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THE LONG-RACEMED BUCKEYE.—(Pavia Macrostachya.)—Fig. 1.

Arboricultural.

THE LONG-RACEMED BUCKEYE.
(Pavia macrostachya.)

Our first-page engraving is a very accurate picture of the leaflets and flower racemes of this fine hardy shrub, drawn during the past summer from a specimen plant at the Rural Grounds. We have often alluded to it before and never, perhaps, without expressions of regret or surprise that it is so rarely seen in our gardens and lawns. This is simply because it is not well-known, for nurserymen's catalogues offer it at the usual price of such shrubs, and it can scarcely fail to please those who give it a fair trial. It is very distinct and possesses features belonging to no other shrub that we have ever seen. The five leaflets droop almost as much as those of Mandrake (Podophyllum peltatum). The long, vertical spikes of buds, at an early stage bring to mind the spikes of Plantain. They grow until they become a foot or more in length, the flowers meanwhile unfolding until all are in bloom. Broader than high, the outside stems of the plant hug the ground for some little distance and then grow up forming a hemisphere of foliage. Adorned with its many racemes of fragrant, hyacinth-looking flowers and blooming in July and continuing to bloom for a long time when most other hardy plants have ceased, few plants will give more pleasure.

We know of specimens which are 50 feet in circumference and eight feet high. Our largest specimen is four feet in hight and 15 feet in circumference. It bore last August 50 racemes of flowers and is now five years old—that is, it is five years since it was taken from the nursery. We could quote many of our best horticultural authorities to prove that it should be found in every collection whether large or small, and we hope our readers will place it in their lists to be ordered next spring. It is a native of South Carolina and Georgia.

HORSE CHESTNUTS.

SAMUEL PARSONS JR.

There are truly Horse Chestnuts and Horse Chestnuts. The number of distinct species and varieties may be estimated at scores. Most common of all on lawns is the well known Horse Chestnut, Æsculus Hippocastanum, so called, some say, because the form of a horse-shoe may be conjured out of the shading of the nut. At any rate, common peculiarities mark nearly every species and variety of Horse Chestnut, whether the horse-shoe be there or not. All have large, light-green, shadowy foliage; are more or less round-headed and have massive spikes of solid-looking flowers. Flowers, indeed, make the chief attraction of the tree. All Horse Chestnuts, moreover, put forth leaves early in spring, yet before autumn, if not before August, many of these leaves fade and become discolored. None of the varieties like a sandy or dry soil, and all especially need liberal feeding, that is, fertilizing. All are worthy of distinguished, isolated positions on the lawn, and group finely together in considerable masses. This is especially true when the eye looks down from above on the leaves parted on every hand by splendid clusters of flowers. So persistent are these peculiarities that I question whether they do or not, to a great extent, in the several species and varieties overshadow other differences. There are few genera of trees whose respective species and varieties look so much alike, to the casual glance, as do those of the Æsculus. Yet, on examining the flowers, fruit and even foliage, the different species and varieties are notably distinct.

There are two sections or subgenera of Horse Chestnuts according to many botanical works, although the best authorities speak of Æsculus as an all-embracing genus. The Pavias, as a genus or subgenus, have proved distinct enough to gain a decided foot-hold in the minds of the general public. Yet their distinctions from the Æsculuses, we must acknowlege, are not very sure. Most, not all, of them have smooth husks on the nut, while the shell of the Æsculus is always prickly. Generally, the Pavias are low trees or bushes. Propagators also say they can most surely tell the Pavia from the Æsculus by the smooth, dry buds of the former and the gummy, sticky buds of the latter. They say this test never fails. The largest, tallest tree of the Æsculus section is the common form of Æsculus Hippocastanum, with the typical light-green foliage of Horse Chestnuts, so lovely during the time of putting forth. Like those of most Horse Chestnuts, the flowers are early and only peculiar from their white color. The stamens are prominent and purplish or yellow. Perhaps, as a whole, we appreciate this Horse Chestnut as much as any. True, as every one has noticed, the leaves do fade early in August; but what will you have? Nothing is perfect.

We have many varieties of the Æse. Hippocastanum more or less distinct. There are pyramidal forms, dwarf pyramidal and other dwarf forms, which again have lapsed into a weeping variety. Crisped-and curled-leaved kinds may be seen. There are cut-leaved and dissected kinds, the last cut into mere shreds of leaf tissue. They are all very curious, certainly, and quite distinct when we come to examine them more closely.

Æsculus Memmingerii deserves special mention for its fine foliage distinctly dotted with white spots, and there is also a maculated kind, more or less marked with golden spots. This coloring changes in other varieties, as in Æse. variegata and marginata, while either form or color again differs in the beautiful Æse. alboflore pleno, serotina, pavioides, fructu-eduli, spectabilis, nigra and procera. But I must stop. Our array of names is already overwhelming. Sometimes the names themselves are sufficiently descriptive, as in pyramidalis. Generally, though, the kinds I pass over thus rapidly are not specially distinct or striking. Æsculus rubicunda, however, is a species possessing distinguished qualities. I have only to look at a certain specimen standing in a prominent place in Flushing, to feel ready to use strong expressions in its favor. In late spring and early summer this tree is a great globe of rich green, heavy foliage, literally studded with large clusters—bouquets, I might say—of bright pink flowers. Good authorities term it a cross between Æsculus Hippocastanum, and some Pavia or Buckeye. It is certainly of lower growth than many of its immediate relatives, and has much of the glowing color of Pavia rubra, etc. I do not think I am exaggerating when I say that Æculus rubicunda is the decided favorite among Horse Chestnuts employed on the lawn. It grows very slowly, and hence is usually grafted on the more rapid Æse. Hippocastanum.

When we turn to the Pavias or Buckeyes, we find a tolerably distinct class, except for the hybrids that shade in to the so-called Horse Chestnut type after the fashion of Æsc. rubicunda. Pavia rubra has, perhaps, the most value for the lawn planter, and this, again, is called Æsculus Pavia, from its resemblance to the common Horse Chestnut. Its flowers are a brownish-scarlet and the branches slender. The tree is not large.

Besides these, there are Pavia rubra atrosanguinea and Pavia rubra Whettleyana, with small, brilliant red flowers and rich foliage. The trailing, P. humilis is also an interesting variety and when grafted high on the Hippocastanum it is an elegant, curious tree, especially when it assumes a weeping form. Pavia glabra, the Ohio Buckeye, is of good size, with pale-yellow flowers. It does not compare in beauty, however, with Æse. Hippocastanum. Pavia pallida is a variety of glabra. Pavia flava and flava purpurescens are still other Buckeyes with flowers more or less yellow. Then there is the interesting Michauxii and many more distinct species and varieties. Loudon speaks of P. neglecta with pale yellow flowers veined with red, and makes it a hybrid between P. rubra and P. discolor. P. discolor is a straggling bush rather than tree and, though early flowering, remains in bloom a considerable time. It is well fitted to make picturesque small trees by grafting on strong stocks. Pavia macrocarpa is an ornamental tree, open-headed, and graceful, not merely round and somewhat formal, like the Æsculuses generally. It is said to be a hybrid between Æse. Hippocastanum and Pavia rubra. Pavia Californica is much admired as a low spreading bush with rose-colored flowers blooming at midsummer. There is also an interesting Æsculus Chinensis. Pavia parviflora is a low-growing tree or bush, a real Buckeye of the West. All the Pavias are used with effect upon the lawn, but, as a whole, they have not the ornamental value of the Æsculuses. I except, however, from this statement Pavia macrostachya which Spach, Lavallée and others class in a distinct genus, Macrothyrsus, so different is it from other Pavias (See engraving). It is a low bush, broader than it is high, because the slender shoots, as they spread, root at any joint that may happen to rest on the ground. The foliage is large, that of a common Horse-Chestnut to all intents and purposes, but the flowers are in pure white spikes and fragrant. The stamens project much and are very ornamental, and the blooming occurs in midsummer. In fact, its late period of blooming, a broad vigorous bush form and immense spikes of beautiful flowers make it one of our best ornamental plants.

This is truly a cursory view of so noteworthy a group as the Horse Chestnuts, but their resemblance to each other has induced me to give the consideration of many species and varieties less space than I should have done had they been Maples or Oaks.

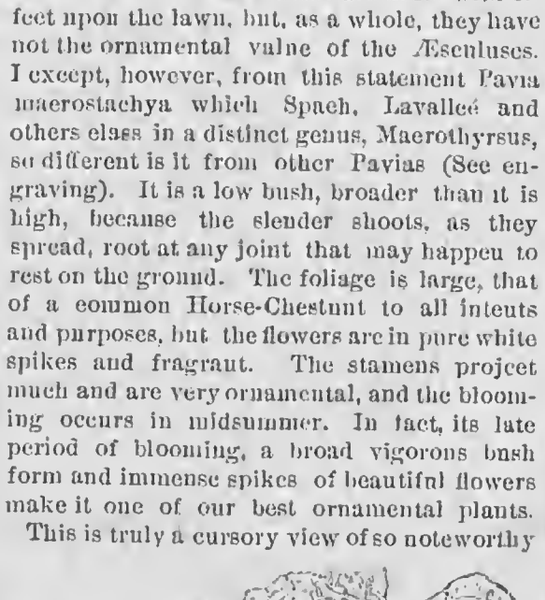


Fig. 4.

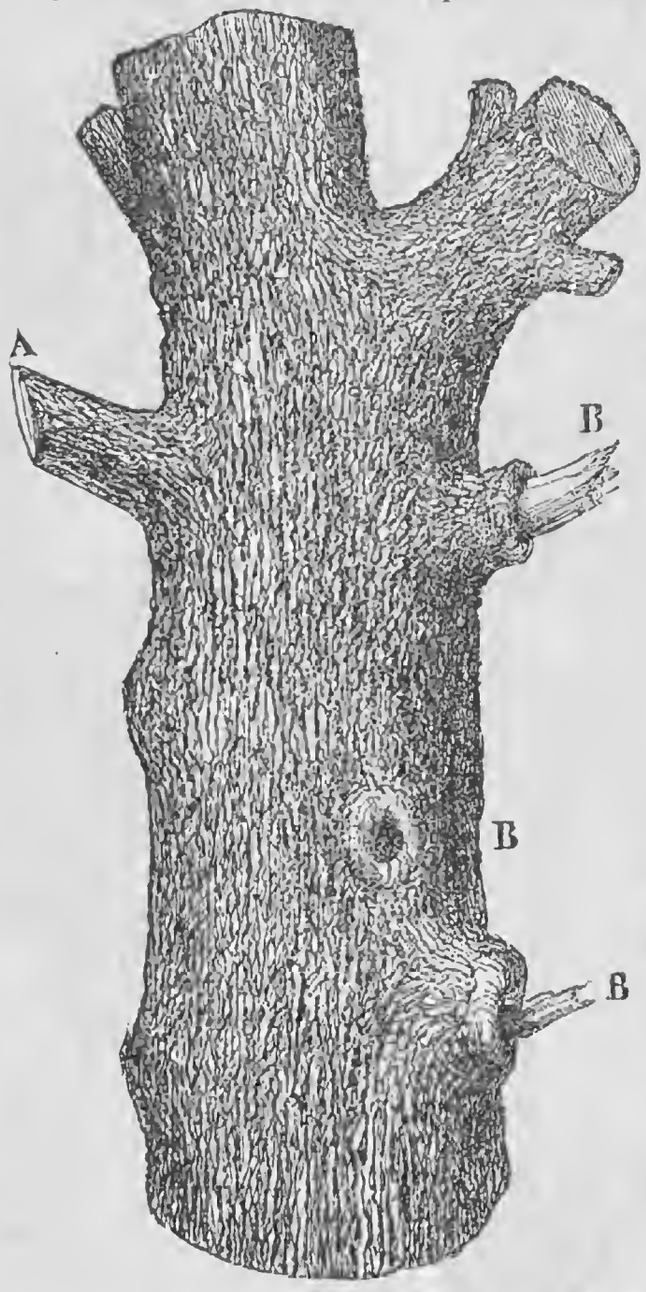


Fig. 2.

Fig 3.

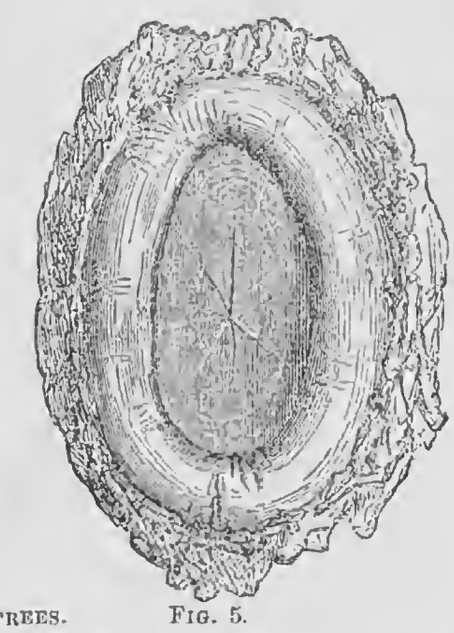


Fig. 5.

PRUNING FORESTTREES.

PRUNING FOREST TREES.

At this season of the year, when the work of removing and trimming large trees is generally done, it will not be amiss to give a few hints in regard to the pruning of forest trees, and, indeed, of all trees from which large limbs are to be removed. It is usually so much easier to cut off large limbs some distance from the trunk—as the tools can be more conveniently handled than when cut close to the body of the tree—that the average workman, who has no interest in the appearance and well-being of the trees afterwards, is very apt to leave a long, unsightly stump for each large branch lopped off. Fig. 2 shows how a tree appears when pruned in this style. The rugged appearance, however, is not the only objection, nor, in the case of forest trees, is it the most important one. The remaining stumps will eventually decay and form holes in the trunk. In these the rain will collect, and the decay will speedily be carried into the heart of the tree, thus destroying its value for timber.

The stumps at and above A are one year old after pruning. The vitality has left them; they are but dead wood and have begun to crack open from the influence of the weather. The new layer of wood that yearly enlarges the tree cannot, in this case, cover the wounds while the wood is yet sound. At B is shown the appearance of such stumps several years after pruning. They have here wholly or in part decayed, but the wounds are still unclosed and the decay is rapidly working inward. In Fig. 3 is a better illustration of the same case. The old branch is slowly disappearing, the many cracks furnishing lodging-places for the atmospheric moisture, and the new wood is bulging out in a gnarled growth in the unsuccessful attempt to cover the wound. Fig. 4 shows such a wound when the stump has finally decayed, B. B. being the lips of the new wood gradually approaching each other, and C. the still intervening opening. In the same figure is shown a section of a similar wound, in which the wood of some 12 or 14 years' growth is destroyed. Fig. 5 is a good illustration of a wound as it appears a couple of years after the branch has been properly cut off. The stump is here so short that the forming layers of new wood can cover it before any damage has been done by its decaying. The timber will be unharmed, and the tree, for ornamental purposes, present a much neater appearance. The above cuts which we have re-drawn, were originally published in the London Garden.

No large branches should ever be cut from any tree unless they are dead, or they, for similar urgent reasons, must be removed. But when they must be cut off, the cut should be made close to the trunk, and the wound covered with grafting-wax, tar, clay, or a similar substance that can prevent the moisture from taking effect. In the laying out of new places, as well as in the improvement of old ones, it is often desirable to retain a few giant Oaks, Chestnuts or Tulip Trees, but to lessen the power of the wind in their crowns, or for other considerations, it is sometimes necessary to remove part of their tops. This may be done to good purpose, but it should be borne in mind that long stumps are not only an eye-sore, but they will eventually interfere with the health of the tree and reduce its value for timber.

Pomological.

OHIO STATE HORTICULTURAL SOCIETY.

A Progessive Organization and Meeting.

The thirteenth annual meeting of our State Horticultural Society occupied three days the past week, and was fully up to the usual standard in attendance and interest, although rain and mud kept many from being present, and the location (Canton) is in the midst of the oldest wheat-growing district, where most of the residents or their parents, came from Pennsylvania or Virginia, and are not noted for their interest in horticultural or modern improvements generally. But, through the efforts of a few enterprising farmers, a county Horticultural Society was formed here the past spring, which has held a number of good meetings, with exhibitions of summer fruits, and already awakened considerable interest, the effects of which were manifest at this meeting of the State Society, which was appointed there on the invitation of the local Society; as it is the practice to change the place of the annual meeting each year, so as to reach and benefit all quarters of the State.

There was quite a good show of fruits at the meeting, considering that this is the "off year" for our apple orchards, and all kinds of late fruit ripened so early in the fall that but few remain sound at this time.

The first business of the meeting, after the appointment of committees, was to hear a report from the secretary of the doings of the Society and its Executive Committee for the past season.

The difficulties and failures of the old orchards constituted the first topic of the programme for discussion the next morning; the question being. "How can the old orchards best be renovated, and is it not better in most cases to cut them down and plant new ones." The writer of this and one or two others took the ground that apple trees cannot be expected

to last for ever, but should be counted as having about the same average duration as man—say 60 to 80 years, under favorable circumstances, and that on thin soil with poor treatment a period of from 50 to 60 years was as long as the trees could be expected to yield any profit. Hence it is full time that a large share of the orchards were cut down, as not worth the trouble and expense of renovation. At any rate no time should be lost in planting new orchards where they are desired to take the places of the old ones, which should be cut away as soon as the young trees afford a home supply of fruit. Various methods were suggested for renovating orchards, by plowing, fertilizing, pruning etc.

Next was an able essay on the science and practice of pruning, by G. H. Miller, of Norwich. The next topic was, codling moths and canker worms—how to combat their ravages—Most of the speakers deemed the band method of trapping the moths too laborious or troublesome for large orchards, but thought they were the best where pasturing with hogs or sheep cannot be practised. Several spoke of the efficacy of the latter method, and urged all farmers to adopt it, as a cheap and easy way of securing fair and merchantable apples. Complaint was made that sheep are apt to injure the trees by eating off the bark, and it was replied that this can be easily prevented by washing the bark with strong soap-suds in which a small quantity of carbolic acid has been stirred—say an ounce of the crude, or half an ounce of pure acid to a pailful of soap-suds. It will not need to be applied more than once in two months, or twice in a season. The same wash will prevent the attacks of borers, and the gnawing of rabbits and mice.

Methods of Evaporating Fruits.

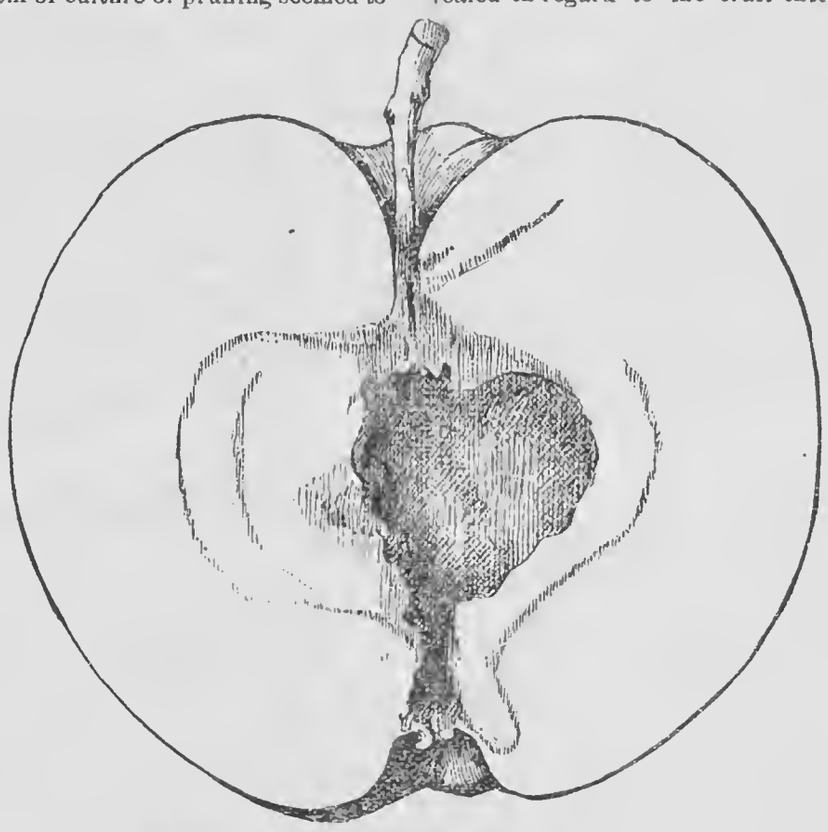
An essay on evaporting fruits by the use of the "American Fruit Drier," by Jas. Edgerton, was next read. His apparatus was of small capacity, costing only about $60, and designed for farm use. He regarded it as the best contrivance of its kind, and a good instrument for orchardists who are distant from market, or liable to have a surplus of fruit, especially such as have children or can hire suitable help for paring and handling the fruit. The quality of the dried fruit is the same as of that dried by the Alden process, and vastly better than that of ordinary dried fruit. He found it pays better to dry Black Cap raspberries by this method than to ship them in a fresh state.

Mr. S. B. Mann, Mich., was present as delegate from the Michigan Pomological Society, and, by request, gave an account of a very large establishment of which he is manager, for evaporating fruits by the Alden method, using three large machines, which, with the buildings and appliances, cost $10,000, and, when in full operation, uses at the rate of 400 bushels of apples per day. It was started five or six years ago as a stock company, by a number of farmers having orchards, and, after heavy losses by fire and other causes, most of the owners were discouraged, and sold their interests to the present company, who revived the business and have run it for several years with fair profit to themselves and much benefit to the farmers around. The market is also improving for the evaporated fruit, both for export and use in this country, so that they are confident the business will pay better in the future than it has in the past. Mr. Mann, on being asked about the use of sulphur for bleaching the fruit and improving its keeping quality, said his firm had adopted that method, but the question as to paying any patent royalty had not yet been fully settled. Remarks then followed about the dispute that is going on in regard to this patent question, between the fruit-driers of Western New York and the Ohio man who claims to have a patent for the sulphur process, by which it appeared that the validity of the patent is likely soon to be tested in the courts.

Grape Culture. New Varieties. Diseases.

Mr. G. W. Campbell, who is our standard authority on varieties of Grapes, read an essay on the new Grapes as observed the past season, speaking especially of those exhibited at the show at Rochester, and some he had seen elsewhere. The writer of this also gave his impressions of a number of new Grapes, especially those examined by him at the Rochester exhibition and in gardens about that city. Mr. High, of Middle Bass Islands, gave the results of his experience with the Brighton and several other new Grapes. Specimens of the Prentiss Grape, sent by Mr. Hubbard, of Fredonia, were exhibited at the meeting, and made a favorable impression as to its appearance, flavor and keeping quality, the only doubt being as to the vigor of the vine, and its ability to withstand disease in this climate. All who had tried the Brighton, or seen it fairly tested, spoke well of it; much confidence was also expressed that the Niagara and Pocklington would prove valuable in Ohio; perhaps also the Duchess and Lady Washington, at least for amateur culture, their fine quality rendering them worthy of careful trial, and, if necessary, the use of sulphur to prevent mildew. Favorable mention was also made of the "Rochester" and "Monroe," seedlings of Ellwanger and Barry, and of Mr. Ricketts's "Jefferson."

Discussion on grape rot showed that this disease had not prevailed very generally in Ohio the past season, owing, it is supposed, to the dry summer; though in some localities the disease was quite destructive. Several persons testified that it invariably made its appearance during hot and rainy or sultry weather, and that no system of culture or pruning seemed to have any effect in its prevention, unless the vines or clusters of fruit were sheltered from the weather, as by a coping of boards over the trellis, training against buildings or inclosing the clusters in paper bags. My abstract of the discussion on this subject at the Rochester meeting, as published in the RURAL NEW-YORKER of Nov. 29, was read, and the facts and inferences met a general assent.



CRANBERRY PIPPIN.—FROM LIFE.—SECTION.—FIG. 6.

Essays By and For the Ladies.

One of the surest signs of progress in our State and County Societies, is the interest taken in the meetings and proceedings by ladies. The second evening of this meeting was especially the ladies' benefit, and quite a number of those of the city, as well as from the country were present. First was the reading of an essay by Mrs. Helen V. Austin, delegate from the Indiana State Horticultural Society, entitled "Women as Horticulturists." It was of considerable length, and marked ability, containing many good hints and points which elicited frequent applause. Mrs. Austin, in advocating the rights and privileges of women and their fitness for the pleasures and employments of horticulture, showed up in strong terms the conduct of very many farmers in denying to their wives and children this natural and cheap source of recreation and enjoyment.

Next was an essay by Mrs. J. K. Niesz, wife of the president of the County Society, on the influence of Horticulture on Rural Life. This also was quite timely and good. Then followed an excellent and practical paper by Mr. M. Milton, of Youngstown, O., who is a well educated florist and a good writer, on Window Gardening and the care of Winter-Blooming Plants.

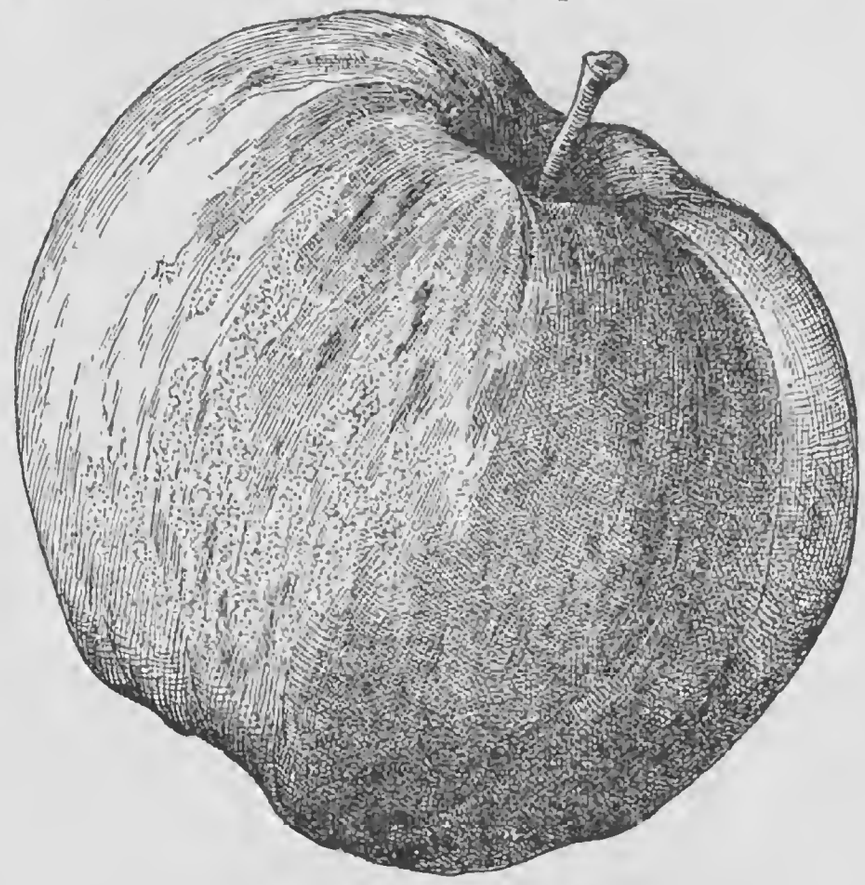
I find that space will not permit me to glance at the practical topics of our third day's discussions; such as raspberries, strawberries, new peaches, plum culture, curculio, black knot. These, with the essays and speeches, will be published in our annual report of which 20,000 copies are printed each year by the legislature, as an appendix of the State Agricultural Report, and 500 copies in pamphlet form for members of the Society.

Painesville, O. M. B. BATEHAM.

The Fruit Interest on Lake Michigan.

At the recent meeting of the Michigan Pomological Society some instructive facts were revealed in regard to the fruit interest on the Lake Shore. Last winter the Legislature of Michigan passed a law for the suppression of yellows in the Peach, by directing the prompt destruction of all diseased trees. It was shown that in South Haven and the surrounding country, where the fruit-growers had rigidly enforced this law, there were but three and-a-half per cent. of diseased trees for the season, and men in that vicinity are confident that if the supposition that the yellows spread only by contagion is correct, the prompt extermination of all affected trees will reduce the annual loss to about three per cent. An interesting point was also brought forward concerning the value of local Horticultural Societies. The best fruit was marketed from points throughout the State where live Societies were at work, while in localities where there were no Societies, mostly second-class fruit was marketed. Many of the fruit-growers present acknowledged that they, in great part, owed their success to the hints and encouragement they had received from the Societies.

It is found almost impossible to enforce the yellows law in districts where there are no Societies through which people may co-operate in their work, and by discussions on the subject learn that it is for their benefit. People, however, are gaining faith in their ability to hold the disease within bounds, and the present indications seem to show that in a few years all the high land bordering on the lake shore and extending back from 10 to 20 miles will be planted with Peaches and various other kinds of fruit. Western Michigan fruit-growers, who formerly shipped only to Chicago, are commencing to send direct to cities further west and north. The probabilities are that the western fruit trade will be greatly developed, in which case there will, most likely, be no locality in the country that can offer better inducements to fruit-growers than western Michigan. F. A. G.



CRANBERRY PIPPIN.—FROM LIFE.—FIG. 7.

THE CRANBERRY PIPPIN.

This very beautiful apple, of which we here give illustrations, originated on a farm near Hudson, N. Y. It does not appear to be widely known, comparatively few being found in the market. The specimen here presented we bought one day while strolling through Washington Market, in this city, where this variety readily sold for $5 a barrel. We cannot affirm as to the suitability of the tree to all sections of the country, for, as far as we are aware, it is as yet cultivated only in the East, and there to a limited extent; but the tree is said to be a vigorous grower and very productive. The size and beautiful appearance of the fruit make it very attractive, and therefore excellent for market. It is medium to large, roundish-oblate and regular. The skin is thin, very smooth, of a light yellow, with a bright scarlet cheek, the red flush sometimes spreading over the greater part of the apple. In point of flavor it is not a first-class apple, though for cooking purposes it is unsurpassed. The flesh is white, tender, pleasant, subacid and quite juicy. It is in use from November to the beginning of March. It is worth trying in all localities where fruit will thrive. Wherever it does well, it will rank among the best as a market apple.

ORCHARDS IN ILLINOIS.

A. C. WILLIAMS.

THAT there are so many farmers to whom it has never occurred to put out an orchard, is indeed strange—and farmers, too, who have supplied themselves and families with almost every other comfort. Even in the great State of Illinois there are entire neighborhoods in which there is not one good orchard. Especially is this the case in many prairie districts. I have seen several such places within the last fortnight: farmer-like residences on either side of the highway, manifestly built years ago; mammoth barns, and tasty out-houses in keeping with well kept farms; miles of well grown hedges; meadows dotted with stacks; fat cattle roaming upon the verdure of a "thousand hills" in township-like pastures, but no orchard to furnish fruit for the family. In timbered districts such farms are not so common. We may account for the absence of orchards in the prairie districts, however, by reasons other than sheer neglect; but I will not undertake to do so here, since negligence is the main trouble. Certainly those farmers do not let their families do without fruit, so that the money expended for it, any year, would quite equal the cost of trees and planting.

At this day, with the priceless advantages of the agricultural press, pomological books, and societies, common sense is all that is requisite, for one not only to put out an orchard, but to do it well, and know, or *find out*, exactly what to plant in his particular locality, climate and soil. For Illinois, till something first-rate in quality is found, nothing is better than Ben Davis in the way of apples for winter, Hubbardston Nonsuch, Snow (Fameuse), Maiden's Blush, Rambo, or Porter for autumn and early winter, and Astrachan, Duchess of Oldenburgh, Primate, or Red June for summer. Of course, there are many others that do well in Central Illinois, but this list is intended for beginners who would probably set out a plain and unpretending orchard, if they only knew a few sorts that would be certain to succeed with half a chance—orchards in Illinois seldom get a whole chance.

Most families, however, would want for winter more than one sort, and I might add Winesap, Westfield Seek-No-Further, or Jannet, and for a sweet apple, Talman Sweet. There are scores of other sorts deservedly popular, a few of which I cannot refrain from naming and pointing out certain defects they are subject to when grown here. The Eastern man who comes West expecting to grow Baldwins, Spys and Roxbury Russets, and enjoy them in their perfection, as he has from boyhood, will generally be sorely vexed and disappointed, since they are almost always unreliable here. The first-named, as I have seen them, are imperfect, ripen prematurely, and are damaged badly by dry, rotten specks, while on the tree. Spys come to perfection, and *such* perfection, but are ripe and must be used long before cold weather. Such has been my observation, no matter what the care and treatment have been. Roxbury Russet is open to the same objections as the Baldwin, except, perhaps, that it may not rot on the tree so badly.

Of Cherries, I have experimented with Dukes, Hearts, Bigarreaus and Morellos, and here in Illinois, especially in the central portions, I would advise the inexperienced to hope for fruit from the Dukes only, and of them the "Early May" (May Duke as we call it), is the best; still any of the various sorts belonging to the Duke family is not likely to disappoint the planter.

It is a very common practice to set cherry trees in the yard, here, and if Dukes, worked on Mahaleb stock, were used, it would not be bad, but nearly always the worst old scrubby seedling Morello stock in the country, is used

and, sprouting as they do, the yard is soon spoiled and made a wilderness with very little fruit. I believe those who have yet to put out orchards will never regret it, if they will select a piece of land, make the orchard on it, and keep all fruit trees banished from the lawn or yard. It is neither elegant nor suitable in any possible sense to make orchards of the yards, where little or no cultivation can be given, and those "old-fashioned" cherry trees, as we term them here, are even unfit for a well kept orchard. They might do very well for shade, planted in lots where hogs are kept, but they soon become ugly jungles and bushy thickets, no matter where they are put. What I have said in this article is for the benefit of the class referred to at the beginning, and I shall have something to say about Peach, Plum, Pear, Quince and berries next time.

Douglas Co., Ills.

PEAR BLIGHT AND SALT.

It is amusing to read the varied experiences of Pear growers after the application of salt on their orchards, which have been called out by Gen. Noble whose pear orchard by the sea-side is not affected with blight. Mr. Woodward, in the interior of New York, has applied salt, also wood ashes and bone dust. He has a good orchard and no blight; while your correspondent, H., from Ontario Co., N. Y., has applied salt liberally and killed his trees; or else all died from blight. Mr. Woodward's trees are Duchess, short-jointed, slow growers and not much subject to blight. Perhaps if he had mixed sand instead of salt with his ashes and bone dust, the results would have been the same, for ashes and bone dust are like the meal put with saw dust for horse food—the more meal, the better.

What causes blight, and the remedy are great questions, and especially with us in Georgia who claim to have the best country for Pears and Peaches in America. Out of 4,000 pear trees, I have lost about 400 with blight in the last three years, mostly the Bartlett, Clapp's Favorite and other rapid growers. The Duchess and Seckel have not blighted. Two Barlett tress planted on each side of my smoke-house where the roots have access to salt, have not blighted, while other Bartletts 20 feet off, blighted. This would argue somewhat in favor of salt. My observation of the blight led me to conclude it was caused by extreme and sudden cold or heat affecting the succulent, more rapid-growing sorts, like the Bartlett and others; while the slow growers were exempt. Acting on this thought, I allowed my pear orchard to grow up in weeds and grass without any cultivation this year. The growth was retarded and the blight stopped. But says one: "This is not a blight year; it comes in waves and when the wave is over, the blight stops and every fellow's remedy hits, and is THE remedy, until another wave comes and washes it all out." Let us have more experience on salt.

Spalding Co., Ga. W. W. WOODRUFF.

NOTES ON INFLUENCE OF STOCK ON GRAFT, ETC.

I HAVE been much pleased with the many articles which have appeared in the RURAL on the influence of the stock on the graft. But it rather surprises me that so few experiments have been tried, or, if tried, that so few have been reported.

There is no orchardist of the present day who is not well aware of the fact that the stock has a great influence for either good or bad on the graft; but few are aware of the cause of that influence, or of a practical remedy for the evil effects. I have been much disappointed in that none of the many able contributors of the RURAL has suggested some method that would lead to something beneficial. Grafting on whole seedling stocks, is no remedy, as some of your contributors appear to think, because there is in the quality of the fruit from such trees as much variation as, or more than there is when grafted on short pieces of old roots. If it were not for the loss in propagation by cuttings and the unhealthiness of the majority of such trees, a partial remedy might be found. At any rate, the fruit would be of an even quality, although inferior to the best grown on grafted seedlings, because some stocks improve the quality while others hurt it. The nurseryman who is first able to control this influence and can supply us with trees that are certain to bear the very best fruit, may consider his fortune as made. In the meantime, for private use, I have for some time practised the following method which so far has been satisfactory: If I want a fruit tree that will bear a superior quality of fruit, I search all the orchards within reach for a tree of the particular variety I require and hat bears the very best quality of fruit. This tree when found, I mark, and at the proper time I take both cions and short pieces of healthy roots on which I graft the cions. I then have a tree with the same roots and top as the one from which they were taken, and providing the soil, location, etc., are similar, the fruit has "in all cases that I have tried," been equal in quality to that of the parent tree.

T. F. FORFAR.

The Herdsman.

THE JERSEYS.

RICHARD GOODMAN.

THERE is some excuse for the mistakes of the reporters of the daily papers in their accounts of the International Dairy Show, when they mix up the breeds of cattle in sad confusion, miscall the names of the prominent breeders, refer to the herd of "Jerseys" entered by one competitor and the "Alderneys" by another—no Alderneys being there at all—and no carping owner of stock would say, "Has this fellow no feeling of his business?" for it is not his business, and the various races of cattle are as much a novelty to him as the mowing of the parks is to the eager crowds that hang about the slow city scythemen in early spring.

But when we read in the report of an address before the Massachusetts State Board of Agriculture, by a veteran breeder of Devon stock in Connecticut, that "Alderneys embrace the Jerseys and Guernseys," just as the minister apologises for always using the term men, because it embraces women—the men certainly do—we are apt to become cantankerous and to insist that public speakers, at least, should know what they talk about. Every intelligent stock raiser in this country, who takes a paper adapted to his business, knows that the designation of "Alderney," there being so few of the latter animals raised and imported, has been merged into that of "Jersey," and that the only two classes of Channel Islands cattle known to American breeders, are the Jersey and Guernsey, and these are so unlike each other that he who runs may distinguish them.

Mr. Hyde is no nearer the truth when he says that these cattle have been too closely bred, and are therefore too delicate and effeminate for the ordinary practical farmer, and that they are larger eaters than other cattle as compared with what they produce, the fact being that they are hardy and long-lived, will thrive upon pasture other stock would starve on, and are quickly injured if fed excessively, as most other stock are to produce the quantity of butter yielded by the Jersey or Guernsey. At the meeting at Greenfield, Mass., where these remarks were made, one day was set apart as a dairy day, and large prizes having been offered for various samples of butter, there were multitudes of competitors from the dairy districts and towns about, and it is a somewhat noticeable fact that the prize-winners were small farmers, owners of Jersey or grade Jersey cows, who made the butter in the old-fashioned way, setting the milk in shallow pans; but from the milking to the final packing the utmost cleanliness was observed.

Another point of importance was, that all the premiums were given to butter made during the end of November, showing that as good butter can be made in the winter by skillful hands as in the spring or fall, and that the complaint of the ordinary farmer that he cannot make it in winter, arises either from his ignorance or indolence—generally from both—and it was formerly no unusual reply of a New England farmer to the inquiry why he dried off his cows so long, that it was cold milking in the winter and the butter, if made, would not sell, as it was bitter. The Jerseys have been influential in remedying this state of things, as they were too costly not to be utilized as long as possible, and there is more difficulty in drying them off when it is necessary so to do, than other cows, and their butter, retaining its color—if they are properly fed—as well as its flavor, the consumers who have become accustomed to fresh butter when residing abroad, have made a demand for a similar article, and large quantities of the "gilt-edged" article are now sent to the cities from private dairies, and this with that from "creameries" must soon be the leading staple for the table of those who can afford and are willing to pay a remunerating price.

Therefore let us give the *Jerseys* their due; sink altogether the term *Alderney;* spell the *Holstein* with an n not an m; remember that they are really Dutch cattle; that Short-horns and Durhams are identical, and that the *Ayrshires* came from the same region that gave birth to Burns, and that just as he was an *Ayrshire* ploughman and his only AIMS are in his songs, they are *Ayrshire* cattle.

Lenox, Mass.

WINTERING CATTLE.

L. S. HARDIN.

PROTECTION of dumb beasts against inclement weather may be said to be the basis of farm improvement. Just in proportion to a man's care for the stock under his charge, can you measure his degree of progress toward the point of perfection that we should all struggle to attain? The higher types of thoroughbred cattle that reach these shores with such blood-like and elegant forms, are created almost solely by great care in protecting them through long lines of breeding, from the hardening and roughing effects of exposure. In this way we can readily see how much the English stock breeder is ahead of us in his system of handling cattle. We are, however, a people quick to imitate the practices of others when they strike us favorably. In this way we have produced copies of the English race-horse and fat cattle that have been able to stand the test of competition on the other side of the big waters. We thus see not only the importance of protecting stock, but it is evident we are abundantly able to do it when we set our heads in that direction.

By "wintering cattle" I mean not only feeding, but in some measure, at least, protecting them from inclement weather. At the Far West where cattle are handled on a grand scale, it seems impracticable to furnish any protection outside of a vigorous constitution and a thick hide, so that cattle there, so far as protection is concerned, may be said to winter themselves. As we come Eastward we find the herds smaller, and consequently better taken care of. In the dairy districts particularly there is something of a reform going on in the way of protecting cattle in winter. It was only the other day a dairyman was telling me of often, when a boy, having heard the creaking of the cows' feet on the cold snow at night, as they moved about the stable-yard, to keep up the circulation. He also said that many a frosty morning he has made the cows get up, that he might warm his bare feet where they had been lying. So it seems, in days gone by, the boys were not much better wintered than the cows. But even to this day in the best dairy districts it is simply amazing to see the utter neglect of shelter that is practiced by dairymen. The roughest shed will save, in the condition of the cows, a large percentage of feed, while full protection will allow the number of the herd to be added to fully one-fourth on a given quantity of feed.

In the matter of what constitutes perfect shelter, doctors disagree. I have seen the very best results in product of milk and health of cows, where the thermometer in the stable was never allowed to go below 60 degrees in the coldest weather, and the air in the stable was saturated with the smell of manure—there being a total absence of ventilation. This may not be the most profitable temperature for handling cows, but the dairymen who did so, made fortunes. There is one thing certain, however, in relation to the correct temperature of cow stables:—the air should never be allowed to fall below the freezing point, if a profit is expected from the milk yield. A cold cow is about as useful for making milk as a frozen pump.

Young stock require protection with a view to their future usefulness. If they are for beef, then the better the protection, the greater the profit from the returns. If they are intended for the dairy, a little hardening will not hurt them. "Roughing it" detracts from the fattening tendency, and thereby makes a more profitable milk producer. Feeding and watering are correlative principles with shelter; and in wintering animals they should be treated in respect to one of these practices as they are in the other. The ultimate purposes for which the beasts are intended should govern their treatment, for just as they are wintered will be their future development.

CIRCULAR AND BY-LAWS OF THE NATIONAL DAIRY CATTLE CLUB.

NEW YORK CITY, Dec. 26, 1879.
(Butter & Cheese Exchange) 309 Greenwich St.

DEAR SIR:—This Association has been organized for the sole purpose of measuring and recording the yields of dairy cows. It is an acknowledged fact that 25 per cent. of the cows in our best dairy districts are unprofitable. To remove this burden from the dairyman, the practice of handling cows must be reduced to a business basis. To accomplish this, owners must keep strict accounts, as all good business men do.

This Association presents a simple, clear and practical method by which the dairyman can measure the value of each cow—her daily production — so recorded that it will point unerringly to any change in the cow's yield—whether it comes from sickness, neglect or accident, bad quality of newly purchased food, unwise change of pasture, or other injurious practice that could not have been detected except by the great loss occasioned thereby.

A daily record, like a faithful sentinel, sounds the alarm at the approach of danger, and puts us on our guard against the hazards of serious loss.

We appeal to you to assist us in this good work by becoming a member of this Association, or at least sending us the records of your cows.

Respectfully,
L. S. HARDIN, SEC.

BY-LAWS.

For the purpose of carrying out the design of this organization, the Executive Committee pass the following by-laws:—

(1.) It is suggested to dairymen that, in general, cows to be profitable should yield as follows:—Cows over four years old should yield not less than 7 lbs. of butter a week, or 200 lbs. of butter a year, on 25 lbs. of milk a day, or 4,000 lbs of milk a year; a cow under four years of age should yield not less than 5 lbs. of butter a week, or 150 lbs. a year, on 18 lbs. of milk a day, or 3,000 lbs. a year.

(2.) It is deemed advisable to admit cows of any product to be registered under the following rules:—

Class A.—A continuous daily record of milk or butter, or of milk and butter, for 12 months.

Class B.—A periodical record of the product of three days in the first week of each month for a year, of milk or butter, or of milk and butter.

Class C.—The product for 7 days of milk or butter, or of milk and butter.

(3.) In all tests under classes B and C the cow must be milked dry within 12 hours preceding each term of trial.

(4.) Bulls may be put on record after their dams or daughters are recorded.

(5.) The fees for a single record shall be two dollars. Each additional record in the same herd, or a subsequent record of the same cow, shall be one dollar.

(6.) A discount on these terms of 25 per cent. shall be allowed to members.

(7.) One-half of the fees for recording shall go to the Secretary.

(8.) Persons keeping annual records are requested to make monthly reports to the Secretary for immediate publication—at his discretion.

(9.) All final reports must be made on blanks furnished by the Secretary.

(10.) State the whole yield in pounds and quarters of pounds.

(11.) All applications for record must be filled out by the applicant and subscribed and sworn or affirmed to before an officer of the law.

(12.) When the application is filed, a certificate of yield shall be returned to the applicant.

(13.) Should an application not be satisfactory to the Executive Committee, then such application shall not be recorded unless such steps are taken as in such case the Committee may deem advisable.

(14.) The Secretary, upon application, shall furnish all necessary blanks for recording yields.

Certificates of application and certificates of record on receipt of 25 cents.

Blank forms will be furnished on application to the Secretary.

The fee for membership is $3.

WE call special attention to the auction sale of Holstein cattle advertised elsewhere in this issue. Whether for milk, butter or cheese this fine breed is rapidly gaining a wide popularity in this country. Moreover, the great prepotency of the bulls, due to the purity of their blood, renders them valuable sires for improving our natives, and the aptitude of the cows to take on flesh readily, when turned off for the butcher, adds to their value as abundant yielders of milk.

Field Crops.

TILLERING OF THE WHEAT PLANT.

PROFESSOR LEVI STOCKBRIDGE.

THE wheat plant, like some others of its class, has the habit of developing underground stems from the base of its main upright stem. These are full of nodes or joints from which grow upright stems with true roots. This method of growth is called tillering and is a feature of great importance to the wheat grower, because it may result in very largely increasing the final yield. Instances have been recorded, where by tillering as many as fifty full heads have been produced from one seed, when but for it the product would have been a single one. It is a noticeable fact, that in different circumstances wheat tillers very unequally, and apparently without law. The same development is not made in different years by the same variety of wheat, or in the same year in different circumstances of soil, exposure and plant food. Yet careful observation has led to the quite general belief that this development is materially influenced by three causes which are worthy of note.

The first is the depth at which the seed is planted. A vigorous plant with much vitality and in rapid growth, tillers more than a feeble and slow grower. If, now, the seed is planted so deep as to be in cold soil and excluded from aerial influence, it germinates slowly; in other words, it decomposes slowly. The young plant is poorly fed and expends all its power of development in struggles to reach its normal position in the air and sun-light. In such a case, the plant will be deficient in layers beneath the surface from which other aerial stems may be produced. The same result may follow too shallow planting, from the same cause. A position near the surface in a comparatively dry soil, makes decomposition slow and a plant feeble, the same as deep planting. Wheat seed should be covered in the surface soil, and, other things being equal, it will tiller the more the nearer the sur-

face, provided it lies in soil constantly moist. The proper depth to obtain the most favorable conditions, is between one-half inch on heavy, moist loams and clays, and two and one-half on dry, sandy loams.

Plants, like animals, have their periods of infancy, youth, maturity and old age. The perfection of the two last, depends materially on the developing influences of the first two. A hot-bed growth which crowds the plant through all these periods with unnatural activity, is not favorable for the best development in either of these, and lessens the result sought in large returns. Tillering is effected in the period of infancy and youth. The shorter this period and the more unfavorable its attendant circumstances, the less the development. This is illustrated in the growth of spring wheat sown from the 20th of April to the 10th of May; after the copious rains of spring have passed, the clear, warm sun-light, and comparatively dry soil of June hurry it rapidly to the July harvest. It tillers very little; it has no time, and produces but few more stalks bearing heads than the number of seed grains sown. Therefore we sow a bushel more of spring than of winter wheat to the acre; and of winter we sow more the middle of November than the first of October. Those circumstances of abundant moisture, cool but not cold weather, which give the time and power for wheat to tiller freely, exist in the fall months. The wheat grower, therefore, if he would avail himself of this habit of the plant, should sow this grain about the first of September in middle New England, while in the southern part of the Middle States the same result might be reached if it was sown three or four weeks later.

The next cause of abundant tillering is food. Good cattle are the result of good and abundant food *judiciously* supplied, and that continuously through all the period of their development. It is exactly so with wheat. There may be over-feeding which will amount to unnatural growth and injury in both cases. Stuffing and starvation should both be avoided and the best food for the young calf and the young plant, may not be the best for the ox or the plant in an advanced state of growth. Tillering takes place in the infancy and youth of the plant, and if at that time, its short and not fully developed roots are surrounded by an abundance of actual food, which can be taken up by simple absorption, their complete development does not occur, tillering is deficient, the plant is over-fed and hastened on to unnatural maturity, at which time its root power is not sufficient for its perfection. The young plant to tiller well, should be well, but not over-fed and stimulated to a too rapid growth. Yard manures and composts which have passed through their *active* stage of decomposition, but in which that change will yet go slowly on for weeks and months, will produce the result we seek, and carry the work on to completion. The same result may be produced by more active chemical elements; but in this case the manures should be intimately mingled with the soil a sufficient time before sowing the seed, to have their intense activity modified by action on the soil itself.

LUCERNE HARDY IN CANADA.

The following is a letter sent to us by a friend in answer to our inquiries. He resides at St. Lambert's opposite Montreal:—

In reply to your inquiry about Lucerne, I have to say that I have about three acres of it, which I have cut over for three years past. The soil is light and deep upon a clayey base; the land slopes in two directions and *no water* can stay upon it. I cleaned it well with root crops two years previously. I sowed the land in the spring broadcast, of course, after fall plowing and thorough harrowing. In a month I was disappointed and disgusted with a crop of weeds. Being busy with other work, I let them grow some time longer. When, however, we mowed the weeds the Lucerne was up about six inches. We happened to have summer showers and it started up immediately and in another month we had a fair crop of it. I cut it a second time, the weeds having been killed out. We cut last year and this on the 1st day of June and of the following July, August and September. After having obtained four crops each season, feeding four horses and two bulls (one feed of hay per day for the animals), I am quite satisfied with it. The roots have gone down over two feet. I gave it a top-dressing of plaster this year, but do not think it did much good. I intend to top-dress it with a compost of barnyard manure and earth from ditch cleaning. I should prefer well rotted manure if I had enough of it.

We had fine crops this year. One month we had no wetting rain whatever, yet the Lucerne was undiminished and gave us a good cut. In starting this crop, look out for water; some of my furrows were not well made, and in the spring retained the water which killed the Lucerne in those spots. I can improve in my next attempt by working the land more carefully. They say it will last twenty years with careful top-dressing, so that it is worth the labor needed to prepare the ground well. I have much better soil on my farm, but I chose the present spot on account of its sloping and offering no place for the water to stand. I am told that it does well seeded down with barley. This knoll of land does not keep the snow and is, of course, not well protected during the winter; in fact, it is one of the most exposed places on my farm. If I had read some of the books, I would not, perhaps, have chosen this spot. *None* of the roots have been winter-killed, so that it has proved hardy so far.

MATURITY OF THE COW PEA.—J. A. F. writes us from Terre Haute, Ind., that the Cow Pea has been grown there, in latitude 39° 30', in a small way for many years, fully maturing its seed. Indeed, so far as he knows, it has been grown for its seed alone, to be used as food in winter. He has known and heard of its being grown there for 20 years. The Crowder and Lady Pea are those mainly grown there, and they are esteemed by some for table use.

Farm Topics.

THE TRUTH ABOUT IT.

[THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

THE TRUTH ABOUT SORREL.

T. H. HOSKINS, M. D.

Col. Curtis is quite correct, as far as he goes, in what he says (p. 803) about the use of lime to prevent the growth of sorrel. But he is singularly incorrect in saying that "Men of science sometimes tell us that sorrel is an effort of nature to get rid of the acid in the soil, and as a remedy for the acid condition of the soil, and to get rid of the sorrel they recommend the free use of lime to sweeten the ground, thus by removing the cause, to cure the evil." I am astonished that the intelligent Colonel should say this, and I think it would puzzle him "awfully" to produce the first line or word from the writings of any man having any title to be called a "man of science," in proof of his hasty allegation. "The truth about it is *that this belief is a popular error*, against which not only men of science, but many practical farmers, have been contending for years. The conclusion that the acid of sorrel comes from the acids which exist in sour soils, is one of those hasty generalizations, the apparent plausibility of which is very attractive to people with no scientific training. But even a tyro in science knows that the acids of acid plants and fruits come ,not from the soil, but from the atmosphere; while the observing, practical farmer refuses to swallow the theory because he has frequently observed sorrel to grow luxuriantly alongside of a lime-kiln, or by the side of a pile of ashes, and has also noticed that sorrel is hardly ever seen in any abundance upon sour soils, while it thrives and grows abundantly on the very sweetest lands, when other and stronger plants are prevented from choking it out.

Nevertheless, we sometimes find in practice that in a field dressed with lime or with ashes, the sorrel will disappear, and that a heavy growth of grass and clover takes its place. Such occurrences are often quoted by those who hold to the "sour-soil" theory, regardless of the fact that such an event *never happens in a really sour soil*. The explanation of such a change, when produced by the use of lime and ashes, is very simple indeed. We find sorrel takes possession of our mowings under two conditions:—First, the clover or grass may be winter-killed, in which case the minute plants of sorrel (which are to be found all through and among the grass in all mowings on light soils) rapidly grow and multiply from their innumerable branching roots, and in a very few weeks entirely fill the ground, so that where, the preceding year, hardly a spear of sorrel would have been apparent in the thick growth of larger plants, we now find, early in June, a crop which seems, by the prevailing redness, to be all sorrel. The second condition under which sorrel takes the lead is where the soil has become exhausted by continued pasturage, or by successive mowings without any fertilizing application. Here the weaker sorrel gradually gets the upper hand as the stronger plants perish, or become weak for lack of sustenance.

Now, in either of these cases, if we dress liberally with lime or ashes, the weakened grasses and clovers may start up with renewed strength and overgrow the sorrel, thus reducing it to its normal state of subjection on all fertile soils that are seeded with anything better. If the alkaline application fails to give the grasses superiority over the sorrel, it is because something more (probably nitrogen) is needed. In such cases a top-dressing of good, fine stable manure will restore the sod, *provided the seeds or roots are there to make one.*

Orleans Co., Vt.

Miscellaneous.

TOMATOES.—In this latitude (34° N.) tomatoes come into general bearing by the 1st of July, and by August they rapidly deteriorate, being no longer good for salad, and calling for much sugar in cooking. For autumn use in cooking and for catsup, we have always resorted to the volunteer tomato, which is spherical and about the size of a Chickasaw plum. With reference to the Acme, we noticed, as have many others in your columns, that the first, earliest fruit was curiously defective in a ring of the size of a dime at the "flower end." After the first week of ripening this defect entirely disappeared; the fruit was abundant, beautiful and maintained its *superiority* of quality up to our first frost, on the 3d of November. They were never bitter, and continued to make good salad to the last. Henceforth we abandon all other sorts until a better one appears. In cultivation we give abundant space, two feet apart, in the row. We take our pea brush, which is then ready for removal, and stick it in two rows on either side of the tomato row, with tops inclining inwards. When the tomatoes get above the brush, we clip with a sickle, giving the row the uniformly rounded top of a hedge, which we maintain by subsequent clippings during the season. It makes an ornamental hedge, giving abundance of delicious fruit. The vines are frequently relieved from ripened and defective fruit, and any excess is taken to the poultry yard, to the great comfort and benefit of its voracious denizens. C. W. S.

AN EXCELLENT EXAMPLE.—Our friend, W. C. H., of Walden, Orange Co., N. Y., having sent in a number of subscriptions, refers to one of them as follows:—"This address is that of a boy sixteen years of age, who has been employed by me during the last eight months, and who, during that time, has taken such a great interest in the RURAL, and, consequently, so much the greater interest in my work, that I have decided to present him with the paper for the ensuing year. His wages have been paid to his father, and his portion for his summer work is represented by a pair of skates. To-day I offered him a present of $2 or a year's subscription to the RURAL. He did not hesitate in his choice for a moment, but thanked me for the gift, and said he thought the paper would do him the most good. Wise boy! Every week he has had the privilege of reading my copy, and I have been surprised at the large and useful fund of information he has gleaned from its rich columns. Although I have made it a practice to have my RURALS bound, I have found that by letting my work boys read them, they take a much greater interest in the work, and my papers are but little injured."

WHAT OTHERS SAY.

CATALPA SPECIOSA.—Professor C. S. Sargent, of Cambridge writes to the London Gardeners' Chronicle as follows: "Permit me to correct an error which appears in the account of Catalpa speciosa in your issue of Nov. 1. The fact that there are two species, or two very distinct forms, of North American Catalpa was first noticed and made known many years ago by Dr. J. A. Warder, of Ohio, to whom, and to Mr. E. E. Barney, of Ohio, is due the credit of having brought the very remarkable economic properties of this tree to public attention, my own connection with the matter having been entirely subordinate to theirs. I take this occasion to call the attention of European planters to Catalpa speciosa. It is in every way a far finer, and a more rapid-growing tree than Catalpa bignonioides, and should it succeed in Europe, as from its geographical range in this country I am led to believe that it will, it will prove a most valuable addition to the list of your ornamental and timber-producing trees."

PLANTING THE BRANCHES OF APPLE TREES.—Henry S. Young, of England, says that a neighboring farmer, some six years since, planted two branches of an apple tree, one the size of an ordinary walking-stick, the other four times the size; both were planted in a garden, about six inches deep, and both bore fruit the following year. They bear well now, look healthy and vigorous, and bid fair to do so for many years to come. These branches were cut with a cross piece at the bottom; they were not pruned, and were planted the middle of December.

WHY COMPLAIN?—America gets our cash, only because we want her grub. It is idle to complain because we have to pay for what, this year, we sorely want, and to snarl because we cannot tax those who are saving us from famine. This is the truth of the position. The foreign growers whom men are so anxious to tax, are the one assistant force which is staving off riot, disease and death from our crowded towns.—Ag. Gazette (Eng.)

DISEASED MEAT.—Dr. Carpenter says that animals fall an easy prey to every kind of epidemic; for all sanitary laws are, as a rule, ignored by farmers. He was not surprised when an inspector from the Metropolitan Meat Market declared upon oath in the Croydon Police Court that 80 per cent. of the meat which was sent to the London market was the subject of tubercular disease; and that to exclude diseased meat from the market would be to leave the metropolis without an adequate meat supply.

POSSIBILITIES OF AN ACRE.—Waldo says in the Ohio Farmer that he remembers one year making a very large profit from an acre of land, managed in this way: He first grew a crop of Tom Thumb peas, which matured in time for cucumbers, for pickles, and then he grew 500 bushels of turnips, sowed broadcast among the cucumbers. He found that these crops will mature without crowding each other, if properly managed.

POLLED ANGUS.—The Earl of Airlie, writing to the North British Agriculturist, under date December 26, 1878, says:—"I have at present seventeen pure Polled Angus milch cows in my dairy. The greater number of these give from 12 to 14, and sometimes 16 Scotch pints for a considerable time after calving. The milk is admitted to be much richer than that of either the Short-horn or the Ayrshire."

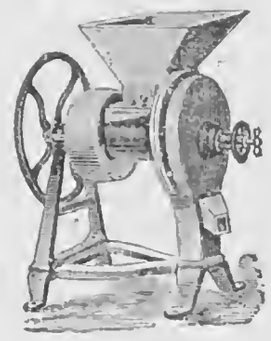
COLOR IN BUTTER.—The Channel Islands breeds almost invariably possess the faculty of conveying a yellow hue to the butter. This gift is personal. Some cows of all breeds have it when in full milk, but the Channel Islands breeds have it in the greatest measure, and retain it for the longest period after calving.—Dairy Farmer.

SCOTCH POLLED CATTLE.—Mr. W. B. Allen says that the black Scotch Polled, though admirably suited for breeding bullocks on the ranches of our Western plains, cannot be made generally popular among Eastern farmers, on account of their color and usual deficiency for the dairy.

Industrial Implements.

The Victory Corn Mill.

THIS efficient mill for grinding corn, corn and cob, oats, barley and all other grains for feeding stock, as well as bones, shells and charcoal, weighs 400 pounds, costs $45, and is manufactured by Thos. Roberts, Springfield, Ohio. Of the advantages of grinding feed for stock we have spoken so often that it would be superfluous to repeat them here. All these advantages can be secured by the use of this mill. Every part of it is duplicated, so that any broken piece can be readily replaced at a



trifling expense. If the corn is quite dry, it is claimed for it that it will grind 20 bushels per hour. Of course, if the corn is damp, it will grind more slowly. Shelled corn it grinds fine enough for family use, and by reversing the motion it sharpens itself. The crushing of the corn and cob is effected before going to the burr by means of a heavy cast-iron screw, revolving in a cast-iron chamber just under the hopper. The operation of the screw is such that it feeds the crushed mass along continually to the burrs, where it is ground coarse or fine, as may be desired. The fineness is regulated by a feed-screw, seen in front of the mill. It can be operated with any kind of power where a belt can be used. It will grind with a four-horse power, but if it is desired to run it to its full capacity, eight-horse power is required. Full information with regard to it will be promptly furnished on application to the manufacturers at the above address.

THE OPTIMUS RETURN BUTTER PAILS, manufactured by James B. Gilberds, Jamestown, N. Y., and favorably noticed in our last issue, bore away the first premium in articles of that kind at the late International Dairy Show. The same enterprising manufacturer took first premium for butter firkins also. These goods are strongly made and are deservedly gaining a large sale and wide popularity.

Everywhere.

COLORADO CORRESPONDENCE.

Much has been said of the mines and mineral wealth of this Centennial State, but little, so far, of her agriculture and population. Immigration has become simply immense — over 100,000, it is stated, having come here since last January. Our climate, soil and agricultural resources, as well as mining, have attracted them. Leadville, since January, has risen from a few hundred inhabitants to nearly 25,000; Denver, from 20,000 to over 30,000, and still she is rapidly enlarging her borders. Every little town is growing apace, and even the cattle, sheep and chicken ranches are full of people, and still they come to invest in any and every kind of speculation; some for health, some for pleasure, while the greater part come to make money and seek a fortune. Every available spot where water can be obtained, is being taken up at extravagantly high prices, and intelligent and skilled labor is in great demand. This "Great American Desert" is "booming"—minerally, sanitarily and agriculturally. People from every State are here, and thousands from foreign countries. John Chinaman graces every nook and corner of the cities and towns. His wash-tub notoriety makes him independent. He has plenty of money—but not to spend. He always rents and never buys. He greets you with his tapering eyes in front and his plaited switch behind, clad as to his feet with wooden shoes, and, as to his person, with the full, flowing and short celestial robe of blue. He walks the streets and adorns the theater as if he had us in his power. He is never seen on the farm; nor could he become a farmer if he would, from the fact, it is said, that he "reverses everything with which he works." He hitches his team to the plow handle, he takes the hoe by the blade, he drives a nail with the edge and cuts with the hammer of the hatchet, and I suppose he would walk on his head if he could make a dime without spending any of it.

The Utes are a failure—not in lying, but in their anticipated success in brow-beating the Colorado Governor and his people. This will not be their greatest failure. Every chief but Ouray has become a notorious outlaw. Turning State's evidence won't save them.

Fort Collins, Colorado. * * *

RURAL SPECIAL REPORTS.

Arkansas, Greenwood, Sebastian Co., Dec. 12.—Very pleasant weather; no snow; a few frosts. Farmers busy and happy. Cotton, 11c.; corn, 75c. in the car, and prices improving. Oats, none in market. Wheat, $1.25@1.50, and very scarce. Sweet potatoes, 50@60c.; Irish do., $1.25@1.50 per bushel, and very scarce. Farmers here do not know how to keep them. Eggs, 16⅔c.; live hogs, 3½c.; bacon, 5c.; hams, 8@10c.; flour, $4; shorts and meal, $1.50 per 100 pounds. R. R.

Canada, Fern Hill, Ont., Dec. 12.—Crops here turned out better than was expected in the early part of summer. Fall wheat was very good; but the spring sort was a miserable failure, some hardly getting back what they sowed. The midge was the principal cause of the mishap. Oats were a very fine crop. Of peas there was very little sowed. Corn, which was planted instead, proved a "middling good" crop. My Blount's corn did extra well. Some of it grew to the hight of 14 feet, and had from three to nine ears to the stalk, and it all ripened finely. It was planted 3½ feet each way on sod soil. Defiance wheat did much better than I expected of the shriveled seed. Hay hereabouts was a very fair crop, and so were late-planted potatoes. The Beauty of Hebron ripened here before the Early Rose. Fruits of all kinds are quite plentiful. Fall-sown wheat looks fine. That sown first has begun to lodge, and some farmers have turned in their stock to graze it. A great area has been sowed to wheat here this fall. The weather is very disagreeable at present; cold, like winter, some days, and as warm as in summer on others. J. M. W.

England, London, Dec. 9.—So far we have had the most severe winter we have ever had—really hard and continuous frost at the end of November and early in December, which is quite a novelty for us. W. R.

Iowa, Eldorado, Hardin Co., Dec. 11.—We have a splendid corn country, considering that we are in north latitude 42°. Our yield is from 40 to 80 bushels per acre, without manuring; oats about the same; wheat (spring) averages about 15 bushels. Not much fall wheat is raised here. Wheat now brings $1; corn, 25c.; oats, 25c.; potatoes, 30c.; hogs, 3½ to 4½c. per lb. gross; butter, 20c.; eggs, 15c. per doz. E. M.

Mo., Bucklin, Linn. Co., Dec. 10.—Autumn has given us more rain than usual, I think. We had five or six light thunder showers in November. Fall grain looks well. Of the Rural seeds we like the "Golden Rural" tomato very well. Though not as sweet as the Canada Victor, its flesh is peculiarly delicate in its texture, it is very handsome and bears well. The "Beauty of Hebron" potato did first-rate, and is destined, I believe, to supplant the Early Rose. The Rural Cricket ticks merrily on the wall, and says it is time to retire. Mrs. F. M. B.

Mich., South Haven, Dec, 18th.—Our autumn was unusually wet, with a heavy fall of snow in November, followed by a warm, rainy week or two, since which we have snow again, three or four inches deep, and the range of the thermometer from the freezing point to about 14°. No ice yet forming in Lake Michigan. T. T. L.

Ohio, Ripleyville, Huron Co., Dec. 16.—We have had a very fine fall for farming. Winter is now just setting in with snow two inches deep for the first time. Wheat never looked better at this season. We had an extra-good crop last harvest; on some places it went as high as 51½ bushels per acre. Corn was a poor crop with some exceptions. Oats were about middling. Potatoes good. Apples very scarce. Hay a very light crop. Wheat is now bringing $1.30; corn, 50c.; oats, 25c.; clover seed, $5.50; hogs, live weight, $4; butter, 25c.; eggs, 20c. J. K. R.

Rhode Island, Providence, Dec. 24.—You ask subscribers to tell you which part of the paper they like best. Naturally, being in the florist and nursery business, I like best the parts referring to that subject. I am also very much pleased with the seeds, as most of them have done well with me. We have plum trees set in our hen yards and they fruit well. E. T. D.

Texas, Dayton, Dec. 10.—Our crops are all gathered, and both corn and cotton were light, owing to the drought. Cotton has gone forward in fine order, for there has been no rain to speak of in six months. Thirteen days ago, I pulled three large-sized Voorhis watermelons, being the second growth. They were planted on the bank of the Trinity River in a bed of sand. I doubt if any of your subscribers can say as much, and I can assure you they were a rich treat. G. G.

The Querist.

ANSWERS TO CORRESPONDENTS.

Another Grape Swindle. (?)

A Subscriber, Norfolk, Va., asks our opinion of the following varieties of grapes:—Eva, Butler, Imperial, Moore's, Highland, Montgomery, Challenge, Wyoming, Monroe, Janesville, Rubies, Duchess. They were sold in that section last spring by an agent of a J. H. Hutchinson, "M. D.," of Geneva, N. Y. It was claimed for them that they were superior to any other Grape grown. The agent sold them at $16 a dozen, "to introduce them," asserting that the retail price was $60. Our correspondent seems to have some doubts as to the superlative merits of the Grapes, and even appears disposed to think that the claims put forward on their behalf might be somewhat fraudulent, and sends us a copy of the circular in which they are plastered with praise.

Ans.—The circular sets forth that the proprietors are introducing the "Medicine Grape of Europe, hybridized with our Iron clads of America;" that Prof. D. W. Jones, of the Department of Agriculture, says:—"We can cordially recommend them to all lovers of good fruit, and shall look with interest upon their general introduction to this country;" that Dr. Hutchinson, of Geneva, has analyzed 'those 12 hybrid grapes; that Dr. Bell is introducing and finds them to consist largely of citric, malic and tartaric acids and iron.'" Then the circular goes on to tell how tartaric acid is the name applied to the active principle of "those Hybrid grapes, producing a slightly stimulating or tonic effect upon the quickened system," and more bosh of the same sort that need not be reprinted. We have never heard of several of the Grapes above named. The claim that they are superior to any other Grapes grown, is false upon the face of it. The statement that the price is $60 per dozen at retail is also false. There is no such Grape as the "Medicine Grape" of Europe. The analysis of the grapes by Dr. Hutchinson is absurd. Of those named, Moore's (by which, perhaps, Moore's Early is meant), Imperial, Highland and Duchess are comparatively new sorts—good so far as tried, but not yet sufficiently tested to justify any broad assertions as to their value. We have never before heard of "Professor" D. W. Jones, Dr. J. H. Hutchinson, or Dr. W. R. Bell, all of whom seem to be connected in one way or another with this rather dubious transaction. By the way, we have had quite a large number of inquiries the past year as to the trustworthiness of various "nursery" firms hailing from Geneva, N. Y., and have seldom been able to answer reassuringly on the subject, although there are several excellent nurseries there.

Horse Queries.

W. E. A. S., Cincinnatti, O., has a five-year-old mare that can trot fast when urged on by whip or voice, but which, when these stimulants cease, quickly drops into a spiritless jog-trot, and he asks whether anything can be done to give her spirit and a good brisk gait. He also inquires whether weighed shoes increase the speed of a horse.

Ans.—Horses differ greatly in temperament. Some are dull, lethargic, even stupid, but these are very safe drivers. Others are nervous, high-strung, uncertain and restless; such are never safe except when a strong hand holds them. To change one kind to another is as impossible as to change a meek, patient, quiet stolid-tempered man, into a fiery, hasty-tempered, quarrelsome one. It is the nature of the animal, and whipping will only tend to render it still more stupid. "You cannot make a silk purse out of a sow's ear." This adage applies to the case in point. Weighted shoes, or foot weights, will tend to increase the stride of a high-actioned, and speedy horse, but will have a contrary effect on a dull, slow one. The weight having impetus given to it by the quick picking up of the foot, helps to carry the foot beyond the natural length of the stride. But a slow motion is made only slower by a weight.

Feed for Young Colt and Calf,

J. H. B. Belcher, N. Y., asks, 1, what kind of grain should be fed to a young colt to produce the best effect in bone and muscle, without fattening him; 2, would the same feed do for a calf seven or eight months old, and how much would it require.

Ans.—1. Our correspondent will find an answer to his first query in the article published on page 821, in our issue for Dec. 20. And in addition to the rations there given, if more cheaply obtained, he may substitute fine middlings for the oats, or if convenient to a mill, may grind two bushels of oats with one of corn, and give two quarts of this with one pint of linseed oil-meal. The oil-meal will keep the colt's stomach in as fine condition as grass. Corn is too heating to be fed, except in very small quantity or with other muscle-forming food. 2. The same food will be good for the calf, and especially if a male to breed from, or a heifer which is to be a breeder; and if the calf is to be grown for beef the same ration is best until its frame is grown, when corn may be added to put on the fat. With nice, early-cut clover hay, the grain ration may be reduced. The calf eight months old should make an excellent growth on four quarts of fine middlings and one quart of oil-meal per day, or three quarts of oats and corn, ground as above, with hay.

Indigestion in a Horse.

R. S. T., Shunpike, N. Y., has a horse out of condition that scours very badly on driving him five or six miles at a moderate gait. His feed is hay and oats. His coat looks rough and his legs swell while standing in the stable. The swelling, however, abates on driving him, but he doesn't grind his food as he should, and our friend asks what ails him and a remedy.

Ans.—Indigestion is the trouble. He may be too old to grind his feed well, and so swallows it whole, or maybe he eats it too fast, if he is not too old. Feeding meal would remedy the troubles. If the hay were cut fine and fed with the meal, he would probably do better. Doses of Glauber salts, two ounces daily, would give tone to the stomach and purify the blood. It is not uncommon for horses' legs to swell when standing in the stable. A tablespoonful of ginger would be good fed daily with the meal.

The Kieffer Pear.

H. E. P., Deposit, N. Y.; J. C., Akron, Ohio; E. D. H., Detroit, Mich, make inquiries as to the likelihood that the Kieffer Hybrid Seedling Pear will prove thrifty and profitable in their respective localities, and for more information with regard to it than was given in the Rural of Nov. 22.

Ans.—All the information we possess was given in the Rural which presented the portrait of the Kieffer Pear. We do not believe that our correspondents can ascertain whether it will "do well" with them, except by trial. We try to be foremost in informing our readers as to all new fruits, grains and plants; but we advise caution in trying them. It is now too late to transplant. The pear will be advertised in all rural papers before planting time in the spring.

Arboricultural Information Wanted.

O. W. F., Blackstone, Mass., asks for the experience of any Rural reader who has ever grafted or budded the Shag-bark Walnut on the common Pig Walnut, so-called in New England. He wants to know how it is done; the proper time for doing it; when to cut the graft or bud, and how the wax is made.

Miscellaneous.

M. L. B., Princeville (either in Ill. or Kan.), wants to know what is to be done with Blount's corn to obtain the book premiums offered by the Farmers' Publishing Co.; to whom and when shall the full proceedings be reported?

Ans.—The six book prizes offered by the Farmers' Publishing Co. are for the six heaviest yields of corn raised from the quantity sent out by the Rural, the corn to be weighed three months after date of harvesting. For the number and kind of books in each prize, see the issue of April 26th or the Querist of Nov. 15th. The reports should be sent to this office, and are to contain only the weight of the corn, properly certified to by some public officer.

G. G., Dayton Texas, has two orange trees twelve years old, and he wishes to transplant them. They have never borne any fruit. Is it best to move them *now* or in the spring? Of course, the ground is open all winter.

Ans.—There will be nothing gained by waiting till spring. If convenient otherwise, they can be transplanted now. Transplanting in the North is done in the fall and spring only because the ground is either too frozen or too wet during the winter to do the work well.

E. T., Penville, Ind., asks if the June Berry will do well in Central Indiana, and where it can be had.

Ans.—The June Berry, a variety of which (Amelanchier alnifolia) we illustrated in the Rural of July 19th, will do well in Central Indiana; indeed it grows wild in many localities in the West as well as in the East and North. It can be had in almost any well-stocked nursery, and any enterprising nurseryman will be able to supply it, though he should happen not to have it in his stock.

G. C., New Haven, Conn., has a bed of fine muck from three to fifteen feet deep on his farm. It is free from grit and seems composed of decayed leaves and vegetable matter, and he asks what value has it as compared with manure from cows fed on hay, and what should be added to it to make it equal to such manure?

Ans.—Such muck is about equal to poor cow manure, or such as would be made from hay alone. It would be made more immediately useful in the soil if composted with a bushel of lime to each wagon-load of the muck.

A. D. P., Union Springs, N. Y.; D. T., Youngstown, O., et al, inquire as to terms, &c., of Prof. Meehan's work, "The Native Flowers and Ferns of the U. S." We have given these particulars more than once and refer our inquirers to the publishers for further information—the American Natural History Publishing Co., Philadelphia, Penn.

Finis, Oshkosh, Wis., describes a plant and asks its name. He also wants to learn how to destroy the red spider.

Ans.—1, it is Eryngium Leavenworthii—a hardy annual of great showiness, if rightly cultivated; 2, wash the leaves with a solution of whale-oil or carbolic soap or tobacco. Try acetic ether.

J. B. G., Columbia, Pa., asks where the Duchess Grape, an engraving of which was given in the Rural of Dec. 6, can be purchased.

Ans.—Of J. T. Lovett, Little Silver, New Jersey.

S. C. C. F., North Carver, Md., asks what does J S. Woodward, in Rural of Dec. 3d, mean by the "light coat" of salt, wood-ashes and bone-dust he says he gives his pear trees—how much of each constitutes a light coat?

Ans.—Will Mr. W. please answer.

Many readers ask where they can get cow-pea seed. We cannot tell them at present.

Communications received for the week ending Saturday, Dec. 27.

W. S. M.—W. H. P.—A. G. W.—G. P. A.—H. B., thanks.—W. L. D.—T. G. C.—G. G.—N. R.—A. E. G.—L. A. R.—G. C. G.—W. B. D.—J. W. S.—J. E. R.—L. H. E.—S. H. M.—E. F.—M. L. B.—H. H.—J. W. M.—E. J. R.—J. B.—T. T. L.—T. H. H.—J. M. M.— E. E.—J. A. F.—S. C. G.—A. E. V.—D. A. H.—M. H. S.—C.—A. E. S.—F. H. D.—E. B.—W. H. L.—N. C. K.—J. P.—M. A. L.—B. F. R.—

Floricultural.

THE FREE SEED DISTRIBUTION.

A LETTER FROM "CLINTON."

One of the agreeable features connected with patronizing the publication of the Rural New-Yorker is the privilege of participating in the benefits of its free distributions of new and rare seeds. One whose attention is directed towards the pursuit of agriculture or horticulture as a means of profit, cannot fail to appreciate the value of the introduction of new varieties of plants calculated to meet his wants. It cannot be expected that every variety of the seeds thus gratuitously furnished from the Rural office will be found to be adapted to every locality or soil, or to meet the wants of every individual. But it cannot be known, with any certainty, to what particular climate or soil any plant is *best* adapted till it has been fairly tested; therefore there need be no grumbling or feeling of dissatisfaction if, for instance, Blount's Prolific corn is generally found to be a failure in latitudes as far north as Central New York. We

had no guarantee or assurance that it would succeed in any such locality. But it had been highly recommended as an improved variety, and we were kindly furnished with an opportunity to test its value for our own use, without any expense to ourselves other than the trifling trouble of planting and cultivation. And yet, in looking over the several reports of those who have been thus favored, it has really seemed to me that some of them indulged a sort of feeling that they had been almost *imposed* upon by being persuaded to make the trial, when the simple announcement of the fact whether the corn would or would not succeed in their locality, and if not *why*, would seem to be all that it was necessary to report, that such report might be beneficial to others.

Neither the Golden Rural nor the Acme tomato may suit every one, but, at the same time, many may be highly pleased and duly grateful that they have been introduced to their notice, and another advantage of that introduction may be in stimulating others to efforts in the production of other improved varieties, so that eventually the tastes and wishes of a larger number of the lovers of this valuable vegetable or *fruit* may be gratified. Many of my age can well recollect when the tomato was first introduced to our tables as an article of food. We have also witnessed, with much satisfaction, the great improvement that has been made by the introduction of new varieties, not only in form and flavor, but in the time of ripening.

For one, I confess to a weakness (if you choose so to term it) for testing new varieties of seeds and plants, and have frequently succeeded, very much to my own satisfaction, where others failed. I am now anxiously waiting for an opportunity to test the seeds which the RURAL so kindly promises to furnish to its subscribers for the coming year.

These remarks remind me to speak of the flower seeds distributed from the RURAL office by its present managers. I have been pained, I might almost say *disgusted*, at times in reading the reports made by several of the recipients. Too many of them read like these, for instance: "The flower seeds you sent me proved an entire failure;" or, "Only one or two of the flower seeds ever made their appearance;" or, "The season was so dry that the flowers were a failure;" or, "The flower seeds were neglected till it was too late for them to succeed;" etc., indicating clearly, to my mind, that the fault was with the recipients, and not in the seeds. I can truly say that, with the many seeds received from the RURAL office at various times, I have been quite successful—more so, I have thought, than with those purchased of the dealers. Possibly I have been more careful with them, in view of the source from which they came. At all events, I can vouch for the genuineness of the seeds furnished, and if, in any case, I have failed of success, I am frank enough to attribute the failure to my own ignorance of the correct manner of treatment, or to some accidental cause. I would, therefore, respectfully suggest to the recipients of flower seeds from the RURAL office, if they have no taste for their cultivation or no time to devote to their proper care and attention, that they kindly hand them over to some friend or neighbor, who they are sure will give them a fair trial, at the same time informing him of the source from which the seeds came, and the manner of distribution. In so doing they will not only give pleasure to the individual, but may aid in gaining a new subscriber for the RURAL. I am certain I have induced more than one to subscribe by calling attention to this free seed distribution to subscribers, and, in some cases, giving them a portion of my seeds for trial.

Although the taste for the cultivation of flowers has been so largely improved within my recollection, and has now become quite popular, yet it is surprising to see how many there are who *profess* to have a taste in that direction, while in fact it is evidently a mere pretense made for the purpose of being supposed to be on the popular side. I have always given freely of seeds or plants to those who desired them, even to my own inconvenience many a time, as I take pleasure in encouraging their cultivation. But I have been surprised to notice how many there are, even at this day, who, on being inquired of afterward as to their success with them, have confessed either that they forgot to plant them, or that the weeds had choked them, or even that they had not looked at them since they were planted. With all such persons, my confidence in their professed love for the cultivation of plants or flowers is very much weakened, to say the least of it.

I fully indorse what has recently been said in the RURAL, under the head of "Miniature Hot-Beds" and "Floriculture for Young People," etc. After the plain and simple instructions there given, no amateur cultivator, who has ever read them, if possessed of a modicum of common sense, will hereafter be warranted in reporting that the seeds gratuitously furnished from the RURAL office "all failed to germinate."

Oneida Co., N. Y.

The Poultry Yard.

PREPARING POULTRY FOR MARKET.

FORREST K. MORELAND.

BUTCHERING on the farm is no small task. The work itself, when once fairly commenced, is not so difficult, but it is an unusual task and one that is dreaded to some extent. Killing and dressing poultry are a task that usually falls to the lot of the women.

It is the practice on many farms to get ready for killing, get some assistance and butcher the hogs, and, perhaps, one or two beeves at the same time. The occasion is usually taken advantage of by the women folks to kill and dress all the turkeys, geese, ducks and chickens, and get rid of everything of this sort at once. There is a show of reason for this plan. Butchering, at best, is a very disagreeable matter, and by attending to it all in one day, there is much less trouble and annoyance. When the poultry is all killed at once, it must be marketed at the same time; and, of course, it is sold for shipment or to some dealer to be retailed. In either case, a somewhat lower price must be accepted than if sold in another manner, if, indeed, the farmer should not be so unfortunate as to strike a glutted market. Another method of disposing of poultry, and one which I have followed for years and have found to be uniformly profitable, is to procure a number of good customers who will take a certain quantity of poultry regularly until the entire stock is disposed of. Those who wish to sell their poultry in this manner will find it indispensable to success to observe a little care in fattening their fowls and preparing them for market. It will not do to sell old hens for spring chickens, nor will it do to stuff their crops after they are dressed or to send to market carelessly-dressed poultry. When care is taken to have a good article neatly dressed, fully twice as much can be realized from it, if retailed in the manner I have suggested, than if sold to commission men or retail dealers. I have found it well worth the extra trouble.

Fowls should not have access to feed for from 12 to 18 hours before killing. This may be accomplished by putting the fowls to be killed in an inclosure by themselves for that length of time. No more fowls should be killed at once than can be dressed before they get too cold. They are much more easily picked while warm. There are different methods of killing fowls—good, bad and indifferent. One method, much practiced, is to have a suitable block of wood in some convenient place; grasp the fowl firmly by the legs with one hand, and with a sharp axe—sometimes a dull one—sever the head from its body at a single blow—if two or more are not required. When this is accomplished, the fowl is left to thrash around on the ground, getting its feathers all besmeared with blood and dirt. This is the bad method of killing poultry. There are a great many indifferent methods and some very good ones. Inasmuch as indifferent methods of killing fowls are matters of utter indifference to the readers of agricultural papers, I shall pass them by, and endeavor to give a few practical suggestions that may lead to some slight improvement in dressing poultry. One method of killing chickens is to take the bird by the head and swing the body around two or three times rather quickly, which breaks the vertebræ and causes death speedily. Another is to give the fowl a sharp blow on the back of the neck with a small stick; this also causes death. Still another is to run a sharp penknife up through the roof of the fowl's mouth, penetrating the brain and causing death almost instantly. The method of killing poultry that suits me best and one in no way objectionable, is to tie the fowl's legs together and hang it up, head downwards, and with a sharp knife make a slit through its neck in such a manner as to pierce the principal vein. When the killing is performed in this manner, the fowl is thoroughly bled, and with birds whose feathers are valuable, it is the best possible method of killing. The feathers are perfectly clean and not disagreeable to handle.

There is another advantage in favor of this method and one which will bear mentioning; and that is, that in fowls whose heads have been cut off, the skin on the neck is drawn away down, which, to say the least, does not improve the appearance of the fowl. In the method which I have suggested, all this is avoided by first dressing the birds and then cutting off the heads before going to market. Even then, if the skin has a tendency to draw away from the neck, it can be tied over the latter.

The fowls should be picked while yet warm. They should be picked dry, if it can be done without tearing the skin. If this is tender and liable to be torn, which always spoils the appearance of poultry, then a single dip in scalding water for barely an instant will prove a certain remedy. Scalding rather improves the aspect of poultry, giving, I think, a fresher and better appearance to the fowl than if it were omitted. Some fowls, as geese and ducks, it will be found necessary to *singe*, in order to remove the fine downy feathers which can be removed in no other way. This is accomplished by making a good blaze with a quantity of paper, and then taking the fowl by the legs and neck and turning it once around in the blaze. A single instant will be found sufficient, and there will be no appearance of smoking or scorching.

After being picked, the fowl should be "drawn;" that is, the inside should be removed. The heart and liver and the gizzard, after having been cleaned, should be replaced. This is an operation that should be performed with great care. It is only necessary to make an opening large enough to insert the two forefingers. I have seen fowls almost ruined by "boggling" done in dressing. I have this much to say in reference to "drawing" a fowl—that no amount of instructions will take the place of actual experience. Too much care cannot be observed in order to prevent the fowl from looking "mussy." This is one of the cases where neatness "tells." After the fowls are drawn, they should be prepared for market. It is hardly possible they will be marketed the same day they are dressed; at least, they should not be, as they are not nice to handle. Take the larger birds, such as geese and turkeys; tie their legs together to facilitate hanging up; pass a cord around the body, confining the wings close to it. This will very much improve the appearance of the fowl in market and make it much easier to pack, if it is desirable to do so. After this has been all attended to and the fowl has been well washed, both inside and out, with warm water, and rinsed in clear cold water, it should be hung up in some cold room and allowed both to drip and stiffen.

If the fowls are to be sold to private customers, too much care cannot be exercised in preparing a good article in a neat manner. Purchasers are apt to take notice of carelessness, and are also sure to know when they have received a poor article. Let the fowl be a good one, and sell it for just what it is. Do not sell a five-year-old gobbler for a young turkey. Prepare the birds nicely, and if there is any profit in the business, poultry handled in this manner will be pretty apt to realize it. If the fowls are consigned to commission men or jobbers, let the same care be observed in preparing them for market. They should be closely and carefully packed in boxes or barrels and consigned to none but reliable dealers. And here the same good faith should be observed. The farmer should resist the temptation to slip in a poor fowl with the good ones. No box or barrel of fowls should be shipped without marking in plain letters the name of the consignee on the package. I think that poultry dressed and marketed in the manner I have suggested, will be found reasonably profitable—at least such has been my experience.

St. Lawrence Co., N. Y.

CONSTITUTIONS OF POULTRY.

HENRY HALES.

AFTER considering poultry as one species, it is not a little remarkable that the various breeds show a considerable diversity of constitution and longevity. Domestication not only brings out various colors and sizes, but every so-called breed of fowls differs in many other respects from the others, even as regards constitution and liability to certain diseases, some of which are known to have been imported with the birds; for instance, scaly legs—elephantiasis—was never seen in our poultry until its introduction with the Cochins and Brahmas. These grand, massive birds brought us cholera too; but at the same time they brought a constitution almost proof against cold. While all other breeds are more or less sensative to this, these heavily-feathered birds appear quite indifferent to it, and lay on through the coldest weather; whereas other breeds do not seem able to keep up enough internal vigor to make eggs in very severe cold. During chickenhood they are also very hardy and easily raised.

One would certainly expect the largest breeds to be longer-lived than the smaller ones, but this is not always so; the large Asiatics are not as long-lived as most of our ordinary-sized poultry nor do they keep up their laying qualities like many fowls. After they have attained the age of three or four years, they seem infirm, getting very fat when well fed, and unproductive, while Dorkings are not in their prime till they are two years old, and keep up their vigor for seven or eight years. I know of a Silver Gray Dorking hen ten years old, that still keeps laying. I had one eight years old that brought up two broods last year; but the Dorkings have not the constitution while they are young that the former have, but get strong when full-grown. Their principal weakness when young appears to be in the throats and breathing. They seem to outgrow their strength, for when they attain a certain size they are then hardy. Spanish fowls feather very slowly, and are sensative to wet and cold during their half-naked period. Leghorns, although of the same class, feather very quickly, and the Brown are specially hardy when very young; but are not hardier than most others when adult birds. They are then as much liable to roup as many other breeds. All the Hamburg family are predisposed to roup, so are Games and Bantams. The Polish are very delicately constituted; so are the French, of which the Houdans are the hardiest. The cross that produced the Plymouth Rocks seems to have grafted the weather hardiness of the Asiatics on the already comparatively hardy Dominique.

In giving this comparison of constitution, let it not be supposed that I recommend or disfavor any of the breeds on account of constitution alone; they have all their respective merits that are not to be overlooked. My object is now simply to classify their weaknesses, which every breeder should understand, especially the young fancier and farmer. I know there is a great disinclination among breeders of poultry to admit these facts; but why? They are sure to be found out sometime or other, and by knowing beforehand what to expect, one is better prepared to encounter or even prevent the ill effects of such constitutional weakness.

Sheep Husbandry.

A PROFITABLE SHEEP ACCOUNT.—On Nov. 8 Abel Hoyt & Son gave a statement in the RURAL of their gross income—$128 35—in one year, from a flock of 18 ewes and one ram. In our issue of Nov. 29 a N. J. correspondent, mistaking the gross for the net income, asked for an account of the outlay for keeping the animals. Messrs. H. & Son write us that their object in giving the account was to show farmers in different parts of the country what the entire income from such a small flock of sheep might be, each being able to judge best for himself what the cost of maintenance would be in his locality. In estimating the cost of keeping them, our correspondents offset two cows against the flock, or nine sheep to a cow. Eight full-grown sheep might be a fairer proportion, but five of these were yearlings or lambs. It is generally estimated that 2½ tons of hay are required to winter one cow; and hay in their neighborhood, Saratoga Co., N. Y., was worth seven dollars a ton last year in the barn. A small amount of grain was fed during lambing season. The usual price for pasturing one cow there is eight dollars, so that the account would be about as follows:—

Gross income		$128.35
Outlay—5 tons of hay, @ 7	$35.00	
Pasture	16.00	
Grain (estimated)	5.00	56.00
Net Profit		$72.35

With regard to care, all needed attention is thought to have been amply repaid by the manure.

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SATURDAY, JAN. 3, 1879.

A GLANCE BACK.

We have sometimes regretted that we changed the price of the Rural New-Yorker from $2.50 to $2 per year. We have no evidence that our increase of circulation is to any extent attributable to that cause; while, on the other hand, the lower price obliges us to be more cautious in continuing to make the marked improvements which have characterized the progress of the paper for several years past. Of those to whom we have sent specimen copies as many as ever reply that they would subscribe if we could make the subscription price less than it is. Now there are, no doubt, some progressive farmers and horticulturists who, while they are hungry for the best books and periodicals, are yet so poor that the difference of a dollar or even fifty cents in price would decide them to rest satisfied, for the present, with a lower grade of literature. With this class we sympathize. We would be happy if we could send them the Rural for 50 cents per year. But there is another class—a very large one too—that seems to have no appreciation of what constitutes *value* in agricultural journals, and a low price is the first if not the only requisite to engage their favorable consideration. We have no slurs to cast either upon this class or upon the cheap periodicals they choose to read. They have just as good a right to their opinions as we have to ours. The influence of an agricultural paper must largely depend upon the appreciation of its subscribers, and in this as in all things else, "birds of a feather will flock together."

We hope it may not be considered out-of-place at this time if we dwell for a moment upon the more marked improvements which have been made in the Rural New-Yorker under its present management and during the past two years and a half

First—Our columns have been filled by contributions from the ablest writers in the land. This has been freely admitted by the press in general, and even by leading agricultural and horticultural journals.

Second—With the exception of an occasional column or so under "What Others Say," the "Practical" departments of the paper have, without a single exception, been filled with *original* matter; and, to a considerable extent, the same may be said of the "Literary" departments.

Third—Nearly all of our engravings of farm, garden and orchard plants and fruits have been executed from drawings from nature by our own artists, and the same may be said of our building plans and farm contrivances—they have been drawn from original sketches or models. Now, if these had been old cuts that often "go the rounds" of both hemispheres, electrotypes of which may be purchased for a few cents per square inch, it would cost us less to use them than to fill the same space with a high grade of original writing. As it is, however, our drawings and engravings constitute one of our *heaviest* items of expense, to say nothing of the time, labor and research required to *obtain the subjects to be drawn.*

Fourth—We are the first, so far as we are aware, to have established experiment grounds in direct connection with journalism, an example we are gratified to see is likely to be followed by other journals who appreciate their great value in such connection. It is, however, to be regretted that the tendency is to copy after the objects and methods of the great Rothamsted farm of England, where Dr. Lawes for forty years has conducted a series of valuable experiments, the results of which are so trustworthy that little can be learned from their repetition even though other experimenters as rarely fitted in every way, could be found to conduct them. The object of the Rural's Experiment Grounds has been to test new plants and seeds, whether for the farm, garden or orchard; to produce improved varieties by cross-breeding, and to disseminate such rare and promising seeds and plants among our subscribers that, without expense, they may determine their value for their own lands. We are free to state that whether our labors in this field have or have not been serviceable to our readers, no mere profit to be derived from the income of the Rural New-Yorker alone will be likely to compensate us for the cost of maintaining and working these experiment grounds.

Last—We have somewhat improved the quality of the paper upon which the Rural is printed; we have enlarged it by lengthening its columns; we have improved the mechanical execution in every way; we have increased our editorial force in order to insure greater care and accuracy in every department. These, however, need not be dwelt upon, since they are improvements which might reasonably be looked for in any progressive, prosperous journal. We need not either dwell upon our Free Plant and Seed Distributions, for the reason that these are self-imposed offerings to our subscribers, which in every way we reserve the privilege to regulate to suit ourselves. But the cost is immense! We are afraid that few of our friends would *believe* us, were we to state in exact figures what these distributions have cost us during the past year. We have more than once paused to ask ourselves if the money could not be more advantageously expended. And the only reply has been another question which we could not answer, viz.:—"In what way?" Many of our friends have said to us: "Why send out such *costly* seeds? Would not the bulk of your subscribers appreciate just as well good, though well-known varieties of corn, wheat, oats, beets, lettuce, Zinnias, Lady's Slippers, etc., etc?" This may be true—we are half-afraid that it is. But this would upset the very *objects* of our distributions, and we should very decidedly prefer not to distribute plants or seeds at all. Our object is to send out *new* plants of great promise, with a view to promoting the farmer's or gardener's interests over the entire country; our object is to enable every one to test these high-priced novelties, so that if good, he shall derive the benefit—if poor, he shall not be the loser! As to the well-known seeds suggested in place of those we grow or select, every seedsman can furnish them in any quantities, and we are far from desiring to trench upon the seedsman's sphere of operations. Most of the seeds we offer cannot be purchased, or if they can, only in foreign countries or of the producer! This oft-repeated assertion of ours is as true as any words that can be spoken.

Rural Readers, it will be seen by you who have followed us long enough to be enabled to judge, that we are in deep earnest, and that we have indeed at heart, as our foremost errand, the advancement of the best interests of those whose income is derived directly from the soil. We have made you many promises—positive and implied—we have fulfilled them all, not, it need not be qualified, "to the best of our abilities," but in full to the very letter—and more. What shall we say for another year? Can we do better than to offer last year's work as evidence of what this year's work shall prove if life and strength be spared us? It has been usual to announce for the new year a list of contributors. This may well be omitted. All of our old contributors, so far as we know, will continue with us, and contributions from several new writers of equal ability and prominence will soon appear. The interests of all parts of our country shall be treated alike, as our widely distributed circulation permits. We solicit from all the freest possible criticisms of our course and of our work. Nothing that is well intended can give us offense, and we fully recognize the fact that we must first be conscious of our weak points before we can materially strengthen them. Articles upon any given subject of general interest will be furnished as requested. We solicit short, concise communications relative to any topic suitable to our columns. All questions will be answered either by mail or in our Querist department.

Finally we return to each and every one of our readers our sincerest thanks for their hearty support and cheering words. We have never entered upon a year with brighter hopes; with a better defined feeling that the Rural is doing good and that its sphere of influence is again to be enlarged. A Happy New Year to all! Let us work faithfully to advance our cause—the magnificent, inspiring, noble cause of agriculture—and may we at the end of the year have no less reason to feel happy than we have now at its auspicious beginning.

TWO QUESTIONS ANSWERED.

We have been requested by a valued correspondent "to write an article that shall answer such a question as this: 'Can a young man of education, accustomed to refined society, and with a keen appreciation of, and love for, the elegancies of life, support himself and family on a farm, say of 160 acres, without daily crucifying his tastes and feelings? Must he see an uneducated, boorish laborer at his table every day?'"

To the first question we should say, Yes, to the second, No. Can he support a refined family at all on such a farm? Yes, if he has shrewdness, diligence and push, and *understands farming.* Otherwise not. He cannot support them by working as a tailor, shoemaker, blacksmith, merchant, doctor or lawyer, unless he has learned the trade well or studied the profession thoroughly. Why should he be able to do so as a farmer? He cannot make a living by the other callings without shrewdness, diligence and enterprise. Why should he on the farm? The more of these qualities he has, and the better he has learned his trade or profession, the greater will be his success in the other pursuits; why is not the same true on the farm? The days are past when "any fool could be a farmer." Real success in farming requires just the qualities the man in our question is supposed to have. Of course, his wife, and his children, when of suitable age, will need to be co-workers with him, just as they would need to be if he were a mechanic or tradesman. Nor is this inconsistent with refinement. Labor is not necessarily degrading.

But the gist of the question is, can he do this *without daily crucifying his tastes and feelings?* Unhesitatingly we answer, Yes. Such crucifixion must come, if at all, either from his *work* or his *associates, i. e.,* his hired help or neighbors. But very little of the ordinary farm-work is necessarily disgusting. The care of orchard, garden, vineyard, grainfield, may be made a constant delight. Every tree, shrub and plant is an object of interest, and their growth and development are full of daily surprises and enjoyment. Every colt, calf and lamb may be a friend whose society shall not be degrading, and whose gambols are graceful and delightsome. Every farm process taxes the judgment and ingenuity, at least if wisely performed. The use of the various implements and machines requires and develops skill. There is little monotony on a well-managed farm—none to compare with the dead and dreary monotony of shop or factory or huge mill, where, in the minute divisions of labor, the laborer is made a cypher or automaton. The man who, day after day, feeds iron to a nail-cutting machine, or boards to a planer, becomes in time scarcely more than a part of the machine.

Now it is not so with the farmer described in our correspondent's question. *He* will know enough of the geology and chemistry of soils to make him long to know more, and this makes him a constant student; enough of the botany and chemistry of plants to make him watch their growth and development with intelligent, inquisitive delight; enough of the anatomy and physiology of his dumb beasts, and of the laws of their development and improvement, to make stock-breeding to him a science, an art, and not a low, obscene and debasing trade. And so with the endless, round of ever-varying work that occupies the intelligent farmer. It all tends to arouse thought and study in a mind *once trained to habits of study.* There is the constant delight of novelty and change. There is nothing to dwindle a man into a cypher; even the automatic work of the farm need not have this effect. Such work as plowing, harrowing, driving crops to market, etc., are tasks that require no special mental attention, but set the mind free for planning for the future or for careful thought on questions of agriculture, mechanics, political economy, etc., connected with and suggested by such work. And the occasional unpleasant work need not be any "crucifixion." The proper saving, making, and application of manures are a science. The mud, manure, or filth, need not stain the farmer's character, or defile his tastes, any more than they do his feet through the impervious texture of his rubber boots. "Not that which goeth into the man defileth the man," said our Lord. Much less that which may chance to soil his hands or his clothing in his necessary labor.

So then this "daily crucifixion" need not come from the occupation of the farmer. Must it come from his *necessary* association with hired help? This association may be both while eating and resting in the house, and while laboring in field or barn. This brings us to our correspondent's second question. "Must the educated and refined farmer see an uneducated, boorish laborer at his table every day?" This, we suspect, is the real trouble! We fear our correspondent has sat at meals with men in barnyard boots and overalls, shirt-sleeves rolled up, and with sweat offending eye and nostril. Perhaps he has seen them, Blitz-like, half swallow their table-knives with every mouthful of food, heard them suck their soup from their spoons, or even drink their milk or coffee with a strong, loud inspiration of the breath that proved anything but an "inspiration" to his appetite. Or he has seen them daily bolt their food with the savage and indecent haste of a herd of pigs, or of railway travelers with the conductor's "All aboard!" ringing in their ears. For we have seen worse violations of table-etiquette and common decency, and suffered worse "crucifixion" at first-class hotels and restaurants than ever at any farmer's table. Not always under the pressure of haste, either, and often deliberately committed by men whose diamond studs and nicely fitting garments proclaimed them gentlemen, but whose manners marked them as boors.

Now the question is, "Need these things be so in the house and at the table of a refined gentleman who happens to be a farmer?" This opens up the whole subject of the *choice of, and association with,* farm help; a subject so important and many-sided that its consideration must be deferred another week.

With the return of good times after a period of depression, a rise in prices is naturally to be expected. The possession of money has a tendency to induce people to buy goods which they managed, sometimes at considerable inconvenience, to do without in the days of slim or empty pockets. A full pocket-book, is also a strong inducement to supply a hundred and one things which one could well dispense with in the absence of so welcome a persuader. All this increases the demand, while the facilities for increasing the supply are more slowly brought into full operation, and in the meanwhile, according to the inevitable principles of trade, prices must go up. Then again, timid capital gets bold in good times, and undertakes many new works, thus adding to the general prosperity, and especially to the prices of the commodities it chiefly uses in these undertakings.

On the above accounts and on others, farmers must expect and be prepared to pay considerably higher prices for most, if not for all, of the implements and machinery they may need the coming spring. Wages have in many cases been lately raised; the cost of materials are in all cases higher than a year ago; manufacturers are seeking to reimburse themselves for the slim profits of late years; middlemen are stimulated by the general good times to make all they can from all parties, and, as usual, the farmer must expect to contribute largely to the support and enrichment of all other classes.

Ever since the Philadelphia Centennial Exhibition of 1876, New York, as the commercial metropolis of the nation, has been earnest in its determination to hold a World's Fair that should far transcend that provincial show. Arrangements are almost completed now for carrying this resolution out in 1883. Last Tuesday there was a meeting of the Executive Committee held in this city, which Secretaries Sherman and Deven attended. With his natural clear-headedness, the former pointed out strongly the paramount advantages of New York for such an exhibition, and urged that it should be made to excell not only the Philadelphia affair, but everything of the kind that had ever before attracted the admiration of the world. Anyhow, there's going to be a World's Fair here in 1883, and a big one, too.

BREVITIES.

The corn premiums offered for the best yields of Blount's corn will be awarded immediately after New Year, and the announcement of the winners will be made in the Rural of Jan. 17th.

The "possibilities of an acre" of wheat must be something indefinitely high, since "Everywhere" tells us from Huron Co., Ohio, that in some places actualities there amounted to 51½ bushels. There must have been a world of tillering to produce that result. It would be interesting to know whether the seed was sown in accordance with the conditions which Professor Stockbridge, elsewhere in this issue, describes as most conductive to that end. Out in Montana, however, the Territorial Fair Association lately awarded the first premium for the best acre of wheat to a yield of 102 bushels—very nearly double the large Ohio yield. Has any one ever heard of a larger yield—outside of Munchausen land? We haven't.

Literary Miscellany.

THE IRON GATE.

[A POEM delivered by Dr. Oliver Wendell Holmes, at the celebration of his seventieth birthday.]

WHERE is this patriarch you are kindly greeting?
Not unfamiliar to my ear his name,
Nor yet unknown to many a joyous meeting
In days long vanished—is he still the same?

Or changed by years, forgotten and forgetting,
Dull-eared, dim-sighted, slow of speech and thought,
Still o'er the sad, degenerate present fretting,
Where all goes wrong, and nothing as it ought!

Old Age, the gray-beard! well, indeed, I know him—
Shrunk, tottering, bent, of aches and ills the prey;
In sermon, story, fable, picture, poem,
Oft have I met him, from my earliest day.

In my old Æsop, toiling with his bundle—
His load of sticks—politely asking Death,
Who comes when called for—would he lug or trundle
His fagot for him?—he was short of breath.

And sad "Ecclesiastes, or The Preacher,"
Has he not stamped the image on my soul,
In that last Chapter, where the worn-out Teacher
Sighs o'er the loosened chord, the broken bowl?

Yes, long indeed, I've known him at a distance,
And now my lifted door-latch shows him here;
I take his shriveled hand without resistance,
And find him smiling, as his step draws near.

What though of gilded baubles he bereaves us,
Dear to the heart of youth, to manhood's prime;
Think of the calm he brings, the wealth he leaves us,
The hoarded spoils, the legacies of time!

Altars once flaming, still with incense fragrant,
Passion's uneasy nurslings rocked asleep,
Hope's anchor faster, wild desires less vagrant,
Life's flow less noisy, but the stream how deep!

Still, as the silver chord gets worn and louder,
Its lightened task-work tugs with lessening strain:
Hands get more hopeful, voices grow more tender,
Soothe with their softened tones the slumberous brain.

Youth longs and Manhood strives, but Age remembers,
Sits by the raked up ashes of the past,
Spreads its thin hand above the whitening embers,
That warms its creeping life-blood till the last.

Dear to its heart is every loving token
That comes unbidden ere its pulse grows cold,
Ere the last lingering ties of life are broken,
Its labors ended, and its story told.

Ah, when around us rosy youth rejoices,
For us the sorrow-laden breezes sigh
And through the chorus of its jocund voices,
Throbs the sharp note of Misery's hopeless cry.

As on the gauzy wings of fancy flying,
From some far orb I track our watery sphere—
Home of the struggling, suffering, doubting, dying,
The silvered globule seems a glistening tear.

But Nature lends her mirror of illusion,
To win from saddening scenes our age-dimmed eyes.
And misty day-dreams blend in sweet confusion
The wintry landscape and the Summer skies.

So, when the iron portal shuts behind us,
And life forgets us in its noise and whirl,
Visions that shunned the glaring noonday finds us,
And glimmering starlight shows the gates of pearl

—I come not here your morning hour to sadden,
A limping pilgrim, leaning on his staff—
I, who have never deemed it sin to gladden
This vale of sorrows with a wholesome laugh.

If word of mine another's gloom has brightened
Through my dumb lips the Heaven-sent message came;
If hand of mine another's task has lightened,
It felt the guidance that it dares not claim.

But, oh, my gentle sisters, oh, my brothers,
These thick-sown snow-flakes hint of toil's release;
These feeble pulses bid me leave to others
The task once welcome; evening asks for peace.

Time claims his tribute; silence now is golden;
Let me not vex the too long suffering lyre:
Though to your love untiring still beholden,
The curfew tells me—cover up the fire.

And now, with grateful smile and accents cheerful,
And warmer heart than look or word can tell,
In simplest phrase—these traitorous eyes are tearful—
Thanks, Brothers, Sisters—Children—and Farewell!

IN FOLLY'S NET.

(Continued from page 845.)

"Her prayer was heard and answered; she was saved from that terrible sin, she locked away the poison. I have but little more to say, gentlemen of the jury; confidently I leave the rest in your hand. It is for you to decide whether the prisoner at the bar be guilty of the crime of which she is accused—whether the woman whose life we have traced back in its gentleness and purity, who has borne trial nobly, and defeated temptation grandly—be one likely to sink to such depths as these! If she had been accused of having taken a knife in her despair, and sheathed it in her husband's heart, you might have believed that; but of such a cold-blooded crime as this she is incapable, it is not in her nature—it would be impossible for her to commit it!"

Sir David sat down with his face as calm and impassive as when he had risen; but ere he sat down he gave one glance at the jury. It was enough—a slight smile flashed over his lips—that one glance had told him what he wanted to know, and when they went away to deliberate he knew what their verdict would be.

Jean did not move—she still kept the same posture, with her fair face half-hidden on her maid's shoulder. Once she had murmured a few words in answer to a question from Collins, but that was all. Those who loved her watched her with anxious eyes; there was something in this unnatural stillness and calm that had a more horrible dread for them than the wildest distress or passion of terror could have had.

CHAPTER XXVIII.

"BECAUSE I LOVE YOU."

IT had been almost spring-time when Jean Blair had been tried for her life, and the summer was past and gone before she was able to leave her room after the long and serious illness which had followed the trial, and during which she had been unconscious of all that passed around her—of the anxiety of those who cared for her, or of her own danger. A burning fever consumed her, her eyes were without light or sense, her lips were parched and dry, and the loud, uneven panting beats of the poor heart which had suffered so much, could be seen when the little, hot hands hung the coverings off her aching chest. Her only cry was for "water, water;" for thirst consumed her with an intolerable torment.

It was terrible to see her suffer thus; each unconscious sigh that broke from her, each movement of the fevered, aching limbs, each look of anguish from the sleepless, sightless eyes, rent the loving hearts which watched by her bedside and did all to alleviate her bodily suffering that was in their power.

But more heartrending than even her bodily pangs, to those who tended her, were the indistinct, unconnected, wandering words which escaped her lips; sometimes she was in the prison, longing for yet dreading the trial; then she was in court with the hundreds of eyes upon her; at other times she was in the past, in the fresh, fair scenes, before trouble had touched her; before she had suffered and borne—sometimes she thought herself with Lord Ivor, happy, beloved, and loving; and then a terrible shadow would cross her face, and she would relapse into silence for a time.

But she was young and strong, and in the end youth and strength conquered; after many weeks of suffering the fever left her, and consciousness returned. It left her weak, feeble, helpless as a child, but the recovery was but a work of time, the doctors said—she would soon get stronger now.

She was at Sholto Hall all this time, for Blair Gates was closed. Mrs. Fergus Blair, having been defeated in her object, had returned to Edinburgh, and Blair Gates was tenanted only by the servants. Mrs. Brett had left the neighborhood—none knew whither she had gone. By Mr. Blair's will she had been left well provided for, and she had had few friends among the household. Freeman, the steward, was looking after the estate. Lord Sholto rode over sometimes and thought of the rich demesnes which were now in Jean's possession, and which could not, for many years, if ever, give her any pleasure.

Lord Ivor had spent most of his time at Sholto Hall, for though he never saw Jean, he could not have borne to be away from her at such a time; his anxiety at her dangerous illness had been very great—so great, that he had wandered about the house and grounds, looking haggard and miserable, and utterly wretched. But at last the change for the better had come; Jean had been pronounced out of danger, the heavy shadow of gloom which had hung over the house had been lifted, the servants went about their duties with cheerful countenance once more.

Ida Crawford's fair young face brightened, and her sweet voice could be heard singing about the pretty rooms; and Captain Murray, who had behaved in a most exemplary manner during the long, anxious time through which they had passed, began to grow eloquent against such a long delay, and to press for an early date for the marriage.

On his first interview with Jean, he had won her over to his side; and when he had left her she had sent for Ida, and pleaded the cause which was already nearly won.

"Do not let me think that I have brought suffering on all whom I love, Ida," she said, softly. "I do not want your husband to dislike me because your pity for my unhappy fate makes you keep him waiting. Let it be as he wishes, dear, and may you have every happiness!"

So Captain Murray prevailed; milliners and dressmakers were called into play, and when the autumn was turning the fair green leaves red and golden before the wintery winds swept them to the ground, a fair young bride knelt in the parish church at Sholto, and plighted her troth "for better or worse." And when the ceremony was over, she came in her sweeping white robes, with the lace veil still on her orange-blossom crowned brow, to show herself in her bridal finery to Jean as she lay white and languid on her sofa, and smiled her welcome with such sweet tenderness, that Ida's lip trembled as she kissed her, and Captain Murray bent to touch the little frail hand held out to him reverently as he might have touched a queen's.

It was a quiet wedding, and followed by no ball. In the afternooon the bride and bridegroom drove away together, and Lord and Lady Sholto as they stood and bidding them farewell, wished them "God-speed," thought of another bride and bridegroom who had left Sholto Hall scarcely a year ago under such very different circumstances.

Quiet as it had been, of course the wedding had brought many guests to Sholto Hall—relatives of the bride and the family of the bridegroom; and in her quiet little sitting-room sounds often came to Jean of the life and gaiety which reigned below. She was much alone just now, for Lady Sholto's time was much taken up by her visitors; and now that Ida had left, many hours would be necessarily lonely, for Lord Sholto's sister had conceived a deep and heartfelt admiration for Jean's behavior during her trouble, and had spent every spare moment by her side.

"You need not light the candles, Collins," she said to her maid, in the evening of Ida's wedding-day. "I like the firelight now. I am so lazy, lying here."

"Very well, ma'am," Collins said, quietly. "Lord Ivor wishes to know if you will receive him this evening—if it will not tire you."

"Oh! no," Jean answered, quietly. "Tell his lordship I shall be very glad."

A few minutes after the Earl entered the room, which was lighted only by the pleasant dusky light of the fire, which was blazing cheerily, and lent a warm touch of color to Jean's pale cheek as she lay on the cushions, and held out her hand to him with her old bright smile.

"I want to hear all about the wedding," she said, with a touch of her old gaiety. "Florence had not time to tell me. I only know that the bride looked lovely and the bridegroom radiant, for that I saw for myself."

"Everything passed off very well," he answered, pulling a deep arm-chair over to the fire, and ensconcing himself easily therein in an attitude of careless ease, and in a position whence he could watch the sweet, wan face, so precious to him still. "The bride, as you say, looked lovely! Murray was beside himself with happiness, and the speeches were quite *en regle*: there was no opportunity to quote the well-worn saying, 'Lost a daughter and gained a son,' you know; but I am sure everything else was said that is usual on such occasions."

Jean laughed softly; it was an uncommon occurrence for the Earl to come and spend a long afternoon or evening with her in her solitude, and since her illness he had been almost constantly at Sholto Hall. He had not spoken of love to her, and they had drifted into a warm, close friendship, which satisfied Jean, and appeared to satisfy the Earl; but he was only waiting—waiting with all the patience of a deep, true love—for the time when he should deem it right to speak to her of the old relations between, and ask for their renewal.

Perhaps the sight of Captain Murry's happiness had given a spur to his impatience; perhaps, the great love he bore Jean would wait no longer; perhaps he thought that the nine months which had elapsed since Mr. Blair's death were sufficient. Be it as it may, he had come to her this evening, making up his mind to put his fate to the touch, and "win or lose it a'."

"And you returned thanks for the bridesmaids as best man, I suppose?" Jean said. In a moment "What did you say?"

"I escaped that penance," he answered, laughingly. "Ida agreed with me in thinking that the proper thing is for the youngest groomsman to do so; and little Trevena made a capital speech, only breaking down once, when he looked at Lucy Greville, and found her pretty blue eyes fixed admiringly upon him. I should not be at all surprised, Jeanie, if there was another wedding ere long in which Trevena and Lady Lucy take prominent parts."

"He is a nice fellow but too young to think of matrimony, surely."

"He will be soon of age," said Lord Ivor. "The best thing he can do is to marry young, because he has time to play ducks and drakes with his property."

There was a short silence, then the Earl leant forward where he sat, and said softly:

"Jean when am I to be made happy?"

She started violently and the great brown eyes, so much larger and sadder since her illness, went to his face with a sudden dread in their depths, while the color flashed up for a moment into her face, giving it back almost its old beauty and brilliance.

He drew near her, and took the little slender hands tenderly in his strong clasp.

"I do not want to startle you, dear child," he said, caressingly; "nor to distress you in any way; but, darling, I have had a weary waiting, and I have been patient; when may I have my reward?"

"Your reward!" she repeated, vaguely.

"Yes, my reward—your love!"

The rose-flush faded, and a shudder ran through Jean's slender frame. She knew that this moment must come, and she had dreaded it with an unutterable dread; now that it had come, she had hardly strength to bear it. She lifted her little hands, and covered her face with a sob.

"I have startled and agitated you," he said, tenderly. "Forgive me, darling; I ought to have remembered that you were not strong yet. I will not urge you further, Jeanie; but surely you can give me one word—only one word, to tell me that your love is mine still—that soon you will give me the right to take care of you and cherish you."

She answered him nothing. Lying there still, with her hands hiding her face, she shuddered as if in dread, as if in terror.

"Is it that you have ceased to love me?" he said, suddenly, and his voice grew hard and cold.

She uncovered her face, and as her eyes met his, the look of reproachful love was sufficient answer; the momentary doubt faded.

"Forgive me, darling," he said, penitently. "That was a cruel speech. See, I will not tease you any further. You shall answer me when you will, dearest child; but remember, Jeanie, that I have loved you so long, and that I have waited patiently."

He rose from his chair as he spoke, and went over to the piano, while Jean turned her face to the cushions and cried softly, as in very weakness and terror of the answer she must give him.

The Earl sat down and opened the piano; he was an accomplished musician, and often, during the languor and debility which had weighed upon Jean in the first weeks of her recovery, he had spent hours unwearied at the piano, trying to sooth and cheer her. Now, as his fingers wandered over the keys in some of Beethoven's softest melodies, Jean's tears flowed fast and unrestrainedly as she lay with her face hidden from his gaze. Softly the Earl played on; from where he sat he could see the bowed head and slender, recumbent form; he had not meant to pain her, but he felt an undefined dread of what her answer would be, which he strove to set aside in vain; and so watching her, he finished the sonata, and played a sweet, dreamy prelude. Then his rich tenor voice rose clearly and sweetly in the silent room:

"The love that deep within me lies,
Unmoved abides in conscious power;
Yet, in the heaven of thy sweet eyes,
It varies every hour.

"A look from thee will flush the cheek,
A word of thine awaken tears;
But, ah! in all I do and speak,
How frail my love appears!

"But storms may rise and thunders roll,
Nor move the giant roots below;
So, from the bases of the soul,
My love for thee doth grow!

"It seeks the heaven, and trembles there
To every light and passing breath;
But from the heart no storm can tear
Its rooted growth beneath!"

The song came to an end; the singer arose, and crossing over to Jean's sofa, gathered her in his arms to his heart.

"Even so do I love you, my darling! Can you be insensible to such love?" he murmured, tenderly.

"Not insensible, ah, no!—not ungrateful, ah, no!" she said, passionately, as she strove to release herself from his clasp, and lifted her wet eyes to his face. "It is but too precious to me, Archie; and because it is so precious, I cannot accept it!"

"Cannot!" he repeated. "My dearest, you took it long ago, and you have never given it back. I will not take it back, Jeanie!"

"But you must, dear!" she said, gently. "Archie, listen."

"I am listening," he said, softly, looking at the fair face on his breast with infinite love and compassion. "Say on, my dearest!"

"You will not be angry? I cannot bear your anger," she pleaded.

"Angry with you, Jeanie! Is that likely?"

"It is possible!" she said, sadly.

"I think not! Try me, love!"

She shivered as he held her. How could she say to him what she meant to say—what she must say!

CHAPTER XXIX.

"Archie!" said Jean, at length, with her wet cheek resting against him, and her eyes seeking his with a prayer in their depths, "it is very hard to say it to you—but I must; and you will not be angry, because you know how I suffer in speaking the words which will part us?"

He smiled, holding her closer to his heart.

"You must believe me," she went on, with feverish earnestness, "and you must make it easier for me, Archie! I will never bring disgrace on the one I love—I love you too well to accede to your wishes!"

"Disgrace!"

"Yes, disgrace!" she repeated, more steadily. "Think what I am, Archie, a woman who has been tried for her life—a woman on whom the stain of imputed crime lies heavily still! Remember the verdict was "Not Proven," it does not clear one of guilt because the crime was not proved against me!"

"It means the same thing, Jean. What foolish scruples are these!" he said, quickly. "Are you going to break both our hearts with this folly?"

"Not break yours, my dearest, I trust," she said, trying to smile. "You have not considered enough, Archie; your ancient name and stainless lineage shall receive no blot from me, and hundreds deem me guilty still; hundreds would say you had wedded a—a——" her voice failed.

"Hush!" he said, passionately, "how can you soil your lips with the word? If it be as you say there is all the more reason for you to accept the shelter of my name. Who will dare to accuse you when you are my wife?"

"I will not bring shame to you, Archie!" she repeated, drearily. "I will not, because I love you!"

"Even if you should, I love you enough to bear the shame gladly," he said, quickly. "Jean, you are breaking my heart!"

"No—no!" she said, in a tone of pain. "It is to save you pain that I speak! Dear, the time would come when you would regret the sacrifice—when you would wish you could undo what you had done!"

"Do you think me so base and so cowardly?"

"Ah! no! I know you to be noble and good. I know that you would never say one word to remind me of my shame; but I should see it in your face, Archie—I should read it in your eyes; and one look would kill me, Archie for I love you!"

"Have you considered?" he said, passionately. "You, who speak so coldly and dispassionately, have you thought of what life will be in the future if you are to be alone? If the world casts shame upon you, will it be easier to bear without the shelter of my love? Can you fight alone better than when I am at your side?"

A look of infinite sadness and desolation came into her face.

"Easier?—better?" she repeated, faintly. "Without you! Ah! no; and yet it must be, Archie!"

He turned from her with a gesture of impatience.

"So my love is nothing to you?" he said, angrily. "Do you not care that I suffer? Jean, there are times when you make me doubt your love!"

A little cry of pain broke from her, her head sank, her hands were pressed together like one who suffers beyond her strength; but she gave no sign that she yielded. She loved him with an unutterable love, but she would not accept the happiness he offered—she would not seek his tenderness in her shame; for she spoke but the truth when she said the stain of crime lay heavily on her still. She loved him *too* well to become his wife.

In proportion to her love was her agony—there was no consolation possible to her. It would have seemed mockery beside the supreme renunciation of this living sacrifice of her intense love, which gave itself to misery and desolation without a thought of its own devotion, without a glance at its own unasked and cruel self-immolation.

He watched her in silence, never thinking but that she would yield in the end, never thinking

she would refuse the love and tenderness he offered. He spoke truly when he said she needed the shelter of his name and of his devotion. As Countess of Ivor the world would have been chary of casting a stone at her; as Jean Blair, alone and unprotected, they would have an additional weapon in the fact that even he who loved her had forsaken her.

The light of the ruddy fire fell full upon her face as she stood, showing plainly the ravages her trouble had made; and lifting her eyes, she let them dwell on him with a love he could not but see and feel—and, seeing it and feeling it, he came back to her, and sank on his knees beside her.

"Ah! forgive those cruel words," he murmured, tenderly. "Darling, you are trying me sorely, and I have no more patience. Put your hands in mine, sweetheart, and tell me that you will accept the love I offer—that you will be my wife!"

"No," she repeated, drearily, "no."

"No!" He rose and moved away; she looked after him with yearning eyes, and her lips trembled at the anger and pain on his face.

There was a pause then—there was a lifetime of anguish to her concentrated in the few moments which followed.

"Is your decision irrevocable?" he said. "Could no change of circumstances alter it?"

The stony calm of her face broke, a gleam of hope shone in her sad eyes.

"Only if my innocence were clearly proved," she said, faintly.

"Not otherwise, Jeanie? think to what misery you are condemning us—think of your own loneliness—think of my anguish!"

"Better loneliness than worse pain—better a short anguish now than a lifetime of misery," she said, in a voice of one in deadly pain.

"You send me from you?" he went on, in a low hoarse voice.

"I cannot bring you shame."

"If I am willing to accept it?" he pleaded, more gently.

"I cannot bestow such a gift, Archie," and she stretched out her hands to him in passionate entreaty; "do not leave me in anger."

He sprang to her side again, caught her in his arms, covering her eyes, lips, hair, and her little thin hands with the closest kisses, and the red blood rose in her wan cheek under his touch.

"You will have pity on me, Jeanie? Darling, I am trying to be patient, but you are taking from me all my happiness"

She tried to disengage herself, but he held her close.

"You will not send me away?" he cried. "You will not—Jean—you will not!"

"I must," she said, faintly.

He flung himself away from her with a passionate exclamation of pain, covering his face with his hands. She stood watching him with a hopeless agony on her face.

"I must," she repeated; "do not let your last words be angry ones. I love you—I shall always love you, but I cannot bring you disgrace!"

"You never loved me!" he said, fiercely.

"I love you but too well," she answered, gently.

"Then why condemn me to misery?" he said, more softly.

"Why? Because of that love."

He watched her for a moment with wonder, and admiration, and reverence; he loved her well, truly and deeply, but he never loved her with such a love as that!

Going to her side, he took her hands in his.

"I love you," he said, gravely and quietly. "I love you with my whole heart. Nothing can change my love. You send me from you and I go, but if ever you wish to recall your decision, a word from you will bring me to you again."

He stooped and kissed her as he spoke—a grave, long, tender kiss, in which was no passion now.

"We can be friends," she answered, tremulously. "You know I am leaving Shotto soon; the doctors tell me I must not winter here. I am going southward with the swallows," she added, forcing a smile. "Meanwhile we can be friends, can we not?"

"No, friendship is possible between us," he said, brokenly. "I cannot be your friend, Jeanie. If you are ever in trouble, and need a friend's assistance—send to me then, and I will come, I will be your friend."

He waited a moment longer, but she did not speak; her eyes dwelt on him with a long, lingering glance, in which was a hopeless melancholy, a long farewell; then he dropped the hands he held in his clasp, and left her, not daring to speak again, to her loneliness.

She stood for a moment as he left her; her tears fell fast and heavy down on the clasped frail hands—she was so lonely, so alone now; and her heart ached for love, her youth craved for happiness, as a thirsty man craves for the cool water to quench his thirst, and both were denied her.

CHAPTER XXX.

SLOVALE AND ITS GOSSIPS.

The place which Jean had chosen for her winter residence, and whither Collins accompanied her, as soon as she was able to bear the journey, was a lovely little Devonshire village, nestling in a valley, rich in all nature's loveliness, and hidden away in the heart of that fairest of all England's counties. It was a quaint, sleepy little place, with but little changes as the years passed on, save in the outward face of nature, the change of the seasons; the fair, tender colors of spring, the richer glow of summer's beauty, autumn's splendid, fiery magnificence, and winter's grave, cold sternness, succeeded each other in due course; a few lives began, a few ended there, as time went on, but the village itself slumbered on. There was little poverty there and little vice, but there was as much meanness, as much petty envy and jealousy, ay, and more, than in larger towns, where if crime is more frequent, charity is wider, and pity more generous.

Thither Jean had gone to recover health and strength in the mildness of its soft air, in the shelter of its wooded hills. Collins was with her, and two or three of the servants from Blair Gates who loved her, and who asked to go with her; it was but a modest little establishment for her wealth, but she cared for no more; she only wanted to forget, and in Mrs. McLeod (for she had retaken her maiden name), she hoped to pass unknown and unnoticed.

Lord Shotto had taken a house for her—a quaint, pretty little villa, which they had made as dainty and luxurious as possible, so that her arrival was rather eagerly looked for by the residents of Slovale, consisting chiefly of the members of decayed families, who prided themselves on their respectability and position, and were generally poor and arrogant, and sticklers for "birth and connections."

To these people the new tenant of Bellevue was an object of absorbing interest; that she was rich seemed evident, for all the appointments of her house, though simple, were of the best and most costly; the two horses in her stables were thoroughbreds, her one carriage was perfection; her staff of servants—three maids and a man—seemed large for one lady; a gardener and a stable man completed the establishment—small, indeed, in comparison to the household at Blair Gates or at Shotto Hall, but large in the eyes of the residents at Slovale

They learned that she was in delicate health, and young. Would she receive visitors, and go into society, they wondered. And very soon after her arrival that point was settled, for in answer to their calls, Jean sent prettily worded thanks and apologies, but said her health did not permit her to go into society.

On the first Sunday after her arrival the congregation at the parish church were all on the *qui vive* to see her, and more than one head was turned to look at the slender, graceful figure which came up the aisle in sweeping mourning robes and crape-covered face When she lifted her veil, there was eager curiosity to see the face it had concealed—a face unutterably sad and weary, but very fair to look upon. Then the calls had not been made, nor Jean's apologies for not receiving visitors, so Slovale was prepared to receive her warmly, and she was pronounced to be "very pale but pretty, and very good style."

But as days went by, and Mrs. McLeod showed no desire to become better acquainted with her neighbors, opinions began to alter; she was pronounced cold and still, the languor of her manner was dubbed affectation, her retirement insolence, even the pale beauty of her face lost its meed of admiration; she was sallow, her face wanted expression, while as for her figure, who "ever saw any beauty in a maypole?"

One or two of the gentlemen of the coterie were more generous; they saw Jean outwardly as she was, a beautiful, graceful woman, with suffering written distinctly on her face—suffering borne and conquered, but which had left its scars.

One friend only had Jean made: the clergyman of the parish had called upon her, and she had been pleased with his unaffected kindliness of manner and holiness of life. He was a young man, earnest and devoted, and not very long married; his visit had done Jean good, and she had entered warmly into his schemes for the improvement of his parish and the benefit his parishioners.

"If I can help you," she said, "I shall be very glad. I am rich, and have but little use now for my wealth."

When he rose to go, she held out her hand with some of her old sweet grace in the gesture.

"My wife would have called," he said, coloring a little, "but she is not yet strong."

"I know," she said, smiling "I heard that a little angel-life had fluttered into your home-nest lately. I shall be glad to see you again; and if you think it right to bring her, it will give me great pleasure to see Mrs. Moore."

"If I think it right," he repeated. "What do you mean, Mrs. McLeod?"

"Sit down again," she said, with a faint smile, "and I will tell you. When you know my name you will know all. McLeod is my maiden name, My husband's name was Andrew Blair, of Blair Gates."

There were a few minutes' stillness and silence, then Jean went on:

"Yes, I am that most unhappy woman," she said, sadly. "I was accused of the murder, and the verdict was 'Not Proven.' That many think me guilty, I cannot doubt; but those who knew and loved me did not distrust me for one moment. May heaven bless them for that generous belief in me!" she added, brokenly.

"You read the trial, Mr. Moore?" she said, in a moment.

"Yes," he said, hesitatingly; "I read it."

"And you deemed me guilty?" said Jean, lifting her clear eyes to his face for a moment.

"Yes," he answered, frankly. "And the verdict surprised me. It does so no longer," he went on quickly. "I believe you innocent, Mrs. McLeod. Yours is a face which cannot lie."

"You will keep my secret," she said, smiling faintly, as she held out her hand to him. "I need scarcely ask it. But if you bring your wife to me, Mr. Moore, you must tell her first. I can have no friends unacquainted with my past."

"I will tell her. As soon as she is able she will come to you," he said, and as he bent down in farewell, he touched her hand to his lips with as much reverence as though it had been the fingers of an empress.

So there was a close intimacy between the Rectory and Bellevue, and the other residents at Slovale were angry thereat. What right had Mrs. Moore to give herself stuck-up airs? She was not too unwell to receive Mrs. Moore, and to have the child at her house for hours together, and to go out driving with the Rector's wife. Public opinion was bitterly against her, and the winter passed by heavily enough to poor Jean, her only pleasures being the society of Mr. and Mrs. Moore and an occasional letter from Shotto Hall and Lord Ivor, who tried to write in a friendly tone, but whose deep love would break out in spite of his efforts to restrain it; and sometimes his letters had a yearning sadness, which made Jean's heart ache as she read.

She heard of him often, for he had thrown himself with all his energy into his political career, and was making himself famous. Jean's heart beat high with triumph as she read of his; her eyes flashed, her cheek brightened, she was almost happy then. Once, in a Court journal, she saw his name coupled with the name of one of the fairest *debutantes* of the season, a girl whom she had known and liked; and although her color failed and her eyes grew dim as she read, she tried to think she was happiest because his life was brightening, and in her next letter she sent a few tender congratulatory words, which came, as she told him, from her heart.

By return of post came the Earl's reply: It was shorter and colder than any letter she had ever received from him, and it gave a distinct and unhesitating denial of the assertion in the newspaper. Poor Jean was inconsistent enough to feel all the happier after the arrival of that letter.

"I wonder who the man was who was spoken of in the trial by Sir David Carnes," said little Mrs. Moore one day to her husband. "Don't you remember, George, she said she had refused to go to the ball because she was afraid of meeting him; I wonder why he did not marry her after the trial?"

"Perhaps he did not care to bear her shame with her," said the Rev. George, dubiously.

"Or perhaps she did not care to let him share it," said the little wife, gently. "And yet, if he had given her his name, they could have gone abroad and no one would have recognized her."

"He may have been some man of high rank, whose actions are always before the public," said the Rector, meditatively.

"Perhaps. I wish she would look less sad, George. It is dreary here for her."

"She is tranquil, at least, dear wife, and we will keep her secret," said the Rector, as he dismissed the subject, and turned to his interrupted sermon.

But though they kept her secret well and faithfully, it oozed out—by what means no one ever knew; but envy and malice have better eyes to discover than love has means of concealment; and after having spread all manner of false reports and stories about the tenant of Bellevue, the petty village gossips found out the truth, and spread it abroad with all the gusto of a great discovery.

It was some time before Jean guessed that she was known; she had kept herself too much in retirement to mark the avoidance and the open contempt with which they began to treat her; and her servants had long known the brand which was upon their mistress before it came to her ears, and it was only by chance at last that it did so.

Jean was walking alone down the village street when a little yellow-haired child, running across the road, fell on the rough stones and began to cry. Jean stooped and lifted it up, saying a few gentle words, and slipping a coin into the little chubby hands, grazed with the fall; but the child shrank from her.

"You shan't touch me!" he cried, sturdily, through the sobs. "You're wicked! My mother says you killed some one once!"

So saying, he ran away from her with a defiant glance, and Jean made her way home quickly, knowing that her secret was known, and feeling utterly miserable and desolate.

And then began a time which, to a sensitive, delicately-nurtured woman, was nothing more or less than martyrdom She dared not show herself in the street, so strong was her dread of receiving insults, or hearing coarse insinuations. It was in vain that Mr. Moore used all his influence to quell the angry tongues; in vain that Mrs. Moore went daily to Bellevue and showed the warmest friendship for poor Jean; scandal, having such a theme to descant upon, could not be silenced, and tongues wagged lustily.

"I must go away," said Jean, one day, to Mr. Moore, speaking ever so wearily. "I cannot stay; and yet, wherever I go, the same dreadful story will ever follow me! There is no rest, no respite for me! Oh, Mr. Moore! is it wrong to wish my pilgrimage ended? Every day seems more miserable than yesterday."

"Poor child!" he said, pityingly. "Be brave, and you will live it down!"

"Brave!" she repeated. "All my courage is gone; and yet I don't think I could die unless I knew that my innocence would be proved."

"It is in wiser hands than yours," said the Rector, tenderly. "My child, all things are working for good to them that love him."

"All things!" she repeated, softly, and the despair faded from her eyes. "Then I will not murmur! It cannot—it shall not be a cross which brings me nearer to Him!"

CHAPTER XXXI.

WHAT THE SPRING BROUGHT.

It was the springtime again—the lovely April month, beloved of poets and painters, half-laughing, half-sorrowful, with its mingled tears and laughter. In the northern counties the chilliness of the past winter still lingered; but in the favored south the air was soft and balmy, and the country was at its fairest. The grass and the moss took their brightest coloring; the trees donned their spring attire; the hedgerows brightened into variegated masses of flowers, and the violets and primroses were abundant.

At no place did the sweet springtide come in fairer loveliness than at Slovale, and Jean was too ardent a lover of nature not to feel soothed and calmed by the beauty around her; but her heart was too heavy to know any real happiness. The time was gone by forever when she would have enjoyed a long ramble through the lanes, and have filled her hands with the violets and primroses, with a child's pleasure in their sweetness—a child's delight in the mere physical pleasure of air and sunshine; and her eyes would go longingly after the rosy children as they scampered by her house with their floral treasures.

But the springtime which brought primroses, and violets, and wood-anemones, and snowdrops to the village children, was to bring to Jean the blessing for which she craved, and after the long weary months of gloom, the sunshine was shed upon her life once more.

The French windows of the little drawing-room of Bellevue were open, and the bright April sunbeams, as they played over the pretty velvety lawn and on the flower-beds, gay with many-colored spring blossoms, glinted in through the long lace curtains, and touched Jean's graceful head with a soft, lingering tenderness, as she leaned back in a low chair, looking out dreamily over the beautiful grounds. Her book lay open on her knee, but she was not reading, and she was so lost in her day-dream that she did not heed the opening of the door, and the intruder came softly in and stood watching her for some minutes unperceived.

Suddenly she looked up and recognized him—recognized him with a little cry of joy which broke from her lips as she rose.

"Archie, Archie, Archie!" she cried out, and threw herself into his outstretched arms with a joy which told him that he was welcome beyond all words.

"Ah! Jeanie—you are glad," he said, with a tender smile. "Your face says it plainly, and you need not try to deny it."

"You knew I would be glad, Archie," she answered, struggling for calmness. "And I am glad—how can I help it—when I have longed for you with such a bitter longing!"

"And yet you sent me away, Jeanie," he said, with tender reproach.

Her face shadowed over.

"I welcome my friend," she said gravely, and she drew herself out of his arms, and motioned him to sit down.

But Lord Ivor laughed softly, and took possession of her again

"I am not come as your friend," he said, with his eyes on hers. "Do you remember what you said, my darling?"

Her eyes sought his in startled questioning.

"Are you able to hear good news?" he said, tenderly. "Jeanie, I think I am the happiest man in all England," he added, with irrepressible gladness.

"Tell me," she said, faintly.

He put her into her chair again, for she was trembling and very pale, and taking his seat beside her, he clasped both her hands tenderly in his.

"Listen, darling" he said, softly. "When you sent me from you, you told me that on one condition only would you listen to the prayers I addressed to you; that your innocence should be clearly proved before all the world. It is so now Jeanie!"

She grew white to her lips as she listened, but her eyes, with their silent entreaty, urged him to continue his story.

"The unhappy woman has confessed all, my darling. I mean Emily Brett," he went on, tenderly "She has never known peace, she has never known happiness since and her remorse has eaten into her heart, until she could keep her secret no longer."

"Emily Brett!" came from the white lips.

"Even so, love, Sir David suspected her from the first, and I was determined to know the truth. Fear of discovery was ever before her, remorse preyed upon her, her health decayed under the pressure, and when she found death was near, she sent for me and confessed all. It seems that she had loved the unhappy man whose death lay at her door; that he had promised her marriage; that when she found him lost to her she resolved to revenge herself upon him; and she hated you—because you had supplanted her—bitterly enough to make suspicion fall upon you. It is all clear now, my darling; I have put the confession into Sir David's hands; he has taken the necessary steps to make it public, and you are cleared for ever from a shadow of doubt."

For a moment she did not answer or speak to him, but sat watching his face with dilated eyes; then a merciful flood of tears came to her relief, and with a murmur of thanksgiving, she let her head fall upon his breast, and wept away the last bitterness of the cloud which had overshadowed her life so long.

"My darling," whispered the Earl, after a long silence, as he stooped to touch with his lips the closed eyelids, and kiss away the tears which still glittered on the long lashes, "have you nothing to say to me?"

"Could I find words to thank you?" she said, with her eyes hidden. "I can guess all you leave unsaid, Archie. You have sought to prove my innocence, and so it is proved."

"It may be so," he said, smiling. "I do not say it is so; but if it be, my darling, it was in the selfish hope of a reward. Will you deny it me still, Jean?"

She stole her hand up round his neck and clung to him, feeling as if this hour repaid her for all her suffering. The silver lining of the cloud was turned outwards now, the future rose before them with its rainbow of hope and joy, and as Lord Ivor pressed her to his heart, and his lips trembled on hers, he knew that she was his own again—for ever—for the love wherewith they loved each other would not end with life, but would live beyond the grave.

* * * * * * *

There is but little more to tell. Happiness has no history, they say, and after the long course of misery came a perfect feast of joy. For many years neither has known anything but joy and pleasure; but the shadow that had fallen upon their lives had taught them how to endure—no mean lesson! Until a swimmer has breasted the waves he cannot tell his strength; until a soldier has been in battle his courage cannot be proved; until adversity comes upon us we

cannot tell our powers of endurance; until we have passed through the blackness and darkness of the storm we do not know how pleasant it is to bask in the sunshine—the dark days only enhance the brightness of golden ones, if we do not let the dark days embitter us—and these two of whom I write had borne calamity bravely and nobly, and borne it with a heroism and courage which had ennobled both lives. She was worthier of love than she had been in the early sunshine of her shadowless youth, and he was better able to appreciate the heart which beat only for him.

Standing there together in the blissful consciousness of mutual love, all the bitterness of the past fell from around them, and as she rested in his arms, a ray of sunshine stole in through the window and fell upon them where they stood—it seemed as if it touched them with divine benediction—as if angel hands passing had been laid upon them, and angel voices whispered a prophecy of peace and happiness, which was fully carried out in their future lives.

THE END.

SKETCHES OF GERMAN LIFE.

BERTHA A. WINKLER.

A Festival.

THROUGHOUT the vine-growing region of Germany each village celebrates the "Kirby" three days of general rejoicing and merry-making in the latter part of October when its vintage bargains with the wine merchants are closed, old debts paid, new ones not yet contracted, and everybody supposed to be in a good humor. The old folks laugh and crack jokes over their wine glasses and the young work off their exuberant spirits in dances and games that the national Thanksgiving Day, which follows soon after, may be observed with due solemnity.

Suspecting from the holiday appearance of the garrulous assembly in which we suddenly found ourselves the objects of curiosity instead of *vice versa*, that this festival was in progress, we directed our inquiries to that effect to the buxom, rosy-cheeked girl in waiting who at once burst out in enthusiastic affirmatives of "Ya! ya! morgen wirds losgehen!" In imagination already enjoying the prospective waltz she presented, with her flushed cheeks and sparkling eyes, a most refreshing picture of German beauty and robust health. We could not repress a smile, however, when, glancing askance at our dark travelling skirts, she naively suggested the necessity of wearing some red ribbons if we wished to take part in the festivities

Early the following morning an unusual excitement prevailed in the streets. Girls arrayed in their best ginghams, blue stockings and red or yellow neckerchiefs were standing under the doorway engaged in pinning flowers or ribbons in the hats and coats of their sweet-hearts. About thirty of them all similarly decorated, started arm in arm to meet the band of music which was expected from the city. The roads leading to the neighboring villages were alive with gay arrivals Each group as they appeared in sight were walking abreast, thus forming a single line extending the entire width of the road. The effect of this peculiar fashion, viewed from my window, was singularly beautiful. Line after line of gayly dressed forms and flying ribbons rose from behind the hills and, as they drew nearer, swinging their hats in token of recognition and filling the air with song, those already arrived greeted them with a thrilling, sonorous song of "Willkommen Kameraden, etc." (Welcome comrades!)

Shortly after the arrival of the band of music which was the commencement of the festivities, we descended to take a view of the ball-room now gaily festooned with evergreens. Already the dancers were whirling around on the highly-polished floor and performing gymnastic feats without the least inconvenience to their partners. During the intervening pauses eating, drinking, and smoking is the rule, and after listening awhile to the clatter of plates, loud laughter, and still louder calls for the "Kellner" who was frantically rushing to and fro with a dozen glasses in his hands, we were glad to grope our way through thick clouds of tobacco smoke and beat a hasty retreat by the back door where a motley crowd of urchins were standing on tiptoe or by turns assisting each other in climbing up to the window for a glimpse of those wonderful "musikaners" within.

Among the out-door sports which we witnessed with much more pleasure in the afternoon, the foot-race is, perhaps, the most excitable and amusing. Not less than 10, and sometimes as many as 30, young girls, all dressed as nearly alike as possible appear on the ground, where a number of small-sized wash-tubs, filled to about four inches from the rim, stand in readiness for them. At a given signal from the judges, who first see that the tubs are all of one size and contain the same quantity of water, these girls simultaneously swing them on their heads with remarkable ease, and with arms akimbo await the second call, at which they promptly start. For a few paces they generally keep within even range. But gradually the line is broken; some one quickens her steps, the others follow suit; then there are some sudden standstills as the water begins to drip over the rim, and not daring to support the tub with their hands, a dexterous jerk of the head, a quick backward movement, and tub and water are sent splashing into the road. With this manœuvre they have saved themselves a good drenching and disgrace. Meanwhile, the remaining contestants, after a close walk, have left two more behind in the same unfortunate predicament. The attention of the spectator is now directed to the foremost two, who still maintain even pace and a steady equipoise; but their flushed cheeks and compressed lips indicate their internal excitement. As they neared the goal, their speed doubled. One was now ahead and greeted with shouts, the other made a desperate effort, but in vain; she arrived only in time to empty the turbulent water at the judge's feet. The foremost was then presented by the judge with a wreath; the victor of some other game, after presenting her with the handkerchief he has received as a prize in his game, carries her off as the queen of the day, amidst the shouts and huzzas of the admiring spectators.

Balancing heavy burdens on their heads is considered a necessary accomplishment, and encouraged as such in all their out-door sports by offering prizes to the winner. I have seen women carry a large basket full of eggs on their heads, and one of butter and cheese on each arm, to the nearest town, a distance of five miles, with comparative ease.

During the entire three days in which the games and merrymaking were continued with untiring enjoyment, we could not report a single case of drunkenness or misconduct. They seemed like overgrown children, whose hearts, mirrored forth in laughing, joyous faces, seemed bent upon nothing but play. And to one who has witnessed their mode of life during the rest of the year, there is nothing more refreshing than to see these people, after the hard, incessant labor of spring and summer, suddenly break loose, like children from school, to enjoy a series of exhilarating fetes and frolics which would cure the most hopeless hypochondriac. It was, therefore, with some regret that, on the even of the third day, we saw the last ribbon of the departing friends flutter out of sight and heard the faint echo of "Comrade, adieu," with a thrill of sadness which the surrounding village boys, vainly searching their empty pockets for crumbs of cake, expressed far better in their rueful faces and the half-spoken wish, "wenns immer so war!"

BEER WILL NOT INTOXICATE?

I HAV finally cum to the conclusion that lager beer as a beverage is not intoxicating

I have been told by a German who drunk it all nite long, just to try the experiment, and was obliged to go home sober in the morning. I have seen this same man drink eighteen glasses, and if he was drunk it was in Germân, and nobody could understand it.

It is proper enuff to state that this man kept a lager beer saloon, could have no object in stating what was not strictly thus.

I believe him to the full extent of my ability. I never drank but three glasses of lager in my life, and that made my head outwist as tho it was hung on the end of a string, but I was told it was owing to my bile being out of place; and I guess that it was so, for I never biled over wus than I did when I got hom that nite. My wife thot I was goin to die, and I was afraid I shouldn't, for it seemed as tho everything I had ever eaten in my life was coming to the surface; and I believe that if my wife hadn't pulled off my boots just as she did, they would hav cum thundering up too.

O, how sick I wuz! 14 years ago, and I can taste it now.

I never had so much experience in so short a time.

If any man shud tell me that lager beer was not intoxicating, I shud believe him; but if he should tell me that I wasn't drunk that nite but that my stummick was out of order, I shud ask him to state over a few words just how a man felt and acted when he was set up.

If I warn't drunk that nite, I had some ov the most natural simtums that a man ever had and kept sober.

In the first place it was about 80 rods from where I drank the lager beer to mi house, and I was jest over two hours on the road, and a hole busted through each one of my pantaloon neez, and didn't hav any hat, and tried to open the door by the bell-pull and hiccuped awfully and saw everythin, in the room trying to get round on the back side of me, and, sitting down on a chair, I did not wait long enough for it to get exactly under me when I wuz going round, and I set down a little too soon and missed the chair about twelve inches, and couldn't get up soon enough to take the next one that come along; and that ain't awl, my wife sed I wuz as drunk as a beest, and, az I sed before, I began to spin up things freely.

If lager beer is not intoxicating it used me most almighty mean, that I know.

Still I hardly think that lager beer iz intoxicating, for I hav been told so; and I am probably the only man living who ever drunk eny when his liver was not plumb.

I don't want to say anything against a harmless temperance beverage, but if ever I drink eny more, it will be with mi hands tied behind and mi mouth pried open.

I don't think lager beer is intoxicating, but if I remember rite, I think it tasted to me like a glass of soap suds that a pickle had been put tew soak in.

JOSH BILLINGS.

For Women.

CONDUCTED BY MISS FAITH RIPLEY.

LEARNING TO REST, OR HEALTH WITHOUT MEDICINES.

"I CANNOT heal you with medicines," said an old physician. "It is rest you need. It is useless—nay, worse than useless—it is folly for me to dose you with medicine, if you are not going to do your part to maintain your health and spirits. Here you are at 28 worn out and literally tired to death, when you ought to be in the bloom and freshness of life. 'Died of exhaustion' might be the truthful verdict of a very large proportion of deaths among the female population of America. Go, take air, rest, sunshine, and though it may be years before you are well, you have so much sinned against nature, you may, with care, be tolerably comfortable."

She replied: "If I have overestimated my endurance it was because I thought to economize by it, and the air and sunshine I have had, because I felt I could not live without it. Why, Doctor, I have done all the errands for my house, bought every pound of groceries, every lamp-chimney, attended to every individual want of my family for years; bought everything that has been required or consumed by the family, and that, of course, gave me out-door exercise."

"Yes, of a certain kind; but that was work, not healthful, reanimating exercise. Now, I am going to give you some kindly as well as professional advice. Suppose you change the order and character of your work. Don't be such a slave to your needle. It is foolish, and would be wicked for you now to continue it.

"If you have the means, and wish to indulge your tastes, as all women do, for fine needle-work on your own and your children's clothes, and can afford to pay some one who has more need of money and less of rest than you, surrender the work and the money, and you take the rest. You can then do with less sewing, and take more sunshine. Be not so careful and troubled about much sewing; cultivate the habit of resting when you feel tired and worn. Rest is not idleness; it is oftimes only change. Cultivate your flowers and your neighbors. Go out frequently, in a social way; it will give you something pleasant to anticipate, and something pleasant to remember. Don't be willing to give up your social position, keep the friends you have now, your children will want them for their friends by and by. You want social position to give them, too, with their other inheritance, so don't sacrifice that or your old-time friendships. Open your piano, furbish up your music, resolve to be less of a drudge in private, and more of a social help. Take hold of the little interests of your town, become more public-spirited, do good with your whole soul, in a general way, instead of burying yourself and living beneath the load of your own selfish cares. Do not infer that I counsel you to neglect any of the delicate little attentions of the home-life—not I. But a delicate oversight of the household economy will oftimes answer as well, you know, as more laborious efforts; only, live more in the outside world, and in a short time your load will have lightened wonderfully, and you will be able to laugh with the best of them."

"This," said a cheerful laughing little woman "is the medicine an old doctor gave me, and I give it you, testifying that it helped me more than any potion I ever took. I began to feel that I had been both wicked and selfish to neglect and make of no avail accomplishments which had cost my parents money and self-denial. It set me thinking. Work is elevating, but drudging is ignoble, and every woman must guard against this latent propensity to drudge. It is the custom to saddle all our physical ills upon the present era, but it cannot be questioned that constitutional disease is as often hereditary from over-work and exhaustion on the part of our parents as from any other cause. There is truth in the old saying of being 'born tired'

"For my part," said the little woman with a happy, ringing laugh. "I'm always glad now, since I'm emancipated, when I think how Christ reproved Martha, I only wonder that I and the rest of 'us Marthas' haven't appropriated that text long ago: "Careful and troubled about much serving, but Mary has chosen that good part which shall not be taken away from her;' which 'good part' consisted not alone in hearing of spiritual things, but also, perhaps, in evincing a disposition to contribute to the social and intellectual advancement of her sex. Now I mean to do my work with honest pride, whatever I find to do, but have my little seasons of social and intellectual recreation each day," said the little woman, as she arose to go.

Ruth Reubens, in Cincinnati Times.

FEMININITIES IN BRIEF.

AN innovation in underwear is seen in fine pink and blue flannel, beautifully embroidered in flowers with white floss; other more costly underwear comes in silk, in such colors as red, blue, rose-color and olive-green. White skirts are no longer worn in the street. Black satin, or Japanese blue, scarlet, or olive-green satin and flannel take their place.

A novelty in dinner cards is that of using silk as a mat upon which the card is sewed. The silk, which should be heavy gros-grain of a bright color, is embroidered with a flower or simple design in one corner, and a card velveted and gilded on the edges, is laid diagonally across. The card should be narrow and the silk fringed for half an inch or more.

Stone china is fashionable and is decorated in marigold pattern, in sage-green, blue and ashes of roses tints.

APPRECIATION OF THE RURAL NEW-YORKER.

Recent Extracts from Letters and from the Press.

THE RURAL NEW-YORKER.—Under date of Nov. 1, the Newbernian, (N. C.) says: "Fifty years ago it was a very common opinion that book-farmers were a flighty and visionary class of men, in following whom, the practical farmer, would come to grief. There is truth in this assertion, for very many visionary men have induced the practical men to carry into execution crude and baseless theories. But at the same time, there were thoughtful and prudent men who made agriculture a study; believing that the cultivation of the soil and the production of remunerative crops should not be given up to the men who had muscle, but no brains. On the contrary, there were a few who believed that the highest scientific attainments combined with experience were necessary to constitute the successful practical farmer. No journal has done more to instruct the farmer and elevate agriculture to the level of science, than the RURAL NEW-YORKER, now in its thirty-first year: a weekly periodical, edited by cautious and experienced men, and giving good and wholesome instruction to all who are engaged in the noblest and most independent avocation in life—agriculture. We have been acquainted for years with this excellent paper; we have read its numbers with pleasure and improvement and we have greatly desired that in every farm-house in our land, a copy of it might be found, well read and thoroughly discussed.

A WRITER in the McMinnville (Tenn.) Herald says:—"I have for the past few weeks had the pleasure of reading that excellent agricultural journal the RURAL NEW-YORKER, and have derived so much benefit from the perusal of its columns, that I feel that I could not do my farming friends a greater service than to recommend it to their favorable consideration. It is certainly one of the very best agricultural journals published in this or any other country, and I feel assured that no tiller of the soil who loves and honors his profession and is interested in its progress would ever regret the subscription price, or after reading it one year, would ever let his name drop from the subscription list. The RURAL NEW-YORKER is a weekly journal, containing sixteen pages, handsomely illustrated, embracing every department of agriculture, and treating in the most satisfactory manner of every subject in which the cultivator of the soil feels interested, therefore it cannot fail to instruct, encourage and benefit him. Such a journal, in the hands of every farmer in the land, would be the most effective cure for the "hard times," and if all such would subscribe for it and study it as they should do, I feel convinced that the "good time coming" would come in on the express train.

GENTLEMEN — Permit me to thank you for the copies of the RURAL which you have pleased to send to my address. I am at the present associate editor of the Indiana Farmer, having charge of the Scientific Department. I need hardly say to you how highly I appreciate your paper, both in the extent of its information and in the general accuracy of its scientific deductions. When in charge of the United States Laboratory at Washington, I had an opportunity to compare the papers that presented farming in its scientific aspect, as they were received at the department; and I found none freer from misstatements than the RURAL NEW-YORKER.

Indianapolis, Ind. RYLAND T. BROWN.

THE Farm and Fireside (Springfield, Ohio) says: "The publishers of the RURAL NEW-YORKER, 78 Duane Street, New York City, are conducting a series of free plant and seed distributions among their subscribers. We have received a sample of the first distribution, and are free to say it is all the publishers claim for it. Ten of the varieties they offer cannot be purchased here or in Europe. They are among the finest hardy plants in cultivation. The RURAL is a wide-awake, progressive journal, and merits a hearty support

MR. J. G. CANNON, Millers, Va., says: "I write to tender you, gentlemen, my thanks for the valuable aid gathered from the rich, practical and instructive columns of your pre-eminently the first agricultural paper in this country. May it continue to lengthen its cords and strengthen its stakes with each recurring year."

"BY the way," says M. L. T. Lovett, of Little Silver, N. J., "you asked me sometime back what you should do to improve the RURAL I must say I have but one fault to find with the RURAL: It is so nearly perfect as to leave but little room for improvement."

I THOUGHT to economize last spring by stopping two weekly agricultural papers, and taking one monthly, but it doesn't pay. As long as I am a farmer I want the RURAL NEW-YORKER.

P. M. SHAW.

Trumansburg, Tompkins Co., N. Y.

I DISCONTINUED my subscription several years ago for the purpose of retrenching, but I find of late that I can better afford to live with it than I can without it. CHARLES SCHWAB.

Seneca Co., N. Y.

PROFESSOR BEAL, of the Michigan Agricultural College, says: "I only hope the RURAL will continue to be as good as it has been for the past two years."

WM. C. L. DREW, of California, says: "I consider the RURAL the Banner Agricultural paper of America, and deserving of support from all quarters."

"WE think the way your paper is conducted now, it is worth all the other agricultural papers thrown together." COLE & BROS.

Pella, Iowa.

MR. W. G. WARING, Tyronne, Pa., says: "My friends are much more than pleased with the RURAL. They use their strongest words of admiration."

MR. R. B. CUTTS of Garrettsville, Ohio, under date of October 22, says: "The RURAL NEW-YORKER saved me $10.00 on my potatoes,"

THE RURAL NEW-YORKER seems to meet with the success that its great energy and ability deserve."—Maryland Farmer.

JOHN S. BOGGE, Laporte, Ind., (and many others): "The seeds received were to us worth far than the price of the RURAL."

MR. WM. ROBINSON, Editor of the London Garden, says: "The RURAL certainly deserves its success."

WE consider the RURAL NEW-YORKER the best paper published. C. M. SILVA & SON.

Newcastle, Cal.

NELSON RITTER (Syracuse, N. Y.) says: "The RURAL stands at the head as an agricultural paper,"

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN-THOUGHTS FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

"We may live without poetry, music and art
We may live without conscience, and live without heart.
We may live without friends, we may live without books.
But civilized man cannot live without *cooks*.
He may live without books, what is knowledge but grieving?
He may live without hope—what is hope but deceiving?
He may live without love—what is passion but pining?
But where is the man that can live without dining?"

It was many years since I had read that poem of Owen Meredith's in which these lines occur. "Lucile" abounds in sentiment and romance, and those lines wedged in among such passionate love scenes, cause one to smile at the truth of this confession from such a source. Oh! bride of one, or of fifty years, you have ere this learned the truth of that last line I am sure, for—

"Where is the *man* that can live without dining?"

Does some cynic of the sterner sex add,—or woman either? I reply, that I have noticed in instances when the gentle sex alone inhabited a home, there was less and perhaps too little attention paid to a full. "square" meal. We depend too much on cups of tea, and put ourselves off by way of a *resting* spell, with an easily prepared lunch when the men folk are not with us.

These thoughts were partly brought to my mind by the remarks of a lady in Boston, who, being the wife of a clergyman of wide and well know renown, has had an opportunity of learning a great deal of the domestic life in families.

"My dear" she said, "I hope you use good, respectable hop yeast." I assured her I did.

"That is good; but the mixture called 'salt risings' or 'milk risings' is very unhealthy. The smell, when a few days old, is quite putrid, though the bread, when new, is very white and attractive. Then the saleratus bread with greenish streaks or small, acrid spots all through the unwholesome loaf or biscuits! Yes; I have suffered," she went on. "Pies, rich and indigestible, butter that has managed to retain an endless variety of bad flavors, and is inserted into every dish upon the table! How often have I said in my heart—'not even a dinner of herbs do I crave, but a well baked potato with a little salt, if cooked aright!'"

"But," I ventured to protest—"these are extreme cases."

"There are too many of them still to be found in rural districts," she added, confidently.

I felt as if such a thing must be a mistake, and have been wondering ever since how we could come at the facts; how learn what, and in what manner our rural housekeepers prepare the midday meal. Suppose—taking one ordinary day without any extras—we jot down for each other's benfit the details. We will suppose that all our butter tastes of white clover—but let us tell in what proportion we use it, and if the libel we sometimes hear is true, that fat pork swimming in grease, with few vegetables, forms the staple cooking of a farmer's wife. I think it might be conducive to good if our faithful domestic Economist, Mrs. Maple, would kindly print some of the "dinners" that may be sent in. Let them be *bona fide*; no embellishments, and I think we can prove even to the "Hub," that our food is wholesome and palatably cooked with care and often with regard to hygienic principles, that do credit to us, according to the light that has been given us. And as was remarked with regard to the grand complimentary breakfast lately given the veteran author, Oliver Wendell Holmes, that it was discussed much as all meals must be "even when literary lions are at the table," so we once more repeat—

"Where is the man that can live without dining!"

CHILDREN'S CLOTHING.

BY MARGUERITE.

E. E. K.'s article of December 6th is a good one, and I earnestly wish that all mothers were as sensible in the mode of dress for their children. I tried her method last year and, please excuse my egotism when I say I think I'm a step in advance now. I found the drawers, skirt, and stocking supporters too much for one waist, so I stitched a piece of muslin inside of the waist of flannel chemise, putting on it a button for the drawers. Then I sewed the skirt fast on the waist, putting buttons on each side for the supporters. Recently I have adopted still a better method for wearing the stocking supporters. I took a piece of elastic tape nearly an inch wide, and sewed the ends together, having it go over her right shoulder and under her left arm; another over her left shoulder and under the right arm, coming down below the waist. A single piece was fastened to this, about five inches long, and the stocking supporters are buckled on to it. They work like a charm! Not a button about them, and her clothing is supported by her shoulders, which is the only proper way.

The drawers go into the stockings, extending to the ankle; but on account of their liability to slip up, I knit on ankle-pieces of fine yarn, seaming it; I also knit a heel on it, like a stocking, and a half-instep. The leg of the drawers then are fast, and my little girl of five can dress herself. Another way is to sew a piece on the bottom of the drawers similar to the top of a man's sock. They are more inclined to fit snugly. For the wrists of under chemise-sleeves I knit pulse-warmers and sew them on. I have great trouble on account of my children wearing out the knees of their stockings while the feet are good. I find I can cut the worn parts off, and knit the sound lower parts up. I also have tried knitting the knees double, as one would a double heel, which is an excellent plan. Another good way is to line them across the knees before they are worn.

There is not enough said about the proper ways of dressing children. I visited a baby the other day, that was just beginning to walk. It wore cotton stockings, and had nothing to protect it from cold from its waist to below its knees except the loose dress. The mother was doctoring it for croop, and had had no rest with it the night before. A doctor's bill will probably follow, and perhaps a coffin. Isn't it better to invest in flannel, or Canton flannel, and learn the best way to make the garments? Remember, mothers, your children have to bear the penalty of your ignorance. Because one does not know any better does not clear us. God holds us responsible. I have gained the knowledge I have by study and experience since I became a mother. A little thought on a mother's part will bridge over many a chasm in the family, and many of our parental troubles would cease to exist.

TO KEEP THE CELLAR WARM.

MARY BEAL M'LOUTH.

There is nothing in winter which mars the farm-house more than the unsightly straw used for banking its walls. On bright, warm days it gives off a sour, unpleasant odor, besides furnishing a good foundation for a fire. A house banked with dirt, presents a much more tidy appearance and the banking does not have to be done over again every year. Pack the dirt hard as high as the wall, and then cover with sod, leaving a blank space under the windows. It will settle a few inches. The ground under the windows can be filled temporarily with sand, and a board nailed on to prevent its scattering! I do not wish to recommend anything whereby careless people might get their houses burned; but if families will use every precaution against fire, a stove can be set up in the cellar, just underneath the stove in the room above, and the pipe put through a thimble in the floor, and made to connect by means of an elbow with the back part of the stove-pipe. A little expense will prepare a joint suitable to receive it. It is necessary to have a damper; but one can be made to answer for both stoves. A very little fire is sufficient, but the stove must be very tight. A few brick can be put in front, and all cracks covered with sand. In a cellar that is exposed, a thermometer is sometimes the means of saving the potatoes by warning one of impending danger.

SMALL CHOPPING-MACHINE.

Can any housekeeper help a backwoods' lady to a chopping-machine which will do for a family of three? Of course, I have the sausage-mill, but when I have a *little* meat or cold fowl—just for one dinner's relish, perhaps—I don't want to be troubled with that machine. I have a chopping-board and knife, both big and heavy. But is there no machine for chopping a little meat without needing an hour's work to clean and fix up when done? I like *minced* meats, but they are almost unknown at our house, because of the trouble of preparing them. Now is there any contrivance to help me out—something that won't cost a great deal, either of money in the beginning or of time and patience in the end. If there is nothing of the sort, won't some ingenious Yankee invent one? I wish he would. MRS. S.

North Carolina.

DOMESTIC RECIPES.

Escaloped Chicken or Turkey.

Chop fine any cold fowl and season with pepper and salt. Moisten bread-crumbs with a little milk, butter a baking-pan, put in a layer of crumbs, then a layer of meat, and so on, until the pan is full. Beat up two eggs, add half a cup of milk, any gravy or dressing that has been left, thicken with bread-crumbs, season with butter, pepper and salt, spread over the top, cover, bake three-fourths of an hour, then uncover and let brown.

Orange Merinque Pie.

The beaten yelks and whites of three eggs, grated rind and juice of three oranges, four table-spoonsful—or more, if liked very sweet—of sugar, one table-spoonful of melted butter. Cream the butter and sugar, add the beaten yelks, then the juice, rind and whites; bake with an under-crust. When done, beat the whites of two eggs to a stiff froth, add two table-spoonsful of powdered sugar and spread over the top, and return to the oven to brown. MARY B.

QUESTIONS ANSWERED.

Sugar-Cured Hams.

Please give directions for the above.

MRS. STONE.

ANS.—Allow the hams to stand until the animal heat is entirely out of them, then rub well with common salt and leave them in a cask for two days, turning over twice a day. Take out and, for hams weighing from 12 to 14 pounds, take for each, three-quarters of a pound of common salt, the same quantity of brown sugar, one ounce of powdered saltpeter and a teaspoonful of cayenne pepper. Rub first with the saltpeter, then with the salt, after which with the sugar and pepper. All the ingredients should be well rubbed in. Place in the barrel, skin side down, in which they are to be kept, let remain a week, make a pickle of salt and water, strong enough to bear up an egg, add to it a pound of sugar and pour over the hams until covered. At the end of four weeks take out, hang up for a week, then smoke. Hickory wood is the best to use. Smoke at least three weeks.

News of the Week.

MISCELLANEOUS.

Monday, Dec., 29, 1879.

It is rumored on good authority that the United States mission to Russia has been tendered to Gov. Van Zandt of R. I. The Russian is one of the four great missions, and our important and friendly relation with that power give some significance to this appointment. Should the rumor be true, it will leave the field clear for the re-election of Gen. Burnside to the Senate, and will give several anxious candidates an opportunity to enter the Gubernatorial race in April.

A petition has been received by the President, signed by 400 gentile citizens of Utah, protesting against the reappointment of Governor Emery as the chief magistrate for that territory. The reason given is, that he favors polygamy and has approved the repeal of the only territorial law under which polygamy can be punished.

As the refunding act of 1870 was amended last year so as to permit the four per cent. bonds it authorized to be exchanged for any bonds of five per cent. and over as they became redeemable, Secretary Sherman will be able to take up the $18,429,000 six per cent. bonds which come due on the last day of December. There still remain about $103,000,000 of four per cent. authorized by the act of 1870, but never issued; but none of these can be used in exchange for the '81 sixes till the latter are actually due.

Cincinnati, Ohio, Dec. 26, 1879.—The Western railroad rates are likely to be altered. An Evansville Indiana despatch of Dec. 26, says an important meeting of the general freight agents of the Southern and Western Railroad lines will be held there on the 30th inst., relative to rates to the southeast coast, regular green line points and routes via Baltimore and New York. The Southern interests, it is understood, will prepare for war on the steamship lines and combinations that have forced the coast freights round by Baltimore to Charleston by ocean. Messrs. Stahlman of the Louisville and Nashville; Knox, of the Nashville and Chattanooga; Frink, of the St. Louis and Iron Mountain, and Babcock, of the Evansville, Terre Haute and Chicago, have been in correspondence and twenty representatives are expected.

A monument has been erected over the neglected grave near Lincoln City, Ind., of Abraham Lincoln's mother, Nancy Lincoln, who died in 1818, when Abe was nine and a half years old. The Lincoln family removed from Kentucky to that spot when it was a wilderness in 1816, the year Indiana entered the Union, and there Abraham lived till he was 21 years old. Studebaker, the great wagon-maker of South Bend, Ind., was chiefly instrumental in having the mother's resting-place cleared of its tangled undergrowth and a marble stone provided to mark the spot.

Congress adjourned last week for the holiday recess. The chief things of interest during the last two days of the session were a debate in the Senate led off by Voorhees of Indiana, on his resolution to investigate the negro exodus from North Carolina to the State which the senator represents, and which was passed by the aid of republican votes, and a debate in the House over the Ute question, which, however, led to nothing definite. A number of prominent republicans are said to have formed the New Orleans Ledger publishing company, to publish a republican newspaper, the first number of which will appear January 3. Ex-Gov. Michael Hahn will be president of the company and editor-in-chief.

A motion was submitted by Senator Edmunds in the United States supreme court last week, to advance upon the docket the case of Augustus D. Juilliard against Thomas S. Greenman, which now stands No. 779. This is a test case, brought to obtain the opinion of the court as to the validity of the act of Congress of May 31, 1878, forbidding a further retirement of the so-called United States legal-tender notes, and requiring them to be reissued and kept in circulation after redemption. Dennis Kearney talks of nominating Thurman as the workingmen's candidate for president, in the hope of a democratic indorsement. Dennis is now on his way to Boston.

President Leland Stanford of the Central Pacific road intends to plant every tree, shrub and vine that will grow in California on an arboretum of some 300 acres, which he has set apart for that purpose on his Menlo Park estate near San Francisco. He has just bought 1231 kinds of plants and he intends to give a practical test of his belief that California will grow a greater variety of plants than any other country in the world.

The surrender of the guilty Indians is still doubtful. A dispatch from Los Pinos agency, Col., datdd Dec. 26, says that "Ouray and the chiefs selected to go to Washington came to the agency yesterday, bringing with them only a part of the prisoners. General Hatch refused to go unless all the prisoners demanded by the commission were surrendered. Ouray asked for further time, and five days more were granted to deliver them at Cline's ranche, thirty miles from here, on the road to Animosa, at which place General Hatch will await their coming. Ouray is either playing a double game or is unable to accomplish what he attempted.

The snow is from five to fifteen feet deep on the range, and the general is compelled to build a sleigh in order to make the trip. The success of the commission is somewhat doubtful, and the army may yet be called upon to settle the Ute question."

The next meeting of the Michigan Pomological Society will be held at Hillsdale, February 11th, 12th and 13th.

FOREIGN.

The cold in Europe continues severe. . . Trouble is feared among the boers of Transvaal, South Africa. This Dutch colony was some time ago annexed by Great Britain, and the original settlers don't like the present government. . . Business is remarkably brisk in Great Britain, in all branches, but especially in the iron department. Strikes, of course, are multiplying. . . The emancipation of Cuban slaves has been decreed by the Spanish cortes, only a handful of opponets voting against the measure, and these chiefly representatives of "The Ever-Faithful Island." Students at Russian Universities will in future be subjected the most rigid military discipline. . . . Accounts vary somewhat with regard to military operations between Chili and the allies, Peru and Bolivia; but the balance of success seems on the side of the sturdy Chilians, who have invaded Peru lately and won several victories. All farmers are interested in this struggle, as in case Peru wins, she'll have a monopoly of guano and nitrates, her object in figbting.

There has been another Cabinet crisis in France. The present Ministers have all resigned, but no successors have yet been found for certain who can command a majority of the Legislature. The new Cabinet is certain to be anti-clerical, more radical, favorable to general amnesty of imprisoned Communists, and, on the whole, an advance towards extreme republicanism. . . The Russian Government seems to be inclined to recede from the extreme measures of repression it appeared to contemplate against revolutionists immediately after the late attempt upon the life of the Czar. We are now assured that liberal measures will be soon inaugurated. In spring the Russian empire will, it is said, be extended eastward, by the capture of Merv, and also of Herat in Afghanistan. The English, however, will probably anticipate the Russians in case of the latter. . . The condition of the British forces in Afghanistan is rather critical. The natives have everywhere risen to arms, and the various detachments of English troops are pretty nearly all surrounded. That under Gen. Roberts at Cabool has been forced to quit the city, and for some time was besieged in the neighborhood; but by the latest accounts it seems he has defeated the enemy, and having plenty of provisions expects to hold his own at least until spring, when the necessity of planting their crops will force the warlike hill tribes to return home. . . There are various reports, some of them true, no doubt, and others sensational, of a grand rising of the Mahommedans of the East against British domination. It is said to have begun in Afghanistan, and to be likely to spread to British India. Considering that the number of Mahommedans exceeds that of Christians of all denominations, such an uprising would be formidable, as nearly all of them are in Eastern countries. But there is little fear of anything more than a local excitement. . . Bismarck is again reported sick. . . The French Government has proposed a plan for the settlement of the Turko-Grecian boundary, which is expected to be satisfactory, and so a threatening war is averted. . . More Russian Nihilists have been arrested in Berlin and Florence. Not content with conspiring against the Czar, they are also accused of concocting schemes against the government of the countries that give them a refuge. . . Another insurrection in Mexico!—this time in Lower California.

EGGLESTON TRUSS CO.—*Gents:*—I was in your office a few weeks ago and was fitted with a Truss. I can say it is the best Truss I have ever used. Has not troubled me one bit since it was put on. I have not had the Truss off but once since you put it on, and that was this morning. The intestines did not come down, so I know I can soon take it off altogether. Then I shall walk the earth a free man, after 20 years of bondage and suffering. No money would induce me to be placed

back where I was a few weeks ago, unless I could get one of your "Sensible Trusses."

Yours truly, A. KIMBALL.

Marengo, Ill.

A great medicine in small vials.—Dr. Pierce's Pellets (little pills). No cheap, paste-board or wooden boxes, that allow a waste of strength. Sick headache, dizziness, rush of blood to head, bad taste in mouth, billious attacks, jaundice, internal fever, boils and nettle rash. Sold by druggists.

CURE FOR COUGH OR COLD.—As soon as there is the slightest uneasiness of the Chest, with difficulty of breathing, or indication of Cough, take during the day a few "*Brown's Bronchial Troches.*"

All your own fault if you remain sick when you can get Hop Bitters that never fail.

The Markets.

THE GIST OF THE MARKETS.

IT will be noticed that all over the country prices of agricultural products are at present stationary or nearly so. The slight variations in prices from those of last week, noted in the various markets, are not greater than those that often take place from day to day, or even in the course of a single day's transactions. Indeed so long as inducements to exportations continue so uninspiring as at present, little advance can be expected in cotton, breadstuffs and provisions, as all three of these are now held at higher prices in the domestic than in the foreign markets. There is therefore no inducement to ship, or to pay higher prices here with the effect of adding to the enormous accumulations already in the hands of dealers and speculators. To-day (Saturday) freights on the fleets of European steamers leaving this and other Atlantic ports, are lower than on any day during the year, owing to the unwillingness of produce dealers to ship at present transatlantic prices. In the European markets the impression prevails that prices here must come down somewhat, and at any rate the present figures there are high enough to tempt the export of grain from all other countries having a surplus of it. American speculators think the supply from that source will soon be exhausted, and that then they can demand their own figures.

Wool, despite the slackness that always marks the trade towards the close of the year, is still firm, with a slight upward tendency, if anything. At the present rate of consumption the stock on hand will be used up before the new clip, and prices abroad are so high as to render importation unprofitable, unless prices fall there or rise still more here.

The strike of working hog packers in Chicago, besides inflicting a great deal of harm on the trade of that city, has had a depressing influence on prices elsewhere, as much of the stock that would naturally go there, has been diverted to other markets, adding there to the usual supply, while the demand can be only slightly increased, if at all. By wise municipal precautions, no violence has been yet committed among the Chicago strikers, and it is to be hoped, for the sake of all parties, that the unfortunate suspension of work may soon be over.

By mail advices of December 15, we learn that the grain trade there was unsatisfactory to English farmers, as the price—46s, 7d per quarter—was too low to be profitable, and they were urged, therefore, to use every effort to raise it to at least 50s. American red winter wheat was 10s. per quarter—or 25c. a bushel—higher than the average wheat of home production, the disastrous want of quality in the domestic grain being responsible for this. Little change was expected before New Year's, as dealers dislike to incur obligations to be met then. The following comparison of prices of wheat in different markets will be interesting:

	December 1.		December 11.	
	s.	d.	s.	d.
Paris	57	0	59	9
Marseilles	55	0	56	9
Berlin	49	8	50	7
Hamburg	49	2	50	0
Amsterdam	50	0	52	0
New York	50	0	53	0
San Francisco	57	5	58	5
Alexandria	43	0	43	0

The prices are in shillings and pence English, the measures in quarters of eight bushels.

The Mark Lane Express of the 25th, in its review of the British grain trade, says that owing to frost, wheat sowing must be deferred indefinitely; the distress is increasing in agricultural districts; cattle are suffering severely; thrashing is steadily progressing; provincial grain trade has been slack owing to disinclination of millers to increase stock until after the holidays. Prices of all cereals were firm, except maize which sold at a slight reduction. Some fear was entertained that those countries having a surplus of wheat, might imitate America and put up prices. Imports had fallen off considerably, and there was an effort to substitute cheaper wheats instead of American red winters and springs.

SPECIALS FROM ALL CENTERS.

Until Saturday, Dec. 27.

Baltimore.—During the week there has been a slight fall—from 1½c. to 3c.—in all grades of wheat, both for cash and future delivery; in corn also there has been a slight fall—from ½c. to 1½c.; oats, rye and hay are unchanged. WHEAT—Southern red at $1.40@$1.45; do. amber at $1.50@$1.55; No. 1 Maryland at $1.55½; No. 2 Western red, spot and December at $1.52⅞@$1.52¾; January $1.53⅞@$1.53⅞; February at $1.58⅝@$1.58¾. CORN—Southern white 62@65c.; do. yellow 58@60c.; Western mixed, 59¾@60¾c. OATS—Southern at 47@48c.; Western white at 47@48c.; do. mixed at 45@46½c.; Pennsylvania at 47@48c. RYE—$1 00. HAY—Prime to choice Penn. and Md., $17@18. BUTTER—Prime to choice Western packed at 23@25c.; roll at 20@24c. EGGS—Fresh at 21@22c.; limed at 16@17c. COTTON—Middling, 12¾c.; low, 12¼c.; good ordinary, 12c. Gross receipts for week, 5,396 bales; exports, 1,337; sales, 751; spinners, 250.

Boston.—Since last report corn, oats and rye have been steady; shorts have gone up $1.00, and fine feed and middlings from $1 00 to $1,50; cotton is a shade lower. Supply of Western cattle lower than for some months; quality mostly of ordinary grade; prices fully ½ higher than for the same quality a week ago. CORN,—new, 62@64c.; old, mixed and yellow, 65@67c. OATS.—No 1 and extra white at 51@54c; No. 2 white at 50@50½c; No. 3 white and No. 2 mixed at 48@49c. RYE—95c@$1. FEED—Shorts at $19; fine feed and middlings scarce at $19.50@21. HAY—Choice, $16@$17; poor to ordinary, $11@15; rye stray, 24@25; oat straw, $10@12. COTTON.—Middling 12¾c; low middling 12¼; good ordinary, 11⅞; gross weekly receipts, 11,921 bales; exports, 2,788.

BRIGHTON CATTLE MARKET.—BEEF CATTLE, per 100 lbs. live weight, extra quality, $5.62½@5.87½; first quality, $5.12½@5 50; second quality, $4.62½@5.00; third quality, $4.25@4 50; poorest grades of coarse oxen, bulls, etc., $3.25@4.12½. MILCH COWS—Extra, $45@$70; ordinary, $20@44; farrow cows, $13@$27; springers, $18@$45 ₰ head. SHEEP AND LAMBS A better demand for sheep than a week ago. Western costing 5c @5c.; Northern lots at 4c.@6½c. SWINE—5½c.@5¾c.

Buffalo.—During the week wheat has risen from 1 to 3c. per bushel. Corn has had a pretty heavy fall of 10c.; No. 2 Western oats, steady. State, a decline of 1c.; barley steady. Of cattle the weekly receipts were 5,447 head against 10,700 the previous week; demand light, but prices somewhat higher, owing to diminished supply. Sheep active and firm. Hogs somewhat higher; receipts 17,580. WHEAT.—No. 1 Duluth Spring, $1.43; No. 1 hard 41,190 the week before; market active and higher. Duluth at $1.45. CORN.—New No. 2 Western held at 50½@51c; old held at 53@54c. OATS.—No. 2 Western, 45c.; State retailing at 46@47c BARLEY.—Canadian, 70@85c.; State, 65@75c.; No. 2 Western, 90c. RYE.—No. 1 Milwaukee held at 90c. MILLFEED.—Coarse, $15@15; fine, $15@16; finished at $17@18 per ton. CATTLE.—Light, choice steers, $3.65@4.25; steers and cows, $3.60; butchers' cows, $2.50@3 20; common to fair, $2@4 50; good to choice, $4.75@5.40. SHEEP—common to fair, $4@4,50—no lambs offered. HOGS.—Yorkers, $4.90@5; heavy and medium of fair quality, $4.75@4.85.

Chicago.—During the week No. 2 red winter wheat fell 1c.; No. 2 Chicago spring went up 1c. for cash and 2½c. for futures; No. 3 rose 1½c.; rejected, steady. Corn is a shade higher; so are oats, rye and barley. Hogs went up from 15c. to 30c.; but prices are still depressed by the continuance of the strike, most of the packeries having closed down entirely, or being run short-handed. A good deal of hogs sold for 50c. to 75c. per 100 lbs. less than was paid for them in the country, making a loss of from $100 to $200 per car-load. Already it is moderately estimated that fully $2,000,000 worth of hogs have been prevented from coming here by the strike, and even if it ends soon, it will be some time before the business here recovers from its effects. The demand for cattle was lively, and prices all round ruled from 15c. to 20c. higher than a week ago. WHEAT—No. 2 red winter, $1.32; No. 2 Chicago spring at $1.32⅜ cash; $1.33⅛ January; $1.31⅞ February; No. 3 do at $1.16; rejected at 98c. CORN—40¾@40¾c. OATS—35c. cash; 35¼c. January; 40¼c. March. RYE—80c. BARLEY—90c. BUTTER—Good to fancy creameries, 28@32c.; fine to fancy, 24@25c.; good to choice fresh made dairies, 20@22c.; fair to good, in shipping lots, 16@18c.; common to medium, 13@15c.; rolls, 16@22c. CHEESE—Good to fine cheddar creams, 12¼@13c.; fair to good flat skims, 11@11½c.; poor to fair, 7@10c., according to quality. EGGS—15@22c., outside price for superior fresh. POTATOES—60@65c. ₰ bushel for Peachblows; 50@55c. for Early Rose. HOGS—Dressed, $5.20@5.35; common to mixed live, $4.40@4.5; choice heavy, $4.60@4.80; Light, $4.50@4.75. CATTLE—Shipping, $3.60@5.10; butchers, $2.00@2.40; stockers, $2.40@3.60. SHEEP—Choice extra heavy fat grades, $4.50@5.00; fair to good do., $4.00@4.40; common to medium, $3.50@3.90; all good stock taken at once.

Cincinnati.—During the week all cereals remained pretty steady, with just a shade of downward tendency; butter rose from 1 to 2c. per lb., and hogs from 15 to 20c. WHEAT, $1 33@1.36. CORN, 40@43c. OATS, 39@40c. RYE, 92@93c. BARLEY, 90c. BUTTER.—Choice Western Reserve, 24@25c.; prime do., 22@23c.; prime to choice, Central Ohio, 21@22c. HOGS.—Common, $3.75@4.15; light, $4.20@4.45; packing, $4.50@4.70; butchers', $4.70@4.75. COTTON.—Middling, 12¼c.; low middling, 11¾c.; good ordinary, 11¼c. Receipts for week, 16,765 bales; shipments, 15,393; sales, 570; spinners, 100 bales

Detroit.—During the week wheat has been steady, with a very slight upward tendency; corn unchanged; oats from ½c. to ¾c. higher; clover seed 5c. lower; hogs unchanged. WHEAT—No. 1 white Michigan, $1.35½ spot, Dec. and Jan.; $1.42 Feb.; $1.45½ March; $1.50½ May. No. 1 Milling $1.34. CORN—No. 1 yellow 49¾; high mixed 48¾; No. 1 mixed 48c.; No. 2 mixed 46c. OATS—No. 1 white 42c.; No. 2 white 39¾; No. 1 mixed 40¾; No. 2 do. 37c. CLOVER SEED—No. 2 $4.70; prime $5.05@5.10; choice $5.40. DRESSED HOGS—$5.25.

Indianapolis.—Cereals steady during the week; hogs, ditto. WHEAT—No. 2 red strong at $1.35@$1.36. CORN firm at 40@40½. OATS steady at 37½@40c. Hogs quiet at $4.25@4 55.

Louisville.—Since last report wheat has risen 2c; corn is unchanged; oats, 1c. lower; rye steady; cotton, do. WHEAT.—$1.32@1.34 CORN.—White 46c; mixed at 45c. OATS.—White 42c; mixed, 40c. RYE quiet at 91c. PORK $14. COTTON, middling 12c. Weekly receipts 446 bales; shipments, $1,35 stock on hand 3,111.

Milwaukee.—During the week there has been a very slight advance in most grades of wheat; corn has been steady; oats, ditto; rye, 1c. higher, and barley 1½c. WHEAT—No. 1 Milwaukee hard $1.31¾; do. soft $1.31¾; No. 2 Milwaukee $1.30⅝ spot and Dec.; $1.31¾ Jan.; $1.33¾ Feb.; No. 3 do. at $1.15¾; No. 4 at $1.08¾; rejected at $1. CORN, scarce and wanted; No. 2 at 40⅞. OATS—No. 2 35c. RYE firm and wanted; No. 1 79¾. BARLEY—No. 2 spring, cash 75¾. HOGS—live, $4.50@4.80; dressed, $5.15@5.20.

New Orleans.—Since last report corn is unchanged; oats 2c. higher; hay about $1 lower, as heavy supplies are arriving; cotton just a shade lower. CORN.—Active and firm at 55c.@58c. OATS, scarce at 50c. HAY, prime $22@23; choice, $25 Pork, old, $13.50; new, $14 COTTON, middling, 11⅞; low middling, 11⅛; good ordinary, 11¼; gross weekly receipts 78,767 bales; exports to Great Britain, 48,564; to France, 12,411; to the rest of Europe, 7,288; constwise, 8,082; sales, 34,500.

Philadelphia.—During the week there have been slight fluctuations in wheat, oats and rye, but prices at the close were about the same as at the end of last week; butter steady; eggs, 2c. higher for Penn, 1c. for Western; cheese unchanged; cotton do. WHEAT—Western rejected, on track, $1.45@$1.47; Pennsylvania and Southern red, on track, $1.52@$1.52¾; Southern amber, choice, on track, $1.54; No. 2 red, in elevator, $1.53. RYE—Western and Penn. at 97c@98. CORN—Old Penn. and Southern yellow, on track, 62@62½c.; Southern yellow, on track, 58¾@59c. OATS—45c. bid, 50c. asked for No. 2 white. PORK—$13.50@$14. DRESSED HOGS, 5¾c@6¾c. BUTTER—Creamery extra, 32@34c.; Bradford Co. and N. Y. extra, 28@30c.; Western Reserve, extra, 23@25c; do. choice, 17@22c.; rolls, Penn. extra, 24c.; Western Reserve, 22@23c. EGGS—Penn. 26c; Western, 21@23c. CHEESE—N. Y. factory, 13@13¾c.; Western full cream, 12¾c.@13c.; do., good, 11c.@12c.; do., skims, 7c.@9c. COTTON—Middling, 12¾c.; low middling, 12¼c.; good ordinary, 12¼c. Gross weekly receipts, 6,699 bales; exports, coastwise, 305; sales to spinners, 1,424; stock, 11,197.

St. Louis.—During the week there has been a rise of 1c. on No. 2 red fall wheat, other grades unchanged; corn about 1c. lower; oats less than 1c. of advance; rye just ½c. lower; barley steady; hogs from 10c. to 20c. higher; cattle just a shade higher. WHEAT—No. 2 red fall $1.35¼@$1.35¾ cash; $1.36¾@$1.36¾ Jan.; $1.40¾@$1.41¾ Feb.; $1.45@$1.46 March; No. 3 do. at $1.25¾ bid. CORN—35¼@35½ cash. OATS—37¾. RYE—$1¼ bid. BARLEY—85@90c. PORK—$13.50. HOGS—light shipping, $4.10@$4.20; packing at $4.25@$4.50; butchers' to fancy. $4.50@$4.60. CATTLE scarce and wanted; good to fancy shipping steers, $4.40@$4.90; light, including good butchers, $3.80@$4 25; cows and heifers, $2.50@$3.75. Sheep scarce; fair to fancy muttons, $3.25@$4. COTTON—middling, 12c; low middling, 11¾; good ordinary, 11½; weekly receipts, 20,549 bales; shipments, 16,181; 4,117.

Toledo.—Wheat has been nearly steady during the week, with a slight advance on choice grades. Corn has fallen 1c. to 2¾c., and oats 2¾c. Clover seed advanced about 20c. WHEAT—Amber Michigan, January, $1.41; No 2 red winter, January, held at $1.42¾; February at $1.43¾; March at $1.43¾, bid. CORN—High mixed at 42½c.; No. 2 at 42½c., spot; 43c. for May delivery; No. 2 white at 44½c.; rejected at 42c.; damaged at 40c. OATS—No. 2 at 37½c. SEEDS—Clover, prime, $5.10 asked, $5.05 bid.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Dec. 27, 1879

BEANS AND PEAS.—The market is weak and unsettled. Holders of strictly choice straight lines will not sell under the extreme, but the offering of good useful stock is liberal and cheap sellers get the business. Green peas steady at $1.80@$1.85; Southern B. E. peas $2.60@2.30 for 2 bu bag: Marrow beans, $1.10@1.40 medium, $1.35@1.55; pea, $1.45@1.75; white kidney, $1.75@2; red do., $1.05@1 85; black, (or turtle soup) $1.85.

Receipts of beans since Jan. 1, 1879, 374,275 bush., against 347,675 in '78; exports, '79, 52,225 pkgs; in '78, 48,926 do.

Receipts of beans for week, 3,656 bush.; exports, 485 pkgs do.

BEESWAX.—Small sales have been made at 24½@25¾. for Western and Southern.

BUTTER.—The demand is fully up to holiday volume, and, with some competition for the finest grades of State, prices are a shade firmer. A good many dairy lines have been broken to fill first-class wants, and bodies and remnants have the medium trade that naturally belongs to Western. Exporters are not taking large lots, but their trade, or, for that matter, any other, is not counted by holders. Western creamery goes mostly for fancy grocers' use, but selected well-made State is not more than one cent below its winter leader. Dairy and factory parcels are not over plenty and sell well up to receipt. Receipts of butter since Jan. 1st, 1,430,339 packages, against 1,277,863 in 1878. Exports for corresponding periods, 36,367,005 packages, and 23,023,732 do. State pails and tubs, small dairy and fresh ends, 28@30c.; best lines, 26@27c.; fair to good, 24@24c; firkin and tub single dairies, choice, 26@27c.; do. fair to prime, 22@25c.; firkins, alone, choice, 24c.; fair to prime, 21@23c.; Welsh tubs, 20@24c.; poor State —@20c.; creamery, finest, 36@37c.; good to prime, 33@35c.; sweet cream, 33@34c.; poor to good, 23@32c.; Western imitation cream, 28@30c.; dairy, fresh, extra, 25@26c.; poor to good, 18@22c.; factory, late made, 23c.; poor to good, 18@19c.; very poor Western, 11@14c.; rolls, 20@22c.

Receipts for week, 18,000 pkgs.; do., exports, 875 do.

CHEESE.—There has been a quiet market as usual during holiday week, with prices without important change.

Quotations are for State factory: Fancy, 13@13¾c.; good to prime, at 11¾@12¾c; fair to good, at 10¾@11¾c.; half-skimmed at 9@10c.; skimmed at 6@8c. Wis. factory: Fine at 12¾@12¾c.; good to prime at 11@12¾c. Ohio factory: Cheddar, fine, at 12¾@12¾c.; do., fair to good, 10@11c.; flat, fine, 12¾@12¾c.; flat, good to prime, 11¾@12¾c.; flat, fair to good, 10@11¾c.; half-skimmed, 9@10c.; skimmed, 6@8c.

Receipts for the week, 19,477 boxes; exports, 16,200 do.

Liverpool cable quotation, 61s. 6d. Steam to Liverpool, 25s.

Receipts of cheese since Jan. 1st, 2,550,890 pkgs.; in '78, 3,172,767 do. Exports, corresponding periods, 128,691,911 lbs.; 136,384,523 do.

COTTON.—Business is interrupted as usual about the holiday period, in the absence of despatches from the other side and the closing of Cotton Exchange. The latest prices were for Dec. 12.55@13.60c.; Jan. at 12.66@12.68c.; Feb. at 12.97@12.98c.; March, 13.24@13.25c.; April, 13.44@13.45c.; May, 13.65@13.65c.; June, 13.78@13.80c.; July, 13.90@13.93c.; August, 14@14.02.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	10 15-16	11 1-16	11 1-16
Strict ordinary	11 5-16	11 7-16	11 7-16
Good ordinary	11 11-16	11 13-16	11 13-16
Strict good do	11 15-16	12 1-16	12 1-16
Low middling	12 3-16	12 5-16	12 5-16
Strict low middling	12⅜	12½	12½
Middling	12½	12⅝	12⅝
Good middling	12¾	12¾	12¾
Strict good middling	13	13⅛	13⅛
Middling Fair	13⅛	13⅜	13⅜
Fair	14¼	14⅜	14⅜

STAINED.

Good ordinary	10¾	Low middling	11 13-16
Strict good ordinary	11⅛	Middling	12 3-16

DRIED FRUITS.—Trade generally is quiet, and prices not changed. Prices are:

Apples—New North Carolina, at 6¼@8¼c. for fair; 10@10½c. for choice; 11@11¼c. for fancy sliced. Patent evaporated apples, choice, in cases, 15@16c.; do. fair to good, 13½@14½c.; N.Y. State sliced, new, 7¾@8¼c.; quarters, choice, 7@8c.; new southern quarters scarce and nominal; new North Carolina peeled peaches at 17@19c., do., Georgia, 13¼@16½c. Peaches, Delaware evaporated, peeled at 25@28c.; do. unpeeled at 13@14c.; new halves at 8c. Blackberries at 9@10c. for new. Raspberries at 26½@27c. Pitted cherries at 18@19c.

EGGS.—Receipts for the week, 4,950 bbls.; do. last week 5,930 do. Supplies are light and average quality has run better. Some Southern marks bring full prices. Limed selling more freely but not quotably higher.

Near points fresh, doz. 25c.; State and Pa., 22@24c.; Canadian 18@20c; Western, prime to extra, 22@23c.; off grades, 17@18c.; Southern, 23@24c.; State limed, 16@16½c.; Canadian, 15@16c.; Western, 15@16c.

FRESH FRUITS.—The reserve of pine apples is small: as receipts have about ceased, extras are held strong. Poor have sold freely to cheap venders, but the supply hangs large. Pears are not commercially quotable. Prime grapes firm, at $2.25@3.50 for Catawba cases. Florida oranges are not as attractive as in former seasons; many parcels have to be repacked.

Spitz, ₰ bbl., $3@3.50; Baldwin, $2.50@2.75; Greenings, $2.25@2.50; Lady apples, choice, 14@16c.; poor, 6@10c.; poor Greenings and Baldwins, $1.75@2. Cranberries are at a good holding quantity and prices are firm. Cape Cod, fancy, $8@8.50; other Capes and Eastern, $6@7.75; N. J. crates, $1.75@2. Florida oranges, hf. bbl. crates, $2@3.75. Pennuts in good demand. Va. hand-picked, 5@5½c.; ex-prime and other grades, 3¾@4¼c. Hickory nuts dull at 80@90c.; B. walnuts, 52c.; Pecans, per lb, 9¾@10¾c.

FLOUR.—There is a fair amount of business and prices rather better.

Latest sales are at $5.40@5.90 for inferior to fancy superfine State; $5 90@6.20 for inferior to good extra do., odd lots and lines; $6.20@6.35 for good to choice do.; $6.25@6.90 for inferior to very fancy superfine Ind., Iowa, Michigan, &c.; (the latter an extreme); $6.00@6 20 for inferior to good shipping extra do., and $6.20@6.50 for good to fancy shipping extra do.; inferior to about choice white wheat extras, $6.20@7.25; choice to fancy do. at $7.25@8 50; red and amber winter wheat, inferior to fancy trade and family, at $6.10@8; round hoop Ohio, $6 00@6.50; and trade and family brands of do, at $6 60@8.00; the latter rate for very fancy; St. Louis at $6 15@7.10 for inferior to very good extra; $7 15@8.50 for very good to fancy; Minn. clear, very inferior to fancy, at $6.00@7.10; Minnesota "straight," very inferior to fancy, at $6.50@8.00, and patent poor to very fancy, at $7.0@9 25; Canada stock at from $4.25@6.25; city mill extra at $6.75@7.00 for about fair to choice for West Indies (fancy do. quoted at higher figures); do. for England, $6.00@6.50 for poor to very choice; do. trade and family extras, $7.10@8 25. do. for South America, $6.75@7.25; No. 2 at $4.35@5.25 for very poor to very fancy.

GRAIN.—Wheat is active on export account, and closed strong at an advance; latest sales are of No. 1 white at $1.55½@1.56; do., December option, at $1.55⅝; do., January, at $1.56¾@1.57; do., February, at $1.60@1.60¼; No. 2 white at $1.53@1.53¾; ungraded white at $1.55; No. 2 red, 1.59½@1.60; do., December option, at $1.59¾@1.60; do., January, at $1.60¾@1.61¼; do., February, at $1.65¾@1 64¾; ungraded red at $1.51@1.52¾; ungraded spring at $1.42@1.47. Rye is firm at 97½@98c. for State and Canada. Corn has a moderate sale at for New York No. 2 at 64¾@64½c.; do., December, at @61¾c.; do., January, at 62c.; New York steamer mixed at 63¼@63¾c.; do., December, at 63c.; ungraded western mixed at 62@64¼c.; No. 3 at 62@62½c. Oats favor buyers with a small demand; latest sales are of New York No. 1 white at 52c.; New York No. 2 white at 51@51¾c.; New York No. 3 white at 49¾@50c.; New York No. 1 at 50c.; New York No. 2 at 50c.; New York No. 3 at 49c.; ungraded white western at 50c.; ungraded mixed western at 50c.; white State at 51c.; mixed State at 51c.; No. 2 Chicago at 50c. afloat.

HAY AND STRAW.—There is a fairly active and firm market. Shipping hay quoted at 65@70c.; retail lots at 70@80c. for medium, and 80@95c. for prime; clover at 55@60c, Straw at 80@85c. for long rye; 65@70c. for short rye, and 55@60c, for oat.

HOPS.—The movement is very light on export and home trade account, and prices are unsettled. Quotations are for New Yorks, new crop, choice, 38@40c; New Yorks, new crop, medium, 34@36c.; New Yorks, new crop, low to fair, 30@32c.; Eastern, new crop, 30@33c.; Wisconsin, new crop, 30@38c.; Yearlings, 7@18c; Olds, all growths, 4@10c.; Pacific coast, new, 35@40c.; Pacific coast, olds (nominal), 7@12c.; Bavarians, 50@65.

HONEY—The market is steady and that is a point gained for this item as buyers never make frequent visits. W.clover, ₰ ℔, 18@19c.; single comb, larger, pkgs., 14@16c.; buckwheat, 12@14c.; clover extracted, 11@10c.; strained, 8@10c.

POULTRY AND GAME.—Turkeys have had a good sale; geese have had more of the old style holiday hum noted for one or two years past. Fowls and chickens have been neglected, and with enough to call a surplus the market is very low. The West is sending fine samples of fed turkeys this season.

Turkeys, New Jersey and Pa., prime, 12@14c.; State, Northern Ohio and Mich. 12@14 c. other Western, prime, 11@12c.; do. fair to good, 10@11c.; Philadelphia, dry-picked, 14c.; do., chickens, d. p. 10@12c.; do., Jersey, per lb., 9@10c.; do., State and Western, prime, 8c.; fair to good, 6@7½c.; Philada. fowls, dry-picked, 9@10c.; N. J. do., 7@8c.; State Western, 5@7c.; Geese, choice, 9@10c.; others, 7@8c.; Ducks, choice, 11½@12½c.; other, 10@11c. Cooped stock has merely a nominal place; fowls, 7@9c., roosters, 4@5c.; turkeys, poor to prime, 9@10c.; Western, 7@9c.; ducks, 40@75c.; geese, N. J., $1.62@$1.75; State, $1.25@$1.50; Western, 87c.@$1,12.

There has been no rush of game and good prices ruled for Christmas. The market closes fairly strong with favorably cold weather. Season for venison is over.

Wild Ducks, Canvas-backs, Havre de Grace, pair, $3.50; Northern, $3; red-heads, 75c.@1 00; Mallards, 75c.@80c.; Teal, 10c.; Black, 50@60c.; common 20@30c. Quail, trapped, ₰ doz., $3.50@$3.25; Partridges, State, ₰ pair, $1.00; Western, 85c@90c.; Grouse, $1.12@$1.25; Flight pigeons, ₰ doz., $1.25; Rabbits, ₰ pair, 30@35c.; Hares, 30@45c.; Minn. venison, saddles, 13@14c.; other, 12@13c.; whole, deer, 7@9c.

PROVISIONS.—Hog products have been fairly active and firm. Mess pork closed at $13.25@13.35 for December; $13.25@13.35 for sellers' option, old or new, for January; $14.00@14 10 for new do. for do.; $14.00@14 15 for February, and $14.25 for March. Bacon at 7¼c. for long clear and 7¾c. for short clear. Beef at for mess at $10.50@11.00; extra mess at $11.00@12.00; packet at $13.00@13.50; tierced beef, city extra India mess, at $21.00@23.00. Beef Hams at $16,50. Lard—Western steam at $7.80@7.90 for spot lots; $7.92½ for new for January; $8.02½@8.05 for new for February, and $8.12½ for new for March; Stearine at 7¾@7¾c. for Western. Tallow at 6¾c. for prime.

SEEDS—Grass are quiet. Clover is steadily held at 8½@8¾c. for prime to choice; 9¾@9¾c. for extra choice. Timothy at $2.75 for prime.

TOBACCO.—Has not varied in any particular, trade being moderate and prices unchanged.

VEGETABLES.—Potatoes dull and unusually low for the season. White onions too high for quick sales; red and yellow, steady. Cabbage lower, but an early advance is expected.

Potatoes, Nova Scotia Rose, $1.50@$1.62; Prolific, 1.25@1.50; Mercer, $1.25@1.37; State Peachblows, d.-h., $1.75@2; Snowflake, d.-h., $1.25@$1.50; Early Rose, Maine, d.-h., $1.50@1.62; State, $1.37@1.50; do. in bulk, 1.25@1.50; do., Peerless, $1@1.37; N. J., do., 87c.@$1; Sweet potatoes, $3.25@$3.50; squash, marrow, ₰ bbl., 75c.@$1.25; Hubbard, $1.25@1.50; cabbage, white, per 100, $4@5; red do., $5@6; onions, white, per bbl., $3@4.50; red, do., $2.25@$2.50; do., yellow, $2.50@2.75, do., Chester, $1.75@$2.25. beets, $1@1.25; Russia turnips, 75c@87c.; carrots, 75c.@$1; celery, per doz., $1@1.50.

WOOL.—A light business the present week on account of the holidays, but confidence prevailing at late prices. Quotations are for—

Ohio, Pennsylvania, Indiana and Virginia—XXX, 52@55c.; XX, 49@52c.; X, 49@52c.; No. 1, 53@56c.; No. 2, 47@50c.; common, 43@45c.; combing, 55@57c.

New York, Michigan, Indiana and Wisconsin—XX, 43@48c.; X, 45@47c.; No. 1, 50@55c.; No. 2, 46@50c.; common, 40@43c.; combing, 50@55c.

Iowa, Vermont and Illinois—X and XX, 12@46c.; No. 1, 48@52c.; No. 2, 44@48c.; combing, 1@53c.

Missouri, Kentucky and Tennessee—Washed fleece, 46@53c.; unwashed fleece, 35@42c.; unwashed combing, 35@45c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Dec. 27.

BEEVES.—Receipts for the week, 10,381 head; do. last week, 10,552 do. The demand was moderate after the liberal rates of last week for Christmas and holiday show, and Wednesday and Friday had a spiritless market. Prime Kentucky steers quoted extreme at 10¾c., 57 lbs. dress. From that grade down to common the range was 7¾@10¾c.

MILCH COWS.—Business is light the average is as before $35@$60, but when the extreme is made the quality has to be specially attractive.

VEAL CALVES.—Live have sold well; Choice N. J. fair to prime, 6@7½c.; best State, 7¾c.; Mount Hollys 5@7¾c. Buttermilk, 3¾@4¾c.; grass, 2¾@2¾c. Hog dressed plenty, prime to extra, 9½@10½c.; a few at 11c.; common to good, 4@8c.

HOGS.—Receipts for the week, 27,082 head; do last week, 30,376 do. The market is excited owing to small supplies. Prime Ohio hogs were wanted at 4¾@5¼c.; city dressed, 6¾@6¾c. Country pork—[illegible] medium, 6¾@6¾c.; heavy, 6¾@7c. Tenderloins, 8¾@8¾c.

SHEEP AND LAMBS.—Receipts for the week, 20,495 head; do. last week, 27,087 do. Mild weather kept back early buyers, but at the close there is more confidence and an active trade can be reported at 4@6c. Lambs scarce; quoted at 6@7¾c.

Reading for the Young.

MY LABORATORY.

S. RUFUS MASON.

My farm of 80 acres is exactly half a mile long, and a quarter of a mile wide, square corners, a road on the east and north sides. I am so well satisfied that all cultivation must be conducted in a scientific manner, that I have converted the whole of it into a chemical laboratory. I have fitted it up with furnaces, crucibles, retorts, benches, tables, spiders, pots, pans and kettles. I employ as assistants, those who have been actively engaged in the especial business of cultivation from the creation of the world down to the present time; they have vast experience, and are very nearly perfect.

There is, however, a little room for improvement, and I, as the youngest member of the company look after that myself. Our operations are continuous, night and day; hot or cold, wet or dry, we are always at work. I will tell you *what* we do, *why* we do it, and *when* we do it.

As soon as a crop is taken from the soil, we begin. If it is one of small grain, we let the *Sun* and *Rain* act upon the land until the weed seeds have all sprouted, we then turn them under with a plow and then a second crop of weeds comes up, which we leave to the tender mercies of *Jack Frost*, our watch dog, and a deadly enemy to all young plants which venture out late. The plow has thrown up the soil quite loose, admitting the *atmosphere*, which aerates every particle of it and refreshes it, just as a breath of fresh air does the cousins, after a lively tussle with the hoe on a warm day.

As cool weather comes on, *Jack Frost* steps in, he nips the clods and freezes them solid, leaving them so till the *Sun* in pity, warms them up, upon which they fairly dissolve with gratitude, and crumble down before him, reduced to fine soil, suitable for seed growth in the spring.

Gentle Spring brings in her train a little troop of helpers, who in turn moisten, and then dry the earth till it is warm enough for a seed bed. Seeds cannot flourish in a cold, chilly bed, and at this time of year must be well tucked in, and although the *Wind* is one of my most valuable assistants, he is sometimes boisterous, and in the exuberance his zeal, will blow the covering off, so we have to go along the seed rows and *tramp* in the seed, "now, don't you forget it," (how natural it is to use slang right after the word tramp.)

About these days, or a little earlier, we start our *furnaces*. Some of our seeds are foreigners or of foreign descent at least, and from hot countries. They require a very warm bed, and we start a fire with fresh manure from the horse stable, put it in a heap, build a box around it to keep *Jack Frost* out, put on a layer of nice soil, and plant the seeds of cabbages, tomatoes, peppers, melons, cucumbers and tender flower seeds.

This furnace is shut out from my out-door helpers by a glazed sash, admitting only the *Sun*. We don't want *Jack Frost*, we don't want *Rain*, we don't want *Wind*, but we must have *Water*, so we let him in under the sash through the rose of a watering pot. (Oh! my! I hear little Kitty Clover say, "I never heard before of a watering pot that bore roses.") Well, they do.

From this warm bed, the young plants are transferred to flower pots, and thence to out-of-doors, where the *air* and *earth* are warm enough, and enjoy the *spring showers*. These showers are very different from other kinds. They are more gentle, contain more ammonia, and are of a *temperature* very refreshing to young plants, which toss their heads and tiny blossoms up towards the gently falling drops, as if they loved them. As *summer* comes along in its hot, dusty march, the rains are driven away, but, like every good action, they leave a pleasant memory, in this case called *Dew*. The *Dew* comes and waters the plants at night when the *Sun* is away. These *Dews* are more tender and delicate than the *Rains*, more beneficial, more constant, more timely, more gentle, and less powerful. As the delicate *Dew* is merely an imperceptible mist, it has no power to force itself through hard-packed soil, we therefore keep the surface loose and open by constantly stirring it with plows, harrows, rakes and hoes.

You will notice that I have a capital set of helpers; they work night and day, are extremely zealous, and some of them at times over-do the matter, but as a general thing they are good, so I set down their names in italics.

During the latter part of *summer* and early part of *fall*, the *Sun* overpowers all the rest of my workers, the plants turn pale, flowers droop, fruit and seeds mature, and all vegetation passes into the "Sere and Yellow Leaf," and here my most important ally begins his duties. He is called *Decay*, he gathers all the dead leaves, stems and branches, he packs them close to the ground, then *Moisture*, his right-hand man, arises from the *earth*, the herbage turns brown, then black, then crumbles down to a fine unctuous mass, containing all the elements of plant food for next season's crops, and this we call Mold or Humus.

In the late fall and winter, this is attacked by *Jack Frost*, *Wind*, *Sun* and *Rain* by turns, which thus prepare it, and by spring it is *plant food*. My active band of helpers do this sometimes in an irregular way, and at uncertain and unseasonable times, and it is the cultivator's business to interpose and regulate, of which I shall treat fully in another article.

Dodge Co., Nebraska.

LETTERS FROM THE COUSINS.

Dear Uncle Mark.—While reading my letter to-night in the children's department of the Rural, it occurred to me that I never told you of the "China Tree," the seeds of which I sent you. They bloom as I said before, in spring, and are of a lilac color. They form in clusters on a single spray. The leaf is composed of three leaflets, that is, there are three leaves so arranged on the stem that they form one leaf. I have looked my botany through, but I cannot find the name of "China Tree," from end to end, so of course I am unable to tell the botanical name of the tree. I never from childhood to womanhood heard the tree called by any other name than the "China Tree," as I always learned that it had first been imported from China and hence its name. There were some "Refugee Negroes" in my garden this summer, and they recognized the tree at once and exclaimed, "Law, missus, you'se got China Trees up har' I do declar." At the first appearance of the tree from the seed, it looks like a weed, only the color is a lighter green. After awhile it somewhat resembles the Elderberry bushes, but as it grows to maturity, it takes on a dark green. If I had only thought before the leaves fell, I would have sent you one, so you could see what it looked like. Now, with your permission I have a proposition to make to the little cousins, and I want them to vote on it. I love children and would do almost anything to please them, so I propose to write them a story of a little girl I knew well and will call it "Reminiscences of a Little Girl." I will try my best to interest you. The best part of the story will be that it is all true. We will follow her from infancy to womanhood and see what you think of her. I am writing like a "steam engine," for fear baby Fred should wake, for that would seriously interfere with all my calculations. What a splendid paper the Rural is! good print, good paper, and interesting reading matter, it is surely all it claims to be, a first-class journal and family paper, and deserves all the commendations bestowed on it by the Chicago Inter Ocean. Hark! what is that noise? 'Tis baby waking, so good-bye to this letter and all concerned for to-night, and some day we will meet again.

Yours truly,

Marshall Co., Kan. Mrs. M. J. Galpin.

[Let us have the story by all means, I am sure the cousins will all be glad to read it.—U. M.]

Uncle Mark.—The grape seeds were received and carefully planted, and now I am anxiously watching for them to appear above ground. My window-plants, which occupy two windows and number some forty varieties, require much attention, but they well repay me for the trouble in their beautiful foliage and blossoms.

Among my choicest plants are the Oleander and a Calla Lily. The former has been in bloom since last June. I also prize very highly my Madeira Vine, which last summer filled the upper half of a window, and bore a lot of delicate white flowers. On bringing the plants into the house, the first of October, I cut it all down, and now there are several shoots that reach the top of the room, from the window-sill, and have been nipped back a number of times. Having read considerable about the germination of weevil-eaten peas, I thought I would test it, for the curiosity of it; hence, I selected seven that very badly eaten, and planted them in a flower-pot; the result is that four came up looking strong and healthy; two are now making a luxuriant growth in the window, the other two having been pulled up. Emily.

Steuben Co., N. Y.

Dear Uncle Mark:—I am a little girl nine years old. I live in the country. I like to read the Rural, especially the boys' and girls' letters. Papa has taken the Rural longer than I have lived, and most of the time it was the only paper we were taking. I have to go one mile and three-quarters to school. I like flowers. I, with my sister Pearl, should like to join your Horticultural Club. Your niece,

Mason Co., Illinois. Fannie E. Armiling.

Dear Uncle Mark:—I have read the Rural for almost one year, and am very well pleased with it, especially the letters written by the little folks and aunts. Tell Pocahontas that perhaps she has her Oleander in too large a pot. I find they bloom best when the pot is full of roots, then they will not grow so freely. I cannot boast much on my Rural seeds, as the weather was so dry, that but few came up to any good. The tomatoes were splendid. E. Dawson.

Wor. Co., O.

Dear Uncle Mark:—As my other letter was in print, I write again. I received the grape seeds, and am much obliged for them; but they are not coming up yet; I hope they will soon. I live on a farm, and can have my garden anywhere. Our farm is almost level. Had I better select my garden spot on high or low land? I did not have a garden the past year. I will close. Your neice,

McLean Co., Ills. Laura Furman.

The Puzzler.

HIDDEN GROCERIES.

1. Is your watch silver, Sandy?
2. Get me some tape, Essie.
3. Has the course of soup past, Ella.
4. He brought me an apple, but termed it a pear.
5. Ha, ha, Min! Cem eats raw ham.
6. Tell me, Nick, how chowder does taste.
7. Massa de saps agoing to waste.
8. Ah, Asa usage begets forgetfulness.
9. In fastening clothes, pins must be used.
10. Let every tub stand on its own bottom.
11. Do they wash board walks.

☞Answer in two weeks. L.

DIAGONAL PUZZLE.

1. A personal pronoun; 2. To act (reversed); 3, Very small; 4. A lady's name. Primals form a western State. Diagonals form a thought.

☞Answer in two weeks. Little One.

DROP LETTER PUZZLE.

Bl-ss th-m wh-ch p-rs-c-t- ---; hl-ss -nd c-rs-n-t. Fill each blank with a vowel and find one of Christ's glorious beatitudes, found in the sermon on the mount.

☞Answer in two weeks. L. O.

A PYRAMID PUZZLE.

A consonant; To be able; part of a flower; A clown; Centrals form a young animal.

☞Answer in two weeks. L. O.

A NAME PUZZLE.

Place nine female names so as to form a tenth.

☞Answer in two weeks. O.

PUZZLER ANSWERS.—Dec. 20.

Hidden Sounds.—1. Scoresby; 2. Jura; 3. Whale; 4. Booth; 5. Davy; 6. Cross; 7. Wolsienholm; 8. Bayfield; 9. Heywood; 10. Collins; 11. Mt Desert; 12. Vineyard; 13. Tangier; 14. Currituck; 15. Core; 16. Calibogue; 17. Sapelo; 18. Cumberland; 19. Altamaha; 20. Gron; 21. Jesuit.

Acrostical Enigma.—E. S. CARMAN.

Hour Glass Puzzle:

S u b l t A n e o u s
S t u m B l i n g
S w e E t l y
S a R a h
P I t
S
A T e
R o W e l
T r a I p s e
S w i f T n e s s
S w e e t H e a r t s

Centrals form "*Aberistwith*."

Various.

BRIEFLETS.

The British Medical Journal tells of the successful manufacture of artificial eggs. The Scientific American suggests that incubators be invented to hatch them. . . Mr. Keppler, in Puck, presents the average *plumber's* bill like this: Looking for leak, $25; loss of time looking for leak, $50; making leak larger, $100; studying the size of the leak, $200; making new leaks, $300; assistants, $500; paper for making out bill $600; etc., etc. . . Park Benjamin wants criminals to be killed by electricity instead of a rope. Are not executions shocking enough already?—Buffalo Express. . . The nutritive power of parsnips is higher than that of beets, carrots or turnips. . . The Editor of the California Horticulturist says: "Persuade others, also, to plant gardens, and to make beautiful homes, for this is one of the very best ways in which to brighten the world of men and women." . . The American Cultivator in an editorial calls Alfalfa a variety of Lucerne. They are the same. We show everywhere that it has proved hardy in Canada during several years past. . . Mr. Samuel B. Parsons proposes a National Horticultural Society. . . Prof. Husmann estimates the Elvira Grape as among the best for Missouri. . . Mr. Purdy says: "Take out the grubs; head back the peach-trees; then they will live to old age and bear the best fruit." . . Mr. Beecher thinks that religious papers are no more ready to acknowledge their errors than secular papers. . . Our respected friend, Mr. James J. H. Gregory, says in Land and Home, that the cheapness and availability of kerosene for keeping frost from rooms above ground or below ground is a matter well worthy the consideration of the public. . . We have a little conservatory which, during very severe weather, is not sufficiently heated. An ordinary German student lamp has proved effectual in keeping out frost during such weather. . . And now for a Happy New Year, good readers! Has the Rural promoted the well-being of your home during the past year? We hope so, because it has tried so to do. The way to have many friends is to prove worthy of them. Write to us freely. We will thank you for any suggestions or criticisms. If any question perplexes you, see if we can not clear up the perplexity. If you desire any topic treated more freely than we have treated it, let us know what it is. . . What is the best food to make hens lay in winter, Mr. Ritter? . . The strongest objection to discourtesy and arrogance in argument is that they defeat the very object of the argument. They create distrust, dislike or even disgust.—Mr. Chamberlain in Ohio Farmer. . . The Cincinnati Gazette of Dec. 17, has the following: The Rural New-Yorker is one of the handsomest and most liberally conducted agricultural journals among our exchanges, and it was never so good as at present. We never open its well-filled pages without a wish that our columns were even more numerous and broader than they are, that we might transfer a measure of its good things for the delectation of our readers. . . Considering the distinguished source, we think the foregoing the best compliment of the season. . . The Farmers' Club, of Onondaga Co., declines to take any active interest in the forming of a National Agricultural Society, as former experience has shown that they do not pay for their cost in time and money. . . Restrict the time for the reading of agricultural and horticultural essays at our clubs, State and National Societies to ten minutes. That's long enough for ninety-nine out of a hundred of our orators to tell all they know that hasn't been published many times before. . . Our friend, Nelson Ritter, says that oil meal is the best thing that calves can be fed on, but he finds natives do not do so well on it as Short-horns. . . Mr. Nottingham says that raw eggs will stop scouring.

AGRICULTURAL NEWS.

The next meeting of the Michigan Pomological Society will be held at Hillsdale, February 11th, 12th and 13th. . . On Christmas day Santa Claus whirled down from the pole in the midst of the most widespread cold storm of the year. Away in California, advices to San Francisco from all parts of the Pacific coast tell of an unprecedentedly cold spell. The cold wave reached St. Paul, Minn., early in the morning, and straightway the thermometer rushed down to 40° below zero. At Chicago, the day was the coldest of the season, the thermometer standing about zero all day and dropping six or seven degrees lower at night. Down at Cincinnati, the fall of snow prevented extreme cold, but the thermometer sank steadily all day. At St. Louis, cold set in on Christmas eve, and the thermometer marked seven to eight degrees below zero all the next day. Here some heavy falls of snow showed how extremely filthy the streets were, and added deeply to the universal slush; but the weather, while wretchedly uncomfortable, was not cold. All over the north, however, the cold wave is reported to have prevented a green Christmas. . . The annual meeting of the Ayrshire Breeders' Association, for the election of officers, members, etc., will take place at the Tremont House, Boston, Mass., on Jan. 15, 1880, at 12 M. It is expected that essays of interest to breeders and producers will be read at the meeting. . . Chicago has 21 of the largest grain elevators in the world, with a total storage capacity of 17,000,000 bushels. On Dec. 18 these elevators contained 6,549,665 bushels of wheat, 2,534,679 bushels of corn, 1,096,118 bushels of oats, 260,802 bushels of rye, and 707,897 bushels of barley, making a grand total of 11,149,161 bushels, against 10,125,252 bushels a week before, and 8,613,579 bushels at that period last year. . . Louisiana sugar-planters are trying to bring about the repeal of the reciprocity treaty with the Sandwich Islands, so as to prevent the free importation of sugar from that quarter. . . A meeting of wagon-makers from all parts of the United States was held in Chicago, lately. An advance of from $16 to $18 on farm wagons was decided upon. About $20,000,000 were represented. . . The Mobile Register thinks that $20,000,000 will be made this year by Southern planters, by the rise in crops over what they expected to get for them, and it urges that part of this be put into the establishment of manufactories in the South, especially for those spinning yarn from seed cotton. . . The Vermont State Grange is out in a vigorous protest against railroad discriminations in freight. . . The entire capacity of the Boston grain elevators is only 1,700,000 bushels; 1,081,000 bushels are now stored in them. . . The Louisiana sugar crop for 1879 is said to be worth $25,000,000. . . An elevator, with a capacity of 2,500,000 bushels, is to be constructed at Baltimore. . . Lack of corn and railroad transportation have forced the Madison (Ind.) starch factories to shut down. . . The rice crop of South Carolina is estimated at 41,000 tierces, and that of Georgia at 26,000 tierces. . . In southern Indiana and Kentucky the Hessian fly is threatening destruction to the fall-sown wheat. . . Norfolk, Va., is the first pea-nut port in the world, receiving the entire crop of Virginia, which is much larger than the growth of Tennessee and North Carolina.

NEW PUBLICATIONS.

Portrait of Dr. Holmes.—The publishers of the Atlantic Monthly have prepared for subscribers to any of their periodicals a superb life-size portrait of Oliver Wendell Holmes, uniform in size and style with the portraits of Longfellow, Bryant, Whittier, and Lowell, heretofore published.

This excellent portrait, or any one of the others above named, is furnished to subscribers, for one dollar, by the publishers, Houghton, Osgood & Co., Boston, Mass.

PERSONAL ITEMS.

Ismail Pasha, ex-Khedive of Egypt, is somewhat seriously ill.

The young wife of Minister Christianey doesn't like Peru and is coming home.

The Rothschilds have lately paid in England $195,000 probate, and $120,000 legacy duty.

Mrs. A. T. Stewart pays a tax on only $500,000 of personal property. W. H. Vanderbilt pays none.

Colonel McDaniel, the veteran turf man, is lying very ill at his residence, at Princeton, with pneumonia.

Mrs. Emily Hayne, mother of Paul H. Hayne, the Southern poet, recently died in Richmond county, Ga., 74 years old.

According to Victor Hugo forty-five is the half-way house between youth and old age. A woman never reaches the half-way house. Does she?

The English Government has granted pensions of £500 annually to the widow and £100 to the mother of the late Major Cavagnari, who was murdered at Cabool.

The granddaughter of Eugene Sue, who was the original of one of the characters in the "Wandering Jew," was a petitioner in one of the New York courts last week.

"Grant and Mahone' would carry Virginia," is a proposition laid down at Washington. The new Senator from Virginia is ambitious and very likely suggested the ticket himself.

King Kalakaua, like Dennis Kearney, dislikes the Chinese, and fears they will obtain possession of his kingdom. Therefore he asks Portugese to make their home in the Sandwich Islands.

Nine of the United states Senators have given sons or sons-in-law small jobs about the Capitol. The young men generally serve as clerks for the committees and draw $6 a day, Sunday or Monday, rain or shine

In his message to the South Carolina Legislature, Gov Simpson recommends that the convict labor be employed and utilized outside the penitentiary walls in the development of the resources of the State.

Olive Logan says the new Queen of Spain is a real bread-and-butter miss, as depicted by Byron, but her mother, the Empress of Austria, is a woman of great beauty. But, then, Olive is getting rather notorious as a sensational gossip.

Walt Whitman is ill at St. Louis—too ill to travel. When he is well enough to leave the house, he either goes down to the river to "loaf and invite his soul," or visits a neighboring kindergarten, where the children gather merrily about him to beg for stories.

The bones of John Randolph of Roanoke have been removed from their burial place at Roanoke, Va., and deposited in Richmond's Hollywood Cemetery. Judge Hunter Marshall, one of the pall-bearers at the late burial, was present at the first interment of the great Virginian in 1833.

The attorney general having granted a flat for a writ of error to the Tichborne claimant in England, an association to help to set the claimant free, and restore to him the properties and possessions of the Tichborne baronetcy has been formed. There is little danger, however, that the rotund fraud will derive any benefit from these efforts.

Mrs. Jane Grey Swisshelm petitions Congress to give to "Susan," the wife of the Ute Chief Johnson, a section of wild land, "the same to be inalienable in her and her heirs until the Fourth of July, 1979, in acknowledgment of her heroism and humanity in defending the white captives lately taken by her tribe." This is very generous of Mrs. Swisshelm, especially as General Adams alleges that Susan's blood-curdling story that she rushed into the Indian council and made a thrilling speech demanding that the captives be freed, has not a word of truth in it, and that, in fact, Susan was not there at all.

When "Thad" Stevens was a young lawyer in the Pennsylvania courts, he once lost his case by what he considered a wrong ruling of the Judge. Disgusted, he banged his law books on the table, picked up his hat and started for the door, with some vigorous words in his mouth. The Judge, feeling that his dignity was assailed, rose impressively and said: "Mr. Stevens!" Mr. Stevens stopped, turned and bowed deferentially. "Mr. Stevens," said the Judge, "do you intend by such conduct to express your contempt for this Court?" And Stevens, with mock seriousness, answered: "Express my contempt for this Court! No, sir! I was trying to conceal it, your Honor!"

No sense of having sickness in the family if you will use Hop Bitters in time. Ask those who know.

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Miscellaneous.

62 Gold, Crystal Lace, Perfumed & Chromo Cards name in Gold and Jet, 10c. CLINTON & BRO., Clintonville, Ct.

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THE request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness.

Implements and Machinery.

THE NEW AND IMPROVED DEMAS

I offer to the public in this machine that which has never before been accomplished; a Turning Lathe and Bracket Saw combined—practical in every sense of the word, and so low in price as to come within the reach of all. The Saw Attachment is a fac-simile of the "Holly," except that it is more powerful and will do heavier work with great dispatch. The manner of attaching the Saw to the Lathe is a *marvel of simplicity*. It can be thrown in or out of position in five seconds *without removing any part of either machine*. Both can be run at the same time if desired. The Lathe bed is 2 feet long, 3½ inches wide and 2½ deep, built exactly the same as a machinist's iron Lathe, and has V-shaped ways for the head and tail blocks to slide upon. No other Lathe at this price has this feature. It will turn a block 5 inches in diameter and 15 inches in length, which is very large for an amateur Lathe to turn. It is built entirely of iron and steel, and stands 3 feet 5 inches in height. Spindle of steel, nicely fitted; has collars, spur centre, screw for putting chucks on; is furnished with rosette and ball chucks. No other Lathe has these valuable attachments. Cone pulley with two lifts, for heavy and light work; **has solid emery wheel**—a new feature in Turning Lathes—which makes it the best in the market for heavy and light work; tail-screw is steel; has a ball-balanced handle, and a knurled set-screw for fastening it; has two rests, one 4-inch and the other 12-inch; balance-wheel is very large and heavy; has two grooves; in fact, this is the most complete, largest, most powerful, and steadiest while operating of any Lathe and Saw in the market. The ease of operating, combined with quality, amount, and variety of work executed, places this machine so far in advance of all others that it has not a rival that will bear comparison.

No. 1 has 25 New Process Designs in sawing and turning, 3 Drill Points, 6 Saw Blades, 5 Turning Tools, Screw-Driver, and Wrench. $8.00
No. 2 (same as No. 1, except has 87 Patterns in book)..... 8.50
No. 3 (same as No. 2, with 15 feet of assorted Woods)..... 9.00

With each machine I give a Manual of Turning and Fret-Sawing (illustrated). No. 3 Demas is without doubt the most perfect and complete outfit ever yet offered the young amateur. Either above machines sent freight prepaid for **$1.00** extra.

Respectfully,
A. H. SHIPMAN, Rochester, N. Y.

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Our latest improved sawing machine cuts off a 2-foot log in 2 minutes. A **$100 PRESENT** will be given to two men who can saw as much in the old way, as one man can with this machine. Circulars sent free. W. GILES, 711 W. Lake St., Chicago, Ill.

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Do not fail to see CLARK'S NEW ROOT CUTTER. The leading stock raisers in the country pronounce it the best and only cutter that cuts roots in shape for feeding.

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Miscellaneous.

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I have one of the best stock farms of 720 acres in southeastern Kansas; 150 acres bottom land under plow, 100 acres of timber, good creek running through the place, 3 never-failing wells, 2 houses, good barn, corn-cribs, sheds for 1,000 sheep; hog, cow and sheep pastures of 20 acres each. Open land adjoining on the east sufficient to pasture thousands of cattle or sheep. A few apple trees and about 100 peach trees in bearing; also 550 apple trees 4 years old. Price $10,000. The above could be sold in two farms, but would prefer to sell in one. Address J. J. DAVIS, Everett, Woodson Co., Kan;

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MRS. B. SMITH'S BUTTER COLOR.
We offer above to any that will excel it in Color or Taste. Harmless; and the Butter keeps the longest and sells at Highest Price. Send for Dairymen's Receipt Book, Free. Mrs. B. SMITH, 72 N. 4th St., Phila., Pa.

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Wit and Humor.

MRS. PARTINGTON says Ike has bought a horse so spirituous that it always goes off on a decanter.

"THAT'S what beats me," as the boy said when he saw his father take the skate strap down from its accustomed nail.

MAMMA—"Why, Poppett, all these apples are bitten. Have you touched them?" Poppet—"No, ma. But it froze last night, and p'r'aps—p'r'aps they're frost-bitten!"

JANE (under nine) to her governess: "Miss Blunt, when ma asks you to have some more wine to-day at dinner, do, please, say yes." Governess: "Why? What do wish me to take more wine for?" Jane: "Oh, I only want to see ma's face."

LITTLE Master Roddy has been in the habit of putting his pennies into the box at Sunday-school till last Sunday, when he came ruuuing into the house in a breathless hurry and shouted: "Mamma, I shan't save up my pennies any more. The money don't go up to God! I saw Mr. Kelly take it and put it in his pocket!"

"Oh, yes, wait till Christmas," snarled the youthful scion, "that's always the way. If I want a new sled, wait till Christmas; a pair of skates, wait till Christmas. I waited last year, and I didn't get sled or skates either. Nothing but a book with a red cover and a little baby card with verses onto it. Christmas is a fraud. Boys never get nothing they want."

A YOUNG man, dressed in the hight of fashion, and with a poetic turn of mind, was driving along a country road, and, upon gazing at the pond which skirted the highway, said: "Oh, how I would like to lave my heated head in those cooling waters!" An Irishman, overhearing the exclamation, immediately replied: "Bedad, you might lave it there and it would not sink."

A READY ANSWER.—"Mr. Brown, couldn't you give me a position of some kind with you?"

"Very sorry—don't think there is any vacancy in my establishment."

"If you have nothing else employ me as your adviser."

"Very well; you may commence by advising me how I can best get rid of you."

YES, FUN, LOTS OF IT.—"Do animals have fun?" asked some unobserving individual. Of course they do. When a cow switches her tail across the face of the man who is milking her, steps along just two yards, and turns to see him pick up his stool and follow, she has the most amused expression on her face possible, and if she can kick over the milk-pail she grows positively hilarious.

THE inhabitants of the Bordelais country are prone to exaggeration, but one of them recently met his match. He was dining with a Japanese friend on the Boulevard, and mushrooms came under discussion, "In my country," said the Bordelais, "the mushrooms under the trees are larger than these plates." "What of that?" exclaimed the Jap." "In my country it is the trees that grow under the mushrooms."

A certain old gentleman, very rich and still more stingy, is in the habit of wearing his clothes to the last thread. One of his friends, meeting him, exclaimed: "They told me that you had a new hat, and I'll be hanged if you haven't!" "Oh, yes," said the miser, looking as if he were a trifle ashamed of himself, "you see, my wife kept telling me that the old one was a good deal worn out. Well, yesterday was my wife's birthday, and I got myself a new hat for her birthday present."

THE FEBRUARY ATLANTIC

WILL contain, in addition to its full quota of reading, (144 pages, including an installment of Mr. HOWELL'S New Serial Story, which has already attracted great attention,) a Supplement giving a full and authentic report of

THE HOLMES' BREAKFAST,

including all the Speeches and Poems, with such description as is necessary to give an adequate idea of this memorable occasion.

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CHARGE ON THE "RAZOR-BACKS."
Hunting Straying Tenderloin and Spare-Rib.

Jim—"Gully, Bill; what a jumper!"
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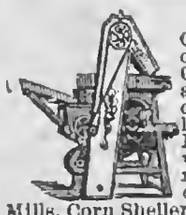

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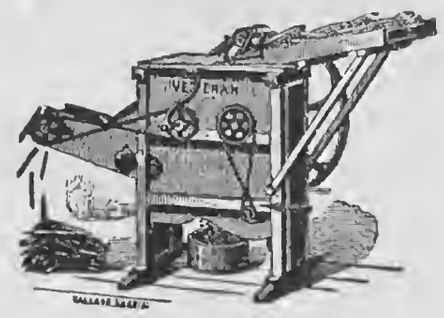

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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Biographical.

OUR PORTRAIT GALLERY.

ROBERT W. FURNAS.

Robert Wilkinson Furnas was born in Miami County, Ohio, on May 5, 1824, and was married in Cincinnati, Ohio, in November, 1845. His father was a farmer, and both his parents were "Friends" or "Quakers," and were born in South Carolina, his grand-parents having immigrated to that State from England. He remained on the farm until 17 years old, when he went to Cincinnati where he served a regular apprenticeship of three years to the printing trade. His educational advantages during boyhood were exceedingly limited; but none of the many opportunities of picking up information afforded in a printing office were neglected, and the greater part of his present attainments was acquired over the mid-night lamp in that school, principally after the age of maturity. When 22 years old he returned to his native county, Miami, and purchased, published, and edited the "Times," at Troy. Afterwards he engaged in the book trade in the same town, and subsequently became a railroad agent and conductor. In 1856 he emigrated to Brownsville, Nebraska, where he established a newspaper, the Nebraska Advertiser, still published, being the oldest paper in the State.

In his adopted State his career has been distinguished, and the list of public offices he has efficiently filled marks an active and honorable life. For one year he was chief clerk of the Senate branch of the Nebraska Legislature, and for four years a member of that body. In the early part of the late war he was commissioned by President Lincoln as colonel in the regular army, and organized and commanded a brigade of Union Indian soldiers in Kansas, Missouri, Arkansas, and the Indian Territory. At the solicitation of the Governor of Nebraska he resigned his Indian command, came home and organized the Second Nebraska Cavalry, of which he was appointed colonel. In this capacity he served under Gen. Sully in the Indian war on the extreme northern border of the United States.

His military career ended, he became agent for the Omaha and Winnebago tribes of Indians. He was regent of the Nebraska University for six years, during two of which he was president of the Board. He is an ex-president of the St. Louis and Nebraska Trunk Railroad Co. For eight years he was president of the Nebraska State Board of Agriculture. He has been Governor of his State for one term—that of 1873-4. At present he is president of the Nebraska State Horticultural Society; president of the Nebraska State Historical Society; ex-president of the Nebraska State Soldier's Union; Past Grandmaster I. O. O. F.; Past Grandmaster, Past ex-High Priest, Past Grand Commander, Past Grand Patron of all Grand Masonic bodies of the State, and a vice-president of the American Society.

While a member of the Legislature he drafted and secured the passage of the first Common School Law; also an act creating the State Board of Agriculture, and was always alive to all questions that tended to promote educational and agricultural advancement.

In politics Gov. Furnas is a Republican; in religious matters he is affiliated with the Presbyterian Church, and for 30 years he has been active in temperance organizations. He has always enjoyed good health, and he carries his years so well that those who do not know the date of his birth, might readily take him to be not more than from 35 to 40 years old. During life his motto has been: "Leave the world something the better for having lived in it." He has "gone up to the head" in all things he has undertaken, firm in the belief that "*patientia omnia vincit.*"

His life has been so busy a one that he has not had time to get rich. True, he made and owned one of the best farms in the West—especially as regards fruit—but grasshoppers and Shylocks wrested it from him. He has always been enthusiastic in his opinions as to the benefit of tree-planting on the Western prairies, and has with his own hands set out thousands of fruit and forest trees, has had many more thousands planted for him, and been instrumental in the clothing of the treeless prairies of the State with millions of forest and fruit trees. All along he has taken special pride in advancing all educational and agricultural interests in the whilom "Great American Desert", which, during his time and not a little owing to his efforts and the influence of his example, has become a teeming area of arable, meadow and rich pasture land.

At present Gov. Furnas is engaged in farming and fruit-growing, with every prospect of soon re-establishing the fortune of which insect and usurious pests some time since deprived him. The Governor is pre-eminently a self-made man, having since the age of ten "hoed his own row," both his parents having

ROBERT W. FURNAS.—Fig. 8.

died of cholera within four days of each other when he was in his ninth year. He is now the only member of his family living, a twin brother having died before his parents, and a sister shortly after their death. Among the representative men of this country—those who have made an honorable position for themselves by their talents, energy, honorable life and valuable services, Governor Furnas stands in the front rank.

With such men in the van, little wonder that the Great West has advanced rapidly over the great prairies, subdued the Great American Desert and become the hope and home of the landless, the impoverished, the enterprizing and the bold spirits not of the Eastern States alone, but of Europe and one might almost say, of the entire civilized world.

Entomological.

NOTES ON THE CABBAGE WORMS.

PROFESSOR CYRUS THOMAS.

Swapping the ten-lined potato beetle to the East for the European cabbage worm, has not been a very profitable exchange on the part of the West, at least I can say that for Illinois it has not. The butterflies of this species—Pieris rapæ—so far as I can ascertain, first made their appearance in this State, in the vicinity of Chicago, in 1875 or 1876. The first notice that I can find of injury by the worms was in 1876. In 1878 they appeared in Central Illinois in large numbers doing much injury to the cabbages; a few butterflies were observed also in the extreme southern portion. During the past season they have been very abundant, over a large part of the State, playing sad havoc with the cabbages. This as a natural consequence has caused the wide-awake horticulturists of our State to test the remedies heretofore proposed and also to try new ones when these failed; what has been the general result I will mention a little further on.

As is well known, the female of this species scatters her eggs singly over the leaves; our native Western species, Pieris protodice, appears to have the same habit. The habit which the young larva has, of devouring the egg shell immediately after it has escaped from it, appears to be common to all the species of the genus, and was long ago noticed in reference to P. brassicæ by that close observer Harold.

I had a fair opportunity the past season of testing the statement made by Dr. Fitch as to the peaceable and unaggressive disposition of the worm. Toward the close of the season a new cabbage worm made its appearance in my garden in considerable numbers. I observed the two species feeding together generally in perfect harmony: but the European species always avoided any intrusion on the rights or premises of its neighbor. This characteristic of the worm, which is very marked, is directly in contrast with the character of the perfect insect, which, as it had done in the Eastern States, has driven before it, wherever it made its appearance, our native species. I am informed by one careful observer that he has even seen it battling with our native cabbage butterfly. Be the cause what it may, as soon as it made its appearance in a locality the native species, although abundant before, immediately disappeared. The pupa state of the first or summer brood as given by Dr. Fitch, varies from seven to nineteen days; the observations made here indicate a somewhat shorter period for this latitude, varying from five to ten days. The species is generally understood to be two-brooded. The perfect insect was taken here last spring early in March, and the worms were still feeding as late as the last days of November. The butterflies were more or less numerous all summer, but they appeared to be most abundant at three periods—in March and April, July and September. Hence I feel quite certain that we have had three broods in the southern extremity of the State the past season.

It has frequently been stated that the worm has a habit of boring its way into the heads of cabbages. My observations do not confirm this statement. That it will bore part way into an incipient head, while the leaves are yet partially separated is true, but I failed to find a single instance of a worm boring into a solid head through the thickness of even three leaves; a fact which I deem of much importance, as it affords a possible remedy I shall call attention to.

Natural Agencies Which Assist in their Destruction.

Fortunately for our gardeners, the little chaleid parasite—Pteromalus puparum, Linn.—which infests the pupa, made its appearance also this year, and, from the large number of parasitized chrysalids I have observed, promises to give us efficient aid in the destruction of this pest next season. A large number of the cocoons and a few specimens of the perfect insect of a species of Microgaster (not yet determined) were observed in company with the worms. The cocoons are white, which fact alone would indicate that it is different from the species that attacks the cabbage worm in Europe.

In examining the remains of pupæ of the cabbage insect that had been infested by the Pteromalus, I noticed that in almost every instance some of the parasites had failed to make their escape. As these had passed through the pupa state, though not always with perfect wings, it is certain that they had not been attacked by a secondary parasite. Did they fail to perfect their organization and to acquire sufficient strength to cut their way out from want of sufficient food? According to Curtis as many as two or three hundred may be found in a single pupa of Pieris brassicæ—which is a larger species than P. rapæ. In the latter I find the number to vary from ten to thirty, which corresponds closely with Dr. Packard's observations.

I found no instance of the worm being attacked by a Tachina fly. A small spider, probably the Theridion brassicæ of Dr. Fitch, was quite numerous among the cabbages, but I did not observe it feeding on the young caterpillars.

Artificial Remedies.

Old Vincent Kollar, in his work on "Injurious Insects," says: "The best way to destroy them is by picking off and killing the caterpillars as well as the pupæ, as far as it is possible." Curtis in his "Farm Insects" says: "There are several methods of reducing their numbers and checking their increase; the best is to look in the winter for the chry-

salids, which are concealed under the ledges of walls, pailings, doors, window-sills, on bushes, in hedges, on the trunks of trees etc., and crush them; but on no account to destroy the dark-brown-colored ones which are full of the parasitic Pteromati. As the spring advances, ring or large bag-nets may be used to catch the butterflies; and when the caterpillars are large enough to be seen, hand picking is neither difficult nor laborious; or dusting the plants with hellebore powder, fresh and genuine, would be worth a trial, and it is very effective in some instances." Boisduval in his "Entomologie Horticole" gives but one remedy, that of catching the butterflies with insect nets. Duponchel, in his work on "Caterpillars," recommends as the most effectual remedy, employing children to catch the butterflies, and destroying the pupæ. Dr. Fitch also recommends employing children to catch the butterflies, and suggests placing pieces of boards between the rows of cabbages, elevated two or three inches above the ground, as places for the worms to pupate, where the pupæ can easily be collected and destroyed. His chief remedy appears to be killing the caterpillars by cutting them asunder with scissors. He thinks topical applications of poisonous substances, such as hellebore etc., of no particular value. Prof. Riley repeats the recommendation to capture the butterflies; also recommends trapping the pupæ by placing boards between the cabbages. He adds that the "saponaceous compounds of cresylic acid are effectual, and without objection as to poisonous qualities." In addition to these remedies the following have also been recommended:—Drenching with hot water; sprinkling with salt; drenching with brine; with weak lye, with dilute carbolic acid, with decoction of Elder; with decoction of Dog-fennel, etc; dusting with hellebore, powdered lime, ashes, pulverized black pepper, meal, saw-dust, road-dust etc.

I tried the experiment of catching the butterflies with insect nets, and am satisfied that children, from ten to fifteen years of age, can soon be taught to do this with ease and rapidity. The butterflies move heavily and rather slowly, alighting especially on cruciferous flowers; a small bed of early radishes here and there, allowed to run to seed, will attract them, and they may then be caught without running among the cabbages, which is one objection to this method of relief. But the efficacy of this method depends very largely on cooperation; for it is rather irritating to toil two or three days in the hot sun-shine—for it is then they are most numerous—and as you think the enemy is about conquered, to see a fresh army pouring over the fence from your neighbor's garden which is left to shift for itself. If a proper combined effort is made to capture the butterflies when they appear in the spring in a neighborhood, and are few in number compared with what the summer brood usually is, they may be so generally destroyed that with a little additional labor in destroying what worms appear, cabbages may be saved from injury.

I tested by experiment most of the topical applications I have named, and found none of them to be effectual. The pests will eat with apparent unconcern when covered over with a thick coating of lime, ashes or salt, and according to Dr. Fitch, of hellebore. Of the liquid applications tried the most effectual was a lye made by mixing strong ashes in water, warm at the time used, and applying it in as large quantities as the cabbages would bear. Unless used somewhat carefully, it will discolor the outer leaves of heads. Lime and brine were of no value whatever; elder decoction killed a few; other applications gave similar results. Adding my experience to that of numerous other persons throughout the State, who were experimenting, I am satisfied that no application yet suggested will prove of any real value as a remedy for this cabbage worm, which, though apparently so tender and delicate, is, in fact, exceedingly hardy and tenaceous of life, much more so than most leaf-eating caterpillars.

Although the list of materials tried is a rather long one, yet I am not prepared to say there is no topical application that will destroy the worm without materially injuring the cabbage. The fact that the species and its congeners have long been injurious in Europe without such a remedy having been discovered, renders the likelihood of such discovery doubtful, but not conclusive. If some method of applying kerosene can be devised that will not injure the cabbage, it may be effectual. Dry, pulverized cayenne pepper, if not too costly, might be beneficial. There are also numerous other substances which might be suggested which I had no opportunity of testing, which it would be well to try. Placing a leaf of the cabbage on the top of it at night, as a means of drawing them together, has been recommended, but the indisposition of the worms to leave the leaf they are on, prevents this from proving as beneficial as it appears theoretically to be. One serious drawback to any such remedy, could one be found, is that although one brood of worms be destroyed, unless there is combined action on the part of our neighbors, we will be overwhelmed by a second swarm from the surrounding gardens, and by the time these are destroyed, our cabbages will be comparatively worthless.

It behooves the gardeners, therefore, to ascertain if there is any mode of cultivation by which the cabbages themselves may be enabled to resist these attacks. Notwithstanding the general destruction where the insect was abundant, a few persons succeeded in raising a full crop of fine, large heads. Upon inquiry I found that in these cases it was owing almost entirely to two facts:—First, the ground was made as rich as possible. Second, the plants were brought forward a little earlier than usual—some two or three weeks in advance of the usual time—and were pushed to heading by extra culture. As heretofore stated, if firm heads are formed the worms will do them, in this section, at least, but little injury. Our early varieties suffered no injury from the worms. How far this is true in reference to northern latitudes I am unable to say. Certain varieties of cabbage, I noticed, suffered less than others, chiefly, as appeared to me, on account of their firm heads, and heading at a rather early stage of their growth.

In concluding my notes on this species, I would urge further experiments with topical applications, but would recommend to gardeners to rely chiefly on the following means:—Capturing the butterflies, especially the spring brood; killing the worms, using scissors for this purpose; earlier planting; selecting the firmest-headed varieties; and giving the plants as vigorous growth as possible, by enriching the soil and thorough cultivation.

The chief objection to the earlier planting is the difficulty of preserving the crop for winter use when the fall is warm, as it was last winter. How far this can be accomplished the gardeners must decide.

Farm Topics.

WINTER WORK FOR FARMERS.

As long as the ground remains unfrozen there is little excuse for idleness upon the farm, but when the earth becomes snow-bound and the soil frozen so as to be impenetrable by farm implements, we naturally seek the comforts of the fireside, leaving it only when occasion requires. The farmer who has been diligent and persevering during the seasons of seedtime and harvest, is certainly deserving of all the repose he needs in winter, but there is danger of excess in that direction, which is detrimental both to health and successful farming. If we will use a little thought we will find means of employing our winter leisure, which will prove pleasant and profitable.

Pruning Fruit Trees.—The orchard is a department of the farm that too often suffers from neglect. The best time to prune fruit trees is a subject upon which farmers disagree; but, all things considered, there is probably no better time than February or March. At that period farmers usually have little else to do, and the work will be more thoroughly done than it would be if postponed to a more busy season. The warm days of February furnish an excellent time for tree pruning. With a short ladder, a strong pruning knife and a fine-toothed saw, the farmer should go over his orchard every year. When two branches are rubbed together by the wind so that the bark is marred, one of them should be removed. Dead and broken limbs and sprouts should be cut off and wherever the shoots have grown so thick as to interfere with each other, they should be thinned out. Whenever it is found necessary to cut off a large branch, the wound should be sealed as soon as the surface becomes dry, with a coating of white lead or common paint. This prevents a waste of sap and preserves the wood from decay.

The Farmer's Shop.—A good workshop containing such tools as can be used to advantage by the farmers, should be found on every farm. A room with a stove in it and large enough to permit of the construction of a hay rigging, a gate or portable fence, will furnish a place where many hours may be healthfully and profitably spent in the most inclement weather of winter. Here a great deal of repairing may be done that would otherwise find its way to the professional mechanic. New tools may be built, that will be needed on the farm, or harnesses may be oiled and repaired and a great many things that will suggest themselves may be done. In mild weather the thoughtful can find profitable out-door work, such as repairing outbuildings and cutting up fallen branches from trees.

I do not mean to be understood that every hour in winter should be spent in labor. Every farmer should spend a portion of his winter leisure in reading good books and papers, and in conversation. Winter is the only opportunity that farmers have to improve their minds, and a few hours each day should be spent in intellectual culture; but when the head begins to ache from long-continued reading by the fireside, it is a hint that out-door exercise is needed. Whenever I see an orchard with the trunks and branches disfigured by lusty sprouts and black, dead branches, or a pair of bars where there should be a gate, or farm implements out of repair at the beginning of the busy season, I am led to believe that the owner has not made good use of his winter leisure.

Chemung, Co., N. Y. G. A. Goff, Jr.

STONE FENCES.

W. J. FOWLER.

One of the oldest kinds of fence is the stone wall, and, despite some objections, it is likely to retain its popularity for localities where huge bowlders cover the ground. The special advantage of the stone fence is its permanence, and to secure this to its fullest extent the wall must be well laid and have adequate drainage. It is a common mistake to suppose that piling very heavy stones upon each other is a protection against frost. The expansion of water by freezing will rend asunder the strongest vessel, provided no other way of escape for the imprisoned water is provided. Huge bowlders will be tipped over and thrown down as easily as if they were smaller and the more of them there are on the wall, the heavier becomes the work of rebuilding when time and frost have done their work. But on land that is naturally or artificially drained, a full stone fence without rails or posts is most reliable and permanent. The stones need not be large, but they should be well laid and not less than three and a half feet above ground, including the bank. It is better to lay the foundation one foot below the surface to protect from frost. The bank also serves the same purpose. It requires a great many stones to make a wall of this discription, two feet wide at base and, including foundation, four and one half or five feet high. To the beginner the temptation will be strong to build a half wall and top off with stakes and rails. But if a permanent fence is desired, the temptation should not be yielded to, and if the place does not need a permanent fence, stone should not be used. Removing an old wall, even if there are not half as many stones as there should be, costs about as much as the land it occupies is worth. Very many farmers have torn up such walls within the last twenty years, as reaping and mowing machines have made small fields inconvenient to be profitably worked. Thousands more regard the old division fences as nuisances, and are only kept from removing them by the labor and expense and the added fact that if the stones were out of the wall, they would on many farms be as much in the way somewhere else. So difficult is it to decide where permanent fences are needed that it may be almost made a rule not to lay any wall except for outside fences. Stones not needed for these or for building, had better be buried out of the way where they lie rather than be dug up and drawn away to be perhaps equally a nuisance after a few years in some other place. It is better economy generally to have such inside fences as are needed of such material that they can be easily changed or removed when occasion requires. When a farmer gets his rotation of crops exactly to suit him and adopts his fences to it, the chances are that after a few years he or his successors will be compelled to change the rotation, so that the fences will not be adapted to the changed necessities of his management.

Monroe Co., N. Y.

Arboricultural.

OTHER MAPLES.

SAMUEL PARSONS, JR.

Every lawn almost has Sugar Maples, Norway Maples, Silver Maples as well as Scarlet and Sycamore Maples. Possibly after the Elm we find no deciduous tree more commonly employed than these Maples. I have endeavored to speak with all due respect and admiration for such trees since their importance to the lawn planter is evident and great. The Japan Maple Polymorphum also has been and is receiving much well deserved attention. But it has occurred to me to ask how about the *other* Maples not commonly spoken of in connection with lawn planting. There are *others* we know. We believe, and perhaps know them to be, in many ways, excellent ornamental trees. Yet we do not use them, if we know them, and if we do not know them, then are we sadly deficient in lawn planting knowledge and should be enlightened. Let us look at a few of the most striking. There are half a dozen at least, and I do not include among them several Japanese species that are as yet mere curiosities of the botanist.

Unquestionably the most familiar is Acer campestre, the English Field Maple, common in Great Britain along road-sides and hedges, yet little used in America. Its neglect must arise from mere carelessness; for it is a picturesque little Maple, having neat, compact foliage and otherwise special fitness for the office of either shrub or tree. Very hardy, easily managed and cheap, it is perhaps better fitted for certain positions than any other Maple originated out of Japan. It may not be very choice, but it and its varieties are certainly valuable in lawn planting. I wish it could enjoy higher consideration and more general employment.

The striped Maple (Acer striatum or Pennsylvanicum), the Snake Maple, or striped Dogwood is also one of the *other* Maples that though commonly known, especially in America, continue to be slighted in our lawn planting operations. It is a neat, compact, elegant tree remarkable for a striped, light-colored bark—whence the name. An Eastern American Maple, it deserves, on that account, even more attention, because we are thus assured of its entire hardiness and fitness for our climate. The leaves are of good size and of a bright and cheerful green; round-headed, rather than pyramidal in contour, the general effect is that of a low tree, only somewhat larger than the English field Maple, (Acer campestre). As we shall see again, Acer striatum forms one of the most noteworthy types that may be recognized as possessing their analogues in Japan or along the Amoor river. The flowers are greenish-white.

There are three other American Maples quite noteworthy, Acer spicatum, circinatum and macrophyllum, all natives of America. The last is found in Oregon, has a large leaf six to twelve inches long, and a fine ornamental appearance. It is, unfortunately, not entirely hardy in Eastern America, a peculiarity California and even Oregon plants are apt to evince. The flowers, in this case, are yellowish.

Acer circinatum, the Vine Maple, is also from the Pacific Coast, a round headed, low tree, or "spreading bush with thin, moderately seven to nine-lobed leaves," and small corymbs of purplish-red flowers. The leaves, in fact, are roundish or heart-shaped, and the contour of the entire foliage likewise more or less round, forming a feature on the lawn, always pleasing and effective. Acer circinatum is a tree little known, but deserving of very general employment. Unlike Acer macrophyllum, it proves perfectly hardy in spite of its origin. The other Maple is Acer spicatum, the Mountain Maple, a tall shrub or low tree common in the Northern States of America. The leaves are not specially striking, but the flowers bloom latest of all the species. I have sought attention for this Maple, not because of its superior excellence, although it is attractive enough in its way, but on account of its curious resemblance to a Maple of the Amoor River, also termed A. spicatum. In Japan, if not in the same region, we have repeated almost identically the form of A. Pennsylvanicum as A. tegmentosum. A. Pennsylvanicum, again, suggests somewhat the appearance of A. Colchicum rubrum (or mono. or lætum), another species belonging to the same region as the last. It is very curious to thus notice different forms of Maples almost repeating themselves under like conditions on opposite sides of the globe. Japan is full of these resemblances, analogues of kindred forms in America.

Acer Tartaricum Gennali is yet another interesting Asiatic Maple. The leaves are small, heart-shaped, light-colored, and a curious drab-green, and the general contour is that of a large spreading bush. It is not a new species or variety, yet it is decidedly choice and uncommon.

Passing from Maples of Europe and America we come to the *other* Maples of Asia, to one or two of which I have just alluded. Indeed, species and varieties of Maples abound in both the Amoor region and Japan.

First and perhaps foremost of the *other* Maples of Asia, of which I desire to speak, is A. Colchicum rubrum, an old but choice Maple, somewhat hard to propagate, but always valued by those who know its excellent ornamental qualities. Bright-red leaf-stems and leaves, the latter with triangular lobes, distinguish the young growth of this Maple, and render its appearance charming both in spring and fall. It has a smooth, light-colored bark and fresh, green, mature foliage. Strange to say, this Maple, commonly called Colchicum, which makes it a native of the region of the Caucasus is distinctly declared by all good authorities a Japanese species, lætum, mono, and perhaps trimcatum. This will readily account for the fact that it does not graft readily on American or European Maples. A. Colchicum (mono or lætum) is one of the most valuable of the *other* Maples, perhaps as valuable, ornamentally, as any member of the genus.

In Japan we have, besides the numerous polymorphum or palmatum varieties, Japonicum, Sieboldianum, diabolicum, rufinervum crataegifolium and the curious Acer carpinifolium, a

plant that few on first acquaintance would class with Maples. These kinds, however, have been either spoken of before or possess little value for the lawn planter if, indeed, they are practically attainable; certainly in several cases they are not. I should perhaps say that all Maples here spoken of as among the *other* Maples are worthy of distinguished single positions. Since they are chiefly small trees, they may be also placed on the outskirts or in the middle of shrub groups.

Thus you perceive that the *other* species and varieties of the genus Acer (may I not say of all genera?) have, in very many cases, an ornamental value not to be neglected, or even, perhaps, set below that of our best known trees.

Pomological.

THE DAVENPORT APPLE.

Among the new and excellent apples, which deserve the attention of the public, is the Davenport here illustrated. In the latter part of November we received two specimens of this apple from the veteran pomologist, Mr. Charles Downing, who pronounces it "very fine as an eating apple and valuable for family use." Mr. Downing's attention was first called to this new apple by Joseph Davenport, of West Hartford, Conn., who informed him that it originated on the farm of Rev. Edward Davenport, of Colerain, Franklin Co., Massachusetts. The tree, he said, is a moderate grower, forming a round, spreading head, and bearing very abundant crops in alternate years. The apple is a russet, and, as will be seen in the engraving, it is somewhat below medium in size. Flesh delicious, tender, juicy, subacid; season, October December. Its russet color and small size will likely prevent it from ever attaining popularity as a market apple; but for home use it deserves to be appreciated by all lovers of good fruit.

INDIANA HORTICULTURAL SOCIETY.

The Nineteenth Annual Session of the Indiana Horticultural Society was held at Dublin, December 16, 17, and 18. The meetings were well attended and the proceedings the most interesting the Society ever had. The first meeting, as is usual, was occupied by an address of welcome with a response by the president, reports of the officers, and appointments of special committees.

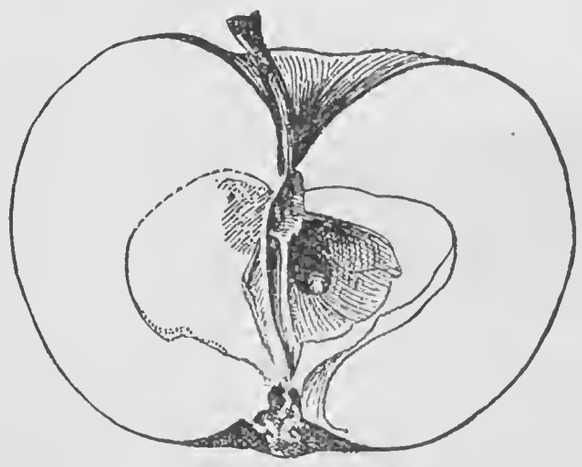
The evening session was opened by an address on the care of orchards and profit of fruit-growing by Dr. A. Furnas. He preferred a western slope on soil that will produce an average crop of corn or potatoes. He prepares the ground as if for corn, digs holes large enough to take in the roots without crowding, and prefers a two-year old tree. He is not so particular about the top, but wants plenty of roots. He plants most varieties two rods apart; but some varieties, such as the Wagener, Jersey Black and some others, it would do to plant much closer. For the first five or six years he cultivates in corn or potatoes; then sows in grass and turns on hogs. He thinks a crop of oats injurious. He prunes in sugar-making time for wood and in August for fruit and recommends the root-pruning of unproductive trees. He says, do not plant too many varieties; the present market demands a large red apple; plant regular bearers and trees that bear early. He knew an orchard of Ben Davis of which the fruit the eighth year after planting, sold for $2.40 per tree. He spoke favorably of Rome Beauty, Smith's Cider, Indiana Favorite, and Maiden's Blush.

The address was followed by a very interesting discussion participated in by N. Ohmer, of Ohio; C. R. Coryell, of Michigan, and others on the effects of the warm temperature during the fall months on the keeping of fruit. Some saved their apples by picking them early and covering them with straw or corn-stalks; some who in former years succeeded by picking and putting them in barrels and leaving them lying under the trees, lost most of their fruit by so doing this year.

The meetings of the second day were mostly occupied by reports of which the president, Sylvester Johnson, made a very interesting one of the late meeting of the American Pomological Society. J. C. Ratliff, delegate from this society to the late meeting of the Michigan Pomological Society, gave a very interesting account of the proceedings of that body. Reports of Hon. J. D. G. Nelson, Wallace Ragan, Dr. S. S. Boyd, and D. E. Hoffman, members of the State Fruit Committee, showed that the last season on the whole was a favorable one—as there was a large crop of small fruits and grapes and an average crop of pears and apples; the latter however did not keep very well.

The meeting in the evening of the second day was opened by an address on Ornithology by Prof. A. W. Brayton, who had a very large and interesting collection of specimens for the inspection of the members. He commenced by stating that we had during the year about 280 species of birds in the State, of which about 150 made it their breeding grounds. Some 25 or 30 remained during the year and the rest simply went across the State in their annual migrations.

Dr. John A. Warder, of Ohio, delivered a very interesting lecture on Entomology—he closed his address by referring to a favorite topic of his—the Catalpa as a timber tree, and showed some of the wood which had been exposed to the weather during 67 years and still remained sound.



DAVENPORT APPLE—DRAWN FROM LIFE—FIG. 9.

There was a large number of very interesting papers read. One by Mrs. E. Boyd deserved notice; but want of space forbids it, and I will close by referring to the fruit on exhibition, which consisted of 546 plates of apples, two of grapes, and six of pears. There was also a fine lot of potatoes, corn, dried and canned fruits, and a very well executed bust made out of gilt-edge butter.

D. E. H.

For other reports of Industrial Societies, see page 29.

IRON FOR PEAR BLIGHT.—Noticing lately several recommendations of "iron as a fertilizer" and "salt for pear blight," calls to my mind the following:—Some eight or ten years since I found the blight had attacked a few dwarf pear trees on my ground. This was the kind of blight in which the young wood suddenly turns black. I applied to the surface of the ground, under the trees, a strong solution of sulphate of iron (copperas) several times till the soil was of a yellow color, pruned severely all the affected wood, and have never seen any blight there since. I would not state that iron will cure pear blight in all or any cases, or even that it did so in this case, but I should most certainly apply the same remedy, should blight occur again on my premises.

Muskegon Co., Mich. S. B. P.

Horticultural.

COVERING TENDER SHRUBS, HYBRID PERPETUAL ROSES, ETC.

If we could depend upon snow lying through all the freezing weather of our bitter winters, we should need no other covering for plants, for there is no better shelter than the snow, at least as long as it has some two or three inches of depth over the plants to be guarded, and as long as it remains open and cellular. Then it prevents the soil warmth radiating off into space, just as dry ashes, or dry sawdust, or tan, or chaff, or wool, or the like open and cellular matter, will prevent radiation back into a heap of stored ice.

But some very charming and desirable beauties of our yards cannot be bent down like a vine so as to lie under the snow, and a common recourse is to wrap them with straw. This makes a lawn look ghostly through the long winter, adding to the universal whiteness, when the snow sheet everywhere before us makes one long for some soft color, some bit of green or neutral color to rest the dazzled eye. Where they can be had, branches of Hemlock Spruce or other evergreen, answer well and look well; the leaves will not drop until the hot sunshine of April burns them off. Generally a mere screen against the direct blast of the wind and impact of the March sun upon frosted leaves or shoots is sufficient. Plants easily broken should have a few stakes set in round them before the ground freezes, to be tied together in a point above the summit of the closed-in shrub. Evergreens, such as the Japan Euonymus, etc., should not be quite deprived of light or air; their thickest shielding should be on the south and west sides. An empty flour sack of tough buff paper makes a ready and perfect covering for deciduous H. P. Roses, etc. If there is danger of the snow being whirled away from over the roots, a little litter should cover them to retain snow and aid its useful service.

For protecting a low, tender tree, such as a Fig, or an Orange, or a Tea-rose, from the first autumn frosts, in order that it may retain its leaves longer and ripen its wood and bark better before being covered or transferred to the cellar, a large store box, open at the bottom and cut in two horizontally, makes a very convenient covering. The lower part remains in place round the tree, and the upper is lifted to expose the leaves to the sunlight in mild weather, and shut down on threatening evenings as easily as the lid of a trunk. Two superimposed boxes can be used for a taller plant.

The Worden and Champion (Talman) Grapes.

In order to compare the merits of these two varieties with others better known, I have made tests from grapes grown in the same vineyard, with the following results:

	Per ct. Sugar.	Per ct. Acid.
Delaware	21.0	1.2
Isabella	16.0	1.7
Concord	16.0	1.5
Worden	17.0	1.0
Champion	10.0	0.9

All were picked in good order, well ripened, except the Champion which were over-ripe and considerably shriveled. My samples of these were picked Oct. 9th, long after the time when they should have been marketed. This would deduct from the acid, and add to the sugar, but with this advantage they fall a little over one-third below the Concord in quality, and stand below good apples in the amount of sugar they contain. The Worden has one per cent. more sugar than the Concord, and has one-half per cent. less acid, consequently they will *taste* better to the average eater. NELSON RITTER.

Field Crops.

TEOSINTE.—A CAUTION.

Nov. 2d, 1878, we reported our trial of this plant. Since that time it has been talked about first by one journal, then by another all over the country—all, for the most part, based upon what it had done in warm climates. We hope there is no danger of another "Pearl Millet" excitement over Teosinte for this or a more northerly latitude, since we think we can assure our readers that our season is entirely too short for it and that it can never prove as valuable for green fodder as corn. To help nip any such danger in the bud, however, we reprint what was stated in the article above referred to:

"Among novelties sent out by Vilmorin & Co., of Paris, France, last year was Teosinte (Reana or Euchlæana luxurians), a fodder plant resembling corn in its stalk and leaf. Our seed was sown May 15. It was, like the Pearl Millet, slow to germinate and slow to grow until late in the summer when the rate of growth was very like that of corn. Oct. 12, when the leaves had been somewhat withered by frost, one of the largest plants was cut and found to weigh ten pounds. It measured five feet in hight and consisted of seventeen stalks. These stalks were thicker, softer, the juice sweeter than those of corn. There were more leaves also and they were broader and more tender. It is a perennial plant in its native home, Central America, where its stalks are cut off and fed to cattle, new shoots again growing from the roots. Those plants which we cut back, made very little growth afterwards. The very large tender leaves, the heavy succulent stalks and their sweet juice, and the luxuriant growth of the plant during hot weather, might warrant a trial of Teosinte in our more Southern States."

In the same number we gave a very good illustration of the plant, also taken, as we remember, from a cut which was sent to Mr. W. H. Carson by Vilmorin & Co., or redrawn from the latter's catalogue, we are uncertain which.

Cow Peas.

Messrs. J. M. Thorburn & Co., say they have received the following information on this subject:—

The Speckled and Whip-Poor-Will are the favorite varieties in general use, being the earliest and most prolific. The crop is easily gathered as it is not inclined to climb or trail, the growth being like that of snap or bush beans. The pods when green and tender can be used, like snap beans, for the table, or when green shelled for the same purpose. When ripe, they are not good for human food. Planted at the same time with Lima beans, they will ripen first. The seed of the first crop ripens in time to allow the planting of a second one. The Lady Pea is small, nearly white, and when dry, is much used for the table. The Sugar Crowder is much larger and more prolific than the Lady, and, like it, is much esteemed for table use. It is a climbing or trailing sort. The Black Pea is used for feeding stock. It is a vigorous, strong grower. The Clay Pea is also a strong grower and prolific. The seed of this sort will not decay in the ground during winter, that which may fall from the vines coming up freely the following spring. This variety is used only for feeding stock. As seen above, some varieties are good for human food and all are valuable for feeding stock, either shelled out or left on the vines to be cut and cured as hay. They will grow on poorer soil than any other crop, and afford a larger amount of vegetable matter which may be turned under to enrich the soil. Growing so rapidly and luxuriantly, they completely smother out all growth of grass and weeds. They are planted the same time as snap beans and cultivated the same, except when wanted to be turned under.

Dairy Husbandry.

WINTER BUTTER MAKING.—No. 2.

HENRY STEWART.

The Cow.

BUTTER making begins with the cow; one cannot make the best butter from a poor cow There are cows from which the best dairymen and dairywomen will fail to get good butter, especially in the winter time. One may be sure of success if he has a good pure-bred or grade Jersey or Ayrshire or Guernsey cow, and some native cows will make equally good butter. But some will not, and the best of them are improved by a cross of either of the above pure breeds. The dairyman, then, who would excel in producing fine butter in the winter time should weed out from his herd every cow whose cream is white or specky, or apt to become bitter, or that may sometimes foam in the churn. He should also have fresh cows, for the cream from a fresh cow will be of a much higher color than that from a farrow cow, or even from one that has been milking three or four months. Having made a selection of cows, the next thing in order is to feed them on the right food, to secure firm, hard, yellow butter, having the waxy grain and high nutty flavor so essential.

The Food.

The food has a most important effect on the quality of the butter as well as the quantity, and both the selection and the quantity of food given deserve consideration. A few tests of foods made by myself personally, without any intervention of a hired man, and in which the feed was given, the cow milked, the milk weighed and skimmed, and the butter churned and weighed by my own hands, may be given. In February last my cow, Minnie, was fed upon the usual ration of 10 pounds of meal of corn, oats and wheat bran ground together; to this were added six pounds of palm nut meal daily. Feb. 1st to 7th the cow gave 161 pounds of milk which produced eight pounds of butter; Feb. 8 to 14, the milk was 191½ pounds and the butter 9¾ pounds; Feb. 15 to 21, the milk was 194 pounds, and the butter 10¼ pounds; Feb. 22 to 28 the milk was 198½ pounds, and the butter was 12 pounds; the meal was discontinued because the butter deteriorated in quality somewhat.

A test with cotton-seed meal gave the following results A two-year-old Ayrshire cow, Bolivia, fed previously on 10 lbs. of corn, oats and bran meal daily was given four pounds of cotton seed meal. The yield was as follows:

			Milk.	Butter.
Nov.	1 to	7	126 pounds.	5⅞ pounds.
"	8	14	129 "	7¼ "
"	15	21	128 "	7⅛ "
"	22	28	132 "	7 10-16 "

The color of the butter and flavor were much improved by the cotton-seed meal. The last-mentioned yield of butter is still maintained.

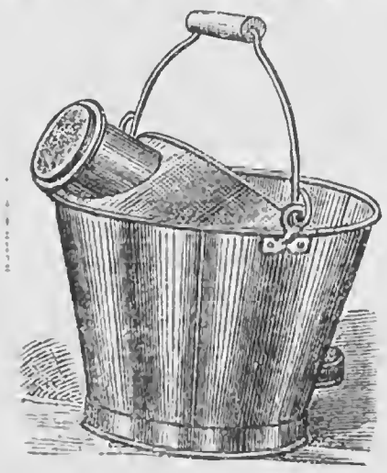
After very thorough and long-continued tests of every kind of feed attainable, I prefer the following rations and kinds for the production of the best quality of butter:—Ten pounds of meal made of corn, oats and wheat bran or middlings, with four pounds of cotton-seed meal, given half in the morning and half in the evening with cut and wetted hay; at noon a feed of dry hay. If roots are at hand I would give a peck of these in place of the hay at noon. A handful of salt daily sprinkled on the feed is indispensable; the want of it will be discovered in the churning.

Milking.

If the quantity and quality of the butter depend upon the cow and the feeding, the milking may easily spoil all. This should be done in the most cleanly manner. It is impossible to keep cows perfectly clean and a stable entirely free from odors, unless all the income is expended in the attention that would be needed. But yet the milk may be kept clean if the stables are cleaned out and freshly bedded before milking, and the cows are carded and brushed off and the udders wiped with a clean cloth. Some impurities, such as loose hairs and dust, *will* get into the milk in spite of all care, but these may be kept out of the butter. An excellent milking-pail, which I have recently tried (Dodge's patent, fig. 10), strains the milk perfectly, from every hair and speck of dust; it is easily kept clean and promises to be very durable. The strainer may be made of one, two or three thicknesses of wire cloth, and can be unscrewed for washing.

Setting the Milk.

Upon the setting of the milk depends the quantity of the cream raised, as well as the quality of the butter. The difference between deep and shallow setting is too small to be perceived by the most careful tests, excepting as regards convenience. The deep-can system is convenient under certain circumstances, and in some is indispensable; but I prefer shallow setting when all other things are equal. All these things are equalized and more by the Ferguson Bureau Creamery, which is the most convenient shallow-pan system I have met with. This consists of a closet with shelves for the pans inclosed by glazed or wire-gauze doors, a place below for the cream and butter and one above



DODGE'S MILK PAIL—FIG. 10.

for ice. The temperature may be maintained the year round at any desired point; the milk and cream are thoroughly aired and exposed to light; and the closet may be kept in any place that may be desirable. For usefulness, and labor-saving I have met with no more effective plan than this. But with whatever system of setting is used, the requisites for first-quality butter are purity of air, sufficient ventilation, moist but not damp atmosphere, and freedom from any odor whatever, with a temperature not below 45 and not over 60 degrees. The cream skimmed every 36 hours should be stirred in the cream jar each time that fresh cream is added, and should be kept as purely as the milk.

There is a dispute respecting the churning of sweet and sour cream. Sweet cream will make delicious butter, and preferable for immediate sale; but this will not keep so well, nor has it that ripeness of flavor and peculiar nuttiness, which butter made from sour cream possesses. Sour-cream butter may be kept for a year or more and may improve with age to some extent for a few months, while sweet-cream butter should be eaten in a week after it is made. Thus it depends upon the manner of disposal, if one should churn sweet or sour cream. But the acidity of the cream must not be excessive. In the winter, if kept at a temperature of 50 degrees, the cream may be churned once a week; if kept longer, there may be trouble in the churning.

Can Fatness in a Cow Lessen her Milk Yield?

That cows may be too fat to give a full flow of milk and hens too fat to lay, is a current opinion among farmers in some sections, which is an absurdity, it seems to me; the fact being that the cow or hen gets fat on account of non-production, not that the yield of milk or eggs is lessened by the accumulation of flesh. Cows take on flesh when supplied with rich food beyond their capacity to convert it into milk. Certain articles of food have a tendency to produce milk, while the fat-forming qualities of others are predominant; yet were a cow allowed so small a ration of any kind, that she would decrease in weight, the production of milk would not be increased thereby; but, on the contrary, a diminished yield would be the result. There is a limit to the profitable conversion of food into milk; also a limit to the capacity of cows to secrete milk; but if, by high feeding with careful attention to details, we can get the same returns in four years that otherwise would require five, we are the gainers. It seems incredible that any thinking man could believe that a "cow would yield more milk when thin in flesh than when fat." M. B. P.

Turnips for Milch Cows.

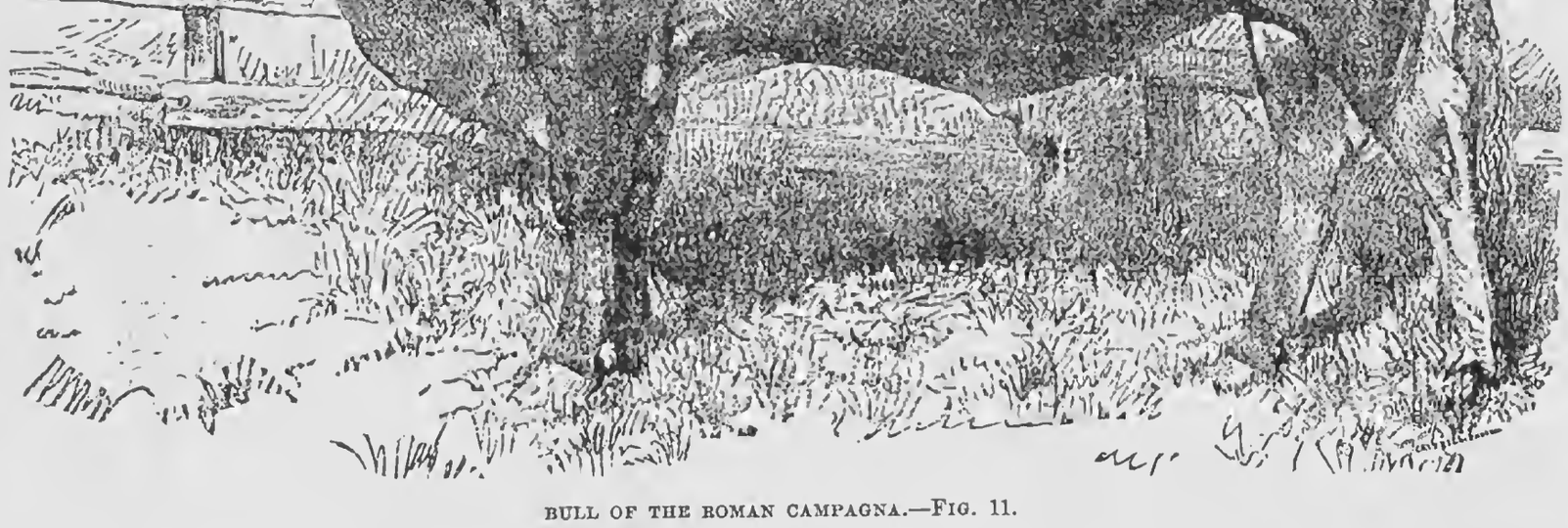
Though the RURAL and other agricultural papers have told us "time and again" for the last twenty years, everybody does not yet seem to know that turnips in large or small quantities may, with impunity be fed to cows, *if fed at milking time*, I have used them as cow feed for years without the least taint being perceptible to taste or smell in milk or butter.

M. B. P.

The Herdsman.

OUR ANIMAL PORTRAITS.

THIS week we present to our readers a couple of very suggestive animal portraits. One is a descendant of a race that was sung of by poets before the opening of the Christian era, and that has remained unchanged, so far as is known, since then; the other belongs certainly to one of the best established and finest of our modern breeds. The clumsey beast with the hollow back, the huge neck and brisket, the scarcity of flesh where it should be most abundant, and the generally ungainly form, is one of the famous animals that for ages have enlivened the Roman Campagna. The splendidly formed beast, with the straight back, the blood-like head, the heavy layers of flesh in those parts where the meat is the best, and the form approaching a square when viewed in front and behind, and an oblong when seen from the side, is a fine representative of the white-faced Herefords, which are lately striding rapidly to the front, especially among the raisers of beef cattle in the West. There's a lengthy article, which every farmer and breeder should carefully take to heart, in the study and comparison of these two animals, one the representative of the old unimproved race, the other the representative of our latest advances in the art and science of breeding.



BULL OF THE ROMAN CAMPAGNA.—FIG. 11.

LICE ON CATTLE.—I have not a doubt but the many remedies recommended in books and newspapers are effectual in disposing of these parasites, but they all require some time to prepare and use them, and if you will just stoop down and take a handful of earth (sand would seem to be the best) and rub it thoroughly into the hair among the lice, repeating it a few times, and use the curry-comb or card (which you ought to do anyway), I think you will find it just as effectual as the most elaborately prepared compound used in the most highly recommended manner. How this would do for ticks on sheep I cannot say, but I would use it in preference to the tobacco dip. Of its being an effectual remedy for the pests on horses and cattle, however, I can speak from experience. VIEILLARD.

THE HEREFORD HERD BOOK.—The publishers have adopted for the title of the above work, The American Hereford Record, and have made application to the Secretary of State of Illinois for permission to form a stock company for the publishing of this and such other works as shall seem best to advance the interest which they represent.

The Record was in the hands of the printer by the 1st of January, and will be placed before the public at an early day. It will contain 2,300 pedigrees and some 50 or more pages of reading matter, giving a sketch of the progress of the Hereford breed of cattle and their relation to other breeds.

The English Hereford Herd Book Society has issued the 10th volume, which is just out. The American work will be complete in itself; every pedigree will trace as far back as the record goes.

The Swine-Herd.

ESSEX PIGS; ORIGIN AND CHARACTERISTICS.

COL. F. D. CURTIS.

ESSEX pigs, like the Berkshires, originated in England, and take their name from the county where they were first bred. The older pigs of Essex were cross-bred and were generally spotted, or black, with white patches. They were in no sense a breed, but were the result of crossing black pigs with the native white ones. It is claimed that these crosses, which do not seem to have been popular, were made with a black breed called Sussex, another county name, or with the Berkshire — probably more with the latter than any other. Just such hogs could be produced any time in America, by crossing Chester Whites, or any coarse white breed with Berkshires, and selecting the spotted or patched ones for breeding. The Essex pigs do not seem to have had any special or peculiar merits until they were crossed upon the Neapolitan, a distinct black breed native to the peninsula of Italy. The most marked early improvement was made, according to English writers, by Lord Western, who had imported a pair of Neapolitan hogs previous to 1839. This enterprising gentleman soon had the white spots bred out of his crossbred pigs, which were really grade Neapolitans. By continuous breeding in a direct line (which was followed up carefully by Mr. Fisher Hobbs, a tenant on the Western estate, who established a number of families of these grades, and then bred them together), the improved Essex became, after a number of years, pure-bred Essex.

Pigs of Mr. Hobbs's breeding have, with success, been imported into this country, originally by Samuel Thorne, a farmer merchant of New York, and their descendants have been scattered quite extensively. The Essex, as now bred, have a more dished face (hollowing in) and shorter noses, than those first imported, and they are not so large in body and bone. This is probably owing to the want of new blood to cross upon, and to the fact that the young pigs are kept too fat, which creates an undue proportion of fat to bone. A renewed cross with the original blood, the Neapolitan, would impart renewed qualities to the Essex, and we are expecting to see this done before long, as in our judgment it would be wise so to do, and if not done by American breeders, it will be likely to be by the English, as they understand the art of improvement by out-crosses. As the Neapolitan pig is entirely black, there would be no change in the markings of the Essex, the color being now pure black, with small, upright ears, a light coat of hair, no bristles, round, full hams and wide shoulders, short legs, short neck, full cheeks and broad backs.

The Essex hold the same relation to the black breeds, which the Suffolk or the Small Yorkshires, do to the white breeds. An Essex boar is valuable to cross upon coarse-bred sows, as the offspring will fatten easily and mature much earlier than the blood of the sow. The females are naturally prolific mothers, when not too closely inbred, and are docile and kind. Essex pigs possess the virtue of hardiness, and, like other black breeds, freedom from mange. Color will not protect hogs from lice, but white hogs are far more liable to be affected by mange, which is caused by an insect so small that it is not discernible to the naked eye, burrowing under the skin. The pure Essex is a handsome, round, plump pig, and easy to keep. Like the Suffolk, the young pigs are small at birth, but after a few weeks, grow and mature rapidly. The skin of the Essex, like that of the Berkshire, is, when dressed, a bluish-white. The Essex are excellent for a hot climate, as they do not blister easily. They possess the general merits of quietness and aptitude to fatten on a small amount of food, the prejudice against their black color, being more notional than rational.

OWING to the trouble between the employes of the packing houses of Chicago and proprietors there has been an enormous falling-off in the receipts of hogs there. The first week after the strike only 42,669 arrived against 142,926 for the previous week; and 162,404 for the corresponding week last year. Many of the hogs that would have gone there are still at home; but a great many more have been sent to other markets.

The Poultry Yard.

KEEPING POULTRY IN WINTER.

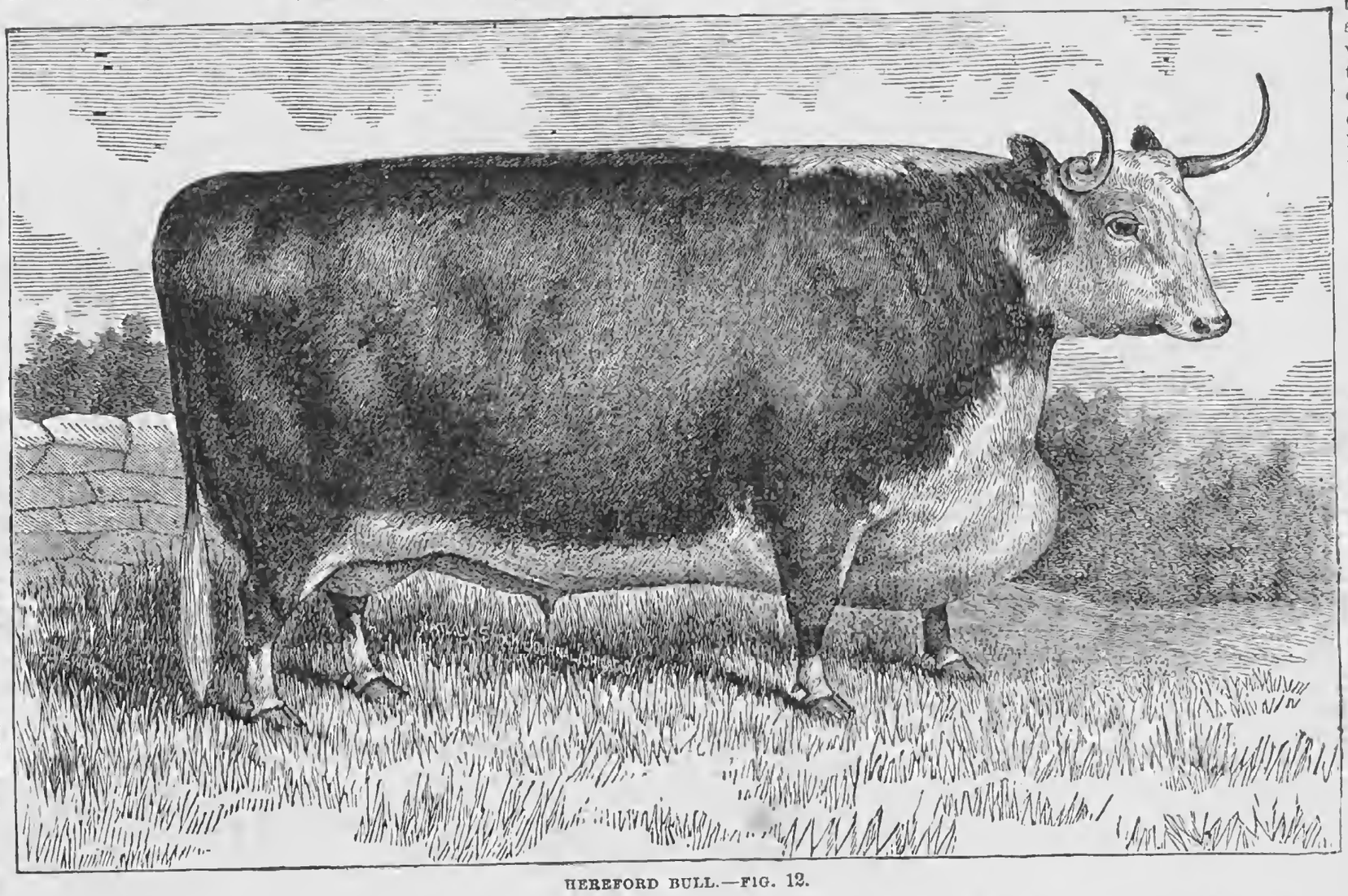
FORREST K. MORELAND.

Poultry-raising in a climate where the thermometer at one time indicates 30° below zero, and in less than 24 hours 30° above zero, must necessarily depend for its profits, to a great extent, upon the hardiness of the fowls kept. This is one of the essentials in poultry-raising. What matters it how large our chickens are or how profitable they may be as egg-producers if they are not adapted to our rigorous climate? I have frequently heard my neighbors boast of the innumerable good qualities of their different breeds of poultry, and too often add, "But they are a great trouble in winter; they won't lay and very often they freeze to death." It is too true that the greatest fault is very often in the hen-house. No breed of fowls ought to be expected to live in this climate, in a building where the snow flows in at every crack. But, no matter what ought to be, we have to consider what is, and, if that is an evil, to suggest a remedy if such a thing is possible. The large, fast-growing fowls are not as vigorous as the more active ones. Their habits are more sluggish, and they do not take sufficient exercise in extremely cold weather. Take a fowl whose legs are covered with feathers, although these are a questionable ornament to my way of thinking, yet in winter they become a great inconvenience, as they catch all the filth and snow, if the fowl is allowed to go in the snow, as a hardy fowl should. A large fowl is chilled much too easily in cold weather. I do not mean dangerously chilled, but chilled so that it loses a desire to help itself, and sits around on the ground, growing worse all the time, and liable to be stepped on and killed.

Of those classed as large breeds there are some active ones, but the rule is that a good growth and large size are incompatible with active habits and a hardy constitution. Take fowls that are very active, great foragers from early morning until late at night and from early spring until late in the fall able to take care of themselves and even a little troublesome to the neighbors, and you have birds that are rather hard to freeze, and which, under any decent sort of treatment, will lay through a good share of the winter. When the poultry-yard is so situated that there is no chance of annoyance to the neighbors, or of damage to gardens and crops, there is much more profit in keeping fowls that forage for themselves than those that require regular feeding. The former wander all around the barnyard and fields, scratching and picking up seeds that would be lost, and worms that would not be lost. They live in this manner instead of requiring corn at 75 cents per bushel, and always make a good return in eggs.

I have kept for several years the Golden Polands and have never made but a slight outlay for grain in summer. Were it not for their very active habits they would be quite unfit to stand our climate. As it is, their value for the table and as layers and non-sitters makes them well worth a little extra care. They are better adapted to stand our winters than some breeds, and not so well adapted as others. I think the American breeds are much better fitted to stand cold weather than the Spanish or French. But no breed of poultry can stand what some breeds on some farms are required to stand. Hen-houses can be erected at very small cost, warmth, with an abundance of light and good ventilation, is all that is required. I have seen very good henneries constructed from some building that was useless for any other purpose. Take an old frame of this sort and double-board it and line it with sawdust or tan-bark, and, provided the work is done well, you have a cheap and good hen-house. I do not propose in this letter to give a plan of a hen-house, but merely to offer some suggestions for the benefit of poultry for the winter. One side of the house should be glass; double if possible—it will be a means of heat as well as light. The house should be made as comfortable, and all cracks and holes should be closed and made as tight as possible.

Hens may be kept in the warmest hen-house, even in one warmed by artificial heat; yet if they are not fed, there will be no eggs. I have for years followed the practice of giving the hens all the meat scraps, egg-shells and vegetable refuse from the kitchen; it pays much better than to feed the same stuff to the pigs. Hens are very partial to meat either raw or cooked, and they also like vegetables in the same way. But more than this—such a mixture of food is healthful and greatly tends to increase the production of eggs. As all this kitchen refuse is well adapted to the needs of fowls, it will yield a much better return if given to the hens than if used in any other way. If they are fed a clear dish of corn, barley or oats, their appetites are very apt to become cloyed, and themselves to fall in vigor and fertility. In winter they should be fed a sufficient quantity of heat-producing food. Of this corn or barley is the best, and the kitchen refuse before spoken of, will furnish the necessary meat scraps. If meat can be procured in no other way, certain portions of carcasses can be procured at the slaughter houses, very often for the asking. If meat cannot be procured without buying, the health and productiveness of the hens will warrant the purchase of an occasional piece for them, though not of a porter-house steak or a roasting piece perhaps. If hens are unhealthy or lacking in vitality, there is no profit in keeping them.



HEREFORD BULL.—FIG. 12.

HOW TO MAKE HENS LAY IN WINTER.

To get a plentiful supply of eggs in winter, young hens are necessary. Pullets hatched in April and May will prove most satisfactory. The hen-house must be warm and kept clean. Provide plenty of fresh water always. A variety of food is absolutely necessary, but wheat or screenings should be the main feed. Corn has more fattening than egg-producing properties, and should be fed sparingly. Buckwheat is valuable feed for hens. Oats are not worth much, but will do to make out the variety.

Feed in the morning a warm mess of meal, middlings, or something of that sort, mixed stiff, but feed no soft feed after the middle of the day. Only dry grain should be in a hen's crop upon going to roost. Fresh meat must be fed. Lard or tallow scraps are good; both can be bought at the soap factories, the former costing $2 and the latter $1 per hundred. Scraps should be broken up and soaked over night, warmed, and fed in the morning. Meal may be added. Hens also require vegetable food. Carrots are best; chop as fine as kernels of corn, and about twice a week add a few onions. For shell material use oyster or clam shells, both browned and raw. Break them fine. Keep plenty of fine sand where your hens can have full access to it. Another important consideration is, make no sudden change in your manner of feeding, as every radical change diminishes the supply of eggs. Provide plenty of nests, and never allow your hens to be chased by boys, worried by dogs or frightened in any way. Perfect quiet must reign in the poultry house, or eggs will be scarce. Let no one who has neglected his hens expect a full supply of eggs immediately after commencing a systematic course of feeding. It will take weeks, perhaps months, before the best results will be realized. N. B.

Sheep Husbandry.

Advantages of Using a Pure-bred Ram.

I HAVE been in the sheep business on a small scale for several years, having commenced with ewes that would shear 4½ pounds of wool. I bred on in this way for some time, but found it did not pay so I purchased a thoroughbred buck for which I paid $40. From his first cross with the ewes I got a set of lambs whose clip averages six and a half pounds each; now I have ewes that will shear from eight to ten pounds of washed wool. At present I get three pounds of wool per head more than I did before I got my buck, and as I keep about 150 sheep, it gives me 450 pounds extra, and that, at 35 cents per pound, will give $157.50 extra. This is not for one year; but for as long as they live—say ten years. In that time the extra gain from the use of my thoroughbred ram would be $1.575—a nice profit. But that is not all. I can sell my sheep for about one-third more, and still there are thousands of farmers that will not pay $25 for a ram! My advice would be to all young beginners, to use none but thorough bred rams. If they are not able to get one themselves, they should hire the use of one or join with a neighbor and purchase one, and as soon as each is able, he should get two or three thoroughbred ewes; then he can raise his own bucks. I hope to hear from some good sheep-breeders through the RURAL.

R. GREENBANK,
Monroe Co., Ohio.

Various.

A LETTER FROM MR. F. B. THURBER.

NEW YORK, Dec. 30, 1879.

EDITOR RURAL NEW-YORKER:

DEAR SIR:—My attention has just been called to an editorial in your paper of Dec. 27, entitled "Specimens of Oleomargarine," which I think does both the managers of the Dairy Fair and myself an injustice, inasmuch as it carries with it the idea that it was an advertising dodge of the manufacturers of that article, and expressly states that the "President of the Dairy Fair is interested in its manufacture, and is the largest dealer in the stuff in the country."

I desire to state that this action of the managers of the Fair was taken during a four days' absence, and I knew nothing about it until I found it on exhibition when I returned. On inquiry, I found that so many dairymen had manifested a curiosity to see it, that the managers had purchased specimens of different manufacturers, and exhibited them as an interesting feature of the fair, so that the action could not be attributed to any desire of the president to advertise the article.

Regarding the other points upon which I think your article does me injustice, you evidently entertain the impression that the firm of which I am a member, is substantially the Commercial Manufacturing Company, which is perhaps not to be wondered at, because a statement to that effect was made at one of the meetings of the butter merchants at the American Exchange a short time since. This, however, is incorrect; neither myself nor my firm, nor any member thereof, owns a dollar's worth of stock in that company; our sole connection with it having been to make advances to it and sell its product on commission, its entire product up to the time of the great advance in the price of butter having gone abroad.

Interested parties have also sought to convey the impression that we have sold it fraudulently, or contrary to law, which also is not true. We have looked upon it simply as a commercial product as legitimate as lard, and the only wrong in its sale, in our opinion, is where it is sold for butter, which my firm never has done. I have no doubt from what I have heard and seen, that some manufacturers have done so, but I think you will admit that a firm doing its business in an open, honorable, and lawful manner, should not be blamed for the sins of those who do not do their business in that way.

You are also in error in stating that either myself or my firm is the largest dealer in oleomargarine in the country. There are at least two or three establishments in other cities that manufacture more oleomargarine than the Commercial Manufacturing Company, although the quantity manufactured has been largely over-estimated, and I think that you, as well as others, have over-estimated its effect on the butter market.

The late meetings on the subject were held at a time when the butter market was experiencing a natural reaction from an advance of over one hundred per cent. I think it was this rather than oleomargarine which was responsible for the weakness of the market at that time—a conclusion which I think the present strength of the market confirms. I do not think as you do, that oleomargarine "has inflicted and is still inflicting a monstrous injury on the dairy interests of the country." On the contrary, I think it is producing a beneficial effect upon the dairy interests of the country, the same as it has in Europe, by attracting the attention of butter makers to the necessity of improving the quality of their production, for which I think you will admit there is ample room. I think if you will talk with the leading men in the butter trade, you will find that my firm, as well as myself individually, have done as much work and expended as much money in advancing the dairy interests of this country as any other firm or individual, and I certainly would not be interested in any business, especially an unlawful one, which was calculated to injure the dairy, or any other legitimate interest. If lard were manufactured and sold as butter I should say it was wrong, but, on its merits, lard is a legitimate article of commerce, and the interests of citizens interested in its production are perhaps entitled to as much consideration as those of any other class.

Farmers are stock raisers as well as dairymen, and it seems strange that they should object to a new outlet for one of their products, except upon the basis that it is fraudulently sold in place of another. I believe this is the view taken by the leading dealers in dairy products, and that they prefer that if oleomargerine is to be manufactured, it should be sold by houses who do their business in an open and above-board manner, as we do.

It is also now understood by the leading butter men that the extraordinary efforts made by parties outside of the butter trade to stir up an anti-oleomargarine excitement, were made to serve an ulterior purpose, for which they do not propose to be used.

Respectfully, etc.,
F. B. THURBER.

CASH VS. CREDIT. I have been much interested in the articles that have been published in these columns, on the above topic, and certainly hope they will be the means of doing much good. Debt is one of the greatest curses that the farmer has to contend with, and it is not realized until it is too late. Before a man gets into a debt he should make some calculation to pay that debt, but far better is the plan to never get into debt, even if you have to suffer many disadvantages in consequence. "Owe no man anything" is one of the farmer's best mottoes. F. H. D.

Everywhere.

NOTES FROM CENTRAL NEW YORK.

ANOTHER season has passed, and in many instances, it has been a remarkable one in this section; the drought of 1879 has been the most severe ever known in this portion of the State, yet the crops, as a whole, have been abundant in quantity and fine in quality. Many former years of more copious showers have not produced so good crops as a whole as the past, thus showing that while the drought was of long continuance and very severe, there have been other causes that have operated favorably to the production of fine crops. Of these one prominent cause may have been the better preparation of the soil, and the better tillage of the crops. One thing is certain—that those farmers who fitted their grounds last spring in the best manner and followed up the after-cultivation in the same thorough way, determined to raise less weeds than heretofore, have been quite successful in their crops, especially if the ground was made rich by the application of manure, whether made on the farm, or commercial fertilizers sold in our markets. The hay crop was not as heavy as some years; but was of good quality. Oats, which are our principal spring-sown crop, were above an average yield. Wheat, also—what little we have sown in this section—was good in quantity and quality. The past three years have been very favorable for wheat, and more has been raised hereabouts than usual. The past fall has been no exception to this rule in the putting in of the crop for the harvest of 1880, and at the setting in of winter, the prospects were favorable for a bountiful harvest next July. Although our wheat fields are not large, the crop was put in well last fall, and has made a fine growth to withstand the winter. If that should prove favorable, we may look for another good yield the coming harvest. Corn, on well manured fields that were well tilled, was a good crop. Potatoes were fully an average crop in quantity, and extra in quality: some cultivators say they are better than they have been in twenty years, but that is saying too much, in my opinion: but it is true we have had a good crop. Apples are poor in quality and few in quantity compared with last year's yield, when they were abundant and excellent. The dairy is the absorbing interest in this section, and all the earliest and mid-summer sales were low, consequently the dairy farmer has had a hard season; many tenant farmers will hardly pay their way. The fall prices of both butter and cheese have been liberal, but the product was small from the effects of the severe fall drought. We are now hoping for a more prosperous season in 1880 wherein the dairy products will be more abundant, and the prices more liberal during the season. The farmer who raised hops this year was the fortunate man, as the crop has been of general good quality, and fairly abundant in quantity on well tilled fields for so dry a season, and the price has been good. A few sold too early and too cheaply; but, on the whole, better prices have been realized for the hop crop by the grower than for any other raised in this section. J. TALCOTT.

Rome, Dec. 22.

RURAL SPECIAL REPORTS.

ILLINOIS, Baileyville, Ogle Co., Dec. 24.—The year is closing auspiciously. We had a pleasant fall, favorable to the maturing of the late crops and for field work. The weather was dry, with only occasional showers that kept vegetation from suffering until Nov. 26, when a wet spell set in which continued until Dec 10, and completely saturated the ground and replenished the cisterns, wells and streams, so we have no fears of a water famine soon. The ground is now covered with snow, but there is not enough yet to make good sleighing; it is snowing a little to-day. The corn crop was about all cribbed in good condition by the 20th of November; the yield was large and the quality excellent; but there was hardly as much as last year. The average yield, I think, in this section, was about 48 bushels per acre—shelled. Some *fields* were much better than others, according to fertility and the manner of cultivating the crop, and consequently the yields varied greatly—some being as high as 75 bushels per acre, and others not over 30 or 35 bushels. This shows the difference between good and bad farming. The autumn work was all done in due season, and the farmers are well prepared for winter. Live stock in general are healthy and in fine condition. Winter wheat and rye made a vigorous start this fall, and the prospects for them at present are promising. The recent advance in the prices of grain and provisions has revived business greatly, and the times are much brisker here now than at this time last year; but strikes in Chicago last week at the stock yards, among the laborers, have caused a slight reaction and most likely we shall not have another boom in business until after the holidays, if even then. W. B. D.

INDIANA, La Porte, La Porte Co., Dec 26.—The Cow Pea, I think, has been grown on my place for several years by colored people from North Carolina, and has succeeded as well as the common white bean. To us the RURAL is a standard work. The back numbers are just as valuable as the latest, and although my time is valuable, yet I feel it a duty to try as far as possible, to induce my neighbors to share in the advantages it has brought us, by enrolling themselves on the list of its subscribers. J. S. B.

NEVADA, Tuscarora, Elko Co., Dec. 12.—We have had remarkably mild weather here the past two winters, very little snow falling in the mountains, consequently water has been very scarce this year, and as we have no rains during the summer months crops have suffered for want of moisture. For this reason potatoes have yielded poorly, they will average about two tons per acre in this valley. The Beauty of Hebron did exceedingly well taking everything into consideration. I planted seventeen hills the first week in July, one eye in a hill; three of the pieces did not grow, leaving fourteen hills at digging time. The eighth of October the yield was 31 pounds of large and small potatoes, and more than double the yield of the same number of hills of either Early Rose or Early Ohio. As to earliness I cannot say, as I did not plant them the same time with other varieties. Of the other seeds sent me by the RURAL, the Hollyhocks are doing well. The Bronze Ricinuses were cut down by frost early in the season. The Aquilegias come up very well, but have not grown very much this season. The Defiance wheat was looking very well, but was pulled up by mistake. The other seeds started well, but owing to the dry hot weather they were all killed. We are having the heaviest storm that has occured for a number of years. It commenced ten days ago, and has been raining, blowing, and snowing by turns ever since. We have had some cold weather; the coldest day the thermometer stood at zero. F. A. B.

NEW YORK, Clyde, Wayne Co., Dec. 22.—The RURAL'S Bronze Ricinus, I must say, I am delighted with. It was a beautiful ornament of our flower-garden throughout the summer, and late last autumn by being protected from one frost in September. I have purchased packages of Bronze Ricinus of seedsmen at different times In every instance they failed to give me satisfaction, and I had concluded that a fine Bronze was a mith. But the new RURAL Brouze is a jewel. The Hibiscus Moscheutos and militaris, Crater's Lemon Hollyhock, and other seeds germinated and grew finely. Blount's White Prolific corn I think from my trial with it, is not fitted for this latitude. 43° north. The frost held off unusually long this autumn, else not a single ear would have ripened; as it is, only a few reached maturity. Although the enormous 10 to 14-feet stalks produced from three to eight common to very small ears each with a large cob, yet I have an opinion that Blount's corn is not on the right track to produce the greatest amount of shelled corn to the acre. I believe there are kinds of corn peculiar for growing large, long ears with exceedingly small cobs, two ears of which will produce more shelled corn to the acre, than eight semi-ears of Blount's Prolific. The stalks make quite a problem for a farmer who attempts to handle them in the same manner as common corn in this vicinity, while as a forage it cannot compare with many other varieties. However, it may give grand results and good satisfaction every way in the South and West. Clover seed thrashing is nearly done throughout this section. A very small yield is realized—generaly one-half to two bushels to the acre. Hundreds of acres were left uncut. The destroyer of the clover crop is the worm of a fly closely allied to the Hes-ian fly. It is the Cecidomyia leguminicola so named by J. A. Lintner, of the New York State Museum. It was first noticed in the same locality in which the Hessian fly made its appearance this last time—Seneca and Tompkins counties. This is the first year it has been noticed in Wayne county and it is not known now in the northern part near Lake Ontario. In that section Mr. E. M. Smith, of Sodus, raised 75 bushels of clean seed ("big kind") from 10 acres of land. Where the worm is at work in the blow, a field never has a red appearance in blossoming time, although there may be abundant foliage. I judge the fly is spreading at the rate of thirty miles per year, and, of course, will eventually reach the clover areas of the West, unless checked by parasites or some destroying epizootic. Barley has not quite met the expectations of the farmers, the prices never changing from 50 to 75 cents according to quality and kind. More profit is expected from oats, now 43 cents. Wheat is nearly all marketed. Hardly any corn has been sold—price 50 cents. W—X.

FULLER'S STATION, Guilderland, Albany Co.—We are having very cold weather, the thermometer was down to six degrees below zero yesterday morning. To-day we have about six inches of snow, it will make fine sleighing. Farmers in our section are in better spirits this year than last. We are getting from $8 to $12 a ton for hay, and from $16 to $18 for rye straw at the station. Cattle and sheep are in better condition this winter than last; our rough fodder is cured much better this year. I believe in stabling my cattle and sheep as I can winter them on one-third less feed than if they were left out in the yard. I use saw-dust for bedding. I think it is much better than straw; it absorbs all the urine thereby saving a valuable fertilizer. I have tried it several times, and am convinced that the mixing together of the droppings and urine makes a good strong manure. The rye and wheat in our section are looking much better this winter than last, as are also the meadows. I buy cattle at West Albany and winter them and sell them again in the spring to feed on my clover hay, cornstalks and straw, thereby keeping these at home for manure, which I find pays much better than to draw them off of the farm.

A. L. M.

OHIO, Youngstown, Mahoning Co., Dec. 24.—The summer was dry. Fall was middling dry and warm, and nice to do fall work. Winter commenced warm and moist. We have had very little snow yet, but lots of rain. Crops and meadows were middling good. Wheat yielded about 15 bushels to the acre. Corn was two-thirds of a crop. But, oh, my! How my prolific corn grew and grew. I thought it would never stop growing. Finally it tasseled out. Then came the ears, from one to six on a stalk, from six to nine feet up in the air. It is too late for me. Oats were half a crop. Potatoes half a crop. Wheat, $1.40; oats, 40c.; corn, in the ears, 35c.; potatoes, 55 to 60c.; butter, 20c.; eggs, 20c. I. S.

The Querist.

ANSWERS TO CORRESPONDENTS.

A Bushel, Etc.

J. A. D., Millville, N. J., asks 1, what is the cubic measure of a bushel of ear corn; or, in other words, what is the rule for ascertaining the number of bushels in a bin of ear corn; 2, what is the rule for ascertaining the number of bushels of corn in the ear and unshucked in the bin. 3, He also wants to know where the Lady Washington and Duchess Grapes can be purchased.

ANS.—The English Imperial bushel contains 80 pounds of distilled water, weighed in the air at a temperature of 62 deg. F., and the barometer at 30 inches, and it measures 2,218.-192 cubic inches. In New York the standard bushel is declared to contain 80 pounds distilled water at its maximum density, but elsewhere in the United States the Winchester bushel has been generally adopted. This bushel was in common use in England to the year 1826, and holds 77.6274 pounds of distilled water at 39°8 F. and 30 inches barometric pressure, or 2150.42 cubic inches. Now, a cubic foot contains 1,728 cubic inches, and dividing 2150.42 by this number, we have 1.2386 cubic foot or 1 foot and 422.42 cubic inches as the contents of a bushel. To obtain the number of bushels in a certain bin, find the cubic measure by multiplying its length by the product of its width and hight in inches, and divide the number by 2150.42, the number of cubic inches in a bushel. 2. We are not aware that there is any rule for finding the number of bushels of unshucked corn (we suppose that by this term is meant that the corn is not husked) in a bin, and do not see how there can be, as there is more husk on some varieties than on others. 3. The Lady Washington Grape originated with James H. Ricketts of Newburgh, N. Y., and we suppose can be bought of him; for the Duchess apply to J. T. Lovett, Little Silver, N. J.

Hogs Troubled with Indigestion.

D. B. S., Greenville, Ky., says he has a lot of hogs he is trying to fatten. He gives them all the corn and corn meal they will eat, yet they are not gaining as they should. They are apparently in good health, only that sometimes they will stop eating corn and begin rooting up and eating dirt, and he asks whether the dirt is injurious to them and what must he do to make them "all right."

ANS.—Hogs are often troubled with indigestion, and when this is the case, they will not eat well. This condition of the stomach is sometimes caused by over-eating, or by being fed food which is too rich. When hogs are thus affected they will not eat a large quantity, and if they do, it seems to do them but little good. The fact that these pigs eat dirt goes to show that their stomachs are disordered. They should have all the charcoal they will eat, which will correct the acidity in their stomachs and promote appetite. Feed sulphur and give them access to salt. They will not eat enough of either to injure themselves. Give them half the quantity of corn meal and mix wheat bran with it for a change. A few roots would be healthful and strengthen their appetites. Give plenty of drink.

Agricultural Reports, Etc.

S. W., St. Clara, W. Va., asks: 1. whether Chester Mammoth Corn is a white or yellow sort. 2 How to procure the Reports of the Department of Agriculture.

ANS.—1. We do not know the variety. 2. The Agricultural Reports are printed at a heavy expense to the public, for free distribution, presumably "where they will do the most good." Those who have the management of their distribution seem to think that this is in second-hand book stores, or in the warehouses of dealers in old paper; and, so far as we can see, the easiest way for an ordinary farmer to secure a copy is to send an order for it to some extensive dealer in old books. Here and there some farmer who is in the habit of sending in reports to the Department of Agriculture at Washington, gets a copy direct from that quarter, but by far the largest proportion of them are distributed among the Senators and Congressmen, to be again distributed by these among their constituents. Those who may be anxious to get copies of the works and who do not like to seek them in the old book stores, should apply to the Congressman of their district.

The Dentaphone.

D. B., Chataugua Co., N. Y., asks whether the Dentaphone advertised in the RURAL is what it claims to be.

ANS.—Before admitting the advertisement we made careful inquiry as to the character of the device, and were assured it was really worth all that was asked for it. Since then, having received a number of inquiries, like the above, we have procured a specimen for personal examination. It is a small, neatly gotten up device, but on testing it on a couple of deaf friends neither could get any benefit in the way of hearing, from its use.

Miscellaneous.

M. E. S. Fulton, N. Y., asks, if it will kill an Oxalis and Geraniums to keep them in a dark, damp, warm cellar during the winter; 2, should Geraniums which are to be wintered in the pots, be cut back in the fall; 3, will Gladioli seed grow as well in a hot-bed as in an ordinary seed-bed?

ANS. 1, A dark, damp, warm cellar is not a suitable place for wintering plants. The warmth and moisture will stimulate growth in some plants and cause mold and decay in others. If the place were dry, it would be better. 2, Large Geraniums should be cut back in the fall, or in the spring before they start anew. 3, the Gladioli seed may be started in a hot-bed, but care should be taken in transplanting the young plants that they do not dry out too much.

Mrs. A. E. V., Carthage, (one of the dozen in the United States,) says 1, that her house plants have of late been troubled with the red spider for which she asks a remedy; 2, she has received a Salvia from a friend; it blossomed this fall, but now the leaves have fallen off and she wants to know what can be the trouble.

ANS.—The remedy for the red spider is to keep the plants in a moist atmosphere and to syringe them frequently with water. To wash them with water to which has been added a little carbolic acid is also effective. 2, Many Salvias drop their lower leaves in winter so that need be no cause for alarm. If the plant is dead we know of no restorative.

P. T., West Port, Ky., has an orchard which he intends to sod down. The trees are from 10 to 18 inches in diameter. He asks:—1, what mixture of grass seed to sow, and, 2, how many square feet in an acre.

ANS.—Equal quantities by weight of Kentucky blue grass, white clover and orchard grass. 2. 43,560.

J. B. R., Address mislaid, asks which is the best feed for milch cows.

ANS.—See articles on "Making Butter in Winter," in RURAL for Dec. 27 and in this issue. An excellent food for making milk consists of corn and oats ground together, equal bulks.

Geo. F. A., Brook's Grove, N. Y., asks where pure Narragansett turkeys can be had.

ANS—Though we have made several inquiries, we have received no definite information on this point. W. Cliff, Mystic Bridge, Conn., probably can supply them.

A Subscriber, Cornwallis, Oregon, asks if the American Book Exchange, 55 Beekman street, N. Y., is reliable.

ANS.—Business men who have dealt with this firm have assured us that they are thoroughly reliable.

W. H. P., F. B., C. S. A. and others. As remarked here last week we do not know at present where Southern Cow Peas can be obtained. They will without doubt be advertised during the coming season.

G. H. T. (no address) wants a remedy for white worms in pots of house plants.

ANS.—The best remedy is to give the plants fresh soil. Give lime water.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JAN. 3rd.

L. S. H.—W. M. N.—S. E. H.—E. R. W.—W. N. W.—F. E. H.—E. D. W.—A. L.—K. J. P.—F. C.—R. G.—J. J.—P.—T. F. H.—R. S. W.—J. H. W.—H. W.—J. H. G.—M. L. R.—J. R.—T. H. G.—H. B.—Mrs. Cisco, thanks for specimens.—M A. C.—Mrs. Beatty, will answer as soon as possible.—T. A. D.—F. H. S.—J. A. H.—O. F.—H. E. E. R.—A. B.—B. L. B.—T. W.—F. D. C.—T. H. B.—W. C.—D. B.—J. J. P.—J. M.—H. W. H.—C. O. F.—J. S.—M. M. B.—J. B.—S. H.—M. B.—N. B.—M. A. L.—K. P.—O. C. D.—M. J. G.—N. B. I.—

Miscellaneous.

WHAT OTHERS SAY.

HYGIENIC.—A damp bed, or a draft of cold air acting on a heated and perspiring horse will often lay the foundation of a malady that utterly ruins his usefulness. Open windows and doors on opposite sides of the stable, or openings in the walls or floor should be carefully guarded against, especially when the horse has just come in from work. But in securing comfortable warmth, we must avoid impure air, from confinement of the breath or emanations from dung or urine. Cleanliness and sufficient openings for the ingress and egress of air, on one side of the stable only, or above the level of the animals on both sides, will guard against cold, while securing purity of the atmosphere. . . Large numbers of cattle die annually in the West from the lack of water when feeding in the cornfields. Dry corn-stalks, as compared with grass, are constipating food; but smutty corn-stalks are especially liable to cause impaction of food in the stomachs, and disease of the brain. The risk is largely, or entirely obviated if there is a sufficient supply of water; but when the water supply is frozen up the animal can no longer chew the cud from lack of water in the paunch to separate and float its contents, and impaction and a whole train of evil consequences follow. If water can be supplied so that the cattle can drink at will, it is better; but if not, it should be allowed abundantly at any cost, twice a day. . . While in many cases no other than iced water can be had, it is all-important that stock should not be left to become so thirsty that they will fill themselves when driven to drink, and then stand shivering in the cold stall or stanchions, where they are denied even the privilege of stimulating their circulation by walking about.—National Live-Stock Journal.

STOCKS FOR ROSES.—Jean Sisley concludes an article in the Country Gentleman on this subject thus: Many persons object that the stocks on which Roses are grafted offer the great inconvenience of suckers, and particularly the Manetti. The consequence is that there is always a struggle for life between the stock and the graft. But as the seedling brier is young, if a strong variety is grafted on it, the roots will give up, and the graft, by emitting roots, becomes, after two or three years, quite independent. This is not exactly the case with standards. These, on account of their age, being stouter, resist the influence of the graft, and as the suckers the standard brier endeavors to emit are continually destroyed, the stock cannot live, if the graft is not a strong variety, and if it is pruned as usual; because the roots of the standard do not receive sufficient aerial nourishment from the graft. That is why we often read in horticultural papers the question why standard Roses die. * * * * * *

The conclusion of these remarks is that all varieties of Roses are preferable when budded on the young seedling brier.

INSECTIVOROUS PLANTS.—Mr. Croucher tells the London Garden that trapped insects frequently injure the plants which they are supposed to "nourish." Here is his statement:—

"Any one who, like myself, has grown insectivorous plants continuously for some twenty years, knows that they are more injured than benefited by the insects entrapped, and that the idea that they produce more seed when fed with insects than when deprived of them is a fallacy. Some assume that it is granted that all plants have the power of absorbing nutritious substances through their leaf tissues. This is also a fallacy, though it has been accepted as proved by those who only study Nature to uphold theories. How is it that plants covered with glasses to keep off flies do so well? The great cause of much of the disputation on these subjects is that naturalists look at only one part of Nature, instead of studying her as one grand whole, seeing in the lower developments steps towards those that are higher."

CATALOGUES, ETC., RECEIVED.

THE thirty-second semi-annual statement of the Travelers' Insurance Company, which we publish on the last page of this issue, shows clearly its remarkably strong position. With total assets amounting to $4,955,090.43, its otal liabilities are only $3,659,539,46, leaving a surplus of $1,296,450.06 to meet all possible contingencies as regards policy-holders. An examination of the securities in which the funds of the Company are invested, shows that they are nearly all readily convertible into cash in case of any emergency. The statement also shows what must to the managers prove a very gratifying increase in the amount of business done by the Company during the past year, especially in the accident department, in which there is the remarkable gain of 11,422 policies over the number in 1878. With so excellent a record for the past, this Company can certainly, it seems to us, look forward to the new year and the new decade with a strong assurance of a continuance of the well merited success that has hitherto rewarded their discrimination and energy.

AMONG the first catalogues received for 1880 is that of the monster seed house of D. M. Ferry & Co., Detroit, Mich. It contains 180 well-filled pages, several colored plates, many engravings, all within the showiest of illuminated covers. It is filled with everything for the flower and vegetable garden and farm. Seeing nothing to the contrary, we are led to infer that it will be sent free of charge to applicants. It is certainly worth applying for and keeping as a handy and comprehensive reference book.

WEST TENNESSEE, its resources and advantages, by J. B. Killebrew, Commissioner of Agriculture, Statistics, Mines and Immigration for the State of Tennessee, a pamphlet of 93 pages. "Middle Tennessee," and "Tennessee, the Home for Intelligent Immigrants," by the same author. Published by Tavel, Eastman & Howell, of Nashville.

"SEED-TIME and Harvest." This is published by Mr. Isaac F. Tillinghast, of La Plume, Pa. It is a quarterly magazine of 24 pages, and the publisher is one fitted to make it of practical value by a long experience in the culture of flowers and vegetable seeds.

THE Wisconsin Dairymen's Association will hold its Eighth Annual Meeting at Elkhorn, Wis., Jan. 14 and 15. Among the premiums offered are two silver cups, valued at $25 each, presented by the RURAL NEW-YORKER for the best cheese and dairy butter.

PROGRAMME, Premium List, etc., of the Nebraska State Hort. Society, Winter Meeting, fruit and floral exhibit at Lincoln, on the third Tuesday in January. Robt. W. Furnas, President; Daniel H. Wheeler, Secretary.

Circular. Lectures on Topics Related to Agriculture, at the Ohio State University, in the city of Columbus, to continue three weeks. The lectures will be free. They will commence Jan. 13, 1880.

SALE CATALOGUE of imported and thoroughbred Holstein Cattle to be sold at auction on Wednesday, Feb. 4, 1880, on the farm of W. R. Willetts, Skaneateles Village, Onondaga Co., N. Y. Send for a copy.

REPORT of the Entomologist of the State of Illinois, on Noxious and Beneficial Insects. Prof. Cyrus Thomas, State Entomogist.

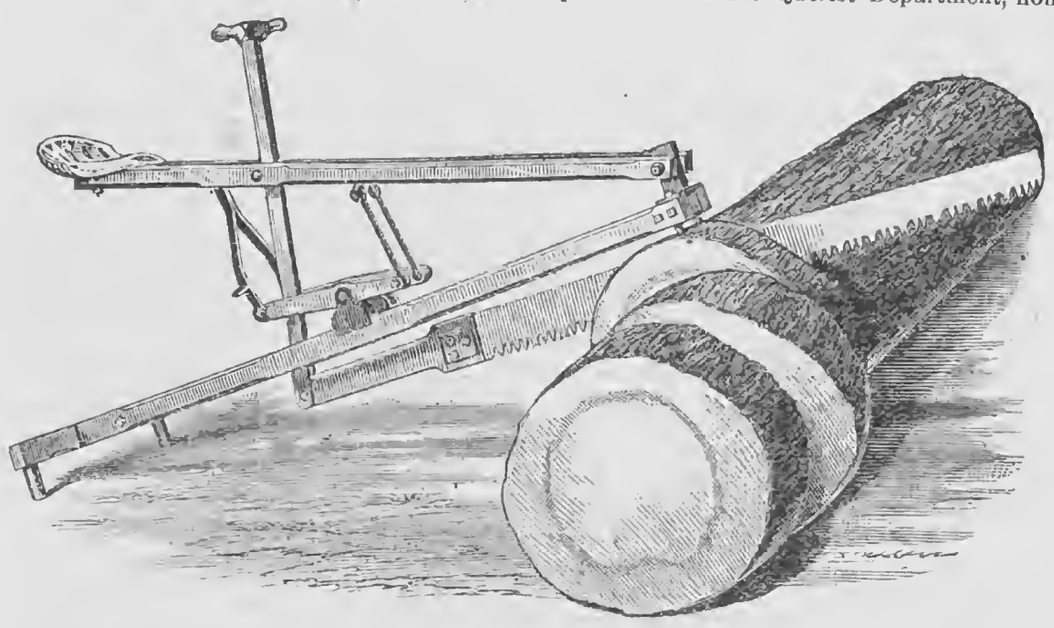
CATALOGUE of Trotting Stock, sold by Baker & Harrigan, Comstocks, Washington Co., N. Y.

THE Baltimore Sun Almanac for 1880.

Industrial Implements.

THE GIANT RIDING SAW.

WE have had several inquiries as to the efficiency of the riding saws advertised in the RURAL, and have answered the queries, either by letter or in the Querist Department, honestly, as we always do, to the best of our knowledge. Lately, however, we have especially investigated the claims of the Giant Riding Saws, manufactured by W. W. Bostwick & Co., 178 Elm Street, Cincinnati, Ohio, and find that the firm is quite trustworthy, and the saws made by them very efficient. By their use power is greatly economized, so that one man can, without much difficulty, pretty easily accomplish the labor of two working with the old-time cross-cut saw. Of them there are two sizes made, No. 1 and No. 2, the latter, six feet long and seventy-five pounds in weight, being especially adapted to agricultural needs, as is indicated by its name, "The Farmer's Friend." It is easily transportable from place to place, and is quickly brought into operation. The accompanying engraving plainly shows how it is operated. With one end upon the log to be cut and the other upon the ground, the operator having seated himself on the saddle, with his feet resting upon the foot levers, grasps the handle of the saw lever, and, as he throws his weight alternately from his seat to his feet, every "foot-pound" of power, resulting from the weight of the body and the muscular movement of the arms, is economically used to thrust the saw back and forth, thus bringing a powerful force to bear upon the saw in the log. By means of an adjustable seat, the machine can be readily adapted to persons of any size or weight, so as to be efficiently operated and maintain the same length of stroke. The firm informs us that they can turn out 100 machines a day, and that they fully warrant every one of them to do as represented. On the removal of the saw blade, the power that ordinarily drives the saw can, by proper attachments, be used for cutting feed, turning a grindstone, working a churn or corn-sheller, and for many other purposes, which so laboriously tax the strength and patience of those round the homestead. In a notice here we can only call attention to the merits of this device, and ask our readers who may be in need of such a machine, to seek more detailed information by dropping a postal card to the above address:



THE GIANT RIDING SAW.

GRINDING MILLS.

In the preparation of grain for food, the reduction of the berry to flour has always, except among savages, been the first, and generally, until recent times, the most laborious operation. Even to-day this work is lengthy and wearisome over a great part of the globe, not among savage races only, but also among the degenerate representatives of ancient civilization, and even in many of the rude sections of the most civilized nations. The quern, or hand-mill, with which the dusky women of Asia Minor to-day make the flour for cakes and other viands, differs but little, if at all, from that at which the daughters of Israel toiled in the days of David, and the women of Persia in the reign of Xerxes. But, while civilization has been stationary or retrogressive in the East, in the West it has been steadily advancing, slowly for centuries and rapidly for decades, in the art of grinding grain as well as in other useful and ornamental arts.

Recent improvements in milling are not confined merely to the substitution of steam, wind and water as motive powers in grinding, instead of human labor, but they also embrace the introduction of mill-stones much more efficient than those employed in ancient days. These are composed of a variety of quartz called burhstone, found in what is geologically called the Paris basin, and which is peculiar for its regular cellular structure and flint-like hardness. It is these qualities of extreme roughness derived from its honey-combed formation, and its capacity for holding a sharp surface, owing to its hardness, coupled with its great strength, that render it the best stone for grinding. Like cork, it is a natural product, and no efficient substitute for it has ever been discovered. The stones, when extracted from the quarries near Paris, are split with wedges into cylindrical forms: the pieces then are cut into parallelopipeds called *panes*, and these are hooped together in the shape of mill-stones, answering the purpose excellently well, while they are much more convenient for transportation than single stones. They are made into sizes to suit the largest merchant or custom flouring mill or the smallest farm mill to be driven by horse, wind, water or steam power.

Great care and experience are required to select this stone of the proper grinding texture and evenness for grain. The Nordyke and Marmon Co., Indianapolis, Ind., are manufacturers of complete grinding and bolting flour mills, and furnish them of two runs of stone and upwards—one for wheat and the other for corn. That represented in our engraving is capable of making, in 24 hours, 40 barrels of merchantable flour, and at the same time, of grinding 200 bushels of corn into meal. This outfit, with engine and boiler, can be purchased for $2,000, all ready to be put into any suitable house of one or two stories in hight. The stones are French buhr, simple in structure and easily managed.

It speaks well for the efficiency of these mills that there are over 1500 of them now in use, all of which, we are assured, are giving complete satisfaction. The firm should certainly by this time know how to satisfy the most captious customer, having been engaged in this specialty for 36 years.

Prices and circulars giving full information will be forwarded on application to the above address, and it would certainly be wise in those wanting mill-stones, bolting cloth, water-wheels, farm-mills, steam engines, flour-packers, or smut machines and bran dusters, to consult this firm before purchasing anywhere.

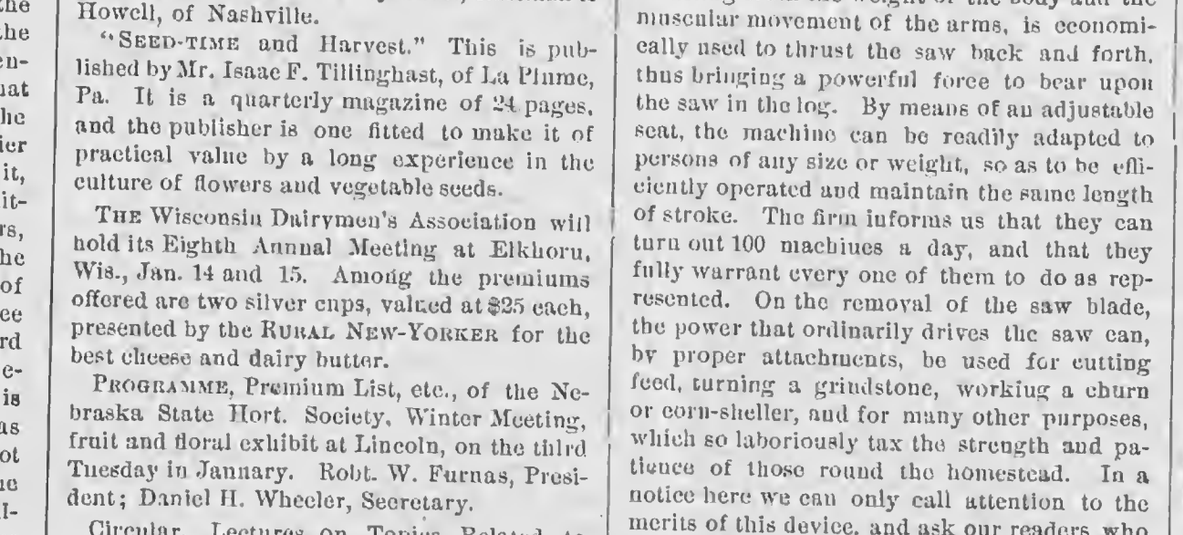


Fig. 2.

THE NORDYKE AND MARMON'S GRINDING MILLS.

Halladay Standard.

VICTORIOUS AT
Phila., 1876—Paris, 1878
25 Years in Use.
GUARANTEED SUPERIOR
To any other Windmill Made.
17 SIZES—1 MAN TO 45 HORSE POWER
Adopted by the leading R. R. Co.'s and by the U. S. Govt. at Forts and Garrisons.
$3,500,000 worth now in Use.
Send for Catalogue "B" and Price List.
U. S. WIND ENG. & PUMP CO.,
Batavia, Ill.

WINGER'S IMPROVED
WIND-MILL FEED GRINDER.

Operated by pumping Wind-Mills. A novel and perfect feed mill for grinding all kinds of grain for stock and house use. Cheap, reliable and durable. Agents wanted everywhere. Also the old and reliable Stover, the well tried, strong, durable and self-regulating, solid wheel WIND-MILL, which took the Centennial diploma as well as grand medal. Branch office, Greencastle, Pa. Send for catalogue to STOVER WIND ENGINE CO., Freeport, Ill. E. B. WINGER, Gen. Manager.

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The Strongest and Most Durable Wind Engine in the World. Sold by Dealers in nearly every County. Inquire for it. Every Wind Engine Fully Warranted.
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THE
RURAL NEW-YORKER.

PUBLISHED EVERY SATURDAY.

CONDUCTED BY

ELBERT S. CARMAN.

Address THE RURAL NEW-YORKER,
78 Duane Street, New York City.

SATURDAY, JAN. 10. 1879.

As our readers are aware, for the past year or so we have made inquiries as to the benefit derived from the use of salt on Asparagus beds, so generally recommended. Thousands of acres of Asparagus are cultivated on Long Island, some with and some without salt. We have been unable to learn that salt is known to be of any advantage whatever. The most that is known seems to be that salt does no harm. It may be, however, that the air of Long Island, situated between the Sound and the Ocean, supplies all that is needed and that tests to ascertain the value of salt would have to be made further away from the influence of the sea.

SUBSCRIBERS will please remember that we are only too glad to supply them with free specimens of the RURAL NEW-YORKER at this time to show to their friends. Most people are glad to receive and to examine such specimens, as they are thus enabled the more discriminatingly to judge whether it is advisable to make any changes or not in their selection of journals for another year. We are naturally anxious to increase our circulation as much as possible, and any good words or kindly acts in our behalf on the part of our friends will place us under many obligations which we shall all the while endeavor to repay by making the RURAL more interesting and instructive.

MR. MARSHALL P. WILDER writes us that our pomological department keeps up abreast with the times and has afforded him much information, which is gratifying to us. By the way, the London Garden publishes our recent original portrait of this much respected gentleman, with a condensed biography of his life. Referring to this, to which we called his attention, Mr. Wilder says: "It is much better than the one in the Gardeners' Chronicle some years since."

There was a fine engraving of Mr. Wilder, we learn, published in Ghent some two or three years since in "D. Arboriculture &c." but the *title* was given as Le Maréchal P. Wilder as if he were a veritable Field-Marshal.

PROFESSOR C. V. RILEY sought the position of Entomologist to the Agricultural Department. He solicited the press to pronounce upon his fitness for that position. He was appointed and—resigned. Probably he was surprised that the resignation was promptly accepted, for he exerted his best influence to get back. Then he commenced and has since industriously continued his denunciations of the Department which, even if well founded, come from him, under such circumstances, with an exceedingly bad grace.

Professor Riley is generally acknowledged to be one of our ablest entomologists and it is to be regretted that he should suffer his ambition and his vanity to run away with his discretion.

CATALOGUES.

The Seedsmen's and Nurserymen's catalogues of the present day are proofs of the advancement which has been made in Agriculture and Horticulture, and records of wherein this advancement consists. Any farmer, florist or gardener who purchases his plants or seeds without having examined these works, does himself injustice. He cannot expect to keep up with the times. These catalogues are now issued by every prominent or enterprising establishment throughout the country, and most of them are sent to applicants either without any or for a merely nominal charge. Our advice to our readers is to send for all of them; to examine them carefully; to compare them and to make out their lists not until they have thus thoroughly informed themselves. The trustworthiness of the firm sending out the catalogue ought always to be considered before the price. Fresh seeds and well-grown plants have a standard value. When therefore we find certain kinds offered in one catalogue at a lower price than in the others, it would be judicious to learn something of the firm which so offers them before determining to send orders. Old or impure seeds or those not true to name; plants, whether for ornament or for fruit, that are not sound, well-grown and true to name, are always causes of very great disappointment. The new catalogues for 1880 from all of the prominent growers of this country and of England, will be noted in their appropriate place in our columns as they arrive. As before intimated, we urge our readers to consult them freely before making selections, even though they have but a single grape-vine, a half dozen strawberry plants or a pint of early peas to select.

NEVER SNUB A CHILD.

THAT was what our minister said in his sermon a few weeks ago, and if those four words made as much impression on the rest of his congregation as they did on us, that sermon will prove of more real practical value than most that are preached, and the children of generations yet unborn will have good reason to rise up and call the preacher blessed. We have no idea of giving a report of that sermon, or even a synopsis of it. What we have quoted is in itself a sufficient topic for consideration, and enough to furnish food for thought through one sitting.

"*Never snub a child.*" Mind that, you fathers and mothers who will read this! Think for a moment what is the effect a hasty, thoughtless word may make on the child's disposition. The little one may come to you when you are worn out by toil, tired from mental labor, engaged in reading or in conversation, or busied with some perplexing task, and trouble you with an innocent question. If you are vexed, don't show it; don't fret; don't look cross; don't speak hastily; answer the question as well as you can—some questions that children ask are not easily answered—and send the child away kindly. Its pleasant face will diffuse light and love over the whole house and do you a better service than you may be aware of. A frown, a rebuke, even the slightest check will show its effect on the child's countenance, and you may be sure it goes deeper than you can see, and lasts longer than you may think.

No opportunity to cultivate a child's self-respect should be neglected. That is the foundation of true manhood, and he who builds on any other builds on a quicksand. Better that than the education of the schools or fortunate business connections, high birth or influential friends. These are all well as adjuncts, but altogether they are less to be desired than that self-respect which begets confidence, energy and self-reliance.

If you want to try an experiment, take a dog and subject it for six months to the same treatment some children receive, and observe the effect. Our word for it, you will give it such a disposition that it will be known all over your neighborhood as an animal to be avoided. Somewhat like effects are produced on all other animals. There are, of course, differences. Some will be more easily affected than others, as their natural dispositions differ, but a harsh word is never without injury, and, if this is the case with animals whose appreciation of praise or blame must be comparatively small, what must be the result when a finely organized child is the subject?

Many brutal instincts may, in a measure, be overcome by kindness, and, on the contrary, humanity becomes dulled by undeserved reproof, even when it is not formulated in words. The world would be better if there were more kindly words, and many a child grows up to be a hard-hearted, unloving man who, if reared in an atmosphere of kindness, would have nourished the seeds of affection planted in his youthful days, and in his maturity been a blessing to all around him.

TWO QUESTIONS ANSWERED.—CONCLUSION.

LAST week we tried to show, in answer to our correspondent's question, that the ordinary *work* of the farmer will not be a "crucifixion" to the feelings and tastes of a farmer of education and refinement. The second part of his question, viz.: "Must he see an uneducated, boorish laborer at his table every day?" is, as we intimated, harder to answer. But we should, without hesitation, say No. The question, however, opens the whole subject of association with farm help, and how far it is necessary, and how far it need be degrading or distasteful to a farmer of culture. There are several solutions, as the question is vague. "A farm of 160 acres" may employ one hired man or twenty. We know a "farmer" in the "fruit belt" of Michigan, with much less than 160 acres, who, in bearing time, employs sometimes as many as *seventy* pickers, men, women and children. He does not board them. Even his regular hands do not board with him, but in a house near by. His only association is that of employer with employed. Of some of his employes he does not even know the names. They come from the country round about, find board, pick by the quart, get their tickets at the "shipping shanty," and he cashes these each Saturday evening.

We know other farmers with not more than 160 acres, who pursue some specialty, hire several hands, have a cottage where all dairy work, etc., is done and all the hands are boarded, so that the farmer associates with them only as he works with or oversees them in the field. And this cottage system is fast gaining favor even on moderate-sized farms in this country. It has long been the common way in other countries. It gives the farmer married help, and therefore usually more permanent and reliable, and less transient; takes the drudgery out of the family home or mansion, and settles the question of "eating with boorish laborers."

But our correspondent's question refers, we presume, to the more difficult case of a young farmer of refined tastes and good education but somewhat limited means, who pursues ordinary mixed or grain farming, and keeps only one or two hired men by the month. Now the only reason a farmer should board his help any more than the merchant his clerks, or the head carpenter or other mechanic his journeymen and apprentices, is that farm-houses, as a rule, are isolated and remote from town, and the farmer must in some way board his help or have none. Let this be granted then, and that this young farmer lives in a community where it is customary for the help to eat at the same table with the farmer and his wife and children, and where he will be called "stuck-up" if he departs from the usual custom, and that for this and other reasons he does not deem it best to depart from it. What then shall he do? One thing he can usually do, *choose* his help. A wide-awake, progressive, educated farmer can make his own choice among laborers. He need not have boors about him at all.

Plenty of young men—sons of neighbors, perhaps—knowing that they can *learn something worth while of farming* from such a man, will be glad to work for him a year or two before settling on farms of their own at the West. Now these young men may not be Chesterfields in manners. They may even see no objection to sitting at table in working boots and overalls, and shoveling food with a table-knife. But, if courteously treated, they will be willing, nay, even glad, to learn. If their employer courteously says, "I always remove my boots and work coat and overalls when I come in to meals or for the night, and put on slippers and a clean coat or dressing-gown, and I should like to have you do the same while you live with me. We may not notice the odor of the stable, having just come out of it, perhaps, but the ladies will be troubled by it." Ten to one the young man will readily fall in with the suggestion, and after a few weeks wonder he could ever have done otherwise. For this at least is not mere "stuck-up nonsense." It is utterly impossible for a man to milk a dozen cows, clean their stable, or "clean down" a span of horses as it should be done, without carrying more or less of the odor in his clothing and on his boots, no matter how carefully brushed or cleaned. And if he wears them all to table daily, he daily offends and insults at least the lady of the house, if she is a lady at all. We know many farmers' wives who bear this cross daily because they suppose it must be borne.

But what about further intercourse with hired help in the house? The various members of the house have their sleeping apartments, which should be sacred from all intrusion except on invitation. Then the large dining-room and the kitchen should be always warm in winter and be the home of the hired help and of such members of the family as choose to stay there for a longer or shorter time. But the evening home of the refined farmer and his family will be the parlor or library. Here he will read, and study, and write, and talk with his family and friends. Here will be the quiet games, the piano music and the singing. The rougher, noisier games will be in the dining-room. If the hired help have a taste and talent for music they will often be invited to listen to it or join in it. But it can easily be understood that they are expected in the parlor only when invited and only when suitably dressed.

Another question is in regard to the intercourse of the farmer with his men while at work. Need this be degrading to the farmer of refinement? Need it be a daily, hourly "crucifixion" to his tastes and feelings? Decidedly not. It will rather be a constant, gradual education to his men if they are the young men we have described. The stronger nature or intellect will always predominate. The educated farmer who really understands and loves his work—rather his *profession*—can constantly find in the work his men are helping him to do, subjects for conversation and instruction to the men. Profane or vile words and obscene stories will not be tolerated, no, not for a moment. They will be cast out as things low, coarse, disgusting, not to say immoral. The careful father will not risk his children even in occasional association with young men of vile or profane thoughts and tongues. He will not knowingly have such men on his farm, and he will take some pains to know about this matter.

And so the association of such a farmer with such men will not be a degradation and a crucifixion to him, but an elevation and a pleasure to them. They will not correct all their table manners in a day. But if they once know that by common consent the knife is used for cutting and the fork for conveying food, they will so use them. If they know that picking the teeth at table is an abomination, they will be more careful in that regard. And so on with the various gross violations of table propriety.

And if the farmer uniformly treats them while at work with courtesy and respect, they will treat him at least as well. They will say, "Yes, sir," and "No, sir," and "If you please," and, in short, use courteous language. And his intercourse with them need be no more distasteful than that of the merchant with his clerks, the doctor with his patients, the lawyer with his clients and witnesses, or of all three with their servants.

BREVITIES.

OUR next original portrait will be that of Professor Levi Stockbridge.

IT is a wonder that the Honeysuckle is not used for forcing more than it is. True, the flowers are not over showy, but their delightful perfume is reason enough.

A RARE LIST OF OFFICERS.—The Ohio State Agricultural Society for 1880 has Dr. J. A. Warder for President, N. Ohmer for Vice-President, M. B. Batcham for Secretary, and G. W. Campbell for Treasurer.

GOV. FURNAS of Nebraska "*has not had time to get rich.*" But he is rich in the sense of having commanded, by his life's acts, the respect and esteem of all who know him. Ah, that this sort of wealth were more alluring! Our portrait is from a recent photograph.

OUR friend Mr. W. Rice tells us that the report of the land department of the Union Pacific R. R. shows that 22,183.19 acres have been sold, the price amounting to $100,637 39. There have been 234 purchasers, so that the average price per acre is $4.53 and the average number of acres to each purchaser, 94.80.

To say that we are receiving up to date a larger list of subscribers than we have ever before received would be to say what is not true. We *may* say that we have to go back to 1874 to find a list as large as that we are receiving up to date. This seems to be due in a great measure to the *efforts of our own subscribers*. Thanks to them. May they live long and prosper!

DURING the present year this journal has been supplied with special reports of all important Agricultural and Horticultural Societies which have occurred in the North, West and South. New England, however, has been neglected. The present voluminous and extremely interesting report of the Connecticut Board of Agriculture will go far towards atoning therefor. It should be read by all.

WE know not how many inquiries we have received as to where the Southern Cow Pea, Doura, Duchess Grape, and other plants lately illustrated in our columns can be obtained. As to the Cow Pea, we are trying to place it in our seed-distribution. But if we do, only a small trial lot will be sent to each subscriber. As to Doura, we cannot at present say. Doubtless we can give the information before another planting season arises. As to Duchess Grape; we find that it is offered in our advertising columns.

ACCORDING to the estimate of the Encyclopædia Britannica, as estimated by a writer in the Nation, the natural resources of the United States, fully developed, are capable of sustaining a population of nearly 1,200,000,000, equal to the present estimated population of the globe. This estimate seems extravagant until we remember that even such a population would give us but three hundred and sixty-four persons to the arable square mile, while England to-day has about three hundred and eighty-nine.

WE must apologize. There is no getting around it. Our opinion about Roses isn't worth a snap. But we feel so humbled too. Oh! that we could take back what we have said about the American Banner Rose! "The ladies waiting on the tables at the great fair of the Seventh Regiment wore them." This is in every paper in the country. All these notices end: "As it can only be supplied in small quantities, it will cost more than its weight in gold!"—And the RURAL has spoken disrespectfully of this Rose!

Industrial Societies.

CONVENTION OF THE CONNECTICUT BOARD OF AGRICULTURE.

SPECIAL REPORT.

THE Annual Convention of the Connecticut Board of Agriculture met at Willimantic Dec. 17, 1879.

It was near 11 o'clock when Gov. Andrews called the meeting to order and introduced Ex-Governor Hyde, who delivered the introductory address. He congratulated the Board on the prosperous condition of the State and country. The cattle disease had no foothold on the soil, and science was liberating agriculture from the thraldom to which it had long been subject; it was doing more, it was elevating it. Old lands had been skinned and worn out; the old folks remained to die on them, and the young men had run away. Special rotation was not tried, if thought of. Soil had appetite, and needed food. It also had lungs to breathe. It needed drink also and, like the human family, it loves the sunshine, and smiles under good treatment. Our animals show the effect of better breeding. The dairy cow of to-day if not the queen of hearts was a power behind the throne. The ideal cow of the future will have a full udder, with a copious supply of milk, rich in cream for butter and caseine for cheese. Her depth of loin would please the eye and her flesh tickle the palate of the epicure. Had we reached this ideal yet? If not let us strive for it, remembering that "one star differeth from another star in glory." At the Dairy Fair at Greenfield he was amazed and deeply impressed at the immense product and interests involved in the Dairy business of the country.

R. S. Hinman read a paper discussing the right of the State to disseminate agricultural knowledge He had no question of the right, yet the impression prevailed to some extent that they had come together at the State's expense to advance their own peculiar interests. While this might be true in a limited sense, there was no just ground for supposing that any other interests were to suffer in consequence. The lands of England were entailed, and the Government directed the care and management of them. To make the case analogous, let Connecticut be the landlord and the farmer the tenant. It was to the interest of every merchant and manufacturer in the State that her agricultural interests be improved and her products increased.

Mr. Sedgewick opposed these views. Private means and enterprise had done much to benefit the farmer, and he thought them sufficient. If the State aided farmers with public money, why should it not aid merchants as well?

Governor Andrews stated the increase of property had been confined to one hundred towns; others had decreased. Of the twenty-six townships in Windham county only five showed any increase; the others show a decrease both in value and population. How can the producing capacity of a town that cannot support as much population as it did years ago, be increased so as to do it again? This problem seemed a proper subject for the Board of Agriculture to solve. A merchant from Boston or New York, who comes here with plenty of money made elsewhere, buys a farm, puts up fine buildings, etc., for a home in which to spend his surplus wealth was not the one to be benefited. It was the great mass of farmers who had only their farms from which to make their living.

W. P. Gates put the question differently:—How could the fertility of this country be prevented from going abroad in the way of grain, etc., exported? Would it not be better to bring the manufactories and operatives here where we could board them, and by consuming our surplus products at home, retain also the fertilizing materials that now go abroad?

Another speaker was surprised at Mr. Sedgewick's views; he thought the appropriations to the Board eminently proper and judicious; that people would differ as to the economy of their expenditure was to be expected, but he thought there was little ground for complaint on that score. There were farms in Connecticut, many of them, that could be bought for less than the improvements cost, and they were for sale; how to improve these farms and increase their products, were matters of interest to the whole community. He believed the export of beef, pork and grain added to our wealth; but the export of bone, linseed and cotton-seed meal, to fertilize the lands and feed the stock of foreign nations, was wrong. England sets us a good example in the use of these things.

Mr. Hinman asked if it were not to the press that Connecticut was largely indebted for the adoption of the Mapes's theory of plowing in manure, and to the Board of Agriculture was due the credit of exploding a system that had cost the State more thousands of dollars than the Board had hundreds.

Mr. Whitaker thought the course of the Executive in coming here to take part in this meeting was encouraging. Such conduct tended to the elevation and attraction of Agriculture. Last year butter at St. Albans sold at eight cents, cheese at 4 cents. Who could raise them at such prices? There was no sale for them here; they were sent to Europe and brought the gold that set the wheels of returning prosperity in motion. It was the patriotic sacrifices of American farmers on the altar of their country, that turned the tide of prosperity in our favor. Can the Board enable us to successfully compete with the West? It has been said that no other class had asked for State aid; but the manufacturing interests had been continually knocking at the doors of Congress for aid in the shape of a protective tariff. Some years ago he met in New York a gentleman who had expended large sums of money to secure this object, who assured him he thought it ought to be a penal offense to wear an article of foreign manufacture! These discussions consumed the morning hour.

Afternoon Session.

The first paper was by Secretary Gold on the preservation of food.

Temperature was of great importance; in addition, chemicals, sugar, salt, etc., were essential agents. Slowly ripened meat at a low temperature accounts for the superior quality of city beef over the country article. Veal and lamb need less ripening than beef. When fully ripe the meat should be put in hot water at once. Beef for ordinary purposes should not freeze; it would keep best in the quarter if allowed to hang for a week or more. Salting should be deferred until the meat is ripe. The fat of pork only should be salted, the lean should go for sausage. Pack pork in clean barrels on the edge. For curing hams he used six gallons of water, nine pounds of salt, two pounds of sugar, one quart of molasses, four ounces of saltpeter, two ounces of saleratus, for 100 pounds of meat. First cover with salt and let lie, flesh side up, for two days, then pack in barrels rather close and pour on the above brine For small hams three weeks will suffice; if large, six weeks. The latter he would take up and repack at the end of three weeks. At the end of the three or six weeks he takes them out, dries them thoroughly and smokes them without freezing. The preservation of grain and butter received due attention. The latter after working and salting to taste, was rolled in cloths, packed in barrels and covered with a saturated solution of salt. In reply to an inquiry from Mr. Fish, how to keep eggs fresh, he said: pack on end, cover with lime-water and some salt, and put in a cellar; they will keep for a long time.

Mr. Morrison asked if cellars differed in keeping butter.

Mr. Gold—"The temperature alone would make a difference."

Mr. Morrison could not keep his June butter in his cellar, but in a neighbor's it kept satisfactorily—a circumstance he could not account for.

Mr. Hart had put down two barrels in June; the brine, not being strong, had extracted the salt from the butter.

—"This was because the brine was not as salt as the butter; on the other hand, if it was more so, the butter would not absorb from it to any extent."

Mr. Augur's rule for salting butter was one ounce to the pound.

Mr. Hart—"This meets the taste of most people, while some wanted only an ounce of salt to 18 or 20 ounces of butter; cleanliness, good feeding, care in making, keeping in an even temperature and putting on the market at the proper time are essential to profit."

Mr. Cheever—"It should be kept *under* the brine, otherwise it will be apt to spoil; so with pork."

Mr. Wethercll—"Is salt essential to the keeping of butter? This question was asked at the Dairymen's Association a year or two ago and some one cried out he would like to have that question answered."

Mr. Hart did not think butter would keep without salt. Lard was mentioned in support of this theory, but the lard being cooked, they were not analogous. How should we compete with the West? The best hotels are supplied with butter from there, and it takes all the premiums and trade. He urged the cooperative system as the best means of meeting this competition; otherwise farmers must provide their wives with ice houses and other facilities.

Mr. Alpheus had noticed a great difference in quality of butter and concluded it was due to being hand-worked. In some suspected cases this was admitted.

Mr. Hinman said salt deepened the color of butter and was useful in extracting the buttermilk that the water failed to do, thus improving its keeping qualities.

Mr. White did not doubt good butter could be made without salt. His practice was to wash the butter two or three times, so that the last water ran off perfectly clear. Salt to suit the taste and it will keep a year. One can't make first-quality butter without good feed and clean and perfect manipulation. Cellars differ in keeping qualities.

Mr. Gold thought that under the best conditions the cream could all be obtained by the use of shallow pans; but perhaps some of the improved systems are superior to this. No doubt Connecticut farmers would expend $100.000 in dairy apparatus during the next five years. The Board were urged to conduct a series of elaborate experiments to ascertain the merits of the different methods. The gilt-edged butter of Dr. Grant and Mr. Starr were frequently quoted.

Mr. Day—"It is well known that these makers are surrounded with the best appliances; our farmers' wives would make gilt-edged butter, too, if so supplied."

To the question: When was the cream in best condition for churning? Mr Gold replied: "Just as it is ripe on the point of turning sour."

Mr. Hart agreed and would go a little further and say it was ripe just as it was sour, and if it could be kept at that point a few days, all the better.

Mr. Perkins compared the Grant and Starr dairies with the condition of Connecticut farmers generally, and claimed their profits were due more to the calves and stock sold at prices the latter could not command. He also wanted to know if it was a fact that the addition of an ounce of salt to a pound of butter did not increase its weight.

Mr. Hinman—If a reply must be based on his own positive knowledge he must waive it, but he believed it was a fact, on the assurance of the butter maker. The salt was worked into the butter at the first working and allowed to stand till the second working, its action being to eliminate the minute particles of buttermilk which the worker failed to do. In this view it was not difficult to believe the buttermilk thus obtained equaled at least the weight of salt added.

Mr. Whitaker's wife used three-quarters of an ounce of salt to the pound of butter, but she never sold as many pounds as she salted. As to hand-working butter, a man having three cows, his wife made the butter and took some to the Greenfield Fair and took all the prizes, and it was *hand-worked butter*.

Mr Augur—Gov. Andrews alluded to Colebrook's depleted farms this morning; he would add that butter making did not produce these effects. Our farmers want the best appliances, and he thought the Board would be justified in experimenting in this direction as had been suggested.

In response to inquiries Mr. Cheever said salt did color butter, and it would not keep without it. He agreed with Messrs. Gold and Hart as to the ripeness of cream, and in summer he used salt to keep it at that point. His price for years was 85 cents per pound; he now gets but 75 cents, owing to competition. A man in Boston commenced to make a specialty of gilt-edge butter a year or so ago; he began at 40 cents; it was in such demand that the price advanced to 50 cents, and, being satisfied with the profit at that figure, he declined to advance it further. The price of even gilt-edge butter, like other commodities, was subject to the law of supply and demand.

Mr. Sedgewick was informed in New York that the surplus of these fancy dairies was sold in that market for 30 to 40 cents.

Some discussion occurred in favor of an experimental farm and of testing improved dairy apparatus. Messrs. Gold and Augur thought these things could be accomplished without additional appropriations.

MORNING SESSION.

Dec. 18th.—The convention met at 9 o'clock. The Question Box was opened; the first ticket drawn requested Mr. Fish to give his experience in growing corn.

He thought he generally obtained the most bushels per acre from a large Dent variety. The stalks were large, grain white, cob red; did not know any special name for it, except Western Dent. He plowed sod as late as the middle of May. If the manure was coarse, he plowed it in; if fine, harrowed it in; plowed about six inches deep and harrowed thoroughly. Could not harrow too much. Used a Randall harrow, and if possible would harrow the whole depth of the plowed ground. Planted his corn in drills 3½ to four feet apart and dropped two kernels about every foot, and afterwards thinned to one. Did this to secure an even stand. As soon as it was up sufficiently, harrowed with a Thomas smoothing harrow till it was four inches high, then cultivated till it was about four feet. Thought his success was mainly due to his thorough and frequent harrowing and cultivating. Horse labor was cheaper than hand labor, and the latter must be avoided if we would successfully compete with the West. His first experience in harrowing corn was with a brush on potatoes, in crossing which he went over the end of a piece of corn adjoining. After doing so he repented, for he thought the corn was ruined; but it came out so well, the next year he ventured to put the harrow on, and any one as timid as he was, after making one trial, will not hesitate to repeat it. On a very stony piece of 6½ acres it took his boy half a day to go over after the harrow and remove any stones that happened on the hills. On one piece he applied 100 bushels of leached ashes from Canada to the acre, costing 17 cents per bushel at the railroad station, and harvested 120 bushels of corn.

One gentleman thought he made a mistake in plowing so late. To this Mr. Fish replied that possibly he had. He was at one time prejudiced in favor of fall plowing; but found his crop was more injured by cut worms. He once plowed in a heavy application of manure eight inches deep; he thought the manure would rot and be just where the crop wanted it; but it was a complete failure. He thought he had lost his crop and manure, too; the next season he turned the sod and manure up again and found it all there and only partially decayed. He planted to corn again and got the benefit of his manure in a heavy crop. He considered the corn and fodder to be one of the most valuable crops he could raise. By deferring plowing until late, the weather was warm and soon warmed the ground, and if the grass had made a good start, he thought it was green manuring in a small way.

How to Kill the Rose-bug was the next question.

Mr. Augur—"On a small scale hand-picking may be resorted to."

Mr. Hall had been deluged with them on a young strawberry bed and used Paris-green effectually. On fruiting beds this would not do, of course.

How to Relieve Choked Cattle? Mr. Fish stated that a stick of wood put in the mouth, like a bit, and fastened by each end to the horns was an effectual remedy for choking as well as hoven. The animal's efforts to get rid of the stick would soon give relief in either case. Mr. White had never found but one case where the obstruction could not be removed from the outside by the pressure of the hands.

The hour for the regular order having arrived, Dr. E. L. Sturtevant read a paper on Thoughts and Facts Concerning the Food of Man. Custom, habit, taste and prejudice were all shown to exert a vast influence over our palates. Soup, a permanent article of diet in France, in America was seldom used. The mushroom, in America almost unknown, in France, Belgium and Italy was almost a daily diet. The potato was cited as an instance of the difficulty of introducing a new article of food, as it was used in this country in the 16th century, whereas it took till the 18th century to get it into use in Europe. Flowers are in many instances used as food to a great extent, the chief instance in this country being the cauliflower. He had recently enumerated about 3000 varieties or species of edible plants and no doubt there were from 4000 to 5000. Of Cassava there are two species, the sweet and bitter; the former is perfectly harmless and little grown, and although the juice of the latter is intensely poisonous, yet the root is used for food and makes the cassava tarch largely used in some countries. Saw-dust is sometimes used as food; so are grasshoppers. An instance occurred in Massachusetts the past season of a school-boy whose play-mates had played tricks on him by holding him down and feeding him grasshoppers by force, which he afterwards learned to eat from choice.

Geo. Hyde called on Prof. Brewer to state what he knew about grasshopper diet.

The Professor stated that happening out among the Indians, he was tempted to try grasshopper pie, and it was not so bad. He gave the *modus operandi* of the Indians in making the 'hoppers up into what they called cachowda, which is really nutritious and delicious and much liked by the Indians. Prejudice affects our diet more than likes and dislikes. Pork was despised by millions. There is no good reason why horse flesh is not good, wholesome, nutritious and palatable. Time will overcome the prejudice against it.

Mr. Cheever related an instance of a man near Crawford Notch, N. H., a mechanic who it was reported ate live frogs. He sought him out, caught the frogs for him and saw him eat them.

Mr. Cressey—"Habits of diet are sometimes due to a morbid condition of the system."

Mr. Brewer—"Analysis shows that the clay so largely eaten by Indians and by people in some parts of the South, contains some ingredients that are palatable and nutritious. The crow, skunk and owl are mentioned by Mr. Capen as very palatable—the latter really delicious. Young crows are as good as squabs."

Mr. Webb—The hawk and raven are good; the buzzard and prairie dog passable.

After this repast the Question Box was applied to and asked that ubiquitous and never-to-be-settled question—What is the Best Strawberry?

The nearest approach to an answer was given by Mr. Capen, of Boston, that of the old, well-tested sorts for general use the Charles Downing would give as good general satisfaction on all occasions as any, and this view was generally concurred in. The Duncan was well spoken of; the Crescent, Monarch, Boyden, &c., were also mentioned.

Afternoon Session.

DEC. 18.—A paper on butter as an article of

food, by your excellent contributor, Richard Goodman, of Lenox, Mass., was read by Secretary Gold. A few points are noted:

"Gilt-edge butter is an article of recent manufacture, dating back about ten or twelve years. Philadelphia has the highest reputation for the best article. The Darlingtons had been preeminently successful, realizing from 95 cents to $1.25 per pound for their product. On the other hand, a case was mentioned where a lot of butter was sent in to compete for premiums, where not one-third of it was fit for use. Ireland might make good butter if the cattle were kept in decent quarters and care and cleanliness were used in its manufacture. The mass of the best butter of the future will be made by creameries under intelligent direction; but they will not be able to make what will be considered a gilt-edge article.

At this juncture a short stout gentleman came in wending his way to the stage and in a few minutes was introduced by secretary Gold as Prof. Collyer, chemist of the Dept. of Ag. at Washington, who would talk to the convention on sugar and sugar making.

The Professor stepped forward and said he should speak of sugar, its production and the waste of the country. The value of sugar annually imported was given at $109,000,000, which came out of the pockets of the consumers. We had imported since '48 $1,800,000,000 worth of sugar—as Col. Sellers used to say, "there is millions in it." The average consumption of sugar in this country is 35 to 40 pounds, for every man, woman and child, and it would be double were it not for the cost. The Department and its head had been sneered at and ridiculed frequently; he was not here to reply to any of these attacks but to give in plain, practical detail the results of some of his experiments from which he felt confident that in five years we should produce all the sugar we shall need for our own consumption, and in 10 years make it for export. His experiments were made with sorghum or Chinese sugar cane, and corn-stalks. There were about 10 distinct varieties of these sorghums, but in general composition there was no great variation. His experiments were with four varieties planted last May, and analyses made at different periods of growth, from the appearance of the flower to the hard freeze of Oct. 23rd, and once thereafter, showed that first the juice contained from four to six per cent of uncrystallizable and from two to six per cent of crystallizable sugar. In subsequent trials the uncrystallizable diminished to three, two, one, and in one case to less than one per ct., while the crystallizable increased to 17 per cent. He had made, in the aggregate, over 250 different experiments. He had sent to Louisiana for stalks of sugar-cane which were received in good order, and on testing them he had found they were not one whit better than sorghum. In 40 experiments, using 23 tons of sorghum and corn stalks, from the best nine of them he obtained 92 7-10 of the sugar in the juice. From nine of the poorest sirups he secured 90 and 1-10 of the sugar in the juice, and any one pursuing the same method could do the same. The apparatus necessary to work up the product of 25 acres, ought not to cost over $150; Aiken, of S. C., says $100. His brother-in-law in central N. Y. made sirup he sold at 50 cents per gallon. A gentleman in Ill. made 45,000 pounds of sugar which he sold at 10 cents per pound. His experiments yielded at the rate of over one ton per acre for any of the samples used, while Louisiana reported 1350 pounds per acre as the product from cane. He had secured 33 tons of stalks per acre; he would recommend only the early kinds of sorghum for trial in Connecticut. The most important thing was the time when the juice contains the largest per cent. of crystallizable sugar, which in his experiments he had found to be at its maximum at the ripening of the seed.

Of the sugar we consume we raise 13 per per cent. and import 87 per cent. We are paying as tribute to foreign countries for sugar more than the product of all the gold mines of the world, which it was said amounted last year to $100,000,000.

The aggregate corn crop of the country is 480,000,000 bushels; 1½ per cent. of the stalks would produce $109,000,000 worth of sugar. During the 15 years ending in '77, the average yield of corn had fallen off 20 per cent, and of wheat 16 7-10 per cent. The average at the East is greater than at the West both in wheat and corn. Dr. J. B. Lawes says that in England they have reached the utmost limit of profit. A larger yield would be unprofitable. England is importing $2,000,000 worth of fertilizers annually. The average mineral matter—ash—in 28 samples of corn is 1 61-100, consisting of phosphoric acid and potash. These come from the soil, and alone are worth 20 per cent. of the value, of the crop. A Baltimore man put up 75,000 cans of corn a day. Maine canned $1,500,000 worth last year. The stalks of these crops could be profitably utilized for sugar. He had tested them and they yielded sugar readily. At Bellerica a silo was recently opened and proved a success. After the stalks are pressed and the juice taken out, they are in better condition to go into a silo, and the sugar is saved. The white field corn with which he experimented, yielded 69 bushel of shelled corn per acre; after husking the corn the stalks were put through the mill and the per cent. of sugar was larger than he ever obtained from stalks before, as they yielded sugar at the rate of 1000 pounds per acre.

Evening Session.

The farmers had not finished questioning him at the hour of adjournment, and he consented to remain during the evening; the Convention meeting earlier than the usual hour, when he gave, in answer to questions, his methods of operating quite minutely, especially during the process of evaporating and crystallizing. With his rude apparatus he could evaporate 75 gallons of juice in three hours. For this latitude he would advise the Early Amber, or some other early variety, and get a good mill. He had no doubt anyone could succeed as well as he did; he only wondered so much had been done and so little accomplished. Doubtless previous failures had been due to the presence of a larger per cent. of uncrystallizable sugar. Let the cane mature and there need be no failure. No doubt five acres of sorghum could be grown as cheaply as one acre of beets, while the per cent. of sugar in the latter was only 12 46. The samples of sugar he exhibited were eagerly examined and tasted, and pronounced excellent.

The first paper of the evening was by A. H. Angur, a son of the Pomologist of the Board, on Fruits and Fruit Gardens for Farmers. He urged that more attention be given by farmers to secure a full and continuous family supply of fruits as promotive of health and happiness, and an inducement to the young folks to remain at home, and he gave lists of the best varieties as a guide to the inexperienced.

He was followed by J. M. Hubbard, with a paper on the Compensations of Agriculture. Though a farmer and the son of a farmer, he admitted that farmers, as a class, receive less compensation for their labor, financially, than do the followers of any other occupation. Still there were other compensations which he proceeded to enumerate:—First, work, hard work and plenty of it. A farmer need never be out of a job. There is a sure market for all his products, whether at a profitable rate or not. To the small capitalist it offers a safe investment. He surrounds himself and family with comforts, sound health, pure air to breathe, out-of-door life. Sunshine and wind, though sometimes rude, are, nevertheless, true friends; pure milk, fresh fruits and vegetables as ministers of pleasure and health, stand unrivaled and of inestimable value. It was a very interesting paper, and if he failed to convince his less sanguine hearers, who are prone to look at the shadows as well as the sunlight, that compensations were ample, all will agree that he presented a pleasing picture of rural life as it should be.

Morning Session.

Dec. 19th.—On assembling this a. m. at nine o'clock, Secretary Gold's prolific Question Box furnished ample material for discussion.

Will the cost of bringing the corn crop of the West to the seabord pay for the fertilizers necessary to produce the crop here? This was a broad question, to answer which required much research and statistics. It brought out, however, a statement from Mr. Perkins as to the value he placed on corn stalks for fodder. It took only 60 hours to cut the stalks from 130 bushels of corn. These, with an equal amount of cut hay, with the addition of meal, enables him to keep up the flow of milk from his cows equal to a grass diet.

A saturated solution of salt, followed by a dose of aloes, was Dr. Cressy's remedy for removing pin-worms from horses.

The Baldwin and Roxbury Russet were named as the most profitable long-keeping apples. Coe's Greening, origin Middletown, a firm, fine-grained, good-quality, productive, late-keeping apple, was named as promising well. It was one of the few perfect apples exhibited. Mr. Perkins thought the Roxbury Russet would fill the bill, in proof of which he showed fine specimens grown in '78, kept in his open cellar, sound and plump.

The question of the Best Strawberry for Market, elicited from Mr. Capen, the remark to which all agreed, that the Wilson had taken more money out of our markets than any one berry; but as a berry for all purposes he must say, as he said yesterday, that he thought the Chas. Downing the best of the well tried kinds. Mr. Wateman had made more money from Col. Cheeney than from any other; but it was a poor berry for table use. The Wilson rusted with him. The Monarch rusted less. The Crescent was not exempt. The Sharpless he thought the most promising of the new varieties.

Mr. Angur thought the Crescent rust-proof. It had proved so with him so far. He hoped The Sharpless would on trial prove to be all it promised. The Great American was generally a failure. [It may here be remarked that we have cautioned our readers against this much-talked-of berry from the beginning.—EDS.]

Mr. May—The point was the Wilson was unripe; if allowed to ripen, it would not carry better than any others.

Angur had been assured that a solution of copperas water was a sure remedy for the cracking of the pear. The curing of trips, the destruction of the white grub, pruning trees, etc., all received attention when the hour for the regular order arrived. Then Prof. Cressy lectured on Diseased Meat and its Consequences upon our Health and Happiness. All animals when slaughtered for food, should be in fair growing condition, not over-fat. As soon as an animal ceased to gain, its flesh began to deteriorate. He showed specimens of diseased meat from an animal recently slaughtered as first-class beef. This disease was called tychus tuberculosis, or consumption, and was more prevalent than was supposed, and spread by inoculation. It differed from pleuro-pneumonia.

All of these meetings have been largely attended, and much interest manifested among Ct. farmers, which must eventuate in much benefit to that class. The exhibition table contained 27 jars of apples and three of pears from Secretary Gold, of West Cornwall; 14 of apples and three of pears from Angur & Sons, of Middlefield; eight of pears from A. D. Capen, of Boston; eight of apples from C. T. Hickox, of Watertown. I. S. Hubbard, of Fredonia, N. Y., a plate of Prentiss's grapes; from Messrs. Hale, of So. Glastonbury, strawberries in bottles; Albert Day, of Brooklyn, four jars of potatoes; Mr. Williams, of Mystic, White Flint and Ga. flouring corn; J. B. Olcut, of So. Manchester, Tuscarora corn and meal; H. L. Stewart, of Middle Haddam, Waushakum corn—making altogether a very attractive display.

E. W.

Literary Miscellany.

A QUIET HOUSE.

BY MARY AINGE DEVERS.

My house is quiet now, so still!
All day I hear the ticking clock,
The hours are numbered clear and shrill,
Outside the robins sing and trill,
The sunshine sleeps upon the sill,
My house is quiet now, so still!

But silence breaks my heart! I wait,
And waiting yearn for call or knock,
To hear the creaking of the gate,
And footsteps coming soon or late
To greet me sitting desolate,
The silence breaks my heart, I wait.

As through the lonely house I go,
From hall to hall, from room to room
What shall I seek to find or know?
The brooding shadows spread and grow,
The startling echoes mock me so,
As through the lonely house I go.

Ah! blessed Heaven, if I could hear
Sweet noises in the tranquil gloom,
Soft broken songs and laughter clear,
The joyous tumult, glad and near,
That vexed me many a happy year—
Ah! blessed Heaven, if I could hear.

Ah! blessed Heaven, if once, once more
My longing eyes might see the stain
Of little footprints on the floor,
And grouped like roses at the door
The sweet child-faces gone before,
Ah! blessed Heaven, but once, once more.

My house and home are very still!
I watch the sun, I watch the rain,
The winter days come white and chill,
And years go on....Perhaps death will
Life's broken promises fulfill
My house, my home, my heart are broken still!

CONQUERED.

CHAPTER I.

THE FIRST GLIMPSE OF THE FOE.

THEY were brother and sister; one could see that at a glance, although the slender figure of the girl was in such strong contrast to the almost Herculean proportions of the young man. They had the same crisp, wavy, dark-brown hair and broad, low brows; the same deep, gray eyes, well-rounded chins, and lips that parted readily into pleasant smiles. They had the same light, active movements, he accomodating his step to hers, and she alertly keeping close by his side, as if accustomed to take part in many a long, healthful country ramble; many a climb up cliff or mountain.

On this cold December afternoon this youthful pair were standing on the lawn in front of an old-fashioned, roomy mansion, built probably in the reign of Queen Anne, and secluded in its own grounds of three or four acres. It was situated in a picturesque district not far from the Sussex Downs, and an hour ago they had been exclaiming admiringly at the view to be obtained from a Belvedere in the garden. Now with upturned faces they were gravely contemplating the shuttered windows, smokeless chimneys, and barred doors of the house itself.

"It's a very grim habitation," said the young man, thrusting his hands into his pockets. "A week within its walls would teach a fellow to believe in ghosts, or else hunt the rats. Damp, deserted, gloomy, and unpleasant altogether.

"Those who used to live here, who trained those roses round the windows, didn't think so, George," said his sister, softly.

"Oh! if you're going in for sentiment, I've done—or, at least, I'll wait till the roses bloom before I give my opinion again."

"We ought not to have come here so late in the day," Katrine observed, slipping her arm through her brother's, with a little coaxing gesture which he never could resist. "If the sun shone, the empty house would not have such a depressing appearance."

"Oh!" said George, doubtfully.

"Really it wouldn't. With the gray, wintry sky darkening into twilight, and all so silent around, one naturally gets morbid."

"Hungry, if you like; it's hours and hours since I breakfasted; but I'll not confess to anything morbid but a dislike to being kept too long without my dinner."

"George," said the young girl, still keeping her eyes fixed on the house, "it is very sad that families should be disunited, and homes, such as this might have been, broken up for lack of a little kindly forbearance."

"It will be a great deal sadder to me," cried George, giving himself a little shake, and then squeezing his sister's arm to his side,—"a great deal sadder if you stand about here and catch cold. A pretty Christmas our first one in England for five years would be if you were *hors de combat!* And there are tears in your eyes, too! You silly Katrine! Hang our contrary relatives, I say, and all their disputes. Let those who quarrel fight it out amongst themselves, and we'll go in for peace and good-will."

Before Katrine could answer, he was running down the broad carriage drive at a rate that rendered her breathless by the time they reached the pretty but tenantless lodge at the gates.

"There's nothing like exercise for dispersing the blues," quoth George Wyllis, gaily. "Your roses are coming back, Kittens. But, I say, where's the trap? It was to have met us here precisely at four, and now it is ten minutes past."

"We shall meet it before long. I dare say," his sister replied, as she tripped beside him at a soberer pace."

"Humph! I should hope so; for it's beginning to snow, and it's an eight-mile drive into Arundel. The man could not have misunderstood the directions I gave him."

"He's a little late, that's all," said Katrine, placidly.

"All! It's very provoking; for you are tired, and not fit to buffet against such a storm of wind and snow as we shall be exposed to as soon as we reach the top of the hill."

"I am tired, I'll not deny it," the young girl murmured; "but it's no use being impatient. Perhaps your watch has gained a little."

"Anyhow, I must find you a shelter somewhere while I walk into the village," her brother exclaimed, with affectionate anxiety. "Do you know I am not sure whether I didn't tell the man he had better wait for us there?"

"A shelter!" repeated Katrine, peering about her. "But where are we to find one? Isn't there a cottage just beyond these trees? Ah! yes; I see it now. There was such a pleasant-looking, apple-faced old woman at the door when we passed it earlier in the day."

"Then you'll not mind going and warming yourself by her fire while I hurry to the inn where we lunched. If our vehicle is not there, perhaps I can charter another."

George Wyllis sprang away, and his sister, closing the umbrella the wind almost forced out of her hand, sped through the little rustic gate he had opened for her, ran up the path or the cottage-garden, and tapped at the door of her pleasant old woman's ivy-covered dwelling.

It was ajar, and her gentle "May I come in?" eliciting no reply, she stepped into the snug kitchen, and looked around for its mistress. A bright fire of wood and turf burned on the hearth, and the kettle, swung over it on a crane, was singing merrily; but the old woman had gone to the village-shop to replenish her stores; and with the happy security, found only in such primitive places, had left her door not merely unlocked, but open to all comers.

A very gaunt tabby, that was basking in the warmth, raised herself, and purred such a welcome as Katrine stood irresolute on the threshold, that she hesitated no longer. Brushing the snow off her ulster, she came and knelt on the rug to chafe her benumbed fingers, to take off her hat, carefully dry and curl the drooping feather twisted around it, and then shake down over her shoulders the curls of brown hair, in which the large flakes of snow were congealing together.

"Is your mistress a witch, pussy?" she merrily demanded, as she stroked the animal that was rubbing itself against her arm, "and did she disappear up the chimney on her broom-stick as soon as I came near? If she's mere mortal, she'll be rather astonished when she comes back and finds me so comfortably installed on her hearth-rug. What fun it would be to depart before she returns, and leave some tokens of my presence behind me! This blue scarf tied round your neck, tabby; half-a-crown in her comical little black teapot: another under the lid of her sugar-basin; why, she'd be sure to set it down to the fairies, or declare she'd had a visit from Santa Claus, if she has ever heard of him."

Katrine twisted up her hair, smiling at a queer reflection of herself in the highly-burnished top of a battered old pewter dish-cover that hung close by; and then springing to her feet began to drop her fairy gifts in quaint hiding-places. A couple of pieces of silver where she had at first proposed, another in the old woman's spectacle-case, and under the lid of a small work-box of Tunbridge-ware that stood on a side table, and this brought Katrine very near a half glass-door leading to an inner room.

The first time she had glanced in the direction of this sash a faded-green curtain hid what was behind it, but now chancing to turn her eyes that way she saw, or fancied she saw, a hand drawing the curtain aside.

For the first time since she entered the cottage Katrine realized her loneliness, and began to feel nervous; and though she walked quietly back to the fire-place, and talked aloud to the friendly cat

in the same gay, careless strain as before, her heart was beating faster, and she found herself wishing her brother would make his appearance.

There was certainly some one on the other side of the curtain, though why anybody should be hiding there it would be difficult to say. Yes, she was not mistaken; for while stooping, and pretending to caress the cat, she contrived to cast another look in that direction. The face of a man—a pale face, the lower part of it partially concealed by a beard and moustache—was pressed against the glass.

The moment she moved it vanished; but the fire-light had played upon it, and she knew that she was not deceived. Would the owner of this face, on having assured himself that she was alone, leap out upon her?

The supposition was such a horrifying one that she could scarcely restrain herself from screaming and rushing away. But she did conquer the impulse, and controlled her alarm sufficiently to walk to the door with the cat in her arms, as if merely proposing to ascertain the state of the weather.

Once there, however—oh! welcome sound!—the tramp of a horse's hoofs and the rattle of a vehicle rose above the sound of the north wind, and Katrine could be prudent no longer. Dropping poor puss into a snow-drift, away she ran, and did not stop till her brother's cheery "Halloo!" fell on her ear.—[To be continued.

For Women.

CONDUCTED BY MISS FAITH RIPLEY.

SNOW-BOUND COTTAGE.

BY J. G. WHITTIER.

A HARD, dull bitterness of cold
The coming of the snowstorm told.
Meanwhile we did our nightly chores,
Brought in the wood from out-of doors.

Shut in from all the world without,
We sat the clean-winged hearth about.

The house-dog, on his paws outspread,
Laid to the fire his drowsy head;
The cat's dark silhouette on the wall
A couchant tiger's seemed to fall;
And, for the winter's fireside meet,
Between the andirons' straddling feet
The mug of cider simmered slow,
The apples sputtered in a row,
And close at hand the basket stood
With nuts from brown October's woods.

Our father rode again his ride
On Memphremagog's wooded side;
Sat down again to moose and samp
In trapper's hut and Indian camp;

Our mother, while she turned the wheel
Or run the new-knit stocking heel,
Told how the Indian hordes came down
At midnight on Cocheco town;

Our uncle, innocent of books,
Was rich in lore of fields and brooks;

Next, the dear aunt, whose smile of cheer
And voice in dreams I see and hear,
The sweetest woman ever Fate,
Perverse, denied a household mate.

There, too, our elder sister plied
Her evening task the stand beside—
A full, rich nature, free to trust,
Truthful, and almost sternly just.

Upon the motley-braided mat
Our youngest and our dearest sat.

Brisk wielder of the birch and rule,
The master of the district school
Held at the fire his favored place;
Its warm glow lit a laughing face.

We heard once more the sleighbells sound,
The wise old doctor went his round,
Just pausing at our door to say,
In the brief autocratic way,
That some poor neighbor, sick abed,
At night our mother's aid would need.

And while, with care, our mother laid
The work aside, her steps she stayed
One moment, seeking to express
Her grateful sense of happiness
For food and shelter, warmth and health.
And love's contentment more than wealth.

LETTERS FROM A COUNTRY GIRL.—No. 20.

MARGARET B. HARVEY.

Young ladies who have "devoured" page after page and volume after volume of "yellow-covered literature," sooner or later wake up to the despairing conclusion that because they were not "born to wealth and high position," and because they don't live on "Fifth Avenue," they can never be anything,—that "refinement" and "good society" are things out of their reach. No matter whether or not they have lived all their lives in an atmosphere of comfort and intelligence and goodness—*their* folks don't live in *the* proper way. And they fret and writhe under this conclusion, and perhaps grow bitter and uncharitable, more or less, and wonder why it is that every spot in the United States, except a certain quarter of New York city, is given over to the "low and vulgar," and why farmers' and mechanics' daughters are considered by the "*ton*" as no better than "hired girls." If they are the least bit well-informed, and have read through the school histories, they wonder, too, if republicanism exists only in books.

My dear girls, I sympathize with you fully. Let me also try and help you a little. You have fallen into a very natural mistake, as a consequence of your reading—but let me tell you emphatically that it *is* a mistake. I need no better illustration than the present excitement in my own city, Philadelphia. General Grant is now our guest, and all delight to do him honor as have princes and kings, barbarians and enlightened. What man among us stands higher than does he? Yet we all know that he lived in a log house, that he learned his trade as a tanner, that he drank the very dregs of poverty. Suppose he had believed himself absolutely worthless because he wasn't born rich and didn't live on Fifth Avenue—where would our country have been to-day? He has made his own position, you say. So he has, and he deserves to be honored for it—but I contend that, aside from the usual improvement in every respectable human being as he or she grows older, he is no better now than he was in his days of adversity. He doesn't think so himself, at any rate, for he takes all his triumphs as modestly as any one well could. Not one in a thousand of you has before her as brilliant a future as our beloved commander of armies—but you may, if you will, have something worth striving for. I quote General Grant right here, because I think he fittingly personifies the genius of the American people.

You all have an idea of something which you variously express by the use of such terms as "position," "station," "high," "low," common," and so forth. Now, I say that unless as you grow older you grow also more and more sordid, and selfish and conceited and narrow, you will learn that what you mean ("caste," "social distinction," etc.) is a very arbitrary thing, representing totally different values in different localities, and, sifted down to the bottom, may be found "just nowhere." I once believed that "all men are created equal," although found in the Declaration of Independence, was not true—I believe differently now. I don't say that all men *remain* equal, but I do say that they are created so, starting life ignorant and helpless, all having within them the possibility of attaining supreme heights. Have we not all come short of the glory? What possessions have we, mental, moral or material, that we have not received as free gifts from our Creator—or, in other words, what are we ourselves? So, then, can you not see that republicanism is only another form of solid Bible doctrine, an inevitable following out of the true spirit of Christ? To rate men and women by mere externals is just about equivalent to rating them by the colors of their hair.

So, my girl, believe that you can be a true lady no matter how you are situated, and not only that you can be one, but that you can be known as one. But don't expect to be a perfect one all at once, any more than you can gain a thorough education all at once. Begin, first of all, to cultivate your heart and mind. This you may do in various ways—you may read good poetry, sing true songs, study impartial history, observe nature, in short, seek to love the good and the beautiful. If you are, or become a Christian, you have the most effectual help of all, for no woman, I think, can be in every respect a lady, unless she attend first to the discipline of her own heart, so as to develop an exceedingly sweet and tender charity for others. She should seek to be the personification of kindness, believing that *every one* has the same right to her civility. It will not do to be deferential to the rich and haughty to the poor—such conduct is worse than vulgar. Right living from within must, sooner or later, work outwardly to the proper regulation of every-day conduct. Still, it is well to think of externals a little—some attention to etiquette, too, will be of value. Yet, don't lay too much stress on it, else you will give rise to the suspicion that you only lately began to think of it at all. And don't ignore it entirely—you can scarcely do so without being betrayed into rudeness occasionally. But remember that while you are to make strict rules for yourself, you are not to do so for others—there is where you are to exercise your forbearance. We cannot ignore or snub people for what they do, or we would frequently offend those who have advanced far beyond ourselves. I have frequently seen one of the most influential and best-known writers in this country, sit down before me, and deliberately take out his knife and clean his nails. And I saw a prominent and gifted artist-whip out a comb in a crowded concert-room and smooth his rumpled hair. Rules are useful, but most people of character do insist upon being laws to themselves, though, I am happy to say, rarely to the extent indicated above.

You want good society, it is natural that you should, and right that you should have it. But, before you feel aggrieved that you are shut out (if you are, or think you are), pause, and consider whether *you* yourself are good society. Is your acquaintance worth making, on account of your admirable qualities, your courtesy, or your mental attainments? If not, then you have something to do in the way of fitting yourself for worthy companions. If so, why, then don't worry—water will find its level. Live simply, naturally, and intelligently, and you won't go through the world friendless.

Don't feel yourself in the least slighted because certain families in your neighborhood don't countenance you. Be strong enough to create your own circle—if you are not at present, look forward to the time when you shall be. You have a perfect right to invite whom you will into your house—so has your neighbor. You need not consider yourself any better or any worse than your fellow-beings—still, you don't want to "mix" with anybody and everybody, for two very good reasons. One is, some of your human brothers may have the capacity and the inclination to do you more harm than good. "Evil communications corrupt good manners." The other is, for the sake of upholding the privacy of the home. This is the principle upon which we do not sit at the table with our servants—not that we think ourselves so much superior, but that we do not care to have our domestic circle intruded upon. So, why should your "stiff" neighbors worry you? They may have nothing against you, and probably don't think of offending you—all they want to do, is to protect their family sanctity. You have precisely the same right that they have—when you know them better and they know you, you will find them delightful and the very reverse of "stuck-up"—or, if you don't, you needn't desire any further acquaintance with them. You will then have another illustration of the fact that externals are not all. You may as well learn, first as last, that those who *do* consider themselves the highest in the land, on account of money, or position, or influence, or anything else, and rely upon nothing in their own minds and hearts, are greatly piled by the united sentiments of the wisest, and would work you very little advantage if you did know them.

Tear yourself away from everything, and resolve to stand in your own integrity, though the heavens fall. Break off all degrading associations; eschew all vulgar habits of action, thought and feeling; turn aside from all frivolous pursuits. Read, study, and think. Beautify your home, so far as in you lies; learn to dress quietly and tastefully; treat your body as though you realized that it was a temple of the Holy Ghost. If you have friends living in cities—refined, cultured friends, I mean, there is more real vulgarity in cities than elsewhere, among what I may call the "half-cuts," people who are neither very intelligent, nor very ignorant—a few brief visits to them will teach you far more than I could in volumes, in the way of adornment, neatness, propriety, and so-forth, as well as give you an insight into general literature, music, art, science, and matters of interest generally.

Say that you have a better idea of true living. Don't become discontented with your circumstances, except so far as you desire to improve them. Cultivate a divine adaptability,—a heroic force that bends all things to its purposes, and overcomes unlimited discouragements. You never saw a place, however ugly and unattractive, that couldn't have been made better—even homelike and beautiful. As I think I showed you in my articles on Home Decoration that something may be made out of nothing—almost literally. A true, lady may make a ladylike abode out of "a hollow beech-tree." (That is, if such a thing exists; I never saw one.) Oh, if women would only do without carpets and buy pianos—without silk dresses and buy books, if they would have croquet and archery, instead of Hamburg edgings,—if they did without gold chains and bought photographs and hellotypes and engravings—how much sweeter and purer their lives would be. Their rooms would look far lovelier in simple matting and muslins, and they themselves far daintier in fresh prints and rough hats enwreathed with dried grasses, both rooms and dresses enlivened with natural flowers, than if houses and forms were loaded with gaudy finery, and minds and hearts left starving.

Having determined that your house—or your room—shall look like the abode of a lady, study all the more to act as it indicates that you do. Use your influence—gently, however—to bring those around you to do likewise. Remember a few little points, as preliminary to giving your attention to others:

"Airs" are always vulgar. You are what you are—affectations of any kind won't make you otherwise. Be yourself and act your usual character always. Be quiet and self-contained, and be very wary as to how you seek to impress your superiority on others. But then, here you may be misjudged. A genuine love of the refinements and proprieties of life, whether they are attainable at present or not, is the very opposite of "putting on,"—this last springs from a sense of inferiority and is a wrong means to overcome it—a cure applied, as it were, to the outside. Besides avoiding affectation, and smoothing off roughness, beware of gossip. No lady ever lowers herself so far as to tattle, or repeat what wasn't meant for her to know. Nor will she allow herself to say anything uncharitable of her neighbors—she is supposed to be busy with other matters. Talk about things, not persons—find subjects of conversation in books, and in nature. As to ebullitions of temper and sarcastic expressions—such things are worthy of heathens or, at most, ungovernable children. A lady who cannot control herself had better seek solitude immediately. It will save her friends, and the trouble of making countless apologies.

Of all ladylike accomplishments, the most valuable is the use of good English. Read well-written works and consult the dictionary frequently. Writing letters carefully is a good means of familiarizing one's self with spelling, punctuation and grammar. Speak well, if possible, whatever you don't do. In doing so, study to use proper terms—simple words are preferable always—eschewing slang and certain other words which have either gone out of use or never were recognized. Among these are "polite," "genteel," "pants," "gent," and some others. Never use words which savor of cringing servility on the one hand, or of haughty supercilliousness on the other, such as "big bug," "upper crust," and the like. If you wish to speak of a person's agreeable manner, say that he is "courteous" (pronounce it right, *curt-yus*), or mention his "courtesy." A worthy person is "respectable" or "refined," as the case may be. Put a little boy into "trousers," or "pantaloons;" even "breeches." Don't cut a *gentleman* down into a "vulgar fraction" of himself. Be especially careful of such expressions as "Law, me!" "Mercy, days!" "Hain't," "Hadn't orter," "It's me," "Thribble" (triple or treble), and "Slippy."

Don't appear at the table, especially in the evening, without being as neat as circumstances will allow. Don't eat with your knife. Such a practice is more than vulgar—it is barbarous—recalling the time when men used their knives to strip a dead animal, and cut off pieces of its raw flesh. The knife is to be used only to divide the food, the fork, held in the right hand, is to convey it to the mouth. The fork is *not* to be used in helping one's self to bread or cake; these are to be taken with the fingers. Never put your knife or fork into a dish upon the table from which others must be helped. Do not pour out tea or coffee into a saucer. Eat cheese with your fork. Do not hesitate at the last of anything in a dish; take it—there ought to be more. If you are at home, fold your napkin after eating. If you are out, unless you care to stay awhile, do not fold it, but leave it crumpled—it is supposed to be ready for the wash-tub. A few other little points you may find out for yourself from time to time. For instance, olives are to be taken with the fingers.

You know, of course, that you are not to pass before a person without apologizing; that you are not to pick your teeth or clean your nails in company; to neglect to answer a courteous letter or return a call; to present a sharp-pointed instrument with the point towards the person receiving it; to notice or allude to a deformity; to leave a caller abruptly, without asking to be excused; to speak of your own good fortune simply in contradistinction to your friend's adversity—that is, to boast, as the Southern girls did before the war, of "my father's wealth"; to make unkind or unnecessary remarks about acquaintances;—to forget yourself, in any way, without apologizing:—in a word, to be unmindful of the feelings of others. I went into detail upon matters which, I think, generally speaking, are most neglected among farmers' folks. In other respects, in good, hearty, old-fashioned hospitality, they are without peers.

A young lady *has* a right to select her gentlemen friends. Her house is *not* open to every Tom, Dick and Hary who chooses to come in. She may invite certain of her acquaintances to call and see her, and she may omit to invite certain others, to do the same. So far from a young man's feeling that he is free to visit or note any girl he chooses, he ought to feel honored that he is asked to visit any. And a young lady may or may not recognize any young gentleman who has been introduced to her,—he cannot speak until she has signified that he may,—that is, unless they have known each other long enough to be considered old friends. She can also excuse herself from an unwelcome visitor. There is no reason why a girl should not hold up her head.

A word or two as to children. The old system of repression is going out—the little ones are beginning to be treated as little ladies and gentlemen, and are taught to behave so. In old times, parents seemed to believe that children could bear any kind of boorish treatment, and still grow up with tender hearts and refined instincts—now, it is known that such a course of action tends to harden. So, never reprove a child in company,—if you have anything to say, say it afterwards, and privately. The old fashion of teaching children to say, "Yes, sir," and "No, ma'am," is going out—it is something that must be unlearned when they are older, for such a mode of speech in a grown person sounds servile. It is better to say: "Yes, mamma," "No, Mr. Smith," and the like, "Sir," and "Ma'am," being very sparingly used, chiefly in addressing a gentleman or a lady with whose name you are not familiar, or in case you desire to be exceedingly formal. If you wish a remark repeated, which you did not hear, don't use, "Sir?" or, "Ma'am?" as a question,—say, "I beg pardon." For children and older folks alike, the more simple, the more apparently sincere, the manners, the better—anything like elaborate bowings and scrapings, and the dancing-school style generally being considered rather in bad taste than otherwise.

A younger person is to be introduced *to* an older; a gentleman *to* a lady; in short, where there is an obvious difference between the two parties, the inferior to the superior,—otherwise, strike an equal balance as nearly as possible. Never, under any circumstances, directly *cut* an acquaintance,—if it would be unpleasant for you to meet such a one, you can avoid seeing him or her. And of all hateful things, I think a disposition to look out for slights and insults is the most so,—better not take in enough, than be always getting hurt,—the last argues a morbid self-consciousness that will finally ruin your peace of mind. Moreover, be very cautious about dictating to others,—even moderately advising,—for you may find yourself assuming a knowledge which you don't possess.

How far useful what I have said may be, I don't know. But I hope it may accomplish some little good. Don't cry down anything because it is "fashionable,"—all these considerations are proper and convenient as well. You are, or ought to be, as good as anybody,—as self-respecting, at least. So, nothing really valuable is too valuable for you if you will only take it and use it rightly. It is *your* duty, as well as other people's, to keep up with the times, and adorn your place in the world. See that you do it.

VARIETIES.

Your character cannot be essentially injured except by your own acts.

In memory's mellowed light we behold not the thorns, we see only the beautiful flowers.

To be comfortable and contented, spend less than you can earn—an art which few have learned.

None more impatiently suffer injuries than those who are always most forward in doing them.

The description of cuts, promised for the first issue in January, has been unavoidably delayed; it will appear in the next number.—EDS.

Pride is as loud a beggar as want, and a great deal saucier. When you have bought one fine thing, you must buy ten more, that your appearance may be all one piece; but it is easier to suppress the first desire than to satisfy all that follow it.

THE language of postage-stamps, instead of flowers, has been invented by a practical American. Thus, when a postage-stamp is placed upside down on the left corner of the letter, it means "I love you;" in the same crosswise, "My heart is another's;" straight up and down, "Good-bye, sweetheart, good-bye;" upside down in the right-hand corner, "Write no more;" in the center at the top, "Yes;" opposite at the bottom, "No;" on the right-hand corner at a right angle, "Do you love me?" in the left-hand corner, "I hate you;" top corner on the right, "I wish your friendship;" bottom corner on the left, "I seek your acquaintance;" on a line with the surname, "Accept my love;" the same upside down, "I am engaged;" at a right angle in the same place, "I long to see you;" in the middle at the right-hand edge "Write immediately."

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN-THOUGHTS FROM EVERY-DAY HOUSE.

MRS. ANNIE L. JACK.

I think the most unromantic time of the year in a farmer's kitchen is that period designated in some localities "slaughtering time." Then half the men of the neighborhood collect at some place of rendezvous, generally near the principal store of the village, or on the premises of some one famed for fat pigs. The work is done with a coolness and evident relish that are surprising and the chief conversation for days afterwards is of the weight, size and fleshiness of the defunct animals. To the housewife it is a busy time and entails a large amount of prosy and extra work that I cannot begin to recount. But one important item we have been lately preparing, and knowing my own difficulties in times past, I give one method for the use of young housekeepers, or those who have no better plan. It is

Brawn, or Potted Head.

Soak the heads in salt-and-water twenty-four hours, changing the water and turning them once in that time. Then place in clean water in which is dissolved a tablespoonful of saltpeter and enough salt to make a weak brine, after two days they will be found clean and ready to prepare. Then with a sharp knife thoroughly clean each piece, rinse and boil until the bones slip out. Do this from the back and under-side of the head. The feet and ears, I should mention, should be put on first, as they require half an hour or more extra boiling. A beef tongue to each head is an improvement; it is also better to omit the fatty part of the cheek; season with black pepper, powdered sage, salt, mace and cloves to taste. A little cayenne adds to the flavor for those liking high seasoning. Wet your molds or dishes with cold water, and pour in the compound while hot, taking care to have every small bone removed. This, when kept cold and only turned out of the molds when wanted, is a nice relish for breakfast or tea, and keeps fresh a long time. The chopping machines have made the making of sausage meat easy, and there is quite a difference between now and the time when we tired our wrists and wearied our patience with the wooden bowl and mincing knife. So much for the march of improvement which is comparatively slow in the housekeeper's department compared with the rest of the world's work.

AMENITIES OF RURAL LIFE.

I WAS interested in reading Mrs. Annie L. Jack's remarks in a late RURAL. I agree with her that contact and intercourse with the domestic life of other families than your own, are healthful in their effects on any housekeeper who, perhaps, has often been tempted to think her experience in life a little more complicated and irksome than that of others could be. The dull routine of domestic life becomes tiresome and burdensome without a change which is so invigorating to mind as well as body. What is pleasanter than an interchange of visits among those who can enter into our needs and sympathise with our trials! Sympathy is a great panacea and heals many a wound which might otherwise cause sad results. We are none of us so poor and lowly but that we can find plenty who will understand our trials and be ready with words of comfort. Don't, therefore, shut yourselves in day after day and year after year without an endeavor to cultivate the amenities of life, for in so doing you do yourself, your husband and your children an injustice, for they will certainly lose much by such a course. Set apart certain times or days as sacredly for the cultivation of social intercourse, and enter into it as religiously as you do the care of your home, thus opening the way for improvement not only for yourselves but for your neighbors and friends. M. H. S.

DOMESTIC RECIPES.

Graham Gems.

Stir Graham flour in sweet milk to the consistency of griddle cake batter; add one egg well beaten and a little salt. Bake in hot gem pans.

M. M. WASHBURN.

Indian Pudding.

Eight tablespoonsful of corn meal; one-half cup of sugar; one-half cup of molasses; one-half teaspoonful of cinnamon; one-half teaspoonful of allspice; one-half nutmeg and a piece of butter the size of an egg. Stir these well together and add milk well moistened. Have the milk boiling and stir all well together and bake one hour and fifteen minutes. I think you will not find this the oft despised Indian pudding. A. G.

QUESTIONS ANSWERED.

Drying and Canning Pumpkins.

Mrs. W. S. M. asks how to dry pumpkins for winter use.

ANS.—Take the ripe pumpkins, pare, cut into small pieces, and steam until tender. Mash, strain through a colander and spread on greased pie plates not quite an inch thick. Dry in an oven as quickly as possible without scorching. When partly dried turn over. Keep as you would any other dried fruit. When wanted for use, soak the pieces over night in a little milk and they will return to a nice pulp. The following recipe for preserving pumpkins in cans is an excellent one, and may give better satisfaction than drying. Steam and put through a colander the same as in drying. Fill glass cans with the pulp and place over the fire in cold water. Boil an hour or longer. Remove from the fire and seal air-tight.

Keeping Sausage.

Mrs. S. H. Green asks how to keep sausages through warm weather.

ANS.—Make up into little cakes as for table; fry until about half done; pack them into gallon stone jars and pour melted lard over the top. When wanted for use, scrape off the lard, take out what is required, and always be particular to melt the lard and return it *immediately* to the jar. Or, the sausages may be stuffed in skins, partially cooked, and packed in jars, same as above. The jars may be sealed in either case with pieces of brown paper smeared with flour paste. Keep in a cool, dry place.

To Restore Graining.

Miss M. E. Sanford asks how to restore the graining of a room which is badly cracked by the use of hot water in cleaning.

ANS.—So far as we know nothing will restore it, but perhaps some of our readers can offer suggestions.

Salsify or Vegetable Oysters.

W. A. Marean asks for recipes for the above.

ANS.—*To stew:* wash thoroughly, scrape off the skin with a knife, cut across in thin slices and boil in water only enough to cover, until tender. Add a cup of rich milk or thin cream, thicken with flour and butter rubbed together, season with pepper and salt. Toast some thin slices of bread, place in the tureen and pour over the oysters. The thickening may be omitted, more milk added and served with crackers like oyster soup.

To Fry: Scrape, parboil, cut into slices, dip into a beaten egg then in cracker crumbs and fry until well browned.

Fritters No. 1: Scrape, boil until tender, mash fine, wet to a paste with a beaten egg, a little milk butter and flour for each cup of salsify. Season, make into little cakes and fry until brown.

No. 2: Three beaten eggs, one-half cup of milk, half a dozen small roots of salsify, flour for a thin batter, salt and pepper. Grate the roots into the batter made of the eggs, milk and flour. Drop by the spoonful into boiling fat.

News of the Week.

AGRICULTURAL NEWS.

Crops.

WHEAT.—The December crop report of the Dep. of Agriculture states that preliminary investigation points to an increase of twelve per cent in the area sown in winter wheat. The only States reporting a decline are Alabama, Mississippi and Arkansas, in which the united wheat area would not exceed that of some counties of the Northwest. All the other States show an increase, especially the spring wheat States of the Northwest. The winter wheat acreage of these States, however, is small, and hence their increase. Even a very high ratio does not add materially to the breadth sown in the country. But many large winter wheat States report great enlargement:—New York, West Virginia, Ohio and Michigan, each 7 per cent; Texas and Tennessee, each 10 per cent; Kentucky and Indiana, each 14 per cent; Missouri, 16 per cent; Kansas and Oregon, each 20 per cent; Illinois, 22 per cent. There are quite general complaints of the ravages of the Hessian fly in the early-sown crops, and of the drought hindering germination in the late-sown. Yet the crop starts out on the whole under prospects considerably above the average, especially in the large winter-wheat States.

TOBACCO.—The final returns have not yet sensibly changed the November estimates of the tobacco crop. The total product of the country is within a small percentage of that of 1878, the gain being chiefly in Kentucky, Tennessee and Connecticut, and the most serious loss in Ohio and Missouri. As a whole, the quality is but slightly better than that of last year's crop, although the improvement is quite marked in several States. The total crop of 1879 is estimated at 384,059,659 pounds, valued at $21,545,691, against 392,546,700 pounds, valued at $22,127,428 in 1878.

OATS.—The return of the oat crop made on November 1, is confirmed by the report of this month. The total product of the country is estimated at 364,253,000 bushels for this year, against a total in 1878 of 413,578,000 bushels—a decline of 12 pr cent. The price as returned on the first of this month averaged 33.2 cents per bushel, against 24.6 cents last year at the time, making a total valuation this year of $120,855,000, against $101,845,000 in 1878.

POTATOES.—There is no change in the estimate of the potato crop of the last month. With an increase of three per cent. in the acreage for this year, there is a yield of 98 bushels per acre, against 69 bushels last year and 94 bushels in 1877. The total crop for the country is estimated at 181,369,000 bushels, which at the price returned—43.5 cents as the average—would make in round numbers $79,000,000, against a valuation last year of $73,050,000.

WINTER RYE.—The area in winter rye has fallen off about three per cent. from last year. The New England States, the States north of the Ohio River and the Pacific States equal or slightly increase their last year's acreage. Texas, the only one of the Gulf States in which this crop is of sufficient importance to attact attention, reports an increase of 19 per cent. The other sections report a diminished breadth. The falling off in the Southern inland States is fully one-fifth. The condition of the crop is about average on the whole, being above in a majority of States reporting it.

HAY.—The hay crop is about 10 per cent. less than that of 1878. The New England and Gulf States have slighly increased their product, but all other sections have declined. The heaviest loss is in the Southern inland States which taken together have fallen off 27 per cent. The drought in this section has fallen with especial severity upon the grass crop. The same disastrous influence has been felt in the States north of the Ohio, where the loss is 20 ner cent., and in the South Atlantic States, where it amounts to 17 per cent. The Middle States, the largest hay-producing region of the country, fall off nine per cent.; in the remaining sections the losses have been much less, the Pacific States falling off but one per cent. The average price of hay is about $9.24 per ton, against $7.21 in 1878. The aggregate value will be over $325,000,000 against $285,543,752 last year, an increase of nearly 14 per cent.

An elevator with a capacity of a million bushels will be built at Duluth next spring. . . The new grain elevator now building at Jersey City will be the largest in the world. The Erie Company is also building a monster elevator at Jersey City. . . . America contains 13,000,000 milch cows; Germany, 9,000,000; France, 5,000,000; Great Britain and Ireland, 4,000,000; and Switzerland, 600,000. In 1870 there were manufactured in this country 960,000,000 pounds of butter and 340,000,000 pounds of cheese. About 4 per cent. of the former and over 40 per cent. of the latter were sold for export. . . Short-horns in England have sold on an average fully $52 each lower in 1879 than in 1878. In the past year the average price of 2,354 animals was £47 19s. 9d., while the average price of 2,811 animals the year before was £57 5s. 9d. . . The total exports of produce from this port since Jan. 1 '79 were $353,237,730 against $346,916,873 for the corresponding period last year, and $298,620,928 in 1878. A very fair increase.

The Western N. Y. Hort. Society will hold its 25th annual meeting in Rochester, in the Common Council Chamber, commencing Wednesday Jan. 28th. 1880 at 11 A. M. Prof. G. C. Caldwell, Professor of Chemistry, Cornell University; Prof. W. R. Lazenby, Professor of Horticulture, Cornell University; Hon. Lewis F. Allen, Buffalo, N. Y. An early member of the Society, and one of the most eminent Agriculturists and fruit growers of our State; Mr. John J. Thomas, Editor of the Country Gentleman, and author of "American Fruit Culturist;" Mr. James Vick, the renowned seedsman and florist of Rochester; Mr. H. E. Hooker, Esq., of Rochester, a vice-president of the Society, and a cultivator of great experience; Prof. C. H. Dann, of Warsaw, N. Y. Mr. J. S. Woodward, of Lockport, a vice-president of the Society, and a practical, successful orchardist; Mr. H. B. Ellwanger, of Rochester, whose papers on the Rose have been so acceptable, will each make an address at this meeting. After the reading of each paper, there will be discussion on the topics suggested by it. Full reports are expected from the Standing Committee, ten in number, and also from the Special Committees on Orchards. A great variety of questions have already been proposed for discussion. When all have been received a complete list will be prepared and sent to members. Farmers' club and all kindred societies are invited to send delegates and ladies are especially invited. Specimens of new and rare fruits, or such as possess some special interest, also other rare garden products, new implements, etc., are solicited. Parties who may not be able to attend can have the transactions mailed to them by remitting the annual fee of membership, one dollar to Mr. P. C. Reynolds, Rochester, Treasurer. . . Pleuro-pneumonia is reported to be spreading in Westchester Co., N. Y. . . Great floods occurred in the Canary Islands in Dec. 21st. Houses and crops destroyed. . . The Chicago Board of Trade has protested against the adoption of the central system here. The grain operatives are still bitterly opposed to it. In any event it will take years before *producers* can get accustomed to it . . St Louis grain receipts for the year 1879 were 45,000,000 bushels, an increase of 10,000,000. Cotton receipts largely increased, and all leading lines of business showed a marked improvemeet. . . Cincinnati grain receipts for the year 1879 wore the largest in the history of the city, being 11,263,275 bushels, against 11,165,697 bushels for the previous year. The total value of all merchandise receipts was over $208,000,000 and of shipments over $192,000,000. . . Much dissatisfaction is expressed by the farmers who supply Philadelphia and this city with milk, at the prices they are getting for their product, and an agitation is now under way on the subject of devising some means for forcing dealers to pay a higher figure.

MISCELLANEOUS.

Monday, January 5, 1880.

A political event has occurred in Maine which is calculated tocreate widespread alarm. A republican majority of seven in the Senate and twenty-nine in the House of Representatives of that State has been counted out by the Governor and council, who act as canvassers of returns of votes cast; and a democratic and greenback majority of eight in the Senate and seventeen in the House has been counted in. If this action is consumated by the organization of the two houses of the Legislature as thus constituted by the canvassing board, a greenback Governor and State officers will then be elected. The republicans have of course done all in their power to reverse this action of the Governor and council, and attempted to bring the matter before the Supreme Court, but the court held the opinion that it could not interfere with the Executive Department. At last accounts some of the democrats to whom the Governor had granted certificates of election refused to occupy the contested seats in the Legislature.

The energetic French engineer M. de Lesseps is now in the field with a large staff of assistants making the final survey for the projected canal across the isthmus of Panama which shall separate North America from South America and unite the Pacific with the Atlantic Ocean. Indeed, it is not yet known whether it is practicable or even possible to construct the canal at all, but this question M. de Lesseps is expected to decide at the end of this month. A conflagration took place on the evening of New Year's day at Red Bank New Jersey, which destroyed the business block of the town. A number of buildings were destroyed but it being mostly plain frame structures the aggregate loss is not so large as it might have been. The total loss is estimated at $35,000.

A double lynching took place at Golden Colorado on December 28th. Two men, Sam Woodruff and Joe Seminole, committed a cold-blooded and cowardly murder on a farmer, R. B. Haywood, last September. They were both arrested and were awaiting trial when they were taken from the jail by 150 masked men and lynched. The severest weather reported for years prevailed in Dakota Minn., and Northern Wisconsin at the close of the old year. The cold wave seemed to come from the British Possessions. At St Vincent the thermometer stood 50° below zero, at Crookston 56°.

FOREIGN.

Although prices of food are unusually low in the British Isles, yet the pressure of extreme want is upon thousands in Great Britain, and that of starvation upon tens of thousands in Ireland. Earnest appeals for relief are made to the public on this side of the Atlantic and on the other; but succor is slow and people are actually starving in the west of Ireland. . . The French have a new Cabinet under the presidency of De Freycnet, whose program is very radical. He intends to enforce a purification of the civil service, by turning out every official who does not emphatically endorse the Republic, suspending established laws to effect this purpose. . . Canada has lately been somewhat reorganizing her Cabinet. She has now thirteen ministers to 5,000,000 population, while we with 50,000,000 manage to get along with seven. . The King and Queen of Spain were fired at as they were driving through the palace gate at Madrid, the other evening. The would-be assassin was immediately arrested, and has confessed his crime. . . King Humbert of Italy, has been shot at while out hunting, recently, by a gang of poachers. . . A portion of the bridge across the Firth of Tay, on the east coast of Scotland, was blown down the other night while a train from Edinburg to Dundee was crossing, plunging the cars into deep water and drowning about 75 passengers. The bridge opened to traffic in May, 1878, was 10,320 feet, about two miles long, being the longest iron bridge in the world, and it had 89 spans. It cost $2,545,000 and was 130 feet above high water.

The Proof of the Pudding is in the Eating.

Grocerymen and storekeepers pay 3 to 5 cents a pound extra for butter made with Gilt-Edge Butter-Maker. It increases production 6 to 10 per cent.; reduces labor of churning one-half; gives a rich golden color the year round. Sold by druggists, grocers and general storekeepers. Send stamp for "Hints to Butter-Makers." Address, Butter Improvement Co., Buffalo, N. Y.

FOR ALLAYING HOARSENESS and Irritation of the Throat it is daily proved that "*Brown's Bronchial Troches*" are a mild remedy yet very efficacious.

Truth is mighty and has prevailed. See its triumph in Hop Bitters.

The Markets.

THE GIST OF THE MARKETS.

WHAT was said here last week about the state of trade in agricultural products, in various parts of the country, may be repeated this week—things are nearly at a standstill, and will probably remain so far a week or two at least. The prices of our surplus cereals depend on the necessities of our transatlantic customers, and these seem determined not to pay our figures until forced to do so by the cry for food from their suffering countrymen. Well, we can afford to wait, and that seems the present intention of the dealers and speculators here. The prices still offered by these for grain for future delivery, show plainly that they expect a further rise, and generally as a class they have pretty correct information about the amount of grain that can be supplied to our foreign markets from other sources, and therefore can estimate pretty accurately the prices at which we can afford to hold our produce. Just at present, however, the general tendency of prices for cereals throughout the country, is downward.

The produce dealers are joining the grain men in their opposition to the Cental system in this market, and another petition was presented to the Board of Managers of the Produce Exchange on Saturday 3d inst., asking that another ballot should be cast to decide whether it should go into operation or not. This is important to farmers, as upon the action taken will most likely depend whether they will soon have to sell their produce by the old-fashioned bushel or the new-fangled Cental. As yet, despite the last vote here, the selling price of grain is still posted up in the Exchange in bushels.

It will be seen that we have enlarged the scope of our market reports at several points this week, notably at Boston, Chicago and Louisville, in compliance with the wishes of our friends in districts tributary to those points. For the sake of condensation as well as of intelligibility, we arrange all the quotations in each market together, so that anyone interested in any item can readily discover it in CAPITAL LETTERS, on casting his eye over the proper report.

The following were the net receipts of cotton at the below named ports from September 1, 1879, to Jan. 1st, 1880:

Ports.	Bales.	Ports.	Bales.
Galveston	339,036	Boston	125,306
New Orleans	833,626	Providence	20,076
Mobile	247,329	Philadelphia	16,281
Savannah	547,860	City and West Point	138,227
Charleston	343,589	Brunswick	3,156
Wilmington	65,863	Port Royal	20,757
Norfolk	373,329	Pensacola	405
Baltimore	9,854	Indianola	6,354
New York	88,521		
Total			3,183,569

SPECIALS FROM ALL CENTERS.

Until Saturday, Jan. 3.

Baltimore.—Since last report No. 2 West'n winter red wheat has fallen ½c. on spot and a shade more on futures; other grades unchanged. Southern white corn is from ½c. to 3c lower; do. yellow, a shade lower; Western mixed is from 2¼c. to 2½c.

lower. Oats 1c. lower on all grades. Rye and hay and butter unchanged. Eggs, 1c. lower. Cotton, middling, 1-16c. higher. other grades unchanged.

WHEAT.—Southern red, $1.40@$1.45; do. amber, $150@$1.55; No. Western winter red, spot and Jan., $1.52@$1.52½; Feb. $1.56¼@$1.56¾; March $1.60@$1.60¾. CORN.—Southern lower owing to large receipts; Southern white, 60c.@62c.; do. yellow, 58c. @59c.; Western mixed, spot and Jan. 57¼@57¾. OATS.—Southern and Western white at 46c.@47c; do. mixed 45c.@46c.; Penn. 46c.@47c. RYE.—$1. HAY.—Prime to choice Penn. and Md. $17@$18. BUTTER.—Prime to choice Western packed, 23c.@28c.; roll 20c.@24c. EGGS.—Fresh 20c.@21c.; limed, 15c.@16c. COTTON.—Middling, 12 9-16c.; low middling, 12¼c.; good ordinary, 12c. Weekly receipts, 8,235 bales; gross exports, 3,376; sales, 1,400; spinners, 235.

Boston.—Corn is about the same as at last report; oats somewhat higher; rye unchanged; shorts $1 and middlings from $1 to $1.50 higher. cotton unchanged:

FLOUR firm and in steady demand; sales of western superfine at $5 25@5 75; common extras at $6@6.75; Minnesota extras at $6 50@7 50; winter wheats at $7@7 50 for Ohio and Michigan; $7@$7 75 for Illinois and Indiana; $7 25@8 25 for St. Louis; patent Wisconsin and Minnesota spring wheats at $7 75@9 50; patent winter wheats at $7 50@9. CORN quiet; sales at 63@64c. for new; 64½@67c. for old mixed and yellow. OATS firm; sales at 52@54c. for No 1 and extra white; 50½@51c. for No. 2 white; 48@49½c. for No. 2 mixed and No. 3 white. RYE nominally 95c.@$1. SHORTS selling at $20; fine feed and middlings at $21@22. BUTTER.—New York and Vermont choice creameries at 32@34c. ℔ lb. fair to good 18@22c. and common 18@22c; Western choice creameries 33@35c; choice dairy packed at 25@28c. choice ladle-packed 20@23; fair to good do. 17@19c. and common 14@16c. CHEESE is in moderate demand; sales Choice Northern factory 12½@13c. ℔ lb; fair to good 10@11½c; common 7@9c. EGGS—Eastern at 22@24c; Northern 21@22c; Western 18@20c. ℔ doz. BEANS—Northern hand-picked Pea at $1 80@1 90 ℔ bushel; do. do. Western at $1 75@1 80; do common $1 65@1 70; medium choice $1 60; common to good $1 40@1 45; Yellow Eyes $2 10@2 30; Red Kidneys at $1.75@1.85; Canada Peas 80c@1 00 ℔ bushel for common to choice. Green Peas $1 60 @1 85. POTATOES continue dull; we quote Houlton and Maine Central Rose 50c. ℔ bushel; Houlton Jackson Whites at 48@50c. Main Central Jacksons at 45@50. Vermont Rose at $45@50; do Jackson at 45@50. Peerless at 45@50, and Prolifics at 45@50c. ℔ bushel. SWEET POTATOES at $3,00@3.25 ℔ bbl for yellow Jersey, and $2 50@2 75 for Norfolk. ONIONS $3@3 25 ℔ bbl. Apples are in steady demand at $1 25@2 25 ℔ bbl according to quality. CRANBERRIES at $5 50@7 00 ℔ bbl. HAY AND STRAW—Hay has been in steady demand, first quality coarse Eastern and Northern hay at $16@17 ℔ ton; poor and medium at $11@15; choice Western timothy at $13@14 ℔ ton. Rye Straw $24@26 ℔ ton. COTTON, middling 12¾; low middlings 12¼; good ordinary, 11⅞; weekly gross receipts 25,690 bales; exports to Great Britain 888.

WOOL.—The market is steady and in moderate demand, but firm, and there is no pressure to sell; sales, Ohio and Pennsylvania fleeces, at 49½@51c. for X, XX, and XXX and above; Michigan and Wisconsin fleeces at 47@48c. for X; medium and No. 1 fleeces at 53@57c., including Michigan, Ohio and Pennsylvania, and combing and delaine fleeces at 50@57½c.; unwashed wools selling 28@42c., including coarse, fine and medium, and some most desirable lots of medium not offered, except at a considerable advance on the latter rate. California wool firm at 20@40c. for fall; very little spring offering. Pulled wools in fair demand at 40@62c., including choice Eastern and Maine supers at 60@62c. There is very little doing in foreign wool.

Buffalo.—Wheat, corn, oats, barley and mill feed are the same as at last report; cattle and sheep somewhat higher; hogs from 5c. to 30c. lower.

WHEAT.—No. 1 hard Duluth, $1.45; Western and white do., $1.46@$1.47. CORN.—Quiet at Old No. 2. Western 53½c. OATS.—Dull. No. 1 Western held at 45c; white, 46c; State, 46@47c. BARLEY.—Canada, 70@75c. RYE.—No. 1 Milwaukee held at 90c. MILL-FEED.—Selling at mills: Coarse, $15.00 @16.00; fine, $15@16; finished at $17@$15. CATTLE—About the same number received as last week: Choice steers, $4.90@$5.30; good shippers, $4.65@$4.85; medium, $4.45; prime fat cows and heifers, $3.12½@$3.80; bulls, $2.25@$2.85. SHEEP—Receipts for week 4,400 less than for last week: owing to their light run and unfavorable weather, prices have declined: Western sheep, $4.80@$5.25; choice, $5.60. HOGS.—Weekly receipts, 31,370; do. same time last week, 17,580; market dull. Yorkers, $4.60@$4.70; heavy and medium, $4.65@4.80; common to fair, $4@4.25.

Chicago.—No. 2 red winter wheat is 1c. lower than at last report; No. 2 Chicago spring 2c. lower for cash and nearly the same for futures. No. 3 do. a shade lower; rejected, unchanged. Corn from ⅜c. to ½c. lower; oats and barley unchanged. Butter unchanged except in best quality rolls which are 2c. lower; no change in cheese; potatoes 10c. per bush. lower. Despite the continuance of the strike, hogs are only a shade lower on some grades, steady on the others; cattle a shade higher; sheep do:—

WHEAT—Unsettled at No. 2 red winter $1.31; No. 2 Chicago spring $1.31⅛, cash; $1.32⅞@1.33 Feb.; No. 3 do. $1.15½; rejected, 98. CORN fairly active at 40c. cash; 40½c. Feb.; 46c. May; rejected, 36½c. OATS active at 35c. cash; 35⅛, Feb.; 40c. May, bid. RYE 80½@81c. BARLEY, 90c. for No. 2; 65@66c. for extra No. 3. BUTTER, good to fancy creameries 28@32c. ℔ lb; fine to fancy dairies, nearly equal to creameries, 24@25c.; good to choice fresh made dairies 20@22c.; fair to good dairies, in shipping lots, 16@18c.; common to medium qualities 13@15c.; roll butter, 16@20c. CHEESE—good to fine cheddar creams at 12½@13c. ℔ lb, and fair to good flat skims at 11@11½c. ℔ lb, while the poor to only fair grades were salable at 7@10c. according to quality. EGGS—choice, 21@22c. per doz; ice-house 19@20c. for good lots. Apples, good to choice stock, $2.75@3 per bbl.; fine 50c. per bbl. higher; ordinary to fair $1.50 to $2 per bbl. for poor condition, $2.25@2,50 for those in good order. HAY, for car-loads on track: No. 1 timothy, $14@14.50 per ton; No. 2 do. $13@13.50; mixed timothy, $10@12; upland prairie, $11@11.25; prairie $10@10.50. Small bales bring from 25c. to 50c. per ton more than large ones. POTATOES—by car-load on track: Peachblows, 50 to 55c. per bush; Early Rose, 40 to 45c. HONEY—good to choice, 16@18c.; beeswax 20@22c., good to prime; 12½@15c. for common. MILL-STUFFS, bran $10.50 per ton; middlings $11@11.75; shorts, $11. HOGS—market tame owing to strike which has now lasted 17 days and both sides are firm; mixed packing $4.40@4.50; choice heavy $4.55@4.85; light $4.40@4.65. CATTLE, good, slow but steady at $4.60@5.25; common to fair, dull, at $3.40@4.10, a fall of 10c. since yesterday; heavy butchers' weak; cows, $2@3; bulls, $2@2 90; steers, $2.90@3.60; stockers and feeders, $2.30. SHEEP market steady and firm at $3.90@5.50.

Cincinnati.—Wheat firm 1c. to 2c. higher than at last report; corn a shade lower; oats and rye 1c lower; barley unchanged; butter 1c lower except on Western Reserve; common hogs the same; other grades from 10c. to 15c. lower; cotton steady:

WHEAT strong $1.35@1.37. CORN dull at 40c.@42. Oats steady at 38@39c. RYE steady at 91@92c. BARLEY dull at 90c. BUTTER in good demand; choice Western Reserve 23@25c.; prime do 20@22c.; prime to choice Central Ohio; 20c.@21c. HOGS quiet but firm; common $3 75@$4 15; light $4 20@4 40; packing $4 40@$4 55; butchers', $4 55@4 60. COTTON steady; middling, 12⅛; low middling 11¾; good ordinary 11⅜; weekly receipts, 14,215 bales; shipments, 12,776; sales, 182; spinners 100.

Indianapolis.—Since last report No 2 red winter wheat has fallen from 1c to 1½c; corn from 1c to 1½c; oats a shade lower; hogs from 6c to 15c. higher:

WHEAT steady: No 2 red at $1 34@1 35½. CORN firm at 39c. OATS firm at 37½@39½. HOGS quiet at $4 30@4 70.

Louisville.—Wheat the same as at last report; corn, white, 1c., and mixed 4c. lower; oats, mixed 1c. higher; rye unchanged.

WHEAT.—Strong at $1.32. CORN.—Firm; white, 45c.; mixed, 41c. OATS—Quiet; white, 42c.; mixed, 41c. RYE—Steady at 91c. BUTTER—Fair country, 10@15c.; fair to choice, 18@22c.; Western Reserve, 23@25c.; Western creamery, 32@35c. EGGS—Fresh at 16@18c.; CHEESE—Western factory, 13@14c. APPLES.—Green, $3.00@4.00 according to quality; choice to fancy, $3.75@4.25; selections, $4.50@5.00. CRANBERRIES.—$8.00@9.00 per bbl. in store. HAY—Steady; prime to choice timothy, $16.50@18.50; mixed, $12.00@14.00. SEEDS.—Timothy, $2.75@3 00; orchard grass, $1.60; red top, 65c.; clover, $5.35@5.50; blue grass, clean, 55c.; extra clean, 65c. COTTON quiet. Middling, 12@12½c. Weekly receipts, 1,079 bales; shipments, 218; stock on hand, 3,972.

Liverpool, England, Jan. 2. A leading grain circular says:—"The grain trade since Tuesday has been quiet, but prices have been firm in the faith of rather lower quotations from New York. Prices there must yet fall considerably to reach the level of those of Great Britain. Some of the provincial markets were even dearer than last week for foreign wheat. Native wheat is still in disfavor with millers. The imports into the United Kingdom last week were much below the average consumption. At the Liverpool market to-day there was a quiet trade in wheat, the turn in prices favoring buyers where any business was done, but the majority of holders were not disposed to accept a decline. There was hardly any inquiry for corn, which was offered at a half-penny per cental reduction. Flour and other articles were nominally unchanged, the other transactions being quite of a retail character."

WHEAT.—No. 3 spring dull at 10s. 7d.; do. 2 dull at 10s. 11d.; winter, new Western, dull at 11s. 7d.; do. new Southern dull at 11s. 8d. CORN.—Mixed steady at 5s. 8d. for old; steady at 5s. 7d. for new. CHEESE.—67s. 6d. per cwt. for the best grades of American. COTTON.—Futures closed firm; uplands, low middling clause, January and February delivery, 6 29-32d.; uplands, low middling clause, March and April delivery, 7 1-16d.; uplands, low middling clause, April and May delivery, 7 3-32d. The sales of the day included 8,550 bales of American.

Milwaukee.—Since last report No. 1 Milwaukee hard wheat has dropped ⅛c.; do. soft ⅛c.; No. 2 Milwaukee ⅛c. on spot and futures; No. 3 do. ⅜c.; No. 4 do. fully 1c., while rejected is 5c. lower; corn ⅝c. lower; oats ½c. higher; rye ½c. and barley 2c. higher. Dressed hogs, 10c. higher.

WHEAT, firm; No. 1 Milwaukee hard $1.31½; do. soft, $1.31½; No. 2 Milwaukee, spot and Jan. $1.30½; Feb. $1.31⅞; March $1.33⅞; No. 3 do. $1.15; No. 4 do. $1.07½; rejected 95c. CORN dull; No. 39½c. RYE, firm; at 80c. Barley strong; No. 1 spring 77½c. Mess pork 13.50 cash. Dressed hogs in fair demand at $5.25@$5.30.

New Orleans—Since last report corn is from 2c. to 4c, and oats from 4c. to 5c. higher; hay about the same; pork, 50c. lower on old, and $1 on new. Cotton is ⅛ lower on middling and good ordinary. CORN active and firm at 59@65c. CORN MEAL, $2.50 @$2.60. HAY in good demand, prime, $22.20; choice, $25@26. PORK, dull; old, $13; new, $13.50. RICE, Louisiana ordinary, 6@7½c. BRAN quiet and weak, 77½c. COTTON, firm; middling, 11⅞; low middling, 11½; good ordinary, 11⅛. Weekly net receipts, 50,471; gross 56,523 bales; exports, to Great Britain, 13,750 bales; to France, 5,805 bales; to the Continent, 2,483 bales; coastwise, 11,186 bales; sales, 37,600 bales.

Philadelphia.—Wheat the same as at last report: except No. 2 red, which is 1c. lower; rye unchanged; corn a shade higher; oats, ditto; dressed hogs unchanged; Western reserve butter 1c. higher, other grades the same; no change in cotton.

WHEAT—In little demand; Western rejected, on track, $1.46; Penn. red, on track, $1.52; amber, $1.53½; No. 2 red, in elevator, car lots, $1.52; amber at $1.53½. RYE—Scarce; Penn. in demand at 98c. CORN—Active at old Southern yellow, on track, 63c; Southern white, in elevator, 63c. OATS.—Brisk, and firm at Western rejected, 46@47½c; fair to choice Ohio and Penn. white at 48½@49½c. DRESSED HOGS.—5½@5¾c. BUTTER firm. Creamery extra at 32@34c.; Bradford county and New York extra at 28@30c.; Western Reserve extra at 24@26c.; do. good to choice at 18@22c.; rolls firm; Pennsylvania extra at 22@23c.; Western Reserve extra at 22@23c. EGGS quiet; Pennsylvania at 23c.; Western at 21@22c. CHEESE.—Steady; New York factory at 13@13½c; Western full cream at 12½c.; do. good at 11@12c.; do. skims at 7@9c. BRAN.—$17.50@18.00. COTTON—Quiet but firm; middling, 12⅞c.; low middling, 12⅜c.; good ordinary 12¼c. Weekly receipts, 6,108 bales; exports to Great Britain, 755; coastwise, 1,483; sales, 7,237; spinners, 6,472. WOOL.—More active and prices strong; Ohio, Pennsylvania and West Virginia—XX and above, 50@55c.; X, 50@52c.; medium, 55@58c.; coarse, 49@52c. New York, Michigan, Indiana and Western—Fine or X and XX, 48@50c.; medium, 54@55c.; coarse, 48@50c. Washed combing and delaine.—Fine washed delaine, X and XX, 52½@55c.; medium washed combing and delaine, 60c.; coarse do. do. do., 50@55c.; Canada washed combing, 50@55c. Tub-washed.—Choice, 55@60c.; fair, 50@54c. Unwashed combing and delaine.—Medium unwashed combing and delaine, 40@45c; coarse do. do. do., 40@42c. Bright unwashed Clothing.—Fine or X and XX, 30@23½c.; medium, 40@42c.; coarse, 38@40c. Dark, Earthy, Unwashed Clothing—Fine, 25@28c.; medium, 30@38c.; coarse, 28@30c. Oregon—Fine, 37@40c.; medium, 40@42c.; coarse, 30@35c. California—Fine, 37@40c.; medium, 37@40c.; coarse, 33@37c. New-Mexican and Colorado—Fine. 35@40c.; medium, 35@40c.; coarse, (carpet Wool), 28@30c. Pulled—Extra Merino, 45@50c.; super, 50@55c.; Lambs' super, 50@55c.

St. Louis.—Since last report, No. 2 red fall wheat has risen 1½c.; but has fallen a shade on futures; No. 3 do. has gone up 2½c. Corn 1c. higher; oats, ½c. lower; hogs from 10 to 20c. lower; cattle from 10 to 50c. higher all round. Sheep a shade higher. Cotton unchanged:—

WHEAT—Firm; No. 2 red fall, $1 36½@1 36⅝, cash; $1 36½@1 36⅞, Jan.; $1 40@1 41 Feb.; $1 44⅞@1 45½ March; No. 3 do. $1 28 bid. CORN firm at 36½@36⅝, cash; 36⅝ Jan.; 38⅛ Feb.; 40⅞ March. OATS 37c. cash. HOGS dull; light shipping $4@4 10; packing $4 15@4 30; butchers' to select $4 25@4 40. CATTLE fairly active and steady; choice to fancy shipping $4 90@5 12½, one lot averaging 1,622 lbs., brought outside price; good to prime, $4 40@4 80; light steers, $4@4 30; feeders, $3 60@3 65; corn-fed Texans, $2 75@3 75. SHEEP strong, scarce and wanted: fair to fancy muttons, $3 25@4 15. COTTON, quiet; middling 12c.; low middling, 11½c.; good ordinary, 11⅛c.; weekly receipts, 14,720 bales; shipments, 15,476; sales, 201.

Toledo—Since last report amber Mich, wheat has fallen 1½c. and No. 2 red winter 1½c. No. 2 corn has fallen 1½c.; No. 2 white, ½c.; rejected, 1⅛c; oats, ⅞c. higher; clover seed, 5c. lower

WHEAT.—No. 3 white Wabash, $1.34½; amber Michigan. January, $1.39½; No. 2 red winter, spot and January, $1.41; February, $1.44½; March, $1.48; May, $1.53; No. 2 Dayton and Michigan red, $1.40; rejected, $1.12; No. 2 amber Illinois, $1.43½. CORN dull; No. 2, spot, 40⅜c.; February, 42½c.; May, 47⅝c.; No. 2 white, 44½c.; rejected, 40⅝c. OATS dull; No. 2, 38½c. CLOVERSEED—Prime, $5.05.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Jan. 3, 1879.

BEANS AND PEAS.—The demand for beans continues light, but holders believe the downward movement in prices for standards has subsided. All sales of prime marrows quoted latterly at the extreme. Fancy beans at old prices. Southern B. E. and green peas steady. B. E., $2.25 per 2 bu. bag; green, $1.70@1.75; medium beans, fair to prime, $1.35 @1.55; marrow, $1.40@1.65; pea, $1.45@1.70; w. kidney, $1.75@1.95; red kidney, $1.60@1.75; black or (turtle soup), $1.80.

Receipts of beans for week, 6,956 bush.

BROOM CORN.—Demand is fair; green stalk braid, in job lots, at 5½@6½c.; green hurl at 7@8c.; red and mixed at 4@5c.; fancy brush corn at 9c.

BUTTER.—The new year opens the market with considerable encouragement. Receipts are not heavy enough to give local buyers any independence, while a fair export demand and the filling of New England wants keep quotations well up to last ranges. State is materially helped by the light supplies of Western this season, but receipts of the latter will be apt to enlarge as January advances. Exporters would enlarge their purchases if holders would favor them in quality at the price now current, 23@23½c. for good, useful shipping grades. Freights abroad are unusually low, and shippers aim to avail themselves of cheap rates in all dairy products.

Comparative movement of butter from June 1st to January 1st past three years:

	Receipts, pkgs.	Exports, firkins.
June 1, '79, to Jan. 1, '80,	1,025,410	232,278
" 1, '78, " 1, '79,	944,150	183,853
" 1, '77, " 1, '78,	869,850	136,136

Quotations;—State pails and tubs, choice, 29@30c.; good to prime, 27@28c.; fair to good, 22@25c.; full dairies, choice, 27@28c.; fair to prime, 22@26c. firkins, fair to choice, 21@25c.; Welsh tubs, 22@25c.; poor State 20@22c.; creamery, fancy, 36@37c.; fair to prime, 27@35c.; poor to fair, 23@26c.; sweet cream, 33@34c.; Western imitation creamery, 23@28c.; dairy, fresh, extra, 25@26c.; fair to prime, 22@24c.; poor to good, 18@20c.; factory, late made, best, 22@23c.; fair to prime, 20@21c.; very poor to fair, 14@18c.; rolls, 19@22c

Receipts the for week, 15,120 packages; exports, 5,100 do.

CHEESE.—A very good business has been done, the holiday week considered, chiefly in good and under grades, with strong prices made.

Quotations are for State factory: Fancy, 13@13¼c.; good to prime, at 11¾@12½c; fair to good, at 10½@11½c.; half-skimmed at 9@10c.; skimmed at 7@8c. State farm dairy: Fine at 12@12¾c.; good to prime 10½@12c.; fair to good at 9@10½c.; skimmed at 7@8c. Wis. factory: Fine at 13½@13c.; good to prime at 11@12½c. Ohio factory: Cheddar, fine, at 12¼@12¾c.; do., fair to good, 10@11c.; flat, fine, 12½@12¾c.; flat, good to prime, 11½@12½c.; flat, fair to good, 10@11½c.; half-skimmed, 9@10c.; skimmed, 7@8c.

Liverpool freight, 17s. 6d.@20s.; Liverpool cable, 67s.

Comparative movement past three years from June 1st:

	Rec'ts, boxes.	Exp'ts. lbs.
June 1, 1879, to Jan. 1, 1880	2,156,500	92,422,720
" '78, " '79	2,687,300	105,042,208
" '77, " '78	2,159,800	89,460,620

BEESWAX.—Small sales have been made at 24½@25½c.

COTTON.—The cotton exchange has been closed for two or three days. Through the holiday weeks business has been in consequence very light. The latest prices were for Jan., 12.59@12.60c.; Feb. at 12.90@12.91c.; March, 13.14@13.15c.; April, 13.32@13.34c.; May, 13.50@13.52c.; June, 13.68@13.70c. July, 13.78@13.80c.; August, 13.89@13.90c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	10 13-16	10 15-16	10 5-16
Strict ordinary	11 3-16	11 5-16	11 5-16
Good ordinary	11⅝	11¾	11¾
Strict good do.	11⅞	12	12
Low middling	12 3-16	12 9-16	12 5-16
Strict low middling	12⅝	12⅝	12⅝
Middling	12 9-16	12 11-16	12 11-16
Good middling	12 13-16	12 15-16	12 15-16
Strict good middling	13 1-16	13 3-16	13 3-16
Middling Fair	13 9-16	13 11-16	13 11-16
Fair	14 5-16	14 7-16	14 7-16

STAINED.

Good ordinary	10⅝	Low middling	11 11-16
Strict good ordinary	11⅜	Middling	12⅝

DRIED FRUITS.—Dealings have been small on account of the holidays and prices unsettled and nominal. For Apples—New North Carolina, at 6½@8½c. for fair; 10@10½c for choice; 11@11½c. for fancy sliced. Patent evaporated apples, choice, in cases, 15@16c.; do. fair, to good, 13½@14½c.; N. Y. State sliced, new, 7½@8½c.; quarters, choice, 7@8c.; new southern quarters scarce and nominal; new North Carolina peeled peaches at 17@19c., do., Georgia, 13½@16½c. Peaches, Delaware evaporated, peeled at 25@28c.; do. unpeeled at 13@14c.; new halves at 8c. Blackberries at 9@10c. for new. Raspberries at 26½@27c. Pitted cherries at 18@19c.

Exports for week. 390 bbls. apples.

EGGS.—Receipts for the week, 4,918bbls.; do. last week 4,930 do. Buyers stocked up pretty well during the holidays, and for the moment the market is quiet. Choice marks and small lots of fresh held the rates obtained when trade was running.

Near points 25@26c.; State and Pa. 21@23½c.; Western, fresh, 23c.; fair to good, 20@22c. Southern, 22½@23½c.; Canadian 18@20c; Inferior or State marks, 17@17½c.; State limed, 16@16½c.; Canadian, 15@16c.; Western, 14@16c.

FLOUR.—The market has been moderately active and showing little change. The holidays and absence of cables from abroad have interfered with export trade.

Quotations are at $5 50@$ 00 for inferior to fancy superfine State; $6 1 @6 30 for inferior to good extra do., odd lots and lines; $6.30@6.50 for good to choice do.; $5.50@6.00 for inferior to fancy superfine Indiana, Iowa, Michigan, &c.; $6.10@6 30 for inferior to good shipping extra do., and $6.30@6 60 for good to very choice fancy shipping extra do.; inferior to about choice white wheat extras, $6.25@7.25, choice to strictly fancy do. $7.25@8.50; red and amber winter wheat, inferior to fancy trade and family, at $6.25; round hoop Ohio, $6 15@6 60; and trade and family brands of do. at $6.65@8.10; the latter rate for fancy; St. Louis at $6 25@7.15 for inferior to very good extra; $7.15@8.50 for very good to fancy; Minn. clear, very inferior to fancy, at $6 15@@7.25; Minnesota "straight," very inferior to fancy, at $6.60@8.00, and patent poor to very fancy, at $7 25@9.25; in bond stock at from $4.30@6 15 city mill extra at $6.85@7.10 for about fair to choice for West Indies (fancy do. quoted at higher figures); do. for England, $6 15 6.60 for poor to choice; do. trade and family extras, $7.25@8 25; do. for South America, $6.90@7.25; No. 2 at $4.30@$5.25 for very poor to very fancy. Buckwheat Flour is selling at $2.00@$2.35.

FEED.—Sales of 40 to 60 lbs. at $19.00@$20,00; 80 lbs. at $20.00; 100 lbs. at $21@$22; Sharps at $21@$23.

FRESH FRUITS.—Apples are quiet, but there is a strong upward tone in prices for fine fruit. Lady apples have now merely a chance sale. Exports have suspended liberal operations. Spitzenbergs, ℔ bbl., $3@3.50; Baldwins, poor to choice, $2@2.75; Greenings, prime, $2 62 poor to good, $1.75@2.28. Cranberries show a reduced stock, and have advanced Cape Cod, fancy, ℔ bbl., $8.50@9; fair to choice, $7@8.25. Other Eastern bbls. $6.50@8.50. N. J. crates, good to selected, $2@2.50. Grapes quotable when choice at $3 Catawba case. Florida oranges have not had the success of some former seasons; quality runs very uneven, and flavor is not as generally as fine: fancy half bbl. cases, $3.75@4; poor to good, $2@3; bursted crates, $1.75@2.50. Peanuts very steady after the free sales of late. Virginia hand-picked, 5@5½c.; good to fancy, 4@4½c.; Pecans $9½@10½ ℔ bbl.; Swellbacks, 80@90c. ℔ bush.

Exports for the week 6,165 bbls apples.

FURS AND SKINS.—Former quotations are something firmer, but not likely to have any real strength until after the London sales of January, at 19@20c. Stocks of American common show a large surplus abroad, and shippers do not express much confidence in higher rates for skunk and muskrat.

GRAIN.—The market has shown much activity, partly on account of the holidays abroad, and absence of definite markets there. Of wheat the latest sales are of No. 1 white at $1.55½@1.55½; do., January, at $1.55@1.55½; do., February, at $1.58½@1.59; do., March, at $1.61½; ungraded white at $1.51@1.52½; No. 2 white at 1.52½@1.53; No. 2 red at $1.57½@1.59; do., January, at $1.58@1.58½; do., February, at $1.61@1.62; do., March, at $1.64½@1.65; ungraded red at $1.40 @1.54½; ungraded spring at $1.06@1.42. Rye at 98c. for State and Canada. Corn at for New York No. 2 at 62½@62c. do. January, at 61½@61½c.; do. February, at 61½@61½c; do., May, at equal to 61.60c.; New York steamer mixed at 62@63½c.; do. January, at 60½c.; ungraded mixed western at 60@63½c.; New York No. 3 at 61@61½c.; round yellow new at 61½c. Oats, No. 1 white, at 53@53½c.; No. 2 white at 52½c.; No. 2 white at 51c.; New York No. 1 at 51c.; New York No. 3 at 51½@51½c.; do., February, at 52c.; do., January, at 51c.; New York No. 3 at 50c.; ungraded white western at 52@52½c.; ungraded mixed western at 51@51½c.; white State at 52½c.; mixed State at 52c.; No. 2 Chicago afloat, at 51½c.

HAY AND STRAW.—Inquiry is very fair, and as receipts are moderate prices are well sustained. Shipping hay quoted at 70@75c.; retail lots at 70@80c. for medium, and 80@90c. for prime; clover at 55@60c. Straw at 85@95c. for long rye; 65@70c. for short rye, and 55@60c. for oat.

Exports for week, 1,420 bales.

HONEY—Supply under good control: prices steady. Single comb, white clover, ℔ lb, 18@19c.; larger pkgs, 14@16c.; buckwheat, 12@14c.; clover extracted, 11@13c.; strained, 8@10c.

HOPS.—Demand has been very light and prices have ruled weak, and in a good degree nominal.

Quotations are for New Yorks, new crop, choice, 38@40c.; New Yorks, new crop, medium, 34@36c.; New Yorks, new crop, low to fair, 20@32c.; Eastern, new crop, 30@38c.; Wisconsin, new crop, 30@38c.; Yearlings, 7@18c. Olds, all growths, 4@10c.; Pacific coast, new, 35@40c.; Pacific coast, olds (nominal), 7@12c.; Bavarians, 50@65.

POULTRY AND GAME.—Turkeys have sold well at fair figures, but there has been no holiday gush in prices at any time. Supplies have been well sold up and moderate receipts will furnish early wants. Chickens and fowls abundant and ruling low. Geese in fair demand when prime. Capons quoted this week.

Turkeys, New Jersey 12@13½c.; State, Penn., and Western inc. Ohio, prime, 12@12½c; other, 10@12c.; Philadelphia, dry-picked, 14c.; do., chickens, d. p. 13@13½c.; do., Jersey, per lb., 9@11c; other fair to prime, 5@9c.; Phila., fowls, dry-picked, 10@11c.; State and N. J. prime, 7@9c.; poor, 6@6c.; Ducks, choice, 12@13c.; other, 9@11c. Geese, Pa., 9@11c.; others, 7@8c.; Capons well grown, 20@22c.; small and slips, 16@18c. Cooped stock low and not inquired for; fowls, 6@8c.; roosters, 4@5c.; turkeys, 9@11c.; Western, 8@10c.; ducks, pair, 45@75c.; geese, N. J., $1.62@$1.75; N. Y. and Penn $1.25@$1.50; Western, 87c.@$1.12.

There has been a good offering of game and with venison out of the way the demand is fair: Quail very plenty at $2 25@2.50; Canvas-backs, Havre de Grace, pair, $3.00@$3.25; W. and E. Norf., $2.50@$2.75; red-heads, 75c.@1 00; Mallards, 60c.@70c.; Black 40@60c.; Teal and common 30@40c; Partridges, State 75@80c.; Western, 65c@75c.; soft and drawn, 40@50c.; Grouse, $1.25; W. pigeons, $1@$1.25; Rabbits, 20@30c.; Hares, 30@35c.

OIL-CAKE.—Western is quoted at $35 per ton.

PROVISIONS.—Hog products have been quiet comparatively with prices, however, closing firm. Mess pork closed at $13.10@12.20 for old mess for January; $13.80@13.90 for new do. for do.; $13 85@13.95 for new do. for February, and $14 for March. Bacon at 7½c. for long clear and 7½c. for short clear. Beef Hams at $16.50. Beef at $10.50@11.00 for plain mess, $11.00@12.00 for extra mess; $13.@13 50 for packet. Lard at $7.80@7 90 for Western steam on spot; $7.97½ for new for February; $7 85@7.87½ for old for do., $8.07½ for new for March; 8.17½ for new for April. Stearine at 7½@7¾c. for Western. Tallow at 6 11-16@6½c. for prime.

SEEDS.—Clover is firm; Western at 8½@9½c. for about prime to extra choice; and 9½@10c. for fancy. Timothy is quiet at $2.75 for prime. Flaxseed is dull at $1.70@$1.75.

TOBACCO.—Trade has been moderate the past week, with prices unchanged. Quotations are for

KENTUCKY LEAF.

	Light.	Heavy.
Common lugs	3½@ 4	4½@ 5
Good lugs	4½@ 5	5½@ 6
Low leaf	5½@ 6½	6½@ 7½
Medium leaf	7 @ 7½	8 @ 8½
Good leaf	8 @ 8½	9 @10½
Fine leaf	9 @11	11 @ 12
Selections	12 @—	12½@14

SEEDLEAF.	Crop of 1877.	Crop of 1878.
	Very scarce.	
New England Havana seed	— @—	22 @30
do. wrappers, common	13½@15	13 @15
do. do. medium	16 @17	16 @18
do. do. fine	18 @25	20 @27½
do. do. selections	27½@35	30 @40
do. seconds	— @—	10 @14
do. fillers	— @—	6 @ 7½
Penn. assorted, common	— @—	10 @12
do. do. fair	15 @20	12½@15
do. do. fine	— @—	16 @20
do. wrappers	22½@35	16 @35
do. fillers	10 @12	8½@ 9½
N. Y., ass'd. com. to medium	— @—	10 @11
do. do. good	— @—	12½@15
Ohio assorted	— @—	8 @14
Ohio wrappers	12½@16	15 @25
Wisconsin assorted	8½@10	8 @12
Wisconsin Havana seed	— @—	15 @20
Wisconsin wrappers	11 @15	12 @18

VEGETABLES.—Exports of potatoes 8,700 bbls.; do. of onions 80 bbls.

The outlook is for easy winter prices for potatoes, at least until the present surplus is worked down, or the weather lightens.

Nova Scotia E. Rose, bulk bbl. $1.50@$1.62; do. Prolific, d. h., 1.50; do. Mercer, $1.25@1.37; Main., Early Rose, d.-h., $1.62@1.75; State, $1.37@1.50; b. and d.-h.; Peachblows, white, $1.87@$2.00; do. red, $1.62@1.87; Snowflake, $1.37@1.50; State Peerless, $1.12@1.37; N. J., do., 87c.@$1. Garden stuff shows some winter firmness. Marrow, and Hubbard squash, $1.25@1.50 ℔ bbl.; cabbage, $4@5 per 100; onions, white, per bbl., $4@4.50; yellow, $2.50@2.75, red, $1.75@$2.25; Chester, $1.00@$1.25 beets, $1@1 25; Russia turnips, 75@87c.; carrots, 75c.@$1; celery, per doz., $1@1.50.

WOOL.—The market has not varied. The dealings have been moderate this week on account of the holidays, but confidence is expressed as to the future.

LIVE STOCK MARKETS

NEW YORK, Saturday, Jan. 3.

BEEVES.—Receipts for the week, 9,422 head; do. last week, 10 381 The demand has had very little snap feeling as usual on the interruption of a holiday. Very poor stock quoted at 6½@7½c., to dress 53@54 lbs. Common to good steers at 7¾@9½c., 55@56 lbs.; prime, 10@10½c., 56@57 lbs.

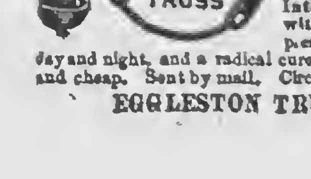
COWS AND CALVES—Generally quiet at $35@$60 as an extreme range for good to extra milkers.

VEAL CALVES.—The demand has been steady and brisk New Jersey and Bucks Co. choice 7½@8c; other in State, 6½@7½c.; Mount Holly's range at 5@7½c., 300 lbs. own; Buttermilk, 3½@4½c.; grass, 2½@2¾c. Hog, dressed, 9½@10½c.; choice fair to good, 7½@9c.

SHEEP AND LAMBS.—Receipts for the week, 19,734 head; do. last week, 21,495 do. There has been a good market and no difficulty in putting out prime stock. Sheep range at 4½@5½c.; lambs, extra, 7c.; poor to prime, 5½@6c.

SWINE.—Receipts for the week, 16,996 head; do last week, 27,082 do. Live in good supply, and with liberal arrivals of dressed, are easier than early in the week. State and w. live, $1.75@5 per 100 lbs.

Country pork; light, 7@7½c.; medium, 6½@7c.; heavy, 6½@6½c.; lt., 6@6½c. Pork tenderloins, 11½@11c.



THIS NEW
ELASTIC TRUSS
Has a Pad differing from all others, is cup shape, with Self-Adjusting Ball in center, adapts itself to all positions of the body, while the Ball in the cup presses back the Intestines just as a person would with the Finger. With light pressure the Hernia is held securely day and night, and a radical cure certain. It is easy, durable and cheap. Sent by mail. Circulars free.
EGGLESTON TRUSS CO., Chicago, Ill.

Reading for the Young.

THE "RURAL" TELEPHONE.

Fun for the Cousins.

HERE is something that will interest every boy and girl who reads the RURAL. Of course, all of you have heard of telephones, as they are now getting into very common use, and know that they are instruments for conveying sound from one place to another. Thus with a good instrument one can converse with persons several miles away just as effectually as if they were all in the same room, and the tones of musical instruments, singing, laughter, etc., are conveyed with equal distinctness. At the American Institute Fair, recently held in New York city, the visitors might listen to music and conversation carried on six miles distant, simply by holding a telephone to the ear. The "Rural" telephone is made for and supplied to us by Prof. W. R. Brooks, of Phelps, N. Y., who is the inventor and manufacturer. He sells them for $3 and $5 dollars a set (two), according to size;

a reliable, durable and perfect instrument for conveying the direct human voice over lines varying from 50 to 5,000 feet in length, when erected according to the directions accompanying each set, which are very simple and can be carried out by any intelligent person. These instruments use the direct sound wave conveyed over a copper wire, dispensing entirely with costly batteries and all magnetic appliances which are employed with more expensive instruments. The pattern is entirely new, and the most durable yet produced, being constructed of fine iron and hard wood neatly finished. The metal diaphragms are equal to those of the most expensive instruments. By means of two screws they can be fastened to the window frame, or other convenient place. A small hole is usually made in the window sash, through which the wire passes to the distant station. The voice is conveyed not only with great distinctness and volume, but retains all its individuality, so that the person speaking can be recognized.

As a "call" when you wish to send a message, a few sharp taps upon the specially constructed sensitive disc, are distinctly heard at the other end of the line in all parts of an ordinary room The straighter the line can be run the better, but a few angles, not too abrupt and kept from contact with trees and buildings, will not interfere with the proper working of instruments. The girls and boys can have no end of amusement, and establish the most complete communication with the houses of all their dearest friends.

Now we propose to present every boy and girl with a set of these telephones (two instruments, one for each end of the line) who will send us *five*, or eight subscribers, at $2 each. For five subscribers we give size A, which is used on lines from 50 to 2,000 feet in length. A set of size B, will be given for a club of eight subscribers. This size is of sufficient power to be used on lines up to 5,000 feet in length. The wire used is known as soft copper wire, and may be purchased at any hardware shop. For the long distance purchase No. 22 guage, for short distances No. 20 guage.

PRESERVING SOUVENIRS.

MRS. M. L. SAYERS.

During the mystic days of Indian Summer I visited one of the greatest natural curiosities of Virginia—a lake on a mountain 4,000 feet above the sea. I sailed above its mysterious depths, whose margin bristled with a thousand ghostly pines, bleached by the wash of half a century. I saw the sun rise in glorious divinity upon old Bald Knob, and I stood beneath the leap of the cascade in that fern-clad wild of primeval forest. The music of those waters, the luxury of those shades, the form and color of those rocks, produced an effect which the mind perhaps can receive but once, but will retain forever. And, though I cannot transfer it to canvas, I can imitate nature by piling up rocks and covering them with mosses, green and velvety lichens streaked with lights and shadows, and clumps of waving ferns, which grew into beauty beneath those eternal shadows. Thus my east window-sill has become a miniature Bold Knob, with its *mirrory* lake and *glassy* cascade. I crystallized the mosses, some branching as gray and bare as an oak forest in winter, some as green and feathery as the moaning pines, some as short and dark as mountain heather, and arranged them upon rocks to represent the peaks, in whose basin I placed a bit of mirror, in shape of the lake, with white stalagmites standing upon the margin and reflected in the depths like those submerged pines.

Farther on, to represent the leap of the mountain-torrent which fell like a silver veil from the brow of majesty, I arranged a fall of white spun-glass, and imitated the wild, untamed aspect of the surroundings by little bowlders of gray stone and rock crystals crowned with bits of drooping ferns, mosses and grasses crystallized to represent those eternal damps. Now every bright morning, I have a winter scene lit up by the same day-god which rises in such majesty and might upon old Bald Knob, when snow and ice and a million crystal drops, make it so beautiful and at the same time so impossible for me to behold, and my trophies are preserved inviolate.

Just above this hangs an airy phantom basket made of spirals and beads strung alternately, till 54 of each are shaped into a basket with wire, another is made of 34, and another of 24 spirals with beads between. These are fastened equidistant to bugle suspenders, (three) the smallest at the bottom terminating in a tassel. This triune affair is filled with crystallized grasses, colored according to Pipsey's directions, and resembles an inverted fountain, in shape, while it possesses all the qualities of the kaleidoscope for varying colors as it twirls and shimmers in the morning sun, each crystal becoming a prism and producing all the hues of the rainbow.

LETTERS FROM THE COUSINS.

Cousin "King George" on Kansas Orchards.

UNCLE MARK.—I write you although I am not a cousin, or, at least, I have never asked to become one; but my brother is a subscriber, and I look forward to each paper with pleasure, for I am getting interested in horticulture, agriculture and floriculture. I have studied botany and am very much interested in it. I have also had some experience in the vegetable garden. I am not acquainted enough with any one branch of horticulture to make a very long letter, so if I make a mixture you must not scold. First I will tell a little about Kansas orchards. The most Kansas apples are not so solid and juicy as those we used to have in Massachusetts, such as the Baldwin, Porter, Rhode Island Greening, Russet, Non such, etc. The standard winter apples in Kansas are Rawle's Genet, Winesap, Hutching's Pippin and Kansas Keeper. There is a great deal of discussion about trimming orchards, but the best orchard I have seen in Kansas never was trimmed at all. The owner has always taken pains to bend the limbs down to the ground and hold them there by putting logs and sticks and brush on them. He says horizontal limbs bear more fruit than upright ones, and I think he is right. The trees in Kansas cannot be left to grow so large as those in New England, because the high winds we have here would injure them and very likely ruin them. The trees in the orchard of which I spoke do not average over eighteen inches from the ground to the lower limbs. The southwest wind is the strongest; and nearly all apple, peach, pear and plum trees lean to the north and northeast, if not trained right when they are young. We have as many enemies of our apple trees here as in the East. The root borer, the limb borer, codling moth, leaf rollers, and a lot of others that have to be looked after and kept from doing as little damage as we can. It takes a great deal of time and work to keep an orchard as it should be, but if one likes the work, even if he is tired, he is not discouraged, but he will go to work the next day when he is rested, and work as hard as ever. The pear trees were blighted very badly last year. I do not know from experience what is the cause. I have seen some articles in the RURAL on the subject. I will give a theory of one of my friends. He says it is lightning, and the reason of it is that pear trees never blight in Oregon, and they have no lightning there (?). But I like what the RURAL says, for it looks more as if it was so. I fear Uncle Mark will say my letter is too long; but if it is not published, I know there is no great loss without some small gain. Father says the more I try to put my thoughts on paper, the more and better I can write.

A great many of the peach orchards are seedlings, and the farmers don't take any care of them. They are glad enough to get the peaches, and the more they get the "gladder" they are, but still they don't cultivate them, or dig the borers out of their roots, and so they last but a few years. There are a great many borers, and the trees need constant attention. The limbs should not get too long and straggling. A seedling tree will not form so nice a head as a budded one, nor will it have so nice, large fruit. The cling-stones are richer and juicier, I think, than the free stones, but if a person is in a hurry, he is apt to strike his teeth on the stone, and then he thinks he likes free stones the best.

There are three kinds of cherries that do well in Kansas, and I don't know but all kinds will, but I have seen these kinds do well. The Early Richmond, English Morello and Black Tartarian. The May Duke is not counted a good cherry here. We can a good many cherries and I like them much better if they have been pitted. I have learned how to graft and bud cherries. I like budding very much. The spring is the best time to bud, just as the sap starts, so that the bark will slip. Some persons bud in July and August, but I think more of the buds die because the wax or gum of the tree will ooze out and kill the bud. Grapes are very uncertain in Kansas except a few kinds. The Concord is the standard sort. The Isabella, Ive's Seedling and a few others are cultivated, but are not as likely to live as the Concord. The mildew is its worst enemy here, and winter-kill comes next. I like layering to get good, strong vines, instead of cuttings stuck in the ground. You go into a vineyard in August or September and take a long cane and lay it down on the ground, and before you throw any dirt on it take your knife and cut a little notch in it where you want the roots to come out, and then cover the notch with dirt. The roots will come out at the place you cut, and early the next spring you can take it up and set it out where you want it. I do not know enough about plums to say anything of these. I have a pretty flower-bed, but it is very small as well as pretty, and the flowers are mostly perennials, such as Roses (thirteen different kinds), Altheas, Bridal-wreath (two kinds), Lilac, Yucca, Lily-of-the-Valley, wild Verbenas, Japan Quince, flowering Almonds, Tuberoses, etc. I have also charge of the vegetable garden, but my sheet is full, and I am afraid Uncle Mark has already got out of patience. So my letter goes flying into the waste-basket, or into the stove to warm his toes one of these chilly mornings. KING GEORGE.

Burlington, Kansas.

UNCLE MARK:—I have for some time wished to write and acknowledge the receipt of the Cuthbert raspberry plants you editors so kindly sent. I am under many obligations to the senders, and highly pleased with the excellent manner in which they were put up for mailing. They were very fine plants, and the only improved raspberry plants I have planted here as yet, consequently I prize them much, and was thankful to receive them. Will you accept myself and "little boy," as members of your Horticultural Club? I am 28 years old, but I learn you take in members in the twenties. My little boy is nearly eight years old, he has had a little garden of his own for two years and is very proud of the flowers and vegetables he has grown. I have cultivated flowers and vegetables for 15 years and like to work in the garden. We located here in an open field, after building a house and barn 22 months ago; not a tree was here, no garden or yard was inclosed; we made a garden of nearly half an acre and I have growing 60 gooseberries, 75 strawberry plants, 50 cherry currants, and 37 grape vines. I raised 20 of the grape vines myself, also the currants. Last spring was our first experience in grafting. I grafted 100 apple trees, 35 pear trees and six cherries, out of the lot 85 apples, 20 pears and three cherries grew finely, nearly every one started to grow, but owing to the severe drought, many died. We are pleased with the result of our grafting, all are of the finest kinds of fruits. Upwards of 30 peach trees, we raised since we came here, which I budded last September, are doing well. Besides the above, we bought and set out upwards of 200 fruit trees, since we came here. Some of the cherries were full of fruit last summer. I also grew about 200 apple seedlings this summer, for grafting next spring. I must close by hoping you had a merry Christmas and wishing you a Happy New Year. Success to the RURAL, the best of papers I long may it live! Respectfully yours,

MRS. P. S. W.

Newmarket, Shenandoah Co., Va.

DEAR UNCLE MARK:—As my other letter was kindly received I will venture to write again. I have not seen any letters lately from the "Blue Hens' Chickens." That reminds me, we have a chicken that crows every night at nine o'clock. Won't some of the cousins please tell me how it knows just when that hour comes around? We had such beautiful weather all the fall and even now it is warm and pleasant, but I hope we will have a snow storm about Christmas. We do not have much sleighing here, but I like to see the trees and the ground all covered with snow. I am reading Joseph Cook's lectures now, and wish all the larger cousins could enjoy them. It is so much better to cultivate a taste for good solid reading than light novels. I am also very much interested in Uncle Mark's Horticultural Club as I love flowers. Over a year ago I commenced to study botany but am sorry to say I have not made much progress in it. I did not find it interesting studying all alone, having no teacher but dame nature and my text book. I wish the cousins could have seen my plate of flowers Thanksgiving Day. I had some lovely Roses, (the queen of flowers), some in bud and some in full bloom, and a white Camellia, white and red Bouvardia, Stevia, Fuchsias, Carnations, Geraniums, Ferns and different kinds of Geranium leaves. I must not make my letter too long or it may find its way to the waste basket.

Your loving cousin, HELIOTROPE.

—DEAR UNCLE MARK AND COUNSINS:—I thought I would report my last season's success although I have neglected to write for a long time, but I have not had much spare time. My bulbs had sixteen flowers each on a stalk. I was very much pleased with them. My radishes were large but strong. The soil was very dry. I would be very much obliged if Uncle Mark would tell me if drought have any effect on radishes in regard to their taste. I hope I shall have better luck next year. The corn ripened nicely. When I was in the hay loft pitching hay I accidentally stabbed my left foot with the pitch-fork and have been obliged to remain in doors for over two weeks. We have tried many remedies but found none to do any good until we poulticed with onion and salt which has had the desired effect to be well in a short time. We have had several snow storms. I hope I have not offended Bertha A. Weeks by the remark I made some time back. I like such letters as those of Ivy, Lilly Lee, Solomon Sap, Barney Blackstone, Young Tom and several others. I would like the cousins to write and tell how they bestowed their Christmas presents. I and my brother always had a Christmas tree and a gay time. I will close for this time, wishing Uncle Mark and the cousins a Happy New Year. BOB WHITE.

Rockford, Ill.

[Radishes are greatly injured by drought.—U. M.]

DEAR UNCLE MARK.—As I have not seen any letters from this place I thought I would write. I am twelve years of age. I live in Plymouth, but am so situated that I can have a garden. I raised some potatoes this year. I have gathered up seeds of all sorts, and of as many different kinds as I could get. I shall commence gardening next year in good earnest. I wish Uncle Mark would put my name on the Horticultural Club list. My father takes the RURAL NEW-YORKER, and I like very much to read it, especially the Reading for the Young. If I see this in print I will try again.

CHESTER H. CARPENTER.

Richland Co., O.

UNCLE MARK:—Will you please add my name to the Horticultural Club. I cultivate many flowers and shrubs in the garden and some in the house. Have Roses, Pelargoniums, Fuchsias, &c., as house plants My little boy of six, R. F. Thatcher, sends thanks to Uncle Mark for seeds, and has to report that he raised a bushel of beets, nine and a half bushels of potatoes and some other vegetables last summer, which he planted, cultivated and harvested himself. Yours truly,

Meeker Co., Minn. M. NELLIE BALDWIN.

UNCLE MARK:—Will you take a nephew from California? If so, you can put my name down. I am a farmer's son, and am 15 years old. Will you please to tell me the cause of curl leaf in the peach tree? From your CALIFONIA NEPHEW.

Penryn, Placer Co., Cal.

[You are welcome to join the Club. I wish I was able to answer your question in regard to curl in the peach leaf. No one knows exactly what is the cause.—UNCLE MARK.]

MAGAZINES FOR JANUARY.

SCRIBNER'S MONTHLY.—CONTENTS:—The United States Life-Saving Service, J. H. Merryman; Success with Small Fruits, E. P. Roe; Young Artists' Life in New York, William H. Bishop; The Grandissimes, George W. Cable; The Acadians of Louisiana, R. L. Daniels; Confidence, Henry James, Jr.; A Madonna of Fra Lippo Lippi, Richard Watson Gilder; A Revolutionary Congressman on Horseback, Thomas Wentworth Higginson; The Spider's Lesson, Julia Ward Howe; Extracts from the Journal of Henry J. Raymond, Henry W. Raymond; Cor Cordium, Henry Terrell; Thirza, Julia Scayer; To Sorrow, Julie K. Wetherill; American Arms and Ammunition, William C. Church; A "Personal," and What Came of It, Barbour T. Lathrop; Hymn to the Sea, Richard Henry Stoddard; Topics of the Time.—British and American Farming, From Country to City, Flat Money. Communications.—An Objection to English Spelling Reform, N. L., with a Reply from Prof. Lounsbury. Home and Society.—General Principles of Cookery; II. Stewing and Making Soups, Catherine Owen; Two Kinds of Decoration, M. L. E. Culture and Progress.—Arnold's Light of Asia, The Letters of Charles Dickens, Taylor's Studies in German Literature, Farrar's Life of St. Paul, Bret Harte's Lwins of Table Mountain, Miss Phelps's Sealed Orders, An Earnest Triffer, Guernsey's Thomas Carlyle, Abbott on John. The World's Work.—New Drawing Apparatus, New Tube-cleaner, Steam Pavement-rammer, Electric Balance, New Uses for the Flexible Shaft, New Method of Obtaining a Temporary Blast, Memoranda. Bric-a-Brac.—The Star, W. T. Peters; Dictation Exercises, Virginia S. Imlia; Les Morts Vont Vite, J. B. M.; A Reply to "Speaking Features," P. C. S.; Song, William M. Briggs; Epigrams, George Birdseye; Is Life Worth Living? G. J. A.

PHRENOLOGICAL JOURNAL FOR JANUARY, 1880—Contents: James G. Blaine, with portrait; Accuracy of Observation; Studies in Comparative Phrenology, Chap. I.—The Skull in Man and the Lower Animals; Intemperance in History; My Wicked Friend; Fitz-Greene Halleck—The Man and the Poet, with portait; The Old and the New Education; The Robin, Illustrated; The Young Folks of Cherry Avenue, Chap. I.; Magnetism and Somnambulism in Paris; Poisons as Medicines; What Shall our Children Eat? Position in Sleep; Poetry, Life Pictures; Duty; Trust the Children; Editorial Items, 1880, Commendable Independence; Don't Grumble.

Notes in Science and Agriculture—The End o the World; The Deepest Well in the World: The Rain Tree; The Time to Sow Seeds of Fruit Trees; Important Applications of a Waste Material; The Panama Canal, an Old Idea; Recent Studies on the Skulls of Murderers; Lubricants; Egypt's Gift to America; A Vegeterian Shindig; Simple Way to Cook Eggs; Dairymple Farm; Effect of Different Colors on Animal and Plant Life; Domestication and Brain Growth.

Answers to Correspondents—Morphine; Physicians and Surgeons; Accountability and Phrenology; Morbid Organization; Clairvoyance; Effect of Hard Study; Pronunciation of Words; Topics for Essays; Caprice; Executive Ability; Diet for Leanness and Fatness, etc.

What They Say—Natural and Acquired Talents; A Dream; Family Letter No. 3; An Old Soldier's Experience.

Personal—Wisdom—Mirth—Library.

ST. NICHOLAS—Contents: Frontispiece, "The Beggars are Coming to Town," drawn by Jessie Curtis; The Proud Little Grain of Wheat, Francis Hodgson Burnett; Japanese Top-Spinning, J. Reed Sever; The Dolls' Baby-Show, B. M. B.; Bidding the Sun "Good-Night" in Lapland. Poem, Joy Allison; Jack and Jill. Chapters III. and IV., Louisa M. Alcott; The Three Copecks. Poem, Paul H. Hayne; The Land of Short Memories, S. S. Colt; The Catcher Caught. Pictures; The Practical Fairy, Charles Barnard; Popping Corn. Poem, Jennie E. T. Dowe; The Shepherd-Boy of Vespignano, Agnes Elizabeth Thomson; Ino and Uno. Verses, Josephine Pollard; How Hal Went Home, Louise Stockton; The Relay in the Desert, R. G. M.; Plums. A Fable, Paul Fort; The Boys' Own Phonograph, John Lewes; "There was a young lady Brooking." Nonsense Verse, Frederic Palmer; The Children's Claim, Mary Hallock Foote; Sow, Sew, and So. Verses, Rosa Graham; A Strange Music, Louis C. Elson; Blodget's Orders, George Klingle; Time Will Tell. Picture drawn by Isaac Porter, Jr.; The Sprig of Holly, Frank R. Stockton; Among the Lakes. Chapters VII. and VIII., William O. Stoddard; Snow-Ball Warfare, Daniel C. Beard; The Sleeping Princess. Operetta, John V. Sears; For Very Little Folk; Trot, Dot and Bunny, Jennie E. Zimmerman; Jack-in-the-Pulpit; Ways of Cutting Oranges and Apples; The Letter-Box, Illustrated; The Riddle-Box.

GOOD COMPANY—CONTENTS.—Old Town Fireside Talks of the Revolution, Harriet Beecher Stowe; A Kind of Co-operation, John Bascom; His Birthday, a poem, Lucy Larcom; Certain Men of Mark, II., Gambetta, George M. Towle; Tom Hardy, a story, Rebecca Harding Davis; The Indian Work at Hampton Institute, Helen W. Ludlow; The Fireside Christmas—Twilight, Mrs. D. H. R. Goodale; Lamplight, Dora Read Goodale; Daylight, Elaine Goodale; Roman Mosaics; His Grandfather, a story, Caroline Cornwell Wright; False Methods in Temperance Reform, Beverley Ellison Warner; How the Debates of Congress are Preserved, Henry R. Elliot; The Colleges for Women at Cambridge, Emiley F. Wheeler; Weeds, Mrs. Edward Ashley Walker; Estes Park and Long's Peak, Alfred Terry Bacon; The Old Men of the Bear and Ragged Staff; A Remarkable Book, Elizabeth W. Denison; An Evening at a "Workman's Coffee-Room" in England; David Ker; Obed's Subscription, Mary Wager Fisher; Editor's Table—Is this Flat Treason? Father Scully and the Schools; The Children's Friend; Recent Collisions of Church and State; Is the Indian Ever the Aggressor? Literature.

PERSONAL ITEMS.

General Burnside advocates Canadian annexation.

William H. Vanderbilt gave about $25,000 in Christmas presents.

Colonel Fred Grant, A. D. C., will go to Cuba and Mexico with his father.

Bayard Taylor's executor is selling lands belonging to the Cedarcroft estate.

Emma Young, one of the daughters of Prophet Brigham, is an actress in the Bella Union at San Francisco.

Ex-Senator Pomeroy, of Kansas, has a gold mine in North Carolina which pays him a thousand dollars a week.

Col. Robert G. Ingersoll from his profession and lectures earns from $40,000 to $70,000 a year, and spends most of it.

Mr. Spurgeon, who is writing at Mentone, France, is said to be not only physically ill, but also greatly depressed in spirits.

General Avezzana, one of Garibaldi's most famous companions in arms, is dead. He was President of the Italia Irredenta committee.

Thomas A. Scott, in reference to reports now going the rounds to the effect that he is hopelessly ill, says he has never enjoyed better health than now.

Bancroft, the historian, has given up his horseback rides, but works as hard as ever on his history. He talks very cheerfully of his old age and death.

Alexander Stuart, the wealthy sugar refiner, of New York, who died last week, leaves his whole estate, valued at $7,000,000, to his brother, Robert L. Stuart.

It is to be inferred, from the election of new directors, that the Keely Motor Company is still alive but it doesn't take much to be comparatively alive in Philadelphia.

To pass him "as they would a tree" were the instructions given to the laborers and tenants on the late Duke of Portland's estates if they should at any time meet the Duke.

Within the past year Sir Arthur Guinness has sold his interest in the brewery business for $5,000,000, and his celebrated stout is no longer a perennial fountain of gold to him.

General Grant remarked to a newspaper man in Washington that he thought he would soon be fit to take a seat in Congress. He alluded to the practice he was getting as a speech-maker.

In the list of Georgia lawyers who have received big fees, the Atlanta (Ga.) Constitution puts Senator Ben Hill first. He received in one case a fee of $140,000, of which $60,000 were paid in cash.

Major Wade Hampton, the Senator's eldest son, who died a few days ago, was in all the principal engagements around Richmond, and when General Johnston was assigned to the West followed him there and remained with him until the surrender. He was wounded at the battle of Burgess Mill, on the 28th of October, 1864, while bending over the body of his younger brother, Preston, who was killed in that engagement.

The ex-Confederate General Joseph E, Johnston was lately in Raleigh, North Carolina, and a gentleman asked him rathor pointedly why the Southern army did not take Washington after the first battle of Bull Run. Rising on his feet, he replied: "There were two reasons—myself and the Potomac River. I had reached that age when I knew an American soldier could not ford a river a mile wide and eighteen feet deep."

An agent of the RURAL, in Ohio, sends us a club of subscribers in which appears the name of Mrs. J. Birdseye of Clyde. This esteemed lady is an old friend of the RURAL who has now reached the rich age of four score years. She has taken the RURAL since the beginning of its third volume, and has preserved every copy up to date. We trust that she may enjoy good health and read the RURAL for many happy years to come.

William A. Owens, of Pine Hill, Ky., had killed three men in affrays, and he declared that having shed blood enough, he never would under any circumstances shoot at anybody again. Now, James Langford, a brother of one of Owen's victims, desired to take his life, and usually tried to do it whenever excited by drink. On such occasions, Owens always fled from Langford, and once was shot while speeding away on horseback. They met a few days ago in a village store. Langford was drunk and murderous. Owens hastily mounted his horse and rode away. Langford followed on another horse, firing frequently. At length Owen's horse threw him, and he found himself within close range of his pursuer's pistol. Then he shot Langford dead.

Ice water is perfectly harmless and more refreshing with a little Hop Bitters in each draught.

ADVERTISING RATES:

Inside, 14th and 15th pages (Agate space)..40c. per line
" 13th page..... 50 "
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Fifty per ct. extra for unusual display.
Discount on 4 insertions, 5 per ct.; 8 ins., 10 per ct. 13 ins., 15 per ct.; 26 ins., 20 per ct.; 52 ins., 25 per ct.
☞ No advertisement inserted for less than $2.

NOTICE TO AGENTS.

Any respectable person may become our Agent.

Postmasters are requested to act as our Agents.

A Cash Commission of Twenty-Five Cents will be allowed Agents for each yearly subscriber. Our new Premium List is now ready and will be mailed free to all. It is sealed more liberally than any other we have ever offered.

One name or a dozen names may be forwarded at any time. Credit is given the Agent for every name sent until canceled by Premium.

Address

THE RURAL NEW-YORKER,
78 Duane St., New York.

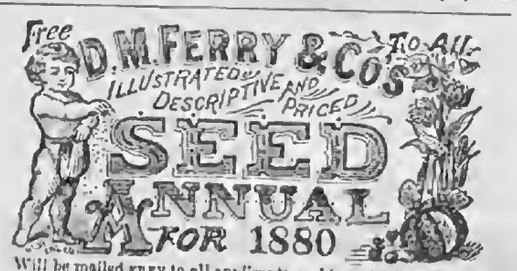
Trees, Seeds, Plants, &c.

MARKET GARDENERS.
Fresh, Pure SEEDS for YOU.
Send for Garden Manual and Price List for 1880.
J. B. ROOT, SEED GROWER, Rockford, Ill.

SEEDS FOR THE GARDEN, FARM & FIELD. OF ALL KINDS

PLANT SEED COMPANY'S
Seed Catalogue and Almanac
For 1880
Containing Prices and Description of
Field, Vegetable, Tree and Flower Seeds, Seed Grain, Novelties, Seed Potatoes, etc.
☞ *Mailed Free to all applicants.* Address,
Plant Seed Company,
ST. LOUIS, MO.

HONEY LOCUST SEED; Last year's very clean. Under 10 pounds, 40 cts. per pound; over, and under 50 pounds, 30 cts. per pound; 100 pounds $20. ROBERT CRISWELL, Brooklyn, L. I.



Will be mailed FREE to all applicants, and to customers without ordering it. It contains four colored plates, 600 engravings, about 200 pages, and full descriptions, prices and directions for planting 1500 varieties of Vegetable and Flower Seeds, Plants, Roses, etc. Invaluable to all. Send for it. Address,
D. M. FERRY & CO., Detroit, Mich.

A beautiful work of **100 Pages, One Colored Flower Plate, and 500 Illustrations,** with Descriptions of the best Flowers and Vegetables, and how to grow them. All for a FIVE CENT STAMP. In English or German.

Vick's Seeds are the best in the world. FIVE CENTS for postage will buy the FLORAL GUIDE, telling how to get them.

The **Flower and Vegetable Garden,** 175 Pages. Six Colored Plates, and many hundred Engravings. For 50 cents in paper covers; $1 in elegant cloth. In German or English.

Vick's Illustrated Monthly Magazine—32 Pages, a Colored Plate in every number and many fine Engravings. Price $1.25 a year. Five Copies for $5.00. Specimen numbers sent for 10 cents; 3 trial copies for 25 cents.

Address JAMES VICK, Rochester, N. Y.

New Publications.

HOLIDAY MUSIC.

Six Christmas Carols. (25 cts.) New. By H. N. BARTLETT. Also many other fine Carols. Send for list.

Christmas Gifts. Nothing is better than an elegant volume of Bound Sheet Music, such as GEMS OF ENGLISH SONG, CLUSTER OF GEMS, SUNSHINE OF SONG, or one of the thirty others of similar style costing from $3 to $4 each, and including each from one to two hundred popular Songs or Pieces.

Christmas Gift. Nothing is better than a Violin, Guitar, Cornet or any Band or Orchestral Instrument, a Music Box (large or small,) a Drum, or any Toy Instrument. Full Stock. Send for lists.

ORGANISTS will do well to present themselves with DITSON & CO.'S ORGAN SELECTIONS. ($1.50) containing 52 pieces by the best composers. May be used as Voluntaries.

The sweet Sunday School Song Book, WHITE ROBES (30 cts.) will be a most acceptable present for a Sunday School.

The bright Temperance Song Book, TEMPERANCE JEWELS, (30 cts.) just out, will give new interst to Lodge and Reform meetings.

Any Book mailed for retail price.

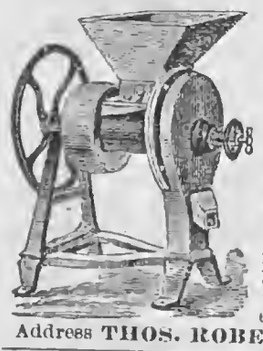
OLIVER DITSON & CO., Boston.
C. H. Ditson & Co., 948 Broadway, New York — **J. E. Ditson & Co., 922 Chestnut St., Phila**

FLORIDA.

If you want to know about the Resources, Climate and Agriculture of Florida, subscribe for the *Florida Agriculturist*—an eight-page paper at De Land, Volusia Co., Fla. C. Codrington, Editor. Subscription $2 per annum.

C. CODRINGTON & CO., Publishers.

Implements and Machinery.



THE VICTORY
CORN MILL.

The Victory Corn Mill will grind corn meal coarse or fine, shelled or on the cob. **Self Sharpening Plates.** Made entirely of IRON AND STEEL. Very strong, durable, and warranted in every respect. Capacity, 10 to 20 bushels per hour. Send for circulars.

Address THOS. ROBERTS, SPRINGFIELD, O.

PRONOUNCED
the
BEST PLOW MADE
by the
Northern Ohio Fair of 1879,
State Fair of New York of 1879,
State Fair of Michigan of 1879,
and by the
Paris Exposition of 1878

when it competed with 187 other PLOWS, and received the GRAND GOLD MEDAL for being the BEST general purpose Plow in the world—an honor never before conferred upon a Hand Plow.)

Is the MOST EASILY ADJUSTED and MOST PERFECT SCOURING PLOW ever invented, and the thousands that are in satisfactory use all over the land demonstrate the fact that no other CHILLED PLOW manufactured is equal in EVERY RESPECT to the "GALE."

For Circulars and prices, address

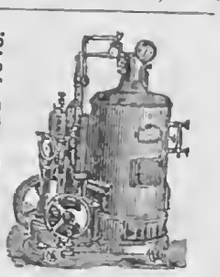
GALE MANUFACTURING CO.
ALBION, MICH.

INGALL'S PAT. LINK AND CHAIN

Will make or mend your chains, of all sizes, without tools. Inquire at your Hardware store or address

INGALL'S MFG. CO., Providence, R. I.

PATENT SPARK-ARRESTER.
8-H. P. Mounted, $650.
10 " " 750.
12 " " 1000.



2-H. P. Eureka, $150.
4 " " 250.
6 " " 350.

Send for our Circulars.
B. W. Payne & Sons, Corning, N. Y.
State where you saw this.

THE request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness

THE BOREL & COURVOISIER SWISS WATCHES

HAVE BEEN AWARDED

THE GOLD MEDAL

at the Paris Exposition of last year, based on the greatest superiority of of performance during the test made manufactured of the best material and finished by skilled hand labor er beyond peradventure. Messrs. B. tion in prices, so as to bring their Great care is taken in the finishing those adjusted for railroad use. Call improved B. & C. Watches. The relative merits of Swiss Watches, as manufacture. Can a country that *Hundred years* be ignored? Give nd they will demonstrate to you you to institute an impartial com pari-

The Jury of Awards' decision was workmanship and extreme accuracy by the Judges. These watches are and made with improved machinery, thus insuring an accurate time-keep & C. have made a still further reduc watches within the reach of all of their movements, particularly on your jeweler and ask to see the public is asked to investigate the compared with those of American has made watches for the past *Two* the Borel & Courvoisier fair play, that none can excel them. We ask son before purchasing.

QUINCHE & KRUGLER
17 MAIDEN LANE, New York, Sole Agents for the United States.

TERMS FOR 1879.

THE subscription price of THE RURAL NEW YORKER is

Single Copy, per Year $2 00
" " Six Months..... 1 10
Great Britain, Ireland, Australia and Germany, per Year, post-paid..... $3 04 (12s. 6d.)
France, " " 3 04 (16¼f.)
French Colonies, " " 4 08 (20½f.)

Any one sending a club of eight is entitled to one copy, one year, free.

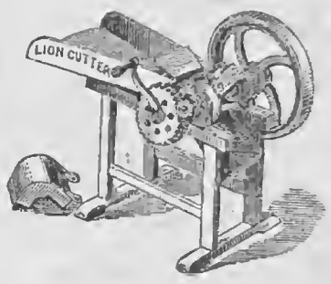
Agents will be supplied with canvassing outfit on application.

Implements and Machinery.

Sawing off a Log,
Easy and Fast.

Our latest improved sawing machine cuts off a 2-foot log in 2 minutes. A **$100 PRESENT** will be given to two men who can saw as much in the old way, as one man can with this machine. Circulars sent free. W. GILES, 741 W. Lake St., Chicago, Ill.

CAUTION—Any sawing machine having a seat for the operator, or treadles for his feet, is an infringement on our patents, and we are prosecuting all infringers. SO BEWARE WHO YOU BUY OF.



Lion Feed Cutter, combining the latest best improvements. Also **Gale's Feed Cutters,** both cylinder and lever, and **Belcher & Taylor's Root Cutters.** For full description send for illustrated catalogue and price list. Address
THE BELCHER & TAYLOR AG'L TOOL CO., Chicopee Falls, Mass

Real Estate.

FARM FOR SALE.—One of the best in the State. Contains six hundred acres, adjoining Detroit and Milwaukie depot at Ada, ten miles East of this city. Also a new Hotel to rent containing 75 rooms. Address E. P. & S. L. FULLER, Grand Rapids, Mich.

FARM FOR SALE.

I have one of the best stock farms of 720 acres in southeastern Kansas; 150 acres bottom land under plow, 100 acres of timber, good creek running through the place, 3 never-failing wells, 2 houses, good barn, corn-cribs, sheds for 1,000 sheep; hog, cow and sheep pastures of 20 acres each. Open land adjoining on the east sufficient to pasture thousands of cattle or sheep. A few apple trees and about 400 peach trees in bearing; also, 550 apple trees 4 years old. Price $10,000. The above could be sold in two farms, but would prefer to sell in one. Address
J. J. DAVIS,
Everett, Woodson Co., Kan.

Miscellaneous.

WE ADVISE YOU TO INSURE YOUR property in the
AGRICULTURAL INSURANCE CO.
Of Watertown, N. Y.,

The largest Company in the country which insures only farmers' property and residences. Over twenty-six years old.

Capital **$200,000 00**
Net Surplus, over..... **$216,000 00**
Assets, Jan. 1, 1879..$1,098,623 24

$777 A year and expenses to agents. Outfit Free. Address P. O. VICKERY, Augusta, Maine.

HIGH CLASS POULTRY, Grape Vines, Small Fruits, finer than ever. Send for circular. GEO. S. JOSSELYN, Fredonia, N. Y.

THE DEAF HEAR
THROUGH THE TEETH!

PERFECTLY, all Ordinary Conversation, Lectures, Concerts, etc., by NEW Channels, to the Nerves of Hearing, by a wonderful New Scientific Invention, THE DENTAPHONE. For remarkable public tests on the Deaf—also on the Deaf and Dumb—See *New York Herald*, Sept. 3d, *Christian Standard*, Sept. 27, etc. It displaces all "ear-trumpets." Size of an ordinary Watch. Send for our FREE pamphlet. Address AMERICAN DENTAPHONE CO., 1267 Vine St., Cincinnati, Ohio.

50 Best Mixed Cards ever sold, with name, for 10c. Post-paid. TRY ME. J. B. Husted, Nassau, N. Y.

18 ELEGANT New Style Chromo Cards with name, 10c. postpaid. Geo. I. Reed & Co., Nassau, N. Y.

62 Gold, Crystal Lace, Perfumed & Chromo Cards name in Gold and Jet, 10c. CLINTON & BRO., Clintonville, Ct.

PRODUCE EXPORTS TO ENGLAND.—Lowest rates of freight and insurance on all kinds of produce, such as GRAIN, MEATS and FRUITS. Responsible Agents in England for sale of Consignments. Bankers, The Bank of New York. Cash advances made. F. B. RELPH,
Freight Broker and Shipping Agent,
29 Broadway, N. Y.

Agents Wanted.

WANTED—Salesman—for each State. Salary $75 to $100 and expenses. Goods sold by sample. LA BELLE MANUF'G CO., Chicago, Ill.

MARK TWAIN'S NEW BOOK,
A TRAMP ABROAD.
Prospectus now ready. Apply to AMERICAN PUBLISHING CO., Hartford, Ct.

$350 A MONTH—AGENTS WANTED—75 best selling articles in the world; one sample *free*. Address, J. BRONSON, Detroit, Mich

Various.

BRIEFLETS.

GET in your ice. . . Feed the sheep well—give them fresh, pure water and keep them out of the wet. . . Pigs need dry beds as well as other animals. . . A great deal of celery is rotting owing to the continued damp, wet weather. The covering material must be removed and, if possible, dried during sunshine. . . We understood that Mr. Reall threatened to resign as Secretary of the A. A. A. We are sorry, very, very, to hear that; not that we are confident that he will, or even fear that he will, but because it indicates there has already been a squabble or something of the kind. If Reall resigns it will require a big cord to hold the three A's together. . . Next to railroad monopolies, perhaps farmers suffer most from the impositions which patent-rights legalize. . . Here's something to talk about—Dr. Hager says that one part lupine seed and two parts rye make an excellent substitute for coffee—and they are more nutritious. . . One of the best and "cheapest" implements for stirring the soil of flower pots is an old four-tined table fork. . . Spring catalogues will soon be issued. Compare them—select the plants and seeds—then consult the RURAL'S Index which will aid in determining which are the best varieties. . . We do not propose to extend our notices of catalogues through several months. Seedsmen and nurserymen are requested to forward catalogues as soon as published . . Pres. Wilder is opposed to grass in orchards. . . Jean Sisley says that standard Roses present the ugly sight of a nosegay on a broom-stick. . . A Peoria woman sneezed her jaw out of place lately, and the married men of the place have been buying snuff ever since.—Boston Commercial Bulletin. . . We have given the Dentaphone to two deaf friends for trial. They were as deaf with it as without it. . . Mr. Loomis shows us the largest Japan Persimmon we have yet seen, says the Pacific Rural Press; it was grown at St. Raphael, Cal., measures 10½ inches in circumference and weighs 8½ ounces. The variety is the "Mikado". . . If we could have three finely-endowed and strictly-regulated medical schools—one at San Francisco, one at St. Louis and one at New York—and do away with the balance of these "hot-beds" for sprouting ready-made "M. D.'s," it would be an immense boon to the people of this country. So says a writer in the National Live-Stock Journal. . . The request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness.

AMATEUR DAIRYING--(First Experience.)

Oh, Charles! The man who sold you the cow must have deceived you! He said her butter would be yellow as gold; but see, the milk is white as chalk!

Charles thinks he has been taken in by the purchase.

This is, perhaps, the same lady who inquired after the cow that gave the buttermilk.

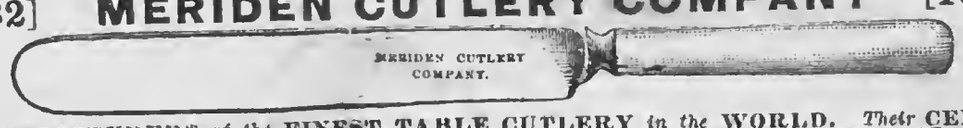
ESTABLISHED 1864. C. GILBERT'S STARCHES

ARE ABSOLUTELY PURE.

WE HAVE NEVER BEFORE made such a variety of Garden Wheel Hoes and Seed-Sowers.
WE HAVE NEVER BEFORE offered tools so well made, beautifully finished, and perfect in practice.
WE HAVE NEVER BEFORE combined so well variety of work with ease of operation. These machines quickly save first cost. They are prominent Agricultural *premiums*, and JAS. VICK says he has never sold any so popular. Correspondence is particularly solicited, and descriptive catalogues with numerous engravings are sent *free*.

S. L. ALLEN & CO., 229 Market St., Philadelphia, Pa., Mfrs. of PLANET JR. Goods.

1832] MERIDEN CUTLERY COMPANY [1879



MANUFACTURERS *of the* FINEST TABLE CUTLERY *in the* WORLD. *Their* CELLULOID HANDLE *is superior to* IVORY, *and especially suitable for* HOLIDAY GIFTS. *Warranted and sold by all dealers, and by* MERIDEN CUTLERY CO., *49 Chambers Street, New York.*

A GOOD SAW MILL
For $200.

Our No. 1 Plantation Saw Mill is designed to be run by 8, 10 or 12 horse-power Agricultural Engines. With this power from

1,500 to 4,000 Feet

of lumber can be cut in a day. A product 25 to 50 per cent greater than can be cut with any reciprocating saw mill. The mills are complete except saw, and will be put on the cars in Cincinnati for the low price of $200, and warranted in every particular. Saw Mills of all sizes, Engines and Boilers, Shafting, Gearing, etc.

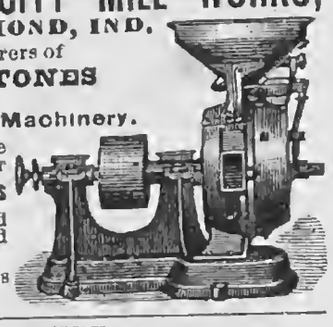
Illustrated circulars sent free.

LANE & BODLEY CO.,
JOHN AND WATER STS.,
Cincinnati, O.

My Annual Catalogue of Vegetable and Flower Seed for 1879 rich in engravings, from photographs, of the originals, will be sent FREE, to all who apply. My old customers need not write for it. I offer one of the largest collections of vegetable seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. *Full directions for cultivation on each package.* All seed *warranted to be both fresh and true to name;* so far, that should it prove otherwise, *I will refill the order gratis.* The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other vegetables. I invite the patronage of *all who are anxious to have their seed directly from the grower, fresh, true, and of the very best strain.*

NEW VEGETABLES A SPECIALTY.
JAMES J. H GREGORY, Marblehead, Mass.

RICHMOND CITY MILL WORKS,
RICHMOND, IND.
Manufacturers of
MILL STONES
and
Flouring Mill Machinery.



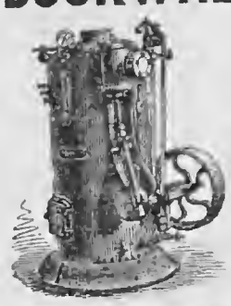
We manufacture the best French Burr CORN AND FEED MILLS in the country. Send for description and prices.

State you saw this in RURAL N.-Y.

THE
Ferguson Bureau Creamery

Correct in Principle. Perfect in Operation.
Awarded International Diploma at the Dairy Fair, 1879.
It maintains a perfectly uniform temperature at 60°.
It increases the production of Butter fully 10 per cent.
It makes Butter unexcelled in texture, flavor and keeping qualities.
It requires the least labor of any system.
It will last twice as long as any other apparatus.
It is a perfect Refrigerator for Cream and Butter.
It can be used with either ice or water.
☞Send for large circulars giving full particulars and many other testimonials
THE FERGUSON MFG. COMPANY,
AGENTS WANTED. Burlington, Vt.

BOOKWALTER ENGINE



Compact, substantial, economical and easily managed.
Guaranteed to work well and give full power claimed.
Engine and boiler complete, including governor, feed-pump, drive-pulley, etc., etc. at the low price of

3	Horse power	$215
4½	" "	245
6½	" "	315

Manufactured at Springfield, Ohio. Send for Descriptive Pamphlet.

JAMES LEFFEL & CO., Springfield, O.
Or, 110 Liberty St., New York City.

FARMS —AND— HOMES.

On the Kansas Pacific Railway. 3,000,000 Acres for Sale in the GOLDEN BELT. $3 to $7 per acre. 11 years credit. Wheat 20 to 50 bushels; Corn 40 to 100 bush. per acre. No Manure needed. Good climate, pure water, fine schools, churches, and good society. Railroad and market facilities excellent. Maps and full information FREE. Address S. GILMORE, Land Commissioner, Salina, Kansas.

HOLSTEIN CATTLE.

25 head to be sold at public auction on Wednesday, February 4th, 1880, by WM. R. WILLETTS, Skaneateles, Onondaga, Co., N. Y. Send for sale catalogue.

METALLIC SHINGLES.

Gold Medal Awarded at Paris Exposition, 1878.

Make the best roof in the world. Superior to Tin. Cheaper than Slate, and less than ⅛ the weight Cannot Crack. Fire Proof. Can be put on by any Carpenter.

75 per cent. saved in freight, with no breakage in carriage or putting on. ☞ Will last a life-time. Send for full description and prices to the

IRON-CLAD MANUFACTURING CO.
22 CLIFF ST., New York City.

BIG GIANT CORN MILL.
Every Man His Own Miller.

The only Mill that will grind Corn with Shuck on without extra expense. The only Mill grinding Corn and Cob successfully that will grind Shelled Corn fine enough for family use.

Grinds twice as fast as any other Mill of same size and price. Manufactured by

J. A. FIELD, SON & CO.
922 N. 2d St., St. Louis.

Mill Manufactory
Established 1851.
Grist Mills
OF
FRENCH BUHR STONE
Portable Mills for Farmers, Saw Mill Owners, etc. Price from $80 up. Complete Mill and Sheller $96. A boy can grind and keep in order. Adapted to any kind of suitable power. Complete Flouring and Corn Mill very cheap.
NORDYKE & MARMON CO.
Indianapolis, Ind.

CIDER PRESSES AND GRATERS.
BOOMER & BOSCHERT Press Co., Syracuse, N. Y.

32ND
SEMI-ANNUAL
STATEMENT
OF THE
TRAVELERS
INSURANCE CO.

Hartford, Conn., January 1, 1880.

ASSETS.

Real estate	$ 735,911 87
Cash on hand and in bank	353,855 01
Loans on bond and mortgage on real estate	2,015,522 91
Interest on loans, accrued but not due	51,015 37
Loans on collateral security	3,200 00
Deferred Life premiums	49,320 41
Premiums due and unreported on Life Policies	34,122 35
United States government bonds	277,150 00
State, County and municipal bonds	348,380 06
Railroad stocks and bonds	409,350 00
Bank stocks	607,662 50
Hartford City Gas Light Co., Stock	18,000 00
Adams Express Co. stock	52,500 00
Total Assets	$4,955,990 42

LIABILITIES.

Reserve, four per cent., Life Department	$3,192,433 80
Reserve for re-insurance, Accident Dep't	268,694 66
Claims unadjusted and not due, and all other liabilities	198,406 00
Total Liabilities	$3,659,539 46
Surplus as regards Policy-holders	$1,296,450 96

Statistics for the Year 1879.

LIFE DEPARTMENT.

Number of Life Policies written in 1879	1,711
Whole number of Life Policies in force	11,352
Amount Life Insurance in force	$18,182,132.00
Total claims paid in Life Department	1,395,517.92

ACCIDENT DEPARTMENT.

Number of Accident Policies written in 1879	54,540
Cash Premiums received for same	$992,033.90
Gain in Policies over 1878	11,422
Gain in Premiums over 1878	$216,451.39
Whole number Accident Policies written	572,525
Number Accident Claims paid in 1879	7,545
Amount Accident Claims paid in 1879	$395,678.30
Whole number Accident Claims paid	41,594
Whole amount Accident Claims paid	$3,437,630.24

Total Losses paid, both Departments, 4,833,148.16

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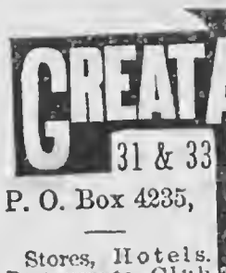

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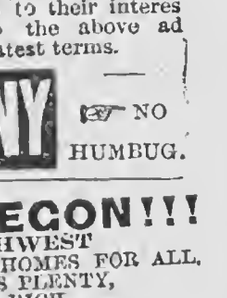

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 3. WHOLE No. 1564. | NEW YORK, JAN. 17, 1880. | PRICE FIVE CENTS. $2.00 PER YEAR.

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RESULTS OF THE CONTEST.

The Rural's Corn Premiums.

WHO THE PRIZE-TAKERS ARE.

Best Yields from Blount's White Prolific Corn.

At the rate of over 183 Bushels of Shelled Corn to the Acre.

295 Pounds from 90 Kernels.

The First Prize--$100 in Gold, given by the Proprietors of the Rural New-Yorker, goes to N. Y. State.

SECOND PRIZE GOES TO IOWA.

The Third to Kansas.

GOOD CULTURE—GOOD YIELDS.

On April 26th, 1879, we announced a list of premiums that would be awarded for the greatest yields of Blount's White Prolific corn, which we at that time were distributing among our subscribers. The corn was to be planted within an area of 33 feet square, and we were to be notified of the exact number of grains planted in each case, but as to soil, culture, manure, etc., the competitors were at liberty to proceed as they thought best.

Thousands of our subscribers applied for the corn, and a large number registered their names as competitors. As the season advanced the corn developed some wonderful properties, which have been discussed in the RURAL from time to time. In the majority of instances it was pronounced a failure, mainly by reason of its growing season being longer than that of ordinary corn, and in various localities it was destroyed by frost before it reached maturity. On the other hand, many careful cultivators have expressed their satisfaction with it, and think it a desirable variety for general culture. The reports show that in some cases it has ripened well, while it has failed to do so in other cases in the same locality; this can only be accounted for by differences in soil and culture as well as by an unfavorable season.

Having scrupulously compared the multitude of reports received, and exercised the strictest fairness in awarding the premiums, we are now prepared to announce the result.

The prize-takers are as follows :—

THE PRIZES.

The prizes are awarded on the basis of the greatest yield from the number of kernels planted.

The first prize as stated above is $100 in gold.

The 2d prize, a feed and meal mill of the value of $65, is given by the Challenge Mill Co., of Batavia, Ill. This mill is adapted to wind or horse-power and has a capacity of 20 bushels per hour at a speed of 800 to 1,000 revolutions per minute.

The Giant feed mill, valued at $45, given for the third best result, is contributed by J. A. Field, Son & Co., of St. Louis, Mo. This mill has taken the highest premium at the St. Louis fair. It grinds with the husk on without extra attachment. It will be shipped on board the cars at St. Louis free of charge.

Prize number four, the "Veteran" corn-sheller, valued at $35, is given by the Sandwich Manufacturing Co., of Sandwich, Ill. This is a very complete sheller and perfect separator that works satisfactorily as a power machine. It has a revolving wire cob-rake and a fan for cleansing the corn.

The fifth prize is given by the Wheeler & Melick Co., of Albany, N. Y.

The prize-taker has his choice between a La Dow's pulverizing harrow and a two-horse disc corn cultivator, each valued at $30. Both of these implements have been figured and described in the RURAL. They are thorough and durable pulverizers, and for the size are not excelled by any other implement of the same class.

For the sixth prize Messrs. Rumsey & Co., of Seneca Falls, N. Y., offer a choice of anything from their catalogue to the value of $25. This firm manufactures metallic pumps, hydraulic rams, farm bells etc. in great variety, and is able to satisfy Mr. Bingham's wants in this line of goods.

The seventh and eighth prizes are donated by Livingston & Co., of Pittsburgh, Pa., who offer a hand corn-sheller of the value of $5 for each. We have one of these shellers in use at the RURAL FARM, and find it to fulfill everything claimed for it.

Dr. Wm. H. Chamberlin's Report.

The following extracts from Dr. Chamberlin's letter will help to explain how he obtained so large a yield.

"I have read with great interest the communications from the numerous correspondents of the RURAL in regard to their success with the Blount corn. I planted 100 kernels of the package I received—which were all the mice left me—on May 20. All did not come up until June 10. It was so cold and wet at the time here that I put glass over it to bring it out; but after it came up I had no fault to find with it, for it grew beyond anything I ever saw or heard of in the corn line. Day and night, week in and week out, it kept growing, and I thought, as many of our Rural friends did, that it was an earless sort of corn. However, about the 20th of July the ears began to show themselves, from three to ten on a stalk, and on the 25th of July the tassels were in sight. I never saw such corn for roots and suckers. On many of the stalks the roots and ears met. I did not disturb the roots but pulled nearly all the suckers.

There have been hundreds of people to see my corn, and without one exception, all thought it a great acquisition for general cultivation, and that it would eventually take the place of any corn we are raising in this part of the country.

I harvested it on October 1st, and to tie the stalks I used a step-ladder seven feet high, and hen could not reach the top of the stalks within several feet. They are from 13 to 15 feet high. I have a stalk in my office fifteen feet and one inch high now. The medium-sized stalks are much the more prolific. I have engaged all my corn for seed for next year, and could sell much more if I had it. I shall plant it for my main crop next year, as will also many of my neighbors. The only thing I can see against it is, that it may take too long a time after planting to mature it."

The following is Dr. Chamberlin's report which was duly certified to by D. W. Cole, a Justice of the Peace.

1. Date of planting, May 20th, 1879.
2. Date of harvesting, Oct. 1st, "
3. Date of weighing, Nov. 11th, "
4. Weight of shelled corn, 295 lbs.
5. Measure of shelled corn, 4 19-32 bushels.
6. Weight of stalks (cut up), 270 lbs.
7. Average number of ears per stalk, 5 8-9.—Whole number of ears grown, 630.
8. Character of soil, sandy loam.
9. Kind of manure used:—10 bushels of blacksmith-shop manure, consisting of horse droppings and hoof parings, with one bushel of refuse gas lime, spread evenly over a clover sod (clover eight inches high), and plowed under. I also used one gallon of liquid manure twice during the season, to each hill, made as follows:—two bushels of hen manure in 40 gallons of water.
10. Cultivation:—I cultivated the corn once, and hoed it three times, but did not hill it. All suckers were pulled except 100, on which grew 100 of the poorest ears of corn raised on the plot.
11. Number of kernels planted:—I planted 100, the mice having destroyed the balance of the package (25 kernels). It was wet and cold when the corn was planted, and ten kernels did not germinate, and consequently only 90 kernels came up.
12. Number of kernels in a hill;—one and two. I shall put three kernels in a hill next year and destroy all suckers.

WM. H. CHAMBERLIN, M. D.

Medina, Orleans Co., N. Y., Nov. 13th, 1879.

Mr. G. W. Strong's Report.

The report of Mr. G. W. Strong, of Davenport, Iowa, was satisfactorily certified to. We make the following extract from it, relating to his method of cultivation:

"The soil on which the corn was grown was upland prairie, that had been used for gardening, and was very rich. It had been well manured with barnyard manure. I also used 50 pounds of land plaster, four pounds of guano, and four pounds of bone dust. I planted the corn in drills, four feet apart, one kernel in a place, and the kernels 19 inches apart in the rows. I cultivated it with a hand hoe, but did not pull the suckers; nor do I think it would be best to pull them off. In applying the fertilizers I opened a drill the length of my rows, and then sowed plaster the whole length of the drill. I then planted one kernel of corn in each hill, making a ring, about three inches across, around the kernel with guano; then I covered all inside of the ring and over the kernel with bone dust, and finally covered the whole with about one inch of soil. The drills were four feet apart, and I hilled the corn very high, so as to make deep trenches. I had a well at the end of the plat, and during the dry weather I used to pump the trenches full of water two or three times a week; the consequence was that the corn grew sixteen feet in hight.

I do not think that the ordinary season is long enough for it here; but this has been an unusual season; frost held off very late, and it has been one of the best for corn for several years."

Mr. A. B. Dille's Report.

The winner of the third prize, Mr. A. B Dille, of Edgarton, Kansas, gives the following particulars in regard to the soil on which he raised the Blount's corn, and how it was manured and cultivated. "I planted 122 kernels in 100 hills, from which grew an average of nearly three stalks to each kernel. The soil was a black loam strongly impregnated with lime. It was heavily manured with manures from the hog-pen and stable. This was plowed in. On preparing to plant, I put, in addition, a small shovelful of manure in each hill. When the corn was six inches high I sprinkled a quantity of hen manure along the rows and gave it a thorough cultivation. During the summer the corn had four good plowings and was hoed clean twice. The season was favorable for corn throughout this county, and the yield was as good as we ever had. It is not uncommon for corn in this locality, with only ordinary care, to yield 70 or even 80 bushels per acre. It will be seen that this corn yielded at the rate of 160 bushels per acre, which is by far the largest yield I ever had. I do not deem Blount's corn as valuable a variety as the corn we raise here, but it is far more prolific. I intend to plant one bushel of it next season."

Mr. J. B. Chapman's Report.

Mr. J. B. Chapman, of Ovid, N. Y., who obtained the fourth best yield from the seed planted, gives the following in regard to the culture: "The soil is a clay loam. It was covered with a dense timothy sod, having been in grass for seven years. On this I spread one load of manure from the blacksmith shop. After it was plowed I put a little Farmer's Pride phosphate in each hill. The corn was planted the 21st of May and harvested November 20. During the summer it was cultivated twice and plowed once one way, and hoed three times. There were from one to five stalks in a hill, and from one to six ears on each stalk. Several hills had twelve ears, but in no case did I plant more than one kernel in a hill. Only 100 kernels came up."

We might continue to multiply these reports *ad infinitum*, but so much has already been said on the subject in the RURAL that this will be sufficient. One fact stands out prominently: in every instance in which a large yield has been obtained the soil has either been uncommonly rich by nature, or it has been made so by fertilizers, and the crop has received extra attention in point of culture.

In the case of Dr. Chamberlin, the yield was at the rate of 183 bushels of shelled corn to the acre, which is something astonishing. It is, however, absurd to suppose that the same ratio of yield could be maintained, had several acres been under cultivation, instead of a small fraction of one acre; and whether the actual increase that on a large scale could be reached over an ordinary corn crop, would be sufficient to pay for the expenditure of fertilizers and extra labor in culture on an equal scale as that expended by Dr. Chamberlin, remains yet to be determined. The yield is also found to vary greatly in weight. Dr. Chamberlin weighed one bushel and found that it turned the scales at 61½ pounds; from this the weight varied down to 55 pounds a bushel. These differences in weight must, in the main, be due to the difference in size of the kernels, which is found to be far from uniform.

The attention of our farmers has now been fairly called to this prolific corn, and the RURAL'S object may in this regard be considered accomplished; whether it is worthy of general introduction and extensive cultivation will soon be decided by the practical tests made by many of our farmers.

	Number of kernels planted.	Yield. Number of lbs. shelled corn.	Number of lbs. to each kernel planted.
1st Prize, $100 in gold. Wm. H. Chamberlain, M.D., Medina, New York	100	295	2.95
2d Prize, Feed and Meal Mill (value $65.) G. W. Strong, Davenport, Iowa	122	272	2.23
3d Prize, Giant Feed Mill (value $45.) A. B. Dille, Edgerton, Kansas	122	221	1.83
4th Prize, "Veteran" Corn Sheller (value $35.) J. B. Chapman 2d, Ovid, New York	131	216	1.64
5th Prize, a La Dow's Pulverizing Harrow or a two-horse Disc Corn Cultivator, which, is optional with the winner (value $30.) A. J. Blackman, Clarksfield, Ohio	111	182⅝	1.63
6th Prize, a choice of anything to the value of $25 from the catalogue of Messrs. Ramsey & Co., of Seneca Falls, N. Y. M. Z. Bingham, Princeville, Illinois	145	213	1.46
7th Prize, a Hand Corn Sheller (value $5.) A. Thwing, Chardon, Ohio	128	172½	1.35
8th Prize, a Hand Corn Sheller (value $5.) J. L. Scott, Monongahela City, Pa.	127	166	1.30

Field Crops.

SORGHUM-GROWING IN KANSAS.

I have raised different varieties of sorghum or Northern cane, and manufactured a good deal of it into molasses, making from 500 to 2,400 gallons in a season, doing a good deal of custom work. I generally succeed in making a good article of molasses, that will not only keep well any length of time, but which will improve by age, and sell in the home market at an average price of 35 cents per gallon. I never made any attempt at making sugar, not having any centrifugal or other apparatus necessary to separate the sugar from the molasses. My molasses granulates freely, and I am satisfied that with proper appliances and proper treatment, sugar can be made from our Northern cane. To make sugar in paying quantities it will be necessary to put up good buildings, and furnish them with good machinery and all necessary fixtures and appliances to handle it properly.

The majority of the farmers hereabouts look at the subject favorably as a means of supplying their families with a good and wholesome sirup, and raise enough for their own use. More farmers would raise it if we had more good and well-arranged factories to work it up and make a good article of sirup close at home. The manufacture of sorghum molasses as a business here is not very flattering, the market being limited to small quantities.

The cultivation of sorghum is very simple and easy, being the same as that of corn. But in the selection of soil, all black and rich bottom land must be carefully avoided, as sorghum raised on such land invariably makes black and strong molasses. Any naturally dry or well-drained upland will do. The ground should be as free from grass and weed seeds as possible, and put in good order by plowing and harrowing until it is fine and mellow. Lay off lightly with a three or four-row marker—such as we use here in the West for corn. Three and a half feet each way are about the proper distance for hills, or, if drills are preferred (which will probably yield more per acre), three and a half feet is the proper distance for the drills. In planting the seed, cover very lightly. The after-culture consists in keeping the ground well stirred and free from weeds until the cane is well headed out. In harvesting the cane for molasses, I commence as soon as the greater portion of the seed has passed into the dough state. I then strip, cut and work up as speedily as possible. For sugar it should be fully ripe. In boiling I have never used any neutralizing re-agent, but am satisfied such might be used to good advantage. Two things are indispensable: fast boiling and good skimming. The juice should never go down after it once begins to boil up, but should be kept boiling until it is ready to come off. Skimming should be carefully done whenever and wherever scum appears.

Coffee Co., Kans. AMOS ROSER.

AN EXPERIENCE WITH SORGHUM IN KANSAS.

THE growing of sorghum in Kansas has become an industry from necessity. There are many farmers here who can grow every year, without interfering with other farm matters, enough sorghum to supply their families with all the sirup needed, without any other expense than their labor, as there are mills that make up the cane either for one-half or for 15 cents per gallon of sirup. As yet there has not been much sugar made, as to do so successfully requires special apparatus. There are many instances here where the sirup has made sugar in the pan without the aid of any chemicals or extra labor, and all engaged in the manufacture of sirup think there is not the least doubt that sugar can be profitably made in Kansas from sorghum, if the right means are used in reducing the juice. Who will tell us what it is?

The question that first suggests itself is: What kind of soil is best adapted to the growth of the plant? My experience says that any soil that will grow good corn, wheat, or oats, will grow good sorghum. When should it be planted? The same time as corn. Here in Kansas we plant from April 1st to May 10th; but I prefer to plant from April 15th to 20th, as then the cane has a long season to mature. The preparation of the soil should be the same as for a good corn crop. We plow deep and harrow well and roll. No manure is used on the crop here while growing; it causes rust on and above the first joint. The mode of culture is optional with the grower; but the best results have been obtained by planting in drills 3½ feet apart and 15 inches in the drill. We find that it can be handled to much better advantage in drills than in hills when stripping time comes. Stripping should not be done before one is ready to make up the cane, as it promotes the growth of suckers. With us these do not start until the cane is ripe. Cultivate the same as corn—well. The average yield of juice per acre, as far as I can ascertain from others and my own experience, is, on new broken sod, 750 gallons of juice, equal to 150 gallons of sirup, weighing 18 pounds to a gallon; on old ground that produced 60 bushels of shelled corn the quantity was 1,000 gallons of juice, equal to 200 gallons of sirup, allowing five gallons of juice for one gallon of sirup.

The Early Amber did better; with it less than four gallons of juice made one of sirup. The net profits from sod would be $26 25. There is no other crop on sod that will produce $10. On old ground 200 gallons, allowing one-half for making, would leave $35 net per acre. You would have to get 140 bushels of corn at 25 cents to make $35, or 35 bushels of wheat at $1 to equal the sorghum.

I cannot see that there is any more expense in raising sorghum than there is in raising corn or wheat, and each can easily estimate the profits by the crop he raises, and the price he gets for the product in his own locality. There are several associations formed around the country for the benefit of those interested in the growing of sorghum. The meetings of these are very well attended and much interest is taken by farmers generally. W. J. BROWN.

Butler Co., Kan.

EXPERIENCE WITH SORGHUM IN OHIO.

LAST spring I procured from the Department of Agriculture a package of seed of the Minnesota, or Early Amber sugar cane. I planted two patches. Of the one that did the best, I now propose to treat.

The patch was planted about the 10th of May, and cut about the 8th of October. It contained between thirteen and fourteen square rods, was plowed four times and hoed twice. The soil is a yellow clay, interspersed with a little sand and gravel, and tolerably fertile, and the yield was, by accurate calculation, at the rate of a fraction over 214 gallons of thick molasses per acre. This was put into earthen jars, and, on unsealing them, the lower half is found to be granulated, the mass soon becoming dry by exposure to the air, but containing too much gum to be equal to common Orleans sugar.

In the manufacture, the juice is conducted through a tin tube from the mill to the first evaporator where most of the green scum arises and is taken off. From thence it passes out over a layer of gravel and pebbles, till it reaches a second evaporator, made after the style of Cook's Patent, where the final boiling and drawing off occur. No solution to clarify the juice was employed in the operation.

I think that it has been demonstrated that the Early Amber is superior in every respect to all other varieties of sorghum now in cultivation. It ripens earlier, enabling the cultivator to get it worked up before any of the fall frosts occur; it produces a much purer, sweeter sirup and a larger amount per acre. The indications are that there will be twice as much planted in this vicinity next season as there was in the year that has just come to a close, and nearly or quite all of it will be of this variety. It is to be hoped that some genius will so perfect the construction of sorghum mills and apparatus for granulating the sirup, that in a very few years this nation will cease to be under the necessity of sending abroad for sugar.

In conclusion, permit me to remark that the practice, once so common, of stripping off the blades several days before cutting the cane, is much spoken against here by molasses manufacturers. They say that the juice begins to sour from the first, and that the cane should be cut down on the same day that the stripping is done. And, furthermore, it is requisite that it should be cut while the seed is in the dough, and the grinding and the evaporation of the juice be attended to as soon thereafter as possible, to obtain the best results.

Morrow Co., O. JOSHUA MORRIS.

Experience with Sorghum in Illinois.

I got some Early Amber seed from the Department of Agriculture at Washington, and planted it on May 14. The weather was so dry that I did not get half a stand. The cultivation was the same as for corn, except that it received some extra dressing with a hoe. It commenced to ripen about the 15th of August and was ripe the 1st of September, when a frost almost ruined it. Then it was cut and piled, and laid there three or four weeks before it was made up. It made good sirup, but this did not granulate well. I made about 700 gallons of sirup for my neighbors. I made theirs before my own, and therefore had better success. Most of it granulated in the coolers when it was made, or soon afterwards. I think that to secure the best success in granulating sirup, it should be kept in a warm place, in open tanks or barrels. I put some in open tanks, and some more of the same kind in tight barrels. That in the barrels granulated pretty well, but that in the tanks did much better, all of it turning to solid mush sugar, with the exception of a little molasses on the top.

Bureau Co., Ill. M. A. COLBY

A POTATO QUESTION IN TENNESSEE.

IN February last I bought of J. M. Thorburn & Co., of your city, one barrel of Beauty of Hebron potatoes. I raised a second crop, planting the last time on July 23 and 24. I saw by the advertisement that they purported to be a week earlier than the Early Rose potatoes. In our section, our farmers have found that they can grow and market a crop of Early Rose by 10th to 25th of June, and by planting the small, unmerchantable potatoes they can grow a second crop, which is usually nipped by the early frosts, though that does not affect the tubers, and these, dug a week or ten days after first frost, yield good, full, plump tubers, not as large as Northern potatoes of the same sorts, but we, here, believe them superior in mealiness of flesh and in flavor. I experimented this year with one barrel of Beauty of Hebron (supposed to be New York State seed) and one barrel of second crop Early Rose of my own growing. I planted both on March 12, in precisely the same sort of ground—only divided by a ditch. I gave both the same cultivation and on the 26th of June marketed my Early Rose. During the "growing season" I several times examined the two kinds and each time I found the Hebron showed the larger tubers of the two; but the Rose had more in number to each vine. My experiment cannot be completed till another spring crop shall have been grown and by planting Early Rose and Beauty of Hebron, both of second crop seed and under the same conditions, I shall hope to settle the question of early maturity as between these two varieties.

A good many second crop Early Rose potatoes are being shipped from our locality for seed, to points northwest of us, and if our second crop seed shall be found earlier than Northern seed of the same varieties, why should not the shipping of second crop potatoes of this section to the colder section where only one crop can be raised, be found an important industry developed with profit to somebody and supplying the tables of your section with that valuable vegetable earlier than your seed will furnish them?

Davidson Co., Tenn. JAMES J. PRYOR.

Farm Topics.

HISTORY OF A POOR FARM.—No. 22.

FARMERS' FAMILIES.

OUR little society has become by degrees very much of a sociable family affair, and we find ourselves frequently discussing matters which relate to our various family interests, as they depend upon our different farm managements. We have around us a peculiar sort of society. There are old families in our neighborhood who have owned their farms for a hundred years or more, and many new-comers who have bought parts of divided farms which have been sold to be distributed among heirs who have left the old homestead and have gone into distant localities to enter into business or into new associations or family ties. The old and the new still retain their distinctions and their different ways, and this offers unusual opportunities for contrasting the results of the varying methods of management. My old neighbor thinks there is nothing like the old style of doing things, and still retains full control of his farm and his family, although his grandson who works the farm is over 40 years old and is practically responsible for all the work. Mr. Martin thinks this is not just. He says:—

"Give the young folks a chance; let them have an interest in the farm and the business; and make them feel they are doing something for themselves. I have no son, but my daughter, Mary, runs my dairy, and what she can make out of it, is hers to do as she thinks best with it. What is the result? She is thoroughly interested: studies all about her business and won't be in a hurry to give up that to go off and get married, unless she is making a good match; I mean by that, to choose a good, industrious, careful, steady husband, with some ideas consistent with her own; and not take some flashy city man, who would spend in clothes and cigars as much as would keep a family. It is all very well to talk of love in such matters as this. Love is a sentiment, and its direction takes the channel in which young folks have been trained. There must be something for love to live on, else when trouble comes to the front door, it will fly out of the window. It is a more serious matter with boys than with girls, because a boy is apt to pack up and leave "to do for himself" if he thinks he is not justly dealt with. Parents should feel that they are responsible for the welfare of their children, and that a family, as far as may be, should be a partnership; more especially if there is but one to be taken care of. I like the idea of father and son—or daughter, if there is no son—going into partnership and having a mutual interest in the home and the business."

"If this had been the practice years past, there would not be so many farms lying idle in the East," said Dr. Jones, "and many young folks would have been spared much hardship in making new homes in the West; while the old folks would not have been left practically childless in their old age, and have been compelled to leave the farm and live in a village, upon their savings, which might otherwise have been nursed and increased to help the children when the parents no longer needed their money."

"Here is Mr. Close, whose farm is in the flats, rich meadow land and upland, and over 250 acres. He is over 70, and has two sons; one is in the Western mining region, and a thorough rover, and the other has a store in a Western city. He has seen neither for a dozen years. His farm is going back to the condition of a wilderness, and the whole feeds but five cows, a pair of oxen and one horse. The old man keeps pegging away as well as he can, with the old lady for his only companion; and there is work on the farm for both the sons and two or three hired men, if they had been content to stay. But Close kept the boys at work, and doled out a few dollars to them now and then, and wanted to make a hard bargain with them to rent out the farm on shares when they became of age. So they left; and by and by the Close farm will be sold to be divided among the heirs. There might have been three farm houses across the road in place of one, and two or three laborers' cottages; 50 or 60 cows in place of five, and three happy families with uncles and cousins and aunts, in place of a dull, dreary, solitary old couple; and Close thinks his boys used him rather badly in leaving him all alone."

"I think that was right mean of the old man," remarked Miss Martin, who had just come into their pleasant parlor, "there were never better boys anywhere than the Close boys, and they worked very hard, early and late, to please their father; and that reminds me of what I read last week of a man who gave his boy an orphan lamb, and the boy nursed and brought it up until the fall, when it went to the market with the rest of the flock, and the boy cried and said he would never raise another lamb. The paper said that was the meanest robbery ever perpetrated. That was just the way the yoke of steers that the oldest Close boy raised from calves went, and one of them he bought from us with his own pocket-money when it was a week-old calf."

Here our old neighbor dropped in, and we at once changed the conversation, lest he might think it intended for him. He has, however, quite a different disposition from that of Mr. Close, and although his grandson is simply a tenant on shares, without any permanent interest in his grandfather's farm, yet the two are quite well satisfied, thinking it to be a matter of custom, and having no jealousy of each other's interest. Still even in this case it works to a disadvantage, and prevents improvements which ought to be made.

"Here is another new idea," remarked the old gentleman, opening his copy of the RURAL NEW-YORKER, and putting on his glasses. "This will suit you, Miss Martin, no doubt; for it is just your way of doing things. They are getting up a Society to record tests of dairy cows; I suppose putting the weights of milk and butter in a book, and paying your two dollars for it. What good is that going to do?"

"I approve of that," said Miss Martin, "and I shall be willing to pay a few dollars to have some of our cows' names in that book. Why, we have some cows that don't pay for their feed, and I never knew it until Fred showed me how to make and keep a record. Jenny's record shows that she gave as much butter as three other cows together in the six months they have been milking, and they have all been fed alike. Star gave only two pounds and a half in seven days, and father thought she was his best cow, because she would fill a pail with milk. Jenny's cream is three times as thick as Star's, and we never knew it until we kept a record. Father did not think Jenny worth half what he would have sold Star for, until we found out the old cow's value. Now Star's calves go the butcher, and we raise Jenny's heifers always."

"A cow is a cow," said the old gentleman, "and you can get as much for one as another when you come to sell. I like an easy-keeping cow, that you don't need to be always buying feed for."

"Of course, you like to make cows pay, don't you?" said Miss Martin. "Well, let me read this to you; this is a record of Jenny, my Jersey cow. This is my cow because I raised it, you know, and father will never sell her, you may be sure, because he gave me the calf. Well (reading), week ending Nov. 15, 168 lbs. of milk; Nov. 22nd, 161 lbs.; feed hay and four quarts of meal, corn, oats and middlings, with one peck of beets; Nov. 29th, 198 lbs. of milk; Dec. 6th, 231 lbs.; feed same as before, with four pounds of cotton-seed meal added; now, four pounds of cotton-seed meal cost seven cents, which is 49 cents a week, and 63 pounds

of milk are worth $1.62. Next week I can give you a record of the amount of butter made extra, because each cow is now getting four pounds of cotton-seed meal a day."

"I think that is worth knowing," remarked Dr. Jones. "If no record is kept, no one can know these things. I am ashamed to say that I don't know which is my best cow, or if the cows pay for their feed or not. But hereafter I shall keep a record of their milking; there is very little trouble about it."

"It is no trouble," I replied; "Miss Martin is following my plan. A spring balance with a hook hangs in the barn in the rear of the cows. Close by it, hangs on the wall, a paper block with a column for each cow; the cows are numbered on the stanchions, 1, 2, 3, and so on, and each one's number is written at the head of the column on the block or paper pad. Each cow's milk is brought to the deep pails in which it is strained, and before it is poured out, the pail and milk are weighed. The pail weighs three pounds exactly, and the net weight of the milk is written in the column belonging to each cow. The same is done morning and evening, and at the end of the week the sheet is taken from the block and filed away after the total of the week's weights is entered in a book. When a change of feed is made, that is noted across the block before the weight of the milk is written down, and is also entered in the weekly report book. The whole work does not take ten minutes each day, and it enforces cleanliness, because a little water is poured into the pail after the milk is strained, and the dregs of the milk are washed out and thrown into the gutter. Each cow is thus milked into a clean pail, and, if necessary, the milker washes his hands after milking each cow. That takes up a little time, but it is well spent. For what butter I make I can get 20 cents a pound over the common market price, and I have the pleasure of knowing that the milk I sell is absolutely pure and clean. Besides, I think it due to the cows to keep them clean; they seem to know it, and feel proud of it.

"How do you record the butter made?" asked Dr. Jones of Miss Martin. "Each cow's milk, when it is tested for a week, is strained into one particular pan. I have to use three shallow pans for this purpose, and the milk stands 36 hours, which is long enough to get all the cream. Every week I keep this one cow's milk by itself in a separate crock, and have it churned separately, so that every ten weeks I can get through the whole list, if I want to, and know exactly how much butter each cow made in one week. But I can tell pretty nearly by the cream if there is any gain or falling off when I skim the cream. Of course, it takes some time, but it takes time to do many things that we are obliged to do, and we don't grumble at it."

"There are a great number of poor cows in the country" I remarked "and a good many good ones. We ought to know the good from the bad. Miss Martin raises the heifer calves from her best cow, but if she did not know the best cow, the worst one's calf might be raised. If this plan is followed, in five years the value of the dairy cows might be doubled. We have had so many figures about cows etc., poured out on to us by speakers at the late dairy fair, that I wont give you any more; but what I say is true, and you know it. Now there are a great many good cows in the country and it is important that every dairyman should know it. When I want to buy a good cow and pay a good price for her, I want to have a record of what she does and what her dam and grandam did, and by-and-by we shall have records of thousands of such cows. Then if owners of cows can be taught to keep records, by-and-by it will be only stupid men and fools who will keep the poor cows; and in time these—the cows I mean—will all die off and be got rid of.

MY EXPERIMENTS.

I regret to say that my hot-bed played a trick on me which resulted in the loss of nearly all the seeds sent from the RURAL office, as well as other valuable seeds and plants. I have some very nice plants of Hollyhock, however; and as I am partial to this old-fashioned, but now very much improved flower, I prize them highly. The spring wheat was a failure, and I have known but three good crops of spring wheat in this section in twenty years, while winter wheat seldom fails. Millet made a good growth; but as a forage plant in this latitude I think it undesirable. No plant will ever fill the place of corn as a fodder crop in a climate where it does as well as here, while hay made from mixed grasses gives so much more nutriment in the same bulk for winter use that farmers, taking into consideration the cost of cultivation of fodder crops when compared with that of hay, prefer the latter even against the experience of their neighbors who grow corn fodder.

The Voorhis watermelon was a grand success, productive, with thin rind and of good quality, and large enough, while in symmetrical shape, evenness of size and general beauty of appearance it was ahead of all my melons. The other melon I shall raise is Phinney's Early; it is good enough, and resembles the Voorhis in appearance, though more uneven in size and not so handsome, but more productive with me and a very sure crop; the Voorhis may be equally sure upon a longer acquaintance. The Blount's corn I did not apply for, and I am glad I did not now. I am prejudiced against large varieties of corn. They do not pay. The stalks do not make good fodder; the corn is no better than smaller kinds, while the great cobs and stalks are a perfect nuisance. I except Mammoth Sweet corn from the above, as all sweet corns, when properly grown and cured, make good fodder. The Golden Rural tomato is "nice"; but not profitable for me to raise. We do not preserve tomatoes; we grow all the berries and small fruits and when one has enough of the good pickles, preserves, and canned nice things that can be made from these fruits, there is no room for tomatoes; for canning and table use no tomato yet equals the Acme, though the Trophy is almost as good. The Beauty of Hebron is a valuable potato, and while I am not going to say it will supplant the Early Rose, Vermont or Ohio; I do say it will hold its own. I had a good yield and we tested the quality while green and fully ripe, and pronounced it among the best.

While I am talking about potatoes I may as well give my experience. I have twice discarded the Early Rose for other varieties; once for the Extra Early Vermont, and once for the Early Ohio, and while I retain both kinds now, I was obliged to get back the Early Rose. I am in favor of early potatoes, as the crop can be marketed early and the ground sowed to fodder corn, turnips or wheat, and even if the market for these is low, they can be pitted in *shade* thinly covered, and repitted in autumn with perfect safety. My favorite late potato is the Excelsior. I am growing seedlings from this variety; some are now four years from seed. Some are very valuable kinds of late potatoes, but none are valuable that ripened earlier than "medium early".

I have for several years made some interesting experiments with potatoes, as I am what is here called a large grower. My hired man, one spring while we were preparing potato seed, thought I was too particular about my selection of seed for the "seed patch". I had a model potato in my mind, and selected perfectly shaped and even-sized tubers to select another year's seed from, as had been my practice. To convince him of the advantage of my method, I selected some ill-shaped specimens, knotty and gnarled, and we planted them alongside the seed patch planted with potatoes every one of which was a beauty. When we dug both patches I was surprised myself; the experiment taught me an important lesson as well as him. He learned that like will inevitably produce like in a greater or less degree; I had the new thought forced upon me that we can deteriorate a variety faster than we can improve it. The proof was before me in about a bushel and a half of Early Rose potatoes with scarcely a mess of tubers that the house-wife would prepare for the table; while the adjacent row turned out finely-shaped potatoes, no cragged ones, and a very small portion of small ones. If this is true of potatoes it is of grain, fruits, stock; in fact, of all we raise or breed. [Not to the same extent at all. The remark is true enough of seeds or blood. But a potato is merely a fleshy stem.—Eds.]. I am now in possession of a strain of Early Rose potatoes improved in shape by selection. There is a tendency in this potato to grow long, and in some soils a little sharp at one end. This tendency I bred away by selection of seed, which is a valuable experiment and within the reach of all who read and discredit this statement.

I would urge more attention to the improvement of varieties of grain and vegetables, and in conducting experiments with these have some point you wish to reach, a model to work to. Give the public the benefit of your experience. Your neighbors may be merry over your "fooling around"; but the experimenter is gaining knowledge while the laugher is merely being amused. Don't try too much at once, follow one or two experiments carefully until you are either successful or obliged to acknowledge defeat. E. L. M.

Huron Co., O.

SO-CALLED MODEL AND EXPERIMENTAL FARMS.

THE gentlemen owning them profess to teach the common farmers. Why don't they experiment with different kinds of food and tell them which varieties and in what proportions, produce the most and the best milk? Why don't they try cows one week tied up with chains, another fastened in stanchions and another lying loose in boxes, and see the effect on the milk and on the weight of the animals? Why don't they try different foods on fattening animals, on cows, on sheep, and on swine? And why not experiment with horses, too, and give the results? What is the use of boasting and puffing about a farm and giving the public no information? A very great deal of good might be done to our stock interests by a systematic course of treatment and trying one breed of cattle against another. For instance, supposing on one of these farms there happened to be Short-horn cows, Jerseys and Holsteins; take a fair average cow from each breed; weigh the food to each and ascertain which gives the most milk and the most butter, and by calculating the food eaten by each, see which pays best for eating it, and also try in a similar way some animals of different breeds for beef. Some good experiments, too, might be made with sheep:—take half a dozen ewes, say, pure South Downs, half a dozen grade Downs, the same number of grade Merinos, and weigh the food to each and see which bring the best early lambs; which yield the best clip of wool, and also try a similar number of barren ewes or other sheep, and test their qualities for making mutton and wool. Without hinting at, or intending to direct attention to any one farm, what, in the name of common sense, is the use of calling a farm *a model* when there is literally nothing to take an example from:

We want something original; something modern, and we don't want to wait years for it. Let us have prompt action and when any information is offered, we don't require a compiling of old-fogy ideas from books half a century old. The days of compilers are past! The present age requires genuine, live, truthful experiments made very carefully by a man who knows all about farm live stock of every variety. If he is not interested in any one of the breeds more than another, so much the better. We have, every now and then, a breeder claiming all the virtues in the world for his particular herd or flock; but a reliable test made by two or three of these model farms, would throw light on the subject, and if the results were not wholly satisfactory, they would lead to other and more exact tests. Let these farms grow roots of every variety and by intelligent use of them ascertain their real merits in the climate of the United States. I know they have been almost extraordinary assistance to British agriculture, and it is well understood the breeders of pure-blooded stock in the United States, all grow some, as they cannot keep their stock from falling away without them. Consequently, let the model farmers throw light on this matter, too. G. M.

The Herdsman.

WINTER FEEDING FOR STOCK—No. 3.

PROFESSOR E. W. STEWART.

Waste Products as Fattening Food.

MANUFACTORIES have multiplied so rapidly within the last few years, at which large amounts of waste products are left after the production of the commercial articles, and these refuse products have such importance as feeding stuffs as to require special attention in discussing winter feeding of stock. That RURAL readers may get a clearer understanding of these waste products and their comparative value, I give a table containing their digestible constituents, nutritive ratio, and value compared with average meadow hay, which is rated as the unit of value. I give only the percentages of the digestible nutrients, because these determine the feeding value.

Foods.	Digestible Nutrients. Albuminoids.	Carbohydrates.	Fat.	Nutritive Ratio.	Compared with meadow hay.
Meadow hay, average	5.4	41.0	1.0	8.0	1.00
Clover hay "	7.0	38.1	1.2	5.9	1.08
Timothy hay "	5.8	43.4	1.4	8.1	1.09
Hungarian hay "	6.1	41.0	0.9	7.1	1.04
Wheat bran (coarse)	10.0	48.5	3.1	5.6	1.58
" middlings	8.9	51.8	2.6	6.9	1.56
Western ship stuffs	8.7	54.5	2.5	7.0	1.51
Rye bran	10.6	50.0	2.8	5.3	1.56
Buckwheat bran	13.5	44.0	3.9	4.1	1.79
Poppy-seed cake	26.8	26.4	7.4	1.7	2.69
Hemp seed cake	20.9	17.4	5.2	1.5	2.03
Olive-oil cake	3.6	33.8	10.6	16.5	1.42
Sunflower cake	31.3	21.7	7.6	1.3	3.00
Palm-nut cake	16.1	55.4	9.5	4.9	2.51
Sugar-beet cake	1.8	21.6	0.2	13.9	.047
" molasses	8.0	64.0	—	8.1	1.43
Potato refuse in starch manuf'ng	0.8	13.7	0.1	17.4	0.25
Rye " " "	5.2	18.1	1.2	4.1	0.68
Wheat " " "	3.7	15.1	1.8	5.3	0.58
Corn bran	5.2	55.0	3.6	10.3	.112
Corn sugar, or starch meal	3.2	19.3	1.8	7.4	0.60
Corn slump, or distilling refuse	1.5	5.4	0.8	4.6	0.24
Brewers' grains	4.8	11.3	1.2	3.0	0.56
Malt sprouts	20.3	43.7	0.8	2.2	2.08
Linseed cake	37.6	27.0	10.4	1.4	2.96
Linseed meal (extracted)	27.8	33.9	2.1	1.3	2.51
Cotton-seed meal (decorticated)	33.2	17.6	16.2	1.1	3.60
Cotton-seed cake (undecorticat'd)	17.5	14.9	5.5	1.2	1.75
Meat scrap	45.0	—	2.0	0.1	3.17
Fish scrap	44.6	—	8.6	0.2	3.60

These are the principal waste products, and their comparison with the different kinds of hay and with each other will be instructive to many readers who are in doubt as to the relative value of these various foods. Some of these waste products will be found in almost every locality, and it should be the aim of all feeders to utilize the cheapest foods, which will accomplish their purpose. The reader should give careful attention to the nutritive ratio—this means the proportion of muscle-forming food (albuminoids) to the heat-giving and fat-forming nutriment (carbohydrates); as, for example, meadow hay is as one to eight.

All vegetable foods contain both classes of these substances. The albuminoid substances are called gluten, albumen and casein, and they contain about 15 per cent. of nitrogen, which is always found, in about the same proportion, in the muscles, the blood, the skin and the hair. And besides nitrogen, albuminoids contain carbon, oxygen and hydrogen, or carbon and water. The carbohydrates contain no nitrogen—only carbon and water. These are starch, sugar, gum, cellulose and fat. All these substances must be present in food to sustain animal life. In examining the table the reader will see that these foods contain albuminoids and carbohydrates in very unlike proportions. The nutritive ratio shows, at a glance, the relative proportions of these substances.

The Germans have been experimenting for some years in determining the relative proportions of albuminoids and carbohydrates required for animals of different ages and kept for different purposes. The following table is translated and published in the report of the Commercial Experiment Station:

FEEDING STANDARDS.

Per day per 1,000 pounds live weight.

	Total Organic Dry substance.	Nutritive Digestible Substances. Albumi-	Carbo-hydrates.	Fat.	Nutritive Ratio
	lbs.	lbs.	lbs.	lbs.	lbs.
1. Oxen at rest in stall	17.5	0.7	8.9	0.15	1:12
2. " moderately worked	24.0	1.6	11.3	0.30	1:7.5
3. " heavily "	26.0	2.4	13.2	0.50	1:6.0
4. " fattening 1st period	27.0	2.5	15.0	0.50	1:6.5
" " 2d "	26.0	3.0	14.8	0.70	1:5.5
" " 3d "	25.0	2.7	14.8	0.60	1:6.0
5. Cows in milk	24.0	2.5	12.5	0.40	1:5.4
6. Growing cattle:					
Age. Av. Live Weight....					
month. per head.					
2—3 150 lbs.	22.0	4.0	13.8	2.0	1:4.7
3—6 300 "	23.4	3.5	13.5	1.0	1:5.0
6—12 500 "	24.0	2.5	13.5	0.6	1:6.0
12—18 700 "	21.0	2.0	13.0	0.4	1:7.0
18—24 850 "	24.0	1.6	12.0	0.3	1:8.0

Dr. Wolff illustrates the standard ration for milch cows by saying that 30 pounds of young clover hay will keep a cow in good milk, and this contains of dry organic matter 30 pounds, of which the following are digestible: albuminoids, 3.21, carbohydrates, 11.28, and fat, 0.63 pounds. This is an excess of albuminoids, a slight deficiency of carbohydrates and an excess of fat. Then he takes 30 pounds of the best meadow-hay, which contains of dry organic substance, 23.2 pounds, having digestible albuminoids 3.49 pounds carbohydrates, 12.78 pounds, and fat 0.42 pounds. This is very close to his feeding standard.

I wish my readers would carefully study these tables, and get well fixed in the mind the qualities of the different foods. Chemistry has done much for agriculture; but in no department has it done more than in revealing to us the quality of foods. Chemistry is able to give us precise information concerning the elements of animal bodies, showing how the latter meet exactly the wants of the former. The waste products given in the table are, of course, not normal rations, in themselves, possessing some elements in excess, and being deficient in others, but when the feeder understands the composition of his foods, his skill is shown in combing them so as to give completeness to all the elements. In order to give any thing like a complete discussion of winter-feeding and the methods of preparing foods, it will be necessary to treat of that stale topic,

Cooking Winter Food.

This topic is stale because it serves always to bring out no end of contradictory opinions—those of its advocates and opponents alike apparently based upon experiments. And it is unfortunate that experiments have not been careful and long-continued enough to settle the question beyond cavil. If we look at the matter from a philosophical point of view, we shall find the arguments very strong for cooking the food of animals. Heat certainly has a decided effect upon the digestibility of food. Starch composes from 40 to 65 per cent. of our cereal grains. And if you take starch that has been separated from other elements of wheat or corn, and mix this with water at a temperature of 100 degrees, or expose it to the heat of the animal stomach, it will not dissolve, as it requires the heat of 162 to 212 degrees to dissolve it completely. Every housewife knows that she must mix her starch with boiling water to dissolve it. If we cook one bushel of corn meal thoroughly, it becomes two bushels or more in bulk—the grains of starch having

burst and become soluble in water. This is the effect of cooking upon grain.

Woody fiber, or cellulose, is still more difficult of digestion. Let us take an extreme case: take the woody fiber of the trunk of a tree. That is supposed to be quite indigestible, but if we take the saw-dust from hard wood, say sugar maple, still better box-wood, place it in an oven, thoroughly dry or bake it at a temperature of about 300 degrees (do not burn it), then grind it fine in a coffee mill, the resultant flour will now partially dissolve in hot water, and by the addition of yeast will rise like wheat dough. Under the power of heat it becomes soluble and digestible. Tomlinson says the people of Norway and Sweden, in case of scarcity of food, have sometimes used saw-dust, thus prepared, for bread. I could refer to a half dozen authorities upon these facts, but only mention them to show the effect of heat upon the digestibility of grain and the woody fiber of hay, straw, etc. It appears, then, that cooking cattle food ought to render it more digestible and therefore more valuable.

The writer, many years ago, from extended experiments, became well convinced of the value of cooking food for all farm animals. But there is a great deal that goes under the name of cooking cattle food, that is merely a delusion—wetting with hot water; never raising the temperature even to the boiling point, much less continuing the heat long enough to thoroughly cook the food. Yet all these are called experiments in cooking, when they are only experiments in warming and fermenting food. That only can be called cooking food, which boils or steams it till reduced to a pulp. The writer has proved by careful experiments that cooking renders 25 to 30 per cent. more of the food in grain and straw digestible. Early-cut and nicely-cured hay is not improved more than 5 to 10 per cent. and therefore it does not pay to cook it. I have not room to detail experiments in this paper. But if it be admitted that food is increased in value 25 per cent. by cooking, it does not follow that cooking must always be profitable. It is a simple question whether the cost of cooking will be less than the gain.

And right here is where mistakes are often made. It costs nearly as much to cook the food for five to ten animals as for 30 to 50, provided you have an apparatus capable of cooking for the larger number. I say then, to start with, that you cannot afford to cook the food for a few animals, unless you have the leisure to do it yourself. The cost of the labor will be greater than the profit. Then, one of the greatest discouragements to successful cooking has been the multitude of small apparatus invented and put on the market for this purpose. Farmers are not supposed to be engineers, and they do not understand the advantage of a large fire-surface in producing steam. Most of these small boilers, which are recommended for cooking for 20 to 30 head of cattle, have only six to ten square feet of fire-surface. Ten square feet of fire-surface, in a boiler, is reckoned equal to one horse power. Now, a five-horse boiler, having 50 square feet of fire surface, would produce five times as much steam with about the same fuel as a one-horse boiler. These small boilers are totally inadequate to the work they are expected to do.

Again, in cooking food economically, there should be ample power to cut the hay, straw or fodder corn, with a carrier to deliver the cut feed in the steam box, also with a power mixer to mix the cut fodder with the grain and water (for all food must be moistened before it can be steamed), doing nearly all the labor by machinery. When properly arranged, one man may do all the labor of cooking for, and feeding 100 head of cattle. Those waste products, given in the above table, may be used most profitably under the cooking system in making up fattening rations with straw and other coarse fodder.

STOCK BREEDING NOTES.

RICHARD GOODMAN.

[HAVING been in the habit for twenty years past of entering into my note book memoranda of the best ideas of others and the results of my own practice in breeding fine dairy stock, I reproduce some of the most useful of these notes as a guide to beginners in the business of breeding.]

MILKERS—To develop milking properties or to perpetuate them, breed with bulls descended from milking families. Keep the cows constantly in milk for from nine to ten months, giving plenty of good stimulating and milk-producing food, summer and winter. Heifers must come in young—my Jerseys do at two years—and be kept in milk ten months with their first calf, that the milking organization may be kept in full play for as long a period as possible.

SERVICE OF COWS.—It may not be possible to force nature into any particular channel, but the experience of breeders has settled upon the practice of taking advantage of the *first period* of the cow's heat—not always the first coming in heat—to insure the getting of a heifer. It is noted that when a bull runs with the herd, there are more heifers than of the other sex, owing to the copulation at the *earliest moment of the heat*. Cows should not, as a general rule, be served the first time they come round after calving, but be put off until they are again in season, as they are more likely to stand the service and less likely to be injured. After service tie or shut up the cow and do not let her mix with the herd for twenty-four hours.

CALVES.—After the calf has been with the dam a couple of days, if there is no sign of garget in the bag of the latter, teach it to feed from the pail and to be led familiarly with the halter. If the dam's bag is hard and will not yield to the hand-rubbing, let the calf in to suck and bunt three times a day until the hardness is removed, stripping the teats well after each nursing.

BULL CALVES reared at the pail, at a year old will show a finer head and dewlap than if allowed to nurse, as in the latter performance they are obliged to hold their heads down and necks stretched out so as to occasion too much loose skin. They should have good milk every day until turned to grass, and at a year old have a ring in the nose. A calf of either sex will take, from the first to the third week, four to six quarts of milk daily; from the third to the sixth week, six to eight quarts; from the sixth to the eigth week, 10 to 12 quarts. Keep before them in a little box which they cannot tread in, some wheat bran and give them access to a little fine hay after they are a month old. A mixture of wheat bran, ground oats and oil meal, allowing a couple of quarts a day to each calf, is excellent food for the youngsters as they grow, and will assist in weaning them from the milk when that is needed for other purposes, or keep them in condition when skimmed milk is substituted for fresh, as it is on most dairy farms after three or four weeks. No matter how fine the breed is, the calf must be raised on rich, nourishing food to develop its milking qualities as well as its growth, and an animal stinted during its first year in its natural food, seldom recovers. Cleanliness is of the first importance and freedom from vermin. I see now before me a cow of the best pedigree and the richest of milkers, which has never developed in size and form and has remained weak and poor because whilst a growing heifer, she was neglected, and the lice and dirt allowed by a careless stableman to overrun her. Salt in a small quantity once a day is better for all the animals than large quantities less often, and a little sulphur mixed with it—say one-half to three-quarters of a pound to each cow during the winter—will do them good, and sulphur well rubbed through the hair will keep off the lice from cleanly herds when the cows are well fed, bedded and carded.

BEFORE CALVING.—Heifers fed for three months before calving with a little oil meal *in addition* to their other fodder, acquire, it is said, a larger development of the milk vessels and yield more milk afterwards than if fed as usual. The general practice among farmers and some breeders is to feed high up to the moment of calving, but I have found this a dangerous practice with *Jerseys*, having lost several fine cows in too good condition, from puerperal fever, and I consider it safest to withdraw, at least two weeks before the parturition, all food except hay, and a little oats or roots.

BREEDING FOR THE BEST RESULTS.—The best females should be used as well as the best males, and especially in the case of in-and-in breeding, which is only allowable in case no other sires of equal excellence are to be had and the breeder is striving to attain certain uniformity of excellence. The best male, in reference to the particular case, may not be the best animal of the stock from which it is desired to purchase, because he should pre-eminently possess points which will either improve or sustain those of the females which he is to serve. The properties which a male should possess are relative, not absolute—for absolutely good points should be possessed by the female. The least defect in the female, from accident or inherent weakness, should be the instant signal for her removal from the herd.

THE AIM OF THE BREEDER is that the stock shall possess fine symmetry—shape, as it is commonly called—robust constitution, a disposition to attain early maturity, which insures good quality of flesh, and, in milch cows, deep-milking qualities.

SELECTION OF BULL.—He should be of moderate size, coupled with as much fineness of bone and limb as is consistent with vigor and energy, together with fullness of carcass and ripeness of points. In addition to these, let him be of as *pure blood and of as long ancestry as possible, and for the dairy, of the best milk or butter stock.*

Tokun Farm, Lenox, Mass.

MEAT OR FAT?—There is a general agitation in the live stock papers looking to the production of beeves, sheep and hogs yielding a fine quality of marbled meat rather than huge masses of indigestible fat. The present tendency of fat-stock shows is decidedly favorable to the rearing of animals of less service to the table than to the lard-rendering industry.

Dairy Husbandry.

CENTRIFUGAL CREAMING.

At the late Dairy Fair there were on exhibition two machines for separating the cream from milk by centrifugal force. Only one was in operation, and it did such good work that the Messrs. Whitman and Burrell took it home with them to try it in actual work in the dairy.

The president of the International Dairy Fair, Mr. F. B. Thurber, furnished me the following statement of a trial of one of these machines at the dairy fair in England, at which he was in attendance last summer:—

"Memorandum of results obtained in a competitive trial between the Laval Cream Separator and setting milk in pans, at the Dairy Show of the British Dairy Farm Association, London, October, 1879:—

"Sixty gallons of milk were divided into two equal portions of 30 gallons each. One portion was placed in the separator, and the product churned at a temperature of 56 degrees, yielded 16 pounds 7 ounces of butter; the other portion was set in pans 12 hours, and then skimmed; left another 12 hours and skimmed again; the product was then churned at 56 degrees, and yielded 18 pounds 13 ounces of butter.

"The skimmed milk by both processes was then set in pans 24 hours; that from the separator yielded 17 ounces additional cream; that from the ordinary method of setting yielded 38 ounces additional cream. To complete the test a bottle of each skimmed milk was taken by Dr. Voeleker, Consulting Chemist of the Royal Agricultural Society, to ascertain what amount of fatty matter still existed in the skimmed milk; this result had not been completed or announced when I left."

While the above statement makes out a case in favor of shallow setting, yet, if the figures be true, I will venture the prediction that in less than three years centrifugal cream separators will be as common in farm-houses as sewing machines now are. To my notion, however, there is some mistake in the make-up of this statement. Just to think of it: the shallow pans and the machine required but about fifteen and sixteen pounds of milk each to make a pound of butter, and they probably used city milk, which every one is willing to swear is at least one-third water from the pump. And then there was much cream left by both processes, as afterwards proven. The closest work I ever did with milk was in a competitive trial between deep, cold and shallow setting, in Chautauqua county. There we used native cow's milk. The former method required 21.51-100 pounds and the latter 21.53-100 pounds of milk to one of butter, and nothing but a chemical analysis of that skimmed milk would ever have found a particle of cream.

In my opinion, whoever gave Mr. Thurber that statement made the mistake of dividing those 60 gallons of milk between them instead of giving each process 60 gallons. From my practical knowledge of cream separating I am quite positive that, considering the quality of milk probably handled and the amount of cream left in the skimmed milk, the two processes required just about double the amount of milk to make a pound of butter that this statement credits them with having used. I hope the English exchanges of the RURAL NEW-YORKER will correct this statement, if in making it I am mistaken. L. S. HARDIN.

STRAINING MILK.

I have seen at dairy fairs many devices for straining milk—one with a pyramid of very finely woven wire in the center of the strainer rising about three inches above the bottom. The theory upon which this is expected to work is that the milk pouring upon the apex of the pyramid, would wash the sides so that the milk could pass through. This same principle was in another invention applied more simply by inserting the same wire gauge over holes in the sides of the old-fashioned circular strainers.

The great trouble with all these wire strainers is, that if they are fine enough to stop cow hairs from passing through, they are then so very fine that the thick portions of rich milk soon clog the whole strainer up and create great delay in straining the milk at the stable. Every practical dairyman knows what harm it does cows for the milkmen to take a long time in finishing them up. There should be no stopping from the time the first cow is touched until the whole herd is finished, and it should all be done in as short a time as is consistent with clean, thorough milking. Men should not be allowed, much less required, to delay at the receiving can. Wire strainers, if fine enough to be of any real service, are sure to do this.

The best plan is to have a strainer large enough to hold a full bucket of milk, placed upon the receiving can. This strainer should have one thickness of linen and one of cotton cloth on it, the former above the latter. In this way and this way only can milk be properly and expeditiously strained at the stable. With this plan the man when through with a cow, walks to the receiving can, pours in his bucket of milk and passes on to the next cow. The bottom of the large strainer should be as large as the receiving can will admit. L. S. H.

A MOVEMENT LOOKING TO BETTER PRICES FOR MILK.

A meeting of the milk-producers of Orange, Sullivan and Sussex counties, N. Y., was held at Middletown, on the 6th inst., to form an organization for mutual protection, and to obtain better prices for milk. More than 250 delegates attended, representing most of the important stations in the three counties. Reports from the various stations show that farmers generally would be glad to accept two, three and four cents a quart respectively for each four months of the year, while some preferred two and one-half and three and one-half cents for each six months. Many of the reports state that the farmers are willing to bind themselves not to sell for less than two, three and four cents. No action was taken on the reports, as it was determined that the first business should be to form an organization. The following committee to draft a plan for an organization was appointed: For the Erie Road and its Branches—Henry M. Howell, of Middletown; Joseph W. Youngs, of Oxford; J. E. Wells, of Chester, and Charles F. Johnston, of Goshen. For the New Jersey Midland—J. W. McCoy, of Deckertown, N. J., and G. W. Cook, of Slate Hill, Orange County. For the New York Midland—James D. Gray, of Parksville, Sullivan County. For the Sussex Railroad—Samuel Warbassa, of Branchville, N. J. The committee will meet at Middletown on Jan. 13th, and report to a mass-meeting of the farmers of the three counties to be held there on Jan. 20.

The members of the committee are nearly all in favor of selling all the milk on the platform at Jersey City, from day to day, for cash and for what it will bring, and will probably recommend an organization looking toward this as an ultimate result. This would prevent heavy losses on milk bills by reason of irresponsible dealers, and would save large losses of cans as well as collectors' fees. The committee thinks some intermediate plan must be adopted to improve the present condition of the business and to encourage timid farmers to risk the more radical change of daily platform sales.

Most of the farmers in the three counties are receiving only three cents for winter milk. The feed to produce this costs nearly all they get for the milk, and little is left for income on capital, depreciation of stock and the labor involved. Association creameries are being built or projected at different points along the Erie road, to work up the surplus milk into cheese or butter.

FEEDING COWS FOR BUTTER.—As regards the proper feed for cows so as to make them give milk that will produce butter with a good, rich color, I must differ from a late correspondent of the RURAL. He says that corn-stalks produce butter of a very white color. Now since I commenced stabling my cows—about the middle of October—I have given them corn-stalks twice a day, mornings and nights; at noon I feed them a little wheat straw, which I use as bedding after they have picked it over; yet my butter has a very rich color. Give me plenty of corn-stalks, oats and ground corn—three of oats to one of corn—a little bright hay—clover, timothy or quack (quack I prefer if cut and cured properly)—and if your correspondent can beat the color of my butter he will have to mention a different kind of feed to do it with. To make butter come quickly, I have never either seen or heard of anything better than ground oats as a feed for the cows. Never before has butter come so soon with us as during the past two winters, during one of which we fed the cows with ground, and during the other with unground oats. T. A. D.

Kirkville, N. Y.

The Poultry Yard.

ARTIFICIAL INCUBATION.

HENRY HALES.

Nature is generally slow and sure in her methods of reprodnction; man tries to be a little faster. He has domesticated poultry, and by care, selection and good feeding, he has brought hens to lay more eggs than they can possibly hatch themselves, furnishing him with a supply of food not to be excelled. But sometimes chickens are wanted more than eggs, and man's ingenuity has been taxed to find out how to turn those eggs into chicks without the aid of that fickle, fussy bundle of flesh and feathers called a sitting hen. The problem is not a new one—it is as old as the pyramids themselves; but the Egyptians had a climate that did half the work. With us the qnestion is how to hatch and rear chicks at a time when the climate is very trying—early spring—so that chicks hatched at that time are nearly ready for the gridiron by the time others are beginning to pipe under their natnral mothers, or so that, if intended for show birds, they may be well developed in the following fall.

In comparing the advantages between natural and artificial incubation we must take into consideration the preparation, time and cost of each. In the former there is the cost of sitting hens, feeding them, the place they occupy, and the labor in caring for them during the period of incubation. Those who have had any experience in the latter performance know well the patience required for regulating their unruly, capricious perversities; for of all things domesticated, nothing is more provoking than an intractable sitting hen, shifting from one nest to another, staying off too long, or, if you shut her down, when yon peep in you will find her as the Dutchman did, sitting "standing up." Who in looking after the sitters, has not experienced that "olfactory" treat of cleaning a fouled nest of broken eggs, generally caused by the blundering sitting hen? There is certainly no reason why vermin should be there, for a little care will prevent that, but it all takes *time*. After the hen has brought off her brood, in all natural history there is no more interesting sight, *if* she happens to be a good, sensible mother; but too many prove to be otherwise. Her very zeal endangers her offsprings as she dashes at every supposed enemy, or perhaps (which is very common), she drabbles her little ones through all kinds of weather, early and late, over wet grass or under a scorching sun; or, if cooped up, she keeps up such a continual scratching and jumping as to destroy the objects of her solicitude.

Then there is the calculation which only experience can decide as to the gain or loss in the health of chicks as raised naturally or artificially. Some assert that the latter escape the constitutional weakness and parasitic tendency of the hen, owing to the improved, warmed, artificial mothers. This may be true, but certainly not unless great care is given to the warming, cleansing, etc. Many evils are certainly avoided with the new mothers, but with delicate breeds, or, I should say, with all except the hardy Asiatics, the natural warmth of the mother is a great desideratum.

In deciding about the use of incubators, the first considerations are:—the outlay for machine and artificial mothers; the space occupied by them; the outlay of oil for warming and of time in attending them; the percentage of chickens raised at a given price, at a certain time when the services of mothers would be dispensed with; and the sound, healthy constitution of the offsprings. Upon the results of these considerations will depend the relative advantage of natural and artificial hatching.

"GOOD LUCK" IN POULTRY KEEPING.

"You've had prime good luck with your chickens, ha'n't ye?" I was so busy cleaning my hen house that I hardly noticed the coming of the neighbor from whom the voice came. Now, I looked up. "Yes," I said, "first-rate luck; raised every chick that left the shell." "Wall," he replied, "that's jest the way, some folks always do seem to have luck, but I never did. Hens lay any?" "Yes," I replied, "my pullets are laying from four to six eggs a day." "Only see!" he said, "I must have your breed of fowls." "All right," I replied, "but you must also get a comfortable place for your hens, and give them the same care and management that mine get, and then I think your hens will lay as well."

As he walked away I fell to cleaning the room again, and to thinking wherein my "luck" consisted. In the first place, I had the "good luck" to have clean, comfortable coops for my chickens; second, I had the "good luck" to see to it that they were fed regularly with corn-meal buckwheat and oats and corn ground together; and, thirdly, I had the "good luck" to furnish them with clean, pure water, and safe quarters for the night, secure from prowling skunks or marauding rats. The fact is that most of the "good luck" in chicken raising is simply the result of good management and careful, persistent industry. JOHN H. SEVERSON.

Albany Co., N. Y.

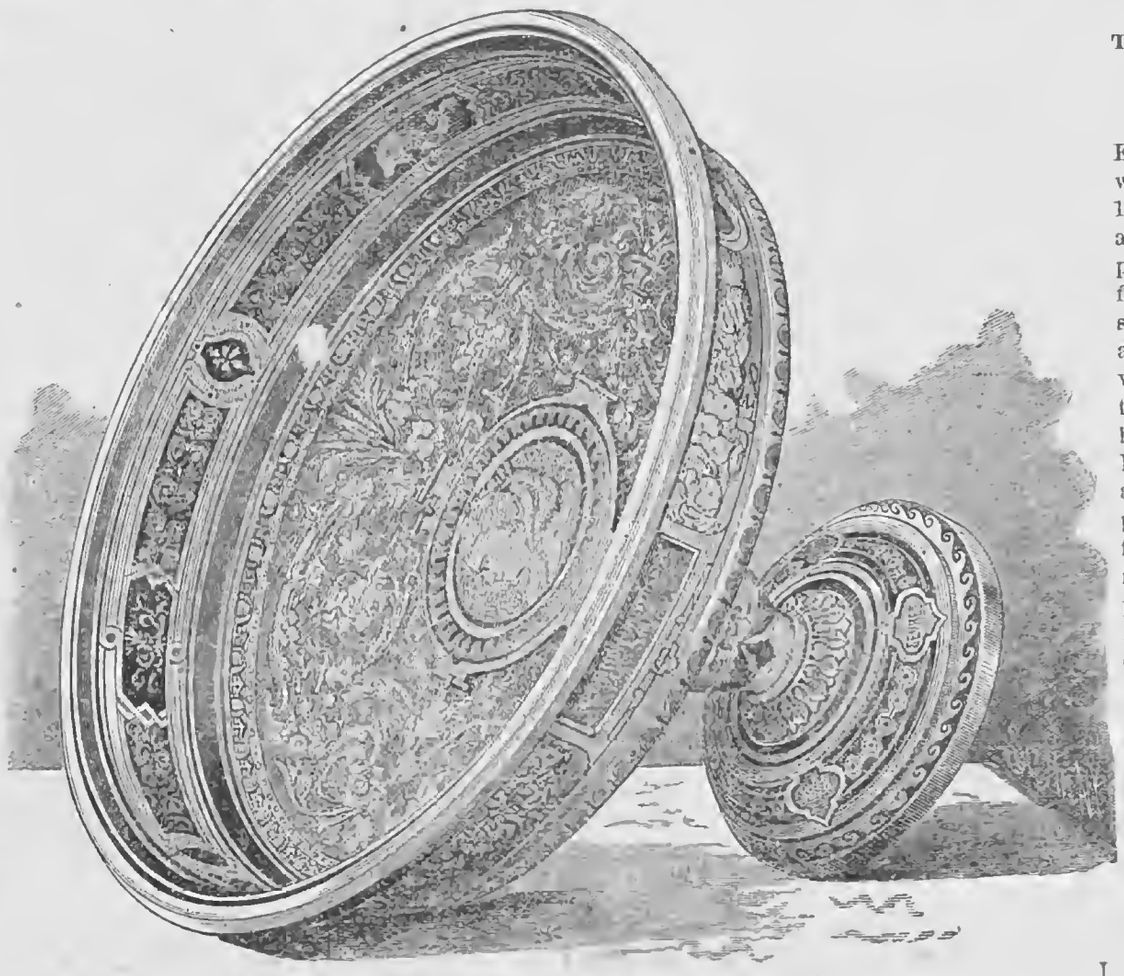
The Apiarian.

INTRODUCTION OF CYPRIAN BEES.

There has been much curiosity manifested of late as to the value of Cyprian bees for our American apiaries. The Italian bee, it is true, has met with universal favor, and by general consent has been pronounced superior to any other known race. But it is not in the nature of American bee-keepers to let well enough alone. They must be progressing. With true Yankee spirit they are ever on the look-ont for something better, forever experimenting, perfecting, investigating. And a very commendable spirit it is. It is this characteristic that has already led them to produce the best hives, the best extractors, the best smokers, and the best bee-literature in the world, and still the cry is onward. Cyprian bees are said to be on trial in one or two apiaries in the country already, but there is a shadow of doubt as to their purity, and to pronounce upon their value as compared with the Italians might therefore be premature.

There are now good prospects, however, that this question will soon be settled. Mr. D. A. Jones, the noted bee-keeper of Beeton, Ontario, and Mr. Frank Benton, a recent graduate of Michigan Agricultural College, are about to embark for Cyprus, where, after having made themselves acquainted with the people, surrounding circumstances, etc., they intend to locate an apiary and breed bees for exportation to this country. Mr. Benton is to have charge of the apiary in Cyprus, and send the bees to Mr. Jones, who, in order to keep them pure, will continue their propagation on an island in Lake Huron, several miles from shore, where there is no possibility of their mixing with any other bees. This plan seems to be the only one whereby bees can be imported direct from Cyprus, as the good folk of that island refuse to sell their bees to strangers; they have a superstition that it is unfortunate to do so. If a few colonies of Cyprians were first to be brought to some place in Italy or Germany, and then bred for further exportation to this country, grave doubts of their purity might well be entertained. To the casual observer there is but little difference in appearance between Cyprian and Italian bees, but on turning them over, the Cyprians are found to be bright yellow on the under side of the body, which the Italians are not. Professor A. J. Cook, of Michigan, has also made some careful measurements of the tongues of the two races, and at a recent visit to this office the Professor stated that he had found a remarkable uniformity in the length of the tongues of Italians, all measuring 25 hundredths of an inch, while the tongues of Cyprian bees varied greatly, some measuring 26 hundredths and others only 24 hundredths of an inch. This circumstance led him to doubt that the bees were perfectly pure.

We hope that this effort to introduce Cyprian bees may not only prove a success to those who undertake it, but that the bees may prove a valuable acquisition to the rapidly expanding business of honey production.



JOHNSTON HARVESTER CO'S. PRIZE VASE.—FIG. 13.

Various.

CATALOGUES, ETC., RECEIVED.

THE Flowers and Ferns of the United States, by Thomas Meehan. Published by the American Natural History Publishing Co., Philadelphia, Penn.

We are now in receipt of parts 9, 10, 11, and 12 of Volume 1st, second series, and they strike us as even of more interest than any of their predecessors. It should be borne in mind that though each part is one of a comprehensive work, each part is in itself complete. We have no reason to suppose that the work is not meeting with an appreciation alike gratifying to its well-known editor and the publishers. We should be sorry if this were not so, because the work in all respects is one that should forcibly commend itself to every lover of the wild plants of our country. It is a work of great beauty—the botany is trustworthy; the colored plates are drawn from nature with remarkable accuracy, and the descriptions are written in an easy, plain manner that renders them interesting to the beginner as well as to the skillful botanist. Our words of praise are positive and we mean them so to be. There is not one of our readers who purchases this work that will ever reproach us for having so influenced him. The price is extremely low. Indeed it is this alone which makes us solicitous lest it may not meet with the extensive patronage which alone can secure its continued publication from year to year until the most important plants of our country shall have been drawn and described. Address all questions to the publishers who will answer promptly.

W. B. JONES, Herndon, Ga., Price-list of field and garden seeds. Besides many sorts of seeds adapted exclusively to a Southern climate, we notice seeds of Pearl (Cat-Ta'l) Millet offered (cleaned) at 15 cents per pound by the bushel; also Minnesota Early Amber cane seed—Dourra, &c. The Dourra, however, is not the variety of which we wrote a few weeks since, as we judge from the description. Price-list free to applicants.

WE have received a prospectus of the American Entomologist, a monthly to be edited by Chas. V. Riley assisted by A. S. Fuller. Professor Riley is competent to make this work of great service to all who are interested in Entomology. All business letters to be addressed to the publisher, Max Jaegerhuber, 323 Pearl St., New York city. Sample copies 20 cents—$2.00 per year.

PLANT SEED COMPANY, 812 and 814 North Fourth St., St. Louis, Mo. A large catalogue of 32 pages. Early Amber cane, all sorts of field seeds and roots—spring wheats, Clawson, Fultz, Red May, Diehl, fall wheats—Blount's White Prolific corn; flower and vegetable seeds generally. Sent free to applicants.

REPORT of the Commissioner of Fish and Fisheries for the year 1877. This volume of 981 pages is a valuable mine of information with regard to all questions relating to the finny tribes as food for the human family.

The Special Prize for Harvesters at the Paris Exposition of 1878.

AT every international Exposition held in Europe, American agricultural machinery has won high distinction, but at that of Paris in 1878, it achieved an overwhelming victory over all competitors. In no department was this superiority more manifest than in that of practical field trials, for exceptional merit in which twelve special prizes in the shape of twelve objects of art—Sèvres vases—were offered. Of these seven were won by Americans, one by a French exhibitor of an American machine, two by French exhibitors of home-made machines, one by an English exhibitor, and the twelfth was not awarded, as no sufficiently meritorious competitor appeared for it. Although it is doubtful whether any field trial excelled that of reapers in importance, only one of the dozen prizes was offered for that class of machines. As thirty-five of the best reapers in the world contended for this, the honor of bearing it away was all the more distinguished. This honor fell to the lot of the Johnston Harvester Company, of Brockton, N. Y., who have lately received the splendid prize represented in the accompanying engraving.

The vase is of tazza form, ten inches high, the bowl being three inches deep and fourteen and a half inches wide across the top. The prevailing color outside is blue and gold; inside are panels of scroll work, tritons and trefoils, with a circular band in gold. The center is ornamented by a raised medallion emblematic of the city of Paris—a female head with a battlemented mural crown. The medallion is encircled with scrolls, rosettes, fruits, wheat ears and other agricultural symbols. Outside around the body of the vase is a wreath of flowers, fruits and grain, with a spiral pink band bearing the legend "Exposition Universelle, Paris, 1878." The pillar is blue and gold highly ornamented. Four panels in a circular band on the foot contain respectively the words "Sèvres," "Paris," "Exposition," "1878."

The money value of this unique work is about 1000 francs, but this is a mere nothing as compared to its worth as a lasting testimonial of the practical excellence of the machine that won it from so many able rivals in a contest to which the attention of the agricultural world was directed.

American Butter Color at the London Dairy Show.

It was my honor and pleasure, as steward of butter and cheese implements, to have charge of the collection of American utensils exhibited at our late show in London, in conjunction with my friend Prof. J. P. Sheldon.

I must thank Wells, Richardson & Co. for the liberal gift of samples of their Perfected Butter Color which I have spread over a great area for trial—some going to South America, a sample to Russia, another to Norway, etc. I brought to my home some small and large bottles giving the former to friends who are thoroughly in love with it. I have always objected to ordinary annatto preparations, because they give an unnatural reddish tint, whereas properly colored butter, however large the amount of color used, should be a clear yellow. The nearer we can approach the color of Australian or pale gold, the more natural is the color and the better pleased is the consumer. Our people demand color, but they do not like unnatural tints.

Now, so far as I can judge by a few practical experiments, I have never met with any color equal to the Perfected Butter Color and I congratulate Wells, Richardson & Co. upon their success in its production. I believe there is a good opening for it in England, and that it may be got into use in Denmark, Sweden, Norway, Germany, and France where, as doubtless you know, they have an immense trade in butter. JOHN OLIVE.

London, Eng.

Everywhere.

RURAL SPECIAL REPORTS.

KENTUCKY, Milton, Trimble Co., Jan. 3.—The RURAL has repeatedly expressed the opinion that the price of potatoes would rule low the present season. But the light crop in Kentucky, Indiana and Ohio induced me to believe the RURAL would be mistaken; and I refused 40 cents per bushel early in the season. But now, after paying 10 cents per bushel for cooperage, five cents per bushel for freight and 10 cents per bushel for drayage, storage and commission, I would gladly accept 50 cents per bushel. In other words, had I taken the RURAL'S advice, I would have been at least 15 cents per bushel better off to-day than I am. I am now holding my hogs upon the strength of the RURAL'S statement that the present depression in the price of hogs would be only temporary. We shall see. The thermometer went down to 15° above zero on Christmas Day, which was the coldest day of the season, so far. We have had but one snow, and that was barely enough to make a white instead of a green Christmas. S. E. H.

NORTH CAROLINA, Raleigh, January 6.—I have been quite familiar with "Cat Tail," or, as the RURAL calls it, "Pearl Millet," for the past twenty years, and can bear testimony to its value as a green food for cattle, and especially for milch cows. In these parts we have not used it as a dry food to any extent. I was quite successful with it the past summer, cutting it four times, and I think in an ordinary summer it might have been cut six times. We suffered from an excessively dry season, and hence the crop fell short. I should not hesitate to recommend it in this part of North Carolina, and think it will do better south of this; indeed I have seen it made profitable south, and if I am not in error, our first seed was brought to North Carolina from Charleston, S. C. I think the Doura, which by some is called Pearl Millet, would prove a valuable crop; but the birds play havoc with the seed, as they do with Cat Tail Millet seed, and a planter must purchase his seed every year or keep a "darkey" with musket and small shot to shoot or scare the birds away.

I read the Tea Plant article that lately appeared in the RURAL, with some interest, especially as I know a gentleman in this State who has for the past twenty years raised his own tea, and that of a fine quality, from seed planted by himself. The seed was sent out from the Department of Agriculture some twenty or twenty-five years ago.

I am glad to see Prof. Ledoux writes for the RURAL. I am one who thinks that our "Experiment Station" is a long step ahead for North Carolina, and sincerely believe we are already feeling its good effects. Your specimen of Cow Pea would do credit to us who raise them in perfection. The pea vine forage is equal to the best hay, if the vine is cut when the pod is just formed. It is, however, harder to cure than any other forage; but it pays for the trouble.

If your seedsmen who have "Pearl Millet," "Doura," or "Teosinte" seed for sale would advertise, we would know where to buy. I desire to try some of each to test them, but do not know where to find the seed. P.

N. Y., Crumb Hill, Madison Co., Jan. 6. Corn was about half a crop here; oats were good; potatoes fine both in quantity and quality; fruit light and it rots in the cellars badly. We have had a large quantity of snow, but little remains now. It was a good fall for fall work of all kinds. L. P. N.

OHIO, Mt. Vernon, Knox Co., Jan. 3.—We have had very cold weather here this winter, the thermometer standing a good part of the time at from 5° to 8° below zero. The winds have been very cold; the trees are covered with ice from sleet; but there is very little snow. The prospects for ice are so far poor, as the waters are high and ice cannot form. I have mulched my winter spinach with bean vines which I find to be the best covering. They are not too warm or close, catch what snow there is and can be easily removed. Potatoes are still very low; No. 1 stock 30c. per bushel. Corn is King here this season, bringing 50c. at the crib by the 100 bushels. Wheat sells at $1.25; oats, 30c.; beans, $1.40; onions, $1.75 and scarce at that. Real estate is on the rise, and that is a good sign. Good farms cannot be had here close to the town, under $100 per acre. Our farmers are beginning to be alive to the advantages of tile drains. M. W.

OHIO, Hillsboro, Highland Co., January 8. We have had an open winter thus far. There have been a few cold snaps only last week, the severest being when the mercury stood 6 degrees above zero; to-day it stands at 54 degrees, and we are having plenty of rain. The mud-roads are in a worse condition than they have been for three years. Corn was less than an average crop and is now worth 40 cents. Early potatoes were a short crop; worth 50c. Peachblows were a good crop, worth 20@25c. Oats were good, worth 30c. per bushel; wheat, $1.05; hay, $10.00 per ton. I don't think very much of the Pearl Millet; our season is not half long enough; of the Blount's corn we had about three-quarters of a bushel of ears—about the size of our common pop-corn, and stalks about 14 feet high. The Beauty of Hebron potatoes did well, considering the hot and dry weather we had when they were setting. J. & B.

O., Jerry City, Wood Co., Jan. 4. So far we have had a mild winter, with only two or three cold days, and but little snow. Wheat was injured considerably in the fall by dry weather and the fly. Pieces that escaped injury look splendid and have not been damaged by freezing as yet. A large acreage was sown, of which a small percentage will probably be plowed up in the spring for oats or corn. All kinds of stock are looking well, but should the winter prove a long one, rough, feed will be scarce except straw. There is a fair amount of grain in the country for this time of the year. We have a large quantity of fine timber principally Cottonwood, Sycamore, Oak, Elm and Ash. There are four stave factories in the county, that manufacture millions of staves every year. Money is "tolerably" abundant; prices for stock and produce "tolerably" good. Good work-horses are worth from $75 to $125; milch cows, $25; fat hogs, $1 per 100 lbs; cattle, $3; chickens, 4 cents per pound; turkeys, 5 cents; butter, 18 cents; eggs, 18 cents; wheat, $1.25; corn, 43 cents; oats, 30 cents; land $40 to $50 per acre. H. W.

PA., Poughtown, Chester Co., Jan. 5.—The weather was very fine here the past fall, so that a great deal of out-door work was done. Lately we had a good deal of rain so there is plenty of water in the rivers and springs. D. H.

VIRGINIA, New Market, Shenandoah Co., Jan., 4.—Times are better here than they have been for some time; this is owing to better prices for produce and a better prospect, for wheat etc., for next harvest. This is a grain-growing section. Wheat is just recovering from the long drought we had here. Some wheat has not come up yet. We did not have rain enough to settle the ground from the 15th of Sept. until the 6th of Dec. Since then showers have been seasonable, and grass and wheat have grown a great deal. We had very little rain from the time the corn was planted until it was matured, and consequently wells and springs in some parts of the country dried up. We did not have an average wheat crop, and not more than two-thirds of a corn crop: other grains in proportion. Plenty of garden truck. Farmers here feed their surplus corn mostly to cattle and hogs, and ship very little; freights are high here. Prices are:—beeves, 3½c. to 4½c. per pound; hogs, 3½ to 3¾c; chickens, live, 5c. to 6c; ducks, 20 to 25c. each; turkeys, 7 to 8c. lb gross; wheat, $1.35 to $1.37; corn, 50 to 53c; rye, 60 to 70c; oats, 40 to 42c; bacon, 7 to 9c. per lb; butter, 20c; eggs, 20c; lard, 5½ to 6c; clover-seed, 8 to 8½c; onions $1.00 to $1.25; flax-seed, $1.00 to $1.25; beans, white $1 80 to $1.90; mixed 75c. to $1.00; apples, 40 to 45c. We have had very little cold weather yet, just a slight skim of snow and sleet together a few weeks ago. We had a pretty heavy lot of icicles on the night of the 13th of Dec; they broke down a good many trees and tree-tops etc., but by evening of the 14th, nearly all the ice had disappeared. The coldest weather we had this winter was four deg. above zero. Corn is mostly husked and cribbed and the fodder is nearly all gathered. People predict a mild winter. We have good pasture yet. P. S. W.

The Querist.

ANSWERS TO CORRESPONDENTS.

Coarse or Fine Feed.

D. A. H., of Memno, Pa., asks the relative effect and value of coarse, medium and finely ground feed upon fattening cattle, remarking that some who were once in favor of the finest grinding, now prefer coarser ground feed.

ANS.—There will always be different opinions upon this question until feeders study the effect of concentrated and bulky foods upon the bovine stomach. Naturally cattle feed upon bulky grasses, and have four stomachs to manipulate this food. If you grind corn very fine and moisten the meal, it forms into a very solid mass of adhesive dough. In this state it goes in the stomach when fed alone, and forms a plastic bolus there. It is easy to see that the gastric juice cannot circulate freely through this adhesive mass, and can only work slowly upon the outside. Now, if the corn be merely cracked up into small granules, leaving small spaces between them, the gastric juice can circulate among these, and when they are fed alone it may therefore more perfectly digest the food in that form than when it is pulverized so as to form adhesive dough. Besides, the adhesive dough, lying in the stomach for some time undigested, will often produce a feverish and unhealthy state of the system. But again, if we look to the real object of grinding grain, we see that the benefit must be derived from the comparative fineness of the particles, the finest ones being most easily saturated with the digesting fluid, and therefore most easily digested. If you mix the most finely ground corn meal with cut hay or some bulky food, you will prevent it from forming a plastic dough. The fine particles of meal being separated by the cut hay, the food will go into the stomach in a loose, spongy state, and the gastric juice can now circulate through the whole mass, and digest these fine particles of meal with greater rapidity. The finer the meal, the more easily it is digested. The cut hay or straw should be first moistened so that the meal will adhere to it. If there is any true philosophy in grinding at all, this reason is good all the way down to the finest grinding that can be done without heating the meal. The fault is in feeding this very fine concentrated food alone. If our inquirer has not facilities for cutting hay, then the next best way is, to spread a thin layer of hay in the manger, sprinkle it with water and then sift on the fine meal; this will so adhere to the hay that the cattle must eat much of the latter with the meal and thus give bulk in the stomach.

These are a few of the principles concerned in this question; but we have not space to discuss all the incidental points. Suffice it to say, that the writer has found very fine meal to produce 20 per cent more milk when fed with cut hay, than when fed alone, in a carefully tried experiment; and this must be caused by a more perfect digestion of ground feed, and the same rule will apply to fattening cattle. If the concentrated food is to be fed alone (which never should be permitted), then it should be fed dry.

The Southern Cow Pea Once More.

W. O. Jr., Trappe, Md., desires us to answer the following questions: 1. How thick ought the peas to be sown at the last working of a corn crop, to be plowed under in October for winter wheat? 2. How would it do on light land to plow the wheat stubble the latter part of June or the first part of July and sow in peas; the latter to be turned under for wheat in October? What quantity should be used and how planted? 3. Is not the yellow pea the best for fertilizing purposes on thin land? 4. What quantity of lime should be used? Should it be applied before or after the vines are plowed under, or later with the drill when seeding the wheat. 5 How would it do to sow Bermuda grass and red clover with oats in spring in an orchard to secure a standing pasture after harvesting the oats? 6. What proportion of each per acre? How would herd's grass do to mix with them? 7. Where and at what price per bushel can the Bermuda grass be obtained?

ANSWER BY DR. A. R. LEDOUX.

We referred the questions to Dr. A. R. Ledoux; he answers them as follows: 1. Some farmers sow them broadcast before the last plowing of the corn. The plowing serves to cover the peas—a rather slovenly way but saving much time and work. A better way is to drop four or five peas three or four feet apart in a furrow run between the rows, and cover them with a block, small harrow, or in any other simple way. They then require little cultivation—at most a single plowing or light hoeing to keep down the weeds until the peas obtain a fair start. 2. That is a good plan often followed. Sow broadcast or, better, in drills, three or four feet apart. Cover with the harrow followed by a board. When four or five inches high give them one good plowing. An easy way is to sow in every fourth furrow when plowing the stubble. Plowing the succeeding furrows covers the peas. I consider cow-pea vines better than clover for turning under as a fertilizer for wheat. 3. The black pea is most esteemed for turning under, as it makes very much vine. The "Clay" pea is also very good. 4. From ten to fifty bushels of lime may be used per acre according to the soil. It is not always necessary, especially on light soils. It should be sown upon the vines before plowing them under. 5 and 6. Mixtures of Bermuda grass, blue grass, and *white* clover are often sown and give satisfaction. In warm climates the blue grass and clover afford pasturage during the greater part of the winter, while the Bermuda disappears, reappearing in spring. 7. Bermuda grass bears no seed in this country. It is propagated by setting out cuttings.

Some varieties of the Cow-pea not only "make little vine," but none at all. They form a bush and occupy little more space than bush beans.

Best Breed for Improving Texan Cattle, Etc.

A reader, Pleasanton, Texas, asks, 1, whether Durham and Short-horn cattle are the same; 2, what breed of bulls would be the best to cross on Texan cows for beef and milk; 3, from whom and at what price can he obtain heliotype copies of the great master painters.

ANS.—1. Yes. The race was known about a century ago as Durham or Teeswater cattle, and both names, especially the former, are sometimes applied to them still. Short-horn, however, is the more appropriate name for the modern, improved breed. 2 For beef and milk combined there is no breed that excels the Short-horn. A large proportion of those taken to Texas, however, have died before they could become acclimated, principally from "Texan fever." The survivors, too, are reported to have deteriorated considerably, and to have lost somewhat of their power of impressing their special characteristics on their progeny. This faculty is possessed by several other breeds more powerfully than by the Sort-horns under circumstances widely different from those under which the breeds were formed; inasmuch as some other breeds, such, for instance, as the Jersey and Devon, are of longer standing and less contaminated by outside blood. At an auction sale of an imported herd of Short-horns, that lately occurred at San Antonio, Texas, the prices were very low—lower than those often realized at the North. The reason assigned was that stockmen in that section did not find the improvements by the cross, of sufficient value to pay for the extra care needed to keep the new-comers in fair condition and to insure against the large percentage of loss among them. Yet by all accounts most of what improvement is being made in Texan cattle is due to just such crosses. The Polled Angus would be an excellent breed for improving the long-horned Texans, if there were any certainty that they could become acclimated without serious loss or deterioration. For beef *and* milk the polled Norfolk would be even better. For beef alone it would be hard to beat the Hereford, and as this is even a purer breed than the Short-horn, it should be able to stand better the difference in climate between Texas and England. Further experiments seem necessary to determine which breed of cattle is best fitted to improve the Texan herds; but at present, despite some drawbacks, the Short-horns are ahead. 3. Heliotypes of the best pictures by Millais, with portrait and descriptive letter-press, large 4to, $10. Houghton, Osgood & Co., 220 Devonshire St., Boston.

Another Humbug.

J. D. P. asks: 1, whether J. C. Boyd's miniature galvanic battery is what it claims to be.

ANS.—We have had half a dozen or more inquiries about this Boyd humbug, most of which we've answered by letter; but as it seems that the country is being flooded with circulars claiming marvelous merits for the little device, it becomes our duty to warn our readers that the thing is an arrant humbug. The fellows who try to palm such frauds off upon the rural population—and too often succeed in doing so—would never dream of trying the experiment on townsfolk, except, perhaps, among the ignorant masses in the lowest neighborhoods. It is the success such rascals meet with in country places that has been the chief cause of the low opinion entertained by many of bucolic intelligence. Isn't it time that country folks should learn that the receipt of a high-colored circular is a pretty certain proof that the object it puffs is a humbug or a swindle? Every week we come across accounts of successful frauds perpetrated in this way in one part of the country or another, and for one case that comes to light hundreds never become known to the public. This special humbug is a little metallic device about the size of half a dollar, about which the circulars—a number of which have been sent us—talk a farrago of quasi-scientific nonsense. Very earnestly would we urge it upon our readers never to invest a cent in any device, speculation or enterprise which is brought to their notice by fulsome circulars or glowing descriptions in newspapers that do not even profess to discriminate in the advertisements admitted to their columns. If any of our friends should feel greatly tempted to make any such investment, let him at least wait until he has consulted us with regard to it. We promise a speedy answer and an honest one, and there isn't the slightest danger that the opportunity for being swindled will come too late after the receipt of our answer, however loud the swindler may shout "This is the last—the very last—chance."

Bone Spavin.

R. C. R., Colfax, N. C., asks, whether the following recipe will cure bone spavin of two or three years' standing:—"Corrosive sublimate, quicksilver, and iodine, of each one ounce, with lard sufficient to form a paste: apply as much as will lie on a three-cent piece, each morning for four mornings only." He also asks for any practical information on the nature and treatment of spavin.

ANS.—The recipe is good, but we doubt if it will cure a bone spavin of two or three years' standing. Applied when the disease first shows itself it might arrest it. Applying a hot iron to the part is a more active absorbent, and would be more likely to arrest the leakage from the joint. Such leakage, which produces the spavin, is caused by a strain which may be produced by bad shoeing (not keeping the foot level), by slipping, or by too severe work. A

spavin is an effort of nature to throw out bone to strengthen the joint. This bone causes the joint to become stiff and sore. Any ointment which will abate the inflamation or promote absorption is good. In all cases the animal should have absolute rest. Caustic applications have sometimes produced cures, but the safest and surest is firing, followed by softening and mollifying liniments, which will soothe the parts and stimulate the ligaments. Thorough rubbing is also good.

Remedies for Lice on Calves.

A Subscriber, Newmarket, N. J., asks for a remedy for lice on calves.

ANS.—A very simple one was given in last issue—rub dirt or sand well in among the vermin. A correspondent in the RURAL of Feb. 6, 1878, says he found plaster ground very fine and dusted on the backs of the animals, an effective exterminator. It should be thoroughly dried on the stove before application. Washing the infested parts of the animal with strong suds of carbolic soap, is certain death to all pestiferous vermin. Carbolic crystals can be bought at any drug store at from eight to ten cents an ounce at most. To one pound of common bar soap placed in a pan with some water, and melted down, add one ounce of the crystals, stirring well; and from the mixture make suds which will be cheaper than that made from prepared carbolic soap and at least as efficacious. Two or three applications at least, of any remedy, are needed, as the nits keep on hatching. The stable surroundings of the infested animals should also be thoroughly washed, as the vermin often harbor there and thence find their way to the bodies of clean animals. There is a host of other remedies, more or less efficacious, but a good washing with carbolic suds is hard to beat.

Punch and Judy.

A. P. R., asks what is the origin of the puppet show of the above name.

ANS.—The exhibition is of Italian origin, its Italian name being Policinella or Pulcinella which is said to have been derived from Puccio d'Aniello, a buffoon of Acerra, near Naples, whose humorous eccentricities in the 17th century were transferred to the Neapolitan stage. Another theory derives its name from *pollice*, the thumb, a name of dwarfs in several languages. The modern drama of "Punch," so commonly exhibited in the streets of European cities to the huge delight of crowds of children, and sometimes seen here, is supposed to have been composed by Silvio Fiorello, an Italian comedian, about 1600. It embodies a domestic tragedy followed by a supernatural retribution, the whole of which is treated in a broadly farcical manner. Punch is a short obese personage, with a grotesquely enormous hump on his back and wide mouth, long chin and hooked nose, and wearing a three-pointed cap. His wife, Judy, and his dog, Toby, are, so far as the names are concerned, of Anglo-Saxon origin, as is much of the cudgel brutality of wifely castigation.

The Audiphone.

C. C., Damascus, Pa., and several others ask information from those who have actually tested it, about the Audiphone, lately invented by Mr. Rhoades, of Chicago, and described some weeks since in the RURAL.

ANS.—For the last week or two we have had one of these devices here, and have tested it on two very deaf people, neither of whom has been benefited by it; yet when a person with hearing powers unimpaired, closes his ears so as to shut out ordinary sounds, he can hear quite well by means of the Audiphone. It would be unfair, therefore, with our present knowledge of it, and in view of the high claims put forth in its behalf, to say anything definite as to its merits. By next week or at most the week after, we expect to have tested it so fully in many cases, as to be able to speak decisively on the matter, and until then we would advise any of our friends who may be thinking of buying one, to await the results of our investigations.

Bermuda Grass.

F E. H., Granite, Col., referring to a late query and answer on the above grass, in the RURAL, says that from the description therein given of it, he is satisfied it is just the grass he wants; but he wishes further information; 1, does the top after dying down in winter grow again in spring? 2, will it bear irrigating? 3, where can the seed be obtained for trial?

ANS.—1, Yes. 2, Yes. 3, Seeds cannot be obtained. It does not bear seeds in this country. Mr. J. B. Killebrew states that it grows luxuriantly on the top of Lookout Mountain, having been set there many years ago. This mountain is 2,200 feet high. It must be propagated by cuttings of the roots, which may be dropped in furrows three feet apart.

Wood Ashes.

J. E P., Hornellsville, N. Y, asks, the value of pine and hemlock ashes as compared with hard-wood ashes, and how much one can afford to give for ashes for potatoes when the latter are worth 25 to 35 cents per bushel

ANS. The ashes of soft timber, as pine and hemlock, while they are light and small in quantity, are rich in the valuable ingredients. Pine gives but 5½ pounds of ash per cord. Hemlock gives about 6 pounds to the cord. Yet these ashes contain 15 per cent. of potash; the full contents are as follows:

	Pine.	Hemlock.	
Potash	15.3	15.3	per cent.
Soda	9.9	7.7	"
Magnesia	5.9	24.5	"
Lime	50.1	27.1	"
Phosphoric Acid	3.0	1.7	"
Sulphuric Acid	3.0	1.7	"
Silica	6.0	3.9	"
Chlorine	0.2	0.6	"

Pine ashes are therefore worth 96 cents a bushel of 80 pounds at the rate of 6 cents a pound for potash and phosphoric acid.

Black Teeth in Swine.

J. S., Mahoning, O., asks for the cause and a remedy for black teeth in swine.

ANS.—Black teeth is an effect and not a cause of poor condition consequent on indigestion. In the course of this disease acrid secretions corrode the enamel and blacken the teeth Of course, the pig cannot thrive, hence a superficial judgment pronounces the effect which is most apparent to be the cause of the trouble. The teeth are injured, and probably cause irritation or pain, and should be removed with pincers and not a punch. The pig should then get a dose of physic, or such treatment as would restore the digestive functions.

Miscellaneous.

O. C. D., Wellville, Va., has a field of winter wheat sown on rather poor land; owing to pressure of other work, he had no time to manure it before sowing, and he asks, whether a top-dressing of muck and lime would be beneficial; 2, should the muck and lime stand a considerable time after having been mixed, before being used; 3, what would be the proper time to make the application—the land is rather a light sandy loam and the wheat was plowed in.

ANS. 1. We do not think the top-dressing of muck and lime would appreciably affect the present crop. A spread of short manure now, or of superphosphate (250 bushels to the acre) in the early spring, would be preferable. 2, Yes. 3, Spring or fall—we do not know that it matters much which. You do not state what you intend to raise after the wheat.

A Subscriber, (address mislaid) sends us a pinkish stone and wants to know what it is and what it is good for. He has seen large masses of it in Mexico.

ANS.—It is gypsum, or plaster stone. Chemically it is a sulphate of lime combined with two equivalents of water. Its uses in the arts are manifold. Ground to a powder, it is applied to the land as a fertilizer. When the water is driven off, it forms the well known plaster-of-Paris used for forming casts, as a cement, etc. Mixed with other substances, as alum, borax, sulphate of potash, etc., various compositions are formed that are of more or less importance in the arts.

A. B., Oakland Co., Mich., having seen in the engraving of the Rural Grounds, in our Fair Number, that a rustic fence incloses them, asks how it is made, of what material, if it is painted and whether it is durable.

ANS.—The fence is made of red cedar, with the bark left upon it. The posts were tarred seven years ago when the fence was built. They are yet as sound as ever apparently. The cross-pieces are merely beveled or cut out with an axe or saw so as to make them conform in appearance with each other or with the posts. The work is very simple. Of course, no paint is used. We consider it very durable.

T. S. B. asks where a bran thrasher is manufactured in the Eastern States.

ANS.—Machines are made for *scouring*, that is, removing every particle of flour or middlings from bran, which is what we suppose you refer to. These are called bran "dusters," or scourers, and not thrashers. They are made by those who supply gri-t-mill machinery. A popular machine of this kind in the Eastern States is made by Huntley & Co., Silver Creek, N. Y. Write to them for information on the other points inquired about.

P. P. S., Cornwallis, Oregon, sends a beetle and asks for its name.

ANS. The beetle belongs to the family Cerambycidæ and the genus Prionus. The species has not yet been named, as far as we know, though it is closely related to Prionus brevicornis. The fauna of the Pacific slope has not been thoroughly studied up; there are still many species which are new to science. To classify and name these would be an excellent opportunity for some enterprising entomologist to make himself famous.

J. C. C., Emporium, Pa., asks whether there is any means of detecting the presence of lead ore, in the same way that the presence of iron is indicated by the magnet.

ANS.—We have never heard of any such means; nor can our inquiries and investigation discover any; nor do we believe that any exists.

H. M. T., Paris, Ark., asks, where can he get a couple of vines of the Duchess grape, remarking that he cannot afford much of a vineyard, but that he wants a few choice vines for home comfort.

ANS. The Duchess, as remarked here more than once within the last couple of months, can be had of J. T. Lovett, Little Silver, N. J. This is a new variety, and we cannot advise our correspondent to invest in "novelties", however highly we may think of them. Any one who enjoys good health is never too old or too poor to plant a few good Grape-vines, if he can spare the ground.

H. W. H., Nobscot, Mass., asks: 1, whether the "History of a Poor Farm," as published during the past year in the RURAL, is a true story; 2, whether Cow Peas would be the best fodder to sow for winter feed for sheep; 3, if so, where can they be procured.

ANS.—1. It *is* essentially true. The writer owns a poor farm and is working it up as described. 2. Perhaps not. Experiments are needed to test the value of Cow Peas in the North. 3. We shall distribute them free. We learn that some of our seedsmen propose to offer them.

J. H. G., Independence, Ia., asks as to the economy of cooking food for hogs and steers.

ANS. This query is answered at large by Prof. E. W. Stewart under "Herdsman"; our friend will apply the general information therein contained to his own special circumstances.

W. N. N., Hermitage, Mo., sends a mineral which he desires us to name, and he wants also to know if it contains silver.

ANS.—The mineral is sulphide of lead (PbS.), commonly called galena. It does not contain silver.

S. W., St. Clara, W. Va., is informed that the Chester Mammoth Corn is a yellow variety.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JAN. 10th.

C. G,—A. C. H.—C. C.—T. A. E.—J. L.—P. R. H.—L J. G.—M. W.—J. S. W.—A. B. A.—J. H. P. S.—W. C. H.—I. S.—R. H. S.—N. A. H.—J. W. T.—J. W.—R. G.—O. W. H.—A. R. L, thanks.—W. J. B.—A. C. S.—E. A. W.—H. A.—E. W. S.—N. J. C.—J. D. W.—J. A. W., thanks.—K. R.—N T. L.—W. O.—M. L. S.—K. T.—H. Y.—G. L. R.—T. H.—S. R. W.—T. O.—M. R. N.—B. D.—S. T. M.

Miscellaneous.

WHAT OTHERS SAY.

COTTON IN CALIFORNIA. "In 1870, the first year that any cotton was grown in the State, 34 bales were produced," says the good Pacific Rural Press. "Since then the production has been irregular—one season it reached nearly 300,000 pounds while last year it was but 163,000 pounds. Most of the cotton received here is grown on the banks of the Merced, near Hopeton, although it has been raised successfully on the King's River and other points in the San Joaquin valley, as well as in Los Angeles county. There is a large area of land in the southern section of the State especially suited for the cultivation of cotton, and whenever the time arrives that proper inducements are offered in the way of manufacturing advantages and the cultivation shall be carried on understandingly, California may reckon cotton as one of her staple productions. Heretofore there has been little encouragement held out to those desiring to engage in its cultivation—the demand has been irregular and the want of care in preparing the land and caring for the plant as well as picking and placing it in the market, has not had the effect of improving the standard quality of the production. California ranks with New Orleans middlings in the market; the staple is rather short, but the color is superior, and if the same care was taken as in the choice of seed and selection of fruits and cereals, there is little doubt that it would take a high place in the estimation of manufacturers."

HOW TO REMOVE BEE GLUE FROM THE HANDS Dr. A. B. Mason writes as follows in the American Bee Journal:—"I had been examining all my hives and my hands were pretty badly smeared with the glue. My next job was some repairs in, and whitewashing my hen house. When washing my hands to remove the lime, I noticed they became quite yellow, as did the water I was washing in, and I did not understand what caused it, but I soon discovered that the bee glue was nearly all gone from my hands. Since then I keep some slaked lime ready for use during the season when handling bees. I moisten the places that I wish to cleanse and rub with the wet lime till the propolis is removed. If I use much lime, I then moisten my hands with vinegar. This is much cheaper than alcohol, and as I am sometimes called from work among the bees, to work at some one's mouth, I am not annoying my patients with the fumes of turpentine."

A HANDSOME COMPLIMENT is paid to us by the current number of the Center Democrat of Bellefonte, Pa.: "As a country-home journal no one within our knowledge better deserves a place at every fireside than the old RURAL NEW-YORKER. It is original, independent and conscientious to the highest degree, and in all respects worthy the entire confidence of its readers. The able management of Mr. Moore, its founder, has been succeeded by one much more able. Forms and precedence, so far as they interfered with the entire independence and rapid progress of the paper, have been discarded, and it stands to-day alone in a number of its more important and valuable features. The company which conducts it is composed of a few wealthy men who seem to work more for the purpose of doing good than accumulating riches. Connected with the paper are eighty-two acres of ground devoted to experiments and worked in the interests of its subscribers." Thanks, Mr. Woodward.

RELATIVE INFLUENCE OF SEX IN FERTILISATION.—It has been stated that, in order to obtain double flowers, it is advisable to make use of the pollen from double flowers, where it is possible to obtain it, and to apply it to the stigma of single flowers from which it is desired to procure double-flowered seedlings. M. Lemoine, of Nancy, it appears from the *Revue Horticole*, has tried this plan with success, and was desirous of experimenting in this manner with Lilacs, but the only double-flowered Lilac then known had no stamens, and consequently no pollen. M. Lemoine then decided to reverse the process, and to fertilize the stigmas of certain double-flowered Lilacs with the pollen from some of the best single varieties. The experiment was so far a success, that out of forty seedlings thirty at least yielded semi-double or double flowers, one of them being very remarkable for its beauty.

CHRISTMAS DINNERS IN CALIFORNIA.—It would be a matter of surprise to our Eastern friends to read a bill-of-fare of a dinner such as we sat down to Christmas Day. In addition to oysters, soup, salmon, turkey, etc., at the bottom of the bill-of-fare (they ought to be at the top), are delicious grapes, strawberries, peaches, apples, walnuts, almonds, raisins, etc. And then a further surprise would appear when they were informed that peaches are of such infinite variety in Los Angeles, that they are ripening from the fifteenth of June till the first of December, while grapes are abundant from July to December. Oranges are in market ten months in the year, and potatoes are gathered every month. Is not such a land attractive to lovers of luscious fruit?—Cal. Hort.

THE PROBLEM.—The editor of the Gardener's Monthly says: A., an excellent gentleman, does not want the office. B., a poor stick, does want it. A. and his friends stay at home and do nothing, believing that the office should seek the man. B. has his friends actively at work. They tell C. D. E. F. and so on, what a magnificent fellow B. is, and that if he is elected there will be work for all, and perhaps more, which the demagogue knows how to put forth plausibly, and the result is that B. goes into the office.

Now, the problem for our good-wishing friends to solve is, how to get the office to the good man who does not want it, and to keep out the bad but industrious worker who is not fit for it.

ENGLAND AS OUR PUPIL.—It is often seen that the home-staying father, partly from affection, but even more from new ideas, modifies his notions and methods upon the knowledge which young Hopeful brings back from school and college: and, comparing similar relationships, it is more than probable that American may play a similar part to English agriculture. The former has nothing to unlearn; she has an enormous variety of information from a rapidly increasing population of mixed origin. She may well be able to give a lesson to ourselves who are burdened with traditions, and not always wholesome prejudice in favor of what once was in vogue.

COTSWOLDS IN ENGLAND.—I have always been a great admirer of Cotswold sheep as the grandest of the long-wools. Many years ago, when I wanted to establish a herd of pure-bred sheep in my county, where at the time the principal feature in all herds was mongrelism, I wrote to Mr. J. B. Lawes (who knew my district well), and asked him what breed of sheep he would advise me to go in for. He replied that, according to his experiments, the Cotswolds gave the greatest weight of flesh in proportion to the expenditure for food.—Yeoman's Note Book.

HOW TO USE HEN MANURE.—As soon as he has his poultry houses cleaned, Mr. Kern tells the Ohio Farmer, he takes the manure and spreads it over his wheat field, or a poor spot in his meadow, and you can take his word that a man with one eye can see where he puts it. To put hen manure in a box or barrel and keep it one year before it is put to a crop, he thinks is a wrong way.

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SHORTLY TO APPEAR.

Notes from Dr. John A. Warder, T. T. Lyon, Ellwanger & Barry, P. J. Berckmans and others respecting the true Paradise Apple as a dwarfing stock, with illustrations.

On The Kinver and an entirely new French Yellow Globe Mangel as sweet as a sugar beet and as productive as other mangels—illustrated.

Leguminous Plants—grasses and valuable fodder plants, by Professor W. J. Beal—illustrated.

Important Addition to the Rural's Seed Distribution.

Special Articles from Professor S. W. Johnson, Professor F. H. Storer, Professor G. C. Caldwell, Dr. A. R. Ledoux.

A Series of short articles upon the cultivation of our choicest vegetables—illustrated.

Dairy Specialties by Henry Stewart, L. S. Hardin, Professor L. B. Arnold.

Fruit Notes by Pres. T. T. Lyon, Dr. T. H. Hoskins, Sec. Garfield and others.

Poultry Notes by Forrest K. Moreland, Henry Hales and others.

Life Engravings of the Chinese Yam (Dioscorea batatas) "Cinnamon" vine; the Tulip tree and fruit &c., &c., &c.

Small Fruit Notes will be presented later by the well-known writers whose contributions have made this journal of such value in this important department of Horticulture.

TO NEW SUBSCRIBERS.

We find that many of our new subscribers have not seen our Free Plant and Seed Distribution supplement and consequently know nothing as to its terms. We will therefore send this supplement free to all who apply until further notice.

As originally announced in our Fair No. of Sept. 6, the Plant and Seed Distribution will be completed before March 1st. This for the benefit of our new subscribers.

The perfect stranger who, "for a consideration" offers you a splendid chance or certainty of large profits or a glorious bargain, is exceedingly likely to be a very imperfect man.

While Europe is starving in spots and pinched for food nearly everywhere, our granaries are overcrowded and where to store our surplus cereals is getting to be a puzzling question in our collecting centers.

We present the reports of those who are entitled to our Corn Premiums without comment. It happens that all of the prize-takers are unknown to us either personally or by reputation. Our main object in offering the premiums was (first) to introduce what we believed to be a very valuable variety of corn, and (second) to stimulate investigation as to the best methods of corn cultivation. Our readers may best judge by the reports themselves of the extent to which our object has been gained.

The roots of plants feed on certain soluble elements of the soil, upon which their vigorous growth in a great measure depends. Can these elements be fed to the leaves so as to aid the plant in its growth? Have so-called "carnivorous" plants any power of absorbing and assimilating the decomposing bodies of the insects which they entrap, as Mr. Darwin believes? Recent experiments throw a doubt upon this theory, being one upheld merely by ingenious though invalid evidence. There can be no doubt, however, that the so-called albumen of seeds, rendered soft and soluble by chemical action, *is* absorbed by the *seed leaves* (the cotyledons or leaves of the embryo), and that the life of the plantlet in the act of germination is wholly dependent thereon. If the first leaves in albuminous seeds absorb nutritious substances, why may not the subsequent leaves have the same power?

Truly the way of the transgressor is hard. Benjamin C. Bogert, late treasurer of the Produce Exchange of this city, misappropriated about $35,000 of the funds confided to his charge, and when the inevitable discovery of the defalcation came the other day, the wretched man, ashamed to face his old-time friends, rushed unbidden into the presence of his Maker. In the full vigor of life, a respected member of his church, beloved by wife and family, honored by the community, implicitly trusted by his business associates, with a crowd of friends each ready to help him in any known difficulty, so spotless in record that even in a political canvass his personal character remained unassailed, with an apparently blameless life behind him and before him an honorable and prosperous career—and yet to turn out a criminal and a suicide!

In several parts of the country, notably in the neighborhoods of Philadelphia, Chicago and this city, the farmers who supply these cities with milk are justly dissatisfied with the prices generally obtained for it. The railroad companies and retail milk dealers divide nearly all the profits between them, leaving the producers but a mere pittance for their labor and their capital. Special attention is directed to this hardship just now owing to the good prices obtainable for other dairy products, and the wits of the farmers are at work to devise some means whereby a juster proportion of the profits of the trade shall find its way into their pockets. Here, as elsewhere, a combination of the aggrieved seems the best remedy for their trouble. An organization of some sort is the only way of making this combination effective, and it is to be hoped that the rules being now devised by a committee of the farmers of three neighboring counties, will be so wisely framed as to serve as a precedent for farmers similarly situated elsewhere.

At no time, within the last decade at least, have there been in vogue so many forms of swindling as at the present day, especially in rural districts. Among the many causes that have contributed to this epidemic of rascality, doubtless not the least is the return of prosperity to country places. To the sharper a man with money is always game, be he cityman or countryman, but especially if he happens to be the latter. The sight, in the papers, of frequent exposures of all forms of roguery together with other causes, makes the city man a skeptic with regard to offers of friendship or fortune from mere strangers; but experience has shown that the countryman is more trustful and confiding, whether visited at his own home by plausible tricksters, alluring circulars and advertisements, or approached during his occasional visits to the city by sweet-spoken swindlers always on the outlook for just such prey. Elsewhere in this issue we call attention to several schemes cunningly devised for fraudulently transferring money from the pockets of credulous dupes to those of wily sharpers. These are mere specimens of certain forms of detected dishonesty; but there is nothing so Protean as vice of this kind—nothing that assumes so many forms and disguises. These very rascals will doubtless ere long be appealing to their gulled dupes and to others, under other names in other swindles with headquarters in other places. In view of the unusual activity of these pests of society at present, farmers and others cannot be too careful in investigating all investments in which they may feel disposed to put their hard-earned money—and it would be a safe and profitable rule never to invest a dollar in any business or device puffed up by circulars or specious advertisements by irresponsible parties.

"Do you know Mr. Smith of New York State?" said the innocent cockney to the American visitor in London. We are sometimes reminded of the simplicity displayed in this query on reading over the questions sometimes asked us about various forms of swindles appealing to our readers for support. "What is the standing of Mr. Brown, of Chicago?" "Is Mr. Smith of Cincinnati, reliable?" "Will the device advertised by the circulars of Mr. Jones, of your city, do all that is claimed for it?" Such are specimen questions sent to us. Our friends should know that swindling takes a thousand shapes; that sometimes the same rascal may be hidden under all three of the above names at the above places at the same time, and all the while be known to his acquaintances under a different name. Usually such frauds operate but a short time under the same name in the same place. They do with names as they do with money—appropriate them freely, and when "found out" under one, they take another. Thus, like the Irishman's flea, it's hard to lay hands on them. Their names are generally unknown to the mercantile agencies, and before they can be investigated, they have made a haul, and have gone fishing in other waters for other gudgeons, or for the same—for gudgeons of this stripe can be caught often. We would ask our friends, therefore, in making inquiries, to send us an account of the way the parties inquired about propose to do business, and, whenever possible, to forward the circular or advertisement that attracted their attention. There is an undisguisable family likeness about all these swindling schemes, easily detected by an ordinary physiognomist in rascality.

AWAY WITH ADULTERATION OF MILK.

A Consumers' and Producers' Cooperative Association of this city has in hand a difficult but very necessary task in forcing those who supply the city with milk to furnish a healthful, unadulterated article. The laws relating to this subject should be stringent, and their enforcement should be rigidly made by the proper officers, and not be left to the efforts of a volunteer organization. The aid of the latter, however, will be always valuable in stimulating negligent and aiding vigilant officials in the discharge of their duty. Experience elsewhere shows that the quantity of milk used in cities depends in a great measure on its purity. Less than a dozen years ago the laws affecting the sale of milk in English cities were made more severe than formerly and since then they have been more vigorously enforced, with great advantage alike to consumers and producers. So greatly has the sale of milk for food been increased by these means that British dairy farming has assumed a new complexion. Instead of converting their milk into butter and cheese, the farmers are yearly finding a rapidly increasing market for it in towns and cities at much better prices than they had been in the habit of realizing from the manufactured products. This mode of disposing of milk has already assumed such important proportions, that it has become the sheet-anchor of a large section of English dairy farmers as well as a question of first moment to the public at large. The control of the milk trade in summer and its development in winter, the best methods of cooling and aerating the product so that it can be transported unharmed for long distances in hot weather, railroad facilities and rates of freight, together with the prevention of adulteration by milk-salesmen, whether farmers or retailers, have all received careful attention there, and it is certainly time that these points should meet with more systematic consideration here, not in the neighborhood of this city only, but from all who expect to make the highest legitimate profit from supplying one of the most healthful and nutritious forms of food to the dwellers in cities, towns and villages throughout the Union.

A HINT TO SEEDSMEN.

During the last few years, attention has been repeatedly called to the modern method of seed-testing whereby the proportion of valuable seeds in any given sample is accurately determined,—that is to say, the proportion of seeds capable of germinating,—as well as the proportion of foreign seeds with which the sample is contaminated. Thanks to the patience of certain scientific men in Germany, a simple and trustworthy process of testing has been worked out, and Professor Nobbe, of Tharand, has published a large book, with some three hundred figures, descriptive of the mode of procedure and of the appearances of seeds which are likely to be met with in the process of testing, both those of agricultural plants and of weeds.

The appearance of this systematic treatise has led several writers to urge that experiment stations should be established by the governments of the several States and Territories for the purpose (among others) of testing the seeds which are on sale in the American markets. But there is another way of looking at the matter which we would commend to the attention of the seed-dealers. Perhaps some of our enterprising, large-way dealers would find it for their interest to do their own testing? Assuredly the power and reputation of those houses would be enhanced, who sold (and bought) goods of whose quality they could speak with absolute certainty,—whether to praise or to blame. There is no great or insuperable difficulty in the matter. There are, at the least, eight or ten colleges in the country where the methods of testing could be taught to any intelligent young seedsman, who might apply as a special student; and under proper guidance female labor would be perfectly competent to the light and easy work of testing. It seems, indeed, as unreasonable for the seedsmen to neglect this source of knowledge and power, as it would be for copper-smelters to shrink from employing the assayers upon the results of whose tests their business is actually based.

BREVITIES.

An unusual pressure upon our space crowds out our illustrations for this number.

No man who does not take a hearty interest in his work can ever hope to ascend the ladder of progress.

We learn that some of our New York seedsmen have larger orders for green peas from England than they can fill.

This will be a specially welcome number to the winners of our corn premiums, as the first intimation of their success will reach them on its receipt.

"Horse trots at Fairs" are condemned by a host of agricultural papers just received. Glad to see so many of 'em joining in the Rural's crusade against the evil.

The Mark Lane Express says that an American states that "hogs may be planted in any kind of soil—they will root anywhere." This ought to have gone "the rounds," but we have failed to see it before.

All subscribers wishing our seeds and plants should send six cents' worth of postage stamps—that is, two for the seeds—four for the Raspberries. The rest of the postage and all other expenses we bear. All who have not seen it, should send for our seed supplement which explains the whole matter.

Here is something for the poultry fanciers to work upon. Complaints are often heard of the disturbance caused by the crowing of cocks in the early morning. In this educational age couldn't cocks be trained to crow the hour? We should like much to take the credit of this wise suggestion. But it comes from Punch.

Mr. J. B. Garber writes us that he has never had a grafted grape-vine that grew when grafted in the fall. He has had the best success in February or early in March, when the ground was dry enough. He has also had good success with grafting in April, May, June and July; the running of the sap proved little hindrance. He gets fruit the second year by grafting.

The premiums awarded this week for Blount's White Prolific corn, do not include the book premiums offered by the Farmers' Publishing Co. The competition for these will now be in order. There are six premiums, the total value of which is $30, to be awarded, as announced on April 26, for the six heaviest weights of shelled corn, the corn to be weighed three months after harvest.

E. P. Roe wants to know, in the Gardener's Monthly, whether Queen of the Market is not the Cuthbert Raspberry. We have asked the same question in our columns. Will not Judge Parry answer? Is the Conover also the Cuthbert? We believe there can be no dispute as to the Cuthbert's retaining the name by priority. Whatever the name, we believe it to be over a wide portion of the country the best hardy Raspberry in cultivation.

The request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high standing and trustworthiness.

Let us say to our new readers (our old ones are aware of the fact) that we have no interest in Blount's Corn other than what arose from the desire of disseminating what we believe to be a variety of unequaled productiveness for certain parts of the country. It was sold last season as high as $8 per bushel. It will be offered the coming season by many seedsmen. We raised, as we have stated, on a measured quarter of an acre, 18 bushels (shelled) of this corn, though several unfavorable climatic causes seriously lessened the yield. For our own seed, we selected the topmost ear of such stalks only as bore over three ears.

In writing our notes to accompany the Dwarf Buckeye, a full-page engraving of which was presented a few weeks ago, we overlooked the following memoranda made during its blooming season last summer: "There are one hundred racemes on the plant before us of pure white flowers. Each flower bears five stamens, the filaments of which are twice as long as the corolla, which is one inch in length. Each raceme bears 175 peduncles, and each peduncle from three to six pedicels, so that on each raceme there are no less than 500 flowers. The exserted stamens tipped with rose-colored anthers, give the inflorescence a feathery look, while the plant is one of great showiness."

For Women.

FIFTY YEARS AGO.

A Grandsire's Dream.

I sit within my ingle-nook,
So old and gray, I know;
I close my eyes and backward look:
'Tis fifty years ago—
Ere youth has fled, or hope is dead,
And life's sands running low.

The Christmas bells are chiming sweet
('Tis fifty years ago),
There comes the fall of fairy feet
Across the trackless snow;
And hearts beat high, to pleasures nigh,
Just fifty years ago.

From out the lvied manor-house
I see a golden glow;
And merry voices welcome us
('Tis fifty years ago),
A laughing band stand hand in hand
A crowd pass to and fro.

In hall and homestead, great and small,
Sing blithely as they go;
The smile of one is smile of all
('Tis fifty years ago),
And hearts are light and eyes are bright,
That Christmas long ago.

A face looks out from wealth of hair,
That waves o'er brow of snow;
And brown eyes droop with shyest air
('Tis fifty years ago),
And cheeks are flushed and voices hushed
To whispers sweet and low.

A kerchief crossed a swelling breast,
The heart that throbbed below
Grew restless with its own unrest;
For, ah, how could you know
That I loved you, so well, so true,
Just fifty years ago?

We trod a measure through the hall
With stately steps and slow—
Once more I hear your footsteps fall,
Your bright cheeks brighter glow,
And you are mine, by right divine,
Of love—long years ago!

Your dainty cap, your golden hair,
Your muslin kerchief's snow;
Your tiny feet that cross the stair
Less swift than mine, I know;
All these I hear and see, my dear,
As fifty years ago.

How fair you looked! How fond I loved!
'Twas well it should be so;
I gaze upon your picture now
Till tears begin to flow;
And all the past is held as fast
As fifty years ago.

It is not fifty years—and time
Has stayed for us, I know;
We hear the merry Christmas chime,
We see the falling snow;
And hand in hand so close we stand,
My love of long ago.

The voices sweet of friends who greet
Are close to me, I trow;
The fire-gleams dance in radiant heat,
The holly-berries glow.
I have but dreamt of days I've spent
Since fifty years ago.

. . . . . .

Alas, who stands demurely here,
With eyes of tender glow,
So like the eyes of you, my dear,
In days of long ago?
She smiles, I ween, at grandsires dream
Of fifty years ago! —*London Society.*

DESCRIPTION OF CUTS IN ISSUE OF DECEMBER 20th, 1879.

NOS. 1 AND 2.—KNITTED SHAWL, WITH CROCHET BORDER.

MATERIALS REQUIRED: Two bone knitting pins, No. 8 (bell gauge). A half pound of white Shetland wool, quarter pound of blue ditto.

Cast on 190 stitches with white wool, and knit each row plain until you have the size required.

The crochet border, shown in No. 2, is worked in double blue wool.

1st Row: One double into a stitch of edge of shawl, five chain, pass over four stitches, one double into the next stitch.

2nd Row: One single into the third of five chain of last row, five chain, one single into third of next five chain. Repeat.

3rd Row: One single into third of five chain, five chain, draw a very loose loop into the third of next five chain, draw the wool through the loop, draw up another loop, and work all off together, five chain. Repeat.

4th Row: One single into the third of five chain, five chain, one single into the top of last long stitches, five chain. Repeat.

5th Row: One single into the third of five chain of last row, five chain, one single into the third of next five chain, five chain. Repeat.

The little balls are attached to the border by a needle, threaded with wool. To make the balls: Cut two pieces of cardboard in circles, a little larger than you wish the balls to be, and cut in the centre of each a circular hole, about half the diameter of the whole. Put the two card circles together, and, with long needlefuls of wool sew through the centre hole, and over the outer circle of the card, so as to cover it completely and evenly, and continue thus till the centre hole is filled up; then, with a pen-knife or scissors, cut quite through the wool all round down to the edges of the card, and slip a piece of wool of sufficient length between the cards, and tie it tightly, leaving an end hanging; tear away the card, draw the two sides of the ball together, and trim the edges with scissors.

NOS. 3 AND 4.—KNITTED JACKET FOR LADIES.

MATERIALS REQUIRED: eight ounces each scarlet and gray double Berlin wool, two bone knitting pins, No. 6 Walker's gauge, a tricot hook No. 7.

This jacket is very easy to make, it is knitted in three stripes, two gray and one scarlet. The stripes are joined by a needle and wool. For the gray stripes which are made long enough to pass over the shoulder and form both the front and back stripe, cast on twenty-one stitches, knit three and purl three alternately; always slip the first stitch; continue to knit thus until you have made the stripe the length required, purling the knitted and knitting the purled stitches in each alternate row. About 174 rows will be required. These bands compose the two sides, shoulder-pieces, and fronts. The stripe for the back is knitted with scarlet wool in the same way, making it half the length. The light stripes are sewn one each side of the back, then each is folded and sewn up under the arm, leaving a sufficient space for the arm-hole. With scarlet wool work a stripe of tricot on eight stitches. For the edge of the stripes work one double into a stitch, four chain, one treble into first of four chain, pass over two stitches of tricot and repeat. This stripe is sewn to the jacket as shown in the illustration. A similar stripe serves for the sleeves, working on six instead of eight stitches. The jacket is fastened by pearl buttons.

NOS. 6. AND 7.—SCARF CROCHET.

Materials required. Berlin wool, and an afghan hook. No 000. The scarf is worked at the ends with two colors, and in the center with one color only.

Make a chain the width you wish the scarf to be.

1st Row: Work up a loop through each of three successive stitches, draw through three loops on the hook together, one chain, insert the hook through the perpendicular loops just worked, and work one double, one chain. Repeat.

2nd Row: Draw up a loop through each of three successive stitches, draw through the three loops together, one chain, work one double under the perpendicular loops, turn the wool over the hook, and repeat.

All the following rows are worked like the second.

For the edges, work one double into a stitch of scarf, three chain, pass over two stitches, one double into the next. Repeat.

The fringe is made by knotting equal lengths of wool into each loop of chain at the ends, then knotting them twice again, as shown in the design.

NO. 8.—GLOVE: CROCHET AND KNITTING.

Materials: three ounces Andalusian wool; four steel pins. No. 14 (bell guage); small bone crochet-hook; one yard of ribbon one inch wide.

Make a chain of seventy stitches, join round, work six rounds of double crochet, taking up the front horizontal loop of each stitch. (This applies to all the crochet throughout the work.)

7th Round: Two double in successive stitches, two double in the next stitch, sixty-four double, two double in the next stitch, two double.

8th to 15th Rounds: The same as last, with this exception: the increase is made in the same stitch of each round and you will have one more double at the beginning and end of each round.

16th Round: Double crochet in every stitch.

17th Round: the same as 8th.

Repeat these two last rounds eight times more.

34th Round: Work off the thumb-stitches, ten chain, one double in the first of the thumb-stitches, leaving the hand-stitches unworked. Now continue to work the thumb separately.

35th Round: One double in each of the thumb-stitches, pass over one of the chain, eight double in the remaining stitches, pass over the last of the ten chain, and repeat this round four times more. Then continue in the round twelve times more.

Now decrease by working two stitches together after each sixth double. Repeat this last row four times more.

Now decrease as before after every fourth double. Lastly, work a round, decreasing after each three double. Then work off all the stitches together, and fasten on the wrong side. This completes the thumb.

Now continue the hand. Work four rounds, decreasing one stich on each side of the thumb-gore. Work twelve rounds without increase or decrease. Work to the side opposite the thumb, and begin the little finger. This is worked on nine stitches of the under side of glove, and ten of the upper (that is, nineteen stitches in succession), make a chain of eight stitches, join with one double to the first of the nineteen stitches of finger. Continue in the round for finger, and work exactly as described for thumb.

Now work two rounds of the glove before beginning the first finger.

1st Finger: Work eleven double from the outside of glove, ten from the under side, eight chain, one double in the first of eleven double. Continue in the round as for little finger, working fifteen rounds before decreasing.

For the middle finger, work ten double on both sides of glove, eight chain between for the gore, work round taking up the gore of the first finger, and decreasing one on both sides, as described for thumb. Work eighteen rounds before decreasing.

The third finger is worked in the round and without the eight chain, as the eight chain for little finger and middle finger forms the gore. If the fingers are found not to be long enough, more rows can be added. This would be seen in working the little finger.

For the cuff:—

1st Round: One treble, one chain, pass over one. Repeat. Now work fifteen rows of patent knitting. Patent knitting is worked thus:—Make one, slip one as if for purling, knit two together. Each round is the same.

Now knit eleven rows plain knitting; cast off. Fold over the knitted part, and hem to top of treble row on the wrong side.

A piece of elastic is run through the treble row and the back of glove is ornamented with a bow of ribbon and three rows of coral-stitch, worked with black-wool (see design.)

NO. 9.—BALL KNITTING.

Materials required: Half an ounce each of scarlet and black Berlin wool, and two steel pins No. 15.

The ball is worked in patent knitting as follows:

Cast on forty-six stitches on one pin in scarlet wool.

1st Row: Make one, slip one, knit two together throughout.

2d Row: Like first.

3d Row: Work on all but the last six stitches

4th Row: Work on all but the first and last six stitches.

5th, 6th and 7th Rows: Like 4th Row.

8th Row: Work on all but the first six and last nine stitches.

9th Row: Work on all but the first and last nine stitches.

10th and 11th Rows: Like 1st Row.

This finishes one section. All the rest are worked in the same way, using black and scarlet wool alternately for ten sections.

When the last section is complete, cast off the stitches. On the back work long button-hole and cross-stitches with amber wool, as shown in the design. Sew up the two sides and one end of the ball, stuff it well with cotton wool, then sew up the other end, and ornament each with a bow of amber ribbon. Balls of this kind are better than those of india-rubber for use in the nursery. They are not liable to injure and break the furniture by coming in contact with it. This ball will make a nice present for a young child.

NO. 10.—INFANT'S JACKET: KNITTING.

Materials Required: Lady Betty wool and two knitting pins, No. 14 Walker's gauge.

As the size of the jacket is needed to be very different, according to the age of the child for which it is required, it is better to cut a paper pattern to the size and work to it. The jacket is worked lengthwise beginning at one of the arm-holes. Cast on the number of stitches required from the top of sleeve to the bottom of the jacket with the pins and wool mentioned; it will be necessary to cast on ten stitches to the inch. At the lower edge of jacket knit two stitches in one row, and purl them in the next along both the stripes.

1st to 12th Rows: Knit.

13 Row: Purl, increase one at the beginning of the row to from the shoulder.

14th Row: Knit.

15th Row: Knit one, purl one, alternately, increase one at the beginning of the row.

16th Row: Knit.

17th Row: Purl one, knit one, alternately, increase one at the beginning of the row.

18th Row: Knit.

19th Row: Purl, increase one at the beginning of the row.

20th Row: Knit.

Repeat from 1st row. In the second fancy stripe, work the increase as described for the 1st stripe: this increase is not repeated again. After the front is wide enough decrease for the second shoulder in the same proportion as the first was increased, by knitting two stitches together in each alternate row of the fancy stripes. When the front is finished cast off sufficient stitches for half the sleeve, and continue the pattern for the back, increasing the shoulder to correspond with the front of the shoulder. The back will not need to be quite as wide as the front, when half the back is worked, cast off sufficient stitches for the opening, and cast on, on another pin the same number. In the following rows work off on to one pin and continue to the other side, not forgetting the decrease for the second shoulder. Sew up under the arms and the shoulders on the wrong side.

For the sleeves, cast on the number of stitches required for the length of the arm, and knit in stripes as described for the bodice of the jacket. When large enough for the arm-hole, sew up on the wrong side.

The jacket and sleeves are edged with a narrow knitted lace made as follows:

Cast on seven stitches.

1st Row: Knit two, make two, by turning the wool twice round the pin, knit two together at the back, make two, knit two together at the back, knit one.

2d Row: Purl two, knit one, and purl one in the made stitches, knit one, purl one, knit one, purl one in the made stitches, knit two.

3d Row: Cast off the first three stitches, knit six.

4th Row: Purl two, knit five. Repeat from the first row. This is sewn by a needle and wool round the bottom of the jacket, the neck, and cuffs; a narrow ribbon is run through the knitting under the lace at the throat, and above that on the wrists to draw it to the required size.

NO. 11.—INFANT'S HOOD: KNITTING AND CROCHET.

Materials: 1 oz white, 1 oz. blue, Shetland wool 2 oz. blue, ½ oz. white, single Berlin wool; one pair of wood pins, No. 10 (bell gauge); bone crochet-hook.

Cast on 12 stitches with white Shetland wool.

Work 48 rows plain knitting, increasing in every alternate row by knitting the first and last stitch at the front and back, at the beginning and end of row.

In the 49th and every alternate row following it, decrease at the beginning and end of row by slipping one stitch, knitting one, and passing the slipped stitch over it. Continue this till your work is reduced to twelve stitches. Cast off.

Take the blue wool, and knit another piece in exactly the way described for the white. Place the two parts one over the other, the blue outside. The twelve stitches are placed at the front of hood.

For the border, with blue Berlin wool and the same pins, cast on 102 stitches for the front border.

1st to 7th Rows: Knit.

7th Row: Make one, slip one, as if for purling, knit one. Repeat.

8th to 21st Rows: Patent knitting (make one, slip one, as if for purling, knit two together.)

22d Row: Knit one, knit two together. Repeat.

23d to 27th Rows: Plain knitting. Cast off.

For the edge, work entirely round the border with white Berlin wool as follows: One double, three chain, one treble in the first of the three chain, pass over two. Repeat.

Sew one to front edge of hood. A border is worked in the same manner for the back of hood. Two lengths of chain-stitch are needed to run through the hood, to draw it to shape. These are finished with tassels tied up of lengths of wool.

NOS. 12 AND 13.—INFANT'S BOOT: KNITTING AND CROCHET.

Materials required: ½ oz. each blue and white Berlin or merino wool, four knitting pins, No. 15 Walker's gauge, and a crochet hook, No. 9.

Commence the boot at the ankle, cast on forty-eight stitches with white Berlin wool on one, No. 15 pin, for a stout child, and merino wool, and No. 16 pin for a small child; knit the stitches off sixteen stitches on each of three pins.

1st to 3rd Round: Knit three, purl three, alternately.

4th to 6th Round: Knit.

These six rounds are repeated eighteen times, commencing the 7th round with purl three, knit three, so as to reverse the basket pattern, and the 15th round with knit three, purl three.

19th Round: Divide the stitches and continue the pattern for front of foot on half the stitches with white wool for eighteen rows. Then take blue wool and commence the decrease for the toe by knitting two together at the beginning and end of each alternate row, until there are twelve stitches left, when cast off.

For the heel and sole, knit on the other half stitches with blue wool for twelve rows, the gusset of the heel is made like a stocking heel, that is:

1st Row: Knit to the center stitch, knit the two next together, turn.

2nd Row: Purl back past the center stitch, purl two together.

3rd Row: Knit past the last two knitted together, knit two together, turn, repeat these two last rows until you have taken in all the stitches, pick up the stitches at the side of heel, knit across the stitches, and pick up those at the other side of heel, knit backwards and forwards on these stitches, working the first and last stitches on the pin together with the corresponding white stitch of the front. Decrease for the gusset of the foot, knit the third and fourth stitches together, and the two before the last on the pin of every forward row continue to purl and knit each alternate row, decreasing until there are twenty-three stitches on the pin, then without decrease until you reach the first row of the blue toe, when decrease as described for the front, still joining the sole to the front of boot. Cast off the last twelve stitches, and sew up the toe on the wrong side. For the crochet frill round the ankle with blue wool work:

1st Round: One treble separated by one chain into each alternate stitch of top of boot.

2nd Round: With white wool, one single into every stitch of last round.

3rd Round: Three trebles into each of three successive stitches, pass over two stitches, and repeat.

4th Round: With blue wool, one double into the back loop of every stitch.

5th Round: With white wool, one single into every stitch.

6th Round: Three trebles into each of two successive stitches between the last trebles, pass over three stitches, and repeat.

7th Round: One double into every stitch.

A narrow blue ribbon is passed through the treble stitches and crossed in front; the front of ankle is also ornamented with a bow of ribbon.

NO. 14.—KNITTED GAITER.

Materials Required: Berlin wool, and four stee knitting plus No. 14 Walker's gauge.

Begin at the top. Cast on seventy-two stitches that is twenty-four on each of three pins.

For the ribbed top of gaiter knit two and a half inches of knit two, purl two.

For the 1st to 4th Round of calf, knit with the exception of the center stitch of one pin which is purled in every round to form the seam. Mark the stitch by drawing a piece of wool of another color through it so that you may observe to purl it in each round.

5th Round: Knit one, purl two. Repeat increase by knitting the back loop as well as the front of the loop before and after the seam in each fourth round for three times, repeat from the first to the fifth round four times, then commence the decrease in the same proportion as you increased until you have worked eight patterns.

1st to 3d Rounds: Knit. Decrease two in the first round.

4th to 7th Round: Purl three, knit three, decrease two in the fifth round. Repeat from the first to seventh round twice more, then divide the stitches as you would for the foot of a stocking, that is, take the same number for the heel as there are for the front of foot. Continue the pattern on the back half of the stitches for twenty-eight rows, cast off. Pick up the stitches at each side of the heel with a crochet hook, and knit them on the pin with the front stitches. Decrease by knitting two together at the beginning and end of every other row until only twenty-six stitches remain; cast off, and sew a strap of leather to each side of the front to pass under the foot.

The simulated button-holes are made by working one treble into a stitch at the side of gaiter (see design), three chain, pass over two stitches, and repeat. A bone button is sewn in each scallop.

NOS. 14 AND 15.—CHILD'S CHEST PROTECTOR. TRICOT.

Materials required: Berlin wool and a tricot hook, No. 8. Cut a paper pattern of the size. The chest preserver is made in one piece. It is straigh and square at the back of the waist, hollowed ou for the throat, and straight at the fronts, where i opens down the middle, and is fastened by chain

work loops and buttons. Begin to work at the back of the waist. Make a chain the length required. Work the design shown in No. 14.

1st row: Work up the loops as in ordinary tricot. In the backward row draw through two loops together, one chain. Repeat.

2d. row: Draw up a loop through the two loops drawn through together, then draw up another loop through the back loop of chain of last row Repeat. The backward row is worked as described in first row.

The second backward rows are repeated throughout.

The border is worked in point. muscovite as follows: Make a chain of six stitches, work up the loops as for ordinary tricot. In working back draw through the first loop, three chains draw through the next two loops, three chain, draw through the two loops, three chain, draw through the last loop.

2d row; Work up the six loops, draw through the two first, three chain, draw through the two next loops, three chain, draw through the two next loops.

Repeat the first row, then work two rows plain tricot, and repeat from first row.

For the edge, one double into a stitch, one chain, pass over one stitch, and repeat, one double over double of last row, five chain. Repeat.

NOS. 15 AND 16.—DEEP KNITTED BAND FOR PETTICOATS.

Materials Required: Berlin wool, and two bone pins each Nos. 8, 9, 10, and 11.

At this season of the year when ladies are so liable to take cold by changing from warm everyday dresses to thin ball costumes, this band will be found very acceptable. It is intended to be worn under the light fitting dresses, as from its elasticity it clings closely to the figure, the petticoat being buttoned to the lower part. The band is made of wool, and is warm and comfortable without increasing the size of the wearer. The band is worked without increase or decrease, the graduation towards the waist being made by working with smaller pins. Commence at the bottom. Cast on 198 stiches or less according to the size required. With No. 8 pins, purl two and knit two alternately for fifteen rows, then work with No. 9 pins for fifteen rows, then with No. 10 pins for fifteen rows, and with No. 11 pins for as many rows as you wish the band to be deep. Cast off Sew six bands of stout tape on the inside as shown in No. 5, and another piece of the same tape for a band Buttons are sewn over the tapes on the outside to which the petticoat is fastened.

PLAYING AT HOUSEKEEPING.

The Boston correspondent of the Worcester Spy gives an account of a "Kitchen Garden," established for the benefit of poor girls at the North End, which we are sure will be read with interest. She says:

"The Kitchen Garden" was first established in New York city by Miss Huntingdon, an active worker in the mission to the poor. She says that she spent hours of thought by day and night trying to devise some means by which the drudgery of the toiling children might be lightened, and they come to like the work that then filled them with weariness and disgust. The problem for her was how to teach the mass of children to put courage into their drudgery.

A kindergarten solved the problem for her. Instead of blocks and balls and colored paper, there should be brooms and dust pans and little beds; and instead of lessons in geometry, there should be object lessons in household work, given on the Froebel method, with music and songs. She tried her plan with such success, that she prepared a book with the music, the lessons and the household catechism that the children learn, to be used as a text-book by other teachers; she called her school a kitchen-garden, and her plan has already been adopted by thirteen of the New York churches for their mission schools. Last summer a Boston lady established schools here, at her own expense, and they are now in excellent condition at the Children's Mission and at the North End Mission.

A visit to one of them is very interesting and amusing, The class that I saw was of 24 little colored children, the eldest 10 or 11 perhaps, and even the youngest quite capable of helping a good deal at home. They had four teachers—one who played the piano or organ, one who led the singing, the principal teacher who gave the instruction, and an assistant who was learning the art of teaching. The first lesson was bed-making. On the long tables, with 12 children at each, were toy bedsteads about two feet long, each with a mattress, two sheets, two blankets, one spread, a bolster, two pillows, with pillow and sheet shams. The children marched in to gay music, and before they began their lesson they sang together the bed-making song:

When you wake in the morning,
At the day dawning,
Throw off the bedding and let it all air,
Then shake up the pillows,
In waves and in billows,
And leave them near windows, if the day is quite fair.

For beds made in a hurry,
A fret and a worry,
Are always unhealthful and musty, 'tis sure;
But left for airing,
Pains-taking and curing,
And one must sleep sweetly, to know it is pure.

The rules for bed-making,
If ever forsaking,
You list to the careless and hurry them through,
They'll soon grow so matted,
So hard and so flatted,
You'd wish you had listened and kept them quite new.

The beds are already made, and the first thing the children do is to prepare them for sleeping. Working together and keeping time to music, they take off the pillows and shams, turn back the spread, turn down the other clothes, and make the bed ready for its occupant. Then they take off the clothes, putting them on two chairs, to air, turn the mattress over and round, and make the bed scientifically. The rules are to make it *level, square and smooth*, and they are taught how to do this. The children are not allowed to take a lesson unless or until their heads, faces and hands are perfectly clean, and this rule has been so thoroughly enforced that the little bed-clothes, which have been in use since June, are still unsoiled and look as if they had just been done up. The questions and explanations take some time, and make a variety in the lesson.

Then came a washing lesson. Each child got her toy tub in which was a bag of clothes, table and body linen, coarse towels, and colored stockings, a wash-board and a bag of clothes-pins. No water is used; but the clothes are carefully sorted, the fine ones washed, or apparently washed without the board, then the coarser ones, and so to the end, the proper twist in hand-wringing being insisted upon; then the clothes are properly hung upon a line. A sweeping lesson is conducted in the same thorough way, each child having a broom, a brush, a feather duster, a cloth, a dust pan and small broom. Of course there is no limit to the lessons that can be given in this way. Miss Huntingdon's book has the songs and music for those I have mentioned, for setting tables and folding table linen, for dish-washing, and for simple lessons in molding butter pats, biscuits, etc., and for rolling out cookies.

The kitchen garden is intended to be a sort of preparatory or primary school, fitting the pupils for a cooking school, or other advanced course of household education. The children have great fun doing all these things, and it seems that they really learn a good deal, and even the little ones like to practice at home, as far as they can, the lessons learned and the songs sung at school. The improvement in families at the North End is said to be noticeable since the children learned to make beds, set tables and sweep The compulsory cleanliness is a great thing; the fun of it, the having a real good time, is a good thing, but the ladies who work for the kitchen garden think of it and believe in it as something which will give children some interest, home pleasures, and some ambition.

There is nothing in our present methods of education to foster domestic life, or household employment. To shirk work, go to school, and race through a series of out-door excitements, are found to be the daily routine of a majority of children, way down to those whose out-door employment is only rough street play; and this kitchen garden seems to be a way to lead them to interests at home, to wanting things in order, and to a willingness to help put and keep them so. There cannot be a child in the world who does not look with a sort of artistic satisfaction at the doll's bed which she has, with her own hands, made so square and smooth; and a majority of the children are eager to try the same thing on a grown-up bed at home. At any rate, the classes are a pleasant sight, and the plan is working well.

AGENTS NOT WANTED.

ADELINE E. STORY.

The book agent and the tree peddler are abroad in the land. When I, for one, want trees or vines or plants, I prefer to get them direct from the nurseries. There is a middleman whom it is the easiest thing in the world to dispense with. I should do this as a matter of economy, if from no other motive. It will be found in most cases a saving of at least fifty per cent., and what we get, as my experience goes, is more likely to prove true to name.

As to the book agent, he might as well turn over the leaves of his prospectus and discourse about type, cuts and binding, to the "Goddess of Liberty," if that divinity could be found embodied, as to me.

A man who thinks himself too poor to take a magazine for his wife and children, and who settles the matter of a subscription to a circulating library the moment the subject is broached, with a positive "Can't afford it." will suffer himself to be cajoled by the persistent agent, who generally "knows his man" before he has talked *at* him a minute, into buying a book which, ten to one, he never heard of before and for which he has no need, and which he doesn't read after he gets it. There are books he does want; books he has longed for many a day; but he has allowed himself to be talked into subscribing for this one that is worthless to him, and what he wants he must go without.

"Ah!" thinks the hard-working farmer as he seats himself on his plow—for you are no more out of reach of the wide-awake agent in the field than you would be in the house—to listen to the glib sing-song of the charmer, "we want some books. I'll buy this one. It is coarse print and the pictures will amuse the children."

The pictures do amuse the children certainly, and that is about the only satisfaction that is ever got out of the new book.

Literary Miscellany.

CONQUERED.

CHAPTER II.

IN BATTLE ARRAY.

When he had helped her to mount to the seat beside him and they were driving rapidly towards Arundel, Katrine, between laughing and crying, told her half-credulous auditor the story of her fright, and described to him the pale, stern face she had seen in the lonely cottage.

Maria Weddell, spinster, called, out of respect to her years and matronly appearance, *Mrs.* Weddell did not profess to let lodgings. The cottage was her own, inherited, with its half-acre of garden and orchard, from her father, and she lived on a small annuity bequeathed to her by an elderly lady, whom she had nursed through an illness that lasted from the time she was young and comely till her good looks had faded and her hair was turned gray.

So Mrs. Maria Weddell lived "independent," as her neighbors were wont to say, and kept her cheerfulness, though her cottage was the most solitary one in or near that secluded Sussex village.

Not that she was always alone. Though she steadily refused to follow the example of Mrs. Jones at the shop, and put up a bill with "lodgings to let" neatly written on it, she sometimes consented to vacate her best rooms for the accommodation of any friends of her late mistress who wished for quiet and country air; and as these friends recommended other friends, who were willing to respect Mrs. Weddell's oddities, and considered themselves favored by being permitted to occupy her apartments, they were rarely vacant, except in the depth of winter.

Mrs. Weddell was debating whether to spend her Christmas *solus* as usual, or accept an invitation of some years' standing from a married cousin at Horsham, when the question was settled for her by the arrival of another claimant for her rooms and her household cares.

A gentleman this, young, handsome, courteous, yet apt to be seized with irritable or restless moods during which he either locked his door and smoked and wrote unceasingly, or else shouldered his knapsack, mounted his bicycle, and was seen no more till he scared the country folks on their way home from market, by the glare of his little red lantern and his swift, noiseless rush past them.

He had come into Sussex, he told Mrs. Weddell, to be quiet while he prepared a volume of travels for the press; and he had engaged her rooms because he was assured that he was not likely to be worried with the intrusion of callers; and so he littered the table in Mrs. Weddell's parlor, which was just large enough for him to take three strides across the floor, with manuscripts and books of reference; disfigured her mantel-piece with his German pipes and tobacco pouches; and half affronted her by bundling a huge feather bed and three of the six blankets heaped upon it, out of his chamber, and telling her he could not consent to be smothered.

It was not often his bell rang, fortunately for himself, as Mrs. Weddell was no obsequious London landlady who studied the wants of her lodgers and made them pay for it in the bill. She had asked him on his arrival at what hour he would like to dine; the answer was at four, five, six, seven, he did not care; so she set his dinner before him at two o'clock, because that left her time for a nap before her own tea. She had inquired what she was to call him, and he replied that he wasn't particular, but would respond to any name she preferred; so Mrs. Weddell examined his portmanteau, and finding on it a torn label gummed on at Dieppe, after much study of the strangely-spelt word, decided to call him Mr. Dippy, which was the nearest pronunciation of it at which she could arrive.

Sometimes, but very rarely, Mrs. Weddell would volunteer a little conversation while she laid or removed the cloth, and her lodger leaned back in his chair and rested the eyes that ached with poring over his books. But it required a great deal of painful thought to fix upon a subject that would interest him, for he had only said "Oh!" when she informed him that —— cattle fair was coming off next week, and didn't seem to hear her at all when she announced the arrival of a circus in the village.

Mrs. Weddell was unconsciously regarding him so fixedly as she debated this point that at last he perceived it, and with one of the faint smiles that made his ordinarily stern face so pleasant, he put to her an inquiring "Well?"

"Don't you never want no amusement?"

"None but what I find here;" and he pointed to his books.

"Seems to me," Mrs. Weddell observed, "that it can't be good for anybody to study all day and every day. There's some fine big pictures up at the great house. I can get the keys for an hour or two any afternoon."

"For my accommodation? Thanks; but why should I go and see the pictures you mention? Are they *chef d'œuvres?* I mean are they the works of any of the great masters, or merely modern?"

"There ain't been a master at the great house for years and years; it belonged to a maiden lady like myself, but she's dead, and the pictures were all hers."

"I see; how well we always understand each other, Mrs. Weddell! Thanks for your offer, but I had a surfeit of paintings when I was in Italy."

"Then you've been abroad? That's another reason why you should go up to the house and have a look about ye, Mrs. Wyllis—the lady as used to live there—had been to foreign parts, and brought home no end of fine things which she didn't live to enjoy."

"And you think it would be pleasant for me to go and stare at her collection? To be admitted on sufferance that I might envy the inheritors of Mrs. Wyllis's pictures and curiosities? O, thanks Why do you propose it? I was assured that you are not in any way connected with the owners of the 'great house,' as you call it."

Mrs. Weddell looked dubious.

"Connected—that means related, don't it? No; I'm the only Weddell in this part of the county since father died; there might be some sort of a tie betwixt us and the old lady, for both our names begin with a W, but I never heard of it."

"Are you one of Mrs. Wyllis's old servants?"

Mrs. Weddell folded her arms and looked dignified.

"I never went to service in my life; we were very respectable people—father and me. I only went to 'tend an invalid just to oblige our parson As for Mrs. Wyllis, I don't think I ever saw her. She only came here nows and thens after she bought the estate; and she didn't buy it for herself, but for a great-nephew she had adopted, only they say he contrived to offend her, and so she——"

"That will do; I don't want to hear any gossiping details," he interposed, brusquely. "If you'll take the tray away, I'll go on with my writing."

"But if you'd like to go over the house, now's the time; and——"

With an ejaculation in German, the heathenish sound of which made Mrs. Weddell drop a saucer, he demanded why she insisted in harping on such a distasteful subject! He would thank her never to mention it again, and the discomfited spinster went away in a huff.

A few evenings after this, Mrs. Weddell was hastily summoned to her lodger's sitting-room. He was standing at the window, from which he had pulled back the curtain, and was pointing in the direction of the Hall.

"What does this mean?"

"Fires," she answered, laconically.

"Good heavens! the great house on fire!"

"Lor' bless'ee, no, sir. That smoke, and them lights you can see betwixt the trees, means that some of the family has come at last, and they say they're going to keep their Christmas in the old house."

The curtain was hastily dropped over the window, and a wave of the hand dismissed Mrs. Weddell, but ere she could close the door she was recalled

"Look here, I can't be disturbed by these people. If any of them come prying into your cottage, don't mention me; or if you must say anything, tell them I'm a gouty, ill-tempered, fanatical, irritable old bachelor, with a chronic ailment that makes me eschew society. You must never admit them into my rooms on any pretence whatever, and if they want to do the benevolent and force themselves upon me, tell them—tell them it will have the effect of driving me away."

"Lor'!" cried Mrs. Weddell, her cap borders standing on end, "for sure I needn't tell 'em all that! If they do come here and ask me any questions about ye—which it 'taint likely—won't it be enough to say that you're a bit querish in the head with studying so much?"

"*Mad*, do you mean?" he queried, smiling in spite of himself. "Oh! well just tell them what you choose; only keep them away from me."

And for fear Mrs. Weddell should not carry out his injunctions, the first time he heard voices approaching the cottage, he laid down his pen and hastened to lock the sash-door leading into her kitchen.

While doing so he could not help seeing through a crack in the curtain drawn over the panes of glass that one of Mrs. Weddell's visitors was the same slender, lady-like brunette who had visited the cottage a few evenings previously. She was accompanied by a pretty child, and a livery servant carrying a small hamper which he set down on the floor, and at a signal from his young mistress retreated.

The young man resolutely turned his eyes from the bright, speaking face and graceful figure of this lady, but he could not shut his ears against the liquid tones of her voice as she greeted Mrs. Weddell, admired her cosy kitchen and her cat, while the child, making friends with the latter, sat down on a beehive-chair drawn close to the hearth, and warmed her feet.

"We heard in the village, Mrs. Weddell, that you have a sick person staying with you; is that correct?"

"Quite, miss; leastways he isn't sick, not exactly so," was the hesitating reply.

"But he is in delicate health, I suppose? and he has no friend residing here with him, has he?"

"He do look pale for certain," reponded Mrs Weddell, who was very much afraid of saying anything that was not in her instructions.

"Is he obliged to keep his bed? No? Has he seen a doctor since he has been here?"

"He dont want no doctors, miss, unless they could persuade him not to sit studying so much."

"Ah! He is literary, I suppose?"

"No: he's chronical; that's what he told me to tell anyone that asked after him. And he's frenatical as well, and can't be spoken to by anybody not on no pretence whatever, or he'll pack up and go away."—[To be continued.

DIPHTHERIA.

Causes, Restriction and Prevention.

IMPORTANT PRACTICAL SUGGESTIONS FROM THE STATE BOARD OF HEALTH OF MICHIGAN.

Diphteria is, primarily or secondarily, a constitutional, or blood-poisoning disease. It attacks persons of all classes and ages, but most frequently children under 16 of age. In ordinary cases the poisoning principle of diphtheria probably enters the blood by way of the mouth and the air passages. The period of incubation of diphtheria, or the time from a person's exposure to the disease to his coming down with it, varies somewhat, being usually from a few hours to seven or eight days; in some cases it is 12 to 14 days.

The specific contagium developed by the disease itself, and by which it spreads, is diffused by the exhalations (breath, perspiration, etc.,) of the patient, through the air immediately surrounding him, as well as by clothing or other solid substances that have been brought into contact with the products of the disease. As a rule, the virulence or malignancy of the contagium is in direct proportion to the severity of the case from which it emanates, though malignant cases may result from exposure to a mild case.

The more this contagium is allowed to accumulate in the room where the patient lies, the more powerful does it become.

RESTRICTION OF DIPHTHERIA.

Diphtheria is a contagious disease, and hence the strict observance of the following precautions are of very great importance:

1. Every person known to be sick with this disease should be promptly and effectually isolated from the public; one or two persons only should take the entire charge of the patient, and they should be restricted in their intercourse with other persons.

2. The room into which one sick with diphtheria is placed should previously be cleared of all needless clothing, carpets, drapery and other materials likely to harbor the poison of the disease. This room should constantly receive a liberal supply of fresh air, without currents or drafts upon the patient. It will be well also to have the sun shine directly into the room.

3. In order that the guardians of the public health may have early warning, it is important that every case of diphtheria be promptly reported to the local board of health.

4. The duties of householders, physicians and board of health, as specified in sections 1734, 1735, 1732 and 1695 of the compiled laws of Michigan 1871, should be rigidly enforced.

5. The discharge from the throat, nose and mouth are extremely liable to communicate the disease, and should be received on soft rags or pieces of cloth which should be immediately burned.

7. The discharge from the kidneys and bowels are also dangerous and should be passed on old cloths and burned, or into vessels kept thoroughly disinfected by nitrate of lead, chloride of zinc, or sulphate of iron, (copperas), and then be buried at least 100 feet distant from any well.

7. Nurses and attendants should be required to keep themselves and their patient as clean as possible; their own hands should frequently be washed and disinfected by chlorinated soda.

8. Soiled bed and body linen should at once be placed in boiling water or in water containing chlorinated soda, chlorinated lime, or solution of chloride of zinc.

9. All persons recovering from diptheria should be considered dangerous and therefore no such persons should be permitted to associate with others, or attend school, church, or any public assembly, until in the judgment of a careful and intelligent physician they can do so without endangering others.

10. The body of a person who has died of diphtheria should as early as practicable be placed in the coffin with disinfectants, and the coffin then should be tightly closed. Afterwards the body should not be exposed to view except through glass.

11. No public funeral should be held at a house in which there is a case of diphtheria, nor in which a death from diphtheria has recently occurred. No children, at least, and it would be better in most cases that few adults, should attend such a funeral.

12. The room in which there has been a case of diphtheria, whether fatal or not, should, with all its contents, be thoroughly disinfected by exposure for several hours to strong fumes of chlorine gas, or of burning sulphur, and then, if possible, it should for several days be exposed to currents of fresh air.

13. After death or recovery from diphtheria, the clothing, bedding, carpets, mats, and other cloths which have been exposed to the contagion of the disease should either be burned, exposed to superheated steam to a degree of dry heat equal to 240 degrees Fahrenheit, or thoroughly boiled.

PREVENTIVE MEASURES.

14. Avoid the special contagion of the disease.

15. Beware of crowded assemblies in ill-ventilated rooms.

16. The grounds under and around the house should be well drained.

17. No vegetable or animal matter should be allowed to decompose on the surface of the ground near the house.

18. If any soap-factory, slaughter-house, rendering establishment, or other source of foul odors, contaminate the air which you and your children daily breathe, take immediate measures through your local Board of Health or health officer to have such nuisance abated.

19. Your own privy especially, should at all times be thoroughly disinfected, by dry earth, coal ashes or copperas-water; and the receptacle should be so constructed as to be water-tight and to be tightly covered when removed to be emptied, as it should be often enough to prevent the air about it from becoming offensive, and in cold weather so far as possible.

20. Your whole house and especially its sleeping rooms should be well ventilated.

21. Your cellar should be dry and well ventilated; it should frequently be whitewashed, and always kept clear of decomposing vegetable or other substances.

22. No cesspool should be allowed near the house. If there be one, it should either be removed or be thoroughly and frequently disinfected with sulphate of iron, (copperas.)

23. Your house drains should be looked to with scrupulous care, to see that they are well trapped, kept clear and ventilated into the open air.

24 Your house should not have uninterrupted connection with a sewer. Be sure that the waste pipes do not permit the entrance of sewer gas into the house, but that they enter the sewer through an open air space, or at least through a space freely ventilated to the open air.

25. Be sure that your drinking water is not contaminated by surface drainage, or by leakage from the drain, gas-pipes, sewer, cesspool or vault.—*St. Albin's Weekly Messenger.*

A SPECIMEN SWINDLE.

LAST week the "put and call" swindle, one of the most ingenious and successful ever perpetrated and one against which we warned our readers in our Querist Department several months ago, was practically broken up by the Post Office authorities of this city. A brief account of the affair may be a warning to some of our readers, or rather to their paper-borrowing neighbors, against a host of frauds differing only in their methods, whose circulars crowd the mails while their advertisements find prominent places in hundreds of newspapers.

In the city here the N. Y. Times deserves well of the public for thoroughly exposing the whole affair. The business was started in a "bucket shop" here in 1875. The head of the concern devised the system of roguery which proved so safe and profitable that it was soon taken up by many others. His plan was simply to advertise extensively throughout the country asking for money with which to speculate in stocks—and to pocket every dollar that was sent to him. Circulars filled with enticing descriptions of the immense profits to be made by the investment of small sums, were scattered broadcast throughout the land, especially the rural districts, and fools were not lacking to jump at the bait. All any of them ever got was a letter announcing that the speculation had proved disastrous. No stocks were ever purchased. Railroad, mining and other stocks are constantly rising and falling, and as no special kind of stock was ever mentioned beforehand in which the operator intended to deal, he always told his dupes that he had speculated in some kind which had actually fallen inside the thirty days within which he stipulated that he should have entire control of his patrons' money. The representations made were very cleverly drawn up, and, although on the surface they seemed to promise fortunes to everybody on close analyses they really amounted to nothing more than an invitation to fools to hand over their cash.

In 1878 the number of similar swindling offices had so increased and the nuisance had become so unbearable that the members of the Stock Exchange made a united demand for their suppression. The styles of reputable houses had been closely imitated and these were constantly in receipt of letters, some asking for information, others fiercely denunciatory, and all intended for the spurious concerns. In November of that year the Law Committee engaged the services of a shrewd lawyer to ferret out the matter and to use every means to break up the nefarious business. From that time until last week he has been persistently engaged in the attempt to bring criminality home to the astute swindlers; but so carefully had they operated just within the letter of the law, that although he had the advice and assistance of the United States District Attorney and of the District Attorney of this city, all his efforts failed to fix a criminal offence upon them. His investigations, however, discovered the names of the chief operators and their *modus operandi*.

He soon found out that the chief man in the business—the owner of four of the principal concerns—was one Benjamin R. Buckwalter, who established his first "put and call" swindle in 1876, at No. 10 Wall street under the name of Buckwalter & Co. He made a mistake then, however, in attempting to do a city business along with a regular country trade, and the city sharpers got the best of him. With his experience, however, he soon got a partner and started another concern at 40 Broad street under the title of Bradley & Co. As they confined their operations to simple country folks here, they made money rapidly and used it to branch out on a larger scale on the corner of Broad-street and Exchange-place as Lawrence & Co., an imitation of the reputable neighboring banking-house of Lawrence Bros. The office was small, but the building was large and imposing. On their circulars was a wood-cut of the entire block, including the United States Sub Treasury and the splendid Drexel Building on the side-wall of which was the legend, Lawrence & Co. "Bankers and Brokers," the intention evidently being to give countrymen the impression that that was the building occupied by the concern.

Here they bought up all the names they could get of farmers, villagers and all sorts of people everywhere, and actually copied the entire list of one mercantile agency embracing the names and addresses of every business man in the United States. They mailed over 1,000,000 circulars at the first dash, giving an ingenious improvement on their own "put and call" artifice, since known as the "Combination Scheme." Hundreds of our readers have doubtless, received circulars descriptive of this alluring invitation of "the spider to the fly," and those who have not, should be thankful that they escaped the temptation to "step into that parlor—" so we'll let the hundreds of our readers who know all about it, tell all about it to the thousands who know nothing about it. The circulars were models both as baits to attract the unthinking and for their avoidance of all responsibility of any kind whatsoever. If the recipient sent a good sum—say $100—he was pestered no farther; but if his remittance amounted only to, say, $10, he was tempted again and again to invest more until his folly became manifest even to himself and anger took the place of greedy hope. Then he was dropped.

So many were the "innocents" that sent in their remittances that the sharpers were all soon breast-high "in clover." The books of Lawrence & Co., show that their receipts were, in July last, over $37,000; in August, nearly $24,000, and in September, over $29,000. During that month an article printed in the New York Times, exposing the swindle, caused their receipts to fall in November to $18,000 and in December there was a further drop to $12,000. In October last, which was an average month, the receipts of one day exceeded $2,300; of another, $1,900; and so on. After paying $15,642 for mailing circulars, advertising, etc., Buckwalter's share of Lawrence & Co., profits was, for that month, $17,452 43, and altogether he has been receiving from all his concerns $22,833.33 per month. At a low estimate taken from the books of the eight concerns lately suppressed, an aggregate capital of $75,000 per month was obtained from the dupes of these sharpers.

Well, there isn't space here to tell how the persistent lawyer and the United States Post Office at length managed to suppress the various concerns, but we give a list of the names of those whose mails the Post Office authorities have stopped. No doubt many of them are already familiar to some of our readers, as the chief prey all of them hunted dwelt in rural places. Besides Lawrence & Co., Buckwalter owned Adams, Brown, & Co., No. 28 Broad-street; Allen, Jordan & Co., No. 54 Wall-street and Barnes, Garrison, & Co., Nos. 11 Broad-street and 65 Exchange-place. The mails of four other concerns were also stopped; namely, Charles Doxell & Co., Thatcher, Belmont & Co; Simpson & Co.; and Heath & Co. The two last named were run by J. M. Pattee who originally ran the Wyoming Lottery; then the Cheyenne Lottery; then the grand Distribution Company, of Victoria, Canada; then the Buillon Mining Company; then the Gold and Silver Mining Company and numerous other swindles, against nearly every one of which we have at one time or another cautioned our readers.

THE BLANCHARD CHURN.

THE present manufacturers of "The Blanchard Churn" [P. Blanchard's Sons, Concord, N. H.] have been engaged (father and sons) in making churns for over fifty years. They have devoted much time to the scientific investigation of the process of butter-making, and in developing the best mechanical means for aiding it. It has been

for many years their only business. They have carefully observed and examined every new claimant for the dairyman's favor. They have been constantly testing and applying improvements to the churn they have been making. They have been perfecting the machinery and appliances of their factory. They have been untiring in their efforts to combine every desirable quality in their churn, and to omit everything needless or complicated, and they now have the best-known churn in the country. We now offer these churns as presents to those of our friends who will send us in subscription clubs: The No. 3 [2 gallons] for a club of 10, and the No 5 [8 gallons] for a club of 14. No housewife, dairyman or dairymaid who do not already possess one of these churns, can spend a few moments more profitably than to visit their friends and neighbors, obtain their subscription to the RURAL and send them to us along with an order for a churn.

PALACE ORGAN.—Style 13, Five Stops—Five Octaves—is offered in our premium list as premium No. 83. The Loring and Blake Organ Co., Worcester, Mass., and Toledo, Ohio, make this organ. In selecting a suitable instrument of this class to offer as a present, we were guided by the advice of musical friends, and the style we give is thought to be exactly suited to the requirements of the country-home.

A case comparatively plain in appearance was selected because the absence of excessive ornamentation is a positive advantage from a musical point of view, as the light, resonant case secures a

peculiarly sympathetic quality of tone, that is the perfection of accompaniment for solo singing.

The action, or internal mechanism, is precisely the same as that which is furnished in the most elaborate cases, and is warranted for five years. There are three sets of reeds—one of twenty-eight notes, and two of thirty-three notes each. The power is sufficient to fill any ordinary room completely, and it will lead a fair-sized chorus without difficulty. The five stops—diapason, melodia, vox celeste, tremelo and forte, with the patent knee-swell, produce a charming combination of musical effects. We will present one of these organs, direct from the factory, [price $180] for a club of 200 SUBSCRIBERS.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

FOR MEN ONLY.

ADELINE E. STORY.

IF women's curiosity is as great as it has come to be considered, no doubt every one of the sisterhood who glances at the above heading, will read what follows. The woman whose good fortune it is to have a kind, thoughtful husband; one who takes her out frequently, never forgetting to see that the robes are well tucked in about her in cold weather, and thinks it *his* place and not *hers* to hold the umbrella in case of a storm; who, to lighten her labor, winds the clock every morning and attends to the locking up at night; who has never discovered that the children take all their bad traits from her, and that in their good ones they take after him; who shows as much consideration for her as he does for other women; who, in short, attends to all the little details for her comfort as though that were as much to him as his own, will think what is here said altogether uncalled for, while the woman who is fast bound to a man of a different stamp, will say: "O, I know all about those men. But there's no use in talking to them—they're too selfish to care for anything."

It is for such men as this woman's lot is cast with, that what I have to say is intended. I know that every one of you that has read thus far, will go on, because you haven't the faintest suspicion that it is meant for you, and you will want to see how some one else "catches it."

But let us see. What do you do for your wife because she *is* your wife, and it is, therefore, your duty to do your best to make life pleasant to her? You undertook the task—though then it was not so much a task—years ago. *Now* you look after your own comfort, and that is about all that you want to attend to, in that line. You use tobacco, though she dislikes it, and the smell of it in your breath and in your clothes is nauseating to her. You swear in her presence, though you would not in that of another woman, and that, too, when you know just how hateful it is to her. You are, moreover, in other respects not too choice in your use of language, obliging her to hear words from you that you would be shocked, and rightly, too, to hear coming from her lips. You spit on the floor, though you know it disgusts her. You keep your hat on in the house, and she weighs you in her mind against other men she knows, who do not—and you are found wanting. You eat with your knife, even when there is company present, and that mortifies her. You tell all the little secrets she trusts you with, to your father and brother, and that weakens her confidence in you. But these are trifles, you say. They may be, but trifles make up the sum of our happiness or unhappiness.

But you are delinquent in other respects and your faults of omission are as great as your faults of commission. You never voluntarily and of your own free act, ask her to go out with you. If she is one of the favored few and is so situated that she can go of herself when she pleases, it does not matter so much; but if she is one of the many compelled, alone and unassisted, to keep the domestic treadmill in motion, it does matter a great deal. You hitch up your team, slick yourself up a little and drive to town. You have business there, or you go there because you have nothing in particular to do, and you want to get out. But do you take your wife along? Not you, indeed, any more than you do when you drop in at a neighbor's of an evening for an hour's chat, and yet if there is any earthly mortal who needs to get away, now and then, from a scene of care and worry, it is the housewife who must make her one pair of hands do the work of two. She never asks you to take her, do you say? Perhaps if you try you will remember that she used to. She would be lacking in dignity to keep it up all her life when your actions, if not your words, plainly tell her that you don't want her to go along with you.

And then you withhold your sympathy from her in matters which are of interest to her, or which are trying to her, and being a woman sympathy is necessary to her happiness. There are many other things you do which you should not, and many which you should do and do not, but this article is growing long and so, for the present I forbear.

HOUSE-HOLD HELPS.

H. E. S.

Fringed Mittens.

MEN who are out in the cold and handle cold things, know how comfortable a good, warm pair of mittens are, and I thought I would give directions to aid the inexperienced in making fringed mittens. The yarn for the fringe is best, if spun very coarsely, and but slightly twisted. It may then be reeled into skeins

which can be colored to suit the fancy. Double and twisted yarn is best.

Have four coarse knitting-needles, and on to three of these, cast fifteen stitches each for a common-sized wrist. Double the end of the yarn you hold in the left hand, to make it strong at the edge. After casting on your sticks, knit around plain four times, then having your fringe cut in skeins, take six threads if quite coarse, or eight if fine; begin at the end of the needle: place the end of the fringe a half inch out, and knit one stitch, then turn the other part of the fringe out and knit two stitches, then turn in again leaving a loop which, when cut in two parts, will be about half an inch long. After knitting once around with fringe, knit around plain twice before putting in fringe again. Widen for thumb and narrow the end in the middle of the thumb needle and at the lower end only of each of the other needles.

Directions for Cutting and Making a Vest.

Pin the pattern neatly to the cloth, and cut out the fronts first, and mark with chalk the places for the buttons, button-holes and pockets. The remaining pieces will furnish the collar, facings, and pocket-welts. Having cut these, cut the backs, linings and pockets. For a colored vest, good, strong, colored drilling should be used for neatness and durability. White cloth ought not to be used to line colored vests; but may be used for light summer vests that are often washed.

After cutting the vest, stitch and press the little gore under the pockets and cut the pocket-places. Then baste a piece of strong linen on the under side where the buttons come, and sew on the buttons with strong, double thread. Then sew on the lining of the collar to the outside front of the vest. Stitch on the facings around the front, turn them over and press them down. Sew the outside of the collar to the lining of the vest, and baste upon it the buckram. Then fit the outside and lining neatly together, and face them down on each other.

Fruit Biscuits.

Fruit biscuits, which are so relished by many as shortcakes, may be prepared in this way: Make a crust as for biscuit, roll out a half inch thick, cut in rounds or squares. After placing one layer of these on the tin, place another layer of the same size over them; put in the oven and bake. When done, these layers are easily separated, and any kind of stewed, canned or preserved fruit, may be placed between them, and they are very convenient when one has not time to prepare pie.

Crackers.

To make good and healthful crackers, take, for five cups of good flour, one cup of melted butter; rub it well into the flour; then put one teaspoonful of soda in a bowl and pour a little warm water on it, and dissolve; have ready two teaspoonsful of cream-of-tartar, and put a cupful of cold water into the bowl that has the soda in it; when ready to turn into the flour, add the cream-of-tartar, and pour in while it is effervescing. Mix your dough and roll out half as thick as a cracker ought to be, and cut in squares or small rounds. Bake in a well-heated oven.

DOMESTIC RECIPES.

Canned Corn Fritters.

Drain off the liquor from a can of corn, chop fine, add three beaten eggs, a small cup of milk, a table-spoonful of melted butter, two table-spoonsful of flour, and a tea-spoonful of baking powder. Season with pepper and salt. Fry by the spoonful on a griddle.

Apple Tapioca Pudding.

Pare and core six or eight large, tart apples, put into a deep dish, pour over a cup of hot water, cover, place in a moderate oven, turning once or twice, and cook until tender. Have prepared one teacupful of tapioca by soaking in three teacupsful of warm water for five or six hours, and pour over the apples after draining off most of the liquid from them. Bake until the tapioca looks clear and a nice crust has formed on top. Serve with hard sauce.

Fried Onions.

Peel, wash, cut crossways so as to form undivided rings, flour well and fry in drippings for about ten minutes; drain, sprinkle with salt and pepper and serve. Mrs. M. B. P.

Cracker Pudding.

Boil one quart of milk, add seven milk crackers rolled fine, three beaten eggs, a few seeded raisins or bits of citron; flavor and bake one-half hour. Serve with liquid sauce.

Cold-Slaw.

One cup of milk, one-half cup of vinegar, two or three beaten eggs, salt and pepper with a small piece of butter. In mixing the ingredients add the vinegar last. Put into a large frying-pan, bring to a scald, add the sliced cabbage and stir until well heated through. This is for one small head of cabbage. Mustard and oil may be added if liked.

Crackers.

Two quarts of sifted flour, one cup of butter or half lard, two cups of sweet milk, one teaspoonful of soda and two of cream-of-tartar. Rub the cream-of-tartar with the shortening well through the flour, add the soda with the milk, knead and pound with the rolling-pin as long as you have time and patience. Roll thin, cut round, and bake in a quick oven.

Remedy for a Cold.

Ten ounces of gum-arabic, one ounce of paregoric, 12 grains of ipecac, one stick of licorice. Dissolve the gum and licorice in one-half pint of warm water, then add the other ingredients with a quart of cold water. A dessert-spoonful three or four times a day.

Miss C. B.

Tomato Soup.

Have a gallon of nice soup from fresh beef, skim off the top, add two quart cans of tomatoes, put through a fine sieve, make a paste of half a teacupful of flour, with butter enough to mix, and stir into the soup as it boils. To prevent its being lumpy, take out a little of the soup and mix first with it. Boil twenty minutes. Season with pepper and salt.

Mrs. Reid.

News of the Week.

MISCELLANEOUS.

Monday, January 12, 1880.

The political trouble in Maine continues. The Legislature assembled on the 7th inst., and organized. The Greenbacks are in the majority. Governor Garcelon's term of office has expired, and President Lunson of the Senate was expected to act as governor *pro tempore*, until another executive shall have been elected; but early on the morning of the 9th inst., ex-Governor Chamberlain, who is in command of the military forces of the State, issued a general order, stating that in view of the extraordinary situation now presented at the seat of government, he would assume command and protect the public property and institutions of the State, in trust, for the people, until a governor has been legally elected and duly qualified. . . . The champion for the Irish people, Mr. Charles Stewart Parnell, who has recently come to this country to invoke the sympathy of Irish-American citizens for their fellows at home, has, during the past week, been addressing large crowds in Newark, New York and Jersey City. He receives great applause from his listeners, but a feeling is gaining ground in more reflective minds that he overdraws the picture of distress and of the asserted English misrule from which Ireland is suffering.

Canadian papers say the commercial prosperity of the Dominion is retarded by her inability to make treaties. The independence of the country is being advocated. Reciprocity with this country is to follow. . . In the United States last year 175 persons were hanged. . . The President has refused to pardon Captain Gregg convicted of embezzlement in the money order division of the Chicago Post Office. . . A counterfeiter was arrested at Greenville, Miss., on the 9th inst. On his person was found several hundred dollars in spurious gold and silver coins. He is thought to be a deperado of the worst type. . . Several retail dealers of oleomargarine in this city have been arraigned for selling it for butter, on testing the case in court it was found that professed experts failed to detect the difference between artificial and real butter. . .

On Sunday January 11 an eclipse of the sun took place in California. The total eclipse was best observable across the Salinas Valley situated about 26 hours' journey from San Francisco. Many scientists observed the phenomenon. No eclipse of the sun will again be visible in California for 20 years to come.

The returns of the Commissioners of Emigration show that for the year ending December 31, 1879 there were landed at Castle Garden a total of 175,589 immigrants, of whom 135,070 were aliens. In 1878 the total arrivals numbered 121,369, of whom 75,347 were aliens. During the month of December last there were landed at Castle Garden 9,949 immigrants, against 5,320 during the same month in 1878. The Labor Bureau during the past year provided employment for 11,014 males and 5,017 females, the former including 1,379 mechanics and 9,635 agricultural and other laborers. In 1878 the number who procured employment amounted to 5,623 males and 4,945 females. The principal nationalities of the immigrants who arrived last year were: Germany, 33,571; Ireland, 22,624; England, 21,555; Sweden, 12,394; Italy, 7,220; Scotland, 6,087; Norway, 4,933; Switzerland, 4,653; Russia, 3103; France, 2,331.

Mr. Edison has made new and important improvements in the electric light. On the evening of December 28th Menlo Park N. J., the place where the inventor lives, was illuminated with 40 electric lamps. It is quite possible that electric light will be so perfected by Edison that it can be used for house light and as such eventually supersede gas. Cablegrams from England state that the news of the illumination at Menlo Park created some excitement in London and gas shares fell slightly. . . Since the above trial with electric light, Mr. Edison has been much criticised by scientific men and others, who have predicted a speedy failure to the experiment. But in spite of all, the electric circuit has been enlarged, more lamps added, and stores illuminated to perfect satisfaction. Thousands of people now visit Menlo Park to see the light; and admission to his laboratory takes place by card.

At Fort Edmonton, N. W. T., a Cree Indian was hanged on Dec. 23. The most horrible reports are given of this Indian's crimes. He had murdered a large number of people, among which were his mother, wife, and seven children, and to crown the horror he turned cannibal and ate of his own mother's flesh. . . The Grant "boom" continues, and, if there is any change at all, it grows louder with every passing week. He is supported by the leading republican newspapers, and it is not unlikely he will be nominated to hold office as President for a third term. . . The arriving European steamships report unexampled stormy passages. The ships and crews have had to battle with fierce winds and mountain waves during the first week of the New Year.

An oppressive quiet prevails in the political circles at Washington. Nothing at all of an exciting nature is taking place. The national capital is as quiet and contented as peace and prosperity can make it. A discontented politician suggested the other day that Mr. Hayes be impeached. He argued that while Grant was at the wheel there was always something exciting to talk about—either Southern troubles, Mexican troubles, or blood-curdling Indian wars; but now he finds the atmosphere too stale to breathe.

FOREIGN.

There's a severe famine in the Province of Seistau on the frontier of Persia and Afghanistan. The people are selling their children for food. . . A famine prevails in some districts of Bosnia, 8,000 people are reported to be on the brink of starvation. . . On Jan 5, a serious conflict occurred at Carraroe, Galway, between masses of peasantry and 60 constabulary. The latter fired among the crowd. Many wounded on both sides—one woman killed. . . On same day great fetes at Panama greeted Lesseps who is vigorously pressing the projected canal across the Isthmus there. A corps of engineers started on a final survey of the proposed route. . . Berlin contains 60,000 adult male Socialists, as shown by their votes, and annually brews 50,000,000 gallons of beer. . . It is said that the Government has determined to use $250,000 of the Church surplus as a fund to be loaned, at an exceptionally low rate of interest, to landlords and to local bodies, for expenditure in the construction of permanent works in order to provide labor for unskilled workmen, said loans to be repaid in thirty-five years.

Summer's Heat

relaxes the system and renders us liable to attacks of diarrhœa, dysentery, bloody flux, cholera-morbus, cramps in stomach, colic, and other painful and dangerous affections for which Dr. Pierce's Compound Extract of Smart-Weed—compounded from the best French brandy, Jamaica ginger, smart-weed, or water-pepper, anodyne, soothing and healing gums and balsams, is a most potent specific. It is equally efficacious in breaking up colds, fevers, and inflammatory attacks. Every household should be supplied with it. Fifty cents by druggists.

Coughs.—"*Brown's Bronchial Troches*" are used with advantage to alleviate Coughs, Sore Throat, Hoarseness, and Bronchial Affections. For thirty years these Troches have been in use, with annually increasing favor. They are not new and untried, but, having been tested by wide and constant use for nearly an entire generation, they have attained well-merited rank among the few staple remedies of the age.

Old men, tottering round from rheumatism, kidney trouble or any weakness will be made almost new by using Hop Bitters freely.

The Markets.

THE GIST OF THE MARKETS.

The Grain Market throughout the country is in a peculiar condition just now. Last fall Jim Keene and other capitalists formed a syndicate for the purpose of speculating in wheat, especially No. 2 Red Winter. They bought up all offered in the Chicago market and a good deal elsewhere, and their enormous transactions have had a great deal to do with the good prices obtained from wheat of late. In the expectation of a great demand in Europe, they have been holding vast accumulations here, buying grain on this side of the Atlantic at figures considerably higher than those ruling on the other side. They anticipated that by this time prices would have risen there, and the boldest of them are still confident that they can force there later on whatever prices they may please, within moderate limits. There is a report, however, that some of them are getting weak-kneed and disposed to sell out quietly at present figures, leaving their associates in the lurch. Moreover, their stocks are so heavy that there is difficulty in finding storage. This is especially the case now in Chicago, where the elevators, with a capacity of 16,000,000 bushels, are full or nearly so. Railroad cars are standing on the track there loaded with grain for which there is no storage-room; vessels in the harbor are in the same condition. Temporary storage will have to be supplied there and along the railroads. Prices have been forced so high that it is a dead loss to ship to this point, much more so to Europe. Farmers find it hard to sell, though content with the price. It is not very improbable that there will be a big break soon, with a recovery after an interval.

Prices of hogs the past week have been depressed not only by the continuance of the Chicago hog-packers' strike, but also by the warm weather which caused several packeries in Chicago and Cincinnati, and doubtless elsewhere also, to suspend operations. The strike will probably end this week, and it is to be hoped for the sake of the hogs, or rather of their owners, that "as the day lengthens the cold strengthens" will prove true. During the week there has been little change in the hog line. But just look at the prices now and at this time last year when light hogs sold for $2.65@$2.75 and heavy weights at $2.60@$3.

The Mark Lane Express, of the 6th in its review of the British Grain trade for the past week, says: "The recent frost prevented the sowing of much of the land which was intended for wheat, especially in the midlands and ten districts, where it is reported that only about one-half of the intended quantity has been sown. As the frost has now disappeared some of this deficiency, at any rate, should speedily be remedied. It is impossible as yet to state the effect of the frost upon the growing wheat, but it may be remarked that increased apprehensions are felt on this point. In France roots have been much injured by frost, and it will be difficult and expensive for cattle-owners to tide over the winter. Damp weather has rather deteriorated freshly threshed grain.

The quantity offered at Mark Lane has been small and prices were not quotably lower. Trade in foreign wheat was only slightly affected by the holiday influences during the past week, and the full rates of last Monday have been obtainable. The supply for the moment is doubly in excess of the demand, and stocks are increasing. Holders, however, do not seem inclined to press sales. There seems to be a general inclination to await a further development of the situation in America. If prices here had continued as abnormally depressed as during the first half of the year 1879, the great speculative enterprise which is now afloat in America could hardly have failed to be successful, but now, that prices in England have risen ten to twelve shillings per quarter, the possibility of a corner is materially diminished. The only noteworthy change in feeding stuffs has been a decline in maize of about 1s. per quarter, in consequence of the large arrivals and flagging demand.

SPECIALS FROM ALL CENTERS.

Until Saturday, Jan. 10.

Albany, N. Y.—Wheat—No sales. Rye dull and lower, 80@85c, in the street; sales of one car of State at 95c. per 56 lbs. Oats scarce at 50@52c. in the street. Barley steady, sales from cars No. 2 six-rowed State at 81c. Cattle, good to extra $4 75@5 50; milch cows dull; prime milkers at $45; springers $25@35; veal calves scarce at 6@7c; grass at $3 50@6 50. Sheep and Lambs—receipts 21,400, an increase of 7,800 over last week; prime sheep at 6c.; lambs dull at 5½@7½. Dressed Hogs 6@6½c.

Boston.—Since last report corn is unchanged; oats, a shade higher; rye steady; shorts a shade lower; middling unchanged; butter steady with a fall of 2c. in creameries; cheese steady; eggs unchanged; beans ditto; potatoes a shade higher; no change in hay and straw.

Flour quiet. Western superfine at $5 25@5 75; common extra $6@6 25; Wisconsin do. at $6@6 75; Minnesota do., $6 50@7 50; winter wheats, $7@7 25 for Ohio and Michigan; $7@7 50 for Illinois and Indiana; $7 25@8 for St. Louis patent spring wheats, Minnesota and Wisconsin, $7 75@9 50 patent winter wheats at $7 50@9. Corn, new 62c@64c; old 64½@67c. Oats, No. 1 and extra white 52@54c; No. 2 white, 51@51½; No. 3 white and No. 2 mixed, 48@50c. Rye, 95c@$1. Shorts, $19 50@20; fine feed and middlings, $21@22. Butter.—N. Y. and Vt. choice creameries 30@33c; fair to good 28@30c; full dairy-made, choice 28@30; winter dairy-made 20@23c; straight dairies, choice 23@25c; dairies, common to good, 18@22; Eastern 18@22c; Western, choice creameries 34@35c; choice dairy packed, 25@28c; choice ladle-packed, 22@24c; fair to good 18@20c; common $15@16; Cheese, choice Northern factory 12½@13c; fair to good 10@11½c. common, 7@9c; Western factory; choice 12@13c; fair to good, 10@11c; common, 7@9c. Eggs, Eastern, 22@24c; Northern 21@22c; Western 18@20c. Beans—Northern hand-picked Pea at $1,80@1.90 ℔ bushel; do. do. Western at $1 75@1 85; do common to good $1 65@1 75; medium choice $1 55@1 60; common to good $1 35@$1 40; Yellow Eyes $2 10@2 20; Red Kidneys at $1 75@1 85. Canada Peas 80c.@$1 00 ℔ bushel for common to choice. Green Peas $1 50@1 55. Potatoes.—Houlton and Maine Central Rose 50c. ℔ bushel; Houlton Jackson Whites at 50c. Main Central Jacksons 45@50c; Vermont Rose $45; Jackson 45; Peerless, 45@50; Prolific 50@53c. Onions $3@3 25 ℔ bbl. Apples at $1 50@2 50 ℔ bbl. according to quality. Cranberries at $5 50@7 50 ℔ bbl. Hay and Straw first quality coarse Eastern and Northern hay $16@17; poor and medium $11@15; choice Western timothy, $13@14, Rye straw $23@$24. Cotton middling, 12¾c; low middling, 12¾; good ordinary, 12¼.

Cincinnati.—Wheat 3c. lower than at last report; corn, 1 to 3c. higher; oats, 2c. higher; rye, 1c. lower; barley, steady; butter, choice Western Reserve, 1c. higher; prime, do., 1c. lower; other grades about the same; hogs unchanged, except packing, which are 5c. lower; prices of hogs kept down by warm weather.

Wheat—Wheat dull at $1 32@1.34. Corn, firm at 43@45c Oats strong at 40@41c. Rye quiet at 90@91c. Barley steady at 90c. Butter, choice Western Reserve, 24@25c.; prime, do., 21@23c.; prime to choice, central Ohio, 20@22c. Cheese, prime to choice, factory, 13@13½c.; sharp stock, 12@12½c Beans, fair to good, white, $1.15@1 35; good to prime, medium and navy, $1.40@1 50; prime to choice medium and navy, $1 65@$1 75 for jobbing lots. Feed, bran, $11 per ton on track; ship-stuffs, $11.50@$13. Middlings, $15@$21—stuff in sacks 50c. higher than above quotations. Apples—Market overstocked, $1.50@$2; choice, $2.25@$2-50. Onions.—Good to choice, $3 50@$4.25. Potatoes.—Peachblows, 28@30c. ℔ bus., from wagons and 35c@40c from store; Early Rose, $1 50@$2. Hay.—Prairie hay $10@$15; fair to prime timothy, $15 50@$16,50; choice light pressed do $17, on arrival and $1 more from store. Horses.—Drivers heavy draft horses, street car hags, and good Southern chunks are in demand and scarce, and sell readily. Driving horses, $100@$175; draft do., $100@$175; streeters, $75@$100; Southern chunks, $50@$80. Mules, age 4 to 8 years, 15½ to 16 hands, $150@$180; 15 to 15½ hands, $95@$115; 14 to 15 hands $65@100. better prices are expected from now until springtime.

Chicago.—Since last report No. 2 red winter wheat has fallen 3½c.; No 2 Chicago spring, 2½c. for cash, 2½c. for Feb.; other grades are proportionately lower. Corn steady; oats firm, 2½ to 3c. higher; rye, 1½ to 2c. lower; barley 6c. lower; butter somewhat lower; Cheese about steady; eggs from 2 to 4c. lower; potatoes steady; No. 2 timothy $1 lower, other grades about the same; hogs about 5c. higher; cattle a trifle higher.

Wheat—No. 2 red winter at $1.28½; No. 2 Chicago spring, $1.29¼ cash; $1.30¼ for Feb; $1.30¾ for March; No. 3 do., $1.13¼; rejected, 90c. Corn, 40¾@40¼c. cash; 40¾c for Feb.; 45¾@45¾c. for May. Oats, 35c. cash and for Feb.; 32¾c. for May. Rye, 79c Barley, 81c Timothy seed in good demand at $2.75@2 86. Flax-seed from at $1 51¼; clover and $5@5.50. Butter—Creamery, 28@35c.; good to choice, dairy, 22@25c.; medium, 19@21c.; inferior to common, 16@18c.; roll, 15@23. Cheese—Full cream, 12½@13c.; part skim, 11@12c.; low grades, 5@9c. Eggs—Fresh, 19@20c.; market overstocked with eggs not in prime condition. Potatoes—Peachblows, 55c; Early Rose, 45@50c. Apples, ℔ bbl., in lots, $2 50@3 25, Cranberries, ℔ bbl., $7@8. Hay—No. 1 timothy, $14@14 50; No. 2 do., $12.50@13; mixed, $11.50@12; upland prairie, $11@11 25; slough, $9. Wool—was in light request and steady. Tub-washed was quoted firmer, owing to small supplies. Washed fleece, medium choice, 48@51c.; washed fleece, medium common, 46@48c.; washed fleece, fine, ℔ lb., 40@45c; medium unwashed, 33@37c.; fine, do., 27@30c; coarse, do., 29@32c.; tub-washed, choice, 52@55c.; tub-washed, common to good, 40@44c Hogs mixed packing, $4 40@4.55; choice, heavy, $4 60@4.85; light, $4 40@4 55. Cattle—Exports strong at $5@5.15; Shipping strong at $3.70@4.90; butchers' active at $2@3.40; calves, $3.50@5.25; stockers and feeders, $2.20@3.60. Sheep—Market strong, $4@4 25.

Detroit.—No report last week so no comparison can be made.

WHEAT.—Extra white Mich., $1.35½; No. 1 white Mich., $1.35½, spot and Jan.; $1.38½ Feb.; $1.42½ March; $1.44½ April. CORN.—No. 1, yellow, 49c.; high mixed, 48½c.; No. 1, mixed at 48c.; No. 2, mixed at 46½. OATS, firm, with an active demand: No. 1 white at 41c.; No. 2 white, 39½c.; No. 1 mixed at 39½c; No. 2 do. 38c.; Clover seed, No. 2 at $4.65; prime, $4.95; choice, $5.30. Dressed hogs, $5, a decline of from 10c. to 15c since yesterday.

Indianapolis.—Since last report No. 2 red wheat has fallen 2½c.; corn has risen from ½c. 1½c.; oats a shade lower; hogs 10c. lower.

WHEAT, firm; No. 2 red at $1.31½@$1.34. CORN firm at 39@40c. OATS steady at 36½@39. Hogs steady at $4.20@$4.60.

Liverpool, England, Jan. 10.—Wheat is about 2c. lower, except No. 2 Southern which is 4c. lower; corn 1c. lower; cheese 30c. per cwt. higher.

WHEAT:—Spring No. 3 dull at 10s. 6d.; spring No. 2 dull at 10s. 10d.; winter, new Western, dull at 11s. 6d.; do. Southern, dull at 11s. 6d. CORN, mixed, old, steady at 5s. 7½d.; do. new, steady at 5s. 6½d. CHEESE—American choice firmer at 69s. per cwt.

Louisville.—Since last report wheat has declined 1c.; white corn has risen ½c, and mixed 3½c.; oats 1c. lower; rye steady; butter steady; eggs from 3c. to 5c. lower.

The packing houses have been compelled to close for the season, owing to the failure in the supply of hogs, though a few establishments are still buying on both sides of the river. More hogs killed than in any season since 1875.

WHEAT,—Firm at $1.33. CORN.—White, 45½c.; mixed, 44½c. OATS—White, 41c.; mixed, 40c. RYE —Steady at 91c. BUTTER—Western creamery, 32@35c.; Western Reserve, 23@25c.; fair to choice country, 18@22c.; common to fair do., 10@15c. BEANS—Prime navy $1.75@1.90 for Northern hand-picked; common stock, $1.00@1.25. EGGS—Liberal supply. Fresh, 13c. on arrival APPLES.—Green, on arrival, $3.00@4.00; choice to fancy, for store, $3.75@4.25; selections, $4.50@5.00. CRANBERRIES.—$8.00@9.00 per barrel. DRIED APPLES,—6½@7c. CHICKENS—$2.50@3.00 per doz. TURKEYS—8c. per lb., fresh. POTATOES—Russets, Peachblows and Peerless, from store, $1.75@1.85; Early Rose, $2.00. In other markets Peachblows are dearer than Early Rose potatoes. How is this?

Milwaukee.—Since last report No. 1 Milwaukee hard and do. soft wheats have fallen 1½c.; No. 2 Milwaukee has dropped 2½c. on spot, 3½c for February, 3½c. for March, and other grades proportionately, except rejected, which is steady; corn 1c. higher; rye 2½c. lower; hogs 10c. lower.

WHEAT—No. 1 Milwaukee, hard, $1.30; do. soft, $1.29½; No. 2 Milwaukee, spot and January, $1.27½; February, $1.28½; March, $1.30½ bid; No 3 do., $1.13; No. 4 do., $1.06; rejected, 95c. CORN—Firm; No. 2, 40½c. OATS—Steady; No. 2, 35c. RYE —77½c. for No. 1. BARLEY—No. 2 spring, 73½c. cash. HOGS—Firm at $4.50@4.55. Dressed hogs in fair demand at $5.15.

New Orleans.—Since last report corn has dropped from 4 to 7c; hay about the same; cotton has gone up ⅛c:—

FLOUR quiet but steady; superfine at $5 50@5 75, double extra at $6@6 12½; treble extra at $6 25@6 50; high grades at $6 50@7 25. CORN quiet at 55@58c. OATS 53c. CORN meal $2 45@2 50. HAY in fair demand; prime at $24; choice at $25. PORK old, at $13 25; new at $13 50. LARD, tierce at 8½c; keg 8½. Bulk meats firmer; shoulders, loose, 4½c; packed, 4½c; clear ribs, 6½; clear sides, 7c. BACON quiet; shoulders, 5½@5½c; clear ribs, 7½@7½. COTTON steady; middling, 12½c; low middling, 11½c; good ordinary, 11½c; net receipts, 11,825 bales; gross, 12,635; exports, to Great Britain, 331; sales, 7,000; stock, 324,257. Weekly net receipts, 51,031 bales; gross, 53,092; exports, to Great Britain, 25,939; to the Continent, 10,412; to the Channel, 2,231; coastwise, 8,162; sales, 55,300.

Philadelphia.—Since last report Western rejected wheat has fallen 3c.; do. Penn. red, white No. 2 red sold on Saturday 3½c. lower; rye steady; Southern yellow corn 3½c. lower; Southern white 2½c. higher; oats from ½c. to 1½c. higher; butter about the same; cheese ditto, eggs 1c. lower for Penn., and 2c. for Western; bran steady; dressed hogs went up from 1c. to 1½c.

WHEAT—Western rejected $1 43; Penn. red on track $1 49@1 49½. At the Open Board No. 2 red, January, at $1 49 bid and $1 51 asked; February at $1 51 bid and $1 52½ asked; March at $1 54 bid and $1 54½ asked. RYE scarce at 95c. CORN, Southern yellow on track 59½c. OATS firm; stained, 47 1-2; mixed, 48c.; fair and choice white, 49@50c. PROVISIONS quiet; city mess beef at $13; beef hams at $16@16 50; mess pork at $13 50; extra prime at $42. Smoked hams at 10@11c.; do. in salt and pickle at 8 1-2@9½c.; clear rib sides, smoked, at 7½c.; do. in salt at 7c.; shoulders, in salt, at 4½@5c.; do, sugar pickeled at 7 1-2c.; do. smoked at 5 1-2c. DRESSED hogs at 5½@5½c. LARD—Western in tierces at 7½@8c.; do. butchers' at 7 1-2c. BUTTER firm; creamery extra at 32@33c.; Bradford county and New York extra at 27@28c.; Western Reserve extra at 24@25c.; do. good to choice at 18@23c.; rolls firm; Pennsylvania extras at 32@34c.; Western Reserve extras at 22@24c. Eggs demoralized; Pennsylvania at 19c.; western at 17@19c. CHEESE firm; New York factory at 13@13 1-2c.; western full cream at 12 1-2@13c., do. good at 11@12c.; do. skims at 7@9c EGGS were dull and prices weak under the excessive supplies and limited demand. The quotations are: Limed at 16@17c.; interior Western at 18@20c; fair do at 21c.; strictly fresh do. at 22c., and Penn. BEEVES—Market inactive on account of the high rate of cattle West:—extra at 6½@6c.; good at 5½@5½c.; medium, 4½@5c.; common, 3@4½c.; bulls and cows, 2½@2½c.; calves, 3@6½c. SHEEP—Extra, 100 to 130 lbs., 5½@6c.; good, 90 to 100 lbs, 5½@5½c.; good, 80 to 90 lbs, 5½@5½c.; fair, 70 to 80 lbs, 5@5½c.; common, 4½@5c. LAMBS were in demand, but few arrivals:—Extra at 6 1-2c; good, 6@6½c.; medium, 6c; common, 5 1-2@5½c. HOGS—The market during the past week was dull. A choice lot sold at 7 1-2c, and we quote extra at 7½c; good, 7c; medium, 6 1-2@6½c; common, 6@6½c. HAY AND STRAW are held firmly.—Cut hay at $19.00@$20.00; prime baled timothy hay at $18.00@$19.00; Rye straw at $21.00@$22.00, and wheat and oat do., at $12@$13. BRAN—$17.50@$18.25.

St. Louis.—Since last report No. 2 red fall wheat has declined from ½c. to 1c. for cash, 1½ for Feb. and 2½ for March; corn 1½ higher; oats ½c. higher; cattle about the same as at last report with a slight upward tendency.

WHEAT.—No. 2 red fall $1.35½@$1.36 cash; $1.36 Jan.; $1.38½@$1.38½ Feb.; $1.41½@$1.42 April; No. 3 do. $1.24 bid. CORN.—37½ cash. OATS slow at 37½ cash. RYE, 85c. BARLEY dull; choice to fancy 75c.@90c. HOGS.—Light shipping at $4.20@$4.25; packing at $4.35@$4.50; butchers' to fancy at $4.50@$4.60. CATTLE firm, with a good demand, but in light supply; choice to fancy fat steers, 1,600 lbs. average at $5@$5.25; good to prime at $4.40@$4.90; light, well fleshed-steers at $4@$4.30; cows and heifers at $2.50@$3.50; feeders at $3.50@$3.75; stockers at $3@3.50; corn fed Texans at $2.75@$3.75; receipts, 500; shipments, 1,300. Sheep firm but scarce; 90 to 110 lbs. average at $4.25@$4.75; extra heavy at $4.75@$5.25.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Jan. 10, 1879.

BEANS AND PEAS.—The bean market shows a wholesome tone of resuming business, and all fine qualities are quoted with confidence. At the moment the leading attention is given to marrows and mediums, with exporters expressing an early want of supplies of the latter for W. I. use. Southern B. E peas per 2 bu. bag, $2.25; green peas, firm; $1.80 at station; 1.85 from store; medium beans, fair to prime, $1.33@1.65; marrow, $1.45@1.57½; pea, $1.45@1.70; w. kidney, $1.75@1.95; red kidney, $1.60@1.75; black or (turtle soup), $1.75.

Receipts of beans for week, 5,300 bush.

BEESWAX.—Demand is small and prices unsettled. Sales at 21½@25½c. for Western and Southern.

Exports for week, 4,828 lbs.

BROOM CORN—has tended a little higher on small offerings; choice brush at 9c.; choice hurl at 8c.; stalk braid at 6@7c.; mixed red and green at 5@6c.

BUTTER.—The demand is not sharp at the winter prices, but is perhaps quite as brisk as might be expected in connection with mild weather. The cheaply rated stock always suffers neglect when it shows poorly on the tryer, and several warm days this week have hurt the selling appearance of medium State and undergrade Western. Fine quality is not over-plenty and receives only trifling additions from late receipts of summer and fall make. There is a marked improvement in winter made stock, and the inquiry for nice fresh State and Western is becoming a notable feature in the trade. General receipts are light, and all reserves of fine table grades seem to have a good future, and the remaining few country owners will participate in the later profits of the market. In the opinion of the trade there will be no long rule of much higher figures than are now recorded; an admission, by the way, that does not suit owners who took up speculative purchasing just after the timely buyers left off.

State and Western are usually close together in figures for all useful grades. From the light supplies this Jan. it would seem that many Western marks strike a newer market.

Quotations:—State pails and tubs, choice, 29@30c.; fair to prime, 22@28c.; fresh made, 26@27c.; full dairies, good to fine, 23@28c.; other, 22@26c.; firkins, 21@25c.; Welsh tubs, 22@27c.; poor State, 20@22c.; creamery, fancy, 36c.; prime, 35c.; poor to good, 25@28c; sweet cream, 33@34c.; Western imitation creamery, 23@28c.; dairy, fresh, extra, 25@26c.; poor to prime, 18@24c.; factory, best, 22@23c.; poor to good, 18@21c.; very poor, 16@17c.; rolls, 21@22c.

CHEESE.—Shipments for the week, 33,536 boxes. There has been considerable activity, shippers disposed to buy freely all grades, and with the statistical position showing much more favorable to producers, prices are higher and closed strong.

Quotations are for State factory: Fancy, 13½c.; good to prime, at 12¾@13¼c; fair to good, at 11½@12½c.; half-skimmed at 10½@11½c. State farm dairy: Good to prime 12½@13½c.; fair to good at 11½@12½c.; Wis. factory: Fine, 13½@13½c; good to prime 12½@13½c. Ohio factory: Cheddar, fine, at 13½@13½c.; do., fair to good, 11½@12½c.; flat, fine, 13½c.; flat, good to prime, 12½@13½c.; flat, fair to good, 11½@12½c.; half-skimmed, 10½@11½c.

At the close holders of strictly fancy factory demand 14c., and feel that it will be supported.

Receipts for week, 15,628 boxes; exports, 31,000 do. Cable quotation, 68s.

COTTON.—The market has been active, and closed easy at for Jan. 12.83@12.90c.; Feb. 13 01c.; March, 13.27@13.28c.; April, 13.43c.; May, 13.67@13.90c.; June, 13.84@13.86c.; July, 13.78@13.95@13.91c.; August, 14.03@14.01c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	11 1-16	11 3-16	11 3-16
Strict ordinary	11 7-16	11 9-16	11 9-16
Good ordinary	11¾	12	12
Strict good do	12⅜	12¼	12¼
Low middling	12 7-16	12 9-16	12 9-16
Strict low middling	12¾	12⅞	12⅞
Middling	12 13-16	12 15-16	12 15-16
Good middling	13 1-16	13 3-16	13 3-16
Strict good middling	13 5-16	13 7-16	13 7-16
Middling Fair	13 13-16	13 15-16	13 15-16
Fair	14 9-16	14 11-16	14 11-16

STAINED.

Good ordinary	10¾	Low middling	11 15-16
Strict good ordinary	11⅜	Middling	12⅜

DRIED FRUITS.—Apples have a fair inquiry at easier prices. Peaches are slow and unchanged. Small fruits are quiet and steady. Prices are For Apples — New North Carolina, at 7@8½c.; for fair; 10@10½c. for choice; 11c. for fancy sliced. Patent evaporated, apples, choice, in cases, at 15c.; do. fair to good, 13½@14c.; N. Y. State sliced, new, 7½@8½c.; do, quarters, choice, 7@8c.; new southern quarters, scarce and nominal; new North Carolina peeled peaches 17@19c., do., Georgia, 13½@16½c. Peaches, Delaware evaporated, peeled at 25@28c.; do. unpeeled at 13@14c.; new halves at 8c. Blackberries at 9@10c. for new. Raspberries at 26@26½c. Pitted cherries at 18@19c.

Exports for week, 177 bbls. apples,

EGGS.—Receipts for the week, 6,875 bbls.; do. last week 4,918 do. There has not been an active day since our last, and prices have broken under light receipts. For Cincinnati and Louisville lots, 17c. is extreme. Selected Western and Southern are taking the trade from near point stock as there is not enough difference in quality to warrant 2@3c. against the buyer.

Near points 20@21c.; State and Pa., 17@19c.; Western, fresh, 14@15c.; fair to good. 13c., Southern, 16@18c.; Canadian and Western, interior, 15@16c.; State limed, 14@15c.; Canadian, 13@14c.; Western, 13@14c.

FRESH FRUITS.—Apples are dull; buyers are suspicious of stored stock, and there will be few quotations of load lots until the weather hardens. Spitzenbergs, ⅌ bbl., $3@3.50, which is lower; Baldwins range, $1.75@2.25; Greenings, $1.50@2.50; spotted and scalded lots unsettled, the buyer generally obtaining his terms. Cranberries extremely firm. Cape Cod, fancy, ⅌ bbl., $8.50@9; fair to other cape and Eastern, bbls, $6.50@8.25; N. J. crates, $2@2.37; selected, $2.50. Grapes have outlived their welcome; only very choice cases bring $2.75@3. Florida oranges do not improve in quality, and, of course, not in prices; only bright-colored, uniform-sized stem fruit bring, $4.50, hf. bbl. case; other sorts, $2@3. Peanuts continue active at 5@5½c. per lb. Hand-picked Va., good to fancy, 4@6½c. Pecans steady, 10@10½c. Hickory nuts dull at 7@8.7c.

FLOUR.—The supplies have been liberal, and there are free sellers at easier prices, caused by a reaction in wheat values.

Latest prices are $4.35@5.60 for inferior to fancy superfine State; $5.65@5 90 for inferior to very good extra do., odd lots and lines; $5.90@6.25 for very good to choice do.; $4 85@5.60 for inferior to fancy superfine Indiana, Iowa, Michigan, &c.; $5.65@5 90 for inferior to good shipping extra do., and $5.90@6.25 for good to very choice shipping extra do.; inferior to about choice white wheat extras, $5.90@7 00, choice to very fancy do. $7.00@8 25; red and amber winter wheat, inferior to fancy trade and family, at $6@7 65; round hoop Ohio, $5.75@6.25; and trade and family brands of do, at $6.35@7.65; the latter rate for fancy; St. Louis at $6 00@6.25 for inferior to very good extra; $6 85@8.00 for very good to fancy; Minn. clear, very inferior to fancy, at $5 85@$6.85; Minnesota "straight," very inferior to fancy, at $6.50@8.00, and patent poor to very fancy, at $7.25@9.25; Oakdale stock at from $5 85@5 75, city mill extra at $6.50@6.90 for about fair to very choice for West Indies, (fancy do. quoted at higher figures); do. for England, $5.65@6.00 for poor to choice; do. trade and family extras, $7.00@8.00; do. for South America, $6.65@7.10; No. 2 at $4.00@$4.70 for poor to fancy. Buckwheat Flour moves out moderately well at $2.00@$2.25.

CORN MEAL.—Is selling at $3.10 for Brandywine; $2.00@3.10 for yellow Western; and $2.75@3.00 for white Western.

FURS AND SKINS.—There is a temporary firmness in the market for lots suitable for London February Sales. Prime skins quoted:—

	Nor. & East.	W. & S. W.
Otter, each	$6.00@8.00	$1.50@6.00
Grey Fox	40@ 80	50@ 60
Red Fox	1.40@1.60	1.00@1.30
Black Bear	6.00@9.00	4.00@7 00
Cubs and yearlings	2.00@4.00	1.50@3.00
Fisher	6.00@8.00	6.00@7.00
Mink, dark	1.00@1.25	60@ 75
Mink, pale	60@ 00	—
Muskrat, winter	10@ 12	9@ 10
Muskrat, fall	7@ 9	6@ 8
Kitts	—@ 2	—@ 2
Beaver, per lb	1.80@2.00	80@1.25
Raccoon, each	60@ 75	40@ 55
Opossum		8@ 20
Skunk, black		1,00@1.15
Skunk, half-striped		50@ 60
Skunk, striped		25@ 20
Skunk, white		10@ 15

GRAIN.—Wheat has been more freely offered and prices have declined. The slack export trade, which has taken only 310,020 bushels for the week is the main cause for the lower prices. Latest prices are of No. 1 white at $1.51@1.51½; do., January, at $1.51½@1.52; do., February, at $1.54½; do., March, at $1.56; No. 2 white at $1.48; ungraded white at $1.50; No. 2 red at 1.53½@1.54½; do., January, at $1.51@1.54½; do., February, at $1.54½@1.56½; do., March, at $1.56½@1.58; ungraded red at $1.48@1.60; mixed winter at $1.48½. Rye at 93½c. for No. 2 Western and 95c. for State. Corn has had a better export demand, some 305 000 bushels taken for export through the week, with prices at the close strong. Latest sales are of No. 2 at 59½@62c.; do., January, at 59½@59½c.; do., February, at 59½c; New York steamer mixed at 58½@58½c.; do., January, at 58½@58½c; ungraded mixed western at 57@60c.; New York No. 3 at 56½@56½c.; steamer white at 62c.; round yellow at 74c. for old and 68c. for new; No. 2 white at 66c. Oats are weak and irregular; latest sales are of No. 1 white, at 50½@51c.; No. 2 white at 49½@50c.; do. February, at 51½c.; No. 3 white at 48½c.; New York No. 1 at 49@49½c.; New York No. 2 at 48½@49c.; do., February, at 49@50½c.; New York No. 3 at 47c.; ungraded white western at 48@52c.; ungraded mixed western at 47@50c.; white State at 50½@51½c; mixed State at 48@49c.; No. 2 Chicago afloat, at 49c. bid.

HAY AND STRAW.—The market displays a fair degree of activity, and prices unchanged. Shipping hay quoted at 70@75c.; retail lots at 70@80c. for medium, and 85@90c. for prime; clover at 55@60c. Straw at 85@95c. for long rye; 65@70c. for short rye, and 55@60c. for oat.

Exports for week, 2,169 bales.

HONEY—Holders aim to start trade by marking off a cent. White clover, single comb, ⅌ lb, 17@18c.; larger pkgs, 14@15c.; buckwheat, 11@13c.; clover extracted, 10@12c.; strained, 8@9c.

HOPS.—Mr. Wells, in his circular, says:—"We have to report another dull week in hops, and, as intimated in our last, a reaction must take place in London, and our export trade revive before any marked improvement can be looked for here. The demand from our brewers is entirely of a retail character, nobody feeling disposed to buy beyond actual present wants, or to stock up at present prices; a continuance of this state of things will make a dull, dragging trade, which can only be improved by fresh orders from abroad. All quotations are entirely nominal."

Quotations are for New Yorks, new crop, choice, 38@40c.; New Yorks, new crop, medium, 34@36c.; New Yorks, new crop, low to fair, 30@32c.; Eastern, new crop, 30@35c.; Wisconsin, new crop, 30@33c.; Yearlings, 7@15c. Olds, all growths, 4@10c.; Pacific coast, new, 35@40c; Pacific coast, olds (nominal), 7@12c.; Bavarians, 50@65.

	Bales.
Receipts for the week	536
Total receipts since September 1, 1879	69,435
Total receipts for same period in 1878	41,634
Export clearances for the week	305
Total exports since September 1, 1879	39,793
Total exports for same period in 1878	15,380
Imports for the week	49
Total imports for the season	1,008

LEATHER.—Quotations are, for hemlock sole, 27@29c.; for light, 27@31c.; for middle, 27 to 30c; for heavy, 25 to 28c for good damaged.

OIL-CAKE.—Is generally held at $35 per ton.

OIL PEPPERMINT—We learn from prominent exporters that the stock here is almost nominal, and if any demand exceeding ordinary druggists' wants should arise, the supply would have to come from London, where almost two crops have been speculatively concentrated.

POULTRY AND GAME.—The push of the dressed poultry trade is over, and the season will have to be ranked as one of the poor paying ones. Small turkeys are in fair demand. When large and small are mixed inside prices are full. Prime chickens move fairly, but easy prices for all lines of poultry except special. Near point, dry picked are easy.

Capon, large, quoted at 20@22c.; small and slips, 16@19c.; Turkeys, N. J., 11@12½c.; State and Western, prime, 10@11½c.; fair, 8@9½c.; Philadelphia dry picked, 17@11c.; do. chickens, 13@14c.; N. J., 16½@12½c.; other, 5@9. Fowls, dry picked, 10@11c.; N. J. 9½@10½c.; other, 5@9c. Ducks, choice, 13@14c.; other, 10@12c. Geese, extra, 10@12c; other, 7@9c. Squabs, white, ⅌ doz., $2.00@2 25; dark, $1.25.

Live prime fowls have had a fair sale at 9@10c.; Western dull at 8½c.; roosters, 5c.; turkeys, 8@10c; ducks, 45@75c.; geese, choice, $1.62@1.75; other, $76@$1 37.

Receivers of game have discouraged shipments during the detrimental weather. Demand not large for any variety.

Canvas back ducks, $2@3.25; red head, 90c@$1.25; Mallard, 60@75c.; teal, 30c.; black, 40@50c.; common, 30c. Quail, trapped, $2. Partridges, prime, 70@75c. ⅌ pair, including Canada, 40@50c. Grouse, $1@1.12. Prime wild pigeons, 80c@$1; acorn fed, 70@75c. Rabbits, ⅌ pair, 15@25c. Hares, 20@25c.

PROVISIONS.—Hog products have been slow and rather weak in price. Mess pork closed at $13 80@13.90 for new mess for January; $14.05@14 00 for February, and $14.10 for March. Bacon at 7½c. for long clear and 7½c. for short clear. Lard, Western steam at $8@8.02½ for spot lots; $8@8.02½ for January, and $8 05 for February and $8.15 for March; Stearine at 7½@8 for choice Western. Beef at $10.50@11.00; extra mess at $11.00@12.00; packet at $13.00@13.50; tierced beef, city extra mess, at $21.30@23.3. Beef Hams at $16 85@$16.50.

SEEDS.—Grass are fairly active; Clover quoted at 8½@9½ for prime to extra choice, and 9½@10½c. for prime to fancy. Timothy quiet and not quotable. Flaxseed quoted $1.70@$1.75.

TOBACCO.—Trade has been very quiet and prices have not shown important change.

VEGETABLES.—A fair shipping demand has kept some life in the market, but as a rule prices are easy at old rates. The weather is mild, and some buyers could be induced to stock up if prices for fine were shaded. Onions, steady, sales chiefly red celery, scarce and higher. Cabbage firm. Squash sell freely now that pumpkins are out of the way.

Nova Scotia E. Rose, bulk bbl. $1.50@$1.62; do. Prolific, d. h., $1.37@1.52; do. Mercer, $1.12@1.37; Maine, Early Rose, d.-h., $1.50@1.75. State, b. and d.-h., $1.25@1.50; Peachblows, white, $1.57@$2.00, do. red, $1.75@1.85; Snowflake, $1.37@1.50; State Peerless, $1.12@1.50; N. J., do., 75c.@87. Marrow, and Hubbard squash, $1.25@1.50 ⅌ bbl.; cabbage, $3@6 per 100; onions, white, per bbl., $1@4.50; yellow, $2.50@2.75; red, $2.25@$2.50; Chester, $1.75@$2.25. beets, $1@1.50; Russia turnips, 75c.@$1; carrots, 75c.@$1; celery, per doz., $1@2. Exports for week 4,900 bbls. potatoes; do. onions, 180 do.

WOOL.—There has not been much done this week, but business will probably be fairly under way shortly from the lull which usually prevails about the holidays. Prices generally are strong.

Ohio, Pennsylvania, and West Virginia — XXX, 55@58c.; XX, 51@55c.; X, 50@55c.; No. 1, 55@57c.; No. 2, 47@50c.; coarse, 43@46c.; combing, 53@57c.

New York, Michigan, and Wisconsin—XX, 47@50c.; X, 47@50c.; No. 1, 52@55c.; No. 2, 46@50c.; coarse, 38@40c.; combing, 50@54c.

Indiana, Kentucky and Tennessee—X and XX, 46@50c.; No. 1, 52@56c.; No. 2, 46@50c.; coarse, 38@40c.; combing, 50@54c.; combing unwashed 37@40c.

Illinois, Iowa and Minnesota—X and XX 43@47c.; No. 1, 48@52c.; No. 2, 43@45c.; coarse, 37@40c.

Georgia, Alabama, Mississippi and Louisiana—fine unwashed, 43@45c.; medium unwashed, 40@43c.; coarse unwashed, 30@32c.; burry, 18@21c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Jan. 10.

BEEVES.—Receipts for the week, 10,216 head; do. last week, 9,432. Moderate receipts have kept the market steady, and the closing sales are ½c. higher than on Wednesday. The range of sales was as follows: a car-load of yearlings and heifers, 2½@2½c. live-weight; common dry cows, 3½@5½c. oxen, 6½@5c; the latter to dress 55 lbs. Common to fair steers, 7½@9c., dress 55@56 lbs.; good to extra, 9½@10½c., dress 56@57 lbs. One premium bullock of 1,550 lbs. sold at 12c., to dress 58 lbs. The export demand is moderate and seems to be for special orders.

MILCH COWS.—Market quiet with small receipts; the quoted range is $30@50, with sales of 18 State at $35@55.

VEAL CALVES.—Supplies are not oppressive, and good, steady prices have ruled for live and dressed. New Jersey and Bucks Co. choice 7½@7½c.; other and State, 6@7c.; Mount Holly's range at 5@7½c., 300 lbs. and over, down; buttermilk, 3½@4½c.; grass, 2½@3½c.; hog-dressed calves, choice, 9½@10c.; fair to good, 7½@9c.

SHEEP AND LAMBS.—Receipts for the week, 21,829 head; do. last week, 19,734 do. Trade has ruled active most of the week. An attempt to put up prices checked business for a time, but later on within a shade of concession the pens were cleared. Sheep $4.98@$6.40 ⅌ 100 lbs.; lambs, $6.15@$7.50 do. A car load of extra heavy Ohio sheep sold at $6.52 for export.

SWINE.—Receipts for the week, 29,914 head; do last week, 16,916 do. Demand steady and supply, well sold up at 4½@5c, the extreme for good 200 lbs average Ohio.

Light dressed pork is mostly selling as the weather is unseasonably warm.

Country pork, light, 6½@7c.; medium, 6½@6½c.; heavy, 6½@6½c.; ..., dressed, 6½@6½c. Pork tenderloins, 11c.

New Publications.

FARM IMPLEMENTS & SEEDS.

Call on or write to R. H. ALLEN & CO., New York, for whatever you want of the above. Address 189 & 191 Water St.

International Dairy
FAIR
PRIZES.

Both the Sweepstakes Prizes, at the International Dairy Fair, just closed, "for the best butter and cheese made anywhere," were salted with English salt (Higgin's Eureka brand), as were also most of the other lots taking prizes. Higgin's Eureka Salt took the first prize at the Centennial Exhibition, 1876, the Paris Exhibition, 1878, also at the Fair of the British Dairy Farmers' Association, London, 1879; Royal Irish Dairy Fair, Dublin, Dec. 10, 1879; and at more than forty State and County Fairs in the United States.

The British Government has granted a patent to Thomas Higgin for an improvement in salt manufacture, and the consumption in this country has risen in three years from 6,000 to over 70,000 sacks, while during the same time the consumption of brands heretofore thought to be the best, has largely decreased. If this means anything, it means that Mr. Higgin's improved process is working as great a revolution in salt as the Bessemer process has in steel, or new process milling in the manufacture of flour. The difference in the cost of using the best salt for butter and cheese is too small to be considered a moment (being less than one thirtieth of a cent per pound on on butter, and one-sixtieth of a cent per pound cheese).

The prize cheese and butter salted with Higgin's salt sold for an extra price more than a hundred times this amount: therefore

It Pays

to use the best salt. Factory men who manufacture for their own account cannot afford to use cheap salt, and milk producers who have their butter and cheese made up for a certain price can afford to pay more if Higgin's Eureka Salt is used. It is the purest, strongest, and most uniform grained salt ever manufactured, and instances of the keeping properties of butter and cheese made with it have been quite remarkable.

Ask your dealer for the Illustrated Dairyman's Almanac, for 1880, describing how salt is manufactured. If he is unable to supply it, a postal card to the undersigned will receive attention.

H. K. & F. B. THURBER & CO.,

Importers, New York.

B. P. & C. E. BAKER,

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For Sale by nearly all Dealers in Salt.

"ACME"
Pulverizing Harrow,
Clod Crusher and Leveler.

Has twelve steel coulter teeth and ten steel cutting spurs. Cuts over six feet wide, and two to four inches deep. The only implement combining Pulverizer Crusher and Leveler! performs all three operations at one time in the most perfect manner. Works perfectly on light soil, but is *especially adapted to sod and hard clay where other Harrows fail.* Agents wanted. Send for circular. NASH & BRO., Harrisburg, Penn., and 22 College Place, New York.

CHERRY TREES.

E. Richmond, No. 1, 2 years, $30.00 per 1,000. Dwarf Pears, No. 1, $60.00 per 1,000. No. 2 Plum Trees, 2 years, $100 per 1,000. Cherry Seedlings, No. 1, $6.00. Apple stocks, light, $3.00 per 1,000. Pear Seedlings, No. 2, $3.00 per 1,000. Apple seed.

E. P. CLARK, Dansville, N. Y.

Reading for the Young.

THAT BROTHER OF MINE;

Or, Horticulture Indoors, Spiced.

BY MRS. M. L. S.

"Bliss, can you spell excellency with four letters and yet there will be 140 in it?" said Will—with a look of surprise at his own ingenuity.

"Oh! what do I care for your quibbles and quizzes!" replied Bliss; "go get me those sticks and hoop wires for making the frame for the ivy which has taken root in this pot."

"Well, Miss 'busybody,' look this way;" and Will held up a card with X L N C written upon it, in bold capital letters.

"Oh! yes," said Bliss; "that's as plain as A B C; only four letters, and XL make forty, and C, one hundred. Now, that I have solved your puzzle, get the things, please, and I'll make you a puzzle."

"Yes, so could a fellow make an egg stand on the end after it had been cracked a little. Very easy, indeed. But Bliss is going to make me a puzzle. Won't it be a stunner!" And suiting the action to the word, he came down so heavily on the table with his fist that the pot of Ivy rolled to the floor.

Bliss jumped to her feet, exclaiming, "I didn't mean I'd make you a puzzle, only a frame for your vine; just look! Go bring me that old umbrella frame which you were clapping at the dog yesterday," and her face brightened with a new idea.

Will, feeling just a little uncomfortable over the accident to the plant, scampered off to the garret. Bliss was gathering up the plant and earth when she heard an affected sniffle, and there was Will, in a wide expanding crinoline, with a bonnet-frame on his head, the umbrella frame hoisted, and smelling vigorously at a small brown jug. "How do you like the picture since it has been finished?" said he, simpering.

Bliss, unable to suppress it, broke into a merry laugh as she exclaimed, "What a clown you are, Will."

"Oh, no; only a skeletonized *sweet* William," said he, as he cut some rare capers, imitating a coquette tripping about to show herself to best advantage. At last, catching his foot in the hoop, he fell sprawling to the floor.

"The sweet William is down, too," said Bliss; "I've picked up the Ivy, now let me pick up this sweet *smelling* William—oh! I mean the smelling bottle," and Bliss fairly choked with laughter as he rolled over, all the while getting more tangled up.

"I can work the wires and get out of this cage; I'm not the first fellow caught in such traps," said he, affecting much exhaustion from the struggle.

"Here's your smelling jug, perhaps it will revive you, said Bliss, with mock politeness, holding the jug to his nose.

"*Jug or not*, I can make an Oriental idol to be worshipped as much as a *juggernaut*," said Will.

Bliss brought out her sheet of decalcomanie, and commenced cutting out a pagoda.

"Don't these old Celestials look funny with their toad-stool hats on? See, I have cut out a whole row," said Will, after a time; "you just stick the bulge for a center-piece, and let these crank-eyed fellows be approaching it on each side."

"Now, here is an antique vase with a Chinese group, and all it needs is some of those grasses in yellow, blue, red and green crystals," said Bliss, as she placed it on a bracket. "Now Will, for your old umbrella and hoop skirt."

"You don't want any more *antics*, do you?" and Will looked cunning, as if he would like to repeat his character of a woman.

"No, but hoist the umbrella half way, and hang it up by the handle," said she, assuming a business air as she went to work on the tins which secured the steel to the tapes. After getting one hoop off she began at the hub weaving it in and out about the whalebone ribs of the umbrella, and repeated this till it formed a basket as large as desired, when she finished it with bonnet wire and carried a string from the end of each rib up to the groove in the handle where she secured it. She had been so occupied with her work, she had not noticed Will's absence.

"Good morning, *mees*," said a pinched voice at the door, and looking round she beheld an old woman with what seemed a green velvet bonnet bristling with green plumes, on her head. "Old lady!" said she, "walk in and give me your bonnet." This bonnet proved to be a fine mat of moss and ferns, and she immediately turned it up into her basket and began drawing the fronds through the openings between the wire.

"You came very timely, old lady; for I was just ready for the moss, and now let me see if you have some dirt in that pan under your red shawl."

"I brought this imbrill to keep yer ivy dry," said the crone, for Will had been too often scolded for spilling water when helping to water the basket.

Bliss took the pan of leaf mould, and Will held the ivy while she put the soil around it in the newly made basket. They then dipped it in a tub of water and when done dripping, hung it in the window where the light struggled through the tracery of ferns. "Now the stick, Will," said Bliss, "while we have the hoops out."

"Oh! the *Styx*," said Will. "Paddle your own canoe," and he fled.—To be continued.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I thought I would give a final report of my summer and fall work. The beans did not yield as much this year as they did last, on account of the very dry weather we had all summer. The yield from one-third of an acre this year was four bushels, thus lacking one-half bushel of last year's crop.

My Dolly Dutton corn met with several drawbacks. At first the season was too dry for it, then it grew finely for a while, and Sept. 3rd the ears were full grown and just right for eating, which was eight weeks from the time of planting. A week later five stray calves got into the patch and destroyed nearly all of it, breaking off and leaving on the ground a few ears; I had these cooked and they were especially sweet and delicious

In the latter part of September the calves came again and tore off one good ear which I ripened in the house. I had still left two very small ears, and they ripened naturally Oct. 7; so altogether I shall have enough to start me again next year.

The White Tailed radishes never made flower-stems, but just kept on growing till frost, at which time some of the roots were still edible. They are most remarkable radishes.

My pop-corn was dried by the drouth so that it was almost good for nothing. I got one peck this year where I got five pecks two years ago.

I have had a queer change take place in some Tulip bulbs bought of Vick, in 1873. I ordered three single early Tulips, and the first year they all flowered and produced single flowers; the next year I had an increase of two or three bulbs that flowered with the first lot, but one produced double flowers, and has continued to do so since, and to produce more bulbs, which also have double flowers. They have increased very rapidly. I have now over ninety flowering bulbs. Can you explain this change? Last fall I bought another lot of bulbs, one double and several single. This is the first double Tulip I have ordered.

I received the grape seed a long time ago, planted them as you directed, and am waiting for them to sprout. Yours truly,

Dodge Co., Neb. WM. J. MASON.

[This, on the whole, is a very good report. It shows industry and some sagacity on the part of the cultivator. The most interesting point is, perhaps, his observation in regard to the Tulips, and I hope other members of the club will try their skill in producing double flowers. It would be well to observe if the double flowers are of the same size as the single ones, and if they still retain the same shade of color as the mother bulbs had. The soil will influence the color of some flowers, as of the Hydrangia, for instance, which will change from a pinkish to a bluish shade when the plants grow in a soil containing iron, and it might be that a change from single to double might have a similar effect on the Tulip. To give the reason for this change from single to double is no easy matter. We only know that cultivated plants frequently do this, and sometimes, when the plants that thus change grow under peculiar circumstances, as in a dry soil, or a poor soil, etc, people are very apt to say that these circumstances are the cause of the change, but this may not always be true.—Uncle Mark.]

DEAR UNCLE MARK AND RURAL COUSINS: Some time ago Lenora Wire spoke of an orange tree. I have an orange tree that is two years old Will it bear fruit without grafting in this climate? Cousins, I must tell you of our duck. My brother was working near the lake one day, and he caught a young gray duck, and I brought it to the house and put it in a pen where it lived till it was nearly full grown. It became quite tame. It would walk around with the other fowls, but one night my brother took it out of the pen to show it to some friends, he set it down on the ground, it walked a few steps, went quack quack, flapped its wings and flew away in the dark. We thought we should never see little duckey again, but the next day I was over to the lake, and there was duckey with a large flock of companions, as happy as could be; at sight of me they flew to another and larger lake. One evening last fall, just before an awful thunder shower, little duckey came and alighted in our door yard as though it was afraid of the storm, but on trying to catch it, it flew away to the lakes again. The next day my brother went over to the lake and got it; it stayed with us two or three days then wandered off again and we have not seen it since. Uncle Mark, please don't scold at this long letter. WILD TOM.

Chelsea, Michigan.

[Oh, no, Tommy, I never scold anybody for writing long letters, in fact I like long letters, *provided they are well written and sprightly;* but I have one objection to make and that is in regard to your adopted name, "Wild Tom," is not a handsome name, and I feel also safe in saying that it is not expressive of your character, for a really wild boy would care nothing for gardening. I would suggest that the cousins select handsome *noms de plume* when they do not wish to sign their own names. Sometimes the name alone will cause people to be prejudiced against or in favor of a person of whom they otherwise know nothing.—UNCLE MARK.]

DEAR UNCLE MARK:—I see so many joining the Horticultural Club that I thought I would join too, if there is still room. I had no vegetable garden last summer, but I had a flower garden and a small bed of Ground Cherries. I have a few house plants of which I will tell the names. They are: Fuchsias, Geraniums, Jerusalem cherries and a Calla-lily. My father is in the nursery business on the Yaquina Bay. My mother has a Tallow Tree that does not bloom. It is not very old. Does it require any special treatment? I would also like to know how to raise Fuchsias from seed. I guess I have written a long enough letter for this time so good-bye. ELLA BRIGGS.

Benton Co., Oregon.

[The Tallow Tree (Stillengia sebifera) is a Chinese tree, which, however, has been naturalized in Florida and other Southern States, and does not require any *special* treatment except to have protection in cold weather. In China it grows from 30 to 40 feet high; it has long flexible branches and long stalked leaves much resembling those of the Poplar. The flowers appear in dense spikes at the ends of the branches. It is called the Tallow Tree because of a tallow like coating which envelops the seeds. This is used for candles by the Chinese.—U. M.]

DEAR UNCLE MARK:—Fearing you will think that I have deserted you, I will write you again and tell you how I am enjoying myself. I am so sorry the flowers are all gone, I miss them very much. My bed looks so bleak and cheerless when there are no plants in it. But winter also has its pleasures; I find it very cheerful. I have nice books, and read nearly all day. I received a good many Christmas presents, but of all I prize my books the most; for you know I am a great reader, and if I could not have books to read, I do not know what I would do. Last fall some girls gave me some seeds which I will save for my garden for next year I am going to make some improvements in my garden next summer, and I hope I shall succeed in making it look pretty. But I must close, as I have already written a long letter.

Yours LIZZIE E. BLAIR.

P. S.—What is the matter with the old members of the Horticultural Club, and all the cousins, since they don't write? I send my regards to them all; and I want them to write and tell us how they spent Christmas and how they enjoy the winter. L. E. B.

New York City.

DEAR UNCLE MARK:—I have been thinking of joining the Club for a long time. I live up in the northern part of Michigan where the winters are long and the snow gets very deep. I am only seven years old and six years of my life I have spent here on my papa's homestead. I don't go to school but mama has been teaching me to write, but I can't write good enough yet to write this letter, so papa is writing it for me.

I had a little garden last summer, but it did not do well. I hope to have a better one next summer and wish you to please send me some flower seeds suited to this northern climate, that will blossom next summer. I have a Geranium and a Pink which blossomed this year, that I am wintering in the house. I have twin sisters three years old and a brother five years old. Please put my name on your list. BERTHA E. SMITH.

Otsego Co., Mich.

The Puzzler.

HIDDEN DRINKS.

1. Tobacco coagulated.
2. On the Rhine, Winefred died.
3. 'Twas a cub Roma caught.
4. I do but term "ilk" a synonym for "just so."
5. Is ginger popular as a flavoring extract?
6. You are too flippant.
7. He was sailing on the bay.
8. I saw a mummy.
9. It was Philip Ulque.
10. The pony bit Tersie.
11. Let Onie be Ernestine.
12. I saw Toka yesterday.
13. Believe me, the glinting is over.
14. I had the cabs in the order specified.
15. For that a flat had gone forth.
16. They had fine music at Awba's party.
17. You made Ira very angry.
18. Madam! alms, eyes can see, are here needed.
19. Lemarisch in open air is old, sallow, and thin.
20. Do give that cur a coat of paint?
21. Oh, pshaw, Heyward!
22. Too bad, rakes plant at Ion,—Bitter shall they rue it.
23. Lepos set down his Glass.
24. For a French sou Chong teased his wife.
25. My angel, I care only for you.

☞Answer in two weeks. LITTLE ONE.

A MALTESE CROSS.

TOP.—The noise of a pig. An animal. A vowel.
RIGHT.—A sort of candy. Not on. A vowel.
BOTTOM.—A fire-stir. Noise. A consonant.
LEFT.—A man's name. A thing for carrying mortar. A consonant.
CENTER.—Top—Part of the human body.
" Right—Three consonants.
" Bottom—A river of Spain.
" Left—A city of Iceland.

Across the centrals form mountains of Russian America, and downward they form a city of Greenland.

☞Answer in two weeks. L. O.

DROP LETTER PUZZLE.

R-u-y-u-h-a-t-n-n-t-o-r-a-m-n-s-n-t-r-u-t-t-e-o-d-o-r-o-f-r-e-s-r-c-o-s-n-m-r-i-u-s-o-t-a-g-r-n-o-g-e-t-e-i-d-e-s-n-r-p-u-h-i-o-t-c-v-l. Fill the blanks and find a text of Scripture.

☞Answer in two weeks. L. O.

HALF WORD SQUARE.

Insolence—Loud sound—Bulk—Employ—French article—A consonant.

☞Answer in two weeks. O.

PUZZLER ANSWERS.—Jan. 3.

HIDDEN GROCERIES.—1. Silver-sand; 2. Tapers; 3. Soup-paste; 4. Apple-butter; 5. Mince-meat; 6. Chow-chow; 7. Sap-sago; 8. Sausage; 9. Clothes-pins; 10. Tubs; 11. Wash-boards.

DIAGONAL PUZZLE:

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    I
  O D     (do)
  W e E
  A n n A
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Primals form "*Iowa.*"
Diagonals form "*Idea.*"

PYRAMID PUZZLE:

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        C
      C A n
    C a L y x
  B u f F o o n
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Centrals form "*Calf.*"

DROP LETTER PUZZLE.—Bless them which persecute you; curse not.

A NAME PUZZLE.—Felicia; Rexetta; Elvira; Dorinda; Etienne; Rosabellinda; Iriarte; Cassandra; Antonina. Initials form "*Frederica.*".

THE

RURAL NEW-YORKER

For 1880.

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Prof. S. W. Johnson,	Prof. F. H. Storer,
" G. C. Caldwell,	" E. M. Sheldon,
" Thomas Meehan,	Henry Stewart,
Gov. Robt. W. Furnas,	Prof. L. B. Arnold,
Prof. E. W. Stewart,	Dr. J. B. Lawes,
" Wm. J. Beal,	Prof. I. P. Roberts,
Pres. T. T. Lyon,	Gen. Wm. H. Noble,
Charles Downing,	Col. F. D. Curtis,
Prof. R. C. Carpenter,	B. Pickman Mann,
D. E. Salmon, D. V. M,	Samuel B. Parsons,
Prof. G. E. Morrow,	Samuel Parsons, Jr.,
" Elbridge Gale,	Col. M. C. Weld,
Sec. C. W. Garfield,	T. H. Hoskins, M.D.,
Rev. R. H. Crane,	Dr. F. M. Hexamer,
O. S. Bliss,	Prof. A. J. Cook,
Prof. A. E. Blount,	W. J. Fowler,
Dr. A. R. Ledoux,	Geo. Such,
M. B. Bateham,	M. Oakey, A. M.,
Dr. Jno. A. Warder,	Prof. S. M. Tracy,
Lester A. Roberts,	E. Williams,
L. S. Hardin,	William Falconer,
Rev. L. J. Templin,	Richard Goodman,
W. I. Chamberlain,	James Taplin,
Jonathan Talcot,	Jno. T. Lovett,
S. B. Peck,	Forrest K. Moreland,
A. M. Halstead,	Lorenzo Rouse,
S. Rufus Mason,	W. C. L. Drew,
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PERSONAL ITEMS.

General Sherman's Christmas present was a fourth grandchild, born at St. Louis.

Mrs. Kate Chase Sprague has rented a Washington house that formerly belonged to Senator Sargent.

Richard Wagner, the eminent composer, is reported to be so seriously ill that little hope is entertained of his recovery.

New Jersey, small as she is, is great in Presidential timber. McClellan, Parker and Randolph are in the field, with the back counties to be heard from.

General Grant, when asked which city among all he had visited he liked the best, answered quickly:—"Washington; I think it is the handsomest city in the world."

General Grant is the first ex-President who has visited the upper part of South Carolina since Washington passed through in his private carriage in the year 1797.

The Portuguese Minister at Washington is preparing for his government a report on the public schools of the United States. He considers ours the most admirable system in the world.

Baron Gustave de Rothschild, of Paris, has just bought a $400,000 house that adjoins his own mansion on the Avenue Marigny that he may pull the former down and thus enlarge his lawn somewhat.

Sir Cresswell Cresswell, late Divorce Judge in London, observed that the feminine petitioners in his court nearly always were blue-eyed, while the naughty respondents almost always were light-gray or black-eyed.

The Rev. John G. Brady, who has returned from a stay of two years in Alaska, says that the natives have learned how to make "a ruinous intoxicating liquor" from molasses, and they drink so much of it that alcoholism is a common disease there.

Frank Buckland has been visiting Abbottsford, and finds Scott's study left precisely as it was in his time. The place now belongs to Sir Walter's great-granddaughter, who is a Roman Catholic and married to Mr. Maxwell, son of Lord Herries.

Ex-Controller Connolly, of New York, one of the Tweed crowd, now a fugitive from justice, has recently made three millions in New York speculations. His son-in-law conducted the business. This is not generally the way of the transgressor.

Charles Morgan, the steamboat millionaire owner of the Morgan line of N. O. steamers, and the Morgan Louisiana R. R., who died leaving an estate valued at $12,000,000, willed that all his property should be distributed among his heirs as the laws of New York provided. Several of the grandchildren contested the will on the ground that they would not receive their pro-rata share, as certain other heirs had received advances previous to the death of the deceased. Lately the contestants withdrew their objection to probating the will.

The Countess of Girgente (Princess of Asturias) has always attended to the education of her younger sisters, who are handsome and accomplished, and has always been the prompter and mentor of her brother, King Alphonso, whom she habitually accompanied, before his first marriage, to the church, the theatre, the Prado, and the arena. On the wedding day she drove to the Atocha with Queen Isabella and her two younger sisters. She has given up her apartments in the Alcazar Real to the Queen mother, and accorded her precedence at all state festivities.

Mayor Leone, of Monrovia, Liberia, prints the following advertisement in a local newspaper: "Municipal Notice.—Whereas, There has been a great laxity in observing the law providing that all persons coming into the city of Monrovia be clothed, this is to require all magistrates and conservators of the peace to immediately proceed to its rigid enforcement twenty days from the date hereof. Pantaloons reaching to the knee and native shirts or loose gowns are to be considered sufficient clothing within the meaning of the ordinance."

The weakest woman, smallest child, and sickest invalid, can use Hop Bitters with safety and great good

AGRICULTURAL NEWS.

Out in Iowa a new departure in creameries seems to be under way—the cream instead of the milk is collected and taken to the creamery—less work and freight, and a saving of the skimmed milk to the farmer. . . Suits have been begun against several retail dealers in this city for selling oleomargerine for butter. . . Two of the chief dailies of this city have been indicted for publishing lottery advertisements—oh, yes, this is agricultural news, inasmuch as it should open the eyes of some farmers. . . Twenty-eight States have now duly appointed Fish Commissioners. . . A farmers' lecture course begins at the State University, Columbus, Ohio, on Tuesday, Jan. 13, and will continue three weeks. All who want to attend should send for information to the University . . Through the untiring efforts of one of the best of Secretaries, the New Jersey State Hort. Society promises to hold a very lively and interesting meeting on the 15th and 16th inst., in Park Hall, Newark. A cordial invitation is extended to all. The total catch of menhaden by the fishermen of Greenpoint, Long Island, during the past year was 211,000,000; gallons of oil rendered, 1,013,350; tons of scrap made for fertilizing purposes, 22,100. Other points not heard from. . . No clearances are granted to vessels carrying neat cattle and sheep from this port unless each animal has been pronounced healty by duly qualified inspectors. . . A large number of fights have occurred in Chicago between the Union and non-Union men, the former being always the aggressors, as they object to the action of the latter in taking their places. The packers refuse to take any of the strikers back unless they quit the Union. . . The Jersey Cattle Club propose to exclude from the Herd Register in future the "very questionable importations of the dealers"—that is of the Fowlers. . . West Va. is about to form a State Wool Growers' Association. . . The Seventh annual session of the N. Y. State Grange will be held at Rochester, beginning Jan. 27. . . On Wednesday, Jan. 7, Senator Windom submitted to the Senate a resolution calling on the Committee on Appropriations to consider the expediency of establishing an additional executive department of the government, to be called "the Department of Agriculture and Commerce," which shall embrace in its jurisdiction agriculture, domestic and foreign commerce, manufactures, mines and mining, public lands, geological and other surveys and railroad statistics, and that said committee report its conclusions by bill or otherwise. Ordered to be laid on the table. Subsequently Mr. Davis, of West Virgina, introduced a bill to establish a Department of Agriculture and Commerce, which was laid on the table, subject to his call. . . On the same day a vote was taken on Produce Exchange here on the question whether the adoption of the cental system should be indefinitely postponed. There were 771 votes in favor of postponement, and 168 against it. Grain and provision members jubilant. No cental system until Congress enacts uniformity. . . From a correspondent in Hocensack, Lehigh Co., Pa., we learn Mr. C. Krauss, a well-to-do farmer, who had a large stock of milch cows and young cattle, and some Jerseys, last fall bought a heifer for winter beef from a drover from the Philadelphia cattle market. After a time the new-comer showed signs of pleuro-pneumonia, and so did most of the other cattle. A veterinary surgeon was called in who pronounced the disease decidedly pleuro-pneumonia, and ordered the affected animals to be killed. Thirteen fine animals had already been killed at the date of writing and seven more were to be slaughtered right-away by order of the State Inspectors. . . The California orange crop, it is said, is not so large this year as last, but the fruit is finer. . . Arizona has a new market for the fruit growers of Southern California; for the miners who are thronging hither are hungry for fruit, and no orchards there are yet in bearing. . . Floods, greatly damaged the country around Grand Rapids, Mich., on Tuesday the 7th. . . On same day Mr. Davis, of Ill., introduced a bill into the House to admit free of duty articles intended for the exhibition of the Millers' International Exhibition, to be held at Cincinnati in June '80. . . The eleventh winter meeting of the Vermont Dairymen's Association, will be held at Brandon, Jan. 21st, 22d, and 23d. . . The waters of the River Vistula are so high that 20 villages in the Crawcon district have been submerged. . . The Prussian Financial Minister says that 106,000 people need public aid in Upper Silesia, owing to short crops. . . That Maine sugar-beet factory doesn't seem to "pan out" well. . . The French legislature has passed an act making agriculture one of the regular studies in the public schools. . . Call you this winter? It's spring-like hereabouts. . . That pleuro-pneumonia at Haverhill, N. H., turns out to be of a mild, con-contagious form, by last reports. . . The Annual Meeting of the N. H. State Ag. Society will be held at Manchester, Jan. 31st. The receipts of the last N. H. State Fair were $7,536 77; expenses, $6,753.95. . . Bishop Ireland is said to have secured 45,000 acres in Lyon Co., Minn., for a Roman Catholic colony. . . By the laws of Iowa, aliens, whether they reside in the United States or not, may acquire, hold or transmit property. In New York they must obtain a special act of the Legislature to enable them to do this. Query: Does not New York drive away many moneyed Scotch and English by this enactment? In England an American can hold any land he likes and buys.

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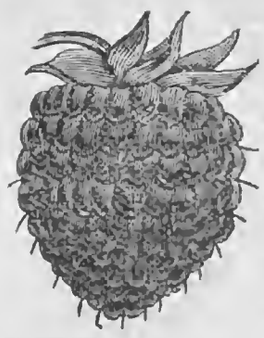

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BRIEFLETS.

Mr. Meehan says that lumps of tow dipped in gas tar and placed in the runs, will drive moles away. . . We request our readers to send us by postal, or otherwise, any change in crop prospects, or any items of agricultural or horticultural news which may occur in their sections of country. We shall thus be enabled to add to the value of our "Everywhere" Department. . . T. H. Hoskins, M. D., of Newport, Vermont, pays the Rural a valued compliment. It is as follows: "I congratulate you on the prosperity of the Rural New-Yorker. It deserves it and more, and if you go on with your work, you will make it the best paper of its class in the world. I think it is about that now—yet no doubt you can advance it even beyond where it now stands."—We shall certainly try. . . . . Speaking of sweet potatoes, a correspondent of the London Garden says: "When good, it turns out something between a sweetmeat and a vegetable. I do not know if their price is high in America, but it would be a great boon if they could be sent here in such quantities as would allow of their being used as food. At present they are merely Covent Garden curiosities." . . We cannot find the slightest real evidence that the use of iron will prevent the cracking of pears. . . Our crop reports have shown that corn has ripened very imperfectly over large areas of the country, owing to various causes. Nevertheless, the yield seems to be upwards of 150,000,000 of bushels greater than ever before. . . Domestic Economy.—If you are blest with a large family, and have, besides, numerous relations whom you don't wish to disoblige, always dress yourself and household in black; and thus you will escape the expense of mourning.—Punch. . . The prosperity of agriculture is inseparable from the prosperity of other great industries of the country. . . A thorn in the bush is worth two in the hand. Punch. . . Too many broths spoil the cook. . . One good kiss deserves another. . . Confidentially to our lady readers—Lace in haste and lament at leisure. . . . . The Duchess of Oldenburgh and Red Astrachan Apples for Illinois, ... When the printed address on the Rural has no number attached, the subscription expires at the end of the year. . . Thanks to a California friend for the little box of S. American corn. . , Remarkable specimens of fruits, roots, tubers, corn, wheat—grain of any kind—are thankfully received. They sometimes furnish us with the subjects for engravings. We are always glad to bear the expense of postage on such articles if notified by postal card or otherwise. . . The mistaken notion prevails with some sportsmen that the signboards forbidding hunting, fishing or trespassing on private lands are of no account, and that they can be disregarded with impunity.—Center Democrat.—They are very often regarded as excellent for target practice. . . Alonzo Sessions says: "If animals become diseased, I should prefer to see them slaughtered promptly rather than tortured to death with drugs" . . Says the N. Y. Tribune in a thoughtful editorial: "Much of the misfortune of all classes comes from inability to hold a level head in a season of sudden prosperity. Farmers, go steady! and prove, as usual, the balance-wheel of the world's industrial machine. . . People with corns should never kick. . . When the wine comes in, the ladies walk ont. . . "Did the Dairy Fair pay?" N. Y. Tribune. The International? Why, yes—certainly, of course—that is—but why do you ask the question? . . In preparing ground for vegetables as the season permits, spare not the manure. It is penny wise and pound foolish. Remember that the excellence of vegetables depends upon their rapid and luxuriant growth. . . No just reason has been assigned why the Agricultural Department should not have a representative in the Cabinet. Journal of Agriculture. . . Mrs. Maple, who is *very* stout, says there is no waste (waist) in *her* kitchen. . . *Virtus semper viridis*—A young man from the country. . . There is no happiness which will compare with that which comes to a man whose bills are all honestly paid. . . The little girl was quite right who said she had been converted, and knew it because she felt all the time like giving the best things she had to her sister. A little more of that kind of conversion would do older people no harm. . . "The London Garden of Dec. 6 contains a very excellent portrait of Hon. Marshall P. Wilder." Mass. Ploughman. Why not have said, friend Ploughman, that it was copied from the Rural New-Yorker with due credit? . . We beg to thank our subscribers for their efforts and good words in our behalf. In a great measure we owe our increase in circulation over last year to them. . . Trouble is as easily borrowed as an umbrella; but not so easily lost. Never be a borrower of either.

PIGGY, PIGGIER, PIGGIEST.

Poking Fun at Darwin's Origin of Man.

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By the suddenness and violence of its effects. Self-evident as this proposition would seem, there are many foolish persons who are content only with a remedy which acts abruptly. The pill and other nostrum-vendors who trade upon the credulity of this class, find their "best holt," as poor Artemus Ward termed it, in the sale of violent purgatives. So long as they wrench the bowels of their dupes sufficiently, they are pretty sure of a certain measure of success. If instead of such pernicious rubbish, Hostetter's Stomach Bitters is used, the results are widely different. The bowels are relieved, but always gently, by this pleasant laxative, which does not weaken but invigorates them, and endows the co-operative organs of digestion and bilious secretion with activity and regularity, strengthens the constitution and physique, and while it is safe in its constituents, is sufficiently prompt in operation.

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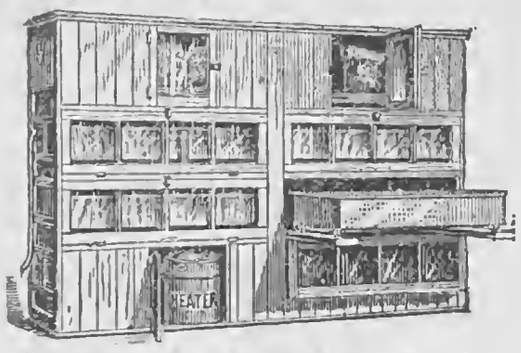

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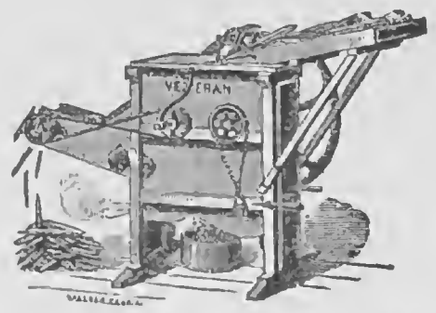

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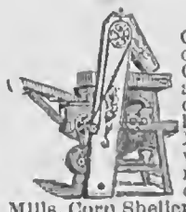

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Ralph Evans 1890

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Arboricultural.

NOTES FROM THE RURAL GROUNDS.

The Tulip Tree. — Liriodendron Tulipifera.

THE Tulip Tree! the Tulip Tree! The queen of our forests for beauty, and yet how rarely seen in ornamental grounds! The conservative Dr. Gray calls it a "most beautiful tree." Hemsley says, "It is one of the noblest hardy trees." A. J. Downing says, "Whoever has once seen the Tulip Tree in a situation where the soil was favorable to its free growth, can never forget it. . . It is in our estimation decidedly the most *stately* tree in North America." And so, through a long list, we could tell our readers of the high estimation in which it is held by those who have made the study of plants an essential part of the work of their lives. There are two erroneous impressions regarding this tree, which, in a great measure, may account for the fact that it is rarely seen about American homes.

One is that as it attains an immense hight in the forest or field, it is not suited to the lawn or home grounds. The other is that it is difficult to transplant successfully. As to the first, it is true that the forest Tulip, towering up to a hight of 100 feet or more, with a naked trunk two-thirds of its hight, does not commend itself as being valuable for purely ornamental purposes. Let us dwell upon this objection for a moment:—Seven years ago, we removed a young tree from a near field and set it within twenty feet of our dwelling. The grounds were new and presented that bleak, bare appearance which makes one wish for the seasons to hasten around, that the growth of trees and shrubs might change this to one of maturity and comfort. The Tulip, therefore, was employed to produce a quick effect. The third year it had made a growth so considerable that we were called upon to decide whether it should be cut back or removed, and the former alternative was adopted. It has been cut back yearly since with the result that we prized it last summer as one of the most beautiful lawn trees we have ever yet set eyes upon. The leaves are twice the size of those which grow in the woods and are perceptibly larger than those which grow upon trees of the same age under cultivation when not cut back. Besides, the annual pruning has forced the growth of many lateral buds which would otherwise have remained dormant, so that the tree from spring till late autumn is a mass of luxuriant foliage which entirely conceals the branches, and is most pleasing in its refreshing shade of green and firmness of texture during summer, and in its golden hues of fall. We are of those who believe that, as a rule, all pruning impairs in a greater or less degree the vigor or longevity of plants, though not, perhaps, appreciably so in many cases. How long our Tulip will remain healthy under this treatment remains to be seen. We are impressed, however, that the development of several branches by pruning, in the place of one branch when the tree is permitted to grow naturally, may change its size from one of the first magnitude with an erect, columnar trunk, to one of comparatively dwarf dimensions; in other words, that the vigor which in the woods is expended in the growth of a colossal main stem, is by cutting back distributed among a greatly increased number of lateral branches and leaves.

THE TULIP TREE—Liriodendron Tulipifera.—From Life.—Fig. 14.

As to the second objection; viz.: that it is difficult to transplant—an objection prominently set forth by most authors—we may say from positive knowledge that it is without foundation in fact. The objections hold good in any attempts to transplant the tree from woods or fields as trees (Maples, *e. g.*) are usually transplanted—that is by a partial cutting back of the branches. To be successful in transplanting the young Tulip, however, not only must the secondary branches be cut back, but the entire stem to within two or three inches of the neck must be cut away so that the roots and neck are all that remain to be transplanted. Thus we have treated a number ourselves; thus we know of hundreds of others being treated with no greater percentage of loss than that which attends the transplantation of the Sugar or Swamp Maple.

The growth is rapid. From roots so removed from their native grounds in the early spring, trees not less than fifteen feet in hight may be counted upon in five years thereafter.

Our engraving of leaf, fruit and blossom is a very faithful portrait drawn from the tree above alluded to, and reduced in size, except the fruit cone which is the average natural size. The flowers appear in early June, and from their resemblance to the Tulip (*Leirion*, a Lily or Tulip), the tree derives its familiar name. They are externally of a greenish color so little removed from that of the leaf, that a tree may pass through its blooming period unknown to those who pass it daily. Nevertheless, the flowers are pretty enough upon examination, being internally of a yellowish color, with a band around the bottom petals, of deep orange.

It is variously called Poplar, White-Wood Tulip Tree, Virginia Poplar, Saddle Tree (from the truncate shape of the leaves), Canoe Wood, etc.

LIRIODENDRON TULIPIFERA.

REV. A. W. MANGUM.

This tree, so wide-spread and well known, is one of the most beautiful and valuable of the products of the American forest, and deserves much higher esteem than it receives. As an ornamental tree, it will compare favorably with the handsomest of our native trees. The trunk is erect and stately, the branches naturally incline to symmetry, the foliage is exceptionally beautiful, the tulip-shaped flowers are fragrant and modestly attractive, and the bright yellow of its autumn garb mingles charmingly with the myriad hues of the fading groves. To those who demand the more practical, its claims are even more potent. Perhaps there is no part of the tree that has not been applied to some special purpose for the benefit of man. It was, perhaps, this variety that was used by the savages to make their "poplar" canoes. The early settlers on the Atlantic coast utilized the tree in various ways. They made of the buds an ointment which they thought to be "excellent good to cure all manner of inflammations, scalds and burns." They learned that "it is very durable and lasting under ground and in the water." They tell us that it "makes handsome wainscot, tables, shingles for houses and planks for several uses."

The bark of the root and even of the branches is still regarded as a tonic. The timber is still noted for its durability. In rails it will last fifty years. The writer is informed of one instance in which it is probable that the rails have lasted over 50 years. Though it is peculiarly sensitive to the effects of moisture, it is much used in building. Being straight, long, durable, and easily hewn, it often takes the place of other timber in the plates, etc., of houses. It is commonly chosen in some localities for troughs in which to feed hogs, cows and horses; and also for the beating of the apples in those places in which there are no cider-mills. Notwithstanding its tendency to swell in damp weather, it is used by us in making furniture. While the young tree furnishes the angler with a light fishing-rod, the bark of the tree has furnished the scholar with paper. The tree sometimes reaches the diameter of nine, ten, and even eleven feet. One tree sometimes yields 10,000 feet of good lumber. From the Report on Forestry, I learn that about 15,000,000 feet of poplar logs are annually floated on the Cumberland to Nashville, Tenn. The comparative rapidity of the growth is a forcible recommendation. Having so many good qualities, it ought surely to be so highly esteemed as to be better protected and more faithfully cultivated.

A RARE ELM.

JAMES HOGG.

Last spring Mr. C. S. Sargent, of the Harvard Arboretum, noticed in Central Park, just south of the entrance at Fifth Avenue and 72d Street, an Elm tree which was entirely different from any species he had hitherto seen. He wrote to me asking if I could identify it or give any history of it. I was not able to identify the species, but was able to give him a short history of it, which I subjoin, as it may be of interest to some of your readers:

About twenty years ago when I was connected with the Central Park as one of the Commissioners, I visited the different nurseries in the neighborhood of the city to inspect their stock of trees and shrubs as a guide to making purchases for the Park. At Mr. Gustin's nursery on the Newark flats, I found an Elm tree which was quite sub-evergreen, with very small, persistent leaves, very thickly set on very short, delicate twigs. Mr. Gustin did not know the name of it, but said that he received it from France. I was much struck with its beauty and ordered some five or six plants, all he had propagated, for the Central Park, and the tree at the 72d St. entrance is one of them, and I believe the only one surviving. Mr. Gustin's nursery has long since been broken up, but the original tree was still growing on the grounds some two or three years ago. Mr. Sargent, this autumn, found another tree of the same species growing in the grounds of the Agricultural Department at Washington, where it was known as Ulmus Siberica, a name not to be found in any book of descriptive botany that either of us is aware of.

FRUIT OF TULIP TREE.—FROM LIFE.—FIG. 15.

He sent a specimen of the tree in the Park to Prof. Oliver, of the Kew Herbarium, who pronounces it to be Ulmus parvifolia. Loudon in his Arboretum Brittanicum, gives it as a variety of Ulmus campestris, and quotes U. microphylla of Persoon and U. pumila of Wildenow as synonyms. Loudon thus described it—"A tree, according to Pallas who mentions several varieties of it, very common in all the woods in the south of Russia, and varying in hight from that of a middle-sized tree to that of a diminutive shrub, according to the soil and climate in which it grows. It is very plentiful about Caucasus; through Siberia, it gradually becomes more scarce; but occurs again about Lake Baikal, where the inhabitants use the leaves as a substitute for tea. In mountain rocks the branches are short and thick; but in sandy soils the trees are small, and the shoots slender."

Persoon described U. microphylla as having small leaves, sharply serrate, nearly equally attenuated at the base, and the branches twiggy. He gives U. pumila *var.* transbaicalensis as a variety with thickly-set lanceolate-ovate leaves like Euphrasia officinalis (Eyebright). He also mentions a variety very similar to the above but somewhat larger in its growth.

LEAF OF ULMUS PARVIFOLIA.—FROM LIFE.—16.

Unlike other Elms which ripen their seeds in June or July, this species does not ripen its seeds until October or November. The seeds on the tree in the Central Park appear to be all abortive this year, but the tree at Washington is producing good seeds. The tree in the Park is about twenty-five feet high, the branches are erect and do not droop at all. It is a very beautiful species and some of our nurserymen should obtain some of the seeds or cions for grafting, and offer it for general cultivation, as it is well worthy of introduction and distribution. I may add that M. Maximowicz and Dr. Savatier have found it in Japan.

Farm Topics.

NOTES FROM THE RURAL EXPERIMENTAL GROUNDS.

Cauliflower.

One of the most prized—and justly so—of all our vegetables is the cauliflower, and it is also one of the most difficult to raise in perfection by those who have not learnt by experience or otherwise of its special needs. A heavy, solid curd, as nearly round as may be, free from protruding leaves and at least a foot in diameter, may be considered the standard of excellence. In Erfurt, cauliflowers are grown in low muck lands, with intervening ditches of water, and even then during dry weather, water from the ditches is thrown over the plants. Water, therefore, is of the first necessity. The best crop we have ever grown here was raised upon rather clayey loam by the free use of manure-water and a frequent stirring of the soil. This sort of cultivation, however, though it may serve well enough for small gardens and amateur gardeners, cannot be followed by the market-gardener with profit.

About the first of February seed should be sown in hot-beds, and as soon as the plants are large enough, they should be transplanted to a cold-frame, where they may remain until the latter part of March, when, in this climate, it is generally safe to plant them in the open ground. If given air freely before transplanting, and protected during cold snaps at night and thus gradually hardened, they will stand as much frost as a cabbage, without injury. It is, we believe, very important that the plants should get established in the field or permanent beds as soon in the spring as possible, since the droughts and heat of early summer are fatal to the formation of fine heads or curds, unless they have had time to form a sufficiency of roots and leaves. Treated in this way, the plants should be ready for market in mid-June, leaving plenty of time to clear and prepare the ground for second crops.

The land for cauliflowers cannot be too well prepared; and manure liberally applied is indispensable. Lime is freely used on Long Island where splendid crops of this delicious vegetable are raised from year to year, though not on the same fields. Superphosphate and guano, at the rate of 300 pounds per acre, more or less according to the home-made manure used, are also applied as a top-dressing and harrowed in. Early Dwarf Erfurt, Early Paris and Lenormand's are as good as any of the dozen varieties offered in catalogues.

Doura.

The Rural New-Yorker has stated in an Editorial Brevity, that it did not know where seeds of this variety of common sorghum (illustrated on first page of issue of Dec. 27th, '79), could be obtained, oblivious to the fact that it was advertised last season in its columns for several weeks by Messrs. R. H. Allen & Co. of 189 and 191 Water St., N. Y. It was through the kindness of one member of that firm that seeds of all the varieties described in the issue above referred to, were sent here to be tested. It is this variety (Doura) about which different accounts disagree as to its forming more than one stalk from a single seed. As previously stated, ours averaged eight or nine stalks that, after being cut on July 10, when they were five feet high, attained the hight of six feet again by the first of October. As previously stated, also, we freely recommend our readers to purchase a few seeds of this sorghum for experiment, as the faith is strong upon us that it may prove of value as a fodder plant.

Weather and Crops.

Wheat with us has never looked finer at this season than now. The remarkable growth of leaves, which it was feared might induce decay, is still beautifully green and fresh, and there is no appearance of the Hessian fly or any other indication that the promise of another grand crop will not be fulfilled. The weather up to to-day (11th) has been soft and the ground, except on the shady side of trees and houses, as open as in early November. Fruit buds were perceptibly swelling, and a few sensitive shrubs began to push their leaves. Last night, however, a brisk frost occurred, and the ground to-day is frozen two inches in depth. It is to be hoped that the cold weather will continue, since this alone can restrain the quickened roots and buds from further action, which, should another warm interval occur, would prove fatal to the fruit crop of the present year.

Some New Light on the Potato-Rot.

For a number of years now, it has been well understood that the "potato-disease" is caused by a parasitic fungus called Phytophtora, (or Perenospora) infestans by botanists which, while feeding upon the substance of the potato-plant, or the tubers, rapidly disorganizes their tissues.

As if this parasite were not, of itself, a sufficiently active enemy, it appears that, in certain cases, the destruction of the tubers is greatly accelerated by bacteria which follow the disease-fungus and feed upon the disorganized tissues which have been made ready for them. Two German observers, Reinke and Berthold, recently set themselves to study the question: Why is it that farmers sometimes distinguish two kinds of potato-rot, viz: wet-rot and dry-rot? Wet-rot may be defined the state when the whole interior of the potato has run down to more or less fluid, filthy pulp, of a very strong and peculiar odor: while the term, dry-rot, is applied to tubers whose substance has been changed to a loose, spongy mass which feels dry, and which, when cut across, presents a marbled appearance. Dry-rotten potatoes are always covered, sooner or later, with mold; while upon the surface of wet-rotten potatoes there may be either no mold or, more commonly, only occasional patches of it. Dry-rot rarely occurs unless the wet-rot has preceded it.

Both dry and wet-rot may follow the attack of the potato-rot fungus proper (Phytophtora), and be promoted by it, but it appears that the wet-rot is not solely due to the Phytophtora. Thus much is shown by the fact that tubers which have never been attacked by that fungus may still be destroyed by wet-rot. In experiments where potatoes infected with Phytophtora were kept moist, they quickly passed into the wet-rotten condition; but it was observed that simultaneously with the first symptoms of the wet-rot, bacteria made their appearance in the rotting tissues. Furthermore, on wounding some sound potatoes which were perfectly free from Phytophtora, and placing upon the wounds some of the liquid charged with bacteria taken from a wet-rotten potato, taking care meanwhile to keep the tubers moist enough that the wound should not become dry, it was easy to start local patches of the wet-rot; and it often happened that the inoculated tubers quickly became rotten through and through.

The experimenters were thus led to the conviction that the bacteria and the fermentations due to their presence, are the immediate cause of the wet-rot; and that the actual harm done by the potato-disease fungus (Phytophtora) is chiefly in preparing the way for the bacteria, by disorganizing the tissues of the tubers and bringing them into such a condition that the decomposing action of the bacteria is peculiarly rapid.

The predisposing influence of the Phytophtora is so well marked that in experiments where potatoes infected with this fungus were inoculated with the liquid from wet-rotten potatoes, it was found that the wet-rot often ran its course, even in those cases where no pains had been taken to hinder the wounds from drying. On the other hand, in the experiments upon potatoes free from Phytophtora, it appeared. In some cases, that the progress of the local patches of wet-rot produced by inoculation, was checked by the formation of a cork-like layer in the sound part of the tuber, in the vicinity of the rotting place. This cork layer hindered the bacteria from penetrating, and protected the potato from further decay. It appeared, furthermore, that potatoes suffering from the disease caused by Phytophtora have no power to produce this protective layer of cork. The natural skin of the potato, like the cork layer just mentioned, is an efficient protection against the bacteria which cause wet-rot, so long as it is neither cracked nor broken at any point.

Considerable differences were noticed in different potatoes, all equally free from Phytophtora, in respect to their power of resisting decay. Some tubers were completely changed to rotten pulp in the course of two days after having been inoculated upon a wound, while in other cases the formation of a cork layer in the substance of the potato, fenced off, as it were, the wet-rotten place from the sound portion, and restricted the bacteria to narrow limits. In general, potatoes completely ripened in autumn and rich in starch best resisted the progress of the decay. The practical lesson taught by these experiments is the old one that excessive moisture must be avoided, if potatoes are to be kept free from rot. Undue wetness of the soil, or stagnant water on the soil, will promote the growth of the bacteria, as well as of the Phytophtora. The soil on which potatoes are grown should not only be well drained in the ordinary sense of the word, but provision should be made, in special instances, to carry off surface water in cases where heavy or long-continued rain might do harm.

Other things being equal, the presence of a large proportion of organic matter in the soil will favor the development of bacteria; and the danger would be increased if the land were heavily manured with dung or stable-manure. The experience of practical men accords with the conclusion of the experimenters, that in order to protect stored potatoes from wet-rot, all diseased specimens should be picked out a

the time of digging, that the tubers should be harvested as dry as possible and afterwards kept in a dry place.

As regards the utilizing of potatoes when the wet-rot has appeared among them, the authors urge that by rapidly drying potatoes thus affected, the starch in them may be saved; that is, the most valuable ingredient of the tubers.

Farm Economy.

ON FENCES.

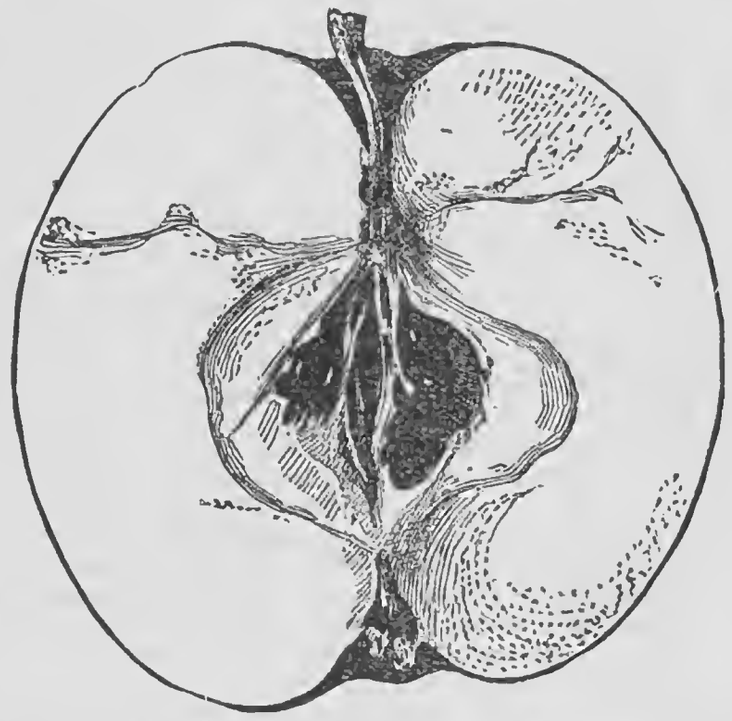
H. L. WYSOR.

THE RURAL'S leader in the issue for Dec. 6, on Highway Fences, contains many pertinent and suggestive questions, of which some, as the writer truly states, are more easily asked than answered. As to the question whether there should be any road-fences at all, it would seem for many prudential considerations, which will suggest themselves to any one who considers the subject, that it is to the interest of the farmer that these should be kept up. Whether he should build and keep up all of these fences, or only part of them, or no part of them, is quite a different matter. It is to be remembered, however, that in most cases the law allows him, or at least intends to allow him, damages sufficient to cover the cost of once building his highway fences. But is there not more material used in the construction of these fences than would be at all necessary if it were not for certain kinds of stock using the highway as a public common? A fence to keep out pigs would require just twice as much material as one that would keep out cattle and horses, and, of course, it would cost in the same proportion. If it were designed, for instance, to construct a board or a wire fence, two or at most three boards or wires to the panel would be amply sufficient against cattle and horses, but against pigs five would be needed.

Now, a man can, if he chooses, keep his own swine where they will not annoy him; but, unless there is a law to protect him, he cannot keep those of other people out of the roadway. It seems reasonable that the law should require every man to keep his own stock within his own limits, leaving him at liberty to do so in whatever manner he may think proper—by building fences, by soiling, or by herding, as he may choose. This, in brief, is actually the law in some of our States. In others, as here in Virginia, the law requires farmers to keep their highway fences and those between themselves and their neighbors of a certain hight, which varies in different places. Here it is five feet. The result of this law is that persons who either own no land whatever or else keep what they have under the plow, make use of the public road as a pasture on which they turn their milch cows and other stock, which are a constant source of annoyance both to those who travel the road and to the farmers who live along the line of it. There have been instances in which farmers have knowingly overstocked their pastures, and when all the grass was consumed, have turned their stock out in a body to graze on the highway. Yet, so far as is known to the writer, the law does not even pronounce these things to be nuisances; at any rate it does not forbid that the highway should be made use of in this manner.

After all, however, the farmer could well afford to keep up his road fences, if there were not so many other fences besides, which constantly demand his time and attention. It is the object of this article to inquire whether there are not more of these other fences than there ought to be, and to suggest ways in which a great part of them may be dispensed with. Before quitting the subject of highways, it is proper to remark that they should always, wherever it is practicable, be laid off on the division lines between neighboring farms, so that one man may not have all the burden of keeping up the fences on both sides of the lane. In a level or a prairie country this is generally very easily done, especially where the land is laid off in sections and parts of sections. In a broken country, it may be a matter of some difficulty. In any case, the interests of individual farmers should be consulted as well as those of the public, and where they conflict, some sort of a compromise ought to be made. A road ought always to be so located that it will occasion the land-owner the least possible injury and cause the least amount of fencing to be done, while at the same time its grade should be easy and its situation such as not to make it too difficult to be kept in repair. A road should never run for any great distance parallel with a stream of water which is necessary for the use of the stock on a farm, nor should it be so situated as to cut off any large proportion of a place from water. I know farms of which four-fifths are deprived of water in this way. Want of water is more frequently the cause of breachy cattle than anything else, and the best of fences will give way before the assaults of a thirsty ox.

It has been often asserted—and no doubt truly—that the value of all fencing in the United States, together with the annual cost of keeping it in repair, amounts to more than the sum of our public debt. Unquestionably,



SECTIONAL VIEW OF MAGOG RED STREAK.—FROM NATURE.—FIG. 17.

this item of fencing is a heavy burden upon the farmer, and one that tends greatly to diminish the profits of his farm. How this burden may be brought within more reasonable limits is a question which merits our serious consideration. In view of the fact that the time is rapidly approaching when timber, even in the best wooded districts, will have become too valuable to be used for purposes of fencing, it becomes us to inquire how the annual destruction and waste of trees may be largely reduced. Already iron and steel are coming into use in place of wood for this purpose, but these are too expensive to be used in keeping up fences as they are now kept. Let us see, then, what can be done.

In the first place, some disposition must be made of the hogs; as has already been said, they cause more fencing than all the other stock put together. Let the farmers in those States where such laws do not already exist, urge upon their legislatures the necessity of passing such as will restrain swine and other stock from running in the public roads, under the penalty of being taken up as estrays and impounded. Then, let every farmer keep his own hogs either in pens built in his barnyard, or in a lot cut off especially for them. There is certainly no need of allowing hogs to run all over the farm; for unless their noses are rightly cut—which is a barbarous thing to do—or rings are used—which more often than otherwise do not serve their purpose—all the grass is rooted up and destroyed.

The practice of soiling will occur to many as a good way in which to save a vast amount of fencing. Knowing nothing of the merits of this system, I pass it by with the remark that it would be adapted only to such places as are level or only moderately rolling, since the labor and expense of getting green food from steep hillsides would be too great to make it profitable, and in many cases it would be altogether impracticable.

A division of the farm into arable land and pasture land comes next for consideration. Under our present system of agriculture, it is necessary for the purposes of rotation to keep the farm divided into a number of fields, small or large, according to the size of the farm itself, which are separated by cross fences. If the divison above proposed were adopted, only one cross fence would be needed. Precisely how this division should be made—how many acres ought to be included in the arable side and how many in the pasture land—would depend upon quite a variety of circumstances, such, for instance, as the size and situation of the farm, water, etc. Of course, the arable land—within which should be included the meadow—should be sufficiently large for all the grain and hay needed on the place to be grown on it. To illustrate: I know a place which consists of 240 acres. Of these, 200 are hills and woodland, the other 40 are river bottom. Between the 200 and the 40 runs the public road. As the 200 acres are composed of hills, they should be kept permanently in grass and be grazed by calves or yearlings, since heavier cattle could not be kept on such land. Of the 40 acres, 10 should be cut off as pasture for the horses and milch cows needed on the place, which, in this case, would not be more than two of each kind. The remaining 30 acres should contain the garden, orchard and the land to be kept under the plow. In no case, when a good sod has once formed on a steep hillside, should a plow ever touch it, for one heavy rain-storm may wash away more soil than can be put back in a life-time. How grass may be renewed without the use of the plow when it begins to fail or has run out, will be a matter for another article.

The failure of the grass on the pasture land would be the principal objection to this system. All the manure saved in the barn-yard—and this would be large in quantity if the stock were kept in the barn during the winter—and all the commercial fertilizers purchased, must be applied annually on the arable part, which must be kept in the highest possible condition.

Let us suppose another case, and say that a farm is composed of 100 acres level or gently rolling. Let 65 acres be devoted to pasture; then there will be 10 acres for meadow; 10 each for wheat and corn, used alternately—the 10 which are in wheat one year being planted in corn the next, and *vice versa*—and five for garden and orchard; all these together will comprise the arable land. In this manner the right sort of a division, such as is suited to his circumstances and surroundings, will occur to any farmer who gives the subject a thought. In support of this plan, it is worthy of notice that it is now the practice of the best graziers in this country, to give their cattle, when these are first turned out to pasture in the spring, all the range which they intend for them to have during the season. It is alleged that the cattle are more quiet and contented in this way than when they are turned into fresh fields at intervals. All the cross fences between the different pasture fields are laid down in places, so that the cattle can pass from one field into another.

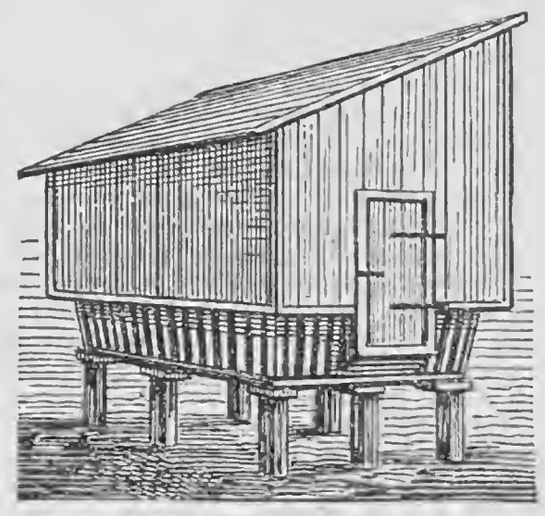
Finally, where the farm is adapted to such a purpose, cattle may be fattened in winter, and none kept on the place in summer at all. Here, there would be no need of any division. The whole farm, except so much of it as would be required to supply the cattle with grain, would be mown. Cattle of the necessary size and weight should be bought in November and sold in April, having been thoroughly fattened in the interval. This plan, like that of soiling, would be suited to places that are level but badly watered. The advantages to be secured in this way, besides the item of fence saving, are apparent. A better price would be obtained for the cattle in the spring than in the fall. The manures from the grain fed being richer in all the elements of plant food, would probably more than pay for the expense of feeding the cattle, and the land would not be tramped to death in wet weather.

I have said nothing in this article about sheep, because they cannot be kept long on the same range. Those who wish to keep sheep must make up their minds to keep up division fences between their small fields, or else to employ hurdles or movable fences. Sheep must be frequently changed from one pasture into another, otherwise they will soon become diseased beyond remedy.

Pulaski Co., Va.

AN "OVERSKIRT" ON THE CORN-CRIB.

A YEAR ago last October I built me a corn crib. During the fall, after it was filled with corn, the strong southeasterly winds drove in the rain, and wet the corn pretty thoroughly. This dried off, however. Later, the northwest winds filled all the crevices between the ears with snow. Luckily we had no thaws all winter; but when, in February, the crib was resorted to for corn to be taken to mill, the ears on the westerly side were as closely packed in frozen snow as eggs in bran. In handling and shelling, a good deal of this came off, but there was also a good deal in the shelled corn, and when this was ground the meal was sensibly damp from it.



OVERSKIRT FOR CORN CRIB.—FIG. 19.

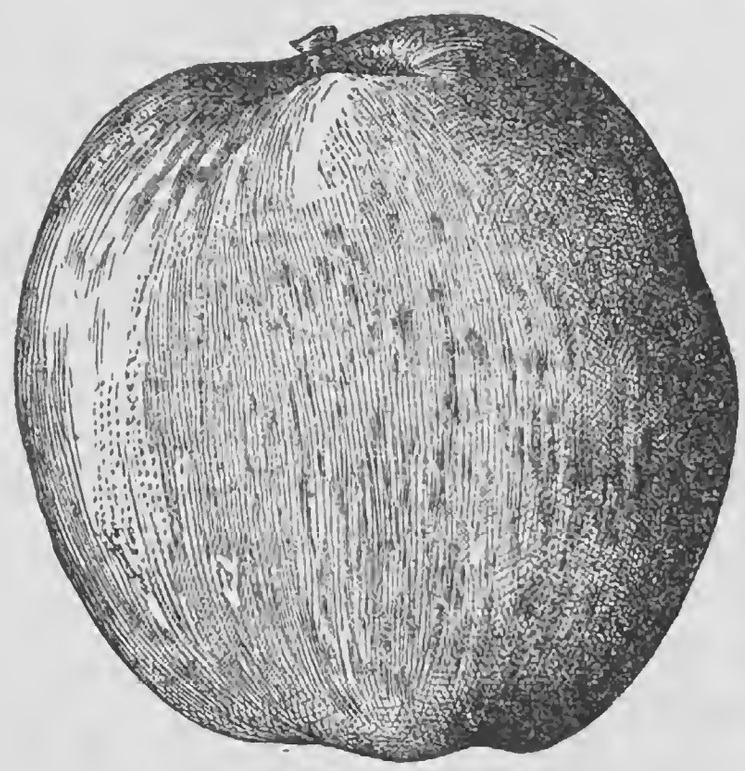
This year I resolved to make an improvement, and have clothed my crib in an overskirt of half-inch boards, as shown in the sketch. It keeps out rain and snow perfectly, and gives, what I did not expect, a stronger draft of air through the corn than before. The corn was not so well dried before husking this year, as it was in 1878, but it has dried out completely in the crib. The first grist was taken to mill in November, and was in excellent condition for grinding. T. H. H.

Pomological.

THE MAGOG RED STREAK.

THIS apple originated as a seedling on the farm of William Warren, in the town of Newport, Vt., on the west shore of Lake Memphremagog, near the Canada line. Within the last ten or twelve years it has been quite widely distributed, and is reported as succeeding well in Northern Maine, Lower Canada, Wisconsin, Minnesota and Iowa. The last report of the Iowa Horticultural Society speaks of it as "the beautiful Magog Red Streak," and the secretary, Prof. Budd, of the State Agl. Col., thinks it a very promising sort, especially for the colder parts of the State. The writer was the first to propagate it, and has now a considerable number of trees in bearing. He finds them extremely thrifty in growth, perfectly hardy, early, regular and good bearers. Trees 12 years planted, give a yield of 1⅓ to 2½ barrels of merchantable fruit.

The Magog Red Streak is roundish, approaching ovate in form; medium to large in size. yellow in color, with more or less streaks of red, especially on the exposed side; mild subacid in flavor; good to very good in quality. Flesh yellow and fine-grained; core, medium. Keeps through March, and sometimes longer. Though not so conical and never ribbed, the general appearance of the apple is like that of the Yellow Bellflower, but with red stripes on its sunny side. T. H. HOSKINS, M. D



MAGOG RED STREAK.—FROM NATURE.—FIG. 18.

THE HOWELL PEAR.

"A correspondent, 'W. H. W.,' writes about the Howell Pear in the RURAL NEW-YORKER, and accompanies his communication with a section 'cut' of the pear. What he says of the quality and productiveness of the pear is correct—it being a handsome, good-sized and popular fruit of third or fourth-rate grade. But as to the 'cut,' we don't know where the writer gets it from, as it represents an old Windsor or Bartlett pear, but most assuredly not the Howell as we raise it and as Downing represents it. Probably it is used as a Boston agricultural paper did the engraving of a cow, which was made to answer for all breeds."

Our respected friend, the editor of the Germantown Telegraph, is entirely mistaken in the above remarks. "W. H. W." did not write about the Howell Pear at all. Those initials were under an article called "Kerosene on Trees," and another article, by T. F. Forfar, on "Pruning," intervened between it and the article on the Howell Pear, which was presented editorally. The cut was drawn by C. Habkemeir from a specimen grown on quince stock in the "Rural Grounds," and is an accurate outline. The tree was purchased *about* four years ago of Ellwanger & Barry, Rochester, New York. The outline is more pyriform and less obovate than the Howell is generally on *pear* stock, a difference often seen in the Duchesse as between standard and dwarf.

It is rated by the American Pomological Society as "very good," which is *second* as regards quality.

SALT AND PEAR BLIGHT.

In answer to S. C. C. F. in RURAL of Jan. 3. I would say that by a "light coat" of wood ashes, salt and bone-dust, as applied to pear trees, I mean just this:—We make a mixture of wood ashes four parts; bone dust, two parts; salt one part, by measure; and apply each year two quarts to each tree. I should not object to twice the quantity, but can hardly afford it. A part of the bone used is the coarse bits sifted out of bone-dust, the pieces being about the size of small kernels of corn, and smaller. These I procured of a crusher here at a low price.

We cultivate soon after applying it. I have no doubt that H., of Ontario Co., N. Y., killed his trees by too free a use of salt. Baked beans are a good and wholesome food, but I knew a man who undoubtedly killed himself eating them. We should use "judgment in all things", even in eating beans. I know, as Mr. Woodruff says, the Duchesse is not very subject to blight; but still it does sometimes blight, and if using salt or "sand" with bone-dust and ashes will save it, then I shall advise its use.

My first experience in using salt was on three large Bartlett trees in a plot where nearly all had previously died with blight. Having some mixture of salt and ashes, equal parts, that had been made for another purpose, two quarts were applied to each tree with marked results, and it has been applied each year since, and those three trees are still alive and thrifty. I don't claim that salt is a specific for the blight; but I do think, if we make the trees as healthy as possible by supplying those elements which they require, we shall be much less likely to lose them by blight. I am well convinced by my own observation as well as by studying the analysis of the Pear, that it requires salt in our inland soils, and just so long as my trees are exempt from serious attacks of blight, I shall continue its use, nor shall I neglect the wood ashes and bone-dust. I use the second quality of salt, buying it by the car-load. It costs but little, and I use it for many crops on the farm, and think it pays me well. I would about as soon my Dwarf Duchesse should blight as to do as Mr. Woodruff says, "let them go to grass"; for, in that case they would only occupy the ground with no profitable results, but if they blighted, I could clean them off and use the land.

Lockport, N. Y. J. S. WOODWARD.

Sheep Husbandry.

SHEEP vs. COWS.

COL. F. D. CURTIS.

Comparative Profits; The Future of Sheep; An Example.

A Rural subscriber has written to us that he thinks that, in our statements of the comparative cost of keeping sheep and cows, in the RURAL of Nov. 22, we did not do full justice to the latter. We think, on the contrary, that we did not do full justice to the sheep when we stated that five coarse-wooled sheep required the same amount of feed as one cow, and that seven medium-wooled, or the same number of fine-wooled sheep, could likewise be kept on the amount of feed necessary for one cow. We have taken the trouble to inquire of several farmers in this vicinity, also subscribers to the RURAL, and they agree with us, without an exception, that we estimated the sheep too low. All of these persons keep sheep as well as cows. Our estimate of 150 pounds of butter to a cow is also too high, as the average yield per cow throughout the State of New York is 115 pounds. Six coarse-wooled sheep to one cow, and eight of medium and of fine wool would be nearer the actual number. The basis of profit is also decidedly in favor of the sheep, as the home market for their productions in wool is not over-done, as is the case with cows, and the foreign market for our woolen manufactures is extending in the most satisfactory manner. It has increased within the last two or three years several millions of dollars. Foreign countries are learning to appreciate the value of the strong and well-made American cloths; besides, it has been demonstrated that, notwithstanding the cheapness of labor on the other side of the ocean, our manufacturers can compete with those abroad, with paying profit. This is because our machinery is now fully equal, if not superior, to the foreign, and the power is largely that of water, which reduces the cost below that of coal and steam.

Our mills are capable of doing a larger percentage of work on the capital invested than the foreign ones, and it only remains for the American farmers to furnish wool enough to supply our mills, to place this important industry upon such a solid basis that it may be entirely a home affair. This is not at present the case, as millions of pounds of wool are annually imported.

It is a fortunate circumstance that there is perfect harmony and unity of action between the woolen manufacturers and wool-growers. The former have always been willing to make all needful concessions in arranging a tariff schedule, so that both these interests could be protected and sustained. They freely express themselves as anxious to foster wool-growing in this country, because they believe that the material for the support of their mills should be drawn from our own land, as this would establish a basis of independence and of substantial prosperity far greater than if such material were brought from other countries. To insure this production, the farmers have only to know that their investments in sheep will pay, as there have been so many fluctuations in this industry, owing to arbitrary changes in the protective duties established by Congress and over-production in manufactures resulting in ruinous losses, that farmers are distrustful in this direction. The woolen interests are now so widespread, covering every portion of our country, that it is doubtful if the people would allow any interference by legislation, which would jeopardize them. The rapidly increasing foreign market, will prevent any glut which will throw back upon the country unsold goods, to break down prices and destroy the industry. Sheep-feeding is not so much affected by droughts and other influences of a similar nature as the dairy.

Our figures, showing the income from sheep were furnished by those who had taken no extra care of their flocks, but whose profits were decidedly satisfactory. Messrs Moorehouse and Classon wintered, last winter, 38 ewes. From them they sold 223 pounds of wool at 33½c. per pound, amounting to $74.70. The 38 ewes produced 49 lambs, of which they sold 36 for $3.25 each, making $117. Thirteen lambs were reserved, for which they had been offered $5 a head, making $65. This would make a total of $256.70. Their sheep are grade South Downs, and were bred from Meriuo ewes. The rams used were nearly full-bred South Downs, but probably contained a portion of Cotswold blood, as the sheep are larger than average South Downs. The income on this flock—rating seven sheep to a cow—would be $46.67. These sheep were not fed any grain, but were wintered on hay. In summer they ran in a back lot where cows would not do well, as the pasture was not rank enough. Mr. Moorehouse has increased his flock for next year to 50 ewes, and will still further increase them, as he is satisfied they will pay better than cows, although his dairy are mostly grade Jerseys, and an excellent lot. This productive flock of sheep have all been bred by Mr. Moorehouse from common grade Merino ewes. He has laid the foundation for a large profit in the future on a small capital. The local butchers are ready to take the lambs as soon as they are old enough, the best ewes being always reserved, and this is the way the flock has been established, and it is the best way.

The Poultry Yard.

WINTER LAYERS.

To obtain a breed of fowls, or rather to breed a flock of fowls, that are constant egg-producers, is the great desideratum. Many fowl-breeders have at one time and another imagined that they have approximated to perfection in this direction. By far a much larger class of fowl-breeders—those who breed to sell—have at one time and another *advertised* that they and they alone had reached perfection in this particular. To obtain fowls that will lay all the time is an impossibility. It is an impossibility to expect fowls to lay for more than a few months at a time, without taking a rest. The frequency of these periods of recuperation and their duration determine to the mind of the breeder the value of the bird. Some breeds will lay but for a short time in the summer, and then the hens take to sitting, and there are no more eggs for that season. Some other breeds under good care, will commence laying in early spring, and continue to lay with commendable perseverance until the weather becomes quite cold. Breeds of poultry possessing these characteristics are very good to rely on. Good treatment will be promptly paid for. There are other breeds that will lay almost the entire year, with the exception of the time spent in resting or in sitting. These are the nearest approach to perpetual layers, and even the fowls of these breeds will at times stop laying for no other apparent reason than that they seem to want a rest—which is reason enough. Some breeds of fowls seem to be more apt to lay in winter, and others will lay only in spring. The natural tendency of all fowls is to produce eggs only in summer, and any improvement in this particular is due to natural selection, improvement in breeding and good care.

It is a comparatively easy matter to obtain eggs in winter, if the proper arrangements are made beforehand. Chicks of the large breeds that it is desired should become winter layers, should be hatched in March or April. This is very essential, as it is necessary that they should obtain a good growth. Leghorn and Golden Polands and the smaller breeds will do well enough if hatched in May or early June. I do not fancy as winter fowls those that have large combs, wattles and feathered legs; they are much too apt to suffer from the cold. All fowls require warm houses, plenty of good food and constant care, if it is intended that they should lay eggs in winter. There must be a variety in the diet, with access to pure water and broken oyster shells.

With all the conditions perfectly favorable, the farmer may have to feed his fowls until he is quite discouraged before he sees any prospect of fresh eggs. But if the fowls are cared for in an intelligent manner, the eggs are sure to come, and eggs produced in winter command a fair price, being much more marketable than those that have been salted from the summer before. I do not mean that eggs produced as they are on some farms, one or two per day to every dozen of the half-starved fowls, are profitable. But I do mean if sufficient hens are kept to produce in eggs two or three times the cost of their keeping, besides furnishing one of the greatest luxuries for the farmer's own table, that no farmer who has tried it will say that such fowls do not pay. Hens that have laid a good share of the winter will usually want to sit pretty early, and this is a great advantage. The hen-house should be ready for the hens it is desired to keep over, early, at least before the weather gets cold. The fowls should not be allowed to experience any ill-effects from cold or damp weather, as a sudden or severe chill exerts a very injurious effect upon any breed of poultry, especially upon hens intended for winter layers. The house should not only be made perfectly comfortable but should be kept perfectly clean. It is a good idea to whitewash the inside of the building before the birds go into winter-quarters. They should have all the stimulating and heat-producing food they can consume. All that hens are fit for in winter is to produce fresh eggs at a certain price per dozen, and they must be fed and cared for with that end in view. I find that hens will pay a much larger price for grain consumed in winter than in any other season, and therefore they can be made much more profitable then than at any other time. FORREST K. MORELAND.

Unhealthy Poultry.

The mode of raising stock birds for sale to farmers, insures weakly, sickly flocks. No bird confined between fences, to march back and forward over its own excrements, to lose all chance of insect food during summer, to have little use of its wings; to be, in fact, a prisoner, can be expected to be healthy. But fancy breeders who raise from two to 20 varieties, are forced to do this violence to common sense and their customers. Even when roosters are purchased to infuse new blood and new vigor into a flock of hens of good stamina, the effort is a failure; good blood can't be improved by the addition of bad blood. If farmers want the real value of their money imparted to their flocks of hens, let them deal only with a breeder who raises but one sort, and lets that have the run of the farm. Why are people so blind to the simple question of "Improvement of Stock?" Few men would go to a hospital or pest house in search of husbands for their daughters; even the young girls themselves know too much to be deceived into mating with run-down, debauched youths, but men who are actually looking out for good blood look in the most impossible places for it, and take it from there, too, and then complain that poultry don't pay. S. RUFUS MASON.

Dairy Husbandry.

THE OLEOMARGARINE FRAUD.

A meeting of the National Association for the Prevention of the Adulteration of Butter was held in this city on Tuesday the 13. inst. at the American Exchange rooms, when a resolution was adopted, the preamble of which denounces the increased fraudulent sale of oleomargarine in the guise of butter, thereby deceiving the consumer and defrauding the farmer and dairyman of the legitimate profits of their labor; condemning the course of certain firms interested in the profits of oleomargarine manufacture, and finally resolving

"That we, the merchants engaged in the butter trade representing the Society for the Prevention of the Adulteration of Butter, condemn all encouragement given to those violators of the law, as hostile to the dairy interests throughout the United States, and that we use every effort to increase the fund already raised to prosecute not only offenders in the city of New York but in adjacent cities; and to use our personal means to disseminate throughout the country all information respecting the suits now being prosecuted and the parties defending the same.

Resolved, That 5,000 copies of these resolutions be printed for distribution in the United States."

The resolutions made a decided sensation, and at the close of their reading Mr. H. K. Thurber arose and said that in his opinion and in the opinion of several other persons the resolutions were aimed at his house. If such was the case he begged to enter a denial and a protest, as his firm sold oleomargarine openly and under its proper brand. He was not to blame for what the retail dealers had done. He was a commission merchant, and sold what the people wanted to buy. He said that oleomargarine was a product of the farm, and it could not be ignored or put down. Its sale and use were too well established to be overthrown by edicts or denunciation. There was some applause at this, and then half a dozen of the legitimate butter men arose and denounced what they called the oleomargarine swindle. It was proposed to have additional laws passed to protect the pure butter interest. Mr. Neal said the present law was good enough; all it needed was rigid enforcement. The Secretary said if Mr. Thurber's name had not been connected with the oleomargarine trade and given it an air of respectability, it would have died a natural death. He did not object to any one using "the stuff" or selling "the stuff" under its own name, but he did propose to fight it when sold or palmed off on the people as butter. A long debate followed concerning the resolution. Some said it was too personal; some said it was too sweeping; others wanted it referred back to the committee for revision; several offered substitutes; but at last all propositions and amendments were voted down and the resolution was carried by a strong majority.

Miscellaneous.

WHAT OTHERS SAY.

THE COW PEA.—The old Maryland Farmer says: "We have been familiar from our boyhood with this pea, which Dr. Ledoux, of North Carolina, writes about and which the RURAL NEW-YORKER illustrates and devotes so much space to. . . The greatest value of the Cow or Southern Pea is its great use and adaptibility to green manuring. We recuperated many poor acres by the use of peas alone. The late J. Q. Hewlett, of Baltimore county, made rich several hundred acres of poor land chiefly by the use of Cow Peas. He gave, years ago, his experience with this vegetable in several well-written articles which attracted much notice. Every volume of the Maryland Farmer has had frequent reference to the value of this pea—has steadily impressed upon the farmers, year after year, the importance of growing this crop, because we have practically tested their value by repeated experiments to our entire satisfaction. Peas are a God-send to the poor farmer on poor land. They will grow where nothing except "poverty grass" will grow. . . So we may say now, for the hundredth time and more, plant Southern field peas, either in drills or hills, for forage, seed, or as a manurial crop. . . As a crop for market they pay better than wheat or other grain crops on the same land. . . On very poor land they will give more bushels of seed than any grain crop, and yield more forage or provender than any cultivated grass known. . . It is surprising that a plant so well known for so long a time should just now be so suddenly made so

conspicuous and heralded as if a grand discovery to help the progress of agriculture."

[We may say to our respected contemporary, the Maryland Farmer, that we have well-grounded hopes that it may prove as valuable in this climate as it is known to have proved in more southerly climates, and it is for this reason we have given so much space to its consideration. Acting upon our faith, which comes from our own tests, we have purchased a quantity of this Cow Pea, large enough to enable us to send a small packet to all of our subscribers who apply for our present "Free Seed and Plant Distribution."—Eds.]

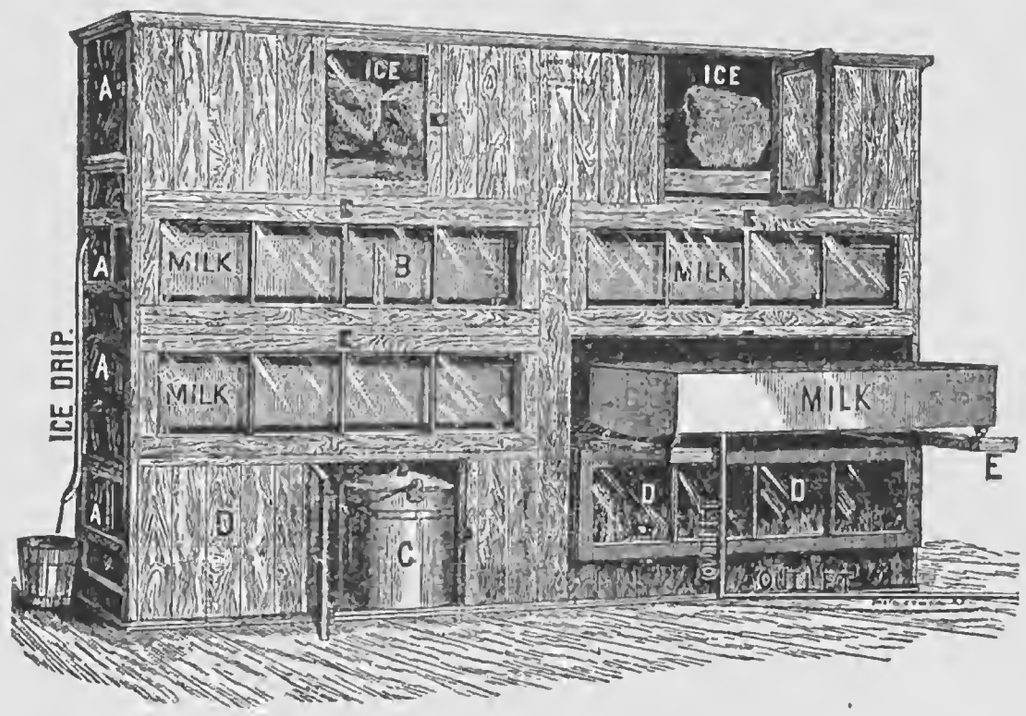
PEARS.—DUCHESSE D'ANGOULEME.—The general popularity of this pear, says the Country Gentleman, will be understood when it is borne in mind that it has received the highest vote for value in the catalogne of the American Pomological Society in twenty-two of the States of the Union, and the next vote for value in thirteen more States—thirty-five States in all. Its large size renders it extremely popular in market, although not of first quality in flavor. But a point of special value is the exemption of the tree from the blight, this disease rarely making serious inroads into orchards planted with this sort. Its general hardiness has been shown in neglected orchards where nearly all other sorts have disappeared for want of care, while the Duchesse has remained in full vigor. In portions of the Western States it has not succeeded. The Bartlett, however, stands first for general popularity, in spite of the drawback on account of the liability of the tree to blight. It bears while young. Doyenné Boussock is one of the few which succeed perfectly on quince stock. Clairgeau varies from worthless to good, according to season and location. The quality generally improves as the tree grows older. Flemish Beauty, when fine, is very fine. It does not crack at present as in previous years.

ARTIFICIAL WINES.—The Keeper of the Seals recently addressed a circular to the Procurator General, as we learn from the London Farmer, relative to the so-called artifical wines, and the brandies made from them. The circular is particularly aimed at the "dry grape" wines, the manufacture of which has attained considerable importance in the South of Europe, whence wines are still turned out as if the phylloxera had never existed, and all the vineyards destroyed by it had been re-established by magic. M. E. Martin now takes upon himself the defence of these artificial wines in the columns of our contemporary, The *Journal d'Agriculture Pratique*, and asks what difference there can possibly be between wines made of fresh or of dry grapes. He claims that the chemical analysis shows no difference whatever between them, for all that the manufacturers do in working in dry grapes is to replace the water they have lost by evaporation. M. Martin does not advocate wine making from dry grapes alone; a certain proportion of fresh grapes must be added, or the necessary fermentation will not readily ensue. But he contends that if fresh and dry grapes be used in about equal proportion, the resulting wine will be exactly similar to that made from fresh grapes alone, and he defies the cleverest taster in the trade, or the most fastiduous eater to detect the least difference between them.

A NOVEL THEORY AS TO THE ORIGIN OF DIAMONDS,—One of Dr. W. B. Fletcher's frogs escaped from his frogarium some time ago, and was found the other day behind a register at his office starved to death and shrunk to half its former dimensions. The doctor dissected it, and coming to its lungs found these organs clogged with thousands of black crystals which looked like coarse gunpowder. Under the microscope those crystals presented regular facets, with smooth surfaces, presenting the same angle of crytallization as the diamond. On burning they gave off carbonic acid gas, and they are pure crystals of carbon, as the diamond is. According to the Indianapolis Herald, the doctor ingeniously theorizes that in the ages gone by the huge reptiles of the antediluvian period, dying under circumstances similar to those under which the frog did, may have formed large crystals of carbon in their lungs which were afterward transformed into the hard and lustrous diamond.—Scientific American.

AN ENGLISHMAN ON PROTECTION.—The Sheffield Telegraph says that America, France and Belgium have never swerved in one single instance from their policy of protecting the employment of the people; and what is the result?—that the capital of labor has been steadily turning over, accumulating and multiplying, and enriching all classes of the community. In America, especially, the effect of protecting the employment of the people has been little short of marvelous. The best workmen of England have flocked to her; industries that ten years ago had no existence, have sprung into vigorous life; she has multiplied her make of Bessemer steel eighteen times in ten years; she has seven hundred iron works in full operation; she now supplies herself in almost every manufactured article she requires; and neither war nor rebellion, nor debt, nor soft money, nor hard money, has been able to cause more than a temporary derangement of her prosperity.

THE A. A. A.—We propose to model our American Agricultural Association, (says Mr. Hardin in the London Ag. Gazette) very much upon the design of the Royal Agricultural Society of England, and we take great pride in pointing to the success of that institution, even under the great disadvantages of depression in agricultural interests that it has labored under in late years. If it could live through such trying times, we, with the strength of large crops and rising markets all around us, should certainly flourish. The encouragement that the movement has met with by letters indorsing it from good men all over the country, is flattering to the last degree, and makes us firm in the faith, and December will see one of the grandest agricultural Societies that has ever been organized." What! Saul among the prophets!



FERGUSON BUREAU CREAMERY.—FIG. 30.

WHEN DOCTORS DISAGREE.—The editor of the Germantown Telegraph says: "When are we to get done with that miserable fruit, the Kieffer pear? It continues to occupy space in agricultural and horticultural journals all over the country. And what matters whether it is a hybrid or a natural, so long as it is worthless—totally worthless in our estimation—at least as a table fruit?" Conversely, the editor of the Gardeners' Monthly says: "All we can say is, that we have eaten fruit of the Kieffer pear, which was equal in luscious richness to any pear we ever ate!"

CONGRESS AND AGRICULTURE.—When Congress shall stop its foolish quibbling and fighting, says the Western Rural, and give some intelligent attention to the subject of agriculture, establishing a proper department for its advancement, and making a decent appropriation for its support, it will have done more for the solid prosperity of the nation than has ever yet been done at one stroke in the history of our government. Agriculture is the support of the Republic, and to neglect its interests at Washington is little short of a downright crime.

DAMAGE TO TREES—The Germantown Telegraph says that there is more damage done to trees in taking them up in the nursery by rough, ignorant workmen, who have to be employed in the rush of business, than from any other cause in the transplantation. This fact is to be particularly remembered.

ENGLAND'S CHASTISEMENT.—Eighteen hundred and seventy-eight was a right good year, compared with its successor. If the one chastised us with whips, the other has chastised us with scorpions.—Agricultural Gazette.

CATALOGUES, ETC., RECEIVED.

CATALOGUE.—Peter Henderson & Co., 35 Cortlandt St., N. Y. Of the 128 quarto pages of this catalogue, 28 are devoted to flower seeds; 28 to vegetable seeds, and the rest to new or rare plants, vegetable plants, roots, small fruits, bulbs, flowers, etc., constituting in its entirety what Mr. Henderson appropriately calls it—"A Catalogue of Everything for the Garden,"—though, indeed, in this title many seeds and "things" for the farm are not counted in. It is fully illustrated with woodcuts, and one very showy colored plate of flowers of some of our best and latest Geraniums, both single and double, which, handsome as they are, are in no wise exaggerated. The catalogue is one that may be perused for hours with pleasure and instruction. This will be sent, we believe, free to applicants.

CATALOGUE of A. D. Cowan & Co., The American Seed Warehouse," No. 114 Chambers St., New York City. A plain but full and carefully-arranged catalogue of 65 pages. Choice seeds for the farm and garden with a summary of useful hints pertaining to their cultivation. Mr. A. D. Cowan has had an experience of several years in some of the leading houses in Europe, and latterly, for nearly ten years with the well-known firm of B. K. Bliss & Sons. He should, therefore, be well qualified to superintend his business. This firm, we see, offers a costly silver-plated ice-pitcher and salver as a premium to the fall exhibition of the Queen's County Agricultural Society for the best three specimens each grown from their seeds. Free to applicants.

FARM MANUAL.—Garden, farm and flower seeds—also blooded stock. This is not a very elegant catalogue, but there is a good deal of enterprise about it. We notice the Telephone pea here offered—also Teosinte (of which the RURAL has frequently spoken as of probable value for warm climates as a fodder plant), Blount's White Prolific corn, Doura, etc., etc. The catalogue also gives lists of all sorts of poultry, eggs for hatching, shepherd and other dogs, cattle, sheep, hogs, etc. Sent free.

E. & J. C. WILLIAMS, Montclair, New Jersey, Descriptive Catalogue of small fruits, grapes, bulbs, hardy roses, etc.,—seed potatoes. The "Montclair" Raspberry, of which we have given a portrait in our columns, is now first offered for sale. Catalogue free. Our readers may feel assured of fair treatment from this establishment.

CATALOGUE of the Monmouth Nurseries, Little Silver, Monmouth Co., New Jersey. Everything in the way of small fruits. Catalogue free. Mr. J. T. Lovett, well-known to our readers as an earnest worker in his special line of horticulture, is the proprietor. We advise our friends to send for this catalogue which will give them much trustworthy information.

VICK'S FLORAL GUIDE, to which we shall refer hereafter, is as usual a model of neatness and good taste. It is full of fine engravings with a front colored plate of a group of Roses. It is truly a Floral Guide. Mr. Vick's address, though it hardly needs to be given, is Rochester, N. Y.

FRANCIS BRILL, Mattituck, Long Island, N. Y. Market Gardeners' Price List of Cabbage Seed, Illustrated. This old establishment has for many years made a specialty of growing cabbage seeds. ALSO price-list of Garden Seeds in general. Free.

J. B. ROOT & Co's Garden Manual and Catalogue of seeds, plants, etc., 803 Kishwaukee St., Rockford, Winnebago Co., Ill. In addition to the regular lists of seeds, etc. are several good articles upon Garden Plants, Asparagus for Market, &c. Free to all.

DEPARTMENT of Agriculture Report for 1878.

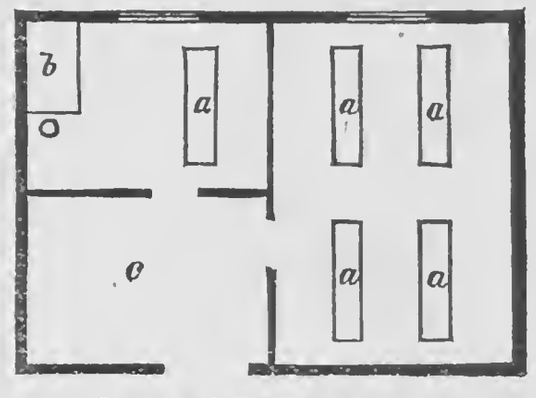
Industrial Implements.

THE FERGUSON BUREAU CREAMERY.

When examining the dairy apparatus exhibited at the recent dairy fair in New York our attention was attracted by a decidedly novel arrangement for setting milk. On close examination we discovered that this new arrangement comprised within itself every desirable point of excellence required for the most successful performance of this most exacting work of the dairy. That the setting of milk for cream is the one thing most needful for success in butter making, is amply proved by the great variety of appliances invented by practical dairymen for this purpose, and the considerable cost of some of the apparatus, in which much mechanical ingenuity is exhibited. The fact is, that a perfectly effective method of setting milk for cream is the great desideratum in dairying. It is the most important part of butter making as regards quantity and quality of product, and every one knows that profit bears an exact ratio in regard to the quantity and quality of the butter. Therefore a perfectly well arranged system of setting milk, in which convenience, cleanliness and effectiveness are all combined, is something that appeals directly to the favorable notice of butter makers.

The apparatus above referred to is the Ferguson Bureau Creamery made by the Ferguson Manufacturing Company of Burlington, Vt., and which is represented in the accompanying engraving. This is a handsome piece of furniture which may appropriately find a place in every dairy, and will not be out of place in any well appointed kitchen. Further, its arrangement is so perfect that where a well furnished dairy or kitchen cannot be afforded, it may be used in any place, even a cellar or a barn, and yet be found to offer great advantages and conveniences for setting milk under the most unfavorable circumstances. As may be seen, the creamery consists of an upright bureau or closet made of odorless, seasoned, spruce timber.

In the upper part is a rack which contains ice for cooling the milk when necessary, with a metal pan and escape pipes to lead off the water. Under the ice are spaces for four pans for milk. These pans are square in form with curved bottoms provided with means for drawing off the milk. Rests are provided upon which each pan may be drawn out (see engraving) upon its four small wheels, for skimming or emptying; each pan is intended to hold one milking and the pans vary in size for that purpose. Below the milk pans is a closet for cream and butter, of large capacity for storage. The construction of the bureau is such as to provide every facility for preserving an equal temperature; and for securing ample ventilation for removing all the odors or moisture which arise from the cooling of the milk. Further, the light is admitted to the cream by which the natural depth of color so desirable, is maintained. The temperature is lowered in summer by the use of ice in the upper closet or by a stream of cold water passing through pipes in this closet, which are provided for use in case this method may be practicable. Ventilation is secured by means of valves at A. A., which can be opened or closed at will, and through which air may circulate over and around the ice, passing over and around the milk pans and into the closets below. Gauze screens are also provided to replace the glass doors in front of the milk pans; and to prevent change of temperature during the filling or emptying of the pans, temporary shutters are provided to close the spaces which would otherwise remain open.



PLAN OF CREAMERY.—FIG. 21.

To warm the closet in the winter time a hot-water heater is furnished which is placed in the lower closet, warming the air which then rises through the closets above, and keeps the temperature even. The advantages *claimed* for the creamery are: uniform temperature within it; an increased production of butter on account of the perfect separation of the cream; a superior quality of butter by reason of the preservation of the cream from dust, odors, and other outside influences; perfect cleanliness and the removal of all undesirable odors from within; the least labor in doing the work; its durability; its adaptation for use in any room, dairy building or part of a house, with other useful points which are noticeable on sight. It is as useful in the factory as in the private dairy, and a public creamery furnished with this apparatus, would be a model of neatness and convenience. A plan of furnishing a creamery is suggested as follows: The building is divided into three apartments, one is supplied with four of the largest bureaus (*a a*), each holding 320 quarts or more of milk, as may be required; another has one or two bureaus, a sink and churns; and the other (*c*) is used for the receiving room or office. The milk and ice may be moved about on light trucks. The simplicity of the arrangement is evident. Last but not least, the cost of the apparatus is remarkably moderate, so much so that the saving alone, in a year, will amply repay the amount expended.

Everywhere.

RURAL SPECIAL REPORTS.

FLORIDA, Starke, Bradford Co., Jan. 5.—I have neglected to thank the RURAL for the fine roots of Cuthbert Raspberry sent me; but am often reminded of my duty, as I pass the rapidly growing vines on my way to my vegetable garden. We are having no winter at all so far, we have had only three light frosts, none of them scarcely nipping even the most tender plants. The thermometer most of the time stands from 70 deg. to 80 deg. in the shade. It is unusually warm even for this climate at this season of the year. Vegetable gardens look as they do at the North in July. On Christmas we had green peas, Irish potatoes, turnips, lettuce and radishes. The potatoes were fine and had been planted only nine weeks. I picked a few ripe strawberries, but the weather is too dry for them to ripen fast. If showers were as frequent as they are sometimes, we would have plenty of berries. The orange crop is much larger this year than last, and for a month past the fruit has been rapidly sent to market, where it has brought fair prices. The cotton ginning establishments have about finished their labors for this year. There are about twenty in this county, two in our village, one of which has turned out 100,000 pounds of lint. The crop was about half destroyed by the continued rains of August and September, but owing to there having been a larger acreage planted than usual, the number of bales is not much less than last year. Most of it is sent to the Savannah market, and has brought from 28 to 36 cents. To 100 pounds of lint there are about 325 pounds of seed. All but about one-fifth of the seed in this vicinity is sent abroad, whereas every pound of it should be kept and returned to the land. It has been bought by a firm in Savannah, and they are sending a great deal of it to Egypt for seed. Planted there it produces an inferior quality of long-staple cotton. There is a recent improvement in ginning machines. The old ones take out nothing but the clean seed, but the new invention takes out all the little lumps, leaving nothing but the pure long fiber. There is more waste, but the staple brings a higher price in market. The highest price for cotton both last year and this has been obtained by Northern men who have recently come here.

In answer to a correspondent the RURAL says that Bermuda grass in the South disappears in winter; that is not the case here; it remains green and fresh all winter. Even the hard freeze of a year ago did not seem to hurt it. It makes a handsome lawn, but will not grow tall enough to mow on any soil I have seen. We have what is called Crab grass, which comes upon the plowed ground in June and runs over everything. Cattle are very fond of it, and where the ground has been well manured, it will make a light crop of hay, *very light, too, here*. By October it all disappears, but it grows again. I. S.

ILLINOIS. West Jersey, Starke Co., Jan. 8.—Rain, rain every day this month hitherto. Weather warm and frost all out of the ground. Winter set in with but little rain or snow and water has been very scarce until lately, so that farmers were greatly troubled by want of it both for their families and stock. Crops for '79 were about as follows:—Wheat, oats and hay, light; corn was a very good yield in bulk, but it will not weigh as heavy as in former years. H. E. MC.

KANSAS, Larned, Pawnee Co., Jan. 3.—The "Notes from the Rural Experimental Grounds" in the RURAL of Dec. 27; on "Doura," have a peculiar interest to the farmers of this portion of Kansas, because they throw a partial light on a new crop that we have been experimenting with here for the past two years, and about which very little is known beyond what has been learnt by our own experiments. I refer to what we call "Egyptian or Rice Corn," which must be the white Egyptian corn referred to in the "Notes." I inclose a small sample of the grain for identification and would be glad to learn through the columns of the RURAL of its value for either animal or human food, and how it compares in nutritive or beef-producing qualities with Indian corn, or if any such comparison has ever been made. Our elevation here is 2000 feet above tide-water; a little too high to successfully raise Indian corn, at least until our country becomes more thickly settled and the land more generally improved. The Egyptian corn, however, promises to be a good substitute. In 1878 it yielded as high as 75 bushels per acre, and in the unusually dry season of 1879, 40 bushels per acre were obtained. Those who have fed it to their stock think it equal to Indian corn for fattening, and if given the choice, cattle, hogs and horses will all eat it in preference to Indian corn. Our farmers are so pleased with its productiveness, the cheapness with which it can be raised, and its adaptability to our climate, that they are going heavily into its cultivation the coming season. Cattle and sheep men are especially interested in its culture, as they expect that this corn, in connection with the Buffalo grass—which now affords such good pasture the year round—will enable them not only to raise cattle and sheep cheaply, but also to furnish beef and mutton for the Eastern markets at a cost that will almost defy competition. This corn has been ground into meal and is in use now as an article of food in many families, the flour being preferred generally to Indian corn meal.

The plan of cultivating this crop here has so far been to drill it in with a wheat drill, the rows being about three feet apart, one bushel of seed to 20 acres of ground. It is then cultivated the same as Indian corn, but only in one direction. When ripe the heads are cut off with a sharp knife, thrown into a wagon and hauled off. They are then run through a thrashing machine—any good separator will thrash 2000 bushels in a day. Any light you can throw on a crop that is at present of so much interest to the farmers of southwestern Kansas will be appreciated, as we would like to know just what the value of the grain is for feeding, before going so heavily into its production. H. R. H.

[In addition to what has already been stated in these columns, we regret that we can give our correspondent little information. The variety sent is White Egyptian corn, one of the many varities of Sorghum vulgare. It has for ages been cultivated in Africa and India for its grain which there forms an important part of cereal food, though in nutritious qualities it is considered inferior to most other grains. As to this, however, we are not possessed of any definite information. Perhaps some of our readers can furnish more information with regard to it.—EDS.]

KANSAS, Iola, Allen Co., Jan. 9.—Christmas Day was the coldest day during our two years' residence in this State—thermometer 7 deg. below zero. New Year's Day was foggy and it has remained so ever since. The frost is all out of the ground which is quite muddy. The fog is so thick at times that one can see only a few rods away. There is a heavy immigration to Kansas, and Allen Co. is settling up fast. Crops did well here the past season and the vast number of hogs and cattle is astonishing. H. M. S.

MARYLAND, Easton, Talbot Co., Jan. 10.—We have had and are having delightful weather. The warm rains have pushed the wheat vigorously ahead, and the young crop is now looking as well as I ever saw it at this season. The past summer was a dry one, yet our county made an excellent crop of corn of the finest quality. Most of it has been shipped, bringing from 60c. to 65c. T. B. B.

MICHIGAN, Muskegon, Muskegon Co., Jan. 10.—In your widely circulated paper are notes from all parts of the United States as well as occasionally from Canada, from which a reader can obtain quite a history of the productions, their modes of culture and the times of ripening of the fruits, vegetables and cereals of the entire nation. Permit me, therefore, to offer, as a return for the many favors of the kind received through your journal, a short description of that part of the State of Michigan, which is the home of my adoption and in which I have resided for the past twenty years.

The city of Muskegon, situated on the south side of the river and lake of that name, and about four miles above their debouchure into Lake Michigan, has increased in population from less than 1,500 in 1860, to over 8,500 in 1874, and is now estimated generally at 10,000. It owes its growth mainly to its peculiar situation and special adaptation to the manufacture and shipment of pine lumber. I find that all new countries bordering upon navigable waters, get a reputation given by sailors who see only what borders upon the waters they navigate. The northwestern part of Pennsylvania got the reputation of extreme roughness from the reports of sailors and raftmen upon the Allegheny River, which was true as far as they could see. This has also been the case with the eastern shore of Lake Michigan, which, for its southern half at least, is mostly made up of sand bluffs so fine and light of texture, as to be constantly rising up and blowing over the almost perpendicular banks ranging from twenty to sixty feet in hight. The prevailing winds being from the west, make their marks upon both shores of the lake, the western being flat, as far as I have seen it. These precipitous banks have given a character for barrenness to Western Michigan, that the facts in the case do not warrant, and which, in the settlement of the Northwestern Territory, bluffed off prospectors and settlers who preferred the more level and verdant plains and prairies further west. But the immense forests of the central and northern parts of the lower peninsula lured lumbermen from the exhausted lumber regions of the East, and disappointed settlers from the windy and treeless portions of the West, the former finding here not only vast quantities of pine and other woods, but abundant streams on which to float this timber to shipping points, where it is mainly manufactured into lumber, and shipped mostly to Chicago, but more or less to all other places, even to New Orleans, and to England; while the would-be farmer or fruit-grower finds here a genial soil and an equable climate, the latter unequaled east of the Rocky Mountains. The many streams which, in this State empty into Lake Michigan, all form lakes or lagoons near their mouths, but debouch into the big lake through the bluffs by narrow channels, thus affording commodious and safe harbors.

The largest of these streams is Grand River emptying at Grand Haven. The next largest is the Muskegon. Around Muskegon Lake are 30 steam saw-mills fed by logs floated down the Muskegon River and its branches, computed in the aggregate of floating water at 300 miles. These logs, when put afloat, are driven down and delivered at the different mills by the Muskegon Booming Co., and their record for the year 1879 foots up 432,762,094 feet, or what will cut that amount of inch boards. Those not using in their business figures amounting to millions, can hardly realize the quantity of the lumber sawed here the past year. If all were cut into one-inch boards, they would cover a surface little short of ten thousand acres. When we take into account that it is estimated that 100 million feet of the cut of the past winter have not yet come down the Muskegon, and that the cut of the Muskegon is only about one-fourth of the cut of the State, we can hardly avoid the questions:—What becomes of it? and what shall we do when the timber is gone? This question of timber supply for the future is becoming a serious one, and in this great timber country, standing timber is the most valuable real estate we have. S. B. P.

NEBRASKA, Orleans, Harlan Co., Jan. 9.—Fruit trees are scarce here; but money is scarcer. Cattle are in prime condition without having been fed a wisp of hay. Ice is breaking up in the Republican River. R. H. C.

NORTH CAROLINA, Brookston, Warren Co., Jan. 3.—The past week has been remarkably warm for this time of year—65° above zero every day. Land is in fine condition for plowing. Wheat is making rapid growth. M. B. P.

PENNSYLVANIA, Lineville Sta., Crawford Co., Jan. 5.—We are having very wet and changeable weather. We have had over three feet of snow with scarcely any sleighing, but there is plenty of mud at present. Corn is worth 50c. @60c.; oats, 32c.; wheat, $1.00@1.25; buckwheat, 50c.; potatoes, 35c.@40c. R. H. S.

PA., Venango Co., Jan 9th.—So far, this winter has been remarkably open. The mercury has scarcely visited zero and has not gone below that frigid point. A great deal of rains and lots of mud—no snow to speak of. The crops of the past season have been rather above the average. Fruit was very good. This county produces a great many apples but not much more fruit. Our markets here are not governed by the same circumstances as in other places; but by the price of oil. As that is low, produce is down, but business is improving rapidly. C. E. J.

WASHINGTON TERRITORY, White River, King Co., Jan. 1.—This place is exactly in latitude 48° north. The principal crops of White River Valley are hay and potatoes. Gooseberries, Raspberries, Blackberries and Currants grow in abundance. Black Caps frequently grow a stock from the ground and bear fruit the same year. There are thousands of acres of Cranberries, which yield abundantly on the marshes, but no one knows how to cultivate this sort of fruit, so that there is a fine opening here for any one skilled in this line. Coal is found in abundance, and gold in small quantities. There are fish in our rivers, but we can't tempt them to take a fly-baited hook. W. C.

The Querist.

ANSWERS TO CORRESPONDENTS.

Cattle Queries.

G. E. N., Afton, N. Y., asks, 1, whether he can without injury cross the offsprings of a blooded bull with their own sire, and how long can he practice such in-and-in breeding, using the same sire, without deteriorating the stock. 2, which is the best breed for the dairy—the Holstein, Jersey, Devon or Ayrshire—considering their yield, the cost of their keep, and their value for beef when they are turned off for the butcher. 3. Of two patrons of a creamery, if one brings richer milk than the other, as shown by the lactometer, he wants to know whether he gets a larger proportion of the butter made.

ANS.—Such close in-and-in breeding, though practiced largely by Bakewell, the Collings, and some other famous breeders, is not advisable unless the breeder has in view the attainment of a certain uniformity of excellence, or where other sires equally good cannot be had; and even then much judgment is demanded to avoid evil results. How soon weakened constitution, greater liability to disease, and barrenness may result from the practice, depends on so many considerations that no definite period can be named; but it is not improbable that a tendency to these defects may be generated at a very early date, though some time may elapse before they become manifest. "Line breeding," or crossing cows with bulls of a collateral branch of the same family, is a much safer method, and, as a rule, one attended with better results. Even here, however, experience shows that an occasional cross with a choice bull of the same tribe, but not of the same family, is often beneficial, if not necessary. 2, "The Best Breed for the Dairy" is a question which has caused no little wrangling. Among those mentioned the Devon must be excluded, as that breed, though often fair milkers, are more distinguished for meat than milk. If butter is the object, 'tis hard to beat a good Jersey, both for quantity and quality, especially for the latter. But there are Jerseys and Jerseys. For milk, cheese and butter, both the Holsteins and Ayreshires have fine reputations, especially for milk and cheese; but the latter would thrive where the former would starve. The Holstein is a massive beast that demands a large amount of good feed to do justice to its reputation; the Ayrshire, smaller, hardier and a better forager, is able to pick up a good deal of its food where its bulky rival could, or would, find none, and manages to do well on meagre fare. Under the best conditions for each, the Jersey is generally held to be the best for butter, the Ayrshire for milk and cheese, and the Holstein for its fattening qualities when dried off, although many say that the Holstein cannot be beaten for milk and cheese when well-fed. It is generally conceded, however, that the Ayrshire gives the best yield for its feed, and in view of its fine yield of milk, cheese and butter, and its adaptability to many conditions of climate and pasture, it may well be entitled the general-purpose cow. 3. No. All the patrons of a creamery or cheese factory share in the aggregate product in proportion to the quantity and not the quality of their milk. It isn't exactly just, but where is the remedy?

Wells and Cesspools.

Cess, Boston, Mass., says "My house is on the side of a hill. My well, which is stoned over, is about 18 to 20 feet from my cesspool. Between the two the land falls off four feet, the well being the higher on the hill. My cesspool is stoned up loose and is about eight feet deep. The hill falls off below my house a considerable distance. My water-closet, sink and bath-tub discharge into the cesspool. The well is not straight up the hill from the cesspool, but sidewise at an angle of about 45 deg. I do not know the depth of the well. The soil, I believe, is blue gravel. 1, Will my well become foul under these circumstances? If so, how soon? The conditions have existed for nearly two years. 2, Should I abandon the cesspool, would it be safe to use the well, provided it is not already tainted? 3. What would be the nearest absolutely safe distance between a well and a cesspool in a soil that is largely blue gravel?"

ANS.—1, The circumstances are full of peril. The well will without doubt be considerably deeper than the cesspool; a draft to scale showing the comparative situations is here given. The water from the cesspool sinks into the soil and will take a course in every direction from the center laterally and downwards. The dark-shaded strip from the cesspool to the well shows the line of saturation, which might be carried considerably further downwards. If the well is 24 feet deep, fully eight feet at the lower part is subject to infiltration from the cesspool. Two years or less would be sufficient to saturate the soil for 20 feet. Any expert would pronounce the case a seriously dangerous one. Test the water by placing an open glassful in a warm place for a week or two and observe if it is clouded or gives off any scent. Foul water has a sweetish taste and gives a brownish deposit which is precipitated by nitric acid, the organic matter being oxidized by the acid. The sweetish taste of water fouled by organic matter of this kind is often deceptive and therefore renders it more dangerous.

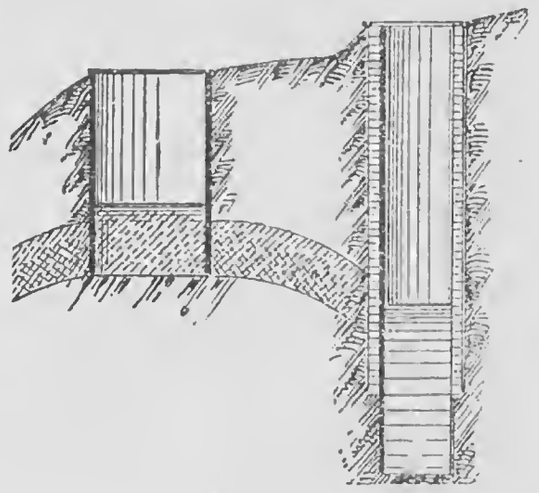


FIG. 22.

2. Yes. If the cesspool were cleared out and filled with fresh earth, the latter would absorb

a large portion of the foul matter and cause a reflux, so to speak, of the contaglon. 3. No well in gravel soil should be nearer than 100 feet to a cesspool. If a clay subsoil is near the bottom of the cesspool and *dips towards the well*, 200 feet might not be a safe distance. If the bed of clay dips *from* the direction of the well, 50 feet might be perfectly safe. To make the matter secure, it might be well to test the water. This may be done easily by pouring a few drops of nitric acid into a small narrow vial filled with the water. The bottle should be made perfectly clean and rinsed several times previously with some of the suspected water. If the water is colored yellow or brown by the acid, it is tainted with organic matter. Another test is to make a solution of permanganate of potash in pure water. If the color of the permanganate is weakened, the added water may be considered impure.

Preparing Peat for Fuel, Etc.

J. B., Union, N. Y., wishes to know the address of some one who has experience in growing basket Willows, where cuttings can be had, and at what price per 1,000; 2, if there is a ready market for willow shoots; the price per pound, and if they have to be peeled before they are sold. 3. He also wants to know how to prepare peat for fuel.

ANS.—At present we are unable to give the address of any one who has practical experience in the business. Cuttings can be had from most nurseries; we do not know their price. 2. The culture of basket Willows does not prove a success in America. Some say labor is too high to allow of any profit. Willow shoots of the proper size for basket-making are worth only five cents a pound prepared and delivered at the place of manufacture. One ton to a ton and a half to the acre is a large yield, and is seldom reached. Willow plantations suffer also much from destructive insects. There is not always a ready market for the growth. The best way is to contract with some manufacturing firm for the disposal of the crop. The shoots are generally peeled and prepared for use before they are sold. 3. In Europe, where in some countries peat is used almost exclusively for fuel, we have seen it prepared as follows:—A large quantity—several hundred loads—of peat is dug up and drawn together in a convenient place in a layer about three feet thick. When enough material has thus been collected, it is next worked up with water to one homogeneous mass to fit it for the form. This is done by driving a team and a wagon constructed for the purpose around in the mass till it has attained the proper plastic consistency, water being thrown on it all the time as needed. As soon as ready, the turfs, or peat bricks, are formed. A form with holes of the desired size is laid on the ground, filled with the peat, and then lifted up and drawn a little forward, again filled and so forth, till all the material has been used. When a large quantity of turfs are made, it requires much space to put them on. The peat is transported to the forms in wheelbarrows. After the lapse of a week or ten days, the turfs are turned on the edges to facilitate the drying, and, a little later, piled up in a conical stack for the same purpose. This is done mostly by children. The drying being done by the sun, the manufacture of this fuel must, of course, take place during the warm weather in summer.

Trouble with Churning and Butter.

N. J. C., White River, Washington Territory, says that her cows feed in the day-time on timothy and clover pasture or meadows where, owing to the great mildness of the season, they find lots of green, short grass; at night they are tied in the barn and fed timothy and clover hay with some Horn carrots—say a bucketful to each cow every night and morning. The butter from their milk is white, soft and tasteless. She usually makes fine yellow butter, but as soon as carrots are fed, this poor stuff alone comes. A neighbor's cows are fed in precisely the same way, yet the butter from their milk is nice and yellow; and she inquires what causes her butter to be white and tasteless or sometimes bitter, while her neighbor's is good and yellow. During her last churning after working one hour, the cream foamed and filled the churn so full that she had to take out a pailful; then after another hour's churning that cream foamed up to overflowing again so that another pailful had to be taken out, and it took from four to five hours to finish the churning, and she asks the cause of the trouble, which has occurred only while carrots are fed to the cows.

ANS.—Perhaps the quantity of carrots is too large for the cows' health. Try half the quantity and note the result. Late-cut hay makes white butter. The hay used may have been too ripe before it was cut. The bitterness in the cream comes from not skimming soon enough, and the difficult and frothy churning from having the cream too sour and too cold. Have a kettle of boiling water over the stove and when the milk is brought in and strained, set each pan over the kettle and scald the milk till the top wrinkles pretty briskly, and then set it where it will keep at about 60 degrees, and skim at the first appearance of souring—not later than 36 to 48 hours. Churn in about 12 hours after skimming and have the cream at 50 to 62 degrees, and you will have more and better butter and easier churning.

Windmills at Sea.

S. E. H., Milton, Ky., asks what would be the result of using a windmill on a ship for a mast and sail combined, using the power of the mill instead of steam power for propelling the vessel.

ANS. With any windmill made, the effect would be that in the first stiff gale that ship would lose every stitch of "sail" and probably her masts also. Those living on prairies have some idea of the force of the wind in a storm, but as it sweeps over the level expanse of ocean its power is still greater, while the stress upon the sails and the rigging is vastly increased by the tossing of the vessels amid the waves. Then again, it would be impracticable to set the "sail" so that the vessel could make any headway on her proper course in a contrary wind. In a moderate wind now a square-rigged sailing vessel can sail within six points of the wind, owing to the set of her sails, and a fore-and-aft-rigged vessel several points closer, eight points being at a right angle to the direction of the wind. By "tacking" therefore across her course she manages to gain some distances on it at every tack, but as a windmill faces the wind point-blank, there is no such thing as setting it aslant, and if it could be done, the impulse of the wind upon it could not aid in propelling the vessel, unless the wind was abaft the beam, owing to its level surface. As a sail, therefore, it would be worse than useless in contrary winds, while with a favorable breeze its necessarily small surface would give but little propelling power. As a generator of power to be used instead of steam, what windmill can produce from 3,000 to 4,000 horse power, the average power used in transoceanic steamers? There is a host of other considerations which would render such employment of windmills impracticable. These are exceedingly useful devices, but their only use on vessels is for pumping water out of the hold, and then in rough weather they have to be "furled".

Irish Potato Culture in S. C.

H. B., Greenville, S. C., asks: 1, when should Irish potatoes be planted in that section; 2, what varieties would be likely to thrive best; 3, should fertilizers be used, and, if so, what kind and how much; 4, how often should they be "worked."

ANS.—1, Plant as soon as the soil is in proper condition, which will probably be early in February in that latitude. Frosts may occur late enough to cut them down, which may retard the growth, and it would be well to leave a part for planting the last of the month, or early in March. The best crop of early potatoes a friend of ours ever raised, was planted in March, in latitude 42°, and was twice cut down by frost. 2, Early Rose for the main crop. It might be well to try some of the newer sorts, such as the Beauty of Hebron, in a small way. 3, Apply any good manure broadcast, plowed under. Unless thoroughly rotted and made fine, it should never be used in the hill. Ashes are excellent mixed with the soil in the drill or hill—the more the better; or, they may be mixed equal parts with plaster, and about a gill applied to each hill after the first hoeing. Cotton seed is also good—a quart or less to the hill. If commercial fertilizers are used, choose those rich in potash. 4. Twice is usually enough, if thoroughly performed; or work once and mulch with pine straw which, besides preventing the growth of weeds, keeps the soil cool and moist—an important consideration so far South as our friend's home. There are so many ways of cultivating this crop, all of them good enough, that we haven't space here to give them. A great deal of valuable information on potato culture, the result of actual experience in different parts of the country, was contained in our special Potato Number, published Oct. 18, 1879.

Preventing Rust on Wheat, etc.

R. L. S., Tangent, Oregon asks, 1, if there is any remedy for wheat rust; 2, what Prune is the earliest and best for his locality and where can he buy grafts. There are no curculios in Oregon, he says, and plums grow there to perfection.

ANS.—There is no remedy that in all cases and under all circumstances will prevent wheat from rusting. A distinguished German agriculturist states, however, that about six hours before sowing his wheat he prepares a steep of three measures of powdered quick-lime and ten measures of cattle urine. Two quarts of this are poured on a peck of wheat and stirred with a spade until every kernel is covered and white with the preparation. He has found it an effective preventive for rust, and he has followed the practice for many years. 2. The Peach Plum and Drap d' Or are the earliest of which we have reliable reports from Oregon; but many excellent varieties will do well there, among which, besides the above, are Washington, Yellow Egg, Jefferson, Reine Claude de Bavay, Prune d' Agen, German Prune, Coe's Golden Drop, Bradshaw, Columbia and others. Procure grafts from Eastern nurserymen if none can be had in your neighborhood.

Sore Eyes in Hogs.

W. S. T., Cornwall, Ont., Canada, has four Berkshire pigs which have swelled eyes; the swelling seems to be under the eyelids, and these are red and inflamed. He has been bedding them with oat hulls, and wants to know if the dust in the bedding is the cause of the disease, or what else can occasion it, and a remedy. 2, If oat hulls are fed to cows, will they dry up the milk?

ANS. 1, The dust from the chaff or hulls of oats would inflame the eyelids of pigs and so would the hulls, as it would be almost impossible for pigs to nest in a bed of chaff without getting the chaff into their eyes more or less. The dust would of itself be cause enough. The eyes of pigs sometimes become inflamed by colds in the head when they are exposed to a cold draught. They are often afflicted with catarrh caused by colds, which affects the eyes. 2, Oat hulls will not increase the flow of milk beyond hay, but will make it less. They are better than straw. Whether they will dry up the milk depends upon what the cow has been fed previously.

Destroying Stumps.

P. R. H., Avoca, N. Y., wishing to destroy some hard-wood stumps by slow combustion, by impregnating them with nitrate of potash, asks how much should be used; how it should be applied, and how long it would be likely to take to penetrate the stump.

ANS.—It is said that by boring holes into the head of a stump and putting into each hole an ounce of saltpeter, and after leaving it to penetrate the substance of the stump, setting the latter on fire, it will be completely consumed. This *may* be so. It is easy to try it when one has some stumps. We would suggest that a trial be made now; boring a hole diagonally downwards from each of four sides of the stump to a depth of 12 inches, inserting one ounce of saltpeter into each hole, leaving the stump until the spring. When it has dried considerably, put fire to it. Then please report the result. If you are successful, it will be the first case that has come to our knowledge. But we think it worth a trial, if for no other purpose than to settle this question.

Is Hungarian Hay Injurious to Horses?

R. H. C., Orleans, Nebraska, asks whether Hungarian hay is injurious to horses. He has fed it more or less for three years past. He has frequently been told that it would kill his horses, and last New Year's Day his best horse died. He is not sure the hay hastened his death. In the spring of '79, being anxious to get an old team into good condition for work, he fed heavily both of hay and corn. He found his horses growing stiff, and substituted bright oat straw for hay, and their limbs gradually regained their wonted suppleness. He is not sure but substituting chaff, or, better, oats, for corn would have been followed by the same happy result. If Hungarian hay is a dangerous feed, wherein lies the danger?

[Our correspondent, Mr. W. I. Chamberlain, who has had much experience with Hungarian grass and any of our other friends who have had experience in this connection, will, perhaps, kindly answer.—EDS.]

Scaly Legs in Fowls.

M. B., Fredericktown, Ohio, asks the cause of, and a remedy for, scaly legs in chickens.

ANS. The scurfy or scaly matter on the legs of fowls was carefully examined microscopically by Dr. Moxen and Mr. Tegetmeier who ascertained that it is due to the presence of a minute acarus, or mite, allied to the itch insect on the human subject. The remedy they prescribe is to soak the legs in warm water, so as to remove the scurf without injury, and to apply sulphur ointment. But we have cured it by the free use of kerosene upon the legs. The affected birds should be separated from the others, as the disease is contagious.

Sour Soil.

S. R. M., Dodge Co., Neb., is in blissful ignorance, yet has the folly to seek to be wise, thusly:—"Will some one, please, tell me what a "sour soil" is; where it is found; what causes it; how it is known from other soils; in fact give me such a description that I can be sure of it when I meet it? I am totally ignorant on the subject, and don't believe we have such a condition in Nebraska. I have never found any one here who could tell me."

Miscellaneous.

J. H. S., Lowell, Mass., asks which are the standard works on the following subjects, and where can they be procured:—1, on the culture of all the small fruits—Strawberries, Raspberries, Blackberries and Currants; 2, on the culture of the Grape, and on wine-making; 3, on sheep husbandry; 4, on poultry-raising on a large scale; 5, on bee-keeping.

ANS.—1, Barry's Fruit Garden, price $2.50; Fuller's Small Fruit Culturist, $1.50. 2, Harazthy's Grape Culture and Wine-making, $5.00; Husman's Grapes and Wine, $1.00; Buchanan's Grape Culture and Wine-Making, 75c. 3, Stewart's Shepherds' Manual, $1.50. 4, Geyelin's Poultry Breeding, $1.25; Wright's Poultry-Keeper, $2.00; Stoddart's "An Egg Farm," 75c. 5, Cook's Manual of the Apiary, $1.50, and Quinby's New Bee-Keeping, $1.50. All the works can be obtained through the American News Co., Chambers St., N. Y.

P. S. W., Newmarket, Va., asks whether packing butter in a vessel and putting this inside another vessel with a layer of salt all round the butter package, is a good plan for keeping butter in summer, and if so, whether a large unglazed earthenware crock would do for the outside vessel; 2, how many ducks should be allowed to one drake; 3, instructions to children how to play chess.

ANS.—Yes; yes. 2. Three. 3. We cannot spare sufficient space to give instructions enough to be useful in teaching the art of chess-playing By far the easiest and best way is to get some one who knows the game to tell how to make the moves and to form plans, the latter being essential in anything like fair chess-playing. We may, however, in a short time spare time and space for an article on this subject in the Literary Department.

R. S., Dunsville, Va., asks if there is an instrument used to ascertain the strength of vinegar, after the method of testing the strength of whiskey; if so, where can it be had and its cost.

ANS.—There is such an instrument used to test the strength of vinegar. The specific gravity of acetic acid, as compared with pure water, is 1.062, water being one. But ordinary vinegar contains only from two to three per cent. of acetic acid, and its specific gravity will therefore be very little more than water. Instruments of that kind can be had of E. B. Benjamin, 10 Barclay St., N. Y. City. We do not know the cost.

J. L. K., Middlesex, N. Y., T. D. H., Rochester, N. Y., J. R. G., Leavenworth, Kan., R. H., Newark, Ohio, S. T. M., Ontario, Can., asks whether the American Book Exchange, of this city, is a responsible concern and if it is safe to send it money in advance.

ANS. — Having had a great many queries of this kind of late, we made several inquiries from reliable parties who have dealt with them, and are satisfied that they are reliable dealers and have therefore admitted their advertisement into our columns.

J. M. W., Fernhill, Ont., asks: 1, what is the proper name for Lilac; 2, what is the proper name for a flowering Almond which blooms early in summer and grows about two and a half feet high.

ANS.—1, The botanical name of Lilac is Syringa. Syringa vulgaris is the common Lilac from Europe, of which there are pale violet and white varieties. S. Persica is the Persian Lilac; it is more slender than the above, with lance-ovate leaves and looser cymes. 2, Amygdalus nana is the botanical name of the little shrub known as the Flowering Almond.

I. G. C., (no address) wants to know the best mode for starting seed from Pinus Sibirica.

ANS. The seed may be sown in the open ground in the spring, but probably the best way would be to sow it in a pot or box during the winter, keep it moist and in a moderately warm room till it sprouts; then, in the spring, thump out the pot in the open ground and shade the young plants.

W. C. N., Rice Co. Kan., asks, 1, what varieties of Magnolia will succeed in that locality; 2, will it do to dwarf the Pear on the Orange Quince.

ANS.—1, Magnolia tripetala, M. acuminata, M. glauca, M. macrophylla and, in fact, all the deciduous Magnolias ought to do well in Kansas. 2. The Quince is an excellent stock for dwarf Pears and the one generally used.

W. E. E., Lamartine, Ohio., wants to know the best way to get out osage orange seed, and at what time.

ANS.—The seed is obtained by rotting the fruit and washing away the pulp; it is then scalded and kept warm and moist until it is sown. The best way to preserve it is to lay it in alternate layers with sand slightly moist.

C. H. J., Ingleside, Md., asks where he could get an incubator.

ANS. They are sold and have been advertised in the RURAL, by A. M. Halsted, Rye, N. Y.

NOTE.—IN reply to the many questions we have received as to where seeds of the particular kind of Doura of which "Notes from the Rural Grounds" spoke so highly in a late issue, we have ascertained that for the present, R. H. Allen & Co., 189 and 191 Water St., N. Y., can supply them in small quantities. We speak of this because we really desire that our readers should try this (with us) very valuable fodder plant, and we know of no other house that can supply this particular variety. The variety described by other journals as Doura develops a single stem and is valuable chiefly for its grain.

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SATURDAY, JAN. 24, 1880.

SHORTLY TO APPEAR.

Notes from Dr. John A. Warder, T. T. Lyon, Ellwanger & Barry, P. J. Berckmans and others respecting the true Paradise Apple as a dwarfing stock, with illustrations.

On The Kinver and an entirely new French Yellow Globe Mangel as sweet as a sugar beet and as productive as other mangels—illustrated.

Leguminous Plants—grasses and valuable fodder plants, by Professor W. J. Beal—illustrated.

Stock Notes by Professor E. W. Stewart, L. S. Hardin, Richard Goodman, M. C. Weld, Col. F. D. Curtis, A. B. Allen and others.

Important Addition to the Rural's Seed Distribution.

Special Articles from Professor S. W. Johnson, Professor F. H. Storer, Professor G. C. Caldwell, Dr. A. R. Ledoux.

A Series of short articles upon the cultivation of our choicest vegetables—illustrated.

Dairy Specialties by Henry Stewart, L. S. Hardin, Professor L B. Arnold.

Fruit Notes by Pres. T. T. Lyon, Gov. Furnas, Dr. T. H. Hoskins, Sec. Garfield and others.

Poultry Notes by Forrest K. Moreland, Henry Hales and others.

Life Engravings of the Chinese Yam (Dioscorea batatas) "Cinnamon" vine; the Tulip tree and fruit &c., &c., &c.

Small Fruit Notes will be presented later by the well-known writers whose contributions have made this journal of such value in this important department of Horticulture.

TO NEW SUBSCRIBERS.

We find that many of our new subscribers have not seen our Free Plant and Seed Distribution supplement and consequently know nothing as to its terms. We will therefore send this supplement free to all who apply until further notice.

As originally announced in our Fair No. of Sept. 6, the Plant and Seed Distribution will be completed before March 1st. This for the benefit of our new subscribers.

Professor Blount has said regarding his White Prolific corn, that it must not be highly manured or a maximum of leaves and stalks and a minimum of grain would result. The reports of our prize-takers show that it is next to impossible to manure this variety of corn too highly. An immense amount of leaves and stalks will be produced in any event—they are characteristics of the variety.

Among parasitic plants, those which are destitute of green foliage are supposed to strike their roots through the outer bark and to live upon the elaborated sap of the inner bark. Such are the Dodder, so injurious to flax, Beech-Drops, Rafflessia Arnoldi of Sumatra &c. But our Indian Pipe (Monotropa uniflora) bears not a trace of green foliage or stem and yet it is not known that it is a parasitic plant. Dr. Gray suggests that though it may be parasitic on the roots of other plants in early growth, yet it afterwards appears to live in the manner of the larger fungi, upon leaf-mold and decaying herbage. Its mode of life should be investigated.

Mr. Wm. Robinson of the London Garden, a weekly horticultural journal that has many friends here as well as in England, writes us: "I wish you would tell us more about the beautiful hardy plants of your country in the Rural. A great many of your plants are among our finest garden flowers here, and it would be pleasant to know all about them. Of course, I do not mean technically, but how they look and grow at home; what localities they inhabit, and under what conditions their beauty is highest. The way the world of trees is treated in your paper is admirable, and I only wish for something equally good about the herbaceous plants and other hardy flowers."

There are few of our agricultural exchanges that do not speak joyfully of considerable additions to their lists of subscribers as compared with last year or preceding years at corresponding dates. This is good evidence of an easier feeling among farmers generally. There are also a number of new papers that have appeared within a few months and we hope the buoyancy of the times will assist in commanding a due appreciation among the favored people to whom they must look for support—for the American farmer of to-day must be classed as among the most favored people of the earth. We believe in enterprise, and the greater the number of agricultural and rural journals in our country, the harder we shall all have to work to merit a profitable share of patronage.

We are in receipt of frequent complaints about culpable delay and great carelessness and irregularity in the mail service in frontier places. No part of the post-office routes of the country is better paid than that over thinly settled States and Territories, and none so mismanaged. We are glad therefore that the matter is now being overhauled by a Congressional investigating committee. Of the $2,000,000 increase made last year in "Star route" expenditures; that is, for mail matter carried on wagon, stage, or horse-back, all except $300,000 went to Texas and the Territories. With liberal pay, we should have efficient service there, or know the reason why we haven't. Mismanagement in the matter at present seems to extend all the way from the Second Auditor who has charge of the contracts at the Post-Office in Washington, to the local postmaster on the most distant frontier.

For two years past we have often called attention to the excellence of a variety of sweet corn well known as Mexican. We have tested in our grounds all sorts of sweet corn and, as regards sweetness and a richness that might well be described as "buttery", we believe this Mexican variety should be placed first. That there is no market demand for it is owing to the fact that the ears are rather small (averaging seven inches) and, being as white as other kinds until the kernels begin to harden, there is no distinctive character by which it may become known to purchasers and others, and larger kinds are preferred. The Mexican corn grows about five feet high, is very prolific, often bearing two and three ears to a stalk, and remains for an unusually long time in a fit condition for table use. Even after the kernels begin to color, they are still sweet, tender and well-flavored. When mature, they are of a slate-color and much shriveled. Seed is offered by all seedsmen and we hope that those of our readers who have not done so, will give it a trial.

On Monday, the 12th inst., just as the last issue of the Rural went to press, the strike of the men belonging to the Butchers' Union of Chicago virtually came to an end, after having done a world of mischief during the five or six weeks it had lasted. At its commencement we recorded the impression that it was chiefly due to the desire of the hog-packers to reduce the price of hogs, which were at that time selling at figures that would reimburse the farmers of the country for the losses some of them incurred on their swine during the preceding year. This end has been partially gained, and the action of the "bosses" all through the strike has confirmed our belief that the object they had in view in permitting it was to depress prices. To gain this end, a heavy money loss has been inflicted on Chicago from which a great deal of business has been diverted to other points owing to the trouble; a still heavier loss has been brought upon the the farmers of the entire country, for the depression in prices due to the strike has extended everywhere; the families of hundreds of the workingmen have been forced to the brink of starvation, and the men themselves morally and physically demoralized by the shiftlessness, intoxication, and other vices inevitably fostered by idleness and exasperation of mind.

AN ILL-NATURED GIBE.

In noticing the appearance of a new agricultural newspaper in this city, the editor of the Nova Scotia Journal of Agriculture takes occasion to remark that: "The besetting sin of American agricultural papers is that they rehash 'science' after it has been filtered successively through German, French and English publications, and give paltry details of experiments by ignorant persons to determine what had been determined years before by exact methods in the hands of competent experimenters."

Perhaps of all people in the world, it least becomes an agricultural editor of that particular province of the Dominion to criticise the American newspapers in language such as this. The statement above cited is neither considerate nor just and a full half of it is not true. No doubt there is much paltry experimentation in this country, such as would never be undertaken by persons thoroughly informed in science and in the history of the art of Agriculture. To correct this crudeness, time enough must be allowed for the influence of our agricultural schools to penetrate far and wide. It may justly be expected that the graduates of these schools will, by precept and example, in due time remove all causes for such reproach.

In respect to the other point of the criticism: it is plainly absurd for any one to say that "science" dribbles down to us from *English* sources. Most of the leading agricultural papers of this country, and particularly the Rural New-Yorker, are at pains to procure their scientific articles from the first authorities in the country; and it has often been noticed that perhaps the most striking peculiarity which American science presents is its independence of the mother tongue. There can be little doubt that by far the larger portion of the knowledge of scientific matters which is current in this country has come to us direct from the great center of scientific activity, Germany. There was a time, it is true, some years ago, when the American methods of teaching mathematics, physics, chemistry, and medicine came largely from France; but of late years we have turned more and more towards Germany; and it is a very long time since we have looked to England, except incidentally, for scientific teachings. In this connection it may well be asked what treatise on science in its relations to agriculture has England given us, in recent years, to compare with the books of Prof. S. W. Johnson, "How Crops Grow," and "How Crops Feed?" How is it that the standard German scientific work on cattle-feeding by Prof. Wolff is even now being edited in New Haven, to be published in this city while we may look in vain toward England for any approximation to a work of such character? It is worth while to remember that the books of Prof. Johnson were republished both in England and Germany.

Dr. Lawes has done admirable service in England as an experimenter, and in this country as a writer, also. But in this we see no filtration. It is a legitimate flow of knowledge which we are proud to accept and uphold. We can assure the Nova Scotia editor that he has fallen into error as to the sources and the composition of our scientific "hash."

THE POISONING OF WELLS.

It is probable that ninety-nine cases in a hundred of disease in rural districts are the result of poison absorbed into the system either from the stomach or the lungs. The blood is manufactured in the digestive organs from the food, passes in great part through the liver, and all of it through the lungs, in both of which it is filtered and purified, and in the latter it is brought directly into contact with the air which is breathed by inspiration and is subjected to any deleterious matter which may be contained in it. As the food and drink are the materials of which the blood is formed, any unhealthful or poisonous influence at this prime source, of course poisons the stream; and as the function of the lungs is to aerate and purify the blood, anything wrong in the purifying material, interferes with this important vital process.

But we propose here only to call attention to what we believe to be the most prolific source of rural diseases, malarial, functional and organic in their character. This is the water supply. A case in point appears in our column of inquiries and answers, and we have taken the trouble to illustrate it for the purpose of showing distinctly how wells are poisoned. In this case a cesspool eight feet deep, receives the excreta of a family, the wash from a bath-room, water-closet and sink included. Thirty or forty gallons a day, equal to nearly 15,000 gallons, or 2,000 cubic feet per year of the most poisonous kind of filth, are poured into this pool only eight feet deep, and, of course, soak into the soil and saturate it. Twenty feet only from this deadly sink is the well which is probably several feet deeper than the cesspool. The drainage from this cesspool will flow then in every direction in a circle of twenty feet radius only, before it pours into the well. For each foot in depth of this area there are about 1200 cubic feet. In a year the 2000 cubic feet of waste will completely fill this space of twenty feet around the well to a depth of more than a foot-and-a-half, and in two years to a depth of three-and-a-half feet. But two things cannot occupy the same space, and this filth will then be distributed over a much larger quantity of ground in proportion to the ratio of solid soil to the small interstices, or spaces among the gravel, in the mass. Taking this ratio as only ten to one, the 2000 cubic feet of waste will saturate 20,000 cubic feet of earth in one year.

It is true that the soil near the cesspool will retain the largest portion of the solid matter, and the first water which reaches the well will be filtered to some extent. But it is only a question of time—the lapse of which will depend upon the nature of the subsoil—how long or short a time will elapse before the poison pours undiluted into the well, and from it into the stomachs of the unfortunate and unsuspecting victims. If a bed of clay lies close to the bottom of cesspool, there will be no escape downwards and the period required to reach the well will be probably six months. If the soil is gravelly and the waste sinks downwards, there is the absolute certainty that a stream of water which flows into the well will be reached sooner or later.

A similar frightful certainty, slowly but surely approaching in thousands of cases, threatens in time to sap the life of unsuspecting people, who will by-and-by exhibit every symptom of insidious but fatal disorder. The hectic cheek, swollen glands, dry hot skin, disordered digestion, bilious derangements, headaches, tremors, diarrhea, dysentery, cutaneous eruptions, tumors, coated tongue, foul breath, and all the varied symptoms by which blood-poisoning first becomes apparent and the final deadly typhoid and malignant fevers are predicted, alarm the consciousness, while the source of the very poison itself is hourly used to allay the fever and thirst occasioned by it.

We do not desire to be sensational or to make too much of this. The danger exists and it is everywhere. The case before us, to which we call the closest attention, is by no means an unusual one. In fact, there are thousands that are greatly more dangerous than this, and every person who cares for his own health and that of the loved ones whom he shelters from harm with tenderest care, should see to it that this prevalent source of danger is eliminated from his household; and remember that *decomposing organic matter is the most deadly of all poisons.*

BREVITIES.

We are in hopes to be able to begin our Seed and Plant Distribution on or before February 10. It is very pleasant to make this *announcement* to our readers, but the distribution itself is a long, tedious, trying task.

Discontent in Germany seems to be assuming serious proportions. The people were promised a reduction in their taxes but the Government, in view of the prevailing distress, now assumes that this is out of the question.

Is it wrong to use butter coloring, provided the coloring matter is not injurious to the health? Why discuss such a question? It is right to please the eye whenever we can do so; and if we can relish our food the better for it, so much the better. Let us select larger gnats to strain over.

It is the rule in our office to answer every inquiry received either by mail (when so requested) or in our Querist columns. An unusual pressure of business during the past three weeks has obliged us to break our rule repeatedly, for which we ask the indulgence of our questioners.

All subscribers wishing our seeds and plants should send six cents' worth of postage stamps—that is, two for the seeds—four for the Raspberries. The rest of the postage and all other expenses we bear. All who have not seen it, should send for our seed supplement which explains the whole matter.

The following vegetable seeds may be sown in the open ground as soon in the spring as the ground can be worked and, should therefore first engage the farmer's attention as to selections: Lettuce, Onions, Peas, Radish, Parsnip, Cauliflower, Cabbage, Carrot, Celery, Kale, Parsley, Turnip, Spinach, Asparagus, Salsify. We remind our readers that nothing is gained, and oftimes everything is lost, by sowing seeds of the following vegetables too early: All sorts of Beans, Melons, Tomatoes, Pumpkins, Squashes, Cucumbers and Sweet Corn. There is not so much gained by starting tomatoes in the house or frame as is generally supposed. Try a plant or so each way.

That scientific investigation in agriculture is not only valuable, but that it is appreciated by the farmers, is demonstrated in Michigan. Clawson wheat, which formerly was but little grown in that State, was analyzed by Professor Kedzie, of the Agricultural College, and pronounced by him to be much better than it was generally supposed. After the analysis Clawson became the most popular variety of wheat. It advanced 10c. per bushel, making an aggregate increase of nearly $1,500,000 in the value of the wheat crop for one year, all of which went into the pockets of the farmers.

For Women.

DESCRIPTION OF CUTS.

ILLUSTRATION No. 23 represents an evening costume and a suit for every-day wear. We presume "RURAL" readers with appreciation and ingenuity, will be able to adapt the styles to their use. Any material suitable for the two modes may be used for their construction.

No. 26.

NOS. 24 AND 25—FRONT AND BACK OF PALETOT.—No. 24 showing the front of paletot, is of black fancy cloth, trimmed with skunk fur and bone buttons. No. 25, showing the back, is of diagonal cloth, ornamented with buttons.

No., 26 FASHIONABLE GLOVES.—The illustration gives a pretty style of glove for evening wear. They are of black kid, finished at the top with black lace over white.

No. 27, CRAVAT-BOW AND RUFFLE.—This pretty bow and ruffle is composed of Bretonne lace, made on a muslin foundation.

THE WOMENS' LETTERS.

I THINK the letters of the ladies in the RURAL of Dec, 27; very interesting. The question of "Marguerite" in reference to the chewing of tobacco and its use in any manner, has often occurred to my own mind I also would like to have the question solved. My oldest boy is seven years old and I dread his learning to smoke and chew just as much as I do any vice that men are addicted to. His father smokes, but I hope my boy never will; and right here I would ask the ladies if they have ever seen a man who was in the habit of using tobacco, have a handsome or cleanly-looking mouth? I never have; for it spoils both lips, teeth, and breath, this deadly noxious weed. Boys learn to smoke because they think it smart and manly, although their first efforts in that line may be attended with all the nausea of sea-sickness. The lady who allowed her little one to suck the "old man's pipe," under the impression that it would help him, must never have studied any of the laws of hygiene or health. She had more forbearance towards the "old man's whim," than I would have had. I'm afraid that "contemptible old pipe" would have graced the fire about the time I found my child imbibing its vile contents. With all due deference and respect towards "old folks," I must say that a good many of them are full of "notions" quite as useless as that of the "horse shoe" nailed over the door for 'good luck," the breaking of a mirrror portending coming death or misfortune, and hundreds of other such "moonshine ideas," that ill accord with the light of this 19th century.

No. 24.

What a splendid thrilling story "In Folly's Net" is. Poor Jean was severely punished for the folly of flirtation.

I am glad to see that there is a plea made by one of your correspondents for the "old maid" for they are a class that are generally pretty roughly handled, and I fully agree with the writer, that it is far better to live peaceably in single blessedness or wretchedness—whichever you may choose to call it—than to be the slave of a tyrant, or the poor down-trodden wife of a drunkard. How do you suppose a man would feel to come home and find his wife drunk, or perhaps "smashing up the furniture," for pastime, as some men do, why then it would be terrible? Yet there are thousands of wives to-day who (though far superior to their drunken husbands), have to stand and live through this misery day after day, becoming mothers with the dread that their children will follow in their father's footsteps, or hoping that perhaps his example may be a warning to them in later years. I believe in marriage for all, as it is ordained of God, but far better die unwed than to live for years in a literal "purgatory." The sentiments expressed by the writer on "Chemiloons" have my warmest approval, for I have a perfect abhorance of "corsets;" they are the bane of women's lives. I would not be hired to wear one; my daughter never shall, while she remains under my control. I had a music scholar once (a girl about 16 years old), who was always and is still complaining of constant headaches. She wears a corset tightly laced, and just think what a small amount of sense her mother must have, when she wanted her child to tie the strings to the bedpost and pull tighter. I reasoned with the girl and took down my Physiology to show her the shapes as nature and fashions made them, but she preferred the waist that looked as if the being were about to snap in two, but 'tis almost useless to say more on this subject. So long as it is the "fashion" for women to try and look as if they had no digestive organs whatever, just so long will the majority of women sacrifice themselves to this merciless "Moloch." I expect I have tried the reader's patience with this long, rambling letter, so adieu, wishing to all a "Happy New Year," peace and success during the year of our Lord, 1880. MRS. W. J. G.

Waterville, Kan.

MRS. HAYES'S attire at the New Year reception at the White House, will be matter of interest to female readers. Her dress was of white brocaded satin, wrought with gold threads. The V shaped front of the waist was filled in with lace and her sleeves were of duchess lace with embroidery of seed pearls. The court train of satin was long and square; rose buds were worked upon it with threads of gold. The plain white satin petticoat was trimmed with bias folds of satin divided by a fringe of gold and pearls. Broad bands of gold embroidery separated the petticoat from the court train. In her hair she wore a silver comb and on her neck a pendant—a cameo head of the President set in diamonds.

A LITTLE three-year old, whose mother was mixing a simple cough medicine for him, watched the process, and asked if it was good. He was permitted to taste, and exclaimed: "It's awful good, mamma! *Let's keep it all for papa!*"

Literary Miscellany.

CONQUERED.

CHAPTER II.

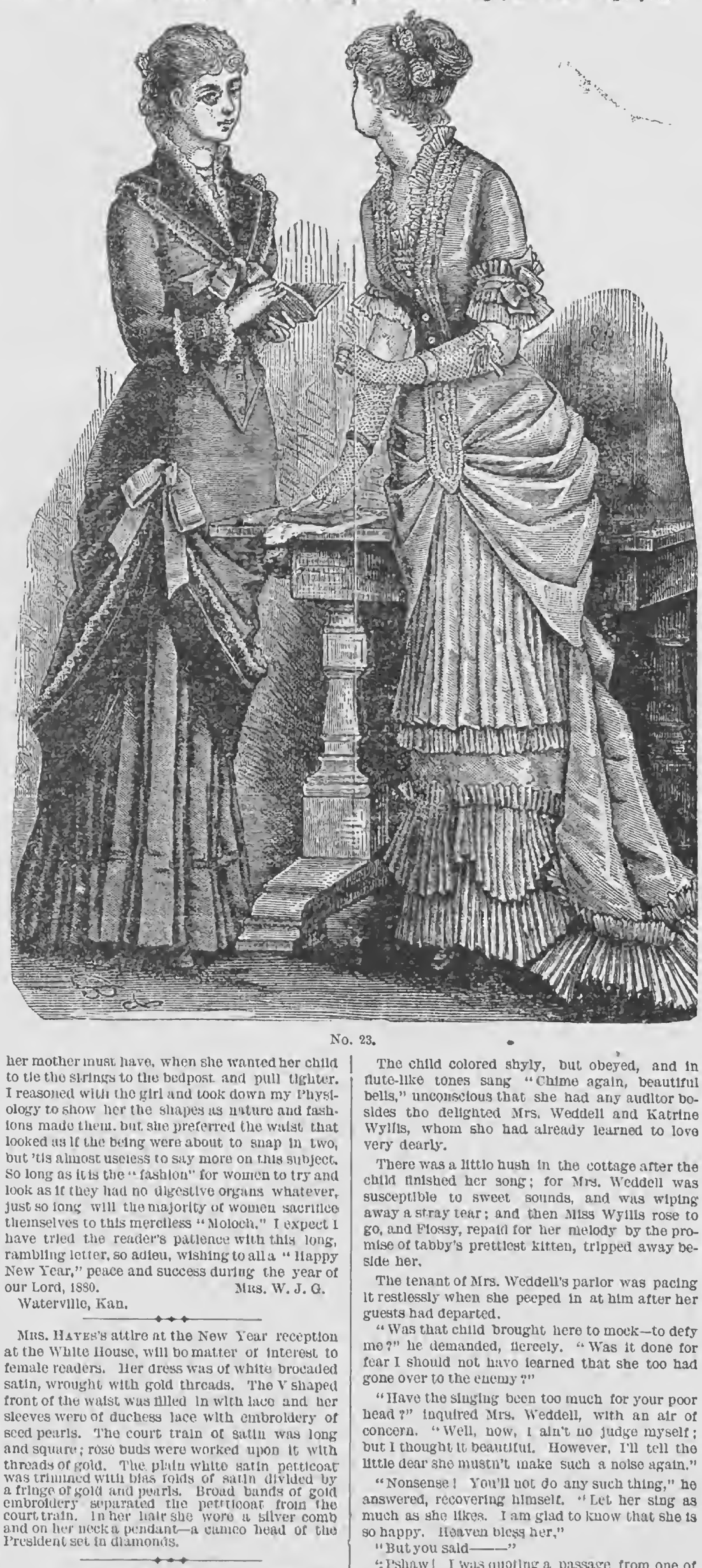
(Continued from page 845.)

"Poor man!" said the young lady, compassionately. "He need not be afraid that we shall intrude upon him if he so positively declines any sympathy. Time must effect his cure; but you will not, I hope, refuse this fruit and game our housekeeper has packed up for your use and his. Flossy!"

Her gentle call brought the child to her side directly. She was a pretty, fair-haired little girl about eight or nine years old, and there was something in her face so familiar to Mrs. Weddell, that she studied it intently.

"Your sister, ma'am?"

"No; a little cousin, who was to have spent her holidays at school, and, finding that she was not very happy in the prospect, we persuaded her governess to let her come into Sussex with us. Flossy, darling, I want Mrs. Weddell to hear how sweetly my birdie can warble. Will you sing to her one of the songs your brother taught you?"



No. 23.

The child colored shyly, but obeyed, and in flute-like tones sang "Chime again, beautiful bells," unconscious that she had any auditor besides the delighted Mrs. Weddell and Katrine Wyllis, whom she had already learned to love very dearly.

There was a little hush in the cottage after the child finished her song; for Mrs. Weddell was susceptible to sweet sounds, and was wiping away a stray tear; and then Miss Wyllis rose to go, and Flossy, repaid for her melody by the promise of tabby's prettiest kitten, tripped away beside her.

The tenant of Mrs. Weddell's parlor was pacing it restlessly when she peeped in at him after her guests had departed.

"Was that child brought here to mock—to defy me?" he demanded, fiercely. "Was it done for fear I should not have learned that she too had gone over to the enemy?"

"Have the singing been too much for your poor head?" inquired Mrs. Weddell, with an air of concern. "Well, now, I ain't no judge myself; but I thought it beautiful. However, I'll tell the little dear she mustn't make such a noise again."

"Nonsense! You'll not do any such thing," he answered, recovering himself. "Let her sing as much as she likes. I am glad to know that she is so happy. Heaven bless her."

"But you said——"

"Pshaw! I was quoting a passage from one of the poets, that was all."

"Was that poetry now?—a bit out of a battle-piece?"

"Yes, Mrs. Weddell; the cry of an overcharged soul worsted in the battle of life. Remember you are not to check that child's innocent happiness; and remember also that you are not to speak of me. Say that I am much the same, or that the pain is more intolerable than ever; it will be the truth—the sad, serious truth."

CHAPTER III.

BESIEGED.

Katrine Wyllis and little Flossy came to the cottage again in the course of a few days; but this time they had a bevy of merry companions, lively girls, whose laughter and chattering warned the solitary writer to turn his key before they were half-way up the garden.

No. 27.

"Don't look terrified at such an invasion! We are friends, not enemies," cried the tall, black-eyed, stately Brenda, as Mrs. Weddell, who had fallen asleep over her knitting, opened her eyes and stared at the bright vision of smiling girl-faces and well-dressed figures about her chair.

"Sit still—oh! do sit still!" implored Bessie Tresham, her sister, who had artistic tastes. "You'll make such a charming picture. I must sketch you just as you are. Wasn't it lucky I insisted on bringing my book and pencil?"

"I can knit, so give me your work," cried *petite, piquante* Madge Renton, possessing herself of the stocking. "Flossy, my darling, be our pretty page, and find seats for us. If Mrs. Weddell doesn't object, we mean to stay and talk to her. Not all at once, you know, because that would not be giving each other fair play."

With the aid of a stool and an old box, the whole party were accommodated, and Bessie commenced her sketch of their half-disconcerted, half-flattered hostess, who now found breath to utter a protest.

"You don't mean to say you're going to put me into a big pitcher like you have up at the house! Let me get my tother cap on first, and then I won't mind it a bit."

But the laughing girl seized and brought her back to her chair.

"No, indeed, we like you just as you are," the artist insisted. "Fold your hands on your lap, and look as placid as you did when we came in. Can't you go to sleep again if we are very silent for five minutes? Or if Flossy would sing and lull you off—where is she?"

Yes, Flossy, who sat on the rug at Katrine's feet cuddling tabby and the kittens, was quite willing, and as she warbled her simple, old fashioned songs, the carefully modulated voices of her companions took up the strain ever and anon, and made the harmony more complete.

Then Katrina, at Brenda's urgent entreaty, sang in the rich plaintive contralto that always thrilled her hearers, and never more than now, a quaint carol with a refrain that breathed of peace and good-will; and as she sang, the head of the listener in the parlor drooped on his folded arms, and the lips he had been angrily knawing, quivered with pain not unmingled with remorse.

No. 25.

"I can't see to do any more," said Bessie, presently. "But I may come again to-morrow, mayn't I, Mrs. Weddell?"

"And I?—and I?" queried the rest.

"Lor' love ye all!" cried their gratified hostess, "come as often as ye like. It do's a body good to see your merry looks! and I'll tap my elder wine to-morrow, see if I don't!"

"But I hope we shall not disturb your lodger," observed Katrine, gravely.

"Of course we shan't," said Madge, rolling up the ball of worsted and sticking it on the top of the knitting-pins. "He's deaf; fanatical, chronical; such people always are."

"Of course he is," assented Brenda. "We may come and go as often as we choose, but he'll never know it."

"I'm glad of that," cried Bessie. "It gives one such a comfortable feeling; but still it shall not make us unmindful of the poor dear old bachelor. His is a peculiar case, and we'll pity if we can't relieve him."

"Oh! yes, he shall have our pity," said everyone in chorus, and away they rustled, enjoining Mrs. Weddell to be ready for them on the morrow.

"It's impossible to read or write with such a lot of talking in the house," Mr. Dieppe told his landlady on the morrow. "If your visitors are coming again, I shall have to carry my book and papers upstairs."

"Lor' now, I thought them pretty young things' voices had such a pleasant sound!" she declared. "But shall I tell 'em you're *not* deaf?"

"By no means. Have I not forbidden you to mention my name to anyone?"

So the writing implements were transported to the bed-chamber, but as it did not boast of a fireplace, it was so intensely cold that the writer's hands were soon benumbed; and just after Katrine and her friend were to be descried coming towards the cottage, he crept down-stairs on tip-toe to warm himself in the parlor.

How musical those gay young voices sounded, and how infectious were those rippling peals of laughter! But he must not listen; it was mean, it was dishonorable: he would retreat again to his chamber.

However, it was not his fault that Mrs. Weddell's sash-door fitted so badly that he knew he could not pass it without being overheard; nor was it any fault of his that although he carefully retreated to the furthermost end of the tiny room, and endeavored to absorb himself in a translation from the German, stray sentences would reach him every now and then, and distract him from his book.

Bessie's sketch was progressing favorably, and he could hear her friends criticising and admiring it.

"When this is finished, I think I shall commence a fancy portrait of Mrs. Weddell's invalid," the artist observed.

"Poor dear old gentleman, don't make fun of him," cried Brenda, pathetically. "When people are *very* old, and ugly, and ill-tempered, one mustn't be too hard upon them. By-the-bye, I have brought him something to comfort his gouty feet," and she produced a pair of gaudy carpet slippers of majestic dimensions. "Present them to him, Mrs. Weddell, as from yourself. Mine is the sort of benevolence that prefers to shelter itself behind some one else. If the *pantoufles* shouldn't be large enough let me know."

"And I have thought of the patient sufferer as well as you," said Madge, holding up a hideously ugly wadded traveling cap, with lappets for the ears. "Make him tie these strings under his poor dear chin, Mrs. Weddell, to keep the draughts away. He might like to sleep in it."

"And here are a pair of scarlet muffetees for his wrists," added Bessie handing her a pair that would have fitted Daniel Lambert; "and, let me know, if you please, whether he suffers with cold feet. If so, I'll line one of my muff-boxes with flannel, and send it down for him to put them in."

"Inquire whether he wears glasses," said Brenda. "For we have a huge pair of goggles at home that belonged to my great-grandfather, which we will lend him with pleasure."

"And if he would like to be read to," chimed in Madge, "you can mention that I'm used to reading to a deaf person through an ear trumpet, and rather like it."

"And oh! Mrs. Weddell, if you should have any reason to think he has caught cold, if you only hear him *sneeze*," cried Bessie, "do send for me to make him some gruel. I've taken lessons at a cooking class, and never had any opportunity of putting my acquirements into practice. It would be such an opening for me if I were permitted to nurse up a chronical! I should so enjoy it!"

"What is a chronical?" asked Flossy, wonderingly.

"It's a mysterious ailment, my child," she was assured. "Only the invalid himself could properly explain the nature of it. Don't stop to ask any more questions, or we shall not be home before the dressing-bell rings."

Away they all trooped, laughing and chattering as before, promising Mrs. Weddell a water-color copy of her own apple face in the course of a day or two.

"Have you betrayed me to these giggling damsels?" demanded her lodger, stalking into the kitchen, and kicking across it the gouty slippers. "What do I mean? Why that, with the exception of Miss Wyllis, who seems endowed with more good sense and feeling than her companions, they are making a jest of me."

"Lor's now, I thought it was very good-natured of 'em! But differing people has differing opinions; and old Master Mascall would be glad of the cap and the shoes if you raly don't want 'em.',

"If I don't! Take them out of my sight! They represent gratuitous insults."

Yet, when he had stalked back to his own room, and was soothing his ruffled temper with a pipe, Mrs. Weddell was startled by hearing him burst into a peal of laughter.

On the morrow his tormentors invaded the cottage again, but it was only for a few minutes. The ice on the great pond was reported to be quite strong enough for skating. George Wyllis and a couple of his friends had gone into the village to get runners fixed in a chair for the convenience of Mrs. Tresham, the good-humored matron, who, with her daughters, had accompanied Katrine to the Hall; and the young ladies, with their skates, had agreed to meet them on the ice.

"Wish us a pleasant time, Mrs. Weddell," cried Bessie. "If your poor dear lodger would like a turn on the pond, wrap him up well in a few blankets, and we'll combine to push him about in our sledge."

"Better keep him beside the fire," advised Brenda, and let him amuse himself with these;" and she handed Mrs. Weddell a box of bronchial troches.

"Ah! that reminds me," cried Madge, diving into her pocket. "He might like to try the homœopathic treatment; so I've brought him my case. The globules got mixed up when I let Flossy play at keeping a doctor's shop; but I don t suppose it will signify which he swallows."

"Good-bye!" Flossy called back to the old woman. "We shall come and see you to-morrow, because it's Christmas Eve."

But long before the usual hour for their visit Mrs Weddell's lodger mounted his bicycle and rode away; nor did he return till darkness had settled down upon the earth. He must have ridden into the town; for amongst Flossy's Christmas gifts next morning she found a beautiful doll, which had arrived by carrier, addressed to Miss Florence Evelegh.

Mrs Weddell was busy making her plum-pudding when the young man went through the kitchen; but she suspended her work to listen to the exclamation of surprise he uttered on entering his room.

Fairy hands had been at work there, adorning it with holly and ivy. Beside his writing-desk there stood a vase of exotic ferns and Christmas roses, and on the mantel-piece Bessie at the last moment had placed one of her own clever sketches. It represented Faith, Hope, and Charity; but each of the angelic sisters wore the sweet, spiritual face of Katrine.

The young man gazed at it long, then walked away, and brushed his hand across his eyes; but he came back to press his lips reverently to the picture, and was carefully transferring it to his pocket-book when a rush of hurried feet passed the window, and the hasty opening of Mrs. Weddell's door was followed by a fall. He ran into the kitchen, to find the original of the sketch lying at the feet of the terrified old woman.

CHAPTER IV.

HOW THE SIEGE WAS RAISED.

"It was very foolish of me to faint," Katrine murmured, when the cares lavished on her had brought back her senses. "Pray let me go home at once, or they will miss me and be uneasy."

"But deary me, you are not fit to go alone, missie!" cried Mrs. Weddell; "how came you to be out at this time?"

The explanation was promptly given. A servant to whom a letter of importance had been entrusted had forgotten to post it and Katrine had discovered the omission while she was dressing for dinner.

"I knew some poor friends of ours would have but a sorry Christmas if they did not receive the cheque my brother had inclosed," she added; "and I knew he would be angry with the man for his carelessness, so I thought, I would run down to the post office myself; but there were a couple of men, I think they had been drinking," and she shuddered and grew pale again at the recollection, "and when they would have seized me I was so alarmed that I ran here.

"I must hasten home," she said again, with an apprehensive glance at the night.

"But not alone," said Mrs. Weddell's lodger, coming forward. "If Miss Wyllis will accept my escort, I shall be happy to walk with her to her own door."

With a bow and a blush Katrine assented, but ere they left the cottage he turned to speak to Mrs. Weddell.

"If a trap comes here before I return, give the driver my portmanteau, and tell him I will follow on foot."

"Going to leave me!" she gasped; "and so sudden like. Lor', Mr. Dippy!"

"I have been here too long," he responded sternly, and followed Katrine.

He soon discovered that she was trembling so much that in common courtesy he must beg her to accept his arm.

"Perhaps I ought to introduce myself," he added; "but as our acquaintance begins and ends to-night, it is scarcely worth while."

"Then you are leaving this part of the country?" said the young girl timidly. "We also propose returning to the home my brother has made for himself in Canada, as soon as the Christmas holidays are over. We are afraid that the hope that brought us to England will not be realised."

"I thought, that is, I fancied Mr. Wyllis intended to take up his abode at the Hall," was the remark this elicited.

"No, no; he has never dreamed of doing so," Katrine eagerly responded. "How could he? the house is not his."

"Not!" her companion repeated, with a start.

"Allow me to explain," she cried, almost breathless with emotion. "I will be as brief as I can."

And without giving him time to reply, she went on:

"Many years ago our great-aunt, Mrs. Wyllis, adopted the son of one of her nephews, and lavished upon him all her affection That she loved Bertram Evelegh dearly, I don't suppose even he would deny; but it is also certain that she brooked no rival in his affections and quarrelled with him violently when he insisted on providing for his orphan step-sister, a pretty child, for whom she conceived an unreasonable dislike."

"Unreasonable, indeed?" the young man murmured.

"In her fury Mrs. Wyllis drove Bertram from her presence, and destroyed the will she had made in his favor; but soon after this she was seized at Florence with an illness that proved fatal, and my brother and I, who were touring in Italy and staying near that city, were sent for. You are listening?"

"Most heedfully."

"You may have heard a cruel report that has been widely spread, to the effect that Mrs. Wyllis in her last moments was prevailed upon to execute a new will, bequeathing to my brother all that she possessed."

"I have heard and believed it," he admitted, "though I also know it was scarcely necessary to press the dying woman to do this, as Mr. George Wyllis was the heir-at-law already."

"Then now you must hear and believe me," exclaimed Katrine, impetuously. "Our aunt made no such will; nay, more in her last moments she bitterly regretted her treatment of her adopted son."

Katrine could feel the arm on which she leaned tremble even more than she did.

"Poor aunt died in my presence," she added, softly, "soothed by George's solemn promise to find Bertram Evelegh, and put him in possession of the property she always intended for him. Her last thoughts was of her boy—ah! you cannot think how grieved we were that our messengers could not find him!—her last words were an entreaty that I would some day tell him how truly she had loved him in spite of her injustice."

The hand of the fair speaker was raised to the lips of her companion, but he did not, nay, he could not speak; his heart was too full. Only a few hours ago he had been oppressed with the sense of his gnawing poverty, and the dependence upon him of the little sister for whose sake he had offended his capricious kinswoman; only a few hours ago—poor, friendless, and weighed down with a rankling consciousness of the unfair treatment to which he had been subjected—he had resolved to quit England forever; and now Katrine's melodious voice told him that all he had relinquished was his own once more.

But they had reached the grounds of the Hall, and Katrine was turning towards a side door. He must leave her, yet he could not do so without making one effort to put into words the conflicting emotions that swayed him.

"My sweet cousin, what must you have thought of me—"

Before he could get any further the door flew open, and a group appeared at it. Katrine had just been missed; every one was anxious about her, and her brother George sprang forward to clasp her in his arms, and exclaim, at the sight of her companion:

"Bertram Evelegh! Then it *was* your face Katrine beheld at the cottage the first time we came here. She recognized it as soon as she saw the photograph Flossy wears in a locket."

"Is this the fanatical invalid?" queried Brenda, saucily. "Oh! do introduce me! I am so anxious to know if he appreciated my gift."

"And mine; and mine," cried Madge and Bessie, sweeping him low curtsies. "Has his chronic ailment been benefited by them?"

"It's not Mr. Chronical; it's my own dear brother Bertram!" exclaimed Flossy, springing into his embrace. "I am so glad."

"Welcome to your own house," cried George Wyllis, shaking his hand heartily. "It's not customary for the guests to arrive before the host; but never mind. Here you are at last. The king has got his own again, hip, hurrah!"

"But are you in earnest? Do you really propose to act so generously by me as to give up all?" Bertram demanded, with quivering lips.

"My dear fellow," was the laughing reply, "there's no generosity in giving up what was never mine. Pooh! I have inherited an ample income from my father, so I need not grudge you yours. We have only been holding possession—Kittens and I—till we could find out where you had hid yourself. She declared you were at the cottage, and persisted in her opinion, even after we had tried the experiment of taking Flossy there to see whether her voice would bring you out of hiding."

"It did nearly; but I thought it would be cruel to rob the child of her new friends."

"And we had nearly lost him to-night, George," murmured Katrine. "He was going away."

"Going away? Why?" asked Mr. Wyllis, bluntly.

Bertram Evelegh reddened, and looked at Katrine, who, by some strange sympathy, colored yet more vividly and drooped her lustrous eyes.

"I will answer that question to my cousin Katrine some other time, if she will let me."

George Wyllis smiled, and then sighed. He began to understand the state of affairs, and to divine that Bertram Evelegh would not value his recovered fortune unless he received a yet more precious gift with it. But his own heart was captive to Brenda Tresham. He knew he should not return to his Canadian home alone, and so it was in his most cheerful tones he responded:

"We'll postpone all questions and answers till Christmas is over, and go back to the dining-room and drink a long life and a happy one to the owner of the Hall."

"And finish the evening with a dance," said Brenda.

"But ere we go," cried Bessie, "I should like to hear that the brave damsels who besieged the hermit knight are awarded the palm of victory."

"You confess that you were actuated by *malice prepense?*" queried the young man.

"Yes, and no!" cried Madge. "When Katrine's attempt to turn you out of your fortress and satisfy herself that you were Mr. Evelegh proved a failure, we insisted on being permitted to try what we could do. We hoped to exasperate you into a sortie!"

"What would you have done if you had proved successful?" asked the amused Bertram.

"Fled," said Brenda, theatrically, "and left Katrine to face the foe!"

"Pray do not call me that any longer!" he pleaded. "I am so ashamed of my churlishness that you may inflict on me any penance you can devise."

"Shall we take him at his word, and make him wear our cap and slippers?" asked Madge, with a grave air.

"Thank goodness, you cannot do that!" he laughed, "for they have already changed hands. For one gift I found on my mantel-piece to-night I can never be sufficiently grateful. I should have carried it with me wherever I wandered."

He looked at Bessie, who curtseyed and smiled very prettily at this allusion to her sketch.

"After all," said Brenda, "we cannot do better than leave Mr. Evelegh's punishment to Katrine. It was she who commenced the siege."

"Agreed," whispered Bertram, as he led the blushing Katrine towards the dining-room. "I wish for nothing better than to place my fate in such gentle hands. It will be the happiest moment of my life when I may be allowed to dedicate my future to the dear little cousin by whom I am proud to own myself 'FAIRLY CONQUERED.'"

"THE EYE-OPENER."

THE Post-master General transmitted to the House of Representatives last Monday a report in relation to the use of the mails by agents and originators of fraudulent schemes, including in the report an outline of the various methods employed to obtain money fraudulently through the mails. There are six different classes of swindling schemes referred to in the report, of which the lottery companies organized, or professing to have been organized, by State authority, are first considered. First comes the "Kentucky State Lottery," and parties connected with it operating in Louisville, Covington, Newport and Frankfort, Ky. Its owners are now said to be. Simons & Dickinson of this city and Murray, France & Co., of St. Louis, the latter being the managers of the lottery. The statement in its circulars "that the holders of prizes are secured by ample bonds deposited with the State by the lottery managers," is declared to be false, and the whole concern, claiming to operate on an old "grant" away back in 1839, is in effect pronounced rotten.

The Commonwealth Distribution Company claiming to act under the "Frankfort grant" is of the same stripe, having been declared illegal by Chancellor Menzies, of Ky, and no one being responsible for the prizes, except the tricky lottery managers. Other lottery companies mentioned are:—The Wyoming Lottery and Cheyenne Lottery Companies, the Grand Distribution Company of Victoria, Canada, and the New Brunswick Grand Gift Soiree of St. Stephens, N. B., "operated by one J. M. Potter, one of the most persistent, ingenious ubiquitous persons using the mails for the purpose of deceiving and defrauding the public by means of gift enterprises, schemes and devices." The Kentucky Cash Distribution Co., the Louisiana State Lottery and the Arizona Lottery have also been subject to investigation by the department. The drawings of the Canadian and the New Brunswick companies taking place outside of the United States, no action could be taken by the department in the matter of the return of registered letters and the non-payment of money-orders.

The next case mentioned is that of Edgar W. Jones, alias the Union Publishing Company, alias the Magnetic Watch Company of Ashland Mass., and having several other aliases under which he sent through the mails in 1876 80,000 circulars and advertisements of obscene books and a "Genuine Swiss Magnetic Timekeeper," which was in fact, a brass compass of no value. For months the complaints of parents, teachers etc., from all parts of the country in regard to the vile documents sent by Jones to their children were piling up on the hands of the Post-master General, until, through the exertions of Mr. Anthony Comstock, Jones was indicted and his business broken up. The next case is that of H. B. P. Allen, alias The National Banking Company, of 79 Nassau Street New York This so-called company, with flaming circulars offered to sell what they called "bonds" on the Havana, Kentucky and Louisiana lotteries at half the regular rates for tickets, and to add extra prizes to the drawings. They claim to be able to do this because they pay no percentages to agents and do business economically. They are characterized as bad frauds.

The Texas Gift Concert Association, of Denison, Texas, is spoken of as "one of the most successful swindles disclosed by the department records." Its receipts were about $100,000. The report of Special Agent Egerton on the case, dated "St. Louis, Sep. 18, 1878," which states that the managers of the concern divided the day's receipts among themselves every evening, and that tags representing unsold numbers were placed in the wheel at the drawing, and the prizes announced for them, thus enabling the managers to manipulate the cash at their pleasure. The agent stated that ten indictments were pending against the concern. "The Kansas Land Company," doing business at Topeka, Kan., belonged to the same class as the Denver Land Company. This concern advertised to give away "Kansas Homes" for $2 each, but as it was started about the time of the exposure of the Denver Land Company's swindle, it was frustrated almost at its inception by the prompt and energetic action of the Post Office officials. Various arrests and seizures are detailed in the case of Max Burger, alias Borger & Co, alias Wachsman & Co., bankers, No. 84 Nassau street, this city. The names were used to cover the sale of tickets in the Royal Havana, the Ducal Brunswick-Luneberg, the Free City of Hamburg, the Louisiana and the Kentucky lotteries and the Commonwealth Distribution Company.

Swindling land companies also receive attention. First comes that arrant fraud the Denver Land Company, exposed by us more than once. In addition to the "put and call" swindles exposed here last week under the head "A Specimen

Swindle," the following name is mentioned in the category:—Baxter & Co., who do not carry on business where their circulars say they do, but in a back room up two flights of stairs in New Street.

The various firms who advertise to forward upon receipt of 50 and 60 cents a bound volume of Webster's Unabridged Dictionary are also pronounced by the special agents of the Post Office Department to be impostors.

The Eureka Hog Cholera Co. has made a number of victims out West. In Warren County, Iowa, an organization has been formed to resist the payment of notes given by farmers. The Patent Iron Jack men get farmers to sign a contract as agents, but make the contract a note which is soon disposed of to innocent (?) parties. The Sliding-Gate humbugs, despite a judgment against them, are still trying to collect royalty. A heavy boot applied to the most honorable part of *their* persons, is the best argument with them. The "Ladies' Favorite Clothes Wringer" is pronounced worthless, except as a plaything for children. The Sprague Manufacturing Co., of Chicago, are accused of making it.

The latest swindle is styled "census taking." A gentlemanly fellow drives up with blanks for statistics on the farm—bushels of wheat, number of cattle raised, acres under cultivation, etc. Between the tables and the foot of the page, where the farmer signs his name attesting the statement, is a blank space, whose existence is accounted for as affording room for miscellaneous information. In a month more the farmer receives notice from a neighboring bank that his note for $150 is due. He knows nothing of the note, but investigation shows that the "census taker" has filled in the blank with a promise to pay, which, being now in the hands of an innocent holder, must be paid by the unlucky dupe.

BRIC-A-BRAC.

"What were the worst results of the civil war?" cried an orator. "Widows"—shouted Jones, who had married one.

A GOOD EYE CURE

"Can you cure my eyes?" said a man to Dr. Brown.

"Yes," said the doctor, "if you will follow my prescription

"Oh, certainly, doctor," said the patient; "I will do anything to have my eyes cured. What is your remedy, doctor?"

"You must steal a horse," said the doctor, very soberly.

"Steal a horse, doctor!" said the patient in amazement. "How will that cure my eyes?"

"You will be sent to State Prison for five years, where you could not get whiskey, and during your incarceration your eyes would get well," said the doctor.

The patient looked somewhat incredulous, but he did not adopt the doctor's remedy.

RECENT LITERATURE.

How to be Well. By M. Augusta Fairchild, M. D. S. R. Wells & Co., 737 Broadway, New York. Price $1.00.

A valuable work, written by a lady whose experiences amid her own and others' sufferings combined with good sense, render her more able to deal with disease both as regards diagnosis and care.

Advocating the use of water (both hot and cold) in various ways in cases of severe suffering she presents her theory so clearly and forcibly that one could almost wish he had never become familiar with the use of drugs, but confined himself to Nature's remedies, cold water, healing herbs and the observances of hygienic laws in the body's welfare and control. Read it! every earnest seeker after health. Every chapter will afford you food for thought, while the perfect style in which it is written, can but afford pleasure.

A Tight Squeeze; or The Adventures of a Gentleman as a Professional Tramp. By "Staat." Lee & Shepard, Boston, Mass. Price $1.00.

A well written book—original and intensly interesting, from its very outstart. Touches of rare pathos, and pictures of innocence are mingled with the strangest plot, one could hardly dream of. A pleasing feature of the book, is that one is constantly finding surprises. It is well worth knowhow a gentleman of $10,000 could renounce the honors connected therewith and become a vagabond, at least, in name, if not in nature.

Zigzag Journeys in Europe. Illustrated. Estes & Lauriat, Boston.

This volume is well adapted to the young people. It is both instructive, and entertaining; qualities which are calculated to win the youthful reader's attention. As the title indicates, it is a disconnected account of traveling experiences of a teacher and class.

MAGAZINES FOR JANUARY.

Good Company.—Number 5.—1880. Contents. A New Year's Song, Elaine Goodale; A Basement Story, Edward Eggleston; Acer Saccharinum, E. S. Gilbert; Roman Mosaics, II, Emily F. Wheeler; A Hard Bargain; a story, Horace E. Scudder; Reflected; a poem, Rose Terry Cooke; Certain Men of Mark: III.—Bismarck, George M. Towle; A Lawyer's Life, R. R. B; The Problems of French Protestantism, E. W. Hitchcock; Opposition; a poem, Sidney Lanier; The Mystery of Gillyflower Inn; a story, Lizzie W. Champney; Impressions of Washington; A Day Home for Working-Women's Children, Amanda B. Harris; Greek meets Greek; a story, Mary Densel; More Nooktown Gossip. Carl Clinton; Aspiration; a poem, Helen Ekin Starrett; Editor's Table.—Smith versus Smith; Gladstone Redivivus; You begun it; The latest phase of the School Question; Learning a Trade; Literature.

"Extract From Impressions in Washington."—There is a nameless fascination in the Washington air. The average citizen, living far removed from the capital, often wonders why the office-holder who once comes to Washington is so loth to leave it that he will often stoop to almost any device to secure a further lease of power,—whether it be four years in the White House, another term in either end of the Capitol or only a longer commission in a petty department clerkship. But when the citizen comes to Washington himself, the mystery is solved. He may not be able to define them very clearly, but he cannot stay long in the city without himself experiencing in some measure those subtle influences which render the capital so attractive to the permanent resident. Even to the casual visitor there is something very interesting about merely watching the great governmental machine or inspecting its component parts. The very atmosphere of the capital, instinct with the official and social life that centers about the seat of government in a great nation, seems to possess a singular charm, which disposes one to linger and enjoy it. The stranger no longer wonders that the office-holder likes Washington, that he constantly schemes for an extension of his term, that, if finally deposed from power, he so often prefers the most humble position here to a residence elsewhere.

Not the least among Washington's charms are its physical and climatic advantages. No one can longer doubt that the city is fit to be the capital of a great country. The comprehensive plan on which it was laid out in the early years of the struggling republic, gives one a fresh respect for those far-sighted fathers who could even then devise a scheme which should to-day fit the necessities of the seat of government for fifty millions of people, and be capable of equal development with the progress of the nation hereafter. The broad avenues are a constant source of delight, the parks and squares are ample for the needs of a large city, and the great system of improvements, carried through with whatever corruption under the Shepherd *regime*, laid the basis for the transformation of Washington from a straggling and neglected town to a handsome metropolis. Nothing goes farther to justify the choice of this locality as the capital than its climate. Though it suffers from the summer heats, its temperature during by far the larger part of the year is most comfortable, and the change from the inclement weather which prevails over the greater portion of the country through the winter months to the usually balmy air of the capital is especially grateful. Indeed, a winter residence at Washington possesses greater charms than in any other city on the continent, what with its mild weather, its exceptional social advantages and the attractions which the meeting of Congress presents to any one interested in studying our system of government at its fountain-head. Every year the capital is becoming more and more the winter-headquarters for people of leisure, for persons of literary tastes, for students of politics, for devotees of fashion, and a composite society is gradually growing up in which everybody is sure to find congenial elements.

The Saturday Magazine.—The issue of Jan. 3, 1880, has been received. Contents are: Miss Monkton's Marriage; A piece of Porcelain; Clawdevil; The Russian Gipsies.

A Piece of Poucelain.—Like a good deal else both in the works of nature and industry, the beautiful porcelain which adorns our tables and mantel-pieces had a harsh and unexpected beginning. It does not rise at the bidding of the skillful potter from clay found ready-made in the bosom of the earth, but is dependent on the nice, choice and careful adjustment of several elements, which are drawn from different places and demand very different treatment, before they come before us compacted into the beautiful clay that takes the shining shapes we so much admire. Porcelain is broadly distinguished from earthenware through being a semi-vitrified compound; one portion of it remaining infusible while the other fuses, and, combining with the infusible part, forms a smooth, compact, and semi-transparent substance. The beauty of porcelain results from the silica in the clay, which is infusible and preserves its whiteness under great heat; this gives to it the hard and resonant character, while its semi-transparency comes from the elements that fuse and envelop it. In China, where for ages porcelain of a very fine quality has been made, a peculiar clay was found in the earth, which greatly simplified the earlier processes for the Chinese potters; and in the development of the industry in Europe, research and invention have done their utmost to discover a directer process than has yet been attained. Hence probably the popular error by which the name was traced to the French *pour cent annees*, instead of to the Portuguese *porcellana*, a cup, based on the idea that the materials of which porcelain is composed required to be matured underground for a hundred years. The bulk of the materials do indeed require long maturing in the earth, but the origin of the name could hardly have sprung from that. Not the least interesting part of the manufacture, as we are fain to think, is the initial process of clay-making. Some time ago we had the privilege of a leisurely walk through one of the largest and most famous porcelain works in England, under the conduct of a guide well able to explain to us all the outs-and-ins of the manufacture, and we, in our turn, shall now make the endeavor to familiarize others in some measure with what proved of the greatest interest to ourselves.—*H. A. Page, in The Saturday Magazine.*

Demorest's Monthly Magazine for January, 1880—Contents:—Mozart, Steel Engraving; Illuminated Art Title to Volume Sixteen; Colored Steel Fashions; Good Luck Horseshoe; Cabinet Game No. 3; A Happy New Year, M. E. S.; The New Year, a Floral Design; Eighty, Margaret Sangster; The Trumpet Major, Thomas Hardy; A Dedication, Rose Geranium; The New Year, Mrs. C. S. Nourse; The Red Plaid, Auber Forrester; Talks with Girls, Imagination, Jennie June; Little Miss Spinner, or the Story of a Voice, Sarah Bridget Stebbings; Specimen Hunting at the Vineyard, Mrs. Annie E. Preston; Consolation, Scrapsey, a story of to-day, by H; New Year's Eve, by Cricket; Plans for a Dwelling House. House and Home—Household Art; Blades of Grass; A Paper of Pins; World of Science; Pressed Ferns; The Wedgewood Portland Vase; Chair Scarfs.

Young America's Corner—Right About Face, Josephine Pollard; Parlor Pranks of Dr. Pucher's Boys, or Christmas in the Old Stone House; Marionettes; Careless Fann; Demorest's New Cabinet Game, No. 3; Illustrated Rebus; Fancy Work—Card and Letter Receiver; Hair Pin Holder; Lambrequin for Bracket; Handkerchief Box; Spice Box; Diamonds of Thought; All the World's a Stage, four illustrations; What Women are Doing; Editorium—A Happy New Year; Winter Entertainments; Mozart; Mr. Hardy's New Novel; Our New Title; Ostrich Farming; Good Luck; Prospectus for 1880; Domestic Science; Kitchen.

Fashions—Colored Steel Plate of Costumes Described; Thyra Corsage full-size pattern; Review of Fashions; Models of the Month; Lace; Fashionable Jewelry; Coiffures; Hair Dressing; Veronique Train; Leonie Cloak; Georgette Cloak; Fashionable Fans; Ruffs; Evening Gloves; Neckerchiefs; Lace Fichus; Eulalia Overskirt; House Dress and Visiting Toilet; Opera Dressing; Feathers and Furs; Alphonsine Polonaise; Zulma Pelisse; Thyra Corsage; Ora Sleeve; Daphne Basque; Edroyna Polonaise; Fashionable Trimmings; Bangles; Fancy Costumes for Children; Winter Cloaks and Jackets; Brides' Dresses; Winter Fashions for Children; Finita Costume; House Sacque; Bijou Coat; Paula Dress; Beaufort Suit; Cornell Vest. Ladies' Club—Answers to Correspondents; A Household Treasure; Our Premium List; Correspondents' Class. Literature—Reviews of New Books; Business Notices.

This issue is presented in its usual attractive form. The useful, ornamental and entertaining qualities combined recommend it to the ladies.

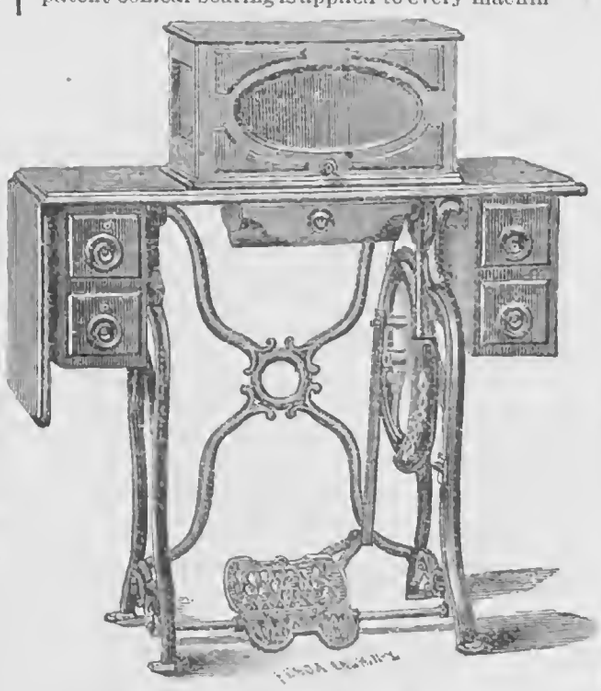
Eclectic Magazine.—Contents:—Steel Engravings; The Smile; Sir Walter Scott and his Literary Friends at Abbottsford; On Freedom, by Professor Max Muller; The History of Money, by Sir John Lubbock; Mathew Arnold's Selections from Wordsworth, by Prof. J. Addington Symonds; A Siding at a Railway Station, by James Anthony Froude; Suspended Animation, by Richard A. Proctor, B. A.; A Village Idyll; White Wings—A Yachting Romance, by William Black; Beasts, Birds and Insects in Irish Folk-Lore, by Letitia McClintock; Forms of Salutation; A Sermon in Stone, by Austin Dobson; Mademoiselle de Mersac; The Book Language of China, by Herbert A. Giles; A Mathematician's View of the Theory of Evolution, by W. H. L. Russell, F. R. S.; Shuttlecock and Battledore, by S. Waddington; Literary Notices; Science and Art—The Nordenfeldt Gun, Lighting Ships by Electricity, The Black Mildew of Walls. The Origin of our Domestic Animals, Blasting Coal by Compressed Air, Hardened Glass, Fire-Proof Compositions; Varieties.—Christian and Pagan Rome, Hedgehog and Viper, Early Days of Victor Hugo, Protective Mimicry in Birds, Rondeau.

We take pleasure in announcing the issue of Vol 10, of the Encyclopædia Britannica. Published by J. M. Stoddart & Co, 727 Chestnut St., Phila, Pa.

THE VICTOR SEWING MACHINE.

The machine illustrated in the accompanying cut (style 6½) is offered in our premium list for a club of 37 subscribers. The price of the machine is $37.50.

The "Victor" is a shuttle machine, having all of the latest improvements, including patent drop and interchangeable feed. It has the only straight self-adjusting needle to be found in any shuttle machine, by which the thickest material or the finest fabric can be sewed, using either cotton, silk, or linen thread, of any size or finish, making a perfect lock stitch alike on both sides. The running motion is light, easy, rapid, and noiseless, the bearing being positive, and the wearing parts being made of finely-tempered steel. The new patent conical bearing is applied to every machin



It is so fitted to either side of the drive-wheel and treadle that it entirely subdues and prevents jerky, whirring, disagreeble motion, and reduces the sound to an almost imperceptible hum. The "Victor" is adapted to every kind of sewing; has a self-adjusting shuttle tension, positive motion, certain take-up, a perfect and sure feed, crossing seams with certainty, and does not break thread or miss stitches. It has neither springs nor cog-wheels, is very economical in the use of thread, and does perfect work on all kinds of goods, from lace to leather. Made by Victor Sewing Machine Co., Middletown, Conn.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

A DINNER IN EVERY-DAY HOUSE.

MRS. ANNIE L. JACK.

Our bread is good this week, light, sweet and white but has one fault—the under crust is soft. The amateur cook tells me "that stove will not bake well at the bottom." I know it sometimes fails, and as it is sixteen years old—which is exactly the age of said "cook"—I think it has faithfully done its duty. "Never mind," I say "we'll have a new one when our ship comes home." The butter is fair. It was made in August, and might be richer in color and flavor. We are using the worst first, though, I have asked a good judge and he says "fair to good."

"A plain dinner to-day," I said this morning. A small roast of beef was put into the oven care having been taken to have it *hot* so that the meat would glaze over on the outside and retain its juices. We allow a quarter of an hour for each pound, and I have to give an extra quarter for our failing oven, especially if the wind is southeast, which has an effect on the draft. In order that the children may not eat too much meat, I make, with roast beef, a Yorkshire pudding which is put into the pan after the greater part of the gravy has been turned off and about 20 minutes before serving. It is very simply made, being a batter of flour and milk with an egg well beaten up in it. This is thinly poured over the pan, the meat, of course, being raised on a stand. The children are all fond of it served with the beef and vegetables. Of the latter we have Hubbard squash which is steamed, and takes but a teaspoonful of butter to make it palatable, and is very good without any. Our potatoes are Early Roses, than which for table use I require no better. Boiled 20 minutes in boiling water with a little salt, poured dry, and the pot well shaken for a minute, they are fit for—well! for even a Rural connoisseur.

A few small onions boiled in milk, are relished by the children and are a specific for colds during this changeable season. Indeed when eaten freely, boiled onions will break up an obstinate cough caused by cold. We have home-made pickles, of course, but do not find them a necessity. I noticed that the "cook" was studying her French exercises while the dinner was making headway, so I proceeded to make a simple pudding. There is plenty of apple-sauce made, so a deep pudding dish is filled three parts, then, taking about four or five table spoonsful of flour, I go to the jar of sour cream, and pour in enough to make a thick batter. This, when beaten well together, is poured over the apple-sauce. There is no soda, salaratus or baking powder, yet the paste will be light and, I think, healthful. We put butter on the table, but no one takes it, except one lad, and as he is to chop wood this afternoon, I have no fear but he will work it off. A rosy apple finishes our repast. It is one of our plain weekly dinners. I might have added some of the extra dishes in which we sometimes indulge, but prefer to give a specimen of our usual fare. And who shall say that we have not dined? Gravy? Of course. After the grease is poured off, the gravy is thickened by adding a little burnt flour and water, salt and the least dash of pepper. It is not always very gravy-ish, but it is all we require,—and I may add we all seem satisfied

HAPPY NEW YEAR.

On entering the new year we recall our resolutions of last year, and on examination find ourselves in some respects the gainers, although, after all, so far behind the mark, that again we set ourselves to form new ones for the year just opening. Instead of being discouraged by past failures, let us be encouraged to fresh efforts if we can mark ever so little progress.

But how few of the days that are gone would we be willing to take all in all and live over again. Each day comes and goes, and we say: "Surely to-morrow will bring us fewer mishaps, less hardships, more victories." And so we go on fighting the battle of life. To the household it is a battle with dust, with disorder, with the thousand and one things that men take no note of, but which are of vital importance to their comfort and well-being.

In every department of life the warfare is going on. To the man of science, peering into the stars or delving into the depths, it is a combat for fresh victories. To the artisan, to the farmer, to the professional man, in whatever branch his life-work may lie, it is one long-continued struggle, and it should be matter for rejoicing that man is so constituted that his happiness and highest development are, in a great measure, under his control.

Looking back on one, two, three years, we see but little advancement in our little world of domestic life; but take a sweep backward, say fifty and a hundred years, and hear what our

grandmothers tell us about heating brick ovens and cooking with blackened, smoke-bedimmed kettles on wide hearths, over blazing fires, when a tallow candle was a luxury that only a privileged few had, and then compare with those old-time kitchen inconveniences the household of to-day, with its ranges for cooking and well-lighted rooms. The thoughtful ones may well be wondering what is in the dim future, and whether the next century will bring additional light and comfort in our homes. We look at our children with almost a feeling of awe, tinged, perchance, with envy, as we reflect on the revelations that may open to them.

It does us good to take a broad outlook on life, reviewing the past and forecasting the probable future, while we who are occupying but a little speck in the cycle of the ages, see to it that we perform well our part, knowing that not one good endeavor will be lost.

M. H. S.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JAN. 17th.

M. G. R.—S. H.—E. F.—N. W. B.—M. U. F.—F. D. C.—C. D.—D. A. K.—J. J. P.—T. D. C.—D. C.—R. A. S.—J. B.—J. M. D.—C. J. R., nex week—G. E. N.—J.—J. E. R.—B. P.—J. N. D.—G. E. E. S.—C. V. R.—"Marguerite"—W. S. H.—H. B.—A. T. O. C.—L. B. A.—R. H. C.—L. B.—E. H.—C. W. W.—M. B. P.—F. K. M., thanks—J. O. R.—A. K.—M. B. B.—I. T.—J. L. B.—H. S. C.—C. E. J.—S. R. M.—W. J. G.—H. R. H.—W. H. S.—H. B.—S. B. P., Michigan—W. E. McA.—W. G. B.—H. L. W.—I. S.—W. C. H.—M. H. S.—G.—S. P., Jr.—W. B. D.—H. M. S.

News of the Week.

MISCELLANEOUS.

Monday, January 19, 1880.

Ulysses Johnson, who committed an infamous outrage, at Baltimore, on Elizabeth Riddle, aged 13, October last, and who fled to Virginia, was captured in Elliot City, Monday. . . Bogert, the late defaulting treasurer of the New York Produce Exchange, was formerly county collector of Bergen county, N. J. The freeholders of that county are now investigating his accounts, as there is reason to fear that he robbed the county by an over-issue of bonds amounting to $51,000. . . The moonshiners on Butler creek, in Wayne county, Tenn., have organized under oath to kill any revenue officer or marshall who goes into that locality. They killed W. A. Fowler for guarding Deputy Collector Davis and his friends. The revenue officers will not dare to go after wild-cat concerns in that region without a sufficient force to overcome any resistance . At Newark, N. J., the coroner's jury in a celluloid explosion finds that the accident resulted from the over-confidence of the experts of the company in their knowledge of the properties of materials which had not yet passed beyond the dangers of experiment. The management is censured for imprudence in allowing such experiments in a room filled with workmen and with such imperfect means of escape. Seven men were killed.

Order is gradually being restored in the Maine government. On the 16th inst. the greenback Legislature assembled and elected a Governor and State officers. The election resulted in a unanimous choice of Joseph L. Smith for Governor, who the same day took the oath of office administered by acting president Ellis, of the Senate. At a second joint convention, the State officers were chosen as follows:—P. A. Sawyer, Secretary of State; Charles A. White, Treasurer; W. H. McClellan, Attorney General; M. M. Folsom, Adjutant General General Chamberlain has again issued an order, contradicting the rumor spread abroad that the State House was kept by one party against another, and assuring the people that the rights and privileges of all parties and their members-elect should be protected with complete impartiality. Three companies are under orders from General Chamberlain, but will not be brought to the city unless needed. In spite of all this, the Supreme Court of Maine has decided in favor of the republicans who assembled and submitted certain questions concerning the situation to the court for decision. . A later despatch says: The whole aspect of affairs has changed and the hopes of a peaceable solution of the dispute by the decision of the Supreme Court are blown to the winds by the action taken by the Fusionists to-night. Soon after the points of decision were received from Bangor the leading fusionists had a consultation with Governor Smith and his staff, and before ten o'clock an order was issued revoking all previous orders by which General Chamberlain was placed in command of the State forces, and declaring that the commanding officers of all the military organizations accepted into the service of the State are required to report to the Commander-in-Chief, J. L. Smith. . . A still later communication received just as we go to press, reports a further change in the situation. Gen. Chamberlain, with all the other military officers refused to recognize Smith as Governor unless he could show credentials from the Supreme Court of the State, sanctioning his election. This, of course, he could not do, as the Court had already decided in favor of the republicans. Presently the republicans met and unanimously elected Daniel F. Davis Governor. Thus there are two rival governors in the State, each claiming to be duly elected, and to be the lawful executive. Mr. Davis informed Gen. Chamberlain of his election and sent him a copy of the decision of the Supreme Court sanctioning the action of the republicans. Gen. Chamberlain immediately resigned his trust in favor of Mr. Davis, as the recognized Governor and Commander-in-Chief of the State. The republicans thus have command of the militia, they have the support of the courts and of the clergy, and the control of the State Treasury, and all that is needed to complete their success is the submission of the Fusionists. To this end two propositions have been made: either to stamp them out at once by a vigorous move, or to let them linger on, assemble and make laws which nobody will respect, and finally die a natural death. Senator Blaine, who is the active leader of the party, is greatly in favor of subduing them at once.

Gen. Garfield was formally elected United States senator to succeed Thurman, by the Ohio Legislature last week. . . The Irish agitators, Parnell & Dillon, have been very busy during the past week The following appointments are definitely agreed upon, for meetings at which they will speak:—Up to the 17th inst., they were to remain in the New England States, ending with Providence They will be in Chicago on the 20th; Springfield, Ill. (Parnell alone), 21st; Detroit (Dillon alone), 21st; Toledo, Ohio, 23d; Buffalo, N. Y., 25th; Rochester, N. Y., 26th; Albany, N. Y., 27th; Troy, N. Y., 28th; New Haven, 29th; Springfield, Mass., 30th; Cambridge, Mass., 31st; Washington, D. C., February 2; Baltimore, 4th; Richmond, Va., 6th; Pennsylvania coal regions, 7th to 11th, inclusive; Altoona, Pa., 12th; Montreal, 15th. Mr. Parnell and Mr. Dillon will also visit the following places, but the dates of their visits are not fixed:—Ottawa, Toronto, Indianapolis, Cincinnati, Louisville, Lexington, Ky.; Memphis, Nashville, St. Louis and the West, as far as California.

A fatal explosion of coal gas took place on the 16th inst. aboard the steamship Greece shortly after she had arrived, and while lying at her pier at Hoboken. Two men were killed and several severely injured.

When Mrs. Chipeta Ouray, the wife of Chief Ouray, of the Utes, passed Alamosa, Col., eastward bound, she saw the body of a man dangling from a tree by the roadside. Mrs. Ouray was so shocked that she cried all the way to Chicago and would not be comforted. She reasoned that if the palefaces were in the habit of hanging horse thieves the tribe of her husband could expect no mercy.

Mrs. Latham, of Lynchburg, Va., having discovered that her husband was a Republican, sued for a divorce on that sole ground. The Corporation Court of Lynchberg decreed the divorce, but it was overruled by the Court of Appeals. Judge Anderson dissented on the ground that the husband had been untrue, having gone over to the enemy, and that the moral taint of his action would cause the wife to be excluded from the best society of the State.

FOREIGN.

Bismarck's condition causes much anxiety everywhere in Europe, but especially in Germany—rheumatism and an alleged general breaking up of his iron system. . . The French Ministry declares in effect that its policy will be anti-clerical, free trade, repressive of attacks upon the republic by speakers or newspapers; progressive at home and firmer but conciliatory abroad. . . There has been a good deal of fatal rioting at Pesth, Hungary. Herr Verhoway, a radical newspaper editor, was as much disliked by the nobility as he was popular among the masses. One of the nobles fixed a quarrel upon him, when Baron Maythenyi interfered, challenged and severely wounded him in a duel. The Baron is a professed duelist, the best shot in Hungary, and the populace say it was a "put-up job" to murder their favorite. The Casino Club of the nobles has been stoned; nightly mobs threaten violence; troops out heavily; shots fired; several deaths among the crowd; many arrests; considerable uneasiness; the Internationals believed to be at the bottom of the commotion. . . Out in Afghanistan the war seems to have assumed a guerilla character. Little organized resistance to the British in large bodies: but small detachments are attacked, difficult passes defended, and the whole country outside the invaders' lines, in confusion and turmoil. . . Montenegro is fighting hard for a strip of territory sliced off from Turkey by the Berlin Congress and given to her. The resident Albanians and Turks, however, refuse to be handed over, and are aided by their kindred and friends, so that there has been a mimic war going on. Both parties are brave and hard fighters, especially the Montenegrins. . . Starvation and turbulence stalk hand in hand in Ireland, and severer famine is threatened in the west of the island than that of '48. The distress is so great as to transcend the scope of private charity to relieve it, and the Government is about to start public works to give the men employment and wages. The poor-houses are being crowded, and several deaths from starvation have already occurred. Charitable contributions are pouring in from everywhere, but only in a thin stream, while the distress is oceanic. . . A Rome despatch says an agreement has been reached between Germany and the Vatican. . . Mr Mactear, who claimed to have discovered the mode of manufacturing diamonds, gives up his claim. Mr. Maskelyne, of the British Museum, decided that the supposed diamonds were composed almost entirely of silica and alumina, and Mactear, after first denying it, now agrees with him. . . The Queen of Spain has been attacked with epileptic fits, owing to the late attempted assassination of her husband, from which she, too, had a narrow escape. . . Gambetta was re-elected president of the French Chamber of Deputies, by 259 votes out of 308 being recorded.

Vast bodies of Russian troops are being concentrated in Poland This is considered a menace by Prussia and Austria but any hostile intention is denied by Russia. The fortresses along the Russian frontier on the west are being rapidly strengthened, and so are the defences of St. Petersburg. Many *rumors* of approaching hostilities. . . . Fever is epidemic in the north of Naples; in one district out of 62,000 inhabitants, 33,000 are prostrated. . . The New French Ministery is not pleasing to Berlin; its head, De Freycinet being regarded as a creature of Gambetta. The latter is losing popularity at home on account of a newly required pomposity. . . The London Times of a recent date contains notices of hunting appointments of 120 packs of hounds in England and Wales. This represents in one way or another an expenditure of at least $6,000,000. The cost of efficiently keeping up a first-class pack is estimated at $20,000 to $30,000 a year. Well fed dogs and a starving people!

Mr. Tennyson—of whom it has before been stated that he was a Spiritualist—is said to have so firm a conviction as to personal immortality that he cannot bear the slightest contradiction on that subject.

ENGLISH SALT.

The New York Produce Exchange Reporter, in commenting upon the fact that both the butter and cheese taking the sweepstakes prizes at the International Dairy Fair (for best made anywhere) was salted with Higgins's English salt, says:

"The product of these works is rapidly growing in favor with dairymen all over the country. We talked with several there from this State, Wisconsin, Iowa, Massachusetts and Maine, with a view to learn if they had any preference in regard to salt; most of them, who had for years used other kinds of salt, now preferred Higgin's Eureka; they pronounce it purer, finer, and say it can be more readily used than other kinds hitherto used by them, and gives better satisfaction in many respects, not the least important among which is, that it imparts superior keeping properties to the butter and cheese salted with it."

Another bit of testimony favorable to this salt is the result at the recent Massachusetts Butter Show, which, as shown in a recently published letter of Professor Alvord, is as follows:

"All but two of the twelve premium lots were salted with Higgin's Enreka Salt; one of the two with the American Dairy Co.'s salt; and the other kind of salt was not stated. This may be variously explained, but the fact deserves notice."

There can be no doubt but that the keeping properties of English butter and cheese, especially the latter, are quite remarkable, and the same is also true of the celebrated Danish butter, in which English salt is used, but whether it is all due to the salt or not is a question.

Dr. Voelcker, who is considered high authority in England, in a paper on cheese-making, says "the finest quality of salt should be used," and the difference in the cost of using the best salt per pound of butter or cheese, is so infinitesimal that it is not worth while taking any risk.

The Receipt

for Gilt-Edge Butter Maker was obtained from one of the most extensive dairy farmers of Ireland, noted for the excellent and superior keeping qualities of his butter, which was eagerly purchased by London dealers for export to India, where the warm climate puts butter to a very severe test. It has been thoroughly tried by a large number of the very best butter-makers in this country, and they have given it their emphatic approval. Price 25 cents per package. Sold by all store-keepers.

COLLINS, N. Y., Feb. 19th, 1879.

Gentlemen:—We churned one gallon of cream to-day at a temperature of 56 deg, using your Gilt-Edge Butter Maker. Time of churning, 15 minutes—result, 4 1-8 pounds of butter. Color, good. As we have not previously weighed our butter, of course we cannot tell whether there is a better per cent. or not, but appearances indicate it, and the quality is at least two cents per pound better. Yours, &c.,

M. E. WILBUR, Prop'r of Collins Creamery.

AN ARTICLE OF MERIT.—"*Brown's Bronchial Troches*" are the most popular article in this country or Europe for Throat Diseases and Coughs, and this popularity is based upon real merit. Imitations are offered for sale many of which are injurious. The genuine "*Brown's Bronchial Troches*" are sold *only in boxes*.

Temperance clergymen, lawyers, ladies and doctors use Hop Bitters, as they do not intoxicate, but restore brain and nerve waste.

The Markets.

THE GIST OF THE MARKETS.

WANT of space cuts short "Gists of the Markets" this week, but with the summary over the report at each place, this is a small loss. That probable tumble in wheat, spoken of last week, has come soon, hasn't it?—and there is plenty room below for more fall.

SPECIALS FROM ALL CENTERS.

Until Saturday, Jan. 17.

Boston.—Since last report corn, oats, rye and feed stuffs are about stationary; creamery butter steady, fall dairy-made a shade lower; winter dairy-made 2c. lower; other grades nearly unchanged; cheese generally a trifle higher; eggs steady; beans unchanged; potatoes from 3 to 5c. higher on some kinds, steady in others; hay steady; rye straw $1 lower.

CORN.—New 60@63½c. OATS.—No. 1 extra white 52@55c; No. 2 mixed 47½@49c. RYE 95c@$1. BUTTER.—New York and Vermont choice creameries at 30@33c. ₩ lb, fair to good 28@30c; Fall dairy made, choice at 26@30c. Winter dairy made at 20@23, Straight dairies, choice, at 23@25, dairies, common to good, at 18@22c, Eastern and PEIsland 18@22; Western—choice creameries 34@36c, choice dairy packed at 25@28c, choice ladle-packed 22@24, fair to good do 18@20c, common 15@17c. CHEESE, Choice Northern factory 13½@13c. ₩ lb, fair to good at 11@12c, and common 8@9c: Western factory—choice 12@13c, fair to good 10@11c, common 7@9c. EGGS Eastern at 22@23c. Northern 21@22c. Western 18@20c. ₩ dozen. BEANS.—Northern hand-picked Pea at $1 80@1 90 ₩ bushel; do do Western, at $1 75@1 85; do common $1 65@1 75; medium choice $1 55@1 60; common to good $1 35@1 40; Yellow Eyes $2 10@2 20; Red Kidneys at $1 75@1 85. Canada Peas 80c.@1 00 ₩ bushel for common to choice. Green Peas $1 50@1 85. POTATOES Houlton and Maine Central Rose 53@55c. ₩ bushel; Houlton Jackson Whites at 50c. Maine Central Jacksons at 48@50, Vermont Rose at 45@50 do Jackson at 45. Peerless at 45@50, and Prolifics at 50@53c. ONIONS $3 25@3 50 ₩ bbl. APPLES at $1 50@2 50 ₩ bbl, according to quality. CRANBERRIES at $6 00@8 00 ₩ bbl. CLOVER SEED steady at 8¾@9¼c. ₩ lb. for Western and New York; Timothy at $2 50@2 75 ₩ bag; Canary Seed at $2 45@2 85, and American Linseed $1 50@1 55 ₩ bushel; Calcutta $2 45@2 50. HAY AND STRAW first quality coarse Eastern and Northern at $16@17 ₩ ton; poor and medium at $11@15; Rye Straw $22@23 ₩ ton. SHORTS $20; fine feed and middlings $21@22.

Buffalo.—No report last week, so prices are not compared.

WHEAT.—No. 1 hard Duluth offered at $1 40@1 35 bid; CORN. No. 2 mixed 49@50c. RYE 89c. OATS No. 2 Western at 44@44¼. CATTLE, choice heavy $5 40@5 50; good shippers $4 45@4 75 mixed butchers' $2 65@3 25; closed with a steady downward tendency. SHEEP. Fair to good Western sheep $5@5 50 fair to choice Western lambs $6 50. HOGS good to extra Yorkers $4 60@4 82½; market closing week with 45 car-loads unsold.

Cincinnati.—Since last report wheat has fallen 4 to 5c.; corn 2c.; oats 1c.; rye from 1 to 2c. Western Reserve butter 1c. lower; other sorts steady; cheese unchanged; beans from 10 to 15c. lower for good to white; navy steady; feed, do.; hay lower all round; hogs from 20 to 25c. higher on all sorts.

WHEAT dull at $1 27@1 30. CORN dull at 41@43c. OATS firm at 39@41c. RYE dull at 88@90c. BUTTER, fine Western Reserve at 23@24c., and Central Ohio and Indiana at 20@22c.; fair to prime packing grades at 15@19. Common butter is selling at 12@14c. Creamery sells moderately at 35@37c. CHEESE—mild factory at 13@13½c. per lb, sharp selling moderately at 12@12½c. BEANS—Common at 75c.@$1 00, and fair to good white at $1 10@1 25 per bushel on arrival; prime to choice medium and navy selling at $1 40@1 50 per bushel on arrival, and $1 65@1 75 from store. BEESWAX dull at 20c. per lb. POULTRY—Chickens at the close are selling at $2@3 50; ducks $2 50@3 00, and geese at $3 50@4 00 per doz., and live turkeys at 7½@8c. per lb Rabbits are quiet at $1@1 50; squirrels, 75@80c.; quail $1 50@2 00, and prairie chickens at $5@6 per doz.; wild turkeys, 50@75c. each, and venison saddles, 10@11c. per lb. SEEDS—Timothy seed at $3 per bushel, from store. Clover seed quiet at 8½c. per lb. on arrival, and 8¾c. from store. Flaxseed in good demand at $1 20@1 30 per bushel on arrival. HAY—Prairie hay, $10@12; fair to prime mixed, $14@15; fair to prime timothy, $15 50@16 50; choice light pressed timothy, $17@$17 50 per ton on arrival and $1@2 more from store. BRAN, SHIPSTUFFS AND MIDDLINGS—Bran at $11 and shipstuffs at $11 50@$13; middlings $15@20 per ton in bulk on track, stuff in sacks selling for 50c. per ton more than the above quotations. HOGS—Common at $3 75@4 30; fair to good light, $4 35@$4 50; fair to good packing, $4 50@4 70; butcher selections, $4 70@4 80.

Chicago.—Since last report No. 2 red winter wheat has fallen 5c; No. 2 Chicago spring 6½c for cash, 6c to 7¾ for Feb., 4¾ for March. No. 3 do. and rejected 6c lower. Corn 1c lower; oats 3c lower: rye 2½c. lower; barley 2c higher; butter and cheese steady. No. 1 timothy hay from 50 to 75c higher; other sorts unchanged. Hogs from 10 to 25c lower; cattle somewhat lower.

WHEAT unsettled with sharp fluctuations; No. 2 red winter at $1 23; No. 2 Chicago spring at $1 23¼ cash; $1 23⅞@1 24 February; $1 24⅞@1 25 March; sales at $1 23¾@1 25⅝ March; No. 3 do. at $1 06¼@1 06¾; rejected at 90c. CORN dull at 39¼c. cash; 39½c February; 44½c bid May; rejected at 35c. OATS dull at 34@35c cash; 34c February; 38¼@38⅝c May. RYE easier at 76¾@77c. BARLEY at 86c. TIMOTHY SEED at $2 80@2 90. FLAX SEED strong at $1 57. BUTTER—Good to choice creameries 28@32c ₩ lb; fine to fancy dairies, nearly equal to creameries, 24@25c; good to choice fresh made dairies 20@22c: fair to good dairies, in shipping lots, 16@18c; common to medium qualities 13@15c, roll butter 16@20c. CHEESE—Good to fine cheddar creams at 12½@13½c ₩ lb, and good but slightly sharp at 12@12½c, while good to best flats were quoted at 11½@12c, and the only fair qualities at 10@11c. Common to sour stock was held at 6@8c. GREEN FRUIT—Good to choice apples were salable at $2 75@3, and for really fine fruit and packing as high as $4 was obtainable. Car-lots sell at about the same prices that are asked in a small way. CRANBERRIES were in fair request and firmly held at $7 50@9 ₩ bbl, the outside figure for choice cultivated. HAY—Current quotations for car-lots on track range as follows: No. 1 timothy $14 50@15 25 ₩ ton; No. 2 do $13 50@$14 25; mixed timothy $11 50@12 50; upland prairie $11@11 50; No 1 prairie $9@10; No. 2 do $8@8 50. Small bales sell at $25@50c ₩ ton more than large bales. CIDER—New York "prepared" cider sells in a small way at $5 ₩ bbl, and good to choice Michigan stock at $4@4 25, with sour and thin lots unsalable except at vinegar-makers' prices. EGGS 17@18c. ₩ doz in a small way, and old lots at 14@16c, for the best. Poor lots are not wanted, ice-house stock selling all the way down to 10c ₩ doz. HONEY AND BEESWAX—Good to choice white comb in small packages is salable at 16@18c ₩ lb. Beeswax is in fair demand and steadily held at 20@22c ₩ lb for good to prime bright yellow and at 12½@15c for common and dark colored lots. ONIONS—Fair to choice red at $3@3 50 ₩ bbl, and good to choice yellow at $3 75@4. POULTRY—Fair to choice dressed stock: Turkeys, 10@11c ₩ lb; chickens 8@9c; ducks 7@9c; geese 6@8c. Live offerings selling slowly at $4 50@5 50 ₩ doz. for good to the best. POTATOES are without material change, choice stock held peachblows by the car-load at 55@60c ₩ bush. for good to choice stock and early rose at 50@55c. Other varieties and mixed cars were salable at 40@45c, and in a small way from store 5@10c ₩ bush higher rates were obtainable. SWEET POTATOES at $3 50@3 75 ₩ bbl for fair to good Jerseys, and $2 75@3 25 for kiln-dried Illinois stock, with poor lots not wanted at all. SEEDS—Fair to prime timothy at $2 75@2 82½ ₩ bush; prime to choice clover at $5@5 25; common to good do selling at $4 50@4 90; flax at $1 53@1 54 on a basis of pure; Hungarian at 80@90c, and good to prime millet at 80@85c. MILLSTUFFS—Bran at $12 50@13 ₩ ton; shorts at $13, and wheat screenings at $6@10.

Detroit.—Since last report No. 1 white Michigan wheat has fallen 5c. for cash, 8c. for Jan., 11½c. for Feb., 9½c. for March, 7½c. for April; corn and oats steady.

WHEAT—No. 1 white Michigan at $1,30½ asked; January, $1,30@1,30½; February, $1,31½; March, $1,35½; April, $1,37½; May, $1,39½; milling, No. 1, nominal. CORN in good demand; No. 1 yellow at 49c.; high mixed at 48c.; No. 1 mixed at 48c.; No. 2 mixed at 46c. OATS scarce and firm; No. 1 white at 41c.; No. 2 white at 39½c.; No. 1 mixed at 39½@40c.; No. 2 do. at 37c. CLOVER SEED—Prime at $4.65; choice at $5.30. Dressed Hogs steady at $4.25@4.30.

Indianapolis.—Since last report No. 2 red wheat has fallen fully 5c.; corn from 1c. to 1½c. lower; oats just a shade lower; hogs somewhat higher.

WHEAT steady; No. 2 red at $1.26@1.29. CORN weak at 38@38½c. OATS weak at 36¼@39¼c. Hogs quiet at $4 25@4.60.

Louisville.—Since last report wheat has fallen 5c; corn ½c. higher; oats steady; rye from 1c. to 2c. lower; butter steady; beans nearly unchanged; apples from 50c. to $1 lower, except selections which are steady; potatoes unchanged; hogs not quoted, packing season close.

WHEAT firm at $1 28. CORN quiet; white at 46c; mixed at 41c. OATS quiet and steady; white at

41c; mixed 40c. RYE eastern at 89@90c. BUTTER common to fair country at 10@15c, and fair to choice at 18@22c; Western Reserve at 23@25c, and Western creamery at 35@25c. CHEESE steady Western factory at 13@14c. BEANS, Prime navy at $1 70@1 80 for Northern hand-picked per bushel at store; common stock, $1@1 35. FRUITS. Green apples on arrival at $2 50@3, according to quality; choice to fancy from store, $3 50@3 75; selections, $4 50@5; cranberries, $8@9 per bbl at store. Dried apples from store, 6¼@7c. MILL OFFAL We quote per ton in bulk: Bran, $12 50@13 50; shipstuff, $15; middlings, $18 50. HAY prime to choice timothy at $16 50@18 50, and mixed at $12@14 per ton on arrival. STRAW $8@2 on arrival and $10 from store. VEGETABLES. We quote on arrival: Onions for home-grown and Northern, $3@4 per bbl. Russets, Peachblow and Peerless potatoes, from store, in cooperage, at $1 75@1 85; Early Rose, $2@2 25 per bbl.

Milwaukee.—Since last report No. 1. Milwaukee hard wheat has dropped 4½c; do. soft 4¾. No. 2 Milwaukee has fallen 4½c. for Jan, 5¾c. for Feb., 5¾ for March; No. 3 do. has dropped 4 1-2c; and No. 4, 5 1-2c; corn 1c. lower; oats steady; rye 1¼c. lower; barley ¾c. lower; hogs, live, about 5c. lower, dressed 10c. lower.

WHEAT.—No 1 Milwaukee hard at $1 25 1-2; do. soft at $1 25c; No 2. Milwaukee cash and January, $1 23; February at $1 23 1-2; March at $1 24¾; No. 3 do. at $1 08 1-2; No. 4 do at $1, rejected at 90 1-2c. CORN at 32¾c. for No. 2. OATS firm; No. 2 at 35c. RYE unsettled; No. 1 at 76c. BARLEY unsettled; No. 2 spring at 73c. LIVE hogs dull and weak at $4 25@4 60. Dressed hogs steady at $5@5 05.

Philadelphia.—Since last report wheat has fallen from 3c. to 10c. on all grades for cash, with a somewhat heavier fall for future deliveries; corn a shade lower; oats, steady; butter steady except Western Reserve extras, from 1c. to 2c. higher; eggs still demoralized; cheese from ¾c. to 1c. higher.

Wheat dull, feverish and unsettled; rejected at $1.33; Penn. red on track at $1.40¾@$1.41; southern amber at $1.41¾@1.42; No. 2 red, in elevator at $1.40¾; at the Open Board at second call No. 2 red sold at $1.42¾, February; January at $1.40¾ bid and $1.41¾ asked; February at $1.42 bid and $1.42¾ asked; March at $1.44 bid and $1.44¾ asked. RYE but little sought after; Pennsylvania at 90c. CORN is dull with a very limited inquiry; sale yellow on track at 59c.; do. afloat at 58c.; do. choice from store at 59¾c.; steamer on track at 58c. OATS dull; stained at 46¾c.; rejected at 47c.; mixed at 47¾c.; fair and good white at 47¾@48c.; choice and fancy do. at 49@49¾c.; Delaware oats come forward slowly and range from 47@48c. BUTTER quiet; creamery extra, 33@34c.; Bradford county and New York extra at 27@28c.; Western Reserve extra at 24@25c.; do. good to choice at 18@22c.; rolls quiet; Penn. extras at 21@23c.; Western Reserve extras at 21@23c. EGGS dull and steady; Pennsylvania at 18@19c.; Western at 18c. CHEESE firm; New york factory at 14@14¾c.; Western full cream at 13¾@13¾c.; do. good at 12@13c. DRESSED HOGS at 5¾@6c. CLOVER at 7@9¾c.; timothy at $3@$3¾; flax at $1.60. FEED.—Bran at $17.75@18.50.

St. Louis.—Since last report No. 2 red fall wheat has fallen 10c. for cash, from 8@8¾c. for Feb., from 8c to 9¾c for April; corn 1¾c. lower; oats, rye and barley steady. Light shipping hogs from 5c to 10c lower; other sorts unchanged; cattle somewhat higher.

WHEAT unsettled; No. 2 red fall at $1.25¾ bid cash; $1.28@1.28¾ February; $1.30¾@1.32¼ March; $1.32@1.34 April; No. 3 da. at $1.21. CORN weak at 35¾@35¾c. cash; 35¾c January; 36¾c. February; 37¾@37¾c. March; 41c. May. OATS at 37@37¾c. cash; 36¾@37c. January; 37¾c. February. RYE dull at 80c. asked. BARLEY—Choice at 75@80c.; fancy at 85@90c. HOGS steady; light shipping at $4.10@4.20; packing at $4.25@4.50; butchers' to fancy at $4.50@4 60; receipts, 10,300; shipments 1,500. CATTLE in active demand, but in light supply; yards cleaned out quickly; shippers were the principal buyers at $5.70; fancy steers, averaging 1,660 lbs., brought $5.40; other grades firm and unchanged; receipts, 900; shipments, 100. SHEEP—Supply fair, consisting of high grades, which brought $4.50@5.25 for good to fancy; receipts, 1,300.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Jan. 17, 1879.

BEANS AND PEAS.—Trade in beans continues to revive, and prices have a well set upward tone for all white. Red kidneys quiet, but not offered freely. Turtle soup beans quiet. Receipts of beans begin to favor sellers. Green peas hold their strong position; q. oted, $1.80 at station and $1.85 from store. Southern B. E peas nominal at $2.25 per 2 bu. bag; marrow beans, prime, $1.65@1.70; other, $1.45@1.55; medium, prime, $1.52½@1.55; other, $1.35@1.40; pea, $1.45@1.70; w. kidney, $1.70@1.90; red, do., $1.60@1.70; black, $1.70@1.75.

Receipts of beans for week, 4,620 bush.; exports, 700 bbls. and bags.

BEESWAX.—Small lots have been placed at 24¾@25¾c. for Western and Southern,

BROOM CORN—There is not much demand, but receipts are moderate, and prices showing firmness. Prices are for choice brush at 9c.; choice hurl at 8c.; stalk braid at 6@7c.; mixed red and green at 5@6c.

BUTTER.—In a general way State butter is quiet. Sellers have been breaking up dairies in order to make the higher rates for fine table stock, and there are a good many bodies of dairies that hang at the prices when fine high-grass-fed Western can be found to fill grocers' wants. Creamery is steady for first-class use, but any grade at all under fine sinks into the cheaper scales. There has been a fair export call taking 5,000 packages. This trade at the moment is not giving the attention to fair and medium goods that would be desirable at this part of the season. All common lines of Western factory show weakness, and there are many remnants of State that would have to be marked off to sell. There is very little Eastern demand. Dealers whose winter trade has heretofore counted largely upon New England custom, find themselves supplanted by oleomargarine. The outlook is certainly not propitious for the speculators who went in on the last end of the stock. The earlier operators will have command of the market, at least until their finest reserves are used up. Fresh made State brings 26@27c. Rolls are dull, the weather being bad for handling them, even when they are well wrapped.

State pails and tubs, choice, small lots, 29@30c.; fair to prime, 24@28c.; full dairies, choice, 27@28c.; fair to prime, 22@23c; firkin dairies, choice, 25@26c.; other, 22@24c.; Welsh tubs (including late made), 22@27c.; poor State, 20@22c.; creamery, fancy, 30@37c.; fair to prime, 27@35c.; poor, 23@25c.; sweet cream, 33@34c.; Western imitation creamery, 25@30c.; dairy, fresh, 26c.; other, 19@25c.; factory, finest, 21@22c.; other, 18@20c.; very poor Western 12½@17c; rolls, 18@22c

Receipts for week, 25,100 packages.

CHEESE.—Shippers have taken this week 26,646 boxes. A slight advance has been made in prices with the moderate stocks. Low grades are scarce and wanted chiefly.

Quotations for State factory are: Fancy, 14@14¾c., good to prime, at 12¾@13¼c; fair to good, at 12@12¾c.; half-skimmed at 10¾@11¾c. State farm dairy: Good to prime 12½@13¼c; fair to good at 11¾@12¾c. Wis. factory: Fine, 13¾@14c.; good to prime 12¾@13¾c. Ohio factory: Cheddar, fine, at 13¾@13¾c.; do., fair to good, 11¾@12¾c.; flat, fine, 13¼c.; flat, good to prime, 12¾@13¼c.; flat, fair to good, 11¾@12¾c.; half-skimmed, 10¾@11¾c.

Receipts for week, 26,930 pckgs; exports, 29,000 do. Liverpool cable, 7½ higher. Steam, 25s.

COTTON.—The market has been irregular, and closed weak, with, however, large dealings; latest prices are for Jan. 12.84@12.85c.; Feb. 12 94@12.95c.; March, 13.17@13.18c.; April, 13.38c.; May, 13.56@13.57c.; June, 13.72@13.73c.; July, 13.82@13.84c.; August, 13.93@13.94c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	11⅜	11¼	11¼
Strict ordinary	11⅝	11⅝	11⅝
Good ordinary	11 15-16	12 1-16	12 1-16
Strict good do.	12 3-16	12 5-16	12 5-16
Low middling	12¼	12⅜	12⅜
Strict low middling	12 11-16	12 13-16	12 13-16
Middling	12⅝	13	13
Good middling	13⅜	13¼	13¼
Strict good middling	13⅝	13⅝	13⅝
Middling Fair	13¾	14	14
Fair	14⅜	14⅝	14⅝

STAINED.

Good ordinary	10 15-16	Low middling	12
Strict good ordinary	11 11-16	Middling	12 7 16

Receipts for week, 40,322 bales.

DRIED FRUITS.—Apples have shown some little export demand for evaporated lots, and for which prices are strong; otherwise the market is quiet, and small sales only. Prices are For Apples—New North Carolina, at 7@9c. for fair to good; 10@10¼c for choice; 11c. for fancy sliced. Patent evaporated, apples, choice, in cases, at 15c.; do. good and prime, 13@14c.; N. Y. State sliced, new, 7¾@8¼c.; do, quarters, choice, 7@8c.; new southern quarters, scarce and nominal; new North Carolina peeled peaches 17@19c., do., Georgia, 13¾@16¾c. Peaches, Delaware evaporated, peeled at 24@28c.; do, unpeeled at 11@16c.; new halves at 8@8¾c. Blackberries at 9@10c. for new. Raspberries at 26@26½c. Pitted cherries at 18@19c.

Exports for week, 600 bbls. apples,

EGGS.—Receipts for the week, 4,585 bbls.; do. last week 6,377 do. There is no certain demand for any but strictly fresh; such sell upon arrival. An abundance of State stock is offering at 14@15c. Southern fresh have a good demand, but shippers neglect to put them up attractively.

Near points 20@21c.; State and Pa.; 17@19c.; Western, extra, 18c.; fair to good, 15@16c.; Southern, 16@18c.; limed, State, 13@14c.; Canadian, 12½@13½c.; Western, 12@13c.

FEED.—Sales of 40 lbs. at $21@21.50; 60@80 lbs. at $21.50@23; 100 lbs. at $21@23; rye feed at $13@20.

FLOUR.—There are decidedly lower prices on the break in wheat, and very slow buying.

Latest prices are $4.85@5.40 for inferior to very choice superfine State; $4 40@5.60 for inferior to good extra do., odd lots and lines; $5.40@5.20 for very good to very choice do.; $4 85@5.40 for inferior to fancy superfine Indiana, Iowa, Michigan, &c.; $5.10@5 60 for inferior to good shipping extra do., and $5 10@5.90 for good to very choice shipping extra do.; inferior to about choice white wheat extras $5.75@6.65; choice to fancy do. $6.75@7.75; red and amber winter wheat, inferior to fancy trade and family, at $5 75@7.50; round hoop Ohio, $5.70@6.00; and trade and family brands of do. at $6.10@7.45; the latter rate for fancy; St. Louis at $5 85@6.50 for inferior to good extra; $6.50@7.75 for good to fancy; Minnesota clear, very inferior to fancy, at $5 65@6.65; Minnesota "straight," very inferior to fancy, at $6.15@7.75 and patent poor to very fancy, at $6 65@9 00; unsound stock at from $5 35@5 50; city mill extra at $6.40@6.75 for fair to very choice for West Indies (fancy do. quoted at higher figures); do. for England, $5.45@5.75 for poor to choice; do. trade and family extras, $6.75@7.75; do. for South America, $6.60@7.00; No. 2 at $3.85@4.50 for poor to choice.

CORN MEAL.—Is selling at $3.30 for Brandywine; and $2 50@3.10 for Western.

FRESH FRUITS.—Trade in apples has fallen into a lull at a bad time. Stock has spoiled badly and dealers will have to try and make good stock pay for prior sales. This, however, is not the comfortable style of commerce that a ready winter sales would afford. Shippers are about done; prices here and abroad are against them. Prices easier for all grades. Spitzenbergs, ₱ bbl., $3@3.50; Baldwins choice, $2.75; other, $1.75@2.50; Greenings range, $1.50@2.00. Cranberries firm, though not in large demand. Stock mainly here. Cape Cod, fancy, ₱ bbl., $8.50@9; other capes and Eastern, bbls. $6.50@8.25; N. J. crates, $2@2.50. Grapes hardly wanted; prime Catawbas, $2.75@3 ₱ case; poor, $2@2.50. Florida oranges dull, with the disadvantage of having to be repacked to sell. But hf. bbl. cases, $3.25@3.50; other, $2@2 75, as they run. Peanuts not so active, but sellers can stand a lull after the late free business. Va., hand-picked, 5½@6½c.; good to fancy, 4@4½c. Hickory nuts, 75@80c. Pecans, 10@10½c. One hundred quarts of Fla. strawberries arrived on Thursday; best bid, 75c. ₱ quart.

GRAIN.—Wheat broke sharply on the large supplies here and at the West, and has been feverish and irregular, closing, however, stronger; latest sales are of No. 1 white at $1.42@1.43; do., January, at $1,42½@1.43; do., February, at $1.44½@1.45½; do., March, at $1.47@1.48¼; ungraded white in store at $1.38@1.45; No. 2 red at 1.44¼@1.47; do., January, at $1.41¾@1.45½; do., February, at $1.46@1.48; do., March, at $1.49@1.51; No. 3 red at $1.37; ungraded red at $1.30@1.47; No. 2 Milwaukee spring at $1.41; New York No. 2 spring February, at $1.36; New York No. 3 spring at $1.33@1.35; ungraded spring at $1.42. Rye at 92¾@93c. for No. 2 Western. Corn has been more freely offered and closed at a decline; latest sales are of No. 2 at 61½c. do. new at 59¾@60¼c; do., January, at 60¾c.; do., February, 58¾@58¾c; do., March, at 58¾@58¾c.; do., May, at 57¾c.; New York steamer mixed at 57¾@58¾c., do., January, at 57¾@58c.; do., February, at 57½c.; ungraded mixed western at 56@61¾c.; New York No. 3 at 56@56¼c.; round yellow at 58c. for new; steamer yellow at 58c; No. 2 white at 60c; steamer white at 61¾c. Oats have favored buyers with free sellers; late t sales are of No. 1 white, at 48¾@49c.; No. 2 white at 47¾@47¾c.; No. 3 white at 47¾c.; New York No. 2 at 47@47¼c.; do., February, at 47¾@48c.; New York No. 3 at 46c.; ungraded white western at 47¾@49c.; ungraded mixed western at 46¾@48c.; white State at 48@50c.; mixed State at 47c.; No. 2 Chicago afloat, at 47¾c. asked.

HOPS.—Emmet Wells, in his circular, says:—"There is a trifle better feeling, without any marked improvement, in the demand or any change in values. At considerable expense and trouble we have succeeded in procuring through our custom-house broker the number of bales of hops exported during the season from outside ports. The following are the figures, viz.: San Francisco, 2,000 bales; Boston, 1,930 bales; Philadelphia, 1, 925 Baltimore, 599 bales; total, 6,502 bales; add New York shipments, 40,380 bales; grand total, 46,982 bales. In round numbers England has taken from us 47,000 bales since September last; at least 12,000 bales of these were old hops, so that we have really parted with only 35,000 bales of our new crop, which is not so big a draft as some people would suppose. Putting the new crop at 200,000 bales (which is the lowest estimate we have seen) there would be for home use 65,000 bales new, and these added to the 35,000 bales of old in the hands of our brewers and dealers in September last go to make up the year's home requirements. From the foregoing it would seem that we cannot now spare many more hops for export without encroaching upon the supply required by our home brewers between now and the next crop, and any important increase in the demand from London will naturally tend to advance our prices."

	Cents per lb.
New York, new crop, choice	38 @40
New York, new crop, medium	34 @36
New York, new crop, low to fair	30 @32
Eastern, new crop	30 @38
Wisconsin, new crop	30 @38
Yearlings	7 @18
Olds, all growths	4 @ 0
Pacific Coast, new	35 @40
Pacific Coast, olds (nominal)	7 @12
Bavarians	50 @65

	Bales.
Receipts for the week	954
Total receipts since September 1, 1879	70 389
Total receipts for same period in 1878	43,024
Export clearances for the week	684
Total exports since September 1, 1879	40,480
Total exports for same period in 1878	16,122
Imports for the week	none
Total imports for the season	1,008

HAY AND STRAW.—Receipts are moderate, demand good and steady, and prices strong. Shipping hay quoted at 75c.; retail lots at 80@85c. for medium, and 85@90c. for prime; clover at 55@60c Straw at 90@95c. for long rye; 65@70c. for short rye, and 55@60c. for oat.

OIL-CAKE.—Western is quoted at $34.

POULTRY AND GAME.—Supplies of good dressed have been small and prices have ruled steady. High rates are not to be expected for odd parcels as the trade will run to regular receivers from this time on. Fine chickens and small turkeys lead the demand. The 6@9c. quotations are for remote freight stock, Turkeys, N. J., 12@13c.; State, Mich., Ohio and Penn., 12@12½c.; other Western, 10@11¾c.; Philadelphia dry picked, 13@14c.; do. chickens, 13@14c.; N. J., 11@12½c., State and Western, prime, 10@11¾c.; prime to fair, 8@9c.; Phila. fowls, dry picked, 11@12c.; N. J. 10@12c.; poor to prime other, 6@10c. Ducks, choice, 15@16c.; other, 10@14c. Geese, choice, 12@12½c; N. J. and State, 10@ 2c.; Western, 8@10c. Squabs, white, ₱ doz., $2.50@2.75; dark, $1.50. Capon, large, 20@22c.; small and slips, 16@18c.

Supplies of live are small, and fair prices are ruling as city killers have some demand for fresh dressed. Fowls, 10@12½c.; roosters, 6@7c.; turkeys, 10@12c.; ducks, 50c.@$1; geese, choice, $1.75; other, 1.12@$1.62; pigeons, fair, 30@35c.

There is a strong market for the few remaining sorts of game, quail and grouse specially high.

Canvas back ducks, 2.75@$3; Havre de Grace, $2@$2.50 Northern Western; red head, 75c@$1.25; Mallard, 50@80c.; black 50@75c.; teal, 30@50c.; common, 30@40c. Quail, $3.50@3.75. Partridges, prime $1@1.15; other, 85@95c. Grouse, $1.25@1.37. Wild pigeons, light, prime, 1.25@$1.37 acorn fed, $1.00 Rabbits, 25@30c.; Hares, 25@30c.

PROVISIONS.—Hog products have been active and tending higher. Mess pork quoted at $13 45@13.55 for new mess for January; $13.50@13 60 for new for February, and $13 60@13.70 for March and $13.70@13.80 for April. Bacon at 7¼c for long clear and 7¾c. for short clear. Lard—Western steam at $7.75 for spot; $7 92½@7.95 for January; $7 92½@7 95 for February; $8.05 $8.07½ for March and $8.15@8.17½ for April. Stearine at 7¾@7¾ for Western. Tallow at 6¾ for prime. Beef Hams at $16.50. Beef—Extra mess at $11@12; plain mess, $10.50@11; packet, $13@13.50; tierced beef, city extra India mess, at $21.50@23, and Philadelphia do. at $21.

Receipts for week, pork, 2,140 bbls. Beef, 1.189 pkgs. Cut-meats, 32,068 do. Lard, 8,464 do. Dressed hogs 4.96; do.

SEEDS.—Clover is easy and quoted 8c.@9c. for prime, and extra choice Western, and 9¾ for fancy. Timothy is quiet at $2.75@$3.

TOBACCO.—Export movement is somewhat better, and the market is firm generally.

VEGETABLES.—Exports for week 5,233 bbls.; of onions 70. Prices have advanced for potatoes. The South has bought seed quite liberally during the week.

Nova Scotia E. Rose, bulk bbl. $1.75@$2.00; do. Prolific, do., $1.50@1.62; do. Mercer, $1.25@1.37; Main, Early Rose, do., $1,75@2.00. State, do., $1.62@$1,75 do. b. $1.37@1.62; State Peachblows, red, $1.87@$2 00; do. white, $1.75@1.87; Snowflake, $1.50@1.62; State Peerless, $1.25@$1.62; N. J., do., 87c.@$1. Norf. spinach has sold at 1.50@$2 bbl.; kale, $1. Onions prime yellow scarce. Squash, marrow, bbl 1.25@1.50. Hubbard, $1.25@1.50 ₱ bbl.; cabbage, $1@7 per 100. onions, white per bbl., $3@4.50; yellow, $3@3.25; red, $2.25@$2.50; Chester, $1.75@$2.25. beets, $1@1.50; Russia turnips and carrots, 75c.@$1; celery, per doz., $1@2.

WOOL.—There has not been much activity as yet this week, but prices have ruled very strong. Quotations are for domestic fleece:

Ohio, Pennsylvania, and West Virginia—XXX, 55@58c.; XX, 51@55c.; X, 50@53c.; No. 1, 55@57c. No. 2, 47@50c.; coarse, 43@46c.; combing, 53@57c.

New York, Michigan, and Wisconsin—XX, 47@50c.; X, 47@50c.; No. 1, 52@55c.; No. 2, 46@50c.; coarse, 38@40c.; combing, 50@54c.

Indiana, Kentucky and Tennessee—X and XX, 46@50c.; No. 1, 52@55c.; No. 2, 46@50c.; coarse, 38@40c.; combing, 50@54c.; combing unwashed 37@42c.

Illinois, Iowa and Minnesota—X and XX 43@47c.; No. 1, 48@52c.; No. 2, 43@45c; coarse, 37@40c.

Georgia, Alabama, Mississippi and Louisiana—fine unwashed, 43@45c.; medium unwashed, 40@43c.; coarse unwashed, 30@33c.; burry, 18@24c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Jan. 11.

BEEVES.—Receipts for the week, 12,423 head; do. last week, 10,216 do. The week has been a dull one, and closing prices are fully ¼c. lower than for Wednesday's market. Common and medium stock suffered the most trade neglect, were kept over for Monday. Dry cows and rough oxen sold at 7@8c., dress 55@56 lbs.; poor to fair steers, 7¾@9c., dress 55@56 lbs.; good to prime, 9¾@10¾c., dress 56; choice and above, 10¾@11c., dress 57–58 lbs. Export wants improving.

COWS AND CALVES.—The demand is merely a chance affair. Receipts include some Southern stock, which sells low. The range is $30@60. very few making the extreme; good quality milkers considered well sold at $45@60.

VEAL CALVES.—There have been no great additions to the arrivals of live, and as soft weather has kept back hog-dressed, firm prices prevail throughout. N. J. and Bucks Co. live, choice, 8c.; fair to prime including State, 6¾@7¾c., with a few State at 8c.; Mount Holly at 6¾, 300 lbs., down, 5@8c. Hog-dressed, choice, 10@10¾c.; other, 8@9¾c.; buttermilk, calves, 4@5c.; grass, 3½@3¾c.

SHEEP AND LAMBS.—Receipts for the week, 29,993 head; do. last week, 21,832 do. The increase was more than the market could carry in a warm week, and a low, easy market is reported. A decline in pitts also tended to weaken car-load prices for sheep. About one-half the supply sold up to Friday night. Sheep ranged at 5¾@6c.; lambs, 7@7¾c.

SWINE.—Receipts for the week, 30,614 head; do last week, 29,914 do. Light Ohio hogs sold at 5c.; quoted at the yard, $5.00@5 20 per 100 lbs.

Light country pork, 6¾@7¾c.; medium, 6¾@6¾c. heavy, 5¾@6¾c.; city dressed, 6¾@6¾.; Western dressed, 5¾c. The latter arriving in poor condition. Pork tenderloins, 11@12c.

CAT-TAIL MILLET,

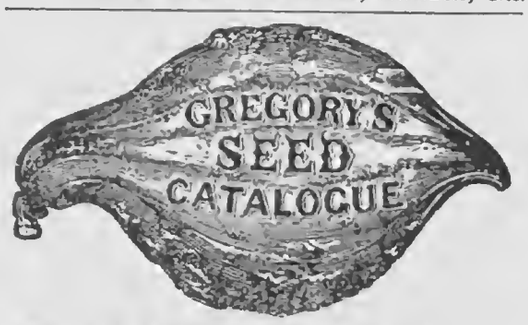
ALSO KNOWN AS

"HORSE" or "PEARL" MILLET,

50c per lb. by mail, 25c. by express. Chufas, 50c. per qt. by mail. Send for price-list of many new and improved Standard Seeds.

MARK W. JOHNSON, & CO.,

27 Marietta Street, Atlanta, Ga.



My Annual Catalogue of Vegetable and Flower Seed for **1879** rich in engravings, from photographs, of the originals, will be sent FREE, to all who apply. My old customers need not write for it. I offer one of the largest collections of vegetable seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. *Full directions for cultivation on each package.* All seed *warranted to be both fresh and true to name*; so far, that should it prove otherwise, *I will refill the order gratis.* The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other vegetables, I invite the patronage of *all who are anxious to have their seed directly from the grower, fresh, true, and of the very best strain.*

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17 SIZES—1 MAN TO 45 HORSE POWER

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Operated by pumping Wind-Mills. A novel and perfect feed mill for grinding all kinds of grain for stock and house use. Cheap, reliable and durable. Agents wanted everywhere. Also the old and reliable Stover, the well tried, strong, durable and self-regulating, solid wheel WIND-MILL, which took the Centennial diploma as well as grand medal. Branch office, Greencastle, Pa. Send for catalogue to STOVER WIND ENGINE CO., Freeport, Ill. E. B. WINGER, Gen. Manager.

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It maintains a perfectly uniform temperature at 60°
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THE FERGUSON MFG. COMPANY,

AGENTS WANTED. Burlington, Vt.

International Dairy FAIR

PRIZES.

Both the Sweepstakes Prizes, at the International Dairy Fair, just closed, "for the best butter and cheese made anywhere," were salted with English salt (Higgin's Eureka brand), as were also most of the other lots taking prizes. Higgin's Eureka Salt took the first prize at the Centennial Exhibition, 1876, the Paris Exhibition, 1878, also at the Fair of the British Dairy Farmers' Association, London, 1879; Royal Irish Dairy Fair, Dublin, Dec. 10, 1879; and at more than forty State and County Fairs in the United States.

The British Government has granted a patent to Thomas Higgin for an improvement in salt manufacture, and the consumption in this country has risen in three years from 6,000 to over 70,000 sacks, while during the same time the consumption of brands heretofore thought to be the best, has largely decreased. If this means anything, it means that Mr. Higgin's improved process is working as great a revolution in salt as the Bessemer process has in steel, or new process milling in the manufacture of flour. The difference in the cost of using the best salt for butter and cheese is too small to be considered a moment (being less than one thirtieth of a cent per pound on butter, and one-sixtieth of a cent per pound cheese).

The prize cheese and butter salted with Higgin's salt sold for an extra price more than a hundred times this amount: therefore

It Pays

to use the best salt. Factory men who manufacture for their own account cannot afford to use cheap salt, and milk producers who have their butter and cheese made up for a certain price can afford to pay more if Higgin's Eureka Salt is used. It is the purest, strongest, and most uniform grained salt ever manufactured, and instances of the keeping properties of butter and cheese made with it have been quite remarkable.

Ask your dealer for the Illustrated Dairyman's Almanac, for 1880, describing how salt is manufactured. If he is unable to supply it, a postal card to the undersigned will receive attention.

H. K. & F. B. THURBER & CO.,

Importers, New York.

B. P. & C. E. BAKER,

Western Agents, Chicago.

For Sale by nearly all Dealers in Salt.

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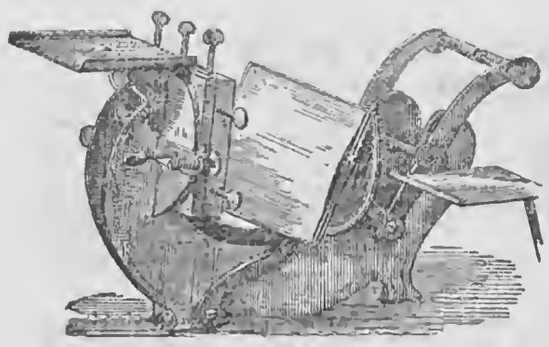
THE KELSEY PRINTING PRESS.

HERE is a premium that the young people will regard with great favor, and they will be entirely justified in doing so. It is a complete printing-press, in a small way, and we selected it as a premium with a special view to please the boys. With this press they can print cards, labels, addresses on envelopes, etc., for themselves and their friends, in any style desired.



The illustration shows just what the press is. The bed-plate is 3x5 inches; that is, anything as small as one line of type, or as large as a postal-card may be printed, and printed well, if the operator is expert. There are all conveniences furnished with the press, including metal "rules," an inking roller, two boxes of ink, one of lye, etc. We use one of the presses in our office for small work, and it suits us exactly so far. The price of the press is $10. We offer it to anybody who will send us a club of eighteen subscribers. It is made by Kelsey & Co., Meriden, Conn.

THE FRUIT GROWER'S FAMILY.

Esther's School of Pets

REV. HENRY S. CLUBB.

As stated in my first article on "The Fruit Grower's Family," Esther invited me to witness the performances of her School of Pets, and as all young people of refined taste, take delight in pets of some kind, I will now tell you what I saw in a recent visit to this happy family. The weather being too cold for the school of pets to be held in the open air, where it is usually held Saturday afternoons, Esther, knowing my desire to see he school in session, arranged to hold it in a room which had recently been added to the house for an office, as her father had been elected Township Treasurer, and he would require a place where to transact the business. He had not yet occupied it for this purpose, and there was nothing in the way of Esther using it for her exhibition of pets.

The scholars were a cat, a sky terrier, a parrot a large-tailed squirrel, and a chipmunck. All those she had been training so as to be on friendly relations with each other, to subdue their natural tendency and control their conduct in each other's company so as to abolish all fear on the one hand and ferocity and cruelty on the other.

Esther arranged two chairs about six feet apart at one end of the room, the backs towards each other, on the tops of which rested a heavy pole. On one chair sat the squirrel and on the other the chipmunk which was her newest scholar, having been caught last. On the floor on one side was the terrier and on the other side of the floor, the cat, while the parrot sat on a cross perch standing in front.

Several other friends were present to witness the performances and we, the visitors, sat at the other end of the room. Esther whispered something to the parrot who immediately repeated in a loud sharp tone the order: "Chippy run up." The chipmunk was a little disconcerted and did not at first notice the order. The parrot immediately cried in a loud voice, "*Chippy run up!*" So sharp and shrill was this said that the poor little timid chipmunk immediately ran up the back of the chair and across on the pole. He reached the opposite chair and looking down saw his rival, the large-tailed squirrel awaiting orders. The parrot then acting under the orders of Esther cried out. "Neddy jump up," and immediately the squirrel was upon the cross pole. Quick as lightning Chippy made way for his friend Neddy, by swinging under the pole, and Neddy reached the other end quicker than we could write the fact even in short hand. Then both squirrels ran towards each other meeting at the center of the pole, and this time Neddy swung under and let Chippy run over. They continued to repeat this operation running backwards and forwards on the pole and alternately running over each other and making way by swinging under with great rapidity. Esther said it had been very difficult so teach them thus to pass each other on the pole as at first, when they met they used to quarrel as to which should go under. They at last settled on this plan of taking turns and since then they had not quarrelled. They then stood side by side on the pole making bows to the company who furnished them with an ample supply of ground nuts which they dexterously caught, running down each time to his own chair to deposit each nut caught, in a little box placed there for the purpose.

When his part of the performance was over, the parrot said "Well done, Neddy. Well done, Chippy, you may now eat some of your nuts, but don't forget poor Poll." At this instant Neddy came to the centre of the pole and politely handed a nut which was taken by the parrot with a "Thank you, Neddy." Then, Chippy, not to be outdone in politeness repeated the operation which seemed to please Polly very much as she literally screamed her gratitude.

The dog and the cat had all this time been quietly watching what was going on and awaiting their turn in the performance. The parrot now after receiving a hint from Esther, gave an order to the cat "Puss you fetch your chickens." Puss looked towards a basket at the corner of the room and at this moment the lid of the basket was removed, probably by a string, one end of which was held by Esther's little brother, Harry, who was fond of playing this little trick, when out jumped half a dozen chickens about half grown or size of bantams. Puss walked lazily towards them and they immediately surrounded her. One, a young rooster, more daring than the rest, jumped on her head and made a most ludicrous attempt at crowing. One of the pullets caught pussy by the tail, and the others pecked at her without hurting, just to show the exuberance of their joy. Puss stood it with the greatest composure, and made no effort to check the enthusiasm of the reception, but seemed rather to enjoy it. Polly was greatly excited to see this performance, and so indeed were all the spectators, who inquired of Esther how she had managed to make the cat and the chickens such good friends.

Esther explained that the chickens, when quite young, lost their hen-mother and she had brought them in to take care of them, and as Puss had recently lost her kittens, she immediately conceived the idea of letting the cat foster the chickens. Puss was not adverse to this and had brought them up tenderly and kindly, never once attempting to injure or kill them, and they, in their turn, had learned to treat the cat as their mother. They had now become so big that they did not need her care, so they simply played when they met, from old acquaintance. Several of the brood had died from getting smothered under pussey's soft fur, literally killed with kindness, and only six remained of the ten hatched. When the chickens were making towards the door, Polly called to Prince, the dog, with a kind of whistle, and Prince sprang up and prevented their escape by placing himself near the door until it was closed. Esther said she had trained Prince to keep the school together and to keep off intruding dogs or cats when the school was held out doors, as it is in warm weather.

In the evening we had a pleasant time with the Fruit Grower's family. At supper there were four kinds of canned or preserved fruit, peaches, quinces, raspberries and cherries, and we found that both Amy and Esther had learned to do the canning and preserving.

The conversation related to a great many subjects. Esther told us how she had trained her pets by treating them kindly. She had, when in New York, heard a good deal of the "Happy Family," which Barnum used to exhibit at the Museum on Broadway, and thought she would see if creatures of such different disposition could be trained to live happily together, and although it required great perseverance, she had succeeded better than she had ever expected. She had also preserved accounts cut from the newspapers of extraordinary freaks with domestic animals, where the young of one had been taken care of by the maternal instinct of an entirely different specie and even of antagonistic dispositions. These accounts she had made a collection of in her scrap book, and now had over a hundred different incidents showing both intelligence and affection in domesticated animals, some of which would be creditable to the higher order that claims to monopolize the wisdom of creation.

The crop of fruit this season was exceedingly good and the Fruit Grower's Family were happily in enjoying intelligent pursuits during fall and winter, the ample reward of their well directed industry during the spring and summer months. Amy was making good progress with her botanical studies and school, and John was preparing a large number of grafts to plant in the spring in his nursery, having been encouraged by the success of his first efforts.

THE STORY OF AN OWL.

IN some places in England there exists a cruel custom which shows not only ignorance, but ingratitude. I mean the custom of farmers and others who nail alive on the door any owls that come in their way. In this, they not only commit a cruel action, but they also deprive themselves of a friend, who rids the fields and gardens of destructive insects and vermin.

One day, when on an excursion in the neighborhood of Windsor, I found an owl fastened up to a barn door, which seemed to be at the point of death, for it had been there two days without food, and both its wings were pierced through with large nails. I wanted to take the poor thing down from its gibbet, but the farmer came running up to stop me.

At length I persuaded him to let me have the bird. I set to work to release the owl, who, not understanding my charitable intentions, scratched my hand severely with its claws. The farmer went away laughing, which did not hinder me from drawing out the nails and delivering the poor bird which I put in my handkerchief. After this I laid it on the grass, and poured down its throat a few drops of water, which appeared to refresh it.

It seemed to understand my good intentions towards it, for it soon allowed me to touch it without moving. I washed its wounds and wrapped up its right wing, which was broken, with a bandage made at the expense of my handkerchief. The owl, its eyes bloodshot through suffering and fever, regarded me with much surprise. I went to a tree and shook down a lot of insects, which I offered to the owl, who gobbled them up greedily, and then I returned home with my singular acquisition.

It was a female, still young, of the common tribe generally known as the barn owl. Red and brown characterized its plumage. Its breast was shaded with red, getting more brown as it descended. The tail, too, was reddish and covered with bands of a deeper hue.

During this examination, the poor bird got out of its basket and hopped with difficulty on to the back of my arm chair. Having installed itself comfortably, it began to arrange its disordered plumes and looked at me fondly with great eyes, whose pupils kept dilating as the shades of evening drew on. I went up to her and stroke her gently on the back. She received the caress with an evident satisfaction, and returned it by rubbing her head gently on the back of my hand. From that time a compact of friendship was made between us and Strix—for I gave her the ornithological name—soon became to me a tender and faithful companion. She never failed, when I opened my window in the morning, to fly out for a few minutes, and returning to my dressing room, dabbled with delight in a bashful of water, and took the greatest pains with her toilet. She then proceeded to breakfast on insects produced by the gardener, and sometimes pieces of fresh meat. Then she used to take her accustomed place on my arm-chair. From this post she followed my slightest movements and lent the greatest attention when I wrote. If I got up, she leaped on my shoulder and accompanied me. If I was obliged to go out, she used to put her head between her wings, but directly I returned would overwhelm me with signs of joy.

Although her broken wing would not allow her to fly long distances, Strix, especially on fine evenings, used to allow herself airy excursions to the roofs of neighboring houses and back. On one occasion she did not return until next morning. From this time she became restless and feverish, no longer sleeping during the day, as her custom used to be.

One evening I caught her breaking up my waste paper basket, which she carried away piece by piece. Then she commenced her nocturnal excursions, which she prolonged into the next day and did not return for her food until the evening and then disappeared

This manner of proceeding made me curious. After two or three days' watching, I discovered that she used to take refuge in a neighboring garden. One morning at break of day, I saw Strix going across the trees towards a ruined tower. I gained the summit by some broken steps, and, to my delight, beheld Strix offering from the food she had got from my house, mouthfuls to four little birdlings covered with down, who opened their yellow and insatiable mouths to their widest extent.

The fugitive was not at all startled at seeing me at her nest. She continued her distribution peacefully without ruffling herself. This duty fulfilled, she raised her head softly, and turned on me her great, golden eyes, full of tenderness.

From that time I regularly carried to the young mother such scraps as I knew she liked. Soon the little ones recognized my steps and noisily hailed my arrival.

The husband himself, reassured by my intentions, acquiesced in the amiable compact which bound me to the family, and every morning we all seven fraternized with a friendliness with which, I was not a little touched.

One day, to my great astonishment, I found all six installed in my library. Although sensible of this proof of their affection and confidence, I must confess I felt somewhat embarrassed. Nevertheless, I thought it only honorable to fulfill the duties of hospitality and served my guests with meat, cut in strips and a piece of beef that my cook was going to roast for my dinner the next day. My six guests having finished all I had to give them, the father and his four children began to flap their wings, a sign of their departure, and flew away, leaving Strix with me, who, from that time, resumed her old habits, as if she had never left them.

One day, as I came home about one clock, I heard up stairs some most discordant cries, which made themselves heard in the court. I ran up stairs and opening my window saw poor Strix on the balcony assailed by hundreds of sparrows. They attacked her with great blows and tore out her feathers without their victim (who was blinded by the sun, which struck right on the window) trying even to repel them, or defend herself. My presence put the little army to flight, and I took in the wounded owl, who did not recover herself for full an hour afterwards.

Strix lived many years after this. She met with several adventures, the chief of which was her being stolen from a stone coping where she was very fond of taking a nap.

I suppose the man who took her had been prepared beforehand and had thrown a sack over her head, or else she would have been sure to have given the alarm. After some days' non-appearance, I thought her gone forever, and I do not think I should have seen her again, but that I happened to walk shortly afterwards through Leadenhall market. I thought I heard a familiar shriek and sure enough, there she was in a cage outside a shop. I went into the shop and put some questions to the man, who, however, asserted he knew nothing about it, it was offered to him by a very respectable man, and that he gave a great deal for it, &c. So, finding I could get nothing out of him, I bought her and took her home.

Strix gradually grew older and more infirm, until at last, one morning, on entering my library, I missed her from her old perch, and presently, to my great grief, found her by the fire-place, stretched out—dead! Few can imagine how much we felt the loss of our affectionate and faithful old friend.—*Cottager and Artizan.*

DEAR UNCLE MARK:—I would like so much to join your Horticultural Club. If I am not too young, will you please put my name down on your list. I am only seven years old but I go to school, and I love flowers very much. Mother has some nice plants in the windows. In the summer I have a little flower garden myself. I am afraid this is too long already. I hope all my Rural Cousins will read this, and if you ever come to Kansas, Uncle Mark, do come and see us.

From your little neice, GRACIE DILLE.

Johnson Co., Kansas.

[Thanks, Gracie, I will try to remember your invitation when I go to Kansas.—U. M.]

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PERSONAL ITEMS.

The Princess Louise will sail for Canada on the 22d inst.

Senator Sharon, the Nevada absentee, has just drawn $3,000 back pay.

Senator David Davis is said to have lost fifty pounds since the death of his wife.

Maine is not represented in Congress at all now, From Blaine down the members are watching the Fusionists.

My wife and daughter was made healthy by the use of Hop Bitters and I recommend them to my people.—Methodist Clergyman.

AGRICULTURAL NEWS.

THERE is a report that the old United States Agricultural Society, inaugurated 28 years ago, but which has shown little or no vitality since the outbreak of the war, is about to be revived—Is it to be a rival of the three A's? . . The American Poultry Association held its annual session at Indianapolis on the 12th. Cash on hand $522.36, besides a wealth of standards, show-cards, etc.—a good showing compared with that of the first meeting a few years ago, when money had to be borrowed to meet expenses. . . According to the report of the Montreal Corn Exchange on the 15th the receipts of grain for 1879 amounted to over 23,000,000 bushels, which is larger than on any previous year. Shipments, 22,700,000 bushels. . . North Carolina has 52 cotton mills. . . In Powhatan Co., Va., during the last month a Mr. Watkins had 100 sheep killed by dogs. . . The fence law of S. C., is said to be a wonderful saving to farmers. . . . The fall clip of wool in Nueces county, Texas, amounted to three million pounds—more sheep there than in any other county in the State. . . . Hurrah grass is taking possession of a great many fine farms on the Arkansas River bottom. On account of its persistency, it is called "eternity weed." Negroes think its seed is sown by the devil.—So says the Little Rock Gazette. . . Nicaragua wheat is getting to be a favorite in some parts of Texas. It is claimed to be rust and smut-proof; to give double the yield of ordinary varieties; to be excellent food for mules, horse and hogs, ground. It makes sweet but coarse flour, and is said to be peculiarly adapted to the South. Millers, however, object to grind it on account of its hardness, and workmen to bind is on account of its bristly ears. Special milling steam attachments, it is said, are being prepared for it, self-binders will not shrink from the rough beard. Planted, in Texas, from August to March—Feb. and March preferably. . . One firm at Tully, N. Y., thrashed the following amount of grain this season:—Of wheat, 10,671 bushels at 4c. per bushel; 22,000 bushels oats at 2c.; 4,359 bushels barley at 3c.; 475 bushels buckwheat at 4c.; 1,152 bushels oats and peas at 3c.; 722 bushels flaxseed at 12c.; 302 bushels clover at 75c. per bushel, making an aggregate of 36,621 bushels of grain, and the gross proceeds amounting to $1,368,59. . . Last Monday additional storage capacity for grain to the amount of two million bushels was provided at Chicago; six hundred thousand bushels of wheat were on that day stored in ships, at seven cents per bushel, for transportation to Buffalo in spring. . . The apple crop of Chautauqua Co, N. Y., for 1879 is estimated to have been worth more than the butter production, and if the clear profits are taken into account, it is said to have been worth ten times more. . . Ex-Gov. Washburn, of Wis., has just given the Wis Industrial Association 40 acres of land at Montreal Point, his old home, to be used as a permanent fair ground. . . The stock of cheese in this city on January 1, is put down at 194,000 boxes. It is estimated that outside of the city there were in the State about 58,000 boxes. In addition to this, the States of Pennsylvania, Illinois, Iowa, Ohio and Wisconsin are estimated to have had 154,000 boxes. This made a grand total of 406,000 boxes on hand. A year before the amount of stock held in New York city alone was 396,467 boxes, and two years before it was 218,032 boxes. The amount this year, therefore, was considerably less than for two years past and made a more satisfactory showing as to future prices for this dairy prdoduct. G. J. Kruse, of Lake Village, Ark., claims to have a sow that gave birth to a litter of five fine pigs on Dec. 19th, and to another of 10 ditto, on Dec. 25th. . The striking Chicago packers were riotous last Tuesday. Non-Union men were mobbed and maltreated savagely, and several packing houses stoned. Police called out in force, mobs retire. Violence more *striking* on Wednesday. Mob becoming turbulent, and was swelled by the riff-raff of the city. . A destructive gale swept over Oregon on the 9th blowing down houses, killing cattle, blocking railroads, prostrating telegraph poles and "mussing up" things generally. . . A famine prevails in Russia in the country between the Volga and the Don, owing to the failure of the crops from drought. Some have died of starvation, many more dying; help from the government craved. . . An experiment is now being made in exporting live cattle from Australia to England. The cost of transportation is about one-and-a-half times the price of the beasts, which cost in Australia about double the price of Texas cattle in the Lone Star State. . . From Jan. 1st sheep may be landed in Ireland from this country, without quarantine and without being slaughtered at the place of landing. . . The nail manufacturers of this city have advanced the price of nails—bad for board fences.

There will be an Agricultural Institute at the Illinois University, Champaln, Ill., from Jan. 27 to 30. Twenty-two lectures will be delivered by prominent specialists. Boarding $1 per day; reduced railway fares; all cordially invited. . . The winter meeting of the Mich. State Pom. Soc. will be held at Hillsdale, Feb. 11, 12 and 13, opening with an afternoon session on first day. Other horticultural organizations invited to send delegates. All information will be supplied by Secretary Garfield, Grand Rapids, Mich.

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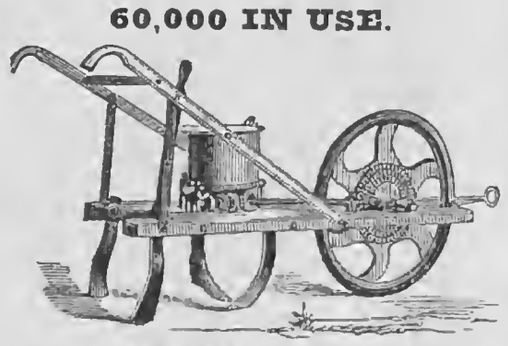

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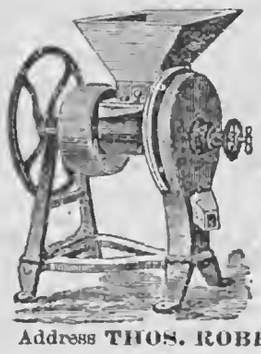

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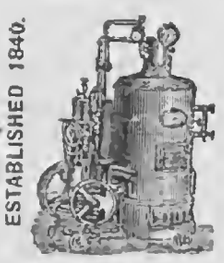

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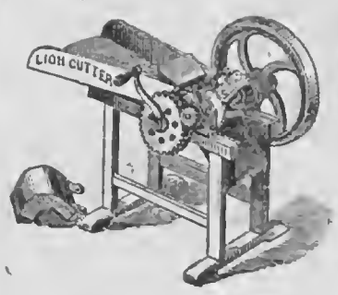

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BRIEFLETS.

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. There are thirty-two shops in Paris where horse-flesh is sold. . . New subscribers are requested to send for our Free Seed Distribution Supplement. This will explain to them many matters about which we cannot repeat detailed information. It will be sent without charge. . . Mr. Chcever says that cider for drinking purposes is a pest in any farmer's cellar, and that it is better for the well-being of all concerned to be satisfied with a barrel of "apples on tap." . . NURSERY GARDEN OPERATIONS.—Sow buttons everywhere—February is the month for cutting teeth—keep the cuttings—Trim your baby-sister's hair with the scissors. You may expect a fine crop—Dig the baby in the ribs; plant a blow on your little brother's nose and wait to see what the result will be. Probably some birch.—Punch. . . It is an excellent idea—that of breeding small cobs and big kernels. It is, however, well to bear in mind that the kernel must have something to stand and grow upon. The fact that the number of rows and the size of kernels necessitate a corresponding size of cobs is strangely overlooked by some corn breeders. . . M. Ludlow says, in the Poultry Bulletin, that the much-talked-of Langshan fowl is the original of the Black Cochin. . . The question is, why does not some one make a breed of *large*, non-sitters that can be kept within picket fences, as the Asiatics are?—Idem. . . Itch is a foul disease—who can blame hens for scratching? . . Are you saving your hen manure? . . Even as Nature benevolently guards the Rose with thorns, so does she endow woman with pins. . . One Hundred articles of value are offered in Our Premium List to those who raise clubs for the RURAL NEW-YORKER. It will be sent to all who apply. . . Peter Henderson charges for the coming year 60cts. per pound for *clean* seeds of Pearl Millet . . The price of the new striped Tea Rose "American Banner" for next season will be $3.00 each for largest—$1.50 each for smallest size. This is really *very* cheap when it is considered—as all the papers have been saying—that the *buds* are worth their weight in gold. The buds, however, don't weigh much. . . Those who can raise spring wheats we would recommend to try the variety known as White Spring Russian. Of all the kinds tried at the RURAL's farm two years since, this yielded as well as any. . . The Chinese Hulless Oats, now offered by every seedsman, are really an excellent kind. The kernels are plump and heavy. The only trouble is that they "shell out," if left until ripe. . . Those who are interested in seeds and plants should, from now on, review the advertising columns. . . It will soon be time to talk about Strawberries again, and also of small fruits in general. If there were any way by which we could oblige every one of our readers having 50 feet square or more of land, to cultivate the small fruits, we should do it. And in the end they would all thank us. . . If Congress will give Dr. Collyer ten acres of ground, he promises to return twenty tons of sorghum sugar the first season or forfeit his reputation. . . The brightest paper in America—THE RURAL NEW YORKER. That is what it is going to be for 1880. If not, we will forfeit *our* reputation! . . The manufacture of sugar from sorghum is a decided success with proper machinery and management. The Amber-Liberian cane is the most promising variety. . . A dog suspected of killing sheep should frequently have his teeth examined to see if any wool sticks between them, which, if found, is unimpeachable evidence that he is guilty, and he should be lynched at once without judge or jury. . .

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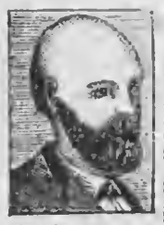

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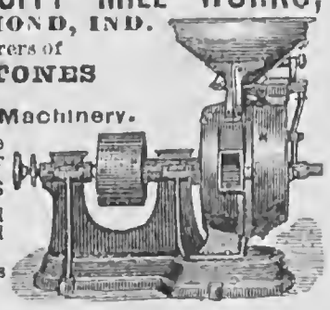

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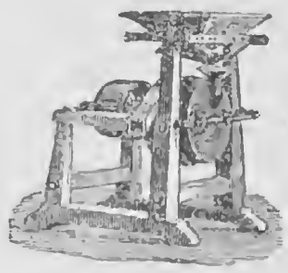

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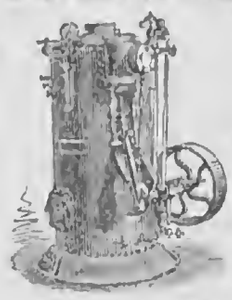

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 5. WHOLE No. 1566. | NEW YORK, JAN. 31, 1880. | PRICE FIVE CENTS. $2.00 PER YEAR.

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Field Crops.

LEGUMINOUS FORAGE PLANTS. No. 1.

PROFESSOR W. J. BEAL.

To "live in clover" is one way of expressing happiness, ease, plenty, luxury, an abundance of good things. Cattle are well cared for, if they run in a pasture where the clover is knee-high or where it comes up to their eyes. The very word "clover," when spoken, has an agreeable sound.

The clovers and their allies belong to a very large and important natural order called Leguminosæ. This name is derived from "legume" which means a pod like that in which peas and beans are produced. The order includes about 6,500. These vary in size from small herbs to giant trees, and are found in all climates, cold, hot, wet and dry. The order is the most remarkable for its great variety of useful products. Lindley, in his "Vegetable Kingdom" says: — "It is not only among the most extensive that are known, but also one of the most important to man, whether we consider the beauty of the numerous species, which are among the gayest-colored and most graceful plants of every region, or their applicability to a thousand useful purposes." It includes numerous Acacias, noted for durable and fragrant wood, numerous gums, drugs, dyes, peas, beans, peanuts, licorice, fiber plants, perfumes and many forage plants, some of the most important of which are about to be described.

Trifolium pratense—Red Clover.

In saying anything of this well-known plant, I feel like attempting to introduce one neighbor to another where the acquaintance is intimate and has been of long standing. As a forage plant, I know of nothing which has been longer cultivated in England, having been grown as early as 1633 — nearly 250 years ago. It is our most valuable clover for meadow and pasture. The name Trifolium, is derived from two Latin words, meaning three leaves. Each leaf has three leaflets. Most red clover is biennial, though some plants, in isolated places are perennial. The roots may be made to live longest where they are kept cut down very little while they grow, and are not allowed to flower or go to seed. By selection and care several varieties (races) have been obtained, some of which are perennial, or said to be perennial, and are known in England as "cow-grass." In this country, it is usually sown with timothy (on sandy soils without timothy) on fields of young wheat, oats, or barley. It is mowed the next spring, pastured the year after, when it is usually turned under or perishes the winter after.

The clovers, especially red clover and other large clovers, are valuable for enriching the soil. They draw a larger proportion of their food from the air than is the case with true grasses. They are rich in nitrogen. The roots are large, run deep, and bring to the surface some of the most valuable mineral ingredients of the subsoil. I have not thought clover roots extended down very far, unless they were found at least six feet below the surface. They will often be found longer than this, even in soil which is somewhat tenacious.

To secure a good "catch" of clover, several things are important. The soil should be in good condition chemically and physically; rich, well drained, and well cultivated. When sowed in winter or very early in spring, the young plants are liable to be killed before they become well established. Some of our best farmers sow seed after the hard spring frosts are over. They then harrow or roll the ground or use both the harrow and the roller. These implements are usually beneficial to the young plants of wheat. For hay, clover should be cut at least as soon as it is well covered with flowers. There is much difference in the value of clover hay, depending on the mode of curing. This has been clearly shown by former articles in the RURAL.

The flowers of this species are in heads and usually red—rarely white. Each flower has ten stamens closely surrounding one pistil. The petals are irregular and somewhat resemble those of the Locust and pea. Bumblebees visit the flowers freely and have been thought by some to be necessary aids in carrying pollen to fertilize each flower. It is probable that they assist in securing fertilization, though I have found by experiments made during the past three years, that red clover will produce about two-thirds of a crop of seeds when the heads are closely tied in bags so as to keep all bees away. Honey bees do not usually visit red clover, as the flowers are so long hat they cannot reach the honey. There are some exceptions, though I have never seen honey bees numerous on this variety. Red clover is rather coarse for pasture. All kinds of stock will pass it over if they can get plenty of June grass which they much prefer. Especially is this the case in summer after the clover has sent up its flower stalks. The clovers are very sensitive and are favorably affected by a light dressing of gypsum or plaster. A second crop of red clover is often taken from the field, though this crop is usually allowed to go to seed.

Sutton & Sons of England, advertise

LEGUMINOUS PLANTS.—Fig. 28.

1. Trifolium pratense (common Red or Broad-leaved Clover); 2. Trifolium repens (Dutch Clover); 3. Trifolium incarnatum (Crimson Clover); 4. Trifolium hybridum (Alsike Clover); 5. Onobrychis sativa (Sainfoin); 6. Medicago lupulina (Black Medick); 7. Lupinus albus (Lupin, blue var.); 8. Vicia sativa (Vetch).

Trifolium pratense perenne—Perennial Red Clover, or Cow Grass.

They say "it is quite distinct from the common red clover, and is most valuable for purposes for which red clover is wholly unsuited. It produces only one crop in the year, and comes into cutting fully a fortnight or three weeks after the first cutting of red clover, at a time when green food is generally very scarce." They speak of it as valuable for permanent pastures. A small patch of this at the Michigan Agricultural College has lived for three years. It killed to some extent last winter.

I have also tried another clover from the same firm with just about the same result as last mentioned. Trifolium pratense hybridum giganteum Suttoni—Sutton's giant hybrid cow clover, is the imposing Latin and English name of this clover. They claim that it is a hybrid between the common red clover and cow-grass. "It is exceedingly productive, and under favorable circumstances, will produce three heavy crops for mowing or grazing in one year. It has also the merit of succeeding on soils that will not grow the common red clover." On our sandy land it does no better than our common red clover. A further consideration of this subject is reserved for future numbers

POTATOES WITHIN POTATOES.

This occasional phenomenon is thought by some to be caused by the perforation of the potato by young shoots, the tips then developing into tubers. Another view is that the bud is formed within the tuber; that it feeds on the parent and finally ruptures the skin by its increasing pressure. A Mr. Lachanme asserts, the Gardener's Chronicle, of London, says, that he can

Fig. 29.

produce this abnormal formation of tubers at will by persistently pinching out the sprouts. The rind of the potato finally bursts, revealing small, perfect tubers within. The internal development, according to this theory, was "provoked by the constant suppression of exterior growth" forcing the development of adventitious buds within. It does not appear that this abnormal growth can be turned to any practical account. The cut which we have reproduced, was drawn origiually for the Gardener's Chronicle of England.

Planting Corn on Sod Land.—A friend of the Rural, Mr. N. C. Jessop, of Long Island, who is noted for raising large crops of corn, pursues the following method of culture:—He invariably plants his corn on sod land. In plowing the ground he takes care to plow in a straight line. The land is marked crosswise, and the corn is planted at the intersection of these markings with every fourth furrow, dropping a little pulverized manure in each hill. No harrow is allowed on the land before the corn is planted. By this method the soil does not become so compact as if harrowed fine, and the sod will rot quicker. If the weeds should start before the corn, a light harrowing lengthwise will check their progress and not hurt the corn. He says he has followed this method for several years with signal success. At first his neighbors ridiculed it, but, somehow, they are now beginning to plant corn on sod land, and to use the harrow sparingly.

Farm Topics.

CULTIVATING WITHOUT PLOWING.

W. J. FOWLER.

Plowing land has always seemed to me an expensive and wasteful way of preparing it for seeding. All that the plow aims to do is to reverse the soil. If in addition it pulverizes the newly turned surface, the benefit is incidental and accomplished only by disproportionate labor. The Londoner said he never liked farming—the land was invariably wrong side up, and had to be turned over before anything could be done. With sod land intended for sowing or planting, this reversal of the soil is necessary. But fully two-thirds of the plowing done in this country is of stubble or after hoed crops, and for these, turning the surface soil to the bottom of a deep furrow is more often a detriment than a benefit. English farmers are using a scarifier, cutting up the stubble and pulverizing the soil to the depth of five, six or seven inches, but without turning it over. This does not cost as much labor as plowing; more surface can be prepared per day in as good or better condition, and from what I have heard of this process, I judge it is a success.

It seems to me that this surface-working stubble ground for wheat in the fall ought to succeed. When we plow, good farmers drag and roll the surface so as to make it hard and pack the under soil as thoroughly as before plowing. If the soil is properly enriched, it makes little difference to wheat how hard it is. Generally the harder the sub-soil, with only two or three inches at the surface moist and permeable, the safer the plant will be from winter-killing and the better the crop. The stubble of oats and barley is in the way of successful shallow culture. The plow, which will turn the stubble well under the furrow, seems to be indispensable. Yet the stubble itself is of little or no advantage to the wheat plant. If the field could be burned over before plowing, and then cultivated to the depth of three or four inches, it would be the best seed-bed possible. The ashes of the stubble mixed with the surface soil, would be worth more as manure than the stubble itself, decaying as slowly as it is apt to do.

Our severe Northern winters pulverize the surface soil to the depth of three or four inches, and especially after hoed crops there will be on the surface a fine vegetable mold which makes the best possible seed-bed for oats or barley. If the preceding crop has been kept clean of weeds, as it should be, it will be a great mistake to plow it. Dragging or cultivating the surface lightly, so as to level down ridges, is all that is required. If corn stubs or old potato vines are in the way, they should be gathered in heaps and burned. By this method a large amount of land may be prepared for seeding with little labor and in much better time than if done by the plow followed by the cultivator or harrow. For most kinds of spring grain, it seems to be well settled that shallow plowing is usually better than deep. On well cared for, clean and mellow potato stubble the after grain crop will be better if the plow is dispensed with altogether. The exceptions to this are where the soil is foul with thistles and other weeds which need to be checked by spring plowing, so as to give the grain an even start and better chance to keep down the weeds.

THE TIME TO SELL PRODUCE.

One of the most perplexing questions with which the farmer has to deal is when to sell his farm produce, so as to realize the highest possible price for it. It is straight-forward work to raise a crop and prepare it for market; but to decide upon the exact time to sell it and the price it should bring, is quite another thing. Almost any product of the farm will bring more at some part of the year than at any other; but that time varies in different years, and it is not always easy to foretell when that time will come or to recognize it on its arrival. If a farmer harvests a crop, he feels that he should receive the highest market price for it, and so when he has prepared it for market, he is sometimes undecided whether to sell it at once or hold it in hopes of a rise in the price. It is impossible to give any rule by which a person can decide the time to sell any crop to the best advantage. Some farmers are in the habit of keeping their produce too long, and are thereby sometimes heavy losers. A case of this kind came under my notice, of a farmer who once received the enormous price of $2 50 for a large crop of wheat. He was thought by his neighbors to have been very fortunate; but it proved the reverse, for since then he has not been willing to sell any crop of grain at a fair, remunerative price, but always "hangs on" for more, sometimes for years and almost always with loss.

Here is one of the greatest advantages that a farmer may receive from reading agricultural papers. The market reports and especially the "Everywhere" department of the Rural, are of great use to those who know how to utilize them. From them we learn the state of the markets in the principal centers, and the progress and prospects of all the principal farm crops in different parts of the country, by which we may judge whether there is likely to be a scarcity or a surplus in any product we may have to sell. If we find, from these reports, that in a great many parts of the country a certain crop is unusually poor, it is reasonable to judge that the demand for that product will improve, or if for any reason there is a light crop of some certain product in some foreign country, thus causing a great foreign demand, we can also hope, with reason, for higher prices for that particular article.

But there are other things to be considered besides a probable rise in price, in holding farm produce. In all the products of the farm, there is, of necessity, a constant waste. Loss of weight from shrinkage, damage from rats and mice, insurance and interest on the money that it would bring, should all be taken into account. Doubtless the best time to sell produce, in the long run, is as soon after it is ready for market as we can receive a fair, remunerative price for it, unless for some good reason there is a reasonable prospect of a better market in the future. G. A. Gore, Jr.

FURNISH YOUR BOYS WITH TOOLS.

Prof. John E. Sweet, in an address before the Onondaga Co. Farmers' Club, said: "The farmer who provides himself with the necessary tools to do the repairing of the farm, not only makes a paying investment, but does for his sons, in another way, just exactly what he does for them when he sends them to school. He gives them a chance to learn something; he does even more—he gives them a chance to learn to *do* something. From among those boys will be found the mechanical engineers of the future."

It would be difficult to crowd more truth and common sense into this short space. It is well known among mechanics that when an apprentice "learns to handle his tools," his trade is half learned. No man can even saw off a fence-board as it should be done without considerable practice. He must first learn to handle his saw. Not half of mankind—to say nothing of womankind—can drive a nail without either splitting the article nailed or pounding their fingers, and perhaps they will do both. Not one man in twenty can shove a jack-plane with any reasonable hopes of success, and the like awkwardness extends to the use of all manner of tools. If farmers will furnish their boys with tools, and teach them how to keep them in order, the next generation will not be so helpless when anything is broken, as is the present one. With a few dollars invested in tools, many journeys to town may be avoided. Moreover, by the use of tools one may learn something of mechanics, and is a much better judge when called upon to select any farm machinery or tools.

I remember an instance, when a boy, of a neighbor who had a small workshop, with an assortment of tools, which his boys were allowed to use, and the consequence was, his five boys, every one of them, became in time first-class mechanics, and some of their useful inventions have been described and illustrated in the Rural. Other boys in the same neighborhood, apparently equally intelligent, almost without an exception, grew up to be bunglers, some of them without sufficient skill to sharpen a sled-stake. N. R.

Arboricultural.

PLANTING HIGHWAY SHADE TREES.

FORREST K. MORELAND.

That portion of the highway laws of this State which has particular reference to the planting of shade trees is well calculated to accomplish the desired end. The law is contained in Chap. 566 of the laws of 1870, and is substantially as follows:

Any inhabitant liable to highway tax, who shall transplant by the side of the road any forest shade trees or fruit trees, of suitable size, shall be allowed by the overseers of highways, in abatement of his highway tax, one dollar for every four trees set out; but no row of Elms shall be planted nearer than seventy feet, no row of Maples or other forest trees nearer than fifty feet apart, except Locusts which may be set thirty feet apart, and no allowance, as before mentioned, shall be made, unless such trees shall have been set out the year previous to the demand for such abatement of tax, and are living and well protected from animals at the time of such demand. No person shall be allowed in abatement of his highway taxes, as aforesaid, more than one quarter of his annual highway tax, and no one shall receive any abatement of tax for trees planted previous to the passage of the act. This is substantially the law as affecting the reduction of highway taxes by setting out shade trees. There is also a statute protecting farmers who may set out trees in the highway opposite their lands, provided the trees are not set closer than six feet apart. In this latter case the farmer owns the trees and may use them for his own profit and may protect his rights as against all others.

It is my opinion that those who take advantage of the statute allowing an abatement of a portion of the highway tax, after receiving this abatement, lose the right to convert such trees to private use afterwards. For illustration: A, in the spring of 1879 planted a dozen shade trees on the road-side. In the spring of 1880, all of the trees being alive, he receives his abatement from high-way tax to the amount of three dollars. He has virtually sold these trees to the public, and when they become valuable for timber or fuel, he has no right to cut them and apply them to his own use. Not that the public own the trees, but trees transplanted under these conditions become like the soil of highways—the property is in the adjoining owner, but the public has an easement that the individual cannot interfere with or control.

The compensation for setting out shade trees is sufficiently liberal, so that there ought not to be any highways unprovided with such trees. There are few farms so situated that good wages cannot be made at setting trees at twenty-five cents each. It is only necessary to set sufficient trees each year to cover one fourth of the highway tax for the next year. An interesting question might arise when a farmer having complied with the statute and having received his abatement, should afterwards take advantage of his right to set out as many trees as he wished not nearer than six feet apart. He would own the trees not set out under and in compliance with the statute, free of any claim or interest the public might have. I think the statute a very good one and one that aims at important results, but in no part of the State with which I am familiar, has it awakened much interest among farmers. I should like to see the experiment tried of fixing the value of the trees at a higher price, or, if that should not be deemed advisable, to allow them to be planted closer, and allow a larger portion of the highway tax to be commuted in a single year. The law is a good one, but it does not seem to reach the average mind, and it certainly has not been productive of the good that our legislators strove to accomplish.

St. Lawrence Co., N. Y.

The Sunray Pine.

I have had the Pinus Massoniana in cultivation for ten years. During this time it has proved perfectly hardy, and very easy of propagation. Five years ago I grafted several young Scotch Pines with clons of this tree; nearly every clon grew and one small tree is bearing cones, though none have appeared on my oldest tree. This Japan Pine is not only very hardy, but it is very beautiful, having the soft, slender leaves of our White Pine arranged after the manner of the Scotch Pine—two leaves in a sheath, and densely clustered on the ends of the branches, spreading in every direction, hence the common name of Sunray Pine.

Hardin Co., Ohio. W. C. Hampton.

[The Rural New-Yorker had the honor of conferring the name of "Sunray Pine" upon the Golden Variegated Pinus Massoniana. The species had never, that we know of, been called "Sunray Pine," for the reason stated by our friend or for any other reason, before we so named it.—Eds.]

That Florida Coffee Tree.—I see by an editorial note in the Rural of Dec. 13th, 1879, that some of the public press doubt the truth of the maturing of the coffee-berry in south Florida. During the past week I had the pleasure of inspecting a limb taken from a Coffee Tree belonging to Mrs. Joe Atzboth, of the County of Manatee, Florida—the lady alluded to in the article. On it were berries of three different ages, some fully ripe, some green and growing, some young berries and blooms. No, sir; it was not the product of the hot-house in Washington City, but the product of a four-year-old plant, grown in the open air on the banks of Manatee River, at Braidentown. None of the trees has been injured by cold yet. Doubt no more!

Tampa, Fla. T. F. Hampton.

Pomological.

TRAPPING THE CODLING MOTH.

M. B. BATEHAM.

Professors Cook and Beal deserve much credit for their persistent labors in teaching the people of Michigan how to trap that worst of insect pests, the codling moth, by what is called the band method; and it appears by the reports that quite a number of the orchardists of that State are practicing this method of saving their apple crops from worms, with considerable success. Professor Cook has also favored us in Ohio with his presence and instructions on this topic at several of our meetings within the past five years, but, as far as I have learned, not a single orchardist in this State has adopted this method, excepting on a few trees by way of experiment, or in small orchards where sheep or hogs could not be kept. Mention was made of this fact in my report of the late meeting of our State Horticultural Society published in the Rural of Jan. 3. Prof. Beal, alluding to that report, in a recent letter to me, says:

"I see that you again state that most of the speakers at your meeting, in discussing the codling moth, say the band method of trapping is too laborious or troublesome for large orchards. Here we change the bands nine times during a season; the labor costs only $1.08 per 100 trees, and the material for the bands about one cent a tree—in all a trifle over two cents a tree per year. Not such a dreadful expense or bother to us!"

I heartily congratulate Prof. Beal and the orchardists of Michigan on the discovery of such a cheap mode of managing this method of trapping codling moths, and I hope it may prove as effective as it is cheap; then it will certainly be the fault of the growers if the apples of that State are not hereafter free from worms. I hope also that Prof. Beal will tell us just how it is done; for I know he is not a believer in horticultural patents or monopolies. I have fears, however, that his cheap method will not be of much advantage to us in Ohio. For so little expense to be possible, I apprehend the trees must be young, with smooth bark and low heads, so that only one band has to be used, and no rough bark to be removed, and the bands were doubtless of cheap paper, and the work done by college boys or other cheap hands. In the Michigan Pomological Report for 1878, Prof. Beal states that he found the expense of the bands and labor for 250 trees, amounted to about four cents a tree. The size of the trees is not stated, nor whether one band or two were used. I presume it was the

same orchard as in the experiment above mentioned.

Prof. Cook and others have told us heretofore that cloth is the best material for the bands, and it is necessary to apply two bands to each tree, because it has been ascertained that about as many of the worms crawl down from the fruit on the limbs as crawl up from that fallen on the ground, to seek places of shelter beneath the scaly bark on the trunks; hence one band needs to be near the ground and another near the branches and of course all the rough bark must be removed from above and below the bands. In fact, Prof. Cook advises cleaning the whole tree of rough bark and washing with soft soap. Now, to say nothing of this latter process, it is quite obvious that the rest of the plan, including nine or ten removals and replacings of the bandages, is more laborious and expensive than represented by Prof. Beal, unless the trees are young and smooth.

The reasons why our Ohio orchardists are not generally willing to try this method, are: 1, the majority of the orchards in this State are older than those of Michigan, and the trees much larger, ranging from four to six feet in circumference where the bands should be applied, and covered with rough bark—not only the trunks but the limbs for 12 to 20 feet in hight—and to be at the trouble or expense of cleaning these of all the scales that can afford protection to the worms is simply out of the question—our farmers won't do it! And, 2, most of our apple growers are farmers who find it profitable to keep sheep and hogs, and, of course, raise corn or other grain to feed them when necessary, so that the services of these animals as worm destroyers in the orchard cost less, besides being more effective, than the band method in its application to large trees.

Death to the Currant Worm.

I mean the pale green worm from half to five-eights of an inch long with a black head; but why it should be called by the above name, I never could understand; for I never knew it to touch the Currants as long as there were Gooseberries near. After submitting to the destruction of my large English Gooseberries for two or three years, I looked up the biography of this insect, and finding that it hibernated in the ground under the bush, I applied in the spring a plaster of lime-mortar around the base of the bush over a circle of 18 to 24 inches in diameter. That season I saw only one of the pests, and none for years after. Mildew, however, set in strong, but my experience leads me to believe that sulphur, if faithfully applied, will most certainly prevent and even stop that; but it is safest to use it as a preventive. S. B. P.

Dairy Husbandry.

MILK-PRODUCERS' PROTECTIVE ASSOCIATION.

According to the agreement noticed here two weeks ago, more than 200 delegates representing the farmers of Orange and Sullivan counties, N. Y., and Sussex county, N. J., assembled at Middletown, N. Y, on Tuesday, Jan. 20, to organize a Protective Association. Fully 100 other farmers, not delegates, were also present. The following plan of organization prepared by the committee appointed on Jan. 6th, was almost unanimously adopted:

We, the milk producers along the lines of the Erie, Midland, and Sussex railroads and their branches, in order to protect our interests in the production and sale of milk and cream in New York city and vicinity, so long neglected as to leave them upon the verge of ruin, do hereby form ourselves into an association which shall be known as the Orange, Sussex, and Sullivan Milk Producers' Association.

That this association shall consist of two classes of organizations as follows:

A local organization of the milk producers at each milk station where there are 100 or more cows represented, to be known as a Station Association.

A controlling organization to be known as the Central Association, consisting of general directors, appointed by delegates from the different Station Associations along the lines of their respective railroads.

The Station Association shall be organized with the following officers, viz.: President, Vice-President, Secretary, Treasurer, who shall be under proper and sufficient bonds, and a Director. If at any milk station there be less than 100 cows represented by those wishing to form an organization, they may unite with other station associations.

Any milk producer may become a member of this association upon paying to the treasurer of the association of which he is to become a member the sum of $5 each for the average number of cans of milk shipped by him daily, and subscribing his name to the by-laws of the Station Association, which shall contain the following agreement or pledge:

"I, the undersigned, a milk producer of——Station, —— County, —— State, do hereby agree and pledge myself to place the milk and cream production of my dairy or dairies in the hands or under the control of the Executive Committee of the General Association to be disposed of for my best interest and for the best interest of all the members of this association.

"I do further agree to stand by and support this agreement in every particular, under the penalty of forfeiting, as liquidated damages, my membership fee heretofore paid by me to the Treasurer of this Station Association."

This plan of organization shall not go into operation unless two-eighths of the farmers shipping milk over the different roads represented shall subscribe to it.

This plan differs but little from the system successfully practiced for many years in the neighborhood of Philadelphia. It was also resolved to hold a mass meeting of the farmers of the three counties at the same place on Thursday the 29th inst., for the purpose of effecting a permanent organization.

Lewis Horton, of Golden Bridge, and J. D. Powell of Katonah, Westchester County, were present as a committee from the Harlem Railroad. They stated that producers shipping over that road were organizing for self-protection. They propose having an Executive Committee to transact business in the city for all producers on the Harlem Railroad, and would be glad to join with similar committees representing the Erie and Midland Roads. Committees of milk-dealers were also present, representing the Kings County and New York Milk Exchanges. N. B. Kilmer, a Brooklyn dealer, said the principal obstacle in the way of farmers getting a better price for their milk was the presence in the market of cheap milk, sent from the country or produced in the city, in the hands of irresponsible dealers, who undersold the regular trade. He read the draft of a bill which the dealers of New York and Brooklyn propose asking the Legislature to pass, providing for licensing every dealer by the Board of Health, and for a rigid inspection of milk at every point of shipping, as well as at the terminal stations; also prohibiting the use of brewers' and distillers' grains for feeding cows whose milk is offered for sale in the cities of New York and Brooklyn, the expense of the inspection to be paid from the funds derived from license fees. Only one farmer opposed the bill, which was approved by the meeting unanimously. George W. Allison, of the Orange County Milk Association of New York city, spoke of the immense number of cows in and about the city that were fed on distillers' slops, and said it was this poor milk which made the surplus, ruined the business of the legitimate dealers, and made them unable to pay more to the farmer. He hoped the farmers would not undertake to force a big price from the dealers, for if they did the dealers would get their milk from some other sources.

Threats of this nature were also made by several other milk-dealers and there seemed to be a good deal of acrimonious feelings between the milk producers and dealers. Doubtless the spirits of the latter were somewhat embittered by having been refused admittance to the meeting until after its legitimate business had been concluded. It is intended to have the organization ready to assume control of the milk of its members by April 1. It is not the purpose of the persons engaged in this organization to demand exorbitant prices for milk, but to secure remunerative prices at all times, and to regulate the supply to suit the demand, with a view to sustaining the price, and still keeping their product in the market.

A NEW DEPARTURE.

At the big dairy fair held in this city last month were exhibited cans for handling milk after a style that is not only entirely new, but looks to me to possess some of the elements of unfathomable possibilities. This, perhaps, is asking for a good deal, and yet we have all lived to see Orange County superseded by Iowa, while our professors were telling us at all the Dairymen's Conventions that good butter could not be made outside of a certain territory or belt circumscribed by the professors' own individual experiences. By the way, what has become of that "dairy belt" we used to hear so much about?

The item of interest I wished to call attention to was a set of tin pails about eighteen inches high, twelve across the top and eight at the bottom. In the side of these pails was inserted a pane of glass with, if my memory serves me rightly, a per-centum scale marked by its side. These pails are distributed among the dairymen with instructions to fill them with fresh milk from the cow, and set them immediately in cold water. At a given time twice a day this milk must be skimmed, and the owner of the pails calls for the cream.

It is a well settled principle in butter-making that cream fresh from the milk will not churn profitably; that is, a large per-centage of the butter will not come out of it unless the cream has had several hours to ripen before it reaches the churn.

It matters not whether the cream be sweet or sour when put into the churn, it must have this time to take on some chemical change, I suppose, before it will give up all the butter. Now the question is, what ought to be done with the cream during this time of rest? The aforesaid parties purpose to utilize it by hurrying it on to the market; that is to say, cream raised, say 200 miles (and if refrigerating means were employed the distance could be stretched to a thousand), from New York city, immediately when collected, is shipped to the city and there manufactured into fresh butter every morning.

Let us go a step farther: Suppose the centrifugal machine, through Yankee ingenuity, becomes simplified and cheapened until one can be found in every farmer's house; then the farmer draws the milk from his cows, puts it in the machine, and in twenty minutes he grinds out all the cream, hermetically seals it and ships it direct to the factory in New York city. By next morning the denizen of the big city, having forgotten all about the corner grocery, orders directly from the factory, a few blocks away, his regular morning's supply of fresh butter and real, genuine butter-milk—no churned clabber for him.

These are days of surprises, and it is dangerous to doubt the possibilities of our enterprising dairymen after they once get out of the leading-strings of their old grandmothers' ways of doing things. As an earnest of the practicability of this plan, I found a sample of cream at the fair put up in neat bottles and all the way from Iowa. The cream claimed to be some two weeks old. I took a bottle of it home and tried it in coffee, and on sweet preserves. There was not the slightest semblance of sourness about it; but, on the contrary, it was as sweet and delicious as any cream could be. How it was preserved I know not, except that it was hermetically sealed; but it certainly could travel across the ocean, if necessary, with impunity. If the process of preserving it is cheap, it may help to solve the above problem. L. S. Hardin.

Sheep Husbandry.

THE ORIGIN OF LINCOLN SHEEP.

I notice my name in connection with a dispute as to the "Origin of Lincoln Sheep," in the Rural for December 27, and with your permission will endeavor to set the parties right. Now, if we try to ascertain the "origin," we shall have to go back to the Dark Ages of sheep-breeding; for we read in an ancient history of the county that "The Lowlanders came to Lincoln for the fine wools of the sixteenth and seventeenth centuries, when the tide of the Witham rolled at the foot of Lincoln Castle walls, and barges came to load for the Low Countries, and even at that time the long wool of "Ye towne of Lincoln and ye comntrie about" was greatly esteemed.

But I suppose what your correspondents are after is to ascertain to what breed or breeds the Lincolns of the present day are indebted for their wonderful development of both wool and mutton. They were originally celebrated as producers of the very finest quality, as well as the heaviest fleeces of combing wool, but at the same time they were large, coarse, slow-growing sheep. I believe there can be but little doubt that the Leicester has been used to make them mature sooner and take on flesh quicker while young, though many of the best ram breeders deny such to be the case. They claim that it has been done entirely by selection, and pertinently ask if Bakewell could *manufacture* the Leicester from sheep similar to theirs (Leicestershire and Lincolnshire being adjoining counties), why not the Lincoln breeders improve theirs also by selection? The point now is not worth disputing, for in my opinion there is not a long-wool sheep of any breed in England worth owning, that has not some Leicester blood in its make-up. But let us rather give credit to those breeders who had the sagacity to use the cross in such a manner as to retain all the good qualities of the old Lincolns, and only absorb such as were desirable for their purpose from the Leicester. That there have been any "dashes" of late years is not probable, because the Leicester can add nothing that the Lincoln requires. What was done in that direction was about 90 years ago, for we find that four Lincolnshire farmers paid Mr. Bakewell 1,000 guineas ($5,000) for the *use* of *one* ram *one season*.

That the Lincolns are indebted in any way to the Cotswolds is not a fact. The cross has been tried, but invariably with bad results. I know a once prominent ram breeder who tried the cross, and in two years he lost all his customers, and had to go out of the business. They are pre-eminently the sheep for the district in which they are raised, growing heavy fleeces of the finest lustre wool, producing the heaviest carcasses of mutton, and being so hardy that they can "winter out" on turnips, perhaps up to their knees in mud for weeks together during a rainy season, and not only live through it, but grow and do well.

G. G. says there are only two cases of Lincolns reaching 400 pounds. I could give many more. At the Smithfield Cattle Show they almost invariably carry off the honors as the heaviest sheep exhibited. Again this year, as usual, many ewes have been exhibited there weighing 350 lbs. each and upwards. "Dashes of Blood" will be considered in next.

Ont., Canada. R. Gibson.

The Poultry Yard.

A PROFITABLE POULTRY ACCOUNT AND ITS LESSONS.

NELSON RITTER.

Having kept an accurate account of the receipts and expenses of my hens for the last 13 years, it may interest readers of the Rural if the results are given:

Amount received for chickens and eggs sold in 13 years		$2,624.46
Amount paid for feed in 13 yrs	$1,446.98	
" " " fancy fowls and eggs	54.22	
" " " additions and repairs to hen-house	87.94	1,589.14
Leaving as net profit		$1,035.32

or a profit of about 65 per cent. The number of hens kept ranged from 50 to 280. The best results were obtained when 150 were kept. I am well aware that this report falls below many highly-colored ones that we read of in the papers; but it has the merit of being a truthful one. All poultry and eggs were sold at market rates, none having been sold at fancy prices, so that this profit is a legitimate one, and can be realized by any person using common sense in the management of his hens. The highest profit in any one year was $203 38, in 1870; the lowest $26 25, in 1875. In the years 1869, 1870, 1871, 1872, the profit was $633.12, leaving $402.20 for the other nine years. This difference was partly owing to the change in price of eggs and chickens, and partly to a change in the breed of my fowls. It will be seen that each dollar paid out in the 13 years, has given a return of $1.65, often within the week, certainly as often as once per month upon an average.

In looking back over these years I discover many mistakes made that lessened the profits. They certainly can be avoided hereafter; but, whether others equally detrimental will not be made, is not so certain. The worst mistake was my catching the "fancy-hen fever," and paying exorbitant prices for new breeds that looked well, but were in all other respects undesirable. Hens, bred only for color, purity of plumage, exactness of comb, etc., will not lay well—at least that has been my experience. The person who has a fancy for perfect fowls, and has the means to gratify that fancy, has certainly a perfect right to do so, just as he keeps other pets; but for the man of moderate means, who is obliged to keep fowls for profit, a "business hen" is best. After paying $4 per dozen for eggs, and raising chickens that would not lay well, and becoming disgusted with this result, I watched our markets until I discovered a man who brought in plenty of eggs in the winter months. His eggs were bought without any questions as to breed, and set with satisfactory results. This is a good way for new beginners to procure a stock of laying hens, afterwards selecting eggs from the best layers for setting, and thus improving in that direction.

Let me add that when one's hens are doing well, he should not change them at the solicitation of persons having something better to

sell, nor be misled by glowing advertisements of some wonderful new breeds. Give the fowls you have the care and attention you would the new kinds, and you will find less difference in breeds for profitableness than most people suppose. If you desire to give new breeds a trial, "go slow," cling to what you have until the newer ones prove to be more desirable, even if you are called "old fogy" for so doing.

Onondaga Co., N. Y.

PRESERVING EGGS.—Several years ago I came across an article in some paper, stating that a factory had just been started at Passau, Bavaria, for this purpose. The eggs were first dried, then ground to a fine meal, and this put up in tin cans for use, the same as we do with fruits and vegetables. If this method of preserving eggs proved successful in Bavaria, it would be well worthy of adoption in America, especially in the Western and Southern States, where eggs are so cheap and it is so difficult to find fair sale for them. Thus prepared, an almost unlimited market may be insured for all our surplus, and a high price. Not long since, I saw a statement in an English paper, that the rounding number of 870,000,000 eggs had been imported from France into Great Britain the preceding year, valued at £2,650,000—say about $13,000,000 of our money. I do not know how true the above statement is, but if it states a fact, the United States ought and might, if we take the proper means to do so, profitably share in this importation.

A. B. A.

PEKIN DUCKS.—Take it all in all, I do not consider the above-named ducks as profitable as the smaller breeds. A near neighbor keeps them, so I have had a good chance to watch them, and also to make some inquiries in regard to them, and with the same care that the smaller breed of ducks receive, they scarcely give any profit, while the others do well. The Pekin ducks are beautiful water-fowls, but I do not believe they are profitable to keep, except as fancy fowls, and if anyone who does not breed them for sale at fancy prices has found them otherwise, I should be pleased to hear from him through the RURAL.

F. H. D.

The Swine-Herd.

YORKSHIRES.

The Different Families, their Origin and Characteristics.

COL. F. D. CURTIS.

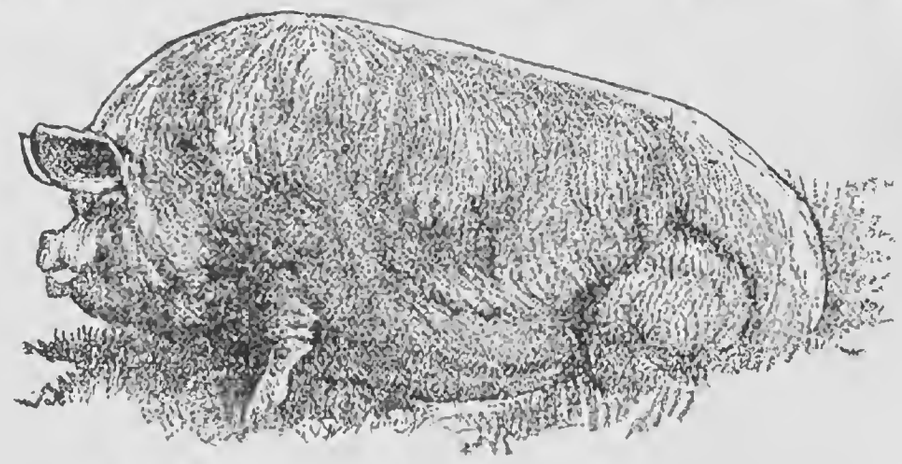
AMONG the breeds of white hogs the Yorkshire, as a pure breed, seems to antedate all others in England. The original Yorkshire hogs were undoubtedly the native breed of England and were of the same blood as those bred in other counties, with the differences which liberal or scanty feeding always make—and carefulness in selection and breeding. The Yorkshire farmers seem to have been impressed early in the present century with the importance of improved pigs, and of careful breeding, in order to obtain them. It is probable that they first used white Chinese pigs to cross upon the native. The effect of crossing these chunky and thick-fleshed pigs upon the long-bodied and coarse natives, would be to shorten the bodies, round the hams, widen the shoulders and make the cheeks plumper, as well as to shorten the noses.

These characteristics are developed to a marked degree by these ancient pigs. Mr. Harris, in his work on the pig, quoting British authority, says "the first improvement of the old native Yorkshires was made by crossing them with the white Leicester." He does not tell us how the Leicester pigs originated, but they probably trace back to a direct Chinese cross, as this was the only breed of pigs in those days, which could make the changes which were the basis of the improved hogs.

A variety of families of these improved white pigs seems to have been started in different parts of the kingdom, very similar, if not almost identical, in points and appearance. At first, the large pigs seem to have taken the lead, which was natural, as the original hogs were coarse and slow to mature, often reaching an excessive weight. Subsequently, a finer and smaller family was established, called the Small Yorkshires, which could have been done by constantly selecting the chunky and finer-bodied pigs or by direct and positive crosses with the Chinese. A middle breed was established, later, which is the best, as it is neither large nor small, and possesses all of the desirable qualities of both.

The Yorkshires are thick-meated and easy to keep. They are more objectionable than some other breeds on account of the large amount of fat in proportion to the lean, and on this account are not suited for bacon, and the hams require close trimming or there will be a considerable waste of fat. Their clear white color, and thin, delicate skins make them an attractive breed, while the fine grain of their flesh makes it very palatable. The American market does not now demand the thick, heavy pork which used to be so popular, but a thinner and leaner sort. On this account, the Yorkshire pigs and their crosses will not be so much bred, notwithstanding their early maturity and remarkable aptitude to fatten. The same criticism will apply to all similar breeds.

In England the name, Yorkshire, has been supplemented by a number of others, and these the names of different families, as York-Cumberland, Cumberland, and Lancashire, another name for Manchester; quite recently the general and more appropriate name, Small White breed, has been substituted for the various titles given to the smaller white sorts,



MR. SPENCER'S PRIZE SOW, "SISTER TO OMEGA."—FIG. 30.

which are now bred as much in other counties as in Yorkshire or in Cumberland, if not more. There is but little waste in these pigs, as the following standard of characteristics indicates.

The principal points are:—"A short, upturned nose; lower jaws dished; prick ears, slightly inclined forwards; heavy jowls; the neck somewhat long and well padded with flesh, making the head appear to be hung at a lower level than the shoulders, which should be wide apart and well joined to hoop-like ribs; the loin wide; the hind-quarters long and square, with meat down to the hocks; the tail thin and set high; the legs short and placed well apart, the whole being covered with a coat of fine hair." This is the English standard, as taken from the London Live Stock Journal of recent date.

While a good coat of hair is the standard, many of these pigs "run back" to the old Chinese type, and have bodies nearly naked, or with thin and scattered coats. This is one of the objections to them, as in summer they are liable to blister when exposed to the hot sun, and to get scabby in winter on account of the cold. It is a singular fact that these white hogs, when crossed upon either Essex or Berkshire, will almost invariably produce pigs with dark spots on the skin, the hair being entirely white; but these pigs bred together will become spotted or mixed in color.

The large Yorkshires are not numerous in America. A few years ago fine specimens were exhibited at the State fairs by James Brodie & Son, of Jefferson Co., N. Y. These were the only ones which had the appearance of being well-bred, that we have seen for a number of years. The smaller families are bred quite extensively, and usually fill a number of pens at the fairs, ranking in numbers and size about the same as the Berkshires, but more admired by many on account of their color.

The Yorkshire pigs, like all other thoroughbreds, will improve any kind of native hogs, when crossed upon them, by producing more aptitude to fatten and also smaller bone, with less offal, and thereby an increased value. Such crosses will mature earlier and make more pork, on the same amount of feed, than the natives.

IN connection with the above article on Yorkshire Swine, we give herewith an engraving of a celebrated English prize-winner of that breed, Mr. Spencer's sow, "Sister to Omega." Redrawn from the Ag'l Gazette.

HOG CHOLERA.

THE appearance of hog cholera in this neighborhood within the last month reminds me of the efforts the Government has made to investigate the nature, causes and treatment of this malady. I have wondered if all over the Union there is as much ignorance and lack of interest about these investigations as among the farmers of this section. Here in Illinois every sick hog is supposed to have the cholera. Thousands of hogs are yearly lost owing to this popular error. My own experience is an illustration of this. For three years during February, March and April, I lost several pigs from four to six months old by a disease my neighbors and myself supposed to be cholera. When one thinks this plague is destroying his hogs there are a folding of the hands and a feeling of helplessness that lead one to think the trouble of investigation useless and to make no effort to avert the calamity; whereas by such an effort, all, or at least a part of the infected animals might be saved. When once my doubts were aroused as to the nature of the malady attacking my hogs, a little investigation soon proved that it was not cholera. Having ascertained the real nature of the disease, when the pigs began to ail I was able to treat them so as to save them all. Just in the same way thousands of hogs that might easily be saved, are yearly lost through ignorance and misconception.

Another fruitful source of loss lies in the belief of many in remedies for hog cholera. The venders of these, though generally frauds who knowingly impose on the credulity of their dupes, are occasionally themselves deceived. A few of them may have succeeded in curing their hogs with the nostrums, from what they supposed to be cholera, but which in reality was some other ailment. Then the greed for making money out of their discovery has confirmed their belief in its efficacy, or silenced any doubts raised by its failure in hundreds of other cases. The majority of those who sell such recipes or nostrums, however, are arrant swindlers with no real faith in their own medicaments, but an unbounded belief in the gullibility of the rural population—a belief which their success year after year shows to have some foundation. Farmers trusting in such worthless "cures," are apt to neglect other precautions and lose their hogs.

A. C. WILLIAMS, M.D.

Industrial Societies.

THE CORNING (N. Y.) CANE SUGAR ASSOCIATION.

Mr. Reynold's Reply to Hector Bertram.

IN the RURAL of Dec. 20th there appears an article over the signature of Hector Bertram, which contains a number of misstatements. At the time I did not consider them worthy of a reply and should not make one now were it not for the fact that I am in correspondence with a number of your readers (strangers to me) for the further advancement of the sugar industry, and as the said H. B., for some reason unknown to me, continues to vent his malice in other journals, I feel now that it is necessary, in justice to myself and the Husbandman from which you copied the article, to make a plain statement of facts:—

Two years ago last summer Mr. D. W. Payne, of this place, spent several hundred dollars in experimenting with sugar beets. During his experiments I became very much interested. The next spring I obtained from the Agricultural Department at Washington some seed of the Early Amber cane, which I planted with great care on the 3rd of June—I think after my field corn was up. It was a good season for corn, and the cane made a splendid growth and ripened its seeds before frost. With the assistance of Mr. Payne I constructed a rude crusher, and hired a one-mule tread power to extract the juice. I boiled it down after the proper defecation, and succeeded at four different times in obtaining a good article of sirup, in two instances after the cane had been severely frozen. I exhibited these samples at our local fair and Farmers' Club, making a plain statement of the facts to our Club. It produced quite a desire among the members to try it themselves. Accordingly, when spring came, having about 50 pounds of seed, I donated it to the Club, each member taking what he wanted. Gen Le Duc, also very kindly sent me several packages which I distributed. The last season being very dry, the cane did not grow or do nearly as well as it did with me the preceding year, very little of it getting ripe. Many of the farmers who planted it, placed the seed too deep in the ground or too shallow, and others planted it on very dry ground or failed to "firm" it in sufficiently to sprout it.

In the fall, however, at an early meeting of the Club, it was found that among the members there were about two acres to be worked up. Ten of the gentlemen joined with myself and formed an association for the purpose of experimenting and working up our cane. Mr. H. D. Smith, the former president of our Club, was chosen president of the company and your humble servant secretary and treasurer. I sent at once to Cincinnati for a crusher. On its arrival, I superintended the placing of it, as well as the construction of the pans, arches and everything else connected with it. From the time the first stalk of cane went into the mill, until the last was ground and finished, I was away but three days, I think, and on those days I was invited by the Chemung Co. Fair and the Elmira Farmers' Club to their place to show them how to work up some cane and corn-stalks they had. I entirely neglected my farm affairs, and for two weeks worked night and day, often going home at two or three o'clock in the morning. I ordered chemicals from Prof. Stewart and the Clough Refining Co. But they failing to arrive at the first of our working, I experimented with those of my own manufacture. The chemicals purchased were placed in the tanks by myself alone. So much for my *personal supervision.*

As regards Mr. H. B's statement that, "the Corning Farmers' Club were surprised to find my first report coming indirectly through the RURAL, I will say that the sugar association had no meeting from the time we commenced work, up to the day in which the members met at the Farmers' Club, and during an intermission they gave in the measurements of their grounds, etc., which I placed on record, and Mr. Bertram forwarded the same for your publication, together with a statement that for $70 a crusher and pans suitable for working up the cane of a neighborhood, can be obtained. Our experiments the past season fully prove that a crusher of ample power and suitable pans for working 10 acres cannot be obtained for less than $150,—and I would much prefer to have the crusher alone cost that. At some future time I will try and give the readers of the RURAL a statement of the best and simplest method I know of for working up Amber cane and corn-stalks. During my visit to the Elmira Farmers' Club, President Hoffman called upon me to tell them something about what we were doing in Corning in the sugar industry. The few simple statements which I made to them from memory, *I think* fall very short of the complete report of the secretary of a sugar association that has accomplished as much as ours.

C. J. REYNOLDS.

I certify that the above is a true statement and that Mr. C. J. Reynolds is a gentleman of honor and integrity.

H. D. SMITH.
President of Corning Sugar Association.

[We publish the above with pleasure, in justice to Mr. Reynolds whose statements, from what we know of his character, would have been fully credited without the certificate which he has chosen to append to his communication. Should our friend Mr. Bertram entertain different views, he will agree with us that our columns are not a suitable place to present them. EDS.]

Scientific and Useful.

ADULTERATED CLOTHING.

PROFESSOR F. H. STORER.

A GOOD deal of nonsense, mixed with some grains of truth, is written from time to time by the professed philanthropists in respect to the adulteration of food. Of the adulteration of clothing, on the other hand, we hear comparatively little, though in all probability this subject is of paramount importance. The abundance and cheapness of cotton in this country, the familiarity of our manufacturers with the modes of working it, and, above all, the enormous demand for cheap and tasteful clothing on the part of the great American people, have led to the introduction of this less valuable fiber into ordinary "woolen" goods to an extent which but a few years since would have been almost inconceivable. Not only are so-called woolen goods prepared by weaving together mixtures of cotton and wool, rag-wool, and shoddy, in divers ways and in varying proportions; not only is the dust of wool (called "flocks") shrunk into woolen goods, even those of fairly good quality, to make them heavier and more compact; but by resorting to certain styles of goods and methods of weaving, so that the cloth shall be appropriately thickened in ribs or ridges, it has even been found possible to make clothes salable for men's winter wear out of nothing but cotton. Some samples of heavy cloths, which at first sight look as if they were certainly woolen and as if they were able to keep a man warm, and which really are thick and strong, have been found not to give off in burning any trace of the "burnt-wool" smell, with which everyone is familiar. Some years since, certain goods for gentlemen's wear were fashionable, which consisted of gray woolen with occasional golden threads of silk between. But of late, both the silk threads and the woolen parts as well, have been replaced with a really good imitation consisting of nothing but cotton. These debased goods are sold at low rates, and many of them are in good taste and of seemly ap-

pearance. They are durable no doubt, and the buyer commonly gets his money's worth. The only trouble is that, in most instances, they are not fit for the particular purposes for which they are bought. Cotton goods are not appropriate wear for anyone exposed to the winter's cold, in the northern United States. They have much less power to keep in the vital warmth or, in other words, to protect the wearer from cold, than is possessed by woolen or by silken goods. There is sound sense in the practice of those northern Chinese who habitually dress in silken raiment and put on one extra jacket of this material for each degree of cold.

The power of cotton, silk and wool to conduct heat was determined, in 1877, with special care, by Schuhmeister, of Vienna, with the result that, if the conducting power of air be called 1, that of silk is about 11, that of washed merino wool about 12, and that of cotton about 37, on the average in each case, and as nearly as may be. Each of the materials was in the unmanufactured condition and had been pulled apart with the fingers so as to bring it to a similar condition of aggregation with the others.

Of the cheap, thick goods made in imitation of woolen, which are sold for winter use upon every hand, it should in justice be said that they are good enough for (early) autumn wear, while the somewhat thinner goods sold in autumn are really well suited for much of the weather of our summers, at least for those on the sea-board. But for January, February, March, and parts of December and April, most of us need woolen and that of the best, Every man who wishes to avoid the neuralgias and rheumatisms which make life wearisome, to say nothing of the sharper pleurisies and pneumonias which make the grave-yards full, will do well to consult some other qualities besides mere thickness when selecting his winter clothing and that of his children. There are various familiar tests of wool, such as its softness and warmth and the peculiar odor which is given off when bits of it are burned. It is well, also, to ask the salesman whether he means cotton-wool, lamb's-wool, sheep's-wool or goat's-hair when he glibly assures us that the goods we are pricing are "all wool," for the phrase is one of many meanings. It is not only used every day in a "conventional" sense, dissimilar from its real significance, but often, I fear, in several senses in as many consecutive breaths. But for the inexperienced buyer, perhaps no test is so good as the selling price. When dealing with a fairly trustworthy merchant, we may safely count on his goods being rich in cotton in proportion as they are cheap. Other things, such as fineness and elegance, being equal, the cloths which contain most wool will be sold for most money.

Miscellaneous.

Notes.

GOLDEN RURAL TOMATO.—This tomato, of which the RURAL NEW-YORKER favored me with seeds, I think very highly of, but do not think the flavor to be quite as fine as that of the Acme, which I also raised for the first time the past season.

FARM BUILDINGS.—As a general thing, in the construction of farm-houses and outbuildings, not enough attention is given to the ornamental part of the work, although it is receiving more attention than formerly, which is a good sign. When a farmer erects a set of buildings, or even a single one, it should be made a point to build in such a manner that it will be an ornament to the landscape, as well as serve the purpose for which it was erected.

TREE AGENTS.—This class of men are again in the field for the winter campaign with their highly colored plates, and "flowery" language. Do not be led into paying high prices for so called new sorts of plants, or trees, to be repented of at length, when they are found to be worthless, or else old varieties under a new name, as is often the case. It is always best to buy of responsible nurserymen.

SPREADING MANURE.—When driving to the village the other day, I passed a field where the farmer was engaged in spreading manure from little heaps, which he had recently placed there. Now why this method is in so common practice I am unable to say, unless it is because "father done so," for it is certainly much easier to spread it directly from the wagon; besides, it can be distributed more evenly, and takes less time. F. H. D.

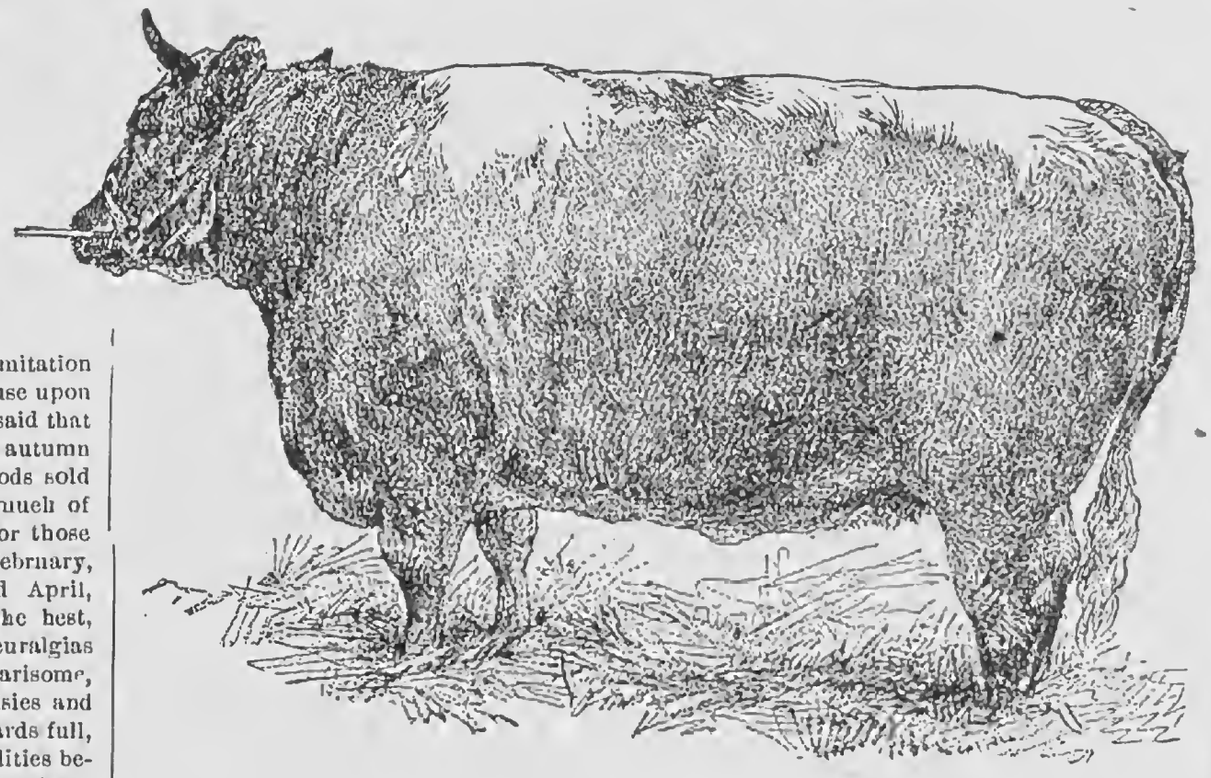
CATALOGUES, ETC., RECEIVED.

THE Farmers' Station Record. This is a Monthly, and the first number now before us is filled with interesting matter, a good deal of it from the pen of Mr. Conrad Wilson, its venerable editor. The plan of the publication and its peculiar objects we do not understand fully, and we must, therefore, defer a further consideration of the periodical for another time. It is published in this city, and communications addressed to Conrad Wilson, Box 2,695, will receive prompt attention.

FARM MANUAL—W. Atlee Burpee & Co., 221 Church St., Philadelphia, Pa.—Garden, farm and flower seeds—also blooded stock. This is not a very elegant catalogue, but there is a good deal of enterprise about it. We notice the Telephone pea here offered—also Teosinte (of which the RURAL has frequently spoken as of probable value for warm climates as a fodder plant), Blount's White Prolific corn, Doura, etc., etc. The catalogue also gives lists of all sorts of poultry, eggs for hatching, shepherd and other dogs, cattle, sheep, hogs, etc. Sent free.

BENSON, MAULE & CO., 223 Church St., Philadelphia, Pa.—Illustrated and Descriptive Catalogue of Garden, Field and Flower seeds; also a selection of small fruits, trees, plants, bulbs; also a price list of thoroughbred stock and eggs for hatching. Free to applicants.

NOTE.—In referring to the Catalogue of E. & J. Williams (Montclair, N. J.), we said that their fine Raspberry, the "Montclair," is now, for the first, offered for sale. In this we were mistaken. They hope to offer plants "in limited quantities *another year*."



MR. RATCLIFFE'S SHORT-HORN HEIFER.—FIG. 31

The Herdsman.

A SURE MARKET FOR YOUNG SHORT-HORN BULLS.

THE great Western Plains may be depended upon for many years to come as a good and certain market for them, as it is found that they make a more rapid improvement in their progeny, when crossed upon the wild Texan and other common cows, than any other breed. The trouble and expense of placing them there in small numbers, have till recently been so great, and they arrived at their several places of destination in such poor condition generally, as told greatly against them, and no one there could be tempted to give their real value. Thus, there was usually a loss to the breeders of these bulls rather than a gain in transporting them to the Western Plains. But now, by clubbing and taking a large number together in cars, with careful attendants and plenty of forage, these young bulls are delivered in excellent condition, and at a cheap rate, at any point required on the railroads; and it being advertised extensively beforehand that they would be for sale at such places on certain days, Western breeders flock in from all quarters to purchase, and are found willing, under these circumstances, to pay fair prices.

Steers suitable for exportation to Europe are the most profitable sort for the breeder to produce, and the feeder to market; and the nearer these approach the oblong, square, blocky form of the Short-horns, the more beef of a superior quality they will make for the food consumed, and the higher is the price it will fetch in the European market. Thus ensues a double advantage in breeding such grades—meat at less cost in production to the breeder and feeder and the obtaining of a greater sum for it. In order to make the most rapid improvement in grade stock, thoroughbred bulls alone should be used; and those of the best constitution, most compact in form and finest in all their points; are to be preferred.

OUR ANIMAL PORTRAITS.—The accompanying portrait represents Mr. Ratcliffe's Champion heifer at the late Islington, Eng. fat stock show. She is a very fine specimen of the Short-horn breed; having in her the blood of the Princess and the old Moss Rose tribes. The engraving is redrawn from the English Agricultural Gazette.

COLIC IN HORSES.—I am satisfied that this is produced from indigestion more often than from other causes. I had two horses, one of which would not eat cut hay wetted and mixed up with meal, while the other ate it greedily. The latter was affected often with colic, while the former was never attacked. The colic would continue severely for several hours, although I administered the best advised medicines for it, and the horse would not eat anything after the attack for a whole day, and sometimes longer.

The feed thus given with the cut hay was usually two quarts of Indian meal, two quarts of wheat bran, and one pint of oil meal, morning, noon and night. I presume wetting them all up together clogged in the stomach and caused the colic. Considering this, I subsequently fed the meal ration dry by itself, and gave the horse dry, uncut hay; since this it has not had a single attack of colic.

A. B. ALLEN.

Various.

AGRICULTURAL NEWS.

THE fifth annual meeting of the N. J. State Horticultural Society was held at Newark, January 15th and 16th, with a large attendance, and much interest manifested. The officers elected for the ensuing year are Pres., Jno. S. Collins, Moorestown; Rec. Sec. J. T. Lovett, Little Silver; Treas., W. H. Goldsmith, Newark. . . The owners of the Cook Evaporator patents are asking for their extension. Farmers in Ill., and Mo., are petitioning Congress against granting the extension as detrimental to the rapidly extending sorghum cane-growing interests of the country. . . In Minnesota 28,000 acres of prairie land were planted to trees in 1879 and 250,945 rods were planted in rows along the R. R's. . . A new deposit of guano has been discovered in caves near Cape Town, Africa. . . The farm products of Ill. in 1879 amounted to $200,000,000, estimated to be double the product of all the gold and silver mines in the country . . A beet sugar factory is to be started at Low Point, Dutchess Co., N. Y. . . Of dried apples 230 tons are said to have been shipped from Sodus N. Y., since the crops were gathered. . . At the annual meeting of the Western N. Y., Ag. Soc., held the other day at Rochester, a committee was appointed to select some other place for holding the fair on account of the small encouragement offered by the people there and the sneers of the press. The yearly receipts were $11,942.06 and the expenditures $11,989.16. . . . Arkansas ranks next to Texas as a cotton-producing State. . . In northern Texas, recent rains have put wheat fields into fine condition. . . The Tennessee Stock-breeder's Association will hold their fourth annual meeting at Nashville, Feb. 10, W. S. Shields, of Granger, Pres. . . It is estimated that two-thirds of the arable land of Louisiana have never been brought into cultivation. . . Kentucky shippers intimate that nearly all the ripe cattle from that state for this season's market are marketed. . . A sheep farm of 13,000 acres was recently purchased in Greeley county, Neb., at an average of 75 cents per acre, the railroad company allowing a large discount for cash. . . At the last meeting of the Lexington, Ky., Live Stock company a committee was appointed to raise money to give a great banquet to the breeders of Short-horns throughout the United States and Canada, at Lexington, the last Tuesday in July, 1880. . . Receipts of hogs during the year just closed, at Cincinnati, 947,976; shipments, 168,543; cattle receipts, 203,616; shipments, 87,422; sheep receipts, 443,184; shipments, 361,879. . . Cleveland, O., ranks now as the third hog-packing city in the U. S. The total number of hogs packed the past year 480,000—an increase of 100,000 over the preceding year. . . Three dollars a bushel is the price of corn in Deadwood, Dakota. . . The freight on Iowa butter to Boston is 60c. per 100 lbs., that on Vermont butter 80c. to $1. . . In future, queen bees are allowed to travel by mail, with their necessary attendants, so long as no one is injured in handling them. . . It is the general opinion of Cuban planters that the sugar crop will not amount to three-quarters of last year's crop. . . A poor and very short tobacco crop is also anticipated owing to severe drought. . . Advance sheets of the crop report of the State Board of Agriculture of Illinois, show that the winter wheat acreage now sown in that State is 2,658,826, or 25 per cent. greater than last year. . . The N. Y. State Agricultural Society held its annual meeting in Albany on 21st inst. . . Ex-Gov. Seymour, its President for the past year delivered a fine address on the conflict between European and American agriculture. The following officers for the ensuing year were elected:—President—General N. Martin Curtiss, of St. Lawrence county. Vice-Presidents—John D. Wing, of New York; Isaac H. Cocks, of Queens; Joseph Hilton and George F. Mills, of Montgomery; James Geddes, of Onondaga; John Julland, of Chenango; Robert J. Swan, of Seneca, and Marcus H. Phillips, of Orleans. Corresponding Secretary—T. I. Harrison, of St. Lawrence. Recording Secretary—W. H. Bogart, of Cayuga. Treasurer—Adin Thayer, of Rensselaer. Executive Committee—Jesse Owen, of Chemung; D. D. S. Brown, of Monroe; I. L. Hoxie, of Otsego; J. V. H. Scoville, of Oneida; George Tweddle, of Albany; Gerrit S. Miller, of Madison; I. J. Deforest, of Schenectady, and David Cassett, of Onondaga. . . A telegram from Lake Charles, Louisiana, last Wednesday, says: "April weather continues here. Orange, fig, peach and plum trees are budding and strawberries are in blossom. . . Serious inundations and damage to property are graphed from Holland and Poland. . . . Cattle raising is likely to supersede cotton raising in some parts of Georgia. . . The New Orleans Cotton Exchange has decided, by 109 against 78 votes, to deal in cotton "futures" henceforth on the New York system. . . Wine-making in Australia is becoming an important industry—the total yield this season is put down at 396,000 gallons. . . The Humane Live Stock Co. of this City, are building 250 patent stock cars, with feed and water troughs and separating partitions. Cars about six feet longer than present stock cars, designed to carry stock long distances without loading and unloading—The first of a needed enterprise. . . There are about 60,000 Mennonites in America. They have 500 meeting houses, one-eighth of that number being in Canada. They abstain from taking an oath, do not inflict punishment, do not accept public office and never go to law They are nearly all farmers . . The Pennsylvania State Dairymen's Association will hold its Sixth Annual Convention at the new Library Hall, Meadville, on February 4th and 5th. Addresses will be delivered, among others, by Pres. Lenhart, S. A. Farrington, John Fuller, X. A. Willard, Hon. S. H. Findlay. This is usually one of the most instructive dairy conventions in the country, and it is therefore to be hoped that the attendance will be large. . . An Amber sugar-cane Association has been established in Fond-du-Lac Co., Wis. . . Last year's crops, according to the Ag. Dep. were worth $300,000,000 more than those of '78. . . The Northwestern Dairymen's Association will hold its annual meeting at Milwaukee, Feb 26. . . The Dairymen's Association of Northern Ia. will do ditto at Montecello, same date. . . The annual meeting of the N. J. State Agricultural Society was held at Trenton, June 21, and was largely attended. The old board of directors was re-elected, except the substitution of W. F. Kidder for the late J. R. Kilburn. The Treasurer's report shows a balance of $1,000 50 on hand. . . The Northeastern Bee-Keepers' Association will hold its 10th annual convention at the City Hall, Utica, N. Y., Feb. 11, 12, 12. Liberal prizes offered for the best essays on topics of interest and importance to bee-keepers, and also for various implements needed in apiculture. . The Ohio Poland-China Record is now ready for the press; so writes to us J. M. Milliken, Hamilton, Ohio . . Chicago received 137,760,380 bushels of grain last year, and claims that no other city in the world could have handled so vast a quantity. . . In Morehouse parish, La., a boy of 13, who went to school last year in his leisure time raised 600 pounds of cotton, which he sold for $70, doing all the labor himself—a white at that. . . Planters are still picking cotton in some parts of La . . The mule trade is lively throughout Middle and Western Tenn . . The French hope that the severe weather has killed the phylloxera, but fear that it has killed the vines also. . . Upwards of 6,000 sheep are reported to be fattening in Yates Co., N. Y. . . The Grand Master of the Wisconsin Grangers says the co-operative stores have been grandly successful. . . Floods in Columbia, S. A., have done immense damage. . . The proposed Congressional investigation of the Department of Agriculture is to be deferred until complete preparations have been made for a thorough overhauling The scope of the investigation includes an examination into the history, systems, and workings of the Department for some years back with a view to its re-organization on a new and enlarged basis. There seems to be no special animus against the present Commissioner—it's the system, not the man, that is mainly found fault with. . . For 1879 Nebraska gives the largest average yield of corn per acre, amounting to 45 bushels, and Colorado the largest average of wheat, amounting to 23.1 bushels per acre . . Col. Wilkins, of the "York Farm," in Maryland, raised this year an aggregate crop of 70,000 bushels of peaches, which were sold for about $42,000. . . The peanut crop of Virginia, Tennessee and North Carolina is estimated at about 1,835,000 bushels—an increase of about 500,000 bushels over last year. . . In 1867, 42,000,000 head of sheep produced 147,000,000 pounds of wool; in 1877, 35,000,000 head produced 208,000,000 pounds; this shows a wonderful improvement in the *science* of sheep husbandry, inasmuch as 7,000,000 less sheep produced 60,000,000 pounds more wool! ! !

Everywhere.

LIFE IN THE ROCKY MOUNTAINS.

MANY of our readers of the RURAL, living in the land of formal and steady habits, among the hills and vales of their native States, in towns and farm-houses often a century or more old, can form little idea of the great difference between their surroundings and ours. The writer was born on a beautiful, wooded slope, in old Chautauqua, in sight of Erie's beautiful blue, where the scarlet strawberry peeped from the verdure of the meadows, and the woodside furnished raspberries, blackberries and mandrake, each in its season; where youth, with its ever-remembered pastimes, was spent. But he has wandered far from that blissful spot, and now, when gray hairs begin to lighten his dark locks, he finds himself away in the midst of the Rocky Mountains, where from his vine-clad cottage he can contemplate snow-clad peaks, or in a day's ride reach mountain gorges where the soughing Pines shadow the rippling and dancing streamlets that glisten with ice in mid-summer, at the moment when the blushing peach, toothsome fig and glossy prune are in their most delicious condition.

The climate here is dry, and in summer is generally rainless, so we have to irrigate our gardens, orchards, vineyards and fields by diverting mountain streams and bringing them out upon the most fertile lands in the valleys. From these ditches the water for stock and domestic use is taken. As a general thing, the people of this country all live in cities and towns, and thus the combined efforts of all the citizens of a town are used to make and keep in repair the main canal that brings the water, each sharing in the supply in proportion to the amount he has paid. This is brought through every street in the town or city, and each in turn waters his garden and grounds and what is not thus needed is used to water field crops adjoining the town. Thus, by people living together they are enabled to have good schools, and by a union of efforts, help each other in other ways.

There are very few wild fruits here, as lands not irrigated are desert, where stunted shrubs alone grow sparsely, except away up in the mountains, where rains make trees, grass and shrubs grow more abundantly. We raise fruit, however, in abundance and of the finest quality and richness; namely, apples, peaches, plums, pears, apricots, prunes, nectarines, figs, almonds, berries and the most delicious grapes, and these, ripening in succession from April to December, give us a long season of enjoyment. Oranges and lemons may also be grown here in sheltered places. Of native nuts, we have only the pine nut, which is abundant in some seasons, and brought in for sale by the Indians. They are very sweet and rich, though small. Every lady likes and eats them when they are to be had. In our gardens we grow some English and Black Walnuts.

Our towns are laid out in acre lots, that we may have good space for fruit and vegetables, and on each side of the street a babbling stream flows, watering a row of trees. So our towns seem shady and forest-like. In summer they are very pleasant, and in spring, when the trees are in bloom and the garden flowers give their perfumes, it is doubly delightful. We have a very interesting group of native plants and flowers many of which flourish in dry soils with little or no water, some producing magnificent blooms, and such strange and fantastical shapes. Among these are the Cactus, Yucca, Agave, Ferns, etc. There are also annual and perennial herbaceous plants, some giving blooms, of great beauty. Even some desert shrubs would make charming additions to the old collections extant in the East.

Washington Co., Utah. J. E. JOHNSON.

RURAL SPECIAL REPORTS.

CANADA, Ilderton, Ont., Jan. 16.—Cattle trade brisk, especially for bulls. Closing your ports against us has stimulated our farmers. They now know all our surplus must go to England, as it will pay to send thither well-bred steers only—hence the demand for bulls.

R. G.

COLORADO, Fort Collins, Larimer Co., Jan. 14.—We have just returned from a trip to Southern Colorado—a section one cannot appreciate in any way without seeing it. Two days' ride over the Colorado Central and the Denver and Rio Grande Railroads, brought us into the great San Luis Park, containing over a million of acres. It is one of the most magnificent bodies of land in the world, rich and unsurpassed by the valleys of the great rivers. The entire Park is surrounded by high mountains abruptly rising to the hight of several thousand feet. This immense plain seems to have been a vast lake which, once upon a time, cut through the rocky peaks and made its way to the Gulf, leaving as its path the beautiful Rio Grande. Almost all of it thus far has been untouched and "undefiled by man." It is government land and is open to settlers. There is room enough for 50,000 families, and water enough to irrigate every acre. Wheat, oats, barley, potatoes, and almost any vegetable grow most luxuriantly, and with but little cultivation. Hay is raised at the small expense of about $2 50 per ton, and sold for $20 on the ground. Potatoes are planted in every third furrow behind the plow, and without any culture whatever they turn out from 100 to 500 bushels per acre. The only discouraging features of this great and fertile tract is the altitude (7,749 feet), and the Mexican "greasers" who occupy the best and richest sections. Del Norte is an old mining town situated at the extreme west end of the Park. But for "drinking," it would be quite a pleasant place to live in. * * *

IOWA, Marshall Co., Jan. 12.—We are having a very open winter hereabouts—no snow to speak of; the frost was nearly out of the ground last week, but it has frozen up again now. The price of grain here varies with the Chicago market: wheat, 25c.; corn, 15c. and oats 10c., *less* than in Chicago. Butter 22c.; eggs, 18c.; hay, $5 per ton. N. L. C.

KANSAS, Bala, Riley Co., Jan. 17.—Prices here are: wheat, fall, $1@1.35; spring, 75c.@$1; corn, 20c@25c.; hogs, $3.25@$4; oats, 25c@30c.; rye, 50c@75c.; potatoes, 80c.@$1.

H. F. J.

KY., Wilsonville, Spencer Co., Jan. 14.—We have had only two spells cold enough to enable us to save our meat. Owing to the very open winter many hereabouts have not been so fortunate as to save their bacon, and a good deal of meat has been lost. Grass looks as it generally does in April. J. P. P.

MICH. Unionville, Tuscola Co., Jan. 14.—We have had a very open winter so far—about six inches of snow and about two weeks of passable sleighing. It is colder now with a slight covering of snow. The wheat looks first-rate; with good weather from this time on we shall have a large crop. Our crops were very good last year. Wheat is selling here for $1.25@$1.27; oats, 40@45c.; corn, 50c.; potatoes, 35@40c.; butter, 20c. per pound; eggs, 20c. per doz.; pork and beef, $4@5 per 100 pounds. About one and a quarter to one and a half times more wheat was sown here last fall than ever before. This part of the country is quite newly settled and all have done the best they could.

L. A R. NO 2.

MINN., Howard Lake, Wright Co., Jan 13.—We are now, for a few days, enjoying good, solid cold weather with little prospect or hopes of more snow. The thermometer is ranging from zero to 20 degrees below, and some say 30. The first week and more of this month, gave us a regular January thaw, and we lost nearly all our good sleighing. Previous to that, farmers and everybody were literally rejoicing over the good roads, which were better than for years before, at that season, and lasted through the entire month of Dec., which month toward the last brought some stinging cold weather which you have no doubt heard of ere this. But how could I write the news when the thermometer ranged from 30 to 58 degrees below zero scarcely 20 feet from me! I thought I knew Minnesota pretty well before, but our thermometers usually froze up at 44 deg. The severity of our weather farther west on the prairies at such times causes too much suffering and bereavement to warrant badinage, when we think of so many perishing in consequence of it. Probably not so many were frozen this year as were during the sudden as well as violent storm of three days in January of '73. That storm was more fearful, but the weather was not so cold. The night of the 23rd of Dec. was windy enough, and showed us a grand display of a large meteor, appearing to divide and fall in different places. This happened near the peep of day in this vicinity—the brilliancy of the display lasted about three minutes. Better times! Wheat which is mostly No. 1. is now bringing at the elevator $1 10, and last week brought two cents more; corn, 30 cents; potatoes, 25c; butter, 15 to 20 cts. Were it not for old debts hanging incubus-like over most farmers, they would be happy. If they would only act upon what the RURAL NEW-YORKER has said on that subject, they would be wiser and soon be out of debt—and keep out all the time. Nearly sixty thousand bushels of wheat have been received at the elevators at this point on the St. Paul and Pacific R. R. A. M.

N. Y., Corning, Steuben Co., Jan. 13.—We are having a very open winter. Thus far there has been but little snow—at present only about two inches, and that fell yesterday. The ground is not frozen, and last Friday and Saturday I noticed a number of farmers plowing. Those who contemplated doing a lot of lumbering, are somewhat disappointed, and are afraid that they cannot do all they had intended, as it is getting late. The weather has been very changeable—the thermometer at night marking perhaps down near to zero, and the next morning up to freezing point, or above; but we have not had nearly as cold weather as is reported from all around us. Sunday, the 14th of December, was the coldest morning thus far in our neighborhood, and then the mercury was only one deg. below zero at 8 A. M. Much complaint is yet heard on all sides, of scarcity of water, as the usual fall rains did not come in sufficient quantity to raise many of the springs. The roads are now, most of the time, very muddy, and disagreeable to travel.

F. H. D.

TEXAS, Caldwell, Burleson Co., Jan. 10.—The new year is ushered in with an abundance of rain. On the 24th of last month we had the severest cold known to the oldest inhabitant, lasting five or six days; since then it has rained more or less up to date. Last year will be remembered here as the "Dry Year." Corn is scarce and chaffy; cotton less than a quarter of a crop; wheat and oats were almost entirely killed by the Christmas cold. Rye has come out and looks as well as ever. There will be quite a harvest of poor cow-hides this spring. Corn has jumped to $1.12, while wheat brings only $1, which shows how poor it is. Good wheat should be worth more than corn. Notwithstanding the hard times, people are going to work with a will to raise another year's crops The Gulf, Colorado and Santa Fe R. R will probably reach Caldwell by June. People are compelled to kill hogs off after having been fed only on what little mast there has been. Pork is consequently a thin article, but it sells from 3½ to 4 cents per pound. We had eggs all winter till the cold snap. The hens will resume business in a few days. We can have eggs all winter here with very little trouble. For the last 10 days it has been as warm as April. Cotton, beans, etc., etc., are coming up freely—volunteers I mean. D. H. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

Short-horns and Holsteins.

E. S., Eagle Harbor, N. Y., asks, 1, the addresses of breeders of Short-horns not too far away; 2, the comparative merits of Short-horns and Holsteins.

ANS.—Jonathan Talcot, Rome, N. Y., R. H. Allen, 189 and 191 Water St., N. Y., C. Parsons, Jr., Galway, Mass. 2, There is not a little similarity between the claims put forth in behalf of the Short-horns and the Holsteins. Both are massive beasts; both need extra care and feed to produce the best results; both mature early and lay on flesh readily and economically, and under certain conditions both yield large messes of milk; while in its native country, England, the Short-horn holds a position nearly as unrivalled as that occupied by the Holstein in its native country, Holland. For the last half century, however, or more, the Short-horn has been bred chiefly for beef, and in this country almost entirely so, and consequently the deep-milking qualities of the original race have, as a rule, greatly deteriorated. Occasionally, especially in the States east of the Alleghanies, some selected herds of the breed are found that do so well at the pail as to prove that care and selection would ere long re-develop the deep-milking qualities that first attracted attention to the race. There are a few families of Short-horns, too, that have always been bred for milk as well as for meat, such as most of the Bates' stock and Princess tribe, and these have generally been satisfactory milkers. As a rule, however, the modern American Short-horn is a poor milker, but on good feed matures at least as early and lays on a first-rate quality of flesh at least as readily and at as little cost of feed as any breed, while the males are remarkable for their prepotency, strongly impressing the special characteristics of the race on crosses with other breeds, but still more markedly on crosses with native or grade cows. In breeding the Holsteins, on the other hand, milk has always been the main object, and early maturity and aptitude to fatten have been secondary considerations. Being a very ancient race, probably the most ancient of our modern breeds, the Holstein also is strongly prepotent. For beef the Short-horn, no doubt, is preferable to the Holsteins; a natural result of the end for which it has, for many Short-horn generations been bred; for milk, however, the Holstein has decidedly the advantage, a natural result, also, of the aim kept in view for centuries by its breeders. For milk and beef combined there would probably be not much difference between a good Holstein and a good Short-horn of some deep-milking family. Of late, however, there is a growing conviction that in the manufacture of beef and milk there is as much profit in a division of labor as in the manufacture of pig-iron and steel, and consequently, there is an increasing tendency to look to the spare breeds, such as the Jerseys and Ayrshires, for milk and its products, and to the beef breeds, such as the Short-horns and Herefords, for our meat supply—the grades of each being often better for their respective objects than even the pure-bred stock.

Hogs—Alive and Dressed.

L. H. N., La Porte, Ind., asks what should be the difference in price between live and dressed hogs to pay the same to the farmer.

ANS.—Personally we have made no experiments by which we could determine this question, but on looking over our Scrap Book, we find an account of an experiment, clipped from some paper whose name was unfortunately omitted, which just answers the query. The writer says that this year he selected 20 pigs farrowed the last week in May, from five litters, all cross-bred Suffolk and Polland China. They had nothing but thin grazing after being weaned, till the corn was large enough to feed, since when they had been fed well, and though not large, were well fattened. The following are the exact weights alive, and dressed:

No.	Live wt.	Dressed wt.
1	172	143
2	151	128
3	155	130
4	126	104
5	135	116
6	163	136
7	130	108
8	136	114
9	153	128
10	148	120
11	131	112
12	176	145
13	148	118
14	153	128
15	164	138
16	148	120
17	133	115
18	168	139
19	132	114
20	113	91
Total	2,935	2,447

The shrinkage, therefore, was 488 pounds, or a trifle over one-seventh. He was offered $4 per 100 for the lot on foot, which would have amounted to $117 40. He sold them for $5.10 dressed, amounting to $125.02, leaving $7.62 in favor of dressing at these prices, and the rough lard was sufficient to pay for butchering. This class of pigs are said to shrink much more than the larger and older hogs. Farmers can look this over at their leisure and decide how they will sell. To determine the vexed question how much less a hog will weigh after being stuck than when alive, he weighed the two first before scalding, and the loss was 8 and 7½ pounds respectively.

Feeding Linseed Meal.

R. G., address mislaid, asks 1, whether linseed meal can be fed dry with other food, with as much good effect as if it were soaked; 2, is it good for fattening hogs.

ANS.—1. Linseed meal may be fed dry with benefit and without danger. All rich, concentrated food is best fed dry; if soaked, it can be swallowed without chewing; but no animal can swallow fine, dry food without chewing it and mixing it with saliva. The saliva has considerable solvent powers, and exercises an important office in the digestive process. It is a highly complex fluid, containing potash, soda, lime, ptyaline—a substance which changes starch into sugar—and alkaline chlorides, phosphates and sulphates. One function of the saliva is evidently to prepare food for digestion, and in feeding, this should be always considered. Food bolted or gorged is unmixed with saliva, and thus theoretically the food should be given dry, so that it may be masticated and mixed with saliva; practice proves the truth of the theory. Linseed has a laxative and softening effect, and the meal may be given alone beneficially. 2. It is good for any fattening animal, but for hogs it is a dear food as compared with corn. Hogs fatten better on corn, or other starchy food, than on such oily food as linseed.

The Honey Locust as a Hedge.

W. C. W., Atlantic, Iowa, writes: 1, Is the Honey Locust worth anything for hedges? 2, What time should the seed be sown—fall or spring? 3, Will the Barberry make a good hedge? The Osage Orange has proved a failure in that locality, and wanting to start a live fence, he desires the information asked for above.

ANS.—1. In northern localities where the Osage Orange is not hardy, no better hedge plant can be found than the Honey Locust. It is "iron-clad" as to hardiness; will, with judicious pruning, form a very close and durable hedge, and its strong and thickly set thorns are particularly disagreeable to breachy animals. 2. The seeds should be sown in spring. They can be purchased of all large seedsmen. 3. The Barberry will do as a hedge plant, but it falls much behind the Honey Locust. Besides being less defensive, its leaves form a lodging-place for the fungus known as wheat rust, in a certain stage of its development, and to plant the Barberry is to encourage the wheat rust. This fact alone should be enough to prevent its use as a hedge plant, even were it the best for that purpose.

Muck.

S. H., Montgomery, N. Y., says he has heard much about the value of muck as a fertilizer, and wants to know if it would be advisable to dig holes and thus destroy the land in order to obtain the muck.

ANS.—It will depend upon circumstances. There is no doubt that muck has value as a fertilizer, but this value is not a contant quantity; it varies with the land to which it is applied as well as with the constituents of the muck itself. But generally it is advisable to take out the muck, at the sacrifice of a small plat of arable land, and, indeed, the muck bed if the surface is unmixed with any other

has but little value for cultivation. Should the muck deposit lie in a shallow layer on the surface and form arable land, we should hesitate before digging it out for manurial purposes. In that case it would be well to apply muck to the land in a small way and note the effect. If the result was greatly to increase the crop, the practical farmer could easily calculate whether the benefits derived from its use would outweigh the injury to the land from which the muck was taken.

About Water-Cresses.

Constant Reader, St. Charles, Ill., asks: 1, how water-cresses are prepared for market, and about how much are they sold for: 2, when should they be planted.

ANS.—1, They are commonly sold in the market in baskets holding three or four quarts. When first offered the price is generally $1 for such baskets. This price varies from season to season. 2, Early spring. The roots are best planted in spring in shallow, running water. They increase rapidly, as well from the spread of the roots as from the seeds which the plants sow. The shoots should be cut, not pulled or broken off, which destroys or weakens the plants. After they become well established, they may be cut almost weekly during the summer. A profitable price may always be obtained for water-cresses.

Curing Skins.

A. W. B., Monument, Mass., asks for a recipe for curing skins, such as those of musk-rat and mink, so that they can be made into carriage robes.

ANS.—Stretch the skins on a board or a frame, and scrape off all the flesh. If they are dry, soak them with warm water on the fleshy side, then cover them on the same side with a mixture of powdered alum and salt in equal parts; lay the skins together in pairs, fleshy sides together. After a week, shake out the skins, and add some fresh mixture. When the skins are completely "tawed" (not tanned), stretch them and rub them with chalk and pumice-stone until no more chalk will be absorbed, then pull and stretch gently until dry and soft.

Miscellaneous.

C. W. W., Lewis Co., N. Y., wishes to know where the Blue Pearmain apple originated, it being grown on two or three farms only in his locality, having been taken there some years ago and grafted upon other trees.

ANS.—Mr. Charles Downing, in reply to the above inquiry, says:—"I have never seen any origin given to the Blue Pearmain, but it is an old and very good variety as to flavor, but only a moderate bearer, and is not now much cultivated." We acknowledge a box of apples from C. W. W., and regret that we cannot give the information sought. We can only say that several of those marked "Seedlings" were of excellent quality, and should be propagated. Probably grafting will not materially change the quality.

A. C. H., Roanoke, Ind., asks, 1, where he can get the Kieffer Pear; 2, when must Larch seeds be gathered to grow best; 3, which kind of Catalpa would grow the best and make the best timber in Western Kansas; 4, when should it be planted; 5, where and at what price can reliable seed be bought.

ANS.—1, Of J. S. Collins, Moorestown, N. J. 2. Just as soon as ripe in autumn, and they should be preserved in sand. Sow early in spring in boxes of light sandy soil; 3, Catalpa speciosa. The wood is thought to be almost unequaled for durability. 4, Spring. 5, Young seedlings can be purchased at a very low price in large quantities, of R. Douglas & Sons Waukegan, Ills., who make a specialty of it.

D. J. H. & several others in various places ask whether La Belle M'f'g. Co. of Chicago, Ill. is a trustworthy concern; whether it will do what it promises and whether "there is money" in its business.

ANS.—This concern has the reputation of doing business honestly. So far as we have been able to learn, they do what they say they will, just as do other "square" business firms. Whether their business will "pay" an agent or not, will depend in a great measure upon his own energy, address and persuasiveness as a canvasser. The letter copying book and ink for the sale of which they want agents, are good enough things in themselves. Of course, a fair share of business caution is always desirable in dealing with strangers.

A. R., address mislaid, asks 1, how to germinate the hardy shrub seeds of the RURAL'S last free seed distribution; 2, which would be more advisable—to purchase ground bone at $60 per ton of 2,000 pounds, or manure from a livery stable at 50c. a load, to be hauled three miles for wheat or corn on clay soil.

ANS.—1. We know of no better way than to sow in well-drained flower pots of mellow soil. Cover them with glasses If you had a greenhouse, bottom heat would facilitate germination. 2. We should choose the manure at 50c. per load.

NOTE.—Thank you for your interest in the RURAL'S behalf.

T. G. T., Horn Brook, Pa., has had a choice bulb presented to her by a lady. The only name she knew for it was "Spirit of Santia" by which name it is known in Chili, S. A. She has never seen the flower, but it is said to be of a peculiar shape, resembling a white dove. The plant has now two leaves of a very dark green. She wants to know its proper name and culture, for all the books and catalogues at her disposal have been searched in vain for this information.

ANS.—The plant referred to is an orchid, Peristeria elata, also called the Dove Plant. It is a choice tropical plant and requires to be kept in a high temperature, (about 70° or 75°) to grow to perfection. Plant in a light, loamy soil and water freely during the growing season.

L. L. C., Catherine, N. Y., asks whether the Rural Life, a monthly agricultural periodical started in this city about a year ago, is still in existence, as several subscribers in that neighborhood, although they paid subscriptions for a year, have not seen it or heard of it since August.

ANS.—The Rural Life was discontinued several months ago. It may again resume. We do not know.

M. M. W., Belle Vernon, Pa., asks where he can obtain information on tobacco culture.

ANS.—The RURAL has published several articles on this subject during the past year—see pages 277, 311, 226, 534—and will also treat of it during the current year. "Tobacco Culture, by 14 Experienced Cultivators" price 25c. gives a great deal of information on the industry in different places, and can be had through the American News Co., of this city.

G. C. W., New Florence, Pa., asks, 1, where he can get some spring rye; 2, what is it worth per bushel, what kind of ground suits it best, how many bushels per acre will it average; 3, what kind of chickens are the most profitable to raise for early market.

ANS.—1, Of any seedsman. 2, $1 75 per bushel. We have never had any success with spring rye. Perhaps some of our readers will answer. 3. We should prefer Plymouth Rocks. We do not know the person you inquire about.

P. L. C., Hedges, Ky., sends us a specimen of a pea or bean, and asks its name. The people in the mountains thereabouts use them in a half-ripe state for food, and as they are extremely prolific, only a small patch is planted by each. From our engraving in a late number, he thinks it must be some variety of the Cow Pea. There, however, its only name is the "long-pod" bean or pea.

ANS.—Yes, it is one of the Cow Peas, closely akin to the variety known as Whip-Poor-Will.

R. H., Harlan Co., says he has an ample supply of wild (choke) cherry and wild plum stocks and asks what he can work on them advantageously.

ANS.—We are not aware that the wild choke cherry can be used as a stock to work upon. Wild plum stocks are often used to work the cultivated varieties on; but they should be grafted or budded at, or just below, the ground, otherwise the graft will over-grow the stock.

J. L., Edinburgh Pa., 1, asks whether Plymouth Rocks and Asiatic fowls are kept on the RURAL FARM for sale; 2, if not, where can they be bought.

ANS.—1, Absolutely nothing is for sale connected in any way with the RURAL or its Experimental Grounds. 2, Both kinds can be purchased from several parties who are in the habit of advertising in the RURAL, such as G. E. Josslyn, Fredonia, N. Y., and others.

A Constant Reader, Oconomowoc, Wis., and A. C. H., Roanoke, Ind. inquires about cane mills and evaporators.

ANS.—Both the Vermont Farm Machine Co., Bellows Falls, Vt., and the Blymyer Mfg. Co. of Cincinnati, Ohio, make excellent mills and evaporators. Prices vary with sizes, etc., but all information will be promptly furnished by both firms on application.

H. S. B., Catskill, N. Y., asks where and at what price can refuse salt be purchased.

ANS.—At the salt works in Syracuse or in this city. Almost every salt-laden vessel coming to this port has a great deal of damaged salt on board, good enough for fertilizing purposes, however. The price is usually from 15c. to 20c. per bushel, and sometimes even less.

J. B., Ea. Schodock, N. Y. asks where he can get a work on the manufacture of opium, that will describe the necessary machinery and give the *modus operandi* in all its details.

ANS.—There are several works on the character and effect of opium when used as a medicine and to excess, but we know of none that offers all the information here desired.

G. H. A., New Haven, Conn., asks if there is such a thing as a pure white Gladiolus—one neither striped nor blotched with any other color.

ANS.—There is no pure white Gladiolus yet, as far as we know, but at the various floral exhibitions of last season we have seen some that were *almost* entirely white.

Little Girl, Van Wert, Ohio, asks whether "Uncle Mark" will have any choice seeds to distribute this year, and if so, where should he be addressed to secure them.

ANS.—1. He will have some next season. He should be addressed at this office.

K. H., Bolington, Va., asks what is the best and most comprehensive work on the diseases of horses.

ANS.—Stonehenge's. "The Horse in the Stable and the Field" $3 50, is as good as any with which we are acquainted.

S. Houghton, Lowell, Mich., asks where he can get some seeds of the Golden Rural tomato.

ANS.—We have given full address in the hopes some of our readers who have saved seeds may oblige our friend. We have none left and are working with other sorts.

F. B. O., Scipioville, N. Y. writes, will you please give me the address of some one who furnishes chemists materials,—flasks, glass tubes, retorts etc?

ANS —E. B. Benjamin, 10 Barclay St., N. Y. City.

J. W. H., Jersey City, N. J., asks what are the laws relating to setting trees on the roadside in New York State.

ANS.—See article on the subject under Arboricultural, in this issue.

J. L., Pharsalia, N. Y., asks whether sorghum will ripen seeds in that section.

ANS.—Yes. Early Amber cane will mature seeds in Chenango county.

MANY INQUIRERS.—Seeds of Early Amber sugar-cane are sold by all seedsmen. See advertising columns. Price about $5.00 per bushel.

Various.

WHAT OTHERS SAY.

COW PEAS. We are pleased to find in the N. Y. Tribune a letter from Mr. Solon Robinson respecting the value and management of "Cow Peas" to which the RURAL NEW-YORKER has of late been giving so much attention. Mr. Robinson paid a visit to the farm of Col. Richard Peters near Calhoun, in Georgia, who, having tried to keep up the fertility of his soil with clover and all sorts of commercial fertilizers with only partial success, and not being able to make enough stable manure, and finding that sheep only fertilize the fence corners and shade trees; the question naturally was: "What next?" The important southern crop, Cow Peas, has been found in this instance more than a substitute, since it is more certain than clover and affords a greater bulk of growth to serve as manure for any other crop. The Col. led the way into a beautiful green field, covered in its whole extent with a most beautiful growth about as high as his hips.

"You have often recommended farmers to sow peas and plow in the green crop as a fertilizer; will you now tell me how to do it?" said the Colonel.

"I cannot. I acknowledge I am beat," replied Mr. Robinson.

"Then I will tell my experience, if you will tell it to others, for the benefit of the public. I was, and still am as enthusiastic as you upon the subject of keeping up the fertility of our farms with this crop, but as for plowing it in, I am skeptical. I tried that experiment last year, and failed! I am forced to the conclusion that no plow has yet been made that will plow under such vines as grew upon this farm."

"What did you do?" asked Mr. Robinson. "I understood you to say that fine wheat was grown upon the pea field. You must have managed somehow to plow under the vines."

"No, I didn't."

"What, then, did you do?"

"I said to myself something *must* be done. This is the only field I have for wheat, and I am going to sow it, and I did, and got a first-rate crop."

"Pray tell me how you did it."

"I got out the great iron roller, and the team waded through that green sea, pressing down the vines upon which this wheat was sown. The roller was followed by a large disc harrow, which rolled up some little ridges of loose earth, without moving the vines, except to press them deeper into the soil. The field was then crossed in the same manner, one team doing ten acres a day. This double harrowing, if harrowing it can be called, gave a pretty good tilth for the seed, which was covered with a heavy brush-drag. I shall serve this field in the same way. It will answer for wheat, rye and oats, but not for barley; and if for corn, I would sow rye or turnips and graze sheep and goats, which would rot the vines so they could be plowed in the spring. Now you have my experience with Cow Peas as a fertilizing crop, in which I have full faith."

"Is it a good plan to sow peas and turn in hogs?" asked Mr. Robinson.

"Yes; or poultry, a little before the pods are ripe. Sheep or goats would eat all the leaves. Swine trample them into the ground."

"You give me leave, then, to recommend Cow Peas as a fertilizer, upon your experience?"

"Yes; but don't tell people they can plow them in, unless their land is poorer than mine."

EFFECT OF GIRDLING GRAPEVINES.—The Amherst Transcript reports the following experiment: "Among the experiments with the Grapevine at Amherst Agricultural College, girdling has produced some remarkable results, both in the quantity of the fruit and the period of development. The vines were girdled about the first week in August, when the free acid of the Concord grape had reached the highest state, and the grape-sugar had begun to increase. Experiments were made with whole vines and with branches. Two incisions were made through the bark and cambium layers from one-quarter to one-third of an inch in width, and the substance between removed. The fruit on the girdled vines matured fully two weeks in advance of the ungirdled vines. Prof. Goessman picked fully matured fruit from a girdled vine at his residence fully three weeks in advance of fruit on ungirdled branches of the same vine. The vines that were girdled a year ago were in fine condition this season, and although in most instances fully healed over, the girdlings seemed to produce the same effect on the fruit as the first year."

MILK FEVER is far more prevalent than formerly, and many dairymen who formerly would have refused to buy a cow after calving, now prefer the event to be over, which they know to be frequently attended with anxiety and loss. It is easy to note the great and paramount cause of this deadly affection, by stating too much rich, stimulating, nitrogenous food before calving. . . Alderneys, Ayrshires and superior milking Short-horns are specially prone to suffer. Beef-making subjects, which are poor milkers, are rarely struck down. Animals in a state of nature, in which the milking capabilities are lightly developed, scarcely ever have milk fever; hence its comparative rarity either in America or the colonies.

GOOD QUESTIONS.—The Western Stock Journal and Farmer asks as follows:

1st. What grass is the best to feed cattle on for beef?

2d. How can the best grass be produced for that purpose?

3d. How can the grasses be utilized to the best advantage to make the most pounds of the best beef, in the shortest time, and from the youngest steers?

4th. Is it profitable to the feeder to keep his steers until they are three or four years old, if he can turn them off at two, or two and a half years old, weighing from 1,400 to 1,700 pounds?

EDUCATION ON THE FARM.—"As I look back," says 'Waldo,' in the Ohio Farmer, "over a third of a century spent on the farm, in which I have been to some extent an experimenter, I am deeply impressed with the fact that there is enough in the farmer's calling to bring into exercise the best powers of both mind and body. How erroneous is the judgment of those who suppose that mere muscle is all the farmer needs, and who think that the merchant or mechanic needs a better education than the farmer, and that their callings will develop higher traits of character than his."

PASTURING WHEAT.—If the growth in fall or early spring is too rampant and likely to be troubled with the fly, it is better to be pastured by cattle, not sheep, while the ground is solid enough to bear the weight of the animals without sinking in too deeply. Sheep, if allowed much upon the wheat, clip it too closely and may injure the crown of the plant. While we have never heard of any loss being suffered by judicious pasturing, we have no doubt that as a rule it is beneficial. The plants may tiller more, and assuredly grow up thicker and stronger and stand the storms better.—Germantown Telegraph.

THAT THE BEST REMEDY, says the The Nation, for Irish poverty is to be found in the great multiplication of peasant properties, and not by emigration, as many suppose, there is little question. Emigration is good for those who emigrate, but it leaves gaps in the home population, which are soon filled by a fresh poverty-stricken mass.

"KIEFFER'S HYBRID is of very good quality good size, deep yellow color, and orange yellow where exposed to the sun, ripening in October, and from what I have seen of it, it is a promising variety for market, as well as for family use."—So says Charles Downing in the N. Y. Tribune.

"A BLAMELESS REPUTATION is no shield against the attacks of the partisan hack who uses his pen as a poisoned arrow and fills his ink bottle with venom"—N. Y. Herald.

IF OUR LEGISLATURES and Congress were made up by a two-thirds majority of farmers, we might be able to get a little honest legislation.—Nebraska Farmer.

THE
RURAL NEW-YORKER.
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CONDUCTED BY
ELBERT S. CARMAN.

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78 Duane Street, New York City.

SATURDAY, JAN. 31, 1880.

SHORTLY TO APPEAR.

NOTES FROM Dr. John A. Warder, T. T. Lyon, Ellwanger & Barry, P. J. Berckmans and others respecting the true Paradise Apple as a dwarfing stock, with illustrations.

ON THE KINVER and an entirely new French Yellow Globe Mangel as sweet as a sugar beet and as productive as other mangels—illustrated.

LEGUMINOUS PLANTS—grasses and valuable fodder plants, by Professor W. J. Beal—illustrated.

STOCK NOTES by Professor E. W. Stewart, L. S. Hardin, Richard Goodman, M. C. Weld, Col. F. D. Curtis, A. B. Allen and others.

IMPORTANT ADDITION to the Rural's Seed Distribution.

SPECIAL ARTICLES from Professor S. W. Johnson, Professor F. H. Storer, Professor G. C. Caldwell, Dr. A. R. Ledoux.

A SERIES of short articles upon the cultivation of our choicest vegetables—illustrated.

DAIRY SPECIALTIES by Henry Stewart, L. S. Hardin, Professor L. B. Arnold.

FRUIT NOTES by Pres. T. T. Lyon, Gov. Furnas, Dr. T. H. Hoskins, Sec. Garfield and others.

POULTRY NOTES by Forrest K. Moreland, Henry Hales and others.

LIFE ENGRAVINGS of the Chinese Yam (Dioscorea batatas) "Cinnamon" vine; the Tulip tree and fruit &c., &c., &c.

SMALL FRUIT NOTES will be presented later by the well-known writers whose contributions have made this journal of such value in this important department of Horticulture.

TO NEW SUBSCRIBERS.

We find that many of our new subscribers have not seen our Free Plant and Seed Distribution supplement and consequently know nothing as to its terms. We will therefore send this supplement free to all who apply until further notice.

As originally announced in our Fair No. of Sept. 6, the Plant and Seed Distribution will be completed before March 1st. This for the benefit of our new subscribers.

WE can no longer supply back numbers. All subscriptions will henceforth be continued one year from the date of their receipt.

GRANTING that the Kieffer pear is of fair quality, we have no evidence that it is "blight-proof," which is the strongest point claimed for it by those who have this tree for sale. Much interest is manifested in the Kieffer all over the country—but we advise our readers to purchase rather for experiment than with any sanguine hopes of profit.

HAVING in a recent Editorial spoken reproachfully of Professor C. V. Riley, we now—in justice to him—call attention to his reply on p. 77. Following his reply is our evidence and that of the Commissioner of Agriculture in support of the statements made in the editorial alluded to. The reader should suspend judgment, however, until Professor Riley has had an opportunity of being heard from again, though we trust that any further controversy may prove short, pertinent and decisive.

WE are pleased to see that the Western Rural seems earnest in its condemnation of swindling advertisements. As it is a piece of conscientiousness that *costs* something, its readers should respect that journal accordingly. It seems to us a disgrace to this nation that so-called "respectable papers" should admit to their advertising columns (seemingly without protest from their readers), the most glaring, self-evident frauds. The disgrace is hightened by the standing editorial announcements that "Readers will do them a favor by reporting any failure of advertisers to make good their offers" and that they will "expose those who seek thus to impose upon the public." It seems odd enough that publishers should wait to learn through bamboozled readers what they already understand full well themselves.

AFTER a lapse of two-and-thirty years starving Erin once more stretches out her emaciated hands for relief towards America where so many millions of her children have in the interval found homes. It is rather unfortunate that political agitators should have tried to make an expression of America's sympathy with a starving people appear like an indorsement of their own political schemes. With the latter the great majority of the citizens of this country have little sympathy, while comparatively only a few would deem it just or expedient to promote them by financial aid; but for a suffering people America's sympathy is accustomed to come from the pocket as well as from the heart.

WE see that "Hybrid" potato seeds are offered in some catalogues for 50 cents per packet, each containing 25 or 30 seeds. Passing the fact that the seeds produced by crossing two varieties of potatoes are not "hybrid" seeds at all, it seems to us beyond all probability that if actually the result of artificial crossing, they could be produced and sold for such a price. Few potato flowers can be induced to bear fruit. It is *always* difficult to find pollen and, if we may judge by our own trials, we should not like to guarantee a single seed ball (fruit) for every day of labor. We cannot believe that seed, *known to be crossed*, could be profitably produced at one dollar for *each seed!* Perhaps those who have made a special study of this work may be able to show wherein we are wrong. We should feel obliged if they would.

THE Gardeners' Chronicle of Jan. 3, gives a list of the trees, shrubs and herbaceous plants introduced by Robert Fortune to whom the horticultural world should feel under lasting obligations. Nations are quick to recognize and to honor political or military services but very slow to recognize the services, of those who plod and toil through their lives to advance the interests of horticulture or agriculture. Many of Mr. Fortune's discoveries and introductions are to-day among the most prized plants of the ornamental grounds of our country. We may mention Spirea palmata; Lilium auratum; Prunus Japonica; Lonicera aureo-reticulata; Kerria Japonica variegata; Deutzia crenata fl. pl,; Retinospora aurea, obtusa and pisifera; Sciadopitys verticillata, many Maples; Dielytra spectabilis; Viburnum plicatum; Spiræa prunifolia fl. pl; White Wistaria; Forsythia viridissima; Akebia quinata etc., etc.

It may be some comfort to the quiet, unobtrusive Robert Fortune to know that, perchance, after his death the world may come to realize how much it owes to him and to others like him.

IN view of the continued destruction of European vineyards by the phylloxera, a great deal of transatlantic attention has lately been directed to this country as a source from which a supply of wine might be obtained. Time was, and not long ago either, when American manufactured products were held in poor estimation by the old European States. Of late years however, the rapid improvements in our methods of manufacture, coupled with a better acquaintance with our wares, has changed the world's opinion with regard to most of the goods made here; but as yet, American wines have not shared in this revulsion of opinion as much as many of our other products. At present much of the wine which is drunk here, paid for and praised as of foreign vintage never crossed salt water. From the days when the New World was serving an apprenticeship in industrial pursuits in which the Old World had already become skilled, there still remains among the American people a tendency to overestimate many European products and to underrate many of their own. The knowledge that the eyes of Europe are upon them should stimulate our vineyardists and wine-makers to produce an article that must command the approval of epicurian transatlantic connoisseurs. We advocate total abstinence; but believe the general use of pure native wines in lieu of stronger liquors a step in the right direction.

IN this State 600 cattle are now in quarantine on account of pleuro-pneumonia. Already $16,000 have been spent in checking the plague, and last Wednesday $30,000 more were asked of the Legislature to pay past debts and for immediate expenses. With praiseworthy wisdom and alacrity, the full appropriation was promptly made unanimously in executive session. At the same time a concurrent resolution was introduced in both Houses calling upon Congress to legislate for the suppression, by the National Government, of this standing threat to the vast cattle interests of the country. We have frequently insisted on the necessity of speedy legislation in this direction. The whole country is deeply interested in the eradication of this plague from the very few spots in which it still retains a foot-hold. Some of the Western papers have now and then expressed the opinion that its extirpation is a work for which the Eastern States exclusively should provide and pay. When a building is on fire and the fine neighboring mansions are threatened with a ruinous conflagration, it is certainly not a mark of wisdom on the part of the owners to confine their efforts to urging the proprietor of the burning structure to increased endeavors to extinguish the flames. The quota of the States which are free from the pestilence towards its suppression in less fortunate States, would be but a small premium on the insurance of their own herds against possible contagion.

NOTWITHSTANDING the fine crops that during the past year blessed the West as a whole with abundance and returning prosperity, certain parts of it, especially along the frontier, are at present sadly pinched. Early in the week Gov. St. John, of Kansas, telegraphed Jay Gould that great destitution prevailed among the farmers of the frontier counties of that State, especially those of Sheridan, Grove and Wallace counties, owing to the failure of crops through drought last year. Gould telegraphed a remittance of $5,000, for which a couple of car-loads of flour and meal as well as a large supply of bacon were promptly forwarded as an immediate installment. Frequently during the past year Kansas contributors to "Everywhere" have warned intending immigrants to that State, of the imprudence of going too far west. The present distress is by no means a novel experience, however, as it has frequently happened that that State has had to save recent settlers from starvation in frontier places owing to shortage or entire failure of crops. Experience seems to demonstrate that the immigrant to the Far West, with a family dependant upon him, should have capital enough not only to build some sort of a home and plant the first season's crops, but also to bridge over the second should the crops of the first prove failures. In a thinly settled country little help can be expected from distant neighbors all equally pinched, while work whose wages might eke out a short harvest, is hard to find and poorly paid.

THE CORNER IN WHEAT.

GREAT was the excitement last Saturday among the grain dealers at the Produce Exchange in this city. Wheat suddenly dropped from three to five cents per bushel; reports from various points in the West announced a fall there also; rumors flew thick and fast of failures among the brokers, of weakening of some of the wheat syndicate, and of the speedy collapse of their "corner." The "bears" were jubilant, the "bulls" despondent, but although many were squeezed tightly, not more than one or two of the regular dealers were crippled; but a large number of "outsiders" operating on "margins," are said to have lost everything.

For the last three or four weeks the price of wheat has been steadily declining, with a pretty sharp fall last week, as noted in our Market Reports. The syndicate, who since last fall have been the chief purchasers of wheat all over the country but especially in the West, cannot, however, afford to allow prices to go down in view of the enormous quantities they have on hand, some of which they purchased at higher figures than those now ruling, while the cost of all of it has been considerably increased by shrinkage, vermin and storage since it came into their hands. Just at present however, the outlook for them is not very bright. European advices seem to indicate a firm resolution on the part of dealers there not to purchase our wheat until the prices shall be satisfactory to them. Rather than pay heavily for wheaten bread, there will be a great substitution of other foods for the "staff of life," while British India, Australia and New Zealand are looked to for large supplies of wheat. Consequently, despite the late decline in wheat here, prices in Liverpool to-day are lower than in New York. This has been the chief cause of the great shrinkage in our wheat exports for a considerable time. In this port there are to-day about 250 vessels waiting for grain cargoes which cannot be had at any paying rate of freight, while the ports of Boston, Philadelphia, Baltimore and San Francisco have each large expectant fleets. Grain is accumulating enormously in the West, owing to the rise in railroad freight immediately on the removal of competition by the closing of the canals. A few months ago the charge from Chicago to New York was two dollars per ton; now it is eight dollars. Hence on the 19th inst. the stock of all kinds of grain at Montreal, Boston, New York, Philadelphia and Baltimore amounted only to 16,402,187 bushels, including 11,133,899 bushels of wheat and 2,322,628 bushels of corn.

But there is altogether in the country at present an estimated surplus of 86,000,000 bushels. The wheat crop for 1879 is put down by the statistician of the Produce Exchange here at 448,000,000 bushels. Of this the consumption for manufacturing purposes, seed and food is about 250,000,000 bushels, leaving 198,000,000 bushels for export. From July 1 to December 31, the export was about 127,000,000 bushels, including an estimated remnant of about 15,000,000 of the crop of 1878. Deducting this from the total export, there are left 112,000,000 belonging to last year's crop, of which this surplus of 86,000,000 bushels is yet available for export. Certainly not more than from 15,000,000 to 20,000,000 of this still remains in the hands of the farmers, and of the remainder the whole must be in the hands of dealers and by far the larger portion under the control of the syndicate.

It will be seen, therefore, that until the next harvest shall have come into market, the price of wheat will have comparatively little effect upon the farmers of the country, though it may "make" or ruin hundreds of speculators. What it shall be will depend upon the issue of the struggle between the greed of these and the need of Europe, but meanwhile, the entire population of this country also, are economically interested in it, inasmuch as the cost of their loaves and hot rolls will depend upon the outcome. The members of the syndicate are all very wealthy men; they can command vast capital besides; they are, most of them, bold and resolute speculators; there is little doubt but that before next harvest there will be a market for all their grain at their own figures, if they persevere; their profits if triumphant will be enormous; their losses, if defeated, will not be small; a persistent struggle may therefore be anticipated, unless the weakening of some of them shall cause a speedy collapse of the "corner."

BREVITIES.

WE fear we shall not hear as much from our friend Mr. J. B. Armstrong as formerly. He is now the Editor of the Daily Republican of Santa Rosa, Cal. a copy of which (vol. 1. no. 10) is now before us. We wish him success. He has talent enough to command it.

MR. Charles Darwin publishes in Nature, a case in which hybrid birds, the offspring of two distinct species, have proven fertile *inter se*. The common goose and the Chinese goose are so distinct that they have been placed in different genera. But they interbreed and their offspring are fertile. Sterility, consequently, is thus shown to be no safe criterion of specific difference.

AT the Fair of the Wisconsin Dairymen's Association at Elkhorn, on January 14 and 15, the silver cup, value $25, offered as a premium by the RURAL NEW-YORKER for the "Best Cheese made at any time," was awarded to W. S. Baker, (Merrick's Factory,) Cold Spring. A similar cup of the same value offered by the same paper for the "Best Butter made at any time," was at the same time adjudged to L. Lytle, Elkhorn—both first premiums.

AT the late meeting of the New Jersey Horticultural Society, Mr. P. T. Quinn stated that the Chinese Sand Pear had blighted on his place. As this Pear has heretofore been considered blight-proof, and by reason of this quality, has been highly recommended for stocks, this revelation is of much interest. Though it may withstand the disease better than other varieties, the fact that it has once blighted, is evidence that it may do so again, and the appellation "blight-proof" as applied to it, will hereafter be a misnomer.

OUR new friend, Land and Home, complains that the Mass. Ploughman appropriated one of its articles by Prof. James Law, an advance proof of which was sent to the Ploughman, so that it might appear in both papers the same week. "This is the way they return our courtesy," says the Editor. "Courtesy," is that the word? The Ploughman merely accepted that which was presented and failed to say "Thank you" in *public*. Perhaps the Ploughman was grateful at heart. Land and Home was in a sort of inexplicable humor last week. It tells its readers how it blundered in bestowing a wrong name upon Mr. Crozier's bull and then soothes itself by saying that the RURAL NEW-YORKER made a greater blunder over the Hereford bull which we illustrated in our issue of Jan. 10. We hoped that our slip would pass unnoticed; but we wish to be "courteous" and are not unwilling to aid our young friend in giving it publicity.

A LETTER FROM PROFESSOR C. V. RILEY.

TO THE EDITOR OF THE RURAL NEW-YORKER:

Sir :—I find the following statements in an editorial in the issue of Jan. 8th of your journal :—

[1] Professor C. V. Riley sought the position of Entomologist to the Agricultural Department. [2] He solicited the press to pronounce upon his fitness for that position. [3] He was appointed and—resigned. [4] Probably he was surprised that the resignation was promptly accepted, for he exerted his best influence to get back. [5] Then he commenced and has since industriously continued his denunciations of the Department which, even if well founded, come from him, under such circumstances, with an exceedingly bad grace.

The third statement is true. I pronounce each and every one of the others most false and unwarranted. [1] The position of entomologist to the Department was tendered me after various consultations and some correspondence with the Commissioner, and I was a candidate merely as others were after the public announcement of Prof. Glover's ill health and necessary withdrawal. [2] In accordance with custom, I solicited some dozen of the leading naturalists of the country to pronounce upon my fitness for the position, but not a word was solicited from the press. [4] I was *not* surprised at the acceptance of my resignation, because said resignation was deliberate, for good reasons, and emphatic, and I twice declined to extend the time when it should take effect. Instead of exerting my influence to get back, I dissuaded those who expressed the wish to have me back from making any attempt to bring about that end. [5] I have said nothing of the Department since my resignation that I had not said before, or during my connection with it, nor written anything regarding it except the paper read at the organization of the American Agricultural Association. Said paper, while fearlessly criticizing, was really a plea for the advancement of agriculture in this country, and for the re-organization of the Department on a broader and more useful basis. It was without personality, indorsed by members of the Society, and unanimously ordered printed.

I am unwilling to let pass unnoticed such slanderous statements in an old-established journal for which I have always had respect, and unless they were made from sheer malice, you have been misled by others, and will retract. Respectfully,

Washington, D. C., Jan. 12, 1880. C. V. RILEY.

REPLY.

We could hardly feel malice towards one who, so far as we know, has never harmed us in any way or sought to do so. But if it were otherwise, we should feel that it would be far from manly, were we to suffer our personal dislike to show itself in the columns of our own journal. To our way of thinking, the Department of Agriculture under Gen. Le Duc, has displayed energy and a manifest desire to benefit the interests of agriculture. Whether it has measurably succeeded or not, the effort and the desire to do so should have shielded it from the vulgar gibes and reproaches that have been showered upon it by those who could have had no benevolent motive in so doing. When, therefore, any person holding the high position that Professor Riley occupies as an entomologist, first seeks an office in the Department of Agriculture and then, having become displeased with its Chief, endeavors to be replaced after an ill-considered resignation, and, failing in this, denounces both the Department and its Commissioner, we assume that it is the business of the press in general, and of the agricultural press in particular, to show wherein such reflections are without foundation in fact.

Professor Riley pronounces "each and every one" of our statements as "most false"—except the unimportant one that "he was appointed and resigned." First, therefore, the statement (1) that he sought the position is "most false," and second, the statement (2) that he "solicited the press to pronounce upon his fitness for that position" is likewise "most false."

We have the proof that, about a month previous to his appointment, he wrote a letter over his own signature requesting the "Editor of the RURAL NEW-YORKER," to pronounce upon his fitness for the position of Entomologist to the Department of Agriculture, in view of his name having been mentioned in that connection.

In consideration of the fact that a number of the more influential agricultural journals did at that time, as if by one accord, express *their* opinions respecting his fitness for the position, we naturally concluded that the same request had been made of those journals. Of this, however, we have no further proof than the above bit of circumstantial evidence, somewhat strengthened, perhaps, by the fact that as we had no personal acquaintance with Prof. Riley, he was as likely to have made the request of other journals as of ours. The fact remains, all the same, that he *did* make the request of us, and that therefore he did solicit a public expression of opinion "from the press" as to his fitness for the position. The third statement is not questioned. We respect Professor Riley's unwillingness to pass unnoticed any slanderous statements from reputable sources. As they were *not* in the present case made from "sheer malice," or from any malice whatsoever, if we have been "misled" as to the fourth and fifth statements, we shall gladly and fully "retract" them. On the other hand, Professor Riley is thus far called upon to admit that our first and second statements are not "most false," but absolutely true.

Statements, Letters, Short-hand Reports of Conversations, &c., from the Commissioner of Agriculture.

DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C., Jan. 15th, 1880.

EDS. RURAL NEW-YORKER:—Your understanding of my verbal statement that Prof. Riley tried to retain his position in the Department after his resignation had been accepted, is correct, as the following extracts from certain letters, and from his conversation, taken down at the time in shorthand, will show. Prof. Riley's resignation was dated March 29th, 1879, and was as follows:

"Unwilling to incur further risk of being treated discourteously whenever I make any suggestion for the benefit of my Division, and satisfied that under present circumstances I cannot longer remain Entomologist of this Department and retain my self-respect, I hereby tender my resignation."

This resignation was accepted in the following words:

"I have the honor to acknowledge the receipt of your communication of date March 29th, tendering your resignation of the position of Entomologist of the Department.

Passing without criticism the offensive manner and style of your communication, and looking to the good and harmony of the Department, your resignation is hereby accepted without comment, to take effect April 30th, A. D., 1879."

About this time I had occasion to be absent from the Department, and on my return I learned that the Baltimore Gazette, had published the following article written by its correspondent here, Mr. Butler, whom at that time I had never seen:—

"Several weeks ago Professor Riley, Entomologist of the Agricultural Department and former State Geologist of Missouri, sent in his resignation to Commissioner Le Duc. In a conversation to-day Prof. Riley made certain statements that will be likely to lead to a Congressional investigation. He remarked that he did not care so much about the personal affronts shown him by Le Duc, but he did object to the latter assuming everything connected with his special Department. Furthermore, he charges and stands prepared to prove that Mr. LeDuc has misappropriated funds set apart for the Commission appointed to investigate the ravages of the cotton-worm in the South. The Professor says that this fund is so drawn upon that he could not operate with any success. It was used in clerk hire, and he knows that a draughtsman sent out to Minnesota to make plans for a new house for Le Duc, was paid from this appropriation.

The Commissioner is about to have an interesting investigation on his hands. It will be remembered that some time since the charge was publicly made that Le Duc had misappropriated the fund for seeds. This, it is alleged, can be proved. It amounts to thousands of dollars. Since the resignation of Prof. Riley the place he vacated has been offered by Le Duc to Prof. Cyrus Thomas of Ills., but that gentleman has written a caustic letter of refusal to the Commissioner, giving 'Under the circumstances' as his reason."

This article was crowded into papers all over the United States north and south, with such variations here and there as the editors of the different papers chose to make. I call your attention to this, and especially to the latter part, that you may compare it with the statements of Prof. Thomas and Mr. Brisbin Walker (and no one acquainted with either of these gentlemen will question their veracity). You will notice that the paragraph states that Prof. Thomas "had written a caustic letter of refusal" giving "Under the circumstances" as his reason. But the words in quotation were used in this connection to convey the meaning that "under the circumstances" meant the dismissal of Riley. A copy of the letter in which Prof. Thomas accepts the position tendered him, will be incorporated in this letter, that you may judge of the motive that would prompt the desire to circulate such a falsehood.

I sent for Mr. Riley, called his attention to the article, and the following is a short-hand report of our conversation at that time:

Commissioner.—"The Chief Clerk was telling me this morning something in relation to a newspaper article which I have not yet seen. What is there of it?"

Riley.—"I am very much annoyed at the way the thing has been mentioned. I tried to avoid it. A stranger to me came up to my house and wanted to get some points. I told him I had nothing further to tell him. I told him what the result of the resignation was. To my surprise a paragraph appeared which I would not have had for anything I have studiously avoided—"

Commissioner (interrupting).—"What was the paragraph?"

Riley.—"Simply went on to state that Prof. Riley had resigned, the former geologist—he had it—of Missouri, and a lot of other erroneous ideas and even went at the Department."

Commissioner.—"Were there some specific charges of dishonesty."

Riley.—"Something in regard to seed."

Commissioner.—"What was there about the drawings that I employed a man to do for me?"

Riley.—"It made reference to your employing some one to go to Minnesota to make drawings."

Commissioner.—"You made no reference to it in your conversation?"

Riley.—"No, sir."

Commissioner.—"What are the facts as you understand them?"

Riley.—"I presume Mr. Butler has been feeling sore. He has made repeated charges and references to the Department, and took advantage of my resignation to come up there and lug my name in. Those are the facts. * * * * I detest the way newspapers take advantage of every opportunity to make news. This man is simply repeating what he has said before. * * * * This man, Mr. Butler, was sent up as a representative of the Baltimore Gazette. This man was sent up by Mr. Jones. I was in my office at the time. I just told him I had nothing whatever to say in regard to the matter."

Commissioner.—"Then the information came through Jones?"

Riley.—"Yes; he told me he had been sent by Jones."

The day following this conversation my attention was called to the charge of implied dishonesty by the then editor of "The Republic", Mr Brisbin Walker, who asked me if I wished to make the denial public. I advised Mr. Walker to call and interview Prof. Riley, as I did not believe that gentleman had ever authorized its publication. This interview was held and a report of it appeared in the "Republic" of April 13th, and is as follows: "Finding in the Courier-Journal of Wednesday, what purported to be an interview with Prof. Riley, late Entomologist of the Agricultural Department, in which serious charges were made against General Le Duc, I took the trouble to call on Prof. Riley and show him the report. After reading it through carefully, he exclaimed emphatically: 'This is an outrage. It is wholly made up, and no such interview ever took place.' In the course of further conversation he stated that he believed the interview to have been concocted for the purpose of injuring Gen. Le Duc. It is difficult to estimate just what punishment a man deserves who will deliberately manufacture falsehoods against a Government official and send them broadcast by the telegraph. This is not the first time that an effort has been made to injure the standing of the Commissioner of Agriculture by the dissemination of malicious rumors; nor is it the first time that falsehoods have recoiled to the discomfiture of the originators."

On April 29th, Mr. Butler, correspondent of the Baltimore Gazette, called at my office and the following stenographic report of his conversation explains itself:

Mr. Butler.—"General, about ten days or two weeks ago I went up one day and had a talk with Prof. Riley. He made some statements to me and I understand lately through Western men and several friends that he says he did not make them at all. I say that he did make those statements. * * * If Mr. Riley wants to kick against any statement I made, I will face him in a minute. There were a great many things he did say I did not use. He made several broad statements * * * How did I know of it if he did not tell me?"

I will now quote from a conversation held with Mr. Riley on the afternoon of April 29th. * * * *

Commissioner.—* * * When charges are made by a man who, as he says, gets his authority from you and gets not only what he published but more, and from you, I have a right to believe it."

Riley.—"When you have the first reason to doubt my honor and integrity you have; but I have tried to keep out of this, and I will face any man who says I have had anything to do with all this unpleasantness."

Commissioner.—"I will send for the newspaper man to come here to-morrow, and we will see what he has to say about this matter. He has either to say what he has told me or he has to confess that he has lied to my face."

Mr. Butler could not come the next day, but made his appearance May 1st, accompanied by a fellow reporter, Mr. W. P. Copeland. The following is a short-hand report of what occurred. Mr. Butler called to meet Prof. Riley, who had made arrangements to meet him at two o'clock, but was at that hour absent.

Mr. Butler.—"I want to meet him and have this thing settled right up here and now. I don't flinch a hair, you know."

Commissioner.—"He said he would be here at two and have his witnesses."

Butler.—"Well, there were no witnesses to it."

Copeland.—"I waited nearly an hour in front of Riley's house while Mr. Butler was in there. When he came out he told me what Riley had said."

The Commissioner referred to Mr. Riley's denial of the Walker interview.

Mr. Butler.—"Yes, he is trying to craw-fish on that, too."

I give you these quotations from my short-hand reports upon this matter, that you may better judge of the character of a person who would seek to retain a position in the Department after all this had passed. I will further quote for your information from a short-hand report of April 29th, the same being an answer to your query whether Riley did or did not try to remain in the Department after his resignation and after furnishing the newspaper paragraph to Butler.

Mr. Riley.—"I called at your house on Tuesday evening. I have had two letters from Thomas saying that the position had been tendered to him and that he had declined it. I thought under the circumstances I would see you and find out whether you still desire me to leave or whether you felt convinced I had no finger in that legislation. I wanted to know definitely about the matter. I should like to finish this investigation, and if I stay I have certain places where I would very much like to visit. * * * * I felt that if Thomas did not accept there might be still a chance of your letting me continue. * * * I am willing to admit that I sent in the resignation hurriedly, but I thought you had something against me. Your manner showed it."

Commissioner.—"You seemed anxious to make your resignation, and even when you were advised to delay, the Chief Clerk tells me you said 'No, you would not do it.'"

Riley.—"Of course, I am willing to admit I was hasty. * * * * Now, if Thomas comes here I would like to know just when he comes, and I would like, if possible, to make some arrangements to complete that Cotton Commission. If there is a way of my remaining with you, if you are convinced that I am not the cause of this legislation."—"I would like to do so"—is what he said; finishing the sentence. The short-hand writer did not get it down, as you see by —. He lost a little and had to commence with:—"I know Thomas is in this position:—He throws up his place at $3,000 and a position on the Commission. He is in a far better position than I am. He has expressed an unwillingness to go into Department life. * * * * I feel satisfied that if Thomas knew all the circumstances he would be perfectly satisfied."

Commissioner.—"If he does not accept it, there is another party who stands ready to take it."

Riley.—"Well, I had hoped that some arrangement could be had, but this will end the matter for the present."

In this connection I now incorporate the letters heretofore referred to. Under date of April 2nd Prof. Cyrus Thomas writes:

CARBONDALE, Jackson Co., Ill., April 2nd, 1879.

HON. W. G. LE DUC—*Commissioner of Agriculture.—Dear Sir:*—The position of Entomologist to the Agricultural Department is a very desirable one, and one which I would gladly accept under most circumstances, but do not see how I can do so this year consistently with my own interest.

If I understand correctly, the salary is only $1,800 or $2 000. With the family I have, this would hardly support me in Washington. The salary of State Entomologist of Illinois, which office I now hold, is $2.000; hence there is no pecuniary advantage to be gained by changing. You are also fully aware of the expense and trouble of breaking up and moving a family the distance I would have to go.

The position you offer is one in which an Entomologist may gain great reputation, and hence is to be desired on that account; but my first duty is to my family, and the salary, if what I understand it to be, would not justify me in making the change.

Thanking you for the kind offer made, I must decline accepting, for the reasons given. Very respectfully, CYRUS THOMAS

This is the letter upon which the press commented so severely, giving "Under the circumstances" as the reason for his declination. This confidential communication found its way to the public through the press and telegraph, but with the wording and spirit so garbled as to show an evident intention and desire to have pending negotiations looking to the appointment of Thomas suspended, and also that it might, as far as possible, call down on the Commissioner the censure of that portion of the newspaper press which has so long been used for the furtherance of Mr. Riley's purposes. Meanwhile he wrote to Prof. Thomas requesting him as a friend to write me and try to correct what he (Riley) thought was an erroneous impression; *i. e.*, to help him to get back into the Department.

Mr. Cowing, of this Department, had suggested that he might go back if he obtained letters from parties certifying that he had nothing to do with certain legislation—as will be seen from Cowing's letter inclosed. Riley obtained several letters on this point and presented them, but I did not think it prudent or profitable for the Department to reinstate him.

By means not necessary to be explained here, the Appropriation Bill did not provide the additional thousand compensation to the Entomologist, and hence Prof. Thomas addressed me the following letter on April 17th.

CARBONDALE, April 17th, 1879.

HON. W. G. LEDUC, *Commissioner of Agriculture—Dear Sir:*—Having examined the Bill making appropriations for your Department, and having more fully considered the offer you so kindly made me, I have decided to recall my acceptance. I do not see under the present condition of the Appropriation Bill how I am to obtain the salary mentioned, as the provisions are very strict and I cannot afford to leave Illinois and go to Washington for $1,900.

I think you and I could work together harmoniously and the position is a desirable one, but until Congress will make a proper allowance for the position, I cannot agree to take it. My acceptance was based on the proposition as to salary, but I do not see how it can now be carried out, and as I do not want to make a change on uncertainty, I must withdraw my acceptance. But allow me to thank you for your flattering offer, and to state that I will at any time I can, wield any influence I may have for the benefit of your Department. * *

Very truly yours, CYRUS THOMAS.

[The above letter has reference to another letter not published.—EDS.]

After Prof. Thomas had declined, I tendered the position to Prof. Comstock, the present Entomologist. It was, you know, accepted, and I have every reason to congratulate the Department and the country thereon. While all this was progressing, letters from various persons were received, evidently at the instance of Prof. Riley, to secure his reinstatement in the Department. These facts will, I think, sustain the statement that Prof. Riley industriously tried to get back into the Department after he had resigned.

WM. G. LEDUC.

DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C., Jan. 16th, 1880.

W. J. COWING—*Dear Sir:*—In a conversation I had with an editor of a paper, I remarked that Riley tried to get back in the Department after he had resigned. If you have any knowledge upon this subject have the kindness to put it in writing and send it to me at your very earliest convenience. Very respectfully yours,

WM. G. LEDUC, Commissioner.

DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C., Jan. 16, 1880.

HON. W. G. LE DUC—*Commissioner of Agriculture.—Sir.*—In reply to your favor of this date, I would state that I learned a day or two after Professor Riley tendered his resignation, either through Prof. Riley or Gen. Carman, Chief clerk of the Department, or perhaps both, that the difficulty between the first named gentleman and yourself had grown out of some interference with legislation for the Department. As Prof. Riley disclaimed any such interference, I remarked that if such fact was shown to the satisfaction of the Commissioner, I thought it would result in an amicable settlement of the misunderstanding, and that his resignation might be withdrawn. My recollection is that Prof. Riley acted upon this suggestion.

Yours, very respectfully, W. J. COWING.

DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C., Jan. 16, 1880.

HON. W. G. LE DUC—*Commissioner of Agriculture.—Dear Sir:*—My recollections of the circumstances attending the resignation of Prof. Riley are as follows: some time in April Prof. Riley informed me that on the preceding day he had a conversation with you, in which your tone and conversation were so severe and marked that his self-respect would not allow him longer to remain in the Department. He then handed me his resignation which I returned, informing him that I thought his action hasty and ill-advised and advising him to withhold the same until he had thought more of the matter. He thought favorably of my suggestion, and I thought acted upon it, but the next morning I heard he had handed it in to you. Some days later he seemed to have obtained the impression, that if some matter relating to his efforts to obtain special legislation were explained to your satisfaction, the resignation might be withdrawn. I then told him that it was too late, that his hasty action in the first place, coupled with some unfortunate newspaper articles had put it beyond my province to do anything in the matter. Prof. Riley was anxious that the differences should be accommodated and he remain in the Department, a fact which is strengthened in my mind by the remark he made to me in New York in December last "that he had always had the impression that had I interfered more actively in his behalf, the matter might have been arranged."

Very respectfully

E. A. , Chief Clerk.

Literary Miscellany.

THE MODEL SUBSCRIBER.

WILL CARLETON.

"Good morning, sir, Mr. Editor, how are the folks to-day?
I owe you for next year's paper—I thought I'd come in and pay;
And Jones is going to take it, and this is his money here;
I shut down tendin' it to him, and then coaxed him to try it a year.

"And here's a few little items that happened last week in our town;
I thought they'd look good for the paper, so I just jotted 'em down;
And here is a basket of peaches my wife picked expressly for you,
And a small bunch of flowers from Jennie—she thought she must send something, too.

"You're doing the politics bully, as all of our family agree;
Just keep your old goose quill a flappin' and give them a good one for me
And now you are chock-full of business, and I won't be takin' your time;
I've things of my own I must tend to—good day, sir; I believe I will climb."

The editor sat down in his sanctum, and brought down his fist with a thump:
"God bless that old farmer," he muttered, "He's a regular jolly old trump,"
And 'tis thus with our noble profession, and thus it will ever be still;
There are some who appreciate its labors, and some who perhaps never will.

But in the great time that is coming, when Gabriel's trumpet shall sound,
And they who have labored and rested shall come from the quivering ground:
When they who have striven and suffered to teach and ennoble the race,
Shall march at the end of the column, each in his God-given place—
As they march through the gates of the city with proud and victorious tread,
The editor and his assistants will travel not far from the head.

WILFUL'S CHRISTMAS EVE.

CHAPTER I.

AT KING'S CROSS.

"Train to York, sir? Yes, sir; starts in ten minutes See to the luggage, sir? Yes, sir; directly."

"Due in ten minutes, is it? I was in hopes it was gone," muttered the elderly gentleman who had questioned the porter; and then he drew his scarf up to his ears, shivered in spite of his thick Ulster, and remonstrated peevishly with the lady who leaned on his arm.

"There is a train, as you hear, but it is impossible that you can reach Froyle Priory before midnight. And the weather is frightful! the papers are full of reports of heavy snow-storms, and the cold is intense, and ——"

But here he was interrupted by the lady, who drew herself up with a dogged look on her well-preserved features

"Did you ever know me to permit the mere accident of weather to interfere with my duty?"

"Why, what on earth ——" Mr. Lockwood began fratedly, then checked himself with a hopeless gesture, as if he knew all further arguments would be thrown away on this Spartan matron

But as he turned from her, his eyes fell on two young ladies who had silently followed her on to the platform; the one a fair, placid, sleepy-eyed blonde; the other a vivacious mignonne brunette, and he ventured another remonstrance.

"You must not forget the girls, my dear"

"Forget them!" his spouse coolly repeated, "They are here, are they not?"

"Yes, yes, that's what I mean; it is not prudent—Is it? to expose them—colds and coughs, you know—and Gertie, bless her! has just had a touch of neuralgia, and Lelia so far from strong."

"I am not at all strong myself," said Mrs. Lockwood, deliberately. "This hurried journey may lay me up, but no personal considerations shall deter me from doing what I know to be right."

"Now, really, my dear, you are taking an exaggerated view of your responsibilities," her spouse began.

"But really, Mr. Lockwood, you are keeping me standing in a draught. May I not take my seat, or do you intend to forbid my going to the Priory?"

"Forbid it!" and Mr. Lockwood looked aghast at the idea of exerting his authority. "No, no, Maria, you must do as you like; you always do," he added, ruefully; "and I don't suppose it's any use asking why, after agreeing to our spending Christmas quietly at my son's house at Sydenham we are suddenly marched off to the other end of Yorkshire."

"You raised no objection when I accepted the invitation of General and Mrs. Froyle," he was tartly reminded.

"I am aware of that; in fact, I don't think I ever do oppose your plans, my dear, but I did not wish to go to the Priory, and I'm sure I was heartily glad when you told me it was our duty to stay at home, and not expose Lelia to the inclemency of a Northern winter. You certainly did say so," he persisted, as she made another attempt to interrupt him. "Yet here we are, starting for the General's at the shortest notice, and so late in the day, that we shan't reach his house before midnight! Just fancy riding over those bleak moors, with a wind blustering round us that freezes the blood in our veins Ugh!"

"I thought," cried the lady, tartly," I thought I made you understand—I am sure I tried to do so—that you need not accompany us unless you choose."

"I don't see much choice in it," was the reply; "but here's the train. Where's Gertie? Where's Lelia?"

"We are here, sir," said Mrs. Lockwood's ward, Lelie Darton, tripping towards him; "but don't trouble yourself on our account. I'll take care of Ger," and she stood on tiptoe and nodded patronizingly at her tall friend. "You've quite enough to do without looking after us."

This was true, for that much-tried gentleman, harassed on one side by his lady, on the other by her maid, an elderly spinster who was out of humor at this sudden journey, was in a state of utter bewilderment by the time the impatient guard hustled him into the carriage, where Mrs. Lockwood was already comfortably seated, and audibly wondering he could not have managed the luggage and the tickets better. He would have defended himself, but was severely informed that her head was aching intolerably; and thus snubbed, he settled himself in a corner and went to sleep, an example which Mrs. Lockwood, in spite of her sufferings, very soon followed.

As soon as her regular breathing proclaimed the fact, the young ladies exchanged glances.

"Pleasant this, isn't it?" queried the tall, fair Gertrude. "Three hours ago I was snugly seated over the fire, thinking how nice it would be to spend Christmas at my brother John's, and pet my baby-neices, and here I am—cold and cross—my wardrobe bundled into my trunks anyhow—more than half my toilet essentials left behind, and all my ideas in a state of confusion. Will any one tell me why? What has happened? My dear, very dear stepmother, often does inexplicable things, but this is the most inexplicable of all!"

"Scold me for it?" answered Lelia Darton, crossing her arms on her bosom, and putting on as penitent an air as her sparkling brunette features could adopt. "Yes, scold me; it's all my fault! No, not my fault; my misfortune! If I had been born dumb, what a dear girl I should have been! But, alas! the gift of speech has been a fatal one to me—unhappy, ill-fated me!"

"Don't stop! I like to hear you rave a little, it's so amusing!" said Gertrude, tranquilly. "Only, when you've quite finished, favor me with an explanation, for I'm not quick-witted enough to find one myself."

Lelia flung her sealskin muff at her friend, who slipped her own hands into it, and leaned back in an easy attitude, asking, nonchalantly:

"Well?"

"Don't tease, Gertie! I really am very unhappy."

"Shall I weep with you?" inquired Miss Lockwood, feeling for her handkerchief. "I shall be most happy!"

"No; but you might be serious when you see that I am in earnest," Lelia excitedly retorted. "Have you not troubled yourself to wonder why we are hurried off from town in this manner? But no, you never do trouble yourself about anything! You are the coolest, most indifferent creature, that ever existed!"

"*Merci!* You are complimentary!" replied her friend. "I rather think I commenced the conversation by demanding a reason for this hasty move. If it hasn't surprised me very much, it is because my feelings have become blunted since papa married Major Reif's widow, and I have lived with that excellent female and her ward. Ice on one side of me, fire on the other, have reduced me to a nonentity."

"It's you who are complimentary now!" cried Lelia, with a laugh; and then she leaned forward to give Miss Lockwood a loving caress, and exclaim: "How cruel I was not to see that you have tears in your eyes—not to divine that you must be grievously disappointed at being dragged away, just as you had reckoned on spending a few happy days with your brother! Dearest Gertie, forgive me!"

"Is there anything to forgive, little wilful?" Gertrude demanded, as she returns the affectionate hug. "Why are you accusing yourself? Is it your fault that mamma has suddenly repented the good nature with which she acceded to papa's wish to go to John's for the holidays?"

"Yes, it is all my doings. If I could but have held my tongue a little longer, or fibbed more readily, or if that wretched Viscount Alleyne would but have died in his infancy, or married some one else—as he ought to have done when he came of age—I should have escaped this vexation!"

"What a mysterious speech! Has it a beginning or an ending? What *have* you done, you dreadful young woman?"

"Don't I tell you? I talked when I should have been silent, and spoke frankly when I should have diplomatised."

"Thanks for the explanation. It's a very lucid one. I understand just as much as I did before!" said Gertrude, quizzically.

"Patience, dear! I'm coming to it," replied Lelia. "You know that ever since the death of my parents consigned me to Mrs. Reif's—I beg her pardon, Mrs. Lockwood's—care, she has been engaged in a continual struggle to model me into a girl after her own heart——"

"Query, has she a heart?" murmured Gertrude.

"She has considered it her duty to make me an accomplished automaton, and I need not tell you that she has failed I'm sure she has to me!"

"Never mind," said Gertie. "I like you best as you are. But do go on, or we shall reach our journey's end before I learn why we are on the wing for the house of your father's old friend, the General"

"Here's the reason, then. When Viscount Alleyne and I were children, our parents used to discuss the idea of a marriage between us, because our estates join. I had forgotten this till Mrs. Lockwood reminded me of it. Of course, she considers it her duty—how I hate that word! to carry out their half-formed plan, and she decided to stay in London, because she heard that his lordship, who has been *attache* at St. Petersburg, had returned to England, and would spend some weeks in town."

"It begins to grow interesting," said Gertie; sitting up. "A live lord, young, handsome, and rich. Can the dear mamma be cruel enough to hurry you away from such a prize?"

"A prize, indeed! Why, he was a hateful boy. We were always quarrelling," pouted Lelia. "I did not wish to see him again; and when I discovered that General Froyle had invited him to meet us at the Priory, I was delighted to find that Mrs. Lockwood had declined the invitation. While she loitered in London waiting for him, he would have time to fall in love with some Northern beauty. All would have gone well, and I should have escaped the humiliation of being thrown at his head, if I had not triumphed over her too soon."

Gertie regarded the pretty speaker inquiringly.

"Yes, Mrs. Lockwood lamented this morning that, in spite of her efforts, I was so totally unfitted to shine in society, that she feared Lord Alleyne would scarcely care to wed me; and I could not resist telling her we were not likely to meet at all, as he would spend his Christmas holidays at the General's. You know the consequence. I had spoken too soon; in three minutes she had telegraphed to Mrs. Froyle, and I was sent to the right about to get ready for this journey."

"Oh, poor Lelia! Are you destined to be a viscountess in spite of yourself?"

The dark eyes flashed angrily.

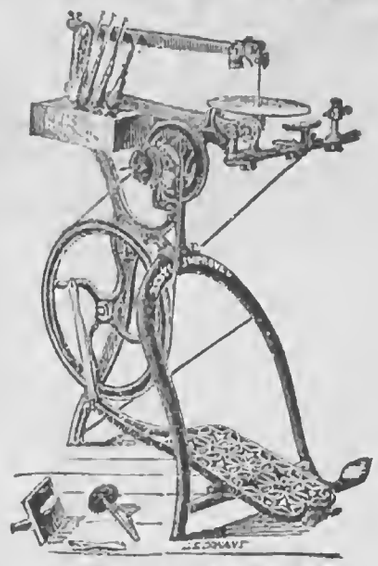
"Is it at all probable? Has not Mrs. Lockwood's assertion that it is her duty to get me well married been sufficient to rouse all my womanly feelings in arms against her?"

"Don't be too wilful, Lelia. If the young man is all he ought to be—"

"What has that to do with it?" asked Lelia, impetuously. "I have too much self-respect to be offered for sale. I refuse to consent to such degradation. Do you think I could endure to stand by and hear him reminded that our parents thought it would be a good match, and that my property will be a nice addition to his, only he must take me along with it? I tell you I'll not submit to it!"
—To be continued.

THE LESTER SAW.

This saw is offered as premium No. 96 in our premium list. The "Lester" is made by the Miller's Falls Co., office, 74 Chambers St., N. Y., and is probably, the best saw of its kind made. It consists of first, a scroll saw, with tilting table for inlaid work; arms 18 inches in the clear; clamps which will hold saws of any length or width, and face them in four different directions; cutting lumber from one sixteenth to one inch in thickness; speed, 1,000 strokes per minute. Second, a circular saw, two and one-half inches in diameter, which will cut lumber one-half inch and less; with an iron table four by five inches. Third, a drilling attachment, with six Stubs's steel drills of various sizes for wood or iron work. Fourth, an Emery wheel, with wide and narrow rim. Fifth, a Turning Lathe, with iron ways and rest, steel centers, and three best steel turning



tools; length of way, 15 inches; distance between centers, nine inches; swing, three inches; length of slide rest, 4½ inches; number of revolutions per minute, 7,000. Also, with each Machine, six Saw-blades, a Wrench, Screw-driver, extra Belt and two sheets of Designs, with a nice box for the small tools and a box for the whole Machine. It is taken apart when shipped and packed in a box, but the working parts are all left in place, and the frame is put together again by a single bolt. It is made of iron, with all the *working* parts of *steel*, and weighs 50 lbs. To say the least this machine is a very handy tool on the farm and to many it is indispensible. Boys with a taste for mechanical work can get nothing better to develop their ingenuity. We give this machine for a club of 20 subscribers.

"THE EYE-OPENER."

A Philadelphia firm is largely advertising a Bible for $1, but so words its advertisements that the ordinary reader understands that a fine Bible worth $15 is meant, instead of the paltry thing sent;—trickery in the sale of Bibles!!! . . The Chicago Oil Painting for 25c. humbug we showed up some time ago, and merely refer to it here to warn our host of new readers against this humbug of the "School of Design"—design upon the pockets of dupes! . . The Robbins Washer, price $4.00, is said to be a humbug, and described as a piece of cheap metal weighing six pounds. "The Bissel Co." are charged with humbugging folks with the thing.

NEW PUBLICATIONS.

Temperance Jewels. A new collection of Temperance, Reform and Gospel Songs, Duets, Quartets, Solos, and Choruses. By J. H. Tenney and Rev. E. A. Hoffman. Oliver Ditson & Co., Publishers.

Temperance musical literature has not, on the whole, attained a high rank; perhaps because of the homely subjects, on which poets do not care to sing. In this book, however, everything seems to be of a high order, and the words are full of encouragement to the reformed and the reformers. Clergymen will be pleased with the decidedly religious character of the songs, which are entirely in unison with the present reform movement.

MAGAZINES FOR FEBRUARY.

Harper's Magazine.—Contents: Bartram and His Garden; Foreign Tips; A Famous Breviary; Washington as a Burgher; A Visit to the Republic of San Marino; The Drop-Star, A Legend of Lake Kayutah; The Percheron and Norman Horse; The Lover's Peril, a Poem; Grub Stakes and Millions; White Wings, a Yachting Romance; Hector Berlioz; Mary Anerley, a Novel, Chap. XXIV. to XXVII; Mr. Keesler's Horse-Car, a Story; A Symposium of Wood-Engravers; A Night in an Avalanche; Editor's Easy Chair; Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

Descending the Humboldt Mine.—Entering a rough wooden building, you see a steam-engine turning an immense drum, around which is coiled a wire rope. On a chair sits, with each hand on a lever, the bright, watchful engineer, his eyes fixed on the drum, now nearly covered with the coil. In another minute, click! the machinery has stopped, and out of an opening in front, like Harlequin in a Christmas pantomime, has come a grimy figure, who stands there smiling at you, with a lamp fixed on the front of his cap, and his feet on the rim of a great iron bucket. He steps off, the bucket is emptied of its load, not of rich ore, but of very dirty water, which it has brought up, and there is an air of expectancy among the workmen, and an inquiring smile on the face of Mr. Thornton, the superintendent. Something is clearly expected of you, for it is established that you are not what is called by the miners a "specimen fiend," or unmitigated sample collecting nuisance, and it is assumed that when you came hither to investigate you "meant business" You take the hint, and follow Mr. Thornton to a room, where amid a good deal of joking, you put on clothes—and such clothes!

If you have one spark of personal vanity, "all hope abandon, ye who enter here," for even your kind guide has to turn away to hide a smile when he sees you in overalls which will not meet in front, and are precariously tied with a ragged string, an ancient flannel shirt, the sleeves of which hang in tatters around your wristbands, and a cap which might have come over in the *Mayflower*, and has a smoky lamp hooked into its fast decomposing visor. As you approach the mouth of the shaft, the engineer genially remarks that there "ain't *much* danger," and when the bucket has come up and been partially emptied, the by-standers repeatedly advise you to be careful about getting in. As you climb perilously over the side, you think of the Frenchman who, starting in the fox-hunt, cried out: "Take noteece, mes amis, zat I leafe everyzing to my vife!" And when you are crouched down so that Mr. Thornton can stand on the rim above, you do not think at all, but know, that you are what Mr. Mantalini called "a dem'd moist, unpleasant body." Mr. Thornton makes a grim remark about it being as well to have some matches in case the lamps go out, gives the word, and down you go. Understand that there is just about room for the bucket in the shaft, that the latter is slightly inclined, and that you catch and jar and shake in a nerve-trying way; and understand, further, that a person should carefully study his temperament and possible disabilities before he takes a contract to go into a deep shaft.

At a certain depth—it may be 500 or 1000 feet (in some Nevada mines it is 2500)—you stop at side drifts or cross cuttings in which men are at work, and here you see, walled in by rock, the fissure vein. Some are "stoping," or cutting pieces away with the pick, others holding the steel wedges, and others striking them tremendous blows with sledge-hammers. They are, by-the-way, in the habit of accompanying these blows with guttural sounds, the hearing of which induced a special correspondent of the gentler sex—ignoring the fact that they receive three dollars per diem, own chronometer watches, and have fine bank accounts, and silver spoons on their tables—to write a soul-stirring description of the poor down-trodden miner, imprisoned far from the light of the blessed day, uttering terrible groans as he toiled his life away for the enrichment of the bloated and pampered capitalist. Other men, again, are drilling, loading, and tamping for the "shots," which are to tear the rock in pieces; and you will probably remember a pressing engagement "to meet a man" at some distance from the mine, and induce Mr. Thornton to ring for that moist car, and take you up before they light the match.—A. A. Hayes, Jr., in *Harper's Magazine for February.*

Lippincott's Magazine.—Contents:—A Day With the Ottawa Chantiermen, Frederic G. Mather; Summerland Sketches. Chapter VIII.—The Delta of the Sumasinta River, Felix L. Oswald; Adam and Eve, Chapters 4–6, The Author of "Dorothy Fox"; Old and New Rouen, Two Papers, I Edward King; A Future Capital of the United States; His Wife's Nearest Relation, Margaret, Bertha Wright; Decorative Art and its Dogmast Two Papers. I. M. G. Van Rensselaer; Through Borrowed Eyes, Elaine Goodale; The Peasant-Land of Lorne; E. N. Lamont; Little Angel, The Author of "The Clifton Picture"; Olivia; Wildwood Studies, Maria P. Woodbridge; The Bonapartes in Exile, Arthur Venner; Our Monthly Gossip.

The opening article, "A Day with the Ottawa Chantier-Men," by Frederic G. Mather, gives a lively account of the lumbermen, and much information about the resources and prospects of the great Canadian forest lands, with many good illustrations. "Old and New Rouen" is the first of two illustrated papers, by Edward King, describing in his usual flowing and graphic style the most picturesque and interesting of French provincial towns. The eighth chapter of Dr. Oswald's "Summerland Sketches," also illustrated, carries the reader to the Delta of the Sumasinta River.

For Women.

HONEYSUCKLE.

How fair they were, my darling twain,
Who walked adown the grassy lane
That sultry August day;
Unconscious of the golden charm
That floated round them, arm-in-arm,
They wandered on their way.

One wore her raven tresses low,
Close-braided, o'er a brow of snow,
Like some grand Roman dame;
Here were those luminous, large eyes,
From whose dark depths strange gleams arise,
And break in sudden flame.

Around her sister's gentler face
The brown hair rippled, tender grace
Was in her form and look;
A wild-rose color on her cheek,
Brown, loving eyes, contented, meek,
And clear as summer brook.

I sat beneath a shady tree,
And heard their laughter floating free,
Through idle, happy hours;
I saw them gather by the way
The struggling clusters, sweet and gay,
Of honeysuckle flowers.

I watch them wave their scented spoil,
In eager haste, with playful toil,
And laughter-brimming eyes;
They twined it on my faded brow.
Ah, heaven! I have that garland now,
A sacred, mournful prize!

Was it because they were my own,
I fancied even their lightest tone
More sweet than other sound!
Was it because I gave them birth,
I thought that nowhere on God's earth
Could fairer things be found?

Was it but doting mother's love?
Or were my darlings fair above
The playmates of their time?
I know not then, nor now I know,
It is so many years ago,
They scarcely reached their prime.

But this I know, 'twixt them and me
Rolls yet the awful, tideless sea
That parts their world from this;
And well I know that where they are
There is no need of sun or star,
Nor need of mother's kiss.

But o'er my honeysuckle wreath,
My wearied heart will often breathe
A prayer for those bright bowers,
Where I may see my daughters stand,
Each holding for me in her hand
Heaven's amaranthine flowers.

—*Weekly Times.*

A GOOD-BYE TO THE "RURAL" SISTERS.

A LITTLE over two years ago—September, 1877—I made my bow to you, good ladies, and asked you to aid me in making the Woman's Department of the "Old RURAL," useful, instructive and entertaining: you promptly responded, and by contributions, suggestions and kindly words of encouragement, have aided very materially in bringing the department to the degree of excellence it has attained.

The fashion articles, those which treated of home decorations, of art matters, of courses of reading and home study, and lastly, the dear, old, gossipy "Club," have all been received with marked favor, and I cannot but feel that you have really enjoyed the department.

The "good, old times" are gone forever, so far as I am concerned, for I must bid a sad good-bye to all the pleasant friendships and delightful associations resulting from the editorship of "For Women." With the close of the year 1879, my connection with the RURAL came to an end. In resigning my position which I do with sincere regret, I wish to thank you, one and all, dear ladies, for your uniform courtesy to me, and to add a "God bless you" to my good-bye. Sincerely your friend, now and always. FAITH RIPLEY.

348 W. 35th St., N. Y.

[We may say that we too, part with Miss Ripley with sincere regret.—EDS.]

"REDEEMING THE TIME."

MRS. E. GRIFFITH.

PERHAPS there is nothing in life at once so precious and so ill-used as time. The golden hours slip away empty-handed, bearing but little from the most of us with which to enrich the coming years; so that when God rolls up the scroll of life, instead of its being written within and without with deeds and thoughts worthy of an intelligent being, it is found to be but an empty, soulless blank.

No doubt the man in Scripture, who had labored diligently and reaped so great a harvest as to be obliged to "pull down his barns and build greater in which to stow his abundant grain," was esteemed by most people as a man of wisdom, a smart, keen, live, business man, whose clear head and active hands would not let one moment run to waste. Yet, God called him a fool. God deemed him most wasteful, because he had spent *all* his time in laying up treasure for himself, and had not a thought of any bank account in Heaven. And yet I think sometimes that we are just as wasteful and foolish.

So engrossed do we become in the question "what shall we eat, what shall we drink, and wherewithal shall we be clothed?" that the interests of the Kingdom are crowded out, to a great extent, till a more convenient season. God tells us to "Redeem the Time;" that is: put something aside which only serves to minister to the flesh, and give the time we would have devoted to it to a higher, nobler purpose. In a word, *sacrifice self.*

How much some of us do—we women Christains, that calls for hard, exhaustive labor and hours of precious time, that does not add one whit to our comfort or well-being, but on the contrary produces fretful weariness, sleepless nights, and thorough disgust with one's-self and one's surroundings, simply because "everybody does it."

Ruffled pillow-slips, embroidered underwear, tucked skirts, chair tidies, air castles, and over-trimmed dresses are considered so indispensable to a respectable walk in life that the most of us havn't any time for anything else except to make cocoanut cake, lemon-custard pies, rich preserves, and ever so many other things to eat that we can't possibly get along without. And so our souls starve. Isn't it strange we don't think more about it than we do?

For many years I have habituated myself to a course of daily reading, beginning with my Bible and winding up with a good newspaper. Sometimes, especially of late years, I have allowed it to be broken in upon for days together, and I cannot tell you what a loss it always has been to me. Now, perhaps some of you may think that I have nothing else to do. Allow me say you are greatly mistaken. I am a regular busy-body, have a household of four to look after and do all my own work.

ORGUINETTE.—STYLE "A".

But I'll tell you: I made up my mind long, long ago, to dress plainly, and wear my clothes out, regardless of the changing style; to never learn how to make tidies or log-cabin quilts, or air-castles, or tucked and ruffled pillow-cases, because I knew I ought not to take the time God had given me in which to prepare for the life beyond. Many and many a time have I wielded the washing machine with one hand while with the other I held a book which constituted a part of my reading course.

Make excuses as we will, the fact is, there are very few of us but might snatch up five minutes in which to garner up rich thoughts from all the busy hours of the day, sweetening our lives and lightening our toil. There are many minutes when we are getting dinner, waiting for irons to heat, etc., that we spend impatiently that might be given to acquiring some useful information.

No one, who has never tried the experiment, knows how such a process elevates and strengthens the mind and heart, puts a check to fretfulness, and satisfies the soul. There is no other class of persons in the world that has such widespread power for good or ill as women; no one class upon whom is imposed such grand responsibilities; none that have such an educating influence.

Let us look to it, then, Christian women, that we set a better example before our sons and daughters! Let us begin and *carry out* a grand substitutionary work, "Redeeming the Time," because—and is not this sufficient reason? "The days are evil." For you know "we do *all* things through Christ, who strengtheneth us." There is no *can't* with God.

THE ORGUINETTE.

THE orguinette is a new musical instrument of the organ class and constructed upon the same principles. The same class of reeds are used as in the organ and a similar sound is produced, but unlike the organ this little instrument is not played by striking the keys with the fingers. By turning a crank merely, a sheet of perforated paper passes under a series of fingers that fall upon the valves, these are opened and the sound which is sweet, brilliant and melodious is produced. It will be a matter of surprise to all who hear it that so unpretentious an instrument can produce such really good music. The perforated paper is to the orguinette, precisely what the sheets of music are to the practised performer—and it is an exact copy of the *effect* produced by such music, if it is run through the orguinette properly. We send with the Orguinette 14 feet of music, but any quantity may be bought at 6½ cents per foot, embracing dance music, songs, hymns, and all the most popular and recent music.

ORGUINETTE.—STYLE "C."

Any one can play the Orguinette that is old enough to turn a crank! and it is an unfailing source of amusement and pleasure, especially to the young folks. For a frolic it is immense! It reels off quadrilles in perfect time, and the changes are printed on the music at proper places so that a child can be orchestra and leader. We give style C for a club of 38 subscribers.

Style A is the same as above without the "Expression Box." We present it and 14 feet of music for a club of 20 subscribers. Both are made by the Mechanical Orguinette Co. New York City.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

WHAT A WOMAN CAN DO.—No. 3.

MARY BEAL MC'LOUTH.

BELIEVING that the laboring class are the healthiest, and knowing that many who are sick would exchange all they possess for health, I have written these articles to encourage all classes, both rich and poor, old and young, to spend as much time as is consistent with their engagements in the open air. Don't hide your face from the pleasant sunshine, for it alone will bring the color to your cheeks. Now I hear somebody say, just like all other country women, hasn't any pride. Very well, have it as you please! I remember only too well my childhood days when the big sun-bonnet was a constant burden, in which I was obliged to envelop my head or remain in the house. But as I grew older I concluded a brown color was better than none, and so going bare-headed, combined with out-door employment, has given me better health than I ever dared to hope *I* should enjoy.

The care of poultry the year through, is the most remunerative of any employment I can mention, besides being very pleasant. But allow me right here to give a word of caution. Do not begin on too large a scale or try too many kinds at once. Chickens are the most easily cared for, and I am sure the profit from them will exceed that from any other kind of poultry. From a child I always found pleasure in cleaning up the door-yard. On bright days in the spring, it's a real treat to get out and gather up the rubbish, which will accumulate during the winter. Unless you found time the fall before, put on some leather mittens, trim and tie the Raspberries. If you wish to delight the children, have husband make a bon-fire of the refuse, in the evening. Picking and caring for small fruit is very animating, especially if you are where you can sell readily, and you have a faculty for filling your dish rapidly. I have picked half the apples we had for our own use, standing in a wagon, driving from tree to tree as necessity required. In the fall get the whole family out husking. Pull down the shock, cut the standards, but let the men bind and set up. Don't try to do everything just as the men do. Instead of slashing off the stalks and making hard work of it, draw the corn cutter back and forth as you would a saw. It's easier, but, of course, slower. Husking is sport after the tramp, tramp, tramp in the kitchen. Besides, it counts more. A woman who can use a saw, hammer and nails, can every day, find ample scope for her abilities. My father taught me when young the use of tools, and I bless the day when I learned. It is a satisfaction to any one to have an article made or repaired, without waiting the motion of some uninterested person who does not see any necessity for doing it any way, and perhaps never gets quite ready, putting one off from time to time until too late.

I might tell how I made my apple-racks, making a mammoth, dry house of my kitchen; cut up a hard-wood box and made a door-step; put up a door to the hen-house with leather hinges (though others would be as easily put on if one had them); made chicken coops innumerable, of all styles and descriptions; sawed the back of an old chair, nailed on a board, and painted it, making a respectable wash-bench. A door that would not shut, was taken off its hinges and sawed off. A shelf was put up in the cellar way. Laths were tacked below the mop boards, in the store-room and closets up-stairs, to keep out the mice. A railing was made to prevent one from falling down-stairs. Strips of wood were put up in different places for hooks or nails on which to hang clothes. Some casters were put in the lounge. A board three feet long and one wide, with strips nailed on sides and one end, the end board projecting below, so as to raise it a few inches from the platform; this to prevent water from running back into the well—a very much needed and useful article. It's so unwholesome to have the water dripping back to be pumped out again.

To those who do not wish to work, I would say, walk, walk, walk! Don't be afraid of its making you weak and bringing on worse ills, but walk every day. I don't consider it's a woman's place to do all this work, but some feel the necessity of doing something, and so they had best do that which *is* best.

RUBBER GLOVES FOR DISH-WASHING.

SEVERAL months ago a Vermont lady inquired where rubber gloves could be had, and at what price. In Philadelphia the price for gloves, without wrists or gauntlets, is 95 cents; with wrists, $1 20. These prices were given me at Wanamaker's. The lady's inquiry would have been answered at once, but that her postal card was mislaid. I don't know the cost of a mop for dish-washing, but a clever woman can make that readily by fastening her dish cloth to the end of a stick. If it does not quite answer her purpose, it will give her the idea how to fix it right. Perhaps some RURAL reader can furnish a drawing with explicit directions. MARY WAGER-FISHER.

FASHIONABLE TIDIES.

CHAIR "scarfs," as they are called, may be made out of ribbon velvet, Turkish toweling, crash toweling, or even bed ticking. Stripe the crash or ticking with black velvet ribbon, red flannel, or cut the stripes from a pretty cretonne, and fasten down the edges with any fancy stitch in floss or worsted. The spaces between the stripes may be worked with silk or worsted, all of the same design, or each different and of a different color. Finish the ends with a fringe of the same, or of worsted or silk to match the stripes. I have just finished a handsome "scarf" made out of Turkish toweling and ornamented with cretonne figures, fastened down in feather stitch. I fringed out the ends a finger in depth, and fastened in gay colored floss to match the cretonne. The length and breadth of a "scarf" must depend upon the size of the chair it is to ornament.

MRS. S E. W.

SAUSAGES AGAIN.

MRS. E. K. R.

NOT too late, however, to be of use to some belated housekeepers who have not yet struggled through the wearisome work attached to "bootcherin time." It was a long time after my first experiment in sausage making before I found a recipe that exactly suited my "gudemon's" taste, although every year I tried a new one. One would think that common sense might have taught me that nine teaspoonsful of pepper, nine of salt, and three of powdered sage to every pound of meat (which were the directions found in an old English cook-book,) would be too high a seasoning for all ordinary palates. Nevertheless, it was tried among the rest, and even the chickens to which it was finally consigned, found the result beyond their endurance. After many failures in getting just the right proportion of meat, salt, etc., a good old Dutch lady gave me the recipe which I have followed for several years with increasing satisfaction. Here it is: 25 pounds of meat, nine ounces of salt, two ounces of pepper, two ounces of saltpetre, one and one-half ounce of sage. Pack in bags made of old but strong cotton, cut about five inches in width and fifteen in length. When filled, tie with a cord long enough to make a loop to hang them by, and hang in a cool place. When you want to open a bag, rip open the lower end, turn the cloth back far enough to cut off what slices are needed, then fold the cloth down again to exclude dust and air. In this way you have the same loop to hang by until the whole bag is used.

Sausages are sometimes made of equal quantities of beef and pork, but they never should be, for the reason that pork needs longer frying than beef does, and by the time the pork is cooked sufficiently, the beef is all frizzled and dried up.

DOMESTIC RECIPES.

Pickled Oysters.

DRAIN and strain the liquor from off the oysters, bring the liquor to a boil, put in the oysters and boil *one* minute; skim out, add the same quantity of vinegar as liquor, a few cloves, mace and a little pepper and salt. Boil fifteen minutes, then pour over the oysters.

Orange Marmalade.

Take ripe oranges, pare off the outside rind very thin, and boil until tender; then cut into tiny strips. With a spoon take out all of the juicy pulp, throwing away the white pith. Mix the pulp and juice with the tender peel, weigh, add an equal weight of sugar and boil in a preserving kettle for half an hour, stirring constantly. Put away like jam. M A. B.

Ready-Made Portable Soup.

The following method of preparing soup stock for use the year round, is excellent, besides being a very convenient article to have on hand. With it a good soup can be made in half an hour. Into a large kettle put about four gallons of cold water, then put in ten pounds of a shin of beef, free from fat, six

pounds of a knuckle of veal and two chickens; —the meat of all cut into small pieces and the bones broken. Cover closely and let *simmer* all day, then strain it. Next day take off the fat, clear the jelly from any sediment adhering to it, and boil gently, uncovered, until it thickens to a strong glue. Then pour it into pans and put in a cool oven. When it will take the impression of a knife, check off, then finish drying. Wrap in paper and pack in boxes

MRS. E. C.

Apple Pudding.

Apple pudding is one of the most easily prepared and palatable of deserts. Place a large layer of sliced apples in the bottom of a buttered earthenware baking-dish. Sift three teaspoonsful of baking powder and a little salt into three cups of flour, and stir in sweet cream until it is a thick batter. Where cream is lacking butter and water will answer. Spread the batter over the apples and bake one-half hour. Eat with sweet sauce.

Chicken Pie.

By making a batter after above recipe and pouring it over a dish of boiled and well-seasoned chicken, a nice chicken pie can be made on very short notice. An old and tough fowl or any tough meat can more easily be made tender and nicer cooked under a *cover of dough* than in any other way, probably because of the closer confinement of steam.

Ice Cream.

A very good substitute for ice cream may be enjoyed during any snow-storm. Beat thoroughly one egg, a cup of thick sweet cream, a cup of sugar, and add a little lemon or vanilla flavoring. Set it in the coolest place to be found for an hour (if longer all the better). Just before eating stir thick with light snow. E K. B.

QUESTIONS ANSWERED.

Coloring Recipes.

PLEASE give me some good recipes for black and other colors. They will be read with interest in this Western wild.

MRS. N. J. CIRCO.

Black on Woolen.

Work five or six pounds of cloth for one hour in a bath (at a boiling heat), with eight ounces of bichromate of potassa, six ounces alum and four ounces fustic; lift, expose to the air and rinse through warm water. Refill the kettle with clean water, add four pounds logwood, four ounces boxwood and four ounces of fustic. Let the goods simmer in this one hour; lift, add four ounces of copperas in solution, and work half an hour longer. Wash thoroughly and dry.

Black on Cotton.

Steep 10 pounds of cotton in a decoction of three pounds of sumach while it is hot, shaking and airing several times, and let stand all night. In the morning work for 10 or 15 minutes in a tub of lime-water, then work for half an hour in a cold solution of two pounds of copperas. Again work through lime-water, then for half an hour through a warm decoction of three pounds of logwood and half a pound of fustic previously scalded. Lift out goods and darken liquid with two ounces of copperas in solution. Work ten minutes then wash and dry. All black goods should be washed in soap-suds after coloring.

Blue on Cotton—No. 1.

To dye 10 pounds of cotton: Put into a tub sufficient cold water to work the goods easily, add one-half pint nitrate of iron and work in this 20 minutes; wring out and pass through a tub of clean water. Into another tub of cold water mix four ounces of ferrocyanide of potassium in solution and a wine-glassful of sulphuric acid. In this work the goods fifteen minutes. Wring out and wash through cold water in which is dissolved one ounce of alum. This is for a light shade of blue. For a darker shade add more ferrocyanide and iron.

No. 2. Dissolve two and a half pounds of copperas in sufficient water to allow of working 10 pounds of cloth. Boil two hours, take out, rinse, refill kettle with clean water and add one-half pound prussiate of potash. Boil about half an hour, lift out goods, add one-half pound of oil of vitriol, return and boil half an hour longer.

Green on Cotton.

It is only necessary to add eight pounds of fustic and half a pound of alum to the last recipe to produce a good green. Simmer the goods in the decoction until the required shade of green is obtained.

Brown on Woolen.

Work 10 pounds of goods half an hour in a bath made up with two pounds of fustic, two pounds of madder, one pound peachwood, and four ounces of logwood; lift, add two ounces of copperas. Work for half an hour longer. Wash and dry.

Crimson on Woolen.

Work in a bath for an hour with one pound cochineal paste, six ounces dry cochineal, one pound tartar and one pint single chloride of tin. Wash and dry. This is for 10 pounds of goods.

Olive on Woolen.

For 10 pounds of goods work for an hour in a bath made up with 10 ounces fustic, eight ounces logwood, four ounces madder, and two ounces peachwood; lift and add four ounces copperas in solution. Work for thirty minutes.

Tan on Cotton.

Boil slowly one-half bushel ground tan bark in water enough to cover 10 pounds of cloth, for three or four hours; strain the dye; put in the goods and let stand five or six days by the stove, airing several times. When the color is the shade desired, rinse and dry.

Orange Pudding.

Mrs. B. asks for a recipe for the above.

ANS.—We do not know of any directions better than those given by Mrs. D. Snedeker, in the RURAL of Jan. 19, 1878, which we will republish:

Three pints of milk; seven heaping tablespoonsful of sifted corn starch (Gilbert's); yelks of four eggs; salt, flavor and sweeten to taste; peel six oranges; cut into fine pieces and remove the seeds; lay in the bottom of a deep pudding dish; sift over as much sugar as required; when cool, pour over the oranges the corn starch; beat the whites of the eggs to a stiff froth; add two tablespoonfuls of sugar; flavor and spread over the pudding; place in the oven until the meringue is of a delicate brown. Although this recipe seems simple, it requires care in putting the ingredients together. First, let the milk come to a boil; add the corn-starch, which has previously been dissolved in a little cold milk; boil until it thickens; take from off the fire and stir in the well-beaten yelks the sugar and flavoring; return to the back of the range for a few minutes, stirring constantly; when again taken from the fire beat the corn-starch until it is cool enough to pour over the oranges. This constant beating prevents the corn-starch from being lumpy. The meringue should not be made until the pudding is ready for it to be spread over the top and placed in the oven.

News of the Week.

MISCELLANEOUS.

Monday, January 26, 1880.

Preston D. Mood, editor of the Clarendon Press, Columbia, S. C., and son of Henry M. Mood, one of the most distinguished preachers in South Carolina, committed suicide at Manning village last week by blowing out his brains with a pistol. Mood had addressed a beautiful Jewess, and threatened to kill himself if she refused his offer. Notwithstanding his threat the fair daughter of Israel rejected him, and the rash young journalist thus put an end to his life. . . . A new law in regard to regulating the railroads, it is hoped, will be enacted in New York State. The Legislature appointed a committee to investigate the charges the people have made against the roads. Monopoly, unjust discrimination in charges of freight and even secret bargains and favors shown to certain merchants, which gave them unfair advantages over their fellows, and corruption in the election of railroad officials were shown to exist. To remedy these, the committee proposed that a commission of three be appointed to overlook all the roads in the State, and to compel them to respect the laws. These laws are not yet made, however, but public opinion is so aroused on the subject that it is hoped the Legislature will be forced to do its duty. . . . A lady in Hoboken, a well-to-do merchant's wife, has just invented a street sweeping machine, which is said to be far superior to any now in use. The patent is just taken out. Her name being Eureka C. Browne, she proposes to call it "The Eureka Street Sweeper." . . . An accident occurred on the Virginia Midland railroad on the morning of the 23d inst. A material train consisting of engine, coal car, nine flats and a caboose, in rounding a curve near Charlottsville at a great speed, struck a large rock which had fallen from the cut on the track during the night. The engine was thrown from the track, but miraculously it again jumped on the rails and was saved. The rest of the train was wrecked; two persons killed and seven severely injured. . .

The penalties of obstructing census-takers, who begin their labors on the first Monday in June, are severe. The law says: All persons above the age of 21 years who shall refuse to furnish the information required by the supervisior or enumerator shall forfeit and pay a sum not exceeding $100, to be recovered in an action of debt. Presidents, directors or other officials of private corporations who refuse to furnish information required of them, are made liable to a penalty not to exceed $10,000. Only two weeks are allowed for the completion of the census. The compensation of the enumerators is the following: Two cents for each living inhabitant; two cents for each death reported; ten cents for each farm; fifteen cents for each manufactory, which is to be in full for all services, and no mileage or traveling expenses. The subdivision assigned to each enumerator must not exceed 4,000 inhabitants.

Negotiations with the Ute Indians are in progress, at which three things are to be accomplished:

First—to have the treaty provisions about the surrender of offenders carried out so that the participants in the White River murders can be tried.

Second,—To make such an arrangement with the Utes as will avert from them the injuries that are threatened to be inflicted upon them by the border population of Colorado, and which certainly would come if the present boundaries of the reservation were preserved. This accomplished, the present difficulties will pass over without an Indian war, which will be a great benefit to the country generally.

Third.—To secure for them full compensation for every piece of land they may cede to the United States and a safe and advantageous settlement for the future.

Last week we stated that the Maine difficulties had taken shape in favor of the republicans. These are still in power and, if anything, their claims have been better established during the week. On Monday Governor Davis determined not to admit the fusionists to the State House and accordingly a strong force of police was placed at the gate, and others around the building. The fusionist legislature appeared in a body and demanded admission. The Speaker of the House, the President of the Senate and their Governor successively demanded admission at the gate of the capital where they were met by the Mayor of Augusta, backed by a large force of police, who, refused each in turn, to enter, stating that he had orders to that effect from the Governor, Mr. Davis. The fusionists then adjourned to Union Hall where they have met every day since. They have submitted questions to the Supreme Court the answers to which is expected greatly to influence their future actions. Last Friday the proceedings took an exciting turn; bloodshed seemed almost inevitable. It leaked out that the fusionists had secretly enlisted some 260 men from Augusta and other places for the purpose of forcing admission to the capitol. This created a sensation all over the State. The republicans got into a flurry. The militia of the State was ordered out; several companies were stationed in the capitol, and everybody turned with breathless expectancy to the coming skirmish Such is the situation at present. No violence has as yet taken place, but the military is ready should aggression be made. It is to be hoped shat this rivalry will be settled without bloodshed. The Maine Legislature has been petitioned for a subsidy for sugar beet culture.

It was the birthday of Burns, the favorite bard of Scotland, last Sunday, the 25th. . . . The first serious accident has occurred on the elevated railroad, New York City. On Saturday morning last, a locomotive jumped the track near 143d street and fell to the street below, a distance of 25 feet Only one car was attached, and it remained on the structure. None were killed, but seven persons were injured; some severely.

FOREIGN.

Jules Favre, the French statesman, is dead ... All the Russian Ministers, except those of War and Marine, are said to have been put under M. Wallujeff who advocates internal governmental reform....In Germany many of the provisions of the Falk laws most obnoxious to Roman Catholics are about to be repealed. Berlin and the Vatican are coming closer together; the Liberals fear they may come too near....Last Monday a terrible explosion occurred in the Lycett colliery at Newcastle-on-Tyne, England, by which nearly 100 workmen were killed....The English Government lately bought all the telegraph lines, and has now sued the telephonic companies to force them to take out licenses and pay royalty, as interfering with the monopoly....In Rio Janeiro, Brazil, the government levied a small tax on the street cars. The mob indignantly destroyed the cars and tracks, stoned drivers and conductors, and fired on the troops called out to suppress the riot. The latter returned the fire, killing three, wounding thirty, and dispersing the mob....The Peruvian and Bolivian forces in the province Tarafaca are reported to be surrounded by the Chilians, and negotiations for their surrender are said to be proceeding. Peru, which began the war, is doing no better under her recently appointed dictator than under her deposed president, and must soon sue for peace. England is said to be about to interfere, but our government know nothing of this threatened infringement of the Monroe Doctrine... The Cuban Slavery Abolition Bill passed the Spanish Chamber of Deputies on Wednesday, by 230 to 10 votes....Italy has raised the yellow fever quarantine against vessels from this country....The Russian forces intended for the campaign against Merv in spring, have been severely defeated by Turcomans at Tchikislan, south of the Caspian. This, it is thought, will greatly interfere with the projected expedition, if it doesn't prevent it for this year....The British are making good headway in Afghanistan, and will seize upon Herat, it is said, in spring. Some say they will occupy the country; others that they will appoint a creature of their own as king and retire to India —hardly the latter....General Grant has arrived in Havana, and put up at the palace prepared for him by the Governor-General....The first blast to begin the cut through the Isthmus of Panama, for the Lessep's Canal, was fired on the 10th inst., on the highest part of the Isthmus, and displaced a huge mass of rock....The City of Odessa is suspected to have been undermined by Nihilists. Great alarm....A proposed increase of the German army by 20,000 men.—A peaceable sign this!....In France the radicals are jubilant; the moderate republicans just a little discontented; other factions immensely so. The last of the imprisoned Communists will probably soon be pardoned.

In Russia the crops of 1879 were so short that it is expected that it will be necessary to import American grain into that country the coming spring.

Malarial fever, Ague, and Biliousness will leave every neighborhood as soon as Hop Bitters arrive.

HOARSENESS.—All suffering from *Irritation of the Throat and Hoarseness* will be agreeably surprised at the almost immediate relief afforded by the use of *Brown's Bronchial Troches*"

For diarrhœa, dysentery, bloody-flux, cramps in stomach, and colic, whether affecting adults, children, or infants, Dr Pierce's Compound Extract of Smart-Weed is a sovereign remedy. It is compounded from the best brandy, Jamaica ginger, smart-weed, or water-pepper, anodyne, soothing and healing gums. For colds, rheumatism, neuralgic affections, and to break up fevers and inflammatory attacks it is invaluable and should be kept in every household. Fifty cents by druggists.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JAN. 24th.

E. W.—M. Y.—C. S. B.—D. E. S.—C. D. L., thanks—W. I. C.—J. W. L.—I. H. R.—T. W.—F. H. S.—N. R.—W. S. T.—R. G., thanks.—T. H. H.—F. D. C.—T. C. C.—W. A. R.—J. Y.—L. A. R. (Unionville)—A. L. J.—F. K. M, thanks—A. M.—J. L.—M. B. B.—T. G. T.—M. W. F., thanks.—N. G. R., many thanks.—E. S,—M. F. Mc C.—A. E. B.—J. B, T. W.—F. H. D.—R. A. W.—A. H.—B.—E. K. B.—J. S. D. L. B., thanks—no they never become outlawed to you.—M. J. G.—H. S.—R. G.—A. E. V.—M. I. M., thanks—F. K. M.—M. L. S.—S. P.—G. A. G., Jr.,—W. I. C.—E. W. S.—O. C. D.—R. M. L., thanks.—M. B. C.—J. K. H.—A. M. A.—J. J. R.—C. D., thanks.—M. B. P.—I. J. B.—L. S. H.—H. F. S.—S. R. M.—W. V. A.—B. G.—E. L. T., thanks.—C. W. C.—R. H. C.—L. A. P.—

The Markets.

THE GIST OF THE MARKETS.

GIST of the markets can be readily seen by the summary at the head of each. A bad tumble for wheat—Eh? Hogs are coming in in large supply, and will be in larger, so soon as the roads become somewhat less impassable through fathomless mud a good cold spell wanted to raise prices. Many complaints nearly everywhere that these alternate thawings and freezings are likely to injure fall planted crops.

SPECIALS FROM ALL CENTERS.

Until Saturday, Jan. 24.

Boston.—Since last report corn has fallen 2c. on lower grades, steady on upper; oats 1c. lower on poorer grades, steady on others; rye unchanged; feed steady.

CORN quiet; sales of new at 58@63½c. OATS—No. 1 and extra white at 51@55c.; No. 2 white, 50c.; No. 3 white and No. 2 mixed, 47@49c. RYE nominally 95c.@$1. SHORTS selling at $20@21; fine feed and middlings, $21@22.

Rest of Boston Report has unfortunately not reached us as we go to press this week.

Baltimore.—Since last Saturday corn and oats are about steady; rye from 1c. to 2c. higher; hay unchanged; Western packed butter 3c. lower; rolls unchanged; eggs, ditto

WHEAT—Southern red $1 37@1 40; amber $1 43@$1 47; No. 2 Western red winter spot and January $1 39@1 39½; Feb. $1 40@1 40¼. March $1 42¼@$1 42¾; April $1 44¼@1 44⅝. CORN—Southern white at 58@60c; do, yellow, 57½@58c; western mixed, 56½@56¾c; steamer, 55@55½c. OATS—Southern at 48@50c.; western white at 48@49c; do mixed at 46@47c; Pennsylvania at 48@49c. RYE dull at 90@95c. HAY firm; prime to choice Pennsylvania and Maryland at $17@18. BUTTER steady; prime to choice western packed, 20@26c; roll 18@23c. EGGS quiet at 14@15c.

Buffalo.—Since last, corn steady: oats from 1c. to 1½c. lower; rye 2c higher; little charge in prices of cattle; sheep from 20c. to 25c. lower.

WHEAT—Dull and unsettled; nothing doing for some days; buyers and sellers apart; tending downward. CORN—No. 2 Western, 49@50c; old do. at 52@53c. OATS—No. 2 Milwaukee on track 43c. RYE nominally held at 91c. for No. 1 Milwaukee MILL FEED in fair demand and firm; coarse at $18@19; fine at $18@19; finished at $18. CATTLE—total receipts for the week 15,910 head; for the same time last week, 12,223 head; good demand and prices firm, run light; all offerings taken; fair to medium at $4@4 50; good shippers at $4 65@4 75; still-fed bulls at $3 40. SHEEP AND LAMBS—total receipts for the week 19,800 head; for the same last week 18,300 head; good demand and prices firm; offerings compare favorably with last week; fair to good western sheep at $4 80@$5 25; choice at $5 50; poor to good lambs at $4 60@$6 30; no Canadas on sale; best grades disposed of. HOGS—total receipts for the week 30,805 head; for the same time last week, 31,385 head; demand fair and prices going up for Yorkers; heavy dull; no local demand; sales of good to choice Yorkers at $4 70@4 80; extra selected at $4 85; heavy and medium at $4 75@4 90; fair ends at $4 20@4 60; coarse rough to common at $3 10@4 15; pigs at $4 05@4 25; a few remain unsold.

Chicago.—Since last No. 2 Chicago spring wheat has fallen 5½c. for cash and proportionately on futures, and No. 3 do. 4½c.; corn has dropped about 2c.; oats from ½ to 1½c. and rye from 1 to 2c.; butter and cheese steady; cider, do.; potatoes about 5c. lower; seeds a shade lower; apples and cranberries steady; No. 1 timothy hay from 50 to 75c. lower; mixed timothy, 50c. lower; other sorts unchanged; prime cattle from 30 to 60c. higher, other sorts unchanged; sheep about 40c. lower; hogs from 15 to 27c. higher.

WHEAT—Unsettled and almost panicky, closing heavy; No. 2 Chicago spring, $1 14¾ cash; $1.14¾ for Feb.; $1.16 for March; No. 3 do., $1.02. CORN active, firm, but unsettled: 37¾@37¾c., cash; 37¾c. bid February; 37¾c. March; 42¾c. May; rejected at 34½c. OATS unsettled at 33½c cash; 33c. February; 37½c. May. BARLEY firm at 78c. BUTTER, good to choice creameries, 28@33c. ₩ lb.; fine to fancy dairies, nearly equal to creameries, 24@25c.; good to choice fresh made dairies, 20@22c.; fair to good dairies, in shipping lots, 16@19c.; common to medium qualities, 13@15c; roll butter, 16@20c. CHEESE—Full cream cheese continues in good request, and owing to the small stocks and the favorable outlook, the market is firmer and stronger than a week ago. Prime full cream at 13@14½c. ₩ lb. Sharp and off flavor, 12@13c.; part skimmed, good to prime, 12@12½c.; hard skimmed, 9@10c., and common sour stock, 8@9c. CIDER—Only a small demand existed for this article, and the market was little better than nominal at $4@4.25 ₩ bbl. for good to choice Michigan stock in a small way. New York prepared cider sells slowly at about $5 ₩ cask and at $2.25 ₩ keg. EGGS—The receipts continue liberal, the demand slow, and prices weak, sales of fresh stock in a small way being made at 15@16c. ₩ doz The best "candled" lots bring 12@14c. and ice-house stock is dull at 5@10c. POTATOES—Peachblows by the car-load at 50@55c. ₩ bush. for good to choice stock; Early Rose at 45@50c. Other varieties and mixed cars were salable at 38@42c., and in a small way from store 5@10c. ₩ bush higher rates were obtainable, tendency of prices downward. SEEDS—Common to prime timothy, $2.70@2.80 ₩ bush.; prime medium clover at $4 80@4 85, and high grade to choice do. at $4.95@5.10; flax at $1 56@1.57 on a basis of pure; prime millet at 85c. and do. Hungarian, at 90@95c. GREEN FRUIT—Apples, common to only fair stock sells slowly at $2@2 50 ₩ bbl. and good to choice at $2.75@3. Car-lots at about the same prices that are asked in a small way. CRANBERRIES were in fair request and firmly held at $7.50@9 ₩ bbl., the outside figure for choice cultivated. HAY—Current quotations for car-lots on track range as follows: No. 1 timothy, $14@14.50 ₩ ton; No. 2 do, $13@13.50; mixed timothy, $11@12; upland prairie, $11@11.50; No. 1 prairie, $9@10; No. 2 do, $2@8 50. Small bales sell at 25@50c. ₩ ton

more than large bales; No. 1 timothy at $14.50. HOPS—Good to choice New York hops of this year's growth at 40@45c. ₩ lb; do. Wisconsin, 30@38c.; New York crop of 1878, 13@20c.; Wisconsin do. do., 5@15c., according to quality, and still older lots, 2½@5c. VEGETABLES—A moderate business is being done in this line for the season, and prices are steady. Cabbage, $5@8 ₩ 100; rutabaga turnips, 30@32c. ₩ bush; parsnips, $1.50 ₩ bbl.; carrots and beets, $1.25@1.50 ₩ bbl.; celery, 25@35c. ₩ dox. Spinach was salable at 40@60c. ₩ box. HOGS, mixed packing at $4 35@4.50; light at $4.40@4.55. All sales were made subject to the usual shrinkage of 40 lbs. for each piggy sow, and 80 lbs. for each stag. CATTLE, good to prime in good demand at full prices, with a good supply at $5@5.75; common to medium shipping dull and slow at $3.60@4 25; butcher's weak and slow; common stock, heaviest, at $2@2 90, chiefly at $2.35@3 25; stockers and feeders quiet and slow, but steadily at $2.70@3 90. SHEEP, weak end slow, $4.10@5.37½; lambs at $4.75.

Cincinnati.—Since last wheat has not altered, ranging last week from $1 27 to $1 30; corn a shade higher; oats and rye steady; butter steady; cheese a shade higher; beans unchanged; chickens a shade higher; ducks 25c. lower; live turkeys from 1c. to 1½c. lower; rabbits from 25c. to 50c. higher; quail from 50c. to $1 higher; bran $1 50 higher; middlings $2 higher for best, other sorts steady; hay and seed steady; hogs about ditto.

WHEAT dull and nominal at $1 28. CORN active and firm: No. 2 mixed at 43c. OATS steady at 40c. RYE quiet at 33c. BARLEY steady 90c. BUTTER—The market has ruled dull throughout the week, all grades in good supply, yet in consequence of bad roads there was no danger of an accumulation. Fancy Western Reserve is quoted at 24@25c., and choice Indiana and Central Ohio at 20@22c.; medium at 15@18c., and common at 12@14. CHEESE—The market closed firm for prime to choice factory at 13@14c. per pound, with a good demand. BEANS—Common at 75c.@$1, and fair to good white at $1 10@1 25 per bushel on arrival, prime to choice medium and navy $1 40@1 50 per bushel on arrival, and $1 65@1 75 per bushel from store. EGGS were in liberal supply and weak, the jobbing demand light at close, 12½@13c per doz., round lots dull at 12c. POULTRY AND GAME.—Chickens at $2.50@3.25; ducks, $2 25@2.75, and geese at $3.25@3.75 ₩ dozen. Live turkeys are dull at 6@6 1-2c. and dressed at 8c per pound. Game scarce. Rabbits sell at $1 50@1 75 per dozen. Quail would bring $2 50 per dozen. FEED—Bran scarce and firmer, with a good demand at 12 50@$13 per ton, in bulk on track. Shipstuffs quiet at $12@$13. Middlings firm and fairly active at $15@$22. Stuffs in sacks held at 50c per ton higher than the above quotations. HAY fairly active and firm; prairie hay, $10@$12; fair to prime mixed, $14@$15; fair to prime timothy, $15 50@$16 50; choice light pressed timothy, $17 00@17 50 ₩ ton on arrival, and $1 00@2 00 more from store. SEEDS.—Timothy firm, with a fair jobbing demand at $3 00@3 10 per bush. Clover seed quiet at 8 1-2@8½c ₩ lb from store, and 8c on arrival. Flaxseed in good demand at $1 20@1 30 ₩ bushel on arrival. HOGS steady and firm; common at $3 80@4 30; light at $4 35@4 55; packing at $4 50@4 70; butchers' at $4 70@$4 75. Early in the week prices were higher, but a large supply coming in, and the weather growing milder, they dropped.

Detroit.—Since last, No. 1 white Michigan wheat has fallen 6½c. for cash, and 9½c. for May, and proportionately for intermediate; corn just a shade higher; oats from ½c. to 1c. higher; clover seed steady; dressed hogs 90c. higher.

WHEAT—No. 1 white Mich., $1.23½ spot and Jan.; $1.24 Feb.; $1.26½ March; $1.29 April; $1,30½ May. CORN quiet and steady; No. 1 yellow at 49½c.; high mixed at 48c.; No 1 mixed at 48c.; No. 2 do. at 46c. OATS scarce and advancing; No. 1 white at 41½@42c.; No. 2 do. at 40½c.; No. 1 mixed at 40½c.; No. 2 do. at 38c. CLOVER SEED very dull; No. 2 at $4.30; prime at $4.65. DRESSED HOGS scarce and in good demand at $5.15@5.20.

Indianapolis.—Since last wheat has fallen from 3c. to 4c.; corn a shade higher; oats about steady; hogs from 10c. to 25c. lower.

WHEAT quiet; No. 2 red at $1 23@1.25. CORN strong at 37½@39c. OATS strong at 35 1-2@38c. HOGS strong at $4.00@4.60.

Liverpool.—Eng. Jan. 24.—PORK—Prime mess, Eastern, 62s., Western, 59s. per barrel. CHEESE—American choice steady at 72s. per cwt. WHEAT—No. 3 spring dull at 10s. 2d. per 100 lbs.; No. 2 spring dull at 10s. 7d; new winter western dull at 11s.; new southern winter dull at 11s. 2d. CORN—Mixed at 5s. 7d. per cental for old; new firmer at 5s. 5d.

Louisville.—Since last report wheat has fallen from 1c. to 3c.; white corn steady, mixed 2c. higher; oats, mill offal, onions and potatoes all unchanged.

WHEAT dull at $1.25@$1.29. CORN steady; white at 46c.; mixed, 43c. OATS dull; white at 41c.; mixed, 40c. RYE quiet at 57c. MILL OFFAL.—We quote per ton in bulk: bran, $12.50@$13.50; shipstuff $15; middlings, $15.50. HAY.—Demand has been fair, and prices have not varied materially. We quote prime and choice timothy at 16.50@$18, and mixed at 12@$14 per ton on arrival. VEGETABLES, on arrival, onions, for home-grown and Northern, 3@$4 per bbl. Russets, peachblows, and Peerless potatoes, from store, in cooperage, at $1.75@1.85; Early Rose, 2@$2.25 per bbl. HORSES AND MULES.—Plug horses, 35@$60; smooth southern shippers, 60@$80; good drivers, 80@$100; saddle horses, 90@$110; combined horses, 110@$125; extra, 135@$150. Mules—14 to 14½ hands high, 55@$60; 14½ hands high, 65@$75; 14 to 14½ hands high, 60@$75; 14½ to 15 hands high, 75@$90; 15 to 15 1-2 hands high, 90@$110; 15 1-2 to 16 hands high, 110@$1.25; 16 hands extra heavy, 125@$140; demand growing brisk and prices stiff.

Milwaukee.—Since last report No. 1 Milwaukee wheat has fallen 8c. and soft 8 1-2; other grades proportionately. Corn has dropped 1½c.; oats, 1 1-2c.; rye, 2c and barley 4c.; live and dressed hogs a shade lower.

WHEAT unsettled, but more steady towards the close: No. 1 Milwaukee hard, $1.17 1-2; do. soft, $1,16 1-2; No. 2 Milwaukee, spot and Jan., $1.14 1-2; Feb., 1.14½; March, $1.16½; No. 3 do., $1 01; No. 4. do. 93 1-2. CORN, No. 2 at 28. OATS, No. 2 at 33 1-2. RYE dull; No. 1 at 74c. BARLEY dull; No. 2 spring at 69c. HOGS.—Live, quiet and steady at 4.25@$4.70; dressed, in fair demand and firm at $5.

New Orleans.—No report last week.

OATS easy at 52@53c. CORN MEAL strong at $2.90@3.25. HAY firm; prime at $23@24; choice at $26. SUGAR unsettled; inferior, 4 1-2@5 1-2c.; common to good common, at 6@7c.; fair to fully fair at 7@7½c.; prime to choice at 7 1-2@8c.; yellow clarified at 8½@8¾c. RICE firm; Louisiana ordinary to choice at 6½@7½c. BRAN dull at 73 1-2@75c. COTTON steady; middling, 12c.; low middling, 11½c.; good ordinary, 11½c. Weekly net receipts, 11,344 bales; gross, 75,189; exports, to Great Britain, 23,479; to France, 11,477; to the Continent, 5,002; coastwise, 9,409; sales, 31,050.

Philadelphia.—Since last, rejected wheat has fallen from 5c. to 7c.; Penn. red from 1-2c. to 1c.; Southern amber 1-2c. higher; No. 2 red 1½c. lower for cash. Corn from 1-2c. to 1c. lower; oats from 1-2c. to 3c. lower on different grades; creamery butter steady; Bradford Co. and N. Y. 2c. lower; rolls 5c. lower; other grades unchanged. Eggs 1c lower. N. Y. factory cheese steady; Western 1c. higher.

WHEAT weak and unsettled; little or nothing doing for export; rejected, $1.26@1.28; Penn. red, on track, $1.40@1.40 1-2; Southern amber, on track, $1.42. At Open Board, No. 2 red, $1.39½ for Jan.; $1.39½ for Feb.; $1.41½ for March. CORN dull and weak; western Pennsylvania and Southern yellow on track and in grain depot, at 57 1-2@58c.; Western mixed, on track, at 57c.; Southern white, on track, at 60c. OATS weak; stained, 40@46 1-2c.; mixed, 47c.; fair to good white, 47@48c.; choice to fancy do., 48 1-2c. BUTTER dull and weak; creamery extra at 32@34c.; Bradford county and New York extra at 25@26c.; Western Reserve extra at 23@25c.; do. good to choice at 17@22c.; rolls weak; Pennsylvania extra at 16@18c.; Western Reserve extras at 19@20c. EGGS dull; Pennsylvania at 18c; Western at 17c. CHEESE—New York factory at 14@14 1-2c.; Western full cream at 13½@14c.; do. good at 12 1-2@13 1-2c.; half-skims, none here. BRAN firm at $19.50@21.00. HAY AND STRAW.—Rye straw is plenty and dull, and low grades of hay are hard to move, but prime timothy continues in good request and firm; hay, $12@20; prime baled do., $18@19; rye straw, $20.50@21.50; wheat do. at $12, and oat do. at $13 per 100. SEEDS.—Clover seed has been exceedingly dull; Western and Pennsylvania, in lots, at 7@7¼c.; timothy seed is firm at $3 per bushel; Flaxseed scarce and in demand at $1.60; Calcutta linseed sold at $2.37 1-2; orchard grass commands $1.75.

St Louis.—Since last week No. 6 red fall is 5¾c. lower for cash, 7½ for Feb, from 7¾c, to 9c. for March. Corn and oats a shade higher; rye 4c. lower; hogs from 10c. to 15c. higher; cattle and sheep a trifle lower.

WHEAT.—Lower and demoralized, especially for March and April. No. 2 red fall $1 20 cash; $1 21 Feb; $1 21½@1 25 March; $1 27½@1 27¾ April; No. 3 do. $1 17 bid. CORN strong at 36c. cash; 35¾@35½c. January; 36½@36¾c. February, 37¼c. March; 40¾@40¾c. May. OATS firm, but slow at 37¾c. cash; 39¼c. May. RYE quiet at 75c. HOGS active; light shipping at $4. 20@4 30; packing at $4 40@4 60; butchers' to select at $4 60@4 75. CATTLE in light supply, mainly of fair-fleshed native steers, which sold quickly at $4 40@4 75; good to choice scarce and wanted at $5@5 50; butchers' stuff easier at $2 37½@3 62½; feeders at $3 70@3 90; good to choice corn-fed Texans at $3 75@4 15. SHEEP firm at $4@5 25.

Toledo.—Since last week corn nearly steady; oats and clover seed 2c higher.

CORN dull; No. 2 spot at 40¾c; May at 45c; rejected at 40½c. OATS quiet; No. 2 May, 40c. CLOVER SEED dull; prime held at $4 75 at the close.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Jan. 24, 1879.

BEANS AND PEAS.—Marrow beans are higher; medums steady and firm. Light receipts help sellers. White kidney quoted above red this season. The late rush of orders for green peas has been filled; market 5c. lower, but no pressure to sell; quoted, $1.75@1.80. Southern B. E. peas per 2 bu. bag, $2.25; marrow beans, prime, $1.75; other, $1.55@1.65; medium, prime, $1.52½@1.55; other, $1.35@1.40; pea, $1.45@1.50; w. kidney, $1.70@1.90; red, do., $1.40@1.70; black, $1.70@1.75.

Receipts of beans for week, 4,116 bush.; exports, 1,300 bbls. and bags.

BEESWAX.—Transactions are limited to small lots for which 24½@25½c. quoted.

BROOM CORN—Stock here is unusually light, not exceeding 1,400 bales and of this about 300 bales are held on account of Baltimore manufacturers. The supply also includes about 400 bales old. This has brought about comparatively full prices. It is not likely that anywhere near present prices could be sustained if several additional car lots should come forward. Quotations are for choice brush at 9c.; choice hurl at 8c.; stalk braid at 6@7c.; mixed red and green at 5@6c.

BUTTER.—A rather weak tone prevails at the close and trade has been dull all the week. Undergrade State cannot compete with fair grades of Western and that troublesome substitute, oleomargarine. Exporters are bidding lower and have been yielded to in many instances, making some addition to sales for Europe. Western creamery only makes 26@30c. A good shippers' rate for other goods is 18@20c. The average standard of State butter has been hurt for show by the long drain that has been made upon tops of dairies. Where these have been largely used up, owners find local buyers hunting up fresh made fine, either State or Western, and taste is generally best suited with the latter.

State pails and tubs, choice, small lots, 28@29c.; fair to prime, 24@27c.; winter made, 25@27c.; full dairies, choice, 26@27c.; fair to prime, 22@26c; firkin dairies, choice, 24@25c.; Welsh tubs (including late made), 25@27c.; poor State 18@19c.; creamery, fancy, 36@36½c.; fair to prime, 27@35c.; poor, 23c.; sweet cream, 33@34c.; Western imitation creamery, 23@25c.; dairy, fresh, 25@26c.; other, 19@24c.; factory, finest, 21@22c.; other, 15@20c.; very poor Western 10@12½c; rolls, 19@21c

Receipts for week, 22,100 packages. Exports, 7,671 packages.

CHEESE.—The stock of strictly fancy is very light and the few holders are not inclined to sell, except at decidedly higher prices; demand is limited to actual wants—otherwise there is not much stir to trade—more on account of the difficulty in getting the low grades which are chiefly wanted. Exports for the week, 33,525 boxes.

Prices are for State factory: Strictly fancy, 14½@14¾c. choice at 14@14½c.; good to prime, at 12¾@13¾c; fair to good, at 12½@14c.; half-skimmed at 10¾@11¾c. State farm dairy: Good to prime 12¾@13¾c.; fair to good at 11¾@12½c. Wis. factory: Fine, 13¾@14¾c.; good to prime 12¾@13¾c. Ohio factory: Cheddar, fine, at 14@14¾c.; do. fair to good, 11¾@12¾c.; flat, fine, 13¾c. flat, good to prime, 12¾@13¾c.; flat, fair to good, 11¾@12¾c.; half-skimmed, 11¾@11½c.

Receipts for week, 8,919 boxes.
Exports for week, 25,965 do.
Liverpool cable, 72s.
Steam, 25s.

COTTON has shown frequent changes in prices and a fair degree of activity, closing at for Jan., 12.63@12.65c.; Feb, 12.67@12.69c.; March, 12.89@12.90c.; April, 13.08@13.09c.; May, 13.27@13.28c.; June, 13.43@13.44c.; July, 13.58@13.51c.; August, 13.61@13.65c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	10¾	11	11
Strict ordinary	11¼	11¾	11¾
Good ordinary	11 11-16	11 13-16	11 13-16
Strict good do	11 15-16	12 1-16	12 1-16
Low middling	12¾	12¾	12¾
Strict low middling	12 7-16	12 9-16	12 9-16
Middling	12¾	12¾	12¾
Good middling	12¾	13	13
Strict good middling	13¾	13¾	13¾
Middling Fair	13¾	13¾	13¾
Fair	14¾	14¾	14¾

STAINED.

Good ordinary	10 11-16	Low middling	11¼
Strict good ordinary	11 7-16	Middling	12 3-16

DRIED FRUITS.—In apples there is less doing in evaporated lots, which can be had at easier prices; other grades are also slow. Peaches remain quiet, and in small fruits there is little trade. Quotations are for apples—New N. C., at 7@8¾c. for fair to good; 9@9¾c. for choice; 10@10¾c. for fancy sliced. Patent evaporated, apples, choice, in cases, at 13¾@14c.; do. good and prime, 12¾@13c.; N. Y. State sliced, new, 7¾@8c.; do. quarters, 6¾@8c.; new southern quarters scarce and nominal; new North Carolina peeled peaches 17@18c., do., Georgia, 13¾@16¾c. Peaches—Delaware evaporated, peeled at 24@28c.; do. unpeeled at 13@15c.; new halves at 8@8¾c. Blackberries at 9@10c. for new. Raspberries at 25c. Pitted cherries at 18@19c.

EGGS.—Receipts for the week, 3,900bbls.; do. last week 4,585 do. Light recipts fail to animate the market; steady business can not be looked for while long held stock makes the formidable obstruction that has distressed the market all the season. Limed eggs weak at the low figures.

Tennessee eggs, 16@16½c.; Near points 20@21c.; State and Pa., 17@17½c.; Western, extra, 17c.; fair to good, 15½@16c. Southern, fresh; 16½@17c.; limed, State, 12@13c.; Canadian, 11½@12½c.; Western, 11@12c.; hold eggs, 13@15c.

FLOUR.—This has been a very dull week and prices have been declining. The situation of the grain markets, with large supplies held West and here and the downward course of prices together with the apathy of exporters tend to the reduced prices for flour.

Latest prices are $4.65@$5.85 for inferior to very choice superfine State; $5 35@5 50 for inferior to good extra do., odd lots and lines; $5.50@5.85 for very good to very choice do.; $4 65@5.35 for inferior to fancy superfine Indiana, Iowa, Michigan, &c.; $5.30@5 50 for inferior to good shipping extra do., and $5.50@5.85 for good to very choice shipping extra do.; inferior to about choice white wheat extras, $5.65@6.60 choice to fancy do. $6,65@8.00; red and amber winter wheat, inferior to fancy trade and family, at $5.80@7.50; round hoop Ohio, $5.50@6.85; and trade and family brands of do., at $6.00@7.00; the latter rate for fancy; St. Louis at $5 75@6.50 for inferior to good extra; $6.50@8 00 for good to fancy; Minnesota clear, very inferior to fancy, at $5 60@6.60; Minnesota "straight," very inferior to fancy, at $5.00@7.75 and patent inferior to very fancy, at $4.65@8 75; unbound stock at from $3 2½@5 50; city mill extra at $6.40@6.75 for fair to very choice for West Indies (fancy do. quoted at higher figures); do. for England, $5.35@5.75 for poor to choice; do. trade and family extras, $6.75@7.75; do. for South America, $6.60@6.90; No. 2 at $3.65@4.35 for poor to choice.

CORN MEAL.—Sales at $3.30 for Brandywine; and $2.50@$3.10 for yellow Western.

FURS AND SKINS.—At the London sale of Jan. 20th, American skins showed some advance. The effect has been good here, and next week we will quote a revised table.

FRESH FRUITS.—Exports of apples 7,505 bbls. Some boat parcels of apples are turning out better than stored this winter. Trade at present is a straggling one; prices are comparatively easy as few dealers have courage enough to hope for better prices. Cranberries have outside demand sufficient to keep them stiff. Grapes have come to be a nominal affair. Fla. oranges have the old story; arriving in poor order and have to be repacked to make $3 50. Peanuts are selling again. Hickory nuts lower. Charleston strawberries have sold 75c. to $1.00 qt. Fla., 50@75c. do. Spitzenbergs, ₩ bbl., $3@3.50; N. Spys and Seeks, $3@$4. Baldwins, choice, 2.00@$2.75; other, $1.75@$2.25; Greenings range, $1.00@2.00. Cranberries, Cape Cod, fancy, ₩ bbl., $9; other capes and Western, bbls. $6.50@8.50; N. J. crates, $2@$2.75. Grapes, prime Catawbas, case, 2.50@$2.75; poor, 1.75@$2.25. Florida oranges bf. bbl. cases, $3.25@3.50; other, as they run, $2@3.00. Peanuts, Va., hand-picked, ₩ lb 5¾@5½c.; good to fancy, 4@5c. Hickory nuts, 50@75c. Pecans, 10@10½c.

GRAIN.—Wheat has tended downward, and has received very little attention from exporters. The glut in the Western markets, and the inability, in consequence, to move supplies forward from farmers' hands and the very slack export demand, have caused the lower range of values. Latest sales are of No. 1 white at $1.41@1.42; do., January, at $1.41@1.41¾; do., February, at $1.41½@1.42¾; do., March, at $1.43¾@1.45; do. May, at $1.43@1.44; ungraded white, at $1.37½@1.38; No. 2 red at 1.43¾@1.44¾; do. January, at $1.43@1.41; do., February, at $1.44@1.45½; do., March, at $1.45¾@1.47¾; No. 3 red at $1.37; ungraded red at $1.10@1.42. Rye is quiet at 90¾@91 for Western. Corn has been held up better than wheat, as the supplies have been less liberal, yet has not had much export call; latest sales are of No. 2 at 58¾@59c.; do. new, in lots, at 56c.; do., January, at 56c.; do., February, at 55¾c.; do., March, at 56¾c.; do., May, at 55¾@56c.; New York steamer mixed at 58¾@59¾c.; do., January, at 59½c.; do., ungraded mixed western at 55@55¾c.; New York No. 3 at 57¾@58c.; yellow Western and Jersey at 59@60c.; steamer mixed at 58¾c. Oats have been moderately active and easy in price; latest sales are of No. 1 white, at 50c.; No. 2 white at 48¾@49c.; No. 3 white at 47½@48c.; New York No. 1 at 48c.; New York No. 2 at 47¾c.; do., February, at 48c.; New York No. 3 at 47c.; ungraded white western at 48¾@49c.; ungraded mixed western at 46¾@47½c.; white State at 48¾@51¾c.; mixed State at 47c.; No. 2 Chicago afloat, at 48c.

HAY AND STRAW.—Prices are on a good, strong basis. The demand is steady and fair, and receipts moderate. Shipping hay quoted at 75c.; retail lots at 80@85c.; for medium, and 85@90c. for prime; clover at 60@65c. Straw at 90@95c. for long rye; 60@70c. for short rye, and 55@60c. for oat.

Exports for week 2,675 bales.

HOPS.—Emmet Wells, in his weekly circular, says:—"The better feeling noticed in our last has not been sustained, and the hope indulged in by out side speculators and a few "bulls" in the trade that prices would advance immediately after the holidays has not been realized, but has gradually given way to a feeling of disappointment, and, in a few instances to that of uneasiness, as is evidenced by the fact that one outside holder of some 3,000 bales, finding the prospect of an advance anything but flattering, has concluded to unload; not upon this market, but on the London market. The hops in question are of the last growth, and embrace a large proportion of the last 14 days' exports, and, as we are credibly informed, go over on owner's account, not on order. Another thing to add to the dullness of our home trade is the fear produced by the present slim prospects of a good ice crop, and the serious harm that will result to the brewing trade should the present warm weather continue a month or six weeks longer. Ice, of course can be brought from higher latitudes, but only at greatly increased expense. Our revised quotations show a decline of from 3 @5c per pound."

The quotations are for:

	Cents per lb.
New York, new crop, choice	33 @35
New York, new crop, medium	30 @32
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @33
Wisconsin, new crop	27 @31
Yearlings	7 @18
Olds, all growths	4 @.0
Pacific Coast, new	30 @35
Pacific Coast, olds (nominal)	5 @10
Bavarians	45 @60

	Bales.
Receipts for the week	617
Total receipts since September 1, 1879	71,006
Total receipts for same period in 1878	46 059
Export clearances for the week	635
Total exports since September 1, 1879	41,115
Total exports for same period in 1878	17,499
Imports for the week	19
Total imports for the season	1,027

OIL-CAKE.—Western is quoted at $34 per ton.

OILS, American Essential.—The stock of peppermint is only of retailing quantity; prices firm; no can or export lots; glass brands, $3.25@$3.50. Spearmint, $2.25 Wintergreen, $2.50. Tansy, $2.50. Wormwood, $5. Sassafras, 55c.

POULTRY AND GAME.—Prices for dressed are quoted easy, but considering the fact that many shipments at this part of the season are made up of the rough remnants of coops, quotations are fair. As we have remarked, there is not much room for other than near-point stock. Light turkeys and chickens of uniform size have the steadiest sale. Squabs have advanced.

Turkeys, N. J., 12@13c.; State, Mich., Ohio and Penn., 12@12½c.; other Western, 9½@11c.; Philadelphia dry-picked, 13@14c.; do. chickens, 12@13c.; N. J. do., 11½@12c.; State and Western, prime 10½@11c.; poor to fair, 5@8c.; Phila, fowls, dry-picked, 10c.; N. J. 9@10c.; poor to prime other, 6@9c. Ducks, choice, 13@14c.; other, 10@12c. Geese, choice, 11@12c; N. J. and State, 9@10c.; Western, 8@9c. Squabs, white, ₩ doz., $4.00; dark, $2.50. Capon, large, ₩ lb 20@21c.; small and slips, 16@18c.

A light supply of live have given a firm tone to prices fowls and chickens, but liberal receipts are on the way and quotations may suddenly change.

Fowls, 10@12c.; roosters, 5@6c., turkeys, 10@12c.; ducks, 55c.@87c.; geese, extra, $1.75@1.87; other, $1.12@1.50.

Supplies of game are extremely light, not more than filling hotel and supper orders. Market firm for all sound items.

Canvas back ducks, Havre de Grass, $2.50@2.75; Norf. and Western, $2@2.50; red head, $1@$1.25; Mallard, 70@80c.; Teal, 40c.; common, 20@40c., quail, $4.00; partridges prime, $1.37@1.50; other, $1.12@1.25; grouse, $1@1.25; wild pigeons, flight, prime, $1.50@1.75; acorn fed, $1@1.35; rabbits, 3@40c.; hares, 35@40c.

PROVISIONS—Had less export demand, and closed for pork at $13.35@13 40 for new mess for January; $13.35@13.40 for do for February; $13 40 for do. for March and $13 45@13.50 for do. for April. Bacon at 7½c. for long clear and 7¾c. for short clear. Lard—Western steam at $8 for spot lots; $7.90@7.92½ for February; $8 for March and $8.07½@8.10 for April. Stearine at ¾@ for Western. Tallow at 6¾@6¾ for prime. Beef Hams at $16.50. Beef—Extra mess at $11@12; plain mess, $10.50@11; packet, $13@13.50; tierced beef, city extra India mess, at $21.50@23, and Philadelphia do. at $21.

Receipts for week, pork, 2,075 bbls. Beef, 860 pkgs. Cut-meats, 31,850 do. Lard, 8,150 do. Dressed hogs 4,750 do.

SEEDS.—Grass are lower, especially clover, which is in very fair supply and but little wanted: clover quoted at 7¾ for prime Western, 8@8¾ for choice, and extra choice do. and State at 8¾@8¾. Timothy at $2.75@3. Flaxseed is dull at $1.70@1.75.

TOBACCO.—Export demand is moderate, and prices are unchanged.

KENTUCKY LEAF.

	Light.	Heavy.
Common lugs	3½@ 4	4½@ 5
Good lugs	4½@ 5	5½@ 6
Low leaf	5½@ 6¾	6¾@ 7¾
Medium leaf	7 @ 7¾	8 @ 8¾
Good leaf	8 @ 8½	9 @10¾
Fine leaf	9 @11	11 @ 12
Selections	12 @—	12½@14

SEEDLEAF.	Crop of 1877. Very scarce.	Crop of 1878.
New England Havana seed	— @—	22 @30
do. wrappers, common	13½@15	13 @15
do. do. medium	16 @17	16 @18
do. do. fine	18 @25	20 @27½
do. do. selections	27½@35	30 @40
do. seconds	— @—	10 @14
do. fillers	— @—	6 @ 7½
Penn. assorted, common	— @—	10 @12
do. do. fair	15 @20	12½@15
do. do. fine	— @—	16 @20
do. wrappers	23½@35	16 @35
do. fillers	10 @12	8½@ 9¾
N. Y., ass'd, com. to medium	— @—	10 @11
do. do. good	— @—	12½@15
Ohio assorted	— @—	8 @14
Ohio wrappers	12½@16	15 @25
Wisconsin assorted	8½@10	8 @12
Wisconsin Havana seed	— @—	15 @20
Wisconsin wrappers	11 @15	12 @18

FEED.—Sales of 40 to 60 lbs. at $19.00@$20.00; 80 lbs at $20.00; 100 lbs. at $21@$22; Sharps at $21@$23.

VEGETABLES—Exports for week 3,474 bbls. potatoes; of onions 105. The demand for potatoes is good and the late demand is well supported. Texas is quite a buyer this season. Prices are deemed fair under the remarkably open season, which admits steady railroad deliveries. Some boat lots are sprouting. Sweet in light supply but equal to current wants. A few Fla. green peas have appeared but did not attract a buyer. Norf. Spinach, 1.50@$1.75 bbl.; Baltimore do. $1@$1.25. Onions firm.

Nova Scotia E. Rose, bulk bbl. $1.75@$2.00; do. Prolific, d. h., $1.50@1.62; do. Mercer, $1.25@1.37; Maine, Early Rose, d.-h., $1.75@2.00, State, d.-h., $1.62@1.75; r. o. b. $1.37@1.62; State Peachblows, red, $1.87@$2.12; do. white, $1.75@1.87; Snowflake, $1.50@1.62; State Peerless, $1.37@$1.75; N. J., do., 87c.@$1. Sweet potatoes, 3 25@$3.50. Squash, marrow, bbl $1@$1.25; do. Hubbard, $1.25@1.50 ₩ bbl.; cabbage, $4@7 per 100; onions, white, per bbl., $3@4.00, yellow, $3@3.25; red, $2.25@$2.50; Chester, $1.75@2.25 beets, $1@1.50; Russia turnips and carrots, 75c.@$1; celery, per doz., $1@2.

WOOL.—The market is strong and there is increasing demand, with a good deal of confidence. Quotations are for

Ohio, Pennsylvania, and West Virginia—XXX, 55@58c.; XX, 50@53c.; X, 50@53c.; No. 1, 55@57c.; No. 2, 47@50c.; coarse, 43@46c.; combing, 53@57c.

New York, Michigan, and Wisconsin—XX, 47@50c.; X, 47@50c.; No. 1, 52@55c.; No. 2, 46@50c.; coarse, 38@40c.; combing, 50@54c.

Indiana, Kentucky and Tennessee—X and XX, 46@50c.; No. 1, 52@55c.; No. 3, 46@50c.; coarse, 38@40c.; combing, 50@54c.; combing unwashed 37@42c.

Illinois, Iowa and Minnesota—X and XX 43@47c.; No. 1, 48@52c.; No. 2, 43@45c.; coarse, 37@40c.

Georgia, Alabama, Mississippi and Louisiana—fine unwashed, 43@45c.; medium unwashed, 40@43c.; course unwashed, 30@33c.; burry, 18@24c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Jan. 24.

BEEVES.—Receipts for the week, 13,783 head; do. last week, 14,428 do. Heavy receipts with the mild weather have kept the daily markets depressed. Compared with Wednesday's market cattle were sold $1 per head lower. Oxen and dry cows sold at 6¾@7¾c., poor to fancy steers, 7½@8c.; sales largely at fractions each side of 7c. Export demand good.

MILCH COWS—Receipts of over 200 head are greatly above winter wants here and quotations with small sales are weak at $60@$90 per head. An extra milker might do $5 or $10 better; but most of the quality now arriving is regulated very much by beef quotations.

SHEEP AND LAMBS.—Receipts for the week, 26,258 head; do. last week, 29,943 do. There has been a fair steady trade and the market closes firm. Sheep quoted at $4.65@$5.65 per 100 lbs. Lambs 6.75@$7 the latter for Canada.

VEAL CALVES.—Dressed, dull, must be in perfect order to bring 10c. Coarse, heavy, live, dull; fine quality sell readily at the extreme. N. J. and Bucks Co. live, choice, 8c.; other, 6½@7c ₩

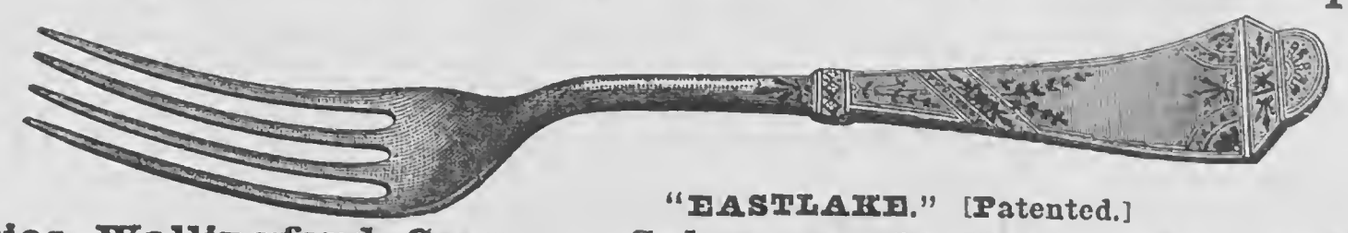
Mount Holly stock, 300 lbs., down, 5@8¼c. Hog-dressed, choice, 10@10½c.; other, 8@9½c.; buttermilk, calves, 4@5c.; grass, 2½@3¼c.

SWINE.—Receipts for the week, 31,039 head; do last week, 30,614 do. Live firm at 5@5½c. ₩ lb., corn fed; swill sold at $4.93½ per 100 lbs.

Light country pork, 6¾@7c.; medium, 6¾@6½c.; heavy, 6@6¼c.; Western dressed, 5¼@6c.; city, dressed, 6¾@6¾c. Pork tenderloins, 11c.

HALL, ELTON & CO.,

Electro-Plated Ware, German Silver and Britannia Spoons.



Factories, Wallingford, Conn.

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Reading for the Young.

FLORICULTURE FOR YOUNG PEOPLE—NO. II.

JOHN N. DICKIE.

IN the RURAL of December 13th, I told you how to sow flower seed in order to have the best of success. The next thing is the selection of varieties; for, without a proper knowledge of the numberless sorts advertised in our catalogues, a very unwise selection might be made. To tell the exact truth, but a small per cent. of our annuals are capable of giving general satisfaction, although they will always be of interest to the florist. What the great majority want in a flowering plant is good color, neat habit and prolonged bloom; and in the following descriptions I shall conscientiously endeavor to give you the cream of the great tribe of annual flowering plants portrayed in the catalogues of our seedsmen. First, then, upon the list, let us place

PHLOX DRUMMONDII.—This flower does not make quite so dazzling a display as a bed of Geraniums, but it far surpasses that popular bedding plant in delicacy. Do not sow the seed too thick. Let the plants stand one inch apart in the seed bed, and water well. Transplant to the permanent bed from the 5th to the 10th of May, setting one foot apart, no more, no less. Buy seed of mixed varieties the first year, which will cost you ten cents, and produce from one to two hundred plants, which will bloom until after light frosts, provided you keep the seed-pods cut off. As a rule, you will always have better flowers and more continued bloom, by cutting off the blossoms as they fade. Those varieties from which you wish to save seed can be grown in some retired spot.

PORTULACA.—Often called "rose moss." Well known, but positively unequaled for brilliancy of color. Keep the soil damp with a little moss until the seeds start. Set the plants six inches apart. The double rose flowered will keep in bloom nearly all day, and is very desirable. From a paper of the seed you will probably obtain twenty double flowering plants. The rest will be single and semi-double. When, after prolonged bloom, the plants grow long and ungainly, cut back and they will start out anew. No plant bears trimming better, as it can be cut into any shape with impunity.

PETUNIA.—For a constant, brilliant display without extra care and attention, this flower excels any annual with which I am acquainted. Seed of the common sorts of blotched and striped costs ten cents a paper, while the more fancy sorts are twenty-five cents. Begin with the inexpensive kinds. They flower more profusely, and make a better display. Set 18 inches apart; a packet of seed will furnish plants enough for a half dozen beds. I have planted them along a fence and had it completely covered by September, making a most beautiful picture; but the soil must be very rich to produce this effect.

POPPY.—Don't laugh, dear young reader, for a bed of poppies properly attended to, is a dazzling sight, and will attract general attention—as much so as anything in your gardens. Having a taproot it will not transplant, and the seed must be sown in April—surely by the first of May—in the beds where they are to bloom. Thin out the plants to one foot apart as soon as they appear. When they begin to bloom do not allow a single pod to form under any circumstances. From neglect of this caution poppy beds are not worthy the name longer than two or three weeks: whereas, by not crowding them, and renewing all faded flowers, they will blossom from two to three months. The large flowered sorts are the best, of which I name Double Oplum Poppy, Mursell and Paeony flowered. Now don't neglect this flower because it is old-fashioned. You might just as well refuse to sing Old Hundred. Try a bed next spring and report results.

SALVIA.—A great many imagine they cannot grow Salvia from seeds, simply because it is grown largely by florists. This is a mistake. For ten cents you can purchase a package of seed sufficient to plant a large bed. For fall flowering there are few plants that equal Salvia splendens. Seed germinates rather slowly. Set two feet apart, if the soil is rich. You can let the seed form on this as the Petunia, as they are both persistent bloomers.

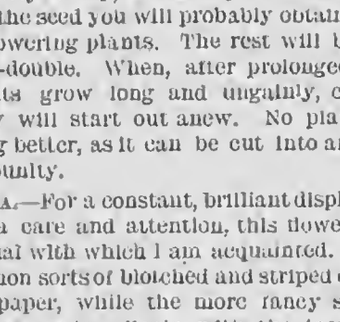
Morrow Co., Ohio.

[These are a few of the most desirable of our many beautiful annuals which ought to be found in every garden. Now is the time to select seeds, and lay plans for the coming summer. I advise the members of the Horticultural Club to send for catalogues of the different seedsmen they see advertised in the RURAL, so that they can be prepared to make a wise selection of seeds; meanwhile, I hope to extend the list of such plants that are especially desirable and suitable for their gardens. UNCLE MARK.]

A HERBARIA PRESS.

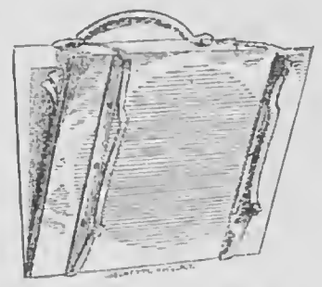
PROBABLY no premium that we have heretofore offered will prove so acceptable to the cousins as

No. 1.



this plant press, and especially will all who are at all interested in botany, regard it with great favor. The young botanists of the Horticultural Club can here secure a neat and excellent plant press, something which every botanist should have, for a very little trouble. When plants are gathered they must be pressed, so that they can be preserved for future reference. This pressing is generally done by laying the "specimens" between the leaves of an old book and then laying a weight upon it, but the press here offered the collector can take with him in the field, and immediately put the plants under pressure while they are yet perfectly fresh. The illustrations give a clear idea of the press. No 1 shows it as it appears when shut, and No. 2 when it is open.

No. 2.



The outside is made of perforated or slotted birch board. Inside of these boards are placed thick sheets of bibulous paper, which will thoroughly extract the moisture from the plant or leaf. The whole is fastened together with strong straps which can be drawn as tightly as may be desired. A leather handle, similar to that of the ordinary valise, makes it easily portable. We offer this press for a club of six subscribers.

LETTERS FROM THE COUSINS.

A New Uncle.

UNCLE MARK:—I request the privilege of becoming a member of the Horticultural Club. I am aged, but as you accept of aunts, why not uncles? I was unfortunately injured while in the Union Army of the Rebellion. Previously my life was a very active one, both physically and mentally, and a life of inactivity would now be to me a life of misery. I have been very feeble for several years past. I have spent my time wholly in my garden, when the weather permitted, and I was not confined in the house in pain and sickness. My work there has so far been a pleasant, profitable and healthy pastime. I was born and bred and spent my time in a city, the first thirty years of my life, in mercantile pursuits, and I was educated accordingly, so you may be sure I am very ignorant of horticulture. I read some time ago in the New York Tribune, that my namesake, Secretary Thompson, commenced at 60 the study of Greek and Latin. Why not I, at the same age, study horticulture? I have a large garden; one-sixth of an acre for onions; space allotted for two to three thousand cabbages, and besides potatoes, sweet and common corn, and culinary vegetables of all kinds; a Wilson strawberry plat; and three to four hundred Catawba, Isabella, Concord and Clinton grape vines. I have had it so arranged since my discharge from the army, as I was not able to do much work myself, that most of the cultivation can be performed by a horse.

I was not prepared for the seed distribution of last year, so was very unfortunate with them. I am proud of the Acme tomato and the Beauty of Hebron potato. This fall I have had a team of oxen for half a day, breaking up fresh ground, and as the weather was so very favorable, I am now well prepared for experimenting and growing flowers without interfering with our regular crops.

There are three large rocks near by one of the entrances of my garden, with a space between two of them large enough for a summer-house, or arbor. I intend to build one there similar to the one in the birds eye view of the Experimental Grounds of the RURAL. I wish you to be informed that I am a lover of nature, to the extreme of adoration, and that I live in a beautiful and romantic place, under High Point, one of the high mountains of the Catskill range. Behind my house the rocks are seen towering more than one hundred feet in hight, and in some places they rise forty to sixty feet perpendicularly. In front between my house and garden there is a deep rocky ravine, with rocks in fantastic shapes, precipices perpendicular, forty feet and more in depth. My home looks small, surrounded with this precipitous grandeur; and when clothed in the garniture of autumn, in golden and bronze, green, red and purple hues, harmonizing with the neutral tints of the bare and mossy rocks, it portrays a beautiful and romantic sight. All who love the beautiful and romantic would not be content with those three naked rocks at the entrance of the garden; they would want them clothed to correspond with the rest of the scenery and that is just my feeling. I have improved them, some little in my sight, by heaping a lot of knarled roots upon them. My neighbors talk to me of blasting them out; but I love nature to much in its wild ruggedness, to commit such a sacrilege. I would rather see a rural gate, a flower plot, a rustic arbor, and the rocks clothed with ferns and creeping plants.

City bred and educated as I was, my knowledge is too limited to proceed to clothe those naked rocks to make them harmonize with the rest of the surroundings, hence I have to appeal to you for assistance; for which I shall ever be grateful.

Ulster Co., N. Y. JOHN THOMPSON.

[You are very welcome to join the Horticultural Club. Your age and experience will certainly enable you to give the cousins much sound advice, and your appreciation for the beautiful in nature will lead you to point out the beautiful to them. As to the manner in which you can best cover the large rocks you mention, I should venture an opinion more confidently had I seen the rocks and surroundings. I would recommend to set some plants of the Virgina Creeper, Clematis, Dutchman's Pipe, and other vines round about them; these will soon cover them with a profusion of green. Or, if the place is not too exposed prepare the soil and plant some Grapevines to cover the rocks, and thus make them useful, as well as ornamental. A wire trellis can be stretched over them to which the vines may be tied.—UNCLE MARK.]

DEAR UNCLE MARK:—As I like to read the letters from the Cousins in the RURAL, I will write one, too, asking if I may join the happy band and become a member of the Horticultural Club. I am ten years old, and go to a school, about three quarters of a mile distant. I am very fond of flowers and we have a good many house plants some of which are in bloom. Among them are a Calla and several Geraniums, both red and pink, and an Oxalis that blooms the most of the time. We also have a nice Oleander, but it has never blossomed and is about three years old. Will some one tell me how to make it blossom? This being my first letter to you I will not make it too long; but if I see it in the RURAL I may write again. So good-bye, with love to all the cousins, I remain one of them. ESTELLA.

Southington, Conn.

[I shall be glad to put you on the list when I get your full name.—U. M.]

The Puzzler.

HIDDEN MEN OF PROFESSIONS.

1. 'Tis evident I struck her.
2. In law ye resign.
3. The Modoc torments his victims.
4. With physic I annoy.
5. To leg is Latore's failing.
6. As I fell a stud entered my eye.
7. How late a cherry tree bears?
8. Tut, tut, Orlando!
9. I saw this Toria no more.
10. Ibo, tan is the stuff to cleanse hides.
11. George Olog is through.
12. Tell me the fact Orsina?
13. You are a perjuror.
14. It broke Ruth's heart.
15. You know our big ram, ma, Rian had?
16. The music I announced.
17. What a bump I received!
18. That torn eyelid is inflamed.
19. By her bib Lio, grap her.
20. Do survey Ernest's farm?
21. Min! is "terra" earth?
22. Do you the treasure receive?
23. To join the clergy, manage well.
24. Ned, I tormented him.
25. That journal is trashy.

☞Answer in two weeks. LITTLE ONE.

TRANSPOSITION.

Tou nl eth tofs lape noolngilth, uot nl het musrem ral,
Tawh a dite fo volgln romemsle surshe dasyl r'oe em heret,
Fo a gouny dan solfneght gifrue, fo a recal dan nusyn wobr';
A mlles klle het tligh fo gormlnn—tl saunth em neve now;
Fo a pahpy, yphap yad meard, fo a tufrue chiwh saw ot eb;
Tub eth yojs fo het slnycit turfeu enon ubt neavch nac ees;
Rof het puc morf ym mertllbng spll saw henewred,
Dan pohe's slat lickerfing yar saw nedqnech.

☞Answer in two weeks. L. O.

HIDDEN ANIMALS.

1. Have you read David on Keystone State?"
2. Step up Pygmilion.
3. I will set the leg Traf fearlessly.
4. Rash Ogden spurred his horse.
5. Hand me the glove-box.

☞Answer in two weeks. S.

DROP LETTER PUZZLE.

T-e-a-r-f-c-s-f-o-a-e-b-o-e-s-l-l-; -b-o-e-a-d-a o-t-l-e-h-a-t-o-o-t-o-w-l-n-t-l-p-s-. Fill the blanks so as to form a text of Scripture.

☞Answer in two weeks. L.

A DIAMOND PUZZLE.

A vowel; an animal; an Anglo-Saxon divinity; the juice of a tree; a consonant.

☞Answer in two weeks. O.

PUZZLER ANSWERS.—Jan. 17.

HIDDEN DRINKS.—1. Cocoa; 2. Rhine-wine; 3. Broma; 4. Buttermilk; 5. Ginger-pop; 6. Fip; 7. Wassail; 8. Mum; 9. Pulque; 10. Bitters; 11. Tonic-beer; 12. Tokay; 13. Metheglin; 14. Absinth; 15. Rotafia; 16. Catawba; 17. Madeira; 18. Maraschino; 19. Marischino; 20. Curacoa; 21. Whey; 22. Drake's Plantation Bitters; 23. Posset; 24. Souchong tea; 25. Angelica.

DROP LETTER.—"Rend your heart and not your garments, and turn unto the Lord your God, for He is gracious and merciful, slow to anger and of great kindness, and repenteth Him of the evil."

HALF WOOD SQUARE:

I n s u l t
N o i s e
S i z e
U s e
L e
T

MALTEJE CROSS:

```
        G R U N T
          A P E
P           E           T
E H       A R M       O A
R O M     A N Z     O F F
C D       S A N       F F
Y           V           Y
          D I N
        P O K E R
```

Downwards, "*Upernavik.*"
Across, "*Romanzoff.*"

Sabbath Reading.

SPEAK SOFTLY.

SPEAK softly, gently ever!
There is no wiser part;
For harsh words pierce like steel
The yearning, loving heart.

As gems reflect in brightness
Every flitting beam,
Let words reflect in kindness
Love's sunny, love-lit gleam.

Speak softly, gently, ever;
There is no better plan—
For angry words can never
Effect what kind ones can.

For, O! a soft word spoken
May move the stubborn soul
That still would prove defiant
Should words of thunder roll.

Speak softly, gently ever!
Words breathing nought but love!
And soon our blighted Eden
Will bloom as realms above.

THE ENJOYMENT OF THIS WORLD.

THAT the things of this world afford a certain degree of pleasure is testified by all who possess them, whether they be Christians or not. But that they confer no great happiness is equally the testimony of all; and those who possess most of them are often most sensible of dissatisfaction and want. This arises in part from their nature; it is not possible that perishable things should feed the hunger of an immortal being. Yet there can be no doubt that, should we acquire them and employ them in the best manner, we might enjoy them far more than we do. Why is it that we find in the ordinary gifts of Providence so little happiness?

One reason may be superstitious conviction that God will be displeased. There are many who fear to rejoice in riches, lest God become jealous. But there may be an enjoyment of the world wholly in accordance with His will. Paul assured the people of Lystra that He filled the heathen world not only with food, but also with gladness. The same apostle directed Timothy to teach the rich that God gave them all things richly to enjoy. There is no necessary antagonism between the things of this life and the God whose power creates them and whose providence bestows them. Only when we worship them as idols, or use them as screens to shut His glory from our eyes, do we provoke Him to anger. But this is not the way in which we may best enjoy them.

Another common reason of our failure to enjoy the world may be found in our envy of others who are more fortunate than ourselves. In the presence of their splendor our own disappears from view, like the moon when the sun rises above the horizon. It is the story of Haman repeated; we can have no peace while Mordecai is permitted to sit at the king's gate. A wiser course would be to enjoy not only our own possessions, but also the possessions of others. Expelling envy from the heart, we shall perceive that the palace of the rich, built to be admired, was therefore built for us, and we shall enjoy its architecture equally with its owner. We shall be able to thank the millionaire for keeping his spacious lawns, in order that we may feast our eyes on them We shall look at the gems and jewels and dresses of fashion as worn for our inspection, and we shall rejoice in their beauty, and the more that we are not subjected to the cost of their purchase. All things will become ours.

Another reason that we enjoy our possessions so little is that we impart so little of them to those who are needy. Selfishness and happiness are implacable foes; they cannot dwell in the same breast. The riches that we strive to enjoy selfishly are a curse and a bitterness; they fail utterly to bless; they are apples of Sodom, full of dust and ashes, which the hungerer loathes. What we give we most truly gain.

Nor is the highest enjoyment found merely in imparting of our superfluity that whose loss we do not feel. The law of sacrifice is the law of happiness. Not until we give so largely as to become conscious of want, do we reach the greatest joy of giving. And in a world where there is so much misery, both of body and spirit, it is possible for even the most wealthy to attain this happiness of sacrifice.

The only other reason of our failure to enjoy the world of which we care to speak at present may be found in our failure to enjoy the hope of bliss in the world to come. There is no antagonism between worldly joy and spiritual joy. Nay, the latter increases the former. The man who regards his money only as a means of present gratification does not derive from it a tithe of the satisfaction which would come to him did he believe that he may lay it up in heaven for eternal use, that he may make friends with it who shall welcome him to everlasting habitations. The joy of the spiritual life does not eclipse the joy of the earthly life; on the contrary, did we live as we should, the one would rather illume the other, and make it more conspicuous, as the sun lights the earth, and reveals its beauty. The man who knows not God knows not how to employ His bounties in such a way as to derive from them the highest satisfaction.—*The Watchman.*

HE who makes the fullest use of God's gifts is their real owner, for property does not become possession until the proprietor becomes the master.—S. S. Times.

To forgive our enemies, yet hope that God will punish them is not to forgive enough. To forgive them ourselves, and not to pray God to forgive them is a partial piece of charity.—Sir Thomas Browne.

PERSONAL ITEMS.

Senator-elect Garfield once drove a canal horse, and could whip any man on the route.

By the will of the late Frank Leslie all his real and personal property is bequeathed to his widow.

General Sherman is said to be the most persistent theater-goer of all the public men in Washington.

The Lord Mayor of London gives a bond of $50,000 for the safety of the official diamonds, and one of $100,000 for the safety of the plate.

President Lincoln once said that some people not only believed that the earth moved on its own axis, but that they were the axis.

A bitter correspondent writes to the London News that "Swinburne" signifies "pig's brook," from "swin," a pig, and "burne," a brook.

Algernon Sartoris, the English son-in-law of General Grant, has arrived in this country, but Mrs. Nellie Grant Sartoris does not accompany him.

Lieutenant General Skobeloff, inspector general of the Russian cavalry, father of the General Skobeloff who distinguished himself in the Russian war, is dead.

Governor Williams, of Indiana — the "Blue Jeans" of the whole country—had a family reunion on Friday week, his seventy-second birthday. Six grandchildren were present.

Ex-Governor Garcelon, of Maine, whose action has produced the present muddle in the Pine Tree State, is 72 years old, and has an excellent reputation as a doctor and a man.

Mrs. J. J. Astor has just sent one hundred more of the homeless children of New York to homes in the West and South, at a cost of $1,500. During the last seven years she has found homes for six hundred and seventy-seven poor lads and has expended on them $9,750.

A wealthy man who lived in Chesterfield, Va., had two sons. Tom and Jack, both found of playing poker, but Jack was very sharp and Tom very flat. When the old man died he left Tom $90,000 and Jack only $1,000, but he explained at the foot of his will that $1,000 was just stake enough for Jack to win everything that Tom had; and so it turned out.

Ouray, the Ute, is short and stout. He has a square face, and wears a high hat. He has somewhat of a beard. He speaks Spanish well. General Adams says that Ouray is a man of intelligence, but that when he was told that the Utes acted badly he smiled, shrugged his shoulders, and merely said that it is only a way the Indians have.

Senator-elect Mahone, of Virginia, is a small, slim man, with bright eyes and quick movement. As a Confederate leader he was famous for his daring. He never wore a sword while in command, always forgot his pistol, and went into action with nothing in his hands or in his pockets, wearing generally a loose blouse of gray flannel, which his soldiers called his "fighting jacket."

Julia Jackson, the sixteen-year-old daughter of Stonewall Jackson, was presented at Baltimore, on Christmas Eve, with a silver pitcher, inscribed, "To General Stonewall Jackson's daughter, from Confederate soldiers in Maryland, Christmas, 1879." The presentation was made in a quiet manner at Miss Cary's school, where Miss Jackson is a pupil. Mrs. Jackson was present.

Mrs. Grant is said to be very fond of collecting pictures of herself, Ulysses and the children. She gets every photograph she can and carefully puts it away for future use. When fixing up her house at Galena the other day, she hung up Ulysses and the children in nearly every room. The little General, observing the redundancy about the house of Grant and the little ones, removed his cigar from his mouth long enough to observe "it was in bad taste," whereupon the good wife gave the man of her destiny to understand very plainly that it was *her* house he was talking about, and she would not be told how she should fix it up.

Lieutenant Gorringe has found under the pedestal of the obelisk that is coming to this country several Masonic emblems of great historical value. A perfect Masonic altar, a Masonic apron, and so on, are represented on blocks of hewn Syenite granite. General Roome, the Grand Master of Masons in New York State, says that the discovery will be a great thing for Masonry. It is claimed by many Masons that the society sprang from the Essenes, who wore the arc of three secret societies among the Jews. John, the Baptist, belonged to the three, and it is supposed, also, that Christ was brought up within their mystic rules.

Ask any good doctor if Hop Bitters are not the best family medicine on earth. See notice.

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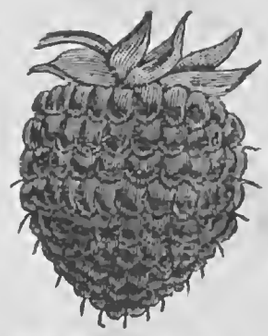

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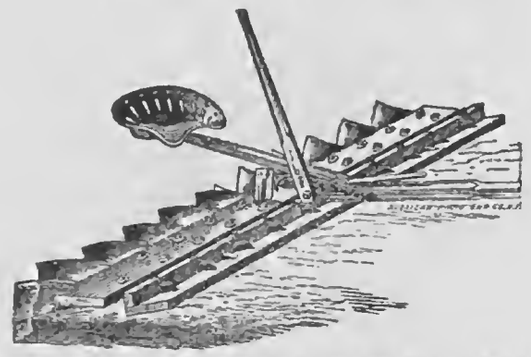

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Various.

BRIEFLETS.

THE expediency of creating a Department of Agriculture and Commerce is a question in which every farmer should feel himself deeply interested. . . Speaking of possible troubles in Europe, Nation says: But Germany, too, is full of trouble, and her fighting chiefs are pretty old, or very rheumatic, gouty, and neuralgic. Neither the emperor, nor Moltke, nor Bismarck is physically equal to the strain of another great war. . . In politics, the hardest thing to find is the "best man." . . "Probably no single consideration operates so powerfully to deter cultivated and refined gentlemen from entering political life as the knowledge that nobody who seeks office can escape being treated like a blackguard."—N. Y. Tribune. . . In the catalogue of E. & J. C. Williams is an original engraving of a Raspberry (the Montclair), which is *actually true to life!* The oddity of the thing is what we call attention to. The raspberry, however, is not for sale yet. . . Agricultural journals are now expressing their sincerest thanks for the generous support they have received during 1879 and, as an evidence of their gratitude, only ask that the support may be doubled or quadrupled for 1880. . . That the hog, as we usually see him, is a grunting, exacting, selfish brute, it is impossible to deny. But wilfully dirty in his habits, he certainly is not. Ag. Gazette. . . Messrs. Read and Pell have had "an arduous pilgrimage through America". . . Quinine is now recommended as a specific for Whooping Cough. . . Life spared, we shall *begin* our Seed and Plant distribution on or before February 10th. . . One evil deed will spoil a whole life, as a drop of ink will discolor a goblet of water. . . This is leap year, but look out before you leap, Herald. . . The Detroit Free Press says that although fences do not walk, they have a swinging gate. . . There is nothing better than shallow boxes in which to sow seeds. Let them be three inches deep, with a crack or so in the bottom for drainage. Fill them with *light* soil. Leaf mold from the woods, mixed with sand, is excellent; or sand and thoroughly rotted stable manure. Fill the boxes to within half an inch of the rims. Pat down the soil to an even surface, and then sow the seeds. Sift soil over them just so as to cover, and pat down lightly again, watering only when the surface shows signs of drying out. Keep the boxes in a temperature as near 65 deg. as may be. . . On the 22nd of February, it will be fifty years since Philip R. Freas pitched his tent in Germantown. The Old Telegraph has since been published every week, and edited by him through sickness as through health. . . The Michigan Farmer says that D. M. Ferry & Co. the seedsmen of Detroit, have just erected the largest seed store in this country, if not in the world. . . M. Nicholas de Nasattine says that the aroma on fruit increases with the latitude, while the sweetness decreases. Northern trees have flowers and foliage of vivid colors, and herbs of the North contain more essential oil than those of the South—all this being due to the prolonged light of summer months in Northern climes. . . Buckwheat straw, which has heretofore been considered of little value, has of late been utilized by some of the Western farmers by chopping it fine and adding meal to it. A small quantity fed to stock occasionally would be relished, no doubt.

Wit and Humor.

A boy at the dog show demurely inspected the blacks and the blues, and the bigs and the littles; then said, in a voice that was low and dejected, "Oh, cracky! My eyes! What a place for tin kettles!"

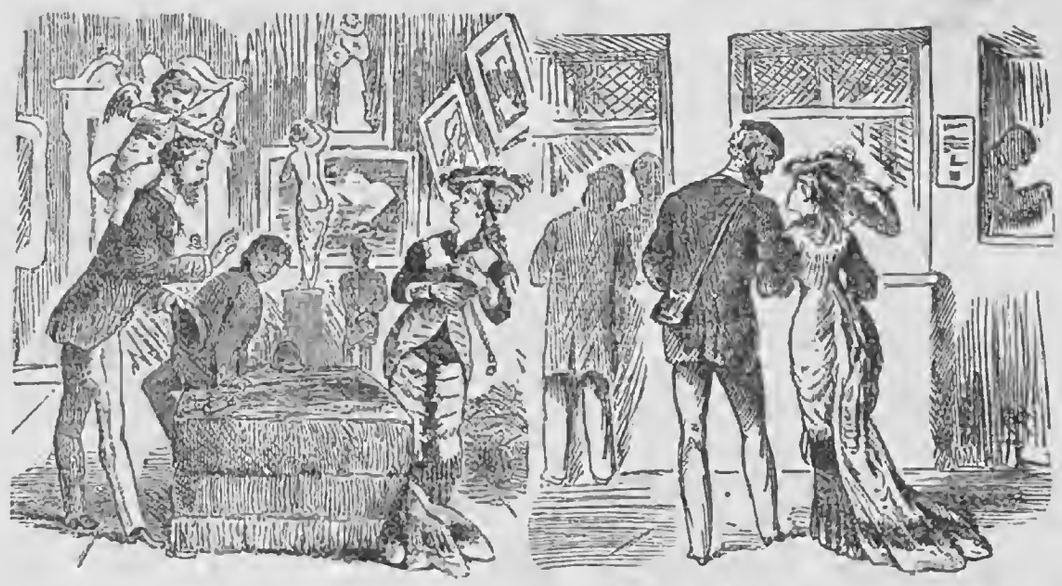
A DILEMMA.—'What are you puzzling over, Pousonby?' 'I'm trying to answer a note from the 'dear duchess,' as you call her. She's done me the honor to write and ask if that St. Bernard pup I gave her should be fed on meat or biscuits?' 'Well, biscuits, shouldn't it?' 'Of course. But she spells biscuits with a k, and I don't like to spell it properly for fear of hurting her Grace's feelings; and yet I don't want it to get about that I spell biscuits with a k,' 'Say meat, then!' 'But she spells meat with two e's!'

RECENTLY a tenant entered the office of a Tipperary land agent, and throwing a roll of notes on the table exclaimed: 'There's ivery penny i've got in the world. "It's a year's rint, and ye may take it or lave it—if ye take it, I'll go to the workhouse; if ye lave it, I'll go to Ameriky on it. The agent opened the notes and counted the money. 'Why, my good man, there is more than a year's rent here. There is over four year's rent in the bundle.' 'The devil there is,' cried the tenant putting his hand in his pocket—'begor, I gev you the wrong bundle of notes after all.'

MISCHIEVOUS CUPID.

1. He is fascinated with the painting, and sits down to regard it with ease. (Cupid determines to make a match.)

2. For a better view he leans back and raises his glass, to the discomfiture of the lady behind. (Cupid chuckles at the good beginning.)



3. Great astonishment of both parties; he apologizes profusely. (Cupid straightway sends a piercing arrow right to her heart.)

4. The explanation is accepted, as is his arm, and happiness dawns upon the couple. (Cupid is satisfied and becomes invisible.)

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For the pen of sheep that have suffered themselves to be most easily fleeced.

For the best battering ram.

For the most sheepish sheep.

For the sweetest sheep's eyes.

For the flower of the flock.

PIGS.

For the sow with ears best adapted for the manufacture of silk purses.

For the litter most contented either to go to market or to stay at home, to eat roast beef or to have none.

For the least pig-headed pig.

For the "fattest hog in Epicurus' stye."

For the biggest bore in the place.

IMPLEMENTS.

For the "Elevator" best calculated to raise the spirits without causing inebriation.—Punch

Right and Left

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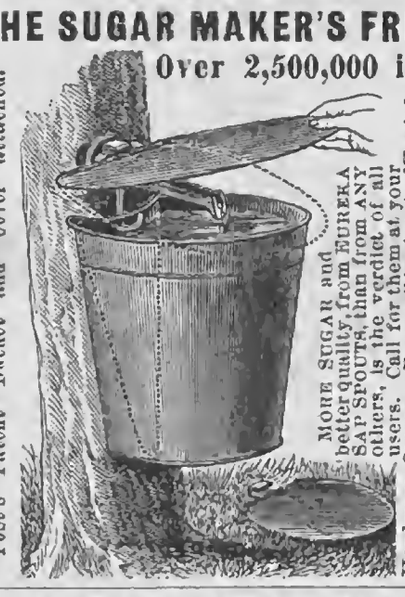

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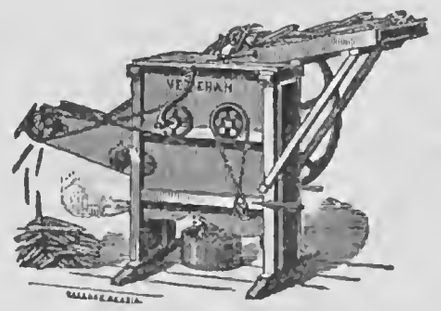

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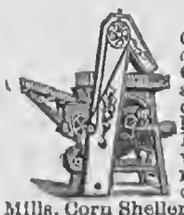

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THE RURAL NEW-YORKER

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The Vineyard.

THE EUMELAN GRAPE.

J. T. LOVETT.

THIS Grape, which originated at Fishkill, New York, and was purchased in 1866 by that hero of American Grape Culture, the late Dr. C. W. Grant, (by whom it was subsequently disseminated), is not, although generally supposed to be, (which is quite natural owing to the fact that it has been stated as such in various treatises on American Grapes) a variety of the Fox Grape, (*Vitis Labrusca*), from which the majority of the varieties cultivated at the North have descended; but a variety of the Summer Grape (*Vitis æstivalis*). And there are few Grapes about which there is such a wide disagreement of opinions regarding their value—(which by the way is more or less the case with all varieties of the species) and said disagreement in all probability will ever exist so long as does the variety. This is readily accounted for from the fact that it behaves so vastly differently in different situations, even within a short distance of each other. In a word, it is a most precarious variety, as much as or more so than the Triomphe de Gand and similar varieties of the Strawberry. It is exceedingly handsome; very early, and as its name implies, ("Good Black") is of extremely high quality, "when," one would say, "you can get it." It is so rich in sugar that it has been reported to have "raisined" on the vine under favorable circumstances; but this I cannot vouch for, never having *seen* it do so. Dr. Grant describes it in his catalogue as: bunch of good size, elegant form, and a proper degree of compactness; berries medium to large, round, black, with a fine bloom, adhering firmly to the bunch long after ripe: flesh, tender, melting, all going to wine-like juice under slight pressure of the tongue; ripens very early (even before Hartford Prolific) and evenly to the center. Flavor pure and refined, very sugary, rich and vinous, with a large degree of that refreshing quality that belongs distinctively to the best foreign wine grapes; all of which I can indorse when the vines remain vigorous and healthy. But I must add, so far as my experience goes, it approaches in the same marked degree, that best of American Grapes, the Adirondac, in the uncertainty of a crop as it does in the quality of its fruit.

There is one peculiarity about the Eumelan that I have never been able to understand—a decided difference in the growth of vines under the same treatment. Instances are known of vines propagated from the same parent vine, propagated in the same way, planted side by side and given the same cultivation and fertilizers, yet one would grow into a large vigorous, fruitful vine and another would make scarcely any growth at all; nor will nursing of any known kind restore such runts to vigor, but invariably, after years of watching and care, they must be dug up and thrown away as worthless. I have thought that the difficulty may arise from the *bud* producing the cane from the eye or cutting, being weak or defective in some other way; but this because I could account for it in no other way. It is simply speculation on my part, and the phenomenon is one that has often puzzled me.

Little Silver, N. J.

THE EUMELAN GRAPE.—I consider this of excellent quality, and where it succeeds well a very desirable Grape to plant. In our light soil here it does not always prove a good bearer, but when it does fruit, it is very fine.

Passaic, N. J. GEO. C. WOOLSON.

A LIST OF GRAPES.—Mr. E. Williams names Cottage, Telegraph, Worden, Concord and Martha as a good list of five varieties of Grapes. To enlarge the list he would choose Goethe, Brighton, Merrimack, Lady, Wilder, Salem, Agawam and Massasoit. We have hopes that Mr. Miner's native seedling Grapes will prove worthy of being added to the above list.

Horticultural.

AN INTERESTING STRAWBERRY DISCUSSION.

New Jersey Horticultural Society.

Fruit Growers in Council.

[Rural Special Report.]

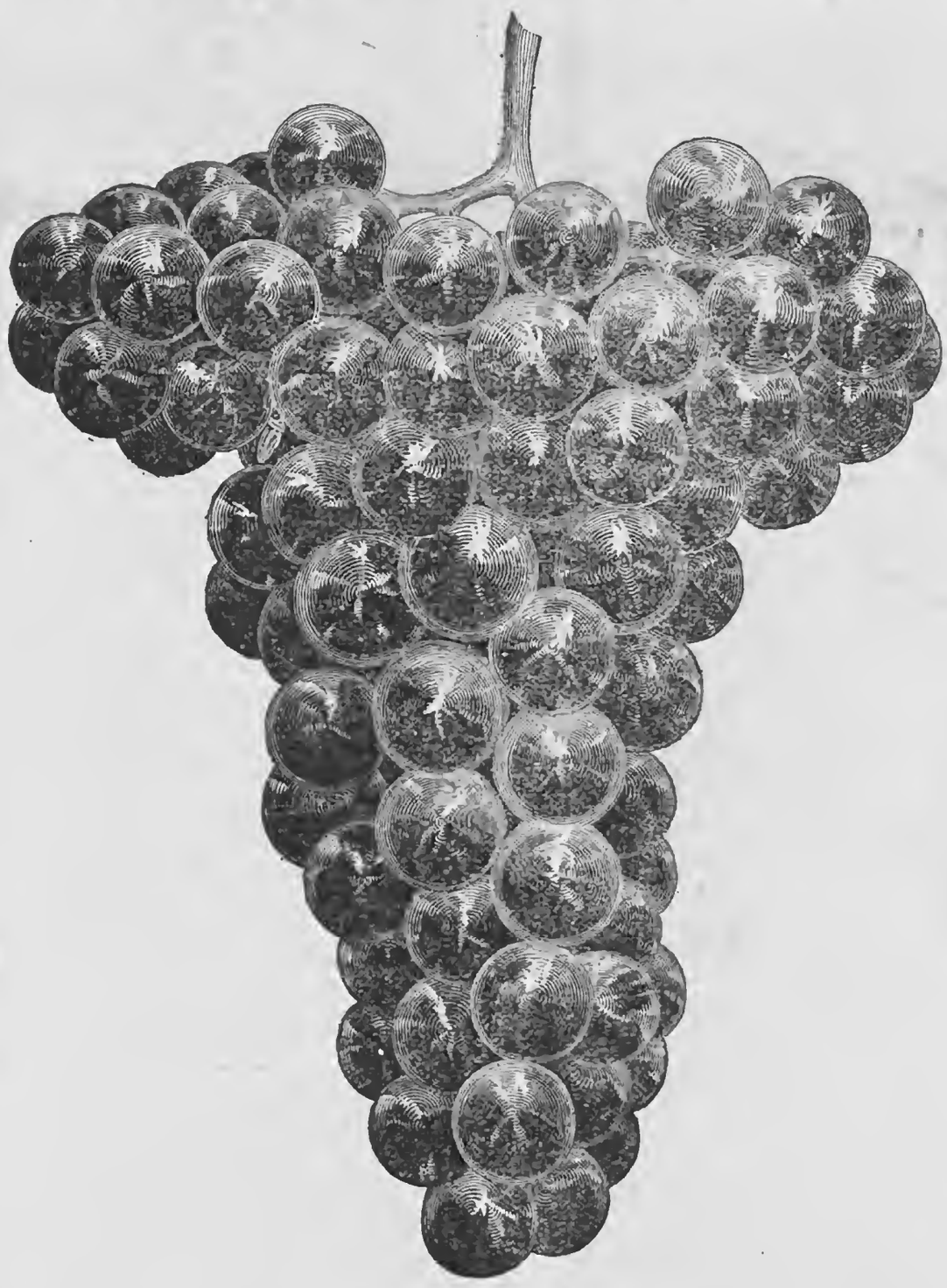
MORNING SESSION.

AT the fifth annual reunion of the above Society at Newark on January 15th, the first question discussed was: "The future of Strawberry Culture as a Source of Profit." The subject was introduced by Rev. J. L. Chapman, of Irvington, a thorough-going amateur. He took his text—a small strawberry plant—in his hand, and commented on its structure, capacity and requirements, and criticized the actions of plant growers for disseminating such quantities of feeble plants as he held in his hand, which was a fair specimen. He urged a reform in growing better plants, charging more for them. The public would be the gainers. To nurse feeble and sickly plants was a waste of time and labor which he could not afford. Less in number and better in quality was his advice.

He advocated high culture and top-dressing to secure a vigorous growth; but when to apply the top-dressing to secure the best results, he was not prepared to say—he was experimenting on that point. Mowing off the tops, as practiced by some, was a questionable practice. In a wet season, it might be of advantage, but in a dry one plants were irreparably injured. A neighbor was growing the Crescent Seedling. "What for," he asked—"to make *sauer kraut?*" No, but because it was productive; could be sold cheap, and people would buy it. It might be so, but he wanted no such fruit.

He thought berries should be graded 1st, 2nd, and 3rd quality, as to flavor, by a competent committee, so that people would know what to plant. New varieties were annually sent out at high prices, many of which, on trial, proved worthless. Any new fruit introduced ought to have a certificate from such a committee. He had tested about a dozen kinds; among them Glossy Cone, Great American Beauty, Black Giant, Pioneer, etc. He thought the coming berry was the Gipsey, a fine-colored berry of good shape, flesh fine and buttery, a beautiful hardy plant, not large enough to suit the prevailing mania, but his wife told him to part with any but that, as she liked it the best of any that came to her table. He advocated thorough preparation of the soil before setting the plants, and clean culture afterwards. He had been troubled with the "grub." Great American had suffered most, and old beds more than new ones.

Mr. Lovett asked if any one had been successful in exterminating the pests, and how?



EUMELAN GRAPE.—Fig. 32.

Mr. Roe would rather have that question answered than any other; he came to learn, and had been much pleased with the remarks of the speaker.

Mr. Crane supposed it was well known to be the offspring of the May beetle or dor-bug, and he would suggest that May was the time when the warfare should commence. He thought we often erred by destroying their enemies. The skunk was one of these, consuming great quantities of insects.

Mr. Hale had used salt as a remedy with partial success. Had hung boards covered with coal tar about his grounds at night and caught quantities of the beetles, but he could not say as to the relative proportion of friends and enemies thus caught.

Mr. Capen, of Boston, would merely suggest that protecting the birds might obviate the necessity of hanging out tarred boards.

Mr. Ward would make a plea for the birds. He thought he had good cause of complaint against damage by cat-birds, yet deemed the benefits generally outweighed the damages. He thought the injury by "grubs" was more apparent among the weak plants than the strong ones.

AFTERNOON SESSION.

The strawberry question being resumed, Mr. Batty of Manchester, by request, gave an account of some of his seedlings. His best was a pistillate variety very robust in habit; berry conical, about the color of Green Prolific, firm enough to stand shipping well, and about doubly as productive as the Wilson, with him.

Mr. Quinn thought a few years ago he knew something about Strawberries, but the views of those days had been somewhat changed by the progress made since. Hovey's Seedling was then considered one of the most profitable till the Wilson superseded it on account of its greater yield and better shipping qualities, but the berry was too sour to suit the public, and the cry among the berry growers was: "Anything to beat the Wilson." The Charles Downing, Boyden's 30, and the seedlings of Mr. Durand, had entirely superseded the Wilson in his vicinity. He believed no finer, larger or better berries were grown anywhere than in Essex county. His most profitable berry was Charles Downing, but some of his neighbors had better success with Boyden's 30. He advocated high manuring—no danger of using too much. He followed potatoes with Strawberries, setting the plants in July, in rows three feet apart. With a favorable season they would give a full crop the season following. He covered the rows with fine manure in winter, and in spring raked off the coarser portion between the rows. He hoed the surface not more than one-sixteenth of an inch deep! (That's getting things down to a fine point!—Rep). By this practice he grew 171 bushels on an acre in 1878; last year the same ground produced 156 bushels. Fifty bushels were formerly considered a good crop; but now less than 100 was unsatisfactory.

Mr. Jones, a neighbor, grew at the rate of 412 bushels in his garden. Mr. Durand had been very successful. His Great American had been the most productive of any variety he ever saw. A Mr. Brown at Middleville had a crop last year that was like apples for size (!!). Green prolific was too soft.

Dr. Hexamer was glad to hear Charles Downing spoken so well of. It was a berry of great intrinsic value. Triomphe de Gand used to pay him the best of any. Cumberland Triumph was a very fine berry, one he could sell any quantity of. Sharpless was the most promising of the new varieties. Champion was also very valuable, in some localities it was very profitable. The New York market was not always a fair test as to the value of a variety. He should prefer locating near a town of a few thousand population, where he could put his fine berries in market and have them consumed the same day they were picked.

Mr. Roe felt amply repaid for attending. He

would indorse all that had been said of the Charles Downing. It grew in favor on acquaintance. He also liked the Monarch very much. If confined to one variety, it would be Triomphe de Gand. Champion was worthy of all Dr. Hexamer had said of it. Sharpless was very promising; so was Miner's Prolific. This was very productive and stood the sun well. He could not distinguish any difference between Champion and Windsor Chief. Golden Defiance was his best late berry. Springdale had always done well. Crystal City was very early. He thought spring cultivation very beneficial; had seen failures where it was omitted. Moisture was essential for success. Irrigation would eventually be practiced.

Mr. Crane had grown Strawberries for 25 years. Had practiced irrigation years ago and prolonged the crop till the 15th of July. Miner's Prolific was appropriately named; its foliage stood well. It was his best variety last year. Charles Downing did not do as well as formerly. Durand's varieties with him were failures.

Mr. Parry approved of what had been said generally. One of the best crops he ever raised was of Boyden's 30 on a piece of ground just suited to them. He was emboldened by his success to plant it largely the next year, and lost all from drought. He cited an instance of a man in Gloucester, who succeeded admirably with Triomphe de Gand by irrigation.

Mr. Collins indorsed much that had been said, especially regarding Charles Downing. Continental was a valuable variety in his vicinity, it pays as well as any of the late sorts.

Mr. Parcell asked if any one had experience with commercial fertilizers exclusively, and got no response save from Mr. Lovett, that he had seen beneficial effects from the use of Mapes's fruit and vine manure.

Mr. Claywood thought there was too much crowding of plants. He advocated hill culture; had used a spoonful of sulphur about the roots of the plants when set, and had had no trouble with "grubs."

Dr. Trimble had never seen such berries in market as the late Mr. Knox of Pittsburg used to send to New York, and they were Jucundas.

Mr. Roe prized it highly. He grew 190 bushels per acre of it last season.

Mr. Ward would speak a good word for the Great American. Though so much had been said against it, with the same culture and alongside the Downing, Boyden's 30, etc., he had realized 50 per cent. more for it the past season.

And thus ended the strawberry discussion. It had covered nearly the whole field owing to the great latitude allowed, and was of much interest; but the main question of "future profit" was not touched upon. If my readers can solve the problem from this digest of the discussions they can do more than I can.

E. W.

EXPERIENCE WITH THE PEA-WEEVIL.—Four years ago my pea seed was so badly eaten by the weevil that I planted double the quantity, to insure a full row. What vines came up were not strong. I saved the first peas on the vines, however, for seed, and tied them up in a sound bag. The next spring I put peas, bugs and all in boiling water for about a minute. The following year I found I did not have half the quantity of bugs, and last spring I found but two in a quart of seed. I live a half mile from any pea-raiser, so that I am not troubled by the immigration from other pea-vines. I think if every one would follow the plan of putting the seed in boiling water, the pest would soon be got rid of.

J. E. M.

Field Crops.

EXPERIMENTS WITH TOBACCO.

G. A. GOFF, JR.

WISHING to experiment somewhat with different kinds of tobacco, I procured, last spring, seeds of six varieties, namely:—Havana, Cape, Silky Prior, Ohio Broad-leaf, Lancaster and Chemung Broad-leaf. The seed of the first two varieties was imported; the last three are varieties of the Connecticut Seed-leaf and the Silky Prior is a variety largely grown in Virginia.

The seed was sown in the usual manner, and the plants, as soon as they became of suitable size, were set out in a good, fertile, well-prepared soil. Owing to the dry weather which prevailed during the greater part of the growing season, the tobacco did not make as large a growth as I anticipated. The plants, while growing, received the same care that is usually given them, and when ripe were cut and hung up to cure in the manner followed by tobacco growers here. When the tobacco was thoroughly cured, it was taken down and the leaves stripped from the stalks. The Havana and Silky Prior were planted in adjoining plats of equal size. The Havana from the plat weighed 49 pounds and the Prior 78 pounds, or at a rate per acre of 1200 and 1800 pounds respectively. The other varieties were not weighed. In the quality and size of the leaf as well as in the manner of growth when in the field, there is a marked contrast. The leaves of the Havana are very small compared with those of the seed-leaf varieties, the largest being about 10 inches in length and four or five inches wide, while some leaves of the Ohio Broad-leaf have measured three feet in length and 18 inches in width. The quality of the Havana is good, and when assorted, it turned out a larger percentage of wrappers than any other variety that I have tried. The Cape resembles the Havana, except that it does not grow so tall and has somewhat larger leaves. The Silky Prior is of good quality and runs well as to wrappers, but the leaf is not as fine in texture as the Havana and grows of much larger size.

The other three varieties resemble each other so much that I can detect no marked variations in the quality, the main difference being in the character of growth in the field and the size of leaf, the Ohio Broad-leaf being the largest and most "leafy" variety, and consequently, as it has cured out well, the most profitable kind to grow in this locality. Our crop of 11 acres, grown the past summer, is mainly of this variety, and we have sold it readily for 15 cts. per pound "through." Havana tobacco, to be made as profitable to growers as these seed-leaf varieties, would have to command a much larger price per pound, as the yield per acre is from one-third to one-half less, and the expense in growing it is no less, as it "suckers" more and requires a longer period to bring it to maturity.

Chemung Co., N. Y.

Sorghum in Connecticut.

Some 25 or more years ago, some small packages of sorghum seed received from the Department of Agriculture, were grown here as a curious plant, supposed to be of the broom-corn family. But from that time forward for twelve or fifteen years, no attempt was made to grow it, or until a little excitement grew out of the introduction of some sirup said to have been made from the sorghum cane. The result was the erection of a mill for grinding or pressing the cane, and a large pan of copper for evaporation; and then, some farmers engaged in the cultivation of the crop; but as it was an entirely new thing, and they were wanting in experience, the results were not as satisfactory as anticipated, and yet by no means discouraging. The first sirup was of a very poor grade in comparison with what is now produced. But so favorable was the result that from that time on there has been more or less of sorghum raised here and manufactured into sirup. In some instances the yield has been quite large; but figures are not at hand, except of one case in which 36 gallons of excellent sirup were obtained from 40 rods of ground. So far as the cultivation is concerned, it varies but little from that of corn, although at the first weeding, it may be a little more difficult unless planted upon very clean land. Messrs. Brown and Utley are the manufacturers here, and Mr. Brown has made close observations upon the subject and has become fully satisfied that the character and condition of the soil influence the result very much. This section contains a great diversity of soil, and therefore there has been an opportunity for learning some facts touching the case. In the first place, Mr. Brown is satisfied that it requires a warm, sandy soil and should not be planted too early; that if planted upon a moist wet, peaty soil, the yield of sirup will be much less and of poorer quality. He usually plants after he has planted his corn, and upon a soil that is dry, warm, sandy and fertile, and applies so liberal a quantity of manure—hog manure he considers the best—that it grows rapidly through the season. The sooner the juice is expressed after the cane is cut, the better, as there will be more and a better sirup. It should not be allowed to get frosted, as that would greatly injure the sirup. One of Mr. Brown's customers kept an accurate account, and the entire cost of his crop was 25 cents per gallon. He was offered 80 cents per gallon for the entire crop, but refused.

Tolland Co., Conn. WM. H. YEOMANS.

DROOPING SORGHUM.—For several years I have raised it and shall continue to do so. Stock of all kinds eat it greedily, but I deem it especially valuable in the poultry yard. The "good wife" who superintends this department, feeds the young chicks "ab initio" with this grain with the best results. Corn rye, oats etc., are grains that are too large for the little fellows to swallow unground. the flour must be wet into a paste to become available. All this muss and trouble can be avoided by feeding unground drooping sorghum. I commend it especially to those who use incubators. It does not require a long season for its maturity; hence it is adapted to a wide territory. Until forty bushels are sent away, Rural folks can obtain trial packages gratis, by sending a stout envelope addressed and stamped to R. H. CRANE.

Orleans, Neb.

Farm Topics.

THE USE OF PEAT FOR FUEL.

HENRY STEWART.

PEAT when free from sand, makes a very good fuel, giving out great heat, and when covered with ashes retaining a slow combustion for a long time. In burning, it emits a sweet-scented smoke which is very pleasant as it is borne by the breeze to the passing traveler. Its only fault is that the ashes are light and are easily wafted by a very light draft of air from the fire-place into a room. But what is there of all the useful things which nature has provided us with, that has not some drawback in the using of it? Efforts have been made to utilize peat for fuel in this country for the purposes of smelting iron and firing under locomotive boilers; but while we have coal and wood so cheap and readily available, the vast beds of peat which exist will probably remain dormant except for private household uses. The peat for the purposes above mentioned was compressed by powerful machinery into hard, solid masses not unlike the W. Va., splint coal, or the brown coal known as the lignite which is common in the far Northwest. But peat may be prepared for fuel with very little trouble.

In Ireland, Scotland, Wales and parts of England where there are extensive bogs or peat swamps, the peat is cut out in systematic but very simple fashion as follows:—The moss and sedges, with the upper layer of the peat, are removed by sharp-edged spades, when the brown, fibrous peat, which alone is used for fuel, is laid bare. This is cut out into blocks about nine inches long, six wide and six inches thick, with a tool called a skean. This is like a spade with upturned sides, and all the edges ground sharp. As the tool is thrust down into the peat, it cuts out a block of the size above mentioned. These are piled up in perpendicular ranks, like those of brieks in a brick-yard, to dry. In drying, they shrink to about two inches in thickness and somewhat less in length and width than when first cut. These blocks, or "turfs," as they are called when dry, form the only fuel of thousands of persons who live on the poor and small tracts of land (not to be called farms) that we are now reading so much about in connection with the distress in Ireland. They are also peddled about the streets of large towns and cities adjacent to tracts of peat bog, and are used there for summer fuel in wealthy homes and to make an agreeable and cheerful fire on chilly summer evenings, as they are kindled readily and give a fierce, glowing heat while burning.

There are thousands of acres of useful peat in thousands of localities in America, which might be made very valuable as fuel. In the prairie regions peat is plentiful, and as one goes further north into the treeless regions of the North Pacific Railroad, there are single peat swamps of hundreds of acres which have millions of tons of peat in them. The best peat lies deep in the swamp, below the upper layer, which has turned black and pasty by decomposition. It is the fibrous, brown matter that makes the best fuel, as it is tough and bears drying and handling and does not melt down, so to speak, into powder, as the black upper layer does. Once peat becomes dry it is practically indestructible, and if left in a heap soon decomposes and breaks down; so that in drying the blocks, it is necessary that they be piled with wide open joints between them and the pile made not over two feet wide, so as to give free passage to the air. The pile is also covered with the coarse weeds of the swamp to shed rain. Lastly, frost is the great disintegrator, and peat for fuel should be cut only in the summer time; if cut in the winter the frost would soon reduce it to powder.

HUNGARIAN HAY FOR HORSES.

SINCE I am asked by the Editors to answer the questions of R. H. C., of Orleans, Nebraska, on page 59, I would say in brief: Hungarian hay has in some way got the reputation of injuring horses when fed to them for a long time. How it got this bad name I do not know, but presume in the same way that clover hay did, viz., by being fed when improperly cured. But clover hay, when properly cut and cured, is an excellent feed, and is extensively fed by the Dutch farmers of Stark and the neighboring counties in Ohio, and to the great advantage of their horses, especially in point of fatness and sleekness. But it is harder to cure than timothy, more liable to must or mold in the mow, and is then most injurious to horses, and very liable to cause permanent heaves. The same is true of Hungarian grass. It is far harder to cure than timothy, and apt to grow musty, and is then, of course, injurious.

Again, it is more liable to have dirt and dust in it, as it does not form a turf-like meadow grass. Hand-raking is a remedy for this evil. Another trouble is *rust*. The pure, black-headed, (black-seeded) Hungarian is seldom attacked, but I have had the yellow-headed (yellow-seeded) millet rust badly. In that case I should not deem it safe hay for horses, no matter how well cured.

One thing more:—It should not be *ripe* when cut. Then the straw is of little value and the seed very heavy and very hearty, and might well injure horses. The heads are immense, and since the straw when ripe is nearly worthless, the horses will select the heads, and eat an over-ration just as they will of any grain. But if the hay is free from these faults, I should consider it a safe feed. One thing, however, I had almost forgotten to mention:—It has a curious power of increasing the secretion of urine; but I have not found this perceptibly injurious to the animals, though I have fed it largely to cows and considerably to horses, for several years. In a word, I should say:—"See that the hay is free from rust, dust, must, and over-ripeness, and I think you will find it safe." W. I. CHAMBERLAIN.

Farm Economy.

ICE-HOUSES ON THE FARM.

F. K. MORELAND.

IT is a matter of some surprise to thinking people how very few farmers, even those who are well-to-do, own ice-houses. A farmer may have all the modern farm machinery, elegant and costly buildings with all the modern improvements, but unless there exists some pressing reason why he should have an ice-house, he will get along without it. Farmers will live all summer without fresh meat, except on rare occasions; use butter just about as firm as oil; drink water or milk that is lukewarm, and suffer numberless other inconveniences which are the result of a lack of ice, for the simple reason that nine farmers out of ten cannot see any profit in going to the expense of erecting the necessary building. Even those living on or near streams that furnish good ice, are slow in falling into the habit of storing a quantity of it each year. In regard to this matter of a supply of ice: let one man in a neighborhood build an ice-house, store a quantity of ice in good shape and use it one season, and the next at least one-half of his neighbors will follow his example. Of those who do not, a small portion may be unable to do so, but the remainder can borrow ice from their more provident neighbors, or are too shiftless to make even ordinary citizens.

One reason why so few farmers have these conveniences is not only the cost of the building, but a lack of knowledge of how to keep ice. One of my neighbors built a house of stone, making a building that would have answered for a root cellar. His ice did not keep a month longer than if it had been in the open air. An ice-house need not be an elaborate structure. I have known good ones constructed of slabs or rails and straw. But it is much better to have one substantially made. There are on most farms some small out-building which has fallen into disuse, and which, with very little trouble, can be turned into a good ice-house When this is possible it should be done, as it saves useless expense. I have even known ice to be safely stored in one end of an unused mow. When it is as economical, the better way is to have a building expressly for it. This should be no larger than is required to contain the needed supply. It should be square in shape, and high enough so that when the ice is stored it will form a pile in the shape of a cube. When the dairy does not require a constant supply every day, three cords will be found a very good supply for an ordinary family The building should be well-drained, and when the ice is stored—and it should be packed as closely as possible—the whole should be well covered with sawdust. In storing it, between it and the wall of the building a space should be left, which should be filled with sawdust, closely packed. It should be ventilated, otherwise the ice will not keep.

There are from four to five months in the year when ice is a necessity, when it is almost impossible to be comfortable without it, and for that length of time last year my supply of ice cost me about four cents per day. Its value in the household for that length of time I dare not compute. We use it morning, noon and night in the preparation of iced drinks. Without it the butter used in the family would be unpalatable. By the use of a small ice-box, fresh meat can be kept until consumed. Too many cellars are so constructed that without ice it is almost impossible to raise all the cream on milk during very hot weather. With a Cooley creamer, however, and a liberal use of ice, no difficulty is experienced in getting all the cream in fine condition. I know that it was impossible, by any practicable test, to detect any signs of cream on my skim-milk. I think that the use of ice in my dairy alone last season paid not only for my creamer, but also for my ice-house and supply of ice.

But there is much more in the use of ice than can be estimated in dollars and cents. Those who live in cities cannot get along without their daily supply of it, which is as much of a necessity as their supply of meat or bread, and they are willing to pay what amounts to a heavy tax in the season for this luxury alone, and all this as a mere matter of family comfort. Is not the comfort of the farmer's family equally important? There are cases, as in sickness, when access to ice is one of the greatest blessings imaginable. And yet farmers continue to neglect procuring a supply. It is a cheap luxury. The labor of storing it is done at a time when no other work is pressing. The ice market is generally quiet. No speculators create "corners" in ice in the country. Any one who wants it can generally get it for—nothing. Now, farmers, one and all, store a supply of ice this winter and use it next summer, and see for yourselves if it is not a cheap luxury and a great blessing.

St. Lawrence Co.,

HANDY THINGS TO KNOW AND TO DO.

Making Ropes Pliable.

In a former letter I described some of the uses of ropes and how to handle them to advantage, and continue the topic.

Jute and manilla ropes are cheap and strong, but they are stiff and awkward things to knot or tie or to do anything with, in fact. If one takes a coil of such rope and, immersing it in a pot of water, lets it come to a boil, and after a few minutes takes it out and lets it dry thoroughly stretched, all the stiffness and "kink" will be taken out of it. If the rope be not too long, I throw it over the limbs of a tree, tie the ends together and lay a few rails or posts in the bight. If too long for this, it is made fast by each end in the crotches of suitably distant trees, drawn taut, and stretched by laying a few rails upon it. Thus treated, when dry it makes excellent halter or tie ropes, or, in fact, a handy and useful rope for any purpose and, for aught that I ever suspected to the contrary, it is just as strong as ever.

Stuck in the Mud.

Any one is liable to such an accident in getting timber or firewood out from the woods, or when going over poor roads with heavy loads anywhere. What is to be done? Every effort of the team has only settled one fore wheel, we will say, deeper and deeper. It is hardly possible that with fence rails for levers, after

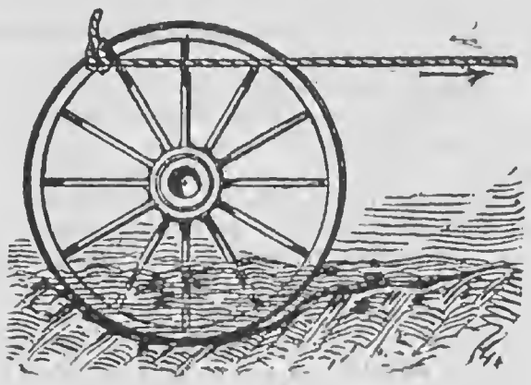


FIG. 33.

digging out in front and down by the side of the wheel, it may be lifted a little and the team will start it out, and then the hind wheel will drop solidly into the same hole, unless the hole is bridged very quickly and well. It is nearly as important to keep the hind wheel from getting in as to get the fore wheel out. The best way I know of is to make a sort of corduroy road, by laying sticks and rails across the rut close up to the fore wheel, and a little pile just there, so that when the start is accomplished the chasm may be easily bridged. Now, how to start:—Somebody must fetch a rope, if possible a block and tackle, or a pair of blocks, or, what is better, an extra horse or a pair of horses. Where shall we attach the rope? The most power will be gained if we make fast near the top of the wheel, a little back of the uppermost spoke, and then start up both teams very steadily. (See fig. 33.)

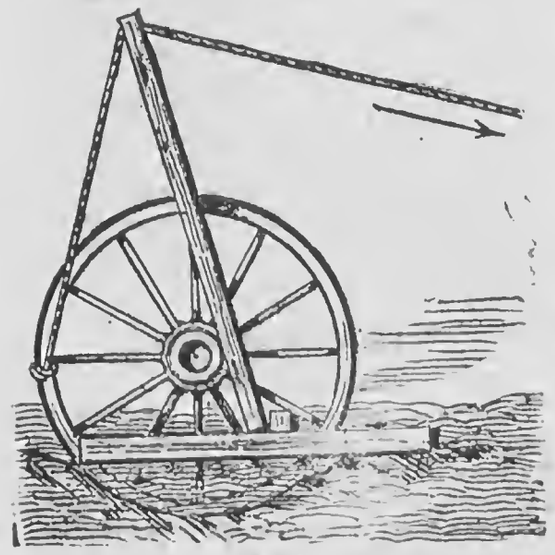


FIG. 34.

This may not work. The wheel may slip; or it may come partly out only to sink in again, and in either case the draft becomes a "dead pull," as soon as the wheel moves a quarter around. If two good posts can be found, one for a sill to rest on the ground, the other for a strut to hold the rope in the position of most effective draft; then the rope may be attached as far back as possible on the wheel, as in figure 34 passed over the strut, and the teams started again. This, it will be seen, lifts as well as draws, and if there is any hope of starting the load, it will be very apt to effect it. It is sometimes the quickest way to unload; but no one not experienced in the ways of bad roads ought to unload without trying every way to get out. It takes a good driver not to hurt his horses, or their harness, or their tempers or his own. It is a dear experience if horses become balky, and every effort should be made to have everything ready so that they shall not exert their strength uselessly, but that when they do pull, the load shall come out.

If, instead of making the rope fast at the periphery of the wheel, it be deemed important to lift as much as possible, we may attach the rope to the hub, or pass it around the hub. Then when the teams are started, one will lift while the other will draw.

A Handy Stump-Puller.

This same application of power is often useful in many ways. It is easy to see that when the bottom of the post and the point of attachment of the rope are very near together, the lifting power will be very great, but the motion will be very small. If the bottom of the post be set back a little, the lift will be much greater. A very handy stump-puller may be made on this plan: Take two white-oak straddles four inches through and, say, eight or ten feet long; bore inch-and-a-half holes through them near the tops, and put a crowbar through them, attaching a chain, as in figure 35 and a powerful draft may be applied. The chain must pass around the top of the posts, or be fastened so that it cannot slip. If the stump does not come out but is started a little, or even if it is not, the feet of the posts may be shifted so as to give more motion or more power, as may be needed. B. ☞ Y.

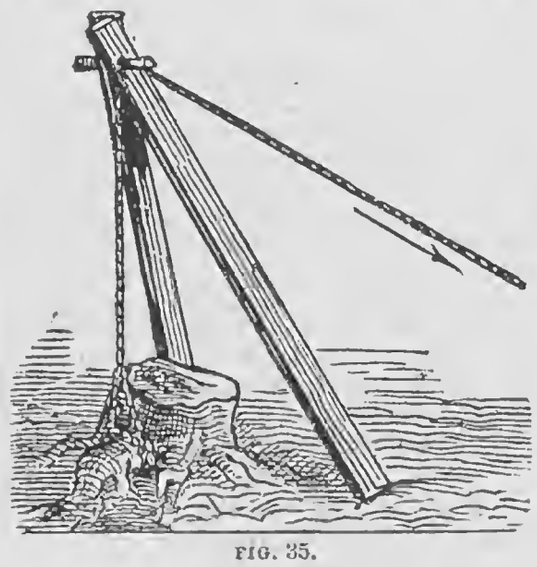


FIG. 35.

Sheep Husbandry.

SHEEP HUSBANDRY.

IRA J. BLACKWELL.

The question "Does it pay to raise sheep?" will here come under consideration. As few people wish to work without some compensation, the answer may be, that there is plenty of land in the older States that is worth but little except for pasture, and a great amount in the West, that has no other use at present; under these circumstances we must choose between sheep, cattle or horses. Cattle and horses require more capital than sheep, and more care and shelter; take longer to mature, and, moreover, horses require more judgment. It appears that the land that we farm should be in grass nearly half the time; for the last few years it has not paid much profit for grain raising owing to low prices. It is best to utilize this grass in some way. I think that an acre of good land will keep three sheep and raise a lamb for early market to each ewe. If we keep the lambs later or raise them entirely on grass, we must reduce the number. It will take to raise them, two bushels of corn each, worth here at present 55 cents per bushel, and 100 pounds of wheat bran, worth one dollar, making, with the feed given to the lambs, about $2.50 per head, or $7.50 per acre. Three lambs should bring $15, and three ewes ought to shear 10 pounds of wool, worth four dollars, which would make $19, leaving a balance of $11 50 to pay for grass, hay, fences, interest on stock and losses. The manure ought to pay for the labor. If the land is poor, this estimate is too high, for stock will not grow without feed of some kind. One sheep kept growing is better than three that just hold their own. There must be improvement all the time. "Almost fit for the butcher," I believe is the proper condition for stock, when raised for profit.

We might let the grass go down on the land and rot, if more profitable. We cannot take it off the farm to profit, unless we bring it back in some shape or other. The farmer that sells his hay and straw generally soon sells his farm; for without hay and straw we make but little manure, and without manure, corn, wheat and grass do not grow well in this section. It is to be presumed that attention will be turned more to sheep raising at the present time. Whenever anything that farmers raise gets to paying, all try that particular branch of industry, and the consequences are that prices rule low—and the beginner loses his enthusiasm and quits the business. That sheep raising has paid I think is certain; that it does pay is evident; that it will pay is probable. Yet all trades must be learned to be successfully prosecuted; and so with raising sheep. If we keep them to raise lambs, then we must endeavor to get the lambs ready for market in the shortest time and at the least expense. How shall we do this?

Probably the first consideration would be the best breeds for early maturity and to fatten. I think the South Down is best. Certainly a South Down buck and any well built ewe will bring a close well built lamb. This is especially necessary for early lambs. For later, a Leicester, Lincoln, Cotswold, or any good-sized ewe, will give more profit, perhaps; but they will take longer to get ready for market. Those ready to market in April and May bring the most money, and to sell best they must weigh about 70 pounds, and be what the butchers call ripe; that is, they must be fat and well fleshed up, which will take a South Down lamb four months. If we grow for wool and the flesh, the offsprings of the South Down crossed on the Oxfords, Leicester, or Bakewells, make a good weight of carcass, and would pay as well as any. Where the bucks are sent to market as lambs and the ewes kept for breeding purposes, when kept for wool, and to be sent to market when full-grown, I *think* the Lincoln would be best; but I have had no experience with this breed. The above breeds must have care and shelter. If large flocks are to be raised and with little care and expense, probably the Merino would be best, as sheep of this breed are hardy and increase rapidly.

For early lambs it is best to have a house that can be shut up in cold weather. There should be plenty of ventilation, but no chill drafts, as lambs dropped in January and February are too sensitive to the weather to withstand the cold of that season. With proper quarters and a cow to supply milk to the young lambs until they get strength to nurse, few lambs need to be lost. In very cold weather most twins will need some help from the bottle until they are old enough to eat meal, which they usually do at three weeks. We practice the plan of an extra pen for the lambs, so arranged that they go in and out at all times. We keep feed in this pen, feeding wheat bran at first. After the lambs are six weeks old we put in some Indian meal, always trying not to put in enough to cloy the little things. They will eat all the bran they want, and after a short time come back for more. With meal we find that, let them once get all they want, and it will be from a day to a week before their appetites return, and the lamb is put back about a month; for as soon as a lamb stops feeding well, it loses flesh rapidly. This is one reason why shipping early lambs long distances will not pay—they lose flesh too fast.

A large flock must have attention and at lambing time the flock-master will need some small pens in which to put the ewes that have twins, for where there are many in the flock, all twins ought to be kept separate from the flock until the lambs follow the ewe. There are very few ewes that will not own their lambs if put in a pen in which they can just turn round. There will be plenty of room for the lamb, and if the pen is of the right size, the ewe cannot butt the lamb. No violence is needed here—patience and perseverance are the requisites. The ewe will have to be held for the lamb to nurse. If she does not furnish milk enough, the cow must be resorted to. A bottle that holds a half pint is large enough; it should have a rubber nipple on top for the lamb to suck. I advise all who do not want to give extra time, care and feed to the flock, not to have the lambs dropped until April. At this date they will not cost so much to raise, taking less grain and attention. If dropped by the last of May or in June, good lambs can be raised without grain. In shipping to market, never send a poor lamb; keep it until it gets fat. If we do not get them fat in summer, we must keep them until winter, and feed them.

All bucks should be castrated if dropped after February, and twins after January, even when intended to be sent to market as lambs. Castration should be done with a sharp knife the same as with other stock. There's no need of the old way of cutting with a knife that only tears. We must deal kindly with our stock. The man that shouts and hammers around will not answer among the sheep or anywhere else; he was not made for the business, and if he is the owner, his balance will, most likely, be on the wrong side of the ledger. There is truth in the saying that stock grows while we look at them. Feeding alone will not answer all the requirements of animals. The owner's attention should be there, watching for any that are sick or lame or not improving with the rest, to see that all get a share of feed, and none too much and to see that some unruly ones are not injuring the weaker ones. A flock of sheep properly taken care of, are not likely to have the foot rot, which is mostly caused by neglect to keep the feet clean. When the weather is wet and warm in winter and spring, if the sheep have to be driven out of the pen, they will go through the mud, as they usually follow in the foot-steps of the one that goes first; consequently the mud presses between the toes or hoofs, hardens there; the sheep get lame and from bad soon get worse; in short, the foot will be found inflamed and between the toes will be a running sore, and if it gets under the hoof, we have genuine foot rot. Prevention is best, if possible. If through neglect the feet do get sore, apply a little muriatic acid at once; and if the sore is under the hoof it must be reached promptly; delay only increases the torture. Foot rot can be cured in in the early stages without much trouble; but when it has got a fair hold it can be got rid of only with much care, by washing with chloride of lime and applying the acid once a day; at the same time give each day an ounce of Epsom salts. For garget or caked bag we use camphor melted in lard and rubbed on while warm, not hot. Put in plenty of camphor and rub lightly.

Mercer Co., N. J.

The Swine-Herd.

FEEDING PIGS.

PROFESSOR E. W. STEWART.

The pork crop as represented in our exports, stands at the head of all our animal products. It is therefore important that all the economies of producing pork should be carefully studied. The pig has long been treated as if its constitution could stand almost anything. And perhaps the error leading to the most disastrous consequences has been the prevailing idea that the pig thrived upon the most concentrated food, and did not require bulk in its aliment to promote health. This error has not been confined to unthinking farmers; for the experiments of Dr. Lawes, of Rothamstead, and of Dr. Miles, at the Michigan Agricultural College, in pig feeding, were conducted wholly with concentrated food in determining the feeding value of corn meal etc. They evidently did not regard corn meal, fed alone, as too concentrated for the health of the pig. Yet they would not have regarded corn meal alone as a healthy ration for a horse. But the pig is as much a grass-eating animal as the horse. In the wild state both lived upon grass, but the grass-eating nature of the pig has been forgotten, and he is plied with concentrated food from weaning age till slaughtered, except in certain cases when it is desired to keep him cheaply for a few weeks upon grass. This summer pasturing of pigs ought to have taught the feeder a lesson as to its requirements for health.

Experiment with Grass and Meal.

Many years ago I tried an experiment to test the effect of grass in the ration of the pig.

A litter of six five-weeks-old pigs were divided into two lots of three each, of equal weight. Each lot was placed in a separate pen on the first day of June. One lot was fed wholly upon corn meal soaked 12 hours. The other lot had one quart of green clover, cut short with a straw-cutter and mixed with corn meal. Each lot of pigs had all it would eat. The theory held by the writer was that meal alone must go into the stomach of the pig in the plastic state of dough, so that the gastric juice could not penetrate this mass and properly perform its office, while the clover grass, being mixed with the meal, separated the particles and permitted the gastric juice to pass freely through and digest it rapidly. The clear meal being digested so slowly or lying too long in the stomach, would create fever and other disturbances in the system. The lot of pigs with the clover and meal were always lively, always ready for their feed; whilst the other lot with meal alone, would eat greedily for a time and then become dainty for a few days, taking little but water, showing a feverish condition of the system; but by fasting they appeared to recover the tone of the stomach, and would go on eating with an appetite again. This was repeated several times during the five months of the experiment. On weighing the two lots at the end, the one on meal alone averaged 150 pounds each; the lot on clover and meal, averaged 210 pounds each, or 40 per cent. more for being treated as grass-eating animals. Each lot consumed the same amount of meal.

The clover was intended as a palatable food, which should merely divide the meal or prevent packing in the stomach. Only about five quarts of the grass were given per day. The nutriment in the clover could not have made the difference in the result, although it was good food so far as that could be obtained from one pound of dry grass.

Experiment with Cob-meal.

This point of bulky food may be well illustrated by an experiment lately tried by a committee of two farmers' clubs in Connecticut to show the comparative value of corn meal, corn and cob-meal, and whole corn. The report is as follows:—

"Nine thrifty shoats were purchased, and divided as uniformly as possible into three pens. The experiment was begun April 1st, and ended June 6th. Lot No. 1 was fed 1,332 pounds of corn ground into meal—clear meal wet in pure water. Lot No. 2 was fed cob meal and water, 1,361 pounds of corn and cob meal. Lot No. 3 was fed 1,192 pounds of whole corn with water.

Results: Lot No. 1, weighed at commencement of experiment 453 lbs; weight at slaughtering, 760 pounds; gain in live weight, 307 pounds; dressed weight, 615½ pounds. Lot No, 2 weighed at commencement 467 pounds; when slaughtered, 761 pounds; gain in live weight, 294 pounds; dressed weight, 593 pounds Lot No. 3. live weight at start, 456 pounds; at slaughtering, 689 pounds; gain in live weight, 221 pounds; dressed weight, 567 pounds. Lot 1 gained in live weight for every bushel fed, 12.90 pounds; No. 2 gained 15.11 pounds; No. 3 gained 10.38 pounds. Lot 1 took 4.34 lbs. of meal for one lb. gain in live weight; and 5.68 lbs. for one lb. dressed weight. Lot 2 required 4.63 pounds to make one of live weight, and 5.93 pounds for one of dressed pork. Reducing this quantity of cob meal to clear meal, it will be found that 3.70 pounds make one of live weight; while 4.75 pounds make a pound of dressed pork. Lot No. 3 required 5.39 pounds of clear corn to make one pound live weight, and 6.55 pounds to make one of dressed pork."

These are valuable experiments, and the result greatly surprised the committee appointed to carry them out. They make this comment:

"These experiments show us that when we compare analyses of feed with results in feeding, there is something we fail to discover. Neither chemistry nor theory would expect that the corn ground with the cob would prove a feeding material of nearly equal value to that of clear meal; yet this experiment proves this to be the case, and further proves that cob-meal is superior in feeding value to that of clear corn without grinding. We have long been satisfied that a certain amount of coarse material fed to cattle with a concentrated food, was both judicious, economical, and profitable; but on account of the peculiar construction of the pig's stomach, we were not prepared for the result showing the desirability of feeding a coarse material in connection with corn meal."

This is just the point we have been considering. Physiology and the natural history of the pig should have taught feeders the necessity of feeding a proportion of bulky food. Here the ground cob, by its office of merely dividing the fine meal and allowing a free circulation of the gastric juice, has a value nearly equal to that of corn meal, performing the same office as that of the clover grass.

I have also proved by an experiment with short-cut clover hay in the winter—a few quarts mixed and softened with meal—that ten per cent. more pork could be made with the same grain feed when thus mixed with the coarse food. This is a matter of so much importance, I think, as to justify this extended notice. Bran is an excellent food to mix with corn meal; not that it is very well digested by the pig; but because it furnishes a coarse food to separate the fine particles of meal. I have had the best success with a liberal allowance of succulent clover that not only separates the meal in the stomach, but is, itself, well digested by the pig. In the winter, two quarts of short-cut hay, mixed with four quarts of corn, barley, rye or millet meal, and cooked or steeped and softened in hot water, will keep pigs healthy and cause a thrifty growth or fattening according to age and amount fed. When the pig shall be treated according to its nature in strict compliance with physiological principles, we shall hear much less of cholera and diseases of the stomach.

The Apiarian.

BEE HINTS FOR THE SEASON.

The winter has so far been remarkably favorable for bee-keepers. No penetrating frosts have endangered the colonies, whether in the house or left to winter with protection on the summer stands. On the contrary, it has been warm enough to admit of examining colonies standing outside at almost any time, and there have been many pleasant days on which the bees could with safety be permitted to fly, if this has been found necessary. Colonies that were put in winter-quarters in good condition, and properly protected against mice, have required little or no attention. But now as the spring draws near, the bee-keeper's vigilance should be unrelenting. On account of the pinched honey yield of last season, the bees were in many instances put in winter-quarters with a minimum supply of food.

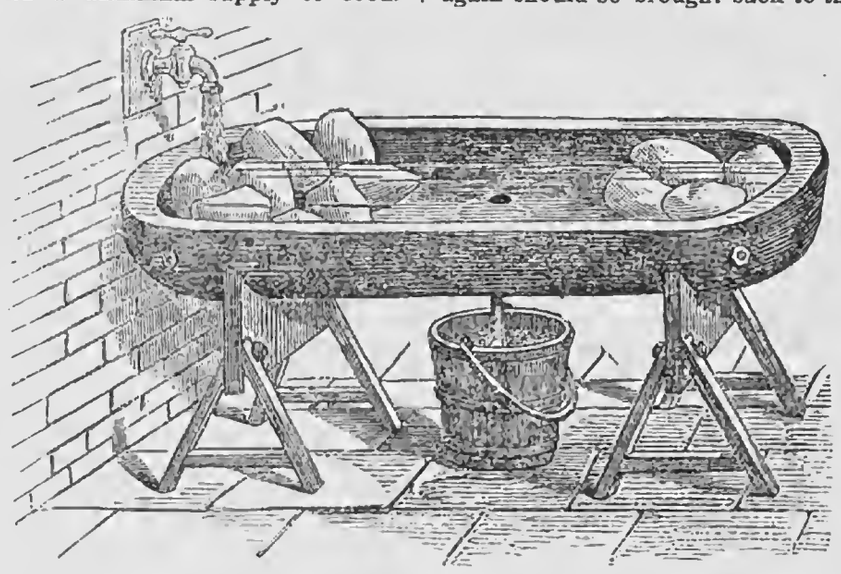


FIG. 36.

These should have immediate attention, and should the honey supply be exhausted, they must be fed without delay. We have so often advocated to feed nothing but the best quality of honey, or, in lieu of this, coffee A sugar, that it seems superfluous to repeat it. Frequent attempts to feed the bees poor molasses, or grape sugar, have abundantly demonstrated the falacy of such economy. The best quality of cane sugar is the only safe substitute for honey. The sugar is dissolved to a medium thick sirup in hot water, heating it just to the boiling point. There are now any number of feeders in use, each being considered the *ne plus ultra* by its particular friends. The best one, however, that we know of, one on which there is no patent, but which has been given to the bee-keeping public, is the "Division Board Feeder" invented by Professor Cook. Another feeder of merit, and a very simple one, can be made out of a cylindrical tin can with a tight-fitting cover. Punch a number of very fine holes in the cover, through which the feed can ooze out; when the can is filled and the cover replaced, turn it bottom-side-up on top of the frames. Since no air can gain admittance, the sirup will run out very slowly, and thus give the bees time to sip it up.

Again, the bees may be well supplied with food, but they may suffer from dysentery, which is a very prevalent disease. It is readily recognized by a pungent, disagreeable odor and an uneasy hum of the bees. If present, the combs will, on examination, be found to be besmeared with feces, and many of the inmates dead and dying. The only remedy is to allow the bees to take a purifying flight, and this chance should be given them on the first warm, pleasant day. Remove colonies in the cellar to their summer stands in the apiary about the middle of the forenoon, and let them remain there till towards evening, when they again should be brought back to the house or cellar. While they are flying, it is also best to examine each colony to learn its condition, and carefully clean off much-besmeared combs with a quill, and sweep off the bottom board. If these precautions are taken as soon as possible, and they have not been suffering too long, the disease may be arrested and the bees saved. To let the disease run its own course is certain destruction. Dysentery is generally brought on by a too high temperature, which causes them to be uneasy and to eat more than is for their good. On the other hand, colonies in a good condition, having food enough and suffering from no disease, mice or other enemies, should not be meddled with. The quieter they in that case remain until gentle spring shall again awaken nature and call them forth to work, the better.

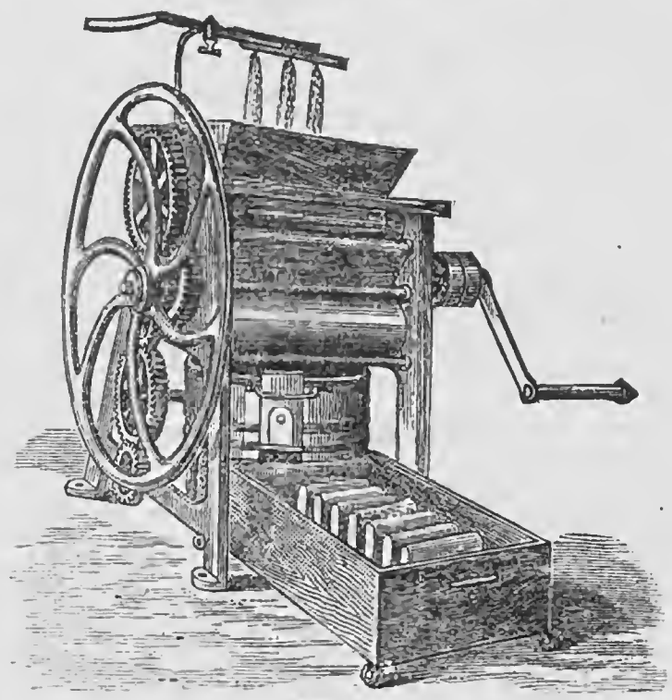


FIG. 37.

So much for the "personal" wants of the bees at this season. But this does not embrace all the work of the apiary. The winter is preeminently the season in which to make hives, frames and other needed implements. Now there is but little else to do; when spring comes there is always a pressure of duties, and delayed winter work which can no longer be postponed, must then be done at a double cost. Every bee-keeper should be mechanic enough to make his own hives, and whatever else is needed in the carpenter line. If there are any who make a business of bee-keeping, that still retain the old box hive, let them at once decide to abolish it for all future time. Too many farmers who keep but a few colonies, just to supply honey for home use, we know are still clinging to this hive. Let them take the same course. The venerable old box was good in its day; but its day is past. It marks a step in the progress of apiculture; now we are a step higher. Its last laurels are won. It cannot live in the presence of movable combs, artificial foundation, honey extractors, prize boxes and a foreign market for our honey. The present is the best possible time in which to decide on the particular form of hive that is to replace it, and when the choice has been made, purchase materials and make the new hives at home.

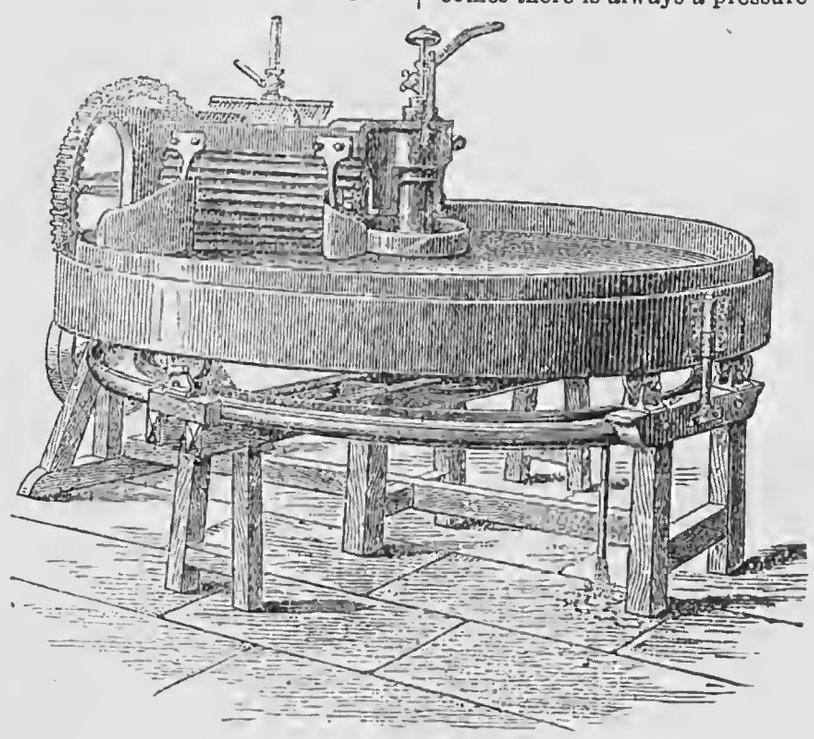


FIG. 38.

On former occasions we have given descriptions and illustrations of some of the best patterns. Avoid complexity in the pattern. Make every hive, frame, division board and cleat of the same size and shape as every other, so that transfers can be made at pleasure. Lay plans for the coming summer. Purchase seeds of honey plants if such are raised. Study the bee literature. Learn what others have done and how they did it, and thus follow their successes and avoid their failures. In short, leave nothing till to-morrow that can be done to-day, and in a few weeks when spring opens, all will be ready, and the work can be done satisfactorily.

Dairy Husbandry.

LADLE OR "MILL" BUTTER.

In the art of butter-making there is no point, so far as its commercial value is concerned, of greater importance than uniformity, not only of quality and texture, but especially of color and shape of package. This was always felt to be a great drawback in handling the butter from numerous small dairies. To overcome this objection, many devices and processes have been invented. The most important of them is the factory or creamery system. Instead of a dozen farmers making a dozen different grades, colors and shapes of butter, all carry their milk to one place and have one man make it into a uniform article, and that with a special view to suit the requirements of a special market.

The first step, however, that was taken toward accomplishing this end, was in the use of the several machines and contrivances pictured here, which have been redrawn from the Ag'l. Gazette. In France as in this country, hucksters went about the country and picked up numerous small lots of butter, and bringing them to the shop or store where the manipulation took place, the various lots were sampled and separated by an expert in judging the quality of the various sorts. Those of a certain grade would resemble one another only in taste. Those lots of uniform taste would be put in the large trough (Fig. 36), water turned on, and men with strong hands would knead it thoroughly together, making it one homogeneous mass, and, if the demands of the market required it, more salt and a given quantity of coloring matter would be added. In this country it has been the general practice to keep the hands off the butter, ladles being used instead. This butter, when packed in tubs, presents a uniform appearance, and in the trade goes under the name of "ladle butter," the expert dealer being readily able to detect the effects of mixing, in the broken-down grain and general salviness of the article.

After this primitive process came various machines invented to save the manual labor of breaking down the butter, which was considerable in cold weather. Some of these are represented at Figures 37 and 38. Here the butter is assorted as in the above process, and the lumps of a given quality are ground together by means sometimes of iron rollers or a mixing machine, like that used in a brick-yard for working the clay. These machines always mix the butter more thoroughly than the old method, but consequently destroy the grain more effectually and render the butter more salvy and with poorer keeping qualities. This has given rise to still another brand of commercial butter known as "mill-butter," that uniformly sells for several cents a pound less than even "ladle-butter." It is said the farmer never knows in what country his butter will be marketed. In this instance he would not recognize his own handiwork the next day after he had parted with it. L. S. H.

VERMONT DAIRYMEN.

(Rural Special Report).

The annual gathering of the dairymen of Vermont met at Brandon on the 21st, 22nd and 23d inst. It has been my pleasure to attend many such gatherings throughout the States, but I have never been more edified and instructed than at this one. Vermont is one of the real live dairy States with a constant eye to improvement, and an honest ambition to be abreast with the times, not only in making, but in marketing her products.

On this occasion the most prominent of her citizens lent their presence to give interest and tone to the meetings. It is not in many States that the Governor will put himself out so much as to attend a gathering of farmers, especially if no election is in the immediate future. Speakers of prominence from other sections were engaged to handle the special subjects in the dairy.

Local talent was called upon the first day in the opening exercises, and many good things were laid before the attentive audience. After electing the old officers—Hon. E. D. Mason, President, H. W. Vail, Treasurer, and O. S. Bliss, Secretary,—the regular order of business was resumed. The president gave a cursory sketch of the Vermont display at the International Dairy Fair, complimenting his State on the appearance and management of the fair generally, and expressing his particular delight at the information he gained there that should his cows ever again become unprofitable, he could drive them down to the foot of 42nd Street and have them turned into butter—hide, hoofs, horns and all.

An address from Dr. Mott was read, in which he called the Channel Islands "Alderney Islands," and stated that there were four of them, each possessing a separate breed. This will be news to Jersey breeders, especially as to Sark and Alderney. He also quotes Dr. Sturtevant describing the model Ayrshire with short legs and short teats, and a mirror within her escutcheon. For once the doctors do agree!

Ex-Governor Smith paid an eloquent tribute to the dairy history of Vermont, but warned the farmers to be on the alert against their wide-awake rivals of the West. He advised greater thoroughness and the keeping of records on the farm, in order to raise the average of Vermont cows, which average a yearly yield of only 98 pounds of butter. While he lamented the distress of England and Ireland, he still congratulated this country upon its ability and opportunity to feed them. He made the remarkable statement that farm products, like beef and wheat, could be laid down in England by farmers living a thousand miles west of Chicago, at a profit, and at lower prices than those at which English or Irish farmers could produce them, even if they had their land rent-free, or owned it as Western farmers do theirs.

He was called upon to explain why it was, he being the president of the Vermont Central Railroad, that butter and cheese were carried from Chicago to Boston for less rates than that passing over that road from St. Albans to Boston. This looked like a fearful discrimination against local freights. The Governor, however, apparently gave universal satisfaction by proving that the butter from Chicago was not made in Chicago, but had paid as high rates to get to that city as Vermont butter pays to get to Boston; thus whatever charges were made from Chicago were that much more on the butter and in favor of the Vermont dairyman; that is, most of the Western butter is made in Western Illinois, Wisconsin and Iowa, and averages 100 miles from Chicago, and to get it there costs $1.40, $1.50 and $1.60 respectively.

L. S. Hardin spoke a piece on the subject of testing cows. He said that a number of prominent breeders of each class of dairy animals had organized the National Dairy Cattle Club for the purpose of recording the yields of dairy cows. This was done that the poor ones might be weeded out and the best be bred from, just as the process is now carried on of recording the performances and improving the breeds of trotting and running horses. He claimed that no dairyman had a correct estimate of the value of the cows in his herd, and instanced his own surprise at the mistaken estimates he had put upon his own cows before he recorded their yields.

Mr. Willard then took a range pretty much all over the dairy interests of the country. He pictured in striking colors the peaceful and harmonious pursuits of the farm when compared with the stormy and exacting life of a city merchant. Even oleomargarine, he thought, might do the farmers some good by cutting off the tail of the market and forcing all butter makers to make a prime article. He then reviewed the improvements of the dairy. Higgins's process of shipping butter, when in granules, in barrels of brine, had been tested by sending a lot of it to England, and when put upon the market it brought the same price as the best home-made English goods. He touched upon many other new ideas and had even a good word for Durand's cow milker. He was in favor of farmers keeping records, and concluded with the special charge that all the good things we have were not furnished by nature, but by art. He aptly put it thus: "No Short-horn cattle or thoroughbred horses roamed our primeval forests; no golden wheat or luscious fruits or wholesome vegetables grow upon the uncultivated lands." It seems to be, at least in some instances, a case of the sweat of the hired man's face.

J. D. W. French gave a most admirable essay upon the virtues of the Ayrshire race of cattle. He acknowledged that after listening to such an argument, Jersey men would go home Jersey men and Short-horn men would go home Short-horn men. But he came to speak to that large class that had not adopted any of the breeds. He thought the Ayrshire cattle were adapted especially to the wants of New England, with her rugged pastures and often thin soils. He touched on the history of the breed and dwelt with energy and force upon the proposition that the Ayrshire cow would make a greater amount of milk from a given quantity of food than any other breed. He has kept the record of his cows for six years, and is a firm believer in the necessity for such a method in improving the dairy value of cows. He told of the preacher who was called upon for a short address to a gathering of dairymen. He described the killing of the fatted calf. He was sure it was a blooded animal and had been cherished and preserved in the family *for many years*.

Mr. Adams, Secretary of the New Hampshire Board of Agriculture, gave many happy suggestions as to the needed improvements in farm management, such as harrowing growing crops, using new kinds of machinery, some of the riding harrows, droppers, etc., needing but one improvement, and that was a place for the horse to ride.

Governor Proctor pictured in striking colors the rising splendors of the State. All he knew of dairying was his first experience when as a handler of milk, he became large enough to wind up his daily petition with, "Give us this day our daily bread *and cheese*."

Prof. Englehart told all about how to keep the stable as sweet as a young lady's boudoir. He prefers sulphur, burnt with alcohol on a frying-pan, as the best disinfectant. Salt, he says, will absorb bad odors, and therefore should not be kept near coal oil, salt or dried fish, etc., if it is to be used in butter or cheese. He then described his methods for testing milk, as he was the milk inspector of Syracuse. The farmers did not seem to be favorably impressed with his reliance on the lactometers. He admitted a variation of 14 degrees in milk, but they were willing to agree that if the milk in the can in town showed a variation of 18 degrees from the milk when drawn from the cows at the stable, there was a strong probability that some one had been baptizing it. H.

Miscellaneous.

THE OTHER SIDE.

THE RURAL NEW-YORKER has received a goodly number of kind words and compliments during the past two years, a few of which, during subscription times or as campaign documents, it has thought well to place before its readers. It will seem, however, that all who examine the RURAL are not of the same opinion, as will appear from the following letter. It may be well to remind the writer that the RURAL NEW-YORKER being *national* in its field of work, cannot give *special* consideration to any *one* of the agricultural organizations of our country:—

"I have received the specimen of your paper. I have examined it carefully and find it a first-class, old-fashioned farm journal, conducted on the basis that all farmers are fools, and always will remain fools, so that they require a sort of dry-nurse in the shape of a weekly magazine to warn them of the stumbling blocks in their way, and to keep them from being imposed upon. I cannot believe that you are ignorant of the fact that some years ago there was an association started in this country to enlighten, educate, and improve the farmer. It now numbers over half a million of members; owns hundreds of halls that are used exclusively for their weekly or fortnightly meetings; has established hundreds of schools that are owned and controlled exclusively by farmers for the education of their own children; in short, it has done more in ten years to elevate the farmer, teach him to attend to his own business in a business-like way, and to grapple with the discomforts of his isolated life, than all the agricultural journals that have been published in the last forty years. I have looked in vain through your columns for any notice of this movement; and for you to pretend to publish a farmers' paper and ignore a fact of such vital importance to them, is a positive insult to their understanding. When you devote a portion of your paper to defending and teaching the principles of the Patrons of Husbandry, and to giving the farmers some account of what they are doing for their own advancement, you can consider yours a farmers' paper. Until you do so, you must be content to take a back seat among the "old fogies," who furnish the farmer with a paper at the lowest price and then throw in a jack-knife, or, if he will get a lot of fools in the same trap, will give him his choice from a pencil to a $300 piano. I took the sample copies you sent to our grange meeting last Saturday and told the brothers that if any of them, who were subscribing to our grange publications wanted a good agricultural paper, they could not do better than to take yours; but that their first duty was to support their own organs. There were between thirty and forty present. ROBERT H. GILMAN.

Lecturer of Milford Grange, Del., No. 6. Jan., 16.

WHAT OTHERS SAY.

FOOD ADULTERATIONS.—Our respected contemporary, the Boston Journal of Chemistry, speaking of "Food Adulterations," quotes from what several Chicago chemists have said, adding some very sensible suggestions and advice. What these chemists say is enough to frighten any nervous person out of his wits. One must believe that to eat is to be poisoned—slowly poisoned. The following are a few paragraphs of what the Boston Journal quotes more at length:

"I never use the pickles generally sold in our markets. I think the yellow pickles are quite as dangerous as the green. I know that lead is largely used in their manufacture. Verdigris is used in making the green.

I have examined a large number of specimens of oleomargarine, and have found in them organic substances in the form of muscular and connective tissue; various fungi, and living organisms which have resisted the action of boiling acetic acid; also, eggs resembling those of the tapeworm. I have them preserved, to be shown to any one who desires to see them. The French patent under which oleomargarine is made requires the use of the stomachs of pigs or sheep. This is probably the way the eggs get in. I have specimens of lean meat taken from oleomargarine. There can be no question that immense amounts of oleomargarine are sold and used as pure butter. I regard it as a dangerous article, and would on no account permit its use in my family. I do not dare to use the sirups commonly sold in our markets, and I use but little sugar, as I believe them nearly all adulterated. In regard to glucose, I am informed and believe that seven-eighths of all the sugar sold in Chicago is made of, or adulterated with, glucose. I have made more than a thousand microscopical examinations of milk in this city. I think that not over ten per cent. of the milk sold here by dealers is wholesome and unadulterated."

The Journal of Chemistry concludes its comments upon the above statements as follows:

"Dangerous frauds are no doubt practised to an extent demanding serious and prompt attention; but any assertion which leads the public to believe that every article of household use is dangerously sophisticated is calculated to do harm, and its falsity should be exposed."

DO FARMERS WISELY CHOOSE OCCUPATIONS FOR THEIR SONS?—At a late meeting of the Syracuse Farmers' Club Mr. Edwards said: "A farmer has two sons; one has strong physical development and a natural taste for farming; to use the hoe and follow the plow day after day is both congenial to his feelings and his health; his mind rests in quiet satisfaction as he looks out upon his father's broad acres, and views with manly pride the growing flocks and fattening herd, and estimates in dollars and cents their value. The other son lacks the physical strength of his brother, but has fine, sensitive nerves, and a deep thirst for scientific or legal knowledge. He goes to the fields with his brother, with heavy tread because it is his duty to go, but his thoughts are among the planets, trying to calculate their distances from earth, and the influence they have upon the seasons. Such a boy can never make a successful farmer, no more than the other can make a successful astronomer. Parents should at least be as wise in looking after the fitness of their boys for their chosen business, as they would in training their colts. But how is it? A farmer goes out to examine his young horses: there is four-year-old "Dick," large, strong, close-jointed, and mild-tempered, slow and steady, a good horse for the team. There is young Flora, smaller, long-jointed, with deer-like limbs, and high temper, can be made to trot in 2.20, worth $5,000. No farmer will ever make the mistake, and put Dick in training for the race-course and send Flora to haul stone. Now, his boys are just as unlike as his colts and need as different training. The judge naturally wants his sons to become lawyers, so, too, the minister, merchant, mechanic and farmer too often insist that their boys follow the inclination of the parent rather than their own. It is a fact that most of the failures result from not putting the right man in the right place. Had Franklin always been kept at the tallow chandler's trade, the lightning might never have been subservient to the will of man in transmitting our thoughts from continent to continent in a moment of time. Had Edison been put upon a farm, and kept there, his whisperings would not now be heard from city to city."

COLORING BUTTER.—Mr. Hawley, of the Onondaga Co. (N. Y.) Farmers' Club, finds that Indian meal fed to a Jersey cow will give both the color and aroma of grass butter. Buckwheat bran and oil meal both would make the color white.

Mr. Terry said it was absolutely necessary to put butter in the market that customers would take; they wanted colored butter, and it must be colored, or the dairyman would take the consequences. If the market says color, you must color with artificial means or by feeding.

Mr. Overacre urged the farmers to adopt the method of natural coloring. First select good cows, butter cows, then feed them well, and you will get good-colored butter.

Mr. Geddes said the question was simply the old one. When he was a boy they pricked horses' tails to make them carry them high and look spirited, and a horse could not be sold unless his tail was pricked. The demand in the market was for colored butter, and it must be colored by feed to the cow, or artificially when making. He had eaten butter in Philadelphia, that had cost $1.15 per pound, and on the table that stuff showed the carrot fiber with which it had been colored. People who wanted to eat their carrots in that way and pay $1.15 per pound, should be given the privilege they demanded. The next day, at the same table, he had eaten butter that cost 50 cents per pound at the corner grocery, and, for his taste, it was infinitely superior.

DRY COWS.—It is a common practice among some dairymen to give their cows, when dry, but scanty living. When a cow ceases to give milk, or is dried up, any feed is considered good enough for her. I think this is a great mistake, and the result is a diminished product of milk, both in quantity and quality, when she does come in. There is a large draught on the system to sustain the calf while the cow is carrying it; and to keep the cow in good condition good feed is as important as when she is giving milk. It is my opinion that one dollar's worth of food when the cow is dry is worth one and a half dollar after she comes in. An animal in poor condition cannot digest as much food as an animal in good condition. If the cow is poor when she comes in she will not digest enough food to support the system, and, at the same time, to make a large quantity of milk.—Monthly Bulletin of the American Jersey Cattle Club.

COWS IN MILK.—In many countries, says the Agricultural Gazette, part or all of the field work is done by cows, and if these cannot be well cared for, or if they are overworked, the flow of milk is immediately more or less diminished. On the other side, the advantages of a moderate exercise for the cows ought not to be underrated. Cows want exercise and fresh air as well as other animals, and how often do they get little or nothing of either? How can we expect a cow to be healthy if she is kept altogether in the stables where she inhales constantly bad air? and how can she bear healthy and fully developed calves under such circumstances? Moderate work for cows cannot be condemned in principle, provided they are not overtired, and the slight decrease of milk, which is unavoidable, is more than covered by the work accomplished. Cows in milk ought not to work longer than three hours a day.

THE CENTAL SYSTEM.—In my (cor. Mark Lane Express) opinion the people who would be most materially benefited by the uniform use of the cental would be the farmers themselves. The advantage of being able to compare the prices paid in different markets, home and foreign, would be very considerable. Depend upon it the more open and simple a trade is, the better it is for both producers and consumers. It is the middlemen who get the advantage of a dark or intricate system. They know more of the ins and outs of the trade than farmers can know, and they are often able to use their knowledge to their advantage.

TO KEEP WELLS PURE.—A correspondent of that sterling paper, the Inter-Ocean, writing from Battle Creek, Mich., says that he purified his well of water, which was subject to many worms, bugs and other insects as to render it almost unfit for drinking, by placing in the well a couple of good-sized trout. They have kept perfectly healthy and have eaten up every live thing in the water. In the winter season crumbs of bread or crackers are thrown in. The water is perfectly pure and sweet.

CATALOGUES, ETC., RECEIVED.

NOTE.—Readers are referred to our advertising columns for any particulars omitted in the following necessarily brief notices:

JAMES M. THORBURN & CO., 15 John St., N. Y. Catalogue of 95 pages descriptive of all sorts of seeds for the vegetable and flower garden, lawn, farm and nursery, embracing in its entirety probably one of the largest collections to be found anywhere. We take great pleasure in commending this catalogue to our readers and friends. Established in 1802, this firm is everywhere known and respected for its fair dealings. The catalogue will be sent to all who apply, without charge.

PROGRAMMES of Cook's Grand Excursions to Europe for 1880 by the Inman and Anchor lines of steamers. It is proposed to visit the chief points of interest in all European countries. Thomas Cook & Son, 261 Broadway New York.

Everywhere.

NOTES FROM FLORIDA.

St. Augustine, St. John's Co.—My land is mostly devoted to the Orange, Lemon, Lime Fig, Shaddock, Citron and Banana. I have the Magnolia grandiflora 40 feet in hight, the Eucalyptus, Date Palm, Sago Palm, Royal Palm and Cabbage Palmetto; also the Japan Plum, Pomegranate, five varietes of Honeysuckle, three Passion Flowers, two Wistarias, four Bignonia radicans, the Yellow and White Jessamine, English Ivy, five varieties of Lantana five varieties of Camellia Japonica, Aristolochia Sipho—this latter is a native here also—the White and Red Honeysuckle, and the Coral Plant. We have the Akebia quinata the great variegated Pittosporum, White and Red Oleander, the Yucca gloriosa, and Yucca filamentosa. Besides these we have about 100 varieties of the ever-blooming Roses. We have about 40 varieties in full bloom at this time. Of orange trees we have 75, but only eight are bearing now. The best products here are cotton, sugar cane, tobacco, sweet potatoes, peas—the cow pea flourishes here—beets, turnips, cabbage. Much is done in orange culture and that is rapidly increasing. Early vegetables are grown here for the New York market; Strawberries do well; so do tomatoes, squashes and melons. Corn, oats, rye, wheat and barley do not pay for cultivation here to any great extent. Many other semi-tropical plants could be profitably cultivated, such as the Tea Plant, Almonds, the Olive, Grapes, Peaches, Pecan Nuts, etc. But to be successful requires Northern Industry and Northern intelligence. This warm climate leads the native to be indolent and thriftless. The climate, however, is delightful. We have not yet had a frost this season, the mercury to-day is at 82°—the lowest this season was 42°. I came here for my bronchial trouble, and began coming south in 1834, and feel myself quite well informed of this climate. This is no doubt as healthful a climate as the world possesses. We have the advantage of a bright sun and the delight of a sea breeze.

H. A.

RURAL SPECIAL REPORTS.

California, El Dorado, Jan., 19th.—We have had the coldest winter ever known here; ice about 1½ inch thick, something unknown to our oldest inhabitants. For the first time there are no flowers in bloom in my garden. The ground is soaked completely with the heavy rains. But we do not grumble. On the contrary, every one looks forward to the best summer for gardening and agriculture ever known in our State. A few good late rains will, with what we have already had, make millions for the farmers. W. C. L. D.

Conn., Columbia, Tolland Co., Jan. 19.—We are having a very open winter. The prices paid for farmers' produce hardly keep up with the advance on necessary family stores, and some are still looking for the "better times." W. H. Y.

Illinois, Balleyville, Ogle Co., Jan. 24.—The weather has been very mild here this month, with considerable rain and but little snow. There was enough snow on New Year's and the day following to make tolerably good sleighing; but heavy rains set in on the 3rd. inst. and the snow soon disappeared, the frost came out of the ground, and there was mud everywhere almost, but especially on low undrained ground. On Monday night, 19th. inst. following a rain, some three or four inches of snow fell, but it did not last long; then on Thursday morning, 22nd, we had some two or three inches more of snow, but it is thawing quite fast. Winter wheat has not suffered much, we think, while bare, as there have been no sudden and severe alternate freezing and thawing; but it is not yet out of danger. Business has not improved any since the beginning of the new year, but seems to be getting worse for the farmers. The strike of the laborers at the stock-yards in Chicago, which lasted a month, had a damaging effect upon the producers, as well as upon the packers, and it fell with crushing force at last upon the "strikers" themselves, so no one was benefited, while all suffered more or less. The late break in the price of wheat is very discouraging to the farmers who have any to sell. It seems to be caused by speculators who have accumulated large quantities and refuse to ship it abroad where it would "do the most good;" and the present high rates of freight on grain by rail from Chicago to New York and other points—40 cents per cental, equal to 24 cents per bushel—are another cause of the grain blockade and the bursting elevators in Chicago. What the outcome of this will be no one can tell; but we hope for another "boom" in business, when Lake navigation opens. Wheat is now about 15 cents per bushel lower than it was a month ago. Other kinds of grain are somewhat depressed, but have not fallen so much as wheat. Our country markets, which are governed principally by Chicago, are in an unsteady condition, and dealers are at a loss to know what to do. As the roads are bad and the prices of produce weak and unsettled, there is very little doing. W. B. D.

Kansas, Morris Co., Jan., 20.—It is quite warm and wet here now, but a cold wave struck here about Christmas time, the mercury falling to 10 degrees below zero. A large amount of winter wheat was sown here last fall, which is looking splendid. Much of it was pastured last fall to avoid too large a growth. A very fair crop of all kinds of farm products was grown here the past season. This county is receiving a very large immigration, although not so large as counties through which pass one of the great thoroughfares of the State, but yet there is room for many more good farmers and mechanics and for all kinds of reputable business. Fruit growing here is as yet in its infancy, although a few farmers have apple and peach trees in bearing. Nursery stock is quite reasonable in price, good two or three-year-old apple trees (home-grown) can be bought from $8 to $12 per hundred. J. E. R.

Kansas, Coffeyville, Montgomery Co., Jan. 23.—We have lived here six years. It is a beautiful country, especially in spring and summer, when the whole prairie is carpeted with green, and dotted all over with bright-hued flowers. Many of them are advertised in the catalogues, such as Digitalis, Verbenas, Catchfly, Dutchman's Pipe, Virginia Creeper, Sensitive Brier and many others I know not the names of. There is one objection, however, to Kansas—the wind blows so hard here that, as an old lady once remarked, "It seems like it'll blow all the *side* off of Kansas;" but we have got used to it and do not mind it much, and two-thirds of the time it is very calm. People are flocking here "like flies around a drop of honey." They seem to think Kansas is "a slice from the juciest side of the earth," and I guess it is.

Mass., Raynham, Bristol Co.—Perhaps by this the Rural readers have heard all they wish in regard to Pearl Millet; but I have just arrived at what I judge to be a fair conclusion as to its merits and it may be interesting to the host of new readers at least to learn the results. The seed you sent me was sown about the last of May, at the same time, in like soil and under the same conditions as Western corn for feeding milch cows. The Millet was sown in rows about four feet apart, and one plant allowed to grow every two feet. The corn was planted in rows 3½ feet apart, and at the rate of three bushels of seed to the acre. As the Millet grew much more slowly the first of the season, it was more labor to keep it free of weeds, but after settled warm weather, it gained upon the corn until at harvesting, there was not much difference in the amount of forage; but while the violent winds prostrated and ruined a large part of the corn, the Millet was entirely uninjured. When about half grown, and again at harvesting, I fed a portion of it, which was as good as the corn. But the Millet, at whatever time it might be cut, would not start to grow again any more readily than corn cut at the same stage. So far it must be a success in that its perfect resistance to our heavy winds must be an advantage quite commensurate with the labor of the extra cultivation during the early part of the season. But as a winter feed it is not equal to corn. Although, owing to its standing erect, it was cured much better, yet my cows refused to eat it if other good food was offered. C. D. L.

Minn., Winnebago City Township, Faribault Co., Jan. 22.—This county is one of the southern tier, about 160 miles west of the Mississippi. It can with truth be classed as the garden county of the State. Farmers are jubilant over the prices they are getting for produce and stock. Wheat sells for $1.10 per bushel; timothy seed—of which there was a large acreage raised here—brings $2.25 per bushel; live hogs 4@$4.50 per 100 pounds. Splendid improved farms with a soil unprecedented for richness, producing wheat, corn, oats, flax, and sorghum of the richest flavor, can be bought for from $2,000 to $3,000, containing 160 acres. Unimproved farms are selling for about $10 per acre. Our market facilities can't be surpassed; the So. Minnesota R. R. Co. running two roads East and West through the center of the county, and the Sioux City and Blue Earth Branch running north and south from Mankato, and terminating at Fort Dodge, in Iowa, supplying the inhabitants with coal. So with the timber belts on the Blue Earth and Maple rivers, both running through the county and supplying all the wood needed for fuel besides water power for a number of grist mills. The climate is unsurpassed for its healthfulness. The 25th of December was the coldest day this winter, the thermometer marking 33° below zero. It has been very mild all this month thus far. H. F. S.

Michigan, Laingsburg, Shiawassee Co., Jan. 20.—We have had a pleasant open winter. About ten days' sleighing in December, but there has been no snow visible for weeks. Grass has grown; sheep have picked their living, and wheat is as green as in May, promising finely. Fodder was rather scant, on account of the severe drought, but the mild weather has helped, and most farmers in this vicinity will get through very well. Much more than the usual quantity of rain has fallen. To-day we are having quite a snowfall. G. M. K.

Michigan, Utica, Macomb Co., Jan. 26.—We are now having very fine weather for winter. It is almost like summer. We have had but very little cold so far. Wheat is looking fine. The prospect looks very favorable for a large crop the coming season. Our crops for the past season were very good, with the exception of corn, which was generally rather light, as it was very dry at the time it was setting. This is one of the best grain counties in the State. Utica is in one of the finest-located places in the State. It is on what is called the Shelby Plains, about six miles from Detroit. J. P. P.

Mo., Kingston Furnace, Washington Co., Jan. 23.—The winter is the mildest I have known for years, and very cloudy and wet. The area sown in winter wheat is very large, and the crop looks well. Those who sowed early were troubled by the fly, and in some cases had to resow. The wet and warm weather is unfavorable to lead mining which is the principal industry here during the winter. The business "boom" has kept the Western cities and railroads exceedingly busy. The feeling in favor of securing a portion of the immense immigration, which all feel sure is to take place from England during the coming year, is very strong. It exhibits itself in the formation of Immigration Societies and in advertising farms and lands at low prices. This is a number-one region for stock growing, well shaded, well watered and with good farming lands in the valleys and in many parts of the uplands. It still has a stock range along the pine-clad spurs of the Ozarks, reaching from less than 50 miles of St. Louis to the cane brakes of Arkansas. Herders could drive south as winter approaches; spend that season in the cane brakes, and return on the spring grass with their cattle ready to drive them from the range directly to market at St. Louis in two days' time. Herders here would prove welcome to buyers of stock and feed. Settlers could purchase lumber for shelter cheap and hire stock fields for part of winter feeding, and would have no quarrels on the plains with either sheep men or settlers. It is not a large field for the business and that perhaps is the reason why it is not occupied at all, or even known, but its nearness to market and base of supplies, its good range and freedom from storms, and the fact that it is open to the first comer without let or hindrance and with no necessity to invest a dollar in land for years, so that all the herder's capital can be put in stock—all this, I think, puts this range in the front rank for advantages for a moderate amount of either sheep or cattle or both. N. W. B.

N. Y., Elmira, Chemung Co., Jan. 24.—There is a marked contrast between the present prices of farm products and those of a year ago. The prices of the principal products are as follows:—Wheat, $1.40@$1.45 per bush.; corn, 63@65c. for 60 pounds; oats, 38@42c.; potatoes, 35@40c. per bushel. Good hay sells for $14 and loose oat straw at $8.00 per ton. Tobacco farmers are busily engaged assorting their crops. There is little activity in the tobacco market here at present. Probably one-half of the tobacco in this country has been bought up at prices ranging from 11c. to 15c. per pound. So far, our winter has been warm and open. The prospects for the coming winter wheat crop are not encouraging. Owing to the protracted dry weather last fall, it made but feeble growth and the open weather with no snow to protect the ground from alternate freezing and thawing, is unfavorable for it. G. A. G.

Ohio, Shelby, Athens Co., Jan. 24.—The weather is very mild. Grass and wheat look as green as in spring. Roads—well, I guess there is a bottom, but it is a good ways down. Wheat sells for $1.35 per bushel; oats, 33 cts.; corn, 45cts.; potatoes, 50cts.; apples, 50cts.; butter, 18 cts. per pound; eggs, 20 cts. a doz. A. K. S.

Virginia, Lexington, Rockbridge Co., Jan. 24.—It looks as if we could not get any ice here this winter. The weather now is as mild as it usually is in March or April. We have had but one slight snow-fall—hardly enough to cover the ground. Wheat looks fine. Flour sells for $6 per barrel; corn, 45@50c.; potatoes, 50c.; pork, $4.50; butter, 15@16c.; eggs, 10c. J. F. S.

Wyoming Territory, Jan. 11.—The great snow wave of '80 is here. We have 3½ feet of snow on a level—the heaviest fall we white men have ever had on Puget Sound. Business of all kinds is blocked, and many buildings have fallen from the pressure of snow. Wheat is the only farm product that commands a good price. Potatoes, 20 cts. per bushel; eggs, 25 cts. per doz.; hay $8 per ton, baled and delivered. The Skaget gold mines are the present great cause of excitement all through this region. A warm rain on this accumulation of snow would cause frightful floods and loss of property. C. H. S.

Wis., Lavalle, Sauk Co., Jan. 4.—Wheat sells for $1.15@$1.20; potatoes, 20c.@30c.; butter, 14@17c.; hay, $5@$6; beef, live, $2@$3; hogs, dressed, $4 80@$5. I have just returned from Central Ohio; crops were good, except corn, which was mostly a poor crop. From my own observation I judge but little will be fit for market. W. S. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

Beets vs. Turnips for Sheep.

J. F. A., Washington Co., Mich., asks the relative value of beets and turnips for feeding sheep at this time of the year.

Ans.—According to analyses of Drs. Voelcker and Langster, the nutritive elements of the roots usually fed to sheep are as follows:

IN 100 PARTS OF	Water.	Flesh formers.	Fat formers.	Woody fiber.	Ash.
Sugar Beets	81.5	1.00	15.40	1.3	.80
Mangels	87.78	1.54	8.60	1.12	.96
Ruta-bagas	89.40	1.44	5.93	2.54	.63
Yellow Aberdeen Turnips	90.57	1.80	4.64	2.34	.65
White Globe Turnips	90.43	1.14	3.96	2.00	1.02

Of all the roots usually grown, the sugar-beet is the best for sheep, being the most palatable, and containing the greatest proportion of solid nutritious matter. Considering the large quantity of water contained in them, roots may be considered as highly nutritious food, and when fed in conjuntion with dry fodder, and in proper proportions, are greatly conducive to the health and growth of the sheep. Their effect upon the quality of the wool, especially the lustrous wool of some of the long-wooled is very favorable. The proper quantity of roots to be given depends upon the kind of sheep. As a safe guide, it may be estimated that one bushel of roots will be a sufficient daily allowance for 10 sheep weighing 150 pounds each, live weight, if along with the roots, 1½ pound of hay and ¼ pound of meal or bran per head be given. But the daily ration of roots must be apportioned with care and judgment. For lambs five to six pounds daily will be sufficient; for two-year-olds and mature sheep, 10 to 15 pounds will be ample allowance; the smaller quantity being enough for a South Down, and the larger for a full-grown Cotswold, Leicester, or Lincoln. For a Merino a much less quantity should be apportioned, as this breed cannot produce a fleece of good quality, or great weight, without being supplied with enough oily matter to secrete the large amount of yolk which their fleece contains.

Laying out a Lawn.

G. E. S., Mt. Pleasant, Ohio, asks advice about grading around a house just built. There's plenty of cellar dirt to grade with, and ample opportunity to make a beautiful lawn, sloping just enough to carry off the water. The house is about 75 feet from the road. How should a terrace be made, and when sodded? What is the best method of planting some thrifty Maples, with trunks five or six inches through? How and when should they be moved? What other forest trees would be best for lawn shading?

ANSWERED BY S. PARSONS.

If the cellar dirt is already disposed about in heaps, it should be manured heavily after grading, with ammoniated manures, stable manure, etc. Such soil is usually very poor, and a good lawn needs to be of rich soil. If you must make terraces, which are not as desirable in many ways as a regular slope, construct them low and sod early in the spring. Sodding, however, may be successfully done during more months in the year than most other lawn-planting operations. If you wish to succeed in moving large forest trees—a difficult operation at best—you must cut back the branches well, trim all roots broken in digging, and move and dig so as to retain as much of the small fibers as possible. Let such trees be planted four or five inches deeper than the crown of the roots, and even in some cases, where the soil is naturally dry, eight or ten inches. Pound the earth firmly about the roots, placing the best soil nearest the fine fibers. The Elm transplants, perhaps, most easily of all forest trees. Birches and Poplars also may be moved with fair success from the woods. Beware, however, of Hickories, Pepperidges, Oaks, etc. Ordinarily it is not profitable to transplant shade trees from the woods. A thrifty tree, one and a half to two inches in diameter, grown in the nursery, will become, in five or ten years, far more attractive and shapely than any forest tree, not to speak of the smaller risk of death incurred. To make

transplanting forest trees more sure, dig around and cut their roots the year before moving, to obtain a new set of fibers.

The Audiphone and Dentaphone.

Several inquirers ask information about the Dentaphone and Audiphone.

ANS.—We have carefully tested both of these "helps to hear" in about a dozen cases of deafness from various causes and of different degrees. In several cases neither was of the least help. In such instances the deafness was total or nearly so, had been of long standing and was caused by violence, accidental or otherwise. On a deaf-and-dumb man the Audiphone had absolutely no effect, but a deaf-and-dumb child could, what she called, "hear" singing *under* the instrument, but not before it. In neither case was the Dentaphone of any use. Indeed, in more than half the cases tested, this device was of no practical benefit, but in several instances it seemed to help materially, and considering its low price, it cannot, therefore, be classed among the "humbugs." In about half the number of cases, the Audiphone was really serviceable, but in only two out of all the tests did it give entire satisfaction. In one of these the deafness had been produced by erysipelas about 18 months ago, and in the other a child had been made deaf a year before by concussion of the brain, the result of a fall. On the other hand, a man who four years before had been made almost totally deaf by concussion of the brain could obtain absolutely no aid from either device. When the auditory nerves are severely injured, neither is worth a cent. The loss of the eye-teeth and, still more, the use of false teeth, both diminish any good effects that might otherwise result from the use of either instrument. In recent cases, and especially where the deafness was not very severe, the Audiphone gave much more satisfaction than in severe cases of long standing. From our various tests we have come to the conclusion that in cases of comparatively slight deafness, it might be worth while to try the Dentaphone, and in all cases it would be well to test the Audiphone, were it not so high-priced. The chances seem to be about even whether the device will, or will not, be of any real service, but we do not expect that more than one in ten will be entirely satisfied; yet the knowledge that no help lies in that direction, is of itself soothing to the anxious deaf man.

Feed Table—Nutritive Ratio.

G. E. N., Afton N. Y., writes:—I want a little explanation on the feed table on page 39. In the nutritive ratio column meadow hay is 8.0, clover hay 5.9; does it mean that 5 9 pounds of clover hay are worth as much as eight pounds of meadow hay?

ANSWER BY PROF. E. W. STEWART.

ANS.—This means that in meadow hay, there is one proportion of albuminoids or muscle-forming matter to 8.0 of carbohydrates, or heat or fat-forming elements, and in clover hay one to 5.9 Our inquirer will see that linseed cake is 1 to 1.4. The nutritive ratio is to show the relative proportion of these two classes of constituents. But one of fat is reckoned equal to 2.4 of carbohydrates. The nutritive ratio is found by dividing the carbohydrates and fat (increased 2.4 times) by the albuminoids. As in meadow hay, carbohydrates and fat make 43.4, divide this by 5 4 (albuminoids) and you have 8 as the quotient, according to the nutritive ratio in the table. If N. had looked at the value column, compared with meadow hay he would have seen that clover is rated at 8 per cent. more than meadow hay. Some of the early agricultural chemists rated the value of all food according to its amount of nitrogen or albuminoids, regarding the albuminoids as the only nutritious elements, but now the value of a food is calculated from the carbonaceous elements as well. Dr. Wolff takes the following as the basis for estimating the value of a food: 4½ cents for each pound of digestible albuminoids; 4½ cents for digestible fat, and 9-10 of a cent per pound for carbohydrates. Now, if the reader will turn to the table, he will see that meadow hay has 5 4 pounds of albuminoids in 100 pounds, and one pound of fat; these two make 6.4 pounds at 4½ cents, or 27.7 cents, and 41 pounds of carbohydrates, at 9-10 of a cent, or 36.9 cents, added, make 64.6 cents per 100 pounds. Clover hay calculated in the same way, amounts to 69.7 cents per 100 pounds. This is 8-100 or eight per cent. more than meadow hay, which is taken as the unit of value. We trust this will make the table clear. Those foods that have the largest amount of albuminoids are most valuable.

Vertigo (Megrims.)

S. H., Lowell, Mich., has a valuable mare bought out of a sale stable last fall, so that he knows nothing of her history. She is naturally a kind animal, but sometimes she starts up suddenly and shakes her head as if stung by a bee in the ear, and pauses a moment as if expecting to be stung again; then jumps, shakes again and acts as if furious. The entire spell seldom lasts more than five minutes and the fit never comes on more than once or twice in driving all day, but he scarcely ever hitches her up without its occurring. Sometimes she acts like a wild horse, rearing up, but generally she only manifests the above symptoms, and he asks what is the nature of the trouble and a remedy therefor.

ANS.—This is a form of vertigo—a trouble caused by disease of very different organs. Thus, the same symptoms result from tumors or effusions in the brain, from obstructed blood-vessels, from heart disease and from plethora. Of course, a careful examination is necessary before the best practitioner could give intelligent advice; and, even then, this is one of those difficult cases in which it might prove unsatisfactory. The most generally applicable treatment consists in lessening the quantity of food and giving purgatives, followed by alteratives and sedatives; but it must be evident in such uncertain cases it is worse than useless for us to lay down any course of treatment. Unless she is very thin and weak, however, light feeding may cause an improvement; and, if so, *bromide of potassium* may be given in two to three drachm doses twice a day for a week or two.

Earless Corn.

J. E. R., Morris Co., Kan., says: "In gathering corn here we often find large, nice stalks without an ear on. This is so much the case that a field of corn often looks as though it would make a much larger yield than it really does. Then, too, we have sometimes found in the same field a stalk with a good ear, that also produced a sucker with a fair-sized ear on the top of it. Can you enlighten us as to why this is so? The land is alike all over the field, good, rich bottom land. Stalks without ears on are quite common here, and we would like to know a remedy for it."

ANS.—We cannot answer why this is so, except to say that such is the nature of the variety of corn, modified by climate, soil and culture. The only way that any given variety can be improved is by selection and cross-breeding. Thus, we should select our seed corn from the most prolific stalks and from the best ears. We should cut off the tassels (male flowers) of barren stalks so as to prevent them from fertilizing fertile stalks. Where practicable, it is a good plan to raise a small plot of seed corn as far removed from all other plants as possible. As soon as the ears have set, go over the plot removing all barren or comparatively unproductive stalks.

Muscovey Ducks.

G. B. C., Hanaca Falls, N. Y., asks whether Muscovy ducks are prolific layers, good mothers, good breeders and good table fowls.

ANS.—As layers, the Muscovy, Musk or Brazilian duck—for it is known by this trio of names—is inferior to the Rouen or Aylesbury, but probably on a par with the usual inhabitants of the duck-pond. The eggs are a dull white and seldom exceed three ounces in weight. The mother is ordinarily careful of her ducklings, but the drake shows no affection whatever for them. Muscovy ducks are prolific breeders, but in a warm climate they are better layers and breeders than in northern latitudes. Their period of incubation is five weeks. The flesh of the white duck is the most delicate; that of the black, the finest-flavored; and these are also the most prolific. The bird, though a voracious feeder, is easily fattened, and excellent eating, if killed just before it is fully feathered; but it is longer in becoming fit for the table than the common duck. At first the flesh is high-flavored and tender, but that of an old bird is rather rank and tough. The female is much smaller than the male, the former seldom exceeding five or six pounds live weight, while the latter often reaches nine or ten pounds. The male pairs readily with other domestic ducks and the offsprings of the cross are large birds, often seven or eight pounds live weight, but such hybrids are said to be generally unprolific.

Applying Lime.

R. A. W., Geneseo, N. Y., asks how many bushels of good air-slaked lime should be sown per acre on a stiff clay soil plowed last fall, and on which it is desired to plant potatoes in the spring; when and how should the lime be applied.

ANS.—Forty or fifty bushels of lime per acre is the quantity generally applied. But because lime is useful in one case, it by no means follows that it is useful for every crop. It is most useful when clover or grass is to be sown, and the usual practice is to apply it when fall grain is sown to be followed by clover in the spring, or on a summer fallow. Potatoes are injured in quality by freshly applied lime. They are made hard and will not boil soft or mealy; peas, also, are made hard by the use of lime. Oats, too, are injuriously affected by lime, while corn, wheat and clover are benefited. These are crops that are assisted more by mineral feeding; while oats, potatoes, peas, and some other crops require barn-yard manure more than mineral fertilizers. To use lime indiscriminately is therefore not advisable. Lime is *always* to be spread on plowed ground and harrowed in, and *never* to be plowed under. Being fine and heavy, it soon sinks downwards, and after three or four years will be found settled to the bottom of the furrows.

The Rural Only.

H. D. C., Clayton, Del. and others ask if we have "Ennobled Oats" for sale by the bushel, and the price.

ANS.—Such inquiries come from our *new* friends (may they prove steadfast in the ratio of their numbers), who are not aware that we make a *Specialty* of *selling* nothing whatever except the RURAL NEW-YORKER. Our seeds and plants are free to all yearly subscribers who apply and who care enough for them to be willing to share with us the postal charges, according to our announcement in our Fair No., and in our Supplement which will be sent free to all on application. Most of the seeds we offer are specialties which *cannot be procured*, except through our Free Seed Distribution. We guarantee every seed to be of last season's production, and as choice and valuable of their kinds as any novelties offered either in this or any other country. We have no disposition whatever to be modest or reticent as to the value of our seeds, or to have them associated with the ordinary seeds which may be found in any one of the hundreds of seedsmen's catalogues of the country. We have been at too much pains to secure them, and they have cost us too much for that. We have a pride in this matter, and aim to be the first either to introduce or to popularize improved or new varieties.

Value of Barley, Corn and Oats.

W. S. H., address mislaid, asks what is the relative value of barley as feed for cattle, especially for milch cows, as compared with corn or oats.

ANS.—Barley has a larger percentage of albuminoids, and consequently furnishes a better food for supplying the caseine in milk, but corn has some excess of oil over barley but not over oats. Oats, however, have more husk and not as much digestible food per hundred pounds as either barley or corn. Corn is the richest in starch, which goes to support animal heat, to form the milk sugar or whey and perhaps the oil in milk. It is generally conceded that corn meal is most excellent food in the production of butter. It does not increase the quantity of milk as much as barley or oats. Now this statement of the peculiar qualities of these foods shows that the best food can be only obtained by mixing all these together. Each one possesses some qualities the others do not, and the feeder should study, not to find the best single food, but how to combine the best food from the variety which he has at hand. Variety is required to make the best food.

The Chichester Rifle.

H. J. S., Rochester, N. Y., and several others asks what is the character of the rifle advertised by circulars by the Chichester Rifle Co., of Jersey City.

ANS.—We visited the store of the Co., to find out all about this weapon, and saw there a large assortment of them. They are certainly, as advertised, a new style of rifle, much resembling a lanky, overgrown pistol, or like some of the air-guns frequently seen in gun-smiths' windows. The cut in the circular, several of which have been sent us, represents great execution done at long range by this formidable weapon, but we are strongly impressed with the conviction that there is more "long-bow" than rifle shooting about the concern. It *may* be worth the price as a boy's dangerous play-thing, but any one who sends on $4.50 expecting to get a rifle worth at least double the money, is pretty likely to be vexatiously disappointed. It seems designed for target practice.

Grapes.

R. A. W., Genessee, N. Y., asks where can he obtain the following Grape-vines:—Uhland, Downing, Ithaca, Imperial, Don Juan, Cassady, Marine's Seedling, Onondaga.

ANS.—Uhland can be had of Bush, Son & Meissner, Bushburg, Mo. Downing or Ricketts's No. 1. is still in the possession of the originator, Jas. H. Ricketts, and has not yet been offered for sale. Ithaca originated with Dr. Parker, Ithaca, N. Y., and has not, we think, yet been offered to the public. Don Juan and Imperial are now in possession of Messrs. Merrell & Coleman, Geneva, N. Y., and have not been offered for sale. They own the stock. Cassady is now so nearly obsolete, it is doubtful if vines of it can be had. A. Hance & Son have vines of it in their Trial Vineyard, and can probably supply grafts. Marine's Seedling and Onondaga must be new sorts not yet offered the public—at any rate they are new names to us.

A Spavin "Cure."

W. S. M., Bendersville, Pa., asks whether Kendal's spavin cure, sold by W. H. Schieffelin & Co. of this city, is a humbug.

ANS.—This firm is one of the largest dealers in drugs in N. Y. city or in the country, and would not deal in humbugs. They say, however, that they have no personal knowledge of the merits of this "cure;" but that no complaints have reached them with regard to it, though they have sold a great deal of it, and it has therefore been tested very extensively.

Miscellaneous.

J. B. T. W., St. Charles, Ill., asks, 1, what are the constituents of what is there called sugar-corn meal; 2, would it be injurious if fed to dairy stock; 3, about what is its comparative value as compared with wheat bran for that sort of stock.

ANS.—1, We know nothing of the feed. It is, quite likely, the refuse of corn after extracting glucose for the adulteration of the cane sugar and sirup of commerce; 2, if so, nearly all the sugar and starch are extracted, and there would be a heavy discount on its value; pure corn meal is worth little more than wheat bran as a dairy feed, even less for simple milk. This would probably be worth far less; 3, can't say about injurlousness. Sulphuric acid is used in obtaining glucose. We shouldn't like to risk the feed without analysis. Submit samples to the Ill. Agr'l. Col. Chemist.

A. K., Shelby, O., in cribbing his corn found a double ear 8½ inches long, 10½ around, solid for two inches, then there were two well-formed ears, one 16-rowed; the other 14-rowed, containing altogether over 1900 grains, and he asks whether such things are rare, and whether the seeds would be likely to reproduce double ears.

ANS.—Such abnormal growths are not very rare. We have seen three ears joined at the bottom. We have never seen them, however, so large as the twin ears above described. Twin apples or fruits of any kind are homologous cases. Such monstrosities are rarely reproduced in their seedlings.

W. S. H. asks, 1, Whether Heik's Nursery Co., of Dayton, Ohio, is reliable; 2, what are the qualities of the Weaver plum; an agent of the above firm has been selling specimens at $1 per tree, warranting them to be hardy and curculio-proof, and showing specimens preserved in alcohol in glass jars.

ANS.—1, The above company is represented to be of "excellent" standing by the mercantile agencies here. 2, We have never heard of the Weaver Plum. There is no such thing as a curculio-proof plum (as we believe) that is fit to eat. All standard fruits are described in horticultural papers and books. Persons ought never to be influenced by the appearance of fruit in jars displayed by strangers.

A. S. S., Waco, Texas, asks the name of a good standard work on the propagation of fruits and flowers, its price and where it can be had.

ANS.—We do not know any single standard work treating of both subjects. For fruits, Thomas's American Fruit Culturist is as good as any. Price $3.75. For flowers, Henderson's Floriculture is good. Price $1.50. Both can be had through the American News Company, N. Y.

E. P., Verbeck, Kan., asks where he can buy evergreens and if he can raise evergreen trees from seeds.

ANS.—Of R. Douglass, Waukegan, Ill. If correspondents would take the trouble to consult our advertising columns, they would find a great many such questions answered satisfactorily. We advertise none but reliable firms. Evergreens are easily raised from seed.

SEVERAL.—Regarding the Doura—or that particular kind of Doura of which we wrote as sending up at least eight stalks from one seed—apply to R. H. Allen & Co.—see advertising columns. Judging it from one season's test at the Rural Farm, it was pronounced by the farmers thereabouts the most *profitable* fodder plant they had ever seen. We should like to have our inquirers send for a small quantity, try it, and report the results to the the RURAL NEW-YORKER.

O. L. S., Canastota, N. Y., asks, 1, what is the best work on apple culture; 2, its price; 3, where can it be bought.

ANS.—1, Thomas's American Fruit Culturist is as good as any; 2, $3.75; 3, from the American News Co., N. Y. City.

O. C. D., Wellville, Va., asks what is the best kind of corn to plant for fodder in drills.

ANS.—For that section Blount's White Prolific is likely to be as good as any for that purpose. Try it.

F. B. Columbia, Pa., wants to know if red cedar posts will last as long in the ground as locust posts.

ANS.—Locust is more durable.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JAN. 31st.

J. L. C., thanks.—N. C.—A. B. A.—A. K.—J. P. P.—J. F. A.—W. B. P., we prefer pencil to pale ink.—J. F. A.—A K.—C. D.—F. K. M.—L. F.—N. R.—F. A. G.—F. D. C.—B. F. R.—T. T. L. thanks.—G, G.—E. K. B.—E. W.—M. J. G.—"Carl Veva."—J. T.—H. S.—G. C. C.—E. F.—F. H. D.—R. A. W.—A. J. S. H., thanks.—E. S. B.—H. E. K.—D. L. B.—M. F. Mc C.—B.—T. G. T.—M. A. L.—J.—F. W. F.—A. E. B.—J. B. T.—W., many thanks.—N. G. R.—M. B.—A. M.—J. L.—K. M.C.—T. C. C.—W. A. R.—J. Y.—L. N. R.—W. A. R.—S. T.—

THE
RURAL NEW-YORKER.
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ELBERT S. CARMAN.

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78 Duane Street, New York City.

SATURDAY, FEB. 7, 1880.

SHORTLY TO APPEAR.

On The Kinver and an entirely new French Yellow Globe Mangel as sweet as a sugar beet and as productive as other mangels—illustrated.

Leguminous Plants—grasses and valuable fodder plants, by Professor W. J. Beal—illustrated.

Stock Notes by Professor E. W. Stewart, L. S. Hardin, Richard Goodman, M. C. Weld, Col. F. D. Curtis, A. B. Allen and others.

Important Addition to the Rural's Seed Distribution.

Special Articles from Professor S. W. Johnson, Professor F. H. Storer, Professor G. C. Caldwell, Dr. A. R. Ledoux.

A Series of short articles upon the cultivation of our choicest vegetables—illustrated.

Dairy Specialties by Henry Stewart, L. S. Hardin, Professor L. B. Arnold.

Fruit Notes by Pres. T. T. Lyon, Gov. Furnas, Dr. T. H. Hoskins, Sec. Garfield and others.

Poultry Notes by Forrest K. Moreland, Henry Hales and others.

Life Engravings of the Chinese Yam (Dioscorea batatas) "Cinnamon" vine; the Tulip tree and fruit &c., &c., &c.

TO NEW SUBSCRIBERS.

We find that many of our new subscribers have not seen our Free Plant and Seed Distribution supplement and consequently know nothing as to its terms. We will therefore send this supplement free to all who apply until further notice.

As originally announced in our Fair No. of Sept. 6, the Plant and Seed Distribution will be completed about March 1st. This for the benefit of our new subscribers.

The Rural New-Yorker, from careful tests and inquiry, confidently recommends to its readers the following Peas as among the most desirable in cultivation:—For earliest, Early Dan O'Rourke. Philadelphia is the earliest pea and the poorest. Alpha (Laxton) bears balloonish pods, but the vines are prolific and the peas large, very green and delicious. For second early, McLean's Little Gem is best. This is ready for the first picking about one week later than Dan O'Rourke. For an early pea that grows to such a hight that it does not absolutely require brushing, and for general excellence, this is very generally placed first. The American Wonder matures at about the same time and is the only variety that disputes a claim to the first place with the Little Gem. Champion of England and Eugenie we prefer for the main crop, and British Queen for the latest.

An armed truce is the condition of Europe. The Continent is a vast camp; the best efforts of every nation are directed towards rendering its army as numerous, as efficient and as thoroughly prepared for instant action as possible. Jealousy, revenge, dread of reprisal, lust of conquest and aggrandizement, hatred and distrust—all combine to hasten the advent of the next war. When it comes, it will not be a struggle between two nations; the probability is that nearly the whole Continent will be involved in its sulphurous fumes, and that neither the Channel nor the shop-keeper's love of peace will be able to keep Great Britain from voluntarily entering or being forced into the fray. The advanced age of most of the chief leaders, such as the emperors William and Alexander, and of Gortschakoff, Beaconsfield, Bismarck and Von Molkte, may at first glance seem a valid cause for shrinking from the toil and strain of warfare; but each of them knows full well that the conflict must come soon, and the Germans at least, confident in their present superiority, must naturally wish to precipitate the inevitable while their country is well prepared for the struggle, and while they themselves are in a better condition than they ever can be in the future to guide their legions and share in their triumphs. It looks therefore, as if war might break out at any time, and though we must deplore a calamity so terrible to humanity, we cannot forget that it would be an excellent thing for neutrals.

THE JURY DISAGREE.

Not an uncommon occurrence—nor, when it occurs, should it be unexpected. Questions usually referred to juries are such as in civil cases the parties interested are not able to agree upon themselves, and in both civil and criminal are usually covered with masses of conflicting evidence of persons who are willing, perhaps, but unable to see the same things in the same light. And what is the edict of the law? It says you shall see alike, no matter what your organization, your power of sifting evidence, your ability to judge of the trustworthiness of witnesses from their general appearance, or to reject the sophistries and special pleadings of the attorneys. The law says you must and shall think as the men on your right and on your left think, or failing to do so, you shall be kept as prisoners during the pleasure of the Court, which has the power to confine you day and night without fire or food, or without beds or bedding, or even comfortable places to sit, until you force your conscience to such a point as to be willing to tell a lie in the cause of justice (!) and say one thing when in your inmost soul you believe another.

He who writes this has sinned with the rest, and from his experience in the jury-room is of the belief that not one verdict in ten gives the true opinion of one-half of the jurors. Verdicts in civil cases are usually the results of compromises, especially where damages or other money awards enter into them. All who know about them are well aware that it is not unusual to take the sum each juror thinks right and proper, add them together and divide them by 12, to arrive at a just and legitimate conclusion, on the ground that the average of the opinions is likely to be nearer right than that of any one, and on that ground individuals excuse themselves from receding from their conscientiously formed beliefs. In criminal cases where the verdict must be guilty or not guilty, it might seem that an agreement would be more easily reached. But this is not so; there is in the mind of every man a fear of doing an injustice that cannot be undone. The Court instructs that the prisoner shall have the benefit of any doubt. Much, if not all, of the evidence of guilt must be circumstantial, and circumstances which to one would seem to be overwhelming proof, to another are not worth a moment's consideration, and both are equally sincere and honest. It is not in the possibility of their natures to see things alike—but the law says they must. Sometimes they defy the law and remain in a state of disagreement until the Court discharges them, leaving the case in the same condition as before the trial commenced.

The result of the recent Hayden trial in Connecticut, where after a long and tedious trial of three months, the jury did not agree, eleven being for acquittal and one for conviction, should, it seems to us, awaken public thought to the necessity of the correction of jury law. We have nothing to do with the merits of the case, but merely present it as one where immense sums of money have been spent in its prosecution and defence, and the case is just where it was before the trial commenced. The prisoner, neither convicted nor acquitted, has been released on $5,000, bail and should the State no longer prosecute, Mr. Hayden must continue to live as a man charged with murder, tried and not acquitted. If it be thought necessary for 12 men to agree before a verdict be decided upon, we should not object; but they should agree by their own volition and not by force. If we were members of any of the State Legislatures now in session, we would strive to have a bill passed providing that two-thirds or three-quarters of any jury should agree. If that proportion of twelve men is not sufficient, then let the jury consist of sixteen. When the jury retire, the foreman should invite expressions of opinions, or discussion of the merits of the case, and when the question was submitted to vote, the first one should be final and decisive of the matter. The questions would be differently framed for civil and criminal cases, but the result would be the same—the first vote should decide.

But as we are not legislators, we send this out to our readers, some of whom are, in hopes that it may awaken attention to the subject, and, like a little leaven, continue to work until this reformation of our statutes, so much needed, shall be accomplished.

THE VALUE OF A DOLLAR.

We once employed for a short time in ditching, a man who at twenty-one years of age was worth some fifteen thousand dollars, but who lost most of it on the whole foolishly, and was compelled, for a time, at least, to support his family by working for daily wages. One night when we paid him, he said, "I'm much obliged both for the wages and the tuition." We supposed he referred to instruction in laying tile-drains, but he said "No, I mean instruction as to the value of money. I never knew what a dollar was worth before. But after working all day in the ditch to earn one, I'm not likely to spend twenty-five cents of it for a cigar or any other nonsense."

We could point out scores of city boys who have become miserable spendthrifts from the lack of just such knowledge. Their fathers were more or less wealthy, but the sons were not put into the office, or mill, or shop, and made fairly to earn their money by tiresome labor, either physical or mental. Their fathers said to themselves: "My sons shall never have to drudge as I did," and so the boys did *no* labor, bore no responsibility and never learned how money was fairly and honorably earned, and, of course, never knew its value or its proper use.

In a certain rural district we know, we can count, within a radius of ten miles, more than as many young or middle-aged farmers who have since their majority, "run through" from ten to thirty thousand dollars each, that their hard-working fathers left them; and all because they never learned the *value of a dollar*. One such, on his sudden accession to his property, thought to impress some of his young friends at a hotel where they had stopped for dinner, by spreading a hundred dollar bill on his slice of bread and butter and eating it with great apparent relish. He did "impress" the one he might have married, with the belief she had better not marry a man who was both spendthrift and fool; and the young man in less than twenty years saw the time when he was glad to get the bread and butter, without the hundred dollar bill for a relish! In youth he had never been taught to labor, had had a large stock of spending money compared with the other farmers' sons, and supposed the only limit to the amount was "the old man's stinginess."

Sometimes the same evil results follow a very different and "heroic treatment." We have in mind a well-to-do farmer who kept his sons at severe farm labor from early childhood and never gave them any spending money or any chance to earn it, or any interest in farm or stock, or in the profits of their labor. Of course, they hated farming. Of course, they wanted spending money, like other boys. Naturally and actually failing to get it otherwise, they "took" butter, eggs, maple sugar, etc., and sold them to procure it. *He* called it stealing, "thrashed" the boys severely and put such valuables under lock and key. *They* called it "taking" a small part of what they earned, and finally ran away from home and left "the old gent" to find other boys, and *pay them* for their labor.

But the subject grows upon us. Examples multiply in our memory, of the sad results that have followed unwise teaching, or no teaching, in regard to the value and proper uses of money. We merely wish to say, we believe children, especially boys, but girls also, in whatever station in life, should be taught to earn, to lay up, and wisely to spend money. If born to a heritage of wealth, they should be taught that its possession brings greater responsibilities, and its proper management, when they grow up, will bring even a heavier tax on their mental and moral powers and faculties, than would the earning of a livelihood. We think they should even be taught some useful employment or mode of earning money, both as a discipline and safeguard. We have great sympathy with the English and Continental occasional practise of teaching even the sons of wealth some useful employment. We believe wealthy parents should teach their children wisely to manage their estates, so that they shall not be compelled to will them away lest they be squandered by their heirs.

On the other hand, if children are born simply to a heritage of labor, we believe they should be taught that labor is no disgrace, and taught how to labor well; lay up and invest their earnings wisely, and gradually in this good land relieve themselves of the necessity of oppressive over-wearisome toil. We believe that children after in some way earning money, should be permitted to invest or spend it, under general advice if they seek it, as they on the whole choose, at least for a time. They should be permitted to choose in childhood, and if possible, taught to choose wisely. How shall they learn to choose wisely in manhood if they are never permitted in childhood to choose, and even to choose unwisely, but gradually taught to choose wisely. "Poor Richard's" silly purchase of the whistle taught him a lesson, and was, on the whole, the best bargain he ever made. A few pennies, dimes or even dollars, unwisely spent in childhood, nay, spent in utter foolishness, and regretted in bitterness, may save in manhood the squandering of a fortune, or the wreck of a life.

BREVITIES.

It now appears that the "Washington Market" sweet corn is the "Egyptian" sweet corn.

Those who have learnt "The Value of a Dollar," are generally those who prefer to pay as they go.

Englishmen should read the speech of Horatio Seymour before the State Agricultural Society. It will tell them as well, perhaps, as the reports of Messrs. Read & Pell, the cause of their "agricultural distress.

A Syllogism.—A weed is a plant the object of whose existence has never been discovered. There are a great many men, the object of whose existence "no fellah" can find out. Therefore, a great many men are weeds!

"It might be shown," says Horatio Seymour, "that the extremes of heat and cold in the northern belt of States, will ever be among the most important influences in stimulating the energies, the prosperity and civilization of the American people."

The Germantown Telegraph has never had a specimen of the Clairgeau Pear (grown on quince stock), that has been fit to eat. We have never heard of an instance of its attaining any excellence as a dwarf. But on pear stock, though quite variable, it is sometimes very good.

All subscribers wishing our seeds and plants should send six cents' worth of postage stamps—that is, two for the seeds—four for the Raspberries. The rest of the postage and all other expenses we bear. All who have not seen it, should send for our seed supplement which explains the whole matter.

Here is Doctor Chamberlin's acknowledgement of the prize won in the contest for the greatest yield of Blount's Prolific Corn, and paid by The Rural New-Yorker: "Draft of one hundred dollars came all right, for which receive thanks." The other seven successful competitors have not yet favored us with any acknowledgment of the receipt of their prizes.

Inexperienced fruit growers in selecting plants, are too prone to look at the top and to *overlook* the bottom. We would impress upon them the fact, that unless the roots are well developed and covered with small or fibrous rootlets, the *less* top the better. In selecting grape vines, e. g., the roots are all-important. The canes should be cut almost entirely away. It is *never* economy to purchase old vines.

We see an advertisement going the rounds indorsed editorially by some journals, of a tomato *very much* earlier and *much* better than any other variety. This is hard to believe. It might be, perchance, one or the other, though that would be saying a good deal—but we cannot believe it is both. It is probable that we have reached the limit of earliness in the tomato and that further increments in this direction will be made only at the sacrifice of quality.

It will be seen by those who read the Department "For Women," that Miss Ray Clark takes the position made vacant by the retirement of Miss Faith Ripley, who has ably and faithfully conducted it for several years past. We respectfully commend Miss. Clark to the entire confidence of our lady readers, assuring them that their inquiries, or communications of any kind, will receive prompt attention. It is, indeed, one of the objects of the Department that lady readers should therein communicate freely with each other, while the Department in this way is made interesting and instructive to all.

While we have shown our disposition to exclude all untrustworthy advertisements from our columns, and while we intend to exercise the same or a greater degree of caution in the future, we are the more desirous that those who *do* advertise in our columns should be made to know the value of this journal as an advertising medium. If our readers would kindly mention the Rural New-Yorker in any correspondence they may hold with advertisers, they would assist us in this matter. The increase in our circulation up to this date has been all that we could reasonably have asked, and we shall strive in every way in our power to prove to our readers as well as to our advertising patrons that we shall make generous returns for their confidence and support.

Peter B. Mead tells us, in speaking of remedies for plant insects:

If your "old man" smokes, utilize him, and put a plant before him with every pipe. The novelty of this thing will amuse him at first; but he will probably tire of it after a while. Keep him at it, however. Reason and wrestle with him. Tell him how bad it is for the bugs and how good for the plants. Keep him down to it. In the end, he will either give up smoking or take to the work kindly with the consciousness that at last he is doing some good in the world. Then your turn will come. Take him in your arms and kiss him and he will be the happiest man alive. There is too much smoke that does no good in the world.

The interesting article from which we take the above, will appear in an early number of the Rural.

Pomological.

SELECT APPLE LIST OF NEBRASKA.

We are indebted to Gov. Furnas for the following Report of a Special Committee of the Nebraska State Horticultural Society:

In 1877 the Nebraska State Horticultural Society announced a "Select list" of seven varieties of Apples, best suited in all respects, to culture in the State, both for market and family purposes; two summer, two fall, and three winter. These were Carolina Red June, Cooper's Early White, Malden's Blush, Fameuse, Rawle's Janet, Ben Davis, and Wincsap. An additional list of 12 varieties was given, adding to the foregoing, Red Astrachan, Rambo, White Winter Pearmain, Domine, and Talman's Sweet. At the meeting, January, 1879, the list was increased and slightly changed by adding Sweet Bough, Duchess of Oldenburg, Porter, Peck's Pleasant, Bailey's Sweet, and Willow Twig, and substituting Jonathan for White Winter Pearmain, the latter having of late "scabbed," so badly as to render it almost worthless. The Jonathan being further tested, has given universal satisfaction, and was therefore placed in its stead.

At the meeting last named the undersigned were appointed a special committee to prepare and present the points of excellence claimed, and found to exist in Nebraska for the list as it now stands, giving a full description of every variety. In furtherance of the objects for which the committee was appointed, the following report is presented:

The descriptions are principally from "Downing's Fruit and Fruit Trees of America," to which are added the peculiar or particular characteristics obtained by experience in Nebraska. The list presented has had twenty years' experience in the State and Territory. In every instance the varieties presented have shown greater size and finer color than Downing's descriptions call for.

While there are many other varieties, so far as tested, that show themselves well adapted to the soil and climate—and it is believed time and further experience will give them a place on our "select list"—the list as it now stands, comes as near perfection, in all essential requisites, as the Society has been able to find, coming within the limits of the number of varieties named. The General List *recommended* heretofore at various meetings of the Society, as having been found worthy so far as tested, has not been changed.

Summer Varieties.

Red June.—We call this apple simply Red June. The proper name, as given in standard pomological books, is "Carolina Red June." Tree very vigorous, upright; an early and very abundant bearer. Fruit, medium size; skin, smooth, deep red, sunny side almost purple, with light bloom; flesh very white, tender, juicy, brisk sub-acid; ripens after early harvest; fair table, excellent market.

Red Astrachan.—It is a Russian apple—hardy as an oak. Tree vigorous, upright, and an abundant and regular bearer; a little tardy coming into bearing; fruit rather above the medium, smooth, roundish; in sun, deep crimson; in shade a little greenish-yellow; flesh, quite white, crisp, moderately juicy, rich acid; not first quality for eating; good cooking and valuable for market. Ripens July to August.

Maiden's Blush.—Tree rapid grower, spreading head, and bears large crops; fruit medium, skin smooth, waxen appearance, pale yellow in shade, brilliant crimson next to the sun; flesh white, tender, sprightly, pleasant sub-acid; good for both table and market. Ripens from last of August to October.

Sweet Bough.—Known in our Society, and generally, by that name. Catalogue name, "Large Yellow Bough." Tree, moderately vigorous, round head, abundant bearer; fruit above medium, oblong, ovate; skin smooth, pale greenish to yellow; flesh slightly creamy, crisp, rich, sprightly, sweet; one of the best early sweet apples. Ripens July to August.

Cooper's Early White.—Has been tested by Mr. Masters, particularly, for 20 years. Is of Western origin; was brought to Nebraska by Mr. M. Its quality is above medium as an early variety; tree strong, robust, rather rough-looking; little tardy coming into bearing; fruit medium, roundish, little flattened, pale yellow waxened appearance, with a faint blush tinge of green at the stem; flesh white, crisp, sprightly; fruit makes a fine appearance; at our exhibits, at home and abroad, has attracted more attention than any other variety raised in the State; handles well, sells well, and is valuable in all respects.

Duchess of Oldenburg.—A Russian apple; while not of first quality, it always finds ready sale. Tree vigorous; head spreading; requires little or no pruning; fruit medium; skin smooth; finely marked and streaked with red, on a golden ground; flesh juicy, sprightly sub-acid; ripens late, August to early September; is a fine market variety, but must be handled at once, when ripe and ready.

Autumn Varieties.

Fameuse.—An old French variety, from Canada; tree moderately vigorous; round head; fruit medium, roundish, somewhat flattened; skin, ground of pale red on shady side, fine deep red in sun; flesh remarkably white, very tender, juicy, with slight perfume; a valuable market sort.

Rambo.—Tree vigorous, spreading, productive; fruit medium, flat smooth, yellowish white in shade, streaked and marble with pale-yellow in sun, and speckled with large rough dots; flesh greenish white, very tender, rich, mild sub-acid; good for table, kitchen and market; ripens October to December.

Peck's Pleasant.—Tree moderately vigorous, spreading grower; fruit above medium; skin smooth; when first gathered green, with a little dark red; when ripe, beautiful clear yellow, with blush on sunny side; flesh yellowish, fine-grained, crisp and tender, with a delicious, high, aromatic, sprightly, sub-acid flavor; commands high price in market where known; November to March.

Bailey's Sweet.—Tree vigorous, spreading, productive; fruit large, roundish conical, obscurely ribbed, yellowish, striped with red and sprinkled with minute dots; flesh white, tender, not very juicy, almost melting, honeyed sweet flavor; ripens November to March.

Porter.—Tree moderately vigorous, forming low, round, spreading head; fruit rather large; color clear, glossy, bright yellow, dull blush next to sun; flesh fine-grained, sprightly, agreeable, sub-acid; valuable market fruit; ripens in September.

Winter Varieties.

Ben Davis.—Tree vigorous, round, erect head, bearing early, regularly, and abundantly. Fruit above medium to large. Form roundish, truncated, conical, often sides unequal, splashed and striped with two shades of red. Flesh white, tender, moderately juicy, pleasant sub-acid; is not No. 1 as to quality, but one of the very best market varieties; keeps, handles and ships better than almost any other variety; is a beautiful and attractive apple, and, consequently, always sells well; is pronounced, generally, "the apple for the million."

Winesap is so well known everywhere and by everybody, that description seems almost needless. Tree rather irregular, not forming a handsome head; a vigorous and rapid grower; comes into bearing early, and bears regularly; very productive—holds its fruit late without injury—fruit medium, rather roundish—skin smooth, dark red—flesh yellow, and of a fine, crisp, rich, high flavor—ripens November to May—one of the best both for table and market.

Domine.—Tree a rapid grower, early and prodigious bearer—fruit almost fac-simile of Rambo in appearance, only a more lively color—a sprightly, juicy, long-keeping, winter variety—it is excellent from December to April.

Talman's Sweet.—Tree upright, vigorous grower, and very productive—fruit globular—when ripe, whitish yellow, soft blush on one side—flesh quite white, rather firm, fine-grained, and of a rich, sweet flavor—probably one of the best market sweet apples—ripens November to April.

Jonathan.—Tree vigorous, upright, spreading, round head, hardy, and very productive; an early and regular bearer; fruit medium, regularly formed, roundish, conical, or tapering to the eye; skin thin and smooth; ground clear, light-yellow, nearly covered by lively red stripes, deepening into brilliant red in the sun; flesh a little pinkish, very tender, juicy, with a high vinous flavor, almost equal to Esopus Spitzenburgh. With those who have tested it in Nebraska thoroughly, it is called "the coming apple." Its quality is superb as a table apple, and, when well known, it will always command good prices in the market; it is not so long a keeper as many other varieties. Thus far, the Jonathan has shown no "ills," and is good almost from the time of gathering.

Rawle's Janet—more familiarly known as "Janetting," "Gannet"—has a host of synonyms. Tree vigorous and spreading, not an early bearer, but regular when it comes into bearing; a later bloomer than any other variety, thus avoiding late freezes. For this reason alone, it is particularly valuable with us; fruit rather large, yellowish; shaded with red and striped with crimson; flesh whitish-yellow, tender, juicy, pleasant, sub-acid, is both excellent and popular, a good keeper, one of the most valuable market varieties; it is classed in Nebraska, "Iron-Clad."

Willow Twig.—Tree vigorous, spreading somewhat drooping; fruit medium, light yellow, with russet dots; flesh yellowish green, not very tender; pleasant sub-acid; valuable for late keeping, and of the best market varieties.

Robert W. Furnas, E. N. Grennel, V. C. Utley, Hiram Craig, J. T. Allan, Samuel Barnard,

Recommended List.

At the annual meeting of the State Horticultural Society, March 1, 1875, J. H. Masters, Hiram Craig, R. W. Furnas, S. B. Hobson and J. T. Allan, were appointed a committee to revise the list of fruits recommended for general cultivation, and instructed to report only those varieties which had been thoroughly tested and proved successful.

The committee made the following report, which is not as extensive as it might have been, as it is deemed advisable not to recommend too many varieties, believing it best to give attention to those which are most desirable for profit, combined with excellence of flavor:

Summer Apples.—Early Harvest and Summer Pearmain, first quality; Early Pennock; Buffin's Early, best early variety; Williams' Favorite.

Autumn Apples.—Jersey Sweet, hardy and reliable; Gabriel, one of the very best; Fall Wine; Drap d'Or, very hardy; Hubbardston Nonsuch, a good bearer.

Winter Apples.—White Winter Pearmain, very successful; Yellow Bellflower; Roman Stem, good for late winter; Clyde Beauty, excellent for early winter; Grimes's Golden Pippin, of fine quality; Swaar; Perry Russet, very profitable; Esopus Spitzenburgh; Northern Spy; Red Detroit, hardy but slow bearer.

The committee appointed at the last meeting of the Horticultural Society add to this list the following:

Early Red Streak, Sweet June, Autumn Strawberry, Autumn Swaar, Early Trenton, Sops of Wine.

Miscellaneous Fruit List.

The fruits in the following list have all been well tested in Nebraska from ten to twenty years, and are presented by the State Horticultural Society, as, in most respects, worthy and reliable.

Crabs.—Transcendant, Hyslop, Hewes.

Pears.—Summer—Rostiezier, best early; Bloodgood, early and good; Doyenne d'Ete, small, very sweet; Buerre Gifford.

Autumn—Buffum, an erect, strong grower, bears well; Howell, ranks among the best; Seckel, unsurpassed in flavor; Duchesse d'Angouleme; Buerre Diehl, fruit large, a good bearer; Louise Bonne de Jersey; White Doyenne, a prolific bearer; Sheldon, does well; Doyenne Boussock, a strong grower; Buerre Bosc, recommended by the president.

Winter—Buerre d'Anjou, best winter pear; Lawrence, does well; Vicar of Winkfield.

Cherries.—Early Richmond, best for profit; Belle Magnifique, very successful; Reine Hortense; English Morello, very profitable; May Duke.

Plums—Jefferson, Miner, Lombard, Green Gage, German Prune, Imperial Gage.

Peaches.—Hale's Early, Crawford's Early, Early York, Stump the World, Troth's Early, George IV., Smock, Crawford's Late, Ward's Late, Morris White, Old Mixon, Early Beatrice, Amsden, Alexander, Newington Free, Jacque's Rareripe, Heath Cling.

Apricots.—Breda, Moorpark, Early Golden, Peach, Hemskirke.

Grapes.—Concord; Hartford Prolific, best early; Delaware, better than Concord and equally hardy; Iona, Ives's Seedling, Martha, Creveling, Lumelan, Salem, Goethe (Rogers's Hybrid), very fine and hardy.

Strawberries.—Ellsworth, Agriculturalist, Green Prolific, Wilson's Albany.

Blackberries.—Early Wilson, very reliable; Kittatinny; Snyder.

Gooseberries.—Houghton's Seedling, Whitesmith, Cottage Girl, Smith's Improved.

Currants.—Red and White Dutch. White Grape, Cherry Versailles.

Those who grow fruit for market will find a very great advantage in assorting fruit before placing it on sale. A few extra apples in a barrel or basket show an unfavorable comparison with the inferior. A few inferior destroy the value of the superior. Perfect apples, of uniform size, color and shape, always command superior prices. Better throw away the inferior than mix them with the extra and select. In matter of transportation, it costs as much for the poor as the good. Sales and profits are largely in favor of the latter.

Planting Fruit Trees.

For an orchard of Standard Apples, Pears, Cherries, Plums, Apricots, Prunes, Peaches, Nectarines and Quinces, the soil, excepting new grounds, should, before planting, be made mellow by repeated plowing, and kept constantly cultivated for several succeeding years. For this purpose, potatoes, beets and other low-headed crops are best, as they give the trees the frequent benefit of the plow, cultivator and hoe, and leave them in the full enjoyment of the necessary stimulants of the air and light. Every species of fruit tree and plant prefers a peculiar soil in which it flourishes best, and requires less manure and culture, producing better fruit than in soil less congenial, yet so different are the various species that almost every soil, from the peat bog to the sandy plain, is adapted to fruit, and all the intermediate soils between these wide extremities are adapted to various species.

The first care on getting trees home should be to dig a hole in the ground, fill it with water, stir in enough soil to make it moderately thick, and then plunge the roots of the trees in it until they are thoroughly coated with mud. Then keep trees of each variety tied together as they are received (unless the branches are so large that the soil can not reach all the roots, in which case they should be divided), "heel them in"—that is, bury the roots, to the depth of four or five inches, in loose, well pulverized soil, in such manner that when ready to plant, you can pull up each variety by itself, without uncovering the remainder. By so doing, you will have the root of each tree damp and in good condition when planted. As trees are often killed and always injured by being left to the mercy of the hot sun or cold winds until all can be regularly planted, it will be seen that these precautions are very important.

Should trees be received in a wilted or frozen condition, as is sometimes the case from unavoidable detention on the road, they should be at once buried in the earth to within a few inches of the tops, and there left until they recover. If frosted however, the roots should not be touched with the hands, or subjected to the rays of the sun or any artificial heat, before they are placed in the ground.

Let the hole be dug from eighteen to twenty-four inches in depth, and large enough (the larger the better) to receive the roots without cramping; throw back and scatter the sub-soil, and partially fill the hole with good surface earth, so as to fit it for the tree to stand about as deep as when in the nursery.

Prune off the ends of the roots, leaving them fresh and free from bruises, and put the tree in the place prepared; cover the roots lightly with rich, mellow earth, pour on water, and work the tree gently up and down, alternately adding earth and water until every cavity is well filled; or, better, work the earth thoroughly among the roots with the hand.

Trim up the tree to four or five limbs suitable to form a top, and cut each of the side limbs back to a bud, within four or five inches of the body, leaving the central, or leading, limb from eight to twelve inches long; but where there are no side limbs suitable for this purpose, the tree should be divested of all its branches and headed back to a hight proper to form the top. If planted in autumn, this pruning should be deferred until early in the spring; but it should by no means be neglected altogether, as nothing so much conduces to the success of transplanting and to the subsequent beauty and prosperity of the tree.

If the trees come to hand while the earth is too wet to receive them, bury their roots until the condition of the earth is more favorable. If the roots become dry from too long exposure, place them in water, and let them remain there from eighteen to twenty-four hours. To protect them from the drought, nothing is so effectual as to spread a covering of straw, loose litter or leaves about their roots after the transplanting is completed. This keeps the earth light and moist, and renders the too often injurious process of watering unnecessary.

AGRICULTURAL NEWS.

A company has been organized to construct an irrigating canal from the Platte River, Colorado, eastward to the great plains south of Denver. Length 86 miles; width 20 feet; depth several feet, cost $100,000, results the cultivation of 60,000 acres of the finest wheat land in the Union....In Lawrence Co., N. Y. 200,000 cows net $5,000 a day profit on their milk....The Ayrshire Breeders' Association held their annual meeting lately in Boston. In the treasury $908.33. It was voted to petition Congress for stringent legislation relative to stamping out pluro-pneumonia. Officers for the current year:—Pres., Dr. Pierce of Providence, vice-presidents; Peter Coutts of Cal., J. L. Gibb of Canada, J. F. Converse of N. Y., Alonzo Libby of Me., J. L. Turner of Texas; Sec. and Ed. of Ayrshire Herd Book, J. D. W. French of North Andover, Mass., re-elected; Treas., J. F. Brown of Providence, R. I.; Exec-Com. W. Birnee of Springfield, Mass., S. M. Wells of Westfield, Ct., C. H. Hays of Portsmouth N. H., J. F. Hyde of N. Y., Herbert Meriam of Weston, Mass....The officers of the lately striking Butchers' Union of Chicago have misappropriated $7,000 of the funds raised to support the strike—much wrangling as to which of them is the guiltiest....Jim Keene and his wheat combination are, it seems, in the meat business, too. While the prices of meat were highest in Chicago they unloaded a considerable quantity, and then during the recent heavy decline they bought in heavy quantities, and the rise which began on Monday last was due to their influence....There was a general snow storm in Cal on Monday—an application of a dressing of the poor man's manure....Last spring a bill allowing farmers to sell leaf tobacco of their own production to other persons than licensed dealers without paying special tax was referred to the Committee on Agriculture, of the National House of Representatives, which has just reported it favorably to the House. The manufacturers now insist that it should properly have been referred to the Com. on Ways and Means, and strenuously oppose the passage of the bill. It has a very strong support, however, among those who from policy or a principle of fairness, are beginning to pay attention to the agricultural interest....On Jan. 26th, a bill was introduced into the Lower House of Congress, By Mr. Mason of N. Y., to incorporate the Cosmo-American Colonization and General Emigration Bureau of the United States. The bill incorporates Thurlow Weed, Cardinal McCloskey, and twenty-eight others as such bureau, the capital stock of which shall be not less than $1,000,000 and may be increased, and the object of which is to be the encouraging, promoting and conducting of emigration from the overcrowded cities and other districts of the United States, and from Great Britain and other parts of Europe to the several States and Territories of the United States needing immigrants, and for other humane and commercial purposes....Owing to the disease of the vine, the area of the vineyards in France has decreased by about four hundred thousand acres since the year 1874; though a great portion of the soil in which the vine formerly flourished is unfit for any other culture. The area of vineyards in the country is at present about five million acres. ....John Bright advocates as relief for Irish troubles that Parliament should appoint a commission with full power to sell the farms of land, lords to tenants willing to buy them and advance three-fourths of the purchase money, the principal and interest to be paid in 50 years—the sale to be compulsory only where the land is owned by London companies or guilds, which is the case with large tracts here and there....."Fluke" on the liver is a very fatal disease among sheep near Banbury England....One of the boys on an English reformatory ship has died from trichinosis, although the pork had been thoroughly boiled for a long time—hitherto considered certain destruction to the parasites. Of course, it is noised abroad that American pork formed part of the dietary....The importation of pork from this country in any shape has been prohibited in Spain, Italy and Greece through alleged fear of a trichinosis epidemic....The largest shipment of grain that ever took place down the Mississippi started from St. Louis to N. O., week before last; 270,000 bushels of corn loaded on barges towed by a powerful steam tug....In 1879 nearly 22 million pounds of foreign wool were sold in Boston and 25 million pounds imported into N. Y., while woolen manufactures worth $20,773,785 were also landed here. Plenty sales for more home-grown wool....Salt is now being manufactured for fertilizing purposes exclusively—not classed, of a reddish tinge, price about $6 25 per ton, So says the Grange Bulletin....The National Grange is circulating a petition to Congress to amend the patent laws so as to make the manufacturer and vendor of patent articles alone responsible for infringement—success to that check upon patent swindlers and extortioners!....Several sales of land are reported near Gainsville, Ga., at 100 per cent. advance on last year's prices....The Ag. Dept. of Ga, estimates that 80 per cent. of the farmers who raise their own supplies make money, while 75 per cent of those who give liens and mortgages and pay high interest on supplies advanced, don't make both ends meet ... Mule market very lively in Ky., prices advanced $20 on good mules, but, like good Indians, they're scarce....The mule and horse trade in the South is said to be better than since '73....There's a small "boom" in broom corn culture about Danville, Ky....$5 per 112 pounds is the contract price for 300 acres of hemp to be raised this year in Fayette Co., Ky....20,000 bales of hemp "to arrive" have been lately sold here at 5c to 6¼c... Old hemp sells in interior Ky for $6 per 112 pounds; new, for $5; good seed very scarce and high-priced.... The convention of the butter-tub manufacturers of Vt., N. H. and N. Y., met at St. Albans, Vt., on Jan., 29 and advanced the price of tubs an average of one cent each... The Western Iron Association met last Friday at Pittsburgh and put up prices on iron....

For Women.

CONDUCTED BY RAY CLARK.

TO THE "RURAL" LADIES.

In the last issue you were informed of the departure of Miss Faith Ripley, by an announcement from her own pen. While entertaining personal regret that your relations have been severed, it is hoped that your interest in the "Woman's Department" will remain the same.

As her successor, I ask the continuance of your hearty co-operation in this particular work. The object is to make the department as interesting and instructive as possible. To do this your kindly aid will be needed now as in the past.

In soliciting articles it is left to your own judgment as to the selection of topics, but it is preferred that the matter be condensed as much as practicable. Mutual criticism thereby furthering the knowledge or thought of a particular subject—is requested. Prose is at all times of more value than poetry. Accept my best wishes to engender pleasant relations. Yours truly,

RAY CLARK.

HOME ECONOMIES.

I THINK the depth of woman's intellect is well proven in our "Club," even to masculine minds. Indeed, I began to fear that the current of their minds ran so very deep that we, who quaffed

FIG. 39.

nearer the surface, would find nothing to suit our needs. I fear, the silent way most of us accept and enjoy our part of the "RURAL" would not be justified. When we look for so much, ought not more of us contribute something to aid others in well-doing?

The many ways of making home beautiful without great expense, are duly appreciated by the busy energetic mothers, in farmers' homes, who love all beautiful pleasant things. They know how hard it is to procure the little luxurious comforts found in village homes. The longings to feast the eyes on art and beautiful surroundings, are no less strong, though unsuspected by their loving husbands toiling so faithfully to make home happy. How could they complain or add to their cares by wishing for pretty tasteful surroundings beyond their strength to supply and means to furnish.

The spirit of "Jessie Seabright" in "Log-Cabin Sketches" is needed everywhere among farmers' wives; a hungering for the beautiful and an indomitable energy that will surmount every obstacle to obtain it, even in a "log cabin."

A determination to make her home a comfortable abiding place for her husband and children and a talent to make the most of what one has at hand, are what one needs, as a farmer's wife especially. I have heard of one who threw into the rag-bag nearly enough to clothe a family. She was a farmer's wife who would have been glad of the extra money that would have been saved had she known how to make the best use of available material. The many hints of economical using of materials have been of such service to me that perhaps a few hints of mine may also benefit others.

A cloak was fixed nicely in this way:—The cloak was plain beaver, cut long sacque. We got three quarters of a yard of black velvet on the bias, two and one-half dozen buttons, one yard crinoline. In the house was a well-preserved black satin vest, out of date. We determined to sacrifice that for piping. The cloak was cut over, close-fitting back, and with velvet collar; cuffs, pockets and facings also of velvet, corded with the satin. The cloak looked very nice indeed. A slight expense made it very satisfactory to the owner.

Old Hats:—Did you ever find old hats a nuisance? Shall I tell you what to do with them? Old straw hats may as well be burned, though sometimes the brims may be sewed together for kettle mats, saving your table many a black mark. But wool or fur hats may be serviceable. A fine soft felt, binding worn rather rusty, and altogether shabby, was served this way:—Binding ripped off, thoroughly scrubbed with hot, clean suds; then a dye of extract of log-wood and blue vitriol took the rusty look away, and left it black as new. Some gros grain ribbon neatly stitched on for binding and band, and the hat was given a new lease of life, as best.

I found an old Scotch cap the other day. I plunged that into suds, then dyed it, and with a bit of silk vest-binding, a fore piece of new enameled leather, made the cap do nicely for a school cap for George. Now little mothers, economically inclined, try soap-suds and dye on old hats and rid the house of a nuisance.

Old waterproof cloaks were made over for our school girls' balmorals, by putting in black dye and pleating on ruffle of new waterproof with red flannel pinked, and trimmed with plain bias band above. One-half yard red flannel brightened two balmorals, and the girls are quite proud of them. As the cloaks were very rusty and outgrown, they were much more serviceable as balmorals, and will be durable. May these hints help some worker like myself. VINA.

THE TEACHER'S MANUAL OF DICTEE.

FOR a long time the natural desire to improve and extend education in the higher branches, had caused the beginning of school life and training to be neglected, but the tide of attention seems now to be turning the other way, and there is a notable tendency to put the best teachers and the best appliances into the primary schools. There, the best and most enduring impressions can be made; there, the young minds are like fair white paper,—blank; and even the muscles which must work together with electric readiness for the production of euphonious and intelligible speech are as yet neither warped by ill use, nor inert through disuse. The improvement of *elementary* instruction, of the primary grades of schools—is now the foremost care of the ablest friends of general education, not only with us, but in Great Britain, France, Belgium; and other countries. Entirely new modes are adopted: the first steps are made easy and pleasant, and in lieu of the book held before the little learner's eyes until it inflicts myopy and induces hatred of books and letters, the school room is made an interesting, happy place; the slate and the blackboard are chief means of gaining acquaintance with letters, and pleasant, natural reading is acquired without any of the bewildering trouble of spelling or tasking in any way with very little use of a book. A *desire* to learn is first infused, and then the child's literary education is as good as secured. The teacher is only a useful aid after that, and not an absolute necessity. There is no urging or driving to be done. If the art of Reading is well taught from the beginning, the faults that spoil its effect upon the hearer get no hold, and it soon becomes easy to the learner, and delightful to the listener. The arts of Spelling, and of Pencil-craft (Writing and Drawing) are less readily taught, and it is especially to this, although in great part to Voice-culture too, that the French method of Dictee applies. It is said to abbreviate the time and toil required for the mastery of English spelling very greatly, while it promotes art and precision in pencil-work, and secures full and complete enunciation and correct pronunciation. It is certainly founded on reason, and its method of exercise in spelling is that which we all eventually fall into—that of calling up in the mind the figure—the detail of letters—of any word that we have seen but once, perhaps, and copying them as we write. Children soon learn to recall these letters if there is some inducement to notice them, just as they recall items of dress or other objects that have arrested their attention, and there seems no reason why we should spend such a length of weary, disheartening time in vainly trying to teach spelling by the ear.

The manual in question gives entirely original definitions of vowel sounds, consonant sounds, and the classes of each. These are questions that lie at the very root of language, and will greatly interest every true teacher. The dictee uses a very simple but neat and linear shorthand to give, visually, the pronunciation of the words to be spelled, in order not to show the letters, which are to be recalled in the manner above alluded to. This secures a thorough drill in pronunciation and in the phonetic features of every word, but only the current mode of spelling is shown or taught.

FIG. 40.

FIG. 41.

A curious feature of the work is that it is printed from electric pen stencils. This is done in order to give illustrations in place with the lettered text.

W. G. W.

HAVE the courage to give occasionally that which you can ill afford to spare. Giving what you do not want nor value neither brings nor deserves thanks in return; who is grateful for a drink of water from another's overflowing well, however delicious the draught!

DESCRIPTION OF CUTS.

NOS. 40 AND 41.—BACK AND FRONT OF HOME-DRESS.—The dress is of dark violet cashmere; the skirt is trimmed with one deep kilting, and in front with twelve narrow kiltings; the tunic and jacket are deeply bound with Pekin, and trimmed with fringe. The back is shown in No. 40, and the front in No. 41.

No. 42.—HAT FOR LITTLE GIRLS.—Is of gray beaver, trimmed with ostrich-feather trimming and Sultan satin ribbon.

No. 39.—FAN.—This is a fashionable style of fan of feathers, mounted in mother-of-pearl. The feathers should match the color of the dress with which the fan is used.

CORRESPONDENTS' CORNER.

THIS is a question which may be out of your line but it is one which we have not been able to settle among ourselves, and would like to have your opinion on it, as editors know almost everything. A young man wishes to take a young lady to (say) Pinafore; she has sisters, both older and younger than herself. Should he also ask them, and if so, how far should this rule hold? Another of similar sort: Two young men are quite intimate and one of them gets married. His bride and young man number two, are not friendly, though acquainted, and he is not invited to the wedding. Is it his place to call on the couple after they get to housekeeping? CORRESPONDENT.

The first question we leave to some one better versed in etiquette than ourselves, merely suggesting that it is an open question, to be settled by the individual. To the second question we would reply that, if the young gentleman wishes to conform to the rules of society, he will not call. If invitations to the wedding were issued, and he a former friend, was ignored, it should be presumed that his company is not wished, unless a special invitation is afterward received from both parties.

WHERE can I get Lemon's Analine Dyes, and what do they cost? M. E. B.

ANS.—They can be procured at almost any grocer's or druggist's store. Price 25 cents a bottle.

WILL you please give a recipe for removing mildew? MRS. F. M. B.

Linn Co., Mo.

ANS.—Presuming the question to refer to mildewed clothing, we would say that there are several recipes, one of which is fresh buttermilk. Dip the article in the milk and expose it to the sun. We do not vouch for the efficacy of this or any other mode, however, as the removal is a very difficult process.

How shall I cut the girls' school dresses? Dark cotton plaid. Girls ten and twelve years of age; style of cuff and collar, also; and aprons suitable for school. M. A. A.

Canandaigua, N. Y.

In issues of earlier date will be found cuts and illustrations of dresses, aprons, etc., suitable for children; to these we refer the above questioner.

Literary Miscellany.

NEIGHBOR JONES.

I'm thinking, wife, of neighbor Jones, the man with the stalwart arm—
He lives in peace and plenty on a forty-acre farm.
When men are all around us with hearts and hands a-sore,
Who own two hundred acres, and still are wanting more.
He has a pretty little farm, a pretty little house:
He has a loving wife within, as quiet as a mouse;
His children play around the door, their father's heart to charm,
Looking just as neat and tidy as the tidy little farm.

FIG. 42.

No weeds are in the cornfield, no thistles in the oats;
The horses show good keeping by their fine and glossy coats;
The cows within the meadow, resting 'neath the beechen shade,
Learn all their gentle manners from a gentle milking maid.

Within the field on Saturday, he leaves no cradled grain
To be gathered on the morrow for fear of coming rain;
He lives in joy and gladness, and happy are his days;
He keeps the Sabbath holy; his children learn his ways.

He never had a lawsuit to take him to the town,
For the very simple reason there are no fences down;
The bar-room in the village for him has not a charm;
I can always find my neighbor on his forty-acre farm.

His acres are so few that he plows them very deep;
'Tis his own hands that turn the sod, 'tis his own hands that reap;
He has a place for everything, and everything in its place;
The sunshine smiles upon his fields, contentment on his face.

May we not learn a lesson, wife, from prudent neighbor Jones,
And not sigh for what we haven't got—give vent to sighs and groans?
The rich arn't always happy, nor free from life's alarms,
But blest be those who live content, though small may be their farms. [Atlanta Constitution.

WILFUL'S CHRISTMAS EVE.

CHAPTER I.

(Continued from page 78.)

"But you need not wake papa, nor stamp on my toes to emphasize your protest," expostulated Gertie. "Not even my stepmother, though she's a wonderful woman, can marry you against your will; and you have one, Lella."

"But she can mortify me, and humble me, and degrade me in my own eyes, and—"

"The gradient is one in twenty," broke in Mr. Lockwood, rousing himself with a yawn. "What did you ask me, Gertie? Bless my soul, how cold it is! How's the weather, my dears?"

"The wind has dropped, and the country is hidden by the snow that has fallen steadily for the last hour," answered his daughter, rubbing one of the windows to look out. "It will soon be quite dark."

"And there's no moon, and they keep the sorriest of horses at the inn from whence we shall have to drive to the Priory," said her father, dismally.

"Perhaps the General will send his own carriage for us," suggested his daughter.

"Not very likely. He values his horses too much to let them undertake such a journey after nightfall; eight miles each way, and the worst of roads; the valley that lies between the moors and his place will be almost impassable after such snowstorms."

"Then don't let us attempt it," said Lella. "Let us behave like sensible people, and go back to London."

"If Miss Darton had behaved sensibly and truthfully in the first place," cried an acrimonious voice from the opposite corner, "we should have been safely housed at the Priory before the snow commenced. It is hard, after years of incessant efforts to mould a character into rectitude, to discover deceit and trickery where one might reasonably have looked for something better."

"Don't Lella! what's the use?" whispered Gertie to her friend, as the latter would have commenced a passionate retort. Think of papa, if you won't have pity on me! It makes him so uncomfortable."

Lella thought Mr. Lockwood deserved all he had to endure for his spiritless submission to his wife's tyranny; but she loved his daughter, and for her sake closed her lips firmly, drew her veil over her hot cheeks, and sat in rather sullen silence, while

the train labored on through the snowdrifts and the deepening obscurity.

"Once or twice there was a temporary stoppage, and the speed was lessened more and more; but the occupants of that first-class carriage were either drowsy or absorbed in their own thoughts, and failed to notice these ominous signs of the difficulties with which the engine-driver was contending, till the train came to a standstill altogether.

"But this isn't —— Station: I can't see the lights!" exclaimed Mr. Lockwood, letting down a window, and attempting to look out. "Gracious me, what weather!" as the snow was driven in his face, nearly blinding him. "Guard!—I say, guard, where are we?"

"Four miles and a-half this side——, sir, and snowed up!" was the reply.

"But—but what are we going to do?"

"That's just what every one else is asking, sir, and I'm sure I can't answer them. This is about the wildest bit of country the line runs across; but there is a village some two miles off, where you'll maybe get shelter till the morning."

Mr. Lockwood drew in his head, and regarded his companions with such an air of dismay, that Lelia found it irresistible, and burst into a merry peal of laughter.

CHAPTER II.

UNDER WHAT SIGN?

As the discomfited Mrs. Lockwood refused to imitate the other passengers, who set off in a body to make the best of their way to the village of which the guard had spoken, she and her companions soon found themselves comparatively alone. At first she decided that the most dignified proceeding would be to remain where they were till one of the railway officials had procured a vehicle; but with some trouble they succeeded in convincing her that nothing of the kind was to be had; and the cold becoming more and more intense, she consented at last to make an effort to reach the village on foot.

But she had so sharply berated the guard, whom she persisted in considering to blame for what had happened, that he gave the necessary directions in the gruffest and curtest manner. The equally angry lady threatened to report him for incivility, and hurried Mr. Lockwood away, when he would have bespoken the services of the stoker as their guide. The consequence was, that after wading through the snow till they were nearly exhausted, and Baker, the maid, was in tears, the fact became evident that they had lost themselves.

"What's to be done now?" asked Mr. Lockwood, as they huddled together under a bank that sheltered them from the drifting snow. "I think we had better make our way back to the train."

"I can't do it," answered his lady, faintly. "You are cruel to propose it. I should perish in the attempt. You had better leave us here while you go in search of assistance."

But Gertie and Lelia clung to his arms, protesting that he should not run any such risks.

"It is his duty to do it," Mrs. Lockwood muttered selfishly.

"And it is ours to prevent it," Gertie took courage to retort. "We must and will keep together, let what may happen."

Here Baker burst into louder weeping, and wished she had never been prevailed upon to leave London.

"My good girl, pray be quiet!" implored Mr. Lockwood, almost beside himself with apprehension for the safety of the four helpless women dependent on his exertions for their rescue. "Lelia! Gertie, my darling! didn't the guard say something about a roadside-inn somewhere in this direction?"

"Yes, but mamma would not hear him out, and one cannot tell how far astray our wanderings have led us."

"I can see a light!" cried Lelia, suddenly, "and at no great distance. See where it shines out again, as if somebody had drawn back a curtain to look out at the night!"

"Thank Heaven!" ejaculated Mr. Lockwood, fervently. "It must be the inn of which we were speaking. Courage, girls; there's a chance of getting shelter at last. Wipe away your tears, Baker; you'll see London again, never fear. Now, wife of mine, it's *your* duty to make another effort; so come along, and let us all try and reach the house we have been lucky enough to find."

Mrs. Lockwood was too much exhausted to resent this sly thrust, and hung heavily upon his arm as he strode manfully on. Cheered by the steady glow of that bright lamp, everyone followed his example; but the difficulties of the route were tremendous; they soon found that they were traveling across country; that there were low stone walls to climb and drifts to wade through. Twice Baker, who was short and fat, sank into a hole, where she stuck fast, howling dismally, till Gertie and her father came to her assistance; and everyone was so exhausted, that even Lelia's bright orbs shone through tears of thankfulness, when they found themselves standing in front of a long, low, old-fashioned dwelling, that looked delightfully snug and pleasant to the weary party.

Mr. Lockwood's rap at the door brought to it a portly dame, whose cry of mingled astonishment and terror caused a door on one side of the passage to be thrown open, and Lelia fancied she caught a glimpse of a couple of masculine forms standing just within it.

But Mrs. Lockwood, whose spirits revived as soon as she knew she was safe, cut short the civil explanations of her spouse, by addressing the woman herself.

"Are you the landlady of this inn? Then let chambers be got ready for us directly. There must be good fires lit in them, and I shall require a hot bath, and some white-wine whey, and my bed carefully warmed; and pray don't keep us standing here, but show us where we can thaw our hands and feet, and take off our wet wraps."

The woman hesitated a moment, then ushered her unexpected guests into an exquisitely neat kitchen, where a huge wood-fire was burning on the hearth. Even Mrs. Lockwood was too glad to bask in its glow to be as fastidious as usual, and condescended to say it was very comfortable. Long after she had retired with Baker to the neat little room hastily set in order for her reception, Gertie and Lelia continued to sit with their feet on the hearthstone, drying their skirts, shaking the snow-crystals out of their tresses, and chatting merrily with their father, who pronounced himself too comfortable to stir from the huge old leathern arm-chair in which he was reclining.

"I wonder whether we shall be able to continue our journey to-morrow?" observed Gertie, as, in pity to their yawning hostess, they rose at last to follow her upstairs.

"I hope not," answered Lelia. "I hope we shall be snowed in by morning, and that there'll be no signs of a thaw till the larder begins to be empty."

"You foolish child, you'd soon find yourself moped to death in a country inn."

"Not I!" was the gay reply. "I'll find myself plenty to do, and when all other resources fail me, I'll sing all my old songs, and make Baker and her mistress warble choruses to them."

The notion was so absurd, that both girls went upstairs laughing over it; till Lelia, chancing to look back, saw that the door in the passage below had opened again, and as before, she caught a glimpse of masculine figures.

"I fancy we are not the only belated travelers staying here to-night," she observed to Gertie, who was, however, too well satisfied at the sight of a comfortable bed to discuss any subject but the relief of resting her aching limbs upon it.

Youth and their excellent constitutions enabled the young girls to shake off the ill effects of their fatigue and exposure. They slept long and soundly, and were already at their toilette, when Baker came in, red-eyed and dismal, to announce that her mistress was too ill to rise and firmly believed that she was going to have rheumatic fever.

Gertie dutifully proceeded to her chamber, and came back to confide to her friend that Mrs. Lockwood's indisposition seemed to proceed principally from the state of the weather. There was every prospect that Lelia's wish would be gratified, for the snow continued to fall so steadily that all the approaches to the cottage were blocked, and their hostess predicted that some days must elapse before they would be able to cross the wide expanse of moor that lay between her dwelling and the nearest town.

"Did you remind Mrs. Lockwood that it is our duty to be resigned to the inevitable?" asked Lelia, saucily, as they ran down stairs together.

"No; I behaved myself, which is more than you know how to do; was civil and sympathizing; promised to send up as dainty a breakfast as we can procure here, and to ask for the latest newspapers, and a mounted messenger to carry to the Priory a report of our position."

"I hope you'll not be able to get one," said Lelia. "I shall protest against any poor fellow risking his life for such a purpose. I'd rather spend my Christmas here a thousand times, than be compelled to be civil to my lord the Viscount."

"Now, for my part, I should dearly like to see him," Gertie declared; "but where are we to take our matin meal? Are we to go into the kitchen again? Oh! no, the cloth is spread here," and she stepped through the door Lelia had noticed on the previous night, and found herself in a low-ceiled, quaintly-furnished parlor. "Empty eggshells and crumbs of bread! Was papa too hungry to wait for us?"

"If so, he has not breakfasted alone," said her friend, pointing to the two empty cups on the table.

"Oh! please, miss, please 'm," said a shy, awkward handmaiden, who had followed them into the room, "missis is boiling some coffee and baking some cakes for you, and I'm come to clear off these things out of your way."

"Who has breakfasted here? Cannot we have the room to ourselves?" asked Lelia.

"Please, 'm, there ain't no other, only the kitchen, and it's the two gentlemen, Mr. Lee and the t'other one," the girl answered incoherently.

"I told you there were people here," said Lelia, "What a bore!"

"I wonder who they are?" mused Gertrude. "They call everyone *gentlemen* at these places. Perhaps they are commercial travelers."

"What they call bagmen in 'Pickwick,' I suppose," added Lelia, advancing towards the bay window. "I think I've seen them sometimes at Brighton — Jewess-looking fellows, who talk through their noses, and wear a quantity of jewelry. I hope they will have the good sense to confine themselves to the kitchen."

A smothered sound, very much like a laugh, at the other end of the apartment, made her turn sharply round, and stand transfixed and crimson with confusion; for two young men, who had been seated by the fire reading, had risen, and were bowing politely to the fair intruders.

Mr. Lockwood, who had been in the porch, surveying the weather, bustled in just then, and his genial manner relieved the embarrassment that had fallen upon the quartette.

"The Reverend Norman Lee," he read off the card the elder of the young men put into his hand. "Very happy to make your acquaintance. I was an Oxford man myself. And so you are doing a little quiet reading here"—he glanced at the Greek author open on the table—"with your—your brother?"

"Only by adoption," said the other, with a smile. "My name is Robert Sidney; and Lee, who is my old college friend and tutor, beguiled me here for less studious purposes than renewing our acquaintance with the classics. But this snow has spoiled our shooting, and made prisoners of us."

"Then come and be introduced to your fellow-captives—my daughter, Gertrude; my wife's ward, Miss Darton."

Mr. Lockwood was a little vexed that his cordiality to his new acquaintances was not seconded by Gertie or Lelia, who seemed to have lost all their customary ease of manner; but he endeavored to atone for it by his own civility, and would not listen to Mr. Lee's proposal that he and his friend should carry their books into the kitchen.

A PLEA FOR ONIONS.

I NOTICED in the RURAL an article from an English paper regarding *Onions*, and feel inclined to believe the fact of their *usefulness* as a medicine, in this wise—During the prevalence of epizootic in this country we had 400 bushels of onions—prices were very low, and when the disease came in the neighborhood, we commenced feeding the onions at the rate of a peck twice a day for each horse. The consequence was that in our case the epizootic was *very* slight—only old horses showing *any* symptoms, while all around us it was very bad. Of course, we gave the onions all the credit, not knowing any other difference of treatment.

Canada. ANNIE L. JACK.

A CHRISTMAS AFTER-THOUGHT.

MRS. ANNIE L. JACK.

Now the holidays are over, and we settle down to the regular routine of winter work, it is safe to ask one's-self if the "play's worth the candle," and if we are satisfied with the results in holiday making? Does Christmas mean to us but the interchange of gifts, given and received because such is the custom? Does it mean to the children simply Santa Claus and turkey, or are there deeper and nobler aims that influence our lives after the giving and receiving is over?

In "Every Day House" the living rooms are trimmed with ground pine, holly, and other evergreens; cards are brought out that speak of good wishes, and hung among the greenery.

The Christmas tree stands in the parlor until January is fairly on its way, and each child leaves part of its fruit to be distributed to some of the little ones of the neighborhood, who speak of *the* tree as if it were public property to enjoy. We like this. It adds to our pleasure that it is so, and we hope in this way to make the holidays *last* a little way into the year.

But I often think these days are, with too many of us, like a Sunday face that is put off with our best clothes when we go out to fight with the world.

How can we say a mean or slanderous word of the neighbor to whom we addressed the fervent "Happy New Year!" or think hard thoughts the next week of the friend to whom in the melting holiday mood we have sent a timely gift? Yet such is human nature; and it would be well for us all, if in our homes we could inculcate the charity for all men, that would lead us to make New Year wishes last "all the year round."

MARSH'S CYLINDER-BED FOOT LATHE.

THIS is the most perfect combined machine we have ever seen, and is made in the most finished and workmanlike manner. Its great merit lies in its capacity for doing so many different kinds of work. It is a machine shop, in itself, with tools, lathe, saws, (circular and scroll), and attachments. With this lathe a farmer is in a measure independent of the machinist; and the boys may acquire a familiarity with working in metals and wood, that will be of service to them in any station of life; and for those out of employment, the possession of this machine is a steady living. The Battle Creek Machinery Co., Battle Creek, Mich., will sell it for $32.50, and we give it away for a club of 95 subscribers.

PHILADELPHIA BROADCAST SEED-SOWER.

Broadcast Seed-Sowers are becoming popular. With a good machine of this kind the grain can be scattered much more evenly than it can possibly be done by hand. We do not mean to persuade farmers that they can no longer sow their grain by hand, but we do believe that a machine of this kind ought to be found on every farm, not only because it does excellent work, but also from an

economical point of view; a boy can sow as much and do the work as well as the most experienced hand-sower can, in the same time. The one here shown is made by Benson, Maule & Co., Philadelphia, Pa., and since its introduction has made a fine record. Its chief merits are an exceptionally large seed-reservoir, perfect, and wide-spread cast, and non-liability to get out of order. The range of its usefulness is note-worthy, it being capable of sowing the largest and smallest seeds. A gauge-plate, handily placed, makes the change instantly for different seeds, and quantities. The price is $6. We will supply it for a club of 12 subscribers.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE KITCHEN CLUB ON CHILDREN'S DRESS IN WINTER.

MRS. ANNIE L. JACK.

THE Kitchen Club met at Miss MacGregor's and were quite a cosy-looking company in her bright, cheerful kitchen. Some of the ladies had their work with them, and I remarked that nearly every one had a stocking and was busy knitting. Mrs. Demarce said, in answer to a question, that she had knit fourteen pairs of stockings during the month of December. She is a consumptive looking little woman and I was not surprised to hear Miss MacGregor remark that it had been asserted by physicians that knitting steadily was bad for the lungs. Of the truth of this assertion I am not prepared to vouch. Our grandmothers, who lived into the nineties, strong and vigorous, were often great knitters—but it may not be good exercise for people who are weak of lung or chest. For my own part I only confessed to a tiredness of fingers as my present experience. At tea we were favored with Miss MacGregor's specialty, which is a cookie that is always crisp. She does not pretend to have any special recipe, but makes them as follows: "Half pound butter. Half pound sugar, rubbed well together. Three eggs, beaten well, flour enough to make a stiff paste. Roll thin, cut with a round, notched cake cutter, prick with a sharp fork, and bake in rather a quick oven." "Haven't you left out something?" I said. "Yes," answered Miss MacGregor, quickly, "I generally have a little sour milk and put in a couple of tablespoonsful." We were to talk of children's clothing but I do not know that we made any wise or new remarks. The chief thing was conceded to be warmth, neatness and good taste. The fashion of dressing little girls to imitate their elders was condemned by all the ladies present, as was the costly and elaborate trimming so much in vogue. Mrs. Labarge suggested that the dresses of little girls be made longer in the skirt, and all the underwear be closer fitting, as giving added warmth. The kilted pants of boys coming just to the knee were universally condemned, and we congratulated each other that many people would not be led by the prevailing style. Mrs. Tompkins who has eight half-grown boys, wished there was some fashion by which their arms and legs would not always be too long for their clothes, at which we all laughed and consoled her with the remark that she had always one ready to step into the out-grown clothes, and that boys were so much easier dressed than girls. This she doubted if one took the mending into consideration. So with many pleasant remarks, some interchange of patterns, and a tea where harmony reigned and gossip was rigidly excluded, we bade each other a cordial good-bye.

PIG'S-FOOT OIL.

So long as Wager's grandmother was alive she always had me rub the little fellow's chest and the soles of his feet with pig's-foot oil, if at night he chanced to be hoarse from a slight cold—rubbing in the oil with a warm hand by the fire. How much good was effected by this I do not know, as one never can fortell with certainty what the result of an indisposition will be if let alone. But the application of the oil always seemed to act as a relief, and was sometimes applied again in the morning, if any trace of hoarseness remained. The oil or grease which rises on the top of pig's feet when being rendered into "souse," should be carefully removed, made free from sediment by straining, put into a wide-mouthed bottle not over a finger long, and duly labeled. It is then "handy" for the sort of use above mentioned.

M. W. F.

EVERY DAY MEALS, CANNING MILK, ETC.

Mrs. Annie L. Jack proposed that farmers' wives should send in an "*unembellished*" bill-of-fare for a day, and, as I hope to see others, I will give ours for a day in warm weather.

Breakfast: Boiled potatoes, the objectionable fried pork, *often*, well-cooked and crisped, but *not* "swimming in grease"; lettuce or something fresh from the garden; good, sweet *hop-yeast* bread (white and brown), butter, and a good cup of coffee. Dinner: Boiled rice and milk, *cold*, prepared while getting breakfast; bread and butter, and, in their season, some fresh vegetables from the garden; viz.: some green peas, string beans, green corn or anything we may wish. Supper: Bread and butter; fresh fruit; sponge cake and tea. Nothing elaborate, but wholesome and so easily prepared that many days I have no fire from morning till night, which is both comfortable and convenient for me.

Will Mrs. Annie L. Jack tell us something about those Muskoka ducks? We were much interested in her former account and would like to get some, if possible.

If those who are obliged to do without milk a part of the year will put new milk and cream, scalding hot, into glass cans and seal tightly, they will find that it will help in many ways. It is nice for mashed potatoes and many other vegetables. It can be canned during the last weeks of milking.

A square of cotton napkiuing, nicely hemmed and spread over a tin milk strainer, will take out fine hairs and tiny specks from milk.

Sewing machine oil stains may be easily removed by using plenty of soap with COLD water, and rubbing vigorously. I have erased them in this way for ten years. ANN B.

Nunda, N. Y.

EXTRACT FROM A PRIVATE NOTE—(Without Permission.)

PLEASE tell your Editor that in his list of qualifications of the RURAL, I think he makes too little of "our" department—not in space—but by ignoring your devoted work and its *value* to the paper. A large class of his readers are women, and they *influence* the men—ahem! in their choice of a paper. In speaking to farmers' wives of *any* magazine or paper, I notice their *first* question is—"Are there good household hints and fashions in it?" But he extols Governor so and so's valuable paper on Agri—or some other culture; Professor Somebody's on Pom—or some other ology—and lets your work, well, perhaps, stand on its *own* merits—and the *faithful* Woman's Department likewise. A. L. J.

HOUSEHOLD HELPS.

I WILL say to my house-keeping sisters, who know the labor of beating eggs for pound cake, that the cake will be just as nice if they are not beaten at all. If you will cream the butter and sugar together until smooth, then stir in first a handful of the flour, next two eggs, another handful of flour, two more eggs and so on until you have it all mixed; add the flavoring, stir a few minutes and it is ready for the oven.

I could not be induced to try the above recipe for some time after I heard of it, but since I have tried it I do not make cake any other way. I think if my sisters will try it they will like it as well as I do.

Lawns and calicoes should always be washed in cold water, if you wish to preserve their colors. Warm or hot water either will fade them. Never use the kind of soap that is put up in bars or papers, by certain dealers to whiten or make clothes clean without boiling. To wash calicoes, &c., with common turpentine, or country made soap will brighten the colors. All such goods should be ironed on the wrong side. I wish some of my sisters would give me a recipe for doing up mourning calicoes, to prevent the starch from showing white on them.

A plaster made of soft soap and gum camphor will scatter swellings, boils, &c., just as well, if not better, than iodine, and is sometimes easier to obtain, especially in the country. M. H. S.

HOUSE-CLEANING HINTS.

An Excellent Whitewash.

Whiting five pounds, skimmed milk two quarts, slaked lime two ounces, linseed oil one pint. Put the lime in a stone-ware vessel and pour the milk on it, till it looks like cream. Then crumble in the whiting and grind all together as you would paint, after which add oil. You must keep your mixture constantly stirred, as the oil rises to the surface. This whitewash looks beautiful and cannot be rubbed off with a cloth when dry.

Furniture Polish.

The following recipe for polishing furniture I have always found satisfactory. Take spirits of turpentine in the proportion of two ounces to one of linseed oil, apply with a rag, and polish with buckskin, and afterwards with the hand. This polish looks splendid on pianos or organs and gives them a newness not otherwise obtainable.

I wish some lady would give me a recipe for the best manner of preserving citron, either for preserves or otherwise; also how to cook "Kale" so as to make it tender and palatable.

Chloride of lime put on a saucer under a piano or in the back part of an organ, is a sure preventative against mice.

MRS. M. J. GALPIN.

To Paper Whitewashed Walls.

Make flour starch, as you would for starching calicoes, and apply it to the wall with a whitewash brush. Let it become dry, then when ready to put on the paper, again go over the wall with the starch, also the paper, and apply. Walls may be papered in this way, which have been whitewashed for years in succession.

Alum is one of the best additions to whitewash to prevent its rubbing off.

Smoky walls may be improved by adding plenty of indigo to the water before mixing in the lime and other ingredients. M. A. L.

News of the Week.

MISCELLANEOUS.

Monday, February 2, 1880.

At Haverstraw, N. Y., there has been serious trouble between the property owners and the Albany and Jersey City Railroad Company, about the occupation of some land, each party claiming that the other was tresspassing. A fight lately took place between the attorneys on the two sides, each backed by several hundred men. No blood shed, but the trouble is unsettled....There was a light fall of snow in San Francisco on the morning of the 26th ult....The Grant "boom" is not quite so boisterous at present as it has been for some time past, and some of the most sanguine prophets even predict his retirement from the field....Masonic emblems have recently been discovered in Egypt, which indicates that the fraternity dates back to the construction of the pyramids....In the Shepherd's Fold, a so-called charitable institution of this city, has recently been discovered a veritable wolf in the form of avarice. The institution was under the sole control of a Rev. Mr. Cowley and his wife. They took in little children whom they pretended to give the most tender care, receiving funds from the public and in many instances also from the parents or guardians of the children. It was found that the litte ones were starved, beaten and maltreated in every way by the Rev. Cowley. No servants were kept and the children had to do all the work including washing and scrubbing, cooking, nursing each other when sick, etc. The matter was finally brought before the court where the foul management was revealed....Messrs. G. Carlberg and L. C. Elson, editors of the New York Musical Trade Review, which has lately suspended publication, have been engaged on the editorial staff of the Boston Musical Herald....Joseph Gillespie, a murderer, was hanged in Alexander, N. C., on the 30th ultimo. He was an accomplice in the murder of W. G. Fowler, a merchant of Moorisville, N. C., in October, 1878. Fowler was a quiet, respected citizen and the murder excited great indignation....

The inter-oceanic canal across Central America, now being projected by M. de Lesseps, has aroused some patriotic sentiment at Washington. The Monroe doctrine, which is, in short, that it is not good policy for the United States to allow any foreign power to interfere in any way with affairs on the North American continent, has again been revived. Politicians of every shade are unanimous in maintaing that if any canal is built, it should be mainly with American capital, and under the protection and control of the United States government. According to advices of January 30th, the French government has officially disavowed any intention to set up a protectorate in this country, or in any way to make itself responsible for the plans of M. de Lesseps.

The Ute Indians continue a subject for discussion in Congress. Gov. Pitkin of Colorado has for the past few days been giving evidence before the committee on Indian affairs, relative to the outrages and subordination of the Indians in that State. . . MONTREAL, Quebec, Jan. 30.—Mr. Parnell's visit to this city has been postponed *sine die*, and it is asserted by a morning journal that owing to the strong public feeling against his visit here, he will not come at all.

BANGOR, Me., Jan. 27.—The Supreme Court unanimously decline to recognize the Fusionist body at Augusta, and declare that the House and Senate now holding sessions in the State House is the legal Legislature.

AUGUSTA, Me., Jan. 27.—The Fusionists are very much depressed. At the reception of the news from Court, Major Smith said he believed the controversy had now ended. He said that while the previous opinion of the judges was based on the Republican statement there was room for reasonable doubt, but in view of the fact that the court had decided against them on a Fusion statement, they could but gracefully submit. He had got through playing Governor, and should go home. Major Smith's views will be adopted by the better part of the Fusionists, who will take their seats in the Legislature. Henry Ingalls, a leading member of the Fusion House, says he is not prepared to give an opinion to-night, but has always been in favor of yielding to the Court.

NEW ORLEANS, La., Jan. 26.—The steamboat Charmer, with 2,100 bales of cotton, was burned fifteen miles above the mouth of the Red River. Eight lives were lost, viz.:—Two chamber-maids, two cooks, two cabin boys, one fireman, one deck hand. The boat and cargo was valued at $13,000, . . From Battle Creek, Mich., the following is reported: A few weeks ago Edward Bingham brought home two living boa constrictors from South America, which were placed in the High School Museum. Miss Kittie Rhodes, aged 10 years, the janitor's daughter, has obtained such control over them that they obey her commands of tone and gesture. She recently introduced and exhibited them at a public entertainment, putting them through a course of tricks taught by herself.

FOREIGN.

In Ireland the famine is increasing in severity, especially in Connaught and the west. Last week there were three deaths from starvation. The attention of the whole civilized world is attracted to the deplorable condition of the island. The British Government is starting public works to give the poor employment, charity is sending alms from all sides; but the distress is only thereby prevented from being more widely fatal. Meanwhile political agitators are using the desperation of a starving people to further their own ends....In England the prospect of an early dissolution of Parliament seems to be the chief topic of general interest, outside the agricultural distress at home, the famine in the sister isle and the menacing aspect of the Continent. The late brisk revival of trade all over the country, has helped Beaconsfield and the Conservatives. Yet Gladstone and the Liberals expect to be able to elect a majority to the next House of commons, and thus once more to get control of the Government and its vast patronage:...In France, also there is talk of the dissolution of the present Assembly, in which case the Imperialists will insist on an appeal to the people to decide the future form of government. Factions still bitter: Bonapartists, Orleanists, Legitmists or Bourbonists, united individually, but differing from each other in nearly everything but opposition to the Republic; while the adherents of the latter are divided broadly into three factions, united only in opposition to the monarchists. Quietly the army is being perfected, every able-bodied man in the country being liable to fill its ranks....In Germany Bismarck's recent increase of the army is the subject of most interest. This mighty machine will soon have every regiment and corps completely full—to be directed against whom? Either France or Russia it is pretty sure, or perhaps against both, in which case Austria according to the late agreement, would take a hand. Krupp's great gun foundry is so busy that 2000 fresh workmen have been taken on, yet the men work half the night. Steadily and rapidly all over the country quiet preparations are being made for war, or for such a display of might as shall gain all desired concessions from neighboring nations...., Austria is watching Italy where the "Unredeemed Italy" party are vigorously insisting on a war to "free" Trieste and the adjoining territory. Italy is just now proud of the completion of the most powerful iron-clad afloat; while famine oppresses 92,000 people in the Southern or old Neapolitan provinces. Great floods and much destruction of property just cablegrammed ....Spain is busy recuperating from the late inudation in the south. The attempted assassin of the King the other day, turns out to be insane. The emancipation of the Cuban slaves, though decided, still causes much bitter discussion as to the *modus operandi*, and details....Russia has her hands full suppressing the Nihilists by death and Siberia, restoring her *prestige* in the East, lately injured by her serious defeat by the Turcomans; keeping one watchful eye on the British in Afghanistan, and another on the German warlike preparations. There is talk of re-establishing the Kingdom of Poland, with an independent sovereign or with the Czar crowned especially in that connection, as the Emperor of Austria is crowned King of Hungary. This morning's cablegram announces a project for incresing the already enormous army by 150,000 men....The general aspect of Europe is anxious, vigilant, expectant and decidedly belligerent.

A CARD TO DAIRYMEN has been published by Milton B. Fraser, of Rome, N. Y., giving notice that on January the 21st he sold to Messrs. Whitman & Burrell, of Little Falls, N. Y., his entire business in cheese factory furnishing goods, apparatus, etc., together with his U. S. Letters Patent for gang cheese presses and hoops, and his goodwill in the business. The purchasers will continue the business in Rome for the present, and as they now own the right to the Sternbergh patents and are the licensees of Hubbell & Co., they can sell the Frazer presses and hoops, or any other, and give purchasers the right to use them, free from all claims from any parties whatsoever.

MESSRS. WALTER BAKER & CO., the celebrated Chocolate manufacturers, of Boston, have just entered upon the second century of their business career with the prestige which is won by long-continued success,—a success born of enterprise and perseverance, and achieved by unswerving business integrity and a desire to excel where others were satisfied with merely doing well. Prompt to perceive and quick to adopt every advantageous scientific discovery or mechanical invention that would tend to the perfection of their preparations of Cocoa, etc., they have now the satisfaction of knowing that their goods are "the standard for excellence and purity throughout the world," having received the first premium at all International Expositions. As the healthful, strengthening and medicinal properties of Cocoa preparations are rapidly becoming more widely known, the demands on the resources of Baker & Co. are correspondingly greater, so that we may safely predict that their success in their second century will be even greater than in the past.

EGGLESTON TRUSS CO. Chicago, Ill.—*Gents*:—A short time ago I met Mr. Carmichael, of Traverse City who has been wearing a Truss of your manufacture for some time with great satisfaction, the rupture being closed, I have no doubt, permanently. I have known Mr. Carmichael for some years and think his case a remarkable one. The rupture was one of the worst I have ever seen. I wish you would send me your catalogue and price list. I have a bad case of umbilical hernia in a child, which I am in hopes your apparatus may help. Also others. Yours, &c,

Sherman, Mich. DR. H. D. GRISWOLD.

Grocers and Storekeepers

pay 3 to 5 cents a pound for extra butter made with Gilt-Edge Butter Maker. It increases the production 6 to 10 per cent. Reduces labor of churning one-half. Gives a rich golden color the year round. Sold by druggists, grocers and general storekeepers. Send stamp for "Hints to Butter-Makers." Address, Butter Improvement Co., Buffalo, N. Y.

HO! FOR EUROPE.—All persons desirous of visiting Europe or the East economically, and at the same time under peculiarly favorable auspices, should read Dr. Tourjee's advertisement, and send for his 48-page prospectus for 1880.

COUGHS AND COLDS are often overlooked. A continuance for any length of time causes irritation of the Lungs or some chronic Throat Disease. "*Brown's Bronchial Troches*" are an effectual COUGH REMEDY.

My mother drove the paralysis and neuralgia all out of her system with Hop Bitters.—*Ed. Oswego Sun.*

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, Jan. 31.

Baltimore.—Since last report Southern red wheat is unchanged; amber from 2c. to 3c. lower; No. 2 Western red winter up 4c; corn 1c. higher, oats a shade higher; hay steady.

WHEAT.—Southern red at 1.37@$1.40; do. amber at 1 45@$1.45; No. Maryland at $1.47½; No. 2 Western winter red, spot and January at 1.43@$1 43½; Feb. at 1.43½@1.43¾; March 1.46@$1 46¼; April $1.47 1-2@$1.48; May $1.48¼. CORN.—Southern white at 59@61c.; do. yellow 57 1-2@58c., western mixed, spot, January, 57¼@57 1-2c.; February at 56 1-2@56¾c.; March and April at 54¼@54½c; May 54¾@54⅞c.; steamer, 54 1-2@55c. OATS steady; southern at 48c.; western white at 48c.; do. mixed at 47@48c.; Penn. at 49c RYE dull at 90@92c. HAY steady; prime to choice Penn. and Md. at $7@$18

Boston.—For a change cattle and wool reports take the place mostly of usual reports this week. Little or no change in prices of other products from those last quoted.

CORN quiet; sales of mixed and yellow at 61@63c. OATS steady, but in moderate demand; sales No. 1 and extra white at 51@53c.; No. 2 white at 49½c; No. 2 mixed and No. 3 white at 47@49c. RYE at 95c. SHORTS selling at $20@20.50; fine feed and middlings, $21@22. WOOL—The demand continues good; prices are very firm and well sustained, with a decided upward tendency; holders are very indifferent about selling large lots of desirable grades, as it is evident that such wools cannot be replaced except at higher prices; all grades and qualities are in demand. Sales of Ohio and Pennsylvania fleece, X and XX, at 50@52c.; No. 1 fleeces at 55@56c; Michigan, Wisconsin and other fleeces at 48@50c.; Michigan medium and No 1 at 53@55c. Combing and delaine fleeces firm and in fair demand at 50@57½c; fine medium unwashed wools are selling at 30@45c, the latter price for choice and medium. Pulled wools are quite firm, selling fairly at 45@60c., and choice supers at 60@62½c. In California wool nothing of consequence was done, prices of fall ranging at 20@40c.

BRIGHTON CATTLE MARKET—Prices of beef cattle ₩ 100 lbs., live-weight—Extra quality, $5.62½@6; first quality, $5.12½@5.50; second quality, $4.62½; third quality, $4 25@4.60; poorest grades of coarse oxen, bulls, &c., $3 25@4 12½. There has been a large supply of cattle brought in from the West during the past week, a large portion of which were bought expressly for the English markets, especially those of the best grades of beeves. Cattle cost higher at the West than they did the previous week, but the trade here except for shipping cattle, has not improved any over that of one week ago. Many of the best cattle which were brought up for shipment to London and and Liverpool cost from 6@6½c. per pound, live weight, but there were but few if any bought at that price by butchers to slaughter for the Boston markets. There was a fair supply of beef cattle among those from Maine. WORKING OXEN.—We quote sales of 1 pair four-year-olds, girth 7 ft., live weight, 3,000 lbs., at $135; 1 pair five-year olds, girth 6 ft., 9 inches at $125; 1 pair extra nice ones, live weight 3,200 lbs., girth 7 ft., 2 inches, at $160; 1 pair, girth 6 ft., 10 inches, live weight 2,900 lbs., at $135; 1 pair, girth 6 ft., 8 inches, live weight 2,700 lbs., at $110; 1 pair, girth 6 ft., 4 inches, live weight 2,600 lbs, at $85 1 pair, girth 6 ft. 2 inches., live weight, 2,200 lbs. at $85; 1 pair, girth 6 ft., 6 inches, live weight 2,600 lbs., at $110; 1 pair, girth 7 ft., live weight 3,000 lbs at $129. MILCH COWS.—Extra $45@70; ordinary $20@44; springers, $18@50; farrow cows, $13@27 per head. SHEEP AND LAMBS, were nearly all owned by butchers, and cost, landed at Brighton from 5 to 7c. per lb., live weight. SWINE the fat hogs were all owned by butchers, costing from 5¾@5½c. per lb. live weight.

Buffalo.—Little or nothing doing in grain; scarcely enough to make quotations; cattle somewhat higher; hogs from 5c. to 10c. higher.

FLOUR steady with a fair demand. WHEAT offering No. 1 hard Duluth at $1 30. CORN—Sales of four cars of No. 2 old Western at 48½c on track. RYE—In fair demand but nominally unchanged; sales, 6,000 bushels of Canada on private terms. Nothing doing in other grains. CATTLE—Sales of fair to good native shipping steers at $4 25@4.70; bulls at $3 00@3 20; mixed butchers' at $2 95@3 30. SHEEP AND LAMBS—Weak and lower; buyers holding off to obtain concessions; a few sales of fair to good Western sheep at $3 00@3 25; sellers holding choice at $3 50; 20 cars remain unsold HOGS—Demand fair and firm; best grades disposed of; good to choice Yorkers at $4 50@4 85; fair light at $4 70@4 75; heavy and medium at $4 80@4 90; coarse rough to common, at $3 10@4 25; pigs at $4 35@4 40.

Chicago.—Since last report No. 2 Chicago spring wheat has gone up again 3½c. and other grades proportionally; corn has fallen from ½c. to 1c.; oats 3-4c. lower; butter steady; cheese somewhat higher; potatoes and fruit steady; hogs 5c. lower; cattle lower.

CHICAGO.—Wheat unsettled; No. 2 red winter at $1.22; No. 2 Chicago spring at $1.18 1-2 cash; $1.18 3-4 February; $1.19 7-8 March; No. 4 do. at $1.04 1-2 rejected at 88c. CORN dull, at 46 3-4c. cash and February; 41 1-2 at 41 5-8c. May; rejected at 34 1-2c. OATS dull and a shade lower 32 3-4c. cash and February; 36½c. May. RYE steady and unchanged BARLEY at 78c. BUTTER. The demand continues light from all classes of buyers, and the feeling in the trade is one of weakness. Good to choice creameries 28 and 33c. per pound; fine to fancy dairies, nearly equal to creameries, 24 and 25c.; good to choice fresh-made dairies 19 and 21c.; fair to good dairies, in shipping lots, 16 and 18c.; common to medium qualities 13 and 15.; roll butter 15 and 17c. CHEESE.—Exporters were taking hold pretty freely of low grades. Prime full cream sells at 14 and 15c, the prices given being for round lots. Good to the cheddar creams at 13 and 14c. per pound, and slightly sharp goods at 12 1-4 and 12 1-2c., white goods to best flats were bringing 12 1-2 and 13c, and the ordinary to fair stock 10 and 12c. BEANS.—There is but a limited demand, the only sales being made are in a small way. Good to choice hand-picked Eastern mediums held at $1.40 and $2.50 per bushel, and navys at 5 and 10c. above this range. Western quotable at $1 15 and 25 for common to good, and stock that requires recleaning and picking over was nominal at 60c. and $1 per bushel. GREEN FRUIT—The market for apples remains very quiet. For poor stock peddlers are about the only buyers, and a good many consignments are keeping very badly. Common to only fair stock sells slowly at $2@2 50 ₩ bbl, and good to choice at $2 75@3. Car-lots sell at about the same prices that are asked in a small way. CRANBERRIES were in fair request and firmly held at $7 50@9 ₩ bbl., the outside figure for choice cultivated. HAY—Good grades of both prairie and timothy are in fair request on local and shipping account, and former prices were named. Current quotations for car-lots on track range as follows: No. 1 timothy $14@14 50 ₩ ton; No. 2 do. $13@$13 50; mixed timothy $11@12, upland prairie $11@11 50; No. 1 prairie $9@10; No. 2 do. $8@8 50. Small bales sell at 25@50c. ₩ ton more than large bales. Sales were: On Track: By Sample—1 car No. 2 timothy at $13; 1 car upland prairie (to arrive) at $11 50; 1 car choice No. 1 prairie at $10 50. Free on Board—1 car No. 1 timothy at $14 50. POTATOES—Common mixed and dirty-appearing lots

were dull. We quote peachblows at 50@55c. ₱ bush for good to choice, on track, and do. early rose at 44@48c, with other varieties and mixed cars slow at 35@40c. In a small way 5@10c. ₱ bush, higher figures are obtainable SWEET POTATOES—Quotations range at $4 50@5 @ bbl. for choice to fine Jerseys, and at $3 50@3 75 for good to the best Illinois kiln-dried stock. SEEDS—Good to choice medium clover at $4 75@5 per bush.; ordinary to choice timothy at $2 70@2 85; flax at $1 65@ $1 70, on a basis of pure, and good to choice Hungarian and millet at 85c.@$1. HOGS—mixed packing at $4 30@4 55; light at $4 35@4 55; choice heavy, $4 50@4 75. CATTLE—Market slow; shipping at $3 75@5 40; native butchers' active and firm at $3@4; stockers and feeders steady, but slow at $2 60@3 80. SHEEP—Market overstocked and weak; common ½@¾c. per ℔ lower at $3 70@ $5 70. WOOL—The asking rates from store for eastern Iowa, Wisconsin and Illinois wool range as follows: Tub-washed bright 56@60c. ₱ ℔: do. dingy and coarse 50@55c.; fleece washed medium 48@52c.; do. fine 45@48c.; do. coarse 45@47c.; unwashed medium 35@38c; do. coarse 33@35c., do. fine bright 28@31c.; do. heavy 24@28c.; bucks' fleece 20@22c. Consignments from western Iowa, Nebraska and Kansas sell at about 2c. @ ℔ less than this range, and burry and poor-conditioned lots at 3@5c less.

Cincinnati.—Since last report wheat, oats and corn are unchanged; rye and barley 2c. lower; choice Western Reservoir butter has fallen 1c. on lower kind, steady on best, choice Central Ohio from 2c. to 3c. lower.

WHEAT at $1.28. CORN weak at 43c. OATS quiet at 42c. RYE dull at 85c. BARLEY dull at 88c. Choice Western Reserve 23c.@25c.; choice Central Ohio at 17c.@20c. HOGS quiet; common at 3.50@$4.30; light at 4 35@$4.60; packing at 4.45@$4.65; butchers at 4 70@$4.80; receipts, 3,700; shipments, 1,200.

Detroit.—Since last report there has been a fall in futures in wheat, but everything with regard to cash sales is so unsettled that no satisfactory figures can be given this week; corn from 2c. to 4c. lower; oats 1-2c. lower; clover seed held at 35c. higher, but nothing doing at that price; dressed hogs steady.

WHEAT unsettled; extra white Michigan no sales; No. 1 white Michigan spot, no sales; February, $1 23¾; March, $1 23¾; April, 1 30¾; May, 32¾; milling No. 1 nominally $1 20. CORN dull, with not much inquiry; No. 1 yellow at 45c.; high mixed at 44¾c.; No. 1 mixed at 44c.; No. 2 do. at 43¾c. OATS firm and active; No. 1 white at 41@ 41½c.; No. 2 do. at 40c.; No. 1 mixed at 40@40¾c; No. 2 do. at 39c. CLOVER SEED dull; prime nominally at $4 65@4 70. DRESSED HOGS scarce at $5 15@$5 20.

Milwaukee.—Since last report No. 1 Milwaukee hard wheat has gone up 2½c.; do. soft, up 3c.; corn and oats ½c. lower; oat, rye steady; barley 1c. higher; live hogs about the same, except on higher grades 25c. lower; dressed, 10c. lower.

No. 1 Milwaukee hard at $1 20; do. soft at $1 19½; No. 2 Mil. spot, January and February, $1 18; March, $1 19¾; No. 3 do., $1 04¾; No. 4 do, 98¾c.; rejected, 90c. CORN—No. 2, 37½c. OATS 32½c. for No. 2. RYE quiet at 74c. for No. 7. BARLEY dull; No 2 spring at 70c. LIVE HOGS quiet at $4 25@ $4 50. DRESSED hogs dull and lower at $4 90.

Philadelphia.—Since last report, Western rejected wheat has gone up about 10c.; Penn. red 2 1-2c. to 3c.; other grades also up; corn steady; oats 1 1-2c. higher; butter steady; eggs 1c lower; cheese 1-2c higher; seed mostly unchanged; hay steady; rye straw 50c lower; other straws steady.

WHEAT—Western rejected at $1 37; Penn. red, on track, at $1 43; amber at $1 41; No. 2 red, in elevator, car lots, at $1 43. RYE—But little offering; Penn. 90c. CORN—Fair local consumptive demand, with some export inquiry, but not much disposition to operate in futures. Sail yellow, on track, at 58c; mixed Western at 57c; Western ungraded at 56@57c; rejected at 55c; Southern white on track and afloat, at 60 1-2c. OATS—No. 2 white sold at 49½c March; 48½c bid and 49 1-2c asked for No 2 white January; 48½c bid and 50c asked February; 48c bid and 48 1-2c asked March. BUTTER moving slowly; creamery extra at 32@34c.; Bradford county and New York extra at 25@26c; Western Reserve extra at 23@25c.; do. good to choice at 17@22c; rolls dull; Penn. extra at 14@16c.; Western Reserve extras at 17@19c. EGGS quiet; Penn. at 16c; Western at 15@16c. CHEESE strong; New York factory at 14 1-2@15c.; Western full cream at 14¼@14½c.; do. good at 13 1-2@14c.; do. half-skim at 13@14c. COFFEE—Dull and weak. SEEDS—Clover seed has been exceedingly dull, and the bulk of the offerings are again of poor quality, which is not wanted. Sales of 1,000 bushels Western and Pennsylvania, in lots, at 7@9¼c., as in quality—nothing but very choice high-colored Wisconsin or Ohio will command the latter price. Timothy seed is firm at $3 ₱ bushel. Flax-seed is scarce and in demand at $1,60. Cal. linseed sold at $2.53½. Orchard-grass commands $1.75. BEEVES—The market is moderately active and prices are steady; the heavy demand for export trade has made the wholesale rate high, and butchers are complaining that they cannot pay the price. We quote extra at 6@6¼c.; good at 5¾@5¾c.; medium, 5@5¼c.; common, 3¾@4¾c; bulls and cows, 2½@3¾c.; calves, 5½@6¼c. Sheep were in good demand. A choice lot sold for 6¾c., average weight 150 pounds. We quote extra, 100 to 130 pounds, 6@6¼c.; good, 90 to 100 pounds, 5¾@6c.; good, 80 to 90 pounds, 5¼@5¾c; fair, 70 to 80 pounds, 5¼@5½c.; common, 4¾@5c. LAMBS were scarce and in demand. Extra at 6¾@7c.; good, 6¼c.; medium, 6c.; common, 5¾c. HOGS, good at 6¾@7c.; medium, 6¾c.; common, 6@6¼c. FRESH COWS were moderately active and sales were reported from $20 to $50 ₱ head. HAY, prime is in steady demand at $19@20 for cut, and $18@19 for baled. STRAW is dull at $20@21 for rye, $12 for wheat and $13 for oat.

Toledo.—Since last report corn ½c. higher; clover seed 15c. lower. WHEAT dull; amber Michigan spot at $1 28; No. 2 red winter, February at $1 28¾; March at $1 31; April at $1 33¾; May, $1 36¾; No. 3 red Wabash, $1 13. CORN dull; high mixed at 41c. No. 2 spot at 40¾c.; February at 40¾c.; May at 44¾c. OATS nothing doing.

St Louis.—Since last report wheat has gone up 2¾c. on No. 2, red fall, steady on No. 3; corn 1¾c. lower; oats 1c. lower; hogs from 5c to 15c. lower; cattle steady.

WHEAT.—No 2 red fall at $1 22¾ cash; $1 21¾@ 1 22¾ February; $1 25¾@1 26 March; $1 28¾@ 1 28¾ April; $1 28¾@1 29¾ May; No. 3 do. at $1 17 bid. CORN 34¾@34¾c. cash; 34¾@35¾c. February; 34¾@36c. March; 37½@37½c. April; 38¾@ 38¾c. May. OATS lower at 36¾c. cash; 38¾c. May. HOGS, light shipping at $4 20@4 35; packing at $4 30@4 50; butchers' to select at $4 50@4 60. Cattle sales of native steers at $4 50@5; no prime or choice offered; butchers' steers of 1,100 lbs average were taken by the Canning Company at $4@ 4 25; feeders at $3 75@4 10; stockers at $2 75@3 50; cows and heifers, $2 40@3 25. SHEEP scarce and firm; light at $3 25@4; heavy at $4 25@5.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Jan. 31, 1880.

BEANS AND PEAS.—The bean market is firm, marrows showing best strength. Mediums quiet for local use the weather being unfavorable for consumption. W. kidneys salable at full figures. Pea and Red Kidneys dull. Sellers do not look for a break in prices while receipts run light. Green peas in few hands and firm at 1.80@$1,85; So. B. E. peas per 2 bu. bag, $2.25. Marrow beans, prime, $1.70@1.75, other, $1.55@1.65; medium, prime, $1.50@1.55; other 1.35@$1.40; pea, 1.50@$1.75; w. kidney, $1.60@1.80; red, do., $1.55@1.75; black, 1.75@$1.80.

Receipts of beans for week, 1,552 bush.; exports, 1,673 do. since Jan. 10, 12,100.

BEESWAX.—The movement is slack, but offerings are light and prices unchanged; quoted at 24¼@25¾c for Western and Southern.

DRIED FRUITS.—Apples have had more of a movement at inside prices, partly on export account Other descriptions are quiet and unchanged. Quotations for apples—New N.C., at 7@8¾c. for fair to good; 9@9¾c. for choice; 10@10¾c. for fancy sliced. Patent evaporated, apples, choice, in cases, at 13¾@14c.; do. good and prime, 12¾@13c.; N. Y. State sliced, new, 7¾ @8c.; do. quarters, 6¾@8c.; new southern quarters scarce and nominal; new North Carolina peeled peaches 17@18c., do., Georgia, 13¾@16¾c. Peaches—Delaware evaporated, peeled at 24@28c.; do. unpeeled at 13@15c.; new halves at 8@8½c., and quarters at 7@ 7¾c. Blackberries at 9¾c. bid for new. Raspberries at 25c. Pitted cherries at 18@19c.

Exports for week, 84 bbls. apples.

BUTTER.—Several weeks run of trade that has not run up in volume to the expectations of holders of State, have caused weakness to develop into decline. All grades of State are in buyers' favor and unless business improves with the help of a more favorable style of weather in Feb. and March, the shipper will have some pretty long lines to dictate upon. Many lines of State have been pretty thoroughly sorted over and customers begin to scatter, giving fresh Western, and for that matter, perfect oleomargarine the preference to off flavored State. Many dealers know how materially their fine ends have been broken off as they give regular quotations for offerings of dairy bodies. Western butter as a quantity is easier in sympathy with State, but still holds the brisk portion of business. Exporters are dealing fairly, paying 18@20c for Western, with a large offering of factory to be had at 16@17c. and State 21 @22c.; when they bid higher for the latter the stock is needed for local use. Rolls dull and turn out poorly in appearance this mild weather.

State pails and tubs, choice, small lots, 27@28c.; fair to prime, 22@26c.; winter made, 25@26c.; full dairies, choice, 25@26c.; fair to prime, 20@24c; firkin dairies, choice,; other bodies of dairies range at 18@25c.; poor State, 18@19c.; creamery, fancy, 34 @35c.; fair to good, 27@32c.; early-made, 21@26c.; Western imitation creamery, 22@24c.; dairy fresh, 24@25c.; other, 18@21c.; factory, finest, 21@23c.; other, 15@20c.; very poor Western 10¾@12¾c; rolls, 18@19c.

Receipts for week, 23,600 packages. Exports, 8,000 packages.

FRESH FRUITS.—Exports for week, 3,900 bbls.; since Jan. 1st, 32,100 do.; same period '79, 15,200 do. Russets mainly now go forward. The home market is quiet, and for line lots from store or boats, or for fresh receipts prices are easy. Some fancy, high-colored and extra-sized lots quoted in a small way, 50@75c, above.

Spitzenbergs, ₱ bbl., $3.50; Baldwins, choice, $2.75 @3; poor to fair, $1.75@2 50; Greenings, $2@2.75. Poor stock it well out, unless the weather of the past week has made a renewed supply. Cranberries firm for bbls, and tending higher for fine crates. Cape Cod, fancy, ₱ bbl., $3.50@4; other capes and Eastern, $6.50@8.25; N. J. crates, $2.25@2.62. Char. strawberries, 60c.@$1 ₱ quart. Catawba grapes dull at $2.50@ 3.50 ₱ case. Florida oranges are in better demand, with some odd lots of better quality. These specials bring $4@4.50, but the run of ht. bbls is quoted, $2.50 @3 50 Peanuts steady; receipts for Jan., 12,500 bags; nearly double, compared with Jan. '79. Hand-picked, Va., 5¾@6c. ₱ ℔.; extra prime to fancy, 4¾@5¼c.; good to prime, 4@4¾c. Hickory nuts not wanted; 50@75c. Pecans, 10c.

FURS AND SKINS.—We annex the late revision in prices consequent upon the higher market abroad. Beaver and Opossum at the London sale were more profitable for shippers than other fine skins. The catch of skunks has been large and prices are easy. Red fox is scarce. Bear, wolf and robe-style, skins are dull, as the demand here has been very light this mild winter. Cub bear as low as $2. Beaver, ₱ ℔, $1.75@2.50 N. & E.; $1@1.50 W. & S. W.

Bear, Northern Black, $7@10; S. & N., yearlings, $4 Beaver, N. & E. skin, $1@5; do., W. & S., 50c.@$3; Badger, 75c.@$1; Cat, Wild, 20@40c.; Fisher, N. & E., each, $7@9; do., S. & W., $3@4; Fox, Silver, as to beauty, $15@30; do., Cross, N. & E., $3@4; do., Red, N. & E., $1.00@1.75; do., S. Penn., N. J., and N. Ohio, $1.50@1.70; do., Red, S. & W., 50c.@$1; do., Gray, N. E. cased, 70@80c.; do., Gray, S. & W., 40@60c.; Fox, Kit, 30@50c.; Goat, American, ₱ ℔., 10@15c.; Lynx, each, $1@2; Marten, States, dark, $1.50@2.50; do., pale, $1@1.25; Mink, N. Y. & New England, $1@1.50; do., Canada, Michigan and Minnesota, 60@80c.; do., N. J. Penn. and Ohio, 60@70c.; do., Md., Va., Ky. Ind., Wis. and Iowa, 50@60c.; do., Missouri and S. Muskrat, N. & E., fall and winter, 10@13c.; do., do., West. Penn. and Ohio, fall and winter, 9@11c.; do., S., fall and winter, 8@10c. Otter, Ky., Va., N. C. Kansas, etc., $5@7; do., N. and E. and Northwestern, $3@8; do., Penn., N. J. Ohio and Western, $5@7; do., S. C. and Georgia, $4@6; Opossum Northern, cased, 10@30c.; do., Southern and open Northern, 5@12c.; Raccoon, Mich., N. Ind., N. Ohio, 65@80c.; do., Ill., Iowa, Wis. and Minn., 60@70c.; do., N. Y. and E. State and N. Penn., 50@55c.; do., N. J., S. Penn., Ind., Mo., Neb. and Kan., 30@50c.; Geo., Ark., Fla. and Ala., 25 @40c.; Skunks, prime black, No. 1, cased, $1@1.10; do., No. 1, open, 90c.@$1 do., half striped, 45@60c.; do., striped, 25@30c.; do., white, 10@15c.; Wolf skins; mountain, large, $1 50@2; do., prairie, prime, 50@60c., Fisher, $6@10.

CHEESE.—Prices have worked up still further this week, and closed strong on the moderate stocks and a steady call from shippers, who have taken this week 25,585 boxes.

Quotations are for Strictly fancy, 14¾@15c.; choice at 13¾@14¾c.; good to prime, at 13¾@14¾c; fair to good, at 12¾@13¾c.; half-skimmed at 11¾@12¾c. State farm dairy: Good to prime 13@14c.; fair to good at 12@12¾c. Wis. factory: Fine, 14¾@14¾c.; good to prime 13@14c. Ohio factory: Cheddar, fine, 14¾@14¾c.; do., fair to good, 12@13c.; flat, fine, 14@ 14¾c. flat, good to prime, 13¾@13¾c.; flat, fair to good, 12@13¾c.; half-skimmed, 11@12c. Pineapple, State, 13@14c. do. Eastern, 15@16c. Young America, 14@16c. Imitation English, 14@16c.

Receipts for week, 6,936 boxes.

Exports for week, 25 000 do.

Liverpool cable, 75s, an advance.

Steam to Liverpool continues low, 25s.

COTTON has been active and closed strong at for Jan. 12.97@12.99c; Feb. 12 98@13c.; March 13 24@13.25c; April, 13.46@13.47c.; May, 13.66@13.67c.; June, 13.82@ 13.84c.; July, 13.94@13.96c.; August, 14.04@14.06c.; September, 13.35@13.40c.; October, 12.53@12.56c.

Quotations for spot cotton are based on American standard of classification, and no cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	11 1-16	11 3-16	11 3-16
Strict ordinary	11 7-16	11 9-16	11 9-16
Good ordinary	11¾	12	12
Strict good do	12⅛	12¼	12¼
Low middling	12 7-16	12 9-16	12 9-16
Strict low middling	12⅝	12⅝	12⅝
Middling	12 13-16	12 15-16	13 15-16
Good middling	13 1-16	13 3-16	13 3-16
Strict good middling	13 5-16	13 7-16	13 7-16
Middling Fair	13 13-16	13 15-16	13 15-16
Fair	14 9-16	14 11-16	14 11-16

STAINED.

Good ordinary	10¾	Low middling	11 5-16
Strict good ordinary	11¾	Middling	12⅛

EGGS.—Receipts for the week, 5,950 bbls.; do. last week 3,800 do. The market has ruled very unsatisfactory. Buyers' wants are few, but when centered upon special fresh stock, sellers find the surplus of old, stale or foul eggs very oppressive. Even good fair marks have been neglected.

Near points, per doz., 15@20c.; State and Penn., 15¾@16¾c.; strictly fresh Western and Southern, 16c.; fair marks Western and Tennessee, 15@ 15½c.; inferior, including state Canadian, 13@14c.; State, limed, 11¾@12¾c.; Canadian, 11@12c.; Western, 10@ 12c.

ESSENTIAL OILS.—An insignificant stock of peppermint holds very firm prices. Peppermint, in tin, glass, Hotchkiss, $3.50. H. & P., $3.25. Spearmint, $2.25 Wintergreen, $2.50. Wormwood, $5. Tansy, $2.50. Sassafras, 55c.

FLOUR.—The market has tended lower and has been very dull.

Prices are $4.40@$5 25 for inferior to very choice superfine State; $5.25@5.50 for inferior to good extra do., odd lots and lines; $5.50@5.85 for good to very choice do.; $4 50@5.35 for inferior to very choice superfine Indiana, Iowa, Michigan, &c.; $5.25@5.50 for inferior to good shipping extra do., and $5.50@ 5.85 for good to very choice shipping extra do.; inferior to about choice white wheat extras, $5.65@6.60; choice to very fancy do. $6,65@8.00, the latter an extreme; red and amber winter wheat, inferior to fancy trade and family, at $5.70@7.50; round hoop Ohio, $5.40@5.90; and trade and family brands of do. at $6.00@7.50; the latter rate for very choice; St. Louis at $5.65@6.60 for inferior to good extra; $6.50@8 00 for good to very fancy; Minnesota clear, very inferior to fancy, at $5.40@6.00; Minnesota "straight," very inferior to very choice, at $5.75@7.50 and patent inferior to fancy, at $6.50@8.50; unsound stock at from $3 00@5 25; city mill extra at $5.25@6.75 for ordinary to fancy for West Indies do. for England, $5.25@5.75 for poor to choice; do. trade and family extras, $6.75@7.75; do. for South America, $6.40@6.75; No. 2 at $3.75@4.60 for poor to very fancy.

BUCKWHEAT FLOUR is selling at $1 85@2.10.

CORN MEAL.—Sales at $2.75@$3.10 for yellow Western and $3.30@3 35 for Brandywine.

GRAIN.—Wheat has been feverish and unsettled, but closed weak at a decided decline. Latest sales are of No. 1 white at $1.40@1.42½; do., January, at $1.41@ 1.42; do., February, at $1.41@1.42½; do., March, at $1.44@1.45¼; do. May, option, at $1.44¼@1 44¾; No. 2 white, at $1.39@1.40; ungraded white at $1.38½; No. 2 red at 1.43@1.45¼; do January, at $1.43@ 1.44¼; do., February, at $1.44@1.45½; do., March, at $1.47@1.49½; do April option, at $1.48¾@1 50; do. May, at $1.50; No. 3 red at $1.37@1.38; ungraded red at $1.36@1.40; No. 3 spring, at $1.23@1.31; ungraded spring at $1.23@1.25. Rye at 91@95 for Western and State. Corn is fairly active and relatively strong. Latest sales are of old No. 2 at 61c. afloat; do. new, in lots, at 61@61½c.; do., January, at 62c. bid; do., February, at 60c.; do., March, at 58¾@ 59¾c.; do., May, at 54¾@54¾c.; New York steamer mixed at 61¾c.; do., January, at 61c.; ungraded mixed western at 60 3dic.; New York No. 3 at 60@ 60¾c.; round yellow, old, at 70c.; steamer yellow at 61½c. Oats are fairly active and irregular in price; latest sales are of No. 1 white, at 50c.; No. 2 white at 48½@49c.; do. February at 48¾c.; No. 3 white at 48c.; New York No. 1 at 48½c.; New York No. 2 at 48¼@ 48¾c.; New York No. 3 at 47¾@48c.; ungraded white western at 49@51½c.; ungraded mixed western at 47¾@49c.; white State at 51¾@53c.; mixed State at 48¾@49c.; No. 2 Chicago, at 48¼c.

HAY AND STRAW have a good demand and prices are strong. Shipping hay quoted at 75c.; retail lots at 80@85c. for medium, and 85@90c. for prime; clover at 65@70c Straw at 95c.@$1 for long rye; 65@70c. for short rye, and 55@60c. for oat.

Exports for week 2,020 bales; since January 1, 9,275 an increase of 6,450 compared with 1879 at this date.

HOPS.—There is a difference of opinion respecting the market, some parties reporting a very dull trade and sales difficult, except at lower prices than we quote, while others show sales at the figures. It would probably be difficult to move large lots at the figures. The quotations are for:

	Cents per ℔.
New York, fancy	38 @40
New York, new crop, good and choice	34 @37
New York, new crop, medium	31 @33
New York, new crop, low to fair	29 @30
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast, olds (nominal)	5 @10
Bavarians	45 @60

POULTRY AND GAME.—Dressed poultry shows no improvement; a little cold weather has been offset by warm and rainy days when holders had some surplus. Anything above current wants at this part of the season, is dangerous property. Ducks are in fair demand; they and some squab are favorably affected by the lightly supplied game market Capons have declined.

Turkeys, N. J., 12@13c.; State, Mich., Ohio and Penn., 11¾@12¾c.; other Western, 9¾@12c.; Philadelphia dry-picked, 12@13c.; do. chickens, 11¾@12¾c.; N. J. do. 10¾@11¾c.; State and Western, prime, 9@10¾c.; prime to fair, 7@8c.; Phila. fowls, dry-picked, 9@10c.; N. J. State 8@10c.; poor to prime other, @7c. Ducks, choice, 14@15c.; other, 10@13c. Geese, choice, 10@11c; N. J. and State, 9@ 1c.; Western, 8@9c. Squabs, white, ₱ doz., 3.75@4; dark, 2.25@2.50. Capon, large, ₱ ℔ 18@ 20c.; small and slips, 15@16c.

Cooped stock abundant in buyers favor. Fowls, 8@10c.; roosters, 6@6c. turkeys, extremely low 7@10c.; ducks, pr 55c.@$1; geese, choice, $1.87; other, $1.12@ @ 75; pigeons, 35@40c.

The closing prices for quail, $4.00; partridges, $1.12 @1.50; grouse, $1,12@1.25; rabbits 35c; hares, 35@40c., these items have no legitimate sale after this date. Wild pigeons, $1.37@1.75 for acorn fed and fine trapped. Canvas back ducks, $2.25@2.50; red head, $1@$1.25; Mallard, 75@80c. Black and Broadbill, 50@ 60c.; Teal, 40@50c.; common, 20@40c.

PROVISIONS—Hog products have less demand and closed weak, with mess pork quoted $12.90@12 95 for new mess for January; $12 90@12 95 for do for February; $13 for do. for March and $13.10@13.15 for do for April. Bacon at $7.30 for long clear and $7.40 for short clear. Beef Hams at $16.75@17. Beef at for extra mess at $11@12; plain mess, $10.50@11; packet, $11.50@12.50; tierced beef, city extra India mess, at $20@22.50, and Philadelphia do. at $—.

Lard—Western steam at $7 90 for new on the spot; $7.85@7.87½ for new for February; $7.87½@7.90 for March; $7.95 for April. Stearine at 7¾@8 for Western. Tallow at 6¾c. for prime.

SEEDS—Clover is stronger with a better demand; quoted 8@9 for prime to extra choice Western and 9¾@10¾ for State; Timothy at $2.90@3.

VEGETABLES.—The shade of advance in potatoes noted last week has been lost; local buyers have considerable railroad stock to draw from, and can do better than from store. The enlarged export is owing to a temporary demand for the West Indies. A few Bermuda have sold at $6@7. Sweet potatoes getting out of date; prices easy. Onions firm. Fla. string beans quoted $3@4 ₱ crate; do., green peas, $1@1.25 small crate Bermuda tomatoes, $1@1.25 ₱ box; do., beets, $3@3.25 ₱ crate.

Nova Scotia B. Rose, per bbl., $1.50@1.62; do. Prolific, d.-h., $1.37@1.62; do. Mercer, $1.25@1.50; Maine, Early Rose, d.-h., $1.75@1.87; State, d.-h., $1.50@$1.62; do. b. $1.37@1.50; State Peachblows, red, $1.75@1.87; do. white, $1.37@2.00; Snowflake, $1.37@1.62; State Peerless, $1.25@$1.50; N. J., do., 75c.@$1. Sweet potatoes, 3 00@$3.25. Norf. Spinach, per bbl, $1.50@1.75; kale, $1@1.25. Squash, marrow, $1@$1.25; do., Hubburd, $1.25@1.50 ₱ bbl.; cabbage, $3@7 per 100; onions, white, per bbl., $4.50@4.75; yellow, $3; red, $2.75@3; Chester, $4.50@$4.75; beets, $1@1.25; Russia turnips and carrots, 50@87c.; celery, per doz.

WOOL.—Has not been active, yet holders are quite firm at late prices. Latest sales are:

X, XX and above Ohio at 51@53½c.; X and XX State at 45½c.; X and XX Pennsylvania at 48c.; No. 1 Oregon at 43c; scoured California at 71@75c.; fall California and Lambs' at 19@37c.; fine spring Texas at 35 @36c.; fall do. at 26@35c.; Utah at 33@37½c.; domestic noils at 48@52c.; Montevideo at 33c.; mixed East India at 18@30c.; Bagdad at 30@33c.; Cape at 32½c.; Australian at 58c.; do. old clip at 45c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Jan. 31.

BEEVES.—Receipts for the week, 11,934 head; do. last week, 13,783 do. The market during the week has been marked with fluctuations, and at no time on or since Wednesday has it favored the seller. A car load of premium cattle, 1,561 lbs average, brought 11½c.; dressed 58 lbs. Exporters have operated quite liberally this week, and have helped to prevent a serious decline in upper class stock. Common to good steers sold at 7¾@9¾c., dress, 55@ 56 lbs.; prime, 9¾@10¾c.; selections, 10¾c. Quality generally good, and herein much of the falling off in price consists this week.

COWS AND CALVES.—Receipts have slightly moderated, but prices are no better. A better average quality was offered. Good State cows have sold at $35, $40 and $50 per head. No call for heavier receipts.

VEAL CALVES.—Market steady for live at good prices; dressed in good demand when choice. Live calves, N. J. and Buck's Co. choice, 8@8¾c.; State and other N. J., 6¾@7¾c. Mount Holly, 300 lbs., down to 200 lbs., 5@5¾c. Buttermilk, 4@5c; grass, 2¾@3¾c. Dressed, fair to choice, 8@10¾c.

SHEEP AND LAMBS.—Receipts for the week, 29,481 head; do. last week, 26,258 do.; do. market rather over-stocked and sellers were anxious to part with stock. Sheep ranged 5¾@6c. with extra wethers at 6¼c. Lambs, 5¾@7¾c.

SWINE.—Receipts for the week, 21,673 head; do last week, 31,039 do. An advance on 'change gave prices for live an upward push and prime Western corn fed were worth 5@$5.35 per 100 lbs at the close. Country pork light 6¾@7c.; dressed 6¾@6½c; heavy, 6c.; dressed 6¾@6¾c.; Western dressed are of no account; now in fact they will never again form much of a branch of trade as far east as this.

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will be ready Feb. 1st, with a colored plate.—It is full in really good and beautiful plants.—New Dracænas, New Crotons, New Pelargoniums, New Roses, Geraniums, Clematises, &c., with a rich collection of Fine Foliage and other Greenhouse and Hot-house plants, well grown and at low prices. Free to all my customers, to others 10 cts., or a plain copy free. Catalogue of Seeds and Roses free. JOHN SAUL, Washington, D. C.

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Reading for the Young.

THE INUNDATION.

In many homes, and particularly in those in which Uncle Mark has some niece or nephew belonging to the Horticultural Club, the scene here presented will have repeated itself so often as to be quite familiar. The little girl is a gardener and a lover of flowers. In her solicitude for their well being she is administering the remedy that so many little girls (and many big ones, too,) think a sure cure for any and all ailments of the plants —water And she is giving it a thorough soaking. The large watering-pot is evidently too heavy for her, for being unable to manage it, she pours a liberal shower on the cushioned chair, from which it flows like a little Niagara Falls, to the floor, where it threatens to form an inland lake in a small way. She could most likely have avoided this "inundation" if she had taken the rose off the watering-pot and poured the water out of the spout. It is to be hoped that her mamma will not scold her when she discovers the flood. She ought to take into consideration the good intentions of her little daughter, and how troublesome it is for her to use the large pot. To be sure she could have watered her vine much easier if she had let the pot stand on the floor. She would not then have to lift the pot so high and there would be no occasion to pour water on the chair; but she does not stop to think of this. Her only thought is to give her plant water, and water it gets in abundance. All little gardeners should study this picture that they may avoid similar inundations.

THE INUNDATION.—Fig. 43.

LETTERS FROM THE COUSINS.

The Bobolink.

A little girl sends this description of the much-loved Bobolink:

Uncle Mark.—The Bobolink, or Bobolincoln, as he was formerly called, generally comes to us about the middle of May and remains until the middle of June. His color is black or blue black, at first, but he don't keep this coat of feathers very long. He soon stops singing and changes his coat to a kind of greyish brown, which is not so pretty. His song is very pretty, and he seems to say "Robert Lincoln! Robert Lincoln!" In size he is about medium, being between the sparrow and robin. Although they fill our meadows and pastures in large numbers, they do not gather in large flocks, as do some other birds. By their graceful movements, strongly contrasted plumage and cheerful notes, they enliven our fields and seem to constantly challenge the admiration of the beholder. He soon leaves us and goes farther south—generally to Virginia and South Carolina—where he frequents the rice fields. In South Carolina he is called the reed bird. When he gets as far South as that he does not care for dress; all he cares for is to get enough to supply his table, so he is a sort of a gourmand.

St. Lawrence Co., N. Y. May I. Moreland.

Dear Uncle Mrk:—I have had a great desire to join your Horticultural Club but thought you had so many little nieces and nephews that all the corners would be filled; but I see by the Rural that you still take new members for your club. We have not taken the Rural very long but think it an excellent paper. I read the cousins' letters weekly and would like to become one of them. Our garden did not do so very well last season, it was so dry. I have some house plants, and they are doing very well, for I am so fond of flowers. I attend to them every day; mamma has some English Holly seed and planted some of them in a box and cared for them, but they failed to come up. She has some more seeds, and she would be very thankful if Uncle Mark would tell her how to treat them so as to insure their germination and growth. I have two little brothers, Oliver and Leonard, who would like to become members of your club. Each of them had a little patch of ground for a garden last season, which they attended to in their own way and they raised beans, peas, watermelons, popcorn and Hollyhocks, and with pink and blue Morning Glories, Gourds, Madeira Vine and five leaved Ivy. I take care of all our flowers this winter. I must close, but will write again soon. Yours, Minnie Chapel.

Cortland Co., N. Y.

Uncle Mark.—Will you please accept me as a new cousin? I am 12 years old next month. I have one sister, and two brothers. I wish much to join your Horticultural Club if not too late. I did not have a very large flower bed this summer, but mean to have one larger next summer. We had a children's wigwam this summer and last; as shown in one of the older Rurals, it was covered thoy did very well considering the season was so dry. They watered their plants several times, but did not give them enough to keep them growing well, so now they say they will do better next season if it should be a dry one; the weeds had not much chance, for their hoes was going on some part or other of the garden nearly every day. Papa is going to give each of them a larger patch this year; I hope they will do well and then perhaps Oliver will write and tell you how he succeeded, so please put our names down as members of your club. Your niece, Wild Rose.

Burlington, Kansas.

Dear Uncle Mark.—I have written to you and the cousins once before, but so long ago that I presume I have been forgotten. I saw my other letter in print, so I venture to write again. I very much enjoy reading the letters from the cousins, but am not so much of a gardener as most of them. I am quite fond of flowers, and enjoy working out of doors, in the garden or yard. I always raise flowers, but the chickens bother me a good deal by digging them up. I am quite a housekeeper, and like to work in the house much better than out of doors. I wonder if all the nieces know how to cook. Especially do I like to make cake. I have written quite enough, so I'll bid you adieu. From your loving niece, Zephyr.

Michigan.

MAGAZINES FOR FEBRUARY.

Appletons' Journal.—Contents: A Stroke of Diplomacy, from the French of Victor Cherbuliez; The Comedy Writers of the Restoration; Miracles, Prayer and Law, by J. Boyd Kinnear; Life in Brittany; The Seamy Side, by Walter Besant and James Rice. Chapters XXVII—XXIX; Teaching Grandmother—Grandmother's Teaching. by Alfred Austin; The Russian Gypsies, by Charles G. Leland; First Impressions of the New World, by the Duke of Argyll; Editor's Table: The World's Paradises—The Pulpit and the Stage—Trees in Cities.

The Russian Gypsies.—It is, I believe, seldom observed that the world is so far from having quitted the romantic or sentimental for the purely scientific that, even in science itself, whatever is best set forth, owes half its charm to something delicately and distantly reflected from the forbidden land of fancy. The greatest reasoners and writers on the driest topics are still "genial," because no man ever yet had true genius who did not feel the inspiration of poetry, or mystery, or at least of the unusual. We are not rid of the marvelous or curious, and, if we have not yet a science of curiosities, it is apparently because it lies for the present distributed about among the other sciences, just as in small museums illuminated manuscripts are to be found in happy family union with stuffed birds or minerals, and with watches and snuff-boxes, once the property of their late majesties the Georges. Until such a science is formed, the new one of ethnology may appropriately serve for it, since it of all presents most attraction to him who is politely called the general reader, but who should in truth be called the man who reads the most for mere amusement. For Ethnology deals with such delightful material as primeval dumbo-cephalic skulls, and appears to her votaries arrayed, not in silk attire, but in strange fragments of leather from ancient Irish graves, or in cloth from lacustrine villages. She glitters with the quaint jewelry of the first Italian race, whose ghosts, if they wail over the "find," "speak in a language man knows no more." She charms us with etchings or scratchings of mammoths on mammoth-bone, and invites us to explore mysterious caves, to picnic among megalithic monuments, and speculate on pictured Scottish stones. In short, she engages man to investigate his ancestry, a pursuit which presents charms even to the illiterate, and asks us to find out facts concerning works of art which have interested everybody in every age.

Ad interim, before the science of curiosities is segregated from that of ethnology, I may observe that one of the marvels in the latter is that, among all the subdivisions of the human race, there are only two which have been, apparently from their beginning, set apart, marked and cosmopolite, ever living among others and yet reserved unto themselves. These are the Jew and the Gypsy. From time whereof history hath naught to the contrary, the Jew was, as he himself holds in simple faith, the first man. Red Earth, Adam, was a Jew, and the old claim to be the chosen people has been apparently confirmed by the extraordinary genius and influence of the race, and by their boundless wanderings. Go where we may, we find the Jew—has any other wandered so far?

Yes, one. For wherever Jew has gone, there, too, is the Gypsy. The Jew may be more ancient, but even the authentic origin of the Romnany is lost in ancient Aryan record, and, strictly speaking, his is a prehistoric caste. Among the hundred and fifty wandering tribes of India and Persia, some of them Turanian, some Aryan, and others mixed, it is of course impossible to identify the exact origin of the European gypsy. One thing we know, that from the tenth to the twelfth century, and probably much later on, India threw out from her northern half a vast multitude of very troublesome indwellers. What with Buddhist, Brahman, and Mohammedan wars—invaders outlawing invaded—the number of out-*castes* became alarmingly great. To these the Jats, who, according to Captain Burton, constituted the main stock of our gypsies, contributed perhaps half their entire nation. Excommunication among the Indian professors of transcendental benevolence meant social death and inconceivable cruelty. Now there are many historical indications that these outcasts, before leaving India became gypsies, which was the most natural thing in a country where such classes had already existed in very great numbers from early times.—*Appletons' for February.*

Eclectic Magazine.—Contents: Lord Beaconsfield. I. Why We Follow Him, By a Tory. II. Why We Disbelieve In Him, by a Whig: First Impressions of the New World, by the Duke of Argyll; The Letters of Charles Dickens, by William Minto: History and Politics, by Prof. Seeley; Early English Ballads; A Gossip about Goethe, in his Birthplace; Teaching Grandmother—Grandmother's Teaching, by Alfred Austin; White Wings; A Yachting Romance, by William Black. Chaps. XVII. to XIX; The Literary Calling and Its Future, by James Payn; Escape from Pain; The History of a Discovery, by Sir James Paget; A Sonnet in Dialogue. To E. W. G., by Austin Dobson; Mademoiselle de Mersac. Chaps. XXVIII and XXIX; Carlyle's Political Doctrines, by William L. Courtney; Sunshine and Shadow; Prof. Asa Gray. With Portrait, by the Editor; Literary Notices.

The Electric Light in the British Museum.—The practical utility of electric lighting was fairly tested on Saturday morning during the heavy fog which shrouded the metropolis. For more than a century readers at the British Museum have been compelled to suspend work on the occasion of a fog, and to leave the reading-room; but on Saturday morning shortly after ten o'clock, when many readers, unmindful of the improvements of the age, were about to quit with their papers, the electric light was turned on, and, without any apparent preparation, the spacious room was suddenly illumined as by a magic ray of sunshine, to the great satisfaction of all present. There was a murmur of applause. For with the new carbon which Messrs. Siemens have manufactured at their Berlin works, and with the gilt reflectors suggested by Mr. Bond, the principal librarian, the light is about as good a substitute for sunlight as can yet be devised. Since the latter part of October the electric light has been continuously used in the national reading-room of an evening until seven o'clock, and an average of more than two hundred students and literary men have been able nightly to proceed with their researches to that hour, instead of leaving off, as formerly, when the shades of evening fell. It is reported that one of the staff, Mr. Nichols, has worked closely for two hours for a fortnight by the light, with a view to try the effect on the sight, and finds that there is not only no inconvenience, but that the optic nerve is strengthened, and that glasses are quite unnecessary as a protection.—*Eclectic Magazine for Feb.*

PERSONAL ITEMS.

Gen. Grant has sent two trotting stallions, bay descendants of "Ethan Allen," as a present to the Mikado of Japan.

Jennie Flood, whom U. S. Grant is to marry, has just had $2,500,000 in registered 4 per cents given her as a wedding dowery by her father, the San Francisco nabob.

Young Ulysses Grant, "Buck," as he is generally called, has had a rich streak of luck. He has been speculating in stocks in New York, and is credited with having cleared $100,000.

Senator Lamar is very eccentric in his habits. Sometimes he will almost starve himself and then eat voraciously. He has fits of melancholy that last a long time. He is never very buoyant. His ordinary demeanor is that of grave and stern decorum.

The widow of President Tyler, in her petition to Congress for a pension, says that her means of support were swept away by the late depression of real estate, and she continues, "In fact I find I have scarcely anything whatever left to live upon and it is only in this extremity that I appear before you."

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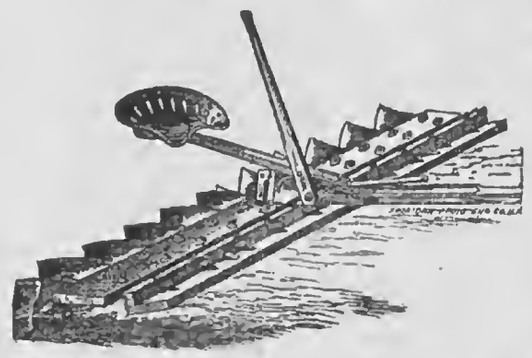

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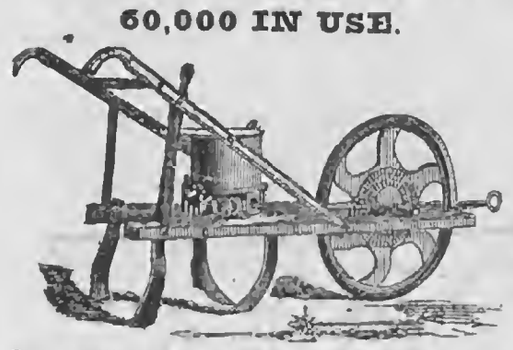

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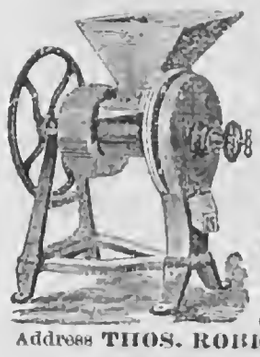

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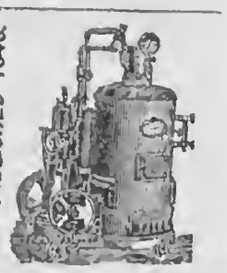

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Grapes and Currants.
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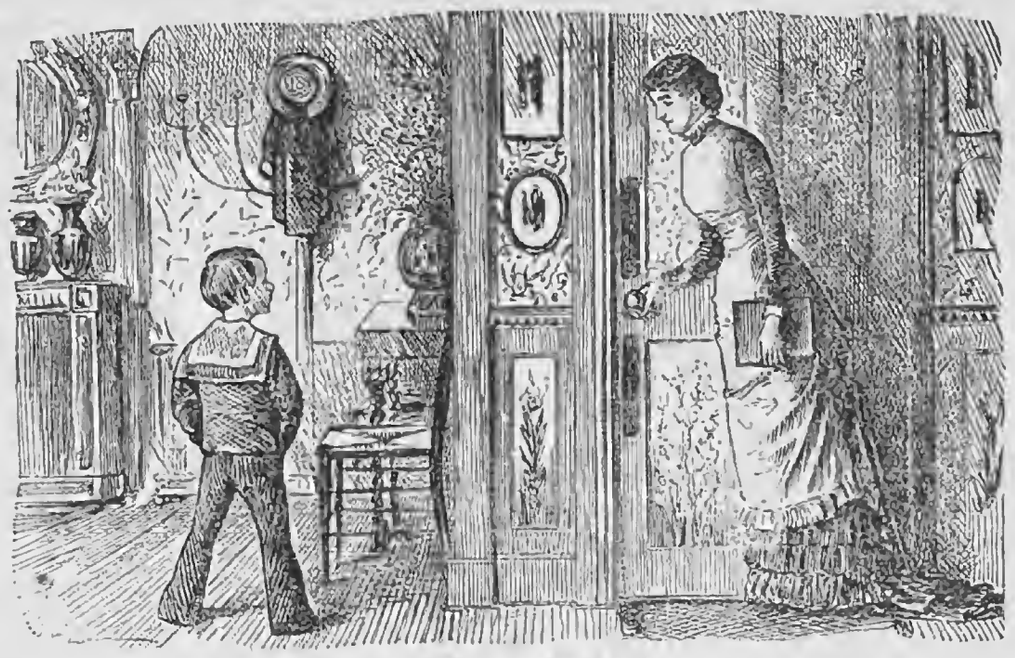
Various.

BRIEFLETS.

We can no longer supply back numbers of the RURAL NEW-YORKER. All subscriptions will be extended one year from the date of their receipt. . . The White Hydrangea "Thomas Hogg" is truly a valuable acquisition. It is nearly hardy and will stand the average winter of this climate with proper protection. A small plant purchased of a nurseryman last spring, bloomed with us through the entire summer and fall until frost. . . Of all the hardy, tall-growing grasses, we are still of the opinion that the Zebra-striped Eulalia is the most desirable. . . We have yet to find that the Cuthbert Raspberry has made one enemy. Its weak point is not yet discovered. . . With the Berkshire hog for stock and chufas for fattening, the South can be made the cheapest bacon-producing region in the world. . . Prophetic people are proverbial nuisances. . . Said General Jackson once: "I never place any reliance on a man who is always boasting about what he'd have done if he'd been there. You may depend upon it such a fellow never gets there." . . Mr. Nelson Ritter tells us that farmers should discuss the methods of marketing produce. He would rather raise an acre of strawberries than sell them. Nine-tenths of the people have no taste; they buy by the eye a red apple, yellow butter or a big pear without any regard to quality. . . It was once sneeringly said to Abraham Lincoln by a third-rate lawyer, "You used to drive swine to market when a boy." "Yes," said the President of this great Republic, "and *you* studied law, and it was soon found out that you and I had both mistaken our callings. . . Timidity in concession is for poor souls, who, if they concede much, may have little or nothing left. . . Do I, by coloring the butter, defraud my neigbor? Do I empty his purse? Do I give him an inferior article? No. Do I please his taste? Do I please his eye? I do. Where then is the immorality?—Report in Rural Home. . . There is a likelihood that the Mass. Ag. College will be consolidated with Amherst Barkis has not said whether he was willin' or not. . . When first offered, we tested the American Wonder Pea, introduced by Mr. Bliss, and reported upon it favorably. It is now offered by seedsmen in general, a proof that our report was not astray. . . Are "Egyptian Sweet" and "Washington Market" the same variety of sweet corn? If so or not, they resemble each other closely and both are first-rate sorts, though late. . . Peter Henderson says that Beauty of Hebron is one of the most valuable potatoes of recent introduction. . . How many distinct varieties of Asparagus are there that catalogues should tell us that the Colossal (Conover's) is the best? . . Probably Early Jersey Wakefield is one of the best varieties of early cabbage grown. . . We feel like thanking the Western Stock Journal and Farmer for its support of our views against horse-racing at agricultural fairs. . . It is often said that farmers have no time to attend to the garden. Why not give the garden time as well as the field? It will pay as well and oftentimes better. . . Mr. Hardin asks, in the Ag. Gazette of London: "Milk, pale, innocent, life-giving milk, what is there about it that should rob every dealer of his ordinary sense of human responsibility?" We would reply that there is nothing *in the milk*. . . Our readers, in ordering pears for spring setting, should not forget, among winter kinds, the Winter Nelis (one of the best—tree free from blight); Beurré d'Anjou (early winter), Dana's Hovey, Lawrence, Josephine de Malines and Beurré Gris d'Hiver. We respectfully urge it upon our readers not to order fruit trees of unknown traveling agents. Send for the catalogues of those whose announcements appear in our advertising columns, compare them and order accordingly. . . It is time to set hot-beds and to prepare for cold-frames. (For detailed instructions, see the catalogues offered in our advertising columns). . . Increase the value of your time by providing all tools and implements that will be needed for spring work—Whitewash the cellar—Select seed potatoes—Clean up the barn, the carriage-house, the granary, remove every old barrel, box and all rubbish; sweep away the dirt and the insects that winter in corners—Collect all rubbish from every source and burn it, saving the ashes for early vegetables—Repair fences, paint out-buildings, white-wash the henneries—Plow, if the ground is dry enough to crumble—Prepare for early planting of potatoes and especially for the early sowing of spring wheat—Sow clover seed—Keep pig-pens warm, dry and clean; filth, wet pens and little change of food are, no doubt, fruitful causes of disease—Study catalogues and determine what seeds and plants will be needed, and order them early—The present warm spell is favorable for pruning. Attend to the currant bushes—Cut out all old and scraggly stems and those which run crosswise—Get things in order—Hire the best help—Lay out your plans for the busy season. . . It may be a little early, but we like to be prompt when it helps trade. There is every prospect of a short peach crop this year.—Boston Post. . . We know a worthy citizen who is so upright that even the hair of his Sunday wig stands on end.—N. Y. News. . . An idiot in America is proposing to allow the original growers of new varieties of plants to patent them.—Mark Lane Express. . . The Germantown Telegraph answers the question "How to rid our premises of rats" thus: Cats, eats—nothing but *cats!* . . The dairyman who does not feed his cows well through the winter, is not only unmindful of the comfort of his cows, but is cheating himself out of the profits of the next season. . . Says Pres. Clark (Rural Home): "Unlike the farmers of the Old World, the American farmer is a sovereign, a power in the nation, the owner of the soil he works. His social and political status is inferior to that of no other class of citizens. How this fact exalts and ennobles the occupation of the farmer!" . . We should like to hear more from our readers with regard to their poultry experience. Many a valuable hint or bit of useful practice may be written in a few lines, and it is just such short *practical* items we most prize . . First-rate Lady apples sold during the holidays as high as $18.00 per bbl.



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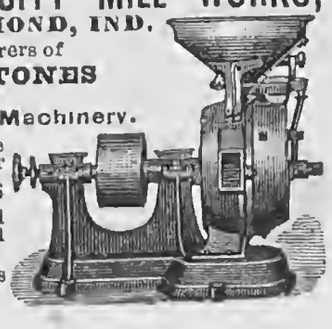

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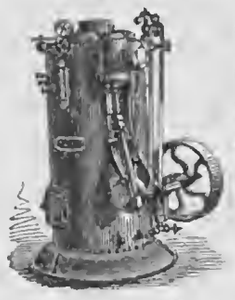
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 7.
WHOLE No. 1568.

NEW YORK, FEB. 14, 1880.

PRICE FIVE CENTS.
$2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Biographical.

OUR PORTRAIT GALLERY.

LEVI STOCKBRIDGE.

In every calling there are some men the simple record of whose lives is at once a lesson and encouragement to their co-workers. To farmers of the country a man of this sort is briefly presented in the following sketch.

Levi Stockbridge was born at Hadley, Massachusetts, in 1820, and continued to live there on the ancestral farm with his father until the latter's death in 1860. His was a busy life, however, though a home-staying one. When old enough he attended the common school of the town in winter and worked hard on the farm all the summer long. From his seventeenth to his twenty-first year his summer labors were as unremitting as before, but he had outgrown the common school, and attended the academy either at Hadley or Amherst, in winter. Here among more useful studies, he wasted considerable time on Latin and Greek. Like hundreds of other bright, young men raised on the farm, his ambition at this time looked to another career, and fired him with the desire to go to college and become a lawyer. This project, however, his father would not listen to, and the ardent youth was told he might have a good education, but that he must stay at home, carry on the farm, and in due time inherit it. Bitterly disappointed, he submitted to the paternal wishes, but vowed that even if he never entered college walls, he would have a college education, and to acquire this, after toiling in the field all day, he sat up in his room half the night foolishly poring over Latin and Greek books, but in other ways wisely preparing so that if any chance turned up, he would be fitted to hie away at once to college.

No chance, however, did turn up, and the conviction in time forced itself upon him that such a course of study as that he was then engaged in, would be of little advantage in the career before him, and that as he must stick to the farm, it would be far wiser to learn something more about farming than his father could teach him. To be convinced of the advantage of this, was, in his case, to set about doing it with energy and without delay. Straightway, therefore, he applied himself earnestly to the study of Natural Sciences as a private pupil under Dr. Edward Hitchcock, Professor of Natural Science at Amherst College, which was only three miles away. Just then the Prof. was preparing his report on his geological survey of Mass., and out of the fullness of the heart his mouth spoke from morning till night of rocks and soils and soil analysis, and little else, so that a much duller pupil must have been thoroughly crammed in this important branch of agricultural knowledge.

Already young Stockbridge was thoroughly versed in farm practice—could do anything in that line from castrating a pig or lamb to mowing two acres of heavy grass with a scythe by moonlight just for the fun of it. With a fair share of scientific knowledge ere long added to his practical craft, he soon felt a keener interest in his occupation and brighter hopes for the future. He could analyze the soil of the farm, tell what elements of fertility it was deficient in, and what would supply these, just as well as any professional chemist—a knowledge which those who are well acquainted with him, know he has forgotten nothing of until to-day. During the later years of this studious period, he taught school in the neighboring district, boarding at home and attending to the barn chores as well as to the business of the farm generally.

Gradually, however, as the years went by, wife and children, aged parents, the farm and its constantly increasing crops and business drove him away from his study and drew him into the whirl and strain of active life. Little time now for poring over abstruse books when 225 acres of land had to be cared for; hired men to be seen to; and a world of outside business demanded attention. The years of earnest study and earnest work, however, were bearing fruit. The excellent condition of the home farm, and the mental and physical culture that had produced it, inevitably attracted the attention of neighbors on all sides. The owner was consulted here, there and everywhere. He filled acceptably all the offices of his native town; had charge of the schools; was elected assessor and selectman; was chosen representative to the State Legislature four times and to the State Senate twice. Meanwhile, he kept the farm in tip-top condition; had a first-rate farmers' club in the neighborhood and did all he could for the county Agricultural Society, which sent him as its delegate to the Mass. State Board of Agriculture for 12 consecutive years.

In 1865, when he was thinking that he had lived long enough in public life, and worked hard enough, and that a smaller farm and less work would be a paradise, he had an offer for the old farm at war prices, sold and left it, taking a small place of four acres until a more suitable one could be found. There, though far from idle, he had comparative rest for a time, when a fresh duty once more put him reluctantly into harness.

In 1858 he had made an attempt in the Board of Agriculture to have that body inaugurate a movement for the establishment of an agricultural school in Massachusetts, and urged the project until 1860; and later on, in 1863, he did all he could to induce the State to accept the Congressional land grant for an agricultural college, with all its responsibilities and duties. This having been done, he fought valorously in the Board of Agriculture and elsewhere, to prevent the existing colleges from stealing that fund and devoting it to their own purposes. He insisted that it should be used to support an independent agricultural college, for the special benefit of the farmers of the State. His efforts in this direction having been crowned with success, he waited patiently as a spectator to see the work begun. For two years, however, the undertaking advanced only slowly, with many a hitch and jerk, and then "stuck". In the fall of 1866 a new president was chosen, who visited Mr. Stockbridge privately, and said that he would accept the presidency only on condition that the latter would take the position of farm superintendent and business manager.

Pres. Chadbourne was a good man, and Mr. Stockbridge thought he would make the new institution a success, and consequently, to serve him, agreed to go to Amherst and undertake the duties of the offered position for two years, and no longer. Accordingly he began work in April, 1867. Chadbourne did not come. The very week he intended to move he was attacked by hemorrhage, and the whole burden of the new institution fell upon Mr. Stockbridge's shoulders. That was a laborious year. All the plans had been laid out the previous winter, and the manager exerted himself to the utmost to carry them into effect. The college and other buildings were erected; the farm, fences, old lots and land marks were obliterated, and all laid out anew. A busy year truly was it until August, when, for the first time, the trustees met to see what had been done, and to elect Mr. Clark as President. He commenced his duties at once, and, as the buildings were ready, the school was opened on September 1, with 50 pupils. But, although the charter said it was an agricultural school, no provision had been made for agricultural instruction. In this emergency President Clark appealed to the over-burdened farm manager to go into the school about three times a week and lecture on agriculture. As that was something never thought of on his going there, he at first flatly refused on the ground that he had already as much business as he could properly attend to. But what will not steady persistence accomplish! Day after day he was told that there was nobody else to undertake this essential duty, and at length, finding the reiterated assertion true, he yielded his own wishes and ease to the well-being of the institution he had done so much to establish, and until the close of his two years' engagement, in 1869, labored with his customary earnestness in school and out, to impart sound agricultural instruction to all committed to his charge.

LEVI STOCKBRIDGE.—From a late Photograph.—Fig. 44.

In the spring of 1879, his two year's engagement having come to an end, he bought a farm and sent in his resignation. Much discussion followed this step, Mr. Stockbridge insisting on retiring to the rest he had well deserved by a laborious life during the last couple of years of which he had been doing the full work of two men. The college was not yet in a position, however, to dispense with his services, and once more yielding to pressure in its behalf he consented to remain but as Professor of Agriculture with school duties only.

From that day to this, putting his own wishes for a quiet life aside, he has labored devotedly through evil and good report of the institution whose welfare he has so close at heart, to fit young men who have come under his care for success in life, and to advance the best interests of the farmers of his native State in the first place, and then of agriculture everywhere. Lately he has once more sent in his resignation to take effect next spring, but it has not yet been accepted, nor is it likely the college will submit to this loss of his services if they can still be retained by earnest persuasion.

From early childhood to the present day, his life has been assiduously devoted to agriculture, and surely this is a man whom the farmers not of New England only, but of the country at large may justly feel proud of having among their number.

Farm Topics.

THE RECLAMATION OF BOG-LAND BY THE GERMAN METHOD OF BURYING WITH GRAVEL.

PROFESSOR F. H. STORER.

For a dozen years or more, a good deal of attention has been given in Europe to a peculiar method of cultivating bog-land, which seems to have originated upon the great moors of North Germany, but which is manifestly applicable in many other localities, particularly in cold or temperate climates. This process has been occasionally referred to in American publications, and a brief account of it suggested by Prof. Playfair of Edinburg, was printed in the report of the U. S. Commissioner of Agriculture for 1877. In the same year some highly interesting chemical examinations of old fields that had been cultivated in the manner now in question were made by a chemist named Osswald, whose results deserve the careful attention of every intelligent farmer.

The fundamental idea of the German method is to cover the bog-earth with a deep layer of gravel—after means have been provided for draining the land—and to leave this gravel permanently as a surface layer which is never to be mixed with the bog-earth which lies beneath it. Upon this gravel the crops are grown, as will be explained directly. The gravel surface shields the young crops from destruction by night frosts in the spring; it lessens the evaporation of water from the soil, and the radiation of heat, also, and so keeps the land comparatively warm. Moreover, as practical experience has shown, the buried humus can still supply the crops with food.

The layer of gravel might, of course, be

brought to the bog in carts or sleds from hills or pits, in case that plan should happen to be convenient. But upon the great level moors of Europe, where the process originated, there was no alternative but to get the gravel from beneath the moor-earth. It happened, withal, that the excavations made for gravel could readily be put to use as ditches to drain the land.

As explained by Rimpau, to whom the original description of the processes is commonly accredited, there are two general methods of lifting the gravel, one of them applicable to cases where the beds of humus are deep, and the other to the case of shallow beds. Where the layer of black earth is from a foot-and-a-half to three feet thick, or more, the operations consist in digging large, deep ditches, at stated intervals, and spreading upon the surface of the moor the sandy or gravelly subsoil which is taken from the bottoms of the ditches. In Rimpau's practice, the ditches are dug at distances of about 75 feet, one from another; they are 16 feet wide at the top, 11 feet wide at the bottom, and four or five feet deep. The black earth from the ditch, is spread upon the surface of the moor, and then the sand or gravel or clay taken from the bottom of the ditch is spread, in its turn, so that a layer of it about four inches thick shall everywhere cover the moor-earth. A gravelly sand is held to be best; and, in general, the more gravelly the material is, the better, though it is well to have a small proportion of clay in it. Pure, fine-grained quartz sand does not answer nearly so good a purpose as gravel. Oats may be sown at once upon the gravel and afterwards potatoes, roots, grain, and all kinds of forage crops.

The gravel layer is left permanently upon the surface of the land. It is never plowed under or mixed with the moor-earth. But from time to time when the surface land becomes hard or encrusted it is worked with a subsoil plow in such wise that the soil may be loosened without mixing one layer of it with another. It is well, however, in preparing the field, at the beginning, to plow a little of the sand or gravel into the upper layer of black earth so that there may be good capillary connection between the moor-earth and the final layer of gravel. Some writers have argued, also, that it is well to sweeten the moor somewhat, by burning, before proceeding to spread the gravel upon it. The objection to fine sand, just mentioned, is not only that it is liable to be blown away by the wind, but that it dries out too rapidly and chills off too quickly by night. Indeed, one advantage of the method is that the gravel layer compresses the drained moor-earth which would be apt to become too light and dry if it were cultivated in the ordinary way and exposed directly to sun and wind. Another objection to pure sand is that its particles lie too close together, so that a thick layer of it would, when moist, hinder the proper access of air to the humus.

It is still an open question, perhaps, whether this burying process is the most economical method of reclaiming moor-land, but there is no longer any room for doubt that it is a method of very great merit. It has been found in practice that the effects of the reclamation are sure and lasting, and that better crops can be got from the moors in this way than by any other known process.

The most interesting feature of this system of husbandry is the readiness with which crops get their nitrogenous food from the buried humus. Analysis of plants grown on the gravel layer has shown, all along, that the crops taken from moor-land thus reclaimed are particularly rich in nitrogen; and after some years' experience it began to be noticed by the farmers that grain crops are apt to lodge badly on reclaimed fields that are eight or ten years old. On critical examination it appears that the trouble is due to the extreme fertility of the soil, which had not been properly appreciated.

In the beginning, Rimpau's practice was to manure the gravel layer, much in the same way that he would have manured an upland field. But it appears that in so doing he made a grave mistake, for by using stable manure he got too much humus and too much nitrogen into the gravel layer. Osswald's examinations of the soil from reclaimed fields of various ages, from two to twelve years, have shown that the gravel of the older fields had become very much charged with organic matter. Not that the gravel had become mixed with moor-earth from below; on the contrary, the line of demarkation between the moor-earth and the gravel was surprisingly sharp, considering that twelve years had elapsed, in some instances, since the gravel was spread, and that arable crops had been grown upon the land continually. The only trouble was that the continued application of stable manure, and the accumulation of plant-roots, through injudicious shifts in the rotation of crops, had led to an accumulation of humus in the gravel. No very great quantity of nitrates was detected in these old fields. But there was an abundance of ammonia; and it was plain that there was present in the soil a far larger quantity of active nitrogenous manure than there was any need of; or, indeed, than was good for some kinds of crops, as the lodging had already shown.

Instead of being exhausted by cropping, the reclaimed fields had actually become too fertile. They were no longer competent to grow so great a variety of crops, at any given moment, as they had been at first; they still did very well for grass, however. Some of the twelve-year-old fields yielded the best crops of ray-grass, cut over and over again for green fodder, they had ever given; though they had previously been well manured with dung, with superphosphate, bone-meal, and Stassfurt potash-salts.

Speaking in general terms, the continued use of dung upon these fields was a great error. Here, assuredly, if anywhere, the exclusive use of mineral fertilizers will be in order. Here, if anywhere, the farmer may put his trust almost exclusively in the great store of nitrogen which the humus can supply. It has, indeed, been found best, in practice, to use a little nitrate of soda, in conjunction with the mineral manures, at the beginning of the process of reclamation, before the moor-earth has fairly begun to decompose. But there is little or no need of this nitrogenous adjunct subsequently, since the mere oxidation and decay of the humus supply enough nitrogen for the support of most kinds of crops.

It remains to be seen whether after very long-continued cultivation the accumulation of humus in the gravel layer will be large enough to preclude the growing of grain crops, or to necessitate the laying-down of another gravel layer, at enormous expense. But for the present it is plain that pains must be taken to work against the accumulation of humus, both by avoiding the use of organic manures and by growing a proper proportion of exhaustive crops, fit to bring down the exuberant fertility and to promote the destruction of the unwished-for humus.

The other method of lifting gravel, alluded to at the beginning of this article, is with plows. It is used upon moors which have only a thin layer of black earth. When the moor-earth is no thicker than from eight to sixteen inches, Rimpau gets his top layer of gravel or sand by throwing up the subsoil from below by a system of trench plowing. He runs three plows, specially adapted to the purpose, one after the other. The first plow turns a flat slice, three inches or so deep; the second plow stirs the sole of the first furrow to a depth of 12 or 16 inches; and the third plow throws up at least six inches of the loosened subsoil, to cover the inverted sod. These plowing operations are carried on in summer and autumn. Next spring the furrows are leveled with a heavy harrow, and oats are sown. As was said before, it is to be understood that the moor must be well drained before it can be cultivated in this manner.

Farm Economy.

A MUCK BED—WILL IT PAY TO HAUL IT OUT FOR MANURE?

J. B., Union. N. Y., having a large muck-bed, asks which is likely to be the more profitable—to haul it out on his land or to invest the time and money this would cost in superphosphate or some other fertilizer. He can buy yard manure for one dollar a load 1½ mile away; it is coarse, however, and contains a great deal of unrotted straw. He inquires whether Dana's Muck Manual is a trustworthy guide on the muck question. He cuts out the muck or peat at present in August, allows it to dry and uses it as fuel, for which purpose it lasts as long as well-seasoned hard wood, and makes a much hotter fire. It makes a large amount of ashes, but they are lighter than dust, and he asks whether these ashes are anywhere nearly as good as wood ashes for fertilizing purposes.

ANSWER BY PROF. G. C. CALDWELL.

Two objects are generally supposed to be accomplished by the use of stable manure, viz., feeding the plant with nitrogen, potash and phosphoric acid, and, secondly, the improvement of the physical qualities of the soil by keeping up or perhaps even increasing the quantity of humus, or decaying remains of plants. This humus, mixed in with the clay of a heavy soil, makes it lighter, or with a too sandy soil gives it body, and makes it less leachy and hungry, so that manures do not run through it like water through a strainer; and there are good reasons for the belief that humus serves other useful purposes besides this. Now, if muck is to replace stable manure it should contain the same substances and in about the same proportions; but in attempting to compare the two materials as to the quantity of nitrogen, phosphoric acid and potash that they contain, we are met at the outset by a serious difficulty in the great variability in the composition of the former. Prof. Johnson, in analysing 33 samples of air-dried muck, found the nitrogen to vary from nearly five pounds to 29 pounds in 1,000, or an average of 15 pounds. Stable manure in its ordinary condition as spread on the field, contains about 4½ pounds of nitrogen in 1,000. Therefore, as far as mere quantity of nitrogen is concerned, we shall be likely to have in a load of swamp muck of fair quality, which has been exposed to the air for a considerable time till its surplus water is dried out, more, and perhaps a good deal more, nitrogen than in a load of stable manure.

But the same quantity of nitrogen in one case may not make as much of a crop as in the other; a small part of the nitrogen in stable manure is all ready for the use of the plant, while a larger part, before it can serve as food, has to undergo a change in respect to its forms of combination, which requires time. In muck a part of the nitrogen may be, as in stable manure, ready for the plant, but, on the other hand, pretty much all of it may happen to be in this inert and, for the present, useless condition. As to phosphoric acid and potash, the other two substances which are fed to plants in stable manure, muck is usually so poor in them as compared with the manure that they may well be left out of account. This view of the case is supported by the results of some experiments by Prof. Johnson, which showed that by simply adding wood ashes, containing much phosphoric acid and potash, to muck, eight times as much plant growth was obtained as with pure muck. As to the quantity of humus-forming material in muck, that also varies widely; nine-tenths of it may be combustible matter, capable of making humus, and generally over one-half of it is of this character: but where it contains a large proportion of sand, not over a fourth of it may be combustible: it contains the more humus-forming material the smaller the quantity of ash that it leaves when burned. Ordinary stable manure contains about one fifth of its weight of combustible matter; therefore, well air-dried muck may make more humus in the soil than an equal weight of stable manure, with its much larger proportion of water.

It is plain that, without making a chemical analysis of the muck which our inquiring friend has in such abundance, we cannot give him any reliable advice as to its use. He may have a mine of considerable value in his swamp, or, on the other hand, it may not pay to dig it out and carry it even to the nearest field. That it may be valuable is shown by the results of many trials recorded in Johnson's "Peat and its Uses," which, by the way, we recommend to our friend rather than Dana's Muck Manual. It is there stated that some farmers have compared the muck obtained from their own swamps with their stable manure, and have found it to be capable of yielding quite as large crops, at least for a time. In these cases the muck was applied by itself, and sometimes almost in the fresh state. Such a favorable result could, however, be expected only with a muck of unusually good quality, and a kind of soil that needed just such treatment—perhaps a heavy soil, naturally well stocked with potash and phosphoric acid, and specially needing the loosening effects of the muck. In other and more common cases the best results have been obtained by composting the muck with the manure of the yard, thus using it as an absorbent of the valuable liquids which might otherwise run to waste, and as a check on losses which might result from too rapid rotting of the manure. We find in the book above mentioned such reports as these: "A compost of equal parts of muck and stable manure is equal to the same quantity of unmixed stable manure;" or, "Eight loads of muck and four of manure in compost, when properly forked over, are equal to twelve loads of barnyard manure;" or, "One load of stable manure and three loads of muck equal in value four loads of good manure." Such statements made by men who are well known in their respective localities, and whose names are given with them, are worthy of careful consideration.

Our friend may therefore really possess a valuable piece of property in his muck bed; the chemist might help him to decide how valuable it is; but we would not by any means advise him to call in the services of the chemist, for it would cost too much; nor can we show him how to make even a reliable guess as to the quality of his muck from its appearance, whether snuff-colored or black, fine or coarse, or what not; Prof. Johnson could not find anything in the appearance of the muck that could be taken as a sure indication of good quality. There is, then, nothing for him to do but to try it on his fields, and we advise him by all means to do this, but in such a way that he can tell whether it pays or not; if it does not pay he cannot afford to be handling the heavy stuff year after year. He might try some of it by itself on one of his fields, but not with much expectation of profit; he should also try it in his yard, hauling in, if the beds are not too far off, perhaps as many loads as he expects to have of manure. This can often be done in winter when his team and himself would otherwise be idle many days, and the experiment would cost him comparatively little. Then if he is an experienced farmer and knows about what to expect from a load of good stable manure when put on the land, he can soon tell whether or not the addition of his muck to it is profitable. If he does not know from experience what return his yard manure should give him, he ought by all means to go to work at once and get a reliable answer to this question, and especially before he invests in superphosphate or any other commercial fertilizers. Fortified with this information he may the more confidently strike out into new paths, with the feeling that he is in far less danger of losing his hard-earned gains by unprofitable investments in this direction. Positively, in no better way than this can he learn whether his muck is of any value to him, and we insist that its possible value is great enough to make a careful trial of it well worth while. In using it we would suggest that exposure to the air and to frosts always improves it, and that it is well therefore to dig it out some considerable time before it is wanted.

As to the use of peat for fuel, he will find a full account of this matter in the book above referred to. In regard to peat ashes, they also are exceedingly variable in composition, but at their best they are much poorer than wood ashes in potash—the most valuable constituent of these ashes. They are, however, on the average, about as rich as wood ashes in phosphoric acid, so that they are not by any means worthless, and in the compost pile of muck and manure they serve a good purpose as far as they go. They will be likely to be the better in quality, the smaller the quantity yielded by a given quantity of the peat.

Horticultural.

FRUIT GROWERS IN COUNCIL.

Twenty-Fifth Annual Meeting of the Western New York Horticultural Society.

[Rural Special Report.]

THE twenty-fifth annual meeting of the Western New York Horticultural Society was held in the City Hall, Rochester, commencing January 28th, and continuing two days. It was largely attended, and the proceedings were of great interest. The exhibition of fruit was large and the specimens were fine.

The morning of the first day was devoted to the routine business of organizing, appointing committees and hearing the report of the Treasurer.

The AFTERNOON SESSION was opened by the address of the President, Mr. Barry, followed by the report of the Committee upon Native Fruits, Mr. J. J. Thomas, Chairman. He mentioned the fact that in Monroe County the Swaar, Yellow Belleflower, Pound Sweet, Gloria Mundi and Black Detroit had been found to be regular yearly bearers. He found the Brighton Grape to be a superb fruit for the gardener, and recommended the Jones's Seedling pear, both for market and home use. It is a most delicious fruit, being uniformly good and productive.

Following this, Mr. Jones read the report of the Committee upon Ornithology, in which he noted the shy habits of many birds, which render a study of their habits a difficult task. He had known of the canker-worm being destroyed by the cuckoo, and the pea-vine bugs to be the food of the barn swallow. The butcher-bird, he thought, did good service in ridding our fields of the mice. Mr. Green said that the thrush destroyed many insects serviceable in the garden. Mr. Fowler thought the wood-peckers did great service in the winter by ridding our trees of the pupæ of many injurious insects. Mr. Hubbard, of Erie, had known the English sparrow to eat the fruit buds of the Currant, and to destroy the crop. Mr. Harrison said the sparrow was a grain-eating bird. Mr. Woodward said he had seen the sparrows searching for insects, and would not destroy them until he could prove something against them. We have grain enough in this country to feed both birds and men.

Next came the reports of the Committee upon Visiting Orchards. Mr. Moody, of Niagara County, made a few remarks upon the fruit in that county the past year, which was not a favorable one, the orchards near the lake shore not doing so well as those inland, on account of the severe storms early in the season, which destroyed many blooms. He mentioned an orchard of six acres on heavy land, from which 2,100 barrels of apples were taken.

Mr. Hoag gave the statistics of the amount of fruit grown and sold in the county: Of apples there were 300,000 barrels, at $1.60 per bbl.; dried apples, 120,000 bushels, at 20c. per bush.; apples used for cider, 200,000 bushels, at 10c. per bush.; peaches, 250,000 bushels, at 40c. per bush.; cherries, 458,000 pounds, at 3c. per lb.; pears, quinces, plums and berries sold for $25,000, making a total of $662,740, for the total fruit crop of the county. Mr. Gray, of Orleans County, thought farmers made a mis-

take in barreling their second quality of apples. He urged the destruction of the codling moth, and noticed at some length the evaporators for drying fruit, of which there are several in his county. Mr. Jones, of Monroe County, urged the necessity of thorough culture, and the grading of fruit for shipment to a higher and a more uniform grade. Mr. Wing had dried the past season, 20,000 bushels of apples, and was shipping to all parts of the world. He sent apples, dried whole, to Hamburg for apple dumplings. He utilizes the cores and parings by drying them and selling to jelly makers, who pay four cents a pound for them. Mr. Willard, of Ontario County, regarded plum culture as very profitable. Mr. Hubbard, of Erie County, reported the largest crop of apples they had ever had.

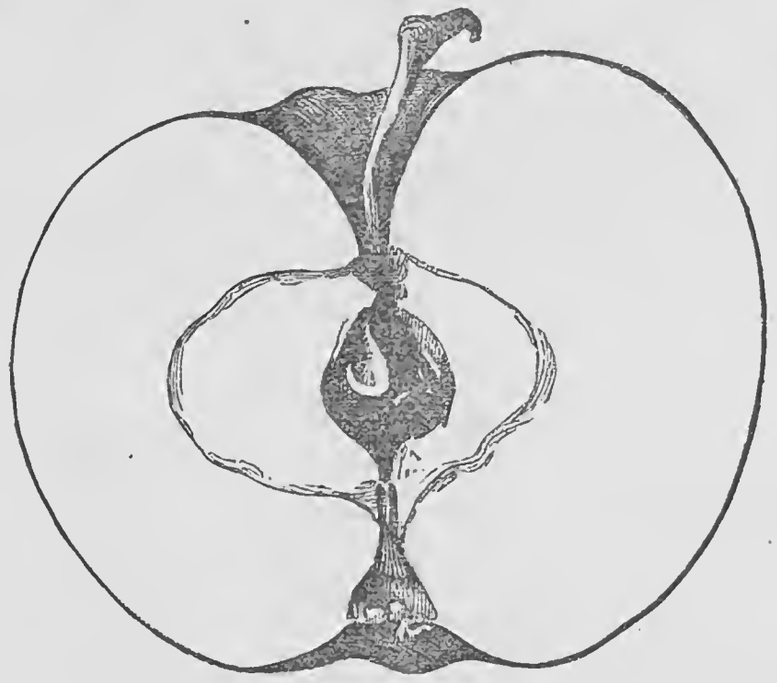
Mr. Thomas read a paper upon the Outlook of Fruit Culture. For success he regarded three things as essential:—1st, locality; 2d, selection of varieties of each kind; 3d, care of the trees. Mr. Handy had practised winter pruning of apple trees and did not approve of it. He preferred summer pruning. Mr. Brooks would prune before the growth started, if it was growth that was not desired. Mr. Thomas thought under certain circumstances plowing orchards was very beneficial. He knew of a young, thrifty orchard that was plowed deeply, and large roots were cut off by it. It bore well the succeeding season and continued to do so. If the trees had been less thrifty they would probably have given different results. Mr. Barry said that in winter light pruning may be done; would prefer to do the heavy pruning in the dormant season, but not in frosty weather. Mr. Moody preferred keeping orchards under the plow.

THE EVENING SESSION was opened by the discussion upon the first question:—"Was there a large crop of apples the past season anywhere outside the area of deep snow last winter? Was the heavy crop partly due to the snow acting as a mulch?" It was thought that the snow had no material effect upon the crop.

Question No. 2 was then taken up:—"What varieties of apples according to the latest experience, give the most satisfactory results both as to bearing and marketing?" Mr. Spence regarded the Bottle Greening as a valuable sort. Mr. Reed regarded it as a fair bearer and a desirable fruit. Mr. W. C. Barry thought it was valuable mainly for its solidity. He had wondered why it was not more popular. Mr. Moody regarded the King of Tompkins Co. as one of the most valuable market fruits. Mr. Bronson had known the King to be injured by the winter and did not regard it as entirely hardy. Mr. Rathbone regarded the Bottle Greening as a better apple than the R. I. Greening. Mr. Hooker had found the N. Spy to be a good bearer but a poor keeper. Mr. Woodward recommended it for Niagara Co., especially for the heavy loam soils having a strong, dry sub soil. Mr. Reynolds had seen the Spy doing excellently well in Wyoming Co.

Mr. Barry opened the next question:—"Have there been any recent improvements in the methods of packing and shipping fruit?" by asking "What is the best method of packing fruit for foreign shipment?" He used paper for wrapping the fruit in, but knew of others using chaff in addition. Mr. Vick had tried several ways, but preferred using strong manilla paper in which to wrap the fruit. In packing in the barrel he placed a layer of buckwheat chaff between each layer of apples, and in the ends put a deeper layer of chaff. He had shipped several kinds with success in this manner. Mr. Hooker objected to the use of the chaff, as it would be liable to impart a flavor to the fruit. He thought that good fruit, packed solidly, would stand shipment to a foreign market. He would advise picking the fruit as soon as matured. Mr. Moody thought well of the plan of having fruit-houses, where the fruit could pass through the sweating process before being barreled. Mr. Hoag had a ventilated fruit-house in which he allowed his fruit to cool, and where he kept it till November. Mr. Moody thought the thorough assorting of apples a necessity; they should be handled quickly and very carefully, and be left in the sun no longer than necessary. Mr. W. C. Barry left his apples in the orchard till they had passed the sweating process. He thought they should not be placed in barrels till after that — nor should they be shipped abroad till cool weather commenced. Mr. Woodward said apples should be picked early and handled but little. When they snapped easily from the stem, it was time to pick them. They should not be barreled till ready for sale. Mr. Clark picked some apples the last week in October, and had but just opened them. He found them to be in good condition.

THE MORNING SESSION, next day, was opened by a paper from Prof. Caldwell, of Cornell University, which was followed by a short discussion upon the question:—"What is the most profitable strawberry for a nearby market?" Mr. Green recommended the Col. Cheney, which was too soft for distant shipment, also the Monarch of the West and the Sharpless. Mr. Jones had found the Champion to be of good size and reasonably productive. Mr. Ellwanger would name the Sharpless and Cumberland Triumph. Mr. Vick recommended for home use, which he thought to be a "near-by," the Triomphe de Gand. Mr. Munson had found nothing equal to the Wilson. Mr. Brooks proposed to send



THE BETHEL APPLE.—FIG. 45.

missionaries to those localities where they grow and eat the Wilson.

Mr. Vick then read a very interesting paper upon flowers and plants—showing the progress made in the history of the Society, which was followed by Mr. Ruhlman's report upon garden vegetables. He regarded the endive as worthy a prominent place in the garden.

Mr. Woodward followed with a paper upon fruit—its influence upon the family and its value as a commercial product. If like produced like, he thought the less pork and the more fruit eaten the better.

The Society then adjourned till afternoon.

THE AFTERNOON SESSION opened with the question "Does it pay the orchardist to grade his fruit according to quality." Mr. Mitchell thought it depended upon the market. Mr. Willard said, it is a question admitting of no argument—you can't afford not to do it. Mr. Younglove said: Keep it up and it will pay. A tasty package is also necessary. Mr. Thomas cited John Morse who had sold one crop of his Bartletts for $9,000. He graded his fruit. Mr. Lazenby had experimented in a small way and found it profitable. Mr. Rumsey wished information in reference to pruning standard pear trees. Mr. Barry recommended but little trimming—the less the better. Mr. Lay would not cut off a limb unless it were necessary. In dwarfs he would shorten in the limbs till they commenced bearing.

Question No. 10 was then called for: "Cultivation of Dwarf Pears.—Can their cultivation be recommended for profit, and if so, what varieties?" Mr. Woodward was not prepared to speak of the profits. His trees were young and growing finely. He fertilized with bone dust, ashes and salt. Would not recommend planting closer than nine by twelve feet. Mr. Willard would say dwarf Pears are profitable if properly handled. Their roots lie near the surface and they need more feed than standards. Mr. Bogue said that on light, sandy soil they would fail, but on good land would prove profitable. He regarded the Duchesse, Beurré Clairgeau and Beurré d'Anjou as the best. Mr. Bogue remarked that the Duchesse did well universally. It wants good rich soil, ripens at the right time for profit and will be planted more than any other. It is remarkably free from blight and is the pear for the million. Mr. Barry regarded the Beurré d'Anjou as a profitable dwarf variety.

"Why will not the standard trees of Duchesse d'Angouleme give as good results as the dwarf?" To this question Mr. Barry replied that he thought the Duchesse as a standard needs age and will do as well as the dwarf when it reaches age.

To the question: "Has any one had experience in thinning the blossoms of fruit trees; if so, how is it best performed, and what has been the result?" Mr. Thomas said that removing the blossoms from old trees was expensive, and did but little good; but if practiced on young trees the bearing year could be permanently changed.

"Are any of the so-called hybrid Grapes worthy of being recommended for cultivation for vineyard purposes?" In answer to this question, Mr. Green thought that no hybrid could be recommended for ordinary planting. Mr. Stace said his experience was that the hybrids did well a few years, then became diseased and were good for nothing. Mr. Merrell had vines of Rogers's Nos. 4, 15, 19 and Salem planted fifteen years and still healthy and doing well. Mr. Hubbard said that generally the Rogers's did not seem to deteriorate. Mr. Younglove had found Rogers's Nos. 15, 4, 43, 14 and Salem for fifteen years to be uniform bearers, good growers and first-class vineyard Grapes. Mr. Clark had an acre and a half of Rogers's No. 4, which for five years had yielded an average of $200 per acre. Mr. Farley had fruited the Rogers's Grapes ten years. He found Nos. 4, 33, 15 and 19 to be profitable. Had had but little experience with other hybrids.

EVENING SESSION.—The first question was: "What can we do to prevent the premature dropping of the quince leaf?" Mr. Green thought it was occasioned by the slug. Mr. Woodward thought it to be caused by plowing away from the tree. Soil seemed to make no difference. It was to be avoided by cultivating up to the tree. Mr. Hoag thought cultivation had nothing to do with it. On low ground the disease was prevalent; but not on high ground. Mr. Bogue stated that last year leaves dropped in June. Mr. Jones had noticed it in nursery rows. The Rea's Mammoth was especially liable to it. The Augers next and the Orange free from its attacks. Mr. Bronson had found that trees in low places held their foliage while those on high ground did not. Mr. Dorman had 1,500 trees mostly on low land. They dropped their leaves but slightly; whereas those on upland dropped their leaves badly.

The next question was: "What are the six best plums for market?" Mr. Hooker named the Monroe Egg, a light-colored plum of moderate size. Mr. Woodward said the Lombard was badly infected with the black-knot in Niagara Co. Mr. Hoag liked the Washington and Yellow Egg. Mr. Barry named the McLoughlin as being of the very best quality. Mr. Jones mentioned the Reine Claude de Bavay as being very popular upon the Hudson River.

Mr. Root regarded the Lombard as the most profitable. Mr. Beadle, of Ontario, said the Lombard was the freest from black-knot with him. Mr. Barry named the Coe's Golden Drop as a valuable sort. Mr. Barry said the Prunes all do well and are profitable. Mr. Zimmermann found that the Italian held its leaves better than the German Prune.

In answer to the question, "What are the best four varieties of grapes for the family use?" the Society names the Delaware, Brighton, Concord and Martha.

The question:—"What sized apples pay best to ship to Europe?" was then discussed. Mr. Ellwanger found the King of Tompkins Co., to be a favorite. Mr. Vick said, the larger the better; the brighter the better. Large Baldwins go well—Northern Spy is best. Mr. Salter asked if the King of Tompkins Co. was generally considered hardy. He had not found it to be. Mr. Allis, of Orleans Co., had found it to be perfectly hardy. It bears yearly with him. Mr. Woodward said that on some soils it twig-blights badly. Mr. Zimmerman had found it to be a shy bearer and sickly in Erie Co. Mr. Root thought it liked high altitude the best. It sells well and does well in Onondaga Co. Mr. Lazenby said it did well in Tompkins Co. The Farmers' Club there, two years ago, by a unanimous vote placed it at the head of the six most profitable apples, and it was the only one of the six which received a unanimous vote. Mr. Hooker had found it apt to blow off; but the good apples sell well.

The society then discussed "New Fruits.—What has been the experience of the past year with new varieties of fruits?" Peaches were first taken up. Mr. Woodward said the Amsden June was worth nothing as an orchard fruit. It rots as badly as the Hale's Early. Mr. Younglove wanted a better market peach than the Early Crawford. He had heard of the Wheatland and wanted to know something about it. Mr. Rogers, the originator of the Wheatland, said that it ripened directly after the Early Crawford. It is handsome in appearance and sells well. He liked the Foster—it pleases every one. Mr. Green liked the Foster better than the Early Crawford. It is more even in size. Mr. Younglove had found both Foster and Early Crawford to be lacking in vigor of constitution. Mr. Hooker did not feel disposed to recommend any of the class of early peaches. They are punctured badly by insects, and can not be grown with profit. Mr. Barry said the Amsden June, the past season, was smooth and fine in appearance, and not at all infested by insects. Mr. Younglove regarded the Early Rivers as the only early one really profitable. Mr. Boyne called the attention of the members to the Lulu, which fruited this year for the first time, at Batavia, where it ripened Aug. 1st, being two weeks ahead of the Amsden.

The new Grapes were then taken up. Mr. Craine regarded the Niagara and Prentiss as being desirable acquisitions. Mr. Farley spoke of the Duchess. It had fruited for ten years in various localities, and, so far as he knew, there had never been a report to its prejudice from those who had tested it. He had never heard of mildew, leaf-blight, or any other disease affecting it which he had not seen on the Concord. Mr. Hubbard did not regard the Moore's Early as of very good quality. Mr. Farley thought the Worden had been overlooked. It was earlier and better than the Concord, larger and finer in growth. The skin is a little thin and it is not adapted for market. Mr. Hubbard had not found it to be much earlier than the Concord.

New Strawberries were then enumerated. Mr. Green found the Brilliant, sent out by Storer of Ohio, to be handsome in appearance. The Marvin is showy and productive. The Pres't. Lincoln is one of the finest large berries we have. The Glendale is valuable as a late bearer. Mr. Hubbard did not regard the New Dominion as of any value upon gravelly loam. Mr. Green also spoke favorably of the Reliance and Gregg Raspberries.

Currants were discussed next. Mr. Hooker asked for information about the Black Currants. He found the Black English to be an upright grower and a small cropper. The Black Naples was not so rapid a grower, but a better cropper. Mr. Barry said the Lee's Prolific had a longer bunch than either of the others. Mr. Hooker had found the Lee's Prolific an abundant cropper. Mr. Fish said that the Naples leafs out earlier than the English. Mr. Jones had found the Lee's Prolific to be of upright growth, the fruit to be of large size, and the plant a very abundant yielder.

The Society then adjourned *sine die*.

H. T. J.

Pomological.

THE BETHEL APPLE OF VERMONT.

T. H. HOSKINS.

THIS variety is a favorite one in the orchards of the White River Valley of Vermont, comprising a part of Orange, Windsor and Washington counties. The original tree in the town of Bethel is still living, and is reported to me as having produced "two barrels of splendid apples in 1876." The Bethel has caused some confusion by its similarity to other apples, and was a few years ago pronounced by C. M. Hovey and other Massachusetts experts, as being "undoubtedly" the Murphy. On the other hand, Mr. Downing thought it might be identical with an apple of St. Lawrence Co., N. Y., known as the Stone Apple, but he now writes me that he is satisfied that it is not the same; though, singularly, the Stone, has as a synonym, the name of Bethel given to it. But this may have been done by some Vermonter, who noticed their similarity. I have been favored with a specimen of the fruit of the Stone, and also with the wood, and recognize distinct differences between that variety and the Bethel of Vermont.

In rich lands the Bethel is regarded as the best substitute for the Baldwin north of the line where that variety is found unable to endure the severity of our winters. The Bethel is hardy, even to the Canada line; of good size, fine color and excellent quality. It keeps well through the winter, but not long into the spring. However, there is a "but" in everything, and the "but" in the Bethel is that it requires a good soil, preferably a river valley soil, to bring it up to profitable productiveness. On the hills, unless well cared for and manured, it is complained of for lack of productiveness.

The Bethel of Vermont is in size large; in form roundish-conical: basin shallow, slightly corrugated; calyx closed; cavity deep and narrow; stem short and slim; color a rich yellow, with bright crimson stripes over nearly all the surface, much exposed specimens being sometimes almost solid in color and dark red; flesh, yellow; core medium; seeds very long and pointed; flavor rich mild subacid; quality very good. Season January to March. A very constant characteristic of the fruit is that it appears laterally compressed, and a transverse section is therefore oval or ovate, generally the latter. [The above engraving is from an apple sent in by Dr. Hoskins.—EDS.]

Orleans Co., Vt.

Sheep Husbandry.

WHAT BREED OF SHEEP PRODUCES THE BEST MUTTON?

This is a question that may be well asked, now that a great demand for mutton sheep to ship alive and in the carcass, has sprung up for the British and other foreign markets, and that the consumption, also, is rapidly increasing at home.

Of all breeds in England, the South-Down has, from time immemorial, taken precedence. This, however, is beginning to be shared at the present day with other Downs, under the name of Oxford, Hampshire, Sussex, Shropshire, etc., the prefix being taken from the county in which the native sheep possesses the make-up and family likeness of the South-Down. All these are of quicker sale and command a considerably higher price per pound than any other breeds.

The reason of this preference is, that they are encumbered with less offal and the bones are finer. The flesh is better marbled than with others, and more lean, tender and juicy throughout the carcass. It is these qualities which recommend it so highly to the lovers of good mutton, and render it the most palatable and economical of all for consumption; no messes of uneatable, coarse meat, or lumps of fat here to be thrown aside, fit only for mutton tallow. In addition to the meat being more palatable when cooked, the hams and shoulders, after moderate salting, can be smoked and eaten shaved into thin slices, like dried beef. They are then scarcely inferior in quality to venison hams, and may easily pass for such, thus making them a cheap luxury for the tea table.

Down sheep are unquestionably the best sort for our farmers to breed most numerously among their flocks for exportation, as, in addition to the superior quality of their mutton, they are extra hardy and prolific, mature early, are quite easily kept and fatten quickly. They shear large fleeces for their size, of a middle quality of wool, which commands a good price in our markets. It works freely with the manufacturer, and makes strong, excellent cloth.

Of the various breeds of Down sheep, it is getting to be the opinion of many, that the Oxford, on account of its greater size, will prove to be the most profitable to rear for the English market, as, other things being equal, the larger takes precedence there, more especially for the production of early lambs. From information recently received from England, I learn that the average weight of Oxford-Down lambs bred there with good farmer's keep, after being dressed and the head taken off, is 32 to 40 pounds at three months old; 48 to 56 pounds at six months; 64 to 72 pounds at nine months; and 80 to 96 pounds at 12 months.

These are great weights, and as early lambs bring an extra price, the profit in breeding and rearing them must be considerable. Moreover, their sale is sure, and the price not subject to fluctuation. Older ones are of corresponding weights, and when properly fed and cared for, fully mature at 18 to 24 months old, which enables the farmer to turn his capital so much more quickly. This gives him an additional profit over and above later-maturing and slower-growing breeds.

Rams can be put to moderate service at six months of age, though it may be better, as a general rule, to keep them back a few months longer. Ewes may be served to drop their lambs without stunting their growth, at 18 to 24 months' age, according to their size and constitution, and these first lambs do as well as any subsequently dropped, provided good care is given to both dam and offspring. The ewes often drop twins and occasionally triplets. From this it is seen how rapidly a flock can be increased, and how precociously this sort of sheep safely breeds.

In order that the reader may better judge of the merits of Oxford-Downs, a group of these noble animals, bred by Mr. Cooper, of Coopersburg, Pa., is here introduced as an illustration of their form and character; and I am assured by impartial judges, that the portraits are not at all flattering.

I have given the dressed weights above of different ages bred by the ordinary farmers of England. Mr. Cooper informs me that the live weights of a pick of his largest at two months old, is 60 pounds each; at four months 80 pounds; at six months, 115 to 120 pounds; and he is confident if pushed on to 12 or 13 months, they might weigh from 150 to 170 pounds. I have seen the weights of full-grown prize Oxford-Downs, reported at English agricultural shows, repeatedly reaching from 250 to 275 pounds, and in one instance it was over 300 pounds. This shows what can be done in the way of single specimens by long, high training, and enormous fattening when particularly desired by breeders. I am of opinion, however, that such large specimens of the Oxfords would not be so profitable to rear and feed as those of medium weights, like the dressed which I have given above; and I doubt whether the flesh would be of so high a quality. But these things can only be proved after a fair trial.

My advice to those who have light soils, or stony or hilly land, is to choose sheep of medium size; but those who possess rich lands yielding abundant crops of grass, roots, and grain, may as profitably, perhaps, rear those of the larger size.

A. B. Allen.

New York.

Various.

DIRECTIONS FOR PUTTING UP FRUIT TO BE SENT BY MAIL OR EXPRESS.

Mr. Charles Downing favors us with the following instructions: Select a characteristic specimen, viz., one of average size, color, form, etc.—perfect or one that will give a fair representation of the variety; put it in a tin, or thin wooden box (paper boxes, unless very stout or double get broken or mashed in the mail bags); fill the spaces around the fruit closely with paper, cotton, or some light material to keep the fruit in its place; put a paper wrapper over the box; do not seal or paste it (contrary to law); but tie it firmly with strong twine on each side of the box; put postage stamps on the wrapper to the amount of one cent for each ounce of weight; also put the name of the fruit in the box, so that the person receiving it may know what the variety is.

When to be sent by express, put each variety separately in a paper wrapper or paper bag, with the name on a slip of paper or card; then pack each parcel closely in the box, and if not quite full, add paper, shavings or something of the kind, so as to hold the fruit firmly and prevent bruising. Put the address in full on the lid of the box. Always select fruit of average size, color and form, avoiding alike the largest as well as the inferior specimens.

Rise in Prices of Ag'l. Implements.

It is doubtful whether there has ever been so much activity in the iron business as at the present time in this country. Blast furnaces that for the last decade almost, have been cold and useless, are now making pig metal to their fullest capacity; rolling mills are working in some cases day and night; but the home supply is still much less than the demand, and the iron works of England and Belgium are working hard to supply the deficiency. During the past week two vessels were loaded with 5,000 tons of steel rails in Liverpool, and it is reported that 13 other vessels are waiting to be loaded entirely with iron for this country.

The farmer is greatly interested in this briskness in the iron trade, inasmuch as all goods into whose make-up iron enters are rising in price. A week or two ago all the plow-makers of the Northwest met at Chicago, formed a combination to regulate the prices of their wares, and began at once with an average rise of about 10 per-cent. Nail makers, stove makers, in fact, all branches of iron manufacture are also advancing prices. Mowing machines will go up probably at least $10 each, next season, hay rakes about $4, and other implements in proportion. Wood, wages, all things are advancing in price, and those who intend to buy, must look forward to pay high figures for their purchases.

To Subdue the Craving for Alcoholic Drinks.—Dr. Norman Kerr recommends a decoction prepared as follows:—

Powdered cinchona bark	1 ounce.
Water	1 pint.
Dilute hydrochloric acid	100 minims.

Boil for ten minutes, and strain when cold; pour boiling water on the contents of the strainer till the product measures one pint. Of this give a wineglassful every three hours, gradually diminishing the frequency and quantity of the dose after the first day, till in six or seven days it is reduced to a teaspoonful three times a day.—Boston Journal of Chemistry.

Dairy Husbandry.

MILK AND BUTTER.

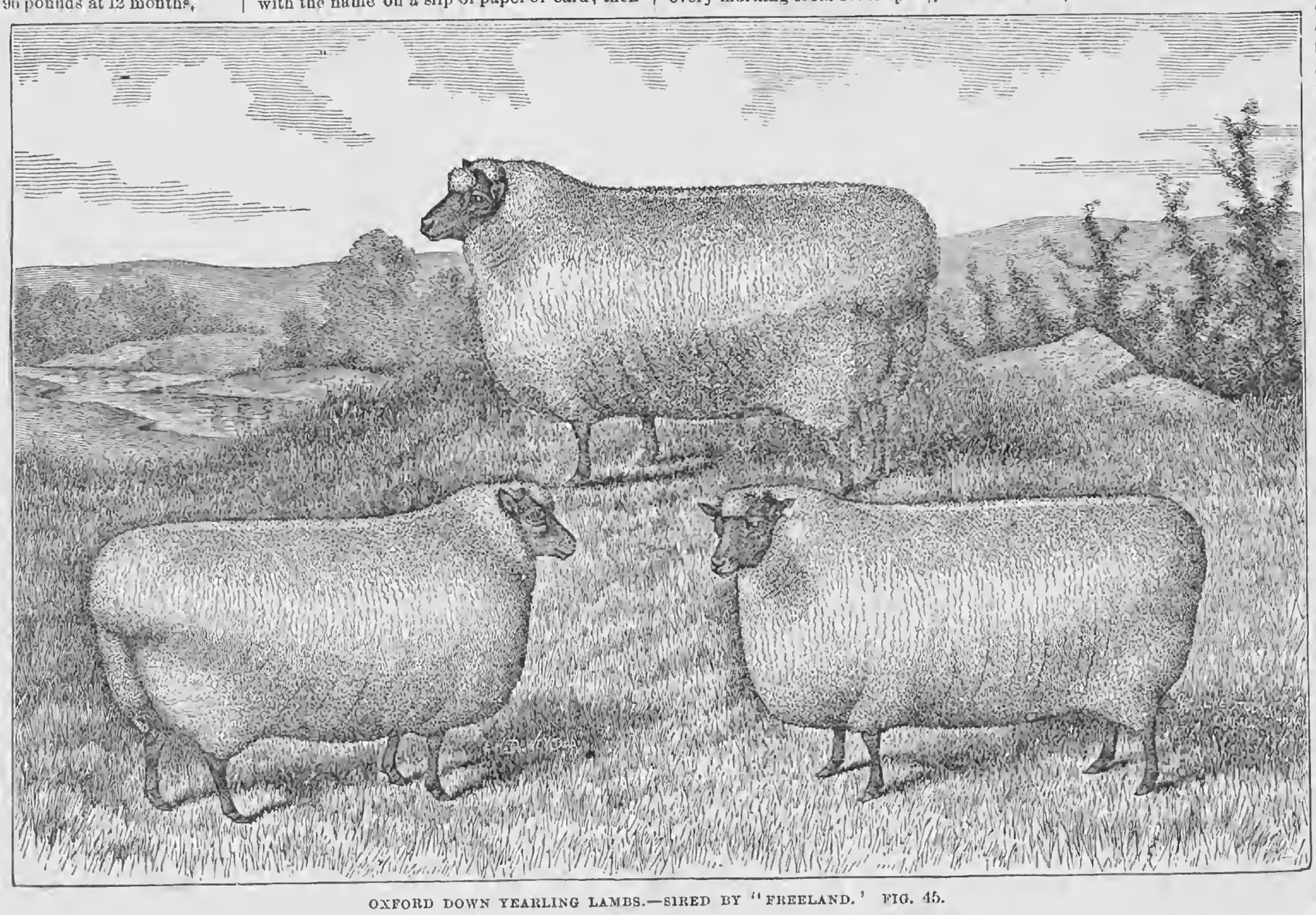
RICHARD GOODMAN.

As society gets more civilized, its tastes become more refined, its appetites more delicate and discriminating, and those who provide for its necessities and pleasures have to take into consideration these important factors and advance the quality of their products accordingly. It is not such a very great number of years since the citizens of New York got their drinking water contentedly from the corner pumps, or had it as an extra luxury brought every morning from some spring. Their milk was generally purchased at the corner grocery from a penny's worth to a pint or quart; they went directly to Fulton and Washington Markets for their meat and vegetables. Water-closets and other now prime necessities were unknown; omnibuses alone carried the comparatively few who were unable to walk; ladies did their shopping on foot, and men of business took their dinners at chop-houses down town instead of, as now, going home and dining comfortably and socially with their families. If a young man wanted to play billiards, he had to go into some saloon where he was tempted to drink and smoke for clubs where gentlemen could indulge in innocent amusements, were rare, and that family which allowed a billiard table in its house was ostracized by all *good* people. The only butter to be had was that put down in early summer or fall for the ensuing winter, excepting that freshly made during the spring and exposed for sale in the market. Now all those who can afford it, desire fresh butter all the year round, and are beginning to realize the value of pure, unwatered milk, and nearly ready to pay a fair price for each of these articles, if they can be obtained.

Most of the instructions in the agricultural papers are for the benefit of the farmers who are taught by scientists and specialists how to produce pure and rich milk and manufacture and market superior butter. The immediate effects of adulterated milk and the tests, however imperfect, of the lactometer and kindred guages, have made the well-to do citizens realize that the most effective measures should be taken to secure the purest article, and such efforts as are being made by the Westchester Association, and the introduction of milk in glass bottles sealed up and delivered directly to the consumer, together with the rigid enforcement of the laws which inhibit "distillery milk" and any adulterations of the lacteal fluid, will protect the people as far as possible against impurity. But they need to be instructed also that to have either milk or butter of the best quality, they must be willing to pay a fair price so that the farmer shall receive a living profit. They are about brought up to the point of believing that pure, rich milk is worth eight to ten cents a quart and that the farmer only receives one quarter of this sum, the remainder being consumed by the charges of the middlemen, transportation, etc.

Now, if milk is worth from six to eight and ten cents a quart, how can the consumer expect to get good butter for 25 to 30 cents a pound, when it takes, on the average, 12 quarts of milk to make a pound of butter: from ordinary cows 12 to 20 quarts of milk are required to make a pound of butter. The milk of some of the thoroughbreds is much richer, and that of the Jersey cow, noted for her special butter-making qualities, is capable of occasionally producing a pound of butter from five quarts, but a fair average is about eight quarts. At six cents a quart such butter would be worth 48 cents at the minimum cost, and, as a matter of fact, *good* fresh butter cannot be put into the market, except, perhaps, for a short season in the early summer, at less than 50 cents a pound, and give the careful and cleanly farmer a living profit. I know the towns and cities are full of cheaper butter; but we find that at our annual exhibitions, cattle shows, fairs and even those, where dairy products are entered for special premiums, not over one-quarter of the butter shown is fit for the table, and a somewhat extended acquaintance with the business and with the farming community in New England, convinces me that the good *clean* butter-makers are few and far between.

For these reasons creameries which *compel* attention to neatness and purity of production, and combine capital and labor in great part, can afford to sell an excellent article of butter at about 40 cents a pound; but the enterprising, industrious dairyman who possesses cows of a uniform richness of product, and carries out his processes from stabling and milking to the final "patting" and covering, can, if he or his wife *knows how*, make butter which, for color, flavor, grain and hardness, will surpass that of the creamery and be worth 50 cents a pound. When our rich and well-to-do people who love good butter, are sufficiently instructed



OXFORD DOWN YEARLING LAMBS.—SIRED BY "FREELAND." FIG. 45.

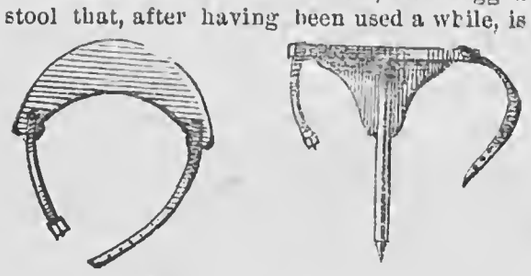
to realize that it is more profitable and more wholesome to purchase such butter for *all* the uses of their families, instead of buying a pound or two a week of butter no better for a dollar a pound, and using very inferior quality for cooking, thus injuring their food and stomachs, it will come into the market in sufficient quantities. As it is, the customers who will buy *cheap* butter are so numerous that it is no wonder the markets are flooded with that country-store mixture called "Irish butter," and that "oleomargarine," which if properly made is far more healthful and less nauseous to smell and taste, largely usurps its place in public estimation.

Whilst the farmers are being taught in public prints, and at International, State and county dairy associations and fairs, how to make good butter, and all the secrets of science and the ingenuity of man are disclosed and employed for their benefit, and they are deluged with pamphlets and prospectuses enforcing upon their attention the new projects, creameries, implements and processes, it is but fair that the much larger number of people who consume their products, should be made to realize that butter-makers, as well as milk-producers, have to live by their calling, and that they cannot work day after day to produce a uniform, cleanly and superior article, without a corresponding return for their labor. The art and processes for superior butter-making are the possession of a limited number, and those that do put on the market an article which commends itself to all who test it, are deserving of at least a pecuniary reward which will enable them to continue to make and sell what all want but few are willing to pay for.

Yokun Farm, Lenox, Mass.

A GOOD MILKING-STOOL.

THERE is nothing about the dairy barn harder to keep in order than the milking-stool. The common form in use is a low, three-legged stool that, after having been used a while, is



MILK STOOL.—FIG. 47.

sure to have the legs dry up so that they will not stay in the sockets. The consequence is that the stool about one-half the time has but two legs, and consequently is perfectly useless. The common substitute is a small box, and this has to be picked up and set down several times while milking one cow and disposing of her milk. All this trouble is avoided by a device of the Swiss milk-men. They use a stool with but one leg properly braced to keep it from dropping out of the seat. This is cut in the shape of a quarter moon; at each end of the seat holes are cut, and a strong leather strap passes through them. When the milk-man enters the stable, he takes this stool down

MILK STOOL IN USE.—FIG. 48.

from a nail where it has been hanging, fits it to his seat and buckles it firmly around his legs. With this he walks about, or sits down at pleasure, with no further thought or trouble about his milking stool. The bucket he holds between his knees when milking, and there is a spike in the one leg to keep it from slipping.

L. S. HARDIN.

WARM COWS.

I WANT to give my experience in trying to carry out an adage which has crept from agricultural journals to journals of agriculture for about a year past, and which has brought me to grief. The adage says, "The warmer stables are kept, the less food is required for the stock." I at once got out my multiplication table, and having found that the average temperature of stables in winter was 32 deg. (according to the number and size of the cracks), I tried to solve the question:—If an uncertain degree of cold caused a cow to eat her head off in six months, what positive degree of heat, according to the aforesaid "adage," would enable her to live without eating altogether, and thus keep her head in proper place, "agin grass come?" Experiment only could decide this question; so I first tried pulse warmers, with no perceptible effect; then I had made a red flannel sack embroidered with green silk to represent *Graminia gracilis*, but her appetite only increased. A neighbor proposed a self-heating rotary grate furnace, which at once showed signs of doing some good; she soon got into a profuse perspiration and refused food altogether. We kept up the fire, and she lolled out her tongue, which shed a copious stream of water, proving that she was not thirsty. Continued this course for a week, when she laid quietly down and made no sign. Sent for a vet. M.D., who thought we had been too sparing of fuel, and by his advice, put some of her flesh on to boil, and at 212 deg. Far. solved the problem. Cows kept in stables warmed up to that degree require no food. Q. E. D.—Now, who wants to pay me for that cow? Stamps taken.

S. RUFUS MASON.

Field Crops.

THE COW-PEA IN NORTH CAROLINA.

THOUGH this southern Cow-pea requires and also receives less cultivation than any other crop, it is grateful for any extra attention in the way of fertilizers or stirring of the soil. The practice of Mr. G. Twisdale, one of the most successful growers in this county, is, first, plow the land in April; then, about June, first run off the rows with a plow, about 2 to 2½ feet apart; drop five to seven peas, 15 inches apart, in the row; cover with a cotton coverer; work once with a horse. Except a few saved for seed, the whole crop is fed by hogs. In answer to inquiries, Mr. T. says: "I plant less than one bushel per acre. Have tried many varieties, and prefer the blacks. I consider 30 bushels per acre a good crop. Can make more pork from peas than from the same field in corn, with one half the labor, besides leaving the land in much better condition. I feed them to my horses without any ill effect." The writer, from experience, agrees with Mr. T. in regard to peas as food for horses, though the popular notion is that they are prolific of colic.

As probably many Ruralists will try the Cow-pea this year for the first time, a few hints as to the cultivation may not be amiss:—Early planting is to be avoided, the usual time of planting beans is a fair time for planting Cow-peas also. Plant them in poor soil; if light and sandy, so much better. If growth of vines is desired, the soil cannot be too highly fertilized. Like English peas, they can hardly be planted too deep, especially in light soil. They germinate very soon. With the soil in proper condition as to heat and moisture we sometimes have them showing their vinelets above ground in three days. With suitable soil and climate there is no more desirable crop. Give them half a chance, and they will look out for number one. There are almost numberless varieties, the chief distinction being in the size, form and color of the ripe grain. The growth of the vine is more dependent on the soil than on variety.

M. B. P.

Warren Co., N. C.

"And Now Comes California."

In "Brevities" for January 3, the RURAL states that a premium was awarded by the Territorial Fair Association of Montana for the best acre of wheat, to a yield of 102 bushels, and inquires whether any one ever heard of a larger yield—outside of Munchausen Land. It says it hasn't.

On page 235 of the Report of the Commissioner of Agriculture, for the year 1871, is the following:—"Wheat in California.—Mr. Rafael Pinto, of Watsonville, California, states that in 1871 he raised 800 centals of wheat on 14½ acres—an average of 93 bushels per acre—and that many acres in Pajaro Valley gave a much larger yield. Two acres, cultivated by Mr. Daniel Tuttle, of Watsonville, produced 12,360 pounds of English club wheat, or 103 bushels per acre, which was sold on the ground, without sacks, at two and a half cents per pound, returning $154.50 per acre."

Who can beat this in the way of a wheat story?

H. L. W.

THE BLOOMSDALE SWEDE TURNIP.—In 1878 I received from the RURAL, a package of the Bloomsdale Swede turnip seed, but neglected to sow them until the past season, when the result was an agreeable surprise. Myself and family unhesitatingly pronounce it the best turnip for cooking that has ever come under our observation. The flesh is a rich yellow, the flavor fine, and, besides, it yields well. N. R.

The Vineyard.

THE EUMELAN GRAPE.

THIS Grape was found in a private garden at Fishkill, N. Y., where it had been grown a number of years, without attracting much attention, by Dr. Grant, of Iona and Israella fame, and introduced by him and his successors, Hasbrouck & Bushnell, with the same high encomiums that attended those varieties, and it has come about as near realizing the position claimed for it as they have. Where it does succeed, it ripens before the Hartford, a black grape of full, medium size, of excellent quality. Belonging to one of our native species (Æstivalis) it ought to be hardy and healthy generally, but proves so only in isolated localities, like its predecessors, Iona and Israella. Some reliable authorities give it a character for strong growth with thick, firm foliage, but with us it is a feeble grower and as subject to mildew as fully as, or more than, the Iona, Israella or Delaware. Whether this is due to an impaired constitution induced by excessive or doubtful methods of propagation, or to an inherent lack of vigor in the variety, I am not prepared to say; I only know that we have never yet been able to make a respectable vine.

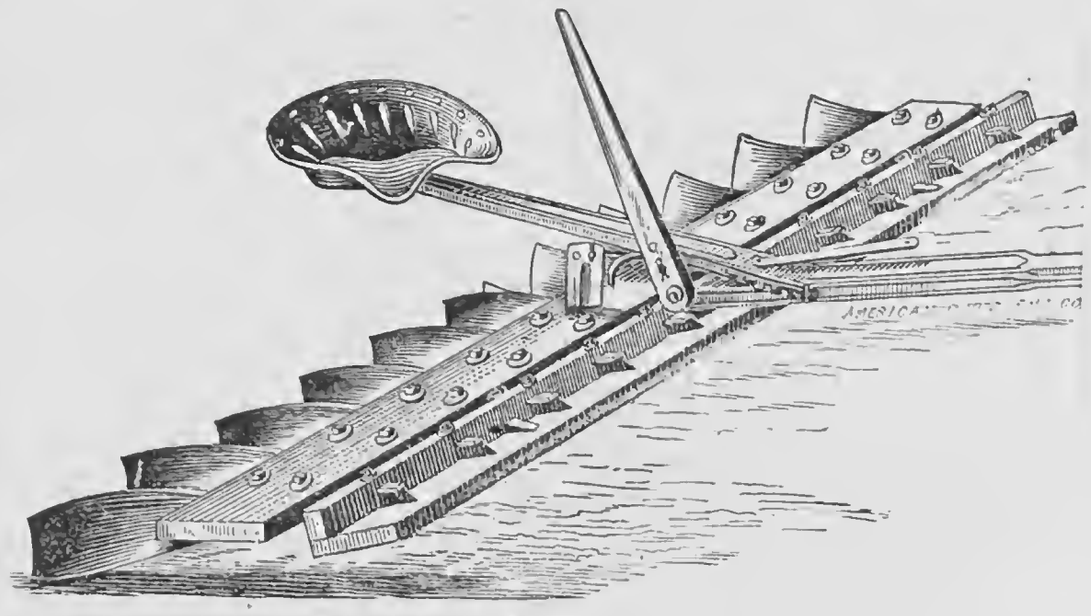
Mr. Bush, of Mo., says: "Perhaps with no other variety is it *so* important to set out only *good* and *strong* plants in the first place, as with this one, and I think that the great diversity of opinion now existing in regard to this Grape is due to the fact that a large number of the vines of this variety sent out have been poor and feeble plants, which have never come to any good thereafter, and never will."

E. W.

Industrial Implements.

THE ACME STEEL PULVERIZING HARROW.

THIS excellent implement, the invention of a man who is himself a practical farmer as well as a mechanic who had previously invented the revolving disk or wheel harrow, seems destined to win a wide popularity once its many merits become known. On its behalf it is claimed that it will crush clods completely, level rough land, thoroughly pulverize inverted sod without turning it, as well as soil that has become baked after plowing, save cross plowing, cover the seed to a uniform depth, and do its work without packing the under soil. Moreover, as it is a pulverizer, clod crusher and leveler combined, it is very economical of labor, and as it is made entirely of wrought iron, steel and wood, it is strong, durable and light, weighing only 126 pounds. Broad as are these claims, they are strongly indorsed by a large number of practical farmers who have tested it under various conditions of soil in N. Y., Mass., N. J., Pa., Va., and other States. Among the long list of testimonials to its efficiency the names of Levi Stockbridge and J. J. Thomas, inventor of the Thomas smoothing harrow, will justly have great weight with farmers everywhere.

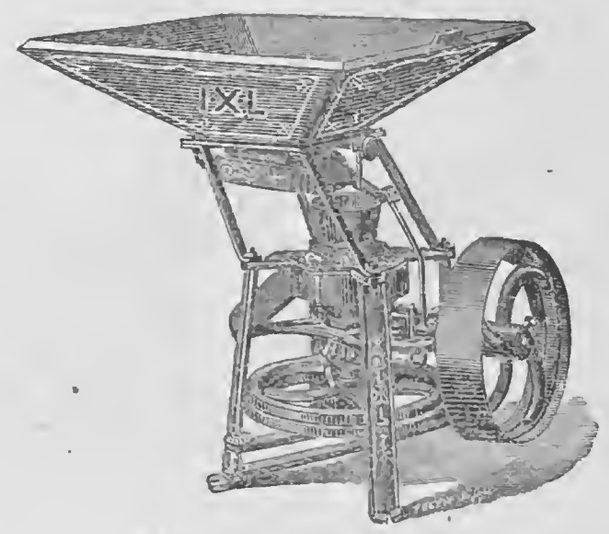


ACME STEEL PULVERIZING HARROW.—FIG. 49.

As seen in the accompanying cut, it consists of a clod crusher and leveling bar or beam permanently secured to the tongue or draft pole, having under its rear a series of steel spurs. This crusher which is provided with ten steel cutting teeth, serves to grind down and force the clods under the coulter teeth which are bolted to a separate beam, or tooth bar, hinged to the rear of the crusher. The tooth bar is provided with 12 curved steel coulter teeth which throughly cut, lift and turn the soil, so that it is successively subjected to the operation of the leveler, the breaking spurs, and the steel coulters. A lever within reach of the driver enables him to control the position of the crusher and at the same time to raise or depress the coulters to regulate the depth of work, which varies from a light surface working to a complete pulverization to a depth of three or four inches In view of its durable construction, its completeness and efficiency this is certainly a cheap implement at $22. In a brief notice like this, its salient points only can be glanced at; but full information will be furnished by its manufacturers, Nash & Brother, 22 College Place this city.

THE I-X-L MILL.

OF the advantages of grinding grain for stock so many proofs have already been made public that to speak of the matter here would be superfluous. Up to the present time, however, by far too little attention has been given to the great importance of grinding the cob of corn with the grain for feeding purposes. The great advantage of this measure has been strongly set forth by some recent experiments in hog-feeding, made by a committee appointed by a couple of Conn. Farmer's Clubs, the results of whose experiments were given in full by Professor E. W. Stewart in the RURAL of Feb. 7. From these it appears that very nearly as much gain was made in fattening hogs on corn-and-cob meal, as on clear meal. While it required 4 34 pounds of clear meal to gain one pound in live weight and 5 68 pounds for one pound dressed weight, it required only 4 63 pounds of corn-and-cob meal to make one pound of live weight and 5 93 pounds for one of dressed pork; or, reducing the quantity of corn-and-cob meal to clear meal, it will be found that 3 70 pounds make one of live weight, and 4.75 pounds one of dressed pork. The same saving must, doubtless, be made in feeding other stock, and the money saved in this way alone, would very soon pay for a mill on any farm where even a comparatively few head of stock are kept. Of the numerous excellent farm mills offered to the public we know of none more cheap, durable, simple, and efficient than that whose phonetic title expresses its claims—the I-X-L. Two sizes are made: No. 2 weighs 150 pounds; grinds eight bushels of feed per hour and costs $50 No. 3 weighs 175 pounds; grinds 10 bushels per hour and costs $60. Both, it is claimed, will turn out double the above quantity of cracked corn, and from half to two-thirds of the quantity fine enough for family use. The mill is entirely of iron of the best quality, and so simple in construction that a man with ordinary gumption can put it together. It can be driven by horse-power, lever power or by an engine or a wind mill, and occupies about a yard square of barn floor. This is the second year since this mill was introduced to the public; it claims therefore to have the latest improvements, and its efficiency is amply indorsed by numerous trustworthy farmers who have used it in different parts of the country. Full particulars as to prices of repairs, mode of operating, etc., etc., will be promptly furnished on application to the manufacturers, the United States Wind Engine and Pump Co., Batavia, Ill., or by their Eastern agents, S. L. Allen & Co., 229 Market St., Philadelphia.



THE I, X. L. FEED MILL.

MESSRS. GREGG & CO. bring out this season their new Gregg Self Dump Rake. The principle on which this rake works (the torsion clutch) has been thoroughly tested, and their new rake bids fair to prove a great success. It will be placed on the market strictly on its merits, backed by the old reputation of its manufacturers.

Everywhere.

RURAL SPECIAL REPORTS.

ILL., Highland, Madison Co., Jan. 31.—We are having warm weather since the first of January, except for a light frost every now and then; we have had light rains every few days. Roads are in a fair condition. Crops for '79 were about as follows: wheat a large crop, in many places averaging 30 to 40 bushels to the acre, worth now $1.15, nearly all sold: oats, a light yield from 20 to 30 bushels to the acre; worth 31 cts.; corn, a large yield, worth 30 cts.; hay, good in quality, but a very light yield, on account of dry weather; worth from $10 to $15 the ton. C. L. R.

KANSAS, Washington, Washington Co., Jan, 27.—We are having fine weather here at this time. We had very cold weather about Christmas; but since that it has been warm and pleasant. It was quite dry here last season. Our wheat crop was light—about two-thirds of a crop; oats light; corn pretty fair; potatoes light. Wheat sells for 85c; corn, 20c; oats 20c; potatoes, 40c. to 50c; hogs, live, $3.50 to 3.65 per 100 pounds. Fall wheat looks fine and everything prospering at present. B.

KAN., La Cygne, Linn Co., Jan. 30.—Wheat sells here for $1@1.10; corn, 20c.; oats, 25c.; potatoes, 80c.@$1; cattle, $2@$4; hogs, $3.70 @3.75; butter, 15c.; eggs, 8@10c. M. C. B.

MO., Rockville, Bates Co., Jan. 30.—We are having a dry, mild and very pleasant winter. Considerable plowing is being done. Wages are now about $13.00 per month, with board and washing. Wheat is worth 90c.; corn, 18c. Corn has been 20c. until it dropped yesterday. Potatoes, 75c.; hogs, $3.50@3.65 per 100 lbs. Crops of all kinds were good last year, except Irish potatoes and the fruit crop. Fruits of all kinds were nearly a total failure. There were a few apples and grapes. J. N. C.

PA., Menno, Mifflin Co., Jan. 30.—We have had a very open winter so far, but two days' sleighing and then not very good. We had a very dry fall—drier than I have ever seen; but since some time in December, we have had wet weather, plenty of mud and bad roads. Wheat is looking very well—I think a little over the average acreage has been sowed. Wheat sells for $1.15; corn, 45 cts.; oats, 35 cts.; cattle, from $3 to $3.50; hogs $5, dressed; butter, 19 cts.; eggs, 15 cts.; potatoes, 40 cts.; horses and cows, no demand. The thermometer has not been down to zero this winter yet. D. A. H.

VT., Randolph, Orange Co., Jan. 30.—The winter, so far, has been uncommonly mild in Vermont. There have been some severe cold snaps, but they did not continue over 36 hours; very little snow has fallen, but a great amount of rain; and there is a firm pavement of ice all over the surface of the ground, that renders traveling neither safe nor agreeable. Market prices have made a slight advance from fall rates. Tramps have disappeared almost entirely, and a man who is willing to work for a fair price is not compelled to starve, or be idle. Contractors for lumber are more plentiful than for years past, and a large amount of lumber, both soft and hard wood, has been cut and piled, ready to be drawn to market stations when there is sufficient snow to make safe sledding. Farmers are more hopeful than in three years past, and are looking for better days. S. H. R.

The Querist.

ANSWERS TO CORRESPONDENTS.

Veterinary Study.

J. L. L. B., Palmyra, N. Y., presents the case of a young man with a family and with but a limited income, who would like to study veterinary surgery, for which he has a natural taste. We are asked what course we would recommend for him to pursue under the circumstances; if he can study to advantage at home, and what books would he need.

ANS.—Veterinary surgery is fast growing in importance, and any young man who is master of the profession may reasonably expect as good an income and as good social standing as can be reached by a doctor of medicine; so if other circumstances permit, our advice would be to take up the study in good earnest. To complete the study without attending some veterinary institution will not be possible, but considerable progress can be made at home. We would call the attention of this young man to the American Veterinary College, in West 54th St., N. Y., as being one of the best institutions of the kind, and the only one in the Union, so far as we know, solely devoted to veterinary science. An able corps of professors under the leadership of the dean of the college, Dr. Liautard, who is well and favorably known as a veterinary surgeon, give instruction in all the branches of the profession. The curriculum provides for a thorough theoretical and practical education, comprehending the fundamental medical sciences. The regular winter session opens October 1st and closes the latter part of April, in which time about 450 lectures and clinics are delivered. The course of study is at present completed in two winter sessions, for which all expenses connected with the tuition are $110 and $135 respectively. A free scholarship is offered to the State Agricultural Society of each State in the Union, the applications to be made to Dr. Liautard, by the Societies, before the 1st of September of each year. The young man in question can ascertain through the officers of the N. Y. State Ag'l Soc., or by addressing a letter to Dr. Liautard, if the scholarship for New York is now occupied, and when it will be vacated. Meanwhile he should study all he can at home, especially anatomy and physiology. For the latter Foster's and Dalton's are recommended, and Liautard's Vade-Mecum for the former. Percival's Practice, Bryant's Surgery and Frey's Histology should next be studied in their order. He should also study chemical physics, of which Miller's and Pynchon's are both good, and Attfield's General Chemistry. This, with a good general education, which every surgeon should have, will form a good foundation for a collegiate course.

Jersey Red and Small Yorkshire Hogs, etc.

J. E. P., Well Co., Ill., asks, 1, what are the leading characteristics as regards weight and qualities, of the Jersey Red and Small White Yorkshire hogs, and their merits or demerits generally; 2, what are the practical merits of the centrifugal creamer.

ANS.—1, There is a great deal of difference between the Small White Yorkshires and the Jersey Reds. The former are much finer in the bone and in the flesh. They are fatter, and have a much thinner skin. Their average weight is one-half less, or perhaps it will be nearer correct to say, one-third less. Two or two-and-a-half Small Yorkshires can be kept and fatted on the same amount of food required for an average Jersey Red. The Jersey Reds are probably the most growthy breed of hogs we have, and require a longer time than the Yorkshires to mature. They have more lean mingled with their fat than the Yorkshires. The objections to both these breeds, or the "demerits," as our correspondent puts it, are that the Yorkshires are too fat and, the Jersey Reds too coarse. The advantages are that the former will keep easily, mature quickly and fatten young, while the latter grow fast and large and have a long body which makes a large proportion of pork. They have strong appetites and are greedy eaters. A recent number of the RURAL gives a full description of Yorkshires, and a future number will give the history and characteristics of the Jersey Reds. We will refer our correspondent to these articles for further particulars. 2. Messrs. Whitman and Burrel write us that this creamer has been tested with very satisfactory results. We have already given all ascertained information about it, and will soon give our readers the results of the practical tests now being made. Messrs. W. and B. expect to be able to sell all that can be manufactured the coming season.

Potash.

H. J., Salisbury, Md., asks, 1, what is the relative value of sulphate of ammonia and No. 1 Peruvian guano; 2, which is the cheaper for ammoniating phosphate; 3, a good formula for a good phosphate; 4, which is the cheaper for potash—sulphate of potash, muriate of potash or S. C. rock; 5, what is the cheapest way to secure potash for the soil.

ANS.—Sulphate of ammonia contains 25 per cent of ammonia and costs $100 per ton. Peruvian guano contains 10 per cent. and costs $60 per ton. 2. The ammonia in the former costs 20 cents a pound, and in the latter 30 cents a pound. 3. You cannot make a good phosphate so cheaply as you can purchase it. The best is prepared by reducing bones with sulphuric acid; this is a troublesome and dangerous business. 4. Sulphate of potash has 40 per cent of potash and costs four cents a pound; muriate has 50 per cent and costs two and a half to three cents a pound, so that the latter is the cheaper of the two. South Carolina rock has no potash; it is a mineral phosphate of lime. 5. The cheapest source of potash is the muriate in which the potash costs five or six cents a pound. This is cheaper than it can be obtained from wood ashes.

The Twig-Borer.

W. H. B., Covington, Neb., sends us a twig of an apple tree, into which holes had been bored by an insect, and asks what insect it was and the remedy.

ANS.—The insect that does this havoc is a small beetle, the Apple Twig Borer, (Bostrichus bicandatus). In the case of most other beetles it is the larva that bores into the wood, but in this case it is the imago, or perfect insect that does the damage. It bores into the twigs just above a bud or small branch, and goes downwards to the depth of an inch or an inch and a half, the hole being about one-tenth of an inch in diameter. Small twigs thus hollowed out lose their vitality and speedily wither. The beetle is narrow, almost cylindrical, and about three-eighths of an inch long. The head is small, bent downwards and partly covered by the large thorax. The only successful remedy that has as yet been applied, so far as we know, is to cut off the twigs and burn them. To make this effectual, the search should be thorough from the start, and the twigs, cut off as soon as there are symptoms of the borer's presence.

Miscellaneous.

B. G., Arkona, Ont., is about to build an all-purpose greenhouse, and asks, 1, what is the best, cheapest and most efficient way of erecting it; 2, if a boiler is needed, what boiler and by what maker; 3, what is the nearest approximate cost of furnishing and heating a house, say 12 by 20 feet; 4, would we recommend sinking it three or four feet in the earth?

ANS.—1, This is a comprehensive question, and will require too much space to answer it fully. The best way to go to work, we should think, would be to make arrangements with a builder whose experience in building greenhouses would assure you that he knows what he is about. From his knowledge of the cost of materials and cost of labor he can make a very accurate estimate. As for the dimensions and shape of the house and its arrangement inside, the fancy can be allowed considerable scope, certain fixed principles being, of course, complied with. A house of the dimensions given can be heated with a fire without trouble. A hot-water apparatus, however, is much to be preferred, if the extra cost will be of no great moment. For manufacturers of boilers we would refer to Hitchings & Co., 233 Mercer St., N. Y. city.; they will furnish all desired information. 3, A greenhouse 12 by 20 feet can be built very substantially for $300 to $350. 4, If the site is much exposed to the wind we recommend to sink it about two feet in the ground, or three feet at the most. When thus sunk it need not be so high above ground and will therefore not be so much exposed to the wind. If the situation is sheltered, the house can be built entirely above ground, and it will be somewhat more convenient and look better.

J. P. P., Utica, Mich., asks 1, whether the Tulip tree would do well in that State, and where can it be had; 2, whether the Cow-peas would be likely to ripen in Mich. and where they can be obtained.

ANS.—We suppose that the Tulip tree grows in your forests, although Michigan is stated by Gray as its northwestern limit. By sending for the catalogues announced in the advertising columns of agricultural journals, it will be seen that most nurserymen offer it for sale. We would again call attention to the fact that success in transplanting this beautiful tree will depend greatly upon cutting it back just above the roots, so that the roots and a few inches of stem only remain. We do not know whether Cow-peas will ripen in Michigan or not. Probably they will ripen in the Southern part of the State. They are advertised in our columns.

R. C. J., Meadville, Pa., asks where he can purchase Cow-peas; if we have decided whether we would offer them free to our subscribers; whether they will ripen with him and whether we recommend them as a means of restoring fertility to poor soils.

ANS.—We find them advertised in our columns; send for catalogue. We *have* decided to send them to our subscribers, but only in trial quantities of half a gill of mixed varieties. We hope that all of our subscribers will give them a careful trial. In this way trustworthy results may be arrived at. They will ripen seeds in Pa., having ripened at the Rural Farm which is situated on Long Island. We *do* recommend them as a means of restoring fertility to poor soils.

P. W., Seattle, W. T., 1, asks how to cultivate sorghum, and where can seeds be obtained; 2, where can seed of Bermuda grass be got, 3, how to save cabbage in winter.

ANS.—1, Sorghum may be cultivated exactly like corn. Seeds can be had in any large seed store, such as D. M. Ferry & Co., Detroit, Mich. 2. Bermuda grass does not seed in this country. It is propagated from root cuttings which can be had of Southern nurserymen. Apply to Dr. W. B. Jones, Herndon Ga., or to P. J. Berckmans, Augusta Ga., or to Mark W. Johnson & Co., Atlanta, Ga. 3. Cabbage may be kept in a dry, frost-proof but not warm cellar, or the heads may be placed on the ground and covered with earth and litter sufficient to keep frost out.

A. K., Address mislaid, asks, 1, how to germinate the hardy shrub seeds sent out by the RURAL last spring; 2, which would be the better plan—to pay $60 per ton of 2,000 pounds for ground bone, or to get livery-stable manure for 50 cents per load, to be hauled three miles, for wheat or corn on clay or gravelly land.

ANS.—We must refer our correspondent to back numbers of the RURAL NEW-YORKER for instructions as to the hardy perennial seeds sent in last years' seed distribution. We shall soon give instructions as to the present distribution which will answer his other request. 2, We should prefer the stable-manure.

W. R. W., Muskegan, Mich., asks whether coal ashes and refuse lime from gas-works are good to put around fruit trees.

ANS.—Coal ashes are of little value, except as they change the mechanical condition of the soil—make it looser and lighter. Gas lime in its fresh state is injurious to vegetation. After exposure for a considerable time to the influence of the air, it is valuable for the same cause as gypsum or sulphate of lime. In that condition it is worth about half as much as freshly burned lime.

A. B. B., Chelsea, Mass., has for a long time searched in vain to find out the name of a plant in his possession, and sends us a leaf for identification, with the request that we tell him how to make the plant blossom.

ANS.—The leaf looks like that of Pereskia, a group of plants closely related to the Cacti. It has no great value as an ornamental plant; but is used as a stock on which to graft the Epiphyllum. It isn't worth while to try to make the thing bloom.

J. B., St. Catherine, Ont., asks where he can get Mexican Sweet Corn.

ANS.—Apply to any seedsman advertising in the RURAL.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, FEB. 7th.

S. H. R.—A. B. B.—G. A. G., Jr.,—S. B.—C. L. R., (Feb. 3)—G. E. M.—D. W. C.—V. F. W.—W. I. C.—I. P. R.—J. S. H.—H. B.—R. C.—E. M. D—C. R.—H. S.—W. P.—C. V. R.—A. R. Le D.—"Carnation"—B. F.—F. D. C.—A. J. P.—G. A. G., Jr.—F. H. S.—C. H. E.—T. H. H.—M. Y.—J. H. N.—P. C. S.—E. S. M.—M. W.—F. D. C.—J. E. S.—N. B.—M. W.—M. F. M. C.—S. A. L.—A. H. & S.—C. H. E.—M. E. M.—B. G.—P. C. S.—B. & E. P.—J. F. C.—W. R. L. D.—N. M. B.—A. L. J.—J. S.—J. B.—J. L.—T. G.—J. G. G.—F. H. D.—I. P. R.—D. S. H.—J. H. M.—O. S. B.—G. E. M.—D. S. M.—H. B. P.

Miscellaneous.

WHAT OTHERS SAY.

"WEALTH" says Horatio Seymour, "cannot grow in this way in Europe. There prices at which lands are bought and sold vary but little in the course of a lifetime, and all that the owner gains is the value of what he raises. He has no estate growing up under him. He cannot, as is frequently the case with us, spend each year all he earns and then leave to his family land which has increased fifty or a hundred fold in value since he became its owner. It is this fact which gives our country its swift increase of wealth. . . When the Pacific States get rid of their gold, there will be another development of agriculture more enriching and beneficial than all that can be dug from mines. God's blessings do not go with the gambling chances of finding lucre in the bowels of the earth, as it does with the industry which works with Him in bringing forth the fruits of the soil. This system improves not only farming, but the farmers as well. . . If all the statements I have made are correct, still the facts remain that the people of Europe have heretofore been able to raise most of the food they need. Why can they not hereafter, with the same labor, on the same soil, raise enough to supply their wants, except for the small amount which they have heretofore imported? These questions bring into view some facts of great interests in many respects. In the first place, where farmers own their lands, as they do with us, all that they can get for what they sell goes to those who labor upon the soil. But as a rule in Europe, and particularly in Great Britain, what is made upon farms must support at least two and sometimes four classes of persons—the tenant, who does the work, the landlords, and usually some agents or middlemen, who hire and sublet to tenants. Church rates and many other charges must also be paid. When our cheap grains reach their markets, as they will hereafter, and govern the price of produce, they disturb the existing arrangements. The tenant must have enough to live upon then as now, taxes and tithes must be paid, and only what is left will go to the owners. This class are to suffer. The conflict is not between American and British farmers, but American and British landlords. If the cost of produce falls, rents must come down, for tenants can pay no more and landlords will get no more than prices will give. The tenants' share cannot be less than it now is, and the loss must fall upon the owners.

A BIG INCUBATOR is to be exhibited at the Poultry show at Springfield, Mass., this month. Last week it was charged with 1 500 eggs, which it is now changing into chickens. The Springfield Republican says the operation is so timed that they will hatch during the show, right before the eyes of the visitors. When the eggs have been under the heat of the in-

cubator for three or four days, they are carefully examined one by one in the light which enters a dark room through an opening about as large as an egg, to show those which contain no living germ, that they may be replaced by others. The egg at that stage has a very interesting appearance. The chicken is a small spot of condensed matter on the upper side of the egg, in whatever position it is placed, the pulsation of the heart being plainly visible. The embryonic chicken has little form, the beating heart being the most noticeable thing. From it radiate in all directions half way down the sides of the egg, red veins through which the nutriment of the egg is drawn to the chicken. At a later period these veins extend all around the egg and a plainly marked umbilical cord connects them and the chick. Before hatching, the material of the egg is all passed through the chick's heart and becomes vital tissue, and one-third of the egg is left an open space, which allows of movement of the head sufficient to chip the shell. The chick always breaks the shell with its head under the right wing. Examination of the process of incubation shows that unless the eggs are turned, not all the substance is taken up, and the chicken is small and weak. A natural instead of an artificial hen turns them in the nest.

A GOOD VERMIFUGE.—Dr. A. S. Sweet, of Southold, L. I., in a communication to the Medical Brief, recommends the following mixture:

Santonin	15 grains.
Fluid extract of pink root	160 drops.
Simple sirup to complete	2 ounces.

Mix. Sig. A teaspoontul morning and night.

It was given about equally between four children of one family and one of the neighbor's children. The result was the expulsion of sixty-seven long worms. He adds: "As having a possible bearing upon the question whether worms cause any special symptoms by their presence in the intestines, allow me to say that the child for which the vermifuge was particularly desired, had, previous to taking it, several attacks of convulsions. They ceased with the expulsion of the worms." [We have tried essentially the same recipe for worms in young setters and pointers, always successfully. No doubt it would prove beneficial if administered to other animals so affected, increasing the dose to suit the size and age. Eds.]

GLUCOSE.—The Confectioners' Journal says that confectioners are using great quantities of glucose sugar, because from its uncrystallizable quality it tends greatly to keep certain classes of goods soft for a greater length of time, and retards granulation in other kinds, and because it saves greatly in the cost of all articles with which it is combined.

It was proved before the Congressional Investigating Committees that vast quantities of glucose, or corn-starch sugar, were sold to sugar refiners; also, that it is sold in great quantities to confectioners. Glucose is now largely used in mixing with California honey, one gallon of glucose to one of honey. It is also used largely in the Eastern States in the manufacture of all sweet wines, lager beer, and all liquors requiring sirups. In fact, corn sugar is now used for all the various purposes for which any sugar is used, except for first-class confectionery. Glucose is also shipped in large quantities to Europe, where it in great demand.

GRASS VS. SWEDES FOR SHEEP.—Grass has 70 per cent. of water and swedes 90 per cent.; consequently the former has 30 per cent. of solid matter, while the latter has 10 per cent., there being thus three times as much solid matter in 100 pounds of grass as there is in the same weight of turnips. Therefore when a sheep eats 20 pounds of grass it swallows only 14 pounds of water, as compared with 18 pounds in a similar weight of swedes, and it partakes of as much as six pounds of solid matter with that weight of the former vegetable as against only two pounds in the latter. The difference may be stated in this form. When a sheep consumes 10 pounds of solid matter in the form of grass it swallows in the process only 30 pounds of water, whereas in eating only 10 pounds of solid matter in the shape of turnips it is under the necessity of swallowing no less than 90 pounds of that cold liquid.—N. Y. Tribune.

A GOOD HARVEST in England, a good harvest in France, a good harvest in America—of these prospects the first two are hardly likely to again fail us at one and the same time, says the London Farmer. As regards the third prospect, it may in some sort be regarded as assured, seeing that a largely increased wheat acreage in North America should give next summer an equal surplus to last year's abundance, even in the case of the yield per acre being 10 to 15 per cent. under the average. As regards what prices will be nine months hence, opinion is, of course, to a very great degree speculative merely; but, inasmuch as wheat harvest has to be prepared for nine months in advance, farmers to-day must take some view on the subject. And without simply saying "ditto" to Lord Thurlow, we ventnre to offer them the opinion that the wheat sown now is more likely to be sold at a loss than at a profit before the year is out.

OUR DAIRY INTERESTS.—"From returns received from the United States," says Mr. Pye, (England), in an address; "it appears the dairy interest has grown into one of a great magnitude, the number of cows actually being over 11,000,000, whilst in England we have only some 2,250,000, a fraction more than one-fourth of those in the United States.

The importation of fresh meat to this country has greatly increased; the enormous quantity of from 25,000 to 30,000 tons having been imported during the last twelve months, and the senders seem to think this only the beginning of the trade.

At one time the 3,000 miles of ocean, and the great expense of inland carriage, formed a very formidable protective duty, which, no doubt, was nearly equivalent to our extra expenses. During the last few years, owing to the increase of railways and the use of large ocean steamers, this protective duty is in a great measure done away with."

THERE IS A STORY on record, somewhere, of a London cigar seller, who was prosecuted by the authorities for defrauding the revenue. The tax on tobacco, imported into England, is excessive, nearly a thousand per cent. In his defense, the cigar-maker maintained, and proved so conclusively to the authorities that he used no tobacco in the manufacture of his wares, that he was discharged. They were made entirely of oak leaves, cabbage leaves and similar materials.

To like effect, the makers of all kinds of intoxicating drinks could easily plead, if any confidence can be placed in the numerous hand-books, openly advertised and sold, which profess to teach the mystery of compounding liquors with such skill as to deceive even the most practiced judges.—Thoughts and Events.

AGE OF COWS IN RELATION TO THE YIELD OF MILK.—The age of cows has a great influence on their yield of milk. After her first calf, a cow does not give as much as after her second or third. At the fifth or sixth calf, the average yield begins to decrease steadily. It may be seen from this, that one ought only exceptionally have older cows than eight or nine years, as after these years the milking qualities are generally on a rapid decline, and, besides, the cows are harder to fatten. As young animals produce more from the same quantity of food because their assimilation is better, there is every reason for not keeping the cows too long. A good dairy cow is (on the Continent) expected to yield not less than 2000 quarts of milk a year; a very good one, 2300 to 2500 quarts; but higher numbers are not rare in almost all breeds.—Agricultural Gazette.

IS MILK FEVER CAUSED OR PREVENTED BY MILKING DRY AFTER CALVING?—Although the practice of some parts of the country appears to discountenance the clean milking of newly-calved cows, says the Ag. Gazette, the nature of milk fever justifies the conclusion that the cow liable to this disease should have her bag drawn dry as soon as she calves, and that the operation, if needful, should be repeated several times daily. No harm, we believe, results from milking thoroughly three times a day, or oftener; much harm, on the other hand, may ensue from allowing the milk to accumulate, as it is apt to do in a good cow in the prime of life in high condition, and milked only night and morning.

NEW MODE OF ADMINISTERING CASTOR OIL.—To the oil add sufficient pulverized sugar, flavored with cinnamon or lemon, to convert the whole into a plastic dough: then form into boluses. Compound licorice powder may be substituted for the sugar. Children, says the Boston Journal of Chemistry, quarrel over this confection. For grown people the boluses may, in some instance, be enveloped in wafer-paper.

BARLEY FOR YOUNG LAMBS.—Reverting again to the subject of barley, it may be as well to mention that, good and wholesome as we have found it to be for ewes and grown sheep, it is a very dangerous food for young lambs. It affects them with a scour which very often ends fatally.—Ag. Gazette, Eng.

CERTAIN FACTS appear to be perfectly clear, says the journal above quoted, America will steadily and rapidly develop as a producer of grain and flesh. Production is there incomparably cheaper than it is in England. Transit will tend to become easier, cheaper, quicker; and we, with our high rents, high living, and high expenses in general, will find ourselves handicapped to a serious degree. Even as to quality there is no doubt they can in many cases outvie us, as, for example, both in wheat and fruit.

CATALOGUES, ETC., RECEIVED.

JAMES J. H. GREGORY, Marblehead, Mass. Catalogue of Warranted Vegetable and Flower Seeds, free to all—and all should apply for it. There is no other catalogue which we look over with more pleasure and instruction.

This catalogue is profusely illustrated and especial attention is called to many new or excellent kinds of seeds, among which we may note Egyptian Sweet Corn, Longfellow's Field Corn, Early Amber Sugar Cane, White Russian Spring wheat, the Turk's Turban and Alpha Tomatoes, Defiance Asparagus, (which is deemed far superior to Conover's Colossal), the newer sorts of Potatoes, &c., &c.

E. P. ROE'S New Descriptive Catalogue and price-list of Strawberry, Raspberry, Currant, Gooseberry plants and Grape vines; Cornwall-on-the-Hudson, N. Y. While looking through this interesting catalogue, it is very gratifying to the RURAL to see that Mr. Roe gives the best praise to those new varieties of small fruits which the RURAL NEW-YORKER from its own tests has spoken most highly of, because it affords excellent evidence that our reports have been the results of unbiased observation. We presume that all of our readers who are interested in small fruits will be glad to send for this catalogue, as Mr. Roe has earned a wide reputation as one of our most intelligent and experienced small-fruit growers.

B. K. BLISS & SONS, 34 Barclay St., N. Y. Illustrated Hand-book for the Farm and Garden, and catalogue of garden, field and flower seeds. This book cannot be described in a few words. It is one of the most complete of any works of the kind published in this country or elsewhere. It is illustrated from beginning to end with wood-cuts of all sorts of plants and also by a really beautiful colored plate of New German pansies painted from life. If this firm is distinguished more for one thing than for another, it is for the introduction of novelties, many of which, especially among new potatoes, are well and favorably known both at home and abroad.

JOHN SAUL, Washington, D. C. Catalogue of rare and beautiful flowers and garden seeds, &c. Mr. Saul issues eight catalogues, (the present is No. 2.) all of which are sent free to applicants in their seasons. Thus special consideration is given to fruit and ornamental trees, evergreens, shrubs, roses, bulbs, orchids, etc., etc. Mr. Saul is among our most enterprising nurserymen and is quick to procure the latest novelties. The Rural Grounds are indebted to him for several fine plants, some of which have already been, and others of which will be, referred to in these columns.

THE NATIVE FLOWERS AND FERNS of the United States, by Thomas Meehan. The American Natural History Publishing Co, Philadelphia, Pa., Publishers. We are now in receipt of Parts 13, 14, 15 and 16, of Vol. II, Second series. Each Part contains, as heretofore, four beautiful colored plates of the plants described in the text. Among them we are glad to see that grand old vine, the Trumpet-Flower, Tecoma radicans, and the brilliant Cardinal Flower, Lobelia cardinalis.

THE DINGEE AND CONARD CO., West Grove, Chester Co., Pa. "The New Guide to Rose Culture." Probably the largest Rose nursery in the world. All lovers of the "Queen of Flowers" should send for this "guide." We can assure our readers that all orders will be liberally and promptly filled. The D. & C. Co. have well earned their high reputation and unparalleled success. Catalogue sent free to subscribers.

SYRACUSE NURSERIES, Smith & Powell, Proprietors, Syracuse, N. Y. No. 1 is a descriptive catalogue of the fruit department; No. 2, descriptive catalogue of ornamental trees, shrubs, vines, roses, green-house, bedding plants, &c. This is one of the oldest and largest establishments of the kind in this country, the area occupied under cultivation being about 500 acres.

ALFRED BRIDGEMAN, 876 Broadway, New York. This is a large, bright, descriptive catalogue, accurately illustrated, that one can read without spectacles. The lists of vegetable, grass, herb and flower seeds, garden tools and horticultural books are very complete, and the establishment is one of the oldest and best. The Catalogue will be sent free to all.

RESULTS of soil tests of fertilizers for 1879, conducted under the direction of the Com. of Agr. of Ga., with comments on the results of experiments—a very useful work for all about to buy commercial fertilizers, especially in the South, as it shows their worth in actual field tests.

WHOLESALE PRICE-LIST of small fruits, &c., grown and for sale at the Pleasant Valley Small Fruit Nursery, Moorestown, New Jersey. John S. Collins, Proprietor. Engraving of the "Kieffer Hybrid Seedling Pear," twelve inches around and weighing 18 ounces.

COLE & BROTHERS, Pella, Iowa. Illustrated Catalogue and Guide to the Flower and Vegetable Garden, free to all. We see that this enterprising concern offers the Golden Rural Tomato.

THE Record Almanac, issued by that marvel of journalism, the Philadelphia Record, a paper that sells for six cents a week, and, as compared with the cheapest of other papers, is worth double that money.

LUTHER BURBANK, Santa Rosa, Sonoma Co., Cal. Catalogue and price-list of Santa Rosa nurseries. Trees, plants, seeds. Australian seeds—Native Californian tree, shrub and flower seeds.

REPORT of the Connecticut Board of Agriculture and Experiment Station for 1878. An excellent work, well gotten up.

C. M. SILVA & SON, Newcastle, Placer Co., Cal. Descriptive circular and price list of trees and plants.

The Poultry Yard.

DORKINGS FOR EGGS AND MEAT.

IN the RURAL NEW-YORKER for Jan. 31, Nelson Ritter gives a plain and practical account of his hens' doings for the last 13 years. Such letters are valuable to those who read them and wish to profit by them, while not a few readers will glance at the account and then forget it forever. Mr. Ritter says, "In looking back over these years I discover many mistakes made, that lessened the profits. They can certainly be avoided hereafter; but whether others equally detrimental will not be made, is not so certain." It seems by the above quotation that Mr. Ritter will be benefited whether the readers of his paper will be or not. That is the true way; in all our experiments, we should have an eye open to improvements, and also watch our failures, so as to avoid them in the future. A few years since I bought a pair of Cayuga ducks for my son, a lad of 10 or 12 years of age at the time, the pair costing $5. In two years' time he had paid me back the purchase money and had saved for himself $50. They were sold for breeding purposes. He bred some that took first premium at our State poultry show. They were selected by poultry fanciers and breeders who had not as good of their own as my son had; still they get the credit, but my son sold his ducks and that was what he wanted.

About the same time, having the poultry fever in its mild stages, I purchased some fancy fowls; in the course of eight or ten years I tried a number of breeds without much success on my part. One trio of Light Brahmas, from a breeder who advertised quite extensively, we were so disgusted with that we fattened and sent them to pot without ever breeding from them at all, although they cost us a good round price. After going the round of six or eight of the so-called best breeds, we got a trio of Silver Gray Dorkings and from them we have now a flock of 30 birds that please us better than any other sort we have ever had. From those we have bred, we have frequently let fancy-poultry men have birds that took first and second premiums at our State fairs, and poultry shows. Last fall at Utica we helped in that way to furnish a prize coop; so that our fowls are not only useful, but fit to show as well. We sell neither fowls nor eggs except on such occasions. We use all our eggs in our family, and the chickens we raise—except an occasional basket of eggs to some friend, or a chicken for some sick person, or to a friend for a holiday treat. Usually Dorking eggs will weigh a pound to seven eggs. The hens are very quiet, good mothers; the chicks feather out early, and with me are hardy. That they are the best breed for all purposes, I am not prepared to say; but, as we treat fowls, they are certainly the best, we think, of any breed we ever had for eggs and chickens to use in a farmer's family, which is what we keep hens for, usually keeping about 25 for that purpose. I carried to a friend in town a few years since a basket of four dozen eggs; afterwards he said he never before knew there was any difference in eggs, but after using those I brought him, he said he would almost as soon have one dozen such eggs, as to have two dozen he could buy in the market.

Mr. Ritter gives good advice when he tells RURAL readers to take good care of the hens they have, and if they are doing well, they had better not change, nor be misled by glowing advertisements. Probably for most farmers an exchange of cocks, however, from some other yard would be of great benefit, whether of the same breed or not. Farmers who raise hens for their own use, both in eggs and chickens, will usually want a fair-sized bird, so that when one is killed for the table there will be something to show when dressed for that purpose. One thing is certain—good care and liberal feeding will pay best in the end with fowls, as well as other farm stock.

Rome, N. Y. J. TALCOTT.

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SATURDAY, FEB. 14, 1880.

SHORTLY TO APPEAR.

On The Kinver and an entirely new French Yellow Globe Mangel as sweet as a sugar beet and as productive as other mangels—illustrated.

Leguminous Plants—grasses and valuable fodder plants, by Professor W. J. Beal—illustrated.

Stock Notes by Professor E. W. Stewart, L. S. Hardin, Richard Goodman, M. C. Weld, Col. F. D. Curtis, A. B. Allen and others.

Important Addition to the Rural's Seed Distribution.

Special Articles from Professor S. W. Johnson, Professor F. H. Storer, Professor G. C. Caldwell, Dr. A. R. Ledoux.

A Series of short articles upon the cultivation of our choicest vegetables—illustrated.

Dairy Specialties by Henry Stewart, L. S. Hardin, Professor L. B. Arnold.

Fruit Notes by Pres. T. T. Lyon, Gov. Furnas, Dr. T. H. Hoskins, Sec. Garfield and others.

Poultry Notes by Forrest K. Moreland. Henry Hales and others.

Life Engravings of the Chinese Yam (Dioscorea batatas) "Cinnamon" vine; the Tulip tree and fruit &c., &c., &c.

TO NEW SUBSCRIBERS.

We find that many of our new subscribers have not seen our Free Plant and Seed Distribution supplement and consequently know nothing as to its terms. We will therefore send this supplement free to all who apply until further notice.

As announced in our late issue, we can no longer supply back numbers of the Rural New-Yorker. Papers will be sent for one year from the date of the receipt of all subscriptions.

The increase in the business of the Rural New Yorker has made a change of location necessary. We have leased for a term of years, one of the most central and prominent buildings in this city, of which we shall take possession the first of May.

It gratifies the editors of the Rural New-Yorker very much indeed that the new catalogues of 1880 give praise and prominence to the many kinds of plants as well for the vegetable, small fruit and flower garden as for the field that have been tested at the Rural Experiment Grounds and favorably reported upon in these columns. Such references from many of our best seedsmen and nurserymen are proofs that our tests have been made impartially, and that our reports are worthy of the confidence of the public.

Our formidable seed distribution was begun last week. We have never before, in any subscription season, received so many undecipherable addresses and we have consequently never before received so many complaints that "the Rural don't come!" As we are obliged to direct our seed and plant wrappers as applications are received, no doubt there will be a correspondingly great number of miscarriages. As soon, however, as the distribution is completed, we shall inform our readers, so that they may have the opportunity of making a second application by postal or otherwise.

Many of our readers request that we will give instructions as to sowing the seeds of the Rural's distribution. As we cannot very well repeat such instructions, we shall wait yet a week or so, and then give them once for all. We have yet to announce the addition of one valuable kind of seed to the list—a new golden mangel-wurzel, which we have imported from France, and which has never (so far as we know) been tried in this country. In connection with this, it has been suggested that we offer our subscribers a prize for the heaviest specimen produced from the seed we send. But this has not been settled as yet.

The leading varieties of pear hawked for sale in the streets of London, according to the Gardener's Chronicle, are the Windsor, (Summer Bell, a coarse astringent pear), Summer Doyenné d'Eté, William's Bon Chretien (our Bartlett), Hessel, Beurré Bosc, Louise Bonne of Jersey, Beurré de Capiaumont, Beurré d'Amanlis, and Beurré Diel. The model pear of the Londoner is the Bartlett. It is a criterion by which he judges of the value of every pear he is called upon to partake of. In Edinburgh the modern Athenians swear by the Jargonelle, which, though pretty, is of poor quality.

It is to be wondered at that farmers never, or rarely ever, raise potatoes from seed, by which we mean the true seed found in the potato "ball" or proper fruit of the potato plant. Seeds germinate as readily as those of lettuce or radish. A small patch of seedling potatoes could be cultivated at a small expense and a trifle of labor, while each farmer might, in this way, produce varieties of potatoes more valuable and productive for his particular soil and climate than any that could be purchased. At any rate, the chances of such results would be worth the trouble of striving for them. We have, at present, not less than 100 little potato plants growing in our conservatory. These will be set out in the spring, and the little tubers which form during the growing season will be preserved in sand for another year. The second year these little tubers form large tubers, when their quality may be tested—the good kept for "seed"—the inferior eaten. Save the potato balls and try the experiment.

HELP FOR IRELAND.

Ireland's wailing cry for food should no longer be heard unheeded. Her distress is actual and terrible. With outstretched, emaciated arms she implores the civilized world in the name of God and humanity to give food to her starving people. Not less than 300,000 souls are at present without daily bread, and the distress is increasing day-by-day. It seems, indeed, strange that a province of the most prosperous nation in Europe, situated at the very hearthstone of the sovereign, should thus be wanting a scant livelihood.

Her most Gracious Majesty, the Queen, and all members of the royal family live in the most pompous style. English aristocracy lounge in luxury. Irish landlords yearly squander enormous sums, the proceeds of the toil of Irish people, in Paris and other places. Yet the people who so labor to support this royalty, this aristocracy, the subjects of the British crown, die for want of food. Is there nothing wrong in this? Are the people insubordinate rebels if they dare whisper a protest against this state of things, and refuse to die with laudations of landlords and English rule upon their lips? True, they are ignorant and unthrifty, but whose is the fault?

We donot now propose to enlarge upon the rights and wrongs of the Irish people, but their deplorable situation may well induce grateful feelings in the hearts of American farmers for the independence they enjoy. Relief for the suffering should now be the uppermost thought, and the abundant harvest of last season will enable our farmers to contribute liberally, and we feel assured they will do it cheerfully. James Gordon Bennett, proprietor of the New York Herald, has headed a subscription list with the magnanimous gift of $100,000.00 and invites contributions to swell the sum to at least a million dollars. Let everyone contribute his mite, and do it without delay.

HOW OTHERS SEE US.

"To see ourselves as others see us," is a most valuable piece of self-knowledge and perhaps there are no other people in the world who are better pleased to be disciplined in this way and to accept just and wise criticisms with good nature and a desire to benefit from them than Americans. Criticisms are not always wise or just, and we have had our share of those which were offensively unjust and prejudiced. Among this class, however, we cannot admit the opinions formed and expressed by Mr. Clare Sewell Read, one of the English special Commissioners who recently visited this country on a tour of observation. From a knowledge of Mr. Read's character we hoped much from this visit and we are not disappointed. A true idea of the vastness of the material interests and necessary future development of the resources of America as well as of the personal character of Americans will go far to remove erroneous and prejudiced opinions and put us on a fair and favorable basis with a people with whom we have done, and must in the future do, our most profitable business. The changed condition of our business relations which have arisen very recently, make this understanding both desirable and necessary and Mr. Read's experience will have an important weight in creating a just popular opinion in England as to American people, matters, and things in general. Mr. Read has recently met his constituents whom he represents so well and effectually in the British Parliament; and has reported to them in an informal way some of the results of his visit here. His report is both instructive and amusing. One of the justest remarks of this gentleman was in regard to our much criticised Department of Agriculture, and this testimony is worthy of regard as showing how in these days, as in the old, "a prophet is not without honor save in his own country and among his own people." He testified to "the great efficiency and usefulness of the American Department of Agriculture," a compliment we think deserved, and one that comes very graciously from so observant a man and so accomplished and thorough a farmer as Mr. Clare Sewell Read. Without taking up time and space to notice fully Mr. Read's opinions about us, we may congratulate ourselves that so sensible a man was commissioned to examine our condition. His practical conclusion is, as might have been expected; that with a country where an Englishman might well believe himself to be at home, the language, manners, to a great extent and the laws being very much the same as those of his own country; with a surpassing business energy and activity, and a land illimitable in its resources, agriculturally and otherwise, competition in the production of the chief staple foods is practically hopeless, that we can produce meat and bread more cheaply than any other country in the world and that we are in a fair way to be very soon independent of the world in manufactured articles. Finally, he thinks, it may be, as we expect to see it, that we shall be in a position to supply England with food and take nothing but gold in payment for it, supplying ourselves with all we need. And so think we all of us.

UTILITARIAN FISH-CULTURE.

The efforts of the United States Fish Commissioner to naturalize the European carp in American waters, and particularly the recent announcement that the fish are ready to be distributed from the Government breeding ponds to all parts of the country, mark a new stage in the history of American fish-culture. The game fishes have already had their chance; they have been bred and distributed far and wide, largely in the interest of sportsmen, but we have come at last to a question of pure utility.

The carp is a domestic fish belonging to the shiner or goldfish family, but of considerable size and, when in season, excellent as food. They affect quiet waters with soft or muddy bottoms, where, in Europe at least, they spawn in early summer. Naturally, the carp feeds upon insects, worms, seeds, and soft plants such as duckweed; but when kept in artificial ponds, the fish will eat almost anything. In Europe they are sometimes fed with flesh from slaughter-houses, but more commonly with the young leaves of clover, lucerne, peas, beets, or buckwheat. Brewers' grains, malt-sprouts, and a great variety of other vegetable matters are likewise used. It is said that the fish do not eat the leaves until they have begun to decay. A good food in this country would be the menhaden fish-scrap, now used as manure. Probably, the meat-dust fertilizer prepared at the slaughter-houses would serve a good purpose, also. Carp are said to be fond of cow-dung and the dung of other farm animals, and to thrive when fed upon dung. They are fond of dor-bugs withal, and such-like insects.

The carp increases rapidly and grows fast. At least 20,000 individuals are said to have been reared at Washington in two years from the 120 fish which were put into the Government pond in 1878. The rapid rate of increase is well shown by the experience of Mr. Levi Davis of Forestville, Sonoma Co., California, as reported in the Pacific Rural Press of January 3, 1880. In January 1876, Mr. Davis bought six carp for $30. One of these fish soon died, but in the course of the year there were reared 2,044, and in 1877, 2,672 young ones from the five old fish. In the spring of 1878 Mr. Davis gave away two of the old fish and still reared 4,000 in that year, from the three old fish he had left. He has not yet counted the crop of 1879. These results were obtained in four small ponds, which cost altogether $200; and the food of the fish is estimated to have cost $10 a year; that is to say, the total cost of fish and ponds to date is $270. Meanwhile, Mr. Davis has sold $415 worth of fish, and he has left his four ponds, 6,000 or 8,000 carp, and $145 cash in hand; in addition to which his family have been eating carp freely for eighteen months. He warmly commends carp-culture to every one who has ponds fit for the purpose, and urges that the carp bears heat extremely well, and will thrive in waters where other fish could hardly exist. His experience is interesting and instructive, though almost too good to last. It is well enough to remember that "there be land-rats and water-rats, land-thieves and water-thieves;" in a word, that the fish-culturist has many foes. What with the summer's heat and the winter's cold; what with our heavy rains to bring mud and silt into the ponds, and freshets to wash away the fish; what with musk-rats to undermine embankments; and the ravages of predatory fish and of fishing birds, it will ill-become the pond owner to sleep too soundly o' nights. Besides gulls, and loons, and the other migratory fish-eating birds, there are crows, herons, kingfishers, and fish-hawks to be looked after; and mink and otter, as well, to say nothing of the angler's rod and the poacher's night-lines. But here, as everywhere, we may find comfort in the adage, "nothing venture nothing have," and rest assured that with due care and proper attention, most difficulties may be overcome. We make no doubt that the carp will be a great addition to the food resources of the country, and that many farmers will find it both convenient and profitable to undertake this form of really useful fish-culture.

BREVITIES.

There is a fine show for wheat in Ohio, according to the statements of our many correspondents from that State.

Grafting Wax.—The following old recipe is as good as any we know of: Two parts of tallow, three of resin, and three of beeswax.

Attention is called to our notices of nurserymen's and seedmen's catalogues this week. Our readers should inform themselves thoroughly before making out their orders.

Last summer for the first time we raised (from seeds) the Turnip-rooted Celery, or Celeriac, advertised in every seedsman's catalogue. We need not tell a long story about that which may be stated in a few words. We shall never again raise Celeriac while we can raise Celery

"Be it known to all men that the great majority can no longer Farm to a Profit. We state, indeed, our grave conviction that in no walk of life is it now more difficult to make a living than by farming." Thus frankly speaks the Agricultural Gazette of London, England.

The question is asked in England: Has it been proved by any competent experimentalist, that the potato can be improved by selection from the tubers? Another question we would ask: Has it been shown that the planting of small potatoes, year after year, will ultimately lessen the size of the crop?

Our readers will think well of the subject "Reclamation of bog-land," as treated by Professor F. H. Storer on our first page of this issue. We have seen in American papers no other coherent and sufficient account of this most important system of husbandry which seems destined to play a great part in the world.

Publishers of the Rural New-Yorker, New York City—Gents:—We have sold over 100 scales since last September, and are fully assured that at least three-quarters of these orders came from our last advertisement in your valuable paper. The Rural we find to be the best advertising medium that we have ever used. Osgood & Co.

Binghampton Scale Works, Binghampton, N. Y.

It seems that the fruit of the Japan Persimmon is not fit to eat until after it has been exposed to frost. The red, tomato-looking fruit, as shown in colored plates of some catalogues, is not the Japan (Diospyros Kaki), but the China or Mongolia Persimmon, D. Schi-tze. This latter is said to be hardier than the other. The fruit rarely contains seed. Kaki persimmons always contain seeds, as we have before remarked.

The parentage of the Kieffer Pear on the male side at least—is guesswork. It is probably a hybrid, but even this is not known. The word "sport" is used to express a bud variation of which nothing further is known. Such variations may be a cropping out of crosses made years previously, the same as sometimes happens in thoroughbred animals; that is, a sudden power or impetus is given to blood which for years previously had, so to speak, remained impotent. But as we do not know this, the word "sport," as the name of an effect the causes of which we do not understand, is very good. But the word hybrid has a well defined signification. For the sake of the accuracy of pomological history, we think the pear in question should be called simply Kieffer's Seedling.

Industrial Societies.

FRUIT GROWERS IN COUNCIL.

New Jersey Hort'l Society.

EVENING SESSION.

(Rural Special Report.—Continued from last week.)

THE early part of the evening was devoted to the ornamentals. The Secretary read an anonymous contribution from a lady friend of the Society on "Old-fashioned Flowers" and one from P. B. Mead on the culture of plants in our living-rooms. There was also a brief essay on the Decoration of Small Places. Discussion followed.

Mr. Crane would caution against planting the Willow near a well. He had one 20 feet distant from a well 20 feet deep. The roots ran to the bottom, drank up the water, and filled the well with fine fibrous roots which had to be cut out repeatedly, and made the water unfit for use. [We know of a similar case where the tree was 100 feet from the well.—EDS.]

Mr. Ward named the Chinese Arbor-vitæ as one of the beautiful evergreens for ornamental purposes.

Mr. Lovett indorsed all that was said as to its beauty, but it was not hardy. He recommended Maiden Hair tree, Magnolias Lenneï and stellata, The majestic Grandiflora, though popular at the South, is not hardy here, but Mr. Parry cited a specimen near Philadelphia 20 feet high, flourishing and beautiful. [We think that that tree is not living now.—EDS.]

The best way to use ice to preserve fruit was asked for.

Mr. Goldsmith used boxes holding a bushel each, placed them four deep on the ice, and had generally been very successful.

Mr. Ward had found that the use of ice under the fruit was only necessary to cool off the warm air arising from the earth. With a temperature of about 34°, and other favorable conditions, he did not see why Bartletts or any other pears could not be kept six or eight months.

Mr. Capen asked what effect this frigid temperature had on the quality of fruit. His impression was that the fruit-houses of Mass. were not as successful as expected on account of impairing the quality of the fruit. Mr. Ward thought otherwise and desired the fruit to be tested then and there to settle the point if possible.

Samples were distributed among the audience and Mr. Capen admitted it was better than he expected. He also distributed samples of his fruit of the same varieties, kept without ice, and the only noticeable difference was due to a different degree of ripeness. He once sold 12 bushels of Bartletts for $12 per bushel, but never expected to do it again. Would pears ever rule as low as apples?

Mr. Ward had sold Bartletts for $37 per bbl.; but the general average was $7 to $8. Was not certain but they could be grown as cheaply as apples, and maybe, sold as low at their natural season. If so, the profit could only be obtained by keeping them till the market was bare, when one could get $2.50 to $3 per bushel, instead of $1 or less in their season.

Mr. Crane alluded to the difference in quality of fruits grown on different soils, which was often quite apparent: and to determine *positively* the effect of ice on the quality the samples should be grown on the same soil, and, if possible, on the same tree and gathered at the same time. He cited an instance of some Bartletts grown on different trees furnished by the late Mr. Reid, of Elizabeth, which, on being tested by that gentleman so astonished him as to make him doubt the variety, the difference was so apparent.

The writer has known instances where the influence of the stock affected the quality of the fruit very perceptibly, and in making tests of this nature, care should be taken to have all the conditions as near alike as possible.

Second Day—Morning Session.

Currants was the first subject this morning.

Mr. Beebe read a brief paper contending that as a *paying* crop, they must receive liberal treatment. As a fancy red Currant, the Cherry heads the list. What it lacked in quantity was made up in size and price. Versaillaise was nearly as large, more productive and less acid—a general favorite. As a field crop Red Dutch, with liberal treatment, would yield more pounds to the acre. White Grape for table use. Black Naples, the standard black variety, has now a rival in Lee's Prolific.

The currant worm and its methods of operation were described and shown by the aid of an admirably executed drawing. The most effective remedy is hellebore. For the comfort of the timid who object to this remedy because it is poisonous, he stated that he had saved 500 bushels last year by using three-quarters of a barrel of shell lime dusted on while the bushes were wet with dew. Salt brine will also kill the worm, and is easily applied, and a good fertilizer. For the borer, cut away the affected portions and burn them. Mr. Crane had a little patch of 1¼ acre, in an apple orchard which had been quite successful, and would have been more so if the trees had all been true Red Dutch, which he purchased them for. But about one-third had proved untrue. He had planted them four by six feet, and manured the ground heavily with hog manure the year before planting—one cannot get the ground too rich. He had found the shade of trees beneficial—made the fruit later. The bushes ought to be renewed every six or seven years. He had not been troubled with worms or borers till two years ago. Old bushes, when taken out should be burned to destroy any insects in them. When the air is still, blow a little hellebore among the bushes—it was effectual in killing the worms which were very apt to be at work before we were aware of it. He regarded Red Dutch as one of the best varieties. It was important to keep the bushes open to let in light and sunshine. The open portion of the orchard did the best in apples; whether this was due to manure, culture, or both, he could not say. He had realized $150 for currants one year and $250 for the apples on the 1¼ acre, being more than he gained from the remainder of the 10 acres in orchard.

The Effects of Tobacco Dust for destroying the worm were asked for.

Mr. Barclay had used it, but not to advantage.

Mr. Hale used stems as a mulch and thought them worth the cost, $15 per ton, for manure.

Mr. Parcell had used the dust or snuff three years successfully. Apply when wet. Two years ago he applied it after a shower, to 150 feet of row; next morning he counted 58 dead worms on a measured square foot of ground.

Mr. Ward thought the worm had been a blessing in disguise, as it had discouraged so many from growing their own supply; they had become purchasers and the prices had advanced so that growers who took the trouble to save their crop, realized better prices for them. Mr. Crane was right as to distances to plant and the importance of attending to the worms in time; then a little hellebore was sufficient; when three or four days older it took more, and they were more difficult to destroy. He thought it best to remove all but four or five suckers to renew the bearing wood.

Mr. Collins used a cart made wide to run between and over the rows for hauling on manure and off turnips, of which he grows large quantities among the bushes. Red Dutch was best for market; White Grape for table—not salable in market, though white made a red jelly.

Mr. Parry regarded Lee's Prolific and Black Naples as alike, or nearly so.

Mr. Lovett had positively seen a vast difference.

Mr. Fuller regarded all the Victorias as identical,—a large, long-bunched, late, red currant. Cherry and Versaillaise he thought one and the same. He and Mr. Downing spent years in investigating the matter and came to this conclusion.

Mr. Roe could see no difference.

The Secretary remarked that the subject was very much muddled, and had been for years. The Cherry or Versaillaise seemed to be more sportive and less fixed in character than any Currant he was acquainted with. He would venture to assert, if Mr. Roe or any one else would select a single plant of either kind, Cherry or Versaillaise, and propagate from it a few years, he would find such a difference in the plants so propagated as to raise grave doubts in the mind of the careful observer as to whether some mistake had not occurred. He had grown the two varieties side by side, when the difference in quality of the fruit was so apparent as to be detected by a stranger.

Mr. Quinn thought all were liable to be mistaken. He had watched these Currants for years, and was satisfied there was a difference, though they were somewhat similar. The especially distinctive characteristics in his grounds were apparent in the habit and form of growth of the plants.

Mr. Barclay grew the Versaillaise very satisfactorily; the only objection was the blank wood; *i. e.*, wood without fruit buds.

Mr. Fuller said that 25 years or more ago there was a true Versaillaise Currant, a smaller fruit than the Cherry, but he did not suppose it was in existence now.

Mr. Parry read a long essay on Experience in Pear Growing, endeavoring to demonstrate that it was a miserable failure as at present conducted, quoting largely from the experience of others in many sections of the country, to prove his assertion. The cause of this disastrous failure was fire blight, but the millenium was about to dawn through a new race of Pears, produced by crossing our best varieties on the Japan and Chinese Sand Pears. This had already been accomplished, and this new departure had produced a vigorous, healthy, hardy, productive, insect and blight-proof race, on which pear growers could hang their hopes. The fruit was large, luscious and handsome, commanding much higher prices in the markets than our best varieties. Among the most promising of these were "Kieffer's Hybrid" and "Le Conte." The first had done remarkably well on his grounds, and was the most valuable Pear yet introduced. It was destined to be among Pears what the Concord was among Grapes. (If we live we shall see.—Rep.)

Mr. Quinn did not take much stock in the gentleman's enthusiasm. If pear-growing was such a failure as he had represented, he and many others only regretted it had not occurred before; but the facts are that Pears were never more plentiful in our markets than they were last fall, and never so low in price. At one time Bartletts could hardly be given away. He was sorry to hear these new varieties were as productive and commanded such high prices. In a few years he and other pear growers would not be able to sell their choice fruit unless they offered chromos as premiums for purchasers. He had grown the Chinese and Japan Pears for years. They were curious and interesting, but the fruit was only fit to cook. For a time they resisted blight, but the last few years they took it badly—last year they were the worst cases on his grounds, and no others within 200 feet. He did not favor dwarf Pears.

Mr. Ward took a brighter and more hopeful view of pear-growing than Mr. Parry had given. He was confining his attention to about a dozen varieties. The Lawrence gave high promise a few years ago, but now it was not so popular. He placed the Bartlett at the head of the list for summer and fall use. It brings more dollars and cents to the pocket than any other. Beurre d'Anjou occupied the same position among the fall and early winter varieties. He had been somewhat discouraged with it a few years ago on account of its not ripening well, but had overcome this difficulty as shown by the pears on the table. Another pear of great value was Dana's Hovey. It was rather small, as was the Seckel, but the quality was unsurpassed. He should plant it largely. He had not lost over 5 per cent. of his trees by blight. Had seen Bartletts average $8@10 per bbl.; but the price had gradually declined. The future profit of pear-growing will be based on the price of apples. If they can be grown as cheaply, why not as profitably? But another point was, what should be done with our large crops that ripen and come in competition with that queen of fruits—the peach? In their natural season the pears on the table would not bring over a dollar a bushel; now they are worth $3 to $4. This subject of keeping pears is an important one, and distributing the crop over a longer period enabled us to realize something like a profit from our labor. He prolonged his sales of Bartletts two months, and could not see that the flavor was injured in the least. He sent loads to market in the fall, that did not pay the expense of carriage; they certainly would not if sent by express. How long could they be kept at a profit? He thought they could and would be kept till April and May, and be in demand, and he hoped another year to keep them till then. It was very important to pick at the proper time, as soon as mature. One of his orchards, about 12 years old, was set 12 feet apart, dwarfs and standards alternating, as he intended eventually to let the standards have all the ground; this had already been done to some extent, the dwarfs not being a success.

Mr. Fuller said that, notwithstanding what had been said against dwarf Pears, in a race of 10 or 15 years for profit, he would take them and win. On being asked if he would risk them on his sandy soil, he replied, yes, on any soil, but he would feed them well. He had never had a case of pear blight or peach yellows on his grounds.

Mr. Caywood also had faith in dwarfs. He had planted 600, and should plant 1,000 more. He always tested the union of bud and stock across his knee; if not perfect, they would break square off. Such trees it was useless to plant. He advised cutting three feet below the appearance of blight. Mr. Idell said the Le Conte hybrid pear mentioned was difficult to find sale for in N. Y. market; it was not as large as represented; it was a second-rate pear, and although Mr. Parry had quoted them as selling at $4.50 per bushel, plenty was sold at half that rate.

W.

Floricultural.

GROWING PLANTS IN LIVING ROOMS.

PETER B. MEAD.

[THROUGH the kindness of the Secretary, Mr. E. Williams, we are enabled to place before our readers the following entertaining and instructive paper which was read before the late meeting of the New Jersey State Horticultural Society.—Eds.]

I am to say something about growing plants in living rooms, which, it was thought, might interest the ladies, who, I understand and am quite willing to believe, constitute the chief adornment of your Society on all occasions, and especially on exhibition days. There is an eminent fitness in this, which many fail to perceive. The fact is, the ladies are an element of strength as well as of beauty in a Horticultural Society; at least, I have always found them to be so. Just think for a moment that where the girls are gathered together, there will the boys be also; but you must be sure to make the boys pay at the gate.

I must say, by way of introduction, that I cannot do more than indicate, and that briefly, the conditions under which plants may be successfully grown in rooms, and furnish a small list of easily grown plants for a beginning. To go over the whole subject in detail would require a volume of no inconsiderable size.

To show you that I have some right to speak on the subject, as well as to win your confidence, I will state that I have grown plants in rooms since I was a boy. In this way I have grown, of species and varieties, several thousands; indeed, I have more than once had upwards of 600 in the house at the same time, nearly every window being ornamented in this way. I may therefore be supposed to know what kinds of plants succeed best in rooms. I will add that I have had no inconsiderable experience in growing plants in the green-house, and I am compelled to admit that to grow a plant well in a room taxes one's knowledge and skill more than to grow the same plant well in a greenhouse. There is, therefore, no occasion for the sneers that we sometimes hear about growing plants in rooms.

Some of you may ask whether plants in rooms are detrimental to health. Speaking from my own experience, I must say they are not. I have even had my bed-room windows crowded with plants during the whole winter. It must be observed, however, that some persons have very delicate and susceptible nervous systems, and cannot endure even the delicate fragrance of the Rose. Such persons may be injured by, or suffer great inconvenience from, fragrant flowers. I have known some such persons, however, to receive much pleasure from the cultivation of inodorless flowers. Aside from such cases, I know of no injury likely to arise from growing plants in rooms; but I know of a great deal of solid comfort and pleasure.

Thus much on the score of injury to the health of the grower. I will turn next to the conditions best adapted to the health of the plants. Since the general use of hot-air furnaces and base-burning stoves, the difficulties of growing plants in rooms have been much increased. In parting with the fire on the hearth and the wood-burning stove, we parted with a good deal of pure, healthy air. But we must make the best of it, and have recourse to ventilation, and open windows and doors in connection with some expedients to be hereafter noted.

In regard to exposure:—a room facing the south is the best; next, east; next, west; and last, north. There are some plants that are very well adapted to either of these exposures, which will be mentioned in their turn. There are some "accessories" which are almost indispensable. A barrel or two of good soil should be put in the cellar, and not left out-of-doors. The best soil for general purposes is rotted sod. A good outfit would consist of rotted sod, leaf mold from the woods, old, well-rotted manure, and sharp sand of any kind, except sea sand. If rotted sod cannot be had, get the best soil you can; for you can make it good enough with the other materials.

Next, something to stand the plants on. Have a box made 3½ feet long, 2½ feet wide, and three or four inches deep, and, if convenient, lined with zinc. Place this on a table, and fill it with clean sand, which should be kept moist. This will promote cleanliness as well as the health of the plants. It will be a great convenience to have the table fitted with rollers, not only for rolling it back on cold nights, but for handling the plants when necessary to change or clean them. There is no necessity for saucers on this sand table; but, if used, they should be inverted, except under Callas and similar water-loving plants. With this arrangement, the plants can be frequently syringed, which not only keeps them healthy and clean, but measurably prevents the accumulation of red spider and some other insect pests. The drip is absorbed by the sand, and no harm is done to the carpet. The moist sand table has another advantage; the evaporation that slowly but constantly takes place from its surface, greatly promotes the health of the plants. Perhaps the ladies will admit that a vaporizer is a good thing to have. The plants think so, and so do I.

I can only allude briefly to the use and composition of soils. Rotted sod, reduced with more or less sand, is well adapted for most kinds of plants. In the absence of rotted sod, a good compost may be made of any common soil, leaf mold, and sand, to which should be added, if convenient, a little well-rotted manure. If you have no manure, then drop in the water occasionally a lump of carbonate of ammonia or a few drops of hartshorn. Do not at any time use guano, either in the soil or in the water. For the Cactus and succulents generally, the soil should be light and sandy.

In regard to watering, do not have any set time for this, but water a plant whenever it needs it, or as soon as the soil gets dry on the surface, and then give it enough to go quite through the ball of earth. Plants like the Calla, however, should be kept constantly wet. A plant in bloom needs more water than when not in bloom; a plant in a dormant condition needs less than when growing; and some plants, when dormant, (Calla and Amaryllis, for example,) require to be kept quite dry. It would take too much time to classify these plants here. A good brass syringe, with duplicate roses, is quite a necessity. A watering pot about nine inches deep, seven inches in diameter, with a spout 2½ feet long, fitted with a couple of roses of different degrees of fineness, is a very convenient thing for a lady to handle. The face of the rose should be flat, and made of copper. One rose should have very fine holes. The common handle is an awkward thing. Instead of being placed on the top, and at right angles with the spout, it should start at the edge nearest the spout, and pass over the top to near the bottom of the pot, in a line with the spout.

In placing the plants in position on the table, do not crowd them. No two plants should touch each other. No matter what your knowledge and skill, or how painstaking you may be, you can not grow good plants if you crowd them; not, at least, what I call good plants. You can not do it even in a greenhouse, much less in a room. It is much more satisfactory to have a few well-grown plants than to have many poorly grown. Place the plants, therefore, in a proper position, and so that each may have a due share of sunshine and light. The spaces between the pots may be very prettily filled in with Selaginellas, Ferns, Festuca glauca, Tradescantia, and similar plants that like a little shade. Syringe or vaporize the plants frequently overhead. Open the windows at top or bottom when the weather is mild. On very cold nights pull down the shade, and roll the table back a little from the window. If you have but little fire-heat, you can, on cold nights, spread some papers or a sheet over the plants. Do not keep the room too warm. In brief, be thoughtful and observant, and these and many other things will naturally suggest themselves.—To be continued.

For Women.

CONDUCTED BY MISS RAY CLARK.

TALK ABOUT MY JEWELS.

BY MARGUERITE.

I SAT down at four o'clock on Sabbath afternoon to review the day. Gertie was quiet for the moment with dolly Rosalind, and Fred was occupied with pencil and paper. We have come through scarlet fever by a long, slow process, and now that whooping cough is prevalent, the children and myself remain at home all the long Sabbath days. The workshops are all closed with the exception of the childrens', and in theirs the sounds or effects of industry, can always be heard or discovered.

About church-time I looked up from my reading to find them both ironing diligently, using the carpet for a table, and a shawl for a blanket. "Why children, this is the Sabbath. It's wrong to iron to-day!" I exclaimed.

"Oh, I know it is," said Gertie, "but we just play that it is *Saturday*."

I had them put the irons away, explained to them why the day was holy, which they appeared to understand readily and then I went out of the room. When I returned, I found them sitting on the carpet with a pint bottle of alcohol beside them, while Fred held a small bottle in his hand in which to measure a dose of medicine for poor Rosalind.

It was lunch time then, and soon after, greatly to my relief, Fred's bed-time. He was tucked in his bed, covered, kissed and all past mischief forgotten by his indulgent parent.

After some time Bessie came in from service and hearing him, supposed his nap was over and went into the room. Instead of sleeping, he had amused himself in several ways, one of the most prominent was, to get out of bed, open a bureau drawer, take out a box of pills and fill his chubby hand with them, and slip in again, and busy himself by sucking the sugar coat off of them, biting some in two, to see if they were as sweet inside as out.

When Bessie entered she exclaimed, "Oh, you dear little fellow you!"

He looked up brightly and asked: "Did 'oo say I'se 'dood boy?" and then added, as he opened his hand, "Oh, des pills are awful nasty, kah! kah!"

Well, he did not sleep. An empty box and a hand with eight pills badly bitten, caused the *pater-familias* to use the substraction table to see how many were missing out of twenty-one. The rest were found in time to save him from an emetic. The nasty taste that troubled him for some time, I judged, was punishment enough, and I sat down complacently to moralize in this way. It will be a life-long lesson to him to keep nasty things out of his mouth—I got no farther. At that moment I was called into the hall. The door connecting us with the store had been left ajar and he had pushed his way through and helped himself to a cigar, and was one moment holding it between his thumb and finger, and the next—oh, horrible sight—putting the proper end in his mouth, at least, I've no doubt but it was! He promised "never, never to 'moke again, if mamma would only kiss him."

Gertie asked me so many times to tie the beads around Rosalind's neck, that I told her I feared it was not right to dress the dolly on Sabbath. She looked perfectly astonished at me, out of her large dark eyes, and asked "You dress me on Sabbath day, don't you?"

The next thing Fred was promenading with my watch in his pocket, and when that was rescued in my favor, he found an old clock to dissect. Just as I had settled down to reading, my jewels were missed. I started in pursuit. They were down stairs, and on my way I passed hammer, irons and nuts. Papa had proposed in the early morning to have some cracked for me, but

"The words of my grandmother rung in my head,"

and I answered, not on Sabbath, but here they were later, and I was fond of them, but just as I picked up the hammer, Gertie exclaimed, "It's wicked, mamma."

"Who said so?" I asked.

"My mamma," but she ought to have answered, my great grand-mamma.

"We are not in mischief now" she told me, while I could see by her expression that she meant to be very good, indeed. In two seconds after I saw that she had a piece of tin-foil in her hand—the second glance I thought it shaped to imitate a revolver, another look and it proved to be Ned's revolver loaded and wrapped in tin-foil. Ah, me! It is only four o'clock! If we all live until to-morrow morning, I'll send to New York by the early mail for a treatise on "Kindergarten Teaching." If Froebel can teach me how to direct these energies in the right channel, I'll not be slow in learning.

LIFE PICTURES.

EVERY human mind, like a great Picture Gallery, is filled with scenes from the past. Dreams of the future occupy it sometimes, but I think we ove best to pause before the pictures of by-gone days. Days that we never before prized, until they had passed beyond recall.

The picture before me now, is of a little house, in the midst of a field. It consisted of two rooms and had a long gallery in front. It was roughly finished and destitute of ornament, scarcely containing furniture necessary for comfort, uncelled, unpainted, unadorned.

Outside, a rough rail fence, without a tree or shrub to lend shade or beauty. The only occupant was a man past the sunny-side of life, accustomed to struggle with life's hardships from early youth.

By chance he met *one* toward whom he was attracted. Chance, destiny or Providence—who can tell which—drew them together and she went to dwell with him, "for better, for worse, for richer or poorer," in the little "Bleak House." Both strong in hope and confidence of being able by the united industry of two pairs of willing hands to defy care and poverty. I wish I could say that success crowned their efforts, but fortune—fickle dame—too often proves unavailing, though pursued ever so steadily.

He did all that two hands could do, and she did her best. While harvests grew and ripened beneath his skillful hands, household duties filled her time, and the little house visibly brightened.

Vines grew over and shaded the sunny windows, and the long gallery was fragrant with the breath of honey-suckle and climbing roses. Trees began to adorn the yard, and in the garden, blue violets peeped from a veil of green leaves. Crimson lilies glowed in the sunshine, roses nodded a welcome, and fruit trees and vegetables yielded a reward to the loving hands that planted and cared for them.

The merry voices of children made music around. The first a boy, with thoughtful, earnest eyes, and afterwards, several little sisters. The children and flowers grow together, and the little ones loved the fairy blossoms that gave grace and beauty to the plain walls. They knew no care, these little ones—and the mother, knowing that life's trials *must* come to them soon enough, strove to make their childhood pleasant, encouraging their happy sports, singing nursery rhymes with them when her own heart was filled with rankling sorrow, striving to beautify and train their young minds.

But trials thickened, sickness weakened and discouraged, losses and misfortunes of various kinds cast a deep gloom over the parents' lives. Finally, the demon debt drove them forth from the home that might have been so happy.

Now, strangers in a strange land, they begin life anew, and only occasionally some chance remark calls up the little house. One day, the mother found a spray of honeysuckle, which she tenderly gathered for the sake of the memories clustering around it.

Her boy perceiving it said, "Mamma, I love honeysuckle, I can't help thinking of the big vine, at the old home." Oh, how much tender regret was conveyed in that little sentence! and how much affectionate remembrance. This proves that the labor we bestow in adorning our homes, is repaid tenfold in the impression it makes upon young hearts. If parents would only spare time from the absorbing cares of life to make home attractive, the young would be less apt to wander and become defiled. Men and women going forth into the world, with hearts kept strong and warm, with loving memories of their homes, would be better enabled to meet life's battles.—Honeysuckle.

GOOD MANNERS.

A PERSON'S manner is quite a different thing from a person's manners. The former indicates very plainly the style and character of the individual, while the latter are the result of training and association. It has been well said, that a lady may possess very excellent manners and yet have a very unfortunate manner, and the reverse. To illustrate: There is a girl who has been carefully taught from her childhood how to enter and leave a room, how to address and introduce people, how to behave at table and in company, yet notwithstanding continual lessons in deportment, she has a manner which is not winning. She is proud, or vain, or cold, or disdainful, and this is shown by her manner even when her manners are agreeable.

We often go into a little store kept by a woman whom we desire to help by our custom. But nearly always her air of supercilious indifference, and her icy remoteness from the least interest in us or our purchases, sends us away half frozen There is an atmosphere of forbiddingness about the shop, and we are glad to get out of it into the sunshine. On the other hand, we know certain saleswomen in some of the great stores of New York, who are so sunny, so genial and so delightful in their way of serving us, that to buy from them is a perfect pleasure, and they often persuade us into taking what we do not really want, solely by the charm of their sweet, unaffected grace.

To have a womanly, dignified and cordial *manner* you must have love to God and your fellow-beings in your heart. To have *good manners* you must use them every day at home, and not keep them merely for company. Fine gold and diamonds never wear out, but are as beautiful after years of use as at first, and far more precious.—Christian at Work.

FASHION NOTES.

HANDSOME new fans are of ostrich feathers to match the costume in color or in pretty contrast.

A novelty in neckties for ladies, is white Japanese crape, edged with lace. They are prettier than muslin or lace scarfs.

The long fleeced fur hats are very fashionable.

Ivory toilet sets, with jeweled monograms and initial letters on the backs of the brushes and hand-glasses, are to be seen.

The serpent bracelet is much worn, many ladies wearing it in place of the linen cuff or lace ruffle. When clasped about the arm it remains stationary.

Seal color grows in popularity as the season advances, and satin is the favorite goods. Dresses, jackets and habits are made of seal satin. In other goods the color is as great a favorite as in satin.

The Queen Ann fashion of trimming merino with figured cotton is carried out in morning and house dresses, by borders of rich figured cretonne stripes, usually seen only on curtains, with veinings and shadings hand-embroidered in silk. The bands are very handsome.

Coiffures are now very simple, both for the day and evening. The hair is worn low on the forehead in short curls or ripples, and arranged in a few loops or a plait at the back of the head.

Tulle is a favorite fabric this winter for ball-dresses, more especially in white, and also occasionally in pale blue, rose color, and other light tints.

Young ladies who are fond of dancing adopt the short dress for balls and evening parties; young matrons generally prefer the more dignified trained skirt.

The brocade fabrics so much in favor this winter will continue quite as much so during spring. Muslin-de-laines and French cashmeres in pretty armure and brocade patterns, will be made up with plain materials for trimmings into very nice walking and indoor costumes.

But the newest and most popular of spring fancy goods is the printed Indian cashmere, in small, multi-colored pine patterns over a light ground.

A COMMENDATORY LETTER.

I WISH to say a few words denoting my appreciation of "Letters from a Country Girl." I concluded, when I read the last chapter, that I would get them all together and read them a second time. I think I usually derive more benefit from a second reading than from the first. I have read the last and twentieth chapter three times, and consider it a perfect gem; just such instruction as most of us need.

If we do not conduct ourselves in a ladylike manner now, it will be our own fault. But then, how prone we are to forget. We seem like children in this respect, we need "line upon line, precept upon precept."

We can bear a great amount of teaching, and then need a little more. It is comforting to painstaking editors that some seeds fall into good honest hearts, and will surely bear more or less fruit. I look upon the "RURAL NEW-YORKER" as disseminating good principles of truth and justice, with freedom from harshness and severity. It is also more benevolent to subscribers than any paper I know of. AUNT FLORA.

Literary Miscellany.

WILFUL'S CHRISTMAS EVE.

CHAPTER II.

(Continued from page 95.)

"My young people would never forgive me for turning you out of a room to which you have an equal, nay, a prior right. I should be scolded to the verge of deafness if I behaved so rudely, shouldn't I, girls?"

Gertie looked down and played with her spoon, but Lelia, who had detected a merry gleam in the brown eyes of Mr. Lee, plucked up courage to say, with a pleading look:

"If these gentlemen possess a forgiving spirit, I'm sure they'll not leave us."

The hint was taken; the young men resumed their seats, and Gertie's fair cheek began to feel less painfully hot whenever she recalled her thoughtless speeches.

No messenger was to be had, though Mr. Lee and his friend volunteered to try and make way to the nearest farm and procure one there. Until the snow ceased it would be madness to attempt it; and though Mrs. Lockwood alternately fretted and scolded Baker for doing the same, Gertie and Lelia prepared to endure their captivity with cheerfulness.

"It's quite a new sensation," the latter asserted. "I shall write a thrilling narrative of our adventures when they are over. What a startling climax it will be if the commissariat stores give out before we are able to evacuate our quarters, and we are not only snowed up, but on the point of starvation!"

"That's too horrible!" cried Gertie. "Let us ring for the hostess, and ask her what she can give us for dinner."

"And we will smoke a cigar in the porch the while," said Mr. Sidney, courteously. "We should be in the way when such an important discussion is in process."

Accompanied by Mr. Lockwood, the young men quitted the room, just as the comely Mrs. Jones entered it, and smoothed her apron, and curtsied the while she replied to the young ladies' questions.

"Eh! well, she wasn't overmuch stocked, seeing she'd only provided for the two gentlemen, but there was a joint in the larder, and some game, and she daresay they would not object to the ladies and their papa's sharing them."

"But why consult them at all? Are not we your guests as well as they?" demanded Lelia, with some hauteur.

"Who will I consult but my employers?" queried the woman, opening her eyes widely.

"But, good gracious! isn't this an inn, free to all travelers?"

Mrs. Jones looked more surprised than before.

"Eh! now what could have put that into your heads, young leddies? This is no inn, but just an old farmhouse that my master and his friends occupy whenever they want a little shooting on the moors."

"And who is your employer? Mr. Lee?"

She shook her head.

"No, it's the other gentleman, Master Robert, I was his nurse when he was a baby. God bless him!"

She was hastily dismissed, and then the girls ruefully surveyed each other.

"This comes of taking things for granted!" cried Lelia. "Here have we been coolly taking possession, giving our orders, and behaving with all the unconcern in the world, while the rightful owner of the place was—was——"

"Laughing at us in his sleeve!" added Gertie. "What an absurd position! We shall have to apologize."

"I hate apologizing; besides, it's not our fault—it's Mrs. Lockwood's."

"Shall we feign ignorance till we can beat a retreat?"

"Do as you like," said Lelia. "I think I shall creep upstairs, and stay there till the snow thaws."

"And desert me? Better put a bold front on it," suggested Gertrude. "It isn't like you to be so cowardly."

Lelia tossed back her head, repeated the word "cowardly!" and Mr. Lee, returning to the room just then for his fuzees, she bravely attacked him. Why had he suffered her and her friends to make themselves so ridiculous?

Mr. Lee pleaded not guilty, and laid the blame on his comrade, who in his turn gravely assured Lelia that if anyone was in fault, it was not he; and by the time Mr. Lockwood had been made to understand the state of affairs, the whole party were so diverted at the bewilderment depicted on his round, rosy face, that their apologies and protestations ended in laughter.

Mrs. Lockwood, who was really suffering from a violent cold, kept her room for several days; but no one appeared to regret it. Her spouse, when freed from the constraint of her presence, was the most genial of men, and the young people soon drifted into intimate relations. They were still held in confinement by the snow; but no one seemed to regret it. The gentleman cleared a space in front of the house, where Gertie and Lelia could walk briskly to and fro, and thus obtain exercise; and when the weather would not permit this, they all gathered in the bay window, where Mr. Lee gave Lelia and Gertie lessons in German, or Robert Sidney assisted the latter in copying a fine old engraving she had found in her chamber. Or the pencil thrown aside and the book closed, they either talked politics with Mr. Lockwood; or the young men, who had traveled, descanted on what they had seen for the amusement of their fair companions.

Then at eve how pleasant it was to gather round the hearth, and chat merrily, conjecture what was going on in the world from which they were so entirely and suddenly cut off! They were never at a loss for amusement; there were old Christmas games played, and new ones invented, no one entering into them more heartily that Mr. Lockwood! and when he asked for the simple ballads he loved to hear, Gertie and Lelia sang all the more sweetly because the rich bass notes of Mr. Lee, and the pleasant, but not powerful, tenor of Robert Sidney, blended with their own voices.

"We seem as if we had known each other for years!" Lelia observed to her friend, as they were going down to breakfast one morning. "What a pity it is that etiquette, in the shape of Mrs. Lockwood, threatens to descend upon us to-day!"

Gertie sighed quite dolefully, and it seemed as if the gentlemen had caught the infection of her gravity, for Robert Sidney walked hastily out of the parlor as they entered it, with signs of agitation on his fine features, and Mr. Lee was equally decomposed.

"Something has happened!" exclaimed Lelia, while Gertie turned pale and looked anxious.

"Nothing that need alarm you," she was assured. "The fact is, Miss Darton, my friend Sidney and I have been taking ourselves to task for a reticence which begins to weigh upon our consciences."

"Pray explain yourselves," murmured Gertrude, entreatingly; while Lelia, though Mr. Lee's tone, rather than what he said, had startled her, after one steady look into his earnest eyes, exclaimed, with her usual impetuosity: "I am sure you have not done anything wrong!"

"Thank you for judging us so kindly, Miss Darton. The case stands thus: My friend was so unfortunate as to overhear you express your repugnance to meet a certain Viscount with whom you were acquainted in your early girlhood. In the face of this avowal he could not bring himself to say I am that unlucky individual. But he agrees with me that this—deception must I call it?—ought not to continue any longer. It will make him very unhappy, he says, if by any act of his own he loses your esteem."

"And I have been domesticated—actually domesticated—for nearly a week, with Viscount Alleyne?" ejaculated Lelia, turning red and then pale. "He is here, and Mrs. Lockwood will have to know it! Oh! this is intolerably provoking!"

She ran out of the room, and Gertie followed, to try and pacify her.

"Dear Lelia, what does it signify? Viscount Alleyne is a man whom no one could help liking."

"He is a hypocrite; he has been tricking me, and I detest him!" was the passionate reply. "And Mr. Lee is worse than the Viscount, for he might have told me the truth; he was in his friend's secrets, and of course he knows that I am to be driven into this marriage, victimized, sacrificed from mercenary motives. I did think *he* was sincere whatever his friend might be."

"Do leave me to myself, Gertie!" she said, presently, and Miss Lockwood was forced to obey. It was no use urging on the angry Lelia that she was really a free agent, and could accept or decline the Viscount's proposals, as she pleased. The girl was writhing under a mortification at which her friend did not guess. Poor Lelia had imbibed such a high opinion of Norman Lee, and had fancied she saw such answering regard in his glances, that she was deeply wounded when she had reason to think that he was not only privy to Lord Alleyne's matrimonial intentions, but that all his praises of his comrade's good qualities were designed to further them.

"But no one shall know what I feel," Lelia told herself. "It shall never be said that I gave my heart away unsought. I will baffle them all before another twenty-four hours have gone over my head."

Mr. Lee espied her presently in the porch, letting the cold air fan her throbbing temples, and hastened to join her.—[To be continued.

ONE HUNDRED YEARS AGO.

ONE hundred years ago wedding tours were not fashionable.

One hundred years ago farmers did not cut their legs off with mowing machines.

One hundred years ago our mothers did not worry over disordered sewing machines.

One hundred years ago there were no disputes about the impoliteness of street-car drivers.

One hundred years ago "crooked" whisky was not known. Our forefathers took theirs straight.

One hundred years ago every young man was not an applicant for a position as a clerk or bookkeeper.

One hundred years ago men did not commit suicide by going up in balloons and coming down without them.

One hundred years ago a young woman did not lose caste by wetting her hands in dish-water or rubbing the skin off her knuckles on a washboard.

One hundred years ago a physician who could not draw every form of disease from the system by tapping a large vein in the arm was not much of a doctor.

One hundred years ago men were not running about over the country with millions of fish eggs to be hatched to order. Fish superintended their own hatching in those days.

One hundred years ago people did not worry about rapid transit and cheap transportation, but threw their grain across the backs of their horses, and uncomplainingly "went to mill."

One hundred years ago every man cut his coat according to his cloth, every man was estimated at his real value, shoddy was not known, nobody had struck "ile," and true merit and honest worth were the only grounds for promotion.—American Republican.

THE EYE-OPENER.

Patent-Electro-Galvanic-Medal battery is the polysyllable title of a little humbug, widely advertised by E M. Ellas, of this city. Legion is the name of the humbugs, and worse, palmed off on the public by gents of that name or alias. This looks mightily like a second edition of the Boyd what-you-may-call-it.... Among those who seek the patronage of the public, especially of the farming part of it, by advertising in the papers or by circulars, we find the following firms not recommended:—N. W. Hunt & J. A. Roarty of Philadelphia; Asa K. Butts, this city; Dr. W. S. Jaques & Co., Cincinnati, Ohio; Kendall & Co., Boston, Mass; N. F. Jones, Ashland, Mass The Northwestern Grain Exchange, and the Chicago Grain and Provision Exchange, despite their high-sounding names, are considered unreliable by the Commercial Reports; C. G. Horton, seller of a spurious Magic Bone Dissolvent. Better keep these names, for if you haven't heard from one or other of them yet, you may. Better keep all the papers .... Another Census swindle is gulling the confiding from Chicago. It calls itself the "Census Information Agency," and pockets the "quarters" of the dupes who want to be enumerators, and send for information, "stamps and blanks."

It being agreed among a party of twelve that a disputed question should be settled by the opinion of the majority, the six ladies expressed themselves opposed to the six gentleman, and claimed the victory. A gentlemen objected to this, as the number of votes were equal, saying, "They are half and half."—"True," replied a witty fair one, "But we are the better halves."

FLAVORING EXTRACTS.

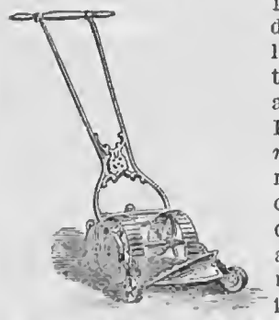
All of these are what are called alcoholic extracts, made by extracting the flavors of the fruits after which they are named. Their manufacture in America is of quite recent date, the first made here being an extract of lemon produced in Boston in 1835. In selecting extracts it is not enough that the article should be pure; it should be made of fruit of excellent quality. Vanilla extract, for example, is of poor quality when made from sour or otherwise impaired Vanilla beans. This, however, is not the chief cause of the poor quality which this extract is frequently found to possess; what is sold under that name is not unfrequently the extract of Tonqua or sunff beans, a much cheaper and inferior article which is, still oftener, used to adulterate the genuine extract. Balsam Peru, rancid, adulterated and otherwise deteriorated oils of lemon, orange, rose, etc., are also used for this purpose. Oils of lemon and orange are sometimes adulterated with the oils of seeds and nuts, and sometimes with spirits of turpentine. Oil of Rose is frequently adulterated with oil of Geranium, etc., and these if not poisonous or injurious are at least inert and fraudulent. Any person of acute perceptions, who is familiar with these substances can easily distinguish and detect them by their flavor and odor. The latter may be the more readily perceived if a small quantity is dropped on blotting paper and the spirit allowed to evaporate. From ten to twenty per cent of water is sometimes added to the flavoring extracts made from oils. A person familiar with proof spirit may judge of its strength by shaking the bottle and observing the bead. Fine flavoring extracts may be kept unimpaired for years, if boxed and in a moderately cool place. Exposure to the air, especially warm air, is always injurious and should be carefully avoided. The extract of Tonqua beans given to dogs in doses of from seven to ten grains, have produced great and fatal depression: and in man, in the dose of from thirty to sixty grains they have caused nausea, giddiness, depression, vomiting and drowsiness. There is also in the market what are commonly known as English Fruit extracts. These are extensively employed for flavoring ices, jellies, lozenges, drops, and for making fruit strups. The most prominent are pineapple, strawberry, raspberry, banana, pear, etc, etc. They are entirely artificial, and are composed mostly of ethers and acids. A very small quantity will sometimes produce nausea and headache, and when taken for any considerable time, or in large quantity, the effect must be highly injurious. They are manufactured on a large scale in England and Germany, and also in Philadelphia. Where the risks of adulteration are so many and serious it is well to know how a pure article can be secured; and so far as our experience extends, the reputation for purity the Burnett extracts have acquired, is well deserved.

OUR PREMIUM OFFERS.

Below we offer two very desirable premiums which will be awarded to any person who may forward us the requisite number of subscribers.

The New Charter-Oak Lawn Mower.

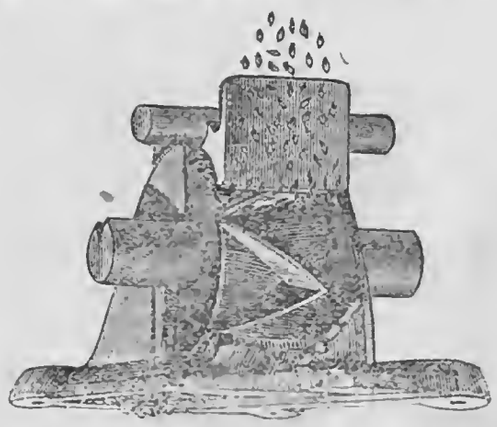
We have selected TWO sizes of this popular mower for premiums. The "standard," or 15-inch cut, (price $25) we shall give for 25 subscribers. and the smaller, 13-inch cut—suitable for small places and for those who do not enjoy pushing a large mower over the turf—we shall present for a club of 16 subscribers. Its price is $16. We have *never* before offered these mowers for such small clubs! and expect every one, including the boys and girls, to have a lawn mower before the season is over. The Charter-Oak is noted for its beautiful finish, and strong construction. It is mounted on large driving wheels, that run *inside* the frame, independently, so that the mower may be turned in small space, and without injuring the sod. Its 5-bladed *solid* knife, works in patent boxes, so made that grass cannot *wind around the shaft*. Hill's Archimedian Lawn Mower Co., makers, Hartford, Conn.



The Farmer's Friend Grain and Fertilizer Drill.

We offer one of these excellent drills *complete*; that is, a nine-hoe, eighteen- drill, with spring hoes, fertilizer and grass-seeder attachments, rear-hoe shifter and land measurer.

The illustration shows the seed-cup and its force-feed principle, which with the patent cone-gearing enables one to sow any kind of grain, in



any condition, with perfect regularity and evenness. We regard this as one of the best drills made, and shall present it for a club of 150 subscribers. (Two or more could profitably combine their efforts and own the drill in common.) Its price at factory, (with all attachments) as offered by us, is $122. Made by the Farmer's Friend M'f'g. Co., Dayton, Ohio.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

GLASS OR TIN FOR CANNING TOMATOES?

MARY WAGER-FISHER.

Last fall, when canning tomatoes, my housekeeper protested against the fruit being put into glass jars, averring that it would not keep. When pressed for a reason, she said that they should be put in something non-translucent—that for herself, tomatoes would never keep more than five or six weeks in glass, and, moreover, that in canning factories tin always was used. "For the sake of transportation," I observed. And I proceeded to have all the tomatoes put in glass cans holding one half gallon each, and using the jar known as the Whitall or Melville patent. I had the jars put in a dark closet, with a dark curtain stretched in front of each shelf. Well, all the jars opened within the last month or six weeks, have proved to contain tomatoes more or less sour, with not a *spoiled* taste, but a taste like vinegar. The tomatoes have every appearance of being good, no fermentation being visible, while the cans are absolutely air-tight. Now, what has produced the acidity of the tomatoes? I don't feel inclined to attribute the fault to glass, as I see no reason in my housekeeper's belief. The closet where the tomatoes are stored is moderately cool, at all times, the thermometer not varying much I judge. Still, it is not a *cold* closet. The fruit was put up after being well cooked, but without seasoning. Will not experienced housekeepers give me the benefit of their experience in regard to tomatoes? Can the acid tomatoes be utilized in making good vinegar?

Concerning Fruit Jars.

While on the subject of fruit cans, I have further remarks to make:—When I first began to put up fruit, beginning with rhubarb and strawberries, I made use of a quantity of glass jars of various patents that were in the closets of the "old homestead," several of which were Mason's "improved." Although some of these jars were comparatively new, yet I found that most of them were suited only for preserves, spiced fruit and the like, as the metal band which screws around the top, had become stretched enough to prevent the can from being made air-tight. I detected the same fault in all cans of similar construction. In purchasing new cans, I was obliged on one or two occasions to have my order filled with Mason's jars, because the dealers kept those of no other make, saying they were the only kind that suited the majority of housekeepers. Among other jars, I used the "Conansey." The fruit in them keeps well; but I foresee the same trouble with them as with the "Mason." My experience and my judgment lead me to reject all cans that are secured at the top by means of a metal band or wire fixture that acts as a screw, for every tight turn upon them stretches them. This can't be helped. I mentioned this fact to dealers who remarked that they had never thought of this before, but added laughingly, "They will last quite long enough, you know." But I did *not* "know." I see no reason why a fruit jar, if not broken, should not last forever, if it is properly constructed, and the only jar so constructed that I have in use, is that which has a glass top, fitting down on a rubber band, and which is made air-tight by means of an iron clamp across the top, through which a screw passes down to the center of the cover. This patent is sometimes called the "Whitall" or "Melville." The moment the fruit is cool in them, they can be readily tested. But after using dozens of them I have never found one imperfectly sealed. So far as I can see, they are the best jar made, and if any housekeeper who reads this disagrees with me, please let her make her objections known, as I now intend to put all my "can" money in these cans. At one shop where I found some, the dealer sold them to me for 25 per cent less than he paid for them. He said he was glad to get rid of them at almost any price. People would have none but the "Mason." I have no desire to enrich the pockets of the maker of this jar by my recommendation, but only to serve the interests of other housewives who, like myself, wish to use their money in the way that will prove most economical and most satisfactory.

INFANTS' CLOTHING.

MRS. W. V. A.

I was greatly interested in the articles by "E. E. K.," and "Marguerite," and would like to say something on the same subject. Last spring and summer I was busy preparing a wardrobe for an infant, and of course, I studied the *comfort* rather than the style of the little garments. In the first place, I objected to flannel garments next to a baby's skin, as I considered them irritating and weakening. Secondly, it appeared absurd to me to put little linen shirts on one half of a child's body and flannel on the other. Thirdly, I did not think it was quite the right thing to put so much clothing on a child's chest and body and let its little arms and the upper part of its chest go so thinly clad. Reading an article by Mrs. Katie Jackson, in the "Laws of Life," I got the idea of what I wanted; high-necked and long-sleeved waists with buttons to button it's skirts on, seemed just what I wanted. I made them of white muslin—waists and skirts—and others of flannel, to be worn over the muslin ones and next to the dress.

My plan worked admirably until cool and finally cold weather came, and then I found that the muslin garments were not warm enough. My mother suggested canton-flannel, which I got, and made up into little gowns or "slips" that come well below her feet. The first ones were made of fine and rather thin canton-flannel, but those she is now wearing are made of a heavier quality, and when she is dressed in one of these with a flannel waist made with long sleeves and high-necked and a flannel skirt buttoned on, and over these a little "yoke" or "gabriel" white dress, I think she is as comfortably and hygienically dressed as any baby in the land. Thus, I think I have secured my objects, a suitable and uniform covering, and hence an equable temperature of all parts of the body.

COOKING FOR THE SICK.

The flesh of young animals, although the tenderest is less digestible than that of animals of middle age. Mutton is easier to digest than beef. *Raw* oysters are nutritious and easily digested. Eggs should not be cooked until the whites harden—neither should they boil, but pour boiling water over them, cover and let stand from five to ten minutes. Food should be served in the very daintiest manner. A cup of tea freshly made and served with one or two blocks of sugar, and a few drops of cream with a slice of toast, even, yellow and without crust, delicately buttered and fresh from the fire, a bit of tender steak, broiled either rare or well-done to suit the patient, and a *fresh* roasted potato, will, if served upon whole dishes and clean linen, tempt the most capricious appetite.

Beef Tea.

Cut the meat of a rump-steak into dice, and to a pound of meat allow a pint of *cold* water, add a little salt and with a fork squeeze the pieces in every direction to extract the juice. Next put water and meat into a *perfectly* clean saucepan; cover and place on the back of the stove where it will gradually heat, taking care that it does not boil. Continue this from two to three hours, then bring to the boiling point strain, pressing the meat with a spoon. Remove any fat that may arise and add a little more seasoning. Sick persons soon tire of beef tea, refusing to take it. When this is the case, add a very little sherry and allow it to get cold. If properly made it will be a jelly, and patients will take it in this form when they would not in the liquid state. Young children will sometimes relish the tea better if it be sweetened instead of salted.

DOMESTIC RECIPES.

Caudle.

Mix two tablespoonsful of oatmeal in a little cold water and then stir into it a pint of boiling water. Add a few raisins and boil very slowly for an hour. Sweeten and grate in a little nutmeg. A small quantity of wine brandy is sometimes added.

White Wine Whey.

Slightly sweeten half a pint of new milk, turn into a clean saucepan and bring to a boil. At once pour in a small wine-glass of white wine. Let it boil up again and set on the side of the stove until the curd forms one lump. Pour off free from the curd.

Beef Juice.

Cut lean steak into pieces three or four inches square, score with a sharp knife on either side, broil for a minute, then express the juice in a lemon squeezer. Add a pinch of salt and give either ice-cold or hot.

Fever Drink.

Toast the bread carefully through and through, then pour boiling water on it and, if liked. add a small piece of lemon peel. Drain off carefully that no crumbs remain in the fluid after it has got cold.

Pour cold water on wheat bran, let boil half an hour, strain, add a little sugar and lemon juice. MRS. M. G. L.

Fried Parsnips.

Scrape, wash, boil and mash. When cool enough to handle season with salt and pepper, flour the hands and make into little cakes. Roll in flour and fry in boiling fat. Drain and serve very hot.

Lemon Juice

The juice of six lemons and the grated peel of two, two coffee-cupsful of granulated sugar, a package of Coxe's gelatine, one quart of boiling water. Soak the gelatine in little more than a cup of cold water for an hour, then add the sugar, juice and peel, and let stand another hour. Pour over the hot water and stir until the gelatine is all dissolved. Strain through a flannel bag. Pour into a wet mold and set in a cool place. Make the day before it is wanted.

Fried Onions.

Peel, wash and cut crossways so as to form undivided rings. Flour them and fry in beef drippings for five or six minutes. Drain, sprinkle with salt and pepper and serve with steak.

Boiled Salt Mackerel.

When freshened wrap in a clean cloth and *simmer* fifteen minutes. Take carefully out of the cloth and place on a flat dish. Boil two eggs until hard, cut into pieces, arrange around or on top of the fish and pour drawn butter over all. E. L. M.

Sausage.

In my judgment the following recipe for sausage is hard to beat:—To 40 pounds of meat use 12 ounces of salt, eight ounces of sugar, two ounces each of sage, black pepper, cinnamon, cloves and ginger. It will require about three quarts of water to be added to make it mix readily. NELSON RITTER.

Apple Snow.

Make a boiled custard of two-thirds of a quart of milk, with the yelks of four eggs the whites of two, and half a cup of powdered sugar. Beat the remaining whites to a stiff froth, add a half cup of powdered sugar, and grate into it five large, tart apples, stirring in as you grate, that the coating of egg and sugar may prevent the apple from changing color. Into a deep dish pour the cold custard, and heap the apple meringue on top. To be eaten soon after making. MRS. B.

QUESTIONS AMSWERED.

Fly Stains. Cleaning Zinc.

What will remove fly stains from paint without scouring; also, what will clean zinc and restore its new look? MRS. A. B.

Ans.—1, Add a few drops of ammonia to warm soap-suds, and rub with a woolen cloth. Try a tablespoonful of ammonia to half a pailful of water. 2, Mix glycerine with a little dilute sulphuric acid, and apply.

News of the Week.

MISCELLANEOUS.

Monday, February 9, 1880.

The New York Herald has headed a subscription list to relieve the famishing people in Ireland with $100,000 ...In Washington, on February 2d, a draft of a bill to reorganize the Department of Agriculture was submitted to the full House Committee on Agriculture last week by the Sub-Committee. The Sub-Committee was instructed to perfect this bill and report it to the Committee next Wednesday. This bill will recommend an enlargement of the powers of the department. A majority of the Committee are in favor of making the Commissioner of Agriculture a full-fledged Cabinet officer, with the same salary and emoluments as other members of the Cabinet. A provision to accomplish this object will be inserted in the bill now being prepared by the Sub-Committee. Mr. Covert, Chairman of the Committee, will make a minority report to the House, recommending the abolition of the Department of Agriculture. He will also oppose any attempt to make Mr. Le Duc a Cabinet officer. Mr. Covert does not believe that it is the province of the general Government to run a Department of Agriculture any more than to create a department of mining, a department of stock raising, shoemaking, or any of the other industries of the several States.....Utes attacked a supply train carrying ammunition and rations to Major Morrow in New Mexico the other day, but they were beaten off by Capt. Carroll and 60 soldiers and scouts in charge, one Navajo scout being killed and two soldiers wounded. According to latest accounts Major Morrow was closely pressing Victoria and his band of Apaches, and other troops were heading off the savages.... Preparations are under way for a new American Arctic expedition under the direction of Dr. Emil Bessels, late chief of the scientific staff of the Polaris. It is to be fitted out by private enterprise, and will sail for the North next year via Jones's sound, where Dr. Bessels intends to establish a meteorological station, to co-operate with those of the international congress. At this station a yacht will be kept to maintain communication, while the principal ship of the expedition, a powerful steamer, will explore the unknown regions to the northward and westward....There is great excitement in Denver, Colorado, over a new discovery of gold near the mouth of the canon of the Platte, a mile from the South Park railroad, and only 20 miles west of Denver. A vein of mineral ores was struck in the Dolly Varden mine at a depth of 20 feet last Friday, and specimens assayed give the value of the ore at $21,199 per ton, $20,176 of it being gold.

The third trial of Mrs. Smith and "Cove" Bennett for the murder of the former's husband, a Jersey City policeman, has resulted in their acquittal.... The politicians all over the country are laying out no end of work over conventions big and little; but they ought to bear in mind that, while it takes a great many conventions to nominate a man for the presidency, it only takes one election to defeat him. A poll of the republican side of the House at Washington gave Blaine 42, Sherman 10, Washburne 4 and 11 blank, with a large number of absentees.....The democratic national committee meet at Washington February 23 to decide when the next national convention shall be held.....It has been Secretary Sherman's ambition to reduce the public debt below $2,000,000,000 while he was at the head of the treasury. Last week he came within $784,000 of bringing it down to that point, and this month's statement will no doubt see the debt, less cash in the treasury, below $2,000,000,000.

FOREIGN.

The Irish famine is growing apace. While the people are starving in thousands there's a world of wrangling about the uses of the funds contributed for their relief. This Parnell agitator in this country seems to be the chief cause of the trouble, and will probably cause more injury than benefit to the distressed population The chief fund hitherto raised is that of the Duchess of Marlborough, wife of the Viceroy of Ireland, amounting to more than $200,000. Parnell charges that only those who pay rent and truckle to the landlords are relieved from this source. This assertion is emphatically contradicted by the Duchess and a host of others, among them some of the Irish Roman Catholic Bishops. On the other hand Parnell and his crowd are charged with refusing to relieve rent-paying tenants from the proceeds of the contributions he is gathering here. The Herald fund will probably soon be the largest, and will certainly be the best administered

In Silesia, also the famine is exceedingly severe, and the efforts among the German-speaking people to relieve it are second only to those of the English-speaking people to mitigate the distress in Ireland. Italy, too, especially the Southern provinces, is hard pinched. Indeed, were it not for the supply of food of all kinds which America is pouring into Europe, our trans-atlantic friends would, most of them, be in a famishing condition. War preparations and war surmises are still the order of the day among the curious public, while occasional assurances that everything is delightfully peaceful, coming from the rulers, have little effect on the minds of the masses.

The London Standard's Vienna correspondent says; "Parnell's reception at Washington is regarded here as a mere comedy."....The London Standard's St Petersburg dispatch says the Government is about to start a journal to combat the Nihilists. ....The Times's Berlin dispatch says the Ultramontanes in the Bavarian Chambers have resolved to appeal to the King, imploring him not to consent to the augmentation of the army....The cession to England of a strip of the African Gold Coast, as a measure of prevention of the smuggling of spirits by American traders, was officially announced in the House of Commons Friday. It was also confirmed that correspondence between the Ameer of Afghanistan and the Russian Government had been discovered in Cabul....The exciting parliamentary election in Liverpool resulted Friday in the return of the Conservative candidate, Mr. Edward Whitley, by a vote of 26,106 to 23,885 for Lord Ramsay, the Liberal candidate, who had made a bid for the home-rule vote pledging his support to an inquiry into the question of home-rule.

AGRICULTURAL NEWS.

La., estimates this year's sugar crop at 175,000 hogsheads of a finer quality than usual....The total home clip of wool last year amounted to 232,500,000 pounds....The S. C. Board of Agriculture has just employed a permanent chemist that analyses of commercial fertilizers may always be obtained....S. C. charges a privilege tax of 25c, on every ton of fertilizer sold or offered for sale in that State....In Denmark wheat occupies 5 per cent. of the whole cultivated area....Russian wheat from the Baltic has to be mixed with German or Danish wheat to fit it for the English market.....The total amount of estate sales reported at the Mart, London, Eng. for the year 1879 was £7,693,764. The corresponding figures for the three preceding years were :—1876, £10,495,927, 1877, £11,738,882; 1878, £9,839,897....Dr. Glen of Cal. is said to have had 45,000 acres in wheat last year—yield 800,000 bushels....By the late reduction of tax on tobacco the government loses $1,000,000 yearly; the grower gets no more for his crop; the consumer pays as much for his "weed," but the middleman laughs....The dairy business in Cal. is largely in the hands of the Swiss who practice soiling almost exclusively....Europe produced 611,000 cwts of hops last year, and America 155,006 cwts....There's a "boom" just now on the Norman-Percheron horse....The American Agr. Ass. is going to issue a semi-annual periodical.... The Maine beet sugar factory is said to have used 9,000 tons of beets in '79, and made 1,440 000 of sugar, which sold for 8½c. per pound....A beet sugar factory is to be started at Franklin, Mass., with a German Superintendent and a capacity of 150 tons daily....Delaware peach growers got $1,500,000 for their 3,981,235 baskets of peaches last year....Five cotton factories near Petersburg, Va., give work to 715 operatives and used, in '79, 9,000 bales of cotton....500 wagons loaded with tobacco came into Lancaster, Pa., one day last week....The largest sugar mill in the world will soon be erected in St. Charles parish La.,—weight of mill and engines, 300,000 pounds.... Owing to the advance in prices of iron and wages, the National Association of Stove Manufacturers on last Thursday raised the wholesale price of stoves to 6½ cents per pound, with extra for trimmings, etc.—they all do it.....The regular ticket nominated for 1880-'81, by the present board of managers of the International Dairy Fair Association, is:—for President, Hon. Hiram Smith, Sheboygan Falls, Wis.; for Vice-President, Col. R. P. McGlincy, Elgin, Ill.; for Treasurer, W. W. Dexter, Chicago, Ill.; for Secretary, Col. R. M. Littler, Davenport, Iowa....At wholesale the best Carolina rice is selling at 7¼ to 7¾ cents per pound, while East Indian rice commands but 6 to 6¼ cents per pound....After the mills now being constructed are completed, Minneapolis, Minn., can turn out 16,000 barrels of flour per day....A Quebec merchant has experimented successfully in shipping beef to England in the carcass. The animals are beheaded, the entrails are taken out, and the bodies pressed into a small compass and frozen. The hide is not removed until the voyage is over, and it is claimed that the meat is superior in appearance to other imported beef, and keeps longer ....A London paper, in tracing the mode in which 122 of the titled families of England have acquired lands, states that scarcely a dozen of the number got them by professional or commercial pursuits. The writer asserts that not one-tenth of the 5,500,000 acres possessed by the 122 was acquired for value received. They were gifts of crownlands. ..David Dows, the great N. Y, capitalist and grain speculator, is said to have 45 out men buying corn up in Ia., for an expected rise before next harvest: In some parts of Ia., corn has sold for 15c. per bush. ....The N. J. Game Society are arranging to let loose a large number of quail in different parts of the State next spring and call on the people to see that the game laws are rigidly enforced....The Farmers' Mutual Insurance Company, of Kalamazoo, Mich., has a list of 2,592 members, paid out $11,486 85 (of which $9,229 52 were for losses), and has $384.50 remaining in the treasury. Assessments on members during the year were $8,516.94. . The Canadian Dairy Association will hold its annual convention at London, Ont., Feb. 18-20. . The ninth annual convention of the N. Y. State Dairymen's Association and Board will be held at Utica Feb. 10-11. . . The creameries in Iowa are paying $1 10 to $1.20 per one hundred pounds for milk this winter. That is more than 50 per cent. higher than that paid in the summer....Several farmers in Kentucky are working their Shorthorn cows. They do as much plowing as horses, and feed better for the exercise they have. . . At the recent annual meeting of the N. Y. State Grange the following officers were elected for the next two years:—Master, W. A. Armstrong of Chemung; Overseer. Guy Shaw of Yates; Lecturer, Prof. W. B. Lazenby of Tompkins; Steward, General E. F. Jones of Broom; Assistant Steward, W. C. Gifford of Chautauqua; Treasurer, J. A. Varney, of Erie; Secretary, H H. Goff. of Monroe; Gate-keeper, Allen Potter of Cortland; Ceres. Mrs. H. Stone of Oswego; Pomona, Mrs. Elliot Makepeace of Jefferson; Lady assistant Mrs Hungerford of Tompkins; Executive committee, L. H. Bishop (chairman) of Jefferson; F. F. Capeu of Monroe, (Secretary;) S. O. Potts of Columbia; W. A. Armstrong of Chemung; H. H. Goff of Monroe. At the late annual meeting of the Nebraska State Board of Agriculture, the following officers were elected for 1880:—President, Martin Dunham; Omaha; 1st Vice-president, J. T. Clarkson, Schuyler; 2d. Vice-president, J. B. Dinsmore, Sutton; Treasurer, C. Omaha; Secretary, D. H. Wheeler, Plattsmouth; Managers, J. F. Kinney, chairman; E. McEntyre, R. Daniels, G W. E. Dorsey and E. N. Grenell. Competitors for Arbor-Day premiums must do the planting on the third Wednesday in April next....Illinois is to go into cheese heavily next season, and Iowa exclusively—well, nearly so—into butter making.... The Department of Agriculture has bought 10,000 pounds of Early Amber cane from one Minnesota farmer for $1,000....Abundant rains in California have enabled farmers to plant 3,000,000 acres of fall wheat—a thing that has never happened before....A bill before the Iowa Legislature prohibits the sale of diseased swine....The average wheat yield per acre in the United States in '79 was 13 9-10 bushels....Maine farmers have an idea that sugar manufacturers and refiners are pocketing an unfair share of the proceeds from sugar beets.... The negro exodus is beginning to be very disagreeably felt by planters who can't get enough laborers in several parts of the South....Great Britain has 175,000 acres in orchards—10,000 more acres than last year.... Lamartine, Mich., is encouraging the cultivation of Early Amber sugar cane... South Carolina basket Willow is said to be equal to the best imported....A sugar beet factory is to be started in Oswego County, N. Y.; 25 men will raise from 1 to 16 acres of beets next season for it —not nearly enough to make it pay....A sugar beet convention will be held at Elmira, N.Y., April 18. Experts will tell all about the industry ... There are 20 schools of forestry in France....Farmers about Amherst, Massachusetts, led by Levi Stockbridge, are urging that the State pay a bounty of a penny a pound on all beet sugar made for a term of years....Norfolk, Va., is to have a cotton factory....The Committee on Agriculture of the Massachusetts Legislature recommend the adoption of a memorial to Congress providing for legislation to prevent the spread of pleuro-pneumonia. ..The A. A. A. is begging for annual memberships for $1 and life memberships for $50. Cattle hoofs are worth $50 per ton for *horn* buttons.. In France 18,000,000, it is estimated, live by agriculture, 9,000,000 by manufacture....In '79 France produced only 565,400,000 gallons of wine—506,000,000 gallons less than in '78, and 660,000,000 gallons less than the average for the ten preceding years....The next N. Y. State fair will probably be held in Albany, the owners of the fair grounds there being less hoggish than those at Rochester....A resolution is before Congress for the appointment of a Commission to investigate the cotton worm, its ravages, and the most effectual means of exterminating it. .... Very successful annual State Grange meetings have lately been held at Milwaukee, Wis., and Bloomington, Ill. Membership said to be increasing....It is said the National Grange is about to make a combined attack on high railrord freight charges, and memoralize Congress for legislation against them. An effort is to be made to secure, say 4,000,000 agricultural votes to the party that promises the most before the next general election. . . The steamer Strathleven with an experimental cargo of fresh meat, 60 steers and several hundred sheep from Australia to London, arrived in the Thames last Tuesday. Meats in good condition. . ....In the past seven years 4,000 stallions and 14,000 brood mares have been shipped from England to Germany and Austria—a good evidence of the high opinion entertained there of British thoroughbred horses....In order to meet the anticipated increased demand of our cattle trade, it is said that upwards of 70 (!!) steamers are now being built in Great Britain expressly to meet the requirements of this interest....Messrs Smith and Powell, of Syracuse N. Y. lately shipped 19 Holsteins to Texas.....

Our Progress.

As stages and stage-routes are quickly abandoned with the completion of railroads, so the huge, drastic, carthartic pills, composed of crude and bulky medicines, are quickly abandoned with the introduction of Dr. Pierce's Pleasant Purgative Pellets, which are sugar-coated, and a little larger than mustard seeds, but composed of highly concentrated vegetable extracts and are warranted to cure all irregularities of stomach, liver and bowels. Sold by druggists.

THOSE COMPLAINING of Sore Throat, hoarseness or "taking cold," should use "*Brown's Bronchial Troches*." The effect is extraordinary, particularly when used by singers and speakers for clearing the voice.

Why be sick and ailing when Hop Bitters will surely cure you?

The Markets.

THE GIST OF THE MARKETS.

For once the comparison of prices between this week and last is omitted, but we would advise all interested in the matter to make the comparison themselves. It is an interesting way of passing time, and (pursued for a few months) would be highly instructive.

Next week we shall begin to quote prices of fertilizers, as the season for these is now at hand.

The Mark Lane Express, in its review of the British grain trade, says: "All out-door work is again stopped by frost. Thrashing occupies the attention of farmers, and home-grown wheat is consequently more liberally offered. In some districts, notably Yorkshire, fears are expressed that recently-sown wheat has been frosted, or, from some other cause, is deficient in vitality. Many of the early-sown fields elsewhere, however, are looking well. Some improvement is noticeable in the condition of the home-grown wheat offered at the country markets, but all, except the choicest lots, have been neglected. The imports of foreign wheat into London have been moderate, and American especially small. Business has been quiet, and the week's demand was of an ordinary consumptive character, principally for descriptions of foreign wheat available as a substitute for English. According to a moderate computation, it is estimated that the requirements of Great Britain and France will reach 12,000,000 quarters between this and August, exclusive of the quantity now afloat. Notwithstanding this, trade continues discouraging to holders. As a consequence of liberal stocks to select from, and the bad demand for flour, millers have shown no desire to do more than meet present requirements. It seems scarcely likely that any marked rise can be expected before May or June. Under any circumstances, it will be necessary for the American 'ring' to hold over stocks some time longer. The arrivals at ports of call have been small. The demand for wheat has been quiet and somewhat irregular at a decline of 1s. and 2s. per quarter. Maize, notwithstanding its scarcity, receded 6d. per quarter. Wheat for shipment was very inactive, though offered at 1s. and 2s per quarter less. Maize was slow at a decline of 6d. The sales of English wheat last week were 36,903 quarters 45s, 7d. per quarter, against 54,792 quarters at 39s. 1d. per quarter for the corresponding week last year. The imports into the United Kingdom during the week ending January 17, were 593,455 cwt. of wheat and 228,510 cwt. of flour."

Baring Bros. circular of Jan 23 says: Wheat market continues dull. Sales—California October bill of lading per wooden ship at 9s. 9d; Oregon prompt iron ship at 55s. t. q per 500 pounds. California terms. Calcutta new No 2 club January, February shipment via Canal, at 51s, 3d s. d. per 402 pounds. The average price of English wheat for the week ending January 17 was 45s. 4½d. on 32 871 qrs. returned. Maize steadier at 26s. 2d for mixed American. COTTON—East India fairly steady, with a moderate demand, but American future close 3-16d. per pound lower. Sales for the week, 2,320 bales spot (of which 350 Tinnivelly at 6¼d@6 5-16d; 620 western at 5 1-14d@5 15-16d; 1,200 Bengal at 5¼d@5¾d.) and about 20,000 to arrive, and for forward delivery. Liverpool, sales 53,640 bales. Middling Orleans at 7⅛d; middling upland at 7d. per pound.

SPCIALS FROM ALL CENTERS.

Until Saturday, Feb. 7.

Baltimore.—WHEAT Southern red at $1 35@$1 40; do. amber at $1.45@1 50; No 2 western winter red $1 44¾. CORN Southern white at at 58@61c; do yellow at 58c; western mixed, spot and February, 57¾@57½c; March at 56¾@56¾c; April, 52¾@52¾c. May at 52¼@52¾c; steamer at 55c. OATS easier; southern at 47@48c; do. mixed at 43@47c; Pennsylvania, 47@48c. RYE quiet at 90@92c. HAY prime to choice Penn. and Md. $17@15. BUTTER steady; prime to choice western packed at 20@26c; roll, 18@22c. EGGS firm at 15@16c.

Boston.—Since last report corn, oats and rye are steady; shorts, $1 higher, other articles not mentioned.

Western superfine flour at $5@5 25; common extras at $5 25@6; Wisconsin extras, $5 50@6 25; Minnesota extras at $6@7 25; winter wheats dull at $6 50@7 for Ohio and Michigan; $6 50@7 25 for Illinois and Indiana; $7@7 75 for St. Louis; patent winter wheats at $7@8 50, patent spring wheats, including Wisconsin and Minnesota at $7@9. CORN —mixed and yellow at 60@63c. OATS steady; sales of No. 1 and extra white at 51@54c.; No. 2 white, 49½c.; No. 3 white and No. 2 mixed at 47@49c. RYE at 95c SHORTS selling at $21@21 50; fine feed and middlings at $21 50@22. HAY AND STRAW—Hay is in moderate demand. We quote first quality coarse Eastern and Northern at $15@16 ₮ ton; poor and medium at $11@14; RYE STRAW—$21@22₮ ton. PRODUCE—The various articles are steady and in good demand. The following prices are paid by receivers: BUTTER—New York and Vermont choice creameries at 28@30c ₮ lb, fair to good 25@27c; Fall dairy-made, choice, 25@28c, Winter dairy-made at 18@23, straight dairies, choice, at 21@23, dairies, common to good, at 18@22c; Eastern and PEIsland, 18@20c; Western—choice creameries 30@33c, choice dairy packed at 23@25c, choice ladle-packed 21@22c, fair to good do 18@20c, common 15@17c. CHEESE—There has been a firm demand; choice Northern factory 13¼@14c ₮ lb, fair to good at 12@13c, and common 9@11c; Western factory—choice 13@14c; fair to good 11@12c; common 9@10c. EGGS—Eastern at 21@22c, Northern 18@20c; Western, 16@18c ₮ dozen. BEANS—Northern hand-picked Pea at $1 80@1 90 ₮ bushel; do. do. Western at $1 75@1 85; do. common $1 55@$1 75; medium choice $1 55@1 60; common to good $1 35@1 40; Yellow Eyes $2 10@2 15; Red Kidneys at $1 75@1 85 Canada Peas 80c@$1 ₮ bushel for common to choice. Green Peas $1 50@1 85. POTATOES are very quiet; we quote Houlton and Maine Central Rose 53@55c ₮ bushel: Houston Jackson Whites at 40@—; Vermont Rose at $45@50; do Jackson at 40@—; Peerless at 40@45, and Prolifics at 50@55c per bushel ONIONS—$3 50@3 75 @ bbl. APPLES at $1 50@2 75 ₮ bbl., according to quality. CRANBERRIES at $6@8 50 ₮ bbl. SEEDS—We quote Clover Seed as quiet at 8½@9¼c ₮ lb for Western and New York; Timothy at $3@3 10 ₮ bushel; Red Top at $2 70@2 90 ₮ bag; Canary Seed at $2 45@$2 85, and American Linseed $1 50@1 55 ₮ bushel; Calcutta $2 37@2 40.

Chicago—WHEAT unsettled No. 2 Chicago spring $1 21 cash; $1 21@$1 21⅞ March; $1 22¾ April; No 3 do. at $1 06; rejected at 90c. CORN unsettled at 35 1-2c. cash; 35⅞c. March; 40 1-2c bid May. OATS dull, at 31⅝@31⅞c. cash and February; 32c. April; 36½c. May. RYE steady at 76 1-2c. BARLEY dull at 82c. DRESSED HOGS weak at $4 80@4 90. Pork active but lower at $11 60c. cash; $11 70c. March; $11 87 1-2c April. LARD in fair demand, but lower at 7c. cash; 7 07 1-2@7 10c. March; 7 17 1-2@7 20c. April. Bulk meats quiet and weak; shoulders at 4 10c; short rib at 6 45c; short clear at 6 50c. EGGS. Fruit house at 8@10c; fresh at 14c. POTATOES. Car-lots quoted at 50@56c. and store lots at 55@65c. The sales are to the city trade. POULTRY. Chickens, dressed, 6@7c per pound; turkeys, dressed, 9@10c. per pound; ducks, dressed, 7@9c. per pound; geese, dressed, 6@8c. per pound. SEEDS Timothy active and firm, selling at $2 65@2 75, prime closing at $2 70@2 75. The offering only fair. Clover also stronger, being in better request with rather small offerings of fresh lots Sales reported at $4 70@4 85. Flax at $1 62@1 63. BUTTER—There is a fairly firm feeling among holders of choice packed butter, but for anything not answering to that description the market continues weak, the supply of low and medium grades considerably exceeding the demand. Creamery 27@32c; good to choice dairy 22@26c; medium 18@20c; inferior to common 10@16c; Roll 15@20c. CHEESE—A firm tone pervades the market, both for full cream and skim cheese. Dealers report a continued good demand at the following range of prices; full cream 14½@15c; part skim 12½@13c; low

grades 8@10c. Hog market quiet and easier, mixed packing at $4 30@4 40; light at $4 35@4 40; choice heavy at $4 45@4 65; market closed steady, with, most all sold. CATTLE quiet and weak; shipping at $4@4 90; butchers' at $2@3; Nebraska Texans at $3 90@4 10; stockers and feeders weak; common at $2 60@3 25; good at $3 50@4 20; yards cleared of stock. SHEEP market quiet but steady at $3 50@4 70.

Cincinnati.—FLOUR dull; family at $5 80@6 10; fancy at $6 25@6 75. WHEAT dull at $1 26. CORN dull at 39c. OATS steady at 29c. RYE in fair demand at 85c. BARLEY quiet at 87c. PORK dull and nominal at $12 25@$12 50. LARD dull at $7 10. Bulk meats quiet; shoulders at 4.24c; clear ribs, 6.50c; clear sides at 6.70c. BACON steady; shoulders at 5½c.; clear ribs at 7¼c; clear sides at 7½c. Green meats dull and nominal; shoulders at 4c.; sides at 6c.; hams at 7c. BUTTER quiet and unchanged. HOGS steady; common at $3 25@$4 25; light at $4 25@$4 45; packing at $4 25@$4 50; butchers at $4 50@$4 55.

Detroit.—WHEAT easier; extra white Michigan nominal; No. 1 do., $1 26½; February, $1 26¼; March at $1 23½; April at $1 31¼; May at $1 42; milling No. 1 nominal. CORN quiet; No 1 yellow, new at 47c.; high mixed at 45c. OATS firm; No. 1 white at 42½c.; No. 2 white at 40c.; No 3 mixed at 39c. CLOVER seed dull; prime at $4 65. Dressed hogs at $4 80@$4 85.

Indianapolis.—WHEAT firm; No. 2 red at $1 25@$1 26. CORN weak at 35½@36c. OATS steady at 36@38c. HOGS steady at $4@4 50.

Louisville.—FLOUR dull and unchanged. WHEAT dull at $1 27. CORN quiet, white at 45½c.; mixed at 42c. OATS dull; white at 40c.; mixed at 39c. RYE dull at 84c. PORK quiet at $13. LARD steady; choice leaf in tierce at 8½c.; do. keg at 8 3-4c. BULK MEATS quiet; shoulders at 4¼c; clear ribs at 6 70c.; clear sides at 6 95c. BACON quiet; shoulders, 5c; clear ribs at 7¼c; clear sides, 7½c. Sugar-cured hams, 9½@10½c. MILL OFFAL.—We quote per ton in bulk: Bran, $12 50@13 50; shipstuff, $15; middlings, $18 50. HAY.—Demand fair. We quote prime to choice timothy $16@$18, and mixed at $12@$16 per ton on arrival. FIELD SEED.—Active and prices rule steady. We quote, delivered from store: Timothy, $3; orchard grass, $1 70; red top, 75c.; clover, common red at $5, and sappling at $5 25; bluegrass, clean, 55c.; extra clean, 65c. STRAW—$5@$9 on arrival and $10 from store. VEGETABLES.—Potatoes have been active, with choice early rose firmer, and ordinary home stock rather easy. We quote on arrival: Onions for home-grown and Northern, $4@$5 per bbl., as to quality. Russetts, peachblows and peerless potatoes, from store, in cooperage, at $1 75@1 85; early rose, $2 10@$2 25 per bbl. New Southern cabbage, $2 50@3. POULTRY—Chickens, $2 60@$3 per dozen, as to size, for large, and $2@$25 for small.

Philadelphia.—WHEAT decidedly better feeling; rather more inquiry for milling as well as for futures, and prices advanced ½@1½c. since yesterday; western Pennsylvania red on track at $1 44; Southern amber choice at $1 46; No. 2 red in elevator, in car lots at $1 41. CORN in good demand from local consumers, and prices are well maintained, but for export and futures there is very little disposition to operate; prices of the latter fell off ¼@1c. Pennsylvania and Southern sail yellow on track and in grain depot at 58c; western mixed on track 57c.; do in elevator 56c.; Southern white on track at 61c. OATS in good demand; prices rather better; rejected at 45½c.; No. 2 white, 47 1-2@48c.; No. 3 do. at 47c. City mess beef, 13. Beef hams at $16 50@$17. Mess pork at $12@$13 25; extra prime at $10@$10 12 1-2. Smoked hams at 10@11c.; do. in salt and pickle at 8 1-2@9c.; clear rib sides, smoked at 7¾c.; do. in salt, 7c.; shoulders in salt, 4 1-2@4¾c.; do. sugar-pickled at 5@5 1-2c.; do. smoked, 5 1-2c. DRESSED hogs at 5¾@6c. LARD—Western tierces at 7 50@7.87 1-2c.; do butchers', 7¾c. BUTTER firm; creamery extra at 32@34c; Bradford county and New York extra at 25@26c; Western Reserve extra, 23@25c; do. good to choice at 17@22c; rolls steady for choice; Pennsylvania extras at 16@20c; Western Reserve extras at 18@21c. EGGS steady, Pennsylvania at 15c.; Western at 17c. CHEESE firm; New York factory at 14 1-2@15c.; Western full cream at 14 1-2@14¾c.; do. good at 13¾@14c; do. half skims at 12 1-2@13c. HAY AND STRAW are dull and weak, under a full supply. We quote cut hay at $19 and 19.50; prime baled do. at $18 and 18.50. Rye Straw at $19 50 and 20.50; wheat do. at $12, and oat do. at $13 per ton. SEEDS.—Clover was taken only in small lots at prices ranging from 7 1-2c. to 9 1-2c. for ordinary to prime. We note sales of 30 bags prime at the outside rate. Timothy was in light supply and firm at $3.25 for prime. Flax was scarce and wanted at $1 65. VEGETABLES.—Potatoes are momentarily in small supply, and are meeting with a good demand at better prices. We quote choice Rose at 53c.; fair to good do. at 45 and 48c.; Snowflakes at 55c.; Peachblows at 50 and 55c. for red and white, and Peerless at 43 and 47c., as to quality. Onions are held firmly at $3 and $3.25 for red, and $4 and 4.25 for yellow Denvers.

St Louis.—FLOUR active; fancy at $6.10 cash; $6.12½ March; choice at $5 85 cash; $6@7.50 May; family, $5.72½@5.15 cash; $5.75 February, and $5.85 April; treble extra at $5.75 asked. WHEAT opened higher, but declined; No. 2 red fall at $1.23½@1 23½ cash; $1.26@1.27 March; $1.28¾@1.29¾ April; $1.31¾ May; No 3 do. at $1.21 1-2. CORN dull at 33¾@33⅞c cash; 34¾@35⅛c March; 36@36 1 2c April; 37 1-2@37⅝c May. OATS weak at 33 1-2@33¾c cash; 34c February; 37c May. RYE higher at 73 1-2c. PORK quiet at $12.15. LARD lower at $7@7 05. BULK-MEATS firmer; shoulders at $3 95@4 05; clear ribs at $6 40@6 50; clear sides at $6 50@6 60. BACON steady; shoulders at 5c; clear ribs at $7 25@7 30; clear sides at $7 40@7 45. HOGS steady; light shipping at $4 10@4 25; packing at $4 20@4 40; butchers' to select at $4 40@4 50. CATTLE—fair run, mainly of steers, which sold at a shade lower prices; shipping steers, 1,600 lbs average, at $5 50; 1,550 lbs average at $5 25@5 35; good at $5@5 20; choice spayed heifers at $4 12 1-2; cows and heifers scarce at $2 75@3 65; feeding steers at $4@4 25; receipts, 1,700 head; shipments, 900 head. SHEEP strong and higher; fair to good light at $3 50@4 25; do heavy at $4 50@5 25; exports at $5 50@6; receipts, 1,700 head.

Toledo.—Wheat dull; amber Michigan, spot, $1 29¾; No. 2 red winter, spot, $1 30¾; March, $1 32½; May at $1 36¾ bid; No. 3 red Wabash $1 14. CORN dull; high mixed at 39½c.; No. 2, spot, at 38½c.; May at 42½c.; No 2 white at 43c.; rejected at 38½c. OATS quiet at 33c. for No. 2. CLOVER SEED—prime $4 60; No. 2 at $4 45. DRESSED HOGS at $5 10@5 12½.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Feb. 1, 1880.

BEANS AND PEAS.—The bean trade does not swerve as larkely as was expected, and the lately marked up rates are now very extreme. There has been a fair demand for marrows for export, but the market is now quiet. Mediums very dull, the total demand hardly supporting extreme prices, though are moderate. Red Kidneys have rather more movement; other fancy beans quiet. Green Peas slightly favor buyers, as their wants were well supplied early in the season. No. 1, c. peas nominal at $2.25 per 2 bu bag. Medium beans, prime, $1.47@1.50; other, $1.45@1.50; marrow beans, prime, $1.70@1.75; other, $1.55@1.65; pea, 1.50@$1.70. white kidney, $1.60@1 80; red, kidney, $1 55@1.75; black, 1.75@$1.80. Receipts of beans, 6,450; exports, 1,160 pckgs.

BEESWAX.—Transactions are confined to small lots, and quotations made of 24½@25½c for Western and Southern.

BROOM CORN—Offerings are small and firm prices held. Quotations are for choice brush at 9c.; choice hurl at 8c.; stalk braid at 6@7c.; mixed red and green at 6@6c.

BUTTER.—The situation of the market is not essentially changed. The advent of colder weather has not imparted the expected snap to the consumptive demand, and there is a free offering of sound, useful lots and lines fully as cheap as last week. Very choice table grade is firm, though a shade off from last quotations. Shippers have neglected State this week, as Western has favored them in quality in their view of prices. Winter made butter is falling off in quality. All parcels show a lack of what gives it precedence, ample grain feeding. Dealers do not anticipate much surplus at the close of the season, but a large bulk of both State and Western has lost merit sufficiently to make all large holders keep a finger upon the export pulse. In exceptional cases for home use, last week's prices are still quoted, but as a rule there is more stock selling at the inside start of the ranges.

Comparative receipts and exports past four years:

	Receipts, pkgs.	Exports, firkins
June 1, 1879 to Feb. 1, 1880,	1,123, 41	252,590
June 1, 1878 to Feb. 1, 1879,	1,167 011	203,441
June 1, 1877 to Feb. 1, 1878,	942,0 3	140 416
June 1, 1876 to Feb. 1, 1877,	938,413	103,972

State pails and tubs, fall choice, 26@27c.; fair to good, 23@25c.; full dairies, choice, 25@26c.; poor to prime, 14@24c; bodies of dairies range at 19@25c; poor remnants, 18@19c.; creamery, fancy, fresh, 30c.; fair to prime 25@31c.; full-made, 25@30c.; summer-made, 21@24c.; Western imitation creamery, 23@28c.; dairy fresh, extra, 25@26c.; other, 18@24c.; factory fine marks 22@23c; other useful, 15@20c; very poor, 10¾@12½c rolls, 17@19c.

Receipts for week, 22,850 packages. Exports, 4,800 packages.

CHEESE.—Shipments for the week have been 20,240 boxes. The market has scarcely varied this week but has been held quite firm, shippers have shown only a moderate degree of interest.

Quotations for State factory: Strictly fancy, 14¾@15c. choice at 14½c.; good to prime, at 14@14¼c; fair to good, at 13@13c. State farm dairy: Good to prime at 14@14¼c.; fair to good at 13@14c. Wis. factory: Fine, 14¾@15c; good to prime 13¾@14¼c. Ohio factory: Cheddar, fine, 14¾@14¾c.; do., fair to good, 13@13c.; flat, fine, 14¾@15c. flat, good to prime, 14@14½c; flat, fair to good, 13@14c.

Receipts for week, 10,243 pkgs.

Exports for week, 18,500 do.

Liverpool cable, 73s, an advance.

Freights lower than ever before 20s. to Liverpool.

Comparative receipts and exports from June 1.

	Receipts. Bales.	Exports. Bales.
June 1, '79, to Feb. 1, '80,	2,329,371	99,383,697
June 1, '78, to Feb. 1, '79,	1,761,423	111,444,572
June 1, '77, to Feb. 1, '78,	2,228,395	95,00[illegible]8 8
June 1, '76, to Feb. 1, '77,	1,856,767	77,127,293

COTTON.—The market has been active and closed at for Feb. 13 03@13.05c.; March 13 24@13.25c; April, 13.49@13 50c.; May, 13.67@13.69c; June, 13.86@13.88c.; July, 13.97@13.99c.; August, 14 06@14.08c.; September, 13.49@13.52c.; October, 12.63@12.66c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	11¼	11¾	1 3/8
Strict ordinary	11¾	11¾	11¾
Good ordinary	12 1-16	12 3-16	12 3-16
Strict good do.	12 5-16	12 7-16	12 7-16
Low middling	12¾	12¾	12¾
Strict low middling	12 13-16	12 15-16	12 15-16
Middling	13	13¼	13¼
Good middling	13¼	13⅜	13⅜
Strict good middling	13⅜	13⅝	13⅝
Middling Fair	14	1 3/8	14⅜
Fair	14¾	14¾	14¾

STAINED.

Good ordinary..... 11 1-16 | Low middling..... 12⅜
Strict good ordinary..11 13-16 | Middling..... 11 9-16

DRIED FRUITS.—Apples have a moderate degree of attention and prices steady. Peaches are quiet and unchanged. Small fruits are moderately offered and rule at firm prices. For apples—New N.C., at 7@8¾c. for fair to good; 9@9¾c. for choice; 10@10¾c for fancy sliced. Patent evaporated, apples, choice, in cases, at 13¾@14c.; do. good and prime, 12¾@13c.; N. Y. State sliced, new, 7¾@8c.; do, quarters, 6¾@8c.; new southern quarters and nominal; new North Carolina peeled peaches 17@18c., do., Georgia, 13¾@16¾c. Peaches—Delaware evaporated, peeled at 24@28c.; do. unpeeled at 13@15c.; new halves at 8@8 c. and quarters at 7@7¾c. Blackberries at 9¾c. bid for new. Raspberries at 25c. Pitted cherries at 18@19c

EGGS.—Receipts for the week, 6,645 bbls.; do. last week 5,950 do. The demand has improved, and as stock is of better average quality, there is some speculative inquiry with the approach of Lent. The following exclamation is instructive for new shippers: "A receiver selling his eggs for first quality at the mark has to guarantee his stock to make a loss of only a dozen or so to a barrel, if the loss exceeds that he has to make it good. Loss off generally means a little more than actual loss; it gives the buyer the counting out and permits him to count everything doubtful in his own favor." Prices close stronger.

Near points, per doz., 20c.; State and Penn., 18@19c.; Western and Southern, choice, 18@18½c.; Tennessee, 18c.; poor marks, Canadian and Western, 14@15c.; limed, State, 12½@14c.; Canadian, 12@13c.; Western, 11@13c.

FRESH FRUITS.—Exports of apples past week, 3,050 bbls. The market for apples is quiet, and few varieties are quotable in a wholesome way. Baldwins poor to choice, $1.75@3 ₱ bbl.; Greenings, $1.50@2.75. Fresh receipts sold not exceed $4.75. Export demand light, with unfavorable cable. Cranberries continue to have a good outside demand, which supports prices. Cape Cod, good to fancy, $7.50@9; other Eastern, $6.50@8.50; N. J. crates, $2.25@2.75. Flor da oranges run poor; many cases have sold at $1.50@$2.50; repacked quoted at $3.50; a few extra original pckgs. have sold for fancy use at $4; all hal bbl. cases. Strawberries are in fine order; culls, 50@60c.; best, 75@80c. ₱ quart. Grapes are higher, owing to scarcity, Catawba, $2.50@4 ₱ case. Peanuts have had a prosperous season; market very firm at 5¾@6c. ₱ lb.; Hand-picked Va., good to fancy, 5¾@6c.; Shelled, 5¾@6c. Hickory nuts, 75@87c. Pecans, 10c.

FLOUR—Has been very dull and lower until the close, when improved foreign advices caused a good deal of activity and 10 to 15c. per bbl. better prices.

Latest figures are $4.40@5 25 for inferior to very choice superfine State; $5@5 40 for inferior to choice extra do., odd lots and lines; $5.40@5.75 for good to very choice do.; $4 50@5.25 for inferior to very choice superfine Indiana, Iowa, Michigan, &c.; $5.15@5.40 for inferior to good shipping extra do., and $5.40@5.75 for good to very choice shipping extra do.; inferior to about choice white wheat extras $5.40@5.50 choice to very fancy do. $5.50@8.00, the latter an extreme; red and amber winter wheat, inferior to fancy trade and family at $5.60@7.50; round hoop Ohio, $5.30@5.85; and trade and family brands of do. at $5 90@7.50; the latter rate for very choice; St. Louis at $5 60@6.40 for inferior to good extra; $6 40@7.75 for good to very fancy; Minnesota clear, very inferior to fancy, at $5.30@6.50; Minnesota "straight," very inferior to very choice, at $5 65@7 65 and patent inferior to fancy, at $6 50@8.50; unsound stock at from $3 00@5 25; city mill extra at $6.10@6.75 for ordinary to fancy for West Indies do. for England, $5.15@5 75 for poor to choice; do. trade and family extras, $6.75@7.75; do. for South America, $6.40@6.75; No. 2 at $3.75@4.60 for poor to very fancy.

FURS AND SKINS.—Arrivals are large, and with prospective free receipts the market closes tamely.

Bear, Northern Black, $7@10; S. & N., yearlings, $4 Beaver, N. ₱ skin, $1@5; do., W. & S., 50c.@$3; Badger, 75c.@$1; Cat, Wild, 20@40c.; Fisher, N. & E., each, $7@9; do., S. & W., $3@4; Fox, Silver, as to beauty $15@50; do., Cross, N. & E., $3@4; do., Red, N. & E., $1.40@1.75; do., S. Penn., N. J., and N. Ohio, $1.20@1.30; do., Red, S. & W., 80c.@$1; do., Gray, N. E. cased, 70@80c do., Gray, S. & W., 40@60c.; Fox, Kit, 20@50c.; Goat, American, ₱ lb., 10@15c; Lynx, each, $1@2; Marten, Stones, dark, $1.50@2.50; do., pale, $1@1.25; Mink N. Y. & New England, $1@1.50, do., Canada, Michigan and Minnesota, 60@80c.; do., N. J. Penn. and Ohio, 60@70c.; do., Md., Va., Ky., Ind., Wis. and Iowa, 50@60c.; do, Missouri and S., Muskrat, N. & E., fall and winter, 10@13c.; do.; do., West. Penn. and Ohio, fall and winter, 9@11c., do., S., fall and winter, 8@10c.; Otter, Ky., Va., N. C., Kansas, etc., $5@7; do., N. and E. and Northwestern $6@8; do., Penn., N. J. Ohio and Western, $5@7; do. S. C. and Georgia, $4@6; Oppossum Northern, cased, 10@20c.; do, Southern and open Northern, 5@12c. Raccoon, Mich., N. Ind., N. Ohio, 6@80c.; do., Ill., Iowa, Wis. and Minn., 60@70c; do., N. Y. and E. State and N. Penn., 70@85c.; do., N. J., S. Penn., Ind., Mo., Neb. and K n., 20@50c.; Geo., Ark., Fla. and Ala., 25@40c.; Skunks, prime black, No. 1, cased, $1@1.10; do., No. 1, open, 90c.@$1 do., half striped, 45@60c.; do., striped, 25@30c.; do., white, 10@15c.; Wolf skins; mountain, large, $1 50@2; do., prairie, prime, 50@60c., Fisher, $6@10.

GRAIN.—Wheat has shown a much better business from exporters towards the close, and prices are stronger. Latest sales are of No. 1 white at $1.43@1.44; do., February, at $1.42½@1.43¾; do., March, at $1.44¼@1.45⅛; do., April, $1.46@1.46⅜; do., May option, at $1.45@1.46¾; ungraded white at $1.40@1.43; No. 2 red at 1.45¾@1.46⅝ do., February, at $1.45¼@1 46¾; do., March, at $1.47¾@1.48⅛; do April option, at $1.48¾ a1 49⅜; do., May, at $1.49 @1 49¾; No. 3 red at Kansas trade at $1.35; ungraded red at $1.40@1 44; No. 1 Green Bay and Duluth spring, at $1.40; No. 2 Chicago and Milwaukee, $1.38@1.39. New York No 2 spring at $1.38; No. 3 spring at $1.30@1.32; ungraded spring at $1.28¾@1.30. Rye is held up to $1, and 95c, reported offered for full lots. Corn is more freely offered and favors buyers; latest sales are of old No. 2 at 61@61¾c. do. in store at 60c; do., February, at 59c.; do. March, at 55¾@56c. do., April, at 54@54c.; do., May, at 54c.; New York steamer mixed at 58@59¼c. do., February, at 57¼58c. do., April, at 53c.; ungraded mixed western at 57@61c., New York No. 3 at 57@57¾c. Oats are in full supply and favor buyers; latest sales are of No. 1 white, at 50 c.; No. 2 white at 48½@49c. No. 3 white at 47¾@48c. New York No 1 at 48¾@48¾c.; New York No. 2 at 47¾ 48c.; New York No. 3 at 47½c.; ungraded white western at 49@51¾c.; ungraded mixed western at 47½@49c.; white State at 50@52c.; mixed State at 49c.; No. 2 Chicago afloat at 48¾c. asked.

HAY AND STRAW.—Receipts continue moderate and as the demand is active, very strong prices are made. Shipping hay quoted at 75c.; retail lots at 80@85c. for medium, and 85@90c. for prime; clover at 65@70c. Straw at $1@.05 for long rye; 65@70c. for short rye, and 55@60c. for oat.

Exports of hay for week 1,390 bales.

HOPS.—The market has remained very quiet. Choice and fancy lots are held firmly, but buyers do not close out other than imperative orders. The lower grades are freely offered. Prices are for:

	Cents per lb.
New York, fancy	38 @40
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @ 0
Pacific Coast, new	30 @35
Pacific Coast, olds (nominal)	5 @10
Bavarians	45 @60

MAPLE-SUGAR.—A small, fine invoice of Ohio, thought to be a consignment, is retailing at 25c.

SEEDS.—Grass are quiet; clover is quoted at 8 for prime Western, 8½@9 for choice and extra choice Western, and 9¾@10½ for State, the latter price for strictly fancy.

TOBACCO.—There is an improved export and home trade demand, and prices very firm. Quotations are for

KENTUCKY LEAF.

	Light.	Heavy.
Common lugs	4 @ 4½	4½@ 5¾
Good lugs	4¾ @ 5¾	5¾@ 6¾
Low leaf	5¾@ 6¾	6¾@ 7¾
Medium leaf	7 @ 7¾	8 @ 8½
Good leaf	8 @ 8¾	9 @10¾
Fine leaf	9 @11	11 @ 12
Selections	12 @—	12½@14

SEEDLEAF.

	Crop of 1878.
New England Havana seed	22 @30
do. wrappers, common	13 @15
do. do. medium	16 @18
do. do. fine	20 @27½
do. do. selections	30 @40
do. seconds	10 @14
do. fillers	6 @ 7¾
Penn. assorted, common	10 @12
do. do. fair	12½@15
do. do. fine	16 @20
do. wrappers	16 @35
do. fillers	8½@ 9¾
N. Y., ass'd, com. to medium	10 @11
do. do. good	12½@15
Ohio assorted	8 @ 4
Ohio wrappers	15 @25
Wisconsin assorted	8 @12
Wisconsin Havana seed	15 @21
Wiscons n wrappers	12 @18

OIL-CAKE.—Western is quoted at $43 per ton.

POULTRY AND GAME.—Dressed poultry rules steady with a limited demand. Scarce game helps fine chickens and prime.

Turkeys, N. J., 12½@13c.; State and prime Western, 12@13c.; other Western, 10@11c.; Philadelphia dry-picked, 14@14c.; do., fowls, 10@11c.; N. J. do., 10@11c.; chickens, Pa. dry picked, 13@14½c.; N. J., 12@13c.; State, 11c.; Western, poor to prime, 8@10c.; ducks 13@16c.; geese, 8@11c; Capons, large, ₱ lb. 20@22c.; small and slips 16@18c.; squabs, dark, ₱ doz. $2@2 25; do., white, $3.75@4.

Strong, prices are quoted for the short list of game.

Wild pigeons, flight, prime, ₱ doz., $1.87@2; scorn fed, $1,62@1 75; wild ducks, Canvas back, Havre de Grace, ₱ pair, $3.50; Western, $3@1.25; Norfolk, $3; Red head, H. de G., $1 50; Western, $1.50; Norfolk, $1 25; Mallard, Western, 87@85c; Mallard and Black, Norfolk, 75@80c.; Teal, Western, 50c.; common, do., 40@50c.; Norfolk, 30@40c.

Live poultry sells well, when prime. N. J., 9@10c.; Western, 7¾@8c.; roosters, 4@5c. Turkeys remain low, 7@8c.; ducks, 70c.@$1 ₱ pair; geese, $1.62@1.75 choice; other, $1@1.50.

PROVISIONS.—Hog products have been urged at lower prices, closing weak at $12.50 for February; $12.60@12 70 for do. for March and $12.75 for do. for April. Bacon at $7.05@7 10 for long clear and $7.25@7 30 for short clear. Beef—Extra mess at $11@12; plain mess, $10.50@11; packet, $11.50@12.50; tierced beef, city extra India mess, at $ 0@22.00. Beef Hams at $17. Lard—Western steam at $7 60 for spot lots; $7.60@7.62½ for new for February $7.62½ for new for March; $7.70 for April. Steerine at 7¾@7¾. Tallow at 6¾@6¾c.

VEGETABLES—Export of potatoes for week, 5,820 bbls. The stock here is large, and further liberal supplies of State and Eastern are available; the market favors buyers. E. Rose, Nova Scotia, $1.00@1.50, bulk; Prolific, $1.25@1 80, do.; in d.-h., $1.37@$1.62; Mercer, $1.12@1.37, bulk; Early Rose, Maine, $1.75@1.87, d.-h.; State $1.40@$1.62, d.-h.; $1.37@1.50, bulk; Peachblows, white, $1.87@2.00, d.-h.; do. red, $1 75@1.87, d.-h.; Snowflake, $1 37@1.62, d.-h.; State Peerless, $1.25@$1.50; N. J., do., $1@1.12 Sweet potatoes, 3 00@$3.25; few wanted. Hot-house rhubarb quoted at $1 50 ₱ doz; do. radishes, $1.00 ₱ doz. Lettuce $1.25@1.50 ₱ doz. Fla. green peas $1.50@2.50 ₱ crate; not in good order. Norf. kale, per bl, $1@1.25; do. Spinach, $2.50@3 00. Balt. do., $2.25@2.50. Marrow squash, $1.25@$1.50; Hubbard, $1 75@2.00. Cabbage, ₱ per 100, $4@8. Onions, white, $1.80@4.00 ₱ bbl.; yellow, $3 00@3 25; red, $2.75@3; Chester, $2.25@2.75. Russia turnips and carrots, 75c.@$1 Celery, per doz., $2@3.

Sharp weather has cut off supplies of many items, and the market is higher for several winter items.

WOOL.—There has been much more activity this week, and with stocks being steadily reduced, prices are very firm. Quotations are for domestic fleeces:

Ohio Pennsylvania, and West Virginia—XXX, 55@58c.; XX, 51@55c.; X, 50@53c.; No. 1, 55@57c.; No. 2, 47@50c.; coarse, 43@46c.; combing, 53@57c.

New York, Michigan, and Wisconsin—XX, 47@50c.; X, 47@50c.; No. 1, 52@55c.; No. 2, 46@50c.; coarse, 2@40c.; combing, 51@54c.

Indiana, Kentucky and Tennessee—X and XX, 46@50c.; No. 1, 52@55c.; No. 2, 46@50c.; coarse, 38@40c.; combing, 50@54c.; combing unwashed 37@42c.

Illinois, Iowa and Minnesota—X and XX 43@47c.; No 1, 48@52c.; No. 2, 43@45c.; coarse, 47@40c.

Georgia, Alabama, Mississippi and Louisiana—fine unwashed, 43@45c.; medium unwashed, 40@43c.; coarse unwashed, 30@33c.; burry, 18@24c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Feb. 7.

BEEVES.—Receipts for the week 11,073 head; do last week, 11,934 do. The market has had a more active run of trade than it did last week, colder weather helping the demand. At the close prices have an improved tone, and in the main the $1 per head last week has been regained. Common to prime steers sold at 8¼@10¼c., dress 51@56 lbs.; extra and premium, 10½@10¾c., dress 57 lbs.

SHEEP AND LAMBS.—Receipts for the week, 29,741 head; do. last week, 24,481 do. Stock has sold up quite clean this week, and there is a better tone to prices at the close. Some very common sheep sold at 4½c.; general range, 5¼@6¼c. Lambs not over plenty at 7@7½c.

COWS AND CALVES.—There is a small demand for fine milkers, and $80 has been paid during the week. A good range is $55@65; stock quoted below $55 not wanted here.

VEAL CALVES.—Supplies of live are light, and the market is firm for any good quality. N. J. and Bucks Co choice, 8¾@8¾c.; others, including State, 6¾@8¼c Mount Holly, 300 lbs., down to light, prime, 5¾@8¼c. Dressed calves doing well; selling, upon arrival, at the advanced price; choice, 11½@12c.; other 9¼@11c. Buttermilk calves, 4¼@5½c.; grassers 3@3½c.

SWINE.—Receipts for the week, 32,491 head; do. last week, 21,673 do.; market steady at 5 5¾c. Country pork higher: 6¼@6½c. dressed, 6¼@6¾c heavy, 6c.@6¾c.; city dressed, 6¾@6¾c.; Western, 5¾@5¾c.; tenderloins, 9c.

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Reading for the Young.

GRAFTING.

UNCLE MARK.

THE members of the Horticultural Club have now enjoyed a long vacation from active work in their gardens. I do not, however, for a moment suppose that they have been idle during the last three months. Most of them have house plants that have needed their daily attention, and all of them, I have no doubt, have been busy laying plans for the work they intend to do in their gardens during the coming summer. We may now begin to look for the coming of spring. The sun is coming farther north with each passing day, melting the snow, breaking up the ice and restoring nature to life and activity as he goes along. Indeed, gentle spring has already come to our Southern cousins, and is now softly and stealthily creeping northward, passing degree after degree of latitude, and will, in not many weeks hence, have expanded over all the Northern States clear to the British line. But I did not mean to tell the cousins how the warm season advances as the sun comes northward, or how it all comes about that we have these climatic changes, for this they already know; but I did mean to remind all the young gardeners that it is now time they get ready to commence work out of doors. For some of them it is high time. In the Gulf States vegetable and flower seeds should be sown by the middle of February; and from this date the seed time will vary with the latitude, till at the middle or latter part of May, spring has reached the northern limit of the United States.

GRAFTING

being one of the early spring operations, I intend to make this the subject for a few remarks. In the first place, I want every member of the Horticultural Club, boys and girls, young and old, short and tall, to learn how to graft; and I desire them all to become familiar with this idea, and to make an effort to learn it. It is an art that may be useful or at least a source of pleasure to everybody. It is not the nurseryman alone who may profit by it. Everybody who owns or expects to own a piece of ground large enough to plant a tree upon, may find profit and pleasure in knowing how to graft. Nor is it exclusively for the boys, though it naturally falls in their sphere of activity; the girls, too, may find it to their advantage; indeed, many of the best educated and most refined ladies are enthusiastic gardeners.

The art of grafting is very old. It was well known by the old Greeks and Romans, and the latter practiced methods that have been transmitted to this late day. The French are, at present, best skilled in the art. There are a great many ways of grafting, all of which have the same end in view, namely: that of uniting a twig, or small branch, of one tree with the trunk, or stock, of another, so that the two shall grow together and form one tree. The object in grafting is, for the most part to propagate varieties which can be increased in no other way, and retain their peculiar characteristics. Nature propagates trees by seed; but seedling trees are so very seldom exactly like their parents, that we cannot perpetuate the good qualities of a fruit in that way. If a man, for example, has one Baldwin apple tree, and he wants another, he will not get it by planting the seeds of a Baldwin apple. The seeds would grow up and form apple trees, but it is extremely unlikely that the fruit these would bear would be, in all respects, like the apple from which the seeds were taken; hence, to get another tree that will bear fruit, which shall be like the first one, he must propagate it by grafting. A grafted tree will also bear fruit at an earlier age than a seedling, which is another object in grafting. And again, by a judicious choice of stock, a grafted tree may be made to thrive in climates and localities where it otherwise would be a failure.

THE NECESSARY TOOLS

consist of a sharp knife, a small pruning saw, some broad, soft strands of bast, or else some strips of muslin, and some grafting wax. The wax can be bought in many seed stores, but if none can readily be obtained, a good grafting wax is made as follows: Melt together 4 ounces of beeswax and 2 ounces resin; in a separate pot melt 2 ounces of thick turpentine, and stir it into the wax when fluid; then add to it all a little tallow or lard, and stir well together. This should, when used, be kept fluid, so it can be applied with a brush. Besides these, one must, of course, have the *stocks*, or trees to be grafted, and the *scions*, or young branches which are to be inserted into the stocks. Of the many methods of grafting, I shall name only a few of the most practical, and of these will first mention

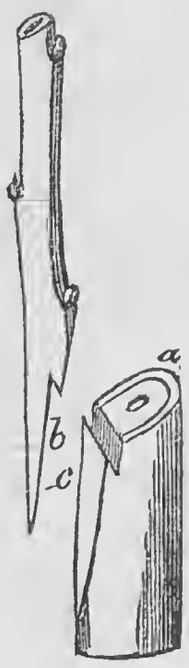


FIG. 52.

BARK-GRAFTING.

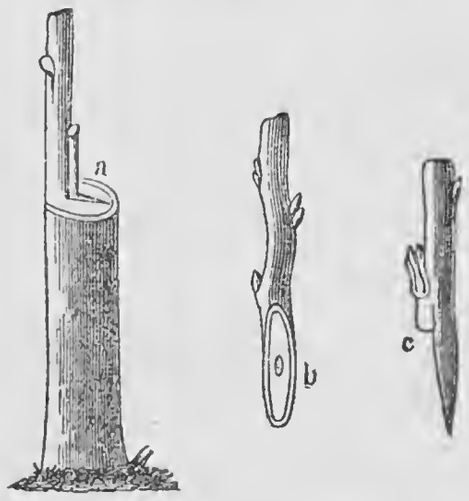
It is done in the spring, as soon as *the bark on the stock is loose*. The method is illustrated in fig. 50. With the saw the stock is cut off from six to twelve inches above ground, with a clear cut, a. Next an oval, clear cut, from an inch to an inch and a half in length, is made on the scion, b, on which should remain only two to four buds. On a smooth spot of the stock, a cut is then made downward through the bark, about as long as the cut surface on the scion, and opening the corners a little, the scion is pressed down between the bark and the wood as seen at a. A little bast is then wound about it to keep it in place, and the whole wound is covered with grafting wax, to exclude the air. Should the scion be rather thick, a transverse cut can be made in it, forming a notch as shown at c.; it is not then so easily pushed out of place. Bark-grafting is one of the best methods to insure success, but, strange enough, it is so little known in this country that even some nurserymen practice the violent cleft-grafting in cases where the above method could be used to advantage. It is especially suitable for regrafting old trees, and when the stock is much larger than the scion.

SIDE-GRAFTING

is another excellent method. It is shown in fig. 51. It differs from the former in that here the scion is not inserted under the bark, but instead, a portion of the bark and wood is cut away from the side of the stock (a, fig. 51), and the two cut surfaces of the scion and stock are fitted together. As shown in the figure the bark of the scion fits against the bark of the stock on one side, and in this position they are tied together, and the wound covered with grafting wax.

SIDE-TONGUE-GRAFTING

is still another method; see fig. 52. The stock, a, is cut off smoothly, and a portion of the bark and wood is shaved off as is in side-grafting; but, in



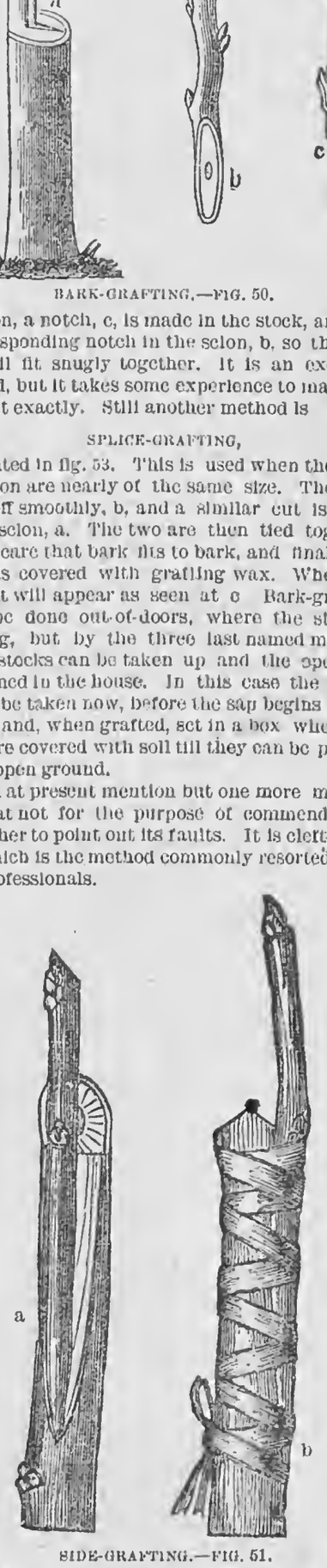
BARK-GRAFTING.—FIG. 50.

addition, a notch, c, is made in the stock, and also a corresponding notch in the scion, b, so that the two will fit snugly together. It is an excellent method, but it takes some experience to make the scion fit exactly. Still another method is

SPLICE-GRAFTING,

illustrated in fig. 53. This is used when the stock and scion are nearly of the same size. The stock is cut off smoothly, b, and a similar cut is made on the scion, a. The two are then tied together, taking care that bark fits to bark, and finally the whole is covered with grafting wax. When finished, it will appear as seen at c. Bark-grafting must be done out-of-doors, where the stock is growing, but by the three last named methods young stocks can be taken up and the operation performed in the house. In this case the stocks should be taken now, before the sap begins to circulate, and, when grafted, set in a box where the roots are covered with soil till they can be planted in the open ground.

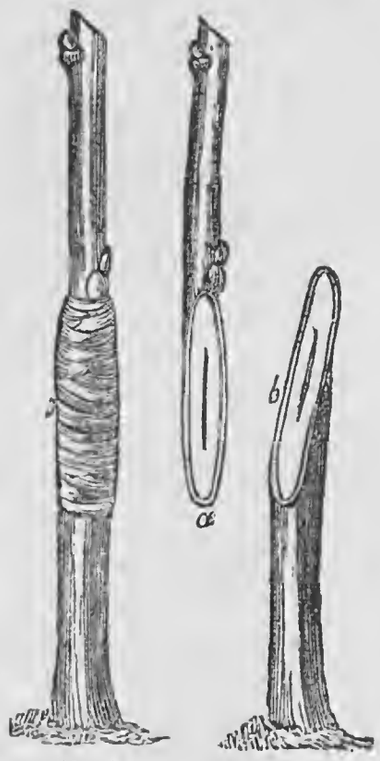
I will at present mention but one more method, and that not for the purpose of commending it, but rather to point out its faults. It is cleft-grafting, which is the method commonly resorted to by non-professionals.



SIDE-GRAFTING.—FIG. 51.

The stock is cut off as in the other cases, but instead of setting the scion under the bark or on the side, the trunk is split through the middle and the scion inserted in the cleft or opening thus formed, taking care that bark fits to bark. The objection is that the operation is too violent and necessarily weakens the vitality of the tree. In every case, it takes a longer time to heal the wound than by any of the former methods, and sometimes the gaping, decaying stump of the trunk may be visible for years before the new growth covers it up. Do not be misled into grafting your trees in this way, because it is common to do so; not every practice in common use is the best that can be devised.

Now a word in regard to getting the stocks. These are seedling trees which nurserymen raise for the purpose, and those of the members who live near a nursery can readily get some. Chance seedlings also spring up in every orchard, these will be of value to practice upon. In fact, every one can find stocks in some way, especially by engaging an elder brother or friend to help. The scions should be taken from last year's growth of some good varieties of apples and pears. Pears are grafted on pear seedlings, and apples on apple seedlings. The scion should never have less than two nor more than four buds, and unless the stock is very large, only one scion should be grafted on each. If two are inserted and both should grow,



SPLICE-GRAFTING.—FIG. 53.

the weaker one must be cut off in the course of the first summer. Graft close to the ground and form the trunk of the new shoot.

I have endeavored to be plain in this description, and by studying the illustrations, all will, I trust, readily understand the different methods. Enterprising boys can soon become expert nurserymen, and aside from the pleasure derived from the work, make a handsome salary, an example of which is given in the story of the Fruit Grower's Family, which the Rev. H. S. Clubb has, from time to time, contributed to these columns.

The Puzzler.

HIDDEN CAPITOLS.

1. 'Tis past, Paulina.
2. Ashtah Lequah is a squaw.
3. I saw Ned Esmo in Essex.
4. This cur is new, West—Mins terrie is dead:
5. Will Incol never confess?
6. As a virgin I, a city do dread.
7. Terra cotta was the material.
8. In Indiana Poll stands.
9. I saw Tom Adison at church.
10. Driscol Umbian raised the row.
11. Provide "noe," as ordered.
12. Why delay now as Hington has gone home.
13. Jeff red Eric to no one else can compare.
14. Rich Arlotte, two no's mean yes.
15. Hal! if axioms are needed, tell me.
16. Ico, may a guava be eaten raw.
17. Fuss an saliva do real good.
18. To a seaman a guava is tonic.
19. Susan! Joseph has come.
20. How fast do mingo pear's jelly.
21. In sport Aupein ceded the bank to me.
22. Oh, Ava, nabobs are scarce.
23. Spanish tow never burns.

☞Answer in two weeks. LITTLE ONE.

TRANSPOSITION.

"I twan to og mohe, si eth leefing fo lal,
On tamert who heyt xepcet ti—
Eth houthgt si hct mase nothug ont eth ames mane,
Or teh rowds ni chiwh yeth loceth ti."

☞Answer in two weeks. L. O.

A DIAMOND PUZZLE.

1. In places. 2. A large body of water. 3. A precious gem. 4. An ancient ship. 5. In latitudes.

☞Answer in two weeks. NELL.

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Resembling oracles. A detached work in fortification. Asserted. The goddess of corn and tillage. Mexican gum-trees. A cover. An article. A consonant.

☞Answer in two weeks. UNCLE WILL.

PUZZLER ANSWERS.—Jan. 31.

HIDDEN MEN OF PROFESSIONS.—1. Dentist; 2. Lawyer; 3. Doctor; 4. Physician; 5. Legislator; 6. Student; 7. Teacher; 8. Tutor; 9. Historian; 10. Botanist; 11. Geologist; 12. Actor; 13. Juror; 14. Broker; 15. Grammarian; 16. Musician; 17. Umpire; 18. Attorney; 19. Bibliographer; 20. Surveyor; 21. Minister; 22. Treasurer; 23. Clergyman; 24. Editor; 25. Journalist.

TRANSPOSITION.—
Out in the soft, pale moonlight, out in the summer air,
What a tide of loving memories rushes sadly o'er me there,
Of a young and lightsome figure, of a clear and sunny brow;
A smile like the light of morning—it haunts me even now,
Of a happy, happy day dream, of a future which was to be;
But the joy; of the mystic future none but Heaven can see;
For the cup from my trembling lips was wrenched,
And hopes last flickering ray was quenched.

HIDDEN ANIMALS.—1. Donkey; 2. Puppy; 3. Giraffe; 4. Hog; 5. Ox.

DROP LETTER.—The sacrifices of God are a broken spirit; a broken and contrite heart O, God, thou wilt not despise.

DIAMOND PUZZLE:—

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    S A P
      O
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Sabbath Reading.

BEARING THE CROSS.

BY PATIENCE CRENSHAW.

SUFFERER divine! Thou who didst go
With toiling footsteps, sad and slow,
Bowed down beneath such weight of woe
As only thou canst ever know,
What debt of love I owe to thee
That thou the cross didst bear for me!

The pain, the shame, the grief, were thine,
The pardon and the peace are mine;
Springs in my heart thy life divine,
And opening heavens above me shine,
While all my powers sing praise to thee
That thou the cross hast borne for me.

And thou dost call me to the cross,
And for its sake all else but loss
Must I esteem. Earth's gold is dross,
Her favor vain, her fame a gloss;
How can they tempt me from the place
Where I may look upon thy face!

In lowly fellowship with thee
Let me a burden-bearer be,
And for life's painful mystery
Teach me thy loving sympathy;
That so my cross I too may bear,
And so thy cup of sorrow share.

JOHN THE BAPTIST AND JESUS CHRIST.

JOHN the Baptist and Jesus the Christ, in their relations to one another, are the symbols of great and eternal facts in religious truth and experience. These two figures and these two lives pass before us like a beautiful and instructive allegory. On the one hand, we see starting up in the wilderness a wild, rude form, wrapped in a coarse blanket, with a countenance expressive of spiritual sadness and wearing the traces of ascetic habit. The desert resounds with his stern accents, and all hearts fall under his searching and unsparing exposure of their sin. Is not this the immemorial type of Law, and of the Repentance with which it is commissioned to work in awakened consciences?

And now this other figure, which comes treading in the footsteps of the desert preacher. On his face is a most winning light. His voice is sweet and low, his food and dress are those of other men his way is among their homes and haunts; he gives his sanction to social and domestic life; he is the healer of the blind, the leprous and the demoniac; on his lips is the word of pardon and peace, he comes to seek and to save that which was lost. He is more than the type, he is the incarnate realization, of the Gospel. He represents Faith and Forgiveness, those elements of religious truth and experience which are to the former as the time of the tender grape and the voice of the turtle dove, the appearing of flowers and the green fig, the time of the singing of birds, is to the winter when it is past and the rain when it is over and gone. For it is the voice of our Beloved, who has come over the mountains of our sin, and standing by the wall of our earthly homes shows himself through the lattice of our daily lives.—*Christian Intelligencer.*

ASKING TO GO HOME.

THE Springfield Sabbath Republican has a pretty story of two little children who went alone on a recent Sunday to church, when a minister from out of town preached. They took a seat near the front, and after the minister had got well into his sermon the smallest child whispered to his sister that he would like to go home. People who sat behind them heard the little girl tell him that he must not go without asking the minister's permission; so hand in hand they left their seat, and standing before the clergyman, the little chap lisped out his petition. The minister was naturally surprised, but, without interrupting his discourse nodded his assent. That did not satisfy the children, and again the boy asked permission to go, and was answered by another nod. The little girl, fearing the minister had not understood her brother, said, "Please, sir, may brother and I go home?" The minister stopped and verbally granted their request, and, with a sweet "thank you, sir," and a courtesy, the children went down the aisle together.

IN order to grow in grace, we must be much alone. It is not in society—even Christian society—that the soul grows most vigorously. In one single quiet hour of prayer it will often make more progress than in days of company with others. It is in the desert that the dew falls freshest and the air is purest.—*H. Bonar.*

IF Christians must contend, let it be like the olive and the vine, which shall bear the most and best fruit; not like the aspen and the elm, which shall make the most noise in the wind.—*Jeremy Taylor.*

PRAYER in the morning is the key that opens to us God's mercies and blessings. Prayer in the evening is the key that shuts us up under His protection and safeguard.—*Rutherford*

HE who makes the fullest use of God's gifts is their real owner, for property does not become possession until the proprietor becomes the master.—*S. S. Times.*

GOOD men have the fewest fears. He has but one who fears to do wrong. He has a thousand who has overcome that one.

THE best of all prayers, is to act with a pure intention, and with a continual reference to the will of God.—*Fenelon.*

PERSONAL ITEMS.

Miss Rogers, a cousin of Richard Cobden, was the prodigy in the last examinations at Oxford university, England, outstripping all the other students, male and female, in Greek and Latin. Her knowledge in other branches is quite as wonderful. After passing her examination, Miss Rogers was at once appointed lecturer in Somerville Hall, one of the Oxford buildings for women students.

There are in the English House of Peers, at the opening of this year, 21 dukes, of whom 11 are Conservatives—Beaufort, Buckingham, Leeds, Manchester, Marlborough, Norfolk, Northumberland, Portland, Richmond, Rutland, Wellington; eight are Liberals—Bedford, Cleveland, Devonshire, Grafton, St. Albans, Somerset, Sutherland, Westminster; one has never voted—Hamilton; and one, Newcastle, is a minor.

Lazy and dull feelings are sure precursors of sickness, which nothing but Hop Bitters will banish.

Miscellaneous.

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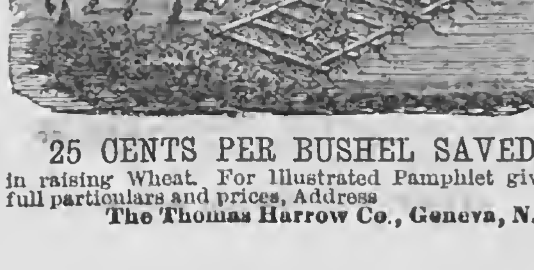

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Various.

BRIEFLETS.

Mr. Brooks in an address before the W. N. Y. H. S. said: "We all had currant bushes that took care of themselves and gave us plenty of rather small currants; but finally the worms ate them up. Professor Morse told us to give the worms hellebore, but the skeptical folks said they didn't believe there was any such medicine, and the orthodox said they would not waste it on worms. So we lost our currants." . . "It is agreed in our county that small fruits must take care of themselves. Blackberries and black-raspberries conform to our arrangement. They set themselves out in the spare places, and do everything but pick themselves. If your Society wants to do anything respectable, they will get up a sort that will pick themselves." . . The reveries of the dreamer advance his hopes, but not their realization. One good hour of earnest work is worth a thousand dreams of success towards insuring it. . . Clawson Wheat, it appears, has decidedly improved in quality in Michigan during the past year, being more flinty and making better flour. . . Our readers in ordering hardy low-growing trees this spring should not forget the beautiful Japan Maples. . . . Mr. Kenny says: "Buy no cane mills of less weight than 750 pounds, if you intend to have one strong enough to stay by you. Always bear in mind, the larger the capacity of the machinery, the less your sirup will cost you per gallon. . . "Keep the feet warm" is an old maxim—but children's necks are better covered than their legs and feet.—Journal of Chemistry. . . Mr. Brewer corroborates the statement that black pepper will kill the Cabbage-worm. . . Mr. Hoffman (Elmira Farmers' Club) thinks that the Cabbage-worm will soon disappear. . . Mr. Williams says: "I believe it not only possible but the duty of every land-holder, even if limited to a city lot, to grow grapes for his own family." . . Speaking of the decline of the Isabella, Catawba, &c., Mr. Williams says: "My own conviction is that there is a limit, a maximum point, when strength, health, vigor and fruitfulness are in their fulness. This level may be maintained for a longer or shorter period, but beyond it is decline." . . The "boom" has not made its appearance as yet in the grocery market, but nevertheless it is confidently looked for.—Grocer. . . The advance of civilization has had a twofold and contrary effect of reducing the price of wares, and at the same time multiplying a hundred-fold the artificial wants of society. The luxuries of one generation become the necessities of the next. . . We see that the same portrait is used in different catalogues for McLean's "Little Gem" and "American Wonder" peas. This is robbing Peter to pay Paul, unless Peter and Paul are the same "fellah." . . Artemus Ward gave the following Hints to Farmers:—To drain your land—Spend all your time at the village groggery, and your land will be drained in equal ratio. . . To clean a lot from cobblestones—Get up a target in your neighbor's garden, and invite all the boys to come and throw at the mark. . . To raise a crop of grass—Rent your farm and engage in politics. Your lands, property and character will go to grass in a brief space of time. . . No kissing by telephone for us. We prefer to take the electricity direct from the battery.—Osculatory Whitehall Times. . . Now the Hayden trial is over, the ladies will have an opportunity to attend to the prosaic duties of housekeeping.—New Haven Register. . . "We have more wants and more means to meet those wants than any other people.—Gov. Seymour. . . Prof. Stewart considers ensilage as the one thing needful to winter dairying. . . Mr. J. A. Hedges is engaged in the good work of pressing upon State authorities the importance of embracing the sugar-making business in the course of studies of the agricultural colleges of the country. . . A Maine man who didn't care two shakes of a lamb's tail about the newspapers rode fourteen miles through a fierce snowstorm to get a copy of a weekly that spoke of him as "a prominent citizen."—Boston Post. . . For Sale.—Golden Rural Tomato—Beauty of Hebron—Holstein cattle—Clydesdale horses—Cow-peas—See advertising columns. . . Mr. Quinn says that most of the Raspberries introduced during the last ten years received the same high praise now bestowed on the Cuthbert. We think not. . . "Didn't you tell me you could hold the plow?" said a farmer to an Irishman he had taken on trial. "Be aisy, now," says Pat; "how could I hould it an' two horses pulliu' it away? Just stop the craytures and I'll hould it for ye." . . Apply carbolic acid to the wound when stung by a bee. . . It seems that Burlington, Iowa, according to the Health Dept. of N. Y. city, is the healthiest city in this country. . . French bread is so light as to be full of "airy nothingness." It is made to *please the eye!* . . It is a pity to be reminded, says . Olcott in the Christian Union, that a funeral is the only social incident that brings out the whole rural neighborhood. . .

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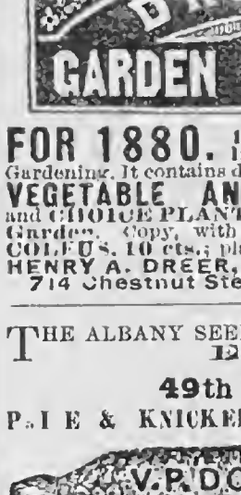

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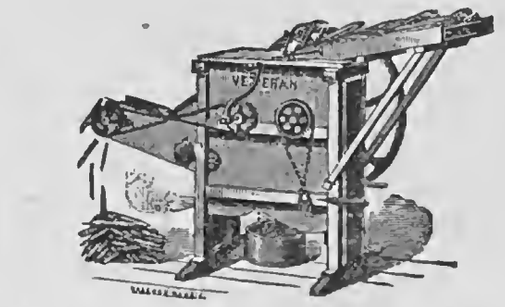

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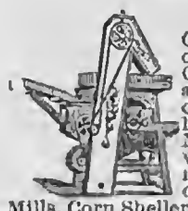

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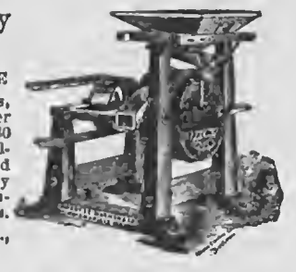

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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Field Crops.

THE CULTURE AND USE OF MANGELS.

HENRY STEWART.

It is but a few years since the profitable culture of roots was held to be one of the impossibilities of our agriculture. The climate was considered to be unsuitable for a crop which held in its cellular tissue 90 or more per cent. of water, and such was the force of this mistaken impression that any one who attempted to grow a crop of roots was considered as a very foolish man. It was said, and is even now said, and insisted upon by persons who would not like to be included among the "old fogies" that corn held a superior position as a feeding crop to any roots whatever; that while we could raise corn of some kind on any sort of land, the trouble and cost of a crop of roots were uselessly undertaken and only failure could result from the attempt. Besides, said they:—"What will you do with your roots when you have them? If you should be so foolish as to raise three or four acres of them and have as many thousand bushels, where will you put them and what will you feed them to?" This was considered a sort of poser which squelched argument and was followed always by the clincher: "No, sir! you can't grow roots here; and if you could, you don't want them; you have corn and what do you want besides?" But then came the knowledge that corn was a very incomplete food of itself, and although it would fatten an animal very well, it was not fitted to sustain the system of a growing or a milking animal, and something was needed to feed with it to perfect the nutritive ratio of the food, and that roots were precisely the sort of addition that was required. Corn, corn fodder and roots together made up precisely the nutritive elements in the exact proportion required. And then our scientific farmers saw the point at once, and set themselves to grow roots—and succeeded. Now, American farmers can grow roots as well as any English farmer ever could, with their advantageous climate; as good in quality; in fact, better, because more solid and less succulent; as large in size and as heavy in the yield. We can grow mangels anywhere from 24 to 40 pounds' weight, if we wish and at a cost that renders them the cheapest food we have. Forty tons per acre, equal to 1,200 bushels, are grown by good farmers who understand the needed culture, and any farmer may grow as many, who will follow the right method. Is there any crop that will pay better? Mangels contain over one per cent. of flesh-forming material which is worth 4¾ cents per pound, and 10 per cent. of carbohydrates worth one cent per pound. This is for the fresh roots having 88 per cent. of water in them. At 14¾ cents per 100 pounds, equal to 8¾ cents per bushel, a crop of 40 tons gives a return of $113.75 per acre. To realize as much from corn one must grow nearly 200 bushels per acre. It requires but little figuring to discover which is the more profitable crop.

We need to grow roots. They exert a beneficial influence upon the soil; not directly, but growing out of the necessities of their culture. The land must be well worked, must be well manured and must be kept free from weeds. A truly honest farmer, I mean one who is honest to himself, and his profession and to his farm, should grow roots for this very reason, because the work disciplines him, in fact, will make a good and successful farmer of him.

WEBB'S NEW KINVER YELLOW GLOBE MANGEL.—Fig. 54.
Lengthwise Section of one of Average Size as Raised at the Rural Experiment Grounds.

Let us consider what he must do. There must be a stock of good well rotted manure prepared. This is indispensable, and the ground should have been well plowed before winter sets in. But the manure must be had, if roots are desired. To grow one acre, then, there should be 25 loads of manure made, turned over three or four times, kept fermenting through the winter and prepared for use early next May. This is disciplinary and useful work; it enriches the farm and the farmer, and the labor will give him higher ideas than are usually held regarding this work of making manure. Instead of being considered as filthy, disagreeable work, the manure heap will be to him a laboratory experiment; carefully prepared; well made; fully performed; and its results watched with great interest. It will bring in the intellect to the aid of the hands and arms, and will set in action a new order of affairs on the farm, as anything will do that is done for a purpose. This is the winter's work. Next comes the seed: six pounds for an acre is the quantity required.

The next consideration is the variety. After growing, the past year, twelve different varieties of mangels and beets, I would select the Kinver Yellow Globe for its soundness, color and yield. Next I would choose Lane's Improved sugar beet, and I would grow half an acre of each, if I had but one acre. I like variety and so do my cows: and if I can induce a cow to eat a few pounds more of sliced roots for her noon-day meal, she will rest the better in the afternoon, and milk the better in the evening for it; and by giving a change week about, with these two roots, the sweeter sugar beets seem to keep up the cow's appetite.

The spring work, next, is to be thought about. If I could procure, or afford to procure a grubber, I would use that to work the fall-plowed ground. This loosens the soil for 10 inches in depth without turning it over, and makes it in the very best condition for growing roots. Not having such an implement, I would cross-plow the ground after spreading the manure, and so mix the soil and manure, and then still further mix it by thorough harrowing. The soil is then marked out in furrows as straight as possible, 27 inches apart. In the mean time the seed is soaking, and as soon as the furrows are made, before the soil has had time to dry, the seed is sown by hand in them, and a man or boy following, covers them about two inches deep with a hoe. A distinct mark of each furrow is still left by which it may be seen with ease. Three hundred pounds per acre of Peruvian Guano, blood manure, superphosphate of lime or specially prepared mangel and beet fertilizer are then scattered along the row and a few inches on each side. By soaking a small portion of the seed, the portion that will grow will be ascertained, and this is important, because 50 per cent. of old seed will be dead, and in that case a double allowance will be required. Although a hand seed drill is a convenience, yet I think the greater trouble of hand sowing will be repaid in the more regular and even growth afterwards. After planting, the ground needs cultivation before the weeds start; this is the least trouble and it is

easier to kill a thousand weeds when they first germinate than one when it is a week or two old; and to keep them from growing, than to destroy them when grown. A week's neglect, once the weeds have started, may increase the labor 50 times and even make it necessary to abandon the crop. This is *the* point in growing roots. Keep the ground clean, and some sort of a crop is certain; permit weeds to grow, and the chance is great that the crop will be a loss.

There may be farmers who have a crop of roots grown and find difficulty in disposing of them. That difficulty is easily disposed of. There is not an animal on the farm but may be kept in the best of health and condition on roots, with a small portion of dry feed. Horses do well on a peck twice a day, chopped and mixed with chaffed hay. If hard worked a quart of meal of any kind or bran, added, will complete a sufficient ration. Cows, oxen, calves and feeding beeves flourish well on roots as the largest part of their diet. The yellow-fleshed mangels give a rich color and no evil flavor to milk or cream, and for winter dairying they are indispensable. A peck of roots with a quart of cotton-seed meal and bran, mixed in equal parts, given twice a day with dry hay or fodder, will keep cows well up to their milk. Sheep may be fed similarly in proportion, except ewes heavy in lamb, which should be fed but small rations, not over a quart at each half daily feed. Pigs thrive wonderfully on mangels and sugar beets. Geese will live wholly on them chopped fine. Poultry will peck out roots and consume them completely. Roots, corn and hay will keep the whole farm stock going in the best order, and as one good acre of roots will subsist one cow for three years or 25 cows for six weeks, and four acres will supply 25 cows for six months, what other crop can pay so well or be so easily grown for the amount of feed procured?

KINVER GLOBE MANGELS.

COL. F. D. CURTIS.

I HAVE grown Webb's Kinver Globe beet for several years and have fully tested its merits, except by actual analysis of its constituents, I am satisfied that it contains a much larger per cent. of sugar than the larger and coarser mangels, but not as much as the white sugar beet. My pigs are fonder of it than of any other root except the sugar beet. It is more easily grown than the latter and will afford a larger yield; and it is not excelled in regard to yield by Lane's Improved. As there are but few rootlets on the sides, and the tap-root is slender and fine, it can be harvested clean and pulled without the least difficulty. It is urged as an objection to it, that it is too easily lifted out of the ground. Care must be had in running the cultivator between the rows, or the mangels will be pulled up, and also in turning the horse, or they will be knocked out by the animal's feet. This trouble can be obviated by sowing some stronger-rooted variety at the ends of the rows. I can fatten pigs on this beet, feeding it raw, and breeding sows may be kept healthy on it and do well. My horses eat it and all beets greedily, and for cattle there is none better. One quarter more bulk of the Norbiton Giant Mangel, can be grown on the same ground, but I doubt if there is any more actual nutriment.

Kinver Globe Mangels originated in England, where they are very popular. The Globe variety has not been so popular in this country of large things, as the Norbiton Giant. It is finer in grain and will keep better, than any of the long mangels. The smaller ones are excellent for the table. It is a rich yellow in color, and the leaves are also yellow, running into green on the edges. The roots do not average so large a size as swedes, which are similar in form. There are several good kinds of Kinver Globe, but Webb's is undoubtedly the best. The Globe variety can be grown closer in the rows than the long, red mangels, and the rows may be nearer together, so far as a good growth is concerned, but this makes it more difficult to work between them and not to disturb the roots. It is not so liable to be injured by freezing, as the beets are closer to the ground—do not stand up so high. There is no soft neck or crown as is the case with the long mangel, which is exceedingly sensitive to the frost, and when frozen will cause the whole beet to decay. The seed this year is scarce and high. When crowded in the row in rich ground the beets will grow on top of each other, and not twist together like the long mangels. The earlier the seed is put in, the larger will be the yield.

Of the Webb's Kinver Globe Mangel we are assured that as much as eighty-four tons per acre have been grown; though of course, nothing like so enormous a yield can be expected from ordinary field culture and manuring. The variety has been extensively grown by leading stock owners in England, and it has proved extremely satisfactory for feeding purposes. In a number of places where it has been tested here too, it has won golden opinions for large yield and good quality.

Horticultural.

FRUIT GROWERS IN COUNCIL.

New Jersey Hort'l Society.

AFTERNOON SESSION.

(Rural Special Report.—Continued from last week.)

RASPBERRIES were discussed as follows:

Mr. Goldsmith named Franconia; Hornet, Fastolff, etc., as of best quality but none of them was hardy. Highland Hardy was supposed to be hardy; but four years' trial proved it not entirely so. His were badly injured last winter. It was early and profitable, selling at 25 and 30 cents per quart. After the middle of July the prices ran low—too many other fruits in competition. The Hudson River Antwerp was still good. He had seen them sold in market at six and eight cents with two commissions to come out. He could not grow raspberries at that price. He planted in rows six to seven feet apart and three feet in the row, confining the young plants wanted for fruiting to a space about 18 inches wide, cultivating between the rows. He stretched a wire over the row, to which the tops of the fruiting canes were fastened. Thinks cultivators generally agree that young plants are more hardy than old ones. He doubted if winter killing was due to *severe* cold weather. Mr. Fuller said the Raspberry is indigenous to, and at home in a northern latitude. As you go to western N. Y., and Canada the Franconia and other varieties are perfectly hardy, while the further south you go, the more tender they are as compared with this place, and to attempt to cultivate them there is a failure. The same is true of the Currant. A Raspberry that will hold its leaves until winter, may be regarded as hardy. Mr. Voorhees thought killing was due to unripe wood. Mr. Lovett had never seen the Turner hurt to any extent. He considered the Cuthbert practically hardy. Mr. Barclay grew Fastolff on the south side of a tight fence till he got tired of covering the vines, and dug them out. Some roots ran under the fence, came up and grew on the north side and were always hardy. Mr. Crane grew Raspberries in his apple orchard. He had observed they did best under the trees in the shade. More were injured last winter than usual. He was not ready to give up Highland Hardy or Philadelphia yet. The latter was valuable for home use. He had grown 150 bushels per acre, but the people began to want something better. Mr. Downing visited him a few years ago and, seeing the perfection it attained on his soil, told him he need not look for anything better; if he did, he would not find it.

Mr. Roe said many varieties, like the Philadelphia, seem adapted especially to certain localities. This was the case with all more or less. He praised the Cuthbert. He had seen the Queen of the Market doing well far to the south and considered it identical with Cuthbert. If so, he believed it would do well as far south as Norfolk; he would risk it there anyway. Mr. Quinn remarked that all Raspberries introduced for the past 10 years had been as highly praised as the Cuthbert is now. Take, for instance, the Herstine! And where does it stand to-day? He thought any one planting any quantity of Cuthberts without first trying it in a small way would make a mistake. A few costly plants generally received extra culture; they did with him, and he presumed the same was true with others, and the result of this treatment was not a fair test for a large plantation. The Philadelphia had been overpraised. Last season in the Newark market they could hardly be given away. Mr. Crane indorsed the remarks of Mr. Quinn on the Cuthbert. He bought 50 plants two years ago and lost every one. He had tried it again last year with the same result. He went to see a neighbor who had bought a dozen plants, to learn his success; he had saved three only and they were "growing small by degrees and beautifully less." Mr. Roe thought the Herstine the best early variety he had. He had admitted none was absolutely hardy unless it was the Turner. He did not think the Cuthbert always hardy. He believed in telling the truth about it. He had seen it killed to the ground, but when once established its vigor is remarkable. Mr. Fuller believed the Turner about as hardy as any we have, but too soft to bear transportation. The quality is good.

The Secretary read a paper on Grape-growing for the People, and by the People, in which he contended that any place fit for human abode could be and ought to be made to produce a family supply, and urged it as a duty that every owner of a lot—even if but a small city one—owed to his family to grow a home supply of this delicious fruit which was a medicine to the sick, a refreshment to the weary and a luxury to which those dependent on the markets were strangers. The cooling shade and luscious fruit amply compensated for the trouble and expense of preparing, planting and caring for the vines. He deprecated the advice so frequently given—to keep the roots constantly deluged with soap-suds and kitchen slops. No vines could remain healthy with such treatment. He preferred transplanted vines grown from ripe wood in the open ground. No hot-house or greenwood vines for him. He urged that purchasers should never buy of any but trustworthy and well known nurserymen.

Among the new Grapes of promise he named Ricketts's Lady Washington, Miner's seedlings, Caywood's Duchess, Niagara, Prentiss and Pocklington, some of which on trial he hoped would come near to the claims put forth for them by their originators, and meet the want long felt of a good, hardy, productive white grape superior to the Concord.

After deciding to hold the next annual meeting in Newark, and arranging for publishing their proceedings, and some miscellaneous business, the Society adjourned *sine die*, and thus closed one of the most interesting meetings this young Society has ever held.

If the bulk of the members, including some of the ablest, would take half the interest that a few of the real workers do, this Society would soon exert an influence that would be seen and felt throughout the country, and be of incalculable benefit to every tiller of the soil. W.

THE LETTUCE DISEASE AND ITS PREVENTION AND CURE.

JAMES TAPLIN.

THE above disease is not a new trouble, for it has prevailed more or less ever since the plants have been grown in houses heated by fire heat, but probably some winters it is more troublesome than in others, so much so that some growers have given up the crop and grown other things in their houses. I notice a recommendation to discontinue growing the crop in old gardens for a time as a remedy; this might be a cure if it was an insect, but it being a mildew closely related to the vine mildew, I do not see what good will result from doing so, as under the same circumstances it will appear again if the crop is grown again in any number of years after. I was informed by a large grower he had never been troubled with it in cold-frames, but always more or less in hot-houses.

For reasons which need not be entered into here, I occupied a part of two houses with lettuce this winter; from want of water the plants could not be planted until after being checked by the first sharp frost while outside, which would predispose them to disease. After the only snow storm we had which laid a day or two on the roofs of these houses, I noticed mildew on many of the leaves. I at once painted the pipes with lime and sulphur, gave a brisk heat and plenty of air in the day and less heat at night, and it disappeared in a few days, the leaves affected dried up and could be picked off, and although a few heads were decayed the general crop was saved.

As a preventive I would recommend cleaning out all the old soil and rubbish, of which there is usually a good stock in that sort of house, wash the wood and glass, and repaint if necessary, and paint walls and pipes with lime and sulphur, and fill in with fresh soil, and with proper attention to the watering, ventilation and heat, I do not see any cause why the former success should not be obtained.

HOW TO OBTAIN VERY EARLY TOMATOES.—We start about 1st to 10th of March in hot-bed; transplant when about three inches high to another bed, first cutting out the tap-root. When about six inches high transplant to four inches apart, and when 10 inches high nip out the top and transplant to 10 or 12 inches apart. Leave until safe from frost and take to the field, which should have been plowed about as early in the spring as peas can be planted. Run over with a harrow or roller to pack solid, Line and mark to 3½x4 feet. Spade out a hole 12@15 inches square, 8 inches deep. Put in plant and fill around with mellow soil. Keep water suckers off and you will have tomatoes 15 days ahead of any one. M. WELSH.

Farm Topics.

HISTORY OF A POOR FARM.—No. 23.

Some Pertinent Criticisms.

OUR meetings have become quite notorious since our discussion of some family arrangements which were rather severely criticised, and the matter having leaked out, probably through our out-spoken and matter-of-fact young lady visitor, has been a subject of village conversation, gossip and comment. Dr. Jones who has the best facilities for hearing and learning of the opinions of the farmers' wives and daughters, says the remarks made have been very popularly received and several ladies have intimated that they would be pleased to have an opportunity of recording their opinions on various similar matters. The suggestion staggered Mr. Martin, who seemed to think that it would be impossible to discuss any practical matters within bounded limits with a few lady visitors as speakers.

"I want" said he "to ask Dr. Jones one thing, and that is this; 'Why farmers' wives become insane?' I have just been reading a long article in a paper in which this question is asked, and a column full of reasons are given why farmers' wives and daughters cannot help but become crazy because of their cares and hard duties.'"

"A man is little better than a lunatic himself" remarked Dr. Jones, "to write any such stuff. Unfortunately there are diseased minds as well as diseased bodies, and as a large proportion of the population live on farms, of course a large proportion of sick and diseased persons are found in farmers' families. Fred can probably tell us within half a dozen how many farmers we have in the United States."

"The latest estimate is that there are over four million farms at the present time, and, of course, as many farmers; the average number in a family is five, so that 20,000,000 persons, or nearly half the population, live on farms."

"But not half the idiots or crazy folks, I warrant you," remarked my old neighbor. "I have lived here, boy and man, for 87 years this New Year's, and I have known every family within a dozen miles or more since I was sheriff of the county over 40 years ago, and I have never known one insane person in a farmer's family.

"You are right," rejoined Dr. Jones. "I have been well acquainted with farmers' families all my life, and, as a rule, they are more robust and long-lived than any other class; the children are strong and hardy, and the majority of cases of sickness in country places is caused by carelessness, inattention and inexcusable disregard of sanitary requirements. Farm life is so healthful that carelessness becomes a rule. On the contrary, look at the women and children in towns and cities, and if there is a place where 'cares and hard duties,' exposures and privations, should cause nervous prostration and mental disease, it is in a crowded city tenement house; and the wife most likely to become insane, is the mother of a family of a city workman. There is no class of people more healthy, sound in body and mind, and long-lived, than farmers."

"Well, that is satisfactory. Now, I want to know why we farmers cannot have pork and beans for our dinners three times a week without having the fact thrown in our faces by a magazine writer as evidence of our poverty, ignorance, misery and general boorishness. What do you say to that, doctor?"

"I am from New England and, of course, cannot give an unprejudiced opinion; but I am sure that pork is wholesome and nutritious food and that much nonsense and stupidity are written about it. The hard work of the world is done on pork; and I may add, beans. Beans, too, form one of the most nutritious foods. Sailors live chiefly on pork and beans. These are the staple food of the lumberers in the timber districts, men who do more hard work and suffer as much exposure as sailors. Soldiers are obliged to eat a good deal of pork. Miners make pork their staple flesh diet, and necessarily consume a large quantity of beans. Laborers everywhere consume pork largely. The Cuban slaves are fed on it. "Hog and hominy" used to be the usual food of our Southern negroes. An enormous quantity of American pork and bacon is exported to add to the products of other countries, and if pork were unwholesome food, it would not be thus widely consumed. I use more pork myself in a year than of any one other kind of meat, and good bacon or ham never comes amiss, even to a man of refined taste. A pig is no more uncleanly a feeder than, if so much so, as a fowl, which is as filthy a forager as exists, yet who makes any objection to broiled chicken on that account A rabbit is infested with as many parasites as a pig, and yet its flesh is never objected to, not that by any means a pig need necessarily be infested with these creatures at all, if it is properly kept. Oxen are infested with embryo tape-worms in their flesh, and sheep are specially subject to parasites."

"You have been reading critically of late, Mr. Martin," I remarked.

"Yes. I am sick of the way some people who write in agricultural papers have of lecturing farmers about what they ought to do; as though they were children, and as to say; 'Johnny, you should not put your fingers in your nose; or you should not scratch your head; or you should keep your hands clean and not crawl in the sand and wear the knees of your pants, or play in the mud and make your mother angry.' Farmers surely have as much common sense as other people, and know what to eat and drink as well as their neighbors."

"At the dairy fair we were told by a speaker, who could not know what he was talking about," rejoined Miss Martin, "that we ought to get cows that would milk 12 quarts a day for 300 days in the year. I don't believe there are a hundred such cows in the country, which is not enough to go around and give 4,000,000 farmers one apiece. If we cannot make money

in the dairy without such cows, there's a poor look out for us, I think. And there's another thing I have noticed—how is it that the men get all the premiums for the best dairy butter? Do they take care of the milk and the cream, and churn and make the butter, and wash and keep clean the pans and pails? I don't think it. If farmers' wives get mad, that's enough to make them mad I think; to get up some nice butter and their husbands take it to the fair and Mr. So-and-so gets the premium and pockets the money, instead of the woman who had all the work to do. To be pleased about that is one of 'the hard duties,' I suppose, that fall upon the women."

"That certainly is a great evil," I replied, "but it might easily be remedied by making the entries in the names of the persons who actually made the butter and by awarding the premiums to them only. Your complaint is just, and I hope it will go where it will do some good.

"The fact is, that among agricultural writers there is a tendency to be too practical and too specific, and particular: it is as though a preacher should habitually address each of his hearers by name, and recount to him each of his peculiar failings and peccadilloes, and some imaginary ones, too, and publicly admonish him that this should be avoided and that should be done; instead of teaching general principles which each one could apply to his own case as his conscience would prompt. In agriculture there is an infinite number of differences and variations, and one can seldom be specific. Every writer should be a teacher. If he has not something to teach that readers do not already know, he has no "call," and should remain among the learners. We want new facts, and old ones sometimes that appear in new shapes experiences, suggestions and observations that may be applied as they may suit any particular case.

"Farmers, as a rule, want to know what other farmers are doing, because among a thousand men doing the same thing, some one will discover a better or an easier way of doing it, by which all may profit; but they don't want to be told they are boors because they eat more pork than may suit the taste of one who never experienced the appetite gained by a morning's work behind the plow; nor the swiftness with which a hearty dinner of pork and beans will disappear in the afternoon through the same work. Nor do they appreciate the lecturing which calls their work "tiresome and unvarying drudgery and an unvarying round of drudge-like duties" etc; nor to be charged with a want of ordinary human kindness and family affection, through which wives and daughters are brought to insanity. They don't want to be "preached" to or at, but they want, and are ready to receive and appreciate useful information."

"It is not long since" remarked Mr. Martin, "that the papers were full of the isolation and lonesomeness of farmers and one genius proposed that all the houses and barns should be built in a village and the stock driven to and from the farms two or three miles, all the feed hauled there, and the manure drawn away, and all this for the purpose of enabling farmers and their families to visit each other and gossip. This would be a costly recreation. It is very good of such people to be so careful of our comfort, but very unwise to make our boys and girls discontented and to believe that there is something about farm life that is degrading, disagreeable and uncivilizing; when the truth is, that morality, honesty, comfort, independence, domestic happiness and quiet content flourish the most in our farm homes and among industrious, healthful and useful farmers. It is pleasant and profitable to visit among one's neighbors, and an hour or two of conversation between intelligent men and women cannot fail to be to both interesting and useful. There is no need for farmers to be isolated and lonesome. There may be the farmers' club for discussing practical matters; the farmers' reading and book association; the farm improvement society; the ladies' society and other useful means of mutual benefit and culture, and a sufficient number of persons to maintain such associations may be found within easy walking and driving distance of each others' homes.

Dairy Husbandry.

WINTER BUTTER MAKING.—No. 3.

HENRY STEWART.

The Dairy.

If the first requisite for good butter is the cow, the second is the dairy room or house, for it is useless to procure good milk, if it is spoiled in the keeping. A dairy room should have an even temperature, and in the winter may be kept at 45 to 50 degrees. One that is partly underground and has an apartment over it for churning and washing, pans, etc., is preferable, as it will need no artificial heating by a stove. I prefer one with brick walls, white-washed with lime, plastered over-head, and with a cement or flag-stone floor; that has the windows above ground and facing the south and west; the windows covered with fine wire gauze outside and hinged at the top, so that they may be opened by raising and hooking up the sash. The window being close to the ceiling, ventilates the room completely. My own aim in a dairy house is a building having a brick basement in a hill-side, with ice-house in the rear, having a chute on the bank through which to put in ice; and the milk room in the front, with porch for airing the cans and pails. Over the milk room shall be the churning and washing room, provided with a water heater, and with an elevator for passing cream and butter up and down, and stairs leading below; also a sink with taps from a tank above. Over the milk room shall be a tank supplied from a well, by a wind-mill overtopping the whole. From the tank, water may flow through a pipe into the rooms below, for use in washing pans or supplying water in case the submerged-can system of setting the milk might be used at any time. A sink and drain may also be carried from the milk room. The tank will be high enough to supply the house and the barn with water through pipes. The cost of the whole I estimate to be about $600 for a dairy of 50 cows, and no one can doubt that it will be a profitable investment for the maker of extra butter.

The Churning.

When I enter this part of my subject I touch a broad field, over which lie in perspective the ghosts of a score or more of discarded and departed churns. The misery of a butter-maker is the endless variety of churns. There are many good churns, beginning with the old-fashioned, up-and-down one, which recalls my boyhood when I waited for my cup of fresh buttermilk, and often waited three hours; for in those days the whole milk was churned. Now I can get my buttermilk in eight minutes, or less, by the old kitchen clock, which never varies from year's end to year's end. But it is not from an up-and-down churn, which, although it makes good butter, is a man and woman-killer; it is now from a "rectangular" churn, and it is *right* angled without any doubt, for the butter not only comes quickly, but in such an excellent shape, being beaten about by these proper angles, as to greatly facilitate the washing and preparing of the butter.

To particularize, let me recall the churning of the 7th day of January, 1880; because this was an eventful one, and settled in my mind some questions which were previously doubtful to me. My cross-bred three-year-old Jersey and Ayrshire cow, Maida, had been fresh two weeks, and this was the first churning of six days' milk. The cream—12 quarts exactly—was turned into the rectangular churn aforesaid, and the churn and cream were both at a temperature of 65 degrees. After churning for eight minutes precisely, making 70 revolutions of the churn per minute, I was surprised to hear the "slap-dash" of the buttermilk, and was more than surprised on opening the churn to see so magnificent a sample of butter. The mass of golden butter was in small grains from the size of sago grains up to that of buckshot, lying in an irregular mass piled up in the churn with a small quantity of buttermilk at the bottom. The butter weighed 10½ pounds. The result, 10½ pounds of butter from 12 quarts of thick cream, churned in eight minutes, at a temperature of 65 degrees, settled some points about which questions are frequently asked.

This churning out of the way, the cream of two Ayrshire cows three-years-old that have been milking 10 months and are three in calf—14 quarts in all—was put in the churn at a temperature of 60 degrees. This I churned three hours patiently without breaking the cream, and was advised to throw the cream out as it was one of those messes which would never churn. Let us try some warm water. A quart of hot water from the kettle was thrown in, the churn rotated, and in one minute the butter came; the temperature in the churn then was 64 degrees. This also goes some way to settle another difficulty in winter dairying, which causes a great deal of trouble.

If butter comes at 64 or 65 degrees in a short time and fails to come at all at 60 degrees, this is a valuable fact to know. Another churning of Malda's cream of 16 quarts from seven days' milk produces 14 pounds of butter in 12 minutes at a temperature of 65 degrees, with several stoppages to watch the progress; so that eight quarts of nearly pure cream will make seven pounds of butter.

Churns

The Tartars are said to do their churning by putting the milk in a sheep-skin bottle which they tie to the saddle and take a brisk gallop for an hour or two; on returning the butter is made. This is the original horse-power churn. But its principle is clearly the same as that of our best modern churns, viz: agitation of the milk in a vessel in which the contents are dashed from one side to another to break up the butter globules. This is the principle of all the dashless churns of which so many of such various shapes were shown at the late International Dairy Fair. The peculiar action of these churns produces the butter in small globules, as above mentioned, and in this shape the milk can be drawn off and the cold water or brine introduced into the churn, and the butter thoroughly washed and made ready for immediate packing. Certainly of the many churns which I have used, the "Rectangular" pleases me the most, on account of its very easy motion, its shape, which is a hollow cube suspended diagonally upon two of its opposite corners, its freedom from iron gudgeons penetrating inside as is usual in dash churns and which *will* blacken and foul the butter, and chiefly on account of the ease and perfection with which it can be cleansed, its quick churning and the excellent shape in which the butter comes.

Coloring Butter.

My customers are very exacting people. They object to light-colored butter and, like the majority of consumers, they judge of butter by the eye as well as by the flavor. Recently the New York Farmers' Club "resolved" that coloring butter was a fraud and a practice to be denounced. Do these *farmers* wear their cassimeres of the natural shoddy color or do they prefer them dyed? Did they object to the coloring of oleomargarine when they resolved over that, and insist that that fraud should bear its natural tallow color? The fact is, butter is colored because those who buy it *will* have it colored to suit their taste; and while colored butter will sell the best, so long will butter be colored. One teaspoonful of good liquid butter coloring in 12 gallons of cream is needed even with Jersey cows in the winter, and for other cows twice that quantity will be required to give a color somewhat lighter than that of a gold coin.

There is nothing about annatto that is objectionable, and all the talk about its filthy preparation is simply "bosh" and falsehood. When color is used it is best to put it into the churn, and I do not find that it has any ill effect whatever even upon the buttermilk, which is a pleasant, wholesome article of food when the milk is all right.

Bitter Cream.

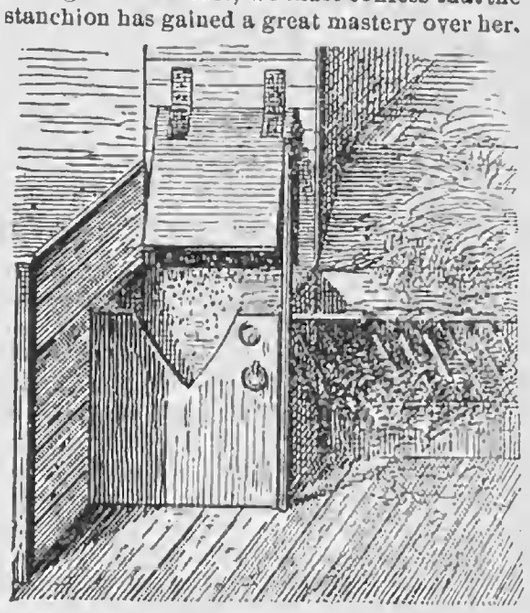
This reminds me of the many complaints of bitter cream in the winter. This is caused invariably, I believe, by something in the food or in the condition of the cow. Every one knows how prevalent that vile plant, bitter weed or rag weed, (Ambrosia artemisiæfolia) is; and how much of it is cut with the second cutting of the meadows,—the much-praised-for-butter rowen hay. This weed will give to milk, cream or butter, a very bitter flavor, which no process or disguise can conceal. If turnips are fed, I defy any person to escape bitter cream and ill-flavored butter. The presence of a heap of turnips on my barn floor the past winter so impregnated the air, although none were fed, that the milk was perceptibly flavored by them until they were removed. Feeding immediately after or before milking is unavailing. There are cows which from some peculiarity of condition give milk which turns bitter. Such cows should be discarded from a winter dairy as soon as the fault is discovered, for they are not healthy and their secretions are not pure. The mixture of a pinch of saltpeter in a six-quart pan of milk will remove or disguise this bitterness, I cannot say which.

How Butter may be Spoiled.

Good butter may be spoiled in the churning. Over-churning ruins the texture and changes the proper waxiness to a disagreeable, sticky greasiness. This is the more easily done in the churns with revolving dashers, which will press the butter against the side of the churn and squeeze and rub it until it is spoiled. Too long churning spoils the quality by the oxidation of the butter and the premature formation of strong-flavored acids in it, the full preserving presence of which we call rancidity. It may be spoiled by churning at too high a temperature, by which it is made soft and oily, and of a greasy texture and flavor. No subsequent treatment can remedy this error. It may be spoiled before the cream reaches the churn by keeping this too long, or what is practically the same, by keeping it in too warm a place; 50 degrees is about the right temperature if cream is kept a week; if it is kept at 62 degrees, three days are long enough. White specs are produced in butter by over-churning, or by having the cream too sour. Either of these faults produces curd in the milk and the small flakes of this cannot be washed out of the butter. Milk from a cow in ill health, and that is acid when drawn, will produce specky butter. So will the use of salt containing particles of lime, which unite with the butter and form insoluble lime soap. White specs are covered up to a large extent by using good coloring, which is made of oil as the solvent. But this use of a coloring, being to disguise a fault and to add an undeserved virtue, is worthy of the denunciation of even the Farmers' Club.

A NOVEL COW-STALL.

It has long been a matter of dispute between both practical and theoretical dairymen, as to which is the better contrivance for a cow—a stall or a stanchion. The latter certainly has many good points to recommend it. It is the perfection of discipline and control over the cow, and when we remember what a sovereign contempt a cow has for the spirit of order or the rights of another, we must confess that the stanchion has gained a great mastery over her.



COW STALL.—FIG. 55.

There are, however, feelings of regard, and especially of sentimentalism, to be taken into consideration by many dairymen and by most breeders of blooded cattle. Cows in stanchions look as though they were pilloried and held by the neck in a most uncomfortable condition. Large cows are particularly clumsy and apparently very uncomfortable in these close quarters. Whether or not cows can actually be made to give more milk—which, after all, is the criterion—in any arrangement yet devised than in the stanchion, is a question that needs much evidence to determine. Almost without exception, the practical dairies of the country are supplied with stanchions. They are cheap in construction and economical of space. I have examined many other designs in use for keeping cows in stalls—fastened by chains, straps and halters—and tried to devise an improvement on them. The above design, fig. 55, after many changes, running through years of hard experience in trying to make the cow not only comfortable but at the same time to keep her under complete control, was finally adopted as being the most complete within my experience for compassing these ends.

One great trouble with cows when fed ground feed in stalls, arises from their disposition to take up a large mouthful, and then turn their heads from over the manger, and, while chewing, waste nearly one-half the feed upon the floor. To prevent this, each has to put her head deep in the manger to get the feed. The swinging door through which she is fed, prevents her from putting her mouth over in the alley-way. A post or upright prevents her from putting her mouth over the hay-rack to the right of her. The only way she can get out is to back out, which she is never inclined to do until the feed is all gone. She meets with this same trouble in wasting her hay. The depth of the feeding-trough which runs to the floor, prevents her from rooting the feed out. The notch cut in the front of the feeding-trough allows young things to reach the bottom, but prevents them from stepping into the trough, which they are all inclined to do. The fastening was a broad leather strap around the neck, with a strong chain and clasp to fasten them in the stall. The stall partitions were five feet high, sloping to four feet, and four feet in depth. The floor should be five feet and a half from the manger to the drop. The full width of the stall is five feet. This was designed for thoroughbred stock, and seemed to meet all their requirements.

L. S. H.

The Poultry Yard.

ARTIFICIAL INCUBATION.

BY HENRY HALES.

One important feature in the use of incubators is that you can use your eggs whenever you get them, without running after or waiting for sitting hens. This is worth something to breeders of valuable poultry; good eggs are often sacrificed from lack of opportunity to set them. On the other hand, when this occurs it is only one setting that is lost, but with an incubator, if anything goes wrong, a whole batch of eggs is destroyed—perhaps a hundred at one time. There are numbers of incubators of various sorts for sale, and I have carefully watched and inquired as to their practical results. The general tale is: "I would have hatched so many, or *so* many, *if* it had not been for an accident to the lamp regulator," or because some other intricate arrangement went wrong. What is wanted is a simple and effective machine, with nothing to get out of order, and at a reasonable price. It is these pretty little adjustments that upset the calculations about chicks; it is the absence of

these "*ifs*" that would bring an incubator to the level of a hen, which would always hatch. It is the uncertainty of hens that the incubator should rectify.

Some object to incubators as unnatural. Certainly nothing is so noble as a hen mother when she *is* reliable: but incubators must be reliable too. I know several noted breeders who tried the artificial hatching, and gave it up, but I see no reason why a machine may not yet be brought out, simplified so that it needs neither an electrician nor a scientist to watch it all the time—one that any ordinary person can attend to. One noticeable defect in the present complicated machines, is that if the lamp burns too low, there is nothing to turn on more heat; if it burns too high the regulator for the purpose turns it down, *if* it works properly. A machine is very subject to atmospheric influences, as every change in the weather has an effect upon the incubator, which must be watched closely to keep up the proper heat at all times. With continued watching, there is no doubt any complicated machine will do the work, as it is effectually done in at least one large establishment in which attendants are at hand night and day. But this will not do for ordinary work; there is too much care.

As to the unnaturalness of it—ducks, turkeys and pheasants are raised better by hens than by their own mothers, and if incubators will improve on hens, they may be used to advantage; but they must be simple, maintaining a regular heat without continual attention, and at such a price that they may be within the reach of most breeders and farmers. If I can find any such machine I will try to procure one, "run" it next spring, and give the results to the RURAL NEW-YORKER.

Pekin Ducks.

I notice what F. H. D. says in a late Rural, about Pekin ducks, that he does not consider them as profitable as the smaller breeds. What smaller breeds? Please tell us; also tell us if the smaller breeds are of any profit, and in what this profit consists, whether in eggs, in meat, or to sell as fancy poultry or water fowl. Please tells us, Mr. F. H. D., what you know about it? As you ask those who have tried them to tell what they know about them, especially if they do not breed them for sale at fancy prices, I will tell what I know about them. In our family, which is a large one, we use a good many eggs and like them in many ways, and hearing of the Pekin ducks as great layers, we bought a trio of young ducks in the fall of 1878. They began to lay in February, and March, in 1879. They laid without interruption till June; then they seemed inclined to sit, which we did not let them do; consequently, they soon began to lay again, and laid till the last of August. We killed off our surplus stock last fall, sold at a cheap price a trio to a friend, and now have a trio for the year 1880. Those now on hand have been laying for some time. If they continue as those did last year, we think they will do pretty well. They had a small stream of water to spend their daytime in, or on its banks, as they choose. The stream is a spring brook, with water sufficient to water all farm stock in the driest seasons, as it has done since the settlement of the country to this time. We feed them a little corn at night when they come up. They will not eat any at any other time when they can have the run of the brook. This winter is so warm that the brook has been frozen over only a few days; hence they have begun to lay sooner than last year. Now, what more can ducks do to make themselves profitable? And what breed of smaller ducks will do better? Will F. H. D., please tell?—We have no ducks for sale.

Rome, N. Y. JONATHAN TALCOTT.

FOWLS EATING EACH OTHERS' FEATHERS.—Unless fowls have a small quantity of meat two or three times per week in the winter season—and daily is still better—they are apt to get into the injurious habit of picking each others' feathers on the head and neck and around the rump. In the summer, if allowed to run out where they can find plenty of insects, they rarely do this. Pressed scraps are for sale in most towns at a low price, which are excellent to feed poultry; but those who are near a butcher's shop or where fish are caught and dressed, can obtain all necessary flesh feed at a still cheaper rate. They should be careful not to feed too much meat at a time, otherwise it may make the fowls sick or give an unpleasant taste to the eggs. A heaping tablespoonful of meat per day is quite sufficient. This, with a variety of grain and vegetable food, as much as they please to eat during the day, clean, fresh water in abundance, with gravel, old plaster, lime or oyster shells pounded up finely, will insure good health and abundance of eggs, except in the molting season and about a month thereafter. A. B. ALLEN.

OF ALL SEASONS, poultry now require watchful care. Clear up their droppings—whitewash and kerosene the houses—stir up the ground in their yards—cleanse the nests for sitters.

Miscellaneous.

WHAT OTHERS SAY.

BEE ACCOUNT FOR THREE YEARS.—It is asserted that figures don't lie, hence we deem this account more eloquent and persuasive than many an hour-long lecture. Dr. A. J. Wright, of Carlton, Mich. says in the American Bee Journal:—

The following are my profits and losses from bees since 1876:

DR.

Spring, 1876—To 1 colony of bees	$6 00	
" 2 hives @$1.50	3 00	$9 00
CR.		
Fall of 1876—By 3 colonies, @6 00	$18 00	
" 120 lbs. comb honey, @20c.	24 00	42 00
		9 00
Profits		$33 00

[Packed in chaff on summer stands; all wintered well.]

DR.		
Spring, 1877—To 3 colonies, @$6 00	$18 00	
" 7 hives, @1.50	10 50	$28 50
CR.		
Fall of 1877—By 10 colonies	$60 00	
" 175 lbs. comb honey, @15c.	26 25	86 25
		28 50
Profits		$57 75

[Packed in chaff on summer stands; all wintered well.]

Spring, 1878—To 10 colonies, @$6.00	$60 00	
" 14 hives, @$1.50	21 00	$81 00
CR.		
Fall of 1878—By 24 colonies	$144 00	
" 600 lbs. comb honey, @12c.	72 00	$216 00
		81 00
Profits		$135 00

I packed in chaff on the summer stands, and did not lose a colony until after April 6th, 1879; then in three weeks I lost 16 colonies on account of old age of the bees, as the spring was very late. I used the same hives and most of the combs, after cleaning thoroughly. I built up again to 24 colonies, which are in good condition at the present time. I also obtained 400 pounds of comb honey, which at 15c. per pound, amounted to $60, and 200 pounds of extracted honey, which I fed back in September. I purchased 1,000 feet lumber for packing, etc., at $10.00, leaving a profit of $50.00 for 1879.

I use the movable comb hive, and increase by dividing. I began on a small scale, but am going in on a larger one.

LONDON PURPLE.—Prof. C. V. Riley has the following to say in the bulletin of the Entomological Commision: One of the most valuable insecticides that has of late years come into use is that which goes by the name of London Purple. The powder is obtained in the following manner in the manufacture of analine dyes: Crude coal oil is distilled to produce benzole. This is mixed with nitric acid and forms nitrobenzole. Iron filings are then used to produce nascent hydrogen with the excess of nitric acid in the benzole, when distilled analine results. To this add arsenic acid, to give an atom of oxygen, which produces rose analine, and quick-lime is added to absorb the arsenic. The residuum, which is obtained by filtration or settling, is what has been denominated London Purple, the sediment being dried, powdered and finely pulverized. . . Like Paris Green it is not soluble, but is much easier kept suspended in water. If applied in this way some care has to be taken in stirring it in the water, as it has a tendency to form lumps, owing to its finely pulverized condition. . . All that has been said under the head of Paris Green as to the desirability of adding a small quantity of flour, or other substance, to give adhesiveness to the liquid, will hold equally true of London Purple, but the latter has in many respects a great advantage over the former, especially in its greater cheapness, being a mere refuse, which, from its poisonous nature, was a drug to the manufacturers, and had to be gotten rid of by being dumped long distances out at sea. This substance can be put upon the market at bare cost of transportation. It can be sold in New York at the low rate of five cents per pound. . . He recommends the use of one-half pound of this powder to from 50 to 55 gallons of water as the proportion most likely to give general satisfaction by effectually destroying the worms without injuring the plants.

VALUE OF INDIAN CORN.—Within the past few years more than seventy analyses of Indian corn have been made in this country, says Professor Caldwell in the N. Y. Tribune. . . It is plainly shown that while different varieties of common corn do not differ essentially from each other, *sweet corn is decidedly the richest in albuminoids and fat.* If a bushel of sweet corn could be produced as cheaply as one of common corn, it would undoubtedly be profitable to farmers to turn their attention to raising it; but sweet corn as now cultivated is usually the product of a rich garden soil; with the same treatment that other corn usually receives it might grow poorer in quality, at least with respect to the albuminoids. White corn appears to be more variable than other kinds in composition, especially as to the albuminoids, and also to be the poorest of all kinds in this important constituent. Eastern and Western corns are practically alike in feeding value, notwithstanding that the latter, in its air-dried condition, is over two per cent. richer in water. . . Dr. Goessman also analyzed the cobs of three varieties of corn, which, together with six analyses by Professor Johnson in 1878, give the following average results:

Water	8.2	Carbhydrates	57.2
Ash	1.2	Fiber	30.3
Albuminoids	2.7		
Fat	0.4		100.0

This material is poor in albuminoids and fat, but rich in carbhydrates—considerably richer than any kind of cereal straw, while not so very much poorer than such straw in albuminoids; and it is richer than potatoes in respect to both of these constituents; consequently both Stoeckhardt and Wolff were inclined to the opinion that meal from corn-cobs would be as nutritious as the potato, or even more so. Dr. Goessman also takes occasion to speak *a favorable word for corn-and-cob meal*, and some farmers who have used their corn in this way are assured by the results that it is profitable to do so.

THE YEAST FUNGUS.—Dr. Hagan's notion is, that obnoxious insects of all descriptions may be killed by the application of the yeast fungus Every one must have observed unfortunate flies sticking to the window-panes in autumn and invested with a fine tuft of delicate cobweb-like threads. Those threads are the spawn of a fungus, which has caused the death of the fly by its rapid growth. The extremely minute spore, or, as we may popularly term it, seed, is deposited on or in the body of the fly, germinates thereon, feeds on its substance, and speedily kills it. What is asserted positively is that mold (or mildew) introduced into mash, produces fermentation and the formation of a yeast fungus, which kills insects. A Prussian naturalist, Dr. Bail, has, it seems, proved by numerous experiments that healthy insects brought into contact with mash and fed with it, are directly infected, and with fatal consequences. A small drop of blood taken with the point of a needle from the body of a house fly so fed, has been seen under the microscope to be teeming with spores of the fungus. Dr. Hagan proposes to turn this to practical account by using beer mash, or diluted yeast, by means of a syringe or a sprinkler. Plants infested with greenfly, for instance, may be so treated, and the subjugation of the potato beetle is suggested. Beetles sprinkled with it died in about ten days.

TO CRY OUT for protection, says a writer in Mark Lane Express, (Eng.) against the foreigner is simply ridiculous and absurd. The appeal would be drowned by the voice of the country, as it would deserve to be. We do not want protection—we have been "protected," in a certain fashion too long, and it has left us in a poor and dependent condition. We want free trade in land; reform in our land laws; a right to kill the vermin which we have to keep, and which destroys an immense amount of food upon soil for which we have to pay rent, rates, and taxes; and the abolition of old antiquated notions and ideas as to restrictions on cultivation which have hitherto benefited neither the owner nor the occupier. Give us, in short, freedom such as the foreigner has, and we can yet compete with, and even beat, him in the future.

DURABILITY OF TIMBER.—Questions of the durability of timber require care in answering, says the Gardener's Monthly. Almost any timber will last forever, "almost," if kept perfectly dry, or always wet. In all countries are old buildings with all sorts of woods, that have kept their timbers fresh for a thousand years. It is the transition from moist to dry, which encourages fungoid growth that destroys timber. When, therefore, one man tells us that he had a post of some tree which was just as good for — years as the day it was put in, and another finds it rotten in half the time, we see how both statements may be perfectly true. There are some timbers that will resist these alternations of circumstances better than others, and this is what most people are after.

CO-OPERATING DAIRYMEN.—Mr. O. S. Bliss says he can show by figures that it costs more to equip an establishment for hauling milk a mile than to work it at the farm; that it costs more to do the labor, if the team work is counted; that the same milk will make more and better butter if set when first drawn from the cow than after it has been hauled and partially cooled. To all this must be superadded the cost of running the co-operative establishment, the waste of material and the carrying back to the farm of the refuse, often much impaired in value.

CATALOGUES, ETC., RECEIVED.

DREER'S Garden Calendar for 1880.—714 Chestnut St., Philadelphia. This work of 130 pages, is designed to furnish brief directions for the management of the vegetable and flower garden; well illustrated and containing lists of flower and grass seeds—bulbs, plants, small fruits, etc. A gorgeous double-page, colored plate of seedling Coleus raised by Mr. Dreer, many of which are remarkably odd and beautiful, forms a part of the Catalogue. Among many novelties we notice the Telephone Pea, now for the first time offered in this country, though only in very small quantities, at a high price. Our lady readers can not fail to admire Mr Dreer's new strains of the Coleus.

H. J. BAKER & BRO., 215 Pearl St., New York. Circular of Forrester's Complete Manures prepared expressly for each crop. This gives analyses by Prof. S. W. Johnson, of Forrester's Chemical Fertilizers, and sets forth the advantages of their use. As aiding farmers to become familiar with their use, we hope our readers will send for this and all such circulars.

Scientific and Useful.

DR. ANGUS SMITH ON THE WASTE OF AMMONIA IN COKE-MAKING.

PROFESSOR F. H. STORER.

IN the lack of anthracite, which meets so many of our requirements here in America, vast quantities of coke are prepared all over Europe by distilling bituminous coal in special furnaces, from which great quantities of ammonia, tar, and illuminating-gas are suffered to go to waste.

Numerous schemes have been suggested, at one time and another, for saving, a part, at least, of these products: and the question of the ammonia, in particular, has long had a special interest for European farmers. That it is a subject of profound importance to them will be seen from the following computations made by Dr. Angus Smith, of Manchester, and published in a report made by him to the English government, which has just been issued

Taking 1876 as the latest year of which he had definite information upon the subject, he finds that fifteen million tons of coal were distilled in that year in England for the coke used in the iron manufacture alone. But from each ton of the coal five pounds of ammonia, or 20 pounds of sulphate of ammonia, might have been saved by using a certain Belgian method of coke-making, which he describes. That is to say, 130,000 long tons of the sulphate, worth at the current English rate £18 (or $90) the ton, or, altogether, eleven and a half million dollars per year, might be collected. Assuming the tar to be worth half as much as the ammonia-salt, the total product saved by using the Belgian system might be sold for $17,500,000.

In answer to the question what could be done with so large a mass of fertilizing material, Dr. Smith turns to the results obtained by Messrs. Lawes & Gilbert by years of carefully conducted experiments upon the farm, whence it appears that the 130,000 tons of sulphate of ammonia, used at the rate of 223 pounds to the acre, in conjunction with suitable quantities of superphosphate or other mineral fertilizer, would be enough to dress 1,300,000 acres of naturally strong land; and that some such increase of crops, and of money profit, as is given in the following table of Lawes & Gilbert might justly be expected.

Kinds of crops.	Crops from mineral manures alone.	Crops from mixed mineral manures and ammonium salt.	Increase per acre due to the ammonium salt.	Value of increase, in £ sterling, calculated upon 130,000 tons of ammonia.
Barley, at 35 sh. per quarter.	24 bu.	45.75 bu.	21.75 bu.	6,204,030
Barley, at 24 sh. per quarter.				4,254,194
Barley straw, at 3 sh. per cwt.	12.12 cwt	25 cwt	13.88 cwt	2,714,860
Wheat, at 45 sh. per quarter.	15.62 bu.	24.5 bu.	8.88 bu	3,256,659
Wheat, at 36 sh.				2,605,337
Wheat straw, at 3 sh. per cwt.	15.62 cwt	22.62 cwt	9 cwt	1,760,356
Oats, at 3 sh. 4d. per bushel.	17.75 bu.	45.37 bu.	27.62 bu.	6,001,552
Oat straw, at 3 sh. per cwt.	8.25 cwt	22.5 cwt	14.25 cwt	2,787,23

As matters actually stand, the price of sulphate of ammonia is a good deal influenced by that of nitrate of soda, brought from Peru; and the price of the nitrate depends in its turn, in some measure upon that of the ammonium salt. According to Mr. Lawes, the price of sulphate of ammonia is kept up by the German demand for sugar-beet cultivation. He urges that if a very large production of sulphate of ammonia took place, there can be no doubt that nitrate of soda would fall in price. He thinks, however, that an annual production of 100,000 tons of sulphate of ammonia could be sold without any serious reduction in price.

As Dr. Smith remarks, nothing could show more clearly that sulphate of ammonia is much needed in agriculture than this belief of a thoroughly well-informed man that so large a quantity could be thrown upon the market without seriously altering the price. He suggests that it would be a great advantage to agriculture if the amount made were many times greater, so that the price might be reduced

It is plain from the foregoing, that if the manufacture of coke in England were conducted as carefully as is asserted to be economically possible by the Belgians, the manufacturers would gain a great increase of profit, and the land might be made to yield an increase of crops equal to some forty millions of dollars.

Dr. Smith suggests, furthermore, that means may be discovered some day of cheaply converting the ammonia to a nitrate in which form still more advantage may be derived from it as a fertilizer; or even that the nitrogen of the air and the hydrogen of water may be made to combine, so that the available supply of ammonia may be immeasurably increased. But for either of these results special invention is required.

With an unlimited supply of ammonia, such as the invention last suggested would make possible, so enormous an increase of crops might be obtained that American produce would no longer need to be imported into England.

Arboricultural.

BIRCHES.

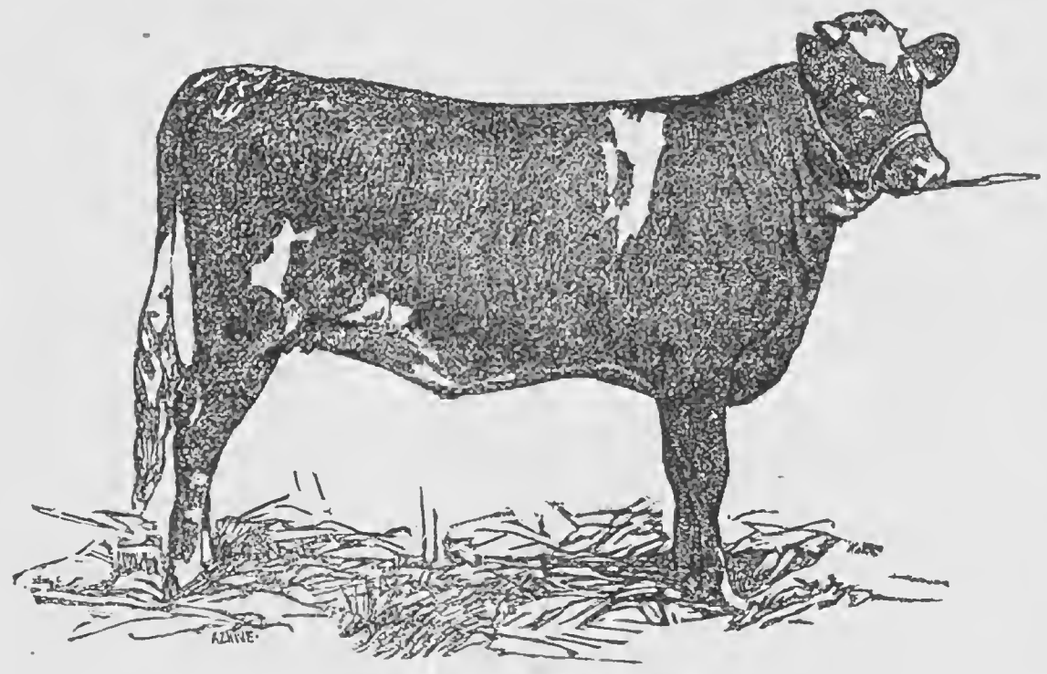
SAMUEL PARSONS JR.

COLERIDGE calls the Birch "the Lady of the Woods." The image seems indeed very apt when we contemplate the refinement of the Birch, its grace and lithesness, its varying moods and altogether delicate appearance. The wood is light and not always easily transplanted; that is, it needs to be treated with discretion and not planted late in the spring. Some trees, like the Poplar, Maple and Willow, will stand almost any amount of ill-timed planting and come out remarkably well; but the Birch, though amenable to good management, has its manners and habits which must not be slighted.

As a lawn tree it is in truth a fair lady, ornamental at all times. In early spring, the bright green satiny leaves unfold in dainty fashion. Later on the tender gray-green foliage delicately sifts sunlight and shadow, giving, in white Birches at least, sundry glimpses of staring, chalky-looking bark of striking character. In fall, the leaves of the same trees turn yellow, at times a beautiful yellow, and in winter delicate tracery of twigs and branches combine with strange-looking, white trunks to make a truly remarkable picture. Did you ever see a large Birch, particularly a weeping white Birch laden with icicles shining in the sun? If you have seen such a tree you will readily agree that it is one of the sights of winter to remember. Most Birches become eventually tall trees, although while young they do not always grow specially fast. Their comparatively slow growth, while young, and great beauty, entitle them to an isolated position on any lawn. The Birch may be planted effectively near a group of trees of broader contour and heavier foliage, or adjoining some arbor, bridge or bit of rustic contrivance. Masses or irregular rows may be properly formed of the commoner sorts along the edges of pools or streams, but ordinarily the tree is worthy of more distinguished treatment than employment in mass. On the whole, the spring is the best time to plant the Birch—early in the spring. Pruning greatly helps it, just as pruning helps all trees that have a tendency to weep. Its value is especially great in this case, because, if not pruned often in the young wood for some years, the Birch loses its lower branches, becomes top-heavy with overhanging boughs, and even sometimes falls in consequence to the ground. To give any idea of the various and numerous kinds of Birches, would require the description of half a hundred trees and shrubs.

Mainly we must have to do on the lawn with the European White Birch and its varieties. There are noble varieties in America, and kindred and equally beautiful kinds in India and different parts of Asia, but the Birch for lawns is essentially the European White Birch. It has in fullest perfection the "sparkling white bark and streaming branches arching like a fountain shower" so admired by every one for ages. This excellence, therefore, gives the European White Birch a first claim on our attention. The variableness of the appearance of different specimens, even where they are not distinct varieties, makes, perhaps, a prominent characteristic. Everywhere, in fact, we see specially weeping forms which, if they were only permanent, would preclude the necessity of grafting pendulous sports for the sake of perpetuity. The finest of the weeping varieties retained by grafting, is Young's Weeping Birch. Vigorous, down-sweeping curves of the most persistent, decided nature characterize its branches and the foliage is of fair size, vigorous and thrifty. Betula alba pendula elegans, the Elegant Weeping Birch, of French origin, is very pretty and graceful, but less thrifty and vigorous. The European Birch takes on, moreover, distinctly and finely cut-leaved forms, and combines this peculiarity with the weeping form in a quite unusual way.

All through the north of Europe, far up into Lapland, we find dwarf European Birches shrubby, small-leaved, and well suited to the lawn. In both America and Europe we have Betula nana, a very dwarf Birch, seldom over



LADY WILDEYES, 15TH.—FIG. 56.

three feet high, and bearing numerous leaves, little, round, smooth and sharply crenulated. The veins are beautifully outlined, especially on the under side of the leaf.

In speaking thus highly of the European White Birch, I don't wish to underrate the excellence of other Birches. American varieties, for instance, are very beautiful. There are, first the brown or yellowish-grey Birches. Less like our ordinary conception of Birches, they are yet lovely trees after their special manner.

Betula lenta, the Pliant Birch, otherwise called the Sweet, Black or Cherry Birch, does not look unlike a cherry tree on a casual glance. It grows large and prefers moist ground like many of its relatives, but also, like most of its relatives, adopts itself readily to most soils, even the most sterile. The leaves put forth early and are downy, and the bronze red twigs are aromatic. Indeed, many Birches after a shower or dew give forth a faint, delicate but delightful odor. Neither should I forget to mention the beautiful yellow "pussies" or catkins that appear on this, as well as many other Birches early in spring.

Betula lutea, the yellow or gray Birch, has a trunk yellowish gray, almost silvery in hue, with leaves more downy and less heart-shaped than the last.

Of the white-trunked Birches of America, there are two noteworthy species: Betula alba populifolia is decidedly attractive and valuable on the lawn. It is a moderate-sized tree, bearing triangular, taper-pointed, smooth and glossy leaves. The Canoe Birch (Betula papyrifera) is perhaps the most noteworthy American Birch. It makes a large tree with quite ovate or heart-shaped leaves. These leaves are dark-green, which makes a strong contrast with the distinctly white older portions of the trunk. The bark peels readily in ample sheets, whence its use for canoe building. B. alba populifolia peels readily also, but not in such masses as the larger papyracea. B. Bhojpattia, called the Indian Paper Birch, is a beautiful Indian species, not unlike our papyracea. B. acuminata of Nepaul is another Asian species, with very taper-pointed, smooth leaves and beautiful, pendulous, oval shape. These Asian species generally are very like our American Birches. I should have mentioned, perhaps, among the European White Birches, the variety Pubescens, bearing leaves covered with beautiful white hairs, as well as B. a. urticifolia, i. e., nettle-leaved, a deeply-cut, serrated and hairy variety, and a variegated kind of the same with leaves blotched with yellow.

I do not pretend to have mentioned all Birches valuable for the lawn, but only a few of the most distinctive. No lawn is perfect without some of these Birches, and any lawn is graced by their light and airy presence. They look and do specially well along the banks of streams, as already noted, and, as should be noted also, equally well on hill-sides and in nooks of rocks.

The Vineyard.

THE EUMELAN GRAPE.

IT is now nearly a decade since this Grape was given to the public with a flourish of trumpets, and the disseminators are said to have made a fortune out of it, and retired from business. The public were at first greatly disappointed with it, solely because of defects in its reproductive organs, the filament part of the stamen being generally aborted and the pollen insufficient, so that it does not fertilize well, causing the clusters to be emasculated. But fortunately the defects are in part confined to young vines; as they acquire age the pollen increases and the clusters become compact. The variety is therefore gaining in popular favor, the vine being hardy. The fruit is black, and the berries of medium size, high quality and flavor. The grape ripens earlier than the Delaware, the Adirondac and Champion only exceeding it in earliness; it never drops from the cluster, or becomes stale, but improves in flavor until frost, and keeps well for winter use. It belongs to our best botanical class, the Æstivalis, and is probably the earliest good grape of its class. It is more valuable for the table than wine. It succeeds better far North than any other Grape of its class.

If it were not for the inherent defect of emasculated clusters, I should consider it our most valuable native Grape. Even as it is, no collection is complete without it. For the hybridizer and amateur, it is invaluable; used as the pistillate parent, its defects do not appear in its seedlings more than in the case of other varieties with perfect reproductive organs, and in the seedlings its high quality seems refined and improved, not reverting or deteriorating so often as many other varieties, especially those of our Labrusca Grapes. It seems strong, vigorous and healthy under all circumstances, but perhaps it will not endure frost quite as well as some of our Labrusca vines of the Concord type, and neither can do this as well as the Cordifolia Grapes of the Clinton type. The Eumelan suffers little from the depredations of Phylloxera, and seldom suffers from mildew. The clusters were more perfect the past season than ever before, the weather happening to be propitious at blossoming time, and I fancied the pollen was more abundant. D. S. MARVIN.

rious.

BRITISH AGRICULTURAL NOTES.

FEW American farmers realize in any full degree the magnitude of the British agricultural imports. I have just been examining the returns for the year 1879, and have found much of interest to me. Broadly stated, the value of the imports of some leading articles, which are also produced by the farmers of the country, during 1879 was as follows:

Wheat and flour	£40,000,000
Other grains	20,750,000
Animals, meats, lard and tallow	22,000,000
Butter, cheese and eggs	16,500,000
Wool	23,260,000
Seeds	7,000,000
Potatoes	2,700,000

Adding the value of other minor agricultural imports, we have a total of over £140,000,000, and at least $680,000,000 valuation of the agricultural articles imported by Great Britain last year. Of the wheat and flour the United States supplied a little over half. One item which might not attract attention is yet worthy of special notice. The value of the importation of guano in 1879 was a little over £700,000; the imports in 1878 were valued at a little over £1,800,000, or a decrease in one year from nearly $9,000,000 to something less than $3,500,000. I do not recall any one fact which more clearly shows the feeling of depression among the agriculturists of the country than does this.

As a whole, the imports for last year were little larger than those for 1878 or 1877. In some articles there was an increase; in others a decrease.

Another table just at hand has decidedly interested me: that giving the sunshine during the years 1878 and 1879 at Greenwich Observatory. Last year there was bright sunshine 982.8 hours; in 1878 for 1,249.8. The first is less than one-fourth of the possible sunshine for a year. During January and February, 1879, there were but 45.5 hours of sunshine, and but 71.6 hours in November and December. In July last there were but 99.3 hours of sunshine. Both in 1878 and 1879 June had the most sunshine of any month. For the first full week of this year there were but 3.9 hours of sunshine out of a possible 56.

The great falling off in the demand for English farms is well shown by the fact that one number of one English paper contains advertisements of 80 farms, aggregating 17,000 acres, which are to let. In prosperous times it has been the rule to have several applicants for each vacant farm; now there are several farms from which each applicant can choose.

The Mark Lane Express has published reports as to the harvest of 1879 from 453 correspondents, representing every county in England and 10 of the Welsh counties. The reports are the most discouraging ever published. One farm reported an average wheat crop and only two barley crops were above average, with 51 reported as average. Oats were much better, more than half being average or better.

The same number of the English Agricultural Gazette, from which the above notes have been collected, reports recent auction sales of forest trees. Thus in Hampshire 887 trees, of beech, elm, ash, fir, oak, poplar, etc., brought £775. In Gloucestershire 132 trees brought £297; 71 black poplars, £133; 740 beech trees, £600; 90 elm, £184; 144 oak, £755. This last sale of oak was at the rate of about $25 per tree.

I take much interest in such evidences of the condition of agricultural affairs in Great Britain, and it occurred to me this collection of notes on a single number of a weekly agricultural paper might interest RURAL readers.

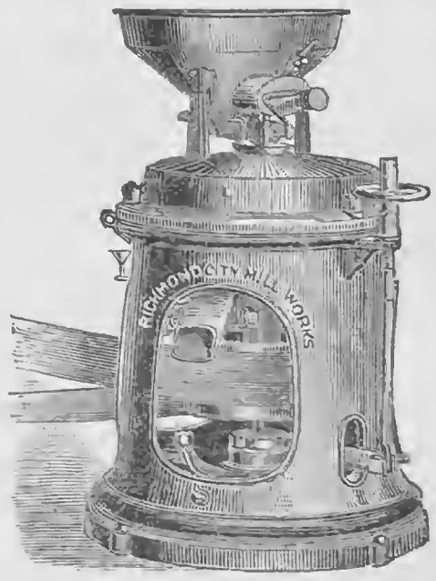
G. E. MORROW.

OUR ANIMAL PORTRAITS.—The accompanying cut represents the yearling heifer, Lady Wildeyes, 15th winner of the 1st prize at Kilburn, when ten months and one week old. The little beauty was then considered almost an ideal Short-horn calf. She is the property of Lord Fitzhardinge, and the daughter of the Duke of Connaught, of the celebrated Bates Dutchess tribe. The Wildeyes tribe, whose blood she largely shares in, dates away back to about 1832 when Mr. Bates bought from Mr. Parrington, of Middleboro' farm, the first of the tribe, then called Wildair, but afterwards christened Wildeyes.

Industrial Implements.

THE "PRIDE OF RICHMOND" MILL.

THIS neat, little 20-inch mill has proved a success where a small mill of from two to six horse power has sufficed. It has a capacity of from 4 to 15 bushels of corn, and from 10 to 25 bushels of feed per hour, depending on the power and number of revolutions. The pulley is 14x7, and the number of revolutions per minute should not be less than 350 and may be as high as 800. The burrs are of best Anchor stock; the husk of iron cast in one piece, turned quite true to receive the bed-stone cap,



which is also turned true and provided with hinges, so that the mill can be opened for examination or dressing the stone. The bed-stone and cap are held in position by bolts passing through rubber springs, which yield when any hard substance passes in with the grain, thus preventing breakage. The spindle is of the best wrought iron, with steel cock-head and toe; the tram pot is adjustable with three tram screws; the runner-stone has improved self-adjusting irons, and before leaving the shop the stone is put into perfect running and standing balance. The mills are made with silent feed or a damsel hopper and shoe, and the delivery spout may be readily changed to either side. We have heard very good accounts of these mills from several quarters. They will be furnished on short notice and all information about them at once by the Richmond City Mill Works, Richmond, Ind.

Everywhere.

RURAL SPECIAL REPORTS.

ILLINOIS, Baileyville, Ogle Co., Feb. 4.—The mild, wet weather in January, followed by hard freezing the last few days of the month, while the ground was bare, injured the winter wheat in this section, but we cannot yet tell how badly it is damaged. The 2nd inst.—"Ground-hog Day"—was fair and, according to the old saying, our G. H. came out of his sub-terranean winter-quarters and seeing his shadow, retired again for six weeks more of winter; and, strange as it may seem, there came a heavy snow storm the next day. Clear and cold to-day, 3 deg. below zero this morning. Business has been dull the past month, but now seems to be reviving. W. E. D.

KANSAS, Parsons, Labette Co, Jan. 31.—Weather is the topic of universal interest, and it is not surprising it is so, when our health and material interests are so much affected by it. Our fall and early winter were fine and dry, and plowing was prosecuted by those who don't have more work than they can do. We plowed last week and this, and are nearly through. Yesterday we had two inches of rain, being the second rain since November, the first rain being nearly three inches. Saving in the spring, we are not apt to have showers. Our rains are singularly regular. We hardly fail to get a rain within a period of a month, and there will be an average of two inches. The interval is too long in July and August, as our winds, heat and the character of the soil evaporate the moisture rapidly. At the end of two weeks after a rain, in those months, crops begin to show a lack of moisture, or, I should say, a lack of food, which the moisture would render available in the soil. Our blue grass is ready to show its color fully as soon as the frosts cease. Wheat is looking well. Our farmers have had a good time in hauling off and selling their corn which was more than an average crop. Prices have been "booming" for this region, all having gone to our southern sister, Texas. Prices have been as high as 32 cts. Wheat here is $1.10; flour, $4 per 100 pounds; potatoes, $1: prairie hay, $4 per ton; eggs, 10 cts. per doz. Did you ever hear of the Texodusters? You have heard of the "exodus," of course. Now you derive from this the "exoduster." So also you have heard of Texas; from this we derive *Texodus*, and thence we derive Texoduster. The Texodus commenced about the first of November, and has been pretty continuous ever since. Till that time there had been no unusual influx of negroes. In fact there had been no movement of them except the usual barbers, boot-blacks, porters, etc. Parsons, being the first important point out of Texas, and the junction of several divergent railroads, it became the chief rendezvous of the exodus. While we would rather not have this immigration, we must make the best disposition of the matter we can. We had in 4 000 people, 200 negroes. Now, in 5 000 we have more than 1,000 negroes. They are laborers, plantation hands, and small farmers. They are intelligent, and well behaved for their class. The Board of Education has prepared a special room for the youth of the exodusters. S. B.

MASS., Winchendon, Worcester Co., Feb. 3.—We had very mild weather here for the last month, but this month has commenced like winter. To day it snows and blows like a hurricane. Beef and pork are selling here for $6 per 100 pounds. Most of the people about here would like to see a couple of months of good sledding. J. S.

MICHIGAN, North Byron, Kent Co., Feb. 5th, 1880.—We are having quite an open winter. No snow during January, but an unusual fall of rain. Farmers were plowing their old meadows last week and the week before. But February has come to us with a clear, cold greeting, with about four inches of snow, which will make a good covering for our wheat, which at present is looking well. Prices are: wheat, $1.20; corn, 45c.; butter, 18c. to 20c.; eggs, 14c. to 16c.; pork, $4.50 to $5 per 100 pounds. W. K. E.

MO., Springfield, Green Co., Feb. 3.—All through January the weather here was very warm, so that farmers kept on plowing all the time. Wheat looks well and more than the usual acreage has been planted. I have about four acres in Raspberries, including all the kinds I could get; but after three years' experience, I have come to the conclusion that for this section the Thwack is best. J. B. L.

N. Y., Elmira, Chemung Co., Feb. 2.—Thus far our winter has been remarkably mild and open. We have not had a week of steady freezing weather, or a day of good sleighing, and owing to a large amount of rain the roads for the most of the time have been bad and the wheeling heavy, especially on those very much traveled. This kind of weather, although unfavorable for teaming has been favorable on some accounts. It has enabled farmers to plow and to do up a large amount of work that will relieve them when the more busy season of spring opens. It has also been very favorable for a large number of farmers hereabouts who were short of fodder and feed for stock. Owing to the severe drought last summer, our farmers gathered a much less quantity of hay than usual, and in consequence the price advanced in Elmira to $15 per ton for hay of good quality; but the mild winter and the economy with which farmers generally used their feed have made a much lighter demand for it than usual, so that there is a considerable falling off in the price of hay. The prospects for the winter wheat crop in this locality are poor indeed. The dry weather last fall allowed it to make but feeble growth at best and some late-sowed crops made no growth above ground at all. This fact in connection with our open winter, with much alternate freezing and thawing, will doubtless leave it in poor condition by spring. I think the yield per acre of winter wheat in this country will fall 50 per cent. below the average. As I have stated in previous communications, the farmers in the Chemung Valley are largely engaged in growing tobacco. It has been estimated that the present crop will yield about 5,500 cases or 2,200,000 pounds. Probably one-half of this has already been bought up, by New York dealers mostly. The prices paid have ranged from 11 to 15c. per pound for running lots. The weather has been very favorable for handling tobacco, and growers are busy assorting their crops and preparing them for market. There is a marked contrast in the present prices of farm produce here and those of a year ago. The prices of the principal products are as follows: Wheat $1 35; corn 63c.; oats 35c. to 40c.; barley 60c. to 70c. per bushel; hay $10 to $13; straw $6 to $8 per ton. G. A. G. JR.

OHIO, Mt. Vernon, Jan. 28.—We are passing through one of the most delightful winters that ever was witnessed in this section. Everything looks well, especially the wheat; never was such a showing as now, and more acreage by one-half is under it. Ice has not formed this month an inch thick. We can cut good spinach and rhubarb from the open ground. Our prices are a shade lower for staple goods:—Potatoes 35 to 40c.; apples, New York State select, $1.25 per bushel. Last season you could leave off the $ mark and then have to crowd the bushel to get the 25 cents' worth. Wheat, $1.25; oats, 35; corn, 50 cents; cabbage $4 per 100; onions, $3.50 per bushel. Last season they were 50 cents and dull at that. Our ice-men's lips are beginning to quiver—they are beginning to think there's no show for them. Our prospects for a fruit crop for next season are good. I have a large peach orchard that is loaded with perfect buds. Is there anything anyone could suggest that will help to keep Hale's Early from rotting so badly? Would it not be a good idea to mulch well with fodder to keep the ground cooler and then thin out freely when about half grown? M. W.

PA., Winterburn, Clearfield Co. Feb. 6.—Winter very open, so far no snow or cold weather of any account, which is very acceptable to the farmers in this community as it will save fodder, which is very scarce—hardly any to be bought at any price. Other products are reasonably plentiful at fair prices. Lumbering forms one of the chief pursuits here; so far the winter is very discouraging to many engaged in this industry, as they depend on snow to haul their logs and timber to the streams. H. F. S.

TENN., Waverly, Humboldt Co, Feb. 5.—This has been the warmest winter to the 1st of Feb. that we have known for many years. Now winter seems to have set in, snow fell here on the 2d., 14 inches deep. S. E. S.

VA., Fredericksburgh, Spottsylvania Co., Feb. 3.—We have had a very mild winter so far; no ice harvest yet, and a very poor prospect for any. There was just a fair average of ground sown in wheat last fall, which at this time is looking very well indeed—rather better than it generally does at this time of the year. The prices of grain and farm products have had a fall here as well as elsewhere. Choice red wheat is now worth $1.47 per bushel; new corn, from 55@57 cts.; rye, 80@85 cts.; oats, 40@42 cts.; apples, $1 per bushel. Wheat has yet a downward tendency. The farmers through this section make as much money from dressed hogshead hoop poles as from any thing else; in fact it is the main business from early fa to late spring. F. M.

VERMONT, Newport, Orleans Co., Feb. 6.—I see you call Honey Locust "iron-clad." It will not stand a single winter here without being cut down to the snow line. The only hardy deciduous hedge plant we have is Buckthorn. Have had a very open winter. No snow on the ground to-day, and a warm south wind with bright sun. Plowing has continued at intervals all winter, and winter rye has been sown this month—an almost unprecedented event in Vermont. Expect to "catch it" later on, T. H. H

The Querist.

ANSWERS TO CORRESPONDENTS.

Raising Early Potatoes in Boxes.

W. S. T., Cornwall, Ont., asks if potatoes can be started in boxes in the house so as to have early potatoes, if so, please describe the best plan.

ANS.—Yes, potatoes can be grown in boxes for early use. Procure boxes three feet long, one foot wide and ten inches deep; bore half-a-dozen holes in the bottom of each to give outlet to the surplus water. Put in about six inches of rich garden loam, and plant in each box five potatoes of some early variety. The boxes should then be put in a warm place and the soil kept moist. As soon as the sprouts appear above ground, they should have as much light and air as possible and still be kept warm. A hot-bed, with a gentle under heat, will then be the best place to set the boxes, as the sashes can be removed on mild days. A greenhouse will do very well, but the plants can hardly get there all the fresh air they need. When the tops are about six inches high, put in two more inches of soil, and, two weeks later, entirely fill the boxes. By this management new potatoes can be had in the beginning of May. Of course, one who has not the use of a hot-bed or a greenhouse, can place the boxes under the windows in a warm, sunny room, and on mild days place them under a wall on the sunny side of a building; but this would entail more labor, and the results would not be quite so satisfactory.

About Cow-peas.

P. C. S., Hurlocks, Ind., asks whether it would be well to sow Cow-peas about March 20, and turn them under to fertilize for sweet potatoes, say about May 20, or about two months after sowing them; 2, about how high would they grow in that length of time; 3, how much seed for an acre; 4, he sends specimens of what is there called Black-eyed peas and inquires whether they are like Cow-peas.

ANS.—1, There would not be enough vines in so short a period of growth to enrich the ground profitably. 2, Probably one foot in your climate—but the different kinds vary in earliness and hight. 3. We should sow one bushel to the acre in drills four feet apart. 4. "Black-eye" is one kind of Cow pea which is a generic name comprising many varieties and *perhaps* several species.

Sowing Blue Grass.

H. H. M., Troy, Mo., asks how many pounds of blue grass it takes to sow an acre, and whether it is best to sow it by itself or with oats.

ANS.—Blue grass should not be sown alone, as it grows very slowly and will be three years before it makes much show. Twenty pounds per acre or 1½ bushel may be sown with timothy, orchard grass and clover; (6 lbs., 20 lbs. and 8 lbs., respectively) and when these begin to fail, the blue grass will appear and occupy the ground. It is obvious that a grass of this kind should not be sown alone, but if mixed with the above varieties, they would be well sown without any crop as early in spring as possible.

Peaches in Succession.

J. T., Olive Bridge, N. Y., asks for a list of early, medium and late peaches.

ANS.—As the three best varieties for a succession of fruit for your section, we would name Mountain Rose for early; Oldmixon Free for medium, and Crawford's Late for late. Alexander's Early, Hale's Early, and others of the same class are earlier than Mountain Rose; but are not reliable in your section owing to the rotting badly of the fruit on the tree and so soon as gathered. The best *very* late sorts are Beers's Smock and Salway. These are so late, however, that they fail occasionally to mature their fruit so far north.

"Tawing" Sheep Skins.

L. H., Steubenville, O., asks how to "taw" sheep skins, as mentioned in a late Rural.

ANS.—Tawing is done by scraping the flesh side of the pelt clean from all flesh or fat, then sprinkling it with a mixture of finely powdered alum and salt in equal parts. Two skins are then laid with the flesh sides together, or a single one doubled lengthwise, and rolled up for a week or ten days; then opened, scraped and washed, and rubbed dry with a piece of chalk, and worked and pulled until the skin is soft.

Miscellaneous.

L., Springle, Suffolk Co., N. Y., asks what manures we used to produce the yield of oats described under Notes from the Rural Farm; the previous treatment of land etc.

ANS.—The crop taken off in 1878 was corn. Mapes's "Corn Manure" was used in hill only. Previously for five years, the field (nearly five acres) was in grass. Last year it was sowed to oats and an "oat fertilizer" purchased of H. J. Baker and Brother (215 Pearl St. New York), was sown at the rate of 400 pounds to the acre. The season was favorable to the crop and the yield was nearly 70 bushels to the acre. The oat fertilizers, Mr. Baker informs us, is known as "Forrester's Oat Manure." The soil of the above field is a sandy (somewhat gravelly) loam. We credit the fertilzer with the large results obtained, though having made no comparative tests, we cannot state to what extent the large yield was due to its use. Mr. Baker, upon application, will furnish descriptive price lists and any desired information. We trust that our farmer readers will accept the RURAL'S advice so often given, viz., to try different kinds of concentrated manures on small plots, with adjoining plots cultivated to the same crop without manure, so that the effect of the fertilizers may be shown. We should state that we deemed the above field not well adapted to oats or, indeed, to any other crop, having received no manure for ten years, except as noted above.

A. C., Liberty Falls, N. Y., asks 1, if there is anything known that will prevent peas getting weevil-eaten.

ANS.—No adequate remedy is known. Since the insects are confined in barrels or bags with the peas until spring, they may be killed by immersing the bags, peas, bugs and all, in warm water for a few hours before planting; thus by exterminating the old insects there would be no progeny. This, of course, would still be a useless task, unless everybody in a whole district would take the same precaution.

R. B. M., Mountain View, Ont., asks 1, which is the best way to build stone under-drains—to lay the stones or tumble them in? 2. Do we take Canadian postage stamps for fractions of a dollar when subscribers cannot procure American ones?

ANS.—1. Lay the stones in the bottom of the drain, and take care to arrange them so as to leave an open water course; for the upper portion they can be tumbled in. 2. We prefer not to take Canadian stamps.

H. B., Greenville, S. C., asks, 1, where we think he can get the most reliable improved seed corn; 2, where can he get fine pure seed of the peanut that has three or four peas in a shell and the price.

ANS.—1. Send for catalogues recently noticed and make selections therefrom. 2 Visit the markets and select peanuts that have three and four seeds. For price see market reports.

M. Y., Cincinnati, O., asks for the exact proportions of the mixture for preventing mice from injuring fruit trees, as given in RURAL of Dec. 20.

ANS.—First put enough quick lime in a pail to make a pailful of ordinary whitewash. Then add a gill each of sulphur, hellebore, whale-oil or soft-soap, and enough of lamp-black and red mineral paint to give the desired coloring in imitation of the color of the bark of the trees to be washed. Fill the pail three-quarters full of boiling water. Stir frequently while using.

L. R. T., Charleton, Saratoga Co. N. Y., asks where can he get Cow-peas.

ANS.—See advertising columns.

B. B., Portageville, Wyoming Co., N. Y., asks how to tan coon skins, leaving the fur on. Who can tell him?

H. E. P., Loganville Pa., asks many questions respecting the culture of Roses, all of which are fully answered in the Rose Guide published by the Dingee and Conard Co., of West Grove, Chester Co., Pa., noticed under Catalogues etc., Rec'd.

G. E. P., Toledo, O., asks for information about the Duchesse de Bordeaux pear for market.

ANS.—It has not been extensively planted. It is a winter pear, sweet and of fair quality. Tree a vigorous grower.

J. C., Monmouth Co., N. J., asks when to sow green peas to insure the earliest crop.

ANS.—The latter part of this month, if the ground can be worked. The wrinkled sorts are more tender than the smooth early sorts.

H. F. S., Shelburne, Vt, asks if Benson, Maule & Co. of 223 Church St., Phila., are a responsible firm to deal with.

ANS.—They are considered responsible and reliable parties.

F. H. S., Baden, Pa., asks if Cricket on the Hearth is published now, and if so, where.

ANS.—The above paper is published at 245 Broadway.

G. K., Greensboro, N. C., asks where can Egyptian, or Rice Corn and Doura be obtained.

ANS.—See our advertising columns for several weeks past.

TO INQUIRERS.—We are constantly in receipt of inquiries about the prices of seeds, tools, etc., and where they can be had. etc., etc, all of which are answered either in our advertising columns, under Catalogues Received, or in our market reports. We have a large number of queries of this kind now on hand, and for answers we hereby refer our friends to the above store-houses of valuable information.

Miscellaneous.

PROF. C. V. RILEY'S REPLY.

TO THE EDITOR OF THE RURAL NEW YORKER:

Dear Sir:—In your issue for Jan. 31st, you seek to defend the charges to which I took exception, by a long letter from the present Commissioner of Agriculture. You are kind enough to ask suspension of judgment till I am again heard from, and to hope that any further controversy may prove "short, pertinent, and decisive." More lies are easily crowded into one line than can be refuted in a hundred; but, so far as a reply to nearly four columns of what is largely misrepresentation can be made short, I will endeavor to make it so. Your first and second statements, the truth of which I denied, are comparatively unimportant; nor do I see that you have proved the first, or that I sought the position in any way beyond that which I mentioned. In reply to my second denial, you state that you received a letter from me asking you to pronounce upon my fitness, and so on. I beg you to produce that letter in proof, as I have no recollection of it.

[The letter itself has not been preserved. The following affidavits are offered in proof that it was received:

This is to certify that a letter, signed C. V. Riley, and directed to the Editor of the "Rural New-Yorker," was received a few weeks prior to his appointment as Entomologist to the Department of Agriculture. The purport of the letter was as follows: "My name has been mentioned in connection with the position of Entomologist to the Department of Agriculture, made vacant by the illness of Prof. Glover. Would you kindly state whether, or not, you deem me qualified to fill that position?"

Signed {E. S. CARMAN, Editor "Rural New-Yorker."
{W. L. HERBERT, Assistant Editor.]

THE STATE, CITY AND COUNTY } ss.
OF NEW-YORK. }

The foregoing writing was subscribed and sworn to before me this 9th February, 1880.

J. B. NONES, Notary Public,
91 Duane S.t, New-York.

The letters of recommendation in my behalf, which are in Gen. Le Duc's possession, will show (if he care to produce them) the character of the writers, and prove the truth of my statement that I sought principally the opinion of leading naturalists, particularly entomologists. That I included a few editors of agricultural journals to which I had been in the habit of contributing, and requested them to send their opinion to the Commissioner, or to me, is most probable; but the expressions of the press, as such, were spontaneous, and not asked for.

The burden of your defense rests with the fourth statement: viz., that I exerted my best influence to get back to the Department, after having resigned. In support of this charge you depend on the evidence of Gen. Le Duc, at once indicating by whom the charge was prompted.

I am aware how difficult it is for me to prove the utter falsity of conversations purporting to be reported. Fortunately, however, in this case, evidence of fabrication is frequently apparent; for no one who knows me will believe that I have given utterance to the language imputed to me in many instances. For the rest, I must depend on the testimony of others. Not to claim too much of your valuable space, I can best state the truth by reciting, as briefly as possible, the facts that in any way bear upon my resignation and upon the point in dispute, and by referring, as I proceed, to the evidence, duly enumerated, which I send for your own satisfaction, but which I hope you will make room for at the end of this communication, even if you have to print it in solid agate or diamond.

I accepted the position of Entomologist to the Department with a full determination to endeavor to accomplish practical good. With this view, one of my first efforts was to secure, with the Commissioner's aid, an appropriation for the Entomological Division, of $5,000, by the passage of the following clause, taken from the legislative bill, and penned by myself:

"For investigating the history and habits of insects injurious to agriculture; for experiments in ascertaining the best means of destroying them; for chemicals, traveling, and other expenses *in the practical work of the entomological division*.....$5000.00."

I also successfully used my efforts to have another special appropriation of $5000.00, for the investigation of insects affecting the cotton plant, diverted to the Department. Senator Morgan, of Alabama, who drafted the bill, and who originally wanted a separate commission, will testify to the fact.

I deposited in the Department my entomological library and collection, and began to introduce various needed reforms. For a while everything went on most agreeably, but finally I had some difficulty in getting the Commissioner to heed, and, more particularly, to carry out, sundry propositions; and I gradually came so to deplore his abrupt and overbearing manner that I twice expressed to him my belief that I was not the kind of man he wanted, and had, perhaps, better retire. I remained upon assurances to the contrary, and upon finding that my own experience was not exceptional. As Entomologist of the Department I naturally felt interested in, and largely responsible for, the results to flow from the expenditure of the special appropriations above alluded to, and which had never before been made to the Department; and, finding that they were being used for other general expenses of the division, which had in previous years been met by appropriations to the Department, I felt obliged to remonstrate against such diversion. On one occasion, in order to avoid such diversion in the future, I urged the Commissioner to have the regular employees of the division specifically provided for in the regular estimates. [In the present year's estimates these appropriations are asked for in the exact form in which I urged them, thus proving the force and necessity of my suggestion.] He remarked: "Prof. Riley, I feel myself abundantly able to run this Department. When I want you to do so I will let you know."

[C] Both the manner and the language of his reply were so offensive, that I immediately wrote my letter of resignation. Wishing to present it in person I went two or three times to the Commissioner's room, but found him, each time, occupied with visitors. I then asked Mr. Carman, the Chief Clerk, to take it in, explaining to him its purport. He expressed regret at my action, and begged me to reconsider it. I replied that my course had been well considered, narrated the facts as just set forth, and finally told him that I would reserve the letter of resignation till the following morning, so as to give him an opportunity of ascertaining whether the Commissioner meant his language to be offensive. Upon being informed by Mr. Carman, next day, that the Commissioner had vouchsafed no explanation, I tendered the letter of resignation. A few hours later, Mr. Carman came to my room and stated that my resignation had been accepted, but that the Commissioner desired me to remain until the 1st of July. I declined to do so, remarking that I did not care to remain beyond the time necessary to get matters in shape for my successor. At the same time I asked him what was the cause of the Commissioner's offensive manner, and was informed that he (the Commissioner) charged me with the interference in the matter of legislation presently referred to. This was not "some days later" as Mr. Carman states in his card," but the very day of my resignation, which was Saturday; for it was on the following day (I was in the habit of spending Sunday morning at the Department, and generally found Mr. Carman and the Commissioner there), that I went to the Commissioner; stated what Mr. Carman had told me; denied having had anything to do with the matter with which I was charged, and told him that for my own satisfaction and vindication I would endeavor to ascertain the facts. From that time on I never gave Mr. Carman, either by word or act, the first reason for supposing that I wished to be reinstated, and it is evident from the latter part of his card that he has confounded with such wish my expressed determination to give the Commissioner proof of his error, and that in other particulars his memory has played him false. [The foregoing statement from the C in brackets, has been shown to Mr. Carman. See evidence marked C.] That some of the statements which I am reported to have made in conversation with the Commissioner, may be understood, it is necessary to premise that in accepting the position of Entomologist to the Department, in the spring of 1878, I nominally retained the chieftainship of the U. S. Entomological Commission, with which I had been honored, but renounced the salary and active charge. For reasons best known to himself, and entirely without the knowledge or request of any member of the Commission, the chairman of the House Committee on Appropriations, (Mr. Atkins), had caused the words "and the cotton worm" to be added to the clause in the Sundry Civil Bill appropriating for the work of the Commission on the Rocky Mountain locust. This seemed like a reflection on the Department, which was then carrying on the cotton-worm investigation under my direction. Commissioner Le Duc, on the Sunday alluded to, confessed that his previous offensive manner was due to the belief that those quoted words were inserted at my instance, but superadded insult by hesitating to accept my word to the contrary. He even repudiated the evidence in the following letter, subsequently obtained for my own satisfaction.

COMMITTEE ON APPROPRIATIONS,
HOUSE OF REPRESENTATIVES,
WASHINGTON, D. C., APRIL 1, 1879.

PROFESSOR C. V. RILEY, *Dear Sir*:—Your letter of the 3rd. inst is at hand. The words "and the cotton worm" to which you refer in your letter as being contained in the Sundry Civil Bill, were inserted at my instance, and upon my responsibility alone, without suggestions from you or from any one else, Respectfully,

L. D. C. ATKINS.

It is true that when I learned the cause of the Commissioner's irritation I took pains to prove that he had wronged me; and for this purpose wrote to the only persons who would be likely to know the facts and my course in the matter, expressly stating that I did so for my own satisfaction, and not with a view of remaining in the Department. These persons were the Hon. Mr. Atkins, whose letter is above reproduced; Senators A. S. Paddock and Wm. Windom, who were at the time chairmen respectively of the Committees on Agriculture and Appropriations in the Senate; and Professor Thomas and Dr. Packard, my co-laborers on the Entomological Commission. [See letter marked A. They were all of the same purport except that those to the Senators also called attention to previous letters, in which I had endeavored to have the offending words stricken out.] The replies of the two last named gentlemen were addressed direct to the Commissioner, and I have not seen them. If they expressed any hope that the difficulty would be adjusted or that I should remain, it was, (as in the case of Senator Paddock), without request of mine, as they will testify. The other letters were addressed to me and submitted by me to the Commissioner [see letter marked P, that from Senator Windom being to the same effect.] [A few days after the above mentioned occurrence, the Washington papers and others, announced that I had resigned on account of ill-health, and was going West to recuperate—the presumption being that the information emanated from the Department. This obliged me to give the facts, which I did in the following card dated April 3. Slip A.

[To the Editor of the Post:]

Sir; It has been announced in your columns and elsewhere, that I have resigned my position as Entomologist of the Department of Agriculture on account of ill-health, etc. Those who originated such a report must have had some other end in view than truth, and I cannot have such a report wired over the country, to excite unnecessary anxiety among friends, without correcting it. My health was never better, and the real cause of my resignation may be gathered from the following letter tendering it: [Letter already published in the Commissioner's communication.]

It is to be regretted—but not on my own account—that the public and private expressions about the matter were not more gratifying to the Commissioner.

Regarding the Baltimore Gazette paragraph to which the Commissioner devoted a column and a half, I cannot see what it has to do with the question in hand; for if it proves anything it confirms my statements, since I should certainly not have taken that mode of conciliating the Commissioner, had I desired reinstatement. The report is, however, sufficiently erroneous to have done me more harm than it did General Le Duc, and the following letter will throw some light and truth thereon.

DEPARTMENT OF AGRICULTURE.)
ENTOMOLOGICAL DIVISION, APRIL 17, 1879.{

Sir:—Your favor of the 16th, inclosing a paragraph from the Baltimore Gazette and requesting my avowal, denial or explanation of certain charges against you, with which my name is therein coupled has been handed to me.

I have already given you orally, in a general way, the facts in connection with said paragraph, so far as I have any knowledge of them, but am glad of the opportunity of doing so formally and specifically, especially since I have been further misrepresented by the Editor of the Sunday Republic, who, at your instance as he avowed, called on me last week to get the facts in relation to another paragraph in the Louisville Courier-Journal, based upon the Gazette item, but containing sundry additions. I stated to him the facts in the case, as they are given below; yet, in the last issue of his paper he puts words in my mouth which I never uttered, and, by a reckless disregard for the truth, places himself in the same category with those whom he justly condemns.

The reporter of the Baltimore Gazette introduced himself as such, at my residence, soon after my resignation, with the avowed purpose of learning more as to the cause of said resignation. A stranger to me, I informed him that the reasons were given in my published letter tendering it; that it was purely a personal matter; that in offering some suggestions for the benefit of my Division, you had treated me with what I considered insulting manner and language, that you had wrongly charged me with having been instrumental in getting the words "and the cotton worm," added to the clause in the Sundry Civil Bill appropriation for the United States Entomological Commission; that you hesitated to accept my word to the contrary; and, finally, that full and satisfactory proof of my veracity and of your error had been furnished by men familiar with the facts.

The reporter then cited various charges that have been and are being made against you. I informed him, in reply, that my resignation had nothing to do with them, except so far as I might have incurred your displeasure by having remonstrated against the diversion of the special appropriations for the investigation of injurious insects to the payment of the clerks and draftsman employed in the Entomological Division.

I deny having said anything about the cotton worm fund being so drawn upon that I could not operate with success, or about a draftsman being sent to Minnesota to make plans for a new house for you.

The loose paragraphs about my resignation which have misrepresented me, from being colored by some underlying person al motive on the part of the writers thereof, have been extremely annoying to me, as I would gladly avoid this kind of notoriety.

Of your conduct, which induced my resignation, I have just cause for complaint; but it was totally foreign to the gossip afloat about the Department management, of which I have heard enough since my resignation to make me trebly satisfied with the course I have taken.

Your letter, with inclosed slip, is returned herewith, as requested. Respectfully,

C. V. RILEY, *Entomologist*.
W. G. LE DUC, *Commissioner of Agriculture*.

The above letter gives the truth about the interview, and it states only what I had previously stated to the Commissioner by word of mouth. Mr. Butler took no notes during the interview, and he drew on his imagination or on other sources of information in so far as his report departs from my statements. I pronounce the reputed stenographic report of my verbal remarks in the main erroneous and misleading, while the interview had with me by Mr. Brisbin Walker was, from the subsequent untruthful report of it, so evidently contrived for a purpose, that it is hardly necessary to add in confirmation of that interpretation of it that, as I have good reason for believing, Mr. Walker was at the time receiving $100 per month for his services in preparing and editing items intended to popularize and laud the Department and the Commissioner; and that he has since been sent to Colorado as an agent of the Department to "investigate mineral lands." He would be an idiot indeed who, after acknowledging and explaining the interview, should deny its having taken place! The following letter was addressed to Mr. Walker but never published.

[Letter to the Editor of the Republic, April 14, 1879]

I had thought that the letter tendering my resignation of the position of Entomologist to the Department of Agriculture, which I found it necessary to make public in order to correct an erroneous announcement regarding my health, was a sufficient explanation of my conduct. The reputed conversation with me to which you refer as contained in the Louisville Courier Journal, couples my name in an unwarranted manner with the charges against Commissioner Le Duc which have lately been bruited about; and I so informed you when you called upon me. But I also informed you of the facts in regard to the origin of the paragraph in question, and neither uttered the words which you put into my mouth nor gave expression to anything that would warrant such a quotation. On the contrary I told you that the paragraph was made up, with additions, from a report that first appeared in the Baltimore Gazette and that this last was based upon an interview with me by a reporter of that paper who introduced himself at my residence and who managed to misrepresent my statements almost as thoroughly as you have done.

Regarding the so-called reports of my conversations on the 29th of April, they are so incomplete, garbled and misleading that they show one of two things: either, first, that Mr. La Dow (the stenographer whose occupation is to be ever near the Commissioner to take down conversation) is a most indifferent reporter and the Commissioner's mind and memory very faulty: or, second, that the one is a tool of the other in willful misrepresentation. I have a vivid recollection of the whole conversation, and herewith give the facts with the evidence in confirmation, so far as it can be given. It was Thursday and I was to leave on the Saturday of that week. I had already moved my affairs from the Department; had been in correspondence with Prof. Comstock and knew that he had assurances of being my successor. [II.] He had, in considering a previous arrangement with me, stated that his term at Cornell ended June 1st. [II.] and this fact with the further fact that, as the day of my leaving approached, it became evident that certain special work on the cotton insect report could not be satisfactorily finished, had led me in various conversations with the Chief Clerk to discuss the propriety of continuing work till the 1st of June, and of modifying my previous declination to remain till July. At Mr. Carman's suggestion I broached the subject to the Commissioner, explaining why it would, perhaps, be best for me to finish the work referred to; that there were parts of the South that I much desired to visit, and that I would remain till June 1st if he desired it. He replied that he understood I desired it; to which I retorted that I was indifferent, and the matter ended. We then conversed for some time on various subjects connected with my resignation. I expressed a wish to know (as he had up to that time preserved silence on the subject) whether he still thought, after the evidence, that I was guilty of what he had charged me with. He replied in the negative and said that I ought to have been less sensitive to his abrupt manner, as he was frequently annoyed and irritated by the constant flow of visitors into his office and the consequent interruption to his work. I confessed to possible haste, but felt that my course was justified by his subsequent action, as I had known for some time from letters received from Prof. Thomas that he had emphatically declined, and no disposition had been shown on his (the Commissioner's) part to retract or settle our differences. I then, in reply to the charge of instigating the statement in the Butler report about Prof. Thomas's "Caustic letter of refusal" explained the facts very much as they are given herewith and also stated Prof. Thomas's position and why he had declined.

At this meeting I expressed the desire to see Mr. Butler in presence of the Commissioner, since there was a question of veracity between us. He agreed to have Mr. Butler there the next day, but this gentleman failed to come. I then agreed to be present again on Saturday at 2 P.M. I was in my office from 2 to 4 P.M. as Mr. Howard, my clerk will testify, [II.] and at 4 P.M., or soon thereafter, went to the Commissioner's room to take my final leave and expressed disappointment at Mr. B's not coming, when to my surprise the Commissioner said he had been there, but that I had not been sent for as the matter was hardly worth while. I expressed a desire to get certain of the Department reports before leaving, and with the assurance that he had always appreciated my ability and that he believed I should do better outside than in the Department, we parted amicably.

This is a plain statement of the facts, condensed into as few words as possible and the truth of which I am ready to testify to under oath. There was much other conversation not particularly relevant.

A word as to the Thomas letters: Gen'l. Le Duc quotes one of April 2nd to himself and says:

"This is the letter upon which the press commented so severely, giving "Under the circumstances" as the reason for his declination. This confidential communication found its way to the public through the press and telegraph, but with the wording and spirit so garbled as to show an evident intention and desire to have pending negotiations looking to the appointment of Thomas suspended, and also that it might, as far as possible call down on the Commissioner the censure of that portion of the newspaper press which has so long been used for the furtherance of Mr. Riley's purposes. Meanwhile he wrote to Prof. Thomas requesting him as a friend to write to me and try to correct what he (Riley) thought was an erroneous impression; *i. e.*, to help him to get back into the Department.

There is the same misrepresentation here as throughout the rest of the Commissioner's letter. I was not sufficiently in Le Duc's confidence just at that time to know anything of his correspondence, and the "confidential communication" must have "found its way to the public" through those who were. Prof. Thomas will testify to the falsity of the last charge. I wrote to him to correct an erroneous impression, but not with a view of getting back into the Department. I call attention to letters [Nos. 3, 4, 5, 6, and 7, for further evidence. Prof. Thomas's course throughout was manly and honorable. He was the first person (being then in Washington) to whom I signified my intention of resigning, and he urged me strenuously not to do so. After the position had been tendered to him he twice declined it, but was subsequently led to accept. Certain facts then came to my knowledge that led me to believe that it would not be to his advantage to accept. He was led to do so finally by a promise of an annual salary of $3 000, and probably $3,500, but positively declined upon learning from me that the Commissioner had no legal means of giving him such a salary. I may add, by way of explanation, that I accepted the position a year before upon similar assurances of increased salary from the Commissioner, but upon finding that there was no chance of getting the increase which the Commissioner expected, in the regular appropriations, I was obliged to ask that an additional $1 000 compensation be allowed me by Congress, and got it. This was disallowed, without my knowledge, soon after my resignation, and I only became aware of the fact after Prof. Thomas's acceptance. When I learned that Prof. Thomas had declined, I used my best endeavors to secure the appointment of Prof. Comstock, in whom I felt much interest as having been the most enthusiastic student in a class before which I lectured at Cornell in 1872, and of whose earnestness and capability I had subsequently good evidence, as he worked with me in the summer and fall of 1878. The later acceptance by Prof. Thomas complicated matters and led to considerable correspondence

(For continuation see page 125.)

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A NOTE TO SUBSCRIBERS.

Attention is called to the several articles upon the Kinver Globe Mangel, an illustration in section of which is presented on our first page. From our own crop raised last season, we cannot speak of it too highly. It is very firm, solid, and at the same time sweet and tender, while its form is always shapely and the skin smooth. We had intended to send our subscribers a small quantity of this seed for trial, but were dissuaded for two reasons, viz., it is now offered by seedmen, and, second, we were informed that Vilmorin & Co. of Paris offered a yellow mangel that, as regards productiveness and solidity, is superior to the Kinver.

We thereupon ordered of the new kind a quantity large enough to be placed in our present Seed Distribution, which we are now making as fast as possible. Our object in thus calling special attention to this mangel is that we deem it worthy of a careful trial, to secure which premiums of some value for the best specimens will be announced in due time.

TO NEW SUBSCRIBERS.

We find that many of our new subscribers have not seen our Free Plant and Seed Distribution supplement and consequently know nothing as to its terms. We will therefore send this supplement free to all who apply until further notice.

As announced in our late issues, we can no longer supply back numbers of the Rural New-Yorker. Papers will be sent for one year from the date of the receipt of all subscriptions.

We should like to see in round numbers the cost per year of supporting the standing armies of the world. Suppose that all the armies were disbanded and that this sum were devoted to agricultural interests—*what* a change would come over the spirit of the world's dreams! Then let an International Congress be appointed to settle all international quarrels or civil discords.

We regretfully surrender so large a part of our space this week to Professor Riley's reply or defence. Yet it seems but just to him that we should do so. We print two affidavits that a letter soliciting the Rural's opinion of his fitness for the position of Entomologist to the Dep't. of Agriculture was received at this office. Such proof will, no doubt, satisfy the general reader. If Professor Riley deems it insufficient, we shall be pleased to give him additional proof, if he will call at this office.

The holders of the patent for the Cook Evaporator are pressing hard upon Congress for an extension of the patent. Already they have succeeded in their efforts before the House, and the measure is now before the Senate for decision. The patentee gets no benefit from such an extension, the manufacturers have already had the benefit of one extension, and there is no valid reason why they should obtain a second. In view of the large increase of sorghum cane culture in the near future, both for sirup and sugar, it is a matter of general importance that all appliances needed in the processes of manufacturing these products, should be procurable at the lowest prices consistent with excellence. This cannot be the case so long as any device is made a monopoly by being covered by a patent. While willingly conceding that the talent and labor of the inventor should be rewarded by the profits resulting from such a monopoly for a certain period, there seems to us neither consideration for the inventor nor justice to the public in continuing the monopoly solely for the benefit of the manufacturers. Farmers, through their clubs and granges, all over the West, are sending to Congress petitions against this extension, and we strongly urge upon farmers everywhere to follow this wide-awake example. No time should be lost; what is advisable in this matter should be done at once, by each grange and farmers' club straightway forwarding protests against this injurious measure to the Senators representing their respective States and the Representatives of their respective districts.

There is no subject relating to the internal economy of this country that deserves and is receiving so much attention at present as our enormous railroad system. The matter is now being investigated by Congress and several of the State legislatures, and is one worthy of the thoughtful consideration of every citizen who has the present prosperity and the future welfare of the country at heart. What legislation, State or national, is likely to conduce to the best results from these mediums of vast benefits to the country as well as of intolerable injustice and oppression to the individual, is a problem of difficult solution. One thing only seems certain—some change from the present course of mismanagement, unfair discrimination, and unscrupulous greed must soon be made. Stockholders in the companies, shippers by them, employees of them—in a word all who have any dealings with them, outside of those enjoying the loaves and fishes of high salaries, patronage, or favoritism, are deeply and justly dissatisfied with the present system, and eager for a change, confident that almost any one must be for the better. Besides the vexations and hardships imposed on the public by the arbitrary rules and tariffs of these vast corporations, their wealth and influence are becoming dangerous to the prosperity of the nation through the corruption of its legislators, and sometimes, it would seem, of its judges. Some check, some restraint, some limit must be set to the rapacity, caprice and unscrupulousness of these mighty bodies, and it will require the best thought of the nation to decide upon the most beneficial legislation to this salutary end.

PRESERVING SPECIMENS OF PLANTS AND FRUITS.

We are often at a loss how to preserve specimens of fruits and other agricultural products. We have tried to keep an unusually handsome bunch of grapes or a "prize" apple, but have found that it shriveled up, changed color, or was otherwise spoiled.

Dr. Nessler, of the Experimental Station at Karlsruhe, has been very successful with a solution containing a little acid—sulphite of lime in 20 per cent. spirits of wine. Alcohol alone has long been employed as an antiseptic, but when strong enough to prevent decay, it will usually affect the color or otherwise alter the appearance of the specimen. The fruit or plant should first be moistened with the alcohol and one to 10 drops of an eight-per-cent. solution of the sulphite added. The specimen is then covered with the alcohol. In preserving leaves and other substances liable to change color, not more than one or two drops of sulphite to every four ounces of the alcohol should be used. For roots, tubers, etc., which are liable to turn brown or grow dark-colored, three or four times the above quantity may be employed.

With this preparation, specimens of white and green grapes, of green leaves, and of roots have been kept for years in a light room without any visible alteration. This liquid will also prevent wines from turning brown and check fermentation. It can also be employed to preserve insects, fish, or small animals.

PROFESSIONAL CRIMINALS.

With the exception, perhaps, of doctors and schoolmasters, no class of the community is so familiar with manifestations of *heredity* as farmers, or so well accustomed to think of, and allow for, it practically as a most important natural force. But it is noteworthy that in this matter the farmer and stock-breeder are much more familiar with the bright side of the picture than with the dark. They habitually take more or less care, it is true, not to breed from weak, vicious, and unpromising animals; but the very fact of their doing so often prevents them from seeing the results which would be arrived at in case such animals were bred from. But in our criminal courts there is no lack of examples of results obtainable by breeding from bad stock; and it will be well for the community at large when the farmers take this matter to heart, in their capacity of citizens and legislators, for no class of men are likely to comprehend it more clearly than they or to act upon it more judiciously.

A story is even now going the rounds of the newspapers of an instance of heredity in crime furnished by a Massachusetts thief from the vicinity of Fall River, who appeared as a witness in a burglary trial, having turned State's evidence. He is the great-grandson of a notorious criminal, who was in State prison with seven of his sons at one time. The grandfather's ancestry is traced back to a noted pirate of colonial times, and his branch of the family has for over a century furnished noted criminals in every generation.

The question what shall be done with the possessors of traits and tendencies thus peculiar and obnoxious to society, has been less fully debated than would be well. The criminals have been harshly enough treated in all conscience at one time and another. But until quite recently the subject has seldom been enquired into in a calm and judicious spirit, and from the scientific point of view. In England, not so very many years ago, the custom was to hang criminals of almost every grade, whenever caught; and it will be noticed that this practice was not essentially unlike the familiar agricultural habit of sending to the butcher the cullings of the herd. There can be little doubt, for that matter, that the death penalty, which is still retained for crimes of deepest dye, is in some part an expression of the popular belief in the workings of heredity; and a determination that, in so far as society has the power, this force shall cease to work in certain particular cases and directions.

The indiscriminate slaughter of criminals of all sorts, turned out to be a grave mistake, however, since it made the dangerous classes heedless and desperate, and increased the gravity of crimes by teaching the lesson that "one may as well be killed for a sheep as a lamb." With the advance of civilization, transportation to Botany Bay, or some other penal colony, was substituted by the English for the death penalty, except in extreme cases; but now that the colonies have become settled with reputable people, they refuse to receive any more criminals, and the only means of disposing of them seems to be perpetual imprisonment. This view of the matter has been extremely well stated by the noted English Judge E. W. Cox, who died a few months since. He says, "There ought to be very little difficulty in dealing with professional criminals educated to crime, living by crime. They commit crime systematically, deliberately, with malice aforethought, calculating carefully the proportion which the chance of profit bears to the risk of detection, capture, trial, conviction and punishment—all of which are taken into the account." A professional criminal is never, or very rarely, reformed. In his mind crime is no sin; no self-reproach follows him; no conscience pricks him. It is his business. He fights with justice and its officers as his natural enemies whom to defy, to evade, to defeat, is a boast and not a shame. He weighs the value of his prize against the risk of penal servitude, and if he is caught, calls it his ill-luck and hopes for better luck next time. He calculates on spending a certain proportion of his life in jail and adapts himself to that condition, making his prison residence as comfortable as he can by good behavior while there and compensating for his forced temporary abstinence by reveling in every sensual pleasure when he is again at large. Reformation with such a man is hopeless. Punishment, at least such as it is now, does not deter him because it is his business to hazard it—precisely as the soldier does not shrink from the service although he knows that he must face the chance of wounds and death. It is his profession to risk his life and he does it. It is the profession of the thief to risk his liberty and he does it.

When, therefore, the Judge is satisfied that the prisoner is a professional criminal, his course is plain. Mercy is wasted on such a man. Leniency is of no advantage to the convict, and it is an injustice to the community. The effect of a short imprisonment is merely to send back the plunderer to prey upon society for a time, to be again returned to the dock after he has run up a new score of offences and probably educated a new race of thieves to assist and to succeed him in his business. Penal servitude should be inflexibly awarded to a convict of this class, the object of such a punishment being to restrain him for the longest possible period from the exercise of his nefarious calling and to make it more difficult for him to follow it after his release. We may be assured that, let freedom come when it will, his profession of preying upon the public will be resumed with double zest after so long an abstinence. The only care required in these cases is that the Judge should be fully assured by due inquiry that the prisoner is really a "professional" criminal. This fact may be ascertained both by inquiry and by considering the character of the offence. There are certain crimes, such, for example, as burglary effected with burglarious instruments, and pocket-picking dexterously done, which require an education for their successful accomplishment, and therefore the presumption is that the practitioner of them is a professional criminal. It will be well for the progress of civilization when society determines soberly and definitely that, in simple justice to itself, the breeding of this kind of animal must be checked by every possible means.

BREVITIES.

Notices of many valuable catalogues are crowded out of this issue of the Rural New-Yorker. They will be presented next week.

The Rural suggested some time ago that we needed a word that should comprise both agriculture and horticulture—one that could be easily spoken and of self-evident meaning. A correspondent suggests "Landculture," and the suggestion is not a bad one.

Several subscribers who take the Rural with the Inter-Ocean have sent us stamps for plants and seeds. We would state that our arrangements with the Inter-Ocean are such that all who forward their subscriptions through that journal are not required to pay postage on our "Free Plant and Seed Distribution."

We shall give next week the first of a series of articles by Mr. Chamberlain, entitled Western Farming. The series might equally well have taken the title of Comparative Farming, the object being to see what can be learned by a careful comparison of the different modes of farming in different parts of the country, more especially at the West. The articles will appear each week or alternate week.

Mr. J. B. Chapman, 2d, acknowledges the receipt of his corn premiums as follows:

Ovid, N. Y., Feb. 9th, 1880.—I send you many thanks for Corn Premium (I hear that the corn sheller is at the railroad station). Also many thanks to Sandwich Manufacturing Co. of Sandwich, Ill., for corn sheller, and for their liberality in giving it as a premium. I will also compliment you *highly* for the fair and impartial manner in which you awarded the prizes.

In view of the recent heavy advance in the price of white paper, newspaper publishers generally have three alternatives: An increase in their prices for subscriptions and advertisements; a reduction in the size of their papers or bankruptcy.—Commercial Advertiser, Chicago.

Speaking for ourselves, we do not at present propose to advance the price of the Rural New-Yorker, though we may possibly for 1881. We do not propose to reduce it in size. We do propose that the Rural shall be better in every way for the present year than it has ever been before, whatever the cost or loss to ourselves. The advance in the price of paper affords no shadow of excuse why journals should not fulfill every promise made to the public during the subscription campaign.

In an extremely interesting paper on American Roses by H. B. Ellwanger, to which we desire to make further reference, we find the following: "American Banner Rose. Sent out by Peter Henderson in 1878. A sport of Bon Silene. Growth moderate, foliage quite small and leathery; flowers carmine, striped and white. It will perhaps be popular as a novelty, but it has no intrinsic merit to make it valuable, and we cannot commend it." We copy the above to show that the fun we have poked at this Rose has not been without a show of reason. The phrases that "went the rounds" that its "buds were worth their weight in gold," &c., were published. It may be supposed, as a compliment to its well-known introducer, for we are positive that conscientious editors could never have published such from any knowledge they may have possessed of the Rose itself.

The Rural is receiving an unusually large number of inquiries as to commercial fertilizers and many readers ask us, "Which kind would you advise us to purchase?" We would be glad, indeed, if we could give valuable answers to such queries—but we cannot. Upon our own farm fine bone flour has, we think, thus far produced the most marked effects, while upon other farms, its effects have not been noticeable. The same may be said of other special fertilizers as, for instance, nitrate of soda, sulphate of potash, etc. Special oat, corn and wheat fertilizers are usually what are termed "perfect" fertilizers, like home-made manures, except that they are supposed to supply the needs of those plants as ascertained by chemical analysis. It will appear, however, that if one's land does not need phosphoric acid or potash, the money spent for those ingredients is poorly invested, though fine crops may result from the use of the fertilizer as a whole. We repeat our advice, so often given, that farmers will purchase small quantities of commercial fertilizers for the purpose of ascertaining what their soils most stand in need of, and apply them to small plots. In the mean time, should they need concentrated fertilizers, they can do no better than to purchase the special oat, corn, wheat, etc., manures offered by such establishments as Baugh and Sons, Baker and Brother, Mapes, Crocker, and many others.

(Continued from page 123.)

with Prof. Comstock which need not be introduced here, but which also shows that no idea of reinstatement could possibly have occupied my mind. I send only one letter to confirm what I say [Letter No. 8.]

One word as to the Commissioner's closing statement:

While all this was progressing, letters from various persons were received, evidently at the instance of Prof. Riley, to secure his reinstatement in the Department. These facts will, I think, sustain the statement that Prof. Riley industriously tried to get back into the Department after he had resigned.

This is of a piece with all the rest. I flatly deny having asked any soul to send such a letter, and I am not aware that any were sent. If the Commissioner has received such, he can easily ascertain whether they were penned at my instance, and there is no person in any part of the globe who can truthfully testify that I requested him or her to write such a letter, though such may have been written without my knowledge. So far from making any such request, it is a fact that while a number of influential men called at my residence, after the publication of my letter of resignation, either to express approval of my course or the hope that I would remain, I begged all who expressed the latter view to take no steps toward that end, as I would under no circumstances remain under Gen. Le Duc. As a specific illustration in point, Senator Paddock expressed the wish to go to the Commissioner with a delegation in my behalf, and desisted only at my instance, as he is ready to testify. There is one person to whom (prior to the circumstances that led to my final attitude) I admitted the possibility of remaining if the Commissioner should admit his error and desire me to remain. It was upon the suggestion of Senator Davis, of Va., present Chairman of the Senate Committee on Appropriations, that I submitted to the Commissioner the proposition to have the employees of my division provided for in the regular estimates. Mr Wm. H. Edwards, of Coalburg, W. Va.—a well known entomologist, and old-time correspondent of mine—was in my office the very day of my resignation, and expressed his surprise and regret thereat. Upon relating the salient facts of the matter he offered to see Senator Davis, with whom he had acquaintance, and I consented that he should, since he knew me well and I desired Senator Davis to have the facts, but not with a view of reinstatement.

There is good reason to believe that I could have brought sufficient influence to bear to accomplish reinstatement had I wished it; for I have since seen a divisional head discharged by the Commissioner but retained upon political influences being brought to bear on him, notwithstanding he had, in private correspondence, characterized and abused the party in a most severe and derogatory way.

A few closing words in explanation of the testimony adduced. The letters are copied verbatim from press copies or files. I have used only such letters or parts of letters as were absolutely necessary. The correctness of the statements followed by the letter H in brackets can be vouched for by Mr. L. O. Howard, who was my clerk and assistant. He knew of my correspondence on the subject, for most of the letters were dictated to him. A student at Cornell, he proved a capable and efficient clerk, and was interested with me in having Prof. Comstock as my successor, since I had him appointed upon the latter's recommendation His testimony is weighty; but the fact that I do not send it shows how difficult it is to get the truth when it affects persons having great patronage. Mr. Howard was willing to testify, but fearing that to do so would be to forfeit his position (the Commissioner having, it appears, announced that no friend of mine should remain in the Department) I hesitated to urge it and he finally went to the Commissioner to ask permission He reported that the interview was unsatisfactory, and upon my urging him that it was best in the long run to tell the truth, he agreed to be at my house the present evening to do so, but sent a card instead stating that it was impossible, and that he was to leave "on the 6:30 train to-night to be gone some time."*

Mr. Schwarz, whose statement [marked S] I send, was my clerk and assistant in the early part of my connection with the Department. The Commissioner found fault with him for no other reason than his German nativity and diffident address, but at my earnest solicitation I was allowed to keep him as a field agent, and he was in the employment of the Department and in constant correspondence with me till I left, since which time he has been engaged by the Entomological Commission. The evidence which I send of the other employees of the Department, [marked "Various"] who all expressed deep regret at my resignation, and with whom I consequently spoke on the subject, is but negative, but important under the circumstances, as I should have availed myself of the influence of some of them, had I desired reinstatement. In the same category is the fact that after my annual salary in the Department had been reduced to $1,900, as heretofore explained, I had financial reasons, aside from the others mentioned, for not caring to remain, since the salary of my present position is $3,000.

To sum up the matter: I accepted a position in the Department of Agriculture with the object of accomplishing practical good. In proportion, as I did so, envious obstacles had to be encountered. Not choosing to cringe and fawn, I resigned. The Commissioner either construed, without reason, my endeavors to remove unjust accusation into endeavors to be reinstated, or has wittingly conspired to misrepresent me. The same manners that offended me have made him many enemies, and he lays much at my door that comes from his own; for it is an old saying that if a man once wrong you he becomes your enemy. I challenge Gen. Le Duc to furnish proof of a single person in or out of the Department, to whom I expressed a wish to be reinstated or whom I asked to either see him or write to him for that purpose; and I stigmatize the report of conversation as an outrageous falsehood in so far as it attempts to give color to such wish.

Apologizing to those whom I have been unwillingly compelled to refer to in this matter, and regretting, sir, the necessity for so long a communication on a matter of so little public interest, I trust that you will bear in mind, as an excuse for its length, that your charges touched my sense of pride and honor and that I write in defense of my veracity. Respectfully yours,

Washington, D. C., Feb. 2d, 1880. C. V. RILEY.

S.

I hereby testify that I was in constant correspondence with Prof. Riley after learning through him of his resignation, and that I was present with him the last day of April, 1879, and while expressing my regrets thereat and hopes that he would remain in his position as Entomologist to the Department of Agriculture, his correspondence showed that he himself had no such intention, and he declared that he would not remain under Gen. Le Duc for any consideration. E. A. SCHWARZ.

Washington, D. C., Feb. 2d, 1880.

3. [Cyrus Thomas to C. V. Riley, Apr. 3, 1879.]

Your letter just to hand, both together. The result has been what I expected. I regret very much your haste, as it is always best never to decide under excitement where the matter is important.

I have already received two telegrams from the Commissioner offering me the position. To the first I replied mildly that my engagements were such that I could not accept the position at present. A second came, extending the time; to this I replied by letter that I could not accept in any case, as it would be no pecuniary advantage to me, and to break up housekeeping and move to Washington would entail a heavy expense. I have also written to him regretting that any difference should have arisen between you which made it necessary to sever your connections. I took the liberty to remark that I was aware from an intimate acquaintance with you that you were sometimes hasty, but that I was fully satisfied it was your intention and desire to be fair and honorable in your dealings and intercourse with others and that exhibition of haste or impatience on your part arose more from habit than willfulness. I also stated to him that if it were possible to adjust your differences, it would be gratifying to the friends of both. That as you were young, and ambitious and your ability as an entomologist acknowledged, I was sure you would be of great benefit to the Department.

I also informed him that the insertion of the words "Cotton Worm" in the clause making appropriation for the U. S. Ento. Com. was done without the knowledge or desire of the Commission, that you had informed me it was done without your knowledge at the time and contrary to your wish, and that I was fully satisfied of the correctness of your statement, as I knew this was not in the plan of the Commission I added at the close that I had no desire to suggest any course in this matter, but wrote to prevent him from obtaining a wrong impression in reference to the insertion of "Cotton Worm" in the appropriation.

4. [Riley to Thomas, April 7, 1869.]

Let me assure you that my resignation was not so hasty as you seem to imagine. I have the sympathy of most persons in the Department, and, had I not resigned at the time, I should have done so a week later after learning many things in regard to Le Due that I did not know before.

[Riley to Thomas, April 10, 1870.]

* * * The Department salary is $1900.00. I do not see in what way the Commissioner can offer you more, because the clause giving the entomologist additional compensation, which was in last years' bill, has been stricken out. He may not have been aware of this when he wrote you. One thing is sure, he has no *legal* means of increasing your compensation, and I should in all probability have resigned under the circumstances, had I not done so for other reasons. Now I cannot well see how you are to be quite as well off financially under these circumstances as you are with your present position; but as I wrote you this morning, you know best about your own affairs, and, I myself being out and you in this rather unpopular institution, I write mainly to say a word in behalf of Mr. Howard, my present assistant, and Mr. Pergande. I am satisfied that you have everything to gain by retaining them, and it would be a consolation to me to have some assurance from you that they would be retained under your charge. I hesitated really more about my resignation for Pergande's sake than for my own, as I was instrumental in bringing him here. If you can give me assurance on this head for their benefit, I shall esteem it a favor. Yours ever,

C. V. RILEY.

P. S. I want you to understand me fully about the salary. I shall inclose, in order that you may fully understand it, the Department appropriations as they will be made this year and as they are in the Legislative bill reported to the present House by the Democratic caucus. The bill differs materially from that of last year in being more particular in requiring the Commissioner to present full statements of expenditures and in preventing any diversion of the appropriations from the specific purpose for which they are made; and these changes have been made because of reported irregularities in the Commissioner's management. In the clause on page 79, referring to cotton insects, there was last year a provision enabling the Commissioner to give me $1000.00 additional compensation. That has also been stricken out.

I am thus particular simply because I wish you to be on your guard and not do what you think I have done in resigning—a foolish thing.

WASHINGTON D. C. Feb. 5. 1880.

EDITOR OF RURAL NEW-YORKER.

Dear Sir:—Prof. C. V. Riley has very courteously shown me a portion (from c 7 to c. 1. 7) of his proposed comments on my communication to the Hon. Wm. G. Le Duc of Jan 16, which communication was published in your paper of the 31st ult. and has propounded the following questions.

"1. Is not the statement correct?

2. Did I ever express to you a desire, or did any one else ever state to you, on my authority, that I desired to be reinstated?

3. Was not my conversation last December in New York to the effect that had you been more earnest in disabusing the Commissioner of his error, my resignation might have been prevented; in short that it referred to your action prior to and not after said resignation?"

While I have no disposition to assist in prolonging a newspaper controversy, which can result in no possible good to any one, justice both to Prof. Riley and myself requires that I should notice his statement and request.

That portion of his statement submitted to me is in some respects correct as far as I know, and in others not correct as I understand matters. I shall notice only the essential points. I have now no recollection that Prof. Riley ever in direct manner expressed to me his desire to be reinstated in the Department, but I have a distinct recollection that a few days after his resignation had been accepted, Mr. Cowing, one of the clerks of the Department, had some conversation with me on the subject during which the matter of interference in legislation was brought up, and the idea advanced that could the mind of the Commissioner be disabused from the impression that Prof. Riley had no hand in the legislation, the difference between the Commissioner and Prof. Riley might be adjusted, and Prof. Riley remain. Mr. Cowing says:

"As Prof. Riley disclaimed any such interference, I remarked if such fact was shown to the satisfaction of the Commissioner, I thought it would result in an amicable settlement of the misunderstanding, and that his resignation might be withdrawn. My recollection is that Prof. Riley acted upon this suggestion."

As I understand it Prof. Riley did act on the suggestion of Mr. Cowing, and obtained letters from some Senators and others tending to show he had done nothing in the matter of the legislation. I certainly obtained the impression from the conversation with Mr. Cowing and from Prof. Riley's subsequent action in obtaining the letters that he desired reinstatement Whether my impressions were well grounded or not, is for others to determine. All this was some days later than the date of his resignation.

My impressions were that Prof. Riley's remarks in New York in December last, applied to reinstatement, from the simple fact that I did not know of any matter of which it was necessary to disabuse the mind of the Commissioner previous to the date of resignation.

Prof. Riley assures me, however, that he referred to such action as I might have taken previous to his resignation This statement of course I will not dispute. I have no disposition to injure Prof. Riley, or make any statement calculated so to do. I recognize his great merit in his chosen branch of science, and did more to have his services retained by the government, than he is aware of, and I did it under the impression that it would be agreeable to him, and in accord with his desires.

Very respectfully

E. A. CARMAN.

6. [Thomas to Riley, April 14, 1879.]

An examination of the bill sent me by you convinced me the Commissioner could not pay me $3,000, as promised, without violating the law directly or indirectly. He also gave me reason to believe it would be brought to $3,500. This flattering offer, with others he obtained and sent, pressing me to accept, prevailed upon me to indicate my acceptance. But, fearing some slip, I very cautiously accepted his "telegraphed *proposition*" which read "salary sufficient *and* three thousand." This left me ample excuse if anything implied should be omitted. Again, he said that one thousand more would be given by the present bill. As it is evident to me that he cannot carry out his proposition, I am under no obligation to accept.

[Riley to Thomas, April 14th, 1879.]

I have never had anything to say about any caustic letters that you may have written to the Commissioner; for I have known nothing about them beyond what you have told me. If the Commissioner has enemies who love to make capital out of my resignation, mine is not the blame, and I am far from desiring to bring you into my quarrel with the Commissioner.

7. [Telegram from Thomas to Riley.]

PANA, ILLS., April 17th, 1879.

PROF. C. V. RILEY,

Cor. 13th and R. W., D. C.

I have sent Commissioner withdrawal of acceptance and final declination. THOMAS.

8. [J. H. Comstock to C. V. Riley, April 8th, 1879.]

It had not occurred to me to apply for the position of Entomologist until I received your letter. I have, however, this morning sent a letter of application as you suggested. With many thanks for your kindness, I am faithfully yours,

J. HENRY COMSTOCK.

[Comstock to Riley, April 10th, 1879.]

I saw Le Duc to-day; and he told me that Thomas had concluded to accept the position at Washington. So that ends my hopes in that direction. I write now to ascertain if you will apply for the position made vacant in Illinois. Of course Illinois would be delighted to procure your services could they make it worth your while to go there. If you do not go there, will you tell me what course to take to work for the position, and say a word for me? I have no idea to whom to write.

I think I could arrange matters here so that I could hold on to this place while trying that.

I received your telegram to-night on my return from Elmira I had learned from another source that Le Duc was to be there and so went over this A. M.

With many thanks for your kindness and interest. I am, very sincerely yours.

J. H. COMSTOCK.

(A) [C. V. Riley to Hon. J. D. C. Atkins, Chairman House Comm., on Appropriations, March 31st 1879.]

I wish to ask you to do me a personal favor. There were added to that clause, as reported to the House by your committee, without my knowledge and to my great surprise, the words—"and the cotton worm." Upon learning the fact I immediately wrote to Senator Windom and Senator Paddock, as chairmen respectively, of the Senate committees on Appropriations and Agriculture, begging them to have these words stricken out, and explaining that the Commission was created for the special investigation of the Rocky Mountain locust, or grasshopper, and that an investigation into the habits and best means of combatting the cotton worm was being made by this Department, and that a clause appropriating therefor was already in the Legislative, Executive and Departmental bill then pending.

I feared at the time that the addition of these few words would be chargeable to my efforts and would compromise me as Entomologist of the Department in the eyes of the Commissioner. My fears have been justified, and, having had nothing to do with the matter, I beg of you, for my own satisfaction and for my own honor before the Commissioner, to communicate to him such facts as you, as chairman of the Committee, undoubtedly possess, regarding the manner in which these words were incorporated into the bill as it came from the committee.

[Letter from Senator Paddock to C. V. Riley, Ap'l. 2, 1879.]

From first to last you expressed your disapproval of the words put into the entomological provision "and the cotton worm" and asked me to have them eliminated in the Senate. You drew an amendment which I sent to the committe to that end, but it was overlooked by the committee. I took the action that I did on the floor in reference to that provision, on the spur of the moment, because I was apprehensive that to attempt the change *there* might defeat all. I supposed that you would not be satisfied with my action then in that regard, but I did what I thought the temper of the Senate demanded. Your record throughout is as I have stated it, and to that I will be sworn if necessary. I have been and expect to be a good friend of the Agricultural Department. I shall take a good deal less interest in it if you leave it. I hope you will withdraw your resignation—and if you do not that the Commissioner will return it to you. I am sure very many of the best friends of the Department here and elsewhere will be greatly dissatisfied with such a change.

VARIOUS.

I addressed letters to various persons prominently employed in the Department, stating the charge of my endeavoring to get reinstated after resigning, and requesting reply to the question "Did I ever express to you any desire to be reinstated?" The written replies are: From Geo. Vasey, botanist, *Never;* from Wm. Saunders, supt. grounds, *No;* from Thos. Taylor, microscopist, *No;* from B. F. Fuller, disbursing clerk, *No;* from Peter Collier, chemist, "*I have no recollection that you ever did;*" from C. Worthington, statistician, "*the subject was never been mentioned:*" from Mr. L. O. Howard, my then clerk, *No;* from Mr. W. J. Cowing, *No.*

To some I gave positive assurances at the time that I would not remain under present management, and Messrs. Saunders, Taylor, Vasey, Howard and Cowing have testified to the fact.

* Later.—I have since learnt that his absence was due to the illness of a relative.

Floricultural.

GROWING PLANTS IN LIVING ROOMS.

PETER B. MEAD.

(Continued from last issue.)

OF Carnations decidedly the best for rooms is Sarah Mead. It is a very free bloomer, and deliciously fragrant. It should be in a south room. A beautiful plant, for either a south or an east room, is Lopezia elegans. It is in bloom nearly all winter. It should be pinched back during the summer till about September, allowing no flowers to appear. Ardisia crenulata is a fine berry plant for any room. Coronilla glauca, an old favorite of the ladies, will do best in a south room, but very well in an east room. It remains a long time in bloom. Lobelia gracilis is a fine drooping plant. Seed may be sown as late as August or September. Does well in an east or a west room.

For a hanging basket you can have Russellia juncea, Polypodium Kurrudrianum, Epiphyllums, Anthericum repens, vittatum, variegatum, etc.; but never put more than one plant of any kind in a hanging basket. The objects usually sold for hanging baskets are deplorable parodies on good taste and "the eternal fitness of things." For a fringe for the window nothing is better than Ivy.

For a warm south room a plant of Heliotrope is indispensable for its grateful fragrance. So, also, a plant or two of the winter-flowering Begonias are desirable for their constant and graceful bloom. Fuchsias will do best in a south room, but very well indeed also in either an east or a west room. Speciosa, Mrs. Marshall and Buchanani are the best for rooms; the last, indeed, is one of the best for winter blooming, either in rooms or in the greenhouse, that I have ever grown. It will, with

judicious management, bloom the whole year round. The corolla is light crimson, the scpals are white, and gracefully curved. It blooms very freely. Speciosa is a good "stand-by."

There are no better plants for rooms than the Cacti. They are all curious and interesting; some remarkably so. Many produce flowers of large size and great brilliancy. Some bloom in the night, and others in the day. The flowers of the night-bloomer last but a few hours, while those of the day-bloomer last from five to ten days. Epiphyllum truncatum and its congeners bloom in early and mid winter. Some of the Phyllocacti bloom in late winter and early spring. In spring, summer and autumn we have the Cereus and others. The nomenclature, however, is at present in a complete muddle. Cereus MacDonaldi is the best climbing night-bloomer for you. All the low-growing night-bloomers are good, and all have white flowers more or less agreeably fragrant There is only one red-flowered night-bloomer (Maynardii), and that is a hybrid. Of the Phyllocacti that are day-bloomers, Ackermani, Jenkensoni, speciosus, roseus and May-fly are among the best. The Epiphyllums are all good, and bloom abundantly. Cereus speciosissimus (day-bloomer) is simply splendid, and C. Mallisonii is very good. For greater variety, add a plant or two of Opuntia, Mammillaria, Echinopsis, Echinocactus, Aloe, Agave, Euphorbia, and many others which I have before me as I write. These all require to be kept warm, and those not growing may be kept in any room till growth begins. The Agaves require the least warmth.

An interesting collection of succulents for a cold room may consist of Sempervivums and Sedums. Of Sempervivums, say Lagerii, arachnoideum, arenarium, tomentosum, heterostochium, Pittonii, Californicum (syn. calcareum), soboliferum, Braunii, fimbristum, barbacidum, hirtum, Verlotii, hispidulum. I have many more, but these are mostly small growers, and very interesting. Sedums are, many of them, too spreading for room plants; but the following are quite suitable: Acre variegatum, sexangularum, anglicum, Japonicum variegatum (a beautiful fall and early winter-blooming plant), Sieboldii. Sieboldii variegatum, carneum variegatum, ternatum, Ewersii, Nevii, monregalense, albicans, album. These Sempervivums and Sedums are all hardy, and will do best without fire heat. In a warm room they soon get out of shape and lose all their interest.

A few bulbs, such as the Hyacinth, Jonquil, Triteleia, Amaryllis, etc., give an additional interest to the window garden. The Cyclamen is another good winter-bloomer, and a plant or two of the single Chinese Primrose must not be omitted. Ferns may be grown even in a north room, but it must be only moderately warm, not hot. Keep them well watered. Do not omit among Ferns, Platycerium alcicorne, the Stag's Horn Fern, which grows admirably in a room. A very pretty plant to place among them is Coprosma Bauertana variegata. It is also one of the most effective of all variegated plants for a cool room. Azaleas may also be put in a north room when in bloom, except the Lateritia type.

But this list is getting long, my time short, and I must stop somewhere, though many more might be added. I will close it, therefore, with the Calla, which, of course, must not be omitted from the smallest collection of room plants. In the spring (about the first of June or even earlier), put it aside where it will get no water, and let it dry up. In August turn it out of the pot, shake off all the loose earth, and pot it in a soil composed of at least half leaf mold. It should be copiously watered, especially when in bloom. A word or two about

Insects.

You will have more or less of these, according to the care you give your plants. You need have but few at any time, only you have got to make a good fight for it; in fact, to "fight it out on this line" all winter. You will have Green and Black Aphis, Red Spider, Mealy Bug, Scale, and perhaps a comparative stranger, the Black Thrips, the worst of them all. It fortunately happens that in killing one you mostly destroy the others. The remedies offered for sale are numerous; many of them very expensive, and some of them totally unfit to be used in a room. On the whole, I know of nothing better for your purpose than carbolic soap, especially that form of it known as Buchan's Carbolic Disinfecting Soap. It is cheap as well as good. It should be dissolved in warm water. If made too strong it is apt to injure the delicate new growth. Experience will soon teach you how strong to make it. The plants should be washed or syringed with it. Let it dry on. It will kill all the insects above named, if thoroughly applied. Tobacco dust is a good remedy for the Green Fly and Red Spider. If you prefer, you can save a tubful of strong soapsuds on wash day, and give the plants a good bath in it.

If your "old man" smokes, utilize him, and put a plant before him with every pipe. The novelty of the thing will amuse him at first, but he will probably tire of it after a while. Keep him at it, however. Reason and wrestle with him. Tell him how bad it is for the bugs, and how good for the plants. Keep him down to it. In the end he will either give up smoking, or take to the work kindly, with the consciousness that at last he is doing some good in the world. Then your turn will come. Take him in your arms and kiss him, and he will be the happiest man alive. There is too much smoke that does no good in the world.

In concluding these rambling remarks, I will just say that I do not advise that any one should, as a beginning, take all the plants above named. The list is presented to select from. You might begin with the Calla, Libonia, Lopezia, Chorozema, Rose, Fuchsia, Begonia, Hyacinth, Selaginella, Coronilla, Tradescantia, a few Cacti, or as many as your table will hold without crowding, and increase the number with other tables as your knowledge and taste increase. All the plants I have named are good for your purpose, and you can select such as you can most readily get. If you can do no better, begin with a single plant.

Literary Miscellany.

WILFUL'S CHRISTMAS EVE.

CHAPTER II.

(Concluded from page 110.)

"Are you implacable, Miss Darton?" he asked, gently. 'I can assure you it was solely to spare you embarrassment that Sidney withheld his rank."

Still harping on his friend!

"It does not signify," she said, coldly. "It is useless rebelling against the fate that has made me the ward of a woman who has no sympathy with me. How far is it from here to the nearest town? and when will the roads be passable?"

"Very soon, I fear; to Eartham the distance is about five miles. Why do you ask?"

"Because I am very much inclined to run away," she answered abruptly, and left him searching in vain for a clue to her strange speeches.

He discovered it in the course of the day, for Mrs. Lockwood whispered it in his ear, assuring him Lelia's repugnance was only assumed. Delighted to find the game in her own hands, Leila's guardian paid assiduous court to the Viscount, pinned her ward to her side in spite of the girl's efforts to escape, and began to take steps to bring about the match which was to relieve her of her willful charge, and enable her to proudly say that she had done her duty by her.

Norman Lee would have smiled at the lady's strategy, if he had not seen with mingled dismay and astonishment that Viscount Alleyne was a willing listener to all her pretty speeches, and appeared eager to conciliate the pouting Lelia. He hung over her chair, reminding her of their childish intimacy, laughing good-humoredly at her pettish replies, and refusing to be discouraged by them. The more she rebuked him, the more desirous he appeared of winning her goodwill.

Was his interest in her reviving already? and was he not only willing but eager to woo the bride his parents had selected for him? Norman Lee found himself wrestling with fierce jealousy, and Gertrude, whispering to her father that her head ached—she might have said her heart—went off to bed.

In vain did Lord Alleyne remind his companions that it was Christmas Eve, and that they ought to spend it right merrily. In vain did he repeat that they ought to sing all their favorite songs and glees, for it was the last evening they would spend at the farmhouse, as the roads were now reported passable, and vehicles had been engaged to carry them on the morrow to the Priory. Mrs. Lockwood assented to all he said, but mirth cannot be forced. Lelia would not sing, Norman Lee's voice was husky, Mr. Lockwood was dull without his daughter, and at an early hour they all retired, glad that the long, tedious evening was over.

Everyone went to their several apartments but Norman. Long after the fire had died out and the lights were extinguished, he was still standing with folded arms in the bay window of the deserted parlor, looking out at the night. Never at this festive season of the year had his thoughts been such gloomy ones—never had he felt so lonely; and he wrestled long with his disappointment, before he determined that it was his duty, as an honorable man to return to his quiet home in a southern county, and see Lelia Darton no more till she was the wife of his friend.

But while he mused, a light step came swiftly down the stairs, the outer door was unbarred, softly closed again, and a solitary female form flittered away in the darkness of the cheerless, frosty midnight.

He heard the sounds, but attached no importance to them, till, as he was slowly ascending to his own chamber, Gertrude Lockwood, wrapped in her traveling cloak, suddenly stood before him.

"Where is Lelia?" she gasped. "She stole from the room while I slept; her hat and Ulster are gone. Oh! Mr. Lee, what does it mean?"

The threat he had regarded as meaningless when it was uttered recurred to his mind; the footsteps hitherto unheeded were remembered with a shudder. Oh! why had he listened to them like one in a dream? Lelia had gone. The delicate girl had braved the bitter cold and the darkness, and wandered forth, none knew where.

He rushed to the door by which she had departed, and tried, with the help of his lamp, to trace her footsteps, and ascertain what route she had taken. But the snow was frozen too hard to retain any impression of them. He strained his eyes to discover some trace of her, but long since she had vanished, and not a sound broke the terrible silence that reigned around.

She had asked him in what direction lay the town; was it thither she had gone? She did not know—poor, impetuous child—how the partial thaw that had set in on the previous day had occasioned a flood that carried away the support of a frail bridge she would have to cross.

With mad haste he hurried over the moorland, praying Heaven that he might be able to overtake her before she attempted to cross the river; but when he reached its banks, she was nowhere to be seen, and the bridge had been wholly swept away!

Had she too been engulfed in the dark torrent whirling and eddying at his feet? The thought was too horrible to be dwelt on, yet he could not but fear that this must have been Lelia Darton's fate. He shouted her name till the echoes took it up and repeated it; but to no purpose! At last, half-frenzied with grief, he began to retrace his steps to the farm, to arouse Lord Alleyne and Mr. Lockwood, that they might help him to search for the lifeless form, which was all he hoped to recover.

One of the Viscount's dogs, a retriever, which Lelia had often patted and played with, had followed him, and was still at his heels when he left the river; but on reaching a coppice by the wayside, the dog bounded towards it, barking and whining, as if to invite him to follow.

Could Lelia be there? Had she heard his steps as he pursued her, and turned aside to avoid him? Again he called her by name, entreating her to answer him, while he went hither and thither, seeking her in vain.

Rover had gone in pursuit of a hare he had startled from its form, and Norman Lee, sick at heart, and thoroughly discouraged, was groping his way out of the copse, when he stumbled over the stump of a tree, and putting out his hand to save himself, it came in contact with the deathly cold face of a woman!

It was Lelia! he had found her, but how? No breath was fluttering on the pale lips to which he pressed his own; her head fell helplessly on his shoulder, and she was all unconscious of his frantic endeavors to arouse her. He pulled off his coat and wrapped it around her; he raised her in his arms, intending to carry her to the farm; but he had not strength to do this, and was almost in despair, when he remembered that there was a woodman's shanty in the copse that could not be at any great distance.

Thither he bore her joined on the way by the now penitent Rover. Laying the helpless Lelia on the ground, and making the animal crouch beside her, Norman Lee quickly gathered together a heap of the dead leaves and broken branches, and set light to them with the aid of the fuzees he had in his pocket.

As the blaze mounted higher, and flickered on the rigid features of the young girl, hope revived. He would not believe that she was dead, and he chafed her hands till, to his unutterable joy, her eyes began to unclose, and she could hear the tender voice that bade her live for his sake, and could no longer doubt that she was loved as fondly as she wished to be!

It was fear that had caused her to swoon; She had discovered that she was being pursued, and while attempting to conceal herself in the wood, had struck her head against the limb of a tree with such force that she remembered no more.

"Did Lord Alleyne send you to seek me?" she asked, when she was able to sit up, supported by the arms that tenderly embraced her.

"Did I need sending? Would I not freely lay down my life in your service, Lelia?"

"Yet you advocated his cause. It was the thought that I had been deceived in you that drove me away. I meant to go to an old servant in London, and get her to hide me till I was of age, and could set my guardians at defiance."

"Do you still think you cannot trust me, Lelia? If you knew the agony of mind I endured when I feared that you were forever lost to me——"

There was no need to say more, and the lovers sat in raptuous silence, till Lelia whispered:

"This has been the saddest Christmas Eve I have ever spent."

"But, love, it is already giving place to a brighter dawning! And, hark! I can hear steps and voices. Miss Lockwood has sent her father and Sidney to our aid, and the light of our fire has guided them hither."

"Whatever made that willful little creature run away?" Viscount Alleyne inquired of his friend, when they were all safely housed again, and Gertie, crying and rejoicing over the recovered Lelia, had led her away to take some repose.

"Was it not your fault? yours and Mrs. Lockwood's?" retorted Norman Lee, indignantly. "When she saw that, in spite of the unconcealed repugnance, you were easily incited to press your attentions upon her, and lend yourself to the unwomanly scheming of that hateful woman, can you wonder at her delicacy taking alarm. It was then, that imagining herself friendless, poor child, she fled."

"Stop a minute; you have quite misunderstood me!" cried the Viscount. "I was civil to Mrs. Lockwood solely because I love her stepdaughter. It was to try if I could learn from Miss Darton whether Gertrude Lockwood is disengaged that I hung about her chair in the evening?"

"Gertrude Lockwood!"

"Yes, yes, my old playfellow, Lelia is a charming little creature; but she lacks the repose of manner, the pure red and white complexion the——"

"That will do!" cried Norman Lee, grasping his hand and shaking it vigorously. "Accept my heartiest congratulations, old fellow. Our mistakes are at an end, and I foresee that we shall both be very happy in our choice."

And so they were. Mrs. Lockwood protested against her ward accepting the hand of an obscure country parson; but for once Lelia's willfulness stood her in good stead. There was a double wedding early in the ensuing autumn. General Froyle gave away the brides, and their bridegrooms have faithfully promised to return from the Continent and present themselves at the Priory in time to share the rejoicings to be held there in their honor next Christmas.

THE EYE-OPENER.

John and George Patty and G. F. Blythe, proprietors of the Patty House, Fond-du-Lac, Wis., were arrested on the 10th, charged with a lottery scheme to dispose of the hotel, valued at $10,000, and extra inducements amounting to $19,000. The special agent who made the arrest says they had already sold tickets amounting to $47,000, and that the scheme not only violated the law, but was fraudulent, inasmuch as the property was greatly over-estimated....The Northwest, and probably other parts of the country also, is being flooded with circulars, etc., principally from Chicago, promising enormous profits from small—or large—sums forwarded to shysters there to be used as margins in speculations in grain. This is just the same old dodge practised here by the "put and call" swindlers, and exposed in the RURAL a few weeks ago, and this fresh device is carried on either by the old sharpers or rascals of the same stripe... Seed swindles are now in order—the Hull-less oats, the branching corn, marvelous wheat, etc., etc., all coming from Old Nick knows where, and all worth extravagant prices....A snide hog cholera cure company out West has copied an endorsement of another similar fraud, and the fellows have fallen out. Nat Pearnetter and John McLean are the copied indorsers....A "bug" exterminator humbug recipe is being hawked about out West which may be recognized as containing as one of the ingredients a 50-cent package of Nye's Bug Exterminator....The Supreme Court of Iowa has decided—against the verdict of the District Court—that when a promissory note given to a lightning-rod man, a patent-right agent, or other traveling swindler, has been afterwards raised to a larger amount, the innocent giver is not liable for more than the amount of the original contract...Potter, Wright & Co., "Bankers", 35 Wall St, do a "put and call" business like the swindles of the same kind exposed at length in RURAL of Jan. 17th.

Kenneth Albro, a rich old Texan cattle man unacquainted with the tricks of city sharpers, came to New York last week with $125,000 in registered bonds, which he carried in an old satchel, but while he was going up the Wall street entrance of the Treasury building two men fooled him by dropping a pocket-book, knocking him down when he stooped to pick it up and making off with his bonds. He has advertised for their return, and another advertisement signed "Tommy" says he can have them for $25,000 cash. Albro offers $5,000. The dropped pocket-book is an old dodge, played frequently on those who look like countrymen, especially at the ferries from the railroad terminus in Jersey City. It is also practiced extensively in other large cities.

For Women.

CONDUCTED BY MISS RAY CLARK.

BABY'S WALKING MATCH.

HURRAH! Baby's on the track!
Got the word to "Go!"
Strength of limb he does'nt lack,
Toddling to and fro.

Mother is a judge so true;
There's no doubt he'll win;
See the pretty belt of blue,
Round his waist to pin.

Many strides he has to take
In the shade and sun;
Many miles he has to make
Ere the match be won.

Bravo! Up and down he goes,
Holding fast to chairs;
Rosy fingers, rosy toes,
Pretty little airs.

This is but the first wee match,
Just his speed to try
A much better gh
Walking by and by.

Here he comes, the proud, wee chap,
Beating all the others!
Now he takes his final lap;
But that lap is mother's!

—*N Y., Independent.*

FASHIONS IN LACE GOODS.

Tinted Snow-Flakes.—Fichus.—Medici Ruff.—How to Rejuvenate a Partly-worn Dress.

TOILET accessories in the way of ribbons, artificial flowers, and laces—more particularly the latter—designed for neck and sleeve ornamentation, take greater prominence each succeeding season. It seems not unlikely that woman's fondness for "fine linen" (freely translated, "laces") will, at no distant day tempt her to make it the principal item of her costume and to subordinate heavier materials, however rich, to a mere background for the display of ingenious devices in gossamer-like fabrics. Even now lace perches on her head, nestles at her throat, falls in soft lines from sleeve and glove-top, peeps from slippered foot and appears in a bewildering array of jabots and flounces over the body of the costume.

The eagerness with which novelties in lace goods are welcomed, stimulates those manufacturers who cater to the caprices of the world of fashion to continuous effort of bringing out new designs and materials with which beauty shall enhance its loveliness and plainness soften ungraceful outlines and harsh features. No fabric of this class, however, met with greater popularity than the Snow-flake tulle, introduced this season. It is suggestive, as to design, of dotted Swiss—that favorite of other days, which has of late years been dropped from the category of available dress materials, and relegated to window, and dressing-table service.

The Snow-flake is, however, much more dainty in effect and is not confined to white, but comes in the greatest variety of tints, and colors; pale blue, pink, lavender and cream, being leading shades.

It combines charmingly with silk, and sets—comprising caps or turbans, heart-shaped neck-pieces and cuffs—are shown of it in combination with silk and edgings of some one of the fashionable laces. It is also extensively worn simply twisted about the neck and brought down to the waist in those shroud-like vests—so suggestive of undertakers' wares—which it is, one of the fashionable vagaries of the hour to wear.

This tulle shares the popularity of French figured mull, Swiss and variegated pongee as a basis for many graceful and beautiful designs for throat, head, hands and arm garniture. There is a partial tendency to return to the less elaborate style of ruff, and in the Medici Ruff, the extreme of simplicity is reached. A plain standing ruff around the neck, extending down the front to the waist-line and that is all there is of it! One misses the riotous jabat, with its wealth of edging, bright with tiny bows or clusters of flowers and in com-

parison the "Medici" looks uncompromisingly stiff.

Manufactured sets in lace goods are small, many of them barely covering the upper portion of the shoulders and only reaching a few inches down the front. Very few are made exclusively of lace and insertion, most have interminglings of silk and mull or snow-flake, or some similar material.

Fichus and capes are shown in a great variety of styles and combinations, the most striking ones being in black. Chenille, jet, French and Chantilly laces are usual garnitures, and they are disposed in every way which the taste and ingenuity of the designer can devise.

It *is* whispered in the privacy of the boudoir that these capes and fichus, both in white and black, not only finish a toilet most charmingly, but that they have the additional merit of being very useful on occasion. For example, a black silk dress which has a worn appearance across the back, over the bust and at the elbows, can, by means of one of these capes, a pair of scissors and a few yards of lace, be made to put on an appearance of extreme juvenility. The scissors are applied to the sleeves at the elbows (or thereabouts), and the result of the surgical operation is completely hidden under a mass of tastefully arranged rows of lace.

This is, however, strictly *sub-rosa*. For should it ever become generally known, every lady who appeared with one of these "studies" in lace and jet, would be suspected of wearing it to cover a greater or less multitude of "shiny" and worn sins on part of her dress; which would, of course, be a cruel libel in most cases, perhaps.

Messrs. Lord & Taylor of Broadway and Twentieth Street, who kindly supplied information detailed above, have a fine line of lace goods in stock. FAITH RIPLEY.

COFFEE HOUSES AS A SUBSTITUTE.

A MOVEMENT well deserving of public notice has been inaugurated in the border town of Annan. A noble lady the (the Marchioness of Queensberry), out-distancing the well intentioned efforts of Good Templars and teetotalers, has taken a short cut to the reform of our national vice—which has always, even to put it mildly, been an ultra-fashionable one in Annan—by opening a coffee palace that, in attractiveness and comfort and cheapness, can more than bear comparison with the old places of resort it is intended to rival and supplant.

So far it has succeeded beyond expectation—perhaps not financially, though of that her ladyship takes small account, but—in the list of young men who have joined as members of the reading and recreation rooms, to which the upper story has been devoted and the numbers who resort to the elegantly fitted up bar, on the ground floor, for a cup of tea, cocoa, or coffee, all at the moderate sum of 1*d*., or to indulge in a regular feed for something less than 6*d*. For the more ambitious, a private room adjoins the public one, where for a trifling gratuity to the civil attentive keepers of the place—old retainers of the Kinmouth family—a comfortable lunch will be set out on a neatly-covered table at the same cheap rate as is charged in the bar.

A framed tariff, in good large type, hangs conspicuously over the chimney-piece, so that those of limited means can calculate their expenses to a nicety before ordering what they want.

Surely this is the royal road to the reformation so earnestly desired and so greatly needed. That many resort to the public houses for the sake of the convivial enjoyment to be found there, too often to escape from a comfortless, unhappy home and not from the mere love of drink, only the pessimist will be prepared to deny. And if an equally, or perhaps more attractive place of resort is offered them, where the company is as good or better, where no half-inebriated fool plays the jester for the amusement of his fellows, only a stage less maudlin than himself—where no fumes of stale drink make the atmosphere almost unbearable, and where nothing that can hurt either mind or body tempts the weak or unwary—then those who know anything of a movement like the present, and watch with sanguine expectation for a visible return, in the best of all currency, to the twice noble lady who has initiated and carries on at her own risk this attempt to do battle with the country's curse. A. L. O. S.

WOOLENS.

WHAT warmth and comfort in the very pronunciation! I have just repaired some flannels and for wristbands took the tops of a pair of old socks, stretched them on the press-board, which tapers, drew the sleeve over it till the turned-in edge just overlapped the raveled edge of the sock-rib; I felled the sleeve to it, nicely drew it off, turned it and sewed down the sock edge. This makes an elastic band which yields to the motions of the body. It would be better, of course, to have knit flannels entire, but they are very expensive, a double set costing $9 and lasting only two winters. Good flannel one yard wide may be bought for 50 cents per yard, and 10 yards will make two sets (if economically cut) of shirts and drawers. Shrink the flannel, cut to fit closely and finish the *wrist* and *ankles* with a knit rib, put on as directed above. They will last three winters.

Now that striped stockings are so fashionable, all the odd bits of bright colored yarn may go to make up a pair of hose for a child. Stripe according to quantities of each color. Use white for the top, heel and toe, gray, black or drab for the ground, make a broad stripe just above the shoe top grading into narrow stripes on each side, of bright red or blue with a mingling of green or orange.

Sock ribs lose their elasticity with age, and become discolored by bad washing. Wind these into a ball for darning the feet of old socks and save your pretty white yarn for knitting fleecy new ones. Knitting is play and may be done while warming your feet, at twilight or during the reading hours of long winter evenings when too tired to do anything, but knit and listen to the reading of a charming story. M. L. S.

CORRESPONDENTS' CORNER.

WHAT history of the United States can I get which would be suitable for a school district library? I would like one recently written, and coming down as nearly as possible to the present time. F. D. C.

ANS.—Barnes's Brief History of the United States, Published by A. L. Barnes & Co., 113 and 115 William St., N. Y. City. Price $1.50. Ridpath's is also *good;* it is more detailed. Price $3. Both may be obtained from the American News Co.

WHAT will remove grease, &c., from woolen and other goods? T. B. A.

ANS.—Use "Household Ammonia;" ask your grocer for it.

WILL some of the "RURAL" ladies give recipe for bandoline. J. C. Q.

ANS.—The simplest is soap and water. This is not always efficient. Here is a venerable and familiar one: Take bruised quince seeds, a table-spoonful; clear rain-water a pint. Boil gently to three-quarters of a pint, then strain through muslin, and add alcohol or brandy, and Cologne water, of each two tablespoonfuls.

CAN you tell me the name of the publishers and the price of the book, "Twenty-five cent dinners for a family of six," and "Fifteen cent dinners for a family of six"? What do you consider the best work on Elementary Entomology. Who is publisher and what is the price? CORRESPONDENTS.

ANS.—We refer you to the American News Co., where information can be obtained and books procured. In reply to the second question we would recommend "Packer's Guide to the Study of Insects." This may also be purchased of the American News Co.

THE doctors say that sealskin is unhealthy. Bless them! Now, if they can be induced to say the same of six-button kids, point lace, and a few such trifles, coming generations of married men will rise up and call them blessed.—Boston Transcript.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

SANITARY ADVICE IN VERSE.

IF the Editors will permit, my fourth and last article will consist of a poem, copied from an old newspaper, which sums up the whole in a few lines, and in better words than I can command.

MARY BEAL M'LOUTH.

"There's a skin without and a skin within,
A covering skin and a lining skin;
But the skin within is the skin without,
Doubled inwards and carried completely throughout.

The palate, the nostrils, the windpipe, and throat,
Are all of them lined with this inner coat,
Which through every part is made to extend—
Lungs, liver and bowels, from end to end.

The outside skin is a marvelous plan
For exuding the dregs of the flesh of man:
While the inner extracts from the food and the air
What is needed the waste in his flesh to repair.

While it goes well with the outside skin,
You may feel pretty sure all's right within,
For if anything puts the inner skin out
Of order, it troubles the skin without.

The doctor, you know, examines your tongue
To see if your stomach or bowels are wrong;
If he feels that your hand is hot and dry
He is able to tell you the reason why.

Too much brandy, whisky or gin
Is apt to disorder the skin within:
While if dirty, or dry, the skin without
Refuses to let the sweat come out.

Good people all! have a care of your skin,
Both that without and that within;
To the first you'll give plenty of water and soap,
To the last little beside water, we'll hope.

But always be very particular where
You get your water, your food, and your air,
For if these be tainted, or rendered impure,
It will have its effect on your blood, be sure.

The food which will ever for you be the best
Is that you like most, and can soon digest;
All unripe fruit and decaying flesh
Beware of, and fish that is not very fresh.

Your water, transparent and pure as you think it,
Had better be filtered and boiled ere you drink it:
Unless you know surely that nothing unsound
Can have got to it over or under the ground.

But of all things the most I would have you beware
Of breathing the poison of once breathed air;
When in bed, whether out or at home you may be,
Always open your window and let it go free.

With clothing and exercise keep yourself warm,
And change your clothes quickly if drenched in a storm:
For a cold caught by chilling the outside skin
Flies at once to the delicate lining within.

All you who thus kindly take care of your skin,
And attend to its wants without and within,
Need never of cholera feel any fears,
And your skin may last you a hundred years."

A CHAPTER ON CARPETS.

MARY F. M'CLOUD.

IN the purchase of a carpet, like anything else sustaining much wear, the best of its kind is always the cheapest. In the various Brussels and velvets the back should be firm and the pile close and thick. For three-plies, ingrains, etc., the entire weave should be close, with no loosely-drawn threads on top, as is often the case in large figures. All raised figures wear off first, and extremely brilliant colors show fade and soil quicker than subdued colors or neutral tints. Now that we have patent exhibitors that seem to display a thousand yards at once, no one need remain in doubt one minute as to how a pattern will look when on the floor. It is always best to know the exact size of the room to be fitted, and have the figures matched where purchased.

Be certain it lies smooth and even on the floor, as ever so small a bulk will soon show wear. Always place something under to lessen the friction, particularly under stair carpets. Paper will answer if nothing better is at hand, but for rooms and halls straw is much superior, as the dust passes through it and lies on the floor. With velvets, Brussels, etc., make it a rule to sweep but little. Pick everything off that can be gathered in that way, and use dust-pan and brush, brushing the dust right into the pan, and never sweeping it the length of the room as is common with other carpets.

Give plenty of air without allowing the sun to strike constantly on one spot, as through a door or window. Stained spots may be greatly benefited by the judicious use of aniline dyes, and it will brighten faded colors to dampen them with water in which a small quantity of spirits of ammonia and borax has been mixed. A new broom should be kept for the use of carpets that are to be swept, as woolen carpets wear off very fast if swept with old, stiff, short brooms, and pieces of oil cloth or oil cloth mats should be used in front of the grate or stove.

On festive occasions, when dancing and promenading are the "order of the day," a cover of unbleached muslin stretched tightly over the carpet will preserve it unsullied. It has always been our custom to change the strips of carpet as they become worn, ripping them apart and putting the outside strips in the center, changing again and again as long as there is any beauty or wear in it, and finally cutting across the middle and turning the ends together. The strips need not all be cut one length and the seams will not all come in a line—then it can be renovated with a border. Of course such a carpet descends in the social scale, from parlor to bed-room and dining-room, and finally finishes off in the kitchen, where it can be pieced out to proper size with oil cloth.

The most common insect we have to contend with is the moth, and after having the binding eaten off from several carpets I have learned that a slight dust of Scotch snuff around where the carpets are tacked will keep them away. Salt is good but draws dampness. Strips of paper dipped in turpentine or carbolic acid and placed under the edges are also good, but scent a room so strongly that it is very unpleasant. A wet towel spread over a suspected harbor of the insects and pressed with a hot flat-iron is sure death, but needs to be repeated often.

To cleanse a carpet on the floor, clean, damp, sawdust is very good swept back and forth. It catches the dust, and will not soil even delicate colors. A broom dipped in a large pan or pail of water and drawn across a few feet at a time—dipping the broom afresh in the water and not having it too wet—is a good method. The water may need changing and a piece of oilcloth should be placed under the vessel of water. When a carpet is lifted from the floor, give a thorough shaking, then hang across a line, and whip with long withes. This is all that most carpets need. If there is grease on it, spread on a clean floor, use a brush, hot water, soap, and plenty of spirits of ammonia, rub both sides and rinse.

Rag carpets may be scrubbed with a broom to very good advantage, afterward hanging to dry. If very dirty soak first. To disinfect carpets from the sick room of contagious diseases, should never be neglected, as their properties of absorbing moisture make them grand receptacles of disease.

After taking them from the floor and cleansing them, if they cannot be washed, the entire surface should be wiped off with a cloth dipped in water strongly impregnated with carbolic acid, after which they should be hung in the air in some out-building, until all danger is past. Another plan is to smoke them over sulphur, but this is sometimes injurious to the colors.

Not uncommonly we hear the complaint of fleas harboring in carpets, and when once lodged in a soft carpet, it is some task to get rid of them. Plenty of salt, swept back and forth over the surface is a sure remedy, as they will not stay anywhere, where salt comes in contact with them.

Somebody has discovered that old rag carpets may be rejuvenated by a coat of paint, and it is asserted they both look and wear well. The carpet is stretched tightly and tacked, then a coat of paint of the same kind as applied to the outside of the building is brushed heavily on and carefully dried. The color is generally buff or orange, and may be striped, barred or left plain. Old carpets, unlike many things, never cease to be useful. After they can no longer be used as a covering for the floor, they make good mats for the hot-bed and cold-frame; useful coverings for sick animals; safe wraps for our bulbs and tubers in cellars that are not quite frost-proof, and when worn entirely into shreds, good mulch about young shrubs if covered with soil; or they can be placed in the forks of fruit trees to catch insects, and are of great value in the lining of a rockery, etc., etc.

COLORING RECIPES.

Brown on Cotton or Woolen.

For 10 pounds of cloth or yarn, take two pounds catch, put into cold water sufficient to cover the goods, heat until dissolved; then add one-fourth pound blue vitriol, previously dissolved. Put in the goods and scald one hour or more, wring from the dye. Dissolve six ounces bichromate of potash in hot water, put in the goods, let simmer fifteen minutes and boil five minutes, stirring constantly. Dissolve the catch in iron and the bichromate in brass. Rinse thoroughly in clear water or in suds.

Yellow on Cotton.

Dissolve one-half pound sugar of lead in hot water and one-fourth pound bichromate of potash in cold water—both in wooden vessels. Dip first in lead water, wring, then dip in potash and wring out. Repeat until the desired shade is obtained. This is for five pounds of goods.

Orange on Cotton.

Take a lump of lime as large as your fist, pour on to it a pail of boiling water, let it settle, pour off the water and while boiling, dip in cloth colored yellow as above, and you will have a beautiful orange.

Blue on Cotton.

Take two ounces oxalic acid; two ounces Prussian blue and dissolve in separate pails of hot water. Dip the goods first in the acid, then in the blue. Wring dry and repeat until the color suits.

For Green.

Dip blue into a yellow dye as above, and it will produce green.

To Dye Scarlet.

To every pound of yarn take one gallon soft water, one ounce of pulverized cochineal; two ounces cream-of-tartar; one ounce solution of tin. When the water boils put in the cream-of-tartar, then the cochineal. When dissolved, add solution of tin; put the yarn in, stirring it all the time, let it boil 15 minutes, air it once or twice, rinse in soft water, and you will have a splendid color.

Salmon on Cotton.

One pound copperas; one-half pound saleratus, dissolve in hot water. Dip first in copperas and air five minutes, then in saleratus, and dry in the hot sun.—MRS. E. M. DUTTON.

DOMESTIC RECIPES.

Potted Fresh Fish.

CLEAN, wash and let remain over night in cold, salted water. For six pounds of fish allow three ounces of salt, two of ground pepper, two of allspice and one of cloves. Into an earthen jar put alternate layers of fish and spice with a dust of flour and a few bits of butter. Pour over equal parts of vinegar and water till the fish is well covered, tie a floured cloth over the top to prevent the steam escaping and bake five hours. Let remain until cold, then cut in slices. MRS. L. B.

Cream-of-Tartar Biscuits.

One quart of flour; one pint of milk; one teaspoonful of soda; two of cream-of-tartar and one of salt. Butter the size of an egg. Mix the cream-of-tartar with the flour, rub in the butter and salt, dissolve the soda in a teaspoonful of boiling water, and mix all together lightly. S. R.

QUESTIONS ANSWERED.

Chocolate for Cake. Analine for Cake.

Please give directions for preparing chocolate to put between layers of cake and on top, also is analine poisonous? I refer to it as used in small quantities for coloring cake etc.

A YOUNG CAKEMAKER.

ANS.—1, Grate one-fourth pound of chocolate, add a teacupful each of milk and powdered sugar. Boil slowly—careful not to burn it—and when quite stiff stir in the beaten yelk of an egg. Take from the fire at once, flavor, and spread over the cake. Or, take whites of two eggs, beaten stiff, one and one-half cup of powdered sugar and six tablespoonsful of grated chocolate. Flavor with two teaspoonsful of vanilla. 2. It is poisonous.

Flickering Lamp.

What will prevent a student lamp from flickering? READER.

ANS.—Do not press the glass chimney too far down in the socket. Allow the air to draw freely through the air holes.

CORRECTION.—"Lemon Juice," the heading of a recipe in last week's RURAL, ought to have read Lemon Jelly. E. M.

News of the Week.

MISCELLANEOUS.

Monday, February 16, 1880.

The newspapers are filled with distressing accounts of the Irish famine. The New York Herald is the faithful champion of the suffering people's cause. Up to Monday morning the 13th, the Herald fund had increased to $200,692.56. It is especially New York city that is contributing to the fund. Long lists of the names of the givers are published in the Herald every day. But it is found impossible to reach all who are willing to contribute their mite by solicitation. Contribution boxes have therefore been placed in the frequented thoroughfares throughout the city, and it is hoped that a sum which, in some measure, will alleviate the distress, may speedily be collected. Irishmen are talking of abolishing all demonstrations, balls and gayeties on St. Patrick's day, and using the money which would be thus uselessly expended, to swell the Herald fund.....The New York Senate have unanimously passed the bill entitling women to vote for and fill school offices. The lower branch of the Iowa Legislature has also passed a woman suffrage amendment to the State constitution, 56 to 24. The women are scoring a steady progress over the country.

AGRICULTURAL NEWS.

A large sorghum sugar factory will probably be opened at Edwardsville, Ill., this year. The firm is to consist of Mr. Belcher, of St. Louis, Mr, Schwarz, of Edwardsville, our occasional correspondent, and Mr. Miller of Minn., all widely known in connection with this new industry....In California there are three beet sugar factories, one at Iseleton, in Sacramento Co.; one at Alverado, and one at Soquel, about which, a correspondent wrote to "Everywhere" some time back....The last is reported to be closing up and out at a heavy loss. Upwards of half a million dollars are said to have been lost in beet sugar experiments in Sacramento Co., while the outlay in the State in this industry is put at a million dollars with results either disastrous or wholly unsatisfactory....The glucose manufacturers in Buffalo, N. Y., make from $30,000 to $40,000 per week. The stock in one concern originally valued at $100 each share is now worth $20,000....The Maine State college farm has paid its way the current year, and earned about $200 more than its expenses....The Senate Committee on Education and Labor has agreed to recommend for passage the bill introduced by Senator Burnside, providing that the net proceeds of sales of public lands, and the net receipts of the Patent Office, shall hereafter be devoted to the establishment of an educational fund, to be appropriated annually among the several States and Territories, and the District of Columbia....Returns from 151 towns in Conn., as to the working of the tramp law, which went into effect last May, show that there if a unanimous verdict in favor of the law as having driven the tramps from the State, greatly lessening town expenses, giving security to the rural districts, and inflicting no wrong on any man....The Imperial Mills new elevator in Chicago was blown down on the 12th inst, and its 123,000 bushels of grain spilled on the ground—loss on grain $65,000; on elevator $90,000 to $100,000; on mill attached, $50,000 . A bill has been introduced into the N. J. Legislature to prevent tae polution of rivers and creeks ...The President has issued a proclamation premising that preparations are on foot for an organized and forcible settlement upon lands in the Indian Territory, warning all persons against entering upon such lands without express permission of the Indian department, and notifying all invaders that they will be forcibly removed by the Federal Government....The International Dairy Fair Association held its annual meeting and election of officers, in this city, Feb. 10. Two tickets were in the field, the "regular" with Hon, H. Smith, of Sheboygan, Wis., at the head of the other candidates mentioned here last week, and the independent with Francis D. Moulton at its head. The latter ticket triumphed. The following are the officers for the current year: Pres., Francis D. Moulton; 1st Vice-Pres., Colonel R. P. McGlincey; Sec., T. Mortimer Seaver; Treas., Wash. Wndsor; and a long list of Vice-Presidents, ..The Association bitterly denounced the oleomargarine fraud and appointed a committee of 15 to take action for the suppression of the fraudulent traffic; and in their efforts they were instructed to co-operate with the Society for the Prevention of Adulteration in Butter, of this city.....The war against oleomargarine is carried on steadily here and in Brooklyn, and has now extended to Jersey City. Arrests are being constantly made of retail dealers, who sell the stuff as genuine butter....The negro exodus has already added about 15,000 to the population of Kansas, most of them devoted to farming....$70,000 have been subscribed for that beet sugar factory at Franklin, Mass., and 400 acres of beets are pledged for the first year's crop....The Southern States seem to be getting wild on cotton to the neglect of food crops. However this may turn out for the South, it is likely to be good for the West whence most of the imported food will be drawn next year....Wheat looks fine in Indiana; stock are in good condition, beef animals scarce....There seems to be a falling-off of 1,000,000 hogs this year as compared with last, so that prices should still rule high....Reports from the leading dealers in agricultural machinery and implements show that their orders are greatly ahead of this time last year.....Duluth shipped half a million barrels of flour last year....Nearly two-thirds of the cultivated area of Minnesota are devoted to wheat. In 1859, the acreage under this crop was 124,972, last year it was 2,769,369....The population in Germany increases faster than the production of grain. Germany annually imports from 40,000,000 to 50,000,000 bushels of grain....It is said that the cost of converting wheat into flour in France amounts to only from twenty to twenty-five cents per 250 pounds....Wheat in England was highest during the past year on November 8, namely: 50 shillings five pence per quarter; and lowest on February 22, namely: 37 shillings seven pence per quarter....A "New Process" mill with 14 run of stories, is being built at Harrisburg, Pa. ....Three-fourths of the lard used in Germany comes from this country....The railroad rates from Chicago to this city are on the basis of 80c. per 100 pounds for flour; 40c. for grain, and 45 cents for provisions.....Ocean freights are lower than for a long time..... The St. Louis Fair Association has an indebtedness of $170,000.....The gold and silver mines of this country, from 1849 to 1875, 27 years, yielded $1,617,000, while the value of agricultural products of one year, 1877, was $1,594,000. In a word, the farmer has added to the wealth of the country almost as much in a single year as the miner in 27....Agriculture, is to be made an obligatory study in all elementary schools of France. This is a recent action of the French Senate, and was adopted by a majority of 254 votes.....It is said that the proceeds from the sale of tickets at the late International Fair at this city paid all expenses.....Geese are raised for their feathers in Texas. One goose ranche in western Texas has 300 geese, whose feathers are plucked every two months, each one averaging a pound and a half a year.....At the Marquis of Huntley's late sale of Polled Angus cattle, in Scotland, 37 animals brought an average of $221 apiece.....The prices of the Polled cattle has been much less affected by the late depression than those of the Short-horns or any other breed.....The production of beet root sugar in Europe, according to the statistics furnished by Herr Licht of Magdeburg, was 1,380,000 tons for 1879, against 1,574,154 tons for 1878. This amount is divided as follows among the various States of Europe: Germany, 410,000; France, 300,000; Austro-Hungary, 365,000; Russia, 225,000; Belgium, Holland Italy, etc., 80,000. In France the diminution in the production of this article was 132,000 tons..... At the annual meeting of the Ontario Co., N. Y. Agricultural Soc. lately held a Canandaigua, the following officers were elected for the year 1880. Pres., H. M. Boardman, Rushville; Rec. Sec., Jesse H. Mason, Canandaigua; Treas., L B Gaylord, Canandaigua; Cor. Sec., Geo. W. Johnson, Geneva. On hand, after paying all debts, $872.70.....The Maine farmers seem to have discovered that there is more profit in feeding their beets to stock than in selling them to the sugar factories at $5 per ton and buying back the pulp at $2. They are slow to make new contracts therefore.....We are told that among English farmers, 477 were bankrupt in 1877; 1815, '78, and 1,431 in '79....Holland has been suffering from floods, entailing immense losses, which, of course, fall heaviest on farmers.....Since his arrival in Havana, Gen. Grant has been enthusiastic in his praises of Florida. According to him, the peninsula will produce within a few years enough sugar, tobacco, and oranges to supply the United States and leave something over. But the sugar and tobacco people in Havana say that the Florida soil cannot produce the finer kinds of sugar and tobacco. The ex-President, however, is sure that the immigration from New England will remedy this lack, and he depends upon Yankee ingenuity to adapt the soil to the tobacco plant.....It is interesting, and to many people it may be profitable, to know the comparative value of different kinds of wood for fuel. Shellbark hickory is regarded as the highest standard of our forest trees, and calling that 100, other trees will compare with it for real value as fuel for house purposes as follows: Shellbark hickory, 100; pignut hickory, 92; white oak, 84; white ash, 77; dogwood, 75; scrub oak, 73; white hazel, 72; apple tree, 70; red oak, 67; white beach, 65; black birch, 62; yellow oak, 60; hard maple, 59; white elm, 58; red cedar, 56; wild cherry, 55; yellow pine, 54; chestnut, 52; yellow poplar, 54; butternut and white birch, 43; white pine, 30.. ....Trees grown on dry land are worth much more for fuel than those grown on wet land..... Much excitement around Amherst, Mass. on the reported sale by the Agr. College, of some Ayrshires infected with tuberculosis. Cattle sold in 1877; won two premiums since, lately found diseased. Farmers' Institutes and Clubs busy discussing the matter. .....The Mass. State Board of Agriculture has just protested against the threatened "gobblings up" of the Agr. Coll. by Amherst or Harvard, both of which colleges are not unwilling to take now what they tried for at its establishment. .. ....The Mass. Agricultural College estimates its real estate at $200,000; the farm stock at $2,747; implements and vehicles at $1,005; farm produce at $2,019; anticipated income for current year, $16,200; expenditures, $14,000.....About Greenfield, Mass. it is said farmers cannot afford to raise sugar-beets for less than $6 or $7 per ton of 2,000 pounds.... ... The largest recorded corn crop in Maine was last year raised by A. G. Thurlow, of Portland, for a $50 premium, offered by the Lewiston Journal—101 bushels on one acre, and, of course, 'twas a poor corn year too... ....Senator Hill, of Colorado has introduced and favors a proposition to appropriate $50,000 to the digging of artesian wells here and there in the plains of the West, for the purpose of proving that 500,000,000 acres may be reclaimed by irrigation, in this way. Private capital will, it is expected, then be invested in the business. Gen. Le Duc endorses the project.

Hints to Butter-Makers

is the title of a valuable little pamphlet, sent free to any address for one stamp. Address, Butter Improvement Co., Buffalo, N. Y. It tells you how to increase amount of butter from given amount of cream 6 per cent., improve quality of butter 20 per cent., make "gilt-edge" or goldon-colored butter the year round. Every farmer and dairyman should send stamp for it.

ONCHIAL, ASTHMATIC and Pulmonary complaints, "*Brown's Bronchial Troches*" manifest remarkable curative properties. Like all other meritorious articles, they are frequently imitated, and those purchasing should be sure to obtain the genuine "BRONCHIAL TROCHES."

Liver Coughs often taken for Consumption are cured almost instantly with Hop Bitters.

The Markets.

SPCIALS FROM ALL CENTERS.

Until Saturday, Feb. 14.

Fertilizers.

MAPES'S Potato Manure—600 lbs per acre, $48 per ton; Corn Manure, 400 lbs. to 600 lbs. per acre, $49; Grass and Grain Spring Top Dressing—one to two bags per acre, $51; Complete Manure (for clay soils), $51; Tobacco Manure (Conn. Brand), $52; Complete Manure ("A Brand"). For use on all crops—in the hill or in connection with stable manure, $40; Complete Manure, (for light soils,) $51 00.

FORRESTER'S COMPLETE MANURES.—Forrester's Potato Manure, $47 per ton; cabbage manure, $50; oat, $47 50; turnip, $52; corn, 47 50; onion, $47 50; wheat, $45; rye, $47 50; grass, $45; fruit tree, $42 50; lawn dressing, $47 50; strawberry, $42 50.

BAUGH & SONS' prices for goods delivered at depot or boat, in bags and in 2,000 lb lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36; Baugh's raw bone superphosphate, $40; Baugh's twenty-five dollar phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent. of ammonia, $48 00.

Baltimore.—WHEAT—Market demoralized; Southern red at $1 45@1 48; do. amber at $1 50@1 55; No. 1 Md. at $1 52: No. 2 Western winter red, spot and February, $1 45¾ asked; March at $1 46@1 46¼; April, $146¼@1,46¾; May at $1.46@1 46¾; June $1.46¼ asked. CORN—Southern steady and firm. Western firm for spot; futures dull; Southern white at 50@60c; do. yellow, 58c.; Western mixed, spot 57 1-2@51¾c.; February at 56¼@56 1-2c.; March at 53¾c. asked; April at 52 1-2@52¾c.; May at 52 1-4 @52¾c. OATS—Weak; Southern at 46@47c.; do. mixed at 45@46c.; Penn. at 46@47c. RYE—Dull at 90@95c. HAY—Steady; prime to choice Penn. and Md. at $17@18. MESS PORK—At $12 50@13. HAMS—10@11c. LARD—At 8¼c. BUTTER—Steady; prime to choice Western packed. 20@26c.; roll, 18@22c. EGGS—Easier at 15@16c. COTTON—Firm; middling, 13 13-16c.; low middling, 13¼c.; good ordinary, 12 1-2c. Net weekly receipts, 523 bales; gross, 3,720; exports to Great Britain, 2,244; eastwise, 944; sales 2,121; spinners, 530.

Boston.—FLOUR—There is a firmer feeling and a steady demand; sales of Western superfine at $5 @ $5 25; common extras, $5 50 @ $6; Wisconsin do. at $5 50 @ $6 25; Minnesota do., $6 @ $7 25; St. Louis winter wheats, $7 @ $7 75; Illinois and Indiana at $6 50 @ $7 25; Ohio and Michigan $6 50 @ 7; patent Wisconsin and Minnesota extras at $7 @ $9; patent winter wheats at $7 @ $8 50. CORN quiet; sales of mixed and yellow at 60 @ 63c. OATS selling at 50 @ 53c. for No 1 and extra white; 48¼ @ 49c. for No. 2 white; 47 @ 48c. for No. 3 white and No. 2 mixed. RYE at 95c. SHORTS selling at $21 @ $21 50; fine feed and middlings $22 @ $23. PRODUCE.—The market is well supplied with the various articles under this head, which are selling at fair prices. The following prices are paid by receivers:—BUTTER—New York and Vermont choice creameries at 28 @ 30c. per pound, fair to good 25 @ 27c.; Fall dairy made, choice, 25 @ 27c., Winter dairy made at 18 @ 23c., Straight dairies, choice, at 20 @ 23c., dairies common to good, at 18 @ 22c.; Eastern and PEIsland, 16 @ 20c.; Western—choice creameries 30 @ 33c., choice dairy packed at 23 @ 25c., choice ladle-packed 21 @ 22c., fair to good do. 18 @ 20c., common 15 @ 17c. CHEESE.—Prices stronger; Choice Northern factory 14 @ 15c. per bound, fair to good at 12 @ 13c., and common 9 @ 11c.; Western factory—choice 13 @ 14c., fair to good 11 @ 12c., common 8 @ 10c. EGGS—Eastern at 20 @ 21c., Western 17 @ 19c. per dozen. BEANS.—Northern hand-picked Pea at $1-80 @ 1 90 per bushel; do. do. Western at $1 75 @ 1 85; do common $1 65 @ 1 75; medium choice $1-55 @ 1 60; common to good $1 35 @ 1 40; Yellow Eyes $2 10 @ 2 15; Red Kidney1 at $1 75 @ 1 85. Canada Peas 80c. @ $1 00 per bushel for common to choice. Green Peas $1 50 @ 1 85. POTATOES are very quiet; we quote Houlton and Maine Central Rose 53 @ 55c. per bushel; Houlton Jackson Whites at 40, Maine Central Jackson at 38 @ 40, Vermont Rose at $45 @ 50, do Jackson at 40, Peerless at 40 @ 45, and Prolific at 50 @ 55c. per bushel. ONIONS $3 75 @ 4 00 per barrel. APPLES at $1 75 @ 3 00 per barrel, according to quality. CRANBERRIES at $6 @ 8 50 per barrel. Boston rendered. HOGS at 5¾ @ 6¾c. per pound in live weight, and 6¼ @ 6¾ per pound for city dressed. HAY AND STRAW.—There has been a fair demand. We quote first quality coarse Eastern and Northern at $15 @ 16 per ton; poor and medium $11 @ 14; Rye Straw $20 @ 22 per ton. SEEDS.—Calcutta Linseed is nominally $2 37 @ 2 40 per bushel. We quote Clover Seed as steady at 3¾ @9¼c per pound for Western and New York; Timothy at $2 90 @ $3 per bushel; Red Top at $2 70 @ 2 80 per bag; Canary Seed at $2 45 @2 55, and American Linseed $1 50 @ 1 55 per bushel. ASHES.—Are in steady demand with sales of Pots at 4 1-2 @ 4 3-4, and of Pearls at 6 3-4 @ 6 7-8c per pound. BEESWAX.—We quote white at 40 @ 50c, and yellow at 24 @ 28c per pound. LIME.—Has been sold at $1 75 @ 1 80c per cask for Rockland.

Brighton Cattle Market.—Prices of beef cattle per 100 pounds, live weight—Extra quality, $5 62½ @ $6; first quality, $5 12 1-2 @ $5 50; second quality, $4 62 1-2 @ $5; third quality, $4 25 @ $4 50; poorest grades of coarse oxen, bulls, &c., $3 25 @ $4 12 1-2. SHEEP AND LAMBS.—The Western sheep and lambs were, as usual, owned by butchers and taken from the cars direct to the slaughter houses, costing, landed at Brighton, from 5 to 7 cents per pound, live weight. FAT HOGS.—The supply for the week has been large, all owned by butchers, and cost, landed at the slaughtering establishment, from 5 3-8 @ 5 1-2 per pound, live weight.

Buffalo.—WHEAT asking $1 35@1 37 for No. 1 hard Duluth. CORN in fair demand; sale of 10 cars new No. 2 Toledo on the track 46¾c. SHEEP—sales of fair to good western at $5@5 40, choice to fancy at $5 50@5 75; fair to choice western lambs at $5 50@6 15; Texas sheep at $3 60@4 10. HOGS—total for the week thus far, 39,165 head; for the same time last week, 32,175 head; market dull; weather unfavorable; sales of good to choice Yorkers at $4 45@4 55; medium and heavy grades at $4 50@4 67½; fair ends at $4 10@4 50; pigs at $4@4 10.

Chicago.—Wheat unsettled and lower, closing firm; No. 2 red winter at $1 23; No. 2 Chicago spring at $1 22¼ cash; $1 23 bid March; $1 23¾ April; No. 3 do. at $1 08@1 09. CORN steady, with a fair demand, but easier; 35¼@35¾c. cash; 35¾c. March; 40¾@40¾c. May and June; rejected at 33¾c. OATS quiet and weak; 31c. cash and March; 35¾@35¾c. May. RYE easier at 75@75¾c. BARLEY easier at 75@77c. TIMOTHY-SEED at $2 55@2 75. FLAX-SEED at $1 65@1 70. DRESSED HOGS at $4 65@4 80. PORK in fair demand, but lower at $11 40 cash and bid March; $11 55@11 57½ April. LARD in fair demand, but lower at $7 05c. cash; $7 10c. March; $7 17½@7 20c. April. BEANS quiet at $1 40@1 50 for prime grades. BUTTER—A continued good demand is noted, and the market maintains a firm tone. Good to choice grades are wanted by the local and shipping trade, and readily command the quoted prices. Roll is somewhat under neglect. We quote: creamery, 28@33c; good to choice dairy, 22@26c.; medium, 18@20c.; inferior to common, 10@16c.; roll, 15@20c. CHEESE—A fair movement on Eastern and Southern account, and a good local demand at the following quotations: full cream, 14½@15c.; part skim, 13½@13c.; low grades, 8@10c. POTATOES quiet at 50@55c. ₱ bush, in car-lots. Sales made from store at 5@10c above these prices. POULTRY slow and easy. Chickens, dressed, 5½@8c. ₱ lb.; geese, dressed, 6@8c. ₱ lb. SEEDS—Timothy quoted a shade easier. Sales noted at $2 65@2 72½, prime being easy at $2 70. Clover dull. Sales were made at $4 25@4 70, prime closing at $4 50@4 60. The offerings were larger, with little demand. A car of flax brought $1 65. HOGS—Market weak, mixed packing at $4 15@4 35; light at $4 20@4 40; choice heavy at $4 40@4 60; all sold; market closed tame. CATTLE; good to prime exports in good demand and firm at $5@5 65; common to good shipping slow; some cases 10c. lower at $4@5 50; butchers' quiet and weak at $2 30@3 50; stockers and feeders quiet at $2 50@3 90. SHEEP—Market demand fair at $4@5 50.

Cincinnati.—WHEAT quiet at $1 28; CORN steady at 39c. OATS dull at 38c. RYE steady at 85c. PORK dull and nominal at $12. LARD in fair demand at $7 05@7 10c. BULK meats dull; shoulders at 4c.; clear rib at $6 10c.; clear sides at $6 65c. BACON quiet; shoulders at 5c.; clear ribs at 7¼c.; clear sides at 7¾c. BUTTER firm; choice Western Reserve at 25c.; choice Central Ohio at 20@23c. HOGS active and firm; common at $3 25@4 10; light at $4 20@4 45; packing at $4 25@4 45; butchers' at $4 45@4 55. CHEESE—The market was strong and the demand fairly active for prime to choice factory at 14@14¼c. per pound. New York selling slowly at 15@15¼c. APPLES have met a strong market under a good shipping and consumptive demand, and at the close choice are selling at $3@$3 50 per bbl. on arrival, and $3 50@4 00 from store. CABBAGE was scarce and firm, the demand fair at $2 25@2 75 per bbl CRANBERRIES were firm, and there was a good demand for prime to choice at $9@10 per bbl,, and $3@3 25 per crate. ONIONS were firmer and in good demand at $4 25@4 75 per bbl POTATOES have been quiet, but early rose were held firmly at $1 90@2 per bbl packed. Peachblows were easy at 40@45c. per bushel, loose. SWEET POTATOES were quiet and steady at $2@2 50 per bbl.; the supply ample. TURNIPS—The demand was light and the market easy for rutabagas at 90c.@$1, and for white at 60@65c. per bbl. POULTRY was plenty and dull, Chickens sell at the close at $2@2 75; ducks, $2 50@3, and geese at $3 50@4 75 per dozen. Live turkeys are quiet and easy at 6½c., and dressed at 8¾@9c. per lb. DRIED FRUIT—The demand for apples was fair, the market firm for choice Northern at 7¼@7¾c. per lb on arrival, and for common to fair at 6@7c. Jobbing lots selling from store at 7¼@8¼c. Peaches were quiet at 8@8¼c. per lb on arrival, and 9@9¼c. from store. BRAN, SHIPSTUFFS AND MIDDLINGS—The demand for bran was fair and the market firm at $13 per ton in bulk on track. Shipstuffs were dull at $13@13 50. Middlings met a good demand and firm market at $15@20. Stuff in sacks brought 50c per ton more than the above quotations. HAY was rather easier as the supply was larger, the demand moderate at the following quotations: Prairie hay, $11@13; fair to prime mixed, $14 50@15 50; fair to prime timothy, $15@17; choice light pressed timothy, $18@18.50 per ton on arrival, and $1@2 more from store. SEEDS—Clover seed met a fair jobbing demand at 8¾@8¾c. per lb. carload lots selling at 7¾c. on track. Timothy seed was steady at $3@$3 10 per bush. Flaxseed brought $1 25@1 35 per bushel on arrival. HORSES.—In this the largest horse market in the union trade this week has been very brisk. Good prices for all sorts except common ponys. The demand, as heretofore, was for smooth drivers, heavy draft, streeters, and Southern chunks. Southern chunks, $45@70; No. 1 streeters, $85@110; draft horses and No. 1 drivers, $140@175, and stock in good demand.

Detroit.—Flour lower, with a few buyers; sales 250 bbl. white at $6 25. WHEAT extra white Michigan, no sales; No. 1 white Michigan nominal; February, no sales; March, $1 28½@1 29; April, $1 31¾: May, $1 33½. CORN quiet and unchanged. OATS very dull; holders are pressing their stocks on the market. No. 1, white at 40c; No. 2 do. at 38¾c. CLOVER SEED very dull and declined at 5c; prime at $4 36; No. 2 at $4 10. DRESSED HOGS firm with a fair demand at $4 90.

Indianapolis.—WHEAT weak, No. 2 red, $1.25@$1.27. CORN steady at 35 1-2@36 1-2c. OATS dull and lower at 34@37c. HOGS quiet at $3.75@4 60.

Louisville.—WHEAT firm at $1.25@1.28. CORN quiet; white at 44c.; mixed, 43c. OATS quiet; white at 40c.; mixed, 39c. RYE steady at 85c.

Milwaukee.—WHEAT—No. 1 Milwakkee hard at $1.24; do soft, $1.22, No 2 Milwaukee, spot and February, $1.20; March, $1.21¾; April, $1.22 1-2l No. 3 do. $1 07; No. 4 do., $1.02@1.03; rejected, 91c. CORN dull and lower. No 2 at 35¾c. OATS firm: No. 2 at 31 1-2c. bid. RYE quiet; No. 7 at 74c. BARLEY dull; No. 2 spring at 71 1-2c. PROVISIONS inactive. MESS pork dull at $11.20 cash; $11.40 March. LARD—Prime steam at 7c. cash; 7 10c. March. LIVE hogs steady at $4.25@4.35. DRESSED hogs easier at $4.75.

New Orleans February 13.—FLOUR quiet but steady; superfine at $5@5 25 double extra $5 75@6; treble extra at $6@6 37½; high grades at $6 50@6 87½. CORN higher at 56@60. OATS quiet and weak at 47c. Corn MEAL higher at at $3 10@3 50. HAY scarce and firm; prime quoted at $24@ choice at $28. PORK quiet and weak; old at $12 62½ new at $13. LARD steady; tierce at 7½@8c; keg at 8¼@8¾c. Bulk meats in fair demand; shoulders, loose, 4 40@4 50c; packed, 4 62½c; clear ribs, 7c; clear sides, 7¾c. BACON quiet but steady; shoulders, 5½@5¾c; clear ribs, 7¾c; clear ribs, 7¾c; clear sides, 7¾@8c. Sugar-cured hams easier; canvassed at 9¼@10¾c.

Philadelphia.—WHEAT dull and unsettled; very little demand; Penn. red on track at $1 47; Delaware amber on truck at $1 50; No. 2 red in elevator at $1 45¾. At the Open Board, first call, no sales; at the second call dull and 2c. lower; No. 2 red for February at $1 45 bid and $1 47¼ asked; March at $1 45¾ bid and $1 47 asked; April at $1 46 bid and $1 47 asked; May at $1 46 bid and $1 48 asked. RYE comes in slowly; Pennsylvania at 90c. CORN closed dull and weak, with a limited demand; Penn., Western and Southern sail yellow on track and in grain depot, 57@57¼c., chiefly 57c.; Western mixed on track, 56c.; Southern white do., 60c. OATS quiet and steady; fair white at 47@47¼c.; good and choice do. at 48@49c. PROVISIONS steady; city mess beef at $13; beef hams at $16 50@17; mess pork at $12 75@13; smoked hams at 9½@10¼c.; clear rib sides, smoked, at 7¾c. DRESSED HOGS, Penn., at 6¾c. LARD—Western tierces at $7 60@7 70; do butchers at 7@7¼c. BUTTER firm; creamery extra at 33@35c.; Bradford county and New York extra at 25@26c.; Western Reserve extra at 25@26c.; do good to choice at 18@23c.; rolls firmer; Penn. extra at 18@23c.; Western Reserve extras, 20@21c. EGGS easier; Penn., 17c.; Western at 16@17c. CHEESE firmly held; New York fancy at 14¾@15c.; Western full cream at 13¾@14¾c.; do. good at 13¾@14c.; do half skims at 12¾13c.

St. Louis.—WHEAT unsettled and lower; No. 2 red fall at $1 25¾@1 26 cash; $1 26¾@1 27¼ March; $1 28¾@1 29¾ April; $1 30@1 30¼ May; No. 3 do. at $1 21¾ bid. CORN at 33¼@33¾c. cash; 33¼c. February; 33¾@34¾c. March; 36c. April; 37 May. OATS at 32½@32¾c. cash; 33c. February; 34c. March. RYE at 70c. bid. BARLEY dull and unchanged. HOGS—Light shipping at $4 15@4 25; packing at $4 20@4 35; butchers' to select at $4 35@4 50. CATTLE—Supply light and of mixed grades,

which sold readily al 10@15c higher; sales of light to fair shipping steers at $3 75@4 40; cows and heifers at $2 75@3 35; feeding steers at $3 90@4 30; receipts, 600; shipments, 1,300. SHEEP steady with a good demand; good at $4 40@4 80; prime to choice at $5@6.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Feb. 14, 1880

BEANS AND PEAS.—The demand for medium beans is not of winter volume and 50c. is not a frequent quotation. A very useful quality is offering at 40c., and with easy rates for potatoes grocers must have proportionately cheap beans. Marrows are in good export demand, and hold full last figures. Pea beans quiet. White and red in fair demand, the former rather scarce. Green peas firm at $1.75@1.80; business moderate. Southern B. E. peas per 2 bu bag, $2.25; marrow beans, prime, $1.70@1.75; other, $1.55@1.65; medium beans, prime, $1.45@1.50; other, $1.35@1.40; pea, 1.60@$1.70; white kidney, $1.60@1.80; red do., $1.55@1.75; black, 1.75@$1.80.
Receipts of beans, 3,800, exports, 1,600 pckgs.

BEESWAX.—Demand is limited to small lots, worth 24@25½c.; quoted for Western and Southern.

BROOM CORN—Dealings are small and prices unchanged. Quotations are for choice brush at 9c.; choice hurl at 8c.; stalk braid at 6@7c.; mixed red and green at 5@6c.

BUTTER.—The market has ruled quiet up to within a day or two, but with a better attendance of buyers and a falling off in receipts prices close strong, with an advance of 1 to 2c. ₽ ℔ The entire offering of State is not attractive, and outside prices are only attainable when fall excellence is positively perceptible upon the tryor. A fair portion of late receipts are farm-owned and have paid for holding to date. Low grades of State and Western have been neglected for a fortnight or so but now begin to move. Late shipments of western are reported as selling at a fair profit, say $1 to $2 ₽ firkin. Roll butter holds a better place than at our last. More fresh solid packed could be placed than arrives. The West used to be relied upon for this grade of stock, but the yield this season seems to get divided along the routes, and New York misses what could be handled. There will be a demand for rich grain-fed winter as long as best ends are broken off dairies to an extent that leaves doubtful graded bodies for the use of those who must, or what is just as good commercially, think they must have steady supplies of State. As cold weather prices are favorable for producers, we join with some of our contemporaries in urging farmers, whose land space permits, to plant more largely of corn with a view to the enrichment of winter butter, an item that is destined in the future to mean business. To-day it would be difficult to fill a large order strictly fine butter creamery or other packages. Western butter is not up to its winter quality standard and seldom exceeds inside figures.
State pails and tubs, full choice, 29@30c.; full, good to prime, 26@28c.; fair to good, 24@26c.; poor to fair, 20@24c.; fresh choice, 30@32c.; good to prime, 26@28c.; fair to good, 23@25c.; entire dairies, choice, 29@27c., good to prime, 24@25c. fair to good, 22@24c.; creamery, fresh, best, 37@38c.; good to prime, 33@36c.; fair to good, 30@32c.; poor to fair, 26@30c.; fall, 26@32c.; summer, 22@26c.; Western imitation creamery, 22@29c.; dairy fresh, extra, 24@26c.; good to prime, 20@24c.; fair to good, 21@22c.; poor to fair, 19@20c., factory, special grades, fancy, 23@24c.; prime, 20@21c.; fair to good, 18@20c.; poor to fair, 16@18c.; very poor 10½@12½c.; roll butter, 18@20c.
Receipts for week, 21,100 packages. Exports, 7,400 packages.

CHEESE.—Export demand is slack and the home trade moderate, but prices are held firmly,
Quotations for State factory: Strictly fancy, 14½@15c., choice at 14½c.; good to prime, at 14@14½c; fair to good, at 13½@14c. State farm dairy: Good to prime at 14@14½c.; fair to good at 13½@14c. Wis. factory: Fine, 14½@15c.; good to prime 13½@14½c. Ohio factory: Cheddar, fine, 14½@14½c.; do., fair to good, 13@14c.; flat, fine, 14½@15c. flat, good to prime, 14@14½c.; flat, fair to good, 13@14c.
Receipts for week, 6,050 boxes; exports, 2,800 do.
Liverpool cable, 73s.
Steam, 20s.

COTTON.—The market has been fairly active and closed at for February, 13 22@13.23c.; March, 13.29@13.30c; April, 13.53@13.54c.; May, 13.73@13.74c.; June, 13.91@13.93c.; July, 14.01@14.03c.; August, 14.09@14.11c.; September, 13 55@13.58c.; October, 12.04@12.77c.
Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	11 7-16	11 9-16	12 9-16
Strict ordinary	11 13-16	11 15-16	11 15-16
Good ordinary	12¼	12¾	12¾
Strict good do	12¾	12⅞	12⅞
Low middling	12 13-16	12 15-16	12 15-16
Strict low middling	13	13⅛	13⅛
Middling	13 3-16	13 5-16	13 5-16
Good middling	13 7-16	13 9-16	13 9-16
Strict good middling	13 11-16	13 13-16	13 13-16
Middling Fair	14 3-16	14 5-16	14 5-16
Fair	14 15-16	15 1-16	15 1-16
STAINED.			
Good ordinary	14¼	Low middling.	12 5-16
Strict good ordinary	12	Middling	12⅜

DRIED FRUITS—Have had increased demand and closed generally higher. For apples—New North Carolina, at 7@8¼c. for fair to good; 9@9¼c. for choice; 10@10½c. for fancy sliced; New York State sliced, new, 7½@8c.; quarters, 6½@6c.; Southern and inferior scarce and nominal. Patent evaporated, apples, choice, in cases, at 13½@14c. for choice, and 12½@13c. for do. good and prime; evaporated peeled peaches, at 23@26c. for good to choice. do. unpeeled at 13@14c.; old North Carolina, 16@18c.; Georgia, 14@10½c.; Virginia, 12@15c.; old halves, unpeeled, 7½c.; do. quarters at 7c. Blackberries at 11c. Raspberries at 25c. Pitted cherries at 19@19c.
Exports of dried apples for week, 300 bbls.

EGGS.—Receipts for the week, 9,875 bbls.; do. last week 6,850 do. Lent is here but high prices have been ruling, and it is difficult for the market to suddenly assume the right sort of action. To make trade brisk consumers must have rated down a degree lower at retail than wholesale parcels are now quoted. Many retailers in this city have made it a point to sell eggs at this season very close to cost, so as to attract customers for other table goods. But as no item stands a high price in a retail way, as it use i to, eggs will have to take their chance with other commodities. Quotations will depend upon supplies and with the yet open weather prices are liable to fall any day.
Near points, per doz., 17@18c.; State and Penn., 15½@16c.; Western and Southern, fresh 15½; good marks, 14@12c. including Tennessee. State limed, 12@13c.; Western, 11@12c.; Canadian 12@12½c.

FLOUR.—There have been free sellers, and buyers have had the advantage without much activity. Quotations are $4.80@5.10 for poor to very fancy superfine State; $5.40@5.65 for inferior to good extra do., odd lots and lines; $5.65@5.90 for good to very choice do.; $4 80@5 50 for inferior to fancy superfine Indiana, Iowa, Michigan, &c.; $5.40@5.65 for inferior to good shipping extra do., and $5.65@4.85 for good to very choice shipping extra do. Inferior to about choice white wheat extras $5.90@6.75; about choice to very fancy do. $6.75@8 the latter an extreme; red and amber winter wheat, inferior to very fancy grade and family, at $5.90@7.75; round hoop Ohio, $5.60@6; and trade and family brands of do. at $6.10@7.75; the latter rate for very choice; St. Louis at $5@6.75 for inferior to very good extra; $6.75@7.75 for very good to very choice; Minnesota clear, very inferior to fancy, at $5.65@6.75; Minnesota "straight," inferior to very fancy, at $5@7.75 and patent inferior to fancy at $6.75@8.75; unsound stock at from $3 00@5.50 city mill extra at $5.25@6.75 for ordinary to fancy for West Indies do. for England, $5.40@5.75 for poor to choice; do. trade and family extras, $6.75@7.75; do. for South America, $6.40@6.85; No. 2 at $3.90@4.75 for poor to very fancy.

CORN MEAL.—Sales at $3.75@3.80 for yellow Western, and $3 25@3.30 for Brandywine.

FRESH FRUITS.—The demand is steadier for apples and prices may work up if the weather will allow a push of stock to be avoided. Railroad stock turns out well. Boat lots run very uneven. Exports for week, 5,900 bbls. Choice Baldwins and Greenings ran c $2.50@3; poor to good $1.50@2.25; very fancy red $1.50 Strawberries arrive in mixed condition; Char. have sold at 15@25c. per qt.; Fla. 35@60c. Fla. oranges in fine order $3.25@4 half bbl. case; the latter for Indian River; stem picked Grapes nominal at $3.50@4 per case. Cranberries firm for bbls; crates higher. Cape Cod, bbls. $7.50@9; other Eastern, $6.50@8.50; N. J. crate, $2.37@2.87. Peanuts are hi. herbu; will hang at the advance: Va. hand-picked, 6c.; other kinds, 5@5½c.; shelled 5½@6c. Hickory nuts 75c.@1; Pecans, 10c.

GRAIN.—Wheat has had a stronger export demand at easier prices. Latest sales are of No. 1 white at $1.46@1.47½; do., February, $1.46½@1.47; do., March, at $1.47@1.47½; do., April, $1.47½@1.48; do. May option, at $1.45@1.45½; ungraded white at $1.42@1.42½; No. 2 red at 1.46½@1.48; do., February, at $1.46¾@1.47½; do., March, at $1.47¾@1.49; do. April option, at $1.48¾@1 50; do., May, at $1.48¾; ungraded red at $1.41@1.45; mixed winter at $1.45@1.46; ungraded amber Michigan at 1.46¾; No. 2 northwest spring at $1.40; New York No 2 spring at $1.38; New York No. 3 spring at $1.30@1.32; ungraded spring at $1.30. Rye at 95@96c. for prime. Corn is moderately active; latest sales are of old No. 2 at 59c. new afloat quoted at 58@59c.; do., February, at 58¾c.; do., March, at 55½@55¾c.; do., April, at 54c.; New York steamer mixed at 57@57½c.; do., February, at 57@57½c.; ungraded mixed western at 56¾@58c.; New York No. 3 at 56@56¾c.; steamer yellow at 59c. Oats are lower and moderately active; latest sales are of No. 1 white, at 50c.; No. 2 white at 47¾@48c.; No. 3 white at 46¾@47c.; New York No. 1 at 48c.; New York No. 2 at 47¾@47¾c.; do., February, at 47½c.; do., March, at 47c.; New York No. 3 at 44¾@47c.; ungraded white western at 49@50c.; ungraded mixed western at 47@47½c.; white State at 50c.; mixed State at 47¾@48¾c.; No. 2 Chicago afloat at 48c. asked.

HAY AND STRAW.—Receipts are moderate, demand liberal and prices strong. Shipping hay quoted at 75c.; retail lots at 80@85c. for medium, and 90@95c. for prime; clover at 65@70c. Straw at $1@1.05 for long rye; 65@70c. for short rye, and 55@60c. for oat.
Exports of hay for week 1,100 bales.

HONEY.—Clover comb quiet; strained in good demand. White Clover single comb, 17@18c.; larger pkgs. 14@15c.; Buckwheat 11@13c.; clover extracted, 10@11c.; strained, 8@9c.

HOPS.—The market is still unsettled, with demand slack and prices are wholly nominal. Quotations are for:

	Cents per ℔.
New York, fancy	38 @40
New York, new crop, good and choice	33 @38
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast, olds (nominal)	5 @10
Bavarians	45 @60

MAPLE-SUGAR.—A few lots of new Ohio quoted 15@16c.

OIL-CAKE.—Western is quoted at $33 per ton.

POULTRY AND GAME.—The weather has not been favorable for the few items in market, and prices are easy. Wild pigeons, per doz., flight, prime, $1 65@1.75; acorn fed, $1.50. Canvas back ducks, $2.25@2.75 prime Southern and Western; red heads, $1@1.25; Mallard, 75@90c.; Teal, 60@60c.; common, 30@40c.
Supplies have exceeded the moderate wants of the period; in fact, in cases good lots had to be put in cold storage. Large turkeys very slow.
Turkeys, Jersey, good to prime, 11@12½c.; State, Mich., N. Ohio and Penna., prime, 11@11½c.; other Western, prime, 10@11c.; fair to good, 9@10c.; Western, d.-p., 10@11½c.; Phila., d.-p., 12@13c.; Capons, Phila., large, 19@20c.; slips, small, 15@17c.; chickens, Pa. d. p., 12@13c.; Jersey, ₽ ℔., 11@11½c.; State prime, 9½@10c.; Western, prime, 8½@9c.; fair to good, 7@8c.; poor to fair, 5@7c. Fowls, Phila., d.-p., 8@10c.; Jersey, good to prime, 9@10c.; State, 8@9c.; Western, 7@8c.; poor to fair, 5@7c. Ducks, Phila., d.-p., 15@16c.; Jersey, 14@15c.; Western, 12@14c. Geese, Phila., d.-p., 10@11c.; Jersey, 10@11c.; State, 9@10c.; Western, 6@9c. Squabs, white, ₽ doz., $4.50@5; dark, $3@3.50.
All cooped stock dull and easy. Fowls, 7½@9½c.; roosters, 4@5c; turkeys, 8@9c.; ducks, 60c.@$1; geese, prime, $1.15; poor to good, $1@1.62; pigeons, 40c.

PROVISIONS—Have been slow and lower. Mess pork quoted at $11.75@12 for old; $12.10@12.15 for new for February and March, and $12.15@12.20 for new for April. Bacon at $6 90 for long clear and $7.10 for short clear. Beef—Extra mess at $11@12; plain mess, $10.50@11; packet, $11.50@12.50; tierced beef, city extra India mess, at $20@22.50. Beef Hams at $17. Stearine at 7¾@7¾. for Western. Lard—Western steam at $7 60 for spot lots; $7.55@7.57½ for February and March; $7.57½@7.60 for April. Tallow at 6¾c. for prime.
Receipts for the week, 1,936 lbs. pork; 780 pkgs. beef; 15,566 do. lard; 2,710 dressed hogs. Exports—Bacon, 2,555,576 lbs.; lard, 3,946,050 lbs.; pork, 4,125 lbs.; beef, 3,140 pkgs.

SEEDS.—Grass are quiet and firm; clover quoted 7¼@7¾ for prime Western; 7¾@8¼ for choice and extra choice do.; State at 9¼@9¾ for choice to 10c. for extra choice.

VEGETABLES.—Export of potatoes for week, 3,216 bush. market for potatoes is very dull and the reduced prices are not strong. Bermudas have sold at $6; Clins, $5. E. Rose, Nova Scotia, $1.37@1.62, bulk ₽ bbl.; Early Rose, Maine, $1.75@1.87, d.-h.; State, in bulk; $1.50@1.75; Prolific, N.S. $1.37@1.62, do.; Mercer, $1.12@1.37; Peachblows, State, white, d.-h. bbl. $1.87@2.00; do. red, $1.75@1.87, Snowflake, $1.37@1.62, Peerless, $1.37@1.50; bulk, 1.25@1.37; N. d., $1@$1,12, Sweet 3.00@3.25; Ch, green peas, $3.50@4.00 ₽ crate; Fla, green peas, $1.50@2.50. Norf. kale, per bbl, 75c@$1.00; do. Spinach, $2.00; Balt. 1.25@$1.50. Marrow squash, $1.25@$1.50; Hubbard, $2@3.50, Cabbage, ₽ per 100, $4@8. Onions, white, 4.00@5.00 ₽ bbl.; yellow, $4.00@4 25; red, eastern; 2.75@$3; red, Chester, $2 5@$4.00. Beets, Jersey, 1.00@1.25; Turnips Russia, 75c.; Carrots, 75c.@$1.25. Celery, per doz., $2.50@3.

WOOL.—There has been a brisk demand and the market is strong at unchanged prices. Quotations are for domestic fleeces:
Ohio Pennsylvania, and West Virginia—XXX, 55@58c.; XX, 51@55c.; X, 50@53c.; No. 1, 55@57c.; No. 2, 47@50c.; coarse, 43@46c.; combing, 53@57c.
New York, Michigan, and Wisconsin—XX, 47@50c.; X, 47@50c.; No. 1, 52@55c.; No. 2, 46@50c.; coarse, 38@40c.; combing, 50@54c.
Indiana, Kentucky and Tennessee—X and XX, 46@50c.; No. 1, 52@55c.; No. 2, 46@50c.; coarse, 38@40c.; combing, 50@54c.; combing unwashed 37@42c.
Illinois, Iowa and Minnesota—X and XX 43@47c.; No. 1, 48@52c.; No. 2, 43@45c.; coarse, 37@40c.
Georgia, Alabama, Mississippi and Louisiana—fine unwashed, 43@45c.; medium unwashed, 40@43c.; coarse unwashed, 30@33c.; burry, 18@24c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Feb. 14.

BEEVES.—Receipts for the week, 11,573 head; do last week, 11,073 do. The week has been a severe one upon sellers. Most of the stock was high bought at the West and trade here has not helped owners, but in scarcely any instance this week. This weather has been bad for several days; wholesale dealers in dressed not willing to risk carrying hides and quarters while damp muggy weather threatened, Lent also curtails the wants of many up-town shops. A serious decline in fat and hides has also a depressing effect. Take it in all it was as poor a week as has occurred in New York for many months. Poor to fair steers sold at 7¾@8c.; dr. 55@5dc.; good to choice, 9¼@10¼c. dr. 56 ℔s.; extra quality 10¼@10¾c. dr. 57 ℔s. Export demand fair for selected stock.

MILK COWS.—Sales have again been reported at $35@$55 per head, good to prime milkers. Supplies continue ample for all wants; common cows not looked at.

VEAL CALVES.—The demand has ruled moderate but prime lots of live have brought fair prices. N. J. and Bucks Co. choice, 8@8½c.; others, 6¾@7¾c. Mount Holly, 5@8c. dressed calves very dull, will be riskey property during Lent. There is a wide range on under goods.

BUTT-MILK CALVES.—4¾@5c.; grass do. 3@3¾c. Hog dressed choice, 10c.; good 8¾@9¾c.; poor to fair, 4¾@8c.

SHEEP AND LAMBS.—Receipts for week, 27,336 head; do. last week, 29,741 do. The market has been dull and inactive, 5¾@6c. for sheep and 7¼@7¾c. for lambs.

SWINE.—Receipts for week, 30,843 head; do last week, 32,493 do. Live, steady at 4¾@5c. County pork light at 6¾@6¾c.; medium 6¾@6½c.; heavy 6@6¾c., tenderloins, 9c.

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Reading for the Young.

MAMIE'S WISH.

I WANTS a piece of talito
To make my doll a dess,
I doesn't want a bid piece,
A yard'll do, I gess.

I wish you'd fred my needle,
And find my fimble, too,
I has such heaps of sewing
I don't know what to do.

My Hepsy tored her apron
Tumbling down the stair;
And Cæsar lost his pantaloons,
And needs annozzer pair.

My Maud needs a new bonnet,
She hasn't none at all,
And Fred needs a new jacket,
His ozzer one 's too small.

I wants to go to Ganma's,
You promised me I might;
I know she'll want to see me,
I wants to go to-night.

I wants some newer mittens,
I wish you'd knit me some,
For most my fingers freezing
These leak so at the fumb.

I wish I had a cookie,
I'm 's hungry as I can be:
If you hasent petty large ones,
You better give me free.

REMINISCENCES OF A LITTLE GIRL.

MRS. M. J. GALPIN.

I SEE by the Rural that Uncle Mark has published my letter promising the little ones a story. I suppose I must make a commencement and see what I can do for you in the role of story teller; but before proceeding any farther, I will say to the little ones, that they can hardly depend on my regular appearance every week, as I have no opportunity to write except at night when my three children are in the land of dreams, and I keep no help whatever, having always found them more trouble than gain. I will try and use language so plain that you may all understand, but if I fail, call on your papa or mamma to help you out of your difficulties.

How shall I commence? Once upon a time when geese were swans, or how shall it be? Well, I will take you back some forty-five years and tell you something in regard to this little girl's father, and after awhile we shall see where she comes in. You will, also, journey with me across the Atlantic Ocean to the town of L——, Galway Co, Ireland. Within that town lived a famous linen weaver, one who wove the splendid Irish linen and linen damask, now so much admired. He was the father of thirteen children and was always so upright in his conduct, that he was dubbed "honest Tom Silk," people would believe his lightest word, more than some men's solemn oaths. He stood six feet two inches in his stockings, and was as straight and upright in stature, as he was in character. The prevailing religion in Ireland then, as now, was Roman Catholic, and he was faithful and strict in all his observances of the church rules. It was the custom in those days to select one of the children of the family for the priesthood, and the choice in this family fell upon the father of our little heroine. Little Tommy Silk left his home to go and live with Father B. and learn the way to the "Kingdom of Heaven," through the priest's hands. He became his help in all things, attended to the vestry, looked up the chapel, saw to the priest's robes and vestments, and swung the censor at the burning of incense during mass and vespers. In fact, one of those young embryo priests; made a first-class "chore boy," while the deluded parents thought it a fine thing to wait on His Honor, the priest. The rest of the family urchins were always jealous of the favored one, and frequently twitted him with being what we call "lony" on account of his being the priest's favorite. Matters glided smoothly by with little Tommy Silk until his 14th year, when an event occurred which deeply affected his ardent young spirits, and to his dying hour he always believed in the reality of what then took place. One evening while at the chapel and going through some religious penance, he was attracted by hearing a noise at the east window. On looking up he saw what appeared to be a beautiful child, clothed all in white, with long golden curls floating over its shoulders, the noise Tommy heard was caused by the rattling of a small table that stood beneath the window, there was nothing of the child visible below the waist. Tommy always said he never before or after in his life saw so beautiful a face. While gazing at it with wide open eyes, the child beckoned to him slowly with its hand to come to him. Tommy started to obey, but, after taking a few steps, terror took possession of him and he fled from the chapel. On gaining the outside of the inclosure, he asked the old woman whose duty it was to dust and see to the church, if she had locked up or seen any child around the church. He told the priest of his adventure, but on the strictest inquiry no tidings could be found of any such child, or anyone whatever around the church.

In those European countries it is customary to have the graveyards around the churches; hence the term church-yard, as applied to cemeteries now.

After thinking the matter over, his Reverence concluded it must have been an angel vision, and ordered Tommy to say a certain number of prayers in the chapel every evening, until fourteen days had passed; then, if the angel came and beckoned to him, to go and see what he had to say. Tommy said the prayers and only missed once, but the angel vision never reappeared. Spiritualism was unknown at that time, at least in Ireland, but still the priest and Tommy always believed that the child was supernatural. Now, I don't believe in ghosts or apparitions of any kind, yet I am often inclined to believe with Shakespeare, that "there are more things in heaven and earth than are dreamed of in our philosophy." From the day of his angelic vision, Tommy was an altered boy. He became devoutly religious, and studied in his books with increased ardor. The good old priest spared no pains in giving his little charge all the information and attention he required. Let me say here that priests were both a blessing and a detriment to the Irish. So long as the masses of the people were unlettered, it was a good thing that they possessed a leader with education and influence, one who could go to a fair with a "black snake" and whip the riotous ones into order. I tell you, dear children, you ought to thank God that you live in the glorious light of the nineteenth century; for the world has progressed greatly since the days of which I speak. On the other hand, Catholicism was detrimental, because it was opposed then, as it is now, to free and general education. The poorer classes never dreamed of learning how to read or write, all that was left for his reverence to attend to. The fact that Tommy's family were pretty well educated for those days raised them "way up" in the social scale. Tommy remained with Father B. from childhood until he was 16 years old. He then went to live with the bishop of the diocese, which was still a step higher, and a preparatory stride toward the time when he should take the sacred vows and become a priest. He found the bishop a stern, unyielding man; one who had little charity toward the shortcomings of others, and visited any misdemeanor with heavy punishment. Tommy's recollections of him in after years were always bitter, and I often think older people are not careful enough about the impressions they leave on the young and tender minds entrusted to their charge. Our young friend lived with the bishop for over two years, when he was sent to live with another bishop in the city of Limerick. Tommy was about 18 years old and had attained his full stature and looked some years older than he really was. While living with Bishop S. he took upon himself the vows of celibacy and prepared to follow the footsteps of all the other priests who had lived and died without wife, children, or any of those ties that bind and endear the human family to each other. But fate was unrolling a panorama for him of which he had never dreamed. A shy, sensitive, loving boy, he thought there was no power that could swerve him from the path of rectitude, or cause him to forget and abjure both his faith and his vows. But so it was ordained. The power of love was to be the magnet that would make him forsake all else and cleave unto the idol of his heart. One evening, while assisting in serving mass, he was attracted by a beautiful face which seemed the embodiment of everything that he thought lovely. The services lost their charm and became a confused mass in his youthful brain. The attraction seemed mutual, for the woman seemed to admire him as much as his glances showed admiration for her. And right here in the holy church is where the evil one, according to Catholic doctrine, commenced his temptation; though for my part I cannot see what wrong there was in two people loving each other as they did afterwards.

For weeks they remained silently admiring each other; the woman not daring to think of a man consecrated to the priesthood, and the man held back by his vows, his honor and all things else combined. They say that "love laughs at difficulties," and it was so in this case. Like Mother Eve tempting Adam, the woman broke the ice of reserve by talking to him one evening when they were coming from vespers. I have often heard Uncle Tommy tell how he felt when she first spoke to him. He said a chill passed over his frame and then every fibre tingled as with an electric shock. Neither of these young ones dreamed at that first acquaintance that they would brave everything to become one. Nor of the care, persecution and sorrow lying ahead in their pathway. What a blessing, dear children, that we cannot see into the future. Never let any of you wish to raise the veil, but believe that "as the day so shall thy strength be," and wait in patience for the unfolding leaves of the future to produce what may be in store for you, be it either hope and joy, or care and sorrow; remembering always that our Heavenly Father "doeth all things well." But now I shall close for this time. I will follow Tommy and his fortunes in my next, and later tell you how my little heroine appeared on the scene, and what her life was in after years. Hoping my tale will interest you, I now say goodnight, to one and all.

May holy angels guard thy slumbers,
Linger round thy lowly bed,
May the morning break with sunshine,
O'er each little sleeping head.

Marshall Co., Kansas.

ROTHCHILD'S MAXIMS.

ALL of the cousins must have heard the name Rothschild mentioned, the name of one of the wealthiest families in the world; and some of them are perhaps also familiar with the story of how they acquired their colossal fortune. The father of the family, Mayer Anselm Rothschild, was born in Frankfort, in Germany, in 1743, and died in the same city in September 1812. He belonged to a poor Jewish family. While a young man he was employed as a clerk in Hanover, but later in life he established himself in his native town, where he opened a banking house. His integrity and ability brought him into business connection with several of the German governments, and particularly with that of Hesse-Cassel. In 1806 the French invaded the latter State and put the ruling prince, William I, to flight. But before leaving his country, he deposited $5,000,000 for safe keeping with the honest banker Rothschild, who was permitted to use the money without interest. By judicious investments of this sum, Rothschild laid the foundation for the present wealth of the family, and although the whole amount was later paid back to the heirs of William, the banker had reaped a hundred fold from its use. Mayer Anselm's five sons, Anselm, Solomon, Nathan, Charles and James, respectively became chiefs of banking houses at Frankfort, Vienna, London, Naples and Paris, and all were made barons by the emperor Francis. The eldest son of Charles, Lionel Nathan, in due time became the head of the London Rothschild firm, and it is he, who, according to George Francis Train, had the following maxims framed and hung on the walls of the bank.

Attend carefully to details of your business!
Be prompt in all things!
Consider well, then decide positively!
Dare to do right! Fear to do wrong!
Endure trials patiently!
Fight life's battle bravely, manfully!
Go not in the society of the vicious!
Hold integrity sacred!
Injure not another's reputation or business!
Join hands only with the virtuous!
Keep your mind from evil thoughts!
Lie not for any consideration!
Make few acquaintances!
Never try to appear what you are not!
Observe good manners!
Pay your debts promptly!
Question not the veracity of a friend!
Respect the counsel of your parents!
Sacrifice money rather than principle!
Touch not, taste not, handle not, intoxicating drinks!
Use your leisure time for improvement!
Venture not upon the threshold of wrong!
Watch carefully over your passions!
'Xtend to every one a kindly salutation!
Yield not to discouragements!
Zealously labor for the right!
& success is certain!

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—As I am a member of the club I thought I would write and tell you of my summer's work. My D. D. corn might have proved as great (in name but not in size) a curiosity as papa's "Blount Corn" had it lived; but something always does happen on a farm. The pigs with their piggiest appetites broke in and and left it a total ruin one day, and I did not save enough to plant next year. I had a nice patch of water-melons and a pretty flower garden with Morning Glories, Pinks, Pansies, Portulaca, Cockscomb and Zinnias in it. Our farm consists of 65 acres; it is three miles from Madison, and is about 30 rods from a school-house. Papa has a good many grapes on a sunny slope facing the south. But these long evenings we cannot spend in the garden, so let us all try and make our corner a bright and pleasant one. Come cousins every one of you. Don't get to nodding, we want to hear from you all. I will tell you how to make a little face that looks real funny when done. Put the end of your thumb between the two middle fingers, in a line with the knuckles and then take two black shoe buttons, and place one on each side of the knuckles above. Then take a handkerchief and cover the whole hand except said features. If done nicely and brought into a room full of company, it will make lots of fun. I have one other amusement I would like to speak of, and then I must close. First, boil some red cabbage in water until the liquid becomes real blue; then put ten drops of dissolved soda in one wine glass, an equal amount of dissolved alum in another, and 10 drops of vinegar in a third. Fill the glasses with the cabbage water; if strong enough the mixtures will take beautiful colors, green, red and purple. Well, I guess Uncle Mark will get tired if I write any more.

Madison, Wis. "COUSIN NONSENSE."

DEAR UNCLE MARK:—We once again write to you. We can't tell you much about our flowers, for we have but very few now. We have three Geraniums, a Rose, and the other two we don't know the names of; we only got the slips last fall and they are small yet. One plant has been in constant bloom since last October. We have three Salvias, one Star plant, and two kinds of Ivy. This is the first winter we have ever tried to keep flowers in the sitting room, for all our plants stay in the ground in winter. We have always a good many animals. Mamma says we may have our flower beds this summer each by herself, then we shall see what success we will have. Perhaps we then may have something interesting to write about. We are only three little girls and can't write as well as some of the other cousins. O! Uncle, we came near forgetting to tell you about our grape seed. It was planted as you directed, but none of it has sprouted yet. No cold weather this winter. As the paper is full we will close.

Yours, &c.,
LIZZIE, BARBARA AND ELIZA POUND.

Spencer Co., Tenn.

DEAR UNCLE MARK:—I am a little boy, 11 years old. My father takes the RURAL, and we all like it very much. We have a farm of 40 acres. We keep three horses and 11 head of cattle, and five pigs. We have sowed seven acres of wheat and three-quarters of an acre of rye. My father thinks he will plant 10 acres of potatoes next summer. We have had a very moderate winter so far. I go to school every day. My teacher gave me two presents for being the best boy in the school. Please print this letter, for I am a little boy and I want to see it in the next paper.

Your little friend, LOUIS A. TUTHILL.

Orient, L. I.

DEAR UNCLE MARK:—I would very much like to join the Horticultural Club. I would have written before but I was afraid you heard from too many. I have one sister and three brothers. Their names are Mary, Fred., Walter and Harry. This summer I had a very nice garden. Mary's and mine are where a stable used to stand, so the ground is very rich. I had Geraniums, Feverfews, Sweet Williams, Balsams, Pansies, Indian Pinks, Mignonette, and Marigolds. I hope this letter is not too long to print. From your niece,

MAGGIE C. DOOLITTLE.

P. S. I will be 11 the 7th of next March.

Knox Co., Ohio.

DEAR UNCLE MARK:—As I have not seen any letters from this place, I thought I would write. I am 11 years of age. I love poultry; I have a duck that lays black eggs. I have a dog also that weighs 75 pounds. I have also a little dog which we call Tilden. He is not, however, related to Sam. J. Tilden. Besides these I have about thirty fish in a little cistern. I must not make my letter too long. WILLIE J. SHANER.

DEAR UNCLE MARK:—Will you please let me join the Horticultural Club? My little brothers—Deville and Ronald—send their names, too. We all love flowers very much, and have a pretty garden every summer, but Deville says he likes to cultivate vegetables best. We go to school and have not lost a day this winter. It has been very warm here since New Years. RENA VIOLET.

Bucklin, Linn Co., Mo.

Sabbath Reading.

THE PRESENCE OF THE SAVIOUR.

THE presence of the Saviour,
How it brightens all my way,
How it helps me, how it strengthens,
How it cheers me day by day.

The presence of the Saviour,
How it makes the darkness light,
How it brings a ray of sunshine
Into sorrow's dreary night.

The presence of the Saviour,
How it fills the longing heart,
With a sense of deep, sweet gladness
Nothing earth-born can impart.

The presence of the Saviour,
How it chases every fear,
How it soothes the restless spirit
When faith feels that He is near.

The presence of the Saviour,
And the knowledge of his love,
How it seems a sweet, bright foretaste
Of eternal joys above.

The presence of the Saviour,
Surely it is heaven begun,
For 'twill be the brightest glory
Of the life beyond the sun.—J. S.

GOOD OUT OF EVIL.

GOD is kinder to bad men than they are to themselves. Often He surprises their evil intention with unexpected good, and shames them into repentance with a blessing.

An Arabian vine-dresser in a time of war was drafted into the Turkish army, and forced away from his peaceful home in the mountains to a life of hardship and violence. Rough experience and example soon made him like all the rest of the Mussulman soldiers, ferocious, reckless, and insensible to any higher duty than fighting and plundering.

While the troops with which he served were out on one of their destroying expeditions, they entered a district inhabited by people whom the Turks considered their political enemies, and attacked a Christian village. The terrified families fled, and the invaders ransacked their houses seizing everything they could carry away. The Arabian soldier was fond of books, and, took care to secure several with his other booty, paying no particular attention to what they contained.

It happened that one of the books was a Bible. He found little opportunity to read till the excitements of camp and field were over; but when he was allowed to go home he took the stolen Bible with him, and as soon as he had examined it he felt interested enough to read it through.

No doubt the rightful owners, while they mourned their other losses, prayed that the Good Book might reform the thief who took it away. Certainly such a wish could not have been more happily realized.

The man continued to read with increased attention, and as he went on he said, "This book is better than the Koran." From wondering at the book he began to wonder at himself. His conscience was awakened, for he learned all about his own heart. The Bible showed him his guilt and led him to penitence; and then it taught him to pray, and to whom to pray. He bowed to the Redeemer revealed in the New Testament, and acknowledged Him as the Friend whom he needed.

His family were enraged when they knew that he had "turned Christian," and their reproaches and persecutions made his home a house of torment. His neighbors hated him for an "apostate," and insulted and denounced him, and even mobbed him in the streets, and destroyed his vineyard and fruit-trees. The poor man was a social outcast; but it was for the sake of a religion whose blessings more than paid him for all earthly spoiling and shame. Nothing could shake his heroic faith. When he was in his extremity the kindness of an English Protestant minister gave him employment, and a refuge which no Mussulman dared to violate.

At the writing of this sketch—three years from the time when he began to read that stolen Bible—the persecuted Arabian vine-dresser is a Christian preacher in a Syrian village on Mt. Lebanon, and pastor of a church which numbers among its members many of those who were once his bitterest revilers.—*The Watchman.*

PERSONAL ITEMS.

Francis Otero Gonzales, the man who tried to kill King Alfonso of Spain some time ago, has been sentenced to death.

The cabinet has considered Maj Reno's case and determined to let him tender his resignation, which will be promptly accepted.

THE publisher of the Chicago Inter-Ocean gives, in that paper, the following unsolicited testimonial, which speaks for itself:

Office of THE INTER OCEAN, *Chicago, Jan.* 10, 1880.

DRS. STARKEY AND PALEN.--*Gentlemen:*—It is contrary to my rules to give certificates to the many healing remedies that are advertised, but my experience with Compound Oxygen has been such that I feel it my duty to recommend it to all my acquaintances suffering from overwork and a tendency to pulmonary trouble. In October, 1878, I was in very poor health. My system had been much overtaxed, and a cold contracted in the spring seemed to have taken permanent hold on my lungs. I had had several slight hemorrhages, was troubled with a cough, and was much reduced in flesh. I was discouraged and my family alarmed at my condition. A friend in Boston sent my wife one of your little books, strongly recommending your remedy. I was besought to order the Home Treatment, and did so. I followed instructions faithfully, and in three months was a new man. My troubles had almost entirely disappeared. The improvement had been quiet, but certain and sure from the time I first began its use. I feel very grateful to you for it, and wish that I could persuade all suffering in a similar way to perseveringly use your simple and effective remedy. Business is very confining and exacting, and when I take cold and feel myself running down, I resort to compound Oxygen, and it is always prompt in its results. I feel like commending it to all. It is not a kill-or-cure remedy. If it does not cure it surely does not injure. Yours truly, WM. PENN NIXON.

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4.	**Singing.** *Randegger,*	2.00
5.	**Musical Forms.** *Pauer.*	1.00
6.	**Harmony.** *Stainer.*	1.00
7.	**Instrumentation.** *Prout.*	1.00
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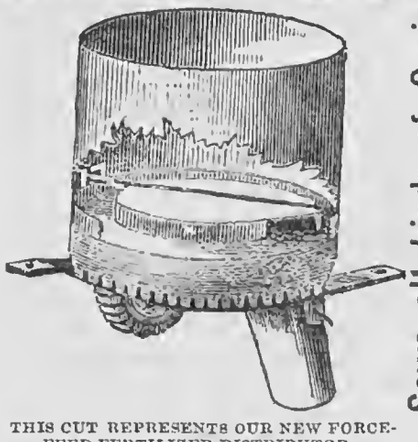

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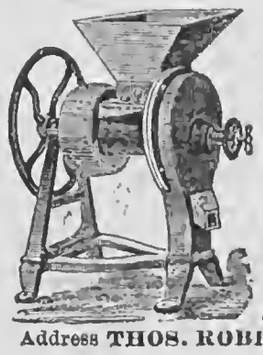

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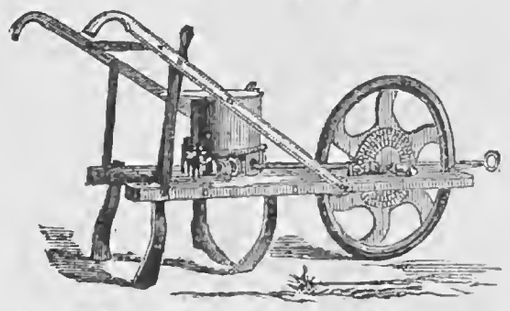

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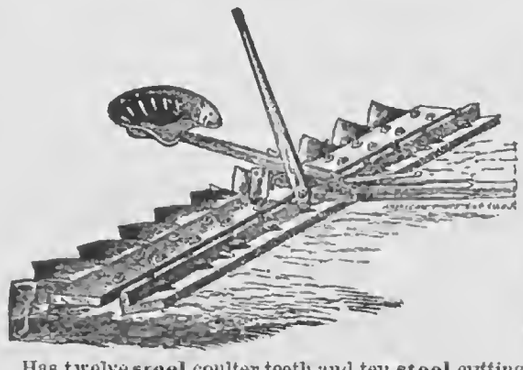

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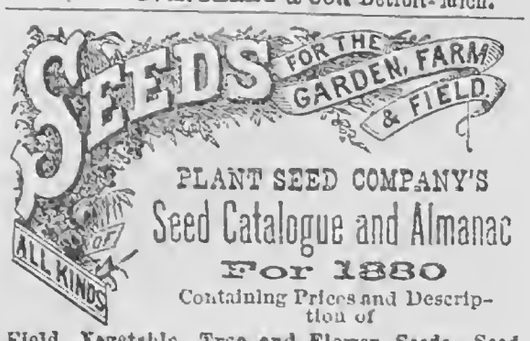

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EARLY PEARS.—Madeleine, ripens late July; medium in size, of juicy, melting, refreshing flavor. Summer Doyenné, more productive. . . Few men are so little given to fault finding as those who despise human nature too much ever to quarrel with it. . . "I cannot say," remarks a writer in Truth, "that I abhor Lord Beaconsfield's political principles—for I never perceived a trace of his having any." . . The roundest of pegs in the squarest of holes. . . Alcohol cuts down youth in its vigor, manhood in its strength and age in its weakness. It produces weakness, not strength; sickness, not health; death not life. It makes wives widows, children orphans, fathers fiends, and all paupers. It feeds rheumatism, nurses gout, welcomes epidemics, and embraces consumption. It covers the land with misery, idleness, and crime. It engenders controversies, fosters quarrels, and cherishes riots. It crowds penitentiaries and furnishes victims for the scaffold. It is the blood of the gambler, the element of the burglar, the prop of the highwayman, and the support of the midnight incendiary. It countenances the liar, respects the thief, esteems blasphemy. It violates obligations, reverences fraud, honors infamy. It defames benevolence, hates love, scorns virtue and innocence. It incites the father to butcher his helpless offspring; and the child to grind the parental axe. It burns up men, consumes women, detests life curses God, and despises heaven. It suborns witnesses, nurses perfidy, denies the jury-box, and stains the judicial ermine. It bribes voters, disqualifies votes, corrupts elections, pollutes our institutions, and endangers the government. It degenerates the citizen, debases the legislator, dishonors the statesman, and disarms the patriot. It brings shame, not honor; terror, not safety; despair, not hope; misery, not happiness; and with the malevolence of a fiend, calmly surveys its frightful desolation; and, stained with havoc it poisons felicity, kills peace, ruins morals, wipes out national honor, then curses the world and laughs at its ruin. It does that and more—it murders the soil. It is the sum of all villainies, the father of crimes, the mother of all abominations, the devil's best friend, and God's worst enemy." Col. Ingersoll. . . Just inquire how many strictly temperance people are in favor of "horse trots" and "speed rings" at agricultural fairs. . . PROBLEM: If God made the country and man made the town, who made New Jersey? . . The Illinois Board of Agriculture (?) votes $1,700 to a *speed* ring for the next fair—and this, so far as we learn, for the love of it! We hope that *agriculturists* will keep away and that horse jockeys will monopolize the ring and have things all their own way. Farmers, you set a pernicious example to your sons; you place them under one of the most alluring and harmful of influences by supporting the *speed* ring and it is no less evil because carried on under the agricultural tent!

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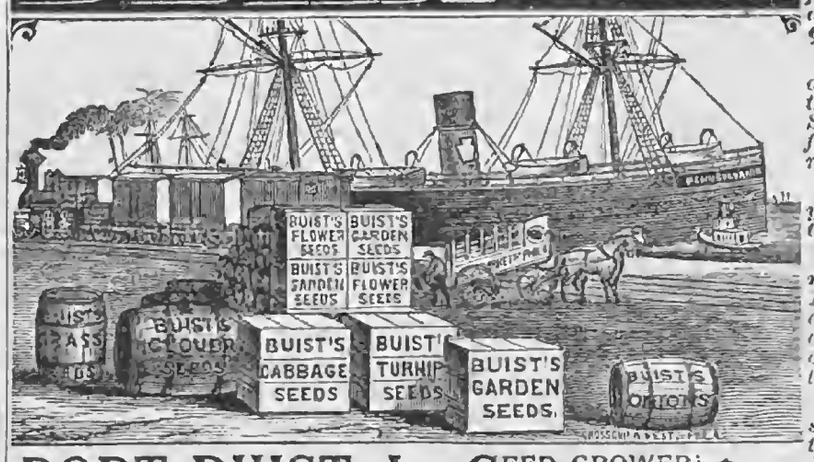

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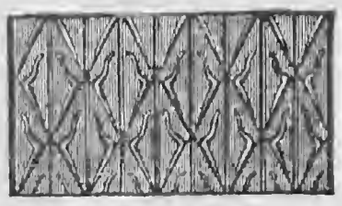

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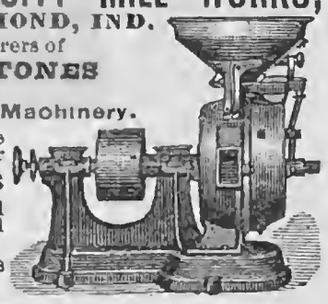

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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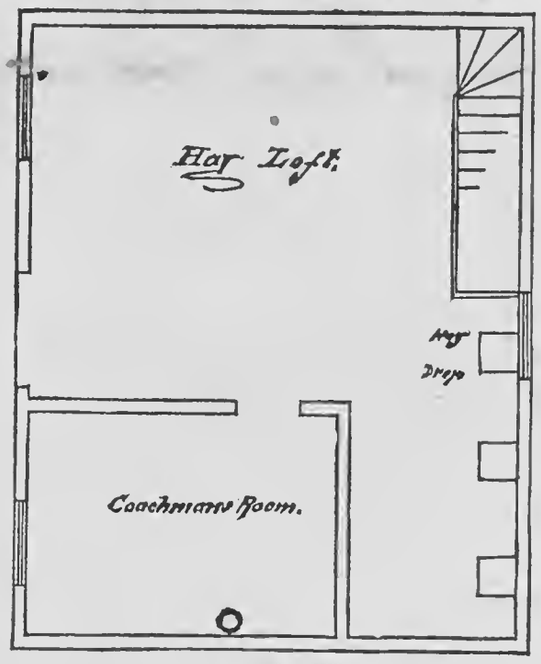
Rural Architecture.

A CONVENIENT BARN.

IN building a barn the first aim should be to make it snit the pnrpose for which it is needed, the second to make it ornamental to a degree corresponding with the snrroundings, the taste of the owner and his means. With these ends in view, the accompanying design was drawn. It was originally intended to erect a barn after this plan at the RURAL GROUNDS, but "circumstances alter cases," and for reasons quite independent of the model, we were finally led to adopt another plan which in some respects seemed to be more suitable. This design is, however, the result of careful study, and we present it here in the hope that it may be of service to some of our readers. It is not, of course, adapted to the requirements of a farm, but rather to that class of country places where the number of the larger domestic animals is limited to a carriage horse and one or two cows. It is drawn on a scale of one-eighth of an inch to the foot, except the plan of the loft, fignre 59, which is redneed

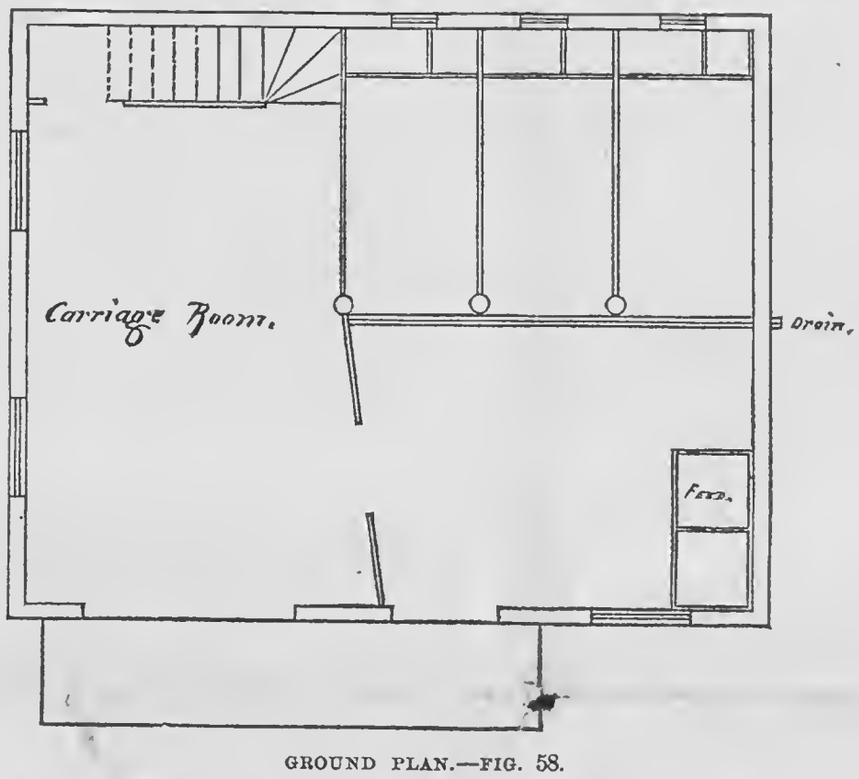


BARN LOFT.—FIG. 59.

somewhat. The arrangement of the stalls, etc., can be changed to suit the requirements of the case. The section drawing to the left of the elevation is intended to show the relative hights of the two floors, and the position of the windows. Instead of the pigeon house on the roof, a weather vane can be erected, if desired. The plans may so readily be understood that no further description is needed. A barn of this description can be built for $400.

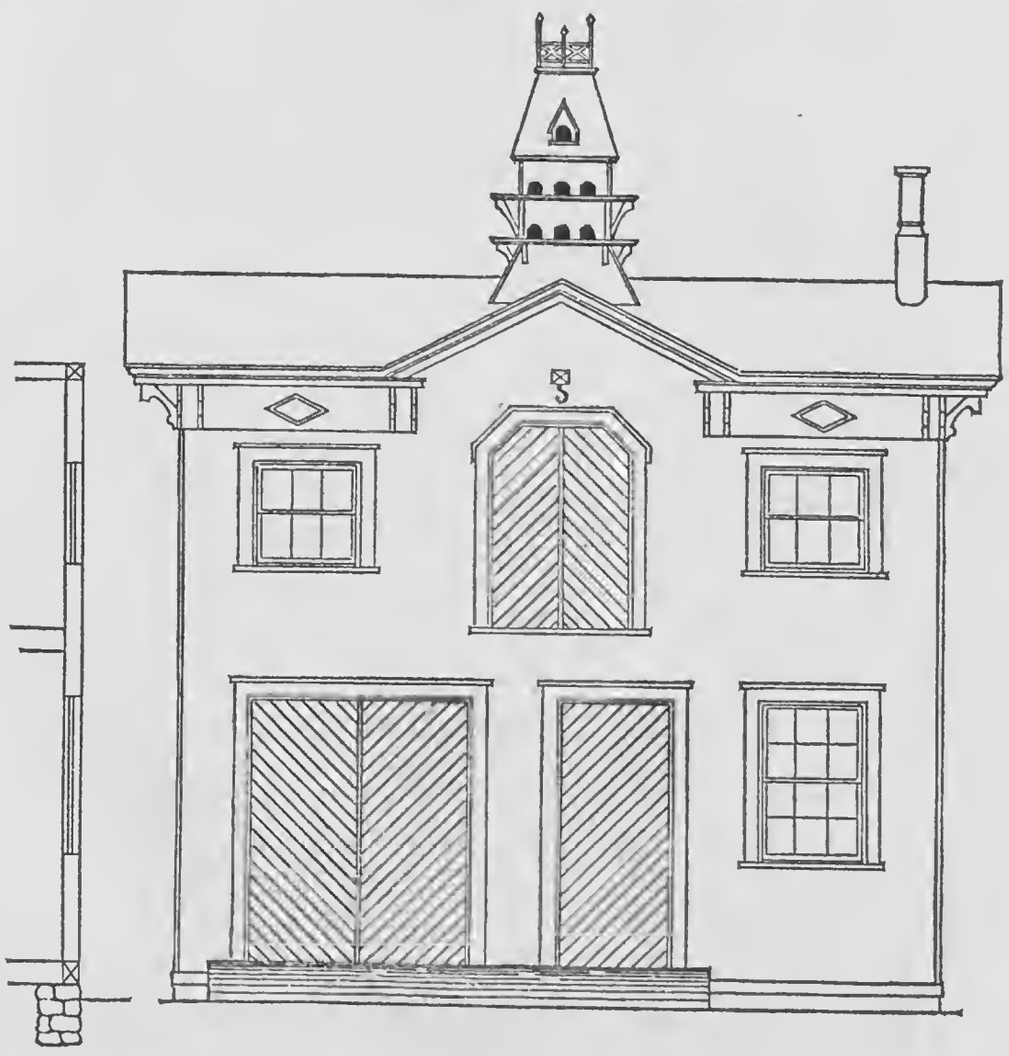
ICE-HOUSES.

THE essential requisites for a good ice-house are:—non-conducting walls and roof, drainage and ventilation, and the chief object of a person building a house should be to secure these ends. The best and cheapest material for ordinary ice-houses is lnmber, and of this probably the best is hemlock plank. The building may be entirely above ground or partly underground. The sills should rest on a stone or brick foundation to secure as much dryness as possible, and this had better be laid in cement A tight or cemented floor should be laid slightly inclined, with a drain at the lowest end to carry off the water. On this rails should be laid and covered with straw to support the ice. The walls and roof should be double-boarded with a space, between the inner and outer walls, from four inches to two feet wide—the nearer it approaches the latter size, the better. This space should be filled with spent tan bark, planing-mill or carpenter's shavings, or sawdnst. By charring the sawdust it is rendered nearly indestructible, while the uncharred article is perishable, and conducive to the growth of fungi which will soon cause the boarding to decay, so that the advantage from this measure amply repays the trifling cost. An air-space may also be left with advantage between the outer wall and an outside weather-boarding. The eves of the roof should extend a good way beyond the sides of the building. The gable end should be towards the north and is the best place for the door. For this purpose a common door will do for the outside, but within, instead of another door, a better arrangement would be a series of boards to fit horizontally between cleats in the door posts. A few auger-holes or a sliding shutter or similar device should provide ventilation from aloft at the north end. It is better and cleaner to pack the ice in ice than in sawdnst, so that the house should be filled as closely as possible. Its size of course must depend on the requirements of the builder, but the larger it is the longer will the ice be preserved if properly packed in a suitable building. A structnre of this kind can be built very cheaply, if a man does a good share of the labor himself; or bearing in mind the essential requirements—non-conducting walls, drainage and ventilation from above—even a cheaper one may be constrncted by any man with a fair average of gumption.



GROUND PLAN.—FIG. 58.

The accompanying cut represents a sectional view of an ice house for keeping meat, fruit, or indeed anything that requires a low temperature for its preservation. A, is the storage room into which the cold heavy air from the ice chamber, B, descends. As cold air is heavier than warm and consequently desends to replace it in a confined space, by having the ice over the store-room the same advantage is secured that has led to a similar arrangement in our refrigerators. Bearing in mind the above conditions, the construction of the building is readily seen from the engraving.



BARN FOR A VILLA RESIDENCE.—FRONT ELEVATION.—FIG. 57.

Farm Topics.

WESTERN FARMING—GENERAL OUTLOOK.

W. I. CHAMBERLAIN.

The styles of farming vary greatly in different parts of the country, and the wide-awake farmer of one State or region can hardly travel through other sections without seeing much to instruct, as well as interest and amuse. If he is a Western man and travels through portions of New England for the first time, the fields look exceedingly small and crooked, and he wonders where the farmers find room to turn around their machines and wagons. He is not at all surprised to find ox-carts in vogue, and wagon-racks for wood and hay so made that the wagon can turn aronnd, like a city truck, without moving one hind wheel, and he says, "Why of course! or else they'd have to drive out of the field to turn around at all!" He admits, for he must, that the valleys of Vermont and Connecticut are fertile and that the great hills furnish fine pasturage far up their slopes; but he says he doesn't like the land set np edgewise "like you were going to cultivate both sides."

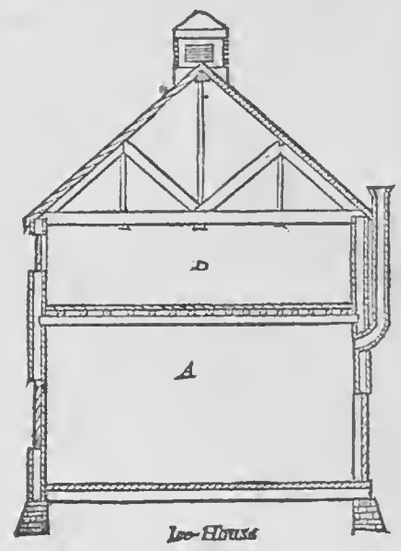


FIG. 60.

When he passes through parts of Massachusetts and New Hampshire and sees the small, angular fields, snrrounded by strong stone walls, every stone of which was picked or pried or blasted from the narrow inclosure, he fairly groans with sympathetic back-ache as he thinks of the immense labor required to clear a single acre and render it not half so valuable for tillage as an acre of unbroken virgin prairie. And he says to himself "If the Lord had put Illinois on the sea-board and New Hampshire beyond the great lakes, the latter never would have been settled." But when he sees the sagacity and thrift of the farmers and notices how they have, by a wise husbanding of all Nature's fertilizers, changed rugged and almost barren wastes into fertile fields, he feels that he has learned a lesson. And when he talks with the farmers and finds them intelligent and moral, as well as snug and tidy in person, farm and buildings, forehanded as well as shrewd, and remembers that Boston and Hartford loaned much of the money to build and rebuild Chicago, he admits that New England at least makes men, and that if Providence *had* put Illinois where *he* was just proposing, the Puritans would never have been the rugged sires of so many stalwart generations.

On the other hand, the New England farmer returns from his first trip to the Great West with enlarged views. That is the place where things are done in the large. The vast fields of grain, herds of swine and "bunches" of cattle, the many complicated labor-saving farm machines and the profuseness with which Nature fairly tosses her rich gifts into the lap of the

husbandman, make his own farming look small and hard. He can raise as many bushels per acre, perhaps, but he can hardly till a tenth part as many acres. He produces good crops, but at immensely greater cost, and only by the most scrupulous saving of fertilizers and the most thorough tillage. But he at heart dimly feels that this necessity for diligence and care has made him stronger in body, mind and heart, and that, on the other hand, the very profuseness of Nature at the West tends to lassitude and negligence, physically, mentally and morally. And he returns home determined to profit by his enlargement of views, indeed, but to make the most of those social and moral influences that surround and beautify the rugged life of the New England farmer.

It is curious how the farming of any given region seems to fall into some mold or rut. The shrewder farmers find what kinds of farming on the whole pay best in their locality, with their soil, climate and markets, and all the rest follow suit. Everything, too, is done in a certain way. I remember noticing this particularly one of the first times I visited the Eastern States. It was in August, and in the fine region between Harrisburg and Philadelphia for miles it seemed as if all the farmers, by common impulse, or by special telegraphic dispatch from some "team dispatcher," had that Tuesday morning begun to plow for wheat. They were all striking out lands, and they all did it in exactly the same way. In each field three tall "sighting stakes" were set in exact line where the first furrow was to be struck. Each stake had a small white rag tied near its top and fluttering in the wind to catch the eye. Each plow was drawn by three horses, two abreast and a "leader." On each leader sat a small boy, and woe to him if he didn't ride his leader in a "bee line" for those distant fluttering rags. Each team plowed forth and back, and then set its stakes for a new land and turned the "back-furrow" in the same way, and so on till the whole field was "struck out." As the day advanced some had finished striking out, and dismissed the leader and the small boy, to the intense relief of the latter, and began to plow on the lands. But they were all at it, and at about the same stage of the operation; and as the train sped on one could almost imagine he was in fairy land, and that man, plow, team, leader, small boy, stakes and fluttering rags of white, were all borne on and on with the rushing train.

Nearer Philadelphia the farming gradually changed more to "butter farming" or "milk farming" or "truck farming" and gardening; and so on past Philadelphia and through New Jersey. For a while all the men would seem to be setting strawberry plants, then all were digging sweet potatoes or picking peaches or melons or gathering cabbages, and so on.

Here, too, the farm buildings, stock and implements were all different. There were no more of the fine bank barns, large fields of grain and clover and timothy and fine herds of cows and steers. Everything had put on a smaller, more minute aspect. Instead of barns for hay-storage were found ricks consisting of four tall, slender posts supporting a simple movable roof and filled with a solid square of hay. Instead of three horses to the plow, rolling under a heavy bed of clover or a stiff, well-pastured turf, a single horse with a small plow turned the light, reddish, sandy soil from which some crop of "truck" had just been taken.

North of New York a broad belt of fertile land along the river is devoted to mixed farming, but for any fifty miles there is a strange similarity in style and processes. Above Po'keepsie, for example, the main crop is hay for the New York market. The hay-barns are much alike, and contain room for storage, and almost always a horse-power, hay-press and baling apparatus, all under cover, so that the farmer and his sons or men, can bale hay in rainy weather, "while they are resting." The hay wagons are alike, too, having long, narrow platforms for the bales to rest on crosswise, and a windlass, or roller and ropes to bind them tightly down. And in late summer and autumn you will see dozens of these wagons, all alike, on their way down to the nearest barge-landing on the river. Though hay and rye straw are the main sources of income on very many farms in this section, yet the farming is quite diversified and "mixed" in character, and everything seems to turn to gold as if by magic under the touch of some of those shrewd old Dutch farmers. It does you good to visit one of them, and see all over his farm evidences of agricultural sagacity. Crops and fruit, and truck, all seem just ready to be turned into money.

My last visit to that region was in October, and I wished I had along with me some of those men who lugubriously ask, "Does farming pay?" Apples, potatoes, milk, honey, butter, veal calves, pork, peaches, grapes, plums, buckwheat, rye, etc., each bringing in considerable sums, and timothy hay and rye straw bringing up the rear with a cool thousand or fifteen hundred dollars to the single farm. On many farms apples are a considerable source of income. This belt along the Hudson seems the home of the Newtown Pippin. No where else does it grow so large and fair. One farmer I visited did not make apples a leading speciality at all; but he had just sold his Newtown Pippins alone on the trees, for $800, to a shipper to send to England. Another had sold his Newtowns alone for $500, and so on.

But I must not dwell, for I mention these things as mere illustrations. Different localities all through New England, the Middle States and the West—indeed, wherever I have had the good fortune to travel and observe the agriculture, seem to have their different modes of farming and their specialties more or less clearly defined. Usually, both the specialties and the modes are, *on the whole*, wisely adapted to soil, climate, markets and surroundings; but sometimes not. Often the farmers of one region may learn much to their advantage from those in distant localities. It will be the object of the articles that succeed the present one, to show what we farmers of one region may wisely learn and imitate, as shown in the farming of other localities. And I shall be glad of any suggestions that may help me in this important and somewhat difficult undertaking.

NOTES FROM THE RURAL'S EXPERIMENT GROUNDS.

The Rural New-Yorker's Free Seed and Plant Distribution.—Instructions.

Upon the whole, we have been fortunate in securing our seeds and plants as originally announced in the Seed Supplement to the Rural New-Yorker published in September last. Of all the kinds offered the Magnolia and Abies Sibirica seeds alone are likely to disappoint the average cultivator. From the time that magnolia seeds are gathered until planted, they should be preserved in moist sand. Otherwise they will require months to germinate, while it may be feared many will entirely fail. Our magnolia seeds were kept in sand up to the time that they were sent to the Rural office. It was then, however, necessary to place them in seed envelopes where they must, of course, remain until received by those for whom they are intended, a period, from first to last, of not less than six weeks. As regards the seeds of the Siberian Spruce, we may say that not until it was too late to change our original announcement did we learn from our respected friend Robert Douglas, the liberal-hearted nurseryman of Waukegan, Ills., that the tree does not thrive well much to the south of this latitude. In its place, however, we have supplied another kind of seed, not less valuable, the name of which we forbear to mention lest it should induce hundreds of additional orders which we could not fill.

As the pea crop in England was well-nigh an entire failure, it was impossible for us to import a large enough quantity of the Telephone to supply our applicants. We ordered 30 bushels which we calculated with our own supply would enable us to send a trial quantity to every applicant. From the replies received, we were led to suppose that there were not thirty bushels of the genuine Telephone pea in all England. We also applied to several of our seedsmen who advertise this pea, but found that they have it only in small quantities and were therefore unwilling to sell it to us at any price. While in this dilemma, the Southern Cow-pea was thought of. This we shall send to all Northern subscribers in place of the Telephone, while from our own stock of Telephone (badly weevil-eaten we are sorry to say) we shall be able to send our Southern subscribers (or those who have applied for the seed distribution) a few seeds of the Telephone. On the other hand, we are much pleased in being able to send the new Golden Mangel (see editorial page of last issue) which was not promised or announced in the original seed and plant selection at all, and we entertain high hopes that it will prove of greater value to our farmers in general than the Telephone Pea could have done.

Sowing the Seeds, etc., etc.

A few orders for the Cuthbert Raspberry were mailed last fall. The rest will be sent off as soon as the ground opens in the spring. Mr. J. T. Lovett, of Little Silver, New Jersey, has grown these plants for us and they will be sent directly from his nursery to our subscribers. The reputation of this grand Raspberry has spread like wild-fire since the Rural has placed it in its "Distribution," and the genuine stock is extremely limited. We request our readers to give it needful care, hoping in due time that their reports will corroborate our own testimony that, taken all in all, it is the best Red Raspberry known. Of course we do not expect it to succeed everywhere—there is no fruit known of which that can be said;—but we *do* expect that, like the Concord Grape, it will be found well adapted to an unusually wide range of territory. When received, spread out the roots carefully and cover them firmly with mellow earth and then cover the ground with a thin mulch of hay or straw. As regards the Telephone Pea and the Ennobled Oats, no instructions need be given. The seeds of

Abies Sibirica

germinate as well as those of any Silver Fir, only it is, as we have said, of very slow growth. Sow the seeds during April in a four-inch pot in sandy loam. Let the pot be well-drained by means of crocks placed over the hole at the bottom, and an inch or so of coarse sand above. Cover the seed with half-an-inch of soil. Then water and plunge it in a protected spot in the garden and cover with a pane of glass as a protection against mice or other vermin as well as to preserve the moisture. Germination of the seeds may be looked for the latter part of May. When germination is evident, remove the glass and shade a little from the hot sun.

Our New Golden Mangel.

As has already been stated, our stock of seeds of this Mangel was imported direct from Vilmorin & Co., of France, ordered just so soon as a doubt arose as to our being able to secure a sufficient quantity of the Telephone Pea. As the quantity which we send to each applicant is necessarily small, it is advisable that the seeds should be soaked so as the better to insure the growth of all. Superior keeping qualities, solidity, sweetness and productiveness are claimed beyond all others, for this variety. We shall offer a premium for the largest and smoothest Mangel produced from this seed, and in order to avoid unnecessary trouble or confusion, it will only be necessary for each competitor to send us by postal card the weight of his largest specimen. In our awarding the premium, it will then only be necessary that we request the raiser to send us such specimen by express at our expense, that we may verify his report. It will be well, also, to soak the magnolia seeds until the outside is softened. Then treat the same as seeds of Abies Sibirica, though planting rather deeper. Should they not germinate during the first season, cover the pots (plunged in the ground to a level with its surface) with evergreen boughs for a winter protection, hoping that they may germinate the following spring. Of all the

Hardy Flower Seeds

we have ever sent out, we consider none more choice or beautiful than the Hybrid Pentstemons and Iris Lævigata. We are confident that the first will surprise and please those who raise them, while the second seem to us as entitled to divide the admiration that is everywhere bestowed upon the best kinds of the improved Gladiolus. The seeds may be sown in the greenhouse or window and will soon germinate. Boxes three inches deep or flower-pots well-drained may be used. Fill to within half an inch of the top with light, rich earth, either leaf-mold from the woods, or garden soil mixed with very old manure and sand. The soil MUST BE light, otherwise it soon becomes so compact as to smother the tender germinating seeds. Sift the soil either through an ordinary coal sieve or one with finer meshes. Spat it down—sow the seeds evenly—cover according to their size, and again spat down until the soil is smooth and firm without being hard. The pots or boxes may then be immersed in water until the surface soil becomes moistened or else showered from a *very* fine rose upon the surface. The Bebb's Aquilegia seeds, being small, will need to be merely covered by sifting soil over them and pressing it down by a smooth block of wood or other substance of suitable size. Our readers should bear in mind that this seed is *mixed* with common sorts of no particular value (this was stated in our original announcement), but the majority of them will prove to be Bebb's Hybrids which, so far as we have seen, bear the largest flowers of any of the Aquilegias and are well worthy of general cultivation.

THE ELMIRA FARMERS' CLUB.

Sugar from Sorghum.

The Elmira Farmers' Club holds its meetings every Saturday evening except one week in each month, when a day meeting is held to accommodate people living at a distance who desire to visit the club. The subject appointed for the last meeting, held Saturday, Feb. 7th, was "The relation of agriculture to government," though the principal topic of conversation was "the manufacture of sugar from maize and sorghum."

Besides the members of the club and those who usually attend the club meetings, there were present many other farmers and prominent men from this and adjoining counties. Remarks were made by the Commissioner of Agriculture, Hon. Wm. G. Le Duc, Col. Piolette, W. A. Armstong and others. Several samples of sorghum sugar were exhibited, the results of experiments made with imperfect machinery and apparatus. Some of the farmers had experimented with sorghum, and had succeeded in making from it sirup and sugar of very good quality and at very little cost. Many others expressed a desire to make experiments in this direction, and many questions were asked as to the best mode of culture of the sorghum and the working of it up, etc.

In reply to these questions, the Commissioner said that the best variety of sorghum to grow in this latitude was the Minnesota Early Amber. He would plant in a rather poor soil, which should be well prepared, as the plant is exceedingly small and tender in the first stages of its growth, in hills 3½ feet apart each way. The seed should be covered lightly but well "firmed" down with the foot to prevent drying out while it was starting. About eight stalks should remain in a hill. Cultivate the same as for corn. As soon as the seed has matured the sorghum should be cut, first stripping off the leaves, which may be done conveniently by passing between the rows and striking them down with a lath or a four-tined fork, thus breaking them off. When cut, the seed ends of the stalks are removed when they are ready for the mill. The juice should not be allowed to stand long after being expressed, but should be removed to the evaporating pans and brought to a temperature of 180 degrees F., when it is treated with cream of lime at the rate of three pints to 100 gallons of juice. It should then be heated to the boiling point and the evaporation continued, skimming it occasionally until it is brought to a density of about 12 pounds to the gallon, when it may be drawn off into barrels where it will granulate of itself. He said the machinery and apparatus to accommodate eight or ten farmers need not cost more than $250.

The Commissioner further stated that from experiments made on the grounds attached to the Agricultural Department, Washington, good sugar in paying quantities had been made from corn-stalks after harvesting at the rate of 60 bushels of good shelled corn to the acre. Several farmers present had used the seed of the Early Amber Cane for feeding stock and had found it of much value.

Commissioner Le Duc is certainly deserving of much praise for the interest he is taking in the manufacture of sugar from sorghum and maize and for his endeavors to make it a successful and profitable industry. His earnestness in the matter has awakened interest in many of our farmers, and many experiments in this line will be made the coming summer.

G. A. G.

Pomological.

KEROSENE.

GEN. WM. H. NOBLE, BRIDGEPORT, CONN.

No one should state a remedy which he does not know to be worthy of faith and test. We every little while come upon an old use of a new or some new use of an old thing, set down as sure to cure the aches and ills of man or beast, and to rout the insect pests. Just one of these is kerosene.

Though of an old family, it claims to have uses new and of wide range. It's a child from the fruitful stock of the coal fields and petroleum. Its tribe is full of all sorts of talent, real and possible. Whether you study it in gas tar or at the coal oil wells, you find it stored with no end of elements, useful and ornamental. It can turn you out a gentle perfume, a flavoring extract, or vials full of wrath and fire. It paints our homes, dyes our clothing, lights our houses, softens the whirr of the work-shop wheels and the mash of its iron jaws. It garners "the wealth of Ormus or of Ind," and about all their odors. It pens up fragrance as sweet as the the "spicy breezes that blow soft o'er Ceylon's Isle," and rejoices in stenches as foul as swarm in those smothering "stink pots" in which the "heathen Chinee is peculiar." From this pungent and manifold tribe comes kerosene.

About its talents in the orchard and garden a recent writer in the "Rural" puts forward some facts, hints and queries. Of such a thing you may say right off, that it can either kill or cure. Pretty much all that kills can cure. It's easy enough to kill; but the cure calls for measures and method. The more murderous the nature, the surer the cure when dealt out gently, well mixed with brains.

Such is kerosene. Like wind and fire and water, it is a very good servant but a very bad master. Its use has been urged for all sorts of ails and aches. For wounds and scalds, burns and frost bites, for rheumatism, neuralgia and cramps. Soon after the late war, some horticultural journal, flushed by a small trial, said it would kill every lichen and louse, and hurt neither bark nor leaf. Its advice to-day would not be quite as loud or loose. But I am a very sanguine man, of that breed Col. Ingersoll defines when he says, "Show them an egg, and directly they see the air full of feathers." I tried it on some young pear trees one spring; the leaves gave up their dead and so they did their lives. The bark stood it better, only one tree was scalded and that got well.

Since then I have only tried kerosene raw, twice. Each time to kill the woolly aphis or American blight. The first trial was on a large Early Harvest. Many of its joints and

limb crotches were colonized by the pest. They had squatted and foraged and blasted all around; the bark was thick and scabbed. I deluged and soaked with kerosone the crevices and whole outposts of the tribe. It killed the scourge and did not hurt the trees. I tried it a year last fall, on the same pest which swarmed in downy tufts over the pruning wounds, and bark bruises of two small apple trees of about an inch in diameter. These were closed in the fall, and so thoroughly that I feared the spring would reveal my rashness in a couple of ruined trees. But though the aphis departed from their borders, the trees were not sensibly hurt.

Now the writer whose note has called out this talk, says, "Kerosene, or petroleum, put in the fall about the roots of some trees, to keep off, I think, insect pests and 'varmints' killed the trees." It's very likely true. The root structure and bark are unlike and more tender than the bark of tree trunks and limbs. They differ in their duties. The root all through is made to drink in the food or harm to which it stretches. The upper bark is more like a robe, or shield and shelter. It stands frost, storm and drought and saves the vital parts beneath. But this kind of cover the roots have not, and do not need. What, therefore, on the bark might only make a cleansing wash, below is drank up by the rootlets and kills. What above would not reach beyond the scarf skin, below would strike the inner fibers of the wood and poison the vital currents of the sap.

Something like this result of coal oil, or coal tar, about the roots of an apple orchard, was some years since seen in this county. The field mice and, I think, rabbits, were destructive. A heavy coating of coal tar was put close down to the roots and some ways above. The "varmints" did not fancy the diet, nor did the trees. They were about all killed.

There is another thing which should be always held in mind by the orchardist. A tree will not stand tampering with its vital parts half as stardily in the fall or winter as in the spring or growing season. You may scrape with a hoe and gash and tear the bark in spring but the like in late fall or winter would prove fatal to the tree. At any rate, it would then resent such treatment as cruelty and hurt.

Now let some one else tell what he knows about the use of kerosene, about the cures of kerosene, raw or mixed with linseed oil, in any states of strength and admixture.

FIG CULTURE AT THE NORTH.

A CORRESPONDENT, some months since, sent me a slip cut from your journal, quoting it as an authority to the import that Figs must be grown under glass. Now the aphorism *audi alteram partem*—hear the other side—is always good advice. Figs are grown, and have been for many years, in Maryland, Pennsylvania, and Ohio with just as much success, and just as fine as can be grown at the South. And if they can be grown in these States, with the same care they can be grown anywhere in the North in the open air. Allow me to quote, not the authority of a person who never made the proper effort, but that of a fig grower for 50 years in Ohio, the pioneer fig culturist of the North, which demonstrates the entire practicability of fig culture in these climates.

G. F. NEEDHAM, ESQ.

Dear Sir: * * Fresh figs have for many years constituted an important part of my summer and autumn diet, and I am glad that the propagation and dissemination of this fine old fruit is in such good and zealous hands as yours, for I am too old to do much in what I consider the good cause of growing semi-tropical fruits cheaply in our climate, though I know *that it will be done*, sooner or later. So I cheerfully hand over the business to other and younger hands. Very respectfully,

Chillicothe, O., 1879. JAS. T. WORTHINGTON.

Our people cannot raise too much good fruit. I account fresh figs as one of the best of these. I would be pleased to send my pamphlet, (3d edition) to anyone inclosing a three-cent stamp; which sets forth the facts in the case, and gives full information how to grow, how to prepare for market, or how we use it.

G. F. NEEDHAM.

[We have no faith in open-air fig-culture in this climate. We would not do injustice to Mr. Needham—but the little pamphlet in question is not worth a three-cent stamp, and we do *not* advise our subscribers to send for it.—EDS.]

Kieffer's Hybrid Pear.

There appear to be various opinions as to the quality of Kieffer's pear, which is owing probably to the unripe state in which it has been gathered and eaten. I have had the pleasure of eating it for two or three seasons and found it of very good quality, especially those of the past season, and from what I have seen of it, I am inclined to think it will prove an acquisition for the market as well as for home use. New fruits generally improve with the age of the tree. It is too soon to give a decided opinion as to the full merits and value of this pear; it requires eight or ten years of trial and experience of new Pears and Apples before they can be fully recommended for general cultivation. CHAS. DOWNING.

Horticultural.

SCARLET TURBAN TOMATO.

NOT for its beauty, its quality or its productiveness do we present a picture of this tomato now offered in this country for the first time. We know nothing about it beyond the description given of it by its foreign introducers. It is

NEW SCARLET TURBAN TOMATO—FIG. 61.

said to be of German origin, particularly early and prolific, producing a dozen or more tomatoes in a cluster. Each fruit contains but very few seeds and these lie near the skin, so that the rest of the tomato is, so to say, seedless. We shall try this among our novelties to be tested next summer and give our readers the result. Meanwhile the accompanying cut may serve to familiarize them with its appearance.

EARLY PEAS.

AT page 92 of the Rural, you give an excellent list of Peas for early cultivation, but characterize the Philadelphia as the poorest of all there mentioned. I presume you are aware that a difference of soils and sometimes of fertilizers often makes a difference in the flavor of all kinds of vegetables. I have cultivated a dozen or more different sorts of peas in my garden for the past ten years, and find the Philadelphia Extra Early equal in flavor to any, and a few days the earliest. My summer residence is in New Jersey, near the sea-shore; the soil a light yellowish mixture of sand and gravel of quite moderate fertility. Tom Thumb in this produces so little it is not worth cultivating; though Mr. Roe says, in his work on gardening, that if the land is made rich it produces fairly. The first year I did not get my seed back. The second I made the soil about as rich as a manure heap, and yet it yielded little more; I then gave it up. Dan O'Rourke, Alpha, McLean's Little Gem, and some others you mention, I have tried and find them good; but, after all, the Philadelphia is the greatest bearer, and the most reliable of the early sorts in *my soil and climate*, and is excelled by none in flavor when *properly cooked*. Champion of England is the most reliable and best in flavor of all I have yet cultivated of the later sorts. But I intend to try a dozen or more kinds over again the coming season, and see what they prove, and will report the same to you. W. B. A.

The Apiarian.

A FEW MIXED THOUGHTS TO BEE-KEEPERS.

J. G. BINGHAM.

BEE-KEEPING, though pursued by some as a special business and by others as a pleasant pastime, is essentially one of the economies of the farm, and in the Old World a farm would hardly be thought completely stocked without a few hives. In this country bee-keeping by ordinary farmers is the exception rather than the rule. Indeed, it is looked upon by not a few as a sort of weakness, a species of hobby-riding, when a farmer takes to keeping bees.

Now, I believe in what is called "mixed husbandry." The tendency is too much to go into one particular line of things. A few years ago the mania was for wheat-growing, because wheat was the great cash article in the produce market.

The rage of the West has been too much for corn. When Merino sheep were bringing fancy prices, everybody was crazy to go into the raising of them. Not many years since the rural passion of Central New York was for hops. Just now, perhaps, the inclination sets toward pet stock raising and dairying. The latter is commendable. But I contend that the wiser plan is to pursue a miscellaneous, general system of farming, except in those cases in which some peculiarity of soil or location dictates a specialty. Farmers should avoid as much as possible putting all into a single venture. They should try all honorable expedients to increase their gains, and if one source of profit fails, another will succeed. Nor should they despise little gains for many a "little" helps to build a fortune.

Bee-keeping well deserves a place among the industries of the farm. As it is wise to keep poultry to pick up the waste grain and stray seeds, so it is wise to keep bees to gather the nectar of clover, orchard blossoms and wild flowers, that would otherwise go to waste. It costs but little more to make a start in bee-keeping than it does to make a start in poultry-keeping, and, season for season, I will match the bees against the chickens, with large odds in favor of the bees. Bee-keeping used to be a very crude affair. It was carried on with gums or straw hives, inside of which everything was fast-fixed and all a realm of mystery. The bees were left pretty much to themselves until the close of the honey season, when they were wickedly smothered with brimstone fumes; and the colony being thus exterminated, its stores were appropriated to the use and luxury of the owner.

Now we have the movable frame hive, which gives us access to the interior of the colony, perfect control over it, and liberty to take the surplus honey without killing the bees. With this form of hive, the loss of swarms by their going off to the woods can be prevented, queens can be given to the stocks that become destitute or them, and weak colonies can be strengthened by giving them comb, bees, or honey. Another modern improvement in apiculture is the importation and breeding of superior bees. Bees, like larger stock, deteriorate by in-and-in breeding and may be improved by crosses. There are inferior and superior breeds of bees, just as there are of poultry swine, sheep, cattle and horses.

For ten years past Italian bees have been largely imported, and though it may seem an extravagant thing to give five dollars for a queen bee—a little insect only about an inch long—it is no more so than to give a hundred dollars for a superior male calf or lamb. The Italian cross has greatly improved our common black bees, by giving them a "dash of fresh blood," as stock-breeders would express it, and by imparting to them desirable qualities. The Italians are a hardier race; busier than "the little busy bee" we have known from our childhood; more prolific; more beautiful in appearance, and less inclined to sting. Honey and beeswax are marketable articles for which there is a well-nigh limitless demand, a demand which, like that for fruit, increases with the supply. Honey forage is abundant everywhere. The Willow yields, early in spring, pollen, propolis, and and some say honey. Our early wild flowers and fruit-blossoms give the bees something to do; and when white clover spangles the fields and roadsides, the honey harvest is in all its glory. The basswood or linden blossoms and the late Raspberries, Asters, Golden-rods, and buckwheat protract the honey season into the fall. The bees are the best farm laborers we can have, inasmuch as they work for nothing, and provide for themselves.

The chief trouble with beginners in bee-keeping is that they will not go to the slight expense and small trouble *necessary* to get informed on the subject. They buy a hive of bees, about which they know nothing, except that bees can sting, and that honey is nice, and then leave it to take care of itself. It is needless to say that this is a very foolish course to adopt. What wonder that only failure and loss are the results? It would be the same in sheep-raising, dairying, or any other line of farming. While, therefore, I advise the farmer to make bee-keeping one of many lines of industrial pursuits, I qualify the advice by urging that it be by no means entered into without seeking information in regard to it. This can easily be obtained from books on apiculture, and from bee journals.

McGrawville, N. Y.

QUEEN BEES BY MAIL.

As has already been announced in our agricultural news columns, queen bees can be sent by mail. This important decision was brought about mainly by the efforts of Prof. Cook (author of the Manual of the Apiary), who went to Washington to interview the Postmaster-General in person. Until a few years ago there was no rule against sending bees by mail; but people grew careless in doing up the packages, other mail matters were daubed with honey, and not unfrequently post office clerks were stung by escaping bees. This state of affairs could, of course, not be tolerated for any length of time, and suddenly the edict went forth that bees should be unlawful mail matter. Bee-keepers soon found that it was a great inconvenience and even a detriment to the development of the industry to have queen bees debarred from the mails. Especially was this inconvenience felt in out-of-the-way places where there were no express offices, and where, consequently, improved bees could not readily be imported. Repeated efforts were made to revoke this ruling, but they were made in vain; the Postmaster-General was immovable. At the meeting of the International Bee-keepers' Association in Chicago, Prof. Cook was appointed a committee to renew the request, and his efforts were rewarded by the above favorable result.

A proviso is, however, attached to the suspension of the ruling. Queen bees and their necessary attendants will be mailable matter only so long as no person is injured by them in handling the mails. It is, therefore, of prime importance that bee-keepers who make use of this privilege, should exercise the greatest care in packing. The carelessness of one person may cause irreparable damage to the whole industry. A cage having a double bottom of pieces of wire gauze or perforated tin, placed one-quarter of an inch apart, has been suggested as suitable for the transportation. The food given to her majesty and suit during her passage in such a cage, should always be candy. Honey is too liable to flow out and damage other mail matters.

The Herdsman.

UGLY BULLS, THE CAUSE AND REMEDY.

COL. F. D. CURTIS.

IT is getting to be a frequent occurrence for some one to be injured by a bull. One of my neighbors was knocked over not long since, and would have been killed but for the attacks of several young bulls upon the old one who was trying to gore his owner. The bulls were all running loose in the yard and the old one was fed meal in a tub. While the neighbor was trying to turn the tub over so as to put meal into it, the bull, impatient for the meal, began to gore him. This bull had hooked a hired man before and was inclined to assert his rights to the mastery of the barn-yard. Such an animal should never be allowed to run loose. It is always dangerous. He should have been confined in a stall and both his food and water taken to him. If necessary to keep him quiet, a slipping noose with a stout rope should have been put around his neck. Tying by the ring in a bull's nose is not safe if the bull is inclined to be ugly. The slipping noose will never be tightened but once, as one lesson will teach the bull that he is in subjection to that rope. This is the first lesson to teach any bull—that he must yield to his master. This lesson should be taught when the bull is a calf,

by making him to lead, to back up, and stand around at the word. When this is done and followed up there will scarcely ever be any danger from bulls, provided certain other equally sensible rules shall be followed.

The young bull should never be fondled or handled about the head, as it gets him in the habit of tossing the head, which is a dangerous practice when he gets older and his horns are grown out. Familiarity breeds contempt—with a bull wondrously soon. He does not appreciate petting, but must always be made to step aside for his master, and this habit must be taught him when a calf. When he grows up to feel his strength, if the attempt is made he will naturally rebel and assert mastership. When bulls do this and stand and paw the ground and roar, with their heads down, they are dangerous. Any person is foolhardy who will approach them in front or without a stout club in hand. Such animals should be confined and led with a staff. High feeding always tends to make a bull sportive, if not ugly. A sportive bull is dangerous, as it is so natural for him when inclined to play to throw his head around and strike with his horns.

An ugly bull, if required for service, should be fed light—only enough to keep him thrifty, and when designed for fattening he should be tied fast with a slipping noose. Every bull should be separated from the cow the *instant* copulation has taken place, and it is always dangerous to drive them away at any other time when a cow is in heat. A bull should be treated kindly by his master or he will learn to hate him, and in an unguarded moment the beast will take his revenge. A bull will remember a wrong and is at all times treacherous. He should be so handled that he is not made nervous or excited at the approach of the master. Obedience and kindness should go together, and obedience must be taught when they are young. It is always best that one person should do everything for the bull. He will act better and acquire a sort of respect for the one who tends him. A bull is always excited by the presence of strangers, as he is by the sight of strange bulls, which he will fight to the death, whereas he is generally fond of a companion bull. Bulls have traits which must be understood or there will be trouble with them.

We have pointed out the most important, and will only add that among a large number of bulls, Ayrshires and Jerseys and natives, we have never had an ugly one which was broken or trained when young. The rules which we have mentioned are also carefully enforced. The winter is a good time, if it has not been done, to train the calves and get them used to the halter. After being tied up a few days, with a halter placed on the head, not on the neck, they will soon learn to lead, after which they should be drilled in backing up and standing around. This last lesson gives them the idea of getting out of the way, and lessens the danger of their pitching at persons afterwards and goring them. The halter should be put behind the ears, so it will not touch the eyes.

Miscellaneous.

NOTES FROM MEADOW GLEN FARM.

Wheat Account for 1879.

Dr.	
Plowing two days	$6.00
Harrowing	3.00
Handling manure	2.00
Guano	5.72
Drilling	1.50
Harvesting	6.00
Thrashing	3.50
Seed	8.00
Interest on land @$100 per acre	12.00
	$49.72
Cr.	
Fifty one bushels wheat	$76.50
Straw (estimated)	3.50
	$80.00
Expense account	49.72
Net profits	30.28

This from two acres of land, the soil a clay loam mixed with slate. Yard manure was applied at the rate of ten loads per acre and harrowed in. I have not charged this in account, thinking the land was left enough better to pay for it. The wheat was plump and nice, of the Diehl variety, and makes nice flour.

Cows and Calves.

We have a favorite Ayrshire heifer with her young calf, both doing finely. We keep them in a box stall, using care not to expose them to wind, or give them cold water. A neighbor lost a fine cow by imprudently giving it a pail of cold water soon after calving. Our calf is as fine a one as we could wish—a cross between Jersey and Ayrshire. We think this the best cross for practical purposes, the Ayrshire supplying quantity and the Jersey quality of milk.

Calves in Winter.

A fine Jersey bull-calf was not doing as well as his companions, so we thought best to put him alone and increase his feed by giving a pint more than his usual mess of meal, at first not increasing it too fast for fear of scours. But finding no harm done, we increased up to three quarts per day, which is enough for a calf. The meal was corn and oats ground together. By the way, our grandfather always said that bull calves never wintered as well as heifers, but this was our youngest calf.

Mating Fowls for Exhibition.

In the spring of 1878 we obtained a trio of Silver Gray Dorkings of a well-known farmer in this county. In the fall of the same year we exhibited them at the county fair, and, as we expected, he also had several trios there; but the judges awarded ours the first prize. Had his been properly mated, it might have been otherwise. The fault was, his cock had a double comb and the hens single ones. Now the standard allows both, but requires them to be mated in a show-pen. This shows that an exhibitor of poulty must be thoroughly posted on the points required by the standard.

Market Lambs.

It is generally supposed that it requires a lamb four months to arrive at that condition that butchers call ripeness. Our single lambs were fat at the age of two and a half and three months, and our twins when four months old. Last spring a lamb born April 15, weighed 59 pounds in the month of June. Its dam was a two-years-old, its sire a South Down lamb. Another born April 14, and sold to butchers the second of July, weighed 70 pounds. Another ewe three-years-old raised twin buck lambs, which, when three and a half months old, weighed 86 pounds each. Our lambs received no extra care, were all sold when less than five months old, and the butchers said their customers complained that they were too fat.

Winter Management of Sheep.

To have success in sheep keeping a man must first have some fancy for the business. Supposing them to have had good care through the summer and fall, the change from green to dry feed should be as gradual as possible. They should be yarded at night as soon as frost comes, and have hay in their racks; the lambs and older ones should be fed a little grain. It is necessary to look after their wants and supply them before the sheep suffer or run down. One should anticipate or foresee what they will need, before actual necessity opens his eyes to the matter. The flock should be divided so the weak and strong are not together; then they can be fed as each class requires. We think early cut and well cured clover hay the best single feed. We change, however, from hay to straw and stalks, but do not confine them long to the latter. We give corn and oats for grain. We prefer to have them in close stables instead of open sheds, that they may be kept confined, but the stables should be well ventilated and the sheep should be allowed to run in yards daily in pleasant weather for exercise. We also feed them in the yard in dry weather. Some object to keeping them in yards, but we never have deformed lambs, and raise 150 per cent of lambs from the number of sheep kept, by always confining them in yards in winter. Salt is very necessary for sheep; they should have free access to it, and it should be kept so as not to get mixed with snow. We mix a little sulphur, which tends to keep the ticks away. We also add a little oil-meal, which is a preventive of stretches; lastly, there is no room for argument, but sheep require water in winter; snow is a *poor* substitute.

Saratoga Co., N. Y. ABEL HOYT & SON.

WHAT OTHERS SAY.

NEWSPAPER SUBSCRIPTION PRICES—A GENERAL ADVANCE IMPENDING.—It is rather late to talk of advancing the subscription price of papers when two-thirds of the subscriptions are already received for 1880, speaking at least for agricultural papers. We take the following from the Journal of Commerce: "If the market value of raw materials continues to advance, every American newspaper which has reduced its subscription price will sooner or later be obliged to raise it. The alternative will be a loss to the publisher on every copy printed. The newspapers were the pioneers in the cheap era now closed. They led the way in reductions and made far greater sacrifices than any of the classes of business that followed them. In other lines of manufacture and trade the lowering of price—where any occurred—was gradual and went no further than the necessity of the situation seemed to require from day to day. But the newspapers struck from 20 to 25 per cent. off their subscription rates at a blow. The concession was too early and too liberal. It was based on expectations that have not been realized. Though newspapers were the first things cheapened, they are the last to go up to their point of true value. The cost, of printing paper and of everything that enters into the production of a journal has largely advanced. The reaction in prices extends to every other article of use and luxury. The inevitable expense of doing business and of living have greatly increased. The only thing that can now be bought at last year's price is the newspaper. It is impossible that this should long remain the sole exception to the rule of universal appreciation. The Chicago papers are the first to do what cannot be longer avoided. The Times of that city has boldly marked itself up to $16 a year including its Sunday edition, and six cents a single copy. This advance is fully warranted by the increased cost of the paper it uses—stated at 50 per cent.—and the other increased expenses of its production. The St. Louis papers are following suit. No journal can be expected to run itself at a loss on every sheet issued, and no subscriber who is partaking of the general improvement of prices in his own business will grudge the same chance of living to the newspaper press. It is the newspaper's turn—that is all.

POLLED CATTLE.—Of the polled (hornless) breeds of cattle of Great Britain, the Black Scotch for beef alone takes precedence, while the Red Norfolk and Suffolk of England are preferred for a combination of beef and milk. Mr. A. B. Allen, in the N. Y. Tribune, says that the cows of this latter breed generally excel in the dairy, and when dried off fatten kindly and make excellent beef. During the past thirty years moderate importations of Black Scotch have been made into Canada, Northern New York and Michigan, and some half a dozen or so of the Red Norfolk, about five years since, into Putnam County, N. Y. All these have done well and are much liked. Some Scotch Black Polled bulls were taken on to the Western plains six years ago, and bred to the wild long-horned Texan cows. A large majority of the calves dropped from this cross were black and grew up polled, or with mere stubs of horns, and were a great improvement over their dams. Some of these steers begin to appear in our markets and are much liked, especially for shipping across the Atlantic, they can be transported so much more safely and cheaply. Their hides suffer no injury by being gored by their fellows; they arrive at their port of destination in superior condition, and are consequently of quicker sale and at higher prices.

"THERE is every reason to believe," says the Valley Farmer, "that next year's wheat crop will be the largest ever raised since the creation of the world." This is a startling way of putting it, but the probabilities so indicate.

CATALOGUES, ETC., RECEIVED.

NOTE.—Readers are referred to our advertising columns for any particulars omitted in the following necessarily brief notices:

R. H. ALLEN & Co., 189 & 191 Water St., New York. A handsome catalogue, and one of New York's old, responsible firms. We here find offered several varieties of seed about which we have received many inquiries of late. We are glad to find our own report of Doura so well corroborated, as shown in the following extract from this catalogue: "Judging from our experience with this plant the past two seasons, and from reports of the experience of others, we believe this to be the most valuable of all the fodder plants recently brought to our notice. It is similar to Broom Corn in its growth, having, however, a very compact, upright head. . . . It grows eight to twelve feet high, is very leafy, suckers freely, and, as it may be cut several times during the growing season, is one of the best forage crops both for green and dry fodder. When cut for drying, the crop may be treated precisely like corn sowed for fodder. Owing to partial failure of our crop, we can only offer the seed by the packet." . . Let us here repeat that our plants, of which we spoke so highly, were raised from seeds sent to us by this firm. We desire to make this plain to our readers for the reason that some kinds of Sorghum, called Doura, develop but *one* stalk to the seed and are of no special value as fodder plants. It may be that a second season's trial of this would not confirm our high opinion as derived from last season's test. Thus judged, however, and the farmers of our neighborhood will confirm the statement, we have never before seen so large an amount of leaves and stalks produced from a given area. The *second* growth of this Doura was taller when our first frost occurred, than the Pearl Millet growing in an adjacent plot which had not been cut at all. We respectfully ask that those of our friends who plant this seed, will report their success or failure to this journal. We are very earnest in desiring to make its supposed value for this climate known, and would gladly purchase 100 bushels of the seed for free distribution, if, through our correspondents, we should be able to procure so large a quantity. Our Doura would have ripened a small quantity of seed but for the sparrows. But we incline to the belief that our seasons are generally too short for seed to mature in this particular variety. The drooping Sorghums mature seed fully. To return to the Catalogue, which is sent free to applicants we find among other notable seeds, Webb's Kinver Yellow Globe Mangel, Cow Peas, the Telegraph Pea, etc.

ELLWANGER & BARRY, Rochester, N. Y. Descriptive Catalogue (No. 1) of Fruits. A colored plate of the Waterloo Peach; woodcuts of a branch of the Stump Apple, showing the remarkably productive quality of the tree and of the Souvenir du Congres Pear, are among the more notable illustrations of this valuable work. Everyone of our readers interested in fruit should send for it. The Hints on Transplanting are full, practical and trustworthy.—Also descriptive priced-list of Strawberries.

E. A. REEVES, 68 Cortlandt St., N. Y. Illustrated Descriptive Catalogue of vegetable, field, fruit, herb, shrub seeds, etc., etc. Sent free to applicants. We see among particularized seeds the new Kinver Yellow Globe Mangel, Hungarian Millet, Spring wheats, Spring rye, etc.

CROSSMAN BRO'S, 300 Monroe Ave., Rochester, N. Y. Wholesale Price-list of garden, agricultural, grass and herb seeds. They call special attention to their onion seeds and to a new lettuce, the Eureka, which they now offer for the first, entirely different from other sorts.

THE COTTON WORM, Bulletin No. 3, of the U. S. Entomological Commiss.; by Prof. C. V. Riley, containing a summary of the natural history of the cotton worm, with an account of its enemies and the best means of controling it.

W. H. REID, Rochester, N. Y. "Key to Success in the Garden," and Annual Catalogue. A very neat and finely illustrated little work that every lover of the flower or vegetable garden will prize.

L. W. GODELL, Amherst, Mass. Illustrated Catalogue of seeds, bulbs and plants. Mr. Godell makes a specialty of flower and other seeds in collections, at very low prices. Catalogue free.

VANDERBILT BRO'S, 23 Fulton St., New York. Catalogue of Farm and Garden Implements—garden, field, flower, fruit and tree seeds, etc. Illustrated; especially the Implement department. Free.

ELLIS BRO'S, Keene, N. H. Illustrated and Descriptive Catalogue of greenhouse and bedding plants. Also send several circulars—all worthy of examination. Free.

BARR & SUGDEN, 12 King St., Covent Garden, London, W. C., England. Descriptive catalogue for the flower and kitchen garden—Gladioli, Lilies, Iris, etc.

LAWSON SEED & NURSERY CO., Edinburgh, Scotland, and London, England. Everything for the garden, farm and nursery.

B. S. WILLIAMS, Upper Holloway, London, N. England. Flower, Vegetable, Agricultural Seeds.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN 36.—FEB. 7, 1880. (ABBREVIATED.)

Shell Marl.

324. Received from Mr. Nathan Hart, West Cornwall, Oct. 22d.

Moisture	23.72
Silica, sand and insoluble matter,	16.88
Oxide of iron and alumina,	1.55
Lime,	27.99
Magnesia,	.97
Soda,	.59
Potash,	trace
Sulphuric acid,	.46
Phosphoric acid,	trace.
Carbonic acid,	21.77
Organic matter* by difference,	5.87
	100.00
*Containing organic nitrogen,	0.44

THERE can be no doubt that its employment, in liberal quantities, viz: one or more tons per acre, especially upon grass lands, would often be attended with decided and long-continued benefit, but, in most cases, its action upon grain crops would not appear at once in so decided a manner as is very commonly the case with good superphosphates or guanos.

The fertilizing effects of this shell marl as well as its commercial value may be safely measured by the percentage of lime which it contains. Its effects on crops would be in general quite similar to those of oyster shell lime although somewhat less pronounced since carbonate is a less energetic agent than hydrate of lime. Its content of lime, 28 per cent., is less than one-half as much as that of the three samples of slaked unscreened oyster-shell lime described in the analyses on next page, whose average is 59 per cent. As 1,000 pounds of the latter cost at New Haven, shipped in casks, $3.20, it is evident that the proposed price of the marl, $15 per ton, is much too large, even after making the most liberal allowance for cost of handling.

Oyster Shell Lime.

The three accompanying analyses exhibit the composition of samples of oyster shell lime and screenings made by H. A. Barnes &

Co , Fair Haven. The samples were taken on Nov. 24th, 1829, by Dr. Armsby, with the assistance of Mr. Barnes, who has also supplied the following data descriptive of the samples.

328. is unscreened oyster shell lime, slaked the day the sample was drawn.

329. is unscreened oyster shell lime, slaked, and about six weeks old.

330 is oyster shell lime screenings.

The two samples of slaked lime are fine and in good condition to apply to land, 328 being quite dry in handling, 329 damp and coherent.

The slaked and unscreened lime which these two samples represent is sold by measure and not by weight. The price, in November, 1879, was 8cts. per bushel at the works, and 9¼ cts. per car load, shipped in bulk at R. R. Depot. The average weight of the screened slaked lime used for building purposes is stated to be 47 pounds per bushel. As the screenings amount to 3 to 5 per cent. of the total, it is not far from the truth to assume that the unscreened will weigh 50 pounds per bushel. The cost of the lime would be 16 cents per 100 pounds at the kilns, or $3.20 per ton. Shipped in casks holding 16 to 25 bushels, the lime would cost about 1½ cents more per bushel and the casks cost $1 each, which would bring the cost of a ton up to about $6.40, two casks included.

The screenings, 330, consist largely of imperfectly burned shells, entire or in fragments. They are not shipped but are sold at the kilns for 4 to 6 cents per bushel.

ANALYSES OF OYSTER SHELL LIME AND SCREENINGS

	328	329	330
Lime	64.47	53.60	53.82
Magnesia	.41	.32	.24
Oxide iron and Alu'na	1.50	1.43	1.14
Soda	.16	.27	.15
Potash	.04	.06	.03
Carbonic Acid	7.79	8.89	22.34
Sulphuric acid	.52	.69	.23
Chlorine	.04	.09	.01
Phosphoric acid	.17	.19	.15
Silica	2.24	2.41	
Sand	5.08	2.85	6.12
Coal	.65	.94	2.60
Water (by difference)	16.93	28.33	13.17
	100.00	100.00	100.00

In the subjoined statement are given the proportions of the various chemical compounds that probably exist in the samples.

	328	329	330
Carbonate of lime	17.45	19.73	50.52
Hydrate of lime	68.64	52.34	33.29
Sulphate of lime	1.13	1.48	.49
Phosphate of lime	.37	.41	.33
Silicate of lime	4.33	4.66	
Magnesia	.41	.32	.24
Carbonate of potash	.06	.09	.04
Carbonate of soda	.23	.43	.24
Sodium chloride (com. salt)	.07	.03	.02
Oxide of iron and alu'ina	1.50	1.43	1.14
Silica			6.12
Sand	5.08	2.85	
Coal	.65	.94	2.60
Water	.00	15.29	4.97
	100.00	100.00	100.00

A brief review of the chemistry of lime manufacture may be serviceable. Clean oyster shells consist chiefly of carbonate of lime. As they are used in lime manufacture they contain probably about seven per cent. of moisture and organic matter, about six of soil and sand, and 87 per cent. of carbonate of lime. In passing through the kiln the carbonic acid is mostly expelled. If completely expelled the loss would be 38 pounds of carbonic acid for 100 pounds of shells, leaving 49 pounds of quick lime (calcium oxide). With this would of course remain the sand, mud, etc., that originally adhered to the shells, together with the ashes of the coal used in burning.

The lime thus obtained is slaked by throwing on water, in order to reduce it to a powder. In this process of slaking, water and lime enter into chemical combination, the 49 parts of lime becoming 64 parts of hydrate of lime. In practice some carbonate of lime remains undecomposed by the burning, and in the slaking process, the use of insufficient water may leave some quick lime unconverted into hydrate, or excess of water may remain as moisture, as is the case with sample 329.

When applied to land, oyster-shell lime may act as a *fertilizer* strictly speaking, or an *amendment*. Commonly, both kinds of action are exerted, and the distinction between fertilizer and amendment is not generally recognized in practice, although very important in considering the effects of this substance. Lime is used as an amendment on heavy clay soils, two to three or more tons being sometimes applied per acre. On loams or light lands 1,000 pounds or 20 bushels of oyster shell lime, applied once in two or three years, is a usual application, equivalent to the addition of 300 to 500 pounds to the acre, annually. It is evident that the small quantities of potash, magnesia and phosphoric acid contained in such doses of oyster shell lime can have no sensible effect upon crops. It is the lime, alone, therefore, to which any benefit must be ascribed. A consideration of the modes of action of hydrate of lime, when applied as a fertilizer, will make evident that it is one of the most valuable aids to the farmer and deserves more attention from Connecticut land owners than it has received.

Our cultivated crops contain on the average as much lime as potash. The necessity for the application of potash salts is fully recognized, but probably the lack of lime is as common a cause for unfruitfulness; for while potash seldom wastes from the soil to any serious extent, and is found in spring, well, and river waters in extremely small quantities, lime freely dissolves in water and rapidly wastes from the soil, so that other things being equal, there is more need for its restoration.

Dairy Husbandry.

NEW YORK STATE DAIRYMEN.

[Rural Special Report.]

THIS Association held its annual meeting at Utica this year, and while the attendance was not large, the interest shown was enthusiastic and the addresses most admirable. Taken as a whole I believe they were the best and most practical it has ever been my pleasure to listen to. The opening address was given by Mr. M. Folsom, of this city, the president of the Association. He reviewed the past and present state of the market and called attention to the want of reciprocity on our protective laws and drew a glowing picture of what might occur to this country should England pass laws protecting her dairymen to the extent that many interested, are protected in this country against the manufacturers of England. He approved of making the Commissioner of Agriculture a member of the Cabinet, so that he could look after those interested, that the farmer was too busy to attend to himself, among which he named the grasshopper plague, cattle plague, army worm, the Colorado beetle and other bugs. He strongly condemned the return butter pail and advocated a simple uniform, package that should go with the butter when sold. New York butter is a little under the average this year while cheese is better than ever.

After a lively debate on the gang press unpleasantness which Messrs. Whitman & Burrell have happily settled by buying up all the conflicting patents, a box of different varieties of foreign cheese, a present from the Messrs. Thurber was opened and greatly relished by the dairymen present. This has been a charming feature of a number of dairymen's conventions this winter for which the Messrs. Thurber are entitled to the thanks of all present.

In the evening the first speaker was Mr. L. S. Hardin, whose address concerning the National Dairy Cattle Club was the same reported in this paper from the Vermont Dairymen's Association.

Mr. Hardin was followed by Mr. B. D. Gilbert, the Secretary of the Association. His subject was importation of foreign cheese into the United States. The fine foreign display of the Messrs. Thurber at the first International Dairy Fair first opened the eyes of the dairymen of this country to the excellence and variety of this class of cheese. The trade which represented 3,120,112 pounds in 1875, has, however, gradually diminished until it has reached the sum of 2,618,793 in 1879.

By comparison with the cheese production of this country, it will be seen that as one increased the other decreased. That is, the more we made of cream the less we needed of a foreign make. Our foreign supplies came from England, France, Germany, Italy, Holland and Switzerland. Limburg, he says, is no longer imported. "It has grown with our growth, though it will hardly need to strengthen with our strength." Our dairymen can make nearly all the imported kinds, but they must bear in mind that many require a full year to ripen for market, so that ready money could not be looked for in this quarter. It would also require new fittings for the factories. He advocated a widening of the dairymen's business by creating a larger demand for varieties of dairy products. "There is," he says, "no foreign cheese brought here to-day the price of which would not enrich any man in a short time, providing that he could manufacture it at home."

Mr. Gilbert was followed by X. A. Willard on the commercial history of the dairy. This address was mostly taken up with statistics. He divided the subject into decades of ten years each, and told how prices had gone up and down, while the production had gradually increased. Prices have maintained a pretty even balance from 7½ cents a pound for cheese and 15 cents for butter in 1825, when the make could not have exceeded a few thousand pounds, to the average of the last decade of about 10 cents a pound for cheese, when the export trade alone demanded over 158,000,000 pounds. He questions if present prices for cheese can be maintained in view of the low prices of beef and pork sold in England. He calls for a better quality of make and warns the dairymen against adopting new methods blindly. Mr. D. W. Lewis, of this city, delivered a very funny address on the effect of greenbacks on the butter and cheese trade.

Reports of committees were received approving the efforts made to have the Department of Agriculture made an executive department; that Congress take measures to stamp out pleuro-pneumonia; that the tolls on salt shall be abolished; that the thanks of the Society be tendered to the Messrs. Thurber for the present of foreign and domestic cheese; that freight discriminations against farmers be legislated against; that the interests of the dairymen of New York would be enhanced by visiting the various dairymen's associations, and that all lawful means shall be taken to put down the unlawful traffic in oleomargarine.

After this the election was held, and, in accordance with the suggestion of Mr. Folsom, the retiring President, that none but dairymen should hold office in dairymen's associations, Mr. Robert McAdam was elected President for the ensuing year, and Mr. Gilbert retained as Secretary.

Prof. I. P. Roberts, of Cornell, gave an exceedingly interesting address on cattle, their food and management. All his illustrations were taken from actual experience at the college farm. In regard to cutting hay, he said it had been chemically determined that neither early nor late cut hay was most nutritious, but that cut intermediately between the two; that the best air for the stable was neither extreme heat nor extreme cold, but medium and especially very dry. Cows should have exercise. In Holland, where cows are kept up the whole winter, he had noticed large lumps on their legs and that they walked as if suffering from rheumatism. He could find no profit in steaming food. He gave the exact figures of what his cows had done in milk and the money received for it, and said the movement now undertaken to induce farmers to keep the records of their cows' performances was the greatest effort ever made to improve the condition of the dairymen of the world. H.

The Poultry Yard.

FANCY PIGEONS.

CARL VERA.

FANCY pigeons! what are they good for? This is a question that is often asked, and it is sometimes put in a criticising and scoffing manner by prominent horse fanciers and even poultry fanciers. With the same propriety might be asked: What good are any kind of birds? What good are flowers? Why were they given to us? For there is just as much in the scores of varieties of pigeons to claim attention and interest as in the birds or flowers. The dove, or pigeon, is associated with all that is holy in Christianity, and with much that was held sacred in mythology. Its very name in Hebrew, "Jona," is derived from a word signifying gentleness, and from the day it brought the olive-leaf to the Ark, both the plant and its winged bearer have been esteemed emblematic of peace. That the pigeon fancy is of very old date will be seen by an examination of the works of classic writers, and many extracts might be taken, were they needed, from such writers as Shakspeare, Tennyson, Pope, Moore, Hood and others.

One extract from Thomas Hood—he who sang the "Song of the Shirt"—I cannot forbear giving, it so aptly expresses our idea of a deserted home:

"No dog was at the threshold, great or small,
No pigeon on the roof—no household creature—
No cat demurely dozing on the wall—
Not one domestic feature."

We all have our fancies; these fancies express themselves in various ways. A man must have leisure to enjoy a fancy, or money to pay for it, and either presupposes a state of society where one does not have to work himself to death to obtain a living, or one where, mayhap, fortunes are accumulated and hereditarily descend to the one who possesses the fancy. The pigeon fancy is ornamental, instructive and fascinating. Why it is fascinating is very simply and easily stated. It is the cultivation and pursuit of *ideal beauty* in its highest forms; it is the constant effort to approach a standard of perfection impossible of attainment; it is progress ever approaching completion, yet never completed, towards a beautiful shadow which ever and anon seems within reach, yet which is never grasped. It thus presents all the encouragement of success, with all the stimulus of failure; all the satisfaction of good work well done, with all the desire for greater perfection yet to be accomplished. Such statements and comparisons as these may, perhaps, provoke ridicule, but, if so, most unjustly, for in their truth lies the engrossing interest of pigeon-breeding to those who follow it, and the reason why, if a man becomes fond of pigeons at all, he becomes so *very* fond of them. For this reason some of the busiest and best of men become pigeon fanciers under the ever-increasing pressure of the battle of life in which they are engaged. They need—they crave—something which shall afford them relief from their cares, reaction for their wearied minds, for the mind—far more than the body—needs it in these days; interest and enjoyment for their leisure hours; and they find it all in the pursuit of the pigeon fancy, which answers most exactly in all these respects to the culture of flowers.

Like the florist, the pigeon fancier seeks to develop what he calls the "beauties" of his pets, and, artificial as his ideals are, they are scarcely, if at all, more so than those of a gardener. No one feels surprised that men should love flowers, and as our natures are not all alike, some of us cannot have flowers; some of us want more return than flowers can give. We would have their beauty, but we crave an eye that can meet ours, a pet that will welcome our approach and show that our regular visit is a joy to it. If only the beautiful flower could turn round at our coming; if it could acknowledge gratefully the refreshing shower we bestow upon it; if it could meet glance with glance, to show us that it shared the joy of every meeting; if, I say, a flower could do all this, then it would answer in nearly all respects to a fancy pigeon. To the true fancier, his pigeons are just such beautiful, rare, *living flowers*.

The pigeon fancy is assuming vast proportions in the United States. Within the past 20 years the buying, selling and importation of pigeons have caused to spring up a number of business houses devoted entirely to the purpose of supplying such pets. Germany and England are the countries from which the largest number of birds are imported. The love for pets evinced by the people of both nations has produced, within the last few centuries, numberless combinations of colors and points of greater interest in this class of the feathered tribe. Each of these people has, however, had its own peculiar fancy. The Germans, living so near the birth-place of fine art, have devoted their time and skill to the production of brilliancy of coloring or odd contrasts of colors, and the toy birds have issued from their hands in every conceivable combination of hues natural to pigeons or striking to the eye. The English, on the contrary, turned their attention to shape, or whatever was odd and curious, and by long selection and careful breeding, have obtained what are called the high fancy birds; viz: the English Pouter, Carrier and Almond Tumbler. We Americans should be thankful that those two nations devoted themselves to such opposite purposes. Between them they have worked to our advantage We now have all the varieties ready-made to our hands, whereas, if both had worked towards the same desires, there would have been a much shorter and more imperfect list to choose from.

I will not, however, infringe further on the valued space of our esteemed RURAL, but in a subsequent number, will speak of the several varieties and in regard to their breeding.

A New York Poultry Account.

HAVING had some experience in poultry raising, I give it for the benefit of RURAL readers After I left school in June, 1878, I commenced taking charge of father's hens and am still in the business. I kept an accurate account of everything the first year. Although I do not think the record is extraordinary, it shows that hens can be made to pay their way. My account is as follows:—

Amount received for chickens and eggs sold	$50.63
Amount paid for feed, repairs and losses	25.22
Profit	25.41

We kept about 25 hens which were a mixture of Brahmas, Leghorns, Houdans and barnyard fowls. We used $12 95 worth of eggs and poultry at home. I have made the hen house warmer by battening and banking, as it was formerly so cold that we got very few eggs in all winter, but now the hens lay about as well in winter as in summer. I fed corn, oats, wheat screenings and corn meal and wheat bran dough—the last on the coldest days. I gave the hens burnt bones and egg shells broken fine often, and fresh meat occasionally. Last spring I had several sick hens; one died and I opened her crop which was filled with some charred corn I had fed them. I gave the others each a "Parson's pellet," and they all recovered. I received all of my instructions in poultry raising from the columns of the RURAL. L. L. ALLEN.

Jefferson Co., N. Y.

A Southern Poultry Account.

I started in on Jan 1. '79 with 30 hens and two cocks, pure-bred and grade Houdans. This number was much reduced one way and another, so that when the last day of the year came around I could strike the average at 23 hens; 10 of this number hatched and cared for chickens. No pullets laid during the fall. The hens were one, two and three years old. They were allowed unlimited range; were liberally fed with corn twice each day except during June and July when the wheat fields furnished ample foraging grounds. They were never permitted to become lean or lousy. In this climate, there are few consecutive days when dry earth for wallowing is not to be found without special provision. A few burnt bones were the only addition to their diet besides that mentioned above. Results as follows:—Eggs gathered Jan. 144; Feb. 311; March, 432; April, 407; May, 221; June, 291; July, 273; Aug. 145; Sept. 77 molting; Oct. 184; Nov. 124; Dec. 177. Whole number 2,786 or 232 1-6 dozen. Average price for the year 12⅓c. per dozen. "Nothing to brag of" to be sure. Still I am pretty well satisfied with the results. No account was kept of the corn.

Warren Co., N. C. M. P. PRINCE.

Everywhere.

NOTES FROM WESTERN ARKANSAS.

THE total area of this State is 52,198 square miles, making a total in acres of 33,406,720, of which 16,257,641 acres are on the tax books, leaving the enormous amount of 17,147,187 acres which is non-taxable, and affords no revenue to the State. Of this large amount, the United States Government owns 7,000,000 aces, which are subject to homestead, in quantities of 40, 80 and 160 acres, according to location, under government laws, or for sale at $1.25 per acre; much of which is valuable and will be made a source of revenue to the State. The greater portion of these lands lie in the west, northwest and southwest sections of the State, and it only requires the small sum of $14.25 to secure a home of 160 acres. The school lands are the 16th section of each township, comprising 640 acres, which are set apart for school purposes and for sale at 50 cents per acre. Of forfeited lands, there are over 3,000,000 acres, which have been forfeited to the State for taxes, and are for sale at 50 cents per acre, or subject to donation to heads of families in quantities of 160 acres, the fees for which amount to $6.00. No other State offers such a munificent donation, or such splendid opportunities for heads of families to acquire a home. The person applying for a donation, must accompany the application with the sum of $5, take an oath that it is for his own use and not for speculation, and within eighteen months present to the land department, proof that ten acres have been cleared and put in cultivation, accompanied by a fee of $1, and he will secure his deed to the land. No building is required. Thus, in our State a head of a family, if he be a citizen of the United States, if he finds United States Government and State lands lying side by side, can homestead from the Government 160 acres of land, by paying say, $15 in money, and secure a donation of 160 acres more from the State of Arkansas, by paying $6; making in all 320 acres of land, such as may be secured out of millions of acres, for the sum of $21. What country on earth offers such a grand inducement to the home-seeker? In addition to these lands, there are the railroad lands, which are offered to the immigrant on terms as favorable as any one can ask. These lands can be purchased on seven years' time, at six per cent. interest, and heavy discounts are made for part or all cash. If none of these lands suit the purchaser or home-seeker, he can usually find improved lands for sale at prices ranging from five to fifteen dollars per acre.

Agriculturally viewed, western Arkansas has no superior. We can grow of cotton over 500,000 bales, worth over $20,000,000. The State stands first as to growing hay and tobacco per acre, second as to cotton, third as to oats, and grows equally with other States, almost all the cereals and small grains, grass, etc. In fruits we stand behind none; raising the finest peaches, apples, plums, cherries, apricots and all kinds of berries. In most parts of western Arkansas stock-raising is profitable, and can be made equally so with the famous blue-grass regions of Kentucky. We have natural pastures both summer and winter, and whenever there is a scarcity of feed, the winters are so mild and short that stock is put through till spring with but little expense. In no part of the world can the laboring man and the poor man more easily support and educate his family than here. Such are our advantages, that with moderate means and energy, all prosper.

The mean temperature at Little Rock, the geographical center of the State, for the twelve months ending July 31, 1879, was 56 deg. Fah. The highest thermometers were July 14, and 15, 1878, which reached 99 deg. Fah. The lowest mean, January 5, 1878, 12 deg. Fah. The rainfall throughout the year is more uniform, owing to physical causes, than in adjoining parallels. Thus, western Arkansas is exempt from the extreme and suffocating heat of more southern latitudes, or the extreme and severe cold of sister States in more northern latitudes. While there has been no rapid influx of immigration to our State, such as has been experienced by Kansas and Texas, yet there has been a constant, steady flow of a more certain, steadfast and profitable class of settlers, than to either of the States mentioned. R. B

Sebastian Co.

RURAL SPECIAL REPORTS.

ARKANSAS, Greenwood, Sebastian Co., Feb., 9.—Since the first of January the weather has been like May. Farmers have been busy plowing for oats and spring crops. Making garden is now the order of the day. Cotton holds its own at 11c. and 11½c. a pound. The recent warm weather has damaged considerable quantities of pork; consequently the price of bacon has increased to 11c; corn has fallen to 60c; flour per 100 lb. $4; salt per bbl. $3.40 oats 60c; butter, 22c@40c; eggs, 20c; Irish potatoes $1@1 25; sugar, 9@13c; coal oil, 30c; onions $2.50; wool 44@48c. R. R.

ILL., Dixon, Feb. 5.—White Russian spring wheat has been found not to answer in this part of the country. I've tried it three times. It is too late, however, and blights in the head. Last fall I thought I would try it as a winter wheat, it looked and grew so much like that sort. I drilled it in but it is dead. I also drilled in 16 bushels of Odessa wheat, which looks all right although it is used as a spring wheat. W. G.

IOWA, Brooks, Taylor Co., Feb. 12.—It has been quite spring-like all winter, only one cold week and that in December. Not any snow to speak of. Quite a large amount of winter wheat was sown here last fall. I cannot tell yet how it will stand the sudden changes of the weather: I have fears it will not be a paying crop. Corn is our staple crop, yielding from 40 to 75 bushels per acre, and farmers that are not troubled with hog cholera are making money even at the low prices we are getting. We grow almost all kinds of fruit in abundance. Land is cheap—wild land $8 and $10 per acre; improved from $10 to $20 and $25, all well watered with streams and springs. Farm products have for the last few days dropped off paying prices. Wheat is worth from 70c, to 80c.; corn, 20c.; oats, 25c.; of rye and barley not much was grown last season; potatoes 40c.; butter, 20c. per lb.; cattle, from $3 to $4; hogs, $3.50.

I wish to say one word to my brother farmers that raise large crops of potatoes. In my mode of planting I use a riding corn cultivator; attach the fifth tooth. Make a small conductor large enough to freely pass pieces of potatoes and long enough to reach from behind the middle tooth to the seat, or forward of the seat; place an old boiler or a half-bushel or anything that will hold from half to one bushel of seed potatoes, forward of the conductor; put a board across forward of that for the boy that drives; set the teeth on both sides to turn the soil on the potatoes, and turn the measure down towards you when you are on the seat, so that the top of the measure will be even with the top of the spout so you can pass the seed into the spout without taking it up in the hand. Have the ground well pulverized before planting. The wheel track will guide you for the next row. After a little practice one can drop as fast as the team will walk. I have planted eight acres per day with it. J. T. S.

IOWA, Davenport, Feb. 12.—I was very much pleased with the RURAL'S remarks on the Mexican sweet corn, in the issue of Jan. 24. I have raised it for my own use for the last 10 years. Discarding all others I plant it in succession three or four times during the season, the last time from the 20th of July to 1st August. By this means one can have green corn until frost kills it, and it is the best of all the sweet corn for a person's own use; but it is not a good market corn on account of its color. We are having a very remarkable winter here. It has been like spring ever since Christmas. Roads are very bad. Farmers cannot come in, consequently produce is very high for this place: wheat, No. 2, spring, $1.10; winter, $1.18; corn, nothing doing in the way of shipments, 24@27 cts.; barley dull at 57 cts.; oats, 36 cts.; potatoes, Early Rose, 40 cts., Peachblows, 55 cts.; onions, 1.50@$2 per bus.; butter, 25 cts.; apples, light in supply, 3.75@$4 per bbl.; cabbage, 40cts. per doz.; chickens, 7cts. per pound; turkeys, 10 cts.; geese, 10 cts.; ducks, 8 cts.; eggs, 20 cts. Everything is high; but would be cheaper if roads were good. G. W. S.

IOWA, Felix, Warren Co., Feb., 5th.—The present winter has been very pleasant; very little snow or rain, ground frozen almost all the time. Our country is mostly prairie with plenty of timber along the streams. Improved farms sell for $20 to $30 per acre. It is a good corn, oats and grass country. Spring wheat is raised, yet it fails some years. Ten times more fall wheat was sown last fall than ever before, but it is the general opinion that the most of it is winter-killed; wheat is bringing in market from 90c. to 95c; corn, 22c; oats, 26; potatoes, 30c; cord wood $1 to $1.25; hogs, $3.75 to $4 per 100 lbs. J. H. A.

IOWA, Washington, Feb. 9.—We have had a very mild winter so far. A part of the time it was very disagreeable on account of mud. For the past two weeks it has been April weather without the showers. Fall wheat will undoubtedly be a failure in this section of the country on account of the alternate freezing and thawing. W. R. B.

KANSAS, Edgerton Feb., 11.—We are having a mild open winter. The weather for the past six weeks has been delightful. Wheat is generally looking well throughout the State, (as *I know* by personal observation), and there is a much larger acreage sown than usual. Farmers can now see the difference between early and late sowing. While the former is green and well rooted, with every prospect of making a good crop, the latter is brown, and considerably thrown out by the frost. The fruit prospect so far is good. If the warm weather does not swell the buds too much before late frosts, we shall probably have a large crop, as the crops for the last two seasons have been light. This is a healthful country, and a good climate. We have good markets, good land, and cheap, good schools, churches enough and good society, and it is a good place for any honest, industrious man to secure a home. A. B. D.

MICH., Cleon, Feb. 12.—We are having what the local papers here call a kangaroo winter, I suppose because it jumps from one month to another with a short cold spell in each. Farm crops were very good here last season. Corn was cut short somewhat by a drought in July and August, which lasted about six weeks. A neighbor told me to-day he was offered 50 cents a bushel for his oats at his granary. Corn is selling for 50 cents for 70 pounds of cars; wheat, $1.12 per bush. in market; hay, $15 to $18 per ton in barn or stack. Good wild land can be bought for from $3 to $8 per acre. J. S. G.

MICH., South Lyon, Oakland, Feb., 7.—No snow; weather very mild; winter wheat looking well; clover killed out; wheat—Clawson—worth $1.15; corn, 50c; oats, 30c; buckwheat, 80c; potatoes 40c; butter, 16c; eggs, 12; live hogs, 4c; fat cattle 4c. to 4½c; fat sheep 5c; stove wood $1.00 A. B.

MO., Springfield, Greene Co.—It is extraordinary that while portions of this country have been visited with heavy snow and most intensely cold weather, we here on top of the Ozark Mountains have had comparatively *no winter*. Up to the end of January the ground had not been covered with snow, nor had the frost been sufficient to prevent the plow, excepting a small portion of the time. Wheat and blue grass have been growing all the winter. Sheep are happy with green pasture and ignore dry food. All stock have a good time, so dry and warm is the season. Cattle and hogs have gone upon the market in better shape from less food and in shorter time than usual. Of course, we enjoy it too, but with some fear that our absent snow and frost may come home in March or later. Never before had we such promise of a large fruit crop of *all* fruits common here. The dry summer and autumn prevented the usual growth of wood in our orchards, and instead every tree is full of fruit buds. We have feared the buds would be so advanced by absence of cold weather as to be killed by frost, but all is right yet. Nothing is lost but the bees. They have nearly all died in this locality; we think it is from the effect of long and severe drought. There was a very large acreage of this county sown to wheat last fall, perhaps never so much before, and as the season for the work was favorable, it was well done, and the many, many broad green fields at this time look very beautiful, promising a large yield. Business in Springfield is much improved; merchants are busy and happy. Receipts of cotton from the western border of our sister State, Arkansas, are unusually heavy. Wagon trains, laden with this staple, are upon the road and streets every day in large numbers. We think this a most lovely part of the "Great West," but we need more transportation—more railroads, and they are coming. JOT.

PA, New Lebanon, Mercer Co. Feb. 7.—The winter in these parts has been very open and warm. We had a good deal of rain and mud up to February. This month so far has been quite cold. The wheat crop, owing to the start it got in the fall, and the mild winter, looks well and promising thus far. The crops of last year were good, taking them all together. Fruit was plentiful, especially apples. Prices: wheat, $1.10 per bus.; oats, 38 cts.; corn, 28 cts.; apples, 50 cts.; potatoes, 35 cts.; butter, 20 cts. per pound; eggs, 20 cts. per doz. R. C.

TENN., Humboldt, Feb. 3.—Our first snow this winter now covers the ground 12 inches, an unusual phenomenon for this section at this date. Wheat looks well—tillering finely. Owing to wet weather and the cotton "boom" not half the usual area has been sown. B. F. T.

WIS., River Falls, Pierce Co., Feb. 16.—Crops last year were, on an average, pretty fair. Wheat averaged about 15 bushels to the acre; but was not of the best quality; corn, 150 baskets per acre; oats, 64 bushels per acre. The fruit crop was very fair. We had good yield of currants, raspberries, grapes and apples. Our standard apples are the Red Astrachan, Summer Rose, Rawle's Genet, Johnathan, Rhode Island Greening, Rock Russet, Ben Davis, Golden Russet, Early Harvest, Duchess of Oldenburgh, Gen. Grant (?) and Wealthy, and these are all doing well. Our standard Grapes are the Isabella, from which I gathered 200 pounds; Delaware, 156 pounds; California raisin grapes, 15 pounds; Clinton, 75 pounds; These are all doing well and stand the winter admirably. G. W. H.

WIS., Wiota, Lafayette Co., Feb. 10.—We have had a remarkably open winter. The ground is now bare and we have not had a day of passable sleighing yet and probably not six inches of snow in all, and but a very few days of severe cold. Generally we have had freezing of nights and thawing slightly during the day, as is usual in November. A much larger area of wheat than has been sown for many years was put in last fall, and such weather must be very trying to it, especially to the late sown. Mine was sown the first week in September and doesn't appear to have suffered any yet. W. F.

The Querist.

ANSWERS TO CORRESPONDENTS.

When to Thrash Wheat.

C. R., Highland, Ill., asks some information as to the best time for thrashing wheat—either from the field a few weeks after it has been harvested, or from the stack. In that part of the country the majority of the farmers find that thrashing from the field saves a great deal of trouble without causing any injury to the wheat either in weight, soundness, plumpness, or keeping properties of the grain in the granary, which has never heated at all, although the thrashing has sometimes been done within 15 days after harvesting. The cause of the practice of thrashing thus early was the damage done by the weevil to the wheat in the stack and afterwards in the granary, and experience thereabouts proves that wheat thrashed from the field hardly ever suffers from insects, while if stacked its value is often lessened one-fourth by these pests.

ANS—No one is better able than our correspondent to answer for his locality the questions he asks. If the facts are as he states in regard to weevil—and we see no reason to doubt it—and if there is not too great a risk to the wheat from storms, then we should say the best way would be to thrash from the field as soon as the wheat is dry enough not to damage by heating in the bin. The practice, however, of leaving wheat in the shock till thrashing time, has been mostly abandoned in the wheat regions of N. Y., Ohio and Michigan, on account of the uncertainty of the weather. Often in those localities heavy rains after harvest sprout the wheat badly, if left long in the field, no matter how well it may be shocked. The plan of thrashing from the shock often involves delay at thrashing time, too. If the wheat is *in the barn* or even stacked, the thrashing need be interrupted only during the actual continuance of a shower. But if it is in the shock, the machine and man may have to wait a day or more for the wheat to dry. Again, one steam thrasher often thrashes many thousands of bushels in a season. But this would require some of the wheat to be left in the shock several weeks, which is quite unsafe except with a climate, like that of California, free from rain, The general practice, therefore in the States named, is to put the grain in the barn or stack about four or five days after it is cut, and let it remain till the sweating process is over, and hot weather and hurry about plowing and seeding wheat are over too, and then attend to the thrashing. But each locality must decide for itself what is best for its own climate and circumstances.

Brain Bladder Worms in Sheep.

F. E., Fairview, W. Va., asks what is the matter with his lambs. When first attacked they go round and round with the head on one side, as if there were something in the ear. This lasts for one or two days, when they get too sick to walk, and when lying down, their eyes keep rolling rapidly.

ANS—If you open the head of one of the lambs by sawing carefully around the skull and lifting off the bone, so as to expose the brain, you will probably find some parasitic worms. These consist of bladders filled with fluid in which the worms exist. The worms are known as brain bladder worms (Cœnurus cerebralis), and the pressure and irritation on the brain produced by them, cause the sheep or lamb to turn round in one direction, holding the head on one side or downwards meanwhile. They are tape-worms in an embryotic condition, and are introduced into the sheep on hay or grass upon which eggs are adhering; these being dropped by dogs in their excrement. In the sheep these parasites never mature, but arrive at their final growth in the intestines of dogs. The bladders are from the size of a pea up to that of a hickory nut or even a hen's egg. As a relief, (there is no cure) give a dose of two ounces of linseed oil, give some light but nutritious feed, and keep the stomach and bowels free from repletion.

When the head of a sheep containing these bladder worms is devoured by a dog, the larvæ are transformed within him into tape-worms. These worms at maturity, or the eggs, having been voided by the dog on the pasture, are swallowed by the sheep, hatched in the stomach, and penetrate to all parts of the body, perishing everywhere except in the brain, their usual habitation. One dog will void thousands of eggs, some of which attached to the anus are dropped in a multitude of places. Old sheep are seldom attacked. To prevent the spread of the disease, therefore, it is only necessary to prevent dogs from devouring the heads of affected sheep, or to keep them from

pasture. The heads of sheep dying fro m the disease should be burned — not thrown away.

Wool Waste.

O. W. F., Blakestone, Mass., asks how to make manure from the waste of woolen mills, which he can have for drawing it two miles.

ANS.—These are a very valuable fertilizer. Wool contains 17 per cent. of nitrogen or 340 pounds in a ton; nitrogen is valued at 25 cents a pound when in a condition to be made immediately available. Woolen waste decomposes slowly, and while it is not of immediate use, and therefore not so valuable as a material containing active forms of nitrogen, yet it is permanent and of lasting value. If the nitrogen in it is worth half as much as that in guano, the waste should be worth about $40 a ton, at which price it is often sold for a fertilizer. English farmers buy it for $25 to $50 a ton. The samples sent are numbered in about their relative value. If mixed together, they are a very good sample of the waste of a factory in which shoddy and inferior wool are used, and which consists of short fibers of wool with some dirt and other foreign matter. This waste is specially valuable for hops, and is forked in about the roots; it is usually spread upon grass lands before they are broken up for corn or wheat, and is plowed in with a light furrow. This is the best manner of using it, as it is in no way improved by laborious methods of composting. It is equally valuable in whichever way it is got into the soil, the only thing to consider being to get it mixed as evenly and as near the surface as possible, and yet have it covered.

Salt.

C. W. W., Lowville, N. Y., wants to know how our salts are made, and what is the difference between common salt and "factory filled;" 2, is lime used in the manufacture, and 3, are not Ashton and Higgin's salts imported?

1. Salt is principally made from brine pumped from wells which are sunk to the natural salt deposits, and this brine is evaporated in pans. The difference in quality is largely due to the purity and freedom from deleterious matter of the brine; also, to the method of manufacture and the care taken during the process. The term "factory filled" was one adopted many years since in contra-distinction to the term "Liverpool ground," which was the commonest grade of salt made, and which was usually shipped in bulk. The term is now applied more or less indiscriminately to most of the brands of English salt. 2, We are not aware that lime is used in the manufacture of salt, but all brines contain more or less lime, and it is a fault with American brines that they contain a large percentage. 3, Ashton's and Higgin's brands are both imported; the latter is made by a new process for which the English Government has granted a patent, and this, it is claimed, is as great an improvement in the manufacture of salt as the Bessemer process is in that of steel. We are informed that the importations of this brand have increased in four years from six thousand to over ninety thousand sacks per annum.

Dairy Cows and Sheep.

E. H. G., Watertown, Mich., has had some experience with blooded stock, but has generally bought in a high and sold in a low market, and he asks whether sheep and dairy cows go well together—he has some $25 Merino sheep

ANS.—Dairy cows and sheep go very well together, as sheep can go on the pasture and eat off what cows reject. But it will not pay to keep $25 sheep for wool or mutton when a common native ewe will bring as good a lamb and at least half as good a fleece, at a cost of $3 or $4. We have this opinion of blood stock, that it will not pay the ordinary farmer to keep them if he has to purchase at a high price. Let the breeders breed them and let farmers cross them on their best native stock by buying good bulls and so raise grades of gradually improving character. The ambition to possess some costly cattle has frequently injured and sometimes ruined farmers, who cannot make money out of $200 cows or $25 sheep, or $50 pigs which will rarely be more productive than half-bred animals which will not cost more than a fourth of these values We consider dairying as the most certain and substantial branch of agriculture, and it is certainly the least exhaustive of the soil. If there is one farmer better off than another to-day, it is the dairyman who keeps good native or grade cows and feeds them well.

Malignant Anthrax or Black Leg.

J. J. R., Pulaski, O., asks for a preventive and remedy for a disease that is playing sad havoc with cattle in that neighborhood, and wh ch he describes.

ANS.—This is evidently "Malignant Anthrax" and the disease runs such a rapid course that there is little time for remedial measures before death takes place; therefore at once endeavor to secure the balance of the herd from this disorder. Give to each one of the herd a good purge, from one-half to one pound of Epsom salts according to age of animal, follow with two-drachm doses of chlorate of potassa or saturated solution of quinia, or common salt or small doses of turpentine twice a day (dose dessert-spoonful mixed with white of egg or linseed oil). If possible remove the animals to another location and change their manner of feed; quality and quantity must be good and generous. Drain lands and disinfect barns and sheds. Bury all animals that die of the disease, as it is highly contagious, and be careful in handling the carcasses, as human beings are liable to contract the malady if infected by the poisonous principle through wounds in the hands or person.

Cotted Wool.

L. L. L., Northeast, Pa., asks the cause of wool cotting in a sheep's back.

ANS.—Cotted or felty wool is caused by low condition of the sheep; by a natural deficiency of yolk and exposure to wet, or by a constitutional defect. Under some circumstances it is the nature of wool to felt and mat together. These are, moisture, warmth, pressure and the presence of alkaline grease (soap) in the wool. When a sheep is exposed to rain and the fleece is soaked, the yolk (which is a true soap consisting of potash and oil) is dissolved, and when the sheep lies down the wool is warmed and pressed together. The result is precisely the same as when a felt-hat maker takes a handful of wool, dips it in hot, soapy water, and presses it with his roller. The fibers of wool being armed with interlocking scales, these become entangled and the wool is matted together—the matting being assisted by shrinkage. Some sheep inherit the fault, and a thorough wetting of the fleece is followed by shrinking and cotting. Others are deficient in yolk for want of good feeding, and the wool, being insufficiently lubricated with this oil or grease, is felted when the fleece is soaked with water.

Egyptian, or Rice Corn.

A. A. S., Macon City, Mo., asks where Egyptian or Rice Corn can be had; he has seen it recommended as better than corn.

ANS.—It is advertised in our columns and several of the seed catalogues noticed in our columns of late. We have raised this and other varieties of sorghum vulgare, valued either for grain or for fodder. Its value as a grain is not fully determined, though in nutritive qualities it is thought to be inferior to corn. There is one variety that throws up 8 or 10 stalks from a single seed, taking so firm a hold of the soil that it is seldom lodged by high winds. This proved with us last summer one of the most valuable fodder plants we have ever raised. The seeds were marked "Doura," though we find that other seeds, so called, throw up but a single stalk, and are valuable for grain chiefly. We should have added this to our Free Seed Distribution had we been able to procure seeds known to be the tillering sort in sufficient quantity for that purpose.

Flax Culture.

J. R., Outagamie Co., Wis., asks for information about flax culture.

ANS.—Flax requires good soil. Moist, rich meadow land newly plowed, or new prairie land is excellent for this crop. A bushel and a half of seed per acre is sown, and the treatment is much the same as for oats or any other small-grain crop. Thin seeding encourages branching and the formation of seed stalks, although the best fiber is produced from a thickly grown crop cut before the seed is mature. When both seed and fiber are required, moderately thin seeding is practiced. The yield common in the Western States is 12 bushels of seed and one ton of straw per acre, although a good crop should produce 25 bushels of seed per acre. Flax leaves the ground in a good condition for wheat, as it shades and mellows the soil as much as buckwheat or peas.

Cow-peas Again.

G. S., Spring Lake, Mich., asks where can Cow-peas be obtained by the bushel, and whether they are likely to thrive in that latitude.

ANS.—We beg again to call attention to our notices of catalogues in late and future numbers of the RURAL NEW-YORKER. Most of them will be forwarded to subscribers without charge. Some of our acquaintance and exchanges state that the RURAL, in its advocacy of a trial of the Cow-pea, is but bringing up an old failure to be again tried and to be again proven a failure. This may be. It will be tried in a small way during next season by not less than 10,000 farmers of the North, and their reports will determine, as it has never been determined before, whether the Cow-pea for certain purposes is of any value or not.

Planting Doura, etc.

D. T. K., Lebanon, Va., asks, 1, for the best cheap feed cutter; 2, how to plant Doura.

ANS.—1, There are many excellent feed cutters, the relative merits of which we do not feel at liberty to pronounce upon. Our inquirer had best write for catalogues and circulars of those advertising in our columns and judge for himself. 2, As to Doura, we last season, prepared our land as for corn, marking off the rows four feet apart, and dropping one seed every six inches in the row Then at the first hoeing, hoe out the plants so as to leave them 18 inches apart. This is for the Doura that sends up an average of eight stalks. For the drooping kinds that have but one stalk leave six inches.

Miscellaneous.

E. L., Fall Creek, Wis., asks, 1, how long can a ram be used on the same flock of sheep without producing any ill effects on the offspring; 3, is there any benefit in grinding the cob of corn with the grain as cattle feed; 3, is the Big Giant corn mill a good machine; 4, would walnut trees planted among fruit trees keep insects away, as he has seen stated in some papers.

ANS.—1, Although in the hands of skillful and experienced breeders, good results have attended in-and-in breeding, yet general experience shows that while to breed a ram to his own lambs may be permitted, to breed to the second generation of offsprings should be avoided. To change the ram the second year would be to act on the side of safety, and except in rare instances, and for the attainment of definite results, this should be the limit of close breeding. 2, The results of some recent experiments in this connection are fully set forth by Prof. E. W. Stewart in RURAL for Feb. 7, and epitomized in notice of the I-X-L. mill in RURAL of last week, and to these we must refer our inquirer. 3, Yes. 4, If such were the case the entomologists and pomologists of the world would long ago have found it out and been saved a world of trouble.

O. S. B., Burdett, N. Y., asks, 1, what the difference is between potash and pearlash; 2, where can these products be bought at the prices quoted in N. Y. market reports, and which is cheapest to put around trees—potash or pearlash; 3, what are Mapes's fertilizers, and where can they be had; 4, the address of a reliable dealer in commercial fertilizers nearest to his place.

ANS.—1. Pearlash is the name given to potash after it has been heated in a reverberating furnance. It contains more carbonate of potassium, and less sulphur and other impurities than potash. 2. Of wholsale druggists. Potash will be the cheaper. 3. They are what are called "special" fertilizers, containing all the ingredients of plant food needed by the crops they are made for, and which are usually not supplied in sufficient abundance by the soil. They can be had from the manufacturers, 158 Front street, this city. 4. Crocker & Co., Buffalo, N. Y., are as near as any.

W. S. M., Bendersville, Pa., asks information about late kinds of potatoes and especially about certain named varieties, such as the Dunmore, etc.

ANS.—The Dunmore is a fine potato. Send for J. J. H. Gregory's Catalogue (Marblehead, Mass.) Send for Bliss's Potato Catalogue (B. K. Bliss & Sons, 34 Barclay St., N. Y.) Look over the Potato Number of the RURAL NEW-YORKER. The catalogues in general noticed every week in our columns will best answer such questions. Indeed, there is scarcely a point relative to potatoes and their cultivation that has not been treated in the RURAL NEW-YORKER for 1879.

C. H. E., Montgomery, Mich., asks whether the Dhoura or Chinese Corn referred to in a work he has, is the same as the Doura spoken of in the RURAL; 2, if so, should he get the White Dhoura or China corn.

ANS.—We cannot say, not having tried and but little trust can be put in variety names. Our seed was presented to us by R. H. Allen & Co., (box 376, New York City) as Doura and it was from this seed that an average of eight or nine stalks grew. It is the only variety of Sorghum vulgare that we deem of much value as a fodder plant. The others are valuable chiefly for their grain.

J. F. A., Saline, Mich., asks, 1, which are the best varieties of beets and turnips; 2, is there a potato superior to the Early Rose that is as early; 3, which are the best three varieties of potatoes; 4, is this a good time to trim apple trees.

ANS.—1, We have found the Beauty of Hebron as good in quality as the Early Rose and far more prolific. This has been the verdict of a majority of the thousands to whom we sent the potato last year. Whether it will prove of more value to you can be ascertained only by trial. 3, Early Ohio, Alpha, Early Snowflake. 4, Yes, this is a good season of the year for pruning fruit trees.

G. A. C., Queens Co., L. I., sends a little bulb which formed on the stem of a Lily in her greenhouse, and asks whether such bulbs will produce plants like the parent, and what causes them to form on the stem.

ANS.—These are really axillary buds which finally drop off and, if covered by soil, grow and propagate the variety or species. Bud variations are not uncommon, but generally variations occur through seminal or seed reproduction.

R. A. W., Genesee, N. Y., (see page 91, RURAL) can procure the Onondaga Grape of Smiths & Powell, Syracuse, N. Y. It originated at Fayetteville, Onondaga Co., N. Y., and is described as amber-colored, of good size, thick skin, very sweet and fine, the flavor resembling both Delaware and Diana of which it is probably a cross. Personally, I have no knowledge of the value of this grape. It is probably worth a trial. N. R.

P. M. L., Laceyville, Pa, asks whether hen manure and ashes would be as good for potatoes as for corn, and how much should be applied to each hill.

ANS.—Hen manure and ashes are good for any crop. About half a gill will be enough for each hill. Should be mixed with the surface soil and not put together until just before or at the time of application, as otherwise the contact with the ashes would set free much of the ammonia in the hen manure.

W. S. P., Adams Station, N. Y., asks, 1, what kind of artificial manure is best for Raspberries, and 2, which is the cheaper—artificial or stable manure, the latter costing one dollar a load and then to be drawn five miles.

ANS.—1, Bone flour and sulphate of potash are good. 2. Good stable manure is cheap at that price, and if it can be drawn at a time when the team would otherwise be idle and over a passable road, we should consider stable manure the cheaper of the two.

V. B., Phillipsburg, Kan., asks 1, whether beech nuts should be frozen to produce germination; 2, where can he procure the Tulip tree.

ANS.—1. Freezing seeds never increases their germinative powers. The most important consideration is to keep them moist—not wet—and thus prevent their becoming dry and hard. 2. Tulip trees can be procured of any nurseryman.

C. C., Damascus, Pa., bought two trees of Paulownia imperialis a few years ago with the assurance that they were hardy; they were, however, winter-killed, and he now asks if it is worth while to try it again.

ANS.—Our friend's own experience ought to enable him to judge. Paulownia cannot bear hard frosts, and except in very mild winters, will winter-kill in the above latitude if not protected.

A Subscriber asks, what is the difference between white and bronze turkeys.

ANS.—There is no recorded difference between white and bronze turkeys except in color. Some assert that white are more delicate, but experience does not prove it to be so.

O. E. T., Chicago, says that she has used a linseed oil barrel for a window garden for two winters and failed each time, while with the same kind of soil used in jars, she succeeded and she asks whether the fault is in the barrel, and if there is a remedy.

ANS.—We have no experience as to this.

A Reader, Monroeville, N. Y., having plenty water convenient, wishes to try irrigation and asks for the experience, as to the best way of distributing the water, of any RURAL reader who has practiced the plan.

A. J. P., Johnston, N. Y., asks when is the best time to trim a hedge of the Norway Spruce.

ANS.—About the beginning of August. Trim off about three-fourths of last season's growth. Simply disbudding in September or pinching back the spring growth are good plans.

A. Z. B., Guilford, Kan., asks for the best way of starting red cedar seed.

ANS.—Sow in a seed-bed in the fall.

See advertising columns.—W. H. W. for hand seed drill; R. H. and others for fetilizers; W. N. C. for Doura.

L. & W., Marianna, Ark., see Farm Economy.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, FEB. 14th.

J. R.—W. P.—J. E. J.—F. E.—V. B.—A. A. S.—B. F. T.—A. L. J.—E. B., rather too personal.—H. L. W., will be used with illustrations.—H. S.—C. V. R.—H. G. L. D.—E. A. C.—I. P. R.—D. W. C.—T. F. M.—J. S. H.—G. E. M.—G. E. P.—A. J. P. O. S. B.—A. B. R.—C. R.—E. M. D.—H. B.—S. E. W., please repeat queries.—M. C. D.—H. L. W.—E. B.—G. C. B.—A. L. R.—"Subscriber."—M. C. H.—L. L. L.—B. F. T.—S. C. S.—W. K. E.—A. B. A.—G. H. O.—F. E.—J. E. J.—J B. L.—W. S. P.—C. C.—G. W. S.—G. C. B.—M. J. McM.—W. H. C. J. H. A.—G. W. P.—G. K.—S. R. S.—J. S. G.—P. M. L.—S. O.—M. A. H. B.—M. P. B.—A. B.— F. P. H.—L. N. G.—A. H. W.—W. S. M.—J. S.—A. A. A. Y.—H. F. S.—V. B.—P. M. A., thanks.—J. H. D. G.—J. L. G.—O. E. B.—A. B.—A. S.—F. D. C.—A. H. G.—N. C. H. E. L.—J. B. C.—E. L. C.—G. H. F.—L. L. A.—G. C. H.—A. S.—W. H. V.—H.—D. S. H.—M. G.—T. S. A.—A. L. J.—G. A. G. Jr.,—G. S.—E. A. H.—C. K.—M. B. McL.—W. H. N.—A. B. A.—E. R. F.—F. S. H.—A. G. W.—G. F. N., we do not publish articles that are sent to other papers.—F. K. M., thanks —H. C. B.—R. R.—A. E. B.—W. S. M.—S. B. D —O. M. S —C. E. F.—J. J. R.—A. E. S.—J. D. H.—C. M.—M. D.—W. I. C.—N. M. C.—J. F. S,—A. B. D.—J. N.—B. C.—I. H.—W. H. A.—S. B. A.—N. C. G.—E. A. G.—R. A. G.—J. H. D. G.—S. O.—N. M. C.—H. B.—A. D., it is hardly suitable for our columns.—A. E. S—A. R.—T. C. D.—W. L. D., thanks—C. E.—F. D. C.—J. B.—H.—S. R. S., thanks—M. C., better luck next time—J. E. S.—J. C. E.—E. A. G.—S. B. A,—

THE
RURAL NEW-YORKER.
PUBLISHED EVERY SATURDAY.

CONDUCTED BY
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
78 Duane Street, New York.

SATURDAY, FEB. 28, 1880.

As announced in our late issues, we can no longer supply back numbers of the Rural New-Yorker. Papers will be sent for one year from the date of the receipt of all subscriptions.

COMPETITORS for the book premiums offered by the Farmers' Publishing Co. for the heaviest weight of Blount's Prolific Corn from seed sent out by the RURAL NEW-YORKER, should send us their reports without further delay. We simply want a certified statement of the actual weight of the corn, weighed three months after date of harvesting; the weight per bushel is not required.

NOT long since we received through a Western Newspaper Agency, among others, an advertisement of the Voltaic Belt Company, of Marshall, Mich., amounting to $160 net. Later, and upon reliable information, we learn that the Company is untrustworthy, and hereby warn our readers against sending for any of their goods. Their advertisement has been thrown out, and we hope none of our readers will have been swindled before this warning reaches them.

WE have stated more than once that the RURAL NEW-YORKER'S Plant and Seed Distribution is not only free to our yearly subscribers who apply, but that (in the present instance at all events) we should share a part of the postal charges. Our subscribers will kindly note upon the receipt of their plants and seeds whether or not we have done so. We would also ask them to compute (estimating our circulation as they may) the aggregate cost to us of such postage.

OH, yes; undoubtedly James Gordon Bennett "gave that $100,000 as an advertisement," and the starving poor of Ireland wish there were more just such advertisers.—Boston Post. In this connection we beg permission to make a remark: If *per se* there is nothing disreputable about advertising, why should so many papers sneer at Mr. Bennett's advertisement, which, besides advancing the interests of an enterprising newspaper, puts food into thousands of hungry mouths?

WE hear nothing of Miner's Grapes. We mean the late T. B. Miner, of Linden, N. J. But we venture to predict that some of them will prove more valuable than many of the hybrids now so much talked of, and adapted to a wider range of country. We have six kinds of these seedlings, a majority of which bid fair to fruit next year, that were sent to the "Rural Grounds" by Mr. Miner to be tested about a year previous to his death. They have made a sturdy growth, and no appearance of mildew has presented itself, while one vine of the "Lady" and another of Ricketts's "El Dorado," growing within twenty feet of them, were badly mildewed.

ELKHORN, WIS., Feb. 16th, 1880.

EDITOR OF RURAL NEW-YORKER,—*Dear Sir:*—Wishing to express my gratitude to you for the Silver Cup offered to the Wisconsin Dairymen, I ship you to-day, one 22-pound package of creamery butter, the same as won the Silver Cup. We valu the cup very highly, not on account of its intrinsic value, but for its rare and elegant beauty, as well as because it was honorably won. Trusting that the acceptance of the butter will afford you as much pleasure as is given me in the presentation, I am

Very Respectfully Yours,
SAM'L LYTLE.

[The butter is beautiful—of excellent quality, and we return our best thanks. EDS.]

WE desire to remind our readers who seem to take for granted that our agricultural prosperity has only begun, that they do not attach enough importance to the extreme agricultural depression during the past year in England and other European countries as an essential cause of our prosperity. Such a combination of bad seasons and failure in crops abroad is unlikely to occur this year again, and it may reasonably be feared that our farmers may find it a difficult matter to sell the immense yields of wheat which are promised by its present condition and greatly extended acreage, at remunerative prices. We hazard the prediction that the present wheat craze will have passed its zenith in a rapid decline, ere the crop of 1880 is well harvested.

THE action of the New York State Dairymen's Association in selecting its officers for the current year from among the farmers of the State is worthy of imitation by Agricultural Societies everywhere. Farmers have been much too often represented in nearly all their associations, as well as in the State and National legislatures, by outsiders who have had but little personal concern in agricultural matters, and whose individual interests have sometimes been inimical to those of their constituents. There are among us, the farmers of the country, an abundance of men capable by education, intelligence and probity, of adequately representing their co-workers, and it's about time that these should come or be pushed to the front.

WITH its wonted vim the West is opening war against oleomargarine. Wide-awake Chicago and drowsy St. Louis, and a host of towns between and around them, are insisting that those who use the stuff should know what they swallow. So skilled have the manufacturers of the concoction become that its rivalry is no longer confined to the poorer sorts of genuine butter, but, puffed up by its fraudulent success, it now aims to compete with our choicest grades. The fat factories of Cleveland are turning out every day nearly as much "Western Reserve" butter as the old Reserve itself. From the slumsits use has risen to boarding-houses, thence to small hotels, and it is now making its way, like a "dead-beat" guest, to the tables of our best caravansaries. A prompt exposure of the fraudulent guest for the benefit of mine host! and of the frauduient "butter" for the benefit of his honest guests and the public! Against oleomargarine as oleomargarine, we make no complaint here, but oleomargarine as butter we denounce as a fraud and a pest.

IN planting new orchards, or even single fruit trees, we hope our readers the coming spring will avoid the error of manuring the ground, even though the soil is quite impoverished. The second year, when the trees are well established, they may be manured with advantage. The growth of a newly transplanted tree the first summer is but little and the trees need but little food. To furnish rich food is really to invite disease. A newly transplanted tree may be regarded as an invalid—that is, its growth and vigor have suffered a severe check, and nature at once sets to work to supply all that was lost in the removal, as in the case of an injured person she endeavors to heal the wound. Surely at such times strong food is not to be recommended. The most and best that we can do is to supply mellow earth and to see that the roots and fibers are placed in contact with it, and in case of drought to spread over the earth, a little further than the roots extend, a layer of hay or straw, so that some little moisture may be retained.

"IT is rumored in newspaper circles that negotiations are afoot for the consolidation of the American Cultivator (Boston) and Land and Home with the RURAL NEW-YORKER. 'The survival of the fittest' is the inexorable law as to agricultural journals, however it may have been with our individual ancestors.' So says the New England Homestead. What a strong team that would make! Now will the Homestead please inform us as to the particulars of the combination and the name of the resulting paper?"

We copy the above from a paper recently started in this city, called Land and Home.

During the past eighteen months, it is true, the RURAL NEW-YORKER has received not less than five distinct propositions from certain agricultural journals to the effect that they should be merged into the RURAL NEW-YORKER, we, of course, to control the new combination. Our reply to all has been that our hands, heart and head were all sufficiently engaged fully to satisfy our love of work, our affections and our ambition. We have never, therefore, given the slighest intimation which could have been construed into the rumor to which the New England Homestead alludes. It is but fair to state that we have never received any proposition from the American Cultivator or Land and Home, the former of which we know only as one of our exchanges and the latter only as a fresh, hard-working aspirant for public favor.

WHENEVER any outlay, State or National, is proposed for the benefit of the supreme industry of the country—agriculture—journalists and politicians are ever ready to denounce the project on the ground that other industries receive no Governmental aid, and therefore that agriculture has no right to expect it. But does not every branch of our home manufactures receive a subsidy from the Government to the extent of the import duties levied for its protection upon similar wares made in other countries? Though the farmer suffers from this shutting out of foreign competition on favorable terms with domestic manufactures, by the higher prices he has to pay for his goods, yet he receives no equivalent aid in his own special calling. It is not our object here, however, to discuss "free trade," but to call special attention to what seems to us a flagrant instance of over-protection by which thousands of our friends are injured. The toll for a boat-load of 240 tons of foreign salt over the 345 miles between Troy and Buffalo, is $414, or at the rate of $1.72½ per ton. A boat-load of domestic salt of the same weight over the same distance pays only $82.80, or at the rate of $34½ per ton. In other words, the tolls on foreign salt over the Erie Canal are five times as great as those on domestic salt, on the same weight and for the same distance. The object of this discrimination is to "protect" the Onondaga salt manufacture, and its victims are chiefly the farmers of the West and Northern Middle States who consequently have to pay higher prices for the salt they use in their dairies and for numerous other purposes. It must also be remembered that this extra charge on foreign salt is imposed by New York State in additon to the import duty exacted by the National Government.

ELEVATE THE AGRICULTURAL DEPARTMENT.

A BILL will soon be brought before Congress by the Committee on Agriculture proposing the elevation of the Agricultural Department at Washington to a level with the Departments of Interior, of War, etc., and to place a Secretary at its head, who, like the other heads of Departments, shall have a seat in the Cabinet. A step of great importance is this, and every effort should be made to secure the passage of the bill. This is pre-eminently an agricultural country, and whatever tends to elevate and develop agriculture, tends to elevate and enrich the nation, and from this view the measure should be supported, fostered and cherished by all true patriots. The bill will undoubtedly meet with much opposition. City Representatives and other Congressmen, the majority of whose constituents are engaged in mercantile pursuits, have but little sympathy with affairs directly relating to agriculture. They fail to see how the Government can influence its development, and claim that a Department of Agriculture is of no more importance than would be Departments of mining and engineering, of manufacture, or of any other prominent industry. Let such reflect that one-half the population of the United States live on farms, while the other half subsist by hundreds of distinct occupations. The wealth of the nation lies in her agriculture. If the land and improvements of each of the 4,000,000 farms in the country be valued at $2,500 on the average, the total fixed capital amounts to $10,000,000,000, besides a floating capital of about a quarter of that sum. Viewed in the light of these figures, the importance of agriculture may be more apparent.

Other nations have long found it necessary to have Ministers of Agriculture. Our Canadian cousins furnish us with perhaps the best, certainly the nearest, example of this kind, as their agriculture resembles our own more closely than does that of European countries. If they in their experience find it necessary thus to elevate agriculture, may not we find it equally advantageous?

Efficient as the Department is, its influence for good may be vastly increased. Under its present organization it is merely a Bureau of the Interior Department, and its ability to develop the industry, to promote which was the object of its creation, is limited to the little encouragement that experiments and the distribution of useful seeds and plants may impart. Invested with the dignity and rank proposed by the committe, its influence will be increased in the same ratio. The Secretary will be entitled to a voice and vote in the Cabinet, and in this position will be better able to advocate and execute whatever measures he may find to further the industry. Congress will have a higher respect for the Department, and the farmers throughout the land, feeling that their calling receives just prominence, will gain greater confidence in themselves and their vocation.

BREVITIES.

IT may be well to bear in mind, as to the injury which shrubs and trees may still sustain, that many experienced nurserymen deem February and March the most trying of any season in the year.

FROM Mr. Mechi's (England) balance sheet, it appears that the most profitable item is his culture of peas and the utilization of the leaves and stems, made into hay while green, being in this state far more valuable as fodder than if allowed to ripen.

Mr. J. B. Armstrong, editor of the Daily Republican, of Santa Rosa, Cal., regards the Pacific Rural Press as one of the leading agricultural authorities in this country. We see no reason why the Press should not have a wide circulation in the East as well as in the far West.

Mr. William Hallitt, of Canada, writes us as follows: "I am going to give you some information. In place of hellebore for the currant or gooseberry worm, try plaster-of-Paris. The worm only needs to crawl through it. Recommend it to your readers. If it don't succeed, stop my paper!

SEVERAL subscribers who take the RURAL with the Inter-Ocean have sent us stamps for plants and seeds. We would state that our arrangements with the Inter-Ocean are such that all who forward their subscriptions through that journal are not required to pay postage on our "Free Plant and Seed Distribution."

ATTENTION is called to "Notes from the Rural's Experiment Grounds" on page 134. Instructions — which we cannot repeat at length—are there given relative to the treatment of our seeds and plants. We wish our friends good success with them and hope, when they bloom, that they will forward us specimens of any that are peculiarly striking or pretty.

WE are constantly receiving applications for the seeds of our regular seed distribution of last year. We beg to state that we cannot supply them. Many of them are now sold by seedsmen in general—such, for example, as the Rural Golden Tomato, Rural Bronze Ricinus, Voorhis Watermelon, Blount's corn, Beauty of Hebron potato, etc. We beg further to state that we never *sell seeds or plants* under any circumstances whatever.

MR. Joseph Harris tells us, through his catalogue, of a very original method of testing the purity of an Essex pig. He says: "A large, well filled bed of choice annual flowers is the delight and admiration of all beholders. Even an Essex pig, should he accidentally find his way into the garden, must lack that refinement for which the breed is so preeminently distinguished if he does not, while he is cracking the cherry stones under the trees, stop to admire a beautiful bed of Phlox, Verbenas or Petunias; should he disturb them there would be just grounds for distrusting the purity of his breeding. The roughest man in a village must feel the refining influence of a beautiful flower garden."

THE KIEFFER PEAR.—Mr. William Parry writes us as follows: "I have observed in the RURAL a paragraph, of which I much approve, advising caution to the purchasers of Kieffer Pears. I have myself expressed the same sentiment on other occasions knowing that fruits do not generally succeed equally well in all localities, and when new fruits are introduced, it is prudent to test them gently. Plant half a dozen trees or less, and see how well they are adapted to the soils and climates. Thus experience may be obtained, worth more to the planter than the reports from other sections. I advise parties to try half a dozen first; would much rather they should be thoroughly tested in all parts of the country, than that any one should plant largely of them on the credit of what the original tree has done standing where it grew from seed.

OF the Cuthbert Raspberry, the RURAL NEW-YORKER remarks that "its weak point is not yet discovered." Mr. Roe says he has seen it "killed to the ground."

The above is from the New York Tribune. We cannot suppose that Mr. Roe desires to imply that the Cuthbert is not a very hardy Raspberry—but rather that there is no variety of Red Raspberry that is entirely hardy in this climate. Mr. Roe, in reply to an inquiry of ours, wrote as follows, July 25th of last year:

CORNWALL-ON-HUDSON, Jan. 25, 1880.

EDS. RURAL NEW-YORKER:—I best express my opinion of the Cuthbert by stating that I planted, last spring, five times as many of this variety as of all others together, and that after seeing it in fruit once more, I am so pleased with it that I shall plant few other Raspberries this fall. Such definite, practical action counts for more than a whole dictionary of words. As far as I can now judge, it seems to me the most valuable Raspberry that has been well tested. I have taken pains to observe this Raspberry very closely. It is rather late in maturing, if this is a fault, and it may develop others. I state my opinion only up to the present time. E. P. ROE.

We have tested this Cuthbert at the "Rural Grounds" for two years and have not thus far, known it to be injured in the least by the severities or changes of winter and spring. It will be granted that the RURAL NEW-YORKER has created the present *furore* over this remarkable Raspberry, and we shall feel exceedingly chagrined to find that extended tests do not support the opinions we have so confidently expressed.

For Women.

CONDUCTED BY MISS RAY CLARK.

WHAT AILED THE PUDDING?

BY JOSEPHINE POLLARD.

"WHAT shall we have for dinner to-day?
Said Mrs. Dobbs in her pleasant way:
"For Sally has much to do, and would wish
That we'd get along with an easy dish—
Something that wouldn't take long to prepare,
Or really require much extra care."
Said Mrs. Dobbs: "There isn't a doubt
But what we'd all fancy a stirabout!"

"A hasty pudding! Hurrah! that's nice!"
Exclaimed the girls and boys in a trice.
Then Sally put on the biggest pot,
And soon the water was boiling hot,
And Mrs. Dobbs mixed together some flour
And water, and in less than half an hour
The pudding began to bubble up thick
And dance about with the pudding-stick.

Said Mr. Dobbs, as he made a halt:
"Our Sally is apt to forget the salt;
So I'll put in a pinch ere I leave the house."
And he went on tip-toe, as still as a mouse,
And, dropping a handful in very quick,
Stirred it well about with the pudding-stick,
And said to himself: "Now, isn't this clever?"
At which the pudding laughed louder than ever.

Then Mrs. Dobbs came after a while,
And looked in the pot with a cheery smile,
And thought how much she'd enjoy the treat,
And how much the children would want to eat;
Then said: "Our sally has one great fault—
She's very apt to forget the salt!"
And into the hasty pudding was sent
A handful of this ingredient.

John, George and Jennie, and Bess, in turn,
Gave the stick a twist, lest the pudding burn;
For oh! how empty and wretched they'd feel
If anything ruined the noonday meal!
And each in turn began to reflect,
And make amends for Sally's neglect,
For the girl was good, but she had one fault—
She was very apt to forget the salt!

But Sally herself, it is strange to say,
Was not remiss in her usual way:
But before she went to her up-stairs work
She threw in a handful of salt with a jerk,
And stirred the pudding and stirred the fire,
Which made the bubbles leap higher and higher,
And as soon as the clock struck twelve she took
The great big pot off the great big hook.

It wasn't scorched! Ah! that was nice!
And one little dish would not suffice
Mr. or Mrs. Dobbs, I guess,
John, or George, or Jennie, or Bess;
And as for Sally, I couldn't say
How much of the pudding she'd stow away,
For she was tired and hungry no doubt,
And very fond of this stirabout.

A happier group you'd ne'er be able
To find than sat at the Dobbs's table,
With plates and spoons, and a hungry wish
To eat their fill of the central dish.
But as Dobbs began to taste
The pudding, he dropped his spoon in haste;
And all of the children did likewise,
As big as saucers their staring eyes.

Said Mrs. Dobbs, in a voice not sweet:
"Why, it isn't fit for the pigs to eat!"
And I doubt if an artist would e'er be able
To depict their looks as they left the table.
Said Sally: "I thought it would be so nice!
But I must have salted that pudding twice?"
And none of the family mentioned that they
Had a hand in spoiling the dinner that day.

—*Independent.*

DESCRIPTION OF CUTS.

No. 62:—EVENING-DRESS. The dress is of faded rose-colored muslin, trimmed with insertion, kilted Bretonne lace, and bows of satin ribbon, this is worn over a plain Princess robe of faded rose silk.

No. 63:—Shows a design for neck wear and, also a style of dressing the hair.

No. 64:—Lace Tie. The tie is a combination of lace and mull or other gauzy material.

Nos. 65, 66:—Are designs for crochet or zephyr work.

A DAY AT A QUILTING.

ONE morning Mrs. Raymond called with an invitation for me to a quilting at a neigbor's nearly two miles away. And now I will tell the sisters of the "Rural" about the quilting. It was at the home of our new neighbors, the Neal's, who live in a little log house in the woods, nearly half a mile from any neighbor. Fair sister, used only to a life of affluence, to scenes of grace, and beauty, surrounded by all that a cultured taste can crave, do you turn indifferently from my homely sketch? Would that I could imbue every heart with the glorious, never-dying truth that love may reign as royally and hearts as truly beat within the lowly cottage as in the princely mansion; that the humblest log-cabin of the forest may be hallowed by love as deep and tender as any that ever performed its blessed mission on God's fair earth.

"Grandma Neal" is paying our neighbors her autumnal visit, and not one, from her handsome son down to the wee-toddler, but is remembered in some substantial way—indeed, "Grandma" is the "good fairy of the Neal household;" and though her means are limited, the simple gifts from her humble store bring sincere pleasure to the hearts that love her. "Such apples and pears! such plums and grapes as Grandma brings!" Surely their like was never seen in that little kingdom where she reigns a crowned queen. Love does reach out to clasp its own, the wide world over!

Among the gifts were materials for some bed-quilts, needed for the bitter cold nights of the winter; and wishing to see all completed before her departure, they decided to make "a quilting." One quilt was on the frames when we arrived. We were a company of three, two others having preceded us. We set to work with a right good will: amidst social chat, now and then a burst of song, and many a merry peal of laughter; the work went on, only a pause to obey the call to dinner. This quilt completed, we removed it from the frames, and, after the usual shaking and fun in throwing it over the head of some blushing lass, we hastened to put on another quilt: this was merely covering an old quilt with new calico.

No. 62.

The old lady said, she thought it a good plan, when quilts became worn, to cover them plainly, outside and line with new calico, quilting on the cover (not closely,) instead of tacking; it saves buying new cotton. Of course, the quilts should be perfectly clean before being covered; and after the lining is stretched on the frames and the quilt spread thereon, should there be any much worn places, lay upon them pieces of cotton-batting (this may also be from old quilts,) and then carefully put the cover in place.

I was thereby reminded of Aunt Maria's plan, which is to take new, cheap, unbleached muslin (sheeting,) and color it for covering worn quilts, though her way is to tack the covers on. This is cheaper and more durable than common calico. A very good color for this purpose (as also for cotton stockings, carpet rags, etc.,) may be made as follows:—Make a strong dye by boiling unrossed soft maple bark with water, in an iron kettle; strain through a colander, rinse the kettle and put into it, the clear dye, to every ten or twelve quarts adding a piece of alum nearly as large as a butternut, having first dissolved it in a little hot water; wash the goods in strong soap-suds and put them in; stir often, lifting them into the air occasionally; do not let them be crowded in the dye. This process secures an even color. When of the desired color, hang them in the shade to dry; then wash them in soap-suds and rinse thoroughly. If a different shade be desired, part hemlock bark may be used.

But to return to the quilting. After dinner the talk drifted into other channels, Mrs. Neal, the elder, interesting us with some incidents from her ripe experience, for she is an old lady, with silver, threaded thickly upon her brow, one who has quaffed deeply of life's sorrows and disappointments as well as its joys and sunshine. Some remark touched a tender chord in her memory, and she spoke of the time of the one great affliction of her early womanhood, when the beloved husband was removed from her side by that ineludible messenger—Death. How he was comforted and upheld in a dying hour by a trustful reliance on his Saviour, and with what firm assurance he declared that, though many troubles and dangers might beset, and their feet wander far from the path of right, his children—two little boys scarce more than babies—would eventually become living monuments to Christ. Sublime faith! And its fulfillment, now in their manhood, the aged mother longs and prays (we cannot think in vain) to see.

At supper the canned pears were so nice that I really could not help remarking it.

"The grapes and plums," said she, well pleased, "I canned before I came; the apples and pears I brought with me. You see, Lizzie here has had no experience in canning fruit, and I wanted her to learn." Then she kindly told me her way of canning fruit—a method, she said, by which fruit would keep for years. For the quart cans, about two quarts of fruit is required. To each of these large cans, if of grapes or plums, allow two teacupfuls of sugar, heaping and packed, which she says is a pound. For apples and pears, one teacupful of sugar. Add just a little water to start a steam in canning apples and pears, none for juicy fruit, and cook the fruit with the sugar a few minutes, or until the fruit is done; then take a glass can, wrap it to the very top in a towel wet with cold water, and with the hot fruit immediately fill the can brimming full, and screw the lid down tight. She did not say, but I presume it should be kept in a cool, dark, dry place. I have not tried this way of canning fruit, but certainly it seems a very quick and easy one.

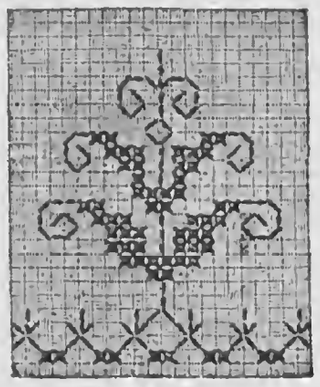
Supper over, we rolled the quilt for the last time, finished marking it, and quilted a short time; then, finding that we could not finish the work—the gathering shadows warning us of approaching night—amidst many thanks for our assistance, we said good-night, and turned our faces homeward.

GLADDYS WAYNE.

REVIEW OF THE WOMAN'S CLUB.

THE MOTHER-IN-LAW.

I SHALL never fill this position, I therefore rise



No. 65.

to preach a short sermon, from an independent standpoint

You will find my text in Paul's Epistle of the Ephesians, Chap. V. beginning at verse 28th; "So ought men to love their wives as their own bodies. For no man ever yet hated his own flesh, but nourisheth and cherisheth it. For this cause shall a man leave his father and mother, and shall be joined unto his wife, and they two shall be one flesh."

No triune government has ever yet been permanent, save that of the Father, Son and Holy Ghost, and even in this, a sacrifice had to be made to appease the anger of a just God. Therefore, oh! frail man, never attempt to set up a family of three heads, for each will become a Medusa whose very hair has turned to serpents—green-eyed monsters of jealousy. In all such confederations, one must become a mere cipher, and this from natural causes, is likely to be the wife, if her husband remains subservient to "his mother."

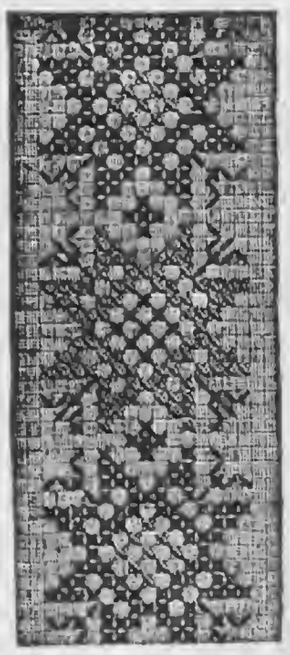
No. 64.

From experience, the mother quite naturally takes precedence in the responsibilities new to the young wife, and by right of this activity, secures the confidence in her superior judgment, and the deference to her will and wishes which she is unwilling to share with that young chit, his wife, who instead of growing self-reliant, becomes daily more dependent, shrinking back within her narrow domains, dissatisfied with herself, and jealous of the precedence of her mother-in-law.

The husband is disappointed in his helpless little wife and begins to regard his mother as a martyr and suggests that she have wifey help under her direction. The wife takes no pride in doing a thing for which, if well done, mother will get the credit, and goes about it with little energy, whereas if she were left to herself encouraged with love and confidence reposed in her, the will would find the way to the accomplishment of difficult tasks. "Experience is the best teacher," and here let the wife take her first lessons. The mother can prove her love, and endear herself not only to the daughter-in-law, but more deeply to that son, through acts of kindness to the daughter, without wrestling the reins of government from the rightful head of this newly established domesticity.

Why should she desire to take upon herself the responsibility of raising another family? She only increases her own cares, and instead of binding, to her, often alienates, by interfering with this twain. If she feel aggrieved, let her remember she has had "her day" in the love of her own husband, the proof of which is this son over whom she is contending with the wife of his bosom.

She belongs to the generation passing away, while there is a prospect for a long life stretching before this couple who must pull together through all its cares. Should the wife then become a cipher in the very outset? The sooner she is fitted for this struggle the better, and every mother will do well to let her son's wife "Paddle her own Canoe" in this voyage of life. Let her take satisfaction in seeing his devotion to that wife who has the brunt to bear, let life go ever so easy with the pair. By her own sufferings, mortifications and disappointments, let her measure



No. 66.

those in store for the young wife, and pity her. She too may have one day become a forgotten mother, or no mother at all (which is worse.) She may never have even the memory of a child-love to cheer her solitude.

MRS. M. L. S.

No. 63.

WINTER GOSSIP.

MRS. E. A. H.

PHILENA called one January morning to borrow a saddle. She had already ridden three miles, on her old, gray nag, with her feet hanging down below the old sheep-skin strapped to his back, the breeze playing about them and her unprotected ankles, as freely as if it had been a warm summer's day instead of the chilly winter's day that it was.

But Philena was not cold; of course not, at least she said so; to have acknowledged that she was would have been as much as to say that she ought to hide those dainty feet in overshoes, a

those slender ankles in leggings, and that would never do—no never.

She put her hand down where the leggings ought to be and gave a sly rub once or twice; that was why I suggested drawing nearer the stove, and that was when I found out that Philena was not cold. Her head was protected by a light, feathery straw-hat, and her ears by flashy jewelry. I saw her give a sly nip at the tip of one, with her thumb and finger as if to pinch back life into the chilled flesh.

To be sure, a gay nubia was thrown carelessly around her shoulders but her ears were not long enough to nestle in its inviting folds, so they had to stand out alone and unpitied, and if they did not literally face the breeze, they had to 'ear it. "Wouldn't you like another wrap? your ride will be a very cold one," I ventured. "O! no, I am not cold at all. I always dress just the same in winter as in summer," she answered with a significant toss of the head. "For pity's sake, child," I said, "don't you wear flannels?" "No, never, they make one look so bungling."

But the horse was at the door, and with a coquettish jerk of the head towards the young man who brought him up, while the tinsel ear ornaments dangled in the breeze, she mounted and was away.

One cold October morning, I sat upon a ferry-boat, crossing the Mississippi, literally buried in wraps. The wind came scurrying down the stream right from the Artic regions. I pulled the robe higher about me, tucked my ears, already covered by a nubia, into the convenient folds of the fur overcoat beside me, and yet thought I should freeze before the uncompromising ferry-boat dragged its slow length across; but there a little to windward of our team was another, and in the buggy sat a lady chatting glibly with a gentleman friend she had discovered; her hat pushed back off her head as if a fungus growth were sprouting from beneath, while a ribbon or two flapped up and down, hither and thither, about the naked ears and neck as their only protection from the blast.

Said a mother to me, "My little girl is getting the rheumatism." Does she wear flannels?" I asked. "Oh, no; she never has," she replied, and when I suggested they might act as a preventative, she replied in a very uncertain tone, "Possibly they might."

I notice in church mothers keep on their cloaks and fathers, if they take off their overcoats, have thick clothes beneath, but the babies are stripped down to their home wear, and with their thin shoes and stockings are allowed to run about the cold floor, where my own well-clothed feet half freeze in sermon time.

Our grandmothers knew nothing of some of our facilities for keeping comfortable, but they wore stout, home-made woolen. In these times there is no excuse for freezing one's blood, only Philena's "It makes one look bungling," to wear clothes for comfort.

THAT GOOD-BYE.

BY MRS. J. E. S.

It is with exceeding regret that the readers of the RURAL learn of Miss Ripley's leaving the department "For Women."

This special part of the paper was just what was needed throughout the whole country in every rural home, and should it cease, or even lessen, it will be a great loss—a loss that cannot well be remedied, and one that the wives, mothers and daughters will feel and mourn for most sincerely.

In looking through the past life of the RURAL, we recall the vacuum felt when Mary Wager said her good-bye (and although her name is seen occasionally, as we trust Faith Ripley's will also be), we know it was a long time before that vacuum was filled. In fact, it was the one just leaving who made us cease our mourning and gave us food such as our hearts longed for.

Farmers' wives and daughters have so much real labor that they require something relaxing brought to them to make their life gleam with sunshine. An intense strain, with no interval of rest, crushes out the strongest life. It is human nature to fret if no change is wrought into the passing days. If nothing specially pleasing or interesting is brought in occasionally, every member of the household feels that something is wanting to make home what it should be, something little now, but which may grow, and in years to come may darken the whole of some-one's life.

MEN go about, see their neighbors, learn what this one is doing and what results follow such and such work. They have their periodicals filled with all kinds of subjects relating to "Farmers and Farming" that are "helps" to enable them to work more intelligently and to better advantage with better results; "helps" to learn what points are most desirable to cultivate, to secure certain qualities; 'helps" to amuse as well as instruct, thus breaking the monotony of a life that otherwise might grow dull and weary and finally ooze into nothingness.

While we see the advantage men derive from such resources we cannot help our cry for equal advantages, especially adapted to women. A part of your paper, Mr. Editor, has been set aside for that purpose. We have tasted its sweetness; profited by its goodness; seen its advantages; and know its value and are not willing to *lose all this* thus obtained.

You cannot afford to do without our good will and we cannot afford to have a whole paper to ourselves. We will be satisfied with a portion of the paper, leaving a large share to our husbands, fathers and sons and another share to "Domestic Economy" (out of which the men ought to give a part of their share for reasons evident), and if Miss Ripley cannot be induced to return, let us have some one else to fill the place. Let us by all means have a department "For Women" *edited by a woman*, and may the dear old RURAL advance without retrograding one single step.

PIANO-FORTE METHOD.

I HAVE waited week after week hoping to see an answer to "Jick's" letter upon music, in the RURAL of November 22nd. As it is a subject which is of great interest to me, I venture to tell you what I know about "Mason's Piano-forte Technics."

A short time before reading that article, while spending a few days with a friend, I noticed the facility and *expression* with which a young girl, a daughter of the family, played scales, arpeggios and pieces of more than moderate difficulty.

I made inquiries in regard to her teacher, and found him to have been formerly a pupil of Dr. Wm. Mason, the author of Piano-forte Technics. His manner of teaching differed from anything I had ever seen, as he used no instruction book only a lesson card, with the scale arpeggio, finger exercise and etude, or piece properly marked.

I found him to be very successful in progressing his scholars rapidly, and his system of teaching was that of "Mason's Piano-forte Technics."

I have since ordered one of the books and although I have not had time to examine it thoroughly, consider it the best and most thorough system of scale, arpeggio, and finger practice I have ever seen.

Great pains are taken to form a good touch, to strengthen the fingers and muscles of the hand, to teach scholars to play with expression and in perfect time, and finally, there is given an admirable way of playing brilliant passages "in velocity."

I hope to hear more upon this subject from lovers of music. Those who have the advantages of city life, cannot begin to imagine how eagerly a few words or hints are received by country people, who rarely hear a good concert, or *any* music, outside the walls of home, and who like myself, earnestly desire improvement. CLAIRE.

AN EXCEPTIONAL LETTER.

I DO not agree with your correspondent's objection to the extract from Professor Smith's article, "The Prospects of a Moral Interregnum." The extract published in the RURAL caused me to get the article and read it very attentively.

While the danger that the Professor suspects may be real, I think I can foresee the benefit to result to Christianity from the infidel teachings of Modern Science.

That it will force upon religionists the gradual elimination of the errors that cause the unreasonable and implacable divisions of Protestantism, and then we will have an exhibit of Christianity in its simplicity, beauty and strength, before which even scoffers will stand abashed.

Therefore I do not think we benefit our children by keeping these questions concealed from them. We should teach them to know that they are to be met and dealt with as living realities. We can assure them that Christianity has already withstood an abuse from its friends under which no human institution could have survived, and we can safely trust it in any attack its enemies can make.

One reflection that consoles me in any impending danger to morality is, that our free land is pre-eminently an agricultural country. My brother farmers do the thinking that gives direction to events and they are independent, conservative and safe. K. J. P.

INFORMATION FOR WOMEN.

EVA EDGARTON.

"In a Horn."

THE articles I am about to describe are pretty and suitable for presents. The charm does not lie *in*, but rather *on* the horn. Procure horns of any size, at tanneries or slaughter houses; boil, to whiten, then scrape, ornament with transfer pictures, edging with gilt or silver paper. Hang in groups for effect, or in a window for some tiny climbing plant. Cheap and very pretty.

Worsted Flowers.

I have learned something new in this line. In making lilies, fuchsias, wild roses or any flower containing pistil and stamen, I found I must manufacture something for the same. So mother and I went to work. Not being successful in finding hog's bristles, we pulled a hemp rope in pieces, cutting the tiny strands the desired length. Melted a little beeswax, dipped the ends of strands in it, then quickly rolled them in flour. Some of them we rolled in colored powder made by crushing bits of water-color paints saved from childhood. They look nearly as nice as any I could buy. If any of the RURAL sisters are at a loss for material, this hint may help them.

To Stiffen Mourning Goods.

Use skimmed milk and water, equal parts; or all skimmed milk and iron on the wrong side.

M. A. H. B.

Please give me the address of Mrs. J. J. Astor or some other person or persons interested in the care of homeless children. I wish to correspond with such parties with a view of obtaining help of that class. S. E. W.

ANS.—By applying to George F. Betts, Secretary; 155 Worth St., New York City, you will obtain the desired information.

Literary Miscellany.

FOUR OLD MAIDS.

W. V. A.

"GIRLS, are you all alone, and is there any danger of our being overheard? for we have business to discuss of a deep and serious nature!"

"Indeed!"

"Utterly impossible in this clan! 'Deep and serious.' Why you really make my head ache!"

"Yes, all alone! not a soul in the house beside ourselves! Come! unburden yourself; I know you are dying to tell us all about it; and as we are quite charitably disposed this afternoon, we will listen to you."

"All right! I'll overlook your extreme pertness this time, my Lady Blanche; but beware of the future! To begin with—and don't you dare to interrupt me until I have finished—"

"Good!"

"Go on! We are resigned to our fate!"

"Tell us some more—anything to keep awake this drowsy day!

"You have often heard me speak of Uncle Tom's lovely little place near M——, and you have heard those Lansing girls talk by the hour of 'Brother Harold's elegant country seat,' where they go every summer and have a gay time. Harold Lansing's place is only a half mile from Uncle Tom's, and they are very sociable and neighborly. Every summer Harold's sisters visit him, and he always has other young company enough to make up four our five couples. Uncle Tom and Aunt Mary are going abroad this summer, and I thought to myself, 'Why can't the "clan" go out there and enjoy themselves while they are gone?" And acting upon the idea I wrote to Uncle Tom, who is just the best and jolliest fellow in the world, and I have his written consent here in my pocket to come out and take possession whenever we like. Uncle Tom lives in L——, and M——. is a small village about thirty miles from there. It will take us a half day to travel there, and if we go before Uncle Tom leaves for Europe, he will join us at L—— and escort us the rest of the way, and see us safely established in our new quarters. Now, young ladies, I shall be pleased to hear your seveval opinions.

"'To be or not to be'—that is the question now open for debate."

The speaker was a girl of medium size, a good figure, and a bright, sparkling brunette. She had a rich, warm complexion; flashing black eyes, and hair of deep intense black. Her cheek bones were a little too prominent, and her nose was rather large, but then her lips were so red, her teeth so white, and her cheeks always wore such a bright, healthy bloom that one never took a second thought of those defects. Her name was Olive Browning; and she was the eldest of Hugh Browning's four daughters. The girls called her "Olive Branch." Her father was wealthy and influential; her mother was something of an invalid, and devoted her time to her two youngest daughters, who were still in the nursery. Olive was nineteen, and her sister Clare was seventeen; and a greater contrast than these two sisters could not readily be found. Clare was the same hight and figure as Olive, but her hair was a rich auburn, and her eyes a rich reddish brown, and she was very fair, with pink cheeks, red lips, and regular features. In manner she was quiet and ladylike, rather retiring, but was quite jealous of her eldest sister. Olive was, by some people, termed "wild," and I suppose she was to a certain degree, for she was full of life and mischief; but she possessed many good qualites, and was a general favorite. There was a general warfare between the two sisters. Clara persisted in holding Olive's language and actions up to the ridicule of their mother who was an exceedingly ladylike person and abhorred the loud hearty laughter and gay witticisms indulged in by her eldest born. The father felt differently, however, and was very proud of Olive and allowed her every indulgence.

The other members of the "clan," as they termed themselves, were two sisters, Blanche and Rose Sheldon and their cousin, Margaret Dean Blanche was tall and well proportioned for her hight, and had bright golden hair, dark brown eyes, a fair complexion and tolerably good features. She was a stylish, vivacious girl, and was in great demand among her companions. Rose was the smallest of the four, and was a brunette, though not of the brilliant style of Olive. She was more sedate and had little gentle ways of her own that made her very lovable. Her features were good and well-defined, and her hair was a dusky brown, but readily passed for black. Her skin was of a rich, creamy color, and the "clan" called her the "Yellow Rose." Blanche was twenty-two and Rose eighteen. Their father was in easy, comfortable circumstances, and quite proud of his two daughters, though he had several younger children.

Margaret Dean, the cousin, was an orphan possessed of a handsome fortune of her own. Her parents having died when she was quite young, and Mr. Sheldon, her uncle, being her legal guardian, her home had always been in his house. She had a married brother, who was many years her senior and who would gladly have had her make her home with him; but she preferred to stay with her uncle, who seemed like her own father. She was about Olive's hight, but was slimmer, though a well-formed girl. She had a clear, pale complexion, blue-black hair, dark bluish gray eyes, that had a peculiar way of darkening with any deep emotion, though at times one would pronounce them a decided blue. Her general expression was calm and quiet, and one to look at the quiet, refined face, would never suspect her of the wild pranks she was guilty of. She and Blanche were of the same age, and the four girls were inseparable, so much so, that their acquaintances called them "the clan." None of them were strikingly beautiful, but they were all bright, healthy, mischievous, good-natured girls.

When Olive had finished her communication, Blanche stretched out her arms and exclaimed, "All honor to our chief!" while Margaret or "Margie," as she was generally called, rose, and placing both hands on Olive's head, exclaimed, with upturned eyes, "Bless thee, my daughter, bless thee!"

"O, girls! do stop your chaff, and talk sensibly for a few minutes, if it is possible. Can you go?"

"Of course we can!" said Blanche in her quick, decided way; and she generally spoke for the rest of the "clan."

"But do you think mamma will let us go, Blanche?" asked Rose.

"Never you mind Aunt Nellie," said Margie, "I'll settle all of her objections!"

"Now for proposition number two," said Olive. "Let us all masquerade for the occasion, it would be such fun! Just think! Rob Lansing, Lance Stedman and his sister, his royal highness, Hugh Enders, and that conceited simpleton, Edgar Farras, are part of the number who are going to Harold Lansing's in about two weeks, and it would be the best joke of the season if the "clan" could fool those Lansing girls. They think they are so exceedingly 'cute' to get four of the most eligible masculines in our set all to themselves for a couple of months."

"Good! good!" cried the girls in chorus when Olive had finished.

"What shall we represent," asked Rose, "witches or fairies?"

"Neither!" said Margie. "Let us be four old maids!"

"That's it!" said Blanche. "We will all have weak eyes and wear goggles to conceal our brilliant orbs!"

"And I will be the youngest sister who affects youthfulness," said Olive.

"I'll be the deaf one," said Margie, "and make everyone repeat his remarks, and imagine him to have said just the opposite of what he really did say."

"O, won't it be fun!" said Rose, clapping her hands. "I'll be the eldest sister and something of an invalid."

"O' dear! You three have monopolized all the characters. Pray, what shall I be?" said Blanche, laughingly. "But stop!" I have it! I will be the strong-minded one. How will that do?"

"O, splendid!" cried the girls in chorus.

"Now comes the usual feminine query," said Olive, "What shall we wear?"

But we will not listen to the many details of the dress and other questions but will wait until a week later when four ladies, well disguised by veils and and linen ulsters, leave the city of C—— on an early train. They are very quiet for the "clan;" in fact they are quite sedate. At L—— they are joined by Uncle Tom, a portly, well-to-do looking gentleman of some fifty odd years.

"Well, young ladies, how are you?" said he, in a brisk, cheery manner. "I don't know which of you is my niece, but I will shake hands with all of you." Which he proceeded to do and thereby found out which was his niece, for she held on his hand and drew down his face and, raising her veil printed a sounding kiss on his lips.

"You blessed old darling of an Uncle!" she whispered. "We won't talk to you now, but we will make up for it when we get to M——."

Arriving there several hours later, they entered the handsome carriage that was waiting for them and were soon driven to "The Retreat," Mr Browning's beautiful summer home.

"Now, Uncle Tom," said Olive, after she had introduced her companions, "call Rachel and Jerry, and let them into the secret and make them "swear eternal secrecy."

Rachel and Jerry, a faithful and elderly couple who had served many years under Mr. Browning, were called, and after Olive had shaken hands with them and they had expressed their pleasure at seeing her, Mr. Browning said:

"Rachel and Jerry, this madcap niece of mine, and her three friends, will spend several months with you, and I put them into your keeping and trust that you will be as faithful in this matter as in other things. They do not wish to be recognized, and for that reason each one of them has chosen a character and will act a part. Now I want you both to promise me that you will keep well the secret of their identity and, if questioned, be very careful how you answer. Will you promise me?"

"Certainly, sir," was their answer, and after a few instructions they were dismissed.

"Now, girls, go up stairs and dress. I would like to see the 'four old maids' before I go, which I must do within an hour."

In a short time, four odd-looking ladies entered the room, led by Blanche Sheldon, who wore an extremely short skirt, very plain and scant, a vest and sacque similar to a gentleman's vest and coat and a high, straight collar and plain cravat. A pair of thick soled shoes were on her feet, and a wig of short, thick, black hair covered her golden locks, and altogether she looked strong-minded and masculine.

Rose wore a heavy black silk dress made with a loose sacque that quite concealed her figure. Gray "puffs" concealed her front hair, and the back of her head was covered with an elaborate cap of black silk and lace and a collar of rich lace encircled her neck. She made a nice looking old lady, and her dress, though old-fashioned, was rich in all its details, and her quiet, gentle ways were well suited to the character she had assumed.

Margie wore a dress of gray silk that had evidently been fashioned after a pattern that had been in vogue many years previous. On her head she wore a front of iron gray hair that was slightly waved and combed down quite low on her forehead and temples, and the back of her head was entirely covered with a cap that was twin to the one Rose wore.—[To be continued.

THE EYE-OPENER.

THE Post Office Department at Washington issued an order on the 18th, to Postmasters prohibiting the delivery of registered letters and money orders to the following named persons represented as being engaged in conducting fraudulent schemes: R. C. Wintersmith, 3 Mozart Building Louisville, Ky., supervisor of the Frankfort School Fund Lottery; W. Scott Glore, Louisville, Ky, new agent for the Commonwealth Distribution Co.; M. V. Wagner, Marshall, Mich., who advertises to send patent recipes; Bermo & Bro., New Orleans, La., representing the Royal Havana Lottery Co.; and D. P. Herrick, 43 New street, New York, who solicits money to invest in railroad and other

stocks. On the 19th Smalley & Gale, No. 23 Broadway, N. Y., were added to the above crowd of tricksters on the ground that they are engaged in fraudulent operations. It has been ordered that all persons receiving mail matter under fictitious names shall be identified at the P. O. before the mail is delivered. . . Three or four weeks ago the Robbin's Washer sold by the Bissel Co. was described as a humbug in a prominent Western paper, and the fact was stated here in our issue of Jan. 31. The Bissel Co. protested against the correctness of the description, and invited us to examine the washer. We've done so, and find the charge not proved. . . The "North American Lightning Rod Company" seems to deserve an advertisement here. Its *modus operandi* is stated by a contributor to a Cincinnati paper to be as follows:—As strangers they profess to wish to do a model job for a mere trifle, say, $3 to $6. For example, a house 24 feet high would require two rods, making 48 feet with three points. The usual price of the rod is 67 1-2 cents per foot, which would make a total of $32.40 for the job. It is to be completed however, for $3. The agent produces a printed contract (that few men other than lawyers would understand) and writes on the margin a credit of $29.40, and the paper is then signed by the farmer. When the house is rodded it contains 125 feet instead of 48 feet as contracted for, and as the farmer understood it. The cost then is:—three points, $10.50; one ball, $2.50; 125 feet of rods, $84.37 1-2. Total, $97.37 1-2, minus $29.40. Balance, $67.97 1-2, which the farmer has to pay. One of the writer's neighbors had to pay $128 for what he contracted to pay, as he understood it, $6.

RECENT LITERATURE.

The Workshop Companion: A Collection of useful and Reliable Recipes, Rules, Processes, Methods, Wrinkles and Practical Hints for the Household and Shop. Price, 35 cents. New York: The Industrial Publication Company.

There is probably not a single reader of this notice that has not at some time or other felt the want of some item of information contained in this book, and would gladly have given the price of the volume for one of the recipes. The book covers a very wide range of subjects, there being no less than 90 main articles, some of which contain as many as 60 sub-headings. The pages are of good size and closely printed in very clear type, so that 164 of them contain an unusual amount of matter. The subjects are arranged alphabetically the work thus forming an almost complete encyclopedia of practical, everyday information.

NEW PUBLICATIONS.

The Vagabonds, By J. T. Trowbridge with illustrations by F. C. C. Darley, Boston; Lee and Shepard, New York. C. T. Dillingham. Price $1.50.

The Breaking Waves Dashed High, By Felicia Hemans. Illustrated by Miss L. B. Humphrey, Boston. Lee and Shepard. Price $1.50.

MAGAZINES FOR FEBRUARY.

With the January number, The National Quarterly Review enters upon a new career of prosperity and vigor. It is permanently enlarged by thirty-two pages and hereafter the names of the contributors will be given in each number. The engagements of the Review for the present year include contributors from many of the most eminent leaders in thought and politics, both of this country and Europe.

The National Quarterly Review for January, presents the following list of essays and authors: Rise and Fall of the Bonapartes, by William Dowe; The Management of the Indians, by Rev. W. E. Copeland; English Classics, by May F. Miller; The Hygiene of Water, by David A. Gorton, M. D., the editor; The Working-Classes of Europe, by David Ker; The Nebular Hypothesis, by David Trowbridge, A. M.; Interstate Extradition, by J. Manford Kerr; The New Eastern Question, by David Ker; A Southerner's Estimate of the Life and Character of Stephen A. Douglas, by Hon. James D. Waddell; and a very full department of Reviews and Criticisms.

Phrenological Journal.—Contents.—Rev. Elijah D. Murphy, Pastor of the New York Port Society. With portrait; Entheasm; Studies in Comparative Phrenology, Continued; Sayings, and who First Said Them; William M. Lowe, Senator from Alabama. Portrait; Agreeableness; Ancient Populations of North America; An Old Custom which ought to be Revived; The Young Folks of Cherry Avenue; Remarks on House Drains, and a Plan for Ventilating Them; Chill-and-Fever South, with Criticism; Clean Beds; Notes in Science and Agriculture; Answers to Correspondents.

Ancient Populations of North America.—From an essay read before the State Archæological Association of Ohio, by Rev. Stephen D. Peet, we make the following eloquent and instructive extract:

"It is proper to observe that there are traces of a numerous prehistoric population scattered over nearly every part of the broad continent. No one who has not made a point of observing, would understand how numerous these vestiges are, or understand their design or purpose; yet they are here to present their evidence, to invite our study and we ourselves are at fault if by comparing and analyzing and attending to their testimony we do not understand the tale.

"Let any one go forth into the fields and the meadows, into the hills and valleys, and search for these records of the past, and he can not fail to trace out an alphabet, more striking than the hieroglyphics of Egypt, or the inscription upon the buried palaces of the East. These works are replete with a varied story; everywhere the decaying skeletons and the silent skull remind us mournfully of the death that has swept over the land; but the remains of fires, the debris of camps, as well as the running stream and sparkling spring from which they drank, all remind us how recently the living have passed away.

'As we go through the silent earthworks, and see all the preparations they made, the walls and ditches for defense, the inclosures they erected for worship, and the monuments or mounds they erected for tombs, we are astonished at the great variety and the wonderful significance.

"If there are modes of life which we do not understand, and structures which are still mysterious in their design, yet they are very expressive of the strange, unknown life of the mysterious religion, the wild aboriginal state. It may not compare with our later civilized condition and modern ideas, for they are only expressive of another condition than that to which we are accustomed.

"But the picture of the prehistoric condition can not be excelled.

"Let any one visit one of the renowned defenses situated so beautifully on the lofty hill-top, and commanding the distant view of stream and valley, of hill and forest, and then look about him and behold the wonderful adaptation for defense and protection, and he will appreciate what were the dangers from the secret foe, and how the war-whoop must have startled the peaceful inmates.

"Let him visit again the quiet village inclosure, and see the surrounding wall, and trace the palisades, or tread the path to the unfailing stream, and walk over the happy hunting-ground and the delightful valleys, and he has a picture of peace which nothing else can give.

"Let him then enter the corn-fields or the garden-beds, or surmount the elevated platform, or enter the ancient courts and court-yards of the agricultural people, and he again has a view of another state of life which he did not know. Again, let him enter one of the sacred inclosures and look about him and see the altars and the temple platforms, and all the complicated structures, wherever the social fires were lit and the victims of a sacrifice were offered, and even if he knows not the worship that then prevailed, it is not difficult to imagine something of the religious customs of the people.

"The grand pageant of the assembled multitudes passes before him as they gather at their religious ceremonies, or their great burials, or for their war expeditions. In imagination he sees in one place the merry-making and the dance, he hears the music and the laughter; but at another he looks upon the smoke and the slaughter and the many mysterious rites. Here he beholds the 'very great burning,' the solemn mourning, the sacred burial; there he sees the plumed warriors, armed with their stone axes and flint spears and maces, either in fleets of canoes, navigating the waters, or in long lines traversing the forests. Everywhere the scene is suggestive of a life that has passed away. Whether one stands on the lofty pyramids of Mexico, which once reeked with the gore of human victims taken in battle and slaughtered as sacrifice, or among the extensive dwellings of the Pueblos' where such multitudes gathered for defense or for residence, or among the sacred inclosures of the Mound Builders, where a still stranger people once lived and toiled and worshipped—yet each structure is suggestive of a life which once prevailed, but which has passed away, and of the prehistoric condition of this continent.—*Phrenological Journal for Feb.*

The American Almanac and Treasury of Facts, 1880. Statistical, Financial, and Political; Edited by A. R. Spofford, Librarian of Congress: Published by American News Company. Price, 25c. The title aptly indicates its contents, being a "treasury of facts," and its author should be the necessary criterion of reliability. Twenty-five cents would be profitably spent in its purchase.

Scribner's Monthly; St. Nicholas; Demarest's Monthly; Domestic Monthly; Delineator, E. Butterick and Co. The above have been received, but further notice is unavoidably crowded out.

The American Antiquarian also received,

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN-THOUGHTS FROM EVERY-DAY HOUSE.

MRS. ANNIE L. JACK.

"There now!" I said. "Why not practice what we preach?" The family gave a questioning look all round. It was only papa's boots that had been wet through by accident, and now when dry, were found too tight for his feet. "I *knew* better," said I. "They ought to have been filled with dry oats, which grain is fond of dampness and would have absorbed it, and formed a sort of "last," keeping the boots in good shape, and drying without hardening. But, then, one cannot think of everything."

I have found a very good way to take out indelible ink, which is to cover the spots with strong salt-and-water. After soaking a few hours wring out, lay on a shallow plate and cover with ammonia. In this way I obliterated some names from table linen, when the markings of a family name needed the change. I do not say it will apply to all kinds of marking ink, but in my case it proved successful.

We were making cake the other day and our pound weight was missing so I hunted out an old book in which in the early years of my housekeeping, I had jotted down useful notes, and found this list, that may be of value to some who have no scales and cannot always guess: 10 eggs weigh a pound; a quart of powdered sugar is equal to a pound and seven ounces; a quart of granulated sugar is equal to a pound and nine ounces; a pint of closely packed butter equals a pound; as does a quart of sifted flour. Butter the size of an ordinary hen's egg, is about two ounces. These seem "trifles light as air" but they help to make up items of domestic economy.

AT THE DOOR.

M. G. RAND.

Some visitors, when about to leave a house, are so thoughtless as to stop to talk, unnecessarily, with the hostess at the outside door.

Hall's Journal of Health calls such a habit "hanging to the door-handle," which is certainly a very comprehensive way of expressing it.

When a lady is so polite as to accompany a friend to the hall-door, it is in bad taste for the visitor to linger, particularly in winter.

The lady of the house may have been sitting in a comfortably-heated room, or perhaps she is warm from working in the kitchen. Not expecting to be kept in the cold, she does not put on extra wraps when she goes out with her caller to the door. The latter, in her heavy cloak and furs, does not mind the cold—it is rather agreeable to her than otherwise. The hostess is the one who suffers from the sudden change from a warm room to a cold atmosphere. The shock often leaves her with a cough, chills, or neuralgia. These evils are not imaginary, but hard facts, as many a victim of *door-handle* talk could testify. A lady who is liable to have calls from persons who are so forgetful of the comfort of others, would do well to remind her friends of the danger of being kept *shivering* at the door.

Surely no one would give offense for so reasonable a suggestion, unless it be the minister's wife, who, for some unaccountable reason, is expected, as a rule, to endure all things. Perhaps the best way for *her* would be to keep a shawl near the door, and make use of it should she have occasion.

There is another thing of common occurrence that ought to be changed. It is the habit that some people have of asking to see a friend at the door, for "*just a minute.*" If the call should not extend beyond the specified time, it might be well enough, in most instances. Generally, the call of a minute is lengthened to one of five, ten or twenty minutes. When a lady receives such a peremptory summons to the door, she answers it as quickly as possible, naturally thinking that her friend is "in a hurry." She fails to discover any reason for undue haste, and secretly wishes she had waited to finish her half-made cake, or the garment that lacked but five stitches of being done. It may be that she is tired, and would like to rest in an easy chair while talking, as she could, if the caller *would* only come into the house. "She don't want to go, and she don't want to stay," as Josiah Allen's wife said of the "Widow Doodle," so what can the hostess do?

These things happen every day, and will continue to, until ladies reflect a little upon the evil of what at first seems of little consequence. Visitors should finish talking while indoors, and when they make a move to leave, they should *go* without delay.

Clinton Co., Iowa.

WASHING BLACK CALICO. GINGER CAKE. DOUGHNUT POTATOES.

If H. M. S. will starch her mourning or any dark calico in skimmed milk and iron on the wrong side, she will find it almost equal to new. Should there be an aroma of scorched milk about it when ironed, thorough airing will entirely dispel it. Calicos soaked for half an hour in cold salt water before washing, are less liable to fade. I called on a neighbor last week, who is a practical housekeeper. While there she treated me to a generous piece of hot ginger cake, which was so nice that I asked for the recipe, which she gave me. It is as follows: One and one-half cup sorghum molasses; one cup sour milk, one-half cup lard, or frying; one egg; two teaspoonsful ginger; two even teaspoonsful soda; a little salt and flour to make a batter not too stiff.

For a change we have, occasionally, what we call "Doughnut Potatoes." Peel them, leaving the small ones whole and cutting the larger ones lenghthwise so that they will be all about the same thickness. Wash sufficiently, wipe dry and fry in hot fat as you do doughnuts. I allow fifteen minutes for cooking. When done a nice brown take out and over each layer sprinkle a little salt. Serve hot.

I heartily agree with the decision of the Kitchen Club in regard to dressing girls. I have three to dress, aged 11, eight and six years, and I am particular that their lower limbs shall be protected from the cold. I wish to have them grow up strong and healthy and think this one of the first requisites.

Mrs. E. R. F.

DOMESTIC RECIPES.

Graham Gems.

One pint of sour milk; one egg; one spoonful of sugar, and one spoonful of soda. Graham flour to make a stiff batter. To be baked in iron gem-pans with a quick, hot fire.

Soft Molasses Cake.

One cup of sugar; one cup of molasses; three cups of flour; one-half cup of butter; one-half cup of buttermilk; two eggs; one teaspoonful of soda; a pinch of salt; half a teaspoonful each of cloves, cinnamon and ginger. Bake very slowly.

Baking Powder Cake.

One cup of sugar; two eggs; one-third cup butter; one-half cup milk or water; one cup of flour; two and a half teaspoonsful of baking powder.

Hickory-Nut Cake.

Two cups sugar; three-fourths of a cup butter; whites of six eggs; three-fourths of a cup sweet milk; three teaspoonsful of baking powder; one pint rolled hickory-nut meats.

Jelly Cake.

One cup sugar; two eggs; one-half cup of milk; four tablespoons butter; two teaspoons baking powder; one and a half cup flour.

Hamlets.

Two eggs; one and a half cup of sugar; one cup of raisins chopped fine, two-thirds of a cup of butter; one teaspoon each of cloves, cinnamon and nutmeg; one teaspoon soda dissolved in two tablespoonsful of sour milk. Mix stiff and cut out like cookies.

Tapioca Pudding.

Four tablespoons of tapioca, soaked for several hours in a little water; one quart of milk; four eggs (leaving out the whites of two for frosting); three tablespoons of sugar. Boil the milk and turn over the tapioca; add when it is blood warm, the sugar and eggs well beaten; bake about an hour and after it has cooled a little add the whites of the eggs, well beaten with half a pound of sugar.

Mrs. T. S. Aldrich.

Railroad Cake.

One teacup of sugar; three eggs; two tablespoonsful of new milk; one teacupful of flour; one teaspoonful of cream-of-tartar and one-half teaspoonful of soda. Bake 10 minutes.

Soda Biscuit.

One quart of flour; one teaspoonful of soda; two teaspoonsful cream-of-tartar; a little salt, and new milk enough to mix soft. Dissolve the soda in the milk and mix the cream-of-tartar in the flour.

Clarissa K.

Hard Soap.

I would like to send a recipe for hard soap, which I found in your paper several years ago and have used it for three years.

One pound of concentrated lye dissolved in two quarts of soft water; pour into a large pitcher to cool. Melt five pounds grease of any kind, have it milk-warm and pour in the lye slowly, stirring rapidly until it begins to thicken. Add one or one-half ounce oil of sassafras. Pour into a box one foot square and cover it, leaving it in a warm place for three or four days. Cut into squares and it is ready for use. Try it.

Mrs. W. W. Hunt.

Bread and Butter Custard Pudding.

Three pints of rich milk; eight eggs; one good sized loaf of baker's bread; one cup of sugar; one cup of molasses; one cup of stoned raisins; one teaspoonful of ground cloves; one teaspoonful of ground cinnamon and a teaspoonful of salt. Cut the bread into rather thin slices and butter thickly. Butter a deep, earthen, pudding dish; put in a layer of bread, neatly fitting it to fill the bottom of the pan. Scatter a few raisins over, then put in alternate layers of bread and raisins until all are in. Bring the milk to a boil; add the sugar, molasses and salt; then turn gradually on to the beaten eggs and spice. Pour the custard over the sliced bread until covered; let soak in; then add more—stirring the custard that the spices may not settle. Do this until all is in. Cover with a plate a little smaller than the dish, press down and let stand an hour before putting in the oven. Bake covered, very slowly, one hour. Remove the cover at the last to let the top brown. Eat with a hard sauce.

Mary B.

QUESTIONS ANSWERED.

Buffalo Robes and Furs Infested with Moths.

Please inform me how to destroy moths in buffalo robes and in any kind of furs?

A Subscriber.

Ans.—They may be subjected to a heat sufficiently strong to kill the larvæ without materially injuring the fur; or, sprinkle liberally with rectified spirits of benzine and roll up tightly for a day or so. It may be that exposing them to the fumes of sulphur may have the desired effect. We merely offer this suggestion.

Furniture Polish—A Correction.

Mrs. M. J. Galpin desires to change her recipe for polishing furniture as published in Rural of Feb. 7, as follows: The proportions are one ounce spirits of turpentine to two of raw linseed oil.

News of the Week.

MISCELLANEOUS.

Monday, February 23, 1880.

A Washington dispatch says of the White House reception, Tuesday night: No wine was served with the collation. The wife of a foreign minister was heard to remark at the table: "What an air of purity it gives to Mr. Hayes's parties, this absence of all that can intoxicate."....Mrs. Conkling is said to be really heart-broken because her husband will not be reconciled to their only daughter, who had the audacity to marry an excellent but poor man because she loved him ....Southern States are trying to keep emigration agents from enticing their colored help away by requiring such agents to pay a big license fee. Georgia has recently enforced such a law on its statute books, and Mississippi and Louisiana are proposing to copy it. Louisiana will make the fee $500 for every parish visited..... .Bismarck has bought 40,000 seedling American maples to plant in his forests in the Sachzeswald.....The German republicans of New York state are preparing to hold an anti-third term convention at Syracuse on the 24th.... ....It is a general principle of law, with which a number of decisions have made the public familiar, that a passenger has a right to a seat on a railroad car before paying his fare, but an Illinois court has recently ruled that when an "excessive number" of passengers apply for seats, the company cannot be required to provide seats and is not liable for any injury which may be incurred by passengers while riding in the aisles or on the platforms.... ....Fires have burned the State normal school at San Jose, Cal., loss over $250,000, insurance $50,000; the Lehman cotton factory, near Prattville, Ala., loss $100,000; the Albany (N. Y.) city hall building, loss $50,000, and one man killed; the Theater Royal at Dublin, the manager, property man and four assistants perishing in the flames, loss on the property $200,000.....Both the applications for patents and the patents granted were less in 1879 than in 1878, and in 1878 than in 1877. Up to 1874 both applications and grants steadily increased from 1861.... ...

THE Republican State convention of Michigan will be held at Detroit, May 12th, for the election of delegates to the national convention.....A boiler in Babcock & Barton's distillery, Peoria, Ill, blew up on the evening of the 18th, killing Benjamin Babcock, one of the proprietors, James Richardson, helper; John H. Sill, fireman, and an unknown man, probably a tramp. Oscar Mills, Louis Langdenburg and Michael Burns, employes, are probably fatally scalded.....Circulars were issued on the 19th, by the Philadelphia and Reading Coal and Iron Company increasing the price of lump and steamboat coal on board vessels at Elizabeth, N. J., to $4 75 from $4, as announced on the 16th inst., and to $4 25 from $3 75 for Port Richmond.....A woolen mill belonging to Verlender Brothers, Chester, Pa., burned on the 19th; loss $75,000. A spoon factory in Waterbury, Conn. burned same day, loss $150,000.

THE CONNECTICUT MUTUAL.—Close following upon the correspondence between Colonel Greene, president of the Connecticut Mutual, and the Hon. John W. Stedman, commissioner of Connecticut, the stalwart company prints its annual statement. A careful perusal of it by the policy-holders and the public will show the gain in net assets, in interest received and in amount of surplus. It will also show the decrease in amount of interest due and accrued, and in the expense account. As usual with this company's report, against the item of net premiums in course of collection is written the word *none*. The ratio of expense of management to receipts is $6 54, the smallest percentage shown by any corporation. The market value of stocks and bonds shows steady gain. The critics will, if they choose, comment, as has been their custom, upon the increase of real-estate ownership, and the company will point to its ability to hold it all, and its determination to sell only when the entire amount of cost is realized. The statement is before all who are interested, and all who hope to be. It will meet with heartiest welcome by sensible men.—*Boston Daily Advertiser.*

AGRICULTURAL NEWS.

THE Cincinnati Millers' Exhibition has been deferred from May 3d to June 26th, owing to the large amount of machinery expected.....Jim Keene, the grain speculator, is said to have lost two and a half millions by the late drop in grain—Such reports are very likely to be foundationless; and then how much did he make by the previous rise?....In 1869 Great Britain imported 400,000,000 lbs. of wool and exported 259,000,000 leaving 144,000,000 lbs. which added to the home production of 155,000,000 made a net supply of 396,000,000 pounds. Included in the imports are 4,250,000 pounds of Alpaca and 9,750,000 pounds of Mohair, besides 75,000,000 pounds of woolen rags intended to be torn up and used again. This is familiarly known as shoddy, and the trade in it has increased from 5,250,000 pounds in 1855 to the above large amount. ... .The three great glucose factories are in New York, Buffalo, and Chicago, but there are a host of smaller ones scattered all over the country, and the trade is rapidly increasing.....The "put" and "call" and "straddle," grain gamblers and swindlers of Chicago seem to be doing a "booming" business, much to the sorrow of their dupes .....S. C., has 17 cotton factories in full operation, besides a Clement attachment one at Westminister, all run mostly by water power in the upper part of the State .....There has been such a demand for flowers at New York this winter that fine Gen. Jacqueminot roses have sold for 50 cents apiece by the hundred; while primroses, pansies and the commoner kinds of flowers have been called for so fast that the florists enter Lent with their conservatories cleared out.....J. J. Mechi, the well known English farmer, keeps 300 head of poultry and finds them profitable Last year New Jersey spent $23,431.81 in enforcing the laws for the suppression of pleuro-pneumonia. Of this vetinary surgeons received $14,924 and other sources of expense gobbled up the balance; $954 were paid for the 80 head of affected cattle killed..... French farmers are now said to be in arms against importations of American cattle, 6,000 of which are reported to have been sold in the markets of that country in the last six months.....Oliver Dalrympe the great Minn., farmer intends to have, next harvest, a wheat patch of 30,000 acres, 20 steam thrashers, 135 reapers and 700 workmen.....Of cattle of all sorts 1,862,265 were assessed in Ill last year 22 per cent. of which were marketed—the average gross weight was 1,163 pounds; average price per 100 pounds $3.50; aggregate value $16,751,450..... That Australian meat sold in London, mutton at 11 and 12c. per pound and beef at 10c.—a trifle higher than American meat, due most likely to the novelty in part.....Upwards of 10,000 sheep were imported into Neb. in '79—How many exported?. ..... The exports of butter from this country are only four per cent of the production; those of cheese forty-one per cent. English people eat far more cheese than butter....The total value of the exports of provisions and tallow from the United States in January last was $9,498,957, against $10,436,359 in January 1879,...The merchant steel manufacturers of the U. S. convened here on the 17th and decided to advance prices only a little—afraid of foreign competition ....The English government will donate seed potatoes and grain to the famine-stricken Irish peasantry, but refuse to supply fertilizers....The steamer Canopus from Boston to Liverpool, arriving on the 17th, lost 247 head of cattle from rough weather.....Large supplies of Australian wheat are said to be *en route* for England via the Suez canal. ....An Indianapolis pork-packer is said to have invented a machine that will scrape 7,000 hogs a day....While railroads charge 40c per 100 pounds of grain from Chicago to this city vessels are taking it hence to Liverpool for twelve cents..... Waterville, N. Y., raised last year 1,163 acres of hops, yielding 4,800 bales, averaging 175 pounds each; only 13 farms in the town didn't raise any. Some raise 60 to 70 acres. One man raised 76,500 lbs. on 60 acres....About Sweetwater, Tenn., the army worm is reported to be playing havoc with growing wheat.....La. sugar costs $40 per hogshead; from 1 1-2 to 2 hogsheads can be got from an acre and sold for from $120 to $160.... ...The silk crop of 1879, as compared with that of the previous year, is thus estimated by the Lyons Society of silk merchants:

		1878. Kilogrammes.	1879. Kilogrammes.
France		7,718,200	3,200,000
Italy		29,751,003	17,421,000
Spain		830,000	500,000
The Levant	Brousa	1,125,000	600,000
	Salonichi	850,000	850,000
	Syria		2,382,797

.....A kilogramm is somewhat over 2 1-2 pounds. Now set that smart son of yours to work, or better still, that cute daughter,.....Statistics just published in Prussia show that the number of pigs infested with trichinosis in 1877 was 162,000 against 172,000 the year before.....A large batch of new Italian Senators has just been created to overcome a majority in the Senate opposed to the repeal of the odious grist tax imposed in the financial stress of some years since and bitterly denounced ever since by the people. Free milling henceforth.....The emancipated serfs of Russia are giving a world of trouble here and there from a forty-acre-and-a-mule sort of belief of what the government has done for them. They are seizing estates and dividing the property of the wealthy among themselves.....A Congressional Committee recently reported that all the public lands in Nebraska west of the 100th parallel should be withdrawn from sale and pre-emption and leased for grazing purposes, on the plea that 1,000,000 acres thus cut off is not fit for farming—just indignation among Nebraskans who have often proved the fallacy of such assertions with regard to other parts of their State .....The Pennsylvania Board of Agriculture at its late meeting passed a resolution that it is high time that the fence laws of that State, made to suit the circumstances of nearly half a century ago, should be made to conform to the altered conditions of today.....Shipments of cattle are much heavier now than at this time ever before.....The value of our fruit crop is put down by the Government statistician at $140,000,000, nearly half of the value of our wheat crop .....In 10 years only 38 cheese factories, we are told, have been started here, while 83 have been founded in Russia in the same time. ....New England has 230 farmers' clubs, with 27,000 active members.....Last year's cotton crop was the largest ever raised....It is officially stated that 106,000 persons are in absolute destitution in Silesia, Prussia. Government aid is necessary, not only to feed the people, but to furnish them with seeds for next crop and to supply fodder for 20,000 cattle "that they lose not all their beasts."....There is a very severe famine in Turkistan, owing to the whole or partial failure of three harvests in succession....The maple sugar season is unusually early this year....Hudson River farmers, milkmen and fruit-growers are thinking of starting a line of steamers of their own to this city to lessen the outrageous charges on their goods... Palatine Bridge, Montgomery Co., N. Y., is to have a new cheese factory....It is said that two-thirds of the Michigan wheat crop are still in that State.

Americans Traveling Abroad

will find all of Dr. Pierce's Family Medicines on sale in all principal drug stores and at the London branch of the World's Dispensary, Great Russell Street Buildings. Golden Medical Discovery is a most potent alterative or blood-cleansing elixir. It dispels all humors and cures blotches, pimples, eruptions, king's evils, or scrofula, enlarged glands, swellings, internal soreness, ulcers, and virulent blood poisons that, unremoved, rot out the vital machinery. Dr. Pierce's Pellets (little sugar-coated pills) are an agreeable and most cleansing cathartic; remove offensive and acrid accumulations, thereby preventing fevers and kindred affections. World's Dispensary Medical Association, proprietors, Buffalo and London.

THE THROAT.—"*Brown's Bronchial Troches*" act directly on the organs of the voice. They have an extraordinary effect in all disorders of the Throat and Larynx, restoring a healthy tone when relaxed, either from cold or over-exertion of the voice, and produce a clear and distinct enunciation. *Speakers* and *Singers* find the Troches useful.

Burnett's Flavoring Extracts are used and endorsed by the best Hotels, Confectioners, Grocers, and the first families in the country.

The Markets.

THE GIST OF THE MARKETS.

London, Feburary 10.

THE BRITISH GRAIN TRADE.—The Mark Lane express, in its review of the British grain trade for the past week says: "some little progress has been made with field work, which is still behindhand in some districts. The land, however, is now in good workable condition. Reports relative to winter-sown wheat are favorable in those districts where it has appeared above the surface. The damp weather is unfavorable to threshing. Really dry samples are practically unobtainable. Even fair average lots are rare. Trade both at Mark Lane and in the country has been exceedingly dull. In consequence of this and bad condition millers would scarcely look at English wheat last Monday, and a decline of 1s. to 2s. per quarter was quoted even on best parcels, the provincial markets following suit. Dense fogs also seriously interfered with business in London. The imports of foreign wheat into London have been moderate, but at Liverpool the arrivals were more liberal. Last Monday's decline of 1s. per qr. has not been recovered, as the consumptive demand was very small, but there has been no further reduction. Oats were depressed in consequence of large imports. Maize was steady, owing chiefly to its scarcity on the spot.

SPCIALS FROM ALL CENTERS.

Until Saturday, Feb. 21.

Baltimore.—WHEAT: southern red at $1 40@1 50: do amber at $1 50@1 55; No. 1, at $1 56; No. 2 western winter red, spot and February, $1 49; CORN: southern white at 61c; do yellow, 58c; western mixed at 45@46c; Penn at 47@48c. RYE dull at 90@91c. HAY steady; prime to choice Penn. and Md. at $11@12. FRUIT we quote apples at 5@6c. for quarters, 6½@7c. for sliced and 9@10½c. for fancy; peaches 6@8c. for unpeeled and 10@13c. for peeled: Blackberries 8½@9c; whortleberries 9@10c; pitted cherries 14@17c. and raspberries 25 cents per pound. MILL FEED.—City Mills stock is quoted at $20 per ton for middlings, $22 for brownstuff and Western at $18 75 per ton. POTATOES: Rose at 55@65c, and Peerless at 50@55c. per bushel the latter for lots from warehouse cellars. POULTRY undrawn Turkeys at 10@11c. and chickens at 7@8c. per lb., and drawn stock 1@2c. higher. SEEDS. Clover, Western car lots at 8@8½c. per lb, and jobbing lots ¼@½c. higher. Timothy is quoted at $2 90@3 per bushel jobbing. TOBACCO Maryland—Inferior and frosted at $1@2; sound to good common $4@5 50, middling $5 50@7 50; good to fine red $8 50@12; fancy $12@14; up-country $13@15; Ohio—Inferior to good common $3 50@5 50; greenish and brown $5 50@7; medium to fine red $7 50@10; common to medium spangled $6 50@12; fine spangled to yellow $10@20.

Boston.—CORN quiet but steady sales of mixed and yellow at 59@62c. OATS selling at 50@23c. for No. 1 and extra white: 45½@49c. for No. 2 white; 47@48c. for No 3 white and No. 2 mixed. RYE small sales at 95c. Shorts selling at $22@22 50; feed and middlings $23@24 50. ASHES steady with sales of Pots at 4½@5c. and of Pearls at 6½@6¾ ₱ lb. BEESWAX. We quote white at 40@60c., and yellow at 24@28c. ₱ lb. HAY AND STRAW—Rye Straw continues rather quiet. We quote first quality coarse Eastern and Northern at $15@16 ₱ ton; poor and medium at $11@14; Rye straw $20@22. HIDES have a downward tendency; Western, dry, 18@22c.; do., wet, 9@10½c. Southern, dry, 14@20c.; do, wet, 9@10½c. LIME—Sales of 900 casks Rockland at $1.70@1.75 ₱ cask BUTTER—New York and Vt. choice creameries 30c. ₱ lb; fair to good 25@27c.; fall dairy made, choice, 25@28c.; winter dairy made at 18@20c.; Eastern and P. E. Island 16@20c.; Western choice creamery 38@36c; choice dairy packed at 23@26c.; choice ladle packed 22@24c.; fair to good do. 10@21c.; common 17@19c. CHEESE—There has been a fair demand; choice Northern factory 14@15c. ₱ lb.; fair to good at 12@13c. and common 9@11c.; Western factory, choice 13@14c., fair to good 11@13c.; common 8@10c. EGGS—Eastern at 20c.: Northern 18c.; Western 16@17c. ₱ doz. BEANS—Northern hand-picked Pea at 1.80@1.90 ₱ bush; do. do. Western at $1.75@1.85; do. common $1.65@1.75; medium choice $1.55@1.60; common to good $1.35@1.40; Yellow Eyes $2.10@2.15; Red Kidneys at $1.75@1.85; Canada Peas 80c@$1; ₱ bush.; for common to choice; Green peas $1.50@1.85 POTATOES—are very quiet; we quote Houlton and Maine Central Rose 53@55c. ₱ bush.; Houlton Jackson Whites at 40c.; Maine Central Jacksons at 38@40; Vermont Rose at 45@50c.; do. Jackson at 40c. Peerless at 45@49c; and Prollifics at 50@55c. ₱ bush. ONIONS $3.75@4 ₱ bbl. APPLES at $1.75@3 ₱ bbl according to quality. CRANBERRIES at $6.50@9 ₱ bbl. SEED—A recent import of 3,000 bags Calcutta Linseed is held at $2.50 ₱ bush. but there is nothing doing in it here and prices are merely nominal; other kinds are steady at 3½@3½c. ₱ lb for Western and New York; Timothy at $2.50@3 ₱ bush.; Red Top at $2.70@2 80 ₱ bag; Canary Seed at $2.45@2.85, and American Linseed $1.60@1.55 ₱ bush.

Chicago.—WHEAT quiet and weak; No. 2 red winter at $1 24; No. 2 Chicago spring at $1 23¾ cash. CORN at 37c. cash. OATS 31½c, cash. Timothy seed heavy at $2 60@2 65. Flax teed at $2 65@$2 70. Dressed hogs stronger at $5 05@5 15. Pork quiet and weak at $11 75 cash. Lard easier at $7 15@7 17½c. cash. Bulk meats easier; shoulders at $4 20c.; short rib at $6 60c.; short clear at $6 70. Apples, per bbl., in lots, $2 50@3. Cranberries, per bbl., $8@9. HAY—No. 1 timothy, per ton, $13@$13 50; No. 2 timothy, per ton, $12@12 50; Mixed, $10@10 50; Upland prairie, $10; No. 1 prairie, $8 50@9; Slough, $8. HIDES—Green-cured hides, light, ₱ lb, 8¼@8½c; Green-cured, heavy, 8¼c; Calf, ₱ lb, 15½@16; Dry salted, ₱ lb, 12@13; Dry flint, 16@17c; Sheep pelts, wool estimated at 50c. SEEDS—Timothy at $3 65@2 83, prime closing at at $2 75. Sales were made at $3 85@4 15, prime closing at $4 10. Pure flax sold at $1 65, and Hungarian at 70c. HOGS—mixed packing at $4 20@4 45; light at $4 25@4 45; choice heavy at $4 40@4 70. CATTLE—shipping at $3 70@5 30; native butchers' firm; cows at $2 30@3 50; bulls at $2 15@3 10; oxen at $2 90@4; calves at $4@5 25; stockers and feeders stronger at $2 80@4, chiefly at $3 25@3 75. SHEEP—Market easier and weak at $4@5 15.

Cincinnati—WHEAT in good demand at $1 29. CORN firm at 39c. RYE firm at 85c. BARLEY dull; extra No. 3 fall at 76. PORK in good demand at $12. LARD quiet but firm at 7½c. BULK meats firm and unchanged. BACON in fair demand; shoulders at 5c.; clear ribs, at 7½c.; clear sides at 7½c. BUTTER in active demand and advanced; choice Western Reserve at 27@28c.; choice Central Ohio at 22@25c. BRAN, SHIPSTUFFS AND MIDDLINGS. Bran at $13@13 50 per ton in bulk on arrival. Shipstuffs at $13 50@14 00. Middlings $15 00@20 00. Stuff in sacks sold 50c. higher than the above quotations. BEANS.—Common quoted at 75c@$1 00 and fair to good white at $1 10@1 25 per bushel on arrival, prime to choice medium and navy selling at $1 40@1 50 per bushel on arrival, and $1 55@1 65 per bushel from store. CHEESE was firm and fairly active, prime to choice factory selling at 14@14½c. and New York at 15@15½c per pound. EGGS have been weak, but rallied, and to-day are firm, with a fair demand at 12@15½c. per dozen, supply light. HOPS were steady and the demand fair for prime to choice Eastern at 40@42c. per pound. POULTRY chickens are selling at $2 00@3 00; ducks. $2 50@3 00, and geese at $3 50@5.00 per dozen. Live turkeys are dull at 6@6½c., and dressed at 7@7½c. per pound. SEEDS market dull for clover seed at 7¼c. per pound on arrival, and 7½@8c. from store. Timothy seed is strong at the close, at $300@3 10 per bush. Flaxseed will bring $1 25@1 35 per bushel on arrival. APPLES: prime to choice are selling at $2 50@3 00 per bbl. in round lots, and $3@3 50 in jobbing lots. CABBAGE firm at $3 per bbl. and $4 50 in jobbing lots. CRANBERRIES market firm for prime to choice at $9@10 per bbl and $3@3 25 per crate. DRIED FRUITS Apples were quite freely offered at 6@7½c per pound on arrival, and sold in jobbing lots at 7½@8c. from store. Peaches quoted at 8@8½c. per pound on arrival, and 9@9½c. from store. ONIONS firm for prime to choice at $4 25@4 75 per bbl. POTATOES Peachblows 28@30c. per bushel loose from wagons, and 35@40c. from store. Russets offered at $1 25 and Early Rose at $1 90 per bbl. packed in shipping order. SWEET POTATOES Kentucky stock at $2 25@3 00 and for Jersey at $3 75@4 per bbl. TURNIPS: rutabagas quoted at 90c.@$1 and white at 60@65c. per bbl.

Detroit.—WHEAT quiet: No. 1 White Michigan at $1 29¾ cash. CORN—No. 1 yellow at 44½c.; high mixed at 43½; No. 1 mixed at 43c.; No. 2 mixed at 42c. OATS steady. No. 1 white at 39@39½c.; No. 2 do. at 38c.; No. 1 mixed at 38c.; No. 2 do. at 37c. CLOVER seed in fair demand at $4 10@$4 15. DRESSED HOGS firm at $4 90@5.

Milwaukee.—WHEAT steady; No. 2 Milwaukee hard at $1.23½; do. soft. $1.22; No.2 Milwaukee, cash and February $2.21½. CORN firm, 37c. No. 2 RYE quiet at 75½c. for No. 1. BARLEY firm; No. 2 spring at 70c. PROVISIONS quiet but steady. MESS PORK firm at $11.75 cash; $11.90 March. LARD—Prime steam at $7.10c. cash LIVE HOGS stronger at $4.30@4.50 DRESSED HOGS quiet at nominally $4.95@5.

Philadelphia.—WHEAT western rejected at $1 27½; Penn. red in elevator, car lots, at $1 48; southern amber do at $1 51; No. 2 red in elevator, car lots, at $1 48. CORN—Penn. western and southern yellow on track and in grain depot at 57@57½c.; southern yellow on dock at 57c; western mixed on track, 56½c; ungraded on track, at 55@55½c. southern white on track at 60c. BUTTER firm; good trades; creamery extra at 33@35c.; Bradford county and New York extra at 25@27c.; Western Reserve extra at 24@26c.; do. good to choice at 15@25c.; rolls firmer; Pennsylvania extra at 20@22c.; Western Reserve extras, 20@24c. EGGS steady; Pennsylvania, 14½@15c.; western at 14@14½c. CHEESE quiet; New York fancy at 14½@15c.; western full cream at 14½@14½c.; do. good at 13½@14c.; do. half skins at 12½@13c —PROVISIONS in moderate jobbing demand and steady, but very few round lots change hands. We quote Mess Pork at $13; shoulders, in salt, at 4½c.; do. smoked, 5½c.; loose butchrrs' Lard, 7c.; prime steam at $7 60; city kettle do., 7½c. Beef Hams at $16 50@17; smoked Hams, 9½@10½c.; sweet-pickled Hams at 8½@9c., as to average; extra India mess Beef at $21 50 f. o. b.; City family do. at $12@12 50; City Tallow, 6½@6½c. EGGS—Fresh Western at 14@14½c., and Pennsylvania, New Jersey, Delaware, and other near by fresh stock at 14½@15c. POULTRY—We quote dry-picked Turkeys, choice light weights, at 11@12c.; do. heavy, 9@10c.; fair to good, 8@9c.; Chickens, choice dry-picked, 9c; do. fair to good, 7@8c., and do., scalded, at 6@7c. Live at 8@9c. for Chickens, and 10@11c. for Turkeys. HAY AND STRAW in full supply and dull. We quote cut Hay at $18 50@19 50; prime baled do. at $18@18 50. Rye Straw at $19@20; wheat do at $11, and oat do. at $12. SEEDS—Clover dull and weak in wholesale lines at 7@8¼c, for ordinary to prime, with sales from store at 8½@8¾c. for prime. Timothy was in good request and firm at $3 37½. Flax was wanted at $1 5, but the market was bare of stock. FEED in moderate supply and firm, with a fair demand on the spot, and a good inquiry for way deliveries. Sales of 50 tons prime winter wheat bran, in store, at $20, with sales reported for delivery at interior stations at $22.

St. Louis.—WHEAT No. 2 red fall at $1 28¼ @ $1 28½ cash. CORN at 34½ @ 34¾c. cash. OATS at 33¼ @ 33½c. cash. RYE higher at 74c. PORK job lots at $12 cash. LARD at $7 @ 6. BULK meats shoulders at 3.90@ $4.; clear rib at $5.40 @ $5.50.; clear sides at 6 55 @ 6 65c. BACON higher; shoulders at $4 75 @ 4 85.; clea rrib at $7 20 @ 7 25c.; clear sides at $7 40 @ 7 50c. Hogs light shipping at $4 20 @ $4 30; packing at $4 25 @ $4 40; butchers' to select at $4 50 @ $4 60. CATTLE—Offerings fair, but almost entirely unmatured stock, which is hard to sell; prime and choice steers scarce and wanted; butchers' stuff steady; sales of medium native steers at $3 50 @$4; fair to good at $4 15 @ $4 50; cows and heifers at $2 60 @ $3 20; good reeders at $3 40 @ $3 75. SHEEP scarce and wanted; good to choice at $4 40 @ $5.

FERTILIZERS—Bone ash is nominally quoted at about $22 per short ton, on the basis of 70 per cent. phosphate of lime. Bones quoted at $22.50@23 for Texas and South American mixed, and $25@26 do. for shin and shank bones. Refuse bone black at $21@22 per short ton on merit. Sulphate of ammonia at 3¾c. ₱ lb on the basis of 26 per cent. of ammonia. Dried blood at $2@2.30 per unit of ammonia short ton. Ammonia, axotine, etc., for the former at $2.62½@2.75 per unit of ammonia, and about $2.75 do. for the latter, all short ton. Nitrate of soda, 4½c. Saltpetre, crude 6¼@6¾. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent ammonia, $35@40; dissolved bone black, 15 to 17 per cent of soluble phosphoric acid $30@35; dissolved bone 13 to 14 per cent of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent of soluble phosphoric acid, 3 per cent of potash, 3 per cent of am-

monia, $40@45; German potash salts, 25 per cent, of sulphate of potash, $15@18 per ton; muriate of potash, 80 per cent, 2@2½c. ₱ lb. land plaster, $7@7.50; dried blood, 10 per cent of ammonia, $35@45 per ton; fish guano dry and ground fine, 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $45; unground fish guano, 6 per cent of ammonia, $25; castor pomace; $12@24; sulphate of soda, ground, and in barrels, $15@18 per ton; sulphate of ammonia 4½c. ₱ lb; bone black, 70 per cent of bone phosphate, $20@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $20 per ton; No.1 Peruvian guano, 10 per cent ammonia, standard, $56.50 per ton; Lobos $47.50 per ton; rectified $65 per ton; guaranteed $56 per ton; nitrate of soda, 5¾@5¾ ₱ lb.

Forrester's potato manure, $47.50; grass, $45; oat, $47.50; cabbage, $50; wheat, $45; rye, $47.50; lawn dressing, $47.50; tobacco, $47.50; turnip, $52—per ton, each.

Baugh & Sons' prices for goods delivered at depot or boat, in bags and in 2,000 lb lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $35; Baugh's raw bone superphosphate, $40: Baugh's $25 phosphate, $25; Baugh's A.A. nitrogen, 18½ per cent of ammonia, $48.

Stockbridge's manures quoted: Potato, $50; cabbage, $50; strawberry, $40; corn, $45; seeding down, $40; orango tree, $35; onion, $50—per ton, each.

Mapes's complete manures for clay soil, $25.50 per 1,000 lbs.; for light soils, $25.50 do.; "A" brand, for general use, $20 do.; fruit and vine, $18.50 do.; cabbage and cauliflower, $23.75 do.; corn, $24.50 do.; potato, $24 do.; asparagus, $25.50 do.; gypsum, Nova Scotia, ground, per ton, $7.50.

Bowker's "Hill and Drill Phospate" $45; Bowker's Phosphate, $40 per ton, each; Bowker's "Food for Flower," 35c. per package and $3 per doz.; Bowker's "animal meal for fowls," $2.50 per cwt.; Ground oysters shells, $1 per cwt.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Feb. 21, 1880.

BEANS AND PEAS.—The bean market has suffered a rather long period of dullness for this part of the year and sellers have been forced to shave prices. With the new figures trade has revived in marrows and there is a more active outlook for other sorts. California is sending samples of pea beans. They are good looking stock for quality, though their greenish tint make them unattractive as yet. No settled quotations. There has been a good movement in turtle soup beans during the week. Green peas in higher demand and prices are firmer. $1.80@1.85. Other peas almost nominal. Southern B. E., $2.25 per 2 bush. bag; marrow beans, prime, $1.70; fair to good, $1.60@1.60; medium, prime, $1.45@1.47½; medium, fair to good, $1.35@1.40; pea, choice, 1.65@$1.70; fair to good, $1.45@1.55; white, kidney, choice $1.75@1.80; fair to good, $1.60@1.70; red kidney, prime, $1.70; fair to good, $1.55@1.60, turtle soup, good to prime; $1.75@1.80.

Receipts of beans, 3,789; exports, 1,000 pckgs.

BROOM CORN—Demand is moderate and prices steady. Quotations are for choice brush at 9c.; choice hurl at 8c.; stalk braid at 6@7c.; mixed red and green at 5@6c.

BUTTER.—There has been quite a sharp demand for butter, and more stock would have gone into use, if desirable high grades were more abundant. As it is, the little spurt is a welcome one, inasmuch as it helps to keep the later line of speculators from losing heart. Those who have had top styles to offer, have made about their first profit. There are full indications that all fine table stock will go out high or at least well. The export trade has been in fair proportion to the receipts 5,500 pkgs. for the week; shippers have paid as high as 20@21½c. for their best wants. Western dairy is in moderate supply, and fortunately there are marks of factory that furnish those who run upon Western. All fresh butter sells upon arrival when it has quality merit—if it has not, it has to take its chance with other undergrade.

Creamery, fresh, best invoices, 38@39c.; good to prime, 34@36c.; fair to good, 30@34c.; poor to fair, 27@30c.; fall made, 25@30c.; early made, 20@25c.; pails and tubs, fall, choice, 30c.; good to prime, 26@28c.; fair to good, 24@25c.; poor to fair, 20@24c.; single dairy, fresh choice, 30@32c.; good to prime, 26@28c.; fair to good, 23@25c.; entire dairies, choice, 26@27c.; good to prime, 24@26c.; fair to good, 22@24c.; poor to fair, 20@22c.; bodies of dairies, choice, 17@26c.; Western imitation creamery, 22@26c.; dairy fresh, extra, 24@26c.; good to prime, 22@24c.; fair to good, 20@22c.; poor to fair, 18@20c.; fancy, 24@26c.; prime, 21@22c.; fair to good, 19@20c.; poor to fair, 17@19c.; very poor, 14@15c.; roll butter, prime, 17@22c.

Receipts for week, 22,425 packages.

CHEESE.—Expor's for the week, 8,700 boxes, showing a continued moderate degree of interest among exporters. Home demand is without much activity. Prices are steadily held and State factory are as follows; Strictly fancy, 14¾@15c.; choice at 14¼c.; good to prime, at 14@14¼c; fair to good, at 13¾@14c. State farm dairy: Good to prime at 14¼@14¾c.; fair to good at 13¾@14c. Wisconsin factory: Fine, 14¾@15c.; good to prime 13¾@14¼c. Ohio factory: Cheddar, fine, 14¾@14¾c.; do., fair to good, 13@14c.; flat, fine, 14¾@15c. flat, good to prime, 14@14¼c.; flat, fair to good, 13@14c.

Receipts for week, 8,975 boxes; exports, 8,600 do.

Liverpool cable, 73s.

Steam, 25s.

COTTON.—Has been fairly active and closed strong at for February, 13.10c.; March, 13.12c.; April, 13.03@13.34c.; May, 13.54c.; June, 13.72@13.73c.; July, 13.82@13.83c.; August, 13.90@13.92c.; September, 13.40@13.44c.; October, 12.59@12.62c.; November, 12.29@12.32.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	11¾	11¾	11¾
Strict ordinary	11¾	11¾	11¾
Good ordinary	12 3-16	12 5-16	12 5-16
Strict good do	12 7-16	12 9-16	12 9-16
Low middling	12¾	12¾	12¾
Strict low middling	12 15-16	13 1-16	13 1-16
Middling	13¾	13¾	13¾
Good middling	13¾	13¾	13¾
Strict good middling	13¾	13¾	13¾
Middling Fair	14¼	14¼	14¼
Fair	14¾	15	15

STAINED.

Good ordinary..... 11 3-16 | Low middling. 12¼
Strict good ordinary..11 15-16 | Middling..... 12 11-16

DRIED FRUITS—Have been held generally at firm prices and demand moderate. Prices are for apples—New North Carolina, at 7@8¾c. for fair to good; 9@9¼c. for choice; 10@10¾c. for fancy sliced; New York State sliced, new, 7¾@8c.; quarters, 6¾@8c.; Southern and inferior scarce and nominal. Patent evaporated, apples, choice, in cases, at 13½@14c. for choice, and 12½@13c. for do. good and prime; evaporated peeled peaches, at 7@8c. for good to choice; do. unpeeled at 13@14c.; old North Carolina, 16@18c.; Georgia, 14@16½c.; Virginia, 12@15c.; old halves, unpeeled, 7½c.; do. quarters at 7c. Blackberries at 11c. Raspberries at 25c. Pitted cherries at 18@19c.

EGGS.—Receipts for the week, 14,042 bbls.; do. last week 9,079 do. The market has not the special activity expected in Lent. Speculation, it is thought, keep rates where they are It is certain that consumers are not purchasing liberally.

Jersey, single barrels, per dozen, 16@17c.; Pennsylvania, fresh., 15@15½c.; Western, 15c.; Southern, 15c.; Tennessee, 14½c.; Western and Canada, inferior, 12@13½c.; limed, State, 11@12c.; Canada, 11@11½c.; Western, 10@11c.

FLOUR.—The movement has been very moderate, and prices easier. Latest prices are $5@5.50 for poor to very fancy superfine State; $5.40@5.65 for inferior to good extra do., odd lots and lines: $5.65@5.90 for good to very choice do.; $5@5 50 for inferior to fancy superfine Indiana, Iowa, Michigan, &c.; $5.40@5.65 for inferior to good shipping extra do., and $5.65@5.85 for good to very choice shipping extra do.; inferior to about choice white wheat extras $5.90@6.75; about choice to very fancy do. $6.75@$9 the latter an extreme; red and amber winter wheat, inferior to very fancy trade and family, at $5.90@7.75; round hoop Ohio, $5.60@6; and trade and family brands of do, at $6.10@7.75; the latter rate for very choice: St. Louis at $6@6.75 for inferior to very good extra; $6.75@7.75 for very good to very choice; Minnesota clear, very inferior to fancy, at $5.65@6.75; Minnesota "straight," inferior to very fancy, at $7@7.75 and patent inferior to fancy at $6.75@8.75; unsound stock at from $3 25@5.75: city mill extra at $5.25@6.75 for ordinary to fancy for West Indies do. for England, $5.40@5.75 for poor to choice; do. trade and family extras, $6.75@7.75; do. for South America, $6.40@6.85; No. 2 at $5.65@4.85 for poor to very fancy.

CORN MEAL—Sales at $2.50@3.10 for yellow Western and $3.30 for Brandywine.

BEESWAX.—Dealings are small and quotations are 24@25¼c. for Western and Southern. Exports 3,302 lbs.

FRESH FRUITS—Exports of apples 4 000 bbls. Apples are only steady. Condition again making buyers cautious; poor to choice Baldwins and Greenings at $2.25@3 extra $3.25@3.50; Strawberries in poor demand 30@75c. Fla.; 40@60c. Charleston; Cranberries scarce and higher for b'ls. Cape Cod, good to fancy, per bbl, $8@10; other Eastern, large round hoop bbls. 7@9c.; N. J. choice to fancy, per crate $2.38@3; good to prime $2@2@2,75. Fla. oranges as before saleable when prime $3 selected half bbl. crates; other $1@3.50. Black Hamburg hot-house grapes $3b. Peanuts quiet; extreme price not often realized. Peanuts, Va. hand-picked, ₱ lb 5¼@5¾c.; extra prime to fancy 5@5¼c.; good to prime 4½@4¾c.; shelled ₱ lb 5½@5¾c.; Hickory, Shellbark, ₱ bush. 75c@$1; Pecan nuts. ₱ lb 9¾.

GRAIN.—The wheat demand has been less general with prices unsettled, but on the whole lower. Latest sales are of No. 1 white at $1.48@1.48¾; do., February, at $1.48¾@1.48¾; do., March, at $1.48¾; do., April, $1.48¾; ungraded white at $1.45; No. 2 red in store and afloat at $1.49@$1.50¾; do., February, at $1.50¾; do., March, at $1.50¾@1.51¾; do. April option, at $1.51@1.51½; do., No. 3 red, Kansas grade, at $1.40 ungraded red at 1.52@$1.47; No. 1 Green Bay spring, choice, in store, at $1.45; No. 2 Milwaukee, in store, at $1.41; New York No. 2 spring at $1.33@$1.38¾; ungraded spring at $1.31¾. Corn is lower and moderately active; latest sales are of new afloat quoted at 61c.; do., February, at 61c.; do., March, at 57¾@57¾c.; do., April, at 55@55¾c.; do., May, at 54c.; New York steamer mixed at 57@57¾c.; do., February, at 57@57¾c.; do., April, at 53¾c.; ungraded mixed western at 57¾@60¾c.; New York No. 3 at 56@57c.; chiefly at 56@56¾c., closing at 56c.; No. 2 white at 61c. Oats are weak and in moderate demand; latest sales are of No. 1 white, at 50@50¾c.; No. 2 white at 48@48¾c.; No. 3 white at 47c.; New York No. 1 at 48¾c.; New York No. 2 at 48@48¾c.; do., February, at 48c.; New York No. 3 at 45¾@47c.; ungraded white western at 49@50¾c.; ungraded mixed western at 47@48c.; white State at 50@51c.; mixed State at 48c.; No. 2 Chicago afloat at 48¾c.

HAY AND STRAW.—Receipts are moderate, demand good and prices strong. Shipping hay quoted at 75c.; retail lots at 80@85c. for medium, and 90@95c. for prime; clover at 65@70c. Straw at $1@1.05 for long rye; 65@70c. for short rye, and 55@60c. for oat.

Exports of hay for week 1,736 bales.

HOPS.—There is an improvement in trade, transactions confined to small lots, and prices nominal.

	Cents per lb.
New York, fancy	38 @40
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast, olds (nominal)	5 @10
Bavarians	45 @60

HONEY—Dull; full prices hardly obtainable. White clover comb, single, 15@16c.; larger pkgs., 12@14c.; buckwheat, 10@11c.; clover, extracted, 10@11c.; strained, 8@9c.

MAPLE-SUGAR.—New quiet at 15@16c. Ohio,

POULTRY AND GAME.—The supply is very large for this slack part of the season, and prices for finest to poorest stock are very easy.

Turkeys, N. J., good to prime, 11@12¼c.; State, Mich., N. Ohio and Penna., prime, 10¾@11c.; other Western, prime, 9¾@10¾c.; fair to good, 8@9c.; Western, d.-p., 9¾@10¾c.; Phila., d.-p., 10@12c.; Capons, Phila., large, 18@19c.; slips, small, 14@15c.; chickens, Phila, d. p., 12¾@13¾c.; Jersey, 10@11c.; State prime, 8@9c.; Western, prime, 7@8c.; fair to good, 6@7c.; poor to fair, 5@6c. Fowls, Phila., d.-p., 9@10c.; Jersey, good to prime, 8@9c.; State, 7@8c.; Western, good to prime, 6@7c.; poor to fair, 5@6c. Ducks, Phila., d.-p., 14@15c.; N. J., 13@14c.; State, 12@13c.; Western, 11@12c. Geese, Phila., d.-p., 10@11c.; Jersey, 9@10c.; State, 8@9c.; Western, 6@8c. Squabs, white, ₱ doz., $4.50@5; dark, $3.50@3.

Wild ducks run poor in quality, few bring extremes. Pigeons in good demand.

Wild pigeons, Indiana, per doz., $1.75@1.87; do., Missouri, $1.50@1 75; wild ducks, Canvas back, Havre de Grace, per pair, $2.75; Western, $2.50@2.75; Norfolk, $2.25@2.50; Redhead, H. de G., $1.25; Western, $1@1.25; Norfolk, $1; Mallard, Western, 70@90c.; Mallard and Black, Norf., 75c.; Teal, Western, 50c.; Norfolk, 50c.; common, 40c.

Live poultry is quiet, and but little is wanted.

Fowls, Jersey, ₱ lb., 9@10c.; Western, 9@10c.; roosters, old and young, 6@6c; turkeys, Jersey and Penn., Western, 9@10c.; ducks, J'y, N. Y. and Pa., ₱ pair, 75c.@$1; Western, 60@50c.; geese, Jersey, $1.62@1.75; N. Y. & Pa., $1.37@1.50; do., Western, $1@1.25; pigeons, 40@45c.

PROVISIONS—Have a poor margin and prices closing steady; Mess pork quoted at $11.87@12 for old and $12.37½@12.50 for new uninspected; new for February at $12.30@12.40; for March at 12.30@$12.40, and for April at $12.40@$12.50; May at $12.35@$12.55. Bacon at 7¾ for long clear and 7¾ for short clear. Lard—Western steam at $7.72½ for spot lots; $7.70 for March; $7.57½ for April. Stearine at 7½@7¾ for Western. Tallow at 6¾@6¾c. for prime and choice.

Receipts for the week, pork, 1,163 pkgs.; beef 525 do.; cut-meats, 39,300 do.; lard, 13,900 do.

TOBACCO.—There is an improved export and home trade demand, and prices very firm. Quotations are for

KENTUCKY LEAF.

	Light.	Heavy.
Common lugs	4 @ 4½	4½@ 5¾
Good lugs	4¾@ 5¾	5¾@ 6¾
Low leaf	5½@ 6¾	6¾@ 7¾
Medium leaf	7 @ 7¾	8 @ 8¾
Good leaf	8 @ 8¾	9 @10¾
Fine leaf	9 @11	11 @ 12
Selections	12 @—	12½@14

SEEDLEAF.

	Crop of 1878.
New England Havana seed	22 @30
do. wrappers, common	13 @15
do. do. medium	16 @18
do. do. fine	20 @27½
do. do. selections	30 @40
do. seconds	10 @14
do. fillers	6 @ 7¾
Penn. assorted, common	10 @12
do. do. fair	12½@15
do. do. fine	16 @20
do. wrappers	16 @35
do. fillers	8½@ 9¾
N. Y., ass'd, com. to medium	10 @11
do. do. good	12½@15
Ohio assorted	8 @14
Ohio wrappers	15 @25
Wisconsin assorted	8 @12
Wisconsin Havana seed	15 @20
Wisconsin wrappers	12 @18

SEED—Clover has a moderate inquiry; Western is quoted at 7¼ for prime and 7½@8¼ for choice, and extra choice; white at 9@9¼ for choice, to 9¾@10 for fancy. Timothy is quiet at 3.

VEGETABLES.—Export of potatoes for week, 2,850 bbls. Market dull. Outside prices represent small sales. Southern stuff has a fair demand. Bermuda, per bbl., $6; E. Ross, Nova Scotia, bulk, per bbl. $1@1.62; Maine, per d.-h. bbl., $1.75@1.87; State, $1.50@$1.62; State, in bulk, per bbl., $1.37@1.50; Prolific, N. S. per d.-h. bbl., $1.37@1,75; in bulk, per bbl., $1.25@1.62; Mercer, Nova Scotia, bulk, per bbl., $1.12@1.37; Peachblow, State, white, per d.-h. bbl. $1.87@2.00; red, $1.75@1.87; Snowflake, State, per d.-h bbl., $1.37@1.62; Peerless, State, $1.37@1.50; bulk, per bbl., 1.25@$1.37; Peerless, Jersey, $1@$1.12; Sweet potatoes, $3.00@3.25; tomatoes, Nassau, per box, $1@1.25; green peas, C'h, ₱ crate, $3.00@4.00; Fla., small, ₱ crate, $1.50@2.50; marrowfat, $1@1.75; kale, Norf., ₱ bbl., 75c.@$1.50; spinach, Nort., $1.50@$2.00; Balt. 75c.@$1.00; squash, marrow, $1.50@$1.75; Hubbard, $2.50@$2.75, cabbage, ₱ 100, $4@5; onions, white, ₱ bbl., 4.00@5.00; yellow, $4.00@4.25; red, eastern, 3.75@$4; red, Chester, $3.50@3.75; beets, Jersey, 1.00@1.25; turnips, Russia, 75c.@$1; carrots, 75c.@$1.25; celery, per doz., $2.50@3.50.

WOOL—The market has been much excited and higher on account of the tenor of the foreign auction sales. At the advanced figures a good business has been done. Latest sales are of XX Ohio at 53c; medium Wisconsin at 56c.; scoured Territory at 75c.; fall California at 24@27c.; spring do. at 40c.; fall Texas at 27@34c.; spring do. at 32@38c. Oregon at 37@42c.; Utah at 33c.; Mexican at 23c.; East India at 38@43c.; New Zealand at 40c.; old Australia at 54@55c.; Montevideo at 38@40c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Feb. 21.

BEEVES.—Receipts for the week, 9 357 head; do. last week, 11,366 do. Another dull unsatisfactory market has ruled. Although the supply was light, it was difficult to close out the yards. Common to fair steers, 8@9¼c., dr. 55@56 lbs.; good to prime, 9¾@10¾c. One premium steer brought 11¾c.

MILCH COWS.—There is no change to note.

VEAL CALVES.—Live calves plenty and low. Dressed calves in small receipt is all the market can handle. N. J. and Bucks Co., live, 7¾@7¾c.; others, including State, 5¾@7¾c.; Mount Holly, 5@7¾c. from above 300 lbs. down to 200 lbs.; buttermilk, 4@4¾c.; grass, 2¾@2¾c.; hog dressed, choice, 10c.; others, 8@9¾c.

SHEEP AND LAMBS.—Receipts for week, 22,410 head; do. last week, 27,336 do. The market for live is dull, being quite full of dressed mutton. Sheep, $4.75@6.55, the lower for Texan, the higher for Ohio; lambs, 6¾@7¾c.

SWINE.—Receipts for week, 22 593 head; do. last week, 20,843 do. Live, firm at $4.70@4.90. Country dressed pork, State and N. J., light, 6¾@6¾c.; medium 6¾@6¾c.; heavy, 5¾@6c; city dressed, 6@8¾c.; Western do., 5¾@8¾c.; pork tenderloins, 8@9c.

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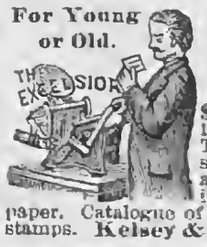

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ABOUT GRANT. By John L. Swift. Red cloth, price $1.00.

"It runs through the war with brief, meaty chapters; setting forth all the great captain's glories; his snatching victory from defeats, his comprehensive view of every situation and his conquering persistence from Belmont to Appomattox. All these are excellently presented, and they furnish the indestructible ground of Grant's popularity, his hold on the regard of the nation, his title to historic fame; thence also, all the arguments for him as the needed 'strong man' are drawn."—[Springfield Republican.

ARITHMETIC FOR YOUNG CHILDREN. By Horace Grant. American edition, edited by Willard Small. Cloth, 35 cents.

This book was originally published under the superintendence of the "Society for the Diffusion of Useful Knowledge." The author adopted as a primary rule that no illustrative lesson should be inserted which had not been variously tried and found to sustain attention by its own interest in the minds of the pupils. Children, he says, in his instructions to teachers, ought not to be perpetually harrassed with dry questions. *The grand object is to cause them to exert their minds with pleasure;* and for this a lively conversation is the most effectual means.

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Reading for the Young.

REMINISCENCES OF A LITTLE GIRL.

MRS. M. J. GALPIN.

CHAPTER II.

ABOUT this time young Father Silk commenced reading the bible and gradually found that there was another light in which to view it, besides that of Romanism; but his progression was slow, as he was held by shackles as of iron. His vows, his early training and everything else combined to keep him still within the fold. But there was a "reserved power" in our friend Tommy, that only needed circumstances to develop. The bishop and priests commenced to sniff something wrong, and Tommy was called upon to explain how matters stood. After a general confession, and receiving the threats of the "Anathema" of the church, he was awarded enough pennance for his derelictions to wear out a dozen pair of knees. Likewise was he to live on bread and water, till he had subdued his mortal, sinful flesh, but the iron had entered Tommy's soul, and light and love could not be driven out so easily. The image of the charming woman who had ensnared his young heart could not be forgotten. Using his position as priest to better advance his cause, he called at the home of his unknown darling and found that she was the young widow of an East India officer and the mother of three children. But even these overwhelming obstacles did not efface his regard. Her father, a Scotchman, and a member of one of her Majesty's Highland Regiments was a fierce man, one who was addicted to his "cups," and when under the influence of liquor it was safest to keep out of his reach. Roy McGregor was a "caution" to all around. Several times, according to the rules of the British army, had he been sentenced to be flogged for drunkenness and misdemeanors but his gentle little wife always interceded for him so pathetically, that she succeeded in having his punishment extend no further than the guard house. Roy McGregor was almost gigantic in size, and a perfect Hercules in strength, while his wife was a dove-like gentle creature who hardly dared say her soul was her own. They had a family of ten handsome children, who almost worshipped their mother and dreaded their ungovernable father. Tommy's "inamorata" was the eldest of the girls who had only a short time previously come back a widow with her husband's regiment. Now when McGregor was in his cups, he would send all the priests and churches to hades, but when sober he was the most abject of sinners. He did not at first notice Father Silk's frequent visits to his house, as he supposed they were caused by the concern the holy father had about his own unregenerate soul, so that "Cupid" had a fine chance to do all the mischief he could, quite unsuspected by all parties. Hour after hour and day after day the bonds that held their souls in thrall grew stronger, till it became evident to both, that they were drifting to the edge of a dangerous precipice, over which they might fall at any time.

Months rolled on, till at last matters were brought to a crisis by McGregor himself, who had found eyesight to see what was going on around him. He arose in his wrath, threatened to kill his daughter and that turncoat priest, if he should ever enter his house again But love laughs at all dangers and will have his own, even if it be in the face of death. Tommy concluded to give up the church, his faith, and all else, to marry the woman he adored, come what might. So one night when one of those terrible wild storms, that rage so often in Ireland, was blowing, he quietly left the bishop's house, and through wind and rain, found his way to McGregor's, where his dear Katie was already expecting him, the giant Roy lay asleep from the effects of his pot of "potheen," and all else being quiet, she left the house and joined Tommy in the garden. The wild wind blew and shrieked through the mountains; the rain poured in torrents, as if determined to drown out that ostracized unfortunate couple, but hand in hand they breasted the storm, until they came to the edge of a bog. Here lived a discarded priest, commonly called a "couple beggar," and standing before this outcast from the priesthood, the ceremony was gone through with, that bound them as man and wife. The bride's heart was almost broken with the fear that her angry father, in a fit of drunken passion, would kill her helpless little ones, as he had often threatened to do, and Father Tommy dreaded the curses and anathemas of the church. I tell you, dear children, it was a dear bought love, and through years of toil and privation, this love was the only sunbeam that brightened their pathway.

If any of my little readers are Catholics, don't think for a moment that I have anything against Romanists personally, although I do not believe in their creed. Some of my dearest friends are Catholics, and I have a score of relatives that are Catholics also. There has been more persecution done in the name of religion, than in any other cause, and before I get through with Father Tom and his little girl, you will see that those of the "orthodox" faith can persecute about as well as those of Catholicism. I do not say that Tommy did right in deviating from the priesthood, but his course is to some extent excusable. I will tell you in another chapter of the wanderings of this fugitive pair, who had thus risked all for the privilege of loving each other. Your heart will be touched by their misfortunes ere I am through. So good-bye, till we meet again.

THAT BROTHER OF MINE.

Or Horticulture in Doors—Spiced.

MRS. M. L. SAYERS.

"BLISS, how do you reckon Tradescantia got to be called Wandering Jew?" said Will, as he stood trying to float a light shell on the surface of the crystal water in a clear glass jar. (It would float whenever the opening was turned down.)

"Oh! because it travels so mysteriously and gets all over one's little world of a window garden before one is aware of it," and Bliss reached up to pluck out a streamer which had stretched across and invaded a pot of Geraniums to its discomfort.

"But Bliss, isn't it strange that such a traveler should be so green looking? Why, that cornucopia fellow is a regular *greenhorn*," and Will's black eyes twinkled with satisfaction at his fun.

Bliss laughed as she was expected to, and said. "while the Wandering Jew is said to go wandering about the world, he never holds any communication with man, and may be ignorant and green as you say; we are apt to respect mystery more than it deserves, and also travelers or sight seers, but see there! your shell has sunk, and see how it is magnified! it is just beautiful. Hold the jar up."

"Oh! yes," replied Will, an "aquarium! Give me that sprig of Wandering Jew, Bliss. Now, old fellow, you must be a sort of amphibious animal, or you couldn't cross seas, and rivers, and bogs, and gulfs; I'll try you in water awhile," and Will put the sprig in the jar.

Bliss watched the rootlets spread out thread-like and delicate, and as she noticed a thousand little hairs bristling along these threads, (being magnified in the water), she exclaimed, "Oh! Will," but Will was gone, and she resumed her investigations.

"Hallo, Bliss! Now for the study of *e-k-e*—ich—oh!—what is it Icabody?" said Will, bursting in with an old bucket in his hand.

"Oh! yes, I see you have some fish—you mean ichthyology," said Bliss.

"Yes, I mean *ichthyology*. Get in there, you little *scaly*-wags," and Will dropped two tiny minnows into the jar. They darted and whisked through the water, and when held in the sun, reflected all the colors of the rainbow. Bliss absorbed in watching their graceful movements had forgotten Will, till he bounded in again. "Now we must feed these little *flirts*," said he, and dropped in an angle-worm which began stretching, drawing up and squirming in every direction. Bliss recoiled, for it was magnified till it looked like a baby snake. It at first frightened the fish. "Now study him Bliss. What sort of *ology* do you call that? He's on a *bender* and stretcher, too. Strange, without any feet he can exhibit so many *feats*," and Will was again delighted.

"But the fish can't eat that great worm, Will, let's try something reasonable," said Bliss, as she got some cracker crumbs and made them quite fine. One of these was soon inhaled, blown out and inhaled again, and she could see quite distinctly the fish masticating it. In the afternoon Will called her attention to the fish gasping at the surface of the water. The jar had set in the sun and the heat had helped dispel the oxygen. Bliss emptied the contents in a basin, wiped the jar and returned the shell, Tradescantia and fish, and added a sprig of coral and some moss-like evergreen (feathery and beautiful), and fresh water. This she repeated once a day, and learned, after three weeks' experience, that warmth was detrimental to keep the water fresh and charged with oxygen, that the fishing-worm went to sleep every night in the little couch-shell, that cracker crumbs, stiff cream and tiny worms from the flower pots, were good food for the fishes, that the Wandering Jew threw out roots readily in the water, and that an aquarium even made of a glass fruit jar afforded her a vast amount of pleasure and some instruction.

Letter from "Will."

LOPEZ ISLAND, Wash. Ter., Jan. 15, 1880.

UNCLE MARK:—What witchery is this that you carry on, in the department for the young? Here is *myself*, portrayed, and my sayings and doings brought to light, in "That Brother of Mine." Ah! those happy days of my boyhood in "Old Virginia!" I was surprised to see I had got into print, and your readers will be more surprised to learn that happy, careless unthinking Will is a great big man with the responsibilities of the best little wife and the *cunningest* little babe in the world, and cut off from that sister and all other kindred, by thousands of miles, away and away off here upon an Island of the Pacific. Here, I brought my bonnie bride two years ago, to try my fortune in a strange land. We found friends among the Indians, and settled upon this Island first, and began life in primitive style. Thanks to the skill acquired in making those flower fixings I could use tools right dexterously, and soon had our humble abode furnished with chairs, bedstead and other necessary articles, of my own manufacture; while Pink cooked our frugal meals and "astonished the natives" with gay quilts of brilliant colors. However, not being accustomed to "dig for a living," I soon got tired of toil, and looked about for a place where it would spring up spontaneously from the ground. We moved to San Juan Island. We move here in boats, and by the time we were well installed, a new joy came to our home.

That cunning little babe brightened the very walls of our rude home. What if we should loose this incentive to new endeavor in a strange land! I thought of my mother then, the pain it had cost her to part with her boy and feel she would never look upon him again, all for a foolish freak. We named our baby Jane for that mother who had been so kind and forbearing, but in honor of the isle of birth, called her Juaneta which is the Spanish for Jane and is pronounced Wa-neta, just as San Juan is pronounced San Wan, which means St. John. I had now a new spur to urge me on, and by dint of hard work, I finally had sufficient money ahead to pay for a "claim" on Lopez Island, to which I returned, built me a house, and am now ready to begin life in earnest. As one help, comes the RURAL NEW-YORKER, sent by *That Sister of Mine*, I know, that I may reap the benefit of its harvest of good things. Is it well though that she inspired me with the love of the beautiful when I have no means of gratifying that love? Ah! yes, it is well—"*All* is well that ends well," and I hope one day to be able to place my Spanish maiden in a bower of beauty. At present, I must be thankful for such opportunities as your free seed distribution, gives one in my situation, and for the room which you give little Juaneta in the Horticultural Club. We shall look after her plants till she is old enough to take pleasure in the flowers which spring up in her path, even in the winter of adversity; just as these fair daisies clothe the ground here now, while thousands can look only upon snow and ice. But my letter grows too long. More another time.

"THAT BROTHER" WILL.

The Puzzler.

HIDDEN DRUGS.

1. In the month of May apple trees bloom.
2. Her hub, (arbutus wood) soon split.
3. In camp hornets stung us.
4. This pig Eli attempted to drive.
5. The nit, Rica, cidar will kill.
6. Lenux vom! I care not.
7. Mr. Frenchy said wiz tremur I at Ica, cidar drank.
8. We ran through intricate church-yard paths.
9. 'Twas a cub Ebenezer shot.
10. Lecopa, I vaccinated baby.
11. In so tan in dyeing woolen.
12. Miss Ella, vender of fruit.
13. If you nip Peca, Charley shall punish you.
14. To hear music Hamo, miles I would run.
15. Ask in Otis' store.

☞ Answer in two weeks. L. O.

OUR WEEK'S GROCERIES.

1. The soldiers were so daring that the enemy were conquered.
2. The state ardently welcomed the president.
3. Sir: up yonder is a farm for sale.
4. Why will you insist in buying gin, Gerhard?
5. The star cheerily twinkles in the gray Eastern sky.
6. Sai, the washer-woman, is poor.

☞ Answer in two weeks. U. M.

DROP LETTER PUZZLE.

D-— n-t kn-w, th-t th— wh- m-n-st-r -b—t h-l- th-ngs l-ve -f th- s-cr-f-c-; -nd th— who-w—t -t th- -lt-r -r- p-r-t-k-rs w-th th- -lt-r. -v-n s- h-th- L-rd -s- -rd—n-d, th-t th— who-pr—ch th- G-sp-l sh—ld l-v- -f th- G-sp-l. Fill the blanks with vowels and find a verse of Scripture, found in the ninth chapter of 1st Corinthians.

☞ Answer in two weeks. O.

A DIAMOND PUZZLE.

A consonant. A short sleep. A wanderer. Inquiries. A heathen. A lair. A consonant.

☞ Answer in two weeks. UNCLE WILL.

DIAGONAL PUZZLE.

1. A vowel; 2. To complete (curtailed); 3. A paddle; 4. A river of Egypt. Primals and finals form two rivers of England.

☞ Answer in two weeks. LITTLE ONE.

A NAME PUZZLE.

Place seven males names so as to form an eighth

☞ Answer in two weeks. O.

PUZZLER ANSWERS.—Feb. 14.

HIDDEN CAPITOLS.—1. St. Paul's; 2. Tahlequah; 3. Des Moines; 4. New Westminster; 5. Lincoln; 6. Virginia City; 7. Ottawa; 8. Indianapolis; 9. Madison; 10. Columbia; 11. Providence; 12. Washington; 13. Fredericton; 14. Charlottetown; 15. Halifax; 16. Comayagua; 17. San Salvador; 18. Managua; 19. San Jose; 20. St. Domingo; 21. Port au Prince; 22. Havana; 23. Spanishtown.

TRANSPOSITION:

"I want to go home, is the feeling of all,
No matter how they expected it;
The thought is the same though not the same name,
Or the words in which they clothe it."

HALF SQUARE:

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O R A C U L A R
R A V E L I N
A V E R E D
C E R E S
U L E S
L I D
A N
R
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DIAMOND PUZZLE.

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    P
  S E A
P E A R L
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    L
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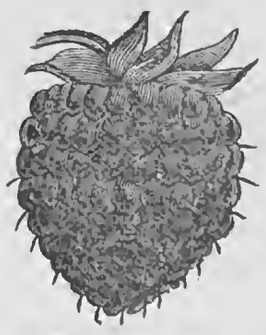
Trees, Seeds, Plants, &c.



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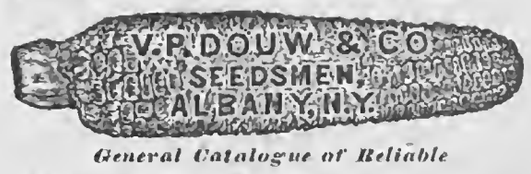

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PERSONAL ITEMS.

Senator Edmunds has saved between $200,000 and $3000,000 in fees from his law office.

The daughter of Ex-Secretary McCulloch is reported to be the best amateur banjo player in New York. She has made it fashionable for young ladies to play the banjo.

Beecher has coined a new phrase—"heavenly drunkenness"—which he applies to a person who has "too much religion." Mr. Beecher himself is not that kind of a drunkard.

PROFESSOR FREDERICK PECK, a scientist, formerly connected with the Agricultural Department as botanist, died at the Washington Almshouse on Wednesday last and was buried on Thursday by some of his personal friends, the interment being made in the Congressional Cemetery. He was 73 years of age.

THE two new ladies-in-waiting who have this year come out with the Princess Louise to Canada are both of them fair widows. One, Lady Pelly, a daughter of Lord Elcho, the originator of the great English volunteer movement, is the widow of Sir Henry Carstairs Pelly, Bart., who died in 1877, and the other, the Hon. Mrs. Langham, a daughter of Lord MacDonald, of Antrim, and a sister of the Vicountess Tarbat, is the widow of Captain Algernon Langham, of the Guards, who died in 1873.

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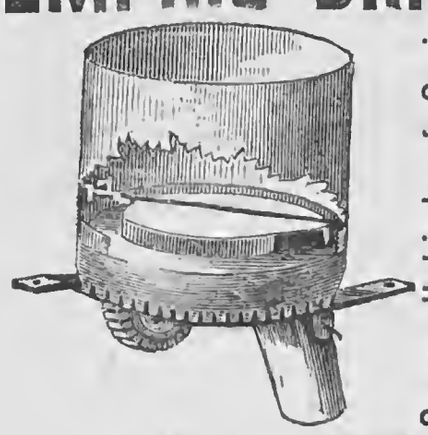

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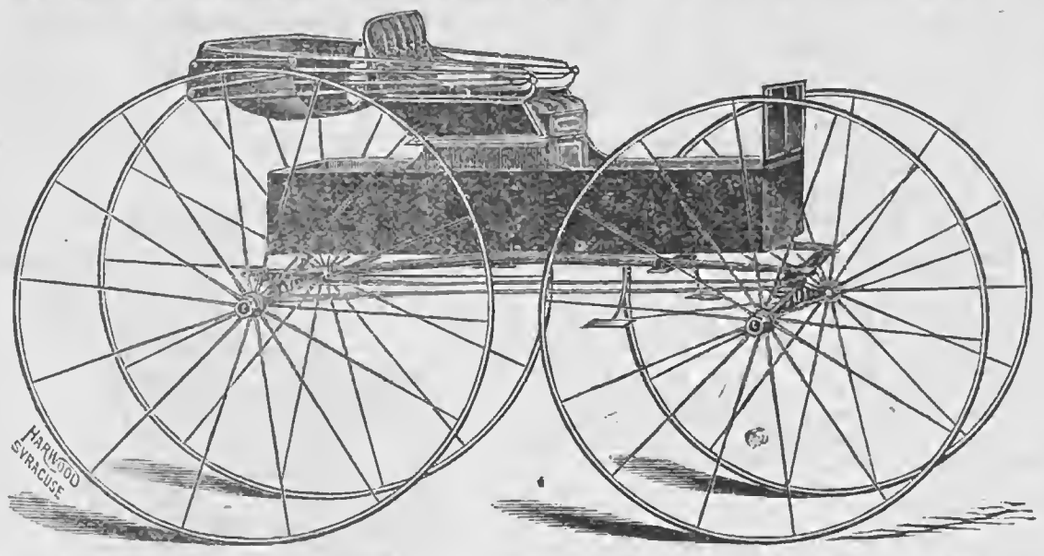

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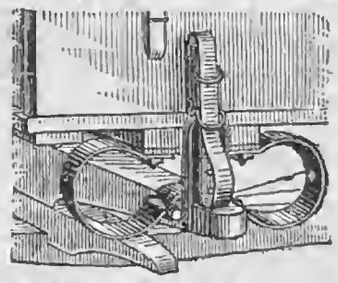

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Humorous.

Not Settled Which.

I TELL yon, you brute, one of us two has got to give in.

From Fliegende Blatter.

Various.

BRIEFLETS.

RENDERING a loose or dry soil firm after seeds are sown, by a roller or by the feet is an aid to their germination. But if the soil is moist when seeds are sown, the use of a roller or of the feet is to be avoided. . . If tender seeds —egg-plants, tomatoes, &c.,—are sown in the same hot-bed with cabbages &c., one or the other class must suffer as the one needs air, the other heat. . . The World says to Mr. Parnell, "Go East, young man; go East!" . . Mr. Beecher says that the man who can learn to love tobacco can learn to love anything under heaven. There are harder things to learn to love, Mr. Beecher, than tobacco. . . And now A. B. Allen makes a plea for polled cattle. . . Some of the farmers of Canada "in convention assembled" expressed the belief that the soil lives to eat and as well as the farmer ought to be fed; that every farm should own a good farmer; that the fertilizer of any soil is a spirit of industry, enterprise, and intelligence; without which, lime, gypsum and guano would be of little use. . . In speaking of the new "American Banner Rose" a month or more since we said it resembled a sick Bon Silene. It seems it *is* a sport of Bon Silene. We trust Bon Silene will amuse herself more creditably in the future. . . The very soul of market gardening is manure. . . Farmer Mechi's (England) balance sheet for 1879 shows a balance on the wrong side—the first in 15 years. . . Mr. Read tells Englishmen that we say that the difference between protection in England and America is that here it is a protection for the back—there protection for the belly. . . Mr. Read concludes, as a result of his visit here, that there is no country like England. . . He further concludes that nowhere in the world has the almighty dollar such an influence as in the United States. . . There is a most powerful aristocracy here as well as in England—the aristocracy of money. . . Our whole country is addicted to gigantic speculations. . . Rich men in America do not retire from business and take to farming, but they continue on in business and die in harness. . . Americans take grog, says Mr. Read, as Englishmen take physic. They walk up to the bar and, taking a small glass of whisky, toss it off and follow it up with a glass of iced water—just as children in England take castor oil. . . We hope that Mr. Read's agricultural observations have been as careful as his *other* observations. He found that although the barrooms were ostensibly closed on Sundays, there was a "back entrance" always open. . . He did not find this out until he had been obliged, one Sunday night, to retire thirsty. . . Mr. Ritter says he likes this world the best of any world he has ever lived in and dislikes the idea of leaving it, . . It is stated that the wholesale oyster trade of New York amounts to $25,000,000 a year and that of the Chesapeake to about the same. . . Americans may be said to have been the first to recognize the general utility of the oyster, and to have turned it to account in cooking, by stewing, roasting, broiling and frying. . . To avoid miscarriage, raise your abilities, or lower your aims. . . Thoughts and Events remarks:—"Ah, liberty is a fine thing,—but not liberty to steal, say. So, it is a fine thing to be able to throw off restraint, but it must be an improper restraint. Leading-strings are inconvenient, but they are good things for the infant unable to walk without them. The lunatic does not know his own business, but the physician who orders a straight-jacket for him does." . . A throne is a very imposing thing till you come to see how small a man sits upon it. . . Among onions, White Globe, Yellow Danvers and Large Red Wetherfield are the best sorts for main crops. . White Portugal is one of the best onions for pickles. . . . It is economy to bear in mind that few novelties are essentially better than the best old sorts. . . Now is the time to select Roses —the Hybrid Perpetuals and Mosses for hardiness—the Ever-blooming Roses for flowers. The last bloom more continuously than the former and for the Southern Middle States and further South are more desirable. The first and second classes are better for the North. . . The quite common practice among our farmers of hiring new help every season is, in our judgment a bad one. . . After a hand has become accustomed to a place and has learned the ways of the family and the methods of his employer he is much more likely to take an interest in his work, than does one who understands that he has but a short time to remain. Maine Farmer. . . Oat meal is a wholesome and cheap article of diet. It ought to be the staple of the supplies given in charity to the poor. . . NON-POISONOUS FLY-PAPER: Quassia chips, two ounces; water, one pint; molasses, two ounces; boil the quassia in the water, strain add the molasses, and in the liquid soak bibulous paper, which is then hung up to dry. Chemical Gazette. . . . . Beurré Giffard, one of the best of early pears; medium in size; juicy, melting flesh—excellent flavor. Must be gathered a week before fully ripe. . . Rosticzer and Tyson are popular sorts; the first for excellent quality and great productiveness, the second for its larger size and the equal excellence of the fruit. Rather a tardy bearer. Both ripen in late August. . . Petite Marguerite is an excellent little fruit, also ripening in late August; very productive. . . Manning's Elizabeth is fine. Osband's Summer is good. Dearborn's Seedling and Bloodgood are fine old pears. Brandywine is variable but usually a good late summer sort; and Ott, though small, is very good. The above pear notes we have condensed from an article in the Country Gentleman. . . In Minnesota 123 gallons of sirup were obtained from half an acre of Amber cane. The yield in other cases was from 150 to 176 gallons per acre, which of itself pays very well. . . Crystals of Copperas, it is said, put in their holes, will effectually drive rats and mice away. It does not cost much to try it. . . In the new Catalogue of Cole and Brother (Pella, Iowa) we find many of the most desirable of the seeds of our Free Seed Distribution offered, which is a gratifying proof of their value. Among them we note the Voorhis Watermelon which Mr. Cole finds to ripen through a longer season than any other sort; the Golden Rural tomato; Blount's corn; Beauty of Hebron potato; the Rural Bronze Ricinus; Hibiscus Moscheutos etc., etc.

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What may we reasonably infer from the success of a medicine which is sent far and wide, not only in the land of its discovery, but in foreign countries, which has met with the indorsement of medical men, the annual preparation and shipment of which employs a small army of employes, and the outlay upon which, in various ways, is simply enormous. We must, if candid, award to such a remedy, the meed of well deserved success. Such a medicine is Hostetter's Stomach Bitters, the leading American remedy for fever and ague, liver complaint, dyspepsia, debility, nervousness, rheumatism, and various other physical troubles. It early took precedence among tonics and alteratives, and has steadily maintained it. Persons of a weakly physique state its recuperative properties to be remarkable, both in degree and the matter of promptitude, and the billous give a particularly good account of its effects.

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Besides all the desirable novelties of last season, and nearly everything else in my line of business.

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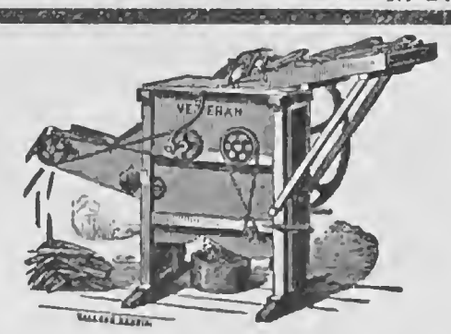

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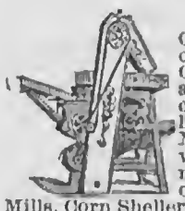

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THIRTY-FOURTH ANNUAL

STATEMENT

OF THE

CONNECTICUT MUTUAL

LIFE

Insurance Company

OF HARTFORD, CONN.

NET ASSETS, January 1, 1879,.....$46,225,182.44

RECEIVED IN 1879.

For Premiums.....	$5,750,441.67	
For Interest and Rents,	3,203,848.99	
		8,954,290.66
		$55,179,473,10

DISBURSED IN 1879.

To POLICY-HOLDERS:		
For claims by death and matured endowments,.....	$3,745,265.54	
Surplus returned to Policy-holders,	1,885,264.97	
Lapsed and surrendered Policies,	1,506,455.88	
TOTAL TO POLICY-HOLDERS,	$7,136,986.39	
EXPENSES:		
Commissions to Agents.....	$308,145.59	
Salaries of Officers, Clerks, and all others employed on salary.....	97,574.29	
Medical Examiners' fees.....	12,544.25	
Printing, Stationery, Advertising, Postage, Exchange, etc.,.....	164,948.82	
Profit and Loss....	2,495,50	
	$585,708.45	
TAXES.....	340,533.89	
		$8,063,228.73
BALANCE NET ASSETS, DEC. 21, 1879,		$47,116,244.37

SCHEDULE OF ASSETS.

Loans upon Real Estate, first lien.....	$22,217,403.37
Loans upon Stocks and Bonds.....	27,953.28
Premium notes on Policies in force.....	4,109,717.91
Cost of Real Estate owned by the Comp'y,	11,089,472.47
Cost of United States Registered Bonds.	4,620,683.14
Cost of State Bonds.....	619,900.00
Cost of City Bonds.....	2,326,460.00
Cost of other Bonds.....	500,000.00
Cost of Bank Stock.....	91,633.00
Cost of Railroad Stock.....	26,000.00
Cash in bank at interest.....	1,418,332.03
Balance due from agents secured.....	52,882.71
Bills receivable, and Judgment.....	15,806,46
	$47,116,244.37

ADD:		
Interest due and accrued	$1,453,488.52	
Rents accrued.....	16,779.05	
Market value of stocks and bonds over cost.....	165,982.86	
Not premium in course of collection .... NONE		
Not deferred quarterly and semi-annual premiums,	39,839.68	
		$1,676,090.11
GROSS ASSETS, December 31, 1879,		$48,792,334.48
LIABILITIES:		
Amount required to re-insure all outstanding policies, net, assuming 4 per cent. interest.....	$44,074,325.00	
All other liabilities.....	1,277,257.06	
		45,351,582.06
SURPLUS by Conn. Standard.....		$3,440,752.42
SURPLUS by N. Y. Stadard, about.....		6,500,000.00

Ratio of expense of management to receipts in 1879.....6.54 per cent.
Policies in force, Dec. 31, 1879, 64,504 insuring.....$164,585,123.00

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PHILIP S. MILLER, General Agent,
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 10.
WHOLE No. 1571.

NEW YORK, MARCH 6, 1880.

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$2.00 PER YEAR.

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Horticultural.

THE STRAWBERRY.

INSTRUCTIONS AND SUGGESTIONS FOR ALL.

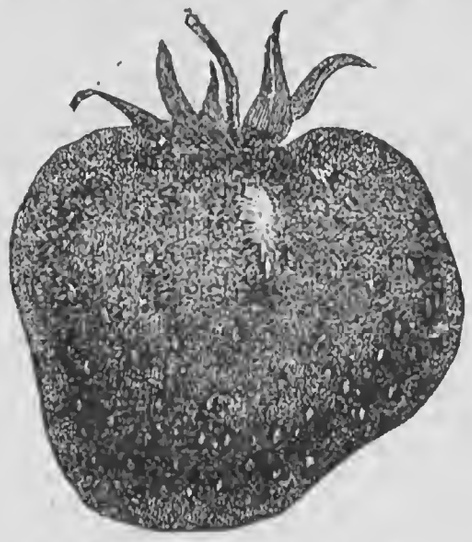
Seasonable Hints.

NOTES FROM THE RURAL GROUNDS.

As Nature is about awakening from her winter's slumber and putting on her spring attire, our readers in town and country will begin to lay plans or prepare to develop and execute those already laid for the coming campaign. Among these plans a bountiful family supply of the earliest, most welcome and delicious of all our summer fruits—the strawberry—should not be neglected. We have heretofore devoted considerable space to this subject in various ways, but for the benefit of our new readers, as well as for those of our old ones who require a frequent reminder before they can make a "new departure," we present the subject again—thus early; with such practical, and seasonable hints as may be needed for their direction.

Preparation of the Ground and Setting the Plants.

Experience has taught us that the Strawberry responds to high and liberal culture as readily



MONARCH OF THE WEST.—FIG. 67.

as any other crop. The soil should be good and free from weed and grass seeds, for the profit of a strawberry crop in field or garden is largely due to the amount of labor bestowed upon it. If the vines are allowed to take care of themselves and dispute their right of possession with white clover, sorrel and weeds of every description, there will be little profit or satisfaction in the attempt. If limited to a small garden where all the work is to be done by hand, select the cleanest piece of ground; that is, one that has been hoed and kept clean all through the past season, where no weeds have been allowed to ripen their seeds. We will suppose such a piece to be a rod wide. Spade it up and work it until mellow, incorporating a good supply of fine rotted manure, if attainable; otherwise sprinkle a dressing of fine bone on the surface and rake it in.

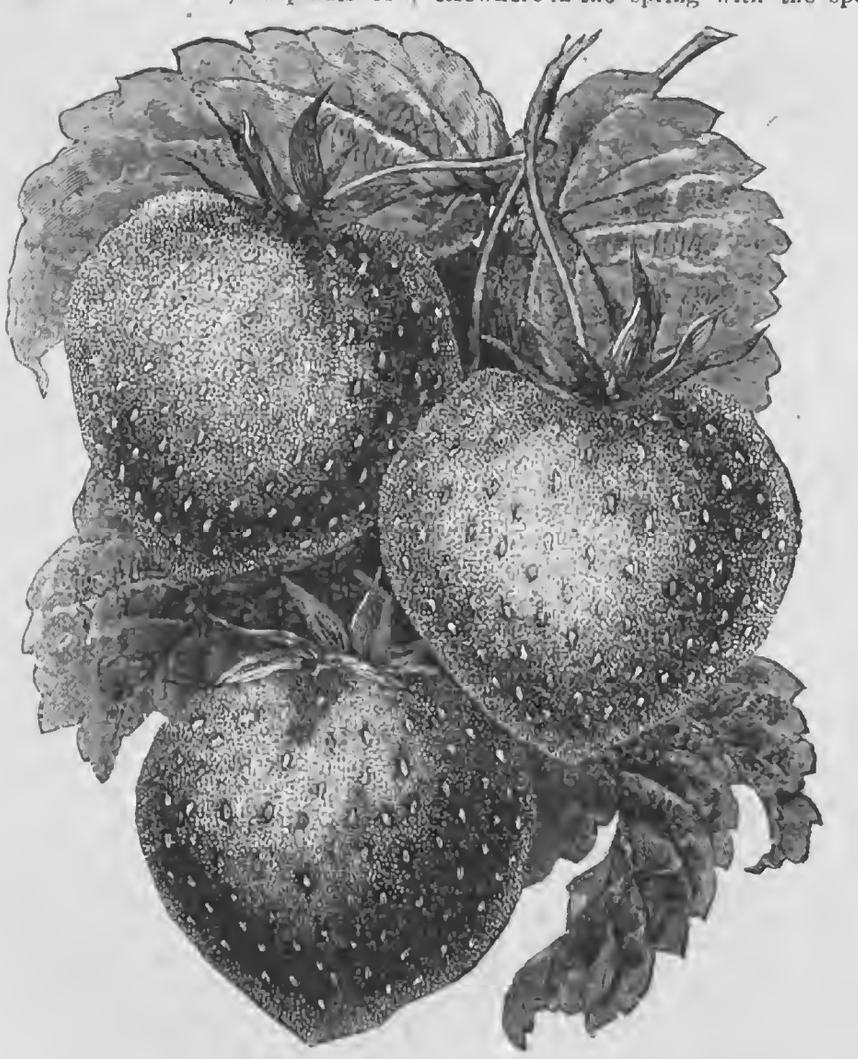
Having received your plants, unpack them—one kind at a time—remove all runners and dead leaf-stalks, and set them in a pail of water. Then proceed as follows:—Let this column represent your ground, make three marks across it 18 inches apart. Then plunge the trowel straight down across the line one foot from the end, drawing out the earth towards you. Take a plant, straightening out the roots *fan-shaped*, and set it against the *back* of the hole which should be *deep* enough to allow the roots to extend *their whole length*. Our experience is that when the roots are *spread out* near the surface, the berries do not grow so large and the plants suffer more readily from drought. Then fill in the earth and press it and the plant against the back of the hole with the hand or foot. Instead of a trowel, the spade may be used forcing it down, face to the workman, square across the line and bringing it forward, thus making an opening for the plant. Remove the spade, again pushing it down in front of the opening. Set in the plant and press the earth back against it with the spade. Set the plants two feet apart in the rows as shown, pinching out any fruit stems that appear.

* * * * * *
* * * * *
* * * * * *

Three feet from this bed start another in the same way, which is equivalent to omitting every fourth row for a path which will be very convenient for picking the fruit without getting on the bed, especially if the good housewife or the girls of the family have to do it, which duty they will gladly assume, while often willing to include the care of the bed for the sake of the fruit.

Care and Cultivation.

Two such beds will require 50 plants; ten beds 250 plants on a little less than four square rods of ground. Five varieties, 50 plants of



CUMBERLAND TRIUMPH.—FIG. 69.

a kind early and late set this spring and well cared for, would give the family a table supply next year worth ten times their cost. By setting the plants this distance apart, it gives an opportunity to hoe and destroy a half dozen crops of weeds that spring up before the plants begin to run. As the runners appear, let but one, or at most, two

CHARLES DOWNING.—FIG. 68.

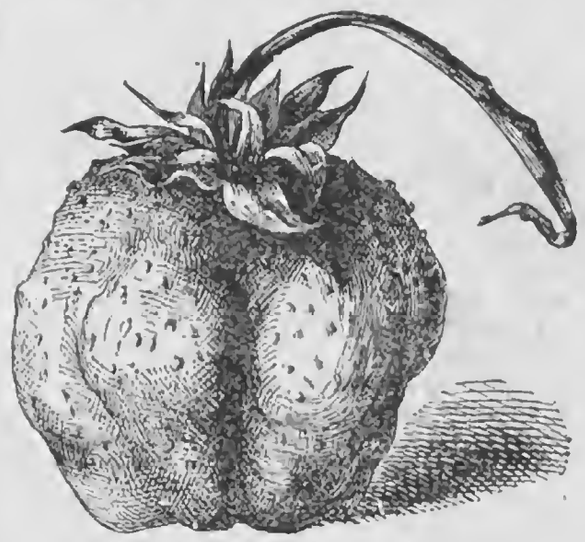
grow from a plant, leading them *in the row* allowing them to root equi-distant from each other. Remove all others as fast as they appear. Thus by fall there will be 500 or 750 strong plants that ought next year—accidents excepted—to produce from five to 10 bushels of fruit. Have some fine well rotted manure prepared, with which to give them a good dressing. Late in the fall when the ground freezes up, cover the vines lightly with leaves, salt hay, straw, corn-stalks, cedar or other evergreen boughs, as may be most convenient. Next spring in due time uncover the plants, leaving the covering between the rows. After the fruit is gathered if desirable the bed can be renewed on the same ground by removing the mulching and allowing sufficient runners to start and take root *midway between the rows*. When these are firmly established the old plants can be turned under, but this course tends to weakness and degeneration. A better plan would be to set a few plants elsewhere in the spring with the special design of producing plants for this purpose, and as soon as the fruit is gathered dig the old plants under and reset with new ones. This is easily done, in a small way, with a ball of earth attached, if the plants are handy, and they will hardly know they have been moved. This is better than potted plants. Where

Horse Culture

is available, it is of course much the cheaper method. For this, the rows should be four or five feet apart and the plants two or three feet apart in the rows; the greater distance is none too much for the strong-growing varieties, and if the matted-row system is to be adopted and no runners removed, six-feet between rows are little enough. The cultivator should be run frequently to destroy all germinating weed seeds as fast they appear, and with a little care and practice it can be run very close to the row, so that but little hand work will be required till the runners begin to root. Then the ground in the rows should be finely pulverized and the young plants distributed over the ground about six inches apart, gradually narrowing the cultivator and widening the row of plants, as they grow, to about three feet wide and clipping off all runners beyond enough to cover the bed evenly, as above. The same treatment as to manuring, covering etc., as given above for the beds described will give nearly or quite as large berries at much less expense for labor.

Soil and Situation.

The best soils for some varieties would not be the best for others. The Jucunda that grew to such perfection in the stiff clay soil of Mr.



SHARPLESS.—FIG. 70.

Knox at Pittsburg, is utterly worthless in the sandy or even stiff clay loams of New Jersey, with the same treatment given to others. Again, some varieties are worthless if allowed to run, exhausting themselves in making plants at the expense of fruitfulness. The Triomphe de Gand is a notable instance of this kind. Our readers will perceive therefore that the *best* Strawberry depends largely on the soil, treatment and culture given it, the taste of the individual, and the purposes for which it is wanted. For family use only, some people would not have Triomphe de Gand if ever so nice, on account of its musky flavor; others would reject the Green Prolific and Wilson on account of their acidity, while others think them about perfection. Tastes differ in the matter of strawberries as well as in any other fruit. To our taste we should eat and grow fewer strawberries than we now do if confined to either of the two last named, so that when we come to speak of quality our readers will understand we do not presume to speak for others. Situations sometimes have quite a desirable influence in lengthening the strawberry season. We have seen a difference of a week in the ripening of the same variety when grown on the south and north side of a wood, which no doubt was wholly due to different exposures.

The Best Manures

and the best time to apply are mooted questions. Probably, all things considered, well rotted barnyard manure composed of about equal parts of horse and cow droppings, is as

good as any. Wood ashes are also excellent; either of these can be applied with safety. The chief objection to the former is the seeds that abound in it. Were it not for these strawberry growing would lose half its terrors. We think the time of the application of any manure has its effect in a greater or less degree on the growth of the plant or the development of the fruit. We do not know to what extent this may apply, and it will require a good deal of experiment and careful observation to determine. We incline to the opinion, however, that any manure not needed to secure a strong and vigorous growth of plant, is best applied when the plant is dormant; then the fertilizing material becomes soluble; is carried down and stored in immediate proximity to the roots to be taken up and appropriated by the plant in developing and maturing a crop of fruit when awakened to life in the spring. The action and benefits of special fertilizers on the Strawberry are subjects on which little is yet positively known, and afford a good field for careful investigation. We urge our readers to make trials of these alongside of stable manure for comparison, and carefully note the results. The great advantage in the use of special concentrated manures, such as guano, phosphate, ashes, etc., is their freedom from seeds of any kind, and ease of application.

Tools, Etc.

The Hexamer and similar pronged hoes are the best implements we have ever found for working among the plants. Owing to their narrow tines they can be thrust down close to the plants at random without injury, loosening and pulverizing the ground thoroughly. Two tines of a broken potato fork, with a short handle, make a capital one-handed tool for weeding purposes and laying in the young plants. Such broken implements, instead of being thrown away, may thus be utilized.

The Best Varieties.

Here again opinions will differ. No one berry will suit all individual tastes, any more than one berry will succeed equally well in every locality and soil.

The Duncan and Duchess, of the older and well tested standard sorts, are of fair size and quality, very early and quite productive.

Downer's Prolific is also early and immensely productive, but not large enough to suit the popular demand, especially when allowed to run at will, but a dish of them well ripened, with a little sugar, is good enough even without cream. We used to think, before the advent of its offspring, the Charles Downing, that if confined to one variety it would be this.

The Charles Downing would be our choice now, however, as it is a berry of very good quality and large size, which is maintained to a great degree to the close of the season. The plant is vigorous and productive and succeeds generally over a large portion of the country.

Boyden's 30 is in some sections, as it certainly is here, very highly prized for its fine size, beauty and sweetness; though in other places after two or three pickings the berries run small and deformed. Nevertheless many good cultivators regard it as their best.

Crescent Seedling, though not an old sort has been before the public long enough to enable us to judge fairly of its merits. It is a pistillate variety of vigorous growth and very productive. The fruit, which is at first of medium size, runs small at the close. The quality is rather acid, though less so than that of the Wilson, which is, singularly enough, the standard of a great many people, and where quantity instead of quality is the object, it will be found in certain sections to answer remarkably well.

Monarch of the West has also attained a good reputation over a wide extent of country. It is a large, handsome light-colored berry of very good quality. The plant is a strong, vigorous grower, but, like the Boyden, the later portion of the crop is often small and deformed.

There are many others, such as Jucunda, Kentucky, Great American, Beauty, Centennial Favorite, and others of Durand's Seedlings which are successful in some localities and as complete failures in others. In regard to the latter it may be well to remember that they have been bred, born and reared under high culture, and the changed condition of things when transplanted to new homes is often so great that it may not be unreasonable to suppose that their failure is sometimes due to this cause; in fact, it would be folly to expect them to retain their good name with "slip-shod" care and culture. Large crops of large berries of any kind are not generally produced in that way. Of the

Newer Varieties.

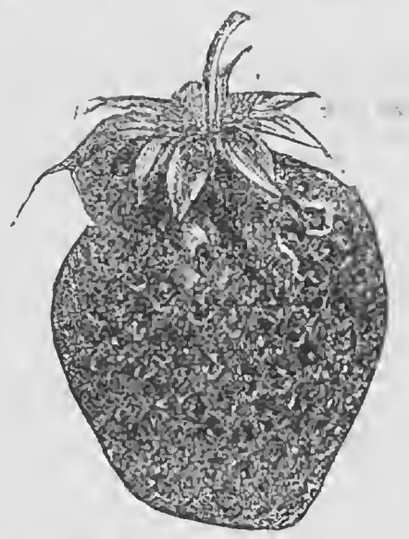
The Sharpless and Miner's Prolific stand at the very front for strong and vigorous growth and luxuriant foliage. In these respects they seem to distance all competitors. The latter bids fair to rival the Charles Downing in size and productiveness; but we think it hardly its equal in quality. Of the former, reports from our Everywhere Department confirm our experience as to its vigor and growth, while there is little question as to its fruitfulness; but another season or two are needed to determine *fully* the position to which it is entitled.

Forest Rose is another new one of excellent quality—a large, late, handsome berry, with a strong erect fruit stalk. The foliage is liable to injury during our hot weather, as was the case two years ago, but last year we saw nothing of the kind. It is considered worthless by some; but where it will succeed we think it will give much satisfaction.

Cumberland Triumph is a very large berry of excellent quality, though more desirable for the amateur than the general cultivator.

There are numerous others constantly being introduced which, if all that is claimed for them be true, must prove decided acquisitions—but as we look back a few years and see the fate of the great bulk of their predecessors, we are admonished not to be over-sanguine, and our advice to our readers is to make haste slowly and *to touch all new things lightly*. Thus may be avoided the vexation, losses and discouragements attending the opposite course.

The disease known as "Strawberry Blight," in some of its various forms sometimes appears when least expected and injures some varieties more than others, though few, if any, are exempt. Late frost and excessive drought may also sometimes injure the crop to some extent, but these notes are written without regard to such contingencies. They are among the risks to which all cultivators and crops are liable, but we think the strawberry crop is quite as certain to reward the husbandman as any other. This reward, however, we regard as accruing from an increased supply and consumption at home, and it is this feature we desire to encourage. *Strawberries should be on the table of the grower at every meal during their season.* Some peculiar people may shake their heads and object to this. "It might be good advice for grown people," they say, "but the children would stuff themselves and sicken in consequence, and the doctor's services would surely be required." Such opinions arise from the effects sometimes resulting from the use of the stale fruits and vegetables of our markets. Thousands of bushels of strawberries are annually consumed that are so far advanced in decay as to be fit *only for chicken and pig feed*, and yet people, otherwise intelligent, will and do buy such trash in preference to a really fresh article because it is cheap—though at the risk of introducing sickness into their families.



SETH BOYDEN.—FIG. 71.

Growers often complain at the low prices returned by the commission men for their berries and sometimes justly, no doubt, but in many instances if they could see their berries when they reached the market or when sold, they would place the blame elsewhere. The fact is *good, ripe, fresh* strawberries or fruit of any kind were not made by our Creator to injure any of his creatures and they seldom, if ever, do. Of all our fruits there is none more tender or delicate and susceptible to injury by handling than the strawberry, and for this reason it is ill-adapted to the rough handling and jarring incident to long transportation. It is a fruit that should be consumed within 24 hours after picking. Our large cities are overstocked every season with fruit 36 to 48 hours old, that ought to be condemned by competent health officers. We therefore would encourage a home supply and increased consumption in home markets of home-grown fruit.

Those who only know strawberries as they find them in our city markets, do not know the healthful luxury of a fresh and perfect article. With many growers their estimate of a strawberry is founded upon its carrying and shipping qualities; its merits as a table fruit being entirely ignored. It is due to the shipping quality of the Wilson that it is in such large supply in our large cities and the enormous consumption shows the appetite of the community for strawberries, even if of poor quality; and the fact that other and better varieties meet with a ready sale at better prices shows a discrimination in tastes, which should be met by an ample supply of better-quality berries of home growth.

Much might be said on the subject of markets and marketing, but a few brief hints at this time will suffice. If one has a surplus of fruit above his family wants, he should not go by a local market to a distant one that is already amply supplied. The nearer home, the better and fresher the berries, the quicker consumed, at the less expense for freight and commissions, and the fewer packages required, as they are more quickly returned. Let the fruit make a nice appearance, let it be uniform in size, clean, nicely arranged in the baskets, either pints or quarts, with no long stems or unripe berries visible, and, above all, have clean packages. The *very best fruit*, offered in dull, dirty and dingy baskets or crates, would be subject to discount. Remember that an important factor in this as well as any other enterprise is the pleasing of the eye. *An attractive appearance is essential to success.* In conclusion, we repeat the advice with which we started, to grow strawberries for home use, to grow plenty of them, and to *use them freely*. The profits of this course cannot be estimated in dollars and cents.

We shall continue, as heretofore—life spared—to test all new and promising sorts and to publish the results in these columns for the guidance of our readers.

The Colonel Cheney Strawberry.

Doubtless this is one of the varieties of Strawberries that succeed *very* well in *certain* localities. It certainly does not seem to be a popular sort with strawberry growers generally; but judging from the way it has produced on our grounds, it seems to me that it has not received the attention that it deserves. The plant is a vigorous grower and very productive. The berries are uniformly large and of a bright and attractive color. The fruit, although too soft for distant markets, is firm enough for home use or for a near market, and the large size and attractive appearance of the berries give them a ready sale. The past season it brought us, in Elmira, from one to two cents more per quart than any other variety we had. We have fruited this variety for market for three years, and with a market within two miles, we consider it the most profitable sort we have tried.

One great advantage which it has over most other varieties of Strawberries, is its ability to stand late spring frosts, and yet produce a good crop of fine fruit. It will be remembered by many that we had a series of severe frosts last May, which almost completely destroyed the apple crop in this locality and greatly injured all other fruit crops. In spite of these frosts which came while the vines were in blossom, the Col. Cheney yielded at the rate of 75 bushels per acre, while the Monarch of the West growing in the same field, was almost completely cut off, so that it was hardly possible to find a berry, and the Wilson and Cumberland Triumph were also nearly destroyed. The Col. Cheney is a pistillate variety, and should be planted within 15 feet of some other late sort having perfect blossoms. It seems to thrive best on a deep, rich, clay loam soil.

Chemung Co., N. Y. G. A. Goff, Jr.

Field Crops.

LEGUMINOUS FORAGE PLANTS.—NO. II.

PROFESSOR W. J. BEAL.

Pea-vine Clover.—Trifolium medium.(?) I have received from several sources, a clover much like the red clover. It is raised in some parts of Western Michigan and in other Western States. It is known as pea-vine clover. The stalk is stout and zigzag and the flowers later than those of red clover. Farmers usually pasture it for a while in spring, and then let it grow for one crop of hay or seed. It seems to be Trifolium medium, though I am not fully satisfied in regard to the species. One of my patches has lasted for three years. It is said to be perennial.

Italian or Crimson Clover.—Trifolium incarnatum—Our seeds were obtained from the Kew Gardens. I have sown a few on sandy loam every year for the last six years. It flowers quite late, and in our climate (Central Michigan) barely ripens a few seeds. These have not germinated very freely. Every year the winter has killed it entirely. Mr. Sutton, of England, writes, "Where a single crop is required, either alone or with Italian rye grass, this is undoubtedly the very best clover that can be grown. It is exceedingly productive, and cattle are very fond of it when young and green. The growth is very rapid, and on this account it is valuable for sowing on clover lays." The long heads or short spikes of crimson flowers are quite ornamental. The leaves are quite soft.

White Clover, or Dutch Clover.—Trifolium repens. This is a very prominent plant and probably well known by most readers of the Rural. It spreads very rapidly under favorable circumstances, so much so that some people think that plants spring up spontaneously, without seed, or that some other plant turns to clover. It is a low creeper, the leaf and flower stems rising from a few inches to a foot above the ground. It springs up and is usually very thick the first and second seasons on a lawn newly seeded on a heavy soil. It comes in on old roads where the soil is well packed. It is a fickle plant. It makes its appearance on sandy land when there is an abundance of rain early in the season. The hot weather comes, and the sun scorches the leaves and the flowers. The plants seem to vanish from sight and others take their places. It is perennial and one of our best honey-producing plants, but apiarists are unable to seed whole fields to the plant and keep others out. One by one the flowers, as they ripen, turn downwards at the top of the stem. There is a difference of opinion as to its real merits as food for cows, sheep and horses. Most farmers esteem it highly for permanent pastures. It is very nice for a lawn in damp weather, but the sun of summer kills the leaves and flowers.

Alsike Clover.—Trifolium hybridum. The specific name hybridum was applied because the species appeared to be intermediate between white clover and red clover. Botanists do not consider it a hybrid. I have twice tried to make crosses with this and white clover, but without success. I have never seen any plants which were intermediate between Alsike and white clover, though I have seen bees working on the flowers of each species where the plants were well mixed. If the plants can be crossed, we shall expect to see new hybrids. The stalks sometimes grow four to six feet in length, but they fall down and the leaves decay towards the base of the stems. The stems recline but do not take root like white clover. It is valuable for pasture and makes good hay, though its habit is not well adapted for meadows. Alsike clover is valuable for bees. In England, it is said to have been introduced from Sweden.

Yellow or Red Suckling Clover.—Trifolium minus. This is a small plant possessing some beauty, and is interesting on account of its near relationship to valuable clovers. In our garden it dies every winter.

Black Medick, Nonsuch.—Medicago lupulina. This is much like small yellow trefoil, and so far as leaves and stems are concerned, resembles white clover. The flowers are yellow; the fruit or pods are black and spirally curved. On good soil the plants furnish a great amount of pasture. It creeps along the ground and is not tall enough for mowing for hay.

Lucerne, Alfalfa, Purple Medick.—Medicago sativa. This somewhat resembles the red clover, only the stems branch less and are more erect. The leaflets are three, obovate-oblong and toothed. The flowers are purple and racemed. When young the herbage is succulent and relished by stock, but if left too long, it becomes woody and of little value. Lucerne can be cut two or three times a year, if grown on good land. It has become famous as a forage plant in California, Buenos Ayres and similar warm, dry climates where it is usually called Alfalfa. The roots become very strong and woody and run down to a great depth, thus accounting for the fact that the plant stands dry weather better than red clover. It is a perennial and in this respect better for permanent pasture than red clover. It has been cultivated in southern Europe for almost 2500 years, where it was introduced from Asia. It does not stand frost so well as clover. A deep, mellow subsoil is essential for the success of Lucerne. As the plant tillers less than red clover, about twice as much seed should be sown to the acre to produce the same effect as seeds of red clover. It should be cut as soon as the plant begins to flower.

THE WHITE PROLIFIC CORN.

PROFESSOR A. E. BLOUNT.

Now that a thorough test has been made of the White Prolific Corn, I mention a few items that may be of interest to the Rural readers—especially to those who gave it a trial. I am not at all surprised to see so many failures; but, as you intimated in the "Brevities" some weeks since, I am *indeed surprised* at the wonderful results that have been attained by some who have given it a trial. When you offered those liberal premiums I was fearful that most of the competitors would overdo, surfeit, and even destroy their crops by too liberal a supply of improper plant food, and unscientific culture. And has this not been the case in a number of instances? I notice many attribute their failure to make a premium crop, to that "old cow" and others to the naughty "wind;" while most adverse reports say, "the season is too short."

It could hardly be expected that seed raised on the 36th parallel and planted in May and June, would mature as high up as the 40th. I have many testimonials, however, stating that it fully matured in as high a latitude as the 42d. Judge Fullerton, of N. Y. City, writes "It fully ripened at Newburg—60 miles above this city;" and G. W. Bradly, of New Haven, Conn., states the same there. These men, as well as many others, whose letters I have on file, planted their seed early. I do not claim that it will ripen everywhere. When I com-

menced improving this corn, it required 156 days to mature it. It now ripens in 120, and some seasons in less. I am indeed glad that Dr. Chamberlin and the other prize-takers of the RURAL have made such large yields. They are much larger than I myself have ever been able to make. The fact is, the point I have had constantly in view was, not to make large yields on a given space with a certain quantity of seed, but the largest quantity on the single stalk and from the general crop, to improve the grain in quality, to lessen the cob, to make the stover less in proportion to the grain, and finer, to shorten the time of its maturity and adapt it to any climate and soil as well as to all localities.

In my endeavors to accomplish these things, I have made many notes, among which I find that in 1874 I shelled from the ears that grew on 631 of the best stalks selected from a measured acre, 784 pounds, or 14 bushels. In 1875, from picked stalks taken from an acre, I shelled 176 pounds, or 3 1-7 bushels. The largest yield of grain, the same year, from a single stalk, was 60⅛ ounces. All these experiments were made on upland clay soil without a single pound of any commercial fertilizer whatever. On each acre I put 20 two-horse loads of home-made compost, two years old, and nothing more. My general crop of 10 acres after 1874, never yielded less, on an average, than 70 bushels, and more than 96, at a cost of only 13 cents per bushel. My experimental grain cost 22 cents during four successive years.

I have no suggestions to make about fertilizers further than that composts made up of material to which corn—both grain and fodder—can be reduced in various ways, are best for it and will effect better results than the *intensive forcing system* many adopt in the use of highly concentrated fertilizers. Those soils that contain large deposits of alluvial matter—such as are found on river bottoms and prairie lands—have a tendency to make corn sucker. The fact is, such soils give corn an overdose of stalk food and sacrifice the grain. Upland soils are better for wheat as well as corn so far as the making of grain is concerned, unless the farmer can apply some neutralizing elements to reduce the alluvial. Dr. Chamberlin was right in removing the suckers, and I hope he and all corn raisers will do the same until they are able to dilute their fertilizers sufficiently so that the suckers will not appear. I have been improving this corn for over nine years, and it has never borne a sucker over a foot high until this season, when I planted on prairie soil. I have been planting it on upland soils with clay subsoil in hills 3x4 feet, leaving but one stalk in the hill, and always using level culture. I hope those who wish to keep this corn for their field crop will take a little pains to keep up its standard. Like all corn and other improved seed, it will degenerate or relapse and in a few years the fodder will be as coarse, the stalks as sterile or infertile and the period of its maturity as long as when I commenced improving it.

The top ear only of those stalks that ripen first and are most uniform, should be used for seed. These should always be selected in the field before the crop is ripe, and cut and shocked alone, when the husk is fairly dead and the grain well glazed. To keep my seed genuine and free from being impregnated by the pollen of foreign varieties and sterile stalks, I cover with muslin 200 or 300 ears, just before they silk, and when the tassel and silks are ready, I remove the muslin, put the pollen of the selected stalks upon the silks and re-cover them. This insures genuine seed, a fully developed ear in every case and much better grain.

Agricultural College, Fort Collins, Col.

THE COW PEA IN TENNESSEE.

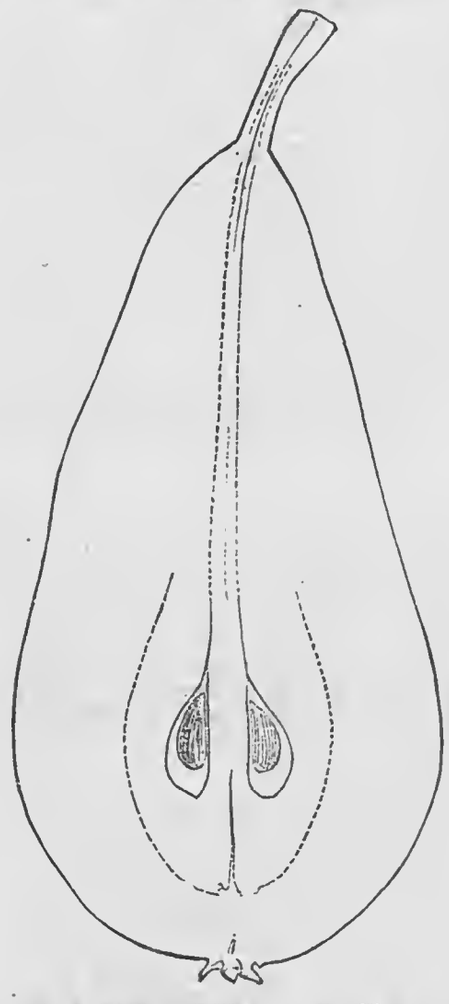
THIS is a valuable crop for hogs and all other kinds of stock, also for hay or soiling and enriching worn lands. I heartily indorse what our North Carolina friends say of it. For years it has been called "the clover of the South." In West Tennessee it grows to perfection. We could not well get along without it. Nothing else that causes so little trouble or expense is so profitable. All our best farmers plant at least as many hills of peas as of corn. Sown broadcast after wheat harvest—with us from 1st to middle of June—tons of pea-vine hay are made, equal if not superior to clover hay. Cow peas will grow where no other crop can be raised to profit, and they are one of the best fertilizers and the cheapest we know of. They may be grown with corn—they generally are with us—planted in the drill, or about the last plowing, between the rows, and they are often sown broadcast when laying by the corn. On good land and in a favorable season the peas are almost equal in value to the corn crop. Stock are turned on the land as soon as the corn is gathered—very frequently before we have frost to damage the vines. Enough seed for planting is picked when ripe—say one bushel for six acres in the hill, or about two to three bushels per acre if sown broadcast. In this cotton region farmers neglect saving seed sometimes, and the demand is greater than the supply. Seed is generally worth in the market here from $1 to $2 per bushel. We grow mainly the Black Running, a late and profitable variety which keeps well, but is objectionable as it pulls down the corn, running to the top of the stalks and down again, completely matting the ground. We also have a black pea, like the "Claybank," which runs very little in ordinary seasons and on thin land. The speckled, or Whip-Poor-Will, is the earliest. Two crops may be raised in one season if planted in May or June. The above are all valuable varieties and will keep until eaten up by stock. Hogs generally are fattened on peas, with very little corn for a few weeks to improve the pork before killing time.

Gibson Co., Tenn. H. B. P.

Pomological.

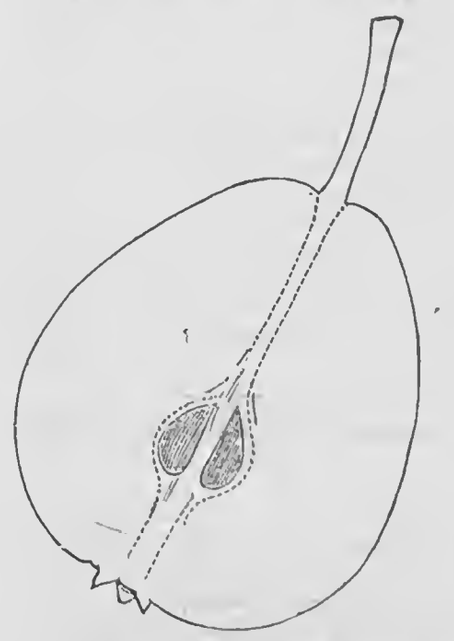
INFLUENCE OF THE STOCK UPON THE GRAFT.

ALL pomologists are agreed that frequently the stock exerts an influence upon the graft, which tends to vary its habit of growth, as well as the size, color and quality of the fruit. It is, indeed, upon this principle of variation that the Paradise stock is chosen for the Apple, and the Quince stock for the Pear when these are desired to produce a dwarfed growth.



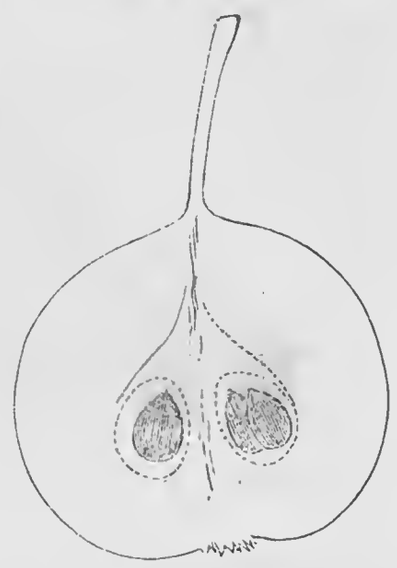
BEURRE CLAIRGEAU.—FIG. 73.

The limits of this influence are undetermined, at least as far as the quality of the fruit is concerned. Nor is it known with certainty what is the real cause or why some stocks influence the graft more than others, or what causes this influence to be more strongly marked in some cases than in others in the same varieties. But it is supposed that plants to a certain extent conform to the same laws that govern progeniture in the breeding of animals; the more fixed a species or variety has become by being propagated in a direct line for a long time, the greater will be its power to stamp its characteristics upon other and less fixed varieties when united with them, whether



GRAFT HYBRID.—FIG. 74.

the union takes place by grafting or through the more intimate connection of fertilization. We present here a very marked and curious instance of the influence of the stock upon the graft, the illustrations of which have been redrawn from the Gardeners' Chronicle. A young tree of the Aston Town Pear which proved unproductive, was cut back and grafted with clons from Beurrè Clairgeau. In due time the graft fruited, but the fruit was neither like Aston Town nor Beurré Clairgeau but intermediate between the two, as shown in figure 74. A twig of the Aston Town stock bore fruit the outline of which is seen in figure 75 a Beurre Clairgeau of the tree from which the



ASTON TOWN.—FIG. 75.

cion was taken is represented in figure 73. The graft hybrid possesses as much of the characteristics belonging to the stock as those of peculiar to the graft, or more, and the variation extends even to the form of the seeds.

Entomological.

BARK LICE AND KEROSENE.

G. H. FRENCH.

As the expediency of using kerosene to destroy insects on growing plants is by many a doubtful one, I wish to give here some of my experience and the conclusions I would draw from that experience. Among my house plants, I have had for several years a semi-shrubby plant known here as Ladder Fern, but which, I think, is a species of Phyllodium. During the summer of 1878 it was, with others, set out in the yard where it became covered with bark lice—a species of either Lecanium or Coccus. When taken into the house, soap suds and carbolic acid solution and hand picking were resorted to, but the only effect was to lessen the numbers, coming far short of extermination. Last summer the plant was again transferred to the yard, so weakened by the lice that but few leaves remained, the principal office of the leaves being performed by the broad green stems. While in this condition, I sprinkled it on an average of twice a week for a few weeks with water into which I had poured a teaspoonful or more of kerosene. As a result of this I noticed that all the lice on the tops of the stems and leaves, or wherever the kerosene touched them, were dead, and the plant putting out new leaves. Where the mixture had not touched, there were yet plenty of lice and upon stopping the application they began to spread. I next took a small brush, such as is used in marking freight, and painted the under side of several of the broad stems and one of the several main stalks with clear kerosene. I did not know but this would kill the plant, but it only killed the bugs, leaving the plant after a few days to grow more vigorously. By these applications I succeeded, as I thought, in killing all the lice before it was time to transfer the plant to the house in the fall, but after a few weeks I noticed there were still a few left. My next experiment was to fill a vessel with water and pour on kerosene enough to make a complete covering over the top. Taking the part containing the plant, I turned it bottom-side-up and completely immersed the top in this preparation, leaving, when I took it out, a film of kerosene over the whole plant as well as much running down the stalks upon the upper part of the roots. This checked the growth of the plant for several weeks, indeed was a severe test of the effects of kerosene on vegetation, but it killed all the lice and the plant is now growing again.

At the same time that I treated the Phyllodium to the kerosene bath, I had a Cape Ivy, a variety of the German Ivy, that had a few green aphides on the growing end. I immersed the end of this, far enough down to include all the part covered with lice. It checked the growth for a couple of weeks perhaps, but did not kill the young leaves that were just coming out, as they expanded with others when the plant resumed its growth. In making the above experiments I had two objects in view—to kill the lice and to see just how the kerosene affected the plants. That it will kill plant lice wherever it can be applied to them, there is no doubt, whether it be the bark lice or the aphides or those that make galls in the leaves. I think from my experiments I am safe in assuming that a moderate application, such as sprinkling with a mixture of kerosene and water, will not kill even our tender house plants, though I would not recommend in such cases the heroic treatment I gave my Phyllodium. In the case of bark lice on trees, such as infest our fruit trees and perhaps our Maples, I think the application of kerosene would be of great advantage, but the mode of application should depend upon where it is to be applied. If to the tender leaves, then it should be mixed with water and some form of sprinkler be used; for covering the surface of a growing leaf checks for a time the growth of that part of the plant, probably because of stopping the pores and thereby stopping respiration. If, however, the wish is to destroy bark lice on the limbs or body, I believe it will do to take a brush and paint the parts with the kerosene, and my experience leads me to conclude that it will penetrate the hard case of the females and kill all eggs and young underneath. I am aware that to old, large apple trees it would be difficult to follow my suggestions on any part but the trunks, and there little if any damage will be done, but I have seen a great many young trees killed by bark lice, which I think would have made fine, thrifty trees if some such remedy as this had been applied, something that would not take the farmer as long to apply as it did to set out the trees.

Jackson Co., Ill.

Trapping the Codling-Moth.

Last season I used bands upon my apple trees to trap the codling-moth, and the result was nineteen larvæ were caught from 75 trees, in the course of the summer. Cotton flannel was used—strips about four inches wide folded once, making them two inches wide when on the trees, with the rough edges downward, and the soft side next to the bark, put on rather loose. Will some one tell me what was the cause of my failure? The apples were usually wormy, but my loss in this direction has never been very severe. These bands are so often recommended, and by eminent orchardists, that my failure was a surprise as well as a great disappointment,

I had about one hundred hens running in my orchard during the season, and am confident that they destroyed more codling-moths than were captured by the bands. My trees have been thoroughly "scraped" every winter for several years, and, in my opinion, with beneficial results. NELSON RITTER.

[We are far from wishing to throw cold water upon any method of detroying insects, that promises to be practicable. But as remarked in these columns before, we believe that it will be found that the above method of destroying the codling-moth will never prove effectual and that in any case it costs more, in time and trouble than it is worth.—EDS.]

Farm Economy.

DEVICES FOR EVAPORATING FRUIT.

VARIOUS methods and devices for evaporating fruit have been employed, all having one common object—to remove the natural juices in the shortest possible time, so as to prevent surface decomposition and consequent decolorization, which can be removed only by the use of sulphurous acid or chlorine. To effect this object, all the principal evaporators have adopted one or other of the following four principles:—

1. The first method introduces the fruit into a humid atmosphere at the top of a vertical hot-air chamber, and, as it becomes heated, causes it to descend by machinery a few inches at a time, until it reaches the heating apparatus at the bottom of the trunk or chamber. Every time one hurdle is lowered, another is introduced above it, and so on until it comes out at the bottom dried. This is not philosophical evaporation.

2. A second method is to lay the fruit on endless, horizontal or inclined carriers. The heat is applied when the fruit is introduced, while a blower is stationed at the other or "wrong" end. This device, as might have been expected by a philosophical mind, has not been a great success, nor has it become a favorite.

3. The third device starts philosophically, but ends in an unphilosophical manner. The fruit is introduced, immediately over the heating apparatus, into a vertical hot-air chamber from twelve to thirty feet high, and going up one side of the chamber returns on the other back to the place where it was introduced, the trays all the time maintaining their horizontal position on the principle of the revolving swing. This is convenient.

4. In the fourth and last device, the fruit is introduced, immediately over the heat, into a vertical hot-air chamber of greater or less hight, and is taken out at the top. While this device is not as convenient as the last to operate, it is more philosophical and if neither used sulphur or chlorine for bleaching, it would make lighter-colored fruit in the same

time, with far less attention and less risk o scorching. Having no interests but truth and the best welfare of fruit growers in general to subserve, I wish to give each contrivance its exact due. Any device for fruit evaporation needs to keep in view several important points: 1. The shortest possible time in removing natural juices to prevent surface oxidation or decay. 2. The absolute necessity that the fruit be kept in a moist atmosphere until the natural juices are expelled, or until only about twelve per cent. of the natural juices remains. The fruit should be kept in this moist atmosphere until it is removed from the evaporating chamber. 3. A strong current of air entering at the bottom of the chamber and passing off at the top, being forced through the fruit as it lies on the hurdles or trays. Hot air in motion in a moist atmosphere, is the true secret of philosophical evaporation. Wherever this is secured, there is a philosophical evaporator, and no where else. An oven or kiln simply dries fruit, but does not evaporate it. In drying fruit the surface is dried, while the interior remains moist, and as soon as the surface is dried, the chemical action of converting the starchy into saccharine matter ceases, while so long as the surface is kept moist and the natural moisture is being rapidly removed, this chemical change goes on the more rapidly as the heat and the moisture increase, so that philosophically evaporated fruit contains from five to fifteen per cent more glucose and often chrystalized grape sugar, than sun or oven-dried fruit, where no sulphurous acid is used in bleaching. When bleached with sulphur, the amount of sugar is somewhat lessened.

The perfection of an evaporator, as regards its philosophy and convenience in operating, would be a sort of endless chain, like the third device alluded to in this article. The fruit should be carried up in the hot-air chamber filled with moisture, fanned by a strong current of air which passes out at an opening in the top, saturated with the moisture extracted from the fruit. The latter, when the natural juices are expelled, should return in a tight cold-air chamber so as to be taken out at the bottom, and immediately put up in hermetically sealed packages. All danger of scorching is thus avoided, as fruit can never be scorched in moisture-saturated, heated air, unless the temperature is raised beyond any probable limits. The danger of over-drying is also avoided by removing the natural juices in moist air. The fruit is taken out when it feels quite moist to the hand, but before it can be removed from the hurdles it rattles from dryness. And yet, as has been repeatedly proved by analysis, there remains only about 12 per cent. of moisture; whereas, sun-dried or kiln-dried fruit may appear hard and dry, yet the analysis shows from 16 to 24 per cent. of water in it, the outside being hard, but the inside soft. Evaporated fruit is of uniform moisture. S.

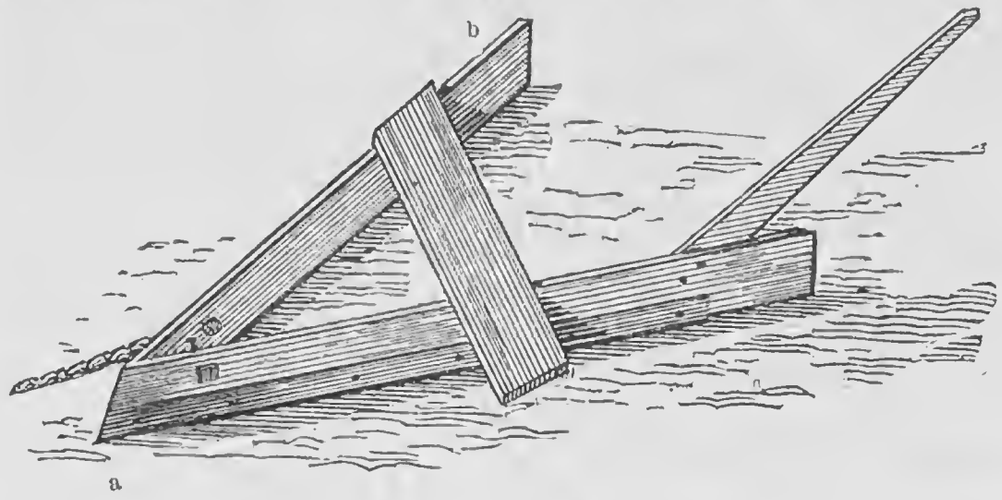
ROAD AND DITCH SCRAPER.

The cut shows an implement used for leveling roads and scraping out ditches. The team being hitched to the chain, the side—a—is drawn straight ahead and holds the scraper in place, while the side—b—in hard ground, cuts off the high places, fills the holes and throws some dirt away from the scraper.

In leveling roads the scraper is drawn down one side of the road with the plank—a—next to the gutter, and back on the opposite side, leveling a strip on either side five feet in width, leaving a ridge of earth at the inner side of each strip. It is then drawn around again so that the point will run just outside of the ridge left the first time, and so on till the whole road is gone over and the earth gathered and thrown to the center, when the road will be left highest at the middle, causing water to run off quickly. This scraper does excellent work in filling up ruts and holes, and would pay for its cost in one year in any road district.

The graveled roads or drives on the college grounds, nearly two miles in length, are kept in order almost entirely with one of these scrapers. It is run over the drives after a rain or whenever the weeds start, and keeps these down and the roads hard and smooth. For ditching, from where the ditch is wanted three or four furrows are turned out each way with a plow; then running the scraper through and back will throw out the loose dirt down to the bottom of the furrows. By repeatedly plowing and scraping, a ditch two or three feet deep may be worked out without any hand-digging, and the dirt may be thrown back a rod on either side, if desired, so that a wagon or a mowing machine will run over anywhere. In putting in tile drains, I have done more than half the excavating, and all the filling after the tiles were laid, except the first five or six inches, with a plow and this scraper.

The sides are of 2x12-inch plank, eight and ten feet in length, the front ends beveled and bolted together, and the back ends spread to cover five feet. The bottoms of both sides should be shod with a steel band 3-16x3 or four inches in width as shown in the cut, fastened on with rivet-headed bolts, counter-sunk, to prevent catching or holding dirt. Where they can be procured, old saw-mill saws are very good for this purpose. The steel bands should project half an inch lower than the planks to prevent slipping. The chain is fastened about 18 inches from the point. The driver stands



ROAD AND DITCH SCRAPER.—FIG. 76.

on the cross-piece and by shifting his position, can change the angle of draft. For nice work, trimming borders, etc., it needs another man to guide the scraper by the handle behind.

F. A. GULLEY.

Agr'l. Coll., Lansing, Mich.

Dairy Husbandry.

THE CENTRIFUGAL CREAMER.

RICHARD GOODMAN, JR.

This machine promises to improve our butter in two ways: the separation of the cream in twenty minutes from the milking reduces to a minimum the danger of injury from outside odors and internal decomposition, and the necessary cost of the machine and of the power to run it being too great for small dairies, will increase the number of factories.

It would be difficult to over-estimate the immense value of this escape from all systems of "setting." We save the expense of a milk-room, pan-room, stove to heat and ice and water to cool, and have all at once become nearly independent of heat, cold, dryness, dampness, dust, odors, insects and decay.

But the cream and skim-milk obtained by this machine are not only better, because nothing foul has got into them, but in every case, and from the milk of the most carefully kept dairies this separator is sure to remove a considerable quantity of offensive greenish matter, which even the healthiest cow deposits in her milk while yet in the body and bag. We have, then, from this separator, cream which may be said to be both negatively and positively purer than that obtained by the methods of setting.

It would also seem to be true that a larger quantity of butter is made from "separated" cream than from "set" cream. The Germans, Mr. Burnett says, have, with their repeated experiments, invariably found a gain of from three to six per cent. The cream from the separator churned in 17 minutes, while that from deep, cold setting required 53 minutes. This was in Mr. Burnett's dairy, and it is in Mr. Burnett's address before the American Dairymen's Association that we have the most valuable contribution to the literature of this subject, which has yet been made. Dr. Sturtevant reports that the butter made from the "machine" cream is distinguished for its absolute purity and its firm grain. Contrary to expectation, it appeared that the great centrifugal pressure had not ruptured any of the globules.

This outward pressure, when the machine is revolving rapidly, is very great. At 2,000 revolutions to the minute the pressure is over 200 pounds to the square inch. Hence it would seem probable that the expense of making a machine which will endure such rapidity of motion and intensity of outward pressure will, always be very considerable. The motive power will also be a large item. From this it would seem probable that this centrifugal creamer will not be available for small dairies, but just in the same ratio will it become the most desirable mode of cream raising in the larger dairies and in butter factories. And just as fast as butter-making is taken out of the hands of the farmers' wives and out of the farmers' dwellings, and put into the hands of men and women and into buildings devoted entirely to this one purpose, just so rapidly will the quality and uniformity of the butter product of the country improve.

I do not mean to say that "the best butter" cannot be made by the farmer's wife in the intervals of her other domestic labors, and in the old-fashioned milk-room or spring-house, and by the old-fashioned methods of setting; but there is little profit in butter so produced, little certainty of its being uniformly good, and much anxiety all the time. For the profitable and regular production of the best butter, it would seem that the centrifugal creamer is already one of the prime necessities. The sweetness and purity of the cream and skim-milk produced by this machine add largely to the value of this method of separation for factories and dairies situated near cities, where sweet cream and sweet skim-milk are in demand; the consumption of these two articles is large to-day and is steadily increasing, and may, at no distant day, be in itself sufficient for the employment of many creamers.

Yokun Farm, Lenox, Mass.

WHITMAN AND BURRELL'S CENTRIFUGAL CREAMER.

While on a late visit to the central part of the State, I took particular pains to look into the success or failure, whichever it might be, of the Messrs. Whitman and Burrell's experience with the machine they took with them from the International Dairy Fair to experiment with. I found these gentlemen quite sanguine of its ultimate success, but they thought they had suggested some improvements that could be made in the machine. The owner, therefore, took it back East with him, and it is supposed he is now embodying in it the suggestions of Messrs. Whitman & Burrell. The present machine costs $500 and only separates at the rate of one hundred gallons an hour. This work is hardly rapid enough for a paying basis, so Mr. Burrell has suggested that a deeper cylinder be made for holding the milk.

There is also a very serious objection in the difficulty of cleaning the present machine, owing to its elaborate and covered mechanism. This it is proposed to remedy by removing the cover altogether, which can be done by raising the sides of the cylinder so high that the milk will not fly out. All parts of the machine can then be easily reached for cleaning. It was also thought that the price, owing to the simplifying of the machine, could be lowered, so that more than one machine could be used in a factory. I could not find that any elaborate experiments or extended use of the machine had been made, though it was run for a while in the city of Syracuse while the American Dairymen's Convention was held there, for the purpose of showing visitors this new method of separating cream from milk.

In this connection it may be well to add that in a note received from Mr. F. B. Thurber, the other day, he called my attention to the necessity of warning the dairymen to be on their guard as to the quality of the cream from these centrifugal machines for butter making, and inclosed a letter to him from Mr. Thomas Nuttall, of London, concerning the test trial made at the last London Dairy Show between this machine and shallow setting. I quote from Mr. Nuttall's letter:

"The exact figures of the analyses by Prof. Voelcker I have mislaid, but I have written for them again, and will let you have them. But the milk that had passed through the separator contained the most fatty matter, and proved that the cream globules had been so broken into the watery part that they would not again collect by standing, and so were practically lost for butter purposes."

This is simply put forth as a warning, and may be a fault confined solely to the machine tested in England, but the matter should be carefully investigated in this country before all doubts of the practicability of the machine are removed. L. S. HARDIN.

THE FAIRLAMB SYSTEM OF GATHERING CREAM.

In the RURAL of January 24th G. E. N. asks, "Of two patrons of a creamery, if one brings richer milk than the other, does he get a larger proportion of the butter made?" In your answer you say, "No; all patrons of a creamery or cheese factory share in the aggregate product in proportion to the quantity and not the quality of their milk. It isn't exactly just, but where is the remedy?"

It is of the remedy that I wish to speak; for there is a remedy, and so far as it has been tried, it works entirely satisfactorily. There has been more or less grumbling and faultfinding among patrons of creameries, and in many cases very justly, too, because one patron took better care of his cows, fed them better and on richer food, and, as a result, produced richer milk, but received no more per hundred than his neighbors whose cows were poor and half-fed. There is no question but the one who produces the best milk contributes to the share of the patron whose cows are half-fed and poorly taken care of. The question how all this could be remedied and every one get just what belongs to him and no more, has perplexed many a wise head for years.

The system which is known in Illinois and Wisconsin as the "Fairlamb System of Gathering Cream" has solved this whole question, and it is so simple it is the wonder that some one never thought of it before. The can which is used is made smaller at the bottom than at the top; is about twenty inches high, with a tube in the center for cooling the milk. The air-tight cover is put on after the milk is cool. The glass gauge on the side of the can shows the number of inches of cream to be taken off. The milk is set at home, and the team from the creamery calls every day for the cream. The graduated glass gauge on the side of the can shows the number of inches of cream to be taken off, and this is set down in the patron's book. At the end of every month the number of inches of cream is figured up, and the patron paid so much per inch, or he allows the factory so much per pound for making, each inch of cream making a pound of butter. For half a day or more, cream is gathered from the patrons before the team returns to the creamery, each one getting just what he produces and no more.

This plan of running creameries has been tried the past year, and many more will follow the coming season. So far it has worked well, giving the best satisfaction. Cream has been carried twenty and thirty miles without ice during the hot weather, and the butter sold in New York at a price equal to that of the best creamery. D. W. C.

Sheep Husbandry.

CARPET WOOLS—THE SHEEP REQUIRED.

COL. F. D. CURTIS.

In former articles we have pointed out the profits which might be expected from a flock of combing-wooled sheep, and suggested to dairymen the advantage of exchanging cows for sheep of this kind in order to relieve one industry over-worked and to build up one scarcely begun. Combing wools are almost entirely imported, and this fact leaves a field open for occupation for all those who are willing to comple with a small investment for stock, painstaking and skill in the management of a flock of such sheep. When this shall be done, there is no class of sheep which will afford more income than they. They will require housing in this climate during all severe and inclement weather, to preserve the rich luster which is essential with a fine class of combing wool, and also liberal feeding to make the length of staple as well as luster. Housing, or protection, does not make the luster but preserves it.

There is another class of wool of long staple which can be produced without so much extra feeding and trouble, to wit, the carpet wools. The Mexican sheep of the Southwest are the basis of this staple, and from the pastoral regions of the Southwest the home supply of carpet wools is mostly derived. These native sheep roam in large flocks over the plains of southern Colorado, New Mexico and Texas. The cost of producing this wool is very small, and the freighting is also light, as it is done by Mexicans with ox teams, several wagons being hitched together and the whole drawn by several yoke which subsist on the grass found along the way, the drivers camping alongside. Fifty cents a hundred is the usual price for hauling freight in this way for a hundred miles or more. So little developed and utilized is this vast region that it is able to furnish but a small portion of the wool required for manufacture into carpets in this country. The millions of pounds which might be produced are now brought from South America and Australia, but principally from Africa. The Cape of Good Hope is the chief competitor with the Southwest in the production of carpet wools. These wools are so low-priced that the protective duties on them are the least of any wools brought into this country. They can be produced in the United States cheaper than any other wools. A long, tough staple is required for carpets. Harshness and coarseness of texture are not objectionable in carpet work, but such wools are scarcely adapted for anything else except rough blankets.

In order to get the long staple required for their work, our carpet manufacturers are obliged to select their wool from almost every wool-producing country in the world. Russia furnishes considerable and so does Asia Minor.

Every pound of carpet wool could be produced in our own country. There are vast districts in the Southern States not now utilized which are capable of feeding millions of sheep. The yield of wool per head may be increased by crossing the Mexican sheep with the Cotswold. The former are light shearers, not averaging more than three pounds, probably less. Each cross is good for an extra pound of wool, and the cross-bred sheep are said to adapt themselves to the fare and habits of the natives without much detriment. We would not advise more than two crosses, which would change the natives to three-quarters Cotswold. The Cotswold is a sheep of very different form from the Mexican, as the latter are more leggy and much lighter in the quarters, thinner on the backs and not generally so muscular or inclined to fat. The natives live a nomadic life, and their form of body is the outgrowth of it, while the Cotswold shape or coulour is a form molded by quiet. These opposites cannot be blended to the extinction of either extreme without changing the nature and characteristics of one or the other breed. Where the new animal must follow the same habits of life as one of the originals, it must conform to the type of the one it supplants, or it will be a failure A Merino sheep graded up to a Cotswold will be ill adapted to follow the nomadic and uncertain life which seems so natural to the semi-wild sheep of the Southwest. Crossing with the Mexican would thicken the fleeces of these long and loose-wooled sheep, but it would at the same time change its character from coarse to medium, and it would no longer be carpet wool, as it would lack the length of staple which adapts it to the purpose. We should like to see every carpet-loom in America supplied with wool of our own raising. This would cover the plains with flocks and give employment to thousands who are now idle, and place our manufacturers beyond the risks of foreign contingencies. Unpeopled regions would be busy with the evidences of life and thrift, and the income of the country would be largely augmented.

These coarse and light-wooled sheep are not suited to the changing and severe climate of the North; but are the best adapted to regions where the seasons vary but little, and extremes of heat and cold do not occur. They will do better on coarser feed than the Merinos or their grades, and on this account are better fitted for the wild grasses of the prairie and all uncultivated lands. For such pasturage they should be graded with the Cotswolds, as they too will bear coarser feed than the fine-wooled breeds. The lambs will be stronger, and the loss much less than with the latter. They are larger milkers and will nourish their young better under rough treatment. The raising of the young is as important in the year's income as the wool. Where the winters are trying and the herbage is finer and shorter, grading with Merinos is the best, as they will be less liable to disease, their close fleeces shutting out both wind and storm in a much more effectual manner. Merinos never do well in low, damp lands; but have a natural fitness for upland and mountains, while Cotswolds do best in valleys.

SHEEP NOTES.

I HAVE just looked over Mr. Blackwell's article, page 87, of the RURAL. It is a good one on the whole, but it is not exactly the thing to recommend South Downs to be crossed on Oxfords. I fancy he does not know how the Oxfords were made. It was chiefly by crossing Cotswold rams on various Down sheep, then selecting the best of these, and breeding them together till they assumed a fixed type. It took 30 years or more of great care and pains to do this. Our people seem to know little of the formation and history of this splendid breed. When in England in 1841, I traveled all over the South Down country, sometimes in a carriage, but more often on a horseback and on foot, mingling among the farmers and most celebrated of the sheep masters. I there saw thousands of such crosses, from which subsequent selections were made to form the Oxfords. These at that time were merely bred for early lambs and wethers for mutton, etc.

Sheep farming on the English Downs is the most beautiful, and at the same time one of the most profitable systems of farming in England. It is the best system for growing wheat on the four-course shift practiced there; also other grain, etc., etc.

Mr. Blackwell speaks of Leicesters, etc. Now, all such, except the hind legs of their carcasses, are too fat for eating—great masses of *mutton tallow*—and in England they are salted down as hogs are here, and the mutton is called the "*the poor man's pork*," in derision, and the poor only eat it, because they cannot afford anything better. These Leicester rams, etc., produce a fair quality of mutton by crossing on our thin grade Merino and other native ewes. But the first cross is the best; a second, or, at least, a third, gives too fat and coarse an animal. Very few of our farmers understand this. I began to ship these long wooled rams to the South nearly 40 years ago, and have kept it up ever since, to fill orders from my friends there to cross on their poor, thin, native ewes. They like the first cross much; also, that of South Down rams which I have sent. A SUBSCRIBER.

Miscellaneous.

WHAT OTHERS SAY.

ARTIFICIAL FERTILIZERS.—A writer in the N. Y. Times gives his experience as follows: "A second year's experience with artificial fertilizers confirms my previous opinion of their value. As a help to fill out the supply of manure, of which no good farmer ever yet had enough, they are invaluable and indispensable. The great advantage is their quick action; 300 pounds per acre of Mapes's Complete Manures, A brand, spread over a field of oats, was rained upon at night when the work was but half finished. Before the next evening the part first covered was conspicuously greener than the other part, showing that in 24 hours the effect of the fertilizer was already in action. The permanence of these fertilizers has been much questioned; but there seems to be no doubt of it. One of my fields of fodder rye, which was in potatoes in 1878, and was then dressed with no manure but the potato fertilizer at the rate of 600 pounds per acre, was put in rye the same fall; the rye was cut for fodder the next spring, and the land was sown to Hungarian grass. Both these crops were unusually good. A part of the rye was cut twice, and a part, left for seed produced good plump grain. The field is sown to rye again, without any manure or fertilizer, and looks remarkably well, and quite equal to another field on which 20 loads per acre of rich cow manure were spread. The effects of the fertilizer are clearly not exhausted by three crops, and show favorably on the fourth.

LIBERAL FERTILIZING.

"The liberal soul shall be fat." This applies in a remarkable degree to the fertilizing of one's fields. Up to a certain point, each additional dollar's worth of manure is returned with profit varying from 100 to 200 per cent. But while there is a point beyond which manuring will not pay, there is also one below which it is equally unprofitable. Each one must find this limit for himself. On my soil, which is a light sandy loam, deep, mellow, and warm, and one that does not readily dry out, 200 pounds of artificial fertilizer, or 10 loads of manure per acre, make but very little show; but 600 pounds of fertilizer per acre has paid for itself three times over. A friend who farms a clay soil in Western New York writes me that 500 pounds per acre is the most profitable quantity he can use; more than that is in excess of the capacity of the crop to use, and less is not enough. This is an important point, and is akin to the feeding of an animal; overfeeding is waste, and under-feeding does not supply the actual natural wants of the animal growth.

EARLY AMBER CANE.—Seeing so much on the cane-growing industry in your paper, I send you the following notes from this section: The farmers here are fast finding out that it pays to raise their own "sweetening," and that the "Early Amber" is the best variety of cane for that purpose, as it makes a sirup equal in taste and looks to the best "sugar drips," and has the advantage of known purity. It finds a ready market at 75 cents per gallon, while common sorghum is a drug at 40 cents. It also matures early, and thus need not be planted as soon, and also gets out of the way of the early frosts; and even now, where they have the machinery, they are making a No. 1 article of sugar from its sirup. If any of the readers of the Inter-Ocean should wish to investigate its merits, and will send stamps to pay return postage and expense of mailing, remembering that postage is one cent an ounce, I will send them seed, warranted pure. Address F. Wilkinson, Avon, Fulton County, Ill. —Chicago Inter-Ocean.

[If Mr. Wilkinson proposes to send these seeds, as his offer implies, "at *cost* of postage and expense of mailing," we fear he will have occasion a hundred times over to regret it. Inexperienced persons can have no idea of the avalanche of applications such offers to widely circulated journals will bring upon them, and the Inter-Ocean ranks, in point of circulation, among the first journals of this country.—EDS.]

ABOUT SEEDS.—Mr. Joseph Harris in his catalogue just received, says: "Last year and the year previous I selected the largest, finest, and best heads of cabbage for seed. The cabbages that I saved for seed would have sold for more money than the seed raised from them would sell for at wholesale. And such really splendid and exceedingly costly and reliable seed will not be as plump and bright and probably not germinate as freely as the seed raised from inferior cabbage of the same variety. You can raise common scrub cattle more abundantly than you can Duchess Short-horns, and you can raise more plants from an ounce of *poor* cabbage, onion, lettuce, carrot, parsnip and beet seed than you can from an ounce of the best and choicest and really *most valuable seed*. If you buy *good* seed, sow it thicker than you would common seed. The cost of seeds is so slight compared with the pleasure and profit of having a good garden, and also as compared with the cost of preparing and enriching the land and the cost of cultivation, that it is poor policy not only to sow poor, cheap seeds, but to sow them so sparingly as to run the risk of not having plants enough to fully occupy the ground."

"WOMAN CAN DO a great many things and do them better than can a man," says Mr. Hyde, in the N. Y. Times; "but she never was made to run a farm. She has various and increasing rights, but following the plow, driving oxen, managing bulls and breaking colts are not among them. She is an indispensable helpmeet to the farmer, but her sphere is a domestic one, literally domestic, that is, belonging to the house. When she takes upon herself the prerogative of mingling with the men in the field, loading hay and moving it away, directing about the breeding of stock, and displaying her equestrian skill on the road or race-course, she unsexes herself and becomes a man in petticoats. . . . When we find that a young farmer has secured a wife, and treats her as a partner in his business, we feel far more confidence in his success than when he is backed up by a rich father or a large capital, and we are confident that many of the mistakes which we have known farmers to make would have been avoided if they had taken their wives into their counsels. There is no henpecking in this; it is the part of wisdom, and whatever is wisdom's part is true manhood."

THE VALUE OF MILK.—"All things considered" says Professor Sheldon in "Dairy Farming," "good milk is the cheapest kind of food that we have; for 3 pints of it, weighing 3¾ pounds, and costing 4½d., contain as much nutriment as 1 pound of beef, which costs 9d. There is no loss in cooking the milk, as there is in cooking beef, and there is no bone in it that cannot be eaten; it is simple, palatable, nutritious, healthful, cheap and always ready for use with or without preparation. . This is to say that, chemically, 3.7 pounds of milk is the equivalent of 1 pound of beef in flesh-forming or nitrogenous constituents; and 3.17 pounds of milk is the equivalent of 1 pound of beef in heat-producing elements or carbo-hydrates. . . . We must, therefore, assume, from the data offered, that the relative values of beef and milk as human food are as 3½ to 11½, or as (in round numbers) 1 to 3½."

COW PEAS.—"The yield this way (Tennessee) is from 15 to 30 bushels per acre, according to land," says a writer in the Country Gentleman. "The yield in hay is from 3 to 4 tons, also according to land. A neighbor has raised five wheat crops one year after another on seven acres of what was poor land when he began with it, and the two last crops made 16 to 20 bushels per acre. The first crop on this land was 5 bushels to the acre. When he cuts his wheat he places his shocks in a line, then immediately plows his land and plants the peas. He cuts them in August or turns them under, and in October re-plows and plants wheat. The work stock needs corn while being fed the hay, but idle horses or mules need no other food during winter."

UPLAND WATER CRESSES.—E. B. H., gives his experience in Vick's Monthly as follows:—"Seed sown early in spring, 1876; ground four feet by eight; north side of brick wall; came up thick, grew well; watered well in dry, hot weather; used early in the fall following; continued until August, 1879, thrifty and good; then it was neglected for watering, and partly died out. It was pronounced, when growing, by an Englishman used to it, as quite equal to that grown in water. I used it myself all the time, morning, noon and night, and say that it ought to be cultivated by all who like such stuff. I recommend to all persons wanting a good stomach, to try its cultivation."

"BLACK MEXICAN" SWEET CORN.—Mr. J. A. Woodward, the experienced agricultural editor of the Center Democrat (Bellefonte, Pa.), thus supports our opinion of this corn: "In the RURAL NEW-YORKER for January 24, we find a high opinion of this most delicious of all the varieties of sweet corn with which we are acquainted. Like the RURAL, we have tested all the leading varieties, but for ten years past we have not failed to have a small lot of "Black Mexican" for our own table use. In point of productiveness we do not think it equals some others, but in quality we do not hesitate to second our valued contemporary in placing it at the head of the list."

EX-GOV. FURNAS.—The Nebraska Farmer which, by the way, is a credit to that State, says: "THE RURAL NEW-YORKER, in its issue of January 10th, has a very fine portrait of ex-Gov. Furnas, followed by quite a lengthy biography. As Gov. Furnas is noted for his modesty, we refer to the matter in the editorial department. No man in this country is so deserving of public favor as Gov. Furnas; no one has spent half, or a quarter, as much time and money as he for the good of us all."

TAKE YOUR CHOICE. Crossing the Atlantic, says the London Standard, we have the United States, with a rapidly increasing population, already numbering fifty millions, but exhausting their fertile soil with the rapidity that a spendthrift squanders his income; and it is within the range of probability that before many years are past she may cease to be an exporting country, unless more expensive systems of agriculture are adopted.

WHERE FARMERS AND MECHANICS intermarry, says J. B. Olcott in the Christian Union, in the old way, as the wiser ones continually do, keeping up an intimacy with the soil and an interchange of employments and implements through the garden, farm and workshop, mutations of fortune find them versatile, and as ready to fall upon their feet with every change in affairs as a cat.

"EVAPORATORS are a God-send to the farmers" says Mr. King in Rural Home. "Consider the millions of people who never see an apple; they can be supplied by evaporated apples. Some consider the evaporated fruit as good for cooking as green fruit. We can pick the best of our apples for barreling and shake the remainder off for evaporators."

CORN.—A writer in the Michigan Farmer advocates late planting, especially in heavy soils. He favors planting deep, or in a deep mark, so that the earth would naturally fall toward the hill. The error of many he thinks is ceasing to cultivate at the time when the crop needs the most attention—viz., when the tassels appear.

CATALOGUES, ETC., RECEIVED.

NOTE.—Readers are referred to our advertising columns for any particulars omitted in the following necessarily brief notices:

F. R. PIERSON, Tarrytown, N. Y. Illustrated Catalogue of Seeds, Fruits, Trees for the greenhouse, garden and farm, with descriptions and plain directions for their cultivation. We are indebted to Mr. Pierson for the original from which our engraving of the "Cumberland Triumph" Strawberry was made. An engraving from fruit raised at the Rural Grounds was published in our Strawberry number, Sept. 7, 1878. Our report of this excellent berry at that time was as follows: "Rather soft for market. Ripens in every part at the same time. Uniformly of large size. Vines very healthy and strong. Perfect shape—flavor good. The acute lobes of the calyx, from three to five, are so constant as to aid in determining the variety. Pale red or pink in color." Later experience not only confirms our first report, but makes us think more highly of it for home use. Mr. Pierson's catalogue is sent to applicants without charge.

JOSEPH HARRIS, "Moreton Farm," Rochester, N. Y. This well-known farmer sends us a four-line advertisement and his catalogue; the latter presumably for notice. As it is worth a good deal more to us than his advertisement, we presume it will likewise prove helpful to our readers. We have tried to speak of catalogues according to our estimate of their value to our readers and not according to the value of the advertisements to us. Many catalogues publish lists of garden, flower and field seeds comprising almost every variety known, whether possessed of any especial merits or not. Mr. Harris selects those kinds only which from his own experience he believes to be the best of their kinds. The catalogue is full of useful hints, the cream of his life's experience. He will send it free to those of our readers who apply.

HOVEY & CO., 16 South Market street, Boston, Mass. Illustrated Guide and Seed Catalogue for 1880. Sixteen of its ninety pages are given to novelties among flower, vegetable and field seeds. Among potatoes "Mammoth Pearl," which originated in Ohio, is spoken of as having produced 1,042 pounds from a half-peck of seed under ordinary cultivation—the largest potato of the yield weighing two pounds and ten ounces.

PRICE & KNICKERBOCKER, 80 State St., Albany, N. Y. This work of 80 pages and 450 illustrations—mailed free to applicants—is a catalogue of garden, field and flower seeds, with cultural directions, and of agricultural implements, farm and horticultural goods in general. This establishment, now in its 49th year, is better known, perhaps, as the "Albany Seed Store."

JAMES VEITCH & SONS, Chelsea, England Catalogue of Plants, including Novelties for 1879. One of the largest Horticultural establishments in England.

TUISCO GREINER, Naples, N. Y. Catalogue of warranted vegetable and flower seeds, plants, seed potatoes, nursery stock, etc. Free.

Everywhere.

RURAL SPECIAL REPORTS.

CAL., Carpenteria, Santa Barbara Co., Feb. 18.—We have had more frost and cold in this vicinity the present winter than for many years. The former, however, has done little or no injury, except cutting down some of the early potatoes. Roses and other flowers are bright and sweet. Early grain and grass are a good growth. The farming prospects were never brighter at this season. O. N. C.

CAL., Norwalk, Los Angeles Co., Feb. 2.—We are putting in a good deal of wheat in this section this year of the Odessa variety, which is said to be rust proof. We are also organizing an amber cane association for the manufacture of sugar. Corn has been so low we are obliged to try something else to help us out. J. K.

ILLINOIS, Baldwin, Randolph Co., Feb. 18.—Until the 13th inst., we had an unusually mild winter. On that day we had a severe snow storm, the first heavy snow this winter, but at this time the snow is about all gone, and we have indications of rain. The roads are well-nigh impassable from the rain that came before the snow, and afterwards the melting snow made them worse. Wheat looks well on an average; but in some places it is turning yellow from too much water; it does not look as well as it did some time back. The rise in the price of pork to five dollars per 100 pounds induced most farmers to fatten and sell all their pigs they could prepare for market. We hear less complaint of hard times among farmers, and there seems a general desire to improve not only their stock but their farms and houses. Wheat is selling at $1 05 per bushel; corn, 35 cents; potatoes, 50c.; oats, 30c.; eggs, 9c. per dozen. N. J. S.

ILL., Canton, Fulton Co., Feb. 27.—The past season here has been the driest since I came here, 22 years ago. Still we had a big crop of winter wheat, 35 bushels per acre in my neighborhood. Of corn we had per acre over 40 bushels; hay was half a crop; potatoes nearly a total failure. S. J. E.

ILL., Buckeye Center, Stephenson Co., Feb. 19.—Winter is going out, I suppose, without snow. Fall grain looks fine. Our market prices are: wheat, $1; corn, 28c.; oats, 30c.; rye, 70c.; barley, 60c.; eggs, 12½c.; butter, 18c. with a prospect of lower price; hops, $3.75. S. F. B.

IOWA, Viola, Linn Co., Feb. 18.—We are having an exceedingly mild winter. On Christmas eve, however, the thermometer marked 28 degrees below zero. Crops are good. Hardly any wheat is raised here. Last year oats yielded about 40 bushels to the acre—a fair crop; corn gave us from 50 to 60 bushels, and hay two tons to the acre. Oats are worth 30c.; corn, 28@30c.; hay, $7. We do not raise many kinds of grain. Dairies and cheese factories are all around us, and dairying is the chief industry among farmers in this part of the world. Raising fat cattle and hogs is no small item, also, in farm economy, as our country furnishes about forty thousand hogs for market, generally of the best sorts, ranging from 150 to 600 pounds per head. They are worth at present about $4.20 per 100 lbs. Of clover seed there are about two bushels to the acre and it is worth about $4 40 per bush. Eggs are selling for 12c. per doz.; roll butter, 18c.; milk is sold to the factories at $1 per 100 lbs. at present; last summer it was down to 45c. per hundred. D. C. W.

IOWA, Fredonia, Louisa Co., Feb. 20.—I raised what were called Kentucky beans in Mason County, Ill., and brought the seed with me and raised them several seasons in Muscatine County, Iowa. The cut and description of Cow peas in the RURAL, answer for my Kentucky bean. They were a grayish-brown. I planted them three beans in a hill; hills six feet apart each way. The vines completely covered the ground. I had about half a bushel too old to eat; these I boiled and fed to my pigs; the old ones would not eat them, but the small ones eat them greedily. H. I. N.

IOWA, Davenport, Feb, 16.—We are having a remarkable winter here. The thermometer has not registered zero since Christmas eve; roads are very bad, and farmers cannot market their last year's crops, so that it is going to make it lively for them when roads get good. G. W. T.

KANSAS, Black Jack, Douglas Co., Feb. 20.—The winter here has been open, and the fruit prospects are promising. We had large crops last season. Corn sells for 20c. now, but has been as high as 25c. A great deal of it is converted into beef and pork. E. O. P.

MICHIGAN, Watson, Allegan Co., Feb. 22.—We have had a very open winter thus far, in this part of the State—between two and three weeks of sleighing in December and the ground almost entirely bare the balance of the time. At the commencement of winter while the sleighing lasted, the business "boom" increased; but since then the roads have been so bad that the times have been rather dull; and as a consequence the prices of farm products have been depressed. They rule about as follows:—wheat, $1.15 to $1 20; buckwheat, 70 to 75c; corn, 38 to 40c; oats, 35 to 37c; barley 100 pounds $1.30; clover seed $4 25 to $4 50; timothy seed $2 00; beans 75c to $1.00; potatoes 25 to 35c; onions 75c to $1 00; butter 12 to 16c per pound; cheese 12 to 14c; eggs 10 to 15c; apples per bushel 75c to $1.00; cranberries per bushel $4 00 to $5.00; beef dressed, 4 to 5c; pork, 4½ to 5c; chickens dressed per pound 6 to 8c; turkeys 6 to 8c. Wheat looks well and a large amount has been sown.—H. E.

MICH., Three Rivers, St. Joseph Co., Feb. 20.—We have had a very open winter here—only very little snow, but lots of rain. Wheat was looking nice last month, but the top is looking yellow now. Wheat is worth $1.15 per bushel; corn runs from 30c. to 40c., according to demands for feed; potatoes, 25c. to 30c. per bushel; eggs, 12½c. per dozen; wood is scarce, and the price varies with the condition of the roads—it has been as high as $4 per cord. S. M. S.

MISS , Okolona, Chickasaw Co., Feb. 20—We are nearly through sowing here, having put in a larger acreage under crops than usual. The country generally is feeling good over the price for cotton, but this very fact is likely to prove fatal to the farming interest by stimulating our people too much to the planting of cotton to the exclusion of other crops A. M.

MO., Oregon, Feb., 12.—Fruit prospect not very promising, but I do hope there are fruit buds enough alive to give a good crop during 1880. We have no snow here this winter and sleighing has been at a discount. Winter wheat of late sowing is killed; that of early sowing looks well, but somewhat injured. Prices of all kinds of grain are down, but most farmers took advantage of good prices some time ago. J. W. M.

NEB., Purple Cane, Dodge, Co., Feb. 19.—Our weather is quite cold even for this time of the year; roads in grand order, stock in fine shape, and farm business going straight on without hindrance. Corn, 16c.; butter, 15c.; eggs, 12c. Spring coming on fast, but every one ready for it. Teams in good order, work enough to prevent them getting soft. No grasshopper eggs in the ground this year, and consequently no danger from them, except we are inundated again as in '74. If we escape this year, it will be the first time in seven years. S. R M.

N. Y., Sherman, Chautauqua Co., Feb. 25.—We have been favored with a remarkably mild winter with very little snow comparatively. Stock appear to be wintering quite well. Farmers are feeling better over the prospect of receiving better prices for dairy produce, as this is almost exclusively a dairy region, with the exception of fruit raising. Apples were a large crop through this section last fall, bringing on the average about $1.25 per barrel. The general belief was if it had not been for the extremely hot and unseasonable weather during gathering time, they would have brought $2 per barrel at least. The scorching weather impaired their keeping qualities very much. Baldwins stood the ordeal the best with me, while my faith in Roxbury Russet (my favorite heretofore) weakened somewhat. Prices of farm produce at present are about as follows: hay, $10 per ton; corn, Western, 60 cents; oats, 40 cents; butter, 20 to 25 cents; eggs, 14 cents per dozen; cheese, 15 to 16 cents. A great many cheese factories and creameries are being built and projected. The Great West, with its cheap, rich and virgin soil, is proving to be the mighty competitor that is crushing the heavily mortgaged farmer of the East. Of those that bought their farms during the high and inflated times during and following the war, a great many are throwing up their farms, and leaving for the frontiers to start life almost anew. Potatoes, which were a splendid crop here last season, are selling at 30 cents per bushel, with no market worth mentioning at that. One of my neighbors, while at the fair last fall, heard of a plan of treating potatoes, when the tops are killed by frost, so as to still secure a good crop. He saw a farmer that had a large patch of potatoes killed entirely to the ground by the heavy frost that visited this section upon the 10th of last June. Everyone knows that when potato tops are killed by frost, the roots will finally throw up new tops and bear lots of little tubers which will amount to but little. This farmer, to try an experiment, set his hired man with horse and plow throwing up ridges of soil, covering up every vestige of stalk, the result of which was he harvested a fine crop of potatoes. A way to stop an unruly cow or steer from jumping—nail a common horseshoe to one forward foot. This prevents the hoof from spreading, and consequently renders the animal unable to spring. This is claimed to be very effectual. It often happens that the best cow of a dairy will get into the habit of jumping into the meadow or corn field when nobody is around to drive her out. I think if we farmers would write about new ways of doing things, that come under our notice, we could be a great help to one another. A. E. B.

N. C., Warren Co., Feb. 18—Two inches of snow on the 2d. Good weather for plowing all winter; considerable has been done. Wheat and rye look well. Sowing oats is now the order of the day. Saw first peach-bloom today. Prices—corn, 80c.; oats, 75c.; cotton, 12c.; eggs, 12½c.; tobacco, 2c. to 75c.; fodder, $1 per hundred; cow peas, $1 25. M. B. P.

OHIO, Hillsboro, Highland Co., Feb. 18.—We have had an open winter and plenty of rain, only two snows—the last on the 4th inst. was eight inches on a level; next day the mercury stood five degrees above zero, the coldest day this winter, but on the 6th it rained again and has rained every few days since. Wheat looks well, almost too rank for this season of the year; a larger acreage sown than last year. Wheat is worth $1.15; corn, 40c.; oats, 35c.; potatoes, 25@50c.; cattle $2 50@$3: hogs, $3.75@$4, nearly all sold. Hay, $10@$12 per ton; apples, $1@$1.50 per bushel—scarce; eggs, 10c.; butter, 16c. We have monthly stock sales on the first Saturday of the month; at the last sale about 100 horses and mules were sold to Cincinnati and Eastern buyers at prices ranging from $50 to $100. Fields and mud roads are very soft, and turnpikes are cut through in many places.

UTAH, Salt Lake City, Feb. 15.—I have just returned from a trip through the northern counties of this Territory, on business for the Salt Lake Herald and Utah Farmer. In my travels wherever I found the RURAL I heard it well spoken of. It certainly is the BEST and the CHEAPEST agricultural paper published. The winter has been extremely cold and an unusual amount of snow has fallen, and there is a big demand for even wheat straw to feed cattle in the north where I have traveled, and a great many cattle have died of cold and hunger. The same causes are almost certain to kill great numbers of sheep all through the Territory, as very few sheep raisers in the South and West take the precaution to provide any kind of feed or shelter for their flocks during the winter. Several years ago thousands of sheep starved to death on account of an unusually severe winter. Some sheep raisers and sheep herders lost almost every head—a shock that even to the present day they have not recovered from. The great excitement now in Utah is the digging of canals to take out water on to the vacant land that private enterprise has not been able to handle. A bill is before the Legislature here to charter and allow Salt Lake City to take out the Jordan River (which carries the water of the Utah Lake into the Salt Lake) on to the "bench" land east and south of this city; and also to issue bonds, etc. But there is considerable feeling against the enterprise because the land south of the ditch has been "filed on" by wealthy men, who are trying to use the city funds and credit for their private interests, and because on this account, the canal will be no advantage to the majority of the inhabitants of the city proper who are very heavily taxed already. What the conclusion will be I am unable to guess, but if the land below the canal could be put into the hands of the laboring people to build and make improvements on it, the projected canal would certainly be a very good move; but if it is to enrich speculators, it will no doubt be cried down by the people of the city. There is another large canal being taken out of the Logan River in Cache county; and also one from the Snake River, in the south of Idaho, which is being opened by the people of Cache county for a stock company, and will be used for mining and agricultural purposes. If there was a clause in the Land laws, allowing large companies to take out canals where private people were unable to manage them, but allowing the company to hold a portion of the land adjoining as a subsidy, and the balance to be open to homestead in 40 or 80-acre claims, and allowing these homesteaders to buy water-right thereto at a certain price or at a certain percentage above the cost of construction, it would be a great advantage to a great many people, and to the government.

The grain trade in this Territory is dull just now, but people are holding on to their produce with the hope that there will be a rise in the market in the spring; but the merchants in the north of the Territory have crowded the prices down since the deep snows and the severe winter put an end to freighting. Wheat fell from 85 cts. to 65 cts. in Cache county, and other grain dropped in about the same proportion, while the prices have risen somewhat in the center and southern portions of the Territory. On the Sevier wheat now brings $1, and is very scarce at that. There is a very great amount of snow in the mountains, and it is feared that damaging floods will occur in the vicinity of large streams, and the people are making arrangements to protect their dams and water-gates from being carried away by the high waters. Farmers who have been short of water in times gone by, are happy in the belief that they will soon have plenty, and consumers are buying breadstuffs in small quantities, hoping that food will be cheaper when spring opens and the farmers can haul their grain to market. W. M. C.

The Querist.

ANSWERS TO CORRESPONDENTS.

Barnyard Manure, Gypsum and Tan-bark.

W. A. L., Brooklyn, N. Y., owns a farm that has been run down by continued cropping. The soil is a sandy loam. He can buy barnyard manure for $1 per two-horse load, gypsum at $8 per ton, and spent tan bark at five cents a bushel. He is thinking of buying the manure to plow under and then top-dress with gypsum, and asks, if tan bark is worth five cents per bushel, and if plaster loses its strength by lying under cover.

ANS.—We would purchase all the barnyard manure that could be afforded, at the price named. At $1 a ton, the nitrogen in half-rotted manure will cost six cents a pound, the potash two cents and the phosphoric acid three cents. No other fertilizer can be procured so cheaply as that. Tan bark is worth nothing in a fresh condition and is very difficult to rot. If burned to ashes it may be worth about as much as the labor of burning, so that it would be dear at five cents a load. Plaster is as unchangeable as so much sand, so long as it is kept dry or undissolved. It is simply ground gypsum which is a permanent rock. Gypsum is a valuable fertilizer in some cases; what these cases are no one can tell until he has tried. All that is known of its action is that it *very often* has a good effect on clover and corn on some soils. It is a cheap article as but 80 to 100 pounds per acre are used, and a trial will cost but little; we should expect but little effect from it until the soil has been improved by using barnyard manure.

Clapp's Favorite Pear.

B. A., East Deering, Me., set out, last spring, some 50 standard Pears, selecting Clapp's Favorite by the advice of his nurseryman, who promised that they would be vigorous, prodigious bearers, and delicious for eating—fully equal to Bartlett. Having seen no mention of this variety in the numerous reports of Pomological Societies in the RURAL, he anxiously asks for some information about it. At present his trees are doing extremely well.

ANS.—Clapp's Favorite is thought to be a cross between Bartlett and Flemish Beauty. It ripens a week or ten days before the Bartlett. It is an excellent pear, juicy and melting, though not of the first quality. It sometimes rots at the core. Maine, we believe, has not reported that it thrives well, for what reason we do not know. Our correspondent is mistaken. The RURAL has mentioned it many times within the past two years. The tree is everywhere, so far as we know, strong and vigorous.

Removing the "After-Birth" of a Cow.

W. S. M., Benderville, Pa., asks what shall be done to a cow that retains her after-birth for several days after calving; is it safe to have it removed, and if so, how should the operation be done.

ANS.—Should a cow not *clean* within two days, it should be removed thus:—take a towel in the left hand and with it grasp the placenta hanging from the vagina, then with the right hand, *well oiled*, follow the placenta into the uterus and *unbutton gently*—no force is required. It may be held by from 10 to 60 cotyledons or buttons, and requires considerable patience to do it right—afterwards with a syringe wash out the uterus with a weak solution of carbolic acid and water (1 to 40), and if the animal is feverish give ½ to 1 pound of Epsom salts, according to size of cow,

Lice in Sheep.

G. W. S., Falls City, Neb., asks how to get rid of lice on sheep.

ANS.—These are generally found on the side of the sheep's neck and the inner parts of the thighs and arms. They cause much itching by which the sheep is impelled to thrust its head between the bars of gates or fences, or to kick and stamp. Occasionally sheep are found strangled by becoming fixed in their attempts to rub their necks, or with their legs broken in their attempts to rub them upon rails. Lice are rarely found on yolky-wooled sheep or upon those that are dipped regularly. To rub the infested parts with some of the following preparation is generally an easy remedy: Lard one pound, flowers of sulphur, two ounces, creosote, 20 drops; one pint of oil may be substituted for the lard.

Raspberries for Drying and Marketing.

C. E., Sinclairsville, N. Y., is thinking of setting out a Black Raspberry patch, and asks which varieties are likely to prove good market berries and good for drying, especially for the latter purpose.

ANS.—The best Raspberries for the purposes are Doolittle's Improved and Mammoth Cluster. These are both very prolific and "waste" less in drying than others, the Mammoth being

preferable of the two for drying or market, *except* when early berries are an object. The Gregg is a large, fine, jet-black and profitable variety for market, and is recommended for drying by those who have put it to this purpose at the West. The objection to Davidson's Thornless is that it is too uncertain a cropper.

Miscellaneous.

Mrs. G. M. H., Helm's Store, Va., has a Camellia that refuses to bloom; the buds fall off and the leaves have little yellow spots on them; in short, it is sick and she is afraid it is going to die; In this dilemma he comes to us for a prescription.

ANS.—The first duty of a doctor when called upon to prescribe for a patient is to ascertain the cause of the trouble and, if possible, remove this cause when discovered. We would ask if the plant has received correct treatment. Are there no scales on it? Has it at any time lately been exposed to a sudden snap of cold, or is the room perhaps too warm? It should not be over 50 deg. Fah. Is the plant properly drained, and has it received neither too little nor too much water? Or maybe the room has been filled with smoke for some hours? Any of these causes may weaken the plant and make it drop the buds. In the beginning of April it will be warm enough to remove it to the open air. Then give it fresh soil, (a mixture of equal parts of good turfy loam and peat with a liberal addition of sharp sand, is best) and place it in a cool, shaded place. We trust the patient will revive.

F. C. D., Boletourt Co., Va., asks 1, whether the present firm of Briggs Bro's. & Co., Rochester, N. Y., is reliable; 2, what is the best commercial fertilizer to insure good fruit on a peach orchard five years old on rather poor sandy soil; 3, which would be preferable—pure raw bone and wood ashes, or raw bone and potash in its most available form, say muriate of potash; 4, the best proportion for mixing the above, the proper quantity to the acre and the right time to apply it; 5, where can potash be had pure and cheap; 6, what is the composition of soil that produces healthy trees and fine fruit; 7, how do successful Delaware peach growers on sandy soil fertilize their orchards without manure.

ANS.—The *successors* to Briggs Bro's. & Co., are reported responsible; the old firm failed a few years ago. 2 and 3. Ashes or sulphate of potash and bone. 4. At the rate of 50 bushels of unleached ashes and 300 pounds of bone flour or 200 pounds of sulphate of potash in place of the ashes. For your climate, the present is a good time to apply. 5. Of any of the firms referred to in this week's RURAL NEW-YORKER. 6. That depends upon what fruits are desired. The Pear and Plum *e. g.*, need more potash than the Cherry and Apple. 7. We do not know.

D. L. I., Ausgusta, Ark., says that on the banks of sloughs running through low lands there is a deposit of black mud which comes in hard lumps like clay; and he asks whether, if this be composted with cotton-seed meal and hard-wood ashes, it would be of value for gardens, and if composted in summer, whether it would be fit for use in the following spring, and especially whether this is the "muck" referred to in the History of a Poor Farm.

ANS.—Muck varies in its composition. (See the article by Professor Caldwell in Rural of Feb. 14, page 102). Unquestionably, if composted as here suggested it will be of value. Yes, it will be in condition to use in the spring if thus composted. Such a mixture would be always beneficial, although a longer delay would sometimes be advantageous. It depends, however, on the character of the muck. A great deal of useful and reliable information on the subject of muck, is given in Professor Johnson's analyses at the Connecticut Experiment Station, published on this page.

S. B. D., Fort Madison, Ia., has a horse that has bruised its leg by kicking against the stall, causing a lump on the bone below the gambrel joint. The leg swells at night, and he inquires how he should treat it.

ANS.—Place the horse in a large stall so that there is nothing for him to kick at. If the enlargement is recent, clip the hair short and apply the following blister rubbed into the skin, smearing the leg beneath with sweet oil to protect it:—Cantharides, half an ounce; mercury, one drachm; lard, four ounces. Be sure that the animal is kept tied so that he shall be unable to get his teeth on the blistered part, and after the blister dries, wash with warm water and soap to remove the scabs. If the enlargement is old and bony, we fear that it is permanent; yet would advise that a good veterinary surgeon be called to apply the actual cautery.

W. M. N., Darien, Conn., has a seedling Grape which he would like to improve by grafting, and he asks how it should be done and when.

ANS.—The grafting should be done immediately, if possible before the sap begins to flow. This method of ennobling the Grape is but seldom resorted to because the union of the clon and stock will always be imperfect and sometimes fail entirely. The stock should be grafted on the portion below ground. Cleft-grafting may in this case be employed to advantage, as the clon can be held more firmly in position. Cut the clon from a branch of last year's growth and let it retain two well developed buds. Proceed with the operation as in grafting apple stocks, and when finished bury the plant so deep that the upper bud on the clon will be level with the surface soil.

C. M., Collinville, Ont., asks, 1, whether the Rice pop-corn mentioned in J. M. Thorburn & Co.'s catalogue is the Rice or Egyptian corn described as grown in Kansas; 2, as about half the peas thereabouts are weevil-eaten, he remarks that unless such peas germinated, they'd have very few peas in his neighborhood, and he's going to experiment with 50 of them this coming spring; 3, the name of some lettuce seed sent us for trial last spring.

ANS.—1. We do not find Rice pop-corn in the catalogue mentioned. 2. It is, for the most part, those not weevil-eaten that grow. Try the experiment. Sow fifty weevil-eaten peas and tell us how many germinate. 3. The lettuce is Green Cos, if we are not mistaken in the kind you sent us.

G. T. F., Whippany, N. J., asks, 1, how to make a printer's "ink roller"; 2, how to make the gum used on envelops, postage stamps, etc.

ANS.—Printers' rollers are made of glue and molasses—a pint of molasses to a pound of glue (best) and boiled in a glue kettle until sufficiently thick. It takes from half to a whole day to boil the glue and molasses sufficiently for a roller. 2, A good mucilage is a solution of gums tragacanth and acacia. We don't know whether this is precisely what is used on envelops and stamps, but it is just about as good.

O. M. T., Orland, Ind., has noticed that there is a difference in price between white and red onions, the white taking the laurels; he is thinking of going into raising onions and asks if the red are more productive than the white ones.

ANS.—White onions command the highest price, because they are handsomer and smaller, and consequently better suited to pickling. The Yellow Danvers is especially a favorite. The red are the most productive.

I. H., West Granby, Conn., asks 1, where he can get Blount's Prolific corn; 2 which is the best work on cryptogamic botany.

ANS—.1, Blount's Prolific corn is now sold by many seedsmen. J. M. Thornborn & Co., 15 John St. N. Y. advertise it. 2. The best general work is perhaps J. M. Berkeley's Introduction to Cryptogamic Botany. It is an English work and can be had through bookstores.

W. B., North Parma, N. Y., asks how to plant the Lily of the Valley. He sent to the seedsman for clumps of this plant, but received only some "pips."

ANS.—Prepare a bed in a shaded place where the ground is not exhausted by large trees, and plant the roots in rows six inches apart, each way, and three inches deep. In the course of a year they will entirely fill the bed.

A Constant Reader, Worthington, Mass.,—asks, 1, if pear clons will succeed on apple stock; 2, will plum and cherry clons cleft-grafted live; 3, at what season should the cherry be grafted.

ANS.—1, Yes, for two or three years—then fail. 2, Yes. It is not the best way, however, See Rural Feb. 14, p. 114. 3, Early in spring, before the buds have swollen.

H. B., Greenville, S. C., asks for the best method of keeping moles out of the peanut patch.

ANS.—For seven years past we have endeavored to keep moles away from our garden without any succes at all adequate to the time and trouble involved. Who has been more successful—and how?

H. B., Greenville, S. C., asks which is the best way of planting corn—in hills or drills.

ANS.—The largest crop of corn we have ever raised was cultivated flat—that is, no hills were made about the plants, and the corn was sown in drills about 18 inches apart—the drills 3½ feet apart. It is more trouble to cultivate in this way.

J. M. W. L., Marshall Hall, Md., asks what would be the probability of success in planting an old peach orchard with other fruit—the land yields 50 bushels of corn and is now in clover.

ANS.—Any land that will produce 50 bushels of shelled corn per acre, will do well if planted to any fruit suited to your climate.

E. L. C., Coopersville, Mich., sends a plant for name. It is in a hanging basket; blooms profusely in winter, but shows only an occasional flower during summer. It is variegated, some of the stems being yellow and others green.

ANS.—It is Peristrophe or Justicia angustifolia variegata.

G. C. B., North Rochester, Mass., asks how to prevent a horse from falling back when hitched.

ANS.—Such animals are dangerous and should be put in the hands of a good trainer (if young), or sold to some one who prides himself on his ability to cure such vices.

J. E. G., Berlin, Wis., asks where and at what price can Defiance wheat be had, as he wishes to try this new spring sort.

ANS.—Mr. Pringle, of Charlotte, Vt., is the originator and B. K. Bliss & Sons, of this city are the introducers. The price is, one pound, 40 cents, $2 per peck; $7 per bushel.

A Subscriber inquires where the Sibley level mentioned in an article by Prof. Carpenter can be purchased.

ANS.—This level was mounted by Mr. Sibley, and is now manufactured by A. J. Bicknell, 27 Warren St., New York. Its cost is $10. The instrument has no telescope.

W. H. W., Cranford, N. J., asks where can he get a hand drill and cultivator combined.

ANS.—Matthews' Drill and Cultivator, Everett & Small, Boston, Mass.; Planet Drill and Cultivator, S. L. Allen & Co., Phila., Pa.; Monitor Drill and Cultivator, Newburyport, Mass.

S. F. B., Buckeye Center, Ill., asks if Roses from seeds produce the same flowers as to color.

ANS.—They cannot be trusted to do so. Other questions will be answered under Domestic Economy.

A. R., asks where he can get Havana tobacco seed.

ANS.—Tobacco seed of all kinds will be found in many of the catalogues noticed in these columns. Price about six dollars per pound.

J. B., Erwin, East Tenn, sends a small stone and asks what it is and if of any value.

ANS.—It is crystalized carbonate of lime, or limestone, and is of no value.

G. M. F., Bazine, Kan., sends a mineral and wants to know what it is.

ANS.—It, too, is crystalized carbonate of lime. Clay and other impurities make it mottled.

J. C. D.—Probably an Ipomœa of some kind. We shall plant seeds and let you know in due time.

TO WHOM IT MAY CONCERN.—We have received a considerable number of inquiries about the reliability and business standing of several firms in different parts of the country; but the full names and addresses of the inquirers not having been given, their questions went promptly into the waste-paper basket. It costs us time, trouble and cash to hunt up all such information and the least our inquirers can do, is to comply with the regulations which, for very good reasons, we have established with regard to the conditions on which information is given in this Department. ONCE MORE, THEN, *all* questions to secure attention, must be accompanied by the FULL name and address of the inquirer, not for publication, but because it is often more satisfactory to us to answer through the mail, and for other reasons.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, FEB. 28th.

F. S. H., a very ingenious contrivance.—S. A. M.—R. G.—G. A. G., Jr.—W. B. B.—J. A. J.—H. T. R.—A. B. A.—A. DeG.—J. P. R.—W. F.—M. L. M.—A. B.—D. W.—A. C. M. F.—A. P. R.—T. D. K.—Mrs. J. W.—J. & B.—T. W.—M. U. N.—J. A.—E. M. W.—W. J. B.—G. C. L.—A. T.—A. R. A.—Mrs. W. O. A.—A. B. A.—J. C. A.—A. W.—J. K.—W. I. C.—G. F. F.—C. T. L.—K. T.—W. G. L. D.—O. D. L. D.—E. V. O'B.—J. N. L. B.—W. W. T.—L. O. H.—F. K. M.—G. W. S.—F. A. G.—J. C. D.—T. D. C.—H. C. A., Buchanan. We should be pleased to hear from E. G. S.—A. E. B.—C. M. S., thanks.—L. A. S.—N. J. S.—R. G., Jr.—W. C.—S. M. S.—G. W. F.—S. E. J.—H. N. L.—Mrs. I. P. R, thanks.—M. B. P.—E. W.—K. T. D.—L. A. R.—J. E. M.—J. McC.—M. E. A.—S. L. I.—J. W. M.—D. O.—F. D C.—J. K.—H. H.—S. K.—G W. & G. H. H.—J. G.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN 37.—FEB. 14, 1880.

Fresh-Water Sediments.

	314 East Wilton.	322 Essex.	334 Woodstock.
Moisture	34.44	5.75	4.77
*Organic and Volatile matters.	2.78	8.11*	7.31*
Oxides of iron and alumina		5.69	3.10
Lime		.67	trace
Magnesia		.88	trace
Potash	3.58	.18	none
Soda		.06	.05
Phosphoric acid		.16	trace
Sulphuric acid		.46	.06
Sand, Silica, etc, insoluble in acid	59.20	78.04	84.71
	100.00	100.00	100.00
*Containing Nitrogen	..	0.29	0.15

314 was sent by D. H. Van Hoosear, Secretary East Wilton Farmers' Club, in August last, described as "deposit from the bottom of a pond hole." The partial analysis showed such large proportions of water and insoluble matters, as to lead to the conclusion that the deposit would have little more value as a fertilizer than a good soil.

The sample 322 whose analysis is next given was sent, labeled dried mud, by Mr. J. I. Stevens, of Essex, who states that "its effect as a top-dressing for lawns and also on mowing land, has proved greater for good than anything I have ever seen. On many crops it has given me better results than $45 crop foods I have purchased. This mud is under water the year round."

The analysis agrees remarkably with that of pond mud from North Woodstock, mentioned in the Station Report for 1877. It contains, however, a little more phosphates and sulphates. In reply to Mr. Stevens' inquiries, was written as follows:

"The dried mud contains every element of plant-food in about the proportions that are usually present in stable manure, or in good composts. Like the fertilizers just named, i contains but about 3 per cent. of immediately available plant-food; the other 97 per cent. being water, sand, or clay, vegetable matters, oxides of iron and alumina, not differing in character or fertilizing value, so far as is known, from the same substances as they make up the bulk of ordinary soils. Unlike stable manure and ordinary composts, the mud contains a considerable amount of sulphuric acid in the form of sulphate of lime. The mud contains 0.46 per cent. sulphuric acid, while stable manure has 0.10 per cent. or less. It is quite likely that this fact may have made the mud so useful in your experience."

Doubtless a pretty liberal application of the mud would be required to produce the striking results Mr. Stevens observed.

In a recent note Mr. Stevens states that the mud sent by him was from a cove or pocket from the Connecticut River; the sediment is brought down in the spring freshets by the Connecticut, the cove being connected with the river by a narrow channel. There is no current in it, and suspended matters are deposited at such a rate as to have reduced the depth of the water three feet since the remembrance of elderly people. There is but little matter washed in from the surrounding hills. The river at this point contains salt from the setting back of the tide during only four to six weeks annually. Some entire years there is no salt at all in the river at this point. The quality of the sample sent was not up to the average. It should have been taken from the middle of the cove.

Mr. Stevens also remarks; "Our mill ponds a few miles back from the river, contain a rich, black mud, quite deep and with a very strong smell. It has been tried on various crops, but kills everything. After being hauled and dried it turns from black to white, and puckers the mouth like alum."

The astringency here referred to is due to soluble salts of iron or alumina. Composting with a small proportion of slaked lime will decompose these salts and render the black mud a safe and serviceable application.

Sample 334 received from S. Palmer, Woodstock, consists almost entirely of sand and silica, with the merest traces of fertilizing elements. Much of the silica exists in the form of the skeletons or shields of microscopic infusorial plants which are common in the water or swamps and bogs. From its light-gray color it might be mistaken for shell marl, but on mixing with acids, like vinegar, it effervesces very slightly, containing but a trace of carbonate of lime.

Peat or Swamp Muck.

Three samples sent by G. M. Dennison, Esq., of New London, are from the town of Old Saybrook.

335 and 341 from the farm of Mr. Dennison, 342 is traversed by the Connecticut Valley Railroad, near Mr. Dennison's land.

	335	341	342
Moisture	85.25	81.40	87.22
*Organic and volatile matter	12.52	12.49	10.42
Ash	2.23	6.11	2.36
	100.00	100.00	100.00
*Containing nitrogen	.43	.42	.27

Reckoned in the dry state the composition is as follows:

	335	341	342
Organic and volatile	84.67	67.08	81.53
Ash	15.13	32.92	18.47
	100.00	100.00	100.00
Nitrogen	2.91	2.24	2.11

The dry swamp muck is thus seen to contain 2 to 3 per cent. of nitrogen, which, under the action of an alkali like lime or ammonia, may become available as plant-food. The organic matter itself under favorable conditions serves to liberate lime, potash, etc., from the mineral matters of the soil.

There can be no doubt that the application of this swamp muck, especially to poor, light soils, would be very serviceable. Evidently, however, the large proportion of water which the fresh muck contains makes it a nice point to decide how much can be spent upon handling it without consuming the profit of application. The proper mode of using swamp muck is to throw it out where it will drain and dry for some months, during frosty weather, and to employ the weathered muck as an absorbent in the stables or barn-yard, or to compost it with lime, fish or animal matters yielding ammonia by their decomposition.

S. W. JOHNSON, *Director.*

THE
RURAL NEW-YORKER.
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CONDUCTED BY
ELBERT S. CARMAN.

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SATURDAY, MARCH 6, 1880.

REMOVAL.

On and after May 1st of this year the Rural New-Yorker will occupy its new quarters, No. 34 Park Row, corner of Beekman Street. We are glad, indeed, to leave our present gloomy building—to which we have been held by a long lease—for one that, being half windows, receivesa full share of air, light, and sunshine. The location is one of the most prominent in this city, being diagonally opposite the City Hall Park—directly opposite the Post-office on Park Row and the World building on Beekman Street. Such a location is in keeping with the status of the Rural New-Yorker, which, whether its financial standing, its influence, or its actual *paid-up* circulation, one or all, is considered, ranks to-day as the first *landcultural* journal of its class in America.

NOTICE.

is now given that all of our yearly subscribers who, having applied for our seeds and sent the required amount of postage stamps, shall not have received them by the 13th inst, will please notify us to that effect. The Raspberries will be sent as the weather permits. Subscribers will notify us of the non-receipt of these later.

Several subscribers who take the Rural with the Inter-Ocean have sent us stamps for plants and seeds. We would state that our arrangements with the Inter-Ocean are such that all who forward their subscriptions through that journal are not required to pay postage on our "Free Plant and Seed Distribution."

For the last time during the present subscription season we announce that our Premium Lists, Plant and Seed Supplements, Posters and specimen copies will be sent free to all applicants. Those renewing their subscriptions would promote the interests of the Rural New-Yorker if they would at the same time forward the subscription of a friend or neighbor.

We trust that the Strawberry Chapter of this week's Rural New-Yorker will give timely and all needed information respecting the preparation of the ground, culture, varieties, etc. There are many new sorts of good promise not mentioned; but why mention them so long as they have not been tested over a wide range of country. There are also many old sorts not mentioned. Full lists of these will be found in the catalogues announced in our advertising columns, and those to which special attention has been called by editorial notes elsewhere. Half of one's success in small fruit culture depends upon a selection of kinds adapted to the soil and climate. The Rural has done all it could thus to assist its readers in a pursuit full of pleasure and profit. Next week we shall place before them a somewhat exhaustive chapter upon the Raspberry.

Farmers, is it not worth your while to experiment more than you have done? Suppose upon six little plots you sow six different kinds of beets and find that one of the six yields more and keeps better than the others. Suppose you plant six different varieties of corn on little plots and find that one variety will yield more than the others. Suppose you sow different fertilizers on separate little plots—ashes or potash salts for potash; dissolved bone-black for phosphoric acid; nitrate of soda for nitrogen, etc.—and you find that oats, spring wheat, potatoes or any other crop thrive notably better on one plot than on the others, will not such experiments pay you? Years ago it was by such experiments we were induced to sow Clawson wheat. It was then known only to a few. Years ago we paid three dollars for a pound of Early Rose potatoes, and we raised this potato for two years before its great value became generally known. So, latterly we have raised Beauty of Hebron potato, Mold's Ennobled Oats, the Kinver Mangel and Doura. It has paid *us* to experiment. We respectfully submit that it will pay *you*. Spring is upon us; there is no time for delay. Prepare your test plots and select your seeds!

Last Thursday, Feb. 26th, a bill was introduced into the House of Representatives of this State, by Mr. Skinner, for the establishment of an agricultural Experiment Station, with the object of promoting agriculture in its various branches by scientific investigation and experiment. The bill provides that the station shall be under the control of a Board composed of a member from each of the different farmers' clubs of the State and one from the Western New York Horticultural Society, and the sum of $8,000 is appropriated for its maintenance. The Rural New-Yorker has frequently advocated the establishment of an agricultural experiment station, not in this State only, but in every State in the Union, and more especially in all the older-settled States. One of the chief and most immediately beneficial objects of such an institution would be to lessen or prevent frauds in the sale of commercial fertilizers, and in the old States the need of these is much greater and their sale far more extensive than in the newer States, hence the greater the benefits there of a reliable check upon fraudulent dealers in these wares. Wherever such stations have been already established, notably in Connecticut and North Carolina, they have been highly beneficial, mainly, of course, to the farmers of the States for whose advantage they have been founded, but greatly also to those of the entire country; for in these days of multitudinous agricultural periodicals an agricultural truth discovered or well elucidated in one part of the country, soon becomes the common property of the whole.

ALL TOGETHER!

When, about a twelvemonth ago, the British Government placed restrictions on the importation of live cattle from this country, on the ground that pleuro-pneumonia existed among some of our herds, many of the Eastern agricultural journals insisted either that no trace of the disease could be found in the United States, or that the type which was proving disastrous in some sections differed from that which was committing havoc in Europe, in that it was non-contagious and therefore not dangerous to the health of our cattle generally. Most of the Western papers of the same class either followed the example of their skeptical Eastern contemporaries and boldly denied the existence of the malady, or, conceding that a few cases might be found here and there in the Atlantic States, parsimoniously insisted that the whole expense of stamping out the plague should be borne by the States in which it was prevalent. The Rural New-Yorker, obfuscated by no short-sighted policy of expediency, regretfully acknowledged the existence of a few scattered instances of the malady in the States east of the Alleghanies, and fully awake to the danger to which the vast cattle interests of the entire country would be exposed from its continuance, strongly urged that effectual measures should be taken for its prompt suppression, both by the States which suffered from its ravages, for the safety of their own stock; and by the National Government, for the protection of the herds of the whole country to which its presence among us was a standing menace.

Our incredulous Eastern contemporaries have since opened their eyes to the existence of the plague, and our economical Western friends no longer insist that the danger to their own vast herds shall be averted solely at the cost of the few States that are already heavy sufferers from its presence within their borders. We trust, therefore, that all parties will offer a hearty support to the bill introduced last Tuesday into the Lower House of Congress for the organization of a National Board of Commissioners, whose duty it shall be to prevent the spread of pleuro-pneumonia and other contagious diseases among our domestic animals, and to stamp out all such plagues wherever they may make their appearance. Such a measure is urgently needed by the West, the Middle States and the South as a safeguard for their untainted herds, as well as by the East for the prompt suppression of so deadly a source of disaster among their cattle. Moreover, every State, county and township from the Atlantic to the Pacific and from Canada to the Gulf, is deeply interested in the eradication of hog cholera and the other contagious stock maladies whose suppression it will be the duty of the Commissioners to devise. Let all, therefore, join earnestly and unitedly in support of the establishment of this much-needed organization.

THE MAPLE SUGAR AND SIRUP INDUSTRY.

This is an industry of considerable, though not vast, importance in this country. It is limited in its extent of area by climatic and other causes, and in its increase, even in that area, by the slow growth of the trees and the difficulty of rearing orchards of them. The part of our country on which the Sugar Maple grows naturally lies almost wholly north of the 40th parallel of latitude and chiefly east of the west line of Minnesota, and only very limited portions of this area have such soil as to produce enough Maple trees to make the manufacture of sirup and sugar profitable. The chief of these localities are Vermont, parts of New York, a dozen or more counties in northeastern Ohio, and considerable portions of northern Michigan, Wisconsin and Minnesota. Further, Maples are not likely to be propagated and orchards reared; for though they thrive splendidly when planted on many sandy and gravelly loams where they do not grow spontaneously, yet it takes nearly fifty years from the seed to rear trees large enough to tap profitably. Most men are not willing to wait so long for returns, and the land is probably worth more for other purposes.

But though this industry is thus limited and circumscribed, there is no reason why it should not be developed to its full capacity in quantity and quality where Nature furnishes the facilities; that is, trees in abundance and suitable climate. Yet such is not the case. In Vermont the industry is probably developed to two-thirds of its full capacity, both in quantity and quality; in New York to perhaps half of both; in Ohio to less than half, especially in quality; while in the other States almost no attention, as a rule, is paid to quality, and probably not a quarter of the quantity is produced that might be.

As for quantity, there is certainly no good reason why the maximum should not be produced. The trees are already on the farms, and may as well be tapped as not. The work comes at a season when little other farm-work can be done by men or teams. The wood for boiling, with good apparatus, need not cost for average localities more than a cent for each pound of sugar, since much rubbish from old fences and fallen wasting timber can be used.

But quality is the great point. Maple sugar, as a simple sweet, can probably never compete in price with cane sugars or sorghum sugars—if the latter prove a success. For cooking purposes the peculiar flavor of the maple is a damage rather than an advantage. Not so, however, with the sirup. This is used chiefly with buckwheat or other pan-cakes, or as a simple delicacy, like honey, with warm biscuits or with bread and butter. And if made of the very best quality, there is no possible sweet with so delicate and delicious a flavor. It is fit to have been the nectar of the gods, and it is universally appreciated by men when once tasted in its perfection.

Now, we think it a waste of good material to make maple sap into sugar, and use it for ordinary cooking. We think the entire possible maple product of the United States, if made into sirup of the very best quality, and pushed through the channels of trade, like our canned goods, could be used as a delicacy and at a high price. But it would need to be strictly prime, soldered, while hot, in quart and half-gallon and gallon cans, so as to retain flavor perfectly, and then kept on sale in our groceries all over the land, like honey or canned goods.

But how can such quality be attained? Only by great care and the use of the best apparatus, fixtures and vessels. From first to last the sap should touch nothing but tin or galvanized iron, and it should be boiled in the Cook's patent evaporator. Here has always been one great obstacle—these evaporators have been so very costly. The profits to the one Cincinnati firm that holds the monopoly of the United States, have been enormous. We happen to know that that firm has charged $25 as its lowest price for the right to manufacture *a single evaporator*. Hence it is but fair to assume that that has been their profit *on the patent alone*, at least on the larger sizes of evaporators. If Congress, however, now righteously refuses to extend *again* a patent for whose *second* extension no reason can be given except the continuance of a great monopoly, and the further enrichment of a firm already an immense one—we say if Congress refuses a second extension of that patent the price of these evaporators will be at once immensely reduced. There will then be no valid reason why one of them should not be found in every sugar camp, and the quality of the maple product be at once vastly improved. The evaporator is an absolute necessity for sorghum. It is an immense improvement for maple.

Then, if some of our huge fruit-canning establishments, always idle in April, would buy and can immense quantities of only the very choicest maple sirup or "maple honey," and push it through the channels of trade just as they do their other canned goods, the problem would be solved. Farmers would be forced to make the best, and would get a fair price. The canners would make a fair profit from their otherwise idle establisments, and the consumers could always find the best "maple honey" at their grocers', and the whole maple product of the country would be used as a rare delicacy, instead of being degraded to a simple sweetener of cakes and pastry.

BREVITIES.

The Raspberry will be treated very fully next week.

Mr. Batcham writes us that he never felt so encouraged about agricultural progress in Ohio as at this time.

We believe that Mr. Wm. Crozier was the first to introduce Webb's New Kinver Mangel in this country, illustrated on our first page two weeks ago.

Turer is a new Pelargonium (Geranium) of which we think a good deal. It is called A. Baltet. The flowers are double, pure white, and last a long time. It is admirable for bouquets.

Mr. G. W. Fuller, (of Minnesota) tells us in a late communication that a Clapp,s Favorite Pear on mountain ash roots, has stood their climate for eight or nine years without injury, while Flemish Beauty on pear stock, has been top-killed more than once during this time.

According to experiments of the Ontario School of Agriculture (Canada), by adding $5.40 worth of bone dust to farmyard manure the crop of wheat was increased $7.20 per acre. By adding nitrate of soda the value of the crop was increased $10 00. Lucerne is deemed profitable, having a season from April to October.

The Dublin Farmers' Gazette says that Irish farmers for some years past have used large quantities of artificial manure on credit. That source of fertility is now shut out because the local merchants who supplied the manures will no longer give credit. The Gazette suggests it would have been well if reductions of rent had been made in the shape of genuine high-class manure instead of money.

Farmers, we tell you, we *advise* you, we beg of you to plant a bed of Strawberries the coming spring, if your garden is not already supplied with this delicious little fruit. Have you no time? Prepare a plot four feet square, make the ground rich and mellow. Buy or beg one dozen plants of Sharpless, Charles Downing or others spoken of on our first page. If the second year you do not enlarge the plot and *find* time to take care of it, the Rural New-Yorker hereby agrees to pay you for your lost time.

Our advertising columns for the next several months will, we think, be found of unusual interest to our readers. They will show for themselves that we exercise all possible care to exclude frauds and all announcements calculated to deceive. We would thank our readers if they would promptly inform us of any unfair dealings on the part of those whose advertisements are presented. We hold ourselves under obligations to investigate such complaints and to expose those against whom they are ascertained to be well founded.

Mr. G. W. Strong, of Davenport, Iowa, who won 2d prize of the Rural Corn Premiums, sends us the following acknowledgment of its receipt. The premium consists of a Feed and Meal Mill, valued at $65, and contributed by the Challenge Mill Co., of Batavia, Ill.

Davenport, Iowa, Feb. 16, 1880.

Editors Rural New-Yorker:

"I hope you will excuse me for not notifying you several days ago that I had received the feed mill, all in good order, and it is a splendid-looking mill. I have not run it any yet, but shall in a few days. There are several of the same kind of mills in use here, and they do good work. Please accept my thanks for the liberal premium, and in anything I can do to help the circulation of the Rural you can command me, for I think it is the best agricultural paper in the world."

Mr. A. Thwing of Chardon, O., the winner of premium No. 7, also acknowledges the receipt of his prize as follows:—

Eds. Rural New-Yorker:—Corn-sheller, from Livingston & Co., received in good order. It works very well.—Respectfully,

A. Thwing.

Various.

THE RILEY CONTROVERSY.

WASHINGTON, D. C., Feb. 19, 1880.

TO THE EDITOR OF THE RURAL NEW-YORKER:

Sir:—I desire, in the briefest manner possible, to illuminate the fog with which Prof. Riley, in his communication to you, of the 2nd instant, seeks to envelop certain matters connected with his resignation and subsequent attempt to be reinstated.

I am characterized as an "indifferent stenographer," the evident desire being to cast discredit upon the conversations as reported. I have referred my notes of the 29th of April to Mr. O'Brien, a stenographer, and his letter together with a corroborative letter from Mr. Bailey as to the date, is inclosed. Further proof of the correctness of the report will be found in an inclosed letter from Col. Fluney which, by permission, I send.

The Professor says he has a vivid recollection of this conversation. "It was Thursday," and he was "to leave the city on Saturday." As I remember, it was on Tuesday and the almanac substantiates that belief. As I was directed by the Commissioner to request the presence of Prof. Riley in his office on the day the newspaper men called, I cannot let Prof. R.'s statement go unchallenged. I was told by a clerk in his Division that he had been absent since 12 o'clock and so reported. Prof. Riley returned to the Department between 3 P.M and 4 P.M. on the day in question. The Prof. refers to Mr. Howard as knowing that he was present. Mr. Howard's letter explains that.

I desire to say, further, that the quotations from the conversations of Prof. Riley, used by the Commissioner in his communication, are true; that the said conversations were taken down at the time in short-hand; that the notes have been truly and faithfully transcribed and that they represent exactly what occurred. Prof. Riley has by his own acts and accord brought upon himself the stigma at present resting upon him, and I am sorry that in his endeavors to free himself from it, he has seen fit to characterize my work as "outrageously false" and thus compel me to enter into the controversy. C. D. LA DOW.

Being called upon by Mr. La Dow to substantiate the correctness of his transcript of certain stenographic notes contained within book No. 48 and appearing between two letters addressed respectively to Messrs. S. A. Mechon and Gen. Pope, I hereby certify to the correctness of said transcript

Respectfully,

E. V. O'BRIEN.

DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C., Feb. 18, 1880.

I hereby certify that upon an examination of the records of this Department I find on pages 121 and 152 of the Domestic Letter Book (1879) copies of letters to S. A. McMechen and Maj.-Gen. Jno. Pope, respectively, the former bearing date April 29th and the latter May 1st, both emanating from the Commissioner's office and presumably written from dictation.

JNO. L. BAILEY,
Clerk in charge of File Room.

U. S. DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C., Feb 5, 1880.

HON. WM. G. LE DUC, Commissioner of Agriculture: Sir—Your favor of this date covering "Vol. XXXIV, No. 5," of the RURAL NEW-YORKER, has been duly received.

I remember being at my desk in your office when the conversations between Professor Riley and yourself therein reported occurred.

While I cannot recall the exact language of these conversations, my distinct remembrance is that their general tenor has been truthfully conveyed in the newspaper account; my conviction of the accuracy of the report being strengthened by the clear impression left on my mind that there was a manifest desire upon the part of Prof. Riley to retain the position of Entomologist of the Department despite the equally manifest purpose on your part not to reinstate him. Very respectfully,

WM. W. FINNEY.

DEPARTMENT OF AGRICULTURE,
DIVISION OF ENTOMOLOGY,
WASHINGTON, D. C., Feb. 19, 1880.

MR C. D. LA DOW: Dear Sir—At your request I would state that Prof. Riley was mistaken in supposing that I am able to testify to his presence in his office between the hours of two and four on the afternoon of May 1st, 1879, and that his recent published statement to that effect was made without my knowledge. Prof. Riley may have been there or may not; I have no recollection whatever on that point. Yours truly, L. O. HOWARD.

[We presume the above will close the controversy. Certain it is we do not feel in duty bound to extend it without any limit.—EDS.].

SOME NEW JERSEY ORCHIDS.

NEW JERSEY is, *par excellence*, the Orchid State. The choicest of the North American species are found here, the rich peat soil and moist woods seeming to suit them admirably. One of the prettiest, though most retiring and inconspicuous, is the Goodyera pubescens. It is essentially a foliage Orchid, its tiny greenish-white flowers, being in no way remarkable. Its glaucous-green leaves are strongly reticulated with white, in the style of Fittonia argyroneura, which it somewhat resembles in habit. The Goodyera or Rattlesnake Plantain, to give it the common name, delights in the shadiest recesses of thick woods, and is not very frequently met with. It does so well in a cool greenhouse that I am surprised it is not seen more among temperate foliage plants, but it is not very well known. Another charming New Jersey Orchid is Calopogan pulchellus, or Grass Pink. Its delicate purplish-pink flowers are produced on long stems, and are not only beautiful, as its botanical name implies, but also very fragrant. It flowers in June and July, and is found in cold, peaty bogs all the way across from Maine to Minnesota, southward through Nebraska to Arkansas, but avoiding Kansas, and thence in a south-eastern direction to Florida. It is very rare in Western New York, and in many other places within the limits named. I have never seen this plant in cultivation, but it should do well in a temperate greenhouse.

Pogonia ophioglossoides, or Snake Mouth, is generally found in the neighborhood of the Calopogon, and its lively pink blossoms form a complete contrast to the green of the surrounding swamp, for this plant grows among sphagnum and sedges, so that those who do their collecting in patent-leather shoes generally must be contented to admire it from a distance. Orchids are singularly circumscribed in their geographical limits, but our present species, where it exists at all, is usually found in abundance. Sometimes a bog is perfectly ablaze with its rose-tinted blossoms. I have frequently seen this beautiful sight in New Jersey. The Pogonia is found from Canada west to Wisconsin, and southward to Florida. It flowers in June.

EMILY L. TAPLIN.

Literary Miscellany.

FOUR OLD MAIDS.

W. V. A.

(Continued from page 142.)

Olive came in last with a bounce and a giggle. She wore an old-fashioned barege dress that was severely plain in its makeup, and had plain linen bands at the neck and wrists. She also wore a wig of dull, dark red color, and parted exactly in the middle, combed back very plainly and smoothly and ending in a half dozen cork-screw curls that reached half way to her waist. She had padded a little here and a little there until her whole appearance was changed and she now appeared quite stoop-shouldered.

All four wore goggles of smoked glass that gave them quite an owlish appearance.

Mr. Browning burst into a loud hearty laugh, and Blanche, in as heavy a voice as she could assume, said:

"Mr. Browning, our landlord, I believe? Allow me, sir, to introduce myself as Miss Frederica Skidmore. This is my eldest sister, Miss Malvina. This Miss Melissa, and this Miss Arabella. We are happy to meet you, sir, and hope we shall agree about the rent, etc.

Mr. Browning rose with great dignity and ill-concealed mirth, and said:

"Certainly, certainly, ladies; allow me to welcome you to "The Retreat." Approaching Rose or Miss Malvina, rather, who had sunk into a large easy chair in a languid, feeble way he said: "I fear you have found your journey quite fatiguing."

"Yes," answered Miss Malvina in a faint, tremulous voice, "it was quite trying to my nerves, and I feel very much exhausted."

"Miss Melissa, I hope you have not suffered from the heat and dust. Did you not find them quite annoying?" he said addressing Margaret.

"Yes, I suppose they are very annoying," she replied in a high, sharp voice. "We have very few beetles in our State, and bugs one must tolerate from sheer necessity."

Here they all burst into a hearty fit of laughter, and, turning to Arabella, Mr. Browning said:

"I had no idea "The Retreat" was going to shelter such a charming young lady, or I should have preferred to remain and play host."

"O, sir, I am afraid you flatter me; I am so young and foolish you would be disappointed in me, I am sure." All this was said in a lisping, affected manner with most absurd poises and gestures intended to promote the idea of her girlishness, and she giggled after each sentence, thus making a most comical character.

The girls all screamed with laughter, while Uncle Tom actually held his fat sides.

"Well, girls, I must go. I want to catch the six o'clock train, see Lansing and request his folks to call on the Misses Skidmore. Good bye! Have a good time; and, Miss Arabella, have a care how you trifle with the hearts of the young men!"

With this, Mr. Browning took leave of the girls, and in a few minutes afterwards was walking briskly through the streets of the village, when he saw Harold Lansing and his wife approaching in a phaeton. Seeing Mr. Browning, they stopped and greeted him cordially:

"Why, Browning, what are doing down here? I thought you were off for Europe!" said Mr. Lansing after the usual exchange of polite greetings.

"We are going in a few days. I ran down this afternoon to escort some ladies who are going to occupy my house for a couple of months, not exactly as tenants, you know, they are four old maids who are relatives of mine. Any courtesies you and Mrs. Lansing may extend to them will be a favor conferred on me."

"We will try to call on them within a few days," said Mrs. Lansing.

"Thank you!" said Mr. Browning. "You will find them rather eccentric—something out of the ordinary line. For instance, they all have weak eyes, and at present are wearing goggles."

"O! you have excited my curiosity!" said Mrs. Lansing. "I dote on eccentric people, and you may be sure I will go over and see them. Good-bye! Bon voyage to yourself and Mrs. Browning!"

"Thanks! Good-bye!"

A few days after this, old Rachel carried Mrs. Lansing's card up stairs to where the Misses Skidmore were making their toilets.

"Tell the lady we will be down in a few moments," said Blanche. "Now, girls, the first time is always the hardest; but we must be dignified and not forget our parts. In the language of some unrecognized classic, we must 'face the music'!"

"Gracious! The first one who plays wrong will be walled up alive! just bear that in mind!" said Olive. Then, suddenly changing her manner, she said, "Sister Freddie, you go first, I'm so bashful!"

The girls all tittered; then Blanche looked stern and, ordering them to follow her without any more nonsense, they marched solemnly, single file to the handsome little reception room.

Mrs. Lansing gave a sudden start when she saw the four odd looking ladies enter the room; but, rising, she said, in her blandest tones, "The Misses Skidmore, I believe."

"Yes, madam; and we are happy to meet you, having heard our relative, Mr. Browning, speak of you," said Blanche. "I am Miss Frederica. This is our eldest sister, Miss Malvina; this is Melissa, and this is Arabella."

"A very pleasant day!" faintly suggested Miss Malvina.

"Yes, very pleasant;" said Mrs. Lansing.

"Is there much society in the neighborhood?" simpered and giggled Arabella. "You see my sisters are so much older than I that I find it very dull here."

"How silly you are, Arabella!" said Frederica, sternly.

"Now, sister, don't crush my young and joyous spirit!" retorted Arabella, with a most ridiculous attempt at a childish pout.

Mrs. Lansing was very much amused—so much so that she could not repress a smile as she replied: "The society is not large, but it is very pleasant. I expect to have my house quite filled with young people next week; and, as you are our nearest neighbors, I hope we can make it more pleasant for you."

"O, how sweet!" exclaimed Arabella, with clasped hands. "Sister, do you hear that?" turning to Melissa with a stiff, quick movement, that was intended to be very pretty and childish.

"What!" said Melissa, in her sharp voice, "my ears lap, hey? You are getting very rude, Arabella!"

"O, dear!" sighed Arabella. Then suddenly putting her mouth to Melissa's ear, she shouted, "I didn't say that. I asked you if you heard what Mrs. Lansing said. She is going to have her house full of young people next week."

"O! I misunderstood you," said Melissa.

Mrs. Lansing took a chair at her side, and said in a loud voice and quite close to her ear, "You have quite an affliction; it is very sad."

"Yes, she is very affectionate, and that is not bad," said Melissa.

Here Blanche yelled into her other ear what Mrs. Lansing had said; and she, turning to Mrs. Lansing, talked to a great length about how long she had been deaf, the cause of it and other tedious subjects. At length Melissa paused, out of breath, and, turning to Malvina, Mrs. Lansing said:

"You look quite delicate, Miss Skidmore. I trust the pure country air will prove beneficial to you."

"Thank you! I am sure" quavered Malvina, but I don't think there is much hope for me. My physician thinks my lungs are affected; my heart troubles me at times, and I am just recovering from a severe attack of neuralgia. I am very delicate—very delicate indeed."

"O, you must not be so hopeless! It is always best to look on the brightest side," replied Mrs. Lansing. "Should you stand in need of a physician during your stay here, let me recommend my special favorite, Dr. Wall."

"Have you no female physician here?" inquired Blanche. I should prefer her if there is. Women who are educated to the profession understand it better than the men. I wonder that more of them do not enter the professions. They have better heads than the men, and could carry out their ideas a great deal better than the so-called "lords of creation."

"There is no female physician in the village; but I believe there are several in M———" said Mrs. Lansing.

"O, sister Freddie is so strong-minded!" simpered Arabella.

"Pity you were not a little more so!" snapped Frederica.

"I really must go," said Mrs. Lansing, rising; "but I hope to have the pleasure of meeting you all in my own house quite soon. Pray, don't be ceremonious, for the summer will soon be gone." Turning to Melissa, she said quite loudly, "I want you and your sisters to come and see me quite often and be real neighborly."

"Thanks!" said Melissa. "We shall be glad to have you come often and be neighborly. You are very kind, indeed."

"Dear, dear!" said Arabella in affected distress, "she has misunderstood you again."

"O! well; let it pass," said Mrs. Lansing, and bidding them good-day, she was soon on her way home, highly amused with those "queer, old maids."

Next week brought the young ladies and gentlemen that Olive had told the "clan" were going to visit the Lansings. They were a gay party. First were the Lansing girls, Julia and Clara, two handsome, stylish, but rather affected girls; Robert Lansing, their brother, a handsome blonde and a rising young lawyer, a good, honest, open-hearted fellow, without a bit of affectation; Lance Stedman, a tall, slim gentleman, with dark hair and sharp, keen, black eyes, rather reticent, but a quick observer, very gentlemanly and possessed of ample means; his sister Laura, not much of a beauty, but very fascinating and a great favorite with the gentlemen; his "royal highness," Hugh Enders, to quote Olive's words, "a splendid looking specimen of the genus homo," with his six feet of well-proportioned bone and muscle, deep, dark blue eyes, brown curly hair, and short, crisp, brown beard, and last, the gentleman whom Olive had designated as "that conceited simpleton," Edgar Faras. He was only a few inches taller than Olive, with the "blackest hair and eyes," as some of the girls described him; dark, swarthy skin; glittering white teeth, and a figure rather broad, but otherwise well-proportioned. He was decidedly handsome; full of fun, and was far from being a conceited simpleton, and Miss Olive was far from thinking him so; but then, girls are contrary, you know!

I think the fact that these four young gentlemen were to visit the Lansings, had more to do with the "clan" visiting M—— than either of the girls would have acknowledged, even to herself. The four gentlemen were great friends—"inseparables" some said, and when they fell into the way of escorting the "clan" to parties, &c., people thought it was "quite odd," "so queer," and some said "a double clan." Each gentleman showed a decided preference for a particular member of the "clan," and the girls seemed very well satisfied with the gentlemen's preferences. Edgar Faras was Olive's devoted slave, but she was critical, merciless and changeable, and he would take solemn oaths never to visit her again, and to be very cold and unfriendly at their next meeting, but when that next meeting came and Olive would greet him with outstretched hands and tell him she hadn't seen him for an age and ask why he hadn't been to see her was he ill? He would immediately dissolve his indignation into a hearty handshake and gay words of banter, and in less than ten minutes make an engagement to call upon her, and in an hour or so afterwards, as he walked home, he would grit his teeth and call himself "a —— fool!"——

It was not long after this that the young people went in a body to call on the Misses Skidmore, and Edgar Faras and Rob Lansing seated on either side of Arabella, vied with each other in playing devoted to that young lady. Faras wanted to take her out for a drive; but no, "Sister Freddie will never consent." Then Lansing wanted the privilege of calling and spending an evening with her; but "sister Malvina thinks I'm too young yet to receive gentlemen callers."

"Ye gods!" said Lansing the next chance he got to speak to Faras alone. "did you hear that old maid say that her sister thought she was too young to receive gentlemen callers? I thought I should explode!"

One morning Faras was waiting for old George, a negro hostler of Lansing's, to saddle a horse for him and while he waited, they discussed the merits of the different horses in the stable. Presently old George said, "Dem is mighty spry old ladies ober to Massa Browning's place! Orter see 'em riding horseback out in de meddar and lafin and runnin like wild! Wouldn't think it to see 'em settin' so straight and quiet like in de kerridge neber smilin' eben. Don't look like old folks when da is down in de meddar! Eben de rite ole one wid sich, wite har and is so mighty pale and sick lookin'—why, sah, she kin run and climb ober a big rail fence quick'n I kin!"

All at once a suspicion flashed into Faras's mind but he turned to old George and said quite carelessly, "O, well, George, they are quite queer folks I know, but you had better not say anything to anybody else about it, for Mr. Lansing would not like it. Here is a quarter for your trouble." And mounting his horse he rode away.

This was before breakfast, and after breakfast Faras strolled off down the orchard alone; but once out of sight of the house he walked off briskly towards a piece of woods on the other side of which was Mr. Browning's meadow, which Faras soon reached, but to his disappointment there was no one in sight. Following the fence he soon reached the Browning orchard through which he passed to the tall green hedge which separated the orchard from the handsome grounds which surrounded the residence. He was standing behind this hedge, and mentally berating himself for "playing sneak," when a sound of gay laughter was wafted to him by the wind, and peering through the hedge he saw, not the four Misses Skidmore, but "'The Clan,' by Jove!"

"O, sisters," said Olive with Arabella's voice and gestures, "don't break my young heart! I beseech you to soften your hearts toward me, and we will bless you all our days—my beloved Edgar and I!"

Here the rest of the girls burst into shrieks of laughter in which Olive joined, and the gentleman behind the hedge had hard work to preserve his gravity. As it was, his face flushed and he said, *sotto voce*, "All right, Miss Arabella! 'All's well that ends well!'"

The girls passed out of sight and hearing, and Faras was soon back on the Lansing place. The joke was too good to keep, and his morning adventure was soon related to Enders, Stedman and Lansing. Astonishment and merriment reigned supreme for a while, and then Rob Lansing said, "By George, boys, we must checkmate them!"

"Agreed!"

"Good!"

"Let us have some fun at their expense;"

"I'll tell you my role, boys," said Faras. "I am going to engage myself to the charming Arabella, and elope with her!"

"Hurrah!" shouted Lansing. "But I say why can't the rest of us follow suit?"

"O, they would suspect us immediately," said Enders. The best thing we can do is to help Faras."

In the course of two weeks they had carried out their plan so well that Arabella was engaged to her "beloved Edgar" and had promised to "fly" with him, for she told him it would be useless to speak to her sisters for they were opposed to her receiving his attentions and scolded her severely for showing a preference for his society.

There was great merriment amongst the "Clan" when Olive showed them Faras's ring and told them of her engagement.

"O, Olive! it will be such fun to elope with him and take off your goggles and wig after he is safely 'hooked'!" said Blanche.

"Just what I intend to do!" said Olive with a merry laugh; then suddenly, with flushed cheeks and an angry stamp of the foot, "I shall do nothing of the kind! so, there!"

"Well I don't make a snapping-turtle of yourself!" said Blanche.

"Girls, I wish you had a little sympathy and feeling for me. You are all just too hateful!" said Olive, petlishly and with tears in her eyes.

"Why, what's the matter!" said Rose, "I am sure I have not been 'hateful, and I have plenty of feeling for you."

"O, come, Olive; don't be a stupid old goose nor a snapping-turtle either!" said Margaret. "How were we to advise or sympathize with you until we knew you wanted either? I was planning up something while you were giving us a sample of your amiability: What day have you and your 'adored one' appointed to 'fly' on the 'wings of love' versus a railroad car?"

"Next Tuesday," sullenly answered Olive.

"Well, don't you see how easily we could pack up and leave on Saturday, while the Lansing crowd are gone on that trip up the river? And then Jerry could go over in the evening and deliver a note to Faras, in which you could say that all was discovered, and that your cruel sisters had hurried you off and you had no idea where they were taking you, that your heart was broken, &c.!"

Olive made a sudden spring and threw both arms around Magaret as the latter finished speaking and half smothered her with kisses, saying, "Margaret, thou art indeed a pearl!"

"With the exception of being 'just too hateful!' said Margaret, with a laugh.

"But where shall we go to?" inquired Blanche. "We can't go home just yet."

"O, we can go to B—— and pay old Aunt Cordy a visit. She would be 'mightily pleased to see ye gals!'" said Margaret.

"That's so! and just the place for us!" said Rose.

I have read somewhere that——

"Man proposes;
God disposes."

But in the case of the "clan" it was woman who proposed and man who disposed, for on Friday night when the Misses Skidmore's trunks were all packed and Arabella's note to Faras sealed and directed, the four gentlemen so often mentioned in this story disposed of all the plans they had proposed. It happened in this wise: Faras persuaded his three friends to go with him and spend the evening with the Misses Skidmore, as he said he would not dare to go alone, and otherwise he should not be able to see his affianced for several days. A very innocent proposition, but it effectually disposed of several propositions.

It had been a dull, gloomy day; sultry with sudden gusts of wind, and late in the afternoon threatening clouds appeared, that culminated just at dusk in a slow, drizzling rain, that bid fair (foul) to last far into the night.

The Misses Skidmore had spent a dull, tedious afternoon, and when Rachel came in with the lamps and told them that it was raining, Olive sprang up and said, "Come, girls, let us have some music and a jolly, good time! No danger of callers to-night, and so we will have a minstrel troupe. Blanche and I will be the 'end men;' Margie will be 'middle man,' and Rose will be the audience!"

"Good!"

"Splendid!"

"Agreed!" said the other three girls, and forthwith the fun commenced.

In the meantime Faras and his friends, nothing daunted, sallied forth under the protection of umbrellas. Arrived at the retreat, Enders was in the act of ringing the bell when Faras suddenly restrained him. The entrance door was slightly ajar, and from within came the sound of music and laughter. Faras boldly pushed the door open, and silently followed by his companions, entered the hall and walked to the parlor door and gazed in upon a strange sight.

The feeble Miss Malvina was seated in a most ridiculous attitude at the piano playing an old-fashioned negro medley with an effect neither soft nor gentle, while Miss Frederica, whose upper lip was adorned with a moustache (produced by a few touches of burnt cork), was singing in a loud, masculine manner, the words of the melody Miss Malvina was playing. At the other end of the piano stood the romantic Miss Arabella with a violin from which she was drawing the most dismal and discordant sounds. In the center of the room was Miss Melissa, with her arms extended and her hands daintily holding up her skirts on either side, displaying a pair of slippered feet that were keeping time to the lively music, while her cheeks were flushed and her cap-strings flying wildly about.

Margaret Doan and Hugh Enders were engaged, and she had promised that when the golden rods bloomed again she would become his wife. When he told her of his invitation from the Lansings, she, to his surprise, insisted on his accepting it, as she was going with the "clan" to some "out-of-the-way" place in the country, and that he might as well go and enjoy himself.

"But, Darling," said he, "it would be such a bore, and I shall be expected to play the devoted to some of those girls."

"O, well, Hugh, I can trust you, dear; and perhaps it will not be such a bore, and if it is you need not stay; you can make some excuse and leave."

Hugh did not wish to accept the invitation, but, as Margaret insisted and as the engagement between himself and Margaret was still a secret, he finally concluded to go.

Robert Lansing and Rose Sheldon were a most devoted couple, and rumor said they were engaged, but as yet there was no engagement existing between them, though it looked much as though there soon would be.

Lance Stedman was Blanche's constant attendant, and in spite of his reticence and grave ways, she loved him with her whole heart and felt confident that he loved her, though he had never told her so in plain words.

The next afternoon, after the arrival of the Lansing guests, Olive made an excuse to send old Jerry to the village, and when he returned, she asked him if he saw any of the company at the Lansing's.

"Yes, Miss; they is all out on the lawn playing croquette."

As he was passing around the corner of the house, Olive called out, "O, Jerry! I almost forgot; we want to take a drive in the open carriage. Please get it ready immediately, and be sure and put on your tall hat."

Three flushed faces confronted her as she entered the door: "O, Olive!" cried the girls, "we can't!"

"You silly old geese! come right up stairs this minute and get dressed! It will break the ice a little, for next week we must return Mrs. Lansing's call."

A half hour afterward the Misses Skidmore were being driven at a slow, dignified pace along the road that led past Lansing's. Miss Malvina partially reclined on a pile of rich cushions and pillows. She was dressed in sombre black which brought out her gray puffs and pale face, for she was now quite pale from excitement. Melissa also wore black, but it was relieved by an antique-shaped bonnet of white straw trimmed with purple ribbon and white flowers. Fredericka sat on the front seat very straight and dignified. She wore a black derby hat with a brown wing fastened at one side, and a dress of brown lawn made severely plain and old-fashioned. Arabella wore a white dress very much ruffled and very short, with a blue sash tied around her waist in regular baby style. On her head was a marvel of millinery art composed of blue silk, satin and lace. It was very fine and stylish, but too small for her head, and evidently suitable only for a very young Miss. She also wore an immense blue bow at her throat, lavender gloves on her hands, and carried a huge fan. The hat belonged to one of her younger sisters, and when the other girls recognized it, and asked her how she came by it, she said, with great merriment: "O, it was just what I wanted, so I helped myself to it! Papa can buy her another one; but won't there be a storm when I take it home! It won't do much good, though, for by that time I shall have had my fun and the scolding can't take it away!"

As they drove past Lansing's, there was a sudden hush and whispering among the gay party on the lawn, and all eyes were turned toward the Misses Skidmore who, amid the profound silence, drove solemnly past. Not one of either party stirred, with the exception of Arabella, whose face, which was now a fiery red, was suddenly averted, but she turned it as quickly again and looked back at the party on the lawn and held her fan before her face in mock bashfulness. It was a splendid little bit of acting and was well appreciated by her audience.

There was great laughter and merriment among the young people on the lawn as soon as the carriage was out of hearing, and a great deal of coughing and suppressed laughter among the Misses Skidmore.

They rode out every pleasant afternoon after that and always passed the Lansing place, and nearly always saw some of the guests.

Finally, one pleasant morning they decided to return Mrs. Lansing's call, and were soon on their way. Malvina wore her customary black, with the addition of a long crape veil. Melissa wore her gray silk dress; her white bonnet trimmed with purple and white, and an old fashioned black lace shawl draped around her. Fredericka wore a scant brown silk with a half fitting sacque and plain linen collar and cuffs. Her skirt was short, with no overdress. Her sleeves were short and she wore one-button kid gloves that were a size too large for her hands. On her head she wore the black derby hat with the brown wing that she always appeared in. But Arabella carried off the honors, arrayed in a sky-blue silk dress that her mother had worn when she was a girl, and of course quite out of style now; on her head a broad white leghorn hat with a wreath of pink and white roses encircling the crown; flesh tinted gloves that were too large on her hands; a short white lace sacque with flowing sleeves, and a whole set of cameos in antique settings, the sight of which on her would almost have caused her mother to faint, for she valued them as precious keepsakes. After they had enjoyed a hearty laugh at each others comical appearance, they proceeded demurely to the carriage and were soon standing at Mrs. Lansing's door.

They were shown into the reception room, and Mrs. Lansing soon appeared and cordially greeted them. In a few minutes after, Julia and Clara Lansing appeared and were introduced to the Misses Skidmore. They sat down near Arabella and entered into conversation with her.

"Are you fond of croquette?" asked Julia.

"O, Yes! it is so sweet!" giggled Arabella.

"I suppose then that you and your sisters play a great deal?" said Clara.

"O, no, indeed!" sighed Arabella, with clasped hands, "my sisters are so much older than I am that they have very little sympathy with me. I am so full of youth and spirits that it is very dull for me sometimes."

All this was said with an accompaniment of giggles, sighs and jerky movements, that caused her to appear extremely riduculous. And had not the Misses Lansing been well-bred young ladies they would have indulged in a hearty laugh then and there.

In the meantime Mrs. Lansing had prevailed on Fredericka and Malvina to remain to lunch which would soon be served.

"Arabella," said Fredericka, "Mrs. Lansing has kindly invited us to remain to lunch, and your sister and I have accepted."

This was—to use a slang phrase—a stunner, and Arabella was so startled that she awkwardly dropped her fan, half rose from her seat, but sat down with a very red face, and said, with great gush, "O, Freddie! how sweet!"

"Fredericka, had you not better ascertain if Melissa wishes to remain?" faintly suggested Malvina.—[To be continued.

For Women.

CONDUCTED BY MISS RAY CLARK.

THE FARMER'S DAUGHTER.

BY ANNIE L. JACK.

She dwelt within a quiet home,
No model of the graces,
Unknown to culture's higher walks,
Or fashion's giddy places.
A thoughtful girl, so sweet, so wise,
With earnest face and deep grey eyes
The farmer's gentle daughter.

From morn till eve the little maid
Is busy at her labor;
She sweeps and dusts, and feeds the hens,
And never minds her neighbor;
No gossip ever listens to,
(A merit rare 'tween me and you),
Thus lives the farmer's daughter.

On baking days her tiny hands
Are skillful at the making;
No bread more light and sweet than her's
Was ever made by baking.
She churns the butter, golden, sweet,
And keeps the dairy clean and neat,
This busy farmer's daughter,

Her garden is an Eden fair,
A-bloom with pinks and roses;
She knows the name of every flower
And makes some gorgeous posies.
Grows peas and radishes, and cress,
And corn and squash and herbs to press,
This happy farmer's daughter.

Long may she bravely smile on us,
Our darling household fairy,
The queen of garden, house, and lot
And princess of the dairy:
To teach us by her pleasant way
To love the things of "every day,"
God bless the farmer's daughter.

AN EXPLANATION.

The letter in our last issue from Mrs. J. E. S.—for which thanks are tendered—has suggested the necessity of a few words of explanation:

It was not, and is not now, the intention to sacrifice the "Department for Women," but owing to the great press of matter for all departments, a deviation from the usual course was absolutely necessary. Occasional raids may be made in the woman's kingdom, but the foe is not to conquer the entire possession. Be of good cheer, "Rural" sisters, and kindly exercise a little forbearance.

R. C.

A REQUEST.

Will Margaret B. Harvey, whose love for Art has rendered her acquainted with the works of the great masters, give to her "Rural" sisters—whose knowledge is more limited—the subjects of some of the finest large steel engravings?

Mrs. S. H.

"BITS OF EXPERIENCE."

VELENA.

Reading the above heading in a mechanical paper, it struck me so forcibly that I have concluded to borrow it and relate a few of my own daily experiences.

Some seven years ago my husband and myself, owing to circumstances and a change of residence, concluded to break up housekeeping and board. Last spring, however, we decided to return to our native town and settle under our own roof, with our feet under our own table. Although somewhat out of practice, it was not difficult to again "bake and brew," sweep, dust, etc., as every housekeeper has more or less of it to do. It, however, was decided upon to have a good pair of strong arms to do the bulk of the work, while I was to oversee the household generally and to do the planning. Wise heads were shaken in a meaning way, but nothing daunted, we engaged a strong Irish Mary to do the whole of the work, well and quietly, "and to be in nights." I was to pay her the first of every month for the last month's work. Knowing that she had been out to service for several years, I said to her that the dishes in such a cupboard were for daily use, and she was to set the table, having things convenient, in order, and to make them look the best it was possible to every time. Everything was to be done well, and the best was to be made of everything that was provided for her. As a general thing I would do the marketing.

Well! She began, and I began! It was, "Will yez be afther telling me how yez would have the loike of that?" in a high, strained tone, fairly making the ear tingle. Said I, quietly, "Do it, Mary, the *best* you can, and if it does not suit I will tell you what changes to make. If you do it well and do it differently from my way, I will learn, but if I have you change it, you will be the one who learns." This seemed rather to please her, and I think it gave her a certain pride that tended toward doing everything well. But, of course, I am obliged to firmly and quietly attend to things daily. For instance, the first time she made bread it was very good, but had a little too much yeast, and so I told her. The next time it was excellent, and I said to her I hoped she would make it as good every time. Several weeks after followed good bread, then it began to be poorer and then a little worse. I said to her that something was wrong and we must find out what. She assured me that she had tried hard but it was her luck. Looking into the matter I found the barrel had been stood in the pantry on the floor just over the cistern and the flour was damp. Mary was told to take the barrel into the kitchen, take out the flour and dry it and dry the barrel thoroughly; then put the flour in again and find a dry place for the flour-barrel. Having given my instructions, I went into another part of the house to do some work of quite a different kind. The next day, making inquiries, I found Mary had the flour and barrel as "dhry as dhry could be," and had put the flour-barrel into the kitchen chamber, away from the dust and damp. Since then we have had excellent bread again.

I can hardly leave this without a comment, that is, with all mechanical skill and with all our strength we must use a little brains in running a house economically and well. There was a cause, the cause was not that she was careless, but in this case it was the dampness that had introduced itself so subtlely that neither her instinct nor her knowledge had as yet fathomed it. It was not damp enough to be seen but my hands being sensitive, I could feel it, and although it might have been questioned whether there really was enough to have any effect, the drying of the flour proved there was. She knew as well as I did that damp flour would not make good bread, but she had not found out that her flour was just damp enough to prevent her bread being good. Had I taken the matter in hand in a different manner there probably would have been quite a different result. The Irish are faithful and true when they once realize that you are upright and just to them and to yourself; but they are of a flashy temperament and must be dealt with "cool and firm." When one finds things awry it may be difficult to appear calm, especially if one happens to be at a white heat; however, if you forget but for a moment and lose your temper in a loose tongue you will soon learn that you have lost a good name with it, also the respect of your maid-of-all-work and feel a rankling in your mind that lessens even your own good opinion of yourself. In other words you find yourself feeling very uncomfortable and no good coming of it. This leads to the "servant" subject upon which we see so much written about. There are two sides to it, namely, those who hire and those who are hired. Both have a story. However, so far as my observation and experience goes it is want of tact in managing that is lacking the most. As a general thing we do not hire until necessity compels us to, then there is so much to be done that our mind becomes flustered, our plans are only half made, things generally are muddled and we get nervous and out of temper, and our help is so "rolled that it is no use trying to do anything." Every one cannot go into a strange place and work to advantage the first few days. And a girl who has to work out for a living cannot come to you or me and take the bulk of our accumulated work and do it in a few days, or possibly, weeks, then go to another place, and so on the year round. They must work steadily, and must not overwork, else they break down, and who will then care for "Mary?" Certainly not the one who exacted the most drudging of her. Then, too, the girl's former life ought, in a degree, to be taken into account, her own home may be little better than a hovel, there may have been no teaching to make her thoughtful and industrious, no ways, no means, of showing her how to do the very things most households require to have done every day. Insist on a servant being kind and willing; with these two elements almost every woman can with time and tact secure valuable help.

FASHION NOTES.

The fancy for dressing the throat as closely and high as possible is again revived. Thick ruchings of crepe lisse and light lace worn in the dress, sometimes above the collar or plaiting, or on the outside of them. The quilled lace is frequently doubled, the plain edges meeting in a seam which its fullness conceals, and a tiny bunch of flowers nestles in its folds at one side.

Misses wear Derby felt hats for every day, or else sealskin toques or turbans. Fanciful silk, satins, or velvet turbans are for better wear, also Pinafore hats with plaited satin in the brim. Felt toques with beaver borders in quaint bowl shape are trimmed on top with a gay satin bow for smaller girls, while the very smallest wear cap bonnets of velvet or of quilted satin and lace, also fancy turbans.

Large collars appear on all handsome dresses for children, and round shapes are taking the place of square ones.

Young ladies wear their corsage bouquets on one side of the neck, near the shoulder.

Dinner cards of sandal-wood are the newest. They are highly elegant and expensive.

Black kid gloves are the most popular for dress occasions, because they make the hand look small and shapely.

Black satin walking skirts have no trimming whatever. Their elegance is in their simplicity.

Broad soled shoes are the newest. They have a double row of buttons on the outside, and are very showy.

One by one brides discard the old fashioned white satin.

Plush collars and cuffs will be much worn on early spring dresses and wraps.

In many of the new designs, both imported and domestic, cords of gold or silver thread and silk are much used. Skirts of tulle and gauze are looped with them, and they are used as a sort of frame or setting for bunches of flowers which decorate ball dresses. Very fine cords are even used for trimming sleeves, berthas and the coiffure.

The fashion of a corsage different from the dress will prevail in the spring. Long corsages of material and color different from the skirt will be worn both in the house and on the street, and later when the weather is warmer without any wrap.

For fine white handkerchiefs hemstitching in blocks on the hem and needle-worked scallops are shown, also the frilled handkerchiefs with one or two ruffles laid in fine plaitings, and overcast in saw-tooth notches.

In spring the polonaise will be generally revived. Its composition will be somewhat changed, but it will be the polonaise again. Princess dresses will be worn also, but with certain changes.

Young girls mass their hair at the back in a thick cluster of curls, or they roll it round in the large soft Grecian plait, and stick a dagger through it, or put an arrow across it.

The fashionable stationery for ladies at present is the heavy English paper in place of the thin French paper that has been so long in vogue.

Among the new fancies for buttons are twin mice of dull silver, owls—the most fashionable of birds just now—and lady birds of red enamel.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN-THOUGHTS FROM EVERY-DAY HOUSE.

MRS. ANNIE L. JACK.

Our hens have been very well behaved this winter, and kept us supplied with eggs. We attribute it to a constant supply of buckwheat, scraps from the kitchen, and plenty of water slightly warm, also to a corner of the hen-house being kept layered with coal ashes and cracked oyster shells, with all the scrapings of lime and sand we could get. I had packed away in the fall a supply of eggs that we find quite fresh. They were simply placed in a box with salt, beginning at the bottom with a layer of eggs, small end down, then one salt, then another of eggs, and again salt, and so on till the box was full. They will keep a year if so placed, and the salt can be used successive seasons. For breakfast, when tired of eggs boiled, fried and poached, we try the omelet here given, by way of variety:—

Four eggs well beaten, to which is added a cup of milk into which has been stirred one tablespoonful of cracker well rolled and a small teaspoonful of flour. Stir well together just before pouring on to the buttered griddle, which must be hot but not *too* hot. Turn when it is well set all round the edge, fold it into four thicknesses, and turn upon a hot plate. The children are fond of this omelet and it is light and not unwholesome.

I think the latter part of winter the most difficult in all housekeepers' experience, in providing variety for the family table, especially when eggs and milk become scarce, as is often the case. It is at this time that the store of preserves comes into requisition and a bottle of canned fruit eaten with warm biscuit, is as nice as any pudding for dessert. A very nice pudding, when milk is not plentiful, is made by chopping beef suet finely, mixing with flour in which a little baking powder has been mixed dry. Then moisten with water to a *rolling* consistency; spread with black currant jam; roll up, being careful to close the ends. Then roll it up in the pudding-cloth, tie, and put into boiling water. Boil two hours. It is very good.

A very simple variety is made by putting a cupful of rice into a pudding-bag, leaving room for it to swell to three times its size when tying up. Boiled two hours and then eaten with any sweet sauce, it is a very wholesome dessert, for young people especially, whose meat-eating propensities have sometimes to be restrained, but whose hunger must be satisfied. What a time it takes to prepare the three meals a day that must be ready when the time comes! And yet we know it is part of our duty, and the more cheerfully we agree to its importance, the better it will be for all the family circle, for

"Never, never, oh never, earth's luckiest sinner
Hath unpunished forgotten the hour of his dinner."

"AN EVERY-DAY DINNER."

ADELINE E. STORY.

Now that it has become a custom for every village butcher to send out wagons in every direction with fresh mutton, beef and veal, there is scarcely a farmer in the more thickly settled portions of the country, who may not have fresh meat for his table at least three days in the week during the warm months and that is when he wants it most, for through the winter he has had of sausage a plenty with beef of his own fatting and killing kept fresh for weeks by being packed closely in snow and allowed to freeze.

With the butcher's boy blowing his horn every other day before her door, and a good garden at her back, rich, golden butter and cream in her cellar, fruit fresh and luscious ready to drop into her hands, with promise on every side of "more to follow," the country housewife of all housewives in the world, may be said to stand in clover. She may any day spread her board with a dinner fit for an emperor, and if she will place a few fresh flowers in the center, the eye as well as the palate will be pleased. It is not so easy to prepare a meal in winter.

Here is one, however, which "our folks" have just pronounced "as good as need be.' Bread, light, crisp and flaky made from home-made yeast and butter—we never think of calling good, fresh butter unwholesome at our house. A loin of mutton baked. It was first prepared by seasoning with salt and pepper, then dredged with flour to form a crust to "keep in the sweetness." With this we had canned tomatoes stewed slowly half an hour with a little butter pepper and salt; potatoes and turnips well mashed and flavored with salt and cream. We prefer the kohl-rabi to the turnip earlier in the season, but it seems to grow stringy with age. For dessert we had apples cut in halves after being pared, and baked with a lump of butter the size of a hazel nut and a teaspoonful of sugar put in the hollow made by "scooping" out the core, a little water was added to the bake-dish and turned on the apples when taken up. This was eaten warm. That was the dinner, plain but substantial and to hungry workers, appetizing. Below I give the recipe for a pudding which is a favorite at our house, also my way of making yeast.

Batter Pudding.

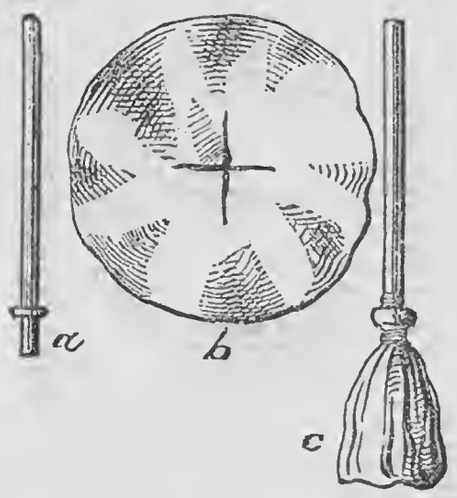
Two eggs well beaten; one pint butter-milk; one tablespoonful sour cream; a rounding teaspoonful of soda; a little salt and flour to make a mass so stiff that it would keep the shape of a very rough mountain if made into one. Stir in ripe berries, cherries or currants—or in the absence of these, the dried fruit—till they are as close together as the stars in the Milky Way look to be. Steam two hours. Serve with cream—not the mixture of milk and yelk of eggs used by city housewives—and sugar to which a little nutmeg may be added.

Yeast.

Boil six medium-sized potatoes, cut in halves, in three pints of water with a handful of hops tied in a cloth. Have ready in a pan a cup of flour. When the potatoes are done, turn the water scalding hot through a colander onto the flour, stirring it until smooth. Mash the potatoes through the colander and when luke-warm add a cup of good yeast.

How to Make a Dish-Mop.

Take a round stick and put an iron washer on it two inches from the lower end, making it fit tightly: a. Take a round piece of cloth,—a worn-out woven undershirt is the best material—about 16 or 18 inches in diameter;



cut a cross in the center large enough to put the handle through, b; put it over the handle, tie the corner of the cross-cut above the washer, wrapping several times with twine or copper wire, as a paint brush is wrapped. Bring the cloth down and tie again and wrap it below the washer. The cloth may be cut into strips if desired, c. H. S.

THE CANNING OF TOMATOES.

I have been reading the article on canning tomatoes, in the number of February 14th, and although not, perhaps, an experienced housekeeper, I have been successful the last three years in putting up tomatoes. I use only the Mason improved jar. I have had the jar Mary Wager-Fisher speaks of as the "Whitall" or "Melville," and could I get them, would never want any other. In Albany, N. Y., where I have inquired, they are not kept, and the Mason seems to be the only, or rather the next best. All my cans that have been opened thus far, have been as nice as fresh tomatoes in summer. They are kept in a cellar which is cold—for it is desirable to have the cellar as cool as may be, without freezing—but it is not dark by any means. With me, the way of putting up the tomatoes has something to do with their keeping. I have tried various ways, but have been the best satisfied in every respect with the following:—After scalding and taking the skin from the tomatoes, I cut them into pieces as large as I can push into the jar, and fill the latter full. Then, having my wash-boiler ready with cold water to the depth of one-third of the jars after they are in, and pieces of grate at the bottom to keep the jars from breaking, I put on the rubber ring and the glass top and set in as many jars side by side without touching, as the boiler will hold. After the water comes to the boiling point, I let the tomatoes boil fifteen minutes, then if any jars are not quite full, I use the contents of one to fill the others. I take one out at a time, put on the metal band as quickly as possible, and after they are cool, put them in the cellar, where they stand until wanted for use. I think, in general, tomatoes are cooked too much. It seems to give them an unnatural and unusually acid taste. Even in making catsup, I only cook the tomatoes until done; say a half hour, then putting them *carefully* in a sieve, the water that first runs through is thrown away, then after rubbing the rest through and adding the seasoning, the mass needs only to be thoroughly scalded, and it is ready to be put away. I have kept it until June, with only a good cork in the bottle, as nice as any one could wish, except that some would want more seasoning than any of us care for. MRS. W. F. A.

ACID TOMATOES; GLASS FRUIT CANS.

If Mary Wager-Fisher is not opposed to the use of condiments, she can utilize her soured tomatoes by making catsup of them, of which I could supply her with a "gem" of a recipe; but before doing so I would advise her in cooking them for the table, to put in a slight pinch of baking soda and a dessert-spoonful of sugar to each quart. I learned from a colored cook to do this during the growing season, when frequent rains produce acidity in that luscious fruit.

My experience with tin *versus* glass is in favor of the latter for everything. Several years ago, I had a like experience to hers. For two years past I have experimented with both, and find that, if kept in a *dark, dry* closet, those in glass are more apt to preserve in the perfect degree the natural flavor of the fruit. From careful observation I am inclined to attribute the tendency to sour to the ripening of the tomato at an unfavorable season.

Speaking of cans, the *bona fide* "Mason" is always in three pieces—the glass jars, rubber ring, and porcelain-lined, *zinc* top. In my opinion they are superior to any other kind, and 'tis only because our little Southern town has not kept them always that I am possessed of so many useless, or comparatively so, "Gems," "Queens," "Melvilles," etc.,—all these latter have the glass-lid, metal-ring arrangement, the latter loosening its fit after a season or two's use. The Mason has a thicker rubber and a distinct ledge around the band; thus by renewing the former when it loses its elasticity, I think the jars can be used many years. I always test them by turning each upside-down with the hot fruit in it. E. G. S.

(Please give the recipe. E. M.)

"BITS OF EXPERIENCE" IN CANNING TOMATOES.

Last fall I selected good, fair tomatoes—not too ripe—and prepared them in the usual way for canning; when ready to put in the cans, about a teaspoonful of table salt was allowed to each can and stirred thoroughly in the prepared tomatoes, which were then put in glass cans and the covers put on. After allowing the cans to "cool off" the covers were tightened and the cans taken down cellar and placed upside-down on a swing-shelf. So far as they have been used during the winter they are as perfect, canned tomatoes as one ever ate.

The cans were the "Gem;" my reason for using them was because I had them. The tomatoes were selected "not to ripe" for when the fruit is too ripe fermentation takes place and acidity is the result. The cans were placed upside down so as to allow the liquid to run out, at once, should they fail to be (or to get) air-tight. Such cans are thus easily detected and can be readily removed. The cellar is an ordinarily good one, not too warm and never freezing. MRS. J. E.

Miscellaneous.

BRIEFLETS.

Artemus Ward said: "Vanity makes young men on fearfully small salaries wear store-clothes every day and neglect to pay their washerwoman. Vanity makes young women ignore the wash-tub, the cook-stove, the garden, and other health-giving institutions of a like character. Vanity makes men whom Nature expressly designed for tin-peddlers, haberdashers and horse-dealers, aspire to be statesmen." . . . Alternantheras, Cineraria maritima, Glaucium, Achyranthes and Coleus, with the Bronze Ricinus or Cannas and Caladiums in the center, make showy beds. . . . Our Young Friend must be careful about confounding Cherries and Currants! . . Mr. J. T. Lovett says:—"It is an enigma, the answer to which I would give much to know, why the hundreds, thousands, aye millions who have facilities for growing them yet exist from year to year, scarcely tasting any of the delicious and health-imparting small fruits, when an abundance can be had for so small an amount of time and money." . . Mr. E. P. Roe says: "Can a man say that he provides for his family when he furnishes them with no strawberries? Ought not people who say that they cannot afford the time and money required to supply their table with small fruits, and in consequence pay ten times the amount in doctor's bills, be placed in lunatic asylums?" . . Tho sea weeds, called by various local names, collected in vast quantities along our bays and creeks, should be composted with bone flour. Thus fermented the phosphate, according to French authorities, is rendered very soluble. . . It appears that the mosquito was not made in vain. Under their influence the cattle of Texas become docile and easy to manage. The Michigan Farmer suggests that all mosquitoes migrate to Texas where they can be made useful. . .

"Tell me I *hate* the bowl?
Hate is a feeble word.
I *loathe*, ABHOR, my very soul
With deep disgust is stirred,
Whene'er I read, or hear, or tell
Of the dark *beverage* of *hell*."....

For home use there is no better beet than the Early Bassano, while Early Blood turnip is as good as any for market. This is a good winter beet if sown late, . . Plant cabbages. If they bring a good price, sell them; if not, feed them to sheep, milch-cows and pigs. . . Mr. Joseph Harris says: "I sow my cabbage seed with a garden drill in rows fifteen inches apart; and that is all there is to it. As soon as the plants appear, hoe the ground between the rows and keep hoeing." . . "Of course, it is desirable to select good, rich mellow land for the seed-bed. Sow broadcast, two pounds of superphosphate to the square rod, and harrow it in and roll or rake the land smooth and level before drilling in the seed." . . When the the plants are large enough, take them up with a fork. Let all the soil adhere that will. If the ground is dry, pour water into the holes and press the earth *firmly* about the roots and necks of the plants. . . We are told that though farmers are all getting better prices for produce of all kinds, they at the same time expect to buy seeds and machinery at the same or a less price than they paid last year. . . The Jefferson Grape of Mr. Ricketts is spoken highly of by those who have tested it. We have a vine and shall report in due time. . . *Astronomical Contingencies.*—If a body meet a body coming through the sky. . . Extract from a remarkably sharp boy's composition on tobacco: "The habit of using tobacco is very bad; in fact, my Third Reader says it is disgusting. Even hogs won't use tobacco. But that's because they ain't persevering. No one likes tobacco the first time. And if hogs would only stick to it a little while, there wouldn't be no more said about their refusing the filthy stuff." . . Alexander Hyde says in the N. Y. Times, that a farmer without a wife is like half a pair of scissors! . . He further says and the Rural indorses it heartily:—I do say that the position of a farmer's wife is one peculiarly adapted to a life of usefulness, and I would like to ask the frivolous and fashionable girls who scorn the hand of a husbandman, whether a life spent in useful employment such as the average farmer expects of a wife, will not in the retrospect, give more satisfaction than one spent in the gay rounds of fashionable society? . . Some farmers, he further says, and we are *very* sorry to be obliged to indorse this too—treat their wives as if they were beasts of burden, made to rear children and do drudgery. . . But he omitted the further truth that such brutality is at least as common among other classes as among farmers. . . Seeds of Asparagus may be sown as early as the ground can be worked. Sow in rows a foot apart in rich, mellow soil. Keep clear of all weeds. Next spring, prepare a bed of deep rich soil and transplant to rows three feet apart and about two feet apart in the rows. . . . There are hundreds of farmers who have been intending, all of their lives, to have an Asparagus bed, and they still intend to have one. No vegetable is more wholesome or delicious—none more profitable. Sow the seeds this spring and delay no longer. Or purchase the roots which will save one year of time. . . It seems odd to say that Pennsylvania has become one of the largest tobacco-growing States in the Union, and yet such seems to be really the case, as the production for the year 1879 shows. . . . Considerable importance appears to be attached to a discovery of the superior value and quality of flour manufactured from the seed of the common broom-corn. . . Instead of searching for substitutes for wheaten flour, however, the proper course for our people to pursue is to extend the cultivation of wheat in all parts of the country where the crop can be made profitable. . . At this day the average tomato is no earlier than it was fifty years ago. . . We seem to be gaining all the time, but is it not rather because the old kinds deteriorate? The whole experience seems like the ancient tread-mill. We keep stepping up and up, but do not get farther ahead, because the wheel is going back against us.—Germantown Telegraph. . . We see that Beauty of Hebron potato is offered in Hooper & Co's catalogue (London, Eng.) at $3 per bushel. . . There is a new Strawberry called "Cetewayo." *What* a name for a Strawberry!

News of the Week.

AGRICULTURAL NEWS.

Monday, March 1, 1880.

A thorough canvass of California shows that the crop prospects are, almost without exception, excellent. Greater area than heretofore is under cereal cultivation.....An English court has condemned the Grinwood line of steamers to pay $15,000 damages to George Wright, of Waterford, Ontario, Can., for a lot of cattle shipped by him for England in 1878, and which were thrown overboard in mid-ocean by one of their captains who believed a storm imminent. A Belgian court had previously awarded 100,000 francs, but this had been set aside by a higher court.....The Association of Breeders of thoroughbred Holstein cattle will hold its annual meeting for the election of officers, etc., etc., at the Empire House, Syracuse, N. Y. on March 19, 1880.....The fourth volume of the Holstein Herd book was ready for distribution about March 1st.....Australians are confident of doing a large trade in meat with Great Britain, through the Suez Canal, at 2c. per pound. .....A Western Hereford breeder lately obtained an order for 400 bulls from one cattle king. .....An English firm of cattle buyers for this country lately shipped 60 Short-horn bull calves to Kansas—all subject to Herd Book entry..... The famous Short-horn heifer, Icile, illustrated in RURAL of Jan. 11th 1878, has been slaughtered. She dressed 70 per cent. of her live weight..... Famine in the interior of Russia is reported as heart-rending. The provinces of Saratoff and Kief, which annually export, in ordinary times, enormous quantities of grain, had scarcely any crop last year. The calamity is aggravated by the want of fodder for cattle, the peasants being forced to sell them. In the Caucasus the famine is still greater, where people are committing suicide and selling their children.....According to the Mark Lane Express of Feb. 24th, imports of wheat into Great Britain during the previous week were small; sales ditto, mainly retail, large dealers holding off for a big drop here. Prices steady except for Russian wheat, which fell a little early in the week, but recovered later. Maize scarce and prices stiffer. Barley and oats quiet with a slight advance on the latter..... Prof. Arnold says a good cow should give 8,000 pounds of milk yearly; the average here is a trifle more than half that; in Holland 13,000 is said to be a common yield.....The toll on foreign salts on the Erie canal is 2½ mills per 1000 lbs. per mile, that on domestic salt ½ mill.....Philadelphia is arresting numbers of oleomargarine swindlers—that's the right name for those who sell the stuff as butter for butter prices.....The Pennsylvania Agricultural Society is already busy arranging for a grand State Fair and Sheep Show next Sept. The success of the last exhibition was so great that the Society has decided to offer premiums amounting altogether to $40,000. Of this amount prizes of $6,000 have been set aside for sheep, $7,000 for horses, $3,500 for cattle, $3,000 for swine, $1,000 for poultry, $1,500 for dairy products and the balance allotted to machinery, fruits, seed and other products.....According to advices of Jan 27 to 29, about Welling, New Zealand, floods had just caused great damage to crops.....New South Wales, Australia, had imposed a duty of ten shillings on sparkling and five shillings on other wines—an injury to Californian vineyardists.....A cyclone and huge tidal wave has greatly injured farming and other property in that province.....The harvest in the province of Victoria was well advanced and the yield heavy. It was expected that 12,000,000 bushels of wheat would be available for export from that province alone.....The Italian Government offers cash prizes for vineyards raised from grafts of American varieties that will resist the attacks of phylloxera. The wonderful hardiness of native American vines, and the high repute of Chateau Yquem wine, which is made from an American grape domesticated in France, show that the experimenters have a double reason for hope..... The Farmers' Club of this city has applied to the Police Commissioners for permission to take away all the street sweepings to be used for manurial purposes. Hitherto they have been dumped from scows out at sea or in the bay at considerable expense. Permission given.....Dennis McCarthy, of Newburg, N. Y., rejoices in the possession of a prolific cow that last Tuesday gave birth to four calves—three heifers and a bull. A few hours later, when last heard from, all of the calves were strong enough to stand firmly on their legs and suck. They resemble each other in color and size. They are symmetrically formed, and appear to be in a healthy condition..... Mr. McCombie, of Tillyfour, Scotland, late Member of Parliament for the Western division of Aberdeenshire and famous as a farmer and a breeder of black polled cattle and as the winner of the first premium at the Paris exhibition of 1880, for the best group of cattle, died at his residence Tillyfour, Aberdeenshire, Feb. 1, in his 75th year... The Germans, who for the last decade have devoted great attention to horse and cattle breeding, propose to hold an international agricultural show, especially of live stock, at Hamburg in 1882. The last one at the same place in 1863 was very successful ...The past year was the first since 1853 on which the sugar cane tasseled in La., a size indicative of a splendid yield....It is proposed in Germany to totally prohibit the importation of horses, oxen, sheep and swine from Russia and Austria, because in addition to cattle-plague other diseases, such as glanders, sheep-pox, foot-and-mouth disease, etc, are constantly introduced from those countries.... Large quantities of ancient wheat and pea seeds have been discovered at a considerable depth under the walls of Homeric Troy, especially near the Skaian gate....From Lceswitz, Austria, we are told that a cow there, last year brought forth five perfectly developed living calves, all of which have since done well. Two of these, both bull calves, were dropped at the beginning of the year, and the other three, one bull and two cow calves, in the month of December....The following is the total return of outbreaks of contagious diseases among stock in Ireland for the week ending Jan. 24th:—Pleuro-pneumonia, 26; sheep scab, 26; glanders, 2; farcy, 1; anthracoid diseases, 13; foot-and-mouth disease, *nil*. The same was the case in England....The organization of the Orange, Sullivan and Sussex County Milk Producers' Protective Association was completed Wednesday at Middletown, with M. D. Houston, President ... Abundant rains have delighted rural Texas ... Georgia got $40,000 last year for guano inspector fees....$25,000 worth of goat-skins were shipped from Corpus Christi, Texas, last year....Southern tramps are meandering North after the cotton-picking season....South Carolina flatters itself that a recent snow storm has killed the Hessian fly, which had begun to damage the wheat crop. ....Georgia will hold no State Fair this year, but will give all her attention at that season to politics....Scab among sheep is very disastrous in Atacosa Co., Texas; sheep raisers are organizing to eradicate it....Lagrange, Texas, is to have a sorghum sugar cane factory with a capacity of 60 tons of cane per day; and Early Amber cane is to be largely planted in the surrounding country.... Efforts are being made to establish a cheese Board of Trade at Ogdensburg, N. Y. Twenty factories have engaged to sell their cheese there—cheaper freights to Liverpool and other causes..... Seven head of cattle belonging to S. T. Mead, of Greenwich, Conn., have been officially declared afflicted with pleuro-pneumonia, and their slaughter advised by Prof. Law. The Governor's action not known yet....Sec. Sherman reports to Congress that the cattle exports for the past six years have aggregated nearly $23,000,000; that pleuro-pneumonia is contagious among cattle; that it is always introduced here by contagion; that the only means of suppression is by the destruction of infected cattle; that none exists or has existed in any State west of the Alleghanies, and there is none now in the United States on or near the boundary of Canada or in Canada. The disease exists in the eastern part of New York, in New Jersey, Pennsylvania, and possibly in parts of Maryland, Virginia, and the District of Columbia....A circular has been issued by the Treasury Department revoking the order of November 3, 1879, which prohibited the importation of neat cattle from the Dominion of Canada The revocation was to take effect March 1....This week's circular of the Liverpool Cotton Brokers' Association, published on Feb. 27, says: "Cotton was in comparatively limited demand throughout the week, and quotations show a slight decline. American was in moderate demand which was fully supplied, but quotations are reduced 1-16d. In Sea Island business was small, but prices were firmly maintained. Futures opened dull and the tone was generally quiet. Prices, after slight fluctuations, show a decline of 1-32d.@1-16d." ... A leading Liverpool grain circular of February 27, says: "The wheat trade, though less buoyant, has been generally steady. At the provincial markets during the past few days wheat was held for 1s @ 2s. per quarter advance, which somewhat checked business. Cargoes off coast were firmly held, but the demand was less active. There are larger offerings for future arrival, causing prices to tend in favor of buyers. Corn was very scarce, but without quotable change. Country millers are indisposed to follow up recent purchases. Sellers are willing to accept a reduction of 2d. from Tuesday's rates, but there was no general pressure to sell. There is more corn offering, which meets with slow inquiry at a ½d. decline.....The railroad rates on hogs from Chicago were reduced, on Feb. 26, five cents per cwt., and rates to all New England ports were made the same as those to this city.....It is said that reductions in grain rates are not improbable,—navigation will soon be open, and force these.....The regular monthly meeting of the New York Horticultural Society will be held at 55 West 33d Street, near Broadway, on Tuesday, March 9th, at 2 P.M. Lots of premiums offered for flowers, etc. This Society usually meets on the first Tuesday in every month at 2 P.M. at above place.

"Now You See It."

Gilt-Edge Butter Maker takes the "witches out of the churn" and turns tedious, unsatisfactory churning into gratifying success. Sold everywhere.

HAMBURG, N. Y., May 28th, 1879.

JOHN E. PIERCE, Sec'y World's Dispensary Medical Association, Buffalo, N. Y.:

Dear Sir—Yours asking as to reputation of "Gilt-Edge Butter Maker" received. We have never kept it until lately. Have sold one case (3 doz. boxes) and it has given the best of satisfaction.

Yours respectfully, T. L. BUNTING.

FOR COUGHS, Asthma and Throat Disorders, use "*Brown's Bronchial Troches*," having proved their efficiency by a test of many years. Imitations are offered for sale, many of which are injurious. The genuine "*Brown's Bronchial Troches*" are sold *only in boxes*.

Burnett's Cocoaine is the best and cheapest Hair Dressing in the world. It kills dandruff, allays irritation, and promotes a vigorous growth of the Hair.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, Feb. 28.

Baltimore.—WHEAT.—Southern red at $1.45@$1.50; do. amber at 1.52@$1.56; No 1 Md. at $1.51½; No. 2 western winter red, $1.47½. CORN.—Southern white at 62@63c.; do. yellow, 59@60c.; western mixed at 56½c. OATS.—Southern at 48@49c.; western white at 48@49c.; do. mixed at 46@47c; Penn. at 48@49c. RYE at 95@97c. HAY.—Prime to choice Penn. and Md., 17@$18. BUTTER.—Prime to choice western packed, 23@25c.; roll, 20@25c. EGGS at 13c. MILL FEED.—City is quoted at $20 per ton for middlings and 21@$22 for brown-stuff, the latter scarce; western is nominal. POTATOES.—55@60c. per bushel for Early Rose and 45@50c. for Peerless and Peachblow; sweets are quoted at $3.25 per bbl. SEEDS.—The inquiry for clover is light and the market is dull for car lots at 7¼@7¾c. per lb.; jobbing lots ¼@½c. higher. Timothy is steady at $3.10@$3.20 per bushel. TOBACCO.—Maryland—Inferior and frosted at 1@$2; sound to good common 4@$5; middling 5.50@$7.50; good to fine red 8.50@$12.50; fancy 12@$14; up-country, 3@$15. Ohio—Inferior to good common 3.50@$5.50; greenish and brown 5.50@$7; medium to fine red 7.50@$10 common to medium spangled, 6.50@$12; fine spangled to yellow 10@$20.

Boston.—FLOUR.—The sales of Western superfine at $5@5.25; common extras, $5.25@6.25; medium fancy bakers' and spring wheats at $6.25@6.75; winter wheats, $7@7.75 for St Louis; $6.62@6.75 for Michigan, $6.75@7.25 for Indiana; winter wheat patents at $7.25@8.50; fancy spring wheats at $7.25@9. CORN 61½c. for high mixed. OATS, 52@54c. for choice and extra white; 51c. for No. 1 white; 49c. for No. 2 white; 48 for No. 3 white; 47c. for No. 2 mixed; SHORTS firm at $22.50; no fine feed offering and middlings nominally $24. HAY.—First quality coarse Eastern and Northern at $15@16 ₱ ton; poor and medium at $11@14. RYE straw $20@22. PRODUCE—The following prices are paid by receivers: BUTTER—New York and Vermont choice creameries at 28@30c ₱ lb, fair to good, 25@27; fall dairy made, choice; 25@28c.; winter dairy made at 20@24c.; straight dairies, choice at 22@25c.; dairies common to good, at 18@20c; Eastern and P. E. Island, 18@20c.; Western choice creameries 35@37c.; choice dairy packed at 23@26c., choice ladle-packed 23@25c, fair to good do. 20@22c.; common 17@19c. CHEESE—Choice Northern factory 14½@15c ₱ lb fair to good at 12½14c. and common 9@11c; Western factory, choice 13@14c; fair to good 11@13c.; common 8@10c. EGGS—Eastern at 15@16c.; Northern 15c.; Western 14@15c. ₱ doz. BEANS—Northern hand-picked pea at $1.80@1.90 ₱ bushel; do. do. Western at $1.75@1.85; do. common $1.65@1.75; medium choice $1.55@1.60; common to good $1.35@1.40; Yellow Eyes $2.10@2.15; Red Kidneys at $1.75@1.85; Canada peas 80c.@$1 ₱ bushel for common to choice; Green peas $1.80@1.85. POTATOES—we quote Houlton and Maine Central Rose 50@55c. ₱ bushel; Houlton Jackson Whites at 40@45c.; Vermont Rose at 50@53c.; do. Jackson at 40. Peerless at 45@48c. and Prolifics at 53@55c. ₱ bushel. ONIONS, $3 75@1 ₱ bbl. APPLES at $1.75@3 ₱ bbl according to quality. CRANBERRIS at $6.50@9.50 ₱ bbl. SEEDS.—In Calcutta Linseed nothing doing and prices steady. We quote clover seed as quiet at 8½@9½c. ₱ lb for Western and New York; timothy at $2 90@3 ₱ bushel; red top at $2 70@3 80 ₱ bag; Canary seed at $2 45@2 85, and American Linseed $1 50@1 85 ₱ bushel.

Chicago.—WHEAT—No. 2 Chicago spring at $1.23½. CORN—fresh at 37½@37½c., cash; rejected, at 35½c. OATS—fresh at 32¾@33c. BARLEY steady at 78c. PORK, $11.70@11.75, cash. LARD weak at 7.12½c., cash. BULK MEATS—Shoulders, 4 20c.; short ribs, 6.55c.; short clear, 6.70c. BUTTER—Creamery quotable at 30@32c. for good to choice, and 33@34c. for fancy brands. Most of the dairy butter is selling at 20@25c. for fair to choice, although some very fancy makes almost equal to creamery sell rapidly within 3@5c. of the creamery. The lower grades of packed butter range at 13@18c. ₱ lb. Roll salable at 17@18c. for medium to good packers, and occasionally at 18½@19c., but local dealers pay higher prices and therefore obtain the bulk of the receipts. CHEESE—Full cream, 14½@15c; part skim, 12½@13c; low grades, 8@10c. GREEN FRUIT—Apples, ₱ bbl., in lots, $3@3.75; cranberries, ₱ bbl., $8@9; lemons, ₱ box, $6@7; Valencia oranges, ₱ case, $8@9; Messina oranges, ₱ box, $3.25@4.25; Malaga grapes, $7@9. HAY in small demand and easy. No. 1 timothy, ₱ ton, $15@13 50; No. 2 timothy, ₱ ton, $12@12.50; mixed, $10@10 50; upland prairie, $10@10.50; No. 1 prairie, $8.50@9; slough, $8.00. SEEDS—Timothy in good demand; sales made at $2.40@2.65, prime closing at $2.60@2.65. There is some talk about seed that has been mixed with stuff the late fire being on the market. It is understood that but little of the fire seed is dry enough to handle now. Clover also has advanced, being in demand and scarce. Sales are noted at $4.30@4 40, and of mammoth at $4.60. Flax, $1.65@1.66; millet at 70c. WOOL—There is a good, steady demand for all grades, and prices remain firm and unchanged. The trading is mostly on order account, Western manufacturers being the principal buyers. The asking rates from store for eastern Iowa, Wisconsin and Illinois wools range as follows, Tub-washed bright, 52@57c. ₱ lb; do. dingy and coarse, 50@55c.; do. coarse, 45@47c.; unwashed medium, 37@40c., do. coarse, 33@35c.; do. fine bright, 28@31c.; do. heavy, 24@28c.; buck's fleece, 20@22c. Consignments from Western Iowa, Nebraska and Kansas sell at about 2c. ₱ lb less than this range, and burry and poor-conditioned lots at 5@5c. less. HOGS—Mixed packing at $4.20@4.35; choice heavy at $4.45@4.65; light bacon in fair demand at $4.20@4.40. CATTLE—Shipping in good demand at full prices at $3.80@5.20; butchers' steady; cows at $2@3.50; bulls at $2@3.60; steers at $3.60@4.20; oxen at $3.80@4.30; stockers and feeders in fair demand at $2.60@4. SHEEP—Best grades in good demand at $4.75@6; one lot Wisconsin at $6.75.

Cincinnati.—WHEAT at $1 30; CORN at 41c.; OATS dull at 36c. RYE steady at 85c. BARLEY dull; extra No. 3 fall at 75c. PORK weak at $12. LARD dull at $7.15c. bid, $7.20c. asked. BULK MEATS quiet but firm; shoulders at 4c.; clear rib at 7½c.; clear sides at 7¾c. Hogs steady; common at $3 25@$4 20; light at $4 25@4 50; packing at $4 30@4 65; butchers' at $4 65@4 75. BUTTER—Fancy creamery 38@40c., and fancy Western Reserve, 29@30c. Prime to choice dairy 25@28c., fair at 23@24c., and common butter, 19@20c. Packers are not buying, as stocks are so light. CHEESE—Choice factory, 14@14½c.; HAY—receipts excessive: prairie $11@$13; fair to prime mixed, $14@15; fair to prime timothy, $15 50@16 50; choice light pressed timothy, $17 per ton on arrival, and $1@2 more from store. SEEDS—Clover seed firm for jobbing lots at 7¾@8c. per lb. Timothy seed quiet: offered at $2 85@3 per bush. as to quality. Flaxseed is in good demand on arrival at $1 25@1 35 per bushel. HORSES AND MULES in good demand at fair prices: Southern chunks, $40@70; streeters, $85@100; draft $125@160; drivers and saddle horses, $125@175. Good mules are in fair demand, large ones especially. The general run of the market was as follows: Drivers, 100@$175; draft horses, $100@$175; streeters, $75@100; Southern chunks, $50@$80. Mules aged four to eight years, 15½ to 16 hands, $100@140; 15 to 15½, hands, $85@110; 14 to 15 hands, $55@90.

Detroit.—FLOUR steady, with a very limited demand; sales 600 barrels white at $6 25. WHEAT extra white Michigan, $1 29½; No. 1 white Michigan at $1 29½ bid. CORN firm, with a good demand; No. 1 yellow at 44c; high mixed at 43c; No. 1 mixed at 42½c; No. 2 mixed at 42c. OATS more disposition to sell; No. 1 white at 37½c; No. 2 do. at 35c; No. 1 mixed at 36c½; No. 2 do. at 35½c. CLOVER seed has advanced about 15c since yesterday and is very active; No. 2 do. $4 15; prime at $4 40@$4 55. DRESSED HOGS firm at $5.

Louisville.—WHEAT firm at $1.20. CORN firm; No. 2 white at 45@46c. do mixed, at 43@44c. OATS quiet, but steady; No. 2 white at 40@41c; do mixed at 38@39c. RYE steady; No. 1 at 86@87c. PORK quiet at $12 50. LARD steady; prime steam at 7½c. BULK MEATS quiet; shoulders, 4½c; clear ribs at 6¾c; clear sides, 7c. BACON steady; shoulders, 4½@5c; clear ribs, 7½c. MILL OFFAL per ton in bulk; bran, $12 50@13 50; shipstuff, $15; middling $18 50. HAY. Prices are firmly maintained; prime to choice timothy, $18@18 50, and mixed at $12@16 per ton on arrival. FIELD SEEDS delivered from store; timothy, $2 90; orchard grass, $1 70; red top 70c; clover, common red at $4 50, and sapling at $5; bluegrass, clean, 55c; extra clean, 65c. FLAXSEED $1 10 per bushel on arrival. STRAW $8@9 on arrival and $10 from store. BUTTER.—Supplies of all kinds light, and prices have advanced: common to fair country at 14@16c. fair to prime at 18@20c, and choice to fancy at 22@24c; Western Reserve at 23@25c; and Western creamery at 30@38c. CHEESE. Western factory at 14½@15c; off grades, 12@13c; pineapple, 20c.

Milwaukee.—WHEAT dull No. 1 Milwaukee hard at $1 24½; do. soft, $1 22½; No. 2 Milwaukee, $1 21½. CORN; No. 2 at 38½c. OATS No. 2 at 32½c. RYE. No. 1 at 74c. BARLEY No. 2 spring fresh at 65½c. MESS PORK dull at $11 75. LIVE HOGS $4 15@4 35. DRESSED HOGS $4.85.

New Orleans.—CORN active and firm at 58@59c. OATS quiet at 45c. CORN-MEAL in good demand at at $2 60. HAY dull; ordinary at $23@24; prime at $25; choice at $27. PORK scarce and firm; old, $12 75; new at $13. LARD dull; tierce at 7¾@7¾c.; keg at 8@8¼c. BULK MEATS in fair demand and firm; shoulders, loose at 4.40c.; packed, 4.50c; clear ribs, 6¾@6¾c; clear sides at 6¾@7c. BACON scarce and firm; shoulders, 5½@5¾c.; clear ribs, 7¾@7¾c.; clear sides at 8¾@8¾c. SUGAR-CURED hams quiet; canvassed at 9@10cc. COFFEE—Rio cargoes, ordinary to prime at 14@16¾c. SUGAR quiet and weak; inferior at 5@5¼c.; common to good common at 6½@6¾c; fair to fully fair at 6¾@7¼c.; prime to choice at 7¼@7¾c.; yellow clarified, 8½@8¾c. MOLASSES quiet, but steady; common at 30@33c.; fair at 36@38c.; centrifugal at 30@42c.; prime to choice at 42@52c. RICE quiet, but steady; Louisiana ordinary to choice at 6@7¼c. BRAN active, firm and higher at 90c. COTTON quiet and steady; middling, 12¾c; low middling, 12¼c.; good ordinary, 11¾c. Weekly—Net receipts, 45,186 bales; gross, 47,654; exports, to Great Britain, 29 218; to France, 4,974; to the Continent, 11,212; coastwise, 4,233; sales, 29,000.

Philadelphia.—WHEAT.—Dull and unsettled. Penn. red on track at $1.47¾; southern amber do. at $1.49. RYE in demand; Penn. at 93c. CORN.—Penn., western and southern yellow on track and in grain depot at 57c. OATS dull; rejected and No. 3 white at 44½@45½c.; No. 2 white at 46@47c.; fancy do. at 47¾@48c. PROVISIONS quiet; city mess beef at $13; beef hams at 16.50@$17; mess pork at 13@$13.25; extra prime at 10@$10.25; smoked hams at 9½@10½c.; do. in salt and pickle at 7¾@9¼c.; clear rib sides, smoked, at 7¾c.; do. in salt at 7c.; shoulders in salt at 4½c.; do. sugar pickled at 5@5¼c.; do. smoked at 5@5¾c.; dressed hogs at 6@6¾c.—LARD.—Western kettle at 7.87½@$8; do. steam at 7.60@7.62½; do. butchers' at 7@$7.25. BUTTER firm: creamery extra at 33@35c.; Bradford county and New York extra at 25@27c.; Western Reserve extra at 25@27c.; do. good to choice at 19@24c.; rolls firm; choice wanted; Penn. extra at 20@23c.; Western Reserve extras, 21@25c. EGGS weak; Penn. 14¾c.; Western at 14c. CHEESE. steady; New York factory at 14½@15c.; western full cream at 14@14¾c.; do. good at 13¾@14c.; do. half skims at 12½@13c. SEEDS.—Clover quiet at 7@7¾c.; timothy firm at 3.25@3.37½; flax wanted at $1.65. Feed in fair request; bran 21@$22.

St. Louis.—FLOUR—Fancy at $6 12½ bid; choice at $6 cash; $5 92½@5 95 for March; $6.05 for April; family at $5 85 cash; triple extra at $5 60 bid. WHEAT—No. 2 red fall at $1 27½ bid; No. 3 do, at $1 23. CORN 34½@34¾c. OATS 33½c RYE dull at 75c. bid. PORK dull; jobbing at $12 50. LARD nominally 7c. BACON easier; shoulders at $5.00; clear ribs at 7.25c.; clear sides at 7.50c. HOGS, light at $4 10@4 20; packing at $4 20@4 40; butchers' to select at $4 45@4 55. CATTLE—Fair business done; sales light to good shipping steers at $4 25@$4 90; no choice in pens; butcher grades range from $2 75@4; choice heavy feeding steers command $4 25. SHEEP in active demand; sales of 112 lbs. average at $4 85; good heavy at $5 25.

FERTILIZERS.—Bone ash is nominally quoted at about $22 per short ton, on the basis of 70 per cent phosphate of lime. Bones quoted at $22 50@$23 for Texas and South American mixed, and $25@$26 do. for shin and shank bones. Refuse bone black at $21@$22 per short ton on merit. Sulphate of ammonia at 3¾c. ₱ pound on the basis of 26 per cent. of ammonia. Dried blood at $2@$2 30 per unit of ammonia short ton. Ammonia, axoline, etc., for the former at $2 62½@$2 75 per unit of ammonia, and about $2 25 do. for the latter, all short ton. Nitrate of soda, 4½c. Saltpetre, crude 6½@6¾. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent. ammonia, $35@$40; dissolved bone black, 15 to 17 per cent. of soluble phosphoric acid $30@$35; dissolved bone 13 to 14 per cent. of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent of soluble phosphoric acid, 3 per cent. of potash, 3 per cent. of ammonia, $40@$46; German potash salts, 25 per cent. of sulphate of potash, $15@$18 per ton; muriate of potash, 80 percent. 2@2½c ₱ lb, land plaster, $7@$7 50; dried blood, 10 per cent. of ammonia, $35@$45 per ton; fish guano dry and ground fine, 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $35; underground fish guano, 6 per cent of ammonia, $25, castor pomace, $19@$24; sulphate of soda ground, and in barrels, $15@18 per ton; sulphate of ammonia, 4½c. ₱ lb; bone black, 70 per cent of bone phosphate, $30@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $26 per ton; No. 1 Peruvian guano, 10 per cent. ammonia standard, $55 per ton; Lobos $46 per ton; rectified $65 per ton; guaranteed $56 per ton, nitrate of soda, 5¼@5½ ₱ lb.

FORRESTER'S potato manure, $47.50; grass, $45; oat, $47.50; cabbage, $50; wheat, $45; rye, $47.50; lawn dressing, $47.50; tobacco, $47.50; turnip, $52—per ton each.

BOWKER'S "Hill and Drill Phosphate" $45; Bowker's Phosphate $40 ₱ ton, each; Bowker's "Food for Flowers," 35c. ₱ package and $3 ₱ doz.; Bowker's "animal meal for fowls," $2 50 per cwt.; Ground oyster shells, $1 ₱ cwt.

BAUGH & SONS' prices for goods delivered at depot or boat, in bags and in 2,000 lb lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36; Baugh's raw bone superphosphate $40; Baugh's $25 phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent. of ammonia, $48.

STOCKBRIDGE'S manures quoted: Potato, $50; cabbage, $50; strawberry, $40; corn $45; seeding down, $40; orange tree, $35; onion, $50—per ton each.

MAPES'S complete manures for clay soil, $25.50 per 1,000 lbs.; for light soils $25.50 per 1,000 lbs.; "A" brand for general use, $20 per 1,000 lbs.; fruit and vine, $18.50 per 1,000 lbs.; cabbage and cauliflower, $23.75 per 1,000 lbs.; corn, $24.50 per 1,000 lbs.; potato, $24 per 1,000 lbs.; asparagus, $25.50 per 1,000 lbs.; gypsum, Nova Scotia, ground, ₱ ton, $7.50.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Feb. 28, 1880.

BEANS AND PEAS.—Medium beans are in fair demand and prime are a little firmer. There has been a large movement in marrows at former figures. European buyers have been in market latterly, and it is thought that next week's export statement will show a large total. Exports for the week, 1,650 pkgs. Fancy beans, including pea, white and red kidneys are steady and firm, extra of the latter looking up. Green peas firm at $1.80. A shade lower than last week for Wisconsin. Southern H. K. $2.25 ₱ 2 bush. bag; marrow beans, prime, $1.70; fair to good,

$1.50@1.60; medium, prime, $1.45@1.50; medium, fair to good, $1.35@1.40; pea, choice, 1.65@$1.70; fair to good, $1.45@1.55; white kidney, choice $1.75@1.80; fair to good, $1.60@1.70; red kidney, prime, $1.70; fair to good, $1.55@1.60; turtle soup, good to prime; $1.75@1.80.

Receipts of beans, 5,760; exports, 1,000 pckgs.

BUTTER.—All high grades of butter have held firm with some further advance, and there is no surplus of those grades to prevent a strong future market. Good under grades have also improved; some holders want to make all fair and medium parcels partake of the strong feeling that exists in nice table grades. The new prices for Western belong to only a small part of the arrivals. Prices are above exporters' limits; they have taken only 2,200 pkgs. during the week. Creamery, fresh involces, 38@39c.; good to prime, 36@37c.; fair to good, 32@36c.; poor to fair 28@31c.; fall 24@26c.; early 30@35; State, pails and tub fall choice 30@32c.; good to prime 27@29c.; fair to good 25@27c.; poor to fair 20@25c.; pails and tubs, single dairy, fresh choice 32@34c.; fresh, good to prime 28@30c.; fresh, fair to good 25@25c.; dairies choice 27@29c.; good to prime 25@25c.; fair to good 23@25c.; poor to fair 21@23c., bodies of dairies 19@27c; very poor 16@18c.; Western imitation creamery 22@29c.; dairy, fresh, extra 25@28c.; good to prime 23@25c.; fair to good 21@23c.; poor to fair 19@20c.; special marks, extra 27@28.; prime 23@25c.; fair to good 20@22c.; poor to fair 18@20c.; very poor 16@17c.; roll butter prime 19@24c.

CHEESE.—The market has been very dull this week, and concessions have been necessary to effect sales, closing weak at generally luside prices; quotations are for State factory: Strictly fancy at 14¼@14¾c.; choice at 14¼c.; good to prime, at 13½@14c; fair to good, at 13¾c. State farm dairy: Good to prime at 13@14¼c.; fair to good at 13@13¾c. Wisconsin factory: Fine, 14¼c.; good to prime 13@13c. Ohio factory: Cheddar, fine, 14@14¼c.; do., fair to good, 12½@13¾c.; flat, fine, 14¾; flat, good to prime, 13¾@14c.; flat, fair to good, 12¾@13¾c.

Receipts for week, 5,337 pkgs; exports, 4,300 boxes.

Liverpool cable, 73s.

Freights 30@33s, which is higher.

COTTON.—Trade has been active and prices closed at for February, 12.91c.; March, 12.91c.; April, 13.14@13.15c.; May, 13.37c.; June, 13.58c.; July, 13.68@13.69c.; August, 13.76@13.77c.; September, 13.29@13.31c.; October, 12.42@12.45c.; November, 12.13@12.16.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	11 5-16	11 7-16	11 7-16
Strict ordinary	11 11-16	11 13-16	11 13-16
Good ordinary	12⅛	12⅛	12⅛
Strict good do	12⅜	12⅜	12⅜
Low middling	12 11-16	12 13-16	12 13-16
Strict low middling	12⅞	13	13
Middling	13 1-16	13 3-16	13 3-16
Good middling	13 5-16	13 7-16	13 7-16
Strict good middling	13 9-16	13 11-16	13 11-16
Middling Fair	14 1-16	14 3-16	14 3-16
Fair	14 13-16	14 15-16	14 15-16

STAINED.

Good ordinary	11⅛	Low middling	11 3-16
Strict good ordinary	11⅝	Middling	12⅛

DRIED FRUITS.—Apples are in good demand and strong in price. Peaches are steadily held and in moderate demand; small fruits are generally firm. Quotations are for N. C. apples, fair to good, 7⅛@8¼c.; choice, 9@9½c.; fancy at 10@10½c.; Virginia, at 7@8c.; New York State quarters, at 7@8c.; sliced at 7½@8¼c.; patent evaporated, in cases, at 13½@14c.; prime at 12½@13c. Evaporated peeled peaches, at good to choice, at 22@23c.; unpeeled at 12@14c.; North Carolina peeled, fancy, at 20c.; choice old at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7½@8c.; do. quarters at 7@7½c. Pitted cherries at 18@19c. Blackberries at 11@11¼c. Raspberries at 26@27c. Plums at 17@18c.

Exports since Jan. 1st, 3,030 bbls. apples—about half the quantity taken by this time last year.

EGGS.—Receipts for the week, 11,163 bbls.; do. last week 14,542 do. The market has declined with moderated receipts and suitable rates for Lent will probably be quoted early, notwithstanding the fast began so soon this year. Southern eggs are slow of sale, being unevenly packed and too small in many cases to be attractive. Limed plenty and dull.

Near Points, ₱ doz., 15c.; State and Penn. 13¾@14c. Western, fresh, 13¾@14c.; Southern, 13@13½c.; Western and Canada, inferior, 11@12c.; limed, State, 10@12c.; Canada, 11@11¾c.; Western, 10@11c.

FLOUR.—Has been more freely offered and prices easier. Latest figures are $5.00@5.50 for poor to fancy superfine state; $5.40@5.65 for inferior to good extra do., odd lots and lines; $5.65@5.90 for good to very choice do.; $5.00@5.50 for inferior to fancy superfine' Indiana, Iowa, Michigan, &c.; $5.40@5.65 for inferior to good shipping extra do., and $5.65@5.85 for good to very choice shipping extra do.; inferior to about choice white wheat extras $5.90@6.75; about choice to very fancy do. $6.75@8 the latter an extreme; red and amber winter wheat, inferior to very fancy trade and family, at $5.90@7.75; round hoop Ohio, $5.00@6; and trade and family brands of do. at $6.10@7.75; the latter rate for very choice; St. Louis at $6@6.75 for inferior to very good extra; $6.75@7.75 for very good to very choice; Minnesota clear, very inferior to fancy, at $5.65@6.75; Minnesota "straight," inferior to very fancy, at $6@7.75 and patent inferior to fancy at $6.75@8.75; unsound stock at from $3.25@5.75; city mills extra at $6.25@6.75 for ordinary to fancy for West Indies do. for England, $5.40@5.75 for poor to choice; do. trade and family extras, $6.75@7.75; do. for South America, $6.50@7.10; No. 2 at $5.65@4.85 for poor to very fancy.

FRESH FRUITS.—Exports of apples for 2,321 bbls. There is a weak feeling in apples and only choice retailing stock is quoted at the extreme. Prior to choice Baldwins 2@$3.25 Greenings 2@$3.50; Russets, 2.50@$3. A little red fruit quoted 3.75@$4. Strawberries are in steady supply, Florida sending the best. Fla. choice, 50@65c. qt. Cranberries scarce and a western demand supports late prices. Cape, $8@$10; other Eastern, 7@9c.; N. J. crates, $2.75@3. Fla. oranges in good demand when quality is attractive. It is almost useless to send the Rusty coat variety as buyers want bright fruit in more fancy half box cases, 4@$4.25; fair to prime, $2@$3.50. Peanuts quiet; Roasters being fairly supplied. Va., hand-picked, 5¾@6c.; ex. prime to fancy, 5@5¼c.; good to prime, 4¾@4¾c. Shelled 5¾@6¼c. Pecans 8¾c; easier; Shellbarks, 75@90c.; few wanted.

GRAIN.—Wheat has shown a good degree of activity, with full purchases by exporters, but at the close prices are weak and decidedly off from the best rates of the week. Latest sales are of No. 1 white in store and afloat at $1.46@1.47¼; do., February at $1.47; do., March, at $1.47@1.47¾; do., April, at $1.47@1.48; do., May, at $1.49½; No. 2 white at $1.45, ungraded white at $1.13 in store; No. 2 red $1.49¾@1.50½; do., February, at $1.50; do., March, at $1.50@1.51½; do. April option, at $1.50@1.50¾; do., May, at $1.48¾@1.49c ungraded red at 1.45@$1.48¾; No. 2 amber at $1.48; No. 3 spring at $1.39; ungraded spring at $1.25@1.27½. Rye is strong and in good demand. Canada quoted at 98c. in bond, and prime State at 98c. Corn has been freely offered and closed weak in price; latest sales are of New York No. 2 at 53@53¾c.; do., February, at 53½@53c.; do., March, at 53½c.; do., April, at 55c.; do., May, at 53¾c.; New York steamer mixed at 57¾@57¾c.; do., February, at 57¼c.; do., April, at 61c.; ungraded mixed western at 57@59c.; New York No. 3 at 56¾@56¾c.; steamer white at 60c.; yellow Southern at 52@55c.; Jersey yellow at 58c.; white Western at 61c. Oats are freely offered and prices weak; latest sales are of No. 1 white at 50¾c.; No. 2 white at 47½@48c.; No. 3 white at 46¾@47c.; New York No. 1 at 48c.; New York No. 2 at 47¾@47¾c.; do., February, at 47¾c.; do., March, at 47c.; do., April, at 47c.; New York No. 3 at 46¾@47c.; ungraded white western at 48@50c.; ungraded mixed western at 47@48c.; white State at 48@52¾c.; mixed State at 47¾@48c.; No. 2 Chicago 48c.

MAPLE SUGAR lower; first large installments usually move slowly as buyers four to get supplied with reboiled stock. New Ohio 13@14c.

HAY AND STRAW.—There is a liberal demand and prices strong. Shipping hay quoted at 75c.; retail lots at 80@85c.; for medium and 90@95c. for prime; clover at 65@70c. Straw at $1@1.10 for long rye; 65@70c. for short rye, and 55@60c. for oat.

Exports for the week, 813 bales. Since March 1 1880, 15,300 do., or 8,800 more than for 1879.

HOPS.—There is absence of material life to the market and prices are at ill unsettled and in a good degree nominal. Quotations are for

	Cents per lb.
New York, fancy	37 @39
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast, olds (nominal)	5 @10

OIL CAKE.—Western is quiet and quoted 31.50@$32 per ton.

SEED.—Grass are quiet; clover is quoted 7@7¼ for Western prime, 7¾@@7¾ for choice to extra choice do., and 8¾@@9¼ for choice Western choice State.

PROVISIONS.—Have been weak and dull; new mess pork quoted at 12.35; $12.50 for February; 12.40@$12.50 for March and $12.60, for April. Bacon at $7.15 for long clear and 7¼ for short clear. Beef—Extra mess at 11@$12; plain mess at 10.50@$11; packet 11.50@$12.5 tierced beef, city extra India mess, at 20@$22.50; do s Philadelphia at $20; Beef hams at $17. Lard—Western steam at $7 70 for spot lots; 7.67½@$7.75 for March; $7.70 for April and $7.75 for May. Stearine at 7¾@7¾c. for prime Western.

Receipts for the week, pork, 2,267 bbls.; beef 726 pkgs.; cut-meats, 38,058 do.; lard, 9,075 do. Exports pork, 4,650 pkgs.; beef, 1,518 do.; cut-meats, 7,004 lbs.; lard, 3,208,400 do.

VEGETABLES.—Exports of potatoes last week, 2,825 bbls.; since Jan. 1st, 46,000 bbls., or nearly double the export of the same date. The market is dull even for best grades; under qualities positively flat; our last ranges are all the trade will bear. Bermuda, ₱ bbl., $5@5.50; N. Rose, Nova Scotia, bulk, ₱ bbl., $1.37@1.62; Maine, per d.-h. bbl., $1.75@1.85; State, $1.50@$1.62; State, in bulk, per bbl., $1.40@1.50; Prolific, N. S. per d.-h. bbl., $1.30@1.75; in bulk, per bbl., $1.25@1.62; Mercer, Nova Scotia, bulk, per bbl., $1.12@1.37; Peachblow, State, white, per d.-h. bbl. $1.87@2.00; red, $1.75@1.87; Snowflake, State, per d.-h bbl., $1.37@1.62; Peerless, State, $1.37@1.50; bulk, per bbl., 1.25@$1.37; Pearless, Jersey, $1@$1.12; Sweet potatoes, $3 00. Onions plentier and decidedly lower. Tomatoes, Key West, per box, 75c.@$1; Nassau, 75c. a 1; Bermuda, 50@75c.; do. beets, new, ₱ crate, $1.25@1.50; green peas, Sav., $3@3.50; Okra, $2@2.50; Fla., small, $1@2; do., marrowfat, $1@1.50; kale, Norf., ₱ bbl., 75c.@$1.50; do., radishes, ₱ 100 bunches, $3 do., spinach, $2@2 50; Balt., $1.25@$1.50; lettuce, Ch'n., $4@6; Boston, ₱ doz., 75c.@$1.12; L. I & N. J. do., 25@75c.; squash, marrow, $1.75; Hubbard, $2 75@3; onions, white, $3.50@4.50; yellow, $3 50; red, Eastern, $4.50; red, Chester, $3.25@3.50; cabbage, ₱ 100, $4@9. Hothouse products—Cucumbers, ₱ doz., $3; radishes ₱ 100 bunches, $3@4; rhubarb, $6@8.

WOOL.—There has been an active business through the week, and the advance made previously has been fully sustained; latest sales are of X and XX Ohio at 54@55c.; Indiana at 54c.; ¾ blood Pennsylvania at 60c.; combing do. at 61c.; scoured Colorado at 80c.; do. Territory at 71½c.; fall Texas at 26@31c.; fall California at 24@27½c.; spring do. at 34@40c.; Oregon at 41@43c.; unwashed Territory at 36c.; unwashed Wisconsin at 32c.; do. Indiana at 36¾c.; mixed scoured at 50@37c.; domestic mills at 28@55c.; Donskol at 27@30c; Mediterranean at 17½c.; Cape at 34½35c.; Montevideo at 39½@41c.; Abudia 34c.; East India at 39@45c.; old Australian at 50@52c.; choice do. at 55c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Feb. 28.

BEEVES.—Receipts for week, 10,450 head; do. last week, 9,357 do. The full offering was sold at 8@9c. for common to fair steers, 55@56 dr. 9¾@10½c. good to prime, 56@57 dr. No cattle above 10½c. quality. These prices are similar to Wednesday's rates. Export trade quite active.

COWS AND CALVES.—There has been a fair trade at $35@55 for fair to good State; prime to fancy in a small way, $60@70.

VEAL CALVES.—The usual spring nuisance is here in the shape of "bobs." The police have made short work of them and dealers are subject to arrest if they sell them before inspection. Best live calves not active and few reach outside rates. N. J. and Bucks Co., choice, 8@8¾c.; fair to choice others, including State, 5½@8c.; Mount Holly, 7@8¼c.; buttermilk, 4@5c.; grass, 2½@2¾c.; hog dressed, choice, 10c.; fair to good, 8@10¼c.

SHEEP AND LAMBS.—Receipts for week, 18,871 head; do. last week, 22,410 do. Sheep firm with light business and receipts, 5¾@6¾c.; extras, 6.60@6.75 per 100 lbs. Lambs, yearlings, 6¾@7½c.; spring lambs during week sold at 7@8 per head live.

SWINE.—Receipts for week, 28,305 head; do. last week, 22,693 do. Live, weak at $1.80@5.00 per 100 lbs. no sales at the close market tending lower. Country pork, light, 5½c.; medium 6¼c.; heavy, 5¾@6c; city dressed, 6@6¾c.; Western 5½@5¾c.; tenderloins, 8@9c.

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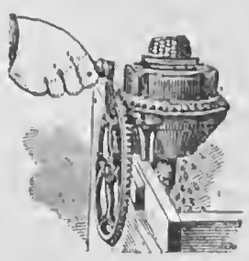

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WHICH IS THE BEST SALT?

Professor Henry E. Alvord, of Massachusetts, in a letter giving results of the recent Massachusetts dairy show, stated that ten out of twelve lots of butter taking premiums were salted with HIGGIN'S EUREKA SALT, and commented thereon as follows: "THIS MAY BE EXPLAINED IN VARIOUS WAYS, BUT THE FACT DESERVES NOTICE."

There are also other facts which deserve notice. The English Government has granted a patent to Thomas Higgin for improvements in salt manufacture, and experts estimate that the Higgin method will work as great a revolution in salt manufacture as the Bessemer process has in that of steel. Higgin's Salt is used in the most noted dairies of Great Britain; including that of the Queen; and its almost absolute purity has also made it a favorite there with the finest trade for household use. In this country its consumption has risen in three years from 6,000 to over 90,000 sacks. Both the first sweepstakes prizes at the late International Dairy Fair (for the best butter and cheese made anywhere) were salted with it, as were also most of the other lots taking first prizes, and all this notwithstanding strenuous opposition, including much misrepresentation from the agents of another brand, which, previous to Mr. Higgin's discovery, had a practical monopoly of the dairy salt market, charging consumers an enormous price for a comparatively inferior article. But the monopoly has been broken by Mr. Higgin, who furnishes a vastly superior article (costing from 30 to 40 per cent. more), at the same or only a slightly higher price.

The situation is described in Whittier's lines:

"Gray-bearded Use, who, deaf and blind,
Groped for his old, accustomed stone,
Leaned on his staff and wept to find
His seat o'erthrown.

These wait their doom, from that great law
Which makes the past time serve to-day,
And fresher life the world shall draw
From their decay."

The difference in cost in using the best or the poorest salt is only about *one-thirtieth* of a cent per pound on butter and *one-sixtieth* of a cent per pound for cheese. Patrons of Butter or Cheese factories should stipulate for the use of Higgin's Eureka English salt, and owners of factories making for their own account can afford to pay five times its cost rather than not use it. It imparts a clean, fresh, rosy flavor, and its purity is such that if the goods are solid and well made, like most of the English goods, the keeping properties are quite remarkable.

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YOU CAN'T AFFORD TO NOT TRY IT, and your own good judgment will tell you whether to continue using it or not.

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MANURES
For 1880.

Some years ago the Stockbridge Manures were only known to a few farmers in the Connecticut Valley. Now they are so extensively used in different parts of the country as to require two large factories, one in New York and one in Boston to manufacture them. This increase shows what farmers think of good fertilizers, and is not only due to the fact that they are reliable, well-made, and high-grade manures, but also to the fact that farmers have

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Reading for the Young.

REMINISCENCES OF A LITTLE GIRL.

MRS. M. J. GALPIN.

CHAPTER III.

We will now leave the fugitive pair and return to L —, and see how matters progressed after their flight was known. The rage of McGregor, after he found his daughter had flown, in express contradiction to his orders, was boundless; in fact, it left him powerless to do mischief, to any but himself, and resorting to the whisky in first-class style, he was soon oblivious of all his surroundings. His broken-hearted little wife wept silent, bitter tears over what she considered her daughter's disgrace, and her misery was full to overflowing when she heard the abandoned little one's wailing for "mamma." I never approved of the action of this headstrong pair (when I had learned the facts) in thus flying in the face of all obstacles to obtain their own ends. Aunt Katie (for she was my aunt) was far more to blame than Uncle Tommy, because he was as yet, but a boy in years, and she had been married and had the holy ties of motherhood to bind her, but when we once give way to a blind and ungovernable passion, it is very hard to tell where it will end. Tommy's family were in the deepest sorrow and felt themselves forever disgraced by their son's action; but alas! poor uncle, he suffered for it all the remaining years of his life. When at last Roy McGregor came to his senses, he gave strict orders that his child's name should never be mentioned in his house, nor did her little helpless ones dare to utter the name of mother. When under the influence of liquor he used to take his bayonet and charge around looking for those worse than orphans "to put them out of their misery," as he said, and not have a "turn-coat priest" for a father, but the little waifs soon learned to know his ways and used to make themselves "scarce" in a hay stack till his fury was over. The anger of the church against its "recreant son" was intense, while the rabble were ready to burn the "vile heretics" should they dare to appear. The church proceeded to pronounce its "anathema" against Father Tom and all that might pertain to him.

While the fugitive pair were still wandering as if the "mark of Cain" were on their brows, that fell disease, small-pox, so fatal among the Irish, appeared in the town in its most malignant form. The family of Father Tom (as we shall still call him) were among its victims, also the children of his wife were stricken down. The little, hot, weary heads and restless hands were never still, and at last it was apparant that only death would relieve their sufferings. The bravado and fight of the redoubtable Roy cowed before this unseen foe, and he became as tractable as a child. The gentle grandmother did all in her power for the helpless sufferers, but her heart was torn with grief for her absent, wandering child, who knew not at that moment that the lives of her little ones were fast ebbing away; that never again would she behold two of those forms so dear to her heart. The incessant cry of the dying children was, "Won't mamma tum at all." After the ninth day the eldest of the three rallied and showed signs of improvement, but Annie and Charlie departed to climb the "Golden Stair." Their last words were to tell their mamma that they were "doin' to Heben when she'd tum." Charlie said that he would "tiss mamma good night." Blessed little ones! theirs was the gain, for sad and dreary were the days of the little orphan who was spared from the hands of the fell destroyer. Two of Father Tom's family died, a brother and sister, and those that were spared were almost ruined by the traces of the disease, as they had it such a loathsome, violent form that they had to be turned and handled in sheets. Nearly every house mourned the loss of one or more loved ones, and general gloom pervaded the town. Masses were said in the churches and prayers offered, but they seemed of no avail—the scourge ran its course till it stopped for lack of victims. Now the most ignorant of the masses thought that the sacrilege perpetrated by Father Tom in marrying and in giving up his faith and "holy orders" was the reason that God had sent the pestilence among them, and if the guilty ones could have been found by the rabble they would have been harshly dealt with.

It may seem strange to the children how Father Tom and his wife could remain ignorant of all that was occurring, but you must remember that they were hiding from the vengeance of their people and their church, and only frequented small villages in an obscure retreat, where news arrived months after it had occurred. Ireland is not as large as some of our states, yet in those days one could travel miles without meeting a human habitation. Rail-road communication only extended to important places or cities, so that suburban villages, at that time, were about as isolated as the Black Hills were to us a few years ago. Did you ever hear of a pestilence or famine that was not attributed to God's wrath? Now I don't think so, because all those events have a purely natural cause. Some of the most terrible afflictions we attribute to the "hand of God," whereas, if we but traced them to their source they are easily explained. Known unto God from the beginning were all things and when He formed man to inhabit this earth, which He had made for him, He well knew how the transgression against the laws of Nature or the Universe would affect him. So that we may know when trouble overtakes us; or a nation is plunged into war or famine, that it is but the just result of the transgression of natural laws. Sometimes those very disasters are the stepping-stone, or entrance to good. Look to-day how Ireland is writhing under the heel of England's iron rule; out of all this contention good is bound to come, though now we may not see it. Whenever Ireland allowed free schools, religious toleration and freedom of thought and action, then will the "Green Isle" blossom as the Rose and be as Tom Moore described it, "First gem of the sea." The Irish are a bright, witty, fun-loving race. They can be led with a silken string, but cannot be driven with a lash. I heard an uneducated Irishman say once, that "Faix, they wor like their own pigs, mighty aisy to coax, but very hard to drive." I hope I shall live to see the day that Ireland is blessed with freedom and independence, or that England will sometime come to her senses and see that according to the Irish nature, her policy of coercion, that she has always and is still practicing, is totally wrong. And if she wishes to retain Ireland in her clutches, she will either have to change her tactics, or be forever on the ragged edge of annoyance. In my next we will follow the fugitive pair and see how they are prospering in their perambulations around the country.

Waterville, Kan.

THAT BROTHER OF MINE, OR HORTICULTURE INDOORS—SPICED.

MRS. M. L. SAYERS.

"Will, do help me to move these boxes from the mantel to the sun on the porch," said Bliss, as she looked at her array of pots and boxes in which she had planted seeds, watered and placed over the fire-place to get bottom heat.

"What are you doing with some piled on the others like a 'stack of black cats,' not to be seen in the dark? Do you *raise* flowers by *elevation*?" said Will, as he mounted a stool to reach the highest.

"I stacked the boxes up, in order to have room; besides, the seeds germinate quite as well in the dark and keep moist on the surface, while the air is warm beneath and around them," and Bliss carried out the Geranium-box to a bench on the porch, for she had planted a few cuttings in the fall, then a week ago had stirred up the earth around them with her little floral set of garden tools, and planted fine seeds, sifted over them pulverized earth, watered and left them to germinate while the cuttings would start new leaves.

She was bending over the Geranium picking off the dead leaves and spying out the new tender ones, when Will exclaimed, "Hello, Bliss! Here's a thousand little pale blecphalous chaps peeping out at me, like pigmies at Gulliver."

Bliss found Will on tiptoe peering into the second box, and asked, "Are they up already? Read the label—no, hand them down—Daisies, I declare—up so soon!

"Oh! lack-a-daisy!" said Will, looking into the next box, "Shoo-flyer! Here's your string of wild-geese with their wings spread, and their necks stretched," and Will handed down the next box.

"Tomatoes," said Bliss, as she carried them out. "The sun and air will soon bring the color to them. They will no longer be white geese, as you call them, Will."

"Yes, *colored* Tommy-*toes*, all in rows, like a flock of *crows*," and Will examined the next box, and the next, as Bliss carried out those with Verbena, Pansy, Lychnis, Canna, Candy-tuft, and so on, till she had them all out in the sun; when she sprinkled them gently with luke-warm water. Will continued to comment, sometimes in original rhyme, sometimes in slang, which Bliss reproved as *highly vulgar* and *low*, and not at all suitable for flowers, which breathe purity and should *elevate*.

"Oh! yes, you were trying to make an *elevator* of those boxes for your brother, were you? And did get me up as high as a three-legged stool and my tip-toes would lift me? much obliged," said Will. "But why do you call these little fuzzy plants *fish* Geraniums. Do they bloom *ichythology*? They ought to be aquatics."

"Their right name is "Zonale," possibly because belts of shade, like zones, around their leaves. We call them "fish," because of a fancied resemblance in the smell of them," explained Bliss.

"And do you carry them in and out, and set them up and down, because they *smell* like fish? I'll catch you some to wear at your *throat-latch*, or in your vinaigrette," said Will, as he snatched a minnow from the aquarium and held it to Bliss's nose—poor girl!

"Mother!" called Bliss, and Will dashed the fish into the jar and fled.

Bliss now enjoyed looking over her little garden in the warm sunshine, picking off the green aphis with the point of a darning needle and feeding the fish with them, and the tiny worms from the damp earth in the boxes. When the sun got low, she placed the boxes again upon the mantel for the night. She will have early plants for her beds.

LETTERS FROM THE COUSINS.

Dear Uncle Mark and Cousins:—I suppose that I can hardly claim relationship, as I have been silent so long. I was at Chautauqua last summer. A short time ago a brief sketch was in the Rural about Chautauqua. I wrote several letters, after my return home, about my experience while there; but, finding all too long, would not send them. I received quite a collection of presents on Christmas; one of which was a large autograph album, in which I would like to have you all write. I do not live on a farm and never have, so I know very little about farming, never having raised anything but flowers, with the exception of the radish seeds Uncle Mark sent to me. I must tell you about them: After I had prepared some ground, about a foot square, I planted all of the seeds, and covered them over lightly; I watered frequently, and was soon rewarded by seeing a regular bed of green heads peeping up. When they grew larger, I intended to transplant them; but some one told me that they could not be transplanted. I knew that they should not be so thick, so I pulled some up. Some of them grew to be quite large, but were so crowded that they had very little chance to flourish. I am studying painting, with the intention of making it a profession. One small panel, that I painted, sold for ten dollars. I have some pastil pictures also, but do not know as yet whether they are sold or not. One word to Heliotrophe. I heard Joseph Cook's lectures, while at Chautauqua, and am also reading his latest lectures. You addressed the editor as U. M. in your last letter and signed yourself as "your loving cousin." How is that? Two sisters and also Slayer-of-conceit, why do you not write again? With love to all. Frizzle Top.

Dear Uncle Mark:—It has been a long time since I have written to you. I have been pretty busy getting subscribers for the Rural, and I suppose this will go into the dreaded waste-basket; but I will trust to the best. Well, about horticulture; I have not done much. I have got a few raspberry plants, but did not have very good luck. I tried to get a club for the Rural. I traveled some and got three (3) subscribers but let Mr. Knapp have them. Shall try again another year if nothing happens. Well, if this finds its way into the Rural I will try to summon courage to write again. Hoping to hear from the cousins soon. I remain ever yours, Willie K.

Chenango Forks, N. Y.

[You should not have given up getting subscribers too early, Willie. A very few more would have entitled you to a printing press, a set of telephones, or to that wonderful pocket-knife, or to any one of the multitude of things offered in the Rural Premium List. It would have paid you well for the trouble.—Uncle Mark.]

Dear Uncle Mark:—I would like to join your Horticultural Club. I have never done much gardening, but I am going to have a garden of my own next summer if the wind will hold up long enough for me to get the seeds in the ground. I am going to have water-melons for one thing and peanuts for another. I shall have some flowers, too. I like Pansies. The flowers look like little faces and I like to see them nodding at one another. We moved here last summer, and into a new house built in a corn field. The corn is gone now and it looks bare, so we are all thinking of the trees we will plant in the spring. I am ten years old. I go to the town school; have a mile to go. It is very pleasant here but the wind blows hard sometimes.

Clay Co., Kansas. Raymond N. Story.

Dear Uncle Mark:—Will you please to open the Horticultural door to two little Texans who very much enjoy your letters as well as those from the dear Rural Cousins. We have a long season here and raise two crops a year. Last year we had a cotton patch, and a sweet potato ridge, beside some hills of watermelons, all of which did well. Nobody else did any work on them. This year papa is going to give us some pearl millet seed, such as your paper sent him, and if you too, will favor us with some seeds—we will "see what we shall see," and in due time report to you, our success. From your little nephew and neice,

Harley and Ella Matthews.

Bexar Co., Texas.

Dear Uncle Mark.—Some time ago I promised you that I would report my success as a florist I suppose you will think it is rather late, but as the old saying is, better late than never, I think that I can say that my flower garden was a success. I received the second premium at our county fair for the largest and best variety of cut flowers. I intend to have another flower garden next spring.

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PERSONAL ITEMS.

There is a Baron Von Munchausen on Von Moltke's staff.

Emperor Francis Joseph, of Austria, lunches at noon on black bread and beer.

Thomas Dawson, the veteran horse-trainer, and for fifty years connected with the English turf, is dead.

Senator Lamar of Mississippi is rapidly recovering his health, and expects to be at Washington in a few days.

The Countess Panil, lady-in-waiting to the Czarina, was last week banished to Archangel, charged with Nihilism.

All the ladies at Washington agree that Mrs. Hayes makes a better President than Mr. Hayes and that she ought to have a second term.

Parnell says that he expects to remain in America about two months longer. He will visit California. In regard to his mission to this country he says that up to last week $80,000 had been received in Ireland through the agencies of the men who are working with him. The Herald fund, however, already amounts to upwards of $250,000.

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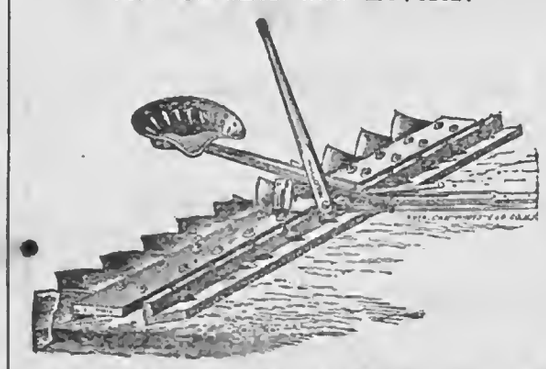

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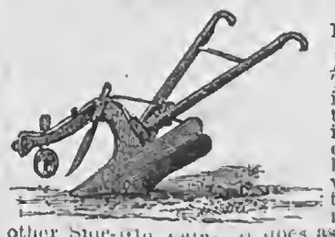

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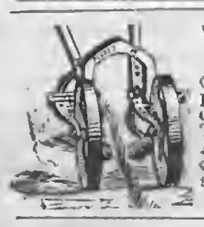
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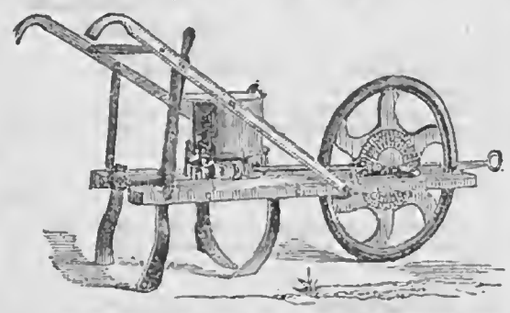

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BUTTER COLOR.
Prepared in vegetable oil by skilled chemists. Does not color the buttermilk. Imparts natural rich color and *enhances price* of butter greatly. Largest and fancy butter-makers have adopted it. Sample by mail, free.
WHITMAN & BURRELL, Little Falls, N. Y., Wholesale Agents for America.

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Wells, Richardson & Co's
PERFECTED BUTTER COLOR
It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.
USE ONLY THIS THE FIRST AND THE BEST

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The habit of administering quinine in powerful doses; as an antidote to malarial maladies, was once dangerously common. Happily this practice has undergone a wide reform. Not only the public, but professional men have adopted, not wholly, of course, but largely, Hostetter's Stomach Bitters as a safe botanic substitute for the pernicious alkaloid, the consequences of this change are most important. Now fever and ague sufferers are cured—formerly their complaints were only for the time relieved, or half cured—the remedy eventually failing to produce any appreciable effect, except the doses were increased. A course of the Bitters, persistently followed, breaks up the worst attacks and prevents their return. The evidence in favor of this sterling specific and household medicine is of no ambiguous character, but positive and satisfactory, and the sources whence it proceeds are very numerous.

COOLEY CREAMER.

Awarded Gold Medal at Paris Agricultural Exhibition, 1879.

Butter made by this process, awarded Sweepstakes at International Dairy Fair, 1878, and Two Gold Medals and First Premium at same fair, 1879. First Premium at Royal Agricultural Exhibition, London, 1879.

It requires no milk-room.
It raises all of cream between milkings.
It affords better ventilation.
It requires less labor.
It is more thoroughly made.
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and gives better satisfaction than any other way of setting milk.

Send for "Dairymen" giving full particulars and testimonials.

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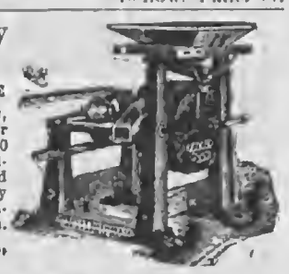

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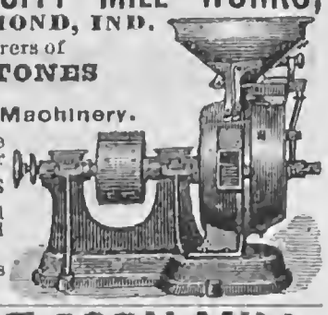

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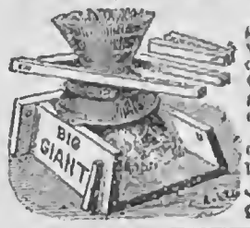

The only Mill that will grind Corn with Shuck on without extra expense. The only Mill grinding Corn and Cob successfully that will grind Shelled Corn fine enough for family use.

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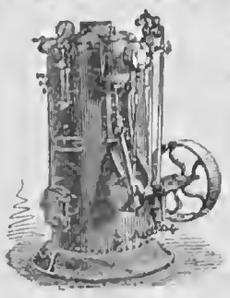

Compact, substantial, economical and easily managed.

Guaranteed to work well and give full power claimed.

Engine and boiler complete, including governor, feed-pump, drive-pulley, etc., etc. at the low price of

3	Horse power	$240
4½	" "	280
6½	" "	370

Manufactured at Springfield, Ohio. Send for Descriptive Pamphlet.

JAMES LEFFEL & CO., Springfield, O.
Or, 110 Liberty St., New York City.

A GOOD SAW MILL For $200.

Our No. 1 Plantation Saw Mill is designed to be run by 8, 10 or 12 horse-power Agricultural Engines. With this power from

1,500 to 4,000 Feet

of lumber can be cut in a day. A product 25 to 50 per cent greater than can be cut with any reciprocating saw mill. The mills are complete except saw, and will be put on the cars in Cincinnati for the low price of $200, and warranted in every particular. Saw Mills of all sizes, Engines and Boilers, Shafting, Gearing, etc.

Illustrated circulars sent free.

LANE & BODLEY CO.,
JOHN AND WATER STS.,
Cincinnati, O.

TOURIST.—"Is it possible that you keep the pig in the house with you?"
PAT. "And why not, Surr? He is the gintleman that pays the rint."

C. GILBERT'S STARCHES

ARE ABSOLUTELY PURE.

THIRTY-FIFTH ANNUAL REPORT
OF THE
NEW YORK LIFE INSURANCE CO
OFFICE, Nos. 346 and 348 BROADWAY.
JANUARY 1, 1880.

Amount of Net Cash Assets, January 1, 1879	**$36,213,457.61**
Less deduction to cover decrease in value of U. S. Bonds and other assets	$135,966.93
	$36,077,490.68

REVENUE ACCOUNT.

Premiums	$6,382,875.25	
Less deferred premiums Jan. 1, 1879	379,839.09	$6,003,036.10
Interest and rents	2,339,875.93	
Less interest accrued Jan. 1, 1879	306,225,93	$2,033,650.00—$8,036,686.16
		$44,114,176.84

DISBURSEMENT ACCOUNT.

Losses by death, including Reversionary additions to same	$1,569,854.22
Endowments matured and discounted, including Reversionary additions to same	1,015,256.22
Annuities, dividends and returned premiums on cancelled policies	2,236,379.97
Taxes and re-insurances	173,608.64
Commissions, brokerages, agency expenses and physicians' fees	626,253.30
Office and law expenses, salaries, advertising, printing, &c	307,392.81—$5,928,745.16
	$38,185,431.68

ASSETS.

Cash in bank, on hand, and in transit (since received)	$1,961,701.48
Invested in United States, New York City, and other stocks (market value $14,356,192.94)	13,544,671.96
Real estate	4,974,573.68
Bonds and mortgages, first lien on real estate (buildings thereon insured for $14,287,000.00 and the policies assigned to the company as additional collateral security)	15,313,278,95
Temporary loans, (secured by stocks, market value $1,300,000)	850,000.00
* Loans on existing policies, (the reserve held by the company on these policies amounts to $3,160,000)	621,403.02
* Quarterly and semi-annual premiums on existing policies, due subsequent to Jan. 1, 1880	367,989.02
* Premiums on existing policies in course of transmission and collection (estimated reserve on these policies, $330,000, included in liabilities)	211,625.23
Agents' balances	22,199.23
Accrued interest on investments Jan. 1, 1880	317,989.11—$38,185,431.68

**A detailed schedule of these items will accompany the usual annual report filed with the Insurance Department of the State of New York.*

Excess of market value of securities over cost	811,520.98
CASH ASSETS, Jan. 1, 1880	**$38,996,952.66**

Appropriated as follows:

Adjusted losses, due subsequent to Jan 1, 1880	$225,662.64
Reported losses, awaiting proof, &c	213,271,31
Matured endowments, due and unpaid	32,780.98
Reserved for re-insurance on existing policies; participating insurance at 4 per cent. Carlisle net premium; non-participating at 5 per cent. Carlisle net premium	34,016,840.82
Reserved for contingent liabilities to Tontine Dividend Fund, over and above a 4 per cent. reserve on existing policies of that class	1,371,482.18
Reserved for premiums paid in advance	16,543.25—$35,876,581.18
Divisible surplus at 4 per cent	3,120,371.48
	$38,996,952.66

Surplus, estimated by the New York State Standard at 4 1-2 per ct., over $7,000,000.00

From the undivided surplus of 3,120,371.48 the Board of Trustees has declared a Reversionary dividend to participating policies in proportion to their contribution to surplus, available on settlement of next annual premium.

During the year 5,524 policies have been issued, insuring 17,098,173.

Number of Policies in force	Jan. 1, 1876, 44,661. Jan. 1, 1877, 45,421. Jan. 1, 1878, 45,605. Jan. 1, 1879, 45,005. Jan. 1, 1880, 45,705.	Amount at risk	1876, $126,132,119. 1877, 127,748,473. 1878, 127,901,887. 1879, 126,232,144. 1880, 127,417,763.
Death-claims paid	1875, $1,624,815. 1876, 1,547,648. 1877, 1,638,128. 1878, 1,687,676. 1879, 1,569,864.	Income from Interest	1875, $1,870,058. 1876, 1,906,950. 1877, 1,867,457. 1878, 1,948,665. 1879, 2,033,666.
Divisible surplus at 4 per cent.	Jan. 1, 1876, $2,499,654. Jan. 1, 1877, 2,626,816 Jan. 1, 1878, 2,664,144 Jan. 1, 1879, 2,811,436. Jan. 1, 1880, 3,120,371.		

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NEW CATALOGUES

The following Catalogues have just been published and will be sent to all applicants as follows:

No. 1—**Fruits**, 64 pages, plain, 10c., with colored plate of "Waterloo" peach, 15c.
No. 3—**Green & Hot-House & Bedding Plants**, FREE.
No. 4—**Wholesale**, FREE.
No. 7—**Catalogue of Strawberries**, with colored plate, free.

A **List** of **New Roses** for 1880, 12 pages, free. With colored plate of five rare and beautiful Roses, 10c.

Our handsomely illustrated Catalogue of **Ornamental Trees, etc.**, (No. 2,) will be ready about March 1st. Plain, 15c., with colored plate, 25c.

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HEADQUARTERS FOR THE CUTHBERT RASPBERRY

The Royalty of Raspberries.

The **CUTHBERT**

I have by far the largest and best stock in country of this "Queen of the Market" as well as the Fruit Garden.

A superior stock of **PLANTS** of all the *good old* and *choice new varieties*, for Spring planting, of

STRAWBERRIES
RASPBERRIES
BLACKBERRIES
GOOSEBERRIES

Grapes and Currants.

My new **Catalogue** for Spring (24 pages), gives complete instructions for planting and cultivation *honest* descriptions and *fair* prices. *Free to all.*

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LITTLE SILVER, Monmouth Co. N. J.

IF YOU HAVE A GARDEN, YOU NEED

ESTABLISHED 1845.

150 pages. Over 300 Illustrations, and a Beautifully Colored Plate of Pansies. Mailed for 10 Cents.

BLISS' ILLUSTRATED AMATEURS GUIDE TO THE FLOWER AND KITCHEN GARDEN contains more practical information on gardening than many high-priced books. Our list comprises 2,000 varieties Flower Seeds, 1,000 varieties Bulbs and Plants, 500 varieties Vegetable Seeds, 500 varieties Potatoes, etc. 220 pages, over 600 illustrations, 2 double-page colored plates of flowers. Price: paper covers, 35 cents; bound in muslin, $1.00.

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Offer to applicants their new
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Established 28 years. 600 Acres. 13 Greenhouses.
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WATERTOWN PLATFORM Spring Wagon

The N't Plus Ultra.

EVERY WAGON FULLY WARRANTED.

This is the best, handsomest, lightest and strongest wagon of its kind in the market. Every Farmer and Dairyman should have one.

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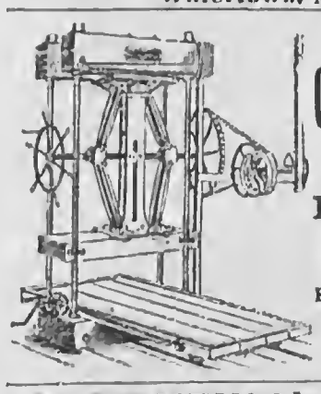

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MATTHEWS' SEED DRILL

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EVERETT & SMALL, Boston, Mass.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Ralph Evans

VOL. XXXIX. No. 11.
WHOLE No. 1572.

NEW YORK, MARCH 13, 1880.

PRICE FIVE CENTS.
$2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Horticultural.

THE RASPBERRY.

THE SOIL—ITS CULTURE—PROTECTION.

Best of the Reds. Best of the Caps. Foreign Varieties.

NOTES FROM THE RURAL GROUNDS.

WERE it generally known that a supply of this delicious substantial and health-imparting fruit may be had for a month to six weeks with less labor and expense than are necessary to produce a supply of peas for the same length of time, it seems to us there would not be such a dearth of this fruit upon the family board of those living in the country during the sultry days of July and August. Hence the object of these notes is to give a few timely directions regarding the simple culture this fruit requires to yield an abundance.

The Soil and its Preparation.

Many are deterred from planting, thinking they have not the proper soil for Raspberries. While a deep, moist, cool soil is best (except for the Cap varieties, when a sandy loam or even quite light soil is preferable), yet they will quickly adapt themselves to almost any soil or situation. In brief, any land that will grow good corn or potatoes, will also grow Raspberries. They can also be planted between the rows of fruit trees, where but few plants will succeed, and they will be benefited by the shade, providing it is not dense. In preparing the soil, as it is to be cultivated on the surface only for years to come, it is obvious that it should be done thoroughly. In this connection it may be well to state that a failure to comply with this requirement is a very general cause of but partial success, and, in some cases, no success at all. If the planting is to be done in the fall, the work *should* be commenced during the summer; if in the spring, in the autumn, by first applying a dressing of well-rotted manure over the entire surface, (two inches in depth are none too much) or a liberal coat of wood-ashes, ground bone or muck; the last, if used, being first well sweetened by lime or the action of the weather. The ground should then be thoroughly pulverized to a depth of at least fifteen inches, with spade or plow, incorporating the fertilizers used with the soil. If to be done by plow, do so by plowing as deeply as possible, following in the furrow with a subsoil plow in like manner. Level the ground by harrowing and then repeat the operation by going in the opposite direction. This will not only produce a fine mellow surface but a loose subsoil also, into which the roots will extend—thereby securing moisture, especially during the parching weather of mid-summer, at which time the plants need moisture most, in order to perfect the crop. Nearly the same good results may be attained by preparing the soil the spring of planting, if the work is done *early* and thoroughly. The only real advantage of commencing the preparation of the soil so far in advance of planting, is that during the interval the fertilizers used become the more thoroughly incorporated with the soil.

Planting.

From time immemorial it has been a matter of dispute which is the better season for planting—spring or fall; and it is a point that in all probability never will be settled, as neither is better for all soils and circumstances. No one need fail, however, in planting at *either* season. When planting in the autumn a small mound of earth or a shovelful of compost should be placed around each plant (if earth is used, rake it to a level in early spring), while if the planting is to be done in spring it should be done very early—as early as the season will admit. The Raspberry is one of the first plants to commence growth in spring, and many checkmate success at the outset by deferring the planting until the buds at the roots, which are to form the canes for the first crop of fruit, develop into little crisp shoots and are mutilated, if not broken entirely off, while being placed in the ground. Contrary to what some might suppose, it is far more difficult to make the plants go ahead after they have become "started" than before. It may be that the "check" they receive discourages them—at any rate, they seldom start again. It is of the utmost importance never to allow the roots to become at all dried. A half hour's drying wind on the unprotected roots will so impair their vitality as to render the plants worthless. It is best never to plant on a windy day, if avoidable. When the plants are received, take them from the package and place them in a trench previously prepared and close at hand, and cover them well with earth. In such a trench they are perfectly safe and a few can be taken at a time as the planting progresses. A common error is made in planting—that of setting the plants too deep. Do not set any deeper than the plants stood before digging, which will readily be seen by the appearance of the canes (this applies to all sorts, whether Cap or upright-growing varieties), pressing the earth firmly about the plants with the feet. Cut back all canes to six inches from the ground so soon as planted. By repeated trials it has been found that the best distances to plant are as follows; in garden culture, four feet apart each way for the upright-growing sorts; and the Caps in rows five feet apart, with the plants three feet apart in the rows. In field culture, plant the former in rows six inches apart, with the plants three feet distant; and the latter seven feet apart and the plants two and a half feet distant.

Cultivation and Pruning.

All the culture that is necessary is to keep the surface mellow and free from weeds throughout the season (which may be done by cultivator or hoe), treating all suckers as so many worthless weeds, except three or four to each hill, or a single row for fruiting canes. Cultivate on the surface only after the first year or near the rows, for if the soil is stirred to any considerable depth the roots will be broken, causing great numbers of suckers to be produced, much to the detriment of the yield, size and quality of the fruit. A good mulching (one to two inches in depth) placed about each hill or along the rows, in spring is very beneficial, serving the double purpose of keeping down grass and weeds and keeping the ground cool and moist, thereby enhancing the size and quality of the berries and prolonging the season of fruition. This mulch may be salt-meadow hay, straw, corn-stalks, shavings, pine-needles, saw-dust, tan-bark, coal ashes, or even stones, and these are of value in the order named.

It used to be thought that Raspberries could be grown only by staking. Stakes we regard as useless as their use is expensive. When the plants have attained a hight of three to four feet (according to the vigor of the variety) pinch out the central shoot. This will cause it to throw out side shoots, which, when they have grown from a foot to eighteen inches in length, should be treated in the same way. Then by fall a strong, stocky bush will have been formed so stout and rugged that no support or protection will be necessary, and the crop of fruit the following year will be enormous, both in size and quality. To grow in the bush form needs watchfulness, but the labor required is far less than for staking, to say nothing of the cost of stakes, while the results are greatly in favor of plants grown in this way. The trouble and expense of covering for winter are also avoided, as plants grown in this manner mature their wood much better and are rendered so hardy as not to need protection, unless they are foreign varieties. After the fruiting season remove the old wood, and in the autumn, should the young canes have been neglected, cut them back one-third of their length, pruning the strong-growing varieties even more severely, never allowing the canes to stand more than five feet after pruning, under any circumstances.

Winter Protection.

Many fail to prune their plants into bush form and to give winter protection. But protection especially to the foreign varieties, well repays for the trouble of the operation. Winter protection is given in the following manner:—At the approach of cold weather, commence by placing a shovelful of earth at the base of each hill, over which to bend the canes and thereby prevent their breaking. Two hills should be bent towards each other that both may be covered at one operation. If simply held down by stones, bricks or pieces of wood, they will be safe from harm by freezing; but a covering of one or two inches of earth is still an improvement. Evergreen boughs make the best of all coverings, and when the plantation is not large, and these can be readily had, they should be used. Corn-stalks are good also. In the spring, as soon as the ground has become settled, the covering should be removed, the canes raised to an upright position and fastened to stout stakes, one of which, four to five feet in length, has been driven into the ground at every hill. The Cap varieties need no protection, but they should be pruned and staked if not grown in the bush form.

It is best always to plant something of an assortment, so as to extend the season of fruit. The list of varieties offered by nurserymen is so long that any attempt at pointing out the merits and defects of all, could not result otherwise than in bewildering many. We will, therefore, confine our remarks to those which we have found to be especially noteworthy, commencing with the

American Red Varieties,

all of which are moderately hardy in most locations unless the winter should be unusually unfavorable. Being, in our estimation, the most desirable of all raspberries, we head the list with the

CUTHBERT.—This we note has recently been termed "The Royalty of Raspberries." In fact, it is being extensively advertised by one of our leading nurserymen, as "Queen of the Market," and we think the title equally applicable to it in the home garden. Large, luscious, beautiful and exceedingly firm; vigorous, of strong growth, extremely hardy and yielding most abundantly, commencing to ripen moderately early and holding out until all others

THE GREGG RASPBERRY.—From Life.—Fig. 77.

have gone. Although it has now fruited North, South, East and West and on various kinds of soils, it has, as recently stated in the RURAL, yet to develop a weakness, yet to make an enemy. We have, however, spoken of this so fully in former numbers (it being part of our free plant and seed distribution) we refrain from further remarks concerning it.

BRANDYWINE OR SUSQUECO.—As a berry for market, this stands next in point of profit. It is of good size, very firm, of bright, handsome color and very hardy. Its demerits are that it is not so prolific as desirable; the canes are of rather feeble growth (except on unusually rich soil) and its inferior quality. It is very dry and might be said to be almost without flavor. It should not be planted for one's own use, at any rate.

THE TURNER, CALLED SOUTHERN THORNLESS by some, is an exceedingly valuable variety, especially for home use or near-by market. It is as hardy as an Oak, and while of but moderate size, yet it is of a bright, attractive color, and one of the sweetest and most luscious raspberries in existence. It is among the first to ripen; the canes are of strong growth and excessively productive. Being rather soft, it should not be planted by those who have no market except at a distance. It suckers the most profusely of any of the American sorts, and must be watched and the suckers kept down, else little besides plants will be the result.

HIGHLAND HARDY is another early sort, resembling the Turner somewhat in appearance and consistency of fruit, but far inferior to it in quality. Canes hardy in all Northern sections, of strong growth, decidedly productive, and, like the Turner, they are produced in great numbers. We say *Northern* sections, from the fact that we find it does not succeed much south of the isothermal line of New York city, the sun apparently affecting its vitality to the extent of rendering it unable to endure the winter. In some sections, where good markets are near at hand, it has proven highly profitable owing to its early ripening and large yield. It is asserted by some that this is the old Kirtland recently brought forward under a new name.

PHILADELPHIA. — Many of our readers can, no doubt, remember when this was almost the only Red Raspberry cultivated. In reality, this venerable variety has done almost as much to popularize raspberry culture in America as has the Wilson, the Strawberry; or the Concord, the Grape. It is so well known and so rapidly becoming a thing of the past that we deem any description unnecessary. It seems to have deteriorated—either from defective culture or natural inclination, and is not what it was in former years. We wish to say little against this old pioneer, however, as we all owe much to it. While the Philadelphia may pass away in name, it will not in reality—at least the race will not—for it has left many worthy children. Among these may be mentioned the Reliance, Early Prolific, etc. The Montclair, too, reference to which has been made in these columns, from all appearances is an offspring of the Philadelphia, and so far as can be judged at present, of greater value than its supposed parent in its palmiest day.

Foreign Varieties and their Seedlings.

As is well known, the foreign varieties of the Raspberry will rarely endure the winters of America without protection. This we think due more to the heat of summer than the cold of winter, as they seem to be peculiarly affected by the parching sun of our summer months. For this reason they succeed better at the North than at the South—it being a notorious fact that they succeed better north of the isothermal line of New York city than south of it. Therefore anything that will tend to keep the soil cool and moist in summer, should be considered in their cultivation. In this connection we would name, first, selecting for them soil that is naturally as cool and moist, without being wet, as can be had, and, second, planting them in partial shade, as in orchards, by the side of a fence, stone-wall, grape-*trellis* or anything else that will afford shade without *excluding* the sun. They should be invariably covered in winter and unlched in summer. But we do *not* recommend this desirable class for planting south of New York except the

HEUSTINE, and this no farther south than Pennsylvania or Ohio. Taken all in all, this is *perhaps* the finest variety of the class, and is truly a superb berry. Owing perhaps to its American origin (it is generally considered a hybrid between the foreign and American species), it seems better adapted to our climate than most others. It is large, exceedingly beautiful and luscious, but it is not sufficiently firm to bear transportation to distant markets. The canes are of strong, robust growth, fairly productive and will often endure the winters of the latitude of New Jersey unprotected, although, it must be covered to insure a crop. In time of ripening it is quite early.

FRANCONIA is perhaps the next best, taken all in all, either for home use or market. Some assert that it and the Naomi are distinct varieties; but we have never been able to detect any difference, hence we speak of but one in detail. Berries large, handsome, firm, with a rich, brisk, sub-acid flavor, and canes of strong growth, very productive, continuing long in bearing.

BELLE DE FONTENAY, *alias* AMAZON, *alias* HENRIETTA.—In some sections this is the finest of all raspberries. It is a decidedly uncertain variety and we know of no way of ascertaining whether it will succeed or not, except by trying it. Like the other foreign sorts, it is confined to the North as a rule, yet a few years back when found growing by the wayside, at Edesville, Maryland, it was so magnificent that it filled the discoverer with astonishment and he at once commenced building castles in Spain over it. Alas! as is too often the case, the castles soon fell to the ground, but it has from that day to this borne the name of Amazon in many sections, and probably will for years to come. Its berries are very large, deep-red, firm, rich and aromatic. Canes rather short, strong, vigorous, prolific and *hardy* for one of its class. It throws up suckers to such an extent that unless they are kept down, it soon becomes a troublesome weed. By cutting to the ground all the canes in spring and destroying all the suckers, except a few to each plant for fruiting, quite a crop of large, perfect berries will be produced in autumn, especially if the ground be rich and rather moist. Owing to this propensity it is frequently termed a "fall bearing" variety.

BRINCKLE'S ORANGE.—This is such a precarious sort that we hesitate to enumerate it in a list so select. As it is the standard of excellence in point of flavor, however, we give it brief mention. Berries large, orange-yellow and quite soft. Canes tender, but when protected, very productive if the soil suits it. It should be planted for home use only.

Cap Varieties.

All of these being hardy, except at the extreme North, while the fruit is sufficiently firm to bear carriage to market, we omit any further remarks on these points. We have seen them growing beautifully and producing most bountifully on soil so sandy that it would not support grass, and, on the other hand, on land of the heaviest and most compact nature; from which it will at once be seen they readily adapt themselves to soils of all kinds. However, they prefer rather loose, light land than otherwise. Commencing with the season we have

DAVIDSON'S THORNLESS the first to ripen of all the raspberries. Its berries are black, fully medium-sized and of good quality. Its canes are nearly free from spines and the few that appear upon them, are small, insignificant affairs. It is, however, quite an uncertain cropper, hence it is not so popular as

DOOLITTLE BLACK CAP, OR AMERICAN IMPROVED.—This is an early variety also, but ripens a week to ten days after Davidson's which it closely resembles in the size and shape of its berries—its flavor being that of the wild black raspberry. In former years it has been enormously productive and has been the most widely planted of all the Cap varieties; but lately it has been affected by a sort of fungus in many sections, greatly impairing its fruitfulness and value. Its numerous, sharp, stout thorns are an objection to it.

MAMMOTH CLUSTER, OR LARGE MIAMI, also known as the McCormick, ripens quite late, is of very large size and of excellent quality. The canes are of exceedingly strong growth and immensely prolific. Altogether, it is a superior variety and for many, many years has been the best of the class, either for home use or market. It is yet, unless it be superseded by the

GREGG. (See cut). So far as our personal observations go, we have failed to see that this excels the "old reliable" Mammoth Cluster in size, productiveness or flavor. At the West it is maintained by the best authorites that it does in all three of the points named; which we accept as correct, from the fact that immense numbers of plants of it are being planted there by experienced fruit growers. It is, however, jet black, having none of the bluish bloom of the Mammoth; and on this account presents a more attractive appearance in the crate and is preferable for growing for market.

FLORENCE is a Yellow Cap and much the best one of its color that we have yet seen. In size it equals the Mammoth, with which it ripens; is of good quality, and of a bright attractive orange color. The canes are of a strong growth and are great bearers. The berries of this and the Mammoth mingled together form a most appetizing picture.

RECAPITULATION. — Prepare the soil *thoroughly* and as far in advance of planting as circumstances will admit. Plant *early* but *don't* plant deep, pressing the earth *firmly* on the roots. Keep the surface of the ground *mellow* and free from weeds and grass. *Mulch* in summer, *pinch back* during the growing season and *keep down the suckers*. As a single variety for planting throughout the country either for profit or the table, we would name as the best *red* sort, the Cuthbert; the best *black*, the Mammoth Cluster. As the *two* best sorts for garden culture we would name the Turner, (if to be protected in winter the Herstine) for *early*, and the Cuthbert for *main and late crop*. For those who perfer the *black* sorts, we would name Doolittle and Mammoth as the two best for giving an abundance and a prolonged season of fruit.

Field Crops.

BEETS AT THE MICHIGAN AGRICULTURAL COLLEGE.

LAST year a piece of land, rather heavy, gravelly loam that had produced 100 bushels of ears of corn per acre in 1878, was dressed with 40 loads of rotten manure to the acre and sowed to beets. The ground was plowed, subsoiled, harrowed till fine, and seed put in with a drill in rows 30 inches apart, and 148 feet long; land not ridged. After getting well started the plants were trimmed to about 12 inches, and well cultivated through the season.

The varieties and yields per acre were as follows:

	Bush.
Long Red Mangel	1,595
Long Yellow	1,140
Improved Mammoth	1,140
Harris's Improved Yellow Globe	1,104
Yellow Globe	1,014
Norbiton	1,107
Red Globe	1,026
Yellow Intermediate	1,026
Warden's Orange Globe	873
Golden Tankard	684
Red Tankard	360
SUGAR BEETS.	
White Sugar	1,414
Maine Sugar	1,255
Lane's Improved Sugar	861
Vilmorin's Sugar	798

The roots were measured in bushel baskets, well rounded up, as so much dirt adhered to some of the varieties that they could not have been weighed with any accuracy without washing. Five bushels of each kind were buried to test their keeping qualities.

The one called Maine Sugar, is the variety that is grown in Maine for sugar. The sugar beets had many long fibers or roots and grew almost entirely in the ground; some of them could not be pulled with a heavy potato hook, and had to be dug out with a spade. The others grew mostly above ground; the Globe varieties could be pushed over with the foot. I would estimate the cost of harvesting the sugar beet to be at least twice that of the others.

The Long Red, which gave the largest yield, grew long and crooked, was brittle and broke easily. It probably will not be a good keeper. The Harris's Improved was round, smooth, as hard as a ruta-baga, and of the best quality.

The yield, although pretty good, I think can be easily increased 50 per cent. on the same ground, last year being the first time the land was well manured and cultivated.

One such trial, of course, does not determine the yielding qualities of these varieties; it should be repeated many times and on different soils. From my previous experience in growing beets, I have found three things necessary to produce large crops:—plenty of manure, deep and thorough cultivation, and *sowing as soon in the spring as danger of frosts will permit.*

LANSING, Mich. F. A GULLEY.

THICK SOWING OF GRASS SEEDS.

WITH such small seeds as those of clover and timothy grass a large proportion necessarily perish as they are usually sown. They are thrown upon the surface without any covering except the loose dirt which rains wash over them. This is ample if the rains come. Deeper covering would bury the seeds so that few would ever come up. But on an acre of ground, such as most clover seed is sown on in the spring, more than half of the seeds come to nothing in ordinary seasons. The seeds germinate, but fail to get root, and one or two days with drying winds destroy the germ. Something is gained by sowing early while the surface is slightly frozen. The seeds which have the good fortune to fall in the open fissures will be out of reach of winds and will root readily. Good seedings are usually got by sowing at this time. But not one quarter of the seeds will fall even then where they will be in good position for growing. A half or even a quarter of an inch difference in position will insure success or failure of the seeds sown. What falls upon the flat, hard surface packed by rains and impervious to moisture will fail, no matter how favorable the weather may be. If seeding is delayed until the ground is dried, the surface should be thoroughly harrowed before sowing.

But the best rule is to sow thickly. I have always believed in heavier seeding with clover than is generally practiced. One peck per acre is none too much, and there are cases where a peck and a half is still better. Last spring when sowing clover seed, one end of the field seemed rather doubtful, so after going over it once at the rate of a peck per acre, I reduced the quantity one-half and sowed this end of the field a second time. The result was that while almost all the clover seeding in the neighborhood was a failure I had as thick a seeding as I had a year ago when the season was everywhere favorable. From my experience the past year I do not doubt that we can nearly always insure a good clover catch by sowing enough seed—enough I mean to give a sufficiency of plants and yet allow a large proportion of the seed to fail. If the season is favorable no harm is done by thick seeding. Clover will not grow so large when the plants crowd each other, but the stems will not be so coarse and there will be a larger proportion of leaves and fine hay—a larger amount also, I believe. Where clover is thin, weeds will come in, which under the closely matted leaves of a thick seeding would be crowded out. If we can insure these advantages at the cost of a few quarts of clover seed per acre it will be penny wise and pound foolish not to do it. W. J. F.

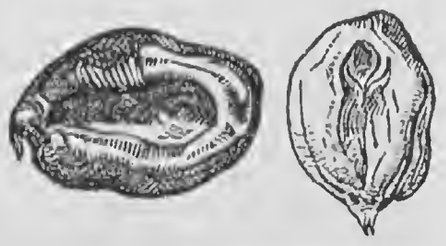
Monroe Co., N. Y.

CUZCO CORN.

THE following letter explains itself:

SAN FRANCISCO, Nov. 17th, 1879.

TO THE EDITOR OF THE "RURAL NEW-YORKER:—*Dear Sir:* I send you a small box containing a pound or more of the wonderful Cuzco corn. You will certainly be much surprised at the size and qualities of this wonderful cereal. I have not the least doubt that it will prove a very great acquisition to our farmers for almost every purpose. It should be planted as far away from other varieties of corn as possible. The province of Cuzco in Peru, S. A., is about 300 or 400 miles inland, and has an elevation of over 11,000 feet. The weather is generally cold in winter and cool in summer, which is very short. A great quantity of rain and snow falls there. I have a plant of it growing in our garden in this city, planted too late (latter part of May, I believe), it is about 15 feet high, has two ears one 12 to 13 inches long, the other 9 to 10



CUZCO CORN.—FIG. 78.

inches long. These ears will not bear any grains, as the pollen from other plants was wanting to impregnate, or fructify them. For a country like some parts of our Great West, where wood is scarce, and where they burn their corn-stalks, this should be valuable corn, as the stalk I have must be from 1¾ to 2 inches in diameter some 2½ feet from the ground. Have a handful of the grain I send you boiled, just as they are, say for 21 hours, and eat them with salt, pepper and butter and you will be surprised. You never tasted hominy as good. Take a few grains and parch them for a few minutes in an oven, and eat them with a little butter and salt, and you will again be surprised. TIBARCIO PARROT.

[Since the receipt of this corn, two kernels ("large enough to be Major Generals") of which we have had engraved, we have also to thank Mr. W. C. J. Drew, of Eldorado, Cal., for a second small quantity. Mr. Drew seems to expect great things of it as well as Mr. Parrot.

Three or four years ago we planted three kernels of this same corn in our garden. We then supposed it was Zea Caragua. It grew to the hight of 11 feet, but had set no ears when frost terminated its further growth, Dr. Thurber, to whom we showed several of our "Major Generals," thinks it can hardly be Z. Caragua which is described as being smaller than Zea Mays (Indian Corn). Dr. Thurber thinks if it be a distinct species, it is very probably Zea macrosperma. It is evidently of no use in this climate. We shall send a few seeds South in order to ascertain if it is worthy of cultivation there as well as to ascertain if, beyond mere size, there is any foundation for a new species.—EDS.]

Farm Topics.

WESTERN FARMING BY A MIDDLE MAN. II.

CHARITY begins at home, and there I judge my comparisons and criticisms of different modes and styles of farming should begin, for such criticisms should at least be "charitable" and kindly in spirit and expression.

I have lately returned from a trip by rail, of some 300 miles, "swinging round the circle" in my own State, going by the Cleveland, Columbus and Cincinnati Railroad through one stretch and style of country, and returning by the Cleveland, Mt. Vernon and Columbus

Railroad, through a region quite distant, totally diverse from the other, going through the most level parts of Cuyahoga, Lorain, Huron, Richland, Crawford, Morrow, Delaware and Franklin counties, and returning through about the most hilly parts of Knox, Holmes, Wayne and Summit, going most of the way through a long monotonous stretch of dead level, with only occasional and slight undulations, and returning through scenery so fine as to remind one of sprightly Vermont hills and valleys, or the Hoosac region of Western Massachusetts, or of the bold scenery of the Alleghanies in Pennsylvania. The January weather was mild and balmy, the fields were bare of snow and free from frost, the wheat and even some of the grass still green, and the whole country spread out to view almost as if in summer. Most of the ground was not new to me, but I found myself again and again saying two things I had often said before. One was, "What a vast and varied State Ohio is!" and the other, "What is there in *hills* that puts life into the farmers, and in a dead level that takes it out of them?"

But my work is not to talk in a moral or poetic strain, but diligently to inquire what excellences may we imitate, and what defects should we avoid in the farming of any locality?

So, then, in riding through the great level stretch first mentioned, I found myself constantly asking, "What does the agriculture of this region chiefly need?" and the answer every time was the same, "Two things, drainage and manure." Not that it is naturally an infertile region: some portions of it are the very garden of Ohio naturally. Huron county and Erie, which adjoins it, are two of the best wheat counties in Ohio. Erie stood first in the State in 1878, giving an average of nearly 20 bushels. But even this fine county sadly needs under-drainage. The waters stood over this great level area long after they had receded from the higher and more hilly portions of the State. The soil is largely alluvial—the settlings rather of the great waters before they finally subsided to the present level of Lake Erie's surface; so, at least, the geologists tell us; and the soil is black and rich, but it is so level that it *must have* drainage of some sort. The open ditches at the roadsides (I speak of the parts of Huron and Erie counties near the lake) are often from two to five feet deep, and into these runs the water from the open ditches or furrows on either side. The wheat fields are plowed in very narrow, high lands, with deep, open dead furrows for the waters to stand and slowly flow in. Of course, this system of drainage is most imperfect and wasteful in many respects. It wastes the fertility of the soil—how, I need not now show. It wastes time in tilling and more in harvesting, and is a fearful strain on any reaper. The proprietors of the Buckeye Reaper told me that they had more trouble from breakage of their table-rake in those and similar counties than in the whole world besides. Tile-drainage must in time replace this superficial and unsatisfactory work.

But further back from the lake, in Richland, Crawford and Morrow counties, the soil, at least from our line of road, seems not so fertile naturally, and there is even greater need of thorough tile-drainage. The water seemed to stand in all the dead furrows and depressions for scores of miles here, and over half of some of the fields, the sub-soil being retentive clay, and the wheat showed the ill effects of it. Still, it is a good, strong, clay soil most of the way, and sufficiently undulating for tile-drainage, provided it be thoroughly and skillfully done. And if thoroughly underdrained and properly tilled and manured, this land will make some of the very best wheat land in the State. Already tiling is well begun, and the factories are springing up everywhere, and a new era in agriculture at the West is already dawning. Portions of these counties, indeed, lying back from my present route, are more undulating and gravelly and less in need of drainage.

Thorough manuring and tillage must, however, follow tilling, or the era I spoke of will dawn all too slowly. I looked in vain through this flat region for the *sources* whence the manure is to come. There were neither stock nor barns nor clover. Not absolutely none, for the agricultural statistics show quite to the contrary, but nothing adequate. I do not remember seeing from the car windows one thoroughly good barn in a stretch of a hundred miles on the C., C., C. and I. R. R. I mean one that looked as if it housed adequate feed and stock for the size of the farm, and planned for the careful saving of every particle and drop of the manure from the animals. Again and again I found myself comparing the farming of this region with that of a certain town in Massachusetts that I visited and studied some six years ago. That town is naturally barren sand, and some of it still remains so. But many of the farmers there have *made* splendid farms. They make their money chiefly by raising stock, or sending good milk and butter to Boston. And they make their *farms* by a scrupulous saving and proper use of every particle of manure, both liquid and solid, from all their animals. Clover is not plowed under, but fed, and the manure saved. Straw is not rotted down, but cut and fed with mill feed, and the manure saved. Their great bank-barns, chiefly with manure cellars, tell the story. Which is cause and which is effect it may be hard to tell exactly, but one thing is certain: the bank-barns are usually on good farms. In that town the neglected farms with tumble-down barns one would be slow to take as a gift, the land seems so absolutely infertile. But farms even adjoining, with the good barns and the good farmers, would be cheap at a hundred dollars an acre. And as I thought it over I said to myself, "If these men make such farms out of such miserable land, why should we be discouraged with the naturally fertile soil found almost anywhere in Ohio. I found also a kind of conundrum slowly "evolving" itself from my sluggish brain. It was this: What is the best and safest "bank" for farmers? Ans.—The *bank-barn*.

But of the picturesque scenery, and the fine farms, and the lessons learned on the homeward trip I must speak at another time.

W. I. C.

THE LAW ON LINE FENCES IN NEW YORK.

F. K. MORELAND.

The law relating to line fences is a matter of some interest to farmers. Disputes in reference to them are too often a prolific cause of discord and sometimes of litigation. A farmer will guard his line fences with jealous care, not only to insure their being properly located but also to insure their being efficient. The statute law upon this subject is all-sufficient. It is provided in substance that each of two adjoining land-owners shall make and maintain a just proportion of the division fence between them. Any land-owner may permit his land to be open and unfenced; but when such owner sees fit to fence his lands, he shall pay to the adjoining owner the value of the division fence, or rather his just proportion of it at the time such division fence was erected by the adjoining owner. All disputes in reference to fences shall be submitted to two fence viewers whose decision shall be final. No farmer may remove his portion of the division fence without giving due notice.

There is another question which will arise most frequently in the older sections of the country, where land is more valuable; and that is as to correct location of line fences. When land was less valuable than now, farmers were careless in locating their division fences. They were very often crooked and too often erroneous; and now when this may cause an error of several acres in the survey of a man's farm, it becomes an interesting question. When a fence has been located for twenty years between two farms, the statute of limitation intervenes, and says *that* is the fence. The parties have acquiesced too long in that line fence for one to disturb the other. The object and aim of all statutes is to prevent litigation. And this is the object of the statute of limitation—it is a statute of repose. The party who acquires any land by the erroneous location of a line fence, acquires a good title by prescription. This principle has been decided too often by our courts to be overruled. In Jackson vs. Dyoling, 2 Caines, 193, the Supreme Court decided that "A possession of 40 years or an acknowledged, though erroneous line, is a good bar to recovery in ejectment. A parol agreement to abide by a certain division line, will be sufficient to prevent either party from claiming in ejectment contrary to it, though it will not pass the lands, but such agreement may, it would seem, be revoked or modified by a a subsequent parol agreement." In Dufert *vs.* Couroy, 1 Hume, 609, the following language is used: "The referees having found as matter of fact in an ejectment suit, that, for more than 40 years, the lots of the respective parties had been separated by a partition fence; that the lots had been used and cultivated by their respective owners for more than 30 years up to the fence on each side; that in 1869 plaintiff's agent moved the fence two feet on the lot occupied by the defendant; that in August 1871 defendant removed the fence to where it stood before and brought an action and recovered damages against plaintiff for removing the fence; *held*, that it was error to find as conclusion of law, that the plaintiff was owner of the strip of land between the fence, as it originally stood and as it stood after its removal by plaintiff." To the same effect is Robinson *vs.* Phillip, 56 N. Y. (Court of Appeals) 634, and Pope *vs* Hammer, 74 N. Y. 240. When a division fence has stood for upwards of 20 years, undisputed, even if not openly acknowledged or even if not located by the joint act of the adjoining owners, there is no reason or justice in removing it. It would seem that the statute of limitations (20 years) is a sufficient length of time in which to correct its location.

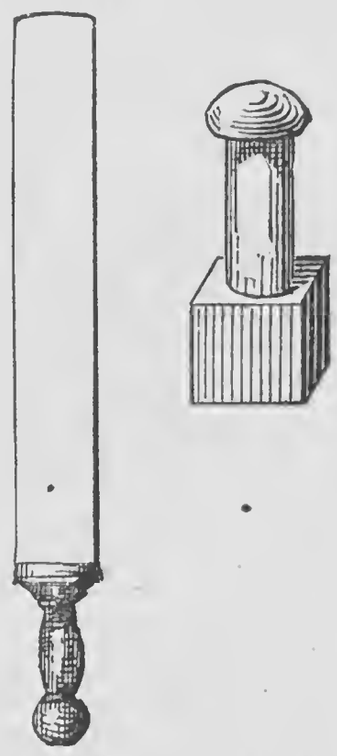
It is not often that any grievous injury will result from allowing the old line to remain. One principal object in correcting the line fence is to have it straight—neighbors can usually agree upon this. I know of cases where the old line has been piled full of boulders and stones, where neither party could wish to change the line.

St. Lawrence Co., N. Y.

Dairy Husbandry.

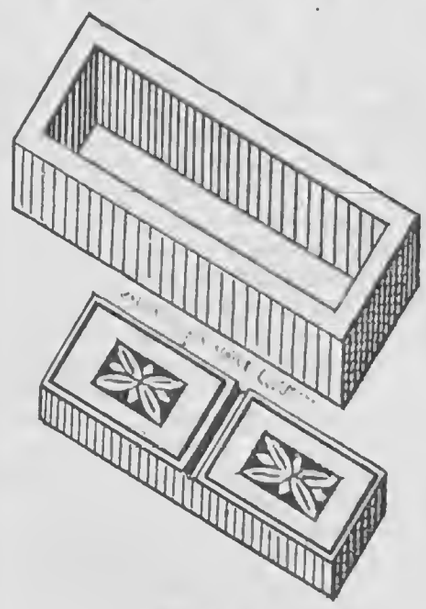
BUTTER PRINTS.

Once, while on a visit to a very noted dairy near St. Louis, I saw the butter maker print butter nearly as fast as a man can mold bricks at a brick-yard. He had a six-sided frame open at top and bottom and larger at the top than at the bottom. In the bottom of this frame he would insert a false or loose bottom with the monogram of the dairy cut on it. He would



BUTTER KNIFE AND RAMMER.—FIG. 79.

then force the butter into the mold with a small rammer and with a long slim wooden knife, he would "strike" or cut off the top of the butter just even with the surface of the mold. Quickly reversing the mold, with his two thumbs he would push the false bottom and butter out upon a cloth already spread to receive them. The false bottom was removed from the butter and the ends of the cloth drawn neatly over it, and then the same process was gone over again. I weighed many of the prints and found them as nearly an exact pound as they could have been weighed by the most practiced hand. I afterwards adopted the same principle, but with a slightly differently shaped mold at my butter factory with complete success—see fig. 80. Butter in rectangular shapes will pack closer in a box than in any other form. It is also very easy to divide into half pounds either on the counter or for the table, one full pound being usually too much to put upon the table at one time.



BUTTER PRINT.—FIG. 80.

There is no reason whatever for requiring the butter maker to weigh every pound of butter. It is not only a waste of time and labor; but if the butter is packed solid in the mold, as it should be, an exact weight can be arrived at with greater precision by "striking" than with the scales. In weighing, the last ounce must be dropped on, and how hard the scale goes down depends much upon how much salt brine or rust has gotten on the hinges or points of balance. Besides, very few dairymaids, or men either, are slow and cautious enough to measure closely, and most of them prefer to throw on a half ounce too much than either to lose the time and patience required to make closer measure or to take the risk of a complaint coming back from the store. Good butter-making is made up of little things, and this is one of the biggest of the little things when a whole year's waste comes to be recorded.

The above tools should all be made of cherry wood and the frame put together strongly with brass screws that will not rust. The paddle, however, may be made of white ash and the longer and wider it is the better. The false bottom should fit quite loosely at first, as it will certainly swell after being used a while. On the face of it any figure or monogram may be cut and on the back four brass screws can be inserted to regulate the size of the print of butter.

L. S. Hardin.

DAIRYING-HOCUS-POCUS.

T. H. Hoskins, M. D.

The mysteries of milk to the popular mind are various and manifold. "Witches in the cream" have sufficed to excuse much ignorance and many blunders among the dairy-maids. But fondness for the marvelous in this connection is not limited to the unlearned. I have recently been making a collection of agricultural text books used in European schools for primary instruction, and in reading them I find, in regard to dairying at least, a good deal of vulgar error taught for truth. In the "Agricultural Class-book," published by Alexander Thom, Dublin, Ireland, (3d. ed. 1870), not only is shallow setting (3 inches) at a temperature of 56 deg. insisted on, but we are told that "at a higher temperature it takes a shorter and at a lower temperature a longer time," and that "at 34 deg. to 37 deg. milk may be kept three weeks without throwing up any notable quantity of cream." In the same treatise we are also told that "churning consists in breaking up the coats of the fatty globules and setting the butter free," and that "this is effected by the combined effect of friction, heat and air." All this is repeated *verbatim* in a book entitled "Introduction to Practical Farming for the Use of Schools," published in London, 1875, by MacMillan and Co.

Cold setting and box churns have blasted this "learning of the ancients," but new crops of absurdities spring up on the same ground on both sides of the Atlantic. Among those I am compelled, very reluctantly, to include the widely quoted declaration of Dr. Sturtevant, (in Land and Home), to the effect that Jersey milk is an unwholesome diet, not only for human infants but for Jersey calves! "The cause at the bottom of this difficulty," says the Dr. in italics, "is the difficulty of digesting the curd of Jersey milk." But he also ascribes it to the richness of the milk by reason of the excess of butter it contains. He cites no instances of babies being slain with Jersey milk, but he refers in proof to a "well-known complaint among Jersey breeders, over that of the breeders of other stock, that their calves scour to a troublesome degree." I have a pretty wide acquaintance among Jersey breeders in Vermont, and have never heard this complaint, nor do I believe the disease spoken of is any more common among Jerseys than among our common cattle; while wherever it occurs it is simply to be ascribed to bad management. As a great many "Jersey breeders" in Southern New England belong to the class of "fancy farmers," who have to depend upon hired help in rearing their calves, and as the calves are very rarely allowed either to suck their dams or have whole milk for more than a few days after birth, it is easy to surmise the probable origin of the complaint where Dr. Sturtevant has heard it, without resorting to the explanation he provides for it.

There is no doubt that Jersey milk is richer in both casein and fat than that of most other breeds. It is richer in all its solid constituents, merely because it has less water. We have not the slightest reason for believing that there is any other difference, or any, at least, of a character to lessen digestibility. The writer in his professional practice has long been in the habit of recommending Jersey milk in preference to any other for infants "brought up on the bottle," and never has seen any evil results that could be fairly ascribed to the milk. His own child, now 17 months of age, has been so reared, (the milk of a cow making one pound of butter from 12½ pounds of milk, being used exclusively), and this child is and always has been a picture of health. As the parents average 46 years in age, and the babe weighed but six pounds at birth and now weighs 38, I think it is a pretty good showing for Jersey milk.

But the most remarkable and self-stultifying statements in this connection, that have lately come under my notice, are those made by a correspondent of the Boston Cultivator in relation to the effect of mixing the milk of various breeds, or of different cows, upon the yield of butter. If true, they would practically lead to the necessity of churning every cow's milk separately, no matter how large the dairy might be. For with the multitude of dairymen it is practically impossible to get together any considerable herd without having in it cows varying greatly in the size of their butter globules. And, besides that, every cow's milk contains both large and small globules, so that in fact we should, on the theory propounded, have to "split the milk," in order to get all the cream. Let us examine these statements a little, and see how they contradict themselves in the eyes of a practical man. The writer be-

gins by saying that it would naturally be supposed that if ten Short-horns are giving a yield of 65 pounds of butter a week, the addition to the herd of two Jerseys making 20 pounds a week, would raise the product to 85 pounds. But this, he finds, is not the case. On the contrary, he asserts that the mixture of the two qualities of milk has been found to sensibly reduce the yield." In support of this statement, the experience of two or three skillful dairymen is given. One of these says:

"This fall, when my herd was making a given quantity of butter weekly, I added to the number of my cows two high-grade Jerseys. I soon found, on weighing my butter product, that the addition of the two Jerseys made no perceptible increase over the previous quantity of butter. I concluded at once that my Jerseys were at fault, and would not make the amount of butter supposed. The latter were new milch cows, and very promising animals in appearance. I next set the milk of each of the suspected Jerseys by itself, and found that the yield of one made twelve pounds of butter, while that of the other made but a little less; also that the original herd, upon careful and repeated test, yielded as before."

Another dairyman who has twelve cows in milk, the majority of which are Jerseys, obtained from cream which ought to have produced 70 to 75 pounds of butter but 38 pounds. The next week he kept the cream of his grade Jerseys and Short-horns separate, and with eight days' cream instead of seven, as in the previous experiment, he obtained 83½ pounds. Both of these dairymen are thoroughly convinced that it is not well to mix the milk and cream of different breeds.

A third dairyman, whose herd was composed of about equal proportions of grade Jerseys and Short-horns, and who is a firm believer in high feeding and the most careful attention, could get only about five pounds of butter per cow weekly. Finally he concluded to set the milk and churn the cream of each cow separately, and found that he had not a single cow that gave less than six pounds, while several yielded upwards of nine pounds each!

Now I undertake to say that these so-called experiments are of no more value, and no more entitled to credit, than would be the assertion of a party who should declare that water out of two adjoining wells would not, when poured together, produce as much ice, or as much steam, as when used separately. Take the first "experience," and what does it in fact tells us? That when two high-grade ("new milch") Jersey cows were added to a herd, the herd made no more butter with them than without them! Yet these Jerseys separately made nearly 24 pounds of butter a week! The whole number of the herd in this case is not stated. We are not told whether the milk was mixed, or only the cream. But whichever course was taken, the entire product (say 23 pounds) of butter from the Jerseys was lost. Did it prevent so much cream from rising, or did it prevent so much butter from coming in the churn? This is a very important question which apparently no experiment was made to decide. If the cream was prevented from rising, we have a singular physical phenomenon presented indeed—no less than the suspension of the laws of gravitation through the influence of Jersey milk. If the cream having risen, did not "come," we then have the hardly less singular phenomenon presented in the refusal of Jersey cream to yield butter, or else of its power to keep just so much as its own weight of butter, and no more, in the cream of the other cows from "coming." If the twenty-three pounds of Jersey butter had "come," and the rest had not, we might suppose that the Jersey cream was a little more prompt than the rest, and that more churning would have brought it all. But no. That Jersey butter, the exact amount, utterly disappeared, and could not be found!

I do not hesitate to say (and I think there are few intelligent dairymen who will not agree with me) that this story is utterly false on the very face of it. And the other cases quoted are like unto it.

I say this not on rational grounds alone, though they are sufficient. I have made a considerable number of experiments to test this very matter, and have uniformly found that when large-globuled milk is mixed with small-globuled milk, the rising of the cream of the latter is accelerated, and also made more perfect. Experiments in the churn have also shown that, when large-globuled cream was mixed with small-globuled cream, the butter came more quickly and more perfectly than with small-globuled cream alone. In each case, by microscopic tests, there were fewer cream globules left in the skim-milk and in the butter-milk than were found in the skim-milk and butter-milk of the same small-globuled milk when set and churned separately, under like conditions. I have no doubt that this will always be found true when the operations of the dairy are, in other respects, properly and intelligently conducted.

Miscellaneous.

WHAT OTHERS SAY.

MR. FINLAY DUN ON AMERICA.—The following notes are taken from Mr. Dun's essay as read before a Farmers' Club of England. Our readers will remember that he is a special correspondent whom the London Times appointed to look into our agriculture. We have read the entire essay with great interest and we doubt not the following pithy, carefully selected, will interest and instruct our readers: The millions, he says, thus made in each recurring year from the bountiful earth have been the chief cause of the recent boom in our industries. The money made in wheat growing and stock raising has been rapidly circulated. When one-fourth of the population [one-half would have been nearer the truth. EDS.] which are more or less directly connected with agriculture, have thus prospered, the remainder of the community speedily participate. In the Old Country, with greater amount of accumulated wealth, and a greater variety of long-established industries, business proceeds at a tolerably uniform pace throughout the year; but in the New World, so predominant is the agricultural interest, that so soon as harvest is secured, business makes a bound, millions of dollars are dispatched West for payment of wheat and cattle. The fall trade in all sorts of goods is double that of the spring; for three months after the farmer gathers his golden grain, wholesale and retail merchants, railways and bankers, have their busy time and their harvest. Never was this more notably illustrated than during last autumn, when, after a most bountiful crop had been reaped, all descriptions of agricultural produce rose with a steady upward rush.

The cattle need and receive little attention; they range instinctively in quest of the best food and water, sometimes spreading over 50 or 70 miles; on some runs salt is provided. Smaller owners have 1,000 to 2,000 head; some of the cattle kings number their 40,000 to 50,000. The chief expenses are the wages of the stockmen and shepherds, who receive $25 to $32 per month (£5 to £6 10s.), with lodgings and rations. Each man looks after about 1,000 head, and in the larger ranches more. There are great diversities amongst the thousands of cattle reared over these vast areas. All are undergoing steady improvement. Lank, rough, profitless brutes are disappearing; the scalawags are polished off. Well-bred bulls of Short-horn and other breeds and well selected grades are introduced from the Eastern States. One gentleman told Mr. Dunn in October that he had himself bred, bought and forwarded West, 1,000 young Short-horn bulls during the last three years. To insure the advantage of such imported sires and prevent the incursion of errant Texans, inclosures are being made in some localities. The Texas cattle, which now muster 5,000,000, are not generally *beau ideals* of symmetry or quality. They are narrow, often open in the loin, leggy, rough, with big heads and enormous horns, hard handlers, and often of a sickly yellow color.

BUT the great breeding and grazing regions of America, where the herds and flocks are so rapidly increasing, and where there is still so much room for increase, are upwards of 1,000 miles west of the Atlantic. One hundred and fifty miles west of Omaha on the Union Pacific, where seven railroads converge, the great cattle ranches begin, and extend 500 miles through Nebraska and Wyoming over the Laramie Plains to the Rocky Mountains, and still 1,000 miles west through Utah and Oregon to the Pacific. Southwards the stock raising is being prosecuted for nearly 1,000 miles through Colorado and Texas to the Gulf of Mexico, and north fully 800 miles through the rich, partially occupied plains and valleys of Wyoming and Montana to the international boundary, and far beyond it into the Canadian Dominion. Twenty years ago these vast regions were unsurveyed; only a few white hunters had penetrated among the Indians; the land was tenanted by bison, elk, deer, and antelope. Since 1860, it is stated that fifteen million bison or buffalo have been killed, with a proportionate number of smaller game. In their place the herds and flocks are slowly extending, but there is room and to spare.

FROM Cheyenne, Julesburg, and other such stations 1,000 car-loads of cattle are annually despatched. Mr. J. W. Iliff, from his big range, 150 miles long and about half as wide, on the South Platte River, now every year forwards 15,000 beasts. The cows each average $25; the best for slaughter weigh, when hung up, 600 pounds to 700 pounds. They are classified in the trade as Texans good natives, butchers' cattle, and feeders. Sold on the hoof or by live weight, they vary from about two and one-fifth to three cts. per pound. They are forwarded in large numbers from Council Bluffs to Chicago, a distance of fully 1,000 miles. Twenty beasts are put into each car, which is covered. In the journey they are thrice unloaded, fed, watered, and rested during twelve to twenty-four hours. The cost of this long journey is $6.77 for each beast. They are forwarded from Chicago (800 miles) to New York for $3 87 extra. When quietly driven to the railway, carefully loaded, and properly fed and rested in transit, accidents are rare and loss of condition slight. Beasts conveyed by rail 1,000 miles and weighed out of the trucks before feeding and watering, will have lost on the gross 50 pounds to 80 pounds.

SHEEP, Mr. Dun says, are increasing throughout the States at the rate of 1,000,000 annually, and now reach nearly 40,000,000. In many parts of the country they are of Mexican origin, crossed with Merino grades. Hitherto they have been bred much more for the production of wool than of mutton. But now that our own as well as foreign markets are opened for mutton, Oxford and Shropshire, Downs, Cotswolds, and Leicesters are being introduced, and the lank, thin bodies, big heads, and close, fine wool are undergoing transformation. American mutton, however, is not so good as American beef. There are great tracts of the continent which, owing to the extremes of winter cold and summer heat, are not well adapted to the thriving of sheep. They have often to be housed during three or four months in winter, and this, besides adding materially to the cost, interferes with vigorous thriving. British flock-masters may therefore be assured that for the present, at any rate, their important business will not be seriously injured by American competition.

BUT the same comfort Mr. Dun thinks cannot be administered to British pig-breeders. The swine of the United States and of Canada are quite as good as at home. They roam healthily at large over plain and prairie, in wood and orchard; they are fed on the best of provender, often on apples and peaches. In the States they number 35 millions. Berkshire and other English breeds, and a useful China hog, are cultivated. He did not see an indifferent grunter during the whole of his travels. They cost often less than four cents per pound; 60 per cent. of the hog products are now exported; hundreds of tons of bacon and pork are sent to British ports at six cents per pound; and England's national bacon bills reach annually $50,000,000.

THE Oregon cattle are more shapely, and have less daylight underneath them than those of Texas. Oregon now numbers about half a million cattle and 2,000,000 sheep, but has area and pasturage for twenty times these numbers. Large drafts are brought eastward over the mountains to be grazed for a year in Wyoming and Nebraska, where the two-year-olds are disposed of at about $15. Into Montana, in the very center of the American continent, both cattle and sheep since 1873 have been steadily extending; the cattle now number about half a million, and the sheep probably about the same.

IN the discussion which followed the reading of this paper, from which we have no space for further notes, Mr. Phipps M. P., remarked that his spirits agriculturally were much higher than they were before he heard Mr. Dun's paper, for it now appeared that the very worst of the outcome of American competition was that the English farmer must be content to produce meat at 15 cents per pound. He thought that as far as meat was concerned, that was not a very bad prospect; and if it could be laid down, as Mr. Dun seemed to indicate, that wheat, to pay, could probably not be sent to this country for less than 40s. or 42s. per qr., (about $1.21 to $1.27 per bu.) he could only say that the message from America was better, as far as farmers were concerned, than he had anticipated. Many in the room, Mr. Phipps had no doubt, could remember the time when good beef was not worth more than 3s. to 3s. 6d. per stone, and that was in a time when American competition was but little thought of. They might depend upon it that if they should be blessed with average good seasons and if the commercial depression of their country should be removed, and if trade and commerce improved and reached the successful position in which they were some few years ago, thus causing a great improvement in the means of the consumers of agricultural produce, then the agricultural producer of the future would have, after all, not so very melancholy a look-out. He, Mr. Phipps, believed that at the present time there was such depression existing in connection with agriculture from various causes—from cattle diseases, from bad harvests, and from bad seasons—that owing to no fault of their own, hundreds and thousands of respectable and at one time well-to-do agriculturists would have to bear the brunt, and would be unable to keep their engagements.

THE great and growing railway system of the States largely contributes to our power of economically sending our trans-atlantic friends every second loaf they eat and supplementing it with a rasher of bacon and an occasional beefsteak. We have 100,000 miles of railways, and are adding annually some 5,000 miles, and this year will add fully 8,000.

WITH such temptingly low rates, no wonder Mr. Dun thinks that American flour is imported in increasingly large quantities, showing in 1879 an excess of 37 per cent. on the imports of former years, and that English millers are anxiously inquiring into and adopting many of the more recent improvements of the best American millers.

CATALOGUES, ETC., RECEIVED.

ROBERT DOUGLASS & SONS, Waukegan, Ill. As the planting season approaches, we call particular attention to this trustworthy old firm. It proposes again the coming year to send trees *by mail* in small lots to all who may order them, at so cheap a rate that no one may hesitate to buy and plant trees and thereby ornament their homes and lay a foundation for future benefit. For ONE DOLLAR they offer to send from 50 to 100 trees to any person, the trees varying in size from four to twelve inches in hight. Among them we may mention the European Larch, White Ash, Hardy Catalpa, Scotch Pine, &c. We *know* from experience that these trees are carefully packed, and that with ordinary care every one will live and grow. The same opportunity has never been offered before that we know of by any other firm, and we confidently advise our readers who stand in need of such trees to order them. Catalogues and circulars giving all needed information will, no doubt, be furnished on application.

BAIRD & TUTTLE, Bloomington Nurseries, Bloomington, McLean Co., Ill. This old and extensive establishment covers 600 acres, thirteen greenhouses, and 10,000 square feet of frost-proof cellars. They have testimonials that their fruit trees, shrubs, small fruits and other plants have been received in Mexico, Nova Scotia, Oregon, &c., in perfect condition. Their catalogues will be sent free to applicants.

HOOPES, BROTHER & THOMAS, West Chester, Pa. We take much pleasure in commending this firm to our readers. They will send their Illustrated Hand-Book without charge to all of our readers who apply. All who love new and choice plants should send for it.

ELLWANGER & BARRY, Rochester, N. Y.—Their lists of new Roses, of fruits, greenhouse and bedding-plants, &c., will be sent as announced in their advertisement.

Industrial Implements.

THS EMPIRE GRAIN AND FERTILIZER DRILL.

We have had frequent inquiries as to the best grain drill and also as to the best drill for distributing fertilizers at the same time the seed is sown, and in the Empire Grain and Fertilizer Drill here illustrated, we present to the careful attention of these inquirers and of all our other readers an implement of this kind which long experience has shown to be second to none on the market. This is a force-feed drill, well defined as one whose mechanism takes positive control of the grain or fertilizer and carries it irresistibly forward to the point where it empties into the funnels or conducting tubes. As a grain drill its chief merits are: Its force-feed arrangement certainly forces the grain from the feed box to the ground, so long as any grain remains in the box; its hopper bottom is a supplement to the feed run, and by its conformation to the sides of the seed-box above, and the shell or disc of the distributor beneath, materially aids in distributing the grain in a regular, continuous stream. It is the combination of the hopper bottom with the disc of the distributor, and the manner in which the grain is received into it and discharged, that imparts to the device the power of positive force.

There must be an even, continuous stream of grain discharged, so that by the forward movement of the drill over the ground it will be deposited in a regular manner in the drill furrow, with no danger of being thick at one place and thin at another.

Fig. 82 represents the hopper bottom, which consists of triangular blocks of wood inserted in the space between each distributor in such a manner that a complete hopper is formed from the top of the seed-box to the point at the bottom of the run where the grain is raised to the discharging aperture, offering the least possible resistance to the downward movement of the grain, and guiding each and every kernel. Fig. 83 shows a sectional view of the feed run filled with grain, by which the force principle is very plainly indicated. The moving or lifting power is the rotating disc with a flange on the outer circumference provided at certain intervals with ribs or starts, as seen in the cut. The grain is received upon this flange

almost immediately upon leaving the seed-box and is carried forward to the discharging aperture and emptied into the funnels, or conductors, in an even, continuous stream.

As a fertilizer distributor its chief claims are: it distributes any kind of commercial fertilizer with certainty and uniformity, without danger of clogging or bunching; the quantity sown is regulated by the gear, so that there is no guess-work on this point; the box can be filled with any phosphate which will be discharged evenly and regularly; the phosphate

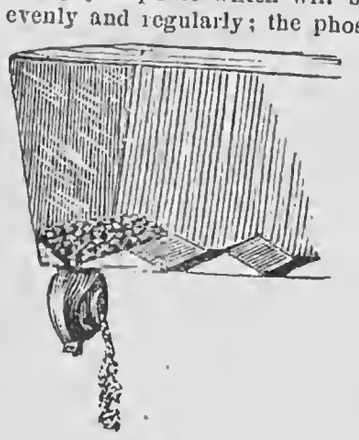


FIG. 82.

does not accumulate at one end of the drill when working on a side-hill; composed of few pieces, it is not liable to become disarranged; and while held firmly together, it can be quickly and easily taken apart, without removing a nut, key or spring; by automatic action, produced by raising and lowering the teeth, it is thrown out of gear before the teeth are out of the ground, and they are in the ground ready for work before it is thrown into gear, thus avoiding any waste by scattering on the surface of the ground.

Fig. 84 represents a perspective view of this feeding device with the side of the cup broken

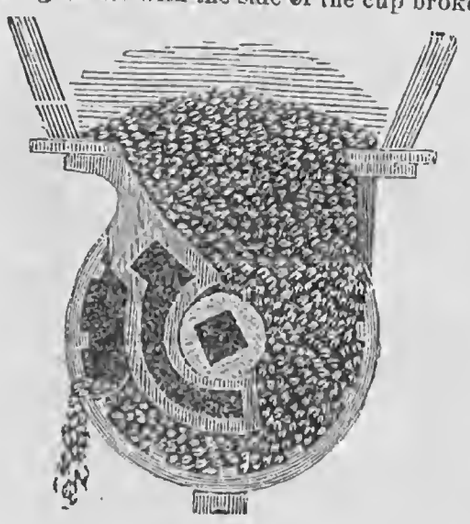


FIG. 83.

away, so that the inside and feeding cap, with cut-off wire, are disclosed, showing the opening in the cap through which the fertilizing substance is carried and discharged into the spout below, and by it conveyed to the conductors.

This device is composed of four pieces: 1st. The stationary bottom plate, or support, which is screwed fast to the under side of the drill box, and upon which the whole mechanism rests. 2nd. The revolving bottom or carrying plate, with cogs on the under side, upon which

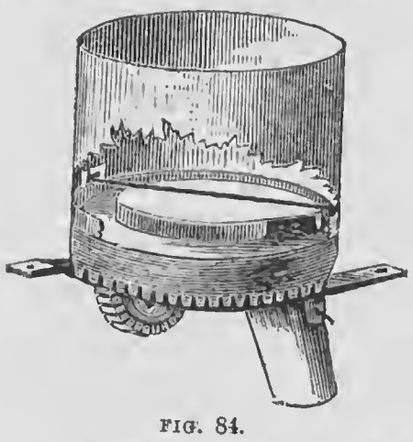


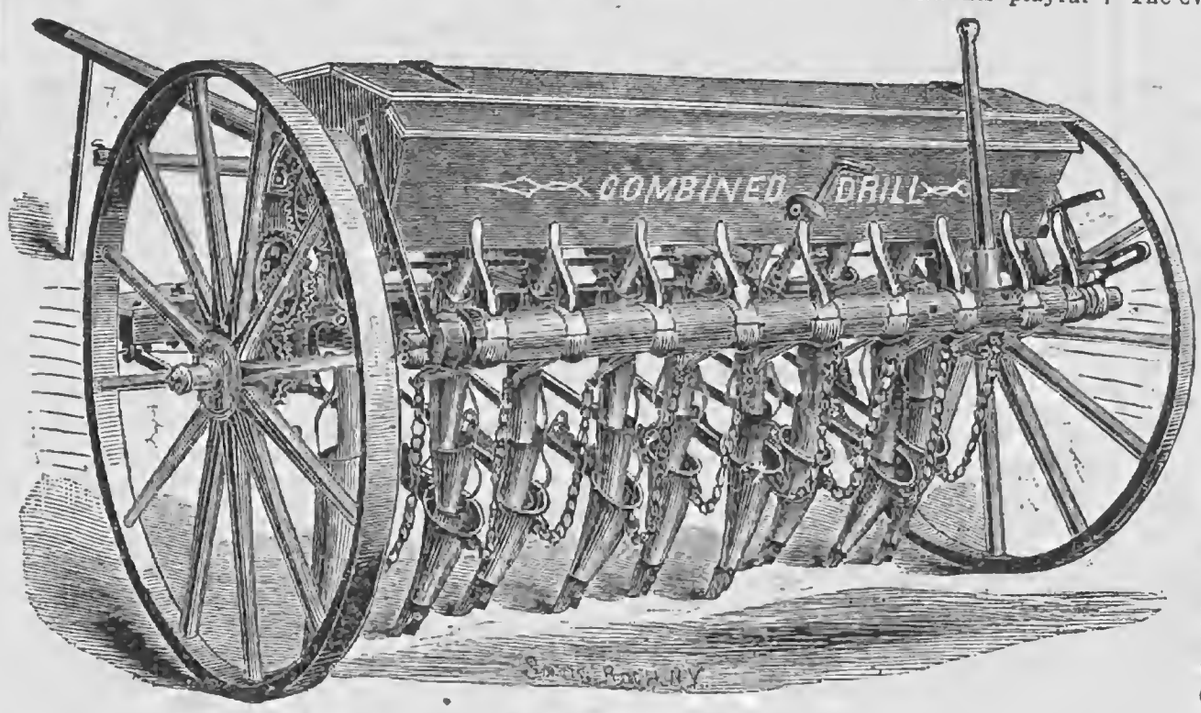
FIG. 84.

rests the revolving cylinder of the fertilizing substance. 3d. The feeding cap; and 4th, the zinc top riveted securely to the revolving bottom plate, to form a cup, or receptacle, which, when at work, is full of phosphate. These different parts are made of sufficient weight to be durable and substantial, and, with the exception of the zinc cup, which is riveted, are held together firmly without the use of a bolt, key, or spring, and, at the same time, are quickly and easily taken apart if there be any cause or reason for desiring to do so.

For fuller particulars of this really excellent implement we refer our friends to the manufacturers, the Empire Drill Company, Shortsville, Ontario Co., N. Y.

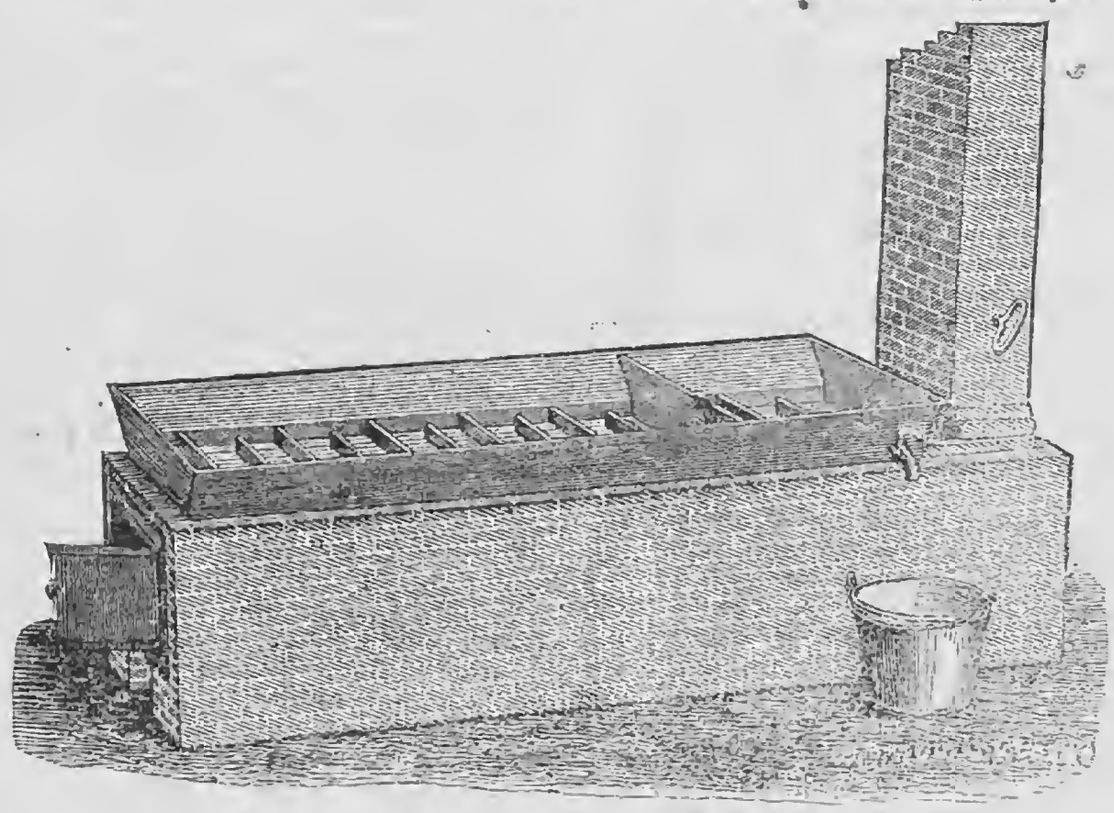
EVAPORATORS FOR SUGAR MAKING.

THE evaporation of saccharine fluids for the manufacture of sugar is an important operation, because not only the quality but the quantity of the product depends upon it. Domestic sugar making promises to become greatly extended since the recent improvements in the



EMPIRE GRAIN AND FERTILIZER DRILL.—FIG. 81.

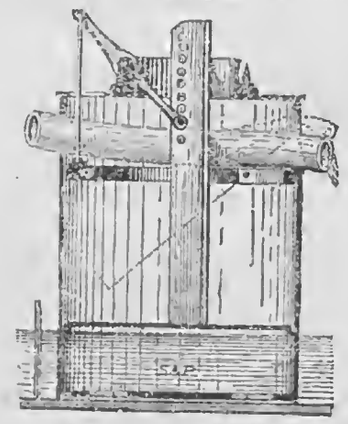
reduction of sorghum juice to crystallized sugar, and the maple sugar industry may soon be eclipsed by the development of this kindred product. By and by every farmer may be his own sugar maker, and this indispensable article of domestic consumption may be made on every farm. But cane-sugar, whether from sorghum of any variety, or from the true Southern cane, can never drive maple sirup or sugar from its place as a household luxury. No other sirup possesses the peculiarly agreeable flavor of maple sirup, and no cakes of sugar will ever be so acceptable to the American youngster as those made in the maple groves. It is a misfortune for us, that in the very practical improvements of the present age, all the poetry of farm life is disappearing, and the rotund, jolly farmer of years ago, who gleefully swung his flail while "the eager and nipping airs" of winter played and sang about the corners and through the logs of the old-fashioned barn, and who, on the approach of spring, hied to the woods with his playful brood about him to make sugar in the old camp and pull candy cooled in the snow, now gives place to the thin-visaged "Gradgrind" who declares that, "Facts; facts, sir! prove that machinery must take the place of hand labor, and that all the future work of the world must be done by steam." Then, alas! good bye to all the fun by which labor was lightened and the young folks amused while they helped to do some profitable work! But maple sirup and sugar cakes and candy will be made, and all the better, too, although the old iron kettle hung on a tripod in the style of a gipsy camp, be relegated to the pile of old iron, and a brand-new evaporator from the Vermont Farm Machine Company be procured from Bellows Falls, Vt., to take its place.



VERMONT FARM MACHINE CO'S. EVAPORATOR.—FIG. 85.

Every device by which the quality of a product is improved is valuable, and it is a well-known fact that the rapid boiling of maple sirup is an important element in securing an excellent quality and a clear, light amber color. The evaporator referred to (see fig. 85) has several new and valuable points; the sap enters where the heat is greatest, viz., over the fire hole, and leaves the evaporator where the heat is least, thus avoiding scorching; the sap flows in a tortuous stream from the front to the rear, and the sirup may be finished off in the lower end of the pan, which can be separated by a gate from the front part. Fuel is saved because the heat is all utilized, and this also secures rapid boiling down. Rapid boiling prevents the formation of the so-called inverted or uncrystallizable sugar, which remains in the sirup and also secures a fine grain and a light color. This not only increases the product of sugar but improves its quality and adds to its salable value, which is of considerable importance when it is remembered that in Vermont alone 15,000,000 pounds of maple sugar are made annually. One cent a pound added to the price of this quantity makes $150,000, and three cents, a very possible additional value gained by the use of this evaporator, will make nearly half a million dollars. This is an example of the benefits derived from any improved machine or device by which an increased value is given to any product or any labor is made more effective.

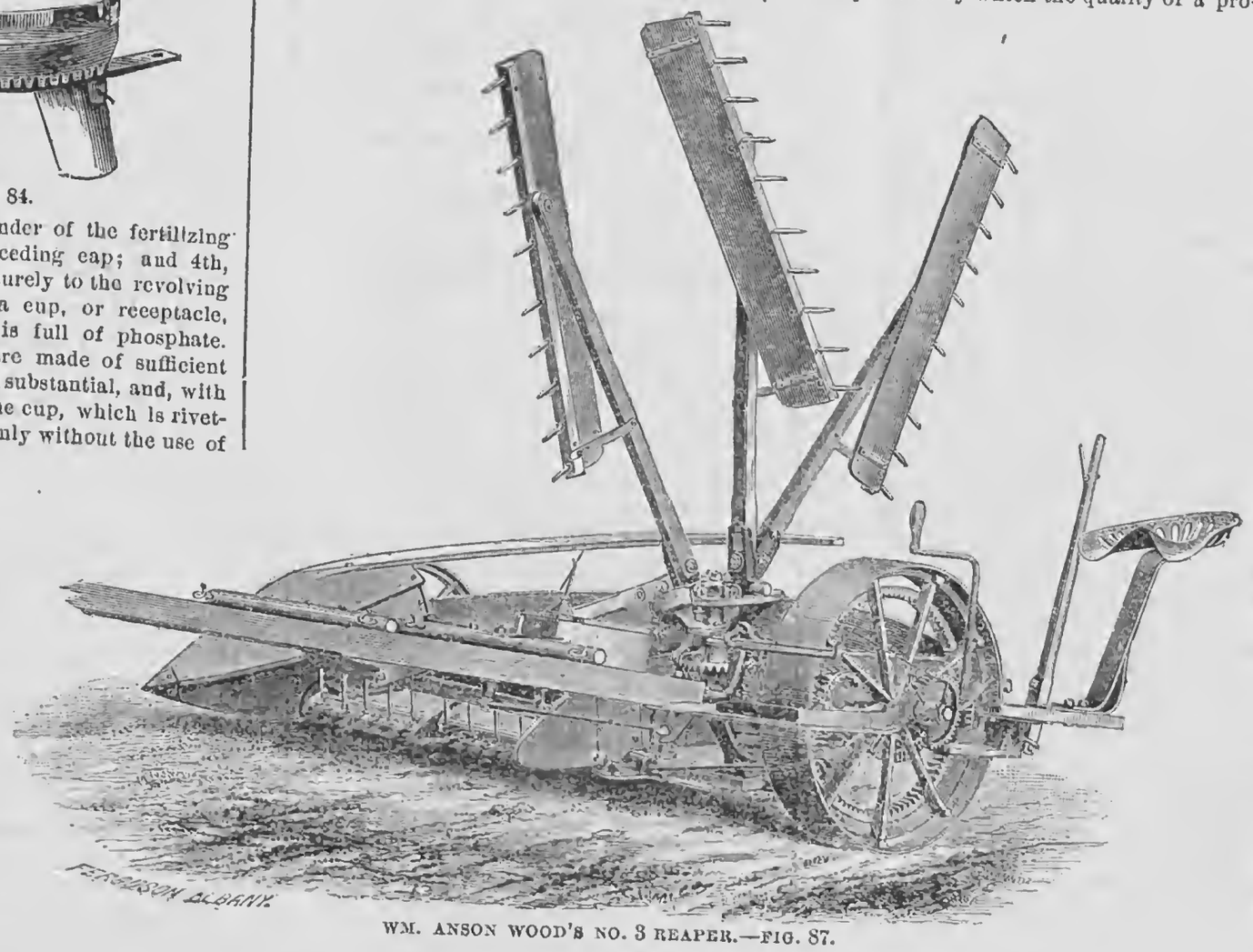
The best evaporators are made of copper and lined with tin; these are found to be very desirable for boiling down cider into jelly, as they are perfectly safe, acid having no action whatever upon the metal. An ingenious automatic feeder is supplied with this evaporator (see fig. 86). This being placed in the evaporator, the sap as it rises, lifts the float, works the lever and depresses the arm which is under the rubber feeding tube. This arm being pressed down, as shown by the dotted line, chokes the tube, as shown by dotted lines, and stops or decreases the flow until more sap is required, when the tube is released again. This is an important adjunct, as, so long as the supply tube or barrel has any sap in it, no attention is needed to keep the boiler furnished adequately. This evaporator may be used for making Amber cane sirup, and sugar as well as for maple sirup, and as Amber cane promises to be largely used for this purpose, the machine will doubtless be extensively called for.



REGULATOR FOR EVAPORATOR.—FIG. 86.

THE WM. ANSON WOOD'S NO. 3 REAPER.

An examination of a new reaper lately put upon the market by the Wm. Anson Wood Mower & Reaper Co., of Albany, N. Y., shows that this firm has accomplished the difficult task of adding another to the numerous improvements made in the reaper since the first clumsy machine excited the wonder, admiration and hopes of the agricultural world. The advance in the line of betterment in the present case is mainly in greater ease of handling. By the new arrangement, the driver, from his seat, has perfect control of the machine, being able with a quick movement of the hand to set the platform and the rakes in any desired position instantaneously. This facility of adjustment makes this an exceptionally efficient machine for reaping lodged and tangled grain and delivering a perfect gavel under all conditions. An ingenious device in the shape of a break-like crank, a little to the right and in front of the driver's seat, works an eccentric which raises or lowers the cutter-bar and table and tilts forward the rakes so that they pick up the grain cleanly. Just back of the crank is a tilting lever which adjusts the rear platform at any desired angle. Owing to these devices the driver need never quit his seat while at work; and stubble is cut at a uniform hight either close to the surface or as high as 16 inches from the ground. Although the machine weighs only 750 pounds and is of very light draft, yet so nicely is it balanced throughout and so fine are the workmanship and materials, that it runs with great smoothness and precision and with a minimum of friction. The drive wheel has a wide tread, and all the desirable features in the machine are firmly secured by no less than 15 patents. We strongly urge our readers to investigate all the claims confidently asserted for the reaper, and seek full information concerning it from the manufacturers at the above address.



WM. ANSON WOOD'S NO. 3 REAPER.—FIG. 87.

Everywhere.

PROGRESSIVE MOVEMENTS IN OHIO.

We are modest people in Ohio. We do not boast of what we have done or intend to do in the line of agricultural improvements; but I will gently hint to the RURAL readers in other States, that we are not disposed to lag behind in the onward march. There has never been a time when the minds of our farmers were so generally alert to discover what can be done for the improvement of their farms or families; for it an accepted maxim that our sons and daughters are the noblest products of the land. This mental awakening of the rural population is, no doubt, largely attributable to the social and educational influences of the Grange organizations. It is also both a cause and an effect of the increased circulation of agricultural papers.

The Use of Commercial Fertilizers

is another grand educational agency among our farmers. The influence these were seen to exert upon the wheat crops especially, compelled the old-fogy class of farmers to lay aside their prejudices against scientific farming, and to admit that something valuable can be learned from reading; and thus the eyes of thousands have been opened to admit the light of science. So rapid has been the increase in the use of these fertilizers that it is found that on careful inquiry the amount of sales, the past year, of superphosphates and ground bone, was about 13,000 tons, and it has nearly doubled in the past two years, with the prospect of still further increase. This involves an aggregate outlay of over $500,000 per year on the part of the farmers; and it is beginning to be learned that there is *cheating* in this trade—that a considerable share of the so-called phosphates are poor *trash*, not worth half their cost; and there is no way of detecting the frauds but by chemical analysis. We propose, therefore, to have passed by our present legislature a fair and stringent law to protect the farmers and honest manufacturers from sharpers in the trade. This has already been attempted twice, and failed, but will succeed this time, or I'll miss my guess.

An "Experiment Station"

is the next thing we mean to have; and it really ought to be the basis of our fertilizer law—as it doubtless will be when established. The class of farmers, numbering 93, who were in attendance at the course of agricultural lectures at our State University in January, presented an able memorial to the Legislature, asking for such a "Station" to be connected with the University. Petitions for the same are also being sent in from a number of Granges and neighborhoods of farmers. But the project is so new to most of the people, as well as to members of the Legislature, that it is not expected to pass before another winter. When our Station gets in operation we shall expect to see all the other States follow suit—and if a few get ahead of us in the race, all right.

A Boom for Tile-Draining!

The great clay districts of our State, like the dairy region of the "Reserve," have been manifestly declining in productiveness for years past, not so much on account of any real impoverishment of the soil, as because of the need of a more thorough and diversified system of tillage, and it has been found that this can only be rendered possible by tile-draining a large portion of the land; and this operation causes wonderful improvement. A convention of tile-makers and advocates of land-draining was held at Columbus last week. There were more present than I expected to see (about 70), and the proceedings were highly interesting and useful. Professor Townsend, of the University, expressed gratification on being present, and gave an interesting narrative of his experiments in tile-draining on a clay farm in Northern Ohio, over 40 years ago. He also gave an excellent lecture on the philosophy and benefits of tile-draining clay lands. The Secretary of the State Board of Agriculture furnished a series of extracts on the results of tile-draining, copied from the reports of the secretaries of county Societies, and designed for the forthcoming Report of the State Board. But the best of all was an essay written by W. I. Chamberlain, and read in his absence by the writer, on the question "Does Tile-Draining Pay?" The essay is a plain narrative of the experience of the writer in his efforts, with no capital but brains and muscle, to renovate an old clay dairy farm that was thought to be fit for nothing but grass, and to be incapable of yielding any profit at that. But as a consequence of tile-draining one field after another, it has become one of the most productive and valuable farms in all that section of the State, yielding immense crops of wheat, clover and potatoes as well as hay, and the value of the land has increased three-fold. This essay was written for, and read in a Grange meeting where most of the neighbors of Mr. Chamberlain were present; so there can be no doubt of the correctness of its statements. It also contains reference to the like marvelous effects of tile-draining on the clay farms of John Johnston and one or two others near Geneva, N. Y., where Mr. Chamberlain visited the past summer. He thus not only shows most conclusively that tile-draining *does pay*, but that it is the very foundation or *ground-work* of improvement of these old clay farms; and that the owners of such lands really cannot afford to defer engaging in this work, for the longer they delay the less able they will be to accomplish it. This essay, with the rest of the proceedings of the Convention, will be published in the March number of the Indianapolis Drainage Journal, and extra copies will be sent to the members of the Convention, for distribution. The hope was expressed that the essay would be extensively read at Grange meetings and the like, in all the clay districts of the State.

A Tile-Drain Organization.

About 50 of those present at the Convention were makers of tile or of tile machines, and nearly all were farmers of clay land, who had tried or seen enough of tile-draining to be convinced of its importance. Much discussion was had on the form, size and cost of tile; the best kinds of clay for their manufacture; on methods of mixing and grinding the clay, and drying and burning the tile, etc.; the aim being to devise such improvements as would tend to lessen the amount of losses from cracking, etc., and thus enable the makers to reduce prices to the farmers. A very common mistake is in the location of a factory where the clay is not suitable. Mr. J. W. Penfield, of Willoughby, who is the oldest tile and machine maker in the State, said he made it a rule never to send out a tile or brick machine until samples of the clay had been sent to him for trial and inspection, so that he could know just what the machine was wanted to do, and could adapt it to the work. The average prices at which smooth, round tile are sold at the factories in Ohio were said to be 20 cents per rod for 2-inch size, ($6 per 1,000 pieces,) and 10 cents per rod, or $3 per 1,000 additional for each additional inch in size of caliber up to six inches. A few factories located favorably as to cost of clay and fuel, and using cheap labor, were selling somewhat below these prices, and some considerably higher.

An association was formed of 56 members, called the "Ohio Tile Brick and Drainage Association." The president is S. N. Titus, of Marion; vice-president, Peter Swartz, Columbus, and Secretary, Daniel Hess, Columbus; annual meetings to be held at Columbus, 2d Tuesday of Feb. A premium of $25 will be paid at the next annual meeting to the person in Ohio who lays the largest number of rods of tile drain in a perfect manner the present year. M. B. BATEHAM.

RURAL SPECIAL REPORTS.

ARKANSAS, Eldorado, Butler Co., Feb. 25.—We have been having one of the most delightful winters I ever experienced. Wheat is looking well but needs rain before we get the next month's winds, which are apt to blow out the wheat when the ground is dry. Market quiet; wheat, 80 to 95c. per bushel; corn, 20 to 25c.; oats, 30c.; potatoes, 75c. to $1. Hogs, live, $3 25 to $3 55 per 100 pounds; fat cattle, $3 50 on foot; butter, 20 to 25c.; eggs, 7c. W. I. B.

NEW YORK, Elmira, Chemung Co., Feb. 23rd.—With the opening of February came a decided change in the weather. It grew suddenly cold and it was thought then that the month would be the coldest of the winter. But, contrary to expectations, after a week of genuine winter weather, during which time we had fair sleighing, it grew warmer again and in a few days the ground was bare of snow and the river free from ice. Warm weather and muddy roads were again the rule, so that teaming, which had been pushed rapidly forward during the week of sleighing, was suspended. Feb. 18 brought another change and the muddy roads became rough and "putty." Since then it has become warm again and to-day it is warm and spring-like. Unquestionably the warm weather has been a great saving to many farmers in this locality. The short supply of forage last fall, occasioned the necessity of commencing foddering very early and some farmers have already found it necessary to buy feed for their stock; but a less amount of feed has been required than in a keenly cold winter; nevertheless there will be little surplus of hay and coarse fodder left over in this section. Hay has made a little advance of late and is now selling for from $13 to $16 50 per ton. Loose oat straw brings $10 and $12 per ton. The bare, open winter has been unfavorable to small fruits as well as to winter wheat. Strawberries that were not well protected have suffered materially and Raspberries have been frozen down somewhat, not by steady cold weather which seldom injures them, but by the alternate freezing and thawing. A meeting of the Chemung Co., Agricultural Society, was held in the Elmira Court House on the afternoon of Feb 18 for the purpose of electing officers and transacting such other business as was deemed important. Mr. Jessie Owen, of Chemung, was elected president, Mr. W. A. Ward, Secretary, and Mr. Wm. T. Post, Treasurer. A large attendance of members from nearly every section of the county was present. The annual fair of the Society will be held on the 22nd, 23rd, 24th, 25th, of September. The Society wisely resolved to allow teams to enter the grounds free of charge. The Society is in possession of a sorghum sugar machine which it resolved to give to any person in Chemung Co., exhibiting the best 100 pounds of home-made cane sugar. A handsome premium will be given as a prize to the best samples of tobacco exhibited at the September fair. A prize of $10 will be given for the best bushel of potatoes and five dollars for the best five-pound sample of butter. Much interest was shown in the production of sugar of sorghum. Numbers present guaranteed at least 20 acres of cane for sugar. A resolution was passed requesting the Assemblyman from this county to secure the passage of a bill to provide a bounty or prize of $50,000 for the 5,000,000 pounds of home-made sugar. G. A. G. JR.

NEW YORK, Walden, Feb. 25.—Warm, showery weather; frost nearly out of the ground; quite a scarcity of hay, sells from $14 to $18 per ton. Oats, 50c.; corn, 60c.; one sale of 165 bushels wheat at $1 45. Winter grain looks fair. Wages are expected to rule from $3 to $4 per month above last season's; a very general advance in real estate; three creameries are being erected in this part of Orange county. Several engaged in furnishing milk for New York market will change to butter. Times are fair and to the industrious and careful agriculturist the prospect is more cheering than for the past few years. RURALIST.

OHIO, New Antioch, Feb. 27.—We are having an exceedingly mild winter in this part of Ohio; very little snow, but little freezing and a great deal of rain. The wheat crop that is now sown bids fair to be a very good one, with a very large acreage sown. The mild weather of this month is giving the farmers a good chance to prepare for spring work. N. B.

VIRGINIA, Essex Co., Feb. 26.—We have had so far an unusually mild winter, with very little snow. The ice season is over and very little has been gathered in the county. Very little rain. Wheat is looking, we fear, too well, especially if we have cold snaps in May, as we usually have. I see a great deal about Cow Peas. They are a crop with us so old that the oldest inhabitant knows nothing of their earliest cultivation. We plant them in lots, say one foot by two and a-half, four to six in a hill in every second hill in the rows of corn. We also sow them broadcast in the corn the last time it is worked, and if the season is not too early, gather a fine crop of peas and vines, and if the cold weather is too early for the peas to mature there is no better stock food than the vines. I am now feeding to my cows and sheep such as I raised in my corn. OBSERVER.

VA., Herndon, Fairfax Co., Feb. 25.—We are having very warm weather—the frogs are singing while I am writing. We have had a remarkably warm winter; not many like it in the recollection of the oldest inhabitant. Grass and wheat have kept green and growing all winter. Wheat looks fine and bids fair for a good crop. I have been here 12 years, and have never seen as good a prospect for a good crop as now. Hay is rather scarce owing to the short crop caused by the severe drought in the early part of summer. The corn crop was good and corn is plenty—worth about 50 cents per bushel here, and 55 to 58 cents in Alexandria and Washington, D. C. Money is scarce and business dull at this time. Trade has been very good, however. S. K.

The Querist.

ANSWERS TO CORRESPONDENTS.

Onion Culture.

C. J. B., Manchester, Iowa, and *B. F. S., Erie Co., N. Y.*, both ask questions concerning the culture of onions. 1. How should the soil be prepared? 2. The best varieties to sow, and how much seed to the acre? 3. What advantage is there in planting sets, and how should it be done? 4. What yield can be expected per acre on rich soil with good culture?

ANS.—1. Onions should not be sown on a very heavy, clayey soil, or on very light sand; a rich, mellow loam, free from grass roots and weeds, is best suited to this crop. As necessary requisites to success, we will mention:—first, rich soil; second, good seed, and third, clean culture. If these three things are secured and the details of the work are properly attended to, one may reasonably expect to harvest a good average crop. If a good coat of manure has been plowed under in the fall, it will not be necessary to plow the land again in the spring. If it has not been thus treated in the fall, however, it should now be manured and plowed about four inches deep. Thorough pulverization is of first importance. Harrow the plat lengthwise and crosswise of the furrows until the surface soil is fine and mellow, and if necessary construct a scraper of a plank about twelve feet long, and level off with this. Should the surface be uneven, a heavy shower soon after seeding is apt to wash the seed into the hollows, and, of course, cause a failure in the crop. There is a diversity of opinions as to the kind of manure best suited for onions, some growers preferring one kind, others another. Ordinary barnyard manure, pig manure, Peruvian guano and fish guano, all have their advocates, but probably there is nothing better than night soil where this can be obtained. It should be thoroughly mixed with dry earth and worked into the soil with a cultivator. When superphosphate or Peruvian guano is used, it should be applied at the rate of about 1,000 pounds to the acre; half of it to be raked in at the time of sowing and the other half when the onions are four inches high. The seed should be sown as early in the spring as the land can be prepared; about the middle or latter half of March is not too early between the 43d and 44th degree of latitude. Sow in drills, 15 inches apart. Either mark out the whole plat with a marker, or use a drill that marks the rows as the operator proceeds, care being taken to make the rows straight. The seed-drill should be set to drop about five seeds to two inches. The proper depth to drop is from half an inch on heavy soils to about three-quarters of an inch on light sandy land. Good seed is essential. To secure the best result use only American-grown seed, and purchase this either from the grower direct or from a reliable seedsman, and not from peddlars or small local dealers; about five pounds will be needed per acre. 2. The three standard varieties are White Portugal, Yellow Danvers and the Red Wethersfield. Which of these to choose for the main crop, must depend upon the demand of the market to which they are shipped. In Boston the Yellow Danvers is a favorite, while in most Western towns a large red onion is preferred; in New York a white medium-sized onion takes at present the highest price. 3. The object in planting sets is to get an early crop. By the middle of June sets will have attained the size of ordinary onions, and can then be marketed. It is not advisable to make this the main crop, as these onions do not keep well and the market is quite liable to be overcharged with the article. They are planted in rows 12 or 15 inches apart, and three inches from each other. From six to ten bushels are needed per acre, according to size. 4. About 300 bushels per acre may be considered an average crop.

Special Potato Fertilizers.

E. A. G., Hartford, Ct, having a piece of turf land plowed last year and planted with potatoes, with a liberal amount of stable manure in the hill, asks, 1, could a good crop of potatoes be expected from the same ground this year by using commercial fertilizers and without stable manure; 2, what fertilizer or fertilizers will produce the best results, the above ground being a light, mellow loam.

ANS.—1. Surely, yes, if there be any virtue in concentrated or commercial fertilizers. With a slight difference, we propose to raise potatoes under the same conditions. 2. We can give no better advice than to suggest the use of special potato fertilizers which are offered by dealers. If you *knew* that your land was already well supplied with one or more of the chief ingredients of such manures, then the others could be purchased separately at a saving. For instance, if potash, an essential manure for the potato, were not needed, bone or lime phosphate would produce the same results as if both phosphoric acid and potash were applied. See our market reports and advertising columns for names and prices of suitable fertilizers and for the names of reliable dealers.

Treatment of Wheat in Spring.

F. W. S., Baden, asks, 1, what is the best fertilizer for wheat in the spring; 2, how much should be applied and when; 3, what is its price; 3, is it beneficial to harrow wheat in the spring and at what time should it be done; 5, would it be advisable to run the mowing machine over it, if its growth is too great.

ANS.—1. The best fertilizer for spring use is superphosphate of lime; 2, 250 to 300 pounds or even 500 pounds per acre may be applied as early in the spring as may be convenient. 3. The price varies from $30 to $45 per ton. 4. Harrowing wheat in the spring is beneficial; it loosens the soil, kills young weeds, and invigorates the crop. It should be done as early as possible but not before the ground is dry. If clover seed is sown it should be done immediately after the harrowing. 5. It would be of no benefit to mow the tops of the wheat unless it is very thrifty, if the mower is used it should be set to cut at least three inches high and should be employed at once.

Keeping Butter.

W. S. H., Deweyville, Utah, asks how butter can be kept for five or six months—it is made

by about 20 different persons, all good butter makers.

ANS.—The butter will probably vary in color and should, therefore, be well mixed. A good mechanical butter-worker (see advertising columns for makers) may be used. The butter should be cut up and mixed as evenly as possible and run through the worker. If color is needed this may be worked in. As the butter is cut up it should be washed to take out some of the salt, and fresh salt be added in the working. Care should be taken not to overwork it so as to injure the texture. The flavor and the keeping quality will be improved by adding an ounce of white sugar to each four pounds of butter.

Miscellaneous.

S. O., Dobyville, Ark., has a two-year-old mule that in going down hill travels badly and seems afraid of falling at every step. His appearance is that of a foundered horse, but he is not foundered. While in the lot he stands apart as if looking at something in the distance, lifting his feet frequently as if they were sore. He is stiff, dislikes to move about, and is slightly lame in one shoulder. He still travels up-hill "tolerably" well. Lately it was found that he had "blind teeth" and they were knocked out. Some say he has "big shoulder" and for this one inquirer has been advised to give three grains of arsenic per day for some time, and this he is now doing, but he is not satisfied either that "big shoulder" is the disease, or that he is using the proper remedy.

ANS.—The going down hill with difficulty and up hill easily, point strongly to navicular disease. This would also account for every other system mentioned. Try the frog with a light hammer; if the animal winces, the disease is certainly in the navicular or coffin bone. Arsenic is of no possible use. The treatment proper in this case is to poultice the feet or make the animal stand continually in a puddle of clay frequently moistened with hot water. When whatever heat exists is removed, blisters should be applied to the front and sides of the pastern or a seton be passed through the frog. As to put a seton in the frog is a difficult operation, to avoid injuring a tendon it should be done by a competent surgeon. The seton is introduced in the hollow of the heel and brought out about the center of the frog. While this is being done the animal must rest.

A. S., Langersville, N. Y., asks, 1, how many cows can a Short-horn bull of 17 months, serve without injury; 2, should guano in the hill with corn be covered, or should it and the corn be placed in the hill right together; how much should be used in the hill; 3, how long should his pure blooded cock and pullets be shut up away from the rest of the flock to insure pure-blooded chicks.

ANS.—1. The young bull may serve 25 cows during the ensuing year; beginning moderately at first. 2, No seed should come into direct contact with guano or any other concentrated fertilizer; nor should guano be thrown on to a hill of young corn or it will burn the spire. The fertilizer should be mixed with the soil before the seed is dropped. One ounce to the hill is sufficient. 3, Three weeks. It is a question not yet settled if the connection with an impure-bred cock does or does not permanently affect a pure-bred hen.

A. G., Salt Point, N. Y., asks, 1, how to cure a sheep's caked bag which has been so since she weaned her lamb: 2, how to rid a six-years-old mare of worms, which cause her to rub her tail; 3, how can hickory nuts be kept over without spoiling.

ANS.—1. Bathe the udder with warm water and rub on it a mixture of one drachm of iodide of potassium and one ounce each of water and glycerine. Give the ewe a dose of one ounce of Epsom salts and if the hardness of the udder does not decrease soon, repeat the dose after four or five days. Give one pint of linseed oil, and one ounce of turpentine, and repeat in a week. 2, Give an injection of salt and water by means of a syringe, or a bladder with a pipe of elder wood made to fit the mouth of the bladder. 3, Keep the nuts in layers of dry earth in a box of suitable size.

B. F., Homebrook, Pa., asks 1, which is the more profitable—to haul stable manure three miles at 50 cents a load of 3,500 pounds, or to plow under green crops and use fertilizers; 2, does it pay to sell dressed pork at $5 per 100 pounds when shelled corn is worth 75 cents per bushel.

ANS.—The stable manure in this case would be cheapest. 2. It does not where the pork is made wholly or nearly so with corn. When corn is 75 cents per bushel, pork should sell for not less than $6 per hundred, if made on corn. When the pig can be grown on cheaper feed, it will pay to finish off with corn on the basis stated. Fattened partially, at least half on roots or milk, pork can be made at a profit at $5 per hundred when the corn is worth 75 cents.

A. H. & S., Galway, N. Y., ask 1, how to analyze soils and manures, the best books on chemistry and the price; 2, where to obtain a copy of Genesee Farmer for Oct., 1850.

ANS.—You cannot learn to analyze soils and manures with any satisfaction short of a good course in general chemistry. Miller's two books, Inorganic and Organic Chemistry are as good as any; price about $4.00 each; can be had through book stores. 2. We do not know.

E. S. B., Ontario Co., N. Y., asks for the experience of some farmer who has tried phosphate on sandy soil.

ANS.—The following from B. C. Underhill, Locust Valley, L. I., will probably give him all the desired information:

LOCUST VALLEY, L. I., Dec. 25, 1879.

BOWKER FERTILIZER CO., *Gents:* The following report shows the result of using Stockbridge Manures the past season:—

	Cost.	Yield.
Stockbridge on Potatoes, 200 lbs. on ¼ acre	$5	20 bbls.
N. Y. Stable Manure, 20 loads " " "	11. 15	"

One row with no manure of any kind, ½ yield of stable manure.

	Cost.	Yield.
Stockbridge on Corn, 400 lbs. on ½ acre,	$9. 70	bush. ears.
N. Y Stable Manure, 35 loads " " "	19.25 85	" "

To this should be added $3 for carting stable manure.

	Cost.	Yield.
Stockbridge on Wheat, 300 lbs. on ½ acre,	$6.75	12½ bush.
N. Y. Stable Manure, 30 loads " " "	16.50	10½ "

Add to this $3 for carting stable manure. No difference in stand of grass.

Stockbridge on Rye, 400 lbs. on 1 acre, cost $9, yield 22½ bushels. Straw very tall and stiff. Weight 1 ton.

B. C. UNDERHILL.

K. T., Albion, Ill., asks where can porcelain nest eggs be had.

ANS.—At most crockery stores There is a carbolic nest egg which poultry fanciers recommend highly as tending to rid the hens and nests of vermin. They are sold for about $1.50 per dozen, Poultry supply or crockery houses sell or can supply them.

J. N. J., Mt. Vernon, O., sent us some Nantucket pumpkin seeds last season to be tested and he now asks how they turned out.

ANS.—We raised about one dozen from the seed sent. They were of all sizes and shapes—some of them resembling in appearance rather the watermelon than the pumpkin. They seem to us nearly worthless.

W. P. G., Chicago, Ill., asks whether Clematis Jackmanii will stand a temperature of 20 below zero.

ANS.—If covered the vines would stand 20° below zero. We do not think the roots would suffer. It is an excellent plan to cut back all Clematis in the fall and cover with brush or litter.

M. L. M., Holmes Co., Miss., asks where the Nansemond potato can be had, and at what price.

ANS.—They will be found in many of the catalogues referred to in our columns. The price is from 50 to 75 cents per 100 plants.

D. C. W., Viola, Ia., asks where can he get some tea plants or seeds.

ANS.—Of the Com. of Agriculture, Gen. W. G. Le Duc, Washington, D. C.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, March 6th.

H. W. H.—M. W.—H. T.—H. D. J.—A. C.—W. C. G.—J. Mel.—F. M. A.—M. M. D.—B. G.—J. L. S.—G. D. N.—A. R.—J. T. H.—W. H.—G. M. H.—C. A. G.—C. C. P.—S. D.—A. B. A.—Dr. J. K. B.—D. C. W.—E. P.—S. F. B.—O. N. C.—W. P. G.—F. W. S.—E. D. P.—A. P.—A. E. B.—M. M. D.—J. B.—C. D. W.—A. M.—H. M. L.—M. F. J.—S. J. E.—W. M. K.—S. P. A.—W. H.—A. M. A.—G. D. N.—Mrs. P. D.—P. & S.—Y. H. S.—W. I. B.—A. R.—H. B.—J. McC.—H. S. L.—T. C. R.—N. B.—"Observer"—J. S.—B. C. D—A. P. A.—G. E. M.—S. P.—G. D. N.—J. T. L.—A. B. L.—C. O. D., accepted with thanks—B. G.—J. C. S.—A. S.—N. S. G.—S. F. A.—J. P. S., thanks—J. N. D.—"Ermengarde"—E. W.—J. S. B.—G. H. and J. H. H.—S. R—W. V. A.—Mrs. B. C. D—S. H. R.

The Poultry Yard.

TURKEYS.

HENRY HALES.

OF all the good new things that Europeans gained through the discovery of this continent the turkey stands one of the foremost. He is, in fact, the king of birds, when his size, adaptability to all climates, plumage, and delicacy of flesh are considered. He certainly would have made a better national emblem than the thievish bald eagle, which steals from the fish hawk; and better than the golden eagle would have been, as that is a native of both Continents. There are several varieties of turkeys, the magnificent Honduras, our American wild ones, and in the domesticated kinds, we have the bronze, black, white, buff, and other colors. There is but little doubt that all domestic varieties originated from the wild turkey of the United States, and of these varieties, the Bronze are nearest to the wild birds in color and size. They are the heaviest and are probably the hardiest. In every way the Bronze turkey is *the* turkey.

I cannot lay too much stress on the importance of size in breeding turkeys. Nothing is gained by breeding from the youngest or smallest birds. As turkeys are not at maturity until three years old, it is much the best plan for those who want fine, large birds to breed from those that are fully matured. What would a farmer gain by breeding together for a number of generations half-grown cattle, or pigs, or any other stock? He would certainly expect their size to be materially lessened; it must be so, too, in any stock. Selling all the biggest turkeys because they weigh and sell for a little more than the smaller ones, is poor policy. Suppose you sell at 18 cents a pound five large birds weighing, say, 25 pounds, and keep five weighing five pounds less, you get $4 50 more for the larger birds. Now, should you raise 20 young birds the next year from the small ones, they would weigh less at a given time (say about November) than they would have done if larger or raised from five matured or larger birds. Up to that time of year, they get most of their food in the fields, so that the less they weigh the less profitable they are. If the 20 young birds each weigh five pounds less, you have 100 pounds' weight less, worth, at eighteen cents per pound, eighteen dollars. Deducting the $4.50 taken for the extra size of the five birds sold and perhaps a dollar saved on a little less food than the five larger birds would have eaten, the loss amounts to $12.50 by breeding from the smaller birds; for the larger birds are of no more trouble to look after than the smaller ones.

The best way is to have a gobler not related to the hens, of as fine matured stock as can be procured, with good large two year-old hens which are better than one-year-old birds, if extra size is wanted. One gobler is enough for six or eight hens; but some prefer not to allow him more than four or five. The hens delight to lay in quiet places where they are least likely to be disturbed; it is best to watch them a little, and if they take a fancy to any outbuilding, sometimes a nest box put up in it will keep them from laying astray; but should they lay astray, they should be watched, that the nest may be looked after, as they generally lay more eggs than they can properly cover some of which may be set under a hen or otherwise disposed of, but it is most important to find a sitting turkey's nest to see that it is kept clean, as sitting birds often break eggs and foul the nest, destroying the whole brood. The nest can be cleaned while the turkey hen is off feeding.

Many people labor under an impression that a hen or turkey will hatch and raise more young ones when left to a stray nest without interference, thinking that as such habit is a nearer approach to nature, it must be the correct way. But what does nature do as to increasing numbers? In a state of nature, the whole feathered tribes about hold their own in numbers from one year to another. This will not satisfy the breeder of domesticated birds and animals. If a farmer has five hen turkeys, he must raise more than that number to pay him for his trouble, and here is where the secret of success comes in—*care*.

Young turkeys are very dainty and require frequent changes of food; when first hatched, chopped hard-boiled eggs and bread crumbs are best. Curd, chopped meat, lettuce, and onions (wild green onions will do), corn meal, wheat middlings, buckwheat, are all good. The birds soon get tired of any one food and must be watched to see that they keep eating, for they sometimes starve with one kind of food only before them. Put the mother in a roomy coop, set a few boards around to make a yard in which the young ones can get their luxuries without running into danger, and in about three weeks, when they can get over a ten-inch board, they may have their liberty in fine, dry weather.

THIRTY-FIFTH ANNUAL REPORT

OF THE

NEW YORK LIFE INSURANCE CO

OFFICE, Nos. 346 and 348 BROADWAY.

JANUARY 1, 1880.

Amount of Net Cash Assets, January 1, 1879.....$36,213,457.61

Less deduction to cover decrease in value of U. S. Bonds and other assets..... $135,966.93

$36,077,490.68

REVENUE ACCOUNT.

Premiums	$6,382,875.25	
Less deferred premiums Jan. 1, 1879	379,839.09—$6,003,036.10	
Interest and rents	2,339,875.93	
Less interest accrued Jan. 1, 1879	306,225,93—$2,033,650.00—$8,036,686.16	
		$44,114,176.84

DISBURSEMENT ACCOUNT.

Losses by death, including Reversionary additions to same	$1,569,854.22	
Endowments matured and discounted, including Reversionary additions to same	1,015,256.22	
Annuities, dividends and returned premiums on cancelled policies	2,236,379.07	
Taxes and re-insurances	173,608.64	
Commissions, brokerages, agency expenses and physicians' fees	626,253.30	
Office and law expenses, salaries, advertising, printing, &c	307,392.81—$5,928,745.16	
		$38,185,431.68

ASSETS.

Cash in bank, on hand, and in transit (since received)	$1,961,701.48	
Invested in United States, New York City, and other stocks (market value $14,356,192.94)	13,544,671.96	
Real estate	4,974,573.68	
Bonds and mortgages, first lien on real estate (buildings thereon insured for $14,287,000.00 and the policies assigned to the company as additional collateral security)	15,313,278,95	
Temporary loans, (secured by stocks, market value $1,300,000)	850,000.00	
*Loans on existing policies, (the reserve held by the company on these policies amounts to $3,160,000)	621,403.02	
*Quarterly and semi-annual premiums on existing policies, due subsequent to Jan. 1, 1880	367,989.02	
*Premiums on existing policies in course of transmission and collection (estimated reserve on these policies, $330,000. included in liabilities)	211,625.23	
Agents' balances	22,199.23	
Accrued interest on investments Jan. 1, 1880	317,989.11—$38,185,431.68	
*A detailed schedule of these items will accompany the usual annual report filed with the Insurance Department of the State of New York.		
Excess of market value of securities over cost		811,520.98
CASH ASSETS, Jan. 1, 1880		**$38,996,952.66**

Appropriated as follows:

Adjusted losses, due subsequent to Jan. 1, 1880	$225,662.64
Reported losses, awaiting proof, &c	213,271,31
Matured endowments, due and unpaid	32,780.98
Reserved for re-insurance on existing policies; participating insurance at 4 per cent. Carlisle net premium; non-participating at 5 per cent. Carlisle net premium	34,016,840.82
Reserved for contingent liabilities to Tontine Dividend Fund, over and above a 4 per cent. reserve on existing policies of that class	1,371,482.18
Reserved for premiums paid in advance	16,543.25—$35,876,581.18
Divisible surplus at 4 per cent.	3,120,371.48
	$38,996,952.66

Surplus, estimated by the New York State Standard at 4 1-2 per ct., over $7,000,000.00

From the undivided surplus of 3,120,371.48 the Board of Trustees has declared a Reversionary dividend to participating policies in proportion to their contribution to surplus, available on settlement of next annual premium.

During the year 5,524 policies have been issued, insuring 17,098,173.

Number of Policies in force	Jan. 1, 1876, 44,661.	Amount at risk	1876, $126,132,119.	Death-claims paid	1875, $1,524,815.
	Jan. 1, 1877, 45,421.		1877, 127,718,473.		1876, 1,547,648.
	Jan. 1, 1878, 45,605.		1878, 127,901,887.		1877, 1,638,128.
	Jan. 1, 1879, 45,003.		1879, 125,230,144.		1878, 1,687,676.
	Jan. 1, 1880, 45,705.		1880, 127,417,763.		1879, 1,569,854.

Income from Interest	1875, $1,070,668.	Divisible surplus at 4 per cent.	Jan. 1, 1876, $2,499,654.
	1876, 1,906,960.		Jan. 1, 1877, 2,626,816.
	1877, 1,867,457.		Jan. 1, 1878, 2,664,144.
	1878, 1,948,665.		Jan. 1, 1879, 2,811,436.
	1879, 2,033,650.		Jan. 1, 1880, 3,120,371.

TRUSTEES.

MORRIS FRANKLIN,	DAVID DOWS,	CHAS. WRIGHT, M. D.,
WM. H. APPLETON,	GEORGE A. OSGOOD,	EDWARD MARTIN,
WILLIAM BARTON,	HENRY BOWERS,	JOHN MAIRS,
WILLIAM A BOOTH,	LOOMIS L. WHITE,	EDW. A. WHITTEMORE,
H. B. CLAFLIN,	ROBERT B. COLLINS,	HENRY TUCK, M. D.,
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D. O'DELL, Superintendent of Agencies.

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MORRIS FRANKLIN,
President.

WILLIAM H. BEERS,
Vice-Pres't & Actuary.

THE
RURAL NEW-YORKER.
PUBLISHED EVERY SATURDAY.

CONDUCTED BY
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
78 Duane Street, New York.

SATURDAY, MARCH. 13, 1880.

REMOVAL.

On and after May 1st of this year the Rural New-Yorker will occupy its new quarters, No. 34 Park Row, corner of Beekman Street.

Announcement.

We have now as we believe a sufficient quantity of the beautiful Laurel-leaf Willow (Salix pentandra?) to be able to send a few cuttings to all of our yearly subscribers who apply.

We pronounce this one of the most beautiful and desirable ornamental trees (of the second size) in cultivation, extremely hardy and adapted to a great variety of soils and an extensive range of country. Its merits have already been so fully set forth in these columns that further remark is needless. This is a supplementary announcement under our Free Plant and Seed Distribution for 1880. Subscribers desiring cuttings are required to send us a two-cent stamp for postage. We promise to send as many cuttings to each as that amount of postage will cover. When received, place them in an upright or slightly inclined position in mellow soil. Press the soil *firmly* about them and keep it *moist*—not wet. We desire that this beautiful plant should grow in the grounds of every subscriber of the Rural New-Yorker.

Speaking of Hybrids, Professor Beal defines, as we understand him, a variety-hybrid to be the cross between two different varieties of the same species;—a species-hybrid to be the cross between two different species of the same genus; a genus-hybrid to be a cross between two different genera. This, we believe, is according to Sachs. The genus-hybrid is a word that scarcely needs to have an existence. The variety-hybrid is it seems to us, objectionable because "hybrid" conveys a meaning of relationship more distant than that existing between varieties of the same species. It strikes us that "cross" and "hybrid" cover the whole ground, the former to be applied to varieties of the same species that have been interbred;—the latter to be applied to all the more distant relationships.

Several stallions of the celebrated Percheron breed from France, and of the Clydesdale from Scotland, were recently lost on their voyage to the United States owing to the excessively stormy weather, which has prevailed nearly all winter on the Atlantic Ocean.

We have counseled our friends over and over again not to ship full-grown horses or cattle in the winter season, indeed during the five months from the 1st of November to the 1st of April, on account of the liability of dangerous storms during this season, and the great risk of the total loss, or serious injury of their animals. Indeed, it would be much better to never import full-grown horses or cattle. A good judge of them can select colts or calves that are sure to grow up, after importation, equal to their parents. The cost of them is not usually over one-fifth to one-third of those full-grown; the cost of feed and transportation is also much less, and the risk of death or accident trifling in comparison. In six months to two years after the arrival here the males can be put to service, and in another year or two be sufficiently grown to show to full advantage.

BOSI DEVELE NO DROSCHT.

Above is the transcript of a sign that was displayed some years ago in a German grocery in Ohio. We have no doubt the worthy Teuton cudgled his brains severely before the orthography was arranged to suit him; neither do we doubt his mental labor was well repaid in good currency and again in satisfaction. Occasionally a whilom customer might gaze at it in astonishment, shake his head and depart sorrowfully, but such were better lost than retained. Those whose custom was best worth having, congratulated themselves on the fact that their grocer could afford to sell his goods cheaper if he would abide by the rule he had adopted. They saw he could reduce his expenses by saving the wages of an accountant and collector, and would not feel obliged to make them contribute a percentage on all the purchases they made, to make up his losses sustained through the defalcation of careless, dishonest, or unfortunate customers. Another class was benefited also—those who could always pay for their purchases when made, if they must; but who were inclined to spend money in hand for unnecessary things when it was not demanded for the ready payment of necessaries. If this sign were displayed at every store, and its decision final, it would work a needed reformation, and the Philosopher's Stone (on the authority of John Randolph) would be found.

We have "many a time and oft" endeavored to enforce on the readers of the Rural the wisdom of this way of dealing, not we hope without good effect. We carry it out in our dealings with our subscribers, and in all our general business, and hope to see the time, and that at no distant day, when in all transactions less than one hundred dollars at most, the inflexible rule will be that of our German friend, which, spelled according to Webster or Worcester, would read—Positively no trust.

THE INTER-OCEANIC CANAL.

The recent surveys in Central America by M. de Lesseps, with a view to construct a canal that shall unite the Atlantic and Pacific Oceans, are not the first attempt in this direction. Ever since the close of Monroe's Administration in 1825, the United States' Government has frequently had this gigantic scheme under consideration; and European nations were agitated by the same subject, even before that time. Congress has often debated the matter during the past half century; special agents of the Government have been sent out to investigate and survey the several routes; plans have been compared; estimates made; companies organized and the work has been all but begun, when a sudden collapse in the interest has occurred and the matter has again been permitted to rest. Among foreign nations, France has ever been anxious that this project should be carried out, and has entertained a manifest desire that the canal should be built under French auspices and with French capital so that she could control the passage and collect the revenues.

There are three routes by which the canal can be built, namely, across Panama, Nicaragua and the isthmus of Tehuantepec, across southern Mexico. This latter route is much to be preferred for the interests of the United States, as the canal would open directly into the Gulf of Mexico and thus would be almost entirely under the control of our Government, which in time of war might be of untold advantage. When M. de Lesseps undertook the project a few months ago, the event created great excitement among the lobby politicians at Washington; the Monroe Doctrine was taken down from the shelf, where it had long rested in sweet repose, and again rehearsed, commented upon and applied to the present case. Not until the French Government made an official declaration disavowing any connection with the projects of M. de Lesseps, was the excitement abated; but on this assurance the stalwart patriots again leaned back in their easy chairs; the Monroe Doctrine was returned to the shelf, and now the matter seems again at rest.

It should not be allowed to rest here, however. The advantages that may be secured for the commerce of the world, and especially for that of the United States, by the construction of such a canal, are too gigantic and universal to allow of further delay of the work. Of all civilized nations none is more able to carry out the scheme than the United States and none would profit more thereby. We can command both the needed capital and skill. And the American eagle watches the interest with jealous care, unwilling that any other nation should undertake what we are too indolent to commence.

From an agricultural point of view such a canal will prove of great advantage. The guano and nitrate deposits on the coasts of Chili and Peru will be brought nearer to our Eastern farmers by several thousand miles, and can consequently be sold at much cheaper rates. This alone will cause a renovation of Eastern farms and a revival of Eastern agriculture, that may more than pay for the construction of the work. It will enable California and Oregon profitably to discharge their surplus products in European markets, and thus place this fertile portion of our country on an equal footing with the Eastern States.

The passage of the world's commerce through the Gulf will cause an influx of immigrants to the South and revive Southern industries. These must be the inevitable effects in this country whatever nation controls the canal; but it is obvious that if the enterprise is under the protection of our Government, the advantages politically as well as commercially must still be infinitely greater. It is to be hoped that such interests will no longer be trifled with; if American capitalists are unwilling to invest their money in the scheme and our Government still hesitates to take the work in hand, no impediments should be laid in the way of other nations who may wish to do so.

SOME CIRCUMSTANCES WHICH FAVOR THE FORMATION OF SALTPETER IN THE SOIL.

Among the scientific conceptions of recent years few are likely to exert a more important influence upon agriculture than that which attributes the formation of nitrates in the soil and in the compost heap to the presence of a living, *i. e.*, an organized ferment.

This conception not only permits nitrification to be classed with the other processes of fermentation, but enables observers to study and classify the phenomena which characterize the process, and the circumstances which promote it, in a much more satisfactory manner than had been found possible before. The French observers Schloesing and Muntz, who have been studying the subject for several years, have just published a brief paper on "The circumstances that influence the production of nitrates," which is of special interest in that it gives precise definition to several points which were previously more or less obscure.

It is found that, like all other reactions which accompany the development of organized beings, nitrification is accomplished between certain limits of temperature. Below 40 degress (F.) nitrification is extremely feeble, if it does not wholly cease. It becomes clearly appreciable at about 54 degrees, and on increasing the temperature above this point it is found that the amounts of nitrate formed increase rapidly. The maximum action is attained at just below 100 degrees (at 98 degrees or 99 degrees), at which temperature the formation of niter is very abundant. In mixtures kept heated to this point it is possible to observe, in the course of a few days, phenomena which ordinarily require months or even years for their completion. Above 98 degress or 99 degrees the rate of formation of nitrates diminishes rapidly. At 113 degrees it is less than at 59 degrees. At 122 degrees only very small quantities are formed, and above 131 degrees no trace of them can be detected. Under favorable conditions, other things beside temperature being equal, ten times as much niter can be obtained at 99 degrees as at 57 degrees, whence it appears that in the production of nitrates temperature is an agent of very great importance.

As has long been known, ready access of atmospheric air, that is to say, of the oxygen in the air, is an essential condition for the formation of nitrates; and it is a condition which is realized in those localities where niter forms naturally. Indeed, in ordinary soil air circulates freely through the interstices between the particles and through their pores. But in liquids, where the air can only penetrate by a slow process of diffusion, when the liquid is at rest, the amount of niter formed is found to be proportional to the amount of surface which the liquid presents to the air. Hence, when the layer of liquid is somewhat deep, the formation of niter may be increased by agitating the water so that air may be commingled with it.

It has been known also for a long time that a certain amount of moisture is indispensable for nitrification; but Schloesing and Muntz find that dryness is well-nigh fatal. Absolutely dry air generally had the effect of killing the nitric ferment, and in all cases dryness stopped the action of the ferment, as long as the condition of dryness was maintained.

As regards solid substances, it was found that nitrification is the more active in proportion as the substance is more moist; provided, of course, that the substance, earth or what not, is not actually drowned or water-soaked to such a degree that air cannot circulate freely between its particles. When this point is passed nitrification slackens, or it may even stop completely.

In order that niter may form, the materials must be very slightly alkaline. In nature carbonate of lime or, rather, the soluble bicarbonate of lime supplies the needed alkalinity. But extremely weak solutions of the carbonates of potash and soda will answer the same purpose; though when the solutions are made more concentrated than two or three thousandths they have an unfavorable influence and completely stop the action of the nitric ferment. A similar remark applies to carbonate of ammonia and to lime also, the latter fact being in harmony with Boussingault's old observation that the addition of lime to loam is not favorable for the production of nitrates. No advantage was gained on adding small quantities of neutral salts of the alkali—the alkaline-earthy-metals—to the materials in which nitrates were being formed. It is true that materials which already contain nitrates are specially apt for nitrification but this fact doubtless depends upon the presence of the nitric ferment (the nitric yeast, so to say) which accompanied the nitrate in the original liquor. Indeed, the presence of nitrates in earth or other materials is to be taken as an indication that the nitric ferment is there also.

The presence of organic matter, that is to say of some substance containing carbon, is necessary for nitrification, and it is found that a great variety of materials will serve the purpose, such as sugar, glycerine, alcohol, albumen, tartaric acid, etc., as well as vegetable mold,—the so-called humus of the soil. The authors think that the province of this organic matter is to supply carbonaceous food to the ferment, and they have been led to believe that the ferment has a good deal to do with the destruction of organic matter. They find that nitrification occurs equally well in the dark and in feebly lighted places; but in strong light they find that the activity of the process slackens, as Warrington did a few years since. They hold, however, that this retarding influence cannot amount to much in the soil, where only the superficial particles are exposed to direct light.

In experiments upon the spontaneous nitrification of arable land it has been noticed that a period of activity is apt to be succeeded by a term of slackened action. But by tilling or in any way mixing the earth the original activity may be restored, very much as if these operations had brought the ferment into the presence of a new supply of food.

BREVITIES.

Mr. Dun says that fewer middlemen intervene here than in England between the feeder and the butcher.

Week before last we rejected between nine hundred and one thousand dollars' worth of advertising from doubtful establishments.

We do not exactly agree with our respected friend, Mr. J. J. H. Gregory, as to the value of Chufas, having tried them ourselves, though not through several years, or perhaps, with the care he may have given to his crop.

It is a question whether our comparatively low average yield of wheat, 13.7 bushels per acre last year, is not partly due to too thin seeding. In England while 1½ bushels is often enough for fall seeding, if sown early, no wideawake farmer would think of using less than two bushels for spring seeding.

The Rural World says that there is a strong probability that a firm will be organized to open a sorgo sugar factory and works at Edwardsville, Ill., the coming summer. The firm will consist of Mr. G. C. W. Belcher of St. Louis, C. M. Schwarz of Edwardsville, Ill.; and Mr C.F. Miller, the well-known sorgo grower of Minnesota. We wish the new firm success.

Mr. John B. Moore offers a new sort of Asparagus, which he says is "the result of cross-breeding." We have a fancy that there is a good deal of this cross-breeding going on between different asparagus plants while in bloom, and as millions of seeds have been planted and very faint deviations have been known to occur in consequence, we should like to know the peculiarities of Mr. Moore's method.

The New Jersey Solons have repealed the pleuro-pneumonia Act—said repeal to take effect on and after Wednesday March 10, 1880. The quarantine against New York is raised and all cattle will be allowed to enter New Jersey without a permit. Whether the saving obtained by this premature abolition of a wise enactment, will not prove "penny wise and pound foolish" to the State at large and especially to its cattle interests, we have grave doubts.

Mr. M. Z. Bingham of Princeville, Ill., who was a prize winner in the contest for the greatest yields of Blount's Prolific Corn, sends the following acknowledgement of receipt of premium:

Princeville, Peoria Co., Ill., Feb. 21st, 1880.
Editors Rural New-Yorker:—I received today from Rumsey & Co., Seneca Falls, N. Y., $25.00 worth of their goods, all sound. With many thanks to you and them for the 6th Corn Premium, I am, Yours truely,
M. Z. Bingham.

Industrial Topics.

THE POSITION OF AGRICULTURE IN ENGLAND.

PROFESSOR I. P. SHELDON.

There can hardly be any doubt that American farmers are in a mood to sympathize with their brethren in misfortune on this side of the Atlantic. They are so on the ground of suffering in common with them, I assume. The farmers on your side and on this are companions in misfortune, and even in misfortune companionship has the faculty of making people somewhat less discontented with their lot than they would be without it. It makes an empty pocket, as well as an empty heart, feel a little less desolate to know that it is "neighbors' fare" all round; less desolate, that is, because less lonely, than it would be if such were not the case. Thus are we gregarious in feeling as well as in habit.

After this bit of philosophy, which is merely the expression of a principle in which many poor souls have been fain to find what scanty comfort it afforded them, I may venture to say that the worst is over, so far as cause is concerned, and that while the suffering has been sharper here than on your side, the effects will probably be seen the longer. Your farmers, too, have suffered from low prices, and many of them from a deficient production, but in addition to these things we have had the most mercilessly forsaken seasons that can be imagined, and I doubt whether those among you who have lived always in the American climate can realize in its depth of dreariness what such a season is like as the one we had last year in England. That you know what rain is I am well aware, for I have seen it rain in the States at a rate with which our climate can but now and again compete, but you do not know what it is to have scarcely a day without it from the middle of April to the middle of October, with the thermometer ranging all the while between 55° to 70° in what ought to have been the summer months, and to have such a season preceded by such a winter of alternate snow and rain and frost as only the English climate can pretend to produce with success.

I believe I am safe in saying you never saw anything like it; and I may venture to hope we shall never see its like again, otherwise I shudder to think what the consequences would be. Last summer and autumn were, it is true—so far, that is, as we have at present gone—the last of a disastrous sequence of wet seasons, but they were far worse than any that had gone before. It is to be hoped that last year, which was the wettest of the series, may prove to have been typified by its own last day, which was the wettest of the year; if it does prove so, then the series is over and the sun will shine once more and "the cat will sit in the window again."

Up to the beginning of the last quarter of the year prices of almost every kind of agricultural produce were steadily declining; cheese and butter, particularly, were lower than they had been for many years, and wool reached a point which the present generation know nothing of except from tradition. Store stock of all kinds went steadily downward in value, so that a farmer's capital, as represented by his flocks and herds, was much less at the end than it was at the beginning of the year. Beef and mutton fell to prices which left no profit on the summer's grazing, and horses were barely salable. And to make matters still worse, all kinds of stock, except where much grain had been fed to them, grew very slowly and there was a general want of condition all round. This was to be expected from such a summer and autumn—the animals were seldom dry and never as warm as they ought to be to do well. The hay and grain harvests alike were miserable failures; the quality of forage and grain alike, owing to the lack of sun and warmth, was very inferior and they were harvested in bad condition all over the country.

Perhaps the worst feature in that disastrous year was the prevalence of liver-rot amongst sheep, which the continued rain did so much to promote. Sheep rotted last summer on land to which tradition did not ascribe any liability to that terrible parasitic scourge. The losses among sheep from this cause are probably larger than they ever were before in these islands. Many farms have not a sheep left, and some parishes are almost wholly destitute of them. And still they are dying by thousands, or are being slaughtered "to save their lives." In the markets they are selling at less than half the ordinary prices, and in some districts they cannot be turned into money at all. In some districts, however, the sheep remain sound, but this is the case only on sound soils, as the carboniferous lime-stone and sand-stone formations. The price of wool is kept down by the large influx into the markets of skin-wool from the dead sheep, and mutton is low in price because of the compulsory slaughter of many sheep that would have been kept on but for their unsoundness. When all of the unsound sheep are got rid of, the sound ones are sure to be very dear—dearer, in all probability than they have been for many years.

Cheese began to rise rapidly in price some five or six months ago, and it is now very dear; but this is owing to the small make of the season. It is now probably as dear as it has been any time during the past 20 years, and this is making some amends to the farmers who have been able to keep what they made; yet very much was sold whilst prices were still very low. Butter, too, commands a very satisfactory price and dairy produce promises to be dear for some months to come. The milk trade has been the only branch of farming that has escaped serious loss, and were it not for this the position of English dairy farmers would be almost as bad as that of any others.

Great numbers of farmers are insolvent, and many more are giving up the business in order to save the remnant of their capital. Farms to let are advertised by hundreds, and rents are falling rapidly; many farms, in fact, particularly heavy-land, arable farms, do not find tenants at any price, and the land-owners have to farm them as best they can. Sound grass-land farms, however, have depreciated very little, if any, in value, though for the time being landlords are making remissions of rent to tide over the present crisis, after which it is hoped things will mend again. You have heard from the political agitator, Mr. Parnell, how distressed Irish farmers are in some parts of the country, and no doubt there is a good deal of truth in what he is telling you, but it is probable that numbers of English farmers are in quite as bad a plight as the Irish, though they do not take the same way to make their hardships known.

I have said that the worst is over, so far as cause is concerned; that is, prices of most things have improved and are likely to improve still more, before long. But the effects of the disastrous period through which we have passed will continue to disclose themselves for some time to come. Numbers of farmers have held on "tooth and nail" through the bad times, and now that there is a prospect of times mending they find themselves exhausted in purse and in spirit. Had they only a bit of fresh capital now to go on with, there is a chance they might win back some of what they have lost; but as this fresh capital is not forthcoming they have to founder just in sight of harbor. Those farmers, on the other hand, who had laid by something against a rainy day and can now in consequence go on without feeling themselves seriously crippled, will in all probability soon find themselves in a fair way to make money again.

It is, however, probable that, although we may get good weather this year, the dripping rains of last year will be found to have so impoverished the land that crops will not be abundant. The more soluble elements of fertilization, it is to be feared, have been washed out of the soil leaving it so much the poorer. The dry summers we had in 1868 and 1870 did much harm to some of the thin-skinned land in the country, but I believe the rain of 1879 will be found to have done still more harm to a wider variety of soils. It is not possible to correctly estimate the loss the nation suffered through last season's influence, but I doubt very much if it be any less than one-fourth of our National Debt. I would venture to estimate our loss at $1,000,000,000. Meanwhile it is probable that good will come out of the present evil, for our farmers will have greater liberty to farm in the most profitable manner, and Parliament is disposed to remove some of the burdens which press unjustly on the agricultural interest and on the land.

Sheen, Ashbourne, Eng., Feb. 10, 1880.

Hygienic Information.

COMMON POISONS AND HANDY ANTIDOTES.

Compiled for the readers of the RURAL NEW-YORKER by DR. A. R. LEDOUX.

In these days when there is so much accidental and not a little intentional poisoning, our readers will do well to preserve the following list of chemical poisons and the most readily obtainable antidotes. Many of the substances included in the list are harmless in small doses, but prove violent poisons when taken in large quantities.

1. Poisons—Sulphuric acid ("oil of vitriol"), and nitric acid ("aquafortis"). (A.)

Antidotes—Magnesia, soda, chalk, whiting, soap-suds, or plaster from walls.

Treatment of patient—Give *milk*, eggs, oils, or flaxseed tea. (A.)

2. Poisons—Muriatic acid.

Antidotes—Same as in 1, except chalk, plaster from walls, and whiting, which must *not* be given.

Treatment—Same as in 1. (A.)

3. Poisons—Oxalic acid ("salt of lemons"), potash binoxilate ("salts of sorrel").

Antidotes—Magnesia, chalk, plaster from walls. *No soda or soap-suds.*

Treatment—Give an emetic. (Twenty grains of zinc sulphate, if procurable, is best.) (A.)

4. Poisons—Acetic acid (strong vinegar), tartaric acid.

Antidotes—Magnesia or soda mixed with water.

Treatment—Same as in 1.

5. Poisons—Soda, potash (lye), ammonia.

Antidotes—Vinegar and water, lemon juice, orange juice, or lime juice.

Treatment—Give oils, or the substances mentioned in 1.

6. Poisons—Saltpeter, cream-of-tartar, sulphate of potash.

Antidotes—None known.

Treatment—Emetics, ice internally and hot fomentation on the bowels, milk, or barley-tea.

7. Poisons—Nitrate of silver ("lunar caustic").

Antidotes—Common salt, brine, or sea-water.

Treatment—Emetics, *after* giving the antidotes.

8. Poisons—Arsenic, Paris-green.

Antidotes—Charcoal powdered, magnesia, oil, and lime-water. Hydrated oxide of iron is the best antidote, and is made instantly by adding ammonia to tincture of iron (muriate).

Treatment—Emetics, white of eggs, milk; afterwards a good dose of castor oil.

9. Poisons—Mercury salts, corrosive sublimate.

Antidotes—Raw eggs (both yolk and white), milk, flour and water, iron filings in mucilage.

Treatment—Emetics, rice water, starch paste, afterwards opiates.

10. Poisons—Lead acetate ("sugar of lead"), ("fly poison").

Antidotes—Epsom salts, Glauber's salts, alum, white of eggs.

Treatment—Emetics, purgatives, milk.

11. Poisons—Copper sulphate ("blue stone").

Antidotes—White of eggs, sugar, iron filings.

Treatment—Emetics. (See Note B.)

12. Poisons—Alcohol.

Antidotes—*Dilute* ammonia water.

Treatment—Emetics, salt water, warm mustard water, cold bath.

13. Poisons—Coal gas.

Antidotes—Fresh air.

Treatment—Bleeding.(?)

14. Phosphorus (rat poison), matches.

Antidotes—None.

Treatment—Emetics, slippery-elm tea or barley tea, *but no oils.*

15. Poisons—Henbane, bitter-sweet, deadly nightshade.

Antidotes—Strong tea, charcoal powdered, effusion of oak bark.

Treatment—Emetics, followed by castor oil.

16. Poisons—Strychnine.

Antidotes—Charcoal, chloral hydrate.

Treatment—Emetics, tobacco juice applied to pit of stomach (for few moments only), warm injections.

17. Poisons—Prussic acid, laurel water, peach oil, oil of bitter almonds.

Antidotes—Magnesia, iron rust, ammonia (inhaled cautiously).

Treatment—Stomach pump, emetics, application of cold water and friction, brandy and strong coffee.

18. Poisons—Tobacco.

Antidotes—Tea, effusion of oak bark.

Treatment—Emetics, purgatives.

19. Poisons—Camphor.

Antidotes—None.

Treatment—Emetics, opium (laudanum).

20. Poisons—Poison oak, sumach.

Antidotes—Weak ammonia water.

Treatment—Emetics, milk, oils.

NOTES.

(A.) For nos. 1, 2 and 3—the stomach pump *must not* be used.

(B.) The poison itself will often produce violent vomiting. In all such cases emetics may be omitted in the treatment.

Common emetics are a table-spoonful of salt in water, a teaspoonful of mustard in water, 20 grains zinc sulphate, 5 10 grains copper sulphate.

In all cases of suspected poisoning send for a physician at once. Use the greatest caution in administering any but the simplest remedies without medical advice.*

* I have made free use of Taylor's, Kallmyer's, and other works in preparing these notes.

Various.

BRIEFLETS.

We do hope our writers will never again favor us with articles upon the subject—"*Does Farming Pay?*" . . The Australians seem confident in the success of exporting meat in in a fresh, uncooked state to England on the American plan. . . There are no longer any cases of foot-and-mouth disease in England. "It has taken," says the London Farmer, "only just one year to rid the country of the most disastrous foreign disease that ever harassed it." . . Mr. Finlay Dun tells Englishmen that the yield of wheat throughout the United States averages about one-half of what is considered the British average, viz., 28 bushels. It oscillates between 13 and 14 bushels. Better cultivation and more care in the selection of seed suitable for the locality, might considerably raise this very moderate average; but drought at some period or another of the summer must always shrink the American yield, and it will probably always take two acres to produce the amount of wheat which the British farmer gets or should get from one. . . Mr. Dun says that the cord-binder is destined to supersede the wire binder. . . Colman's Rural World says: "We know of no one who raised cane last year that is not going to raise it in increased quantity this. And for every one who raised it last year there will be twenty more this year." . . Success to the sorgo industry! . . It is quite as unnatural to deprive ruminating animals of vegetable food as to deprive man of it. . . Take a plate and place thereon two lumps of butter—the one with a natural June color and the other white as lard. Nine persons out of ten, says J. T. Ellsworth, would choose the colored lump. . . When the substance used to color butter is as harmless as the salt which flavors it, there is no harm done. . . The prevalence of rot in sheep in Great Britain amounts to a national calamity. . . We should judge that some of the Cow Peas would make excellent pickles. What says Mrs. Maple? . . . Many still believe in sowing oats with grass seeds upon the lawn. "The oats shade the grass." But the grass *needs* no shade. It needs moisture, and this is the very thing the growing oats take away from the grass. . . An agricultural paper in Canada offers a prize of five dollars for the best essay on "Instructions to New Settlers in Manitoba." The N. Y. Sun competes for this prize. Its essay is as follows: "Don't go. Look at the figures—50 and 75 degrees below zero" . . A cat in the back yard, just ready to pounce on a chicken, is a sign of spring. . . Pres. Barry thinks the English sparrow beneficial to us. He asks: "Does any one *know* that it eats fruit-buds?" *We know* that it eats ripe strawberries. . . Weeds stick in the farmer's crop. . . As Dr. Gregory points out, beauty on our farms, as exemplified in handsome shade trees and shrubs, is a marketable quality. One hundred dollars' worth of suitable hardy plants judiciously planted—the RURAL NEW-YORKER thinks—will add not less than $1,000 to its value in five years. If farmers could be brought to believe this, the nursery business would have no occasion to complain of hard times the coming spring. . . Cut cions for grafting later. . . Budding from such cions may be done in the spring as well as in summer. It is only necessary to keep the buds fresh and dormant. . . Better a hot enemy than a lukewarm friend. . . Mr. H. B. Ellwanger says: "We have probably produced as many of the leading and best varieties of fruits as all other countries combined." . . Sow onion seeds as soon as possible. Five pounds of good seed per acre should be drilled in in rows fifteen inches apart. Everybody knows that success in onion culture depends in a great measure upon *thorough weeding.* For the rest, let the land be *rich* and *well drained.* . . Danvers Yellow is a good keeper and a profitable market sort—round and of mild flavor. Red Wethersfield is a great sort to yield—hardy, vigorous, and marketable. White Globe is a good kind for both the North and South. . . If our readers would have a long season of tender green peas, sow them all early; that is, sow the early, the intermediate, and the late at the same time and as soon in the spring as the ground warrants. Late peas—*sown late*—are not worth the ground they occupy. . . Is there anything, asks Mr. Meehan, that costs so little as flowers and trees, that makes life so much of a pleasure? . .

A RECORD OF HEALTHY GROWTH.—The thirty-fifth annual report of the New York Life Insurance Company, as it is hardly necessary to say, is a very strong financial document which will be examined with keen interest and general satisfaction; were it otherwise, the fact would be extraordinary and discouraging, considering the company's great age and high reputation. The statement now made public is such as might be expected from such an institution. Premium income shows an increase of over $300,000 as compared with 1878; interest receipts also show a considerable increase; assets increase nearly three millions; business done exceeds that of 1878 by more than a million; the volume of outstanding insurance rises over two millions; surplus shows a large increase; the number of policies in force is larger than ever before; the mortality experienced is less than in 1878; and in every particular the report is a record of healthy growth. It was not until 1878 that the New York Life failed to make some annual progress in respect to the volume of its outstanding business, and in that year every company in the State fell back somewhat; but 1878 was the year of utmost depression, and the recovery has begun in life insurance as in everything else. Whatever advantages of absolute security, the lightest actual cost, and the most equitable dealing it is possible to offer are combined in this admirable and mutual company, and those are fortunate who hold its impregnable policies.

Literary Miscellany.

ALICE CARY'S SWEETEST POEM.

Of all the beautiful pictures
That hang on Memory's wall,
Is one of a dim old forest,
That seemeth best of all;
Not for its gnarled oaks olden,
Dark with the mistletoe;
Not for the violets golden
That sprinkle the vale below;
Not for the milk-white lilies
That lean from the fragrant hedge
Coquetting all day with the sunbeams,
And stealing their golden edge;
Not for the vines on the upland
Where the bright red berries rest;
Not the pinks, nor the pale sweet cowslip,
It seemeth to me the best.

I once had a little brother,
With eyes that were dark and deep,—
In the lap of that olden forest
He lieth in peace asleep;
Light as the down of the thistle,
Free as the winds that blow,
We roved there the beautiful summers
The summers of long ago;
But his feet on the hills grew weary,
And one of the autumn eves
I made for my little brother
A bed of the yellow leaves.

Sweetly his pale arms folded
My neck in a meek embrace,
As the light of immortal beauty
Silently covered his face;
And when the arrows of sunset
Lodged in the tree-tops bright
He fell, in his saint-like beauty,
Asleep by the gates of light.
Therefore, of all the pictures
That hang on Memory's wall,
The one of the dim old forest
Seemeth best of all.

FOUR OLD MAIDS.

W. V. A.

(Continued from page 158.)

"Mrs. Lansing has invited us to take lunch with her. Have you any objection to remaining?" said Frederica, quite loudly in Melissa's ear.

Melissa drew herself up and said very coldly, "Mrs. Lansing must excuse me; punch is something I never indulge in."

"O, horrible!" half shrieked Arabella; and rushing to Melissa, she shrieked into her ear, "It is lunch, lunch!"

"O!" said Melissa. "I beg your pardon; you are very kind and I shall be pleased to remain."

And so they remained and were introduced to the guests, and afterwards, when they went out to their carriage, the four young gentlemen that I have told you of very gallantly escorted them.

There was a great deal of merriment among the Lansing's and their guests for the rest of that day, but they would have been greatly astonished could they have looked into the residence of the Misses Skidmore and seen four young ladies of their acquaintance at times almost shrieking with laughter.

There is no telling how it would have ended had not Faras and Lansing simultaneously burst into a loud laugh, which was followed by a profound silence that was suddenly broken by the four ladies rushing from the room at a most undignified pace, while the gentlemen silently retraced their footsteps out to the road, where Rob Lansing exclaimed, "By George! It couldn't be beat!" This was the commencement of the merriment which lasted for hours at the expense of the "Clan."

The Misses Skidmore reached the sitting-room on the upper floor in a body and closed and locked the door, but not a word nor a smile passed their lips until the last echo of the retiring footsteps was heard, when Margaret said, "Oh, that moustache!" and burst into an uncontrollable fit of laughter, in which all joined but Blanche, who walked to a mirror and silently surveyed herself and then commenced to cry, but this only caused the rest to laugh the more till presently she said spitefully, "Well, I guess it wasn't any worse than that liddle!"

"O, O!" shrieked Margaret and Rose, holding their sides and laughing until the tears rolled down their cheeks.

In vain did Blanche and Olive remind them of the part they had taken, but they could only see the ridiculous side of the affair, and so contagious was their merriment that the other two were soon laughing as loudly as they.

The next day was beautiful and the Lansing party were off on their excursion bright and early while the ten o'clock train from M—— carried the Misses Skidmore some fifty miles away to a quiet little village where they remained until the Lansing party had been home for a couple of weeks, when they reluctantly returned home also.

They had not been home twenty-four hours when Faras called on Olive. She begged to be excused, but he insisted upon seeing her, so she went down to the parlor and received him with great dignity of manner but a flushed face. He was perfectly self-possessed and chatted away as though he had not seen her for several weeks. He spoke of the pleasant time he had had at the Lansings, but not a word of the Misses Skidmore. All this threw her off her guard completely, and presently when he saw she was least expecting anything of the kind he drew his chair close beside her and, looking her gravely in the face, he said, "Olive, why do you not wear my ring? I was thoroughly in earnest when I told you that I loved you and wanted you to be my wife."

It was so sudden that she could only stare at him in a dazed way, and taking advantage of it he slipped his arm around her and drawing her close to him imprinted a kiss on her lips.

She sprang to her feet and pushing him violently from her, exclaimed angrily, "How dare you' sir?"

He had risen when she did, and now stood before her. "I think a man may kiss his affianced wife, and you know it is not the first time this summer that I have kissed you."

"Allow me, sir, to congratulate you for having acted a most contemptible part, for which I scorn you!" and making him a deep courtesy, she turned and would have left the room had he not caught her by both hands and exclaimed; "Oh! Olive, don't!"

She looked up at him, her face ablaze with anger, but something she saw in his face caused the anger to die out and her head to droop.

"Olive, darling," said Faras, "won't you keep your promise and put my ring on again?"

"Yes!" came the reply so faintly that none but a lover could have heard it.

There is no need to tell any of the "foolish" things they said and did during the next hour, at the end of which Olive went up stairs and got the ring which Faras then put on her finger for the second time.

The next evening Enders, Lansing and Stedman called at Mr. Sheldon's and were received by the three young ladies with many blushes and shy quizzical looks. They had been there but a short time when Faras and Olive called.

This was a plot on the part of the gentlemen to have some fun at the expense of the ladies, and I am ashamed to say, Olive knew all about it, but did not warn the other girls.

It was soon evident to the three girls how matters stood between Faras and Olive, and great was their wonderment as to how it came about.

Later in the evening Faras asked Rose for some music, and going to the piano she asked him what she should play, to which he replied by naming the negro melody she had played on that memorable night.

"O, yes" said Enders, "do play that, Miss Rose, and Margaret, you dance it for us."

"And I am sure Miss Blanche will sing it for us!" said Stedman.

"Can't you find a violin, Miss Olive?" said Lansing mischievously.

The faces of the three girls were studies during this dialogue, and they looked as though undecided as to whether to laugh or cry, but Margaret decided it by a laugh in which all joined but Blanche who suddenly rose and walked into the library, which had the effect of silencing Stedman who soon followed her, and Blanche who was passionately sobbing was startled by a pair of strong arms around her and a well-known voice whispering in her ear, "Don't cry, darling, I didn't love you any the less as Miss Frederica."

There is no telling what passed between them during the next half hour, but when they again entered the parlor it was with such radiant faces that Rob Lansing laughingly compared them to the sun and moon.

Never did eight young people spend a more delightful evening, and when they rose to depart Rob Lansing said, "Say, boys, let a fellow congratulate you, won't you? and seizing Faras's hand he shook it violently, repeating the operation with Stedman and Enders.

Well, Rob, shall we not congratulate you and Miss Rose also? said Faras.

Lansing turned to Rose who a moment before was standing at his side but who was now making a hasty exit from the room, and springing after her he said, "I'll tell you when I come back." And when he came back a few minutes later leading Rose whose face was suffused with blushes he said. "All right, Faras, wish me joy!"

"Come now, Mr. Enders," said Olive, "how did you and Margaret manage it so quietly? I am quite sure you have not been out of the room tonight and you did not engage yourself to Miss Melissa, did you?"

"No, I did not" said Hugh, but I became engaged to Miss Dean last spring."

"O, you sly thing?" said Olive to Margaret; "and you never told the clan!"

During the winter at a masquerade party the Misses Lansing and all who were visiting at the Lansings' during the summer were surprised to see the Misses Skidmore and still more so when their goggles and wigs were removed, to discover who they really were.

THE EYE-OPENER.

Wildes & Co., of Boston, offer a $9 new American Dictionary for 27 cents. Now any man—or even baby—with a particle of gumption, must know that such an offer is "meant to deceive." W. & Co., advertise widely at great expense; they have other expenses too in carrying on their affairs, and the object of all this is to make money, and how in the name of common sense can they do it by giving $9 worth for 27 cents—and that only to pay postage on their munificent gift! Of course its a deception but so gross that really it should not require exposure....There are several mining companies which are advertising widely throughout the country by circulars and in newspapers, offering fine chances, or even certainties, of large returns for small outlays. These may all be set down as untrustworthy. Capitalists are ever ready with money to invest in genuine mines, and "wild cat" concerns are losing speculations on any terms—witness the Bullion Mining Co.; the Gold and Silver Mining Co., and others—pure swindles—all of which did business in much the same way as that now advertised by a Mining Company, whose "promising" advertisement is before us and whose headquarters are in the "Hub." Nellie McKee, who some time back opened a Branch of the Chicago Board of Trade at Cincinnati, has absconded leaving a pile of debts behind time. The Eye-Opener, some weeks ago, spoke about this Chicago Board of Trade, and the warning then given, of course, applied to its legitimate and illegitimate offsprings.

A SCHOOL-BOY got up and read a composition on "The Tree." He got as far as "This subject has many branches," when the teacher said, "Stop! you have not made your bough yet." If you interrupt me again," said the boy, "I'll leave." "You give me any more impudence, and I'll take the sap out of you. Do you understand?" said the teacher. "I twig," said the boy, and then the regular order of business proceeded.—Des Moines Register.

For Women.

CONDUCTED BY MISS RAY CLARK.

HINTS ABOUT FLOWERS IN WINTER.

A. M. THORNTON.

When Charlie and I were married we moved into the old-fashioned house that had been the Thornton homestead for years. The house was full of closets, cupboards and those tuck-away places dear to a woman's heart; but there was no place to put my flowers, of which I had a fine collection.

On the south side of the sitting room was the nicest spot for a bay-window, but I didn't like to ask Charlie to build one, as we spent a great deal of money on stock and out-buildings. But that bay-window did rankle on my imagination. I dreamed of it day by day and night by night. The Good Book says, "Out of the abundance of the heart the mouth speaketh;" so one day when Charlie asked me what I'd have from the store, I asked him to get me "ten pounds of bay-window." "A word to the wise is sufficient;" the very next day Charlie, like the dear, good soul he is, began the window. It was a dull time for carpenters, and he found one that would work cheap, and with what work he did himself the window cost a little less than $20. To be sure Mrs. Pry, my neighbor, informed everybody that "young Thornton's wife would ruin him next. He'd had to build a bay-window for her, no telling how much it cost. That comes of marrying a stuck-up school-teacher, instead of a smart farmer's daughter, like my Jane." But, Mrs. Pry aside, the window was a success.

I only keep those plants that long experience has taught me will reward my care with plenty of flowers, together with a few whose leaves are as beautiful as the posies themselves. For soil I use good garden soil and compost from an old cow stable, together with an admixture of sand. A few pieces of broken stone in the bottom of the pot secure perfect drainage. For the Calla, the black swamp muck comes very near to its natural soil, but two parts of compost and one part of garden loam will do. Geraniums, Roses, Fuchsias, Heliotropes, Lantanas and Carnations, the same; Primroses and Salvias need two parts of garden soil to one of compost. Scented Geraniums should have a larger pot than the flowering kinds, to encourage a ranker growth. Lantanas, Heliotropes, Begonias and flowering Geraniums need six-inch pots. Fuchsias, Eupatoriums, Roses and Coleuses require the seven-inch size. Abutilons, Callas, Cacti, Carnations, Ageratums, Begonias, Catalonians, Jessamine, Lantanas, Libonia, Wax Pinks, Mimulus, Oleanders, Petunias, Primroses, Roses, Salvias, Stevias, Verbenas and Violets, never fail to do well with me. I am shy of novelties and cling to old friends in spite of the enticing words, "very magnificent" and "grandiflorus," as Charlie often calls it.

For vines, the English Ivy stands first, it is so obliging it never pouts at standing in the corner or in any out-of-the-way place, but grows away as if content with its lot. Maurandias, with their white pink and violet flowers, are beauties. I sowed the seed of mine in the early spring, transplanted five roots into a six-inch pot (they don't take much room) and placed it on the verandah in the summer. Here it grew about six feet in length and was covered with blossoms; in September it began to die down. I then cut it down to the roots, repotted, watered and set it away in a dark place for a few days, until it commenced growing again. There are now yards of it with its tiny, ivy-like leaves clinging to everything with its running tendrils. The new German Ivy, Senecio macroglossis, is a beauty; the ribs and veins to the leaves are of a lighter color than the leaves themselves, while the plant is as strong as the common German Ivy. The Cissus discolor is a lovely vine with leaves shaded with dark green, white and purple, while the upper part of the leaf has a velvety look, but it needs to live on the top of the stove so I had to give it up. Tropæolum, Hoyas, Tradescantia, Madarias, Thunbergias, Ice-Plants, Kenilworth Ivy, Lobelia, Cobæa and Loptospermum, all are vines that do well with me. Vines need more water than plants and are particularly grateful for a sprinkling of warm water over their bright leaves. The Cobæa is a rapid grower but the flowers are rather coarse. It has always troubled me to raise Smilax; it would grow furiously, then suddenly, before I realized what was coming, it became afflicted with "jaundice" and faded away. This year I left it without care all summer, putting the pot in the shade and not watering it at all. In September I watered it again and now it has yards and yards of lace-like green. Rest in summer and moisture in winter seem to be what it needs.

The Chinese Primrose is one of my favorite plants. The single kind blooms much better than the double. The single is the most cheerful little thing; always full of flowers, and only asks not to be kept too wet. I bought the seed in the spring, planted them in a mixture of good garden soil and a little sand. On these I placed my seeds, pressed on lightly, watered with warm water, and set in a warm place. The tiny plants were transplanted when large enough, and placed during the summer in a shaded place. In the winter they are ready to blossom like the Rose. Carnations need rich earth and water. The best Carnations for winter blooming are President DeGraw, white, La Purite, carmine, La Purite, variegated; Edwardii, white, Mrs. Wilson, scarlet; Glory of Venice, orange and rose-color.

Geraniums should have good soil, plenty of sun, and a moderate supply of water. The salmon Geranium is a profuse bloomer, often budding when a tiny slip, and sending up stalk after stalk of flower until perfectly exhausted. The best kinds are General Grant, Harry King, Peabody, Sir John Moore, Haidee, Dr. Kock, all red; Bicolor, salmon; Master Christine, deep pink; and Snowflake, white.

Among Roses, the Bella, white; Sofrano, yellow; Bon Silene, carmine; Isabella Sprunt, sulphur; Duchesse de Brabant, pink; and Mad. Margottin, yellow and rose-color, are the best for winter. The green louse, red spider and scale bug, are very fond of the tender rose shoots, eternal vigilance alone, will save the plant from its enemies.

Let your Roses remain in pots all summer, sinking them in the ground in some shady spot. Take up and repot in September; give them a good pruning, and set for some days in a cool place. In this way I manage to have plants full of scented blooms all winter. My Calla is given a rest during the warm weather; the pot is tipped on the side, under the shade of some tree, and water is withheld for two months. The roots are then washed, and it repotted in rich muck, and set in the shade. After starting, I give it the sun again, and plenty of warm water. In winter, I give plenty of hot manure coffee, and wash its leaves every day. It frequently buds before I can get it into the house.

Abutilons, or Chinese Bell-Flowers, need sun, water, and room. The white Boule de Neige is pretty. A. vexillarium is of a climbing habit, with pretty tassel-like flowers.

Lantanas have striped crimson and yellow flowers. They are easily grown and always ready to blossom. The yellow or orange shade is my favorite. My plant last summer was immense, and such a wealth of flowers! Among Begonias, jasminoides, Saundersonii and nitida alba do nicely. Fuchsias need rich soil, Speciosa and Lustre, being the only ones that bloom during the winter. The Oxalis, too, is a constant bloomer—you can't have too many.

For the insects that infest plants, I find that the frequent sprinkling kills the red spider, smoking with tobacco, and hand-picking is the best for green lice, and the scale bugs, I pick off too. Give your plants fresh air whenever possible, and every day give them a bath. I take warm water, drop in a few drops of aqua-ammonia, which makes it like rain, and sprinkle my plants with a whisk broom. How they laugh and shake their leaves at me in a grateful, but silent way! Don't sprinkle Chinese Primroses. I give my plants manure "coffee," made by soaking cow manure in hot water (I use an old keg) until of the color of weak coffee. This is particularly grateful to Oleanders and Callas. Vines and hanging baskets should be well soaked. I have the top of the bay window full of hanging baskets—old tin pails, worn-out basins, tin cans, anything I could get hold of. These are given a coat of paint, filled with earth and planted with vines. The plants are all full of blossoms, and I have picked many bouquets. Some have cheered the sick, some have lain on the cold pulseless breast of loved ones, and some have decked the bride on her wedding day. Mrs. Pry from her window, shakes her head, and mutters "some folks must have bay-windows, and other flummididdles, to gratify their pride," but what care I? My flowers smile on me, and whisper

"The hand of God hath made it, and where'er
The floweret blooms, there God is present also."

MORNING CALLS.

When paying a morning call, a lady or gentleman must not give her or his card to the servant when the mistress of the house is at home. Such a proceeding would be contrary to present usage, and in the event of a caller making such a mistake, a well-bred domestic would suppress the card, and simply announce the name on entering the drawing-room.

In olden times the contrary custom was observed. The visitor produced his card, which was carried on a silver salver into the drawing-room. Such a proceeding would often be agreeable and convenient in many respects, and is likely enough to come again into fashion.

If the call is of a purely business character, and the visitor unacquainted with the lady of the house, it is still proper to send in a card with the inquiry whether the lady is engaged. Or in the case of a lady making a personal call upon another lady (a stranger) respecting the character of a domestic servant, for instance, a card should be sent in; it would be, however, in better taste to write first, asking for an appointment. If this is done, a card is not delivered.

If a lady is dressing to go out when a visitor calls, the servant can mention that fact to a visitor calling, and offer to ascertain if the mistress will see the caller, and the caller would use her own discretion as to whether she will allow him to do so or not; but unless the visit is one of importance, it would be best in such a case only to leave cards.

FASHION NOTES.

All white toilets are worn, not only at balls, but to grand dinners and evening receptions, when there is no dancing. White is becoming to all young looking faces.

Sleeves are made quite tight and rather short; in some of the latest models introduced, they are trimmed about the elbow instead of around the wrists.

Feather turbans grow in popularity. Peacock blue is the favorite shade, though some gray ones, made of owl's feathers, are very elegant.

Handkerchiefs finished on the edge with inch and a half borders of foulard silks in fancy grounds, with little bouquets of several colors, are made into pretty breakfast caps.

Medium and dark shades of kid gloves are more worn for full dress than for many seasons past.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN-THOUGHTS FROM EVERY-DAY HOUSE.

MRS. ANNIE L. JACK.

ONE of the members of our family has a great horror of hash, always qualifying the dislike with the added phrase "except at home." I improved a dish the other day that was well received, and the hash-hater especially seemed to appreciate it. As a good method for using up cold mutton or beef it is really excellent. Take any bones there may be in the meat; put them in the stew kettle, over-night, with a head of celery, and an onion stuffed with cloves with water to cover it. In the morning, when required for use, strain off the liquor. Then cut your meat fine as for hash, add pepper and salt to taste, and two ounces of onion to every pound. Place in a deep dish a layer of mashed potatoes, a layer of the meat and another of potatoes. Pour over it your gravy; cover and bake for an hour in a moderate oven; take off the cover a few minutes before serving, in order to give it a "handsome brown." Serve in the dish in which it is baked.

Speaking of celery reminds me that this vegetable ought to be at hand in every farmer's cellar; but if it is not procurable, it has been proved that old unsalable celery seed imparts flavor to soups—and can be bought very cheap of seedsmen. A few days ago we prepared too much at once for the table, and found it could be kept for several days by rolling in a clean, damp cloth and putting in a dark cool place. When once more placed in water for a while, it became as crisp and cold as ever. I think, apart from any medicinal virtues ascribed to it, there is nothing in mid-winter that so brightens a table, and whets the appetite as the green and yellow, crisp, nutty stalks of this only half-appreciated vegetable.

LOG CABIN SKETCHES; OR JESSIE SEABRIGHT'S DIARY, NO. 10.

MAY MAPLE.

OCT. 10, 18—The forests have put on their royal purple, crimson, russet and gold. I feel like going into enthusiastic raptures over the natural beauty of these grand old woods; the dim old aisles are carpeted with the gayest matted-green mosses, intermingled with scarlet berries and autumn leaves. And Bertie and I have gathered a host of these leaves to ornament our cosy cabin the coming winter. I have made some handsome rugs; one to put down in front of the stove, and another by the lounge. These are made by drawing rags through coarse coffee sacking with a large hook; a drab or brown background and a central figure of Roses and buds, or a bunch of Pansies, make a cheerful combination most pleasing to the eye. These rugs were much admired at our county fair and drew first premiums. I used cotton rags for all but the central figures; and for these I used old bright flannels, bits of fancy delaines and merinos. In front of Bertie's crib up-stairs, is a rug made of old, worn-out stockings, that is really pretty and so warm and soft to his little feet, while he is dressing; the stockings are cut lengthwise, in strips about half a finger wide. These strips were basted on to a piece of bagging, "shingle-fashion" and then raveled at one edge, making a long mossy fringe of loops. The most of the old socks were a gray mixture, but Bertie's were of a bright red, blue and white, and there was enough of these to mix in, to break up the monotony that one color would have presented. Not a bit of the heading shows, and the edge is neatly faced with cloth. It is really an ornament to the room, besides being decidedly useful.

I thought our little cabin was about as nice and convenient as it could well be made. But last week John and I went to watch with a neighbor at some distance. He has been very ill all summer; the physicians say his affliction was brought on by over-work. He has never allowed himself a day of rest for many years. Always at work from earliest dawn till late at night; there were no Sabbaths or holidays in his calendar.

And now he is suffering untold agonies on that sick bed, his flesh slowly but surely decaying, and oh! so sickening to those who must of necessity attend him! His home is a lowly cabin such as ours was when we first moved into it. In that room he must lie, and endure all the noise and confusion of the work of the household, eating and sleeping, all in the same apartment. It is positively dreadful to think of bearing the affliction of the sick man in such a place, and equally dreadful to think of cooking and eating there.

I came home fully determined to find ways and means to add another room to our cabin, within the next three months.

TO REPAIR VERY OLD CARPETS.

CARPETS that are considered past mending may be made to do longer service with "the least bit of labor," if one doesn't mind patches.

Have these as nearly the color of the carpet as possible and paste them on with flour-paste. Use plenty of paste and "spot" the pieces down well, and allow time to get thoroughly dry before being walked upon. When the edges wear up, a little more paste will fix them. Of course, this should be done while the carpet is on the floor.

We once made a rag carpet do duty for three months on the kitchen floor after it had been voted "too shabby to be seen" by treating it in this way. A. E. STORY.

THE CANNING QUESTION.

I HAVE always put up tomatoes in quart cans of glass, and have had them as good in twelve months as the day they were put up. Many housekeepers complain that they have poor luck in canning tomatoes—so many cans spoiling—and think they are rather difficult to can and keep. I agree with Mary Wager-Fisher that the Melville is *the* can, but that will not last forever, at least the rubbers will not. They become so hard that they are good for nothing. I have several now that cannot be used on this account. My cans were bought 10 to 12 years ago.

But where can the Melville be found? I have not seen one for sale in three or four years. I would like to get some more of them and new rubbers for my old ones. Has the company given up manufacturing them? The Mason and Gem are about the only ones to be found, and I am always in trouble with them, as I am obliged to buy new bands every year. If we could get the Melville and extra rubbers at the same time, they would last a long time.

AUNT MARY.

To Starch Mourning Calicos.

If the lady who wished to know how to starch dark calicos would use coffee instead of water, or dissolve a piece of logwood in the water before stirring in the starch, I think she would be pleased with the result.

MOLLIE CRUMPACKER.

To Grease Boots.

Cut part of an old rubber shoe in fine strips, add hog's lard, place on the stove with the rubber, dissolve, then set away until cool.

S. F. BAUMGARTNER.

Adding Water to Sausage.

Do not add water to your sausage if you wish it to keep well. Season it before putting through the machine. It will then be already mixed. AUNT MARY.

QUESTIONS ANSWERED.

Mending Rubber Shoes & Boots.

Can you give me a recipe for mending the above? S. F. BAUMGARTNER.

ANS.—We will republish directions given in RURAL of Jan. 11, 1879. Dissolve four ounces of pure India rubber and an eighth of an ounce of powdered asphaltum in five or six times the quantity of benzine. Put together in an old tin can, cover tightly, and let stand three or four days; then work it well with a stick, adding benzine if necessary, so that the mixture will be of about the consistency of honey. Scrape the polish from the rubber; apply the cement to each part; let dry half an hour; put on another coat; let dry ten minutes when the parts may be pressed together.

Apple Jelly from Cider.

Will some of our readers please give E. R. Shankland their experience in making jelly from cider?

Blue on Silk.

Please give me a recipe for coloring blue on silk. MRS. S. S. OTIS.

ANS.—Use Leamon's Aniline blue dye. This can be purchased from any druggist for 25 cents.

Verdigris and Mildew.

Please tell me how to remove verdigris from linen, also what will take mildew out of linen?

ELLEN L. POTTER.

ANS.—1. We do not know. Try a weak solution of oxalic acid, rubbing well. 2. Wet the cloth and rub on soft soap and chalk mixed together and place in the sun, or, dip into a solution of chloride of lime and water, an even tablespoonful to three quarts of water, and lay in the sun.

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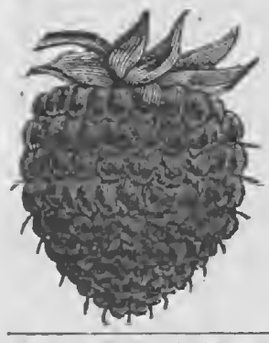

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News of the Week.

AGRICULTURAL NEWS.

Monday, March 8, 1880.

TWENTY new breweries were established in this country in January. An advance of $1 a barrel on beer is agreed upon after May 1st,—hops, more hops. The hop-growers of England are about organizing a company with a capital of $2,200,000 for the sale of their own hops.....On March 1st, Mr. Lowe of Ala., introduced a bill into Congress to abolish the tax on brandy made of apples, peaches and other fruits; also to repeal the tax on tobacco in the hands of producers..... .. Mr. Page of Cal. introduced a bill, same day, to admit steam-plow machinery free of duty.....And Mr. Berry, of Cal., fathers a bill for abolishing duty on grain bags and gunny cloth.....An unusually fine Dog Show will be held in Madison Square Garden, in this city on April 27, 28 and 29. The entries close April 12. This promises to be an unprecedentedly fine display, being the only one to be held in the East this year—Charles Lincoln, Sup't, 141 Fulton street; P. O. Box 1740.....Montreal is going to compete hard with Boston for the export cattle trade when navigation opens this spring. An unprecedently large number of vessels are engaged for that port ....It is said that immense quantities of beef can be put on board vessels at Melbourne at 4c. a pound; all charges to England are about the same, so that it could be sold there at a trifle over 8c. .....In Australia good beef cattle can be bought, it is said, for about one-third this price of the same sort here.....The Iowa legislature has passed a bill prohibiting the manufacture and sale of oleomargarine in that State, under heavy penalties by fine and imprisonment.....The Vermont Central and connecting roads have ordered estimates for an elevator of at least 500,000 bushels' capacity, for Boston harbor..... The recent London wool sales show marked advances in all grades of wool.....Recent exports of Kentucky tobacco have been chiefly to Spain and Italy. A steady advance in prices of Havana leaf tobacco is noted in Cuba.....The State Board of Agriculture of Nebraska has located the State fairs at Omaha for the next three years, on condition that the city furnish suitable grounds and buildings. The Board of Trade of that city took the matter in hand, and after full consultation with the merchants and business men of the city, the conditions will be promptly complied with .....Statistics of pork packing in Cincinnati for the season beginning November 1 and ending March 1, show that there was a decrease of 89,025 head as compared with the previous year. The decrease in pounds was 26,369,774; average gross weight, 266 31 pounds, a decrease of 4.27 pounds; aggregate yield of lard, 19,344,815 pounds, a decrease of 3,629,064 pounds. The increase in the aggregate cost of this year's supply was $1,417,268. The decrease in barrels of pork was 6,099; in cut meats, 11,639,655 pounds... ....Liverpool cablegrams of March 5 say that arrivals of grain were small for the previous week; demand for consumption had improved and prices of grain had advanced slightly owing to scarcity..... Finley Dunn says the United States now produces one-fourth of the wheat grown in the world, and there is an increase here of 25 per cent. every two years....An experimental cargo of fresh meat in a state of perfect preservation has been landed in France from Buenos Ayres. Live sheep are shipped by every steamer from that place to Europe

"A Drop of Joy in Every Word."

FLEMINGTON, Hunterdon Co., N. J.

Dr. R. V. PIERCE, Buffalo, N. Y.:

Three months ago I was broken out with large ulcers and sores on my body, limbs and face. I procured your Golden Medical Discovery and Purgative Pellets, and have taken six bottles, and today I am in good health, all those ugly ulcers having healed and left my skin in a natural, healthy condition. I thought at one time I could not be cured. Although I can but poorly express my gratitude to you, yet there is a drop of joy in every word I write. Yours truly,

JAMES O. BELLIS.

Coughs.—"BROWN'S BRONCHIAL TROCHES" will allay irritation which induces coughing, giving oftentimes immediate relief in Bronchitis, Influenza, Hoarseness, and Consumptive and Asthmatic Complaints.

Such names as Dr. O. W. Holmes, Washington Irving, and Ex-President Van Buren, have borne testimony to the efficacy of WHITCOMB'S ASTHMA REMEDY, which is for sale by druggists.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, March 6.

Baltimore.—WHEAT—Southern red at $1 40@$1 45; do amber at $1 48@1 51; No. 2 western winter red, $1 45¾@1 46. CORN—southern white, 58@60c.; do. yellow, 57c.; western mixed, spot, 56½c. OATS—Southern at 48@49c.; western white at 47@48c.; do. mixed at 46@47c.; Penn. at 48@49c. RYE firm at 95@98c. HAY—prime to choice Penn. and Md., $16@17. PROVISIONS—Mess pork at $13 25@$13 50. Bulk meats—Loose shoulders, 4½c.; clear rib sides, 6¾c; do. packed, 5½c. and 7½c. Bacon—Shoulders at 5½c.; clear rib sides, 8c. Hams, 10@12c. Lard at 8½c. BUTTER steady; prime to choice western packed, 20@26c.; roll, 20@25c. EGGS dull and lower at 11@12c. TOBACCO—Maryland—Interior and frosted at $1@2; sound to good common $4@5 50; middling $5 50@7 50; good to fine red $8 50@12; fancy, $13@14; up-country, $3@$15. Ohio—Interior to good common, $3 50@5 50; greenish and brown $5 50@7; medium to fine red, $7 50@10; common to medium spangled $6 50@12; fine spangled to yellow $10@20. SEEDS—There is a fair inquiry for Clover, and the market is moderately active, at a wide range of prices. We quote Western in car lots at 7¾@8¼c. for common to good, and at 8¾@9¼c. per lb for prime to choice, with jobbing lots ¼@½c. higher. Timothy is steady at $3 10@3 20 per bushel.

Boston.—CORN steady, sales at 60@62c. for mixed and yellow. OATS selling at 50@53c. for No 1 extra white; 45½c. for No. 2 white; 46¼@48c. for No. 2 mixed and No. 3 white RYE at 90@92c. SHORTS selling at $22 50@23; fine feed and middlings at $24@25. Western butter—Choice creameries at 30@38c.; fair to good at 25@27c.; dairy packed 23@26c.; ladle packed at 16@25c.; Western eggs at 13@14c. ASHES are steady with sales of Pots at 4¼@4½c., and of Pearls at 6@6½¢ lb. HAY AND STRAW—Rye straw continues in demand. We quote first quality coarse Eastern and Northern at $15@16 ¢ ton; poor and medium at $11@14. Rye straw $20@22 ¢ ton. CHEESE—There has been a fair demand; choice Northern factory 14½@15c. ¢ lb.; fair to good at 12½@14c. and common 9@11c.; Western factry, choice 13@14c; fair to good 11@12c; com. 8@10c. Northern hand-picked pea at $1,80@1,90 ¢ bushel; do. do. Western at $1.75@1.85; do. common $1.65@1,75; medium choice $1 55@1.60; common to good, $1.35@1.40; Yellow Eyes $2.10@2.15; Red Kidneys at $1.75@1 85; Canada peas, 80c.@$1 ¢ bushel for common to choice; Green peas, $1 50@1.85. POTATOES are steady, we quote Houlton and Maine Central Rose 52@55c. ¢ bushel; Houlton Jackson Whites at 40@45c.; Maine Central Jacksons at 38@40c.; Vermont Rose at 50@53c.; do. Jackson at 35@45c.; Peerless at 45@48c., and Prolifics at 53@55c. ¢ bushel. ONIONS, $3 75@4.75 ¢ bbl. APPLES at $1.75@3 ¢ bbl, according to quality. CRANBERRIES at $7 00@9.50 ¢ bbl. SEEDS—Calcutta Linseed, $2.45@2 50 ¢ bushel CLOVER SEED is quiet at 7½@8¼c. ¢ lb for Western and New York; timothy at $2 80@3 00 ¢ bushel; red top at $2.70@2 80 ¢ bag; canary seed at $2 45@2.85, and American linseed $1,50@1,55 ¢ bushel.

Chicago.—WHEAT steady, with a fair demand No. 2 Chicago spring at $1.25 cash, No. 3 do at $1 09@$1 10; rejected at 90c. CORN fresh at 37½c. regular at 46½c. rejected at 35½c. OATS 31⅜@31½c. RYE easy at 73½@75c. BARLEY 75c. BUTTER—creamery 32@37c; good to choice dairy 24@30; medium 18@20; inferior to common 10@16; roll 15@23. CHEESE—Full cream, 14½@15c; part skim, 12½@13c; low grades, 8@10c. HAY the higher grades are in fair demand and steady, while low grades are dull and easy: No. 1 timothy, ¢ ton, $13@13.50; No. 2 timothy, ¢ ton, $12@12 50; mixed, $10@10 50; upland prairie, $10; No. 1 prairie, $8.50@9; slough, $8.00. HIDES. Fine light stock was in local request and scarce: green-cured hides, light, 8½@9c. ¢ lb; green-cured, heavy 8½@8¾; damaged hides, 6¾@7c; calf, 14@15; dry salted, 12@13 ¢ lb; dry flint, 16@17; sheep pelts, wool estimated 50. POTATOES—Fine lots salable at 50@55c. on truck. SEEDS—Timothy in good demand for shipment, selling at $2.10@2.81 prime being $2.75. Clover quoted dull at $4 45@4 65 prime closing at $4 50. Flax at $1 63 and Hungarian at 81½c. WOOL—Business was quite good on orders from western mills and prices remain firm. The asking rates from store for eastern Iowa, Wisconsin and Illinois wool range as follows: Tub-washed bright, 52@57c. ¢ lb; do. dingy and coarse, 50@55c.; fleece-washed medium 48@52c; do fine 45@50c; do. coarse, 45@47c; unwashed medium, 37@40c, do coarse, 33@35c; do. fine bright, 28@31c; do heavy, 24@28c; buck's fleece, 20@22c. Consignments from Western Iowa, Nebraska and Kansas sell at about 2c. ¢ lb less than this range, and burry and poor-conditioned lots at 3@5c. less. HOGS—Mixed packing and medium at $4.20@4.40; light $4.20@4.35; choice heavy at $4.45@4.70; market closed tame, but with a fair clearance CATTLE—Shipping at $3.90@5.25; butchers' at $3 90@4, stockers and feeders in fair demand at $2.90@4. SHEEP market active at full prices. $4@6.

Cincinnati.—WHEAT scarce and firm at $1 32. CORN firm at 42c. OATS steady at 37½c. RYE firmer at 85c. BARLEY in fair demand; extra No. 3 fall at 78@80c. PORK dull at $12. LARD quiet at $4 17½@$7 20c. BULK meats firm; shoulders at 4½c; clear rib at $6 60c; clear sides at $6 75c. BACON firm; shoulders at 5¾c; clear ribs at 7½c; clear sides at 7¾c. HOGS dull; common at $3 50@$4 15; light $4 20@$4 40; packing at $4 25@$4 50; butchers' at $4 50@$4 65. BUTTER.—Fancy Northwestern Creamery sells at 40@41c. Choice Western Reserve and Dairy 26@28c, prime to choice Central Ohio at 23@25c, and common do. at 20@22c ¢ pound. CHEESE, prime to choice cured factory at 14@14½c ¢ pound. New Northwestern sells at 13½c. POULTRY.—Common live chickens sell at $2 75@$3 00 per dozen, and choice old hens at $3 25@$3 50. DUCKS firm at $3 00@$3 50, and GEESE at $3 00@$4 00. Live Turkeys sell at 8c and dressed at 10c ¢ pound. Plucked geese are not wanted at over $2 00 per dozen. HAY.—Prime to choice timothy sells at $15 00@$16 00, and common to good mixed at $13 00@$14 00 ¢ ton in bales, on arrival. Wheat and Rye straw is firm at $10 00@@$10 50 and Oats straw at $10 50@$11 00. MILL FEED.—Bran sells at $14 50, Shipstuffs at $15 00 and Middlings at $16 00@$20 00 per ton in bulk and 50c more in sacks on track. SEED.—There is a more active consumptive demand, especially for clover and timothy, and the market is firmer. CLOVER sells in a jobbing way at 7¾@8c per pound. TIMOTHY at $2 90@$3 00. Red Top 70@75c, Blue Grass at 60@65c for clean and 70@75c for extra clean, and Orchard Grass at $1 80@$1 90 per bushel. HEMP seed is scarce and advanced to $3 50@$3 75 per bushel. FLAXSEED is wanted at $1 25@$1 35 per bushel, but there is little offered.

Detroit.—WHEAT heavy; No. 1 white Michigan at $1 29. CORN quiet but firm; No. 1 yellow at 44c.; high mixed at 43c.; No. 1 mixed at 42½c.; No. 2 mixed at 41c. OATS in active demand; No. 1 white at 38½@39c.; No 2 do. at 36½c.; No, 1 mixed at 37c.; No. 2 do. at 35c. CLOVER SEED, with more disposition to sell at $4 30. DRESSED HOGS firm and active at $5.

Louisville.—WHEAT firm at $1 22@$1 25. CORN firm; No. 2 white 44@44½c; do. mixed, at 42@43c. OATS quiet, but firm: No. 2 white at 40@41c; do. mixed at 39@40c. RYE steady at 86@87c for No. 1 PORK steady at $12 50. LARD steady; prime steam at 7½c. BULK MEATS steady; shoulders, 4½@4¾c; clear rib, 6¾c; clear sides, 7@7½c. BACON steady; shoulders, 5c; clear ribs, 7¼@7¾c; clear sides, 7¾@7¾c. SUGAR-CURED HAMS at 9@10½c. MILL OFFAL per ton in bulk: Bran, $12 50@$13 50; shipstuff, $15; middlings, $16 50. HAY prime to choice, timothy $16@$18, and mixed at $12@$15 per ton on arrival. STRAW—$8@$9 on arrival and $10 from store. FIELD SEED delivered from store; timothy, $3; orchard grass, $1 70; red top, 75c; clover, common red at $5, and sapling at at $5 25; blue grass, clean, 55c; extra clean, 65c.

Milwaukee.—WHEAT—No. 1 Milwaukee hard at $1 24½; do. soft, $1 22½; No. 2 Milwaukee, $1 19¾; 3 do. at $1 08; No. 4 do., $1 02; rejected, 92c. CORN—No. 2 at 37½c. OATS—No. 2 at 33c. RYE firm; No. 1 at 75@75½c. BARLEY dull; No. 2 spring, 61c. PROVISIONS—Mess pork firm at $11 70 cash. LARD—Prime steam at 7.15c. cash. Live hogs steady, but firmer at $4 15@4 20. Dressed hogs steady at $4 80.

New Orleans.—Flour quiet but firm; superfine at $5@5 25; double extra at $5 75@6; treble extra at $6@6 37½; high grades at $6 50@6 87½. CORN steady with a fair demand at 58@59c. OATS strong at 48c. CORN MEAL firmer; held at $2 65. HAY quiet; prime at $22@24; choice at $26. PORK in fair demand and firm; old, $12 50; new at $12 87½@13 LARD steady; tierce at 7¾c. keg at 8¼c. BULK MEATS in fair demand and firm; shoulders, loose at 4½c; packed, 4¾@4¾c; clear ribs, 7c; clear sides at 8@8¼c. Sugar cured hams dull; canvassed at 8¾@10c.

St. Louis.—FLOUR fancy at $6 02½ bid; choice at $5 62½ cash: family at $5 77½ triple extra at $5 62½ cash double extra at $5 40. WHEAT unsettled No 2 red fall at $1 24 bid, cash; No. 3 do at $1 20@1 20¾; No 4 do. at $1 11¾@1 11¾. CORN 36¼@36⅝c. cash. OATS 33½@33¾c RYE 75c. BARLEY dull; choice spring at 75@80c; Ohio fall at 90@95c. PORK dull; jobbing at $12 15@12 25. LARD steady at $7.05. Bulk meats dull and unchanged. Bacon quiet and unchanged. Hogs active; Yorkers to Baltimores at $4@4 20; packing at $4 15@4 30; butchers' to select at $4 30@4 40; CATTLE in active demand; all were sold; one lot shipping steers, averaging 1,600 pounds, brought $5 35; good to choice at $4 65@5 10; feeders at $3 75@4 15; stockers at $2 75@3 50; cows and heifers at $3@3 50; corn-fed Texans at $2 50@4; SHEEP strong for top grades: one lot, averaging 150 pounds brought $5 90; fair at $3 75@4 50; good at $4 65@5 prime to choice at $5 25@5 50.

FERTILIZERS.—Sales are increasing as the season advances. Bone ash is nominally quoted at about $22 per short ton, on the basis of 70 per cent phosphate of lime. Bones quoted at $22 50@$23 for Texas and South American mixed, and $25@$26 do. for shin and shank bones. Refuse bone black at $21@$22 per short ton on merit. Sulphate of ammonia at 3½c. ¢ pound on the basis of 26 per cent. of ammonia. Dried blood at $2@$2 50 per unit of ammonia short ton. Ammonia, nxoline, etc., for the former at $2 62½@$2 75 per unit of ammonia, and about $2 25 do. for the latter, all short ton. Nitrate of soda, 4½c. Saltpetre, crude 6¼@6¾c. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent. ammonia, $35@$40; dissolved bone black, 15 to 17 per cent. of soluble phosphoric acid $30@$35; dissolved bone 13 to 14 per cent. of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent of soluble phosphoric acid, 3 per cent. of potash, 3 per cent. of ammonia, $40@$45; German potash salts, 25 per cent. of sulphate of potash, $15@$19 per ton: muriate of potash, 80 percent. 2@2½c per lb. land plaster 7 50; dried blood, 10 per cent of ammonia. $35@45 per ton; fish guano dry and ground fine, 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $45; unground fish guano, 6 per cent of ammonia, $25; castor pomace; $19@24; sulphate of soda, ground, and in barrels, $15@18 per ton; sulphate of ammonia 4½c. ¢ lb; bone black, 70 per cent of bone phosphate, $30@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $20 per ton; No 1 Peruvian guano, 10 per cent ammonia, standard, $56.50 per ton; Lobos $47.50 per ton; rectified $65 per ton; guaranteed $56 per ton; nitrate of soda, 5½@5¾ ¢ lb. Seth Chapman's Peruvian guano: standard, $55; Lobos, $46 per ton.

Mapes's complete manures for clay soil, $25.50 per 1,000 lbs; for light soils, $25 50 ¢ 1,000 lbs.; "A" brand, for general use, $20 ¢ 1,000 lbs.; fruit and vine. $18.50 ¢ 1,000 lbs; cabbage and cauliflower, $23.75 ¢ 1,000 lbs.; corn, $24.50 ¢ 1,000 lbs.; potato, $24 ¢ 1,000 lbs.; asparagus, $25 50 ¢ 1,000 lbs.; gypsum, Nova Scotia, ground, per ton, $7.50.

Forrester's potato manure, $47.50; grass, $45; oat, $47.50; cabbage, $50; wheat, $45; rye, $47.50; lawn dressing, $47.50; tobacco, $47.50; turnip, $52—per ton, each.

Bowker's "Hill and Drill Phosphate" $45; Bowker's Phosphate, $40 per ton, each; Bowker's "Food for Flower," 35c. per package and $3 per doz.; Bowker's "animal meal for fowls," $2.50 per cwt.; Ground oysters shells, $1 per cwt. Stockbridge's manures quoted: Potato, $50; cabbage, $50; strawberry, $40; corn, $45; seeding down, $40; orange tree, $35; onion, $50—per ton, each; oats, $45.

Baugh & Sons' prices for goods delivered at depot or boat, in bags and in 2,000 lb lots; Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36; Baugh's raw bone superphosphate, $40; Baugh's $25 phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent of ammonia, $48.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, March 6, 1880.

BEANS AND PEAS.—Trade has been moderate in beans since the recent heavy sale of 2,500 bbls. for Spain. Marrow are called; mediums hold up as prime marks are not plenty. Business is light in fancy sorts. Green peas quiet and 5c lower to sell. Southern B. E. peas would not bring $3.25 in wholesale lots: green peas $1.75@1.80; marrow beans prime $1.65@1.67; medium, prime, $1.45@1.50; medium, fair to good, $1.35@1.40; pea, choice, 1 65@$1.70; fair to good, $1.45@1.55; white kidney, choice $1.75@1.80; fair to good, $1.60@1.70; red kidney, prime, $1.70; fair to good, $1.65@1.69, turtle soup, good to prime; $1.75@1.80.

Receipts of beans 6,480; exports, 2,800 pckgs.

BEESWAX.—A small trade quoted 24 to 25¾ for Western and Southern.

Exports for week, 6,125 lbs.

BROOM CORN.—Offerings are small and prices held steady Quotations are for choice brush at 9c.; choice hurl at 8c.; stalk brald at 6@7c.; mixed red and green at 5@6c.

BUTTER.—Old prices were well supported until within the past two or three days and all grades outside of fine fresh are 1@2c. lower. There are not enough of fancy grades to rule the market at this date, and the advance put on under grades was a mistake, as it checked consumption to a degree that may prove damaging in future sales of medium stock Strictly speaking there is but little stock to name as first-class and few dealers have any fine tops left on dairies of State. Western butter is extremely weak and can hardly recover, with spring so close upon us. Creamery, fresh invoices, 37@38c.; good to prime, 35@36c.; fair to good, 30@35c; poor to fair 27@30c.; full 2@30c.; early 2@2c.; State, pails and tub fall, choice 28@30c.; good to prime 26@28c.; fair to good 23@26c.; poor to fair 20@23c.; pails and tubs, single dairy, fresh choice 32@33c.; fresh, good to prime 28@30c.; fresh, fair to good 23@25c.; dairies choice 25@27c.; good to prime 24@25c.; fair to good 22@23c.; poor to fair 19@22c.; bodies of dairies 18@19c; very poor 16@18c.; Western imitation creamery 22@28c.; dairy, fresh, extra 25@26c.; good to prime 22@24c.; fair to good 21@22c.; poor to fair 14@17c.; special factory marks, extra 23@25.; prime 20@21c.; fair to good 18@19c.; poor to fair 17@19c.; very poor 14@17c.; roll butter prime 18@21c.

Comparative receipts and exports:

	Receipts, pkgs.	Exports, firkins
Jan. 1, 1879 to Mar. 1, 1880,	1,215,451	268,544
Jan. 1, 1878 to Mar. 1, 1879,	1,180,047	249,9 0
Jan. 1, 1877 to Mar. 1, 1878,	1,0.6,077	148,721

CHEESE.—The market has been very dull this week and easier, with shipments only 7,110 boxes. There have been free sellers at the concessions.

Quotations for State factory are: at 14¼@14¾c.; good to prime at 13¾@14c.; fair to good at 13@13½c; do. poor at 12@12½c. State farm dairy: good to prime at 13¾@14¼c.; fair to good at 13@13¾c. Ohio factory: Cheddar, fine, 14c.; do., fair to good, 12¾@13½c.; flat, fine, 14¼@14¾; flat, fair to prime, 13@14c.; flat, fair to good, 12¾@13¾c.

Receipts for week, 4,538 boxes; exports, 5,400 boxes. Liverpool cable, 71s., which is lower. Steam, 31s. 6d. @35s.

COMPARATIVE RECEIPTS AND EXPORTS.

	Rec'ts, boxes.	Exp'ts, lbs.
June 1, '79, to Mar. 1, '80....	2,253,615	101,701,164
June 1, '78, to Mar. 1, '79....	2,853,018	121,222,989
June 1, '77, to Mar. 1, '78....	2,270,386	99,331,138

COTTON.—There has been a good degree of business and prices closed steady at for March, 13.18@13 21c.; April, 13.32c.; May, 13.52@13.53c.; June, 13.71@13.72c. July 13 88@13.89c.; August, 13 91@13.92c.; September, 13.45@13.46c.; October, 12.60@12.62c.; November, 12.20@12.23.; December, 12.16@12.18c.

DRIED FRUITS.—In apples there is in good business and more sun dried stock could be handled at strong prices. Peaches are quiet and steady. Small fruits are wanted and blackberries are decidedly higher. Quotations are for N. C. apples, fair to good, 7¾@8¼c.; choice, 8@8¾c.; fancy at 10@10½c; Virginia, at 7@8c.; New York State quarters, at 7@8c.; sliced at 7½@8¼c.; patent evaporated, choice in cases, at 13½@14c.; primeat 12½@13c. Evaporated peeled peaches, at good to choice, at 22@25c.; unpeeled at 12@14c.; North Carolina peeled, fancy, at 20c.; choice old at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7½@8c.; do. quarters at 7@7½c. Pitted cherries at 18@19c. Blackberries at 12½c. Raspberries at 26@27c. Plums at 17@18c.

EGGS.—Receipts for the week, 13,200 bbls.; do. last week 11,162 do. The week has been an unsettled one and results in a decline compared with the last report. The demand is quite active but is chiefly local. The market lacks its usual outside call that helps to enliven trade in Lent.

Near Points, ¢ doz., 31c.; State and Penn. 15@13½c. Western, fresh, 13c.; Southern, 12@12½c.; Western and Canada, inferior, 11@12c.; limed are very dull and decidedly lower, quoted 8@10c.

FEED.—sales of 40 to 60 lbs. at 22@$23; 100 lbs at $23@$24 and sharps at $23.50@$25.

FLOUR.—There have been full offerings, the export demand light, and prices weak. Latest prices are $5.40@5.50 for poor to fancy superfine State: $5.40@5.65 for inferior to good extra do., odd lots and lines: $5 65@5.90 for good to very choice do.; $5.00@5.50 for inferior to fancy superfine Indiana, Iowa, Michigan, &c.; $5.40@5.85 for inferior to good shipping extra do., and $5.65@5.85 for good to very choice shipping extra do.: inferior to about choice white wheat extras $5.90@6.75; about choice to very fancy do. $6.75@8 the latter an extreme: red and amber winter wheat, inferior to very fancy trade and family, at $5.85@7.75; round hoop Ohio, $5.60@6; and trade and family brands of do, at $6.10@7.75; the latter rate for very choice; St. Louis at $6@6.75 for inferior to very good extra; $6.75@7.75 for very good to very choice; Minnesota clear, inferior to fancy, at $5.60@6.75; Minnesota "straight," inferior to very fancy, at $5@7.75 and patent inferior to fancy at $6.75@8.75; unground stock at from $3 25@5.75; city mill extra at $6.40@6.85 for ordinary to fancy for West Indies; do. for England, $5.50@5.75 for poor to choice; do. trade and family extras, $6.75@7.75; do. for South America, $6.75@7.10; No. 2 at $3.65@4.90 for poor to very fancy (the latter an extreme).

CORN MEAL.—Sales at $2.50@3.10 for yellow Western and $3 30 for Brandywine.

FRESH FRUITS.—Exports of apples for week, 4,825 bbls. There is an easy feeling in the apple trade and few large orders executed. Baldwins and Greenings range at 2@$3.25; russets, 2.50@$3; fancy red, $3.50@3.75. Strawberries are in good, steady supply, and though quality is attractive the weather does not favor sales. Cbas., 20@25c. ¢ qt.; Florida, best, 40@50c.; Fla., Wilsons, 25@35c. Cranberries firm and steady, with a continued call from the the West. Cape Cod, bbls., $8@10; other Eastern, $7@9; N. J., crates, $2.75@3.25. The season is growing late for Fla. oranges and choice are tending higher. A marked feature in the trade this year is a demand for single boxes for family use. Fancy half bbl. cave, 4.75@$1.50; common to good, $2@3.50. Peanuts steady, with a moderate resumption of business. Va., hand-picked, 5¾@6c.; extra prime to fancy, 5¼@5½c.; good to prime, 4¾@5c.; shelled, 5½@6c. Hickory nuts, 75@90c. Pecans, 9½c. New B. walnuts, 62c. ¢ bush. Confectioners have become very regular buyers of B. Walnuts during the past two seasons.

GRAIN.—Of wheat offerings have been liberal and prices lower, giving a fair amount of business for export. Latest sales are of No. 1 white at $1.45½@1.46¾; do., March, at $1.46@1.46¼; do., April, at $1.46@1.46¾; do., May, at $1.44½@1 45; No. 2 white at $1 44½c.; ungraded white at $1.40@1.41¾c.; No. 2 red $1.44@1.45¾; do., March, at $1.45¾@1.48¾; do. April option, at $1.49@1 50¾; do., May, at $1.47@1 47¾; ungraded red at 1.41@1.47; No. 2 Milwaukee at $1.46; New York No. 3 spring at $1.35¼. Rye at 95@97c. for No. 2. Corn has been wanted and prices higher; latest sales are of New York No. 2 at 60¾@61c.; do., March, at 59½@59c.; do., April, at 59½c.; do., May, at 58c. bid; New York steamer mixed at 59¼@60c.; do., March, at 56c.; do.; April at 54½c.; ungraded mixed western at 58@61c.; New York No. 2 at 58½c.; rounds yellow, 60c.; yellow western at 61c.; yellow Southern at 59@61c.; white Western at 61@62c.; steamer white at 61c.; New York No. 2 white at 61c.; low mixed at 61c.; Oats are a trifle better and trade fair; latest sales are of No. 1 white at 51½c.; No. 2 white at 49c.; No. 3 white at 48c.; New York No. 1 at 49½c.; New York No. 2 at 49@49½c.; do., March option, at 48@49c.; New York No. 3 at 48c.; ungraded white western at 49@52c.; ungraded mixed western at 46@49c.; white State at 50@51c.; mixed State at 48½@49½c.; No. 2 Chicago quoted at 49½c. afloat.

HAY AND STRAW.—Receipts are larger demand less active and prices easy. Shipping hay quoted at 70@75c.; retail lots at 80@85c. for medium and 90@95c. for prime; clover at 60@65c. Straw at $1@1.10 for long rye; 65@70c. for short rye, and 55@60c. for oat.

Exports for the week, 1,450 bales.

HOPS.—The export demand continues slack and brewers are doing very little with prices unsettled and favoring buyers. The quotations are for

	Cents per ¢.
New York, fancy	37 @39
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	27 @35
Olds, all growths	4 @18
Pacific Coast, new	30 @35
Pacific Coast, olds (nominal)	5 @10

MAPLE SUGAR.—There is an easy feeling in prices; large cakes 11@13c.; small cakes 13@14c.; syrup in tin 75c@$1 ¢ gal. Shippers should mark gross weight and tare on pkgs. and pack sugar so that it will not break or crumble.

OIL CAKE.—Western is quoted at $32 ¢ ton.

POULTRY AND GAME.—The demand for dressed is not above usual spring wants. Prices for extra fresh are something better. Some old lots remain to be quoted low.

Turkeys, N. J., good to prime, 12@14c.; State, Mich., N. Ohio and Penn., prime, 13@14c.; other Western, prime, 12½@13½c.; fair to good, 10@11c.; Western, dry-picked, 12@14c.; Phila. dry-picked, 12@14c.; Capons, Phila., large, 19@20c; small and slips, 15@17c.; chickens, winter, Phila., 15@16c. Phila., dry-picked, 14@15c.; Jersey, ¢ lb, 14@15c.; State, prime, 12@14c.; Western, prime, 11@13c.; fair to good, 8@10c.; poor to fair, 5@8c. Fowls, Phila., dry-picked, 10@12c.; Jersey, good to prime, 10@12c.; State, good to prime, 9@11c.; Western, good to prime, 8@9c; poor to fair, 6@7c. Ducks, Phila., dry-picked, 16@18c.; Jersey, 15@17c.; State, 16@17; Western, 14@15c. Geese, Phila., dry-picked, 10@12c.; Jersey, 9@11c.; State, 8@10c.; squabs, ¢ doz., white, $3@3.25; dark, $1.75@2. Live poultry is in fair demand, and with light supplies prime coops are firm Fowls, N. J., ¢ lb. 11@12c.; Western, ¢ lb, 10@11c.; roosters, old and young, 5@6c.; turkeys, hens, 10@11c.; toms, 8@9c.; ducks, Jersey, N. Y. and Pa., per pair, 75c.@$1; Western, 60@80c.; geese, Jersey, $1.62@1.75; N. Y. and Pa., $1.37@1.62; Western, gray, $1.25@1.50 white, 75c.@$1; pigeons, ¢ pair, 40@45c. Wild ducks are lower; quality generally against sales. A few Southern English snipe quoted $6. Wild pigeons, Indiana, per doz., $1.75; Missouri, per doz., $1.25@1.50; wild ducks, Canvas back, Havre de Grace, $1.10@1 75; Norfolk, $1.25@1.50; Redhead, H. de G., 60@75c.; Western, 50@75c.; Norfolk, 40@50c.; Mallard, Western, 30@40c.; do. and Black, Norf., 30@40c.; teal, 25@30c.; common, 15@20c.

PROVISIONS—Have been more active on export demands and closed strong. Mess pork quoted at $11.75; $12 for old and $12.50 for new on the spot; 12.40@$12.50 for March and April, and $12.50@ 2.60 for May. Bacon at $7.25 for long clear and $7.50 for short clear. Beef hams at $16.50@17. Beef—Extra mess at $11@12; plain mess at $10 50@$11; packet 11.50@$12; tierced beef, city extra India mess, at $20@22.50; do. Philadelphia at $20. Tallow at 6¾c. for prime. Stearine at 7¾@7¾c. for Western. Lard—Western steam at $7.70 for spot lots; $7.65@7 67½ for March; $7.67½ for April, $7.72½ for May, and $7.80 for June.

Receipts for the week, pork, 1,600 pkgs.; beef 720 do.; cut-meats, 32,900 do.; lard, 11,556 do. Exports pork, 1,308 bbls.; beef 1,513 pkgs.; cut-meats, 960,302 lbs.; bacon, 9,870,503; lard 4,755,738 do.

SEED.—Clover is strong and on demand; Western quoted at 7¾@7¾c. for prime and 8¼@8¾c. for choice and extra choice, and State at 9@9¼ for choice to extra choice, and 10@10½ for fancy. Timothy is quiet at $3.

TOBACCO.—Export demand has been very light but the home trade is good and prices steady.

VEGETABLES.—Exports of potatoes for week, 951 bbls. Market dull for both export and home use, and there is a large offering at inside figures. Sweet potatoes quiet. Bermuda, new ¢ bbl., $5@5.50; E. Ross, Nova Scotia, bulk, ¢ bbl, $1.37@1.75; Maine, per d.-h. bbl., $1.65@2.00. State do. $1.30@$1.62. State, in bulk, per bbl., $1.37@1.50; Prolific, N. S. per d.-h. bbl., $1.37@1,75; in bulk, per bbl., $1.25@1,62; Mercer, Nova

Scotia, bulk, per bbl., $1.12@1.37; Chili Red, N.S., bulk & bbl. 1.25@1.37; Peachblow, State, per d.-h. bbl. $1.75@$2; Snowflake, State, per d.-h bbl., $1.50@1.62; Peerless, State do. $1.25@$1.37; bulk, per bbl., 1.25@ $1.37; Jersey bulk, do. $1@$1.12; Sweet potatoes, do. $3 00. Onions show a recent decline. Southern stuff plenty for the season. Tomatoes, Florida, per box, 60c.@$1.00; Nassau, 50c. 1.00; Bermuda, 50@ 85c.; beets, Bermuda, new, per crate, $1.25@1.50; green peas, Sav., $2.00@3.00; Cuba, $2@3.00; Fla., small, $1@ 2; do., marrowfat, $1@1.50; kale, Norf., per bbl., 50c.@ $1.50; Balt., per bag, 75c.@$1.25; spinach, Norf., per bbl., $2@2 50 Balt., 1.2 6@1.50 radishes, Norfolk, per 100 bunches, 1.50@$3; lettuce, southern, per bbl., 3@$5; squash, marrow, $1.75; Hubbard, $2 50@3; cabbage, per 100, $3@8 onions, white, $3.50@4.50; yellow, 3@$3.25; red, Eastern, $4.00; Chester, $2.75@$3.00; beets Jersey 1.00@$1.25; Turnips, Russia 75c.@$1.00; carrots, 75c. $1.25.

WOOL.—Demand has been active and prices strong, but no higher. Latest sales are of X and XX Ohio at 55@57½c.; ¾ blood Pennsylvania at 62c.; medium Pennsylvania at 60c.; No. 1 Montana at 34c.; fall California at 25@30c.; spring do. at 39c.; fall Texas at 26@28c.; unwashed Ohio at 40½c.; Montevideo at 38@ 41c.; Donskoi at 37c; Cape at 32@37c. Australian at 40c.; East India at 40@45c.; Mexican at 23c.; Montana at 38c.; Oregon at 42½@47c.; Colorado at 32c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, March 6, 1880.

BEEVES.—Receipts for week, 9,199 head; do. last week, 10,460 do. With light receipts the market has ruled very favorable for sellers: more than three quarters of the offering sold at a range of 9@10¼. The transactions at the close 8¾@9c. live weight for common dry cows and bulls 8@9c to 55@58 lbs. for several car loads of coarse to good oxen; 8½@9¾c. to dress 55@ 6 lbs for common to fair steers, with good and choice at 9¾@10½c. to dress 58@57.

COWS AND CALVES.—The market has ruled dull has been quoted at $5 per head lower for fair qualities. Buyers will be apt to hold off now until fresh milkers are plenty.

VEAL CALVES.—Receipts of live moderate, but dressed ill out market wants. Live calves N. J. & Bucks Co. choice 8@8½c.; prime 7¾@8c.; State choice 7¾@8c.; State prime 7¼@7¾c. fair to good 6¾@7c.; Mt. Holly 7@8½c; butterm'lk 4@5c.; gross 2½@2½c.; hog dressed, choice 10c.; good to prime 8½@9½c.; other 7@9c.; gross, hog dressed 4½@5½c.

SHEEP AND LAMBS.—Receipts for week, 19,771 head; do. last week, 18,871 do. Light supplies and advance in wool. Skins have kept prices quite strong. Heavy sheep not wanted this week. Sheep quoted 6¾@6¾c.; anything held above was neglected.

SWINE.—Receipts for week, 29,224 head; do. last week, 28,305 do. Prices have ruled easy and close weak. $4.10@4 85 last quotations. Country pork, light, 6¾7c.; med um 6¾@6¾c.; heavy, 5¾@6c¾c.; city dressed, 6¾@8c.; Western do. 5¾c.

TREES

The largest and most Complete Stock of Fruit and Ornamental Trees in the U. S. Priced Catalogues sent as follows: No. 1, Fruits, (new ed.) with plate, 15 cts.; plain, 10 cts. No. 2, Ornamental Trees, etc., (new ed.) with plate 25 cts.; plain, 15 cts. No. 3, Greenhouse, Free. No. 4, Wholesale, Free, and No. 5, Catalogue of Roses, with beautiful plate of New and Rare Roses, 10 cts.; plain, Free. No. 7, Catalogue of Strawberries, with plate, Free. Address,

ELLWANGER & BARRY, Rochester, N.Y.

FRESH, PURE,

ONION SEEDS.

Very superior strains of the following varieties of our own or Philadelphia grown stock, that can be recommended in every way.

Large, Red Wethersfield,	per lb.,	$2.00
Yellow Danvers,	"	3.00
Yellow Strasburg or Dutch,	"	2.50
White or Silver Skin,	"	2.75

Postage must be added at the rate of 16 cents per lb. Special prices on 10 lb. lots and over.

Send 6c. stamp for illustrated catalogue.

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Seed Grower and Dealer, No. 714 Chestnut St., Phila.

CUTHBERT RASPBERRY.

E. P. ROE offers the largest and cheapest stock in the country of this superb raspberry. The original stock that can be traced directly to Thos. Cuthbert's garden. Also an exceedingly liberal offer. All the other small fruits and grape vines in great abundance at reasonable rates. Address,

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STRAWBERRIES
RASPBERRIES
SEED POTATOES

Send a postal for my prices and Strawberry Circular before buying.

GEO. S. WALES,
Rochester, N. Y.

STOCKBRIDGE MANURES For 1880.

Some years ago the Stockbridge Manures were only known to a few farmers in the Connecticut Valley. Now they are so extensively used in different parts of the country as to require two large factories, one in New York and one in Boston to manufacture them. This increase shows what farmers think of good fertilizers, and is not only due to the fact that they are reliable, well-made, and high-grade manures, but also to the fact that farmers have

FOUND THEM PROFITABLE TO USE.

Now that corn, and other farm produce is bringing such good prices, we anticipate that farmers will invest still more largely in our fertilizers.

Besides the Stockbridge Manures, we manufacture several high-grade Phosphates, and deal in first-class chemicals of all kinds. Farmers who intend to use Fertilizers of any kind, should

Send for our New Pamphlet,

which contains a large amount of reliable information, beside prices for 1880.

MAILED FREE TO ANY ADDRESS.

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Successor to Chapman & Van Wyck,
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DEALER IN
Peruvian Guano
EXCLUSIVELY,
170 FRONT STREET
NEW YORK.

Send for New Pamphlet (1880) containing Results with Practical Growers.

THE MAPES COMPLETE MANURES FOR EACH CROP.

A few Reports (Extracts) from well known Potato-Growers and Farmers in the Use, during the past Season, of the MAPES POTATO MANURE.

MESSRS. TEN EYCK BROS., Truck Growers, etc., Matawan, N. J., report Nov. 1, 1879: "Yield on eight acres nearly 1,800 bushels of potatoes. No acre fell below 180 bushels per acre, while some parts of the field did not fall short of 240 bushels per acre—95 per cent. marketable. Land was in poor heart. The yield of the rows left unfertilized was too poor to be considered of any market value; the difference was so great as to make it difficult to state the degree. The season might be called a good average one, until the heavy rains that occurred in August, which seemed to have a killing effect on the vines of the earlier sorts. A marked difference of **more than two weeks** were unexpectedly seen in the **early** maturing effects of these fertilizers, over a good dressing of coarse yard manure, which was clearly proved on a separate piece, planted with the same variety of potatoes, and the yield one to *four* in favor of the special manures and of *far better quality.*

"Having had an experience of over thirty years in this line of business, we are firmly convinced that better paying results will follow the judicious use of your Concentrated Manures for farming crops, than in the use of the stable manures of the cities, at such prices as they seem to command."

"The cost of these potatoes, grown as above, for the manure, including freight, cartage, and spreading, was **twenty-three cents a barrel**, or about **eight cents a bushel.** If there be a merchantable manure that will reduce that cost under like circumstances, we should like to learn what it is, and where it can be had."

MESSRS. E. & J. C. WILLIAMS, Nurserymen, Montclair, N. J., state in their last issued cat alogue that they grew during the past season from a single barrel of their "Late Rose Potatoes," 240 bushels with the Mapes Potato Manure.

MR. JOHN T. LOVETT, Vice-Pres. "American Association," writes, Jan, 1880: "I had startling results from the use of the Mapes Potato Manure the past season on poor light land. Had finer potatoes and more of them than my neighbors who paid *four times* as much money for stable manure."

MR. FREDERICK MORTON, Rocky Hill, Conn., reports, Oct. 21st, 1879: "On very poor soil, natural yield only 25 bushels per acre, grew 240 bushels potatoes per acre with 700 lbs. of the Mapes Potatoe Manure. The potatoes grown with your manure were all of **two weeks earlier** than those grown with the stable manure (10 cords applied per acre)."

MESSRS. W. B. & O. C. KNAPP, farmers, Round Hill, Fairfield Co., Conn., report, Dec. 15, 1879: "Think the Mapes Potato Manure worth its cost in *keeping the worms* from eating the crop. 400 lbs. per acre, broadcasted and harrowed in, produced a much larger yield than grown with either barn-yard manure or compost of hen-manure, ashes, and plaster."

810 Bushels (Burbanks), from 10 bushels seed on two acres.

WILLIAM S. ROBINSON, Mattituck, Suffolk Co., L. I., Feb. 18, 1880, reports: "Soil, good loam; season good for potatoes; planted last of April; Burbank seedling potatoes; applied four bags per acre (costing $30), of the Mapes Potato Manure; Fertilizer was applied in the drill."

Planted 10 bushels of seeds on certainly not two acres of land, and got 810 bushels of your good potatoes; not over two bushels in 130 of small ones.

Used 800 lbs. of the Mapes Potato Manure per acre and nothing else; probably the heaviest crop ever raised in Suffolk County.

Some other Crops grown with the MAPES MANURES past season.

430 BARRELS CAULIFLOWER from 13½ acres—and 225 bushels potatoes per acre.—JOHN CAMPBELL, Hutchogue, Suffolk Co., N. Y.

500 BUSHELS ONIONS per acre—350 bushels with stable manure, and 250 bushels per acre on natural soil. F. W. PUGSLEY, Poughkeepsie, N. Y.

"600 BUSHELS PER ACRE of as nice onions as ever grew."—"One bushel of the White Onions took the **First Premium** at the Norwalk Fair. It would have been useless to have tried to get half **a crop** without the Mapes Onion Manure." (Complete Manure for light soils.)—CHARLES A. MEEKER, Southport, Conn.

"This is the first special manure I ever used that grew a crop of onions equal with hen manure."—A. N. HOPPE, Chester, N. Y.

105 BUSHELS WHEAT from 2½ acres; 200 bushels potatoes per acre on light soil; turnips far superior in size and quality to those raised with barn-yard manure.—HENRY C. HERRING, Spring Valley, N. J.

FIVE PREMIUM CROPS OF ASPARAGUS grown during the past three seasons at Oyster Bay, exhibited at Spring Exhibitions at Mineola, L. I., were raised with the MAPES ASPARAGUS MANURE. Successful competitors were VALENTINE FROST, Locust Valley, L. I., and GEORGE H. TOWNSEND, Glenhead, L. I.

44 BUSHELS BARLEY per acre on heavy loam.—J. LAWRENCE SANFORD, Southampton, Suffolk Co., N. Y.

PREMIUM POTATOES "grown with the Mapes Manure—Queens Co. Agricultural Society, Town of Oyster Bay."—RICHARD D. COLYER, Woodbury, L. I.

PREMIUM POTATOES, "Best Early Rose," grown with the Mapes Manure—Agricultural Fair at Mineola, L. I.—T. CARLL BAYLIS, Mineola, L. I.

PREMIUM ROSES, Sweet Williams, etc., grown with the Mapes Manure—Queens Co. Agricultural Fair, Mineola, L. I.—WM. A. BURGESS (Dosoria), Glencove, L. I.

TWELVE Medals and Awards given to the Mapes Manures by the State Agricultural Societies and Institutions in Connecticut, New Jersey, and New York States during the past two years.

Mapes Potato Manure, per ton	$48
Mapes Corn Manure, per ton	49
Mapes Onion and Vegetable Manure, per ton	51

No cartage. Single bags sold at ton rates.

These Manures are all READY-MIXED, in FINE, DRY condition, and EASY OF APPLICATION.—Full Directions for use and all information required for their use accompany EVERY PACKAGE. Send for New Pamphlet (1880). Address

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OSBORNE'S (well-known) Grain & Seed SEPARATOR

Farm size *complete:* for separating grain and seed, viz.: Seed wheat; market wheat; cockle; timothy; clover; peas, beans and corn; barley and oats. Has taken more first premiums than any other separator in the land, and has more testimonials. Price **$20** (usual price $35); a limited number for sale by LIGHTHALL & CARTER DAIRY SUPPLIES, 28 & 30 James St., Syracuse, N. Y. Send for circular.

"Victor" one-horse Wheat Drills

(3 and 5 hoed,)

For Sowing Wheat, Rye, Barley, in fallow ground or in standing corn.

Force feed; simply constructed. The five hoed is adjustable for different widths, and is just what every small farmer ought to have, saving the price of a two horse Drill.

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We have perfected a *radical* and *valuable* improvement in our celebrated Churn, which needs but to be seen to be appreciated. Now offered for the first time to the dairy public.

It received the HIGHEST PREMIUM at the International Dairy Fair in New York City, in competition with all the leading churns in the market.

Nine sizes made, churning from one to one hundred gallons. Warranted to be exactly as represented.

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RECTANGULAR & SQUARE BOX CHURNS.

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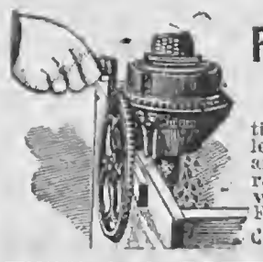

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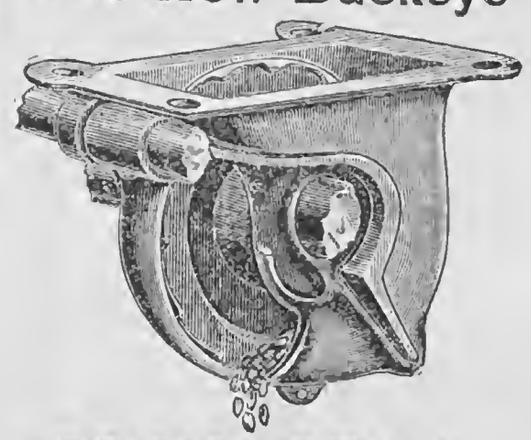
WANTED by a Scotchman (married, with no children), a situation as gardener; 10 years experience in all branches of the business. Best of references as to character and ability. Address, WM. PATTERSON, 12 River St., Boston, Mass.

The New Buckeye



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ALSO

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Over 7,000 of these new Drills were sold and used in the United States last season, and were pronounced by all to be the *most perfect Seeding Machines* in the country. No Grain Drill ever made gave such *universal satisfaction.* It is the best force-feed in the market. Our Fertilizer Sower has a positive force-feed and has no equal in this country. Be sure and send for our new Illustrated circular, giving illustrations and descriptions of the improvements. Address

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IS THE LARGEST, CHEAPEST AND

Lightest Draft Mower IN THE World.

It lessons the expense of gathering the Hay Crop fully Twenty-five per cent. Illustrated circular sent on application. Address

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This is the lightest, most durable and economical Farm Engine made. It is from 1000 to 1500 lbs. lighter than other engines of the same power. It is warranted in every respect, and on account of improved method of utilizing steam is more economical in fuel and water. It is made especially to meet the wants long felt by Threshermen Farmers, &c., for an engine that would combine lightness with absolute strength and durability. Made in three sizes. Circulars giving full description sent on application to J. H. THOMAS & SONS, Manufacturers, Springfield, O.

Be sure and mention this paper.

GREAT WESTERN GUN WORKS

Breech-Loading Shot Guns, $20 to $300. Double Shot Guns, to $150. Single Guns, $3 to $20. Rifles and Cartridges, $3 to $75. Revolvers, $1 to $25. Send stamp for Price List. GREAT WESTERN GUN WORKS, Pittsburg, Pa.

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EXPRESSLY FOR THIS SEASON'S RETAIL TRADE CONSISTING OF

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At the Lowest Possible Prices.

SPECIAL INDUCEMENTS OFFERED TO CHURCHES, STEAMERS AND HOTELS.

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John Van Gaasbeek, Manager.

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PIANOS $150 TO $400 (with Stool, Cover and Book)—All strictly **First-class** and sold at **Wholesale factory** prices. These Pianos made one of the finest displays at the Centennial Exhibition, and were unanimously recommended for the HIGHEST HONORS. The square Grands contain Mathushek's new patent Duplex Overstrung Scale, the greatest improvement in the history of Piano making. The Uprights are the **finest in America.** Catalogue of 48 pages—mailed free.

JUBILEE ORGANS, the best in the world. An 8 stop organ only $65; 12 stops, $97—with all the latest and best improvements, possessing power, depth, brilliancy and sympathetic quality of tone. Beautiful solo effects and perfect stop action. Solid Walnut cases of beautiful design and elegant finish. Circular free. All Pianos and Organs sent on 15 days' test trial—*freight free if unsatisfactory.* Don't fail to write us before buying. Positively we offer the best bargains. **Factory and Warerooms, 57th St. and 10th Ave.** SHEET MUSIC at ½ price. Catalogue of 3,000 choice pieces sent for 3c. stamp. Address,

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Will be mailed free to all applicants, and to customers without ordering it. It contains four colored plates, 600 engravings, about 200 pages, and full descriptions, prices and directions for planting 1200 varieties of Vegetable and Flower Seeds, Plants, Roses, etc. Invaluable to all. Send for it. Address,

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GREGG RASPBERRY.

The most wonderful black raspberry known. For genuine plants, or catalogue, Send to the subscriber, who has 13 acres of them in bearing.

N. OHMER, Dayton, O.

Reading for the Young.

FLORICULTURE FOR YOUNG PEOPLE.—No. 3.

JOHN N. DICKIE.

ANTIRRHINUM (Snapdragon).—This flower is catalogued as a perennial, but I should describe it as a biennial flowering the first season. I have never been able to keep it over two years in this latitude. Seed germinates readily, but be careful not to sow it too thick. Set the plants one foot apart. In August cut the plants back and they will produce shoots which will keep green nearly all winter and flower better the second year than the first. Seed of the mixed varieties is best, as selected seed is inclined to sport.

ASTER.—This flower has been wonderfully improved of late years. It is not a perpetual bloomer, rarely remaining in perfection over three weeks; but on account of its great beauty should find a place in every garden. In order to have a continued show, sow part of the seed in April and the rest in May. Almost any of the varieties found in the catalogues will give good satisfaction; but I will name *New Rose* as a particularly choice sort.

BALSAM (Touch-me-not).—No flower can give my young readers greater satisfaction than this. They are perfectly double and grow freely from seed. Do not set out the plants before the middle of May, and when the plants make four sets of leaves pinch out the center shoot and keep the side branches well trimmed. All the Balsam requires is moisture and plenty of manure. They are, therefore, much finer in wet than in dry seasons.

BROWALLIA.—I began the cultivation of this flower about ten years ago, and expect to grow it as long as I am able to handle a hoe. The flowers are small, in color blue and white. The blue I prefer, as that color is more rare. It increases in size and beauty until frost, and can then be taken up and potted for the house. Set the plants not less than eighteen inches apart, for it will grow two feet high in a rich soil. The seed is very fine, and the plants, as they appear, very minute. Sow on the surface of the soil, and sprinkle a very little earth thereon, pressing down with a board. If you sow deep it will never appear.

CELOSIA (Cockscomb).—A well grown plant of this superb flower is worth a whole bed full of the poor things one generally sees. Seed will germinate in three or four days. Thin out well, and transplant into the richest soil you have. By good cultivation I have raised "combs" sixteen inches long with stems eight inches in width. Let us see if some of our young readers cannot exceed this next year. The tall and dwarf sorts will give equally large heads. The other special sorts advertised in our catalogues I cannot recommend.

CENTRANTHUS.—Another flower not generally cultivated. It is a continuous bloomer, and were it not that the stem is a little clumsy it would be unsurpassed for boquets. Does not require very rich soil. Is very easy of cultivation, and will attract the attention of all lovers of delicate flowers.

DIANTHUS.—The varieties known as Chinese and Japan Pinks are not fragrant but make up for this failing in habit, duration of bloom and coloring. Set the plants six inches apart and keep the seed picked off. If you neglect this they will not bloom over a month. The varieties Imperialis, Laciniatus and Heddewegii are the best.

MARIGOLD.—I cultivate but one variety of this plant which you will find in the catalogues, Tagetes signata pumila. The flower is as much of a marvel as the name, as it forms a dense globular mass as round as a ball, covered with flowers the whole season.

PANSY.—Sow seed as early as possible, and set the plants in a bed on the north side of the house or fence. Make the soil very rich, and water the plants every day or two thoroughly. This is the secret of raising fine Pansies. Water and manure—these will give your flower the envy of the whole neighborhood.

TEN WEEKS STOCK.—Truly a magnificent flower, but rather hard to succeed with. If left in the seed bed too long, the plants become drawn; and, as a rule, the seed purchased of our best seedsmen will produce a small proportion of double flowers. Still it is really worth one's while to meet with some failures in order to see a fine double Stock. I do not recommend this flower to my young readers with the same assurance as the other, but if you wish to experiment, let it be with the Stock.

VERBENA.—Seedling Verbenas are not so fine in color as those raised from cuttings, but the plants are larger, stronger and more persistent in bloom. Get the seed started as soon as possible and set the plants 18 inches apart. A bed composed wholly of rotted sod is best for the Verbena.

And now, dear young reader, I have given you a list of the best annuals for general cultivation. There are many others very desirable, and which I would not be without in my garden, but for a constant, brilliant show, those enumerated are the best. I shall conclude this series of articles with a chapter on the arrangement of flowers in the garden.

Morrow Co., Ohio.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—It gives me great pleasure to be able to write these lines to you to congratulate you on your success in forming the "Rural Horticultural Club;" and what a pleasant time you must have in reading the letters from the young members of the club, with now and then a line from the "old folks at home." But theirs no doubt are of but little satisfaction to you; yes, only a bother to you. I have but few words to say about out-door work at this present time. The severe cold has killed many so-called hardy plants shrubs and vines, but Hydrangea paniculata grandiflora must head the list of hardy or iron-clad shrubs. Roses of all kinds are dead down to the ground. I am so sorry, I will have to wait so long to see my pets again; but will place my hopes in an all wise Being that they will return in due time to make the air sweet with their fragrance.

Deutzias are too tender unless in very sheltered places. Forsythia veridissima the same. My much-petted Honeysuckle is entirely dead. I regret this as it is such a splendid vine or climber. The Trumpet Creepers are all alive up to this time. In looking over the beds of bulbs to-day, the Crocuses and Scilla also Snowdrops were making their appearance above ground and remind us of the coming spring.

Dear Uncle Mark, I wish to say a word regarding flower seeds or any other kind; now, I hope you will not consider me as a beggar of seeds, but I would thank you or any of the Rural Cousins for a few seeds of any kind they might have to spare. I only make this request having lost all such as well as other property by the "fire fiend." I well know the Cousins will return the many small favors they have received from me through the RURAL in times past. Thanking you for your kindness, I wish you success with the Rural Horticultural Club as well as other cares of life.

Oregon, Mo. J. W. MAPLE.

[J. W. Maple sent me last fall some flower seed for distribution among the Cousins. I have kept this to accompany my regular seed distribution to the members of the Horticultural Club, which will take place in a few days.—UNCLE MARK.]

DEAR UNCLE MARK:—I am only eight years old and can't write very well, but I would like to join the Club. I have a sister five years old and a brother five months old. Will some of the cousins please send a nice name for him? I am going to farm a good deal this year. We live on New River in Pulaski County, and have huge melons every summer. How we love the RURAL at our house! Sister read the last one nearly all to pieces. My grandma has a monthly rose in bloom in February. If I see this letter in print next week, I shall go out and stand on my head. I know you are sorry sister is not writing, but she has gone to Newbern to see her grandma. You have no nephew that likes you better than

Pulaski Co., Va. FRANK WYSOR.

DEAR UNCLE MARK:—I have been thinking about joining the cousin's circle for a long time, but have deferred writing until now. We have taken the RURAL for nearly thirty years, and like it very much. Maple Leaves wished us to tell about our gains and failures. I think that would be a good plan if we were all like her. "I have none to speak of." L. J. G.

Clymer, Chaut. Co., N. Y.

The Puzzler.

HIDDEN FEMALE NAMES

1. 'Twas Cass and Randolph.
2. Seat! her in Ella's milk pan.
3. Down in Cecil I asked her.
4. 'Tis best her baby should rest.
5. That parcel I am sure is mine.
6. See the gem mamma gave me.
7. A Christian asks no fee.
8. I am in earnest in excellent.
9. Hecla raised an eruption.
10. Do see me line my frock.
11. Claud, I am home-sick.
12. 'Twas well enacted.
13. It is inclement in England.
14. Anabel, virago-like she scolded.
15. I have a set of coral.
16. Don't tell Anna.
17. By holding the cord Ell aided.
18. Eliza bethought her in time.
19. Hand me the corn Ell and oblige.
20. See Liz at work.
21. A hyacinth I admire.
22. Do rally once more.
23. In castle Dora thy child is kept.
24. Ned navigated the river.
25. On the lea no roving feet ere trod.

LITTLE ONE.

A FRACTIONAL PUUZLE.

One-ninth of milk-punch; one-seventh of whiskey; one-sixth of brandy; one-third of rum; one-ninth of ginger-pop; one-eighth of sangaree; one-ninth of lager-beer; one-eighth of ginsling; one-ninth of chocolate. Take one from each and form a drink.

☞ Answer in two weeks. L.

PUZZLER ANSWERS.—Feb. 28.

HIDDEN DRUGS.—1. May-apple; 2. Rhubarb; 3. Camphor; 4. Spigelia; 5. Nitric acid; 6. Nux vomica; 7. Muriatic acid; 8. Catechu; 9. Cubeb; 10. Copaiva; 11. Tanin; 12. Lavender; 13. Ipecac; 14. Chamomile; 15. Kino.

NAME PUZZLE.—Philander; Augustine; Tristam; Reginald Ingram. Initials form "*Patrick*."

OUR WEEK'S GROCERIES.—Soda; tea; sirup; ginger; starch; yeast; salt.

DROP LETTER PUZZLE.—Do you not know, that they who minister about holy things live of the sacrifice; and they who wait at the altar are partakers with the altar. Even so hath the Lord also ordained that they who preach the Gospel should live of the Gospel.

DIAGONAL PUZZLE:

A
V I
O A R
N I L E

Primals form "*Avon*."
Diagonals form "*Aire*."

DIAMOND PUZZLE:

D
N A P
N O M A D
D A M A G E S
P A G A N
D E N
S

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Type-Setting by Steam. It has not been commonly known that type is now set and distributed by machinery. It is a very interesting sight to see the machines at work which have set the type in our "Acme Libraries" of "History," "Biography," "Classics," and *The Library Magazine*. With their aid one man does the work of five by the old hand process. One office at work for us has twenty-six of these machines already, and more are building. Probably no invention ever more severely taxed the ingenuity of man, and none was ever more completely successful.

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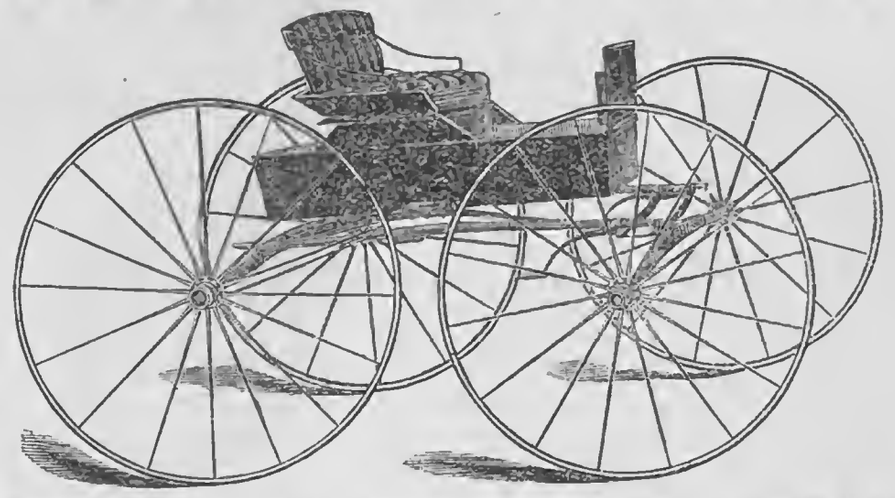

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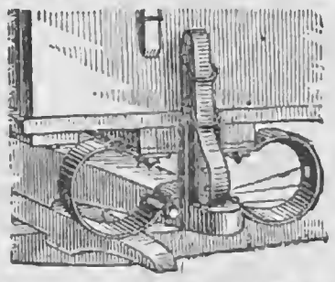

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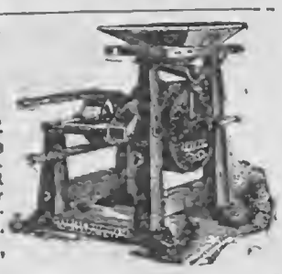

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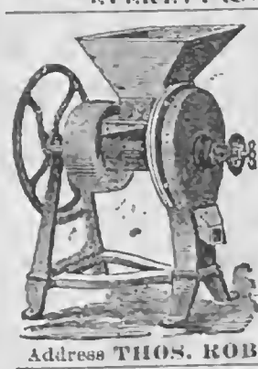

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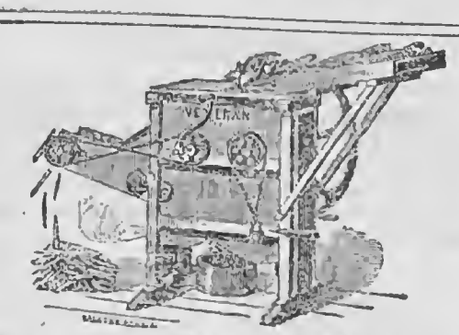

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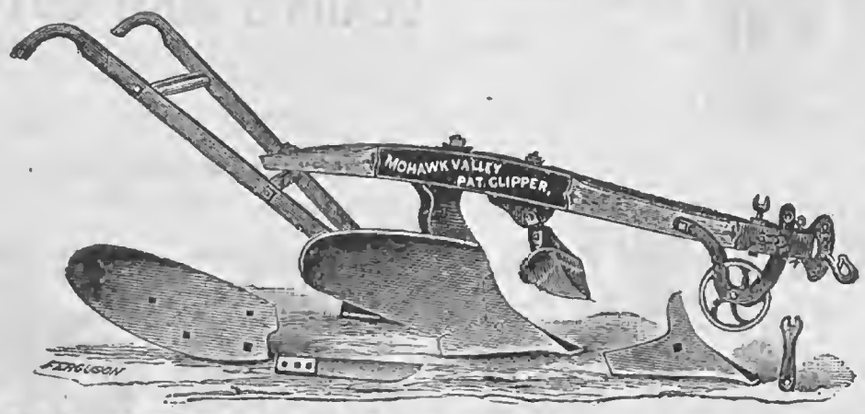

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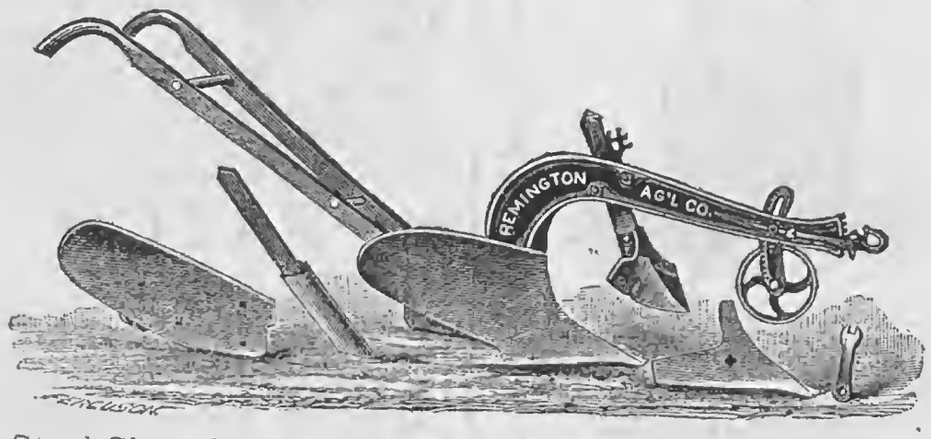

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THE RURAL NEW-YORKER

Ralph Evans

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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The Herdsman.

AYRSHIRE CATTLE.

OF the various breeds of cattle whose merits for the shambles or the dairy have won them popularity among English-speaking people, the Ayrshire is the most recent in its formation. The present century was from ten to fifteen years old before the cattle of Ayrshire, which have since become known by the name of the county in which they originated, can be said to have possessed those distinctive characteristics and that power of transmitting them with certainty to their offsprings, which would entitle them to be considered a breed. The changes wrought in the appearance of Ayrshires within the last half century, too, have been considerably greater than in animals of any other well known breed of cattle. Indeed, until the present or a very recent date, this breed may be considered to have been in a formative stage, or it may, perhaps, be more correct to say that the improvements made in it have been of a more radical nature than in any of the older breeds. As may be inferred from its comparatively recent formation, it is pre-eminently a breeders' breed, owing its origin less to environment and more to care and judicious selection than does any other breed equally well known. More than a century ago, it is true, the rough cattle of Ayrshire had a local reputation for hardy and deep-milking qualities; but the meagre descriptions that have come down to us of the animals of that day, show that they have little else in common with the peculiar characteristics that distinguish the Ayrshire cattle of to-day. How these have been inwrought into the breed is not clearly known; but it is certain that they are due in a great measure to a judicious infusion of the blood of other excellent breeds. The West Highland cattle and the Jersey, Guernesy, Short-horn and even the Holstein, are all supposed by different authorities to have contributed by direct crosses on the native rough but hardy stock, or by "dashes of blood," to the formation of the present breed, and some of the distinctive traits of all these breeds occasionally, by atavism, crop out in the modern Ayrshire cattle.

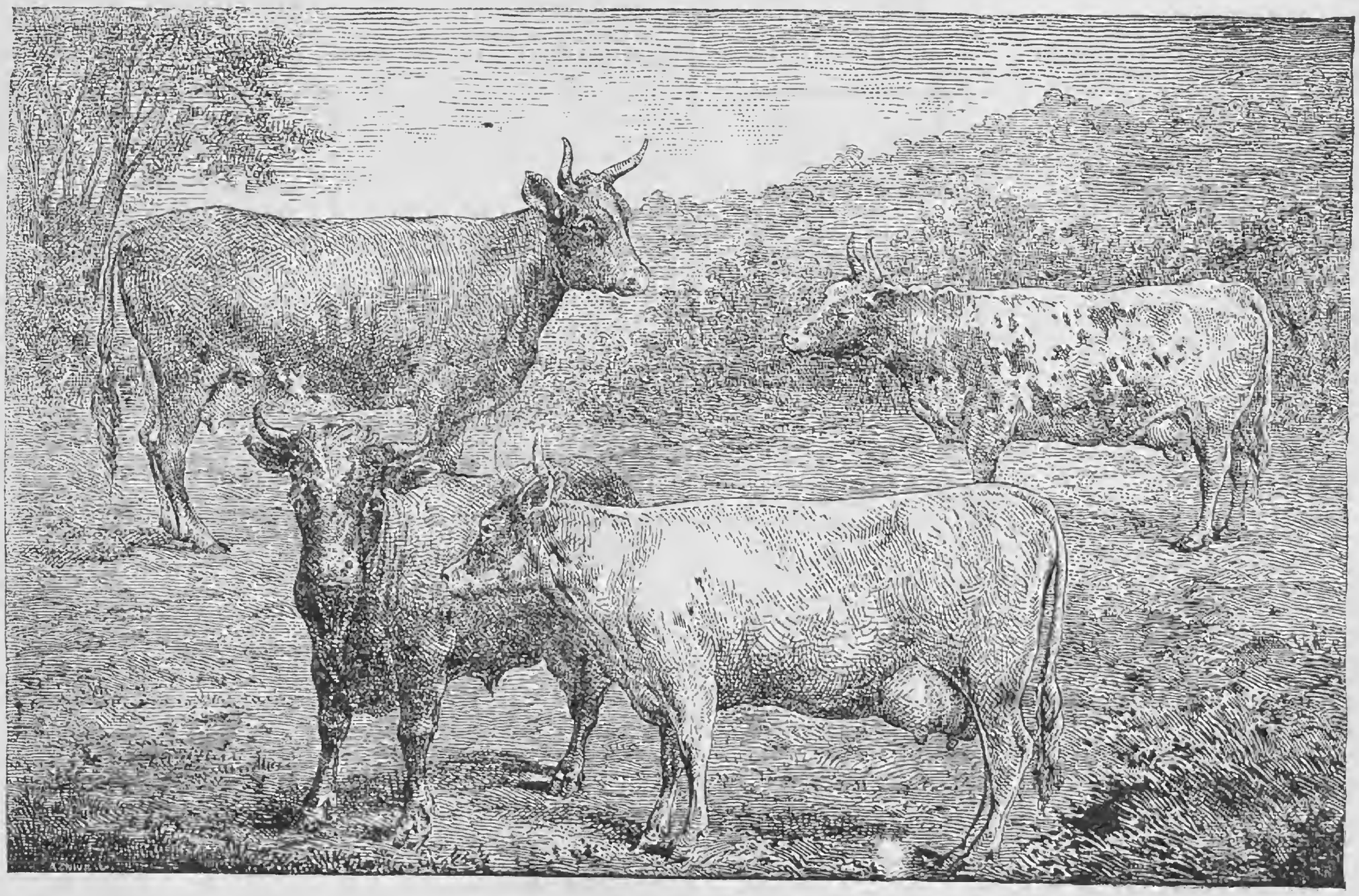
Small in size, short in the legs, excellent foragers, with fine, clean bones and not a pound of superfluous flesh about them, cows of this breed thrive and give large messes of milk where larger and less hardy animals would scarcely pick up a living. But although the Ayrshire manages to get along comparatively well on poor pastures and scanty fare, she makes a grateful return for generous food and treatment. Under such circumstances the records of the milk yields of cows of this breed compare favorably with those of any other, and in comparison with the amount of food consumed, good judges, speaking from experience with other breeds as well, declare that cows of no other breed can compete in milk yield with these. Under the microscope this milk is found to be rich in caseine and the cream globules are numerous but very unequal in size. This is generally held to be a defect of the Ayrshire as a butter cow, on the ground that cream does not rise well when the globules vary in size, nor is all the butter got out of it without skillful churning. Both here and in Great Britain, however, Ayrshires have made a multitude of excellent records as butter cows, although, it is true, their reputation for cheese is still higher.

When in milk the Ayrshire is an excellent machine for converting all her food beyond the economical requirements of her system, into milk. She lays on little or no flesh; all that goes into the month, beyond what is needed to run the machine, is poured into the milk pail. When dry, however, and well fed, she readily takes on flesh of an excellent quality in which fat and lean are much more evenly intermingled than is generally the case in the distinctively butchers' breeds. Although the meat is not laid on so heavily in prime parts as in the Hereford or Short-horn, yet it always brings a good price, and as a rule, the carcass weighs considerably more than the appearance of the live beast would indicate.

The favorite color of Ayrshires is a light brown or brown and white, though red and white is the most common. There are also among them a considerable number red, or mostly red, some white and red, a few flecked; and, now and then, a black and white or even a pure white is seen. The colors rarely mingle together, the line of separation being generally quite distinct. Dark red or black noses are the favorites; but a white nose is not looked upon as a drawback. The udder, the great point of the Ayrshire, should reach well forward and be firmly attached up to the body - not come out behind or hang down loosely.' The quarters should be alike in size and the teats be set on widely and equally apart, not hanging together under a loose, flabby bag. The head is preferably short; the forehead wide; the eyes full and lively; the horns set on wide, inclining upwards and curving slightly inwards; the neck long and straight from the head to the top of the shoulder, free from loose skin on the under side, fine at its juncture with the head, the muscles enlarging towards the shoulder; fore quarters thin in front, generally increasing in depth and thickness backwards; skin, soft and elastic; general form of body, when viewed from the side, wedge-shape. This peculiar wedge-shape form is due less to deficiency forward than to the large bulk of carcass aft.

Any faults? Yes; what is there wholly free from them in this sublunary world? The teats of young Ayrshire cows are, as a rule, inconveniently short; but with careful milking they become quite long enough after the cow has had a couple of calves. An unamiable trait common to them and their possible West Highland kindred, is a sleepless pugnacity of disposition towards each other. Although bred together, Ayrshires are always ready to rip up or gore each other when a good chance presents itself, and to prevent injury from this fault, it is advisable to screw wooden or metal knobs on their sharp-pointed horns.

The accompanying cut has been redrawn from a group of Ayrshires in Professor J. P. Sheldon's Dairy Farming, an admirable work which every farmer should possess.



GROUP OF AYRSHIRE CATTLE.—Fig. 88.

DASHES OF BLOOD.

COL. CURTIS is right, in the RURAL of Dec. 27, in supposing that the Lincolns get their name from the locality in which they were bred, as have also the Leicesters, Cotswolds, Cheviots, Hampshire and Shropshire Downs etc; but I scarcely get the drift of his meaning when he writes. "By Lincolns we do not understand a distinct breed before these "dashes" (Cotswold) were made, but a name for the sheep of a locality." If they were not a distinct breed before the "dashes" were made, how could they be afterwards? Introduce ever so little foreign blood, and your distinctive character is gone; as the Colonel truly says—they will be crosses. The produce of pure animals of distinct breeds can be nothing else but cross-bred, whether they be cattle, sheep or pigs.

Again, if a pure-bred animal of either sex be bred to natives or animals without a pedigree, the offsprings are called grades Leicester, Short horn or Ayrshire, as the case may be. Then breed that produce back again to another pure-bred and it would be called a ¾ grade and the next cross a ⅞ grade, and so on. The term "diluted cross" is generally used to indicate the one mentioned by G. G. in RURAL of the same date. For instance when Mr. Booth sent his famous cow Bracelet to Col. Craddock's Mussulman, the produce, Buckingham, was used very extensively. Mr. Booth was said to have taken a diluted cross, though in this case he was simply taking a cross outside his particular strain, not crossing distinct breeds but merely introducing blood of another tribe. R. G.

The Swine-Herd.

CARE OF BREEDING SOWS.

Practical Suggestions—Why Sows "go crazy."

COL. F. D. CURTIS.

WHEN sows have pigs they often get ugly, or as some farmers term it, "go crazy." The cause of this unnatural condition, when the mother, contrary to her maternal instincts, destroys her young, is not generally understood. Many suppose it to be pure ugliness, or "cussedness," and the frenzied mother is shown no mercy, and is condemned to be slaughtered as soon as may be. Years ago an intelligent breeder of pigs told me the cause of this trouble, and that prevention was the best, if not the only remedy. The trouble arises from constipation or from an inflammatory condition of the system. We make this nice distinction, because our experience warrants it. Constipation will, and always does produce more or less inflammation. When a sow is fed rich and concentrated food for a length of time, her whole system becomes feverish and inflamed, and at the same time the animal may not be in a constipated condition. A total diet of corn inevitably produces an inflammatory and excited state, and when the pains of parturition begin, the poor brute imagines her crying offspring, to be the cause, and in her frenzy she snaps at them with the ferocity of a tiger, and destroys them. We have known mothers thus ferocious in winter, when confined and fed on dry and concentrated food, in summer or autumn, when living upon grass or other succulent feed, to be the kindest and best of mothers. We are satisfied that there never was a sow which had young and bit, or killed them unless she was diseased.

A sow in pig should have as roomy a pen as possible. This will enable her to stir about, which is important, especially if she is to be confined in her diet to concentrated food. Such a sow should never be kept on corn alone, or any kind of grain. Oats are the safest and best if grain must be fed, as the thick skins make a more healthful distention of the bowels, and the grain is less heating than other varieties. Too much flesh is injurious. A lean sow will, as a rule, have more and better pigs than a fat one. A simple diet is the best. House slops, in which bran of some sort may be mixed are sufficient food, and healthful. The best and safest diet is green food of some sort, grass, apples, or roots. In proof of the virtues of the latter, we have never had a frenzied sow since we began feeding them plenty of roots. When we fed corn alone, such cases were common. Last year ten sows wintered on roots: all had pigs and raised full litters except one, which was injured by leaving her with the others too long, and some of her pigs being dead when born, the others were too weak to endure a cold night. Sows had pigs on freezing nights and every one lived, as they were strong and active. The feed of these sows consisted of all the swedes they would eat and one ear of corn until near the time of pigging, when they got two ears at a feeding, making six ears daily. These sows were not a year old when their first litters of pigs were born, and each one of them had second litters in the fall.

Any hog, and especially a sow in pig, should have, at least three times a week, a small quantity of charcoal. This helps to correct acidity of, and arrests fermentation in, the stomach, which is a source of diarrhea. A little sulphur is excellent and coal ashes with the cinders, are good. Pigs will pick out all the charred bits, and they act as correctives. All of the above are important if not necessary to keep a pig in a healthy condition. The best and handiest plan is to throw a bucketful of coal ashes and charcoal in one corner of the pen and let the pig help itself. The sulphur and salt may also be placed in another spot, and if they will not get wasted by mixing with the litter of the pen, several handfuls may be put in at a time, with no fear that any more will be eaten than is required. No harm will ever come on account of a bountiful supply of sulphur, salt, charcoal, or coal ashes. A small, dry bed is best, as the sow will not cramp herself up so much but lie more extended with less danger of crushing the pigs by getting on them when she moves about in the nest. The little pigs can move around with more freedom.

After pigs are born, the mother should be allowed to lie quiet as long as she will. The diet for the first week should be light so as not to create fever, or stimulate the flow of milk. After the first week the feed should be liberal of bran and corn meal. Barley and oatmeal are the best to make a flow of milk, of anything, except cow's milk. The pen must be kept clean, or the pigs will get scabby and sore. Whenever this is the case they should be washed clean in soap-suds and rubbed all over with melted hog's lard. When pigs are three weeks old they will learn to eat oats, if fed with the mother, and when they are four weeks old they may be taught to go into a pen by themselves where can be fed all they will eat. This food is perfectly healthful for young pigs, and will make them grow very fast. Corn is injurious, except given to them in a small quantity. Sows will sometimes refuse to let the young pigs suck, on account of soreness of the nipples, caused by lying in the mud or in a dirty pen. When this is the case, the sore nipple should be inclosed in a bag fitted to it and tied around the body of the sow. We once cut a nipple off to save a litter of twelve pigs, which were starving because this one was so sore the mother would not suffer the pigs to suck. This is a good way to save trouble, but the best way is to wash the udders before the pigs are born, and keep the sow confined where there will be no occasion for cracks or soreness.

A shield or fender at the side of the pen will save the lives of pigs, especially if the sow is inclined to get up and down frequently. A plank ten inches wide should be placed on one side, horizontal with the floor with the ends resting on supports so as to raise it just high enough for the pigs to slip under, and not high enough for the sow's back to get under. Make this plank fast, as it is a safe refuge for the young pigs, and will prevent their being squeezed between the mother and the side of the pen. Make the nest by this fender. Under all circumstances a sow should have a warm pen.

The Poultry Yard.

A POULTRY ACCOUNT.

IN consequence of the mild and pleasant weather we have enjoyed in this section, during the month of January, and the opportunity thus offered to accomplish a large amount of out-door work, that could not be done in severe cold weather, I have devoted my time to making needed improvements and repairs that had been neglected during the fall for want of time, and consequently I have deferred compiling the annual report of my poultry for the year 1879, until the present date.

I have received a number of inquiries from those who have taken an interest in the previous reports of my "poultry account" that have been published during the last four years in the RURAL, asking of my success or failure the past year. The account herewith published will fully answer all such inquiries. Heretofore I have stated the manner in which I cared for my fowls. There are many people who think it is quite difficult to keep a reliable account of the cost and sales of a lot of poultry. For the benefit of these I will endeavor in this communication to tell the way I keep my account:

Nearly all the feed consumed is bought, usually in half-ton lots, and is put in bins and used exclusively for the fowls. When bought, it is at once charged, and no portion of said feed is used for other stock. All sales of fowls, chickens and eggs are duly entered on a day-book of farm sales. At the end of the year this book is looked over and all sales from the poultry yards classed under their proper heads. Fowls, chickens and eggs used at home are charged at their market values.

During the year a few birds are lost in various ways—by accident, disease and other mishaps. Such losses are not included in the account, and of course their value detracts from my net profit. A portion of the roost droppings is sold; but the largest part is used; those retained are credited at the price obtained for those sold. They are thoroughly pulverized, mixed with loam and plaster, and a large handful is applied to each hill for corn previous to planting. I have been most successful by first dropping the mixture in the hill, covering it with an inch of soil and then planting as usual. Rows that were first planted and on which this compost was then thrown on the hill, did not compare favorably as regards color, rapid growth and yield, with those treated as first named.

There has been some criticism made on the previous yearly reports from this flock of fowls, chiefly from a class of men who have utterly failed to make their own poultry a source of profit, and when they read a minute and full account of what others may have accomplished where they have utterly failed, they are inclined to ridicule what they may think quite impossible.

The writer's experience dates back to a commencement with about thirty fowls kept in a 16x6 ft. house with a solitary window, 2x4 ft., and without ventilation. To this succeeded a gradual increase in numbers and large substantial poultry houses that combine warmth, thorough ventilation and plenty of glass to admit the sunshine. This system of management has fully demonstrated that no stock kept on our farms, can give so large a percentage of profit as a well kept and successfully managed flock of poultry. I present the following account to the readers of the RURAL solely for the practical information I believe it contains, and not for the purpose of "puffing" my own flock of poultry, and in proof thereof I refrain from signing my name:

Jan. 1, 1879. In account with 187 fowls:	Dr.
To 184 fowls @ 60 each	$112.20
" 96 bushels corn @ 50	48.00
" 1½ tons cracked corn @ $21.50	32.25
" 2 " wheat middlings @ $22	44.00
" 10 bushels cull onions @ 20c	2.00
" meat scraps and rough tallow	4.50
Total cost	$242.95
Dec. 31, 1879.	**Cr.**
By 861¾ dozen eggs	$186.25
" 114 fowls sold	81.10
" 194 roosters	76.39
" 215 stock on hand 60 cts	129.00
" 120 bushels roost droppings 35 cts	42.20
Total proceeds	$514 94
Deduct cost	242.95
Profit	$271.99

Walden, N. Y., Feb. 10. RURALIST.

Pekin Ducks.

In reply to F. H. D. in a late number of the RURAL, I would like to make a few statements in regard to the above-named ducks. I have raised them ever since they have been imported, as I have reared all other ducks from the common breed up, and have found the Pekin the most profitable, not regarding fancy prices, as I do not set up for breeding except in my own locality, where they are admired by every one that knows them. I have sold all I can raise, dressed, at 75 cents apiece. Have found them as great an improvement on the smaller breed of ducks as the improved breed of fowls is ahead of the common dunghill.

These are the points in their favor: 1. Their flesh in quality and flavor exceeds that of the common or of any other duck I have tried, and so say my customers. 2. They are very hardy and seem to prefer being out-of-doors the year round, and will do well with only a pan of water to drink out of, but they will keep their plumage in better color and gain half their living by a pond or running stream. 3. They are not gormandizers and do not eat any more than, if as much as, the common duck. 4. When dressed, their feathers excel those of the goose or of any other known duck, but I do not believe in picking any duck alive. (I know some folks who keep the Pekin for their feathers only.) 5. Their eggs are larger than those of any other duck, and they lay as many. Perhaps H. F. D.'s neighbor has let his Pekins run down by not introducing new blood, which can be done by changing drakes once in two or three years.

G. H. O.

Dairy Husbandry.

CREAM FOR GENERAL CONSUMPTION.

O. S. BLISS.

THE following article, written more than six months ago and intended for the Fair number of the RURAL, was recalled and withheld from publication because I was unable to find anywhere an indorser of the three theories in regard to the precipitation of injurious or offensive matter by fill milk; the impossibility of drawing the precipitated matter from under the cream with the milk; and the impossibility of deodorizing milk and cream, except by exposing it in wholly uncovered vessels or condensing the odorous gases and carrying them out in the liquid form. But in the meantime it has been shown in the use of "centrifugal," in which the pressure of the milk on the sides of the drum is 200 pounds to the square inch, while upon the bottom of the ordinary 20-inch can it is, including atmospheric pressure, only about 16 pounds, that in *all* the milk experimented upon, however carefully produced, and, though passed through "four fine metal sieves" before being passed into the machine, more or less "dirty matter," as it is called by one experimenter, or "offensive and greenish slime," as it is called by another, is invariably found on the side of the drum, which corresponds with the bottom of the can or pan in ordinary milk setting. It has also been found by scores of practical dairymen, to their sorrow, too, that the matter precipitated upon the bottoms of the "bottom skimming" apparatus, is drawn with the cream instead of with the milk as claimed. None the less gratifying and positive is the indorsement which the third theory has received. The inevitable conclusion is that both the skim-milk and the cream delivered from the apparatus described, are in better condition—freer from all impurities—than that produced by any other known process, unless it be the "centrifugal," and the most rigid practical tests verify the conclusion.

I therefore return it for publication, not with more confidence in the soundness of the theories advanced, but with less dread of the captious criticism of a certain class of obstructionists.

CREAM for the table or for culinary purposes has always been regarded as a luxury in which only the few might indulge. This, in the past, was due principally to causes which happily no longer exist, and there is no *good* reason why it should not now take the rank due to its intrinsic merit as the most healthful and in every way most valuable article of fatty food. The law of compensations is universal. If there is an over-production of butter and cheese, it is because there is a higher and better use for the product of the dairy. The fearful diseases which prevail among swine and the consumers of hog products, and the almost universal adulteration and counterfeiting of manufactured articles, not excepting lard and butter, all admonish the people to resort to the use of the simple, more healthful and more ennobling fat of cow's cream. The poor starving victims of indigestion, whose sufferings no man who has been so fortunate as to avoid them can appreciate, as they learn the virtues of pure, cold cream, will meet the producers half way, and take all they will send them in a good condition and at a reasonable price. As a food for consumptives it is better than any medicine, and many physicians prefer it to the best cod-liver oil, and for many cases of general debility it is far superior to all tonics and stimulants. It is capable of being made a most powerful agent in the promotion of the cause of temperance and sobriety, and is to-day the most promising hygienic and moral force in the hands of the people.

When my attention was directed, several months ago, to an inquiry into the conditions necessary to a more extended and general use of this very valuable product of American industry, now made economically practicable for the first time by the very large development of the dairy interest, I found a healthful public sentiment upon the subject and many persons everywhere ready and anxious to buy and use cream; but I was met at every point with the questions, "Where shall we find it?" "Do you not know that to procure an article of pure cream in a condition for any other than cooking purposes, is one of the most difficult tasks ever imposed upon city residents?" And again the question was asked "How many of the dairymen of the country produce such cream as is adapted to general consumption in its natural state? Or producing it, can put it up in a condition to go to market?"

I had for several years been devoting much time and study to the determination of the problem of economical cream raising, but I had never given much thought to the quality of cream beyond its butter content and its adaptation to the production of good butter. I had, in common with most of the world, assumed that proper cleanliness and care were all the requirements necessary so far as regards quality. But this inquiry at once led me into an entirely new field of investigation, and I found it a very broad one. Turn which way I might, I met with one or another criticism upon the quality of cream. The limitations of this paper forbid a general discussion of these, and I must pass them with only an allusion to the more important.

Much of the cream which goes to market is still that produced in common, open pans. It has the advantage of being freed from the offensive odors and flavors common to milk and of being rich in fat. It has the disadvantage of being loaded with the elements of decay, and if it does not reach the consumer already sour, and perhaps approaching putridity, it soon becomes so; and is, in fact, from the very first only adapted to kitchen use.

The opposite extreme is the cream produced by the cold process. Much of this comes from

the city milk-men; but not all by any means. Little, if any, of it ranks high as regards its butter content, and I have never seen a sample of it which was not otherwise subject to criticism. One of the largest dealers in cream in one of the largest seaboard cities, states that it is far less satisfactory than the other article to which allusion has been made. There are two principal difficulties with it. It retains all the impurities of the milk which in the open-pan system are thrown off in vapor or left in the form of precipitated matter at the bottom of the pan. It is true that in most of the cold methods an attempt is made to deodorize the milk and cream, but, so far as I know, in no single case is the attempt a success. It is a great error to suppose that mere contact of air with the surface of a vessel of milk, has a purifying influence. Such is not the case. The gaseous odors arise with the vapor of the milk, and if there is a free current of air across the vessel to serve as a vehicle and carry them off, they are removed and diffused into the atmosphere; otherwise they are condensed by contact with the cold air and sides or cover of the vessel and fall back into the milk. The "ventilators" which are usually provided for this class of vessels are good for nothing except to provide for the expansion and contraction of the air within the vessel. Air has both weight and elasticity, hence each layer or stratum of air is heavier than that next above it, and can no more rise out of the "ventilators" provided for the class of vessels alluded to than the milk itself. Deodorization in cooling vessels can be accomplished only by condensing the vapors and conducting the condensations away. The elasticity of the vapor is entirely counteracted as it approaches the cold cover of the vessel, and it has no more power to escape than water, which indeed it is.

The retention of the sedimentary matter, which is effected by most of the cold "creamers," is often a very great evil and much impairs the quality of the cream. Indeed, there is much butter thrown on the market, which is injured in the same way. Almost without exception, this class of vessels are provided with arrangements for drawing the milk from under the cream and afterward drawing or pouring off the cream, upon the erroneous theory that the precipitated matter, of which there is always more or less of a more or less offensive nature, will run away with the first of the milk. This is not true.

Every particle of the sedimentary matter is left in the bottom of the vessel to be drawn with the cream. If it were true, as has often been asserted by the men who sell this kind of apparatus, that the sediment runs out first, the hills which God decreed should stand forever would have long since been washed into the sea.

There is, of course, between these two extremes of quality much cream of most excellent quality made by one or another process, which is mostly supplied to individuals, but in some few cases is put upon the market. But it is an exceptional or special product and cannot materially affect the general market any way. If cream is ever produced, sold and consumed in such quantity as the public welfare demands at the present day, it must be the result of a greatly modified system of production and marketing. In the first place, there must be a fixed standard of quality and the product must be brought to that standard. In the next place, it must be put up in merchantable form and made a strictly commercial commodity.

The sooner city people learn that the very last person to whom they should go for their supply of cream is the city milk-man, the sooner a reformation in the quality of both milk and cream will be inaugurated.

I do not propose to offer a word of apology, and but a few words of explanation, for describing in this connection a process of producing cream which both theoretically and practically meets the requirements of the proposed trade in that commodity. When I began the investigation of the subject of cream raising several years ago, it was with no intention or purpose to develop a new apparatus, but only to develop principles and leave to others the practical application of those principles. Experience has taught me, however, that the public interest is not served by such a course; whether my own is or not, is of less importance. This investigation of the means of promoting a more general consumption of cream, to which I have devoted a large amount of time and labor, would have been incomplete and of little avail unless I had been able to point out a means of meeting the demand which may be made for it. It is of little practical benefit to make a *diagnosis* unless a remedy is also prescribed for the disease.

For the economical production of pure cream of a high and uniform quality by the cold process, for I do not find any other practicable, I construct long, na row pans, vats or troughs of moderate depth, say 12 to 16 inches, and place them in a case the lower half of which is a water tank and the upper half a refrigerator or ice chamber. Over the pans, and reaching down into the water in the tank at their sides, I place a cover so constructed that over each pan is a steep roof, upon the inside of which the vapor rising from the surface of the milk is condensed, by the influence of the ice or water, upon the upper side and carried down into the water outside of the pans. This form of cover to the pans has far more cooling surface than a flat cover and cools the milk much more economically than any other I have used, at the same time that it perfectly condenses the vapors and gases arising from the milk and leaves the cream in a much firmer and richer condition than is possible in any non-condensing apparatus, and entirely relieved of the harmful odors.

Instead of the usual method of drawing the milk from the bottom of the pans, I draw it an inch or two above the bottom; then draw the cream, and finally draw the residue of the milk together with the other matter which I do not want in the cream. The bottom of the pan is constructed with especial reference to gathering the deposits in as narrow a space as practicable. I am thus enabled to produce not only a purer cream than by any other known process, but a purer skimmed milk. It should be added that for many purposes this cream is greatly to be preferred to that which has been produced by the aid of heat, which is often offensive by reason of the scalded-milk flavor.

The best method of putting it up for market which I have met, is to draw it directly from the vat while cold into the Warren fruit glass bottles and carrying cases. In these the temperature can be cheaply and easily kept so low that the quality of the cream will remain unimpaired for weeks together. I can see no good reason why consumers should not be able to order a week's supply at a time from their friends in the country. I can see no good reason why, with refrigerator cars and cold storage, cream may not become an article of merchandise as easily and economically handled and transported as butter. The trade in *pure cold* cream is destined to reach immense proportions.

No Patent Milk Pail.—In the Rural of Jan. 10, was an illustration of Dodge's patent milk pail which is similar to one I have been using for a year or more and on which I believe there is no patent. I use cloth for a strainer instead of those commonly used. The material is such as is used for cheese bandages and is cut in squares of one-fourth of a yard. This can be folded in four thicknesses, put over the spout of the pail, (like the one in the illustration) and held in place by a tin ring fitting closely over the spout and strainer. Such a pail can be made by any tinsmith, and is as cheap as a common milk-pail M. E. M.

Pomological.

SOUVENIR DU CONGRES PEAR.

In the Rural New-Yorker of June 5, 1875, we first gave an illustration of this remarkable pear. For the present illustration of it we express our obligations to Ellwanger & Barry, of Rochester, New York, who have introduced it in this country, and who for several years past have offered it for sale. The pear from which the drawing was made is of natural size, raised in their nurseries during the summer of 1879, and weighed 21½ ounces.

SOUVENIR DU CONGRES PEAR.—FIG. 89.

The tree is a *moderate*, upright grower, very productive. To obtain good standard and dwarf trees Messrs. E. & B. are obliged to double work on vigorous kinds. The fruit grows sometimes singly, but generally in clusters of two and three from the same bud, and hangs firmly to the tree when exposed to the influences which cause other varieties to drop. The specimens, as will be seen by the cut, are large to very large, weighing from one to two pounds and larger than the Bartlett or Clapp's Favorite, to which they bear a strong resemblance. The skin is smooth, bright yellow when the fruit is fully matured, with the parts exposed to the sun brilliant red or carmine. The flesh, while it is very like that of the Bartlett, is free from its strong musky aroma, and it is firm to the core. It commences to ripen about the first of August, before the Bartlett, and extends into September.

This pear originated with M. Morel of Lyon Valre, and by him was dedicated to the Pomological Congress of France, hence its name. Messrs. Ellwanger & Barry think it a great acquisition for this country.

Horticultural.

A ROYAL SUBJECT UNDER DIFFERENT TITLES.

The Cuthbert.

If there was ever a stronger example of "persistent merit" among Raspberries than the Cuthbert, it has never come under my observation; and for this reason, too, it seems destined soon to have titles as numerous as the Czar of Russia during the reign of Alexis Michailovitch. As this multiplicity of names seems likely to create confusion (in fact, such confusion already exists to some extent), I write out these few notes in hopes of suppressing it to some extent by throwing light upon the subject; especially as the whole matter seems highly ludicrous to me.

I noticed recently in the circular of Mr. Chas. A. Green, Clifton, N. Y., now one of the most distinguished authorities on small fruits in the country, mention of a Raspberry called "Lost Rubies" with this description and note. "The Red Raspberry, 'Lost Rubies' was found growing with another variety. We hav submitted the canes and fruit to our most eminent pomologists and they cannot name it. We have fruited it four years and can recommend it as the most profitable berry we have among all the old and new. It is of the largest size, bright red, very firm, perfectly hardy and healthy; a rampant grower, and equals the Philadelphia in productiveness. Our pickers fill their baskets quicker from Lost Rubies than from any other Red Raspberry; and when not watched will often slip away to that patch." This suggestive cognomen and the description so exactly fitted the Cuthbert, and the reference to the pickers so vividly called to my mind the experience I had while superintending a gang of pickers in a patch of some acres of Raspberries, a small portion of which were Cuthberts, in 1868, that they led me to wondering if that might not be the same. I therefore wrote to Mr. Green asking him to name some of the *characteristics* of the Lost Rubies. In his reply I read "Lost Rubies entirely distinct from the Cuthbert sent me by ——— ———. The pieces of cane sent are all from one cane —the bluish bloom about the base of the cane is ever present." [That sounds like Cuthbert! I mentally ejaculated.] "I give no protection. The canes stand often six feet high." [Still Cuthbert!] "Do you know of any variety whose canes are like them?" [I do not.] "How about the Cuthbert being the Conover, and how has it been kept so long silent?" The next mail brought the canes. There they were—Cuthberts in every particular to the minutest—in spines, in growth, in form, color and arrangement of buds, in color of bark, in pith, in every perceptible thing. I went out and cut a cane of Cuthbert at random, cut it in pieces and then called in my foreman and others to separate them. No one could tell "t'other from which." I wrote Mr. Green again, sending him a cane of Cuthbert. His response was; "You have provided a key that unlocks a mystery—Lost Rubies and Cuthbert are the same. I can trace the pedigree. I have hunted far and wide for a name. Charles Downing could not name it, nor friend Purdy. Your cut of the Cuthbert faithfully portrays Lost Rubies."

Mr. Green in his first letter asks, "How has it been kept so long silent?" The Cuthbert originated with the late Thos. Cuthbert, Esq., Riverdale-on-Hudson (now a part of New York City) many years ago—twelve or fifteen at the least, and has since been subject to any amount of "wholesome neglect." As Dr. Thurber says of one of our popular Strawberries, "it persisted in speaking for itself," until it was fortunate enough to secure the audience of the worthy Editor of the Rural and now, since *he* has spoken for it, it would seem that others cannot say enough. Perhaps the Cuthbert has faults; but they remain yet to be developed. We now have it appearing east of its home as the "Conover," south of it as the "Queen of the Market," west of it as the "Lost Rubies," and I shall not be at all surprised to find it soon appearing north of it under the appellation of "Prince Imperial," or another like appropriate title. In conclusion I would add that last spring I thought both Conover and Queen of the Market were identical from the appearance of the plants of them. Cuthbert is so decidedly distinct from other Raspberries that I have had, not only conclusive evidence during last summer and autumn as to their identity, but have traced both to the garden of Thos. Cuthbert, to my entire satisfaction. J. T. Lovett.

Little Silver, N. J.

HARDINESS OF RASPBERRIES.

We have been making an inspection of our raspberry fields, to judge of the hardiness of

the different varieties growing side by side without protection of any kind, and as it may be of interest to some RURAL readers we send a short report:

Herstine, Francouia, Brinckle's Orange, and Pride of the Hudson killed to the ground. Mammoth Cluster, Gregg, Philadelphia, Brandywine, Reliance, Early Prolific and New Rochelle are all badly damaged. Doolittle and Henrietta slightly damaged at the tips, while Turner, Cuthbert and Caroline are all alive even to the tips of the very smallest canes. This is about the same as last year, except that the Gregg and Brandywine were not injured. In fact, this is the first winter that Brandywine has ever been damaged; but now many of the canes are dead half way to the ground and it causes us much regret, for until the advent of the Cuthbert, it was our most profitable market variety. Turner has never winter-killed with us, and on this account we consider it very valuable, as it is very productive, of good color, very rich and sweet, although not as firm as the Brandywine.

From our own experience in the past, and from what we can learn from others, we believe that the Cuthbert, while it may not be perfectly hardy in all sections, is more nearly so than any variety in cultivation, except the Turner, and this, combined with its large size, good quality, bright color and great firmness will make it the most popular Red Raspberry in cultivation. We intend to make a large plantation of them the coming spring. Caroline we think has not received the praise it fully merits. It is a hybrid between Brinckle's Orange and Catawissa. The plant is strong, vigorous and very productive and the fruit so closely resembles Brinckle's Orange that it would require an expert to distinguish them. With such valuable qualities as the above, combined with its extreme hardiness, we consider it one of the most valuable for home use, and if we were compelled to plant but one variety it would be Caroline. G. H. & J. H. HALE.

South Glastonbury, Conn., Feb. 27.

Farm Economy.

A COUPLE OF MOLE TRAPS.

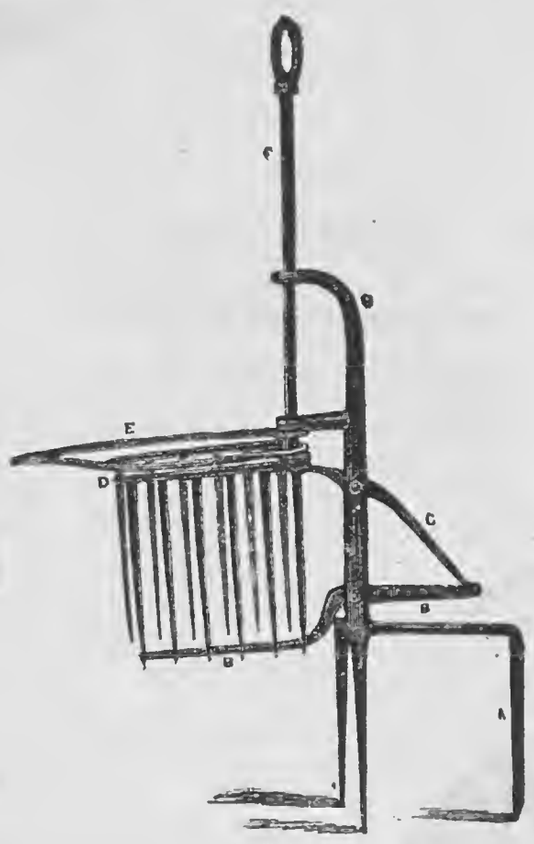
WE here present to the notice of our readers a couple of mole traps, one of which, fig. 90, was described and pictured in a larger cut in the RURAL of July 28, 1877, and the other of which, fig. 91, has been just patented by L. M. Craun, of Burgoon, Ohio. Although they differ considerably in shape, the principles on which both act seem to us identical. The following is a condensed account of the *modus operandi* of the RURAL's trap, as published in the above-mentioned issue:—

The spikes (A), three-quarters of an inch wide and tapering somewhat at the end, are pressed into the ground beside the mole-track as far as possible, so that the trigger (B) which is not yet attached to the lever (C), rests upon the surface of the mole-track, the prong-head (D) meantime being held in its present position by the ring at the top of the upright square bar (F). Now let it slip from the hand. The force of the spring (E) will drive the prongs (D) into the ground, perhaps half way. Press them entirely down with the foot, and raise and lower them several times so as to give firmness to the earth and a free passage to the prongs. Then raise up the prong-head to its present position and place the lever (C) in one of the notches of the trigger (B) according as the other end of the latter is more or less depressed. Now the mole cannot again pass through this track without so pressing upon the earth as to move the trigger (at B), which releases the lever (C) and permits the spring (E) to act, sending the prong-head into its place with great force, securely pinning (generally killing) the mole.

The following are the directions for setting the other trap:

Find a place where the mole passes frequently; press down a few inches of his furrow with the foot—not too closely, but about even with the surface of the ground. Place the trap on one side of the furrow, and at right angles to it, so that the row of spears shall come directly over the mole's path. Place a small stick or handful of dirt under the trap directly beneath the upright post. Next pass the spears into the ground with the trap closed; then raise the spears, and lower the piece through which the spears must pass, and the trap is set. See that there are no sticks or stones to hinder the free passage of the spears into the ground. If the ground is wet, or covered with tough sod, place a weight upon the top of the trap, just above the lower cleat, and let it be of sufficient heft to drive the spears down their entire length. A slight weight, as one or two bricks, should be placed on it even in loose soil.

As this device is patented, to give detailed directions for making one, might expose some infringer of the patent to annoyance and possible loss, unless its validity is tested and upset. The cut, however, leaves little difficulty on this point. When the flap, b, is raised by the passing mole, it lifts the rod, F, which "upsets" a small beveled, wooden knuckle or protuberance at I, on which the top, C N, rests.



THE RURAL'S MOLE TRAP.—FIG. 90.

This being weighted, in its descent forces the prongs r—made of stout wire—through the openings in b into the animal.

Field Crops.

SPRING WHEAT.

A. M. VAN AUKEN.

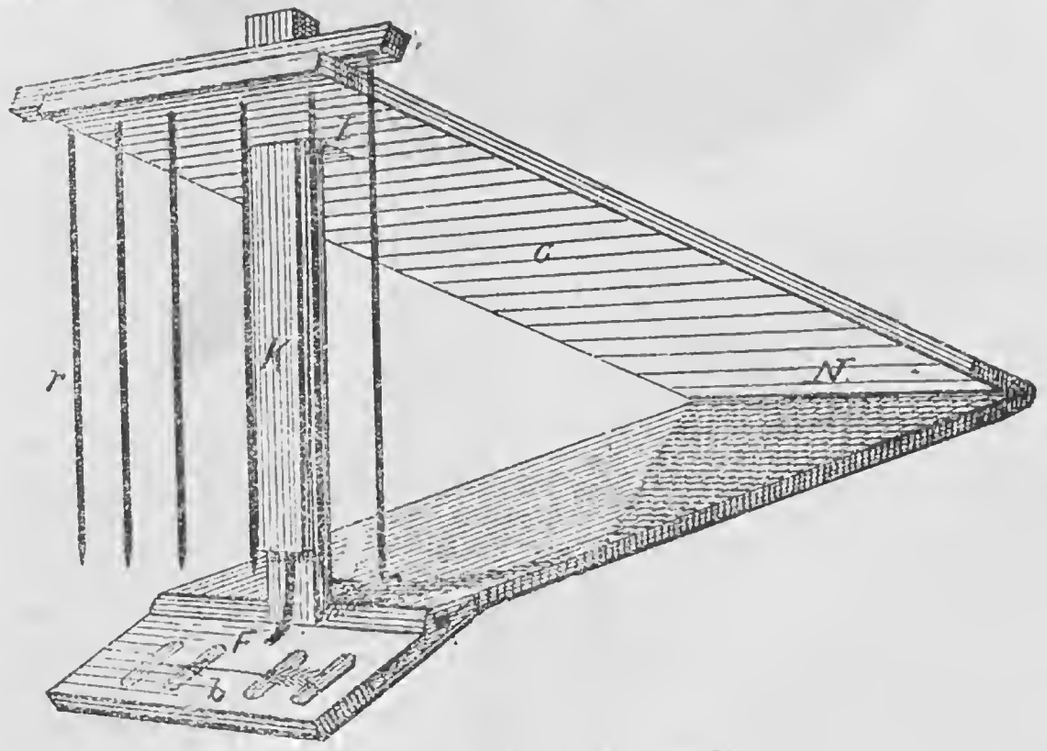
Selecting Seed.

THE seed ought really to be selected in the fall. The best way I know of is to take the wheat from the best part of the field and whip the sheaves over a barrel getting out the ripest grains. The sheaves may then be put up with the rest and thrashed with them. This is "puttering" work and will not likely be attended to in the busy harvest season.

The next best way is to leave a load of the very best until the last; put it on the top so as to be within easy reach, and thrash with a flail before the general thrashing by the machine. That thrashed by the machine is often split and broken. If you have not hitherto selected your seed I would advise that, some day when the wind draws strongly through the barn, the doors should be opened on the ground floor and with a common scoop throw the wheat in a semi-circle *against* the wind. Select that on the outside of your circle as your seed wheat.

Brining Seed Wheat.

I have always been content to sow my wheat dry; but, as it is often recommended to brine wheat, I will give the formula of a successful farmer in an adjoining county: "Procure two barrels, two corn baskets, a wash-tub, a large dipper, and a half bushel measure; also plenty of salt and an ounce of blue vitriol to each bushel. Place the tub in a convenient place with a barrel on either side of it. Make four to six pailfuls of strong brine in each barrel, with two ounces of pulverized vitriol to the pailful. Fill the tub with brine, leaving room for half a bushel of wheat. Commence washing by pouring one-half bushel of wheat into the tub near the side, in a small stream, so as to prevent the wheat carrying the lighter stuff to the bottom. Stir and skim till it is perfectly clean, putting the skimmings into the basket placed on the right-hand barrel. Then empty the cleaned grain into the basket on the left-hand barrel where it may drain until another washing is ready, when it must be thrown in a pile on the floor. Keep an account of the bushels washed, measure the refuse and you can guage your swelled wheat so as to sow the right amount per acre."



L. M. CRAUN'S MOLE TRAP.—FIG. 91.

Preparing Soil.

For full information on this subject read article by "A Jersey Farmer" in the RURAL for Aug. 31st, 1878, also the one by W. J. Fowler in same paper for Sept. 7th. I will say, in brief; plow in the fall; get one or two inches of fine soil and let the ground be hard below that. In your rotation plow deep for your corn and oats, but have courage and plow shallow for your wheat, two inches will give you good results. W. J. Jennings, an excellent farmer and a member of a Fond du Lac County farmers' Club, tells of the effects of trying the thorough-cultivation theory. He had a piece of land that seemed pretty hard; it had been plowed in the fall. In the spring he plowed about an acre, plowed it deep, made it soft and fine. He sowed it all on the same day. The yield on the piece twice plowed was about half that on the rest of the piece.

How much Seed?

Then, make the soil fine and smooth, on the surface by repeated harrowings before sowing. Get it as level as possible before sowing the seed. Then sow your seed thinly. On moderately rich soils I believe one bushel per acre is sufficient. Poorer soils need more seed; richer need less. A well developed head of wheat contains forty grains; I have counted sixty-eight in one head. If we sow one bushel per acre and each grain produces one head—if it grows it can't do less—we shall have forty bushels per acre. I have seen the statement that one bushel of wheat per acre would give one seed to every three inches square of surface. [It has been calculated that a bushel of wheat averages 556,290 kernels, and as an acre contains 43,560 square feet, if the former be divided by the latter, the quotient will give 12 grains to each square foot, or a little over one grain to every 12 square inches instead of one grain to every nine square inches as here stated.—EDS.] That is thick enough for any one. In regard to

Manuring.

I would rather use my manure on some other crop in the rotation, with the exception of plaster and salt. When wheat fails, generally it is not because the land is poor but because the plant food in it is not sufficiently available for the crop. A neighbor had a crop of wheat last year which looked fine until heading out time, but which yielded only four bushels of stuff (not wheat) per acre. In my opinion an application of plaster would have given him a fair crop. One of the best farmers in the State raised the average of his farm from seven bushels in 1866 to 33 bushels in 1877. This was on a crop of about one hundred acres annually. He attributes his success to plaster and clover. His best results are on clover sod, sowing, at the time of sowing wheat, clover and about 100 pounds of plaster per acre. One year his crop, put in in that way, was 27 bushels per acre. On the same ground a part which was plastered in June yielded 15 bushels per acre. The weight of the former was 57 pounds to the bushel, and of the latter 54 pounds. His rotation is, a clover sod, plowed after the second crop is cut; wheat with clover and plaster sown with it; two crops of clover, one for hay and the second for seed or hay as may be, and it is turned under again and is ready for wheat. He believes that Fife wheat grown on a clover sod for a number of years, can be so invigorated so as to beat any Minnesota wheat for "Patent flour."

Time and Mode of Sowing.

Sow as early as possible. If you have two inches of dry soil and frost below it in March sow your wheat. Don't sow when the ground is too wet. It is the rule to sow wheat with the expectation of a good crop, until the wild Plums blossom. As a rule the earlier wheat is sown the better will be the crop. One of our dreaded enemies is the rust, and two of the most frequent causes are, first, sowing so late that it does not ripen before cold nights come on; and second, the use of rank manures.

As I have said before, make your ground as level as possible. As to the manner of sowing, whether by hand or machine, each must decide for himself, only don't cross-harrow after the seed is sown. Do all your harrowing one way, for cross-harrowing invariably uncovers more than it covers up. Three harrowings are enough, and little enough.

Brown Co., Wis.

THE COW PEA IN ALABAMA.

A FEW words about the different varieties of the Cow Pea.

THE RED AND BLACK yield the most vine and leaf, and are running varieties. They will cover the ground and corn, and are very prolific. The seed remains in the ground all the winter and comes up in the spring.

WHIP-POOR-WILL is a bunch pea, very productive, a good table pea, yields ample vine and leaf.

BLACK EYE AND YELLOW EYE are productive in pods and vine—good table peas.

CROWDER is a large white pea, and grows so compact in pods that they are as square as dice; very prolific of vine and fruit.

THE LADY PEA is a small, yellow-eyed pea, immensely productive, and full of vine and leaves. None of the above should be planted except when the weather is warm. They may, as is our custom, be planted between the corn at the last plowing—four or five peas in a hill, either in the middle of the row or near the corn. Before the corn is ripe they will cover the ground and corn with a dense mass of vine, leaf and pods.

The best way to plant them is in drills three feet apart; the peas scattered thinly in the drill, say four or five inches apart or much thicker. As a fertilizer we have nothing that can compare with Cow-peas. They will grow and luxuriate in the poorest soil and completely cover the ground with a dense mass of vine and pods from one to two or three feet thick. In order to plow them in, a turning plow must be used, with a heavy chain attached to the double-tree or a sharp circular coulter. Wheat may then be sown and will produce on the poorest land 10 bushels to the acre. We generally give the vines a thick coat of lime before turning over; sometimes we use stone lime reduced to powder or slaked by strong brine. They form a fertilizer of great power for all plants—in fact, in conjunction with humus, the best I have ever used.

The Cow-pea makes the most delicate and juiciest beef, pork and mutton; increases the flow of rich milk, and gives golden, fragrant butter. The flavor of beef, pork and mutton, imparted by the pea, is entirely different from that of the meat of stock fed on any other food. The hulls of the peas, after thrashing, are greedily eaten by all stock. This pea is the most easily grown, most prolific, and best stock food. One bushel to the acre for broadcasting as a fertilizer is the right quantity. They sell here now at $1 per bushel. They are so plentiful in our land that even our people do not estimate them properly. As the produce is so bountiful they do not take time to gather all the crop, as they deem cotton picking more important. GEO. D. NORRIS.

Madison Co.

Miscellaneous.

WHAT OTHERS SAY.

DIRECTIONS FOR APPLYING CONCENTRATED FERTILIZERS.—[Just at this season more than any other, our readers who desire to experiment with concentrated fertilizers will find the following directions, as given by Professor G. C. Caldwell, of value. These were read before the recent meeting of the Western New York Hort. Society.—EDS.]

First.—Have unmanured plots of the same kind as those manured, and bearing the same kind of crop, so as to have some means of estimating the effect of the fertilizer experimented with.

Second.—Do not experiment with complex mixtures containing all of the three important constituents of manures—nitrogen, phosphoric acid and potash—*unless* other experiments are also tried with manures containing each one of these alone or containing two of them together, for possibly any one of them alone may make as much of a crop as all three together; and if the experiment is not so arranged as to test this possibility, we have no assurance that all three are required for a given good result.

Third—For *phosphoric acid* use a *plain*

superphosphate *i. e.*, one containing no nitrogen for *potash*, either wood ashes, unleached, or muriate of potash obtained from dealers in fertilizers; for *nitrogen*, use either sulphate of ammonia or nitrate of soda; the last-mentioned manure should be used only as a top-dressing for a growing crop. For a mixture of phosphoric acid and nitrogen, an ordinary superphosphate containing both may be used, or fine bone meal, or *rectified* Peruvian guano.

Fourth.—As to the quantities to be applied: of *phosphate*, 300 to 500 pounds to the acre; of sodium nitrate, 100 to 200 pounds; of ammonium sulphate, 100 to 200 pounds; of muriate of potash, 150 to 200 pounds; of bone meal, 400 to 500 pounds; of rectified guano, 300 to 400 pounds; of stable manure, 14 tons.

Fifth—When different fertilizers are to be mixed, be sure that the mixture is completely made.

Sixth—Apply all fertilizers that are to go on one crop on the same day, and let the entire treatment of any series of plots that make one experiment be as nearly alike as possible throughout the season.

Seventh—Commercial fertilizers or stable manure may be applied to either fruits or vegetables. In the case of small fruits or vegetables the manure should be applied broadcast and thoroughly cultivated into the soil.

Of the small fruits, the Strawberry will be one of the best to experiment with. Apple, pear, peach and other fruit trees may also receive applications over the whole ground, or the fertilizer may be applied immediately around the trees and over an area somewhat greater than the spread of the branches.

Soiling Poultry.—A writer in an exchange calls attention to this subject, and gives the following account of his experience:—"The soiling of dairy cows has come to be regarded as the true economical method of keeping them where a small amount of land is available, and the greatest production of milk possible is desired. The same principle, we think, is applicable to the keeping of poultry. In keeping a large flock of hens the manner of feeding them so as to make them profitable is an important consideration. Noticing some time ago that my flock of hens, when let out, made directly for a clover patch, we conceived the plan of soiling them on clover, and each day cut a good armful, placing it in their premises. To our gratification we found that each day every leaf was eaten, leaving nothing but the coarse stems. Bearing in mind the fact that clover contains a large amount of egg-making material, we were not surprised to notice an increase in quantity, size and quality of eggs. Our flock when offered corn, buckwheat, wheat screenings and clover, always preferred the clover. From our little experiment we conclude that one-fourth of an acre of moist ground made rich and sown to clover would yield sufficient food, with two quarts of mixed grain daily, to keep in good healthy working condition a flock of 100 hens during the summer season. We believe clover a cheaper and richer feeding material for poultry than any we have known suggested."—We find the above in the London Agricultural Gazette.

Ultimate Value of Land in the Cotton Belt.—"B. F. J." expresses the opinion, in Home and Farm, that, as successful cotton growing is very largely and purely a matter of climate; all or nearly all of the lands—good lands, bad lands, old lands and new lands—in the cotton belt proper, will sooner or later become valuable even in excess of the value of those lands which are now esteemed so much for wheat.

The New North Land.—In another part of Home and Farm, the same thoughtful writer says: Roughly described, the new country (mostly within the limits of the British province of Manitoba) lies around and north of Lake Winnepeg, and extends to and around Hudson Bay. Its southern boundary is the line dividing the State of Dakota from the British possessions of North America on the 49th parallel. Within that entire region winter never fails to put in an early appearance, accompanied with low temperature and an assured fall of snow, seldom accumulating to a great depth, but lasting from early in November to late in April. And it is from this climatic fact and circumstance that many who have given attention to the subject are prepared to admit that, sooner or later, this new north land, which in extent is equal to three or four of the prairie States, will grow into a great State so populous, productive and wealthy as to astonish the world. Given a soil of a capacity for the production of wheat, a summer climate capable of maturing it, and a snowfall which covers the fields with a protecting blanket from November to April, and there are secured the three essential elements of successful and profitable wheat growing, which, when within reach and on a scale sufficiently large, will produce this great cereal so certainly and so cheaply as to practically monopolize the markets of the world. Though the event now looks remote, and the gratuitous opinion may appear a hazardous one, nevertheless we shall venture to put ourselves upon the record with the prediction that, within a quarter of a century, and perhaps within the next ten years, the farmers of the middle winter wheat region, lying between 35 degrees and 40 degrees north latitude, will find their strongest competitors in the markets of the world to be not in California, not in Minnesota, Dakota, Kansas or Nebraska, but in the new north land about Hudson Bay. The facts and the outcome of the last few crops clearly demonstrate that spring wheat growing in the Western and Northwestern States is extremely hazardous business even on a fresh soil; and in much of this territory winter wheat growing is still more so, because there is no assured and permanent snowfall and the ground freezes dry in February.

book for the farmer, stockman and horse-owner, giving plain practical terms, descriptions, symptoms and remedies for all diseases of the horse, ox, sheep, swine and dogs by Jno. Johnson, United States Vet. Ed. of the Ohio Farmer and Practical Farmer. A little work of 130 pages published by the Ohio Farmer Co., Cleveland Ohio.

THE S. R. NYE BAY ST TE RAKE.—EIG. 92.

CATALOGUES, ETC., RECEIVED.

Note.—Readers are referred to our advertising columns for any particulars omitted in the following necessarily brief notices:

Kissena Nurseries, Flushing, L. I, New York. Parsons & Sons, Proprietors. Catalogue for 1880 of ornamental trees, plants, fruit trees, &c. Also a list of new and rare plants. The gentlemen of this establishment are well known to our readers—indeed to the horticultural world everywhere. In the introduction of our new and rare plants—especially of hardy ones—they have for years, in the face of many discouragements and at a heavy expense, worked with never-tiring perseverance and energy. The catalogues now referred to show the results of their labors. Not less than 350 really new and rare plants are named and briefly described. Important additions have been made to the Japan Maples. For the rest, there are so many plants of peculiar merits, that our readers must examine the lists for themselves.

John Saul, Washington D. C. Catalogue No. 6, descriptive of new, rare and beautiful plants—Crotons, Dracænas and other foliage plants; Fuchsias, Carnations, Verbenas, Phloxes, Geraniums, Gladioli, &c., &c. Catalogue of 118 pages.

Also Catalogue No. 5, descriptive of a select list of Roses, 15 pages.

A. C. Kendall (Late Stair & Kendall and B. H. Stair & Co.,) 115 Ontario St, Cleveland, Ohio. Business established in 1839 Catalogue (free to all applicants) of field, garden and flower seeds, agricultural implements, etc.

Third Annual Report of the N. Y. State Dairymen's Association, with transactions and addresses for the year 1879. Contents: Articles of Association; List of Officers; List of Members; Proceedings—Opening Address; President's Address; Commercial Aspects of the Dairy—Fred I. Evans; A Glimpse at Dairy Husbandry in West Friesland—S. Hoxie; Butter—John S. Shattuck; The Jersey as a Dairy Cow—M. S. Wilcox; The Dairy Interest Prof. L. B. Arnold; Mixed Farming in Dairy Districts—Hon. S. F. Miller; Feed and Care of Dairy Stock—Hon. Harris Lewis; The Unknown of the Dairy—E. S. Munson,

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The Michigan State Pomological Society is about to issue the second edition of its Fruit Catalogue, revised and improved. The first edition was issued free to all applicants and found a large demand. This year we shall ask applicants to remit a small amount to cover the cost of printing and postage. The work of compilation is a free gift to Michigan Horticulture. Any one desirous of obtaining the catalogue can have it sent post paid by inclosing in a letter to me, the address and five three-cent stamps. C. W. Garfield.
Grand Rapids, Mich.

The Homœpathic Veterinarian, a hand-

Quarterly Report of the Chief of the Bureau of Statistics, relative to imports, exports, immigration and navigation, for the three months ending Sept. 30, '79.

Geo. S. Josselyn, Fredonia, N. Y., Descriptive Catalogue of High-Class Poultry. All sorts of eggs of thoroughbreds—also, Light Brahmas, Cochins, Plymouth Rocks, Houdans, Leghorns, Ducks, &c. Free.

Bowker Fertilizing Co., 3 Park Place, N. Y.—A treatise upon the Stockbridge Manures and Bowker's Phosphates. We should like to have our readers send for this treatise. It will be sent without charge, and all may thus have an opportunity of gleaning particulars and of informing themselves as to the use of concentrated fertilizers, by the tests and records of practical farmers therein presented. The questions of "whether it *pays*" to use these fertilizers, and "how best to use them on all sorts of crops," are explained in a very plain manner.

The Thomas Smoothing Harrow; The Thomas Harrow Co., Geneva, N. Y. This is an illustrated pamphlet fully describing the above well-known implement. Among the claims made in its behalf are: its thorough pulverizing capabilities which, it is insisted, are double those of any other harrow; the successful cultivation of corn until a foot high at half the usual expense, killing all the weeds in the hill and largely increasing the yield. It is also claimed that wheat thoroughly harrowed in the spring, will produce five bushels more per acre, and that clover seed harrowed in at the same time, will not fail to "catch." There is a large amount of useful matter in the pamphlet, which is sent free to applicants.

Descriptive and Illustrated Catalogue of Patent Plantation Machinery manufactured by Geo. L. Squire & Bro., Buffalo, N. Y. This handsomely gotten up catalogue contains numerous cuts and full descriptions of coffee hullers, separators and polishers, sugar mills for animal, steam and water power, evaporators, kettles, centrifugals, juice pumps, horse powers, steam engines, water wheels, corn mills, tortilla mills, etc., all made by this old-established firm, which has deservedly won a high reputation wherever their goods have been introduced.

Illustrated Catalogue of Sulky and Revolving Hay Rakes and Portable Engines manufactured by J. H. Thomas & Sons, Springfield, Ohio. Intending purchasers of either hay rakes or portable engines should certainly write for this catalogue—which is furnished gratis to applicants—before deciding which to buy; for the fame of the Thomas rakes and engines is national—nay world-wide.

J. H. Johnson, Great Western Gun Works No. 169 Smithfield St. Pittsburgh, Pa., Illustrated price-list and catalogue of guns, rifles, revolvers, ammunition and sporting goods of all sorts.

Industrial Implements.

THE S. R. NYE BAY STATE RAKE.

Among the excellent rakes that will claim the farmer's attention next season, the S. R. Nye Improved Bay State Rake has many merits that bespeak favorable notice. It is made by the Belcher and Taylor Manufacturing Company of Chicopee Falls, Mass., a firm long and favorably known to the readers of the Rural. It is constructed of the best material and in the most workmanlike manner so as thoroughly to realize the inventor's design—a perfect rake. Among its improvements are:—bent and heavier shafts, and a new seat standard adjustable to a driver of any size. Moreover, the rake is much stronger than heretofore and therefore less liable to need repairs, every part having been strengthened where experience hinted at a weakness, and malleable or wrought iron having been used wherever there was a possibility of breakage. The peculiar shape of the teeth prevents them from scratching the ground, so that the hay is undefiled with dust, and the position of the teeth at the ends of the rake in advance of those in the center, prevents the hay from scattering or "roping out"—a point of particular advantage when raking on a side-hill or gleaning. The manner in which the teeth are held in their proper position laterally—by what is called the *guide*—prevents them from flopping about. We also notice that each tooth acts independently of all the others, so that it can pass over an obstruction 20 inches high, without affecting in the least teeth alongside of it, thus ennabling it to rake clean on rough or uneven ground. As it is dumped almost entirely by the power of the horse, a pressure of only a couple of pounds by the foot, is needed. Circulars describing several other recent improvements and containing testimonials as to the great efficiency of this rake will be promptly sent to all applicants. As the rake received the first medal at the field trials at our Centennial Exhibition, and the large silver medal and diploma at the Paris exposition of 1878, besides several other honorable awards elsewhere, we certainly think its merits should be carefully investigated by all who need such an implement.

The New Blanchard Churn.

What farmer or dairyman has not used or favorably heard of the Blanchard Churn during the last quarter of a century? But, popular as the old form has been for the last 25 years, the recent improvements are sure to increase that popularity. The other day, while noticing the fine display of dairy implements at the International Fair in this city, we felt impelled to pay special attention to this device, and the award of first premium to it since then has confirmed the favorable impression we formed of it. How often, after the introduction of some new invention or of some improvement on an old one, is the thing so evidently beneficial that there is a very natural surprise that it had not been hit upon sooner. Yet it often happens that these apparently simple successes are the results of no small amount of thought, labor and ingenuity. It is the story of Columbus and the egg repeated. The thing is ever so easy and obvious after it has once been done. So with the chief improvement in the new Blanchard. This consists of a better form of the body of the churn. Instead of the flat top of the old farmers' favorite, the top as well as the bottom of the improved article, is made circular. By this seemingly inevitable improvement all the cream must be churned alike, and at the same time, while there is no longer any need for scraping down the cream from the top and sides of the churn, and the making of streaked butter is rendered impossible. Moreover, the new form is stronger and more durable than the old. The body of the churn is made of matched staves from the best Michigan pine. The new dasher, too, being simpler than the old, less power is needed to turn it.

A Useful Device.—During the past three years we have had many occasions to test different inventions and devices, upon the Rural Farm; and it has always given us much pleasure to acquaint our readers with the results of those experiments. And perhaps of none can we speak in more praiseworthy terms, than of the usefulness of the Ingall's Patent Link, a device so simple and practical that its merits are obvious for making and repairing chains without the aid of any tool, and adjustable at once. These links can be used in any place where strength, durability and simplicity are required, and save the farmer, the contractor, the steamboat and vessel owner, many trips to the blacksmith's shop. It also takes the place of belts in transmitting power, and is absolutely safe as it never unhooks when in use, and is made of the very best material. The patentee claims a superiority over all other devices of the kind. Ask your hardware dealers for them or address, Ingall's Manuf'g. Co., Providence, R. I.

At a Trial of binders near Dunedin, Otago, New Zealand, February 10, the improved Walter A. Wood binder, was awarded 1st prize over seven machines in competition. As this is the first trial of the season reported, we are glad to give it publicity.

The Right Speedy Corn-Sheller, made by Curtis Goddard, Alliance, Ohio, is a convenient little thing for shelling small quantities of corn.

Everywhere.

TO AIKEN.

Within a few miles of Philadelphia on the Penn. R. R., the passenger may count a hundred, perhaps several hundreds of barns and other farm buildings with the sides fronting the road, painted black with white-lettered signs announcing Pectorals, Pills, Bitters and other so-called quack medicines. The travel over such central lines is very great and the advertisements are conspicuous certainly—so much so, in fact, that it is a task to look out of the windows and keep the eyes off them. One finds himself, after having passed through this country of barn advertisements, repeating "Smith's Porous Plasters," "Brown's Instantaneous Pain-killer," etc., much as one sometimes finds himself mentally humming some familiar tune that he would gladly banish from his thoughts. Of course, it is not pleasant to have one's outbuildings turned into immense advertising placards. But if the advertisers pay for the space in anything like the proportion charged by newspapers, such signs must very soon pay not only for the barns but for the entire farms.

South of Washington, or perhaps I might better say, Richmond, the railroad to Aiken passes through a country remarkable mainly for its poverty. One involuntarily asks himself: "Why is this desolate country inhabited at all?" It seemed as if the owners had fled from it and that a few poor laborers had been left to live as best they might upon the land or to starve to death. Occasionally I saw a poor old mule (it seemed to be the same one always) with head nearly to the ground, drawing a plow at the apparent rate of one mile per hour. Sometimes big-headed, gaunt-bodied pigs were to be seen meandering through the pine woods or barren-looking fields as if waiting for something to turn up—or to die; they looked to be indifferent. Thus over an immense area of country a startling picture is presented of a desolation which it would be hard to describe.

Aiken.

If this were not a health resort, it would not be anything. The city consists of one short street of stores, a few respectable dwellings—for the most part private boarding-houses—and a substantial hotel capable of accommodating 350 people. Strange to say, in the grounds about this hotel, excepting a few "Pride of India" trees (Melia Azedarach), there are neither trees nor shrubs; neither flowers nor lawns. There is no grass. Oats are sown in the fall and now cover the ground with a foot of fresh, green leaves. After the crop has been harvested, nothing remains but the oat stubble through the summer during which term the hotel is closed. The thermometer during the several days of my visit here (March 4th) has averaged over 70°. The air is dry and balmy and we sit out on the piazza during the evenings until bed-time, usually without an overcoat. Green peas are in blossom, potato vines a foot high. Plum, peach and apple trees are in blossom. Verbenas bloom throughout the winter. Bananas left in the open ground, are now putting forth leaves. Roses are blooming in abundance. Grape-vines are starting into leaf. Still the general appearance of the fields and woods is much like that of winter.

March 8. MAJOR.

RURAL SPECIAL REPORTS.

Ga., Washington, Wilkes Co., March 7.—This has been the mildest winter here within the recollection of the oldest inhabitant. I have in my garden radishes and lettuces large enough to be cut, and some ripe Wilson strawberries. Spring turnips are making fine headway. Peaches and Plums are in bloom, and some trees in the woods are full of young leaves. The wheat and oat crops are looking fine and are in an advanced condition for the season. A good many farmers have planted their upland corn, and are rapidly preparing for King Cotton. J. C. D.

Ind., Roanoke, Huntington Co., March 5—We have had a *soft* winter so far, mud and rain have made the roads almost impassable. The condition of live stock is from fair to middling. Wheat is worth $1.25@$1.30; corn 40c; oats, 35c; clover seed, $3.60@$3.75; timothy, $1.75@$2.00; flour, $7; bran, $14; potatoes, 60c; eggs, 10c; butter, 15c; chickens, 4c per pound; hogs, $3.50@$3.80. A. C. H.

Iowa, Cass Co., March 6.—For the past two months the weather has been delightful. Fall wheat has been hurt somewhat by the open winter. The prospect for fine crops of fruit of all sorts never was better. In 1878-9, however, our fruit was nearly killed as late as May 1st. Last year corn here was an average crop; wheat half a crop. Corn now sells for 25c; wheat, $1; potatoes, 40c. T. H. H. B.

Kansas, Parkersville, Morris Co., March 4.—Wheat looks fine and is as green as in April. Some spring wheat has been sown. The prospects are still good for a large crop of fruit the coming season. The changeable weather we have been having has produced a great deal of sickness. But the most prevalent disease is measles accompanied with a very bad cough. Buyers have bought and shipped all the hogs out of the country and our merchants are now sending to Kansas City for bacon. Hogs and beef cattle bring good prices now. Wheat is worth 90c to $1.05; corn, 23c; oats, 25c, and potatoes $1.00 per bushel. There are two fair Associations in this county, and each holds an exhibition every fall. As most other fairs, they give the largest premiums to men who run and trot horses. The premiums offered for farm produce are so small that no farmer takes any thing to the fair unless he takes pride in doing so; for the premium he gets does not pay for the trouble of getting produce ready; but the premiums offered for races are quite attractive. J. E. R.

Kansas, Larned, Pawnee Co., March 4.—We are having a dry, open winter. Wheat looks very well. The outlook for it is as good as it was four years ago. Some of the early pieces are being hurt by the dry weather. All of the late-sown is stooling out nicely. We have had only one little shower of rain since the 12th of November, and only about four inches of snow. The corn crop last year was a failure, owing to the worm eating it up after it was grown. Rice-Corn was a good crop, and our farmers have learned that they can raise big crops of it even with but little rain. The larger portion of the crop was planted after crops of broom corn or sorghum, and therefore was mixed a good deal, as it readily "mixes." We raise both red and white. Several parties raised crops of the white that thrashed over 40 bushels per acre. Two to three seeds were planted to the hill, and there were from five to seven heads. The sucker heads were smaller. I had a small piece of ground that was plowed June 30, and planted July 1 and 5; the crop matured and was ready to feed the hogs by Sept. 26, as it was then in the dough. For a fodder crop nothing beats it, as one half bushel sown per acre will yield from five to seven tons of choice fodder, and the stock eat up all the stalk except a small piece of the butt end. We have organized a sorgo-sugar factory in this county, and it is meeting with a big success among the farmers, as the cane is a sure crop and will grow even if the weather is dry. S. S. D.

Ky., Milton, Trimble Co., March 6.—Contrary to the predictions of Tice, Ventor, B. F. J. and others, that we would have a cold winter to match that of '78-9, as "seasons went in pairs," we have had one of unprecedented mildness. The mean temperature of January was 59.13 degrees Fah. and that of Feb. was 41.17 Pansies have bloomed in the open ground every month this winter. We have also had one or more thunder showers every month since last September. Wheat that was apparently killed last fall by the fly, is now as green as grass, and promises a good crop. Our pastures present the appearance of May instead of March. Fruit-men tell us they still have good prospects for an abundant crop. I held my hogs through the "temporary depression" last fall (as the Rural called it) and was rewarded by getting almost five cents per cwt. increase. Tobacco growers are preparing for an unusually large crop. One of my neighbor German boys sold four hhds. in Louisville last week that averaged $14.50 per cwt. all round. The crop brought him $550, and was grown on a little less than four acres. Of course, he is going to grow ten acres this season. S. E. H.

Ky., Owensboro, March 7th—We have had an unusually mild winter. Some rose bushes have retained green leaves all through the season and peach trees have been showing red for nearly three weeks in protected situations. Peaches have not been injured so far as I have been able to examine. Wheat is looking well. Some oats have been sown and some plowing is being done between showers. J. H S.

Miss., Okolona, Chickasaw Co., March 6.—We are having very fine spring weather—warm enough for April. Farm work is very forward. Corn planting has been begun and will be finished in a week, except on low lands. A. M

New York, Sharon Center, Schoharie Co., March 3.—We are having every indication of an early spring. Robins and blue-birds are here; the weather is warm and spring-like; in fact, the whole winter has been more like spring than winter. Grass and grain have suffered severely from the bareness of the ground and the constant freezing and thawing. Should the weather be as unfavorable for the next two months as it has been so far, winter grain will not be half a crop here from present indications. It is a great deal too soon yet to predict with any certainty the immense crop of wheat spoken of in a late Rural. A few years ago I paid $6 for about two bushels of potatoes of six different kinds, and to make them go as far as I could, I cut them in pieces of one and two eyes, and planted one piece in a hill and harvested the best crop of potatoes I ever raised. Since then I don't put two and three small potatoes in a hill, as I was taught when a boy. I shall cut all my Beauty of Hebron I raised last year from the one you sent me, into one-eye pieces and plant one piece in a hill. Last spring I thought I would try drilling in my corn. Some of the wise ones said I would never do it again, and I must confess I thought so too at one time; but when I harvested the crop and found I had the best yield of both corn and stalks I ever raised on the same ground, I made up my mind to plant in no other way. My corn was very fine and ripe, and it was a poor corn year, too. I found five ears and three stalks from one kernel of seed. I now have hanging up three stalks with 10 perfect ears of corn grown from one kernel of Blount's corn. Incog.

Penn., Rochester's Mills, Indiana Co., March 8, 1880.—This winter has been a bad one for hauling, there being but little snow. This is a forest county, but the forests are disappearing. There has been a heap of timber cut the past season, but it will not all go to market, for the roads have been too bad for hauling. Wheat looks pretty well, and a large acreage of it has been sown. The prices are:—wheat, $1.25; oats, 35c.; corn, 30c.; rye, 75c.; eggs, 10c. ₱ doz.; butter, 18c. Oil has been found about 15 miles from here, in Jefferson, Co.; the well is said to turn out 60 barrels per day. F. H.

Tenn., Humboldt, March 6.—Warm and very wet for the past month. Early-sown wheat is rusted and thought to be seriously damaged. Native Plums and Apricots are blooming. Before this is seen by Rural readers the trees here will have put on their green spring dresses. Clover and Grapes have been growing all winter. B. F. T.

Texas, San Antonio, Bexar Co, March 4.—The weather is fine; grass is growing fast. Corn is mostly planted. We shall commence planting cotton in a few weeks. I planted sorghum yesterday. Farmers here plant it in drills or broadcast for green fodder. It can be cut from two to four times. It is very good feed for pigs; there is nothing which they like so well and they fatten on it. G. W.

Utah, Ogden City, Weber Co., March 4.—We are generally blest with a variety of weather here during winter, and this has been one of the old-fashioned sorts. We have had the cold wave with snow at intervals, but the snow wave commenced on the night of the 22d ult. and lasted until the morning of the 26th, terminating with a cold, piercing wind from the north. Everything seems dull and dreary under the circumstances. However, there are good prospects for plenty of water for irrigation this coming summer, and the gardener and farmer expect a good harvest. W. J. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

Caponizing Fowls.

D. B. C., Mt. Union, Ia, asks 1, how to caponize fowls; 2, where can the proper instruments be procured; 3, can turkeys be caponized.

Ans.—The best birds for capons are the large breeds, Asiatics or Dorkings. They should be two to three months old. Before the operation they should be deprived of food for from twenty-four to forty-eight hours, so as not to have their bowels distended. The bird to be operated on, must be fastened down on his left side to a board or bench through an auger hole; the wings should be drawn together over his back and well secured; the legs drawn backward, the upper one drawn out furthest and secured. The feathers must be plucked from the right, or upper side, near the hip joint, on a line with and between the joint of the shoulder. The space uncovered should be about one and a-half inch in diameter on an ordinary-sized bird. Draw the skin of the part backward so that when the operation is finished, the skin slides back to its natural position and covers the wound in the flesh, and does *not*, when neatly done, require sewing. Make an incision with a fine sharp penknife (or proper instrument is best), between the last rib and hip, commencing about an inch from the back-bone; extend it obliquely downward, from an inch to an inch and a-half, just cutting deep enough to separate the flesh; take great care not to wound the intestines. The wound must be kept open with an instrument with a spring, called a retractor, or with something answering the same purpose, stretching it wide enough to afford room for the work. Then, carefully cut the membrane covering the intestines which, if not sufficiently drawn up, may be pushed towards the breast-bone lightly by a spoon-shaped instrument, or the handle of a tea-spoon. The organs to be removed are readily recognized—a small reddish-yellow cylinder attached to the spine on each side, covered with a fine membrane or skin which must first be removed with forceps and a fine hook to draw it away. With the left hand introduce the bowl of a spoon (an instrument is made for the purpose) under the lower or left testicle, which is generally a little nearer to the rump than the right one. Then take the instrument called a cannula, which is a hollow tube with a horse hair passed through it, forming at the end a loop which can be tightened by pulling on the two ends of the hair at the other end of the tube. Pass this loop around the testicle with the help of something to place it in position, the cannula has a hook for this purpose, so as to bring the loop to act upon the parts which connect the organ to the back. Then by drawing the ends of the hair-loop backward and forward, and at the same time pushing the lower end of the tube or cannula towards the rump of the fowl, the cord or fastening of the organ is severed. A similar process is then to be repeated with the uppermost or right testicle, after which any remains of the organs, together with the blood around the wound or at the bottom, must be removed with the spoon. The reason for operating on the left or lower organ first is to prevent the blood from covering the lower one if left last. When the operation is performed, which if skillfully done occupies but a few minutes, the retractor is taken out and the skin drawn over the wound, which if it was drawn on one side before cutting (as mentioned above), will connect at a place not exactly opposite the wound in the flesh, thereby covering the flesh wound. If skillfully done it requires no sewing. The old French system was to operate on each side of the fowl, but the system here described is considered an improvement on the antiquated Gallic method.

2. Suitable instruments can be got from the Poultry Monthly, Albany, N. Y., or from the Poultry World, H. H. Stoddard, Hartford, Conn. 3. We have never heard of caponizing turkeys, though it probably can be done; but as the build of a turkey is quite different from that of a fowl, it would involve some surgical experiments which would, most likely, entail some loss, and the benefit would, in all probability, not equal that from a caponized fowl.

How to Make a Small Orchard in the Far West.

R. R., Greenwood, Ark., says: "I am just opening a new farm. Have 10 acres cleared and under fence, which have been cultivated in cotton five or six years. Wish to devote one acre to fruit trees:—Apples, Peaches, Plums, Pears, Persimmons, Cherries, Apricots—in fact all kinds of fruit that do well here. Will you please advise me how to proceed—what proportion of each do I require. One-half of the ground I desire to use for a garden and vegetable patch, and the rest for peanuts, while the trees are growing. The field has a gently rolling slope to the north; soil, sandy loam. The higher portion of the lot is somewhat rocky. The soil is partially made by the decomposition of the various rocks and shales of the great millstone grit formation which is annually washed down from the mountains, making it very rich and admirably fitting it for the growth of an orchard and vineyard."

Answer by Ex-Gov. Furnas, of Nebraska.

The proposition is not sufficiently definite to enable one to reply in a way at all satisfactory. Is the undertaking for "profit," or "pleasure," or for both? Again, if for profit, what is the character of the market relied upon? As a rule, among fruit consumers apples are the staple fruit and should preponderate. The orchard or ground in which Apples, Plums, Peaches and Cherries are planted, can be used for at least ten years for all small fruits as well, at the same time. The proportions of large fruits recommended would be one-half for Apples, one-fourth for Peaches, the other fourth about equally divided for Pear, Cherry, Plum, Apricots and Persimmons, as the taste or inclination of the planter might indicate Then, between the rows, and between the trees in the rows, plant small fruits. Preferably the rows should run north and south, for by that arrangement better effects from the *sun* would be secured. In addition to small fruits between the rows, vegetables may also be planted. By using all the space between the trees for vegetables and small fruits, prime cultivation is thereby more certainly secured, which is essential in obtaining any character of product from the soil. If profit is sought, early returns must be desirable. Therefore vegetables first and small fruits next must be relied upon, at least until large fruits come into perfect bearing. One should not think of dividing the ground in reality—one-half to fruits and one-half to garden. But plant all to fruits—large fruits—and occupy all the intermediate space with vegetables and small fruits. With this close use of all the ground, do not forget *the soil must be fed*, if growth is to be kept up and satisfactory results obtained. The "lay of the land" and the character of the soil as indicated, ought, with reasonable attention, to satisfy even a fastidious experimenter or cultivator.

Angora and Cashmere Goats.

L. R. S., Phœnix, Arizona Ter., asks whether Angora and Cashmere goats are identical; if not, what difference is there between them; 2, which would be the more profitable for wool; 3, where can the wool be sold, and at what price.

Ans.—The Angora and Cashmere goats are

often confounded, but they are really quite distinct, the former being a native of the eyalet of Angora in Asia Minor, about 220 miles E.S.E. of Constantinople, and the latter a native of Cashmere, Thibet, Tartary, and Mongolia. The Angora's hair covers the whole body and a great part of the legs with close, silky ringlets. It is composed of two kinds, the one short, coarse, and of the nature of hair, lying close to the skin; the other long and curly, and of the nature of wool, forming the outer covering. Both sorts are used by manufacturers, but the latter, of which the bulk is much the greater, is much the more valuable. The average clip, which is taken in the spring, amounts to about 2½ pounds. The best quality comes from castrated males, females producing the next best. The Cashmere goats have delicate heads with long, wide, semi-pendulous ears. The hair varies in length, fineness and color with different animals. As in the Angora, the coat is composed of two materials; but here it is the under coat that resembles wool, and the outer, hair. The inside one, always of a uniform grayish-white tint, is beautifully soft and silky, and of a fluffy description, like down. The inner coat only is sold, and this, which is combed out in spring, in a good specimen weighs half a pound. The Angora goat was introduced into South Carolina in 1849, and from that and subsequent importations it has been pretty widely destributed over the country since. It has thriven best in California, but even from there the latest accounts of its profitableness are not encouraging. A few of them among sheep may be useful, however, beyond the intrinsic worth of their fleeces, as they are said to be a sure protection against dogs. There is no regular market in this country for their wool, which is known as mohair. The price ranges from 40 cents to $1 per pound; the factories—of which there is one at Jamestown, N. Y., and others in Philadelphia—paying about 60 cents to 65 cents. The fleeces here are very uneven, and generally of poor quality, and imported mohair is generally used. Cashmere goats were introduced here by Dr. J. B. Davis, of Columbia, S. C., some years ago; and from that place the stock was introduced into Tenn and some other States; but it has greatly deteriorated everywhere, except perhaps in California; and from there no late accounts have reached us on the subject.

About Sorghum.

H. B., Greenville, S. C., ask 1, which is the best variety of sorghum for that section; 2, where can seeds be had and at what price; 3, whether any work treating of the subject has been published.

ANSWER BY C. M. SCHWARZ.

The best varieties for any section can only be found by actual test in planting several of the best known. I would recommend the three best for sugar and sirup, commencing with Early Amber as the first to ripen, although not yielding quite as much as the later, nor as much South as it does North. Next comes Early Orange, stalks short but heavy, like those of the Liberian of which it is a cross, ripening 12 to 15 days later than Early Amber, Honduras is next, the latest but largest of all, but I would not recommend it north of the latitude of St. Louis. For sirup alone the Liberian is perhaps the best; it will not make sugar, but stands any amount of rough treatment. It is for that reason called the lazy man's cane. The comparative yield with me this season (being a very dry one) per acre in gallons of heavy sirup, was:—Early Amber, 150; Early Orange and Liberian, 190; Honduras, 230. 2, I can furnish seed of either at 40 cents per pound by mail postpaid; 20 cents by express; 10 pounds or more, 15 cents per pound. 3, The proceedings of the Miss. V. C. G. Association, published in book form by I. A Hedges St. Louis, Mo., price $1, is perhaps the best for general information on the subject. Blymyer's Annual on Sorgo, can be had free by addressing Blymyer M'f'g Co., Cincinnati, Ohio.

The best results are obtained here by planting in drills averaging two stalks to the foot in the row, and rows three and one-half to four feet apart. Cultivate like corn, but the seed should be covered very lightly. The crop is not to be worked after it is four feet high. A nice-looking sirup can be made by rapidly boiling down the juice without the use of lime or other re-agents; but this will not remove the objectionable sorghum flavor, and to defecate successfully requires a good deal of experience. To defecate well, heat the juice in a plain pan to 180° Fahr. to coagulate the vegetable albumen; then mix in milk of lime 12° or 15° density of Beaumé saccharometer, 3 to 5 pints to 100 gallons of juice—the quantity varies with cane grown in different soils. Bring to boiling heat and draw the fire—it should not boil. In a few minutes the scum may be taken off and the juice run out to settle.

To retain a light color the juice should be made slightly acid again before evaporating. Dilute sulphuric, muriatic or citric acid, or good vinegar can be used for that purpose, but it must be borne in mind that those acids can only be used for sirup; they will invert the sugar. I did not mention the porous alum compound for the reason that it is troublesome for beginners to use. I would not advise these to defecate unless they have first had a chance to see it done by an expert. This will of course exclude them from making sugar.

Edwardsville, Ill.

Thumps in Horses.

W. M. K., Washington, D. C., has a young horse that puffs and blows very hard after having been driven briskly for a mile or two. During the warm weather last summer he did not blow under the hardest driving but began to puff just as soon as cold weather came on. After long or constant driving he gets a "second wind," and stops blowing. On the second day lately after having been driven hard, he seemed affected with the "thumps," but later on, seemed to be all right, and the ailment and a remedy are sought.

ANS.—This trouble arises from functional disorder of the heart, and is known as thumps. The blowing is caused by interference with the action of the lungs by the interrupted circulation. The action is intermittent and irregular and usually comes on after some excitement, such as severe work or rapid movement. The proper treatment is to keep the animal quiet for a time, during which a regular course of sedatives and tonics should be administered. These consist of 15-grain doses of digitalis given three times daily for a week, and then half a drachm of iodide of iron with four drachms of powdered gentian root given daily. The feeding should be the most nutritious and digestible; for instance, ground or crushed oats, sound hay and, once a day, two quarts of linseed steeped in hot water for 12 hours, with two quarts of wheat bran alternately.

Mixing Cream from Fresh and Farrow Cows.

M. B., Andover, N. Y., asks whether the cream from a farrow cow's milk mixed with cream from a fresh cow's milk will make the same amount of butter as if the cream from each cow were churned separately.

ANS.—It is impossible to say precisely, because the conditions are such that no exact result can ever be known and only relative knowledge can be gained. Thus we may add the creams together and churn them and produce so much butter; but it is obvious that we can go no further, and cannot tell what would have happened had the creams been churned separately. We may also churn the creams separately and get so much butter, but we can never know what the result would have been had the creams been mixed. A good many years' experience confirms the opinion of the writer that more butter is made by mingling the cream of a herd than by churning separately. Sometimes a farrow cow's cream will not churn alone, but will make butter when mixed with other cream.

Treatment of Corns on a Horse's Foot.

W. H. J., Newark, N. J. asks how to treat a corn on his horse's foot.

ANS.—Corns in a horse are different from those on the skin of a human being. They are first produced by blows or bruises which start inflammation and the formation of matter under the sole, or cause a deposit of horny matter which presses upon the sensitive inner parts of the foot. They are frequent in flat-footed horses, the frogs of whose feet have been pared away so as to bring the sole to the ground and subject it to continued bruises from stones. The usual mode of shoeing is one that protects the tender spots on the sole from blows in traveling. This is to put a shoe of sole-leather under the iron shoe and stuff under the leather with tow soaked in glycerine to keep the sole cool and moist. If the sole is very tender, the feet should be prepared for shoeing by keeping them upon a puddle of wet clay for a few days, and by frequent dressings of cold water and by giving the horse a cooling medicine, as eight to twelve ounces of Epsom salts.

To Make a Hot-Bed.

L. G., Brownsboro, Ala., asks how to make a hot-bed.

ANS.—Dig out a pit two feet deep, six feet wide and as long as needed, line the sides with rough boards which at the front, or toward the south, reach three inches above the ground and at the back nine inches above ground. Fill this with a mixture of stable manure and leaves which have been turned over a couple of times so as to be heated uniformly throughout. Put on six inches of light soil, and when this is uniformly heated and the heat in the soil has fallen below 90 deg, as shown by the thermometer, the seed may be sown. Hot-bed sashes can be bought already made at sash-and-blind factories; the usual size is three by six feet. When the soil is ready to plant, strips should be nailed across the frame on which to slide the sashes. In the North the depth of the bed should be 2½ to three feet so as to allow room for a sufficient amount of heating material After the plants are up give air liberally by raising the sashes.

Roots for Sheep.

J. S., Kendallville, Ind., has 200 head of sheep, all of them ewes, and having this spring felt the need of roots for them, he asks which would be the best kind for them; will one acre produce enough for such a flock; how much seed should be used per acre.

ANS.—Raise the Kinver Yellow Globe or the Long Red mangel. One sheep will eat a peck of cut roots per day; 200 sheep will eat 50 bushels daily or 5,000 bushels in 100 days, but two quarts daily will give an excellent supply of this kind, so that about 1,200 bushels would be the smallest allowance for this flock. A fair crop would be 800 bushels per acre. If the seed is sown by hand in the drills, six pounds per acre will be sufficient; sow as early as possible after the ground is in good condition for working.

Crippled Hogs.

M. W., Laporte, Neb., asks what ails her hogs; they first lost the use of their hind legs and then of their fore legs and are badly crippled up. They were doctored for kidney worms, without any good results. Their appetite is good, however.

ANS.—We would certainly advise the removal of these swine to higher ground and good beds as well as cover from inclement weather. Then give a full purgative, as castor oil, three to five ounces, according to size of animal. Afterwards give tonics twice a day—either sulphate of iron, pulverized and one-half teaspoonful mixed with feed, or tincture of nux vomica, one-half ounce doses. Perhaps a blister over the spine will be required if the pig is very sick.

Miscellaneous.

J. G., Fremont, Minn., asks, 1, whether European carp would thrive in a pond 12 rods long, five rods wide and 12 feet deep in the deepest part; 2, where can they be had; 3, where can the veterinary works referred to in Querist Department of RURAL for Feb. 14, be purchased.

ANS.—1. European carp will thrive well in any pond in which the water is not too cold. A temperature of 60 degrees suits them best. A deep pond would be necessary in Minnesota where the climate is cold in the winter. Vegetable food is required and a swampy shore or muddy bottom with water plants, is the most suitable. 2. We do not know where they are to be procured. Perhaps the Commissioner of Agriculture at Washington can inform you. 3. Any book referred to in these columns may be procured through any local bookseller from his New York agent or from the American News Company, New York. The latter will also tell the prices.

A subscriber—no address—complains that some inquiries sent us formerly were not answered, and asks, 1, do fancy-foliaged Caladiums blossom; 2, is there a spotted Calla; 3, should the young bulbs that form round the roots of a Calla be removed: 4, the name of a plant a specimen of which was sent us; 5, what will thoroughly clean a blue cashmere dress without injury.

ANS.—We have frequently said here that the name and address of each inquirer must be sent to secure attention to his or her questions; the non-compliance with this rule was probably the cause why the former questions were not answered. 1. They are phænogamous or flowering plants, but do not usually blossom under ordinary greenhouse culture. 2. No. 3. Yes, in May and set out in the open ground. 4. We have not received the specimen referred to. 5. We recommend "Household Ammonia" for the cashmere dress; it can be procured at almost any grocery store.

H. C. F., Elmira, N. Y., has a rose bush that was purchased several years ago of a traveling man for $1.50, but although it has made a vigorous growth every year it has never bloomed. It has been propagated and the young plants possess the same non-blooming peculiarity. He asks how to treat the plants to make them bloom.

ANS—.Are you sure it is a rose bush? We have heard of a traveling man selling a Virginia Creeper for a Grapevine, this may be a parallel case. We can suggest no course of treatment that will oblige this doubtful character to bloom.

W. H., Cambridge, Mass., asks what books on botany and bee-culture we would recommend for beginners.

ANS.—For young students use Gray's Lessons in Botany, price $1.50; for pupils of maturer minds, Gray's Structural Botany and Wood's Botanist and Florist are both good; cost about $3.00 each; can be had through book stores. For instruction in bee-culture use Cook's Manual of the Apiary, published by T. G. Newman & Son, Chicago, Ill., price $1.00.

W. H. W., Hanerville, Wis., asks where can he get seeds of Iris lævigata, I. aurea, and some others.

ANS.—All seedlings of Iris lævigata (known as Kæmpferi in catalogues) are almost sure to have beautiful flowers. Iris aurea is rare in cultivation, but all may be had from Woolson & Co., Passaic, N. J.

M. T., East Shelby, N. Y., asks if mangels will do well on a timothy sod, plowed fresh this spring. The land, which is a heavy loam with clay subsoil, has been in pasture for many years, and is very rich.

ANS.—If the land is well pulverized we see no reason why it should not give a good crop of mangels, though the soil would be better fitted had it been plowed in the fall.

A. A. D., Jamaica, N. Y., says: "Please inform me what kind of grass is suitable for woods, pastures; when to sow the seed and what amount is required per acre."

ANS.—Kentucky blue grass and orchard grass. The seed may be sown early in the spring at the rate of one bushel of each per acre; but the grass should not be used for pasture until the fall.

A. W., River Falls, Wis., has some late turkeys which are lame, some in the foot and some in the joints, and a remedy is asked for.

ANS.—Little can be done for this sort of lameness. Rub the legs with alcohol and camphor, or kerosene and sweet oil, twice daily for three or four days and give stimulating food, such as dough made with oatmeal, chopped onions, etc.

A. S., Lafayersville, N. Y., asks 1, whether the Plymouth Rock and the Brown Leghorn would make a valuable cross; 2, is Soul's wheat a valuable variety, where can it be obtained and its price.

ANS.—1. We have heard good accounts of such a cross, and in view of the excellence of both parents, the offspring should turn out good. We don't know the variety.

D. C. H., Homer, N. Y., sends the flower and leaf of a plant, the name of which she would like to learn. It was given to her as a Cactus. It has a great many thorns on the branches, bears small cymes of red flowers and blooms all through the winter.

ANS.—The flower sent is that of Euphorbia splendens. It is not a Cactus, or in any way related to it.

J. T. H., Woodbury, Ky., asks for a good bee journal.

ANS.—The American Bee Journal, published by T. G. Newman & Son, Chicago, Ill., is an excellent monthly. The Bee-Keepers' Magazine, 61 Hudson Street, N. Y. City, and the Bee-Keepers' Exchange, Canajoharie, N. Y., are other journals on the subject.

R. W. Northville, Pa., sends a flower and leaf and asks for the name of the plant, and how to take care of it.

ANS.—It is Oxalis rosea, commonly cultivated in greenhouses. After flowering let the bulbs dry out to give the plant rest. Repot in fresh soil in September.

W. H., Savannah, Ga., asks how can he determine the weight of horse and cow manure in a pile 30 feet long, 15 feet wide and 6½ feet high.

ANS.—Manure in a fresh condition weighs 60 pounds to the cubic foot. Your pile contains 2,925 cubic feet, which is equivalent to 87 or 88 tons.

A. C. M., New Gloucester, Me., asks, which is the best creamery in the market.

ANS.—It would be invidious to decide which is the *best*; but the following are several excellent ones:—the Ferguson Bureau Creamery, the Cooley, the Reid, and the Mosely and Stoddard.

J. J. W., Nodaway, Iowa, asks where in the West can he buy, 1, Jersey Red Pigs, and, 2, Oxfordshire Down Sheep.

ANS.—1, Smoek & Blakely, Monroe, Green Co., Wis.; 2, Mrs. Ann Newton, Pontiac, Mich.; S. H. Todd, Wakeman, Ohio.

E. H., Kirkland, Ill., asks where and at what price is a paper devoted exclusively to gardening published.

ANS.—Gardener's Monthly, published by Charles H. Marot, 814 Chestnut Street, Philadelphia; terms, $2.10 per annum.

A Subscriber, Paxton, Ill., asks where can a small bone crusher be obtained.

ANS.—Write to the Blake Crushing Machine Co., of New Haven, Conn., *and give your name*, not a *nom-de plume* as here.

A. J. F., Windom, Minn., asks whether the Pulvermacher Electric Galvanic Belt Co. of this city is quite reliable.

ANS —Yes, thoroughly so. The same can also be said of the branch office in Cincinnati.

J. E. & C. J. P., Hornellsville, N. Y., want the address of a firm engaged in the manufacture of pickles.

ANS.—Bogle & Lyles, 87 Park Place, New York.

A. P. R., Yorkville, Ohio, asks which is the best season to cut Sugar Maple for boards.

ANS—In the fall.

W. H. J.—G. G. K.—F. D. C.—H. T. A.—A. J. H.—A. M.—J. W. S.—R. T.—A. T.—A. W—N. J. B.—H. M.—J. A. P.—B. F. T.—G. W.—B. G. J.—A. J. F.—A Subscriber.—J. E. Du B.—N. C.—M. W, H.—W. R. B.—W. F.—A. B. A.—F. D. C.—A. A W.—Mrs. W. V. A.—Mrs. T. D. M.—Mrs. M. L. S.—Mrs. C. E. J.—L. S. H.—S. H. R.—Mrs. V. F. W.—J. T. L.—H. O. F.—G. D. N.—A. B. A.—H. S.—C. L, J., bulbs received,—C, R. D,—L. R, D,—C, N,

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REMOVAL.

On and after May 1st of this year the Rural New-Yorker will occupy its new quarters, No. 34 Park Row, corner of Beekman Street.

A CAUTION.

It has become necessary that we should state that one C. H. E. (or C.) Redding was discharged from the employ of the Rural New-Yorker during the latter part of last year. All persons are cautioned against transacting any business with him on our account.

The gross earnings of thirty-two Western railroads during the month of February aggregate $9,570,903, against $7,285,864 for the same time last year—a net increase of $2,285,039, or over 31 per cent. Only two railroads show a decrease and that is trifling. This is a fine showing for the winter season, and an excellent proof of the great improvement in business this year.

When well bred, like the Percheron, Norman, Clydesdale and Shire horses, an increased size is no objection to a horse's activity on the farm or road, especially in the walk, which is extra fast when properly trained, and is the most important gait for the use of the farmer. The advantage of using an extra-large, powerful horse is that he will do the work of an ordinary pair, and a pair of them equal four of the common sort. This saves something in stable room, grooming, feed, harness, shoeing and general care and attention. It is also much more convenient often to use one horse than two. With the former one can plow nearer to trees and fences and work more rapidly with a one-horse tip cart, than with a two-horse wagon. It is surprising that one-horse carts are not in more use among our farmers. In many parts of Europe they are used exclusively. Loads of all kinds are tipped up in part or entirely, as desired, in a second or so, while from a wagon it takes a considerable time to unload. A cart can be used in a narrower farm road than a wagon, and be turned in one-third to one-half the space required for the latter.

All over the country strikes among workmen are either actually inaugurated or threatened. These were to be expected from the rapid improvement in business, which has raised the price of manufactured goods from 25 to 100 per cent., and from the natural reluctance of manufacturers to share their increased profits with their employes. In many places wages have been raised considerably, and it is to be hoped that some compromise may, in other cases, be speedily effected, by which the stoppage of the wheels of business may be prevented or removed. Strikes are lamentable occurrences at best, causing a world of suffering to the strikers, no small losses to the employers, and a sad amount of ill-feeling between the two classes whose friendly co-operation is necessary to each others' prosperity. According to the Statistics of the Mass. State Bureau of Labor, out of 159 strikes recorded in that State, 109 were failures, 16 were compromised and only 18 were successful—a poor show for strikers. Yet had the employers compromised matters, it is not improbable their gains would have been at least as great, and the prosperity of the State would certainly have been greater. It is not the accumulation of money in the hands of a few in a State or nation, that renders its inhabitants happy and prosperous, but its distribution among the people at large.

It has often been noticed that an Englishman traveling in America finds few things so strange and foreign to all his habits of thought as Indian corn. His doubts and difficulties at the dinner-table as to how to proceed when he first meets a boiled ear of corn, are apt to be comical, to say the least; while his expressed opinion upon the flavor of corn-cake is not infrequently the reverse of complimentary. So, too, for a thoroughly independent view of popped-corn, such as no American who ever lived could possibly have written, we may turn to the Himalayan Journal of Dr. Hooker, who relates that at a camp on the confines of Thibet, the natives gave him "Parched rice and wheat-flour, cured, and *roasted maize.*"; and proceeds to explain in a foot-note that the last-named refreshment is "prepared by roasting the maize in an iron vessel, when it splits and turns partly inside out, exposing a snow-white spongy mass of farina. It looks very handsome, and would make a beautiful dish for dessert." It is a curious question in philology, how long the English and the American languages would retain any resemblance to one another if there were many such stumbling-blocks as maize.

In one of the private gardens of Aiken, S. C., there are 25 tea plants five years old. They are about three and a half feet high and, though growing in a sandy soil and dry situation, they are healthy and vigorous. It has been thought that the tea plant needs shade and moisture. This is true of young plants; but the roots of older ones extend to such a depth that they will endure both heat and drought as well as the hedges of Euonymus, which are so beautiful and thrifty in the gardens of many parts of the South. The tea plants of which we speak, if stripped, would yield enough tea to supply a small family through the year. The leaves are first steamed, then dried in an oven. Thus prepared, without any further manipulation, the quality of the tea is equal to, and of much the same flavor as, that known as good Oolong. There need no longer be any question whatever as to whether the tea plant will flourish in certain Southern States. The only question is one of quality and cost as compared with the imported article. The facts given above as to the Aiken trial which have come under the writer's observation, are specimens of hundreds that should inspire confidence as to our ultimate success in this highly important industry.

There is little doubt but that the immigration from Ireland during the present year will be greater than in any twelvemonth since the famine of '47-8 sent the tide of Celtic immigration with unexampled force across the Atlantic. Already the inpour has begun, an unusually large number of Irish immigrants having landed at this port during the past couple of weeks. Various organizations have been formed, both in this country and across the Atlantic, to aid in this movement, and efforts are being made to settle many of the new-comers in agricultural pursuits. Hitherto Irish immigrants to this country have seldom engaged in agriculture here, although farming was the business of most of them at home. As a rule they have reached our shores with barely enough money to keep them for a few weeks, when necessity forced them to take the first job that offered, and this has seldom been on a farm. Moreover, besides lacking capital enough even to make a small start in farming, they have been destitute for the most part of the steady, persistent industry needed to transform the farm hand into the farmer. It is proposed to settle various colonies of our expected visitors in different parts of the West—we wish all success to the experiment.

At this stage of progress in American agriculture, *steadiness of purpose* is a quality that needs development. Change from one specialty to another with every extreme in the movement of prices, is natural in the experimental period of rural industry in any new country; and this country furnishes no exception to the rule. To leave sheep husbandry after prices have declined, and put the meagre proceeds into meat production, or dairying on a rising market, just in season to meet a disastrous fall, while wool is beginning to advance, has been a frequent experience. Jumping from one business to another without experience, is a leap in the dark, that has wrought injury to multitudes in every community, and ruin to many. Success is hereafter to depend so much upon skill and systematic endeavor, that the only safe road to it will be through intelligent and persevering practice of a chosen pursuit. Examples could be multiplied in every section of the country, in every line of culture, showing the superior profit, in the past, of persevering adherence to this rule. In fact the men who have succeeded, those who have acquired competence and reputation for skill, are almost invariably of this class. Agriculture, as a game of chance or as a land speculation, must give way to science and method with perseverence and close application. Young farmers especially should understand this necessity.

A few weeks will see in Great Britain the excitement and turmoil of a general election which, judging by past experience, will be marked with far more violence, bribery, drunkenness and temporary demoralization generally, than will attend our own presidential election a few months later. Lord Beaconsfield, early in the week, unexpectedly declared his intention of appealing to the country in support of his measures for a vigorous foreign policy on the one hand, and an uncompromising opposition to the schemes of the Irish Home-rulers on the other. The honor and influence of the British empire, he maintains, demand the former, and its security and permanence, the latter. The Liberals are now bitterly denouncing the foreign policy of the Administration on the ground that it has secured no advantage for the country, while entailing upon it many responsibilities whose weight must yearly weigh heavier upon it. The Home-rulers are equally or even more violent in their reproaches of the home policy of the Conservatives, which has exasperated the discontent of the inhabitants of one of the chief provinces of the empire, while it has left the distress which is agonizing it to be relieved by the charity of the outside world. As the duration of each British Parliament cannot be longer than seven years, the present House would have to be dissolved next year; and doubtless the astute Prime Minister, in anticipating its inevitable dissolution, sees that at this moment the temper of the public is favorable to his side. It would, however, be as difficult to foretell the result of the next general election in Great Britain as to forecast the issue of our own presidential election next fall.

Which Shall it be, Cattle or Grain?—Both. A mixed husbandry is safest for the masses. The South has suffered from scarcity of meat and milk, and plethora of corn and cotton. Many a Minnesota farmer has helped to feed the East and England, while he has been destitute of milk for his coffee, or butter for his superabundant bread. It has been repeatedly shown that those countries which produce corn and cattle most largely, boast a higher land valuation than the great wheat countries. It is not only in Indiana and Illinois, but in the new State of Iowa as well where spring wheat has ever been a speciality. Taking a broad view of the future requirements for meat and bread, we see that it is the policy of all nations (Great Britain alone excepted) to produce their bread at home. They dare not risk dependence in so vital a matter. If a bad harvest makes a small deficiency, it can probably be made good; a very abundant harvest may give a small surplus. Meat is less bulky and will better bear the expense of transportation; so the use of meat by European nations is increasing, and the price has steadily increased during the past 30 years. On the contrary, wheat, with temporary fluctuations, is no higher than in the long ago. James Caird says the cost of bread in England was a farthing per pound both in 1770 and 1878, while meat advanced from three and one-half to nine pence in the same time, and from five to nine pence between 1850 and 1878. The recent and unprecedented foreign demand for wheat is the result, in part, of a series of extraordinary crop failures which will not permanently continue. The enlarged demand for meat is in far higher degree the result of causes more permanent in their operation. The outlook for meat is, therefore, better than for grain. Yet both will be required, as population increases, in rapidly enlarging quantities.

During the last couple of weeks upwards of 500 Chinese have reached this city from San Francisco, and should the present anti-Mongolian agitation continue on the Pacific Coast, a much heavier immigration of the same sort must be expected. Of course, the threats of Kearney and his turbulent followers are to be greatly deprecated; of course, any violence they may attempt should be promptly and vigorously suppressed. The supremacy of the law must be maintained; grievances, however onerous, must appeal for redress by legal methods only. The anti-Chinese grievance of the laboring classes on the Pacific Coast, however, is a real and severe one. It is one that has been found intolerable wherever the cheap labor and few needs of the Mongolian have come into competition with the higher-priced labor and more civilized wants of the Caucasian. Civilization is a developer of wants, and before the white man can work for the same wages as the yellow man and be content with the same fare, he must retrograde to the same semi-barbarous condition. In New Zealand and in all the Australian colonies it has been found necessary to legislate against the influx of immigrants from the Flowery Kingdom. The laws that have been found efficacious against the evil there are even more oppressive than those which the California workingmen seek to establish. There, as in California, it has been a struggle for existence between the two races; and self-preservation has made the white man deaf to the doctrines of political economy and the plea of abstract justice from those whose condition or location has preserved them from the hardships entailed upon the laboring classes by competition with the cheap labor of the "Heathen Chinee." If the superabundant population of the crowded Chinese empire must have an outlet, why do not the almond-eyed tail-bearers establish colonies of their own along the vast unoccupied coast of continental Australia?

BREVITIES.

Mr. J. J. Hallford near Grahamville, S. C., has an apple tree that bloomed last December and is now loaded with apples as large as quail eggs.

It is probably a good rule for the farmer to work upon that of staple crops, those which sell for a high price one season will sell for a low price the next.

Mr. Norris writes us from Alabama that he deems Cow-peas a subject of such magnitude that he is compelled in the interests of Agriculture to speak out.

From our correspondent at Aiken, S. C., we learn that the Japan Persimmon is thereabouts exciting much interest. Many plants, purchased at the north, are being tried.

Dr. Hoskins owns a farm of twelve acres and gets a living from it and pays his debts. He believes his income from it more than that derived from many farms in Vermont of 100 and 200 acres.

A gentleman just returned from Florida tells us that in the grove of Col. Hart (opposite Pulatki) is an orange tree from which 10,000 oranges have been picked during the past year, netting him over $250. We know this report to be trustworthy, but such instances rarely occur and should not be received (as they are too often) as evidences, of the usual profits of orange culture.

Our friends, in selecting vines for the coming season, should not forget the hardy and beautiful Clematis. For blue there is no better kind than Jackmannii. Henryi bears a large silver-white flower. Velutina purpurea is of a dark mulberry color. Miss Bateman is pure white. Fair Rosamond is white tinted with lavender, having a light-red band through the middle of the petals.

The value of the Polled Scotch Cattle as beef-producers is fully acknowledged in England. The Royal Agricultural Society, however, is opposed to offering any prizes at the Carlisle meeting. Five hundred dollars are in prizes for Ayrshires, but no encouragement is offered for the Polled Scotch, from which, it appears, is derived a considerable part of the best beef that goes to the London market.

There is as much suffering in other countries as in Ireland. Russia is ravaged by famine, typhus and diphtheria, and thousands are perishing throughout the vast empire, though no suggestion of "relief funds" is made. So in Silesia and Italy misery prevails to as great a degree as in Ireland. Sir S. Northcote has recently said in Parliament that not a single case of actual starvation has been known to occur in Ireland. On this side of the Atlantic, too, advices just received from Brazil give heart-rending accounts of the famine now desolating several provinces of that empire.

Early in the week the President sent a message to Congress, in which he takes the ground that whatever nation may supply the capital for the construction of the Isthmus Canal, the work is of such vital importance to the prosperity and protection of this country, that the United States must be its recognized protector and controller. This official declaration has come not a moment too soon. No room for doubt with regard to the position of this country in this connection, should be left among other nations. A frank and bold enunciation of that position now will doubtless save a world of complication and bickering, or worse, hereafter.

The recent poisoning of a whole family in Canada, from eating cabbages, upon which it is supposed Paris-green had been sprinkled, should prove a warning to farmers against a careless use of this class of insect remedies. Paris-green is largely composed of arsenic, is almost insoluble in water, retaining its active principle for years, and a very little of it may prove fatal. It is well enough to employ it upon potato tops, the cotton plant, and the foliage of such other plants as are not used for food for man or animals, but its use upon, or even near any other kind of vegetation, especially in the kitchen garden, is fraught with danger. There are plenty of useful means by which the cabbage worm may be destroyed or its ravages lessened, without resort to violent poisons. In the case to which reference is made, there was fortunately but one death, though five persons were affected.

For Women.

CONDUCTED BY MISS RAY CLARK.

DAME FASHION.

FASHION, fickle goddess, has led her votaries into such extravagances, that she has brought down on herself the denunciations of sensible men and women—and serves her right; but whether she has been won over and moans to mend her ways, or whether she is only like that little girl with the curl, and is just now very, very good, while she will presently be horrid, and lead the way into, nobody knows what lengths of absurdity; at any rate, she certainly is now, unprecedentedly good, and I feel it in my heart not to withhold a commendatory word.

Perhaps, never before was comfort, health and convenience so studied in connection with dress. For one, I confess myself happy to be able, without making myself conspicuous, to wear clothes that feel comfortable, or rather that I do not feel at all. It is really delightful to put on the short dress of to-day, no dragging train to carry, and one less backache to soothe. Perhaps I am prejudiced by my comfort, but it seems to me that women never looked so well before. We have actually come to a place where extremes seem to be left out, except with the empty-headed few, who will always strain anything into extremes.

We have neither the unwieldy leviathan of crinoline, nor the insufferable tie-back, but skirts that clear the ground and with just fullness enough, answering to the old lady's idea of a dress skirt, "a walking length and a striding width." To be sure trimming is in many cases overdone, but a plain dress with a little graceful drapery, is by no means an oddity. O, woman! do fall so deeply in love with the simple short dress, that you will never give it up, never!

Large waists, too, are admissible. Think of the days when the wasp was the ideal of womanly beauty. Physicians, teachers, and old wise-heads lectured, talked and wrote against it, but a line from a novel describing Belinda's slender, tapering waist, had more weight with the most of the feminine sex. But Dame Fashion decreed "Woman shall breathe again," and Presto! forthwith corset strings were loosened, and heart and lungs and liver took a new lease of health and life. There are some brainless creatures yet, who know no better than to rejoice in a waist that is out of all proportion with their shoulders and hips; their loss will not be felt much when they finally break in two.

Talk about the good old days! Rather pity your buried grandmothers, aunts and other feminine ancestors, wishing that they could have lived in this decade! How did it all come about! Who studied out and skillfully cut and fitted the patterns for underclothes that are a joy to wear? Think of the old bands and bands, that cut and sawed and "skewed round." Now with garments dependent from the shoulders, with the corset waist or corded waist, or "Health" waist, furnished with fastenings for the skirts, so that their weight need not hang on the hips. We pity the queens even, who lived and died before this happy change was brought about.

Even the shoes have had a reform! The high, tapering heel, set in the middle of the foot, on which idiotic fashionables precariously balanced themselves, has given place to a low, broad one, and poor, pinched toes are trying to recover their identity in wide, roomy shoes.

To go from the feet to the head, a lady's dressing-table is no longer covered at night with rolls, curled hair and switches, and her head in the daytime is not of such extraordinary proportions, and intricate make-up, as to be a source of amazement to one not accustomed to the arts of higher civilization.

As for headwear, there are bonnets and bonnets, and hats and hats. Hence, in spite of the many useless and startling affairs with which some will always offend the eyes, there are really sensible shapes and styles of adornment. They are large enough to suit even a man, and many of them light and soft, and altogether comfortable. Hoods, too, again—pretty, fluffy hoods—that cover up one's ears and are proof against the nipping fingers of the most spiteful frosts. And the children, too, have little bonnets or hoods. Many a time I have shivered with horror to see little girls on a cold winter's day with tiny hats set on one corner of the head, they looked so blue and cold. Now it is the fashion to keep warm.

Tyrannical dame, have you had enough of despotism, or are you only resting a little preparatory to a new raid, seven times worse than ever before? I am ashamed to say it, but I suppose there are millions of women who would be ready at the first note of your majesty's announcement to make guys of themselves to any extent, for never had ruler such absolute sway as you! Or was the common sense of those wiser women who cried "Treason" infectious, and have you gone over to the conspirators? Or did you feel some compunctions on account of the physical woes of many of your blind followers—woes consequent of your mandates? Or were you brought down by the anathemas that were hurled at you from pulpit and platform by the satire, ridicule and caricature that greeted you everywhere?

There is nothing more Pharisaical in my burst of self-congratulation. I know there are still enough petty feminine weaknesses to lament, and there are enough ever ready to raise their voices in lusty lamentation over past sins, if not present ones; but I for one am encouraged, and I do feel like sending up a jubilant hymn of thanksgiving, though in the interludes I confess that I improvise a litany, from filters and panlers, from tie-backs, fantails and Grecian bends, from any relapse into the unmitigated follies of which the feminine gender has heretofore been guilty, deliver us.

CONTRIBUTOR.

ARTICLES FOR HOME MANUFACTURE.

I SAW a very pretty shaving paper case a short time since. It was of silver card-board, cut heart-shape, but very broad. It was slashed at regular distances from the edge, and a blue ribbon run in, a bow and ends of the ribbon were sewed on to hold the two sides, and the bright tissue papers that were placed between the article were about twelve inches across, the ribbon an inch and a quarter wide. Such an article would be very pretty made of Bristol board pinked around the edges and ornamented with handsome embossed pictures. Gilt card-board would be still handsomer, and may be more or less elaborately ornamented with a contrasting color of zephyr or embroidery silk.

Purses of sadlers silk either crocheted or netted are useful, since silver has come into circulation again. They are so easily made that very little description is necessary. The meshes should be quite fine. Two rings for slides must be provided. The opening is made lengthwise in the center of the purse and should be two and a half or three inches long.

Slipper cases may be made, costing from a mere nothing to as many dollars as your purse and inclination will allow you to spend. They may be cut into any pretty shape from pasteboard, covered with fancy paper and embossed pictures. A pocket of any bright or plain goods may be used, bordering it with a ruching in a contrasting color. If you wish it still nicer, it can be elaborately embroidered on canvass in Berlin wool, and finished by the upholsterer or finished at home by putting a large cord around the edge to suspend it by, with balls or tassels to correspond.

Fern holders are very pretty made of a lantern globe, when no other glass presents itself, and ornamented with transferred pictures. Another style is with a frame for the back, and a pocket in front, formed of long oat straws, cutting them between the joints, winding them with very narrow strips of gilt paper, so that it will show as much of the straw as the paper. Sew the straw frame together at the corners, leaving an inch or so, rustic fashion, then finish with tiny cord and tassels.

The back should be six inches wide and ten long, the front lacking four or five inches of reaching to the top, and joined at the bottom. When the two frames are completed, stretch on them pink or white tarleton, tacking it underneath, lightly to the straws. Then paste embossed pictures on the front piece and the upper part of the back.

Suspend with cord and tassels. Another cord and tassel at each upper corner of the front piece is fastened to the back in such a manner as to let the front fall forward a few inches to form a pocket.

Another fern holder can be made of Bristol-board pinked and ornamented with pictures and put together in the same manner as the last described.

The tarleton has a fairy-like appearance that is very charming. Tassels or balls for these delicate-looking articles, should be made of pink and white zephyr or something equally dainty and delicate in color.

L. E. K.

HOW TO MAKE MOSS BASKETS

VERY beautiful baskets for holding flowers can be made of the longer and more feathery kinds of mosses. We have made them often, and never do either garden or wild flowers look more lovely than when clustered upon a verdant border of that most delicate and beautiful material, which by proper management may be made to preserve its freshness and brilliancy for many months. We will here give directions for their manufacture. A light frame, of any shape you like, should be made with wire and covered with common pasteboard or calico, and the moss, which should first be well picked over and cleansed from any bits of dirt or dead leaves which may be hanging about it, gathered into little tufts and sewed with a coarse needle and thread to the covering, so as to clothe it thickly with a close and compact coating, taking care that the points of the moss are all outward. A long handle, made in the same manner, should be attached to the basket, and a tin or other vessel, filled with either wet sand or water, placed within, to hold the flowers. By dipping the whole structure into water once in three or four days, its verdure and elasticity will be fully preserved, and a block of wood, about an inch thick and stained black or green, if placed under the basket, will prevent all risk of damage to the table from moisture. To make such baskets affords much pleasant, social amusement for children, who will find a constantly renewed pleasure in varying their appearance.—FLORAL CABINET.

HINTS FOR WOMEN.

New linen may be embroidered more easily by rubbing it over with fine white soap; it prevents the thread from cracking.

To remove grease from wall-paper—Lay several folds of blotting-paper on the spot and hold a hot iron near it until the grease is absorbed.

To take ink out of linen—Dip the ink spot in pure melted tallow, then wash out the tallow and the ink will come out with it. This is said to be unfailing.

If brooms are wet in boiling suds once a week they will become very tough, will not cut a carpet, will last much longer and always sweep like a new broom.

To remove rust from a stovepipe—Rub with linseed oil (a little goes a good way); build a slow fire at first till it is dry. Oil in the spring to prevent it from rusting.

To clean brass—Immerse or wash it several times in sour milk or whey. This will brighten it without scouring. It may then be scoured with a woolen cloth dipped in ashes.

FASHIONABLE WOODEN SHOES.—A French novelty is the artistic "sabot," instead of a boot or shoe. It is made in the shape of the wooden shoes worn by the French peasantry, but of beautifully carved cedar, rosewood, or colonial bark. It is ornamented with silver or other metal settings. It can be made, too, of black stained wood and set with steel knobs. It is a much prettier invention than the turned-up Chinese slipper. It diminishes the foot in size and exhibits the silk clock or striped filoselle hose. The "sabot" is also advantageous to the Marguerite balayeuse, a new frilling for the inside of skirts. It consists of a band that is plain instead of being kilted, and is made either of superior muslin or plain percale. Three rows of embroidery are gathered at the lower basis, one above the other, so that the foot emerges from a small labyrinth of delicate snowy work.

TABLE DECORATIONS.—Nothing is prettier to grow in an epergne dish than moss, using the large feathery and matted kinds, and arranging them so that the straggling parts are tucked in. Sprays of ivy, small ferns, especially the common polypody and hart's-tongue—which, when rooted, last for weeks—may be interspersed, and the whole should be sprinkled well every day. If it is occasionally put out for a couple of hours' soaking in the rain, the dish will keep green for weeks. This will require no cotton wool; but pretty green for growing in wool may be had by cutting off the tops of carrots, with their crown leaves, and setting them as close together as they will lie. They should be kept rather moist.—A LADY ETCHER.

CORRESPONDENTS' CORNER.

IF Mrs. F. M. B. will try placing her mildewed clothing on snow and then sprinkle more over it and let it remain a week or more (the sun must shine on it), I think she will be satisfied with the result. This recipe has been tried on clothes very badly mildewed and never known to fail.

Will Miss Clark have the kindness to give Dr. Dio Lewis's address and oblige? EXPERIENCE.

MRS. F. M. B.—If you have wood ashes and make your own soap, dip the article mildewed in the soap barrel, until thoroughly saturated, with the soap, and spread in the July sun. Bring in nights, or if it should rain. Repeat the dipping if necessary. It takes several days.

MRS. M. B. MCLOUTH.

The above recipes have been selected from several received, the others being similar to these or ones published in "Domestic Economy."

Dr. Dio Lewis is not in New York city; if his address should be obtained, it will be given in another issue. R. C.

IN the RURAL of February 7, a sister wishes to know how to wash mourning calicos. Take five cents worth of glue for washing one dress. Dissolve the glue in the water, wash and not rinse. It looks as good as new, that is my experience.

A. E. H. S.

SEEING an inquiry how to starch black calico without the starch showing white on the material I will say that I have made starch for black lawn, using strong coffee instead of water with very good results. I wet the starch with a little cold coffee and pour on the rest of it while boiling, precisely as ordinary starch is made; and starch the material in the usual way. AUNT RACHEL.

WILL some one be kind enough to give directions through the *Woman's Department* of the "RURAL" for making pretty but not too expensive *Lambrequins* for a parlor in the country, and if some one will suggest something new in the way of *curtains*, I shall be much obliged. EFFIE.

Literary Miscellany.

SKETCHES OF GERMAN LIFE.

BERTHA A. WINKLER.

At Home.

HITHERTO we have only seen the peasants under the most favorable circumstances, gathering abundant harvests; enjoying popular festivals; and, in general, making merry over the most trifling incidents; apparently a most good-natured, contented people. But was it always thus? Are these happy, peace-loving peasants whose world is their village, their forest and their weinberg always amiable and contented with their lot? We will see.

A few days later we removed bag and baggage to the house of a well-to-do Burger, where, judging from the prim attire and joyous faces of the good folks, our expected arrival was made into a holiday. The fragant odor of juniper twigs greeted our entrance into a large airy room furnished with rude but well-scrubbed benches ranged along the wall behind the coverless table; a comfortable looking settle between the wall and the huge furnace-like stove reaching almost to the ceiling; a high feather-bed and a few very clumsy chairs which, like the benches, bore evidence of frequent scrubbing.

The clean sanded floor; the curtained windows and the white-washed wall adorned with a looking-glass, a picture of our Lord, another of Luther, over each of which a fresh juniper twig was nodding its silent, fragrant welcome; everything looked so fresh and bright, so plain and yet so rosy that for a moment our thoughts wandered back involuntarily to the equally humble pioneer homes of America where the light of love and liberty shed its bright rays over the bare floor and the rude, home-made furniture. And from beneath the roofs of which, the great architects and builders of the grand Republic have emerged for two centuries clad, indeed, with German simplicity but armed with the vigor of native strength and filled with the spirit of the free air, and the free soil for which alas! Germany sighs in vain. There, only love, and the contentment of spirit-resignation, can keep the hearth-stone warm.

Adjoining the common sitting-room in the kitchen, a survey of which convinced us that neither the comfort nor the ingenuity of women had been consulted in its construction. Though a model of cleanliness, it was void of every convenience. In the corner nearest the chimney is a crude elevation of stone and mortar about three feet in hight and four in length and breadth, the whole resembling a blacksmith's forge. This is the "shed" or fireplace for summer-cooking, as the large stove previously mentioned is used for that purpose in winter and is adjusted to the kitchen wall in such a manner that it can be heated from without. These stoves are large enough to hold a bundle of twigs the size of a beer keg, in addition to the pots and kettles which are conveyed to the blazing fire by means of a long pronged stick. On the upper rows of shelves which cover one side of the kitchen-wall, the cooking utensils are arranged with military precision, while the lower ones contain high, narrow jugs of milk. On a bench behind the door stands a tub of water which the women have to bring on their heads from a well about a square distant. The old-fashioned dash-churn, which is still in universal use, a basket of fir-cover and a bundle of dry twigs complete the visible contents of the kitchen. The invisible remains consist of several strings of home-made sausages and some hams hanging on beams fastened in the chimney, where the people tell their children, the chimney-sweep, of whom they have a wholesome dread, places them for all good children.

A steep flight of stairs brought us to our little room which—its high feather-bed, looking very much like a snow-covered hillock, two chairs and a small table being its sole occupants—looked a little cold and empty. But a peep through the white curtains over the gable roofs into the variegated billowy landscape, rising gradually into hills or fading in the blue horizon; the clear limpid stream rushing and leaping from the depth of a gray old forest, soon reconciled us to our new quarters. Here we would quietly and unobserved, see the people coming and going; carrying joyfully or wearily, the burden of life's harvest. And in the evening see the family groups sitting on logs before the houses, singing ballads or relating the same old legends of mysterious apparitions and haunted castles, their honest faces all the while reflecting the cheerfulness and sunshine of their green meadows, or the solemn earnestness of their forests. I have seen both characters, and for the home-sick and the love-sick recommend the former. Their very footsteps quickened your pulse. They open the door with a jerk and at once fill the room with life and laughter. You imagine every minute they are going to say something very amusing and are generally not disappointed; though, whatever they relate, the hero is invariably embodied in themselves. Their heads and arms give force to every word, and unless you are accustomed to them you wonder if they haven't got the headache, or if they are not very tired, or if their joints don't ache.

But for a quiet, confidential chat where you are not in constant dread lest your words are brewing a storm in some hot-headed enthusiast, we prefer those quiet, earnest Germans, who smoke their long pipes, listening all the while very attentively to your arguments pro and con until finished; then they carefully knock the ashes out of their pipes, lay them back in their accustomed place and in a few pithy words give you their opinion and, instead of the blustering hurricane without which the other would not come to an understanding, they quietly clear the sky of controversy with an amusing anecdote which converts everybody but themselves into laughter.

WHAT IS A "BLIZZARD?"

"THE papers want to know what a blizzard is, and they turn up their noses at the word, but them as has been thar' can't see where the joke comes in. I've shook hands with one or two blizzards, and here's the affidavies to prove it!"

He drew off his boots. Three toes were missing from the right foot, and the big toe alone remained on the left. Two fingers were gone from the left hand, one ear shrivelled out of shape, and his nose seemed to have no life in it. He was a rough-looking old chap, and he was warming his heels on the steam-pipe in the cabin of a ferry boat along with several other passengers.

"Well, what is a blizzard!" asked one of the crowd as the old man pulled on his boots.

"What's the weather here to-day?"

"Two below."

"Well, you add five or six degrees of cold to it, take off your clothes and walk around for three hours and you'll have a slight comparison. A blizzard hain't 'zactly a two-edged sword nor a bullet, but it lives next door to 'em. You'd better twice over be cotched in a tornado. I'd take the chances of outrunning a prairie fire quicker'n living through a January blizzard."

"Tell us about 'em."

"The fust one I ever seed," said the old man as he held up the stumps of his missing fingers, "war down in Nebraska, close to the west line. I had a ranche and was well fixed. The livin' room fur me and three herders was about twenty feet squar', with a big stove in the middle. On the 4th day of January, 1859, there wasn't a flake of snow on the ground, and at four o'clock in the afternoon it was warm enough to go in my shirt-sleeves. Half an hour before the sun went down the sky was clear and blue. I stood looking off at a herd of horses, feelin' as if I wanted to go bar'fut, when all to once a shiver climbed over me. It was as if ice-water had been poured down my back. Thar was a moanin', roarin' sound away to the westward, another shiver, and next minit it was dark and the blizzard had come. Quicker than I can tell you the sky turned black, night set in, and mountains of snow come boomin' along before a gale blowin' eighty miles an hour."

"Well?" said some one as the old man paused.

"Wall, there she was. That blizzard was born in the Rockies. She'd whirled around and round

gettin' stronger every minit, lifted herself out of some awful canyon, tore along the crags and peaks, and finally tumbled down on the level and started eastward, mad as a grizzly and powerful as a million runaway horses! Them threo herders waren't half a mile away, and all mounted, but yet only one reached the cabin. The other two were struck as dumb and numb as if hit with cannon balls, and they waren't out of the saddle a minit before they were covered with six inches of snow."

"Must have been cold?"

"Cold! Mabbe it wasn't! I did'nt have no thermometer to look at, but I didn't want one. Our jug of whiskey froze solid and split the jug in ten minits. Frost settled on the taller candle within an inch of the light. Every board in the ranch cracked and popped with cold. We had a big stove, but the fuel was mostly under a shed fifty feet away. I thought to go after a load, but as I opened the door I fell back as if ten thousand needles had been fired into my face. That one breath of the blizzard froze my nose and ear."

"And you were out of fuel?"

"Yes, in half an hour I burned up stools, benches, table and all else that would burn, but after midnight the fire went out. Then I lost my toes—frost bitten even when I was dancing over the floor. Ours was a tight cabin, and yet there was a foot of snow on the floor before daylight. The awful wind drove it through every crevice. Did you ever hear the gale which goes with a blizzard? Well, you'll face a cannon sooner than hear it a second time. The wind screamed louder than a locomotive whistle. It raged and raved like a giant in chains, and it struck down every living thing it came to.

All at once it would stop blowin' for half minit, and the stillness would be awful. Then I'd hear it sighin' and groanin' afar off, as if poor lost children were cryin' for home. Then the groanin' would change to a screech—the screech to a wild shriek, and the gale would whirl 'round and 'round the cabin as if bound to lift it from the earth in its teeth. The gale knocked over trees a hundred years old, and rolled rocks weighing a thousand tons down upon the level!"

"And about your stock?"

"When that blizzard struck my ranch I had 500 cattle, 2,000 sheep, and about 200 hosses, all alive and kickin.' It died away about daylight, and after an hour's work we got out of the cabin and through the snow. Far as the eye could reach all was a dead level. Gulches, ravines and dips had been filled up with from five to thirty feet of snow. Every horse, sheep and steer had gone down in his tracks to die and be coffined in white, and we two, frostbitten and frozen, were fifty miles from any white man. Don't sneer at a blizzard! You'd better meet a thousand she tigers!"

NEW PUBLICATIONS.

How to Educate the Feelings or Affections. By CHARLES BRAY. Illustrated. Price, $1 50. New York: S. R. Wells & Co., Publishers, 737 Broadway.

No subject to-day is of greater importance to our people than the cultivation of the feelings, from which character and happiness spring. The world has studied and labored in the direction of intellectual culture, and great advancement has happily been made in this field; but the systematic and properly directed culture and regulation of the propensities has received too little attention, because the public mind has not understood this part of human nature in such a sense as to be able to educate and regulate it. An ounce of prevention in the field of human depravity is worth a ton of cure in the line of imprisonment, stripes, and the halter, inflicted upon the wrong-doers. If we can educate the passions and propensities so as to make them subservient to moral and social law, we have worked toward the disuse of jails, prisons, and the gallows, and prevented the great and sad waste of human life, hope and happiness, which is so conspicuous in our day. The virtuous portion of the people must bear the expenses of crime—the thefts and forgeries are a tax on virtuous industry, and then all the cost of police, courts, jails, and prisons are a burden to be borne by the law-abiding part of mankind. For the good of those who may be saved to virtue, as well as of the virtuous, the feelings ought to be educated and brought into obedience to law and morality. To promote such ends this book is put forth. And as it is a discussion of the subject on a sound practical basis it deserves the careful examination of all who would have a better condition of affairs in general society.

Key to Ghostism. Science and art unlock its Mysteries. By REV. THOMAS MITCHELL, author of "Philosophy of God and the World," etc. 12mo, pp. 249. Cloth, price $1.00 New York: S. R. WELLS & Co., Publishers, 737 Broadway.

THE literature of the day is not wanting in attempts to refute the philosophy and to expose the arts of Spiritualism. Some writers have devoted much time to analyses of the peculiar mental condition of the multitudes who are more or less taken in the toils of this belief, and have given to the world treatises which are more distinguished for profundity of reasoning than for clear and practical teaching on the subject. Mr. Mitchell strikes at the root of the matter in the outset by imputing the existence of Spiritualism to man's love of the marvelous. As a preliminary to the special treatment of his subject he analyzes the nature of mind, showing its relation to the body and the laws of its exercise. This part of the work helps, in itself to clear away much of the obscurity which to the uninstructed eye envelopes Spiritualism. Proceeding next to discuss the subject proper of his book, Mr. Mitchell draws largely from the avowals of "mediums," and of men and women who have been engaged in practicing upon the credulity of the public for gain. He shows how science and invention are made subservient to deceit—how magnetism, electricity, and prestidigitation may overawe the ignorant and superficial. Appreciative of the influence of the late book published by Mr. Kiddle, he devotes some space to its particular consideration, and there wields a vigorous pen. Further, he has given much time to personal investigation, and gathered evidence from all sources of authority, and produced a book which is full of interest to the reading and thinking community.

"THE LITERARY REVOLUTION."—The success of the unique enterprise, which has earned the above title, has hardly a parallel in literary history. Started but little more than a year ago, with one book and one printing press, it already rivals, in magnitude and number of thousand volumes manufactured daily, the oldest and largest publishing houses of the country.

The publications are all of a high order of literary merit, clear in print, on good paper, in neat, strong binding, such as lovers of books who value contents rather than covers, and wish a little money to go a long way will desire. Prices are held so very low, so greatly in contrast with prices generally, that many people have naturally doubted the responsibility of the publishers and even the possibility of making good books at such a small cost; the possibility seems to be demonstrated by the large list of standard books already published and sold in large editions; the responsibility of the AMERICAN BOOK EXCHANGE is unquestioned. Whoever sends money to them need have no fear but he will get promptly all they promise to send in return.

J. B. LIPPINCOTT & Co., of Philadelphia, announce that an entirely new and thoroughly revised edition of their invaluable "Gazetteer of the World" will be issued towards the close of this month. A competent editorial corps has been engaged for the last five years on the work of revision.

MAGAZINES FOR MARCH.

HARPER'S MAGAZINE.—Contents: The New School of Italian Painting and Sculpture, J. J. Jarves, Illustrated; Isis, a poem, Frances L. Mace; Among the Arrapahoes, Lieut. H. R Lemly, U. S. A., Illustrated; "Pinafore's" Predecessor, J. Brander Matthews; Obstinacy, a Musical Adventure, Charlotte Moscheles, Illustrated; A Winter Idyl, William Hamilton Gibson, Illustrated; Dakota Wheat Fields, C. C. Coffin, Illustrated; Valentine, a poem, Philip O. Sullivan, Illustrated; An Irish Wake, J. L. Cloud, Illustrated; Vacation Aspects of Colorado, A. A. Hayes, Jr., Illustrated, White Wings a Yachting Romance, William Black; Miss Beulah's Bonnet, Rose Terry Cooke; Transportation by Railway and Ship Canals, E. H. Derby; The Sifting of Peter, a Folk-Song, H. W. Longfellow; Karin, a Romance of Swedish Life, Z. B. Gustafson; The Snow-Messengers, a poem, Paul H. Hayne; Mary Anerley, a novel, R. D. Blackmore; The Preservation of Hearing, Samuel Sexton, M. D.; Honoria, a poem, James T. Fields. Editor's Easy Chair. Editor's Literary Record. Editor's Historical Record: Political: Disasters, Obituary. Editor's Drawer.

THE SIFTING OF PETER.—A FOLK-SONG.

"Behold, Satan hath desired to have you, that he may sift you as wheat."—ST. LUKE XXII, 31.

In St. Luke's Gospel we are told
How Peter in the days of old
Was sifted;
And now, though ages intervene,
Sin is the same, while time and scene
Are shifted.

Satan desires us great and small,
As wheat, to sift us, and we all
Are tempted;
Not one, however rich or great
Is by his station or estate
Exempted.

No house so safely guarded is
But he, by some device of his,
Can enter;
No heart hath armor so complete
But he can pierce with arrows fleet
Its center.

For all at last the cock will crow
Who hear the warning voice, but go
Unheeding,
Till thrice and more they have denied
The Man of Sorrows, crucified
And bleeding.

One look of that pale, suffering face
Will make us feel the deep disgrace
Of weakness;
We shall be sifted till the strength
Of self-conceit be changed at length
To meekness.

Wounds of the soul, though healed, will ache;
The reddening scars remain, and make
Confession;
Lost innocence returns no more;
We are not what we were before
Transgression.

But noble souls, through dust and heat,
Rise from disaster and defeat
The stronger,
And conscious still of the divine
Within them, lie on earth supine
No longer.

—H. W. LONGFELLOW, in Harper's Magazine for March.

THE ATLANTIC MONTHLY FOR MARCH, 1880.—Contents: Reminiscences of Washington, II, The John Quincy Adams Administration, 1825-1829; Pepita, Thomas Bailey Aldrich; Accidentally Overheard, Horace E. Scudder; Flowers in the Dark, Sarah O. Jewett; Egypt under the Pharaohs, Francis H. Underwood; Some Intimations of Early Childhood, Mrs. Edward Ashley Walker; Areopagus; The Undiscovered Country, VIII-XI, W. D. Howells; New Year Song, Celia Thaxter; Literary and Philological Manual; Her Shawl, Oscar Leighton; Hannah Dawston's Child, Lucy Lee Pleasants; English in England, Richard Grant White; Helen's Cup, Louise Chandler Moulton; The Memoirs of Madame de Remusat; A German Agitator and a French Dilettante; Washington Irving, Charles Dudley Warner; The New Departure in the Public Schools; Prisons and Penitentiaries; The British Civil Service; The Contributors' Club; Publications Received.

GENTS.

One day, several years ago, when I was rather a young man, the editor of one of the great New York dailies, for which I was doing occasional articles, called me into his sanctum. He held a manuscript of mine in his hand, and on his countenance was an expression which I hastily and inaccurately translated into "declined with thanks."

"I notice the word *gent* here," he said, thoughtfully tapping the paper with his forefinger; "have you spelled it correctly?"

"Haven't I spelled it *g-e-n-t*?" I asked in astonishment.

"I believe so; but won't you have the goodness to look it up in the dictionary?"

I turned confidently to Webster's Unabridged, and presently became rather red in the face at not being able to find the word in that bewildering store-house.

"Perhaps there is no such word in the English language," slyly suggested the editor; "in which case we had better strike it out of the article."

This little lesson made so deep an impression on me, and instilled into my heart such a hatred of the word *gent*, that I believe if I were naked and starving I would refuse to be clothed gratis at a "Gents' Furnishing Store," or accept a complimentary dinner in a "Gents' Saloon." Mr. Richard Grant White wittily remarks that "gents" and "pants" belong together, for the former always wear the latter. If "gent" is to be tolerated by careful writers, then let us accept "pants" for trousers, "transpire" for happen or occur, and, in brief, adopt all the variegated and wonderful vocabulary of the average newspaper.

The word "gent," however, does describe a class. When you see a greasy young fellow who seems a cross between a rustic and a negro minstrel off duty—a person with cap set far back on his closely cropped head, tight trousers that grow suddenly full at the ankle, and shoes with turned-up, pointed tips (where does he get those shoes!)—when you see this vulgar little object, you see "a gent." You will encounter him on street corners in shabby neighborhoods, gazing admiringly at the lithograph of some famous clog-dancer or cheap blonde in a drinking-shop window; you will meet him there, but Heaven preserve you from ever meeting him in decent literature!—*Atlantic.*

LIPPINCOTT'S MAGAZINE opens with a description of the Lakes of Minnesota, with their healthful and picturesque summer resorts, which are already much frequented by Northern tourists, and which, judging from this article and its attractive illustrations, deserve to be better known. There are two other illustrated papers in the number,—the IXth Chapter of Dr. Oswald's "Summerland Sketches," which treats of Yucatan, and the conclusion of Edward King's account of "Old and New Rouen." "The American Suez" is the title of an article which will be read with special interest. Another timely paper is devoted to the "Ute Matter," "At the Foot of the Sierras" contains some capital sketches of life and manners in the most beautiful regions of the West. The well-written and suggestive description of "Decorative Art and its Dogmas," by M. G. Van Rensselaer, is concluded in this number. There is a fresh instalment of "Adam and Eve," by the author of "Dorothy Fox;" a very pathetic and realistic story, entitled "A Mother's Vision," by Sarah Winter Kellogg; and a bright little Italian Sketch, by the author of "Signor Monaldini's Niece." "Playing a Part," by J. Brander Matthews, is a witty and neatly-constructed comedy, well adapted for amateur acting. The poetry is by Paul Hayne and Howard Glyndon, and a large space, as usual, is devoted to the "Monthly Gossip" and the "Literature of the Day."

ST. NICHOLAS contains Alfred Tennyson's Child-Song, "Minnie and Winnie," set to music, and Mrs. Alfred Tennyson's revised score of the music for the Laureate's other St. Nicholas song, "The City Child."

"The Disadvantages of City Boys," by Washington Gladden, appears in this number. It is based on actual facts, and is a stirring talk with boys on a subject of vital interest to them. They will find pleasure, too, in the seasonable "Out-Door" Paper, "Kite Time," by Daniel C. Beard, which gives diagrams and full instructions how to make and fly kites of all sorts and shapes.

Among the short stories are "Chy Lung," an illustrated tale about a Chinese fisher lads' curious adventures; "Buttercup Gold," by Laura E. Richards, telling how a little girl found gold through boiling buttercups; "The Tea-Kettle Light," with a picture by A. C. Redwood, a true account of how a New England boy made illuminating gas from birch bark.

Of the two Serials, the installment of Louisa M. Alcott's "Jack and Gill," with two fine pictures by Dielman, brings its young people into a peck of troubles; and William O. Stoddard's "Among the Lakes," illustrated by Taber, tells how its boys and girls enjoyed themselves in an old farm-house.

A commander of the U. S. Navy, with the aid of pictures by R. Riordan, describes the "Gathering of Caoutchoue in Nicaragua;" and John Kieler, in an article entitled "Longitude 180 degrees," explains how travelers lose a day in going to China from San Francisco and gain a day on the return voyage.

One of the striking illustrations is a portrait of "Babie Stuart," the infant daughter of Charles I., engraved by Muller after the painting by Vandyck.

The Departments "For Very Little Folk," "Jack-in-the-Pulpit," "Young Contributors," "Letter-Box," and "Riddle-Box," have varied and lively items, some from the boys and girls themselves.

GOOD COMPANY NUMBER SIX, is as usual rich in stories. They include Better Times, Ellen W. Olney; Cousin Seraphina, by Sydney Hall; Aunt Hetty's Story, by Mrs. E. D. R. Blanchard; and Old Barry's Son. There are these sketches:—The Threshold of the Gods, by Maurice Thompson Little Traveler, by Miss S. O. Jewett, author of Deephaven; and After Fifteen Years.

The writer of Acer Saccharinum has a charming article, Snow Pictures. Austin Bierbower sets forth with much distinctness the fundamental differences of the Republican and democratic parties. There is a careful account of the treasury department, and its present head, Hon. John Sherman, by "David Copperfield." Mr. G. M. Towle's biographical sketch is about Victor Hugo.

There are also The Indian as he Used to Be, Roman Mosaics, Adam and Eve; and poems by Mrs. Wyeth, and Herbert Hall Winslow, the young western poet whose creditable work is to some extent familiar to the public; also the editorial departments.

VICTOR HUGO'S OLD AGE.—It is pleasant to think that the green old age of this master spirit of literature, this man who is renowned alike as a poet, a novelist, a dramatist, a philosopher, an editor, and an orator, who has worked so splendidly in the cause of the lowly, who has given forth ideas that will surely live, who has uttered truths which must make men better as they spread, and who has shown in his own noble, unselfish, fruitful life, what good things are temperance, benevolence, and self-sacrifice—it is pleasant to think that his green old age is being passed in the Paris he so dearly loves, and amid the scenes of all his triumphs; that he may contemplate, with serene delight, the founding of a French Republic likely to endure, and may himself sit as a life Senator of France among its grave counselors.

Victor Hugo has never affected the roughness of life and dress, and vulgar familiarity of manner, by which the demagogue sometimes seeks to gain favor with the multitude. He has always lived like a gentleman and a scholar. His house has always been the center of elegant literary reunions; his chosen companions have been men of culture and intellect. His modest though cozily garnished house in the Rue Clichy has become, since the return of the great exile, the center of frequent political and literary receptions, at which the first minds in France have gathered to discuss measures and books. Thrice in three years the shadow of death fell upon his house, depriving him of a faithful and beloved wife, and two sons on whose future he had rested the most sanguine hopes; these great griefs passed, and left the grand old man sadly serene; for he believes in a future life with all his soul, and knows that ere long his own summons must come to rejoin them. No one can approach him without being irresistibly attracted by his beneficent face, his big, kindly glowing eyes, his cordial, almost affectionate warmth of greeting. To every one alike he is approachable, genial and talkative. As his sympathies reach down to the humblest, so his bearing with all men is outwardly fraternal. What he is in his books, he is in his daily walks; and one has only to read them, to derive an excellent idea of his conversation. It is sparkling, epigrammatic, flowing, full of warmth and feeling, accompanied by expressive action of the features and the hands. He is ready and glad to talk about everything, and amazes by the extent of his erudition, especially in common things. He is easily aroused to a long and brilliant monologue by the introduction of a subject that especially interests him. He never tires of declaiming—for it is declamation—about the hopeful outlook for the Republic; about the enormity of the *coup d'etat;* about the necessity of abolishing, by the spread of knowledge, all crime, war, and poverty. His ideas naturally take poetic and grandiose forms as he warms to his theme. He quotes freely from his own works, with graceful apology; and there is throughout an air of what would be called vanity in a lesser man, but which in him is warranted by the consciousness of his pre-eminent fame, and of the admiration of all the world.—*Good Company.*

BRIC-A-BRAC.

AN art exhibition: "That picture of X's is a fearful daub, don't you think?" The gentleman addressed—"I beg your pardon, but I am the artist." "Oh, I beg ten thousand pardons. The fact is, I don't know anything about art—I just repeat what I hear every one saying.—Art Journal.

A MAN bought a horse. It was the first one he had ever owned. He saw in a newspaper that a side window would make a horse's eye weak on that side; a window behind him would make him squint-eyed; a window on a diagonal line would make him shy when he traveled; a window in front would hurt his eyes by the glare; and a stable without a window would make him blind.

"AMAZING GRACE."

THE following is vouched for by one of the most reliable of Philadelphia divines:

A young clergyman having agreed to supply the pulpit of an older brother absent from home, escorted to church the daughter of the pastor, and after seeing her safely in her father's pew, ascended to the pulpit, unconscious that this natural attention to the young lady was sufficient to excite lively imaginations and inquiries in the audience.

Upon reading the hymn to be sung, the young clergyman was surprised to perceive evident efforts in the congregation to suppress laughter. The daughter of his friend possessed the mellifluous name of Grace, and, all unsuspicious of that fact, he had chosen the hymn beginning with the words "Amazing grace," and proceeding with:

'Twas grace that taught my heart to fear.
And grace my fears relieved.
How precious did that grace appear.
The hour I first believed?

Through many dangers, toils and snares
I have already come;
'Tis grace has brought me safe thus far,
And grace will lead me home?

[*Harper's Magazine for January.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

SMALL FRUITS FOR THE FAMILY.

E. K. B.

THIS is the time of year when farmers are planning what their work shall be for the coming summer, and already each field has an imaginary crop growing upon it; but how few include a plot for small fruits when laying their plans for the future. It seems strange, yet it is true, that farmers, as a rule, enjoy fewer of earth's bounties in the form of a plentiful supply of small fruits, than do many of other callings; and yet they of all others could have them with least trouble and expense.

In the city there are always the markets. In the village there are often fruit peddlers who drive from door to door, but seldom is there one who goes through the country to isolated farm-houses. They probably think it would be "carrying coals to Newcastle" to take fruit into the country; but they would find it quite the contrary. As far as my observation has gone, not one farmer in ten raises his own strawberries, to say nothing of other small fruits. What can I say to lead them to a better enjoyment of the fruits of their land? If the story of our pleasant experience in the culture of small fruits shall lead even one other family to go and do likewise, then shall I consider that the time I spend in writing this does not go unrewarded.

Ten years ago when my husband's failing health drove us from the city, we bought a farm in the hope that out-door life and a plentiful supply of fresh fruits would drive away impending invalidism. But we soon found our supply of fruit was limited to certain months of the year, and that during the summer our only supplies, until apples ripened, must come from three "old-fashioned" English cherry trees and a few straggling raspberry and currant bushes. These, with a dozen forlorn, scrubby dwarf pear trees not in bearing, and a good apple orchard, constituted our stock of fruit. Two big Lilacs, two clumps of Pæonies and a Cinnamon Rose-bush formed our list of ornamentals. But we soon changed all that. The thought of owning land and going without strawberries was an intolerable one to me, and the first spring after coming here I set with my own hands (because, though far from idle, they were the least busy hands in the family just then), a Wilson strawberry bed a few feet square. The next year we had all the strawberries we could use, and we have never been without them since, but, of course, the bed has been renewed. The Wilson is still our favorite, although my husband whose sweet teeth are innumerable, prefers a sweeter berry, and in his search for one has tested several other varieties.

We have added to our stock of fruits from time to time by purchase and propagation, until now we have of small fruits, blackberries, raspberries, gooseberries, currants and grapes, all of choice varieties. Nor have the larger fruits been neglected; and we can "point with pride" to our growing peach, pear, cherry, plum and apple trees and say, "All these are the work of our hands." On counting up I find that the aggregate of varieties that we have planted amounts to over seventy-five, and yet we have not made any great outlay of money. Our purchases having been made directly from the nurseryman, we have got much better terms than if we had dealt through agents.

Our fruit is nearly all in bearing now, and it would be hard to describe our delight in the enjoyment of a succession of delicious fruits through the whole summer. First come strawberries, which begin ripening the middle of June, and by having early and late varieties, their season is much prolonged; before they are fairly gone the raspberries, cherries and currants are ready for use, followed in rapid succession by blackberries, grapes, peaches and pears. Last summer we had fresh berries on our table from the middle of June until the first of October; and, incredible as it may seem, but probably owing to the very warm weather that month, I picked several clusters of large, beautiful Kittatinnies on the 28th of October with which to decorate the wedding supper-table of a friend.

We do not purpose to raise small fruits for sale, but we do intend to have an abundance for our own consumption; and one-fourth acre devoted to their culture gives us such overflowing measure that every year there is a surplus of nearly every fruit we raise, for which we find a ready sale among our less favored but wealthier neighbors, whose daughters gladly come and pick our fruit for a share. Indeed, they tell me that they can with greater ease and more profit pick the fruits in our garden for a small share than to search through the woods and tangled brush-heaps for wild ones. We reduce the work of raising them to a minimum by setting our plants in long lines between the rows of young fruit trees, so that a horse and cultivator may as readily be driven between as through the rows of a corn-field. Treated in this manner but little hard labor is required and the young trees are also greatly benefited and kept in a thrifty condition by the frequent stirring of the soil.

Cayuga Co., N. Y.

IT DON'T PAY.

I DO NOT know why Mary Wager-Fisher or any other lady should wish to expend her "spare can money" upon cans either of glass or tin, for the preserving of tomatoes, when one can purchase them of good quality for eight or nine cents per tin quart can. I do not believe "it pays" to do them up at home. The cans cost as much or more than the above price without the tomatoes, and, although it is true that they can be used more than one season, I have found by experience that the best of glass cans can not be made air-tight enough to keep tomatoes in, without the buying of new rubber rings or metallic bands, after two or three years' use. With the labor of preparing the tomatoes, the heating of one's-self over a hot fire on an August day, and the possibility of failure, where the housewife has only for her time, labor and money a quantity of acid or worked tomatoes which no amount of sugar or soda can render palatable, it seems to me but a "penny-wise-and-pound foolish" kind of domestic economy to do up your own tomatoes whether in glass or tin.

Atkins, Mich. MRS. A. B.

TOMATOES IN STONE JUGS.

I THINK stone jugs are preferable to glass or tin for preserving tomatoes in. Although they cost more in the first place than glass, they will last a life-time with any reasonable usage. I prefer those holding two quarts or a gallon. With us, tomatoes are used as freely as potatoes, and I have frequently done up 30 or 35 gallons in a season. The tomatoes are cooked 10 or 15 minutes, salted, skimmed and put through a funnel into the jugs, which are first rinsed in hot water. Secure with good corks and a cement made of two parts resin to one of beeswax. MRS. L. E. R.

HOUSEHOLD HINTS.

To Wash Mourning Calico.

PUT the dress into a boiler half full of cold, soft water; place on the stove and when the water becomes as hot as you can bear your hands in it, wash out the dress. Use hard soap. Rinse thoroughly and in the last water put in bluing and a little dissolved glue. Do not use *milk or salt-and-water* for calicoes.

To Wash Flannels.

I use my wringer to wash woolen blankets and stockings. Make a strong soap-suds with boiling water and wring them through five or six times. Then rinse through two clear hot waters, the last one well blued. I have washed flannels, both colored and white, in this way for the last twenty-five years without "fulling." To prevent the edges of cotton or woolen sheets from curling, pass the selvedge edge of the sheet into the wringer instead of the end.

That Sausage Recipe.

The recipe for sausage in RURAL of Feb. 14, is a good one except the adding of water. Instead of water add a pint of molasses and a pint of flour. Put the meat with all the seasoning into the wash boiler (I have one that leaks which I use for this purpose); stand on the stove and mix *thoroughly* until the juice has set. Then put in bags made of cheese cloth one yard long—one width will make four bags. Suspend from the ceiling in a cold place where they will freeze.

Lime in Tea Kettles.

One or two clam shells kept in the tea-kettle, will prevent the lime from forming on the sides of the kettle. I always turn a clam shell over the drain hole in the bottom of my flower pots, to prevent the earth washing into the saucers.

Sponge Cake.

Four eggs; two cups sugar; two cups flour; (after it is sifted); half cup cold water, juice; and rind of one lemon; one teaspoon cream-of-tartar and one-fourth teaspoon soda. I proceed to make the cake in this way: Break the eggs—whites on a plate and yelks in a bowl. Beat the whites stiff, as for frosting; stir in the sugar and beat well for five minutes; next beat the yelks, and stir in; then put cream-of-tartar and soda in the water, stir and mix thoroughly. Add the flour, then the juice and chopped rind of lemon; have your tin lined with buttered writing paper and bake. I have used this recipe a good many years, and always have good cake.

MRS. C. F. REYNOLDS.

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News of the Week.

MISCELLANEOUS.

Monday, March 15, 1880.

On the 13th inst, the schooner Alaska, Captain McKenna, left San Francisco for the Artic seas. She went farthest north last year, and was last to leave in returning. Papers and correspondence have been sent by her to the commander of the Jeannette, which he possibly may receive. It is singular that those interested in the welfare of the crews of the Mount Wollaston and Vigilant when asking the Government to send a vessel to their relief, sent nothing by the Alaska, the first outgoing vessel.

Dennis Kearney and his followers have caused much trouble in San Francisco for some time past. California has adopted a constitution which prohibits the employment of Chinamen. Moreover, the San Francisco Board of Health has pronounced Chinatown, that part of the city occupied by the Celestials, to be detrimental to the public health. On the strength of these facts Kearney has allowed his eloquence free flow, advocating instantaneous and violent ejection of the Chinese, and inflaming the workingmen against the bloated capitalist. Many times has the city trembled under the apprehension of riots and disorders. These have, however, been staved off by the firm attitude of the better class of citizens. A large number of citizens representing the wealth, respectability, and decency of the city have formed an organization styled the Citizens' Protective Union. Their object is to support the constituted authorites in maintaining order. Mayor Kalloch, who was elected by Kearney's clique, sympathizes strongly with his constituents, but the Protective Union threatens him with impeachment if he favors their measures. Thus the matter stands at present....The Herald Relief Fund for the Irish famine has now reached the sum of $290,527.75 ... On the morning of the 10th inst. an elephant was born at the winter quarters of Messrs. Cooper, Bailey & Co.'s London Circus, in Philadelphia. It is an unusual occurrence for an elephant in captivity to bring forth young, hence the advent of this baby has excited some interest. The baby weighs 213 pounds, stands 30 inches high and is 35 inches long. The mother is 23 years old....An attempt was made to assassinate Mayor Baxter, of Louisville, Ky., on the 13th inst.; he escaped unhurt. The would-be assassin is a worthless character named Sam Redd, who had been discharged from the street cleaning department for drunkenness. He is now in jail....At Middletown, N. Y., five women were recently elected school trustees ... Captain Eads, the famous engineer who has so effectually opened the outlets or the Mississippi, proposes to build a ship-railway across Central America instead of a canal. He has entertained Congress with a long report of his plans....

The Atlantic and Great Western Railway Company is to be consolidated with the company of the New York, Pennsylvania and Ohio Railway. General J. H. Devereux, receiver of the Atlantic and Great Western road, will be president, and P. D. Cooper general superintendent.....A none sectarian religious organization, named the Salvation Army, which was organized in London a few years ago, has sent a division of missionaries to this country to fight sin and unrighteousness. The division consists of one general and seven subordinate officers, the latter being all ladies. Each wears a cap with a red velvet band on which the words "Salvation Army" are embroidered. They have begun work in the New York saloons, and have so far met with but indifferent success.....

Petitions are now being circulated in different States and Canada addressed to the Legislature of New York and to the Government of the Dominion in favor of the International Park at the Niagara. Any petition that costs nothing to sign is exceedingly popular....A few months ago a five-cent coffee house was opened in San Francisco. A cup of coffee and a roll of bread are given for a nickel. This institution was so well patronized that the other day the fifth establishment of the kind was started. These coffee houses are no doubt a great benefit to the wandering poor.... Recently there has grown up in large cities quite a business in cutting images in ice for evening parties. It is a big thing on ice. These ice figures are generally used for holding raw oysters, and the oysters have no difficulty about keeping cool in them. Ice dishes are also made for holding fruit. In Philadelphia one ice sculptor uses nearly 4,000 pounds of ice a week in this way. He makes Atlas with the globe on his back, the globe being hollow to contain the oysters, and charges from $2 to $5 for this cool mythological gentleman, globe and all. A very popular image is an elephant with an oyster dish on his back.

AGRICULTURAL NEWS.

The shipments of live stock and fresh meats from the United States to Europe have received a sudden impetus, those of last week being the largest in any week for more than a year. The steamer Thanemore, which sailed for England Saturday, had on board 540 live cattle, which is the largest shipment of live cattle on any one steamer since January 1. The total shipments last week were 1,908 live cattle, 4,308 quarters of beef, 1,700 carcasses of mutton, 50 live sheep and 550 hogs. .....The many friends of Wm. J. Walker, Esq., will be pleased to hear that he has again taken his old position of General Eastern Agent for the Gale Plow Co, with Headquarters at Rochester, N. Y. .....The Supreme Court of Michigan has awarded the perpetual injunction against the Three Rivers Plow Co. and in favor of the Gale Plow Co., protecting them in their patent "Improvement in Plow Jointers."

America imported from Europe last year 29,642,396 gallons of wine, an increase over the importation of 1878 or nearly 15,000,00 gallons.....

Italy is now importing foreign cereals at the rate of three hundred and sixty thousand tons per year, its own agricultural products being insufficient..... An Iowa woman examined a straw cutter in a hardware store, and she has just recovered $500 damages for the loss of two fingers, on the ground that the machine was not labaled "dangerous".....The open stock ranges of Banda Oriental are being largely inclosed by wire fences and 75 per cent. of the herdsmen are consequently thrown out of employment and threaten to become cattle thieves... .Grazing lands in Paraguay are selling for from $1,000 to $1,500 per league.....An ambitious Texan boasts that he has a three-year-old bull that'll whip any "bull" the Pope can produce ....Our mean average yield of wheat for 10 years has been 12.2 bushels; our highest average was 1877, 13.9; our lowest in 1866, 10.4 bushels.....In Ireland in 1874, the average number of acres per holding was 29; and the number of farmers, graziers, laborers and male and female servants per 100 acres cultivated, was 5.3....In Indiana the prospects for an excellent wheat crop are fine on all underdrained land.... The rates on grain from Cincinnati to Eastern points have been reduced as follows: On grain to Boston, 35½c. per 100 pounds; New York, 30½ cents; Philadelphia, 28½ cents; Baltimore, 27½ cents: on flour per barrel to Boston, 71 cents; New York, 61 cents; Philadelphia, 57 cents; Baltimore, 55 cents. The reduction took effect March 1, and will not affect any class of freights except as above. A corresponding reduction has also been made at other Western points to the Eastern cities... .The lovers of genuine Havana tobacco will have to prepare for higher prices The crop of 1878 was not prolific, that of 1879 was greatly delayed, and that of 1880 suffers thus far from excessively dry weather.... Rot or "bane" among sheep is playing havoc in various parts of England. In Somerset 5,000 are not left in one district which usually winters 50,000....The cattle plague is increasing in Cyprus...

Heavy exports of seed potatoes for Ireland are expected. In many parts of this State our "exchanges" say potatoes are selling at 25 cents a bushel Mail advices from Adelaide, South Australia, of Feb. 14, say that 400,000 tons of breadstuffs will be available for breadstuffs, and freights that were thought high at 50s. per ton, have gone up to 60s....It must be remembered that the seasons in Australia are about just the reverse of those here—winter north of the equator, is summer south of the line. In that continental island a great number of new agricultural settlements are being opened, and a large increase is expected during the next twelvemonth ....The city editor of a non-agricultural paper has "come out strong" in London—the Daily Telegraph, in an obituary notice of the late Mr. McCombie, the celebrated breeder of polled cattle, describes him as watching with delight "his *horned* beauties"!....The Booth Memorial Fund raised to commemorate the memory of the late T. C. Booth, the famous Short-horn breeder, of Warlaby, amounts to only $11,500, the interest on which is to be devoted to the education of his "direct descendants."....On an area of 2,746,418 acres of land in Ireland, where the average size of holding is 17¾ acres, of which 10¾ acres, or about three-fifths, are grass, there are 27 cattle per 100 acres. On an area of 4,853,982 acres, where the average size of holding is 38 acres, or nearly two-thirds, is in grass, being only a slighly larger proportion than on the small farm area, there are 25 cattle per 100 acres; which amounts to about the same cattle stocking. In sheep the small-farm area has 22½ head per 100 acres; but the large-farm area 30⅗ head per 100 acres, or about one-third more. And in pigs, too, the large-farm area exceeds, having 9¾ per 100 acres, while the small-farm area has 7½ per 100 acres....

The French journal *L'Industree Laitiere*, remarked in a recent issue that 1879 will be deservedly known as the "year of deficits." The crops appear to have been bad nearly everywhere throughout France. The yield of wheat was 82,000,000 hectolitres (a hectolitre is 2.5-6 bushels), the grain being generally of a bad quality, while 100,000,000 hectolitres are wanted for the ordinary requirements of the country. The rye crop is short by 10,000,000 hectollitres; barley has not been altogether deficient in quantity, but the quality is very poor, for it was spoiled by rains, and Indian corn was badly affected by extremes of wet and heat. Oats alone, of all the cereals in France, gave satisfactory returns. Forage crops and pastures were likewise badly injured. The hay crop was short, and, from exposure, lost in quality; half of the Lucerne crops was never got in. Potatoes rotted to the amount of 50 per cent., which is a serious hardship to the poor people of France, and, just at this time, especially so. The French beet root sugar industry suffered by a deficit of more than 25 per cent. and the vintage of the country barely reaches 25,000,000 hectolitres as against an average of 60,000,000 and upwards—a result due to phylloxera and frosts of unusual duration. The French fruit crop suffered greatly, apples, peaches, pears, and plums being almost altogether wanting. The year 1879 was, as appears from the record, as consistent in its disastrous effects upon the agriculture of France as in England, and to a less extent the same condition of things prevailed in most of continental Europe. ....According to the Mark Lane Express of March 10, the weather for the previous week had been favorable. A considerable area of spring grain had been sown early and a favorable seed-time seemed likely to be secured. The autumn-sown wheat presented a generally satisfactory appearance, as also did the pastures. The offerings of home-grown wheat at the country markets were generally scanty, farmers having been occupied with field work. The imports of foreign were fairly liberal. Opinions relative to the course of prices in the immediate future are pretty equally divided, the chief interest centering upon this country. Very little business was done in wheat for arrival, despite the more accommodating disposition of American holders. Australian was pretty freely offered at reasonable prices. Maize was in very limited demand, and unaltered in price. The sales of English wheat last week were 29,530 quarters at 44s. 7d. per quarter, against 44,491 quarters at 39s 1d. per quarter for the corresponding week last year. The imports into the United Kingdom during the week ending Feb. 23th were 776,134 hundred weights of wheat and 147,678 hundred weights of flour.

THE EYE-OPENER.

We have received from our friends in several parts of the country a number of circulars signed. N. J. Mayes & Co., Sweetwater, Tenn., offering on favorable terms a recipe for making sorghum sugar, several kinds of spring wheat, tomatoes, corn, etc. From the wording of the circulars and the manner of conducting the business we suspected the firm to be a humbug, and a letter just received from a thoroughly trustworthy person in that neighborhood leaves no doubt about the correctness of our surmise. "No such circulars are ever sent out in this neighborhood," our correspondent says, "and of course the thing is a humbug."

Distance all Competitors.

The dairyman who uses Gilt-Edge Butter Maker will increase his product six per cent., improve its quality 20 per cent., and distance all competitors who do not use it. 25 cents' worth of the powder increase product and market value of the same $3. Can you make a better investment? Sold by grocers, druggists and general storekeepers. Send stamp for "Hints to Butter-Makers." Address Butter Improvement Co., Buffalo, N. Y.

Burnett's Cologne received the highest award at the Centennial Exhibition. It is filled in elegant bottles, and is for sale by all first-class Grocers and Druggists.

For an Irritated Throat, Cough or Cold, "*Brown's Bronchial Troches*" are offered with the fullest confidence in their efficacy. They maintain the good reputation they have justly acquired.

FORRESTER'S COMPLETE MANURES.

Prepared under the formula of Geo. B. Forrester by H. J. Baker & Bro., New York, have given great crop results to the farmer. They furnish plant-food in the correct proportions to the plant, and are prepared on scientific principles. The results have been, per acre, 400 bushels of potatoes; 1,000 bushels of onions; 985 bushels of turnips; 75 bushels of oats, and very large crops of cabbage. The Potato Manure has been used five successive years on the same piece of ground, and the same manure and crop will be in the identical acre this year, showing that chemicals will keep up the fertility of the land as well as stable manure. Our readers will find much interest in the circulars issued by this firm.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, March 13.

Baltimore.—Wheat—Southern red at $1 38@$1 42; do. amber at $1 45@$1 48; No. 1 Md. at $1 46; No. 2 Western winter red, $1 44½; Corn—So. white, 58c; do. yellow, 56@57; Western mixed, spot, 56½@56 ½c. Oats, Southern at 47@48c; Western white at 47c; do. mixed at 46@47c; Penn. 47@48c. Rye quiet 95c. Hay steady; prime to choice Penn. and Md., $16@$17. Provisions quiet. Mess pork at $13 25@$13 50. Bulk meats—Loose shoulders, 4½c; clear rib sides, 6½c; do. packed, 5½c and 7c. Bacon—Shoulders at 5½c; clear rib sides, 8c. Hams, 10@12c. Lard at 8½c. Butter firm; prime to choice Western packed, 20@26c; roll, 20@25c. Eggs firm and a shade better at 11@12c.

Boston.—Flour steady; western superfine at $5@5 25; common extras at $5 25@5 75; Wisconsin extra, $5 25@6; Minnesota do., $6@7 25; winter wheats at $6 25@6 75 for Ohio and Michigan; $6 50@$7 for Illinois and Indiana; $6 75@7 50 for St. Louis; patent spring wheats at $7@8 50; patent winter wheats at $7@8 50. Corn steady; sales at 60@62c. for mixed and yellow. Oats—No. 1 and extra white at 51@51c.; No. 2 white at 49c.; No. 3 white and No. 2 mixed at 47@48c. Rye at 92@93c. Shorts scarce; sales of shorts, fine feed and middlings at $22@25. Butter—Choice western creameries at 30@37c.; fair to good, 25@27c.; ladle packed at 20@25c. Eggs—Western at 14c. Beans Northern hand-picked Pea at $1 50@1 55 ₱ bushel; do. do. Western, at $1 75@1 80; do. common $1 65@$1 70; medium choice $1 50@1 55; common to good $1 30@1 35; Yellow Eyes $2 10@2 15; Red Kidneys at $1 65@1 75. Canada Peas 80c.@$1 ₱ bushel for common to choice. Green Peas $1 50@1 85. Potatoes are steady; we quote Houlton and Maine Central Rose 50@55c. ₱ bushel; Houlton Jackson Whites at 40@45c., Maine Central Jackson at 40@43, Vermont Rose at 50@52, do. Jackson at 40. Peerless at 45@48, and Prolifics at 53@55c. ₱ bush. Onions $4 25@4 50 ₱ bbl. Apples at $1 75@3 ₱ bbl., according to quality. Cranberries at $7@9 50 ₱ bbl. Seeds—In Calcutta Linseed nothing doing, and prices steady. We quote Clover Seed as selling at 7¾@8¾c. ₱ lb for Western and New York; Timothy at $2 80@3 ₱ bushel; Red Top at $2 80@$2 90 ₱ bag; Canary Seed at $2 45@2 85, and American Linseed $1 50@1 55 ₱ bushel. Hay and Straw—There has been a fair demand. We quote first quality coarse Eastern and Northern at $15@16 ₱ ton; poor and medium at $11@14; Rye Straw $20@22 ₱ ton.

Chicago.—Wheat unsettled; generally higher; and active; No. 2 Chicago spring at $1.23 cash; No. 3 do. at $1 07¾@1 08¾; rejected at 91c. Corn fairly active and a shade higher at 37¾@38c. cash. Oats dull at 31c. Rye 71@73c. Pork steady with a fair demand at $11 40@11 45. Lard dull and drooping at 7.10c. cash., 7.12½c bid. Butter—Fair to fancy creamery 30@35c. ₱ lb; choice to fancy dairy, nearly equal to creamery, 25@30c.; fair to good dairy 22@24c.; common to choice roll 17@22c. Common stock was in small supply and quotable at 14@16. Cheese—A quiet feeling is noted in this market, prime grades being fair sale, with poor lots going out slowly. Prices remain unchanged, and we again quote full-cream cheddar shape at 14@14½c. ₱ lb; prime part skimmed at 12@12¾c., and hand-skimmed at 10@10¾c., according to quality. Hay—Choice hay firmly held, and some dealers asking $11 for the best upland. No. 1 timothy, per ton, $13; No. 2 timothy, per ton, $12@$12 50; Mixed, $10@10 50; Upland prairie, $10@$10 50; No. 1 prairie, $8 50@9; Slough, $8. Seeds—the tendency is strongly to lower prices. Clover quoted at $4 10@4 25 bush. for good to choice medium; at $4 40@4 60 for mammoth; timothy at $2 55@2 60 for good to prime, and flax at $1 65. on a basis of pure. Other kinds were neglected and nominal, Hungarian and millet ranging at 75@90c. ₱ bush. for good to choice. Wool—Prices are firm throughout the list, and western mills are taking about all of the offerings. The asking rates from store for eastern Iowa, Wisconsin and Illinois wool range as follows: Tub-washed bright 55@60c. ₱ lb; do. dingy and coarse, 50@55c.; fleece-washed medium 50@53c; do. fine, 48@53c.; do. coarse, 45@50c.; unwashed medium, 37@40c.; do. coarse, 33@35c.; do. fine bright, 30@34c.; do. heavy, 25@30; bucks' fleece, 20@22c. Consignments from western Iowa, Nebraska and Kansas sell at about 2c. ₱ lb less than this range, and burr and poor-conditioned lots at 3@5c less. Hogs—mixed packing at $4 20@4 45; light $4 25@4 50; choice heavy at $4 50@4 75. Cattle—Shipping at $3 90@$5 40; butchers' strong and scarce at $2 20@3 80; oxen at $3@4 80; calves at $4 50@5 25; stockers and feeders at $3@4. Sheep—quality good; common stock quiet and weak; sales at $5 40@6 50.

Cincinnati.—Flour—Family, $5.85@6. Wheat scarce and firm at $1 29. Corn firm at 42½c. Oats in good demand at 38c. Rye dull at 84@85c. Barley quiet, but firm; extra No. 3 fall at 78@80c. Pork weak at $11.62½@11.65. Lard dull at 7.15@7.17½c. Bulk meats steady, with fair demand; shoulders at 4½c.; clear rib at 6¾c., clear sides at 6¾c. Bacon steady; shoulders at 5c.; clear ribs at 7½c.; clear sides at 7¾c. Butter weak; choice Western Reserve at 23@25c.; choice Central Ohio at 22@25c. The little new Creamery offered sells at full prices, and the medium and better grades of Dairy are fully sustained in price if not in quality, but inferior stock is dull and drooping. Fancy North western Creamery sells at 40@41c. Choice Western Reserve and Dairy 24@25c., prime to choice Central Ohio at 23@25c, common do. at 20@22c. and inferior ranges down to 12½c. ₱ lb. Cheese—There has been a good jobbing trade, and some lots of prime stock have been taken for foreign export so that stocks are much reduced and prices are firm for prime to choice cured factory at 14@14¾c. per lb. New Northwestern at 13½c. Eggs—The market has been easier under liberal receipts, but it closes firm with packers buying more freely at 9½c. per dozen for fresh. Potatoes—Prime Peachblow at 30c. ₱ bush. from wagons, and Early Rose at 35c. ₱ bush. on track. Early Rose sell at $1 90@2. Pearless at $1.50@1.60 and Russetts at $1 25@1 50 ₱ barrel, and Peachblow at 35c. per bushel from store. Sweet Potatoes—Prime Western are offered at $2.50 ₱ barrel from store. Rutabagas are dull and easier at $1 50 per barrel from store to choice Michigan. Cabbages.—Are in good request, with sales of old at $2.25@3.50 ₱ barrel in prime shipping order. Onions.—Are in light supply and firm Yellow Danvers sell at $5 00@5 25 per barrel from store. Some not in prime condition sell a little lower. Ashes.—The market remains quiet but steady for Potash at 5@5½c ₱ pound. Pearlash at 6@6½c. Hides.—Green Hides bring 7@8c, green salted 8½@9c; dry salted 13@14c and dry flint 15@17c ₱ pound. Sheep pelts sell at $1.00@$1.50 for prime to choice wool, and 25@50c for sheared. Damaged hides one-quarter to one-third less. Hay.—Prime to choice Timothy sells at $15 50@$16 50, and common to good mixed at $13 00@$14 50 ₱ ton, in bales, on arrival. Wheat and Rye straw firm at $10.00@$10.50 and Oats straw at $10.50@$11.00. Mill Feed.—Bran sells at $14.50, Shipstuffs at $15.00 and Middlings at $16.00@$20.00 per ton in bulk and 50c more in sacks on track. Seed.—Clover sells in a jobbing way at 7½@8c per pound. Timothy at $2.85@$3.00 Red Top, 70@75c, Blue Grass at 60@65c for clean and 70@75c for extra clean, and Orchard Grass at $1.80@ $1.90 per bushel. Hemp Seed is scarce and firm at $3 50@$3 75 per bushel, Flaxseed is wanted at $1.25@$1.35 per bushel but there is little offered.

Detroit.—Wheat—No. 1 white Michigan, $1 27. Corn—No. 1 yellow at 46c.; high mixed at 45½c.; No. 1 mixed at 45c.; No. 2 mixed at 43c. Oats very firm and advancing; No. 1 white at 40c.; No. 2 do. at 38c.; No. 1 mixed at 38½c.; No. 2 do. at 37c. Clover seed dull and unsettled; No. 2 nominally $3 90; prime offered at $4 15.

Milwaukee.—Wheat—No. 1 Milwaukee hard at $1 22; do. soft, $1 20½; No. 2 Milwaukee, $1 19. Corn, No. 2 at 37½c. Oats, No. 2 at 33c. Rye, No. 1 at 73c. Barley, No. 2 spring, 58c. Provisions, Mess Pork $11 40 cash. Lard, Prime steam at 7.15c. Live hogs at $4 20@4 40. Dressed hogs steady at $4 80@4 85.

New Orleans.—Corn quiet at 56@58c. Oats steady at 45@46c. Corn meal dull at $2.45 Hay steady: prime at $22@23; choice at $25. Pork quiet at $12.75@13. Lard steady; refined tierce at 7½c. keg at 8½c. Bulk meats steady, with a fair demand; shoulders, loose at $4.25; packed, $4 40; clear ribs, 6½@7c; clear sides at7@7½c. Bacon dull, shoulders 5½@5¾c.; clear ribs 7½c.; clear sides at 8½@8¾c. Sugar cured hams dull; canvassed at 8¾@10c. Cotton quiet, easy; middlings 13c.; low middling 12⅝c.; good ordinary, 12½c.

Weekly—Net receipts 28,089 bales; gross 30,489; exports, to Great Britain, 15,991; to France 13,061; to the Continent 17,222; coastwise 2,500; sales 3,600

Philadelphia.—Wheat active—Western rejected on track at $1 41; mixed in elevator at $1 42; Penn red on track at $1 44½; Southern amber at $1 46½; No. 2 red in elevator at $1 44½; the cargo rate for No. 2 red is $1 45½ free on board. Rye scarce; Penn. 92@93c. Corn—Penn. and Southern yellow on track and in grain depot, 55@55½c.; Western yellow on track, 55c.; Western mixed on track and in grain depot, 54½c. Oats—More inquiry; mixed at 45½c.; No. 2 white at 48½c.; fancy do. at 49c. Butter firm and fairly active; creamery extra at 35@37c; Bradford county and New extra at 27@28c.; Western Reserve extra at 27@28c.; do. good to choice at 24@26c.; rolls wanted; Penn. extras at 22@23c.; Western Reserve extras at 23@25c. Eggs firm; Penn at 13c.; Western, 12½@13c. Cheese steadily held; New York factory at 14½@14½c; Western full cream, 14@14½c.; do. good, 13½@13½c.; do. half skims, 12@13c. Poultry—Live chickens at 9@10c., as to quality; do., turkeys, at 10@11c.; dressed dry-picked chickens, 9@11.; turkeys, choice, light, 13@14c. and common to good do. at 10@12c. Feed—Sales of 40 tons prime winter wheat bran, in store, at $21 50, with choice flaky lots quoted at $22 on the spot, and running lots of prime at $21. Seeds—Clover was in full supply and easier, under a slow demand at 7@8c. for fair to prime. Timothy was quoted at $3.15@3.35 for round and jobbing lots, as to quality, with sales of 100 bags at the inside rate. Flax was scarce, and if here could have been placed at $1 85@1 90. Wool—Col. fall, 32@34c.; 70,000 lbs. English combing at 55c.; 30,000 lbs. Canada combing at 52½c.; 25,000 lbs. unwashed combing at 45c.; 10,000 lbs. washed medium do. at 60c.; 50,000 lbs. Ohio do at 65c; 25,000 lbs. medium do. at 70c.; Wisconsin fleece at 55c.; fine medium do. at 59c.; black pulled at 49c; Western super pulled at 55c.; super do. at 58@58½c.; low rolls at 48@50c.; fine Texas at 36c., and fine unwashed at 32½c.

St. Louis.—Flour—Double extra at $5.30 bid; triple extra at $5 50 bid; family at $5 65 bid; choice at $5.87½. Wheat dull; No. 2 red fall at $1.22½@1.22¾; No. 3 do. at $1.20@1.20½; No. 4 do. at $1.13. Corn steady at 36½@36¾c. Oats quiet at 32⅝c. Rye dull at 73½c. bid. Pork dull; jobbing at $11.85@12. Lard quiet at 7c. Bacon—Shoulders at 4.65@4.75c.; clear ribs at 7.20c.; clear sides at 7.40@7.45c. Hogs strong and active; Yorkers and Baltimores at $4.15@4.35; packing at $4.10@4 30; butchers' to fancy at $4.45@4.60. Cattle in active

demand, and urgent for light to medium steers of 1,000 to 1,300 lbs. at $4@4.50; heavy steers slow and weak at $4.80@5.20; stockers and feeders scarce and wanted at $2.75@3.50 for the former, and $3.75@4.15 for the latter; butchers' stock in good demand. SHEEP—prices ranging from $4.25@6.25 for good to fancy.

Toledo.—WHEAT—No. 3 white Wabash at $1 27; No. 1 white Michigan, $1 27; amber Michigan, $1.31½; No. 2 red winter, spot at $1 32. CORN easier; No. 2 at 42½c.; No. 2 white at 45c.; rejected, 42½c. CLOVER seed firm; mammoth at $4 35; prime at $4 05; No. 2 at $3 80

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, March 13, 1880.

BEANS AND PEAS.—With the advanced season and quite liberal receipts the bean market is a shade in buyers' favor all through; in fact for wholesale business inside figures are all the market will bear. Green peas are only steady; the right of the demand is over; quoted at $1.80@1.82½ Wis. 0bls. Southern peas neglected; $2.25 represent only small lots; round parcel would not make $2. Marrow beans, prime, $1.65@1.67; fair to good, $1.60@1.67; medium, prime, $1.45@1.50; medium, fair to good, $1.35@1.40; pea, choice, $1.65@1.70; fair to good, $1.45@1.55; white kidney, choice, $1.75@1.80; fair to good, $1.60@1.70; red kidney, prime, $1.70; fair to good, $1.55@1.60, turtle soup, good to prime, $1.80@1.85.

Receipts of beans, 4,950; exports, 1,900 pckgs.
Receipts for week, 16,150 pkgs., exports, 6,000 do.

BEESWAX.—There is a small trade and a steady market at 24 to 25 for Western and Southern.

BROOM CORN.—Offerings are small and prices well maintained; quotations are for c oice brush at 9c.; choice hurl at 8c'; stalk braid at 6@7c.; mixed red and green at 5@6c.

BUTTER.—The crop of '79 is giving out fast, few lots of firkins or half tubs hold a place as table quality. Shippers have turned their attention to fair, useful State and have paid 22c. for lots that would soon be rejected if held for local use. New butter has a quick sale, and as before some special marks exceed the extreme in the competition to secure them. Mixed old and new will sell no better than common Western factory. Western dairy keeps on even grade of quality better than late supplies of old State and prices rule steady. The outlook of the market is strong, as neither State or Western supplies are likely to be plenty for a couple of weeks. New butter quoted: creamery, good to choice, 34@37c.; extra, 39c.; poor to fair, 27@30c.; fall creamery, 23@29c.; earlier made, 20@26c. New pails and tubs range 23@34c. State, pails and tub fall choice, 28@30c.; good to prime, 26@28c.; fair to good, 23@26c.; poor to fair, 20@23c.; pails and tubs, single dairy, fresh choice, 32@34c.; fresh, good to prime, 28@30c.; fresh, fair to good, 25@25c.; dairies, choice, 26@27c.; good to prime, 24@25c.; fair to good, 23@23c.; poor to fair, 19@22c.; bodies of dairies, 18@25c; very poor, 16@18c.; Western imitation creamery, 23@30c.; dairy, fresh, extra, 25@26c.; good to prime, 22@24c.; fair to good, 21@22c.; poor to fair, 14@17c.; special factory marks, extra, 25@26c.; prime, 21@22c.; fair to good 18@19c.; poor to fair, 17@19c.; very poor, 14@17c.; roll butter, prime, 19@23c.

CHEESE.—Shippers have been freer buyers this week, chiefly of parcels to be had at from 13½@14c.; the latter for fancy; there are selections, however, held at 14½@14¾c. The market is quite steady.

Quotations for State factory are: best at 14@14½c.; good to prime at 13½@14c.; fair to good at 13@13½c; do. poor at 12@12¾c. State farm dairy: good to prime at 13¾@14c.; fair to good at 13@13½c. Ohio factory: Cheddar, fine, 14c.; do., fair to good, 12½@13¼c.; flat, fine, 14@14¾; flat, good to prime, 13@13½c.; flat, fair to good, 12½@13c.

Receipts for week, 5,000 pkgs.; exports, 10,500 do.
Liverpool cable, 70s., a decline.
Steam to England 35s.

COTTON—The market has been fairly active, and firm, closing at, for March, 13.12@13.13c.; April, 13.18@13.19c.; May 13.29@12.30c.; June, 13.56@13.57c.; July, 13.67@13.68c.; August, 13.74@13.75c.; September, 13.35@13.36c.; October, 12.45@12.47c.; November 12.07@12.11c.; December, 12.04@12.04c.

DRIED FRUITS.—Apples are firm in price and have a steady fair demand. Peaches are quiet and prices unchanged. Blackberries are scarce and higher; other small fruits are unchanged; latest prices are for N. C. apples, fair to good, 7½@8¾c.; choice, at 9@9¾c.; fancy at 10@10¾c; Virginia, at 7@8c.; New York State quarters, at 7@8c.; sliced at 7½@8¾c.; patent evaporated, choice in cases, at 13¾@14c.; prime at 12½@13c. Evaporated peeled peaches, good to choice, at 22@26c.; unpeeled at 12@14c.; North Carolina peeled, fancy, at 20c.; choice old at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7½@8c.; do. quarters at 7@7½c. Pitted cherries at 15@16c. Blackberries at 14c. bid. Raspberries at 26@27c. Plums at 17@18c.

Exports for week, 150 bbls. dried apples.

EGGS.—Receipts for the week, 14,640 bbls.; do. last week 13,200 do. There have been several attempts to push up the market, but the best that was done was to make Western rule 13½c. for a day or two. The market is weak at the close at 13¼c. Supplies are liberal, as some owners have been holding for a higher market.

Near Points, ₱ doz., 11c.; State and Penn. 13@13½c. Western, fresh, 13@13¼c.; Southern, 12@13c.; Western and Canada, inferior, 11@12c.; limed are very dull at the late decline, quoted 8@10c.

FLOUR.—After a lull in trade and lower prices demand has quickened, chiefly on wants of exporters, and prices are hardening, especially for low grades.

Sales: prices are $4.40@5.25 or poor to fancy superfine State and Western; $5.25@5.45 for inferior to good extra do., odd lots and mixes: $5.45@5.75 for good to very choice do.; $5.20@5.45 for inferior to good shipping extra do., inferior to about choice white wheat extra $5.70@6.60; about choice to very fancy do. $6.60@7.25; red and amber winter wheat, inferior to very fancy trade and family, at $5.60@7.50; round hoop Ohio, $5.35@5 75; mid trade and family brands of do. at $5.80@7.00; the latter rate for fancy choice; St. Louis at $5.70@6.50 for inferior to very good extra; $6.50@7.75 for very good to fancy; Minnesota clear, inferior to fancy, at $5.60@6.80; Minnesota "straight," inferior to very fancy, at $6@7.75, and patent inferior to fancy at $6.75@8.75; unsound stock at from $3.25@5.75; city mill extra at $6.25@6.65 for ordinary to fancy for West Indies; do. for England, $5.20@5.60 for poor to choice; do. trade and family extras, $6.50@7.25; do. for South American, $6.50@7.00; No. 2 at $3.35@4.60 for poor to fancy.

CORN MEAL—Sales at $2.50@3.10 for yellow Western and $3.30 for Brandywine

FRESH FRUITS—Exports of apples for week, 3,750 bbls. Apples are quiet; buyers are very particular about quality when they pay the extremes. Late railroad lots arrive in poor order, none exceeding $2.75.

Baldwins, poor to best, $2@3.25; Greenings range at 2@$3; Russets, 2.50@$3. Cranberries firm; crates only offering, bbls. have to be made from N. J. stock when wanted. Crates, $2.75@3.25. Florida oranges are firm for pure; few first quality lots expected. Choice to fancy hf. bbl. case, $3 50@4.50; other, $2.50@3. Strawberries have arrived liberally; restaurants begin to make them a daily item on bills of fare; prices easy, 15@30c. ₱ qt. fair to choice. Peanuts steady at former figures. Va. hand-picked, 5¼@5¾c.; extra prime to fancy, 5¾@5¾c.; good to prime, 4¾@5c.; shelled, 5½@6c. Hickory nuts, 75@90c. Pecans, 9½c.

FURS AND SKINS.—The market is very quiet here since the disappointing news from late London sale. It is likely that an easier state of rate will soon be named. Poorly cured lots not wanted now at any price, as all purchases will have to be held either here or abroad.

GRAIN.—Wheat has been unusually active this week, and prices showing frequent fluctuations, closing, however, strong. Exporters have taken larger quantities, but they do not show altogether in the reports for this week, which are in the neighborhood of 800,000 bush; speculation has been rampant and one day's business this week reached about 3,000,000 bush.; latest prices are of No. 1 white at $1.40@1.45; do., March, at $1.44@1.44½; do., April, at $1.43½@1.44¾; do., May, at $1.41¾@1.42; ungraded white at $1 42c.; No. 2 red at $1.43½@1.49; do., March, at $1.48@1.48¾; do. April option, at $1.48¼ at 1.47¾; do., May, at $1.44½@1.45; No. 3 red (Kansas grade) at $1.40 ungraded red at 1.41@$1.46; No. 2 Chicago at $1,41; No. 2 Northwest April at $1.41; do., May at $1,36; New York No. 3 spring at $1.34. Rye sold in a small way at 92c. for State; larger parcels are held higher

Corn has been very active for prompt delivery at higher prices, but closed weak. Shipments this week have been 480,000 bush.; latest prices are for New York No. 2 at 61@61¼c.; do., March, at 57¾@58c.; do., April, at 51¾@54¼c.; do., May, at 53c.; New York steamer mixed at 60¾@61c.; do., March, at 57c.; do., April, at 54c.; ungraded mixed Western at 59¾@61¾c.; New York No. 3 at 53½@59¾c.; yellow, Jersey at 61 c.; steamer yellow at 61c.; yellow western at 61c.; No. 2, white at 64c.; steamer white at 61c.; round yellow at 60@60¼c. Oats closed easy on full offerings; latest sales are of No. 1 white at 51c.; No. 2 white at 1¾7c.; No. 3 white at 47c.; New York No. 1 at 48c.; New York No. 2 at 47¾@48c.; do., March option, 47c; do., April option at 44¾@45c.; New York No. 3 at 47c.; ungraded white western at 48@50c.; ungraded mixed western at 47@48c.; white State at 49@50¾c.; mixed State at 47¾@48c.; No. 2 Chicago at 43c.

HAY AND STRAW.—The receipts are very moderate, demand fair and prices steady. Shipping hay quoted at 70@75c.; retail lots at 80@85c. for medium, and 90@95c. for prime; clover at 60@65c. Straw at 95c.@1.05 for long rye; 65@70c. for short rye, and 55@60c. for oat.

Exports for the week, 2,250 bales.

HONEY—Dull at 14@15c. Single comb, w. clover 11@13c.; larger pkgs., 10@11c. Buckwheat, comb and extracted clover, 8@9c., strained.

HOPS.—There have been a few small sales here but no vig rin any quarter, and prices are nominally unchanged. Quotations are for

	Cents per ℔.
New York, fancy	37 @39
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast, olds (nominal)	5 @10

MAPLE SUGAR.—Prices are falling, as the stock begins to show. Large molds 10@12c.; small, 12@13c. Syrup in tin, 75c.@$1 ₱ gallon.

OIL CAKE.—Western is quoted at $32 ₱ ton.

POULTRY AND GAME.—Dressed has advanced under a lighter demand. Very little State or poor stock here. Western frozen poultry has sold at 14c.; fancy Vermont is scarce as yet and brings exceptional prices. Choice chickens have a steady demand, also prime ducks. Geese slow, season almost over for them.

Turkeys, N.J. good to prime, 14@15½c.; State, Mich., N. Ohio and Penn., 11@15c.; fair to prime, small Western, 12@14½c.; large Western, 10@11½c. Western dry-picked, 13@15c.; Phila. dry-picked, 14@16c.; Capons, large, 18@20c.; small and slips, 15@17c.; Phila., chickens, winter 19@20c.; Phila., dry-picked, 15@17c.; N. J., chicks., 14@15c.; State, 13@14c.; Western, choice, 12@13c.; poor to fair, 7@10c. Fowls, Phila., dry-picked, 12@13c.; State and Western, scalded, 10@12½c.; poor 6@9c. Ducks, 14@20c. Geese 11@13c.; squabs, ₱ doz., white, $3; dark, $2.00@2.25. Live poultry in light supply, and firm. Fowls, 11@12c.; roosters, 5@6c.; turkeys, 10@11c.; the lower for toms, ducks, 60c.@$1; geese, Jersey, $1.62½@1.75; N. Y. and Pa., $1.37@1.50; Western, gray, $1.25@1.50; do. white, 75c.@$1; pigeons, ₱ pair, 40@45c. Game is quiet. Eng. Southern snipe have declined, 2.50@$2.75. Wild pigeons in fair request at 1.50@$2; the latter for Ind. Canvas back ducks, $1.50@1 75; Red head, 40@75c.; Mallard, 40@50c.; Black, 30@40c.; teal, 25@30c.; common, 15@20c.

PROVISIONS—Have tended lower and trade fairly active. Mess pork quoted at for new for March, $12.15@12,25; and April at $12.15@12.25; May at $12.20@12 30. Bacon at 7¾c. for long clear and 7¾c. for short clear. Tallow at 6 7-16c. for prime. Stearine at 7¾@7¾c. Beef—Extra India mess in tierces quoted at $18.50@20; extra mess at $11@12; plain at $10.50@$11; packet at 11.50@$12. Beef hams at $16.50@17. Lard—Western steam at $7.65 for spot lots; $7.60@7.63¾ for April; $7.65@7.67½ for May, and $7.70@7.72½ for June.

Receipts for week, pork, 2,460 bbls.; beef, 450 pkgs.; cut-meats, 43,050 pkgs.; lard, 22,029 pkgs. Exports, pork, 4,704 bbls.; beef, 2,824 pkgs.; lard 7,947,400 lbs.; bacon and cut-meats, 12,038,262 lbs.

SEED.—Clover is firm and in fair demand; sales of Western at 7¾c. for prime Western and 8@8¾c. for choice and extra choice do., and State at 9@9¾ for choice and extra choice, and fancy parcels held higher. Timothy firm at $3.05@3.10.

TOBACCO.—The market has been essentially as last week, showing a moderate amount of business only.

KENTUCKY LEAF.

	Light.	Heavy.
Common lugs	4 @ 4¾	4½@ 5¾
Good lugs	4¾ @ 5¾	5¾@ 6¾
Low leaf	5¾@ 6¾	6¾@ 7¾
Medium leaf	7 @ 7¾	8 @ 8¾
Good leaf	8 @ 8½	9 @10¾
Fine leaf	9 @11	11 @ 12
Selections	12 @—	12½@14

SEEDLEAF.

	Crop of 1878.
New England Havana seed	22 @30
do. wrappers, common	13 @15
do. do. medium	16 @18
do. do. fine	20 @27½
do. do. selections	30 @40
do. seconds	10 @14
do. fillers	6 @ 7¾
Penn. assorted, common	10 @13
do. do. fair	12½@15
do. do. fine	16 @20
do. wrappers	16 @35
do. fillers	8½@ 9¾
N. Y., ass'd, com. to medium	10 @11
do. do. good	12½@15
Ohio assorted	8 @14
Ohio wrappers	15 @25
Wisconsin assorted	8 @12
Wisconsin Havana seed	15 @20
Wisconsin wrappers	12 @18

VEGETABLES.—Exports of potatoes for week, 2,421 bbls. The market is lower and even then inside rates mean the most business. Bermuda, new ₱ bbl., 6@$6.50; E. Ross, N. S., bulk, ₱ bbl., $1.37@1.62; Maine, per d.-h. bbl., $1.75@2.00; State, do. $1.37@$1.50; State, in bulk, per bbl., $1.25@1.50; Prolific, N. S., per d.-h. bbl., $1.37@1.62; in bulk, per bbl., $1.25@1.50; Mercer, Nova Scotia, bulk, per bbl., $1.00@1.25; Chili Red, N.S., bulk ₱ bbl. 1.25@1.37; Peachblow, State, per d.-h. bbl. $1.75@$2; Snowflake, State, per d.-h bbl., $1.50@1.62; Peerless, State, do. $1.25@1.37; bulk, per bbl., 1.25@$1.37; Jersey, bulk, do. 62@75c.; Sweet potatoes, $3.00. The weather has been against sale of Southern produce. Fla. tomatoes box, 60c.@$1.00; Nassau, 50c.@$1; Ber, 60@$1; beets, Ber., new, Verate, 1.75@$2; green peas, Sav., 2.00@3.00; Ch'n, $2@2.50; Fla., small, 50c.@$1.00; kale, Norf., ₱ bbl., 50c.@$1.25; Balt., per bag, 75c.; spinach, Norf., per bbl., $1.50@2 25; Balt., 1.25@$1.50; radishes, Norfolk, ₱ 100 bunches, 1.00@$2.00; lettuce, southern, per bbl., 3.00@$5.00 squash, marrow, $1.75; Hubbard, $2 50@3; cabbage, ₱ 100, $3@8; onions, white, $4@5.00; yellow, 3.00@$3.75; red, Eastern, $3.50; Chester, $3.00@3.50; beets Jersey 1.00@$1.25; Turnips, Russia 75c.@$1.00; carrots, 75c.@$1.25. Hot-house products, Cucumbers, doz. $3.00; radishes 100, 2.50@$3.50; rhubarb 100, 6@$7; lettuce Boston doz. 25@87c.; do. N. J. and L. I. doz. 25@62. Chas. asparagus has sold at $9 doz.

WOOL.—Demand has been active this week and prices very strong. Latest sales are of X and above Ohio at 55@57c.; medium Pennsylvania at 60c.; Texas at 35½c.; scoured do. at 80@88c.; scoured California at 78@85c.; California at 25@35c.; Eastern Oregon at 42@45c.; Australia at 32½@42c.; scoured East India at 55c.; Montevideo at 37½@42c.; Australian at 48@50c.; foreign carpet filling at 20c.; Donskoi at 26½c; Cape at 32@33c.; Russian camel's hair at 17@18c.; Buenos Ayres at 36c.; merino at 34c.; fine Mediterranean at 32c.; unwashed do. at 17c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, March 13, 1880.

BEEVES.—Receipts for week, 12 623 head; do. last week, 9,199 do. Though liberally supplied for Lent the market closed strong and showed some advance for good grades of steers, but that no further advance can be made on Monday next is the general opinion of both buyers and sellers. Excepting a few small lots of rubbish sold at 8¼@8½c. ₱ ℔. to dress 55 ℔. to the gross cwt., and a half dozen fancy steers at about 11c. ₱ ℔. to dress 57 lbs. to the gross cwt., the gross cwt., the extreme range was 9@10¾c. ₱ ℔., to dress 55 lbs., 56 lbs. and 57 lbs.

COWS AND CALVES.—Supply large and market dull; sales generally at $30@50, with a few extras at $62.80.

VEAL CALVES.—The storm kept back supplies and prime live and dressed have ruled firm. N. J. and Bucks Co., live, 8@8¼c.; fair to choice other, 5½@8¼c.; Mt. Hollys, 7@8½c.; choice hog dressed, 10½@11c.; fair to prime, 7½@10c. Buttermilk calves, 4@5c.; grass, 2½@3c.

SHEEP AND LAMBS.—Receipts for week, 21,272 head; do. last week, 19,772 do. The demand has been steady at fair prices. Sheep, 6@7½c.; yearling lambs, $7.25@8.30 ₱ 100 lbs.; spring lambs, $5.50@8 ₱ head.

SWINE.—Receipts for week, 24,473 head; do. last week, 29,224 do. Live strong, with an advance for dressed on 'Change. Common to prime Western live, $4.85@5.12½ ₱ 100; country pork, heavy to light, 6@7¼c.; city dressed, 6¾@6¾c.

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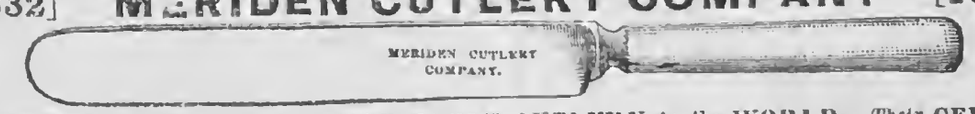

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Reading for the Young.

CLUB NOTES.

THE season for active work is near at hand. The members of the Horticultural Club must now "be up and doing." Those who have not already purchased seeds of the plants they wish to grow this summer should do so without delay And right here, let me tell my dear young relatives that this is an excellent way of spending their spare money. A noted nurseryman, whose articles may often be seen in the RURAL, once told me that while a boy he always saved up his pocket money to buy seeds and plants with it. When his brothers and sisters bought sweetmeats for their money he carefully put his in the saving bank till he was able to buy what he wanted. Then came the selection of the seeds. He searched the seedsmen's catalogues, read all he could find that would enlighten him about his pets, and was thus prepared to make a wise selection. During the summer he was able to show brilliant flowers and well-grown vegetables as the proceeds of his spare money, while his companions had only the remembrance of stomach aches, the results of sweetmeats they had purchased. As a guide in the selection and treatment of your seeds, read carefully the articles on floriculture that appeared in these columns on December 13th, Jan. 31st and March 13th; they were written expressly for you. The flowers there recommended are likely to give you most satisfaction. I will here add a few more that are very desirable. Mignonette (Reseda odorata) is a little plant that should be found in every garden. It is valued for its sweet, agreeable scent. Sow the seed in the open ground where the plants are to remain. Keep them well supplied with water.

Nasturtium, (Tropeolum) of which choose some strong growing variety, it will give better satisfaction than the dwarfs. The flowers are very bright and showy. The seeds are as large as peas and should be planted about an inch deep. Morning Glory, (Convolvulus) is a grand old flower that should not be neglected because it is common. It grows like a weed and the flowers are very beautiful. These, with the kinds named in the floricultural articles make quite a long list. Of course, I don't mean that you should buy all of these, but select a few of those you like best. Nor should you forget to procure seeds of a few choice vegetables. Meantime I am making arrangements for a seed distribution among the members of the Horticultural Club. The members are now so numerous that this is quite a formidable affair, and in the future I shall be obliged to limit the seed distribution to those members who by their interest in horticulture prove themselves worthy to such distinction. At present, I would very much like to know who of the members are trying to graft fruit trees this spring, as recommended in the article on that subject in the RURAL of Feb. 14th. Experience is the best teacher. The only way to learn to graft is to try it. Who can report progress?

UNCLE MARK.

REMINISCENCES OF A LITTLE GIRL.

MRS. M. J. GALPIN.

CHAPTER IV.

ON the morning after their marriage Father Tom and his bride took counsel together what had best be done. He was for going back and braving it out, but the thought filled her with such terror that it was soon abandoned. Mrs. Silk had a married sister living in Athlone, and if they could only make their way there without being discovered they hoped to elude their persecutors. Father Tom thought that perhaps people there would not know his connection with and desertion of the priesthood, and he could then turn his education to some account. But he reckoned without his host, as you will see a little further on. Don't you think they were a delightful couple (of fools, I was going to say)? They had no money and no clothes except what they wore on their flight, and what to do under the circumstances was the all-important question. The old priest who married them was a kind of hermit, so that he possessed almost nothing. O! how were they to begin life under such auspices? Already the clouds seemed lowering above their horizon ere they had fairly launched on life's troubled sea. I earnestly hope, dear children, that the fortunes of this rash pair will be a warning to you never to rush into contracts of any kind except by the advice of your parents and after due deliberation. The priest told them of a little village about ten miles away where they might find a chance to do something towards earning a living.

With light and hopeful hearts they set out on their tramp, as the expense of hiring a "jaunting car" was not to be thought of. Starting at sunrise a few days after their marriage they proceeded on their way; the skylark warbled forth his morning praise, and anon the blackbird and thrush added to the glorious concert, till all nature seemed to rejoice and welcome this hapless pair as they wended their way along the grassy road, or rested now and then beside the fragrant hawthorne hedges. They would slake their thirst by some babbling brook, or refresh themselves with the sparkling waters of some cooling spring. Ireland is famous for its springs, both "holy" and otherwise, while all its streams flow in limpid clearness on pebbly beds, and rise and fall over stones, making infinite cataracts. The scenery in Ireland is unsurpassed in grandeur and beauty, but to appreciate its loveliness one must see the change from mountain to valley, from the roaring torrent to the singing brook, as these wanderers did. About sundown they reached the little village of Glenmore, and Father Tom took a letter of introduction the old priest had given him to the cure of the village. Father Silk learned that there was a schoolmaster wanted, and he was promised the position if he suited. The good old cure pitied him, but he never dreamed he was a banished priest; if he had he would have spurned him like a dog. Father Tom's wife could make beautiful lace and all kinds of embroidery, and so they hoped between them to at least keep the "wolf" of hunger from their door.

Father Silk obtained the school, while his wife assisted him, and after school hours worked at her lace making. Matters glided on smoothly for some months, but at last her people learned where she was, and they then wrote her the terrible tidings of the death of two of her little ones, and wanted to know what they should do with little Katie, who had by this time fully recovered. The shock produced by the news of the death of her children, prostrated her on a bed of sickness. She knew naught for days, but a strong constitution prevailed over the delirium, and she awoke at last from her night of oblivion. The memory of her sorrow rushed over her like a tidal wave, threatening to again obscure the reason but so lately regained; but the common sense of the nurse came to the rescue, and though homely in its expression it served its purpose. "Howly Mother," cried Mrs. Doolan, "will ye be crying the purty eyes out of yer head afther the blessed angels that's gone to liven? Shame on ye; and look at that "gossoon" (meaning Father Tom) it's just crazy the poor boy is intirely; faith, it's himself that don't know which end he's standing on" Father Tom felt wretched, but worse was to come. Ere long their friend, the village priest, received a letter from L——, their native town, giving him a full account of their flight and their sin against the church, and before nightfall the rabble were possessed of all the particulars A mob gathered round the house, threatening them with dire punishment for their "heresy." The nurse, Mrs. Doolan, lent her large cloak to Mrs. Silk, which effectually concealed her form, and she escaped by the back door into the garden, where she crouched beneath the hedge, waiting to see what would become of her husband. He, meanwhile, by the advice of Mrs. Doolan, ascended to the loft, and sprang out upon a low-thatched roof beneath, and thence to the ground; thus saving himself from the fury of the half drunken crowd. I suppose my little readers will wonder why there was such a fuss made over a man's changing his religious views; but you must know that the Irish Catholic will fight for the honor of his "church" quicker than he will for home or fireside.

The hunted pair hid for some days in an old abandoned hut that had been built near a bog by the turf cutters, and here their only friend, Mrs. Doolan, brought them something to eat under cover of the night. She also saved what few of their things she could get, before the infuriated mob had burned down the cottage they had occupied. The idea of living in the old hut could not be thought of, so one dismal night under cover of the friendly darkness, they took their departure along the lonely road, determined to stop no more at villages, but to reach Athlone if possible, where they could find relations and claim the protection of the law if necessary.

After many days, footsore and weary, they reached the suburbs of the city, and here they tarried a while to recruit their failing strength and make themselves presentable. Helping his wife down the rock, Father Tom found a secluded grotto beside a running stream, and here unmolested their they made toilet, taking clothes from the pack which he had carried on his shoulders from the hut. They now pursued their way along the route with renewed hope and vigor. Towards sunset next day they entered the city and found the residence of Mrs. Silk's sister, who, although surprised, welcomed them with open arms. The whole truth and situation of affairs was told Aunt Margaret, and she wept as she listened to the hardships endured by this ill-fated pair. Her advice upon learning the true state of affairs, was that Father Tom should try and obtain some work, while her sister could remain with her for the present. Owing to Father Tom's education he was capable of filling a good many positions, and hearing of the general survey that was then being made of Ireland (between the years 1839 and 1843, if I remember aright, the date as told me in after years by himself), he determined to try and find employment with them if possible. He succeeded in obtaining the position as chain bearer to the surveyors. He remained on this ordinance survey until its completion and rose from "chain bearer" to be the foremost among the surveyors and engineers, and the best draughtsman and penman in the office. Penmanship was an inborn talent with him; I have never seen any writing that equaled his except the copies of Prof Gaskell's Compendium. In my next chapter we will follow his fortunes whilst he was engaged on this survey. As many and interesting were the sights and scenes he witnessed while traversing the country on his route.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK: I thought I would sit down this evening and write an account of my success in gardening last summer. I fear it will be a long one, but I must beg your patience, and I will make it as short as I can. The tomatoes and the Oxheart Peppers were planted in a box together; they all came up, I guess, but they were so late the peppers did not come to anything, and the tomatoes did not ripen, for which I was sorry as you asked me to report as to their quality. The gourd seeds, the Turnip radish, and the three kinds of celery, got mislaid till it was too late to do anything with them, but I shall plant them this summer.

Of the six seeds of Smith's Prize Balsams, three came up; after they were set out one died, the other two grew and blossomed. One was pink and the other white, the white was the handsomest and the more double. I got no seeds. The Black Pansies came up and did beautifully; they were very handsome and blossomed all summer long. With those and the ones I had before, I had sixteen different kinds of Pansies. I gathered quite a lot of seeds. The Phlox Drummondii made a splendid bed, and were greatly admired.

I had lots of Petunias and they were very pretty. The cut-leaved Pinks were very odd, but pretty, and they did nicely as also did the Diadem Pinks. I did not get a single plant from the two kinds of Aquilegias you sent, which I don't understand, as I am sure they were planted right. I am sorry, for I think they are pretty, and we haven't any now, though we used to have them. I have two nice Hollyhocks. The Hibiscus Syriacus came up well; but there was some kind of foliage plant that did not come up at all. I raised quite a bed of Gladiolus; they grew from two to three-and-a-half feet high, and nearly all sent up three flower stalks; but I guess you are weary; so good-bye.

Your niece, MABEL C. HOSKINS.

Orleans Co., Vt.

DEAR UNCLE MARK:—Will you allow me space enough to ask some of the cousins to correspond privately with me? I correspond with one of the cousins, and I will be glad if some of them will write to me soon. Yours truly, LILLY BLAIR.

Griffin, Ga., P. O. Box 123.

BRIEFLETS.

Now, wouldn't it be a good idea to have the Hon.-Benjamin Le Fevre, investigated? . . Whether the Maine beet-sugar factory pays or not will be known when—and not before—the State aid is withdrawn. Should the business continue after that, it will be because there's money it. . . Professors Collier and Goessman don't exactly agree as to the probable profits of making sugar from Early Amber cane in the Eastern States. When *Professors* disagree, let the *farmers* decide. . . We warn our readers against the THWACK Raspberry. Two years ago we reported the fruit as large, and bright in color, firm and worthless—except for market. We have not since had occasion to change our opinion. . . The Indiana Farmer says he is lucky who buys his supply of maple sirup before it is doctored with glucose or sorghum molasses. . . One good reason why persons should prefer to live in the city than in the country is that fewer are struck by lightning in the former. . . Some one has written on "What Girls Think." This is very complimentary to that class of girls who, to be judged by their talk, never think at all.—New Haven Register. . . Lord Bacon said "speaking makes a ready man, and reading a full man. Modern people have an idea that something besides reading makes some men full.—Syracuse Times. . . A well-spent life is like a well-spent day; at its close there is a wish for rest. . . Professor Corbett offers to tell the French Minister of Agriculture how French poultry keepers may gain many millions of francs every year. He charges the moderate sum of $200,000 for his invention! The French Minister has not yet sent the money. . . Speaking of political journalism, Eugene Howland says: "That Democrats own organs of Republican opinion, and Republicans own organs of Democratic opinion, while the writers upon both of them are conscious of the unreliability of both for the expression of their own convictions as men and citizens, is a sad outlook for the moral future of the State." . . Crocuses were in bloom at the Rural Grounds Feb 22. . . The Editor of the RURAL NEW-YORKER has gone South—Aiken, S. C.—for his health, to remain until May 1st. Personal letters may be addressed to him there. . . Whether the growing of sugar beets in Maine will or will not pay is not yet fully determined. But last year's experience gives little encouragement. . . There are still a few who have a good word to speak for Prickly Comfrey. . . We are told that "an honest man is the noblest work of God;" but the demand for the work has been so limited that it has been suggested that a large share of the "fust edishun" must be still in the author's hands. . . Can anything be more frightful and ghastly, asks Truth, than an elaborate costume on a wintry day? . . They are talking in England of "a severe epidemic of matrimony." . . The mining "boom" is the golden opportunity of the original owners of mines, the middlemen and the brokers; but they stand from under when the evil days come. . . Thackeray asserts that a "fine furious temper" is an invaluable possession to him, or her, its possessor, more especially if accompanied with a certain bravery, which oftentimes goes along with it; inasmuch, as half the world being lazy and the rest timid, the fine furious temper is pretty sure of getting its own way. . . It is said that Queen Victoria must save not less than $1,000,000 per year. In connection with her hungry Irish subjects, the aphorism that "benevolence begins at home" naturally suggests itself. . . All that Finlay Dunn and Clare S. Read have said in England relative to the agriculture of this country, gives small comfort to the English farmer. . . In 1841 the population of Ireland was 8,175,124. In 1871 it was 5,511,416. The Public Ledger denounces the suffering in Ireland as Great Britain's Burning shame. . . A gentleman of Kentucky has for ten years painted his pear trees with linseed oil, to prevent blight, with signal success. . . Many substitutes are talked about for the potato—among them the Camass. But what's the matter with the potato that we should need a substitute?. . .

Real Estate.

FOR RENT

For 3 or 5 years—all my Green-Houses, 8,000 feet of glass, heated with hot water, at low rates; situated in the center of a thriving city of 18,000 population.
Apply to R. LINSLEY,
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1,000,000 ACRES
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B.&M.R.R.CO.inNEB.
Prices $2 to $10 per acre on Long Credit; Circulars, Maps and full information Free on application to
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LANDS AND HOMES
IN SOUTHWEST MISSOURI.
1,000,000 acres well-watered Timber and Prairie Lands along the line of the St. Louis and San Francisco R.R. for sale at from $2.50 to $8.00 per acre *on seven years' time.* Excellent for Stock, Fruit, and Farming. The best Tobacco Region in the West. Short winters, convenient markets, superior schools, low taxes, healthful climate, good society. Free transportation from St. Louis to purchasers of land. *Send for maps and circulars.*
W. H. COFFIN, Land Commissioner,
Temple Building, St. Louis, Mo.

JOIN OUR COLONY! *Illustrated catalogue free.*
JOIN OUR COLONY! J. F. MANCHA,
JOIN OUR COLONY! Claremont, Va.

FARMS! Fruit, Grain, and Grass Farms in best part of Maryland at *Panic Prices.* For Catalogue address H. S. MANCHA, Ridgely, Md.

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AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with HEEL and TOE complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to The Twombly Knitting Machine Co., 109 Wash'n St., Boston, Mass.

$777 A year and expenses to agents. Outfit Free. Address P. O. VICKERY, Augusta, Maine.

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1.	Rudiments of Music, *Cummings.*	50c.
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The Weekly MUSICAL RECORD gives nearly 30 pages of good Music per month. $2 per year.

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THE FARMER'S FRIEND & GUIDE
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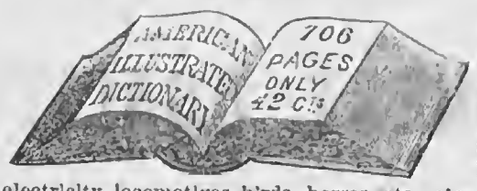
AGENTS WANTED $50 to $125 a Month.
For Business Men, Farmers, Mechanics, Workingmen, Property Owners, Tenants, everybody. Selling fast. Low price. Great success. One sold 500 in one town, another 152 in 26 days, another 75 in 13 days, another 11 in one day, another 10 in a few hours. Agents are having grand success, because it is a book that every man wants. Saves its possessor ten times its cost. No other like it. Send for circulars and terms. P. W. ZIEGLER & CO., 1000 Arch St., Philadelphia, Pa.



ever made for the price. 706 pages. 30,000 words, accurately pronounced and clearly defined. Handsomely bound in cloth, with gold embossed title and ornamentation. It has, in addition, an alphabetical list of foreign words and phrases, also of American geographical names, with their derivation and signification. Popular names of American states and cities. Abbreviations in general use. Words used in the metric system. Divisions of the Aryan languages. Languages and alphabets of the world. Distances traveled in a second by sound, light, electricity, locomotives, birds, horses, etc., etc. Curious facts in regard to man, to women, to light, to sound, to the ocean, etc., etc. Population, size, and religions of the world, etc. This remarkable book sent, postpaid, for 42 Cents. Two for 75 cents. Agents wanted. Price per dozen or hundred given on application. Address PATTEN & WADE, Publishers, 47 Barclay Street, New York.

PERSONAL ITEMS.

THE personal estate of the late Mr. Borie is inventoried at $1,140,561.98.

THE Cardinal Archbishop of Paris is poorer as to temporal matters than the Bishop of Sodor and Man, the poorest of English bishoprics.

Six young women, armed with shot guns, recently accompanied as many young men on a rabbit hunt in Georgia. No one was hurt;—not even a rabbit.

A RECENT visitor to Jefferson Davis, on his farm at Beauvoir, says that he is hard at work on his memoirs, his cotton crop for the next season will reach 1,000 bales, and his wife and nephew, Gen. Joseph Davis, are with him.

THE daughter of Farmer Hawes of Clayton, Contra Costa County, Cal., lost her voice three years ago from diphtheria. She was a devout girl, and prayed for the restoration of her voice. A few days ago when at prayer meeting, and thus fervently praying, her speech returned to her.

The Duchess of Marlborough lately received the following: "Lee, Kent—Madam: I send you a sovereign for those poor, starving people in Ireland. It is my pocket money, and my brother's, and Violet's, and I hope it will give two or three of them a good tuck-out (an English schoolboy's expression. From George Francis Pittar. P. S.—I think it would be best to buy Bath buns, but Violet thinks chocolate."

Miscellaneous.

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Buy of the Manufacturers and Save Intermediate Profits.

WE HAVE NOW OPEN AN IMMENSE STOCK OF THE MOST APPROVED VARIETIES OF CARPETS AND FLOOR COVERINGS

Manufactured by Ourselves

EXPRESSLY FOR THIS SEASON'S RETAIL TRADE CONSISTING OF

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New Styles and Designs.

THESE GOODS WILL BE FOUND TO COMBINE IN AN UNUSUAL DEGREE, ELEGANCE OF APPEARANCE AND POSITIVE WEARING QUALITIES, AND ARE WELL WORTHY OF THE INSPECTION OF INTENDING PURCHASERS.

WE ALSO OFFER A FULL LINE OF

TURKISH and EAST INDIAN RUGS and MATS, CHINA MATTINGS, OIL-CLOTHS, &c., &c.,

At the Lowest Possible Prices.

SPECIAL INDUCEMENTS OFFERED TO CHURCHES, STEAMERS AND HOTELS.

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CARPET MANUFACTURERS AND RETAILERS.

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Implements and Machinery.

Breech-Loading Shot Guns, $20 to $300. Double Shot Guns, to $150. Single Guns, $3 to $20. Rifles and Cartridges, $3 to $75. Revolvers, $1 to $25. Send stamp for Price List. GREAT WESTERN GUN WORKS, Pittsburg, Pa.

ELGIN WATCHES all styles, Gold, Silver and Nickel, $8.00 to $150 Chains, etc., sent C. O. D., to be examined. Write for Catalogue to Standard American Watch Co., Pittsburg, Pa.

BRICK & TILE MACHINES,

In great variety, adapted to the wants of all, or made to order, with reference to location or clay. Brick makers are invited to investigate. Send for circular, and for sample brick if desired.

J. W. PENFIELD, Willoughby, O.

THE **Genthner Hand Seed Sower,** IS SIMPLE, CHEAP, and EFFICIENT.

Any one can use it with facility and plant with accuracy. It will work readily on rough or smooth ground. It can be used to plant all kinds of vegetable seeds, as the openings in the seed-box can be adjusted to the size of any seed.

Retailed for only $2.00.

An energetic man wanted to act as Agent in every town.

Apply to

B. T. GENTHNER, PATENTEE),

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B. H. DAVIS, *General Agent for the United States.*

Patented Dec. 9, 1879. **FOXCROFT, Maine.**

Implements and Machinery.

THE **RIGHT SPEEDY** Corn Sheller.

Cheap, Durable and Effective. It is the best hand Sheller made. Does the best work and works the best. Is warranted for 5 years. **Agents wanted in every County.** For particulars, address,

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INGALL'S PAT. LINK AND CHAIN

Will make or mend your chains, of all sizes, without tools. Inquire at your Hardware store or address

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The New Buckeye

GRAIN DRILL,

ALSO

THE NEW BUCKEYE Combined Grain and Fertilizer DRILL,

AS IMPROVED FOR 1880.

Over 7,000 of these new Drills were sold and used in the United States last season, and were pronounced by all to be the *most perfect Seeding Machines* in the country. No Grain Drill ever made gave such *universal satisfaction*. It is the best force-feed in the market. Our Fertilizer Sower has a positive force-feed and has no equal in this country. Be sure and send for our new Illustrated circular, giving illustrations and descriptions of the improvements. Address

P. P. MAST & CO., Springfield, Ohio.

THE S. R. NYE, IMPROVED Bay State Rake.

MANUFACTURED BY

THE BELCHER & TAYLOR Agricultural Tool Company, Chicopee Falls, Mass., U. S. A.

This Rake Received the Highest Award at the Centennial Exposition and Field Trial. The only Silver Medal awarded at the Paris Universal Exposition, in 1878.

It is Easily Handled by a Girl or Boy, strong enough to drive a horse. Send for circulars.

ESTABLISHED 1840.

PATENT SPARK-ARRESTER.

8—H. P. Mounted, $650.
10 " " 750.
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Send for our Circulars.

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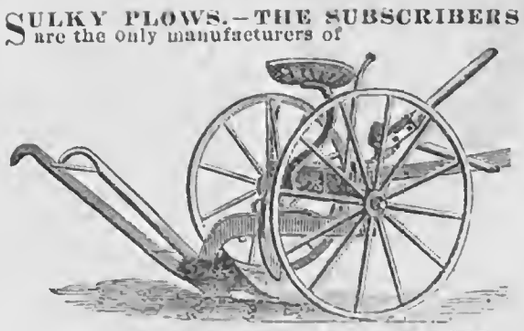
State where you saw this.

SULKY PLOWS.—THE SUBSCRIBERS are the only manufacturers of



OSBORN'S SULKY PLOW,

the only Plowing Machine that has proved a perfect success in all kinds of soil. Any kind of plow can be attached. The plowman rides and handles the plow with ease, regulating the depth and width of furrow. The draft for the team is materially less, and the ordinary laborious mode of plowing is reduced to one of comfort and ease. Sulky made for both right and left hand plows. Also, manufacturers of

THE MEADOW KING MOWER,

and other Agricultural Implements.

Send for Circulars. **GREGG & CO.,**

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Miscellaneous.

One Hundred Years Old.

1780 1880

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CHOCOLATE, BROMA AND COCOA

In their best and purest form, contain every ingredient that is needful for the sustenance and growth of the human system, being composed, as determined by chemical analysis, of starch, gum, gluten, oil, and a white crystalizable substance called theobromine, similar to theine in tea, but containing more nitrogen and being an important adjunct to nutrition.

SOLD BY GROCERS EVERYWHERE.

LA BELLE CHOCOLATIERE.

Our Book of Choice Chocolate Receipts sent free to any Address.

EMPIRE DRILL.

Sows all kinds of Grain evenly and accurately without bunching or breaking the kernels. Sows any brand of Commercial Manure without pasting or clogging.

THIS CUT REPRESENTS OUR NEW FORCE-FEED FERTILIZER DISTRIBUTOR.

THE ONLY DRILL IN THE WORLD Having a Force Feed-Grain and Fertilizer Distributor.

Quantity of Grain and Fertilizer sown regulated by change of gear.

Send for circulars describing this wonderful invention, to the

EMPIRE DRILL CO., Shortsville, N. Y.

☞ Mention this paper.

Sawing off a Log, Easy and Fast.

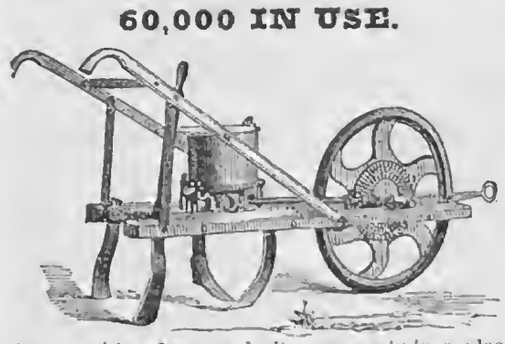
Our latest improved sawing machine cuts off a 2-foot log in 2 minutes. A **$100 PRESENT** will be given to two men who can saw as much in the old way, as one man can with this machine. Circulars sent free. W. GILES, 741 W. Lake St., Chicago, Ill.

A. H. Frank, Buffalo, N. Y., owns and controls Eastern and Middle States.

CAUTION.—Any sawing machine having a seat for the operator, or treadles for his feet, is an infringement on our patents, and we are prosecuting all infringers. SO BEWARE WHO YOU BUY OF.

HOOSIER CORN DRILL!

60,000 IN USE.



Drops, with great regularity, one grain in a place, either 12, 16 or 20 inches apart, does the covering uniform in depth, and is both time and labor saving. A given area of corn planted with this machine contains as many plants as when hilled, but their arrangement is such that *each* plant has access to the *same* amount of plant-food that must necessarily be *divided* between from 3 to 5 plants when huddled together in a *hill*. Hence a healthy start and vigorous growth of the plants and the consequent production of **large, well matured** ears, by which the quality is improved, and the yield increased from 10 to 20 bushels per acre, over hill planting are natural results following the use of our **Corn Drill.** Send for circular.

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Admitted by leading Seedsmen and Market Gardners everywhere to be the most perfect and reliable Drill in use. Send for Circular. Manufactured only by

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8 CENTS PER BUSHEL SAVED in raising corn. For Illustrated Pamphlet giving full particulars and prices, Address

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18 Elegant New Style Chromo Cards, with name, 10c. post-paid. GEO. I. REED & CO., Nassau, N. Y.

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PLAIN and FANCY COOKING. A book of 120 pages and over 400 carefully tried receipts by a practical housekeeper. It teaches how to prepare nice dishes at a moderate cost, and contains all that any housekeeper can desire. Also contains a carefully-prepared chapter on Cooking for Invalids. Price, post-paid, only 25 Cents. Agents wanted. Price per dozen or hundred given, on application. Address J. L. PATTEN & CO., 7 Barclay St., New York.

KIDNEY-WORT

PERMANENTLY CURES KIDNEY DISEASES, LIVER COMPLAINTS, Constipation and Piles.

Dr. R. H. Clark, South Hero, Vt., says, "In cases of Kidney Troubles it has acted like a charm. It has cured many very bad cases of Piles, and has never failed to act efficiently."

Nelson Fairchild, of St. Albans, Vt., says, "It is of priceless value. After sixteen years of great suffering from Piles and Costiveness it completely cured me."

C. S. Hogabon, of Berkshire, says, "One package has done wonders for me in completely curing a severe Liver and Kidney Complaint."

IT HAS WONDERFUL POWER. WHY?

Because it Acts on the LIVER, the BOWELS and the KIDNEYS at the same time.

Because it cleanses the system of the poisonous humors that develope in Kidney and Urinary diseases, Biliousness, Jaundice, Constipation, Piles, or in Rheumatism, Neuralgia and nervous disorders.

KIDNEY-WORT is a dry vegetable compound and can be sent by mail prepaid.

One package will make six qts of medicine.

TRY IT NOW!

☞ Buy it at the Druggists. Price, $1.00.

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12 (Will send post paid.) Burlington, Vt.

WE ADVISE YOU TO INSURE YOUR property in the

AGRICULTURAL INSURANCE CO.

Of Watertown, N. Y.,

The largest Company in the country which insures only farmers' property and residences. Over twenty-six years old.

Capital	**$200,000 00**
Net Surplus, over	**$235,153 81**
Assets, Jan. 1, 1880	**$1,137,549 73**

HOPE FOR THE DEAF

Garmore's Artificial Ear Drums

PERFECTLY RESTORE THE HEARING and perform the work of the **Natural Drum.** Always in position, **but invisible to others.** All Conversation and whispers heard distinctly. We refer to those using them. Send stamp for circular to

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IF YOU WANT TO MAKE MONEY in a legitimate business within 60 days, where small capital is required, and investment can be redeemed at any time, send for information to

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HIGH CLASS POULTRY, Grape Vines, Small Fruits, finer than ever. Send for circular. GEO. S. JOSSELYN, Fredonia, N. Y.

HANSEN'S DANISH LIQUID

BUTTER COLOR.

Prepared in vegetable oil by skilled chemists. Does not color the buttermilk. Imparts natural rich color and *enhances price* of butter greatly. Largest and fancy butter-makers have adopted it. Sample by mail, free.

WHITMAN & BURRELL, Little Falls, N. Y., Wholesale Agents for America.

★ ★ ★ ASK FOR ★ ★ ★

Wells, Richardson & Co's **PERFECTED BUTTER COLOR**

It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say **IT IS PERFECT.** Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**

★ USE ★ ONLY ★ THIS ★ THE ★ FIRST ★ AND ★ THE ★ BEST ★

Humorous.

Miss Nellie Estelle, *nee* Ellen Kelly, and Miss Effie Celeste, *nee* Mary Crump, are two ballet-girls in New York. They fell out about a dog, and had recourse to a police magistrate in order to settle their difference. During the proceedings the following correspondence was read:

Mary Crump—Your dogg is treating my cat shameful. If he ain't made to stop I will make him myself. Miss Nellie Estelle.

Ellen Kelly—Your impertinent letter don't deserve an answer from any lady. But I give you warn that you will lay your filthy hands on my dog (see dictionery) if you dare. I don't demean myself by putting my name to this.

Mary Crump—If my hans is filthey I use soape and water on my nek, and not powder I am not ashamed of my name, if you are.

Miss Ellen Kelly, *nee* Celeste.

On the case being reported, the reporter received the following letter from one of the irate ladies:

Mr. Reporter—Falsehood and desete is foreign to me. I despise the actions of a false friend. Let herr doo and say her worse, meaning no disrespect to your papper, I scorn to say anything except that I will yet be even with one so low as to forget the freuds of her adversite. Yours more respectfully,

Miss Estelle.

P. S.—Excuse bad ritin as my nerves is alpon edge. Miss Nellie Estelle.

Many a poor but religious editor has been compelled to receive payment for his valuable paper in turnips, string beans, pumpkins and such like articles of diet, but we never remember to have heard of a butcher who would accept of a column of paragraphs in return for a porterhouse steak or a small roast for Sunday.—Piscataway Presbyterian.

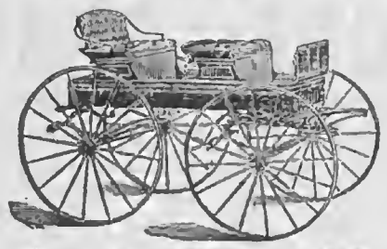
A 3-year-old little girl was taught to close her evening prayer, during the temporary absence of her father, with, "And please watch over my papa." It sounded very sweet, but the mother's amazement may be imagined when the child said, "And you'd better keep an eye on mamma, too."

"Going to leave, Mary?" "Yes, mum; I find I am very discontented." "If there is anything I can do to make you comfortable let me know." "No, mum, it's impossible. You can't alter your figger to my figger, no mor'n I can. Your dresses won't fit me, and I can't appear on Sundays as I used at my last place, where missus' clothes fitted 'xactly."

When Plagued by the Vagaries.

Of a disordered liver, the bilious need expect to derive no permanent relief from the use of calomel, blue pill, or the barbarous cathartics now happily losing ground in general and professional estimation. These rasp, convulse and weaken the system, but Hostetter's Stomach Bitters relieve, regulate and invigorate it. Those significant pains in the liver, the saffron hue which its derangement communicates to the skin, the impurity of the blood, constipation, furred condition of the tongue and contamination of the breath which result from biliousness, are entirely, speedily and pleasantly removed by this beneficent alterative, which is likewise a potent remedy for chills and fever, and its best preventive. While the system is regulated and purified, it is also thoroughly invigorated by this superlatively fine medicine, which is of botanic origin, and contains none but salutary ingredients. The medical fraternity highly commend it.

WATERTOWN



PLATFORM Spring Wagon

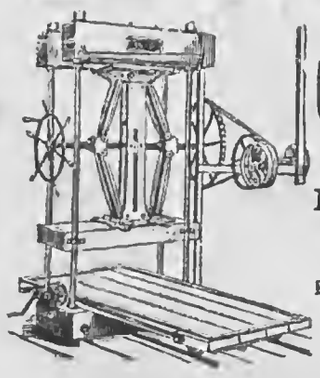
The Ne Plus Ultra.

EVERY WAGON FULLY WARRANTED.

This is the best, handsomest, lightest and strongest wagon of its kind in the market. Every Farmer and Dairyman should have one.

Correspondence solicited. Address

WATERTOWN SPRING WAGON CO., Watertown, N. Y.



POWER Cider Press WITH Double Platform

BOOMER & BOSCHERT PRESS CO., Syracuse, N. Y.

AGRICULTURAL IMPROVEMENTS.

Land-Steward (to Tenant-Farmer).—"Well, Giles, what are you going to sow in here?"

Farmer.—"Ain't 'zactly made up my mind, sir: but if we could put in a few Stewards and Land-Agents—they seems to thrive best on the land nowadays!"

C. GILBERT'S STARCHES ARE ABSOLUTELY PURE.

Send for pamphlet, containing reports of wonderful results from the use of THE MAPES MANURES.

The Mapes Potato Manure. Price per ton, $48. Per Bag (200 lbs.), $4.80. Use three bags per acre—in drills of hills.

For some practical results see "Rural New Yorker" last week, page 177; also for March 6th, page 153.

The Mapes Grass and Grain Spring Top-Dressing.

Price Per Ton, $51. Per Bag (200 lbs.), $5.10. Spread broadcast on Grass or Grain—two bags per acre in spring—earlier the better.

Wheat and Permanent Grass—The Mapes Wheat Manure Compared with Stable Manure.—Years 1877'--78--'79.

VALENTINE FROST, LOCUST VALLEY, L. I., Feb., 1880, reports:—

"In fall 1877, seeded down with wheat and applied broadcast, 1,000 lbs. per acre of the Mapes Wheat Manure. The land was excellent wheat and grass land when *well manured*. The yield of wheat was heavy and of fine quality; in 1879 the first mowing of grass cut heavy; crop was "down" two weeks before cutting. Where I used stable manure the yield was not, in any case, any better than from the Mapes Manure and *the cost was more than double*. The season was tolerably favorable.

I had two lots; one of eight acres and one of six acres; on the six acre lot I put 300 loads of New York Stable Manure on half of it (3 acres); and on the eight acre lot put 400 loads of New York Stable Manure on four acres, a half of it. On the remaining portions, half of each lot, I put 1,000 lbs. of the Mapes Wheat Manure per acre. Both yielded excellently of wheat. The grass was *extraordinary fine, the advantage being if anything in favor of the Mapes Manure through all the years*. The point is, that the Mapes Manure costing $25 *per acre, was fully equal if not better than the New York Manure*, the latter costing $55 to $60 per acre, independent of *great saving in cost of application*."

"Have used the Mapes Manures *four years* with good results, and use them in increased quantities each year."

The Mapes Complete Manure (for light soils). Price per Ton, $51. Per Bag, $5.10.

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The Mapes Corn Manure. Price per Ton, $49. Per Bag, $4.90.

Extract from New York Times, weekly edition, Sept. 3d, 1879.

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This is one of the most valuable fodder crops, but to attempt to grow it upon any but rich soil is a waste of time and labor. It seems, however, to respond to artificial manures very satisfactorily. A crop grown the present season upon land fertilized with 600 lbs. per acre of the Mapes Complete Manure, without any other fertilizer, shows the effect of the manure in an extraordinary manner, and this is the THIRD CROP since the manuring. The first was corn, which yielded 489 BUSHELS OF EARS ON THE ACRE; the next was rye, cut for fodder, and a heavy crop; the present is Hungarian, now cut for fodder, and shows in places a luxuriant growth where the fertilizer happened to be spread somewhat irregularly. The whole, however, is a good crop. The persistence of artificial fertilizers may therefore be calculated for AT LEAST THREE YEARS.

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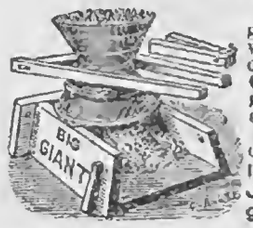

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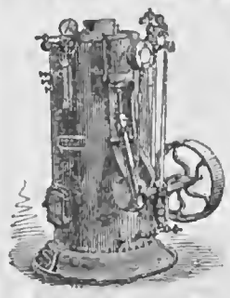

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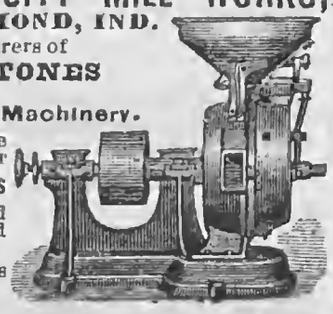

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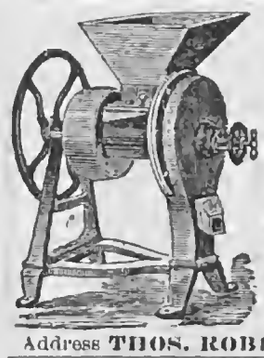

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. XXXIX. No. 13. Whole No. 1574. | NEW YORK, MARCH 27, 1880. | Price Five Cents. $2.00 Per Year.

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The Swine-Herd.

SWINE.

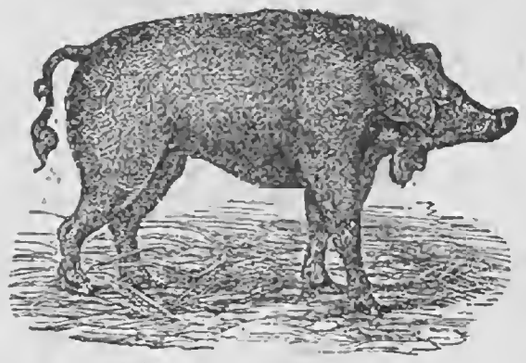
The Importance of Possessing the Best Breeds.

A. B. ALLEN.

Swine have increased so rapidly in the United States and its Territories during the past 10 years, that an indefinite guess only can be given as to the number which the census of next June will show us on its completion. A recent report which I have seen of the hogs packed at the West, in the season of 1878, puts the figures at 5,850,000, while those of 1879 are represented as something less.

The Hon. J. R. Dodge, in a late article in the N. Y. Weekly Tribune, estimates the live and dead swine exported in 1879 at 6,000 000 head; and the annual product of our country at the enormous weight of 5,000 000,000 pounds. How nearly exact this may be I cannot say; but in any event, if a perfectly correct weight could be had at this moment, there is no doubt we should be astounded at the additional figures it would show over those of the year 1870.

Suppose the live weight of swine, as stated above was of the best breed, as the Berkshire, it would be a low figure to set down its average at four cents per pound. In this case, it would amount to $200 000,000. If of a medium breed, an average of three cents per pound would probably be as much as could be real-



IRISH GREYHOUND PIG.—FIG. 93.

ized, thus making the value $150,000,000. If of an inferior breed, two cents per pound are all it would be worth, reducing the value to $100,000,000. If, like the Irish Greyhound Pig, fig. 93, small account could be made of it; for by no system of feeding can such an animal be made good pork; and it would only be a waste of provisions to dole them out to it. The United States during the last fiscal year exported $79,438,936 worth of these products: $51,074,433 being in hams; $22,856,673 in lard; $4 807,568 in pork and $700,262 in live hogs.

The Berkshire.

Of all our breeds of swine, I do not hesitate to place the Berkshire in the very front rank for general purposes, as a cross from him on any other always results in an improvement, while he is sure to be deteriorated if any other breed is crossed upon him. Then for the particular purpose of obtaining extra choice hams and shoulders for smoking, and side pieces for bacon, of a tender, lean, juicy quality, no other breed of swine within my knowledge can be compared to him.

So highly esteemed had the Berkshire become in our country, and so great the wealth and prosperity, especially in the wide pork regions of the West, that was certain to follow from keeping up his peculiar good qualities and perpetuating them in purity, that on February 25th, 1875, an association of enterprising and enlightened breeders was formed at Springfield, Illinois, to more fully insure this desideratum. It took the name of the American Berkshire Association, was incorporated March, 18th 1879, and fixed its headquarters at Springfield, Illinois, electing a President and other necessary officers. The Hon. Phil. M. Springer was made Secretary, who still continues in the office and is also the chief manager of affairs.

The Association proceeded to get up a Herd Book for the record of pedigrees, the first volume of which was published in May 1876. This has been succeeded by volumes, II, III, and IV., and with these are incorporated in their introductions, valuable prize essays of the history of Berkshires, the best method of breeding and rearing, as also that of the prevention of disease and of treating it whenever happening to occur.

BERKSHIRE SOW.—FIG. 94.

The Poland-China.

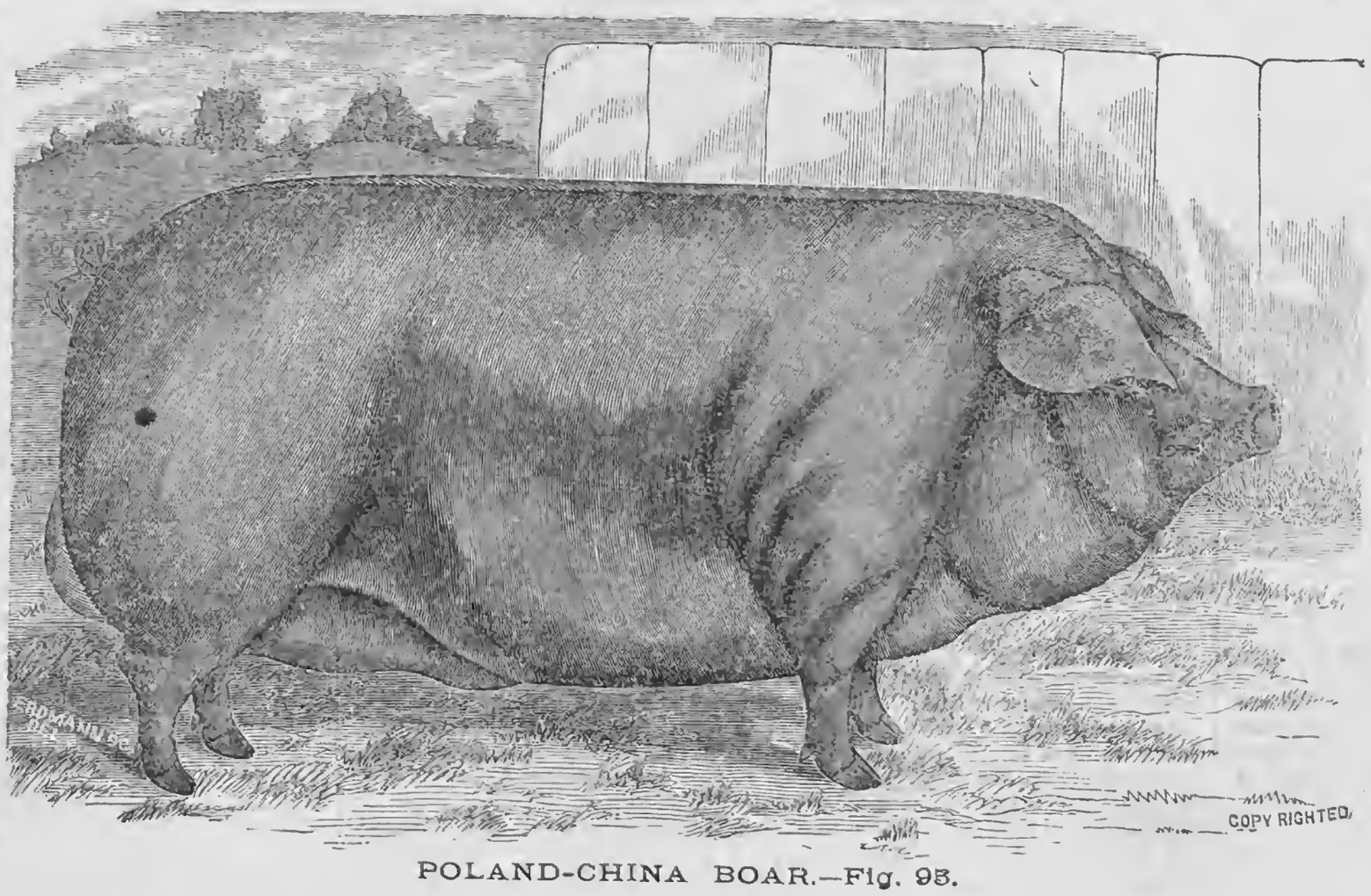
This is the most popular breed of swine at present among us for the production of fat pork suitable for salting for general family use, sea-stores and shipping abroad. They are usually larger than the Berkshire, spotted with rather more black than white; mature almost as soon, and are equally hardy, vigorous and thrifty. As this now distinguished breed is of American origin and completeness, we may well be proud of it, and give it the preference wherever suitable to the requirements of our farmers.

The first volume of a Herd Book of these has just been published in Ohio, under the name of the Poland-China Record. In this the history of the breed is given, the foundation of which, it is asserted, was begun in the Miami Valley in the year 1816, with three breeds of swine, then known there as the Russia, the Byfield and the Big China. Males of these were crossed more or less upon the native females of the Valley, and from time to time this produce was crossed with other breeds, the main improver, after the year 1838, being, as I have been informed, the Berkshire.

I well recollect when first visiting the Miami Valley in December 1841, seeing there a considerable number of very large white swine, closely resembling the English Yorkshire of that day. These were called the Miami breed. Females had been crossed to some extent with Berkshire boars, and most of this produce which was pointed out to me, had grown up large, splendid animals, quite Berkshire-like in form and points, and spotted black and white nearly equally. At the same time I saw an Irish grazier or two there, which I was told had been crossed on the Miamis. This was a white breed, of the size of the larger class of the Berkshires with prick-up ears, and about as fine in the points, but not so fully developed in the hams. I have been informed that they originated from Yorkshire swine, taken to Ireland many years before.

For years past various accounts have appeared in the Western agricultural papers of the origin and subsequent breeding of the Poland-Chinas, till they have become the excellent fixed breed we now find them. I trust their history is fully established as published in their Record, and that all disputes as to it may end. It is sufficient to say, hereafter, that they are well worthy of being perpetuated as we now find them, and that the various breeders in the Western States, who have united in bringing them to their present state of perfection, may well be satisfied with the great good to the public which they have accomplished.

BERKSHIRE BOAR.—FIG 96.



POLAND-CHINA BOAR.—Fig. 95.

The Herdsman.

STOCK NOTES FROM IOWA.

It is the opinion of our oldest settlers that never before within their recollection has January shed so many tears as she did in 1880. The weather, up to the present time, has been very mild, with prevailing cloudy and foggy days. Even the noted London fog can scarcely equal the watery vapor that settles down upon us to remain three or four days at a time. Occasionally we get a day of bright sunshine and of exceptional beauty.

Our markets are good. Just now pork stands at 4 cents, but the usual figures are $4 25 and $4.50 per cwt. We have one of the best markets for butter in the West—Manchester. That staple article is worth, fresh from the churn, 25c@30c. per pound; corn sells for 30c. per bushel; oats, 35c.; fat cattle are handled by several firms hereabouts and are eagerly sought after at $4 per cwt., live weight.

Having made up my mind to slop my cows the coming season, the first necessary thing to do was to count the cost. I therefore made out a bill for lumber for troughs, which amounted to a trifle over four dollars, when an idea occurred to me which saved me considerable money besides a vast amount of inconvenience. I went to my grocer and procured for eighty cents salt and sugar barrels enough to answer my purpose. I then sawed off the barrels at the third hoop and nailed a piece of board at the bottoms, and now have as good and substantial slop buckets as I desire. I feed shorts and find that it pays me, and am more convinced now than ever before that the better farmers keep their cows, the more profit is realized from them, consequently the better it is for them. If those farmers who are always "going to try the experiment" of giving their cows bran or shorts, to see if it pays, will "stand not upon the order of going but go at once," I am certain that the end will justify the means. Never mind the trouble! There is nothing in our line of business that will pay us so well for our

time and trouble as the best of care and attention to our dairy cows—or indeed any stock.

Shades of Solomon, what wisdom! I read in a paper not long since that "farmers should not let their sows have large litters of pigs. Five are enough, unless they have plenty of milk. This precious bit of knowledge doubtless had its birth in the capacious brain of some city wiseacre who "runs" the agricultural column of a secular or Christian weekly, and who, without doubt, has not practical knowledge enough to engineer the construction of a fourth-rate chicken coop. I had a sow farrow yesterday, dropping seven nice, fat pigs, and I have not plenty of milk either, but I trust that the sow will afford an abundance if I keep her as I should. We say on Willow Grove farm, let your sows *have* all the pigs they can; then use judgment in feeding for a few days, giving only coarse, sloppy food, poor and bulky, gradually increasing to a richer diet. After two weeks, give her all she will eat of the richest milk-producing food you can provide and you will "thank your stars" that you did not bid her stop after she had given you five! Now let the reader "point the moral," and provide himself with a good agricultural paper such as the RURAL NEW-YORKER, if he would be thoroughly posted, and not depend upon the ordinary weekly newspaper with its column of extraordinary theories and suggestions. C. S. B.

OUR ANIMAL PORTRAITS.—We give this week likenesses of two of the most fashionably-bred specimens of one of the best known Short-horn herds in England—that of Mr. T. Holford. The cow—whose head is finely represented—is Baroness Oxford 3d, grand-daughter, in direct line, of the celebrated cow, Lady Oxford 5th, belonging to the Holker herd. On the other side, her sire was the famous Duke of Hillhurst, who won added renown for the Kingscote herd. The young bull whose striking portrait we present, is the Duke of Leinster. On the side of his sire, he is a grandson of the cow of which we have just been speaking; but on the side of his dam he belongs to the Airdrie family of the Duchess tribe. His dam, Duchess of Airdrie 7th, was bred in this country by Mr. Albert Crane, of Kansas. The Duchess was the oldest of the Bates' tribes; while the origin of his Oxford tribe may be put at 1834, with the birth of the Oxford Premium Cow.

Dairy Husbandry.

WINTER BUTTER MAKING—NO. 4.

HENRY STEWART.

Washing the Butter.

AFTER the churning comes the final working and packing for sale. Butter that has been well churned is easily cleansed and freed from the butter-milk. There is a point in the churning at which the butter is in the best condition for washing. This is when it is in the state known as small butter. This may be produced in any churn, but it comes best in those which are without dashers, and in these over-churning is not so easy as in the dash churns. The point when churning should be stopped is when the butter is in small lumps about the size of a pea. Then the butter-milk should be drawn off through a strainer which catches the small particles, and these, if amounting to but half an ounce, are worth saving, as one cent even will not come into one's pocket without working for it, and this saving will pay for the salt and for pails in a very short time. The butter-milk having been drawn off, I turn in pure cold water, and give two or three turns to the churn and then draw off the milky water. This is repeated until the water comes away clear. Some excellent butter-makers wash the butter in cold brine and work and pack it directly from the churn. I would rather take the trouble to salt the butter in the butter worker, and put it away for 24 hours, during which time I think the butter ripens and improves in flavor. The color certainly deepens, and the texture is made more solid by the subsequent working. By adding three-fourths of an ounce of salt to the butter as it comes from the churn, and working this in, and setting it away for one day, some water is drawn from it, which is an advantage to the consumer at any rate; at the final working an additional quarter of an ounce of salt to the pound is added. It is very important to use the first quality of salt. So much has been said about salt of late in dairy conventions and elsewhere that the subject has lost its savor, and one is tired of hearing of this or that salt being indispensable. Every butter-maker should get the best, irrespective of cost; for one cent's worth will season 16 pounds of butter, and the saving of a dollar on a bag is hardly to be considered in comparison with five cents a pound difference in the value of the butter. Each may try and choose for himself. But in choosing salt, that should be avoided which has small, thin, hard white scales in it. The salt should be finely ground, white, of even fineness and free from specks of any kind.

As a rule, when one is doing well in making butter, especially in the winter season, it is best "to leave well alone," for changes often seriously upset things. Some salt has particles of lime in it. If there is but one per cent. of lime in the salt, there will be one lime particle to every 99 of salt. A hundred particles of salt are spread through a very small piece of butter, and as each lime particle will make a white speck, it is very easy for the appearance of good butter to be changed for the worse. In making microscopic examinations of samples of butter recently, the presence of lime in some of them was quite plainly shown by a whitish, mottled character from which others were quite free. And touching on microscopes, I might say that a dairyman would find a $25 instrument a source of much interest and instruction in his business as regards milk, cream, salt and butter. The modern butter workers are labor-savers. To work up 20 pounds of butter with the old-fashioned dish and ladle, is a tiresome job and wearies many a conscientious woman's hands and arms; and it does not seem a fitting business for a man to potter with a butter ladle. Twenty or fifty pounds of butter may be worked in a butter worker with ease, and in a tenth part of the time required with the ladle. And in using the worker, it is necessary to use the same cutting and gashing manner of working the butter as with the ladle, and to avoid drawing or sliding the worker over the mass. The right action is to cut off slices from the mass and press them together to form a new mass.

MR. HOLFORD'S "DUKE OF LEINSTER."—FIG. 97.

Packing the Butter.

Good butter should be put into good packages. I have seen excellent butter sacrificed because it was put up in an unattractive shape. The old-fashioned oval rolls, or round lumps, do not sell well.

Fancy prints and cakes are popular for retailing from grocery stores, but these are apt to be mussed in the carriage and handling, unless packed in a costly manner. After trying many methods of packing, I found the five or six, and ten or twelve-pound pails, made neatly of white oak, with close covers and handles, as the Welsh pails, and should be neatly made and varnished.

The best market for winter-made butter is that which supplies private families who are ready to pay five or ten cents per pound above the highest market rates for such butter as may suit their tastes, and is packed in convenient form for use and to avoid waste. The average dairyman need waste no time in pursuing the *ignis fatuus* of "a dollar a pound" for his butter. There may be a large discount taken from that value. This *may be* the retail price in some instances, but in regard to one noted and much puffed dairy, it has been stated that a discount of 40 per cent. was made from the "dollar a pound," and this sort of business savors of "ways that are dark," and has misled and troubled and dissatisfied many persons whose product has been equally gilt-edged with that of the most favored dairies. A dairyman should be content to sell his product at first for what it will bring; let him, however, put his name on every package, and if the butter is sufficiently good, those who eat it will find it indispensable and "cry for more." Then comes the tide in the affairs of dairymen "which taken at the flood leads on to fortune." Then he can say, when pressed with orders, "I want more money for my butter" or I cannot supply you; or, as happens now and then with me, those who get the butter will order direct from the dairy, and the dairyman may make his own terms. Butter is an article of prime necessity. It flavors the staff of life. There is no other such educator of taste.

When a person has eaten choice butter he becomes an expert and views an inferior article with totally new ideas. It is as though a blind man once sees the blessed sunlight and instantly appreciates the depth of darkness from which he has emerged; or, as a deaf man might feel, who is suddenly endowed with power to hear the sweetest music. So the man who eats the best butter becomes a confirmed consumer of it and thus the demand for this article spreads and grows constantly as the supply increases. To make choice butter is my business. From feeding the cows, through milking and all the rest of the work my hand is in it. From it I look for a profit on my investment in farm and stock. Nevertheless, so

MR. HOLFORD'S "BARONESS OXFORD THIRD."—FIG. 98.

the most convenient and popular. The butter is not exposed to air or dust; it will keep good for months if required, being protected from air by a covering of salt and paraffine paper; the butter can be cut from the pail as it is needed; the pails may be packed in a cheap box, and may be carried 1,000 miles with perfect safety and can be returned to the dairy, or sold, if desired, for what they cost the dairyman. When shipped to a near market, they can be returned as "empties" at low rates, and the total cost for carriage need not be more than one cent per pound. Pails of this size are convenient for families, as they last two or three weeks. Larger pails may be chosen, but they should be made of white oak, or of spruce, such

When a person has eaten choice butter he becomes an expert and views an inferior article with totally new ideas. It is as though a blind man once sees the blessed sunlight and instantly appreciates the depth of darkness from which he has emerged; or, as a deaf man might feel, who is suddenly endowed with power to hear the sweetest music. So the man who eats the best butter becomes a confirmed consumer of it and thus the demand for this article spreads and grows constantly as the supply increases. To make choice butter is my business. From feeding the cows, through milking and all the rest of the work my hand is in it. From it I look for a profit on my investment in farm and stock. Nevertheless, so sure am I that the demand can never be filled that I would be willing, nay glad, to instruct my neighbors in the art, as I am here trying to do. It has been said that horticulture enlarges a man's soul; makes him sympathetic and intensely generous and liberal. I have noticed the same traits among dairymen; unselfish liberal-minded men are they, who never forget to do good, and to communicate; and such a sympathy and good feeling I hope always to see among my fellow dairymen and competitors, of whom "the more the merrier" so long as they keep to the top of the ladder. If I shall have helped by these papers to enthuse one of them with the ambition to excel in butter making at a season when the labor is the most profitable, I shall have been well repaid.

Field Crops.

LEGUMINOUS FORAGE PLANTS.—No. 3.

PROFESSOR W. J. BEAL.

SPOTTED MEDICK — Medicago maculata — The leaflets of this plant are three, with a purple spot on each. The plant is a rapid grower of some interest and value. It was introduced with wool into waste places. The curved pods are fringed with a double row of prickles.

MELILOT—Melilotus. — There are two species in cultivation, the yellow, M. officinalis, and the white, M. alba. They are both tall, upright annuals in this climate. They were once grown as forage plants in England; but they are not much liked by cattle on account of a bitter taste. In Switzerland and Germany they are much grown to give a peculiar flavor to a certain brand of cheese. For this purpose the flowers and seeds are bruised and mixed with the curd before pressing. The previous item is taken from Sowerby's Useful Plants of Great Britain. It is also stated in The Treasury of Botany. The flowers of the plants are among the best for honey bees

SANFOIN OR SAINTFOIN — Onobrychis sativa. — This is a perennial herb, the roots having been known to last fifty years. The leaves are pinnate; the flowers grow in spikes; the pods are wrinkled and contain one seed each. It has long been much cultivated in England, France and some other portions of Europe. It looks somewhat like lucerne, and, like that plant, sends down a woody root to a great depth. It is not much pastured, but cut for green food or made into hay. At Lansing, Michigan, a few plants have been grown each year. In most cases they have not lived through the cold winters. I do not know that the plant is of any value as a forage plant in the Northern States.

VETCH OR TARE—Vicia sativa.—This plant much resembles small peas, except that the plant seems more delicate or slender. Sowerby says: "This vetch has been grown from remote times in southern and central Europe as a fodder plant, and has been cultivated here (in England) commonly at least as far back as the time of Ray. It is probably not indigenous. It is an annual, growing two feet high. The stem climbs by tendrils, like peas." It is sown from March to May, and cut for soiling. Horses, cattle and sheep are very fond of it. The seeds are sometimes used for feeding poultry, but are not fit for human food. I have raised some vetches for the past six years. They amount to but little. They are small, feeble, and are much damaged by our hot weather. I think we have several wild species which are worth more to us than this foreigner.

LUPINES.—Lupinus albus.—This plant thrives to some extent in some portions of our country. Each of these species or varieties has failed to mature seeds in Central Michigan. It thrives in climates like Italy and Sicily. The leaves have five to seven leaflets. The plants attain the hight of two to four feet. We have one kind, L. perennis, east of the Mississippi, and many more still further west.

FURZE, GORSE OR WHIN.—Ulex Europæus. —This is a small, prickly shrub bearing yellow blossoms. When cut annually, and the stalks bruised to deaden the prickles, it is fed to stock, especially horses. It is probably nearly as good a forage plant as our large bull thistle. It grows on poor, sandy soil, and is often cut for fuel. At Michigan Agricultural College it grows with difficulty. Some survived one of our mildest winters.

DYER'S WEED —Genista tinctoria.—This low shrub is sometimes eaten by stock in Europe, but is of no value for forage.

KIDNEY VETCH, OR LADIES' FINGERS.—Anthyllis vulneraria.—This is a low herb abundant on the chalk hills of England. Sheep are fond of it, and some use is made of it as a fodder plant.

BIRD'S-FOOT TREFOIL.—Lotus corniculatus. Sutton of England says of this:—"A very productive perennial plant, particularly suitable for dry, heathy and sandy soils. It is eaten with avidity by cattle, and also by sheep." I have not been able to grow any except

feeble specimens of no value. It is recommended in Europe to mix seeds with other leguminous plants and grasses for permanent pastures.

Several other species of several different genera of leguminous plants are more or less raised for forage, and, quite likely, still others, not yet tried, are valuable. Enough has been written to carry out the statement made at the outset that the order Leguminosæ, is remarkable for its valuable forage plants.

FAILURE vs. SUCCESS WITH ROOTS.

What They do for Stock—Turnip Experience and Importance.

COL. F. D. CURTIS.

Our First Experience With Roots.

To raise roots successfully requires experience. This is perhaps the first essential, the other requirements being rich land and good tillage. No crop of roots will do well without both of these conditions being complied with. No man who does his work in a slipshod manner, on the broadcast plan, letting a crop take care of itself, need ever expect to grow roots successfully; for he will not do it. By these precautionary remarks we do not desire to be understood that it is a pressing, tedious and never-ending job to grow a good crop; but that the work must be done right at first, and done well all the way through.

To illustrate—the first time we undertook to grow swedes we never harvested one, as the seed did not grow. We rolled it in, and as the weather was dry, it did not come up. Our first crop of mangels were neglected until a wet spell coming on they could not be cultivated, and when at last the ground got dry enough, we had to mow the weeds before the cultivator would go through them. That crop of mangels—a small one—cost us 25 cents a bushels. It was our beginning. We read an old speech the other day made about this time in which we took ground that roots did not pay. Years afterwards, when we came to see how easily they could be raised, we tried again, going slowly at first, and profiting by experience. We can now, take one year with another, raise swedes and mangels at less than five cents a bushel.

Feeding Value.

A bushel of mangels will feed a hog for two days, and a bushel of swedes will make food enough for a little more than a day. We mean for a full-grown pig; such as a breeding sow. A bushel basket of turnips and mangels filled three times a day, feeds four breeding sows in one pen. A peck a day of swedes fed to the oxen with hay in the morning and straw the rest of the day, has kept them in fine condition. Esquire Davidson said recently they were fair beef, and these oxen have done a good deal of work. A bushel of turnips fed to fifteen sheep morning and night has made them into prime mutton. They had nothing else but hay. The calves, with five quarts of roots each and two quarts of buckwheat bran, are growing as in summer time, and the cows with a peck of roots and four quarts of bran, gain in flesh, having hay but once a day and straw the rest of the time.

Our Prospective Crop.

Roots have gained in favor with us during the past ten years—since we have raised them with success. Each year we have enlarged the area and next year we shall double it, putting in five acres of sugar-beets and mangels and two acres of swedes. We want two acres of sugar-beets of Lane's Improved to feed the pigs in the early fall, and the mangels to winter the hogs on, reserving the swedes for the sheep and cattle. We shall sow flat turnips in the corn, and have a patch of an acre or so besides. These are for the sheep and store pigs to feed on until winter sets in. The patch will be fed on the ground and so will those in the corn field, as it hardly pays to handle flat turnips or to bestow much labor upon them, as other roots are so much better. When they can be put in broadcast and fed on the ground, there is no crop which will pay better for the cost or furnish us much feed at the time of year as flat turnips. One can afford the manure and the labor expended on the ground, as both put it in most excellent order for any crop the next year. With this system of culture there is no hand labor at weeding, which is always costly.

Putting in the Crop.

If possible the ground should be plowed twice, with an interval of a week or more, to give the weeds a chance to start and be killed by the second plowing. The manure should be harrowed in and the seed slightly covered. This may be done with a coarse harrow or by dragging brush over the ground. A pound of seed is enough for an acre if the ground is mellow and so free from lumps and clods, so that all of the seed will be likely to come up; but if not, then double the amount of seed should be sown. This crop may be put in the last of July or the first of August, and may follow a crop of spring wheat, barley or early potatoes. We should never think of devoting a piece of ground the whole season to flat turnips. It should always be a second or a supplementary crop. In the spring is the time to make calculations for it by putting in barley or some other crop early to mature, so it can be gotten out of the way in time for the turnips. Turnips in the late fall are as useful to fill out the frost period as sowed corn is to make up the deficiency of the summer drought. Both extra crops we think essential, and the farmer who neglects to provide for these times of shrinkage in the pail and growth, loses a considerable part of the profits of the season, which he could so easily prevent. We would not spare the manure on the spring crop where turnips are to follow, or when the turnips are put in. The manure gives them a vigorous start and this sends them ahead of the fly, and makes a growth very soon, which covers the ground and makes them independent of drought. Plenty of manure keeps the ground moist. This manure is not lost or exhausted with the crop of turnips, for as the roots derive a considerable part of their growth from the atmosphere, it remains in the soil to feed the next crop. Clover sod may be turned over, after the hay has been removed, for a crop of turnips or swedes. Plaster sown broadcast over the turnips during the season is beneficial. A light sprinkle as soon as they come up, is stimulating, and again a few weeks afterwards. There is no danger of any kind of stock hurting themselves by being turned upon the turnip field. They are loosening in their action on the bowels, which has a good effect in connection with eating the frost-bitten grass and dry grasses which are apt to clog the stomach and are always indigestible according to the degree of dryness and lack of succulency. The first root crop to think about, then, is that of turnips by setting apart a field, or part of a field, in which it may follow some early spring crop, and the first one to be put in is Lane's Improved sugar-beet, followed closely with the mangels.

Doura and Chufas.

MR. JAMES J. H. GREGORY writes us as follows: "I am glad to find you editors have begun to understand the merits of Doura and Chufas. I have grown the latter on my farm for a dozen years. They will ripen here (Marblehead, Mass.) on warm, light soil *every season* and can be grazed for green fodder and be used for hogs—only the season being shorter, the grazing season is shorter also, and hence they have not for hogs the same value here as in the South. The Chufa is also a very nice nut for children to raise—they are capital."

[We would ask Mr. Gregory if his Doura develops more than one stalk to a seed?—EDS.]

Horticultural.

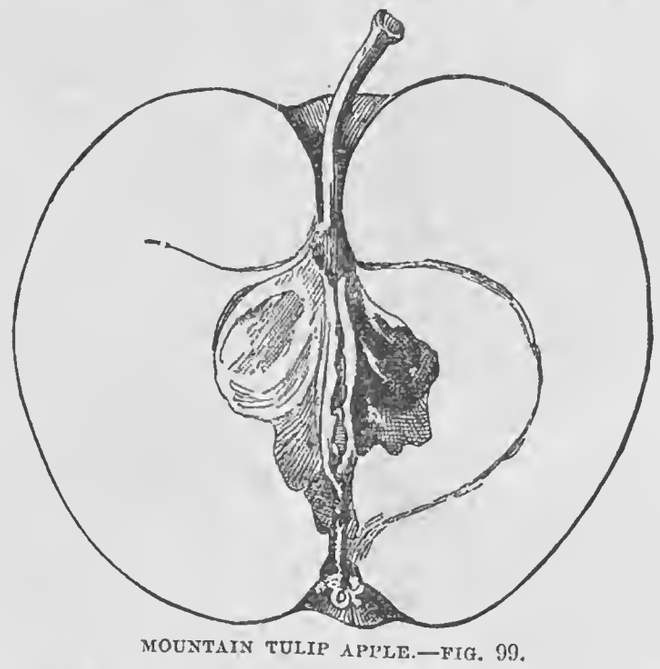
THE FARMER'S GARDEN.

As the busy season opens and the spring work begins, let us not forget our gardens. There are few things about the farm that will add more to household comfort and economy than a good, well managed kitchen garden. By a good garden I mean a successful one, that will contribute something good in the shape of fruits and vegetables to the table every day through the season. Too many of our gardens are failures, because they are either neglected or receive improper care. Eternal vigilance is the price not only of liberty but of everything that is good, and if a farmer has a good garden he must exercise considerable vigilance and care. Farmers usually have enough necessary work outside the garden to fill every hour of time. On many a well managed farm, where field crops are planted, cultivated and harvested in the best possible manner and all the "farm work" is carefully attended to, we find the garden a neglected, repulsive place, overgrown with various weeds and seemingly entirely forgotten. It seems to me that this is an oversight. We should not neglect the garden any more than our corn, wheat and potatoes. When the press of work comes on, the garden should receive its share of attention and not be allowed to suffer from neglect.

One cause for neglected gardens is the inconvenience in using horse power in the cultivation. In selecting a place for a garden and in planting it, we should aim to make horse culture available. The amount of work necessary to cultivate an eighth of an acre of garden is very considerable, if it must all be accomplished by hand, and it is more than the farmer should attempt. A garden should never be cramped by fences. It should be as long and narrow as possible, so as to make little turning at the ends of the rows when cultivating. Several different kinds of vegetables may be planted in the same row without harm, and if so planted, with the exception of onions, lettuce and a few other articles, may be cultivated more easily and expeditiously by horse power than by hand. I don't mean that the hoe is to be entirely laid aside in any instance; but I believe that much hand labor might in this way be avoided in our gardens.

The garden should be a rich, well drained plot of ground, containing as few weeds and weed seeds as possible, and it should be kept free from the pests by not allowing them to grow and mature their seed. Those who have not already ordered their garden seeds should make out their lists and send them at once. Store seeds are not to be depended on. It is much safer to send directly to some reliable seedsman. G. A. G. JR.

CHEMUNG CO.



MOUNTAIN TULIP APPLE.—FIG. 99.

Pomological.

The Mountain Tulip Apple.

THIS gaudy fruit is well named, its stripes and shades, as well as its shape, closely simulating the flower from which it is called. The Mountain Tulip originated as a seedling on the slopes of Yamaska mountain, near Abbottsford, Quebec. It is a very good as well as a showy fall apple of the month of October. It is one of medium size and mild, sub-acid flavor, mellow and agreeable, with some aroma. The tree is hardy and productive. We have many apples of this season, but even for decorative purposes a tree or two of this variety would be valued in the grounds of many growers. The tree itself is thrifty and symmetrical, with the evenly drooping branches characteristic of a heavy bearer. The shape of the apple is not unlike that of the Chenango Strawberry apple, but the size is less. T. H. HOSKINS, M.D.

Orleans Co., Vt.

Souvenir du Congres Pear.

The introduction of this exceedingly promising Pear to the American public, is believed to be due to Ellwanger & Barry, of Rochester, N. Y. Although it has been growing upon our grounds for several years, it has, so far, failed to show fruit. It has been in the hands of various growers in this country for more than a decade. Mr. Barry exhibited very fine specimens at the session of the American Pomological Society, in 1873, at Boston, he having then fruited it three years. He characterizes the tree as a moderate, upright grower; very productive. I very well recollect the wonderfully large size and fine appearance of the specimens shown by Mr. Barry at Chicago in September, 1875. I have not tried it on quince stocks; but it is reputed to be unsuccessful, unless double worked. I do not regard it as likely to take a high position so far as quality is concerned; although it has not the objectionable, musky aroma of the Bartlett, and, while it is earlier in ripening, it, like that old popular favorite, is quite exempt from the tendency to decay at the core. I regard it as pretty sure to take a high position as a market fruit preceding the Bartlett, unless its apparent tendency to overbear shall prove a bar to its popularity by seriously affecting the size, and possibly the quality of the fruit, or the longevity of the tree.

[See cut in last issue.—EDS.] T. T. LYON.

Scientific and Useful.

THE BEHAVIOR OF PHOSPHATES IN THE SOIL.

PROFESSOR G. C. CALDWELL.

IT is a well established and universally accepted principle of vegetable physiology that no food can enter the plant except in the liquid or the gaseous form; that there are no orifices in the roots or leaves by which particles of solid matter can be admitted within the cells and enter the laboratory where the mysterious and wonderful work is carried on of converting dead mineral matter into living vegetable substance. In an ordinary arable soil there is comparatively little plant food that is soluble in water, while there may be hundreds or even thousands of pounds to the acre of insoluble compounds of nitrogen, potash and phosphoric acid. Moreover, when soluble compounds of these important substances are added to the soil they are usually in a short time almost completely converted into difficultly soluble compounds, with the single exception of nitrogen in the form of nitrates.

This interesting property of soils, in virtue of which they seize hold of, and retain in the uppermost layers, the constituents of our manures, is evidently, from one point of view, a useful property, in that these substances are thus protected from being leached out and entirely lost for present use, through porous subsoils or drains; hence no notable quantity of ammonia, potash or phosphoric acid is ordinarily found in the drainage water even of well manured land. But from another point of view it might naturally appear to be a worse than useless property, since it opposes our efforts to increase the supply of soluble plant food for our crops; but the widespread and constantly increasing use of soluble phosphates and soluble compounds of nitrogen and potash, shows that there is profit, nevertheless, in putting soluble plant food into the soil. How shall we dispose of such an apparent contradiction, and reconcile known facts concerning the behavior of soils and the structure of plants with our results in manuring crops?

It was Liebig who performed the first experiments leading to the conclusion now so generally adopted by vegetable physiologists, that plants have, to a certain extent, the power of making their own solution. The feeding rootlets of the plant are in closest contact with the particles of the soil in which they grow, as may be seen on carefully pulling up a young plant from a dry soil; the youngest rootlets, and the root hairs will be found to be sheathed with a coating of particles of soil which cannot be shaken off, and not even pulled off without in some cases taking with them portions of the rootlets. These rootlets and hairs are saturated with sap, a liquid that has a greater solvent power than pure water or than soil-water, and as a result of their close contact with particles of difficultly soluble phosphate of lime or iron, or difficultly soluble compounds of ammonia or potash, these substances may be taken into solution, and under such conditions that they cannot but enter the plant right then and there.

But, it may be said, if soluble phosphate is converted into insoluble phosphate in the soil, why take so much trouble to make insoluble phosphate soluble before applying it? Why not use the powdered rock phosphate or bone dust directly, instead of first treating it with acid? Because in the former case we have a particle of the phosphate among ten thousand of soil, which the rootlet may have but one chance in as many thousands of meeting, while in the latter, as the soluble phosphate is taken into solution by the first rain that thoroughly wets the soil, it is distributed throughout the upper layers to a considerable extent before conversion into insoluble compounds, and is spread over the surface of such a great number of particles of the soil that the rootlets are constantly meeting with it as they press onward in their growth. That the effect of a given quantity of phosphoric acid as soluble or superphosphate, applied to a soil, for instance, that is suitable for wheat, is in most cases very much greater than that of the same quantity in powdered rock phosphate, however finely it may be ground, has been fully demonstrated by both experience and experiment, and it is easy to see the reason why in the above explanation.

The behavior of phosphates in the soil has received a careful study recently at the hands of Albert and Vollbrecht at one of the German Experiment Stations, and some useful conclusions can be drawn from the interesting results that they obtained. It may be necessary to state, first, that there are three phosphates of lime, one soluble in water, another, the so-called reverted phosphate, difficultly soluble in

water, but soluble in water containing ammonium citrate, and a third very difficultly soluble in anything except acids; the second form is more valuable than the third for plant food, and is unquestionably more easily taken into solution by direct contact with the rootlets. Albert and Volibrecht first compared soils rich and poor in lime as to their behavior with soluble phosphate; in a soil rich in lime 78 per cent. of the phosphoric acid became insoluble in water in four hours, and after twelve hours 90 per cent.; but none was insoluble in citrate, so that the change had reached only the second degree of insolubility; at 14 days, when the last examination was made, 95 per cent. of the acid had become insoluble in water, but only four per cent. was insoluble in citrate; therefore while nearly all the acid was fixed in the upper layer of soil, nearly all of it was still in a form easily accessible to the plant through contact with its feeding rootlets, and was also distributed over the surface of a large number of soil particles. In a soil poor in lime, with but about one per cent. of carbonate of lime, after 14 days only 42.5 per cent. had become insoluble in water; in another soil with 0.5 per cent. of carbonate of lime, 32 per cent. of the phosphoric acid became insoluble in the same time; therefore in the one case more than half of the acid was in a condition to be carried off by a soaking rain, and in the other two-thirds of it might be leached out.

The inference from these results is that the use of high-grade superphosphates rich in soluble acid, on sandy or clay soils poor in lime, is not judicious; and this inference is supported in a conclusive manner by the fact that in localities in Germany where such soils predominate, the use of superphosphates has fallen off by four-fifths since the introduction of the high grade wares; the farmers have not found them profitable, and have substituted for them bone-meal or raw Peruvian guano, both of which contain within themselves some provision for the solution of their phosphate. For the same reason the use of crude Peruvian guano is better on such soils rather than of that which has been treated with acid, or the refined guano, as they call it in this country; the treatment with acid converts a large portion of the phosphate in the guano into superphosphate. The same investigators found that in soil from newly reclaimed bog-land, the soluble phosphate was not fixed at all, and that, moreover, the phosphate soluble in citrate was rapidly converted into phosphate soluble in water by the humus compounds that abound in such a soil; hence on such land the use of rich supers would be injudicious.

These conclusions are confirmed by results of experiments with phosphates on a large scale on sandy soils and reclaimed bogs, where it was found that just as good results, and in some cases even better ones were obtained with phosphate soluble in citrate, or reverted phosphate, as with superphosphate. These considerations may serve to explain some of the failures in the use of superphosphates, and to suggest in such cases the trial of liberal dressings of bone-meal.

Farm Topics.

WESTERN FARMING—III.

W. I. CHAMBERLAIN.

I PROMISED to give some account of the scenery and the farming lying along or near the line of the Cleveland, Mt. Vernon and Columbus railroad. The scenery is some of the finest in Ohio. Though the C., C., C. and I. road to Cleveland is nearly parallel to this for quite a distance northward from Columbus, that road seems to have had an instinct for level ground, and this for hills. The C., C., C and I. road goes through much flat "low" land, and yet it is not low. It is really the water-shed or back-bone between two systems of creeks and rivers, nearly all the way from Cleveland to Columbus. But it is a very broad and flat "back-bone," and needs under-draining just as much as if it were a few feet or a hundred feet lower down. Any soil needs under-draining if the water stands on the surface or even a foot below the surface much of the time. The highest land on the writer's farm is nearly a dead level and greatly needed, and was vastly improved by, drainage. And the same may be said of this long, flat stretch of a hundred miles or more between Cleveland and Columbus on the C., C., C. and I. road. Really good farming, fine farming, fine stock, good buildings, good clover and successful rotation of all kinds of crops will never be found here, I think, without the tile-drainage of considerable portions of the area. And I am delighted to find the work already fairly begun, and tile factories already existing in considerable numbers.

But the C., Mt. V. and Columbus road strikes boldly off through hills and valleys and across streams in a most delightful way. You would think yourself in Vermont, so high and steep are the hills, rising to an altitude of six or eight hundred feet above the level of the immediately adjacent valleys. Only for a short distance, however, is the scenery so bold, and the hills so steep as to prevent cultivation. Soon, as you whirl on north through Knox and Holmes counties, the hills grow less bold. They are fine, indeed, but arable to their very tops, and covered with fine fields of wheat. The soil is gravelly much of the way, and does not need artificial drainage, and one can afford to plow the hill sides, with that advantage on his side. And it is not at all surprising that the farming is more advanced and really satisfactory here. There are few better counties for farming anywhere than portions of Knox, Holmes, Wayne and Summit, through which this road passes, and Stark, of which it barely touches a corner. And there are few better farmers than the "honest Dutchmen" who till the most of this good land. One could almost imagine himself in the fine farming region of Eastern Pennsylvania described in the first of these articles.

Stark Co. is perhaps, on the whole, the best for general tillage. The fine, large bank barns, huge straw stacks, rank clover and other grass in its season, sleek cattle and horses, and fine fields of waving wheat, oats, barley, rye and corn, that cover its rolling surface in summer, fill with delight the eye at all trained to beauty of agricultural landscape. I find less to criticise and more to admire and heartily commend in the farming here than in almost any region I have visited. Possibly "distance lends enchantment to the view," and I might see more faults if I lived in the midst of the regions I now know only by occasional inspection from car windows, or from a buggy, as I have driven through. But the farmers of these grain regions seem to me to come more nearly up to my ideal of good farming, and to what their land is capable of, than we at least do in the clayey dairy regions of the Western Reserve. They develop Nature's resources of fertility better than we. They do it more than we by clover, rotation, thorough tillage, the use of lime, gypsum, etc., and by the careful saving of manure from animals.

Their great, warm barnyards are the very paradise of fat cattle and young stock. Their cattle are largely wintered on *corn* and *straw;* for experience long ago taught them what chemistry only lately demonstrated, that these two feeds complement each other exactly, and together make a complete fodder. Those great, warm barnyards, too, are both laboratories and store-houses of fertilizers. Straw is in superabundance. The farmers feed all they can, use all they can as bedding in the stables at night, and spread it over the yard to be picked over by cattle and fowls (and sometimes pigs) all day, and gradually tramped into manure with the droppings and urine of the stock. It makes a great mass of not very rich manure, but in a properly constructed barnyard, where there is neither eaves' wash nor leaching through the soil beneath, and where the straw stack is systematically worked down just fast enough, we have about as near an approach to the perfect utilizing of the feed and straw of the farm as it is possible to get without more labor than our prices of land and produce will warrant.

These old farmers know nothing about the scarcity of bedding and absorbents so common near the seaboard, and until very lately in the Ohio dairy regions. They scout the idea of raking up leaves or road dust for absorbents. They would as soon think of handling straw with a spoon. "Vy, man, it von't pay! And den, vot should ve do mit to big straw stack?" They have little to say of the barbarity of stanchions, but they have their opinion of the man who will let his cattle and horses sleep on a bare, wet floor. They think that man is just fit to sleep on the floor himself.

About the only improvement I would suggest to the excellent grain farming of much of this region, would be an increase of the amount of live stock. They have abundant room to stable it in the basements of their huge bank-barns, half of which is now often nearly useless and nearly a third part "left out-of-doors" as I have elsewhere remarked. They have, too, an abundance of grain and of straw for feed, with clover and timothy for change. And cattle are just the machines to turn this coarse fodder rapidly and profitably into good manure, *good*, of course, just in proportion to the amount of grain, shorts, clover, etc. fed, and the care with which the urine is saved. I have elsewhere strenuously and repeatedly argued that the only salvation or at least renovation of our clayey dairy farms, is the drainage of portions of them, and the gradual increase of their grain-area, with the careful use of straw, chaff, etc., as bedding and absorbents; I now argue and believe that though the case is not so bad on the grain farms I speak of, yet a large increase of the live stock would, if properly managed, be a very great benefit, and would greatly increase the resources of the farms. Nature has made almost any of our farms rich enough in available or latent fertility, and has set us the task of wisely developing, using and increasing it.

The Apiarian.

AIDS AND HELPS TO BEE-KEEPERS.

AT the outset I wish to state that I shall not, perhaps, present anything new to experienced bee-keepers, but simply hints and helps to beginners. I am almost constantly receiving letters from those who seek to know the best way to commence bee-keeping. Many seem to think it a matter requiring much knowledge and instruction. One of the most frequent questions is: "Would you advise me to undertake it without previous study and some practical knowledge?" The answer to this is plain. If you wish to keep cows, you buy cows, and begin to learn to milk by milking them. If you wish to keep poultry, you buy as many fowls as you can afford, and having done this you are interested to know more about their proper care, and you read about them, watch them, and are a poultry keeper without more ado. I advise you to go about bee-keeping in the same way. Buy a few stands, or even one, then get the theory from bee books or journals; watch your bees and continue the practise with the theory. There is nothing about the matter that is mysterious in a practical sense now, thanks to those who have practically investigated the "mysteries" for us. If you can afford to spend the money and can get Italian bees in just the right hives, that is, of course, the easiest way. If not, buy just what you can get, and as soon as convenient, transfer the bees to good movable frame hives and then Italianize. Decide what hive you will adopt, and do not allow yourself to think it must necessarily be a "patented" hive. The best hives, and those most widely in use at the present by successful and scientific bee-keepers, are covered by no patents, and can be manufactured at one dollar and a half each—or less. Always use good material, and knowing the dimensions of the hive you adopt, you can easily obtain widths and lengths that can be cut with little waste. A word right here to my old, experienced brother bee-keepers. You who have purchased hives etc., let me offer you a money-saving hint. Obtain a good foot-power saw, manufacture your own hives and save 50 per cent. You can easily cut up material for twenty hives per day. With it you can manufacture every thing needed, from a complete hive down to a "prize" dovetailed section box. The "Barnes" (Rockford Ill.) combined saw is good for this purpose. I have found it of the greatest practical benefit, and I doubt if there is, or can be, a more useful article to the apiarist than a thoroughly good foot-power saw. Beginners in bee-keeping will find it a pleasure to make their own supplies, and will take pride in doing it well, and carefully. That little "all" once in the Savings Bank, or the few dollars wisely laid away in the "ancestral-stocking," will come very handy by-and-by to purchase from your nearest supply dealer the honey and wax extractors, comb foundations, and other necessities for your apiary. One piece of advice I deem very necessary: Remember you cannot expect to begin where other people have arrived by years of practical labor and study. There is no "royal road" to success in this business, any more than in other branches of industry. Perseverance, patience, and, withal, a little courage, are the requisites. Skill will come in doing what is necessary, *and in no other way.*

J. G. BINGHAM.

McGrawville, N. Y.

Miscellaneous.

WHAT OTHERS SAY.

THE USES OF MANURE IN THE SPRING.—Many persons hesitate to draw out their manure and spread it until they are ready to turn it under supposing some waste to occur by exposure to the weather. It is very doubtful if this suspected waste really takes place, says our contributor, Henry Stewart, in the N. Y. Times. It is true that manure freshly turned or spread smells strongly, but in most cases there is no value or virtue in this scent. Decomposing mixed vegetable and animal matter, such as is found in the contents of a barn-yard, gives off much carburetted and and sulphuretted hydrogen, and these gases are those which escape most freely from manure-heaps. The scent of ammonia is not nearly so disagreeable as that of these gases, and is pungent to the nostrils and to the eyes. It is easily tested. By dipping a piece of red litmus paper in pure water, and exposing it to the vapors which escape from a heap of manure, the red color will be changed to purple if ammonia be present; or, if the ammonia is abundant, the color will become blue. It is very rarely that this effect can be noticed in the strongest-flavored manure-heap, for the reason that as water absorbs 700 times its volume of ammonia, and as fresh manure contains 75 per cent. of water, so long as there is any water not yet saturated with ammonia, none of this can escape into the air and be lost.

A TON of manure having 1,500 pounds of water in it, which is about 25 cubic feet it follows that it will dissolve or absorb about 17,500 cubic feet, of ammonia gas before it is saturated. Besides this, manure contains much sulphuric acid in combinations from which it will escape to combine with ammonia and in this way a large portion of the ammonia formed in the decomposition of the manure will be changed to sulphate of ammonia which is a stable compound.

THEREFORE the fear that ammonia may be lost is hardly to be entertained so long as the manure is moist: a day of warm wind and sunshine will certainly do mischief by evaporating the moisture, and this is the only risk of loss to be feared. It may be perfectly safe to draw out and spread manure in cold or showery weather at this season, but the work should not be permitted to go so far ahead but that it may be covered with the plow if the necessity occurs.

BUT in some cases the practice is convenient. Twenty loads a day may be hauled and dropped in small heaps, thus releasing the team from a waste of time in waiting while the manure is spread; and as soon as a certain quantity is dropped, a spare hand may be employed to do the spreading while the team is at work covering. From the foregoing it will be gathered that this work is essentially one for early spring. It may be done when the ground is too wet to be plowed, or while it is still crusted with frost. Better still, it may be done by means of sleds on the last snow with much economy of labor, and an onerous labor is out of the way before the hurry of plowing and sowing comes.

THE method of throwing the manure, as it is hauled out into small heaps, is sometimes objectionable and sometimes to be preferred. It is objectionable and injurious when it remains in that state for a lengthened period. It contains, when in the ordinary condition in which it is found at this season, about seven per cent. of soluble matter. One heavy shower falling upon a small heap of three or four bushels will wash out of it a large portion of this soluble matter, enriching excessively the small portion of the ground upon which it rests, and depriving the larger part over which it will finally be spread of its due share. The crop will show the result by an excessive growth in those spots where the heaps were placed. This excessive growth is an injury, and doubly so; a waste occurs in two ways; grain will lodge or be affected by rust or smut from rank growth in some places and it will be robbed elsewhere; in the same way, corn will run to stalk from over-fertility in these places, and make a weak growth in others. This is so obvious, and has been so often observed, that it is surprising that many farmers will persist in the practice.

TO DETECT OLEOMARGARINE.—One of the main difficulties in opposing oleomargarine is the want of an easy method of distinguishing the stuff from genuine butter. M. Donny has an interesting note on this question in a recent number of the Journal de l'Agriculture. Artificial butter, such as is met with in large quantities in commerce at the present time, behaves in an altogether peculiar manner if heated up to 150 deg. or 160 deg. C., equal to 320 or 350 deg. Fah., in a porcelain capsule or a test tube. At this point it produces but an insignificant quantity of froth, but the mass exhibits a kind of irregular ebullition, accompanied by violent starts or jolts, which threaten to eject the melted butter from the vessel. It turns brown, but this phenomenon takes place in the following manner:—The fatty portion of the sample preserves its natural color, and the caseous matter, which alone acquires the brown tint, separates from it in the form of clots attached to the sides of the vessel. Natural, unadulterated butter heated in the same manner, behaves quite differently. Heated up to the above temperature, it produces an abundant froth; the "jumping" is far less marked, and the mass turns brown under different conditions. A considerable portion of the brown coloring matter remains in suspension in the melted mass, so that the latter acquires the characteristic brown aspect familiar to those who are acquainted with the sauce called "*au beurre noir.*" In this respect all natural butters behave just alike. It is curious that such a simple test as this has never hitherto been pointed out as a suitable method of distinguishing true butter from artificial imitations.

JAPAN PERSIMMON.—Our readers may remember that the editor of the N. Y. Sun took us to task for the expression of an opinion that this Persimmon (Diospyros kaki) was not hardy in this climate. Now he states as follows:

We have before us a catalogue of one of our Long Island nurseries, dated 1844, in which

the Japan Persimmon is described, and the trees offered at the price of one dollar. More than twenty years ago we purchased and planted trees of this fruit, and althongh they lived a few years they were eventnally killed out during an unusually cold winter. We know of but one tree that ever reached a bearing age in this part of the country, and that one is now dead; therefore, from our own experieuce, we must set down the Japan Persimmon as rather too tender for the Northern States; and it is very doubtful if it will live eveu in Missonri. It is true that there are many varieties of it, some of which may be more hardy than others; but they are not yet known. We would say, try a tree or two if you can afford it, but do not place much confidence in what the tree peddlars (!) say with regard to hardiness of the trees. Of course the trees do well in the mild climate of California, but that is no recommendation for them in colder regions.

PACKING BUTTER.—Mr. Ellsworth, as reported in the Am. Cultivator, says, "There are usually a few weeks during each season when butter is so plenty in our small markets that it is almost impossible to sell it at any fair price, when it may be packed in earthen jars, and be kept in good condition for family use. Take the butter in as good condition as I have described; press it into the jar compactly in a layer three inches in thickness; cut a piece of cloth of the size of the jar, wet it in strong brine, spreading it over this first layer; repeat the process with each succeeding layer until you have reached the top or within three-quarters of an inch. Now make a strong brine, to which add three tablespoonfuls of granulated sugar, one teaspoonful of powdered saltpeter; set in a cool, dry cellar; keep it covered with the brine until wanted, and it will cut out smoothly. But if butter is to be kept for a better market, I would recommend putting it up in any sweet package or jar, direct from the churn in the granulated form, covering it with strong brine, and when wanted take it up and work it over like new butter."

HUMOR.—That only is perfect humor where everybody is pleased. Such was the happy humor in the well-deserved compliments on both sides between Judge Story and Edward Everett, when, at a Boston dinner, in response to the former's neatest of volunteer toasts, "Fame follows where Everett goes," Mr. Everett at once gave that unsurpassed impromptu, "To whatever hight judicial learning may attain in this country, there will always be one Story higher." *Per contra*, Lord Beaconsfield's humor, though brilliant, has too much ill-humor in it to be thoroughly good: it is conceived, flashed, or elaborated too much in the spirit of that statement of his, "A smile for a friend, and a sneer for the world, is the way to govern the world." Indeed, a man outlives his worth—almost his right to live—when he outlives his good-humor. Compute the value of the sun's radiant energy, if you can; and so of the radiant energy of good-humor in character. Hell itself would cease to be hell without ill-humor. Heaven? There can be no heaven without the good-humor that makes it heavenly.—Thoughts and Events.

IMPROVEMENT OF THE ROSE.—Mr. H. B. Ellwanger says:—"Much the same laws operate in the Animal and Vegetable Kingdoms. No experienced breeder of cattle or horses would think for a moment of depending upon chance results; he knows that by crossing this strain with that, he will obtain what he desires, and will be able in a great measure to know what the produce will be. By this knowledge we keep and improve our breeds of Jersey and Holstein cattle, our Hambletonian and Mambrino horses and secure variations in them, such as we desire. Why, then, do we not more generally pursue the same course in raising new fruits and flowers? In the production of new roses, instead of having exhausted the field, as a few writers have incautiously observed, we have only just entered it; the future possibilities open to the raiser of new Roses, are only dawning upon us. Lyons, France, is the head centre whence most of our cherished Roses have come."

THE experiment of bringing foreign beef and mutton from Australia, says the Mark Lane Express of London, has proved successful beyond all reasonable expectation. The butchers took very kindly to the meat, and "asked for more." It was bright in appearance and perfectly sweet when first brought into the market, and it has kept remarkably well. Fears have been expressed in its columns and elsewhere that the meat, after being thawed, would rapidly become tainted, but it is only fair to confess that the surmise has not proved correct. Mutton taken out of the refrigerating room on the night of Sunday week was quite sweet on Saturday, and a week is as long as there is any necessity for keeping imported meat.

IF the importation of this meat should be carried on extensively, our American cousins will be nowhere in the competition. They require £15 for such bullocks as can be bought in Australia at £5 each, and althongh their freight to this country is less than that which importers from Australia will have to pay, the difference is not nearly enough to make up for the large margin between prices at New York or Chicago and those which obtain at Sydney or Melbourne.

TO KILL LICE.—Col. Curtis has hit it. He tells the N. Y. Tribune as follows: "We have tried all sorts of mixtures *to kill lice on animals* and at last have hit on what we think is best: Melt hog's lard, or any hot grease, and in it dissolve salt one-third of the bulk of the greese; take as much grease as will be required to smear the animal all over and into the mixture pour kerosene oil and stir it up. Two gills of the kerosene would be sufficient for a cow of ordinary size. One application completely cured the most stubborn case of lice on an old hog. It leaves the skin smooth and clean, removing the scurf and healing the irritation caused by the parasites. It is also excellent for galls and sores.

SEED COTTON.—Once for all, then, says Home and Farm, we can not too strongly recommend to cotton growers, whether on a large scale or on a small one, that they select their seed from the young plants in the field, for they will find such a course not only economizes time, but also money, for it assures the excellent quality of the seed.

THE cotton seed so carefully chosen, and of whose vitality you are assured with as much certainty as of anything, should, before being sown, be soaked in water cantaining, in solution, soot or wood ashes; but, above all, we recommend soot a substance at the command of every one, which is a rank poison for all vegetable-eating insects, and drives away, by its rank and bitter taste, all sorts of devastating vermin.

If, after soaking the seeds in such a solution you dry them by rubbing through the mass soot to which a trifle of guano has been added, it will strengthen in pushing the germ, and you will have done all that is humanly possible to insure success.

HEREFORDS.—A well-known breeder of Herefords sends the Mark Lane Express the following note: "I have had a gentleman from the United States to see my herd of Herefords He tells me that he has just bought 53 for the States. He used to breed Short-horns, but after trying Herefords he has got rid of his Short-horns. Two of his brothers in the Far West of the States have each a herd of Herefords as good as any he has seen in England. The Hereford breed does well in the States, and is fast coming into use and favor there." The Mark Lane Express has often expressed the opinion that Herefords, bred as they are in England, would be likely to do better than Short-horns in the grazing districts of the United States.

LET ONE ENGAGE the Minister to the United States of any European kingdom in familiar conversation and try the experiment of abruptly asking him if it be not true that actual criminals as well as dangerous and suspected characters are habitally shipped hither from his sovereign's domain. Those who have investigated the subject know well that this is the case. Indeed a great many more than we suspect of those who debark at Castle Garden could join heartily in the refrain of the old Botany Bay convicts:

"True patriots we, for, be it understood,
We leave our country for our country's good."

—The Hour.

RAILROAD MONOPOLIES.—"And it is well," said Land and Home, "that the farmers, manufacturers and merchants are roused to action, for so long as legislation is controlled by Gould and Vanderbilt, so long must the sovereign (?) people submit to these, their rulers, confessing that their numbers, and honesty and justice, are of no avail against these men's money. Only by combining, however, can the victory be won. Combine in the club, in the grange, in town meeting and in city organization; then by vigorous, combined efforts at the capitol, justice may help those who demand it.

CHALLENGE.—Mr. William Crozier, of Northport, Long Island, believing his Jersey cow, Lillie Bonne, which took second premium at the late International Dairy Fair, to be the best in this country, will back up his opinion in the sum of $500 on her against any cow of any breed, for one week's production of milk, cream, or butter. The party accepting this challenge to put the same amount of money on his cow.—American Dairyman, as quoted in the London Agricultural Gazette. Does Mr. Crozier's challenge extend to England?

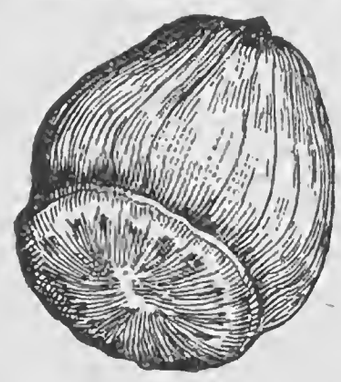
AT THE IOWA AGRICULTURAL COLLEGE every girl is taught how to make good bread and biscuit, and learns before she leaves that institution something about the characteristics and qualities of different flours, says the American Miller. This is a different and more useful "language of flours" than most girls learn, but then Iowa girls are different from most girls.

MR. TALCOTT (writing in the Country Gentleman) says: "There is one peculiarity about pumpkin seeds that has never been mentioned by any writer, and that is, while many think them detrimental if fed to cattle in excess, if hogs are allowed to eat all they will of pumpkin seeds, they will grow fat on them.

THE CALIFORNIA FARMER asks why in their State University they have only three or four agricultural students, and why in a State as rich as California they have no Agricultural College as was designed by the princely gift of the nation, yet they have no agricultural farm.

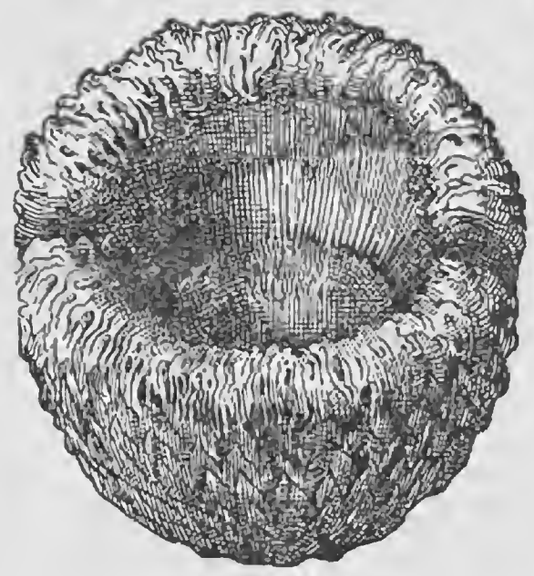
BUR-OAK ACORN.

THE Bur-Oak, (Quercus macrocarpa) also known as White Oak, Over-cup, or Mossy-cup, is peculiar for the size of the cup and acorn. Figures 100 and 101 present the natural size of a



ACORN OF BUR-OAK.—FIG. 100.

fruit sent us from Texas. It varies, however, in size from 9-10 of an inch to two inches across, but this being uncommonly large, our readers may be interested in seeing it. The tree is of middle size and quite handsome. It is found in nearly all parts of the United States, but is most common in the West. It loves rich soil, and the fertile Bur-Oak lands of the



CUP, NATURAL SIZE.—FIG. 101.

West are well-known for their excellence for farming purposes. The wood is hard and durable. Leaves large, from 6 to 12 inches or more in length, deeply lobed or nearly parted, irregular, downy and pale underneath. The whole tree has a striking appearance, and a few specimens on the lawn and around the buildings are not out of place.

CATALOGUES, ETC., RECEIVED.

G. H. & J. H. HALE. South Glastonbury, Conn. Catalogue of Small fruits of all kinds and fruit trees. An enterprising firm and trustworthy. It presents engravings of the supposed largest strawberry ever raised, and of the new quince "Champion." We take pleasure in commending the catalogue (sent free) to the notice of our readers.

PAMPHLET, 16 pages, of the Mapes's Manures. "Long Island Specials" prepared expressly for the soils and crops of Long Island. Reports from many farmers showing the effects of these manures. Also an essay by Charles V. Mapes upon "The Effects of Fertilizers on Different Soils," from the Annual Report (1879) of the New Jersey State Board of Agriculture. In this some very interesting experiments with potatoes are detailed. The RURAL NEW-YORKER is always glad to aid in the dissemination of such papers. Much light is needed on the use and effects of concentrated manures, and the farmer cannot fail to find in such accounts much information which may guide him how to use them. The circulars will be sent to all upon application for them. Address the Mapes Formula Co., 158 Front st., N. Y.

CATALOGUE of Clydesdale Stallions owned by Powell Bros., Springboro, Crawford Co., Pa. This neatly gotten up catalogue of 83 pages contains full descriptions and brief pedigrees of the 13 stallions owned by the above firm, together with a pithy history of this favorite breed. All who are looking for the best sort of working horses for every purpose we would strongly advise to apply for information here before investing in stock anywhere else.

FRANK FORD of Ravenna, Ohio, sends us a circular setting forth the value of his new tomato "Alpha" which he deems the earliest and best tomato known. Certificates of its merits are published from well-known horticulturists whose statements we cannot doubt. Also a circular of a cider preservative.

To Destroy Rats.

When in small numbers, these may be easily got rid of by placing food near their runs for a few nights till they have regularly devoured it, and then poisoning the same. But where they harbor numerously, poisoning is too slow an operation, and, moreover, there are generally some astute old fellows, that, prepare traps and poison ever so cunningly, are too wary to be caught by them.

One of the best methods I have ever tried under such circumstances, to catch rats, is to take four joist posts about four feet long, and nail 12 to 13-feet boards to them, about two inches apart from bottom to top. This makes an ample pen, which should be set near where the rats are most abundant. In setting the pen, put 4 inch square blocks under the posts, so that the rats can run under the lower board, easily into it. Now spread corn, oats, or any thing they are fond of over the ground inside the pen, then lay down three 4-inch square joists equidistant, and floor these with boards. Let the pen remain thus for a week or so, by which time the rats will have made it a great harbor for themselves. Now take the blocks from under the posts, and the lower boards of the pen will come so near to the ground that the rats cannot escape underneath, and being so high they cannot leap over. Then put in one or more terrier dogs, take out the floor boards, and you will see rare sport. I found upwards of 20 rats in a pen of this description one morning, and a small rough-haired terrier bitch of mine, killed every one in a few minutes. She would jump and catch the rat by the back of the neck, breaking it with a single grip. After she had done this, she went leisurely round over them, one after the other, and if she found any still kicking or showing life, she gave it another grip on the neck, and thus settled the matter with the rats.

It is astonishing what complete rat warrens many of our farmers make of their barns and outbuildings. Instead of having their sills and floors close to the ground, they should be raised two feet or more from it; cats and dogs can then easily run under and prevent rats and other vermin from harborbing there. A. B. A.

Industrial Implements.

THE HOOSIER GRAIN DRILL.

THE three main considerations in planting grain are:—effective planting, economy of seed, and the production of most grain to the acre. These three objects are secured by planting with a good drill, such as that we here present to the notice of our readers in the Improved Hoosier Grain Drill, manufactured by the Hoosier Drill Company of Richmond, Ind. The best experience is that the separate distribution of seed is as essential to the growing of large crops of corn as to the growing of large crops of cabbage. The drill under consideration drops, with great regularity, one grain in a place, and is so arranged that it can be adjusted to deposit them 12, 16 or 20 inches apart, to suit the requirements of various kinds of soil. It also, at the same operation, does the covering uniformly in depth, and its covering shares can be adjusted to cover deep or shallow.

There is economy in its use from the fact that no thinning is necessary, and no replanting either, in case good seed is used. The following calculation will fully demonstrate that no corn grower can afford to be without at least *one* good drill. Take, for instance, a crop of forty acres. An increased yield of ten bushels per acre, which is very moderate as the increase is often twenty bushels, will make a total increase of 400 bushels over hilled corn. This, at fifty cents per bushel, gives a *clear* gain of $200 the *first* season, as the time and labor saved will fully pay for the drill. At only twenty-five cents per bushel there is still a net gain of $100, which is a neat little sum.

An attachment for planting beans, peas, broom corn and sorghum goes with every drill, free of charge. We strongly advise all who may need a grain drill to write for full particulars of the above drill, which will be promptly furnished *gratis* by the manufacturers.

SINCE our full description of the Acme harrow, in the issue of Feb 14, we have heard quite a number of good reports of the implement from subscribers and others, and would certainly advise all in need of such a device to obtain a full account of this implement by applying to Nash & Bro., 22 College Place, N. Y.

Everywhere.

NOTES FROM AIKEN—(S. C.)

The bluest place on the face of the earth is a "Health Resort" in bad weather. The invalids growl as if they were suffering personal wrongs, and their long faces are in keeping with the gloomy skies. Nearly a week of rain or drizzle has, as a matter of fact, tried the patience of patient well people, and about the only enlivening thing to be found here in "Aiking"—as it has been with a grim facetiousness called—is the cheerful pine-wood fire in the old-fashioned open chimney-place. "It is an ill wind that blows no good." While the coughers are coughing worse, the land, from this week of storms, is receiving just what it sadly stood in need of. Strawberries were drying up and the thousands of rose-buds that were ready to unfold were looking as if nipped by frost. Now all this is fast changing. In a day or so, the gardens will be a mass of roses, while the buds of trees are swelling and expanding as fast as ever they can. Speaking of Roses, we have here Fortune's Yellow offered two or three years ago as the "Beauty of Glazenwood," first in England, then here. The colored plate of this "Glazenwood" was not only captivating, but was actually enough to set an ardent rosarian quite crazy, being about eight inches in diameter, of a lemon-yellow color striped with red. But its identity with Fortune's was soon discovered, and its buds (unlike those of the American Banner) never came to be worth their weight in gold!

A very common method of raising potatoes here is as follows:—Prepare the soil in the usual manner and plant pieces (cut to single or double eyes) six inches deep. Cover with a foot of pine needles. The vines grow through this, while the tubers form among the leaves ("needles" or "straw") and are taken out by hand, as needed, without injury to the plant which keeps on growing and forming new potatoes through nine months of the year.

It is a strange fact that the "straw" or "needles" (leaves) of pine trees have been regarded as not only worthless as manure, but positively injurious to vegetation. What a costly error! I have just been looking over a garden in which the "straw" has been spaded under in immense quantities, and there left to rot. The proprietor tells me that though, 'tis true, roots must not come in contact with undecayed straw, yet, when rotted, it constitutes a valuable manure rich in both potash and phosphoric acid. The appearance of his Strawberries, potatoes and Roses seems to indicate that his estimate of its value is not much out of the way.

Here I find that the identical Doura of which the RURAL NEW-YORKER has of late said so much, has been well tested, and the report more than corroborates your estimate of its value as grown upon your Experiment Grounds. After the Pearl Millet deceit, no doubt your readers will touch new fodder plants with a dainty finger. And it is well they should. I merely desire to convey to them the estimate which those who have tried this particular kind of Doura place upon its value for this part of the country; that is, as I have already intimated, that it is the most valuable fodder plant yet known. It may here be cut three times during the season and "grows all the better for it." Each seed here, as with you, sends up an average of about eight stalks. These, if not cut back, seed freely and the fruit head is precisely the same as represented by your engraving on first page in the issue of last December 27.

[The panicle referred to was drawn while the grain was in the milk. Some of the grain had not even formed.—EDS.]

The "Green Valley Grass" (I believe it was so called), Sorghum halepense, is also being tested here, with some promise that it, too, may prove of value in this land which so stands in need of this class of plants. The roots are quite hardy here and the leaves are now a foot high. The roots, or rather root-stocks, form a complete net-work in the soil of which they will take complete possession in a few years. How long, however, they will yield a paying quantity of leaves is not yet known.

March 15.—We had a glimpse of the sun yesterday. Last night it rained in torrents and to-day is overcast and muggy. The Chinese (purple) Wistaria is making a beautiful display. The following Roses are in bloom or "nearly so:" Gen. Jacqueminot, Bon Silene, Duch. de Brabant, Isabella Sprunt, Lady Warrender, Mad. Ristori, Safrano, Agrippina, Bourbon Queen, Hermosa, Louis Philippe, Souvenir de la Malmaison, Sombreuil, James Sprunt, Lamarque, Marshal Niel, Reve d'Or, Prairie Queen, Amazone, Solfaterre, Archduchesse Isabella, Archduke Charles, Adrienne Christophle, Bougere, Clare Carnot, Clare Sylvain, Cheshunt Hybrid, Count de Chartres, Caroline de Marinesse, Comte Bobrinsky, Duch. de Thuringe, Emp. Eugenie, Isabella Gray, Le Phœnix, Lucullus, Mad. Herman, Pink Daily, Verdiflora (this is the *green* rose), Anna de Diesbach, Cardinal Patrizzi, Triomphe des Beaux Arts. MAJOR.

EUROPEAN CORRESPONDENCE.

RUSSIA, St. Petersburg, Feb. 23.—The Tribune of the 4th inst. notices the fine display of flowers in the rooms of the New York Horticultural Society on the day previous, in spite of the wintry storm outside, which may be something extraordinary for New York, but is nothing unusual here in St. Petersburg. The establishments for floral exhibitions here are very numerous, large and elegant, affording the choicest collections of flowering plants and cut flowers during the entire winter season, say from November until May. The display of Hyacinths, Tulips, Amaryllis, Lilies, and Crocus, is something remarkable, thousands of which are sold daily at from ten to fifty cents each. The chief attraction, however, is the modest Convallaria, with its most delightful fragrance. Here it is cultivated in enormous quantities in pots and boxes, plain and ornamental. Ordinary flower pots, with from ten to fifteen roots and as many flower stalks, are sold at from 50 cents to $1.00; ordinary little willow baskets 8x14 and six inches deep, filled with from forty to sixty roots covered with the graceful Lycopodium on the top, sell at from $2 to $4 each and as I have been informed, the daily sales of the Lily of the Valley (Convallaria), in this way, during the months of January and February, amount to from $2,500 to $3,500.

During January, February and March the Roses attract universal attention, chiefly the Tea and Bourbon. All the newest and latest varieties produced by the French, English and German raisers, can be found in the various floral establishments on exhibition and for sale in bushy and well grown specimens from 18 inches to three feet high, covered with healthy foliage and perfect flowers, ranging at prices from $1 to $3 per plant. The Azaleas make their appearance by the middle of January in large quantities; stocky specimens covered with a mass of flowers of great variety and brilliancy, bring from 50 cents to $3 each, plants from three to five years old. These and Camellias are purchased by the mass and are usually met with in every house during the winter months. Many rare greenhouse and stove plants are exhibited and sold in these establishments, especially Orchids and richly colored foliage plants, such as Marantas Aroideæ, Caladiums, Ficus, Palms and Conifers.

The show of cut flowers and bouquets is magnificent and the demand for them enormous. Rose buds sell at from 20 to 30 cents each; violets at 25 cents the dozen, etc. Bouquets, depending on the selection of the flowers, shape and size and general make-up, cost during January, February and March, from $3 to $100 each, and baskets, made up in the most artistic style, take often out of the pockets of the gallants the nice little sum of $250, to be thrown at the feet of some favored actress, princess or countess. During the operatic and theatrical season not less than half a million dollars are harvested by florists in this way. For balls, parties, decorative and funeral purposes, at least a million dollars are expended during the season.

The establishments exhibiting and selling fruit and vegetables are equally attractive and inviting; here can be seen during the winter months, tastefully arranged, every variety of fruit, such as pine-apples, hot-house grapes, oranges, pomegranates, pears, apples, peaches, cherries, strawberries, plums, etc., in great perfection and large quantities, selling, however, at high prices, on account of their being raised in hot-houses, with the exception of the oranges, pomegranates, pears and apples which are imported from Italy, Spain and France.

In the vegetable line, the variety is great and choice during the entire winter season, nearly all having been raised under glass and in forcing houses. In spite of the severe climate, the thermometer ranging throughout the winter between zero and 30 degrees below that frigid point, and despite the short days and the absence of sunshine, the wealthy can supply their table daily with string beans, cucumbers, radishes, lettuce, in fine, solid heads; spinach, cress, asparagus, tomatoes, potatoes fresh from the gardens, of course at high prices only. The ordinary supply of winter vegetables is also remarkably large and fine, and they sell at reasonable prices and consist of every known variety of cabbage, the finest turnips I ever saw in any country, onions, beets, cellery, both the English and German, carrots, artichokes, fair potatoes, etc.

The floral establishments and fruit stores are great institutions here in St. Petersburg, and surpass those in London, Paris, Vienna or Berlin. W. R. BERGHOLZ.

RURAL SPECIAL REPORTS.

ILLS., Baldwin, Randolph Co., March 13.—We had another snow storm on the 12th inst., followed by a cold night which will almost surely kill the fruit, as the buds were very far advanced and in some cases Peaches and Apricots had blossomed out. We have also had considerable rain, so that the ground is soaked with water, and the weeds are very bad. In low, flat land the wheat is nearly all water-killed while in some places the fly has entirely ruined it, so much so that it will hardly pay to let it stand until harvest. Where the land is well-drained, however, and was well plowed twice and well-prepared before the wheat was sown in the fall, the outlook is very good. So far the prospect for fruit has been good, and unless the present storm and freeze injures the buds, we will have a good crop The outlook now is that we will have a late spring, as it will take several days of warm, dry weather to make the ground suitable for plowing. Farmers are anxious to sow oats. N. J. S.

IOWA, Luni, Wright Co., March 10.—This country is fast becoming a corn and stock raising country. Improvements are going on very fast, and if it continues at the present rate it will soon lose all the romance of a new country, and the sooner the better. O. E. F.

KANSAS, Cedar Vale, Chautauqua Co., March 13.—Snow four inches deep; weather cold. Fruit prospects, bad. Wheat looks fine. Plowing about finished. Forty years' experience with cows has taught me that a cup of the first milk of the cow, after calving, put on the small of the back, just forward of where the hips unite with the back-bone, will remove the after-birth. I have never known it to fail. P. H. L.

MISSOURI, Springfield, Greene Co., March 10.—Our ice crop for this time is very thin—a failure. We have not had winter enough to drive the larks and robins South, or hush the sweet poetry of the cooing doves. Only one effort at a snow-storm during the whole season. On the night of the 12th ult., snow fell rapidly to a depth of six inches, but was melting next day and was soon gone. West of us, in Jasper Co., there was less, and at the Kansas line none at all. March is lovely thus far, sunshine and showers alternately bring forward the wheat and blue-grass. Plows are moving; oats are being sown, peas, beets, onions, potatoes, etc., are "falling in'o line" in the garden; fruit buds are all alive yet—Apricots, Hard-Shelled Almonds and the first Peach buds began to burst nearly a week ago—critical moment. May He who held off from us the Frost King all winter hold him still in spring till our fruit shall be safe! D. S. H.

NEW YORK, Fluvanna, Chautauqua Co., March 9.—Weather mild. Winter wheat looking fine. Hay plenty at $10. Corn, 30c; oats, 38c; beef, 5c. Potatoes are plenty at 40c; prime butter brings readily 27c@28c. Milch cows are a slow sale at from $30 to $40. Many poor grades can be bought at $25 to $30. Grass seeds are ruling high, $3.25 to $3 50 for timothy; clover, $5.50 to $6.00; orchard grass, $2. The ice crop though usually abundant, is very short, not one quarter of the usual supply has been gathered. We have had abundance of snow but little sleighing. There is a great tendency throughout the agricultural districts, especially in those sections more remote from the city, to shiftlessness or want of care of farming implements, fences, etc. Thousands of dollars are annually squandered by neglecting to house tools, vehicles, etc., properly. No farmer can patiently endure a first attempt to plow with the rusty implement which has remained in the furrow where he left it in November last. Nothing can possibly be gained, but much unduly squandered by this slipshod way of trying to obtain a renumerative return for the outlay of money and labor. A tidy farmer is as much to be commended as is a tidy housewife. The old adage that "a woman can throw out with a spoon as much as a man can throw in with a shovel," is all very well to heed, but what would we say if we saw the housewife set her sewing machine, which cost $35, out-of-doors when not in use; while it is a common thing to see the mowing machine, which cost double the amount or more, left for the year where last used, and not a word said. We censure the women too much and the men far too little. Many a farmer squanders more every year in rot and rust on his many implements, wagons and sleighs than would pay his taxes and leave a little to replace old and poor tools by new and improved machines.

Another item is worthy of mention, that of wood. How perfectly absurd to indulge in the luxury of green wood for constant use! Many a man who thinks himself a thrifty, prosperous farmer is willing to endure the annoyance and vexation of a hand-to-mouth custom in procuring wood. Dry wood prepared one year in advance, is better than bank stocks or four-per-cent, bonds. Dry wood and plenty of it, add much to domestic cheer. It is far more enjoyable than apples and cider. There is no labor expended during the short days of winter that pays as large a profit in dollars and cents—to say nothing of peace of mind and the joy and comfort of the housewife—as that preparing dry wood and properly housing it. H. A. W.

PENN., Bald Mount, Lackawana Co., March 15.—Weather warm for this time—scarcely any snow, plenty of rain and mud. Wheat went into winter-quarters in first-rate condition, but owing to the frequent freezing and thawing, it is badly killed. A larger area than usual was sown, but from present prospects the amount in bushels will be less than last year. Wheat now is worth $1.25; rye, 70c.; oats, 45c.; corn, 65c.; horses have advanced in price about 25 per cent., good farm horses are worth about $150; cows $30@45. D. W. R.

The Querist.

ANSWERS TO CORRESPONDENTS.

Stock Queries.

J. S. B., Lost Nation, Ia., asks, 1, how to treat a horse with lumps all over his hind-quarters from the back down to the hock joints; most of them are the size of a hen's egg; the animal seems to suffer whenever they are touched by the curry-comb or otherwise; they are worse in summer than at other seasons and have now lasted three years; 2, what will cure heaves in a horse; 3, what is good for a thick-winded horse; 4, what is ditto for sprains, swellings, sore shoulders, etc.; 5, where can he get the best and most comprehensive works on the horse, the cow, the hog, the sheep and on poultry.

ANS.—To gain the information he desires our knowledge-seeking friend should take a course in some agricultural college and finish off with a couple of terms in a veterinary school. 1. That horse, no doubt, is affected with farcy in a chronic form, and the lumps are "farcy buds." This disease is due to the same poison as glanders, seeking elimination through the skin instead of the mucous membrane lining the nose. It is an incurable disease *fatal* to man and other animals. In the absence of competent veterinary authority, we would advise that some *old, useless* horse should be inoculated with the pus from one of the tumors, and if the effect is carefully observed, it will be found—if our diagnosis is correct—that glanders will be the result, as a horse inoculated with farcy is likely to exhibit glanders, and often *vice versa*. Or, give the animal a laxative diet for a few days and follow with a purging ball—aloes five drachms, calomel half a drachm. After this depletive treatment glanders will be developed. When our diagnosis of the malady is confirmed, as the disease is highly contagious to man and horses, and as there is no known remedy for it in either case, the patient should be destroyed. His life may be prolonged a short time by the use of green food, but the risk of contagion is too great to be incurred by any man who regards his own welfare and that of his neighbors. 2. There is no recognized cure for heaves in horses; but the effect of the disease may be palliated by giving feed of good quality and small bulk namely, plenty of oats, ground corn and wheat bran and 25 pounds of hay per week. We have seen good results announced from the use of prairie hay or grass, and also from that of corn-stalks. 3. Much depends on the seat of the disease—whether in the nostrils or in the larynx or trachea. Locate the disease. 4. Sprains—first cold water, bandages or bathing; second, hot fomentation; third, blisters, and, above all, "rest." Swellings—ascertain the cause—perhaps an abscess—then poultice and when it points, a bold incision with a knife; or if the result of a sprain—see Sprain. Sore Shoulders—collar galls—bathe with tincture of arnica, opium or myrrh equal parts, and give rest until well. 5. Perhaps "The Farmers' Veterinary Adviser"—price $3—by Prof. Law, of Cornell University, Ithica, N. Y., is the best work on the horse, cattle, sheep and hogs, that we can advise, as it is thoroughly good, plain and comprehensive; then the annual reports of the Commissioner of Agriculture at Washington, D. C. Of works treating of special subjects the following are as good as any: For the cow, Armitage's Clatter's Cattle Doctor, price $6; for the hog, Coburn's Swine Husbandry, $1.75; for sheep, Stewart's Shepherd's Manual, $1.50; for poultry, Lewis's Practical Poultry Book, $1.50. All the above can be had through local booksellers, or from the American News Co. of this city.

How to Make Walks for Rural Grounds.

Mrs. J. E. M., Felicity, Ohio, asks for information as to the method and material for making cheap, durable walks for rural grounds.

ANS.—It is not always possible to make a *cheap*, and at the same time *durable*, walk; indeed, it is, not unfrequently, quite impossible. Much, however, depends upon the situation and the available material at hand. If much used, it is very desirable that the walk be dry and pleasant to the feet, and these ends can only be secured in one way. If the soil is light and porous, dig out the walk about six inches deep; if heavy or clayey, it should be

dng nearly or quite a foot. Get together heaps of small stones, broken rocks, etc., and all the *sifted* coal cinders that can be had. Cinders, or scoria, from the blacksmith's or a foundry are excellent, and may be had for the hauling. If it is possible to get plenty of these there will be no need to bother with the stones. If there should be a pottery in Felicity, (and what would Felicity be without one?) the proprietor will be glad to have you remove the heaps of broken material that are always in his way, and you will have secured one of the cheapest as well as best of materials for a good rural walk. With either one or all of the above materials you can make a durable one. The best as well as the *heaviest* walks and drives we ever made were constructed of the refuse of an iron mine—real road *metal*. Anything, in fact, which is hard and angular, will answer the purpose. A good road cannot be made of *round* stones.

Whatever material is used put the largest pieces at the bottom and the smallest on the top. The bottom of the walk should not be flat, but lowest at the sides; in other words, slightly arched. Having put a layer of material on the bottom, roll it down with a garden roller, if you have one, or in some other way make it solid. Then put on another layer a couple of inches thick, and repeat the rolling, and so on till the walk is finished. The top layer, or finish, should be of fine material, and of a color that is pleasing to the eye; above all things, do not use smooth, white pebbles. Some of the natural soil, mixed with a small quantity of sifted coal ashes and a good deal of sand (not coarse gravel), will usually make a good and agreeable surface for a walk of this kind. The surface finish should be about an inch thick, or just sufficient to cover the material beneath. Avoid the too common mistake of making the walk too high. The grass edge or border at the sides should be not less than an inch above the sides of the walk. Finish the surface with a very slight curve, or just enough to carry surface water to the sides. Walks that are rounded up too much, are not only unpleasant and disagreeable to walk upon, but decidedly hurtful, especially to young people and children. Unless the walks are in some parts steep, gutters will not be needed.

As soon as the surface has been laid, water it well with a watering pot having a "rose," and then pass the roller over it till it becomes firm; or it can be rolled partly now, and gone over again after the first rain. This rolling will develop some inequalities and depressions which must be carefully filled, and rolled again. Go over the work in this way, and continue to remedy the defects as they appear, till you can look at it at last with the eye of an artist, and say it is well done; and may all the ladies in Felicity do likewise. A statement of what material can be had and the nature of the soil would make it much more easy to answer such questions.

Sweet Potatoes vs. Corn for Hogs.

J. W. S., Owensboro, Ky., asks the relative value of sweet potatoes and corn for fattening hogs.

ANS.—We have seen but one analysis of sweet potatoes, and that by Dr. A. R. Ledoux, of the N. C. Experiment Station. The sweet potato has slightly less water than the Irish potato and also less albuminoids, but is richer in glucose or sugar. We give a table of the digestible constituents of the sweet potato, Irish potato, Indian corn and cotton-seed cake.

	Digestible Nutriments			Nutritive Ratio.	Comparative Value.
	Albuminoids.	Carbohydrates.	Fat.		
Sweet potato	1.5	23.5	0.5	18.6	0.28
Irish potato	2.1	21.1	0.2	10.6	0.29
Indian corn	7.3	38.4	3.6	10.2	1.04
Cotton-seed cake (decorticated)	31.0	33.3	13.3	1.6	2.05

This table gives a full understanding of the comparative value of both kinds of potatoes as compared with corn and cotton-seed cake. We give cotton-seed cake, because it appears that the sweet potato is deficient in albuminoids or muscle-forming matter, and cotton-seed is very rich in this element. And as the sweet potato and cotton-seed grow together, a little of the latter should be fed with the former to make a well-balanced food. The sweet potato has only one of albuminoids to 18 6-10 of carbohydrates or fat-forming food, whilst the Irish potato has one to 10 6-10, and corn about the same. Lean shotes of 100 or more pounds' weight may be fattened properly upon sweet potatoes, because they only need fat laid on to fit them for slaughter; but they have not muscle-forming matter enough to grow pigs properly; yet, if a small proportion of cotton-seed cake is given with sweet potatoes, the food is excellent for growing or fattening pigs. Four pounds of boiled cotton-seed or two pounds of decorticated cake, fed with one bushel of sweet potatoes, will make a well-balanced ration for hogs. It will be seen that 400 pounds of sweet potatoes are only about equal to 100 pounds of corn. But the sugar of sweet potatoes is a little more fattening than the same weight of starch in corn. Neither the potato nor corn is quite appropriate to grow young pigs without some more nitrogenous food mixed with it. The Cow-pea, at the South, is excellent to feed with the sweet potato, as it contains just what the potato lacks. Feeders should study how to mix foods of various qualities together, and not try to find a single food for general feeding, for no one food contains all the qualities to satisfy the wants of the animal.

Grafting Evergreens.

A Subscriber, Nashville, Ohio, asks how to graft evergreens.

ANS.—To graft evergreens under any circumstances is not easy. Out-of-doors it is especially hard on account of sudden changes of weather, etc. A covering of oil paper will help to protect the graft. In a small greenhouse or under a sash the operation is easier, although fraught with considerable difficulty even then. The difficulty does not lie so much in the mere operation of cutting and inserting the cion into the graft, as in the selection of proper stock and general care of the grafted plant until it has passed a certain critical period. The temperature must be kept warm and very even. A sash within a green-house is therefore often used.

In regard to selecting a suitable stock for the different varieties of evergreens, the following rule may be considered established. Use only such stocks as are closely allied by nature to the cion. In most cases, the stock should belong to the same sort. For instance, for such evergreens as the varieties of Norway Spruce, Hemlock, Arbor-vitæ, Juniper (Red Cedar), etc., the same Norway Spruce, Hemlock, etc., must be used as stocks. The two-leaved, three-leaved Pines and five-leaved Pines—whether White, Scotch or Mughus—must be used as stocks for varieties belonging to their respective divisions. There are, doubtless, seeming exceptions to this rule, as when we find the Retinosporas of Japan grafting readily and permanently on our Arbor-vitæs, but the Retinosporas would, we feel confident, be called Arbor-vitæs if they were American-born instead of Asiatic origin. In short, it would seem that the value of these affinities between plants in the relation of stock and cion is not sufficiently recognized in our botanical classification.

W. H., Adamsville—one of 14 in 14 States—asks, 1, are any fertilizing qualities lost by burning; 2, the best early tomato; 3, the best sweet corn; 4, the best incubator; 5, what degree of temperature is best adapted to the preservation of fruit; 6, will hens do well confined to a yard; 7, will cabbage thrive in wet land; 8, will Paris-green injure potato vines?

ANS.—1. Yes, nitrogen is lost by burning as well as phosphorus and sulphur in minute quantities; phosphorus, chlorine, sulphur, potassium, sodium, lime, magnesium, etc., are left as ash constituents. 2. There is no "best" early tomato. What is earliest with us may not be earliest with you. We have found the "Little Gem" the earliest. But it is a poor thing. Conqueror is considered an early tomato. Hathaway's Excelsior is early and good. Hubbard's Curled-leaf is also early and good. The leaves curl up as if the plant were suffering for water. 3. Triumph is early and excellent. Early Minnesota is esteemed by many market gardeners as at the present time the earliest and best—that is of very early varities. 4. Halstead's is as good as any we know of. 5. Just above freezing. 6. Yes, if given all the kinds of food they need; if the houses and runs be kept scrupulously clean; if not more than ten are confined in an area of 400 square feet. 7. No. Land, to grow fine cabbages must be well-drained. Much depends upon the season, but, as a rule, fine crops can be produced on any land whether muck, clay, sand, if well prepared and manured. But it must not be *wet*. 8. Yes; if used too strong. One pound of pure Green to 40 of flour or plaster—is about the right strength, though it has proved quite effectual when diluted very much more.

B. G. J., Decatur, Ill., wants to know how to prevent a hedge from sending up sprouts several feet from the original hedge-row.

ANS.—The best preventive is, not to use plants for hedges that have a tendency to "run," or send up sprouts from the roots. In this case the trouble may be overcome by digging a trench two feet from the row and two feet deep, to cut off the roots that run into the field. The trench need not be left open.

G. C., North Lindale, Ohio, asks, 1, how to destroy the potato "bug." 2, whether London Purple is as efficacious as Paris-green for that purpose.

ANS.—1. Paris-green and hand-picking have hitherto been found the best exterminators. 2. London Purple is said to be as efficacious as Paris-green. It has not been tried so extensively, however, but probably next season will decide the merits of this new bug destroyer.

T. H. B., Niles, O., asks the name of a dealer in second-hand books here.

ANS.—Andrew R. Leggat, 3 Beekman Street, is probably the most extensive dealer in such wares in the city.

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REMOVAL.

On and after May 1st of this year the Rural New-Yorker will occupy its new quarters, No. 34 Park Row, corner of Beekman Street.

Blacking the outside of horses' hoofs to make them shine and show well, is an injurious practice, for if done, as is usual, with a mixture of grease and lampblack, as soon as the horse is brought out on the road, dust begins to adhere to the hoofs, which are naturally porous, and thus stops the circulation of air in them, causing disease. The best treatment of the hoof is to keep it clean, and leave it to show its own natural color.

The nineteenth volume of the American Short-horn Herd Book it is expected will be ready for delivery in April. We are informed that this brings the register of thoroughbred bulls up to 37,500, and the cows to about 45,000, making altogether 82,500 head put on record since this work was commenced in 1846. Probably 15,000 or more of well-bred Short-horns, including those in Canada as well as in the United States, have been neglected to be put on record, thus materially lessening their value when offered for sale to those who care for a satisfactory pedigree with their animals. We have no doubt but 10,000,000 good Short-horn cattle have been imported into and bred in America since 1815, the most part of them during the past 45 years.

A New Oil Plant.—Recent English journals speak of a new oil plant (Lallementia liberica), from Persia, as having been acclimatized on the fields of the agricultural school at Cherson in southern Russia. It belongs to the Labiatæ family, and is very similar to Dracocephalum (Dragon's-head). The herb attains a hight of one and a half to two and a half feet, and bears some 2,500 seed grains, which give an extremely pure oil, applicable even for culinary purposes. Cherson is situated about 90 miles north of Odessa, in a temperate region where beech trees grow but not Chestnuts. The natural productions are grain, hemp and tobacco. It lies a little to the north of the line which marks the limit of profitable wine-growing.

Land and Home, a farm journal, whose genesis we announced but a few months ago, has failed. The reason assigned is "lack of capital." Land and Home from the outset secured some of the best writers of the country. It was conducted with surprising vigor. It was receiving many compliments and encouraging words from men who do not compliment idly. Prominent advertisers, even, were expressing their satisfaction with the "returns" from their announcements in Land and Home. Everything seemed to prosper. There was not the least sign of weakness. Land and Home deserved the hearty support of the agricultural community. And yet lack of appreciation, as well as "lack of money," must have had something to do with its early death. Well, Mr. Libby, its editor and proprietor, made a bold, brave push. He is young enough to push again, and we wish him better success in his next enterprise.

A Dutch Picture.—The English geographer, Clements Markham, in calling attention to one of the surprising changes which have occurred on the coast of Holland, draws a picture which is equally interesting from the agricultural and from the geographical points of view. The student of history reads of the great sea fight which King Edward III. fought with the French off Sluys in 1340; how, in those days, the merchant vessels came up to the walls of that flourishing seaport by every tide; and how, a century later, a Portugese fleet conveyed Isabella from Lisbon, and an English fleet brought Margaret of York from the Thames, to marry successive Dukes of Burgundy at the port of Sluys. In our time, if a modern traveler drives twelve miles out of Bruges across the Dutch frontier, he will find a small agricultural town surrounded by corn fields and meadows, and clumps of trees, whence the sea is not in sight from the top of the town-hall steeple. This is Sluys.

We are receiving many, many thanks from our subscribers for the seeds and plants of our present Distribution. All seemed pleased and we have had no complaints thus far, except that several have received two packages. We can assure our friends that we are as much pleased as they can be and really feel like thanking them for their hearty appreciation. Of what value soever our past plant and seed distributions may have been to the country, we feel justified in saying that our next Distribution (to be announced Sep't. 1st) will throw our previous efforts quite into the shade. Three kinds are already secured (unless crops should fail), and one of these three, from careful trials made during the past two years, bids fair to prove more valuable than any plant of its class as yet known to our farmers or gardeners. Meantime we hope our friends will carefully test the plants and seeds which we are now mailing them and that in due time they will tell us of gratifying results.

One of the most remarkable statements which we have seen respecting the potato is the following, which we clip from a late number of a respected contemporary:

"It is said by those who claim to know that the eyes near the base are the male, and those on the upper part the female, the number on each being in right proportion. If this be so, it is clear that every eye should be planted."

The eyes of a potato male and female! The same writer (Mr. C. E. Hewes) says: "Any farmer can tell how corn gets mixed—the process of mixing potatoes (tubers) is the same"(!) Again he says, "No one doubts that melons, cucumbers, squashes and pumpkins mix—the pollen being carried by the wind, &c."

The kernel of corn is the seed—the ovary in fact—and the effects of crossing are evident at or before maturity. Melons do mix, but only through the seed. Hence, the effects of crossing are never evident except in the fruit from the mixed seed. Mr. Howes takes for granted that any intercrossing between the flowers of different potatoes affects the tubers, and that in this way "hybrids" may and do occur. And yet this same writer regards the publication of "single experiments not only as impositions but outrages!"

The weather prophets are out strongly in favor of a late spring, and it is not improbable that at least in some parts of the country their predictions will prove true. All reports concur in showing that, light as has been the snowfall east of the Missouri Valley, the Rocky Mountains and adjacent plateaus are loaded with the heaviest snowfalls and ice masses that have burthened them for many years. The melting of these will send their cold water eastward, while the westerly winds that at this season usually sweep over the region will come east chilled by the cold they have been charged with on their passage, making a late and probably moist spring as far east as Minnesota and Iowa. On reaching the Mississippi Valley, however, these winds are likely to encounter the warm, moist breezes from the Gulf, and the consequent condensation is not unlikely to produce a mild, wet spring in the States along the upper Mississippi and Ohio Rivers. "Old Probabilities," however, has a habit of falsifying the boldest prognostications of our ordinary weather prophets, and it may be that he will show no more respect for the modest forecast of the Rural.

The telegraphic advices during the week from various parts of the Union show that an unusually heavy rain fall has occurred almost all over the interior of the country, being especially severe in the Ohio, Cumberland and Tennesee valleys. The fall of 1.67 inch of rain at Nashville, in eight hours, on Tuesday, is but a sample of the torrental downpour that has drenched vast areas. The prevailing winds nearly so far north as the lakes, have of late been from the south. These warm, water-charged currents from the Gulf, meeting the cold northwestern blasts of March, have been depositing their condensed stores superabundantly. The immediate effect of this downpour upon farming is generally hurtful. Flat, undrained lands are bogged; hillsides are leached or washed away; streams and rivers, here and there, flood the adjacent country to the injury or often loss of stock, fences and other movable property. Ultimately, however, the drenchings will doubtless prove to the farmer a blessing in disguise. The rainfall of winter and early spring is the basis of all forecasts of the subsequent harvest and this abundant water supply, filling all subterranean resevoirs, is a cheering indication of good crops, especially in the grain-growing regions, unless the young wheat has been already severely injured by other causes.

"FESTINA LENTE."

The ancient Romans had that queer old paradoxial proverb or apothegm, "Festina lente," "Make haste slowly." It is a good one, and its observance would save many a blunder. We have similar proverbs in our own language, as, for example, "Always in haste, but never in a hurry." This means, we take it, always prompt and active, but never flurried." Another of our similar expressions is "Think twice before you speak once," and another, "Haste makes waste," and still another, "Things done in haste are repented at leisure." These proverbs are on the whole eminently wise.

Take a few illustrations. An agent wants to sell you a device for taking up the "slack motion" in your mowing-machine pitman or gearing. Don't be in a hurry. If the patent is good for anything the men who make the mower will introduce it. Let some one else try it. Don't pay five dollars unless you are sure the device is all the glib-tongued agent represents it to be, and of this you cannot be sure without trying it—and finding yourself fooled.

The "head salesman" of some great seed store (he says) will give you a chance to be the sole proprietor for your township of the "Norway barley" or the "Scandinavian oats" or the "Bohemian rye." It sells at ten dollars a bushel, and the firm can't supply orders, and will only sell you one bushel on condition you will sign a written contract not to sell at less than that price, and to sell all your surplus, if any, after supplying your township, to this "firm" at seven dollars per bushel, etc., etc. "Festina lente." Our "head clerk" is too anxious to enrich you. His "firm" is too kind by half.

Or a stylish lightning-rod wagon with two "operators" stops at your house. They were directed to you as the most influential farmer in town (look out!) and are willing to put up rods on your very fine mansion and stables (look out!) at just one-third of their usual rates (look out!) for your influence (don't sell it). They are not permitted by their "firm" to take cash (look out!), but only notes payable one year from date (look out!!) and on your approval then of the rods. Now, then, look out! "Festina lente." *Don't sign* any note, or agreement, or inventory, or list, or paper of any kind for any stranger. It will turn up in a year or so in the hands of some other and innocent party quite a different thing from the one you thought you signed, or for a far larger amount, and you will have to pay it. On the other hand, don't *buy* any note from a stranger, even if signed by a man whose signature and solvency you know, without first seeing the signer of the note. Indeed, so common has this particular swindle become that some of our legislatures already have bills before them, or laws already passed, requiring one day's notice to the drawer of a note before its purchase by any second party.

In all such matters, "Festina lente." Don't be in a hurry to make money out of any one who is *anxious to have you* do it. Don't try to get two or ten dollars by paying one. As a rule money must be *earned*, not suddenly made out of some one else. Whenever any one, under any pretext, wants to give you an extra good bargain out of himself, don't let him do it. Don't bet on cards the other man handles. You will find to your cost that "the motion of the hand deceives the eye." Don't buy a $20 bill with a box of soap for a dollar, though you see with your own eyes that the soap-man inclosed it. You will find it was "not that box but another box." You will find that you are swindled out of a dollar instead of *swindling him* out of $19; for that was what you had hoped to do. You put yourself on his level as a swindler, and found him smarter than you. It is his business to be. You tried to overreach and were yourself overreached. You tried to get value without giving a fair equivalent, and found you *gave* value without getting an equivalent. And the verdict on victims of confidence games always is, "Served them right." For these confidence games would make little headway if there were no *dishonest* victims. Sometimes the victims are simply green, but usually it is avarice that leads them into the trap. Don't let it lead you. Don't even change a ten dollar bill for the gentlemanly strangers who feed their fine but tired team in your stable because they can't reach the next hotel, and insist on paying you for their dinner and horse feed. Better give the dinners outright than the nine dollars change *and* the dinners, too. Their ten dollar bills don't pass at bank, and these men never have any change about them. Don't take charge of any "found" pocket-book or valise, and try to find the owner. Don't touch any project by which you are perfectly sure you can (dishonestly) make a "nice thing" out of some one else. You will find the "nice thing" will be made out of you. And it ought to be. "They that *will be* rich fall into a snare." "Festina lente."

BREVITIES.

Many Mulberry trees are being propagated in the South, and there is much talk about the production of silk.

Those who have a desire to know how beautiful a tree the despised Osage Orange may become, when properly treated, should visit the grounds of Storrs, Harrison & Co., Painesville, Ohio.

Corn in the hill or drill—which? One plant every foot ought to do better than three or four plants struggling together in a hill. In the former method it is at least twice as much trouble to keep weeds from each plant as in the other. Is the difference in yield enough to pay for the difference in labor?

There is a new bug (Cicadula exitiosa) that promises to prove a great pest to our grain fields. Already in South Carolina it has perpetrated considerable damage. It is of a yellowish color, one-fifth of an inch long. The abdomen is black above and the wings are described as of a "milky white." No remedy is as yet suggested for its check or extermination. It is partial to wheat and oats.

Dr. Albert R. Ledoux, Director of the N. C. Experiment Station, has just resigned his position, and proposes to open in this city a laboratory devoted to all branches of analytical work, but more especially in the line of agricultural chemistry. We heartily wish the Doctor success in his new venture. Dr. Goessman, of Amherst, will probably succeed him as Director of the N. C. Experiment Station.

We find in some of our agricultural papers advertisements of both Queen of the Market" and Cuthbert Raspberries. Nothing is said in the editorial columns of those papers that they are the same, and their readers are left to purchase the same as if they were different varieties. Judge Parry, we must believe, is not *postive* as to their identity, else he would not advertise the Cuthbert under another name.

Black Suffolk Pigs. Here is a new English wrinkle. White Suffolk were formerly plentiful enough there, and many were imported years ago into the United States. We should like to know whether the Black Suffolk are not the same as Essex, for English breeders are in the habit of giving the county name to all pigs and sheep bred there, no matter if they thus characterize the same sort under a dozen different names

The third corn premium consisted of a Giant Feed Mill valued at $45 and contributed by J. A. Field, Son & Co., St. Louis, Mo. It was won by A. B. Dille of Edgarton, Kans., who sends the following acknowledgment:

Editors Rural New-Yorker:—The Big Giant Corn mill came safely to hand, and for it please accept my sincere thanks. I should have written sooner, but was on the eve of starting on a two weeks' trip. Very truly yours, A. B. Dille.
Edgarton, Kans.

The Rural New-Yorker has advocated cutting back evergreens, according to the injury the roots sustain in transplanting the same, as deciduous trees are cut back, though not to the same extent. A case has recently come to our notice in which two Red Cedars (Juniperus Virginiana) of goodly size were transplanted. One was cut back; that is, the top was so cut off so as to leave barely half the tree. The other was not cut back. The latter died the same season. The other is now a shapely, vigorous tree.

Mr. Horace T Beebe, of Ravenna, O., writes as follows: "I notice on the first page a cut of what purports to be the "Gregg" Raspberry. I regard the cut as almost a burlesque—the fruit of the Gregg is twice as large as represented. I inclose a cut of a bunch and will say that we raised last season berries as large as represented. I had a patch, my son and several others had other patches, and they were fully up to the cut inclosed." Many of our readers have objected to our original illustrations of small fruits for the same reason. The sketch inclosed by Mr. Beebe exaggerates its average size, we think, as much as ours diminished it. As a rule, the illustrations in small-fruit catalogues serve only to disappoint the purchasers.

A Hunting Horse Stud Book is now proposed in England, which will take the same rank there as the Trotting Horse Stud Book does in America. Race horses are too slight, and cannot carry the heavy weights of fox hunters, and leap high fences as those which are called three parts bred. But the latter being chiefly got by racers out of large, cold-blooded mares, often lack speed, wind and endurance enough to carry them to the end of the hunt. It is proposed to take the best of these, as we do our best trotters, and couple them together to form an exclusively hunting breed. Horses thus bred, when not found equal to a fox chase, are superior for the carriage and can be sold at high prices generally for that. But if they happen to be too coarse for this and the road, they can be used on the farm. Then there is no loss attending such breeding, as in race horses, for if one of the latter does not prove swift on the course, he is worth little for any other purpose.

For Women.

CONDUCTED BY MISS RAY CLARK.

MY MOTHER DIED TO-DAY.

JOSEPH A. FARRELL.

You ask what ails this heart of mine,
That I'm not gay and bright;
You ask me why I cannot sing
A little song to-night.
I'll tell you, friends, the reason why:
My soul's not light and gay,
Because a thing of bitter grief
Has taken place to-day.

You ask what ails this heart of mine.
That I'm so sad and drear;
You ask me why adown my cheek
There steals a sparkling tear.
I'll tell you, friends, I cannot drive
This mournfulness away,
Because a thing of bitter grief
Has taken place to-day.

You ask what ails this heart of mine,
That I gaze up on high
And sadly watch each gorgeous thing
In yonder starry sky.
I'll tell you friends, why I look up
At Heaven, so far away—
I seek to find an angel form
That left our home to-day.

You ask what ails this heart of mine,
That I, for pleasure born,
Should be to-night so very changed,
So wretched and forlorn.
You beg me sing for you a song,
And drive dull care away;
Excuse me, friends, I *cannot* sing—
My mother died to-day!

A CHAPTER ON CLEANING FLOORS.

A CLEAN kitchen floor, is a very nice thing in a family, and every house keeper aspires to a tidy floor, as a criterion of her skill. But some of the good ladies make a sad mistake in their praiseworthy efforts, and make work for themselves, as well as injure their floors, and keep them looking gray and dirty.

One day, I saw a young housewife, take her dish of soft soap, and spread it over her floor, which had been newly painted only a few weeks before; then down she went, on her knees, and commenced scrubbing with a brush and hand mop. Oh, how she did work! and how tired she looked! and how her back ached! I watched her till I could stand it no longer.

I said: "Don't you like your painted floor, the reason you are scrubbing the paint all off?"

"I want to keep it bright and clean; paint wears off too quick, it hardly pays to get it painted, any way."

"I should think not, at the rate you take it off. You just spoil your paint, and floor too."

"Why so; I don't understand what you mean?"

"Now, look here, there is nothing that will take off paint like soap, where your soap lies, your paint will all be off before a week. You should never use paint in that way. I supposed you were trying to get it off; there is no quicker way to do it."

"Well, I wish I had known it before; my husband says he never saw such poor paint."

"I expect the paint is good enough, it is the way you manage it. Now this room was all grained and varnished very nicely just before you came here, you could see your face in the doors, they were so bright. You ought to have kept it so for half a dozen years. Now see how it looks, half of the paint is rubbed off and not a bit of shine to be seen."

"Oh, grandmother! do you think I did it on purpose?"

"Bless you, child, no! You knew no better, so I thought I would tell you; you are ruining the looks of your neat kitchen, and also killing yourself all for nothing!"

She looked so sober, I was real sorry for her, and told her to take a long-handled mop, and wash her soap all off, and then I would show her how to mop her floor.

So I tucked up my dress and rinsed all the suds out of the pail and mop, and took some clear, hot water, and washed up the other half of the floor and then took some more clear water, and wiped it up dry. Well she had to own that the half I washed was ever so much cleaner than her part.

Afterward we sat down and talked about it; she was a real nice, little woman and did just as well, as she knew how, and spared neither strength or time to keep things neat and tidy. I expect there are plenty more young women, who waste their health, strength, soap and time, just as foolishly as she did.

If you have a painted floor, keep soap and soapsuds off of it for it spoils the brightness of the paint, makes it soft and then it peels off, leaving the floor looking worse, than if it had not been painted.

If your floor has not been painted, keep soap off of it, for it gives it a dirty, grimy look, and keeps growing worse all the time. Just take clean, hot water, put in a teaspoonful of spirits of ammonia into a three gallon pail of water, stir it, and with a clean, long-handled mop, rub the floor all over, then wipe it off with clean water. It will take a little while to get the gray out of the boards, but it will come out after a time, and you will find it far easier to keep your floor white and nice, than it was when cleaned with soap or suds.

Another thing, when you get your floor all washed, if you would ring your mop out of the clean water, and go around the room and wipe the drips all off the base boards, and take a part of the mop, and wipe out the crevices, you would save a great deal of hard work, and back-ache too.

"Oh, grandmother! I am so glad you have told me how to do it easier and better; I do want to be a nice housekeeper, and be economical, but it seems so hard, when one does not know how to do it; and, I get cross sometimes, about the dirt tracks that mark it all over. It is discouraging to have a floor all tracked up before it has time to dry. Don't you think so?"

"Yes, I know all about it; but it is nothing to what it would be, if the boots were hung away in the closet, and the feet that use them were laid under the green grass. There, don't feel bad; there are worse troubles than to have your clean floors tracked up, and fretting, never did any good to any one." GRANDMOTHER.

TERMS AND MATERIALS USED IN NEEDLE-WORK.

TABARET.—A stout satin-striped silk used for furniture.

TABBINET.—A name for poplin of rich character, the warp of silk, weft of wool. So called because the surface is "tabbied" or watered. Sometimes a pattern is introduced into it. It is chiefly used for window curtains and other upholstery purposes.

TABBY.—A coarse kind of taffeta, thick, glossy, and watered. In silk this kind of material would be called "moire."

TACKING.—(From the Italian *Attacare*).—A term in needlework to designate small stitches taken through two pieces of material at wide and regular intervals. It is most securely effected by working from left to right. Designed to keep the two portions of stuff in place preparatory to their being permanently sewn together.

TAILOR'S TWIST.—A coarse silk thread made of several together, wound on reels, of two ounces each. The numbers used by tailors run from one to eight. There are small reels containing a single thread of 12 yards, equivalent to one yard of 12 threads. By this plan dealers can keep a larger supply of shades at a smaller cost.

TAMIS.—A worsted cloth, expressly made for straining sauces, and sold at oil shops.

TAMBOUR COTTON, made up in skeins, is sold in half bundles of five pound each, and used by tailors for basting. It is to be had in balls also. The numbers are 12, 14, 16, 18, 20, 24, 30, 36, and 40.

TAMBOURS.—Sprigged and spotted needlework muslins, of widths from 27 inches to 36 inches, and in lengths of 12 yards. They are semi-transparent. The needle has a small hook. Tambours are sometimes embroidered with gold thread.

TAMBOUR STITCH (otherwise known as "Chain Stitch.')—The work executed in this stitch is a very old style of embroidery, of which fine specimens are to be seen. The modern method of working differs from the ancient; the latter style was to draw the thread through the material from the wrong side by means of a hook, and so looping it.

TAMMIES.—These stuffs, like buntings, are made of worsted; yet, unlike the latter, they are plain, highly glazed, and chiefly used for upholstery. They are a kind of Scotch camlet, and are otherwise called "durants." They are twilled, with single warps, are usually coarser than twilled bombazets. Their width varies from 12 inches to 36 inches, and are mostly used for women's petticoats.

TAPESTRY.—Embroidery with colored worsteds, silks, and sometimes enriched with gold thread; anciently worked by hand with a needle, and in later times by the loom.

TAPESTRY STITCH.—The ancient "Opus plumarium," otherwise called "feather stitch." They lie lengthwise close together, and overlap one another, two threads of the material being crossed in the length of the stuff, and one in the width.

TARLATAN.—A thin gauze-like muslin, much stiffened; so called from Tarare, in France, the chief center of the manufacture. It is much stiffened, and may be had in various colors. It is much used for evening dresses.

TARTARIUM.—A fine cloth made in Tartary, and is mentioned in the wardrobe accounts of Edward III., and often named amongst the expenses of tournaments.

TATTING.—This work (otherwise called *frivolite*) is done with fine crochet cotton, and by means of a small shuttle, and a strong pin, attached by a chain to a ring, which is worn on the left thumb, the shuttle being held in the right hand. The thread is passed round the extended fingers of the left hand, and brought again between the thumb and finger of the thumb and first finger, the shuttle slipped under the thread between the first and second fingers, drawn out quickly, being kept in a horizontal line with the left hand. While the thread is held stretched by the shuttle, the second finger of left hand should let the loop under it slip, thus securing the cotton; and when a number of stitches are finished, they should be drawn together closely and so form a loop, which latter are united one to the other by the little picots introduced to form the purl-edge, round each loop. These are made by twisting the cotton round the pin, and holding it while forming a stitch. These loops are joined by making the picot in the first loop, where the connection should be made, and on reaching the corresponding place in the second loop the worker must draw the thread through the first picot, and pass the shuttle through the loop just made.

WHIFFS FROM OILDOM.

TO MY mind there are no ornaments we can put in our homes quite as homelike and attractive as those furnished by mother nature; especially if the house is not overstocked.

A few years ago we added a wing to our house, for kitchen and woodshed. This was joined to the old house in such a position that two windows from the former sitting-room and a door from the former kitchen which was converted into a sitting-room—opened into the kitchen. We decided to make a dining-room of the old sitting-room, and had one window cut down and a door hung, but the other window, what should we do with that? The casing was left and boards fitted in where the sashes had been, then papered over, but that did not suit us, it looked patched.

One day when out riding over our hills, I spied clinging to the side of a huge rock, the loveliest moss; great scales of gray Mosaics, overlapping each other, with here and there patches of emerald, I soon secured all that was easily removed and carried my treasure home.

The first question that met me there was: "O, mamma, what are you going to do with that? Can't I have it to make a playhouse?" I must admit the answer to the first was rather indefinite as I had not decided what to use it for; but the last question received a decided negative.

Entering the dining-room soon after, that bare window place stared me in the face and immediately an inspiration seized me; that eye-sore should be made a thing of beauty.

Accordingly the first leisure was employed with glue, tacks and moss. We left a space in the centre about 14 by 18 inches, only covering it with brown paper for future adornment. The remainder was all covered with moss. The casing was covered with running pine and tree moss for a frame. The center was afterwards converted into a very pretty fruit medley, by taking the pictures from fruit cans cutting them out close to the fruit and arranging them in order, then adding varnish. To make the picture more complete we took one of the large shelf-like fungi which grow on old logs and trees, of which we had several, used as door rests. We nailed this, inverted just below the chromo (?) forming a bracket, according to Jessie Seabrights' recommendation. We also made some mottoes of moss, by cutting the letters out of pasteboard, the desired size, then glued the moss on and tacked them in place. For the dining-room we have, "Eat, Drink and be Thankful." (Considering thankful more appropriate for a christian family than merry.) Over the front door made in the same manner, is "welcome." In the the kitchen, "Whatsoever ye do, do it heartily"

CORNELIA E. J.

PLAYING VISIT.

WHO of us—women folk—have not happy recollections of our childhood playtimes, the happiest of which are not of playing hide and seek or Kitty, kitty corner, but of personating grown up people and visiting, keeping house, teaching school, or being a doctor, a gipsy, or a peddler? And what a charm lingers around the memory of the mother, sister, or teacher who entered into these very earnest make-believes, and so made us really happy.

Every day, and often many times a day, a soft little rap on door or chair or couch announces a demure little maiden of four with generally a doll, and always a parasol. Although a dozen steps will bring her to my door, she never ventures out in any sort of weather without that parasol.

She sits down and we talk about her imaginary large family and mine; about her journey to the city, the chickens and the kittens, the news and the neighbors. When she rises to go away she wishes me always to say, "What makes you in such a hurry?" to which she answers, "O, I must get dinner for the boys," or "I must wash my dishes" or "milk my cows." and adds politely, "I should be happy—I should like to have you come over," or "I should be obliged if you would come and see me." After visiting is somewhat "played out" we play school, and have little lessons in letters and manners and music, and about our curious bodies. Then she is my physician, and brings me leaves enough for the healing of a nation—almost, and again she is my own sweet, thoughtful daughter, or my man-of-all-work, Tom.

How marvelously a disagreeable child is transformed into a winning womanly visitor by being treated courteously as one! Must we infer that the disagreeableness is caused by the general lack of such treatment? Can any one allege reason why innocent children thrown into our midst, without even their own consent, should not be treated with the respect and forbearance given to strangers—that is, so far as compatible with their best training? So poor, weary mothers, cousins, sisters and aunts, puzzled to know what direction to turn the irrepressible activities around you, play with the children, calling them grown people, and see how suddenly they become tame and even interesting, while you get glimpses of the man or woman surely to be developed in them if they live, and begin to regret the precious childishness to be lost in the process. The dear little things are so accommodating that they will excuse you for going on with your work, if you only ask them to do so, and may be they will be neighborly and help you, or even be your servant, and do with a good will what would otherwise be a task. Very important lessons in good breeding, treatment of visitors, and behavior before company may be given in these plays by a judicious person. Probably you will have to beg off after a while or turn their attention to something else, for girls especially never seem to weary of this amusement if they find kindliness and a little imagination in it; and this *inexhaustibleness* is perhaps the greatest charm of playing with children as if they were grown folks. ZENA CLAYBORNE.

ABOUT WOMEN.

MRS. Elizabeth Comstock, of Michigan, the widely known Quaker missionary, has visited 115,000 prisoners, and of this number she finds that 105,000 were brought to prison through strong drink.

Miss Mary McHenry, of Philadelphia, has made a singular contribution to the Lincoln relics. On August 13, 1864, John Wilkes Booth was a guest at the McHenry House, Meadville, Pennsylvania, and with his diamond he made this inscription upon a window pane: "Abe Lincoln, departed this life August 13, 1864, by the effects of poison." Five separate lines were made of this, after the manner of tombstone lettering. A few days afterwards the proprietor of the hotel removed the pane from the window, and framing it along with the autograph of Booth, which he cut from the hotel register, sent it to Miss McHenry.

MRS. Elizabeth Thompson, of New York, has given $500 to the Auxiliary Sanitary Association of New Orleans.

THE Empress of Austria is in Ireland again this year. She is still the sensation in hunting, possessing great strength and endurance. She spends many hours in the saddle and rides fast.

Miss Kate Field, of New York, contemplates establishing a Woman's Co-operative Dress Association. A store is one of the features of the enterprise.

Literary Miscellany.

A SUMMER VACATION.

ONE summer I was looking forward with more than usual impatience for my annual seaside holiday. When I say that I was a medical man, with a very large but not lucrative practice in a town, where an epidemic had been raging for some months, the reader will quite understand my strong desire for change of air and scene.

In plain but homely phraseology I was knocked up; the strain upon my energies had been immense. On many nights I had no other sleep than occasional dozes in an arm chair.

But the insidious disease had been conquered at last; there had been no new cases for several days. still I chafed, for there seemed no chance of getting away for some weeks longer at least.

It was at this juncture that I received an unexpected visit from an old friend of mine. We had been medical students together, but I had lost sight of him for some time. He was a young fellow of great abilities, and passed his examination with flying colors; but unfortunately for him, he was without the means which were requisite to enable him to stand a chance of getting on in his profession.

So he was condemned to the hard work and scanty pay which fall to the lot of a doctor's assistant.

But even this occupation had failed, when, as I have just said, he made a call upon me. Knowing his abilities, and finding that he had had a large amount of experience, I lost no time in suggesting that he should take my place for a month or so, while I took the holiday of which I was so much in need.

He was well pleased of course, and as soon as the necessary arrangements were complete, I was on my way.

It was here that I always spent my seaside holiday—not because I thought it the most delightful watering-place, but because some one very dear to me happened to be living there.

This was no other than my old nurse, Mrs. Chamberlain. To me she had been all but a parent, for my mother dying in my infancy, I had been left wholly to her care, and it was only natural I should continue to feel for her the warmest attachment.

My father, too, was dead. I had no brothers or sisters—indeed, so far as I knew, I had not a single relative alive. I was unmarried, too—so in this somewhat forlorn condition it is not wonderful that my affections should still cling to my old nurse; and worried and worn out as I was, I hastened to her with the old childish instinct which used to prompt me to hurry to her side when anything ailed me.

My old nurse had, during her years of service managed to save a little money, and with this had taken and furnished a pleasant seaside residence called Malcombe Cottage, and by letting the chief apartments during the season made a comfortable addition to her income.

On former occasions the good old lady had always contrived to have her rooms vacant at the time of my visit, and I had been in the habit of living there just as if it had been my own home and she my mother.

The abruptness with which I made my appearance at this time had interfered with her arrangements in this respect, and on my arrival I found that the best bedroom had been let to a young lady, who had announced her intention of living quietly there for some months. She had elected to board with my nurse, who now found herself in a difficulty.

This I proposed to solve by taking up my quarters elsewhere. Mrs. Chamberlain had thought of this, but could not bring her mind to it at all; and a few hours before my arrival she had laid the whole of the facts before her fair lodger, whose name I was informed was Linwood.

The result was that Miss Linwood had stated that she should be sorry indeed to interfere with Mrs. Chamberlain's arrangements, and that she would be quite willing to allow the circumstance of my arrival to make no difference to her; she would board with my old nurse the same as usual, provided I had no objection.

Without knowing anything at all about Miss Linwood, I felt I had an objection—though under the circumstances it would have been ungracious of me to express it—I could not help regretting the presence of a third party. In my low and worried condition I wanted perfect quiet along with nurse.

But when I was introduced to Miss Linwood all my disinclination vanished, and instead, I congratulated myself upon the good fortune which had brought me into companionship with so charming a specimen of nature's fairest handiwork.

I divined at once, from her manner and general appearance, that she was far above me in social rank. There was something quite indescribable about her, which showed clearly enough that she could with perfect right lay claim to the much-abused title of lady. Her first greeting was so kind and gentle, that I at once felt at perfect ease in her society, and to accomplish this, is, to my thinking, the perfection of good breeding.

Miss Linwood was somewhere about the average hight, and she seemed almost painfully thin. In spite of this, however, her every movement was full of grace.

As for her face, that was simply the loveliest I had ever seen; but there was upon it the mark of a great sorrow — an expression which said, plainly enough to me, that she had passed through some very heavy trial, and that she was suffering.

I felt for her at the same moment sympathy and curiosity, and I took the earliest opportunity I could to question Mrs. Chamberlain about her.

To my disappointment I could elicit nothing of any consequence.

"She has had more than her share of trouble," said nurse, "and she is quite a lady—there is no doubt about that. But as for her reasons for coming here, I assure you I have never so much as had a hint on the subject, nor has she made a single reference to her former life. It is very seldom she receives a letter, and I do not believe she is acquainted with anyone in the place. I found, too, by her awkwardness in many little matters, that she had been accustomed to the services of a lady's-maid; and when I volunteered to be of what use I could to her in this respect, she quite overwhelmed me with thanks, but would not permit me to wait upon her until I really insisted upon doing so."

All this was very peculiar—not to say mysterious—and the little I heard, instead of satisfying my curiosity in any way, only stimulated it.

Many were the theories more or less ingenious that I invented to account for her presence here, but every one of them proved untenable.

I thought, naturally, at first that she had suffered some pecuniary reverses; yet this notion was disposed of in a rather singular manner.

It was impossible to share the same sitting-room, to take our meals together, and remain as strangers.

Nor did it seem to be in any way her desire to be exclusive, and on my part all I desired was to cultivate the acquaintanceship thus strangely formed.

One evening we happened to be speaking of music, and I expressed rather warmly my passion for it, even in any shape.

"I, too, am fond of music," she said, in a voice which in itself was the sweetest music I had ever listened to—"very fond. I have thought that I no longer felt an interest in it; but I find I was mistaken."

Evidently there was some allusion to the past, and I said no more.

The next day, on my return from a fishing excursion, I found that the sitting-room had received an addition in the shape of a pianoforte.

"Here is a little surprise, Dr. Broughton," she said, with her sly, sad smile. "I believe I shall once more be able to feel a pleasure in music, and so I have bought this pianoforte. Do you like the tone?"

Bought a pianoforte! and of the best quality, I could tell as soon as she touched the keys! Bought it, too, at the seaside! My idea about lack of money was dissipated at once.

Music always affects me deeply—keenly. She played a few bars of some soft, sad air—played with so much feeling that my eyes grew moist. She was a musician of no mean order.—To be continued.

THE BLIND PRINCE.

BY MARGARET B. HARVEY.

Once there was a young prince who had never seen. Long had he prayed that he might receive his sight, but for just as long a time his prayers had not been answered. Still were his eyes closed to all that is beautiful in nature and art; still were the faces of his beloved friends unbeheld.

Save this one blessing he had almost everything that could have made him happy. Never had he known a day's illness, so to his other afflictions he did not add the heavy burden of a tortured body; his courtly position meant a freedom from all the distresses of want; his bright intellect had been well cultivated and he had almost in perfection that never-failing resource of the blind, a passionate love for music, combined with a wonderful skill in execution, so the horrors of a vacant mind were not for him; all of his relatives, without exception, idolized him, so he never conceived of the awful loneliness of the unloved. But this one black shadow hung over him, threatening to poison everything with its blight.

He had prayed long for his sight, I have observed. Rather should I have said, groaned and wrestled for it, fiercely demanded it, even called into question his Maker's goodness in denying it. It was very hard for him to bear, no doubt, and very natural for him to mourn, but such grief as his had none of the sacredness of real prostration under the Lord's mighty hand. It was rather childish, impotent rage, and as such was likely to spoil every good already his.

It was late in the afternoon of a beautiful summer day. The prince sat in a little pavilion in the garden, drinking in all of loveliness possible for him. For, though the gorgeous Roses and fair Lilies, tossing in crimson profusion and swaying in snowy majesty, were hidden from him; though the silvery spray of the fountain, falling among enwreathing ferns and mosses, were invisible to his veiled eyes; though the graceful trees and trailing vines, with the enclosing wall beyond, were covered from his curtained sight; and though the illuminated skies and red and gold lights streaming from them, bathing all in a bright, sunset glow, were as naught—yet the heavy perfume of the flowers, the musical plash of the waters, the soft rustle of the branches, and the gentle kiss of the breezes were all real to him. And so, too, was their blessed influence, stealing upon him ere he was well aware. Healing to his heart they carried, for a strange feeling of sudden tenderness came over him.

"Oh," he mused. "I know that all is beautiful around me now. Could I be any more keenly alive to it if I saw it? My Father's will must be best. I shall leave it with Him to restore my sight as He sees fit. But why this great joy, this springing exultation? My soul is full of melody."

As he spoke, he rose, crossed the garden, and stepped through the low window into the little room in which he spent much of his time. Seating himself at the organ, he ran his fingers over the keys, hoping to find some expression for the sweetness ringing within him.

His past life rose before him, wrapped in a heavy, black pall. And as memory after memory, scene after scene, came back, his fingers, half involuntarily drew out low, crashing chords of rage and dread, followed then by low, minor wailings of despair. But the gladness still reigned in his heart, and thoughts of the scent of the flowers, the fall of the waters, the waving of the trees, and the sighing of the zephyrs, seemed to intensify it; and the sounds of mourning swiftly changed into the earnest, solemn breathings of a hopeful prayer, succeeded by a few faint notes of timid exultation, which, gathering confidence, increased in number and volume, soaring as a simple, happy hymn of praise, and suddenly bursting into a grand, swelling, reverberating anthem of jubilee.

The last was a prophecy, although the prince knew it not. The timid strain of exultation, and the simple hymn of praise would have been a fitting end of his playing. For, wonderfully and entirely satisfied with the harmonies which he had called forth, he turned, with a shade of weariness towards the window from which he had come.

Like a flash was his quick exclamation, "I can see!"

The twilight had been stealing on, as he sat at the organ, filling all the room with dark shadows. But, through the casement came to him the dim sight of the garden, tinged with the faint light of departing day.

"Oh!" he cried; "And this is what it is to see?" And he stepped out into the walk, the same, yet not the same, and made a hasty inspection of the garden, scanning the familiar, yet unfamiliar objects.

"And this is color! I have heard that Roses were red, Lilies white, and leaves green,—I wonder how men ever discerned difference enough to give them different names. And I did not expect to find the grove of evergreens and the pavilion so much alike. But the light, the sunshine,—perhaps my being denied them has made me over-estimate them, for certainly, I was prepared to find them very much brighter."

So he went on, every step he took, bringing him some fresh surprise. For, as his sight had come to him just at dark, he did not know what day was. So absorbed, so bewildered had he been by this sudden awakening, that he had completely forgotten the existence of every human creature. But, before the deepest shadows overtook him, his tutor joined him.

As the prince heard the step, he cried, "Oh, Godfrey, I can see!" Then he felt of the newcomer as he had done in the olden time, and scanned him from head to foot.

"Godfrey, I see you! yet how strange! Your hair and your face, and the flowers and the trees are all the same color,—yet I had heard differently."

"The same color!" exclaimed the tutor. "Oh, my prince, do you not know that it is almost night and that you are looking upon everything in the twilight?"

The prince recoiled and trembled as though he would have fallen. Godfrey supported him.

"Let us praise God that your sight is restored. Let all dear to you thank Him. You shall sleep through the night safely and in the morning see the sunshine"

They gathered around him, all those who loved him. And though he feared when darkness again fell over him, they cheered him in gentle, tender voices. And at last the sun rose for him upon a perfect, unclouded day.

All the mysteries of color were solved for him, in the deep azure of the sky, with its fleecy clouds, in the swaying tree-tops, in the velvety sward, in the glowing heart of the Rose, the seraph robe of the Lily. All the grace of form was comprehended by him, in the tossing cedars and wreathing ivy and spraying fountain. All the wonders of light and sunshine were spread before him, in the gold flooding the green and the opals quivering in the water. Best of all, in one glance, he knew, as he had never known before in years, those whom he loved. His hour of triumph had come.

And thus it may be with many of us. We struggle on in darkness and despair, until we are willing to leave all with our dear Father. Then will He breathe into our souls a sweet consciousness of His tender care, so that we must change the song of our life from its sorrowful tones to those of joy in His love; and before we are aware, we may catch faint intuitions of our coming glory and sing of it in strains borrowed from choirs angelic. Then, too, a sight of His ways and dealings may come to us, true indeed, but seemingly dim and distorted when half covered with darkness, such as that in which we have spent our lives. But after *our* night, the glorious sun of His immediate presence will rise for us. And, whether in deed or in memory, we shall pass again through familiar scenes, illuminated with this light, those things which appeared to us dull and confused will be seen to be their very selves, but bright, clear and beautiful. And it may be, too, with the dawning of that day, the masks will be stripped away from the faces and hearts of our beloved, and we shall be one with them forever.

HISTORICAL SNATCHES.

The United States Mint was established in 1793

Weights and measures were invented in 869 before Christ.

Policy of insurance in writing was first used at Florence, in 1569.

Gunpowder was invented in 1330, and cannon began to be used about the same time. They were first employed by the English at the battle of Cressy, in 1346.

Organs were invented and applied to religious devotion in churches in 758. They were brought from the Greek empire to Europe.

Soap was first manufactured at London and Bristol in 1524.

Blankets were first manufactured in England in 1340.

Japan was discovered in 1542, and visited by the English in 1612.

Gas was first used in London for lighting shops and streets in 1814; introduced in the United States, at Baltimore in 1821.

Cape Horn was first sailed around in 1516.

Gipsies left Egypt when attacked by the Turks in 1515, and wandered over a greater part of Europe.

Cæsar was assassinated 43 years before the Christian era.

Distaff spinning was first introduced into England by Bonavera, an Italian, in 1505.

LaFayette was 19 when he came from France to assist the Americans.

BRIC-A-BRAC.

SIGNS OF THE SEASON.

When the wind blows east alway,
And the roads like rink-floors ring,
And you cough and sneeze all day,
Then men say it 's "merry Spring!"

When the rain pours day and night,
Skies look glum, and faces glummer,
And hay-fever 's at its hight,
Then, of course, it's "glorious Summer!"

When sole change from catching colds
Is in wondering how you caught 'em,
And grey mist the land enfolds,
They you know it's "genial Autumn!"

When cold water takes two shapes,
Drenching *douche* and icy splinter,
And the world 's all coats and capes,
Then be sure it 's jolly Winter!"

"There was a young man with a shaddock,
Who met a young maid with a haddock.
He thought, 'How I wish
She would give me that fish,
In legal exchange for my shaddock!'

"The maiden who did not like haddock,
Thought, 'Oh, what a beautiful shaddock!
If I were not so shy,
I should certainly try
If he'd give me that fruit for my haddock.'

"He went on his way with his shaddock;
She went on her way with her haddock;
And so cruel is fate
That until 't was too late,
Neither of them heard
That, by speaking the word,
He might just as well have had haddock,
And *she* might as well have had shaddock!"

Turning the tables.—Some few years since, in the county of Penobscot in the United States, there lived a man by the name of H——, whose greatest pleasure was in tormenting others. His own family were generally the butts of his sport. One bold and blustering night he retired to bed at an early hour, his wife being absent at a neighbor's. Some time after, she, on returning, finding the door closed, demanded admittance. "Who are you?" cried Mr. H——. "You know who I am! Let me in—it's very cold!" "Begone you strolling vagabond! I want nothing of you here!" "But I must come in!" "What is your name?" "You know my name it is Mrs. H——!" "Begone! Mrs. H——is a very likely woman—she never keeps such late hours as this!" "If you don't let me in," replied Mrs. H——, "I will drown myself in the well!" "Do, if you please," he replied. She then took a log and plunged it into the well, and returned to the side of the door. Mr. H——, hearing the noise, rushed from the house to save, as he supposed, his drowning wife. She at the same time slipped in and closed the door after her. Mr. H——, almost nude, in turn demanded admittance. "Who are you?" she demanded. "You know who I am. Let me in, or I shall freeze!" "Begone you great rogue! I want nothing of you here!" "But I must come in!" "What is your name?" "You know my name. It is Mr. H——!" "Mr. H——is a very likely man—he don't keep such late hours!" Suffice it to say, she after keeping him in the cold until she was satisfied, opened the door and let him in.

I think of thee, sweet William,
And I long to hear from you;
Send me a missive, won't you, please,
Oh, come now, *billet-doux*.

A Backsliding Cat.—A first-rate cat story has come to our notice from an entirely authentic source. The scene is laid in the village of Yarmouth. An aged gentleman and his housekeeper constitute the family, and their good old cat finds the lines are fallen to her in pleasant places. Family prayers are the rule each evening in this household, and the cat fell into the habit of regular and punctual attendance. No other of the cares that proverbially crowd a cat's life was ever allowed to interfere with this religious duty. At the signal for prayers she would even leave a mouse half caught, or give a doomed bird a longer lease of existence, and decorously compose herself in the lap of the housekeeper, with an air of attention to the service that was highly edifying. At the final "Amen" she went friskily about her business. But in an evil day there came a kitten that was deemed superfluous, and sentence of death was passed upon it. The head of the family undertook the execution of the sentence, and, unknown to him, the cat was a witness of the scene. From that day the cat refused to attend the morning service, and cannot now be induced to listen to the prayers of one who had so shocked her sensibilities. She faithfully performs all other duties as before, and socially purrs for the family on all secular occasions, but seems to say: "Let my religious hours alone."—*Portland Trans.*

Sabbath Reading.

A SONG OF HOPE.

FROM THE GERMAN OF OVERBACH.

Why are tears so many
In this world of ours?
Why are sighs so heavy,
Making long the hours.

Nay, then, Christian brother,
Will you still rebel?
Bear the trouble under;
All will still be well.

Up, and shout with spirit;
God's eyes are not dim,
And His children's sorrows
All are known to Him.

He delights to gladden—
Sing His praises out—
With His own hands strewing
Blessings round about.

Only this weak nature
Bears not much of mirth,
So He sends some canker
In the joys of earth.

Till in death we slumber
And return to dust,
All the gifts He sends us
Are but lent in trust.

Make not such commotion
For the things of time,
There are treasures yonder
Waiting to be thine.

Are we not from slumber
Waked from morn to light?
So our life-long trouble
Lasteth but a night.

Night will soon be over,
Day comes on apace;
Ere we can believe it,
We have run our race.

Let us, then, be patient,
Schooling each our soul;
Waiting till the day break
And we reach our goal.

Then will all be over;
Then we shall be free,
Singing songs of triumph
Through eternity. A. C.

We men and women, moving in the common ways of the world, are yet deriving our life from, and in spirit dwelling with, One at the Father's right hand. From that "sitting with Him in the heavenlies," comes all the strength and gladness of our lives. By his unseen grace our nature is nourished; from his fulness our hearts are satisfied. Such communion is understood, even from the common affections of life.

"Underneath thee are the everlasting arms," We have not to wait for Divine succor in the hour of need. It is already there. When we are about to sink, it is by anticipation, "underneath" us. "God is our refuge and strength; a very present help in trouble."

This world, with all its wealth and splendor, hangs but a golden drop in the immensities of God—in the illimitable immensities that open before the soul.

Good prayers never come creeping home. I am sure I shall receive either what I ask or what I should ask.—Bishop Hall.

Miscellaneous.

THE RILEY CONTROVERSY.

To the Editor of the Rural New-Yorker:—Sir:—The impartial reader will weigh the evidence in my reply, already published, with the specious testimony in your issue for March 6th. I care not to be drawn into controversies with persons who can either know nothing of the facts, or find it politic to forget anything that bears evidence in my favor; or to their interest to construe at their master's beck conversations to suit him. If Mr. LaDow is not an indifferent reporter, he *knows* that his purported reports are "incomplete, garbled and misleading" to my injury, and that my general statement of them correctly gives their substance. As to the gratuitous opinions of one who so servilely lends himself to misrepresentation, they are beneath my notice. Having no desire to extend this controversy "without limit," I simply beg you, in conclusion—both to dissipate a suspicion in my own mind that you are making Commissioner LeDuc's case your own, and to justify some statements which I had verbally made in regard to my reply before it appeared—to bear witness, by their publication, to the following facts:

1st, That you suppressed the (for me) most important part of the evidence in relation to Mr. Carman, Chief Clerk of the Department, which I twice sent to you; 2d, that while announcing that you regretfully surrendered so much space to my reply, you declined to omit six different passages and letters which I crossed off in the "proofs" with a view of keeping, as far as possible, other persons out of the controversy; 3d, that all these passages were on page 125, *i. e.*, in the "form" that last goes to press, and that it could not have been too late to make the changes, because the proof was returned by Friday of the week previous to publication, and corrections were made on page 128 in the form which first goes to press. Respectfully,

Washington, D. C., March 6, 1880. C. V. Riley.

[We are sorry Professor Riley entertains a suspicion that we are making Commissioner Le Duc's case our own. We published Mr. E. A. Carman's letter of modification, as requested. We did *not* publish Prof. Riley's explanation of that letter, for the reason that it reached us too late. Nevertheless, the suppressed letter which Prof. Riley

deems a most important part of his evidence, is now presented.

2d. Prof. Riley requested us to forward the printed "proofs" of his reply to him for correction. We did so. These proofs were returned to us with so many parts crossed out and so many additions that the alterations could not be made without upsetting our pages and delaying our usual time of going to press, for although the proofs were mailed in Washington on Friday, they did not reach us until Saturday, on which day a part of the paper went to press. If Prof. Riley were really desirous of keeping certain persons out of the controversy, why did he put them in? It is not fair that we should be held responsible for the after-thoughts of those who send us matter to be published. It was our wish, however, to have made all the alterations indicated—a wish we urgently expressed to our foreman. His reply was that the alterations involved a half-day's work and that they could not be made if the "forms" were to go to press at the usual time.

The Commissioner has asked for neither proofs nor corrections, and we cannot imagine upon what grounds Prof. Riley is suspicious that we have made this case our own.

Professor Riley says that he does not care to be drawn into controversies with persons who can "find it politic to forget anything that bears evidence" in his favor.

It seems that he himself has forgotten the letter he wrote to the Editor of the RURAL NEW-YORKER requesting the expression of an opinion as to his fitness, etc. We have produced the proof. We have offered additional proof. And yet he still forgets. He now states that he deems it of very little consequence whether he did or not. But in this we beg to differ. It was one of the distinct charges we brought against him, and it was as distinctly denied by him. If Professor Riley has really forgotten that he wrote such a letter, we have only to say that he should be tolerant of others' forgetfulness.—EDS.]

The Missing Letter.

THE following was addressed to Mr. E. A. Carman, Jan. 30th, by Prof. Riley:

In a published card addressed to Hon. W. G. Le Duc you make certain statements regarding my resignation.

With a view of refreshing your memory as to the facts, I beg you to glance over the inclosed copy of my own statement thereof, and to answer plainly the three following questions:

1. Is not my statement correct?
2. Did I ever express to you a desire, or did any one else ever state to you, on my authority, that I desired to be reinstated?
3. Was not my conversation last December in New York to the effect that had you been more earnest in disabusing the Commissioner of his error, my resignation might have been prevented; in short, was it not in reference to your action prior to, and not after, said resignation?

Upon refreshing his memory, he gave me the following answers in writing:

To the second question: "No."

To the third question: "From further explanations given, and circumstances recalled, I am led to believe that it was."

In conversation Mr. Carman has shown a natural unwillingness to correct his previous statement, which he admits he has hastily made, and without any idea of its being published. He gave me the above answers with the reservation to explain the whole matter more fully, and has preferred to do so directly to you. [See letter from E. A. Carman in RURAL of Feb. 21, page 125.—EDS.]

I simply reaffirm that Mr. Carman, whose kindness I otherwise fully appreciate, has, in this matter, done me wrong in his first mis-statement, and that the facts are just as I have narrated them.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE SERVING OF REFRESHMENTS AT WEDDINGS, PARTIES, ETC.

"CONSULTRIX."

DEAR HOUSEHOLD:—I have from week to week taken great interest in your department, and have each time thought of some item I could contribute; but family cares have absorbed so much time and attention that I, perhaps like hundreds of others, have let time pass and have feasted weekly upon the labors of others. Having recently had the pleasure of visiting country people, some of them wealthy and all well-to-do, my thoughts have crowded upon me in this wise: Country people—and where is there a better class to visit?—do a great deal of work, and much of it is unnecessary. For instance, when they have weddings, parties or social gatherings of any kind, they think they must follow the old custom of setting a long table and of serving every one in the regular way. If the dining-room be too small for the company to sit down all at once, there must be two or three tables set, as the case may require; those who do this work are frequently overworked, and it spoils all enjoyment, so far as they are concerned. In reality, the hostess should be the one to assist in entertaining, and should be able to enjoy the society of her own guests. People that have ever lived in the country know that the lady of the house is expected to have full charge of the culinary department, no matter how much help she has; hence we see how hard this custom bears upon the farmer's wife.

Now my remedy:—I once knew a family living in the suburbs of a capital city, who had a number of small, plain tables made, which were kept for guest tables when they had a gathering of any kind (heavy dinners excepted). The company were served with refreshments on these little tables. Now, why cannot a number of farmers in one neighborhood own as many of these as they should ever want, each paying a trifle to an ordinary carpenter to make them, and let the one having the most house-room take care of them. The family I have mentioned put them over-head in the wagon-house. Beside saving work it is such a pleasant, social way; the formality of the great table disappears and the guests can sit down by twos and trees as best suits, and be served; in summer under the trees is a nice place, and in winter, all about the different rooms. This is much easier than any of the old ways, one of which is to try to hold a cup and plate on your lap, succeeding in eating a little, and spilling a portion of your coffee on your clothes.

These tables can be covered with towels, napkins or anything handy, and the serving can be done the same as at a picnic. Another convenient way is to have all food prepared and set upon the dining-room table, along with piles of dishes sufficient for the guests. Then each one can help him or herself, or the gentlemen can help the ladies, one servant being sufficient to pour tea and coffee as desired. I have attended large parties where but one servant was seen, although there were several in the house. I have no doubt that a goodly number who may read this article will think it foolish to waste paper upon a subject which all ought to know already; but I was once young and inexperienced and also had a season of living in the country, and at that time I would have been glad to have learned a few of the things herein contained. If there shall be one person benefited, I shall feel that my time is not lost.

SCRAPS.

MARY BEAL M'LOUTH.

I WAS sorry to see in a late RURAL, directions for scattering swellings, boils etc. Although I know some good practising physicians who recommend iodine, calomel, etc., for swellings, yet I never would use them, having so many times seen the ill effects. Let us reason. A swelling indicates impure blood. If red, there is inflammation, and necessarily fever. Nature is taking this course to rid itself of poison which is in the blood. And to put on a preparation to dry up this, or send the poison over the system, is only prolonging the trouble. Two physicians have advised me to use iodine for goitre, or swelled neck. I was afraid, and let it alone. Since then I have known two deaths from its use. The iodine reduced the goitre, but the persons were prostrated on beds of sickness and were kept there until they ceased taking medicine, or until the neck was allowed to swell again. After a time they commenced iodine again and death ensued. Again, in several cases a white powder, which proved to be calomel, was used to kill erysipelas: after every dose the patients were taken with cramps in the stomach, which continued until the swelling was poulticed, and once ended in death. The verdict of the people was. "I believe he would have lived had they kept off the calomel." A poultice made of bread and milk or flax-seed, is good for allaying out the inflammation, but continue to keep moist as long as the swelling discharges, or shows any signs of fever. A dose or two of castor oil would assist nature in cleansing the system. For goitre, I would recommend wearing gold or silver beads. A weight over the spot seems to keep it in check.

To renew old bread for tea: During the forenoon, steam a whole loaf half or three-quarters of an hour, and then wrap until needed, in several thicknesses of cloth.

To paper whitewashed walls: Wash the wall in hot vinegar the day before. If very old I would scrape off, first, what loose lime I could. This is not quite as tedious as making paste to cover the wall, and the paper will stick as well as though the wall had never been white-washed.

CANNING FRUIT AND TOMATOES.

IN reply to the request of your correspondent on the canning of tomatoes, I will say that I have used only glass jars for canning fruit for many years previous to last year, at which time I used a few peach and oyster cans which had been washed out and dried immediately after emptying, and kept in a clean place. This was done at the suggestion of a friend who told me that she had used such cans for years with perfect success. Not a can was spoiled, but in one kind of new glass jars there was a coat of mold, which very much injures the flavor of fruit for me, although some others think not. This I attributed to the kind of jar, but tried the same jars this year and found the fruit—tomatoes—perfect. I cook my fruit carefully and usually put in just the sugar which will be needed when eaten. For years I supposed my good success was owing to the seasoning, but I now think, after making fruit air-tight, that the jars should be kept in a cool as well as a *dark* place. As for the different kinds of glass jars, I have many patents, and think they will all keep fruit well, if made air-tight and kept cool. Mine have not always been kept in the dark—I speak of this more particularly, because I feel the importance of investigating and finding out, if possible, the true cause of failure in the putting up of fruit. I cannot tell why Mrs. Fisher's tomatoes became sour, but should attribute it to anything but a well-sealed glass jar. They may have been too warm—probably were. Bits of decayed tomato will cause the fruit not to keep well although air-tight. I know of several persons who lost their fruit last fall, as they supposed, by putting in bits of decayed pieces. And yet, while not as good, they might possibly have been saved, if they had been put in a cool cellar as soon as canned. My experience is that if fruit will keep "six weeks" in warm weather it will keep always, and be the better—much the better for its age.

To make darkness sure and keep out Jack Frost, who prowls around in a sly manner in our Minnesota homes at this season, I put fruit jars in boxes and cover them with saw-dust, and I have yet to take out the first jar that is spoiled. AUNT FLORA.

APRONS.

An apron is a little thing in itself, but it is a great thing in our need for it—an absolute necessity whenever there is work to be done. And just because it is made to be worked in and cannot on that account be disassociated from labor, I would have women lay them off when their work is done—I know dozens of women who are never without one on. Must we wear this badge of a toil that, though unceasing in its daily round, may admit of pleasurable intermissions. *Must* we wear it whenever we go out to call upon a neighbor, or to visit a sick friend? If not, why *will* we do it?

A little girl who was getting ready to attend an afternoon party came in tears to her mother:

"O, ma, I can't go; my apron is all mussed up."

"Well, child, go without it. You will not need it, I am sure."

"O, yes, I will, ma, for I've tored my dress." *That* apron, at least, had an excuse for appearing in company. ADELINE E. STORY.

DOMESTIC RECIPES.

To Preserve Citron for Cake, etc.

IN answer to your correspondent, I give the following method for preserving home-grown citron for puddings, cakes and pies: Allow three pounds of sugar to 14 pounds of citron. Put the sugar into a preserving kettle with two quarts of water, boil and skim. Cut the fruit into pieces of convenient size, put in only as much of the citron as the sirup will cover, cook until you can pierce the pieces with a straw, then place upon plates to dry. In this way cook all of the pieces. Should there be any sirup left, boil it until very thick and pour a little over each plate. A small bag of whole cloves and cinnamon may be boiled with the sirup if one likes the flavor of these spices. Pack in jars with powdered sugar sprinkled between each layer. H. WEST.

To Color Butter with Carrots.

To color five pounds of butter, grate off the deepest-colored portion of a clean, good-sized carrot, pour over a teacup of warm water, let stand fifteen or twenty minutes, then strain through a cloth and add to the cream just before churning.

Carrot Coffee.

Select the smoothest carrots, wash clean, cut into small pieces and dry slowly until thoroughly dry. Then brown delicately and it is ready to use without grinding.

MRS. A. E. L.

To Color Nankeen.

Procure some ground bark at the tannery, put into a brass kettle, add water and let soak over night. In the morning boil up and put in your cloth, previously wet in alum water. Boil half an hour or longer. The adding of a little lye will make the goods darker. L. M.

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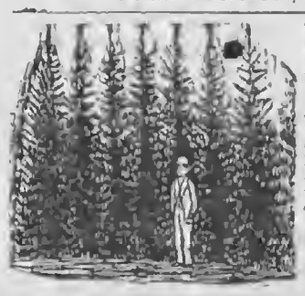
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HALE BROS., So. Glastonbury, Ct.

News of the Week

MISCELLANEOUS.

Monday, March 27, 1880.

Prospectors and settlers are already overrunning the Ute reservation in Colorado ahead of the formal placing of the territory in the market, and Secretary Schurz sends out word that no claims made under these circumstances will be respected by the Interior Department. The President is expected to issue a proclamation on the subject, if the encroachments continue. Reports already come from the region in question of the massacre of trespassing miners by the Indians. Trouble is also anticipated up in Montana, because of a treaty just made between the Crows and Sioux. ..... Vanderbilt's restoration of 10 per cent. to the salaries of the employes on the "family roads," adds $500,000 to the annual expenses of those lines. The Pennsylvania company is about to restore prices to their old standard.... .....

The country received in the first two months of 1880 three times as many immigrants as the first two months in 1879. Nearly twice as much iron is being made now as in 1879. Railroad building is going on from half to twice as fast as last year. Week by week the imports are from 30 to 40 per cent greater than last year. The exports are little, if any larger....A bill for the reduction of fares on the New York elevated railroads to five cents at all hours, passed the Assembly but was killed in the Senate, at Albany....About 4000 New York piano makers have been locked out because Steinway & Sons' 700 striking employes refuse to accept the terms offered them...

An awful boiler explosion took place in a flax mill belonging to Lenman, Rosenthal & Co, at Frankfort, Ind., on the morning of the 11th inst. Ten men who happened to be assembled in the engine-room were instantly killed and the building completely demolished. One body was thrown 150 feet. Cause: old and imperfect boiler. . . Dennis Kearney's defiance of law and decency has come to a crisis, and it is to be hoped that it is the beginning of the end. He was arrested while eating his breakfast a few days ago, on two distinct charges, viz.; for using foul language, which is a violation of a city ordinance, and for threatening to kill a person, both of which offences were made in a speech on the sand lots the evening before. The offender was brought before a judge the following day and sentenced to six months' imprisonment in the House of Correction and a fine of $.. 000. The general feeling among those who have noticed the doings of this reckless blasphemer is that he has received justice and nothing more. The fact that he has committed the same offence a thousand times without receiving punishment does not argue that he should be allowed to continue his outrages unmolested.

AGRICULTURAL NEWS.

Philadelphia turns out daily from 8,000 to 10,000 of oleomargarine.....At the county agricultural shows held in Illinois during 1879, the entries were as follows: Short-horns, 1,961; Jerseys, 324; Devons, 251; Holsteins, 137; Ayrshires, 122, and Herefords, 104. These figures may be taken as indicative of the comparative interest taken in each breed in that State.....A cablegram of the 17th says that in consequence of unfavorable weather in Egypt a large area of cotton land must be resown and the crop will be late..... On same date it is told that the winter sowings of wheat in Russia have suffered greatly from frost .....Mr. William H. Vanderbilt has purchased fifteen hundred acres of land at Oakdale, N. Y., on which he proposes establishing an extensive stock farm....A telegram from the Los Pinos Agency, dated March 14, says that a number of parties have already staked placer claims and taken up ranches on the Ute reservation, and that the next two weeks will see the reservation swarming with trespassers and a conflict is inevitable. The agent requests that traps be ordered to the reservation to protect the Utes..... ....Mr. Conover has introduced a bill into Congress to appoint a scientific Commission of three chemists and two microscopists to establish legal tests for butter and oleomargarine.....Constant arrests of oleomargarine swindlers are being made here, in Philadelphia and in several other cities, but convictions are difficult on account of the difficulty in proving the stuff oleomargarine, and from the strong "backing" given the retail swindlers by the wholesale dealers.....Gen Le Duc, in answer to an inquiry gives the average of wheat in Nebraska last year at 11.2 bushels, and of corn at 45 bushels per acre; and of wheat in Kansas at 11, and corn 33 bushels per acre.... The Texas cattle drive for 1880 is expected to exceed that of 1879 by at least 75,000. Three-fourths of the cattle coming North are expected to concentrate about Dodge City, Kansas.....The cattle dealers of Victoria, Texas, who virtually regulate prices in nearly all that State, have fixed the prices at present at:—yearlings, $6; two-year-olds, $10 to $12; three-year-olds, $17@18. These are the highest figures for years, and it is doubtful whether they can be maintained.....All the cattle were saved from the Guion steamer Montana totally wrecked near Hollyhead, Wales, on the 12th inst.....Both Ga., and Tenn., had extremely heavy rains of late. A telegram from Atlanta on the 15 says the streams were nearly all overflowed, doing much damage to crops. In Tenn 12.35 inches of rain fell out of a yearly average of 52 inches. The Tennessee and Cumberland Rivers were higher at above date than at any time since 1847, causing much loss to stock and crops.....Mississippi raised most cotton last year, Texas came next, 75,000 bales behind, but Texas bales are usually considerably larger than those put up elsewhere.....Very heavy snows on the Pacific Coast.....Epizootic has broken out among the horses at Washington..... Maine is to introduce 2,000 migratory quail this spring .....France has 1,574 beet sugar factories. .....A glucose manufacturing Co. has been started at Atlantic, Ia.; capital, $150,000..... The Sandwich Islands exported last year about 46,000,000 pounds of sugar.....The Cuba sugar crop is reported to be about 40 per cent. smaller than last year ...Oregon has offered $100 for the best acre of sugar beets and $50 for the second best. ..Representative Anderson, of Kansas, has introduced into Congress a bill appropriating $50,000 for exhibitions at agricultural fairs of the process of making sugar from sorghum, corn-stalks, etc..... .. Oswego farmers have subscribed $75,000 towards a beet-sugar factory and want $25,000 more. There's a movement to petition the N. Y. Legislature for a bounty on sugar beets..... There's a brisk American demand for Canadian horses. Lately 131 were shipped from Toronto to Massachusetts and New York in a single week, costing $9,819, or an average of $75 each..... Land and Home, the new agricultural paper that started bravely in this city a few months ago discontinued last Saturday.

Advice to Consumptives.

No man, however uncleanly, would drink muddy, dirty water. A party who occupies a room for hours, breathing the same air, might be compared to a party of bathers drinking the water in which they bathe. The patient must keep the window of his bedroom open. Night air is fresh air without daylight. In close, crowded rooms, the patient suffering from lung complaints breathes consumptively. By taking these precautions and using Dr. Pierce's Golden Medical Discovery and Pleasant Purgative Pellets, fully one-half of the cases of lung complaints would be cured in six months. For cough and irritation of the lungs do not always indicate the presence of consumption, although they may result in that disease and if consumption has already become deeply seated in the system, this is the most efficient course of treatment that can be pursued, outside of any institution that provides special facilities for the treatment of this disease. Dr. Pierce's celebrated Invalid's Hotel is such an institution. Send stamp for descriptive pamphlet containing also a complete treatise on consumption, explaining its causes, nature, and the best methods of treating it, together with valuable hints concerning diet, clothing, exercise, etc., for consumptives. Address World's Dispensary Medical Association, Buffalo, N. Y.

A JOKE ON THE PUBLISHERS.—A Boston publisher recently issued Thos. Hughes' (author of "Tom Brown's School Days," etc.) "Manliness of Christ," in a neat volume, for $1, and a New York publisher coming out with a competing edition, the price was reduced to 25 cents. To make the rivalry interesting, a third publisher, The American Book Exchange, New York, whose "Literary Revolution" has been scattering consternation among publishers and cheering the hearts of impecunious lovers of good books, brings out a neat acme edition for three cents, or entirely without cost to buyers of the April number of their Library Magazine.

WE call special attention to the advertisement on page 210 of important Clydesdale and also of Hambletonian horses, for sale by Powell Bro's Springboro, Crawford Co., Pa. The horses are of the best breed and the firm in every way trustworthy.

A Favorable Notoriety.—The good reputation of "*Brown's Bronchial Troches*" for the relief of Coughs, Colds and Throat Diseases has given them a favorable notoriety.

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COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, March 20th.

A. G. F.—A. E. S.—W. J. S.—H. C. B.—G. O. T, —B. F.—E. K.—A. A. L.—S. B.—E. C. | W. C. W.—G. G. B.—M. H. M.—A. E. S.—E. M.—A. J.—S. H. W.—E. S. A.—E. C.—M. J.—M. B. J.—J. K. M.—A. T. W.—W. B. K.—U. S. E.—L. S.—J. H.—W. C. R.—G. R. H.—E. C. McE.—F. McM.—H. M. S.—G. H. W.—J. N. B.—B. F. C.—B. S.—M. F. S.—W. H. —J. G. B.—E. W. S.—G. C. C.—F. H. S'—D. S. H.—"Jot," we do not remember to have received the communication inquired about. The present one is accepted with thanks.—A. B. L.—F. H. G., thanks. —A. L. J.—M. B. McL.—May Maple.—J. W. S., thanks.—J. B. Lawes.—E, D.—P. A.W.—L. E. Mc C —M. L. H.—A. J. B.—A. C. A.—W. S. B.—H. C.—C. F. D.—C. O. D., thanks.—G. E. N.—W. S. H.—G. G.—E. D.—J. B. Lawes—E. D. S.—H. L. W.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, March 20.

Baltimore.—WHEAT southern red $1.40@1.42; do amber at $1.45@1.48; No. 1 at $1.45@1.45¼; No. 2 western winter red $1.44. CORN.—Southern steady; western spot firm; future easier: southern white, 59c; do. yellow, 57@57¼c; western mixed 57¼c. OATS dull: southern at 47@48c; western white at 47@48c; do mixed at 45@46c; Penn. at 47@48c. RYE more active at 92@95c. HAY steady; prime to choice Penn. and Md. $16@17. PROVISIONS lower and quiet. Mess Pork at $12.37½@13. Bulk meats—Loose shoulders, 4½c. clear rib sides, 6½c. do. packed, 6c. and 7¼c. Bacon—Shoulders at 5¼c; clear rib sides, 7½c. Hams, 10½@11½c. Lard at 8¼c. BUTTER higher; prime to choice western packed, 23@28c; roll, 22@28c. EGGS dull and lower at 11c. ONIONS red at $4.50 and yellow at $4.75@5 per box. POTATOES.—The demand for which stock is lessening and the market is easier, with a good supply, at 50@60c. per bushel for Early Rose, and 40@50 cents for Peerless and Peachblow. Sweets are quoted at $3 25 per barrel. POULTRY. The season of dressed poultry is about over, and prices are nominal. Live stock is in good demand and the market is steady at 8@11c per pound for chickens, and 12@14 cents for turkeys and $3@4 per doz for ducks. FIELD SEED.—The supply of city is light and the market is dull and nominal. Timothy is steady at $3@3.20 per bushel. TOBACCO. Inferior and frosted at $1@2; sound to good common $4@5 50; middling $5.50@7.50 good to fine red $8.50@12; fancy $12@14; up-country $3@15. Ohio—Inferior to good common $3 50@5.50; greenish and brown $5.50@7; medium to fine red $7.50@10; common to medium spangled $6.50@12; fine spangled to yellow $10@20.

Boston.—FLOUR in moderate demand; sales western superfine at $5@5 25; common extras, $5.25@5.75; Wisconsin extras at $5.50@6; Minnesota extras at $6@7.25; winter wheats, $6 25@6.75 for Ohio and Michigan; $6 50@7 for Illinois and Indiana; $6 75@7 50 for St. Louis; patent spring wheats including Wisconsin and Minnesota at $7@$8.75; patent winter wheats at $7@8.25. CORN firm and steady; sales of mixed and yellow at 60@62c. OATS selling at 51@54c. for No. 1 extra white; 49c. for No. 2 white; 47@48c. for No. 2 mixed and No. 3 white. RYE at 90@93c. SHORTS, fine feed and middlings at $22@25, with sales to arrive at lower figures. HAY AND STRAW—Rye Straw is in quiet demand. We quote first quality coarse Eastern and Northern at $15@16 ₱ ton; poor and medium at $11@14. Rye Straw $20@22 ₱ ton. LIME—Rockland Lime is firm at 80@85c ₱ cask by the cargo. BUTTER—New York and Vermont choice creameries at 28@30c ₱ lb. fair to good 25@27c. Fall dairy made, choice, 25@27c. Winter dairy made at 20@24c. Straight dairies, choice, at 22@25c., dairies, common to good, at 18@20c.; Eastern and Pl'sland, 18@20c.; Western—choice creameries 35@37c, choice dairy packed at 23@26c, choice ladle-packed 23@25c, fair to good do, 20@22c, common 17@19c. CHEESE—There has been a light demand; Choice Northern factory 14½@15c. ₱ lb, fair to good at 12½@14c. and common 9@11c.; Western factory—choice 13@14c., fair to good 11@13c., common 9@10c. EGGS—Eastern at 14@15c., Northern 14@15c. Western 13@14c. ₱ dozen. BEANS—Northern hand-picked Pea at $1.70@1.80; do. do. Western at $1 70@1 75; do common $1 65@$1 70; medium choice $1 50@1 55. GREEN PEAS $1 50@1 85. POTATOES are in demand; we quote Houlton and Maine Central Rose 53@58c. Houlton Jackson Whites at 40@45c. Maine Central Jacksons at 40@43, Vermont Rose at $50@55, do Jackson at 40c. Peerless at 40@43, and Prolifics at 53@55c ₱ bushel. ONIONS, $4.25@4 50 ₱ bbl. APPLES at $1.75@3 ₱ bbl, according to quality. CRANBERRIES at $7@10 @ bbl. SALTPETRE is quiet at 6½@6¾ ₱ lb; Nitrate of Soda is selling at 4½c ₱ lb, cash. SEEDS—Calcutta Linseed is nominally $2.50@2.55 ₱ bushel. We quote Clover Seed as selling at 7@8c ₱ lb for Western and New York; Timothy at $2.80@2.90 ₱ bushel; Red Top at $2 80@2.90 ₱ bag. Canary Seed at $2.45@2.55, and American Linseed $1.50@1 55 ₱ bushel.

Chicago.—WHEAT unsettled; No. 2 Chicago spring, $1.18 bid cash. CORN at 36¾c. regular, 34½c rejected 35c. OATS dull at 28½c. Rye easy at 70@73½c. Barley easy at 76@77c. Pork in fair demand at $10 65. BULK MEATS in good demand and tending upward; shoulders, 4c. short rib, 6¼c. short clear, $6.65c. BUTTER, creamery 30@34c; good choice dairy, 24@29d; medium, 18@20c; inferior to common, 10@16c. CHEESE.—Full cream, 13½@14c; part skim, 12 @12½c; low grades, 8@10c. POTATOES.—Peachblows, 55@65c; Early Rose, 40@50c. POULTRY.—The supply continues light, and fine stock sells promptly at outside figures. Chickens, dressed, 6@8c per lb; turkeys, dressed, 8@12½c per pound; ducks, live, $2.00@2.75 per doz.; live geese, $5.00 per doz.; wild ducks, $1.25@1.50 per doz. SEEDS.—Clover in good request with sales at $4.95@$4.15, prime being $4.10@4 12½c. Mammoth sold at $4.50@$4 55. Sales were reported at $2.40@$2.65, Millet sold at 62½@85c, and German at 90c. Flax was steady at $1.05. SALT.—Was in fair demand and steady: fine salt, ₱ barrel, $1.45; ordinary coarse salt, ₱ barrel, $1.50; ground solar, $1 60; dairy, with bags, $2 55@$2.90; ground alum, $1.25; Liverpool fine (white sacks) $1.85.

Cincinnati.—FLOUR in fair demand; fancy lower at $6.15@6.75; family quiet at $5.75@5 90. WHEAT dull and lower at $1.28; CORN easier at 41½@43c. OATS steady at 38@39c. RYE steady at 84@85c. PORK unsettled with no transactions, nominally $11.50. LARD dull at 7@7.05c. BULK MEATS dull and drooping; shoulders at 4c. clear sides at 6¾c. BACON easier; shoulders at 5c; clear ribs at 7¼c. clear sides at 7¾. HOGS quiet; common at $3 25@4.25; light at $4.25@4.50; packing at $4.30@4.60; butchers' at $4.60@4 75. BUTTER fancy selections bring 30c. readily. Good to choice Central Ohio and Indiana sells at 24@27c. and common to fair 20@23. Packers are not buying to any extent, as they are unwilling to pay more than 18c and there is none in the market at this price. CHEESE quiet and easy; prime to choice factory quoted at 13½@14c. and new Northwestern at 12½@13c. per pound. New York held at 15@15½c. SEED—Clover seed at 7c. per lb. for round lots, and 7½@7¾c. for jobbing lots. Timothy seed met a moderate jobbing demand at $2.80@2 90 per bushel. Flax seed ruled firm, with a good demand on arrival at $1.30@1.40 per bushel.

Detroit.—WHEAT—No. 1 white Michigan, sellers at $1.22½. CORN firm and in good inquiry; No. 1 yellow at 46c.; high mixed at 45½c.; No. 2 mixed at 44c. OATS strong, with a good demand; No. 1 white at 40½c.; No. 2 do. at 38c.; No. 1 mixed at 38½c.; No. 2 do. at 37c. CLOVER SEED very dull; No. 2 nominally $3 80; prime nominally $4.10.

Indianapolis.—WHEAT quiet; No. 2 red at $1.25@$1.27½. CORN firm at 38@39c. OATS weak at 34@37c. HOGS steady at $3.80@4.55.

Louisville.—FLOUR quiet; extra, $4.50@5; do. family, $5@5.50; A No. 1, $5.75@6; fancy, $5.25@$6 50. WHEAT dull at $1.21@1.23. CORN quiet; No. 2 white at 43@44c.; do. mixed at 41½@42c. OATS dull; No 2 white at 39@40c.; do. mixed at 37@38c. RYE dull at 85@86c. PORK quiet at $12.50. LARD steady; prime steam at 7¼c. BULK meats quiet; shoulders, 4¼c.; clear rib, 6¾c.; clear sides, 6.90c. BACON quiet; shoulders, 4¾c.; clear ribs, 7¼c.; clear sides 7¾c. BUTTER—Demand good and prices have favored sellers. We quote common to fair country at 14@18c., fair to prime at 18@22c., and choice to fancy at 24@25c.; Western Reserve at 25@27c., and Western creamery at 38@40c. FIELD SEED—Delivered from store: Timothy, $2 90; orchard grass, $1.60; red top, 75c.; clover, common red at $4.50, and sapling at $4 75; blue grass, clean, 55c.; extra clean, 65c. FLAXSEED $1.10 per bushel on arrival.

Milwaukee.—FLOUR, common to choice Western shipping extras at $4.95@5.20. WHEAT unsettled; No. 1 Milwaukee hard at $1.18; do. soft at $1.15¼; No. 2 Milwaukee at $1 14¼; do soft, at $1 11¾; No. 3 do. at $1.16; No. 4 do. at $1.02; rejected at 90¼. CORN dull; No. 2 at 36¼c. OATS dull and unchanged; No. 2 at 31c. RYE quiet but firm; No. 1 at 73¼c. Barley higher; No. 2 spring at 60c. PROVISIONS dull; mess pork at $10.75. LARD, prime steam at $6 90c.

New Orleans.—FLOUR dull, superfine at $4.75@$5; double extra at $5 50@$5.75; treble extra at $5.75@$6; high grades at $6@$6 65. CORN quiet and weak and at 53@55c. OATS firm at 47c. CORN MEAL dull at $2.40. HAY dull; prime quoted at $18. PORK scarce and firm at $12.62½@$12.75. LARD steady; refined tierce at 7¼c; keg at 8c. BULK meats scarce and firm; shoulders, loose at $4.25c; packed do., $4.37½@$4.40c; clear ribs 6¾c@7c; clear sides at 7¼@7¾c. BACON quiet and weak: shoulders, 5c; clear ribs, 7¾c; clear sides at 7¾@8c. Sugar-cured hams dull and lower; canvassed at 8¾@9¾c COTTON steady: middling, 12⅜c; low middling, 12¼c; good ordinary, 11 7-8c. Weekly.—Net receipts, 17,837 bales; gross, 19,544; exports, to Great Britain, 31,812 to France, 4,343; to the Continent, 9,872: coastwise, 2,079; sales, 21,800.

Philadelphia.—WHEAT, feverish; Western rejected on track at $1.28@$1.35; Penn., red on track at $1.42; No. 2 red in elevator at $1.43; No. 3 red in elevator at $1.39; Southern amber on track at $1.44@$1 44¾. RYE scarce: Penn., 91@92c CORN less active, Penn. and Southern yellow on track and in grain depot, 56c; Western mixed on track and in grain depot, 55½c; Western yellow on track, 56c. OATS.—Less doing; mixed at 47¼c; No. 3 white at 48c; No. 2 do. at 49c; No. 1 do. at 50@50¼c. PROVISIONS quiet and steady; city mess beef at $13; beef hams at $17@18; mess pork at $12 62½@$13.75; extra prime at $10@$10 25; smoked hams at 9¾@10¾c; do. in salt and pickle at 7¾c @9¾c; clear rib sides, smoked, at 7¾c; do. in salt at 7c; shoulders in salt at 4¾@4¾c; do. sugar pickled at 5@5¼c; do. smoked at 5@5¼c. DRESSED HOGS at 5¾@6¼c. LARD.—Western at $7.87½c; do. steam at $7 60; do. butchers at 7c. BUTTER firm and in good demand; creamery extra at 35@37c; Bradford county and New York extra, nominal at 31@32c; do. fall at 28@30c; Western Reserve extra at 28@30c; good to choice 23@27c rolls wanted; Penn. extras at 53@25c; Western Reserve extras at 24@27c. EGGS dull: Pennsylvania at 12½c; Western 12c. CHEESE quiet; New York factory at 14@14¼c; Western full cream at 14@14½c; do. good, 13½@13¾c; do. half skims, 12@13c. SEEDS.—Clover dull at 6½@7¾c; timothy quiet at $3.25@$3.37½c; flax at $1.50. Feed quiet and unchanged; bran at $21@$21.75.

St. Louis.—WHEAT unsettled; No. 2 red fall at $1.18¾@1.19; No. 3 do at $1 17¾@1.17¾; No. 4 do. at $1.11 bid. CORN dull at 35¼@35⅝c. OATS, 31¼@32¼c. RYE quiet at 74c.

Toledo.—WHEAT weak; No. 1 white Michigan at $1 25; No. 2 red winter, at $1.29¼; No. 2 red mixed, $1.27¾. CORN dull; high mixed at 43¾c.; No. 2, 42¾c. OATS—No. 2 at 37c. CLOVER SEED steady; mammoth at $4 60; prime at $4 10; No. 2 at $3 85. DRESSED HOGS at $4.80.

Fertilizers.

Bone ash is nominally quoted at about $22 per short ton, on the basis of 70 per cent phosphate of lime. Bones quoted at $22 50@$23 for Texas and South American mixed, and $25@$26 do. for shin and shank bones. Refuse bone black at $21@$22 per short ton on merit. Sulphate of ammonia at 3½c. ₱ pound on the basis of 26 per cent. of ammonia. Dried blood at $2@$2 20 per unit of ammonia short ton. Ammonia axotine, etc., for the former at $2 62½@$2 75 per unit of ammonia, and about $2 25 do. for the latter, all short ton. Nitrate of soda, 4¾c. Saltpetre, crude 6¼@6¾. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent. ammonia, $35@$40; dissolved bone black, 15 to 17 per cent of soluble phosphoric acid $30@$35; dissolved bone 13 to 14 per cent. of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent of soluble phosphoric acid, 3 per cent. of potash, 3 per cent. of ammonia, $40@$45; German potash salts, 25 per cent. of sulphate of potash, $15@$18 per ton; muriate of potash, 80 percent. 2@2½c per lb. land plaster 7.50; dried blood 10 per cent of ammonia, $35@45 per ton; fish guano dry and ground fine, 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $45; unground fish guano, 6 per cent of ammonia, $25; castor pomace, $19@24; sulphate of soda ground, and in barrels, $15@18 per ton; sulphate of ammonia 4¼c. ₱ lb; bone black, 70 per cent of bone phosphate, $30@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $20 per ton; No 1 Peruvian guano, 10 per cent ammonia, standard, $53 per ton; Lobos $16 per ton; rectified $65 per ton; guaranteed $56 per ton; nitrate of soda, 5¼@5½ ₱ lb.

FORRESTER'S potato manure, $47 50; cabbage, $50; oat, $17.50; lawn dressing, $47.50; turnip, $52; grass, $45; hop, $47.50; strawberry, $42.50; wheat, $45; rye, $47.50.

STOCKBRIDGE'S manures quoted: Potato, $50; cabbage, $50: strawberry, $40: corn $45; seeding down, $40; orange tree, $35; onion, $50—per ton each.

MAPES'S complete manures for clay soil, $25.50 per 1,000 lbs.; for light soils $25.50 per 1,000 lbs.; "A" brand for general use, $20 per 1,000 lbs.; fruit and vine, $18.50 per 1,000 lbs.; cabbage and cauliflower, $23.75 per 1,000 lbs.; corn, $24 50 per 1,000 lbs.; potato, $24 per 1,000 lbs.; asparagus, $25.50 per 1,000 lbs.; gypsum, Nova Scotia, ground, ₱ ton, $7.50.

BOWKER'S "Hill and Drill Phosphate" $45; Bowker's Phosphate $40 ₱ ton, each: Bowker's "Food for Flowers," 35c. ₱ package and $3 ₱ doz; Bowker's "animal meal for fowls," $2 50 per cwt.; Ground oyster shells, $1 ₱ cwt.

BAUGH & SONS' prices for goods delivered at depot or boat, in bags and in 2,000 lb lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36: Baugh's raw bone superphosphate $40; Baugh's $25 phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent. of ammonia, $48.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, March 20, 1880.

BEANS AND PEAS.—The market for white beans is dull; and a further reduction in prices has only succeeded in bringing out a few Cuban shippers of marrows. White kidneys are wanted; but there is a lack of large lots. Red kidneys abundant and and weak. Green peas quiet at $1.75@1.80 Wis. bbls. Southern B. E. peas offered at former bids. $1.90@2 per 2 bush bag, and some business may result. Marrow beans, prime, $1.60 other, $1 45@1 50; medium, prime, $1.45; other, $1.30@1.37; pea, $1 45@1.70; white kidney, $1.60@1.80; red do., $1.50@1.65; black, $1.80@1.85.

Receipts of beans for week, 8,664 bush.; exports, 618 pkgs.

BEESWAX.—There is a lighter business and a steady market at 24 to 25 for Western and Southern.

BROOM CORN.—Demand is slack and is for small lots; Nominal quotations are for choice brush at 9c.; choice hurl at 8c.; stalk braid at 6@7c.; mixed red and green at 5@6c.

BUTTER.—The demand for fine fresh is active and receipts are not plenty enough to give all buyers a share on some days. Prompt shipment is urged for new. Old butter is now so reduced in stock that settled rates cannot rule long. It is quite evident from the range of rates for S ate that the best has been absorbed. Western holds a strong place and for the moment holds the steadiest price—position. New butter must be as perfect as hay feed and cold weather will permit to bring the extreme. Avoid injudicious coloring and specially avoid mixing old with new. New butter is quoted: creamery best, 37@38c.; fair to prime, 33@35c; poor, 29@30c. State, pails and tubs, choice, 34@35c.; fair to prime, 28@33c.; poor, 25@26c. Early made creamery 29@30c. Fall pails and tubs, fair to prime, 25@30c.; poor, 22@24c.; dairies, choice, 28@29c.; other, 22@27c.; bodies of firkins, 21@23c. Very poor State, 18@20c.; Western imitation creamery 29@34c.; Western dairy, fresh, 29@30c.; poor to prime, 21@28c. factory extra, 29@30c.; other, 21@27c.; very poor 15@18c.; rolls, have advanced to 22@27c.

CHEESE.—The dealings are small, shippers doing little and there are free sellers, with prices without marked change. Exports for the week 3,300 boxes.

Quotations are for State factory: best at 14@14½c.; good to prime at 13¾@14c.; fair to good at 13@13½c; do. poor at 12@12½c. State farm dairy: good to prime at 13½@14c.; fair to good at 13@13½c. Ohio factory: Cheddar, fine, 14c.; do., fair to good, 12¾@13½c.; flat, fine, 14@14¼; flat, good to prime, 13@13½c.; flat, fair to good, 12½@13c.

Receipts for week, 5,630 pkgs.; exports, 3,100 boxes Liverpool cable, 71s.
Steam 32s 6d@35s.

COTTON—Has been active, closing for March at 13 18@13 09c.; April, 13.15c.; May, 13.33@13.31c.; June, 13.52c.; July 13 64@13,15c.; August, 13 72@13.73c.; September, 13 37@13 39c.; October, 12.49@12.51c.; November 12 11@12.13c.; December, 12,06@12.08c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	11 7-16	11 9-16	11 9-16
Strict ordinary	11 13-16	11 15-16	11 15-16
Good ordinary	12¼	12⅜	12⅜
Strict good do	12½	12⅝	12⅝
Low middling	12 13-16	12 15-16	12 15-16
Strict low middling	13	13⅛	13⅛
Middling	13 3-16	13 5-16	13 5-16
Good middling	13 7-16	13 9-16	13 9-16
Strict good middling	13 11-16	13 13-16	13 13-16
Middling Fair	14 3-16	14 5-16	14 5-16
Fair	14 15-16	15 1-16	15 1-16

STAINED.

Good ordinary	11⅛	Low middling	12 6-16
Strict good ordinary	12	Middling	12⅞

DRIED FRUITS.—Apples have a good demand and rule steady in price. Peaches are quiet and unchanged. Blackberries are scarce and favor sellers; other small fruits are quiet. Prices are for N. C. apples, fair to good, 7¼@8½c.; choice, at 9@9½c.; fancy at 10@10½c.; Virginia, at 7@8c. New York State quarters, at 7@8c.; sliced at 7½@8½c.; patent evaporated, choice in cases, at 13½@14c.; prime at 12½@13c. Evaporated peeled peaches, good to choice, at 22@25c.; unpeeled at 12@14c.; North Carolina peeled, fancy, at 20c.; choice old at 17@18c.; Georgia prime at 15@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7½@8c.; do. quarters at 7@7½c. Pitted cherries at 18@19c. Blackberries nominal at 14c. bid. Raspberries at 26@27c. Plums at 17@18c.

Exports for week, 215 bbls. dried apples.

EGGS.—Receipts for the week, 23,450 bbls.; do. last week 14.8 9 do. Heavy receipts have dropped the market beyond sudden recovery. Cheap prices have brought out a better demand for use, but stock is accumulating. Near Point eggs are very plenty this season, next week ought to take much of the supply at the rates ruling for good stock.

Near Points, ₱ doz., 13c., State and Penn. 12@12½c. Western, fresh, 11½@12c.; Southern, 11@11½c.; poor marks Western and Southern 10@11c.; duck eggs 24@25c.; goose 45@50c.; limed almost nominal at 9@10c.

FLOUR.—Prices have declined and closed weak through larger receipts and the lower wheat market. Buyers have been very indifferent.

Latest prices are $4.60@5.35 for poor to fancy superfine state and Western; $5.25@5.50 for inferior to very good extra do., and mixed lines; $5.50@5.75 for good to very choice do.; $5.25@5.50 for inferior to good shipping extra do., and $5.60@5.75 for good to very choice shipping extra do.; inferior to about choice white wheat extra $5.75@6.60, about choice to very fancy do. at $6.60@7.55 red and amber winter wheat, inferior to fancy trade and family, at $5.60@7.20; round hoop Ohio, $5.35@5 75; and trade and family brands of do. at $5.85@7.00, the latter rate for fancy; St. Louis at $5.75@6.50 for inferior to very good extra; $6 60@7.15 for very good to fancy; Minnesota clear, inferior to fancy, at $5.50@5.80; Minnesota "straight," inferior to very fancy, at $6@7.75, and patent inferior to fancy at $6.75@8.75; unsound stock at from $3.25@5 75; city mill extra at $6.25@6.75 for ordinary to fancy for West Indies; do. for England, $5.25@5.60 for poor to choice; do. trade and family extras $6.50@7.25 do. for South America, $6.50@7.00; No. 2 at $3.55@4.50 for poor to fancy.

FURS AND SKINS.—With a renewed demand for Germany the market is better for parcels conveniently available. Stock in the interior may not be favorably affected by the stronger tone now current here.

FRESH FRUITS—Exports of apples for week, 7,615 bbls. The export demand is the main support of the apple trade. Greenings are now very variable in quality, and it is difficult to find a long line of choice Baldwins. The general range, including Russets, is $2@3 50 for poor to best. But stock used up. Cranberries winding up at $3@3 50 ₱ crate, Strawberries have dropped to popular prices, and sales are broken; quoted 10@25c. ₱ qt. Fla. oranges scarce and firm, the last end of the season is proving the best; fancy ₱ bbl. or less, $4 25@1.75; fair to prime, $2.50@4. Peanuts have a steady demand, at full late rates. Hand-picked Va., 5¾@6c.; extra prime to fancy, 5¼@5½c.; good to prime 4¾@5c. Shelled, 5½@6c. The Producers' Price Current gives the comparative receipts of peanuts as follows:

Oct. 15, '79	to March 20, '80,	64.161 bags.
" 15, '78	" 20, '79,	60 482 "
" 15, '77	" 20, '78,	29,657 "
" 15, '76	" 20, '77,	46,047 "
" 15, '75	" 20, '76,	37,979 "

Hickory nuts dull at 75@90c.

GRAIN.—Wheat has been pressed for sale at lower prices and has been active on export account. The shipments for the week are 960,000 bush. Latest prices are of No. 1 white at $1.41@1.42¼; do., March, at $1 41@1.42 do., April, at $1.40@1.40¾; do., May, at $1.35; ungraded white at $1 40@1.41; No. 2 red at $1.45¾@1.47 do., March, at $1.45¾@1.46; do. April option, at $1.44¾@1 45, do., May, at $1.41¾@1 42¾; No. 3 red (Kansas grade) at $1.37@1.37¾; ungraded red at 1.33@1.45; mixed winter at $1.43¾@1 44. Corn is active and closed firm; latest sales are of New York No. 2 at 55¾@58¾c.; do. old at 59@59½c.; New York No. 2 for March, at 57@57¾c.; do., April, at 51¾@54¾c.; do., May, at 52¾@52¾c.; New York steamer mixed at 58@58¾c.; do., March, at 56c. ungraded mixed Western at 57½@59½c.; yellow western at 59½c; No. 2, white at 61@60½c.; steamer white at 6@61½c., round yellow at 58½c.; 8,000 bush. No. 2 May at 52¾c. Oats active and closed firm; latest sales are of No. 1 white at 49@49½c. No. 2 white at 46@46½c.; No. 3 white at 45@45½c.; New York No. 1 at 46½c., New York No. 2 at 40¾@45¾c.; do., March option, at 45c; do., April at 44¾c.; New York No. 3 at 45@45½c.; ungraded white western at 46½@49c.; ungraded mixed western at 45@46½c.; white State at 49c.; No. 2 Chicago afloat at 46½c.

HOPS.—Demand continues very light and prices are unsettled and in a good degree nominal. Quotations are for

	Cents per ℔.	
New York, fancy	37	@39
New York, new crop, good and choice	33	@36
New York, new crop, medium	31	@33
New York, new crop, low to fair	27	@29
Eastern, new crop	27	@35
Wisconsin, new crop	27	@35
Yearlings	7	@13
Olds, all growths	4	@10
Pacific Coast, new	30	@35
Pacific Coast olds (nominal)	5	@10

MAPLE SUGAR.—Supplies are liberal and good quality will be apt to encourage trade. Prime large to small molds 10@13c.; sirup in tin 90c.@$1 ₱ gal.

OIL CAKE.—Western is inactive and quoted at $32 ₱ ton.

PROVISIONS—Have declined and closed weak on a moderate trading. New Mess pork closed at $11.50 for spot delivery; 11.50@11.55 for April and $11.60 for May. Bacon at $7, for long clear and 7½c. for short clear. Lard — Western steam at 7.55 for new on the spo, 7.54½ for April, 7.55 for May. Stearine at 7¾@7¾c. for Western. Tallow at 6 7-16 for prime. Beef hams at $16.50@17. Beef — Extra India mess in tierces quoted at $18@20. extra mess at $11@12; plain at $10 50@$11; packet at 11 50@$12.

Receipts for week, pork, 2,100 bbls., beef, 1,175 pkgs.; bacon and cut-meats, 47,100 pkgs.; lard, 25,990 pkgs. Exports, pork, 3,842 bbls.; beef, 3,061 pkgs.; cut-meats and bacon, 17,357,205 ℔s.; lard, 7,160,910 ℔s.

POULTRY AND GAME.—Hotels and steamers are now the chief buyers of dressed poultry; prices too high for local trade. Large turkeys not wanted by any trade; ducks scarce and firm; geese hardly inquired for; very little frozen poultry offering.

Turkeys. N. J. good to prime, 14@16c., State, Mich., N.Ohio and Penn., prime. small 15@15½c.; other Western, prime, small 14@15c.; fair to good, small 13@13½c. Western dry-picked, small 14@15c.; large 10@12c.; Phila. dry-picked, 14@16c.; Capons, Phila, large, 20@21c; and slips, small 17@18c.; chickens, winter Phila., 21@23c.; yearling Phila., dry-picked, 17@18c.; N. J., 15@16c.; State, prime 13@14c.; Western, 12@13c.; fair to good 10@12c.; poor to fair, 7@10c. Fowls, Phila., dry-picked, 13@14c.; N. J. good to prime 12@13c.; State good to prime 10½@13½c.; Western, good to prime 10@12c.; poor to fair 8@9c. Ducks, Phila d.p. 19@21c. N. J. 17@19c.; State 16@18c.; Western 14@17c; Geese Phila d. p. 10@12c.; N. J. 10@12c; State, 9@11c.; Western 8@10c.; squabs, white ₱ doz., $3; dark, $1.50@2.00 Live poultry in moderate supply, and firm. Fowls, 12@13c.; turkeys, 11@12c.; and ducks, 75c.@$1; geese, Jersey, $1.75@2; N. Y. and Pa., $1.50@1.75, Western, white, 75c.@$1.25; gray, $1.25@1.50; do.; late winter chicks 60c. ₱ pair fair size. Game is hardly a marketable item. The few small birds depend upon special call, and wild ducks have almost worn out their welcome. Eng. Southern snipe $1.25@1.75. Wild pigeons $1.25@$2; the latter for Penn. Canvas back ducks $1 75@2; Red head, 50@75c.; Mallard, 40@50c.; teal, 40@50c.; common, 15@25c.

SEED—Clover is weak: Western is quoted at 7@8c; and State at 8@9c. Timothy is quoted at $3@3.05 and demand small. Flaxseed is quoted at $1.80@1.85.

VEGETABLES.—Exports of potatoes for week, 2,375 bbls. The market for potatoes is generally dull and prices, as a rule, are shaded.

Bermuda, new ₱ bbl., 6@16.50; Florida, new, $3; E. Rose, N. S., bulk ₱ bbl. $1.35@1.50; Maine, per d.-h. bbl., $1.75@1.87; State. do. $1.25@1.50; State, in bulk ₱ bbl., $1.25@1.50; Prolific, N. S. per d.-h. bbl., $1.25@1.50; do., in bulk, ₱ bbl., $1.25@1.50; Mercer, Nova Scotia, bulk, per bbl., $1@1.25; Chili red, N. S., bulk, ₱ bbl., $1.12@1.63; Peachblow, State, white, per d.-h. bbl., $1.75@1.87; do., State, red, per d. h. bbl., $15.00@1.62; Snowflake, State, per d.-h. bbl., $1.50@1.75; Peerless, State do. $1.12@$1.25; do., bulk, ₱ bbl., $1@$1.37; Jersey bulk, do., 62@87c.; Sweet potatoes, $3 00@3.25. Southern truck has had irregular sale, as the weather has been bad for marketing. Fla. peas no longer wanted. Fla. tomatoes, ₱ box, 75c.@$1.25 Nassau, 75c. $1.25; Bermuda, 60c.@$1; do., beets, new, ₱ crate, $1.75@$2; string beans, Fla., ₱ bush. crate, $3.50@4; green peas, Sav., per crate, $1@1.75. Ch'n., $1@1.75; Asparagus, Ch'n., per doz, $8@9; kale, Norf., ₱ bbl., 75c.@$1.00; Baltimore, per bag, 75c.@$1; spinach, Norf., per bbl., $2@$2 25; Baltimore, $1.2 @1.50, radishes, Norfolk, ₱ 100 bunches, $1; lettuce, Md., $2.50, squash, marrow, per bbl., $1.50@1.75; Hubbard, $2.50; cabbage, Fla., new, per bbl., $3; do, old, per 100, $5@10; onions, white, $4@5.50; yellow, $3.50@3.75; red, Eastern, $3.25@3.50; Chester, $3@3.50; beets, Jersey, $1.50, turnips, Russia, 62@75c. carrots, $1@1.25. Hot-house produce—Cucumbers, ₱ doz., $3@4.5; radishes, ₱ 100, $3@$5.00; do. rhubarb, $5@8, lettuce, Boston, ₱ doz., 25@75c.; L. I. & N. J., 25@50c.; do. carrots, $2.

TOBACCO.—Demand is moderate, with prices steadily held.

WOOL.—There has been less activity this week, but the full recent advance is sustained; latest sales are of X, XX and XXX Ohio at 55@59c.; No. 1 do. at 61c.; common to quarter blood combing at 57½c.; XX at 44c. for State; scoured California at 52c.; scoured Colorado at 18c.; low do at 52½c.; scoured Texas at 85c.; fall California at 21½@35c.; Montana at 42c.; unwashed Iowa at 36c.; Oregon at 45@46c.; foreign noils at 30@36c.; scoured East India at 52c.; South American do. at 62c.; Montevideo at 42@42½c.; Cape at 35@37½c.

LIVE STOCK MARKETS

NEW YORK, Saturday, March 20, 1880.

BEEVES.—Receipts for week, 12,769 head; do. last week, 12 623 do. The export trade has been very active. To-day's steamers have taken car loads of fine Illinois steers; about 700 head in all sail March 20th. An extremely stormy day on Friday depressed the latter part of the week's market, and the ranges annexed are very full; poor to fair steers, 8@8½c., dr., 55@56 ℔s.; good to prime, 9½@10½c. Very common neglected

COWS AND CALVES.—There is quite a strong feeling, and though receipts are free $35@58 per head have been generally reported.

VEAL CALVES.—Supplies of live have enlarged with spring and prices have an easy tone. Poor lots not salable. Choice N. J. and Bucks Co., 8c.; fair to prime other, 5@7½c.; Mt. Holly, 6½@8c.; grass calves, 2@3c.; buttermilk, 4@4½c. Dressed calves show the most weakness: choice, 9½c.; other, 7@9c.; grass hog dressed, 4@5c.

SHEEP AND LAMBS—Receipts for week, 25,144 head; do. last week, 21,272 do. A decline in wool and pelts has helped to weaken prices for sheep. Common to extra sold at 6¾@7½c. good to choice yearling lambs, 8@8½c.; N. J. spring lambs ₱ head, $4@6.50.

SWINE.—Receipts for week, 24,475 head; do. last week, 24,473 do. Market steady at $4.80@5 16 ₱ 100. Country pork, light, 6¾@7½c.; medium, 6¾@6½c.; heavy, 5½@6½c., city dressed, 6¼@6½c. Tenderloins, 10c.

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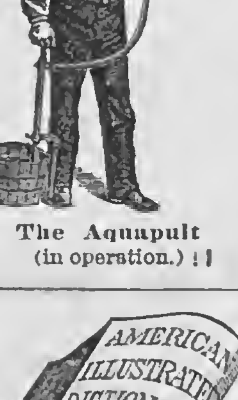
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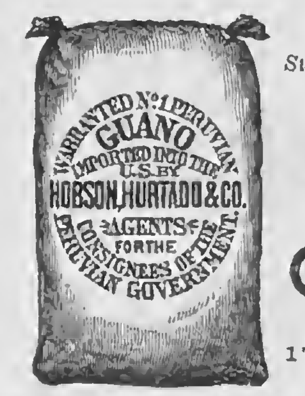

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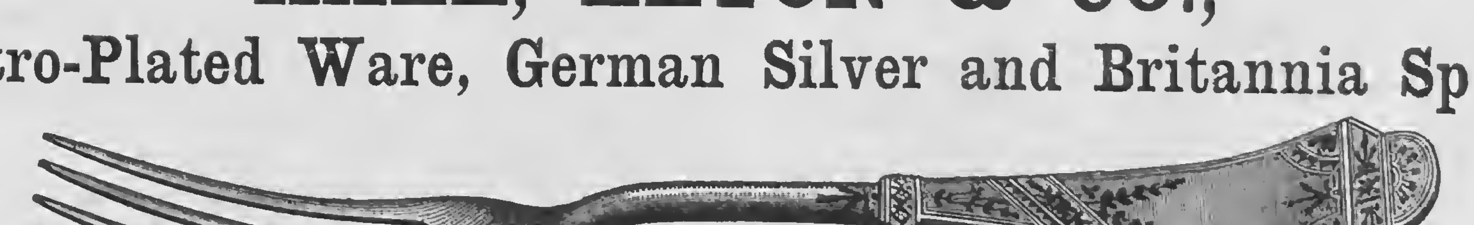
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Reading for the Young.

REMINISCENCES OF A LITTLE GIRL.

MRS. M. J. GALPIN.

CHAPTER V.

I HAVE never yet described the looks of Father Tom and his wife. I have been so intent on following the fortunes of the hapless pair, that I overlooked personal description. Mrs. Silk, at the time of her marriage with Uncle Tom, was but 25 years old; and just in the full bloom of youth and beauty. Although seven years older than her husband, she always looked younger, during all the years of her life. She was tall, and supple as the willow, while all her motions were airy and graceful as those of the fawn. Uncle Tom was the one love of her life, as she was forced into her first marriage by the will of her headstrong, father and a desire to get away from his stern rule. I have never seen a lovelier complexion than hers, one in which the lilies and roses were so artistically combined. She had a suit of hair that fell in shining curls far below her waist, large liquid, dark eyes, and perfect Grecian features, (quite unlike the Irish type of beauty). No one could call Uncle Tom handsome. He had a large forehead and a cranium that measured 24 inches in circumference. He was of medium hight, had large blue eyes, an open honest countenance and was a man who from his *tout ensemble*, one would naturally trust as being worthy of all confidence.

When Uncle Tom (as we will call him henceforth) came home and told his wife that he had at last obtained a chance to earn an honest livelihood, she was delighted at the prospect, but when she found that it would imply separation for months, she resolved to follow him in his journeyings through the country, and no amount of argument could shake her resolution. She had the unfailing argument that she had given up everything for him, and with him she would be till death should separate them. It was finally arranged that she should go, and when he was on a surveying trip she could remain at the nearest village or point on the work. For many weary months they traveled with the surveying expedition, through the country visiting more towns and villages than I could enumerate to you in a day. Whoever has been to Ireland knows the natural beauty of the scenery. Bold mountain ranges, foaming cascades, barren peaks and emerald verdure are the characteristics of the country. All these attractions combine to make the Emerald Isle "the pearl of the ocean", "first gem of the sea."

Once on coming to a village in their route, and having obtained a place to stay over night they found a "wake" was in progress next door. The "keeners" were on hand, the "potheen" was hot and everyone felt comfortable, and prepared to do the full amount of mourning for the dead. To the cool observer of these "wakes" the custom looks like a most ridiculous farce, and so it really is, but you must know, my dear little ones, that the customs of different countries alter the situation, and what seems foolish to us, may be quite a serious matter with others. Perhaps you never have heard or read of an "Irish wake" so I will try and describe one as related to me by Uncle Tom in my childhood.

When a person dies, all the neighborhood and friends gather in the afflicted house; whiskey punch is made called "potheen," pipes and tobacco go round, and then some old crone commences to tell of the good deeds of the deceased. All they can think of in his favor is rehearsed not forgetting to call upon their imaginations, which under the fumes of the whiskey are very lively. Then the keeners or cryers commence operations. They fall on their knees beside the coffin, and bewail the dead in a monotonous singing tone, rising and falling to suit the expression they intend to convey. To hear them one would think their hearts were broken, whereas they are only hired to cry. After telling all the good deeds, they commence to call down maledictions on the enemies of the deceased; and here let me say that no nation under the sun can excel the Irish in making evil wishes against those they hate. An Irish marriage and an Irish wake, are something similar, only that if anything the wake is the merriest; here they enjoy the tobacco and whiskey the most. I wonder if my readers have ever heard of the "Banshee."

Well, there is a superstition in Ireland that before the death of any member of the family, the Banshee will cry for several nights, never less than three, and when her cry is heard consternation and sorrow take hold of the living. I think the Irish banshee is like the "mermaid" of the sailors for the peasantry, who profess to have seen her, say that she is lovely and is nearly always sitting on a rock in the sea or by the sea shore. I wonder if she is related to the "Lone rock by the sea." But the faith that the people have in her is wonderful, and I shouldn't wonder to day if Parnell or Dennis Kearny, heard that the "Banshee" had been heard or seen near their dwelling in Ireland but they would go to the priest to get consolation, as they would expect their hour was come. But, dear children, it takes a good many strange things to make a world.

MY LABORATORY—NO. 2.

S. RUFUS MASON.

My work hands, although having an experience of nearly 6,000 years, are still a little irregular in their habits. They let the soil get poor, my plants suffer, crops don't pay, even my pretty flowers grow smaller and smaller, so from my "little room for improvement," I issue my orders. At once mold, or humus, leaves its rich bed and goes to the poor spots, but if left on as a coverlet, soon dries up and becomes worthless. We therefore cover it up, mix it through the poor soil, and at once, as by magic, the plants grow as they should. If for potatoes, when much potash is needed, we apply ashes, and the same for Strawberries, because ashes from burnt wood contain potash in plenty. Coal ashes are useless as a fertilizer, but are good on heavy, stiff clay, to keep it from becoming too hard for vigorous plant growth. To produce a luxuriant growth of almost any plant, a little guano may be used. This powerful helper of mine is a dangerous fellow, however. His strength is wonderful, so we may mix him up with twenty times his bulk of common soil, before trusting him among our seeds or tender roots, else he would kill everything right and left. Sometimes rain becomes too frequent a visitor; he is a sad dog when let loose in a garden, but we get rid of him by making trenches on the surface to let him run off downhill, and loosen up the soil, that he may run down below the roots, ready to rise again when the sun, saying "dew come, dew come," calls him in summer. The sun takes a spell also, and dries the soil, the plants, roots, stems and all, but we attack the soil again with hoes and rakes, loosening it, to let up from below the excess of rain already there. When the supply of water in the soil is deficient, we cover the garden with anything to keep in what little there may be. We call it mulch, and it may be saw-dust, half-rotted straw or hay. Old half-rotted manure, fresh-cut grass, or any rubbish which will keep the sun out, and the water in.

Water in cultivation is as important to plants as to cousins in hot weather. These cousins, you see, I count as among my helpers; they occupy a corner of that "little room" I speak of, and when the race becomes improved it will be due altogether to the amount of cultivation they receive.

I will propose a mode of proving that cultivation is manure. I want each cousin to plant a few long blood beet seeds this season, to select a few, and hoe them just often enough to keep down the weeds, and then select a similar lot and hoe them well every morning, throwing the earth well up around them each time, and report progress on Oct. 1, 1880, to Uncle Mark. There will be some knowledge of gardening gained, some laudable pride indulged in, some little bragging, and some beets that can't be beat, as well as some that can.

Now, I must introduce my particular band of assistants to the cousins. They are human; they are all first cousins to each other, and the most important of the whole lot. Their names are Industry, Application, Love of Labor, Great Care, Close Attention, Perseverance, Courage, Pluck, Patience and Push.

Every cousin who loves flowers has some of these, and can cultivate all the rest, and what is very curious, in so doing will cultivate her mind, her health, her circle of friends, her grace and her beauty. A study of the topic, which I have touched but lightly, will lead to much good. It will develop principles. There is a principle governing every step in cultivation, which, if well understood, will tell how, when and where to work, and also why—the great why, the stumbling block to all beginners, the first thought which enters one's mind when set to work.

Why must I do so? The usual answer given by ignorant persons is this, 'cause—but, 'cause why. Why 'cause. That stops all further inquiry, but Nature is kind in heart, and to those who will study her always gives the true reason. So, my dear cousins, first think, then inquire, then apply. Never stop asking "Why" till you know everything, then keep your knowledge bright by constant use.

Can any of you tell a gardener's spade from any other? Notice that it is always bright and clean by constant use and care. Even the handle becomes smooth and polished.

Three other helpers, though last, not least, I employ in my laboratory. Order, Neatness and Dispatch I call them, but if well treated they come without calling.

What greater pride can a cousin have than to walk out to her garden with a handful of seeds, and say to her friend, "Here are the seeds, there are the plants; without my care and labor they would have still been seeds." All then that stands between a seed and its flower is a little cousin, first cousin to the seed, third cousin to the flower, while they are second cousins to her. "Oh, my!" says Kitty Clover, "that's worse than roses on watering-pots."

Dodge Co., Nebraska.

THE SEED DISTRIBUTION.

Ere this reaches the young readers, the members of the Horticultural Club will have received their seeds, and the present distribution will be closed. The selection consists of seven kinds of seeds, two kinds of vegetable seed, and five kinds of flower seed. Their culture will be given at length in another issue, as want of space does not permit me to publish it this week. UNCLE MARK.

LETTERS FROM THE COUSINS.

UNCLE MARK:—I take my pen once more, this time to enquire what has become of the members of the club. I open the paper, week after week, and see not more than two or three letters, and those as a general thing are from those who wish to join. Of course the many that join make it all the more pleasant, but if they only write two or three times and then drop it they will hardly be profitable members. Those who used to interest me very much are utterly silent now. Will not Ivy favor us with a few lines once more? What a mild, pleasant winter we have had thus far. Yesterday (Feb. 2,) I had some Pansies in bloom in the open air, where they had been all winter, with no protection whatever. To-day they are surprised by a heavy wind and snow storm. I have D. M. Ferry's Catalogue for 1880. Among the nut trees of which he speaks, I see the names of the English walnut, or Madeira nut, the almond and pecan. Can these trees be grown in Massachusetts? We are having very few flowers on our plants this winter. Last year we could, at most any time, pick a small bunch of fragrant flowers. We are not at all fortunate with house Roses. I suppose we do not give them proper treatment. Perhaps some of the cousins will be kind enough to tell me through the paper how they manage to make theirs grow so nicely. I must report a failure on Smilax, too. I put it away in a dark place, giving it very little water, in the summer, that the bulbs may rest. When it springs up I bring it to the light gradually. It grows fast until about six inches high, then stops, and, although looking green and fresh, it refuses to climb an inch higher until the next autumn. I must close now. CARNATION.

New Bedford, Mass.

DEAR UNCLE MARK:—I am a little boy seven and one-half years old. I go to school every day. I can read in the third reader, and know the multiplication tables; am learning addition now. I love to go to school and study, my teacher Mrs. Winans is kind and good. I have a dear, "curly-headed," little sister four years old, and a black-eyed baby brother six months old. I go to church and Sunday-school. I love flowers and wish to join the "Club," with the rest of the little cousins. We had no snow this winter, so I couldn't draw my sled; maybe we will have some yet. I have two dogs, Dick and Nell. I try to be a good boy. This is the first letter I ever wrote myself. No more at present from your little friend, FRANK E. GALPIN.

Marshall Co., Kans.

Glad to hear from you, Frank; write again.—U. M.

UNCLE MARK: If you will receive me as a member of the Horticultural Club, and the members will receive me as a cousin, I will try to write a letter. I do not know much about flowers or vegetables. We have a few flowers and vines. I will tell you some of them. We have some Roses, Flowering Almond and some others, beside some little flowers. We have no box flowers. We have one vine that we call clinging Ivy. It will stay green all the time. It clings to several trees in our yard. I don't know whether it will kill the trees or not. It may but it has not killed ours yet. Well, my letter is getting long enough for the first. If it is printed I will write again. Please put my name on your list. Good-bye for this time.

Griffin, Ga. COUSIN URIOLE.

UNCLE MARK.—I should like to join the Horticultural Club if you will place my name upon the list. I am a lover of flowers and have generally good success. I like to read the letters from the cousins very much. Your well-wisher.

Butte Co., Cal. ALICE E. SNYDER.

The Puzzler.

HIDDEN SOVEREIGNS.

1. IT is an insult and I'll resent it.
2. Did you see our pet dog, Edward?
3. What a temper Orsina exhibited?
4. In a fit of pique Ena quarreled with her lover.
5. I did the problem on Archibald's slate.
6. Madame Dupres, I dented it unintentionally.
7. I read the edict at Orlanda's office.
8. I saw Eric Z Arin at the opera-house.
9. The skin grew quite inflamed.
10. As for the result a natural idot could guess.
11. Papa shall I go?
12. In her music Zara makes rapid improvement.
13. Take the pig over no road.
14. Draw it taut Oera that it may bear a tug.
15. I choose ecru, Lerma.
16. Essie, hie fast away.
17. Rie a lip has no use for a moustache.

LITTLE ONE.

RHOMBOID.

ACROSS: Enough; a town in Italy; a city in Italy; a town in Africa; a village in the Netherlands.

DOWN: A letter; a Jewish month; to undermine; a stratagem; a city in France; a town in Sweden; a measure of surface; a town in India; a letter. "GUS."

Waterloo, Ind.

TRANSPOSITION.

I lais no het grugins sconea dite,
Hewer teh vawes rea gtb dan het ase sl dlwe,
Rehwe mortss tof moce ot docul ym keiss,
Dan tibswol fo frieg nl kardenss saire.

☞ Answer in two weeks. L.

SQUARE WORD.

A three masted vessel of the Mediterranean. The world. Salt water. A volcano and vowel, Part of the human face.

☞ Answer in two weeks. L. O.

NAME PUZZLE.—Place six male names so as to form a seventh.

☞ Answer in two weeks.

NUMERICAL ENIGMA.

I composed of 10 letters. My 1, 2, 3, is an earthen vessel. My 4, 5, 6, 7, 8, 9, 10, is a waterfowl. My whole is a fairy. G.

PUZZLER ANSWERS.—March 13.

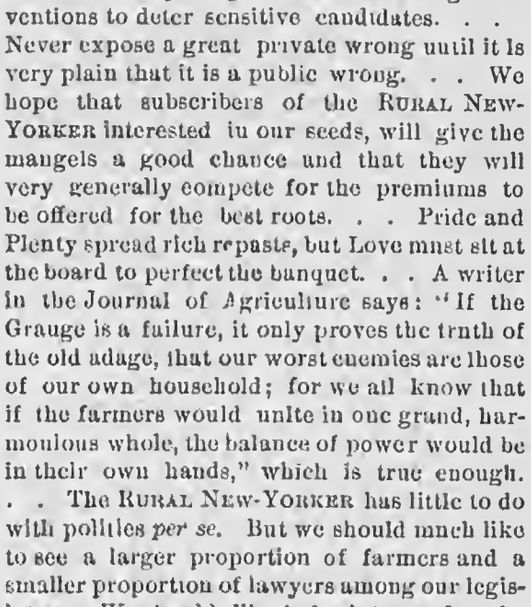
HIDDEN FEMALE NAMES.—1. Cassandra; 2. Catherine; 3. Cecilia; 4. Esther; 5. Celia; 6. Emma; 7. Christiana; 8. Ernestine; 9. Clara; 10. Emmeline; 11. Claudia; 12. Ellen; 13. Clementine; 14. Elvira; 15. Cora; 16. Ella; 17. Cordelia; 18. Elizabeth; 19. Cornelia; 20. Eliza; 21. Cinthia; 22. Dora; 23. Dorothy; 24. Edna; 25. Eleanor.

A FRACTIONAL PUZZLE.—"CHAMPAGNE."

BRIEFLETS.

TRANSPLANT Rhubarb and Horse-radish. . . Be ready for grafting. . . The Germantown Telegraph says: We never heard of a case of fire-blight in a pear-tree in a city yard. So of cracking in Pears. . . Peaches Apples, Cherries, all may fall; but when a Pear once comes in, it is tolerably sure to have more or less fruit every year. . . Mad. Charles Wood, Chestnut Hybrid, Triomphe des Beaux Arts and Paul Neron are fine Roses. . . In pruning shrubs, bear in mind that to prune those which bear flowers on the old wood, is to lose a corresponding number of flowers. Such shrubs should be pruned just after blooming, so as to give them a chance to form flower-buds for the next year. . . The Gardeners' Monthly calls attention to the Lantana as a summer-blooming plant. Few things beat it in beauty and the hotter and drier the weather is, the more freely it blooms. . . Mr. Dreer's new strains of Coleus are creating quite a sensation. . . Prune grape-vines. Remember that the same wood never bears grapes twice. The advice may seem needless but we have known persons to cut away all of the last year's growth and to wonder why their vines bore no fruit. . . One of the Alden apple driers at Adrian, costing $10,000, has paid for itself in five years! . . About 400 bushels of green fruit may be dried every 24 hours. It employs 60 hands. . . In reply to inquiries for canning, probably there is no better variety of green corn than Stowell's Evergreen. . . Mr. Harris thinks that barley will command a good price the coming fall. A great point in raising barley is to get it of the best quality. The land must be dry, clean, mellow and rich. Mr. Harris has used superphosphate with decided advantage. . . Sow as early as land can be put in good condition. Sow at the rate of two bushels per acre. Six-rowed barley is the most profitable kind to sow, as it usually brings from 10 to 15 cents more per bushel than the two-rowed. . Two-rowed barley is rather later than the six-rowed, though heavier. It produces, also, more straw. . . "Thoughts and Events" says: "It passes the understanding to explain why the free press should consider abuse a weapon of civilization.". . "Chaste as snow, thou shalt not escape calumny," ought to be worked in worsted and put up at all nominating conventions to deter sensitive candidates. . . Never expose a great private wrong until it is very plain that it is a public wrong. . . We hope that subscribers of the RURAL NEW-YORKER interested in our seeds, will give the mangels a good chance and that they will very generally compete for the premiums to be offered for the best roots. . . Pride and Plenty spread rich repaste, but Love must sit at the board to perfect the banquet. . . A writer in the Journal of Agriculture says: "If the Grange is a failure, it only proves the truth of the old adage, that our worst enemies are those of our own household; for we all know that if the farmers would unite in one grand, harmonious whole, the balance of power would be in their own hands," which is true enough. . . The RURAL NEW-YORKER has little to do with politics *per se*. But we should much like to see a larger proportion of farmers and a smaller proportion of lawyers among our legislators. We should like indeed to try for the once a farmer-president We hold that the intelligent study and practice of agriculture better fit a man to govern our country wisely than does the study of any other science, pursuit or profession whatever. . . Mr. Furman says that men who make their money in speculative ways, fail in farming nine times in ten. . . Col. Piollet says: "I wish I possessed the power to arouse the mind of every farmer in this land to resent the dastardly attacks that have been made upon a Department which, for the first time in its history, has a practical educated farmer at its head."

Stock and Poultry.



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HIGH CLASS POULTRY, Grape Vines, Small Fruits, finer than ever.
Send for circular. GEO. S. JOSSELYN, Fredonia, N. Y.

PERSONAL ITEMS.

M. de Lessups never touches alcoholic beverages.

Ex-President McMahon is preparing his memoirs.

Senator Davis of Western Virginia is reported the richest man in that State.

The Duke of Sutherland owns 1,208,546 acres of and, and the Duchess 149,879 acres in her own right.

There is a rumor in England that James Gordon Bennett has hired an English nobleman to manage his stable for him.

Ex-United States General Spinner resides permanently in Jacksonville, Fla, and has not been out of the State for fifteen months.

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Have just been completed, by which we are enabled to supply the "Compound Oxygen" for *home use* to any extent, and to all parts of the country, *giving at the same time the right of free consultation by letter during the whole time a patient may be using the Treatment.*

Every case submitted to us will be, as we have said, carefully considered. If we see a reasonable ground for anticipating the favorable action of 'Compound Oxygen," we will encourage the patient to give it a trial; but if we think the matter at all doubtful, *we will frankly say so.* Write for our Treatise on "Compound Oxygen." *It will be sent free.* DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

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FOR SALE BY THE
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Prices $2 to $10 per acre on Long Credit; Circulars, Maps and full information Free on application to
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1,000,000 acres well-watered Timber and Prairie Lands along the line of the St. Louis and San Francisco R.R. for sale at from $2,50 to $8.00 per acre *on seven years' time.* Excellent for Stock, Fruit, and Farming. The best Tobacco Region in the West. Short winters, convenient markets, superior schools, low taxes, healthful climate, good society. Free transportation from St. Louis to purchasers of land. *Send for maps and circulars.*
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FARMS! *Illustrated catalogue free.* J. F. MANCHA, Claremont, Va

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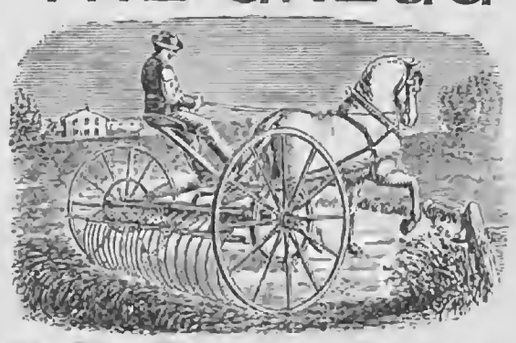
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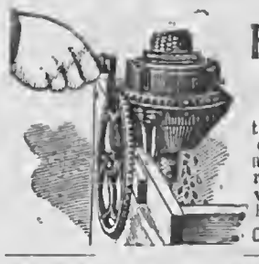
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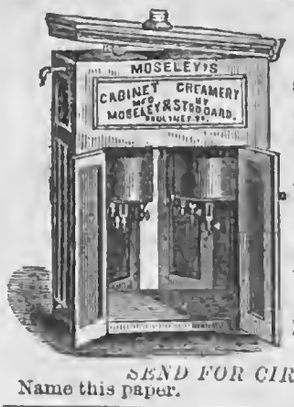

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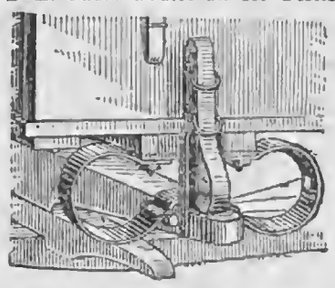
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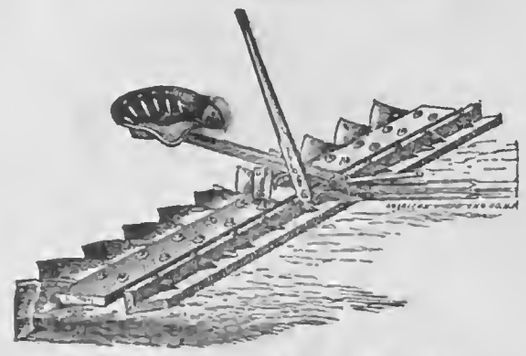
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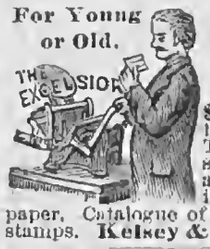

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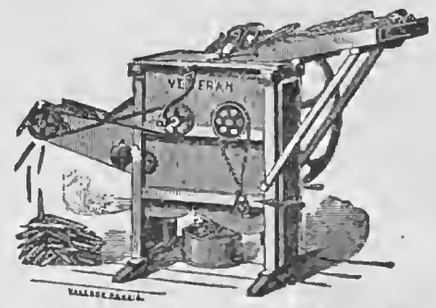

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XXXIX. No. 14. WHOLE No. 1575. | NEW YORK, APRIL 3, 1880. | PRICE FIVE CENTS. $2.00 PER YEAR.

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Horticultural.

NOTES FROM THE RURAL GROUNDS.

The Chinese Yam, Dioscorea Batatas.

The accompanying sketch of this vine was made last season from a specimen that has been growing here for several years. Little need be said as to the value of the roots. They grow from one to three feet in length, largest at the bottom. They are quite tender, breaking almost like a pipe-stem, so that, if grown in large quantities as a field or garden crop, the labor of digging them would cost more than the crops would be worth when harvested. As an ornamental plant, the Dioscorea is of much value. It is in every way as desirable as the Madeira Vine, while the roots, being quite hardy, the vine, when once started, needs no further care. The growth of the stem from the time it appears above ground until about June 10, is remarkable. It is like a *purple rope* without leaves or leaf appendages of any kind. This "rope" attains the hight of from 10 to 15 feet before the buds push, living meanwhile upon the nourishment stored up in the root, being a biennial in its nature, the same as the carrot, beet, parsnip turnip, dahlia or sweet potato. We mention this because it has often been stated that the Chinese Yam increases in size from year to year, whereas the yam of one season dies during the next. In early June lateral buds push and the stems soon become wreathed in

CHINESE YAM—DIOSCOREA BATATAS—(From Nature.)—Fig. 102.

foliage, as is shown in the engraving. It is well to pinch the leading buds if a closer growth of foliage is desired. Respecting the rapidity of the growth of this vine, we may say that several years ago, we tied a string as a mark and found by exact measurement that in 24 hours the stem had grown *eight* inches.

The flowers are borne in delicate racemes and emit a pleasant cinnamon fragrance, from which circumstance an enterprising individual, several years ago, sought to introduce it as a new plant under the name of "Cinnamon Vine." By this name it is still known in many places. In the axils of the leaves little tubers form which may be described as resembling miniature Early Rose potatoes. After the first frosts, these fall and, if buried in the earth, will sprout the ensuing spring. Or they may be collected and kept through the winter the same as potatoes.

The plant is dioecious. We have in this country only the male, so that true seeds never form. It seems odd that, in view of its beauty, the female has never been introduced, so that we might hope to raise seedlings of different varieties.

The large leaf within the vine and the bulblets underneath are of life size.

Our Free Seed Distribution.

In the RURAL of Feb. 28, we published instructions for the treatment of the seeds now being distributed to our subscribers. Since then we have received so overwhelming a rush of orders that our stock of Bebb's Hybrid Aquilegia has been exhausted, and being unable to procure more, we have been obliged to introduce a substitute for this variety. This substitute is a musk melon named "New Surprise" and we trust the "surprise" may be as pleasant as the fruit is excellent. This variety is entirely new. It originated in Washington Co., N. Y., and we have secured seed of the original stock. The fruit is of medium size, with thin, light-colored, finely netted skin and deep salmon-colored flesh. The culture of melons is so simple and so well known that it would be superfluous to give special directions for the planting of the seeds and care of the plants.

Field Crops.

HISTORY OF A POOR FARM.—No. 24.

Seeding to Grass.

GRASS is the most valuable crop we can grow, even upon a farm where soiling is practiced. Where land is cheap and the interest on its cost is low, pasturing is the most convenient and economical manner of feeding, but where the interest charge is twelve or fifteen dollars per acre, it will not pay to pasture cows.

"What does it cost to feed a cow?" asked my old neighbor. "I never kept any account on my farm and I don't know anything about what this or that costs, or what it pays. It is too late for me to begin now; but I see that a young man ought to know how to do it."

"It depends upon how a cow is fed," remarked Mr. Martin. "If a cow is fed upon straw in the winter and a run on a poor pasture in the summer, she may be kept for about $5 a year, and it will take very little milk or butter to pay for her feed and make a good profit; 100 per cent. or so."

"Do you call that a profitable business?" asked William.

"Well, 100 per cent. is good interest, is it not?"

"That depends upon circumstances," replied William; "it might pay some people, and not pay others. It would not pay you, for instance. You may keep 10 cows on your farm and make $50 a year out of them, but you would not be satisfied to live on that. It might pay a man in the Far West where he could keep 100 or 1,000 cows on the plains, and make very good interest on his money. There is a middle course which is best. It would not pay me or you, either, to keep cows that cost $200 or $300 each, in a barn that cost $10,000, and have them brushed and carded twice a day and their stalls sanded with white sand, and a man in attendance to remove the droppings or dry the floor with a mop on every needed occasion. That is what I call fancy farming, and pays nobody. But in a business way it will pay to make the most out of the land and stock by judicious expenditure. Now, I don't know precisely what our cows cost to keep, but I don't think it is less than $50 a year each."

"How do you make that out, William?" asked his grandfather.

"I have thought over it and talked it over with Fred, and we have made it out in this way:—Six cows pasture over 30 acres in the summer. The summer feed costs nothing more than the interest on the land; that amounts to $180, valuing the land at $100 an acre and interest at 6 per cent. The cow 10 tons of hay worth $100, in the winter, 50 bushels of corn worth $25, which makes, in all, $305.".

"You see the pasture is the greatest item," I remarked; "and your land is not really worth $100 an acre, because it takes five acres to feed one cow."

"The grass is not very good," replied the old gentleman; "it is very old and has never had any seed; it is all wild grass, too, that came in naturally. Many years ago we knew nothing of sowing grass seed, and, in fact, had none to sow, and clover was unknown here, then. Your clover field last year had more feed in it than all my 30 acres of pasture."

"And there were but five acres, which were cut three times, and furnished considerable pasture late in the summer besides. Twelve cows were fed nearly four months in all, from those five acres, which was doing more than four times as well as your pasture did; the meal they had was paid for in the larger quantity of milk they gave than yours did."

"It is a great waste of ground certainly," said the old gentleman, "but what can we do if we don't have the grass?"

"Get the grass on it," I replied. "Your pasture is natural grass land, and would produce twice as much as it now does, if it had a little manure; but if it had some grass seed on it besides and was well harrowed, I think it would produce four times as much feed. If I had that field of yours, I think I could feed 15 cows on it all the summer."

"How would you do it?" asked the old gentleman.

"I would harrow the old sod thoroughly and cross-harrow it until I had it loose enough to take some fresh seed. I would then sow some mixed grasses, as I am doing on a piece of my own low land; for instance, red top, timothy, fowl meadow grass, meadow fescue, creeping bent grass, and some others, all of which do well on low, moist ground; and then top-dress it with fine manure. If this did not succeed as well as I wished, I would put more seed on it and harrow it again, and persevere until I had a thick mat of grass in which a cow could stand to her knees. I would divide the field into five lots of six acres each, and pasture but one lot at a time; I would mow half the ground and by changing from one lot to another, I would have the grass always high enough for a full bite, and fresh and sweet. I believe the ground could be made in this way to feed 15 cows the year round on pasture and hay. Then, you see, the cost of feeding one of those cows would amount to only $12 a year for pasture and hay, instead of $30 which it now costs you."

"How long do you suppose that would last?" asked Mr. Martin.

"I should expect it to last as long as the land was so treated. Why not? If the field as it now is, has been kept in grass for 40 years or more, and still feeds six cows through the summer, why should it not remain two or three times as productive for 40 years more, if it is once made so. And if it will last 40 years, why should it not last a century?"

"What is the reason our grass lasts only two or three years and then runs out?" inquired Mr. Martin.

"Because we sow it only for such a purpose and we do not use grasses that are of a permanent character. The usual plan is to sow timothy and clover. The clover is a biennial plant, and runs out after the second year. The timothy has a bulbous root which does not spread, but grows in clumps and bunches and leaves two-thirds of the soil bare. With several kinds of grass maturing successively, the soil would be fully occupied, and the sod would be green from spring to fall, and indeed through the winter. One of my fields is seeded with a mixture of blue grass, Rhode Island bent, red top, creeping bent, meadow grass, and meadow fescue, and the grass was cut last season several times, and is now green and thick enough to give an excellent bite, if I wanted to pasture it. The sod is only two years old and you cannot see or feel the ground under the grass. It is thickly matted and denser than any sod of single grass I have ever seen."

"You have spent a great deal on that field," remarked my old neighbor. "You put bone dust and guano and plaster on it, and last fall top-dressed it well."

"Certainly," I replied; "and you may see the result. 'Out of nothing nothing comes.' I have said that grass is our most valuable crop, but it is rarely treated as such. It is sown when the ground is worn out by three or four grain crops, and needs a rest. Then, when tired out, we seed the ground to give it a rest, and we complain if it does not respond with vigor. It is exhausted; the seed does not 'take;' we have a half or a third of a crop; and it lasts but two years. If, on the contrary, we treated the grass as we treat a grain or a root crop, what would be the result? We should double the product and we could make our meadows and pastures perennial. I have seen leaves—not stalks—of blue grass three feet long on the old blue grass fields of Kentucky, and there are pastures there which have never known the plow from the day the ground was cleared a hundred years ago, or more, until now, and are never likely to be plowed up. Yet you say grass will run out after two or three years. Blue grass has running roots which fill the soil and form a dense sod, and completely occupies the ground. But the most valuable grass is that of which there are several varieties which furnish successive growth. We cannot have a vigorous growth without feeding it, and I have aimed to feed my field well, in the hope that the grass will pay for the feeding as well as would corn or roots. And it promises to do so."

"It is a mixture of grasses from which the thick growth is made," remarked Dr. Jones. "It is a fact that mixed varieties of plants seem to thrive better together than any single one alone. I have observed this fact in woodland. A beech wood is open, and every lover of art knows the beautiful contrast of light and shade that may be observed when the sun shines through a beech forest. It is so with every single variety of tree; the dense woods are those in which many varieties grow together and crowd each other, each seeming to vie to outgrow its neighbor. In a meadow we can grow twice as much clover and grass as of either alone; and so with mixed fodder crops, as oats and peas, or barley and vetches. I believe the different plants take up different kinds or quantities of food, and one appropriates what another leaves. The fact is so, however, and it is our business to know it and avail ourselves of it."

"I thought you did not approve of pasturing at all, and wanted to feed everything in the yards on fodder brought to them," said Mr. Martin. "Have you changed your mind?"

"I am trying to make my farm carry all the stock it can, and to make as much profit out of it as may be possible. I am not farming for an idea, but for profit. When I began here there was not a blade of grass growing on the farm, and the soil would not produce a grain of rye or a clover blossom. In three years I have 25 acres in good grass; I have 12 acres this spring well manured for roots and corn; an unsightly swamp drained and cleared and part in grass; I grew enough last season to feed 25 head of stock with fodder through the summer and half through the winter, and counting the manure made at what it would cost me to buy it and the increase of stock, I have had all my outlay returned. I have done it all by soiling, and by artificial manure. Nevertheless, to feed stock by soiling is a great care; everything must go on like the best of clock-work; one must be on the watch and the jump all the time; and I must confess I anticipate the time when I can turn my cows out to pasture, with the greatest pleasure. But it will not pay me, unless I can make an acre of pasture carry one cow for six months. That is what I am trying for. My farm was a poor farm. You and all my other neighbors confess it is greatly improved. It is now a moderately good farm, and by-and-by I hope it may be thought a very good one. Time is a necessary element, as I have said before. Grass needs time to grow, and without some good grass fields, my farm would always be a poor farm. This is my creed and I don't pin my faith to soiling or any other system, altogether. I want to do the best I can in my peculiar circumstances. But I can never get along without soiling to a large extent in the summer time; nor can any farmer whose special business is the dairy. And if there is any branch of farming that pays better on a poor farm, or helps to improve its condition better than dairying, I have not discovered it or heard of it; for more goes on to the land than goes out, if the farm and business are well managed. And that it must tell—in time."

STARTING TOBACCO PLANTS.

G. A. GOFF, JR.

I HAVE received some questions on the above subject, which seem to me of enough general interest to justify an answer in the RURAL. I will offer a few hints in regard to the young plants, that I have gathered from my own experience and observation, trusting they may be of use to some who are inexperienced in this line of farming.

The first thing to be considered in raising tobacco plants, is a place to sow the seed—or the "seed bed." For securing early plants the common cold-frame used by market gardeners, is generally employed, which is so well known that it needs no further description. This frame is covered with glass early in the spring, and as soon as the ground beneath, or the bed, becomes dry enough to work, it is forked over and prepared to receive the seed. This preparation should be thorough. The soil should be rich and made friable, so that it will not bake or become lumpy. In making new beds it is best to draw a few loads of rich soil or muck from some rich spot and apply it to the bed. Such soil may be found in the woods or often under old stables; but in either case it is likely to contain seeds of weeds, which are sure to make trouble unless some precaution is taken against it. This is best accomplished by preparing the bed the previous season, frequently forking it over to give the weed seeds a chance to germinate and then be destroyed.

If plants large enough to set are desired before the 10th of June, the seed should be started or "put to sprout" by the 1st of April. One-third of a pint will sow 200 square feet of bed, and will, with good success, furnish enough plants to set three acres. Mix the seed with muck or fine sand, and place by the stove till sprouted, being careful to keep the mixture moist and warm. When sprouted, sow the seed evenly over the bed and carefully rake in with a fine-toothed rake. The seed must not be covered deep, or it will not grow. Indeed, many do not cover the seed at all, simply sowing it on the surface. In either case it should be well "firmed" down with a wide board. In a week or ten days the young plants will begin to show themselves. At this stage of their growth they are exceedingly tender, and care must be exercised to keep the surface of the soil from becoming dry. Tepid water should be used for watering the bed, and it should be applied with a sprinkler having a fine rose; otherwise the seed will be washed out and destroyed. Until the leaves become as large as a silver dime the growth is very slow, and about half of the time of the growth of the plants while in the seed-bed, is consumed while they are attaining this size. After they have done so, the growth is more rapid if circumstances are favorable, and in a few weeks the leaves will be as large as a common tablespoon, when they are ready to be transplanted to the field. Nothing is gained by setting small and sickly plants.

In regard to growing plants without glass, good strong plants may be produced in the open ground. Of course, they will not be as early, but they will be tougher and better able to stand transplanting. Growers who plant a considerable amount of tobacco should have some early plants, so as to have a succession of settings, and therefore must raise some plants under glass; but where only an acre or so is to be planted, enough plants can be grown in the open ground to secure a setting, and with careful management they will be early enough to set by the 20th of June, which in this latitude will, in most cases, give the plants time to make their full growth before autumn frosts. In summing up; we find four points essential to success in securing a bed of strong, healthy, and early plants: 1, a properly prepared seed-bed, with a rich, mellow, and friable soil; 2. an even sowing of seed, the proper thickness, having first been sprouted in muck or sand by a fire; 3, close attention to the plants during the first four weeks after sowing the seed, with frequent sprinklings with tepid water; 4, keeping the bed free from weeds during the whole season.

If these rules are strictly followed, there need be no fear of failure to secure an abundance of strong, healthy plants, which will be one great step towards growing a successful crop of tobacco.

Chemung Co., N. Y.

SOME OF OUR LEADING GRASSES.

PROFESSOR W. J. BEAL.

THE writer has long entertained the idea that farmers limit themselves to too small a number of grasses and clovers, especially when we consider the great diversity of our soil and climate. There are several reasons why farmers raise only a small number. The seeds are not in the market, or if they are, some of them are costly, often too much damaged to grow, and very likely not true to name, or mixed with seeds of foul weeds. Another prominent reason for the selection of a few species is the fact that many of them look much alike and cannot be distinguished by any but a botanist.

When there is a demand for these grasses, and only good, true seeds find sale, some one will supply the market. Owing to the reasons named, but few persons are bold enough to leave the beaten track and try anything except timothy and red clover, and, perhaps, one or two more species. Home-grown seeds are likely to be the most desirable, as they are less likely to contain seeds of foreign weeds.

The number of our native grasses is much greater than is generally supposed, a single State, like Michigan or Illinois, containing not far from 120 species, to say nothing about as many more sedges and rushes which much resemble true grasses. A grass is not necessarily the best adapted to a country because it is a native of that country. Look at our weeds and some other introduced plants, and see how they drive out our native plants.

The cuts of grasses in the Report of the Agricultural Department for 1878, are excellent. The Editor of the RURAL has had some of the most important cuts reproduced for the benefit of his numerous readers.

BROMUS UNIOLOIDES—Schrader's grass, Rescue grass. The genus Bromus includes the chess, or cheat, which is often troublesome in wheat fields. The species first named, is an annual in the Northern States. Several spec

of Bromus have been highly commended from time to time by the press, and especially by some seedsmen. The seeds are large and easily collected; the grass is a rank grower. The quality of all with which the writer is acquainted (some dozen or more species) is quite inferior. The grasses are coarse and not very nutritious. The species under consideration is one of the best, and has often been freely disseminated. Our common cheat, or chess, was once advertised as Willard's bromus. In the report from which our cut is taken, the grass is now highly spoken of as a winter grass for the Southern States. At that time of year any green pasture is desirable. For this purpose, one writer in Texas "regards this grass as a wonderful and most important discovery." In Georgia, where it has been tried, less is thought of it than when first introduced.

Turnips Among Corn.

It is a well-known fact that people are more willing to tell of successes than failures, and for that reason I would like to tell the readers of the Rural how I raised a good crop of turnips without much expense.

As our land is mainly devoted to grazing or meadow, we do not expect to obtain a good corn crop without manuring in the hill. The kind commonly used is hog-manure and the manner of raising turnips is to scatter the seed over the load while loading up, and that is all there is of sowing the seed.

The next care they will need will be to thin them out when the corn is hoed. I sometimes leave as many as three, but commonly only one plant in a hill.

As the main part of the growth is in the fall after the corn is cut up, I think they are a better and more profitable crop to grow among corn than pumpkins. In harvesting, I usually drive through the field, pulling several rows at a time and throwing them, tops and all, into the wagon, haul them to the barn and unload on the floor where the tops can be cut off at leisure and the roots taken to the cellar or pit. My crop, this year, was about 140 bushels per acre; the corn crop 100 bushels of ears per acre, which was quite as good as my neighbors', if not better. I have tried several varieties and find Rennie's Prize, the best, as it grows to a good size, is smooth, a good keeper and excellent for the table or stock—only it does not cook as readily as some other sorts. M. E. M.

Pomological.

PEACHES AT THE NORTH.

The idea has been, and still is prevalent that there is no object for Northern farmers to try raising peaches. That the peach is our most delicious fruit all admit; that the trees are easily grown, all acknowledge; that the climate south of 42½° of latitude is not too severe usually, is also true. But still few have any confidence in the practicability of raising this fruit. Occasionally an inquirer wakes up to a determination to try. How shall he do it? There are obvious difficulties; let us look at them.

First, the Yellows—an insidious disease which has been the great drawback in peach growing for at least 75 years; a disease contagious and hereditary. How shall we elude it? I desire to say here, in passing, that there has been great negligence or criminality among propagators in the selection of seed for planting. It is a well known fact that in the peach regions of our country great quantities of peaches, which from inferior size and premature ripening, are unfit to ship to market, find their way to canning or drying establishments where they are used, and hundreds of barrels of pits are there accumulated and held for sale at a very low rate. These have been used to a great extent in producing the young trees which have occasioned so much disappointment to the peach growers of our section; for be it remembered, a diseased pit can only produce a diseased tree. Now what can be done about it? Make no purchases of trees unless you have a clear pedigree, so to speak, of the health and purity of the seed. It is not enough that it comes from North Carolina, West Va., or Tenn., you should have convincing proofs that it has come from orchards of natural seedlings, in which no disease or premonitory symptoms thereof have ever showed themselves. Having trees produced from such seed, raised on new land, budded from trees of untainted health and set remote from any diseased trees, there is every reason to expect success and with good care and cultivation there will be little occasion for failure.

Second, another fruitful cause of failure, even with good trees, is the peach borer. The trees should be carefully examined in spring and in September, and every borer removed. A free application of oyster-shell lime is excellent about the collar of the tree as a preventive. A wash of tobacco lye or a strong soapy application is excellent for the same purpose. Vigilance and promptness are all that are needed to circumvent this difficulty. We should cultivate the ground every year, at first planting some such crop as corn, potatoes, onions, or some other root crop; or beans, peas, tomatoes, or even buckwheat, but we should not allow grass, rye, wheat, oats, or any other cereal.

When the trees begin to bear, cultivate shallow, manuring sufficiently, but drop all other crops and secure choice peaches only. It is well not to disturb the ground after July, in order not to induce a late growth of wood, so as to secure well ripened wood and mature buds for the next year. A growth of young wood and a very rampant and succulent growth are two extremes to be carefully avoided, and the *golden mean*, between the extremes, is the sure ground of safety and profit.

SCHRADER'S GRASS—BROMUS UNIOLOIDES.—FIG. 103.

Manures suited for the Peach are:—well rotted stable manure in moderate quantities, bone dust or bone meal evenly dressed over the entire surface, ashes, or in the absence of these, muriate of potash. A free application of oyster-shell lime upon the entire surface is a healthful dressing. Tobacco stems, too, are good; but all these should be used with care and prudence.

He who lacks all faith in Peaches should try the Troth's Early, Mountain Rose, Old Mixon, Stump the World, Barnard, Crawford's Early and Late. The early Northern Peaches are in close competition with better varieties from the South. Troth's Early, though not equal to some later sorts, has been remarkably healthy and productive with me. The Old Mixon I regard as a very hardy, healthy and productive variety. But the number of choice sorts is numerous and the above list can be increased at the taste and will of the planter

When an orchard has passed a series of productive years and finally declines, so as to need removal, do not cut down the trees; rather take your team and, with chains about the head of the tree, pull it out. It is easily and quickly done, and then the field is fit for Pears, Apples, or any other trees, except Peaches, which should not again be planted within a period of 16 to 20 years. But the small expense of even the best Peach trees, and the slight labor of removing them when past profitable bearing, are amply repaid even by three or four crops of fruit, if we can feel sure of so much. P. M. A.

Middlefield, Ct.

CHINESE PEARS AND CROSSES.

About forty-five or fifty years since I received the "Sha lea," or Chinese Sand Pear, from the late Wm. R. Prince, of Flushing, L. I. The tree made a vigorous growth, and soon came into bearing, producing bushels of its beautiful large fruit. As this never became soft, we didn't know what it was good for, as it was not salable in a raw state. I raised many seedlings from it. These grew up four to six feet the first season, and I thought I had some valuable stocks to work other varieties on, but I soon found that though grafts of other Pears would not do any good on these stocks—they would barely live, but did not flourish—yet these Pears grew and throve on other pear stocks quite freely.

Some of these seedlings I have fruited, and in the appearance of trees and fruits, they are very similar to the original "Sha lea," but the fruit becomes more soft, and the trees bear heavy crops annually. Neither blight nor insects have ever affected trees or fruits. Lately we have found these Chinese pears excellent for canning, and especially for preserving, and for these uses they are superior to all other pears. Being very sweet, they require less sugar than others.

In a late issue of the N. Y. Weekly Tribune, Mr. Charles Downing describes the Le Conte Pear, which is evidently a cross, as is the Kieffer Hybrid and several others. Mr. Prince also had another Chinese Pear, which he called the "Suet lea," or Chinese Snow Pear, so that some of the crosses may be from this strain. A friend in Indiana informs me that he has now nine varieties, and knows of several more. There is a great prospect that by crossing these Pears with some of our sweet Pears, new varieties of great value may be produced. T. B. G.

Dairy Husbandry.

STANDARD FOR DAIRY COWS.

PROFESSOR I. P. ROBERTS.

Will It Pay To Keep a Milk Record?

I find the following in the N. Y. Tribune:

— Professor I. P. Roberts, of Cornell University, according to Professor Arnold, originated the excellent idea of A STANDARD FOR DAIRY COWS BASED ON ACTUAL PERFORMANCE, when at a meeting in Utica three years ago he remarked that "A cow weighing 1,000 pounds to be called good, ought to give annually 8,000 pounds of milk." Mr. Solomon Hoxie, of Whitestown, was impressed with this view, and applied it practically to the improvement of his own herd; and subsequently Mr. W. L. Rutherford took a step further by suggesting that the enterprise be given a scope including the whole country. Thus started and getting into print, the idea found numerous supporters, and finally took form in the "National Dairy Cattle Club" But this new organization, Professor Arnold thinks, has aimed too low. * * * *

The late discussions at public meetings bring this matter directly before the interested public, and I am glad of it, for I am tired of long pedigrees that are "too thin" to hold milk. I find, by reference to my notes, that, two years prior to the date given above, I suggested to my class in Agriculture the desirability of keeping a milk record with every cow. For several years I have been weeding out our dairy by simply weighing the milk for short periods. More than a year ago, I commenced to keep a systematic record with all cows that from former tests were considered worthy of a place in the dairy.

In the following table is given the record of four cows that have completed the year, and also the record—so far as made—of two young half-blood Holstein heifers. The record is given in the exact form in which it is kept in the dairy ledger, except that numbers are used instead of names to designate each cow. I hope it will give some useful hints as to form, to the thousands who, I trust, will from this on keep a record with all their cows, except those already condemned.

Name or No.	Breed.	Age.	Average weight.	Date of calving. 1879	Marking of calf.	Sex.	Blood of calf.	Milk record began.	Estimated yield.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total lbs.	Times weight of cow.	Due to calve. 1880	Ds.	cts.
No. 1	Cow.	7	1086	Jan. 17	L. V.	C	½ H	Feb. 10	541		689	1049	853	1076½	1076	775	614½	463	459	347	114½	8056½	7.42	Feb. 28	161	13
" 2	"	7	1019	Dec. 29	D. V.	C	½ H	Feb. 10	903		541	809½	735	899	829½	656	492	257	80½			6204½	6.08	Jan. 10	124	09
" 3	½ Short-horn.	7	1118	Jan. 30	D. V.	C	½ H	Feb. 10	176½		659	1145	1047	1159	1041	841½	747	630½	563	472½	160	8631	7.72	Mar. 11	172	62
" 4	Cows.	8	860	Mar. 11	B. R.	C	½ H	Mar. 18	52			371	820½	894	818½	714	619½	567	587	412½	602	6631	7.71	Farr'w	132	62
" 5	½ Holstein.	2	1050	Mar. 8	D. V.	C	¾ H	Mar. 18	109			349½	692	808½	638	549	435½	394½	456½	605½	362½			Mar. 17		
" 6	"	19 mths.	918	Sept. 18	V.	C	¾ H	Sept. 23										196½	690½	585½	607½					

In the column marked "estimated yield" is recorded the amount of milk given—based on the subsequent yield—from the time of calving (less five days) to the time of removing the calf. All of the cows have been used for about one-half of the year for experimental purposes. Their rations were thus of necessity quite varied, sometimes hay alone, and at one time, hay with one-half bushel of meal per cow, per day. Cow No. 4 was gradually fed apples till she refused them, after eating 56 pounds per day for ten days; at which time she had perceptibly fallen off in her milk, but she recovered rapidly and gave her normal quantity at the end of one week. Subsequently *cut* food *dampened* raised her yield to nearly that of August. The milk of the dairy is sold at an average price of two and one-fourth cents per pound. The cost of delivering is one-fourth of a cent per pound.

No. 1 cost $45; No. 2, $35; No. 3, $45; No. 4, $30. No. 2 would usually be considered a *good* cow. I bought her for such, but No. 3 not only gave as much, but an *excess* to the amount of $48 53. This is more by $3.53 than the first cost of the cow.

Will It Pay To Keep a Milk Record?

I propose now to analyze the milk of each cow so far as to determine the amount of solids. Since the little seed—(sentence) "A cow weighing 1,000 pounds to be called good, ought to give annually 8,000 pounds of milk," is, under the fostering care of such men as Hoxie, Rutherford and others, about to produce such an abundant harvest, let me drop another one, trusting it will fall in as good ground:—"A man to be called a good dairyman should never—except for a short time in extreme cold weather—allow his milch cows to be in a temperature below freezing. Below is given the average daily temperature taken at 5:30 A. M. and 5:30 P. M., beginning Sunday Jan. 25th.

	Out-of-doors.		In the Cow Barn
Sunday,	34 degrees		48 degrees.
Monday,	33 "		56 "
Tuesday,	39 "		54 "
Wednesday,	36 "		57 "
Thursday,	35 "		52 "
Friday,	22 "	Very windy	48 "

Cornell University, Ithaca, N. Y

THE FAIRLAMB SYSTEM, AGAIN.

As a constant reader of the RURAL, and one feeling much interest in the improvements amongst dairymen, I cannot avoid taking issue with your correspondent, D. W. C., in the RURAL of March 6th, upon the system of gathering cream for creameries. I am willing to admit the patron who supplies a creamery with milk of a rich quality at the same time that his neighbor furnishes a poorer article, does not receive his just award in the returns of his butter, but the plan described has not, as is claimed, "solved this whole question."

Dr. Sturtevant, of Mass., shows a difference in quality of cream quite wonderful, running from 18.18 per cent. to 56.80 per cent. of butter, the latter from cream of the Jersey cow, the next highest being 42 per cent. He says, "We find from these analyses that some creams may yield three times as much butter as other creams. In other words, that milk yielding 10 per cent. of cream may furnish more butter than another indicating 30 per cent. of cream," and he concluded further "that there is not necessarily any connection between the cream percentages and the butter yield." The modest cow with a small percentage, *may* make more butter than the vaunted cow which is supposed to average 25 to 30 per cent. of "cream." Prof. Voelcker presents similar facts.

Mr. Willard states, "cream varies in composition according to the circumstances under which it is produced, and as a consequence of these differences in the composition of cream, *variable quantities of butter are produced from a given bulk of cream.*" Prof. Arnold adds this testimony: "It must not be understood that cream is all supposed to be alike in respect to gravity or value, for *neither is true.*" The italics are mine, and I could add further testimony did I consider it necessary. Now pray tell me, with these facts before you, what advantage has the Fairlamb system over the usual mode of delivering milk, so far as justice between patrons is concerned?

Again, we know dairymen are mortal and we *have* known of instances where they have watered their milk, even in the face of a stringent law to punish the offence, and is it at all unlikely that some mortal of a farmer would water cream when it can be done without fear of the law, and in the manner in which I will exemplify as follows: Take a given quantity of milk thoroughly mixed and divided equally into two of the vaunted glass guage cans; mark them Nos. 1 and 2. Set No. 1 in the usual way for raising cream, be it in spring water or a cool cellar. No. 2 is plunged into an ice bath and at the end of two hours, if the milk is warm from the cow when placed in the cans, you have fully 20 per cent. of cream to let Mr. Teamster skim from your can No. 2, provided you time your work for the calling team. No. 1 can, after setting the usual time of 12, 24 or 36 hours, only gives 15 to 16 per cent. of cream which has, like the nature of the beast that produced it, moved slowly and perchance gracefully to its resting place, while the cream of No. 2 has rushed along like a worried cow, and carried milk with it—has in fact *watered itself.* Let No. 2 set 12 hours longer and the cream will show only 15 to 16 per cent.—the milk has returned to where it belongs.

To my mind the "Fairlamb system of gathering cream" is not the *Ultima Thule* of justice to dairymen patronizing creameries. D. C. O.

Jersey Milk for Babies.

Because Dr. Hoskins has failed to discover in his inquiries any instance where Jersey milk has been found to be unsuited, or in other words, indigestible for a young child or a calf, he assumes that Dr. Sturtevant and others are mistaken when they insist that it is. We must remind Dr. Hoskins that there may be a difference in Jersey cows, and in stomachs. We believe we were the first, nearly three years ago, in the N. Y. Tribune, to assert that in some cases, Jersey milk was unsuited for young children. A baby at the time was being fed on Jersey milk, and although the child was more than a year old, and had been perfectly healthy while nursing, the Jersey milk made it sick. A change to Ayrshire milk corrected the trouble. Probably if the milk had been diluted by making it one-third water, there would have been no trouble. A number of years ago, we nearly lost a Jersey calf by allowing it to suck its mother. When changed to an Ayrshire cow, the scours ceased. Care should be had in trying to rear infants on Jersey milk,—outside of Vermont; at least this is our experience. F. D. CURTIS.

The Herdsman.

NOTES FROM MEADOW GLEN FARM.

Spring Management of Sheep.

THIS is an important and busy season for the sheep farmer, especially if he expects early lambs. The ewes require close watching, and their feed should be increased for two or three weeks before they drop their lambs, in order to increase their milk yield afterwards. Ground oats and wheat shorts made into a slop are very good. They should not be allowed to run out on the bare ground, as the sight of the grass tends to make them uneasy, and takes away their appetite for dry feed. As the lambing time approaches, it is quite necessary to keep them as quiet as possible, and now comes the advantage of having a tame flock, so that one can pass around and among them without causing any alarm or crowding one upon another. If they have been handled rightly from the time of mating, there will seldom be any trouble in lambing; but in case there should be, those who are inexperienced should send for some one who understands the trouble.

After the lambs are dropped, the ewes should have the best of feed; for, as a rule, it is better to increase the milk in the ewes than to force the lambs to eat anything beyond what nature has provided for them. All manure and wool should be removed from the udders of the ewes, and they should always be tagged before they are turned out to grass. Should there be many twins, or, should the ewes be poor nurses, the lambs should have extra feed, such as that given by a new milch cow. This should be fed, while warm, from a bottle through a rubber nipple. If it is necessary to raise a lamb by hand, it can be taught to drink milk as well as a calf. As the lambs grow older, they may be taught to lick oat and corn-meal with a little salt, keeping it in a separate pen with an opening large enough to admit the lambs, but too small to let in their dams. Lambs that are to be raised should be docked, and the buck lambs that are to be fattened should be castrated when two weeks old, for at that age the operation causes them but little pain. It is needless to say that the flock should be kept from all storms or cold winds at this season, yet there is nothing they enjoy more than sunshine.

A Profitable Ewe.

We have a Cotswold-Merino ewe two years old, which dropped a pair of twins—buck and ewe—on April 12. The buck when sold to the butchers, weighed 77 pounds, which, at five cents per pound, brought $3.85; the ewe lamb was raised and valued at $5, which is a low price. In addition to this the dam sheared nine pounds of washed wool which at 33 cents per pound, made $2.97, so that this ewe yielded last year a total gross income of $11.82.

Ugly Bulls.

In the RURAL of Feb. 28, Col. Curtis recommends tying ugly bulls with a slip-noose; will he explain what kind of slip-noose is to be used. We would find it difficult to sleep well if we had left one of our bulls tied in that way. The old adage, never to trust a bull, is a good one. ABEL HOYT & SON.

Saratoga Co., N. Y.

DEVICES FOR MANAGING STOCK.

ON small farms where but few cattle are kept, it is always better that each animal should be "halter-broke;" yet it often occurs that a wild or refractory one is to be removed

FIG. 104.

from one locality to another. This is usually an easy matter when several head are to go together; but when the unruly one alone has to go, it sometimes proves quite a difficult undertaking, and results in ill-temper all along the line of men, boys and dogs, if not in injury to the beast. If a cow is to be driven along an unfenced road through woods, she can be prevented from straying away from the path by securing a strong pole to the horns—fig. 104. Another effectual means of controlling a wild steer, is by a strong surcingle around the body, through which two ropes attached to the fore-feet pass, of such length that the driver can walk behind the animal—fig. 105. When any attempt to run is made, pull the beast up and

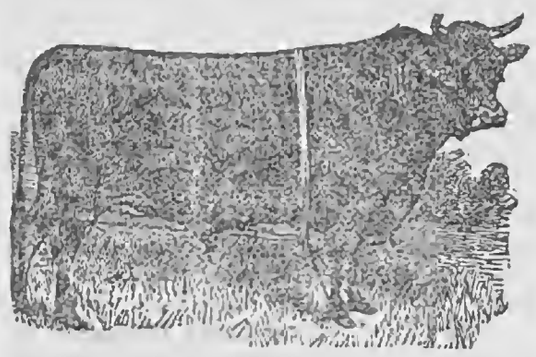


FIG. 105.

he comes down on his knees, and soon finds himself in the hands of his master and goes quietly along. I once owned an ox that could not be trusted to obey when even a few fee away. A few lessons with the ropes made him obedient and safe.

Another little device I have in use is what we

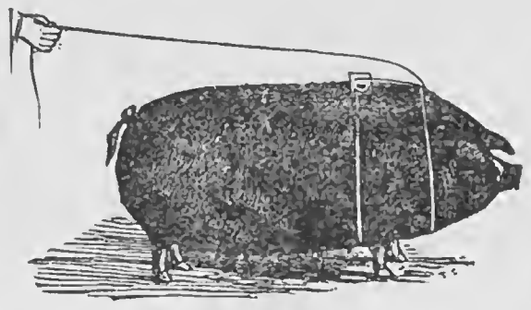
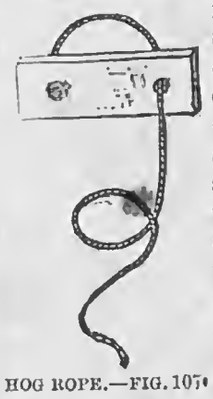


FIG. 106.

call a "hog rope"—fig. 107. A little block of oak or hickory, three inches long, an inch and a half wide, and half an inch thick, has a hole near each end, large enough to allow the rope to run easily. Make a knot in one end of the rope; pass the other end through one hole and back through the other, and you have a "slipnoose" that is reliable. To secure a pig by the nose, place the wood so that it draws flat across the roof of the mouth. A much better device than a rope on the hind foot, for the purpose of leading a pig, is to slip the noose around the pig, just behind the fore-legs, with the block on the back; then take another turn around the neck, and you have him haltered in the best way that a hog can be—fig. 106. M. B. PRINCE.



HOG ROPE.—FIG. 107.

The Swine-Herd.

FEEDING SWINE.—No. I.

A Letter from Dr. J. B. Lawes.

The RURAL NEW-YORKER of the 17th of February, contains an article upon pig feeding, written by Professor E. W. Stewart, which appears to me to call for some comment. I do not feel the same hesitation in writing upon this subject, as I should in writing on many others connected with agriculture in the States, for the United States pig, if his ancesters did not emigrate with the Pilgrim Fathers, has, at all events, a very close relationship with the British pig of our own day.

It has been observed that emigrants from this country after a few generations of residence in the States, lose that rotundity of form and aptitude for laying on fat which are generally supposed to be characteristics of John Bull. Whatever may have been the origin of the United States pig, a residence in that country has not in any way reduced his appetite or impaired his digestion.

Professor Stewart, in his article, refers to some experiments made by a committee of two Farmers' Clubs in Connecticut, and also incidentally alludes to experiments in pig feeding made by me at Rothamsted.

The Connecticut experiments were to test the comparative value of corn meal, corn-and-cob meal, and whole corn. The only one of these three particular foods which was employed in the Rothamsted experiments was corn-meal, and our results agree very closely with those obtained by the use of the same food in the experiments carried on by the committee of the two Farmers' Clubs in Connecticut. The committee obtained an increase of one pound of weight by the consumption 4.34 pounds of corn-meal, and my results show an increase of one pound by the consumption of 4.90 pounds of the same food. The States' pig had, therefore, all the fattening properties of the English, and a little over.

Professor Stewart finds fault with the prevailing idea that pigs thrive on the most concentrated food, which he characterizes as "perhaps the error leading to the most disastrous consequences," and he further adds "this error has not been confined to unthinking farmers; for the experiments of Dr. Lawes, of Rothamsted, and of Dr. Miles, at the Michigan Agricultural College, in pig-feeding, were conducted wholly with concentrated food in determining the value of corn-meal, etc."

Professor Stewart is quite mistaken in stating that the Rothamsted experiments were conducted wholly with concentrated food—amongst many other kinds of food, we made use of bran, for instance, which the Professor says is an excellent food to mix with corn-meal; and I give the results of two experiments—one with corn-meal alone, and the other with two pounds of corn-meal per day to each pig, with bran *ad libitum* in addition.

It took 491 pounds of corn-meal to produce 100 pounds of increase in live weight; and it took 405 pounds of corn-meal, and 496 pounds of bran to produce the same amou of increase.

The pig is a remarkable animal: nothing comes amiss to him, from a baby in a cradle to green food, or any refuse matter; he has, however, a very small stomach, and, if required to fatten quickly, must be furnished with a very concentrated food. This may be illustrated by the two following tables, published by me many years ago:

	Proportion of Stomach in 100 lbs. live weight.	Per 100 lbs. live weight. Dry substance consumed as food.	Per week Increase.
Oxen	51 oz.	12⅕	1.13
Sheep	39 oz.	16	1.76
Pigs	14 oz.	27	6.43
Man	6 oz.	..	..

In this table the animals are supposed to be fed with the most appropriate food: the pigs on corn, or barley meal, the oxen or sheep on roots, hay and corn, or linseed cake, and it will be observed that the pig, with his small stomach, can consume double the amount of food, and increase nearly six times as fast as the ox. It is evident that these two animals are adapted to consume different sorts of food; the ox gets nourishment out of a bulky diet, such as hay, straw, etc., while the pig thrives on a concentrated diet consisting principally of starch. When a pig increases one pound for each 4.34 pounds of corn meal consumed, as was the case in the Connecticut experiments, it is evident such food must contain very little indigestable matter, for it requires 2½ pounds of starch to produce one pound of fat, and as a very large proportion of a fattening pig consists of fat, the amount of residue required to support the vital functions of the animal, is not very great.

The practical conclusion that we arrived at from our experiments was, that the most suitable diet for a fattening pig was barley meal, or food of a very similar composition. Compared with corn meal, barley meal may be said to contain 2.60 per cent. of mineral matter, instead of 1.6 per cent., the quantity found in corn meal. It also contains a very small additional proportion of nitrogen, and a little more indigestible woody fiber. Some of the pigs fed exclusively on corn meal became unhealthy, and we thought the smaller amount of mineral, or indigestable matter contained by the corn meal as compared with the barley meal, might possibly be the cause. Barley meal, which is the principal fattening food used in Great Britain, is certainly a perfectly healthful food.

Professor Stewart, in conclusion, appears to connect corn-meal feeding with certain diseases in pigs, and it may be possible that barley meal is quite as concentrated a food as a pig can fatten upon consistently with perfect health: the addition, however, of bran in the proportion of one-seventh, or one-eight, to the corn used, would probably be quite sufficient to bring its feeding powers up to the standard of barley meal. It must, however, be borne in mind that the consumption of food and the rate of increase in the animal fall off greatly when much indigestible food is used. If an increase of one pound live weight for 4.34 pounds of meal, can be obtained, without injury to the health of the pig, I should, if I were farming in the States, be reluctant to make any change in this diet.

Rothamsted, Eng., March 8.

BULLETIN OF THE AMERICAN BERKSHIRE ASSOCIATION.—This is published at Springfield, Illinois, bi-monthly, and contains much useful information, not only to the breeders of Berkshire swine, but to those of all others. It was commenced in May, 1878, at one dollar per annum. It has attained a circulation, we are informed, of over 3,000, which is so rapidly increasing, that it is the intention of the Association to soon issue it monthly. In the last number we notice a recommendation of feeding a greater proportion of nitrogenous food to the growing pigs, than has heretofore been practiced at the West—such as peas, beans, oats, skim-milk, butter-milk, whey, etc. These, with plenty of exercise in a good grass lot, make better bones, and leaner, tenderer meat than corn, which has heretofore been the almost exclusive diet of Western swine. This last, together with foul, contracted yards, have undoubtedly been the cause of much of the cholera and other fatal diseases prevailing so extensively in the regions of the West.

Veterinary

ABORTION IN COWS—I.

D. E. SALMON, D. V. M.

THERE is no doubt that the losses from abortion are a very serious drawback in many of our best dairy districts. The disease seems to have appeared in New York State about a quarter of a century ago, and as long ago as 1866, it was estimated that such losses in that State alone amounted to nearly five millions of dollars; but New York is not the only State that suffers from the scourge. It has been

alarmingly frequent in Massachusetts, Pennsylvania, Ohio, Indiana and Illinois, and the affected area seems to be continually increasing in size. If I have been rightly informed, it is only within the last few years that the dairymen of the States west of Ohio have suffered from its ravages. In the Southern States, I have only heard of it in exceptional cases.

A Commission was appointed to investigate the disease in New York fourteen years ago, and considerable information was collected in regard to the more apparent phenomena of the trouble, but no discoveries were made that would enable the farmer to control it. If this commission had been composed of veterinarians, instead of physicians, it is possible that more would have been accomplished; for, with due respect to the medical profession, it must be admitted that physicians cannot be as well qualified for investigating the diseases of animals, as are those who make these a specialty. The Pennsylvania Board of Agriculture has, also, had a committee at work on this matter during the last year, I believe, if, indeed, it is not still engaged at it.

Just what the annual losses amount to, taking the whole country over, it is impossible to say; but if the estimate above mentioned, in regard to one State, approached the truth, then these must amount to from ten to fifteen millions of dollars, or three-fourths as much as the losses from swine plague. I am inclined to think that this estimate is much too large, but, at the best, it is a very serious matter.

Now, why is it that this trouble has increased to this extent, when twenty-five years ago, it was almost unknown in the United States? Why do its ravages continue to be greater from year to year? And why is it extending over States once almost entirely free from it?

We know that abortion may be produced by a blow or fall, by diseases of the uterus or of its contents, by any serious disease affecting the cow, and by a number of other causes of less general interest; but these causes affect but a single individual, while practically whole dairies are affected; so that there must be something beyond these, which produces it. It is known, for instance, that a cow aborting in a stable induces the same trouble in others surrounding her—why? Abortion has been traced, says a celebrated French veterinarian, to the miasm arising in hot weather from the decomposing organic matter of half-dried marshes, and how much more should we expect such a result from the terribly fœtid odor often arising from the retained and decomposing membranes of these animals. The conclusion of the New York Commission, that the trouble was sometimes introduced into the dairies by a cow coming from a farm where it was known to exist, would, also, favor this view.

It is impossible, however, to explain a vast number of well ascertained facts by this theory; for many dairymen become so impressed with the fact of the disease being induced in this way that they remove the affected animal immediately, and long before any such decomposition could take place—and still the other cows are not spared. Were the succeeding cases, then, due to the animal first affected, or were there causes connected with the food and surroundings, acting upon all alike and causing the disorder, irrespective of the preceding case? The first fact in support of the latter supposition is, that although a single dairy may suffer to an extreme degree, this is surrounded by other perfectly healthy dairies in the same district, and this in the worst affected sections of the country. This would lead us to infer that there is a local cause. Thus, too great inclination of the floor of the stable may undoubtedly produce the disorder, and this, acting alike on all the cows in the stable, affects a certain number of the animals, and each of these being peculiarly liable to it the two succeeding years, would give us at once an enzootic outbreak of the trouble. So with improper food—that of which the animals must take into the stomach too much bulk to get the required quantity or nutritive elements; drinking very cold water immediately after coming from a warm stable; eating clover or other plants covered with frost, etc. These each act alike on all the animals on the farm, and may cause the same derangement of function in a large proportion of those exposed to them.

There are similar causes which may act on all the animals of a considerable section of the country; thus, in certain seasons the hay is of poor quality, and hence a large bulk must be eaten for support. In other seasons the grasses are covered with ergot and similar cryptogamic growth which have a decided tendency to cause abortion; at other times, rainy seasons, scarcity of food, etc., lead to debility and predispose to the affection. There is no doubt among professional men that each of these conditions may give rise to an enzootic of bovine abortion.

Still we are not satisfied to look upon such pathogenic agencies as the foundation of the trouble which of late years has caused so much complaint. These causes have always existed to the same degree as at present, and yet epizootic abortion, as it is now called, is in this country a thing of the past few years; and more, it is an affection that is gradually extending itself over sections that were previously free from it; so that, if we would recognize the trouble as it exists, we must look beyond the effects of season, of food, of water; we cannot stop with the defects of the stables, with the miasm of marshes, or with changes of temperature. There is something which renders the disease immeasurably more frequent now than formerly. What is it?

There has been but one explanation offered that seems at all consistent with the facts as they occur, and that is that most cases are the direct result of a pre-existing case of the same trouble. Are we to consider then that this is a contagious disease—one depending upon a specific germ which may be transferred with the same certainty of effects as is seen in the inoculating of other contagious maladies? This is a question that has long been debated, and for the solution of which we can, even now, only bring indirect observations.

It would seem, however, that we must recognize a division line in the causes of this disease—ranging on one side all those cases depending upon food and surroundings, and on the other those resulting from a pre-existing trouble of the same nature; and that it is the increase of the latter class which has caused the chief losses of our dairy districts. At the same time there have been many cases belonging to the former class, and the failure to make the distinction has caused much of the confusion and mystery surrounding the affection

Some of the best authorities in the world are inclined to think that the disorder is a contagious one; that there is a principle, or germ, which may be transmitted from an affected to a healthy animal and produce the same specific trouble in the latter. It has been found in the dairy districts of New York that on the worst affected farms an entire change of the cattle—selling off the old stock and buying new—would free the place from the scourge; and this, with the numerous instances in which the trouble is brought on a farm by introducing a cow from an affected dairy, is convincing evidence of the existence of some such principle. I will relate a remarkable occurrence of this kind.

I have said this disorder was rare in the South; but, a few years ago, Col. Richard Peters, the veteran stock-breeder of Georgia, introduced it on his farm in that State by importing a cow from a farm in Pennsylvania where the trouble existed; and not only did his pregnant cows abort, but his young heifers became sterile. These barren heifers, with the exception of two of his choicest, were then sent to Lookout Mountain to pasture during the summer, and while there all became pregnant; but the two which remained at home continued incapable of conception.

Here there was evidently some pathogenic action beyond a sympathy between pregnant animals; there was something besides the odor of the after-birth; something that cannot be explained by a nervous irritability or by a spontaneous affection of the brain. A cause that acted both on impregnated and virgin animals; a cause from which these animals might be removed and recover their normal condition.

Franck and Roloff, in Germany, have attempted some investigations which show that smearing the vagina of a healthy animal with the discharge of a cow that has aborted, was sufficient to induce the malady; and they have examined these discharges microscopically and detected bacteria, to which they attribute the pathogenic action. They have also shown that the abortion is preceded by heat, redness and swelling of the generative organs—that is, by a congestion or incipient inflammation.

Finally, antiseptics, and particularly chlorate of potassa (half ounce daily), have proved decidedly beneficial in cases where the disease was fairly under way; and this is accepted by many as an argument in favor of the contagious character of the affection.

Miscellaneous.

WHAT OTHERS SAY.

OPIUM EATING.—We find the following in in the "Hour": "As with alcohol, pain and sorrow are often the starting points for the habitual use of opium. Its peculiar anodyne properties soothe body and mind. It is of great value as a medicine; but it becomes an irresistible tyrant when used habitually. When its effects are fully developed by long-continued indulgence, the eye becomes sunken and glassy, the skin of a brouzed or muddy hue, the speech thick, the lips fissured, the face haggard and cadaverous, and the physical faculties generally deranged. The mental and moral conditions of the patient suffer to an alarming extent. A desire for other stimulants is often excited by the use of this strange anodyne; obligations, also, are forgotten, and a disregard or truth is characteristic of the victim. In short, body and mind become stupified and poisoned. Of course, all do not use it to the same excess, and some persons are so constituted that the repetition of a first dose is prevented by the painful reaction, causing an extreme faintness and nausea, for which the first soothing influence is no compensation. But many experience scarcely any of this at first, and the delicately organized woman, whose will is weak and whose nerves are overstrung, who suffers, perhaps, from neuralgia, finding immediate relief in opium, is in great peril of becoming a victim to its influences.

There is no lack of illustrations of the effects of this drug, as treatises on the abuse of opium and the confessions of opium-eaters bear witness. In this city there are numerous instances of refined ladies who are under its control; and what is true of the higher walks of life is equally true of the lower."

"ALTHOUGH," said Gen. Le Duc, in the course of his late speech at Elmira, "I had been identified with agriculture and its pursuits for years, beyond the reception of a few packages and bundles of seeds, from time to time, from the Department at Washington, I had no knowledge of its workings. I had always supposed that there was something in the Department of Agriculture that was national in its character, and was not prepared to find that this Department was an adjunct to the government—holding no higher relations to it than a mere seed store for the benefit mainly of the members of Congress."

COFFEE IN TYPHOID FEVER.—Dr. Guillasse, of the French Navy, reports that, in the early stages of the disease, coffee is almost a specific against typhoid fever. He gives to adults two or three tablespoonsful of strong black coffee every two hours, alternating with one or two teaspoonsful of claret or Burgundy wine. The beneficial effect is immediate. A little lemonade or citrate of magnesia should be given daily, and after a while quinine.

MOLES IN GARDENS.—Touching this irrepressible topic the London Farmer remarks that it has been very generally assumed that the great increase of grubs in the parks and gardens around Berlin is in consequence of the wholesale destruction of moles that has been carried on of late years. It is said of the mole, as of the sparrow, that he eats more than his own weight of food every day, and if this were made up wholly or principally of insects and grubs inimical to the gardeners' interests, this voracious appetite would, of course, be of valuable service. To determine this point a series of experiments has recently been carried out upon moles in confinement, under the auspices of the "Garten Direktion." To one of these prisoners were given over-night a hundred and twenty large earth-worms and seventy grubs and caterpillars of different kinds. In the morning it was found that the mole had eaten nearly all the worms, but had left the rest of his provisions utterly untouched. On a second trial of the same kind all the worms were found to have been devoured, but only a very few of the grubs, which latter were probably only attacked when the supply of the former had been exhausted. Hence it would appear that the mole in freedom renders but little assistance in the extirpation of grubs, etc., so long as plenty of other food is at hand. Similar experiments were made by the chief gardener in the Royal grounds at Potsdam, and here, too, the results showed that the services of moles as grub destroyers are far outbalanced by the mischief they do in other ways. We think on the whole that the friends of the mole are increasing.

"ONE TIRED OF FARMING," says in Mark Lane Express (London): "We are hoping and praying that we may have a good summer. I fear my crops will scarcely pay for labor and manure, and nothing for rent and taxes. It is quite an exception to find a liberal landlord in this neighborhood, I have not had one penny abatement of rent, so I have nothing to be thankful for. I am glad to see many more generous.

WAR UPON INSECTS.—With the approach of spring the farmer and gardener will be compelled to renew the war with various kinds of noxious insects, and it is well to make immediate preparations for the fight, by procuring a supply of the insecticides in common use. The first that is usually needed is ordinary flowers of sulphur, to scatter about the poultry yard and house, and especially in the nests where the fowls are laying. There are very few species of parasites infesting poultry that can withstand the fumes of sulphur, and there is no danger of injuring the fowls by scattering it about in liberal quantities. The nest of every sitting hen should be well dusted with sulphur, and when this is done the hen or her chicks will seldom be troubled with any of the numerous species of poultry lice that are usually more or less abundant wherever fowls of any kind are kept.

Freshly slaked lime, well dried, is another insecticide that is very useful for destroying many of the pests that attack plants, and in most cases it may be used quite freely without danger of injuring anything but the insects. The asparagus slugs that often appear upon the young shoots in spring are readily destroyed by liberal applications of lime when the plants are wet with dew or rain. Lime is also useful in destroying and driving away various kinds of flea beetles that infest cabbage and cauliflower plants, slugs upon cherry and pear trees, cut-worms, and similar insect pests found in almost every garden and orchard.

Strong hard-wood ashes and soot are also inimical to a great many insects that infest gardens: and as they are also excellent fertilizers they may be used freely in dusting vegetables of all kinds, and especially melons and similar vines. Every farmer and gardener should keep a barrel or two of ashes in a dry place, ready for use when wanted for dusting his plants.

TOBACCO water or the fumes of burning tobacco are death to nearly all of the aphis or plant-louse tribe of insects, as well as to many larger and equally noxious kinds. White hellebore has long been considered one of the most efficacious of all poisons for the imported currant worm; but a New Jersey fruit grower of considerable experience finds strong tobacco water quite as good as the hellebore, and soon washed off by heavy rains, whereby the fruit is not rendered unfit for use, as when other and more virulent poisons are employed. To make a strong solution, put a half bushel or bushel of tobacco stems, or even the leaves, into a cask or barrel, and press down and hold in place with a stone or other weight; then pour on hot water enough to cover the tobacco and leave it for a few days to steep. After steeping, the cask may be filled up with warm or cold water, and the solution is ready for use. If a half pound or pound of crude potash is added, or a quart or two of soft soap is stirred in, the solution will be much improved, especially in its destructive properties. After using the first liquid, the barrels may be filled again with water and left to steep a few days longer than the first time, or some fresh tobacco may be added to give the solution the required strength. Tobacco water is certainly a cheap insecticide, and will frequently be found quite as efficacious as those that are more costly and troublesome to apply. The above notes on insect destroyers we find in a late number of the N. Y. Sun. Although the same story has been told over a million of times, the hints are timely and valuable.

EVERY OBSERVANT man acquainted with city life must have seen that, in general, rural youth make a fearful mistake in seeking their fortunes in cities, and, therefore, that full support should be given to every effort which has been, or will be made to advance the science and art of agriculture by means of proper schools, so that this really noble pursuit shall have for the minds of our farmers' children that first interest which their good and the good of the country demand.

"ENGLISHMEN CAN RUN ALONE." The American Stockman asks "Why should the Mark Lane Express not come boldly out and ask that a tax so heavy as to effectually prohibit all importations, be put upon American stock, dead or alive?" If the writer of this silly question is a reader of the Mark Lane Express he knows why perfectly well—he knows that the reason is because the Mark Lane Express is opposed to any other kind of protection in relation to imports than protection against disease. The Mark Lane Express leaves the nurse Protection to the babies of commerce in America and elsewhere and says that Englishmen can run alone.

WE MAY EXPECT shortly to hear, says the Mark Lane Express, that the United States Government has put a prohibitory duty on Australian meat, as it is quite clear the Australian graziers can undersell American graziers in the markets of the latter. Then why should not the American grazier—pretty little dear!—be protected as well as the manufacturing baby?

IN POINT OF FACT, writes an Englishman residing in Chicago to the London Farmer, the Englishman coming here who will *adapt himself* to the conditions of society in this country can make as good an average of profit in farming as in any other business. His principal advantage would be that his capital would allow him to own as much land as he would rent in England, and if the value of that land doubled in a generation or less, the increase would go into his pocket instead of his landlord's. The perfecting and cheapening of transportation that are going on all the time, and the introduction of machinery into agriculture to still a greater extent, have the tendency to bring down the value of English land and advance the price of Western land. It is not logical to suppose that land values will remain stationary under such altered conditions.

Everywhere.

RURAL SPECIAL REPORTS.

GA., Atlanta, Fulton Co., March 17.—Winter unusually mild hereabouts, one freeze only, on Dec. 26, but owing to the great tenderness of vegetation in this southern country, it killed everything; great quantities of cabbage plants, onions and all fall-planted vegetables were injured or killed. Grain crops, however, were but slightly damaged, and now wheat and oats are looking fine. Farmers are preparing for planting cotton extensively, and so great are the purchases of commercial fertilizers that some of the dealers have exhausted their supply. Notwithstanding the extremely mild winter, fruit trees are backward. Peaches are just in full bloom—two weeks later than usual. The outlook for fruit, therefore, is good. Labor and everything are going up:—corn, 70@75c.; oats, 55@60c.; sweet potatoes, $1; Irish do., $2.50 ₮ bbl.; labor, $12@16 ₮ month.

C. D.

ILLS., Stone Station, Lee Co., March 16.—We had a remarkably open winter, especially during the months of Jan. and Feb.—not any snow and very little cold weather, and in consequence we have have had very bad roads right along. If we had a freeze to make the roads solid, they were so rough that a person could scarcely get along, and as soon as they were worn smooth again, it would rain and make them so muddy as to be almost impassable. As a consequence, teamsters did not get their teaming done. Farmers opened the spring work more than a week ago. C. S.

INDIANA, Roanoke; Huntington Co., March 16.—We have had and are having very hard weather on wheat and clover. The latter is injured most; but both are hurt, especially on clay soils. Our very wet fall and winter have also injured low or flat wheat fields very much. Several cold days and very cold nights of late, may injure shrubs and fruits as they had began to swell their buds. The market for grain, stock and produce is good here—roads very bad. Preparations are being made for large acreage of spring crops with favorable spring we look for a profitable year. A. C. H.

IOWA., Martinsburgh, Keokuk Co., March 18.—We have had one of the finest winters I ever saw in Iowa, and I have lived here for 25 years. We have not had snow enough to track a rabbit. The fall wheat is all killed. Spring wheat sown in February has rotted. The ground is now frozen solid. This is the coldest March I ever saw. A great deal of wheat was sown in the fall, in this part of Iowa. Market quiet:—wheat, 95c.@$1; corn, 25c.; oats, 25c.; hay, $4 ₮ ton; fat cattle, $4 on foot; hogs $3.65 gross. This is a fine farming country; all kinds of grain grow to perfection here. B. F. C.

KANSAS, Iola, Allen Co., March 16.—We had beautiful weather this month until the 13th, when we had a sudden change, the thermometer on the 14th was only 3° above zero, since then it has been milder, and this morning the ground is covered with snow; the farmers have been busy getting in their spring crops.

H. M. S.

KY., Owensboro, Trimble Co, March 18.—Weather cold; am afraid we shall lose our peaches. Wheat looks well on good land. The ground keeps so wet that farmers will have to rush work when spring opens. Roads in such bad state that hauling a load is next to impossible. J. W. S.

MAINE, Bolster's Mills, Cumberland Co., March 17.—We had an unusually mild winter with but little snow. Hay is rather scarce; worth from $10 to $17 per ton; corn, 65c.; butter, 20c.; eggs, 12c. R. S. P.

MD., Royal Oak, Talbot Co., March 18.—We had a lovely winter, with very little snow. Wheat is looking remarkably well. Fruit is not at all injured as yet. S. B.

MICH., Schoolcraft, Kalamazoo Co., March 20.—Our winter was mild. The prospects of the farmers of this State are good. The abundant wheat crop of last season brought good prices. All other crops were fair with a good market for our surplus of every description at fair rates. We have every reason for congratulation. The outlook of the coming wheat crop is such that with a continued favorable season I prophesy that Michigan's yield of wheat will amount to millions of bushels over that of last year. Of course, the future of prices, with a reasonable crop in Europe, is not so flattering. I would advise farmers to go slowly; save their surplus funds and *keep out of debt.* H. C.

MO., Springfield, Greene Co., March 19.—We had the heaviest snow storm of the season on March 11th. Peach trees were just ready to bloom. Wheat looks unusually fine for this time of the year. The past has been a good winter for stock, as it was dry and warm all the time. Jerseys are doing finely. E. A. W.

N. Y., Elmira, March 22.—We have had frequent changes in the weather during the past week; several light snows fell; a little rain, and several quite hard freezes, followed usually by a clearing sky and bright, warm sunshine; or, in other words, the character of the weather has ranged all the way from a cold, raw winter's day down to a bright, pleasant day in April. Such changes are unpleasant as well as injurious to winter wheat and small fruit. On looking over our strawberry grounds to-day, I find old settings or beds that have once fruited, badly injured from these alternate changes. Our last spring settings, however, are looking fine, especially where they were well protected by a covering of straw. Raspberries also have been materially injured from the same cause. Wheat has suffered less than might be expected. Few pieces in this section will be plowed up and planted to other crops. With the exception of hay, which has fallen off a little in price, farm products remain firm at my last quotations. There has been a great falling off in the prices paid for tobacco since last fall and early winter. Several crops have been sold during the past week at prices ranging from 6½ to 9c. "through." This is about 50 per cent. less than the average price paid early in the winter. This falling off is partly due to the poor quality of the tobacco, the best crops having been picked up before, and partly to the over-production of the poorer grades of the "weed." G. A. G., JR.

N. Y., Afton, Chenango Co., March 19.—Winter unprecedentedly mild; thermometer below zero only three mornings; only ten days' good sleighing; 2½ feet of snow only, although we invariably have from six to seven feet. Hay plentiful around here at from $7 to $8 per ton; corn, 60 to 65c.; oats, 37½ to 40c.; potatoes, 25 to 30c.; apples very scarce and worth about $1 per bush. Clover seed is worth $7 to $8 per bush.; timothy from $3 50 to $4. Prices vary from one place to another, but these are about the average. Farmers are patronizing and building creameries quite extensively here; three or four are being started this spring just in this vicinity. G. E. N.

N. C., Chapel Hill, March 15.—Under lowering clouds driven by a cool east wind, and with the beautiful peach blooms in view, I give you the greetings of the spring of 1880. The winter has been remarkable for both warmth and dryness. There has been more cold than in the winter of '75, but less rain than I have known in any winter of my life. The few freezes have, probably, sufficed to destroy the germs of disease engendered by heat and moisture. If so, the mildness of the season is cause for gratitude. The earth has not been thoroughly saturated with water since last spring. The wells that failed in autumn have, many of them, been low or dry until the present month. But the rain has fallen in sufficient quantities at last. So far, March seems to be *redeeming the time.* Rain, rain, rain! Rain in mist, in sprinkle, in shower! Rain with wind, rain without wind! Rain by day, rain by night! "Water, water, everywhere!" Thank God for the early rain! The spring is about one month behind that of last year, as to vegetation. It is about equal to that of '78. The fruit trees, Peaches, Apricots, Cherries, etc., are blooming. The Apples and Pears show little change. There has been considerable complaint of the Hessian fly and some other depredator upon the wheat. An agent of the Agricultural Bureau investigated the ravages in the wheat in Mecklenburg county, and found that the little enemy is a diminutive hopper without wings—resembling the grasshopper. The freezes have done some damage. But up to the present, the prospect for wheat in North Carolina is extraordinarily good—it has, perhaps, not been better for many years. Oats, I think, are irregular, some fine, some the opposite.

There has been some change in the Experimental Station at the University. Dr. Ledoux has resigned, with a view to return to your city. The Board accepted his resignation with great reluctance. He has done faithful and successful service in his responsible position. He has now a very high reputation in North Carolina, as a Christian gentleman and accomplished scientist. He has been the farmer's—indeed, the citizen's—oracle in regard to multitudinous interests. He has consented to remain until his successor arrives. The Board has chosen, as his successor, Mr. Goessman, of Massachusetts Agricultural College—who has most flattering recommendations. The Board of Agriculture has appointed a special Agent of Immigration, who will, in a few days, start to Europe on his mission. A. W. M.

N. C., Brookston, Warren Co., March 19.—Rain, rain every day for the last 13, three days only excepted, and still it pours. The earth is completely saturated. Rather dull for those who have no plowing done. Temperature to-day 48 deg., about the average for the past two weeks. Peaches in full bloom and safe so far. Grapes pushing out. Wheat (and grass, where there is any) growing where not under water. M. B. P.

OHIO, Wellington, Lorain Co., March 18.—Little snow, but much rain during the winter. Factory-men have about half their usual supply of ice, and that of poor quality—not more than three or four inches thick. Produce of all sorts brings good prices. Cheese is worth 13c.; butter, 22c.; eggs, 10c.; wheat, $1.25; corn, 48c.; oats, 45c.; clover seed, $4.50; hay, $11; hogs, dressed, $5. A. G. F.

OHIO, Howland, Trumbull Co., March 18.—Winter mild nearly all the time; rain and mud in excess. Wheat looking well. Wheat sells for $1.35; oats, 40c.; corn, 30c.; potatoes, 40 to 50c.; eggs, 15c.; butter, 20c., and very scarce; hay, $14. H. A. L.

S. C., Aiken, March 25.—Clear skies and balmy winds. The invalids can now sun themselves from morn till eve. Average day temperature 70°. There is still danger of frosts. It is not a surprising occurrence that peach blossoms are destroyed in early April. We are planting corn. MAJOR.

TEXAS, Waco, Mc Lennan Co., March 17.—We have had a serious set-back in our vegetable gardens in the last week. On the 13th, a sharp "norther" sprang upon us after several days' rain, and for three days the ground was frozen an inch or more in depth, with sleet and rain alternately. Up to that time we had had an unusually warm and forward season for vegetables, many of them being ready for the table; but in a few short hours *all* were lost. My peas were nearly ripe, my potatoes almost ready to bloom, all kinds of vegetables in my garden rapidly approaching maturity. My cabbage, parsnips and carrots withstood the tempest, but peas, lettuce, beets, etc., lay black and stark. My tea plants set out in January, were not injured, showing they are more hardy than is generally supposed. My tomato plants froze in my hot-bed covered with canvass, but celery by their side, was not injured. Most of our farmers had finished planting corn, and much of it had been already plowed over, but it is all destroyed, and a complete replanting will be necessary. While the potatoes were frozen, we hope they may grow out again from the roots and make us a crop. Corn is selling at 65c now,—Kansas corn, shipped to this market, as there is no home-raised corn for sale. A. S. S.

TEXAS, Dayton, Liberty Co., March 15.—We have just been blessed with the best rain that we have had in twelve months. It poured down steadily for 24 hours, and our garden looks fine now. The Cow Peas and Mold's Ennobled Oats are six inches high; the Mangels also look fine; in fact, all garden stuff is doing its level best. The flower seeds are just peeping out of the ground, and the Cuthbert Raspberries are budding. We have had no winter here, except a few days about Christmas. The past has been the driest and warmest winter we have ever seen in Texas during a residence of 32 years. Long may it "wave." Farmers are away ahead this season, owing to the fine weather. Corn is six inches high in nearly every field, and several are planting cotton. Where I have been feeding the oxen with cotton seed the ground is one mass of cotton plants. Notwithstanding all this, the cattle on the prairies are dying in hundreds. Of course, you must understand they are never fed, but subsist entirely on the prairie grass. G. G.

VA., Thoroughfare, Prince William County, March 18.—Most farmers in this section are through plowing sod land for corn; blue grass has started up well; sheep are doing finely with a little corn in the mornings—a neighbor has 27 lambs from 12 ewes. This open winter has been very profitable for our shepherds. March was a splendid month up to about the 12th. Most of our farmers have been troubled with the spring fever—putting in potatoes, peas, etc. Now the earth is robed in snow, and winter has returned unexpectedly. Wheat has made a promising start. E. K.

VA., Abingdon, Washington Co., March 15.—We are having warm, rainy weather. Wheat and grass are growing well. Some stock has been wintered with scarcely any feed. Peaches are coming into bloom. The tobacco trade has been brisk this winter; good prices were realized for last year's crop. A heavy crop will be planted if it can be set this year. It is only within the last three or four years that any interest has been manifested in this industry. I expect the last year's crop will not fall far short of 500,000 pounds. W. B. K.

VA., Lovettsville, Loudoun Co., March 18.—Our winter has been mild and pleasant enough for plowing nearly all the time up to March 9. Since then we have had almost every kind of weather—snow, rain, frost, water, and mud in superabundance but very little sunshine.

J. W. C.

VT, Waterbury, Washington Co., March 17.—A very mild winter in Vermont, with much less than our usual quantity of snow. We sell produce about as follows:—Hay, $10 ₮ ton; butter, 20@25c.; oats, 45c.; eggs, 12c. ₮ doz. We pay for good family flour $8 ₮ bbl; corn, 65c. ₮ bushel; malt $1.30 ₮ cwt. Some farmers who had the courage to tap their trees made some sugar the first of the month; this week has been colder and no sap has come. The prospect is good for an extra yield of sugar this season. A. A. L.

WASHINGTON TERRITORY, Colfax, Whitman Co., March 15.—Winter has been long but not very cold. Horses and cattle have done well in this part of the Territory on the range without feed. Fruit does well here, especially small fruit. The country is settling up fast, but the Northern Pacific Railroad grant greatly retards settlement, as the road holds a strip of forty miles on each side of its proposed route. This grant having expired, and Congress not having declared it forfeited, it is now neither railroad nor Government land, which is very discouraging and unfair for the settler. Prices—Horses from $60 to $150; stock cattle, $12 per head; sheep, $2.50; wheat, 50c.; oats, 50c.; hay, $6 per ton; bacon, 15c.; butter, 25c.; eggs, 25c.; potatoes, 50c. Dry goods and groceries high. H. M.

WIS., West Salem, La Crosse Co., March 16.—We have had a great deal of cold north winds for the last two weeks. The ground was quite bare till the 13th, when we had a heavy snow. On the whole we have had a rather disagreeable winter for these parts—too much freezing and thawing. The wheat is thought to be all killed. Wheat raising has about "played out" in these parts. Those who quit several years ago and went into stock raising, are the best off to-day. Hay is abundant and sells at from $5 to $8 a ton; corn and oats are from 30@35c. a bushel; wheat, $1; potatoes, 40c.; butter, 20@25c.; beef cattle sell from $3.25@$3.60; hogs, live, $3.25. M. L. H.

WISCONSIN, La Valle, Sauk Co., March 15.—The winter has been quite mild with but little snow; it has been continually thawing and freezing; the frost has not been all out of the ground, however. There is much apprehension that the wheat is killed. Some robins and blue birds have been seen, but March has been colder than its predecessors and the ground is now covered with snow. Wheat is $1.00 to $1.12; corn, 40c; oats, 25c; butter, 20 to 22c; eggs, 11c; hay, $5 to $6; hogs, dressed, $4 to $4.50. W. S. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

The "Smith Milk Stock" of Ky.

J. W. L., Smith's Grove, Ky., asks to what breed belong the cattle known thereabouts as the "Smith milk stock." They are, in color, red or yellow and white on the sides of the body; red or yellow on the legs up to the knees; they are large, heavy-set in the rear, with bulging barrels; thin in front on top of the withers; but thick in the brisket; some are duck-legged, especially in the fore-legs. They are rich milkers, but of late years they are rapidly disappearing.

ANS.—From this description it is not easy to determine whether these cattle are Ayrshires or Short-horns, as some Ayrshires are quite large. Indeed, these *might* be Guernseys. Our friend says, however, that they have been well-known in all that section for a long time, and it is not likely therefore that they can be either Ayrshires or Guerneys, as neither of these breeds has been introduced very extensively into Ky., and few, if any, were to be found there until lately, while Short-horns were pretty freely introduced many years ago. As long ago as 1785 some grade Short-horns were taken from Va. to Clark Co., Ky., by the two sons and son-in-law of Mathew Patton, of Va., and on the latter's removal to the same county in Ky. in 1790, he took with him a pure-bred Short-horn bull and cow known as the "milk breed," or Patton stock. In 1803 James Patton, with others, imported the bull Pluto, of the "milk" breed into the same county, and in 1810, Capt. W. Smith, of Fayette county, bought from Va. the bull Buzzard, belonging to the Short-horn or "milk" breed. He was extensively used through that section for many years, and his descendants must therefore be numerous. Later on, quite a large number of importations of Short-horns were made into Ky., and in the earlier days they were generally divided into two classes, known as the "milk" and "beef" stock. It is highly probable therefore that the cattle referred to are descended from some of these early Short-horn importations, although, from the description, there is in them, probably, a good deal of the blood of "native" stock, and, possibly, of some other breeds.

Soule's Wheat.

Your correspondent, A. S., in the RURAL, page 187, asks about Saul's wheat doubtless meaning Soule's Wheat. This wheat was for many years the leading white wheat grown in Western New York. It had a heavy, beardless head, yielded heavily and was a No. 1 in quality. Many of the "brag crops"—40 bushels or more per acre—were of Soule's Wheat. Its fault was found in its lateness in ripening. About 1854-5 the wheat midge attached wheat, and Soule's, being a late variety, suffered most. Hence about 1855 Mediterranean and other early red wheats began to be largely grown, although before the advent of the wheat midge

they were not so productive as the Soule's wheat had been. Some farmers continued to grow this variety until very recently, and if the Clawson had not superseded nearly every thing else the last two years, it would still be common. The midge does not injure wheat hereabouts of late years, and as Soule's wheat is vastly superior in quality to Clawson, it should be sown on rich land. It is not so hardy as Clawson, and needs better soil and treatment. W. J. F.

Monroe Co., N. Y.

Broom Corn,

W. S. T., Upper Red Hook, M. Y., asks for information about the culture of broom corn, and the preparation for market.

ANS.—Broom corn is grown precisely as common corn, up to the time of the ripening of the seed. Just before this happens, the panicle, or head, with the seed stalks which form the brush, is cut off with about a foot or 18 inches of the stem; the stalks are broken down in two rows and crossed lattice-fashion, forming a sort of table two feet from the ground. The brush is laid upon these tables as it is cut. When dry enough, it is moved to airy dry houses in which it is laid upon slatted shelves to dry thoroughly. When perfectly dry the brush is packed in bales of about 200 pounds each, the brush being packed in the center and the ends of the stalks outside, and is sent to market for sale.

How to grow Parsnips.

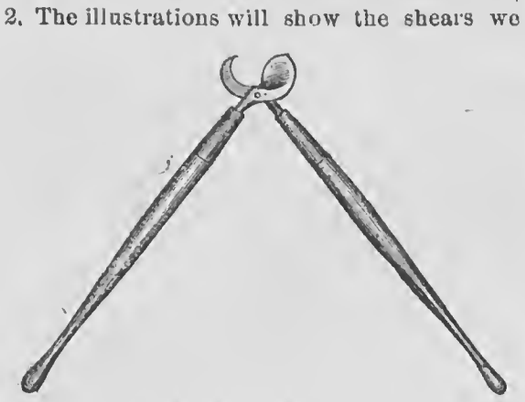
W. T. M., Lewistown, asks how to grow parsnips.

ANS.—Procure good seeds. The land must be well drained, rich and deep. Sow as early in spring as the ground can be put in perfect order. Sow thickly in rows about 15 inches apart. By "thickly" we mean at least four seeds to an inch. The seeds being slow to germinate, hoeing must commence as soon as the rows can be determined. Thin out to three or four inches apart. Treated in this way parsnips never fail, except in cases of great drought or when the land is infested with weed seeds. They may be sown as late as June—but we advise *early* sowing.

Miscellaneous.

S. B., De Wittville, N. Y., has a Honey-Locust hedge of 75 rods, two years old this spring; a year ago it was trimmed down to within six or eight inches of the ground; and he inquires how close should it be trimmed this year, and when; 2, where can he get a good pair of pruning shears; which kind are the best, and what is their price.

ANS.—1.—Cut it back to three feet now, 2. The illustrations will show the shears we



LONG-HANDLED SHEARS.—FIG. 108.

have found best in practice. The small one costs from $1.50 to $2 according to size; the large, about $3. If our friend once uses these shears, he will never again feel satis-

SMALL PRUNING SHEARS.—FIG. 109.

fied to be without them. The long-handled shears will cut a branch two inches in diameter as readily and with as little effort on the part of the pruner as is required to cut a half-inch twig with a jack-knife. Similar ones can be had of R. H. Allen, 189 Water St, N. Y., and Peter Henderson & Co., 35 Courtlandt St,, N. Y.

G. E. N., Afton, N. Y., asks, 1, how to rid cattle of lice; 2, where is a paper on live stock alone published, and its price; 3, where can he get Guénon's work on the escutcheon; 4, where can he get a good book on diseases of cattle and its price.

ANS.—1. Within the past six months several remedies have appeared in the RURAL. Washing the infested parts of the animal with strong suds of carbolic soap is as good an exterminator as any. Buy the carbolic crystals at the next drug store for about eight cents an ounce; to a pound of common bar soap, put in a pan with some water, and melted down, add one ounce of crystals, stirring well, and from the mixture make suds. Two or three applications at least of any remedy are needed, as the nits keep on hatching. Moreover, the stable surroundings of the infested animals should be well washed with the carbolic suds, as the pests often find a resting-place there and thence get on clean animals. 2. The National Live Stock Journal, an excellent monthly, price $2.15 a year, postage paid; published at Chicago, Ill. 3, Guénon on Milch Cows, 75c. 4. Law's Farmers' Veterinary Adviser, $3 is the best work on diseases of stock generally; probably the best work on diseases of cattle alone, in the language, is Clatter's Cattle Doctor, rewritten by Armitage, price $6. The three books, or either of them, can be had through the American News Co., of this city.

F. K., South Gates, N. Y., asks, 1, what is the remedy for the small white worms that pass frequently from a horse; 2, are any artificial fertilizers better for winter squashes than finely rotted barnyard manure; 3, is there any danger of killing or injuring the vines by the application of the manure; and how should it be applied.

ANS.—Horses are liable to be affected with several kinds of worms; but from the description these seem to be ascarides, commonly known as "thread worms"—white little worms about two inches long and somewhat smaller in diameter than a crow quill. To remove them:—inject every morning for a week a pint of linseed oil, containing two drachms of spirit of turpentine. Inasmuch as some may be driven up the colon, it would be well to repeat the process after an interval of a week or ten days, by which time they will have re-entered the rectum. The horse should also have a drachm of sulphate of iron (powdered) twice a day, for a week or so, with his grain. 2. Well-rotted barn-yard manure is as good as anything else, if not better. 3 No. Incorporate several shovelsful with each hill, and make the hill three to four feet wide.

F. M. B., Bucklin, Mo., asks, 1, whether there is any paper devoted exclusively to the interest of sheep husbandry; 2, would it be well to sow Bermuda grass in hollows to prevent washing; 3, where can it be obtained and at what price; 4, a description of the Star Flower.

ANS.—1. We do not know of any. 2. Yes, Bermuda grass will answer the purpose admirably. 3. Try P. J. Berckmans, Augusta, Ga. Do not know as to price. It is propagated by cuttings, and as the grass abounds in certain parts of the South, the price must be inconsiderable. A small quantity would suffice, since when once "established," you can raise it fast enough to supply your probable wants in two seasons or so. 4. Belongs to the Primrose family. Botanical name, Trientalis Americana. Leaves long-lanceolate. Slender flower stalks, bearing delicate, white, star-shaped flowers.

F. McM., Red Bank, N. J., asks what is the best remedy for the cut-worm.

ANS.—A number of remedies have been suggested, such as scattering lime, soot, etc. around the plants, but they are of little or no use. Hand-picking is the surest remedy and may be resorted to in gardens and on small cultivated patches. The worms attack the plants in May and June, and feed at night while in the day time they hide in the surface soil. They can readily be gathered, if sought early on dewy mornings. Fall plowing is also a remedy, but it should be done late in the season when those exposed are too benumbed to again crawl into the soil.

W. H. Adamsville, asks, 1, whether oat fodder is as good as hay for horses, oxen, cows young stock and sheep; 2, where can leached ashes be procured in this city; 3, where can the Lyons heel stiffeners advertised in former RURALS be obtained.

ANS.—Oat fodder cut green and when the grain is in the soft, or milk, state, is equal to the best hay for any farm animals. 2, Leached ashes can be procured of any of the dealers in fertilizers. They cost about 17 cents a bushel by the boat load. 3. The particular heel stiffener referred to or any other can be procured of any dealer in shoe findings.

A. W. A., Afton, Iowa, wants to know, 1, if it is a good thing to mix broken bones with the earth in planting Grape-vines; 2, how deep ought the holes to be dug; 3, is Maude a good Grape and is it the same as Lady?

ANS.—1. Yes, in small quantity. To be of much avail as a fertilizer, they should be pulverized. 2. About a foot and a half or two feet; grape roots seldom enter the subsoil. 3. We do not know of any Grape by the name of "Maude," and if that name is applied to Lady it is a misnomer.

J. McC., Rathbone, Wis., asks how to treat his cherry trees which bloom every year, but do not bear fruit.

ANS.—If the soil is good and the trees of vigorous growth, root-pruning will induce fruitfulness. If the trees are about six years old, sink the spade its full length in a circle about two and a-half feet from the stem. If older or younger vary the distance accordingly. Summer pinching back may have the same effect.

L. S., Chases Mills, N. Y. asks which would pay a farmer best—to collect wood ashes at 10 cents per bushel from house to house, or pay $45 a ton for superphosphates at the depot.

ANS.—That depends. How close together are the houses and how much time and labor of man and team are required to collect the ashes and put them on the farm? time is money and so is labor. Again ashes are valuable for their potash mainly; and superphosphates for their phosphoric acid—which does the land need most, or the crops grown on it?

L. A. D., Belfast, N. Y., wants a recipe for grafting wax, and asks when cions should be cut.

ANS.—Equal parts of beeswax, turpentine and resin with a little tallow, melted together and applied while fluid, make a good grafting wax. Cions should be cut in the fall, winter or early spring before the buds begin to start

H. B. P., Rawlings, N. Y., and several others, asks where that RURAL mole trap is made for sale.

ANS.—Nowhere, so far as we know. It isn't patented, and any of our friends can have it made by the next blacksmith. The cut and brief description give ample instruction how to construct it.

F. W. S., Baden Pa., asks where can he get a rectangular churn, and whether Cornish and Curtis who advertise in the RURAL, are quite reliable.

ANS.—Cornish and Curtis are thoroughly reliable; they will furnish the churn.

J. A. P., Guilford, Conn, asks, 1, where artificial comb foundation can be had and the price; 2, what is the cause of yellows in the peach and how to prevent it.

ANS.—1. J. H. Nellis, Canajoharie, N. Y., furnishes apiarian supplies. 2. Nobody knows.

W. P. D., Thurman, O., asks, 1, if Man-root can be left in the ground during the winter; 2, is Iris lævigata perenuial and will it bloom the first season.

ANS.—1. Yes. 2. Perennial; blooms second year.

Mrs. Shaw, no address, sends two plants for name.

ANS.—One is Blood-root, (Sanguinaria Canadensis), the other cannot be determined from the specimen sent.

S. C., Stone Station, Ill., asks whether drains have been successfully made by using three Tamarack poles and laying them together so that there would be a triangular space between them, instead of drain tiles.

ANS.—Yes.

We have received several inquiries as to the treatment of the seeds of our Free Seed Distribution. Full instructions on this point were given in our issue of February 28, under the head of Notes from the Rural Grounds, and, as there intimated, we cannot, in justice to the bulk of our subscribers, take up their space in repeating the matter, and must therefore refer inquirers to this late number of the RURAL.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, March 27th.

A. M.—C. D.—P. C. S.—R. H. K.—O. H. H.—M. S. F. K.—M. B. C.—C. G.—R. E. C.—J. G. L.—"Reader"—H. B.—F. W. S.—G. H. W.—W. H. B.—M. M. S.—Wm. G.—C. G. S. E. W.—J. E.—G. D. N.—A. D. P.—A. J. C.—F. G.—F. D. C.—R. H. C.—A. B. A.—M. B. H.—B. W.—L. A. R.—A. B. W.—L. S. H.—Mrs. M. E. B.—Mrs. S. H. R.—Mrs. M. L. S.—M L. S.—M. C.—M. S.

Various.

CATALOGUES, ETC., RECEIVED.

FARMING FOR PROFIT, by John E. Read; published by J. C. McCurdy & Co., Philadelphia, Pa. This new book on practical farming is written by a man whose experience as a farmer, and whose prestige as a writer on agriculture, are in themselves a better recommendation than could be given it by any critic. It contains 860 pages and 140 engravings, is neatly printed and well bound. Within its covers is massed together more information on farm matters than can be found in any other one book. It abounds in practical common sense from beginning to end, and treats with thoroughness every subject in connection with farm management and farm life. The author has divided the work into five main divisions. Part I. deals with Agriculture and Mechanics, under which headings the whole sphere of theoretical and practical agriculture is treated, such as plant life, soil analysis, fertilizers, tillage, farm and fodder crops, draining, seed, farm implements, etc., etc. Part II. treats of Live Stock, the breeding of cattle, horses, sheep, swine and all other domestic animals, and their treatment and care in health and disease. Here is also treated the dairy interest, and the most approved methods of making butter and cheese. Part III. treats of Fruit Growing and Gardening, and Parts IV. and V. of Business Principles in Farming and Home Life. We are especially pleased to see the author give instructions for the training and care of fruit trees and the cultivation of the garden; for we are among those who believe that fruits, vegetables and flowers may not only be made remunerative to the farmer, directly or indirectly, but we believe, too, that they exert an educating influence upon the cultivator as nothing else can do, and lead him to a higher appreciation of nature, home and all that is good and pure, and hence to a happy life. The book is not sectional in its character, but treats of the cotton and sugar cane of the South as well as of the cereals of the North; it is comprehensive, practical and fully up with the times. In short, it is a book that every farmer in the land may read with profit. We do not know the price, but we refer all inquirers to the publishers.

REPORT OF MICHIGAN STATE POMOLOGICAL SOCIETY. We are indebted to Secretary Chas. W. Garfield, of Grand Rapids, Mich. for a copy of his Report for the year 1879. The Reports of this very efficient, hard-working Society are always interesting and instructive; they are permeated by the stimulating and healthful vigor that characterizes the Society, but the present Report surpasses, if possible, all preceding ones in excellence. It is an octavo volume of nearly 500 pages neatly printed and well bound. A portrait of T. T. Lyon, the honored president of the Society, forms the frontispiece, and in the middle of the work is a portrait of the veteran pomologist, Charles Downing, the same as that published in the RURAL of Aug. 16, 1879. Besides the list of officers and members, accounts, etc., of the Society, the Report contains a number of valuable essays on pomology and horticulture, that were read at the meetings of the Society. The Secretary's portfolio is interesting, as usual, and we consider the catalogue of fruits of special value. In it are briefly described 250 varieties of apples, over 60 varieties of grapes, and as many each of peaches, pears, strawberries, with other fruits in proportion. We do not know if the Reports of the Society can be bought, but will say that the cheapest way to obtain them is to join the Society. A fee of $1 entitles one to one year's membership, and a copy of the Report postpaid.

ELLWANGER AND BARRY, Rochester, N. Y. We are now in receipt of No. 2, which is a descriptive catalogue (120 p.) of ornamental trees, shrubs, hardy perennial plants, etc. of the Mount Hope Nurseries. Our readers will remember the sketch we gave in the RURAL for Sept. 21, 1878, of Viburnum plicatum, the Japan Snowball, since which we have endeavored by frequent references to make the value of this beautiful shrub apparent While it will thrive in almost any soil or situation it is one of the hardiest. It may not be wise for a journal that tries never to mislead, to be too enthusiastic over anything whatever. But we are not alone in placing this shrub as one of the most valuable in cultivation. The catalogue of which we are speaking gives a colored plate of Viburnum plicatum from which the reader may gain a tolerably correct idea of its flower and foliage.

WHEELER AND MELICK CO., Proprietors of the N. Y. Agricultural works, Albany, N. Y. This catalogue or circular is so illustrated that with the accurate descriptions given all are enabled to gain correct impressions of the construction of each machine and the manner in which connections are made. It will be sent free to all applicants. The catalogue is an interesting study for all who are alive to the value of the latest improvements in Agricultural machinery.

SKETCHES of the Physical Geography of Nebraska by Samuel Aughey, Ph. D. L. L. D., professor of Nat. Sciences in the University of Nebraska. This work of 326 pages gives a full account of the physical features of that fine State, and is a valuable book of reference to all thinking of emigrating to the West. The work can be had through Prof. Aughey at the University, Lincoln, Neb.

FOREST, FORGE AND FARM. This is the first number of a handsome illustrated trade monthly, published by E. Remington & Sons, Ilion, N. Y. It will, of course, pay special attention to fire-arms and the other lines of goods made by the firm, but promises also to embrace a large enough number of subjects to become a good family paper. Price 50cts. per annum.

BANNOCKBURN FARM, Geo. S. Wales, Rochester, N. Y. We have from this establishment a full, plain and practical treatise upon the Strawberry. Also a circular of the best of the Raspberries, Currants, Grape vines, seed potatoes, &c., &c., both of which Mr. Wales invites our readers to send for.

OUR Patent System; a lecture by Prof. R. C. Carpenter of the Agricultural College, Lansing, Mich., explaining the workings of our present patent laws, especially in connection with matters related to the farm.

ANNUAL Report of the Entomological Society of the Province of Ontario, for the year 1879. A pamphlet of 89 pages with many illustrations, a work of much interest to entomologists.

THE
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PUBLISHED EVERY SATURDAY.

CONDUCTED BY
ELBERT S. CARMAN.

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THE RURAL NEW-YORKER,
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SATURDAY, APRIL 3, 1880.

REMOVAL.

On and after May 1st of this year the Rural New-Yorker will occupy its new quarters, No. 34 Park Row, corner of Beckman Street.

NOTICE.

All applications for cuttings of Salix pentandra, which we are now sending to subscribers, must be received within ten days from this date.

Last year we experimented with all sorts of celery. It will be remembered that several catalogues made a specialty of red and golden dwarf and half-dwarf kinds. As they do not retain their color after blanching, the color may be entirely disregarded, except as it may serve to indicate quality. A variety known as Golden-heart, half dwarf, pleased us most, as being remarkably crisp, tender and sweet. For the rest, it was difficult to make any choice. Our conclusion is that excellent celery depends less upon the kind cultivated, than upon proper cultivation and blanching.

Cattle similar to Short-horns formerly existed in Mayence, France. These have been crossed now by thoroughbred Short-horns from England, and the grades cannot be told from pure-breds. The late Dr. Livingstone, when traveling some 30 years ago or more in Africa, found in one of the districts there a distinct breed of cattle closely resembling English Short-horns in size and in all their fine points. The probability is that the latter may have been derived from importations from the former, centuries ago, as the Merino sheep of Spain were said, by Columella, an ancient Roman writer on agriculture, to come from a very fine-wooled African sheep, bred in great numbers from time immemorial.

Six Thousand Million Eggs.—"Professor" Corbett of Hicksville, N. Y., is reported as asserting that this is the number of eggs annually produced in France; that 80,000,000 of these are hatched, and the chickens worth one and a half francs each (at what age he does not state) or about $20,000,000. We should like to know what authority "Prof." C. has for the above assertion, for we saw it stated in the London Agricultural Gazette, of Dec. 22, 1879, that France produced in 1878, only 3,000,000,000—just half of Prof. C's number. It also stated that the poultry was worth that same year 150,000,000 francs (say about $25,000,000.) We wish the statistics of American poultry and eggs of all kinds could be got at; but it is a very difficult thing to accomplish in so extensive a country as ours, and one so sparsely populated. We have no doubt it would be found an astonishing amount, little if at all inferior to the French production; for our farmers not only universally keep poultry of various kinds, but many village and city residents keep them also.

We are glad to hear that a distinct work on Scotch cattle has recently been issued from the Scotch press. The West Highland or Kylocs, as they are sometimes called, are generally of hardly medium size, but are so spirited in carriage and wear such lofty horns, as to give them an imposing appearance. The writer has often paused to admire them as they roamed over the high, grassy hills of Scotland, or pastured in the lowlands. They are of various colors, red, yellow, cream, dun, black and brindled. We prefer the red and yellow, as we found them the best handlers. Their beef commands from a half to one penny per pound more in the London market than any other sort. The Polled Galloway and Angus are considerably larger than the West Highlanders, and their beef is almost of as good a quality, and fetches a trifle higher price in British markets than either Short-horn, Hereford, Sussex or Devon. These are mostly of black color, with some red, dun, etc. Cows of these Scotch breeds usually give but small messes of milk; but it is very rich, scarcely inferior for making gilt-edge butter, to that of the famous Channel Island cows.

The pea weevils are becoming more and more numerous. Until of late years we have looked to Canada for our supply of seeds of the well-known varieties. But the beetle is becoming as abundant there as here, and it would seem that we must now look to England as our main reliance for sound seed. It has been suggested in these columns that if farmers and gardeners would thrust the bags of seed peas into boiling water for a moment, before opening them, these destructive insects might be greatly reduced in numbers. Otherwise the myriads of beetles to be found in seed bags escape to deposit their eggs upon the young pea-pod almost as soon as it has been formed. A single egg is deposited upon the pod over each pea. This soon hatches, the grub eating through the pod into the pod or seed, the hole closing as growth proceeds. Here the larva, or grub, remains until fall and winter during which it passes through its changes. For fastidious people, who are fond of the tender, savory green-pea, it is far from pleasant to know that on the average they eat half a dozen pea-weevil grubs with every mouthful of peas. But we know of no remedy except the impracticable one, either that all farmers unite to destroy the beetle in the way we have suggested, or that they go without green peas for several years in the hope that the weevil will starve to death or become accustomed to depositing its eggs upon some other fruit that might answer its purposes as well.

The British farmer is by no means the only grumbler at American cereal competition; the Russian peasant also is loud in his complaints of the same thing. Not only has it forced him to sell his surplus at lower figures to the rest of Europe, but it now threatens to share with him some of the home markets. Carrying coals to Newcastle could be no more exasperating to the denizens of that smoky city than carrying wheat to Odessa must be to the farmers of the vast wheat-growing tracts of the Crimea and Southern Russia. Lately, however, an American vessel is reported to have touched at Odessa with a cargo of grain for the famine-stricken people in the Caucasus. Thanks to official corruption and excessive freight charges both by rail and vessel on the Black Sea, the merchants of Tiflis find it cheaper to bring grain all the way from this country than to transport it from the neighboring Russian provinces where during last autumn thousands of tons of wheat rotted along the southern railways owing to the absence of proper granaries to protect it from the weather and the inadequacy of rolling stock to transport it to the sea. As a sample of bad management and exaction, a local paper mentions that, owing to the freight depot of the Odessa Railway being a mile and a half from the export quay, the cost of conveying the grain in wagons over the interval is heavier than that of its carriage all the way from Odessa to London.

The almost uninterrupted series of successes of the Chilians against the combined forces of Peru and Bolivia has forced the latter to abandon her ally whom she led into the unjust conflict, while at the same time the Peruvians have been defeated on every side, and have lost a large part of their territory, including the province of Tarapaca, with its vast beds of salt and nitres. The triumph of the Chilians gives them the entire control of the supply of nitrates to the world from that quarter, and it is from the extensive saltpeter deposits found in the adjacent provinces of the three Republics that the great bulk of nitrates for agricultural purposes is derived. It was the greed to obtain control of all the deposits, that about a year ago led Peru to join with Bolivia in an attack upon Chili, where extensive saltpeter beds had lately been discovered. A recent decree of the Chilian Government orders all the elaborators of nitrates who had contracts with the Peruvian Government or its agents to deliver the specified quantity to the Inspector-General of the Nitrate Establishments, for which they will receive from the Chilian Government the price stipulated in the contract. The amounts of nitrates in store and ready for shipment are to be reported to the Government in order that they may be sold to the highest bidder, for the benefit of the Chilian treasury. On the other hand, the Peruvian Government has forbidden the export of nitrates from the province it has lost, under pain of confiscation of the shipments and of all the properties of the shippers in Peru. The nitrate contractors therefore are between two fires, but as that of the Chilians is the closer, they will, no doubt, act upon the order of that Government, which places it, as regards the producers of nitrates, in the same relation as that occupied by the Peruvian Government before the Chilian occupation.

"Fun over oleomargarine" was the sub-heading in one of our evening papers here in describing the proceedings in the United States Senate on the 16th of March. Mr. Davis, of Illinois, had introduced a memorial asking Congress to pass a law to prevent the sale of grease butter as genuine butter, and the grave Senators relaxed their usual dignity to have a little fun over a matter that bears closely upon the financial interests of the vast dairy industry of the country, upon the health of its citizens and upon the morality of its trading community. Senators Conkling, Edmunds and Anthony are mentioned as the chief jokers of the occasion, and the farmers of the country would do well to remember the circumstance when these gentlemen shall solicit their suffrage on some future occasion. It has often occurred to us that if the names of those representatives of the people, State and Congressional, who find it to their taste or profit to neglect or oppose the legislation demanded by the best interests of agriculture, were more frequently placed before the farmers of the country, fear of the just indignation of these might have a salutary effect upon those whose re-election must in most cases depend greatly upon the votes of that class whose welfare they had disregarded or injured. The fun here was mainly over the selection of the Committee to which the farmers' memorial should be referred; and finally it was sent, not to the Committee on Agriculture, but to that on Manufactures.

The penalty of getting hay seed in one's hair must be serious in some parts of Australia. There are districts in that country where the sheep are much distressed and often actually destroyed by the seeds of certain grasses called "Flechilla," which, having once fallen upon or been caught by the wool, quickly work their way through the skins of the animals into their flesh. The ripe seeds of these grasses are armed with recurved barbules whose points, being sharp as needles, easily penetrate the skin, every movement of the animal tending to drive the seed deeper and deeper into the flesh. The mutton exposed for sale in the butchers' shops is sometimes so full of these grass seeds that it excites the attention of strangers. One newly arrived immigrant describes a fore-quarter of mutton as resembling a ham just taken from the bag of chaff in which it had been brought from England. On close examination it appeared that many of the seeds had still their long, thin tails drawn through the flesh, like threads interlacing each other in every direction. He goes on to say that, on questioning the butcher, he was told that they rarely killed a sheep that was not more or less punctured in this way. It stands to reason that butchers' meat, such as this, must need to be thoroughly cooked before eating. From other accounts it appears that the seeds are not infrequently found actually piercing the heart, liver and kidneys of sheep that have died from the effects of their movements. One writer says that he has found "the internal organs so crowded with the seeds that they felt like a bag of needles, if squeezed in the hand." On some "runs" where these grasses are specially abundant, the annual loss of sheep is a very serious matter. It has even been asserted that the northern part of Queensland is unfit for sheep because of the great abundance of the noxious grasses.

On March 22, the members of the Committees of Congress on Manufactures and Agriculture had a junketing trip to Baltimore, to inspect the process of manufacturing oleomargarine at the factory of the American Manufacturing Company, whose proud boast it is that it turns out from 4,000 to 6,000 pounds of the stuff every day. Everything about the factory, from the president to the refuse heap, was on dress-parade to receive the distinguished visitors and, knowing what was awaiting them after the fun of inspection was ended, all returned the civilities of their entertainers with assurances of the high gratification they felt at the sight before them. Having thus earned their dinner, they were treated to "a magnificent banquet" at Rennert's Hotel. After the cloth was removed, stimulated by the magnificent fare they had done justice to, and especially by the "salmon," several of the Congressional Solons became so many Demostheneses in the vehemence of their laudation of the product which they had been inspecting. Mr. Horr, of Michigan, was the first of the festive bauqueters to launch into praise, in which he tried to rival Mr. Carroll, one of the Directors of the Company, who had preceded him. Mr. Beale, of Va., could not praise too highly "the cow that with 100 teats distills, not milk, but butter." Mr. Aiken, of S. C., enthusiastically declared that he would never have another churn on his farm, but would buy oleomargarine. Mr. Wise, of Pa., was no longer a "doubting Thomas" about the merits of the product. Most of the other visitors, too, were equally complaisant to their hosts over the "walnuts and the wine." Of a truth, great is the power of a good dinner with an abundance of etceteras, over the average Congressman; hence it doubtless is that the most successful lobbyists have always been the best caterers. But while every corporate interest has its lobby, what chance against any of them has any conflicting agricultural interest unsupported by an influence so potent with the average legislator?

BREVITIES.

Professor Levi Stockbridge has been elected fifth President of the Massachusetts Agricultural College, in place of the Hon. Charles L. Flint who has resigned. This is the square man in the square hole.

We see advertised a variety of corn that bears kernels larger than any other variety. Very little is said as to other characteristics. Is this the "Cuzco" to which the Rural New-Yorker has of late called attention? If so, we can assure farmers that it will not ripen north of North Carolina, if, indeed, it will ripen even there.

A very good example has been set by the Paris Courts. A quack doctor who advertised very extensively a pretended cure for cancer, has been condemned to pay a fine of a 1,000 francs for practising without a diploma. If he had only known how cheaply he could have bought a splendid diploma over here, he might have saved his money.

The Congressional Committee on Printing has decided that 300,000 Reports of the Department of Agriculture for 1879 shall be printed. We trust that some effectual means may be devised by which these funds of useful and interesting information may be distributed where they will do the most good—among the farmers of the country.

For beds of colored foliage the following plants are very suitable:—Achyranthes in variety; Coleus in variety; Artemesia argentea, gymnocarpa, maritima and candidissima; Alternantheras in variety; Gnaphalium. For the middle of such beds, the following plants are as desirable as any we can call to mind:—Abutilon Darwinii or Boule de Niege; Caladium esculentum; Cannas; variegated Arundo Donax or Eulalia Japonica zebrina.

A bill is before the Mass. Legislature against tramps, punishing them with imprisonment from six months to two years. The R. I. Assembly has passed a law punishing tramps with a year's imprisonment. In the other New England States there has been severe legislation to suppress them. Southern and Western farmers, unless their States take prompt similar action, may now look for an increase among this class of summer visitors.

It now appears that the moon, which exerts so many other influences, is supposed to affect certain forms of disease. Recently a practitioner, who is a "high dilutionist," has applied to certain scientific men to aid him in reducing the "pale ray" to such a shape that it may be used for medicinal purposes. Thus far the experiment has not been a success. In New Jersey lightning has been brought into a fluid form, but bottled moonshine eludes scientific pursuit better than the mystery of the diamond does.

The youngsters who are members of Uncle Mark's Horticultural Club, have shared in our Seed Distribution, inasmuch as we have sent a package containing some flower and vegetable seeds to each. We do this to encourage them in the work, and, if possible, help to develop a taste for gardening that may prove of value to them in after years. Parents should help them in every way possible. Give a small plat of ground to each boy and girl who is willing to undertake its cultivation; furnish them with small tools and be ready with directions and counsel, and occasionally a helping hand whenever they may need such assistance.

A greatly increased demand of mutton from America, for the consumption of England, is likely to ensue this year. In consequence of the continued cold and wet weather of the past season, foot and liver rot have been very destructive of sheep there. The English papers report them as dying off by thousands, whole flocks becoming extinct. In seven of the Southern counties, where upwards of 3,000,000 sheep have been kept, it is feared scarcely one-fourth of them will be saved. In some instances, after butchering sheep which it was supposed would be passable mutton, the inner part of the carcass was found rotten and uneatable, and the only thing saved of any value was the pelt. The various breeds of Down sheep are the best for us to breed for the English market; for they are not only the most salable, but the most profitable. For some account of these, with portraits, see our issue of February 14, page 410.

Literary Miscellany.

EASTER HYMN.

Clap hands, O ye heavens,
Thou firmament ring!
From highest to lowest,
Thou universe sing!
The darkness and tumult
Have ended in calm;
And glory has come
And victory's palm.

Come forth, O ye flowers,
Come forth with the Spring!
And deck the fair plains
With each blossoming thing;
With violets meek
Let roses be joined,
And marigolds bright
With lilies combined.

Thou song of our joy
Rise higher and higher;
Thou spirit of gladness
Breathe forth from the lyre;
For Jesus is risen,
As truly he said;
Unconquered, unharmed,
He has come from the dead.

Clap hands, all ye mountains,
Ye valleys, all ring!
O warble, ye fountains;
Ye little hills, sing!
He liveth again,
As truly he said:
Unconquered, unharmed,
He has come from the dead.

—*Extant Sixteenth Century.*

A SUMMER VACATION.

(Continued from page 206.)

After this we had many delightful evenings. I felt myself under a spell which dominated all my faculties. My friend and my patients were forgotton; indeed, when in Miss Linwood's society I could remember nothing but that she was near.

When alone I did not fail to upbraid myself for my folly. I knew that I was fast falling into a state of midsummer madness, and conscious of this fact, I determined to see as little as possible of Miss Linwood during the remainder of my stay.

On the morrow I set out very early in the morning on another of my fishing expeditions. I was absent all day; indeed, it was quite dusk when, faint and weary, I reached the little gate in front of Malcombe Cottage.

Then I saw at once that something had happened—that something was amiss.

The maid-of-all-work—the only servant the modest establishment could boast—came running towards me in evident perturbation.

"Oh, sir!" she said, breathlessly, "I am so glad you have come back. I have been for Dr. Buchanan, but he is out, and no one seems to know where he is—or when he will come home!"

"The doctor! What has happened?"

"Miss Linwood, sir!"

"Miss Linwood!" I repeated, in a voice which I tried in vain to keep steady. "What of her?"

"Oh, she's dreadful ill, sir. She has not been well all day, and now she lies in a dead faint and do what we will we cannot rouse her from it! I'm afraid she's dying, sir!"

As for myself, the shock to my feelings was so great, that a minute or so elapsed before I could speak.

The appearance of my old nurse at the front door of her cottage aroused me. She was very much agitated, but her countenance brightened when she caught sight of me.

"Why, nurse!" I exclaimed, "what is all this about Miss Linwood's illness?"

"Oh! my boy, that is more than I can tell you. Thank Heaven, you have returned! Follow me at once!"

I did so, and on entering the bedroom found Miss Linwood lying quite insensible on the bed. Her face was drawn into an expression of great suffering.

I could detect a slight pulsation, and by using powerful restoratives, was at length rewarded by seeing a slight flickering of the closed eye-lids, a gasping attempt to breathe ensued, followed by a cry of the wildest anguish.

A violent hysterical attack now seized upon her. Her wild cries—her tears—her struggles were terrible to listen to and witness.

She was quite unconscious of where she was and who was standing at her side.

In all her paroxysm of grief one sentence alone escaped her lips. "Oh! Guy!" in heartrending tones. "How could you—how could you? And I trusted you so!"

Gradually, however, the violence of the attack expended itself, and in a short time she sank exhausted into a heavy slumber.

"We can do nothing, now, nurse," I said, "but wait for her wakening. But tell me what can have happened to cause this? Miss Linwood seemed well enough last night."

But Mrs. Chamberlain shook her head.

"You do not know her so well as I do. She has seemed for days to have been laboring under suppressed excitement."

"Still that would not account for this attack. She must have had a shock of some kind."

"Yes, that is it, no doubt. She received a letter this morning; I saw her turn perfectly white as soon as she commenced reading it, and when she had finished she looked so ill that I said 'Miss Linwood, you are very pale. Is there anything I can do for you?' 'Do not trouble yourself about me,' she answered, in her gentle way. 'I have just received some bad news.' She made a great effort to recover her calmness, and I fancied she had succeeded; but feeling anxious about her, I entered her room, and found her in an insensible condition, just as she was when you returned."

Leaving nurse to watch for her waking, I went down to the sitting-room, my head in a whirl A deep pang was at my heart too, which told me how dear—how very dear Miss Linwood was to me.

The attack was followed by a low, nervous fever, with which I was powerless to cope. I knew, indeed, well enough that it was only the physical manifestation of a mental grief.

I had heard frequently from my friend. Everything was going on satisfactorily—there was no necessity for my immediate return, and I felt that nothing but a case of extreme urgency could call me away from the seaside.

And how patiently she bore herself all through that tedious illness—how grateful she was for all that we had done for her—and how she reproached herself for having caused us so much trouble and anxiety!

But she made no mention of the letter which had produced such disastrous effects, nor did she make a single reference to past events.

Her countenance, however, now wore an expression of settled melancholy, which my heart ached to look upon. She never smiled, except in recognition of some service rendered.

By my advice she went out for walks and drives daily. The weather was fine and the balmy ocean breezes full of invigorating power,

In these excursions I was frequently her companion, drinking in deep draughts of joy and sadness, for much as I loved her I could detect in her demeanor no sign of a reciprocal attachment.

One afternoon we had taken a much longer walk than usual. Crossing an old stone bridge, we had made our way along the grassy slopes of a little promontory, jutting out into the sea.

We sat down on a rocky projection, partly to enjoy the scene, and partly that my companion should have a brief rest, for I feared she had overtasked her strength, and I hinted as much.

But thrilling me by one glance from her glorious eyes, she said, more cheerfully than I had heard her speak since her illness:

"Indeed, Dr. Broughton, I don't feel tired in the least, and I am sure I am quite equal to the walk back."

"Then, said I, with assumed gaiety, "I suppose I must consider I have lost my patient. I esteem myself fortunate in having been able to see you quite recovered, for I cannot prolong my stay here more than a day or so."

"I am sorry for that; I shall miss you so much."

She spoke frankly and calmly, though her regret at my departure was undoubtedly sincere. I was, however, woefully disappointed if I expected the parting would be the pang to her that I knew it must be to me.

"You are very kind to say so. I confess I would gladly stay a few days longer, but it is high time I went back to my patients. My regret is that when we part it will probably be for ever. It will be a great chance if we meet again. My visits here are annual ones, and next year——"

"Yes," she said, sighing softly, "next year! How much happens in one twelve months!"

My remark had evidently brought the past more vividly to her mind, for her smiles faded away, her eyes filled, her head bowed forward.

"Dr. Broughton," she said at length, with evident effort, "I know it must seem very strange to you that I should be living here in such seclusion and perfect isolation. You have tried, perhaps, to account for it in various ways, and yet I will venture to say that you were never once near the mark."

Her clear eyes were looking into mine, and I could only admit that she was correct in her surmise,

"But," I added, "do me the justice to believe that I have not tried to pry into your motives, nor do I wish to surprise you into an avowal of them."

"It is unnecessary for you to say so. You, however, have been so kind, so patient, and have taken so much interest in my recovery, that I feel I can indeed call you my friend; and being so, I feel also that I ought to give you a few explanations——"

"Not if they will cause you any mental uneasiness. In friendship there are two essentials—trust and confidence. In you I have the most perfect trust, and therefore there is no reason why you should give yourself pain by referring to past events."

"You surmise, then, that my story is a painful one?" she asked, after a short pause.

"I do; and I shall be greatly surprised to find that it is not."

"It is painful; and yet, do you know, this evening I feel that it would be a solace to me to relate my troubles to a sympathetic listener, such as I know you would be."

"Indeed I should!" was my earnest answer. "And if it should happen that I should be able to render you some kind of service—if——"

"No—no!" she interrupted. "My past life is over. It is dead to me. You will understand when you have heard. In the first place, my name is not Linwood."

I bowed in assent. I was quite prepared for such an announcement.

"My real name, however," she continued, "cannot be known to you, nor does it affect in any way what I have to relate. Let it suffice to say that I am an orphan, and was an heiress."

"You speak in the past tense."

"Yes, for I am an heiress no longer. At the age of twenty-one I succeeded to a large sum of money. It was left to me unreservedly by my father—that is, as soon as I attained the age mentioned I was my own mistress, and free to do as I chose—an enviable state of things, as many would think.

"I had suitors. That, as the French say, 'goes without telling!' But there was only one for whom I felt the least regard.

"This was Captain Chesney, a young man of good position and well connected.

"He proposed and I accepted him. I have told you that I had no control over my actions.

"But when the news of our engagement was made public, an old friend of my father's came to call upon me.

"'I cannot congratulate you upon your engagement,' he said, very gravely. 'I wish with all my heart you had made another choice. Excuse me for speaking thus to you, my child; I do it only out of anxiety for your welfare. All I ask is, if Captain Chesney tries to urge you into a speedy marriage, do not give your consent—say you have no desire to part with your freedom just yet—and then consider carefully before you take the irrevocable step.'

"'Do you know something to Captain Chesney's prejudice?'

"'Not more, perhaps, than I do of others. He has led a gay life, and despite a liberal allowance from his father he is heavily in debt.'

"Of that I am aware. He told me so with perfect frankness, alleging, however, that it was his misfortune, not his fault."—(To be continued.

BRINGING THEM TO THE POINT.

There is no foolishness about some of the fathers of Dubuque County, Iowa, who have marriageable daughters, and they know how to precipitate business when the fruit is ripe for plucking, and hangs, wasting its sweetness, when it should be plucked. Matters were brought to a climax with a rush at a certain farmer's residence in Vernon Township recently. A young tiller of the soil had for months been paying most assiduous attentions to one of his daughters, but he was such a bashful, modest chap, never having been much in the company of girls, except this one, that he had never been able to raise his courage sufficiently high to pop the question.

He had gone to the house in which the lady lived at least twenty different occasions, resolved to know his fate, but when ushered into the presence of the fair one in whose keeping he had placed his heart his courage would invariably "go back on him," and he would return to his lonely room in greater suspense than before. Upon the evening in question, he had determined that, come what would, he would tell his Mary that he loved her. He would once for all decide the matter, but, as upon each former occasion, he could not get the proposal further than his throat. There it stuck, and he determined to gulp it down and give up the siege, when the door opened, and in walked the girl's father, who advanced to where they were sitting, and thus addressed them—

"I came to put a stop to this here foolishness. It ain't countin' expenses that I'm lookin' at, for coal oil is cheap, an' wood can be had for the haulin', but I'm sick and tired of this billin' an' cooin' like a pair of sick doves, keepin' me awake of nights, and it's got to be stopped right here. Mary Jane look up here. Do you love John Henry well enough to marry him?"

"Why, father, I—I—you must—"

"Stop that silly foolishin," yelled the old man. "Answer yes or no, and quick too, It's got to be settled now or never."

"Well—but, father, don't you know—if you'll only wait, and—"

"Dry up; answer yes or no. Speak!" roared the old gent.

"Well, then, yes! There now," and Mary again hid her face.

"That's business; that's the way to talk. Now, John, look here—look up here, or I'll shake you all to pieces. Do you want that gal o' mine for a wife? Speak out like a man now."

"Why, Mr. ——, ain't this rather a—I mean can't you—"

"Speak it out, or out of this house you'll go, head foremost, I won't wait a minute longer. There's the gal, and there ain't a likelier gal in the State, an' you just heard her say that she wanted you. Now, John, I won't stand a bit of foolin'. Once for all, yes or no?"

"Well, yes, sir. I have been presumptuous enough to hope that I—"

"Oh, stop your soft talk; the thing's settled now. You two fools would have been six months more at that job that I've done in five minutes. I never saw such foolin' as there is among young people now-a-days. Ain't like when I was young—an' now, good-night. You can talk the thing over, an' you an' me John, 'll go up to town an' get the license to-morrow. Soon be time to get to plowin'; no time for love-makin' then. Good night, good night; I hope I wasn't too rough, but I was determined to fix the thing one way or t'other," and the old man went back to bed.

Now that the ice was broken, the young people laid all their plans for the future, and John felt just a little bad at the comfort he had lost when Mary looked up at him shyly, and said—

"This would have been all right months ago, John, if you hadn't been so skeery. I knowed all the time that you wanted to ask me; but it wasn't my place to say anything, you know."

THAT BLOCK PUZZLE.

John Henry, whose engagement to Sarah Emeline is just announced, goes up to spend the evening with his beloved, who has invited a few friends to meet him. He takes the block puzzle up with him to make it pleasant for them. He is quite dexterous in the use of the bits of wood, and has come out even several times. With great pride he showed it to Sarah Emeline and her friends. He works it out carefully. Somehow or other it bothers him more than usual this time. "I wish so many of you wouldn't stare at me," he remarked; "it makes me nervous." Then he goes into a quiet corner and works it out by himself. After a few minutes he returns, exclaiming, "Eureka!" The guests all gather around, and there, sure enough, is 13, 14, 15. "It ain't right, after all," says Sarah Emeline; "you've got 12, 11, instead of 11, 12." And so he had, and no shifting of the blocks could bring it right. Is it any wonder that John Henry put the box in his pocket and never saw his Emeline more? "For," said he, reflectively, "a girl who would take a fellow down like that before a room full of invited company has got no feelin', and it's feelin' that tells in the long run."

Mark Twain was accused of bringing a plague upon his country when he invented the horse-car poetry:

A blue trip-slip for a six-cent fare,
A pink trip-slip for an eight cent fare,

etc., is a terrible thing to get running through one's head. But that flows easily along, and while it occupies the mind it does not torture the brain. The block puzzle turns black hair gray, makes amiable men cross and sane men lunatics. It is, however, the bond of sympathy that binds the people of this city close together, and when a man is seen to stand upon the corner of a street and throw his hat in the air and shout for joy, every person who passes that way joins in the wild hallaloo, for they know he has got 13—14—15!—*Toledo Blade.*

WHERE DOES THE DAY BEGIN?

As a matter of fact, the day begins all round the world—not at the same instant of time, but just as the sun visits successive portions of the earth in his journey from east to west. But the traveler who crosses the Pacific ocean can give another answer to the above question: that on the 180th degree of longitude—one-half of the circumference of the globe, starting from Greenwich east or west—there is an arbitrary change or dropping of a day, and that at this point, if anywhere, the day may be said to begin. It was with strange feelings that the writer, crossing the Pacific, having gone to bed on Saturday night, leaving everything pertaining to the almanac in a satisfactory condition, awoke on Monday morning! Sunday had completely dropped from our calendar, for that week at least. Every one knows that in traveling round the world from east to west a day is lost, and in order to adjust his reckoning to that of the place he has left, one must drop a day as though he had not lived it, when in reality the time has passed by lengthening every day during the journey. For a long time it was the custom for sailors to affect this change pretty much where they pleased; but it has now become a settled rule among American and English navigators that at the 180th degree a day must be passed over if going west, and one added if going east, in which latter case the traveler enjoys two Sundays or two Thursdays, as the case may be. It is most likely that this particular degree was decided on from the fact that, except a few scattered islands of Polynesia, there are large communities, with their vast commercial and social transactions, to be affected by the change.—*Watertown Reformer.*

BRIC-A-BRAC.

What Did the Man Say?—A scene in court with a stupid witness. A man has been caught in the act of theft, and pleaded in extenuation that he was drunk.—Court (to the policeman who was witness): "What did the man say when you arrested him?"—Witness: "He said he was drunk."—Court: "I want his precise words just as he uttered them; he didn't use the pronoun *he*, did he? He didn't say 'he was drunk?'"—"Oh yes, he did—he said he was drunk; he acknowledged the fact."—Court (getting impatient at the witness's stupidity): "You don't understand me at all; I want the words as he uttered them; didn't he say 'I was drunk?'"—Witness (deprecatingly): "Oh, no, your honor. He didn't say you were drunk; I wouldn't allow any man to charge that upon you in my presence."—Prosecutor: "Pshawt You don't comprehend at all. His honor means, did not the prisoner say to you, 'I was drunk?'"—Witness (reflectively): "Well, he might have said you were drunk, but I didn't hear him."—Attorney for prisoner: "What the court desires is to have you state the prisoner's own words, preserving the precise form of pronoun that he made use of in reply. Was it first person I, second person *thou*, or the third person *he, she* or *it*? Now then, sir—(with severity)—upon your oath didn't my client say, 'I was drunk?'"—Witness (getting mad): "No, he didn't say you were drunk, but if he had, I reckon he wouldn't have been wrong. Do you suppose the poor fellow charged the whole court with being drunk?"

Business on the Brain.—One night last week the wife of Justice Moses was roused from a sound sleep by a stern voice.

"Are you ready for trial, I say?"

"Hush! Don't make a noise, or else you'll wake the baby," she replied, endeavoring to soothe him.

"Don't talk back to this court, he vociferated. "If you've got any witnesses, bring 'em on, but let the lawyer do the talking."

"Why, Tom, how you take on! What is the matter?"

"I'll send you up for sixty days—that's what's the matter. Enders, take her away. Now I'm ready for that petty larceny case. Bring up the prisoner."

And jumping out of bed, he started for the next room to summon a jury, but fell over a rocking chair, barked his shins, woke up, and asked his wife what the Dickens was the matter, anyhow.—*Virginia Chronicle.*

THANK GOD FOR THE FLOWERS.

Thank God for the beautiful flowers,
That blossom so sweetly and fair;
They garnish this strange life of ours
And brighten our paths everywhere.

D. S.

The clever Dr. Ritchie, of Edinburgh, met with his match while examining a student: He said: "And you attended the class for mathematics?" "Yes." "How many sides have a circle?" "Two," said the student. "What are they?" What a laugh in the class the student's answer produced when he replied "an inside and outside." But this

was nothing compared with what followed. The doctor having said to his student, "And you attend the moral philosophy class also?" "Yes." "Well, you would hear lectures on various subjects. Did you ever hear one on cause and effect?" "Yes." "Does an effect ever go before a cause?" "Yes." "Yes? Give me an instance." "A man wheeling a barrow." The doctor then sat down and proposed no more questions.

RECENT LITERATURE.

How to Learn Shorthand; the Stenographic Instructor. An Improved System of Shorthand Writing. Arranged specially for the use of those desirous of acquiring the art without the aid of a teacher; being the simplest, most practical, and the best adapted for reporting. By Arthur M. Baker. 12mo, paper, 25 cents. S. R. Wells & Co., publishers, 737 Broadway, New York.

This is the latest manual published on the subject of shorthand writing. It does not propose to teach an entirely new and untried system, but is based on the best and most successful of the older stenographic (as distinguished from the purely phonetic) system of writing. We notice, however, that there are several new features introduced, the two most important of which are a phonetic vowel scale and a method of showing the *place* of a vowel in a word, without using the phonetic vowel signs as in phonography, or breaking the outline of the word. For reporting we think it is better suited than any other system we have seen to those whose natural inclination is to write a quick, free, running hand.

We do not think we can recommend to our young readers a more useful and interesting occupation for these long winter evenings than the study of shorthand writing as taught in this little book, and the low price at which it is published places it within the reach of all.

Four Months in a Sneak-Box. By Nathaniel H. Bishop. Illustrated. Lee & Shephard, Publishers, Boston, Mass.

To anyone unacquainted with the many terms applied to crafts plying the rivers, the above publication would suggest a subject foreign to the reality. The book is a description of the experience of a cruiser in a "Sneak-Box," which is described as a vessel combining much in little; curiously constructed; possessing the qualities of comfort and service. The journey was made down the Ohio and Mississippi rivers and along the coast of the Gulf of Mexico. For interest and instruction it is deserving of much flattering comment. The maps and other illustrations serve to increase the information derived from this pleasing narrative.

MAGAZINES FOR APRIL.

Harper's Magazine.—Contents. Music and Musicians in England, Mr. John Lillie, Illustrated; Some Pennsylvania Nooks, Ella Rodman Church, Illustrated; La Villa Real de Santa Fe, Ernest Ingersoll, Illustrated; An Irish Fishing Village, J. L. Cloud, Illustrated; Shipwrecked. A Poem. From the French of Francois Coppee, E. W. Latimer, Illustrated; Luca della Robbia and his School, E. D. R. Blanchard, Illustrated; Before the Shrine. A Sonnet, Louise Chandler Moulton; The Swiss Rhine, S. H. M. Byres, Illustrated; Home Studies in Nature, Mary Treat, Illustrated; The Old Mill. A Poem, Thomas Dunn English; White Wings, A Yachting Romance, William Black, Illustrated; Mr. Witherton's Romance, Phœbe Yates Pember; A Farewell. A Sonnet, A. H. Louis; Early History of Bible Illustration, W. C. Prime, Illustrated; An Easter Card. A Story, Virginia W. Johnson; Navy of the United States, E. H. Derby; Mary Anerley. A Novel, R. D. Blackmore; Madrigals, A. Bowman Blake; Editor's Easy Chair; Editor's Historical Record; Editor's Drawer.

The First Appearance of the Yankees in Santa Fe:—The first American who seems to have penetrated to New Mexico was James Pursley—an adventurous fur trader who found his way up the Arkansas, traveled extensively through the mountains of what is now Colorado, and finally worked his way down to Santa Fe, where he went to work as a carpenter, growing rich through high wages, but suffering always a feeling of restraint. An occasional Frenchman had appeared; but Pursley (who, by the way, is credited with being the first intelligent man who discovered gold in the Rockies) was the sole citizen of the United States who was there to welcome the immortal Pike when, on that bleak March day in 1806, he unwillingly tramped into Santa Fe at the head of his Falstaffian band, hatless, bootless and trouserless through a year's campaigning on the plains and in the mountains.

The Mexicans were greatly alarmed by this sudden realization of the proximity of the progressive and well-armed Yankees, and their consternation resulted very unhappily for the few leaders of that conquering tide that finally should overwhelm the effete rule of Spain in the New World; yet for a long time after Pike's expedition nothing occurred to frighten further the proud and indolent hidalgos.—*Ernest Ingersoll, in Harper's Magazine for April.*

Phrenological Journal.—Contents: William Ellery Channing, Portrait; The New Education; Comparative Phrenology, The Ethmoid, Parietal and Frontal Bones, Illustrated; Unity of the Human Species, II; Honduras and its President, Marco Aurelio Soto, Portrait; The Miwok Indians, Illustrated; Getting Rid of Intemperance; Hector, his Work and ways; A Plucky Woman; The Young Folks on Cherry Avenue, Chap. 4, a Reading Lesson; Disease—What Is It? Food for Young and old; Hoe-handle Medicine; Another Opinion, with a Preface; A Parable; Cooking Notes; Notes in Science and Agriculture; Editorial Items; Answers to Correspondents; What They Say; Personal.

Eye-Sight.—Milton's blindness was the result of overwork and dyspepsia.

One of the most eminent American divines having for some time been compelled to forego the pleasure of reading, has spent thousands of dollars in value and lost years of his time in consequence of getting up several hours before day and studying by artificial light. His eyes never got well.

Multitudes of men or women have made their eyes weak for life by the too free use of the eyesight. In view of these things, it is well to observe the following rules in the use of the eyes:

Avoid all sudden changes between light and darkness.

Never begin to read, or write, or sew for several minutes after coming from darkness to a bright light.

Never read by twilight, or moonlight, or of a very cloudy day.

Never read or sew directly in front of the light, or window or door.

It is best to have the light fall from above, obliquely over the left shoulder.

Never sleep so that, on the first waking, the eyes shall open on the light of a window. Do not use the eye-sight by light so scant that it requires an effort to discriminate. Too much light creates a glare, and pains and confuses the sight. The moment you are sensible of an effort to distinguish that moment cease and take a walk or ride.

As the sky is blue and the earth green, it would seem that the ceiling should be of a bluish tinge, and the carpet green, and the walls of some mellow tint.

The moment you are tempted to rub the eyes that moment cease using them.

If the eyelids are glued together on waking up, do not forcibly open them, but apply the saliva with the finger—it is the speediest diluent in the world—then wash your face and eyes in warm water.—Exchange.

This has been going round for about ten years, and its ownership, we guess, is lost; but it is good enough to go on indefinitely.—Phrenological Journal for April.

The American Naturalist.—Contents: Protoplasmic Dynamics, W. S. Barnard; A Sketch of Comparative Embryology. II.—The fertilization of the Ovum.) Charles Sedgwick Minot. Progress of Inveterate Palæontology in the United States for the year 1879, C. A. White; A Review of the Modern Doctrine of Evolution [Concluded] E. D. Cope; The Tongue of the Honey Bee. A. T. Cook; Recent Literature; General Notes; Botany; Zoology; Geology and Palæontology; Geography and Travels; Microscopy; Scientific News; Proceedings of Scientific Societies; Selected Articles in Scientific Serials. The table of contents sufficiently recommends this monthly to the lover of scientific subjects.

Sabbath Reading.

SABBATH.

'Tis the pearly light of the holy dawn
That shimmers through night mists cold,
For angel fingers aside have drawn
The amber bars of the gates of gold.

And down from the hights of the upper skies
Is dropped the ladder that Jacob saw,
And men look up with their weary eyes
To the shining stair with a weary awe.

The day is a-throb with the heart of God,
With the jubilate of love o'er death;
And man alike with the lowly clod
Feels the wakening stir of his warming breath.

There's a pause in the mad world's empty mirth,
There's a Sabbath hush in the clear blue air;
Through heavenly portals there floats from earth
The fragrant incense of human prayer.

The message of mercy is borne anew
To the wayward spirit, the guilt-stained soul;
And the words of the promise fall like dew
On the heart that longs for the silent goal.

On the seething billows of human ill
Are treading the feet with glory shod
And the benison falleth, "Peace! be still!"
'Tis the gift to man of the rest of God.

—Cora S. Nourse.

PEACE.

"These things I have spoken unto you, that in me ye might have peace" (John xvi. 33).

"I know the thoughts that I think toward you, saith the Lord, thoughts of peace" (Jer. xxix. 11).

"Great peace have they which love Thy law: and nothing shall offend them" (Psa. cxix. 165).

"Be of one mind, live in peace; and the God of love and peace shall be with you" (2 Cor. xiii. 11):

"I will both lay me down in peace, and sleep; for Thou, Lord, only makest me dwell in safety" (Psa. iv. 8).

"Blessed are the peace-makers: for they shall be called the children of God" (Matt. v. 9).

"Let your requests be made known unto God. And the peace of God, which passeth all understanding, shall keep your hearts and minds" (Philip. iv. 6, 7).

An Ancient Prayer—"Keep mine eyes, lest they behold vanity: keep mine ears, lest they hear lying; but let them ever be open, to hear the word of God.

"Keep my hands, that they may do no iniquity; but may rather be raised in prayer to the Lord, in holiness and purity.

"Keep my mouth, that I may speak no folly; that I may neither detract from the absent, speak ill to those present, nor answer evil with evil; on the contrary, may I bless Thee, O Lord, at all times; let Thy praise be ever in my mouth."—S. Jerome.

Sweet Words.—Five of the sweetest words in the English language begin with H, which is only a breath: Heart, Hope, Home, Happiness and Heaven. Heart is a home-place, and home is a heart-place; and that man sadly mistaketh who would exchange the happiness of home for anything less than heaven.

Let us, for our consolation, our hope, our encouragement, our strength, in every night season, remember the name of the Lord; and let this be also the motive to constrain us through love to new obedience; for the Psalmist not only remembered the Lord's name, but was able to add "I have kept Thy law."

Knowledge of God.—Is there not such a thing as intelligent ignorance? I think so, and our knowledge of God is such an intelligent ignorance. The instructed man's knowledge of God is distinguished from the ignorant man's in being only a more intelligent ignorance. But that is something.

Keep firm hold of your Father's knowledge; strenuously seek the kingdom. In quietness, accept the methods of his unchanging providence. Thus shall your hearts be kept in peace amidst the storm of fire, with the happy thought, "So He bringeth them unto their desired haven."

Christianity is, in society, like that agency in the physical world which drives suns and systems on their tremendous tracks, yet binds them in glittering harmony, holds them to a central order, fills them with joyful life, and illuminates them with universal beauty.

With the dawning of Easter let us resolve to follow the example of the One whose glorious ascension is celebrated.

More harm is wrought by want of thought than want of heart.—Dr. E. H. Chapin.

What more fitting emblem of Christ's purity than the beautiful flowers.

He that has learned to pray as he ought, has got the secret of a holy life.

For Women.

CONDUCTED BY MISS RAY CLARK.

MAKE YOUR OWN PIES.

How well we remember, the fair days of yore,
The old farm-house kitchen, the bright painted floor,
Those days of our childhood, where mother's dear face
Illumined each corner about the old place.

Those pies of our boyhood! we've not seen them since,
The custard and pumpkin, the apple and mince,
So juicy and deep, and so mammoth in size;
But then our dear mother, she made her own pies.

Then pretty, fair housewife, with home bright and neat,
Your kitchen so tidy, your household complete,
What happiness beams in your fair sunny face;
With snowy white apron that adds such a grace,
You make your own bread, that is spongy and white,
You "put up" preserves, and make cake dark and light,
Would you fashion a dainty your household would prize?
Then pretty, fair housewife, pray make your own pies

And dear little maiden, expecting to wed,
Now don't pass this by with a toss of your head:
If your husband you'd please, all the days of your life,
And make him the sweetest and best little wife,
Pray, would you be healthy and would you be wise,
Why, dear little maiden, then make your own pies.

Maud Miller.

TO SCHOOL TEACHERS.

Teachers of common schools often are at their wits ends to keep their pupils interested in their various branches of study. In my experience I have found no difficulty for the first half of the term, but after that it is a hard matter, and the only real successful method I can recommend by actual trial, is giving small prizes. If you are recovering a reasonable renumeration for your services, you will not object to expending two or three dollars in this way. Announce to your pupils your intention of rewarding those who prove themselves most diligent, those having the greatest number of perfect recitations, by giving them a small reward of merit. This year I have given my school notice of the prizes they may expect.

I have some scholars who are almost men and women, and to this class I give a gold dollar to the most diligent pupil. I made this announcement only last week, and I already see a marked change in the recitations. This interest will continue to increase until the whole school will be under the impression that perhaps this may be the last chance they will ever get to compete for a prize and consequently, there will be more improvement in my school during the last four weeks of the term, than in any previous six.

Teachers, you in the meantime must not forget that there is a great responsibility resting on you, (I mean the class of teachers who are employed in the rural districts.) Farmers give their children into your charge and the future career of the child is very often formed by the impressions received in the first few years of school life. Therefore, be very careful and get the child started in the right course, after which it will take care of itself.

Teacher.

MRS. HAYES IN THE WHITE HOUSE.

It is safe to say that no lady in the present generation has produced a more valuable impression by the grace and simplicity of her manners in presiding at the White House than she. It is worth a journey to Washington to see so simple and unconventional a lady at the very head of the best American society. Her portraits do her scant justice. Her face is wonderfully mobile; it constantly expresses her own genuine enjoyment in the enjoyment of her guests. Her laugh is contagious; and it would be as impossible for a photograph or even a portrait to picture the life that sparkles in her face as for a picture to portray the sunshine that dances on the dimpled surface of a lake which ever and anon breaks out into a quiet rippled laughter.

Her social victory is complete, and has been won after a hard battle. The story has been told before, but it is worth retelling. She came to Washington determined not to offer wine to her guests; this was the determination of a lifetime, and she would not and could not abandon it. To give a state dinner without wine was declared to be impossible; all Washington society was opposed to her; I believe it even became a Cabinet question. For a year she was a target for the sort of arrows which it is so hard for any woman to bear unflinchingly. But she bore it all; by her patient persistence and her tact she carried the day and conquered Mrs. Grundy in her own field. She never has offered wine; Washington follows her lead; and I doubt whether any State Capital, not excluding the Capital of Maine, is a more thoroughly temperance city than Washington to-day.

ABOUT WOMEN.

The University of Brussels has for the first time admitted a lady as a science student.

Miss Bryant, daughter of the poet, and her cousin, Miss Fairchild, were at last accounts among the Americans in Rome.

Five male and two female servants will attend the ex-Empress Eugenie to Zululand.

Two young ladies have been appointed census enumerators for Ashland and Catlettsburg, Ky.

Another lady lawyer, Mrs. Laura Maxwell, has been admitted to the practice of law in Keokuk.

The widow of Dr. Cook, who lost his life in attendance upon the fever stricken people of Hickman, has just been elected State Librarian of Kentucky.

The queens of the world are in a deplorable condition. The Queens of Italy and Swoden are dangerously ill; the Empress of Russia is very low; the new Queen of Spain has fallen into epileptic fits on account of the attempt to assassinate her husband.

The Empress Elizabeth of Austria, who has a great fondness for English literature, has sent to Mrs. Isabel Burton, the wife of Captain Burton, a handsome gold locket with her monogram and an imperial crown in diamonds to mark her appreciation of that lady's book on the "Inner Life of Syria."

ADVICE TO LADIES.

In marrying, make your own match; do not marry any man to get rid of him, or to oblige him, or to save him. The man who would go to destruction without you will quite as likely go with you, and perhaps drag you along. Do not marry in haste lest you repent at leisure; do not marry for a home and a living, when by taking care of your health you can be strong enough to earn your own living. Do not let aunts, fathers, or mothers sell you for money or a position into bondage, tears, and lifelong misery, which you alone must endure. Do not place yourself habitually in the society of any suitor until you have decided the question of marriage; human wills are weak, and people often become bewildered, and do not know their error until it is too late. Get away from their influence, settle your head, and make up your mind alone. A promise may be made in a moment of sympathy, or even half delirious ecstacy, which must be redeemed through years of sorrow, toil, and pain. "Circumstances alter cases" but in the main, these suggestions hold good.

Correspondent.

THE TOBACCO QUESTION.

To anxious Marguerite in the last number of last year, I would say, that I know of only one way to secure her desired end. Create a loathing for the weed in your children and you may sleep quietly. This loathing is sure to develop if you bring your children up, as nearly as possible, on nature's original and true diet for man, raw fruit. Every morsel of meat and cupful of milk, or ounce of animal grease brings the danger home to you. They may thereby become tobacco-users or lovers of strong drink, or both. I have three boys, but am not afraid that either one will spend a cent on rum or tobacco, without a word of prohibition on my part. But, good heavens! the melons that were devoured last year during four months, would astonish you. Other fruit would also have been used if we could have secured it.

Chautauqua Co., Kansas. H. Studer.

CORRESPONDENTS' NOTES.

How shall we color the eggs for Easter?

D. F. O.

Ans.—There are several makes of dyes used for this purpose. Much labor is saved by this new mode.

Will some one reply as to the rules of a hired girl; one who is to do the work of the kitchen with the exception of fancy baking? By rules, I mean when, how and in what way they are to be performed.

A Yearly Subscriber.

Ans.—The only true solution of this problem, is to conform to the wishes of the one in charge of the household. Further comment is left to the ladies, who now have an opportunity to chronicle their opinion and experience.

Effie:—May use unbleached muslin, Swiss muslin, either plain or dotted, or linen batiste edged with lace, for curtains; for lambrequins, a new style of canton flannel is in vogue; it can be procured of different shades. Patterns for them can be obtained from any pattern dealer.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE KITCHEN CLUB DISCUSSES "PARTIES."

MRS. ANNIE L. JACK.

We had no cake at Mrs. Chapman's, but she treated us to scalloped oysters that are more rare than cake in this inland country place. We took home the recipe, each determined to try it in the near future. It was as follows:—One quart of oysters; a teacupful of pounded crackers; two spoonsful of butter; half a cup of milk or fresh cream; pepper and salt to taste. Butter a baking dish; put in a layer of crumbs; wet these with the cream—pepper and salt and strew in bits of butter. Put in the oysters, a spoonful at a time, with some of the liquor. Pepper them; put in bits of butter and cover with the cracker crumbs. Then more bits of butter and set in the oven with an inverted plate over it. Bake till the juice bubbles to the top; then remove the plate and brown for two or three minutes. She learned this by following the directions given in Marion Harland's "Breakfast, Luncheon and Tea."

This dish just suited the subject in discussion, which was the influence of party-giving and going among our young people. It was decided that, in moderation, such recreation was beneficial as tending to promote a friendly feeling and social intercourse. The subject of refreshments being important in a "*kitchen*" club, the views of members were asked as to this item. Miss McGreggor decided she would be content with scalloped oysters, if our hostess was the cook, with plenty of fruit afterwards—and a cup of coffee or tea. Mrs. De Macco thought young people were as contented to have trays of cake and sandwiches passed around with tea, coffee, or lemonade—anything to show hospitality before leaving. Another lady told of a friend whose husband fitted up little tables to hold six each—and at these the guests sat down and enjoyed themselves in separate groups, and, if good tact was employed in grouping, this plan was very enjoyable

Aunt Betsy gave us a humorous account of the parties in her young days. They were generally quilting bees, and the young folks were very well satisfied with a barley bannock and an apple during their evening's enjoyment. My opinion being called for, I said: "There is no doubt social gatherings of young people are beneficial, and promote good feeling in country places where the youth of isolated families can only meet in this way, except at church or market. My idea of refreshments is, that no class of society, except the very wealthy, have better opportunity for variety than farmers. Within your home you have fruit of apple, pear and grape (that is in this northern country), nuts of many kinds, popcorn, celery, and ham for your sandwiches. Your poultry yard furnishes a variety in that respect, and your preserve closet has jellies that are tempting to the appetite. So you can set a pretty table with a little outlay for confections and oranges in winter—and let your groups of bright-eyed girls and boys gather round in turn. I promise *they* will be satisfied—so may you be."

A CHAPTER IN MY EXPERIENCE.

MARGUERITE.

I STARTED out for a walk on one of these remarkably pleasant January days, for this Lake-Shore country, and I turned aside to call on the mother whose child was threatened with croup, and was not dressed wisely in my opinion. The big rocking-chair was drawn up for me and dusted with an apron; the doors to the cooking stove were pushed back so I could dry my damp feet; the boys banished from the house to secure quietness, while baby, sweet, pretty and neglected, was toddling about. The father, Mrs. O'Flany said, "was away for a few days," and she had cleaned her shanty, white-washed its walls, and was as happy as a cricket to think I had come in when I did.

"Ah, Mrs. O'Flany, your baby isn't warm enough." I said, as it climbed up on her lap, showing bare knees and thighs. "Doesn't it feel cold?"

"Yes, she always does," was the answer.

"Will you make it some drawers if I cut them for you out of half-worn cloth?"

"Indade, Mrs. Lee, and I will gladly. You are always so kind, God bless you!"

Promising to have them ready by Tuesday, I left her. It was colder on Monday; but I forgot all about my agreement until I saw two mittenless hands clasped together coming eagerly to the post-office "to hear from the father." I had become interested in my afternoon's work and for two minutes repented my promise. Just then Fred came walking in. How long would I hesitate if my child needed a a comfort? I asked myself. Ashamed of my selfish thought, I got up, opened a paper sack, took out some half-worn merino under-wear of ours, and cut out four pairs of drawers long enough to reach to the ankle; then took the wrist and ankle pieces off the original garments; cut them smaller to be sewed on the bottoms, so they would fit neatly and stay in their places inside the stockings, I cut the drawers to be open for this child, prepared bands for the waists, tied each pair separately and made a bundle of the whole to be called for.

Mrs. O'Flany did not come for the bundle; the days grew colder, so I took them over myself, determined to make a pair, partly to show her how, and partly to be sure that they really did the child some good; for the woolen stockings I sent in early winter are kept over for the next winter as she thinks "they will be big enough." I think the only thing that makes me patient with this woman and keeps me so, is her blarney; for sometimes I think I never saw a woman with so little gumption as she. I often think that she is good for blarney, but good for nothing else—but she is.

Seated in the big rocking-chair I soon had a pair fitted and made for the child to wear, and while the mother sewed buttons on its flannel chemise, for it actually wore one, on which to button them, she told me "they had gotten a letter from the father and he sent two kisses for the mother and three more, one for each one of his blessed children, and he would be home 'certain' on the morrow." When we took off the little shoe and cotton stocking it seemed to me ice could not have felt colder than the little foot, and holding it and patting it to get it warm, I told her how warm I would keep the little darling if she were mine. "If I were with you three months I would learn considerable" she said. "Let me tell you of two things—simple ones, too, I have learned of you in a week. I saw you put a skein of yarn over two chairs and then *you sat down to wind it.* Now I would have stood up, and if I had been ever so tired would not have known I could sit down and wind it too. Then again, just now when you wanted to cut a button-hole, you doubled the band and cut it with the shears. I would have had to jump up to get a razor or something else. I did not known I could use the shears for it. Some people work easily, but I do the hardest way." I left pieces for patches, and told her I would cut more when they were worn, if she let me know, and departed amid prayers for blessings on my head from the dear Lord, but it gratified me more when I thought of the child left comfortable by my efforts.

DOMESTIC RECIPES.

Parsnips.

Boil until tender, scrape, cut lengthwise, and put into a saucepan with three tablespoonsful of butter, a little pepper and salt, and a tablespoonful of chopped parsley. Shake until the mixture boils, take up the pieces carefully, and pour the butter over.

Pressed Veal.

To three pounds of veal allow one-half pound of bacon. Chop both until very fine; season with pepper and minced onion and press into a deep-baking dish and bake slowly two hours. Serve cold.

Puff Omelet.

Beat the yelks of eight eggs and the whites of four until very light, stir in a teacup of cream, in which a tablespoonful of flour has been mixed, and season with salt and pepper. Melt a tablespoonful of butter in a baking-pan, pour in the mixture and set the pan in a hot oven. When it thickens spread over the remaining whites beaten to a froth. Return to the oven and bake a delicate brown. Slip on to a large platter and serve at once.

Chocolate Cake.

Two cups of granulated sugar; one cup of butter; whites of eight eggs beaten to a froth; one cup of sweet milk, three full cups of sifted flour, and three teaspoonsful of baking powder. Beat the sugar and butter to a cream, add the milk, then the flour (baking powder in it), and the whites. When well mixed, divide and into one-half, grate a cake of sweet chocolate. Bake in layers and put together with custard as follows: Bring one pint of milk to the boiling point, stir in first two teaspoonsful of corn-starch dissolved in a little milk, and then two beaten eggs and a teacup of sugar. Flavor with vanilla. This is a very excellent cake. MARY B.

Kale.

I think if Mrs. J. M. Galpin will try the following recipes for cooking kale, she will find it palatable. No. 1. Look over carefully, tie into bunches and place for half an hour in cold water. Put into salted boiling water and cook thirty minutes. Have toasted some thin slices of bread, butter and place in a deep dish. Take up the kale, drain, remove the thread and place on the toast. Pour drawn butter over it.

No. 2. Cook the same length of time as in No. 1, drain, press, and chop fine. Put into a sauce-pan with a large lump of butter, pepper and salt to taste, and two or three tablespoonsful of vinegar. Stir until well heated, then heap upon thin slices of buttered toast.

MRS. L. JONES.

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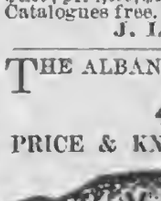
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J. DECKER, Fern Creek, Ky.

News of the Week

MISCELLANEOUS.

Monday, March 29, 1880.

A huge whale, measuring 65 feet in length, has been on exhibition for several days near Fulton Ferry, New York city .....Mr. Edison is constantly experimenting with the electric light. A recent thorough investigation revealed beyond a doubt that the light can be put to practical use both in light-houses, streets and other places; but it is not yet perfected, and it will require some further experiments to bring it into working order.....Atlantic steamers report heavy gales and very perilous passages .....A telegram received from the United States Attorney at Mesilla, N. M., the 26th, by the Postmaster General, states that on account of Indian depredations it is impossible to carry the mails regularly from Santa Fe to Mesilla. General Hatch has been asked for protection and has promised to supply it, but at the writing of the telegram no assistance had been received. The attorney says it will be impossible to carry the mails until some protection is given by the military.....The Florida orange crop this year is much larger than ever before. From such counties as are easily accessible the figures point to a crop of about 440,000 boxes. In Putnam county alone the 1879 yield was nearly 5,500,000 oranges, and next year, with the large number of blooming trees that will come into bearing, the crop will amount to 25,000,000 oranges..... The reduction of the debts of the United States since August, 1865, has been $761,319,350, or 27.6 per cent. In that year our public expenditures were $1,217,704,199, of which more than half was raised by taxation. In 1879 the expenditures were reduced to $266,947,883.. .....The United States circuit court at San Francisco, in the Parrot habeas corpus case, involving the validity of the law recently enacted forbidding the employment of Chinese by corporations, has decided the law unconstitutional. The case will probably be taken to the United States supreme court, Gen. Butler having announced his willingness to make a case there for the people.

AGRICULTURAL NEWS.

Last year's Russian wheat crop, though short, is reported to have been double that of this country—but, then, Russia has to feed a population of about 90,000,000. Reports have it that 55,000 people have died in Armenia from starvation—it is denied that any one has died in Ireland from that cause.. The receipts of wheat at Chicago the past year were 3,000,000 bushels greater than in any previous year. The receipts of corn were 1,250,000 bu. greater. There was a shortage of the oat crop in the State, of 8,000,000 bushels.. Florida is planting rice heavily this year.... Durham, N. C., is to have a silk factory.... Texas is said to have received $180,000,000 for her cattle in the last five years—that would be $36,000,000 a year—a trifle too much exaggeration,... Young grasshoppers have begun to appear in Hill Co., Texas .. Louisiana is about to import large numbers of Chinese laborers to replace the exodusters on the cotton and sugar plantations... Reports from all over the country show the past week to have been unusually cold and stormy for this season of the year....A cablegram from France, on the 22d, says that the unusually cold weather has severely injured the grape vines, especially in Burgundy and Champagne, so that is is feared that this year's crop, too, will be very poor....The drought in Asia Minor creates great uneasiness as to the crops, and the poor are suffering from a steady rise in the price of provisions.... Frost in Egypt—a strange visitor there—has greatly damaged the sugar fields .. Spain has lately prohibited the importation of pork from this country or Germany, through fear of trichinosis... Grain speculators in Grand Rapids, Mich., have failed for about $400,000....The first colored grange has lately been organized at Dallas, Tex., under the name of "Texas Farmers' Association"—no white "trash" admitted....The New England Milk Producers' Association have fixed the price of milk in Boston for the six months after April 1, at 33 cents per can of 8⅓ quarts, all payments to be made on or before the 15th of the month after that in which the milk was furnished....Excessive drought in Cuba... The Hon. C. L. Flint, Sec. of Mass. State Board of Agriculture, who has lately resigned the presidency of the Agricultural College at Amherst, has paid off all the indebtedness of the college, proving that it can be self-supporting.... J. W. Boynton & Co.—father, wife and son—a very extensive Chicago commission house, have failed with no assets, having fleeced a multitude of farmers who had consigned goods for sale to the rogues....In St. Louis all grades of wheat are about 22 cents per bushel higher than they were just a year ago, and corn is exactly five cents per bushel higher. Oats show an advance of six to seven cents per bushel on prices of last year at this time, and a similar advance can be shown in most of the staple products of the farm.... Prof. J. W. Comstock, entomologist of the Agr. Dep't has been examining the insects injurious to oranges in Fla., and is about to visit other orange-growing States also, including California..... Prof. Cyrus Thomas thinks that if we have a dry summer the Chinch-bug will be troublesome in the West this year..... The Iowa Legislature has abolished the State tax on dogs.....The Congressional party to inspect the Baltimore oleomargarine works was made up as follows: Committee on Manufactures—Congressman Morgan R. Wise, of Pennsylvania, Chairman; R. L. T. Beale, of Virginia; W. M. Lowe, of Alabama; John G. Hall, of New Hampshire; R. G. Horr, of Michigan, and Mr. D. B. Moon, clerk of the committee. Committee on Agriculture—Congressmen D. Wyatt Aiken, of North Carolina; J. H. McGowan, of Michigan; D. Wilbur, of New York; E. P Forsythe, of Illinois, and J. C. Ellison, clerk. There were also present from Washington, Messrs. George O. Sellhamer, attorney of the United States Dairy Company, and James McNabb, Jr; also, Mr. H. A. Proston, of Massachusetts. The visitors were received by the Directors of the oleomargarine company, as follows: President—W. Morris Orem; Secretary and Treasurer—William P. Herbert; general Manager—E. Fawcett, and Messrs. W. S. Carroll and William H. Brown, Directors.

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The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, March 27.

Baltimore.—WHEAT—Southern firm and quiet; western dull and easy; southern red at $1.38@$1.43; do. amber, $1.45@1.48; No. 1 red, $1.43; No. 2 western winter red, $1.41. CORN—Southern firmer for white and steady for yellow; western quiet and steady; southern white at 59@60c.; do. yellow at 56½@57c.; western mixed, 55@55¼c. OATS—southern, 45@46c.; western white at 46@47c.; do. mixed at 44@45c.; Penn. at 45@46c. RYE quiet; prime at 93c. HAY firm and fairly active; prime to choice Penn. and Md. at $16@18. PROVISIONS—Mess pork at $12 25@12 50. Bulk meats—Loose shoulders at 4½c.; clear rib sides at 6¾c.; do. packed at 5c. and 7¼c. Bacon—Shoulders at 5¾c.; clear rib sides at 7¾c. Hams at 10¾@11¾c. LARD at 8@8¼c. BUTTER active and very firm; western packed and roll at 28@30c. EGGS firm at 11c. MILL FEED—The demand for city is regular, and the market is steady at $22 per ton for both middlings and brown-stuff, with no other stock offered. HAY AND STRAW—The supply of hay is less liberal and the market is firmer. Straw is steady and firm. Hay—Choice Cecil county Timothy $19@20, fair to prime Md. and Penn., $16@18, mixed $15@17, and Clover $14@15 per ton. Straw—Wheat $9@10, Oats $13, and Rye $18@19 per ton. SEEDS—The price of Clover has declined materially, and there is more doing, sales being reported good Penn. at 6¾c., and prime Penn. and Western at 7c. Common is quoted at 5¾@6¾c. Timothy is jobbing at $3.10 per bushel.

Boston.—FLOUR dull; sales Western superfine at $5@5.25; common extras $5.25@5.75; Wisconsin extras $5.25@6; Minnesota extras $6@7.25; winter wheats at $6 25@6.75 for Ohio and Michigan; $6.50@7 for Illinois and Indiana; $6 75@7.25 for St. Louis; patent winter wheats at $7@8.50; patent spring wheats $7@8 75; but extreme prices not easily obtained. CORN quiet; sales of mixed and yellow at 60@61¾c. OATS dull; No. 1 and extra white at 50@53c.; No. 2 white at 48@48½c. RYE at 90@92c. Shorts, fine feed and middlings at $22@25. BUTTER—Choice Western creameries at 35@38c.; ladle packed, choice at 26@30c.; fair to good at 22@25c. EGGS—Western at 11¾@12c. CHEESE—Sales confined to small lots; choice Northern factory 14½@15c. ₱ lb.; fair to good at 14¼c., and common 10@11¾c.; Western—choice 14@14¾c.; fair to good 11@13c.; common 9@10c. HAY AND STAW—There has been a fair demand. We quote first quality coarse Easter and Northern at $15@17 ₱ ton; poor and medium at $11@14. Rye Straw $20@22. PROVISIONS—Pork, extra prime, at $11@11.50; mess $13.25@13.50; Western clear at 14 50@14.75; Boston clear at $14 75@15, and backs at $15.50@16 ₱ bbl. Beef is steady; we quote Western mess at $11@11.50 ₱ bbl.; extra mess at $11.75@12; and extra plate at $12.50@13; of Beef hams at $17.50@18; and beef tongues $36@37 ₱ bbl.; smoked hams are firm; we quote Western smoked at 9¾@10c. ₱ lb.; Boston at 9¾@9¾c. and 11@11¾c. for fancy in bags.

Chicago.—WHEAT steady, with a fair demand: No. 2 red winter at $1.19; No. 2 Chicago spring, $1.16¾@1.16¾; No. 3 do. at $1.04¾@1.05; rejected at 65c. CORN in fair demand and firm; fresh 36¾c. regular, 37¾c OATS in good demand at 28c. RYE easy at 68@71¾c. BARLEY easy at 76c. PORK strong at $10 60. LARD in fair demand at 7c. BULK MEATS in good demand; shoulders at 4c. short rib, 6¾c.; short clear, $6.65c.; EGGS at 10¾@11c. BUTTER—Prices remain firm all around; creamery, 31@36c; good to choice dairy, 24@30; medium, 18@20c.; inferior to common, 10@16c.; roll, 15@25c. CHEESE—No abatement in the demand for choice and fine makes, but for poor and thin goods only a limited inquiry. Stocks are light and prices are steady and unchanged at the annexed range: Good to choice full cream cheddars, 14@14¾c. ₱ lb.; part skimmed of good quality, 11@11¾c.; full skimmed, 5@9c.; low grades, 6@8c. HAY—No. 1 timothy at $11.50@12.50 ₱ ton; No. 2 at $10.50@11; mixed do. at $9@10; upland prairie at $9@9.50; No. 1 do. $7.25@8.25, and No. 2 do. $6@7. Small bales sell at 25@30c. ₱ ton more than large bales. HIDES AND PELTS—The current quotations are: Green-salted light hides, 6¾c. ₱ lb.; do. heavy cows, av. 60 lbs. and over, 9½c.; No. 2, or grubby and cut, all weights, 8@8¾c.; green-salted bull, 7@7¾c.; do. calf, 14@14¾c.; dry-salted hides, 14@15c.; dry flint, 18@19c.; dry calf, 15@16c.; deacons, 55c. Sheep pelts are salable at 60@65c. ₱ lb. for the estimated amount of wool on each pelt. MAPLE SUGAR—Fair to good bright, new, sells to a moderate extent at 11@12c. ₱ lb., with dark-colored and poor lots not wanted. The sugar is ample. SEEDS—Poor to choice medium clover ranged at $3.85@4.10 ₱ bush.; prime timothy at $3.55@3.60; flax at $1.50@1.55, on a basis of pure, and Hungarian and millet at 60@80c., according to quality.

Cincinnati.—FLOUR dull family at $5.50@5.75; fancy unchanged. WHEAT easier at $1.27½; CORN in fair demand at 40¾c. OATS steady at 37¾@38c. RYE steady at 84c. BARLEY stronger; extra No. 3 fall at 80c. PORK active at $10.50@10.55. LARD stronger at 7@7.05c. BULK meats firmer shoulders at 4c. clear ribs at 6¾c. clear sides at 6¾c. BACON in fair demand; shoulders at 5c; clear ribs at 7¼c; clear sides, 7¾c. BUTTER stronger; choice Western Reserve at 28@30c; choice Central Ohio at 23@27c. HOGS steady and firm; common, $3.50@4.20; light at $4.25@4.50; packing at $4.20@4.55; butchers' $4.55@4.65; BRAN firm and in good demand at $13 per ton in bulk on track. SHIPSTUFFS dull at $15@16. MIDDLINGS an active demand at $18@23 and for stuff in sacks 50c@$1.00 per ton more than the above quotations was obtained. HAY. Prairie hay, $10@11; fair to prime mixed, $14.50@15.50; fair to prime 16@16 50; choice light pressed timothy $17 per ton on arrival, and $1.00@2 more from store. HIDES demand good and prices firm; Green, 7@8c; wet salted, 8¾@9c; dry salted 13@14c. flint, 15@17c; do. selected, 18@20c. per pound. Sheep pelts $1.@1.25 each; sheared do. 25@40c. ONIONS prime to choice at $4.50@5. POTATOES Early Rose at $1.85@1.90. Russets $1.25. Peerless at $1.60. Peachblows at 28@30c per bushel, loose on arrival, and 35@40c. from store.

Indianapolis.—WHEAT quiet; No. 2 red at $1.21@1.22¾. CORN firm at 36¾@37c. OATS steady at 32@35c. HOGS firm at $3.75@4.45.

Louisville.—WHEAT firm at $1.18@1.20. CORN easier; No. 2 white at 42@42½c.; do. mixed at 40c. OATS easier; No. 2 white, 38c.; do. mixed at 37c. RYE steady; No. 2 at 85@86c. PORK quiet at $12.25. LARD firm; prime steam at 7c. BULK MEATS firm; shoulders at 4c.; clear ribs, 6¾c.; clear sides at 6.80c. BACON firm; shoulders, 4¾c.; clear ribs, 7.10c.; clear sides at 7.50c. SUGAR-CURED HAMS at 9@10c. CANNED GOODS—Tomatoes, 2 lbs, $1.15@1.30; 3 lbs., $1.35@1.60. Peaches, 2 lbs., $1.60@1.75; 3 lbs., $2@2.24. Blackberries, $1.50@1.60. Strawberries, $2 Raspberries, $1.50@1.75. Cherries, red, $1.50@1.60. String beans, $1.25@1.30. Green peas, $2. BUTTER—Demand liberal and prices favor sellers. We quote common to fair country at 14@18c.; fair to prime at 18@22c.; and choice to fancy at 24@26c.; Western Reserve at 25@27c., and Western creamery at 38@40c. CHEESE—There is no quotable change. Western factory at 13¾@14½c.; September cream, 15@15½c.; off grades, 12@14c.; pineapple, 18@20c. FIELD SEED easy, with a drop of 20c. in orchard grass. We quote, delivered from store: timothy, $2.90; orchard grass, $1.40; red top, 75c.; clover, common red at $4.50, and spring at $4.75; blue grass, clean, 55c.; extra clean, 65c.; flaxseed, $1 10 per bushel on arrival. MILL OFFAL active at quotations. We quote per ton in bulk: bran, $13; shipstuff, $15; middlings, $18.50. HAY—Demand moderately good, with steady prices ruling. We quote common to prime choice timothy, $15.50@17, and mixed at $12@14 per ton on arrival. BROOM CORN—Medium to prime, 4@6c. per lb for straight; crooked, 3¾@4c.

Milwaukee.—WHEAT opened firm, declined ¼c. and closed weak; No. 1. Milwaukee hard at $1.19; do. soft at $1.13¾; No. 2 Milwaukee $1.11¾; No. 3 do. at $1.04¾; No. 4 do. at 99c; rejected, 89c. CORN firmer; No 2 at 35¾c. OATS scarce; No. 2 at 30½c. RYE quiet; No. 1 at 72c, Barley strong No. 2 spring at 59c. PROVISIONS quiet, but firm. Mess pork firm at $10.65 cash; LARD—Prime steam at $7 05c. LIVE HOGS firmer at $4.20@4.35.

Philadelphia.—WHEAT, pretty steady; No. 2 red at $1.41¾@1.41⅝; Penn. red on track $1.41¾, Del. amber $1.43¾. CORN—Penn. and southern yellow on track and in grain depot at 56c.; Delaware yellow at 55c.; steamer on track at 53¾c.; western rejected on track at 53¾c.; southern white on track at 58c. OATS—Demand limited; No. 1 white at 48@48¾c.; No. 2 do. at 47@47¾c.; do. to arrive at 46c.; No. 3 do. at 46c.; rejected, 45@46c. PROVISIONS dull and weak; City mess beef at $13. Beef hams at $17. Mess pork at $12@12.25; extra prime at $9.50. Hams, smoked, at 9¾@10¾.; do. in salt and pickle at 7¾@8c.; clear rib sides, smoked, 7¾c.; do. in salt, 7c.; shoulders in salt at 4¾@4¾c.; do. sugar-pickled at 5@5½c.; do. smoked at 5¾@6¼c. Dressed hogs, 5¾@6¼c. LARD—Western, $7.62½@7.75c.; do. steam at $7.37½c.; do. butchers' at 7c. BUTTER firm with good inquiry; creamery extra, 35@37c.; Bradford county and New York extra nominal at 31@33c.; do. fall at 28@30c.; Western Reserve extra at 28@30c.; do. good to choice at 23@27c.; rolls scarce and firm; Pennsylvania extras at 23@25c.; Western Reserve extras at 25@27c. EGGS firm; Pennsylvania at 12¾@13c.; western at 12@12½c. CHEESE in fair demand; New York factory at 14¾@14½c.; western full cream at 14@14¾c.; do. good at 13¾@13½c.; do. half skims, 12¾@13c. SEEDS—Clover dull and weak under free offerings at 6@7c. for low grade to prime. Timothy quiet but firm at $3.20@$3.30, as to quality, for jobbing sales. Flax, last sales reported were in small lots to druggists at $2; but round lots were quoted as unsalable above $1.70 or $1.75. FEED quiet but firm under moderate offerings, with sales of winter wheat bran, in store, at $21.75, quoted at $21.25 to arrive; Middlings at $24. HAY AND STRAW—Prime cut Hay at $17@18; prime baled North Penn. Timothy do. at $16@17; Western and York State do., $15@16. Rye Straw at $20@21; wheat do. at $12, and oat do. $13 ₱ ton. VEGETABLES—Potatoes, choice Early Rose at 45@48c.; fair to good do., 38@43c.; Peachblows, 50c.; Snowflakes scarce at 55c.; York State Peerless, 35@40c.; Penn. do. at 25@30c., as to quality. We quote Florida new Cabbage at $4 ₱ bbl. for round lots up to $5, in a small way, for choice; Norfolk do., $1.50@$2, as to quality—arrivals generally poor. Florida Beans, $3@$3.50 ₱ crate; do. Peas, 75c.@$1 ₱ crate. Charleston and Savannah Peas at $1.50 for marrows, and $2 ₱ crate for small. Florida Beets, $1.25 ₱ crate; do. Cucumbers, choice, $8@10; do. do., common to fair, $5@7. SEEDS—Clover seed at 7¾@8¾c. ₱ lb. for Western and New York; Timothy at $2.75@2.85 ₱ bush.; Red Top at $2.70@2.80 ₱ bag; Canary seed at $2.45@2.85, and American Linseed $1.50@155 ₱ bushel.

St. Louis.—FLOUR dull; Double extra at $5 bid; triple extra at $5 30; family at $5.70 asked; choice at $5.60 bid. WHEAT irregular, with some sales higher; No. 2 red fall at $1.20@1.20¾; No. 3 do. at $1.16¾@1.17; No. 4 do. at $1.12. CORN firmer for cash at 36¾@36¾c. OATS dull at 32c. RYE nominally 73¾c. BARLEY steady and unchanged at $1.06. PORK dull at $10.95. LARD higher at 6.92½@6.95c. BULK MEATS higher for sides; shoulders, 3.78@3.80c.; clear ribs, 6.30@6.35c.; clear sides, 6.45@6.50c. BACON higher for sides; shoulders at 4¾c.; clear ribs at 7.10c.; clear sides at 7.25@7.30c.

Live Stock Markets.

Buffalo.—CATTLE market quiet; demand and offerings light; sales of good to prime mixed, butchers' at $3.90@4.20; best grades disposed of. SHEEP AND LAMBS.—Market dull and prices a shade lower; offerings generally of good quality; sales of common to choice sheep at $66@.85; fair to choice lambs at $6.40@7.25. HOGS, fair demand and prices higher for Yorkers; other grades dull; sales of Yorkers, good to choice at $4.60@4.65; fair light at $4.40@4.45; medium and heavy at $4.65@4.75; fair ends at $4.20@4.50; coarse rough and common at $3@4; pigs at $4.25@4.35.

Chicago.—CATTLE market active; shipping at $4@5.35; one load of Missouri steers at $5.75; butchers' steady at $2.40@4.20; stockers and feeders stronger and active at $3@4. HOGS—Market active; all sold; mixed packing $4.25@4.45; choice heavy $4.50@4.85; light $4.20@5.50. SHEEP market strong and steady; freely sold at $5.50@6.50.

ST. LOUIS.—Cattle in fair demand; good to choice native steers in light supply; butcher stock dull; choice to fancy steers at 5@$5.75; fair to good at 3.50@$4.80; light to medium, 4@$4.40; stockers and feeders at 3.25@$3.90; Texans and Indians at 2.75@$3.75. Hogs opened strong, but weakened. Yorkers and Baltimores at 4.15@$4.30; mixed packing at $4.10@4.30; butchers' to fancy at $4.40@4.60. Sheep in active demand; fair to good muttons $4.40@5.55; choice to fancy at $5.50@5.85; export sheep at $6@6.20.

EAST LIBERTY, PA.—CATTLE.—Supply light and all sold out; best at $5@5.25; fair to good at $4@4.80; common at $3.10@3.65; stockers 700 to 900 lbs at $2.25@3.75; bulls, cows and stags at $2@3.50. HOGS.—Yorkers at $4.40@4.50; Philadelphias at $4.85@5. SHEEP, selling at $4.75@6.50.

WATERTOWN, N. Y.—BEEF CATTLE.—Market firm for good lots; working oxen in moderate demand; sales of choice beef cattle at $7.25@7.75; extra at $6.75@7; first quality at $6@6.50; Second do. at $5@5.50; third do. $4@4.75. Store cattle—Working oxen, per pair, $95@170; milk cows and calves at $20@50; farrow cows at $2@25, fancy cows at $55@65; yearlings at $7@14; two years old at $12@25; three years old at $20@38. HOGS.—Western fat swine, alive $5.50. SHEEP and LAMBS—Spring lambs not in sufficient supply to make a quotation; sales of sheep in lots at $4@5.50 each; extra at $6@7; lambs at 6¾@8c. Veal calves at 4@6¾c.

Fertilizers.

Bone ash is nominally quoted at about $22 per short ton, on the basis of 70 per cent phosphate of lime. Bones quoted at $22 50@$23 for Texas and South American mixed, and $25@$26 do. for shin and shank bones. Refuse bone black at $21@$22 per short ton on merit. Sulphate of ammonia at 3½c. ₱ pound on the basis of 26 per cent. of ammonia. Dried blood at $2@$2 30 per unit of ammonia short ton. Ammonia axotine, etc., for the former at $2 62½@$2 75 per unit of ammonia, and about $2 25 do. for the latter, all short ton. Nitrate of soda, 4¼c. Saltpetre, crude 6¾@6¾. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent. ammonia, $35@$40; dissolved bone black, 15 to 17 per cent. of soluble phosphoric acid $30@$35; dissolved bone 13 to 14 per cent. of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent of soluble phosphoric acid, 3 per cent. of potash, 3 per cent. of ammonia, $40@$45; German potash salts, 25 per cent. of sulphate of potash, $15@$18 per ton; muriate of potash, 80 percent. 2@2½c per lb. land plaster 7.50; dried blood, 10 per cent of ammonia, $35@45 per ton; fish guano dry and ground fine, 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $45; unground fish guano, 6 per cent of ammonia, $25; castor pomace; $19@21; sulphate of soda ground, and in barrels, $15@18 per ton; sulphate of ammonia 4¼c. ₱ lb; bone black, 70 per cent of bone phosphate, $30@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $20 per ton; No. 1 Peruvian guano, 10 per cent ammonia, standard, $55 per ton; Lobos $16 per ton; rectified $65 per ton; guaranteed $56 per ton; nitrate of soda, 5¼@5¾ ₱ lb.

FORRESTER'S potato manure, $47.50; cabbage, $50; oat, $47.50; lawn dressing, $47.50; turnip, $52; grass, $45; hop, $47.50; strawberry, $42.50; wheat, $45; rye, $47.50.

STOCKBRIDGE'S manures quoted: Potato, $50; cabbage, $50; strawberry, $40; corn $45; seeding down, $40; orange tree, $35; onion, $50—per ton each.

MAPES'S complete manures for clay soil, $25,50 per 1,000 lbs.; for light soils $25.50 per 1,000 lbs.; "A" brand for general use, $20 per 1,000 lbs.; fruit and vine, $18.50 per 1,000 lbs.; cabbage and cauliflower, $23.75 per 1,000 lbs.; corn, $24.50 per 1,000 lbs.; potato, $24 per 1,000 lbs.; asparagus, $25.50 per 1,000 lbs.; gypsum, Nova Scotia, ground, ₱ ton, $7.50.

BOWKER'S "Hill and Drill Phosphate" $15; Bowker's Phosphate $40 ₱ ton, each; Bowker's "Food for Flowers," 35c. ₱ package and $3 ₱ doz; Bowker's "animal meal for fowls," $2 50 per cwt.; Ground oyster shells, $1 ₱ cwt.

BAUGH & SONS' prices for goods delivered at depot or boat, in bags and in 2,000 lb lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36; Baugh's raw bone superphosphate $40; Baugh's $25 phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent. of ammonia, $48.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, March 27, 1880.

BEANS AND PEAS.—Beans are generally quiet, though marrows show rather more steadiness. A good many parcels sale only as good and such are offered freely at $1.55. White kidney scarce and firm. Other fancy beans neglected, red kidney particularly. Green peas have no wholesale inquiry; quoted at $1.75@1.80 Southern B. E. offered freely at recent lower bids, and $1.90@2 per two bushel bag, without leading to business to any extent. Marrow beans, prime, $1.55@1.60 other, $1 40@1.50; medium, prime, $1.40@1.45; other, $1.30@1.35; pea, $1.45@1.60; white kidney, $1.60@1.70; red do., $1.40@1.60; black, $1.85@1.90; the latter in light supply.

Receipts of beans for week, 4,500 bush.; exports, 2,135 pkgs. Exports since Jan. 1st, 25,900 pkgs., or double than in same period in 1879.

BEESWAX.—Demand is confined to small lots, and prices are unchanged; Western and Southern quoted at 21 to 25. Exports since Jan. 1st, 12,400 lbs.; same time '79, 11,975 do.

BROOM CORN.—The offerings have increased on the part of some of the Western holders and prices have ruled easier. Nominal quotations are for choice brush at 7½@8c.; choice hurl at 8c.; stalk bruid at 6@7c.; mixed red and green at 4@6c.

BUTTER.—The market can be dismissed this week with few remarks and few quotations. Choice fresh State and Western and the remnants of good table grades of old are firm with quick sale. Sellers do not press for upward prices, as supplies can soon enlarge and spring stock cannot be held. Under grades of butter feel the price-strength made by scanty supplies, and it is unusual to see such close ranges as now rule for extreme qualities.

New butter, creamery best, 37c.; good to prime, 35@36c.; fair to good, 33@35c.; poor to fair, 28@33c. State, pails and tubs, choice, 33c.; good to prime, 30@32c.; fair to good, 28@30c.; poor to fair, 26@28c.; Western, 29@33c. Old. State pails and tubs, fair, good to prime, 28@30c.; do. fair to good, 26@28c.; poor to fair, 24@26c.; full dairies, poor to choice, 23@30c.; bodies of dairies, 23@30c.; very poor, 20c.; Western imitation creamery 27@32c.; Western dairy, 23@28c.; poor to prime, 22@28c.; do. factory prime, 26@27c.; fair to good, 25@26c.; poor to fair, 21@23c.; very poor, 16@18c.; roll butter, 23@27c.

Receipts for week, 13,250 pkgs.; exports, 2,675 do.

CHEESE.—Supplies are working down readily and they are now quite small considering the period to clear before the new make comes to hand, consequently holders express decided confidence of current prices.

Quotations—State factory: best at 14¼@14½c.; good to prime at 13¾@14¼c.; fair to good at 13¼@13½c.; do. poor at 12@12¾c. State farm dairy: good to prime at 13¾@14c.; fair to good at 13@13¾c. Ohio factory: Cheddar, fine, 14c.; do., fair to good, 12¾@13¼c.; flat, fine, 14@14¼c.; flat, good to prime, 13@13¾c.; flat, fair to good, 12¾@13c.

Receipts for week, 5,900 boxes; exports, 6,200 do. Liverpool cable, 71s.; steam, 35s.@37s. 6d.

COTTON—Dealings have been liberal and prices closed firm at for March at .2.91@12.93c.; April, 12.94@12.95c.; May, 13.1c@13.16c.; June, 13.32@13.33c.; July, 13.44@13.45c.; August, 13.53@13.54c.; September, 13.18@13.19c.; October, 12.31@12.36c.; November, 11.99@12c.; December, 11.95@11.97c.

Quotations for spot cotton are based on American standard of classification and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	11⅜	11½	11¾
Strict ordinary	11⅝	11⅞	11⅞
Good ordinary	12 3-16	12 5-16	12 5-16
Strict good do.	12 7-16	12 9-16	12 9-16
Low middling	12⅝	12⅞	12⅞
Strict low middling	12 15-16	13 1-16	13 1-16
Middling	13⅛	13¼	13¼
Good middling	13⅜	13½	13½
Strict good middling	13⅝	13¾	13¾
Middling Fair	14⅛	14¼	14¼
Fair	14⅝	15	15

STAINED.

Good ordinary	11 3-16
Strict good ordinary	11 15-16
Low middling	12⅛
Middling	12 11-16

DRIED FRUITS.—The demand for evaporated apples has been fair. Blackberries continue scarce and high; other small fruits are unchanged. Prices are for N.C. apples, fair to good, 7½@8½c.; choice, at 9@9½c.; fancy at 10@10½c.; Virginia, at 7@8c.; New York State quarters, at 7@8c.; sliced at 7½@8¾c.; patent evaporated, choice in cases, at 14@14½c.; good and prime at 13@13½c.; evaporated, choice sliced at at 13c., and good to choice do. at 11¾@12¾c Evaporated peeled peaches, good to choice, at 22@25c.; unpeeled at 12@14c.; North Carolina peeled, fancy, at 20c.; choice do at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@16c.; common at 10@12c.; unpeeled halves at 7½@8c.; do. quarters at 7@7½c. Pitted cherries at 18@19c. Blackberries nominal at 14c. bid. Raspberries at 26@27c. Plums at 17@18c.

Exports of dried apples since Jan. 4, 3,661 bbls., do. in 1879, 14,729 do.

EGGS.—Receipts for the week, 26,350 bbls.; do. last week 23,450 do. With heavy supplies the market made but little recovery from low prices for Easter business. Buyers generally waited until the close of the week and in that time the stock had become quite oppressive and sellers had to humor distribution. A very low scale of rates will be apt to rule during the next fortnight.

Near Points, ₱ doz., 12@12½c.; State and Penn. 11¾@12c. Western, fresh, 11@11½c.; Southern, 10¾@11c.; poor marks Western and Southern 9¾@10c.; duck eggs 25@26c.; goose 50@60c.

FLOUR.—Receipts have been large, freely offered and prices lower. Latest sales are within the range of $4.35@5.00 for poor to choice superfine State and Western; $5.10@5.35 for inferior to very good extra do., odd lots and lines; $5.35@5.60 for good to very choice do.; $5.00@5.35 for inferior to good shipping extra do., and $5.35@5.60 for good to very choice shipping extra do.; inferior to very good white wheat extras, $5.50@5.35, very good to very fancy do. at $6.25@7.50 red and amber winter wheat, inferior to fancy trade and family, at $5.40@7.35; round hoop Ohio, $5.25@5.65; and trade and family brands of do. at $5.75@7.50, the latter rate for very fancy; St. Louis at $5.50@6.35 for inferior to very good extras; $6.35@7.75 for very good to fancy; Minnesota clear, inferior to fancy, at $5.10@6.00; Minnesota "straights," inferior to very fancy, at $5.75@7.50, and patent inferior to fancy at $6.25@8.75; unsound stock at from $3.25@5.75; city mill extra at $6.00@6.50 for ordinary to fancy for West Indies; do. for England, $5.10@5.50 for poor to choice; do. trade and family extras, $6.40@7.25; do. for South America, $6.25@6.75; No. 2 at $3.25@4.25 for poor to very choice.

FRESH FRUITS—Fine, showy apples are scarce and in a retail way bring $3.75@4.00 per bbl.; poor to good Baldwins, and Greenings $2@3.50; Russets, $2.50@3; the latter still have the support of export trade. Greenings are scalding badly. Cranberries, about all here; crates, $3.25@3.50. Strawberries have had poor selling weather and prices are not compensating. Choice Fla., 30c.; do. Chas., 25c.; other quality, 10@20c. ₱ qt. Fla. oranges are in light supply and have advanced; choice to fancy, hf. bbl. crates $4@5; fair to good, $3@3.50. Peanuts are firm and best bags are tending higher; Va. hand-picked, 5¾@6¼c.; extra prime, 5¾@5½c.; good to prime, 4¾@5¼c.; shelled, 5¾@6c. Hickory nuts, 75c.@$1.00.

Hothouse cucumbers, choice, $3.75@4 doz.; other, $1@2.50; radishes, 100 bunches, $2.50@3; rhubarb, 100 do. $5@6; lettuce, Boston, doz. 37½@75c.; L. I. and N. J., 25@62c.; carrots, 100 bunches, $3@3.50.

Exports of apples for week, 5,425 bbls.; since Jan. 1st, 71,475; same time '79, 66,050.

GRAIN.—The large supplies that have been held at Western distributing points are being released and the extensive receipts of wheat, corn and oats have caused a sharp break in prices, leading to a fair export business. Latest sales of wheat include No. 1 white at $1.38@1.39¾; do., March, at $1.38¾@1.39¾; do., April, at $1.36¾@1.37¼; do., May, at $1.34¾@1.35; No. 2 white at $1.36¾@1.37; ungraded white at $1.36@1.56; No. 2 red at $1.42@1.44; do., March, at $1.42¾@1.43¾; do. April option, at $1.42@1.43; do., May at $1.39¾@1.40¾; ungraded red at 1.40@$1.41; mixed winter at $1.39@1.40¾; No. 3 spring at 11.34; No. 3 spring at $1.33¾@1.34; ungraded spring at $1.27½@1.29. Rye at 94c. for No. 1 Canada. Corn at for New York No. 2 at 56c.; do. old at 56½@58¾c.; New York No. 2 for March, at 55c.; do., April, at 51¾@52¾c.; do., May, at 50¾c.; New York steamer mixed at 53@55¾c.; do., March, at 55¾c. bld; ungraded mixed Western at 55@56¾c.; No. 3 at 54¾@55c. round yellow at 56c.; Southern Yellow at 56c.; yellow western at 57@57¾c.; 7,800 bush. Jersey yellow at 56c. Oats at for No. 1 white at 46¾c.; No. 2 white at 42¾@42¾c.; No. 3 white at 41¾@41¾c.; New York No. 1 at 42½c.; New York No. 2 at 42@42¾c.; do., March, at 42¾@43¾c.; do., May, at 40c.; New York No. 3 at 41c.; ungraded white Western at 43@48c.; ungraded mixed western at 41¾@42c.; white State at 44@46c.; mixed State at 41¾@42½c.; No. 2 Chicago afloat quoted at 42@42½c.

HAY AND STRAW.—Demand is very good and as the receipts are not large prices are on a firm basis. Shipping hay quoted at 70c.; retail lots at 70@80c.; for medium, and 85@90c. for prime; clover at 55@60. Straw at 95c.@$1 for long rye; 65@70c. for short rye, and 55@65c. for oat.

Exports since Jan. 1, 23,400 bales.; do. last year corresponding period, 15,650 do.

HOPS.—The export demand continues very slow and brewers are very indifferent, with prices without important change. Quotations are for

	Cents per ℔.
New York, fancy	Nomtal.
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

MAPLE SUGAR.—Supplies have fallen off early and prices are somewhat stronger; large cakes 11@12c.; small extra white, 12@13c.; sirup, 75c.@$1 in tin.

OIL CAKE.—Western is quoted at $32 ₱ ton.

POULTRY AND GAME.—Dressed poultry has the steady position a moderate spring supply affords. Few low priced lots here. Frozen poultry rates with top prices for fresh killed.

Turkeys, N. J. good to prime, 14@16c.; State, Mich., N. Ohio and Penn., prime, small, 15@16c.; other Western, prime, small, 14@15c.; fair to good, small, 13@14c.; Western dry-picked, small, 14@16c.; large, 10@12c.; capons, large, 20@21c.; small, 17@18c.; chickens, winter Phila., 22c.; yearling, Phila., dry-picked, 15@18c.; N. J., ₱ ℔, 13@15c.; fowls, Phila., d.-p., 12@13c.; N. J. good to prime, 12@13c.; State good to prime, 11@12c.; Western, good to prime, 10@11c.; poor to fair, 9@10c. Ducks, Phila d.-p., 19@20c.; N. J. 17@19c.; State, 16@18c.; Western 14@17c.; Western, poor, 10@12c.; squabs, white, ₱ doz., $3.50@3.75; dark, $2@2.50. Cooped stock is easier in anticipation of better supplies. Fowls, Jersey, ₱ ℔, 10@11c.; Western, 10c.; roosters, 5@6c.; turkeys, mixed, 11@12c.; toms, 10c.; ducks, Eastern, ₱ pair, 75c.@$1; Western, ₱ pair, 60@80c.; geese, Jersey, $1.75@2; N. Y. and Pa., $1.50@1.75; Western, mixed, $1.25@1.50; Western, white, 75c.@$1.25; pigeons, 40@45c. Game has always a nominal position so far as demand tells. English snipe, Southern, ₱ doz., $2.25@2.50. Wild pigeons, Northern, $1.75@2; Southern, $1.50@1.75; Wild ducks, canvas back, Havre de Grace, ₱ pair, $1.75@3.25. Western, 75c.@$1; Norfolk, $1@1.50; redhead, H. de G., 66@75c.; Western, 50@60c.; Norfolk, 40@50c.; Mallard, Western, 50@55c.; do., black, Norf., 40@50c.; teal, Western, 35@45c.; Norfolk, 30@40c.; common, 20@30c.

PROVISIONS.—Hog products have been active and are at better prices. Mess pork closed quoted at $11.30@11.40 for March and April; $11.35@11.45 for May and $11.50@11.60 for June. Bacon at 6.90@7 for long clear and 7¼c. for short clear. Lard—Western steam at 7.60 for spot, 7.55 for April; 7.62½ for May, and 7.65@7.67½ for June. Stearine at 7¾@7¾c. for Western. Tallow at 6⅝@6¾ for prime. Beef hams at $16.50@17. Beef—City extra India mess in tierces quoted at $18@20; extra mess at $11@12; plain at $10@10.50; packet at $11.50@12.

Receipts for week, pork, 3,300 bbls.; beef, 900 pkgs.; cut-meat, 40,000 pkgs; lard 14,850 pkgs. Exports, pork, 4,475 bbls.; beef, 2,450 pkgs.; bacon and cut-meats, 10,829,325 ℔s.; lard, 7,670,250 ℔s.

SEED—Clover favors buyers and demand small; quoted at 6¾7¼c. for Western and 7¾@8¼c. for State. Timothy at $3@3.25.

TOBACCO.—Export demand is small, and home rade is very moderate, with prices unchanged.

VEGETABLES.—Exports of potatoes since Jan. 1, 55,109 bbls; do. in 1879, 46,600 do. The market for potatoes is weak throughout, outside rates only made in a small way for selected stock. Supply large to date.

Bermuda, new ₱ bbl., $6.50@8.50; Florida, new, poor to fair $3; E. Ross, N. S., bulk, ₱ bbl., $1.37@1.50; Maine, per d.-h. bbl., $1.75@1.87; State, do. $1.25@1.50; State, in bulk ₱ bbl., $1.25@1.50; N. S., per d.-h. bbl., $1.25@1.50; do., in bulk, $1.25@1.50; Mercer, Nova Scotia, bulk, per bbl., $1@1.25; Chili red, N. S., bulk, ₱ bbl., $1.12@1.25; Peachblow, State, white, per d.-h. bbl., $1.75@1.87; do., State, red, per d.-h. bbl., $1.50@1.62; Snowflake, State, per d.-h. bbl., $1.75@1.87; Peerless, State, do. $1.00@1.25; do., bulk, ₱ bbl., $1@1.12; Jersey, bulk, do., 50@75c.; Sweet potatoes, $3.25@3.50. The variety of garden stuff is good and sales are fair for prime pkgs. Fla. tomatoes, ₱ box, 50c.@$1.25; Nassau, 60c.@$1; Bermuda, 60c.@$1 do., beets, new, $1.50; string beans, Florida, choice ₱ crate, $3@3.50; green peas, Sav., per crate, $1@1.50; Cb'n., $1@1.50; Asparagus, Cb'n., per doz bchs., $6; kale, Norf., ₱ bbl., 1.25@1.75; Baltimore, per bag, $1@1.25; spinach, Norf., per bbl., $1.75@2.25; Baltimore, $1.25@1.75; radishes, round ₱ 100 bunches, 50@75c.; long per 100 bunches, $1.00@1.25 lettuce Md., $2.50; squash, marrow, per bbl., $1.50@1.75; Hubbard, $2.50@2.75; cabbage, Fla., new, per bbl., $3@3.50 do., old, per 100, $5@10; onions, Bermuda, new ₱ crate $3.25@3.50; white, ₱ bbl. $4@6; yellow, $3@3.25; red, Eastern, $2.50@3; Chester, $2.50@2.75; beets, Jersey, $1.50@1.75; turnips, Russia, 62@75c.; carrots, $1@1.25.

WOOL.—There has been less business this week but fully as much confidence as to prices as at any time. quotations are for

Ohio Pennsylvania, and West Virginia—XXX, 57@60c.; XX, 55@57c.; X, 54@56c.; No. 1, 57@60c.; No. 2, 51@54c.; common 47@49c.; combing and delaine, 55@60c.

Michigan, Indiana and Wisconsin—X and XX, 52@55c.; No. 1, 56@58c.; No. 2, and common 46@51c.; combing and delaine 54@57c.

New York, New Hampshire and Vermont—X and XX, 49@52c.; No. 1 55@57c.; No. 2 and common 45@49c; combing and delaine 51@56c.

Iowa, Illinois and Western—X and XX 46@50c.; No. 1, 53@56c.; No. 2 and common 44@47c.; combing 51@55c.

LIVE STOCK MARKETS

NEW YORK, Saturday, March 27, 1880.

BEEVES.—Receipts for week, 11,235 head; do. last week, 12,703 do. The week has been a good one; stiff prices have ruled even for the moderately good quality, and supplies were moved steadily; poor to fair oxen, 7@8¾c., dress 54@55 ℔s.; common to fair steers, 8¾@9¼c. dress 55@58 ℔s.; good to prime, 9¾@10¾c. dress 56@57c. Export styled cattle were not plenty enough to make a large business; but some good droves were picked out for early shipment abroad.

SHEEP AND LAMBS.—Receipts for week, 21,134 head; do. last week, 25,144 do. Good Friday made a sort of holiday, and the pens were poorly attended. Common to prime sheep sold at 6¾@7¾c.; a lot of Ohio clipped sold at 5c.; yearling lambs, 7@8¼c.; spring, per head, $3.50@5.

COWS AND CALVES.—The market has had a very slow run, with a range of $30@55 for fair to very good milkers.

VEAL CALVES.—The demand is good but low quality calves are not wanted. Live calves, N. J. and Bucks Co., choice, 7¾@8c.; prime 7¼@7½c.; State, choice, 7@7¼c.; prime, 6½@7c.; fair to good, 6@6½c. Mt. Holly, 6½@8c.; buttermilk, 3@4½c.; Grass, 2½@3c.

Hog Dressed, Jersey, choice, 10@10½c.; good to prime, 9@9¾c.; State, good to choice, 9@9¼c.; fair to good, 7½@8c.; poor to fair, 4@7c.

SWINE.—Receipts for week, 27,791 head; do. last week, 27,475 do. Receipts all used up; quotations at the close 4¾@5c.; country dressed pork light, 6¾@7¾c.; medium, 6¼@6¾c.; heavy, 6@6¼c. city dressed, 6@6¾c. Tenderloins, 10c. for choice, season growing late.

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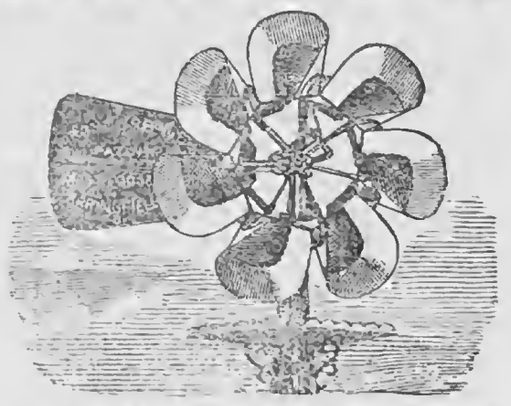

The Strongest and Most Durable Wind Engine in the World. Sold by Dealers in nearly every County. Inquire for it. Every Wind Engine Fully Warranted.

Send for Circulars, Price-List and information to

MAST, FOOS & CO., Springfield, Ohio.

FARMERS AND DEALERS, READ THIS!

These cuts represent our 20 Steel-Tooth Horse-Rake, with Iron Hubs (or Locust Hubs boiled in oil)—2000 in use—and our Positive Force-Feed Grain, Seed, and Fertilizing Drill (which can be changed to sow any quantity while Drill is in motion), with Pin or Spring Hoes—8277 in use and giving satisfaction. All manufacturers say theirs are the best. All we ask is, send for *Descriptive Circular and Price-List*, which contains letters from persons using them. All are *warranted*.

Hagerstown Agricultural Implement Mfg. Co.

State where you saw Advertisement. Hagerstown, Md.

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Garmore's Artificial Ear Drums

PERFECTLY RESTORE THE HEARING and perform the work of the Natural Drum. Always in position, but invisible to others. All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular.

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100 BUSHELS FRESH PEACH PITS for sale, 50 cents per bushel. Address WM. E. SHAFFER, Lockport, N. Y.

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TURNER RASPBERRY

The hardiest, most productive and best Red Raspberry in cultivation. Strong plants, by mail, $1.00 per dozen, by express, $2.00 per hundred, $10.00 per thousand securely packed. Address,

W. B. CALDWELL, Paris, Ill.

NEW HARDY PLANTS.

Japanese Maples, Rhododendrons, Hardy Azaleas, Magnolias, Roses, Purple Beech, Choice Conifers carefully pruned, in large quantities.

All kinds of Fruit and Ornamental Trees, Shrubs, and Vines. Price Lists free. Descriptive Catalogues 10 cents, including list of "New and Rare Plants."

PARSONS & SONS CO. (Limited.) Kissena Nurseries, Flushing, L. I.

COLLINS, J. S., MOORESTOWN, N. J., offers more than 100 varieties best selected Fruit Plants, Trees, etc. Nine sorts of Strawberries at $1.80 per 1,000, pure, packed free. See Catalogue.

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150-Light Gas Machine

Suitable for Hotel, Factory or Dwellings, best make at ⅓ cost. Apply or address, WALDO HOUSE, Hamilton Ferry, Brooklyn, L. I.

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ELASTIC TRUSS

Has a Pad differing from all others, in cup shape, with Self-Adjusting Ball in center, adapts itself to all positions of the body, while the Ball in the cup presses back the Intestines just as a person would with the finger. With light pressure the Hernia is held securely day and night, and a radical cure certain. It is easy, durable and cheap. Sent by mail. Circulars free.

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Factories, Creameries and Dairies. Complete outfits a specialty. The best boiler and engine in market. Send for circulars and net prices. JOHN S. CARTER, Successor to G. B. WEEKS, Syracuse, N. Y.

FARMERS about purchasing fertilizers and wishing to save from 100 to 2,000 per cent., can do so by sending stamp to GEORGE CASPER, M. D., Manatee, S. Fla.

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For 1880.

Some years ago the Stockbridge Manures were only known to a few farmers in the Connecticut Valley. Now they are so extensively used in different parts of the country as to require two large factories, one in New York and one in Boston to manufacture them. This increase shows what farmers think of good fertilizers, and is not only due to the fact that they are reliable, well-made, and high-grade manures, but also to the fact that farmers have

FOUND THEM PROFITABLE TO USE.

Now that corn, and other farm produce is bringing such good prices, we anticipate that farmers will invest still more largely in our fertilizers.

Besides the Stockbridge Manures, we manufacture several high-grade Phosphates, and deal in first-class chemicals of all kinds. Farmers who intend to use Fertilizers of any kind, should

Send for our New Pamphlet,

which contains a large amount of reliable information, beside prices for 1880.

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Seth Chapman, *Successor to Chapman & Van Wyck,* (Established 1849).

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FOR $25 PER TON.

Analysis guaranteed as printed on every bag.

LOWEST CASH PRICES for Goods of Guaranteed Standard.

SULPHATE OF AMMONIA (full strength, 25 per cent.) A SPECIALTY.

We will fill orders for Chemicals to make Home-Made Fertilizers by any formula our customers desire to follow, and we will take pleasure in furnishing estimates of cost on application.

BAUGH & SONS, 20 So. Del Ave., Philadelphia. 103 South St. Baltimore.

ANIMAL BONE FERTILIZERS.

Made from the BONE, BLOOD and MEAT produced in the Great Packing Houses in Chicago.

DISSOLVED BONE.

GARDEN CITY SUPER PHOSPHATE.

ANALYSIS—Ammonia, 2½ ₱ ct.; Sol. Phos. Acid, 10 ₱ ct.; Sulph. Potash, 3 ₱ ct.

The above Analysis is GUARANTEED, and we will forfeit the Goods if not as represented.

Our $25.00 Phosphate,

Analyzing 10 ₱ ct. Sol. Bone Phosphate, 2½ ₱ ct. Ammonia, produces most excellent results on CORN, OATS and VEGETABLES.

☞ EXCLUSIVE TERRITORY GIVEN DEALERS.

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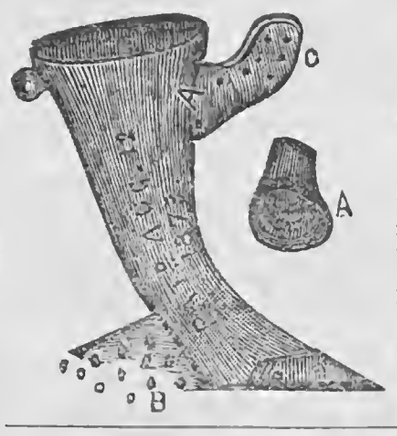
CHICAGO, ILLS. EAST ST. LOUIS, ILLS.



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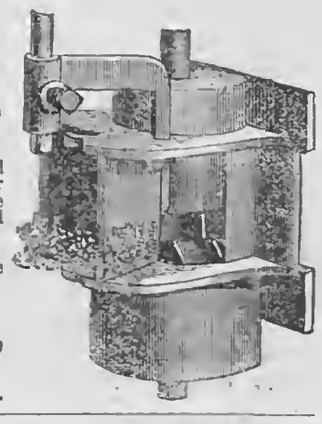
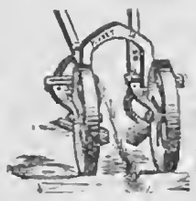
Force Feed Grain Drill.



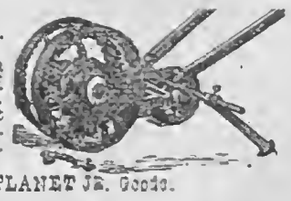
Best Grain seed and Fertilizer Drill in the market. The cuts show our broadcast shovels set with steel to the middle of the boot, and the force feed attachment.

Highest awards at the Penn. State Fair in 1879. Send for circulars. Address,

Foundry and Machine Dept., Harrisburg Car Co., Harrisburg, Pa.



WE HAVE NEVER BEFORE made such a variety of Garden Seed-Sowers, Wheel Hoes, &c.
WE HAVE NEVER BEFORE offered tools so well made, beautifully finished, and perfect in practice.
WE HAVE NEVER BEFORE combined so well variety of work with ease of operation. These machines quickly save first cost. They are prominent Agriculturalist *premiums*, and JAS. VICK says he has never sold any so popular. Correspondence is solicited, and descriptive catalogues with engravings are sent *free*



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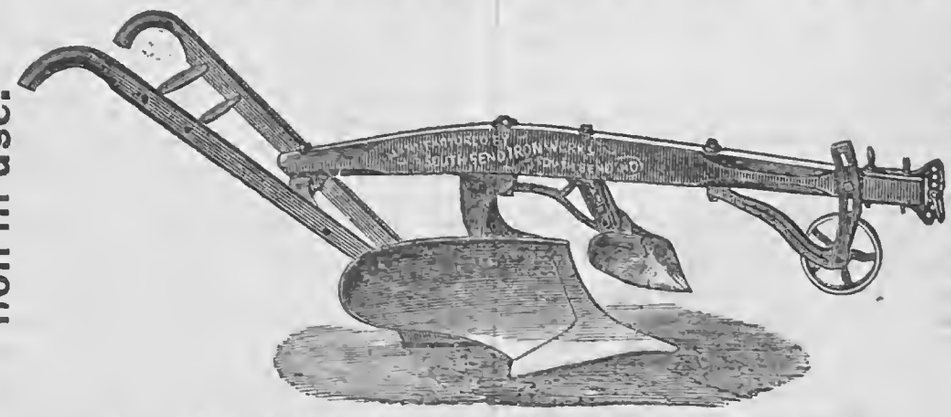
The "Oliver Chilled" Plow.

Nearly Half a Million in use.



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THE LEADING PLOW OF THE AGE.

Sells Best Where it is Best Known.

Its superiority, attested by a host of worthless imitations. The name "OLIVER" will be found on the beam of the genuine.

OLIVER CHILLED PLOW WORKS, South Bend, Ind.

Branches at INDIANAPOLIS, IND., MANSFIELD, O., HARRISBURG, PA., DALLAS, TEX., ROCHESTER, N. Y., ST. PAUL, MINN., ST. LOUIS, MO.

Reading for the Young.

CLUB NOTES.

As announced in the last issue of the Rural, I have sent some seeds to each member of the Horticultural Club. In making the selection I endeavored to choose such kinds as are of easy culture, and therefore not liable to prove failures under the management of young and inexperienced gardeners. The kinds sent are, Sweet Mignonette, Double Chinese Pink, Phlox Drummondi, Portulaca, Cockscomb, Okra and "New Surprise" Musk Melon. The culture of Portulaca, Phlox Drummondi and Cockscomb has already been published in the articles on horticulture, and of course, learned by heart by all the members of the club; it will, therefore, be superfluous to say anything further about the culture of these flowers.

The Double Chinese Pink should be sown in a box or pot at the close of March or beginning of April, and the plants set out in the flower bed about the middle of May. The seed box can best be kept in a sunny window till the plants get a good start, but before they are planted out they must be hardened by removing the seed box to a sheltered position in the open air for some days. Set the plants six inches apart in the flowed-bed.

Sweet Mignonette (*Reseda odorata*) should be sown in rich ground where the plants are to remain. The plants will reach the greatest perfection if the seed is sown in rows about five inches apart. If it is sown broadcast the plants must be thinned. One can hardly conceive of anything lovelier than a few well-grown sprays of these humble but sweet-scented flowers.

Okra, or Gumbo (*Hibiscus esculentus*), is a vegetable used in the kitchen. The seed pods may be cooked in several ways. I will leave my nieces to tell us how they should be prepared for the table. The plant is tender, and the seed should not be sown till the latter part of May, north of New York. It is one of the vegetables that are but seldom seen in the farmer's garden, and I included it in this "distribution" mainly to make the young horticulturists acquainted with it. Sow in a drill two inches deep and keep the plants about a foot apart in the row. But the gem of the distribution is

THE "NEW SURPRISE" MUSK MELON.

This excellent melon is entirely new and I wish all the members to give it a good trial, by which I mean that they should give their plants their best care and attention. The fruit is of medium size with thin skin and deep salmon-colored flesh. Melons will best succeed on a light somewhat sandy but rich soil. Make the hills four feet apart each way and thoroughly mix the soil in each hill with a few shovelfuls of well-rotted manure. Plant four kernels in a hill and when the plants have six leaves remove the weakest one, so as to leave three good plants in a place. After this they must be made to grow as fast as possible and a watering of liquid manure once a week till they begin to blossom will help them along wonderfully. Cultivate till the vines cover the ground, and pinch off the ends of the most vigorous shoots to induce them to early fruiting. Should they be attacked by insects sift some ashes, plaster or lime on the leaves while the dew is on.

These few, brief, general directions I trust will be sufficient. All the members do not enjoy the same facilities for gardening, but I am sure that every bright, enthusiastic young gardener will know how to make the most of his opportunities, and devise methods and means to obtain the best results under all circumstances. Uncle Mark.

HOW JIP WENT TO CHURCH.

ALICE P. ADAMS.

Such a droll-looking little dog as Jip was, with his great black eyes and shining upturned nose! Ill-natured or disinterested people might have designated him as a *yellow* dog, but Hatty affirmed his coat to be *light buff*, and where could one find better authority than Jip's youthful mistress?

One pleasant Sunday morning the family were all ready to start on the four mile drive to church. "Hatty, where's Jip?" asked grown-up sister Sue.

"Oh, he's out on the south veranda. I guess he's asleep.

"All right, then. Get up ponies!" and Bert cracked his whip.

They were driving through the live-oak grove, about a mile from home, when Hatty exclaimed, "Oh, there's a rabbit! He's gone behind the bushes now, but you'll see him in a minute," she added, as all eyes were turned in the direction that she pointed. The rabbit soon reached open ground, and was discovered to be a small dog that seemed very familiar to the party in the wagon.

"Well, I declare, if that isn't Jip!" cried Sue. "Harriet Thorpe, I thought you said he was fast asleep on the veranda!"

"I thought he was, truly," meekly replied Hatty, though she was secretly glad he had come, and hoped that they could not send him back.

"You ought to have gone and looked," said her sister, severely.

"Never mind. I'll call him and send him home. Here Jip! Come here, sir!" but the more Bert called and whistled the faster Jip ran.

"Evidently he has made up his mind that he won't come near the wagon until we have gone so far that he can't be sent back," said Mr. Thorpe "so we shall have to take him along this time. But next Sunday, Hatty, you be sure that you know what you're talking about, for I don't want him to get in the habit of following the wagon."

The day was warm, and after a while master Jip moderated his speed, and was content to trot along slowly by the horses, when he found that he was to make one of the company.

"Poor Jippy! he looks so tired," said his sympathizing mistress. "Let's take him into the wagon, for it is a long way for such a little puppy to come."

"No, indeed! Don't you do it, Bert!" cried hard-hearted Sue. "It only serves him right for following us, and besides, if he is tired, perhaps he will stay in the wagon and go to sleep."

So, when they reached the church, a nice bed was made for Jip on the cushions, and he was left with the stern injunction to "stay there," and he "stayed—" until his friends disappeared within the church door; then down he hopped. No wagon for master Jip where there were so many strange things to be investigated!

Again and again they sent him back, but it was customary to have the door open in warm weather, so it was impossible to keep him out.

"We'll have to make the best of it. Go on, girls, he'll be all right."

So the young people walked up in front, Jip pattering after. Bert and Sue helped with the singing, and Hatty played the organ. They were rather early. "Come here Jip, you cunning, little dog," said the fair organist to her pet in a stage whisper; "hop up here on the seat and go to sleep, for you're so tired. You'll be good and go to sleep, won't you, Jippy?"

But Jip declined to make any promises. He had forgotten his fatigue and was ready for anything. So he only winked hypocritically, and rubbed his left eye.

In a few minutes a number of people entered the church, and Jip pricked up his ears, slipped from under Hatty's detaining hand, and galloped down the aisle to see what all the disturbance was about. When his curiosity was satisfied he returned leisurely to his seat. He repeated this performance *ad libitum* spite of Sue's frowns and Bert's efforts to check him. Even after the service commenced at every fresh arrival that ridiculous little yellow—I mean *buff*, Jip would hurry to the door to see who had come. At last old Mr. Sterling, who was never known to be at church in time for the second hymn, was in his pew, and Jip settled himself for a nap. But his sleep was of short duration; for as the minister became more engaged in his sermon he elevated his voice until its resonant tones penetrated Jip's slumbers, and he woke up.

The minister came forward to the front of the low platform on which was his reading-desk, and stood there, letting one foot hang partly over the edge as he went on with his discourse. Jip noticed that the minister had changed his position and went to investigate, notwithstanding Sue made a clutch at him as he hopped before her, and Bert whistled under his breath for him to come back.

Jip saw the minister's foot and thought it was extended for his benefit, but as it was held perfectly still he contented himself with sniffing at it and then looking up inquiringly into the speaker's face. If this was embarrassing to the minister he gave no outward sign, but rose higher and higher in a flight of eloquence until he reached the climax with a thundering clap!

His impassioned language excited Jip more than the other members of the congregation, and as the gestures grew frequent and forcible the dog pricked up his ears, and wagged his tail vigorously, making no effort to conceal his great interest in what the queer man was doing; and when the minister clapped his hands Jip could restrain himself no longer, but gave vent to his feelings in a sharp, quick bark!

Hatty's handkerchief was tightly pressed against her mouth, but it could not keep back an audible snicker at this exploit of her pet. Sue shook her head frowningly, and after church expressed her opinion decidedly.

"It's a perfect shame to have that miserable little yellow dog disturbing every one in the church. I hope you'll shoot him, father, if he tries to come next Sunday." (Miss Sue was very much out of sorts because some one she particularly wished to see was not at church that morning.)

"He isn't a miserable yellow"—began Hatty indignantly, but her father interrupted her saying, "Never mind now girls, we want to get home. Jip, do you want to ride too? Hop in then, for it's the last time you come up here until you learn to behave yourself." And he has never been there since.

Los Angeles Co., California.

LETTERS FROM THE COUSINS.

Dear Uncle Mark:—I am always interested in the cousins' letters, and have often thought I would write, too. If this letter finds its future abiding place in the waste basket, instead of among the cousins' letters in some future Rural, it will not be the first one that has met the same fate. We have taken the Rural ever since it has been published, and have nearly all of the papers yet—some of them are bound. Our Beauty of Hebron potatoes did not do very well but the soil, in which they were planted, was rather poor. My brother intends to give them a more favorable trial this year. Both varieties of tomatoes were splendid. Of the flower seeds we only succeeded in starting plants of the Hollyhock, Hibiscus and Bronze Ricinus. The frost came before any of the Ricinus seed matured, for which I was sorry. I must tell you about a persevering Bronze Ricinus seed. It was planted last spring in a small pot and left all summer on the flower stand on the porch. It was watered whenever it needed it, and dug up occasionally to see if it had germinated, but it hadn't. Last fall the pot was used for some little "Baby Cactus" (I do not know the scientific name) and nothing more thought of the Ricinus seed, until one day last month we noticed it had pushed the "baby" aside and sprung up in its place. It has been growing nicely ever since, and the fourth leaf is just starting out now. It has been removed to a larger pot and we hope we can raise it for our Geranium bed, where we had a regular Bronze Beauty last summer. My brother and I would like to join the Horticultural Club. If this is published I will write again. Yours truly,

Royalton, N. Y. Nell.

Dear Cousins:—How do you do? I think we are sleepy, (I write just as sleepily as I can) don't you? Looking over the letters of the cousins, written four or five years ago, I noticed that they had lively times. The boys took the girls to task for everything they wrote, and the girls retaliated. By the way, where are Dewdrop, Belle E. T., Storm and Joe Steele? Are they still cousins under another name, or have they left us? I always thought that Belle and Joe were especially spicy. Let us hear from them again. What are you going to do this summer? Garden? So am I, and in addition to that, am going to adopt a course of reading, to improve my mind. Not Mrs. Holmes's volumes either. I am interested in poultry—having hens of my own, and they pay me well. Our hens paid us last year about $40. We only had about 40 hens. I am glad Uncle Mark is going to distribute some seeds, for they are so nice. I am trying an experiment, yes, two of them, soon, and will let you know the results, if favorable.

Goodness! I must stop or this will find its way to the waste basket. Good-bye until another time.

I remain your cousin, Minnie S. White.

Erie Co., N. Y.

[Miss Minnie also sent me correct solutions of the puzzles in the Rural of March 13th. Apropos of the lively cousins who took an interest in letter writing four or five years ago. Don't grieve for them; they have probably other business to attend to. The cousins of the present day are just as clever as the old ones and can make just as lively times now as they had then if they only will try. —Uncle Mark.]

Dear Uncle Mark:—It has been some time since I have written to the Rural, but I hope you and the cousins have not all forgotten poor me. Jack Frost does not allow us to do much at gardening yet, but I have made my hot-bed, pruned my trees and such like, so that when the coming campaign opens, I shall be ready to take command. I presume my Southern cousins are far ahead of me, some have even made their gardens. I did not join soon enough to receive any of the grape seed, or at least, I did not think I had, but Uncle Mark kindly sent me a packet. I sowed it according to directions but it has not come up yet. I have a fine Concord Grapevine which did finely last year and had quite a number of fine clusters of grapes on, but I did not get the benefit of them as they were stolen. I did not have any dog to tie near it as one of the cousins did to his melon patch. But what I wish to write about is, why the cousins don't write more. I will close now as my letter is full. Your nephew, W. H. Rand.

Chittenden Co., Vt.

Dear Uncle Mark:—Father has taken the dear old Rural for a number or years and it is always a welcome visitor at our rural home. We young folks take great interest in the Horticultural Club. Sister and myself would like to be enrolled as members if you will accept us. Last year we cultivated a large variety of flowers, viz: Verbenas, Pansies, Ageratums, Dianthus Tuberoses and a host of others too numerous to mention. We received seeds from the "Free Seed Distribution" of last year. We had twenty-two pounds of the Beauty of Hebron potato from a very small potato! Some of the stalks of Blount's Prolific corn had seven ears on one stalk.

Seneca Falls, N. Y. Mignonette and Flora.

Dear Cousins:—As I cannot say much about flowers at this season, I will tell little anecdotes of what I see and hear; for you must know I am very observing. I notice a great many little things that other people don't take much notice of. Now every time I write a letter to the Rural, I will tell some little anecdote. The other day I was walking along the avenue, when my attention was attracted to a gentleman who was walking along with a large dog. The dog suddenly stood stock still before a fruit stand and would not move an inch till his master bought him a lemon. Having got his lemon he trotted off contentedly by his master's side. I heard one of the cousins say she would like to see Uncle Mark. As I am personally acquainted with Uncle Mark, and often see him, I will try to give a little description of him, Uncle Mark is tall, with light hair, and a light moustache and dark blue eyes. All our family are acquainted with him, he is often at my house. I never imagined that the Will in our story of "That Brother of Mine" would write a letter to us. I hope we will hear very often from him. I think I must close.

Your affectionate cousin Lizzie E. Blair.

New York City.

Miscellaneous.

BRIEFLETS.

Along with an increasing refinement goes a certain increasing strength, as of well-tempered steel, not to be found in coarser natures. So, too, as to character: refining processes solidify, as in the analagous instance of the conversion of brown into loaf-sugar. . . Be careful not to offend a sense of dignity. You need not be so careful about the conscience. Conscience is not so punctilious as dignity. . . Among the exhibits of the recent Applied Science Exhibition at Paris was a carpenter who, though he had artificial arms, was daily seen working at his trade; also a girl with artificial arms who sat knitting—much to the interest of spectators. . . A Milk Substitute is offered for rearing calves and pigs. Why not for babies? . . What spirited, beautiful horses implement dealers put before their mowers and reapers! And how well the drivers are dressed! They look as if they had bought a new suit, hat and all, for the occasion. Sometimes buxom young girls occupy the driver's seat. We are left to wonder why a *double seat* has never suggested itself to these wide-awake implement men! . . Commissioner Le Duc cries: "Honest Tea is the best policy!" . . A house to live in and $137 per day is the pay of the President of the United States. . . The Emperor of Russia gets $25,000 per day and Queen Victoria gets $6,000 per day. . . It is well for us that countries are not governed in accordance with the salaries paid the Chief magistrates. . . Happy are the railroads that contracted for their rails last summer. And happy the newspapers that contracted for a year's supply of paper before Jan. 1st, 1880. . . Ask any of the clerks in our fashionable drug stores if the number of opium eaters and laudanum drinkers is increasing, and he will say yes. A physician and druggist in one of our smaller cities writes: "In this town I began business twenty years since. The population, then numboring 10,000, has not increased largely, but my sales of opium have advanced from fifty pounds the first year to three hundred now; and of laudanum four times as much are required as formerly. About fifty regular purchasers come to my shop, and as many more, perhaps, are divided among the other three apothecaries in the place." In the Southern States, too, men who have become impoverished by the rebellion have taken to the use of opium to assuage their sorrows. . . Oleomargarine has only one advantage that we have ever heard of. If you don't wish to use it as butter—and the chances are pretty heavy that you don't—you have only to run a wick through it and use it for candles. It is also useful for chalking the bridge of the nose in case of local colds. Puck. . . We are in the habit of boasting of the great and increasing immigration to our shores. It would be well if we thought less about the quantity and more about the quality thereof. . . What makes Communism a real danger to-day, not only to San Francisco, but to New York and many other of our cities, is that accursed political demagogism which, to our lasting shame, is so rife among us. An immense amount of wrong is done, and the seeds of infinite mischief are sown in the name of the rights of labor. . . A new ditching machine is now exciting some interest. It is claimed that it will dig 75 to 100 rods of ditch in a day, ready for tiles, three feet in depth—one horse, a man and a boy constituting the working force. . . The Elmira Club deem beets better than turnips for cows. They do not injure the flavor of the milk. . . Mr. Snyder, of Michigan, plants Early Ohio potatoes in hills. . . Judge Balcom, as may be learned from the Husbandman's report, has raised 80 bushels of oats per acre from two bushels of seed. He thinks one and a half is enough in most cases. He has known men to sow four bushels of seed oats to the acre with a harvest of but 25 bushels. In thin seeding the crop is less liable to lodge. . . The milk substitute for calves and pigs alluded to in this column has been exposed by Mr. Voelcker as a most unsuitable substitute for milk, being composed mostly of potato starch. . . Newport is getting utilitarian as well as fashionable. Some of the leading young ladies, having attended a poultry show at Providence, purchased some thoroughbreds and so started the fashion. Now there is a genuine craze, and everybody that is anybody keeps fancy poultry. . .

Mrs. Ott.—What part of the chicken do you prefer Mrs. Jones?

Mrs. Jones.—I have no preference—only don't give me a wing.

Mr. Blair.—You don't like soaring?

Mrs. Jones.—Not on chickens' wings! . . No sane man would deny that truth and justice should take precedence of political sentiment, and that one must be a good man before he is a good Republican or Democrat. . . Any speaker or writer would be ridiculed for stating that there was a general disposition in the country to sacrifice the highest principles to party feeling; but careful observers must have seen evidence of a most dangerous tendency in this direction. . . Gratitude, which has been defined as a lively sense of future favors, has no such degrading significance to the tramp. Considering that whatever is given to him is his due, thankfulness is an unknown quantity in his equation of life. . . The tramp is chiefly interesting as a social study, by illustrating the tendency of civilization in its lower strata to relapse into barbarism. . . There is only one place at which his appearance with undeviating regularity can be counted on. This is the police station, where he stretches his weary limbs at night and sleeps with a soundness which is a refutation of the popular theory that a good conscience is essential to the enjoyment of this luxury. . . The proposition in Ohio to set apart, out of the earnings of married convicts, a certain proportion for the support of their families while in prison, looks like a move in the right direction. It is the misfortune of all human laws that punishments must fall with hardly less severity upon the innocent than the guilty. The new arrangement would qualify much that is objectionable in the system of convict labor.—The Hour.

PERSONAL ITEMS.

M. de Lesseps, doesn't speak English, though his wife and children do, quite fluently,

Dr. Glenn, who was not elected Governor of California, has enlarged his wheat area by 10,000 acres.

The election expenses of Lord Ramsay, the defeated Liberal candidate at Liverpool, were $65,000 and he has nothing whatever to show for them.

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WITH

Patent Level Tread

AND

Speed Regulator.

HEEBNER'S IMPROVED THRESHING MACHINES. Send for Illustrated Circulars to
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PRONOUNCED
the
BEST PLOW MADE
by the
Northern Ohio Fair of 1879,
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and by the
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when it competed with 187 other PLOWS, and received the GRAND GOLD MEDAL for being the BEST general purpose Plow in the world—an honor never before conferred upon a Hand Plow.)

Is the MOST EASILY ADJUSTED and MOST PERFECT SCOURING PLOW ever invented, and the thousands that are in satisfactory use all over the land demonstrate the fact that no other CHILLED PLOW manufactured is equal in EVERY RESPECT to the "GALE."

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Send for circulars to either of the above agencies, or to

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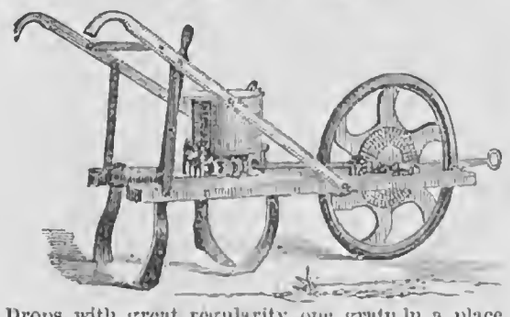
HOOSIER CORN DRILL!
60,000 IN USE.



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Manufacture this Plow of the *best Car Wheel Iron*; also of *Patent Hard Metal*. The handles vibrating from one side to the other as the plow is turned at the end of the furrow, enables the plowman to walk squarely behind the plow—a feature not possessed by any other Side-Hill Plow. It does as good work as any Land-Side Plow. For further particulars and prices send for our new *Illustrated Catalogue*. Address

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PUMPS,
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Highest Awards at all the World's Exposition.
WORKS FOUNDED IN 1832.
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Will make or mend your chains, of all sizes, without tools. Inquire at your hardware store or address

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Farm size *complete*; for separating grain and seed viz.: Seed wheat; market wheat; cockle; timothy clover; peas, beans and corn; barley and oats. Has taken more first premiums than any other separator in the land, and has more testimonials. Price $20 (usual price $35); a limited number for sale by LIGHT HALL & CARTER DAIRY SUPPLIES, 28 & 30 Jame St., Syracuse, N. Y. Send for circular.

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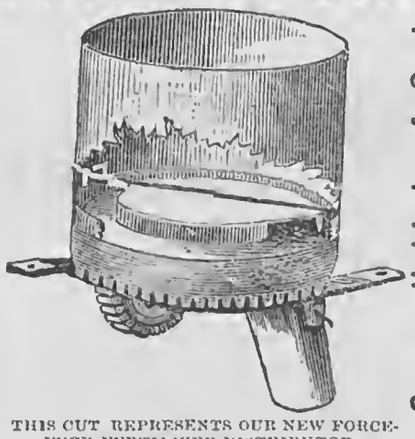

Sows all kinds of Grain evenly and accurately without bunching or breaking the kernels. Sows any brand of Commercial Manure without pasting or clogging.

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THE ONLY DRILL IN THE WORLD,
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Quantity of Grain and Fertilizer sown regulated by change of gear.

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THE
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IS SIMPLE,
CHEAP,
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Any one can use it with facility and plant with accuracy. It will work readily on rough or smooth ground. It can be used to plant all kinds of vegetable seeds, as the openings in the seed-box can be adjusted to the size of any seed.

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Advantages.
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Runs more easily
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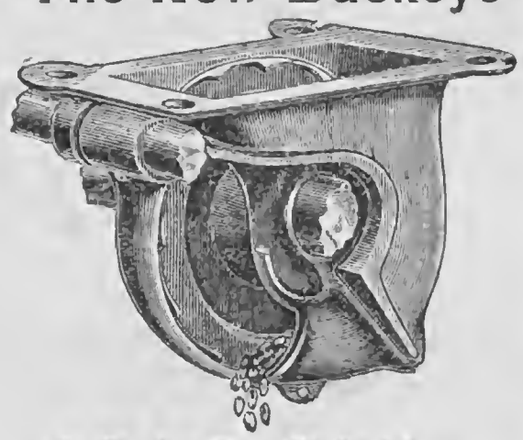

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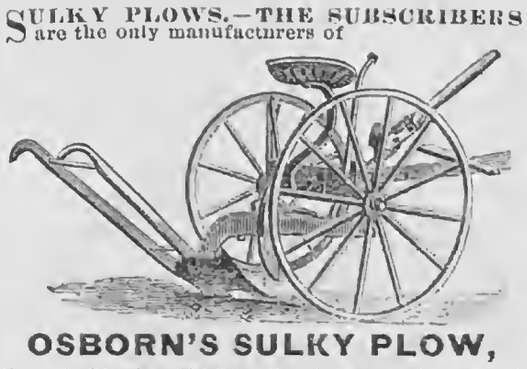

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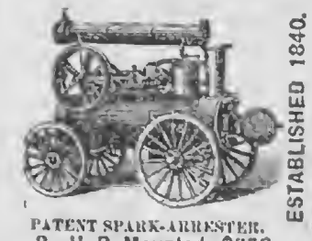

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The Liver, the Bowels and the Kidneys.

These great organs are the natural cleansers of the system. If they work well, health will be perfect; if they become clogged, dreadful diseases are sure to follow with

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Biliousness, Headache, Dyspepsia, Jaundice, Constipation and Piles, or Kidney Complaints, Gravel, Diabetes, or Rheumatic Pains and Aches,

are developed because the blood is poisoned with the humors that should have been expelled naturally.

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will restore the healthy action and all these destroying evils will be banished; neglect them and you will live but to suffer.

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PERFECTED BUTTER COLOR

It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.

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"Does he know anything?" anxiously inquired a friend, bending over the body of a man who had fallen from the roof of a house. "Don't know, I'm sure," the physician replied: "he never did know anything, but you can't tell what effect the fall may have had upon him until he regains consciousness."

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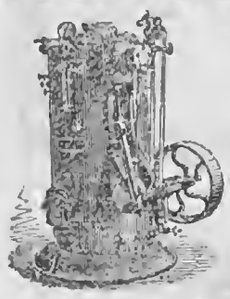

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Guaranteed to work well and give full power claimed.

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4½ " " 280
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Awarded Gold Medal at Paris Agricultural Exhibition, 1879.

Butter made by this process, awarded Sweepstakes at International Dairy Fair, 1878, and Two Gold Medals and First Premium at same fair, 1879. First Premium at Royal Agricultural Exhibition, London, 1879.

It requires no milk-room.
It raises all of cream between milkings.
It affords better ventilation.
It requires less labor.
It is more thoroughly made.
It is cheaper,

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Send for "Dairymen" giving full particulars and testimonials.

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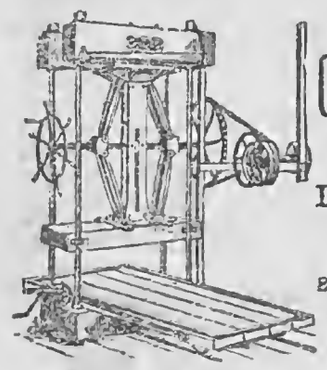

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We also furnish complete outfits. Address,

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A CONTENTED MIND.

Lady—"They tell me your cow never gives any milk, Betty?" *Old Betty*—"No, mum; she don't give hardly any. But, bless her heart, she'll eat as much as two o' them good milkers!"

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Send postal for pamphlet and prices.

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At the Fall Exhibition of the New York Horticultural Society, held in this city, September, 1879, the St. Patrick shown by us was awarded the First Premium over all other Seedling Potatoes exhibited.

Price 50 cts. per lb., by Mail.

Or by Express or Freight, $3.50 per peck; $8.00 per bushel; $30.00 per bbl.

We also offer selected stocks of the following leading Seeds:

		¼ lb.	1 lb.
Beet.	—Early Blood Turnip	$0.10	$0.35
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Radish.	—Round Dark Red	0.25	0.75
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If by mail, postage must be added at the rate of 16c. per lb.

Catalogue for 1880, free on application.

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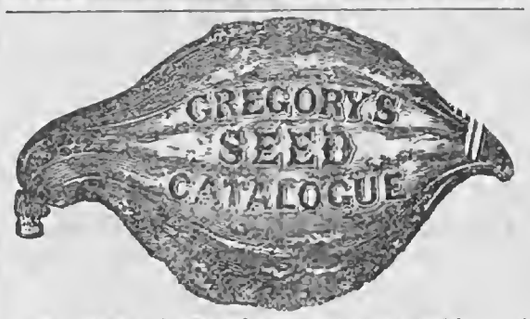

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A superior stock of PLANTS of all the *good old* and *choice new varieties*, for Spring planting, of STRAW, RASP, BLACK CAP, GOOSE BERRIES, Grapes and Currants.

My new Catalogue for Spring (24 pages), gives complete instructions for planting and cultivation *honest descriptions and fair prices. Free to all.*

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LITTLE SILVER, Monmouth Co., N. J.

30 Acres **BIG BERRIES** 100 best sorts plants, Currants, Grapes, &c. See our prices before buying of others. Illustrated Catalogue free.
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FOR 1880,

for the VEGETABLE and FLOWER Garden, for the LAWN, the Farm and NURSERY.

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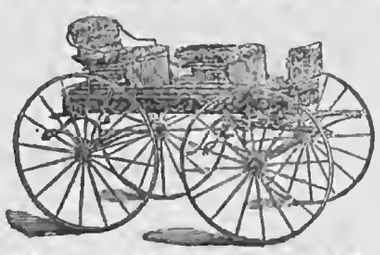

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The Ne Plus Ultra.

EVERY WAGON FULLY WARRANTED.

This is the best, handsomest, lightest and strongest wagon of its kind in the market. Every Farmer and Dairyman should have one.

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Manufacturers of

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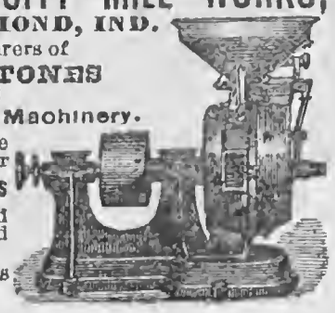

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Assets January 1st, 1880,

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Capital, $200,000. Net Surplus, $235,153.81.

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From year to year it spreads the base of its Pyramid and gains strength.

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THE RURAL NEW-YORKER

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Everywhere.

The Winter Wheat Crop.

Reports from Everywhere.

A LARGE INCREASE OF ACREAGE.

Prospects Good in the Winter-Wheat Region.

EXPERIMENTS FAILURES IN THE SPRING-WHEAT BELT.

Little Damage from the Hessian Fly—No Disease.

LACK OF SNOW AND FREQUENT FREEZINGS AND THAWINGS THE ONLY DRAWBACKS.

Ohio, Michigan, Indiana, Missouri and Kansas Jubilant.

Iowa and Minnesota Dejected.

Early Sowings better than Late—Drilling better than Broadcasting.

IMPORTANCE OF DRAINAGE.

Usual Acreage and Prospects in New England.

Moderate Increase and fine Expectation in the Middle States.

LARGE INCREASE and VARIED OUTLOOK at the WEST.

Considerable Increase and Hope in the South.

Some Increase and a Fair Lookout on the Pacific Slope.

GENERAL PROSPECT.

About Last Year's Crop from an Increased Acreage.

MIDDLE STATES.

New York.

RURAL EXPERIMENTAL FARM, Queen's Co.—Twenty different kinds of wheat were put in from 15th of Sept. to Oct. 15th. All are looking well—Silver Chaff at the present time is looking the best. It stands thicker than the others on the ground; its color is a very dark green and it has made a better growth than any of the others. Wheat in this county, as far as we have observed, is looking well.

Afton, Chenango Co.—The winter has hurt the wheat crop very badly. Some fields look entirely dead—and most of them are so—while others are quite green. The winter has been very open, with little snow, so that the wheat has been greatly exposed. Its appearance is poorer than in any year since farmers began raising it, six or seven years ago. About that time a few farmers tried wheat growing as an experiment, and it succeeded so well that many others followed their example and the area has been constantly increasing. This year's acreage is from 10 to 15 per cent. larger than last year's. Taken as a whole, wheat looks rather "dubious," and the prospect is that the present year's experience will put a damper on wheat growing here in future. G. E. N.

ALBION, Orleans Co.—The wheat in this section appears to have been somewhat injured by frost. I have not discovered any signs of disease or injury by the Hessian fly. I think, in comparison with last year's, the prospects are not as favorable for a good crop, but it compares well with several years before the last. The acreage is larger. J. G.

ALDEN, Erie Co.—In this section late-sown wheat is badly winter-killed; early-sown is in fair condition. No sign of disease. I have neither seen nor heard of any ravages by the fly. At the present writing the outlook is good. Acreage, 25 per cent. above the average. J. M. C.

ALMOND, Alleghany Co.—The winter in this section has not been unfavorable to winter wheat. We see no signs as yet of disease or insects of any kind. Its general appearance is as good as, if not better than, the average. I think there is very little doubt but we shall have a good harvest of winter wheat in this section. J. M. W.

BINGHAMPTON, Broome Co.—It is too early to estimate the general condition of the wheat crop in this section. The acreage is less than usual—about four-fifths the average area. On heavy soils the crop is poor and has been disturbed by frosts. Early-sown wheat is good for the season. Late-sown was affected by drought last fall. With a favorable season henceforth the yield will be good. H. W. G.

BURDETT, Schuyler Co.—Wheat wintered well, and until now has not been damaged to any considerable extent. It looks healthy. No Hessian fly. Will compare well with crops of former years at this season. The acreage is about the same as usual. From now on the alternate freezing and thawing have hurt wheat some years. O. S. B.

CAMBRIDGE, Washington Co.—This is not properly a wheat growing region; but much more was sown last year than usual, and the yield was good, some reporting as high as 40 bushels per acre. The acreage this year is double that of last. I have heard no complaint of the fly last fall. The crop went into the winter looking well; but the winter has been very unfavorable for it—much freezing, and thawing and little snow. A. E.

CHARLTON, Saratoga Co.—The wheat in this section was looking very promising until March 1st. Since then the freezing and sun have changed its color. It does not show any signs of disease yet. The Hessian fly has not injured wheat in this section hitherto. Its general appearance is good, having made a very strong growth last fall. As to acreage, there has been a steady gradual increase in the last few years. F. C.

CLYMER, Chaut. Co.—This is a not a wheat section, there being but a very few acres sown in this town. About three weeks ago it looked green and nice, but since then the frost has yellowed it somewhat. I don't think the Hessian fly has troubled wheat here. The winter has been very mild; but little snow and plenty of mud. It has been a very poor sugar season so far. The farmers generally keep dairy, make butter, and raise most of the calves, which bring from $5.00 to $15.00 each in fall. New butter is worth 25 to 28c; hay, $8. per ton; corn, 55c; potatoes, 35c; and oats 40c. per bushel. J. W. G.

CORNING, Steuben Co.—From close inspection and the general statements of others, I am satisfied that we have not in 10 years had as good an outlook for a large crop of wheat as at present. Up to this time it shows no bad effects from freezing. It covers the ground well and looks unusually green and healthy. The fly seems to have entirely disappeared from this section. I think about an average acreage was sown last fall. C. J. R.

COVENTRY, Chenango Co.—It is too early yet to foretell with certainty the effect of the winter on wheat, but it is considered an unfavorable one. No signs of fly or disease. The acreage is larger than usual. Dairying and sheep raising are more practised here than grain growing; but a great many farmers are raising their own wheat. J. D. M.

DANBY, Tompkins Co.—The past winter has been very hard on wheat in this section. I have seen no signs of the fly or disease, however. I think the wheat looks as fine as it did last spring. The acreage sown is larger, I think. J. E. J.

DUNDEE, Yates Co.—Wheat in this valley has wintered well, considering the drought we had last fall. I think that with a favorable season we will have a fair yield. I do not think it is diseased. Little or no harm has been done by the Hessian fly. The acreage is larger than usual. J. B. M.

ELMIRA, Chemung Co.—The present condition of winter wheat in this section is about 25 per cent. below the average of other years on about an average acreage. Early-sown pieces, where the soil is good, are looking fine, but many fields were sown late and were in poor condition to stand the open winter. Such pieces have suffered materially. However, wheat shows no sign of disease or harm from the Hessian fly, and with a good season will be a fair crop generally, having suffered less from our open winter than was anticipated earlier in the season. G. A. G., JR.

GREENWOOD, Steuben Co.—Wheat hereabouts looks fine. There is no fly. The acreage is about the same as last year. W. A.

GUILFORD, Chenango Co.—There is not a great amount of winter wheat raised in this section, as our land is mainly devoted to dairying. The crop has been winter-killed somewhat up to the present, but not seriously. It shows no signs of disease and is not injured by the Hessian fly. Its general appearance is an average one. Acreage about the same as last year. M. E. M.

HOMER, Cortland Co.—Wheat injured some by freezing and thawing. I have heard no complaint of injury by the Hessian fly. Acreage and appearance about as usual. Not much raised in this vicinity. J. D. H.

JACKSONVILLE, Tompkins Co.—The wheat has so far stood the winter well and is looking better than usual; shows no signs of disease or of harm from the Hessian fly. The acreage is about the usual amount sown in this section. P. H. F.

LOUDONVILLE, Albany Co.—Very little wheat is raised in this town. I have not seen any except my own which looks well and does not appear to have received any damage from any source. L. E. A.

MEDINA, Orleans Co.—Wheat in this section looks 20 per cent. better than it did last year at this time, and there was 20 or 25 per cent. more sown last fall than was sown a year before. There is no sign of disease; nor has the Hessian fly troubled the wheat any. Present indications are that we shall have more wheat the coming harvest than we have had for several years past. W. H. C.

MCGRAWVILLE, Cortland Co.—The condition of wheat is excellent. It has wintered admirably. Its present appearance is healthy, and will compare favorably with any of the ten years past. Acreage thought to be one-sixth larger than in '78 or '79. J. G. B.

NUNDA, Livingston Co.—Wheat in this section has stood the winter well; I have not noticed any signs af disease or injury by Hessian fly. Appearance will compare favorably with former years. Acreage about the average. S. M.

TYRE, Seneca Co.—Wheat in this county looks remarkably well for this time of the year—far better than for a number of years past. It does not show any signs of disease or of Hessian fly as yet. Seneca county has about an average number of acres under fall wheat J. P. M.

WHITNEY'S POINT, Broome Co.—There is a larger acreage of winter wheat than formerly; its general appearance is not as good as last year. The early-sown looks very well: with regard to late-sown, the freezing and thawing have exposed the roots so that many pieces will be very light. The Hessian fly has not made its appearance in our region as far as I know. J. H. K.

New Jersey.

HARBOURTON, Mercer Co.—Wheat looks well. The weather did not affect it until the 9th of March; since then it has been injured. The Hessian fly has not harmed it any. It is looking better this spring than it commonly does. The acreage is larger than last year. C. P

LITTLE SILVER, Monmouth Co.—The wheat crop looks fine. The winter has not injured it in the least. It shows more top for the time of year than it has for a number of seasons. There are a very few pieces that show any signs of the fly. The acreage is about as large as usual. B. H. K.

MENDHAM, Morris Co.—The winter has been very favorable for wheat in this locality; it is looking better than it has for the last three years. It shows no signs of disease or Hessian fly. The acreage sown is fully as large as on other years. B. H. L.

Maryland.

EASTON, Talbot Co.—Wheat has wintered well. No signs of disease or serious harm from the Hessian fly apparent. The general appearance will compare favorably with that of other good wheat years. Acreage larger than usual and the outlook may be summed up as flattering. H. S.

POCOMOKE CITY, Worcester Co.—Wheat is looking good; not injured by the winter. No special signs of disease. So far as my observation has extended, it is not much injured by the Hessian fly. Owing to the mild winter it is in advance of former seasons. The acreage is one-quarter more than usual. W. M. S.

Pennsylvania.

ADAMSVILLE, Crawford Co.—Wheat in this section is looking well, its general appearance comparing favorably with that of other years in spite of the open winter which we have had, It shows no signs of disease, or of being harmed by the Hessian fly. The crop will be about an average. A. E. N.

BERLIN, Somerset Co.—Wheat has stood the winter very well. It does not show any signs of disease. The Hessian fly has not harmed it in the least. Its general appearance is as good as on any other year while I have raised wheat, and a great deal better than last year or the year before. S. B. P.

BOWER HILL, Washington Co.—Wheat in this section looks better than usual at this season. The growth has not been checked very much by freezing. There are no signs of disease that I am aware of, and no complaints about the Hessian fly. The acreage is about the same as in previous years. The last crop has been nearly all marketed. S. MCC.

CLINTONVILLE, Venango Co.—In regard to wheat, I never saw it look greener and better set on the ground. I have only seen one or two pieces that show any sign of the Hessian fly. The acreage will average the same as last year. Wheat is worth $1.40; oats, 45cts.; corn, 40 cts.; potatoes, 35cts.; butter, 30cts.; eggs, 15c. The roads are very muddy. J. A.

LINEVILLE, Crawford Co.—Wheat in this section is being injured somewhat by unfavorable weather, but shows no signs of disease. Some early-sown pieces show signs of the "fly." The acreage is above the average. The prospect, on the whole, is good, perhaps I might say, very good. E. G.

MAYTOWN, Lancaster Co.—Winter has improved rather than injured the wheat hereabouts. The Hessian fly has damaged it less than in years. Its general appearance is very good—above an average. Owing to the system of rotation practiced hereabouts, we can neither increase nor diminish the area of this or any other one of our regular crops. This year, however, the acreage under tobacco will be increased, but that won't affect the space given to wheat. J. A. G.

MILL CREEK, Huntington Co.—Winter has not hurt the wheat. It shows no signs of disease or of any harm from the fly. That sown early looks the best, but it all looks fine in this section—better than for many years at this season. The acreage is larger than usual and we expect a good yield. J. W.

NEW HAMBURG, Mercer Co.—The condition of the wheat is splendid; the winter has been very favorable. It does not show any signs of disease or of the Hessian fly; The acreage is

large, and the prospect for a fine crop could not be better; C. J. G.

PUGHTOWN, Chester Co.—The wheat fields for 30 miles around look good. Some fields sown late last fall did not come up as thick as usual owing to the dry weather. The winter was very mild and no frost was in the ground for a number of days in succession; so the wheat has grown well and looks promising for a good crop. No sign of the fly In February we had April weather. Some potatoes were planted on the 24th. So far in March, we have had light snows and a great deal of rain and a little frost. Wheat has grown fast. Price for wheat, $1 40; rye, 75c; corn, 65c.; oats, 42c.; potatoes, 65c.; hay, $13; butter, 34c.; eggs, 16c.; young chickens, 14c. ₱ lb. R. H.

ROCHESTER MILLS, Indiana Co.—Our late-sown wheat presented a fine appearance through fall and winter months; but March is turning out unfavorable; it is freezing and snowing by night and thawing by day, and this must be very damaging to the crop. It looks as if it would not be half a crop. The acreage is somewhat larger than usual, G. H.

ROCKLAND, Venango Co.—Wheat has been in good condition, and a larger acreage than usual was sowed last fall, but the freezing and thawing of March have hurt it to some extent. The fly has not bothered us much up to this time. G J.

SHARPSVILLE, Mercer Co.—Wheat stood the winter well until the first of March; since then we have had so much thawing and freezing it is not looking as good as it did. There is very slight appearance of the Hessian fly, and no signs of any disease. The crop will average as well as it has done for a number of years, if not better. The acreage is larger. D. J.

UNIONTOWN, Fayette Co.—The wheat in this section of the State looks very promising; it has not been affected by the winter in the least. No fly that I have seen or heard of. From present appearance there will be more than an average crop, the acreage is about an average. J. B. W.

Ohio.

BENNINGTON, Morrow Co.—I think there was about 10 per cent. more wheat sown than last year. Some rusted last fall. Some fields of the early-sown were injured by the fly. The medium-sown looks well; the late-sown has been badly heaved out by the almost constant freezing and thawing for the last two months. It is too soon to decide how great the injury will be. T. W.

BERLIN, Holmes Co.—Wheat here looks good. The fall was dry; but the winter has been favorable and the crop is in a healthy condition. We had a good yield last year—some fields gave 30 bushels per acre, and the entire crop must have averaged 20 bushels, and we expect a still better yield this year. T. L. O.

BUCYRUS, Crawford Co.—We have had an open winter. The wheat looks fine what there is of it. It was hurt by the dry weather last fall. That sowed on sandy or upland soil was not injured and looks well now. There is about one-third more sowed than last year; but I don't think the aggregate yield will be greater. Corn and oats are good crops. D. P.

CADIZ, Harrison Co.—Wheat in this section is looking well, and has not been injured by the winter. No sign of disease nor any appearance of having been injured by the fly. The outlook is that we shall have a full crop. It will compare with that of any other year. T. C. G.

CANAL DOVER, Tuscarawas Co. — The wheat here is less injured by the winter than it was last year. The fall growth was so heavy on rich soils as to cause the crop to rot somewhat in places; but the damage is not extensive. Wheat on poor land is greatly injured by the fly. The acreage under wheat hereabouts is larger, and on the whole the prospect is better than at this time last year. J. K.

CANTON, Stark Co.—The wheat crop in this county never looked better at this season of the year than it does at present, and there is no complaint from our farmers, except, once in a while, one will say, "I am afraid our wheat is too thick on the ground." In this county I think there is from ¼ to ½ more acres out than ever before, on account of timothy and clover having failed last summer, owing to hot and dry weather and that put wheat in again on stubble ground. S. P.

CHARDON, Geauga Co.—Wheat never looked better in this section than it does at the present time. It has stood the winter well. The fly worked "some" last fall, but I think the pest did not injure it much. I think it looks better than it has for several years. More than an average number of acres sown. E M. A.

CHATHAM Ctr., Medina Co.—Wheat is in better condition than it has been for years, the frost has affected it but very little. The Hessian fly troubled it somewhat last fall, but not much. The acreage is a quarter more than last year. W. H. M.

CHESTERVILLE, Morrow Co.—The winter has been favorable for wheat in this part of the country. The last week has been harder on it than all the rest of the season, owing to the continued freezing and thawing. It shows no signs of being impaired by the Hessian fly, and the general appearance of the crop is better than last year. The acreage is larger. E. Y. MEI.

COLEBROOK, Ashtabula Co.—The winter had not affected the wheat until March, now some pieces are damaged by the frost. No signs of disease or of the fly. It does not look as well as last year. The acreage is larger. G. T.

COLERAIN, Belmont Co.—The winter has been very mild. Wheat mostly looks very well, though some pieces are a little yellow. No appearance of fly discovered or heard of. The growth, as compared with that of former seasons, is much more rank. The acreage is greater than usual. Y. B.

CINCINNATI, Hamilton Co.—Wheat well put in came through the winter all right. The fly did some damage last fall in early-sown fields. Owing to the excessive growth, and to the very fine season, some fields required pasturing. Very little injury has been done by frost. The crop is very forward now except the very late sown. The prospect is good for a full average yield, and the acreage is as great as usual in this county. W.

CLEVELAND, Cuyahoga Co. — Not much wheat is raised in this section. Farmers are engaged more in dairying and garden farming, but they are raising more wheat than formerly. As they take pains to have the ground in proper condition, use barnyard manure and superphosphates they seem to be on the right track to make a success of raising wheat. Wheat sowed last fall looks splendid—better than usual. Not enough freezing and thawing to hurt it so far. The Hessian fly did some injury last fall, but we can't now see that it has done any permanent damage. I think there was fully one-third more put in last fall than the year before. G. M. P.

DELAWARE, Delaware Co.—The winter has not injured the wheat around here, except on very wet land. It does not show any signs of disease, or of having been harmed by the Hessian fly. Its general appearance is as good as for two years past, if not better. Spots were injured by the dry weather last fall. The acreage is a good deal larger than last year. M. D.

Dent, Hamilton Co.—Wheat looks well at present. The winter has not hurt it, nor does it show signs of any disease. The fly has not harmed it, except the very early sowings. The acreage is about the same as last year. A. T. P.

EAST CARMEL, Columbiana Co.—Wheat in our section looks very promising; the winter was unusually mild, and up to the first of this month wheat suffered but little from freezing. Some few fields that were not properly put in, are pretty well frozen out, but generally the crop is far better than for several years. The Hessian fly injured some of the earliest-sowed; but its ravages are fast disappearing. The acreage is about a quarter more than last year. J. T.

East Toledo, Lucas Co.—Wheat in this section is coming through the winter in first-rate condition. Where it was sown on low, mucky land the dry weather last fall killed it out; but on the high land it is looking good—fully as good as last year. I think there was fully one-third more sown than ever before, and the prospect at present is that the next harvest will be the largest ever gathered. T. C.

ELYRA, Lorain Co.—Wheat is good in every respect at present; no winter killing; no signs of disease; no fly. General appearance much better than on former years; acreage one-tenth more than on last year. R. W.

Farmington, Trumbull Co.—Wheat looks exceedingly well, the winter being very mild, has not damaged it. It does not show signs of any disease or of being damaged by Hessian fly. Its general appearance is better than common, at this time of year. The acreage is somewhat larger than formerly. J. O. M.

HINCKLEY, Medina Co.—Wheat is in very good condition; it has wintered well. Does not show any signs of disease, or of having been hurt by the fly. The acreage is large—probably one-third more than last year. We are having very fine weather. N. E. W.

LEVERING, Knox Co.—Wheat on bottom or gravel lands is in splendid condition; on clay lands March has been a hard month for it, freezing or heaving it out. The Hessian fly is doing some damage, but only in spots. No special disease. Red rust last fall did not do as much damage as was feared, it being something new in this locality. The acreage is fully one-third more than last year. On the whole, the prospect is above the average. J. O. L.

Lodi, Medina Co.—Most of the wheat in this vicinity looks well—better than it did last spring; but we are having bad weather for it now. I did not hear of the Hessian fly hurting the wheat last fall but some pieces appeared to be rusty. The wheat on these died out somewhat, and what remained does not look so well now. I think the acreage is about the same as last year. S. C. M.

Millersburg, Holmes Co.—In our section the wheat promises a large crop; the winter has hurt it but little—no signs of any disease. No effects from the Hessian fly. The past three years we have had large crops—and the present is equal to any of them, while the acreage is much larger. G. W. M.

MILTON, Mahoning Co.—Wheat generally looks well. It was not injured much until the late frosts struck it. It looks somewhat spotted in places; but shows no signs of injury from the fly. The acreage is greater than for many years. B. F. B. JR.

Mt. Repose, Clermont Co.—In this neighborhood the acreage of wheat sown is at least one-third more than last year; present condition pretty fair, but the last month or two have been quite severe on it. The Hessian fly has troubled a few fields badly. Its general appearance is as good as last year, and better than for several years previous. The continued wet weather, with freezings and thawings, has injured prospects that were considered very fine. J. P. H.

New Lisbon, Columbiana Co.—The condition of wheat appears better than an average. It does not seem to be diseased. The fly has hurt some fields, but not badly. The acreage is about one-third above an average. The winter was not very severe on the wheat; it has been growing almost all the time. E M.

OBERLIN, Lorain Co.—Wheat is looking unusually well in this section, it having made a heavy growth during the favorable fall and mild winter. The acreage is unusually large and but slight damage has been done thus far by either frost, fly or other pests. A heavy crop is anticipated. Many of our farmers applied fertilizers to their wheat land last fall for the first time. It tells. T. H. W.

PAINESVILLE, Lake Co.—In this county and parts adjacent, the wheat crop was looking quite well until about the 1st of March, since which time the freezing and thawing and the drying winds have caused much damage, especially on flat, clayey soils. The farmers are slow to learn that this can all be prevented by thorough under-draining. In many fields the damage sustained this month would more than half pay the cost of under-draining. Peach and other fruit buds continue to look well, although the recent freezing has been severe upon them, considering their forward state. M. B. B.

PULASKI, Williams Co.—The last few weeks were very hard on wheat—too much freezing and thawing. On black, mucky soil all died early in winter from some cause not easily accounted for. Some fields still look fine, especially on sandy or gravelly soil. No Hessian fly yet. The acreage is a little over an average, but the prospect now is for no more than an average crop. A few spots in highly-manured fields are like the mucky spots; in others all is killed. The ground is getting too dry now for wheat to do well. J. J. R.

RAVENNA, Portage Co.—Wheat at present is looking fine; no signs of any disease. The Hessian fly has done no harm in this section. The acreage is rather larger, I believe, than common. W. S. C.

RIPLEYVILLE, Huron Co.—We have had a very mild winter—but very little snow and a great deal of rain and mud. The wheat crop bids fair to be a very good one. The acreage sown is larger than last year. It shows no signs of injury from fly or disease of any kind. Feed is scarce. Hay is selling for $12 per ton; oats, 38c; corn, from 50c to 60c; wheat, $1.25. I. G.

SAVANNAH, Ashland Co.—Wheat is in the best condition I have seen it in this section for the last 26 years, the winter having been the most favorable to it in that time. I have neither seen nor heard of any disease affecting it. There is not the least sign that the crop has been hurt by the fly. The acreage is far larger than in any year during the above named period. Weather good, roads bad. J. C.

Willoughby, Lake Co.—Wheat in this section is looking very fine; the winter has not damaged it. It shows no signs of any disease or of the fly as yet. The acreage is larger than it has been for years. J. W. P.

ZANESVILLE, Muskingum Co.—The winter here has not injuriously affected the wheat to any appreciable extent. So far as I can learn, it shows no sign of disease. I have not heard that the Hessian fly has done any serious harm. Its general appearance is much better than last year and it promises a splendid crop, if not injured hereafter. The acreage of wheat sown this year is about one-third larger than last year. T. F. S.

WESTERN STATES.

Michigan.

ALLEGAN, Allegan Co.—The condition of wheat is good; the open winter has not seemed to injure it; it does not show any signs of disease, or of having been harmed by the Hessian fly; its general appearance is better than that of most other years. The acreage is larger. H. D. E.

Ann Arbor, Washtenaw Co.—The past winter has injured the wheat in this section but very little. The crop looks very healthy and shows no apparent signs of disease. Very little injury has been done by the Hessian fly or any other insect. The weather last fall was unusually warm and wheat made a great growth—the fine top has protected the roots, so that it has come through the winter looking better than usual, and promises a fine crop. J. D. B.

Benton Harbor, Berrien Co.—Winter wheat is injured but very little by winter; shows no signs of disease; is not damaged by the Hessian fly; its general appearance is as favorable as in any former year. The acreage sown is larger than in '79. Farmers look for a good crop unless it is injured in the future. W. G.

BRADLEY, Allegan Co.—The winter has been hard for wheat on clay land. The growth last fall was large and tender. The hard frosts hurt it. The Hessian fly has done but little harm. The crop appears as well as that of last year and the acreage is larger. H. F. B.

BURR OAK, St. Joseph Co.—Wheat looks fine. It has not been injured at all by the winter. No complaints of disease or the fly. Compares well with crops of former years at this season. Acreage larger than usual. S. H.

East Dayton, Tuscola Co.—Early-sown wheat here is not damaged; late-sown is badly killed. No disease or fly. The general appearance of the crop is about the same as last year, and so is the acreage. L. P.

GRAND LEDGE, Eaton Co.—Early-sown wheat looks very well indeed; the frost has killed little patches here and there, but not enough to harm it much. It has had to do without its usual covering this winter, as we have had but very little snow. Late-sown looks bad. I have seen no signs of any disease in it. The Hessian fly worked in it a little last fall, but it seemed to do but little damage in this locality. Take it all in all, I think the crop promises as well as in other years, and double the number of acres has been sown. J. E. H.

GRAND RAPIDS, Kent Co.—Wheat is looking fair; no disease save decay occasioned by fly; center stalks of early sown, gone; but warm fall caused it to tiller well, and it will come out right, if March is not too severe. Wheat looks more brown than last year; but the roots are good and I opine we shall have a good yield. The acreage is smaller than last year in this vicinity. The open winter has been very severe on fields sown late, but most of our sowing was done by Sept. 15th. My own field of 20 acres was sown in August, and was yellow with fly until side shoots sprang out and created a new green. C. W. G.

Kalamazoo, Kalamazoo Co.—Wheat in this section wintered well and looks about the same as last spring, which is better than it has generally averaged the past few years. It shows no signs of disease. The Hessian fly worked somewhat last fall, but the wheat grew so rapidly that it is thought not to have injured it much. Acreage about the same as last year. J. T. C.

LANSING, Ingham Co.—Wheat looks dingy and in some places damaged, but generally it looks very well. It is too early yet to predict; for March and April are very often the hardest months of the year on wheat in this State. Acreage larger than last year a little. Flies are not bad. W. J. B.

LEBANON, Clinton Co.—Wheat in this section is looking well, the winter not seeming to have hurt it, except in a few cases. No signs of any disease are apparent at present. Some fields seem to have been damaged quite badly by the Hessian fly, but this is not generally the case. The number of acres sown this year is less than last. J. T.

MONTGOMERY, Hillsdale Co.—The wheat has experienced some injury on clay soil; but not as much as the average of other years. The breadth sown is larger than last year, and the crop looks better. There is no sign of the fly. The winter has been remarkably mild, not one old-fashioned snow storm or one day of good sledding. Present prices: wheat, $1 20; oats, 37@39c.; clover seed, $3.75@4; timothy, $2.25 per bush.; potatoes, 30@35c.; corn, 35@40c.; butter, 16@18c. per lb.; eggs, 8c. per doz.; hay, $6@8 per ton. C. H. E.

MORENCI, Lenawee Co. — More wheat was sown in this section last fall than in any previous year, and it has, as a rule, wintered well. I don't think the fly has hurt it at all; but if the present dry, windy weather continues a week longer, it must injure the crop. C. C. W.

MORRICE, Shiawassee Co.—The wheat in our section is looking well. No signs of being winter-killed, and the winter has been so open

that we do not think that the fly has damaged it much. Its appearance compares favorably with that of other years—the acreage is larger. J. D.

MUSKEGON, Muskegon Co.—This is a rather sandy region and is not affected, like clay, by the extreme scantiness of the snowfall the past winter. I never saw any Hessian fly or wheat midge here, nor do I know of any disease or insect specially injurious to wheat here. I think there is an increase of acreage, but only about equal to the increase of the clearing up of new land. Farming is not the most prominent business of this Lake Shore region, for fruit growing is the most important part of our agriculture, and lumber manufacture the most prominent business. S. B. P.

Orion, Oakland Co.—Wheat hereabouts looks well. It was not damaged seriously by the Hessian fly. On low lands it has been somewhat lifted by the frost, but the percentage of low land is very small. The general appearance is fine compared with other years; acreage larger than last year. C. K. C.

Owosso, Shiawassee Co.—Wheat in this and adjacent counties, on light soils and ridges, looks well; on porous, loamy and undrained soils it is badly heaved out. Many spots, and some whole fields are utterly ruined. Loss, as now estimated, one-fourth. Present weather and prospects are unfavorable. Comparatively it does not promise so well as a year ago. The general opinion is, that the damage done by the fly is comparatively slight. The acreage is probably 10 per cent. greater than usual. Clover is universally and badly thrown out, therefore the hay crop will be very short, and the subsequent clover seed crop light. M. H. R.

READING, Hillsdale Co.—Taking 100 as the average of condition and acreage of winter wheat here, the acreage under the present crop may be put at 110, and its condition at 100. L. W.

Ridgeway, Lenawee Co.—The winter has not hurt wheat much; some pieces that were sown early and on stubble are injured by the fly, but it is not general. It is looking fine in most places in this county, and will compare favorably with that of other years. The acreage is nearly one-fourth larger than last year. C. C. V. H.

SOUTH HAVEN, Van Buren Co.—Wheat in this region has come through the winter in good condition. It is but slightly browned; shows no signs of disease; is not affected by the Hessian fly. It was farther advanced than usual last fall, in consequence of continued warm weather. The acreage is considerably above that of last year. So far the prospect of another good crop is excellent. T. T. L.

UNION CITY, Branch Co.—In this section wheat is generally looking fine, especially on sandy soils. Some pieces on heavily timbered land are seriously injured by frost, being heaved out of the ground. Very little complaint about the fly. More wheat in the ground than ever before. C. C. L.

Indiana.

BLOOMING GROVE, Franklin Co.—The winter did not harm the wheat until within a month. The frost and snow since then have given it a scorched appearance; but I think that will not amount to anything serious. No signs of disease; but little harm from the fly. Its general appearance compares well with that of other years. The acreage is larger. The scorched appearance spoken of above is where the ground was too wet, and the wheat was thrown out somewhat. C. F. H.

COLUMBIA CITY, Whitely Co.—The wheat crop is a fair average. No disease or fly, and the acreage is greater than usual. Just now the weather is a little too dry. Winter has not affected the crop much only in low places. W. S.

CROWN POINT, Lake Co.—The condition of winter wheat is fair; not as good as last year; injured somewhat by the open winter; no signs of disease; no injury from the Hessian fly; acreage larger than heretofore. This section of country is not adapted to winter wheat. D. K. P.

Harrisburg, Fayette Co.—In a residence of sixty years in this county I have never seen a better condition of the wheat crop. It is neither winter-killed nor injured by the Hessian fly to any considerable extent. The acreage is larger than usual, perhaps by twenty per cent. WM. W. T.

Ingalliston, Marion Co.—Wheat has wintered fairly well. No Hessian fly. Not killed by frost to any considerable extent. The acreage is about an average one. This immediate section is not largely a wheat-growing country—more corn. The general appearance of wheat is better than usual at this season. G. J.

La Porte, La Porte Co.—The winter has not injured wheat to any extent in this section. There are no signs of disease in it. In its general appearance it compares very favorably with its condition in other years. The acreage is considerably larger than in other years, and the prospect is flattering for a fine yield in this section. W. E. R.

Lima, La Grange Co.—Wheat in this county has never looked better or healthier at this time than now. Acreage about as usual. J. S.

MOOREFIELD, Switzerland Co.—Wheat looks well in this section; some pieces, however, are injured by the fly, and on level land some are damaged by the wet weather. J. C.

PLEASANT LAKE, Steuben Co.—In this section we have a variety of soil—oak openings and timber—the winter has been very open; no snow of any account, but a great deal of rain, so that the wheat where the water stood any length of time, has been drowned out. We have no Hessian fly. I think the general appearance is as good as last year. The acreage is as large as on other years, but the season may affect it for the better or worse yet before the settled weather begins. H. B. D.

Terre Haute, Vigo Co.—The prospects for an abundant wheat crop in this part of Indiana, are most flattering. The winter, though considered unfavorable for the crops by many farmers, has proved the contrary. The ground is completely covered with the plant, and the growth is farther advanced by a month than at this season in many years past, and there are no signs of any disease or of harm by the Hessian fly. D. R.

Illinois.

APPLE RIVER, Jo Daviess Co.—Wheat is nearly all winter-killed, as far as I can learn. No chinch bug, Hessian fly, or disease. Acreage large. Crop looks worse than usual. G. H. W.

ALBION, Edwards Co.—Wheat does not look so well as during the last two seasons. It is going down badly on account of wet and frost. A considerable amount was ruined in Wabash county by the fly, and was seeded the second time. Some will be plowed out this spring. The acreage is fully as large as in any previous year. J. T.

ASHLEY, Washington Co. — As a general thing the winter has not hurt our wheat in this section. It has a healthy appearance. In some fields the Hessian fly injured it in small spots only. The prospect is good for a large yield. The acreage is larger, I think, than ever before. The winter was very mild here, with a great deal of rain. M. J. C.

AURORA, Kane Co.—Wheat is killed very badly by the frost. There was more sown than usual. F. C.

BERLIN, Sangamon Co.—Wheat badly winter-killed to the extent of fully one-third. No signs of disease or harm from the Hessian fly. Its general appearance is not equal to that of former years, but the acreage is from one-third to one-half greater than last year. S. H.

BUNKER HILL, Macoupin Co.—The ground was very well prepared for wheat last fall, and fully 33 per cent. more was sown than ever before. The seed all germinated and made a good "stand." The crop was injured slightly by dry weather in January; but it looks very fine now in this and the six adjoining counties. There is a great variety of opinion in regard to the "fly;" some say it lays its eggs in the fall, and hatches in spring and works in the stalk; others equally well informed, say there is another fly which lays the eggs in spring. I have not examined it; but am told that "the fly is awful" in the wheat; but it looks very promising, indeed, and we all feel very much encouraged. W. W. H.

CHERRY POINT CITY, Edgar Co.—Wheat looks very well; the weather right now is rather hard for it. The fly hurt some pieces; there is more sown than common, and it looks very well. S.

CISNE, Wayne Co.—The very open winter has been very hard on the wheat; the light freezing has damaged it more than anything else. No disease is perceptible. The fly has not harmed it, and it will compare favorably with other years. The acreage is larger by one-third than was ever known. N. A. T.

COATSBURGH, Adams Co.—Wheat looks bad. A considerable amount of it will be plowed up this spring. The dry weather last fall hurt it much, and there is some fly in it. It will average about half of last year's crop. J. S.

DANVILLE, Vermillion Co.—Wheat in this section looks quite well for the time of year—much better than usual. Very little has been winter-killed, and I think it has not been injured by the Hessian fly to any extent. Its general appearance is better than the average. The acreage in this county is nearly double that of any other year. I have resided here over forty-five years. R. T. L.

ELMIRA, Stark Co.—Wheat badly injured by the winter which has been open, with frequent freezing and thawing. No damage from the fly. The poorest prospect for a crop we have had for years. For the past two or three years we have had good seasons and farmers ventured a larger amount than has been sown for a long time, as last year led us to believe that it would be useless to sow spring wheat this year on account of the chinch bug. This pest has wintered through finely, and with an average dry summer we can raise enough to supply the world. E. R. B.

FAIRFIELD, Wayne Co.—The prospect for winter wheat here is good—better than for several years. The winter has not harmed it much. We have seen no signs of disease, or of the Hessian fly. The acreage is larger than for six years. E. H. R.

FOUNTAIN GREEN, Hancock Co.—Wheat does not show any sign of disease, or of being injured by the Hessian fly. Its general appearance does not compare well with that of other years. The acreage is smaller. J. Y. S.

GALESBURGH, Knox Co.—The wheat around here has been nearly killed. We have had no snow. I do not think it has been troubled by the Hessian fly. The acreage is larger than usual. Last year there was a good crop and many farmers put in some wheat this year; but it is not a very good wheat country around here. A. P. H.

HOOPESTON, Vermillion Co.—Wheat has been considerably injured of late by frost. No signs of disease or Hessian fly. The general appearance of the crop compares favorably with that of former years. The acreage is half as much again as during any previous year. We expect a good crop, future mishaps barred. C. B. A.

HUGO, Douglas Co.—Unquestionably wheat is in fine condition here. So far I have heard no complaint of serious winter damage or of the fly. It compares favorably with other wheat years "of notoriety." Acreage larger—40 acres have been sown to 10 last year. Of course, in all this hurry and blindness, many fields were "half put in" and a severe fall drouth gave it little aid; yet wheat properly put in—and there is double the usual amount of this class—looks fine and is coming on now rapidly. A. C. W.

JOSLIN, Rock Island Co.—Neither my neighbor's wheat crops nor mine has suffered from the frost. We are the only persons in this district that sowed wheat last fall. I have four acres, two of which I covered with straw; one I top-dressed and the other I left bare. The wheat covered with straw is more forward than the rest; the top-dressed is stronger than that left bare. As far as I can tell, no disease has affected it and no Hessian fly. In a large district (at a distance of five or six miles) the wheat is reported half winter-killed. I can't imagine what could be the difference, as both districts are on Rock River bottom and a sandy soil. The acreage of winter wheat has increased. J. C. A.

MILO, Bureau Co.—Wheat looks bad, almost all winter-killed, owing probably to the open winter we have had, as it looked well in the fall. It shows no signs of disease, and is not troubled by the Hessian fly. Last year wheat was good and a large acreage was put in this year. Of late years there is very little wheat sown, as it is not a sure crop in this section. J. G.

MT. CARROLL, Carroll Co.—Winter wheat we think, has wintered all right so far, but did not get a very big growth last fall, and looks thin on the ground; no disease, and there is no Hessian fly. Acreage about double that of last year. J. C. S.

NORMAL, McLean Co.—Nearly all the wheat in this section is winter-killed. Generally only a little wheat is raised here, but last year we had good crops, consequently a much larger acreage was sowed this year, but I think it will be almost an entire failure. G. C. R.

ODIN, Marion Co.—Wheat is damaged by too much wet and freezing on our flat land. No signs of fly. The prospect is not an average one compared with those of the last three years. I think it will fall short one-third per acre. The acreage, however, is 50 per cent. greater than ever sown before. J. P.

ONARGA, Iroquois Co.—Wheat in this neighborhood has been somewhat injured by the freezing and thawing of the past open winter. No signs of any disease that I know of. No Hessian fly. There were many more acres sown last fall than usual; the prospect is fair for a tolerably good crop this year. I. B. C.

PALATINE, Cook Co.—There is no winter wheat around here to speak of. I only know of one piece about an acre, and it is badly winter-killed. I don't think there are 25 acres in the whole county. I have never seen or heard of the Hessian fly here. We did not raise winter wheat when the country was new. C. M. C.

PAW PAW GROVE, Lee Co.—Wheat hereabouts is badly winter-killed. I think there is no show for a crop. The acreage is larger than for many years. R. S.

PELLSVILLE, Vermillion Co.—But little fall wheat sown in this section; what there is has been winter-killed—it has not been covered with snow once. C. S.

ROCK FALLS, Whitesides Co.—We have never raised much winter wheat in this county, and for several years the crop of spring wheat has been so uncertain that farmers have hardly ventured to sow largely. Last year the snow remained on the ground and the small amount of winter wheat which is always tried as an experiment, produced such a remarkable crop that quite a large amount was sowed last fall. The result, so far as I know, is: the Odessa is completely winter-killed and other kinds of real winter wheat are much injured by repeated freezing and thawing, but promise to recover. No disease or insects that I have heard of. G. W.

ROCKFORD, Winnebago Co.—But little winter wheat has been raised in this county; but about four times the acreage of last year is now growing. Its general appearance is somewhat better than last year. The Hessian fly does not appear until late in the season. Until the past two or three seasons no winter wheat was raised here for a number of years. E. L. H.

SALEM, Marion Co.—Where the drainage is good the wheat looks well; where it is bad, the wheat is generally dead. It shows no signs of disease—only as above stated. At present we see no damage from Hessian fly. The crop looks better than last year at this time. The acreage is thought to be 25 per cent. more than last year, and some think it more than that. G. H. W.

SHELBYVILLE, Shelby Co.—The wheat during the winter, in my neighborhood, looked very well, particularly the earlier-sown; but during the last two weeks the changeable weather has damaged it a good deal—some has been heaved out. The late-sown looks bad. The fly was in the earlier sown, but the late growth in fall overcame it in a great measure; the outlook is hardly as good as last year. The acreage is much larger. W. P.

STERLING, Whitesides Co.—Wheat of the Odessa variety comes up very nicely and made a fair growth. Mine is the best in our neighborhood. I plowed my ground very early, and consequently it became so packed that the frost has not heaved it the same as it has in loose soil. I see no difference between that which was drilled and broadcasted. Until the past fall very little wheat was sown here in the fall, so I cannot compare the present with previous crops. The last general fall seeding was in 1856, when people lost all their seed; since then we have been putting in spring wheat. No Hessian fly here. O. H.

SULLIVAN, Moultrie Co.—Wheat in this part of the country was injured somewhat by the freeze in March where sown on corn ground. It doesn't seem to be injured in any other way. It looks better than it did this time last year. The acreage is one-third more. J. Z. M.

SUMNER, Lawrence Co.—Growing wheat in this vicinity looks well and promises a full crop equal to last year's. More than the usual acreage has been planted. Less complaint than usual of the fly or winter-killing. Farmers are very hopeful with present prospects. J. M.

UTICA, La Salle Co.—The acreage under wheat is much larger here than usual. Nearly all of it is badly wintered-killed; on very high ground it is not so much injured as elsewhere. The wheat crop of 1880 will be much smaller than usual in this county. No disease or fly. F. B. W.

VOLO, Lake Co.—The winter wheat crop in this part of the county is badly winter-killed. The winter has been very wet here, with alternate freezing and thawing until the last two weeks. The clover is very badly hurt, and this is of more importance than the winter wheat. The acreage of wheat put in last fall was double that of the year before. T. D.

Wisconsin.

ALBION, Dane Co.—Winter wheat has been badly killed during the last two months of open weather. Some signs of Hessian fly. It looks sickly in comparison with its condition in the last three years. The acreage is four or five times larger than last year. The yield last year was from 16 to over 40 bushels per acre. H. M. S.

BEAVER DAM, Dodge Co.—The winter has not damaged early-sowed wheat. The crop has not been harmed by the fly. Its general appearance is fair; but not as good as last year. The acreage of winter wheat is three times that of last year. J. W.

BELOIT, Rock Co. — The winter was very favorable for winter wheat. But if it does not rain or snow soon, I fear the grain will suffer. The acreage under the crop is somewhat larger than usual. The fly we do not fear, but we do the chinch bug. F. T. R.

BROTHERTOWN, Calumet Co.—Winter wheat is a failure in this section. It looks the poorest crop for many years. I don't expect half a crop. Quite a large acreage was sown; but the open winter has killed it out. Spring wheat, however, is the main crop here. Of it six times as much are sown as of winter wheat in this section. It was damaged considerably by chinch bugs and drought last year. J. P.

BURLINGTON, Racine Co.—Fall wheat so far looks well and has stood the winter better than usual, and it was an open winter with us. Only a small acreage was sown in this part last season; it is mostly spring wheat that we raise

here, and farmers are about ready to begin to sow, and if nothing occurs to prevent them, the acreage will be larger than last year. The average yield of spring wheat per acre in 1879 was about 13 bushels, while I hear of fall wheat that yielded per acre as high as 42, and as low as 20 bushels. A larger acreage of fall wheat will be sown this coming fall. W. P.

DARLINGTON, La Fayette Co.—This section of country has not been considered good for winter wheat. For two years past, however, good crops have been raised. Last fall much more was sown than usual; it now looks bad. The open winter and dry and cold winds of March, it is feared, have killed it. No Hessian fly in this section. J. B. M.

DE PERE, Brown Co.—Not much winter wheat is raised about here; spring wheat is the principal crop; but there is an increase of 50 per cent. of winter wheat over last year. It generally looks well. No Hessian fly. The prospect is fair for a good yield. H. P. C.

EAGLE, Waukesha Co.—The winter wheat is about half killed, and if the weather keeps freezing nights and thawing days, as it has done the past two weeks, it will all soon be dead. The ground is dry. The acreage is much larger this year than last. There has not been much winter wheat raised in this part of the State the past ten years. There is no Hessian fly. J. S.

ELKHORN, Walworth Co.—Wheat is a miserable failure. Since the fore part of January there has been no snow of any consequence on the ground, so but very few pieces of wheat have lived through. That is the general opinion at present. There is no disease, and no harm from the Hessian fly. Last year there was not much area to winter wheat, but the yield was remarkably large—from 20 to 40 bushels to the acre. Consequently, winter wheat was all the cry, and the acreage was increased and nearly the whole crop used for seed. Now spring wheat will likely be seized on, as for the last fifteen years. Clover is heaved badly. S. D. H.

FORT ATKINSON, Jefferson Co.—The acreage of winter wheat is twenty per cent. greater this year than last in this neighborhood. That sown on good soil is all right yet, as it got a good start in the fall. The Clawson stands our winters the best of any variety. No disease or fly as far as I can find out. The general appearance of the crop is not as good as it was last year, but it is better than the average of several late seasons. Rain or snow soon will generally make it all right. The same remarks apply to clover. L. M. R.

GREEN BAY, Brown Co.—Wheat got a good growth in the fall and was not injured until Feb., when the thawing and freezing killed some in exposed situations. No signs of disease. No Hessian fly. The present condition, compared with that of other years, is favorable. The acreage is from five to ten per cent. more than last year. For the last two weeks it has been cold with two or three small falls of snow. No sugar weather yet. Winter was pleasant and lingers long. T. B.

MARSHALL, Dane Co.—The winter has been hard upon wheat; but upon close inspection. I think it is not much killed. No Hessian fly. The crop does not look so well as last year; the acreage is larger than ever before. T. H.

MAUSTON, Juneau Co.—Winter wheat poor hereabouts. Some pieces on unprotected land have been killed. Cold, dry winds caused the mischief—no fly has put in an appearance. It does not look as well now as at this time last year. More wheat was sown in this county last fall than ever before. G. T. C.

NEW LISBON, Juneau Co.—The winter has been open; no snow to speak of. Wheat and rye are badly killed, probably not more than one-fouth of a crop of either is left. It is too early yet to tell the true condition. No Hessian fly in this section. P. C. C.

OCONOMOWOC, Waukesha Co.—Wheat has been badly winter-killed, excepting the variety known here as Missouri Blue Joint, which seems to be all right yet. I have not seen any signs of disease or Hessian fly. Fully three times more fall wheat has been sown than usual. That not killed is about on an equality with other years in regard to general appearance. Clover nearly all killed. J. J.

OMRO, Winnebago Co.—This has been a mild winter here. Since the first of January wheat has suffered severely from the constant freezing and thawing, especially on the low lands, and that which was sown late. No signs of the Hessian fly, but it is too early yet to predict immunity from loss with certainty. The acreage sown is the largest for many years. H. P.

OGDENSBURG, Waupaca Co.—The general opinion is that wheat is very badly damaged by freezing and thawing—winter-killed. No complaint of the Hessian fly. Its general appearance as compared with other years, is not good. The acreage is larger than for many years. W. H.

OSKOSH, Winnebago Co.—Wheat here does not look very promising. No insect has hurt it, but it is badly winter-killed. Little or no snow all the winter. More fall wheat was sown than ever before, as spring wheat is the kind mainly depended upon. It is too early yet, however, to ascertain exactly how much it has suffered. J. N. C.

SALEM, Kenosha Co.—There is but very little winter wheat sowed in this section. What there is looks well. It shows no signs of disease or Hessian fly. It compares well with the crops of other years, if it is not better. We are sowing spring wheat here now. P. Y.

SHEBOYGAN FALLS, Sheboygan Co.—The acreage of winter wheat is probably three or four times as large as usual. It generally got a heavy growth last fall. There has been but little snow, and the season is not far enough advanced to decide whether it will be injured or not; but the prospect seems favorable, considering it has been exposed to freezing and thawing. Have heard no complaints of injury by the fly. J. A.

SLADE'S CORNERS, Kenosha Co.—Very little winter wheat has been sown in this vicinity. Well protected pieces are in fair condition. No Hessian fly or disease. Its general appearance is quite up to the average, and the acreage is larger than usual. E. F.

SYLVESTER, Mecostie Co.—The wheat in this vicinity has been badly winter-killed. We have had no snow since New Year's, and then but very little. It does not show any signs of disease as far as I can see. The Hessian fly is unknown here. The appearance of the crop is not nearly as good as on previous years. The last two crops of wheat were extra good, and that induced farmers to sow quite extensively last fall. Even those that had not sowed any for seven or eight years were affected by the mania. A few days more of this dry weather and we will all say wheat is a failure. Clover is very badly killed. M. S.

WAUTOMA, Waushara Co.—The acreage of winter wheat is nearly 50 per cent. greater this year than last; almost every one has tried a little. Mine looks as if it was killed out entirely, while that of one of my neighbors looks as if it will be a fair crop, though, as a whole, wheat will be a failure. As for the Hessian fly, I have never seen it. I have asked among the neighbors and they have never seen it. J. G.

Minnesota.

AUSTIN, Mower Co.—There are only a few pieces of fall wheat in this section, and what there is has a sickly appearance and doesn't promise a success. J. A. T.

DULUTH, St. Louis Co.—Very little wheat is sown in this section; small crops only within 100 miles. The Red River Valley, of course, does not come within this limit. The small farmers seem to have fair success with their crops, however. J. G.

LE SUEUR, Le Sueur Co.—Winter wheat is looking well; not affected by the hard winter. No signs of disease. General appearance compares favorably with that of last year. Acreage about the same as last year. The principal crop here is spring wheat. H. C. S.

WINONA, Winona Co.—This is mostly a spring wheat country with a partial failure for the last two years of the spring crops. A considerable amount of winter wheat, however, was sown last fall and the present appearance is that the open winter has mostly killed it. G. A. W.

Iowa.

ATLANTA, Cass Co.—The acreage under winter wheat is much greater than in other years in this county. I do not know of an acre of it, however, that is now alive to any extent, as it has all been winter-killed. The season has been mild and without snow—and, in the main, dry. F. S.

BELLE PLAINS, Benton Co.—In this section of country, from all appearances and according to the opinion of all that sowed wheat last fall, it is entirely winter-killed. A few farmers sowed in the fall of '78 and harvested a good crop last season, which induced many to sow a few acres as an experiment, and they may try again, for every one knows that wheat could not live through such a winter as this past has been, without snow or rain, with continual freezing and thawing. No spring wheat sowed yet. H. L.

BIG GROVE, Pottawattamie Co.—The wheat in this section is nearly all killed owing to the absence of its usual blanket of snow during the winter, but a large breadth of spring wheat is being sown. Our main crop, however, is corn. What wheat was sown last fall was merely put in as an experiment, as this climate is not suited to fall wheat, for we seldom have snow enough to make good sleighing. E. P.

BLUE GRASS, Scott Co.—Wheat all through this section is an entire failure owing to the alternate freezing and thawing. No signs of the fly. The acreage is much larger than usual. H. H.

BURLINGTON, Des Moines Co.—Wheat is very badly winter-killed, except on new or sod ground. No signs of Hessian fly as yet. The appearance of the crop is not as good as in former years. Acreage very large—larger than ever known before. W. P. P.

CAMANCHE, Clinton Co.—Fall wheat is thought to be all winter-killed. I know of but one piece that will probably be harvested. It was thought last fall that the chinch bug was injuring the wheat. I do not know anything about the Hessian fly. Last season fall wheat was good; consequently more was sown than usual. Spring wheat is considered hardly worth sowing on account of the chinch bugs. H. B. S.

CLARINDA, Page Co.—Winter wheat about an average condition. Late sowing is best; a greater amount has been put in than last year. We raise more spring than winter wheat in this county. The Hessian fly is scarcely known. Wheat is free from disease so far. There is a fine prospect for fruit. We have had splendid weather since the first of January. G. B.

DAVENPORT, Scott Co.—There is not much winter wheat raised in this section; but there was a larger acreage sowed last fall than usual, and from all the information I can get, it is about all winter-killed. Winter wheat does well here only about one year in ten—the winters are too open, no snow, and the freezing and thawing in the rich prairie soil heave the wheat out. We shall plow the fall-sown wheat up and sow spring wheat. G. W. S.

Denison, Crawford Co.—Not much winter wheat raised in this section. Some spring wheat has been already sowed, and more will be put in this spring than ever before. The Hessian fly has never visited this part of the country. Corn thrives here better than wheat. The former runs from 50 to 75 bushels per acre, while the latter crawls from 12 to 20 bushels. J. C. S.

DES MOINES, Polk Co.—We had an unusually mild winter, with but little snow or rain. Fall-sown wheat looked well up to February. In that month light rains, with frequent freezings and thawings of the fields, together with the bare condition of the ground, caused the wheat to turn out a complete failure, which will cause a heavy loss to farmers. G. B.

FREDONIA, Louisa Co.—All of the wheat put in last fall, that I have seen or heard of in this vicinity, is dead, or so nearly dead, that it is not worth saving. Most of the fields will be sown to spring wheat; some to oats. I think the fly has not troubled it; it is simply the weather—warm until Christmas; then a severe cold snap; since then freezing and thawing. This is not a fall-wheat region; but farmers got wheat-crazy last fall and there was more put in than ever before—some of it quite late. The fields are as brown now as old stubble. H. J. B.

HAZLETON, Buchanan Co.—This has always been a spring wheat region. Winter wheat has been an experiment here for the last three years. Acreage increasing each year. Have had but little snow and much freezing and thawing weather this winter. Some fear that it has been injured by the weather, but reliable observers consider it mostly all right. No complaint of Hessian fly. J. B. B.

IOWA CITY, Johnson Co.—The acreage of winter wheat sown last fall in this vicinity was about twice as great as usual. It looked well in the fall, but the winter has been so open, with constant freezing and thawing, that it is nearly all killed. Most of it will be plowed up. The Hessian fly has never done any serious harm here. O. C.

LE MARS, Plymouth Co.—This is not a winter-wheat-growing section. There has never been any tried here until last fall. Then several small pieces of from 25 to 50 acres were sown as an experiment, all of which, as far as I have heard, have been nearly or quite killed out by freezing and thawing during our open winter. A. S.

MCGREGOR, Clayton Co.—Late-sowed wheat has been injured more than early-sowed. No sign of Hessian fly. The appearance shows more damage than last year. A larger acreage has been sown than ever before. H. A. L.

NEW HAMPTON, Chickasaw Co.—The raising of winter wheat in this locality is an experiment. In '78 there was a small quantity sown, which did well. Last year saw a large increase of acreage sown to it; but the thawing and freezing of the past winter ruined it. The ground will be sown to oats or planted to corn. J. W. O.

Redfield, Dallas Co.—In this section the weather has been so dry and there have been so much freezing at night and thawing by day that nearly all the winter wheat has been killed. No fly or disease—the alternate freezing and thawing are the only things that have hurt the crop. W. M.

RICHLAND, Keokuk Co.—The winter wheat here is all killed by the continued freezing and thawing. Neither the chinch bug nor Hessian fly has injured the crop at all. Taking the county through, there will not be enough winter wheat to yield half the seed that was sown last fall. Compared with last year the wheat crop will be a failure. W. T. D.

RUTLAND, Humboldt Co.—No winter wheat raised in this section—all spring wheat. A larger acreage will be sown this year than last. None sown yet; but will be this week. Weather fine with freezing nights. W. H. S.

Timber Creek, Marshall Co.—Some farmers here sowed from two to ten acres of winter wheat merely as an experiment—Mediterranean is in good condition, all other varieties are winter-killed. W. B. W.

VAN BUREN, Jackson Co.—The wheat crop is about all killed by the winter; most of it will be plowed up. A large breadth was sowed. Loss great. Red clover badly damaged also. E. O.

VERNON, Van Buren Co.—The winter has been unfavorable for wheat here; probably one-fourth of it has been killed. It does not seem to be injured by the fly. Its general appearance, compared with last year, is unfavorable. The acreage is 20 per cent. greater than last year. The weather now is very unfavorable and the prospect poor. L. C.

VILLISCA, Montgomery Co.—Wheat is badly winter-killed here. No disease or Hessian fly. Its appearance, compared with other years, is unfavorable. There is an increase of acreage of at least 75 per cent., very little having been sown in former years. J. H. VAN V.

WEBSTER, Keokuk Co.—Winter wheat is three-fourths winter-killed. No Hessian fly. The acreage sown last fall was fully four times the usual amount. Of spring wheat the usual acreage will be sown. Weather unusually mild for the time of the year. J. W. B.

Missouri.

CARTHAGE, Jasper Co.—The wheat in this county is better this year than it has been for many in this immediate past. The winter has been open and free from frost, and it has grown all through the season. It does not appear to have been injured by the Hessian fly, and the acreage is the largest ever raised. The same is true of adjoining counties. W. H. P.

CENTER VIEW, Johnson Co.—The wheat crop is very promising; the winter did little damage to it; no damage done by the Hessian fly. There never was a better prospect than at present. The largest acreage ever sowed in this part of Missouri. J. R.

CHARLESTON, Miss. Co.—Wheat in this county looks fine; the warm, open winter, with but few light freezes, did not check its growth. So far no disease of any kind has been visible; and so far as I can learn, the Hessian fly is, like the chinch bug, a failure in this locality. The acreage is larger the present year than in any previous one. M. V. R.

COLUMBIA, Boone Co.—Wheat is in good condition; not much injured by winter—less than usual. It shows no disease. No signs of of the fly. Much more has been sown than usual, and the soil was better prepared. So far our crop promises better than for many years. G. C. S.

FULTON, Callaway Co.—A large acreage of wheat has sown in this county. The early-sown is good except that it has been slightly affected by late frosts; the late-sown is damaged considerably by the recent freezings and thawings. No perceptible injury from the Hessian fly. On the whole, the prospect for the crop is good. H. C. McC.

HAMILTON, Caldwell Co.—In this section of the country farmers put in about the usual acreage of winter wheat. It was sown very late on account of the fore part of last fall having been very wet, but, in spite of everything, it looks well now. F. S.

HERMITAGE, Hickory Co.—The condition of wheat in this county is about as follows:—The winter has been quite unfavorable—too much drought—and in many cases the wheat is turning yellow. No signs of disease otherwise. The Hessian fly has injured the crop to some extent, say 20 per cent. Its general appearance is about 75 per cent. of an average of other years. The acreage is about 25 per cent. more than formerly. The winter has been open, with no snow or freezing weather. M. N. N.

KIDDER, Caldwell Co.—The wheat crop here has been badly injured by the winter. It shows no signs, however, of damage by disease or the Hessian fly; yet its general appearance is worse than in other years. The acreage under it is less than last year. C. R.

MACON CITY, Macon Co.—This has never been considered a wheat county. It fails of good results four years out of five, but the remarkable success of last year induced the farmers to sow last fall one-third more than usual. The winter has been very mild and open, but the wheat looks well and very promising. A few fields look patchy, and now it is warm and dry, and we fear more on this account than anything else. There is no indication of disease and the Hessian fly never troubles us. The chinch bug has harmed the crop in former years, and may this; but in the

light of present indications we shall probably have a good yield. O. A. S. M.

MIRABILE, Caldwell Co.—Wheat in this section is very poor. The winter has been very hard on it, there being no snow to protect it. It shows no signs of disease. The Hessian fly has not harmed it. There has never been any insect here that injures wheat except the chinch bug. The general appearance compares unfavorably with that of other years, and the acreage is a great deal larger. H. W. A.

NEOSHO, Newton Co.—Wheat never looked better. No appearance of fly or other injury. It has grown all winter, affording good pasturage for calves and other light stock. The acreage is about an average for southwest Missouri. We have had a very mild winter, no ice forming sufficient for storing. The fruit prospects are good. The peach blooms are beginning to show the red. Corn, 30c. ₰ bushel; wheat, 90c. Raising hogs and cattle is our best business. M. T. R.

ROCKVILLE, Bates Co.—The number of acres of wheat sown is one-fourth or one-third less than usual. Farmers were afraid of the chinch bug. The fly was in the wheat "some" last fall, but it looked well until the last of February, when we had a freeze that injured it. It does not look as well as usual at this time of year, though it may come out very well yet. J. N. C.

SEDALIA, Pettis Co.—The condition of wheat in this section is good. The winter has been favorable to it. No disease at all. No Hessian fly. I think wheat never looked better at this time of the year, though it is rather small, owing to late sowing. The acreage is larger here than usual. C. C. C.

ST. JOSEPH, Buchanan Co.—Wheat very much injured by dry weather, hardly any rain since November. No sign of any disease or harm from the Hessian fly. The general appearance is worse than for the last six years, the acreage being a little larger than formerly T. B. N.

ST. PETER'S, St. Charles Co.—Fall-sown wheat has suffered little from the winter hereabouts. There are no signs of disease in it. The fly injured only that which was neglected. Its appearance is about the same as at this season in former years. The acreage is about 10 per cent. more than last year. G. G.

TIPTON, Moniteau Co.—We had an open winter till the 12th of March. Early-sowed wheat looks well, late-sowed not so well. In some parts complaints have been made of the Hessian fly. The general appearance is much better now than for many years, and one-fourth more was sowed than last year. If chinch bugs don't trouble us we have a nice prospect for a good crop. D. S.

Kansas.

ALTOONA, Wilson Co.—Wheat shows no signs of disease, nor does it seem to have been damaged by the fly. It looks a little better than usual, and a larger acreage has been sown than ever before. J. H. G.

CLAY CENTER, Clay Co.—We never had better prospects for a good crop. The acreage under fall wheat is about twice as large as ever before. A. B. D.

CHANUTE, Neosho Co.—The prospect here for a large crop of fall-sown wheat, is good. It has not been injured to any extent by the fly, and looks fine at present. More has been sown than ever before. The best time for sowing is from Sept. 15 to Oct. 1. Weather warm and fine for spring work. Oats about all in. W. A. R.

Ellis, Ellis Co.—Much of the wheat in this section was sown late, and it was so dry last fall that it is not up yet; but it is alive, and if we get rain soon I think it will come on all right. No Hessian fly or disease. Acreage under fall wheat larger than heretofore. J. B.

FONTANA, Miami Co.—Wheat looks fine at present; 20 per cent. more was raised than last year and it is 20 per cent. better in this county and also in Johnson county, as far south as I can hear. The fly was in some early-sown places, but we can't tell what it will do this spring. W. P.

HEPLER, Crawford Co.—The winter did not affect the wheat in this section until the last six weeks which have been dry and cold, making it turn rather yellow. There is no sign of disease or of the Hessian fly. The general appearance compared with other years, is rather above the average. The acreage is greater—at least one-third. About ten inches of snow fell on the night of the eleventh of March, which, I fear, has killed the peaches as the buds were very much swollen. A. C.

IOLA, Allen Co.—Wheat was looking splendid until the last cold snap, which has injured it in some places nearly one-third. No disease. No Hessian fly or other injurious insects. The appearance at present is not on an average with that in other years at this time. The acreage is about 50 per cent. larger than in previous years. H. M. S.

LAWRENCE, Douglas Co.—Wheat, most of it looks well; some that was sown broadcast was injured somewhat by the winter. It is mostly drilled, and this looks better than usual. Perhaps 25 per cent. more acreage than heretofore. Not much of it injured by fly. J. P.

MCPHERSON CITY, McPherson Co.—The wheat does not appear to be killed to any extent. There is no Hessian fly here. Its general appearance is not so good as in last March. It is a little too dry. The acreage is about the same as last year. C. D. R.

MEDIA, Douglas Co.—Wheat is looking very well in this section, though the winter has been a little dry for it. The acreage is fully as large as, and probably larger, than in any former year. H. A.

Newton, Harvy Co.—There was a larger acreage sown to wheat last fall than usual, and it looked first-rate until March. Since then we have had some hard freezing and the ground has been very dry so that some pieces have been injured; but, as a general thing, it looks well. We had a little rain on March 24th, which revived the crop considerably and it is growing very fast. No Hessian fly or any other pests. It looks much better than last spring. A little more rain would help it still more. S. O. G.

PAOLA, Miami Co.—Wheat in this section is looking remarkably well; it was not winter-bitten, and shows no signs of disease; have heard no complaint of the Hessian fly. Acreage a great deal larger than ever before. On the whole, the prospect now bids fair for an unusually large harvest. The winter was very mild and pleasant; very little storm of any kind. E. L. W.

Pavillion, Waubansee Co.—The acreage under winter wheat in this county is fully 20 per cent. greater than last year, and the crop is at least 25 per cent. better in condition. Although the weather is somewhat dry, wheat in this and the adjoining counties is very promising. No disease or insect enemies. During the late cold snap when the mercury went four degrees below zero, peach buds were badly hurt but not all killed—other fruits are all right. H. A. S.

SHAWNEE MISSION, Johnson Co.—The winter has improved the wheat a little on the north slopes of the hills. It is healthy, however. I think it is free from the fly; its appearance is better than usual. The acreage is at least one-eighth larger than last year. J. G. M.

SUMMERVILLE, Ottawa Co.—Very late-sown wheat is winter-killed; early-sown, all right. No disease, but it is being injured by a long-continued drought. No Hessian fly. Its general appearance about an average. The acreage is larger by 25 per cent. or more. J. R. S.

Wichita, Sedgwick Co.—Wheat has gone through the winter in fair condition. A breeze on the 14th or 15th of March put it back somewhat, but a warm rain soon will prevent any great injury. No disease or Hessian fly here. General appearance far better than last year. J. E. C.

Wilson, Ellsworth Co.—This part of Kansas being an entirely new farming country and very good for wheat, the acreage in fall wheat is fully double that of last year. There is some increase in spring wheat, too. The Hessian fly and weevil are unknown. Fall wheat has been greatly hurt all around us—1st by drought; 2nd by the late cold snap on March 12-13. It might have been a total failure if the ground had been wet, but since Nov. 13-14, we have had hardly any rains and only a few inches of dry-looking snow. We have had frost every night since the middle of January; but if rains and warmer weather will soon favor us, we are in hopes of raising an average of 15 to 20 bush per acre. Spring wheat just coming up—mostly all Odessa which is turning out very well on the average. We have a great wheat country here, and corn etc., are doing well also. J. M.

Nebraska.

BROWNSVILLE, Nemaha Co.—Winter wheat, owing to too much drought last fall, did not come through the winter in good condition. Much has already been plowed up, and spring wheat sown in its place. No signs of the Hessian fly heard of. The comparative condition with other years at this stage of growth, is inferior, and the acreage small. All Jan. and Feb. were exceedingly pleasant. March has been cold and unpleasant—more snow and real winter than altogether during the preceding winter months. R. W. F.

CHARLESTON, Gage Co.—Wheat has wintered finely, except shallow and late sowings. Poorly farmed pieces are winter-killed. Generally the crop is good. No disease appears to affect it and we have neither seen nor heard of any Hessian fly. The acreage sown is much larger than ever before in this vicinity. H. A.

BEATRICE, Gage Co.—The wheat crop around here passed through the winter very well. The ground was frozen most of the time. Wheat drilled in is all right; broadcasted suffered somewhat. No Hessian fly but some chinch bugs last summer. Compared with other years, the appearance is good. Acreage one-half larger than usual. Spring wheat is more generally grown, but of late years it has not been a sure crop. The past winter was dry. Roads good; immigration increasing; stock has done well and pays better than raising grain. R. S. B.

COLUMBUS, Platte Co.—There is no winter wheat grown in this section. But very little spring put in yet; but there will be a much larger acreage sown than usual if the weather will permit. March has not been looking anything like spring. Six to eight inches of snow have fallen during the past two weeks and on the 14th the thermometer stood 20 deg. below zero. J. A. MC G.

PAPILLION, Sarpy Co.—There is but little winter wheat sown in this section, but what there is has done well so far, although the winter has been very open, and the weather changeable and but little snow. There will be a large crop of spring wheat sown. No disease or any signs of Hessian fly. Farmers are putting in spring wheat. A good many are going West through this county for homesteads. E. E. S.

PLATTSMOUTH, Cass Co.—I left Buchanan county, Iowa, about a month ago. Winter wheat which was sown extensively there was all killed. Here, too, wheat was all killed except that which was plowed in, which will make a fair stand. In this county there are about 3,000 acres, perhaps a third more than last year. P. M.

RESCUE, Saunders Co.—There is no winter wheat sown here; but there will be considerable spring wheat sown—more than last year. Farmers have commenced sowing already, some having put in nearly 100 acres. C. R.

Dakota Territory.

ROCKPORT, Hanson Co.—The only winter wheat raised in this section, is that put in as an experiment. Sometimes all this is winter-killed—a fate that has happened to all sown last fall that I have heard of. It sometimes yields 26 bushels to the acre, however. No Hessian fly in this section. D. J.

Colorado.

SEDALIA, Douglas Co.—Very little wheat was put in in our section last fall, and what was put in is very backward on account of the very dry winter. As far as I can tell, it has not been harmed by the fly. No disease was ever known to harm wheat in Colorado. The acreage is smaller that in other years. R. G. C.

AWADA, Jefferson Co.—We raise no winter wheat in this section, and, owing to the lack of snow or rain, we are this year much behindhand with our crops. It is doubtful if the acreage this year will be as large or the yield per acre as great as last year. There is very little plowing done, and there is no sign of storms yet. C. H. D.

GOLDEN, Jefferson Co.—Very little winter wheat is sown in this State, and very little spring wheat has been sown yet, owing to our dry winter and spring. Unless we have storms soon, the crop will be short—perhaps almost a failure. Land is too dry to plow and too dry to sprout grain. T. W.

GRANITE, Chaffee Co.—This is a mining country—no wheat is raised, or any crop of any kind except hay. The altitude is 9,800 feet at my ranch at the foot of Mt. Elbert. Hay costs $60 a ton at my home market, Leadville, so that hay raising and harvesting are of paramount importance to me, as it "pays" to produce and save even a little more of the crop. F. E. H.

California.

SALINAS, Monterey Co.—The wheat here has been considerably affected by the frosts which have been unusually severe for this section. Some few portions have also been injured by the worm (so called)—I think a kind of wire-worm. No Hessian fly. Its general appearance, taking the whole valley, is very good, but backward on account of the cold weather. Starting from a point eight or nine miles south of the city of Salinas, and going in that direction up the valley, its condition is superior at present to the crops in the immediate vicinity of the town, owing to their having a greater amount of rain. The acreage of wheat is much greater this season than last. F. G.

SOUTHERN STATES.

Virginia.

FREDERICK Co., Va.—I was at my place in Frederick county, Virginia, last week and through parts of the county. The wheat has stood the winter well; no signs of disease—not harmed by the Hessian fly. Its general appearance compared favorably with that during the past three or four years. For the last three years the crops have been remarkably good and the promise for the coming harvest is equally flattering. The acreage this year somewhat exceeds that for the past several years. Around Baltimore the wheat looks well, is forward and apparently free from disease. S. H. W.

Kentucky.

BOWLING GREEN, Warren Co.—Wheat is looking more promising than I ever saw it before. I do not think the past winter, however, was very favorable, for it was too warm and wet. There has been so much rain that in places, it looks yellow, or "scalded." Hundreds of acres in this county are now covered with water, which will be a loss of hundreds of dollars. I hear no complaint of the Hessian fly. Acreage from one-third to one-half larger than ever before. J. D. S.

CARLISLE, Nichols Co.—Wheat generally looks very bad—thin and spindling. The winter has not injured it in the least. The Hessian fly did considerable damage to most of the early-sown wheat, though there are a few scattering fields that look very rank. I do not think the wheat looks as well now as at the corresponding time last year. A larger acreage has been sown. This winter has been very mild, with rain! rain! and mud; but very little snow. C. W. H.

E. HICKMAN, Fayette Co.—The winter has been open and wheat is very forward. Farmers are grazing it with sheep and calves, fearing late frosts. It shows no signs of disease. A few early-sown pieces only show signs of injury from Hessian fly. Its general appearance is very favorable. The acreage sown is large—one-fourth more than last year. J. H.

OWENTON, Owen Co.—Wheat has come through the winter well. No signs of disease or effects of the Hessian fly. The crop is much later than during the past two years, owing to dry weather last fall. Acreage smaller than last year—perhaps 20 per cent.; but it is an average acreage, counting five years. Its general appearance is favorable rather than otherwise. J. W. W.

PIKETON, Pike Co.—Wheat in this section is in better condition than for many years. No sign of any disease, or of the fly. The acreage is larger than usual. Wheat is looking as well now as it generally does the first of May. If nothing happens to it between this and harvest, we expect a bountiful crop. M. D.

North Carolina.

COHOCTON, Steuben Co.—There has been about the same quantity of wheat sown as usual, but there has been very little snow, and it has been freezing and thawing so much, that the wheat looks yellow and bad. No Hessian fly. R. E. K.

GREENSBORO, Guilford Co.—Wheat is looking well in this county—better than for the last seven years. The quantity sowed is greater than in any year for that time. The winter was dry and warm. G. K.

HIGH POINT, Guilford Co.—Wheat is looking very good. Owing to the warm season, early-sown wheat is splendid; late-sown not so large, but no disease about it; neither has it been harmed by the Hessian fly. It looks better, as a general thing, than last spring, and more acres have been sown. J. L. F.

PAW CREEK, Mecklenburgh Co.—The past winter was not very favorable for wheat, but the spring rains have brought it out, and it looks better than usual at this time. No disease. No Hessian fly; but a new insect has destroyed a few fields. The acreage is about the same as usual. J. T. C.

SANS SOUCI, Bertie Co.—We have had an unusually mild winter. Wheat in our section, is large for the season. There is not yet any symptom of disease, nor is it damaged by the fly. At this date it is perhaps looking better than is usual for the period. The acreage though small, is larger than last season. J. C. F.

SWANNANOA, Buncombe Co.—The winter here has been very mild and the wheat is more forward than usual; at present it shows no sign of disease or injury. The appearance is much better than usual, though there is more reason to expect damage from freezing than if it were less forward. The acreage is very large, and if no injury occurs to it from now on, it is thought the crop will be the largest ever raised in the county. D. E. S.

Georgia.

GREENSBOROUGH, Greene Co.—The wheat crop is doing well; in many sections the fly has injured it. Some say the rust has appeared—though this is very early. There is a considerable increase of acreage, compared with last year. The winter has been mild and we think the main crop will be poor; late crops will probably rust. L. B. W.

MACON, Bibb Co.—We have had an extraordinary winter: very few frosts, and ice only twice, also very little rain, comparatively, causing wheat to have a bad appearance. I do not know whether to attribute its bad condition to the ravages of the fly or to rust, from the effects of the dry winter. The prospect for a good crop up to a few days ago was not good; since then, however, abundant rains have fallen and

may make a great difference in the result. It certainly looks improved. A much larger acreage than in any previous year. H. J. P.

Alabama.

HUNTSVILLE, Madison Co.—There has been a good deal of wheat sown this year, and it is looking better than usual—farther advanced. There has been no sign of disease, and as to the Hessian fly, I have heard nothing of it. The winter has been very mild. We have had a great deal of rain this month. P. H. M.

MAYSVILLE, Madison Co.—The prospect of wheat in our section is good. It does not show any sign of disease. We have had no fly. It compares very favorably with former years. The acreage is a little larger than usual. F. J.

NEW MARKET, Madison Co.—The winter has not affected the wheat crop here unfavorably. On high land there are some signs of disease in it; but not on bottoms. The same is the case with regard to the fly. On the whole its general appearance is much better than in former years. It is now in joint in some spots. Farmers would have plowed it up for oats, but the rains fortunately prevented them; and now the ground is covered with a bold, healthy growth. About five per cent. more has been sown than last year. We look for a fine yield. G. D.

SAND SPRING, Limestone Co.—Wheat here is looking fine, especially that put in by Northern farmers, as they generally take more pains to prepare the ground for it. I have a six-acre field, of which a Southerner told me he never saw better-looking wheat at this time of the year. The acreage is larger than usual, and I hear but little complaint of its being winter-killed, No Hessian fly so far as I hear, except in southern Tennessee. The Blount County News of this week says: "There is an extraordinarily large breadth of land in wheat between Blountsville and Guntersville, and it is looking remarkably well." W. M.

TALLASSEE, Elmore Co.—Our winter season thus far has been unusually mild. I hear very good reports of wheat among our farmers through this section of the country; some, though, are reporting rust, which I hardly believe to be true as 'tis too early yet. The crop is generally considered better than last year at the same time. The acreage of all kinds of grain is more than last season—especially so with oats. Farmers are trying to help out the short corn crop of last season in this way. W. E. S.

Arkansas.

GREENWOOD, Sebastian Co.—During this month we have had numerous showers which have impeded farm work to such an extent that farmers did not plant corn as early as last season. Therefore, the season here will be about one month later than usual. However, we keep busy at building fences and plowing. Early potatoes, peas, lettuce and onions are up and growing finely. Some of the earlier sorts of peaches "have gone where the woodbine twineth," on account of frost. Working in this dry, sandy soil is much nicer and pleasanter than toiling in the mud, as we used to do in our former Northern homes. No cleaning stables here and but very little feeding of stock. R. R.

Texas.

BROOKSTON, Lamar Co.—The wheat crop in this section looks fine—better than it has for several years. I have not heard of any damage from the Hessian fly. The winter has been very favorable for wheat and oats. The acreage is smaller than heretofore. Last fall was so very dry that but few farmers sowed wheat. W. J. N.

WACO, McLennan Co.—The condition of wheat throughout this section is better than it has been in any previous season. The winter has been unusually favorable—plenty of rain and growing weather. On the 13th of March we had a severe freeze, but the opinion prevails that the wheat has been benefited by it, rather than injured. There are no signs of disease, and no report of the Hessian fly from any source. The acreage is larger than ever before, and the prospects at present indicate that we shall have an abundant harvest of wheat. A. S. S.

HUTTO, Williamson Co.—In this vicinity the prospects for wheat and oats were never better. The stand is unusually good and not less than twice the usual acreage has been planted. No indications of disease or Hessian fly. The late freeze injured corn and potatoes and killed most garden vegetables and early, forward fruit. E. E. S.

DALLAS, Dallas Co.—The winter has not injured the wheat here; but on March 14th a heavy frost cut it badly, though the people think it is not much hurt after all. Before that, some parts were showing signs of rust. No insects have hurt it as yet. The general appearance compares favorably with other years, in spite of the late frost. The acreage sown is much larger than usual. J. R.

Canada.

INGERSOLL, Ont.—The winter has not hurt the fall-sown wheat much hereabouts. That sown from Aug. 25 to Sept. 5 shows signs of having been injured somewhat by the fly. Its general appearance, however, is fully up to that of other years, while the acreage is larger by ten per cent. Wheat sown on heavy clay land is badly winter-killed. Clover is badly injured by the winter. J. J. MC'L.

Pelham, Welland Co., Ont.—Wheat has wintered well—better than usual. No signs of disease or of the work of the Hessian fly. The present prospects are better than usual. The acreage has increased about 12½ per cent. B. B.

SOUTH DUMFRIES, Brant Co., Ont.—The fall wheat has very seldom looked so well at this time of the year. It showed some yellow spots early last fall, but towards winter it improved in color, and had a fine appearance when winter set in, and has stood the winter well except some on wet clay land that has been hurt somewhat. I think there is about an average quantity of ground under wheat, and it looks now as if it might be above an average crop. We are getting pretty sharp frosts now, that might harm it yet. R. R.

ST. GEORGE, Ont.—Wheat in this section has not been harmed to any great extent by the winter, except in low, undrained places. There is no appearance of any disease. Early-sown wheat is slightly injured in spots by the fly. Its appearance is nearly as good as last year. Acreage larger. About one-fifth of the land here was sown to wheat. A. C. H,

(Continued on page 237,)

Dairy Husbandry.

FEEDING COWS FOR MILK.

IN the RURAL of Jan. 10th, in Henry Stewart's article on "Winter Butter Making," I notice several points that are not quite satisfactory. When there is so much of real value one cannot afford to be without a full and complete solution of so important a subject, especially if it is known to be in the possession of the author, and that its absence is due to a mere inadvertence in not communicating it. Then let me ask, What was the live weight and condition of the cows? What was the proportion of corn, oats and wheat bran? Was it equal parts by measure or by weight? Was hay given to the cows in addition to the feed specified? If so, how much? Was it cut and wet and the meal mixed with it; or given dry without cutting? Again he says, in mentioning the rations preferred, "wheat bran or middlings." Does he put the same value upon wheat bran that he does upon middlings? Is bran that is obtained by the new process of brushing or separating all the flour and middlings from the bran, as valuable as that formerly obtained? How many pounds of cut hay would he feed per day? How many pounds of dry hay to equal a peck of roots?

Professor Atwater gives the following food properties as laid down by Dr. Wolff of Germany as being contained in 100 pounds, equal parts by weight, of corn, oats, wheat bran; with 4.30 of entire amount of cotton-seedmeal:—water, 13.1; ash, 4.2. Total organic substance, albuminoids, 13.5; fiber, 13.2; other carbohydrates, 50.2; fat, 5.7. In this estimate I have taken corn, oats and cotton-seed cake in place of the meals, as they do not occur in the table, and have been sufficiently accurate for all practical purposes.

Now, with oat meal at $1.25 per hundred and no cotton seed meal in our home market; with corn meal at 80 cents per bushel and wheat bran at 60, will it pay to add them to our feed? In this wheat-growing region nearly as much can be obtained for the flour as for the unground wheat, and the coarse feed and the thousands of tons of straw that now rot in the fields or are ofttimes set on fire to get the stuff out of the way, could be made to return a handsome income both in their feeding and manurial disposal. C. H. ELLIS.

Hillsdale Co., Mich.

Remarks by Henry Stewart.

In this special case it is immaterial to specify the points referred to, as the information given simply shows the effects produced by feeding a certain quantity of palm-nut meal and cotton-seed meal. But as it may be of interest to some, I give the particulars desired, more especially as I have been feeding cows for years, making a large number of tests of different kinds of feeding substances and have finally settled down to a mixture of corn, oats and wheat bran *ground together*—not merely mixed—in equal parts by weight, as the best and most profitable food for cows, either for milk or butter, and on 10 pounds per day as the ration that can be most economically employed. The bran used is the common commercial sort usually procured in the market, and which has been cleanly scoured of all particles of flour or middlings. It is difficult to procure any other kind except at custom mills in country places; the merchant mills clean the bran much more closely than other mills. I don't care how closely the bran is cleaned, the phosphates are in it anyhow, and it is for these I use it. The cow Minnie is a large cow, eight years old, of native or mixed stock, and weighs 1,100 pounds; at the time referred to she was fresh or nearly so. Bolivia is an imported Ayrshire in her third year, and had been milking ten months at the time and was in calf two months. Her weight is 450 pounds. Although so small, she will eat profitably as much meal as a larger cow, returning as much milk and butter as two or three larger cows together. She has milked over 8,000 pounds from Feb. 13th, 1879, to Feb. 13th, 1880. The hay given these cows varies from 12 to 18 pounds, as much being given as they will eat and lick the manger. The hay is cut, wetted, and the meal is mixed with it. This cut feed is given morning and night, and at noon a peck of cut mangels and a pound or two of dry hay.

I estimate scoured bran to be equal to middlings, weight for weight; but if I were using middlings, I would reduce the oats one-half and increase the middlings in proportion. While I give a good deal of credit to Prof. Atwater for his valuable work in the direction referred to, yet I look upon these theoretical investigations as only of partial value, as furnishing a basis upon which one may experiment practically—something as though one should stand on the shore and tell a fisherman where to drop his net to catch fish, so these analytical investigations tell us in what direction to work to secure the most valuable results in the easiest and most direct manner. After all, it is in the stable, and with the milk-pail and churn, that one can best investigate the values of food, and, besides, people must do it, each for himself; for the reason that this man's circumstances, being different from that man's, whatever the one does serves only to point the direction in which the other may follow, but it does not do his work for him.

The Herdsman.

STOCK NOTES.

CLUBBING FOR IMPROVED MALE STOCK.—The very best of these might be had if farmers would only unite to procure them; and the service from each would be a mere trifle in comparison with the great benefit derived from their use. Male swine and sheep, even of choice breeds, are so cheap now that nearly every farmer can afford to keep one of his own; but when it comes to bulls and stallions, choice ones are so high-priced, as to make it necessary to form a club for their purchase, as they are beyond the means of most single farmers. Colts and calves, even out of indifferent females, got by superior stallions and bulls, are usually worth twice to thrice the amount of those bred when both sire and dam are indifferent. The cost of feed for rearing a good animal is no more, and often less, than that for a poor one, and if when ready for market, the former brings twice or thrice the price of the latter, it is a matter of great congratulation to the farmer—to his pride as well as to his pocket. Be careful that all stallions are not only of fine form and action, but kind-tempered and perfectly sound.

HEREFORD MUNCHAUSENISM.—An English paper, wiser than those of America, informs us that 400 young Hereford bulls have been lately purchased in Canada and the United States to go into the herd of one of our great Western cattle kings. This will do very well for a Munchausen report. We don't believe that 400 Hereford bulls of all ages can be found in America, to say nothing of young ones alone. Perhaps the above, if indeed they were purchased at all, were grade animals, which is quite another thing from pure, well-bred Herefords.

Field Crops.

DIFFERENCE IN THE VALUE OF ROOTS—RELATION OF SOIL AND CLIMATE.

COL. F. D. CURTIS.

WE have shown that roots form a feeding value beyond that given to them by chemical analysis, according to the various published tables. We do not deny that the chemist can determine the component parts of roots, so that it may be known, approximately at least, what those parts are, but our point is, that the variations are so great in the quality or character of the roots, that the tables are not to be relied upon as a certain guide to the farmer in estimating the worth of roots for animal food. No doubt many farmers have been deterred from growing roots on account of the small percentage of fat or flesh-forming material they are stated to contain; when, as a fact, they contained much more. An analysis of sugar beets, made from those grown on the rich black soil of the prairie States, although it would cover a large region of country, would not be a true analysis for the component parts of beets grown in New York, in New England, or in other sections of the country. An analysis of the beets grown in California would not determine the sugar value or the feeding value of beets grown in Maine. In the latter State they may be profitably manufactured into sugar, while in the former State it is still an undemonstrated question, owing to the large percentage of earthy salts contained in them.

In Illinois and the other States of similar soil, they lack in sugar, and this important constituent is so small that the working up of beets for sugar will not pay. Notwithstanding this fact, it would no doubt pay the farmer well to grow both beets and mangels to feed his animals. If they had done this in all of the country where hog cholera has made such fearful ravages, and fed raw roots to their hogs with the corn, no doubt there would have been much less of this disease, which is caused by a perpetual diet on corn more than by anything else. In some soils the "impurities," in the juice of beets, which are made up of earthy salts, saltpeter, soda, potash, lime, phosphoric acid, etc., more than equal the amount of sugar. Such beets would make a poor showing for manufacturing into sugar, but would be valuable only for animal food in connection with such heating and stimulating material as corn which cannot be fed to excess, or for any great length of time to any animal without filling the system with fever and inflammation. There is a limit in feeding corn to any animal, beyond which it is not healthy. Farmers all understand this fact that the beef animal must not be fed too much, or too long, and that the pigs must be turned off as soon as they get fat, or a reaction will take place and they will get poor again. Not so with roots, as they contain ample juices and material both for flesh, bone and fat, combined in a natural and digestible form. Beets are richer in sugar when grown in soil in which there is not an excessive preponderance of vegetable matter. This is the trouble in the prairie States. In California there is too much alkali.

These are the extremes, but in both of these sections roots are valuable as food. In the Eastern and Middle States there is a more perfect combination of mineral and vegetable matter in the soil, and here beets will grow to the greatest perfection. A loamy soil is preferable, as this contains the elements required to the largest degree. On such land the percentage of sugar has been found to be, in sugar beets, as high as fifteen to eighteen per cent. On Kirby Homestead, N. Y., it was last year 15.60 per cent. The soil is clayey loam and has been cropped with roots of various kinds for several years. The true value, or adaptation of land for roots, will undoubtedly vary in the same locality. This has been found to be the case in Europe; as one factory not widely separated from another can produce a better quality of sugar, that is, freer from impurities. In the State of Delaware the highest percentages of sugar have been found thus far. The manures applied also affect the character of the roots. There should be a combination of manures, with that from the barn-yard as the base.

A slight sprinkle, about 100 pounds to the acre, of Manhattan blood guano, or a similar fertilizer, is valuable to be put into the drill with the seed. Hen manure and plaster (sulphate of lime) are a good substitute. In any case plaster should be sown on the tops of the plants when they are growing. Experience has demonstrated that the teachings of the chemist in regard to the analysis of the soil in connection with the growing of crops, cannot be relied upon with certainty, in fact, that there is very little practical value in their analyses, and it is somewhat so in using special manures for special crops. The soil has such a transforming effect upon manures, and also the influences of the sun and rains are so great that in our judgment there can be no certainty in these crop prescriptions; hence manures of general character are better to be relied upon than any specific doses. The larger the root, the less percentage of sugar according to bulk. A small beet, then, is not to be despised.

Sandy land, well manured, would grow beets rich in sugar, but sandy loam, or gravelly loam would be better; a stiff clay is the least desirable. A dry season restricts the growth, and concentrates the richness of the roots and a moist season expands it into a more bulky form with a larger percentage of water and woody fiber. Swedes in their growth and quality are not so sensitive as the beet family; hence they are better adapted to various soils and climates. As their chief virtue is in their sugar, the same laws and conditions apply to them as to beets, but not in such a particular degree. As a universal crop they are, therefore, to be commended. There is no better guide in root culture than demonstration. We have fully demonstrated in our own case their practical value for food and cheapness. The best way is for others to do the same, in a small way at first, perhaps, but to do it thoroughly and fully.

Scientific and Useful.

METEOROLOGY AND AGRICULTURE.

Perhaps our most progressive agriculturists have neglected to give such attention to the labors of our Signal Service as it demands. No doubt many have dismissed it with the idea that it relates, practically, only to commerce; but to no class is a study of the atmosphere of greater utility than to farmers. They are subject constantly to the effects of changes in the atmosphere, and as its phenomena must be governed by law, who can have more to gain by a methodical study of these phenomena? Some farmers of close observation, before the present facilities were offered them, formed for themselves a system of signs, as they called them, which came very near to the future moods of the weather. These early observations must have extended over a very limited area. But now the thoughtful agriculturist may have at his hand extensive scientific observations made daily over vast areas, which he may compare with those of his own locality. The instruments by which these observations are made are much more accurate than could be obtained even 25 years ago. Our Government has achieved a world-wide distinction by its immense system of observations made at more than 200 stations within the territory of the United States, having exchanges with the stations and chief meteorologists of the Northern Hemisphere. The reports of the Chief Signal Officer contain the meteorological work of the world. All this wealth of material and data from which to study the moods of the weather is within reach of intelligent farmers. Our Signal Service is performing a work more extensive, more thorough and reliable than is produced by the aggregate observations of the meteorologists of all the world besides.

This work could not have been done by individual enterprise, nor could it be done as thoroughly by the Government through civilians as agents. Military discipline seems necessary to the regularity and certainty of such work.

But we commenced this notice with a view of calling attention to a particular feature of these Signal Service reports which does not seem to have been properly appreciated. Our immense territory, having such a variety of climate and productions, has been a puzzle even to our own citizens. Information is eagerly sought from those who have even traveled through these wide spaces, trying to learn something of climate and productions. But the signal stations, located at various points across this wide belt between the Atlantic and Pacific Oceans, give the most reliable information. These give a scientific and most accurate statement of all the facts necessary to determine the climate of this vast territory. Each station gives you the latitude and longitude, the temperature, barometric pressure and humidity of the atmosphere, elevation above sea level, force and direction of the wind, and the rainfall of every day in the year. Here is a body of information which, when studied, gives the most complete knowledge of atmospheric changes and a better insight into the climate than could be obtained from the recollection of an intelligent resident for years. This information now extends, at many stations, over a period of five to ten years.

These annual reports of the Chief Signal Officer are of very great service to the agricultural editor, who requires just the information here given to adapt his instructions to such widely varying conditions of climate and surroundings. His readers are scattered across the continent, and the aptness of instruction must depend largely on understanding the climatic conditions. These reports are so definite in their information that the expert may read the agricultural situation by them more fully than by any mere temporary survey in person.

They must also become more and more valuable year by year, and the press should urge upon Congress the necessity of giving the Service a liberal support. Gen. Myer, the Chief of the Service, is fully appreciated by foreign scientists, as their very cordial reception of him has testified. Let us hope that our Government will give him the means of greatly enlarging the usefulness of the service.

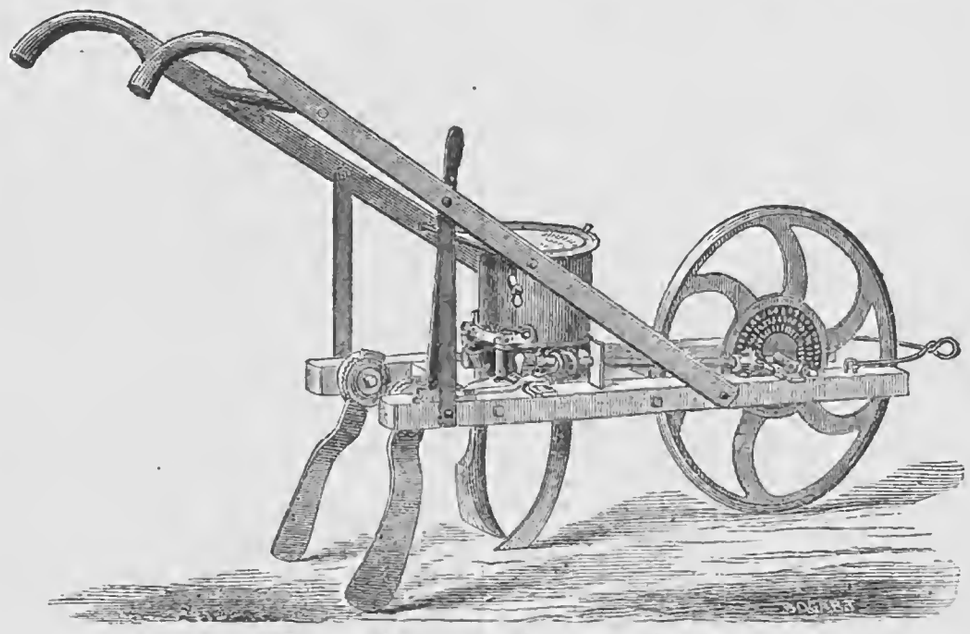
Miscellaneous.

WHAT OTHERS SAY.

Gen. Le Duc and Congressmen.—"In the stand I have taken," remarked Gen. Le Duc, Commissioner of Agriculture, before the Elmira Farmers' Club, "I have incurred the enmity of certain members of Congress, and they make it pretty lively for me sometimes. I found upon assuming my duties that the organic law of the Department read, 'the Commissioner of Agriculture shall purchase new and valuable seeds and shall distribute them among agriculturists.' This law admits of but one construction, and——"

Col. Piollet—"And there were no agriculturists in Congress." (Laughter.)

Commissioner—"But few, if any. I then decided that the Government seed store should pull down its sign and hang up its shutters, and, in the future, we would try and make it a Department more worthy of its name. I addressed a letter to each member of Congress calling his attention to this law, and asking him to furnish me with the names of the prominent agriculturists of his own district. I had no care whether they were Democrats or Republicans, white or black, rich or poor, so long as they were those upon whom I could rely for intelligent service and report? So far as I know, not a single answer was returned to this circular. Then I said to myself, all right, there is an organization called the Grange. (Applause.) Its members should know something about this matter. So I sent letters as nearly as I could to the different Granges, for no one at that time had a list of them. I made out to find them through my correspondents, whom I asked for a list of those in each county, and to-day I have a list giving me the names of the master and secretary of every live Grange in the United States. (Applause; cries of "Good! Good!"). I doubt if any other person has such a list."



THE HOOSIER CORN DRILL.—FIG. 110.

Farm Schools for Girls.—France has agricultural schools for girls. One of the chief is near Rouen, which is said to have been begun with a capital of one franc, by a Sister of Charity and two little discharged prisoner girls, and to be now worth 160,000 dollars. The establishment has now 300 girls from six to eighteen. The farm, entirely cultivated by them, is over 400 acres in extent. Twenty-five Sisters form the staff of teachers. More than one medal of the French Agricultural Society has been awarded to this establishment at Darnetel, and the pupils are in great demand all over Normandy on account of their skill. They go out as stewards, gardeners, farm managers, dairy women and laundresses. Each girl has, on leaving, an outfit and a small sum of money, earned in spare hours. If they want a home, they can always return to Darnetel, which they are taught to regard as home.—London Farmer.

Healthy Pigs.—Mr. J. J. Mechi, the English farmer who never fails to tell the farm journals of his country all that transpires at Tiptree Hall farm, says that he often reads with regret, but not surprise, of diseased pigs—and knows, from extensive experience, that it is avoidable. For some years he kept large numbers, until, owing to their proximity to the house, they became a nuisance to his growing family. But, although he had so many, and so closely packed, they were exceptionally healthy—and he gives reasons for their being so. He was frequently told that owing to his having so many (some 200) there would be disease, but he felt perfectly sure it would not be so, seeing the cause for disease was not present.

Pigs have a desire to huddle together, and they thus create a putrescent atmosphere, especially if on soft straw. In his case they were always on sparred wooden floors, the spars being three inches wide, with an interval between each spar, and a deep pit under them, so that the change of temperature caused by the heat of their bodies and their breathing was continually circulating and changing the atmosphere around, under and above them—there should be, of course, escape openings for the heated air in the upper part of the sty, or shed. There can thus be no stagnation of air—so fatal to man and beast. In cold weather they may be very closely packed or inclosed, as they have no woolen jacket, and have no long and strong bristles, like the hogs of cold countries.

Of course the urine falls between the spars, and the solid they generally deposit in one corner.

In hot, summer weather he was most successful in fattening hogs, without fear of fever (frequently so destructive). In a shed that would hold 40 or 50 (sparred floor, with a deep pit under it), Mr. Mechi turned on a jet, as from a fire engine, and in a few minutes they were all washed clean, and refreshed, and would rub their skins as clean as the back of his hand. A fresh lot, coming in from market dirty, were soon cleaned under a shower of 60 gallons per minute. Those who prefer putting a little straw on the boards in winter can do so—the urine will still run through, and the air circulates, which is the great desideratum.

It is lamentable to see pig mismanagement—burrowing in manure, getting heated, and then by exposure catching cold and lung disease (heaves), or fever. Pigs are gross feeders, and soon poison a non-circulating atmosphere. The laborer's pig being alone, escapes the danger of close company and consequent poisoned atmosphere.

He has fattened hundreds of cattle on sparred floors without a particle of straw or any sweeping of floors, the excreta all passing between the spars to the pit under them. He once had twelve white cattle on these spars from the time they were six months old until sold fat at two years old, and they were always clean and healthy. In fact, from calves until full-grown for the butcher, his cattle were constantly on sparred floors. They always fattened as quickly and grew as well as those on straw in covered yards, and were especially healthy.

It is worth noting that sheep on straw under cover do not get foot rot, and can do with little straw; but in open yards, exposed to rainfall, they will get bad feet unless very frequently littered. The opening between the spars may be according to the size of the animals; a quarter inch of opening would permit free circulation of air; one and a half inch is a good size for cattle.

To Raise Such Hogs as require two and three years to mature, of course, will not pay; says the Planters' Journal, and the great fault of all Southern farmers is that they trust too much to others for what they should do or see done themselves.

Oleomargarine.—English Views.—From a long editorial in the London Farmer we make the following notes: Oleomargarine or butterine, as our readers know, is an artificial butter made from animal fat. The invention is due to the ingenuity of a Frenchman, M. Mège, the of Vincennes. We have heard it said that the late Emperor Napoleon III. was greatly interested in the production of artificial butter, and gave his powerful aid towards developing such a manufacture. However, the credit of the invention belongs to the country over which he at one time ruled, and the Yankees have since been its greatest patrons. The skillful people who make wooden nutmegs have taken to manufacturing artificial butter on a large scale.

Mr. Archibald states that during the last two years the quantity of fat manufactured into oleomargarine and oleomargarine butter by the Commercial Manufacturing Company has been, on reliable authority, stated to be about 200,000 pounds per week, yielding 80,000 pounds of oil and butter. Of this about 75 per cent. or 60,000 pounds, per week was the *oil* product "oleomargarine," all of which was exported in barrels or tierces, for the most part under the name of "oleomargarine," but sometimes as "butter fat," or simply as "oil." This would give a yearly exportation by this company alone of about 3,000,000 pounds; but it is estimated that nearly an equal quantity is now being made by the outside manufacturers, so that the total quantity of oleomargarine exported from New York may be stated in round numbers as about 6,000,000 pounds annually.

French official reports declare it to be a perfectly wholesome dietetic material, and the Parisian *octroi* officials impose on it the same duties which are chargeable on ordinary butter. The New York Board of Health declare oleomargarine to be "a wholesome article of food." Whatever may be its absolute merits, it is necessary that it should be sold under its real name, and not as butter. It is manifestly injurious to the agricultural, as well as to the public interest to allow the artificial to be sold as the genuine article.

But the large demand for the article in any form must have a serious effect on the trade in genuine butter. It will continue to be sold, and dairymen have to face the fact. Good butter will always be preferred to oleomargarine. The contest is one between it and the lower kinds of butter. The lesson to be learnt is that whilst poor, badly-made butter will be at a discount, butter of the first quality will always command a high price, and dairymen should not make any other if they wish to hold their own in presence of the rival industry.

Few things, says Truth, are more insisted on both in private and theoretically than the necessity of having the courage of one's opinions. Publicly and practically nothing pays so badly. It is all very well to be courageous and high-minded, to snap one's fingers in the face of prejudice, to speak the truth in the face of superstition; doubtless this is one's bounden duty; but if so, then one must learn to be content with duty, *per se*, and courage, like virtue, must be its own reward It is useless to expect public support if one says or does things contrary to the current feeling of society. Friends in private will pat one on the back warmly enough, laud one's courage, admire one's pluck, uphold one's views, carry the torch of glorification all around one's action and not leave a square inch unilluminated; they will even make a whole lapful of pellets for future shooting, and urge one on one's grand career with all the power there is in praise, all the strength there is in sympathy. But those very people will shrink from one in public, and deny both the banner they have bowed to and the friend they have just encouraged.

CATALOGUES, ETC., RECEIVED.

Thirty-Second Annual Circular of the Invincible Vibrating Thrasher for steam and horse power, manufactured by Roberts, Throp & Co., Three Rivers, Michigan. A valuable work of 32 pages, filled with fine engravings and instructive reading matter. Our readers should send for it.

Spring Trade List of Nursery Stock, sold by Farley & Anderson, Union Springs, N. Y. This firm now offers for the first time the Dutchess Grape illustrated in the Rural of Dec. 6, 1879.

Trade Price List of Nursery Stock, for sale by A. Hance & Son, Red Bank, N. J.

Industrial Implements.

THE HOOSIER CORN DRILL.

The three main considerations in planting grain are: effective planting, economy of seed, and the production of more grain to the acre. These three objects are secured by planting with a good drill, such as that we here present to the notice of our readers, in the improved Hoosier Corn Drill, manufactured by the Hoosier Drill Co., of Richmond, Ind. The best experience is that the separate distribution of seed is as essential to the growing of large crops of corn as to the growing of large crops of cabbage.

The drill here shown drops with great regularity one grain in a place, and is so arranged that it can be adjusted to deposit them 12, 16, or 20 inches apart, to suit the requirements of various kinds of soil. It also, at the same operation, does the covering uniformly in depth, and its covering shares can be adjusted to cover deep or shallow. There is economy in its use from the fact that no thinning is necessary, and no replanting either, in case good seed is used.

The following calculation will fully demonstrate that no corn grower can afford to be without at least *one* good drill. Take, for instance, a crop of 40 acres, an increased yield of 10 bushels per acre, which is very moderate, as the increase is often 20 bushels, will make a total increase of 400 bushels over hilled corn. This at 50 cents per bushel gives a *clear* gain of $200 the *first* season, as the time and labor saved will fully pay for the drill. At only 25 cents per bushel, there is still a net gain of $100, which is a neat little sum.

The drill above referred to, has also an attachment for planting beans, peas, broom corn and sorghum, which goes with every drill free of charge. We strongly advise all who may need a corn drill to write for full particulars which will be promptly furnished by the manufacturers.

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ELBERT S. CARMAN.

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SATURDAY, APRIL 10, 1880.

REMOVAL.

On and after May 1st of this year the Rural New-Yorker will occupy its new quarters, No. 34 Park Row, corner of Beekman Street.

According to the announcement in our Fair number of September last, our regular Plant and Seed Distribution was limited to all who should apply before the first of April this year. Our preparations were, however, so well made, that we have filled all orders received to date, substituting only one kind of the ten not originally or subsequently announced. We do not promise, however, to fill any further applications. Those who apply must take the chances. Our seeds are nearly exhausted.

In reply to a letter of ours, Dr. J. B. Lawes, of Rothamsted, England, says: "I have received your letter in regard to potato manures; but have little to say on that subject except that I do not think it will pay to use artificial manures for that crop in the States." Dr. Lawes would greatly oblige us if he would state why artificial manures would not pay for the potato crop as well as for root crops or cereals.

We take for granted that our subscribers and friends will be pleased to know that the increase in the circulation and the general prosperity of the Rural New-Yorker, several times alluded to in the earlier part of the year, have been steadily and fully maintained up to this time. As stated before, this must be ascribed in a great measure to the kind words—to the *influence* of our readers—and we beg to tender them our warmest, best thanks. There are more forcible ways of showing appreciation of a generous support than by mere words, and it is our plain duty, as it is our earnest desire, to follow them.

Much dissatisfaction has been expressed by those who purchase the Rural New-Yorker of the news stands, because they are not allowed to participate in our Plant and Seed Distributions. It is plain, however, that our distributions must have some limit and that we must have some protection against impositions. So long as we confine them to applicants whose names are upon our subscription list, we have that protection. Otherwise we have none whatever. So far as profit is concerned, it matters very little to us whether readers purchase the Rural of the news-dealers or send us their yearly subscriptions. But we do not see how we can secure to the former a participation in the Rural's free distributions without granting the same privilege to anybody that chooses to apply.

Though we have many times called attention to the Purple-leaved Beech, Purple-leaved Birch and Purple-leaved Japan Maple in the past, and more especially during the past year, they will not be made unduly notorious by still another word of praise at this general season of transplanting. There are scores of so-called purple-leaved trees which are purple only while the leaves are growing or during the spring. Those above specified retain more or less of the purple hue during the entire season, forming, of course, a decided contrast with the green foliage about them. Of the three, the Birch makes the quickest growth. Its leaves, however, are smaller and the foliage somewhat scanty as compared with the others. The silvery bark, however, compensates for this in a measure. In selecting hardy trees and shrubs for our homes, variety should never be lost sight of. It's as desirable here as anywhere. There is no one plant that combines every excellence, and if we would make our home-grounds objects of general and ever-changing interest, we must secure those individuals which are possessed of characteristic charms. The pleasing peculiarity of purple foliage is seen at its best in the three trees named, while as regards size, habit and leaf-outline, they are strikingly dissimilar.

THE WHEAT CROP IN EUROPE.

The outlook for the next wheat crop among our trans-Atlantic customers, while decidedly better than last year, is not quite as favorable as before the series of three or four increasingly poor harvests that culminated in the miserable failure of last fall in Great Britain and France. The acreage under the crop in the British Isles is less than last year, both because the prospect of close competition with this country has to a considerable extent convinced farmers that it is not likely to pay, and because the winter set in with such sudden and early severity that some lands destined for wheat have been used for other purposes. Nearly all the wheat grown there is sown in the late Autumn or early winter, as only few farmers use the more tender white sorts in the beginning of spring or, oftener still, as early as the middle of February. The weather, however, has hitherto been fairly propitious, and a yield per acre considerably larger than that obtained for the last few years is confidently expected. In France the acreage is proportionately somewhat larger than across the Channel, and the outlook even more hopeful, except in some of the northern departments in which the severity of the past winter has injured the crop. Owing mainly to the protection recent legislation has given to home production in Germany, an increase of the area sown to wheat is pretty certain, and a somewhat larger surplus for exportation is probable for next fall. In Russia a good deal of the fall-sown wheat is reported winter-killed; but spring wheat forms a large proportion of the production of that country. Even as far south as the Black Sea the variety known here as the Odessa, but which is called Ghirka in Europe, is a spring sort whose district is one of the largest and most productive in the empire, extending principally eastward to the Dnieper from the town from which it derives its name among us. Little can therefore be as yet said about the probable production of this powerful rival of ours. Our meager information about the present wheat crop in Spain, Italy, Austro-Hungary and among our other trans-Atlantic customers or competitors, leads to the general conclusion that while the foreign demand for wheat will probably be considerably less than last year among our European customers, the foreign surplus will be at least fully as great among our rivals. It is therefore to be expected that the prices of wheat next fall will be lower—maybe considerably lower—than during the past and present season, unless war should in the meanwhile break out in Europe—an unlikely, but not altogether improbable contingency.

CONDITION OF OUR WINTER WHEAT.

Of the 400,000,000 bushels of wheat produced by this country, by far the largest amount is sown in the fall and known as winter wheat. The latitude of Chicago is generally thought to mark the northern boundary of the region in which this sort can be successfully grown year after year; though some place it as far north as Milwaukee. North of that spring-sown wheat has usually proved the only kind that can be relied on. The isothermal lines, however, do not always, or even generally, coincide exactly with the parallels of latitude, and therefore the line marking the northern limit of the winter-wheat region and the southern boundary of the spring-wheat belt, is irregular, here running considerbly to the north of the above latitude and there not a little to the south. Moreover, there are frequent local conditions, both of climate and soil, specially conducive to the success of one sort or the other, while the seasons often vary so greatly that a variety can be successfully raised one year in a section in which it will entirely fail in another. Despite the longer period of trial to which the fall-sown wheat is exposed, it possesses advantages enough to make the farmers living beyond the region which is steadily appropriate to its growth, anxious to test its production in their own districts. For the last few years experiments of this sort have been increasing, with a fair measure of success, which has almost invariably ended in failure under the exceptional climatic conditions of the past winter and the early weeks of the present spring. On the other hand, within the northern portions of the regular winter-wheat area farmers, when from one cause or another their winter-wheat crop has proved a failure or has not been put in, frequently try their luck at spring-wheat. These remarks are amply illustrated by our crop reports in this issue.

These reports have all been received within a few days—some of them as late as this morning, April 6. With a very few exceptions they all come from intelligent farmers well acquainted with the condition of the crops in their respective neighborhoods; and without any exception they are all the results of the observation of men closely connected with agriculture. The conclusions drawn from a careful analysis of them agree pretty closely with those from various other more local reports published in different parts of the country. Ours, however, have the merit of being the latest and of covering the widest extent of territory, extending, as they do, over the entire country. Still later telegraphic dispatches from various distant points herein reported, show no alterations in the conditions mentioned, except that no part of the country seems now to have any reason to complain of drought, as the late rains appear to have been copious everywhere.

In New England so little winter wheat, or indeed wheat of any kind, is grown that the entire product of the five States makes little difference in the aggregate yield of the country. There, as in nearly all the older settled States, the rotation of crops practiced prevents any very material increase in the area under wheat; but the usual acreage seems to have been sown, and the prospect for the crop appears to compare favorably with that of other years. In the Middle States there is a moderate increase of acreage—probably from five to seven and a half per cent.—and, with a few local exceptions, the outlook is highly promising. This is especially the case in Ohio, which we have included in the Middle States which ought soon to embrace all east of the Mississippi. In a few of the most northern counties of New York and Pennsylvania, the frequent alternate thawings and freezings and the absence of snow, that have proven so disastrous in sections still farther north, have injured the crop considerably, but in the remainder of these States wheat has fully as good an outlook as last year, while in New Jersey and Delaware the prospect is even brighter.

Indiana, which our last year's reports showed to be the banner wheat State—a position accorded to it subsequently by its superior yield—this year also makes a fine show, both as regards the condition of the crop and the increase of acreage. In Michigan, too, the outlook is encouraging, though, with the probable exception of Kentucky, the Hessian fly seems to have been more mischievous there than in any other State. Reports from the northern counties in Illinois, in which spring-wheat is generally more extensively sown than winter, are unfavorable, but those from the rest of the State are encouraging except on level, undrained lands. The acreage under winter wheat throughout the State is probably only about five per cent. more than last year, while on the whole, the yield will, most likely, be lighter. Wisconsin is largely a spring wheat State, and from it the reports of winter wheat are varied—badly winter-killed in some parts, and very thrifty in others. The acreage is larger than last year, but the yield will probably be less.

West of the Great River winter wheat seems to be badly damaged in Iowa and Minnesota—almost, indeed, an entire failure. Spring wheat, however, is the chief wheat crop in both States, and doubtless much of the ruined fall-sown wheat will be plowed up and the land sown to the other sort, so that the aggregate yield is hardly likely to be much less than last year, though the acreage under winter wheat is greater. In some parts of Missouri, especially in the northern counties, the crop has been badly injured, but, on the whole, the reports are highly encouraging. The acreage is larger than last year, and the yield will hardly be less. Kansas officially promises a yield of 30,000,000 bushels, and the vast increase of acreage under the crop, together with its fine condition, goes a long way towards realizing this brilliant pledge. The climate, however, is still apt to justify the old sobriquet, "Droughty Kansas," and although telegrams from that State just received here, show that the fears of drought expressed in some of our reports have been removed; still the dangers are so numerous until harvest that our many friends there would probably be content to compromise for a certainty of a somewhat smaller aggregate yield. Nebraska is mainly a spring-wheat State, and though a somewhat larger acreage than heretofore was this year sowed to winter wheat, yet the crop has been so damaged that the yield of this sort will scarcely be so great as last year, but the deficiency may be made up by sowing a proportionately larger acreage to spring wheat. In the Territories east of the Rocky Mountains but little winter wheat is sown, except in Utah, and reports thence are uncertain. The acreage under winter wheat in California is considerably larger than last year, and recent telegrams announce that the fears of injury from drought entertained in many places, have been removed by abundant rains.

It promises well for the South that it appears to be paying more attention than heretofore to the production of cereals enough for self-support. The acreage under wheat there this year is considerably larger than last, and the prospects for a good crop are flattering, especially in Texas, several of whose northern tiers of counties are admirably adapted to the growth of wheat which can be put on the market from a month to six weeks earlier than our Northern grain.

On the whole, judging from the reports of our own friends, and from many other accessible funds of information, we have come to the conclusion that the *present* indications of the winter wheat crop portend about the same aggregate yield as last year from a largely increased acreage.

BREVITIES.

The White Elephant.—The reader will naturally look for an explanation. But he must have patience.

Puck's suggestion that Oleomargarine be colored blue, red, green or some other loud color with harmless dyes, would severely test its value—and the sincerity of the asseverations of the manufacturers that they desire it should be sold upon its merits!

The New York World says of Teosinte:—"At the North, if sown in hot-beds during the spring and transplanted to the open ground in May, Teosinte will afford a decorative plant for large gardens." This Teosinte resembles corn so closely that until it blooms, it would be hard to tell one from the other. The idea of "sowing" (!) this in hot-beds to be transplanted for ornament!!

A well-known nurseryman writes us: "It is with great pleasure that I tell you that trade thus far has exceeded my wildest anticipations." Again he says: "In some things, such as Cuthbert Raspberry, Sharpless Strawberry, etc., the demand has surpassed a rage or furor and is assuming the appearance of a panic." It is a panic we imagine that can do little harm. We trust it will continue to spread and involve every farmer and gardener in its effects before it subsides!

Many people have a sort of passion for dosing themselves every spring with medicines. Many dose their farm animals in the same way. "The system needs clearing out at least once a year!" It is well to know that medicines are really disease-producing agents, and that they can do us no good unless we are suffering from disease. On the contrary, the effect of medicines upon the healthy system is necessarily injurious. Take medicines only when sick, and not then, if nature can restore health without them.

At the Rural's farm we raise a large quantity of rhubarb—probably enough for 20 families. We have always given it to all applicants and have never run short for the Rural farm family. Horticultural books usually say that the soil "cannot be too rich for rhubarb." But we have never seen larger or thriftier plants than our own and they grow in a sandy soil that often suffers from drought and would not, in its present condition, grow over 40 bushels of shelled corn per acre. We are therefore of opinion that rhubarb needs a light, well-drained soil rather than richness.

We are sorry to see that members of the Elmira Farmers' Club are advocating thin seeding and cultivation for small grains. Our own experiments were carefully made on winter wheat (Clawson), and as our readers may remember, the yield was less than 15 bushels per acre. We have further experiments under way this year with half-a-dozen different kinds of winter wheat. The wheat plant can be made to tiller just so much. If the plants grow so close as to occupy the entire ground, there is no room for thorough cultivation. If set further apart the difference in the yield, granting it will be more, will not be enough more to pay for cultivation. It may be an exceptional case, but our cultivated plants suffered more from rust than those the seeds of which were drilled in the usual way.

The largest sale of Short-horn cattle ever known in England, came off at Birmingham, early the past month. Nearly 400 animals were offered, and it took two days to get through the catalogue. The prices were satisfactory, being a considerable advance over those of last year, which is quite encouraging to breeders, and adds a greater popularity throughout the United Kingdom than ever to Short-horns. We understand the principal purchasers were farmers, and not wealthy amateurs. These wanted the cattle for the improvement of their own private farm stock, rather than to breed from for fancy animals, to sell at high figures hereafter. The large hall where the sale came off was densely crowded with buyers, so much so as at times, to make it quite inconvenient to get round among the crowd. We hope this large successful sale in England, will stimulate American farmers to be up and doing in the same line.

LATEST CROP REPORTS.

(Continued from page 234.)

EASTERN STATES.

New Hampshire.

HAVERHILL, Grafton Co.—Winter wheat in this vicinity is scarce, and what crops there are, bid fair to be somewhat injured by the open winter. As for the fly, we are never troubled with it. The acreage is less than last year. H. H. B.

REED'S FERRY, Hillsboro Co.—There is but a very little wheat raised in this county—hardly enough to report. The acreage is about the same. The winter has not been favorable for winter grain. F. F. W.

Vermont.

FRANKLIN Co.—There is no winter wheat grown in this part of the State and very little in the State at all. I have known occasionally a small patch along our lake, but do not know of any now. Winter rye is more common on the pine lands that are interspersed here and there over the State, but there is but little of that. It is believed that it has suffered but little from the open winter, but it is too early to say positively. O. S. B.

GUILFORD, Windham Co.—Snow on the ground. Wheat not forward enough to judge whether it is hurt or not. An average acreage is under it. C. C. P.

Massachusetts.

AMHERST, Hampshire Co., Mass.—Wheat is little injured by the winter and is in good condition. Hessian fly unknown here, and no prevalent disease, though occasionally it is injured by certain climatic influences. The average is about one-fifth larger than last year. L. S.

EAST LONG MEADOW, Hampden Co.—Very little wheat is grown in this section—not enough to be noticed.

NEWBURYPORT, Essex Co.—Very little wheat raised in this vicinity, and I have not heard of any change as to amount of land devoted to it. I have not raised any for several years on my farm. J. H.

Connecticut.

LITCHFIELD, Litchfield Co.—But little winter wheat is grown in this vicinity; what little there is here promises a fair average crop. J. S. S.

MIDDLE STATES.

New York.

COXSACKIE, Greene Co.—Wheat is an experiment with us about here, this year being only the third time that it has been generally sowed. I have raised two crops of over 20 bushels to the acre. I do not think the open winter we have had has hurt it any. The Hessian fly is something that we know nothing of. The only trouble we have is the weevil and some fields were infested with this pest last year. The acreage is more than four times that of last year; almost every farmer has a large field of wheat. J. H. L.

FLUVANNA, Chautauqua Co.—Wheat looks fine. The winter has been light, and has not done it any harm. No signs of any disease or of the fly. The prospects are better than in the spring of 1879, and the acreage is larger than usual. I was across mine to-day and it is all I could desire. I have been the length of the State twice and, as a general thing, wheat looks fine. I shall soon sow lime at the rate of 10 bushels to the acre, and then harrow when the ground is dry. H. A. W.

Pennsylvania.

WEST MILL CREEK, Erie Co.—Wheat in this section is looking fair on gravelly land, but on clay land some has been winter-killed. The winter has been favorable for wheat, with the exception of some cold, dry winds. The promises of a good crop are better than last year. There are no signs that the fly has hurt it; nor is any disease affecting it. J. F. M'C.

Ohio.

ATWATER, Portage Co.—Wheat, as a general thing, looks well. The winter has been warm and wet, but the water has not injured the crop on land that was well drained. No signs of disease. Some few pieces that were sown in August were infested by the Hessian fly, but this is less than one per cent. There is fully one-half more wheat on the ground this year than last, and it never looked better for the time of year. R. W.

BELDEN, Lorain Co.—The condition of wheat is good. It has not yet been injured by the winter and there are no signs of Hessian fly. It compares well with that for the past three years. Acreage one-third larger than last year. J. S. P.

BIRMINGHAM, Erie Co.—The condition of the growing wheat crop is good. The winter was very favorable for the late sown; of late, however, the nightly freezings and daily thawings are heaving it out of the ground on upland. No fly, and no disease. On the whole, the prospect is good for a full crop. M. L. G.

BLOOMVILLE, Seneca Co.—Wheat was not injured by the winter. Within the last two weeks it has been hurt somewhat by the weather, which has been dry with frequent freezing and thawing. To what extent it is damaged it is hard to tell at present; but on clay land it is hurt considerably. We have had a good rain which will help the wheat. No disease. No sign of being hurt by Hessian fly. The acreage is larger than usual. G. M. M.

CHARDON, Geauga Co.—Wheat looks very well. Where phosphate was used it shows no signs of disease; but where it was not used it is badly injured by March winds and hard freezing. It does not look as well as last year, there having been no snow to protect it. No damage by fly. Acreage about the same as last year. W. M'B.

FOSTER'S CROSSING, Warren Co.—Our wheat is looking splendid in spite of some very trying weather in the fore part of March. J. D.

HAMILTON, Butler Co.—The condition of wheat is fair. The rains have done it injury; much of it has a yellowish appearance. The fly has not seriously damaged it. There is about 10 per cent. increase in the acreage. A. B.

MOOREFIELD, Harrison Co.—Wheat looks better than last year, though in some fields it is quite small on account of late sowing and the dry fall; but it appears to be fairly rooted and healthy. The winter was mild and did not hurt it much or any, and it appears to be free from disease and shows no signs of the fly as yet. The acreage is 10 to 15 per cent. larger than last year. J. N. L.

WAUSEON, Fulton Co.—In our section of country, the wheat looks fine and healthy, and covers a larger number of acre's than last year. No damage from the fly. T. R. M.

WESTFIELD, Morrow Co.—Winter was very favorable to fall-sown wheat. March, the first spring month, however, has been less propitious owing to the frequent alternate freezings and thawings—yet the crop doesn't seem much hurt by this cause. The dry weather and the Hessian fly injured some fields last fall, destroying at least a quarter of the crop in some fields. In spite of all drawbacks, however, the outlook so far as I have heard or seen, is the brightest for 25 years. As there was a poor "catch" of grass last year, the acreage under wheat this year is at least one-third more than usual. J. B. B.

W. ZANESVILLE, Muskingum Co.—The past winter has been an unusually mild one for our latitude, and the growing wheat crop generally looks well; but for the past few nights we have been having quite hard freezing weather that has changed the appearance of the wheat fields considerably. The acreage sown is somewhat larger than usual—say 15 or 20 per cent. I hear no complaint of any disease or damage by the fly, and all things considered, we claim the prospects rather better than usual. J. S.

Maryland.

MASSEY, Kent Co.—Wheat looks fine, and at least six weeks in advance of what it was this time last year. The acreage is one-third larger, and the land produces from 15 to 40 bushels per acre. Wheat has grown every day this winter. The bulk was seeded from the 1st to the 20th of October. The fly troubled the September seeding slightly. This has been a peach region, but a failure for a few years past has caused the removal of one kind of the trees. C. H. B. M.

TRAPPE, Talbot Co.—The winter has affected the wheat favorably. No signs of the Hessian fly. It looks better than usual, and the acreage is larger. R. B.

WESTERN STATES.

Michigan.

ADRIAN, Lenawee Co.—The winter has been hard on wheat. Some fields look fine; some bad. The crop is about the same in appearance as on other years. The fly, I think, has not harmed it much. The acreage is larger than last year. That sown on loose soils has suffered the most from frost. H. D.

GREENVILLE, Montcalm Co.—Wheat has gone through the winter very well as a whole, and some pieces look fine, indeed. On fields that had a large growth last fall, the tops have turned yellow, but the roots are all right. Some pieces were injured last fall by the fly, but I think most of them sprouted up below and will give an average crop. The prospect is fully as good as last year's. The acreage is about one-fourth greater. C. S.

UNIONVILLE, Tuscola Co.—It has been rain, mud, freeze, and thaw all winter. The wheat has been injured very much. It is worth $1.11@1.15; corn, 50@55c; barley, $1.25@1.50c; oats, scarce at 44c. 50; potatoes are in fair supply at 45c 50. onions are very scarce at $1.40@1.50 per bushel. Butter is scarce at 17@26c. per pound. Eggs plenty at 10c. Hay plenty $7@$8. Shingles, $1.50@2.50 per thousand. Lumber, common, $7.@8; clear, $18@20. Maple sirup, scarce, and a really good article commands $1. L. A. R. NO 2.

Indiana.

CHURUBUSCO, Whitley Co.—The condition of wheat is middling. March was a hard month on it. It has not been harmed by the Hessian fly. The prospect now appears to be as good as last year. Acreage larger than usual. M. M.

GLENWOOD, Rush Co.—The winter has been warm and open, and wheat is making a fine growth. No signs of the Hessian fly. The general appearance was never better, at this time of year. The acreage is larger than usual. W. R.

INDIANAPOLIS, Marion Co.—Wheat looks fine in this section. The winter has not injured it. It does not show signs of any disease. No Hessian fly. It looks much better than usual, about as well as this time last year. A large increase in acreage. V. & S.

LOOGOOTEE, Martin Co.—Wheat, as a general thing, looks very well and as the winter was exceedingly mild, the crop was hurt only in low places where the excessive rains drowned it out. Its general appearance, as compared with that of former years, is good. The acreage sown is larger then ever before. The fly hasn't bothered it yet, so far as we can see. Wheat is selling at $1.10@$1.15; corn, 50c; oats, 50c; potatoes, 75c; horses and mules in good demand. Prices for horses, $40 to $150, and for mules about the same. W. F.

OTISCO, Clarke Co.—The condition of wheat hereabouts is good. No disease, but the fly did some mischief last fall. The crop compares well with those of other years and the acreage is one-third greater. J. B.

WARSAW, Kosciusko Co.—Wheat here is damaged much by freezing only on low, moist land or land that has not been well drained. It shows no signs of disease; the Hessian fly is something that I know nothing of; the weevil is the only insect we have to fear from this on. If we are not troubled with that, I think we shall have more than an average crop—probably not so large a one as last year, for that was the largest crop that we ever had, and it was also of first quality and sold for a very fair price—from 90 cents up to $1.35; but it is now worth $1.20. The acreage sown last fall will more than average with other years, I think. Good stock brings good prices and poor animals poor prices, as is always the case, but of all stock sheep are trumps now. They are higher than they have been for ten years. G. A. T.

WESTVILLE, Laporte Co.—Our wheat has suffered very little from winter. It shows no sign of disease, and is not badly hurt by the Hessian fly. Its present appearance is above the average at this time. We are having a warm rain and it is brightening up very much. The acreage sown has been increased. We have a very fine wheat country. Last year several fields averaged from 45 to 50 bushels per acre. C. W. C.

WINAMAC, Pulaski Co,—Winter has not hurt the wheat hereabouts. No disease or fly. Prospects much better than in any former year, and the acreage much larger. The crop looks much better than I ever saw it at this season. L. J. N.

Illinois.

KANKAKEE, Kankakee Co.—We have had an open winter, which has damaged the winter wheat. Some fields are entirely killed, while others are badly damaged. The Hessian fly has never injured wheat here; the only insect that we have to fear is the chinch bug, and that seldom harms the winter wheat. There was a larger acreage sown last fall than for years. J. M.

MACOA, Macon Co.—The condition of wheat is much above an average, but not so good as last year which was an exceptional one. It has been hurt somewhat by freezing and thawing in March. No fly. Acreage fully one-third greater; some claim one-half. Ground has been in fine condition and a large part of the oat crop is in. W. A. VAN L.

MASON CITY, Mason Co.—The prospects for the wheat are good. More was sown last fall than for any of the previous 10 years. S. S. B.

TONICA, La Salle Co.—We have not raised much winter wheat for 25 years, and for a number of years not very much spring wheat. We rely mostly on corn, oats, hogs, cattle and some sheep. We are not troubled much by the Hessian fly, but are sometimes bothered by the chinch bug. The prospect for wheat this year is very poor. We have had a very open winter and I think it is mostly killed. I don't know of any disease. J. B. E.

Wisconsin.

HAZEL GREEN, Grant Co.—The condition of the wheat is bad; the past winter has sadly injured it. It is what the farmers call "winter-killed." The few patches that have been somewhat sheltered show no signs of disease. No sign yet of being harmed by the Hessian fly. The general appearance of what is growing, as compared with other years, is somewhat unfavorable. The acreage is larger than that of other years. We may say the wheat crop (winter wheat) is a failure. W. H.

LODI, Columbia Co.—The condition of winter wheat in this section is very poor. There has been but a very little snow. Rain, mud, freezing and thawing have killed the wheat. There is no Hessian fly here. The general appearance of the crop is very poor compared with the crops of years back. I think three or four times as much was sown last fall as there had been years before, because it was an uncommonly good crop last year. On the prairie they tell me it is all dead. In the openings, hopes of half a crop. I am in the openings. E. M. S.

SHARON, Walworth Co.—We have not been troubled with the Hessian fly for several years. I think there are four acres of winter wheat where there was one last year. The crop does not look very promising now; but a warm rain might save most of it. On the other hand, a few more cold, dry nights without rain, will kill it all. R.

Minnesota.

LENORA, Fillmore Co.—Winter wheat is looking well. This is a prairie county and we have raised spring wheat up to the present time. Our two last crops were almost failures on account of the extremely warm weather, so winter wheat is an experiment. Our climate has changed since I came to Minnesota, 23 years ago. Our winters are like those of central Ohio and our summers are very warm, and we have got to change our manner of farming. If winter wheat does well we shall continue to raise it; if not, we shall turn our attention to other branches of farming. O. F. H.

ST. PAUL, Ramsey Co.—There is but little winter wheat raised in Minnesota; our winters are too cold and our snows are too light. We are not troubled with Hessian fly; but one week of wet, cloudy weather, when the wheat is in the milk, does us great damage. The acreage of spring wheat will be larger than usual. Scotch Fife is our best wheat. No. 1 is quoted at $1.07; No. 2, at $1.04; oats, 32c. on track, 35c. by wagon; corn demand light, 35@38c. Many elevators are being built in order to hold the crops and control prices. One about finished has a capacity of 1,016,000 bush.; another, to be built by the Milwaukee road, will be able to store 1,000,000 bush.; one in Duluth is of the same size; one just finished in Minneapolis, nine miles from here, has a capacity of 800,000 bushels. K. P. O.

Iowa.

DECORAH, Winneshiek Co.—This has always been a spring wheat section; but, owing to poor crops for a few years past, many farmers were induced to try winter wheat last fall, in small quantities; partly as an experiment. Some think it is nearly all killed, and some that it is not. I think that, with favorable weather in the future, we shall have a fair crop; but as the frost is not yet out of the ground, it is hard to tell. Owing to poor crops, farmers have turned their attention rather more to stock raising, so I think there will not be quite as much sown this spring as there has been for years past. The Hessian fly we know nothing of; but have been pretty well acquainted with chinch bugs for a number of years; they do their damage just before harvest. R. G.

FAYETTE, Fayette Co.—The condition of winter wheat in this county is very poor. The mild temperature of the past winter, with the consequent freezing and thawing, has seriously affected the plant. The fields look brown and dead, with no apparent vitality above ground. The acreage is largely increased. Have heard no complaint of Hessian fly. M. S. H.

MASON CITY, Cerro Gordo Co.—There was very little winter wheat sown here last fall for an experiment; but it is badly winter-killed. R. L. L.

MONTICELLO, Jones Co.—Winter wheat has never been raised in this section to amount to much, for the reason that it was said that it would winter-kill, and as spring wheat has generally been a good crop here (until within the last year or two, when it has been almost an entire failure), winter wheat has never been tested as it should have been. In a radius of five miles from my place I do not think there are 100 acres of wheat sown, but there is more in the Eastern and Southern parts of the county. I have about 2½ acres, the first that I have sown. At the present time the leaves are dry to within two or three inches of the ground, but are a dark-green below that. There is, now and then, a plant that seems to be dead or rotten; but most of it, I think, will start when the ground is thawed out. As to the Hessian fly, I do not know anything about it. A. B. T.

PLEASANTON, Decatur Co.—Wheat is badly winter-killed, so much so that a great deal of it will be plowed up. No signs of disease. The Hessian fly injured some pieces a few miles south of us. General appearance bad. Larger acreage than common. W. E. P.

RED OAK, Montgomery Co.—The winter here was very dry, with little snow and frequent freezing and thawing. The general appearance of wheat is that the stalks are dry and dead, yet upon close examination many of them are green within. No signs of disease. No Hessian fly. The crop looks inferior to that of previous years; the acreage is probably greater. H. S. W.

Nebraska.

LINCOLN, Lancaster Co.—Winter wheat in this county is fairly good. Some pieces were partly winter-killed, but the average will be good. This is not a winter wheat country, but each year shows an increased acreage. No signs of disease; no much fly. M'C. & D.

PALMYRA, Otoe Co.—Winter wheat is not grown very extensively in Nebraska. More than usual was sown last fall, and nearly three-fourths of it is killed, owing to the dry weather during the winter. Many pieces will be plowed up. No complaints of the Hessian fly, or disease. Chinch bugs are feared somewhat, as they have heretofore done considerable damage. D. F. W.

Kansas.

EVERETT, Woodson Co.—The wheat at present, as far as I have seen and heard, is looking very promising. Owing to the favorable weather of last fall and winter but very little wheat, if any, has been winter-killed, and it does not show signs of any disease. I have not heard of any appearance of the Hessian fly. It is looking far better at this time than any previous year since I have been in Kansas, and there is at the least calculation a third more acreage sown. The weather couldn't be much more favorable for wheat than during the past winter, as it has been rather dry and no bad frosts to heave the crop, and but very little hard, drying winds to expose the roots. The wheat is not suffering, but a good warm shower of rain would do it good. J. J. D.

FREEDOM, Butler Co.—Everything is looking fine and crops are being put in. Oats are sown; potatoes, early ones, are planted, and corn ground is being turned over in large quantities for early planting. There is no particular change in markets, except in oats, which are getting well up. Stock of all kinds have been well wintered here, as corn and fodder are plenty and cheap. W. L. B.

TORONTO, Woodson Co.—Wheat in this section shows no signs of disease whatever. Acreage about the same as last year—perhaps a slight increase. Have never heard of the Hessian fly in this section during a residence of nine years. Wheat is suffering a good deal from drought, many pieces on loose upland being ruined; while on strong bottoms it is good. I think the prospect is better than a year ago, if we have rain soon. I speak of Woodson, Wilson and Greenwood counties. E. A. H.

California.

FRESNO CITY, Fresno Co.—The growth of wheat here has been checked by long-continued frosts. No disease or fly, the latter being unknown here. The general appearance of the crop in comparison with late years, is fair, and the acreage more than double. S. H. H.

WATSONVILLE, Santa Cruz Co.—Our winters never injure the wheat in this valley. It shows no sign of disease. We have never had the Hessian fly here. The general appearance of the crop is good and the acreage the largest we have ever had by one-half. J. A. B.

WOODLAND, Yolo Co.—The winter was favorable, to wheat here. No disease. We have no Hessian fly in this State. The crop is backward; as the season has been colder than ever known since the State was settled. The acreage is large. S. P. P.

(Continued on page 240.)

Literary Miscellany.

SPECIAL ANNOUNCEMENT.

In our issue of May 1st we shall begin the publication of an original Farm Story, by Charles Richards Dodge, the author of "Louise and I," a Sea-side Story, published by G. W. Carleton & Co., New York. It combines the bright, practical, scientific and romantic sides of the subject in question, and shows the value of a scientific education upon the farm; also that success may come through failure, and that a woman is a help to a man in the achievement of success. Our readers will be instructed as well as entertained, as the agreeable and impressive manner which is employed to convey the thought of the writer cannot fail to be appreciated.

THE BALANCE SHEET.

Life's Ledger opens and a strange new date
Is on the page that else were pure and white,
And we must cast our balance-sheet of fate,
Sum up the columns of the past, and write
What we have gained from the great circling year;
What we have lost in hours swept idly by;
What we have spent in follies all too dear:
What we have saved in life's great treasury.

How much of worldly wisdom we have gained,
What dear illusions lost, like fleeting breath,
And for our gold and pearls what poor exchange
In gaining knowledge and in losing faith.
What notes of promise written in our name
Have gone to be protested in life's bank;
What checks for charity and virtue drawn
Our souls have never signed but with a blank.

Alas! what double entries have we made!
The world on one side, on the other God;
Who holds the balance? can our debts be paid?
Where is our stock, and is its value good?
Have we placed all our winnings in the dust?
Put them on interest in some earthly mine?
Or are they high and safe from moth or rust,
In human sympathy, in love divine?

Rich, not in the abundance that we have,
The year's full horn is emptied at our door:
The soul hath other merchandise to save—
'Tis what we are that maketh rich or poor.
The deeds that we have done with vaulting pride
Hoping that some large interest they would pay,
May count for nothing on the other side
Where angels keep the books a different way.

Our souls dream journeying wander down the past
To that dim forever that lies far behind:
The sum of shine and shadow that is cast
Counts more than all the present wealth we find.
Memory, the treasure of our golden dreams,
At the old fireside ever keeps us room.
Tired of the tumult of life's busy schemes,
Our pilgrim hearts to-night are going home.

What muffled echoes fall across our path,
Footsteps of loved ones that are caught away!
What have we lost in this time-circling tide!
What have they gained in that Eternity?
And do they give good gifts to those they love,
These angels over leaning from the skies?
Have they a New Year on the hights above?
What are they doing now in Paradise?

What have we gained by all that we have lost?
Patience and strength to bear anew the strife;
The soul climbs upward only by the cross,
And sorrow is the crowning crown of life.
Our future lies close folded on the now:
Each precious moment that we throw away,
Like wanton spendthrifts of our golden sands
Is heavy with eternal destiny.

In God's arithmetic no cipher's lost,
Each bears a stamp of value that's divine.
O may our souls at last be found at par
With earth's great duties and with heaven's design.
And may the page of life whereon we write,
However blotted and with tears made dim,
Be lumined ever by the falling light
Reflected from the Star of Bethlehem.

A SUMMER VACATION.

(Continued from page 221.)

"It may be so. But, my girl, take an old friend's advice, and do not be hurried into matrimony."

"I promised readily I would not, for I had already made up my mind not to marry for sometime at least.

"Captain Chesney pleaded long and often that I would change my decision; but I remained firm, nor would I allow any of his entreaties or arguments to shake me in the least.

"Several months passed, but as the time went on my lover grew restless, haggard and distressed. Indeed, so marked was his uneasiness that I could not help adverting to it.

"Guy," I said, "let us be frank with each other. You are in some great trouble; tell me what it is; surely I have a right to know what causes you such evident distress of mind?"

"But he gave me only an evasive answer and tried to change the conversation.

"You may well feel a certain amount of delicacy upon the subject,"—he started and looked at me somewhat wildly as I said this—"and I can easily understand such would be the case. Yet, as I said, let us be frank with each other. Do not be offended with me for what I am going to say, but, Guy dear, you are pressed for money. There, that is the simple truth; and now the worst is over. It is so, is it not?"

"He replied by an evident effort:

"I am ashamed to confess it, but it is true—quite true. No one knows what I have suffered for my indiscretion. My father cannot, or will not, lend me any assistance, and I am now in serious difficulties."

"He was much overcome as he spoke, and clasped his hands over his face; but I pulled them away with gentle force, and stroking his hair back from his troubled brow, said:"

"'I am so glad, Guy, that we have had this understanding with each other; we shall both be happier for it. Now, in the first place you must give me your promise to be most obedient; to be governed by me in this affair; to do without argument or scruple all that I advise.'

"'You are a good girl,' he said; 'too good for me. I am not worthy of you!'

"'I will not hear you say that—nor will I let others say that you were in momentary difficulties when you married me. Now here is what I want you to do, and remember you have promised beforehand to execute my wishes. You must let me free you from these liabilities!'

"He endeavored to protest—to interrupt; but I went on.

"'I wish to do it,' I said, 'in a manner that will be the least painful and embarrassing to both of us. I do not wish to know the sum you owe, nor even the names of those to whom it is due, nor the circumstances under which the debts were contracted. Keep that a secret from me. See, here is a check, duly dated and signed, and made payable to your order; but as you perceive, the amount is left a blank. You see now what I wish you to do. Take this blank check as a free gift from me, fill it up with such an amount as will free you entirely from your difficulties. Do not tell me the sum—I do not wish ever to know it; but I have given special instructions to the banker to honor this draft. Take it, Guy, to oblige me, and let me have the happiness of knowing that I have set you free! And when you can tell me that no one has any claim upon your purse, then I shall be ready to be your wife."

"I will not attempt to repeat his thanks—his protestations of gratitude and affection. But when he accepted the check I felt a glow of joy to find that I had it in my power to free him from a disgraceful thraldom!"

Miss Linwood paused. The sun had set, and a chill wind was blowing from the sea.

I saw that her recital had affected her deeply; yet that there was something of a painful character to come was evident.

"I do not think it is safe for you to sit here any longer," I said. "Let me recommend you to go back to Melcombe Cottage; you can finish your story at another time."

"It is chilly," she said, rising to her feet. "I will follow your advice; in fact, I will return at once, but I will finish what I have to tell you during our walk; the narrative is nearly over."

But seeing that in spite of herself she was trembling violently, I offered her my arm.

She thanked me in her sweet way as she availed herself of the support. How her touch thrilled me—thrilled me, although any wild dream that I may have had about making her my wife seemed farther from a realization than ever—for had she not acknowledged her love for another!

"Well, doctor!" she resumed with a sigh, "I have told you that I gave him the check, and that I looked upon him as a free man."

"What faith you must have had in him!" I ejaculated with a jealous pang.

"And what is love without faith?"

I did not attempt to reply, but asked instead:

"Had you at this time any idea of the amount of Captain Chesney's liabilities?"

"Only a vague notion. I felt, however, that the sum could not excel a few thousand pounds."

"A few thousand pounds!" I repeated, aghast, for the calmness with which she spoke amazed me; "and you were prepared to give up such a sum?"

"You forget I told you I was an heiress."

"Yes, but——

"Wait a moment, I must now explain that my father had left comparatively little real estate—I mean landed property; nearly all his money was embarked in various undertakings, such as bank and railway shares. These investment for the most part returned a high rate of interest, but involved a considerable amount of trouble for a girl.

"Some time before the occurence of these events it so fell out that a very large residential property came into market. It was one of those stately homes for which England is so famous.

"It was a place I knew well and admired greatly. It was here I felt that I could make a home and live in perfect happiness.

"My father's solicitor effected the purchase and the deposit was duly paid. Then he commenced to sell out from the various companies, and the money realized was from time to time paid into the bankers.

"Knowing that there was a large balance standing in my name made me think of this plan for relieving Captain Chesney. I considered the whole thing could be done and no one be any the wiser.

"It was not long after his departure that I was informed that someone from the bankers' desired to see me on urgent business.

"'Do you wish to speak about a check presented by Captain Chesney?' I asked.

"'Yes, miss. It has been filled up for a large sum, and we thought——'

"'It is quite correct,' I answered, for I felt a good deal vexed that the captain should have been put to the annoyance of having the draft questioned in any way. 'I sent notice to the bank that such a check would be produced.'

"'But the amount is so large that——'

'It is quite correct; you have my authority to pay it at once.'

"The clerk bowed and withdrew. As for myself, I had perfect faith in my lover's honor—indeed, the suspicion that he would wrong me, or betray my confidence, never once entered my heart; and instead of feeling any regret at the largeness of the sum required to discharge his debts, I was instead deeply thankful I had the means of doing him so great a service.—To be continued.

SKETCHES OF GERMAN LIFE.

BERTHA A. WINKLER.

Winter Scenes.

Snow, snow everywhere; on the roofs, in the streets, in the air and, one could almost say, over the hearts of the people, so quiet and gray, and wintry look the faces of the persons who noiselessly glide past us with heavy loads of fagots on their backs. Indeed, this white icy mantle seems to have covered the genial smile, as well as the once blooming fields. A dull, oppressive silence prevails in the deserted streets; one listens in vain to catch the merry ring of sleigh-bells, or the huzzar of boys sleighing down the hill. A few old sleds loaded with wood and drawn by a team of sleepy oxen take the place of the former, and the latter, though they pour wildly enough from the school-house and a few snow balls do fly in the air, scatter in the direction of their respective homes and are soon lost out of sight. All is silent as before.

Now a few of them reappear, with odd-looking wicker-baskets suspended on straps from their shoulders. Well fortified against hunger with huge slices of black bread, they start for the forest in search of fire-wood. Just how this is obtained in forests which have long been stripped of every available shrub, and which every autumn is even raked of its dead leaves for staple-purposes, our readers, viewing their own broad forests full of dead-wood, will find hard to answer. But let us follow them briskly wading through the snow towards the forest where they separate, and, in different directions, begin their search for cones and dry twigs among the bleak, bare branches overhead. One with practiced eye soon ferrets out the tree worth climbing, and in the ice and snow he scrambles to the very topmost branch, shaking down the fir-cones or breaking the brittle twigs which yield to his touch. Very often, after a fruitless search, or in disagreeable weather, some green twigs are smuggled in his bundle, and then a sharp look-out has to be kept for the Forester who sometimes makes a very unexpected appearance and, examining the bundle, places a fine upon the green twigs, or takes the trembling culprit for a few days to the village-prison on bread and water for violating forest laws.

The boys, however, contrive to elude him by trickery or, in last extremes, make good their escape by a sharp run with the Forester's dog at their heels. Though dreaded and disliked by the whole peasantry, these youthful Teutons often make game of him and have no end of fun at his expense But, to timid children and poor women the sight of the Forester's green-braided coat, his dog, and gun is absolutely terrifying, though that does not hinder them from taking advantage of his absence whenever the opportunity presents itself. This does not surprise us, however, when we consider the bitter necessity which compels them to such measures. With them, life is a question of existence, not of comforts or enjoyments. It is not gain, but life, which depends upon their labors. And with many such, a life is merely a prolongation of misery and hardships, in summer a struggle for bread, in winter a struggle for fuel.

What we have said to the poorest class is also applicable, though somewhat modified, to the more well-conditioned peasantry. The silence and the gloom of winter rests upon all. Everywhere we see the same grave, and almost joyless faces. Life to these people, is something, infinitely earnest at this season; the rush of spring and summer and the merry festivals of harvest are past, these no longer occupy their mind to the exclusion of all else. Perceptive faculties expand as the pressure of immediate necessity gives way, and, however bright and joyous those halcyon days of summer may have seemed, life in winter and comparative leisure assumes its real and serious aspect. Then they have time to reflect, to plan, to think. Then the droll easy-going peasant who lives in the crude simplicity of his forefathers, is the modern, intelligent, clearsighted man who observes public events with much more interest than the authorities would be pleased with. Who sees, and knows, and judges and condemns, though himself unknown and unseen in his valley-village. Whose sacred watchword instead of "*King* and *Government*" which the schoolmaster drills into the boy; the pastor preaches to the youth; and the magistrate thunders at the man, is "*Liberty* and *Fatherland*" and who would fain utter hard, indignant words against oppression and extortion if he dared; but a half-dozen government officials in the capacity of field-guards and forest-guards are ready to communicate the slightest expression of disapproval at head-quarters and the discontented party would soon be given to understand, in no gentle terms, that the government does the thinking and the peasant the laboring. If parents show him the virtue of silence, government teaches him the necessity of it.

To a casual observer the peasants appear timid, and simple-minded. But this is just what government wants. It trains them into "*unconditional obedience*" and allows them just enough responsibility, and freedom of action to be self and state supporting; or, in other words, to enable him to worm himself through life upon soil. Our observations have resulted in quite a different opinion of him. We know that with all his simple-mindedness, which, however, is more of good-nature than anything else, he knows the hand of the oppressor. His eyes are wide open when the tax-book is placed before him. A conversation we overheard may serve to show that they are not quite as stupid as they seem:

During our interview with the village magistrate, a peasant timidly entered and with his hat in one hand and the door-handle in the other as if ready to make his escape in case of danger, he requested the Herr Schult-heis to furnish him with the necessary papers for emigration. "But why do you want to leave the country, Johannes?" inquired the Schult-heis. "Well," was the reply, I have a book at home, and whenever I look in it I want to go and settle in America." The Schult-heis opened his eyes to think that one of *his* Bauers would read such a book. And, "what is the book; who gave it to you?" he snarled, in the man's face. "Hem," replied the peasant; a little non-plussed at his manner, "its my tax-book and the Herr Schult-heis, himself, gave it to me." I need not add that he obtained his emigration papers without further delay.

Knowing the condition of affairs, we are not surprised at the many serious-thinking faces that we meet with now. This unusually severe winter has brought increased want to many and makes strict economy a necessity for all. The enormous expense of a standing army are levied upon the people, while the flowers of Germany, the support of many aged parents are idling their time away in barracks. There is not much said in Germany but a great deal seen, and felt, and reflected in their faces. Those mild, blue eyes with their timid, furtive glances tell tales which lips have never breathed. Their first-born, their all is taken from them to maintain the power, the greatness and lustre of Imperial Germany.

MAGAZINES FOR APRIL.

Scribner for April closes the XIXth volume of this Magazine, which will be ten years old in November. The current number contains a large variety notwithstanding the space given to the serials, including Mr. Roe's "Success with Small Fruits;" Mr. Cable's "Grandissimes;" Mr. Schuyler's "Peter the Great;" the third of the four parts of "Louisiana" shows an admirable phase of Mrs. Burnett's genius, the scenes between Louisiana and her father being among the most touching passages of her writing.

Single papers of popular interest are not wanting in this number. "The Growth of Wood-cut Printing," by Mr. Theodore L. De Vinne, the printer of Scribner, deals with Early Methods on the Hand-Press. "The Orchestra of To-day," by Mr. Sidney Lanier is descriptive of the differences of construction of the best-known musical instruments. The difficulties of counting time and of directing an orchestra, and the desirability of encouraging women to devote themselves to this department of music, are incidentally discussed. "Eighty Miles in Indiana Caverns," is an account by Mr. H. C. Hovey, of explorations in Sibert's and Wyandot Caves; "Rocky Mountain Mules," by Mr. Ernest Ingersoll, is an illustrated paper of fun and adventure, not without practical information for those who are Westward inclined. An interesting anecdotal biography of Jules Michelet, the historian, is contributed by Mr. J. D. Osborne; a short story by Mrs. Julia Schayer is entitled "A Summer's Diversion." The Poetry of the number includes a narrative poem, "Fra Luigi's Marriage," by "H. H.;" "The Tornado," by Charles de Kay, and poems by Dora Read Goodale and Violet Hunt, the latter being an English girl of seventeen, who is thought, by famous English poets, to have very decided poetic genius. This is her first published poem.

The departments, though not quite so full as usual, have a number of features, including Doctor Holland's "Lay Sermon for Easter." Mr. J. Watts de Peyster writes about "The First Breech-loading Rifle." "Operas for Amateurs" are treated of in "Home and Society." To "Bric-a-Brac" Mr. W. J. Linton, the engraver, contributes a modern idyl in the style of a distinguished poet, entitled "The Princes' Noses," and apropos of the supposed tattooing of the sons of the Prince of Wales.

St. Nicholas.—Opens with an illustrated account of a boy's "Adventure on an Egg Var," in rescuing his baby sister from an eagle. There are five other short stories, all illustrated. There is, also, an illustrated account of the exciting Mexican and Cuban game of "Kite-Cutting," besides a description, with six pictures of the beautiful "Dead City," Pompeii, and a story, with full-page illustration, of how they used to celebrate 'Easter in Rome." The frontispiece, "A Burial at Sea," is an engraving on wood, after the picture by Henry Bacon,—the painting which attracted attention in last year's Paris salon. Miss Alcott's serial, "Jack and Jill," takes its boys through an exciting debate, and its girls into a grand tableau; and Mr. Stoddard's "Among the Lakes" comes to a close with a long installment full of fun and movement. Besides other poems, there are: a quaint two-part dialogue for girls; a stirring ballad about "St. George and the Dragon;" and a lullaby by Mary Mapes Dodge, set to music by Hubert P. Main. The pages set apart for very young readers and for the departments—"Jack-in-the-Pulpit." "Letter-Box," and "Riddle-Box,"—are full of novel and amusing items.

The Domestic Monthly.—The issue of this favorite magazine is interesting to those preparing for the opening season. The spring styles are well defined, and as a rule simple. Even the more elaborate designs owe their apparent richness more to combinations of material than to any technical peculiarities beyond the skill of amateurs. These conditions are favorable for dress-making at home. The frontispiece of the present number presents a street costume which abounds in suggestions for the ingenious, as it may be made with one color and one material, with very little trimming, or with the blended effect of different materials and colors. Among the other illustrations will be found much that is new and tasteful. Basque designs, evening and reception dresses, polonaises, overskirts, wraps, coats and dolmans are shown in great variety, with special costumes for all occasions.

The Literary Department affords, as usual, a carefully selected range of contributions, from the best authors.

Good Company has an account by Charles Dudley Warner of a 24 hour expedition by the well-known Adirondack guide, and himself, over an Adirondack mountain near Keene Flats. The stories include a tale of the South Pacific by Edward Bellamy, and Through a Needles Eye, by Katharine Carrington. The sketches will be particularly enjoyable to lovers of nature. Geo. M. Towle sketches John Bright; and Mrs. Wager-Fisher tells of Ernest Renan, author of the well-known Life of Christ. The other articles include Wanted, by Mrs. Edward Ashley Walker; The Defense of Criminals; Some Frontier Art; besides poems redolent of spring, entitled Fairfield's Brook, Tokens, and Alder Blossoms. The editor has something to say about Mr Ruskin, takes up the cudgels in behalf of a little child's poem, by Tennyson, and gives other articles and also book reviews This number opens a new volume of Good Company, which is published at $3 a year, in Springfield, Mass.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN-THOUGHTS FROM EVERY-DAY HOUSE.

MRS. ANNIE L. JACK.

THE season advances and soon we expect to be busy. Already summer garments are out for repair, and I am confronted with the semi-annual question of—what to wear. In a large family it is one of vital importance, and I often envy those mothers who seem to have a natural talent for fixing over to greater advantage than I find my own skill equal to. I am sure there are many readers who will sympathize with me, and I often think it would be a fine subject for an artist—to depict the chagrin with which we all look at the outgrown dresses and sigh "Too short"! wondering if they can be let down, or kilt-plaited in any way that will insure them another season's service. And while proud to see the children grow, does not a little pang steal to our hearts, that is so charmingly expressed in Louise C. Moulton's poem, "If I Could Keep Her So"?

"Blue eyes learning wonders of the world about
Here you come to tell them—what an eager shout!
Winsome little damsel all the neighbors knew;
Thus I long to keep you, for I love you so."

But grow they will, and soon the little boy or girl is beginning to assert his or her own opinion, to form views of men and things and to require more from you in the matter of appearance than in the early days when a yard of cloth was enough for a shirt. But with increasing cares, the children will be increasing help. The boys, if taught early, can sew on their own buttons, and darn their stockings much to the relief of mother and sister, who will be wise to give them thread and needle-book at some opportune time, with their initials worked upon the cover. This appeals to a boy's pride and will be useful to him in after life, when, perhaps, he may be out in the world—where "mother" cannot be. How one's thoughts wander! and all this time I am confronted with a pile of little frocks and jackets too short in the sleeve or skirt, and must apply to the piece-bag for help—and for awhile lay aside the pen and let the needle have full sway.

LOG-CABIN SKETCHES; OR JESSIE SEABRIGHT'S DIARY, NO. 11.

MAY MAPLE.

JAN. 10, 18.—It is strange how much one can accomplish when one has a will to do so, and still more strange how little money can suffice to make a family comfortable, and happy. And yet so many go complaining all their lives because they have none of the comforts of this world, and must always live in dark, dingy houses, with bare floors, bare walls, bare windows, and a general appearance of dilapidation and destitution. I can't help thinking that one must be particularly unfortunate, who is under the actual necessity of living in such utter poverty. Our own cabin home is not furnished with such luxuries as wealth might bestow; but our neighbors count us among the well-to-do farmers, although our farm numbers less acres than many others. We seem to have things in the house more comfortable than the average farmers; and yet there is nothing the rest might not have, if they would take hold of the matter with energy. But it is easier to say, "I wish I could afford to have so many conveniences about our house; but I don't have time for such fixin's," than it is to go about the work.

My last achievement I am particularly proud of; for I am writing in my new kitchen, which is a good-sized room, and adjoining is a cozy bed-room and a small pantry. And there is a good sleeping-room above. I earned the materials, and John put them together. I made rugs, counterpanes, comforts, did some tailoring, made some toys for the children's holidays, crocheted some fancy edgings, and embroidered some handsome tidies on Java canvas. Not many moments were spent in idleness after I made the resolution to enlarge our borders. When I needed rest I took it. For what luxury would be even a comfort, if I worked myself sick. Neither did I let my mind go starving for its usual rations of intellectual food. I kept my health good and systematized my tasks; and for once Fortune or Providence favored the brave. My friend, Mrs. White, often assisted me to sell my wares, by finding purchasers among her more wealthy acquaintances.

The villagers down by the mill were often glad to get work done, and were willing to pay fair prices; and thus I added a little here and a little there to my purse, the contents of which were hoarded up and counted over and over very much as a miser hoards and counts his gold. At last I had $40, which John thought would be about the expense of lumber and materials, and he would do the work. He said it would not be worth while to go to much expense, for the old log house would not stand many years more, and we had better save our strength and means for something better.

The inside is lined with building paper, instead of being plastered, and then covered with wall paper of a very light drab, and looks as pretty as tinted plaster, and the wall is about as warm as a plastered wall. The windows are large and low, and this particular feature makes the room look especially inviting and cheerful. Now we are somewhat prepared for sick days, that are liable to come to us all sooner or later. Of course, we hope they may still be afar off.

We are resting now and laying plans for the coming season, which we mean to make as prosperous as the last, providential circumstances permitting.

OIL-CLOTH AND CARPETS.

I HAVE tried painting old pieces of rag-carpet, and must say they are not worth the oil and paint put on them. They absorb a great deal of oil and are hard to clean. They are not as good as the carpet without the paint, and will not last as long. Without the paint they may be easily cleaned so as to look nice, by pounding them through good suds and rinse water. If desired to be stiff, they may be starched with flour starch and ironed.

Good, thick cotton drilling or thick, firm cloth may be made into oil-cloth by stretching on a frame and painting. The cloth should be new and strong, or it will not be worth the trouble.

I have tried knitted carpets, as highly recommended a few years since, and must say they are not the carpets needed, and will wear but a very short time. When one wants rag-carpets, it is best to purchase warp and take the rags to a weaver who knows how to weave good rags and warp into substantial carpets; and one will be paid for the labor and expense put on them. Very coarse-threaded rags or tender ones may be cut in strips from one to two inches wide, braided and sewed together for mats or rugs to place where needed.

H. E. S.

JELLY FROM CIDER.

In the RURAL of March 13th, E. R. Shankland asks for the experience of others in making jelly from cider. Having made it for many years successfully, I submit the following:—Bring the cider from the mill as soon as pressed; place the barrel in position for drawing, and let it stand over night. Take a clean brass kettle that will hold from three to six pailsful; adjust it for boiling; fill, and it is ready for the fire. Skim thoroughly when it commences to boil. Don't add any more cider to this kettleful if you want clear, nice jelly. Boil steadily and continuously. When nearly reduced, dip out a few spoonsful into a basin and place it in cold water to try it. Boil it until as thick as common jelly when cold. It may be kept boiling so that it is nearly to the top of the kettle until the last hour, when the coal, swith a few chips added occasionally, will be sufficient. As soon as thick enough, remove from the fire and dip immediately into stone crocks or jars. If it be allowed to cool in the kettle, it will injure the flavor. It is not liable to burn if you keep it over a steady heat until done. HARVEY MORGAN.

IN answer to inquiry about apple jelly, I would say that a copper evaporator is the only thing that it can be successfully made with, and the "Cook Pan" we think the best. Any kind of clean, unfermented cider will make jelly, except that which is very sweet; that is, that made from very sweet apples which will only make molasses. Two-thirds of sweet and one-third of slightly tart apples make the best quality of jelly and while Rambo or Belmont apples make very good jelly it is much better to add one half of some good quality of sweet apples. The better the quality of the fruit from which the cider is made the better the jelly. D. M. SPONTZ.

DOMESTIC RECIPES.

Rhubarb Jelly.

Prepare as for sauce, cutting up into small pieces. Put into a preserving kettle with a very little water. Boil until very soft. Drain through a sieve; then press through a jelly bag. To every pint of juice allow one and one-half pound of sugar. Boil the sugar by itself until nearly ready to form candy and then mix with the juice. Boil together moderately, keeping well skimmed until the jelly falls from the skimmer in sheets. Put away same as any other jelly. M. L.

Old-Fashioned Indian Pudding.

One quart of buttermilk; two eggs; a few dried berries and a teaspoonful of saleratus. Stir in Indian meal to a stiff batter. Boil two hours in a pudding bag, with a piece of salt pork in the water.

Good Doughnuts.

Take a quart of new milk and one cup of hop emptyings, and prepare the same as for bread. When light, add half a pound of sugar, half a pound of butter, three eggs, a little salt and a pinch of soda. Cut square, and fry in hot lard. Season with nutmeg. A. L. G.

QUESTIONS ANSWERED.

Mending Rubber Boots.

B G. J., Decatur, Ill. Please see directions for mending rubber boots in RURAL of March 13, page 175.

To Banish Fleas.

Do you know of anything that will drive away fleas from a house? We have taken up carpets; used salt, lime and other remedies without effect. C. DUNCAN.

ANS.—Try oil of pennyroyal.

To Sweeten Lard—A Frowy Stone Pot.

Will you please tell me what will sweeten lard that has been kept over, also what will remove the odor of frowy butter from a stone pot. MRS. M. N. WAIT.

ANS.—1. Make a weak lye of wood-ashes, settle well, draw off and put it with the lard into a kettle over the fire. When it boils take from the fire, let cool, remove the lard and boil over a moderate fire, skimming off all impurities until no more arise, when it is done. In many cases two or three good-sized potatoes sliced and cooked in the lard until brown will remove all unpleasant flavor. 2. Fill your stone crock with sour or sweet milk, renewing once or twice, after which wash well and sun.

Abner J. P., Wichita, Kansas, asks how cucumbers are pickled by the barrel in the factories with whisky vinegar. He has a barrel of choice pickles in brine, but to buy vinegar there at 35c. a gallon and sell pickles and vinegar at 30c. a gallon won't pay.

These old people whose blood has become thin and steps feeble are praising Hop Bitters for the good they have done them.

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SOUTHERN STATES.

Virginia.

(Continued from page 237.)

PAINESVILLE, Amelia Co.—We had an unusually mild winter up to the first of March, but since then we have had rain after rain almost continually, which has kept the ground in bad order. Wheat—of which there was sown a larger area than usual—is looking well generally, except on low, damp lands, or where it was not properly drained. We have had several frosts of late which, I fear, have killed much of the fruit and many of he tobacco plants. Tobacco is now bringing better prices than last year at this time, and farmers are preparing to put in quite a large crop this year. Most of the oats were sown in February and the beginning of March, and are up. Some farmers, however, have not finished sowing in consequence of wet weather. The prospects are good for a late spring. J. W.

Kentucky.

SPEARS, Jessamine Co.—The winter has not influenced the wheat, but it shows some sign of disease, which I think is caused by the Hessian fly. I do not think its general appearance will compare well with that of other years, it looks dwarfish and spindling. It is almost too forward, I am afraid, for late frosts. More wheat was sown last fall in Kentucky than in any year since it has become a State. J. E. S.

WOODBURRY, Butler Co.—The winter has been very favorable to wheat. It is looking fine, except on rolling land where it was badly washed by the February rains. The acreage is a little over an average. I have not heard of a Hessian fly in this section for years. J. B. E.

Louisiana.

NEW IBERIA, Iberia Parish.—A large portion of the corn crop is planted and cotton planters are ready to go to work. The sugar cane is fine this season, and the prospects for a good crop are very flattering. Cotton and cane, it is expected, will bring a fine profit. Very heavy rains just now are hurting the young crops somewhat. A. E. G.

Texas.

SALADO, Bell Co.—Wheat came through the winter all right. No sign of any disease yet, or of having been harmed by the Hessian fly. Its general appearance is above the average of several years at this time. The acreage is greater than for several years past. E. G. M.

Canada.

LONDON, ONT., Canada.—Wheat here has felt the want of its usual winter coat of snow; but as the ground has not been frozen to any depth, there has been no material injury. There is no disease. The Hessian fly has not put in an appearance. There is reason to expect a fair average crop. The acreage is about one-third larger than in previous years. It had begun to put on a spring-like appearance, but the subsequent cold will probably retard its growth a little. R. S. W.

NEWRY STATION, Perth Co., Ont.—We had an unusually mild winter here, with hardly any snow, and when it came it was only two or three inches deep and lasted only a day or two. Fall wheat has suffered a good deal. Cattle are looking pretty well. There is plenty of rough feed for them and abundance of hay, worth from $5 to $6 per ton. Grain in this section is nearly all marketed, and farmers are looking hopefully to the dairy business expecting to realize better prices the coming season than last. Sheep are selling high this spring. A. J. C.

News of the Week.

AGRICULTURAL NEWS.

Monday, April 5, 1880.

IN Holland here are 12 large factories for the manufacture of oleomargarine. These receive the raw material from this country, and require every week from 50,000 to 60,000 tubs, each containing about 30 pounds' weight—in other words they turn out from 150,000 to 180,000 pounds of the product weekly.....Cattle are dying in many parts of England of rot, just the same as sheep.... ...Many ewes are dying there in lambing, still more of rot.....It is estimated that 75 miles of vessels carried grain from this country to Europe last year, and 25,000,000 more bushels were sent than ever before .....In Ireland farmers whose annual valuation is under £15 and above £4 get as much seed potatoes as will plant half an acre and as many oats as will sow an acre; holders whose valuation is under £4 get enough potatoes to plant a quarter of an acre; but in no case must the value of the seed to any farmer exceed £5. All seeds are to be sold at cost, half the price to be paid next November, and the other half a year later without interest.... ...The steamer Hindoo with grain in bulk from this city to Hull, England, was lately abandoned in a sinking condition at sea, as her cargo had shifted. Three officers and 200 head of cattle lost.....Mr. Jas. N. Lee, Editor of Bell's Messenger, the well-known English sporting and agricultural paper, died on March 11, at the age of 72.....In Uruguay one man owns 3,000,000 sheep and lambs and 250,000 cattle! Where are you, Texas?.....In the Burrawang district in New South Wales, the Messrs. Edols lately got 466 tons of wool from one clip of their 206,000 sheep. The fleeces of the dams averaged 8¼ pounds, those of the wethers, 6¾ and those of the breeding ewes and lambs, 4 pounds, making a general average of 5 pounds....It is estimated there are from 484,000,000 to 600,000,000 sheep in the world, or at the lowest estimate 320,833 miles of sheep, if strung out one closely following the other, or nearly enough to encircle the globe 13 times.....The Mark Lane Express thinks England would be no worse off if every Duchess Short-horn left the Kingdom. ....There is a prejudice just now against the use of mutton in Great Britain, owing to the prevalence of liver rot among sheep. Extensive seizures of carcasses rendered unfit for human food from an advanced stage of the rot, are being constantly made in the chief towns and destroyed by the Health Officers. ..... The fourth annual meeting of the Northern Iowa Butter and Cheese Association was held at Monticello Feb. 25-27. Oleomargarine was bitterly denounced; herds are being weeded out of unprofitable cows giving less than 5,000 pounds of milk a year....At the late meeting of the breeders of Holstein cattle held at Syracuse, N. Y., the following officers were elected: President, E. A. Powell, Syracuse; Vice-Presidents, Hon. G. S. Miller, Poterboro; S. Hoxie, Whitestown; Thos. B. Wales, So. Framingham, Mass. Secretary, Chas. Houghton, Boston. Treasurer, Wm. Brayton, Syracuse. A milk standard was adopted for the breed....Cattle are dying of starvation throughout most of Texas....In Oregon, it is reported that nearly half the herds either have or must perish for want of food. Colorado and Utah cattle, too, are dying by thousands....The Ga. oats crop is reported to be suffering from rust. ...Ga. buys 120,000 tons of commercial fertilizers this year—estimated....Recent frosts have inflicted an estimated loss of $2,000,000 on crops about San Antonio, Texas—all fruits and vegetables have been destroyed....J. B. Killebrew, Com of Agr. of Tenn., has received 30,000 applications for documents relating to the resources of the State, since last Oct. A heavy immigration expected....The "New England Aricultural Society" offers a munificent premium of $50 for the best crop of sugar beets for sugar-making grown upon not less than two acres in New England. Address B. P. Ware, Marblehead, Mass....Detroit has 700,000 bushels of wheat on vessels ready to sail....A heavy immigration of Canadians into this country. Sixty or seventy a day are leaving the country around Montreal for the Far West

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, April 3d.

A. E. G.—G. W. W.—S. C.—A. S. W.—J. C. H.—J. A. H.—W. M. D.—C. F. R.—H. F. S.—J. S.—W. N. J.—H. K.—W. S.—S. C.—G. D. C.—A. A. S.—R. L. H.—Ludie—J. L. B.—C. W. G.—G. E. N.—J. L. B.—W. R.—J. M. C.—E. A. H.—T. B. B.—W. I. C. P. P.—G. E. M.—R. G. H.—W. W. E.—E. W. S.—J. E. J.—M. B.—F. S. G.—W. C. W.—A. L. P.—A. J.

Voice of the People.

R. V. PIERCE, M. D.:—I had a serious disease of the lungs, and was for a time confined to my bed and under the care of a physician. His prescriptions did not help me. I grew worse, coughing very severely. I commenced taking your Medical Discovery, which helped me greatly. I have taken several bottles, and am restored to good health.

Yours respectfully, JUDITH BURNETT.

Hillsdale, Mich.

THIS is to certify that R. S. White & Co's. Natural Butter Color was awarded the first premium at the International Dairy Fair, New York, Dec., 1879; that the decision of the judges was unanimous for the above-named coloring, I will further certify that the agent of Wells, Richardson & Co, used, or tried to use undue influence with the judges when we were examining their coloring, sufficient to throw their coloring out of competition with other coloring, if the rules of the Fair had been strictly observed. (*Signed*) JOHN STEWART, Chairman Committee on Butter Color, International Dairy Fair Association, December, 1879.

Anamosa, Iowa, March 12, 1880.

AN EXTENDED POPULARITY.—Each year finds "*Brown's Bronchial Troches*," in new localities, in various parts of the world. For relieving Coughs, Colds, and Throat Diseases, the Troches have been *proved* reliable.

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Ex-President Martin Van Buren was made comfortable by the use of Jonas Whitcomb's Asthma Remedy.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, April 3rd.

Boston.—FLOUR dull; sales western superfine at $4 50@4 75; common extras, $5@5.50 Wisconsin extras at $5@5.75; Minnesota extras at $6@7 25; winter wheats at $6@6.50 for Ohio and Michigan; $6@6.75 for Illinois and Indiana; $6.50@7.25 for St. Louis; patent Wisconsin and spring wheats at $6.75@8.25; patent winter wheats at $6.75@8.25. CORN in moderate demand; sales at 59@61½c. for mixed and yellow. OATS dull; No. 1 and extra white at 48@50c. No. 2 white at 45@45½c. No. 2 mixed and No. 3 white at 43@44c. RYE at 90c. SHORTS, fine feed and middlings at $23@25. BUTTER—Choice Western creameries at 33@35c; choice ladle packed at 25@29c; fair to good at 22@24c. CHEESE. Choice Northern factory 14½c. per lb. fair to good at 12½@14c. and common 10@11½c; Western choice 14@14½c. fair to good 12@13c. common 9@10c. EGGS Eastern at 12@13c. Northern 12@12½c. Western 11½@12c. per doz. BEANS Northern hand-picked Pea at $1.70@1.80; do. do. Western at $1.70@1.75; do common $1.65@1.70; medium choice $1.45@1.50; common to good $1.30@1.35; Yellow Eyes $2@2.10; Red Kidneys at $1.65@1.75. Canada Peas 80c@$1.00 per bushel for common to choice. Green Peas $1.50@1.85. POTATOES steady. Houlton and Maine Central Rose 50@55c. Houlton Jackson Whites at 40c. Maine Central Jacksons at 38@40. Vermont Rose at 50 do. Jackson at 35@40. Peerless at 40@45, and Prolifics at 50@55c. ONIONS $4.25@4.50 per bbl. APPLES at $1.75@3.25 per bbl, according to quality. CRANBERRIES at $8@10.50 per barrel. SEEDS Calcutta Linseed is nominally $2.50@2.55 per bushel. Clover Seed at 6½@8c. per lb for Western and New York; Timothy at $3.75@3.85 per bushel; Red Top at $2.70@2.80 per bag; Canary Seed at $1.75@2.40, and American Linseed $1.50@1.55 per bushel. HAY AND STRAW first quality coarse Eastern and Northern hay at $15@17 per ton; poor and medium at $11@14. Rye Straw $20@22 per ton. HEMP American Hemp at $1.70@1.75 per ton for undressed $2.75@3. for single dressed, and $3.10@3.20 for double dressed. In Jute Butts sales of 8,000@10 bales on the spot and to arrive at 37-16c per lb. ASHES are steady with sales of Pots at 4½@5c. and of Pearls at 6@6½c. per lb. SALTPETRE is nominally 6½@6¾c. per lb; Nitrate of Soda is selling at 4½c. per lb cash.

Chicago.—WHEAT steady, with a fair demand; No. 2 Chicago spring at $1.11½@1.11¾ cash; $1.13¼ bid May; $1 11½ June; No. 3 do. at 99c.; rejected at 85c. CORN quiet and weak; fresh, 35½c.; regular, 32½c. cash and April; 36¼@36⅜c. May; 36⅝@36¾c. June. OATS easier at 26½c. cash; 30½c. May and June. Rye and barley steady and unchanged. PORK in fair demand but lower at $10 40 cash; LARD steady, with a fair demand at 6.92½c. Bulk meats and unchanged. EGGS at 9@9½c. BUTTER—The offerings are inadequate to meet the daily wants of the trade, and there is a pretty strong upward tendency for the better grades. Choice to fancy creamery 33@35c. ₱ lb; fair to good do. 30@32c.; fine to fancy dairy, nearly equal to creamery, 28@30c.; good to choice dairy, 23@26c.; medium to fair do. in shipping lots, 20@22c.; good to choice fresh roll 23@26c.; common to fair do, 19@21c. Low and common grades are scarce and nominal at 15@18c.; grease butter 10@12c. CHEESE—Good to choice full-cream cheddar 14@14½c. ₱ lb; part-skimmed of good quality 11@11½c.; full-skimmed 8@9c; low grades 6@8c. HOPS—A steady and firm market is noted, the demand being fair for the season. Good to choice New York state hops range at 38@40c. ₱ lb; fair do. at 35@37c., and the crop of 1878 at 12@16c. Olds are dull at 1½@3c. Common western are quoted at 18@25c., with choice nominal, as there are none in the market. SEEDS—This market was unsettled and lower for all kinds, as the offerings were liberal and there was but a limited demand from any quarter. Good to choice medium clover was quotable at $3.60@3.75 ₱ bushel; mammoth do. at $4; ordinary to prime timothy at $1.80@2.20; flax at $1.50 on a basis of pure, and Hungarian and millet at 60@70c. for good to prime.

Cincinnati.—WHEAT in fair demand, but at lower rate at $1.20. CORN quiet at 41c. OATS dull at 37@37½c. RYE steady at 80@81c. BARLEY stronger; extra No. 3 fall at 87@90c. PORK in fair demand $10.75@$11. LARD quiet at 7@10c. BULK meats dull; shoulders at 4c.; clear rib at $6.40c.; clear sides at $6.70c. BACON in fair demand; shoulders at 5c.; clear ribs at 7 1-8c.; clear sides at 7½c. BUTTER easier; choice Western Reserve at 27@28c.; choice Central Ohio at 23@25c. CHEESE was quiet and easy, new Northwestern quoted at 12@13c.; prime to choice factory, 13½@14c., and New York, 15@15½c. per pound. HOGS steady; common at $3.50@$4.25; light at $4.30@$4.50; packing at $4.25@$4.60; butchers at $4.60@$4.75. BRAN, SHIPSTUFFS, AND MIDDLINGS.—The market for bran has been active and firm at $15@$15.50 per ton in bulk on arrival, and $16 in sacks. Shipstuffs dull at $15@16. Middlings in good demand and steady at $18@23 per ton on track. SEEDS quiet and easy, clover seed closing steady at 7@7½c. per pound for jobbing lots. Timothy seed is selling from store at $2.70@$2.80 per bushel. Flaxseed in good demand at $1.30@$1.40 per bushel on arrival. BULLS.—The supply during the week was fair, and also the demand, and the market has ruled steady for all grades, at prices as follows:—Common to fair feeders, $2.35@$2.75, and fair to good bologna and butcher grades, $2.50@$3.25, some slop fed at $3.25@$3.50, and heavy shippers at $3.50@$4.00. MILCH COWS.—Supply during the past week has been rather liberal, and the market became rather quiet and prices easier, the range being as follows: Common, per head, $12@$30; fair to good, $25@$45, with some extra at $60@$65. VEAL CALVES.—Supply fair, and the market has ruled steady, and prices have undergone no special change, the range being as follows:—Common and large, $3.50@$4.50; fair to good light, $5@$6, with some extra at $6.25@$6.50. HORSES AND MULES.—Good horses scarce and prices advancing. $35@$100 for streeters: $140@$175 for draft horses and drivers; $150@$175; saddle horses, and stock in good demand. Southern chunks, $50@$80. Mules, aged four to eight years, 15¾ to 16 hands, $110@$140; 15 to 15¾ hands, $90@$110; 14 to 15 hands, $60@$90. Aged broken mules, in good order, in demand. Dull sale for young unbroken mules.

Detroit, April 2.—WHEAT dull; No. 1 white Michigan selling at $1.18½; May, $1.18½; June, $1.17¾. CORN dull and unsettled; mixed at 43@43½c. OATS dull and unsettled; mixed sellers at 36½c.; No. 1 white nominal. CLOVER seed lower; prime at $3.75 bid.

Indianapolis, April 2.—WHEAT quiet; No. 2 red at $1.15½@$1.17½. CORN weak at 35@36. OATS dull and lower at 31@34c. HOGS quiet at $3 50@$4.50.

Louisville.—WHEAT steady at $1.12@1.18. CORN steady; No. 2 white at 42@42½c. OATS easier; No. 2 white at 33½c.; do. mixed at 37½c. RYE easier at 82@83c. PORK dull and lower at $11 50. LARD quiet; prime steam 7c. BULK MEATS quiet; shoulders 4½c.; clear rib 6¾c.; clear sides 6.60@6.85c. bacon easier; shoulders 4¾c.; clear ribs 7.20c.; clear sides 7.50c. Sugar-cured hams at 9@10½c. BUTTER—Prices are tending down. Common to fair country at 14@18c.; fair to prime at 18@22c.; and choice to fancy at 23@24c.; Western Reserve at 25@27c, and Western creamery at 36@38c. MILL OFFAL active at ₱ ton in bulk: bran $13; shipstuff $15; middlings $18.50 HAY prime to choice timothy $16 50@17, and mixed at $12@14 ₱ ton on arrival. STRAW $10 on arrival. FIELD SEED moderately active: delivered from store: timothy $2.80; orchard grass $1.40; red top 65c.; clover common red at $4.25, and sapling at $4.75; blue grass clean 55c.; extra clean 65c. FLAXSEED $1.10 ₱ bushel on arrival. HEMP Single dressed 13@14c. ₱ lb, and double dressed 15c. WOOL medium at 10@45c. in grease, and tubwashed at 65@68c.

New Orleans.—Flour dull, weak; superfine at $4.50@4.75; double extra at $5@5.25; treble extra at $5.50@5.75; high grades at $5.75@6 35. CORN quiet at 52@54c. CORN MEAL dull at $2.20. HAY quiet; prime at $16@18; choice at $20@22. PORK quiet, but firm at $12. LARD steady, fierce at 7@7½c; keg at 8c. BULK MEATS firmer; shoulders at 4¼@4¾c.; clear ribs, 6½c.; clear sides at 6¾c. BACON quiet; shoulders, 4¾@5c.; clear ribs, 7@7½c.; clear sides at 7¾@7¾c. Sugar cured hams in good demand; canvassed at 9@10¾c. Cotton firm; middling, 12½c.; low middling, 12¼c.; good ordinary, 11¾c. Weekly—Net receipts, 21,093 bales; gross, 22,756; exports to Great Britain, 21,234; to the Continent, 2,472; coastwise, 4,812; sales, 21,100.

Milwaukee.—WHEAT to-day opened steady, declined ¾c. and closed firm; No. 1 Milwaukee, hard at $1.18; do soft at $1.15. No. 2 Milwaukee $1. 10¾; No. 3 do at 99½c. No. 4 do at 95c. rejected at 87c. CORN weak at 31½c. for No. 2. OATS quiet at 29c. for No. 2. RYE dull at 70c. for No. 1 BARLEY firm. No 2. Spring at 59c. cash. PROVISIONS quiet. Mess pork firm at $10.35 cash. LARD. Prime steam at $6.95c. LIVE HOGS dull but steady at $4.20@4.40. Freights—Wheat to Buffalo 7c.

Philadelphia.—WHEAT firm $1.35¼ bid and $1.35¾ asked for No. 2 red, April; $1.34¼ bid and $1.34¾ asked for May; $1.31¾ bid and $1.32 asked for June; $1.17 bid and $1.20 asked for July. CORN firm 52½c. bid and 52¾c. asked for sail mixed, April; 48¾c. bid and 49c. asked for May; 48¾c. bid and 49c. asked for June; 49c. bid and 49¾c. asked for July unsettled and irregular; closing, however, with a firm feeling; western mixed at 40c; No. 3 white 42@43; No. 2 do 48c. and No. 1 do at 44c. BUTTER firm, with a good demand; creamery extra at 35@37c; Bradford county and New York extras nominal, at 32@34c; do fall at 28@30c; Western Reserve extra at 29@31c; do good to choice at 24@28c; rolls scarce and firm; Pennsylvania extras at 23@25c; Western Reserve extras at 25@27c. EGGS easier; Pennsylvania at 12½@13c. western, 12c. CHEESE firm; New York factory at 14¼@14½c, western full cream at 14@14½c; do good at 13½@13¾c. Ditto half skims at 12 to 13 cents. FEED in good request under a light supply, with sales of Bran at $22.50 and white middlings on track at $26. HAY AND STRAW.—Rye Straw scarce and wanted. Hay at $17@18; prime baled North Penn. Timothy do. at $17@17.50 and Western and New York State do at $15@17 as to quality. Rye Straw at $21@22; wheat do at $12 and oat do at $13. SEEDS—Clover neglected and mostly nominal at 6@6½c. for good to prime new and 5@6c. as to quality for old. Timothy was dull at $3. Flax was scarce and quoted nominally at $1.70@1.80.

ST. LOUIS.—FLOUR lower to sell; family at $5.40 asked, cash. WHEAT unsettled and lower; No. ; red fall at $1.20½@$1.21 cash; $1.17½@$1.18¼ May $1.11@$1.11¾ June; 25@96¼c. July; No. 3 do. at $1.15; No. 4 do. at $1.8¼ bid. CORN at 34@34¼c. cash; 34@34¼c. April; 34¾@37¾c. May; 34 5-8 35c. for June; 35¼35 7-8c. July. OATS at 32@32¾c. cash; 32@32¾c. May; 32½@32¾c. June. RYE nominally 70c. BARLEY dull; Ohio fall at 90c@$1. PORK lower at $10.70@$10.75, cash; $10.87½@$10.90 May. LARD nominal. BULK MEATS lower; shoulders at $3.75@$3.80; clear ribs at $6.25@$6.30; clear sides at $6.45@$6.50c. Bacon lower; shoulders at $4 40c.; clear ribs at 7c. bush.: clear sides at $7.20. OATS, 15,000; wheat, 8,000; corn, 25,000; oats' 2,000.

Toledo.—WHEAT steady; No 2 red winter spot at $1,23; April at $1.23½; May at $1.23¾; June at $1.20; July at $1.08; No 3 red Wabash at $1.17. CORN firm; No. 2 spot at 39¾c; May at 40c. OATS steady; No. 2 spot at 33½c; May at 34c. CLOVER SEED firm and in fair demand; prime at $3.70.

Fertilizers.

Bone ash is nominally quoted at about $22 per short ton, on the basis of 70 per cent. phosphate of lime. Bones quoted at $22 50@$23 for Texas and South American mixed, and $25@$26 do. for shin and shank bones. Refuse bone black at $21@$22 per short ton on merit. Sulphate of ammonia at 3½c. ₱ pound on the basis of 26 per cent. of ammonia. Dried blood at $2@$2 30 per unit of ammonia short ton. Ammonia, axoline, etc., for the former at $2 62½@$2 75 per unit of ammonia, and about $2 25 do. for the latter, all short ton. Nitrate of soda, 4½c. Saltpetre, crude 6¼@6¾. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent. ammonia, $35@$40; dissolved bone black, 15 to 17 per cent. of soluble phosphoric acid $30@$35; dissolved bone 13 to 14 per cent. of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent. of soluble phosphoric acid, 3 per cent. of potash, 3 per cent. of ammonia, $40@$45; German potash salts, 25 per cent. of sulphate of potash, $15@$18 per ton; muriate of potash, 80 percent. 2@2½c per lb. land plaster 7.50; dried blood, 10 per cent of ammonia. $35@45 per ton; fish guano dry and ground like. 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $45; unground fish guano, 6 per cent of ammonia, $25; castor pomace; $19@24; sulphate of soda ground, and in barrels, $15@18 per ton; sulphate of ammonia 4½c. ₱ lb; bone black, 70 per cent of bone phosphate, $30@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $20 per ton; No. 1 Peruvian guano, 10 per cent ammonia, standard, $55 per ton; Lobos $16 per ton; rectified $65 per ton; guaranteed $56 per ton; nitrate of soda, 5¼@5½ ₱ lb.

FORRESTER'S potato manure, $47.50; cabbage, $50; oat, $47.50; lawn dressing, $47.50; turnip, $52; grass, $45; hop, $47.50; strawberry, $42.50; wheat, $45; rye, $47.50.

STOCKBRIDGE'S manures quoted: Potato, $50; cabbage, $50; strawberry, $40; corn $45; seeding down, $40; orango tree, $35; onion, $50—per ton each.

MAPES'S complete manures for clay soil, $25.50 per 1,000 lbs.; for light soils $23.50 per 1,000 lbs.; "A" brand for general use, $20 per 1,000 lbs.; fruit and vine, $18.50 per 1,000 lbs.; cabbage and cauliflower, $23.75 per 1,000 lbs.; corn, $24.50 per 1,000 lbs.; potato, $24 per 1,000 lbs.; asparagus, $25.50 per 1,000 lbs.; gypsum, Nova Scotia, ground, ₱ ton, $7.50.

BOWKER'S "Hill and Drill Phosphate" $45; Bowker's Phosphate $40 ₱ ton, cash: Bowker's "Food for Flowers," 35c. ₱ package and $3 ₱ doz.; Bowker's "animal meal for fowls," $2 50 per cwt.; Ground oyster shells, $1 ₱ cwt.

BAUGH & SONS' prices for goods delivered at depot or boat, in bags and in 2,000 lb lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36; Baugh's raw bone superphosphate $40; Baugh's $25 phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent. of ammonia, $48.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, April 3, 1880.

BEANS AND PEAS.—The demand for beans is only about strong enough to support tame rates. The season is advancing and the call may relax at short notice, and holders are free sellers of all grades off from extra. Black beans begin to find a market abroad. Wis. green peas unchanged; $1.75@1,80. The lower rates for Southern B. E. peas do not stimulate trade; 2 bushel bags quoted, $1.90@2. The crop of green peas for 1879 was about 25,000 bbls.: three-quarters of which was handled in New York. Marrow beans, prime, $1.55@1.57; other, $1.40@1.50; medium, prime, $1.40@1.42; other, $1.30@1.35; pea, $1.45@1.65; white kidney, $1.60@1.75; red do., $1.40@1.50; black or turtle soup, $1.95@2. California lima, $5.

Receipts of beans for week, 5,500 bush.: exports, 1,450 pkgs.

BEESWAX.—There is a small business only, with 24 to 25 quoted for Western and Southern.

Exports for week, 17,042 lbs.

BUTTER.—Buyers are directing their attention chiefly to new. This class of stock is variable in quality as supplies increase, and prices are somewhat irregular, not more so, however, than is customary at this season, and at a time when scarce good old creates a hurry on the part of spring shippers to realize. As before, choice express lots sell upon arrival, and some marks ahead. Poor lots—and it is a short jump from fine to low quality—are the more difficult with buyers the longer they miss sale. The tone of the market for new is lower. Old State is quite closely concentrated and is going out well quality considered. The range for State is 23@29c. for useful to best; 20c. very poor; for Western poor to prime 20@26c.

New butter, creamery choice, 35c.; fair to prime, 30@34c.; poor 25@28c.; State, pails and tubs, choice, 30c.; other 25@28c.; imitation Western creamery 25@30c.; fresh Western factory or dairy 27@28c.

Receipts for week, 15,780 pkgs.; exports, 1,630 do.

CHEESE.—The market is without marked change. There is more doing on home trade account; export demand is very slack. The readily diminishing supplies exert firmness. Prices are:

Quotations—State factory: best at 14¼@14½c.; good to prime at 13¾@14¼c.; fair to good at 13¼@13½c; do. poor at 12@12¾c. State farm dairy: good to prime at 13¾@14c.; fair to good at 13@13½c. Ohio factory: Cheddar, fine, 14c.; do., fair to good, 12¾@13¾c.; flat, fine, 14@14¼; flat, good to prime, 13@13¾c.; flat, fair to good, 12¾@13c.

DRIED FRUITS.—In apples there is a good demand for evaporated lots, for which prices are very strong. Peaches are steady in price and demand fair. Small fruits are quiet. N.C. apples, fair to good, 7¼@8½c.; choice, at 9@10c.; fancy at 10@10½c; Virginia, at 7@8c.; New York state quarters sliced at 7¼@8¼c.; patent tent evaporated, choice in cases, at 14½c.; good and prime at 13¾@14c.; evaporated, choice sliced at at 13@13½c., and good to choice do. at 12@12½c. Evaporated peeled peaches, good to choice, at 27@28c.; North Carolina peeled, fancy, at 20c.; choice old at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7½@8c.; do. quarters at 7@7½c. Pitted cherries at 15@18c. Blackberries nominal at 14c. bid. Raspberries at 27@28c. Plums at 17@18c.

Exports for week, 61 bbls. apples.

COTTON—Has been in active demand and closed firm at for April, 12.79@12.80c.; May, 12.91@12.95c.; June, 13.09@13.10c.; July, 13.20@13.21c.; August, 13.27@13.28c.; September, 12.91@12.96c.; October, 12.13@12.15c.; November, 11.77@11.80c.; December, 11,74@11.76c.

EGGS.—Receipts for the week, 17,780 bbls.; do. last week 21,023 do. Easter week did not carry off the amount of stock calculated upon; and continued free receipts added to the unsold supply of last week, have kept prices low. If receipts moderate, dealers feel that prices will not further decline. Goose and duck eggs have fallen seriously. Southern eggs not attractive. The South must improve their breeds of hens.

Near Points, ₱ doz., 12@12½c.; State and Penn. 11@11½c.; Western, fresh, 11c; Southern, 10@10½c.; under grade lots, 9@9½c.; duck, 18@20c.; goose, 25@30c.

FLOUR.—The receipts are very fair, and with the lower tendency of wheat, prices have declined and closed weak. Latest prices are $4.20@4.90 for poor to choice superfine State and Western; $5.00@5.25 for inferior to good extra do., odd lots and lines; $5.25@5.50 for very good to very choice do.; $5.00@5.25 for inferior to good shipping extra do., and $5.25@5.50 for good to very choice shipping extra do.; inferior to very good white wheat extras, $5.45@6.25; very good to fancy do. at $6.25@7.50; red and amber winter wheat, inferior to fancy trade and family, at $5.40@7.25; round hoop Ohio, $5.15@5.60; and trade and family brands of do. at $5.60@7.25, the latter rate for very choice; St. Louis at $5.50@6.25 for inferior to very good extra; $6.25@7.50 for very good to very choice; Minnesota clear, inferior to fancy, at $5.10@6.50; Minnesota "straight," inferior to very fancy, at $5.65@7.50, and patent inferior to fancy at $6.25@8.50; unsound stock at from $3.25@5.75; city mill extra at $6.00@6.50 for fair to fancy West Indies; do. for England, $5.00@5.40 for poor to choice; do. trade and family extras, $6.50@7.25; do. for South America, $6.25@6.75; No. 2 at $5.00@4.00 for poor to very choice.

GRAIN.—The exports of wheat the past week have been 840,000 bush; large receipts and easier Liverpool markets have tended to lower prices. Latest sales were of No. 1 white at $1.31½@1.31¾; do., April, at $1.31¾@1.32; do., May, at $1.29¾@1.31¾; ungraded white at $1.30; No. 2 red at $1.35¾@1.37; do., do. April option, at $1.36@1.37; do., May at $1.31¾@1.35½; ungraded red at 1.33¾@$1.34; mixed winter at $1.33@1.33¾; No 2 Chicago spring at $1.27; No. 2 Northwest, May, at $1.26¾@1.27¾; No. 3 spring at $1.20@1.21¾. Rye quoted at 90@92c. for State. Corn has been in very large receipt and has ruled much lower, leading to an active export business, and the shipments for the week reach 1,350,000 bush. Latest prices are of New York No. 2, regular inspection, at 54@54½c.; do., April, at 53¾c.; do., May, at 49c.; do., June, at 47¼c.; New York steamer mixed at 53¾@54c.; ungraded mixed Western at 53@54¾c.; No. 3 at 53¾@53¾c.; low mixed at 53¾@54c.; steamer mixed at 51¾@53c.; No. 2 white at 56¾@57c.; steamer yellow at 54¾@55c. Oats are in active demand and closed firm; latest sales are of No. 1 white at 44@44½c.; No. 2 white at 41¾@42c.; No. 3 white at 40@40¼c; New York No. 1 at 40c. bid.; New York No. 2 at 40@40½c.; do., May, at 39c.; New York No. 3 at 39¾@41c.; ungraded white Western at 41@45c.; ungraded mixed western at 39@41c.; white State at 44@46c.; mixed State at 42½@43c.; No. 2, May, at 49¼c,

HAY AND STRAW.—Receipts are larger, but demand is very fair, and prices not showing important change.

Shipping hay quoted at 70c.; retail lots at 75@80c.; for medium, and 85@90c. for prime; clover at 55@60. Straw at $1@1.05 for long rye; 65@70c. for short rye, and 50@60c. for oat.

Exports for week, 1,537 bales.

OIL CAKE—Western is quoted $30 ₱ ton.

POULTRY AND GAME—Dressed poultry brings good prices for the small wants of the market. Frozen at the moment sells quicker than fresh dressed when prices are about equal.

Turkeys, choice, frozen, small 15@16c.; small, fresh 15c.; medium, 13@14c.; fair to good, small, 12@14c.; large, 10@12c.; Phila., dry-picked, 14@15c.; capons, Phila large, 21c; small, slips, 16@18c.; chickens, winter large, Phila., 22@23c.; Phila. small, 24@25c.; spring, 30@35c.; fall, Phila., d.-p., 16@18c.; yearling, Phila., d. p., 13@14c.; N. J., ₱ lb, 13@14c.; fowls, Phila., d.-p., 12@13c.; N. J, good to prime, 12@13½c.; State good to prime, 11@12c.; Western, good to prime, 10@11c.; poor to fair 9@10c. Ducks, Phila d.-p., 19@21c.; N. J. 17@19c.; State, 15@18c.; Western 14@17c.; Western, poor, 10@12c.; squabs, white, ₱ doz., $3.50@4.00; dark, $1.50@2.50. Live poultry in liberal supply and easy sale fair. Spring chickens, 60c@$1.00, pair; fowls, 9@10c.; roosters, 5@6c.; ducks, 60c.@$1.00; geese, $1.75@2; fancy N.J. State and Pa., $1.50@1.75; Western, mixed, $1.25@1.50, Western, white, 75c.@$1.25; pigeons, 35@45c. such items of game as remain have lost their attraction and prices are easy; ducks regarded well sold at this late date at quotations. English snipe, $1.25@1.50. Wild pigeons, $2; canvas back ducks, Havre de Grace, $1.75@2, other, 75c.@$1.25; redhead, 50@75c.; Mallard, Western, 50@55c.; Southern common ducks, including teal and Mallard 20@40c.

PROVISIONS.—Hog products have ruled weak and fairly active; Mess pork closed at $11.10 for new, and $10.90 for old; $11.30 for new April; $11.32½@11.35 for May and $11.40 for June. Bacon at 7¾ for long clear and 7¾c. for short clear. Lard—Western steam at 7.57½ for spot, 7.55@7.57½ for April; 7,57½@7.60 for May, and 7.62½ for June. Stearine at 7½c. for Western. Tallow at 6¾ for prime.

Receipts for week, pork, 1,550 bbls.; beef, 296 pkgs.; brown and cut-meat, 34,870 pkgs; lard 18,970 pkgs. Exports, pork, 3,858 bbls.; beef, 2,600 pkgs.; bacon and cut-meats, 15,256,254 lbs.; lard, 8,235,570 lbs.

VEGETABLES.—Exports of potatoes for week 3,078. Potatoes very dull with a large supply to be yet moved. Prices weak. Southern truck has a more extended sale, but prices have to favor new buyers.

Potatoes, Bermuda, new ₱ bbl., $6.50@8.50; Florida, new, prime, ₱ bbl. $5@7; poor to fair $2.50@3.50. E. Ross, N. S., bulk, ₱ bbl. $1.35@1.37; Maine, per d.-h. bbl., $1.75@1.87; State do. $1.25@1.50; State, in bulk ₱ bbl., $1.25@1.50; prolific N. S., per d.-h. bbl., $1.25@1.37; do., in bulk ₱ bbl. $1.25@1.37; Mercer, Nova Scotia, bulk, per bbl., $1@1.12; Chili red, N. S., bulk, ₱ bbl., $1@1.12; Peachblow, State, white, per d.-h. bbl., $1.75@1.87; do., State, red, per d.-h. bbl., $1.50@1.62; Snowflake, State, per d.-h. bbl., $1.75@2; Peerless, State, do. $1.00@1.25; do., bulk, ₱ bbl., $1@1.12; Jersey, bulk, do., 50@75c.; Sweet potatoes, S. J'y and Del. ₱ bbl. $3.00@3.50. Fla. tomatoes, ₱ box, 50c.@$1.00; Nassau, 30c.@$1; Bermuda, 60c.@$1; do., beets, new, do. ₱ cr. $1.50; Fla. ₱ crate $1.75@2; cucumbers Fla. ₱ crate $3.00@6; string beans, Florida, round ₱ crate, $2.50@3; flat ₱ crate $2@2.50; green peas, Ch'n and Sav., small per crate, $1.50@1.75; Ch'n. and Sav. $1@1.50; Asparagus, Ch'n., per doz. bchs. $7.00@9. kale, Norf., ₱ bbl., 1.00@$1.75; Baltimore, per bag, 90c.@$1; spinach, Norf., per bbl., $2@$2.75; Baltimore, $1.00@2; radishes, Nfk round ₱ 100 bunches 75c.@$1; do. long per 100 bunches, $1.00@1.50; squash, marrow, per bbl., $1.50@1.75; Hubbard, $2.50@2.75; cabbage, Ch'n and Sav. ₱ bbl. $3.50@3.75; Fla., new, per bbl., $3@3.50 do., old, per 100, $5@10; onions Bermuda, new ₱ crate $3.25@3.50; white, ₱ bbl. $4@6 yellow, $3.25@3.50, red, Eastern, $2.75@3.25; red, Chester, $2.75@3.25; beets, Jersey, $1.50@1.75; turnips, Russia, 62@75c.; carrots, $1@1.50. Hothouse cucumbers, selected, ₱ doz., $4.00; other per doz. $1@2; radishes, ₱ 100 bunches $1@2.50; rhubarb $4@6; lettuce, extra ₱ doz. 37c.@$1; fair to good, ₱ doz. 25@75c.; carrots ₱ 100 bunches $3.50@4.

SEED—Clover is moderately active and easy; sales at 6¾@7c. for Western and 7¼@7¾c. for State. Timothy is dull at $3.

TOBACCO.—The business is entirely in small lots on home trade account, with prices without change.

WOOL.—There is more activity and a strong market. Latest sales are of

X and above Ohio at 55@56c.; XX do. at 59@60c.; common and ¼ blood do. at 55c.; Indiana tub-washed at 65c.; fine State at 53c.; medium unwashed Wisconsin at 47c.; fall do. at 24½@36c.; California pulled at 45c.; fall Texas at 32@33c.; spring do. at 36@37c.; scoured Colorado at 78@82c.; Oregon at 45c; foreign carpet noils at 22c.; scoured East India at 53@60c.; 50 bales Cape at 35@37c.; Montevideo at 40@41c.

LIVE STOCK MARKETS

NEW YORK, Saturday, April 3, 1880.

BEEVES.—Receipts for week, 12,189 head; do. last week, 11,235 do. The absence of Jewish buyers owing to a special holiday, made a marked difference in the late attendance of the market, and with few purchasers, sellers had to seek sales. This, of course, put the market in buyers' favor, compared with Wednesday last. It is estimated that many lots lost $50 to $80 per car; common and light stock dragged badly. Colorado still-fed brought 9@9¾c.; common to fair steers, 8@9c., dr. 55@56 lbs.; good to prime, 9¼@10c.; dr. 56@57 lbs.; Some extra heavy cattle for export use cost 11@11¼c., dr. 56@57 lbs. The shipment abroad for the week has been liberal and varied.

COWS AND CALVES.—The demand is only fair. About one-quarter of the supply sold at a range of $30@50. When the latter price is exceeded the cow is worth quite as much at home. A few common State cows have sold at $25.

VEAL CALVES.—Heavy receipts of live have made low average sales; 7¼c. seldom obtained. Live calves, N. J. and Bucks Co., choice, 7¼@7½c.; prime 6¾@6¾c.; State, choice, 6¾@6¾c.; prime, 5¾@6c.; fair to good, 5@5½c.; poor, 4@4½c.; Mt. Holly, good to choice, 6@8c.; buttermilk, 3@4c.; grass, 2½@3c.

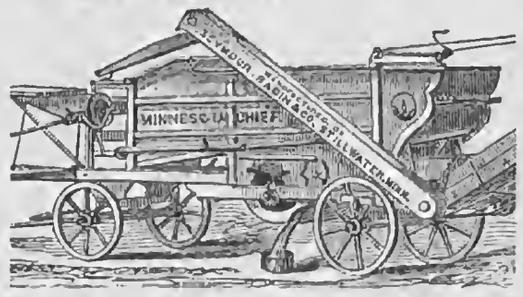
HOG Dressed, N. J., choice, 10c., good to prime, 8¾@9c.; State, good to choice, 8¾@9c.; fair to good, 6@8c.; poor to fair, 4@6c.

SHEEP AND LAMBS.—Receipts for week, 22,160 head; do. last week, 21,134 do. There has been a daily over-stock, and the dull market has had some extra depression, owing to a fall in wool skins. Common to prime unclipped sheep sold at 6@7¾c.; choice wethers only brought 7¾c., and then had been bought ahead. Yearling lambs, 7¾@8¾c.; spring lambs, per head, $4@6. A car-load of Ohio clipped sheep sold at $4.60.

SWINE.—Receipts for week, 31,018 head; do. last week, 27 791 do. Market bare of live; nominal quotations, 4¾@4¾c.

Country-dressed pork, light, 6¾@7¾c.; medium, 6¾@6¾c.; heavy, 6@6¾c.; city dressed, 6@6¾c. Pork tenderloins, 10c.

MINNESOTA CHIEF!



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It is not a vibrator, neither is it an apron machine, but the best points of both are combined, with new and original features of its own. It is wonderfully simple in its arrangement. It is admirably perfect in its threshing and separating qualities. It saves all the grain, and cleans it ready for market. It runs easily, is constructed durably, is finished beautifully, is the most economical, least expensive, and altogether the most satisfactory machine in the market.

It will handle wet grain as well as dry. In threshing Flax and Timothy it has no equal, threshing and cleaning both as well, and nearly as rapidly, as wheat, and requires no change except the sieves. It has more square feet of separating and cleaning surface than any other machine made, and cannot be overloaded. It is both over and under blast at the same time.

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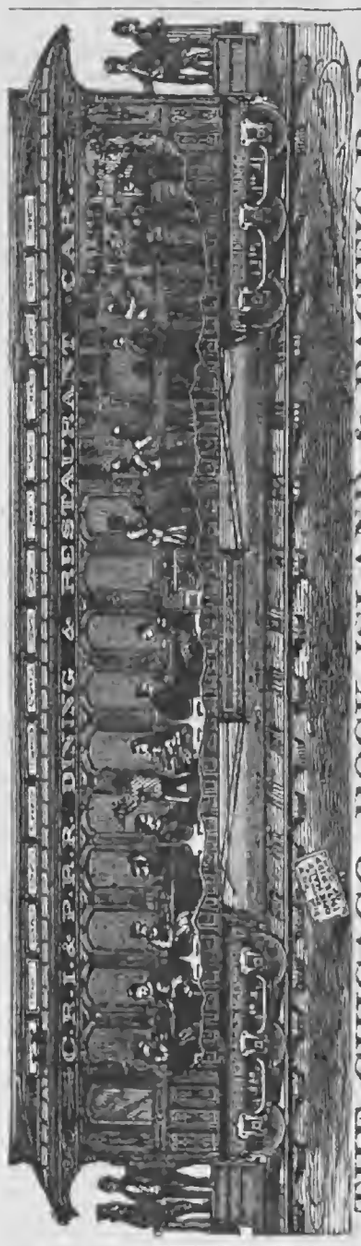

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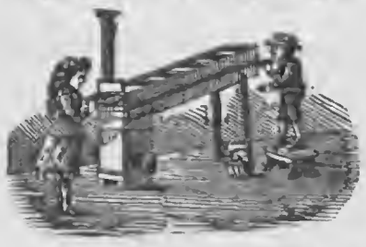

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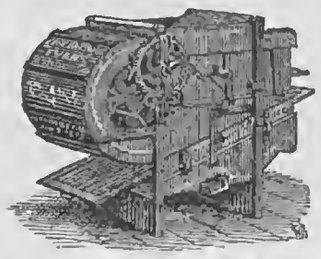

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LOWEST CASH PRICES for Goods of Guaranteed Standard.

SULPHATE OF AMMONIA (full strength, 25 per cent.) A SPECIALTY.

We will fill orders for Chemicals to make Home-Made Fertilizers by any formula our customers desire to follow, and we will take pleasure in furnishing estimates of cost on application.

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For 1880.

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Now that corn, and other farm produce is bringing such good prices, we anticipate that farmers will invest still more largely in our fertilizers.

Besides the Stockbridge Manures, we manufacture several high-grade Phosphates, and deal in first-class chemicals of all kinds. Farmers who intend to use Fertilizers of any kind, should

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DISSOLVED BONE.
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ANALYSIS—Ammonia, 2½ ₱ ct.; Sol. Phos. Acid, 10 ₱ ct.; Sulph. Potash, 3 ₱ ct.

The above Analysis is GUARANTEED, and we will forfeit the Goods if not as represented.

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Reading for the Young.

REMINISCENCES OF A LITILE GIRL.

MRS. M. J. GALPIN.

CHAPTER IV.

For many weary months they traveled with the surveying expedition, passing through wild, barren and beautiful scenery alternately, now staying by some ruined castle (the abode of some former Irish king), whose walls were festooned with English Ivy and numerous other vines of varied hues; the neglected gardens with here and there the flowers peeping forth, and anon a rose-bush climbing over the ruined walls, all betokened neglect and despair. The former glory had departed and naught remained save the moldering tower and a legendary name. Now and then some old and faithful retainer, who had followed the fortunes of his master through a life-time, might be found living in a little cottage close by, and from this class of people, being fond of story-telling, one could hear the most marvelous tales as to the fame in bygone days of the lord of the castle, before the evil days came, when England interfered and put an end to all their lordly possessions and appropriated all their wealth to fill her own capacious "maw."

I presume nearly all my readers have heard of "Blarney" as attached to the Irish, some being more proficient than others in that accomplishment. Blarney is a village situated about four miles from Cork; in this village is an old castle on the top of which is a large, flat stone, that whoever kisses it, so the legend runs, will always have the gift of an "oily, ready" tongue. The castle is famous in song. The first line in one runs thus:

"The groves of Blarney they are so charming."

I find the following account of the erection of Blarney Castle and give it, as it may interest my readers: "It was built in the 15th century by Cormac McCarthy, surnamed 'Laider,' or the strong. Their ancestors had been chieftains in Munster long before the English invasion. Their descendants, as lords of Muskerry and Clancarty, retained their peace till 1659, when their vast possessions were confiscated and all eventually fell into decay." The scenery around the castle is delightful, and every nook and corner is hallowed by legendary lore. Enchanted cows that belonged to the Irish lords may be seen at night, the story goes, disputing with the cows of the present owners for the luxuriant pasturage, and many an earthly bull has been killed and worsted in the encounter with those from the spirit land. The rings of the "fairies" (so they tell) may be seen any moonlight night from early summer till the end of harvest.

The ready wit of the Irish is an inborn talent, and can be found in the "bogtrotter's" cabin as well as in the homes of the rich. Nearly every one has an aversion to bright red hair, and the Irish always call a person of that color "foxy-head," when the reply comes instantly and without thought, "May you never see the dyer." A gentleman asked a little boy once what made them have so many mountains in Ireland, when he replied, "shure whin they wor makin the world, and they cum to Ireland, they had lots to spare, they just set it down here and there, so as to be handy if they should want it again." Then they tell of the first O'Donaghue, when he was a "slip of a boy,' he was sitting in his nurse's cottage, when she set up a "screech" that "the O'Sullivans were staling the cattle, so up he gets and pulls an ould sword out of the thatch and goes and kills every mother's son of the thaiving blackguards." I wonder if any of my little readers have ever read or heard of an Irish fair. Like fairs of any kind, they are lively institutions, full of fun and originality of character. You will see all grades of people from the lord of the manor in his elegant "turnout" to the poor mendicant begging for alms. Whiskey and fun flows freely. The country people from far and near flock to the fair, some in jaunting cars, some on foot, and some riding on the beast they may want to sell. There is a useful little animal used as a beast of burden in Ireland called the ass (now don't laugh); it occupies there about the same position that the mule used to in the South before the war. They are not much larger than a Shetland pony and some say they are docile and easily managed; but when they become old, like everything in life they are not of much value, and this gives Pat a chance to show his native wit. Taking his old, broken-down animal in hand he proceeds to fix it for a sale; he shines its gray coat, gives it a good feed, and taking his station in the horse market, he cries out its value, enumerating all its good qualities, and putting it through its grand accomplishments. Now this deceitful fellow sometimes carries in his hand a nail, so hid that the buyer cannot see it, and when he wishes to show what a lively ass it is, he strikes it with his hand, of course pricking the poor beast with the nail. The ass jumps and prances wildly under the pain, but smart Pat is quite innocent and says, "whoa! there now, ye wild baste; shure, it's nobody can howld ye at all, at all; look at him, will ye, caperin' round like a young filly; begorra, it's me heart is sore trying to howld ye."

Sometimes a man of the medium or lower class will wear all the coats he has, at one time on his back, while at the fair, and when "for love he knocks you down," he takes one of these garments and hauling it after him, he dares any man that wants a fight, to "step on that coat tail"—the offer is generally taken up, as an Irishman loves a fight as well as he does to eat; then there is a general melee, as the factions of both combatants take sides and the fight becomes general until the priest appears and restores order. But it would take too much space to tell all the funny aspects of the fair. In song, rhyme and poetry the Irish stands foremost. you have no doubt read many a funny Irish piece or song. I now call to mind one about a marriage, of which the first verse runs thus:

"'Twas a fine summer's morning, 'bout twelve in the day.
All the birds 'gan to sing, and the asses to bray,
When Paddy the bridegroom and Norah the bride
In their best bib and tucker set out side by side."

I only wish I could let my little readers hear the jolly air or tune of this song, it would do more to cure sickness than all the pills in the doctor's shop. For love making Paddy stands without a rival. He will use more "blarney" and persude his lady love that the moon is made of green cheese, quicker than any other man under the sun. But after marriage, it is not seldom that he uses his fists to his wife. Yet such an anomaly is woman's nature, that if some well-meaning person interferes in these conjugal rows, he is sure to be whipped by both of them for his kindness.

But how far have I wandered from my subject! I have thus deviated from the main track, to relate what might be of interest to my little friends, as I love to please the children. The memory of my own childish years is still as bright as if it were but yesterday, and how often I remember sitting on the stool at uncle's feet and hear him relate wonderful stories of the "banshee," the "pooka," or adventures of the "fairies" in some sylvan glen. The surveying expedition was long and wearisome, but Uncle Tom by this time had entered the office of the civil engineers as draughtsman, and being, as I said before, a beautiful penman, he commanded praise and good wages for his time. We will now leave them, and in my next chapter we will meet at the famous "Lakes of Killarney," the most beautiful and romantic in the world. Perhaps you'll think my little heroine is never coming, but ere long you will make her acquaintance.

LETTERS FROM THE COUSINS.

UNCLE MARK:—I have not forgotten you although I have not written in a long while. I have been very busy all winter in school and have neglected writing until now. My plants are doing finely this winter and I must say I have not seen any look so well as mine. I had a little Begonia leaf given to me in the fall. I put it in a bottle of water where it rooted, and it has now four leaves and one coming up through the dirt beside it. I have a Calla and a few other plants in a southeast window where they get plenty of light and sun.

I wish the cousins would tell of their pets as well as plants. I have got some pets I think everything of. They are a pair of canary birds and they are quite tame. I got them for a Christmas present. Don't you think it was a very nice present, Uncle Mark? I have a pretty hanging basket and a big ivy that covers one window. It is so twined around the basket that I think I shall have to cut it off in the spring. My window garden is very pretty, there are so many different kinds of plants in it and some of them are about a foot high. I must thank you for the seeds you sent and hope we shall have good luck with them. Father had a large package sent to him from Washington about the time yours came, so we will have quite a time experimenting. No more this time for I believe you send all long letters to the waste basket. Sincerely yours,

Onida Co., N. Y. CLARA WOOD.

DEAR UNCLE MARK:—I do not often see letters from this part of the "Badger State," and have been thinking for some time I would like to join the company of cousins. Will you accept another member? Am going to try gardening this year on a small scale. We live on a farm so I have all the room I want. Don't believe I would like to live in a city. I have several kinds of house-plants. Does an Amaryllis require more heat and moisture than Geraniums? What kind of treatment does a Calceolaria want to have it blossom well? Is Sweet Alyssum easily grown for hanging baskets? I am afraid you will shake your head and say, "too many questions for the first time." Should this be accepted I will write again.

Sheboygan Falls, Wis. MYRTLE.

[The Amaryllis does need a somewhat warmer temperature than Geraniums. Calceolarias are grown for winter blooming. Seed can be sown in the fall. Give the plants rich soil, and change to larger pots several times till they are in five-inch pots. Alyssum may be used for baskets.—U. M.]

DEAR COUSINS:—I see a good many new cousins' letters in the RURAL, and while I enjoy reading their letters, and hope they will write often, I would like to see some from our old time friends. What has become of them all anyway? I read some time ago that Madcap Mollie was keeping house. Now Mollie I have been helping to keep house, too; and although I know it keeps a person busy, I think you might take time to write your cousins a letter once in a while. And our Swiss cousin!—did the briny ocean swallow him before he reached his home. If it did not I wish he would write and tell us about his voyage, and some more about that country. We received the seeds from the RURAL all right, and I am going to try and raise some flowers from them. I did not succeed very well with those we received last year; only four kinds grew, but I think it was my fault instead of the seeds'. I am in hopes that I will succeed better this year.

Crawfordsville, Iowa. NELLIE WILDWOOD.

UNCLE MARK:—We have received our Rural free seeds all right. I put the Magnolia seeds in sand and will plant them as soon as the ground gets warm enough. I have some flower seeds planted in pots in the house, and some are coming up. Papa has had my beds all spaded up and is going to fill them with leaf mold from the woods. I have 18 different kinds of house plants; they are all doing nicely now. Uncle Mark, will you please to tell me where and how I can get some Tea Plants this spring. I will tell you about my Roses in my next, and how I got them. NELLIE.

Hamilton Co., Ohio. [Perhaps the Commissioner of Agriculture, Washington, D. C., will send you a Tea Plant if you ask him.—U. M.]

DEAR UNCLE MARK:—As I like to read the letters from the cousins in the RURAL, I will write one, too, and ask if I may join the happy band. My mother died when I was seven years old, and left me in the care of Mrs. Squires, but I chose to retain my father's name. I am twelve years old. I go to school about half a mile distant. We have quite a good many house plants; among them are seven varieties of Cactus. I have had a flower bed ever since I was nine years old, but will have a larger bed next summer. I must close for this time, and if I see this in print I may write again. So good-bye, with love to all the cousins.

Wyoming Co., N. Y. LUCY L. HALLER.

DEAR UNCLE MARK:—Please put my name on the Club list, and I hope I am not too late for the seed distribution among the members of the Club. Papa has taken the RURAL a little over one year, and likes it very much. He has given me a piece of ground to raise the seeds I get. I am 13 years old and live on a farm near Easton, Md., on the Fred Haven River. I will try and give all the attention I can to my garden, and hope I will be successful with both vegetables and flowers. I will write and tell you how I succeed.

GEORGE W. BAKER.

Talbot Co., Md.

DEAR UNCLE MARK:—I would like to join your Horticultural Club. My father has taken the old RURAL for twenty years and we all like it very much. Mamma has twice got some seeds from the RURAL and also some potatoes. They did quite well. I like flowers very much. This is my first letter to the RURAL. From your niece,

Canaserago, N. Y. MAY.

DEAR UNCLE MARK:—I have been reading some of the young folk's letters and thought that I would write one to you. My age is twelve years. We are to have a large flower garden this summer, to make it a little more pleasant around our new house. My oldest brother takes the RURAL and likes it very much. One of your young friends.

Lewis Co., N. Y. EARNEST G. DODGE.

The Puzzler.

RHOMBOID.

ACROSS: 1. The awn; 2. a portion of land; 3. the tip of the ear; 4. a slattern; 5. obtained from the maple; 6. obliterated.

DOWN: 1. A letter; 2. a prefix; 3. passion; 4. the young of shell-fish; 5. earth; 6. a short dagger; 7. pyramidical; 8. a suburb of Constantinople; 9. a word applied to small girls; 10. an abbreviation; 11. a letter. "GUS."

Waterloo, Ind.

☞ Answer in two weeks.

HIDDEN HOUSEHOLD ARTICLES.

1. It is to ventilate the building.
2. I need Lettie to do the housework.
3. Mab rush to the barn this minute.
4. Tab lets all the mice live in peace.
5. O! vengeance is a dreadful thing.
6. Mary got up late and was tardy at school.

A DOUBLE ACROSTIC.

1. A color; 2. a "Will 'o the Wisp"; 3. the semi-diameter of a circle; 4. dry weather. Initials and finals, four members of the animal kingdom.

☞ Answer in two weeks. LITTLE ONE.

SQUARE WORD.

A cape of Spain. A cape of New England. A number.

☞ Answer in two weeks. L. O.

PUZZLER ANSWERS.—March 27.

HIDDEN SOVEREIGNS.—1. Sultan; 2. Doge; 3. Emperer; 4. Queen; 5. Monach; 6. President; 7. Dictator; 8. Czarina; 9. King; 10. Sultana; 11. Pasha; 12. Czarina; 13. Governor; 14. Autocrat; 15. Ruler; 16. Chief; 17. Caliph.

TRANSPOSITION:—

I sail on the surging oceans tide,
Where the waves are big and the sea is wide,
Where storms oft come to cloud the skies,
And billows of grief in darkness arise.

NAME PUZZLE.—Jabez; Ulysses; Leonidas; Inigo; Aurelius; Norman. Initials form "*Julian*."

SQUARE WORD:—

X E B E C
E A R T H
B R I N E
E T N A, e
C H E E K

RHOMBOID:—

B A S T A
B A R R A
P A R M A
P A A R L
S L E E N

Various.

BRIEFLETS.

PROFESSOR RUMSEY says: "Large towns are in themselves a monstrous evil—an evil continually growing through wrongful laws or customs. A town of 20,000 inhabitants is large enough for every good and desirable object."

. . "The Chicago Board of Education has adopted a rule which declares that when a young lady teacher marries she will be considered to have resigned her position as teacher." This is rather hard in these days when many young ladies who wish to marry have to reflect whether they can afford to support a husband or not. . . Frenchmen do not often speak of their wives, lest they talk about them before gentlemen who know them better than they do. . . How can he look with confidence to a heaven above who tries so hard to make a hell below! . . A difference:—Alexander Hamilton once said, "Men are reasoning, not reasonable creatures; but women are reasonable, not reasoning creatures." . . Speaking of the baby elephant reminds us that we shall soon have occasion to introduce a White (baby) Elephant to our readers. . . Gains of Cunning—If you win by cunning, you also lose by it—lose that which is more valuable than any object gained by it—character. Thoughts and Events. . . The Sharpless, so far as we have been able to learn, fails in the South. . . Longfellow and Warren are respectively a late and early berry spoken very highly of by the few who have as yet tried them. The RURAL will will be able to report this season. . . The extravagance of a woman's dress gives rise to the suspicion of extravagance of conduct. . . In the spring coughs, colds, bronchitis do their office of disaster: In the spring a young man's bosom finds relief in mustard plaster! . . We learn that immense quantities of the Gregg Raspberry are being sold by nurserymen. . . Love pleases more than marriage, for the reason that novels are more amusing than history. . . Charles Lamb said; "Women owe to us the most of their faults; we owe to them the most of our virtues." . . Mr. Meehi himself says: "When farmers give up the belief that Mr. Meehi is a mere theorist, it will be better for their pockets, and then I shall be much gratified." No doubt. . . La Bruyère says: "I would wish to be a girl, a beautiful girl, from thirteen to twenty-two, and after that to become a man." . . Celery seed may in a week or so be sown in the open ground. It is only needful to keep the plot free from weeds until transplanted in July. It is well also to cut off the tops so as to insure stocky plants. In the latter part of June, prepare the ground thoroughly and plant five or six inches apart in the row—the rows 3½ feet apart. . . "The higher the elevation the lower the degree of heat necessary to boil water" remarked Gen. LeDuc at the Elmira Club. "You all know you cannot cook potatoes by boiling on the top of the Rocky Mountains."

Col. Piollett—"Why?"

Commissioner—"Because you can't get heat enough to cook the starchy matter in them."

Col. Piollett—"That is the first time I ever heard that." (Laughter.) . . "Bredderin," said the old negro preacher, "if we could only see into our hearts as God does, it would skeer us to death! . . The vice of this dispute between labor and capital is that the first is apt to lose its temper, and the last to show its arroganec. They are mutually dependent, and they cannot long separate or disagree without mutual injury. . . Mr. Forney's paper, Progress, says: "Lord Beaconsfield will carry the elections in the next struggle, but he is clearly providing a terrible reckoning for Great Britain in making Imperialism the party gospel of his followers. Adherence to that feudal folly in an age like the present is a crime before God and man, and will surely lead to the independence of Ireland and to the ultimate loss of all the British colonies. Mark the prophecy!" . . Mr. Dalrymple, the farmer of Dakota, will put in something less than 17,000 acres of wheat—not 30,000 as has been stated. The Prairie Farmer makes the correction. . . Incubators have been called Infernal machines by disappointed French people who have returned to the good old way of hatching eggs. . . "THERE'S RUE FOR YOU" is the title of an English novel soon to appear.

Mr. Ranby—You excuse yourself too heavily, my dear. You have sins to be sure.

Mrs. Ranby—(in a raised voice and angry tone); And, pray, what sins have I, Mr. Ranby?

A speculative rise or a speculative fall in prices always outruns intrinsic value. The pendulum goes backwards and forwards, and intrinsic value lies between the two extremes. . . . To some people the times are never ripe, and the fruit of the tree of knowledge is always too green for public digestion. They acknowledge the fruit and the tree whereon it grew; they make no question about that; but the fitness of period and the ripeness of condition perplex them sorely. . . Field peas and oats go well together on rich land. . . It is high time to sow Verbena seeds in boxes or pots to be transplanted later. Seedlings are far stronger than rooted cuttings. . . Few annuals equal in beauty the Sweet Pea. . . Portulacea, Petunia, Pansy, Mignonette, Phlox Drummondii, Candytuft, Balsam, Morning Glory, Aster, are among the glories of the summer garden. Try whatever novelties you will—none can take the place of these.

PERSONAL ITEMS.

A. R. Corbin, who married Virginia, the sister of General Grant, died at Jersey City on Sunday last at the age of 71 years.

General W. S. Hancock owns a farm near Windsor, Henry County, Mo., and has ordered some extensive improvements to be made on it with the view of ultimately making it his home.

By the will of the late Dr. John M. Broadhead, ex-Comptroller of the United States Treasury, $3,000 are set aside for the use of his cousin Olive and niece Cornelia on the following conditions: They are each to set apart a garden 60 feet square, which they are to plant with currants, strawberries, thimbleberries, raspberries and other suitable fruits. A daughter of Olive "is to post herself on the planting of fruits" and to allow no weeds to grow up in this plantation, "thus correcting carelessness on the part of her father."

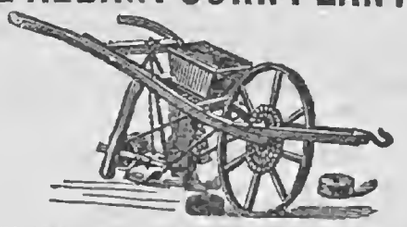
Charles C. Frost, a learned shoemaker, has just died at Brattleborough, Vt., at the age of 74 years. He began to take morning walks through the fields on account of ill health and so became interested in botany. He sent to London for a standard work on botany, and when he found that the work was in Latin he bought a Latin grammar and began the study of that ancient tongue. He mastered Latin, French and German and received the degree of A. M. from Dartmouth and Middlebury Colleges. In botany he was a leading authority.

Neuralgia—A Remarkable Cure.

The following extracts are from a letter received from S. A. Russell, Mescalero Agency, New Mexico, dated June 5th, 1879:—"I felt satisfied that if the remedy (Compound Oxygen) was really what you claimed it to be, it was just what I wanted for a daughter who had been a *sufferer with neuralgia for more than fifteen years.* I wrote you for a copy of your Treatise on Compound Oxygen. After reading this little work, and the certificates of such men as Judge Kelley, T. S. Arthur, and others, I felt that if these were genuine, there must be REAL MERIT in the remedy. * * * I then ordered the remedy sent to my daughter in Kansas. That was about one year ago, and since using the supply then ordered, *my daughter has not only not had neuralgia, but considers herself in perfect health.* * * * Regarding my daughter as having, through the blessing of God, been *permanently cured of as stubborn a case of neuralgia as it is possible for any person to be afflicted with and live, by the use of your Compound Oxygen,* I esteem it a PLEASURE and a DUTY to send you this statement." Our Treatise on Compound Oxygen, which contains a record of many remarkable cures, sent free. Address DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

Implements and Machinery.

THE ALBANY CORN PLANTER



PLANTS ALL KINDS OF SEEDS WITH PRECISION.

Awarded the Highest Medal at the Centennial, as being the best Planter.

SAVES ITS COST IN PLANTING FIFTEEN ACRES OF CORN. One man and a horse can plant from seven to ten acres of corn in one day, with the Planter, at a cost of from $3.50 to $4.

COST TO PLANT FIFTEEN ACRES BY HAND:

Marking, man and horse, 2 days, at $3	$ 6.00
Planting, twelve men, at $1	12.00
Board, ten men, two meals each, at 25c	5.00
Wasted, one bushel of corn	1.00
Total cost by hand	$24.00

Self-Operating SULKY RAKE.

IMPROVED LION,

Best Rake Made in the World.

Send for Circular, etc., to O. H. P. CORNELL, Proprietor Albany Agr'l Works, Albany, N. Y.

LA DOW'S JOINTED

Pulverizing and Smoothing HARROW.

Light, Simple, Cheap. Durable and Flexible

Being jointed in the center, is adapted to both smooth and uneven surfaces. Acknowledged the best of the kind, and will pulverize and cover seed better in one operation, than going over twice with others. Made with both Chilled Metal and Cast Steel Discs polished. Send for circular and price list. Manufactured by

WHEELER & MELICK CO.,

Albany, N. Y., for the United States.

By EVERETT & SMALL, Boston, Mass., for the N. E. States, and by BUDLONG & CO., Aurora, Ill., for Ill., Iowa, Wis., Minn., Neb., Kans. and Mo.

"Also, La Dow's Disc Corn Cultivator"

INVALID ROLLING CHAIR.

(RECLINING)

A Priceless boon to those who are unable to walk. Hon. A. H. Stephens, M. C., and hundreds of others use them. Send for Circular to

FOLDING CHAIR CO., New Haven, Conn.

Implements and Machinery.

INGALL'S PAT. LINK AND CHAIN

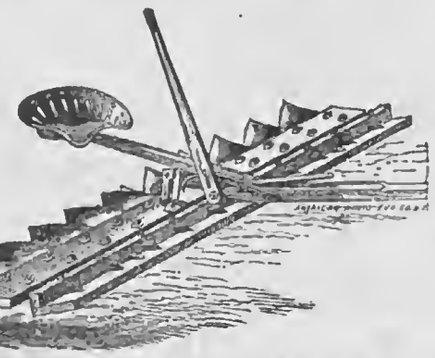
Will make or mend your chains, of all sizes, without tools. Inquire at your Hardware store or address

INGALL'S MFG. CO., Providence, R. I.

"ACME"

Pulverizing Harrow,

Clod Crusher and Leveler.



Has twelve steel coulter teeth and ten steel cutting spurs. Cuts over six feet wide, and two to four inches deep. The only implement combining Pulverizer Crusher and Leveler! performs all three operations at one time in the most perfect manner. Works perfectly on light soil, but is *especially adapted to sod and hard clay where other Harrows fail.* Agents wanted. Send for circular. NASH & BRO., Harrisburg, Penn., and 22 College Place, New York.

"Victor" one-horse Wheat Drills

(3 and 5 hoed,)

For Sowing Wheat, Rye, Barley, in fallow ground or in standing corn.

Force feed; simply constructed. The five hoed is adjustable for different widths, and is just what every small farmer ought to have, saving the price of a two horse Drill.

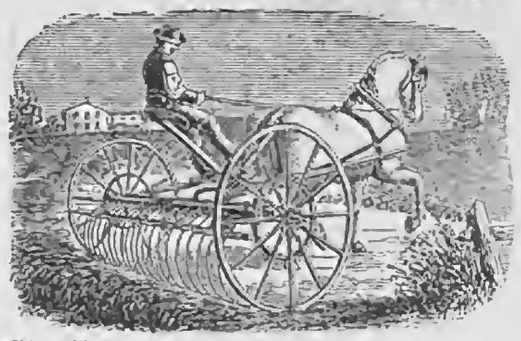
Manufactured only by EWALD OVER, [Send for circulars.] Indianapolis, Ind.

'THOMAS' PORTABLE ENGINE.

This is the lightest, most durable and economical Farm Engine made. It is from 1000 to 1500 lbs. lighter than other engines of the same power. It is warranted in every respect, and on account of improved method of utilizing steam is more economical in fuel and water. It is made especially to meet the wants long felt by Threshermen Farmers, &c., for an engine that would combine lightness with absolute strength and durability. Made in three sizes. Circulars giving full description sent on application to J. H. THOMAS & SONS, Manufacturers, Springfield, O.

Be sure and mention this paper.

THE GREGG



Self Dump Rake.

A boy or girl can operate it. This rake has been thoroughly tested, and is warranted to be first-class in every respect, made of the best material, and to do good work under all circumstances. Also, the

Meadow King Hand-Dump Rake.

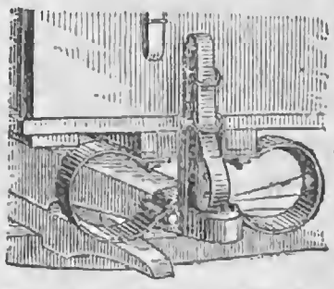
If there is no local agent in your vicinity, send for circulars giving full description, to

GREGG & CO., Trumansburg, N. Y.

SOMETHING NEW!

PULLIAM'S PATENT

BOLSTERS SPRINGS for FARM WAGONS.



This valuable device is suited to wagons of any size—made of the best steel and warranted—are attached by four bolts through the bed—can be put on by any person. They remain on the wagon for all uses and work equally well whether with empty or loaded wagon. There is no use for a spring seat—they make a comfortable spring wagon out of a farm wagon—and save largely in wear and tear. We want Agents everywhere. Send for description and prices, and mention this paper.

SEMPLE & BIRGE MFG. CO., St. Louis, Mo.

THE BELCHER & TAYLOR AG'L TOOL CO.

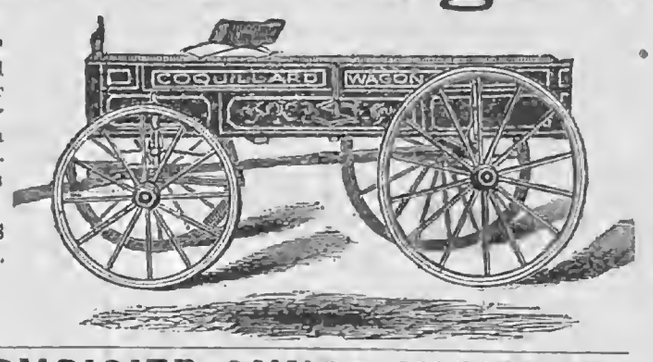
Manufacture this Plow of the *best Car Wheel Iron;* also of *Patent Hard Metal.* The handles vibrating from one side to the other as the plow is turned at the end of the furrow, enables the plowman to walk squarely behind the plow—a feature not possessed by any other Side-Hill Plow. It does as good work as any Land-Side Plow. For further particulars and prices send for our new *Illustrated Catalogue.* Address

GEO. S. TAYLOR, Agent, Chicopee Falls, Mass.

Implements and Machinery.

The Coquillard Wagon.

THE FARMER'S FAVORITE.



These wagons are made of the best Wood and Iron to be procured, and put together by the most experienced workmen. Every one warranted to give satisfaction, both in regard to quality of material and workmanship. They are also noted for their lightness of draft and ease of running.

Carriages, Buggies and Sleighs

Of superior workmanship always on hand. Send for Circulars and Price List.

A. COQUILLARD, South Bend, Ind.

THE BOREL & COURVOISIER SWISS WATCHES

HAVE BEEN AWARDED

THE GOLD MEDAL

at the Paris Exposition of last year. based on the greatest superiority of of performance during the test made manufactured of the best material and finished by skilled hand labor er beyond peradventure. Messrs. B. tion in prices, so as to bring their Great care is taken in the finishing those adjusted for railroad use. Call improved B. & C. Watches. The relative merits of Swiss Watches, as manufacture. Can a country that *Hundred* years be ignored? Give and they will demonstrate to you you to institute an impartial compari-

The Jury of Awards' decision was workmanship and extreme accuracy by the Judges. These watches are and made with improved machinery, thus insuring an accurate time-keep- & C. have made a still further reduce- watches within the reach of all of their movements, particularly on your jeweler and ask to see the public is asked to investigate the compared with those of American has made watches for the past *Two* the Borel & Courvoisier fair play, that none can excel them. We ask son before purchasing.

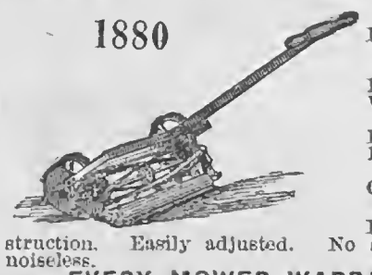
QUINCHE & KRUGLER

17 MAIDEN LANE, New York, Sole Agents for the United States.

PENNSYLVANIA LAWN MOWER

Surpassing all Others and Pronounced the Best.

1880



Advantages.

Lightness combined with strength.
Runs more easily
Will cut longer grass.
Is more durable.
Requires less repairs.
Cuts grass more smoothly.
Less liable to obstruction. Easily adjusted. No springs, almost noiseless.

EVERY MOWER WARRANTED.

LLOYD, SUPPLEE & WALTON, Philadelphia, Pa.

MOSELEY'S CABINET CREAMERY.

THE "STANDARD," Received the *Highest Award* at the following Fairs, 1879:

New England.
Vermont State
New York State.

At the first two

SILVER MEDALS

were awarded.

Agents Wanted.

MANUFACTURED BY MOSELEY & STODDARD, Poultney, Vt.

SEND FOR CIRCULARS.

Name this paper.

Union Railway Horse Power.

THRESHERS AND SEPARATORS.

These Powers are GUARANTEED to produce more Power with LESS ELEVATION than any other Railway Power. Send for descriptive catalogue. WM. L. BOYER & BRO., 2101 Germantown Ave., Phila., Pa. Also Manf. of Premium Farm Grist Mills.

FISK'S AUTOMATIC SEED PLANTER

Has the best improvements of any Hand Planter now in use. Plants with the accuracy of a hoe all the ground Seed for each hill a person can walk over in a day. passes in plain sight.

This is the easiest planter to use ever invented. Every planter fully warranted, and satisfaction guaranteed. Unusual inducements on samples this season. Circulars free.

WALLACE FISK, South Byron, Genesee Co., N. Y.

The Aquapult (in operation.)

W. & B. DOUGLAS, Middletown, Conn., U. S. A.

BRANCH WAREHOUSES: 35 & 37 John St., N. Y., 911 Lake St., Chicago, Ills.

Manufacturers of PUMPS, Hydraulic Rams, Garden Engines, Pump Chains, Curbs, etc.

Highest Awards at all the World's Exposition. WORKS FOUNDED IN 1832.

The cut represents our **Aquapult** a newly-improved brass hand force pump. Fire Extinguisher, Garden Engines. Window and Carriage Washer, will throw water 80 ft. Sent to any address C. O. D., price $9. Illustrated Catalogue on application.

CLARK'S ROOT CUTTER.

Do not fail to see CLARK'S NEW ROOT CUTTER. The leading stock raisers in the country pronounce it the best and only cutter that cuts roots in shape for feeding.

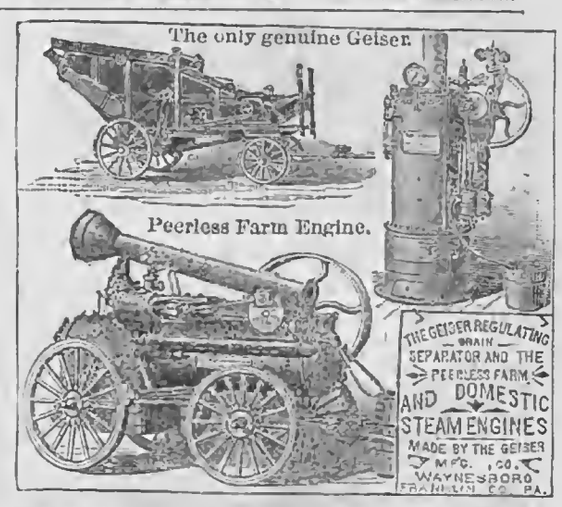
Price No. 1.....$12.00
" No. 2..... 14.00

Send for circular.

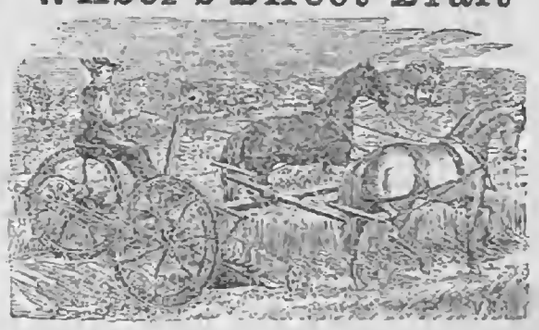
HIGGANUM MFG. CORPORATION, Higganum, Ct., U. S. A.

Manufacturers of Agricultural Implements of all *description.*

The only genuine Geiser.



Wilber's Direct Draft



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IS THE LARGEST, CHEAPEST AND

Lightest Draft Mower IN THE World.

☞ It lessons the expense of gathering the Hay Crop fully Twenty-five per cent. Illustrated circular sent on application. Address

EUREKA MOWER COMPANY, Towanda, Pa.

Miscellaneous.

$125 OUTFIT free to Agents, and all expenses paid. Address H. B. SHAW, Alfred, Me.

ARCHITECT.

Plans and Specifications for Country Dwellings and Barns furnished at the most reasonable rates by ROSSITER & WRIGHT, Architects, 160 Fulton St., New York

WE ADVISE YOU TO INSURE YOUR property in the

AGRICULTURAL INSURANCE CO.

Of Watertown, N. Y.,

The largest Company in the country which insures only farmers' property and residences. Over twenty-six years old.

Capital	$200,000 00
Net Surplus, over	$235,153 81
Assets, Jan. 1, 1880	$1,137,549 73

BADGER STATE Butter Color.

Received the only honorable mention granted to any Butter Color at the International Dairy Fair of 1879. If not for sale by your dealer, send for circular &c. to the manufacturer. E. SHELDON, Fort Atkinson, Wis.

HANSEN'S DANISH LIQUID

BUTTER COLOR.

Prepared in vegetable oil by skilled chemists. Does not color the buttermilk. Imparts natural rich color and *enhances price* of butter greatly. Largest and fancy butter-makers have adopted it. Sample by mail, free.

WHITMAN & BURRELL, Little Falls, N. Y., Wholesale Agents for America.

$777 A year and expenses to agents. Outfit Free. Address P. O. VICKERY, Augusta, Maine.

18 Elegant New Style Chromo Cards, with name, 10c. post-paid. GEO. I. REED & CO., Nassau, N. Y.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with HEEL and TOE complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to The Twombly Knitting Machine Co., 409 Wash'n St., Boston, Mass.

Humorous.

"I'm a ruta-baga, and here's where I plant myself," said a tramp, as he entered a farm-house near Freeport, Ill., and seated himself at the table. "We allers bile ours," said the farmer's wife, and soused him with a dish-panful of boiling water.

A young lady just home from boarding-school, on being told by the servant that they had no gooseberries, exclaimed: "Why, what has happened to the goose?"

"Digby, will you take some of this butter?" "Thank you, ma'am, I belong to the temperance society—can't take anything strong," replied Digby.

Miasma Rendered Powerless.

The most certain way to render powerless the miasmatic vapors which produce chills and fever and other malarious disorders, is to fortify the system against them with that matchless preventive of periodic fevers, Hostetter's Stomach Bitters. The remedial operation of the Bitters is no less certain than their preventive effects, and they may be relied upon to overcome cases of fever and ague which resist quinine and the mineral remedies of the pharmacopœia. Dyspepsia, constipation, bilious complaints, rheumatic ailments, and general debility, likewise, rapidly yield to their regulative and tonic influence. They are an incalculable blessing to the weak and nervous of both sexes, an excellent family medicine, and the best safeguard which the traveler or emigrant can take to an unhealthy climate.

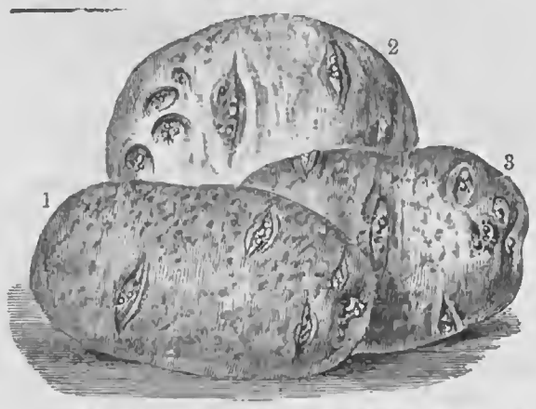
TREES

The largest and most Complete stock of Fruit and Ornamental Trees in the U. S. Priced Catalogues sent as follows:

No. 1, Fruits (new ed.), with plate, 15 cents; plain, 10 cents. No. 2, Ornamental Trees, etc. (new ed.), with plate, 25 cents; plain, 15 cents. No. 3, Greenhouse, free. No. 4, Wholesale, Free; and No. 5, Roses (3rd edition, 1879), with beautiful plate of New and Rare Roses, 10 cents; plain, Free. A list of New Roses for 1880, Free; with plate, 10 cents. No. 7, Catalogue of Strawberries, with plate, Free. Address,

ELLWANGER & BARRY,
Rochester, N. Y.

THREE NEW POTATOES.



1. Pride of America.—In appearance resembles the Snowflake, a few days later; very productive, large size, an excellent keeper; of superior quality.

2. Matchless.—Tubers very handsome, round; pale-red; flesh fine-grained, pure white, and of excellent quality. A great cropper, an excellent keeper.

3. Silver Skin.—A cross between the Early Rose and White Peach Blow. Tubers medium to large. Skin smooth, silvery white, russetted. Flesh snowy white, fine grain, splendid quality, an excellent keeper.

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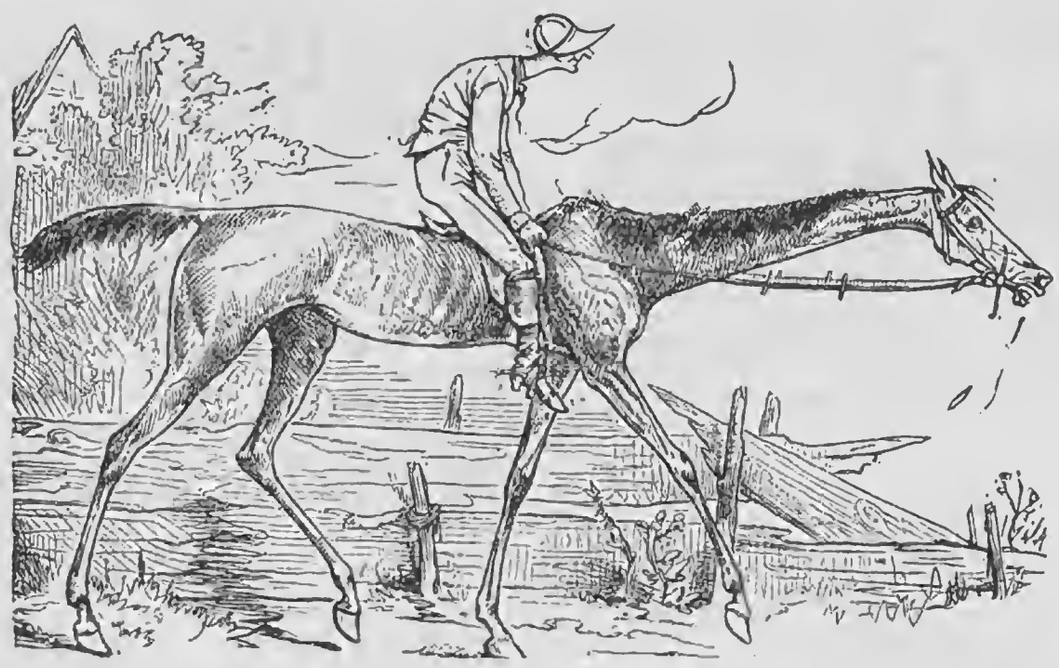

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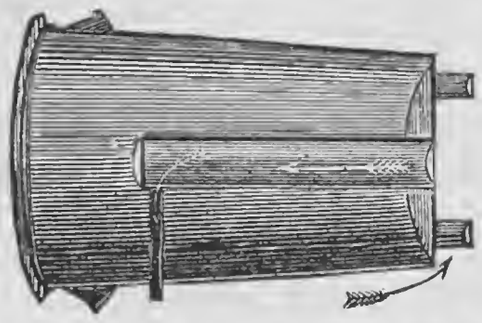

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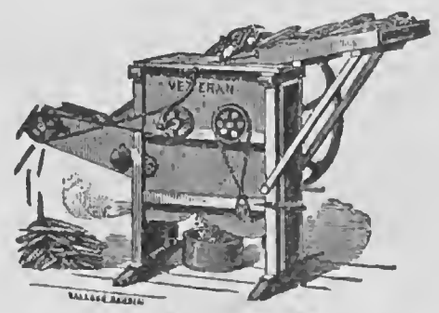

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Ralph Evans

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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Pomological.

THE FRENCH PARADISE APPLE AS A STOCK.

THE references which we have of late made to the French Paradise as a stock for dwarfing Apples, have brought us so many inquiries that we are assured the following remarks and correspondence, together with the accompanying illustrations, will prove of general interest. This stock is to the Apple nearly what the Quince stock is to the Pear, except that more varieties of Apples do well upon it than of Pears upon the Quince. The English Paradise, or Doucin, is used as a dwarfing stock; but the trees, while they grow larger, do not fruit as soon as those worked upon the French Paradise.

Professor Koch, of Berlin, has said respecting this tree that the name Malus paradisiaca appears to have been first used by Ruellius in the year 1537; that it is a native of south-eastern Russia, the Caucasus, Tartary and the Altai Mountains. He had often seen it in the Caucasus and near the Don and the Volga, where it forms bushes and dwarf trees, frequently accompanied with suckers. Mr. Robinson says that the Paradise stock has been known in France for between 200 and 300 years and that, when fairly tried, it proves to be of all stocks yet known the hardiest, most dwarfing and most powerful in inducing early fertility. This stock, he says, if planted in the coldest and wettest of soils, instead of sending long roots down into the sour, clayey earth, like the Crab and, in a lesser degree, the Doucin, keeps its wig-like mass of small roots near the surface, and, without root-pruning, will bear fruit long before the others. As to early bearing, we may say that of our five varieties on Paradise, all bore the second year and have borne every year since; but, except the Lady (Pomme d' Api), none has borne more than three or four apples. The Lady, not over four feet high, bore last year about a dozen.

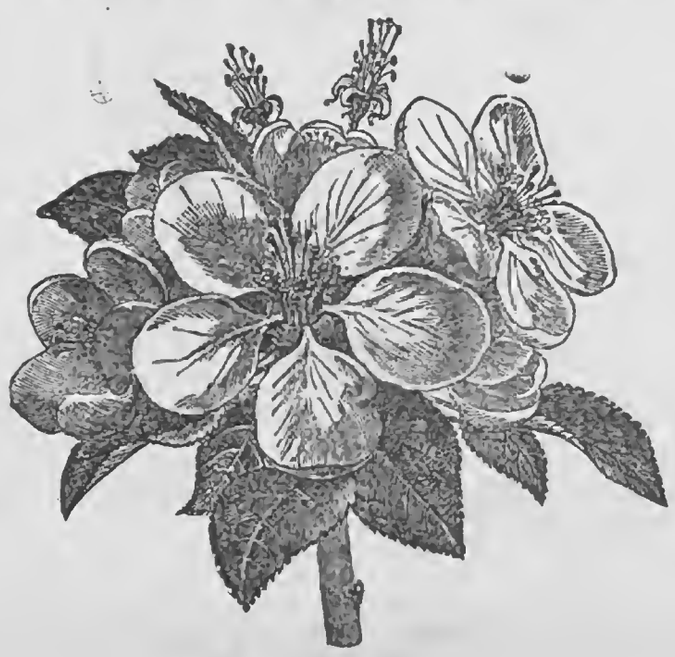
Mr. Robinson in his "Parks and Gardens of Paris," presents a letter from Mr. J. J. Thomas, to whom he wrote for information as to the value of Paradise stock in "the colder parts of North America." Mr. Thomas replies as follows: "The French Paradise stock grows well with us on strong soils, with suitable pruning and cultivation. Neglected and on light soils it frequently fails after a lapse of several years. The oldest trees with which I am acquainted in Western New York are on the grounds of Ellwanger & Barry. Trees which have been worked on it, thirty years old, still possess a fair degree of vigor, having stems six inches to eight inches in diameter, and the trees are about eight feet high, with about the same extent of branches. Twelve-year-old trees are five or six feet high and four or five inches in diameter."

Dwarf Apple Trees--French Paradise Stocks.

PRES. T. T. LYON.

THE problem, how to provide the possessors of limited grounds with an assortment of home-grown apples, adequate to their wants, and, at the same time, to avoid the necessity of introducing into such limited grounds trees whose natural growth will be sure soon to occasion a disproportion between them and the plat they occupy, as well as the desire of the nurseryman and pomologist to rapidly test the varieties with which they may have to do, and that without the necessity of devoting a large space to the purpose, have induced a resort, with the apple, to the process now so commonly applied to all our leading fruits—that of dwarfing, and at the same time hastening fructification by budding or grafting the varieties upon dissimilar stocks.

For the reason—as I imagine—that most buyers are in the habit of requiring large-sized trees, even when dwarfs are called for, it is the custom of nurserymen in general to use what is known as the Doucin stock, for dwarfing Apples, since the young trees so treated sooner reach the requisite size. On this stock, however, the vigor of the growth and the ultimate size of the tree are but slightly diminished; nor is the period of fructification very considerably hastened; while, as an inevitable consequence, the distance apart at which they should be planted, is only proportionately diminished.



FLOWER OF THE FRENCH PARADISE APPLE.—FIG. 111.

For the owners of village or city gardens, who of necessity can devote to fruit only a few rods of ground, in which a full-sized tree, or even an over-grown shrub, would appear out of keeping with the surroundings; and also for the trial grounds of the nurseryman and Pomologist, in which *quantity* of fruit is of less consequence than early fructification, and in which also close planting insures a considerable diminution of the expense of cultivation, a little thought or experience suffices to allay the anxiety for large trees.

FRUIT OF THE FRENCH PARADISE APPLE.—FIG. 112.

To supply the want of this large and increasing class of planters, resort is had to a yet more dwarfish variety of the Apple—the French Paradise Apple—which usually attains a size very little larger than that of a well-grown currant or gooseberry bush, and which, for that reason, may be planted from five to six feet apart each way, and yet leave sufficient space to accommodate the ultimate growth of the tree.

The French Paradise stock seems to be at home in almost any soil adapted to fruit growing; although, in light or poor soils, it will, doubtless, sooner and more constantly demand the employment of fertilizers. Like all dwarfs, its roots extend but a limited distance, and hence, in any soil, they will the sooner exhaust the fertility within their reach, for this reason requiring constant, careful and through cultivation.

Unlike the Pear dwarfed upon Quince stocks, all varieties of the Apple seem to be alike successful on the Paradise stock; the chief ground of preference being, that from natural habit of growth, some varieties are more easily kept in the desired form than others.

As a matter of convenience, Apples are generally worked upon this stock by budding during the growing season; although they may, when desirable, be grafted without difficulty. The buds are forced into growth the following spring by cutting back the stock to just above the insertion of the bud; and the shoots, after one year's growth, are, the following spring, again cut back to the proper hight for the commencement of the top, which should in no case exceed one or one and a half foot.

Dwarfs on Paradise stocks, when planted out, should always be set with the point of union at, or very slightly below the surface, for the reason that, if planted higher than this, they are less sure to hold their position firmly; while they are likely to show an unsightly enlargement at their point of union, with an increased tendency to sprout from the stock above the ground. On the other hand, if planted so low as ultimately to cause roots to push from above the bud, the influence of the dwarf stock is overcome, and the tree assumes the habit and vigor of a standard. A well managed dwarf apple tree on this stock, will generally show fruit the third year from the bud, and if well cared for at suitable times, may be kept in proper shape with very little, if any, use of the knife. Of course, to do this, reference must be had to the normal habit of the variety. When the trees are permitted to assume their natural form, without an attempt to put them into a "straitjacket" and mold them to a single model, the occasional lopping off or thinning out, of a superfluous shoot, and the "pinching in" of the excessively vigorous or misplaced ones, will in the main, suffice for this purpose, although, now and then, an open or straggling grower may require to have its shoots cut back in spring, to bring it into more compact condition; while the most upright or compact growers may need to be *spread*, either by thinning, or by staking and tying down the shoots, to open them sufficiently to the light.

It is believed that the dwarfing influence of this stock, while it diminishes the capacity of the tree for the production of fruit, tends rather to increase its size and brighten its color. How far this last may be true, I will not attempt to decide; but I feel quite safe in saying that, with the increased ability to produce the requisite variety of sorts upon a limited space, and within a comparatively short period, the use of the French Paradise stock offers to tradesmen, professional men, and city and village residents generally, the best possible means of securing an abundance, as well as a variety of fresh, seasonable fruit, such as no public market can be expected to supply.

South Haven, Mich.

A Note from Dr. John A. Warder.

MY personal experience with the French Paradise stock has not been nearly so extensive as my observations of its behavior in the grounds of others, both in this country and in Europe. Many years ago, when desirous of testing a great many varieties of Apples as quickly as possible, a large order for dwarfs was filled by one of the greatest nursery firms of our country. These were planted, and as the majority of the trees were worked on the Doucin stock, they grew famously in our strong soil, and were not fruited much, if any, sooner than if they had been on the common apple roots, and they made as large trees. Those worked on the true Paradise were dwarfed as desired, without any trouble of summer pinching, though that should always be practiced with espaliers, quenouilles, cordons or bushes in the perfect fruit garden or orchard-house.

Except for such refined gardening, or where the planter has a very limited space on which he wants to test a great many kinds, the Paradise is not a desirable stock, certainly not for general orchard planting. The Paradise tree or bush is too decidedly a dwarf, and is naturally lacking in the vigor and thriftiness which are sought for by the average American orchardist and fruit grower.

A Note From Ellwanger & Barry.

IN reply to your inquiries, we beg to say that the Apples on French Paradise stocks bear freely with us. They commence bearing at two to four years from bud, and bear every year, unless permitted to bear too much—which they are apt to do. We regard them as invaluable to nurserymen who desire to test varieties quickly; also to amateurs who desire a few choice Apples in their garden where standard trees cannot be grown; also to

persons taking up their residence in a new place where there is no fruit. A common error in the management of dwarf Apples is to let them root *above* the bud, or graft, when they will cease to bear freely, becoming, in fact, the same as standard trees. Another thing that may be said is that irresponsible parties sell and deliver trees as dwarf Apples which are not.

A Note From J. J. Thomas.

In reply to your note, I would say that my impression is not very favorable to Paradise stocks for *general* culture, and I would not recommend them widely—but they are interesting and convenient for amateurs who will prune and give them proper care.

PEARS.

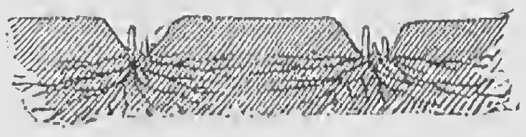
Ellwanger & Barry, of Rochester, N. Y., offer this season for the first time the Hoosic Pear, of which No. 3 in the accompanying sketches is a profile. It is a seedling of Bacon's Incomparable, and was raised by the Hon. A. Foote of Williamstown, Mass. Fruit large, obovate, having considerable exterior resemblance to Beurré Diel; stalk one and a quarter inch long, moderately stout and set obliquely in a slight depression. Calyx large, open, in a shallow depression. Skin greenish-yellow, dotted and marbled with russet. Flesh fine-grained, melting, juicy, with a rich almond flavor, like that of Edmunds, in quality ranking as best; tree an erect, *free* grower, very hardy, and remarkably prolific. Season October.

Messrs. E. & B. have fruited it for several years, and they think its many good qualities justify them in offering it to the public. The outline No. 1 is that of Pitmaston Duchesse. It resembles Duchesse d'Angouleme, which is said to be its parent, though of better quality; is a free, irregular grower, and, like its supposed parent, does admirably on Quince. It is ripe in early October. The outline No. 2 is that of Duhamel de Monceau. This is a French pear (Andre Leroy, '65)—large, long-pyriform; skin rather rough, nearly covered with brownish russet; flesh melting, juicy, with the flavor of Winter Nelis. The tree is a moderate grower. In use in November and December.

Horticultural.

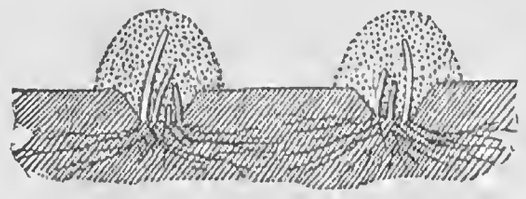
ASPARAGUS AND ITS CULTIVATION.

Were I to cultivate but one square rod of land and grow but one kind of vegetables, asparagus would be the one. In no other way could I get, from so small an area, such an abundance of green stuff, or such a variety of delicious dishes for my table, and all this with comparatively little labor.



ASPARAGUS PLANTS.—FIG. 113.

Many Americans set the plants not over three or four inches deep and break the young sprouts off close to the ground, when six or eight inches high, whilst gardeners in the Old World have the crowns of the plants about eight inches deep and cut the shoots when just appearing above ground. *De gustibus non est disputandum*, however,—there's no accounting for tastes. Whilst having a personal preference for the latter method, I am willing to admit that the lower part of the sprouts, when grown slowly and in unsuitable soil, is always stringy and unfit for food, yet I claim for the shoots, when grown quickly and without exposure to the light, a delicious tenderness and a flavor lacking in those broken off from above ground.



BLANCHING THE SHOOTS.—FIG. 114.

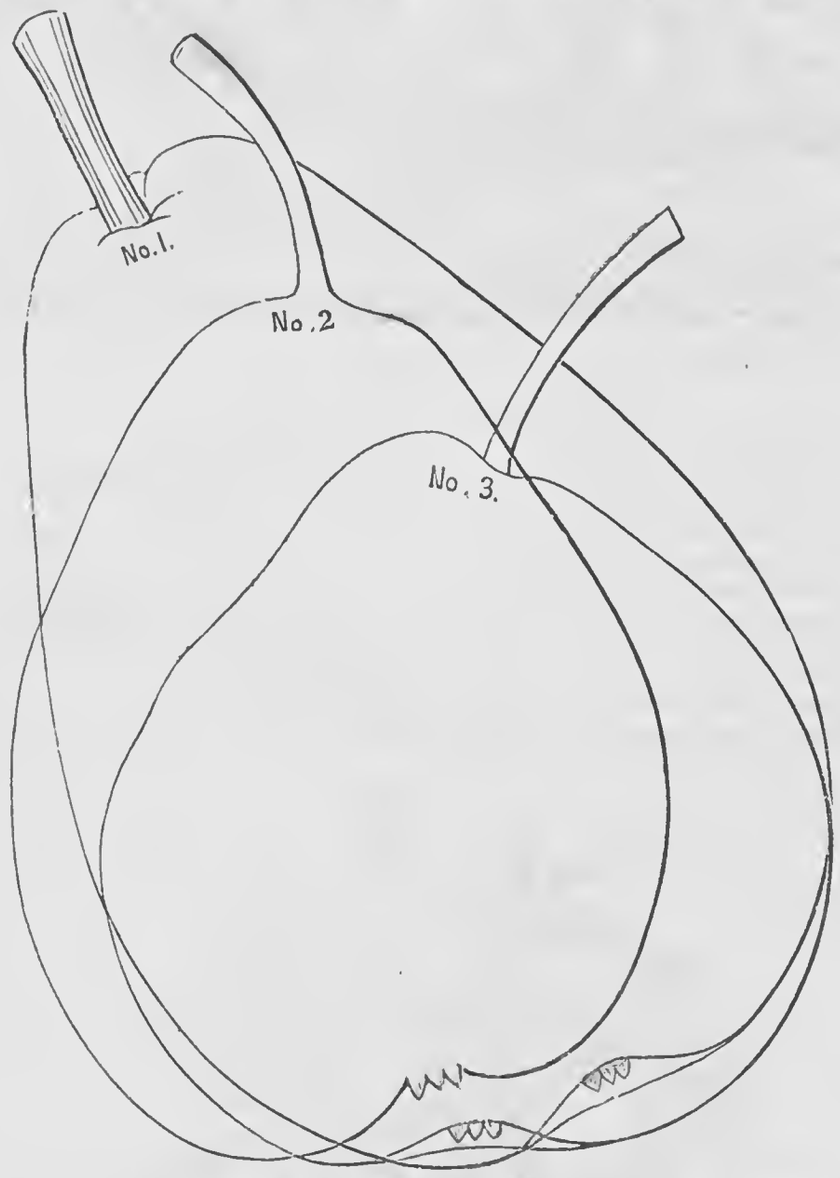
The essential conditions for success are warmth, abundance of stimulants and some materials eight or ten inches deep above the crowns, that will offer the least resistance to the growing sprouts, absorb much heat and keep out light.

Have plants in extremely rich, loose soil in rows 2½ feet or more apart, leaving the crowns free, or but slightly covered. See fig. For the material to blanch the shoots, I am inclined to the belief that dry forest leaves, packed quite loose, would be the best, provided they are kept from being scattered by the wind, either by the use of wires or some other device—boards will not answer.

Having last spring, a quantity of fine sawdust, which had been thrown in the track of the horse-power and mixed by the horse's hoofs largely and thoroughly with loam and horse-manure, I put this in ridges over the rows, as shown in fig. The material kept very light and loose all through the season, and the plants, stimulated by frequent applications of strong liquid manure between the ridges, pushed their shoots vigorously upwards. Many were cut measuring 18 inches in length and one inch in largest diameter, blanched to the tips and of a delicious tenderness and flavor. When a sprout breaks through the covering, the latter may be removed a little, thus laying one side of the sprout bare almost to the roots and affording a good opportunity for cutting it, the covering then is easily put back in it proper position.

It will be seen by fig. that the roots between the ridges, are but a few inches below the surface and therefore more exposed to the influence of the sun's rays than they would be with level cultivation. In the fall a heavy dressing of fine compost may be applied between the ridges and the bed leveled off. Whatever market gardeners may think of this treatment of asparagus, I at any rate am highly pleased with the results obtained.

Tuisco Greiner.



PROFILES OF (1) PITMASTON DUCHESSE, (2) DUHAMEL DE MONCEAU, AND (3) HOOSIC.—FIG. 115.

Field Crops.

HOW AND WHEN TO SOW GRASS SEED.

H. L. WYSOR.

The following article is offered in the hope that some of its suggestions may prove of value even to those whose experience has been long and extended, while, it is hoped, it will enable the beginner to avoid the errors into which the writer himself fell.

It is the general practice of farmers here, and perhaps throughout the United States, to sow their clover and other grass seeds in the spring among the growing wheat, rye, or oats. Ten years or more ago, the sowing was done from the middle of February to the middle of March, when the frost had left the ground open in cracks and seams, into which the seed fell and took root. Now, however, a majority of farmers harrow their wheat, and the grass seed is sown before the harrow from the 1st to the middle of April in this latitude. In this way a catch of grass is nearly always obtained, though I have never observed that the wheat derived any benefit from the harrowing, as is frequently claimed. The common, straight-toothed harrow tears up much of the wheat, besides covering the remainder with earth, which seems for a while to retard its growth. The Thomas Smoothing Harrow is the best implement for this pupose; its teeth, inclining backwards at an angle of about 45 degrees, cover the seed lightly, but sufficiently, and do no injury whatever to the wheat, even if they do it no good. At any rate, our graziers would much prefer to lose the wheat crop than to lose a catch of grass, and therefore care very little about any injury that may be done the wheat in the process of harrowing.

It is not at all a difficult matter to obtain a good set of grass in stiff clay soils, and this, too, when the soil may be very thin. The grass rarely ever perishes, save in seasons of long-continued drought. But on sandy and gravelly soils, the case is quite different, and, with the ordinary methods employed in securing it, a good stand of grass is rather the exception than the rule. Such soils, from their thirsty nature and lose texture, do not compact around the small plants, but allow them to perish for want of moisture except in unusually wet seasons. In my earlier attempts at sowing grass, I threw away many bushels of clover seed before I found this out. On land of this description it is always best to harrow in the seed and follow with the roller. I have frequently noticed that where a road had been trampled through the field and the soil made close and firm, there was a good catch of clover, while on either side there was an entire failure.

One of my neighbors, instead of sowing his corn field in wheat in the fall, as is usually done, always sows it down in clover after the last working of the corn, and he seldom fails to secure a good stand. To follow this method, it is necessary to keep the corn perfectly clean and free of weeds, and to cultivate flat, so as to leave the surface smooth. The corn protects the grass from the heat, and at the same time does not crowd it, as is the case in fields of small grain. By fall the clover has complete possession of the ground, and does not have to struggle for a fitful existence with the rag-weeds, which spring up in vast numbers in the stubble fields. The farmer, however, loses his crop of wheat; it would be better therefore, if one wishes to sow grass seed in the corn, to reverse the old rotation, and instead of the order, corn, wheat, grass; put wheat, corn, grass. I presume that the uncertainty of being able to plow sod land in the summer season, has alone kept farmers from doing this.

It is not an uncommon thing for the summers to be so dry that even stubble fields are plowed with difficulty. But there are certainly obvious advantages in turning over the sod first for wheat. In the first place, the plowing being done in July and August, more weeds and other pests of the fields are destroyed, and they are turned under to rot and enrich the land. In fact, this is the only way in which the running brier, or dewberry vine, can be killed at all. Many fields all over the country are literally covered with these briers, to say nothing about the Blackberry. Now, turning these briers under in the spring is the best possible way of setting them out and cultivating them; for at every point they will send up a new sprout to be the nucleus of innumerable runners. If the plowing must be done in the spring, they should be cut off with the scythe before the ground is plowed. Two or three summer plowings will exterminate them on the worst-infested field. Then the corn, being always planted on a stubble, is never troubled with the wire and cut-worms, which always exist in sod land. The grass seed may be sown in the corn as above suggested, or the sowing may be deferred till the succeeding spring, when the corn stubble should be plowed and the grass sown by itself. Some men would prefer, in this case, to put the corn stubble in oats and sow the clover along with them; for my own part, I do not think the sowing of grass seed with oats advisable, although some good farmers advocate it, and secure good catches in that way. In case of drought, however, the oats, standing on the ground longer than wheat or rye, make heavier draughts on the soil, absorb all the moisture, and thus take away all nourishment from the grass, which is either entirely killed or loses its vigor for the remainder of the season.

A plan, followed by myself for several years past, has been to wait till after harvest before sowing my grass seed; then to break up my stubble either with the swing plow or with bull-tongues; harrow, and sow down with clover and orchard grass, or clover and Randall grass. If one can afford it, especially where his fields are thin, it is always best to sow grass seed alone. There are very few farmers who have failed to notice that in the spots in wheat fields, occupied at seeding time by corn shocks but left naked in the spring, the grass is higher and thriftier than elsewhere.

Timothy should always be sown in the fall, and may in this climate be sown with safety as late as the middle of October. It seldom does well when sown in the spring. All the other grasses must either be sown in the spring or not later in the fall than the last of August or the first of September.

The following quantities per acre are sown here: Clover and timothy (alone or together) one bushel to eight acres; clover and orchard grass (together) one bushel of the former and five bushels of the latter to ten acres; orchard grass alone, if the seed are perfectly clean, one bushel to the acre, otherwise two bushels to the acre. The same proportions are observed for Randall grass. Clover, one quart per acre; orchard, one peck per acre; Randall, one gallon; Red top, one gallon, per acre.

Pulaski Co., Va.

MAXIMUM YIELD OF WHEAT.

The question how large a crop of wheat can possibly be grown upon an acre, is so often asked that I have had the curiosity to compute the rate per acre of wheat harvested by the German chemist, Hellriegel, in his somewhat noted experiments (See Professor Johnson's "How Crops Feed"), made several years since with the view of growing a perfect grain crop; that is to say, the largest possible crop obtainable when the plants are provided with all the food and air and water they can make use of, as well as with plenty of light, heat, and standing-room in soil of the best quality. The experiments were, of course, made on a scale small enough to permit absolute control of all the conditions of fertility above enumerated, and that the plants might be completely protected from injury by frost, wind, rain or hail. They were carried to the utmost perfection with barley to which crop, indeed, most of them relate. Only comparatively few experiments were made with wheat, and in the very brief account of the trials, which is accessible to me, no mention is made as to which variety of wheat was grown. It is not even perfectly clear that a somewhat larger yield of wheat might not have been got in case the wheat experiments had been carried on further, with the same painstaking elaboration and repetition which were devoted to the barley trials. Nevertheless, it appears plainly enough that Hellriegel harvested wheat-grain at the rate of 125 bushels (of 60 pounds each) to the acre; and that he harvested barley at the rate of 195 bushels (of 48 bounds each) to the acre. One of his barley plants, apparently of exceptional merit, is described as having borne 636 grains.

F. H. Storer.

Farm Topics.

WESTERN FARMING—IV.

W. I. CHAMBERLAIN.

Spring Work.

I should like to turn aside from the general purpose of these articles, viz: the comparison of modes and styles of farming, to give a few hints on spring work; and wish to make them general in character, like those on autumn work in these columns last fall.

A General Plan of Work

is most useful, and should, I think, be carefully prepared and *written down* in the farmer's dairy or elsewhere before the spring work begins to press. Then, as the weeks pass, it is well to check off the finished work and see how nearly we have come up to our ideal. A general estimate of expenses and earnings should be made, too, in advance. We should make up our minds what permanent improvements we ought to make and *pay for*, or what debt we can pay up, or what increase make in number and value of our live stock. Of course, accident, or sickness, or partial failure of some important crop, or death of a valuable animal, or like misfortune, may partly thwart our plans and make us fall short of our hopes. But we shall do far more if we have a plan,

and make an estimate, and try for a definite gain or improvement, than if we work at random.

We should be systematic and orderly. Spring work of some kinds must be done at just such a time. Other kinds can be done any time. The first kind should always, of course, take the precedence when its time comes. It is an excellent rule, too, to finish one job before another is begun. Change of weather or other sufficient cause may justify departure from the rule; and often several processes or crops must be watched and carried on together or alternately. But there are certain natural divisions of labor, and *unnecessary* change of work usually involves loss, and waste. For example, work in the sugar camp, if there is one, can usually be *finished* before regular spring farm work is begun. Dull days, when sap does not run, may be used in cutting and stowing the wood for next year's boiling. Prepared a full year beforehand, it is worth almost twice as much for blaze, and blaze is what we want. When the run is really over, the washing and stowing of buckets, utensils and implements should be prompt and thorough, and everything be put in perfect readiness for next year. Then, and not till then, are we ready to begin spring farm work in earnest.

The weather and the season's progress must, of course, decide the order of this. Grapevine pruning precedes even the sugar work. Spring wheat, oats and barley should be dropped in very early to secure the best crops. March or early April, is the time in latitude of 40 and 41 deg. at the West. Fruit trees should be pruned before the bark will peel. I am of those who believe in a light annual pruning rather than in a "big job" once in five or ten years. If trees are shaped and pruned aright when set, and the limb suckers kept down each year by thumb-pinching of buds in summer and the light use of the pruning shears in spring for shoots that have escaped the pinching, large limbs will seldom need to be removed with the saw.

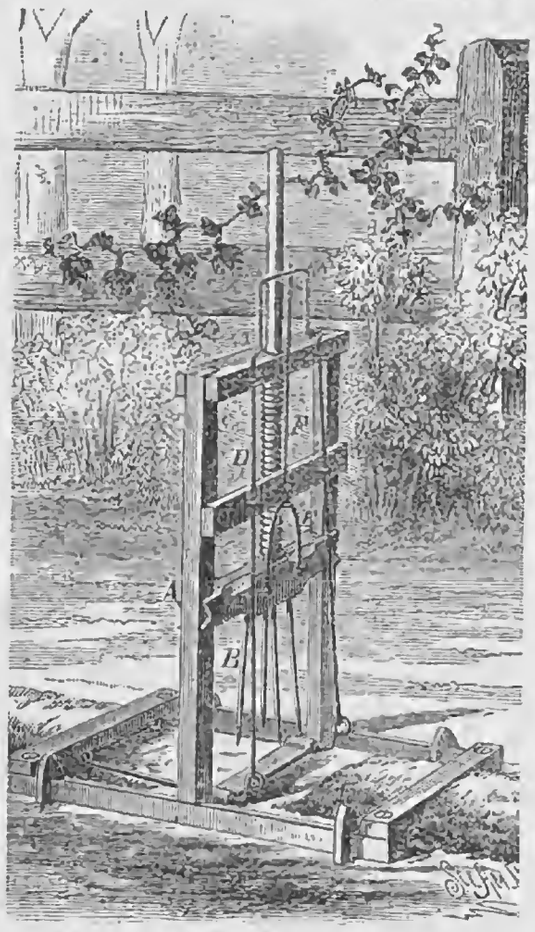
Post holes should be dug before the ground is dry and hard, and new fences built and old ones repaired in weather too dull and damp for tillage. The same conditions of weather and soil, too, favor tile drainage, if any of this work remains over from the fall and winter's "stint."

The Farmer's Garden

is usually, or at least often, "a by-word and a hissing." It *is* small business to potter by hand here when farm work is pressing and your team might plow two acres for corn or drill in ten acres of oats or barley, or plant twelve of corn with the patent two-horse "rower." But if the garden is *long and narrow*, and planted *in rows, not beds*, the plowing and harrowing and most of the marking and cultivation can be done with the team, and a very little time each week will give us the essentials. The perennial or permanent vegetables, like asparagus, rhubarb, etc, and all berry plants and bushes should be at one side or both *in rows* with spaces for horse cultivation, and the long rows of annuals down through the middle. A row each of beets, onions, Swedes, cellery, cabbages, cauliflowers, and salsify, and half a row each of cucumbers, squashes, melons, tomatoes, radishes and lettuce, will do nicely, and two rows each of peas (in succession), Lima beans, sweet corn and early potatoes will make out quite a respectable farmer's garden—all that most farmers can afford to plant and till. Then two or three hours each week with horse and man and cultivator and hoe, will make a far better garden really than as many days of a gardener with spade and hoe, working on patches and beds and alleys, laid out to please the eye. If you can afford the latter, all right. Most farmers cannot, and the row plan described is, I think, the only one likely to secure good kitchen-gardens on most farms. If the garden is unfenced except from the road, and these garden rows can be joined on to rows of corn or potatoes in an adjacent field, the garden is sure of tillage at least when the field gets it, and the extra labor is little felt. And it is easier to fence the *fowls* than the vegetables.

Field Cultivation of "Hoed Crops"

should be almost exclusively *without* the "hoe." In many parts of the West the large fields of corn, potatoes, broom corn, etc., never see a hoe at all. How the East may learn from the West! Corn is planted with a two-horse "rower" that plants 13 acres a day better than it can be done by hand. It puts the seed down two inches into damp soil, below the reach of the harrow teeth soon to follow and sure to uproot or displace ordinary surface-planted corn. Potatoes are covered with a horse. Both are harrowed thoroughly several times before and after coming up. The Thomas Smoothing Harrow is best for this. Indeed, it is the only implement I know that is a perfect success as a broadcast weeder and tiller of *growing crops*. It kills the young and tender weeds, if used every few days, and leaves unharmed and greatly benefited the firmer, deeper-planted corn, potatoes, oats, wheat, etc., and it mellows the soil *in the hill* as no hoeing can. Then (for corn, potatoes, etc.) the two-horse cultivator, with earth guards, throws the soil close up about the rows, but does not cover or break down the stalks, and gets over the ground twice as fast as the old one-horse cultivator. Finally, the shovel plow with adjustable wings, hills up the potatoes completely. And so our Western "hoed crops" are not hoed at all, and if properly tilled *from the first* with these implements, will not be weedy at all, and will be far better tilled than with the hoe. It is a good rule never to do by hand what a horse can do *cheaper*. Not laziness but true economy dictates this rule.



MOLE AND GOPHER TRAP.—FIG. 116.

Work for Rainy Weather.

I am not of those who think it hurts a farmer or his hired man, or men, to rest when it rains. When rain sets in in the afternoon, I believe it is often best to rest till night and give teams and men the time to do the same. But often there are whole days of rain, and for such times work should be planned. Cord wood in a good shed may be sawed and split into stove wood, or old rails into sugar wood. Seed potatoes may be cut, potatoes "sprouted" and hay, straw and stalks chaffed for cut-feed to last for some days or even weeks to come. Barns and cellars may be cleared out and put to rights and the latter whitewashed. Work harness may be washed and oiled, axes and other tools ground and put in order for use, and many jobs of tinkering be done in barn or shop, if only they are down in your memorandum or your mind, so that you will not have to stop and "think them up." Profitable work, too, must be planned for times when, though it does not actually rain, the soil is too wet for tillage. There must always be promptness and wisdom of decision on the part of the successful farmer. His men must never see him at his wits' end to plan work for them, or dallying in doubt. If he dallies here, they will dally at the work. Hired men work far better when they see that they accomplish something than when from the mismanagement of their employer, they cannot earn him their wages, even though they may not have to work so hard in the latter case. They prefer, too, to work for the farmer who works with them, or at least is with them most of the time, than for him who is off at town or elsewhere half of the time. And as for the farmer himself, the old "saw" is still true,

> "For he that by the plow would thrive,
> Himself must either hold or drive."

On large farms in England and elsewhere the superintendence of the work may be enough for the farmer, but on small American farms the farmer himself must usually be a worker. But he must be a thinker and a superintendent too, and at no time of the year is it more important for him to have clear and well-arranged plans and promptness and decision in their execution than now. For in the spring time the preparations are made and most of the crops put in whose growth and sale and use, must pay his hired help, support his family and lay by something for a "rainy day" or for old age.

Farm Economy.

FARMERS' EXPERIMENT PLOTS.

EVERY season for three years past the RURAL NEW-YORKER has suggested to its readers that they should experiment for themselves in order to ascertain what concentrated manure their soils stand most in need of. Some fields may most need potash; others phosphoric acid, etc. Some may need only one—some two—some all, or what has been termed a complete fertilizer. If by test it were found that a given field would produce as much corn by the addition of 250 pounds of bone flour as by the addition of a thousand pounds of a complete fertilizer, it is plain that the difference in cost could be saved for one year or for more, according as the supply of the other fertilizing ingredients was greater or less. The diagram will sufficiently show our readers the best method of conducting such experiments. Each parallelogram may represent 1-40, 1-10, 1-4 of an acre or an acre, if so much land could be spared to the experiment.

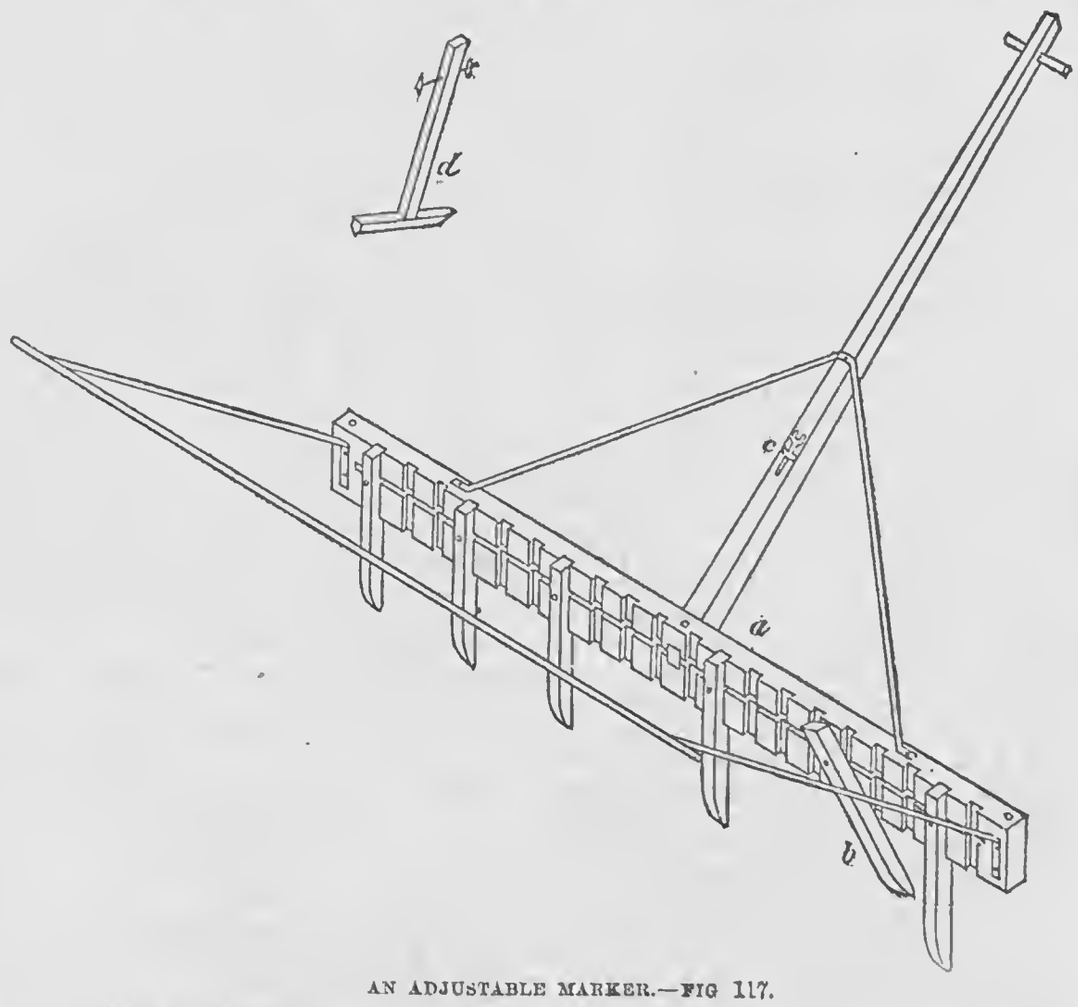
Any of the first-class fertilizer firms of the country will furnish the different ingredients as needed, since such firms are naturally desirous of familiarizing farmers with the use of their own goods For phosphoric acid, bone black is perhaps the best. For nitrogen, nitrate of soda. For potash, muriate of potash. The diagram will suggest combinations, and others still may occur to the experimenter.

EXPERIMENT PLOTS.

No manure.	Farm Manure.	Phosphoric Acid
Potash.	Nitrogen.	Nitrogen and Potash.
Nitrogen, Potash and Burnt Bone.	Bone Flour.	Leached Ashes.

NEW MOLE AND GOPHER TRAP.

IN the RURAL of March 20, we published illustrations of two very efficient mole traps, and we here present another devised for catching moles and gophers, the construction of which is plainly more complicated than that of either of the others, though, of course, the device may be equally serviceable.



AN ADJUSTABLE MARKER.—FIG 117.

The trap has a spring-acted follower guided by the vertical frame, A, and carrying four sharp tines or spikes, B. In the lower portion of the frame is pivoted a lever or trigger, C, which is jointed to the sliding wire frame, D. A bail, E, jointed to the follower is engaged by the catch, F, when the trap is set, and the long arm of the catch is retained by the upper part of the sliding frame, D.

A short section of the ridge of the mole track is pressed down by the foot and the trap is pinned down over the flattened place. When the mole returns it presses the lever, C, upward in the act of opening the path, thus releasing the catch, F, when the tines, B, spring downward and impale the animal. For the gopher the trap is fastened down over the mouth of the hole where it carries out earth. When it emerges with a load it presses up the trigger and springs the trap.

This useful invention was recently patented by Mr. Albert G. Rogers, of Lathrop, Mo.

AN ADJUSTABLE MARKER.

F. A. GULLY.

THE accompanying cut represents an adjustable hand marker, the teeth of which may be set at any distance apart, from nine inches, through all the multiples of three to 57 inches (the cut lacks one tooth), and they can be changed in a moment without taking out any bolts or removing the teeth from the marker, and they cannot be mislaid or lost.

The beam, *a*, is 1¼x5 inches, 63 inches long and made of pine or any strong, light wood. A slit, a half inch wide, is cut through its center except three inches at each end. The notches for the teeth to rest in are three inches apart from center to center, a quarter of an inch deep and an inch and a quarter wide. The teeth are 12 inches long, made of hard wood, each being fastened with one ⅜ inch bolt passing through the tooth and the slit in the beam, with a large washer and a nut on the front side of the latter. They are made to fit snug in the notches to prevent any side motion.

To change the teeth, the nuts are loosened—not taken off—when the teeth may be slipped along any desired distance; if but part of the teeth are needed the others may be tipped up sidewise, as shown at, *b*, and the nuts tightened to hold them in place.

Attached to the tongue, at *c*, is a leather loop to hold a small, flat wrench for changing the teeth. The tongue should be placed at such an angle with the beam that when the marker is being used, the teeth will slant back about 20 degrees from the vertical. This will give the marker a more steady motion than when the teeth are upright or point forward.

At *d*, is shown a tooth with a shoe or runner; the under side of the latter is beveled to an edge, and shows the exact center of the mark. When the seed is to be sowed with a drill, or by hand when the ground is dry, I prefer the teeth with shoes, as the marker can be drawn more easily as well as steadily, and more nearly in a straight line. The objection to using the shoe is that if the ground is at all moist, the bottom of the mark is packed too hard; if, however, a drill is used, the nose, or seed spout, will loosen up the soil when the seed is dropped.

Where much marking is done, it will pay to have a handle attached to the hand marker, as shown in the cut. Two men can then do the work faster enough to more than make up for the extra hand, and with much greater accuracy.

I have also used a one-horse marker made on the same plan. The handles of both are nearly as long as the beams, as shown in the engraving. In marking, after crossing the field or bed—following a stretched line the first time across—one tooth is drawn in the last mark made, for a guide; with the handle shown, the man who guides the marker takes hold of the end of the handle and walks behind the guiding tooth. By looking ahead he sees all the crooks in the mark previously made, and can vary the marker to make them straight. When the marker is turned to come back, he takes the other end of the handle, and so on. With this form of handle any careful man can make straight rows on even ground, while not one man in one hundred will do so with the ordinary marker with the handles at the center.

Lansing, Mich.

Spreading Manure.

I BEG leave to disagree with F. H. D. on spreading manure from a wagon. I think he is mistaken when he says it saves much time and is much easier. It is the custom of our largest and best farmers to unload their manure from the wagon in heaps, making from four to six piles to a load. A good man, with a manure or potato hook, can unload a large load in this way in five or ten minutes, and the spreading may be done at leisure, to fill in time. Most farmers keep hired help, and it is sometimes very convenient as well as profitable to have some light jobs in store to work at in odd spells to fill in time. When manure is spread from the wagon the team has to remain idle about half of the time, or while the driver is unloading; but when the manure is unloaded in heaps; which is done by removing one side board and hauling it off with a potato hook, the time required for unloading is so short that the team is kept busy most of the time.

G. A. G., JR.

The Swine-Herd.

PIG FEEDING.—No. II.

DR. J. B. LAWES, OF ROTHAMSTED, ENG.

In my last letter on the subject of pig feeding, I made some reference to the effect produced on the animal by the presence of more or less indigestible matter in the food supplied. I think it may be desirable to make some further allusion to his subject, as the question is one of considerable importance, and also because misconception, with regard to results which affect to bear upon the point, may easily lead any one to false conclusions.

I will give an instance:—Some time ago a friend, who took an interest in pig feeding, informed me that he was often in the habit of giving to his pigs a few pounds of coals, which had the effect of increasing their appetites.

I said to him, in answer, "I have no doubt that your pigs may consume more food, but you may be assured that the consumption of so indigestible a matter, will cause the food to pass through the system too quickly, the result of which will be that the animal will not receive benefit in proportion, and the food itself will be wasted."

Some years ago we tried at Rothamsted experiments with a celebrated condiment which was said to increase the digestion, improve the appetite, and enable the pigs to give a larger increase upon a given weight of food. The result of adding the condiment to the ordinary food, was to increase instead of to diminish the amount required to produce a given increase of the animal.

In the table which I gave in my last communication I showed that, for equal weights, a pig increased about six times as fast as an ox, and consumed twice as much food; but notwithstanding this fact the pig, further, left less excremental matter from the consumption of 27 pounds of dry food, than the ox from his food of less than half that weight.

Now, bearing in mind what I stated in my last letter as to the different character of the foods which the pig and the ox are adapted to digest, it is evident that when, what may be called the machinery of the animal, is employed in extracting nutriment from a large amount of comparatively indigestible matter, such as is found in the bulky diet of the ox, the rate of increase will by necessity be slow. A mill of a certain capacity cannot extract the same amount of gold from quartz rock, in a given time, where there are only five ounces of gold to the ton, as it could if there was double that quantity of ore. I think, therefore, it may be considered that in order to obtain the greatest increase in a given time, as well as the greatest increase upon a given amount of food consumed, such food must contain very little indigestible matter.

It is true that there are substances which might be used economically as food, both when a pig is growing and also when he is finally fattening; but many of these substances, in this country, we cannot use—at all events in the final stage—and for this reason, that the food consumed by the pig appears to have a more marked effect on the quality of the meat produced, than the food given to oxen and sheep, which, by comparison, affects but little the quality of the beef or mutton. Looking at the value of the manure obtained from beans and lentils, it would often pay the farmer better to use them as a fattening food than corn or barley used; but as consumers have found out that bean-fed pork is hard and unpalatable, butchers naturally object to purchase animals that have been fattened in this way.

The general result of our investigations at Rothamsted led us to the conclusion that, while the growing pig might be fed upon any or everything, the most appropriate food for fattening was corn or barley meal. I may further add that we obtained very good results when small quantities of bran were added to the corn-meal; but whether such addition was absolutely necessary to give the best results we are not prepared to say.

Veterinary.

ABORTION IN COWS.—II.

D. E. SALMON, D. V. M.

Having made a hasty review of our knowledge bearing on the causation of this great scourge, I must freely confess that this knowledge is exceedingly unsatisfactory; that there is no definite evidence on any point, that can serve to clear up the mystery surrounding the disorder, or that points to a practicable remedy. The discovery of bacteria is in itself without importance—these may exist in health as well as in disease, in common as well as in specific maladies; but if a particular kind of bacteria were discovered to be always present, if this were cultivated outside of the animal body for a number of generations and then, when inoculated, it produced the disorder, we would have a discovery of some importance. Again, smearing the generative passage with a decomposing, irritating discharge might cause abortion, irrespective of a specific contagious principle; and, even chlorate of potassa might act beneficially in other ways than as an antiseptic.

Now, I think I see a smile of derision on the faces of hundreds of dairymen as they read this confession of the ignorance and inability of the veterinary profession; I hear them ask, in my imagination—what I have often heard in reality—"Of what value is your profession to us, then, if you know neither the cause nor the remedy for a disease that results in losses amounting to $10,000,000 or $15,000,000 annually.

Allow me to say a few plain words to this class of men, for I know their number is legion. If the veterinary profession has no specific remedy for this contagious affection, it is not inferior in this respect to the medical profession which, so far, has failed to discover an agent that would control a single contagious disease, if we except the itch—isolation and quarantine are their only means of fighting these maladies, and to these the veterinarians can add slaughter, which makes their work far more effective.

But what has been done is no measure of what can be done—the different departments of science are daily throwing new light on the means of investigation, on the nature of contagious germs, and on the means by which these can be destroyed. The investigations that have been made with this, and most other diseases, are far behind the possibilities of the times. Why, then, does not the profession keep its knowledge up with the means of investigation? I will explain.

The investigation of this class of diseases requires special knowledge—it is the most delicate and difficult work yet undertaken by science—beside it, chemical analysis is an easy matter. It requires weeks, months, years even, of patient, unremitting application; long, weary hours at the microscope; the cultivation of the lowest forms of life in special apparatus, beyond the reach of the most minute germs floating in the air; determination of the conditions favorable and unfavorable to their existence; the testing of a large number of medicinal agents in solutions of various strengths; in short, a careful search for the vulnerable points of the organism. But time is money; apparatus and chemicals are money, and special skill may be classed in the same category.

Now, notwithstanding the great, direct and continuous losses sustained by the dairymen from this disease; notwithstanding the fact that they would be the chief gainers by any discoveries in regard to the nature or proper treatment, neither the veterinary profession, nor any member of it has ever been offered, to my knowledge, a single dollar to pay the expenses of the needed investigation! When an investigation of the diseases of animals is to be made, it is generally contended that a farmer, a physician and a *farrier* must be on the commission—the farrier being a cross between a farmer and a blacksmith. There is little appreciation of the proper qualifications of persons appointed to investigate such disease; as a result there are few specialists in the country to conduct them, and the money so seldom and sparingly appropriated does not produce practical results. In marked contrast to this policy, however, is Commissioner Le Due's appointment of veterinarians to conduct such work, for which he certainly deserves the thanks, not only of the profession, but of the country at large.

I have full faith in the ability of modern science to overcome these plagues, and I know that when there is any assurance of continuous and liberal support, the proper men can be found to take hold of these questions and persevere till success crowns their efforts. When the problem is to prevent an annual loss of $10,000,000, the yearly appropriation of $10,000 or even $20,000, for such investigations, sinks into insignificance, whether this appropriation is continued for two or twenty years.

It is a parsimonious, short-sighted policy in our different legislative bodies, that will see a thousand dollars destroyed and will not expend one dollar toward preventing such loss. But, primarily, the stock-owners themselves are the cause of this policy, for a united demand from them would secure any needed legislation; but neither Congress nor the State legislatures will appropriate money (except for political purposes) unless they know that they will be sustained by their constituents.

There are too many dairymen that have such unbounded confidence in themselves, as to believe that because they have been baffled by this disease, the veterinary profession will be equally unsuccessful; there are others who think that the individual members of the profession should make these investigations for the abstract love of science, which they are supposed to possess; still others hold the discovery should be made as inventions are, and the reward obtained by selling the knowledge to interested parties. But, it must be remembered that a professional man at once becomes a quack, when he sells either secret remedies or secret methods of preventing disease, and no man of honor would stoop to this; and, although he may have ever so much love of science, a professional man, like other mortals, must have a subsistence, and must see some return for time and expenses before he undertakes such investigations; finally, the extraordinary and unexpected success that has lately rewarded the studies of contagious diseases is sufficient to inspire the most inveterate doubter with confidence of the ultimate success of systematic, persistent and intelligent investigation, not only of bovine abortion, but of all other contagious diseases.

Treatment.

When a cow shows symptoms of aborting, remove her to a quiet place, at a distance from the other cows; give repeated doses of laudanum (two ounces, three times a day); give the other cows one half ounce of chlorate of potassa, daily, for a week, as a preventive. If the cow aborts, keep her at a distance from the others for, at least, a month; disinfect and bury deeply the fœtus and membranes, and keep the stable, in which she is, well disinfected with carbolic acid, chloride of lime, the fumes of burning sulphur or the three combined, and let her be cared for by a person who does not go near the other cows.

It is impossible to say what is the best disinfectant in a particular disease, except after careful investigation, which is yet wanting with this trouble; those agents which are very destructive to some germs are almost harmless to others. The ones recommended above, however, are most promising.

Injections of weak solution of carbolic acid, chlorate of potassa, or salicylic acid into the vagina after abortion, would lessen the discharge and possibly destroy its infectious properties, and might thus be of considerable advantage in preventing the extension of the trouble. At all events, if the affected animal was, at the time of the abortion or within a few days of this time, in a stable where other cows are kept, and if there is no reason to attribute the trouble to a blow, fall or similar cause, then, this stable should be thoroughly cleaned, scraped, the particular stall deluged with boiling water, and the whole stable whitewashed with the ordinary lime mixture, to which has been added one-half pound chloride of lime and four ounces crude carbolic acid to the gallon: the whole to be followed by closing the stable and thoroughly fumigating it several times with burning sulphur. When practicable, remove the healthy cows to another stable or lot where no diseased animal has been to infect it. When the trouble is once fairly under way, it is often the best plan to sell the whole stock, thoroughly disinfect as above, removing all manure first, and buy a new lot of animals.

These are the best directions that can be given at present; but, I repeat, there is reason to believe that a thorough investigation might improve on these in many respects; it might discover that, as with some other maladies, a certain agent has a peculiar activity in destroying the infectious principle of this disease; and, when found, such an agent might be successfully used as a preventive, and as a curative medicine after the symptons have appeared, and as a disinfectant.

If the most general form of abortion is really contagious, as seems to be the case, then it is caused by a living principle, which can only be produced by a pre-existing organism of the same kind; and this inspires the hope that, with increased knowledge, we may be able to destroy every one of such organisms, and thus rid the world of the greater part of the contagious diseases of men and animals. There have been many important discoveries in regard to the contagious maladies within the last few years, and nearly all strengthen this view. What we need is more earnest investigation; more faith in the resources of nature; a determination to exhaust every possibility before folding our hands in discouragement. One day the greater part of such diseases will probably be exterminated; and if we of the present generation hope to aid in this extermination, and to share the benefits of it, we have no time to lose.

Dairy Husbandry.

HOTEL BUTTER.

R. GOODMAN.

Stopping a day or two since at a new and somewhat pretentious hotel at Albany, N. Y., I was struck by the poor quality of the butter. That put on the table for the use of the guests was not better than very ordinary cooking butter, and both taste and smell united in pronouncing it unfit for the palates, if not for the stomachs, of the four-dollar-a-day patrons of the establishment. A gentleman at the table, hearing me ask the waiter if that was the best article of the kind in the house, thus having his attention called to it, remarked to his neighbor, that nothing gave a hotel such a "black eye" as poor butter. And yet how few public houses even in cities, give a good quality of table butter to their guests, and how rare to find it savory enough in country hotels and city or town restaurants to allow its spreading on the bread. I hear great complaints of the most prominent of the hotels in New York City on this score, and the clubs only avoid the disgrace of frequent animadversions by taking their supplies from private dairies, by which means they obtain an article of which the quality is not only good but equable. And this is found to be more economical than to furnish an irregular and common article of tub butter, and waste it, as is the ordinary custom. The waiters at hotels cut from the dish on the table about a quarter of a pound, "more or less," and "dab" it on the small butter plate of the guest, and the latter "musses" it over; and it is removed with the rest of the remains of the dinner, and ought to go into the "slush; but whether it does or whether it turns up again in the "cooked dishes," "no feller can find out." On the other hand, when nice butter from private dairies is served in little "pats," they are daintily picked out and those not used are untouched and can be served again as fresh and clean as if just taken from the package.

There can be no question that the hotel or club which provides itself with the best butter and has it come in rolls from which nice slices can be cut, or in pats of an eighth of a pound, will find that its butter bill at the end of the year is less than when an inferior article is purchased and wasted according to the usual custom, unless it is made to do double duty, like the proverbial "bread wastes" of boarding-houses, which are said to form the next day's pudding. Our hotels, restaurants and clubs are compelled by the force of public opinion to provide themselves with the best of bread, and they would be relieved of many guests if they furnished only the old square loaf bakers' bread and did not set before them French and Vienna rolls, Boston brown bread and other popular varieties. But as yet the "*gout*" of those who congregate at those caravanseries has not been educated up to the high-water mark, and it is a sad truth that Americans eat more bad butter than any other civilized people.

We are striving through the public press, which enters heartily into the matter, and by means of lectures, dairy meetings, and the like, to make the farmers ashamed of their slovenly habits of butter-making, and the business is becoming a specialty, and soon those who do not preserve cleanliness in their stables and in the processes through which butter is made, will fall back into poverty and shiftlessness generally, whilst those whose practice is the reverse will succeed. But, like all other reforms, even that of the Civil Service, the improvement should begin and be carried out at both ends, and whilst it is useless to enact reforming rules for tide-waiters and custom-house officers and let their superiors do as they please, it is equally useless to carry out these new measures of dairying, unless those for whose eventual benefit they are intended appreciate their value and assist their progress. If the guests of these expensive hotels, where four and five dollars a day should be an equivalent for the best of everything included in "bed and board," and if those of expensive restaurants would insist upon having the best butter as well as the best bread, the proprietors would soon come to terms. A guest at any of these places immediately turns up his nose at a too flavory chop or steak and sends it back, and would growl fearfully if a "wet" instead of a "dry" wine were put before him when ordering the latter; but his education is so incomplete in the matter of butter, and his natural taste so defiled by the quality he has been in the habit of eating, that he is not apt to detect the poor quality of that put on the table, nor of the much worse with which his delicate viands are drenched and injured. We mean to keep stirring up the farmers to compel them to furnish better butter than formerly, but their efforts must be appreciated, and the public everywhere demand that only good, sweet butter shall be put on the table at all times and in all places.

Lenox, Mass.

Petitioning Against Oleomargarine.—The following petition is being circulated for signature among dairymen, farmers, and butter dealers throughout the country:

To the Honorable the Senate and House of Representatives of the United States:

Your petitioners, dairymen, farmers, manufacturers of and dealers in butter and cheese in the United States, respectfully represent that serious injury is being inflicted upon the dairy industry of this country, and that gross imposition is being perpetrated upon consumers in America and Europe by the manufacture and sale of a compound known as oleomargarine—a mixture of fat with butter or milk—and generally sold under the name of butter, and urge the passage of a law

Prohibiting the admixture of fats with butter, milk or cream.

Prohibiting the use of all coloring matter in the fat of animals designed for food purposes.

Prohibiting the sale of oleomargarine as butter, and the use of the word butter in marking, branding or selling any other article than natural butter.

Prohibiting the exportation of oleomargarine, whether invoiced as oleomargarine butter, butterine, oleomargarine oil, or under any other name.

Prohibiting the use of ingredients other than the caul fat of healthy beef cattle in the manufacture of any article of human food.

Placing the manufacture and sale of oleomargarine, and other admixture of fat or grease offered for sale for food under the supervision of the National Board of Health, to prevent the use of refuse or diseased fats in their manufacture, and such other enactments as are necessary in the premises for the full protection of all producers and consumers.

The above petition, we are assured, was sent out by the National Dairy Fair Association. In it there are several objectionable features. Some of the prohibitions prayed for would, if enacted, injure rather than benefit the dairy interests of the country while others could receive no consideration from shrewd business-men of any class. Doubtless, however, it is merely designed as a basis for future legislation, as showing, in a broad way, the views of the dairymen of the country with regard to the manufacture of oleomargarine, and to express in an emphatic manner their sense of the tricky and fraudulent means by which the compound is being foisted on the public much to the loss of those engaged in the production of genuine butter. It is to be hoped, however, that the bill relating to this subject, which will probably be drawn up for Congressional action, will be free from the unwise provisions that mar this petition.

The Poultry Yard.

POULTRY ON THE FARM.

To keep poultry on a farm is economical. When a farmer keeps a herd of cows, a flock of sheep together with horses and hogs, there is always room on the farm for a good stock of poultry. Even when all the cows, sheep and hogs are kept that there is room for, there is still room for poultry. It is almost a necessity for every family to keep a pig in order that the refuse and house slops may be utilized; it is in the same sense that poultry are valuable—they are the scavengers of the farm. There is no class of fowls that require very much room on the farm. Still they do require room and attendance, and they may be kept in such a shiftless manner that they will be found unprofitable. All kinds of poultry may be kept provided they may have the run of the barn-yard; but they must be kept in such a manner as to prevent their ravages in garden and grain-fields. Turkeys, ducks, geese and hens may be kept all summer without using one square yard of room available for any other purpose. Care should be observed in providing for ducks and geese that they may not have the privilege—for such they will deem it—of fouling the water required for the stock, or making themselves a nuisance in any other manner.

Young chickens and turkeys will require some care for the first few weeks of their existence; after that, they may be trusted to care for themselves to a great extent. Poultry may be raised and a flock of hens kept producing eggs all summer without the outlay of one dollar for grain. Sour milk from the dairy is very good for young poultry, and there are many other articles of refuse on the farm that can be profitably used in the maintenance of fowls. Now, why is it that farmers do not indulge in the luxuries of fresh eggs daily during summer and also of fresh poultry more than they do? I know that it is too often the case that all the eggs produced on the farm are sold for groceries and other small items of household expenses. I know that too often all the poultry are sold to the butcher, and that sometimes the farmer does not taste a fresh egg or a chicken during the entire year. This is unwise. With a little care sufficient eggs can be produced only to make a profitable item in the farmer's income; but also to enable him to gratify his taste for fresh eggs as well. Poultry may be produced as cheaply as any other class of meat.

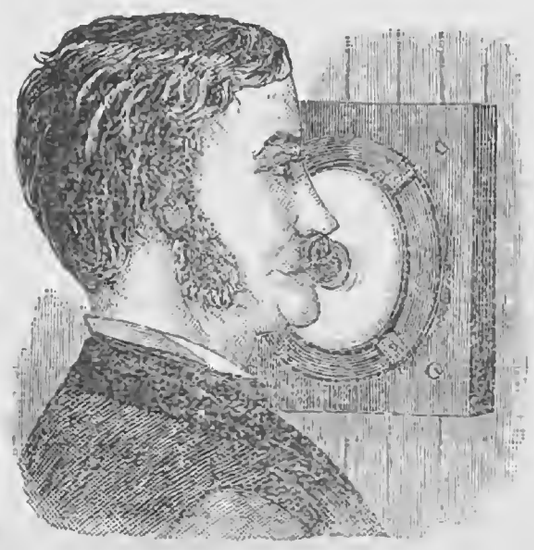
St. Lawrence Co. N. Y. F. K. MORELAND.

SOFT FOOD FOR POULTRY.—A writer in a contemporary says this gives diarrhea, and is the cause of much sickness and death among all domestic poultry, whether land or water fowls. I have fed for years past scarcely anything else than soft food, winter and summer, to my hens, and do not recollect a single case of disease or death from it. Occasionally there has been a slight softening of the feces when two much sulphur had been added to the pudding, but this ceased in a day or so after stopping the admixture of sulphur. My feed has been wheat bran and Indian meal, half and half, in cold weather and two-thirds to three-fourths of the former, with one-third to one-fourth of the latter in hot weather, mixed up with skim-milk when I had it to spare; if not, with water, hot in winter, but cold in summer. To every gallon of this I added four tablespoonsful of brine, and a spoonful of sulphur occasionally, as a guard against lice. Towards night they were fed at the rate of four quarts of oats to 50 fowls scattered on the ground for them to scratch and pick up. They had a high-roofed, well ventilated house to roost and lay in; a large, dry, sunny yard, and a grass plot to run on. Cabbage leaves for green food in winter. This is all. I kept three distinct breeds of fowls, Light Brahmas, White Leghorns and White Hamburgs. A. B. A.

Industrial Implements.

PROF. BROOK'S LOUD-SPEAKING TELEPHONE.

THE accompanying cut represents Prof. William R. Brook's loud-speaking, acoustic telephone—a reliable, durable and excellent instrument for conveying the direct human voice over lines of 50 to 5,000 feet in length. It is the direct sound wave, dispensing entirely with costly batteries and all magnetic appliances. Neither are the latter required for the



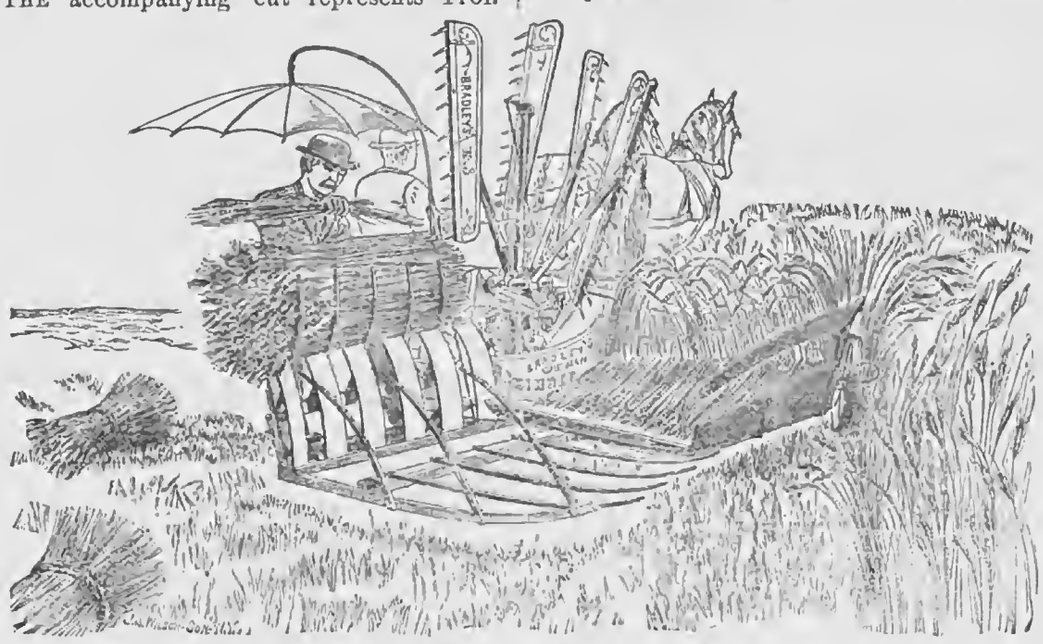
PROF. BROOK'S LOUD-SPEAKING TELEPHONE.

"signal" or "call"; but all is contained within the instrument. Not only is the voice transmitted with great volume and power, but it retains all its individuality so that the person speaking can be recognized. Singing and music are transmitted with wonderful effect. The wire used for the line is No. 20 copper wire, and may be obtained through any hardware store, or it will be furnished by the manufacturer. Large numbers of them are now in use and giving the highest sasisfaction. Any person can put up the line and telephone by the aid of the clear and simple directions sent with each pair of telephones. The low price at which they are offered brings them within the reach of all. For connecting offices, shops, factories and residences, for holding communication with your distant neighbor or friend in the next street, or the adjoining farm, they are very valuable. They are large and powerful instruments and made for practical business or social use. Good agents are wanted in every county, to whom liberal inducements are offered. The price is $5 a pair, and they will be sent to any address, by express on receipt of price. Can be sent by mail for 40 cents extra. For further information, circulars and testimonials of their efficiency, address, with stamp, Prof. William R. Brooks, Phelps, N. Y.

BRADLEY'S AMERICAN HARVESTER, NO. 3

With One-Man, Straw-Band Binder Attachment.

THE stress of keen competition between the various manufacturers of reapers and mowers gives these enterprising, wide-awake gentlemen no rest on the march of improvement in their several machines. Each is always on the outlook for some betterment which will render his own particular implement of greater value to the public than those of his rivals, and, therefore, secure for him a larger share of patronage. In the front rank of manufacturers of this sort of machinery Bradley & Company, of Syracuse, N. Y., have always held a prominent place, but they now expect to reach a still more conspicuous position by putting on the market, the coming season, an entirely new machine—a sweep rake reaper, to which can be attached a device by which one man can bind the grain as fast as cut, using a band of straw.



BRADLEY'S AMERICAN HARVESTER, NO. 3.

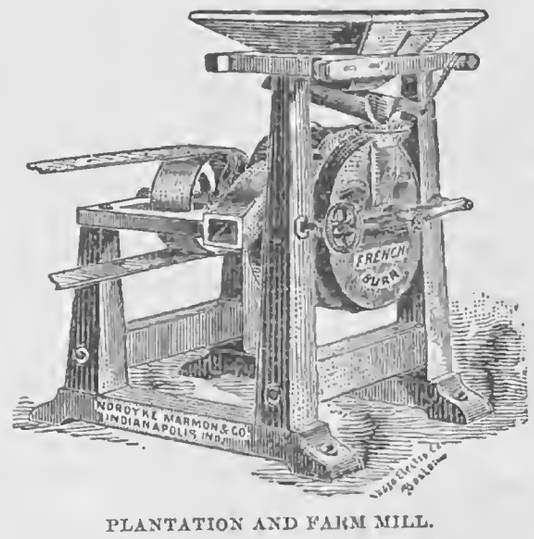
This machine will be known by the name at the head of this notice, and its appearance is shown by the accompanying illustration. The binder being seated at the rear of the machine, the gavel is swept from the platform on to the forks at the rear of the latter. While the grain is lying on the forks, the binder takes his band from it; the set of forks farthest from him then tip up, throwing the gavel upon the other set of forks which raise it on to his lap. The first set of forks then fall back into their place, while the other set are held in position for an instant, compressing the grain, and giving the binder an opportunity for putting the band around. These forks then fall back into their place, and it is the work of an instant to tie the band and let the bundle drop preparatory to a repetition of the operation. When it is desirable not to bind the grain as fast as cut, the binding arrangement is easily and expeditiously detached, whereupon the machine at once becomes a perfect sweep rake reaper. Its construction is simple, its weight, with the binder attachment, is not more than that of an ordinary reaper, and in view of its many merits we predict a wide popularity for it, and invite our friends to obtain fuller information about it by dropping a postal card to the manufacturers.

The Oneonta Clipper Plow.

Among the plows we strongly recommend to the favorable notice of our readers is the Oneonta Clipper, a reversible swivel plow, made by the old and well known Belcher & Taylor Agricultural Tool Co., of Chicopee Falls, Mass. The action of the shifting handles, vibrating from the center of the beam, bringing the coulter into position at each turn of the mold-board, enables the plowman to walk comfortably behind the plow, with both feet in the furrow. The hook and latch being worked by the foot, the plow is turned ready for use without taking the hands from the handles. This plow is easy to handle, light to draw, firm, strong and durable, made of the best charcoal iron, with the wearing parts chilled. Send for descriptive circulars and price list to the above address.

THE NORDYKE AND MARMON CO.'S MILLS.

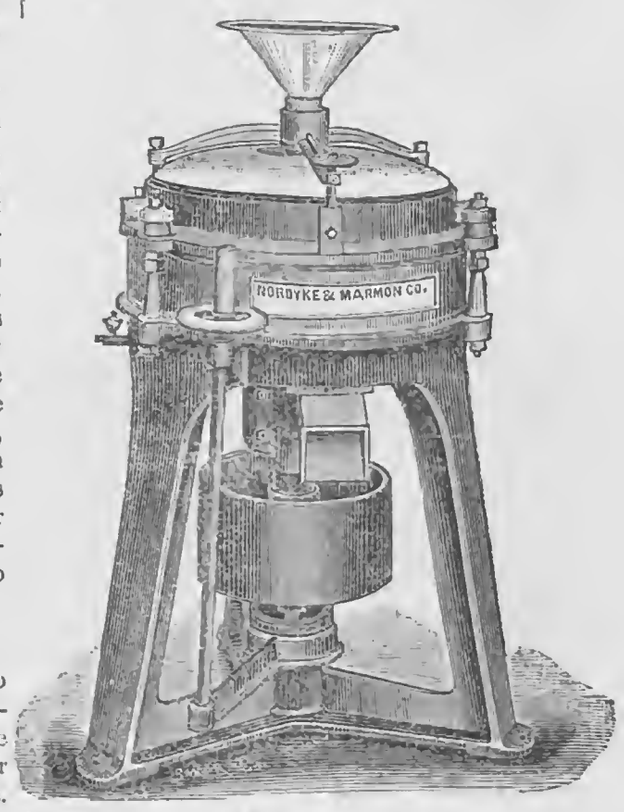
ONE of the best services an agricultural paper can do for its patrons is to call their attention from time to time to the best specimens of the tools, machines and other appliances connected with their business. In no case do we commend an article until one of our own staff has carefully examined it and reported upon its merits. As the opinions we offer on all industrial implements are quite reliable, so far as our investigations have extended, it would certainly be wise in our readers to send for circulars which are always furnishsd gratis and give far fuller particulars than the space at our command here will allow us to give of each article. Of the many advantages of portable grinding mills we have spoken so often, that it would be superfluous to repeat them in recommending to the favorable notice of our readers the widely known Nordyke mills, manufactured by the well known makers of mill stones and mill machinery, the



PLANTATION AND FARM MILL.

Nordyke and Marmon Co., Indianapolis, Ind. As there are upwards of 2,000 of these mills now in use, the intending purchaser can rest assured that in buying one he is making no experiment, but that he will get an article which has always given satisfaction. The grinding surfaces are the best, close, sharp French buhr stones, and capable of being run by any suitable power, and a boy can grind with them and keep them in order.

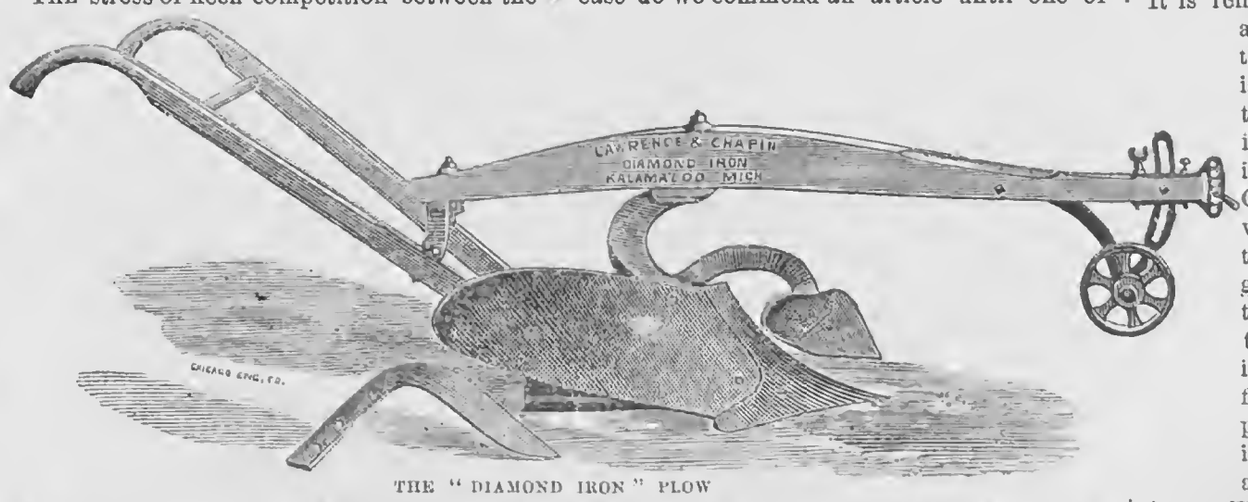
Of the mills made by the company we illustrate two here—the 20-inch New Era Mill for wheat, middlings and corn, and the Plantation and Farm Mill. Both mills are strictly first-class specimens of their kinds in material, workmanship, finish and efficiency, and we advise all who may be in need of so desirable a possession to send for full information about them, which will be promptly furnished gratis, on application.



NEW ERA MILL.

LAWRENCE & CHAPIN'S "DIAMOND IRON" PLOW.

IT is rather doubtful whether there is any agricultural implement on the perfecting of which more thought and ingenuity have been bestowed than on that of the plow. Among the numerous excellent sorts made by various firms the "Diamond Iron" manufactured by Lawrence & Chapin, Kalamazoo, Michigan, has by its intrinsic merits won a high reputation. The "diamond iron" is made of steel, wrought iron and cast iron, so cast, under a patent process, that homogeneity is insured. It is remarkable for its fine grain, hardness and strength, its breaking strength being three thousand pounds. So hard is it, it is claimed that it will make good tools without tempering and annealing, while the edge of a knife made of it will cut wood without crumbling. Of this excellent material all the wearing parts of the plow, including the share, are made, thus insuring great durability. Its weight is less than that of any "chilled" plow of the same size, while the perfection of its form makes it run steadily and do first-class work with a minimum expenditure of power. It scours well in any soil. The coulter is solid steel and the jointer arms steel or wrought iron. We have heard so many laudatory reports of the durability and efficiency of this plow that we strongly urge our readers to send for circulars giving a full description of it, to the manufacturers at the above address.



THE "DIAMOND IRON" PLOW

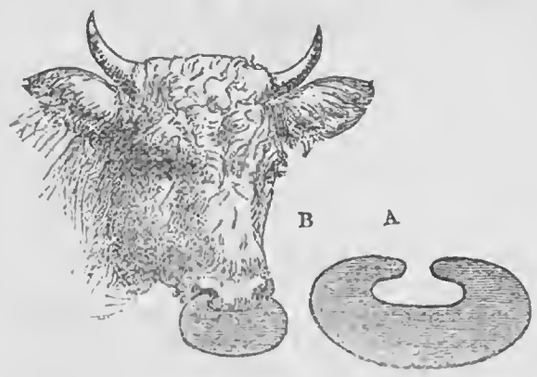
The Querist.

ANSWERS TO CORRESPONDENTS.

How to Prevent a Cow from Sucking Herself.

G. H. W., Salem, Ill, asks how to prevent a cow from sucking herself.

ANS.—Two excellent devices for this purpose were described and illustrated in the RURAL last year—one in the issue of July 26 and other in that of Dec. 6. In the first a stout stick of tough wood is suspended between the fore legs, one end being attached to a surcingle buckled about the animal's body, and the other fastened to a strap which is buckled to the halter. The strap uniting the stick to the halter should be at least 12 inches long to allow the necessary movement of the head to graze freely, while preventing the cow from bringing the head to the udder. For the benefit of our many new friends, we re-introduce the cut of the other device, redrawn from Prof.



ANTI-SUCKING DEVICE.—FIG. 118.

J. P. Sheldon's Dairy Farming, because a cut describes it better than words could, and because it is vouched for as thoroughly effectual. This device is made out of a piece of oak board, eight inches long five wide and a quarter of an inch thick, shaped as in A. The cow's nostrils should be sprung or bent until the piece is fitted as at B. Care should be taken not to make the two points too far asunder, as it would then easily slip off the nose. The points should be about half an inch apart, and nicely smoothed and rounded off, so as not to hurt the cow.

The Wager Peach.

E. H. C, Shepherdtown, Pa., wants some information about the Wager Peach. He expresses his doubt as to its ability to reproduce itself true from seed.

ANS.—Having referred this question to Mr. Downing, he writes us as follows: "I have not eaten or seen the Wager peach, and have only heard of it within the past few seasons, but from the notices given of it I would think it one of those hardy varieties that reproduce themselves from seed, like the Columbia, or Indian Peach of the South, and also like the Hill's Chili and others of the North. The Hill's Chili is said to be about eighty years old, and has reproduced itself from seed, or nearly so, since it was first introduced, and the Wager may be a seedling of it, as the descriptions are very similar." Mr. William C. Barry, of Rochester, N. Y., in a brief essay on new fruits, states that the "Wager Peach was originated by Mr. Wager, of Miller's Corners, Ontario Co., N. Y. It is a bright yellow peach, shaded with red on the sunny side; flesh, juicy and sprightly, and of fair quality; free, very hardy and productive; ripens about the same time as the Crawford."

Selecting Seed Corn.

W. S. M., Dutchess Co., N. Y., referring to Prof. Blount's remark in the RURAL of March 6, with regard to his White Prolific Corn:—"The top ear only of those stalks that ripen first and are most uniform, should be used for seed," asks what kind of ears are best to select for seed from the corn grown by him, the ears of which vary from eight to twelve rows each, the eight-rowed having a small cob and plump, solid and flinty grain; while the ten and twelve rowed have cobs from medium to large with long, dented grains.

ANS.—This corn has not yet established itself as a permanent variety, but it may probably be made to do so by continued selection. The more rows that can be grown, the greater is the product, and it would occur to most people to select seed from those ears having the most rows. A twelve-rowed ear has 50 per cent. more corn than an eight-rowed one, and if this excess could be added to the crop, 60 bushels would be increased to 90. This consideration might be worth study in selecting seed. The top ear is selected by Professor Blount probably on account of its greater vigor and earliness.

Apple Trees Dropping Fruit.

M. B. J., Vineland, N. J., asks how to treat an apple tree to make the fruit fair and prevent it from falling off before it is ripe.

ANS.—Some varieties of Apple have the constitutional fault of dropping a considerable part of their crop before ripening. The Tetofsky will usually drop three fourths of its fruit in this way, though they usually hold on until large enough for pie fruit. When this defect is characteristic we know of no remedy, though we believe that picking off about half the apples when one-quarter grown will secure the ripening of the other half. In trees where the defect is not inherent liberal fertilization and cultivation will usually cure it. Even the Tetofsky does not drop quite so badly in the garden as in the orchard. As to making apples fair, all is done that can be done when good culture is given and the depredations of insects prevented.

Remedy for the Apple and Peach Tree Borer.

J. E. Du Bois, Waverly, N. J., asks how to keep the borer from working in apple and peach trees.

ANS.—We use a wash of lime, sulphur, soap and carbolic acid, colored with lamp-black and red mineral paint. The first wash is applied in May and the trees are afterwards washed as they seem to need it. Placing tarred, oiled or painted paper or paste-board about the stem, and other remedies are advocated by many, but they are of doubtful value, all things considered. The peach grub works in the inner bark mostly, just at or a little above or below the surface of the ground. Its presence is indicated by gummy exudations and it may easily be traced and killed with the point of a knife. An orchard examined in this way in the spring and summer will not suffer seriously from this cause.

Weak-legged Turkeys.

W. C. M, Wallsville, Pa., has a flock of turkeys that were hatched quite late last season, and some time ago he noticed that they did not eat well and were poor and lean. Some, of them walked on the ends of their toes and on looking for the cause he found an unnatural white excrescence resembling "scaly legs" in hens; he applied sulphur, spirits of turpentine and grease without any good effect, and he asks what treatment would be likely to benefit them.

ANS.—Late-hatched turkeys often become weak for the want of proper natural heat while growing; their legs from that cause become weak and swelled. Give them warm, nourishing food with chopped onions; rub their legs with crude petroleum.

Miscellaneous.

J. H. S. Glenville—one of eight in the Union—asks 1, will it pay to sow plaster on meadow—both on new and old—also on oats—the first year; 2, how to make vinegar from a barrel of cider that lay out-of-doors last year from June till frost; 3, another barrel of the same age is quite sour, but tastes bad; it has plenty of "mother" in it, but the latter is of a black color, and he asks can it be cleansed.

ANS.—1. No one can say positively if it will pay to use plaster on any particular soil or crop. The probability is it would pay to use 100 to 150 pounds per acre on either grass, clover, or oats, as these crops are specially benefited by plaster. As the cost is very small, it would be desirable to try the plaster and note the result for future guidance. 2. If the cider was put into a clean barrel and is not moldy, it can be made into vinegar by keeping it in a warm place, and putting a piece of brown paper spread with yeast into it to start fermentation. The bung hole should be covered with gauze to admit air, while keeping out flies and dust. 3. Draw off the vinegar into a clean, sweet barrel, leaving the "mother" in the old barrel. What you think to be mother is probably a mass of fine apple pulp which was not strained out of the juice and has decomposed and become rotten. It may be necessary to filter the vinegar through pounded charcoal to free it from the bad flavor.

W. W. E., Pamprapo, N. J., says he is not a farmer, but he is anxious to buy a farm on which to make a comfortable home. He can command a capital of $3,000, and asks where, within easy reach of N. Y. City, can an eligible place be found for beginning moderately mixed farming with considerable attention to the raising of fancy poultry, pigs and small fruits.

ANS.—We would gladly give you the advice you ask, were we competent to do so. We regard farming as a paying business—as a safe, dignified, noble pursuit. But there are thousands who fail in it the same as in other occupations. Success depends upon the man and upon the farm chosen. The sum of $3,000 is a small amount to begin farming with, and unless you are exceptionally well fitted for the work, you would fail. We would advise you to work for not less than one year under some intelligent, generous farmer, who would give you a home and his advice for your services.

L. E. McO., Ghent, Ky., received a bill of peach, apple and pear trees and Sharpless Strawberries, from Truetts' Son & Morgan, of Nashville, Tenn., which were set out with due care on the day they were received, but the Strawberries failed to show any signs of life, and the trees rightaway began to turn black and the bark to slip off as if they had been scalded. He cut off some of the branches and mailed them to the firm, requesting them to refund the money or send sound trees and plants such as he had contracted for; but no answer having been vouchsafed to this letter, he asks whether there is any means by which he can get back his money or its worth.

ANS.—The firm should at least reply to your letter. If you can prove the above statements to be correct, you can recover. The trees etc., may have been delayed along the route, for which the firm could not be held responsible.

G. G. B., Manchester, Vt., asks 1, what is the value of the Iron-clad Manufacturing Company's metallic shingles; 2. do metallic spouts injure maple trees more than wooden ones; 3, what would be the likelihood of success with blue grass, orchard grass and red top sown in the fall with winter grain.

ANS.—1. We cannot say from actual knowledge; but are inclined to think them much better than wood or slate. 2. No. 3. Spring sowing is preferable. There is too much risk in fall sowing, unless made as early as August 15, with an open winter. Much of the winter's seeding done last fall is killed outright by the open and changeable winter.

W. C. W., Boston, Mass., asks, 1. for a reliable nursery where he can get just what he orders; 2, where can he get the Duchess Grape illustrated in the RURAL Dec. 6th, 1879? 3 Name five varieties of Grapes that are likely to succeed in Massachusetts, besides the following which he already has:—Concord, Hartford Prolific, Delaware, Diana and Catawba. 4. Name the best white Raspberry.

ANS.—1. We must refer you to our advertising columns. We advertise none but reliable firms. 2. Of Farley and Anderson, Union Springs, N. Y. 3. Try Rogers's No. 9, Martha, Maxatawney, Rebecca, Walter. 4. White Antwerp and American White. Both of them are surpassed by varieties of darker color.

J. S., Urbana, Kans., says, "My peach trees have a gluey, waxy substance oozing out, right at the top of the ground; on examining, I find a white worm working on them just beneath the surface of the ground. It looks much like a grub worm, only smaller. Will you please inform me through the RURAL what the remedy is?"

ANS.—It is the peach borer. Paint the trunk with sulphur, lime, whale-oil soap. Paste-board around the stems and breaking lime about them are recommended. Wherever the gum exudes (or near it) a borer-grub will be found. Follow with a sharp knife and destroy all found.

F. B, Louisville, Ky., asks the price of Willards Practical Diary Husbandry and Willard's Butter Book, and whether there is any later and better work on dairy matters.

ANS.—Willard's Dairy Husbandry, $3; Butter Book $1. Prof. Arnold has published a later work of which good reports have reached us. The latest, best and in every way the finest work on the entire subject of dairy husbandry, however, is Dairy Farming, by Prof. J. P. Sheldon, now being published in monthly numbers by Carsell, Petter, Galpin & Co., of this city. Nine numbers have been already issued, price 40c. each, and the work will be completed in about 24 numbers.

G. W. M., Greenville, O., asks, 1, what is a good work on tobacco culture, and, 2, whether there is any paper devoted to that industry.

ANS.—Tobacco Culture by Fourteen Experienced Cultivators, 25c., is the only work on that particular branch of the subject we know of, though there is a large number of European works that treat of the culture, manufacture and adulterations of the weed. The Am. News Co., N. Y., will supply the above work. Almost every year all good agricultural papers tell the whole story. 2. The Tobacco Leaf, 142 Fulton Street this city, a weekly, $4.20; the Commercial and Tobacco Leaf, Richmond, Va., a weekly, price $1 a year.

H. C. B., Poteau, Ark., asks, 1, whether there is any cheap way of killing or getting rid of sassafras sprouts; 2, what it is the best kind of fertilizer to apply to corn in the hill, to give it a start; 3, what is the best means of restoring vigor to an apple tree—tree about 15 or 20 years old.

ANS.—1, We know of no cheaper way than by cutting them down as soon as they are in full leaf. 2, Fine bone flour; or hen manure, applied as often directed in these pages. 3, Cut out all dead branches and thin out where the branches are too thick. Then give the ground a generous spread of manure.

E. C., Cylone, Polk Co., Neb., and his neighbors have for three years given their strawberry beds the best care, the plants have blossomed freely, and still there has not even a sign of a berry. The plants were sold for Wilsons. He wants to know what can be the matter.

ANS.—The plants are all staminate, that is, the flowers possess only the male element or stamens, while the pistils are entirely wanting; a kind of bachelor brotherhood from which no fruit can be expected. The Wilson Strawberry has perfect flowers.

M. B. T., North Loup, Neb., would like to know the proper season to transplant evergreens.

ANS.—Evergreens have been moved successfully at almost every season of the year. Some persons advocate one period and others another. The early spring, however, seems to be the most favorable time. Winter or late autumn is recommended for the removal of large trees. Some kinds admit of being moved at midsummer; but care must then be taken lest the young growth droop.

J. W., Martins Ferry, O., is going into the gardening business, and more particularly, in the raising of strawberries, asparagus, rhubarb, celery and grapes; but he complains that he doesn't know how to go to work, and asks information as to the details of the cultivation of each.

ANS.—We would recommend an apprenticeship of a couple of years with a first-class gardener. The information we could offer on so many broad subjects in the space here at our command, would be of no advantage.

J. K. M., Falmouth, Me., asks, 1, whether seedling plum trees will produce fruit like that of the parent, or should they be budded; 2, will Lucern and other grass seeds "catch" when sown in sod or unplowed ground.

ANS.—1. Highly uncertain; budded. 2. The ground for Lucern should be thoroughly tilled. See History of a Poor Farm and article by Prof. Beal in a late issue for sowing other grasses.

C. D. Carrin, Lockport, N. Y., asks which kind of fertilizer is the best and cheapest.

ANS.—That will depend on the crop for which it is intended a good deal, but mainly upon the condition of the soil to which it is to be applied. The question is far too broad to admit of a satisfactory answer in these limits. Barnyard manure is doubtless in most cases the best and cheapest. For commercial fertilizers see our advertising columns and Market Reports.

M. L. H, West Salem, Wis., asks, 1, would the Japanese Maples be hardy there; 2, can the Rhododendron be grown in the house the same as the Oleander; 3, he has tried the Cow-pea there but it did not ripen.

ANS.—1, Perhaps some of our Wisconsin friends can answer this question. We should doubt it. 2. Not satisfactorily. 3. It is worth a good trial.

G. O. T., White Plains, N. Y., referring to our statement in RURAL of Jan. 19, 1878, that we had two Bassett American Plum trees, asks whether they have borne fruit yet and if they are curculio-proof.

ANS.—Yes, they have fruited with us. The plums are very small and *not* curculio-proof.

I. F. W., Palmyra, Neb., wants to know who manufacture the Centrifugal Creamer.

ANS.—There are two kinds of centrifugal creamers—as stated in a late RURAL. One is made by Whitman & Burrell, Little Falls, N. Y.; we do not know who makes the other, if it is manufactured at all in this country.

E. F., Kingston, N. Y., asks how to raise Bouvardias and Azalcas.

ANS.—Bouvardias and Azaleas require no special treatment. Mellow soil, a sunny window and water—the same as Geraniums need—are their chief requirements. Most Azaleas are hardy. The Bouvardia may be used for bedding purposes, from frost to frost.

J. N. B., Worcester, Mass., asks where the Ring Willow can be had.

ANS—We suppose our correspondent means Salix annularis. It can be had from The Parsons Son's Co., Flushing, L. I.

F. A. M., N. Y. City., asks whether it would be advisable to sow the flower seeds of the Free Seed Distribution in pots in the house instead of in a hot-bed during the warm weather.

ANS.—Yes.

Nell, Cameron's Mills, Pa., asks how to destroy the little white worms that infest the roots of house plants.

ANS.—Use tobacco water. Lime water is excellent.

R. E. C., Waynesville, Ohio, asks how the seed of Cobæa scandens can be obtained.

ANS.—Plants started in the greenhouse and put out in May generally mature seed.

J. M. B., Economowoc, Wis., asks whether the Canton Tea Company of this city is reliable.

ANS.—Yes.

E. N. D.—M. W. F.—A. M. G.—J. D.—C. A. B.—J. T.—C. R.—P. H. N.—W. L. H.—E. H. T.—S. T.—A.—S. S.—J. C.—B. G. S.—G. F. B.—A. B. A.—T. H.—C. C. T.—A. C. L.—W. I. C.—H. R. O—M. V. F. B.—A Subscriber.—H. T. J. S. S.—E. H. C.—E. N. B.—G. H.—E. L. T.—Mrs. M. A.—M.—P.—C. R. & F. W. T.—H. A. T.—A. B.—C. L. H.—T. R.—M O. R.—E. D. S.—F. H. D.—A. K.—W. M. C.—G. G.—T. C.—R. M. O—M. L.—W. F. R.—T. H. H.—S. B.—R. H. C.—T. K.—W. L. H.—A. R. R—Thanks.—E. R.—E. A. C.—G M—J. M.—C. H. E. W. A. T.—S. T. S—A. R.—E. B—J M. B.—W. J.—H. S.—G. B. G—M. L. R.—W. M—A. J. F.—U. S. E.—J. A. P.—B, S. G.—A. T. P.—L. H. R.—I. W. E.—W. C, L. D.—A. B.—J. C. K.—J. A.

Miscellaneous.

WHAT OTHERS SAY.

SELECT LIST OF NEW, RARE, OR VALUABLE PLANTS OF MANY KINDS.—The following new, rare or valuable plants are taken from the catalogues of the season, which have been noticed from time to time in the RURAL NEW-YORKER. They are only those which seem to us worthy of special notice.

NEW ABUTILONS (for bedding, for the sitting-room or green-house). 1. Anna Crozy—An elegant new English variety, with immense globular flowers of a very soft rose color. It blooms freely and continuously all the season. 35 cents. 2. Arthur Belsham—Flowers, large and of good form, clear crimson, without markings on outside; brilliant and attractive, of vigorous habits Distinct. 35 cents. 3. Blandii—A magnificent flower of a deep yellow color, richly veined with dark crimson, and reticulated with light crimson. Blooms freely. Fine. 35 cents.

NEW AGERATUM.—"QUEEN." This is as near as can be described, a silver or a gray, quite a new color, not easily defined, and when planted in a mass (it averages 10 to 12 inches high) it has a good effect. Blooms most profusely far into November in England.

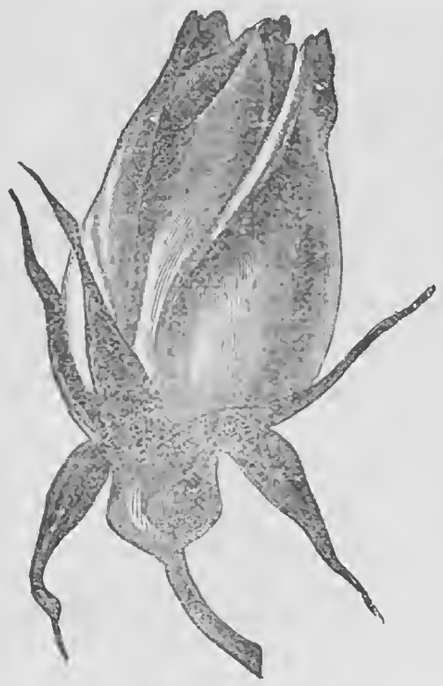
GRAND DUKE NICHOLAS.—A new Hybrid Perpetual Rose introduced from Paris; grand size, very full form, perfectly double, exceedingly fragrant; color, dazzling crimson, brightly flamed with intense scarlet.

DIANA.—Cupped form, large, very double and fine; beautiful, deep pink, changing to clear rosy flesh; petals prettily bordered with purplish crimson.

MRS. LAXTON.—Extra large and fine; perfect shape, very full and fragrant; deep rosy crimson, beautifully flamed and shaded with bright scarlet.

NEW ROSE, "PERLE DES JARDINS." The buds of this Rose are nearly equal to those of Maréchal Niel, but as it is a true Tea bush Rose and not a climber, it is more valuable for general purposes; blooming freely when planted out from young plants the first season, which the "Maréchal Niel" will never do. Color deep yellow; buds large, full, and finely formed.

TEA ROSE, "NIPHETOS." This is the Rose par-excellence. Color of the purest white; large, full, fragrant. It grows dwarf and compact, and flowers in great profusion, nearly



TEA ROSE NIPHETOS.—FIG. 119.

every shoot producing a bud. It is now grown almost exclusively as being the best White Tea Rose, either for winter or summer. Ever in bloom, and possessing all the qualities in a Rose. (*See Cut*).

GEORGE PEABODY.—Extra large flowers; fine cupped form; very full and double; splendid glowing crimson, changing to purplish scarlet; exquisitely Tea-scented; a superb Rose.

JULES CHRETIEN, NEW HYBRID PERPETUAL.—An exceedingly beautiful flower, very bright crimson shaded with purple; very large, full, and of the finest form, among dark brilliant Roses this is the finest. A vigorous grower and free bloomer. A superb Rose.

RUELLIA MACRANTHA.—A Brazilian plant. Flowers freely, of a fine violet-carmine, a pleasing color. This plant is of free growth in a warm house, flowering profusely. One of the finest winter-blooming plants of recent introduction.

NEW WHITE HYDRANGEA, "THOS. HOGG."—It has now been very generally distributed over the country. To those who have not yet obtained it, we would say, that the flowers are pure white, often measuring 10 inches in diameter; the plant, when fully grown, covering a space of five feet in diameter—making it a valuable plant for cemetary decoration or other purposes. It is hardy with a slight protection of leaves in winter.

NEW COLEUS—DREER'S HYBRIDS.—The color combinations of these are very remarkable. They seem to be offered by all florists.

NEW MONTHLY CARNATION, "SNOWDON."—Its merits are that the flowers are of the purest white, borne in profusion on plants that rarely ever exceed one foot in hight. This quality of dwarfness makes it exceedingly valuable.

CATALPA, — Syringæfolia aurea — Leaves large and entirely suffused with a permanent golden color, giving a beautiful warm tint to the foliage. A remarkably handsome tree, with noble foliage of peculiar character and long clusters of fragrant, white, varicgated flowers in August.

CORYLUS—Avellana pendula.—A handsome weeping variety of the Filbert.

DAPHNE GENKWA.—A beautiful, slender, upright-growing shrub, with numerous long, downy twigs, which in early spring before the leaves appear, are thickly garnished with violet-colored tubular flowers, rather more than one inch long. It seldom attains the hight of more than three feet, has fine delicate foliage, and may be classed among the best of our flowering shrubs.

MAGNOLIA HYPOLEUCA.—One of the most attractive of this large family, on account of the fragrance and lateness of its bloom. Flowers milky white, resembling those of Conspicua, but larger, with a most delicious, banana-like odor, and appearing about the middle of June. Foliage bright and attractive, with the underside of the leaf whitish. A great acquisition.

NEW DOUBLE GERANIUMS — Candidissima plena.—Very large, full, and finely formed flowers of the most pure snowy whiteness, not becoming tinted with rose as the flowers fully expand. A really first-class Geranium. Grows vigorously and profusely all the season. We know nothing of this plant, and merely give the catalogue description. Striped Vesuvius—Very distinct from all other Geraniums. Quite double, scarlet ground striped with white and salmon. Will prove acceptable to the most select collection of Zonals, either for the conservatory or for bedding purposes.

NEW IXORA—I. Regina.—An extremely attractive and distinct plant, freely producing large, dense trusses of flowers of a rich violet salmon color.

NEW LANTANA—Surprise.—A fine new variety of robust growth. It produces immense round fringed trusses of fine large flowers of a bright yellow color, changing to rich red with dark center. This is fine as a bedding plant blooming constantly.

TURNIP—"Extra Early Purple Top, Munich."—A remarkably handsome and very early turnip, with a bright purplish red top, and fine mouse-tail root. It has been grown during the past season in the Gardens of the Royal Horticultural Society at Chiswick, where it proved to be three weeks earlier than any other variety sown on the same day and side by side with it.

MELON, "NEW SURPRISE."—Said to be the finest of all musk-melons for Northern localities, with thin light-colored and fine-netted skin and deep salmon-colored flesh.

PEAS, "LAXTON'S MARVEL."—A new three feet, main crop, wrinkled Marrow Pea, raised by Mr. Laxton by crossing Prolific Long Pod with Veitch's Perfection, and tried by the Royal Horticultural Society at Chiswick and awarded a first-class certificate. The pods are large, and contain from eight to ten peas of exquisite flavor It is said to be the best of Mr. Laxton's productions.

CABBAGE, "EARLY ARCTIC."—A new very hardy cabbage from Russia.

BEANS, "DWARF FRENCH EMILE"—Superior and very tender dwarf, and well adapted for forcing. Per quart. 7 cents.

CUCUMBER, "EARLY WHITE JAPAN."—Very early, and assuming a pure white color from the time of formation; quite distinct.

SQUASH, "LITTLE COCOANUT."—A beautiful little winter squash, the size of a cocoanut, cream-colored with green bottom, fine-grained, and of first quality.

WHITE RUSSIAN SPRING WHEAT.—In our tests of spring wheats two years ago, this stood about first in yield. It has since been tried over an extensive range of spring wheat territory, and the reports are all very favorable.

LETTUCE. — Black-Seeded Simpson. — This Lettuce was offered last season for the first time. Like the ordinary Curled Simpson, it does not properly form a head, but a compact mass of leaves; but differs in being very much lighter-colored, the leaves being almost white; stands the summer heat excellently and attains a size nearly *double* that of Curled Simpson.

CORN,—Egyptian Sweet.—This has been grown near Baltimore, Md., for some time. The ear is of large size, and the flavor peculiarly rich and sweet.

CHINESE HULLESS OATS.—The berry comes from the heads as clean as wheat, without hull or chaff adhering. The grain is white. These were among the oats tested at the Rural Farm last year. If left until fully ripe, a good deal of grain is lost.

GOURD.—Dish-Cloth.—There is nothing new about this Gourd, but it is curious, and always more or less inquired about. It forms rather curious, novel-looking fruit, the lining of which is sometimes utilized as a dish-cloth, hence the name.

CONVERSION OF CANE SUGAR INTO GRAPE SUGAR IN COOKING.—At a sanitary convention in Grand Rapids, Michigan, recently, the President of the State Board of Health called attention to a bad practice among cooks, by which cane sugar is converted into grape sugar in cooking, thereby losing more than half of its sweetening power. Some women, he said, will put the sugar in with a mass of acid fruit to be cooked, and keep cooking and keep adding sugar while it keeps on growing sourer, until at last they will use two and a half times as much sugar as they ought to, to secure the desired result. The cane sugar has been changed to grape sugar. Now, if the sugar had been added after the fruit was cooked, much less would have been required, and the result would have been far more satisfactory.

GLUCOSE FROM RAGS.—The *Revue Industrielle* states that a German manufactory is turning out over a ton a day of glucose made from old linen rags. These rags, which are composed of hard vegetable fibers, are treated with sulphuric acid, which converts them into dextrine. The latter product thus obtained undergoes a washing with milk of lime, and is then treated with a fresh supply of acid stronger than the former, when the mass is at once transformed and crystallizes into glucose, of which "rich" confections and jellies may be made. The process is said to be a very cheap one, and the glucose chemically identical with grape sugar. A strong outcry, however, has arisen against the manufacture of grape sugar from rags, and the enterprise is understood to be in danger of being interfered with by the German Government.

PEARS FOR MICHIGAN.—For succesion I can give nothing preferable to the following, says President T. T. Lyon in the Michigan Farmer, arranged in the order of ripening: Doyenne d' Ete, end of July and beginning of August; Tyson, middle and end of August; Fondante d' Automne, (Belle Lucrative) middle of September; Louise Bonne de Jersey, end of September and October; Seckel, October; Beurre d' Anjou, November and December. To lengthen the season to February keep the last, or add Winter Nells.

THE fortune of England's Queen is a profound secret. It is known that she has an allowance of £385,000 a year from the nation; that she receives about £40,000 a year from her Duchy of Lancaster; and that the legacy bequeathed to her by the eccentric miser, Neild, amounted to £500,000; but beyond that the public knows nothing. The royal revenue is appropriated to three departments; the Lord Chamberlain, Lord Steward and Master of the Horse. Besides this, £36 000 are left over for contingencies, and £60,000 a year are for the Queen's private expenses.—The Hour.

Sorghum Sugar.

Mr. C. M. Schwarz, Edwardsville, Ill., who is one of the foremost and most successful manufacturers of sugar from the Amber cane, and who has several times given to our readers the results of his experience, writes us as follows: "I send you two samples of Early Amber sugar, which I have been draining out to day on a hand centrifugal. It drains very readily in about two minutes. The sample on top was not boiled for sugar, but only for table sirup, at 228° density, and will yield only about two pounds of sugar per gallon. The other sample at the bottom of the box was boiled dense, as for sugar, at 233° Fahr., and turns out about five pounds per gallon; both were boiled in the open fire-pan. The process is the one that has already been published in the RURAL NEW-YORKER. I feel now perfectly sure of success, and am about enlarging my works with the assistance of two other gentlemen of large experience. I do not advise any one without the necessary experience to invest heavily in the business, for he would fail, unless sirup was aimed at. This would probably turn out a small percentage of sugar without injury to the sirup." The two samples of sugar were duly received, and we found them to differ perceptibly both in color and flavor. The sample that had been boiled at a density of 232° was decidedly the lighter in color and the sweeter. Both were of excellent quality and will compare favorably with sugar from the Southern cane.

PITURI: A NEW NARCOTIC.—It is a marvelous circumstance that the black man of Central Australia should have dropped upon the same narcotic principle (nicotine) as the red man of America. Piturl, is a plant not far removed from the tobacco plant, which grows in Central Australia. The leaves of the plant are chewed, by the aborigines who trade with it far and wide. The plant yielding it has been determined by Baron von Mueller to be the Anthocercis or Duboisia Hopwoodii, *alias* D. Pituri. Chemical analysis shows that the alkaloid, on which the peculiar poisonous properties depend, is nicotine, the same substance to which tobacco owes its effects. Pituri causes extreme retraction of the eyeballs. It is much sought after by the natives, who will give anything they possess for it, not for the purpose of exciting their courage, or of working them up to fighting pitch, but to produce a voluptuous dreamy sensation, such as the opium eater experiences. The natives in some districts are said never to travel without it on their long marches, using it constantly to deaden the cravings of hunger and to support them under excessive fatigue. King, the survivor of the Burke and Wills expedition, who had lived seven months with these natives when rescued by Howitt, states that when his food became so scarce and bad as barely to support life he sometimes obtained a chew of Pituri, which soon caused him to forget his hunger and the miseries of his position.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN 38.—APRIL 3, 1880.

Fertilizer Analysis.

347. 354.–Concentrated Privy Guano, manufactured by Pollard & Cook, Providence.

No. 347 sampled by the manufacturers and brought to the Station Jan. 16, by F. C. Cook, 119 Ellsworth Ave., New Haven.

No. 354 sampled by F. C. Cook, in February, from lot of ten tons purchased by him. Cost, $65 per ton.

COMPOSITION.

	347	354
Moisture	5.10	
Organic Matter (Nitrogen—0.50)	7.93	
Ammonia " 4.06	4.93	
Nitric Acid " 10.03	38 70	
Phosphoric Acid, soluble	7.76	
Sulphuric Acid	4.71	
Chlorine	.22	
Soda	2.06	
Potash	24.90	
Lime	3.10	
Magnesia	trace	
	100.00	
Total Nitrogen	14.59	14 29

VALUATION OF 347.

	lbs. ℔ T.	Val. ℔ lb.	Ton Val.
Nitrogen of nitrates	200.6	26 cts.	$ 52.15
" ammonia	81.2	23½ "	18.27
Organic Nitrogen	10.0	20 "	2.00
Sol. Phos. Acid	155 2	12½ "	19.40
Potash	498.0	7½ "	37.35
Total Estimated Value			$129.17
Cost			65.00

This Privy Guano has an unmistakable privy odor, but, unlike night soil, it is almost entirely soluble in water, and unlike both night soil and urine, it consists mainly of nitrates and phosphates of potash, ammonia and soda. It is not manufactured from night soil, although it is flavored with this last named substance. Its commercial value is almost double its cost, a fact that would be very welcome to the consumers of fertilizers if it could remain a fact. But a "Privy Guano" of this composition cannot long be afforded for much less than $130 per ton, and the extraordinary value of the two samples that thus early have found their way to the Station, should put purchasers on their guard against a sudden and great decline in its composition and value.

Any parties who have laid in a supply would do well to have samples analyzed before waiting for a crop, and should remember that the first fertilizers bulletined by the Station (in August, 1877,) were Pollard's "Composition for Grass," of which the cost was $32, and the estimated value, $1 03, and Pollard's "Composition for Vegetables," cost $32, estimated value, $0.99. S. W. JOHNSON, Director.

CATALOGUES, ETC., RECEIVED.

NOTE.—Readers are referred to our advertising columns for any particulars omitted in the following necessarily brief notices:

HOOPER, BRO. & THOMAS, West Chester, Pa. Better late than never. We are in receipt of several catalogues from this good old firm. One is a circular of the choicest flowers in collections at wholesale prices—a capital idea. For instance 12 Roses in 12 varieties are offered for $1 00. Another is a Cheap List of Evergreens and Fruit trees and the prices are, indeed, astonishingly low. Last but not least is their Hand-book of Beautiful Flowers, Greenhouse and Bedding plants, 80 pages, illustrated. Our readers may promote their own interests by sending for them all.

SEYMOUR, SABIN & CO., Stillwater Minn. Catalogue of 20 pages setting forth to all interested in grain-trashing machinery the many advantages of the Minnesota Chief Separator. This machine has been well-tried both at home and abroad and has well proven the validity of its claim to stand at the head of modern thrashing machines. The catalogue is fully illustrated and will be sent to all applicants.

BRIEF ESSAYS on New Fruits, Ornamental trees and plants, by William C. Barry, Mount Hope Nurseries, Rochester, N. Y.

THE
RURAL NEW-YORKER.
PUBLISHED EVERY SATURDAY.

CONDUCTED BY
ELBERT S. CARMAN.

Address THE RURAL NEW-YORKER,
78 Duane Street, New York.

SATURDAY, APRIL 17, 1880.

REMOVAL.

On and after May 1st of this year the Rural New-Yorker will occupy its new quarters, No. 34 Park Row, corner of Beekman Street.

SPECIAL NOTICE.

We beg to state that we should be pleased during the coming season to receive from those engaged in raising or testing new fruits of any kind, average specimens of such as may seem to be worthy of general cultivation. We should also be pleased to receive specimens of new grain, roots or vegetables, that seem to be superior to well-known varieties of their respective kinds. Our object in making the request is that we may have them drawn and engraved for the benefit of all who may be interested. It is desirable that specimens so sent, and the letters describing them, should be so numbered or designated as to provide against the possibility of error when opened in this office.

It is reported that the Superintendent of a beet-sugar factory at Ingendorff in Germany, finding that mice were somewhat redundant on his premises, offered a bounty of a quarter of a cent for each mouse, with the result that in the course of ten days 84,000 dead mice were handed in to him.

There are a score or more of horticultural writers who, whenever they deliver an address, write an essay, note or article of any kind, send manuscript copies of it to the leading agricultural journals of the country. The articles are usually of some value and are very generally published. Notoriety or free advertising—though ingeniously disguised—is, as a rule, the compensation anticipated for the trouble and expense incurred. We beg to state that the Rural New-Yorker does not stand in need of such articles and that the authors, by leaving us out of their lists, will place us under obligations.

We are always pleased to secure short, practical notes from our readers, and are always glad to find space for an interchange of experience, criticism and opinion. But we take for granted that what is freely given away is no longer the property of the donor.

There would be a "boom" just now in wool if there were enough of the domestic product in the market to supply the demand. There is, perhaps, no branch of agricultural industry that is likely to pay so well for at least the next decade as wool growing. For the coming season high prices are assured. All over the country manufacturers are contracting for the next clip at very high figures, while wool growers are in many places in no hurry to close bargains, preferring to wait for still better prices later on. With the constantly increasing demand for wool in this country and the present great inadequacy of the home production, all enterprising men can engage in wool raising without any fear of overstocking the market for the next ten or twelve years. If in the meanwhile wool goes down, it will be because other products do so likewise, not because the supply will exceed the demand. Foot-rot has destroyed a large proportion of the sheep in England, drought has done the same for thousands, aye, millions, of those in Australia and Buenos Ayres; while Russia also has lost heavily from disease, so that with an increasing demand for wool, the supply for some time is likely to be smaller.

A bill is now before the legislature of this State for the suppression of tramps. The safety of the rural population, the abatement of an intolerable nuisance, and the well-being of society urgently demand prompt legislation to this end. Already the hordes of shiftless, filthy, idle, lawless vagabonds, that during the severity of the winter have found a wretched shelter in the slums of our cities or in their charitable or penal institutions, are meandering into the country, a grievous burden to the rural population and a terror to lonely wayfarers and isolated homesteads. Most of the New England States have already been cleared of these vagrants by laws, which for the last year or two, have made the Eastern highways hard roads to travel for them, and, unless similar enactments are enforced against them here, we shall not only be troubled with our usual proportion of these rovers, but shall be overwhelmed with the New England quota, likewise. During the "hard times," now happily over, there is little doubt but not a few really respectable workers were forced to "take to the road" in search of employment, but in these days the number of these, always comparatively small, has dwindled into insignificance, and the tramps of today may, with certainty, be set down as a lazy, unscrupulous, dangerous crew, whom it is the duty of the State for the protection of its citizens to suppress with a prompt and vigorous hand.

The New Jersey county bill to encourage the production and treatment of fibers in the State, has become a law. By its provisions, cultivators of hemp, flax, ramie and the plants of the mallow family, will be paid out of the State Treasury from five to ten dollars for every ton of fiber stalks grown, and from two and one-half to ten cents for every pound of cleaned fiber prepared, subject to certain requirements. The idea of advancing the interests of any special branch of agriculture by the bounty system, may strike some as decidedly un-American, and inconsistent with our usual methods of doing things. There are many arguments in favor of the payment of bounties in particular cases, and for intelligent fiber cultivators it seems appropriate enough at the present time. The mighty dollar is a powerful spring with which to start the machinery of any new enterprise. Farmers are loth to enter new fields of industry until there is the promise of speedy return for their labor. There are numbers of new fibers which experiment has demonstrated can easily be grown—some of them indigenous—which in such a country as France would have been utilized long ago. Machinery has recently been invented for the proper cleaning of these fibers, and manufacturers say they will be glad to purchase them, judging from samples submitted. Under such circumstances, it is thought that a little fostering help from the State will set in motion the wheels of a new industry, which will result, in time, in a large return for the outlay.

There has been a great deficiency in the supply of American hemp, which has forced the manufacturers to import largely from Russia and Italy. There is a consequent demand for Kentucky hemp, and it is stated that the farmers of Kentucky are going wild over hemp cultivation. Large contracts have been made for the crop of 1880 at $5 for 112 pounds; seed is being purchased at $3 per bushel, with a prospect of its rising to $5, and land rented at $10 to $12 per acre. This is all very well if it is not "run into the ground" completely and the "fever" does not spread throughout other hemp-growing States. It is one of the unpleasant phases of fiber production in this country, tending to produce an irregular supply and in a measure to demoralize legitimate industry, that when the price is high, there is little fiber upon the market, and everybody goes into its production pell-mell. In the mean time the manufacturers "load up to the eyes" with the foreign product, making contracts ahead. The new crop comes on; good, bad and indifferent are pushed upon the market, and—"There's no money in hemp, sir—I've tried it."

What is most needed in flax and hemp cultivation in this country is more knowledge and experience, both in growing the plants and in preparing them after they are grown. It is in one sense a trade that is to be thoroughly learned and followed after it is acquired. It is only by long practice and experience that the Irish and Dutch flax-growers are enabled to hold their own in any market. It is too much the practice of many farmers to dive into the latest sensation—hap-hazard, trusting to luck and good prices—ready to leave it as quickly for the next golden promise, be it sugar-beet culture or wool growing. It is not to be understood that the farmer must grow flax or hemp and nothing else, but he must stick to the cultivation of a certain amount with other crops—if he wishes to grow it at all—year by year gaining new experience and skill which will eventually enable him to compete with European cultivators, climatic condition being equal. Thus a steady supply is created, which in the long run will be productive of a legitimate industry and prove a source of wealth to the country.

Of the 22 members of the Congressional Committees on Agriculture and Manufacture, six came to this city last Friday to accept the invitation to a "glorious spread" at Delmonico's, tendered to them by the Commercial Manufacturing Company, one of the most extensive manufacturers of oleomargarine in the world. As a perfunctory preliminary to the main object of their visit, they walked through the fat factory, which had been nicely prepared for their cursory inspection, and, just as they acted in Baltimore, the other day, under similar circumstances, they were civil enough to please their courteous entertainers with effusive assurances of their entire satisfaction with what they there beheld. To sharpen their appetites for the evening's feast, the legislative junketers next took a pleasure trip down the Bay, but returned in ample time for the soup and the "salmon." The names of this galaxy of worthies should not remain unknown to rural fame, so here they are:—the Hon's. James B. Richmond, of Virginia; D. Wyatt Aiken, of South Carolina; Jonas H. McGowan, of Michigan; Walter L. Steele, of North Carolina; Albert P. Forsythe, of Illinois; and John A. Anderson, of Kansas. They were accompanied by the Hon. S. W. Downey, of Wyoming, and Col. G. C. Ellison, clerk to the House Committee. They all claimed to be farmers; but while the Congressional dictionary acknowledges that Aiken and Forsythe do some farming, it puts the others down as lawyers. What did they say at the banquet? Why, what could they say except to extol the works and ways of the gentlemen who were entertaing them so generously, regardless alike of expense and public decency. For it is not often that the methods of the lobby are so flagrantly brought to bear upon the formation of congressional opinion in a matter in which so vast an interest is vitally involved. It will not be the fault of the oleomargarine men if these complaisant Representatives of the People do not report in their favor, and, anyhow, they have already got from them a first-class advertisement.

A PARK AT NIAGARA FALLS.

Niagara Falls, the pride of America and the wonder of the world! Who that ever, for the first time, visited these majestic cataracts was not impressed with awe and admiration at the scenery presented! The mighty rush of the waters, the roar, the rocks, the chasm, the mist, the forests, all unite to form one of the grandest scenes to which nature has given birth. Add to this the historical interest connected with the place, and that marvel of modern engineering skill, the large Suspension Bridge, and there are but few places in the world, and none in the United States, more apt to attract visitors, both from home and abroad. The beauty of the natural scenery has, however, in the last few years been much defaced by the cutting away of the forests, the erection of dwellings, manufactories, sluiceways, etc., which now make their obtrusive appearance on the cliffs and in the whirling waters. The water-power here afforded has proved too great a temptation to American enterprise. But if this enterprise is allowed unchecked sway the defacement of the scenery will continue and increase year by year till the once beautiful surroundings will be robbed of their attractions and the place littered with rough manufactories. The Governor of New York called attention to this fact in his message of last year, and by the direction of the State Legislature a Commission was appointed "to inquire, consider and report what, if any, measures it may be expedient for the State to adopt for carrying out the suggestions contained in the annual message of the Governor with respect to Niagara Falls." The members of this Commission have now made their report to the legislature. They find that the private holding of land has worked great destruction to the scenery, that this destruction is accelerating, and recommend that the State purchase the land surrounding the Falls, including the islands in the river and convert it into a national park for the benefit of the public.

This proposal merits universal support. It is only what should have been done years ago before obtrusive buildings had been erected and the scenery defaced. It is only what the general Government has done in similar cases. In 1865 the settlers near Yosemite Falls were dispossessed and the land reserved for the public; a large portion of the region of the geysers on the Yellowstone River has also been set aside as a national park. Niagara, being better known and more easily accessible to all the world than either of these, it is of much greater importance that the scenery should here be preserved. Moreover, if the land becomes public property, there are faint hopes of a reduction of the outrageous charges to which visitors must now submit if they will enjoy the sights to advantage. These charges have become proverbial for their unreasonableness. Every foot of space from which a charming view of the Falls can be had, is private property and is made to yield the highest possible income by letting it to visitors. Private enterprise is lawful, commendable and necessary; but when it works to the discomfort of the public and to the destruction of natural beauty, as in this case, it becomes the duty of the authorities to modify and curb such enterprise to the extent it is detrimental to the public.

From the fact that the legislature has manifested so great an interest in the subject we trust that measures will forthwith be taken for the conversion of the land into a public park. The Dominion Government, we understand, is willing to co-operate with the States in the undertaking, and to preserve the Canadian side of the falls. And if New York State should ultimately find that the purchase of the land and the keeping of a park would make too heavy a draft upon its treasury, then let the general Government take the matter in hand. The world-renowned Niagara Falls should forever remain accessible to and enjoyable by the world.

BREVITIES.

The Yellow Paradise stock is recommended by M. Carriere. It is said to be hardier than the common Paradise stock and can be grafted during a longer season.

Very few farmers, we are forced to believe, know what good salsify or vegetable oyster is—that is salsify properly sown and cultivated. If they did, we are confident it would be raised as generally as is lettuce or celery.

Our Farm Story by Charles Richards Dodge will be commenced in the Literary Department of the Rural New-Yorker on May 1st. We trust it will be found worthy of perusal by every farmer, young or old—male or female.

The latest reports about the winter wheat crop are even more favorable than their predecessors. The rains that have, within the last week or two, visited nearly every part of the country, have helped the crop wonderfully in many places.

One more superfluous patent to annoy farmers with! The device for preventing cows from sucking themselves, which was illustrated in the Rural as long ago as December the 6th and which is reproduced in the Querist Department of this issue, has been actually patented by a Yankee worthy, who is now advertising for agents to annoy farmers with the thing. The device itself is good, but why patent it, as it is an English invention fully described in Prof. J. P. Sheldon's Dairy Farming?

The following paragraph from "Thoughts and Events" well support the views the Rural New-Yorker has often expressed:—The aim of a paper should be much higher than that of merely making money for its proprietor. There are better fields of activity for merely mercenary men than journalism, where they can do far less harm to the public, as well as to themselves, and to these let them confine themselves. The press should be in itself a representative, as it is already in higher quarters an advocate, of co-operation, each man engaged upon it working always with an eye and a feeling for the general interest, as well as for his own.

From statements in the Pacific Rural Press it appears that large quantities of "bone-meal and flesh fertilizer" are exported from San Francisco to New Zealand, the home demand being small, though increasing. Another curious fact is that the Chinese are in the habit of exporting from California some $600,000 worth of shrimps, shrimp shells, small fish dried and their bones, for fertilizing the tea-gardens of China. The shells and bones are thought to supply the ingredients of which the plants exhaust the soil, and are sometimes carried a thousand miles into the interior. One year the exportation of this material amounted to the value of $900,000.

There is a bill now before the N. Y. legislature to force the manufacturers of oleomargarine under a heavy penalty to mark every package of the compound with the word Oleomargarine in distinct letters three inches long, and making it an offence punishable by fine or imprisonment for any dealer to sell from packages not marked in this legible way. A bill on the same subject before the legislature of Massachusetts stipulates for letters only one inch long. We expect that the oleomargarine men will give a hearty and unanimous support to both these measures, especially to that requiring the branded letters to be three inches long. They will thus show that they do not lie in saying that they are anxious to sell the product on its merits and will give to the public an honest opportunity of deciding whether this new-fangled bullock's butter is really "superior, sir," to the old sort from the cow.

Everywhere.

RURAL SPECIAL REPORTS.

CAL., Smith's Ranche, Sonoma Co.—We have had one of the coldest winters ever known in California. The cold snap came on about Christmas and continued until about March 25. Consequently feed is short, stock poor and dairy products reduced about one-half; a considerable amount of grain, too, has been winter-killed, and had to be resowed. The late frosts have damaged the early fruits, and in some sections peaches, apricots and almonds are nearly ruined. The acreage in wheat is much larger than last year. The wheat craze has been general. Less potatoes and barley than usual. Good prices for wool have put sheep on the up grade, and many will sell their cows and invest in sheep. Grain, although backward, promises a good crop; but the season will be over a month later than usual, but should it from this on be favorable, the grain crop will be immense. E. H. C.

CAL., Cedarville, Modoc Co.—We do not sow fall wheat in this section. We sowed it two years; but the frost killed it. Since then we have put in our crop in the spring. The spring is backward, we commenced plowing only on March 22. The Hessian fly is not known in this section. The acreage will be much larger than on any former year. We have had a great deal of snow this winter. The prospect for large crops is good. A part of this valley has been troubled with grasshoppers for the past five years and they have destroyed our crops, but as the winter has been very severe, we feel confident we shall not be troubled with the pests this season. C. & B.

CAL., El Dorado, El Dorado Co.—Wheat in our section is backward on account of the very cold winter we have had; much of the late-sown was injured, early-sown wheat is in fine condition. No disease or injury by Hessian fly is now apparent, and with a favorable spring none is feared. In general compared with other years, it is fair to average, a slight advance, in fact, if any thing, acreage larger. Generally a good crop is looked for. W. C. L. D.

CAL., Brighton, Sacramento Co.—We have had a very cold winter; frost almost every night for the last three months, and very little rain for a California winter. The farmers finished putting in their crops, "which is barley mostly," and are summer-fallowing now. In this vacinity we are having considerable north winds which are very detrimental to the growing grain, unless we have more rain, of which there are tokens now. A. M. D.

CAL., Penryn, Placer Co.—The wheat in our section looks better than usual, not being affected by our unusual season. We have no disease and no Hessian fly. Appearances indicate at present over an average crop. Acreage about the same as last season. I. W. B.

CONN., Guilford, New Haven Co.—Wheat as far as I know has wintered well. No trouble from the fly or from rust except in one field. In 1879 wheat was good and yielded well. The acreage is doubled. I sowed clover in the fall of '77 and it did well; in '78 I sowed two fields to rye seeded with clover, the one that was covered with snow did well, the other was entirely killed. J. A. P.

CONN., New London, New London Co.—Wheat doesn't usually do well in this section, consequently there is seldom any sown; rye is raised instead, and that is looking very well. Potatoes rotted badly last year; some farmers lost nearly their whole crop. Hay, strawberries and potatoes are the crops to which we turn our attention. B. G. S.

DAKOTA, Brighton, Union Co.—No fall wheat growing here this season. It is but experimental with us as yet. Grasshoppers destroyed nearly all kinds of grain last year, and as all the fall wheat was lost, we are still undecided as to the variety best suited to this locality, or whether it will pay to grow it largely in preference to spring wheat, which has heretofore held sway and probably will continue to do so. The season being late, we are now busy sowing wheat. Owing to past losses the acreage will probably be one-half; corn will preponderate. Cattle largely increasing. J. M.

DEL., Hollandville, Kent Co.—Wheat in this section looks well. Early-sown has some fly, but looks promising. I sowed the last week in September, again about the 5th of Oct. and again about the 15th of Oct. That sowed in Sept. showed fly late in the fall, but looks tolerably well at present. That sowed about the 5th of Oct. is perfectly healthy and grows rapidly. That seeded about the 15th of Oct. looks well, though not as large as either of the others. So far as my observation extends, the acreage is somewhat largor than last year. G. M.

ILLINOIS, Ludlow, Champagn Co., April 2.—The winter here being open and changeable, was unfavorable to wheat, but its appearance has greatly improved of late and many fields thought to be nearly ruined, now show promise of half a crop; while some fields look really well. The early-sown generally looks the best. Fruit is thus far safe, as the buds have not started enough to be injured. The demand for live stock seems to be unusually good this spring, especially for horses. The low prices of late years seem to have checked the rearing of horses to such an extent that the supply of good, sound, heavy horses has run short, such being wanted now at from $125 to $200 each, while sound plugs and light horses bring $100. Common cows bring $30 to $40; live hogs, $3.90 to $4 ₩ 100 lbs.; chickens, 5c. ₩ lb; corn, shelled, 30c.; oats, 30c.; hay, $7 to $8 ₩ ton. Potatoes vary much in price according to quality; Early Rose, 30c.; Peachblows, 40c. The trimming and laying of hedges and the husking of corn form the principal occupation of farmers here during the winter. A good part of the past winter the corn-fields were too soft to get over with a team, consequently considerable corn remained in the field during winter, and some farmers who, in other parts, might be called shiftless, had to finish husking before commencing spring work. Perhaps in justice to such, it would be only fair to mention that the spring of '79 was late, and the frost in the fall came early; a considerable amount of late corn was scarcely ripe when frost came, and such dried slowly and was unfit to crib in fall or early winter when the work should have been done.

The trimming and laying of hedges is no small item in the round of farm work in this prairie country. The road and outside farm fences are almost entirely of the Osage Orange thorn, and when properly grown it forms a perfect barrier to all kinds of stock. When a few years old, or when the plants are about two inches in diameter at the ground, they should be trimmed and cut nearly off close to the ground, bent over nearly horizontally, and held in place by stakes or woven between stems left standing upright for the purpose, about two or three feet apart. From the horizontal stems upright shoots start thickly, which soon form the complete fence which thereafter only needs an annual trimming to keep it in repair. Many farmers neglect this annual trimming and do the job only once in four or five years; but while the high hedge makes a good wind-break, it occupies more ground, and, on the whole, but little labor is saved as the annual trimming is light compared to the heavy one. G.

ILL., Deer Park, La Salle Co.—Winter wheat looks bad and in some instances is killed outright. Rye promises well. The fruit prospect is very good; apple trees are full of buds. U. S. E.

IND., Canton, Washington Co.—Wheat looks splendid at this writing; there was considerable complaint of the fly last fall, but it shows no effects of it now. Not hurt by the winter, in the least. Acreage at least 20 per cent. greater than in 1878, many farmers use bone meal as a fertilizer, which doubles their crop. This is a good fruit country. Fruits are uninjured so far, and promise a good crop. W. J.

IOWA, Florence, Benton Co.—A great many supposed that the Strawberries were winter-killed entirely; but since the rain they have come up. I think there will be enough of the vines for quite a crop if no mishap occurs. Before the rain the woods and fields were as dry and dusty as they are in August. S. T. S.

KAN., Meadow Brook, Johnson Co.—Our hay crop last year was light, but our grain crops of all kinds were good. We have had plenty of rain, and prospects for cereal and fruit crops are very fine. Land has advanced 40 per cent. H. S.

KY., Paducah, McCracken Co.—We have had a very mild winter—no snow but a great deal of rain. Wheat looks well and bids fair for a good crop, unless it should be injured by rust, as it nearly always is after a warm winter. The Amber wheat yields more than any other sort per acre—from five to twenty-five bushels, according to the land and the season. On March 17th, while Apples and Peaches were in full bloom, we had a sleet storm which injured about half the Apples. The tobacco plants are up and have not been injured by the insects yet. Cow-peas are as common as corn or tobacco with us. A. R.

MAINE, Atkinson, Piscataquis Co.—The fields in this section are well covered with snow and have been all winter, so what little winter wheat was sown is probably safe. The fly injures wheat in some seasons. The acreage is about the same as last year. A. T. P.

MICH., Montgomery, Hillsdale Co., April 2.—Ten days ago the farmers were quite dishcartened in regard to the wheat crop; but the thorough rain of one week ago, followed by an equally effective one of to-day, completely changes the outlook. While predictions continue to be made that we are to have a cold, late spring, the wonderfully mild, pleasant weather of the past month, keeps abreast with the advancing season; and we are fully justified in saying that Southern Michigan will do her full share in meeting the expectation of an abundant coming harvest. It is doubtful if the dairy interests will immediately recover from the discouraging outlook of last September, although some at least regret that they did not wait a little longer before deciding that there was more money in wheat. C. H. E.

MICH., Eckford, Calhoun Co.—The past winter here was the warmest known to the oldest settler. Last harvest was a good one—wheat yielded 18 to 40 bushels per acre, of extra-good quality of grain. Markets:—Wheat, $1.15; oats, 40c.; corn, 45c. per 70 lbs.; clover seed, $4.50; butter, 22c. per lb.; eggs, 10c. per doz. The wheat on the ground looks well, except on low land, on which it had been heaved up by frost and killed badly. Clover is killed very much. W. H. T.

MINN., Ash Creek, Rock Co.—There is very little winter wheat sown in this part of the State, and what little is sown is only in small patches and tried simply for experiment. Our past winter has been very severe and most of the wheat has been killed out, and from all that I can ascertain, I should call the winter wheat raising in this part of Minnesota a failure. Nevertheless, I will put in 15 or 20 acres this fall and give it a fair trial. Seeding was commenced here on the 25th of March, and was pushed vigorously. I started my drags, five seeders and five drags, on wheat on the 24th. This is the region of large farms, although we cannot boast of quite as large a farm as that of Oliver Dalrymple, on the Red River; yet we have in this county the following large farms;—Rock Co. Farming Co., who have a farm of nearly 30,000 acres; the Eau Claire Farming Co. whose farm covers nearly 3,000 acres; the Harrison Farm of 3,200 acres, and also quite a number of farms of from 320 to 640 acres, and lastly Sunnyside Farm of 2,000 acres of which we have about 600 under cultivation, and it will be seeded about as follows:—350 acres of wheat; 80 acres of oats; 30 acres of barley; 20 acres of flax (which is raised here for seed only); 20 acres of millet; 80 acres of corn; 10 acres to garden and trees, and about 10 acres to be used as an experimental ground in which I will test different varieties of oats, corn, flax, sugar cane, spring and fall wheats, potatoes, etc. M. L. R.

NEBRASKA, Lincoln, Lancaster Co.—Wheat little injured by the winter. Early sowed the best. No signs of disease. No Hessian fly in this section of country yet. The appearance of the wheat is as good as the average. Spring wheat is sown here more than fall wheat. The acreage of fall wheat this year is more than double the previous years, and less spring wheat is sowed. O. B.

N. Y., Johnson's Creek, Niagara Co.—Wheat in this section got a very large growth last fall. The winter has been very open with much freezing and thawing, still its color is good, and it is not much heaved out. No disease or Hessian fly that I have heard of. The prospect is much better than usual; acreage about one-fourth larger than common; variety mostly Clawson. J. M. B.

N. Y., Great Valley, Chattaraugus Co.—Little wheat grown here; acreage greater than last year, however, but it has winter-killed somewhat. There has been but little snow this winter, and the freezing and thawing have been hard on it, so that it looks brown and sickly. E. B.

OHIO, Kingsville, Ashtabula Co.—The wheat crop is looking well now. The winter has not hurt it as much as usual. There is no sign of its having been harmed by the Hessian fly. As to the acreage, it is larger than usual, and it shows no signs of disease. A. J. F.

OHIO, Camden, Preble C.—Wheat looks moderately well; but is considerably injured on flat land when not underdrained. Fruit is uninjured and the prospects are fair for a crop. W. M.

OHIO, Mt. Vernon, Knox Co.—Wheat has so far wintered splendidly. I hear no complaints of disease or Hessian fly. More wheat has been sown than for many years past. J. T.

VT., Randolph, Orange Co.—Very little winter wheat is soen in this section. It is too apt to be a failure from various causes. There will probably be a larger acreage of spring wheat put into the ground this year than usual. The variety known as the Lost Nation has done wonderfully well for two years past, and will be the kind used the coming year. It makes a good growth, makes splendid flour and yields an average of thirty bushels to the acre. L. H. R.

Various.

THE RILEY CONTROVERSY.

DENVER, Col., March 20, 1880.

EDITOR RURAL NEW-YORKER—*Dear Sir*:—My attention has been called to a lengthy card of Prof. C. V. Riley, published in your issue of February 21, relating to the severance of his connection with the Department of Agriculture.

He finds it necessary for his purposes to contradict therein the published account of a brief interview I had with him, in the course of which he denied most emphatically that he had circulated slanderous statements regarding the Comsioner.

So far as Professor Riley's statements relate to my connection with this matter, they are false—absolutely untrue both in statement and insinuation. To show the recklessness of his malice, I desire to call attention to his assertion that I was "at one time engaged at a salary in preparing and editing items intended to popularize the Department and laud the Commissioner," and also that I have "been sent to Colorado to investigate mineral lands." These statements are not only false, but there can be no doubt whatever that Mr. Riley knew them to be false when he made them. I was at one time invited by the Commissioner to prepare for publication, in the agricultural press, a weekly bulletin of the reports received by the Department, the intention of the Commissioner being to use, in this way, a large amount of valuable information which must necessarily be crowded out of the annual reports. This idea, which I believe to be an excellent one, was abandoned, because of the difficulty, owing to limited appropriation, of carrying it into execution at that time. Inasmuch as Prof. Riley furnished me with a portion of the matter edited, he must know very well that his statement is untrue. If he had said; "to laud Prof. Riley," I would not have been so much surprised, as the report which he turned over to me was prefaced by a few remarks of a nature calculated to enhance the importance of the Entomologist, which preface it became my painful duty to eliminate.

In regard to his other statement. At the time of my departure, most of the papers at the Capital contained some notice of my mission, which was to examine and report upon the question of irrigation for the arid lands of Colorado and the West. Inasmuch as I am by education an engineer, and have made somewhat extensive personal examinations of systems of irrigation, including that of the Chinese Empire, the press universally spoke of my appointment in complimentary terms. "Prof." Riley, on the outlook for items concerning the Department, could scarcely have failed to see one or more of these notices. I may be pardoned for mentioning, in this connection, that my mission has been so far successful that my suggestions have been embodied in a bill which has already received the favorable consideration of one branch of Congress. When I called upon Prof. Riley with a copy of his malicious utterances to the Courier-Journal, he was aware that I came as the friend of General Le Duc, and made haste to deny that he was the author of the slander. I was very particular, suspecting the idiosyncracy of the man, to write down his exact words immediately upon the termination of our interview. The words published were exactly as uttered by him, with the omission of the one word "damned" before the word "outrage."

It was a notorious fact that after his dismissal—it was equivalent to such—he haunted the offices of Newspaper Row, unrolling, wherever he was permitted to sit down, his scroll of malicious slanders, in the hope of finding some one willing to aid him in his work of detraction. It was at this stage of his career that he came to be alluded to by facetious correspondents as the "Crushed Bugologist."

An examination of Prof. Riley's published fictions will show that they do not hold together—that they are of a curiously contradictory character. Yours truly, JOHN BRISBIN WALKER.

For Women.

CONDUCTED BY MISS RAY CLARK.

ONLY.

EVA EDGERTON.

ONLY a woman with aching heart,
That sits in the firelight's blur,
And muses over the tangled threads
That fate has woven for her.

Only a woman, with hope all slain
And buried within her breast,
That values life but a sad refrain,
And only longs for rest.

Only a woman in woman's pride,
That smiles when her heart is dead,
You cannot tell by her laugh and jest,
That her light in life is fled.

Only a woman that grieves alone
Away from curious eyes;
Grieves for one who sleeps to-night
Out under the autumn skies.

Only a woman that fain would lie
Her head by the dear one's side,
Rather than live her loveless life
That begins this eventide.

TALK ABOUT MY JEWELS.

BY MARGUERITE.

I THINK the reading of "Helen's Babies" awakened many a one to the fact, that the world is full of mischievous children, and although the taking care of them is the purest joy the mother ever knows, still there are times when the body fails in performing all that the heart would gladly do. Therefore, every mother needs a little rest, and running away from children and domestic cares entirely, is the surest way of gaining it.

Thus I reasoned to myself, while Bob kept reminding me of my promise to be present at the University when he graduated. Finally I decided to go, although there were many invisible cords with wonderful strength, that kept binding me to the home circle. I had never left Fred, and it was no easy thing to do, and the parting from John and Gertie at the depot was nearly as difficult. About two minutes before the train arrived, I turned to Gertie and said, one more kiss and love, then mamma is off. Immediately the little arms clung tenderly around my neck, and kisses were given, but in so doing she struck my hat and away it went to the floor. I picked it up hurriedly, replaced it quickly and just had time to get on the train before it drew a long breath and was off, while blinding tears filled my eyes so that I could scarcely get a last glimpse of the home ones. How long the weeks seemed then, that I had planned to be absent and the possibility of sickness or accident occurring came forcibly to mind; but I cast all care on the Father who careth for us, or tried to do so—although we mothers are prone to hold on to one corner ourselves—and attempted to give myself up to rest. It was a perfect June morning, and my journey lay for miles along the beautiful Lake Shore. I had provided myself with one of Miss Muloch's books to read if I wished. There were lady passengers on board who looked so sensible and good, that I could almost imagine them to be pen friends in the RURAL. We conversed together while I sat a little ahead of them, and one remarked, "how much of a study the fellow passengers were to her," while another was en-route for California where my sisters had gone the week before; so amid a little interchange of thought, and such perfect bodily rest, and freedom from care as I had perhaps *never* experienced before, because never before so deserving, I reached Cleveland. Several hours I had to wait there, which pleased me well, as I wanted time to go to the city. I passed into the dressing room to leave a package and see if I was presentable, so I peeped into the mirror behind a dozen other heads. I was some time deciding on my own—the face looked familiar, but the *hat*—but I comprehended finally that it was my own, only when Gertie knocked it off with a "love," I had replaced it wrong end before. I changed it, thinking meanwhile of the solid comfort taken so far on my journey, all unconscious of the mark of Gertie's loving arms. A friend remarked when I told her, "that it made little difference about hats nowadays, as they could be worn either way."

"But there is a difference in hats," I answered, "and I'm sure mine must have been quite a ridiculous affair with my own class badge fastened in its trimmings."

Night found me toward central Ohio, and Rob's dear, strong arms, helped me off the train, and then, like children, we walked away, talking over our hopes and plans, although they had matured as the years added to our stature. There was much to hear and enjoy for the next week. Indeed every hour was full, and in mind I lived over the last of my own school days, while every pulse beat was in sympathy with the beloved brother and his friends on the stage. The meeting of the Alumni, Cook's lecture, the juniors contest, the jollity of Class day and the exercises of Commencement, all were entered into with spirit, and the resolutions formed there for self-improvement, I hope may extend through life. When these were over, I hastened away to see my mother and in a few days triumphantly returned, bringing her with me to my own home for a short visit, and found everything in as perfect order as I had left it. Who can estimate the new impetus brought into this home of ours from the outside world or measure the strength and rest gained for the renewal of life's battle and the training of its soldiers? None on earth. Mothers do not give yourself up to the same work for years, but seek rest in some form, if it is only a *change*, for often a *change* proves a *rest*.

A PLEA FOR UNITING FAMILIES.

Why is it that no two women can live under the same roof, on equal terms, and live in peace? It is difficult for one woman to be cook, chamber-maid and lady of the house at the same time. Two, or even more, would succeed so much better, especially when visitors call. For instance, just as I am finishing my work in the morning Mrs. A. arrives; I usher her into the sitting-room, take her wrappings and sit and entertain her for perhaps an hour, perhaps longer; then it is time to prepare dinner, for hungry men cannot wait; I apologize, and go to the kitchen; Mrs. A. goes too; we scarce get there when Mr. B. enters: he is a dull, common-place sort of a young man, and can be entertained in the kitchen. I no more than get comfortably settled, when Mr. C. knocks; now I am in a puzzle; he is a very dignified, self-important young gentleman, with whom I can really enjoy a visit if I can have him alone, but can do nothing if others are present. While he is bowing and scraping, I take him to the parlor. Mrs. A and Mr. B. take their leave without ceremony. Now while I sit in the parlor and talk nows and nonsense to Mr. C., who is to get dinner for the five hungry men that will be coming in soon? I am almost ready to yield all of my privileges as the only woman in the house, to have some one to depend on in case of emergency. P. E. G.

THE TOILET.

I am economical. I had saved a bottle of sage-tea, alum and honey (prepared for weak eyes) till it became vinegar. Into this I had dropped waste borax and rinsings of bay-water (and let me here add bay-water is an instant cleanser of bottles to which anything adheres, impossible to be got at with a cloth). My practice had been to clean them by agitating sand and soap suds in them, till by accident I rinsed my camphor bottle with bay-water to add to my bottle of toilet water, for which I at length found use. My hair is forty inches long, and through neglect to wear my dusting-cap was being pulled out by the effort to comb it. I emptied my bottle of savings, after heating, into a bowl, and with a nail brush put my head into a lather of castile soap, and washed the two long plats just as I would linen, rinsed and re-rinsed, wrung it in a towel, and combed till dry by a hot fire. It is now soft as silk.

For softening the hands nothing is so fine as a drop each of glycerine and camphor rubbed on before going to bed. The alcohol and glycerine unite and make a white oil or salve very healing and pleasant to use. I always rub it in well immediately after washing. It is good for the lips and eyes also. Mrs. M. L. S.

VISITING CARDS.

A recent writer on this subject says:—"In visiting cards care should be taken to conform with present usage, and to avoid anything considered to be in questionable taste, for a card is the representative of one's self. To the unrefined or underbred person the visiting card is but a trifling and insignificant piece of paper; but to the cultured disciple of social law it conveys a subtle and unmistakable intelligence. Its texture, style of engraving, and even the hour of leaving it, combine to place the stranger whose name it bears in a pleasant or disagreeable attitude, even before his manners, or conversation and face have been able to explain his social position. The higher the civilization of a community, the more careful it is to preserve the elegance of its social forms. It is quite as easy to express a perfect breeding in the fashionable formalities of cards as by any other method, and perhaps, indeed, it is the safest herald of an invitation for a stranger. Its texture should be fine, its engraving a plain script, its size, neither too small, so that its recipients shall say to themselves "a whimsical person," nor too large, to suggest ostentation. Refinement seldom touches extremes in anything."

INFORMATION FOR EFFIE.

In answer to Effie's inquiry I send description of lambrequins which I made last summer. They were made of scarlet opera flannel, lined with very stiff black wiggin The cords and tassels were made of Germantown wool and zephyr. I had two yards of flannel, two skeins of scarlet yarn, one of black, and one ounce of gold colored zephyr. To make the cords I used two strands of red, one of the black, and one of gold color. I made the tassels mostly of the red, mixing some of the black and a very little of the gold. I trimmed all the edges excepting the top, with the cord because it was cheaper than anything else. I also made the fringe between the sections of yarn. I made the cornice of a piece of lath two inches and a half wide. The leaves can be made of black satin and sewed on by overcasting the edges with gold colored saddler's silk, or they can be omitted altogether, and cover it with gilt paper. If Effie should choose this style of lambrequin from among the many kinds which I have no doubt will be sent in answer to her request, she must be governed in quantity by the size of her windows. My windows are small and the lambrequins are only a little over a yard in length. I will add that they were not expensive, and canton flannel may be used if preferred. The pattern used was Butterick's 6628. Kentucky Girl.

ECONOMICAL NOTES.

Where one has a large family for which to provide handkerchiefs it is a good way to buy Lonsdale cambric for that purpose. A yard makes four, and after they have been washed once or twice they are soft and nice for every day use. They only cost from three to four cents apiece and are much cheaper than linen.

A neat little work-box may be made by taking a cigar-box. Paste a piece of strong cloth on the two sides where the lid is hung, secure it with small picture-frame tacks. That is to make the cover fast. Then paste a narrow strip of cloth around the edge of the box; when dry, cover all with ladies' cloth or other suitable material and sew fast to the strip. Cover the lid so that it can be stuffed for a pincushion. Paste pictures on the inside of the lid to cover the cloth binding, and you have a neat little work-box and pincushion combined, which, if well done, is not only convenient, but ornamental. Aunt Rachel.

Literary Miscellany.

SPECIAL ANNOUNCEMENT.

In our issue of May 1st we shall begin the publication of an original Farm Story, by Charles Richards Dodge, the author of "Louise and I," a Sea-side Story, published by G. W. Carleton & Co., New York. It combines the bright, practical, scientific and romantic sides of the subject in question, and shows the value of a scientific education upon the farm; also that success may come through apparent failure, and that a woman is a help to a man in the achievement of success. Our readers will be instructed as well as entertained, as the agreeable and impressive manner which is employed to convey the thought of the writer cannot fail to be appreciated.

A SUMMER VACATION.

(Continued from page 238.)

"I waited all the next morning, expecting the captain would call. But, doctor,," she added, "I cannot dwell upon this part of the story. Let me tell the dreadful truth at once. He did not come. So far from fulfilling his arrangement with me, he ascertained by some means about how much money was then standing in my name at the bank. How he found this out no one knows; but he must have done so, for the check he presented was within a small amount of the sum total standing to my credit."

"The infamous scoundrel!" I ejaculated.

"I was indeed bitterly punished for my foolish and romantic trust."

"And the amount of which he despoiled you—how much was that?" I asked.

"Twenty-nine thousand five hundred pounds!" she answered, slowly and steadily.

"Good heavens!" I cried, for the magnitude of the sum almost took my breath away.

"But surely," I continued, "he was not able to escape with so large a sum?"

"Alas! he was, and principally through my own weakness, for when I discovered what had happened I was for a time terrified and afraid to speak. But at length the confession of my folly was wrung from me. It was too late to overtake him then. He had left the country, leaving no trace behind him."

"And, of course, without paying his debts?"

"He never paid one of them."

"The arrant knave!"

"Worse still remains behind, for I might have lost myself as well as my fortune, I tremble when I think what would have become of me had he made me his wife! When I think of that I feel indeed that I have escaped cheaply——"

"No—no, Miss Linwood, pardon me," I interrupted—"not cheaply!"

"Yes," she said, slowly, "and when you have heard all you will agree with me. That letter which distresses me so much, contained the intelligence that it had been ascertained that at the very time Captain Chesney was urging his suit to me he was already a married man?"

"It seems impossible," I said, "that any one could contemplate doing you such a fiendish wrong! Such villany—such heartlessness—seems almost beyond belief!"

"I have forgiven him," she said, with great earnestness.

"Forgiven him?"

"Yes. And now let his name never pass our lips again. Where he is I know not. I have told you that there is some portion of my large fortune left—not much, but still sufficient for my wants. I feel that I shall never be able to trust any one again—never—never. You understand now why it is that under an assumed name I have come to hide myself at Melcombe Cottage. It was not that I was unable to bear my loss of fortune, I was resigned to that; but what tried me beyond endurance was the condolence of my friends. Their pity or their blame were alike maddening to me!"

"And so," I gasped, for I was so much touched by what I had heard that I had hardly any command over my voice, "and so, my poor girl, you have, like some stricken deer, sought out a place where you can bear your sorrow in secret and unknown."

A sob broke from her lips; she leaned more heavily upon me, her head rested against my shoulder. Scarcely less agitated than herself, I supported her trembling figure.

The impulse was strong upon me to throw my arms around her—to gather her to my breast—to pour out my love and consolation. But with an almost superhuman effort I controlled this impulse; luckily I remembered in time who and what she was, and that I was only a struggling medical man.

* * * * * * *

Two days later I was back in my dingy lodging near Victoria Park, feeling sad and weary, but looking forward with some eagerness to the morrow, for I was not without the hope that, by devoting my energies wholly to my profession, I should be able by degrees to efface the impression which Miss Linwood had made upon my heart.

When I left her she was calm and perfectly self-possessed. Having confided to me her reasons for adopting her present life seemed to have had the effect of soothing her spirits wonderfully.

Before leaving, however, I had given Mrs. Chamberlain some very special instructions about her guest. I knew I should be quite satisfied to confide her to the good woman's motherly care. She would watch her closely, and in case of any necessity arising was to write to me at once.

A month passed—a long, dreary time it seemed, although I scarcely allowed myself an unoccupied moment, and had induced my friend Holroyd to remain with me. At the end of this period a letter came from Melcombe Cottage.

It ran thus:—

"My dear Boy,

"This comes to say I am no ways pleased along of Miss Linwood condition. The Whether is very whet which keeps her indoors most of the time and she do nothing but sit Moping all day My dear Boy I think you better come and see her She is that thin it make my heart ake to look att her and she wont Eat nor Drink next to nothing and I fear she getting in a very bad way So I think you ought come at Wunst So no more at present from your Old nurse.

"Martha."

Poor old nurse! the production of this epistle had doubtless been a serious business with her. But it effected its object. I stopped only to give a few directions, and commenced my journey without delay.

It was getting late in the afternoon when I alighted at the station. The rain was falling in a steady downpour, and the town had a truly dismal look.

How my heart throbbed when, a few minutes afterwards, I opened the little iron gate in front of Melcombe Cottage, and walked quickly up the garden path!

The door opened before I could reach the threshold. Nurse had evidently been expecting my arrival.

She answered my eager inquires with a shake of the head, and then led me into the little sitting-room.

Miss Linwood was half sitting, half lying on the sofa near the fire; for though it was summer still, the afternoon was chilly.

At my entrance she sprung up, and held out her hand. What a poor, wasted hand it was, I thought, as my own fingers closed over it.

A flush of color dyed her cheeks for a moment, then faded away, leaving her pale as marble. It was then I noticed how large and wistful her eyes looked, and saw the dark shadow under them.

"This must be quite a sudden surprise," I said speaking with assumed cheerfulness, for I was fearful of betraying my anxiety; "but I had a chance to get away for a couple of days, and so determined to run down and see you. I am afraid I let you out of the doctor's care a little sooner than I ought."

"Indeed," she answered, flushing again, "there is really nothing the matter with me. I am very foolish and low-spirited—nothing more. I must try to shake off this depression,"

"Quite true," I said, very gravely, "you must. But do you know I fear you will not succeed while living here in such seclusion. It is a mistake to shut yourself out from life in this manner, depend upon it.

She smiled wearily.

"I am content," she said. "and have no desire to mingle in the world again. I am wretched, merely because I seem no longer to have anything to live for."

"Then pardon me, Miss Lockwood," I said, "you cannot be content Nor is it right that you should think there is nothing to live for. You have had a heavy blow, it is true; but still you must not sacrifice your life because a villain robbed you of your wealth. You think, no doubt, that your sorrow is a hard one to bear; but you should see some of the scenes which I am forced to look on from day to day. Your tender heart would be touched then, and you would esteem yourself fortunate that you were able to alleviate some of their distress. Your feeling is that you can never again be happy; but tell me, do you think you would experience much joy if you found you had the power to make others happy?"

"I should indeed," she said, with more animation than she had yet displayed.

"Then, Miss Linwood, listen to me. Let me prescribe something that will not only benefit yourself but many others. Make up your mind to leave. You tell me that some portion of your fortune remains. I will show you how you can make a noble use of it—how you can do good to others. And believe me, in these attempts to mitigate the misery of the thousands around you, you will find the speediest and most effectual remedy for your own distress. For a sympathetic, generous-hearted woman, there is a glorious occupation—a noble work to do"

"Doctor" she said, "I am grateful to you for showing me my duty. I have been wrong to sit here nursing my own grief. Show me the best way to begin this new life—let me commence without delay."

I had read her character truly—I had touched the right chord.

* * * * * * *

The result justified my expectation—the experiment succeeded perfectly. Miss Linwood—accompanied by the old nurse, who firmly refused to be left behind—as soon as the necessary arrangements could be completed, took up her residence in a pleasant house in the vicinity of my home.

I have mentioned that my practice was extensive but not lucrative. I had a very large number of patients indeed, but they were with few exceptions persons in a very humble station. I was parish doctor also, and in this capacity was brought face to face with poverty in its most terrible aspects.

It was a new experience for Miss Linwood. Brought up in affluence from her very birth, and for the most part having but to express a wish in order to ensure its gratification, she had never been able to realize what it was for people to be destitute of such necessaries of existence as fire, food, and clothes.

Few had better opportunities than myself, of knowing where monetary help was most needed-and I had but to mention the matter, for Miss Linwood to be ready with relief. At first, indeed, her excess of liberality was even productive of injury instead of benefit. This, however, was soon rectified, and she began, for probably the first time in her life, to have a clear idea of the value of money.

Her health improved rapidly and wonderfully. Her eyes grew brighter, her cheeks rounder, and her wasted figure by degrees assumed its proper contour. And at the same time all traces of regret and melancholy vanished from her face. She at last was happy.

I, too, was happy—that is, as happy as I could expect to be. Despite its utter hopelessness, my love for Miss Linwood continued undiminished. I saw her frequently—was often near to her, and so found content.

More than once my heart beat wildly, and my pulses throbbed as I fancied I perceived some sign that she had begun to regard me with a warmer regard. But my joy was always dashed by the remembrance of her own words, spoken so earnestly and firmly:

"I can never trust another—never—never!"

* * * * * * * *

Winter came and went; the sweet, soft spring-tide followed; but still the good work went on. Every day were blessings invoked for the "Good Angel," for so Miss Linwood was known among the poor, and fervent wishes for her happiness went up from many a heart.

One evening in May I was walking beside her in the direction of her residence. The subject of our conversation was—as was frequently the case—the past.

"How much I am indebted to you, doctor," she said, with grateful tenderness. "Think what I owe you——"

"Pray do not," I said; "I do not deserve your thanks. If you knew——"

"Dr. Broughton," she said, "do you remember all I told you about that unhappy episode in my life?"

"Every word."

"Something I said then I wish to retract—the words were uttered thoughtlessly and in haste. You had not taught me better then. I told you I could never trust another person. I am conscious now how wrong I was, for need I say, dear friend—I could trust you—absolutely—perfectly!"

There was something in her voice and manner which affected me strongly. Without stopping to think—forgetting all my stern resolutions—scarcely knowing, indeed, what I said, I made a declaration of my love!

Never once did she attempt to interrupt me by voice or gesture. Encouraged by her silence, I asked the question upon which my happiness depended.

For one instant her eyes met my own—only for an instant. But it was enough. I read my answer in that one glance!

"Arthur," she said, very softly, "you have brought me from sorrow to content, and now you have made me the happiest woman in all the world!"

* * * * * * * *

We were married on the anniversary of our first meeting. How happy I was—how happy we both were—and yet before the honeymoon was over I told my wife that she was a tyrant and a deceiver

This was the cause:

In the first place I had always made up my mind to a life of absolute independence.

My wife ruled otherwise; she insisted that I should make my friend a free gift of my practice and all the money then due to me by my patients, as shown by my ledger and day-book, and that instead of occupying myself any more with drugs and surgery, that I should accompany her upon an extensive Continental tour, as she had set her heart upon visiting all places of interest in Europe.

It was in vain I argued, and pleaded, and reasoned. Like many another husband before me, I had to submit, and allow my better half to have her own way.

That was the tyranny.

Then she had told me that her false lover had drawn out nearly all the money in the bank—as I understood her, nearly all her fortune; but this I found was not so. Her lawyer had not sold the whole of the various shares, and I discovered that, instead of the modest competence I expected, my wife possessed a fortune of nearly £80,000.

But this deception I have consented to overlook, and as soon as we are weary of sight-seeing and wandering, we shall settle down in a quiet country home.

So far we have never heard a word of Captain Chesney and what he did with his ill-gotten gains promises to remain a mystery. Edward.

A Love Letter.—A fair damsel of the West, according to the Litchfield (Ill.) Democrat, recently sent this note to her faithful knight:

Deer Will—Doant kum to see me eny more for a whial eny way. Fauther has got awfully skeered about burglars, and he sits up every nite till late with a double-barrelled shot-gun watching the back yard. He put moren a pound of lead into Brown's Newfoundland dog which was cummin over the fens after a boue last nite.

The rose is red, the voilet blew,
I wouldn't kum now if I was you.

A young lady sent a poem entitled, "I Cannot Make Him Smile" to a British newspaper. The editor ventures to express the opinion that she would have succeeded had she shown him the poem.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

IODINE IN GOITRE.

T. H. H., M. D.

MRS. M'LOUTH warns the readers of the RURAL against the use of iodine for this disease. I think she is mistaken in attributing death to the use of this remedy unless it was very carelessly used, and I know it will cure the disease. The writer is a physician, though long retired from practice. Seven years ago he noticed a slight enlargement of the thyroid gland in his own neck. In two years it had grown considerably and was evidently goitre. Supervening upon a severe cold the enlargement became much accelerated, the neck soon reaching 22 inches in size, and the pressure upon the larynx (windpipe) being so great as to interfere with free respiration in the recumbent posture. So far no remedial means had been employed, and although iodine is the standard remedy of the books, a study of reported cases treated with it did not give a very encouraging percentage of cures. So I went to Boston and consulted the leading members of the faculty there. One surgeon had practiced extirpation of the tumor with the knife, but the patient died. The electricians were consulted, but Dr. Garratt, who is the most eminent among them, thought that no curative results could be expected in less than a year of daily applications of the current, and could report no cures. Discouraged by this, I resolved to give iodine a thorough trial. I took five drops of Lugol's solution at a dose two or three times a day, in a cup of chocolate. In two months the size of the neck began to decrease, and in six months the enlargement had entirely disappeared. Other cases subsequently treated in the same way, ended in an equally satisfactory manner.

I think that the failure of the iodine treatment, where it does fail, is, most likely, due to discontinuing the medicine too soon, either because of the irritation of the stomach by too large doses, or by discouragement on account of the slow development of its curative action. The dose should never be large enough to cause a persistent iodine taste in the mouth, or even the taste of the medicine in gas from the stomach. When but four or five drops are taken in a cup of chocolate, it is not tasted at all. No unpleasant symptoms, or indeed any effects, except the disappearance of the disease, were experienced during the whole treatment, either in my own or the other cases.

There is another matter alluded to by Mrs. M'Louth which I think is misunderstood. Boils or other swellings do not necessarily indicate impurity of the blood. Boils frequently appear upon people who bathe too often, as boys are apt to do, and as lumbermen and others who work in water, are obliged to do. "Packing" in a wet sheet, as practiced in the hydropathic treatment, will always produce them. The skin of man is not adapted to amphibious life, and constant or very frequent irrigation of it, is a powerful irritant, developing inflammation in its glandular structures. Many other "swellings" must be regarded as the results of local irritation, and do not imply any constitutional taint or defect of the blood. Emollient applications to such swellings, when they cause them to disappear, do not "scatter them," or "send the poison all over the system." They simply *cure them*, as the removal of a splinter from the flesh, or an ulcerated tooth from the jaw, cures,—that is, by putting an end to the cause.

Orleans Co., Vt.

MILK AND BUTTER.

WHAT a splendid thing a *new* tin can is for preserving an equal temperature on all sides, when warming cream in front of a hot fire. In a stone jar the cream will cook quite readily upon one side while the other is cold. When the cream gets a little warm, or is not exactly cold, put it into the churn, have it churned *moderately* fast and when the butter stands in insolated lumps upon the dishes and lid, scarpe it down with the finger, put in the yellow of an egg and after churning a little longer, gather, work and salt it, pressing out all milk and water. Make into cakes of a pound each and print it. This is gilt-edge winter butter. Have a solution of saltpeter, dip the print in it after dipping it in the hot water, and wet a rag in the remainder of it for spreading over the butter. M. L. S.

FOOD FOR INFANTS.

A SOUTHERN lady, mother of a large family, favors mothers nursing babes until they are two years old, but she also advises feeding them after they are six months old. She says: "Give them soft, boiled rice, light bread, crackers or barley with a little milk. Also give a piece of rare steak to suck upon. *Do not feed corn-starch and never sweeten an infant's food.*"

Fruit Jars, Again.

I was pleased to see Mrs. Wager-Fisher's remarks concerning fruit jars, and if the truth were known, undoubtedly many others entertain the same opinion; and if they would "speak out," we should not be compelled to buy the Mason simply because no others are kept for sale. Their being so difficult to open, is another objection with me, as John's strong hands are not always here when I have occasion to open them. I have used the rubbers for several years, by soaking them in cold water for a day or two before using. The can I prefer above all others is stamped Grifien's Patent, and is similar to that described by Mrs. Wager-Fisher. The glass cover rests on the jar with a rubber between, and is held down by an iron clamp. Two bulges near the top of the jar keep the clamp in place. It is very plain and simple and cannot fail to please. That it should be called "Perfection" is the verdict of those who have used it.

I do not agree with Mrs. A. B. that it does not pay to can our own tomatoes. Many families in the West consume from ten to fifty gallons of them during the winter, and the expense is no small item, when one has to buy them; but, of course, it does not pay if they are spoiled in the least or soured. If there is any mold or scum, or if the fruit is discolored, you may be sure there is some flaw or crack in the jar—that is, if the fruit was boiling-hot when sealed—in which case I paste paper on the jar while hot after the fruit is put in. I find that empty oyster cans are excellent for tomatoes. Open them by putting live coals on the cover, and in sealing, use brown sealing-wax from the store, as it does not "run" like that of home manufacture. I have succeeded quite as well with stone jars or jugs and often use a pane of glass for the cover of one, two and three-gallon jars, and a smaller piece for the jugs. Canned fruit should be kept in a dark, cool place. JULIA A. WHEELOCK.

DOMESTIC RECIPES.

Brown Bread.

ONE pint of sour milk, one-half cup of molasses, two cups of rye flour, a little salt and a teaspoonful of soda. Steam three hours and then brown in oven.

Ginger-bread.

One cup of molasses, one-half cup of butter, one-half cup of boiling water, tablespoonful of ginger, a teaspoonful of soda and flour sufficient to roll out. SUBSCRIBER.

Nice Apple Sauce.

Pare, halve and quarter tart apples and put into a baking dish. Cover with a thick layer of white sugar, grate over a little nutmeg and cover with a plate. Set into a pan containing hot water and bake in a good oven until the pieces are clear and tender.

Spinach.

Look over carefully, pick the leaves from the stem, wash, cook 20 minutes in salted water, drain, chop fine, return to the fire, season with butter, pepper and salt, press into a hot mold or bowl, turn out and garnish with sliced egg.

Salmon Croquettes.

One can of preserved salmon—drain off the liquor; yelks of two eggs; one raw egg; one-half cup bread crumbs; tablespoonful of butter; pepper and salt. Mince the fish, add the powdered yelks, the raw egg, the butter, then the crumbs and seasoning. Form into egg-like cakes, roll in flour and fry in sweet lard, or lard and butter. MARY B.

Wardian Case Cement.

After experimenting with several different cements for Wardian Cases, I find that the following will stick to stone, glass, metal or wood, and that it will harden under water. Take equal parts, by measure, of litharge, plaster-of-Paris and dry, white sand; then add of powdered resin a third as much as taken of any one ingredient. Make into a putty with boiled linseed oil, adding a little patent dryer. Mix only as wanted, The dry ingredients should be kept tightly corked. This can be used for marine as well as fresh-water aquariums.

H. L. PRINE.

Tomatoes in Glass or Tin?

My experience is that tomatoes will keep good in tin and spoil in glass. I have used Mason's cans until the lids were worn in holes, from age, and do not know of any stretching, although the rubbers stretch and must be renewed. After screwing down the tops, I immediately reverse the jar which saves many a can of fruit from imperfect sealing. When wanted for use, run a *thin* knife blade around under the rubber and they can easily be opened by hand. E. M. W.

QUESTIONS ANSWERED.

Preserving Strawberries. Icing Cake.

Please give a recipe for canning and preserving strawberries; also directions for icing and embossing cake. L. G.

Ans.—*To Can Strawberries:* Fill glass cans with fresh, whole strawberries sprinkled with sugar, in the proportion of one-half pound of sugar to a quart of fruit. Put on the tops and place in a boiler of cold water—the water should be within two inches of the top of the cans. When the water boils, note the time and boil 20 minutes. Take out; make air-tight; screwing down again and again as the cans cool.

To Preserve Strawberries: Five pounds of sugar and a pint of water to seven pounds of fruit. Put sugar and water into a porcelain kettle and boil from seven to ten minutes, according to thickness. Then add the fruit, previously washed and drained, and boil four minutes. Skim out the fruit, turn the sirup into clean tin pans, and place in the sun adding the berries as soon as the sirup is cool. Let stand in the sun—protecting from insects—the sunny part of two days. Then put into glass and screw down. It is not necessary to have the cans air-tight.

Icing Cake: A good rule for frosting is ten large teaspoonsful of powdered sugar to each white of an egg, but as eggs vary the measurement must also vary. The whites should be beaten to a stiff froth, and the powdered sugar added gradually, beating the meanwhile, flavor and put on while the cake is still warm. Smooth off with a knife and if the frosting is stiff, dip the knife frequently into cold water. The cake may be ornamented by drawing a small syringe full of icing and then making wheels, Grecian border, flowers or beading. Ice the cake plain and let harden before ornamenting.

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News of the Week.

MISCELLANEOUS.

Monday, April 12, 1880.

The tunnel under the Hudson River, between Hoboken and New York, is now making a progress of thirty feet a day.....The Herald relief fund for the Irish people has swelled to the sum of some $330,000.....A hotel-keeper in New Orleans was shot and instantly killed on the 9th inst. in a quarrel over ten cents .....A six days' walking match for the championship of the O'Leary belt was last Saturday completed at the Madison Square Gardens, New York. The belt was won by a young colored man named Hart, who in the six days walked 565 miles. This beats anything on record. He will get $17,500 for his week's work.... ....A man named George Marks who died last week at Lancaster, Pa., confessed on his death-bed that he and another man named Wielder, in 1855, murdered a traveling salesman, took his money and cast the body into Conestoga Creek.....A recent telegram from Santa Fe, New Mexico, states that General Hatch, with part of his command, attacked 300 Apache Indians who were encamped in the San Andres Mountains. The Indians retreated after a fight of six hours, leaving their dead behind.....A project has been made for the construction of a new Welland Canal across the Niagara peninsula from Port Dalhouse on Lake Ontario to Port Calborne on Lake Erie. The water-way descends 326 feet and it will necessitate the construction of great reservoirs and locks..... A quarrel at a country dance in Callaway county, Mo., last Friday night, resulted in the killing of Lewis M. Meyers by Bartholomew Watson..... The heaters in the Allentown, Pa., Rolling Mill, have struck for an increase of wages and work has been stopped in all the departments of the mill. .....Destructive fires occurred during the week at Wilmington, N. C.; loss $25,000, one man was killed and several severely injured; at Haverhill, Mass., where a tenement block was burned, two persons suffocated and others injured; at New Brunswick, N. J., where the N. J. Rubber Company's factory was destroyed; loss, $10,000; at Portsmouth, N. H., where a Congregational church and an adjoining house was burned; at Milwaukee, Wis., where a large store occupied by Stamford & Logan was destroyed. Further, a dispatch from Petroleum Center, near Titusville, Pa., says that on last Saturday a conflagration destroyed fifteen buildings in that place. The fire originated in McClintock's Hotel.

AGRICULTURAL NEWS.

Monday, April 12, 1880.

AMERICAN consuls are now required to send to Washington monthly reports of the commercial, industrial and agricultural conditions at their respective ports. Now let the public be informed of the nature of the news so as to be able to utilize the information.... ...The Adams Co., Ill. Agricultural Society, offers premiums of $5, $3, $2.50, $2, $1.50, and $1, for the largest surrender of rat tails up to August 30 ... In 1870 the receipts of wheat in St. Louis were 6,638 253 bushels, and the shipments 636,562 bushels; last year the former had run up to 17,093,362, and the latter to 7,302,076 bushels .....A dangerous and infectious disease, caused by a minute fungus, has broken out among bees in Italy. . . Gen. Brisbin says no Hickory grows west of the Missouri River..... New Jersey has established an agricultural experiment Station at New Brunswick, Professor Cook, the State Geologist, Director.

Gilt-Edge Butter Maker

makes July, August and Winter butter equal to best June product. Grocers pay three to five cents a pound extra for butter made with this powder. Guaranteed harmless. Increases production six to ten per cent. Reduces time of churning one-half. Sold by druggists, grocers and general storekeepers. Send stamp for "Hints to Butter-Makers." Address, Butter Improvement Co., Buffalo, N. Y.

THE larger the profits machinery of any sort puts into the pockets of the owner, the more desirable is its possession. On this principle the J. C. Chase Thrashing Machine Co., of Racine, Wis., should find no difficulty in disposing of all the machines they could make, among thrashermen. Their Apron Eclipse and Vibrator Thrashers have earned an enviable reputation wherever they have been used--and in what part of the Great West have they not? Excellent workmanship and materials and great efficiency are the characteristics of all the work they turn out, whether thrashers or portable and traction engines, etc.

A COUGH, COLD, CATARRH OR SORE THROAT should not be neglected. "*Brown's Bronchial Troches*" are a simple remedy, and will generally give immediate relief. Imitations are offered for sale; many of which are injurious. The genuine "*Brown's Bronchial Troches* are sold *only in boxes.*

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The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, April 10.

Baltimore.—WHEAT—Southern red, $1.28@1.33; do. amber, $1.33@1.36; No. 2 western winter red, spot, $1.32½. CORN—Southern white at 53@54c.; do. yellow at 53@53½c.; western mixed, spot, 49@49½c. OATS dull; southern at 43c.; western white at 42c.; do. mixed at 40c.; Penn. 43c. RYE quiet at 90@91c. HAY firm; prime to choice Penn. and Md., $18@19. PROVISIONS dull for bulk, but steady for job lots. Mess pork at $12.25@12.50. Bulk Meats—Loose shoulders, 4½c.; clear rib sides, 6¾c.; do. packed at 5c. and 7½c. Bacon—Shoulders at 5½c; clear rib sides at 7½c. Hams, 10½@11½c. Lard at 8c. BUTTER lower; prime to choice western packed at 24@26c.; roll at 20@24c. EGGS easier at 11@12c.

Boston.—FLOUR dull; Western superfine at $4.50@4.75; common extras at $5@5.50; Wisconsin extras at $5@5.75; Minnesota extras, $6@$7.25; winter wheats at $6@6.50 for Ohio and Michigan; $6@6.75 for Illinois and Indiana; $6.50@7.25 for St. Louis; patent Wisconsin and Minnesota spring wheat extras at $6.75@8.25; patent winter wheats, $6.75@8. CORN steady; sales of mixed and yellow at 58@60c.; steamer and no grade at 57@58c. OATS firm, fair demand; sales of No. 1 and extra white at 48@50c.; No. 2 white at 46c.; No. 3 white and No. 2 mixed at 43@45c. RYE at 90@92c. SHORTS, fine feed and middlings at $23@25. PRODUCE—The following prices are paid by receivers: BUTTER—New Northern—dairy lots, choice, 28—32c. ₩ lb.; do. fair to good, 23@26c.; new Western—choice creameries at 22@25c.; choice dairy packed, 23@28c.; choice ladle-packed, 23@29c.; fair to good, 22@24c. Old Butter—Creameries, 26@33c.; fall dairy made, 24@28c.; winter dairy made, choice, 22@24c.; winter dairies, common to good, 16@21c.; ladle-packed, Western, 16@21c CHEESE continues quiet and steady; choice Northern factory, 14½c. ₩ lb; fair to good at 12½@14c. and common, 10@11½c.; Western, choice, 14@14½c.; fair to good, 12@13c; common, 9@10c EGGS, Eastern, 12@13c.; Northern, 12@12½c.; Western, 11@11½c. ₩ doz. BEANS—Northern hand-picked pea at $1.65@1.75 ₩ bushel; do. Western, at $1.65@1.70; do. common, $1.00@1.65; medium choice, $1.40@1.45; common to good, $1.25@1.30; Yellow Eyes, $2@2.10; Red Kidneys at $1.60@1.65. Canada peas, 80c @$1.05 ₩ bushel for common to choice. Green peas, $1.50@1.85. POTATOES are quiet; we quote Houlton and Maine Central Rose, 50@55c. ₩ bushel; Houlton Jackson Whites at 38@40c.; Maine Central Jacksons at 35@40c; Vermont Rose at 45@50c; do. Jackson at 35@38c; Peerless at 40@45, and Prolifics at 50@55c. ₩ bushel. ONIONS, $4.25@4.50 ₩ bbl. APPLES at $1.75@3.25 ₩ bbl., according to quality. CRANBERRIES at $8@10.50 ₩ bbl. HAY AND STRAW—First quality coarse Eastern and Northern at $15@16 ₩ ton; poor medium at $11@14. Rye straw at $20@22. SALTPETRE—Small sales at 6½@6¾ ₩ lb.; nitrate of soda is selling at 5½c. ₩ lb. cash. SEEDS—In Calcutta linseed nothing doing, and prices nominal. We quote clover seed as selling at 6¾@8c. ₩ lb. for Western and New York; timothy at $2.55@2.65 ₩ bushel; red top at $2.70@2.80 ₩ bag; canary seed at $2.45@2.85, and American linseed, $1.50@1.55 ₩ bushel.

Cincinnati.—WHEAT unsettled, $1.20. CORN dull at 41c. OATS easier at 35½@37c. RYE dull and drooping at 80c. BARLEY active and firm; No. 2 fall at 95c.; extra No. 3 fall at 92c. PORK dull and nominal at $10.50@10.75. LARD dull and lower at 6.90@6.95c. BULK MEATS weaker; shoulders at 4c; clear ribs at 6.25c.; clear sides at 6.50c. BACON dull; shoulders at 4½c.; clear ribs at 7c.; clear sides at 7½c. BUTTER—Prices declined from 2c. to 4c. on all grades, though there has been a great improvement in the better grades. Fancy Creamery sells at 35@37c. Choice solid packed Dairy, 25@27c.; choice roll 23@25c.; medium do. 16@18c.; and inferior 8@12½@c. ₩ lb. CHEESE—There is fair demand for prime to choice new factory at 11½@12½c. per lb, but inferior is difficult to sell. Prime to choice cured is in light supply and is offered at 12@13c. EGGS have ruled a little higher under light receipts but the market closes easier with free offerings at 10@10½c. per dozen, with only a moderate local demand. ASHES—The demand is light but prices remain steady for Potash at 4½@5c. and Pearlash at 6@6½c ₩ lb. HIDES—Continue in good demand and the market is firm under light receipts. Green Hides bring 7@8c., green salted 8½@9½c, dry salted 13@14c and dry flint 15@17c ₩ lb. Sheep pelts sell at $1@1 50 for prime to choice wool, and 25@50c for sheared. Damaged hides one-quarter to one-third less. MILL FEED—The supply is light especially of Bran and the market is strong at advanced prices. Bran sells at $16@17, Shipstuffs at $17 and Middlings at $18@23 per ton in bulk and 50c. more in sacks on track. SALT—The market remains quiet but steady for all kinds. Ohio River and Kanawha salt sells at $1 35 ₩ bbl. of 280 lbs. Michigan do. sells at $1.45 ₩ bbl. Coarse Liverpool at $1.20@1.30 per bag and Turk's Island at 45@50c. per bushel. SORGHUM—The demand is only moderate for Sorghum syrups, which is offered at 30@33c. per gallon for prime to choice. SEEDS, Clover sells in a jobbing way at 6¾@7¼c per lb. Timothy at $2.60@2.70. Red Top 70@75c, Blue Grass at 65c for clean and 75c for extra clean, and Orchard Grass at $1 80@1.90 per bushel. Hemp Seed is firmer at $4 per bushel. Flaxseed is wanted at $1.20@1.40 per bushel but there is little offered. Round lots of Clover sell at 6½c.

Chicago.—WHEAT firm; No 2 Chicago spring fresh at $1.12 cash; $1.11¾ for April; $1.13¾ for May; $1.12¾ June: No. 3 do. at 99c.@$1; rejected at 85c. CORN moderately active at 35c. cash 31¾c. for April; 36c. bid for May; 36¾c. for June. OATS fairly active at 27c. cash; 30 ¾ for May. PORK strong at $10.30 cash; $10.32½ May; $10.37½ June. LARD fairly active at 7c. asked cash and May; 7.05c bid June. BULK meats firm but not quotably higher. EGGS at 9½@10c. BUTTER.—Market weak with a downward tendency. Choice to fancy creamery 31@32c. per lb; fair to good 28@30c. per lb; choice to fancy dairy, nearly equal to creamery; 28@30c; good to choice dairy 22@25; fair to good dairy 20@21c; good to choice fresh roll 21@23c. Common grades are scarce and nominal at 14@16c; grease butter 10@12c. EGGS—Demand good for fresh stock at 10@10½ per doz. in cases and 9½@10c. in loose packages. CHEESE.—Prices steady good to choice full cream cheddars 14@15c. per lb; part skimmed, of good quality, 10½c@11c. full skimmed 7@10c; low grades 5@6c. SEEDS—Timothy and clover active, Timothy $2.25@2.50; clover, $3.70@4.10; flax, $1.60. WOOL.—Prices are well maintained. Prices from store for eastern Iowa, Wis. and Illinois wool range as follows; Tub-washed bright 58@60c. per lb. do dingy and coarse 50@55c; fleece-washed medium 50@55c; do fine 48@53c. do coarse 48@53c. unwashed medium 40@42c; do coarse 33@35c; do fine bright 30@34c; do heavy 25@30c; bucks' fleece 20@22c. Consignments from western Iowa, Nebraska and Kansas sell at about 2c. per lb less than this range, and burry and poor-conditioned lots at 3@5c. less. Colorado wool (unassorted) is quoted 30@34c per lb for medium to fine; at 27@30c. for coarse to medium; at 25@28c. for black and at 22@25c. for coarse carpet stock. HOGS shippers buying freely at 5@10c. higher prices; packers quiet; mixed packing at 4.20@4.45; choice heavy at $4.50@4.70; light, $4.30@4.55, chiefly at $4.40. CATTLE: exports strong, and prices a shade higher; common to medium steady with a fair demand; sales at $4@5.50; butchers' active and firm, except for bulls; stockers and feeders active and firm at $2.90@$4, chiefly at $3.50@3.75; yards well cleared; a few shipping are held for higher prices. SHEEP only sale at $5.83.

Detroit.—WHEAT—No. 1 white Michigan at $1 18¾ spot and April; $1 18¾ May; $1 17 June. CORN steady and in moderate demand. No. 1 yellow at 43½c.; high mixed at 43c.; No. 1 mixed at 43c.; No. 2 mixed at 42c. OATS in very light request; No. 1 white at 37½c.; No. 2 white at 36c.; No. 1 mixed at 35½c.; No. 2 mixed at 35c. CLOVER seed very firm, more buyers than sellers; $4 10 asked, $4 bid for prime.

Indianapolis.—WHEAT steady; No 2 red at $1.14@1.15. CORN steady at 35@36c. OATS quiet at 31@33c. HOGS strong at $3.50@450.

Louisville.—FLOUR dull; extra, $4.10@4.25; do., family, $4.75; A No. 1 at $5.25; fancy, $5.75@6 WHEAT quiet at $1.10@1.15. CORN steady; No. 2 white at 42½@43c.; do. mixed at 40@40½c. OATS quiet; No. 2 white at 38c.; do. mixed at 36½c. RYE steady at 80@83c. PORK quiet at $11.50. LARD quiet; prime steam at 7c. BULK MEATS quiet; shoulders, 4@4½c.; clear rib, 6½@6½c.; clear sides, 6¾c. BACON quiet; shoulders, 4¾c.; clear ribs at 7@7½c; clear sides at 7¾@7½c. Sugar-cured hams at 9@10½c. MILL OFFAL—Active at quotations. Per ton in bulk; tan, $14.50; shipstuff, $16 HAY, prime to choice timothy, $15.50@17, and mixed at $12@14 per ton on arrival. STRAW, $10 on arrival. FIELD SEED—Quiet and lower for clover and timothy. We quote, delivered from store: Timothy, $2.65; orchard grass, $1.40; red top, 65c.; clover, common red at $4 and sapling at $4.50; bluegrass, clean, 55c.; extra clean, 65c.

New Orleans.—Our quotations are for wholesale lots on the landing. Dealers job at the following advance from store: Corn 2@4c. per bushel; oats, 2@4c. per bushel; bran, 5@7½c. per 100, and hay $2 @3 per ton. CORN IN SACKS—In fair supply, fair demand and firm. White 56@57c.; white mixed, 54@55c.; yellow 53@54c.; yellow mixed, 51@52c. ₩ bush. OATS—In fair supply, fair demand and firm at 42c. ₩ bush. BRAN—Is in light supply, fair demand and firm at $1.10 ₩ cwt. HAY—Is in moderate supply, moderate demand and quiet: choice, $21@22 ₩ ton; prime, $16@18, ordinary. BULK CORN—April, 46@47c. for mixed ₩ bushel: white, 49@50c.; yellow, 50c. BULK WHEAT—Salable at $1.34@1.35 ₩ bush. BUTTER—Choice creamery and dairy are in request; stock of old large; sweet Western scarce. We quote: Western creamery, fancy, 37@38; New York creamery, fine, 35c.; do. prime, 28@30c.; do. dairy choice, 25@26: do. dairy fair to good 21@22: Western dairy, choice 25@26; do fresh packed prime 21@22; do. fair to good 18@20c. CHEESE—Supply moderate; demand fair; choice Western, 13c. ₩ lb. prime do. skims 12@12½ fair to good 10@11c.; fair to good skims, 10@11; New York cream 16½c. COW PEAS—Under a liberal supply and little demand the market is dull and easy; clay $1.20@1.25; choice mixed $1.15; good mixed $1 10; low mixed $1.05; whippoorwill $1.10. Our quotations represent wholesale prices on the landing. Dealers obtain 25c. more ₩ bbl., and ½@¾c. higher ₩ lb. in lots. IRISH POTATOES—Old $1.75 ₩ bbl.; new $2.50@3. SWEET POTATOES—$1.75, packed. ONIONS—Northern $5.50; Louisiana $3@3.50. GARLIC—25@75c. ₩ bunch. FRESH VEGETABLES—Choice Louisiana cabbages, $5.25 ₩ crate; beets, $3.50 per bbl.; carrots $3@3.25 ₩ bbl.; cucumbers, 75@50c. ₩ doz.; green peas, $2.75@3 ₩ bbl. Squashes 75c. ₩ doz.; new string beans, $1.25 ₩ two-third bush. box. Celery 75c. ₩ doz. Egg plants $1.50@2 ₩ doz. Cotton a shade steadier; middling, 12¼c.; low middling, 11¾c.; good ordinary, 10¾c.

St Louis.—FLOUR dull; fancy at $4.55 all the year; choice at $5.22½ asked; family at $4.85 for April. WHEAT lower at opening, declined sharply and closed with a slight reaction; No. 2 red fall at $1.16@$1.16½ cash; No. 3 do. at $1.08; No. 4 do. at $1.01½@$1.02. CORN 34@34 1-8c. OATS 31¾c, cash. RYE dull at 70c, bid. PORK dull and lower; jobbing, $10.50. BULK MEATS dull and about 10c lower to sell. LARD dull at $6.85, bid. BACON, clear ribs at $6.90; clear sides at $7.10. HOGS steady; Yorkers, 150 to 200 pounds, average at $4.10@$4.40; bacon at $4.40@$4.45; heavy at $4.50@$4 65. CATTLE active, firm and higher; supply moderate; sales of light to good heavy shipping steers at $4.30@$5; export steers would bring $5.10; butcher cattle scarce and wanted; good steers and spayed heifers at $3.75@$4.15; cows and heifers at $2.50@$3.50; feeders at $3 75@$4.15. SHEEP fairly active; common to choice at $4.25@$6; sheared Texans arriving and sell at $3@$4.25.

Toledo.—WHEAT opened weak, but closed firm: No. 1 white Michigan at $1.15; amber Michigan at $1.21½; No. 2 red winter spot and April at $1.21; May at $1.21¾; June at $1.18¾; July at $1.16¾. CORN weak; high mixed at 40½c; No. 2 spot May and June, at 39½; rejected at 38½c; damaged at 37c. OATS steady; No. 2 at 33¾c. At the close, wheat weak; No. 2 red winter, April at $1.21½; May at $1.22; No. 1 white Michigan at $1.15¾.

Fertilizers.

Bone ash is nominally quoted at about $22 per short ton, on the basis of 70 per cent phosphate of lime. Bones quoted at $22 50@$23 for Texas and South American mixed, and $25@$26 do. for shin and shank bones. Refuse bone black at $21@$22 per short ton on merit. Sulphate of ammonia at 3¾c. ₩ pound on the basis of 26 per cent. of ammonia. Dried blood at $2@$2 30 per unit of ammonia short ton. Ammonia, axotine, etc., for the former at $2 62½@$2 75 per unit of ammonia, and about $2 25 do. for the latter, all short ton. Nitrate of soda, 4¾c. Saltpetre, crude 6¾@6¾. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent. ammonia, $55@$40; dissolved bone black, 15 to 17 per cent. of soluble phosphoric acid $30@$35; dissolved bone 13 to 14 per cent. of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent of soluble phosphoric acid, 3 per cent. of potash, 3 per cent. of ammonia, $40@$45; German potash salts, 25 per cent. of sulphate of potash, $15@$18 per ton; muriate of potash, 80 percent. 2@2½c per lb. land plaster 7.50; dried blood, 10 per cent of ammonia, $35@45 per ton; fish guano dry and ground fine, 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $45; unground fish guano, 6 per cent of ammonia, $25; castor pomace; $19@24; sulphate of soda ground, and in barrels, $15@18 per ton; sulphate of ammonia 4½c, ₩ lb; bone black, 70 per cent of bone phosphate, $30@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $20 per ton; No.1 Peruvian guano, 10 per cent ammonia, standard, $55 per ton; Lobos $46 per ton; rectified $65 per ton: guaranteed $56 ger ton; nitrate of soda, 5½@5½ ₩ lb.

FORRESTER'S potato manure, $47 50; cabbage, $50; oat, $47.50; lawn dressing, $47.50; turnip, $52; grass, $45; hop, $47.50; strawberry, $42.50; wheat, $45; rye, $47.50.

STOCKBRIDGE'S manures quoted: Potato, $50; cabbage, $50: strawberry, $40; corn $45; seeding down, $40; orange tree, $35; onion, $50—per ton each.

MAPES'S complete manures for clay soil, $25.50 per 1,000 lbs.; for light soils $25.50 per 1,000 lbs.; "A" brand for general use, $20 per 1,000 lbs.; fruit and vine, $18.50 per 1,000 lbs.; cabbage and cauliflower, $23.75 per 1,000 lbs.; corn, $24.50 per 1,000 lbs.; potato, $24 per 1,000 lbs.: asparagus, $25.50 per 1,000 lbs.; gypsum, Nova Scotia, ground, ₩ ton, $7.50.

BOWKER'S "Hill and Drill Phosphate" $45; Bowker's Phosphate $40 ₩ ton, each: Bowker's "Food for Flowers," 35c. ₩ package and $3 ₩ doz.; Bowker's "animal meal for fowls," $2 50 per cwt.; Ground oyster shells, $1 ₩ cwt.

BAUGH & SONS' prices for goods delivered at depot or boat, in bags and in 2,000 lb. lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36; Baugh's raw bone superphosphate $40; Baugh's $25 phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent. of ammonia, $48.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, April 10, 1880.

BEANS AND PEAS.—About the only life given the bean trade is now derived from exporters. In this way marrows and white kidneys are fairly firm. Mediums sell mostly to a class of buyers who can use cheap goods. Red kidneys dull and tending lower. Wis. green peas, quiet at $1,80. Southern B. E. per bu. bag $1.90@2; with a better sale. Marrow beans, prime, $1.52½@1.55; other, $1 40@1.47½; medium prime, $1.35@1.40; other, $1,25@1.30; pea, $1.45@1.62½; white kidney, $1.55@1.70; red do., $1.27@1.50; black $1.95@2. California Lima, $5

Receipts of beans for week, 2,650 bush.; exports, 1,020 pkgs.

BUTTER—There has been quite a sweeping reduction in prices for new during the week and the market is likely to be flexible and in buyers favor, while new white is the dependence. Creamery has not much precedence over tubs or dairy stock. Old butter is no longer a quotable item; the remnants are held for special shipment. New arrives freely but in very small lots, and to make up a fair sized line of pretty even quality buyers have to sample a great many parcels. This feature alone tends to disarrange prices, as it would be hard to make duplicate rates rule in too many small transactions. Western butter is scarce, but follows the decline in State.

New butter, creamery choice, 28@30c.; poor to good, 24@27c.; State, pails and hf. tubs, best, 25@27c.; other, 20@24c.; imitation Western creamery, 23@26c.; do. extra, 23@24c.; other, 17@22c.; do. factory extra, 23@24c.; other 17@22c.; other, very poor western, 11@31c.

Receipts for week, 11,600 pkgs.; exports, 2,500 do.

BEESWAX.—Demand is limited to small lots, with 24@25c. quoted for Western and Southern.

Exports for week, 1,300

BROOM CORN—Trade is slack and prices unsettled; quotations are for choice brush at 7½@8c.; choice hurl at 8c.; stalk braid at 6@7c.; mixed red and green at 4@5c.

CHEESE.—Exports for the week, 9,400 boxes. The demand is sufficient: the small stock considered to give steady prices, and the situation is essentially as last week.

Prices are for State factory: best at 14¼@14½c.; good to prime at 13¾@13¾c.; fair to good at 13¼@13½c.; do. poor at 11@12¾c. State farm dairy: good to prime at 13½@14c.; fair to good at 13@13½c.; poor, 11@12c.; Ohio factory: Cheddar, fine, 14c.; do., fair to good, 12¾@13¾c.; flat, fine, 14@14¼ flat, good to prime, 13@13¾c.; flat, fair to good, 12¼@13c.

Receipts for week, 5,525 boxes.

Exports, 8,300 do.

Liverpool cable, 71s.

Freights, 35s.

COTTON—There has been a sharp pressure to sell and prices have dropped sharply, closing weak at for April, 12.15@12.17c.; May, 12.21@12.23c.; June, 12.35@12.36c.; July, 12.45@12.46c.; August, 12.52@12.54c.; September, 12.22@12.24c.; October, 11.58@11.60c.; November, 11.26@11.28c.; December, 11,24@11.26c.

DRIED FRUITS.—Apples are in good demand and prices strong. Peaches are quiet as also small fruits. N.C. apples, fair to good, 7½@8½c.; choice, at 9@10c.; fancy at 10@10½c; Virginia, at 7@8c.; New York State quarters sliced at 7½@8¼c.; patent evaporated, choice in cases, at 14½@15c.; good and prime at 13½@14c.; evaporated, choice sliced at 13@13½c., and good do. at 12@12½c. Evaporated peeled peaches, good to choice, at 27@28c.; North Carolina peeled, fancy, at 26c.; choice old at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7½@8c.; do. quarters at 7@7½c. Pitted cherries at 18@19c. Blackberries nominal at 11c. Raspberries at 27@28c. Plums at 17@18c.

Exports for week, 1,291 bbls. apples.

EGGS.—Receipts for the week, 10,740 bbls.; do. last week 17,380 do. The tone of the market is decidedly more wholesome. Sales are not so sharp at the new prices, but the falling off in receipts strengthen sellers. Canadian are exported as the market improves.

Near Points, 14½@15c.; State and Penn., 13c.; Western, choice fresh, 12½@13c.; Southern, do., 12@12½c.; off grades, such as badly packed or extra stale, 11@11½c.; duck, 19@20c.; goose, 30@32c.

FRESH FRUITS.—Exports of apples for week, 3,650 bbls. The market is firm for sound and extra apples, but it is doubtful if such high prices as may be realized as the supply goes out, will repair losses during the past mild winter.

Extra Baldwins and Greenings $4.50@5; other $2.50@3.25; russets $2.75@3. Cranberries $3 75@4.25 ₩ crate. Strawberries run poor in quality, many moldy price weak. Chas. 12@28c.; Fla. 18@30c. Fla. oranges are now in few hands: choice quarter $6@7 ₩ half bbl. box; dry or rusty $3@4. Peanuts active, particularly for other points: Va. hand-picked 5½@6½c.; Eastern prime 5½@5½c.; good to prime 4½@5¼c.; shelled 5½@6c. Hickory nuts 75c.@$1. Pecans now mostly in retailers' hands.

FURS AND SKINS.—Reports from the Leipsic sale now in progress expected next week.

FLOUR.—Supplies have been larger, and wheat has been declining; a decidedly lower range of prices. Lates' prices are $3,85@4.75 for inferior to very choice superfine State and Western; $4.75@5.00 for inferior to very good extra do., odd lots and lines; $5.00@5.30 for very good to very choice do.; $4.75@5.00 for inferior to good shipping extra do., and $5.00@5.30 for good to very choice shipping extra do.; inferior to very good white wheat extras, $5.15@5.20 very good to very choice do. at $5.00@7.00 (fancy brands held at higher figures); red and amber winter wheat, inferior to fancy trade and family, at $5.00@6.75; round hoop Ohio, $4.85@5 25; and trade and family brands of do. at $5.55@6.75, the latter rate for very choice; St. Louis at $5.00@5.85 for inferior to very good extra; $5.85@7.00 for very good to very choice; Minnesota clear, inferior to very choice, at $4 75@6.25; Minnesota "straight," inferior to fancy, at $5.35@7.85, and patent inferior to fancy at $6.00@8.50; unsound stock at from $3.60@5.75; city mill extra at $5.90@6.25 for fair to fancy West Indies; do. for England, $4.85@5.50 for poor to very fancy; do. trade and family extras, $6.40@7.25; do. for South America, $6.20@6.65; No. 2 at $2.85@3.80 for poor to very choice.

CORN MEAL.—Sales at $3.20 for Brandywine, and $2.90@3.10 for yellow Western.

GRAIN.—All articles have been in large receipts and prices declining, closing, however, with some reaction on corn and oats, but wheat remaining weak. Exports for the week have been 1,004,000 bush. wheat, 1,033,000 bush. corn, and 62,000 bush. rye. Latest prices of wheat are for No. 1 white at $1.31@1.32; do., April, at $1.30¼@1.30¾; do., May, at $1.25½@1.20¾; No. 2 white at $1.22@1.22½; ungraded white at $1 30; No. 2 red, store and afloat $1.34@1.37; do., do. April option, at $1.33¾@1.35¾; do., May at $1.32½@1.33¾; do. June at $1.30½@1.32; ungraded red at 1.33½@$1.36; mixed winter, at $1.33; choice Green Bay at $1.30; No. 3 spring at $1.18@1.19 Rye quoted at 90@90½c. for State. Corn at for New York No. 2, at 52@53c.; old crop at 53@53½; do., April, at 51¾@52c.; do., May, at 47¾@48c.; do., June, at 47½c.; New York steamer mixed at 51½@51¾c.; ungraded mixed Western at 51½@53¾c.; No. 3 at 50¾; New York yellow at 54½c.; No. 2 white 57¾c.; No. 2 for May at 47¾c.; Oats at for No. 1 white quoted at 47¾@48½c.; No. 2 white at 46¾@46¾c.; No. 3 white at 44@44½c.; New York No. 1 at 41¾c.; New York No. 2 at 41½@41¾c.; do., May, at 38½@39c.; No. 3 at 40½c.; ungraded white Western at 44½@45c.; ungraded mixed Western at 39@42c.; white State at 48@50c.; mixed State at 40¾@42c.; No. 2 Chicago at 41¾c.; No. 2 for April at 40¾c.; No. 2, for May, at 38½c.

HAY AND STRAW.—Demand is good prices better. Shipping hay quoted at 70c.; retail lots at 75@80c.; for medium, and 85@$1, for prime; clover at 55@60. Straw at $1@1.05 for long rye; 65@70c. for short rye, and 50@60c. for oat.

Exports for week, 2,250 bales.

MAPLE SUGAR.—The demand is better than for several back seasons. Shippers seem to have become tired of New York's uncertain market and are apparently giving sugar a wider distribution. Another cause for the light supply here is through holding sap or sirup for winter use, as fine pure sirup has become very popular at restaurants. Molds quoted at 11¾@13¾c.; sirup, in tin, 75c.@$1 per gal.

OIL CAKE—Western is quoted $30 ₩ ton.

PROVISIONS.—Hog products have been active and lower: Mess pork quoted at $11.00@11.05, for May and June; $11.10@11.15 for June. Bacon at $6¾ for long clear. Beef at, for extra India mess at $28@2 0 for city and $19 for Philadelphia and at $11 for extra mess and $10 for plain mess; beef hams at $17@17.50. Lard—Western steam at 7.42½ for spot, 7.40 for April; 7.42½ for May, and 7.45@7.47½ for June.

Stearine at 7¼c. for Western. Tallow at 6.1-16@6¼ for prime.

Receipts for week, pork, 1,900 bbls.; beef, 600 pkgs.; bacon and cut-meat, 28,300 pkgs.; lard 18,750 pkgs. Exports, pork, 6,078 bbls.; beef, 2,780 pkgs.; bacon and cut-meats, 11,770,350 lbs.; lard, 7,620,825 lbs.

POULTRY AND GAME—The demand is light for dressed poultry, with spring items of food drawing off a portion of the trade. Prime frozen, as before, sells best. Large turkeys or coarse fowls not wanted. Capons have advanced.

Turkeys, choice, small, 14@16c.; medium, 12@14c.; large, 10@12c.; Phila., dry-picked, 14@15c.; capons, Phila. large, 24@25c.; small, 21@22c.; slips, 18@20c.; chickens, winter, large, Phila., 22@24c.; small, 25@26c.; spring, per lb., @35@40c.; fall, Phila., d.-p., 18@20c.; yearling, Phila., d.-p., 14@15c.; N. J., ℔ lb., 12@14c.; fowls, Phila., d.-p., 10@11c.; N. J. good to prime, 11@12c.; State good to prime, 11@12c.; Western, good to prime, 10@11½c.; poor to fair 9@10c. Ducks, Phila, d.-p., 18@19c.; N. J., 10@12c.; State, 15@17c.; Western, 14@16c.; Western, poor, 10@12c.; squabs, white, ℔ doz., $3@3.25; dark, $1@2.

Live poultry is not plenty and are firmer: heavy supplies, however, are not advised. Spring chicks now quoted regularly.

Chickens, spring, large, per pair, 75@90c.; small, 40@60c.; fowls, N. J., 10@11c.; Western, 10c.; roosters, 5c.; turkeys, mixed, 11@12c.; ducks, Jersey, N. Y. & Pa., per pair, 75c.@$1; Western, 60@75c.; geese, Jersey, $1.75@2; N. Y. & Pa., $1.50@1.75; Western, mixed, $1.12@1.37; pigeons, 35@45c.

Wild pigeons plenty and lower. Wild ducks almost nominal.

English snipe, per doz., $1.25@1.37; plover, $1.25@1.37; wild pigeons Northern $1.25℔ doz; do., Southern, $1.25; canvas back ducks, Havre de Grace, $1.50@1.75, Western, 75c.@$1; Norfolk, $1@1.50; redhead, Havre de Grace, 50@75c.; do., Western, 45@50c.; do., Norfolk, 40@50c.; Mallard, Western, 40@50c.; Mallard & Black, 30@40c.; Teal, Western, 20@30c.; do., Norfolk, 25@30c.; common, 20@25c.

HOPS.—Trade continues slack and prices barely steady. Quotations are:

	Cents per lb.
New York, fancy	Nomial.
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

SEED.—Clover is stronger; sales at 6¼@7c. for Western. Timothy is quiet at $2.70@2.80.

VEGETABLES.—Exports for week, 750 bbls. Potatoes have in no way recovered from their late dull, sluggish position and sales are still mainly at the inside rates. Snowflake may be in a degree excepted, as there is some seed demand as a trial.

Bermuda, new ℔ bbl., $6.50@7; Florida, new, ℔ bbl., $5.50@6; prime other, $2@3; Early Rose, N. S., bulk, ℔ bbl., $1.25@1.37; Maine, per d.-h. bbl., $1.75@1.87; State, ℔ d.-h. bbl., $1.25@1.50; State, in bulk ℔ bbl., $1.25@1.50; prolific N. S., per d.-h.bbl., $1.25@1.37; N. S., in bulk ℔ bbl. $1.25@1.37; Mercer, Nova Scotia, bulk, per bbl., $1@1.12; Chili red, N. S., bulk, ℔ bbl., $1@1.12; Peachblow, State, white, per d.-h.bbl., $1.50@1.75; do., red, per d.-h. bbl., $1.50; Snowflake, State, per d.-h. bbl., $1.75@2; Peerless, State, ℔ d.-h. bbl., $1.00@1.25; State, bulk, ℔ bbl., $1@1.12; Jersey, bulk, ℔ bbl., 50@75c.; Sweet potatoes, ℔ bbl. $2.25@3.00. Old garden stuff is quite pushed aside for the new items in the list, and the market for the latter is sharper. Tomatoes, Fla., ℔ box, 50c.@$1.00; Nassau, 50c.@$1; Bermuda, ℔ box, 70@90c.; beets, Bermuda, new, ℔ crate, $1.50; Fla., $1.50@1.75; cucumbers, Fla., $4@6; string beans, Florida, round, 2@$4.50; Fla., flat, $1.25@2; squash, Fla., white, $2@2.50; green peas, N. C., ½ bbl. crate, $1.50; Chas. and Sav., small, $1.75@2.25; asparagus, Norf., ℔ per doz. bchs. 35@37; Chas., $5@6; kale, Norf., ℔ bbl., 75c.@$1.75; Baltimore, per bag, $1; spinach, Norf., per bbl., $2.25@3.00; Baltimore, $1.00@2.50. radishes, Nfk round ℔ 100 bunches 50@75c.; long, 50c.@1; squash, marrow, per bbl., $1.50@1.75; Hubbard, $1.75; cabbage, Chin and Sav., $3@4.25; Fla., new, $4@4.50 do., old, per 100, 16@12; onions, Bermuda, new ℔ crate, $2.50; white, ℔ bbl., $4@6; yellow, $3.25@3.50, red, Eastern, $2.75@3.00; red, Chester, $2.75@3; beets, Jersey, $1.50@1.75; turnips, Russia, 75c.@$1; carrots, $1.25@1.75.

WOOL.—Demand has been less active this week, but prices well sustained.

Ohio, Pennsylvania and Virginia, XXX and picklock, 57@60c.; XX, 55@57c.; X, 55@56c.; No. 1, 62@65c.; No. 2, 55@58c.; common, 52@54c.; combing and delaine, 58@65c.

Michigan, Indiana and Wisconsin, X and XX, 52@55c.; No. 1, 59@62c.; No. 2 and common, 50@55c.; combing and delaine, 57@62c.

New York, New Hampshire and Vermont, X XX 49@52c.; No. 1, 55@60c.; No. 2 and common, 47@52c.; combing and delaine, 55@60c.

Iowa, Illinois and Western, X and XX, 48@51c.; No. 1, 54@58c.; No. 2 and common, 45@51c.; combing, 52@57c.

LIVE STOCK MARKETS

NEW YORK, Saturday, April 10, 1880.

BEEVES.—Receipts for week, 9,244 head; do. last week, 12,183 do. The market has had a buoyant run all the week, and closes clear of stock, with a good outlook for next week. Very few extra cattle were on sale, and good steers were benefitted thereby in the price range. Ordinary to fair steers, 8¼@9¼c., dr. 56 lbs.; good to prime, 9¼@10¼c., dr. 56@57 lbs.; rough oxen, 8¼@9c, dr. 56 lbs.

COWS AND CALVES.—There are no new features. Good cows worth more in the country than here, freight and dressing expenses considered.

VEAL CALVES.—Prime live are scarce at the moment and prices are temporarily firm. This is not the season for prices to rule high long. Live calves, N. J. and Bucks Co., choice, 7@7¼c.; prime 6¼@7c.; State, choice, 6@6¼c.; do. prime, 5¾@6c.; fair to good, 4¾@5¼c.; poor, 4@4¼c.; Mt. Holly, good to choice, 6@8c.; buttermilk, 3@4c.; grass, 2½@3c.

Hog Dressed, N. J., choice, 9¼@10c.; good to prime, 8@9c.; State, good to choice, 8@9c.; fair to good, 7@8c.; poor to fair, 4@7c.

SHEEP AND LAMBS.—Receipts for week, 17,768 head; do. last week, 22,960 do. There has been a good active market and no important lots remain unsold. Some car louds were held over purposely for special customers at the close of the week. Clipped sheep, 4¾@5c.; unclipped 6@7¼c.; a car load of extra Michigan, $7.35 per 100 lbs. Spring lamb, $4@5.50 per head. Sheep rate show an advance of ¼@¾c. compared with Thursday's sales.

SWINE.—Receipts for week, 30,207 head; do. last week, 31,018 do. Supplies were sold up; nominal rate for prime Ohio, 5¾c. full.

Country-dressed pork, light, 6¾@7¼c.; medium, 6¾@6¾c.; heavy, 6¾@6¾c.; city dressed, 6¾@6¾c. Pork tenderloins, 10c.

ADVERTISING RATES:

Inside, 14th and 15th pages (Agate space)..40c. per line
" 13th page..... 50 "
Outside or last page..... 60 "
Fifty per ct. extra for unusual display.
Discount on 4 insertions, 5 per ct.; 8 ins., 10 per ct. 13 ins., 15 per ct.; 26 ins., 20 per ct.; 52 ins., 25 per ct.
☞ No advertisement inserted for less than $2.

Entered at the Post-office at New York City, N. Y., as second-class mail matter.

IMPROVED CALIFORNIA WIND MILL.

Simple, Strong, Durable, Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers, CLARK & CO., SOMANAUK, ILL.

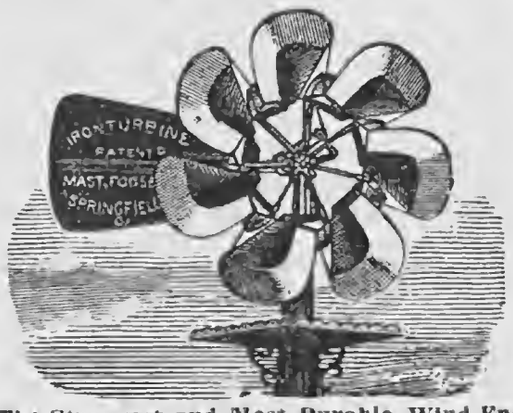
Halladay Standard.

VICTORIOUS AT
Phila., 1876—Paris, 1878
25 Years in Use.
GUARANTEED SUPERIOR
To any other Windmill Made.
17 SIZES—1 MAN TO 45 HORSE POWER
Adopted by the leading R. R. Co.'s and by the U. S. Govt. at Forts and Garrisons.
$3,500,000 worth now in Use.
Send for Catalogue "B" and Price List.
U. S. WIND ENG. & PUMP CO., Batavia, Ill.

CHALLENGE WIND MILLS

Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merit. Mills sent on 30 days' trial. Best Feed Mills, Corn Sheller, &c., &c. Catalogue free.
CHALLENGE MILL CO., Batavia, Ill.

NEW IRON TURBINE WIND ENGINE



The Strongest and Most Durable Wind Engine in the World. Sold by Dealers in nearly every County. Inquire for it. Every Wind Engine Fully Warranted.
Send for Circulars, Price-List and information to
MAST, FOOS & CO., Springfield, Ohio.

I. X. L. WIND MILL.

For Simplicity, Durability and Power *this mill has no equal.* It runs equally well in light or heavy winds. Ice and sleet do not effect it Works well under all circumstances; never gets out of order. We warrant all our mills. Circulars and descriptive catalogues sent free on application to the Phelps & Bigelow Wind Mill Co., Kalamazoo, Mich.

THIS NEW
ELASTIC TRUSS

Has a Pad differing from all others, is cup shape, with Self-Adjusting Ball in center, adapts itself to all positions of the body, while the Ball in the cup presses back the intestines just as a person would with the finger. With light pressure the Hernia is held securely day and night, and a radical cure certain. It is easy, durable and cheap. Sent by mail. Circulars free.
EGGLESTON TRUSS CO., Chicago, Ill.

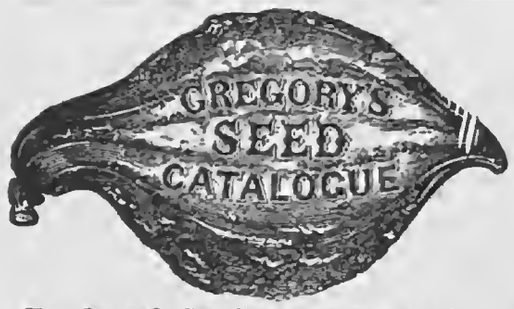
No Club Rates. Everybody gets it for a Dollar. Subscription Agents wanted. Easiest paper to canvass for in the world. If you want a specimen copy before subscribing, send for it. Tell all your neighbors about the great Dollar Weekly Agricultural Paper. It has no equal. Present circulation 50,000 copies.

IMPORTED CLYDESDALES
ALSO,
HAMBLETONIANS,
and other desirable strains of **Trotting Stock**, for sale, **cheap**, and on **easy terms**. All stock guaranteed as good as represented. Catalogues sent free. Correspondence solicited. Address
POWELL BROS., Springboro, Crawford Co., Pa.

BALLARD, BRANCH & CO.,
112 BROAD ST. (cor. Water) NEW YORK.
Produce Commission Merchants,
DEALERS IN
Butter, Eggs, Cheese, Apples, Beans, Hops, Poultry, Corn, Wool, Beeswax, Honey, Tallow, Lard, Lambs, Wild Game, Dried Fruits, Potatoes, Sweet Potatoes, Cider Vinegar, Furs, Rags, Onions, Tobacco, Maple Sugar, etc., etc.
PEACHES AND BERRIES OF ALL KINDS.

A TRIED AND EX CELL Superphosphate
FOR $25 PER TON.
Analysis guaranteed as printed on every bag.
LOWEST CASH PRICES for Goods of Guaranteed Standard.
SULPHATE OF AMMONIA (full strength, 25 per cent.) A SPECIALTY.
We will fill orders for Chemicals to make Home-Made Fertilizers by any formula our customers desire to follow, and we will take pleasure in furnishing estimates of cost on application.
BAUGH & SONS,
20 So. Del. Ave., Philadelphia.
103 South St. Baltimore.

BADGER STATE Butter Color.
Received the only honorable mention granted to any Butter Color at the International Dairy Fair of 1879. If not for sale by your dealer, send for circular &c. to the manufacturer. E. SHELDON, Fort Atkinson, Wis.



My Annual Catalogue of Vegetable and Flower Seed for 1880 rich in engravings, from photographs, of the originals, will be sent FREE, to all who apply. My old customers need not write for it. I offer one of the largest collections of vegetable seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. *Full directions for cultivation on each package.* All seed *warranted to be both fresh and true to name;* so far, that should it prove otherwise, *I will refill the order gratis.* The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other vegetables. I invite the patronage of *all who are anxious to have their seed directly from the grower, fresh, true, and of the very best strain.*
NEW VEGETABLES A SPECIALTY.
JAMES J. H. GREGORY, Marblehead, Mass.

The "*Perfect*" Hog Ring leaves a smooth wire in the flesh, and a barb in front of the nose preventing all rooting.
The "*Perfect*" Stock Mark is applied with the "*Perfect*" Ringer and Ring, to any animals ear, with the owner's initials slipped on the Ring, before closing.
The "*Perfect*" Hog Holder is simple, cheap, durable, and easily applied. Holds the animal firmly while ringing. Ask Hardware Dealers for the "*Perfect*" or send $1.00 for Ringer and 100 Rings, 50c. for Holder, 35c. for 100 Lettered Disks to
J. H. BROWN & CO.,
Patentees and Mn'frs., Ottawa, Ill.

SALT is NECESSARY for LAND
Fruit Trees, &c. LUMP SALT is excellent for horses, sheep, &c. All kinds of salt in full supply; also, Ferris' Land Invigorator and Crop Protector—death to Hessian Fly and other pests. Use it and reap a golden harvest.
EDWIN FERRIS & CO.,
Wholesale Salt & Fish Dealer 183 & 185 Washington St., N. Y.

STOCKBRIDGE MANURES
For 1880.

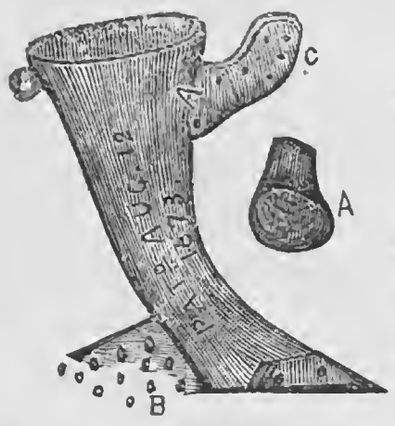
Some years ago the Stockbridge Manures were only known to a few farmers in the Connecticut Valley. Now they are so extensively used in different parts of the country as to require two large factories, one in New York and one in Boston to manufacture them. This increase shows what farmers think of good fertilizers, and is not only due to the fact that they are reliable, well-made, and high-grade manures, but also to the fact that farmers have
FOUND THEM PROFITABLE TO USE.
Now that corn, and other farm produce is bringing such good prices, we anticipate that farmers will invest still more largely in our fertilizers.
Besides the Stockbridge Manures, we manufacture several high-grade Phosphates, and deal in first-class chemicals of all kinds. Farmers who intend to use Fertilizers of any kind, should
Send for our New Pamphlet,
which contains a large amount of reliable information, beside prices for 1880.
MAILED FREE TO ANY ADDRESS.
BOWKER FERTILIZER CO.,
3 Park Place, N. Y.
43 Chatham St., Boston.

FARMERS
about purchasing fertilizers and wishing to save from 100 to 3,000 per cent., can do so by sending stamp to GEORGE CASPER, M. D., Manatee, S. Fla.

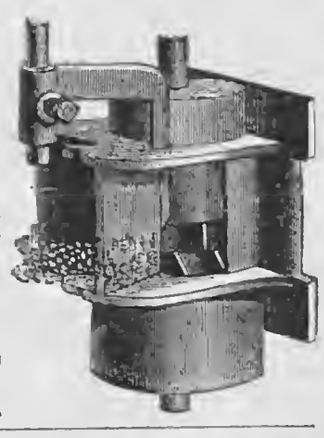
RALPH'S ONEIDA CHEESE VAT.

For Single Dairies and Small Factories.
Send for Circular and full description to
JONES, FAULKNER & CO.,
Sole Manufacturers, Utica, N. Y.,
Dealers in Dairy Supplies and Furnishing Goods. Also Manufacturers of Steam Boilers and Engines and STEAM DAIRY APPARATUS, for Cheese Factories and Creameries.

ANIMAL BONE FERTILIZERS.
Made from the BONE, BLOOD and MEAT produced in the Great Packing Houses in Chicago.
DISSOLVED BONE.
GARDEN CITY SUPER PHOSPHATE.
ANALYSIS—Ammonia, 2½ ℔ ct.; Sol. Phos. Acid, 10 ℔ ct.; Sulph. Potash, 3 ℔ ct.
The above Analysis is GUARANTEED, and we will forfeit the Goods if not as represented.
Our $25.00 Phosphate,
Analyzing 10 ℔ ct. Sol. Bone Phosphate, 2½ ℔ ct. Ammonia, produces most excellent results on CORN, OATS and VEGETABLES.
☞ EXCLUSIVE TERRITORY GIVEN DEALERS.
NORTHWESTERN FERTILIZING CO.,
CHICAGO, ILLS. FACTORIES AND OFFICE: EAST ST. LOUIS, ILLS.



PAXTON
Force Feed Grain Drill.



Best Grain seed and Fertilizer Drill in the market. The cuts show our broadcast shovels set with steel to the middle of the boot, and the force feed attachment.
Highest awards at the Penn. State Fair in 1879. Send for circulars. Address,
Foundry and Machine Dept., Harrisburg Car Co., Harrisburg, Pa.

The "Oliver Chilled" Plow.

Nearly Half a Million in use.

Warranted to give Satisfaction.

THE LEADING PLOW OF THE AGE.
Sells Best Where it is Best Known.
Its superiority, attested by a host of worthless imitations. The name "OLIVER" will be found on the beam of the genuine.
OLIVER CHILLED PLOW WORKS, South Bend, Ind.
Branches at INDIANAPOLIS, IND., MANSFIELD, O., HARRISBURG, PA., DALLAS, TEX., ROCHESTER, N. Y. ST PAUL, MINN., ST. LOUIS, MO.

Reading for the Young.

AN XMAS ON LOPEZ ISLAND.

Santa Claus Among the Indians.

XMAS is gone, but having just read some of the interesting letters of the cousins, it has occurred to me, they might like to hear of Xmas among the Indians. We had a Christmas tree on Xmas Eve. It was erected in a hall (for public amusement) built over a store. The hall was decorated with the evergreens and wild flowers of our island, and bore in letters of living green, these words: "Welcome, Merry Christmas!" The tree was illuminated with many little wax tapers, festooned with strings of pop-corn, and bore aloft fruits more wonderful than Baron Munchausen's, to the utter bewilderment of these "children of the forest" who never before saw a tree of such fruitfulness and variety of production. It was as wonderful as tho' "ready-made-shirt" tree of the Indies, for even the squaws hung on buck skin moccasins for their lords who were white men, and strange tricks and toys for their children who were half-breeds. So you see, being a mixed crowd of recipients, there had to be a greater variety, in order to meet the wants, and tickle the fancies of all grades or classes.

The brass-band from San Juan Island struck up, and the hum of astonishment died away under strains of music powerful enough "to charm the savage breast," after which Rev. Mr. Carr made a short address, then all repeated the Lords Prayer in concert; then came an appropriate dialogue by two little girls, and a song of the "Christ-child." When the last notes died away, in came old Santa Claus with paste-board face, white cotton whiskers and snow-flaked coat. At this unexpected apparition, Indians and half-breeds became pale faces, for a moment, till seeing the kindly intention of old Kris, who began cutting off and distributing the gifts to their savage delight, which was so exuberant they could not repress an audible titter, when by accident old Santa's beard caught fire, and he made some hasty snatches at it, looking more supernatural than ever.

However, no harm was done, and the sparkling eyes of the little *Siteum Cwashes* (half Indians) saw the tree empty and bare by nine o'clock, and pitched out of the window into the bay. Then the band again struck up and dancing commenced, by those accustomed to celebrate Xmas with rude hilarity, while those taught to observe it as sacred retired to the sitting-room of Mrs. Weeks, where a cheery fire and innocent anecdotes enlivened the hours till midnight when supper was commenced. This was a credit to our amiable hostess, and we gave her good proof of our appreciation. The dancing continued till daybreak, when each repaired to his home. We took sail in Billie Barlow's sloop. A stiff south-easter was blowing, so we sped along very pleasantly, until warned by the roll and pitch of the yacht that a reef in our mainsail and jib was required to enable us to jibe, and make another tack to gain Shark's Reef (my landing). So we luffed her up, head in the wind, down came the main sail (all hands to the lower boom!) we hurriedly put in a reef, and as she had no sail to steady her, she rolled and tumbled like a sick horse. Poor Pink and Jauneta wore *paler faces* and they came near relinquishing all claims to the good *muck-a-mucks* (victuals) so carefully stowed away at the breakfast table of good Mrs. Weeks. Rip went the main sail (not so large as at first, but large enough for safety), off on the first tack, off we went jibe, and on the second tack, we brought up at Shark's Reef within forty rods of home, which we reached in a few moments after landing. Then we looked after the safety of our stock; fed the chicks on small grain, the pig and cow on parsnips, carrots, beets, potatoes and slops, since, owing to cold nights corn will not grow here. Thus passed Christmas day on Lopez Island, W. T.

WILL O' THE WISP.

LITTLE FIDO AND THE BEAR.

MRS. E. J. RICHMOND.

WHEN Dr. G. and his pretty young wife decided to take Horace Greeley's advice and "go West," the question arose, "What shall we do with Fido?"

Fido was the family pet, a snow white dog six inches high, but with a spirit as brave as that of any mastiff in the land.

"Take him, of course," said Lottie. "How can we live without Fido?"

"But, my dear, that is absurd. Take a dog a thousand miles!"

However, the deed was done.

This was more than a score of years ago, before the screams of the steam whistle was heard at Valley Home; before Chicago had been lifted from the morass on to firm foundations, while the virgin prairies of Wisconsin waved their billowy grasses and brought forth their beautiful flowers to

"Waste their sweetness on the desert air."

In the midst of one of these prairies Dr. G. located his home. Wandering bands of Indians often passed by the cottage, and the squaws would beg for chickens or milk or bread.

Lottie never denied them, and often the swarthy dames might be seen in pursuit of the chickens which they were sure to run down.

Fido did not like this. He did not like Indians nor prairie wolves, nor badgers, and manifested his displeasure by a sharp, angry bark which did not trouble anybody, and seemed to be a relief to him. One day, or night rather, he found "a foeman worthy of his steel."

The family were seated in the cottage, talking hopefully of the bright prospects before them, and ongingly of the friends they'd left behind, when Fido came running to the door barking violently. Then he ran back to the temporary stables, where the fine horses were kept which the doctor had brought all the way from the old Empire State.

"Fido has started another badger I guess," said the doctor, resuming the conversation. But this did not answer. Back and forth from the stables to the cottage the little sprite ran, almost frantic with excitement, and barking furiously.

At length the family went out with lanterns, to try and quiet the faithful dog more than from fear of any danger.

They found one side of the stable torn off and a horse loose, while both were trembling violently.

Something was moving away across the field and little Fido was in hot pursuit.

"It is a bear," said the doctor, examining the track.

The animal was killed the next day, a huge fellow, who was disappointed in his hoped-for meal off the horses by the spiteful little vixen.

Fido was a hero after this, and always wagged his tail proudly and looked up knowingly when anyone told the story of Fido and the bear.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—Please accept my thanks for the seeds which were received the 26th ult. When the proper time arrives, I will—life spared—sow them and do the best I can in cultivating and caring for the plants. I have my list of flower-seeds nearly completed from D. M. Ferry's Seed Annual, and intend to send for them very soon. Shall not send for very many varieties, as I have several kinds which I saved last season, also ten kinds which came from the RURAL, and Uncle Mark. I have but little time to devote to the care of flowers and prefer a few well cultivated, rather than many neglected.

I want to tell the cousins of something I had last season, which was very pretty. The girls can get their good-natured brothers to assist them in making it, I'm sure. Saw a common flour barrel through the center. (If you wish two tubs, a head can easily be fixed in the open end.) Strengthen the tubs with a couple of hoops. I used green willow, but hoop iron would be more durable. Go to the woods and get some hemlock bark; it must be fresh as bark that has been long peeled, will not bend to the tub. Now nail firmly to the tub, fitting the pieces carefully; saw off the bark even with the tub at top and bottom, and that part is completed. Next drive a round post, three or four inches in diameter, firmly into the ground, leaving from two to three feet above the surface. Set the tub on the post, taking care to have it exactly in the center, and nail, using large nails so as to make it very firm. Fill the tub with good rich soil, and place whatever plants you please therein. Geraniums would be pretty, and if you desire, the pots can be sunk in the soil and the roots remain undisturbed. Any plants that are not very large or tall would look well, by placing the larger in the center, and a row of smaller ones around it. There being such a quantity of soil, it does not dry out quickly, and by watering occasionally, you will have a "thing of beauty," which will be a joy all summer. You can, if you wish, have a small circular flower bed underneath the tub. Pansies thrive exceedingly well, as it is a trifle shady. The next time I write, I hope to be able to tell, not only of plans for the summer, but of plans accomplished. COUSIN NELL.

Broome Co., N. Y.

DEAR UNCLE MARK: In a late number of the RURAL, I read the enquiry, what had become of all the cousins; I answer to the roll call for one, and hope to hear from the rest in due time. I went to school this winter, but now my school has closed. I planted my grape seeds shortly after receiving them, but my pet kitten wishing to explore the contents, upset the basin; we scooped up the dirt and replaced it. I have now two fine strong grape-vines and another one just peeping out. We planted our raspberry bushes in pots as soon as received, and placed them in a south window. To-day I replanted them in the garden; I found they had already sprouted nicely. Now boys it is about time to begin our summer's work. Let us each try and see who can do the best and report. Aside from our garden we can each have a beautiful flower-bed. Many thanks to Uncle Mark for sending me a fine collection of annuals. Before I close I want to tell the cousins that I have a little pet lamb all my own; I love him very dearly; his name is Dick. I have done a little grafting, and will report my success bye and bye. I also received my willow cuttings last night. And now, Uncle Mark, and numerous cousins, I wish you good day.

Lucas Co., Ohio. WALTER GAYHART.

DEAR UNCLE MARK:—I have seen so many letters from the cousins—that I thought I should like to join the club also, if you have not too many nieces and nephews already. We came from the city only about a year ago so I have not had so much chance to learn how to keep a garden as many of the cousins who have always lived in the country. We have not had a very cold winter this year, so we have enjoyed ourselves real well I will not write any more as this is my first letter but, if Uncle Mark will receive me as one of his nieces, I will write again. ELSIE.

Wild Rose, Wis.

YOU DEAR OLD UNCLE:—Please excuse me for for this disrespectful name, but I really couldn't help it. I think you are perfectly splendid to send so many seeds. I mean to have a little round bed for each kind. I suppose most of the cousins have a "Gem Puzzle," or "Game of Fifteen." But I presume they cannot all get it right. I did this morning, by mere chance. What *has* become of Uncle True? I like you better than I did him, though. I like the RURAL better every year.

Your niece, FANNIE S. GIFFORD,

Chautauqua Co., N. Y.

ARITHMETICAL PROBLEM.—A farmer being asked how many potatoes he raised, replied, "I planted three bushels of potatoes in the spring. If what I raise were equivalent to one-third the number of pennies I expended for Paris-green, or three-millionths of the number of Colorado bugs that the land yielded or equal to one twenty-millionth part of the improper words indulged in during the season, I should have potatoes enough to supply the whole world for 10 years!" How many did he raise?"

Miscellaneous.

BRIEFLETS.

THE Queen of England appears to be about the only crowned head in Europe that is not utilized as a target. Perhaps there are no lady-killers in England.—Norristown Herald. . . . Why is it that when a woman has nothing else to occupy her, she invariably rushes off to her dentist's and gets her teeth cobbled till her mouth is like a gold bonanza? Does she enjoy it, or is it just to bankrupt her husband? . . PUCK expresses his views respecting "Oily-margine" in the following impressive manner: The manufacturers of this charming substitute for butter are, we think, being very scurvily treated by the law, the press, and that portion of the public who have been more or less on tasting terms with real butter. . . To be told that their sweet, clarified tallow is not as palatable as the fat made from the milk of the cow, to be nominally obliged to brand it oily-margarine, and thus depreciate their own stuff, is indeed very mortifying. . . But the concoctors of this precious compound do not propose to give up their elegant business without making some effort to convince doubters of the superiority and beauty of the greasy Ambrosia to the regular Orange county article. . . They say that experiments with it, both upon bread and toast, have been wonderfully successful; that a nefarious trade in butter-making has been carried on; that clean and wholesome fat is much better than butter; that there is nothing offensive in oilymargarine; that it is a wholesome luxury for the poor man; that, regarded from a sanitary point of view, spurious butter is away ahead of the real thing, and that the manufacture of oily-margarine is as yet but in its infancy—in which condition we devoutly hope it may remain. . . But we wish it to be distinctly understood that in one shape we have no special objection to oilymargarine in its original form—that is when it exists in its unextracted condition in the live ox or the tender porterhouse steak. . . The manufacturers are, no doubt, very honest and worthy gentlemen; but no sooner are their wares out of their hands than the awkwardness commences. The small, or often the large, grocer sells this vamped-up grease as butter; the boarding-house keeper, if she doesn't buy it as such, makes her confiding boarders believe it is the genuine article, though some poor victim may venture to try to find out what makes the butter taste so confoundedly like fat-drippings. If oilymargarine wants to stand on its merits, let it be colored with harmless dye—red, blue, green; the louder, the better. Then there would be no danger of people who are prejudiced in favor of good old-fashioned butter eating even the choicest clarified beef or pork-fat under a thin disguise. . . Puck, who is really very funny at times, is now talking of a substitute for bread which he calls Breadarine, Lumberine, or Woodeo-sawdusterine. Mr. Edison is the discoverer, it seems. There are no extraordinary difficulties encountered in its manufacture. The saw dust is gathered from the pit of a respectable saw-mill, the chips and splinters are carefully picked out, when it is subjected to a thorough cleansing. It is then placed in a bin, in which a full head of electricity is turned on. This transforms the sawdust into a substance very much superior to flour, and having the same constituents. Water is now added, dough is formed, and by ingeniously constructed machinery for kneading and baking, the Woodeo-sawdusterine loaves are turned out ready for the market. . . The growers of wheat are in despair, and it is very evident they must turn their attention to other callings, for their produce will now be literally worthless. . . The following are analyses of genuine bread and the substitute:

THE WOODEO-SAWDUSTERINE MFG. Co.—

Gentlemen: In accordance with your request, I have analyzed the sample of Woodeo-sawdusterine submitted to me, and take pleasure in informing you that I have found in it no ingredient in the slightest degree injurious to health. I consider it, indeed, as likely to promote robust vigor in people of sedentary habits, and think that it will probably act as a strong moral tonic upon those whose religious education has been neglected early in life. This is my

ANALYSIS.

Pinus Strobus (or American White Pine).....	99.99
Arsenic, Alum, Yeast, Bran, Batter, Paris-Green, Potato-filings, Ink, Salmi de Volaille, Pork, and other foreign substances (approximated)	00.01
	100.00

While in the composition of ordinary bread, made from flour, I find the following

INGREDIENTS.	
Flour.....	99.99
Pinus Strobus, Arsenic, Alum, Yeast, Bran, Batter, Paris-Green, Potato-filings, Ink, Salmi de Volaille, Pork and other foreign substances (approximated).....	00.01
	100.00

From this it will be seen that in all health-giving properties the two manufactures are precisely equal; if anything, the Woodeo-sawdusterine is rather richer in pure nutriment than bread made from flour. I am, gentlemen, yours truly.

J. SMITH, M. D., E. F.,
G. H. I., J. K. L., E. T. C.

. . "Thoughts and Events" remarks: With regard to this matter of advertising especially there are few facts in the history of the press more damning than the prostitution of its great powers to conciliate it. . . We see the firm of B. K. Bliss & Sons mentioned as among the heavy donors to the Herald Irish Relief Fund. . . To stop fits of sneezing, plug the nostrils with cotton wool. Try it. Leave the plugs loose enough to breathe through. . . S. & W. Cooke, of Connecticut (brothers), keep bachelors' hall, do their own work, make and sell excellent butter from eight cows. They are over 70 years of age. . . It is said that the Messrs. Thurber of this city have established a house in London for the sale of oleomargarine. . . To own to having been in the wrong is but saying you are wiser to day than you were yesterday.—POPE. . . When we are alone we have our thoughts to watch, in the family our tempers, in company our tongues.—HANNAH MORE. . . G. W. Hoffman (Elmira Club, reported in the Husbandman) says that two years ago he tried strips through the middle of a field, alternately drilled and sowed by hand, and there was a plain difference in favor of the latter plan; the plants were stronger and more healthy; the strips were sowed and drilled with the same amount of seed to the acre. . . If oats be sown late, more seed to the acre is required than if sown early, because there will be less tillering. . . What a silly question has been started, viz.: Does or does not wheat tiller? Pull up a plant and take a look at it just at this time! . . You may liken thick seeding to stock in the farm yard. Suppose five animals be confined in a yard where they are allowed ample feed upon which they thrive, turn five more in and the supply will be insufficient, so there will be positive loss on the ten. So it is with seed. . . It appears that sewage from cities is not harmful to fish—but the refuse from paper, gas, chemical and other establishments is very injurious. . . Cease pruning as soon as the sap begins to flow. It is better to wait until the tree or vine is in leaf when it will bleed very little if any. . . The "bleeding," even though the tree be not injured thereby, discolors the bark for years. . . Our Aiken, (S. C.) correspondent writes us that from personal observation he finds that the buds of *early* Peaches are injured to the extent that not more than half a crop can be hoped for in that part of the country. Late Peach buds are not appreciably injured. . . Secure the best sorts of corn for seed—prepare the land better than heretofore—cultivate more thoroughly and see if you cannot double your yield with less than a proportionate increase of labor and expense. . . Have you any fruit trees that it would pay to graft? . . In transplanting we charge you not to expose the roots to sun or wind. . . Red-top alone is excellent for seeding a lawn to grass. . . Professor Hilgard (California), reports that seedling Cinchonas are prospering at Berkely, having stood the cold weather with but slight protection. . . The Pacific Rural Press gives much space to the consideration of a new industry. Shellac and laedye, it seems, are found by analysis to exist in large quantities in the resinous substance found on the Creosote plant, Larrea Mexicana which grows in the deserts of Southern California and Arizona. . . We see that the Massachusetts Horticultural Society, at their late exhibition, gave Mr. Peter Henderson a Certificate of Merit for the new Tea-rose "American Banner!" Now, that's glory enough. Mr. Henderson, will you permit us to take back all that we have said that might by any body have been construed as reflecting upon the charms of the A. B.? Long may it wave! May its buds never grow less. . . But, really and truly, we should much like to know what particular "Merit" the Certificate alludes to. . . Marshall P. Wilder's Azalea that measured nearly seven feet in hight and about twenty feet in circumference was *exquisite* indeed. . . Our young friend, Land and Home, has resumed after a two weeks' armistice. The size and price have both been reduced. We hope it may now march on to victory. . . The irrepressible jabber as to whether the Versaillaise and Cherry Currants are the same, still goes on. In view of the fact that, if not precisely alike, there is no marked difference between them, will not horticultural essayists drop the thrice-worn out discussion! There are scores of more recent things about which they might display their careful powers of observation, and instruct their hearers or readers too.

PERSONAL ITEMS.

Senator-elect Mahone, of Virginia, weighs only ninety pounds.

Senator Groome, of Maryland, eats apples and peanuts in the street cars.

Senator Williams, of Kentucky, wears the only wig in the United States Senate.

INGALLS is the thinnest man in Congress and wears a big red handkerchief around his neck.

Blaine will call a new acquaintance by his Christian name before he has known him a fortnight.

The Duke of Westminster, who is the richest man in England, has an annual income of $3,500,000.

Ex-Governor Tilden and Justice Field were schoolmates, the latter boarding at the house of Mrs. Tilden, Samuel J's mother.

The Rev. W. McManus, once a man of brilliant parts, was found dead in a prison cell in Chicago the other day. Drink? Of course.

Mrs. Grossman, of Berlin, Canada, is twenty-six years old, and in seven years of marital life has given birth to twelve children, in ones, twos and threes.

General Imboden, the ex-Confederate cavalry leader, who represents a large number of Northern capitalists, has bought 42,000 acres of mining land in Scott County, Virginia.

Among the unclaimed land patents recently taken from the cobwebbed cuddy-holes of the Land Office was one issued by President Pierce to Abraham Lincoln for service in the Black Hawk war.

Prince Bismarck's sixty-fifth birthday anniversary was celebrated on the 1st instant with all the honors. His palace was flooded with birthday offerings from all parts of Europe. The Emperor William and many other distinguished persons visited him.

Cleanse and moisten the dry stickey mouth of patients and refresh them with Hop Bitters diluted with cool water.

Implements and Machinery.

RICHMOND CITY MILL WORKS,

RICHMOND, IND.

Manufacturers of

MILL STONES

and

Flouring Mill Machinery.

We manufacture the best French Burr

CORN AND FEED MILLS

in the country. Send for description and prices.

State you saw this in RURAL N.-Y.

THE ALBANY CORN PLANTER

PLANTS ALL KINDS OF SEEDS WITH PRECISION.

Awarded the Highest Medal at the Centennial, as being the best Planter.

SAVES ITS COST IN PLANTING FIFTEEN ACRES OF CORN. One man and a horse can plant from seven to ten acres of corn in one day, with the Planter, at a cost of from $3.50 to $4.

COST TO PLANT FIFTEEN ACRES BY HAND:

Marking, man and horse, 2 days, at $3	$ 6.00
Planting, twelve men, at $1	12.00
Board, ten men, two meals each, at 25c	5.00
Wasted, one bushel of corn	1.00
Total cost by hand	$24.00

Self-Operating

SULKY RAKE.

IMPROVED LION,

Best Rake Made in the World.

Send for Circular, etc., to O. H. P. CORNELL, Proprietor Albany Agr'l Works, Albany, N. Y.

FISK'S AUTOMATIC SEED PLANTER

Has the best improvements of any Hand Planter now in use. Plants with the accuracy of a hoe all the ground a person can walk over in a day. Seed for each hill passes in plain sight.

This is the easiest planter to use ever invented. Every planter fully warranted, and satisfaction guaranteed. Unusual inducements on samples this season. Circulars free.

WALLACE FISK, South Byron, Genesee Co., N. Y.

THE

Genthner Hand Seed Sower,

IS SIMPLE, CHEAP, and EFFICIENT.

Any one can use it with facility and plant with accuracy. It will work readily on rough or smooth ground. It can be used to plant all kinds of vegetable seeds, as the openings in the seed-box can be adjusted to the size of any seed.

Retailed for only $2.00.

An energetic man wanted to act as Agent in every town.

Apply to

B. T. GENTHNER, PATENTEE),

or to

B. H. DAVIS,

General Agent for the United States.

Patented Dec. 9, 1879. FOXCROFT, Maine,

Implements and Machinery.

INGALL'S PAT. LINK AND CHAIN

Will make or mend your chains, of all sizes, without tools. Inquire at your Hardware store or address

INGALLS MFG. CO., Providence, R. I.

PRONOUNCED the

BEST PLOW MADE

by the

Northern Ohio Fair of 1879,
State Fair of New York of 1879,
State Fair of Michigan of 1879,
and by the
Paris Exposition of 1878

when it competed with 187 other PLOWS, and received the GRAND GOLD MEDAL for being the BEST general purpose Plow in the world—an honor never before conferred upon a Hand Plow.)

Is the MOST EASILY ADJUSTED and MOST PERFECT SCOURING PLOW ever invented, and the thousands that are in satisfactory use all over the land demonstrate the fact that no other CHILLED PLOW manufactured is equal in EVERY RESPECT to the "GALE."

Distributing Agencies.

W. J. Walker, Agt.,	Rochester, N. Y.
Enos Ott,	Easton, Pa.
J. H. Parkins,	Staunton, Va.
Geo. C. Cribb,	Milwaukee, Wis.
John A. Hoffman,	Vincennes, Ind.
Deere Mansur & Co.	St Louis, Mo.
C. Merkle & Co.	Louisville, Ky.
Doling, Parce & Gray,	Springfield, Mo.
Mark W. Johnson & Co.,	Atlanta, Ga.
Baker & Hamilton,	Sacramento, Cal.

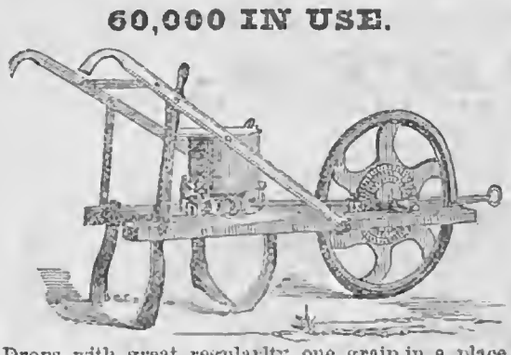
Send for circulars to either of the above agencies, or to

GALE MANUFACTURING CO.

ALBION, MICH.

HOOSIER CORN DRILL!

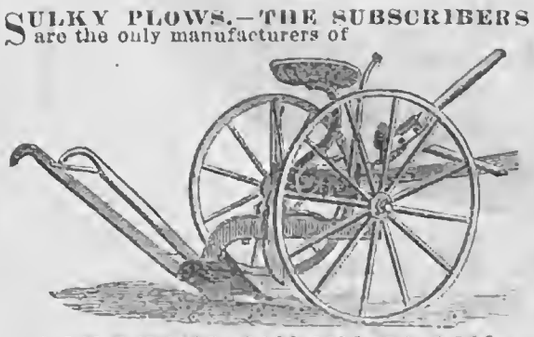
60,000 IN USE.



Drops, with great regularity, one grain in a place, either 12, 16 or 20 inches apart, does the covering uniform in depth, and is both time and labor saving. A given area of corn planted with this machine contains as many plants as when hilled, but their arrangement is such that *each* plant has access to the *same* amount of plant-food that must necessarily be *divided* between from 3 to 5 plants when huddled together in a *hill*. Hence a healthy start and vigorous growth of the plants and the consequent production of **large, well matured** ears, by which the quality is improved, and the yield increased from 10 to 20 bushels per acre, over hill planting are natural results following the use of our **Corn Drill.** Send for circular.

HOOSIER DRILL CO., Richmond, Ind.

SULKY PLOWS.—THE SUBSCRIBERS are the only manufacturers of



OSBORN'S SULKY PLOW,

the only Plowing Machine that has proved a perfect success in all kinds of soil. Any kind of plow can be attached. The plowman rides and handles the plow with ease, regulating the depth and width of furrow. The draft for the team is materially less, and the ordinary laborious mode of plowing is reduced to one of comfort and ease. Sulky made for both right and left hand plows. Also, manufacturers of

THE MEADOW KING MOWER,

and other Agricultural Implements.

Send for Circulars. GREGG & CO.,, Trumansburg, Tompkins Co., N. Y.

Miscellaneous.

LA BELLE CHOCOLATIERE.

One Hundred Years Old.

1780 1880

WALTER BAKER & CO.,

Dorchester, Mass.,

CHOCOLATE, BROMA AND COCOA

In their best and purest form, contain every ingredient that is needful for the sustenance and growth of the human system, being composed, as determined by chemical analysis, of starch, gum, gluten, oil, and a white crystalizable substance called theobromine, similar to theine in tea, but containing more nitrogen and being an important adjunct to nutrition.

SOLD BY GROCERS EVERYWHERE.

Our Book of Choice Chocolate Receipts sent free to any Address.

NOYES' HAYING TOOLS.

FOR STACKING OUT IN FIELDS OR MOWING AWAY IN BARNS.

Anti-friction Hay Carrier.

Grappe Fork.

Save labor and Money. Are simple, durable and cost but little. No trouble in getting over high beams, or to the end of deep bays. Hundreds are in use.

Wood Pulleys, Floor Hooks, etc.

Send for circular and designs for tracking barns to

U. S. WIND ENGINE & PUMP CO.,
Batavia, Kane Co., Ill.

HEEBNER'S HORSE POWER,

WITH

Patent Level Tread

AND

Speed Regulator,

HEEBNER'S IMPROVED THRESHING MACHINES. Send for Illustrated Circulars to HEEBNER & SONS, Lansdale, Mont. Co., Pa.

FARMERS AND DEALERS, READ THIS!

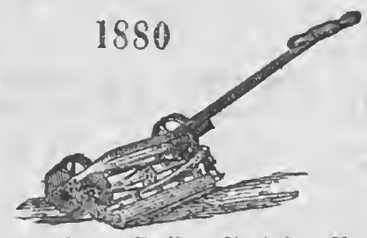
These cuts represent our 20 Steel-Tooth Horse-Rake, with Iron Hubs (or Locust Hubs boiled in oil)—9000 in use—and our Positive Force-Feed Grain, Seed, and Fertilizing Drill (which can be changed to sow any quantity while Drill is in motion), with Pin or Spring Hoes—8277 in use and giving satisfaction. All manufacturers say theirs are the best. All we ask is, send for *Descriptive Circular and Price-List*, which contains letters from persons using them. All are *warranted*.

Hagerstown Agricultural Implement Mfg. Co.
State where you saw Advertisement. **Hagerstown, Md.**

PENNSYLVANIA LAWN MOWER

Surpassing all Others and Pronounced the Best.

1880



Advantages.

Lightness combined with strength.
Runs more easily
Will cut longer grass.
Is more durable.
Requires less repairs.
Cuts grass more smoothly,
Less liable to obstruction. Easily adjusted. No springs, almost noiseless.

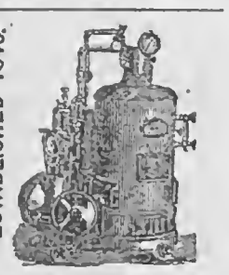
EVERY MOWER WARRANTED.

LLOYD, SUPPLEE & WALTON, Philadelphia, Pa.

PATENT SPARK-ARRESTER.

8—H. P. Mounted, $650.
10 " " 750.
12 " " 1000.

ESTABLISHED 1840.



2-H. P. Eureka, $150.
4 " " 250.
6 " " 350.

Send for our Circulars.

B. W. Payne & Sons, Corning, N. Y.

State where you saw this.

The Aquapult (in operation.)

W. & B. DOUGLAS,
Middletown, Conn., U. S. A.
BRANCH WAREHOUSES:
85 & 87 John St., N. Y., 911 Lake St., Chicago, Ills.
Manufacturers of
PUMPS,
Hydraulic Rams, Garden Engines, Pump Chains, Curbs, etc.
Highest Awards at all the World's Exposition.
WORKS FOUNDED IN 1832.

The cut represents our **Aquapult**, a newly-improved brass hand force pump. Fire Extinguisher, Garden Engines, Window and Carriage Washer, will throw water 60 ft. Sent to any address C. O. D., price $9. Illustrated Catalogue on application.

GREAT WESTERN GUN WORKS, Pittsburgh, Pa.

Send stamp for Catalogue.

Rifles, Shot Guns, Revolvers, sent c. o. d. for examination

Breech-Loading Shot Guns, $20 to $300. Double Shot Guns, to $150. Single Guns, $3 to $20. Rifles and Cartridges, $3 to $75. Revolvers, $1 to $25. Send stamp for Price List. GREAT WESTERN GUN WORKS, Pittsburg, Pa.

ELGIN WATCHES

all styles, Gold, Silver and Nickel, $6.00 to $150. Chains, etc., sent C. O. D., to be examined. Write for Catalogue to **Standard American Watch Co., Pittsburg, Pa.**

KIDNEY-WORT

The Only Remedy

That Acts at the Same Time on

The Liver, The Bowels and The Kidneys

This combined action gives it wonderful power to cure all diseases.

Why Are We Sick?

Because we allow these great organs to become clogged or torpid, and poisonous humors are therefore forced into the blood that should be expelled naturally.

KIDNEY-WORT WILL CURE

Biliousness, Piles, Constipation, Kidney Complaints and Diseases, Weaknesses and Nervous Disorders.

by causing free action of these organs and restoring their power to throw off disease.

Why Suffer Bilious pains and aches?
Why tormented with Piles, Constipation?
Why frightened over disordered Kidneys?
Why endure nervous or sick headaches?
Why have sleepless nights?

Use KIDNEY-WORT *and rejoice in health. It is a dry, vegetable compound and* One package will make six qts of Medicine. *Get it of your Druggist, he will order it for you. Price, $1.00.*

WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.
(Will send post paid.)

ARCHITECT.

Plans and Specifications for Country Dwellings and Barns furnished at the most reasonable rates by ROSITER & WRIGHT, Architects, 160 Fulton St., New York

WE ADVISE YOU TO INSURE YOUR property in the

AGRICULTURAL INSURANCE CO.

Of Watertown, N. Y.,

The largest Company in the country which insures only farmers' property and residences. Over twenty-six years old.

Capital	**$200,000 00**
Net Surplus, over	**$235,153 81**
Assets, Jan. 1, 1880	**$1,137,549 73**

HANSEN'S DANISH LIQUID

BUTTER COLOR.

Prepared in vegetable oil by skilled chemists. Does not color the buttermilk. Imparts natural rich color and *enhances price* of butter greatly. Largest and fancy butter-makers have adopted it. Sample by mail, free.

WHITMAN & BURRELL, Little Falls, N. Y., Wholesale Agents for America.

$777 A year and expenses to agents. Outfit Free. Address P. O. VICKERY, Augusta, Maine.

AGENTS WANTED EVERYWHERE to sell the best **Family Knitting Machine** ever invented. Will knit a pair of stockings, with **HEEL** and **TOE complete**, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to **The Twombly Knitting Machine Co., 409 Washington St., Boston, Mass**

20 Gold and Silver Chromo Cards, with name, 10c. post-paid. GEO. I. REED & CO., Nassau, N. Y.

20 New Styles Chromo Cards, 10 cts. Best ever sold. Stamps taken. J. B. HUSTED, Nassau, N. Y.

52 Gold, Crystal Lace, Perfumed & Chromo Cards name in Gold and Jet, 10c. CLINTON & BRO., Clintonville, Ct.

THE FERGUSON BUREAU CREAMERY.

Surpasses all others in quantity and quality of butter made. It secures matured and ripened cream, which makes butter of the best texture, flavor, and of unequaled keeping quality. It excludes flies, dust and odors; is constantly at the correct temperature (58° to 62°); has room for the cream and butter, and saves three-fourths the labor. It can be used with either ice or water, and both summer and winter.

THE FERGUSON CONCUSSION CHURN is the best. It combines scientific principles with the best labor saving devices. No floats or paddles. Brings the butter in granular form, and secures the largest yield. Before buying any other **Churn or Creamery** or any pans, or cans, send for large Illustrated circular to **THE FERGUSON MF'G CO., Burlington, Vt.** Reliable Agents Wanted.

Humorous.

JUDGE MARTIN decided at Bridgeport, the other day, that certain evidence was inadmissible. The attorney took strong exception to the ruling, and insisted that it was admissible. "I know, your honor," said he warmly, "that it is proper evidence. Here I have been practicing at the bar for forty years, and now I want to know if I am a fool?" "That," quietly replied the court, "is a question of fact, and not of law, and so I won't pass upon it, but will let the jury decide."—New Haven Palladium.

A CONTEMPORARY asks Puck: "Is kissing dangerous?" and that paper answers: "That altogether depends. If the young lady ignores poisonous enamels, and her father doesn't enter the parlor in the midst of the labial exercises, kissing may be indulged in with impunity. Kissing another man's wife is dangerous, we believe—if her husband catches them in the act."

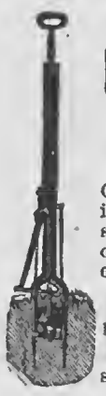
THE DAIRY-MAID OF THE PAST.

THE DAIRY-MAN OF THE PRESENT.—[Puck.]

Establish Healthful Co-operation.

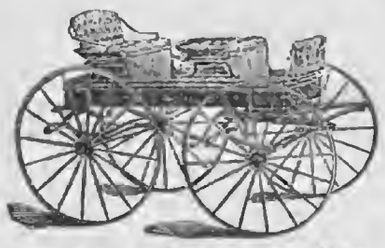
Between the stomach, the liver and the bowels, if you want to banish sick headaches, nervousness, and mental despondency. Upon the vigor of the first named organ depends the good service of the two latter. That fine stomachic, Hostetter's Bitters, pure, approved by physicians, derived from the best botanic sources, soon puts to rout the symptoms which make the lives of nervous, bilious invalids miserable. The very fountain head of such trouble is feebleness of digestion, for which it is an incomparable, long established and widely celebrated remedy. It builds up the constitution when shaken by disease, and protects it against malarial and other hurtful influences. It is an agreeable appetizer, a useful strengthening cordial for the convalescent, and greatly mitigates the gathering infirmities of age.

SHARPLESS. 40 cents per dozen. $1.50 ₩ 100.
GEO. S. WALES, Rochester, N. Y.



THE ISBELL
MOLE TRAP
IS INFALLIBLE ! !
IT NEVER FAILS to catch and kill. Lawns, Gardens, Parks and Cemeteries cleared of this aggravating pest in short order, by using this trap. Can be set in an instant by any one. Does not get out of order. PRICE, $2.00 EACH. Sent by express on receipt of price, by
YOUNG & ELLIOTT,
12 CORTLANDT ST., NEW YORK.
Wholesale and retail catalogues of reliable seeds free by mail, on application.

WATERTOWN

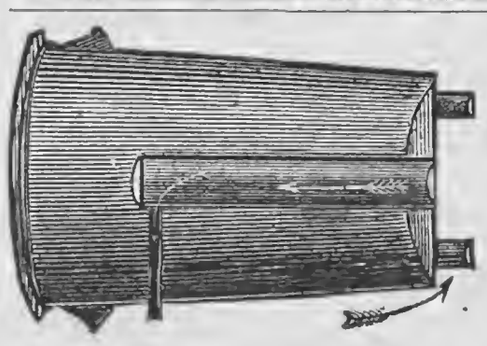


PLATFORM Spring Wagon
The Ne Plus Ultra.
EVERY WAGON FULLY WARRANTED.
This is the best, handsomest, lightest and strongest wagon of its kind in the market. Every Farmer and Dairyman should have one.
Correspondence solicited. Address
WATERTOWN SPRING WAGON CO.,
Watertown, N. Y.

COOLEY CREAMER.

Awarded Gold Medal at Paris Agricultural Exhibition, 1879.
Butter made by this process, awarded Sweepstakes at International Dairy Fair, 1878, and Two Gold Medals and First Premium at same fair, 1879. First Premium at Royal Agricultural Exhibition, London, 1879.
It requires no milk-room,
It raises all of cream between milkings.
It affords better ventilation.
It requires less labor.
It is more thoroughly made.
It is cheaper,
and gives better satisfaction than any other way of setting milk.
Send for "Dairymen" giving full particulars and testimonials.
VERMONT FARM MACH. CO.,
Bellows Falls, Vt.

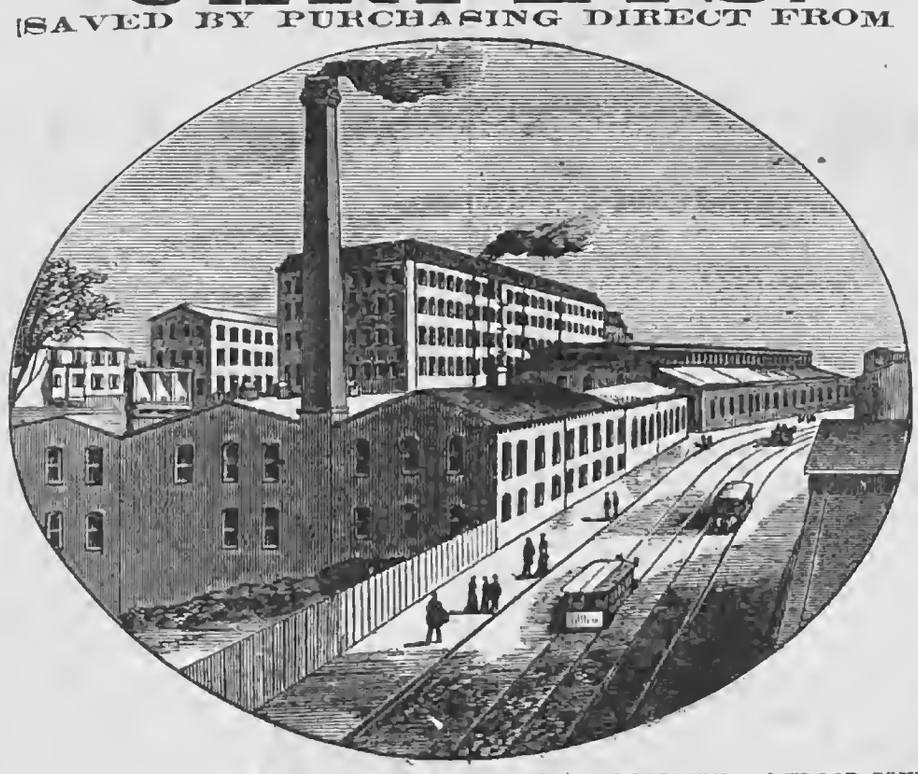
ESTABLISHED 1864.
C. GILBERT'S STARCHES
ARE ABSOLUTELY PURE.



The Fairlamb System
OF GATHERING CREAM.
A New Plan of Making Butter.
Saves time, saves labor, and gives the highest price for Butter. For particulars address
DAVIS & FAIRLAMB,
170 Lake St., Chicago, Ill.

(CIRCULAR.)
GET UP CLUBS Among your neighbors and friends for our excellent Teas, Oolong, Imperial, Young Hyson, Gunpowder, Japan and Mixed, 60 cents per pound. This is the first time these Teas have ever been offered at 60 cents. Same quality is sold by other concerns for 80 cents and $1.00. **ALL EXPRESS CHARGES** paid on $5.00 orders when payment is received with same. A complimentary of 10 per cent. on $10.00 orders. Special inducements on large orders. Try our Basket Fired Japan 60 cents per pound, strictly uncolored. We warrant all goods or they can be exchanged or money refunded and all expenses paid. No house can compete with us, we are the oldest, largest and most Reliable Tea Importers in the business, dealing direct with the consumer. Our reputation for fair and honest dealing requires no comment. **BEWARE** of Cheap Teas that are offered for sale, they are dangerous and detrimental to health—dear at any price—slow poison. Buy from only Reliable Houses and if possible from first hands. We await your orders which shall receive our prompt attention. Goods sent by Express C. O. D. Yours Respectfully,
THE GREAT AMERICAN TEA COMPANY,
P. O. Box, 4235. 31 & 33 VESEY ST., NEW YORK.
N. B.—When ordering please state in what paper you saw this circular.

CARPETS.
SAVED BY PURCHASING DIRECT FROM
INTERMEDIATE PROFITS.

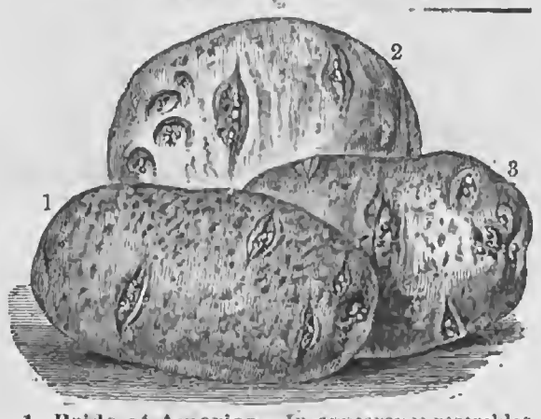


THE MANUFACTURERS.
We have now open an immense stock of the most approved varieties of CARPETS and FLOOR COVERINGS
MANUFACTURED BY OURSELVES
Expressly for this season's Retail Trade, consisting of AXMINSTERS, WILTONS, VELVETS, BRUSSELS, INGRAINS, &c., &c., &c., in
New Styles and Designs.
These goods will be found to combine in an unusual degree, Elegance of Appearance and Positive Wearing Qualities, and are well worthy of the inspection of intending purchasers.
We also offer a Full Line of TURKISH and EAST INDIAN RUGS and MATS, CHINA MATTINGS, OILCLOTHS, &c., &c., AT THE LOWEST POSSIBLE PRICES.
Special Inducements offered to Churches, Steamers and Hotels.
J. & J. DOBSON,
CARPET MANUFACTURERS AND RETAILERS,
40 & 42 WEST 14th ST., N. Y., Near 6th Av. Elevated R. R. Station
JOHN VAN CAASBEEK Manager.

THE ALBANY SEED STORE.
Established 1831.
49th YEAR.
PRICE & KNICKERBOCKER, Successors to

General Catalogue of Reliable
Flower, Vegetable and Field Seed, Vegetable and Flowering Plants and Small Fruits,
MAILED FREE. 80 PAGES—450 ILLUSTRATIONS
80 STATE STREET, Albany, N. Y.

THREE NEW POTATOES.



1. Pride of America.—In appearance resembles the Snowflake, a few days later; very productive, large size, an excellent keeper; of superior quality.
2. Matchless.—Tubers very handsome, round; pale-red; flesh fine-grained, pure white, and of excellent quality. A great cropper, an excellent keeper.
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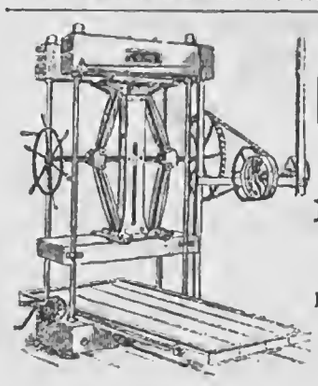

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THE RURAL NEW-YORKER

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Ralph Pratt

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KŒLREUTERIA PANICULATA.—From Nature.—Fig. 120.

Arboricultural.

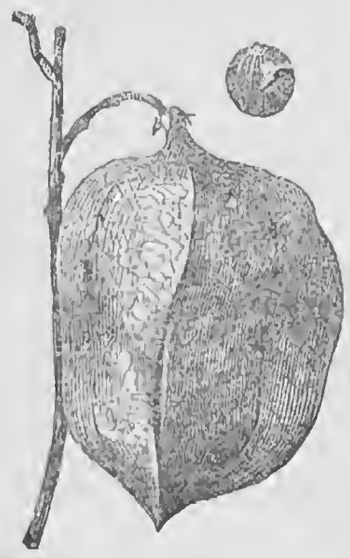
THE KŒLREUTERIA PANICULATA.

Some plants have become generally known through the medium of catalogues and periodicals, and yet are seldom seen on the lawn. Excuses might be accepted for this, if the plants were insignificant, ornamentally considered, but in the case of the Koelreuteria this is far from true.

Nor is it a new plant. Over a hundred years ago, it was brought from China and grown with due appreciation in England. Difficulty of propagation cannot be offered as a reason for its neglect, since it both seeds freely and germinates readily. Propagation from seed, however, seems to be the successful method of growing it. The lack of appreciation in such cases can only be excused on a plea of ignorance. People have simply not seen it, or employed its excellent qualities. No other excuse can be rendered. It is, in fact, a thrifty rapid-growing tree, possessed of all the better qualities that characterize our choicest class of hardy ornamental plants. Practically speaking, it is quite hardy in every situation wherein I have seen it tested. As it is also easily transplanted, it will be readily seen how useful a lawn tree it becomes. Its size at maturity is medium, and its general contour low and umbrella-like.

The entire aspect of the tree is feathery and graceful, full of sunlight rather than shade. Indeed the foliage is very charming in appearance during the greater part of the year. All the interior of the body of the tree is devoid of leaves which cluster in feathery tufts or masses on the outer portions of the branches. The leaves proper are large and pinnate, that is, consist of a number of leaflets arranged on either side of a leaf stalk, as in the Ailanthus. This openness of leaf as well as the general light-yellow hue, gives rise to a warm sunny tone, very peculiar as seen upon the lawn. Such traits make the appearance of the Koelreuteria very effective contrasted with a mass of the darker foliage of other deciduous trees—that of the Norway Maple, for instance.

Another interesting feature of the Koelreuteria is its flowers. Of a beautiful yellow color, they stand in large panicles of inflorescence, very different in appearance from the drooping yellow flowers of the Laburnum.



SEED AND CAPSULE OF KOELREUTERIA PANICULATA.—FROM NATURE.—FIG. 121.

Another special feature of the large open cluster borne by the Koelreuteria is the fact that they appear on a fair-sized tree in July. Few fair-sized trees bear flowers conspicuous either for color or magnitude, and still fewer bloom as late as July. We find, therefore a double attraction in the flowers of the Koelreuteria. The fresh warmth of the yellowish color of the younger portions of the bark is also pleasing, so that, to sum up, we find in this tree the following excellent qualities, viz.: warm, sunny-tinted, feathery foliage worn as a crown on more or less naked branches, bright-colored bark and lovely yellow flowers borne in July. Other valuable qualities of easy propagation and transplanting as well as hardiness and fair vigor combine to make the Koelreuteria a tree that should win for itself invariably a conspicuous place.

There is a Japanese variety of Koelreuteria paniculata that deserves passing mention simply for its shorter panicles of flowers and slightly different general habit.

Samuel Parsons, Jr.

[Koelreuteria paniculata.

At first glance, it would scarcely appear that the Koelreuteria is a very near relative of the Horse Chestnut. They present upon a closer scrutiny, however, so many resemblances that botanists class them in the same family; viz., Soapberry (Sapindaceæ).

The tree from which our drawing was made was planted in the Rural Grounds seven years ago. It is now about seven feet high, showing little disposition to increase much in hight. The top is spreading, but the branches and main stem are crooked and irregular.

The flowers though individually small are quite showy, as seen in the panicles which are liberally produced in early summer. The inflated seed-pods persist for a long time, though by no means adding to the ornamental appearance of the tree. One of the capsules and a single seed, of life size, are shown on this page. It is thoroughly hardy with us.

Farm Topics.

WHAT IS THE TRUE MONEY VALUE OF LEACHED ASHES?

PROFESSOR F. H. STORER.

Farmers have been so long accustomed to compare leached ashes with wood ashes (*i. e.*, "live ashes") and to regard them in some sort as a weaker representative of, or substitute for, wood ashes that the real significance of the leached product seems to be not clearly understood. In point of fact, leached ashes and wood ashes are not comparable as fertilizers. They belong to totally distinct classes. Wood ashes are clearly to be classed among the potassic fertilizers, while leached ashes cannot be so classed; they fall naturally among the calcareous fertilizers. Wood ashes do indeed contain other valuable constituents besides potash—lime among others—and they have certain peculiar qualities which need not be discussed in this connection; but the fact remains that they differ so decidedly from leached ashes that the two materials do not admit of any close comparison.

It has long been known to chemists that leached ashes contain hardly any potash, and this truth was exhibited most emphatically some eight or nine years since by a number of analyses made by Professor Johnson, of New Haven. Yet to this day most experiments with leached ashes are made, as they have been from the times of the first settlers, with the view of testing the old question: "Are leached ashes as good as unleached?" I would not in the least undervalue such experiments. It has appeared indeed that upon not a few soils the question here stated has been answered in the affirmative. It is important any-way for every farmer to learn by trial whether his land is specially grateful for lime, or lime-carbonate, for potash salts, or for the caustic, alkaline effect of wood ashes, and so forth. But there is another kind of experiment which might be made with leached ashes, which ought to be made in many places, and that is the comparison of leached ashes with lime, applied in various forms, with the view of obtaining in the cheapest possible way results as good as those afforded by leached ashes.

Professor Johnson's analyses show that the average composition of leached ashes, as brought into New England from Canada, is

Water	35.34
Sand, clay and charcoal	11.47
Iron oxide	1.50
Lime	25.99
Magnesia	3.30
Potash and soda	1.27
Phosphoric acid	1.44
Sulphuric acid	0.11
Carbonic acid	17.49
Silica (soluble)	2.09
	100.00

And that a struck bushel of leached ashes, weighing 55 pounds, contains pounds of

Water	19.44
Sand, clay and charcoal	6.31
Iron oxide	0.82
Lime	14.30
Magnesia	1.81
Potash and soda	0.70
Phosphoric acid	0.80
Sulphuric acid	0.06
Carbonic acid	9.61
Silica (soluble)	1.15
	55.00

In view of these analyses, and of the facts so often asserted: 1st, that unleached ashes have been found to be as useful as leached upon some soils; and 2d, that excellent results are sometimes obtained by using comparatively small quantities of leached ashes in conjunction with dung or some other fertilizer, it is hard to escape the conviction that the fertilizing effects of leached ashes must depend primarily upon the 24 or 25 lbs. of carbonate of lime that are contained in each bushel of the material.

The calcareous constituent is so predominant and the esteem in which leached ashes are held is so great and peculiar, in the localities where they are largely used, that it may fairly be inferred that their merit depends chiefly upon the lime-carbonate. But if this inference is correct, the question is at once opened, why should not the farmers use other forms of the lime-carbonate, which may be had at cheap rates, instead of importing leached ashes from abroad? This is a question which can be answered only by experiments, such as can best be performed on the large scale by the farmers themselves, and each of the experiments should be made to last for several years, or until a definite result has been reached by means of it.

Theoretically, the question to be determined is simply: cannot some cheaper form of carbonate of lime be used to replace leached ashes? And if a chemist were to test the matter he would be apt to use powdered chalk, or perhaps even the prepared chalk called "whiting," taking for his trials quantities of chalk equal to the amount of lime-carbonate contained in the dressing of leached ashes with which the chalk was to be compared. But practically the question is not so simple. It divides itself into several subordinate inquiries looking to the practicability of getting the useful lime compound in some cheaper form than chalk, by using shell-lime or some other of the cheap limes that are sold for agricultural purposes.

There are several ways of testing the matter, and each of them is worthy of being tried on the large scale in the districts where leached ashes are esteemed. One way would be to "lime" a part of a field outright, by burying small heaps of quick-lime at proper intervals upon the field in spring or autumn, and spreading, as soon as may be practicable, the fine powdery product which is formed after a little time from the slaking of the lime by the moisture of the soil. By dressing another part of the field with leached ashes, and leaving yet another portion unfertilized, it would be possible to gain some just conceptions as to the comparative merits of the fertilizers. The slaked lime obtained in the manner just described, would naturally soon be converted into carbonate of lime by absorbing carbonic acid from the air and from the soil; but the experiment, considered as an experiment, will, of course, be complicated by the fact that for a certain space of time caustic lime is in contact with the soil. It could never be told with certainty precisely what part of the good, or perchance the bad, effects of the liming operation were to be attributed to the slaked lime or to the lime-carbonate formed from it. The failure of such an experiment would in no wise prove that carbonate of lime cannot be used to replace leached ashes; but, on the other hand, from the very simplicity of the trial, any successful results obtained by means of it would be specially valuable; and the chances are that in many cases the lime would turn out to be a better application than the leached ashes.

There can hardly be a doubt that many comparisons of lime with leached ashes, in the sense of the foregoing proposal, have actually been made already by American farmers, and it would be well if all of them could be collected and studied anew in the light of what is now known of the composition and modes of action of both these fertilizers.

Another way of proceeding would be to use air-slaked lime in comparison with the leached ashes, or rather lime which has first been slaked with water and then exposed to the air until it has become carbonated, for quick-lime is partially carbonated when permitted to slake slowly in the air. Lime is often sold in the slaked condition for agricultural purposes, and might be spread out in a thin layer, in a barn cellar, for example, and left for a number of weeks, with occasional rakings, until it had become saturated with carbonic acid by absorbtion from the air. In case only quick-lime is procurable, some of it might be slaked with about half its weight of water and then exposed to the air. Allowing for impurities in the quick-lime, some 25 or 30 pounds of the carbonated product might be used against a bushel of leached ashes.

Still another practical term of comparison could be obtained by preparing a quantity of compost with lime and peat and contrasting this product with the leached ashes, though, of course, a good part of the benefit derivable from the compost might be due to the nitrogenous matters contained in it.

Some years since an article called oyster-shell flour, obtained by grinding oyster shells extremely fine, was procurable in Boston, which might have been used for experiments such as are here proposed, though it is doubtful whether this flour would have been found so economical a fertilizer as slaked oyster-shell lime. No process of mechanical attrition is likely to give the fineness and openness to the action of the solvents which results from a chemical operation such as the slaking of lime. In some experiments of my own, which were published in the Bussey Bulletin, oyster-shell lime gave rather better results than were obtained from this oyster-shell flour.

The spent lime obtainable from soap boilers in the vicinity of cities may very properly be used, after it has become dry, for experiments such as are here suggested. But the spent lime from gas works would hardly be fit for these trials. Not only does it contain, when fresh, certain tarry matters and sulphur-compounds which are obnoxious to vegetation, but even after weathering, it may well retain enough empyreumatic matter to hinder the process of nitrification, the promotion of which in the soil is probably one great merit of leached ashes and the other forms of carbonate of lime.

For cases where small quantities of leached ashes are used, as when the farmer puts a handful of the material on each hill of corn, it would be an easy and not a particularly expensive matter, to use whiting upon some of the rows, instead of the leached ashes. It would be necessary only to determine how many handfuls go to the bushel, or, more simply, how much a handful of leached ashes weighs, and to apply the whiting with some kind of a spoon which shall give to each hill of corn as much whiting as is equal to 25-fifty-fifths the weight of a handful of leached ashes.

With regard to the cost of substituting lime for leached ashes, in the manner above indicated, it is easy to show that in many localities it could not be great. If it be admitted, for the sake of the argument, that the farmer can obtain quick-lime at eight cents the bushel, which is, I believe, a liberal allowance for many of the localities on the sea coast where leached ashes are largely used; and that each bushel of the quick-lime will make two bushels of slaked lime of 40 pounds each, and that the slaked lime contains no more than ten per cent. of impurities, then each bushel of the slaked lime would produce, by exposure to the soil or air, some 48 pounds of carbonate of lime, or say twice as much as there is in a bushel of leached ashes. Hence, in so far as the lime carbonate is concerned, a bushel of the slaked and aired lime for which four cents have been expended, will be worth as much as two bushels of leached ashes, costing some 20 or 25 cents apiece.

I am well aware that in some instances very large quantities of leached ashes are applied to the land, sometimes as many as 200 or 300 bushels to the acre, and that in such cases the small proportion of potash and phosphoric acid and magnesia which the material contains may be of real utility to the crops, considered simply as sources of plant-food; but it is equally true that there are many cases where this view cannot be entertained, and it is still questionable how much importance should be attached to these incidental constituents, even in those instances where the largest quantities of leached ashes are applied to the land. In case it should be found in some places that the action of these incidental constituents cannot be spared, it would still be easy, as Prof. Johnson has urged, to add to the quick lime a quantity of Stassfurt potash-salts, and of bone-meal, or another phosphate, in order to make good the deficiency. Per contra, it has often been noticed that there is little use in repeating the application of leached ashes too often. The approved method of dealing with them is to apply them once in a while and to use other fertilizers between times to keep the land in good heart. This custom, so closely allied to the old practice of "marling," goes to show again that leached ashes are to be classed as a calcareous manure.

Field Crops.

SOME PASTURE GRASSES, AND THE TREATMENT OF PASTURE LANDS.

HUGH L. WYSOR.

Advocating the division of the farm into arable and pasture land, I stated in my article on fences, in the Rural for January 24, that the principal objection which could be urged against the plan would be the failure of the grass on the pasture land, which, in course of time, would need the intervention of the plow. I have several times suggested the plan to graziers here, and their reply has invariably been that except on the swales and low-lands the grass will run out in six or seven years, and on the more exposed portions of the fields sooner than this. At the same time they acknowledge that the best pastures here have not been broken up within forty years. I am told that the best pastures in England have not been touched by the plow within a hundred years. It is acknowledged that one cause of the short duration of grasses on pastures is, that the kinds generally sown are not adapted to permanent pastures. It is the general practise of farmers in the United States in sowing their lands down to grass, whether designed for meadow or for pasture, to sow only two kinds—timothy and clover, frequently clover alone. On many farms here, it is only necessary to sow clover, as by the time it has run out, the Kentucky blue grass will have possession. Now, all the treatises on grasses advise the sowing of a mixture of as many as eight or ten different kinds. Practically this advice cannot be followed, because so many are either not to be had in the market, or can be obtained only at prices which no man can profitably afford to pay for them. In laying down lawns or small plots, the plan would answer; but when it is a matter of hundreds of acres, it is out of the question. There are essentially only four perennial grasses which are commonly quoted in our markets. These are timothy, orchard grass, red-top, and Randall grass. I propose to notice them briefly.

Timothy,

called cat's-tail in England, and herd's grass in New England—a name applied to red top in the Middle States—is probably the most nutritious of all perennials. It is excellent for meadows, and makes more and better hay than any other grass. But from its peculiar habit of growth—sprouting at or near the surface of the ground from a bulb, which being cut or bitten off, the plant is destroyed—and from its scanty aftermath and slow growth after being cropped, it is poorly adapted to permanent pastures.

Red-top,

although, I believe, not liked in Pennsylvania, is a grass not at all to be despised. It makes

a sward so fine and firm in texture as to be scarcely, if at all, inferior to that of blue grass. While its native habitat is on wet or almost swampy lands, it will thrive anywhere. Indeed, some of our best upland pastures are made up entirely of this grass. It should never be omitted in mixtures intended for permanent pastures.

Orchard Grass

I do not hold in any high estimation, except for situations where better grasses will not succeed. It is admirably adapted to soils which are loose in texture, such as sands and gravels. It is inclined to grow in tufts, does not make a close sward, and is so coarse that stock will not readily eat it, if they can get anything better. I have lately seen inquiries in the papers as to whether this grass is the same as that which is commonly known as dog's-foot. In England, it goes under the name of cock's-foot, but our old farmers here call it dog's-foot. It appears to me that the shape of the panicles resembles more a dog's than a cock's foot. As there is another grass which in the South is called by the latter name (Panicum Crus-galli) the former would seem to be preferable. There is one fact connected with the seed of this grass as generally offered in the market, which ought to be noticed, and that is, that about one-half of it is pure chaff. The bundles of straw containing the seed are left out in the field till they are about half-rotted. They are then taken up one by one and tapped with a stick, the seed falling out on a sheet spread beneath. These are then put in bags and, without further preparation, offered for sale. What seed remains in the bundles after this process, is afterwards thrashed out with flails, the seed being slightly fanned with a sheet as it lies in bulk. The proper way to clean them is to run them through a wheat fan. If properly managed, no good seed will be blown away, and they will be thoroughly cleared of all chaff except that within which the kernels are inclosed. The naked kernels—not being much larger than pin points—cannot be separated from the glumes. From the circumstances stated above, more seed must be sown than otherwise would be necessary.

Meadow Fescue,

known in Virginia as Randall grass, is in the opinion of many a much more valuable grass than orchard. It puts forth as early in the spring, remains as late in the fall, yields an equally luxuriant aftermath, and is much finer in texture. It succeeds in nearly all situations. I have seen it growing moderately rank in the bottom and on the sides of washed-out gullies where there was no appearance of soil. It is quoted in seedsmen's catalogues at from 30 to 40c. per pound; but can frequently be had in our Virginia markets at from $1.25 to $1.50 per bushel of 14 lbs. Some years ago, a writer in the Southern Farmer, stated that this grass was called Evergreen in this county from its remaining green throughout the season. This is an error. The grass locally called here Evergreen is the Tall-meadow oat grass of the books. [It is called "Evergreen" in North Carolina. Eds.] For laying down pastures, then, I would recommend red clover, with all three, or any one or two of the three, grasses last above noticed. As to

Blue or June Grass—(Poa pratensis),

its seeds from the low growth of the plant are not easily saved and can be with difficulty obtained in large quantities. However, where it grows naturally, it is abundantly able to take care of itself without any seed. Give it only a foot-hold, and it will root out and destroy the other grasses and usurp the entire premises. But when once a heavy blue grass sod is obtained, there is nothing further or better to be desired. The owner of such a sod should never allow himself even to think of putting a plow in it. There is another grass often seen in old pastures called wire blue grass (Poa compressa) which affords short but nutritious grazing. It seldom sends up stems exceeding a foot in height.

It remains to consider

The After Treatment of Pastures

when they begin to fail. In the first place, I have known old timothy meadows to be renewed by simply resowing the seed, and dragging over them a common "A" harrow with newly sharpened teeth. But the harrow is not a very effective implement for this purpose, as it can only penetrate the soil from the force of its own weight. On heavy swards, and particularly on tenacious clays, it would scarcely make a mark that could be seen. It might be said that some of the improved harrows would do for this work, but I am inclined to think they would not. The Randall wheel harrow, which weighs 500 pounds, would perhaps penetrate the soil deep enough, but then if the discs were set with the line of draft, they would not disturb the sod at all; if they were set at an angle with the line of draft, they would turn furrows, which would not be what was wanted. The only implement at present to be had which can be relied on, is the common single coulter. This, while very slow, is an effective tool, and will tear up and scarify the sod to perfection. In the absence of manure, which can seldom or never be spared from the cereals, the scarifying of the sod is all that can be done to revive our pastures, and really on good lands it is all that is needed. In cases where the sod has simply become moss-grown, it will answer without reseeding the land. Scarifying the sod will have as great an effect on the growth of the grass, as plowing other crops has on them. It is unfortunate that we have no implement specially adapted for accomplishing this work speedily, as they have in England. One of these English implements, Finlayson's scarifyer, exhibited astonishing powers in breaking up Hyde Park in 1826. It is made with an iron frame somewhat in the shape of an "A" harrow set on low wheels. There are nine curved steel tines set in the frame and pointed to enter the ground, the depth being regulated by a lever set up on the apex of the harrow, and running back within reach of the driver's hand. Running at full depth, the teeth will penetrate the ground eight or nine inches. All this class of British implements are very powerful, and could be largely used in place of plows on stubble land, as well shown by Mr. Fowler in the RURAL of January 31st.

Pulaski Co., Va.

SORGHUM HALEPENSE.—FIG. 122.

SORGHUM HALEPENSE.

JOHNSON GRASS, FALSE GUINEA GRASS, MEANS GRASS, EGYPTIAN GRASS, GREEN VALLEY GRASS, CUBA GRASS, ETC.—I quote from the Report of the Department of Agriculture for 1878:

"A perennial grass with strong, vigorous roots, and an abundance of long and tolerably broad leaves. Its stems attain a hight of five to six feet, with a large and spreading panicle. The flowers and seeds are much like those of broom-corn. It has been much discussed in the Southern Journals."

This is not hardy at the North. It has been several times highly extolled in advertisements. It is said to send up a tender stem early in spring and on good land may be mowed half a dozen times in the year, yielding a good crop each time. "Stock love it and give the preference to it over any other growth." The rhizomas or root-stocks, often called roots, are very numerous, long and as large as one's fingers. These sprout freely and make the plant very tenacious of its footing, when once introduced. Much after the manner of quack grass, it comes to stay when it falls in ground and in a climate suitable to its growth. The seeds will grow freely, so will fragments of the root-stocks. Having seen this grass and read much of it, the writer thinks the virtues of all grasses are not combined in this one.

PROFESSOR W. J. BEAL.

SEVERAL SOUTHERN GRASSES, AND THEIR POSSIBLE VALUE AT THE NORTH.

M. B. BATEHAM.

THE remarks on "Teosinte" in the RURAL of January 10, prompts me to say a few words about two or three other Southern grasses—not much known as yet; and to suggest the inquiry whether some one of them may not possibly be found of value to stock and dairy farmers in our central and southern States, as well as in the South.

The great desideratum with this class of our farmers is, some forage plant of vigorous growth and perennial habit that will withstand the summer droughts that so frequently occur and cause the failure of ordinary grasses and forage crops. It needs to be something that produces plentifully with little care and labor, is relished by cattle, both green and as hay, and will bear cutting repeatedly during the summer.

Leaving Lucerne ("Alfalfa,") out of the list, as not a grass, and not suited to the generality of our soils, besides not being good for hay, is there any one of the Southern exotic grasses, of the Sorghum or Panicum family, that will nearly meet these requirements?

Green Valley Grass, Sorghum Halepense.

It was mentioned in the RURAL last summer that some parties in Missouri and southern Iowa were advertising a supposed new forage plant, under the name of "Green Valley Grass," said to have been recently introduced from the West Indies, and wonderfully productive of nutritious green food and hay, and withstanding the severest droughts. Wishing to learn more about it, I wrote to the principal advertiser, asking for a few of the roots, as it was a perennial, and inquiring if he could give me its botanic name. He sent the roots promptly, and said he had not been able to learn the botanic name of the grass, and he wished I would do so when it came into bloom. So, when the time arrived I sent one of the heads to Professor Asa Gray, and he pronounced it Sorghum halepense; and this I knew, from the Reports of the Department of Agriculture, had been grown and written about for a number of years in several of the Southern States; was called Guinea Grass by some, and Johnson Grass by others, the latter name being preferred, as there is another Guinea Grass which is a species of Panicum. Several writers speak in very high terms of this Johnson Grass, as affording the greatest abundance of pasturage and fodder, requiring to be cut four or five times in a season to prevent its growing too tall, and that its roots were so vigorous and enduring as to withstand severe droughts.

In my own experiment, I planted the roots last May, in poor sandy ground, at a very dry time, and gave them no water or culture; but the plants grew to five or six feet in hight, with leaves and branches on the sides, showing a disposition to produce plenty of forage; and as the whole season was remarkably dry, I was convinced that all which had been said in regard to the ability of this grass to withstand drought is true. But now comes the question:—Will it endure our winters? I presume not—and this is a serious difficulty, but perhaps not insurmountable.

Mr. Taylor of Missouri says, in that climate, the past severe winter, while the surface roots were killed there were plenty of the lower roots that kept alive to renew the crop, and he believes that the same will prove true with it in Ohio and similar latitudes, as the plant has very strong and jointed root-stems, some of which run quite deep, and from which new shoots arise. Indeed, it is made a serious objection to it, by some people, that on account of this habit of growth it is very difficult to eradicate where it has once got possession; and the best way to make new plantations is, to break up these rhizomas and scatter the pieces in furrows, like sowing corn for fodder.

Now, in case the roots will not withstand our winters without protection, it is possible they will do so by having the ground ridged with a plow in the fall so as to turn the soil over the rows of plants, then harrowing it down in the spring, or, if that will not suffice, it will not be much work to plow up a wagon-load or two of the surface roots in the fall and store them in a root cellar, or cover them in a pit for the winter, and plant them in the spring. This may be found to pay, if the plant proves as productive of green food or fodder, and as capable of withstanding drought as my single experiment seems to indicate. In order to test the question of winter treatment, I have left some plants entirely unprotected this winter, ridged the ground over others with a hoe, buried some in the ground below the reach of frost, and put some in a cellar with potatoes.

Guinea Grass Proper—Panicum Jumentorum,

is another Southern plant, introduced into Florida from the West Indies some years ago, by Mr. Codrington, now editor of the Florida Agriculturist, at Deland. He claims that this is much superior to the Johnson Grass or Sorghum halepense, at least for that portion of the South: that it is equally as productive, and more nutritious for cattle, besides being less exhausting to land and less difficult to eradicate.

Mr. Charles Mohr, a botanist of Mobile, and author of a treatise on the grasses and trees of Alabama, says the Guinea Grass—Panicum—is regarded as superior to the Johnson Grass—Sorghum—though both are quite valuable and of similar habits of growth; both are perennial and easily propagated from the roots. Seeds are readily saved of the latter, but not of the former, as they ripen but few at a time, and drop as fast as they ripen. Both species need cutting four or five times during the summer, and make good hay if not allowed to grow too tall, and an abundance of pasture; but neither will endure frost; they are said to be natives of Africa.

Para Grass.

Another new species of grass, said to be superior to both the others for the extreme South, has recently been introduced by Mr. Codrington, from the West Indies, where it is called "Para Grass," having been introduced there from the Para valley in Brazil. Mr. Mohr writes me that he has seen but little of this grass, but he thinks very favorably of it for the Gulf region, especially for moist or wet soils, for which it seems especially adapted. It appears to be of the genus Panicum, the specific name not being yet determined. It is immensely productive of leaves and stalks, which

are sweet to the taste and much relished by cattle. Like the other two, it is propagated by

PANICLE OF SORGHUM HALEPENSE.—FIG. 123.

its large creeping roots, and needs to be cut repeatedly during summer.

It is my impression that this last will not prove of value at the North; but I think the others are, at least worthy of trial, for the purposes I have stated, and in the manner suggested.

[The large cut of Sorghum halepense, which is taken from the last Agricultural Report, does not seem to us accurate. The simple panicle is our own from nature. Our correspondent at Aiken, S. C., says, in the RURAL of March 27th: "Sorghum halepense is also being tested here, with some promise that it may prove of value in this land which so stands in need of this class of plants. The roots are quite hardy here and the leaves are now a foot high. The roots, or rather root-stocks, form a complete net-work in the soil of which they will take possession in a few years. How long, however, they will yield a paying quantity of leaves is not yet known."—EDS.]

Miscellaneous.

NOTES FROM AIKEN, S. C.

P. J. BERCKMANS'S HOME.

I TOOK a run *down* (we are 600 feet above sea level here) to Augusta t'other day—thence to the nursery, farm and home of P. J. Berckmans, situated about five miles out of that very respectable city. After running *down* to Augusta, one must run *up* to Mr. B.'s, for his home is nearly as high as Aiken—the difference being scarcely more than 100 feet.

A little world within itself! When have I seen a bit of country in my Southern travels that so combined the desirable characteristics of the North and South! Never before? Hardly ever before, I may truly say. Mr. Berckmans has *grass* about him—the very thing beyond all others that a Northern man yearns for after he has lived in the South long enough to prize it adequately—grass, winter and summer! As one enters the carriage gate, a straight avenue, 750 feet in length, confronts him, lined (twenty feet apart) with the incomparable Southern Magnolia—M. grandiflora. What a grand tree to be sure! You have at the North trees which in summer may be compared to this. But taken the year round, it has always seemed to me the noblest—the finest tree that grows upon the face of the earth. This avenue leads to a large, square, plain, substantial building—the Berckmans home—and those qualities, if I may so speak, are found, by all who know them, to be nobly personified in the members of this worthy family. Hills and valleys on every hand spread out, but the view is intercepted by pine forests in such a manner as to suggest the "little world within itself," comprising, in all, 500 acres. It is full of surprises. Now we are in a forest. In a minute more we are in a peach orchard—a strawberry plantation or an oat field.

"How many oats per acre?" I asked, as we looked at the oat field.

"Oh! sixty bushels," he replied.

"What manure?" I asked.

"None," he replied. "Our oats sown in October are ready to cut about the middle of May. The stubble is turned under and Cow-peas are sown at once. These are cut for hay—and a fine hay they make—in August. The peas continue to spread and grow and this second growth is turned under and oats sown in October or November, according to the season."

"How long can this be kept up?" I asked.

"Forever," he replied—"and the longer, the better!"

Near the house several men were digging under what looked to be Couch or Quick grass (Triticum repens). The grass and roots were cut up in pieces two or three inches long—spread thickly upon the ground and then spaded under.

"What is it, I inquired?"

"BERMUDA GRASS," he replied, "the great boon to the Southern people and country! You know it does not seed, so that we propagate it in this way."

"Does it keep green during your summers?"

"Yes," he said, "if clipped or mowed the same as you would treat your Northern lawns. As a forage plant," he continued, "it is invaluable. Mr. Ravenell has harvested ten tons per acre on ground that would not produce twelve bushels of corn per acre. He uses Bermuda grass and Vetch. (Vicia Cracca—not sativa). The Vetch is rolled and affords pabulum for the Bermuda. This dies down in April and seeds itself for next year's growth."

"Have you the Hydra grass?"

"Yes, and we do not fear it, either. The fact is, NO plant is to be feared under cultivation."

This is known too as Nut grass—botanically, Cyperus rotundus var. Hydra—and is generally deemed the vilest pest that ever cursed the husbandman. When Southern farmers are ready to praise or even speak toleratingly of what has previously been cursed without stint, it may be supposed that revolutions here as elsewhere are going on in farming.

I hear an everlasting deal of talk about the "Capabilities and Possibilities of the South." Some of them are no doubt visionary enough—the rest not only practicable, but easy of accomplishment. What is still needed (in my poor judgment) is Energy—and that alone. Then the "possibilities" and "capabilities" will find a quick demonstration. But the climate is enervating. Northern people who are frisky enough at home and who "drive" things unceasingly, here soon wear off the wiry edge and become as obtuse and easy-going as those "to the manor born." Still there are exceptions, and these are the ones who, when "established" in the South, seldom care to be transplanted to their quondam Northern homes.

On and off, Mr. Berckman has had strawberries during the entire winter, for you must know the winter here has been exceptional as well as at the North and West. As we stood surveying two large fields of various kinds, I

TWIG OF CORK OAK.—FROM NATURE.—FIG. 124.

asked what kinds best suited the climate. He replied "Wilson first; next, Monarch of the West; then Cumberland Triumph, Black Defiance and Kentucky."

Col. Cheney is also fine here. Along the coast there is none so much esteemed for market as Nunan. It is by far the earliest. It is mulched with pine straw, and, thus treated, they get three quarts of Nunan where they get one of Wilson or any other. [The engraving is made from an average berry sent to us by "Major" from Aiken, and received in good order.—EDS.] The berry at first colors in blotches of bright red. Picked at this time, it will carry for long distances. But it is always sour and, in fact, is simply to the South what the Wilson is to the North.

Near the avenue of Magnolias alluded to, grows a Cork Oak—Querens suber. It is about 14 inches in diameter and sixteen years old, as I remember. I send you a twig for illustration. Mr. Berckmans cut out a piece of the bark three inches long and one deep. It seems to be of fair quality.

[This is the species of Oak that supplies the world with cork. Its home is in southern Europe and northern Africa, where it grows in abundance, especially in Portugal and Spain. The first stripping takes place when the tree is fifteen years old. This is called virgin cork and is useful only as a tanning material and for forming rustic work. Subsequently the cork is removed every eight or ten years, and the trees continue to thrive under the operation for upwards of 150 years. The annual cork harvest from the regions mentioned above, is estimated at about 12,000 tons. —EDS.]

My stay at Mr. Berckman's was so short that I cannot do justice to his nursery grounds, greenhouses and the natural beauty of his little world, so I pass them without notice. But I may be pardoned for expressing my satisfaction at having become acquainted with this worthy gentleman and his congenial family, who, through many years of earnest attention to their chosen occupation, have yet always managed to find time to entertain those who visit them, with that rare and delightful hospitality that seems to spring from a desire, first of all, to please and profit others.

NUNAN STRAWBERRY.—FROM NATURE.—FIG. 125.

The Apiarian.

A HOUSE APIARY.

A PROPER summer and winter dwelling for bees needs two requisites—to be cool in summer and warm in winter. It should be a double-walled house, which may be rectangular or octagonal in form and of such dimensions as the present and prospective needs of the apiary may demand. The outer wall is best made of brick and as thin as possible. Inside of this there should be wooden strips two inches thick, which should receive a layer of paper sheeting inside, which may be held by nailing strips two inches wide immediately inside the first-mentioned strips. These last strips should receive lath, after which all should be plastered. This may cost more than a purely wooden structure, but it will be more nearly frost-proof than any other kind of wall, and in the end will be the cheapest. If it is desired to build the outer wall of wood rather than brick, let it be of matched plank or double-boarded. There will be two dead-air chambers, each two inches deep—one between the paper and the wall, the other between the paper and the plaster. The entire wall will be nearly eight inches thick. If desired, it may be made less thick by using one-inch strips, though for our very severe winters the above is none too thick. The doors and windows should be double and should all shut closely against rubber. The outer one should consist of glass, and should be so hung as to swing out.

In hot weather it should be replaced with door and window screens of coarse, painted wire gauze. A small window, just above each colony of bees, is very desirable. I would have the building but one story, with joists and ceiling above, eight inches thick. Above these I would sheet with building paper, fastened by nailing strips two inches deep on top, above which I would ceil with matched boards. Lath and plaster below the joists. The hives, which are to be kept constantly in this house, may rest on two rows of shelves, one at the floor, the other three feet high. The entrances, of course, pass through the wall. An alighting-board, so hinged as to be let down in summer but tightly closed over the entrance during very severe winter weather, would be very desirable. Between the double windows—which, it will be remembered, shut closely against rubber—sacks of chaff may be placed in winter, if found necessary to keep the proper temperature. With few colonies this might be very necessary. The adjacent entrances should vary in color, so that young queens would not go astray when they returned from their "marriage flight." Somewhere in the walls there should be a ventilating tube—a brick flue would be very good—which should open into the room just above the floor. Ventilators such as are so common on barns might be used. The pipe for admitting air should pass through the ground and enter the floor from below. A good cellar well ventilated and thoroughly dry will be convenient, and should not be neglected.

Are they desirable?

That the early use of these houses has met with so much favor, seems to argue that with more experience and greater perfection they may become popular. The desirable points in the case, as it now stands, are: First, the bees are in condition to winter with no trouble or anxiety. Second, they are handled in the house, and as they fly at once to the windows, where they can be suffered to escape, they are very easily and safely handled, even with little or no protection. Third, as we can extract, manipulate honey boxes, etc., right in the same house, it is desirable on the score of convenience. Fourth, as the bees are protected from the sudden rise of the out-door temperature, they will be kept from frequent flights during the cold, forbidding days of the fall, winter and spring, and will thus be more secure against spring dwindling. Fifth, as they are so independent of out-door heat, because of the thick walls, with intervening air-spaces, the bees are found less inclined to swarm. Sixth, the house can be locked and one will know that thieves cannot steal the hard-earned property.

The objections to them are: First, the bees leave the hives while being handled, crawl about the house, from which it is difficult to dislodge them, especially the young bees. This objection may disappear with improved houses and practice. Second, in very severe

winters they may not offer sufficient protection, yet they would be much safer than chaff hives, as there would be many colonies all mutually helping each other to maintain the requisite temperature, and the walls might be even thicker than specified above, without any serious inconvenience. Third, some think it pleasanter and more desirable to handle bees out-of-doors, where they are unconfined. Fourth, the cost of the house; yet this is incurred only for once in a life-time, and saves providing shade, sawdust, packing-boxes, complex hives, etc. I predict that these structures will grow more and more into favor. J. G. BINGHAM.

Cort. Co., N. Y.

Miscellaneous.

WHAT OTHERS SAY.

FROM a prize essay delivered by Samuel Parsons before the Mass. Horticultural Society, we copy a few paragraphs. We would gladly present the excellent essay entire did our space permit:

THE JAPAN MAPLES.—They have been exhibited and sold in Europe, in a limited way, for at least fifteen years, but, strange to say, in face of the simple facts, there has existed a widespread conviction that their hardiness is defective. Hence we read of them as pot-grown, a condition that must always prevent the full, free development of their beauty. Some one must have finally, and perhaps accidentally, left them unprotected in the open ground during winter, for we may now find them growing in the most exposed positions, apparently as hardy as any Maple. The only weakness of which they now continue to be accused, is a tendency to burn and fade under the stress of exceptionally hot summer days.

LET us look at a few of the varieties that may strike us as specially noteworthy. First, and perhaps most popular, comes Acer polymorphum sanguineum. Its main attraction is the solid, rich red, or purple that dyes the leaf, otherwise it is simply solid and vigorous for an extremely dwarf tree. The Sanguineum variety performs very much the same ornamental part among shrubs as the Purple Beech does among trees, with less shining lustre and more richness of hue. Surely I could not give it higher praise. In mentioning these varieties of Japanese Maple, I must not forget the original species, Polymorphum, which grows better than many of its varieties, and is only less exquisite than the best of its offsprings. Indeed, though the prevailing color of its leaves is green, it often throws out sports of pink, yellow and white, thus illustrating afresh its erratic tendency, that tendency which has enabled Japanese cultivators to display their horticultural ingenuity in perpetuating so many attractive varieties by skillful grafting.

MAGNOLIAS.—Magnolia Halleana or stellata, is the most compact and slow-growing of its race. It has been introduced from Japan for many years, but has not until recently been received with anything like the attention it deserves. The leaves are dark-green, somewhat small for a Magnolia, and given to disposing themselves in very picturesque masses. If it is the most dwarf of Asiatic Magnolias, it is also the hardiest and most readily transplanted. Its prime charm consists in its flowers. They are more than creamy white, they are snow-white, with a peculiar brilliance of texture; but, more than all, they are delicately fragrant.

THE SUN-RAY PINE.—But the Pinus Massoniana *par excellence* is the golden-leaved form of that species. It is bright gold, that seems to gain a touch of deeper gold as you pause to look at it. This peculiar effect is greatly enhanced by the fact that Pinus Massoniana has two leaves only in a sheath, and these leaves are so clustered on the end of the branches as to spread in every direction. It was this peculiarity that gave rise to the name Sun-ray Pine. But the noteworthy habit of this Pine is its late variegation. In June, while in full growth, it is rather greenish-golden than golden, but all through the summer its yellow grows brighter, until, in September, it makes a very striking object amid the fading leaves of fall.

OIL PASTE SHOE-BLACKING.—As the Scientific News remarks, any one may make his his own oil-paste blacking if he cares to take the trouble. The following is a trustworthy recipe for the purpose:—

Molasses	1 lb.
Ivory black	1¼ lb.
Sweet oil	2 oz.

Rub together in a Wedgwood mortar till all the ingredients form a perfectly smooth homogeneous mixture; then add a little lemon juice or strong vinegar, say the juice of one lemon, or about a wine-glass of strong vinegar, and thoroughly incorporate, with just enough water, added slowly, to gain the required consistency.—Journal of Chemistry.

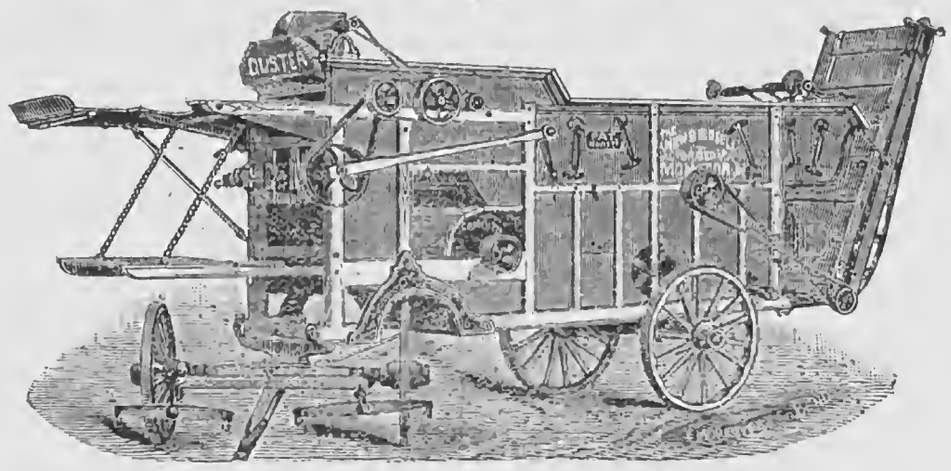
WAR AND TAXATION.—"Every war, even a victorious war, is a national calamity." So writes the Count Von Moltke, Germany's most successful warrior. Last year Europe expended for military and naval purposes something near $800,000,000, and did no fighting. This great burden was borne chiefly by eight Powers, as follows: "Russia, $173,740,000; Great Britain $153,510,000; France, $128,520,000; Germany, $101,626,000; Austro-Hungary, $53,074,000; Italy, $44,030,000; Spain, $28,560,000; Turkey, $23,800,000. This profitless squandering of money—which the over-taxed producers have to furnish—is unfortunately not the whole of the blood tax upon Europe in times of peace. The national debts of Europe, due almost entirely to past wars and preparations for future conflicts, amount to more than twenty billion dollars, the interest of which the producers have to meet. About eighteen billions of debt stand against the eight Powers above named.

To this frightful extent Europe is handicapped in the race for industrial supremacy. It is the penalty which the people have to pay for the accidents of their geographical position, the forms of government they have inherited, and their worse inheritance of military history, national hatreds, and political entanglements.—Scientific American.

PLANTS AND THE ELECTRIC LIGHT.—A good deal has been said by some of the London horticultural journals respecting the practical application of the ELECTRIC LIGHT for forcing purposes. It now appears that the growth of plants is proved to take place under the influence of the electric light, and although matters are still in their infancy, enough has been definitely gained to show that, in the future at least, the English, if not American gardener may be able to avail himself with advantage of the electric light, and ultimately set the dark, foggy days of winter at defiance as he does already their low temperature. It was already known in a vague sort of way that the action of the electric light on vegetation was similar to that of the solar ray; but practical proof, such as would carry conviction to the unscientific mind, was wanting. This has now been afforded, and to Dr. Siemens, as we learn from the Gardener's Chronicle of London, is due the credit of being the first to place the matter on a practical basis. At a late meeting of the Royal Society, Dr. Siemens gave orally an account of his preliminary experiments, and exhibited illustrations of the power of this new agent in promoting vegetable growth. The method pursued was to plant quick-growing plants and seeds, such as mustard, carrots, beans, cucumbers and melons, in pots, and these pots were divided into four series, one of which was kept entirely in the dark, one was exposed to the influence of the electric light only, one to the influence of day-light only, and one to day-light and electric light in succession. The electric light was applied for six hours each evening—from five to eleven—and the plants were then left in darkness during the remainder of the night. The general result was that the plants kept entirely in the dark soon died; those exposed to the electric light only or to sunlight only throve about equally; and those exposed to solar light first, and then to electric light after sunset, throve far better than either, the specimens of mustard and of carrots exhibited to the Society showing this difference in a very remarkable way.

THE ELECTRIC MIDDLINGS PURIFIER.—A public exhibition was given in New Haven, March 13, of the electric middlings purifier, the joint invention of two young men of that city. The working of the device is said to have been highly promising. Over the wire bolting cloths is placed a bank of hard rubber cylinders, which are slowly revolved against strips of sheep skin and thus electrified. To these rollers the light bran is attracted, to be mechanically brushed into a proper receptacle. This substitution of electric attraction for the blast in separating bran from flour is said to lessen the waste, while it obviates the necessity of doing the work in a closed chamber and the risk of explosions. The exhibition was made in an open room, and there was neither dust nor waste.

THE RAILROAD lobby is the most powerful, dexterous and best supplied of all lobbies, and no bill restricting the roads or adverse to their interests has any chance of success unless it is clearly right and is urgently demanded by



THE BIRDSELL MONITOR JR. COMBINED CLOVER SEPARATOR.—FIG. 126.

the great body of the people. The unjust favoritism of secret special rates must be abolished.—So says the N. Y. Herald; so say we all.

THE New Hampshire Mirror and Farmer says that an extensive breeder of Angora goats in Texas considers it a much more profitable business than sheep-raising. This person owns 1,119 goats. It costs $1,000 per annum to provide for them, and his profits last year he estimates at $2,000. The meat is claimed to be better than mutton, and each goat yields about two pounds of hair annually, which is worth 55 cents per pound in this country and 75 cents in England.

SPRING HAS COME.—Go and commune with nature and be chased by the taurine quadruped; go walk in the aromatic fields and valleys where the hornet buzzes like a book-agent and yearns for an opportunity to imbue the small boy with its cimeter. Go along the railroad beside which idle breezes osculate and dally with the telegraph wires, and behold the number of quack medicines, everyone of which is the best, and you will be quite well aware that spring is here. Just gaze upon the Dandelion whose golden heart is wreathed in a snowy aureole; just gaze upon the Violet which offers a tempting banquet to the honey-bee; just gaze upon the lambkin that gambols playfully over the balmy lawn; and then look at the suits of clothes for eight dollars apiece, and the landlady cleaning house, and removing tacks from the floor with her husband's best razor. Then listen to last month's chicken trying to evolute its pule into a respectable crow; then notice how the landlord doesn't keep his word about having the wall re-papered, and the kitchen faucets fixed so that they won't divulge their contents unsolicited, and you will be twice positive—if possible—that spring is at hand.

If you happen to be matter-of-fact, and can't distinguish the poetic affinities and attributes of things, and still imagine that spring is not here, why then there is only one way for you to find out positively, and that is very simple—look at the almanac.—Thoughts and Events.

FORCIBLY PUT.—We find the following in the Evening Post: "Poisoning the wells is regarded as an extreme act of human atrocity; but although in almost all wars of any magnitude and duration the act or the intent to commit it is charged upon 'the enemy,' there has seldom been any trustworthy evidence in support of the accusation. Is poisoning the milk much less atrocious? Next to water there is no article more widely used, or used more unsuspectingly. When the adulteration is effectual and fatal, the principal sufferers from it are members of an innocent and helpless class—little children, who are spared in war as non-combatants, but who are easiest and oftenest the victims of those destroyers in time of peace, the venders of diseased milk."

PLOWING MATCHES are excellent things, says the London Farmer. They foster in the teamster a love of performing good honest work. A straight, clean, well-cut furrow is pleasant to look at, and any project which tends to promote good plowing is deserving of support.

MR. R. J. BLACK, OF BREMEN, Fairfield Co., Ohio gives prominence in his catalogue to the following apples:

CELESTIA. From seed gathered in North Carolina by Dr. Mote. Dr. John A. Warder says of it: "It combines so many excellencies that it will be hard to find its compeer." He describes it as follows:—Core small, oval, open, clasping; seeds numerous, long, angular; flesh yellow, very fine-grained, very tender, juicy; flavor sub-acid, very sprightly and spicy, aromatic, delicious; quality, very best; use, table and kitchen; season, September [near Cincinnati],—Warder's American Pomology, page 531.

STUART'S GOLDEN. See RURAL NEW-YORKER for July 22, '79, for Mr. Charles Downing's description, also engraving from specimen sent by Mr. Downing.

MOTE'S SWEET.—Dr. Warder says:—"One of the most delicious sweet apples. Origin the same as that of Celestia.

CATALOGUES, ETC., RECEIVED.

CATALOGUE OF FOREST TREES OF NORTH AMERICA, by Prof. Charles S. Sargent, of Harvard University. This catalogue is published with a view to facilitate the collection of information regarding our forest trees, in connection with the 10th census of the United States.

THE AMERICAN STANDARD OF EXCELLENCE, revised by the American Poultry Association at their annual meetings, including the changes made at their annual meeting at Buffalo, February, 1879. This handsomely gotten up work of 243 pages, gilt-edged, morocco-bound and printed on tinted paper, is an elegant specimen of editorial supervision and typographical art. In it is a complete description of all the recognized varieties of fowls, and it should, therefore, be in the hands or on the book-shelves not only of every poultry fancier, but of all lovers of domesticated fowls. Geo. S. Joselyn, Fredonia, N, Y., Sec'y and Treas. A. P. A.

HOLSTEIN HERD BOOK, VOL. 4. In this volume are registered 208 bulls of this fine breed, 68 of which are imported animals, and 577 cows, of which 365 are imported. As we have had frequent occasion to remark this breed of late years has been gaining rapidly in popularity, not only in the recognized dairy districts, but all over the country.

CATALOGUE OF CIDER AND WINE PRESSES sold by Boomer & Boschert, Syracuse, N. Y.

Industrial Implements.

THE BIRDSELL MONITOR JR. CLOVER SEPARATOR.

TWENTY-FIVE years ago John C. Birdsell invented the Monitor Clover Separator, which he continued personally to manufacture until 1870, when the rapidly growing demand for his machines necessitated the organization of the Birdsell Manufacturing Company, of South Bend, Indiana, so that by enlarging the works the great demand might be promptly supplied. Of the present workshops the main building, 80x166 feet, and five stories high, is devoted exclusively to the manufacture of separators. The popularity of these among thrashermen everywhere, is amply shown by the fact that over 8,000 of them are now in use throughout the country. The late adaptation of steam to thrashing machinery, however, called for a separator that would do the work much more rapidly. Even with Mr. Birdsell's quarter of a century's experience in that particular line, it required a considerable number of experiments before just the right improvements could be made upon the "old reliable" Monitor to adapt it to the new requirements.

The most efficient changes, however, were at length discovered, and these were all embodied in the Monitor Jr. Combined Clover Separator. In its construction the makers have adhered closely to the main principles which made the old Monitor deservedly a favorite, departing from them only in form and other unessential details, in which the changes made are conducive to greater efficiency under the new requirements. The Monitor Jr. differs from the old Monitor in the following particulars:—The thrasher cylinder runs under-shot instead of over-shot, hence no thrasher feed roller is necessary, while it is enabled to thrash much faster, as the hulling and separating capacity has been increased about one-third; instead of the long raddle belt that conveyed chaff and seed to the huller in the old machine, that office is more efficiently done by a vibrating floor in the new; as seen in the accompanying cut, the sides of the machine are made tight, an arrangement which, with the addition of the Duster devised by the same firm, practically saves the operators from the annoyance of dust; the size of the pulleys has been enlarged, thus greatly increasing the friction, and lessening the strain. Several minor alterations have also been made, all in the line of greater efficiency. Great as has been the popularity of the old Monitor, one ventures little in prophesying that that of its youthful competitor will be still greater, a good fortune already presaged by the large sales of it made since its introduction to the public. We would advise all who are interested in machinery of this kind to send for prices and full particulars to the above address, and also for THE CLOVER LEAF, a well edited and instructive periodical mailed free to all farmers whose names are forwarded to this enterprising Company.

Everywhere.

RURAL SPECIAL REPORTS.

COL., Canon City, Fremont Co., April 6.—We sow but very little fall wheat in this section. I know of but one person in this county that makes a practice of sowing fall wheat, and his is not ready to harvest more than a week before that sowed in the spring, and the yield per acre is no more than that of spring wheat, neither does it make any better flour. We are not troubled with Hessian fly in this country at present, nor with anything injurious to wheat, except grasshoppers. The acreage in wheat, I think, is less this year than it has been for several seasons in this county. I don't know as to other counties. The crop sowed here is chiefly oats, and there will be a greater acreage under it this year than for several previous ones. J. G.

IDAHO, Bois City, Ada Co.; April 10.—The wheat crop bids fair to equal that of previous years. Acreage about the same as last season. Our farmers here know nothing of any wheat disease. They put in their crops and count with a certainty upon a good harvest. Nothing is raised here without irrigation. No insects have troubled us as yet. L. F. C.

ILL., Hoyleton, Washington Co., April 6.—This part of Southern Illinois is known as Egypt—a very appropriate name I often think, so far as the mummified character of the old settlers is concerned The land, however, is rapidly changing hands and becoming the property of a more wide-awake and industrious people. In this section it is owned chiefly by Germans, and they display an energy, industry and true knowledge of farming that would be a credit to any people. Three-fourths of my neighbors are Teutonic, and they still maintain a great deal of the manners and customs of the Fatherland, especially in their churches, schools and marriages. They know how to raise wheat, and fully three-fourths of their arable land is under it, and the prospects for a fine crop are good. Late-sown wheat, however, is damaged a great deal by frost and heaving, and last fall the Hessian fly destroyed some fields entirely. The outlook now, however, is favorable, and there has been a large increase of acreage. During the winter we had a great deal of rain, and very little hard freezing—hence a good deal of mud; even now our roads are nearly impassable. Spring work will therefore be late; our plows are still in winter-quarters, but a few days of drying weather will fetch them out. Fruit prospects are flattering. Wheat is now selling at $1.20; corn, 25c.; oats, 25c.; potatoes, 40c. A good deal of land changed hands this winter at an average price of $25 to $30 per acre. The buyers are all Germans; the sellers, Americans who are going West. All tillable land hereabouts is now occupied. M. S.

IOWA, Oskaloosa, Mahaska Co., April 10.—We had a moderate winter, with very little rain and no snow. Quite a large breadth of winter wheat was sowed last fall; but it is almost or wholly a failure. The weather is quite dry at present with frosty nights. At this rate grass and the spring wheat will suffer. People generally have sowed spring wheat on their winter-wheat ground. This county has an abundance of coal and timber, which renders it quite a desirable place to live in. It is, too, an excellent grain and stock county. Cattle are just beginning to roam around and pick up a little grass, which, in its present condition, is not of very much benefit to them. A. B.

KANSAS, El Dorado, Butler Co., April 6.—We had a splendid winter. With one exception it has been too dry for winter wheat. Peaches will not be over half a crop on account of the warm weather in January, which caused the fruit buds to swell so that the cold weather we had on the 12th and 13th of March killed about half of them. All other fruits are safe yet, and the indications are fair for a good crop. We had quite a heavy rain on the afternoon and night of March 26th, which was needed very much. Corn is worth 20 cts.; oats, 40 cts.; wheat, 80 cts.; flax seed, $1.75; millet, 75 cts.; potatoes, $1.25; butter, 17@20 cts.; eggs, 8@10 cts.; cattle, $3@4; hogs, $3.60; hay, $3 per ton. L. K. W.

KANS., Freedom, Butler Co., April 6.—Peach trees are in bloom; but the crop will be small; mostly on seedlings; budded fruit is nearly all killed. We generally have ripe peaches from June 15 to Oct. 20. W. J. B.

MICH., Dansville, Ingham Co.—We had no snow the past winter to amount to much. It was almost like summer. Winter wheat is looking first-rate around here, though some pieces have been heaved out and the roots lie bare. It is the same with clover fields. Wheat is worth $1 per bushel; oats 30c. per bushel; potatoes 30c. per bushel; eggs 9c. per doz.; butter, 25c. per pound. O. G.

N. Y., Corning, Steuben Co., April 8.—The past winter was a very mild and pleasant one; but little real cold weather and but very little snow—most of the time the ground was bare and plowing was done at intervals of a few weeks, all winter long. Owing to the open season but little ice has been gathered. Notwithstanding the scarcity of hay at the opening of winter, there will probably be a considerable quantity carried through the summer. Stock were sold off last fall, so as to greatly reduce the number, and at very low prices, on account of the short crop of hay; but the winter has been so mild that far less fodder has been required than if it had been as cold as usual. On referring to my diary, I find that robins and blue-birds have come one month earlier than last year; $10 at the barn, or $12 delivered, seems to be about the price paid for hay now. The roads have been bad most of the time since last fall. F. H. D.

TEXAS, Clarendon, Donley Co., April 6.—There is no wheat grown in this county for two reasons:—We can't make flour of it, for there's not a mill of any sort in the county, and, again, we can't sell it, for it's 170 miles to the next railroad at Fort Dodge, and 220 to the road at Fort Worth. What little farming is done here is confined to raising corn, which sells readily to stockmen at $1 per bushel; but last season scarcely any was raised on account of dry weather. The past winter was very open and also very dry—no rain since November until 10 days ago, and then just enough to wet the ground for plowing. That Pearl Millet the RURAL sent me last year acted splendidly. When five feet high and heading out I cut it, and it grew to the hight of four feet again, headed out and ripened its seed. It was greedily eaten by all kinds of stock. G. H.

TEXAS, Salado, Bell Co., April 5.—We have lately had a very hard freeze. Corn planted and up was all killed; all is now replanted and coming on. On the 1st we had the finest rain of the season. All small grain is looking fine, and the promise of a heavy crop of wheat, oats, etc., is good, but we raise no grain for export, all being consumed in this or adjoining counties. The amount of the old crop on hand is small, but sufficient to carry us to the harvest of new—now only six weeks off. We have a fine merchant mill at Belton, and our Salado River has five mills in less than ten miles, which most of the year run night and day. E. G. M.

VT., North Bennington, Bennington Co., April 6.—On a section extending from the mountains, in southern Vermont, forty miles to the Hudson and as far from north to south, I think it will require great research to find ten acres of wheat. I do not know or hear of a kernel being sown last fall. The grandfathers, now gone, used to tell what crops of wheat their fathers raised. It has been grown at spasmodic intervals, in various parts since I can remember—about forty years. But to grow wheat profitably, even for home use, on these old lands where only isolated acres seem adapted to it, more knowledge must be had. Some say it does not pay to raise wheat, because when it is carried to the mill, they get poor flour and little of it. E. N. D.

VA., Newmarket, Shenandoah Co., April 12.—Winter here was exceedingly mild up to 1st of February; for a week or so we had snow and cold, then mild until 1st of March when we had a good deal of cold rains, winds, etc., nearly throughout the whole month. April, so far, has been somewhat blustery, with a few very fine growing days. Wheat, of which a large acreage is sown, is looking exceedingly well for the time of year, in this section, except a few small spots hurt by the drought last fall. In the adjoining county, Page, wheat is badly eaten by the fly. We have had some severe frosts the last week, which, it is feared, have injured the fruit crop to some extent. Peaches have been in bloom for three or four weeks; Plums, Cherries and Apples are blossoming now. Farmers have generally finished sowing oats, and are preparing to plant corn. Peas, radishes, lettuce, onions, etc., have been up for several weeks and are growing finely; prices for produce are, wheat, $1 15@1.16; corn, 50@60c.; oats, 40c.; rye, 60c.; butter, 20c.; eggs, 8c.; potatoes, 50@60c.; springs and wells that were low and some dry last fall have filled up now and water is plentiful everywhere here. O. S. W.

VA., Princess Anne Co. Apr. 8—We are having winter by spells—a few days since strawberries were making nicely, and to-day looks as if it might snow. We cut our first asparagus on the 5th. We plant quite a quantity of the black peas among corn, pick a part and turn hogs in on the remainder to fatten, finishing on corn. They will not do for hens—they stop their laying. A great deal of fish and crabs are used here for manure. M. S. M.

VIRGINIA, Norfolk, Norfolk Co., April 9.—On the 24th of March a hard freeze here killed all the strawberries and peaches that were in bloom and injured "truck" generally. We have not much hopes of a good peach crop in this section, as most of the trees were in blossom before the late frost. Apples, pears and cherries, however, are safe. J. L. B.

WIS, Chilton, Calumet Co., April 9.—We have had a very mild and open winter, and are having a wet, backward spring. Winter wheat, of which this county sowed an unusually large acreage last fall, has suffered more or less, but from an examination of quite a number of pieces, I am convinced that people are more scared than necessary, and that nearly, if not quite, a full crop will be harvested. The kind sown has been almost universally the Clawson. Spring wheat is worth $1.10 to $1.15; corn, 50c.; oats, 40c; potatoes, 40c. to 60c.; butter, 25c.; eggs, 10c.; hay, $12. G. G. C.

WIS., Edson, Chippewa Co., April 8—Wheat looks well—better than last year. It has not been winter-killed to any great extent, and does not show any signs of any disease as yet, or of harm from the Hessian fly. I think that its general appearance is better than last year at this time, and quite as good as the average of previous years. The acreage is about the same as last year. J. O. B.

WIS., East Troy, Walworth Co., April 8—Winter wheat is starting finely; clover is mostly killed. We have commenced sowing spring wheat. F.

The Querist.

ANSWERS TO CORRESPONDENTS.

Etc., Etc., Etc.

J. T. F., South Onandaga, N. Y., asks, 1, whether the following rule for determining the weight of live cattle by measuring them is correct:—Measure in inches, the girth around the breast just behind the shoulder blade, and the length of the back from the tail to the fore part of the shoulder blade; multiply the girth by the length and divide by 144. If the girth is less than three feet, multiply the quotient by 11; if between three and five, by 15; if between seven and nine, by 31. If the animal is lean deduct one-twentieth. Or, second, take the girth and length in feet; multiply the square of the girth by the length, and multiply the product by 8 36. Live weight multiplied by .605, gives net weight nearly. 2, Which are the more durable—split or round posts, and what is the probable respective durability of the following kinds of timber—locust, red and white cedar, chestnut, oak, elm, red beech, white and black ash, and black-walnut. 3. What quantity of oats should be sowed or drilled in one acre. 4, Is there anything in which seed corn can be soaked or with which it can be mixed, that will prevent crows and grubs from eating it, and at the same time act as a fertilizer. 5, Name the best books in geology, with the price; 6, also the best on law and the price; 7, the best on physiology, and the price.

ANS.—1, All these rules are based on some rough method of finding the cubic contents of the carcass. The second rule will work more nearly than the first, but it is only an approximation after all, because cattle differ greatly in quality and solidity of frame, and a gaunt, bony animal with much offal will yield much less than a well-bred, compact one. These rules are therefore to be used with variations and allowances founded upon experience. 2, Round posts are more durable than split ones, when the bark is stripped off. The timbers mentioned may be classed as to durability very much in the order given. Chestnut is preferable to white cedar. 3. Two-and-a-half bushels per acre. 4, Soak corn in hot water in which some pine tar has been stirred. A thin coating of the tar envelopes each grain and serves to disgust the crows. There is no necessity to steep seed in any fertilizer. If that is put into the soil, it will be placed where it will do the most good. 5, The Elements of Geology by Loomis is a small, cheap work. Lyell's, and Dana's works are more costly standard works. 6, Waits's "Every Man his Own Lawyer," is a useful book for reference; but law is a sharp-edged tool which no one should play with; it is better to pay a moderate fee to a lawyer for advice than to be one's own lawyer. The adage runs, "A man who is his own lawyer has a fool for his client." 7, Dalton's is an excellent work. The prices can be obtained by inquiry at the next book store. We would remind our friend that this department is meant for the use of *all* our subscribers, so that no one of them should make so many inquiries at once that full answers to them would occupy all our space to the delay of answers to other inquirers. Three or four queries are quite enough at one time; if more are sent the answers are necessarily cut short: but one can come again. Then again, never send all the way to New York to ask a question which can be easily answered in the neighboring village.

An Impotent Young Bull.

R. G., Lewisville, O., has a Short-horn bull, two and a half years old, that has failed of late to get any calves and a cause for his impotency and a remedy are asked. He has outdoor exercise every day; is fed corn and oats mixed; also corn fodder and hay; he has not been run very hard and has been permitted to serve cows only once.

ANS.—There are so many things that may cause impotence in a bull, it is almost impossible to prescribe a remedy without seeing the animal. Your bull may have received an external injury, as they are liable to by jumping a fence, butting against some hard substances, or trying to overturn some heavy object, or by fighting. If nothing of this kind has happened to him, he may have been over-fed at times with corn or other food. We would suggest feeding him nothing for a few weeks but hay, and letting him have a roomy yard for exercise in all good weather, both during the day and night; if you have sufficient pasture, turn him out to this, if well fenced. See that he has plenty of pure water at all times to drink, and give him a heaping tablespoonful of salt every day, if he will take so much, and the same quantity of sulphur once a week. After dieting thus for a few weeks, give him with his grass or hay, two quarts of oats and two quarts of wheat bran every night and morning, with a pint of linseed meal if you have it; if not, then a pint of whole flax-seed mixed with the oats and bran. After a week or two of this feed, let him be tried to a cow of a size he can easily cover. Medicine of any kind is rarely of any benefit to an impotent animal; a judicious diet is the best thing.

Analysis of the Sweet Potato.

P. C. S., Hurlock, Md., asks for a full analysis of the sweet potato.

ANS.—The following is the analysis of this potato given by the North Carolina Experiment Station. We give also that of the Irish potato:

	Sweet potato.	Irish potato.
Water	73.39	75.00
Albuminoids	1 28	2.11
Starch	15.06	17 32
Gum, pectine, etc	1 08	2.70
Glucose (sugar)	6.86	....
Cellulose (fiber)	0.98	1.65
Fat and wax	0.26	0.30
Ash	1 07	0.92
	100.00	100.00

The great distinction between them is the glucose in the sweet potato. The sweet potato in this particular analysis appears to have less water, but perhaps in a greater number of analyses this would not appear. The sweet potato must be extremely valuable as a fattening food. Dr. Ledoux estimates a good crop at 450 bushels to the acre; but if we should estimate them at only 300 bushels per acre, and corn at 40 bushels, the sweet potato would yield two and a half times as much dry food per acre as corn.

The Cattle Gad Fly.

H. S., Easton, Md., sends some specimens of worms taken from the backs of a couple of Jersey heifers. They were found just under the skin, and were easily pinched out with the thumb and finger, and he asks for some information about them.

ANS.—These are the larvæ of the cattle gad fly—œstrus bovis. This fly is much like the horse botfly and belongs to the same family. It lays eggs in the skin along the backs of cattle in August, and the larvæ remain in the flesh and feed upon the pus caused by the irritation until May, when they wriggle out, enter the ground, pupate and emerge as mature flies in the summer. They do no particular harm except to cause some irritation, and worry the cattle. The only preventive is to keep the cattle up at the season when the eggs are deposited—this, however, is impracticable. The worms—so-called "warbles"—are so common as to occasion special regulations concerning wormy hides by tanners' associations; and as we never hear of an animal suffering from them, they are among those minor inflictions which it pays better to submit to than to fight against. They may, however, be easily dislodged by pressing with the finger and thumb as above stated.

The Bartlett and Clapp's Favorite Pears.

Verdant Inquirer, East Deering, Me., says that he is told by an old nurseryman that there is this difference in the Bartlett and Clapp's Favorite Pears—that in a locality where one will thrive, the other will not. For instance, on the east side of a high hill in his town one thrives finely and the other fails—the tree cracks badly; while on the west side of the hill, the case is exactly reversed. The Bartlett is at home on the east side of the range and a failure on the west side; while the Clapp's Favorite is a success on the west, but a failure on the east side, and our correspondent asks the cause of such a phenomenon.

ANS.—Such differences exist. We can not say, in the case here mentioned, why it is so. Generally speaking, it may be said that those kinds which push buds the earliest in the spring are less liable to injury if growing in situations which retard their spring growth.

Sowing Salt and Plaster, etc.

O S. B., Burdell, N. Y., says he thinks barley does best broadcasted; on it he wants to sow salt and plaster—a bushel of each per acre—and having no drill, he asks whether the best results can be got by broadcasting them. It is said thereabouts that commercial phosphates do not do any good on gravelly lands—oak, chestnut, walnut, ash and hickory land; and he asks what is the reason for their failure.

ANS.—Barley and all other small grains do best when drilled. The plaster and salt should be sown broadcast, being heavy, and if sown on a damp day, they may be spread very evenly. The reason why phosphates fail on your soil is explained in an article on the behavior of phosphates by Professor Caldwell, March 27, page 200. Probably if you were to increase the application, the effect would be more apparent.

About Fall Wheat.

D. B. C., Mt. Union, Ia., asks what kinds of fall wheat are hardiest, and what is the best way of preparing the soil to lessen the risks of winter-killing.

ANS.—So far the hardiest fall wheats are the Clawson, Fultz, Treadwell and red Mediterranean. The red varieties are hardier than the white. But the preparation of the soil and the manner of sowing have much to do with the resistance of the crop to the winter. A loose surface and a compact bottom make the best seed-bed and the seed should be put three inches underground by a drill.

Roots for milch cows.

F. N. G., Olean, N. Y., asks what kind of roots is the best for milch cows whose milk is sold in town—some sort that does not flavor the milk.

ANS.—There is nothing better than the Yellow Globe Kinver mangel for milch cows. They give no ill flavor, but produce rich full-flavored milk. For a change, which cows appreciate, a quantity of Lane's sugar beet might be sown. These also make good milk and much of it.

Moss on Meadows.

C. H. G., Glenville, N. Y., asks, 1, the cause moss on meadows and a remedy therefor; 2, which is the best commercial fertilizer for a loamy soil.

ANS.—1. Moss grows on meadows because the soil is too poor to produce grass. To get rid of it, harrow up the mossy spots, seed them down again, and either spread manure on them or some artificial fertilizer prepared specially for grass. For "special" fertilizers consult our advertising columns.

"Foundered" Sheep.

W. G., De Witt, Neb., asks whether there is any remedy for foundered sheep.

ANS.—More particular information regarding the sheep should have been sent. How are they foundered? It is, most probably, something else than "founder" so-called; describe the symptoms and we will advise you. As a temporary expedient, give the sheep a dose or two of one ounce of linseed oil, which will relieve the bowels and cool the system.

Miscellaneous.

B. S., Memphis, Mich., asks, 1, the difference between Alsike clover and Alfalfa; 2, which is the better for sandy soil; 3, how to get potatoes to form a second crop.

ANS.—1. Botanically the two plants belong to the same family (Leguminosæ), but they differ in being members of different genera. Alsike clover (Trifolium hybridum) is a native of Sweden, and has derived its common name from a parish in that country named Alsike. Alfalfa, or Lucern (Medicago sativa), originally came from Asia; but it has long been in cultivation both in North and South America. As fodder plants both are considered excellent. An analysis of each shows the Alsike clover to contain: water, 82.0; organic matter, 16.2; ash, 1.8: albuminoids, 3.3; carbohydrates, 6.3; crude fiber, 6.6; fat, 0.6; and Alfalfa in about the same stage of development contains, water, 74.0; organic matter, 24.0; ash, 2.0; albuminoids, 4.5; carbohydrates, 7.0; crude fiber, 12.5; fat, 0.7. This indicates that Alfalfa contains a somewhat greater proportion of nutritive matter than the clover. 2. Neither of them is suited for very light soil, both preferring a rich, loamy soil, and the Alfalfa must, in addition, have a deep, mellow subsoil. For your latitude the Alsike clover will probably prove most successful. 3. Early potatoes sometimes form new tubers a second time in the same season; but this second crop is worthless, or nearly so. The potato yield may, however, be materially increased by layering the tops, as described in our potato number of Oct. 18th 1879. When the earliest tubers are nearly full-grown, bend the tops over and cover them with soil all but four or five inches of the tips; if the season is not too dry the stems will form new tubers.

H. T., Wolf Date, Ia., asks, 1, what kind of grass seed should he sow in groves in which the trees stand from four to eight feet apart, and are three years old. 2 He lost 50 hogs the past winter from a cough and he asks what remedy should be applied; 3, would a cross of a Poland China sow with an Essex boar be advisable for early maturity; 4, what is the RURAL'S own opinion of the merits of cob meal as food for hogs and horses.

ANS.—Sow orchard grass, wood meadow grass, (Poa nemoralis) and Kentucky blue grass; these all thrive under shade: about seven to ten pounds of seed of each are sufficient. 2. Cough is caused as much by indigestion as by lung disease. You should make a post-mortem examination by which your judgement would be guided as to the seat of the disorder, and then consult Coburn's Swine Husbandry for advice. 3. A cross of the two breeds (an Essex boar to be used) would improve the progeny as to early maturity. 4. Every now and then some one discovers that corn cobs are very nutritious. We don't believe it. Some persons eat bread with saw-dust in it, and find it acceptable, but only because they must fill their stomachs and have nothing else. Cobs contain some sharp, scaly fragments which cannot be ground fine, and cause serious irritation to the intestines of horses and pigs. Cob meal may do for cattle, but we think not for horses or even pigs. More favorable experiments than have yet been made, will be needed to change our opinion.

C. F. R., Tonawanda, N. Y., asks, 1, when is the best time to plow sod for corn; 2, which kinds of grass make the best lawn, and how much seed to the acre; 3, when should millet be sown as a main crop for hay; as clover did not "catch" last year, he is compelled to resort to millet this year.

ANS.—1, As near as possible to the planting time. If possible we should plow to-day and plant to-morrow. Corn loves a fresh, mellow soil with a decaying green sod to feed upon. 2, Lawns should be seeded thickly. Red top, 10 pounds; Kentucky blue grass, 6 pounds; creeping bent, 5 pounds; crested dog's-tail, 5 pounds; annual spear grass (Poa annua), 2 pounds, will be a sufficient quantity of seed and give a continuous verdure from early spring until winter. We shall have a lengthy illustrated article on lawn-making in the next issue. 3, Sow millet of any kind in June.

H. C. S., Easton, Md., says his chickens eat corn until their crops seems filled to the utmost capacity; but they droop and die; the droppings are white and yellow, and he asks what ails them.

ANS.—The trouble with your fowls is probably caused by weakness of digestion. Irregular or too steady corn feeding will produce such symptoms, also a want of broken bone and oyster shells to assist digestion. If the fowls are not supplied with these give them feed, or soft feed—wheat and corn meal scalded, with boiled potatoes. Add a little cayenne pepper and chopped onions; change their food occasionally. Oatmeal made into a stiff paste with cold water, or rice slightly boiled so as not to be sticky, is very good. So is, a little meat occasionally. Wheat, oats, buckwheat, etc., should be given rather than whole corn, which should be supplied but sparingly till their health is restored.

J. L. B., Norfolk, Va., asks for the experience of any of our readers with either of the following fruit evaporators: American, Zimmerman, Granger, Alden; and whether the fruit dried by either of them is better than that prepared in fruit houses.

A Subscriber, Chappell's Bridge, S. C., sends a bunch of blue, bulbous flowers, which are a troublesome weed on his farm; he wants to know the name, and how to get rid of them. Hogs will eat them greedily.

ANS.—The plant is Scilla Fraseri, also called Wild Hyacinth, and Quamash. It bears a raceme of beautiful blue flowers. Summer-fallowing the field with frequent and thorough use of the harrow, and throwing it open to a herd of swine ought to exterminate this beautiful but troublesome pest.

A. J. P., Johnston, N. Y., asks whether slaked lime is as good as land plaster to mix with hen manure, and whether the mixture is good for Strawberries.

ANS.—By no means. Lime mixed with hen manure will expel the nitrogen, the most valuable fertilizing ingredient of the manure; whereas land plaster "fixes" the nitrogen, and is therefore an excellent admixture. Hen manure and plaster form a good application for any garden crop.

TO SEVERAL INQUIRERS.—We do not give the addresses of contributors to the RURAL.... See our advertising columns for the name of a trustworthy commission merchant to whom goods can be sent for sale in this city.... Doubtless the reason why your queries have not been answered is that you have failed to send your address. . . The Evaporator of the American Drier Co., Chambersburg, Pa., is the best we are acquainted with. One of our staff has, as usual, personally examined the No. 2 Evaporator and strongly indorses the claims the company puts forth in its behalf.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, April 10th.

E. M. S.—J. B. D.—W. R. C.—D. L. H.—E. A. S.—W. D. C.—W. W. M.—M. C. C.—E. M. S.—Thanks.—H. M. S.—J. O. B.—L. F. C.—J. G.—A. B.—J. C. P.—J. W.—N. A. W.—J. B. W.—R. R—S. R. B.—R. L. S.—T. J. E.—J. A.—E. B.—G. L. H.—J. W. W.—J. H. S.—N. A. W.—A. K.—W. I. C.—J. H. M. M. N. B.—L. G. F.—C. R. G.—E. M. S.—A. G. B.—G. W. S.—A. J. P.—C. T. B.—P. B. S.—E. L. T.—Mrs. B. C. D.—Mrs. W. V. A.—Mrs. V. F. W.—W. L. H.—N. C. R.—O. S.—W. T. K.—N. R. C.—T. H. R.—W. W. W.—H. B.—T. R. O.—S. K.—H. I. L.

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No Matter What Other Plan Has Failed, This Has Stood the Test of Time.

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READ WHAT THE PEOPLE SAY OF

"Dr. Sykes' Sure Cure for Catarrh."

C. P. TEMPLE, Coulterville, Pa., June 7, 1877, says: "I have used four packages of your remedy, and believe it is the only medicine in the market that is just what it is recommended to be—'*A Sure Cure.*'"

W. VILDA, Wilbur, Saline Co., Neb., April, 9 '77, says: "Your 'Sure Cure' *is all you claim for it.*"

E. A. CHILDS, Wrightstown, Wis., Dec. 23, 1879, says: "I thank the Lord I saw your advertisement. I was bad off with Catarrh, that had been dropping down on my lungs about a year. Your 'Sure Cure' arrested its course in about three days; it has far exceeded my expectation. I recommend it to all who are suffering with Catarrh or Lung Complaints. You can use this as a testimonial, for I can say *your 'Sure Cure' is rightly named, if a person only follows the directions.*

S. P. JEWETT, 20 River st., Chicago, April 3, '71: 'This certifies that on the 10th of January last, I tried Dr. Sykes' 'Sure Cure' for my Catarrh with such good results as to make me careless about getting more than one bottle. *It gave immediate relief and proved far superior to anything I had ever tried.* I cheerfully recommend it to a suffering public."

MR. A. BURTON, 290 W. Huron st., Chicago, May 17, '77, *reported the cure of his son*, a young man, by six bottles; bought six for himself, and I received information by one of his neighbors, who also became a patient, that *they cured the father* also.

W. G. JEAN, Portland, Oregon, Feb. 10, 1879, reports *a complete cure for Catarrh of twelve years*, and says: "There is nothing on this coast the equal of your Catarrh Remedy. Before I used your 'Sure Cure' my nerves were so shattered I could not write any," His letter now shows a bold, even, steady hand.

THOS. HOME, Richmond, Utah Ter., Jan, 22, 1880, says: "My brother *who was cured by your 'Sure Cure'* sends his best regards, and is thankful that such a man as you lives upon earth. He says he thinks that such men are inspired by the Almighty as an instrument in His hands in doing good to suffering humanity."

ALBIREUS ENGEL, Metamora, Ill.: "The three bottles of your 'Sure Cure' have done me more good than all the doctors and other medicines I ever tried, and *I feel like a new man.* I have a brother that used one bottle, and it helped him so much that he thinks he he is cured.

MRS. E. C. BRAINERD, Spring Green, Wis.: "I have used the bottle of 'Sure Cure,' and am thankful to report favorably. *My Lungs feel stronger and do not pain me so much.* The discharges from my head are not so bad, and my limbs are not so badly swollen. I was so weak I could hardly get about, but am getting stronger every day, and I have great faith, with God's blessing, in a cure. I like your Insufflator very much."

A. L. TOOMBS, Bloomfield, Iowa, aged 71, March 15, 1879, after using 7 packages 'Sure Cure' says: "When I commenced taking it I was severely troubled with Catarrh and Asthma, so that I could not rest day or night. I had not been taking it long until I saw that I was getting better, until I now feel that *I am almost cured of it.*"

MRS. M. A. BAIRD, Junction, Va., after using but one Package "Sure Cure" and ordering more, Oct. 25, 1879, says: "The 'Package' I have used did me a great amount of good. My head felt very badly from *such a roaring that I could scarcely hear any ordinary conversation, but it is now so much better that I seldom need ask to be told again.*"

REV. R. S. MARTIN, Crown Point, formerly of Hebron, Ind., Feb. 6, 1880, says: "Your 'Sure Cure' is the best remedy I have ever found for Catarrh, and quite a number of persons *have used it with success* on my recommendation."

REV. A. W. JEWETT of Joliet, Ill., Jan. 21, 1880, made the following verbal report: "Although I now find that I have used it but very imperfectly, I never tried anything before that did anywhere near the good your 'Sure Cure' has done."

DR. J. HOOVER, now of Oshkosh, Wis., wrote from Argos, Ind., June 14, 1879, as follows: "Your 'Sure Cure' helped me more than anything and everything I ever used, and I believe it will entirely cure me." He reported the cure afterward, then bought the 'Sure Cure' for his patients, and the following quotations from his letters are fair samples of his further reports: "Mrs. Lowrey's cure is the wonder of everybody; she now does her own housework, including her washing. (Mrs. L. had been given up to die by several doctors and all her neighbors; was a bad case of Cancerous Catarrh, which had poisoned her whole system; she took the "Sure Cure" and "Specific Blood Medicine," and after her cure gave birth to a perfectly healthy child.)

"All are improving who are trying your medicine, and are satisfied, and I am getting to have great faith in its power to cure almost *any* case."

"If any one would have guaranteed me a cure of my Catarrh a few years since, I would have given all I possessed, and I feel that I must go to work treating Catarrh or disseminating *the remedies that will cure it.*"

"The Specific Blood Medicine and 'Sure Cure' continued to give satisfaction."

L. E. MITCHELL, Juniata, Adams Co., Neb., Feb. 24, 1880.—"I write to thank you for the wonderful cure you have wrought on my wife by your unequaled medicines. The case was so severe that I am not capable to describe it, and we cannot find words to express our gratitude; for we know you have saved her from a terrible death that must have come soon, if we had not providentially heard of you. In July, 1878, her throat and mouth were attacked with a terrible sore, and a large bone came out and left a hole as large as a silver half dollar in the roof of her mouth, through into her nose, it then ate very fast clear up through her nose—or so near through the doctor lanced it, and more than once, but could not afterwards heal it. Her pain and sufferings were awful—no sleep or rest: nothing but misery and the sore fast spreading. We employed doctor after doctor, but none of them could give but temporary relief, and some of them seemed to make it eat away faster by the burning medicines they used. They called it a cancer, and, finally, after it had eaten more than half her nose off, the doctor who had attended her for about a year called a council of physicians, and they decided it to be a cancer, and said the treatment she was taking was all right, and that all had been done that could be done. They said the eating could not be stopped, and it would certainly kill her in less than three months, and there was no cure for her; so we accepted it as the will of God that she must die

Her desire to see her father, brother and other relatives in Jackson, Mich., before she died, was so great that I bid her 'good bye' never expecting to see her again, and she set out on her sad journey. Before reaching Chicago a kind-hearted minister, the Rev. M. L. Vorheis, of Burlington, Iowa, on the same train, learned the particulars of her case, and insisted upon it that Dr. Sykes, of Chicago, could cure her, and that she must stop and see you; also told her of a wonderful cure wrought by you on a Mrs. Henry Avery, of Burlington, Iowa, of a cancer in the throat. As it was too late in the evening on her arrival to see you and not time in the morning before the first train, she hurried on and then wrote you from Jackson. Your answer was prompt, but not at all encouraging; but after reading some of your cures of what you call 'Cancerous Catarrh,' she and her brother started at once to see you. I wish you would describe how she was when you first saw her. But I want to tell the world that in a little over ten weeks from the time my wife left home I went to meet her at the depot, and she had changed so much in her looks that I passed right by her, and did not recognize her till I heard her happy voice. Her nose was all healed up, and she looked so good and happy, and she weighed 25 pounds heavier than when she left home. All our neighbors look upon her wonderful cure as a miracle; she is now a stout and healthy woman, and is doing the work of our large family, a well and happy woman. We cannot express our feelings towards Dr. Sykes as we would like; we are overjoyed, and can only say, "God bless you, Dr. Sykes."

I saw Mrs. (Nancy) Mitchell on the 9th of October, 1879; her brother, A. S. Wing, of Jackson, Mich., was with her, and can vouch for the description I will here endeavor to give. First, when the cloths were removed from her face, she was an awful sight to behold. Her nose was entirely eaten off from the ridge in line with the eyebrows down on the right side to the eye, and to the cheek in a circular form, coming out within half an inch of the end of the nose; the flesh and bones all gone on that side; and was eaten down fully one-third of her nose on the other side. Her cheeks and eyes were badly swollen and inflamed, lancinating pains all through the sore, and severe pains all through the head. The nostrils were equally as raw as the external sore, and the quantity of matter discharged was estimated at about half a teacupful daily, the cavity was open clear through into her mouth. She had but little appetite, and said she had not had a good night's sleep in over a year. I saw her every day for two weeks, treated the sore with a mucilaginious preparation, then with what I call a cancer powder, used an ointment, the "Sure Cure" and "Specific Blood Medicine. During these two weeks Mrs. Mitchell boarded with Mrs. L. Andrews, at 721 West Lake street, and she can also vouch for the case and cure. I never saw a sore heal so rapidly as this, or a patient gain faster; in two weeks she returned again to her father and brother in Michigan, taking medicines with her, where she stayed eight weeks, the nose healing up sound within that time. She returned to Chicago Saturday, December 20, put a notice in Sunday's Tribune and Times of the 21st, announcing her cure, and asking interested people to call and see her at my office from 2 till 4 p. m., Monday, (and about thirty called), and she started for her Nebraska home next day, saying she was the happiest woman on earth.

The Rev. W. J. Chaplin, of Dowagiac, Mich., happened to ride in the seat with her to Chicago, and gives me the privilege of referring to him in proof of the cure. Prof. Henry Olin, of Bennett Medical College, office corner of Madison and State streets, saw her that Monday morning, and speaks of the cure as one of the greatest he ever saw. I have Mrs. Mitchell's photo in my office, taken on that Monday after her cure, and notwithstanding she is badly scarred, the deformity was not so great as a person would naturally suppose. Let me also add that previous to coming to me her treatment had all been of the cauterizing type, carbolic acid being about the mildest of any, and she was using this daily until the blood would gush from the gaping sore. Nearly all of this kind of cases I get have also been treated by this barbarous mode. Will not my fellow physicians learn a lesson from these cases and let their patients live?

In dismissing this most interesting case I want thus publicly to thank the Infinite Spirit of the Great Physician, who made me the humble means in His hands of snatching from the very grave this sorely-afflicted woman and thus bringing joy and gladness to her family and friends.

The above are but samples of what the remedies have accomplished. Price of the "Sure Cure" and "Insufflator," all complete, is only $1.50. Book of full information, ten cents, well worth a dollar. Name the Rural New-Yorker in writing, and address,

DR. C. R. SYKES,
169 Madison St., Chicago, Ill.

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SATURDAY, APRIL 24, 1880.

REMOVAL.

On and after May 1st of this year the Rural New-Yorker will occupy its new quarters, No. 34 Park Row, corner of Beekman Street.

Milking Prizes. The British Dairy Farmers' Association, offer a large number of prizes for the best milkers to be exhibited at their show next October. We understand that Short-horn, Ayrshire, Guernsey, Jersey, Kerry, Dutch (Holstein), and some other breeds will be entered there for competition. Would it not be worth the while of some of our own dairymen to send a few cows there? If the richness of milk is to be considered as well as the quantity given, we are confident no cows can excel the American. Where are the records in any country of cows like ours making 500 to 600 pounds each of first-quality butter per annum?

Noxious Drugs to Horses.—Grooms are too much in the habit of administering these, wholly careless or ignorant of their injurious effect. This is particularly the case with arsenic, which they freely use, in order to give horses a finer and more showy coat of hair. We often hear of cases of the death of horses from this cause, both at home and abroad. It is an imperative order from us to our stable men to never give medicine of any kind to our animals without first consulting us. In some European countries, particularly in Hungary, we have heard that the lower class of females are almost insanely addicted to the habit of taking arsenic, to improve the complexion of the face. In a short time the system gets so accustomed to this dangerous drug, that a delicate female can take enough at a single dose to kill half a dozen stout men. But a continuation of these doses for a few years is sure to result in premature death.

It is proved, where fish are preserved in many of our bays open to the sea, and even in some few lakes and streams, and not allowed to be caught except at proper seasons, that, acre for acre, the water furnishes a more valuable product than the richest and most highly cultivated land. We are glad to notice that more and more attention is given to this matter annually, by the United States and single State Governments, also by private individuals. Fish add a great variety to our food and are alike healthful and palatable, perhaps more so than most kinds of meats. By exchanges with foreign nations, many new kinds have been added to our waters, and we are promised more. In consequence of this our products are continually increasing, and some waters, in which, heretofore, little of consequence found life, are now producing largely, as in the instance of the European Carp which subsists solely on vegetable matter growing in the water.

Wheat and rye for late autumn, winter and early spring pasturage are extensively cultivated in many districts of our Southern States; and for the first and last season, we cannot imagine why they are not more cultivated in the Middle States, as high up, at least, as the 40 and 41° of north latitude. Our farm is in the former latitude, and we have been in the habit of sowing these grains for pasturage for years past. We sow through the last week in August to the first week of September, and by the last of October the grain gets so rank and high as to give a good bite, and this gain occurs ordinarily by the last of March or the first week in April. If left to grow, rye is fit to cut for soiling by 15 to 25th of May, and wheat a few weeks later. The soil on which these grains are sowed for pasturage, should be a rich, warm, dry loam; there is then no danger of poaching in turning stock on so late and early; but yet this stock ought to be of the lighter weights. Sheep may be of full size; but the cattle should not be over 6 to 24 months of age. When rainy, the stock must be kept off, and if nights are frosty, don't turn on *till* the sun has dried it up. A ration of linseed or cotton seed meal should be given night and morning, to keep the bowels in good order.

Mr. Parsons, in an essay from which we have quoted under What Others Say, speaks of the Sun-ray Pine (Pinus Massoniana, var.)as having received its familiar name from the fact the "leaves are so clustered on the sides of the branches as to spread in every direction." The Rural New-Yorker used the word "Sun-ray" in writing of this golden variety several years ago, simply because the yellow needles reminded the writer of the sun's rays. We were not aware that it had been so called previously, or we should not have claimed the credit of that very appropriate name. Mr. Parsons speaks of the peculiarity of its late variegation. We have before alluded to the fact that when the new leaves first appear in the spring a mere dot or transverse line of yellow is seen. As the leaves lengthen, it appears that this yellow dot or line alone elongates, so that finally the greater part of the leaf is golden yellow. This color is retained through the winter, presenting a bright and beautiful sight either in contrast with the snow or with the dreary appearance of the winter garden in general. We can recall no other instance in which any plant so highly variegated as is the Sun-ray Pine is possessed of so much vigor, while at the same time the variegation is entirely constant.

Our references to this beautiful conifer are always followed by many inquiries from our readers as to where it can be obtained. We anticipate them in the present instance by saying that we are not aware that it can as yet be purchased anywhere or at any reasonable price—but the stock in another year will probably be extensive enough to warrant its being placed in nurserymen's catalogues.

There has been, besides a great deal of valuable truth, a great deal of bosh written as to the dependence of flowers upon insects for their pollenation. When a new medicine is discovered for a certain disease, physicians and credulous invalids in general are very ready to attribute to it curative powers of so wide a range, that it becomes valued as well-nigh a "cure-all" ere its specific power can be well tested and proven. Of late years the same jumping at conclusions has been evident as regards insects and flower pollenation. Wherever any peculiarity exists in the position of the stamens, the petals or other parts of a flower, some ingenious theory has been conjured up to show that fertilization is dependent upon insect agency. It has been stated we know not how many times that Kalmia latifolia, the well-known Calico-bush or Mountain Laurel, is of this class. The anthers rest in little pockets of the corolla which, as it expands, holds these, causing the long, slender filaments to recurve. The theory is that insects at this stage of the flower's development, working at the nectar tubes below, free the anthers from their pockets and, the strain upon the elastic filaments being removed, the pollen is thrown upon the stigma of the same or other flowers. Whence it follows that insects are essential to the fertilization of the Kalmia ovules!

The writer of this note, for a week or more past, has had the opportunity, among the Kalmia groves and thickets of South Carolina, of observing how entirely mistaken this pretty theory is. In most cases the natural expansion of the corolla frees the stigmas from their pockets. In other cases this natural movement is precipitated by the wind. A gentle shake of the corymbs of well-expanded flowers was sure to shoot off a number of stamens, while others could be seen here and there shooting voluntarily. Of the very few insects which were seen visiting the flowers all rested upon the *top* of the filaments and, instead of exerting any force to free the anthers from their pockets, served rather to hold them down more securely. A large bouquet of buds and partly developed flowers was taken to the house and placed in water. Here, as in the woods, the flowers opened and, as the corollas spread, the anthers were loosened, shooting pollen grains sometimes to the distance of a foot or more.

ANOTHER BENEFIT FROM AGRICULTURAL COLLEGES.

It is to be presumed that the agricultural colleges have been instituted for the general public benefit. It is not to be supposed that their complete end and purpose are to educate youths only for the profession of farmers. Have not the parents, the full-grown men, some claim to be educated too, and should not the influence of the college go abroad to the farm and not be confined to the class room, the laboratory and the experimental plots and pens? So far these institutions have done great good. One cannot expect that they should find their full development in a year or two, or even in many years. Their officers and teachers have much to learn in the way of finding out how to teach most effectually, as well as to teach. It is a new business to be built up upon a foundation hidden and to be groped for and surveyed in the dark. But it is gratifying to know that year by year the professors are accomplishing a good deal and are finding out ways of doing more. We would throw out a suggestion which may possibly lead to a valuable service which may be done upon the college farms. Many prominent farmers and agricultural writers are interested in the improvement of of our grass lands by increasing the varieties cultivated. Grass is our greatest crop. In value it surpasses corn, cotton and wheat together. As hay and pasture, it should be credited with a large portion of the value of live stock, dairy products, meat, wool, hides, tallow (including oleomargarine, of course), poultry, eggs and pork, wheat and produce. It is admitted that our grass is not made the most of; that we need to grow more than two or three varieties and to make our pastures and meadows more permanent. Recently our contributor, Prof. Beal, referring to this subject, mentioned the difficulty there is in procuring seeds of varieties not usually grown, and in the present issue Mr. Wysor refers to the same trouble. We have experienced this difficulty, and it has to our knowledge greatly hindered the seeding of grass lands. Could not these grass seeds be grown to some extent upon the college farms and sold in small quantities, pure and fresh, to farmers who wish to grow such grasses. Certainly it would be a small beginning, but every great improvement has had a beginning, and from this small starting point it would be but a few years before these seeds, home-grown and fresh, would be regularly in the market.

HOW TO BUY A HORSE.

Look at him standing quietly in his stable, to see he has no trick like that of putting one hind foot over the other. In doing this he often cuts the fore-part of his hind foot with the sharp calks of his shoe, thus making him lame perhaps for months. When brought out, do not allow him to be jockied in his paces. Take your stand on one side of the road, and let him walk naturally and quietly by; then turn and walk by, showing his other side. Now stand behind and have him walk off in front of you and from you; then turn and walk towards you. Observe if he goes freely and easily and plants his hind feet in the tracks of his fore feet. Next, have him trotted by you, and back and forth, watching his action closely.

Now look at his eyes and make a motion with your hand towards them, as if you intended to strike. If he winks quickly, or draws the head back, the vision may be depended on generally as good, and no blindness in him. The eyes should be moderately prominent. Sunken eyes are apt to get blind as the horse grows old, and often characterize a vicious temper. Examine the teeth and see that they are sound, strongly set, and even. Look at his fore legs and notice if he has strong knee joints, and that they are not sprung. Examine the hind legs closely above and below the hocks for any swellings, and especially for curbs and spavins. Now look at all the pastern joints and see if clear of cuts from interfering, or if there are any scars on them in consequence of this. The pasterns should be rather short for a carriage-horse, and not much sloping. If the latter, and long and elastic, they are apt to give out at a hard pull. In a race-horse such pasterns are less objectionable. In a heavy draft animal they are unpardonable.

The feet are often passed over, but a thorough examination of these is of the utmost importance. They should be reasonably large, the hoofs clear and tough, free from cracks, not shelly, and well set up at the heels, otherwise they will soon wear down on pavements or hard roads, and the horse become foot-sore. If always to be kept in the country to work on a farm or dirt roads, low heels are not so objectionable; lastly, regard the inside of the hoofs and see that they are free from corns, and that there is a good-sized frog to soften the jar to the leg, when the foot stamps on the ground.

A pony-built horse is the best for working in harness, while a more rangy-bodied one, with longer legs may be preferable for the saddle, but these should not be so long as to be liable to weakness. The legs, from the hocks and knees down, in all horses should be rather short than long.

If the tail lifts hard and stiff, it is usually an evidence of a strong back and quarters. If it lifts quite limber and easily, the reverse is apt to be the case.

As to the age, this is readily told by the teeth till seven years old, unless they are "bishoped." It is usual for jockies to call a horse eight when he is all the way from ten to twenty; but an adept can give a pretty shrewd guess as to this, for after ten years old the eyes begin to sink, gray hairs come into the head, and there is a want of youthful look and vivacity.

After all, there is a great risk in buying a horse, even from an owner who is truthful and honestly disposed to speak of his failings; for in many cases he is really ignorant of what these are or of incipient diseases which may be lurking in the system at the time of sale. As for the tricks of jockies in hiding the age, faults, and covering up diseases, they are past finding out; and when they trade with each other even, the very smartest and most knowing one gets cheated easily by one much more skillful than himself in showing off a horse. It is only after using a horse for months that pretty much all that there is in him can be found out, and we have known unexpected faults and vices to turn up after possessing one for years.

In the city stables so many horses are kept under the same roof, and there is such a want of proper ventilation that "pink eye" and the "horse distemper" are often prevalent there, or if not shown at the time of purchase, these break out soon after. It is safest to buy a horse immediately upon its arrival in town, before he has a chance to get discussed, and before the sellers have time to "slick him up." Never mind a dirty coat and rough looks; you can clean the former and smooth the latter without risk to the animal as soon as you get home, and after this he will probably show 25 to 50 per cent. better than when you bought him. One rather thin in flesh is safer to buy than when fat, for this covers bad points, and when worn down somewhat a rather fine-appearing horse turns out to be very common-looking.

BREVITIES.

Our Market Reports show clearly the small number of varieties of grass seeds regularly quoted in the chief markets of the country.

Last year we gave an engraving of the double white Chinese Wistaria. Our correspondent in South Carolina has seen what purported to be the above, but the flowers were *single*.

"From the best information that I can get," says our Aiken (S.C.) correspondent, "the acreage of cotton in this part of the South will be over 25 per cent. greater than last year."

To prevent milk fever in cows the London Agricultural Gazette says: give ten drops of the strong or "mother" tincture of aconite, in a wine-glass of cold water once a day for about a week before calving; also a dose as soon as possible after calving; then three or four times a day for a couple of days, after which period the danger may be considered over. In addition to this, if the cow shows a great abundance of milk in her bag, a moderate quantity of this should be drawn out daily a week before calving.

Mr. Meehan observed during a visit to James Vick that he is at present particularly interested in Phlox Drummondii. That was always, we believe, a favorite of Mr. Vick, and there are few bedding annuals that give more satisfaction. It is a great favorite in some parts of the South also. The writer of this six weeks ago, was admiring beds of Drummond's Phlox in the gardens of Aiken, S. C. In that climate, when once planted, it is always planted and, indeed, in a few years becomes a weed, if we could suffer ourselves to apply the word to so beautiful a plant.

During the past week forest fires have been exceptionally wide-spread and disastrous in New Jersey, Pennsylvania and Virginia. Besides the enormous loss of valuable timber caused by them, much farm property has also been destroyed, in the shape of fences, hay grain, barns, etc., and in many cases it has been only by the greatest exertion on the part of the neighborhood, that isolated farm houses and even villages have been saved from the flames. In some cases losses of stock and even of human lives are reported. Many of these fires have, doubtless, been due either to the carelessness or malice of tramps—another cause for the suppression of these pests.

The returns of April 1st to the Department of Agriculture show an increase in the area sown in wheat last fall of 13 per cent. more than in the fall previous; in the area sown in rye there is a decline of six per cent. as compared with the year previous. The condition is 98—precisely the same this April as last year. There was a large increase in fall-sown wheat in those States that heretofore have exclusively sown in the spring. As shown in our recent reports, the experiments were unfortunate, and all—particularly Iowa and Nebraska—report great disaster from the winter. On the whole, the wheat crop thus far looks as favorable as in the spring of 1879, except, of course, in the spring wheat belt. The condition of live stock, as represented, is very favorable—better than for several years. No disease is reported other than cholera among the swine, and that is no worse than last year, if so bad.

For Women.

CONDUCTED BY MISS RAY CLARK.

THE COUNTRY-GIRL'S LETTER.

DEAR SIS—Here I am in the city;
Cousin Minnie is kind as can be;
Uncle John calls me "dear little daughter;"
And yet, Sis, between you and me,

I am awfully homesick this morning
For the little white house by the mill;
The world seems so wide round about me,
Such a wee little corner I fill.

Cousin Minnie has beautiful garments
Awaiting her wearing. Don't say
Anything to our dear little mother—
My cashmere is made the wrong way;

And I see Aunty looking unhappy
Because it don't set as it ought;
And the cut-away hitches in wearing—
Don't set like the one Minnie bought.

But don't breathe a whisper to mother,
Who thinks I am stylishly dressed;
I'll try not to care about fashion,
Or whispers: "She came from out West."

Mr. Austin comes here to see Minnie,
I think he's her lover. Ah, me,
If he really fancies, and loves her,
How happy that girl ought to be!

I'm afraid of his eyes blue and steady,
He thinks I am awkward I know,
That's the reason he stares at me, often
And makes my hot cheeks redden so.

Well—he is not my world forever,
What matters it any way, then?
But I want to come home, little sister,
And never leave Willow again.

POSTSCRIPT.

I don't know, I'm sure, how to tell you,
I'm dazed, and it will not seem true.
But he loved me instead of fair Minnie!
He talks about roses with dew
On their freshness. He seems not to care
In the least about beautiful clothes;
He's going to father to-morrow
To ask for a wild country Rose.—*N. O. Picayune.*

DESCRIPTION OF CUTS.

No. 130. Design for cross and Italian stitch.

No. 131. HORSESHOE PENHOLDER.—The whittler ingeniously inclined may utilize this design for practice of skill.

No. 128. TABLE COVER:—The cover is of crash, embroidered in cross-stitch with colored cotton, zephyr or silk; the ends are finished with fringe with an embroidered heading. Any design may be used for the embroidery which suits the taste of the maker.

No. 129. BORDER: CROSS AND ITALIAN STITCH.—This design is suitable as a border for table covers, etc.; it is worked in cross and Italian stitch, with cotton or any other embroidered material.

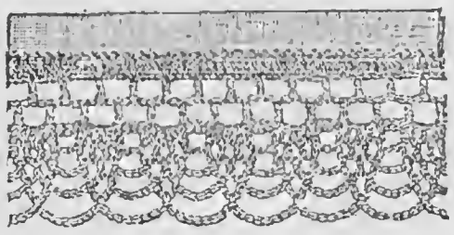

FIG. 127.

No. 127. CROTCHET EDGING.—Make a chain the ngth required.

1st Row: One treble into each stitch.

2d Row: One treble into a stitch, three chain, pass over three stitches, and repeat.

3d Row: One treble into second of three chain of last row, three chain, one treble into the top of last treble, one treble into the centre of next three chain, * three chain, one single into the first of three chain, repeat from * three times more. Repeat from the beginning of the row.

4th Row: One double separated by four chain under each of the loops of three chain of last row, two chain. Repeat.

5th Row: One double separated by five chain under each four chain of last row, five chain. Repeat.

6th Row: One double separated by five chain under each five chain of last row, seven chain. Repeat.

7th. Row: One double under the five chain of last row, eight chain. Repeat.

FASHIONS.

ALTHOUGH the fine weather has brought out several novelties in out-of-door costumes, yet it is much too early to lay down the law with certainty as to what will be fashionable for the early summer. However, from what is now seen already, it is probable that mixtures of stuffs and colors will be more than ever prevalent, and that short, round skirts, with long casaquin bodices and casaque jackets, and pleated bodices round at the waist, will be generally fashionable for young ladies.

The long dress, half-train, and short skirt are as yet equally in favor for visiting, dinner, and evening dresses. Instead of the chief part of the costume having a plain ground, it will be the contrary. The dress itself will have a pattern, and the ornamentation, such as collars, scarfs, drapery, frilling, &c., will be of plain material.

Up to the present the new patterns consist of small spots, or birdseye pattern, lozenges, minute checks, stripes, and small detached flowers, on foulards, serges, mohair, poplin, and muslin-de-laine.

The casaque jacket most in vogue just now is made high at the neck, with two rows of buttons cut out under the waist in front; it is square at the back, and is often made of the same material as the dress, or in plain cloth or velveteen striped, the colors being different shades of stone grey, dove, beige, and a reddish brown color called mordaree.

From what is seen in the arrivals from Lyons the changeant or shot-silks will be much worn; the new colors in light shades are lilac, light blue,

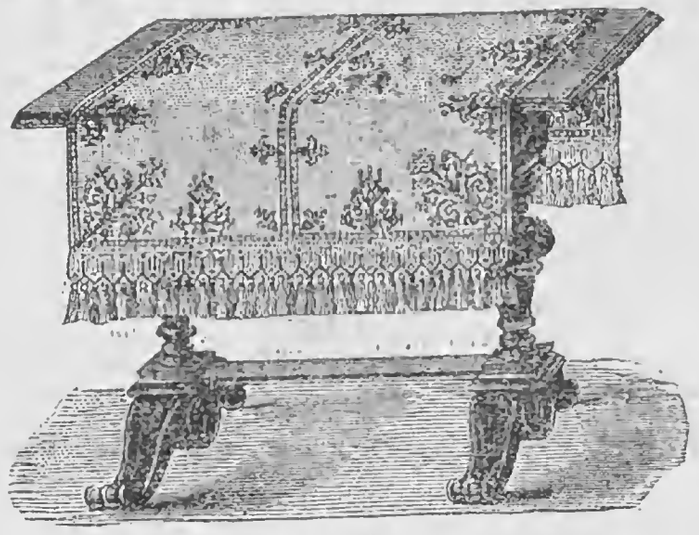

FIG. 128.

silver-gray, dove, and mauve in many different tints; the dark colors most fashionable are blue, bronze, violet, old gold, cherry red, and a reddish-prune color called Ophelia; one shot-silk very much in favor already is called gorge de pigeon.

Black satin is extremely fashionable for visiting, dinner and evening costumes; the shapes are very much the same as a few weeks ago; those for evening wear are profusely trimmed with jet and colored steel-bead embroidery; the sleeves are very often of black lace, or with net, satin bands like bracelets.

Dinner dresses are still made very much to resemble the costumes of the 16th, or those of the last century. In one instance they have the high Mary Stuart collar at the back, and are square cut in front, with skirt, for instance, of Ophelia, with cut velvet opening in front from the waist to the bottom, over a white or silver-gray puffed satin, the bodice having basques or pointed long waist, and the sleeves being either slashed, or of crepe lisse with bands of Ophelia prune satin embroidered with pearls; or in the other they are of the Louis XIV. style, with round low bodice skirt of brocaded silk with tunic of satin, and long train. The trains just now are made much less full, and are square at the bottom; the square-cut bodice is made narrower and very low, with frill and high pleats of crepe lisse, lace and point d'esprit. Sometimes crepe lisse is embroidered with gold thread and colored silk.

All kinds of mantles are to be trimmed with fancy galoons, embroidery, pleatings, frillings, jet feather galoons and fringes. A great many of the so-called novelties are much like the well-known "visite" shape. Pelerines are to be worn. One of the new paletot jackets in Sicilienne has a long frilled waistcoat of faille; another paletot without trimming is made of cloth, is tight-fitting, the buttons are in one straight row, and it has a pelerine or Garrick as low as the shoulders, and a directoire turned-back collar in front; but as yet there is really no very striking novelty.

Bonnets are made with broad scarf-like tie strings of foulard or silk. Some of the newest have strings of figured gauze. One of the newest shapes without strings is called the "Creole," a kind of small Rubens hat.

A PERPLEXED "FARMERINE."

WILL you help a perplexed "farmerine" with some advice? I live one mile from a flourishing college town where we attend church, and though I desire to be "adorned with a meek and quiet spirit," yet the subject of dress demands *some* attention, and as I am my own dressmaker, I would be thankful for any suggestions you may be so kind as to offer. And bear in mind, please, that I'm not possessed of great means, but must make every cent go as far as possible.

In the first place, I have a good, black silk dress made 16 years ago, with wide, ungored, trailing skirt. It is an excellent silk, but it is the "shiny" sort. Are such "shiny" silks worn now? If so, what shall I get to trim, or make it up with; and how make it, &c.?

What would you advise for suits for girls 15 and 17 years old, something that would do for spring and fall wear, not costing over fifty cents per yard?

What summer wash goods would you recommend, and could you give some hint on making so that we farmers' wives could do some of our summer sewing now?

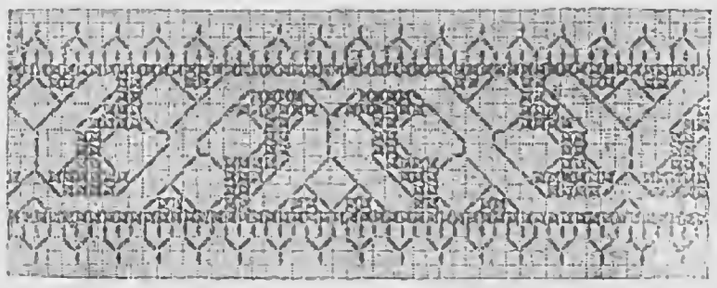

FIG. 129.

What kind of neck-wear, lace, bow, or something quiet and lady-like, not costing over one dollar, would you advise for myself? I like to be neatly, and, if possible, stylishly dressed, to please my husband and children, which I think should be the aim of every wife and mother?

An answer to the above may give some new ideas to other farmers' wives, who like myself, have more taste and love of nice things than they have means to gratify. MRS. M. A.

ANS.—The "shiny" sort of black silk is not in vogue; if, for economical reasons it must be used, it will be best to mix it with "novelty" goods. Cuts have been given previously in the RURAL that may be utilized in making.

There are so many kinds of goods that we scarcely know which to recommend for a miss; debage and novelty are two.

For wash goods, gingham, mohie cloth, cambric or calico may be used; a blouse waist with plaited or ruffled skirt, or plain skirt and overskirt, or a skirt and polonaise—of which there are many styles—would be suitable for summer wear. Make a square handkerchief of India muslin and edge with lace, or make bow, after styles in issue of Jan. 24th or Feb. 28th, using Breton, Languedoc, or imitation Valenciennes lace. A bow of tulle would also be becoming.

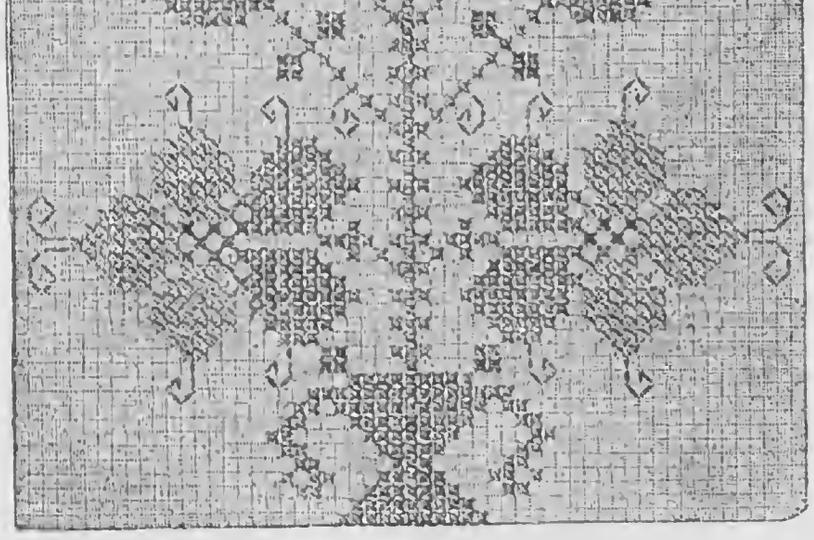

FIG. 130.

REMINISCENSES OF SPRING.

THERE is a hint of spring in the air, a suspicion of violets and trailing arbutus in the soft south wind. Trailing arbutus! What memories crowd around the word and multiply as the fancied odor of their lovely blossoms are wafted to my mind from out the halls of the vanished past. Long ago I used to hunt for this lovely trailing flower in the soft April days. They grew on a bleak hillside near my home. Up among the crevices of the rocks, where a bit of soil had accumulated and a tiny sea of moss shielded it from the weather, I would find a bunch of these flowers, waxen white and so pure that I would hold my breath as I gazed. Then down through a miniature forest of hemlock, and birches to a hollow by the brook, where, under the sodden leaves, they nestled in rare loveliness, a spray of creamy white or dazzling pink Oh! so beautiful; like good deeds discovered unexpectedly 'neath a homely exterior; then again down by the water's edge, where the delicate bells were bedewed by its touch, clinging to a patch of earth. These, perhaps, would be white (formerly) but just tinged with a pink glow, as though the sunset had kissed their faces and the smile remained. I remember how I would crouch down on the cold ground—making a ludicrous figure, no doubt, in my cow-hide shoes and short frock, while my unmanageable hair tumbled over my eyes—and touch them with reverend fingers, and wonder in a vague, childlike way, if the roads in heaven were bordered with such as these. Another treat I used to enjoy in the springtime was the gathering of the shrub called mountain pink in that section, but known elsewhere by the less romantic name of swamp apple. I have never since seen such ravishing shades of pink, no perfumery could ever equal in my estimation the sweet odor of those exquisite blossoms. But in childhood everything looks lovelier than in after years, I think; the sky is not near so blue as when I used to lie in the clover bloom and dream of the future's golden possibilities. My heart goes back tenderly to the past, while the tears drop unbidden, blotting the paper before me. But I remember that in the far somewhere all will be well at last. EVA.

THE RESPONSIBILITY OF MOTHERS.

ANNIE L. JACK.

A FEW Sundays ago a minister in one of our Provincial cities preached a sermon on the immoral tendencies of the young people of the age, and affirmed that the chief fault lay with the mothers who shirked their duty; bringing up their boys and girls ignorant of the laws of Nature and of God. What a charge to mothers is this assertion, and yet who dare deny it?

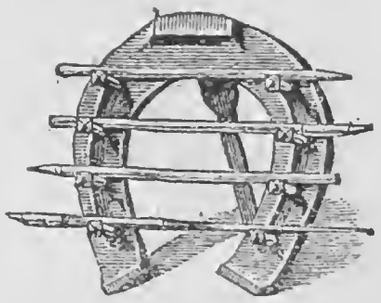

FIG. 131.

To try to bring up children ignorant of the evil that is in the world, to evade their questions, regarding the laws of life, will only arouse a morbid curiosity likely to lead to disastrous results.

It is like the king in that wonderful story "The Light of Asia"—who determined that nothing but what was beautiful should be seen by his son, Prince Siddartha, and sent criers before he left the palace to proclaim. "The king commands that there be seen to-day

> No evil sight; let no one blind or maimed,
> None that is sick or stricken deep in years,
> No leper, and no feeble folk go forth."

But in spite of all his mandates there "Crept forth a wretch in rags, haggard, and foul, an old, old man"—And so the prince learned of age, and death inevitable.

It is thus that mothers try to hide from their children things they are the only ones competent to teach aright, and it is well that among our clergy there are a few fearless enough to speak of this duty too often neglected.

A knowledge of botany inculcated in a proper manner is the first thing to arouse in a child's mind thoughts of the origin of life—"How plants grow"—explains many interesting truths, the transition is easy from plants to the higher order of beings, making the after work easy.

To keep pure in the world, was Christ's prayer; it is one that every mother needs to pray for her sons and daughters; and in this as in many other things "knowledge is power" and a proper understanding of truth a safeguard from evil.

ANSWER TO INQUIRY ABOUT RULES FOR A HIRED GIRL.

I noticed an inquiry in a late RURAL, for rules for a hired girl. If many years experience entitles one to speak on the subject, I should say that there can be no fixed rules for housekeeping. Every house is different in construction, and families vary in size, and what would apply to one household would be out of place in another. Directions for doing different kinds of work can be given but no general rule will apply to each case, except it be the Golden Rule. Consideration and forbearance are always in order on both sides; the more just and upright the employer and employed are, the more harmonious will be the working of the domestic machine. AUNT RACHEL.

Literary Miscellany.

SPECIAL ANNOUNCEMENT.

In our issue of May 1st we shall begin the publication of an original Farm Story, by Charles Richards Dodge, the author of "Louise and I," It combines the bright, practical, scientific and romantic sides of the subject in question, and shows the value of a scientific education upon the farm; also that success may come through apparent failure, and that a woman is a help to a man in the achievement of success. Our readers will be instructed as well as entertained, as the agreeable and impressive manner which is employed to convey the thought of the writer cannot fail to be appreciated.

FARMER BROWN'S PUPIL.

HECTOR BERTRAM,

A few years ago there lived in the southern part of the State of New York, a bluff, outspoken, honest farmer, by name Rufus Brown. Farmer Brown was recognized over a considerable extent of agricultural country as authority on nearly all subjects appertaining to farm management; the proper system to be pursued in order to obtain most satisfactory results, and was looked upon as that rarety, a man who had begun at the foot of the ladder and worked himself up to a position of comfort and independence on the farm. Shrewd but not avaricious, saving but not miserly, industrious, persevering, farsighted; he possessed those attributes which go to make up the practical go-ahead successful farmer,

Farmer Brown was not an educated farmer. He could not make a chemical analysis of the different varieties of soil found on his farm of 200 acres, neither could it be said that he was familiar with the botanical genera of the various plants, and also the weeds which are a constant source of annoyance to the thrifty owner of a farm; yet he rarely sowed a variety of grain on soil incongenial to its successful growth or applied fertilizers which did not have the effect intended.

His knowledge had been obtained from careful experiment and although the old gentleman was at times somewhat stubborn, "set in his way," as the neighbors had it, the position he had attained, the success that attended his efforts, the garden-like fertility of his fields, the contented, happy look of his stock gave ample evidence of the wisdom of his management.

His boys did not grow dissatisfied and desire a professional life, notwithstanding they had graduated with honors at the college where their father had placed them, recognizing in agriculture as wide a range for the development of their intellectual powers as in other pursuits ignorantly recognized by certain classes as more ennobling, more *gentlemanly*.

But we will not weary the reader by a protracted description of Farmer Brown's style of conducting his affairs at present, for this will be shown in the proper place, but will hasten forward to an evening in October and visit the happy, prosperous family as they are gathered about the long table in the wide, airy dining-room of the neatly painted vine-embowered farm-house.

At the head of the table sits the farmer himself, a picture of good humor and content, while opposite, Mrs. Brown, a benevolent, bright-faced old lady, smiles benignly upon her husband and the children on either side, It is unnecessary to give a detailed description of the good things spread upon that table. Farmer Brown was something of an epicure in his way and any one stopping at the farm-house when unexpected, for a meal, would fail to find the fare set before him what is supposed to constitute the regimen of the farmer's table. The conservative pork and beans with a beverage of weak tea was tabooed from the snowy linen cloth, and fresh eggs, chickens well cooked, vegetables and fruit were found in their places.

Alice Brown, the farmer's only daughter had received a systematic course of instruction in a culinary school and by the knowledge there obtained was enabled to prepare numerous strange but luscious dishes, seldom called upon to grace the farmers' table.

"I saw Robert Edwards in town to day," Farmer Brown said, as he leisurely pared a large golden-checked peach, when supper was over and the dessert placed on the table by Alice, "and he told me something about himself which I can hardly believe. What do you think it was, Alice?" glancing at his daughter with a merry twinkle in his gray eyes.

"I'm sure I haven't the slightest idea," the young lady answered demurely, although a vivid crimson mantled her cheek immediately.

"I know," cried Master Tom, the farmer's youngest boy, not so much taken up with the cluster of grapes with which he was engaged as not to notice the conversation going on about him.

"Well, what is it youngster?" Farmer Brown asked, with an admiring look.

"Why, he wants Alice to take to the city and and make a grand lady of her. I know; I heard 'em talking about it the last time he was here. He said he'd be awful proud of her down there in the big new house he's been a building."

"Ha! ha! boy, you hain't far out of the way after all, but that's only part of the matter. He wants Alice, but will not take her to the city. He is going to turn farmer and has asked me to find a suitable farm for him, and also to become his instructor."

"And why does Robert wish to leave the city?" Mrs. Brown asked, as she turned the RURAL she was reading and eagerly scanned the domestic department.

"Because," and Farmer Brown cast a furtive glance at Alice as he spoke; "he has make a mercantile life a failure. The money left him by his father has been reduced by ruinous speculations until he has but a scant ten thousand at his command. To save this little he has decided on investing in a farm and striving by industry and perseverance to retrieve his shattered fortunes."

"And what purchase do you propose to suggest to him?" asked Mrs. Brown nervously, for she knew that whatever home Robert Edwards furnished Alice was likely to share it with him.

"I had been thinking of the Martin farm," Farmer Brown answered slowly. "True, the place has run down badly under the present system of renting which has been practiced upon it; but it is for sale cheap, and I know of no place which possesses all the requisites of a first-class farm, or one which is so near our own;" and the genial old gentleman glanced quizzingly at his eldest child seated at the head of the table, for Alice had long since relieved her mother of this duty, the twinkle of his gray eyes plainly showing his approval of the union sure to follow.

"I see no reason why this should influence you,' Alice answered, demurely.

"But I do," Farmer Brown answered, decidedly; "and I shall write to Robert this evening and tell him of my decision. You may expect the young gentleman at any time," he added to Alice, as he took his hat from the peg behind the range and started for the barn. Farmer Brown was a wealthy man in the general acceptation of the term, yet he trusted to himself alone for the management of the "chores."

The "Martin" farm, of which Farmer Brown had spoken, consisted of one hundred acres of what had once been a fertile, productive soil, but the former owner had left it some ten years prior, and from that period it had received such care and attention as farms generally do that are worked by non-residents on shares.

How this farm, under the careful suggestions of Farmer Brown, was brought up to a state of great fertility; how Robert Edwards, the old farmer's son-in-law, retrieved his fortune on the farm, we intend to tell the reader in a series of articles. That they may meet the expectation of the reader and the approval of all farmers we sincerely trust.

WORK UNDONE.

M. B. E.

Only a soiled, tangled mesh of threads, knotted, snarled and broken; tossed hither and thither by the careless passers by, seemingly a worthless thing.

In their eager search for scientific knowledge of the unknown men pass it heedlessly by, never thinking that within that filthy mass may be imbedded some gem of untold worth.

Perhaps some chance poet may discern its gloomy resting place amidst the scum, and in after time sing a doleful song in memory of its wretchedness; or it may be that some sneering cynic may point it out, and in bitter sarcasm rail at humanity in general for its neglect.

But poet, cynic, and philosopher, alike pass on their way and the sin-stained snarl in Satan's web is none the better for the songs breathed above it, the bold, brazen satire hissed about it, or the utter neglect of wisdom to aid it.

There it lies, trodden deep in the mire, and each passing hour only adds more and more to the deep incrustations of foulness that clothe it; but see—out from the common rabble comes one filled with more than a poet's enthusiasm, and clothed with a truer coat of mail than that of the sarcastic cynic. This one, whose mind is filled with a wisdom beyond that of the most renowned sage of past or present times, plows his way through the dark, noisome stench of all impurities; and with a firm, but gentle hand, draws the object of his search out of its slough up on to the firm true earth again.

Then commences the struggle between right and wrong, honor and dishonor, justice and crime; but Christ's love triumphs at last; and in the glittering gem purified by his love, who can discern the faintest resemblance to the worthless snarl despised of all men? The soiled threads have been cleansed and made straight and now they form the warp and filling of a life that God has consecrated to Himself.

O, ye philosophers! in your search for wisdom's lore have a care for the souls that are perishing beside your pathway. In the slums of iniquity, that you can faintly discern far beneath your proud feet, there may be many a precious jewel crumbling into decay, for the lack of a hand to remove the rust that is slowly but surely destroying its brilliancy. These gems are necessary to complete the Master's diadem, and if you leave the work for other hands to do, what reward can you expect?

What matters it if some strange phenomenon in the atmospheric world should never be explained? God rules the universe, and He understands all the causes of what now seems strange to us; better that one famishing soul be fed with the bread of salvation, than that the workings of a dozen new planets be solved.

You may follow the trail of a comet across the sky, but you can not cause it to deviate one atom from its course. You can not form a planet and set it revolving around a sun of your own manufacturing; but you can throw light into the sunless hearts, and add new stars to Christ's train of followers. Better do the little that you can for Christ's sake, than to add untold renown to your name, as one of the world's sages.

O, ye poets, with your smoothly flowing words, would you put aside fame's crown of laurel to aid a sinful stranger, struggling in Satan's grasp? Your sweet songs of peace, harmony and love, may touch the heart of some partially enlightened mind; but to one steeped in crime, more than a poet's words are needed to rouse the manhood within him. The strong hand clasp must be given, and then you must not scorn to labor side by side with the one you would save.

O, ye cynic, with your crude, half-formed ideas of human nature and that nature's God, what right have you to ridicule other men's neglect? Is the work left undone more theirs than yours? Cast aside your bitter railings, and with bared hands hasten to the relief of your erring brothers. Leave to God the judging, and strive to forget your selfish opinions in the work before you.

Censure as we may, each class of men is necessary to the world's existence; but it is among the common people, we seek for Christ's retinue of workers. These pause not for the barriers Sin erects to block their way, but press on with bleeding feet. O'er stones and stubble, Christ leads the way; now rocky walls they scale, and there beyond lies a vast precipice over which many a one has met their doom; but on they go sustained by God's all powerful hand. These win the day, and on High they swell the throng at The Redeemer's feet.

Then do thy little, O fellow-worker, and cease repining for the fame and notoriety of renowned men. Yours is the noblest part of all if you but do your work without complaint.

Traveling on His Looks.—They were in a railroad car journeying to Chicago. On the opposite seat sat a man of commanding figure and brow, and thoughtful expression.

"What a fine countenance, James; I wish I knew his occupation."

"Maybe he is a lawyer."

"There's too much benevolence in his face for a lawyer."

"He may be a banker."

"Not a bit of it; a man with such a heavenly expression couldn't content himself with money getting. His aim in life is higher than that."

"I guess you are right, Amelia; I'll take your word and his for it."

At the next station an inquisitive farmer took a seat beside the stranger with the noble brow and asked him about his vocation. Amelia held her breath and listened to the reply. It was this:

"I keep a saloon and a meat shop. My wife sells beer and I do my own butchering."

SCRAPS.

What you cannot avoid learn to bear.

You are better employed in drying the tears of others than in shedding your own.

Bustle is not industry any more than imprudence is courage.

Gratitude is the music of the heart when its chords are swept by kindness.

There are many shining qualities in the mind of man, but none so useful as discretion.

The moment a man is satisfied with himself, everybody else is dissatisfied with him.

NEW PUBLICATIONS.

Brain and Mind. By Henry S. Drayton, A. M., and James McNeil. Illustrated. Extra Cloth. One vol. 12mo, pp. 334. $1.50. New York: S. R Wells & Co., Publishers, 737 Broadway.

On the title-page of this new volume is a sentiment which has a peculiar appropriateness, we think, in such a place, viz: "The greatest friend to Truth is Time, her greatest enemy is Prejudice, and her constant companion is Humility;" for with the lapse of time since Gall proclaimed first his new doctrines of mental philosophy, those doctrines have steadily won their way into popular belief, and that in spite of prejudice, bigotry and conservatism. The literature of Phrenology is extensive, far beyond the conception of those who have not given the subject personal consideration, being spread through a hundred or more volumes of magazines. European and American, and represented otherwise by hundreds of treatises on the whole, or departments of the subject. It must be said, however, that within the past ten years or more no volume has been given to the world which presented a comprehensive view of the science and discussed its principles, not only on their philosophical side, but also on the side of their practical relations to the every-day life of man. It was a recognition of such facts as these that set the authors of "Brain and Mind" to work, to prepare this treatise.

A careful examination of this well-written and beautifully illustrated work must convince any one that the aim to be "explicit and clear in its definitions" and at the same time to render its teaching "thoroughly practical" has been kept steadily in view. Whether a reader be inclined to believe Phrenology or not, he must find the volume a mine of interest and gather many suggestions of the highest value, and rise from its perusal with clearer views of the nature of mind and the responsibilities of human life. The work constitutes a complete text-book on the subject.

Chart of English History. By E. M. Lawney. The chart is 24x29 inches, printed in two colors, with chromatic border, and handsomely mounted. Price, $1.00 per copy. Claxton, Remsen & Haffelfinger, publishers, 628 Market St., Phila. Pa.

The purpose of this chart is to present, in a simple and comprehensive manner, the most important and suggestive facts in English history from the time of the Normans to the present day. The central figure represents the sovereigns of England in the order of their succession, the date of accession, and years of reign, and forms the nucleii around which are gathered the data of contemporary history; the matter being so disposed as to give the reader an intelligent view of the social and political condition of any given period in the briefest practicable space. As an aid to further study, and as a reference map it will be of special use to those who do not possess the books from which it was compiled, or who have not time for individual research. *It can be used with any English history.*

The Interoceanic Canal and the Monroe Doctrine. A handsome little book published by G. P. Putman Sons, New York:

It will prove of special interest just at this time when the project of connecting the Atlantic and Pacific oceans by a canal is being discussed. It contains a history of the several surveys and projects that have been made, and reviews the bearing of the Monroe doctrine upon the subject.

NEW BOOKS.

About Grant. By John L. Swift. Red Cloth-Paper Title, $1.00.

Kings in Exile. Translated from the French of Alphonse Daudet, by Virginia Champlin. 12mo, cloth, $1.00. Paper 50c.

Hal; The Story of a Clodhopper. By Wm. M. F. Round, Author of "Achsah," "Child Marian Abroad," &c. 12mo, cloth, $1.00. Paper 50.

Arithmetic for Young Children. By Horace Grant. American Edition, edited by Willard Small. Small 4to, cloth, 30c. net; by mail, 35c.

Works of Virgil. Translated into English Prose by Prof. John Conington, late of Oxford University Cloth, $2.00.

Six Popular Tales. Second Series. Selected and arranged by Henry Cabot Lodge, and authorized for use in the Boston Public Schools. Stiff paper covers, 20c.

The Prize Speaker. Edited by Geo. M. Baker Uniform with the "Handy Speaker." Cloth, $1.00.

Reading Club No. 8. Edited by Geo. M. Baker. Uniform with Nos. 1, 2, 3, 4, 5, 6, and 7. Cloth, 50c.; paper, 15c. Lee & Shepard, Publishers; Boston.

MAGAZINES FOR APRIL.

The Herald of Health: Contents:—The Secret of a Clear Head, by J. Mortimer Granville; How to Grow Old, by Dr. T. L. Nichols; The Hot Springs of Arkansas, by S. O. Gleason, M. D.; Rice; Two Ways—The Lounging—Reaping; Letter from Superintendent of Cooking School, Raleigh, N. C.; Getting Help from our Habits; Cold Water in Chronic Diarrhea—Bee Stings; Rats—Neglect of the Eye. Studies in Hygiene for Women.—The Telegraphic Disease—Potatoes and Diptheria; How to Apply a Fomentation—A Hint to Mothers—Danger from Eggs; A wise Cook—Dried Pears—Oatmeal Bread—Fruit Gems—Current Literature; Health Foods. This magazine is well worth a reading.

Eclectic Magazine.—Contents: The Reign of Queen Anne; On the Pedigree of Man. Dialogue between a Clergyman and a Physician; Paganism in Paris; What is Jupiter Doing? An Arcadian Revenge; Dirge. (After Herrick); White Wings: A Yachting Romance; Alpine Flowers and Birds; Henry Thomas Buckle; Jemmy Blinker. (A Poem); Mademoiselle De Mersac; A White Rajah; My Journal in the Holy Land; A Treasury of English Sonnets; A Night Watch; Professor Simon Newcomb, with portrait; Literary Notices; Foreign Literary Notes; Science and Art; Varieties. With this issue the usual standard is preserved.

Demorest's Monthly.—This number is of usual interest. It contains intelligence from abroad, including a thorough knowledge of the requirements of a refined and elevated taste at home. It includes literary matter as well as fashion, and is prefaced with three engravings, Only a Little Bite, Purity, and Blind Man's Buff.

COLORADO RAILROADS AND RAILROAD TRAVELING.

BY L. G. CALKINS.

* * * * * * * After a very grave council, it was agreed to take the Chicago and North-Western and Union Pacific Railroads to Denver, at present the booming city of this country, if not of the world.

At 10:30 A. M., we were most comfortably seated in one of the celebrated, and I may say world-renowned, hotel cars of the Chicago and North-Western Railroad, and, of course, our first topic of conversation, as it seemed to be with every one after being seated for the first time in really a palace hotel on wheels, was to discuss the situation.

We had heard of these magnificent hotel cars run only on this road, but must frankly confess had never fully understood the maximum amount of comfort and luxury in railroad traveling until this trip from Chicago to Council Bluffs. The interior construction of the car is simply exquisite, and for neatness in appearance and order in all its arrangements there is, perhaps, nothing on this continent its equal.

It being nearly noon when we embarked, we did not have to wait long to have our curiosity gratified as to the arrangements of the culinary department of this institution. An Englishman sitting just opposite us, after enjoying a sumptuous repast in the most leisurely manner, exclaimed: "This way of traveling is simply perfect." We ate as long and as slow as we pleased of food evidently prepared with more than ordinary skill.

Meals are served on the European plan—pay for what you have—so that a traveler does not pay seventy-five cents for a cup of tea and a little toast.

But one of the marked features and crowning characteristics of this road is its *safety*.

The rapidity with which a train of cars moves very naturally suggests the idea of danger to one not accustomed to such rapid traveling.

I had heard the statement that the Chicago and North-western Railroad was the safest in the country. Whether that be true or not, Mr. Editor, I observed two or three facts which I deem it proper to refer to in this connection, for *safety* in railroad traveling is a consideration of no small moment.

First, the road-bed seems to be a perfect one, with steel rails the entire distance from Chicago to Council Bluffs, hence its firm and substantial character is very readily realized as the train passes over it.

Another feature I noticed was the most perfect condition of the cars run on this road. The coaches all had the appearance of just coming from the shop, and seemingly in the most complete order for service and safety.

Another feature of safety was the kind of men

employed to run the trains. They were evidently not of ordinary stock, but were selected as men worthy to be trusted with the lives of hundreds and thousands of people. There was an air of business and stability about them that gives a traveler a feeling of trust and confidence.

Mr. Editor, I have been thus specific on the question of the safety of this road, for this is one of the first things that a traveling public desire to be assured of, and I am satisfied that the company controlling this great and important line spares no pains or expense to make this feature of their road all the public can ask or demand, and this is why this road is so nearly or entirely free from reports of accidents.

In going westward we passed through some of most interesting portions of Iowa in the night, but in returning had a fair opportunity to see some of the finest country in the world in that State along the line of this road.

At home and abroad, Iowa stands as one of the finest farming States in the Union, and the broad acres of growing crops are certainly a rich feast for the eyes. The fields of corn were simply immense, and the herds of fine cattle indicated great thrift and prosperity. And the general appearance of houses, barns, yards, shrubbery, etc., showed that men of enterprise and intelligence had sought and were beautifying homes in this land of plenty.

After a most agreeable ride of less than twenty-four hours, we arrive at the Union Pacific Railroad depot, one of the liveliest and most interesting places in all Cristendom, about 9:30 a. m.—The Investagator.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE KITCHEN CLUB.

MRS. ANNIE L. JACK.

We always have a little dread of meeting in "club" at Mrs. Peter Rosevelt's, for although gossip is strictly forbidden, she is a self-established censor among us, with a faculty for making people feel quite uncomfortable at times, without meaning any harm. But her kitchen is a model of neatness, the stove shining in brightness, the tins never dim in their polish, and everything to match. But, then, Mrs. Roosevelt is a widow and lives quite alone in her neat little cottage, owning it, and also the well kept garden and poultry house behind it—which she keeps with trim care, and order. We had custard for tea, the top of which was very prettily festooned with white of egg beaten to a froth and just set into the oven for a moment. Her cake was "Sponge citron cake" and was made as follows: six eggs well beaten and the yelks strained; two cups of sugar; half a cup of butter; two cups of flour, or enough to make a batter; half a pound of citron cut into shreds and sprinkled in last, after being dredged with flour which prevents it sinking to the bottom. Beat up well. This makes two large loaves to which, as a recommendation, I may say we all did justice. The subject under discussion was kitchen work, and it was amusing to hear the different opinions of the members upon this never-failing subject. One lady who seemed to despise her position, spoke at length disparagingly of housework. "*Her* hands were never intended for dish washing" and "it was coming *down* in the world to have to do it"—with like expressions which were convincing proof to any right-minded thinker that her ideas were warped and distorted by the decrees of fashion. I knew she was not one to value her time on account of any intellectual employment; that her reading comprised only the novels of the day, and that her hands were not engaged in any noble work. But it was not fashionable to work, and being unable to keep a servant she made the lives of her family and friends unhappy by repeated complaints. When called upon for an opinion, I said, "Let me simply repeat my favorite and oft-quoted lines, of George Herbert, that ought to be written up in letters that would never fade, for our daughters to read and remember:

"A servant with this clause
Makes drudgery divine—
Who sweeps a room as to thy laws,
Makes that and th'action fine."

"But I don't *like* drudgery" sighed little Miss. Whitand, "especially stove cleaning and Ma is so particular." Then some one turned to our hostess and asked her opinion, complimenting her on the bright polish her's had obtained. Mrs. Roosevelt told us that she bought a polish that was rather expensive, paying 25 cents per packet for it; that her chief secret in stove cleaning was to keep it clean, never allowing the dingy burned redness that requires hours of labor to overcome. Mrs. Welsh gave us some useful hints on dish washing, advocating a rack where the hot, rinsed plates will dry without much aid from a towel, and another lady spoke of the value of old newspapers to brighten windows. Our hostess was eloquent in praise of old-fashioned ideas, and strongly condemned the prevalent notion entertained by young girls now-a-days that their hands are only to be kept for piano playing, leaving all the nice household duties to devolve upon ignorant imported help.

Miss. Lothian asked if one was to be reconciled to hard tough hands that could not "play with ivory keys"—or pick up a skein of floss silk without its being likely to stick to them like a burr? Then our good friend Miss. MacGregor took up the reply and suggested that Bridget's wages be employed in procuring labor-saving machines; that young girls who pride themselves upon their hands are not to be blamed, but should be careful to dry them thoroughly before exposure, especially in cold weather—and always to keep clean holders for lifting anything rough or hot, which habits, with free use of glycerine soap, will tend to check the hardness complained of. Old gloves for sweeping, are not much trouble to put on, and the happiness of many a family would be increased if its younger members took a *pride* in attending to the duties of housekeeping. Elevate your work instead of feeling that you are descending to it, which is a distorted way in which to do "whatsoever thy hands find to do." We thought further comment unnecessary so we thanked our kind friend for her advice and returned home strengthened by the talk.

CANNING TOMATOES, AGAIN—RHUBARB JAM AND JELLY.

MARY WAGER-FISHER.

Mrs. A. B. wonders that any lady should can her own tomatoes when she can buy them for eight or nine cents the quart can, in tin, as she thinks it is cheaper to so procure them. I don't agree with her as to the cheapness for most families. And then, cleanliness is an important item with me. I have heard such dismal tales of what happens sometimes to tomatoes in canning factories, that I prefer to have my own put up at home. As to the sourness of much of my own supply of canned tomatoes, I am convinced that the fault lay in the fruit itself. It had ripened when the season was nearly over, and was not fit for the purpose. Not one of the cans has spoiled through fermentation. Every can is thoroughly air-tight. I know that jugs are good for tomatoes, but I like glass for everything of the sort, so that I can always see how it is "getting on." In putting up tomatoes, like all other fruits, it is always best to use the finest quality of fruit to be had, and never wait until the season is nearly over. Fruit that has matured and ripened while the sun is still hot, has a flavor and richness that none other has.

Rhubarb Jam and Jelly.

Rhubarb (pie-plant) makes excellent jam and a jelly of beautiful color and pleasant taste, that is very nice for serving with roast meats, or for filling paste, or sticking layers of cake together. Even by persons who are not fond of rhubarb, the jam or the jelly is relished, as the rhubarb taste is by no means pronounced. To make either, proceed exactly as with raspberries or currants. If one's stock of jellies has been exhausted by the winter's demands, rhubarb furnishes the material for a new supply; I like it quite as well as currant jelly. But there is no jelly equal to that made from the red raspberry!

WHICH IS THE BEST CHURN?

ELINOR BROOKS.

The subject under present agitation at our house is "which churn shall we buy?" After long consideration and careful reading of testimonials in favor of different ones, we had decided to send for one that had been extensively advertised, although we had never seen one of them in use; when, behold! in one of last week's papers comes a letter (with full signature) from one who uses that churn which says "It takes double the time that other churns do," and as we have just discarded a new one for that same fault, is it best for us to get this one? A burnt child dreads the fire, etc., etc.

A year ago when the old dash churn collapsed, we were much elated when we obtained a handsome-looking dash churn that was worked by a crank. It looked so nice, did not turn very hard, and the theory of its action seemed perfect—but it failed in practice. The testimonials agreed that it never took over 20 or 30 minutes to bring the butter, and when the cows were fresh we *did* churn a few times in half-an-hour, though the average time for churning was one hour. Through summer and fall the time gradually lengthened, until in the months of November and December the churning almost invariably lingered from three to four hours. If there is any other single annoyance in a housekeeper's experience as exasperating as that, I do not know what it is.

Of course, some one will say "The cream was too cold" or "you had kept it too long," or "the cows had poor feed," or "something was wrong." But there was no such cause for the long churning as we never churn, winter or summer, without testing the temperature of the cream by a thermometer. We churned twice a week and the cows, besides having nice, bright corn-stalks, were fed two rations daily of corn-meal. The "something wrong" was the churn. It simply had not force enough in it to work faster, and we proved that to be the trouble by using for three alternate times a churn borrowed from a neighbor, that brought the butter within an hour every time.

The respected man upon whom our churning-work sometimes devolves is not a profane creature, yet I will confess that the strongest exclamations I ever heard from his lips, were, while, with perspiration streaming down his face, he was with superhuman force keeping that churn in motion; and through fear that he might some time be overcome by temptation and actually burst out with a genuine "swear" in the presence of a child whose firmest faith is that "papa never does anything wrong," I have banished that beautiful churn to the realm of good-for-nothing machinery; in other words, to the wood-shed attic from which I most sincerely hope it will never be resurrected. Since its banishment we have borrowed a crank churn, such as have been used in this section, for more than 50 years. It brings the butter quickly, yet it has some objectionable qualities, and we would like something different.

There probably is no other that gives the universal satisfaction that an old-fashioned dash does, yet it is hard work to use a large one, and the aforesaid "gude mon" protests against the cruelty of making him wield a heavy dasher, if there is anything *easier* to be found. What shall it be?

Cure for Croup; Washing Fluid.

As soon as any symptoms of croup appear, give the child a mixture made of equal parts of wine of Ipecac, vinegar and strained honey. Give a teaspoonful of this once in five minutes until the child vomits. Put a flannel on the chest. The chest should be greased and heated for several nights. Care must be taken not to take cold.

A good washing fluid which will not injure the clothes may be made by dissolving one pound of potash in one gallon of water, add one ounce of ammonia, and one ounce salts-of-tartar. When you wash add one teacupful of this fluid, to a boiler of clothes. Soap must be added, and the clothes soaped on the most soiled places. The clothes should be soaked over-night. In the morning wring them out, and boil as stated above. SNOW.

Citron Preserves.

Pare off the rind, remove ends, and cut into small pieces. Weigh, allowing as much sugar as fruit. Boil first in clear water, just enough to cover the fruit, until the pieces are tender; take out and add to the water the sugar. Boil until quite thick, then replace the fruit with two sliced lemons to each pound. Boil 15 minutes longer. If the lady who asked for directions for preserving citron will try the above I believe she will be pleased.

MRS. A. E. L.

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News of the Week.

MISCELLANEOUS.

Monday, April 19, 1880.

An outrage was committed a short time ago at West Point Military Academy which has caused much excitement in military, political and judicial circles over all the country. A colored cadet named Whittaker was found one morning in an insensible condition, tied to the bedstead and bleeding from severe bruises. An investigation was made but it failed to reveal the perpetrators, who were supposed to be white cadets. A court was instituted, the interest spread, prejudices arose both for and against Whittaker, and political factions have taken advantage of the opportunity to construct theories on the subject and forward arguments that will further their own peculiar interests. President Hayes is determined to have fair play in the investigation and to this end sent the United States District Attorney to West Point to look after the matter. The perpetrators of the outrage have not yet been found..... Missouri is at present making a determined effort to attract a portion of the immense immigration that is now setting toward this country. A large convention of influential citizens was held in St. Louis last Friday for the purpose of divising the best measures possible to invite and attract settlers.....William L. Bates was hanged at Barnell Court House in South Carolina on the 16th, for the murder of Stephen H. Rush on last Christmas eve. .....Heavy rains and unusually high winds are reported to have occurred in Ohio in the latter part of the past week, which did great damage to property. At Harrisburgh, Pa., the disturbance took the form of a violent and destructive hail and rain storm.....During the past week 500 persons left Halifax and the neighboring country for the purpose of settling in the United States.....It is reported from Yankton, Dakota Territory, that J. M. Haworth, Indian Inspector, has concluded an agreement with the Lower Brule Sioux, by which the Chicago, Milwaukee and St. Paul Railroad Company is permitted to run through their reservation toward the Black Hills. Several chiefs are to go to Washington to celebrate the event. Mr. Haworth has gone to the Spotted Tail Agency to attempt a similar arrangement with the head chief of the Brule Sioux.....

The distinguished English astronomer, Richard A. Proctor, has lately been lecturing on astronomy to large and interested audiences in San Francisco, Cal....The weavers in the Hudson Cotton Factory at Hochelaga, Quebec, are on a strike and have shown great violence to a few of their fellow-workmen who did not join in the strike. The manager is threatened with violence, and they will not return to work unless their demand of 15 per cent. increase in wages is satisfied....The Philadelphia and Reading Coal and Iron Company and other kindred organizations, announce that at the collieries under their control work will be suspended during the three last days of this week and the week following.

AGRICULTURAL NEWS.

Monday, April 19, 1880.

Last Monday a prospectus was issued in London of a company for importing fresh meat from Australia, with a capital of $750,000.....The oleomargarine bill passed the Lower House of the N. Y. Legislature, without opposition on Tuesday last.....On Monday the 12th railroad rates eastward from Chicago were reduced five cents per 100 pounds on grain and ten cents on provisions to New York and proportionately to other ocean shipping ports.....Tulare Lake bed in Hanford, Cal., is five miles from where it was four years ago. On the land reclaimed by the change are found the remains of a corral and cabin, and irrigating ditches can be traced running in straight lines. Wheat is now growing on the bed of the old lake.....The Canal Board at Albany, N. Y. on April 13 adopted a resolution that the toll on foreign salt be fixed at 4½ mills per 1,000 pounds per mile; that the toll on domestic salt going east be reduced to ½ per mill per 1,000 pounds per mile. This is taxing farmers for the benefit of the Onondaga salt works ..... There were two inches of ice on many ponds in New Jersey last Monday, and a heavy snow storm about Montreal... ....The late frosts and cold snap caused some alarm in the peach districts of Delaware and Maryland, but the prospects of a good crop, it is said, were never better .....The Fish Commissioners have begun the distribution of 50,000 California salmon in the Delaware River .....It is urged that there should be a goat in every stable in which a large number of horses are confined. A goat will face a fire, a horse will not, but will follow a goat out of a burning building.....Prof Vennor says that May and the first half of June will be cold and wet, and that after that there will be clear and very dry weather until the end of the year..... The cicadula exitiosa, the new insect enemy of wheat and oats in the South is speeding rapidly. It is one-fifth of an inch long, yellowish in color of upper part of body with a blackish abdomen, and white wings....The Sydney Morning Herald says: "At present prime beef is not worth more than $3.25 per 100 pounds and the average price does not exceed two cents in the wholesale market." ....Heavy frosts on the 14th are reported to have killed the fruit crop about Petersburg, Va., and seriously injured vegetation ...The Erie Canal will be opened April 21 ...There are from three to four million bushels of grain in Buffalo awaiting shipment by canal; part of it is already loaded in boats. Loaded boats will not be allowed to start until there are seven feet of water in the canal.... The exports of cheese for the year ended December 31, 1879, were, from all United States ports, 137,141,427 pounds, vs. 139,249,276 pounds in 1878. ....The cotton crop of Texas is estimated at $57,000,000....Rust in the wheat crop is complained of throughout Alabama....There will be driven from western Texas this spring 301,000 head of cattle. ....It is said that the late cold snap in Northwest Texas killed from 15 to 20 per cent. of the cattle. ....The Agricultural Department values last year's crops at $1,984,430,000; those of the year before at $1,480,570,000, and predicts that those of this year will be worth a plump $2,000,000,000.....According to Senator Davis the Russian Government has spent $14,000,000 on agriculture in a single year against $200,000 expended by ours.... ....Chicago is to have a glucose factory with a capital of $650,000 and a capacity of using 15,000 bushels of corn a day.....Fine prospects for sugar and cotton reported from the South ..... A beef packing Co., at Rockford, Texas, packed 31,500 beeves last year.....Sheep shearing matches are now in order.....Four Professors of Cirencester Agricultural College, England, lately abandoned that institution and are now about to establish an agricultural college of their own at the farm of one of them, Professor John Wrighton, at Charford House, Downton, Salisbury. It is to be known as the South Wilts and Hants Agricultural College. The three associates of Professor Wrighton are Professors Church, Fream and our esteemed contributor Prof. J. P. Sheldon.....

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is increased 3 to 5 cents a pound by using Gilt-Edged Butter-Maker in churning—increases production 6 to 10 per cent. Reduces time of churning one-half. Keeps Butter from becoming "strong" or rancid. Gives a rich golden color the year round. Sold by druggists, grocers and general storekeepers. Send stamp for "Hints to Butter-makers," Address, Butter Improvement Co., Buffalo, N. Y.

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MR. O. H. P. CORNELL.

Dear Sir:—I planted 20 acres of Corn in drills, besides my garden Beans, with the Albany Corn and Seed Planter you sent me last year, in less than *two days*, to my entire satisfaction, Corn yielding more than my neighbors, say 60 bushels to the acre. I think the after tillage is easier and more satisfactorily done, than when planted in Hills or Checks, and shall try it again this year.

Yours, etc., H. D. ROBERTSON.

"WHAT will cure or relieve catarrh?" is a question which has been frequently asked us, and which we have answered to the best of our knowledge in these pages. In this connection we desire to call particular attention to the advertisement, in this issue, of Dr. Sykes's Sure Cure for Catarrh. Besides the numerous indorsements of its merits specified in the advertisement, we have it from thoroughly trustworthy private sources that it is working some wonderful cures of this disagreeable, persistent and dangerous ailment; so that we strongly advise all whose happiness is marred by it, to give this cure a trial.

Cause and Effect.

DISEASE never comes to us without a cause. Ask an experienced physician the reason and he will tell you it is something that inteferes with the working of the great organs. Kidney-Wort enables them to overcome all obstructions and preserve perfect health.

To produce real genuine sleep and childlike repose all night, take a little Hop Bitters on retiring.

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The delicate structure of the skin renders it sensitive to the slightest obstructions, whether arising from sunburn, dust, or the changing air and wind. **Burnett's Kalliston** is prepared expressly to remove these.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, April 17.

Baltimore.—WHEAT—Southern red at $1.25@1.27; do. amber at $1.30@1.33; NO 1 Md. at $1.30; No. 2 western winter red, at $1.27½. CORN—southern white at 52c.; do. yellow at 49@50c.; western mixed, at 47½c. OATS dull, but steady; southern at 43@44c.; western white at 42@43c.; do. mixed at 40@42c.; Penn. 42@43c. RYE dull at 88@90c. HAY firm; prime to choice Penn. and Md. at $18@20. BUTTER steady; prime to choice western packed at 23@25c.; roll at 20@25c. EGGS dull and lower at 10@11c. MILL FEED—The trading in City Mills stock is restricted by the limited supply, and the market is firm at $23@24 per ton for both Brown stuff and Middlings. SALT—The inquiry is fair and the market steady. We quote as follows: Liverpool Ground Alum at 95c.@$1 per sack; Fine at $1.60@1.75 for standard brands; $2.60@2.60 for Ashton's. Turk's Island is steady at 38@40 cents per bushel.

Boston—CORN quiet; sales of mixed and yellow at 56@58c; steamer and no grade at 55@56c.; mixed corn to arrive at 54½@55½c. OATS firm; sales of No. 1 and extra white at 48@50c.; No. 2 white at 47@47½c.; No. 2 mixed and No. 3 white at 45@46c. RYE at 92c. SHORTS, fine feed and middlings at $23@25. BUTTER—Western choice creameries 25@31c.; ladle packed, choice at 23@25c.; fair to good at 18@15c. HAY AND STRAW—Rye straw is in fair demand. We quote first quality coarse Eastern and Northern at $15@16 ₱ ton; poor and medium at $11@14. Rye straw $20@22 ₱ ton. ASHES are steady with small sales of Pots at 4½@4¾c. and of Pearls at 6@6½c. ₱ lb. LIME—Sales of 4,000 casks Rockland at 80@85c. ₱ cask. SALTPETRE—Sales of small lots at 6@6½c. ₱ lb; Nitrate of Soda at 4½c. ₱ lb cash. SEEDS—Calcutta Linseed is nominally $2 50@2 56 ₱ bushel. We quote Clover seed as selling at 6¼@7¼c ₱ lb for Western and New York; Timothy at $2 55@2.65 ₱ bushel; Red Top at $2 70@2 80 ₱ bag; Canary Seed at $2 45@2.55, and American Linseed $1 50@1.55 ₱ bushel. PRODUCE little or no change from last week's quotations.

Cincinnati.—WHEAT dull, weak and lower; No. 2 red winter at $1.13@1.14. CORN active and firm; No. 2 at 40½@40¾c. OATS dull; No. 2 mixed at 35@36c. RYE steady at 80c. BARLEY in fair demand; extra No. 3 fall at 92c. PORK firm at $9 80@$10.50. LARD quiet at 6.85c. Bacon easier. BUTTER lower; choice dairy at 22@23c.; choice roll at 18@20c. CHEESE—The receipts are light, but the supply is about equal to the current demand and the market is steady at 11½@12½c. ₱ lb for prime to choice factory. EGGS—The receipts have steadily increased and with only a moderate local demand the market was weaker and closes dull with free offerings of fresh at 9c. per dozen. ASHES—The offerings are light but there is not much demand. Potash is nominally quotable at 4½@5c. and Pearlish at 6@6½c. ₱ lb. SEED—The consumptive demand for Clover and Timothy and other grass seed has fallen off and prices are not much better than nominal. Clover is offered at 6½@7c. per lb and Timothy at $2.60@2.70 per bushel. There is a fair demand for German and common Millet at 90c @$1 and Hungarian Grass at $1 per bushel. Dealers buy Flaxseed at $1.35 per bushel.

Chicago.—WHEAT unsettled but generally lower No 2 Chicago spring at $1 10¾@$1.11 cash; $1.12⅛ May; $1.09⅜ June; No 3. do at 99c. CORN unsettled but generally lower, closing firmer at 35½@35⅝c. cash; 35⅞@36c. June; 36½c. OATS steady and firm at 29⅜c. cash; 30c. bid May; 29½c. June. RYE steady and unchanged at 71½c. BARLEY firm at 78c. PORK strong and higher at $9 90c. LARD unsettled at $6.77½@6 80c. BULK MEATS stronger; shoulders at 5 95c; short ribs at 6 10c. short clear at 6 35c. EGGS at 8½@9c. BUTTER remains dull, with prices weak and declining. Only a limited volume of business was accomplished at the prices given below: Creamery, 27@30c; good to choice dairy 22@26c; medium, 15@19c; inferior to common, 9@13c; roll, 13@18c; CHEESE.—Dealers report a fair seasonable demand, but, as is invariably the case at this stage of the season, values are weak and unsettled. Full cream, 14@15; part skim, 10½@11; low grades, 6@8c. SEEDS were slow and easy. Sales of timothy were reported at lower prices, and the demand was not very large, while a good deal of seed was offered. Sales were made at $2.20@2.53½. Clover was dull and unsettled at $3.75@3.80, and mammoth at $4 10. German millet was in better request, selling at 70c. and other millets and Hungarian were firmly held, the stock being light. Hogs packing, $4@4.24; light, $4.10@4.25; choice heavy at $4.40@4.60; market closed weak, with a good many unsold. CATTLE all except choice fat; lower; medium 10c off; shipping at $3.75@5.35; butchers' weaker; cows at $2@3.50; bulls at $2 20@3.20; stockers and feeders at $2 50@4 50. Sheep market steady; clipped at $4; good to choice exports at $6@6.50.

Detroit, April 16.—WHEAT depressed; No 1. white Michigan at $1.15, spot, April and May; $1.14 5-8 June. CORN quiet and steady. No. 1 yellow at 42¾c; high mixed, 42½c.; No. 1 mixed at 42½c.; No. 2 do. at 42c. OATS dull: No. 1 white at 37½c; No. 2 do. at 35½c.; No. 1 mixed at 35½c.; No. 2 do. at 35c. CLOVER SEED very firm and in active request; No. 2, $3.50; prime at $4.12½.

Louisville.—WHEAT quiet at $1.10. CORN steady; No. 2 white at 42½@43c.; do. mixed at 40@40½c. OATS easy; No. 2 white at 37c.; do. mixed at 37c. RYE steady; No. 2 at 80@83c. PORK quiet at $11.50. LARD quiet; prime steam at 7c. BULK MEATS steady; shoulders, 3¾@4c.; clear ribs at 6 20@6 25c; clear sides at 6 50c. BACON quiet; shoulders at 4¾c; clear ribs at 6.80c; clear sides at 7.10c. Sugar-cured hams at 9@10½c. FIELD SEED—Clover and bluegrass seeds are higher. We quote, delivered from store: Timothy, $2.70; orchard grass, $1 40; red top, 65c.; clover, common red at $4 25, and sapling at $4.50; blue-grass, clean, 55c.; extra clean, 75c. FLAX SEED, $1.40 per bushel on arrival.

Milwaukee.—WHEAT—No. 1 Milwaukee hard at $1.18; do. soft at $1.10; No. 2 Milwaukee, $1.07½. CORN quiet at 35½c. for No. 2. OATS scarce and firm at 30c. for No. 2. RYE firmer at 71c. for No. 1. BARLEY dull; No. 2 spring, 65c. PROVISIONS—Mess pork dull at $9 80 cash and May; $9.95 June. LARD—Prime steam at 6 75c. LIVE HOGS dull and lower at $4.15@4 30.

New Orleans.—CORN quiet at 49@55c. OATS steady at 42c. HAY in fair demand and higher; prime at $22@23; choice at $25. COTTON firm; middling, 11⅞c.; low middlings, 11¼c.; good ordinary, 10⅞c.

PHILADELPHIA—WHEAT dull; $1.29½ bid, $1.31½ asked for April; $1.25½ asked for May; $1.23 bid, $1.24 asked for June; $1.12½ bid, $1.13½ asked for July. CORN dull at 49½c. bid, 50½c. asked for sail mixed for April; 47c. bid, 47¾c. asked for May; 45c. bid, 46¾c. asked for June; 46½c. bid, 47½c. asked for July. OATS—42¾c. bid and 45c. asked April; 41½c. bid and 42½c. asked May; 40¾c. bid and 41¾c. asked June. PROVISIONS quiet. City mess beef at $13; beef hams at $17. Mess pork in car lots at $11.50@11.62½; extra prime at $9. Smoked hams at 9½@10½c.; do. in salt and pickle at 7¾@9c.; clear rib sides smoked at 7¼c.; do. in salt, 7c.; shoulders in salt, 4¼@4½c.; do. sugar-pickled, 5@5½c.; do. smoked, at 5@5½c. Dressed hogs at 5¾@6½c. LARD—Western kettle at 7.62½@7.75c.; do. steam, loose, at 7.35c.; butchers' at 7c. BUTTER steady; creamery extra at 28@30c.; Bradford county and New York extras at 26@27c; Western Reserve extra at 23@25c.; do. good to choice at 18@22c; rolls at 20c.; Penn. extras at 20@22c.; Western Reserve extras at 21@23c. EGGS easier and steady; Penn. at 12c.; western at 11c. CHEESE scarce and wanted; New York factory at 15@15½c.; western full cream nominal; do. good at 13@13½c.; do. half skims at 11½@12c. SEEDS—Clover was a shade firmer at 6¾@7¼c. for fair to choice, the latter asked, but we heard of no business except in a small way. Timothy was dull at $2.75@3 for fair to prime. Flax was held at $1.85, without buyers.

St. Louis.—WHEAT unsettled No. 2 red fall at $1.08½@1 08¾ cash; $1.09@1.09⅛ May; $1.05 June; closing at 95¾c. July; No 3 do., $1.04½ bid; No. 4 do at $1.00½. CORN 32⅝@32½c. cash; 32½c April; 32¾@33⅛c. May; 33⅜@33⅝c. June; 33½c. July. OATS lower at 29½c. bid cash, 30c. May; 30¾@30¾c. June. RYE dull at 69c. bid. PORK dull at $10.10 cash and June. LARD nominally 6.05c. BULK MEATS firmer; shoulders at 3.75c; clear ribs at 5.95c; clear sides at 6.10@6 15c. BACON firmer, shoulders at 4½c. clear ribs at 6.75c, clear sides, 6 95@7c. SEEDS Clover, red $4.10@4 25; sapling or mammoth $4.75; Timothy $2.25@2.40; Kentucky blue grass clean, 75; extra clean, 85; Orchard grass, $1.75@2; Red top or herd grass 56@65; Hungarian 89@90; Millet, common, 75; German 80@90; Buckwheat, 90@1.00; Flaxseed, $1.40@2.

Fertilizers.

Bone ash is nominally quoted at about $22 per short ton, on the basis of 70 per cent phosphate of lime. Bones quoted at $22 50@$23 for Texas and South American mixed, and $25@$26 do. for shin and shank bones. Refuse bone black at $21@$22 per short ton on merit. Sulphate of ammonia at 3½c. ₱ pound on the basis of 26 per cent. of ammonia. Dried blood at $2@$2 30 per unit of ammonia short ton. Alumonia, axonine, etc., for the former at $2 62½@$2 75 per unit of ammonia, and about $2 25 do. for the latter, all short ton. Nitrate of soda, 4½c. Saltpetre, crude 6¼@6¾. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent. ammonia, $35@$40; dissolved bone black, 15 to 17 per cent. of soluble phosphoric acid $30@$35; dissolved bone 13 to 14 per cent. of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent of soluble phosphoric acid, 3 per cent. of potash, 3 per cent. of ammonia, $40@$45; German potash salts, 25 per cent. of sulphate of potash, $15@$18 per ton; muriate of potash, 80 percent, 2@2½c per lb. land plaster 7.50; dried blood, 10 per cent of ammonia, $35@45 per ton; fish guano dry and ground fine, 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $45; unground fish guano, 6 per cent of ammonia, $25; castor pomace; $19@24; sulphate of soda ground, and in barrels, $15@18 per ton; sulphate of ammonia 4½c. ₱ lb; bone black, 70 per cent of bone phosphate, $30@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $20 per ton; No.1 Peruvian guano, 10 per cent ammonia, standard, $55 per ton; Lobos $46 per ton; rectified $65 per ton; guaranteed $56 per ton; nitrate of soda, 5¼@5½ ₱ lb.

FORRESTER'S potato manure, $47 50; cabbage, $50; oat, $47.50; lawn dressing, $47.50; turnip, $52; grass, $45; hop, $47.50; strawberry, $42 50; wheat, $45; rye, $47.50.

STOCKBRIDGE'S manures quoted: Potato, $50; cabbage, $50; strawberry, $40; corn $45; seeding down, $40; orange tree, $35; onion, $50—per ton each.

MAPES'S complete manures for clay soil, $25.50 per 1,000 lbs; for light soils $25 50 per 1,000 lbs.; "A" brand for general use, $20 per 1,000 lbs.; fruit and vine, $18.50 per 1,000 lbs.; cabbage and cauliflower, $23.75 per 1,000 lbs.; corn, $21 50 per 1,000 lbs.; potato, $24 per 1,000 lbs.; asparagus, $25.50 per 1,000 lbs.; gypsum, Nova Scotia, ground, ₱ ton, $7.50.

BOWKER'S "Hill and Drill Phosphate" $45; Bowker's Phosphate $40 ₱ ton, cash; Bowker's "Food for Flowers," 35c. ₱ package and $3 ₱ doz; Bowker's "animal meal for fowls," $2 50 per cwt.; Ground oyster shells, $1 ₱ cwt.

BAUGH & SONS' prices for goods delivered at depot or boat, in bags and in 2,000 ₱ lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36; Baugh's raw bone superphosphate $40; Baugh's $25 phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent. of ammonia, $48.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, April 17, 1880.

BEANS AND PEAS.—Light receipts of beans, and the fact that the stock here does not exceed prime 12,000 bbls, gives the market a firmer and prime marks of standard white varieties are quoted with confidence. Red kidners are neglected. Black or turtle soup beans in moderate offering and very firm. Green peas steady at $1.75@1.80, with some recent arrivals. Southern B. E. peas, per 2 bu. bag $1.90@2, with sales. Marrow beans, prime, $1.55@1.60 other, $1.45@1.55; medium beans, prime, $1.40; other, $1.25@1.35; pea, $1.45@1.55; white kidney, $1.55@1.72½; red kidney, choice, $1.40@1.50; other, $1.25@1.35, black, $2.05@2.10; California Lima, $5@6

Receipts of beans for week, 720 bush.; exports, 775 pkgs.

BEESWAX.—Small sales at 24@25c. for Western and Southern.

BUTTER—New has had a light arrival for most of the week, and a day or two of really winter weather put considerable temporary back-bone in prices. Old butter being entirely out of the way, receivers of fine trade marks of new are afforded a commanding position when supplies are, or may be shortened. At the close, trade is shaping for it's usual free selling spring movement for any style of stock that lacks fresh flavor, or is devoid of as good a body as can be obtained by weak butter-producing feed. Supplies are yet in small invoices and are mainly State—the West does not seem to have much to have much to spare for points as far eastward as ours. Creamery is weak as it is not enough ahead of carefully made dairy to give it precedence. During the week 30c. has been made but 2c. off from that for choice now represents a full price; several table and market grade of State and Western are quoted pretty close to each other.

Creamery choice, 25@28c.; fair to prime 21@27c.; poor 23@24c.; State, pails and hf. tubs, choice, 25@27c.; fair to prime 24@26c.; poor, 21@23c.; imitation Western creamery, 23@25c; dairy extra, 24@25c.; other, 21@23c.; do. factory extra, 24@25c.; other 21@23c.; very poor 12@14c.

Receipts for week, 17,050 pkgs.; exports, 3,346 pkgs, the latter mainly representing old crop.

CHEESE.—The market is moderately active, and with the small stocks prices are firm. Exports for the week, 14,800 boxes.

Quotations: 14½@15c.; good to prime at 13½@14½c.; fair to good at 13@13½c.; do. poor at 11½@12c. Ohio factory: Cheddar, fine, 14@14½c.; do., fair to good, 13@13½c.; flat, fine, 14½@14½ flat, good to prime, 13½@14½c.; flat, fair to good, 12½@13c.

Receipts for week, 5,361 boxes.

Exports, 5,524 do.

Liverpool cable, 72s.

Freights, 35s.

COTTON—has been depressed and freely offered at lower prices; latest quotations are for April, 11.76@11.77c.; May, 11.80@11.82c.; June 11.91@11.95c. July, 12.14@12.16c., August, 12.13c.; September, 11.81@11.81c; October, 11.39@11.41c.; November, 11.08@11.10c; December, 11.05@11.07c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	9¾	10	10
Strict ordinary	10⅜	10½	10⅝
Good ordinary	10⅞	11	11
Strict good do	11⅛	11¼	11¼
Low middling	11½	11⅝	11⅝
Strict low middling	11 11-16	11 13-16	11 13-16
Middling	11⅞	12	12
Good middling	12¼	12⅜	12⅜
Strict good middling	12½	12⅝	12⅝
Middling Fair	13	13⅛	13⅛
Fair	13⅝	13⅝	13⅝
STAINED.			
Good ordinary	9 11-16	Low middling	10⅜
Strict good ordinary	10 9 16	Middling	11 7-16

DRIED FRUITS—There is a moderate amount of trade and a steady market Quotations; North Carolina apples, fair to good, at 7½@8½c.; choice, at 9@10c.; fancy at 10@10½c; Virginia, at 7@8c.; N. Y. State quarters sliced at 7½@8½c.; patent evaporated, in cases, choice, at 14½@15c.; good and prime at 13½@14c; evaporated, choice sliced at 13@13½c., and good do. at 12@12½c. Evaporated peeled peaches, good to choice, at 27@28c.; North Carolina peeled, fancy, at 20c.; choice old at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7@8c.; do. quarters at 7@7½c. Pulled cherries at 17½@18c. Blackberries nominal at 8@—. Raspberries at 27@28c. Plums at 17@18c.

Exports for week, 100 bbls. apples.

EGGS.—Receipts for the week, 16,649 bbls.; do. last week 10,743 do. The market has lost the buoyant tone that it sounded at year last. The trade at this port has seen it has to divide demand with shade, new garden stuff and other spring produce. Supplies too have loosened to an unexpectedly large extent and sellers are generally trying to work down all the stock they can even at the reduced rates. This is advisable as sudden warm weather will do no good to any held parcels. There is but little fear of Canada stock competing at present figures.

Near Points, 13½@14c.; State and Penn., 11½@11½c.; Western, fresh, 11@11½c; Southern, do., 10½@10¾c.; inferior lots S. & W. 10@10½c.; duck, 17@18c.; goose, 28@30c.

FLOUR—Is in large receipt, and with increased pressure to sell wheat at lower prices, this market is affected.

Latest prices are $3.65@4 60 for inferior to fancy superfine State and Western; $4.65@4 85 for poor to very good extra State and Ioa and lines; $4 85@5.25 for very good to fancy do.; $4.90@4.85 for inferior to good shipping extra Western, and $4 85@5.25 for good to fancy shipping extra do.; inferior to very good extra wheat at $5.00@5.75, very good to very choice do. at $5.75@6.85 (fancy brands held at higher figures); red and amber winter wheat, inferior to fancy grade and family at $4.65@6 65; round hoop Ohio, $4.75@5 25; and trade and family brands of do. at $5.30@6.65, the latter rate for very choice; St. Louis at $4.75@6.65 for inferior to good extra; $5.65@6.75 for good to very choice;

Minnesota clear, inferior to very choice, at $4 60@6.00; Minnesota "straight." inferior to very fancy, at $5.15 @7.25, and patent inferior to fancy at $6.00@8.35.; unsound stock at from $2 75@5 25; city mill extra at $5.90@6.25 for fair to fancy West Indies; do. for England, $4.60@5.25 for poor to very fancy; do. trade and family extras, $6.25@7.00; do. for South America, $5 00 @6.50; No. 2 at $2.65@3.60 for poor to very choice.

FRESH FRUITS.—Exports of apples for week, 1,650 bbls. The stock of apples is almost out of store, and railroad receipts in good order are firm.

Extra Baldwins and Greenings $4.50@5; other $2.50 @3.50; russets, $2 75@3.25. Strawberries have rated higher, owing to diminished receipts. North Carolinas are poor as a rule, quoted 25@50c. ₩ qt.; Chas., best, 30@35c.; poor, 15@25c.; Fla., 15@30c. Cranberries, $3 75@4 50 ₩ crate. Quotations for Fla. oranges are no longer of use to producers, as no more commercial parcels are to come. Peanuts quiet but hold last prices; Va. hand-picked 5¾@6c.; extra prime, 5¾@5½c.; good to prime, 4¾@5½c.; shelled, 5½@6c. Hickory nuts, 90c @$1.

FURS AND SKINS.—Reports from the German sale have not had any favorable influence on the market here. Muskrat, a special shipment from this to the German market, sold at a bad decline. The domestic market is unsettled especially for late caught skins, and future business with shippers even for best furs will have to be made giving them a fair margin for carrying over.

GRAIN.—Wheat is freely offered and is lower latest sales are of No. 1 white at $1.29@1.30, do. April at $1.27¾@1.28¾; do., May, at $1.25@1.26¾; No. 1 white at $1.24; ungraded white at $1 25; No. 2 red at $1.32@1.33, do., do. April option, at $1.32@1.33¾; do., May at $1.29@1 30,do. June at $1.26¾@1.27¾; No. 3 red at $1.24; ungraded red at 1.24@$1.30; ungraded Minnesota spring at $1.26 in store. Rye is quiet at 90c. for prime State afloat. Corn is at a decline and moderately active; latest sales of New York No. 2, at 52@52¾c.; do., April, at 50¼@51c.; do., May, at 46¾@46¾c.; do., June, at 46¾c.; New York steamer mixed at 51¾@51¾c.; do.; April at 50¾c.; ungraded mixed Western at 51@53c.; New York yellow at 51¾c. Oats are fairly active and prices easy. Sales of No. 1 white 50c.; No. 2 white at 46@47c.; No. 3 white at 43¾@44c.; New York No. 1 at 41¾c.; New York No. 2 at 40@41¼c.; do., May, at 38c.; No. 3 at 40c.; ungraded white Western at 45@48c.; ungraded mixed Western at 41@42c.; white State at 47 @51½c.; mixed State at 41@42c.; No. 2 Chicago at 41¾c.

HAY AND STRAW.—Offerings are fair but demand good and prices steady.

Shipping hay quoted at 70c.; retail lots at 80@85c. for medium, and 85@$1, for better qualities; clover, 55@60. Straw at $1@1.05 for long rye; 65@70c. for short rye, and 50@60c. for oat.

Exports for week, 1,9.0 bales.

HOPS.—Trade continues slack and prices are unchanged. Quotations are for

	Cents per ₩.
New York, fancy	Nominal.
New York, new crop, good and choice	33 @38
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

MILK.—Prices paid to farmers for March were 2¾ @3¼c.

MAPLE SUGAR.—Demand good at 11@13½c. for cakes; refined Brattleboro, Vermont, exceeds these prices. Syrup, 75@$1 ₩ gal., in tin.

POULTRY AND GAME—Ordinary fresh-killed poultry has had a slow sale and the season is about over for shipments from remote points. Frozen poultry has lost its steady demand, chickens selling as low as 10c.; a few lots of fancy Vermont turkeys have made 20c. The trade, however, will soon run into its regular spring channel for near-point dressed such as Penn. and some shipments of N. J. stock.

Turkeys, choice, small, 14@16c.; medium, 13@14c.; fair to good, small, 13@14c; large, 10@12c.; Phila., dry-picked, 14@15c.; capons, Phila. large, 24@26c.; small, 22@23c.; slips, 18@20c.; chickens, winter, large, Phila., 24@26c.; small, 20@23c.; spring, per lb., 40@50c.; fall, Phila., d.-p., 18@20c.; yearling, Phila., d.-p., 14@16c.; Jersey, ₩ lb., 12@14c.; fowls, Phila., d.-p., 11@13c.; Jersey, good to prime, 11@12c.; State good to prime, 12@13c.; Western, good to prime, 10@12c., poor to fair, 8@10c. Ducks, Phila. d.-p., 18@19c.; Jersey, 11@15c.; State, 15@16c.; Western, 13@16c.; Western, poor, 10@ 12c.; squabs, white, ₩ doz., $2.50@3; dark, $1.25@1.75.

Live poultry are in moderate supply and bring fair prices. A few Southern crops have brought 11c. Turkeys barely steady.

Chickens, spring, large, per pair, 75c.@$1; small, 40 @60c.; fowls, Jersey, 12c.; Western, 11@12c.; roosters, 5@6c.; turkeys, mixed, 11@12c.; ducks, Jersey, N. Y. & Pa., per pair, 75c.@$1; Western, 60@75c.; geese, Jersey, $1 75@2; N. Y. & Pa., $1.50@1.75; Western, mixed, $1.12@1.37; pigeons, 35@45c.

Wild ducks have no decided price; buyers have dropped them on account of poor quality. We seldom sell up to May. The feature of the week is abundant supply of pigeons; prime, including Penn., 75c., poor, 50c.; Eng. snipe and plover, $1 50@1.75; sand snipe, 35@40c.

PROVISIONS—Have been freely offered at lower prices. Pork quoted at for new for April at $10 50; May at $10.50, and June at $10.57@10 60; July at $10.60@10.75. Bacon at 6¾ for long clear and 7¾ for short clear. Lard—Western steam at 7.25 for spot lots, 7.20@7.22¾ for May; 7.25 for April; 7.27¾ for June. Stearine at 7¾c. for prime. Beef—Extra India mess at $18@20 for city and $19 for Philadelphia and at $ 0.50@11 for extra mess, and $10 for plain mess. Tallow at 6.1-16 for prime.

Receipts for week, pork, 1,800 bbls.; beef, 250 pkgs.; cut-meats, 25,950 pkgs; lard 24,850 pkgs. Exports for do., pork, 4,500 bbls.; beef, 3,2.5 pkgs.; bacon, hams and shoulders, 9,705,850 lbs.; lard, 7,202,500 lbs.

SEED.—Clover is weak at 6¾@7½c. for Western and 7¾@8c. for State.

VEGETABLES.—Exports for week, 925 bbls potatoes. Low prices are the rule of potatoes this spring; it is too late for holders of even fine qualities to expect a turn in their favor. Prime new have fair demand.

Bermuda, new ₩ bbl. $5 50@6 50; Florida, new, Rose, $5@6, Chili Red, $3@4 50; culls, $2.25@3; Early Rose, N. S., bulk, $1.50@1.57. Maine, per d.-h. bbl., $1.75; State, $1,25@1.50; in bulk ₩ bbl. $1.25@1.50; prolific N. S. per d.-h. bbl. $1.25@1.37; in bulk $1.25@1.37; Mercer, bulk, ₩ bbl. $1.00@1.12; Chili Red, bulk, ₩ bbl, $1@1.12; Peachblow, State, white, per d.-h. bbl., $1.50@ 1.75; red, $1.37@1.50; Snowflake, State, $1.50@1.75; Peerless, State, $1.00@$1.12; bulk, $1; Jersey, bulk, 50@75c.; Sweet potatoes, ₩ bbl. $3. Green stuff has a fair demand but quotations prevent a large movement. The assortment is not attractive and that fact will promote business when the weather becomes settled. Carrots scarce and wanted. Tomatoes, Fla., ₩ bu., $2@4.50. Nassau, box, 50c.@$1, Bermuda, 50@90c.; beets Bermuda, new, ₩ crate; Fla., $ .75@2.50; cucumbers, Fla., $2.5 @4; wax beans, Fla., $3@2 50; string beans, Florida, round, 2@$2.50; flat, $1.50@2; squash, Fla., white, $1@1.50; green peas, N. C., ⅓ bbl. crate, $1.50 @5, Chas. and Sav., small, $2@2 50; large, $2@2.50; asparagus, Norf., ₩ per doz. bchs. $3@5.50; Chas., ₩ doz. bchs $3@5; kale, Norf., ₩ bbl., 50c.@$1.25; Baltimore, per bag, 40@60c.; kale, L. I. ₩ bbl., $1@1.25; spinach, Norf., $2.50@3.50; Baltimore, $2.00@2,50 radishes, Norf., round ₩ 100 bunches, 50c.@$1.25 long, $1@1.25; squash, marrow, per bbl., $1.75@2; Hubbard, $1.75@2; cabbage, Ch'n and Sav., $4.50@5; Fla., new, $4.50@5; onions Bermuda, new ₩ crate, $2 25@2.50; white, ₩ bbl., $4.50@6.00; yellow, $4.50@5.00; red, Eastern, $4.00 @5; beets, ₩ bbl., $1.50@2; turnips, Russia, 75c.@$1.25; carrots, $1.25@1.75. Hot-house products—Cucumbers, selected, ₩ doz., $2@2.25; do., seconds and culls, 75c.@$1.50; radishes, ₩ 100 bunches, $2@2.50; rhubarb, $5@7; lettuce, extra, ₩ doz., 50@75c.; fair to good, 25@ 50c; carrots, ₩ 100 bunches, $3 5.@4.

WOOL.—The market is much quieter and there is a weak feeling, more particulary on fine grades. Latest sales are of X and XX and above Ohio at 54@55c.; Iowa at 38–40c.; Mediterranean at 16c.; scoured California at 83@93c.; fall California at 27c.; Cape at 34@37c.; Montevideo at 50c.; Western Texas at 29@30c.; Territory at 32@36c.; Oregon at 45c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, April 17, 1880.

BEEVES.—Receipts for week, 13,101 head; do. last week, 9,244 do. A steady trade has ruled most of the week; prices worked up in the early part of it, as the weather was cold and favorable for butchers. Since Wednesday the dressed beef market has become dull and buying was not sharp at the prices, but a fair trade resulted by the close of yesterday at the following prices. Among the offerings was a 12-car lot of fair Texas stillers, which sold at 8¾@9c.; 7 cars of Colorado and native stillers, mixed, at 8¾@ 9¾c., to dress 56 lb., and 4 loads of Ohio stillers, at 9c., less 50c. each. A few rough oxen and thin steers were sold as low as 7¾@8c., to dress 55 lb., but common to fair steers brought from 8¾c. to 9c., to dress 55@56 lb., with good to choice at 9¾@10¾c., to dress 56 pounds—latter price for two car-loads for export alive. Fat corn-fed and distillery-fed bulls were sold at 3¾@4½c., live weight.

COWS AND CALVES.—Receipts were light and not of attractive quality, few selling above $40 and $20 is quoted for some. At this part of the year a number of good milkers would find purchasers, but the call for new butter, especially this spring, will be apt to keep good stock in the country. Good to prime fresh cows would realize $50@60 per head.

VEAL CALVES.—The market has suffered one of the surfeits incident to spring, and prices have ruled unprofitably low. Hog-dressed have lost most, and this week ought to wind up the shipments, as butchers can supply the wants of trade. Live calves, N. J. and Bucks Co., choice, 7c.; prime, 6@6½c.; State, choice, 6c.; do. prime, 5¾@6c.; fair to good, 5@5¾c.; poor, 4@ 4½c.; Mt. Holly, good to choice, 6@7¾c.; buttermilk, 3@4c.; grass, 2½@3c.; hog-dressed, N. J., choice, 8@9c; good to prime, 7@8c.; State, good to choice, 7@8c.; fair to good, 6@7c.; poor to fair, 3@5c.

SHEEP AND LAMBS—Receipts for week, 23,111 head; do. last week, 17,965 do. Sheep have also had a dragging week. The following were full prices at the close. Sheep at 6@7¼c., with a load of prime Michigan at $7.35. A car-load of coarse Illinois clipped sheep were sold at $4.50@4.62¾ ₩ lb., a small lot of common Ohio do., at $4 80, and a deck-load of prime do. at 5¾c. ₩ lb. Some unshorn yearling lambs were sold at 5¾@8¾c., a few clipped do. at 6c., and a number of spring lambs at $5@5 50 ₩ head.

SWINE.—Receipts for week, 34,100 head; do. last week, 30 207 do. Live dull at 4¾@4¾c.

Country-dressed pork is loosing its regular call, with warmer weather. Light weight, 7@7¾c.; medium, 6¾ @7c.; heavy, 6@6¼c., city dressed quoted on change, 5¾@6¾c.

TERMS FOR 1880.

THE subscription price of THE RURAL NEW YORKER is

Single Copy, per Year	$2 00
" " Six Months	1 10
Great Britain, Ireland, Australia and Germany, per Year, post-paid	$3 04 (12s. 6d.)
France, " "	3 04 (16¼f.)
French Colonies, " "	4 08 (20¾f.)

Any one sending a club of eight is entitled to one copy, one year, free.

Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City, N. Y., as second-class mail matter.

ADVERTISING RATES:

Inside, 14th and 15th pages (Agate space)..40c. per line
" 13th page.......... 50 "
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Fifty per ct. extra for unusual display.

Discount on 4 insertions, 5 per ct.; 8 ins., 10 per ct. 13 ins., 15 per ct.; 26 ins., 20 per ct.; 52 ins., 25 per ct.

☞ No advertisement inserted for less than $3.

SALT IS NECESSARY FOR LAND

Fruit Trees, &c. LUMP SALT is excellent for horses, sheep, &c. All kinds of salt in full supply; also, Ferris' Land Invigorator and Crop Protector—death to Hessian Fly and other pests. Use it and reap a golden harvest.

EDWIN FERRIS & CO., Wholesale Salt & Fish Dealer 183 & 185 Washington St., N. Y.

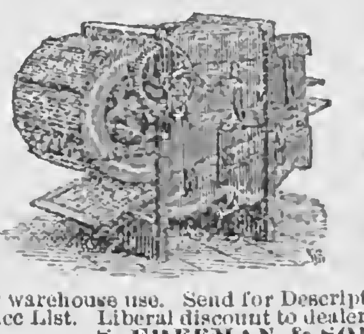
Eureka Drain Tile Machine

This Machine is substantial and durable in construction; simple in its arrangements; easy of access to its wearing parts; having STRENGTH THAT EVEN GROSS NEGLECT could scarcely BREAK,—leaving little to be desired as an EFFECTIVE TILE MACHINE.

We drive this Machine by either horse or steam power, being well suited to either. Our Tile dies range in size from 3 to 9 ins. in diameter; and in shape we vary them to suit the taste of customers. As a Brick Machine it is also a complete success. It is fully warranted as a Tile or Brick Machine. Send for circular.

CHANDLER & TAYLOR, Indianapolis, Ind.

The "Centennial" Fanning Mill.



The best mill in the world. It separates Oats, Cockle, and all foul stuff from wheat. Is also a perfect cleaner of Flax, Timothy, Clover and all kinds of seeds. The great improvement over other mills is that it has two shoes. It is especially adapted for warehouse use. Send for Descriptive Circular and Price List. Liberal discount to dealers. Address,

S. FREEMAN & SON, Racine, Wis.

Trade LONDON PURPLE. Mark.

Valuable insecticide for the extermination of the COLORADO BEETLE, COTTON WORM and CANKER WORM. For Prices, Circulars and opinions write.

HEMINGWAY'S LONDON PURPLE COMPANY, (Limited) 90 Water St., New York.

Professor C. V. Riley says: London Purple can be more effectually sprinkled or sprayed on to the plant than Paris-green, by virtue of its greater fineness.

Professor C. E. Bessey says: It promises to be a most excellent remedy. It quickly kills both the Larva and the Winged Insects.

Professor J. L. Budd says: A single application placed every one of the pests on their backs over the ground, either dead or in a dying condition, in less than six hours.

THE BELCHER & TAYLOR AG'L TOOL CO.

Manufacture this Plow of the *best Car Wheel Iron;* also of *Patent Hard Metal.* The handles vibrating from one side to the other as the plow is turned at the end of the furrow, enables the plowman to walk squarely behind the plow—a feature not possessed by any other Side-Hill Plow. It does as good work as any Land-Side Plow. For further particulars and prices send for our new *Illustrated Catalogue.* Address

GEO. S. TAYLOR, Agent, Chicopee Falls, Mass.

CHALLENGE WIND MILLS

Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merit. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.

CHALLENGE MILL CO., Batavia, Ill.

A TRIED AND EXCELLENT Superphosphate FOR $25 PER TON.

Analysis guaranteed as printed on every bag. LOWEST CASH PRICES for Goods of Guaranteed Standard.

SULPHATE OF AMMONIA (full strength, 25 per cent.) A SPECIALTY.

We will fill orders for Chemicals to make Home-Made Fertilizers by any formula our customers desire to follow, and we will take pleasure in furnishing estimates of cost on application.

BAUGH & SONS, 20 So. Del. Ave., Philadelphia. 103 South St. Baltimore.

STOCKBRIDGE MANURES For 1880.

Some years ago the Stockbridge Manures were only known to a few farmers in the Connecticut Valley. Now they are so extensively used in different parts of the country as to require two large factories, one in New York and one in Boston to manufacture them. This increase shows what farmers think of good fertilizers, and is not only due to the fact that they are reliable, well-made, and high-grade manures, but also to the fact that farmers have

FOUND THEM PROFITABLE TO USE.

Now that corn, and other farm produce is bringing such good prices, we anticipate that farmers will invest still more largely in our fertilizers.

Besides the Stockbridge Manures, we manufacture several high-grade Phosphates, and deal in first-class chemicals of all kinds. Farmers who intend to use Fertilizers of any kind, should

Send for our New Pamphlet,

which contains a large amount of reliable information, beside prices for 1880.

MAILED FREE TO ANY ADDRESS.

BOWKER FERTILIZER CO., 3 Park Place, N. Y. 43 Chatham St., Boston.

FARMERS about purchasing fertilizers and wishing to save from 100 to 2,000 per cent., can do so by sending stamp to GEORGE CASPER, M. D., Manatee, S. Fla.

BADGER STATE Butter Color.

Received the only honorable mention granted to any Butter Color at the International Dairy Fair of 1879. If not for sale by your dealer, send for circular &c. to the manufacturer, E. SHELDON, Fort Atkinson, Wis.

ANIMAL BONE FERTILIZERS.

Made from the BONE, BLOOD and MEAT produced in the Great Packing Houses in Chicago.

DISSOLVED BONE.

GARDEN CITY SUPER PHOSPHATE.

ANALYSIS— Ammonia, 2½ ₩ ct.; Sol. Phos. Acid, 10 ₩ ct.; Sulph. Potash, 3 ₩ ct.

The above Analysis is GUARANTEED, and we will forfeit the Goods if not as represented.

Our $25.00 Phosphate,

Analyzing 10 ₩ ct. Sol. Bone Phosphate, 2½ ₩ ct. Ammonia, produces most excellent results on CORN, OATS and VEGETABLES.

☞ EXCLUSIVE TERRITORY GIVEN DEALERS.

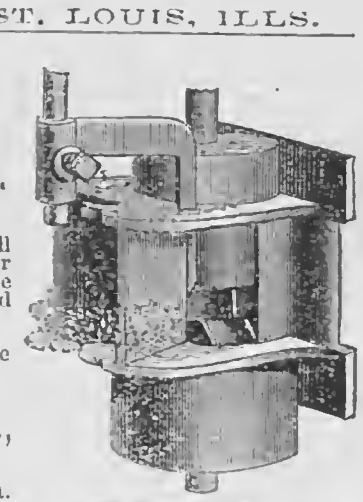
NORTHWESTERN FERTILIZING CO., FACTORIES AND OFFICE: CHICAGO, ILLS. EAST ST. LOUIS, ILLS.

PAXTON Force Feed Grain Drill.

Best Grain seed and Fertilizer Drill in the market. The cuts show our broadcast shovels set with steel to the middle of the boot, and the force feed attachment.

Highest awards at the Penn. State Fair in 1879. Send for circulars. Address,

Foundry and Machine Dept., Harrisburg Car Co., Harrisburg, Pa.



The "Oliver Chilled" Plow.

Nearly Half a Million in use.

Warranted to give Satisfaction.

THE LEADING PLOW OF THE AGE.

Sells Best Where it is Best Known.

Its superiority, attested by a host of worthless imitations. The name "OLIVER" will be found on the beam of the genuine.

OLIVER CHILLED PLOW WORKS, South Bend, Ind.

Branches at INDIANAPOLIS, IND., MANSFIELD, O., HARRISBURG, PA., DALLAS, TEX., ROCHESTER, N. Y. ST PAUL, MINN., ST. LOUIS, MO.

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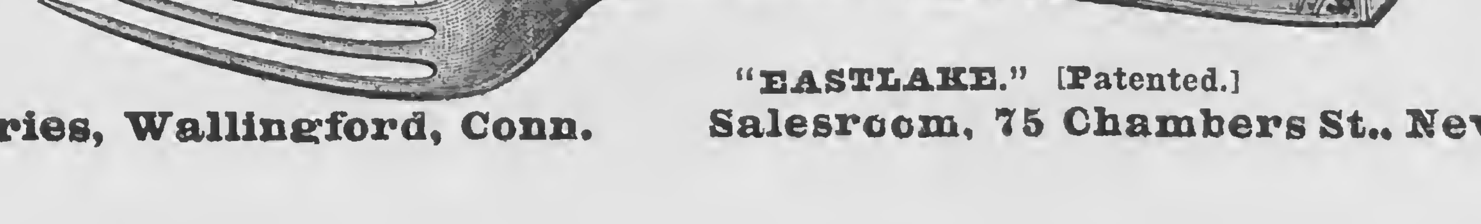

"EASTLAKE." [Patented.]

Factories, Wallingford, Conn. Salesroom, 75 Chambers St., New York

Reading for the Young.

FALL CREEK AND ITS PAPER MILLS.

NETTIE NORTHWOOD.

I HAVE lived all of my life within twenty miles of Fall Creek, and, until last summer, have never visited its falls or paper mills.

One warm morning in haying time F. came in and said that a part of the mowing-machine was broken, and as it could not be repaired short of the Ithaca manufactory, he must take one of the horses and the lightest wagon and start immediately. I petitioned to go, but they were all horrified at the thought of my riding forty miles in an open buggy that warm day.

But after the usual amount of coaxing I obtained permission, and, after giving out orders for a picnic dinner, hurriedly dressed and was ready by the time that F. drove up. Mamma came out with a lunch neatly packed, and in less than half an hour from the time we decided to go Trotter was whirling us over the road at his finest pace.

Our ride was mostly through a thickly settled, well cultivated and beautiful country. We could see hills in every direction. One large, though not high hill, could be seen several miles distant. At first it seemed to be before us, but gradually it moved to our left and finally disappeared. It was thickly settled, and its side was covered with fields of grain, beautiful meadows and groves of trees, the different shades of which combined to make it very beautiful. The farm-houses and barns could be distinctly seen. It seemed the veritable abode of peace and plenty.

We reached Ithaca soon after noon, having made the twenty miles in three hours and a half. F. transacted his business and then drove to the falls. The last fall is visible from the bridge, and while I was admiring it F. saw that Trotter was properly cared for, and then we began to climb the cliffs to obtain a view of the next fall. It is more beautiful than pen can describe, foamy and fleecy as a bridal veil. I do not know how far the water falls, but it must be more than a hundred feet, and the river is quite wide. We soon found that climbing over the rocks was a laborious task, which put a keen edge to our appetites, and accordingly we decided to eat our lunch at the end of the tunnel.

To reach the tunnel we were obliged to retrace our path, go through a large building, up a flight of steps, then follow an ascending path a short distance, when finally we were at the mouth of the tunnel.

This tunnel was blasted out of the solid rock, to let the water through that supplies the motive power for the paper, flouring, and various other mills. It is about twenty feet deep and between fifteen and sixteen rods long. There are spoils driven the entire length, timbers laid across, and on them a walk three planks wide. We enter, and over our heads and on either side, is one solid mass of rock, jagged and rough. In some places on the sides were niches large enough for statues. Under our feet ran the dark waters. The tunnel is slightly curved and for a time all is dark ahead, but soon a little light appears and grows larger until we are at the end. Half way across the opening is a wall of masonry, that rises about four feet above the walk. The other half of the opening is filled by the head gate, for this is the beginning of the flume. There are stones projecting from the wall which answer for stairs, and we climb to the top.

Before us lies a large pond. Far up and a little to the right, is another fall, resembling a mammoth snowbank. All around are cliffs, more than a hundred feet high, rough, rocky, tree-capped and nearly perpendicular.

The cliffs and the falls are in form of a horse-shoe, enclosing the pond. The opening is the dam. It is at our left nearly semi-circular in form, and, I think, about twelve feet high. F. tells me that it was once a little fall, but art has capped it with layers of board, that stones riveted down with iron rods.

The water was quite low and I walked nearly a third of the way across with as much comfort as though on a stone pavement. There I could get a fine view of the falls above the river below, the cliffs, and in the distance a glimpse of Cayuga Lake. Hunger was forgotten until I espied F. spreading the lunch out on the rocks in *man fashion*, and I felt obliged to go to the rescue. How strange it did seem to sit there with that majestic scene, God's own handiwork, before us. Long would we have been willing to linger; but there were so many places that we wished to visit, that we were obliged to turn away.

Just at the entrance of the tunnel, at the left as you are going in, is a deep chasm; one side is nearly perpendicular, and the other shelving; by giving a little spring from the plank walk we stood on the moss covered rocks. The chasm must be twelve or fifteen feet long, and by going to the end we could see the falls far below us. After making signs on the rocks, to be recognized if we ever revisited the place, we turned, and following the footpath commenced climbing the hill above the tunnel. It is very steep, and we were obliged to catch hold of the bushes and low branches of trees, to keep from sliding backwards, but one look at the falls from its highest point was ample pay for the fatigue of climbing.

While admiring the falls below us, we could see the upper ones so distinctly and it seemed so near that we resolved to visit it. So on we went over logs and rocks, through brushes and grass, until we could hear the roar distinctly, and soon we reached the edge of the cliff where an open view was afforded. The falls were still far up, but instead of one we could now see three falls, one beyond the other, making four in all. There may be more, but we were too tired to explore farther. After resting a short time, and gathering a few mementos, we turned back, carrying with us a grand picture to hang on "Memory's wall."

On reaching our starting place we found that we had another hour, and concluded that the most profitable way of spending it would be to visit the paper mills. Descending a short flight of steps we entered an upper room of the brown paper mill. It is a storage room containing enormous piles of rags in brown canvas sacks. I will not mention the rooms in the order we visited them, but will tell, as nearly as I could discover, the course the rags take from the time they enter the mill in rag-bags until, in the form of neat packages of paper, they leave to visit the world. Several women and girls are employed in picking over rags. Before each is a table frame covered with wire cloth; on this the rags are piled, and as they are shaken, cut and sorted to make the various grades of paper, the dust and lint fall into a large wooden box underneath. The coarse, colored rags are sent to another mill to make brown paper.

When thus picked over they are ground in a mill, then placed in a huge, revolving cylinder, where they are thoroughly steamed and cleansed, with acid. They are next placed in a beating engine—a vat with straight sides and circular ends lined with lead. Near one end is a partition, and on one side of the partition is a large, octagonal wheel which rubs the rags as they pass under. On the other side is a wheel studded with cutters which revolves above a block also filled with cutters. The vat is filled with water and the machinery set in motion; and the rags pass round and round, alternately under the wheel and between the cutters until they are reduced to a pulp. The rags for the finer quality of paper pass through two or three of these engines

Passing on, we enter one of the rolling rooms. The rollers are about eight feet in length, and are alternately one, and two feet in diameter; they are in tiers nearly as high as one's head and several feet long. There are two sets, one beyond the the other; the first is covered with felt bands nearly as wide as the rollers.

At the end of the room is a shallow vat from which a continuous stream of fluid pulp is running upon the moving felt band that covers the rollers; it immediately passes under two or three rollers, and in a moment the water is all squeezed out leaving a thin paste on the band. It passes up and down, over and under heated rollers, and comes out at the end, and without the band passes to the next set of rollers where it is dried and polished and at the end comes out cut into sheets of paper. Two ladies one on each sides lay it smoothly as it falls, throwing away the damaged sheets. As soon as the piles are high enough they are carried into another room, sorted, counted, and tied up into packages ready for market. We visited the other rolling rooms but the different grades of paper appear to be rolled out in the same manner.

We reached home late in the evening, tired from the day's exertions. Though I, for two or three days felt tired and lame from my long ride and cliff climbing, still I felt well paid, and think I shall never see a bit of paper without recalling its history.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I received my seed; there were six kinds, four kinds of flower seeds and two of vegetables. I am very much pleased with them, and I hope I will have better success with them this year than last year. I tried hard enough then, but grubs, bugs and chickens had more time than I, they worked while I was at school, and did not stop to sleep nights, I guess. I've been coaxing my cousin to join the club, but he hates to write so badly. He is very much interested in the letters of the cousins. I gave him some of my radish seeds last year, and he raised some very nice ones. I think his did better than mine. I might send on his name, if it would do for me to offer it, but I'll not promise to report for him every time, so I guess he will have to wait until he is willing to write for himself. My brother fenced off a piece of land for a berry garden last fall, and set out strawberries and blackcaps, he has but two of red raspberries, and they are the Cuthbert that he received from the RURAL. He inteuds to keep setting out till he has the garden full. We have beautiful cherries, pears, plums, peaches and apples, in the time for them. With many thanks for the seeds, I remain your loving niece, BERTHA H.

West Town, N. Y.

DEAR UNCLE MARK:—Although I was kept pretty busy with other things last year, I found a little spare time occasionally to work in the garden. The radishes which you sent me were excellent and I saved some seed for this year. The dwarf corn came too late to ripen, but I did not plant it all, so there will be enough left for another trial. Only one of the grape seeds came up. It has been in the house all winter but is so sickly that it will undoubtedly die. I received a package of seeds from you a short time ago, for which please accept my thanks. Some of the young lady cousins seem determined to start up a row in the family. I think they had better flourish the mop and dish-rag instead of a quarrelsome pen. From the way that the daughters of Eve are gaining power it seems highly probable that they will yet bring destruction upon us poor, helpless fellows.

West Salem, Wis. PEACEABLE BOB.

DEAR UNCLE MARK:—I am a boy eleven years old and a reader of your valuable paper, and read the letters in the Youth's Department. I thought I would write and tell you what I captured. While out hauling stone the other day, we came to a hole in the ground and looking in I discovered a large woodchuck. The freezing and thawing of the winter had caused the ground to cave in. My older brother reached in and pulled the woodchuck out. He had not awakened yet and was cold and almost motionless. I took him in my arms and carried him home and put him in a box. Here he woke up in about an hour, and was as spry as in the summer; but he was too wide awake for me; after a while he raised the lid and was again free. JOHN W. HESS.

Indiana Co., Pa.

The Puzzler.

HIDDEN ARTICLES OF FOOD.

1. So Upham has failed.
2. How stiff Ishmael is.
3. What fag Amelia has.
4. Leave me at my aunt's.
5. Universal adamant.
6. Chagra Vyands of S. A.
7. In Pisa Ucenta left us.
8. Throw that rag out of the window.
9. Notice Eric how Derby trots.
10. "Nicod F, ish ball-crazy."
11. Yes, Sal! Mag undid it.
12. Sal, Iye, Unnie and I.
13. Go to a store.
14. Homo, let us go.
15. Bob, a convict is here.
16. So use makes custom.
17. Isa, usage sanctions us.
18. Let Dick, etch up stairs.
19. What ripe apples.
20. Let me ring, Una.
21. You must dump Lingen.
22. General Custar died a hero.
23. Climb Mont Blanc, man. Gerty will go also.
24. Sam pay your debt.
25. Come Geb lets go back.

☞ Answer in two weeks. LITTLE ONE.

HALF SQUARE.

1. A Malabar trading boat.
2. The chrysalis of an insect.
3. The tails of birds.
4. A disease in hawks.
5. A town in France.
6. A prefix.
7. A river of Europe.
8. A letter.

Waterloo, Ind. "GUS."

☞ Answer in two weeks.

A PYRAMID PUZZLE.

A consonant; likewise; the noise of a sheep; to respire. Centrals form an insect.

☞ Answer in two weeks. L. O.

SQUARE WORD.

A poet. An herb. To revolve. A small vale.

☞ Answer in two weeks. L. O.

PUZZLER ANSWERS.—April 3.

HIDDEN HOUSEHOLD ARTICLES.—1. Stove; 2. needle; 3. brush; 4. table; 5. oven; 6. plate.

RHOMBOID:—

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        A R I S T A
      A R P E N T
    E A R L A P
  T R A P E S
    A C E R I C
      E R A S E D
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SQUARE WORD:—

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N A O
A N N
O N E
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Miscellaneous.

BRIEFLETS.

ACH. POINCELOT: The greatest merit of many husbands is their wives. . . ROCHEBRUN: When you talk to women, you must choose between lying and displeasing them. There is no middle course, unless you say nothing. . . NINON DE L'ENCLOS: Women detest a jealous man whom they do not love, but it angers them when a man whom they do love is not jealous. . . "Turnips," says Mr. Harris, "may be divided into two distinct classes. We may designate them as early and late. In England the first class is called 'common turnips" and the latter 'Swede turnips.' With us, the Swede turnips are called Rutabagas." . . For summer use select a piece of rich, mellow, well-drained but moist soil. Sow on it two pounds of superphosphate to the square rod and drill in the seed in rows fifteen inches apart and four or five seeds to the inch. It is necessary to sow very thick on account of the ravages of the black beetle or "turnip fly." Thick sowing and the use of superphosphate are the best remedies for this pest. . . When the plants get into the rough leaf, the danger from the beetle is about over. Then thin out the plants with a hoe, leaving only one plant in a place seven or eight inches apart. Hoe frequently and keep out the weeds, and that is all that is necessary to insure a crop. . . Mr. T. Blake reminds Englishmen that the men who fight the wars are not the men who make the quarrels. If those who make the quarrels were but to fight them out themselves, we should have, he thinks, but few wars. Everything that adds to the war spirit of the country — as their immense outlay in armaments does — is a national curse. . . A movement for organizing a school of instruction in silk culture for ladies has been started in Philadelphia. . . Mr. Dodge will show in his farm story for the RURAL, how a woman can be a help to a man in his achievement of success, without the necessity of making a mere drudge of herself. . . All things considered, what is the best Currant? Our answer would be the old Red Dutch. . . By actual weight and measurement, Mr. Barry has found the Waterloo peach to exceed in size all the very early peaches which he has tested. . . The editor of the Germantown Telegraph has a number of dwarf pear trees now bearing full crops annually, that he planted 32 years ago, and he sees no reason why they should not continue to live and bear at least ten years longer. . . The New York Times makes the considerable mistake of recommending the Tom Thumb as the best early pea. . . Ah, it is a sweet thing to get close to a trusting, loving heart! But oh, it is an awful thing to get there and then betray it! . . "If I were blessed with daughters," says a writer in London Truth, "I should seek out an Irish nurse for them, and insist upon her smoking every day in the nursery a certain amount of the strongest tobacco from a short clay pipe. In after years, my daughters would not render themselves objectionable to the male sex in general, and their father in particular, by declaring that they could not endure the odor of a cigar or a cigarette." . . It may not be so in the planet Jupiter, but on this little earth it is easier for a rich man who has all the vices of the calendar to get a beautiful wife, supplemented after a few years of mutual misery by a divorce, than for a poor man who has all the virtues ever dreamed of to get married at all. . . The Gardeners' Chronicle, we are glad to see, makes liberal extracts from Mr. H. B. Ellwanger's interesting address on American Roses. . . Let us have peas. . . April 12. Freezing weather is reported from the mountains of Western North Carolina. . . Mr. Warner says that he likes neighbors and he likes chickens, but he does not think they ought to be united near a garden. "Even if the hens did not scratch up the corn and peck the strawberries and eat the tomatoes, it is not pleasant to see them straddling about in their jerky, high-stepping, speculative manner, pecking inquisitively here and there." . . It is of no use to tell the neighbor that his hens eat your tomatoes; it makes no impression upon him, for the tomatoes are not his. The best way is to casually remark to him that he has a fine lot of chickens and that you like them broiled. Then he will take them away. . . Press the soil *firmly* about transplanted trees. It is better to *ram* the soil over the roots than to leave it loose. Do not plant trees or shrubs or plants of *any* kind deep. The roots should be as near the surface as is consistent with their being permanently covered with soil. . . It appears that English nurserymen are cultivating our Poison Ivy or Oak (Rhus Toxicodendron) under the name of Ampelopsis Japonica. . . The interesting series of essays upon small fruits by E. P. Roe, beautifully illustrated and published in Scribner, are—Mr. Roe informs us—to be printed in book form with all of the illustrations and double the amount of reading matter. . . One man living in Kingston, N. Y. (says the N. Y. Tribune), who had lost three children suddenly, sent a sample of his well water to a chemist, who found in it "a large percentage of poison," the "juice of manure filtered through the soil." . . Mr. Warner also says that the neighbors' small children as well as neighbors' chickens, are out of place in your garden, in strawberry and currant time. "I hope I appreciate the value of children" he says. "We should soon come to nothing without them, though the shakers have the best gardens in the world(!). But the problem is what to do with them in a garden. For they are not good to eat and there is a law against making away with them. The law is not very well enforced it is true; for people do thin them out with constant dosing, paregoric and soothing-sirup and scanty clothing. . . My plan would be to put them (the children) into Sunday schools more thoroughly, and to give the Sunday schools an agricultural turn—teaching the children the sacredness of neighbors' vegetables." . . Mr. Warner thinks that our Sunday schools do not sufficently impress upon children the danger from snakes and otherwise of going into the neighbors' gardens. . . We should be pleased to learn at what time Moore's Early Grape ripens in different parts of the country where it has been tested. . . Mr. Batcham's observation lead him to believe that grape-rot is not the result of diseased or weakened vines, but of peculiar hygrometrical and thermal conditions which act upon vegetable tissues. Mr. Meehan believes Mr. Batcham to be wholly correct. . . The Winter Nells is said sometimes to weigh half a pound in California when raised upon Quince tock. . . Mr. Hussman, writing for the ural World, speaks of a visit to the vineyard of Mr. Ricketts. He expected to find that the vines were pampered and petted, but found the reverse. They were poorly cultivated, pruned long, and usually bore an excessive crop etc. . .

PERSONAL ITEMS.

Senator McPherson, of New Jersey, made his money at cattle dealing.

Congressman Newberry is now president of thirty-five manufacturing companies.

Hart, the colored winner of the latest walking match, proposes to study law in Boston.

The ex-empress Eugene has arrived safely at the Cape of Good Hope on her pilgrimage to the scene of her son's death in Zululand.

Anna and Teresa Goldoni, aged respectively 84 and 86, lineal descendants of the great Italian dramatist, are inmates of an almshouse in Venice.

Mrs. Hennan, the maternal godmother of Gen. Hood's orphans, died suddenly a few days ago in New Orleans, and the little ones have thus been deprived of their only natural protector.

Increasing Use of Compound Oxygen by Physicians.

A large and steadily increasing number of intelligent physicians in all parts of the country are using Compound Oxygen in Chronic Cases which they have not been able to cure with ordinary remedies. Writes one: "I shall make the Oxygen Treatment a prominent feature in my practice, for *I have tested it sufficiently to satisfy me of its merits.*" Says another: "I do know that my patient is *a hundred per cent better*, and is gaining rapidly. His left lung was *almost consolidated*, but *is now free, except in one small spot.*" Another physician who used it in his own case, says: "I was relieved, the first time I used it, of a *very severe catarrh trouble*; and *my lung trouble promises to be a thing of the past.*" Writes another; "I am thoroughly convinced that the Compound Oxygen *is what we need in a vast army of Chronic Diseases.*" We could give columns of extracts from our correspondence with physicians who are using this new Treatment, all of the same tenor. If you wish to know what Compound Oxgen is, and what it cures, send for our Treatise on its Nature, Action, and Results. *It will be mailed free.* Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

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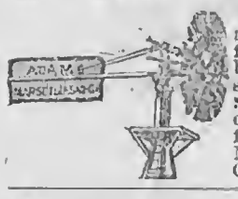

Works in a lighter breeze than any other. Governs itself perfectly. Its operation can not be interfered with by ice or sleet storms. **Well made, Strong, Durable.** Illustrated circulars of all our goods sent free. Address, MARSEILLES MFG. CO., Marseilles, La Salle Co., Ill.

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Automatic Fruit Evaporator.

The cheapest and best in market. For cut of evaporator and descriptive circular, address DODGE & HINCKLEY, Fredonia, N. Y.

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PLANTS ALL KINDS OF SEEDS WITH PRECISION.

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SAVES ITS COST IN PLANTING FIFTEEN ACRES OF CORN. One man and a horse can plant from seven to ten acres of corn in one day, with the Planter, at a cost of from $3.50 to $4.

COST TO PLANT FIFTEEN ACRES BY HAND:

Marking, man and horse, 2 days, at $3	$ 6.00
Planting, twelve men, at $1	12.00
Board, ten men, two meals each, at 25c	5.00
Wasted, one bushel of corn	1.00
Total cost by hand	$24.00

Self-Operating SULKY RAKE.

IMPROVED LION,

Best Rake Made in the World.

Send for Circular, etc., to O. H. P. CORNELL, Proprietor Albany Agr'l Works, Albany, N. Y.

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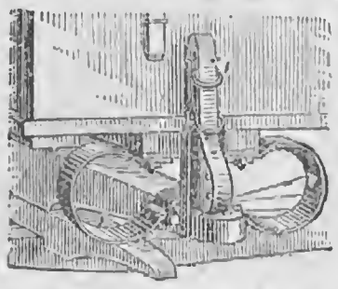
PULLIAM'S PATENT

BOLSTERS SPRINGS for FARM WAGONS.



This valuable device is suited to wagons of any size—made of the best steel and warranted—are attached by four bolts through the bed—can be put on by any person. They remain on the wagon for all uses and work equally well whether with empty or loaded wagon. There is no use for a spring seat—they make a comfortable spring wagon out of a farm wagon—and save largely in wear and tear. We want Agents everywhere. Send for description and prices, and mention this paper.

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The Best Thresher on Wheels!

It is not a vibrator, neither is it an apron machine, but the best points of both are combined, with new and original features of its own. It is wonderfully simple in its arrangement. It is admirably perfect in its threshing and separating qualities. It saves all the grain, and cleans it ready for market. It runs easily, is constructed durably, is finished beautifully, is the most economical, least expensive, and altogether the most satisfactory machine in the market.

It will handle wet grain as well as dry. In threshing Flax and Timothy it has no equal, threshing and cleaning both as well, and nearly as rapidly, as wheat, and requires no change except the sieves. It has more square feet of separating and cleaning surface than any other machine made, and cannot be overloaded. It is both over and under blast at the same time.

Our clover hulling attachment is a new and very desirable feature. It does the business more rapidly and better than an exclusively clover hulling machine.

Separators of the various sizes fitted for Steam or Horse-Power, as desired.

An Improved Pitts Power, an Improved Woodbury Power, and the Elward Equalizing Power, all mounted on four wheels, are manufactured by us, and are not surpassed by any in the market.

For Price-Lists and Circulars, address the manu'frs.

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CLARK'S ROOT CUTTER.

Do not fail to see CLARK'S NEW ROOT CUTTER. The leading stock raisers in the country pronounce it the best and only cutter that cuts roots in shape for feeding.

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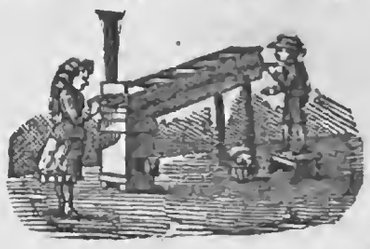

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Correct Principles, Correctly Applied. Illustrated Catalogue giving much valuable information mailed *free.*

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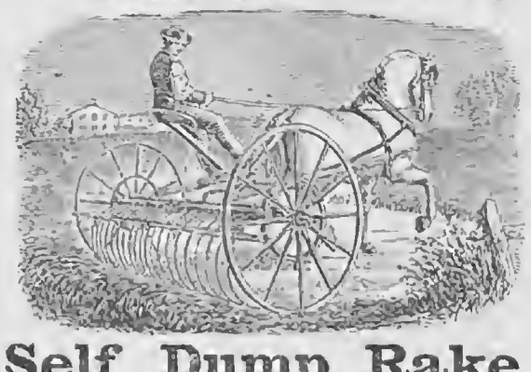

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A boy or girl can operate it. This rake has been thoroughly tested, and is warranted to be first-class in every respect, made of the best material, and to do good work under all circumstances. Also, the

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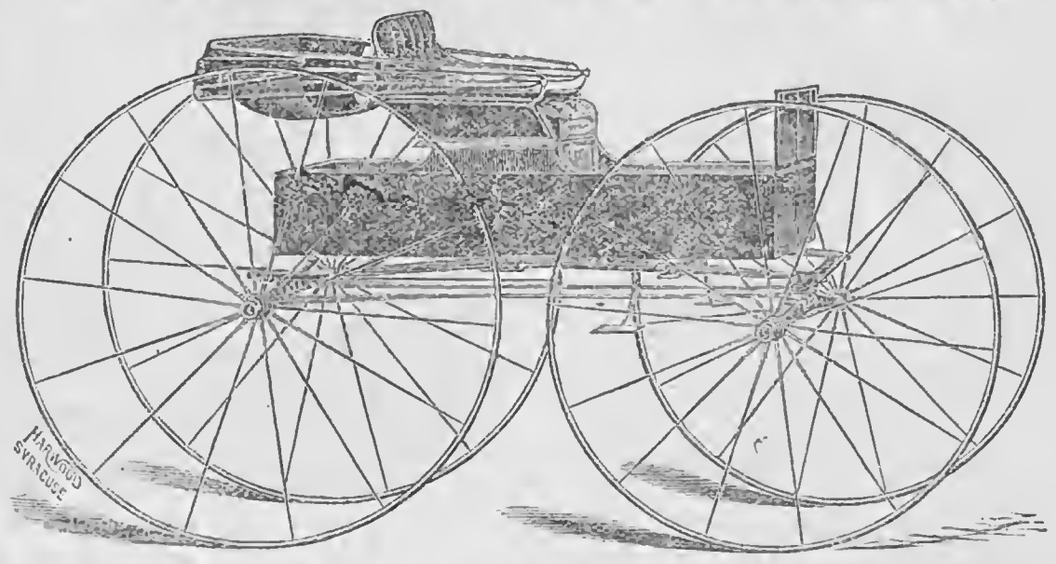

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The Jury of Awards' decision was workmanship and extreme accuracy by the Judges. These watches are and made with improved machinery, thus insuring an accurate time-keep- & C. have made a still further reduce- watches within the reach of all of their movements, particularly on your jeweler and ask to see the public is asked to investigate the compared with those of American has made watches for the past *Two* the Borel & Courvoisier fair play, that none can excel them. We ask son before purchasing.

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THE "STANDARD," Received the *Highest Award* at the following Fairs, 1879:

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OUR SIDE WHEEL MOWER LIGHTEST AND SIMPLEST MOST DURABLE

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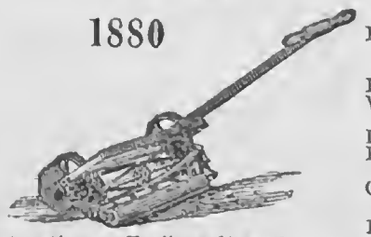

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Runs more easily
Will cut longer grass.
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FISK'S AUTOMATIC SEED PLANTER

Has the best improvements of any Hand Planter now in use. Plants with the accuracy of a hoe all the ground a person can walk over in a day. Seed for each hill passes in plain sight.

This is the easiest planter to use ever invented. Every planter fully warranted, and satisfaction guaranteed. Unusual inducements on samples this season. Circulars free.

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Surpasses all others in quantity and quality of butter made. It secures matured and ripened cream, which makes butter of the best texture, flavor, and of unequaled keeping quality. It excludes flies, dust and odors; is constantly at the correct temperature (55° to 60°); has room for the cream and butter, and saves three-fourths the labor. It can be used with either ice or water, and both summer and winter.

THE FERGUSON CONCUSSION CHURN is the best. It combines scientific principles with the best labor saving devices. No floats or paddles. Brings the butter in granular form, and secures the largest yield. Befor buying any other Churn or Creamer; or any pans, or cans, send for large illustrated circular to THE FERGUSON MF'G CO., Burlington, Vt. Reliable Agents Wanted.

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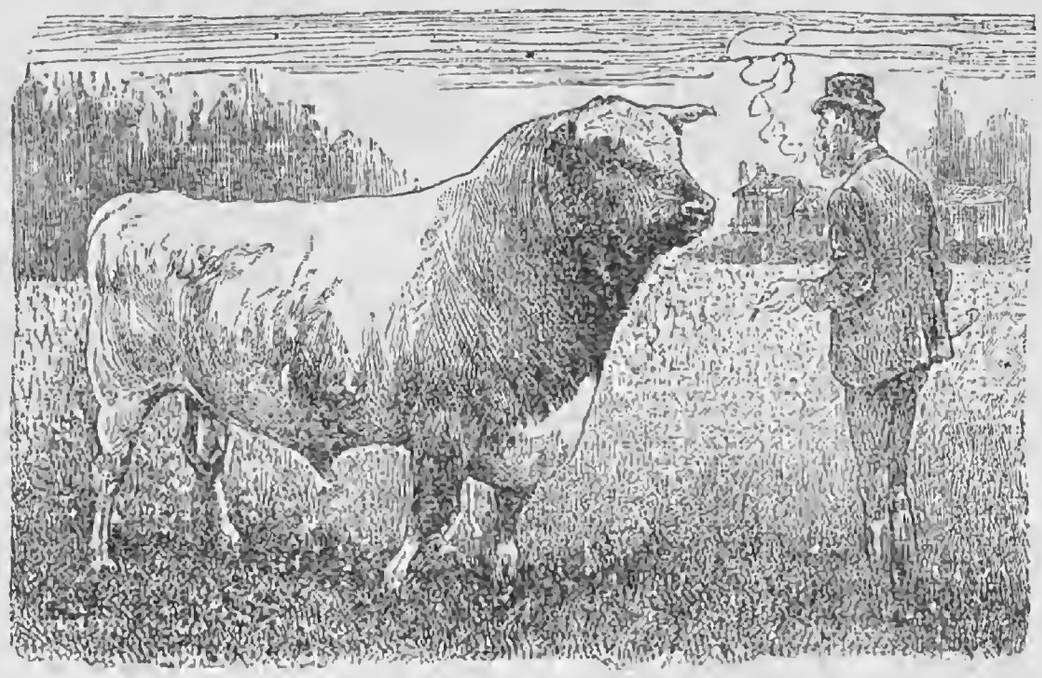
MRS. BROWN says her husband is such a blunderer that he can't even try on a new boot without putting his foot in it.

The Foundation of Health.

Without a substratum, a foundation of vigor, there can be no true health. The puny and the weak have all sorts of aches and pains, not necessarily because they are positively diseased, but because the vital machinery hitches and halts for want of the impetus which abundant vitality would give it. The blood-enriching tonic, Hostetter's Stomach Bitters supplies deficient energy by enabling the stomach to perform its digestive functions actively and uninterruptedly. The result of this is the distribution of stores of vitality to the remotest parts of the system, an increase of muscular energy and the disappearance of those nervous symptoms which accompany and proceed from debility, irregularity of the bowels, torpidity of the liver, rheumatic ailment and malarial fevers are prominent among the actual diseases eradicated by this signally efficacious medicine.



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BULL—Yes, and so would you have been, if your parents had been selected with as much care as mine were.

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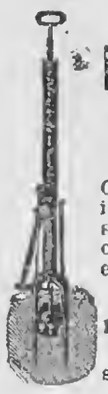

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It requires no milk-room.
It raises all of cream between milkings.
It affords better ventilation.
It requires less labor.
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It is cheaper,
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Send for "Dairymen" giving full particulars and testimonials.
VERMONT FARM MACH. CO.,
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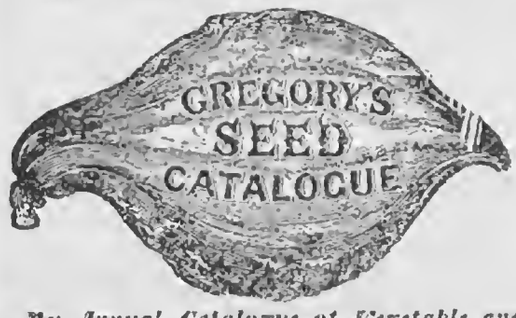

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NEW VEGETABLES A SPECIALTY.
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CORNISH & CURTIS,
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THE NATURAL BUTTER COLOR
Was awarded the diploma of highest merit at the International Dairy Fair, New York, by the Committee of Judges, also at the St. Louis and Illinois State Fairs. It is the cheapest and best in the market. Cheese color by the gallon. For sale by dealers. Manufactured by R. S. WHITE & CO., Fort Atkinson, Wis. Write for circulars and price list.
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BROWN'S ARCTIC CREAMERY
Requires no room; no ice needed; glass covers for cans; light not excluded from milk; no trouble with flies or dirt; a complete milk-room and apparatus of itself; no handling of milk after straining.
Send stamp for Illustrated Circular and Price List.
Address BUNNELL & BROWN,
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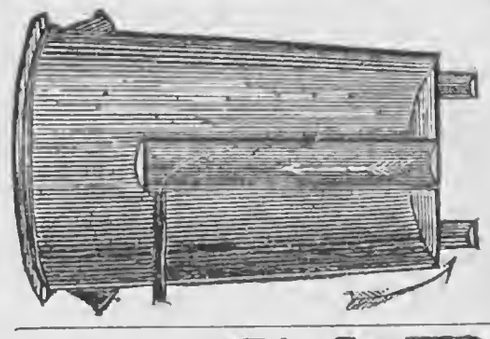

The Fairlamb System
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A New Plan of Making Butter.
Saves time, saves labor, and gives the highest price for Butter. For particulars address
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SAVED BY PURCHASING DIRECT FROM
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THE MANUFACTURERS.
We have now open an immense stock of the most approved varieties of CARPETS and FLOOR COVERINGS
MANUFACTURED BY OURSELVES
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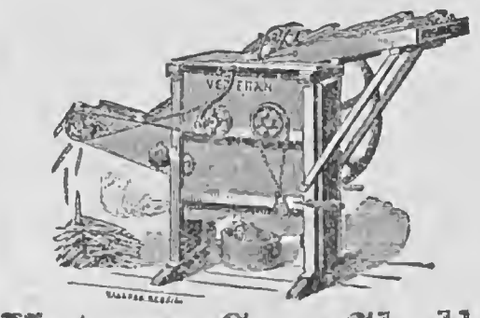

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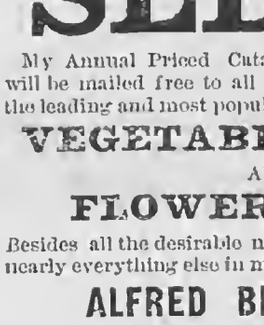

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THE RURAL NEW-YORKER

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The Vineyard.

THE VERGENNES GRAPE.

GEN. WM. H. NOBLE, BRIDGEPORT, CONN.

THE rapid advance of the American Grape to varieties of great merit is one of the wonders of pomology. Wherever the right method of dealing with its problem of development is reached, success attends. From each gain in better knowledge of its solution we may hope for higher excellence. It has taken the life of man to make the wine grape of the Eastern Hemisphere the joy of the table and the wine press; but trial with our varieties within the half of one of these centuries, offers a luscious choice for viand or vintage. Even after this brief effort, many prefer our own imperfect fruits of the vine to the best foreign grapes. Some seem to think a wine can now be made of its fruitage in delicacy of flavor and age-ripening excellence rivaling the best products of the European vintage.

I have rejoiced with pride over the many new Grapes which the RURAL NEW-YORKER has recently so gracefully noticed. I offer to its readers another which I think the peer of any native seedling. Its portrait, which I send, is far short of that large-bunched excellence which its best specimens warrant. It is the Vergennes Grape. Its name comes from that of the town in Vermont, in one of whose gardens it first grew and bore.

It is a Labrusca and claims all the hardiness, and resistance to the ails and pests of the Grape, which belong to that family. The vine is wonderfully vigorous. When one year old, it makes stout growths of five or six feet. Vines of two years stretch out to 12 and 15 feet; then it ripens all its wood, and matures it, as it grows, into sound, rich, brownish-olive, short-jointed vines, ripened to the very tips of its late fall shoots. It leaves no long stretch of green tendrils to get ripe, if the season is long enough, or to be killed by the frost, if short. It is thus proof against the dead wood which mars so many of our vines, whose frozen sap so hurts the rest of the wood. In short, it is an extra-hardy, short-jointed, fast-growing vine.

I send you two small bunches of the grapes, not as specimens of its best estate, but to prove its excellence and long-keeping quality. The specimens have been kept loosely, in a dry cellar, without any extra care. With anything like the pains which many devote to their grape crop, I think this grape in quality and quantity would keep its place on our table beside the apple; certainly with the last of the long-keeping pears. As you see it now, in the bunches sent you, so it has stood for several years, just shrunk a little from its full contour, and without any nice care or help, kept on till thus late. Its shrinkage has nothing of that wilting and flabby texture, which besets so many fine grapes, like the Concord and Isabella, and even the Catawba and Diana, after a long tarry in the fruit room. Another excellence of this grape is its early maturity; the grapes sent you were picked early in September, at Vergennes, Vermont. They are of a lot that have been picked over and eaten from, ever since they arrived at this place. The Vergennes ripens all its bunches evenly; no green grapes, or parts of bunches are seen in its fruitage, as in some other varieties of excellence. It is not subject to mildew, and therefore holding its leaf, matures its fruit and wood. All its products are ripe for the harvest together. When ripe, the Vergennes glories in a rich bloom. I have never seen a grape that in tinge, at its maturity, so filled the eye with a sense and promise of a luscious fruit. This bloom it holds, like a tinted coating, till it shrinks to a raisin.

The Vergennes boasts another quality long sought in our American grapes—an absence of what we call pulp and core. In this regard it is more like the European grape. It is a meaty grape, tender in flesh clear through. The fitness of the Vergennes for wine has been thoroughly tested. It makes a light-tinted, delicate liquor, with a rich and pleasant bouquet. I think it destined, in this quality, to excel any American grape. I have never seen any old wine made from it; it is too new a grape to have raised crops large enough to define and perfect the quality of its wine by age. In short, for hardiness, vigor of growth, large bounteous fruitage, a luscious fruit of the richest tint of blended pink and purple bloom, for its yield of wine with the most delicate aroma, for its early maturity of wood, and fruit, for its long-keeping quality, lasting in excellence beside the apples on our tables, I think this the equal of any American Grape yet grown. I say this with great tenderness towards all its native rivals.

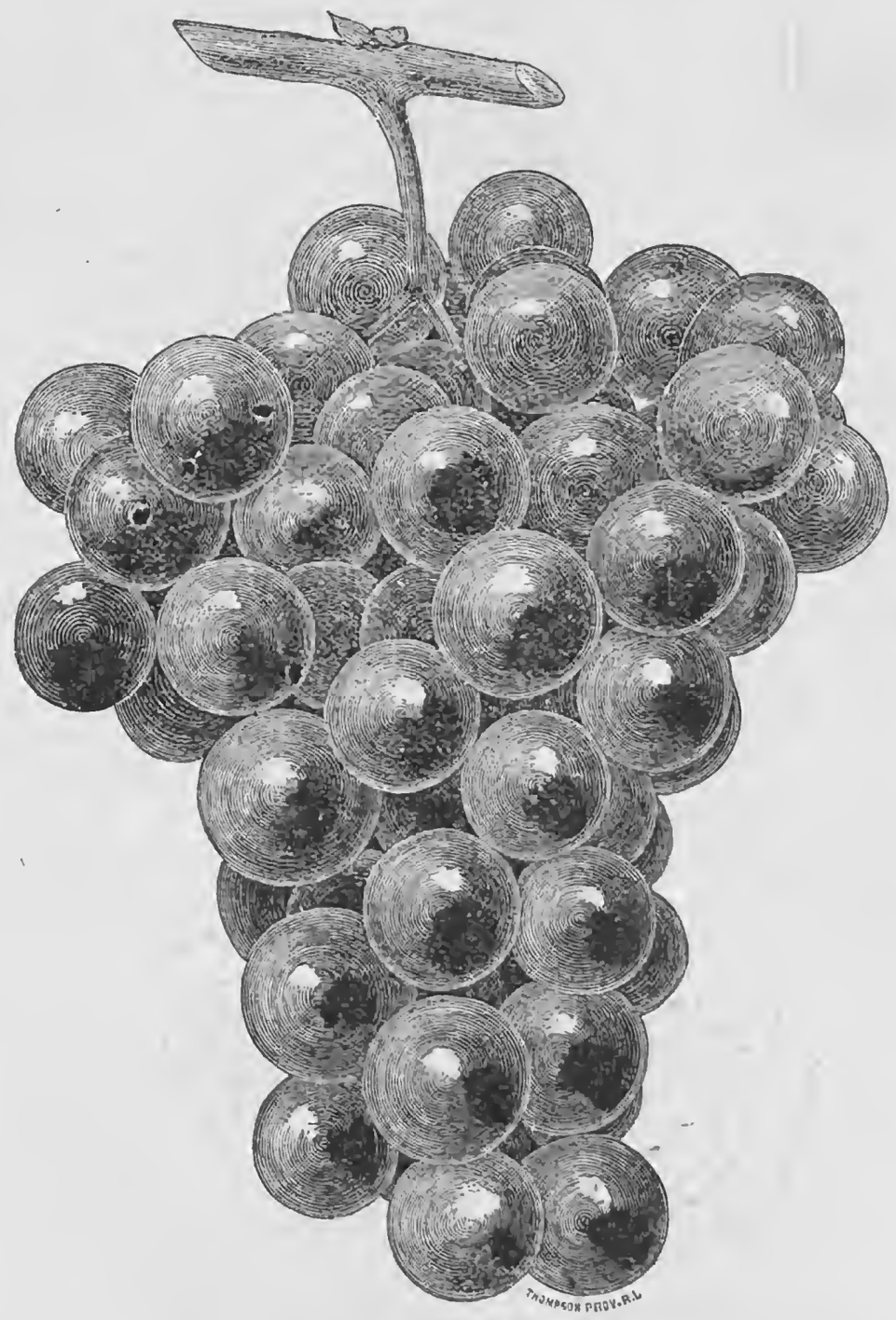
Farm Topics.

HURTFULNESS OF CHLORIDES ON THE TOBACCO CROP.

PROFESSOR F. H. STORER.

IT has been known these 20 years that tobacco which contains an unusually large proportion of chlorine is apt to burn badly; and it has gradually become plain that fertilizers rich in chlorine, such as common salt and muriate of potash, should not be used for this particular crop, because they increase the amount of chlorine in the tobacco leaf and so injure its quality.

In reporting some new experiments, which go to show how important it is for the tobacco-grower to avoid manures that contain chlorides, Adolph Mayer urges that not only should muriate of potash be avoided, and in general, all the ordinary Stassfurt potash-salts of commerce, since they invariably contain a larger or smaller proportion of the chlorides of potassium and sodium, but that there is a choice among animal excrements, even. He explains that night-soil, *i.e.* dung and urine together, such as is obtained from tight cess-pools, contains so considerable a proportion of chlorides that the quality of tobacco may readily be injured by it. In this connection he alludes to the fact of observation that the excessive use of this kind of manure has injured the reputation of the tobacco grown in some parts of the Palatinate, and he considers it proved that the large amount of chlorine in this tobacco is, to say the least, one cause of its inferiority. So, too, the manure obtained by folding sheep (dung and urine together) contains more chlorides than the dung of neat stock; and, in general, the tobacco-grower should take care not to let too much chlorine get into the manure he means to use, either by allowing his stock to eat an excess of salt or in any other way. Where commercial fertilizers are used there ought not to be any difficulty in choosing those which are wholly free from chlorine—a fact easily proved by chemical analysis and to be vouched for by the vendor. Pure sulphate of potash, though somewhat more costly than the ordinary run of potassic fertilizers, can be bought at a price which cannot be deemed high; and, as Mayer says, even saltpeter (nitrate of potash) though sold at a high price as compared with the other potash salts, may well be used to fertilize tobacco, in view of the high price which this crop commands when of good quality. This conclusion had already been reached here in America; some of our most successful farmers being accustomed to use nitrate of potash upon tobacco, in precisely the sense of Mayer's suggestion. It might, perhaps be more economical to use a mixture of sulphate of potash and of nitrate of soda, to replace the nitrate of potash, were it not for the fact that, as now sold, most samples of nitrate of soda are more or less contaminated with common salt. Probably, the best practice of all would be to use the pure sulphate as the chief source of the potash needed by the crop, and to reinforce it with some nitrate of potash, as a means of supplying part of the necessary nitrogenous plant-food. In buying phosphatic fertilizers, such as bone meal; or those containing both phosphates and nitrogen, such as fish-scrap or flesh-meal, it would be well for the tobacco-grower to choose samples which have not been salted for the sake of preserving them.



THE VERGENNES GRAPE.—Fig. 132.

It is to be understood, of course, that the presence of chlorides is not the only cause of tobaccos burning badly. Samples of tobacco well-nigh free from chlorides are sometimes found not to burn well. It is held, indeed, by some manufacturers that the combustibility of tobacco, as well as some of its other qualities, may be influenced to a considerable extent by processes of sweating and fermenting to which the leaves are subjected after the harvest. But it seems to have been well made out not only that chlorides have a very important influence upon the burning of tobacco, but that the grower may control the combustibility of his crop more readily by paying proper attention to the exclusion of chlorides from the fertilizers which he employs than in any other way.

It may here be said that in the old experiments on the combustibility of tobacco it appeared, in general, that tobacco leaves burn well when they contain an abundance of potash in combination with the organic acids natural to the plant, and that they burn badly when they contain chlorides or an inadequate supply of the potash salts aforesaid. In the process of combustion, the organic acids in the tobacco decompose readily at comparatively low temperatures and in case they are in combination with potash one result of the decomposition is the formation of carbonate of potash, which remains in the ashes. It has has been found, indeed, that the proportion of carbonate of potash that can be dissolved out by water from the ashes of different samples of tobacco, affords a tolerably good criterion of the relative combustibility of the several samples. Little or no carbonate of potash can be dissolved from the ashes of those tobaccos which will not burn. The explanation of the matter seems to be that when exposed to heat high enough to calcine and decompose them, these organic salts of potash swell-up and distend in such wise that the tobacco immediately in contact with them is puffed out and converted into finely divided charcoal which, by the mere act of distention, is brought into more intimate contact with the air than it would have been otherwise. So that its combustion is facilitated.

In like manner, tobacco which contains nitrate of potash burns readily, as would naturally have been expected, and it has been urged by some writers that the nitrate is more important in this sense than the organic potash salts. But this idea seems not to have been substantiated; and it has been noticed that too large a proportion of the nitrate is injurious in that it causes cigars to burn more freely and rapidly than is desirable.

The presence of chlorides in the tobacco may, perhaps, tend to lessen the proportion of the desirable organic acids; or it may be that the

chlorides interfere with the intumescence of the organic potash salts at the moment of their decomposition; or, since the alkaline chlorides melt easily, they may simply cover the particles of carbon with a coating of varnish, as it were, which prevents their burning by shielding them from the air. It is not the carbonate of potash itself, but the decomposition of the organic potash salts, that helps the burning. The carbonate of potash found in ashes is a mere product of the combustion. It did not exist, as such, in the tobacco leaf.

It is noteworthy that neither lime nor magnesia acts like potash in this particular, and that with the exception of soda, which is sometimes found in limited quantities in tobacco, potash alone is competent to do this kind of work. It has been proved by experiments that tobacco which burns badly, may be made to burn tolerably well by incorporating with it either malate, citrate, oxalate, or tartrate of potash in such quantity that soluble carbonate of potash may be formed in the ashes; and, on the other hand, it has been found that tobacco which burns well may be made incombustible by introducing the chlorides or sulphates of calcium, magnesium, or ammonium in such amounts that there shall no longer be an excess of potash in the ashes. In these experiments the tobacco leaves were dipped for a moment in solutions of the salts in question; the leaves were then shaken to remove the excess of liquor and left at rest in a closed vessel for 24 hours before they were hung in the air to dry. It should be said that these experiments were made for a scientific purpose merely. The intention was to test the truth of the idea above stated. It is said, however, that saltpeter, or a mixture of saltpeter and borax, or oxalic acid is sometimes added by the manufacturers of tobacco to correct its incombustibility; and that the combustion brought about in this way is not wholly satisfactory. It is said to be too thoroughgoing, to overpower or impair the proper flavor of the leaf.

Still other experiments have shown that it is easy to grow bad-burning tobacco on soils poor in potash, and good-burning tobacco on the same soil by manuring with sulphate of potash or nitrate of potash or even with carbonate of potash, though the carbonate, as well as wood ashes which contain it, is generally speaking not so good a fertilizer for tobacco as the sulphate and nitrate are. It was found, at the same time, that though chloride of potassium is less obnoxious than chloride of magnesium or chloride of calcium, from the fact that it supplies potash to the plant, it nevertheless does harm, as was said before, by supplying chlorine, and is consequently not a fit manure for the tobacco crop.

Entomological.

WHAT I KNOW ABOUT WEEVILS.

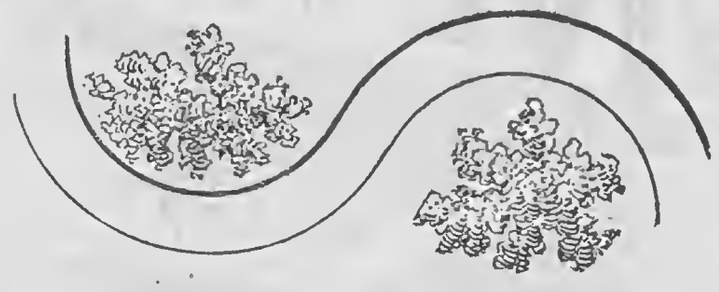
In this part of the country, the weevils first came to the farmers' notice in the years 1873 and '74, in this manner. After thrashing the wheat, when it had stood a little while in the granary, it was found to become heated and to have a queer odor. On looking close, we saw some small, white moths running and flying over it, and in many places wheat grains were held together by a fine web, forming balls, and inclosed in each of these balls was a small, white grub which seemed to get its living by eating the grains forming the balls, as these grains were more or less broken. Then, after cleaning wheat for sowing, we found, behind the fan-mill, many small insects about the size of common dog-flee. The color of some was black and of some brown or reddish, and they were very lively.

Now, I always thought these creatures were one and the same insect, only in different stages of its development; but in looking in Chamber's Encyclopedia, I find what is called the "Corn Moth (Tinea granella)" the description of which answers closely to this moth.

The Encyclopedia says: — "This moth is of a cream-white color; the superior wings marbled with gray, brown, or black, and when at rest sloping like the roof of a house, the fringe turned up behind like a tail. The larva, or Corn Moth—which for its voraciousness, is known as the wolf—eats into the grain, and attaches grains together by a web. Another very troublesome moth also called Corn Moth is Butalis cerealella, which is not yet known in Britain, but is found in some parts of Europe and America."

On looking further, I find the "Corn Weevil (Butalis granaria)" described as "a coleopterous insect of the family Curculionidæ, which, although a small creature, not quite two lines long, is often extremely destructive to grain stored in granaries." This would answer to those insects we found behind the fanning-mill; so that, if I am not mistaken, we have two instead of one insect spoiling our wheat, namely the Corn Moth and the Corn Weevil.

Now, let me give you some of my experience of the damage these pests can do. Last summer I thrashed nearly all my wheat from the field three weeks after harvest, the rest I intended to stack and thrash at the same time as my oats which were not yet cut when I thrashed the first time. Of this wheat, I put 150 bushels in the granary till October, and when I sold it, there were no weevils in it, and hardly a few moths; in fact, I can well say I found no damage done to it; while, when I thrashed



CURVE TOO SHARP.—FIG. 133.

the stacked wheat—which was in the middle of September—about one-fourth was mere bran and another fourth of the grains had weevil grubs in them.

Several of my neighbors who stacked their wheat complained that it had been much damaged in the stacks, and that they could not keep it, as it would heat in their granary. Thus it would seem that the sooner wheat is thrashed, the better. So far I have not found a better remedy and I don't think anybody has; if in this opinion I am mistaken, will the fortunate discoverer please let us know a better way to avoid the ravages of this pest.

Lake Co., Ill. CHARLES RILLIET.

THE WHITE PINE WEEVIL—(Pissodes strobi, Pack.)

WE learn from our correspondent in South Carolina that the White Pine weevil is becoming more and more destructive to coniferous plants in that part of the country. They no longer confine their depredations to the leading stem, but the lateral branches are attacked and the trees soon destroyed. On a single stem of the Deodar Cedar, six inches in length, he found ten beetles. This tree is highly prized for ornament in South Carolina and Georgia; but unless the weevil is in some way destroyed, its employment will have to be abandoned.

This beetle has occasioned much injury to Pines from Maine to Georgia, though it also affects the Hemlock and Norway Spruce. The beetle is oblong, oval, slender, and of a brownish rust color; on the thorax are two white dots and on the wing covers a whitish transverse band behind the middle; its average length is about three-tenths of an inch. The principal injury is done to the leading shoot or shoots of the tree. The beetle lays her eggs in the bark, dropping them at intervals throughout the entire length of the shoot. From each of these eggs hatches a white grub which eats its way inward and obliquely downward until it reaches the pith, in which it works a short distance farther, unless it should happen to meet another grub; in which case it feeds upon the walls of the mine already made until it attains its full growth. The eggs are laid early in the season and the shoot begins to wither during the summer. The grubs remain in their burrows throughout the entire season, changing to pupæ and coming forth as perfect insects early the ensuing spring.

The obvious remedy is to trim the trees well in late summer, and break off and burn the infested shoots with their contents.

Landscape Gardening.

THE FORMATION AND MANAGEMENT OF LAWNS.

JAMES HOGG.

THE numerous letters addressed to the editors of horticultural papers, seeking information on this subject, indicate that but few persons, unless they are professional gardeners, fully understand it. In reply to many such letters addressed to the RURAL NEW-YORKER, I submit the following rules and instructions:

Preparation of the Ground.

In the first place, the ground should be prepared by a crop of potatoes, corn or other hoed crop, in order to clean it as much as possible from weeds. After this crop is taken off, the ground should be plowed and the soil thrown into ridges so that the action of the weather in the winter, by its alternate freezings and thawings, may pulverize it and make it friable in the spring. While it is being plowed all boulders should be removed and all small stones carefully picked off, for it is impossible to have a smoothly mown lawn if stones crop out on the surface to interfere with the operations of the scythe or lawn mower. If the land has a retentive sub-soil or there are depressions in the surface which will hold water or are in any way wet or soggy, it should be well drained and the depressions filled up; for if not thus treated, nothing will grow in them but coarse, marsh grasses, or weeds incident to such habitats, and these will be a constant source of trouble and vexation. In the following spring, as soon as the soil is nicely dry and friable, the ground should be plowed with a sub-soil plow as well as with a surface plow. In this climate, with our tropical heat in summer, it is absolutely necessary to have the ground broken up to a considerable depth, in order that the roots may penetrate deeply into the cool, moist earth below the surface and so draw moisture from below, for without moisture it is impossible to give a bright, refreshing green to the lawn. If the sub-soil is of a gravelly texture and has a natural drainage, sub-soil plowing and artificial drainage may be omitted. Care must be taken not to bring the sub-soil to the surface, as it never produces as good grass as the surface soil.

After the land is plowed all hollows should be filled up by removing into them the soil from any hummocks that may exist. A road scoop and leveler are the best instruments for this purpose. If no hummocks exist, soil must be carted in to fill up the hollows, the object being to get the surface as even as possible. This being done, the whole should be well harrowed to reduce the soil to as fine a state as possible; then sown with grass seed, brush-harrowed in, and then rolled. If the land has been well manured for the previous crop, there is no necessity for manuring it for the grass seed; but if some fertilizer is thought to be necessary, use bone dust, superphosphate, or some other similar artificial manures, avoiding stable or barnyard manures, as they are always full of the seeds of weeds. A rank growth of lawn grass is by no means desirable; a healthy, robust, leafy growth is what is needed, and this is best attained by top-dressings as they may appear to be needed. Under no circumstances should stable manure, or any other likely to contain the seeds of weeds, ever be applied to a lawn. It will cost more than it is worth to extirpate the weeds. It is neither necessary nor in good taste to bring the lawn to a perfectly dead level; any undulations or swells of the ground should be preserved, provided they are not abrupt. If they are, they should be toned down by judicious leveling and made to run into the general level by easy, flowing gradients. If any rocks in places crop out upon the surface, they may be allowed to remain, as by covering them with trailing vines or masking them with shubbery they may be made an agreeable feature of the work. The lawn should never be brought up in close contact with the house or otherwise the latter will look, as Sir Thomas Dick Lauder expressed it "like a tea box on a green carpet." The house should always be separated from the lawn by a terrace, a balustrade or some similar architectural feature, or if this cannot be done or afforded on the ground of

FAULTY CURVE.—FIG. 134.

cost, wide flower borders should surround the house and these should be separated from the lawn by wide gravel walks.

As the purposes of a lawn are entirely different to those of a hay or pasture field,

The Selection of Grasses

must be entirely different, and only dwarf-growing, leafy species should be used for this purpose. All coarse-stemmed grasses or those growing in tufts should be avoided, hence such grasses as timothy grass, orchard grass and red clover should never be sown as they are worse than useless. Experience has shown that in this country, for general purposes none are better than, and few are equal to, the following species: Agrostis vulgaris (called red top in Pennsylvania, but which is not the red top of New York or New England, that being the well known timothy grass); Agrostis canina or Rhode Island bent, which by many is considered to be a dwarf variety of the first; Poa pratensis or Kentucky blue grass; Anthoxanthum odoratum or sweet-scented vernal grass; and Trifolium repens or white clover. Under the shade of trees the Poa nemoralis or wood meadow grass will be found to do better than any other species.

A good mixture of the above grasses may be made in the following proportions:

8	quarts of	Rhode Island bent
15	"	" red top
6	"	" Kentucky blue grass
2	"	" sweet vernal
1	"	" white clover
32	quarts, or one bushel.	

The quantity to be sown to an acre should not be less than three bushels, and four bushels will fully repay the extra cost.

The great object in sowing a lawn is to get a thick, heavy sward as soon as possible, and this can only be done by heavy seeding. Under no circumstances sow oats or any other grain with the grass seed. It is often done under the mistaken notion that the grass in its young state requires shade or protection of some kind, but this is a great fallacy, for the strong growing oats or grain will abstract far more moisture from the ground for its own growth, than its shade would have preserved for the grass. If the latter can have plenty of moisture the sun will have no deleterious effects upon it. In the latitude of New York, the seed may be sown during April or May and will produce a good turf by the ensuing autumn. Of course suitable allowance of time must be made for difference of latitude. The early autumn months, or as soon as cool nights with dews come in, is also a good season in which to seed down a lawn.

The After Management

consists in keeping it closely mown, going over it every ten or fifteen days with the mower according as the growth may be affected by the weather. It is well to leave the mown grass upon the lawn and let it dry up there. It shades the roots of the grass and prevents evaporation from the soil. As it soon disappears from sight it is not offensive, and when finally decayed gives considerable nutriment to the soil. Top-dressing with some readily soluble artificial manure should be given every autumn before the winter frosts set in, so that the autumnal rains may carry it down into the soil. Never top-dress with stable or barnyard manure, it looks very disagreeable and is only a vehicle for sowing weeds. Early in the spring go over the lawn with a small weeding spud and cut out all the weeds that show themselves. In spite of all that can be done, they will make their appearance, seeds of them from other quarters, being blown about in the air, find a ready lodgement in the grass and a very suitable situation for promoting their vegetation. If from any cause the turf should become thin in places, go over them in the spring with a soft brush harrow and put in some fresh seeds, finishing with the roller. It is a good practice, even if it is not necessary to put in fresh seed, to go over the lawn with a brush harrow and roller every spring, as it breaks down any worm casts and gives the lawn a smooth surface, and has also a tendency to keep down any moss that may come in. If it is thought necessary to destroy the worms, it can be done by dissolving six or eight pounds of stone lime in a hogshead of water, allowing it to stand for a day or two and watering the lawn with a watering pot, using the clear lime water. It is, however, a disputed point whether the worms do any real injury or not, many claiming that the perforations they make are an actual benefit to the grass by affording a ready means for aerating the soil about the roots. As to the moss, which in humid and pent-up situations is apt to be troublesome, the readiest way to destroy it, is by top-dressings of fertilizers, for plants of this class do not like manures. Never allow the grass to get more than four inches high before cutting it. Allowing it to grow like a hay field and then cutting it for the sake of the hay it will yield, as many people do, is a sure method of destroying it, as the process of seed-bearing destroys the vitality of the grass and the aftermath or growth is always more or less feeble, and the velvety appearance, so desirable, is effectually destroyed.

Roads and Trees.

The arrangement of roads and walks that may have to be laid out, crossing, or passing through lawns of large extent; and the grouping of trees and shrubs upon the lawn, are very difficult subjects to handle, either in theory or in practice, as they are purely matters of taste

and not of more arbitrary mechanical rules. They require, on the part of the person who proposes to design them or lay them out, an intuitive perception of the beautiful; a knowledge of the principles of the art; the faculty of seeing with the mind's eye the ultimate future effect of the grouping; and also an extensive knowledge of the different characteristics of trees and shrubs as shown in their growth, their spray, and the character and color of their foliage. In short, to be a landscape gardener in the true sense of the word, requires that one must have the feeling and appreciative discernment of a landscape painter, only instead of working with paints and brushes, one must work with the living materials; successful grouping and planting require this kind of knowledge. Some may feel discouraged from attempting the ornamentation of their country places, when it needs such requirements to succeed; but there is no real ground for discouragement, as every group of trees or bushes growing in a field, every pond margined by shrubbery, every sheep path across a field gives suggestions of what is true art and taste in such matters. Not that we should copy nature servilely; we should adapt her suggestions to our own needs and compositions. Sir Thomas Browne has quaintly and truly said, "All Art is but nature; for nature is but the art of God." Any educated, intelligent person is far more likely to succeed in the art of landscape gardening than would any stupid fellow whom he may employ for that purpose, whose only knowledge of art matters consists in serpentining walks without reason, and planting huddle-muddles of shrubs. Now as to

Walks,

it is a mathematical axiom that the shortest distance between any two given points is a straight line, and this is the proper line to make in laying out a walk or road, unless some reason, apparent or real, is given for a deviation from it. The laws of gravity, attraction and repulsion have, however, so modified this law in nature, that we never see any natural lines of motion that are absolutely straight, they all more or less partake of the nature of curved lines. The circle and combinations of its segments are only arbitrary mathematical figures inclosing the largest area within the shortest circumference. The former has no actual existence in nature among bodies in motion, it being modified by other laws so as to become a spheroid, an ellipsoid, a hyperboloid, or some similar figure. Hence the making of a serpentine walk or road by reversing two semicircles or arcs of a circle or connecting them by a tangential line, is in bad taste and is always unsatisfactory because it is unnatural. People instinctively see that it is incongruous, although they may not be able to give any reason for its being so.

Figures 133 and 134 will more readily explain this. Fig. 133 shows two arcs of a circle connected with each other. Fig. 134 represents them connected by a tangential line; and fig. 135 represents a flowing curved line. These make the difference very apparent. In laying out such a line, we have to be governed by the circumstances of the situation; graded, natural obstructions, such as groups of trees or shrubs, rocks or other objects, natural or otherwise, must always afford a reason for any deviation from a straight line. A curved line without any reason for it, is an incongruity. When passing any obstacle to a straight line, it should if possible, always be on the inside of the curve; and if any flower beds are laid out adjoining such curves the line of the bed next to the curve should always be of the same character as the curve, and parallel to it. In no case should a walk or road cross the lawn transversely to the point of the vision from the house, for it practically cuts the lawn in two and makes two lawns instead of one. All such roads should appear to be going from the house or returning to it, or leading to some point of interest, artificial or real, such as a summer-house, an arbor, a flower garden, a copse of woods or something similar. Roads and walks should never be lower than the verges of the lawn immediately in juxtaposition to them, otherwise they suggest gullies or ditches; they should always be fully up to the level of the lawn, or at the edges not more than two or three inches lower, so as to give a distinct line of demarcation.

Embankments.

If it is necessary to have any embankment on any portion of the lawn, it should always be made with flowing curves on the face and never have the appearance of a railway embankment. Whenever engineers are employed to lay out country seats, they invariably fall into this error, and they and nature have continuous fight, they endeavoring to keep the earth at the strict angle of its repose (30° to 37° according to the nature of the soil) and nature, through the elements, endeavoring to tone down the straight line to a curved one. Fig. 136 gives a comparison between these two lines. Walks should be kept at a reasonable

FLOWING CURVED WALK.—FIG. 135.

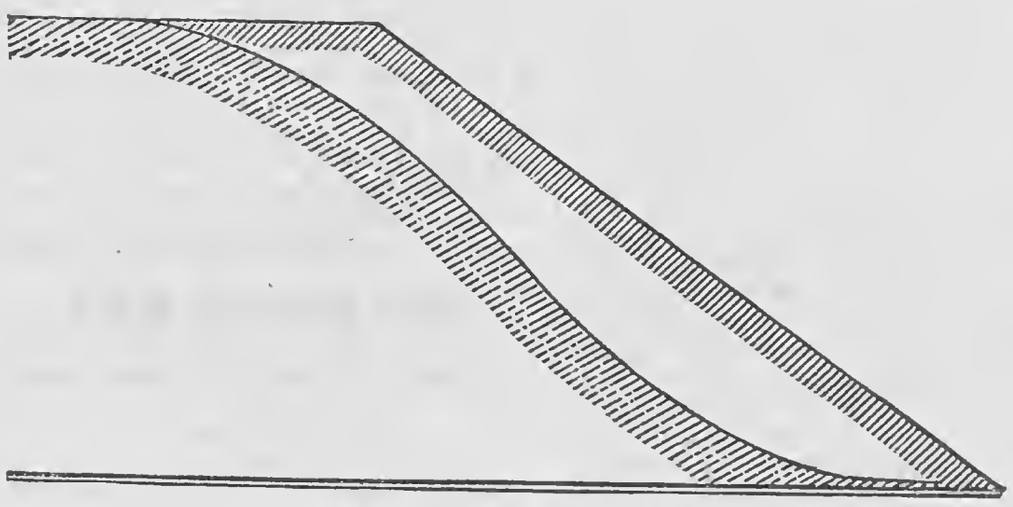
distance from the foot of each embankments in any case. In

Grouping Trees or Shrubs,

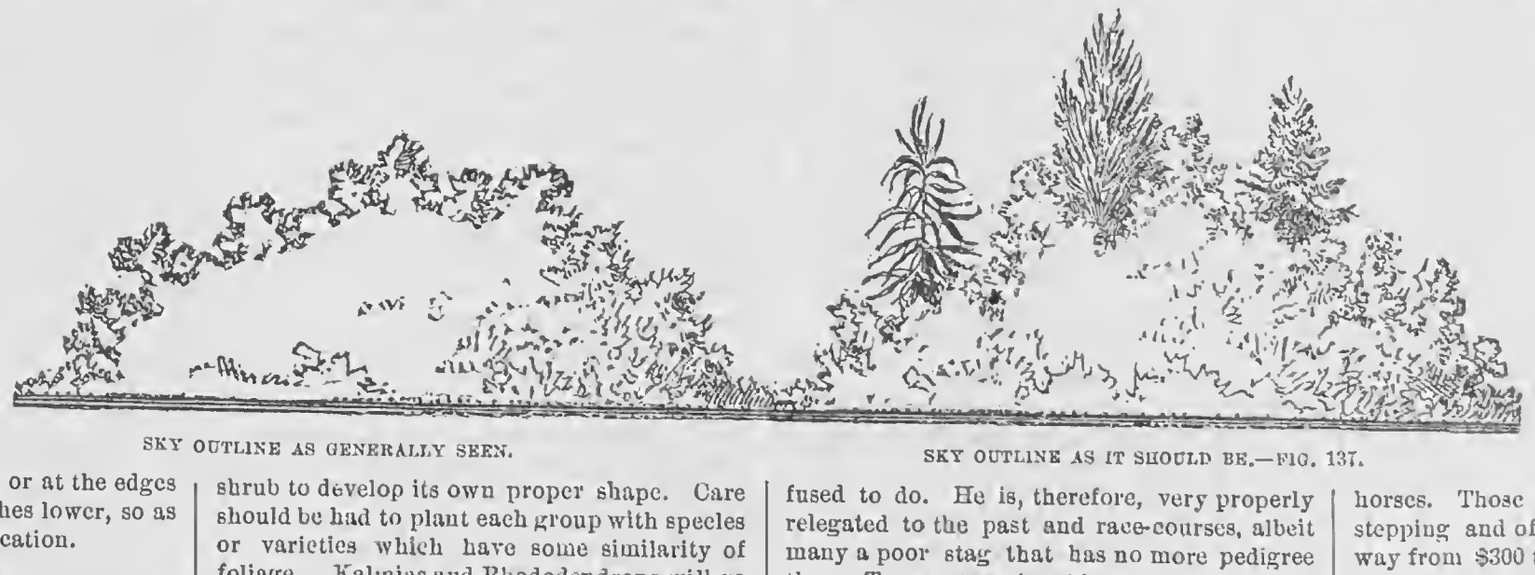
great care must be taken not to give them a clumpy appearance, either on the ground line or on the sky line. Groups of both should have the ground line very irregular, and groups of trees should be connected with each other by a few single specimens, which may be trees remarkable for their form or foliage. In groups they should be so planted as to admit plenty of air and light among them, so as to insure a full development of their characteristic growth, and to produce the beautiful effects of fleckered light on the grass beneath them. Nothing looks worse than dense, dark, untoned masses of shade on the lawn. It is as bad as solid blacks in an engraving, unnatural because too heavy. The sky outline is readily managed by the introduction of trees in pyramidal or spiry forms of growth, or any other forms which will destroy the billowy outline made by round-headed trees, or trees of the same species, such as is produced when trees of one species of Elms, Maples, Oaks or Pines are planted together; hence the necessity of variety of kinds in each group. Trees which bloom before their foliage is fully developed or trees with colored spray, should always have a background of dark-foliaged evergreens, it displays their floral beauty and colors with great effect, and, at the same time, lightens up or relieves for the time being the sombreness of the evergreens. For the same reason trees with light-colored foliage should always have a background of trees with darker colored foliage, as it brings them out in bolder relief.

Groups of shrubs should have a very irregular ground line, with deep indentations or bays, so as to produce strong shadows as a relief to the reflected lights from their foliage. As they are generally below the eye, this reflected light is too strong unless relieved by deep shadows. They should always be planted sufficiently far apart to allow each individual shrub to develop its own proper shape. Care should be had to plant each group with species or varieties which have some similarity of foliage. Kalmias and Rhododendrons will go together very well, or with Calycanthus; but they will not harmonize with Spiræas. It is different with shrubs in this respect, to what it is with trees—they are so close to the eye that the minutiæ of the forms of foliage are immediately apparent, and are not toned down by distance and atmospheric effect. The same remarks as to the sky line apply to them as to trees. I give two figures of each as explanatory of the ground and sky lines for groups of shrubs.

I trust that the above hints and directions will enable such of the readers of the RURAL NEW-YORKER as propose to improve their country places to do so with satisfaction. They will find it a subject of much interest and both a delightful and pleasing study.



FORMATION OF NATURAL AND ARTIFICIAL EMBANKMENTS.—FIG. 136.



SKY OUTLINE AS GENERALLY SEEN.

SKY OUTLINE AS IT SHOULD BE.—FIG. 137.

The Horseman.

BREEDING HORSES FOR PROFIT.

L. S. HARDIN.

THERE is probably no animal on the farm that so deeply interests both the ambition and the hope of gain in the average farmer as the horse, and yet how few, how very few, ever make any money on the colts they raise; how few, in fact, ever use anything like a matured discretion in the course of breeding they pursue. There seems to be a dreadful fascination in one branch of horse breeding, that fairly engulfs the great mass of fancy, professional and farm breeders. That great American production, the phenomenon of the nineteenth century—the incomparable "trotter—" has set the bucolic mind agog, and no one thinks he can die happy without being in some way connected with the production of one or more of the modern flyers. I remember, many years ago, when this feeling, especially among the younger farmers at the South, was rampant about the running horse yelept the "thoroughbred," and from that day to this there is nothing that claims the semblance of an ancestry, from a bull pup to the crowned king, that does not master all his surroundings with the proud consciousness that he is "thoroughbred."

It was, however, soon found out at the South that while thoroughbred horses had sense enough to run around a smooth ring faster than any other breed of horses, yet as that was not the chief purpose for which horses were wanted, they were asked to work on the farm, and draw wagons and carriages as well as run races. This your high-toned and princely thoroughbred has always persistently refused to do. He is, therefore, very properly relegated to the past and race-courses, albeit many a poor stag that has no more pedigree than a Texas steer is sold every year in this city as a "Kentucky thoroughbred."

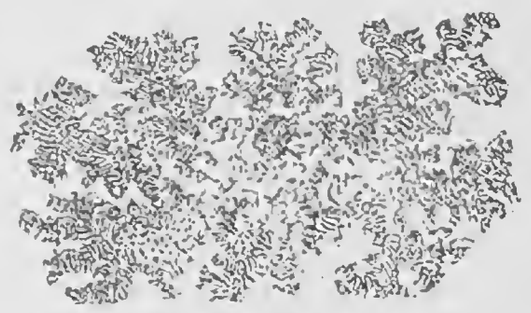
To this ignominous end will soon come the modern "flyer" with the average and busy farmer. He is not the horse we want either for general purposes on the farm, or draft or carriage purposes in the city, or for any one of the other thousand purposes to which this most useful animal, when properly bred, is capable of being adapted.

Let us take a business view of this question of breeding horses, and in order to do that intelligently, it is first proper to see what classes of horses are needed in the market, for in this, as in all other transactions, the supply should be regulated by the demand. Horses are in demand for: 1—running races; 2—trotting races; 3—buggy driving; 4—carriage and park purposes; 5—heavy draft; 6—farm or general purpose. These classes will probably include all the other special purposes that horses are used for. With our first-class running horse the fiat has long since gone forth that nobody can breed him at a profit but your professional race-horse man. The farmer has no more business with raising a thoroughbred horse, than he has with any other description of flying machine. With our second class, the trotter, it is a mere question of time how long the farmer will hold this precious delusion to his soul. Dan Swigert who carried this business as long as his horse genius would let him—and he probably has more of it than any man in America—told me that it cost him not a cent less than $100 a year for each and every colt he raised. He was more than lucky in having his sales average him over $500 each at the end of five years. To do this, some of the

GROUND OUTLINE AS GENERALLY SEEN.—FIG. 138.

colts had to realize fabulous prices. To be sure, he took extra care of his colts, but that brought him extra prices. If the farmer will count the cost of the stallion's service, with interest on the money, time the mare is idle; the cost of rearing the colt; and extra care that is necessary to realize an extra price, and then deduct the losses on little scrawny "weeds" that are good for nothing—if he will keep accounts, with these points strictly in view, he will soon give the trotting fraternity a wide berth.

The third class, buggy horses, is not what can be called a special class. They are generally made up from those that fail to come up to the standard of other classes—such as trotters, heavy draft and carriage horses or those that show more speed and style than are required on the farm. The gentlemen drivers of cities are becoming more numerous every year and creating a special but a limited market for this class of horses. The demand is too limited and the art of breeding too indefinite for any one to make a specialty of breeding this as a distinct class of horses, though there is beginning to be some demand in England and France for stylish buggy horses.



GROUND OUTLINE AS IT SHOULD BE.—FIG. 139.

Our fourth class includes carriage or park horses which are the most profitable to raise. This is best accomplished in conjunction with class number five—heavy draft horses. The stallion should be high-strung and spirited, with rather a light body in proportion to the length of his legs; but he must carry a high head, and should be able to strike a three-minute gait. A solid bay, with black points, is the best color. The brood mare to be put to this stallion should be of heavy body and stand on short, thick legs. From such a pair the offspring should make either a carriage or heavy draft horse, that would always command an extra price in the city market. When the colt favors the sire, he belongs to the class known as park horses. Those that are of good color, high-stepping and of free gait, are worth all the way from $300 to $1,000, if well matched. If the colt favors the dam, then it will be a good, heavy draft horse, and should weigh 1,200 pounds, and, if well matched, it should bring from $200 to $500, the price depending upon its style and action. The breeder should be able to match his own horses; for here is where all the profit comes in.

Our last class, the farm horse, is only too likely to be the refuse of the above classes. He should be put up with a special view to

drawing wood or plowing hard all day, and then taking the boys and girls to singing school at night, with a spirited and well contested race for three miles, on the road home at eleven o'clock at night, with the "swell" horse of farmer Jones's boy. The farm horse in this country that can't stand that, had better go out of the business.

Dairy Husbandry.

OLEOMARGARINE.

HENRY STEWART.

An old Fable Newly Applied.

ONCE upon a time there was an Arab, which his name was Am Eric Andai Ryman. He was reclining in his tent at midday and busily thinking over his past good fortune and the bright future which he anticipated. Suddenly the door of his tent was thrust aside and the uncouth head of an uninvited camel presented itself to his disturbed gaze. "Avaunt! profane beast," he exclaimed, "wherefore doest thou intrude upon my privacy and disturb my rest?" Then the camel replied, "My master, the heat of the noonday sun is intolerable, the inhospitable desert affords no shade, and the coolness of this tent invites me to shelter my head within it. *There is room enough for both of us*, but all I ask is to rest my head in the shade. Deny me not. The world owes everything a living and a shelter." "What art thou that askest this favor of me, thy master, oh beast."

"I am only a camel seeking a subsistence in this stupid world; my name is Oleom Arga Rine, and I am closely related to thy family."

"How so, profane beast," asked the Arab; "all flesh is grass, all fat is grease; therefore we must be related."

And the camel looked so pitcously that the kind heart of the good Am Eric Andai Ryman relented and he bid the camel put in his head and even offered him food from his table. But no sooner had the camel put in his head than he encroached still further and squeezed in his shoulders, and by and by his hump so crowded on the owner of the tent that the poor man was completely thrust out and had to content himself with the poor shelter afforded by the outside.

"Ungrateful beast," complained the Arab, "is this the way my generosity is returned?"

"The world was made for all,' replied the camel, "I have now the tent, and what a fool wert thou that thou didst not keep me out when I was out, and not permit me to get my head into thy tent. Know, oh Scheik, that it is easy to resist an enemy when he has no foothold in thy tent, but once he is in thou art at his mercy and must yield thy place to him."

"Alas, it is even so," exclaimed Am Eric Andai Ryman. "It is too late to cry over spilled milk. My own folly is to blame, and what has come upon me must be endured, for I see no way to regain my tent."

The facts in the case.

A few years ago an innocent-looking exhibit might have been seen at the American Institute Fair in New York. It was a plain glass case containing a few bottles of clear yellow oil, made from tallow and called oleomargarine. It was introduced from France, where it was used to adulterate or simulate butter. The writer, assured that this was a serious affair, threatening the dairy interest, immediately began to call the attention of dairymen to it, in the hope that steps would be taken to restrict the sale of the article and prevent injury. But the most surprising result occurred. Instead of fighting this thing "tooth and nail," it was invited into the dairymen's tent and at the dairy conventions, leading dairymen defended it and speakers glorified it. It was openly recognized as a fit substance to mix with skimmed milk for the manufacture of cheese, and I accompanied a deputation of influential dairymen to a factory near Rome, N. Y., splendidly fitted for this very manufacture, where samples of base cheese were examined and tasted and declared all right. Of that company I was the only one recognized as opposed to oleomargarine. *The camel's head was in the tent.* It was a very short time until the camel crowded the former occupier until he began to grumble, and now he is out and the other is in. Precisely what I prognosticated several years ago has happened, and the dairy interest has a powerful competitor to fight, which it actually helped to nourish and strengthen, when by one grasp it could have strangled it. These are the facts. Now what is

The truth about it.

When a manufacture has become established it cannot be put down. Capital and vested interests are concerned, and the solid footing gained helps to further advances. It is now, not as butter, but as a substitute for butter, that oleomargarine will come before the public, and there is no law, and can be no law, to prevent its sale *for what it is*. The trouble is that it really makes a very fair substitute for butter. I have seen dairymen smacking their mouths and looking wise over it, and unable to distinguish it from butter. I believe the only test short of a chemical analysis or a microscopical examination, which is perfect, is the manner in which it cuts into thin slices with a knife blade. Then it curls or bends and cracks because of its granular texture. When well made and fresh its flavor is agreeable; when pure, it is an unobjectionable article of food, for there is nothing about it that is not already used as food. The fat of an ox is perfectly healthful and nutritious, and the process of separating the limpid oil from the fat and of churning it into an emulsion with milk adds no more to it than is already contained in the major part of the butter, and that is a portion of milk. As a dairyman, I suffer from the competition, for although this substitute will affect mostly the lower grades of butter, yet the cheapening of these cheapens all above them, just as cutting off a few of the lowest steps from a ladder lowers the top ones with the rest. Now that the camel has our tent, I see nothing to be done but to let the world know that the present occupant has no connection with the former one, and compel him to go by his own name and label himself as he is, OLEOMARGARINE in conspicuous and unmistakable letters, at least one inch long, on the outside of the cover of the package.

Jersey Milk for Babies.

Col. Curtis is mistaken in saying I "assume" that there have been no cases in which children or calves fed with Jersey milk, have sickened. What I assume is that when this occurs with sound Jersey or any other milk, it is due to just what the Col. lays it to when he says "Probably if the milk had been diluted by making it one-third water, there would have been no trouble." Jersey milk, having less water, needs more dilution. I agree to that. But I protest against Dr. Sturtevant or or anybody else "assuming" that for this reason Jersey milk shall be refused to infants. All cows' milk, not excluding the immaculate Ayrshire's, will sicken infants fed with it unless water is also given, either *in* it, or *with* it. If Dr. Sturtevant had merely said that when Jersey milk is fed to babies, it should be more freely diluted with water than that of Ayrshires, nobody would have disputed it. What he did say was quite different, and, in my opinion, needed contradiction. Properly diluted, or as I prefer, with all the water in addition that the child wants, Jersey milk is perfectly suitable food for babies, certainly not less so than that of any other breed of cows. Having for years, during the practice of my profession in a large city, made the diseases of children a specialty, and the alimentation of such as were deprived of their natural food, a particular study, I welcomed Jersey milk as being naturally equal to the best for that purpose, and generally superior, because Jersey dairymen are, as a class, neat and careful persons, whose milk, when supplied to families, is more apt than that of others to be sweet, clean, and from carefully fed and tended cows.

Orleans Co., Vt. T. H. HOSKINS, M. D.

The Herdsman.

STOCK NOTES.

LARGE IMPORTATION OF HEREFORD CATTLE.—We note in our English papers that Mr. H. C. Burleigh, of Maine, has been selecting for himself and Mr. J. R. Bodwell, from no less than nine different herds, some of the best specimens to be found in England, of Hereford cattle. He commenced by purchasing from the celebrated herd of the Queen, and finished his ninth selection from that of the renowned Grove. The Hereford cattle heretofore imported into Maine, owing to their rapid growth, hardiness and excellent quality of beef, have become great favorites there. The extra thickness of their hides, clothed with abundant hair, and great vigor of constitution, enable them to withstand the severe cold winters of our most northern States equally well with the hardiest of the natives. Herefords also are making rapid progress on our vast Western plains, rivalling the Buffalo there in thrift and hardiness, and also nearly in size.

SALE OF ANGUS CATTLE.—The famous herd of Black Polled cattle, of the late Mr. M'Combie, half of which was bequeathed to his nephew, Mr. R. Campbell, is to be offered for sale soon at auction. Here will be an opportunity which rarely happens, to obtain the choicest of Polled stock. Mr. M'Combie's animals have almost universally taken first and second prizes for years past at Fat Cattle and Breeders' Shows throughout Great Britain and in France. The few Polled cattle imported into the United States during the past four years, have given much satisfaction, and their stock is just beginning to appear in market, and is eagerly sought for. We are persuaded that further importations would pay well, and we trust some of our enterprising breeders will soon visit England as well as Scotland to make purchases.

HEAVY FARM AND CART HORSES.—In breeding these, farmers should look very particularly to get plenty of bone, strong joints, cords, and tendons. Though muscle, that is, hard, firm flesh, instead of soft and spongy, must also be regarded. The bone of a thoroughbred horse (racer) is of a much heavier weight in proportion to his bulk, than that of the great, flabby, farm horse, which seems to be bred mostly like a bullock—for his flesh alone. But recollect horse meat is not a favorite in our markets, as it is in Paris, and some other cities of France. We want a horse alone for his work, and the one that can accomplish the most of this in the quickest time will sell quickest, and at the highest price.

UGLY BULLS.—In answer to the inquiry of Able Hoyt, what kind of slip-noose we use on ugly bulls, we reply, a slip-noose made with a rope strong enough and loose enough to choke the bull if he don't keep quiet. Our experience is, that after one or two tugs at such a slipping-noose an ugly bull will remain quiet where he is placed without endangering life by getting loose. Fastening by a ring in the nose is not safe, and a furious bull might break a rope around his horns. Hence we always rely on a slipping-noose in such cases, and "sleep well," feeling thas everything is safe. We shouldn't worry much if an ugly bull did get choked. F. D. CURTIS.

SULPHUR FOR ANIMALS.—If taken internally with their food, sulphur will almost invariably keep all kinds of animals free from lice. We have made a practice for years past of giving a heaping tablespoonful once a week in the feed of each of our cows, and the same quantity to about every ten hens in our flock, and they have never been troubled with lice in them. It may be given in the same proportion as to size when required in the food of poultry, pigs and sheep. Sulphur is a mild cathartic when desired for this purpose, and in small doses seems to have a general beneficial effect on the animal system, something like salt, though, of course, not of that nature.

The Poultry Yard.

DORKINGS ON TRIAL—THE BEST PLAN

COL. F. D. CURTIS.

IN many respects the experience of Mr. Jonathan Talcott with poultry, as given in the RURAL of February 14, coincides with my own. We have tried nearly all the fancy breeds and at last settled down to Dorkings, as combining probably the most good qualities of any breed. We first procured gray Dorkings sent over by Cooper, the great Irish fancier. After a few years we imagined they did not do as well as they ought to, although we had changed roosters, and so we procured a trio of White Dorkings, splendid specimens, and crossed them with the gray. We have as a result fowls of beautiful plumage—a great variety of colors—from the most delicately-tinted dove color to bright silver gray. Some are robin-breasted, and altogether they are as pretty a lot of fowls as we ever saw. They are large, square-bodied and plump, very quiet and hardy to raise. The hens are excellent mothers and the cocks not at all pugilistic. They are not given to scratch or to roam about, but at the same time are sufficiently active in searching for worms, bugs, etc. They have averaged during the winter about one egg a day for three hens. Some of our neighbors boast of having beaten this. We confess we are not quite satisfied with the winter's product. We hope, now that spring has come, that they will do better. Some farmers say that the hens which lay in the winter will not do so well in the spring. Perhaps our Dorkings are saving their energies for spring work.

The neighbor who sold the most eggs last year had Leghorn hens. These fowls possess an advantage over the Dorkings as they are non-sitters. Dorking hens, unless closely watched, will waste a great deal of time and flesh in sitting on nest eggs or in empty nests, which is not the case with Leghorns and other non-sitting breeds. It does not require so much food to keep these smaller birds in profitable condition, which is quite an item. This extra expense is offset in part, as Mr. Talcott says, "by having something to show when dressed." They are undoubtedly the par-excellence table fowl. Their eggs do not possess the rankness in color and taste of the Asiatic breeds. We have a few Plymouth Rocks, stately birds, which we are going to put on trial this spring alongside of the Dorkings, and a few Hamburghs (non-sitters) have also been added to the flock by way of comparison. Up to the opening of spring they excelled all the others in laying. The friends of the Hamburghs claim that they will keep ahead. We shall see. The truth is poultry keeping and breeding should be governed by the same general principles and rules which control stock breeding. Fowls should be bred for the purpose for which they are designed. If numbers of eggs, without particular reference to the size, are desired, then the Hamburghs, Leghorns, and games should be selected. If large, clear eggs are wanted, then the Spanish, Dorking and French breeds—the Houdans and Crevecœurs—should be had. If kept for table use, then the Plymouth Rocks and Dorkings should head the list as the most valuable.

If neither the quality of the meat nor of the eggs is to be considered, then the Asiatic breeds will supply the demand. For eating when young there is no nicer chickens than the Games. The Leghorns are also good, but the Hamburghs are not much better than a crow. We have an idea that following out the line of the above reasoning, we shall settle down to the common-sense as well as philosophical basis of keeping a few Dorkings and breeding them for table use, and Leghorns or Hamburghs for the production of eggs. These would breed together nicely, as the Dorkings' eggs could be readily separated and the Dorking hens used for the mothers. In this case Dorking roosters should be exclusively kept for the barn-yard, and a few of the laying breed should be confined by themselves in the early part of the season to get eggs to keep up the stock. Is not this the best plan to obtain the most perfect success? In this way we would get the full benefit of the special characteristics of the different breeds.

Field Crops.

SMALL AND DENT CORN IN THE WEST.

To the new-comer from New England and the East generally, no feature of our Western agriculture is more striking than the great size of the corn fields and the enormous growth, of stalks especially obtained therefrom. Of course, the grain is proportionately large, as every one knows, who has seen specimens of the Dent corn so generally grown in this section. Our long summers and very rich soils are certainly calculated to greatly increase the growth of the corn plant in all its parts. This I have proved by cultivating the small-growing Eastern sorts, which in New York and Michigan rarely grow higher than six or eight feet. After growing these in Kansas for four or five years without admixture, in favorable seasons they attain a hight of eight, ten or more feet. But it is worth while to remember in this connection that the great yields which we "read of," are not obtained in the Southern or Southwestern States, where the plant attains its maximum developement, but in a more Northern region where the growth of the plant is held in check by a comparatively low temperature. The prize-corn fields, so far as my reading has gone, have been generally located in Western New York, on Pennsylvania hill-sides, or Ohio creek bottoms.

A comparison of views with some of the best farmers of Central Michigan, has convinced me that where their soils approach ours in fertility, they can grow as large and perhaps larger crops than are grown in the great Western corn fields. I do not mean to say that corn can be grown as cheaply there as here; in this matter we have no rivals.

A review of the above facts, led me to conclude some years ago that the small Eastern sorts of corn might be advantageously grown in the West, and especially in those sections subject to late summer droughts. In 1876, I planted five acres of "King Phillip" corn, a kind having no special value over a half dozen others of the small Eastern sorts. This was planted in the poorest field on the farm, and as late as June 9th, while the Dent was planted one month earlier. The result was a great surprise to me, for under all these disadvantages, the "King Phillip" gave 44 bushels of shelled corn per acre, costing 16 cents per bushel, while the Dent yielded only 49 bushels costing 16½ cents.

In 1878, under equal conditions as to soil and time of planting, the "King Phillip" gave 50 bushels per acre, costing 13 cents per bushel, and the large Dent, 42 bushels, costing 12¾ cents. Again in 1879, the "King Phillip" came to the front with a yield of 53 bushels, costing 14 cents per bushel, while the Dent gave 41 7-10 bushels, costing 15 cents. I should have said that both sorts received precisely the same treatment during '78 and '79, except that the "King Phillip" was planted in drills 3½ feet apart, while the Dent was planted in hills three feet nine inches each way. The item "cost" in the above account refers simply to the expense of labor and seed.

But this is not all; this small sort ripens six to eight weeks earlier than the coarser Dent, and I am satisfied that had this small sort been in general cultivation in the State during the drought of 1874, more than half a crop would have been made, instead of the total failure then experienced. Moreover, the "King Phillip" is sweeter and more palatable to stock, which prefer it to all other sorts.

I should say, in conclusion, that our experience upon the college farm with the small-growing sorts, has not only satisfied me of their value, but it has convinced many of our best farmers of the same truth, and in this section a large area will, the present season, be planted to "King Phillip" corn. I have no hesitation in advising Western readers to give the small corn a trial the present season.

Agr'l Coll., Manhattan, Kan. E. M. SHELTON.

Miscellaneous.

WHAT OTHERS SAY.

EXTRACTS FROM AN ADDRESS BY J. G. BARGER. I am aware that there are very many who have no sympathy with the Grange movement; who have grave doubts of its ability to do any good; who go even farther, and condemn the whole business. They say it is a selfish institution, and positively injurious to the general welfare of society. For these people I have great charity. Now to these people I wish to present some solid facts, fully believing that more knowledge of our principles will make us more friends; and to Grangers let me say that the experience of the past years has taught us many lessons. The Grange work now lies out before us clear and defined.

WE FIND FROM the census of 1870, that there were in the United States 12,000,000 male persons engaged in all occupations. Of this number, 6,000,000 were engaged in agriculture. From the same source we learn that the total valuation of all personal and real property for that year was $30,000,000,000. Of this amount $11,000,000,000, belonged to the agricultural interest. You see that the agriculturists comprize one-half of the total number of persons engaged in all the various industries of the country, and that their business has for its capital stock over one-third of the entire wealth of the country. After realizing as best we can how immense is the amount of human and monetary energy used in this business, we naturally might expect some great results. From the report of the Department of Agriculture we learn that in 1879 the value of our principal crops, corn, wheat, oats, barley, rye, buckwheat, potatoes, hay, cotton and tobacco, was $1,904,000,000. Let us compare this amount with the value of precious metals that have been taken from American mines. From the best authority we learn that the total value of the yield of the American mines during twenty-seven years, from 1849 to 1875, was $1,617,000,000. You notice that the value of ten of the principal products of the soil for the one year of 1879 was greater than the total value of all the gold, and silver obtained from the mines during twenty-seven years of prosperous and feverishly active operations. Let us go farther. If we ascertain the value of the various productions of the soil besides the ten staple commodities mentioned, and to that amount add the enormous wealth which is yearly derived from animals and the productions of animals, whose sustenance the soil furnishes, we are safe to say that the gross results of the farmers' business for one year is greater than that of all the mining operations of this country, since gold was discovered in California in 1849, up to the present time.

From the evidence offered we might draw the conclusion that the farming business is a satisfactory success. Viewed in its general aspect such is the case; but when applied to the individual farmer we see the situation in an adverse light. For the past ten years American farming has been cheerless and unprofitable. The handling of the currency question and the shrinkage of values has so disastrously affected the debtor class, of which the farmers constitute a large share, that thousands after struggling bravely for a time were obliged to yield to the inevitable. They saw the magnitude of their indebtedness doubling upon them, and were powerless to avert their certain fate. The figures that represented their debts remained the same, but it took more than twice the amount of the same products which the farmer had to pay with to make the same payment on these debts that it did when the debts were contracted.

This revolutionizing of values has made the poor distressingly poor and the rich oppressively rich. There were men, who by their industry and economy, during years of hard work, had saved up quite a competence. They bought farms at the high prices of land and farm products; they paid in what they had and gave mortgages for what they owed. The change came. The land and produce decreased in value, but the mortgages did not. By and by the mortgages covered the whole value of the farms and better security was demanded.

We see how gracious the government is to manufacturers. What does it do for the agriculturist? Of all the enlightened nations on God's foot-stool the United States does the least for its farmers. Even the little government of Sweden in 1877 expended more than four times as much as the United States did in that same year to promote its agricultural interests. With the proofs so clearly given of how much the farmers have done and are doing to promote and protect our country's best interests, the government treasury allows to them out of the many millions it annually expends and squanders, $200,000 for their benefit. This fact is a disgrace to our national record, and an insult to American farmers; but so long as farmers insist on selecting lawyers, merchants and professional men to legislate for them, how can they expect anything different?

Let us consider the railroads of this country. Ostensibly creatures of the law and public servants, they have become indifferent to all moral and legal restraints. They control legislation and make all classes victims of their caprice and avarice. While the railroad interest has for its capital, counting watered stock and all, only one-fourth as much as the farming interest has, and one-sixth as many persons employed in its business as there are farmers, yet it presumes to and does fix the price of every dollar's worth of produce the farmer has; and this assumed task it performs without any consideration of right or justice. In one year the freight rates between New York and Chicago varied from two dollars to thirty-seven dollars per ton.

The Grangers have done good work in this direction. Let them study the question thoroughly; think it over. Let their opinions be known and it will not be long before the extent of the injustice and extortion which our present laws allow railroad corporations to practice, will be understood, and such a moral force and urgent demand will reach our legislators that they will think it for their interests as politicians to heed the warning and do something to correct the flagrant wrongs.

What farmers want to do now is to realize the necessity of doing more work with their heads and less with their hands. It is absurd to think that in this age muscle can compete with brains. The person conversing pleasantly through the telephone with a friend 200 miles distant represents brains. The stage coach carrying the same messages, plodding along six or seven miles an hour represents muscle. To-day mind rules the world. The farmer needs a more complete knowledge of the various causes, natural and artificial, social and political which affect the farming interest. Then he will see how legislation and pampered monopolies combine together to deprive him of rights and privileges which justice declares belong to him. He will better appreciate the importance, usefulness and honor of his occupation. Then the sense of duty which he owes to himself, to his family and to succeeding generations which will follow in his pursuits, will urge him to take such action, to make such earnest and persistent efforts as will result in elevating the agriculturists of this country to that high standard socially, financially and intellectually, which they have merited and are entitled to hold. Brothers of the plow the power is with you.

INSECTS AND PLANTS. Most of the higher flowering plants would speedily perish were insect aid withdrawn, and but for such aid in the past we would now see, instead of our gorgeous flora of Orchids, Lilies, Magnolias, and Roses, one consisting chiefly of Ferns, Cycads, and Conifers, mingled with Willows, Oaks, and Alders, and plain grasses and rushes.—American Entomologist.

DR. SCHUBELER, of Norway, and his associates after years of observation, arrive at the following general conclusions respecting seeds grown in different climates or conditions:

"I. The grain of wheat that has been grown in low-lying lands may be propagated with success on the high fields, and will reach maturity earlier at such elevations, even although at a lower mean temperature. Such grain, after having been raised for several years at the highest elevation which admits of its cultivation, is found when transferred to its original locality to ripen earlier than the other crops which had not been moved. The same result is noticeable in grain that has been transported from a southern to a more northern locality, and *vice versa*.

2. Seeds imported from a southern locality, when sown within the limits compatable with their cultivation, increase in size and weight, and these same seeds, when removed from a more northern locality to their original southern home, gradually diminish to their former dimensions. A similar change is observable in the leaves and blossoms of various kinds of trees and other plants. Further, it is found that plants raised from seed ripened in a northern locality are hardier, as well as larger, than those grown in the south, and are better able to resist excessive cold.

"The further north we go—within certain fixed limits—the more energetic is the development of the pigment in flowers, leaves, and seeds. Similarly the aroma, or flavor, of various plants or fruits, is augmented in intensity the further north they are carried within the limits of their capacity for cultivation; conversely, the quantity of saccharine matter diminishes in proportion as the plant is carried further northward."

PELARGONIUM MRS. CANNELL.—This, as described in the last number of the Florist and Pomologist, is a striking advance in the true Ivy-leaved section, being "the largest and by far the best shaped flower yet obtained. It is a plant of vigorous growth, and therefore well adapted for growing on into a specimen. The flowers are large in size, perfect in form, stout and durable in substance, and produced in bold, well-filled trusses, while the color is a deep mauve-like lilac or purple, beside which all the other similarly colored sorts look pale and ineffective." To Mr. Church, a hybridist of some years' standing, is the credit due for raising the variety, which Mr. Cannell will in due time send out.

IT IS one of the chief advantages of the thoroughbred animal of any species, says the Nat. Live Stock Journal, that he possesses the power of transmitting his own qualities when crossed upon animals of a mixed origin, so that for the actual uses of the farmer a few crosses of any pure blood will give all the desirable points of the thoroughbred. A good and well-bred Short-horn bull coupled with our common cows, will, nine times out of ten, get calves that, for the purpose of beef production, are absolutely worth twice as much as calves from the same cows got by a common or scrub bull; and a second cross—that is, a thoroughbred bull coupled with these half-blood cows—will produce calves that are worth still more than the half-bloods for feeding purposes. And so of any other breed of any kind of farm animals. If the peculiar qualifications of the Jersey breed is desired, there is no need that the farmer should sell off his present stock and buy a herd of pure Jersey cattle. He can do better by purchasing a good Jersey bull; and by using him he can soon engraft the qualities of the Jersey upon all his young stock.

ONE of the very best flocks of fine-wool sheep of which the writer above referred to has any knowledge has been built up by this process. Commencing, twenty-five years ago, with a clearly defined idea of what he wanted, the owner of this flock selected a small lot of the best common ewes he could buy in his neighborhood at a reasonable cost. He then paid a good price for a pure Merino ram and commenced the process of *grading up*. In a couple of years the original flock of ewes was discarded entirely, and the young half-blood ewes took their place. Another pure Merino ram was procured and coupled with half-blood ewes; and he has kept on in this way every year or two buying a new purely-bred male, and retaining the choicest ewes of his flock, fattening and selling off the inferior ones, until he has, as we have said, the very best flock of which this writer has any knowledge. And this is the secret of the whole business; using only thoroughbred males, and selecting from year to year the best females of his own breeding for the purpose of reproduction.

PYRETHRUM. Some observations reported to me (Prof. Hilgard) seem to render it probable that the cultivation of the Pyrethrum between the rows of other plants will, in a great measure, protect these from the attacks of insects; as, of course, the plants themselves are let severely alone by them. It might even seem worth while to try this plan against the Phylloxera, in so far as the winged insect could scarcely escape the deadly effects of the Pyrethrum, thus preventing its spread. It has been reported that a certain kind of Sumac has thus served to save many of the vineyards of the Isle of Cyprus.

CORN. Dr. Sturtevant says in the New York Tribune that Waushaknm Corn, in three years' breeding, has increased in weight from 56 pound to 64 pounds per bushel for the selected ears; from on open ear to a close, compact cylindrical ear; from a crop that varied greatly in size, shape and quality of ear, to at present a crop of excellent uniformity, and extremely few unmerchantable ears. Per contra, a single ear selected for poor quality, yielded 181 ears, of which but two were of fair quality, the remainder, or 99 per cent. being soft, short, gnarled, etc. Where no culture gave two bushels of ears as good as seed, culture gave 16 bushels as good as seed, and the best culture gave 26 bushels of ears as good as the seed.

CHANGING POTATO SEED.—So far as I am aware, says Professor Goodale, in Land and Home, no careful, systematic experiments have yet been made in this country for determining the advantage of "changing seed," as it is termed, or of planting only such as were grown on a heavy loam, and in a cool climate—say either in Northern New England, or in localities 1,000 feet to 2,000 feet above sea level. My own observations and experiments lead me to believe that this advantage is very great, and I am satisfied that the New Jersey farmer, for example, will add at least one-third to his product by planting Maine-grown seed.

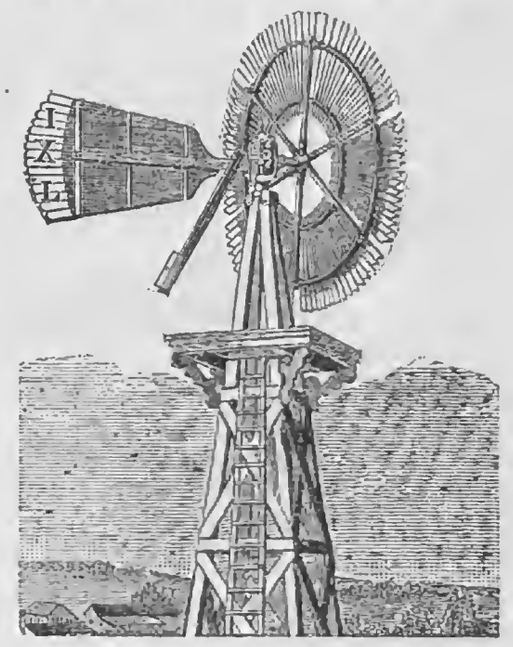
"A NOTEWORTHY sight," Dr. Sturtevant remarks in the same journal, speaking of a visit to the Department of Agriculture, "is that of a bottle of white corn, representing 69 bushels of shelled corn per acre, and alongside a bottle of sugar from its stalks, representing an additional harvest of over 900 pounds per acre. In this case, the stalks were worth more to the producer than the corn. This discovery that the stalks, at the period of full maturity, contain the largest quantity of crystallizable sugar, is of great importance, when we consider the range of the culture of the maize plant, its adaptation to our agriculture. and the value of its grain."

TAINTED MILK.—At Welshpool a case of diphtheria was traced back by medical experts to milk delivered from a house in which this disease prevailed; and at Fallowfield, near Manchester, thirty-five persons, belonging to eighteen families supplied by the same dairy, were attacked with scarlet fever, twenty-four of them within thirty-six hours, and the local Government Board, after careful investigation, believe it was spread by milk drawn from the cows by a man who had lodged the previous night in a house where there was a case of scarlet fever.

Industrial Implements.

THE "I X L" WIND-MILL.

THIS excellent wind-mill is made by the Phelps and Bigelow Wind-mill Company, of Kalamazoo, Mich. In it there are only two points of friction—the main shaft on which is fastened the wheel that operates the machinery, and the crank which moves the pitman up and down to do the pumping. The wheel is solid, of the sort known as the rosette, unusually strong, and firmly braced in front. To stop the mill, the wheel is thrown around by the side of the rudder, exposing only its edge to the wind and stopping instantly, instead of, as in the case of other stiff wheels,



throwing the rudder around by the side of the wheel, leaving the latter still facing the wind until this is strong enough to shift the whole mill with the edge to the wind. One of the most notable features of this mill is its self-governing faculty: when the wind blows harder than the wheel ought to bear, there arises a tendency to fold the wheel and rudder together; and when, in a high wind, the wheel would turn too fast if it faced the wind directly, it turns itself more or less aslant to the wind and keeps just the amount of speed it is designed to have in ordinary winds. If the storm rages too violently, the wheel and rudder fold gently together, and so remain until the gale has abated. Testimonials from well known farmers who use the mill, speak emphatically on this point; some found it to work admirably in sleet and ice storms; others praise it for being tempest-proof, having been unharmed by storms by which trees were prostrated, while all extol its simplicity, self-control and great efficiency. The best material alone is used in the construction of this mill, no part of which is slighted. Indeed the Company warrant it for every point they claim for it, and we urge all in need of a strictly first-class wind-mill to send for full particulars to the above address.

GOOD PREMIUMS FOR A USEFUL OBJECT.—J. A. Field, Son & Co., of St. Louis, Mo., manufacturers of the Big Giant Feed Mill, offer four of their mills as premiums to encourage experiments in testing the value of corn-cob ground together with corn meal for stock feed. They offer One Big Giant, No. 3 Improved, $65.00; for best results in cattle feeding; one Big Giant, No. 2, Improved, $50, for second best results in cattle feeding; one Big Giant, No. 2, Improved with sieve attachment, $60, for best results in hog feeding; one Big Giant, No. 2, Improved $50.00, for second best results in hog feeding. Reports of competitors must be furnished on or before Sept. 1, 1880—stock to be fed for not less than 60 days. We advise all our readers interested in the solution of this problem—and what farmer is not?—to send for full particulars of the conditions of all the experiments.

Everywhere.

RURAL SPECIAL REPORTS.

ARK., Greenwood, Sebastian Co., April 10.—The last three weeks have been dry weather. Forest fires are becoming quite troublesome. Roads dry and dusty. Apple trees in bloom. Blackberries blooming. Forest trees nearly in full leaf. Lettuce and spinach ready for the table. Immigrants coming in from all quarters. Real estate increasing in price. Wages both reasonable and plentiful. Farmers very busy preparing ground for cotton, of which a larger acreage than usual will be planted. Quite a number are going to try raising peanuts which are said to be a profitable crop. All kinds of fowls are raised here with profit. R. R.

ILLS., Baldwin, Randolph Co., April 12.—There will not be as large an acreage of oats sown as usual; the high price of seed oats and the wet weather are the drawbacks. Wheat is looking better than it did at my last report, and where it is good, it looks very fine; but in some places it is very poor, and, taking all into account, the prospect now is not nearly as good as it was at this time last year. Fruit has been injured in some places by the late frost, especially Peaches; but from what I can learn through this section there promises to be a fair crop. Oats are high, 40c. per bushel; corn is also selling at 40c.; wheat has declined to $1.05, and Irish potatoes are all the way from 25c. to $1, the price depending on quality; the last figure being for New York Early Rose for seed. Sweet potatoes are selling at $1.25 per bushel. Farmers, as a rule, are well up with their work, with the exception of sowing oats. There are many farmers in this section who raise nothing but wheat—every acre they can possibly get ready in the fall is sown to that. They do not even raise corn enough to feed their own stock, and some after putting all their own land in wheat, pay a high rental for other land to raise a small crop of corn, or what is strictly necessary to feed their stock. Their stock consists generally of only enough horses to work their farms, one or two cows for milk and butter for family use, and hogs sufficient to fatten and kill in the fall for meat for home use the next year. In this way they risk everything on one crop. If it fails, they have made nothing; and sometimes they have really lost money. Of course, once in a while these farmers make it pay, as they did last year; but I think all will agree that last year was an exceptional one both as to the yield and the prices obtained. Taking it one year with another, however, I question very much whether wheat alone pays nearly as well as mixed farming. It hardly ever happens that we have a general failure as to crops and prices, and by having several different crops to depend on, there are more and surer chances of profit. If wheat fails, you can have corn, oats, hay or stock to fall back on to make up the loss; and if corn is short, wheat may pay. So I believe it pays better even here where there is no range, to keep a few extra head of cattle or hogs to use the surplus hay and corn on the farm rather than to sell these to some one else to feed. Such stock are always sure of bringing money at any time, and when wheat fails, it is quite a consolation to feel that you have something else to fall back on. Then, again, a man who practices mixed farming has less money to pay out for hired help; for he is able to do more of his own work himself, and thus save considerable in the expense account. Wheat is always considerable expense, as it is a crop that has to be attended to at once, and at a time the laborer exacts the highest price for his work; consequently a failure in that involves considerably more loss than in almost any other crop, and to me it seems more than ever desirable for every farmer to raise something else to make up the possible loss by reason either of low prices or of the failure of the crop. N. J. S.

ILL., Stone Station, Lee Co., April 14.—There was considerable wheat sown last fall, but on account of the open winter it is about all winter-killed, especially the Odessa variety, which is a spring wheat properly and not a good kind to sow in the fall; Last year, however, we had a very good crop of winter wheat of that kind. Rye looks well considering the open winter. Our prices are lower in some of the staple products than they were last fall. Corn, 30cts. now, and last fall 35cts.; oats, 28 cts.; wheat $1@1.15; rye 75cts.; hogs about $4. C. S.

ILL., Elkhart, Logan Co., April 12.—Wheat in our section is generally good. Winter seems to have been the worst on that which was broadcasted; but even this appears to be coming out all right. The fly has not harmed it to my knowledge. Its general appearance promises an ordinary crop. G. P. O.

IND., Argola, Steuben Co., April 13.—The condition of wheat here is excellent. The past winter did not injure it at all, and since then the weather has been fine. We are increasing the area under wheat every year, a much larger acreage than ever before was sown. Southern Michigan and northern Indiana will reap a far larger wheat harvest this year than they have ever done. The prospect for fruit of all kinds, too, is good. Spring work is "driving." T. B. L.

IOWA, Dakota, Humboldt Co., April 13.—We raise no winter wheat in this vicinity; all ours is of the spring varieties. Last year the yield was good—generally from 15 to 20 bushels to the acre of No. 2 wheat. On new land the yield was even better, in some places running as high as 25 bushels. The chief injury was done by rust; the weevil also did some damage, and while in the milk some of it was injured by showers and the hot sun. This spring a larger acreage is being put in. Wheat sells here now at 80 to 90c. The corn crop last year was large and the acreage much greater than usual. The yield was from 50 to 60 bushels to the acre and the price from 17 to 25c. About one-third more will be planted this year than last. G. L. H.

MO., Reigsburg, Wells Co., April 15.—Some pieces of wheat are badly killed by freezing and thawing. Some on low ground was killed by drought last fall; but generally it looks as favorable for a good crop as I have ever seen it. It is not damaged by the fly to any extent. The acreage is larger than usual. It shows no signs of disease as far as I have been able to learn or observe. J. H. G.

OREGON, Springfield, Lane Co., April 6.—We have had one of the worst winters known in this State; rain and snow since the first of Dec. Winter wheat is looking well and there is a fair prospect of a large yield. Hessian fly has never been known in this state. Acreage larger than last year. Spring wheat is mostly raised in this county and does well. Farmers are rather late in sowing this spring on account of bad weather. Wheat per bushel, $1; oats, 45@50cts.; potatoes, 50cts. D. J.

OREGON, Long Tom, Lane Co., April 7th.—We had a hard winter in Oregon, yet early-sown wheat looks well. A great deal is sown that is not up yet, and much more will yet be sown; probably seeding will not be done before the first of May. There is no appearance of disease in the grain already growing, although frosty nights are no benefit to it. The Hessian fly is unknown here. The general appearance of wheat is about the same as last year and the acreage much larger. E. B. B.

OREGON, Canby, Clackamas Co., April 8.—Wheat in this section does not show any signs of disease. The Hessian fly is not known here. Its appearance is as good as in former years only it is smaller. The acreage of winter wheat is smaller; but it is thought that the acreage of spring wheat will be larger than last year. We have had an unusual amount of snow this winter and a very late spring. It is very cold and chilly at this time. J. S.

OREGON, Cornelius, Washington Co., April 5.—The wheat has not made as vigorous a growth as in former winters; but it is looking very healthy. It is not injured by the frost. We have no Hessian fly in this country. The prospect for the fall-sown grain is very good—equal to that in our most prosperous years. The acreage is a about the same as last year. There will be a greater amount of spring wheat sown than ever before. J. R.

OREGON, Tangent, Linn Co., April 6.—The wheat in our section looks worse than usual at this time. The winter has been unusually severe on the crop. There is no appearance of any injury from the Hessian fly. There was as much as 50 per cent. more acres put in last fall than ever before, but I thing it looks 20 per cent. worse. R. L. S.

OREGON, Portland, Multonomah Co. April 7.—Wheat in this section is not injured by the winter. No signs of any disease. The Hessian fly is unknown here. Its general appearance is good as compared with other years. Acreage is larger. H. O. B.

OREGON, Scottsburg, Douglas Co., April 5.—About twenty-five per cent. more wheat was sowed this year than usual. No Hessian fly; no signs of disease. Plenty of oats and barley—always good crops. T. W. A.

PENN., Cool Spring, Mercer Co., April 16.—Wheat looks well and more than the usual acreage was sown last fall. Prices are:—wheat, $1 30; oats, 35 cts.; corn, 30 cts.; clover $5. Last year wheat and corn, half crops; oats good. S. R. B.

TENN., Beckwith, Wilson Co., April 14.—Winter wheat is in fine condition; prospects good for a large crop; I have some that is knee-high and preparing to head. The farmers in this county have nearly finished planting their corn. We have had too much rain since the 1st. of February. Seasonable at present. R. Y.

WASH. TER., Alpowa, Columbia Co., April 7.—The past winter has been a severe one for fall-sown wheat. There is no disease in wheat here except smut, and this is prevented by treating the seed with sulphate of copper. The Hessian fly does not trouble the wheat here, and its general appearance is not quite as good as on other years, but the acreage will be much larger. N. A. W.

WIS., Labelle, Sauk Co., April 15.—Half our winter wheat appears to have been killed; the rest will most likely give an average yield per acre. No Hessian fly in this section. Fully half as much acreage as last year has been sown to wheat. W. S. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

The New York Law on Line Fences.

J. H. L., Coxsakie, N. Y., has a wood lot lying separate from the farm and assessed by itself. It has been owned by the family for 40 years and has never had any fence in front of it—that is, along the road. On the three other sides, the adjoining land is owned by three separate men, one of whom has served a notice on our inquirer that he must build his part of the line fence between the wood and the neighbor's lot. The fence is of no use to our correspondent, as the wood lies in common and will do so as long as it is owned as at present, and he asks whether he can be compelled to build the fence.

ANSWER BY F. K. MORELAND.

The general rule in this State is, that when a land owner elects to let his land remain uninclosed, it is no one's business but his own. By allowing his land to remain open and unfenced he tacitly permits it to become common. In no case can a land owner be compelled to maintain road fences; this has been the case since the legislature passed an act to that effect several years since. Our courts have decided over and over again that if a land owner doesn't wish to build partition fences but chooses to let his land remain in common, he cannot be disturbed in this assertion of his sovereign rights. The Supreme Court says in Chrysler vs. Westfall, reported in 41 Barb. 159. "If an owner chooses to let a portion of his land lie open, he cannot be charged with the proportion of the expense of a partition fence, under the Statute" (1. R. S. 353 § 30). Section 30, above referred to, has been several times amended and in 1871 Chap. 635 was made to read as follows:

"When two or more persons shall have lands adjoining, each of them shall make and maintain a just and equal proportion of the division fence between them in all cases where each of such adjoining lands shall be cleared or improved, and where such adjoining lands border upon any of the navigable lakes, streams or rivers within this State, it shall be, and it is hereby made the duty of the owners thereof, to maintain such division fence down to the line of low water mark in such lakes, streams and rivers." Section 31 of the 1 R. S. now reads as follows, Chapter 635 Laws of 1871: "Where two or more persons shall have lands adjoining, and not within the provisions of section 30, as hereby amended, each of them shall make and maintain a just and equal proportion of the division fence between them, except the owner of either of the adjoining lands shall choose to let such lands lie open. If he shall afterwards inclose it, he shall refund to the owner of the adjoining land a just proportion of the value, at that time, of any division fence that shall have been made and maintained by such adjoining owner, or he shall build his proportion of such division fence." Such is the law in regard to division fences. And the portions of the statute law of this State in reference to lands lying uninclosed, seem to me to be founded upon the theory that the only person who suffers from the want of fences is the owner or owners of such uninclosed lands; that if such owner permits the world at large to come upon his uninclosed land at will, he, and not his neighbor, is the only person that is damnified. And if any adjoining owner, in a case where there is no division fence, wishes to have his lands inclosed, he must do it himself and not call upon a land owner who doesn't wish to fence his own lands, to contribute to the cost of inclosing his neighbor's lands—a proceeding in which there is not a particle of justice.

Action of the Nitric Ferment in the Soil.

W. M. C., Glenwood, Utah, referring to our editorial on Nitrification in the Soil in the issue of March 13, asks how does the nitric ferment produce the niter in the manure—does it decompose the woody fiber and extract and feed on the albumen; or does it feed on the fiber and inhale nitrogen from the atmosphere and compound it with the carbon, and develop nitro-carbon, or excrete some form of nitrate, as of potash, soda, etc?

ANS.—Very little is known as yet with regard to the precise mode of action of the nitric ferment. Indeed, looking at the matter from the agricultural point of view, it would seem best to content ourselves for the present with the discovery that nitrates are really formed through the intervention of a ferment, and to devote our energies to the application of existing knowledge to the treatment of the soil and the compost heap so that the largest possible yield of nitrates may be got at the least cost. It is highly desirable, of course, that the natural history of this microscopic organism should be well made out. But for the moment we may well pause to consider more particularly the good which is done in the world by the ferment and how best to avail ourselves of it. In seeking to form a conception of the action of the nitric ferment we naturally turn to the somewhat analagous case of yeast. When the yeast plant is mixed with flour and water, at a suitable temperature, it thrives; and as one result of its life various chemical reactions occur in the substance of the flour, among which the production of carbonic acid specially interests the bread-maker. Just so the nitric ferment thrives in the soil and compost heap when they contain fit food and when the conditions as to air, warmth, moisture, darkness, etc., are favorable. In this case, also, chemical reactions occur, incidentally as it were, as a result of the growth and multiplication of the ferment, and among them the formation of nitrates from the nitrogenous and saline matters in the earth, is of prime importance to the farmer. The nitrates are active and approved forms of plant food, immediately available for the growth of crops, while the nitrogenous matters from which these nitrates were derived may have been inert and crude and of comparatively little worth. When nitrification occurs, there is probably no gain to the farmer as to the total amount of nitrogen, but there is a very great improvement as to the quality of a part of it. In all probability, some of the nitrogen of the crude materials goes to waste during the fermentation, but the nitrogen in nitrates is of so much better quality than the nitrogen of the crude substances, that it is a great privilege for the farmer to be able to make nitrates from a part of his store of nitrogenous materials. There is every reason to believe that the ferment feeds on dead organic matters in the earth, "woody fibre, extracts, albuminoids," and what not, but the analogy of the yeast and other organized ferments points to the conclusion that the nitrates formed are not in any sense to be regarded as secretions. For the present, it may be said that we know that the nitric ferment can change the ammonium compounds, which result from the decay of humus etc., to nitrates; and that it is not unlikely that the inert nitrogen of humus can in like manner be changed by the ferment. But there is as yet no evidence that the ferment can convert the free nitrogen of the air to nitrates.

Coloring Butter.

W. H. S., no address, asks, 1, how to color butter, so as not to look brown, as his always does, when colored with annatto, first mixed with melted butter, next strained and allowed to cool, and then mixed with the newly made butter; 2, how to prepare a home-made incubator.

ANS.—1, There are several methods employed by old and experienced dairymen for preparing annatto for coloring butter, only a few of which space will permit us to give here. Melt about, say, a pound of butter, so that the heavy part may sink to the bottom, and pour the light clear fat on the top into another dish. Into the fat poured off, put a piece of annatto, about the size of walnut, wrapped up in a linen cloth, and place the vessel again over the fire. The coloring matter strains through the cloth, and turns the butter brown-red, when it should be allowed to cool off. When the butter is to be colored, some of this is melted, salted and mixed very carefully into the butter after washing. The quantity to be mixed will depend on the shade of color the maker wishes to impart to his butter, and a little practice soon enables him to take the right quantity. Great care should, of course, be taken to work the butter thoroughly, as, if streaked or marbled, it will, most probably, fetch a lower price in the market than it would if uncolored. The better way is to use the annatto in the cream, and then during the process of churning, it becomes perfectly incorporated with the mass and gives an even shade throughout the butter without any trouble. A simple recipe for cutting the annatto for this purpose is as follows: Dissolve a half pound of concentrated potash in five quarts of water, by heating and stirring. Pour off the lye from the sediment, add one pound of the best annatto and dissolve it. Boil gently for twenty-five minutes, by placing the mixture in a kettle surrounded by water, so as to prevent scorching or burning. Then let the mixture settle; rack it off, and strain through a fine cloth, and bottle for use. By measuring the quantity of cream and the proportion of annatto for the desired shade, a uniform color for different churnings may be obtained. When the annatto is cut by an akali, like potash, the coloring sometimes gives a slightly reddish tinge to the butter, while it is claimed that annatto prepared in the following manner produces a golden hue: Take two ounces of best basket annatto and dissolve it in a quart of soft, cold, water. It should be shaken well in order that the annatto may be thoroughly dissolved; then strain the liquid through a cloth, and add one teacupful of any good dairy salt,

and put the liquid in a bottle for use. To make a golden yellow, one teaspoonful of the liquid to six quarts of cream is added to the cream at the commencement of churning. Ordinarily it would probably be better to use some good prepared coloring, like any of those advertised in the RURAL. 2, From all we have learned with regard to home-made incubators, we would strongly advise our correspondent to have nothing to do with them, as an experiment in hatching with them is nearly certain to end in vexation and loss.

"Scours" in Calves.

J. S. P., Belden, O., asks how to treat calves that have the "scours."

ANS.—This disease, so fatal to young calves, is most common where cows and calves are housed, and among calves brought up artificially. Apart from hereditary tendency and the new demands on the digestive functions of the young thing, it is mainly due especially in calves brought up at the pail, to long fasts and subsequent rapid gorging, or to being compelled to drink sour, stale milk, sometimes given too warm. Sometimes, even when fed naturally, the milk contains injurious matters, owing to the cow being over-driven, excited, or having access to foul water, or on account of the milk having been retained too long in the udder. The early symptoms are:—a dirty tail, dullness, disregard of food and abdominal fullness, with fluid, bad-smelling yellow or whitish faeces discharged with violence or pain. As treatment, the patient should be removed to a clean, airy but warm box. If put on the milk of a farrow cow, it should have that of one that has calved more recently; and if the health of the nurse fails or the bag cakes, the calf should be supplied from a more healthy source. If the little thing is given to rapid drinking, an artificial teat in the pail for it to suck at will partially remedy the habit. The stomach should be cleared of irritating food and acrid discharges by a dose of one or two ounces of castor oil and a teaspoonful of laudanum. If the skin or membranes of the mouth, nose or eyes, are of a yellowish tint, two grains of calomel and 20 grains of chalk may be added and repeated daily for some time. In the absence of the yellowish tinge, give with each meal a tablespoonful of sherry wine in which one-eighth of the fourth stomach of a calf has been steeped for 24 hours. A tablespoonful of tincture of cinnamon, with 20 grains each of chalk and gum-arabic, will be an excellent addition. Finally, if the abdomen is tense or tender to the touch, it should be rubbed over with a thin pulp made of the best ground mustard and tepid water, and covered with a bandage to prevent drying until it has taken effect on the skin.

Cost of Growing Tobacco.

J. S. B., Monroeton, Pa., asks, 1, about what is the cost per acre of growing tobacco; 2, about what would be the yield on bottom land—a gravelly loam that yields about 50 bushels of corn per acre; 3, what would the product sell for when cured.

ANS.—The cost of growing a crop of tobacco per acre would depend much on circumstances, varying with the character and condition of the soil upon which it is to be planted. A gravelly soil, while it is well suited to the growth of tobacco, requires a greater expenditure of labor in the cultivation than a clay loam free from stones. Much also depends on the condition of the soil, whether it be in good tilth, free from weeds and weed seeds, or hard and lumpy and foul with weeds, all of which should be considered. Accurate accounts with a four-acre field of tobacco a few years ago by a friend with a view of finding its actual cost per pound, showed that the yield from the four acres was 6,020 pounds, or an average of 1,505 pounds, per acre. The cost, including manure, rent of land, shed for curing, together with team work, was about eight cents per pound, or $120 40 per acre. The cost of the labor alone would, of course, be much less, probably not more than $60 per acre. The yield which our correspondent will realize from his gravelly loam bottom land will depend on the amount and quality of manure he applies to his tobacco ground, and the culture which he gives the crop, and the season. A rich gravelly loam where clay does not predominate too much, that is not easily affected by drought, should, with good culture, produce a fine quality of tobacco, and with proper management, yield from 1,200 to 2,000 pounds of cured tobacco per acre. What a crop of tobacco will sell for per pound, is a question not easily answered. It will depend on the general quality of the crop, the way it is handled and the state of the market. Look at the market prices in the RURAL and do a little figuring on the above basis.

The Balm of Gilead.

A. L., Port Richmond, N. Y., asks, whether the tree called Balm of Gilead, a native of this country, is the same as the Balm of Gilead of the East—the kind mentioned in the Bible; and, if so, what part of the tree is used as medicine.

ANS.—Abies balsamea, or Balm of Gilead Fir, and Populus balsamifera *var.* candicans, the Balm of Gilead Poplar, are both known as Balm of Gilead simply, in many parts of this country. The true Balm of Gilead—that referred to in the Bible—is the Balsamodendron Berryii (B. Gileadense of De Candolle), a tree belonging to the genus Amyris, or Balm trees. It is a low tree or shrub growing in several parts of Abyssinia and Syria. To obtain the juice, the bark is cut at the time the sap is circulating the most vigorously. As the juices ooze through the wound they are received into small earthen bottles, each day's produce being poured into larger bottles and corked. Each tree is said never to yield more than 60 drops a day, so that the balm is very scarce and difficult to procure unadulterated, even in the East. It is used chiefly as a cosmetic, and taken internally in small doses to stimulate the stomach. The Abies balsamea furnishes the Canada balsam of commerce, a very transparent substance with a delicate yellow color and mild turpentine odor. It is used for the same purposes as copaiba, but chiefly for mounting preparations for the microscope and as a varnish. It is collected by puncturing the blisters on the bark, in which it gathers, and receiving the liquid in a bottle or other vessel. The Populus balsamifera *var.* candicans, is a variety of the Balsam Poplar, known also as the Tackmahack. A tincture made by putting the buds into spirits, was formerly a popular remedy for chronic rheumatism and pulmonary complaints. The resin of the buds, too, is apparently a stimulant, like turpentine and the balsams.

Fertilizers for Hops.

A. T. W., Brantford Ont., Canada, asks what is the best artificial fertilizer for hops. He is growing them on a black loamy soil, rich and deep, with a gravelly subsoil—a regular rich bottom land. Of late stable manure has failed to produce the ordinary quantity of hops, and he thinks that some lacking constituent might be supplied by a chemical fertilizer.

ANS. It is highly probable that the use of lime on this sort of soil, rich by nature and by frequent application of barnyard manure, would have an excellent effect. It is just on such soils that lime produces the best results, and its use in the hop-yard under like conditions has often quite or nearly doubled the yield. In the spring about a pint of air-slaked lime and wood ashes to the hill would serve as a good fertilizer and drive away grubs. The best results we have heard of, however, were obtained by applying a quart of fine unslaked lime to each hill in the fall, covering it with dirt and using no other dressing. In this case ordinary manure had been used liberally for the four previous years, and after the application of lime alone, the yield was more than doubled. A good special fertilizer is made of four barrels of ashes, two of plaster and one of salt to the acre to be applied in the spring after the hops have been tied up. Another is:—Six or eight parts of charcoal dust, two of pulverized hen manure and one of plaster. This is good the first year and afterwards. Wood ashes, plaster and bone dust are all beneficial together or separately. Either a compost of decomposed sod or barnyard and stable manure thoroughly rotted, is, however, the chief reliance in the hop-yard.

The Crescent Seedling Strawberry.

P. C. S., Hurlock, Md., asks what we think of the Crescent Seedling Strawberry for a market berry.

ANS.—We should not recommend it for planting in Maryland if to be shipped to New York, or anywhere else unless it be for a home market. It is wonderfully prolific and of fair size; but it is decidedly soft. Its bright color is in its favor, rendering it attractive at all times; the flavor is at least third-rate—poor. A peculiarity of the variety is that on extremely light land the berries are much firmer and better in point of flavor than when grown on any other sort of land, and it is so excessively vigorous the plants will maintain a footing anywhere

Miscellaneous.

S. C., West Northfield, Mass., asks 1, how can birds be kept from destroying cherries and other small fruit when it is against the law to kill them; 2. how can the large black bugs be kept off from young squash plants; 3. when Strawberries are in bloom and a small stream of water is turned on to the ground during the night, will it be a safe protection against frost.

ANS.—1. There is no way of doing so that does not cost more than the fruit is worth. 2. Insects may to some extent be kept in check on young squash and melon plants by dusting these with ashes, plaster, or even dry road dust. Not knowing what "black bug" is referred to, we can only suggest hand-picking and the crushing of the eggs if found on the leaves. 3. Practically it would not. Water in freezing parts will heat. It would require a considerable body of water to exert any marked influence.

H. A. T., East Troy, Wis., has secured from the Agricultural Department at Washington a quantity of rye grass seed, and he asks should it be sown with other grass seeds, or sown down with grain; is it good for pasture, and what is the best time for sowing it.

ANS.—What kind of rye grass? If it is Italian rye grass, that needs a moist, rich soil, and, being an enormous feeder, is usually sown by itself and cultivated for cutting green, yielding immense quantities of fodder in a season. It is often mixed with other grasses for pasture and hay, and is then seeded with a grain crop in the usual manner. If it is perennial rye grass (Lolium perenne) it should be sown in company with other grasses and not alone, as it has not the vigorous habit of the Italian grass. Either should be sown as early as possible in the spring, as in fact should all kinds of grass. Perennial rye grass has not so far succeeded in our dry climate.

Reader, Lewis Center, Ohio, asks, 1, which is the fuller and more complete, Chambers' Encyclopedia advertised in the RURAL for $10 for 20 vols., or Zell's which sells for $28; 2, is Chamber's Cyclopedia of English Literature a standard work.

ANS.—1, Chamber's Encyclopedia is much fuller and more complete than Zell's—the articles on each subject are longer, and more topics are treated of. The edition of Chambers' referred to contains the same amount of reading matter as the more expensive one; but the type is considerably smaller and so is each volume. 2, All Chambers' publications on educational matters are standard works, containing the best and latest information on the topics discussed.

G. A. A., Potsdam, asks how he can procure the annual reports of the Signal Service and also of the Commissioner of Agriculture.

ANS.—All the compilations published by the Government are, as a rule, divided among the members of Congress—Senators and Representatives—for distribution among their constituents, and we would advise each and every one of our readers to apply to the member for his district or State for any one of the works he may want, and although none of them is quite as interesting as a first-rate novel, they all contain a vast deal more useful information.

J. H. M., East Poultney, Vt., has a five-year-old cow that was lately due to come in; consequently, he began about six weeks before that date to dry her off; and after some difficulty he succeeded in doing so just about the time he became convinced she was farrow; and he now asks whether it is likely he can get a full milk yield again by milking her regularly, or if it would not be better to turn her into beef,

ANS.—Make beef of her unless she is worth keeping over the summer on pasture; the milk will not return to any considerable extent.

H. F. S., Winterburn, Pa., asks what kind of grass would be suitable for a very wet piece of land, and when should it be sown.

ANS.—For wet soils there are no better grasses than red top (Agrostis vulgaris), and fowl meadow grass (Poa serotina). Creeping bent (Agrostis stolonifera) makes an excellent addition to the above two species. The seeds—1½ bush. per acre in all—should be sown as soon as possible.

A. R., Paducah, Ky., asks whether there is any book that gives instructions as to the treatment of stallions and jacks during the season.

ANS.—There is no book which has information about jacks; "Stonehenge on the Horse" refers generally to the management of stallions, and that applies equally to the ass as to the horse.

J. M., Selma, Ala., sends some seed for identification.

ANS.—Sweet clover, Melilotus alba.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, April 24th.

A. B. D.—A. C.—R. Y.—H. B.—A. B. A.—J. G. H.—A. B. A.—R. A. W.—I. A. H.—S. H. R.—T. C. O.—R. M.—W. J. K.—F. D. T.—F. H. S.—S. P. H.—S. P. S.—S. A. M.—W. S. C.—W. B. D.—W. M. P.—C. S.—M. R. S.—J. B.—W. G. H.—L. J.—T. J. K.—R. O. G.—W. W. W.—T. H. R.—M. S. C.—T. R. B.—J. J. R.—M. McM.—S. T. H.—R. N.—R. R.—J. H. G.—H. O. B.—S. R. B.—T. W. A.—N. A. W.—J. H. G.—N. J. S.—G. P. O.—T. B. L.—N. J. S.—G. P. O.—T. B. L.—J. H. L.—S. W. H.—J. J.—J. M.—H. F. S.—R. J. S.—G. A. A.—R. H. T.—Thanks.—E. E. A.—M. B. H.—B. C. D.—J. B. M.—W. T. T.—C. G. T.—M. C.—W. G. D.—R. C.—A. F. M.—F. D.—I. S. H.—L. J. K.—F. A. S.—J. W. S.—G. E. B.—H. A

Educational.

PRESIDENTS OF AGRICULTURAL COLLEGES.

OUR agricultural colleges have been making very moderate progress during the six to sixteen years since they have been respectively organized. The act of 1862, granting a large fund in lands to the several States for the equipment of these colleges, should justly mark an era [illegible] agricultural progress. Its purpose [illegible] lay the foundation of scientific and practical schools of agriculture and the mechanic arts. The law is entitled, "An act donating public lands to the several States and Territories which may provide *colleges for the benefit of agriculture and the mechanic arts.*" The fourth section of this act declares that the "leading object" of these colleges shall be "to teach such branches of learning as are related to agriculture and the mechanic arts." It is perfectly plain that the framers of the law intended these as special, and not as general schools. However much general learning the presidents of these colleges possess, it does not and can not atone for a want of the special knowledge required for the management of institutions devoted "to teaching such branches of learning as are related to agriculture and the mechanic arts" This was so obvious at the first glance, that no one could come to any other conclusion unless the "wish became father to the thought."

Yet all of these institutions were organized by the appointment of presidents in total disregard of the spirit and letter of the law—by placing a purely literary man, having no knowledge of, and generally not even any taste for, rural pursuits, at the head to direct the teaching of scientific and practical agriculture and the mechanic arts. Many of these presidents devoted their public addresses, for several years, to special and labored arguments, attempting to show that the law did not intend these colleges as special schools of agriculture and the mechanic arts, but that they were broad enough to include a general and universal education. This was to justify their action in making them merely literary institutions, with a farm manager giving a few lectures on general agriculture, a chemist and a botanist, sometimes with a machine shop. The result has been that the great mass of the students, nine out of ten, have pursued precisely the same studies—and no other—as they would at any literary school before the organization of these colleges. This ratio is too small for the Michigan and Massachusetts colleges; but large enough to meet the facts of all the rest.

It may not be amiss here to show how widely they have deviated from the intention of the framers of the law, by quoting a paragraph from the speech of Senator Morrill, the author of the bill, in advocating its passage. He certainly ought to know what was intended by the law which he introduced. Answering the objection that they would compete with the colleges existing, he says: "Our present literary colleges need have no more jealousy of agricultural colleges, than a porcelain manufactory would of an iron foundry. *They move in separate spheres, without competition.* * * The farmer and mechanic require *special schools* and *appropriate literature*, quite as much as any of the so-called learned professions. We need careful, exact and systematic registration of experiments. We need to test the natural capability of soils, and the power of different fertilizers; the relative value of differents grasses for flesh, fat and milk-giving purposes; the comparative value of grain, roots, hay, peas, carrots, potatoes or turnips in pounds of beef, pork or mutton; deep plowing as well as drainage; breeds of animals; remedies for the potato disease, and for all the tribes of insects destructive to crops."

What countenance does this give to a general education in these colleges? He says, "the farmer and mechanic require special schools and appropriate literature," but the presidents of those colleges, utterly disregarding the law, turn them into ordinary literary colleges, in which nine-tenths of the students are educated without any reference to agriculture and have no intention of pursuing it. The Academy at West Point is a special military school, but it would be doing greater violence to its intended character, were nine-tenths of its cadets permitted to pursue a mere literary course without regard to military sciences, than is the course pursued at these so-called agricultural colleges a violation of the law under which they organized. And the "special schools" spoken of by Senator Morrill were intended to be as special in relation to agriculture and the mechanic arts, as is the West Point Academy to military science.

But perhaps the late election of the Massachusetts Agricultural College is the beginning of an important movement in the reformation of these colleges. It is so new and refreshing as to require special notice and recognition. We refer to the announcement that Prof. Levi Stockbridge has been elected the fifth president of this college. This is an election "fit to be made." It recognizes special fitness for the duties to be performed, and is the first indication that a purely literary training may be dispensed with in the head of a special college devoted to agriculture and the mechanic arts. Prof. Stockbridge has been the working, vitalizing force of that college since its organization, comprehending the duties of such an institution, and now they have tardily concluded to give credit for services performed, and acknowledge fitness proved. This is a precedent that will bear frequent repetition. Let us hope that these colleges may, in time, be redeemed and given the special character intended by the law. PRO BONO PUBLICO.

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REMOVAL.

THE RURAL NEW-YORKER is now in its new quarters, No. 34 Park Row, corner of Beekman Street.

AT first glance it may appear that forcing plants and fruits by the use of the electric light is not likely to prove of any practical utility. It can never be of as much value to us as to English horticulturists, it is true, but we often stand greatly in need of sun during occasional winters, and almost invariably there are periods when plants suffer and flowers are backward from need of sunshine. Further experiments by Dr. Siemens seem to demonstrate the power of the electric light to ripen fruits and to color flowers. If the cost of its production can be reduced to a nominal sum, no doubt the American gardener will have occasion to avail himself of its use as well as the English gardener, though never perhaps to the same extent. At a late meeting of of the Royal Society, Dr. Siemens showed two pots of Strawberries which had been treated the same, except that one had been subjected to the electric light for a fortnight and the other had not. The plant which had been all the while exposed to light (*i. e.*, sunlight during the day, electric by night) bore far more vigorous leaves and of a darker color than the other which was not subjected to the electric light. The berries of the first were at least a week further advanced than those of the other. Of 16 berries, 14 were colored and for the most part ripe. Upon the other, of 14 berries only one was colored, while the others were entirely green.

DURING the month nearly 34,000 immigrants had arrived at this port on Saturday evening, April 24; 40,000 was the greatest number that ever arrived here in April, and it is confidently expected that that number will be equaled, or even exceeded, during the six remaining days of this month. The Irish and Germans, as usual, head the list of nationalities that have contributed to this tidal wave; but it also includes large contributions from countries that have hitherto contributed only in a small way to the population of this country. The number of Italians and Hungarians has notably increased. while Danes and Norwegians have likewise come in an unusual flood. The character of the immigrants is considered much better than the average, a circumstance due in a great measure to the fact there is among them a large proportion of farmers and mechanics. In former years of heavy immigration the vast bulk of the newcomers were either forced to stay in this city or neighborhood, or at least in the Atlantic States, by want of means to take them elsewhere or they elected to remain here because ignorant of the superior advantages of other sections. This year, however, the authorities at Castle Garden say that a very large proportion of the immigrants go directly to the West, having procured "through" tickets in Europe, and that a comparatively small share only of the mighty influx remains at the East.

WE learn from our correspondent in South Carolina that peaches and fruits generally thereabouts are either badly injured or destroyed. Fig trees, the Japan Persimmon, potatoes, green peas, corn, etc., were also injured. There is a nook in the mountains of western South Carolina, however, that seems to have escaped the effects of this severe and untimely frost, though 150 miles north of the country of which our Aiken correspondent speaks. This "nook" is locally called "Thermal Belt." It is a strip of land extending for a short distance along the south side of the mountains between Spartanburg and Hendersonville, and while within a few miles of it in any direction severe frosts at this season are not rare, it is very seldom that even light frosts occur in the "Thermal Belt" to harm the tenderest buds of spring. No doubt some of the causes which contribute to the successful culture of fruits in the Belt are also conducive to the well-being of those who seek the contiguous valley as a health resort. The air is surprisingly dry and the grass as free from dew at sunrise or in the evening as at midday. The elevation is midway between that of Aiken, which is 700 feet above sea-level, and Asheville or Hendersonville, which are about 2,200 feet above. Protected on all sides by mountains, the climate is an intermediate one, escaping the rude blasts of the Asheville and Hendersonville mountains, on the one hand, and the somewhat enervating heat and sultriness of Aiken, on the other. We receive these facts from a trustworthy source, and cannot doubt that the region of country of which we are speaking is destined not only to become famous as a fruit belt, but as one of the most effective health resorts in our country.

SUBDIVISION OF LAND IN FRANCE.—The consequences of an absurd law are well stated in the following terms by Mr. Richardson, an English agricultural writer.

In France, the law says, "Each one of the co-heirs may claim his share of the real and personal property;" and "in forming the portions of each, it is as well to avoid, as far as may be possible, cutting up the inheritance, and also well to give each co-heir the same quantity of real or personal estate." The courts have interpreted this to mean that a division must take place, if claimed, and have quashed wills which made a disposition to one heir of the real estate, to another of the personal, or gave to each co-heir a separate real estate, although the value of each might be fairly apportioned. The consequence of this is a continual division and subdivision of plots of land, until at last no cultivation is possible except with a spade, and in some cases the spade must not be a full-sized one; and a tree cannot be planted on an estate because it is illegal to plant one within two yards of your neighbor's boundary, and your neighbor on each side is within that distance.

It would seem as if compression such as this must soon lead naturally to violent disruption of the existing order of things and to new arrangements. There was a story some years since, when rifled cannon were first invented, to the effect that a German Grand Duke having bought one of the new guns for the use of his "army", was forced to make treaties with two neighboring dukes before he could introduce artillery practice. The more distant neighbor gave him leave to set up a target in his domain, and the other granted permission to fire across his land. In this particular instance it was not long before United Germany "rectified the boundaries" and "absorbed" the three potentates.

THE speculators who, last fall and winter, ran up the price of wheat far beyond what the ratio of demand and supply justified, are likely to be pinched pretty severely before they can unload the twenty to thirty million bushels which it is estimated they still control. Already much, if not all, of the profit they made on the rise, must be lost by the fall that has occurred, despite their best efforts to keep up prices. A glance at our market reports in the issue for Jan. 3, will show that on Dec. 27, No. 2 Chicago spring wheat was worth $1.33⅞; whereas, as seen in this issue, the same grade was worth last Saturday, the 24th, only $1.12—a drop of 21⅛c. Doubtless, however, in the meanwhile, the chief manipulators of the ring have profitably shifted much of their load on other shoulders, besides selling a good deal of their stock at a fair profit. The fall, however, has not ended yet, and in the next few weeks it is likely to be much more rapid than it has hitherto been. Besides miscalculating somewhat the extent of the shortage of cereals elsewhere, the ring did not reckon upon the obstinate unwillingness of our foreign customers to pay the exorbitant prices demanded by this handful of greedy speculators unscrupulously seeking from the distress of Europe to enrich themselves. Owing to the high prices for breadstuffs brought about by their machinations, our foreign customers have been economical in their use, besides substituting for them, to an unusual extent, other articles of food. Moreover, other nations who had a surplus of wheat, acted in the same way, in order to be able to sell the more at the high figures offered. Thus it happens that with the prospect of an abundant harvest everywhere, and the certainty that some of it will soon be in the market from India, Northern Africa and other warm regions, the ring now finds itself heavily burdened with a load, most of which was bought at higher figures than those at which they can reasonably expect to dispose of it. Well, there will be few mourners over any loss they may incur. Their selfish greed has sorely pinched starving millions, seriously injured trade and commerce, made our foreign customers seek other markets and stimulated to greater efforts our foreign rivals.

FISH CULTURE AS ONE TERM IN A ROTATION OF CROPS.

THE following bit of European experience is of interest as bearing upon the culture of carp and other pond fishes, a subject which is beginning to attract considerable attention among farmers in this country.

In eastern France, at the base of the Jura mountains, there is a tract of about 180,000 acres, formerly called Dombes, which is or was so covered with ponds, largely artificial, that a map of the region is said to have shown as much water as dry land. A curious system of rotation has long been practised there consisting of the alternate culture of fish crops and grain crops; or, latterly, of fish, grain and grass. The ponds are kept full of water and stocked with fish for three or four years—two-year-old or three-year-old fish being bought for the purpose of the breeders. In due season, when the fish crop has ripened and been sold, the sluice-gates are lifted and the water drawn off, there being no difficulty in laying the bed of the pond dry, since the whole district lies on a slope from which water flows away readily. Simple ditches and furrows are opened to dry the pond bottom which is then plowed and kept under cultivation during three or four years. Abundant crops are obtained, although no manure is added. Indeed, the soil is sometimes so rich that there is risk, during the first year of cultivation, that the grain crops may run too much to straw. In some cases oats and barley are grown and in others, where the land is of better quality, a crop of wheat is taken the first year and two crops of oats in succession after the wheat. Sometimes the grain is followed by grass, though this seems to be a modern innovation specially applicable to cases where the ponds are to be drained permanently. In this event the ground is readily converted into good pasture.

The soil of the district is a stiff clay, impenetrable to water, such as would have been extremely difficult to cultivate by ordinary methods in the days before tile-drains and other modern appliances had been discovered; and it is from this circumstance doubtless that the peculiar system now in question had its origin. The land is so thoroughly fertilized by the water that the crops obtained from it are all excellent, and it is to be noted that when the practice was maintained in its purity all the crops were of kinds immediately merchantable. The system was formerly held in high esteem and, as a mere matter of farming, was undoubtedly excellent, but a very serious objection to it is its unhealthiness, and it is now discredited on this account. There were not only too many ponds in the district, but the alternate soaking and drying of the land was pernicious. Of late years, the tendency has been to drain the ponds permanently and to grow forage upon the land for the support of stock, according to ordinary farm methods. Quite recently a company, aided by Government, has done much work in the way of draining the ponds methodically. It is said that the public health has been distinctly improved, as a result of the permanent drainings, and that malarial fevers are still slowly diminishing in the district as the work goes on.

BREVITIES.

IT appears that in 1878 we imported 17,549 ounces of quinine. Last year this amount was increased to 228,348 ounces.

THE general prosperity of our country is something so new and entertaining that politics are obliged to take a back seat.

PROFESSOR Shelton, of the Kansas State Agricultural College, it will be seen, advises our Western readers to plant "King Phillip" corn.

TWO plots six feet by four, of rich, sandy soil (if watered when needed) will supply a family of four with crisp, tender radishes from the first of June until the middle of October. Radishes are worse than worthless unless they are fresh and tender.

MANY farmers and especially farmers' sons cannot rid themselves of the fascination of breeding horses for speed. It is well for them to bear in mind that weight, endurance and strength are what are most needed on the farm and that speed is not compatible with those qualities.

JUDGE PARRY states in his "Forty Years Among Small Fruits" that "Queen of the Market" was introduced by J. R. Helfrich of Jersey City, N. J. Does Mr. H. know anything of its parentage? Speaking of the Cuthbert, Judge Parry, says: "It is a fruit of the same character and may be classed with the "Queen of the Market" which it much resembles in large size and fine appearance, and it has probably descended from the same healthy parentage.

REFERRING to our Editorial in last issue, Professor W. J. Beal, of the Michigan Agricultural College, writes us that that college is already, in a small way, raising the best procurable hardy grasses for seed. So far, however, the quantity obtained has been very small—only enough to supply several other agricultural colleges and a few private individuals. The grasses, he well remarks, can never be accurately grown except under the eye of a *good* botanist.

THE Western Rural informs us that there are parties selling the Chinese Hulless Oats in Ohio at $10 per bushel. Seedsmen, both East and West, are offering them at from $1.50 to $2 00 Readers of the RURAL NEW-YORKER could scarcely be deceived into paying such a price for the Hulless Oats. We have raised them at the Rural's farm and our reports as to their value could not have escaped them. It is a prolific variety, the only objection being that if left until ripe, a considerable proportion of grain is lost.

WE have had an unusually large number of requests the past season that we would send the RURAL NEW-YORKER and wait various lengths of time for payments. The requests are entirely reasonable. Many journals do not require pay in advance; many journals are sent for several years or until requests of discontinuance are received. It is a matter for each journal to decide for itself. The RURAL NEW-YORKER is invariably discontinued at the end of the subscription term and we invariably require pay in advance. It seems to us the only business-like manner of conducting the newspaper business.

THE agricultural editor of the New York Sun speaking of "Pearl" (Cat-tail or Horse) Millet, says: "We have had occasion to refer to it during the past three or four years, and have now *nothing to add* or *take* from our former statements in regard to it. *We will say, however*, that it is *not* adapted to the more Northern States, and north of the latitude of New York City it will not succeed except in warm light soils and in very favorable seasons. The italics are ours. The editor of the Sun has "nothing to add or take from former statements!" "*We will say, however*, etc."—is not that an addition or a subtraction? What is it? How diplomatic! The agricultural editor of the Sun ought to have been a statesman.

JUDGING from the experience of the past months of this year, and especially of last week, this is likely to be remembered as the cyclonic year. Never within our remembrance has there been a land storm so wide, so long, so terribly destructive of life and property as that whose track, last week, through Kansas, Missouri and Illinois, was marked by disfigured corpses and maimed survivors, by leveled homesteads and wrecked villages, by uprooted trees and general ruin. Far on each side of its general course other storms less in extent, though hardly less in violence, have also wrought a world of desolation, while away on the Pacific coast, beyond the barrier of the Rocky Mountains, the telegraph has just announced a rain and wind storm of unprecedented severity.

AS foretold here a few weeks ago, Dr. Albert R. Ledoux, late Director of the North Carolina Experiment Station, has just opened an agricultural business laboratory in this city. The nature of the business and the address at which it is carried on are told in our advertising columns, and it need scarcely be mentioned to our readers that Dr. Ledoux is fully competent, both by high professional ability and wide experience in his chosen pursuit, to confer a lasting benefit on the farmers and others who may consult him, by the accuracy of the information he can impart. North Carolina's loss is likely to prove a gain not to New York only, but to all the neighboring States whose farmers can avail themselves of the Doctor's services.

LAST Thursday, when the Senate joint resolution directing the Committees on Agriculture to consider generally the subject of agriculture came up in the House, Mr. Reagan, of Texas, submitted an amendment directing the Senate and House Committees to inquire into the effect on the agricultural interests of the country of adopting a tariff for revenue only, instead of the present protective tariff. Mr. Garfield objected, whereupon Mr. Reagan charged that the protective tariff cost the agricultural classes $800,000,000 per year on account of the higher prices they have to pay for goods, and that in return they only receive the flattery of vague platitudes. "The flattery of vague platitudes" is good as applied to all the farmers of the country have received from the Government.

IN England the late winter and early spring have been all that the farmer could desire for starting the grass and putting in his crops. Fall-sown wheat, though a trifle backward, and the late-sown thin, is, on the whole, in fine condition. In Scotland the weather has been equally favorable, and seeding is about three weeks earlier than last year. In Ireland, the weather has been somewhat wetter and the work, therefore, is not quite so forward, but there are good hopes of a fine crop next harvest. Potatoes are mostly planted, and the seed potatoes sent out by America on the Constellation are being rapidly discharged and forwarded to the distressed districts for immediate planting. France has been blessed with fine seasonable weather, and all crops are in an excellent condition, especially the fall-sown wheat which has an unusually bright, healthy appearance, due to late rains and genial days. Oats, barley and particularly rye, are also in excellent trim. In Germany the weather has been dry, bright, but very cold, especially in the northern part, yet reports of the growing crops are favorable, except oil-seeds which were severely injured by a late cold snap. The spring is backward in Russia. The slight advices from northern Africa speak favorably of the agricultural prospects, especially in Algeria, which has lately been cheered with abundant rains.

Literary Miscellany.

THE WOODPECKER.

BY LAURA S. HAGNER.

TAP! TAP! goes the woodpecker's busy bill,
Tap! tap! on the old oak tree,
He hunts small game
With his tongue of flame,
For a woodman bold is he!

"'Tis the early bird gets the worm," he cries
As he flies from his nest at morn:
And his cry so shrill
The woodlands fill,
Like the hunter's bugle horn!

In their chamber dark
'Neath the moldering bark
The grub and the worm lie still;
But he hurries them out
With a terrible rout,
And gobbles them up at will!

Natures own red republican,
He sings and steals, and fights
And from the ash tree's highest limb
Harangues about "his rights."

'Tis a melancholy truth,
Not in bird-land alone,
That those who trample others' rights
Still clamor for their own.

JOHN ASCOTT'S DAUGHTER.

BY CHARLES RICHARDS DODGE,
Author of "Louise and I."

CHAPTER I.

AN ALTERNATIVE.

"FATHER, I want to buy a farm."

"You want to—what?"

"Buy a farm, I said."

"Buy a fiddlestick," said Mr. Ashton, with a contemptuous glance. "Want to sink some money, do ye?"

"Yes—to the extent of paying for the land."

"Umph! Well, why don't you buy it then. You've got the money your aunt left you, and you are of age?"

"Yes—but—" the young man hesitated.

"'Yes, but—' what?" growled the old gentleman, perching his spectacles upon the tip of his nose, and looking hard at his son.

"Aunt Jane's money is'nt quite sufficient for the purpose."

"And so you've come to ask me for the balance?"

"Well—yes—that is, if—"

"If I am dum fool enough," interrupted the elder, "you've made a failure of everything else you've tried since you left college, and now—"

"But no money was involved."

"Simply because you had none to involve; so this time you propose to go the whole figger. A farm! what in the name of common sense would you do with a farm? You could'nt keep books for Mallery & Richards, at eight hundred a year; how on earth could you keep your own?"

"You know, father, it was too confining.

"You thought you'd be a writer and you scratched away for half a year, and then gave that up."

"I had no encouragement to go on, for you very well rememb—"

"Then you took a sewing machine agency and never made a dollar at it."

"The business was done to death. Besides, I went into it against my inclination."

"Well, I have'nt advised you to go to farming, have I?" Mr. Ashton snappishly asked, resuming his newspaper.

"No, but you drove me into a scientific school by refusing me a regular academic course unless I would take up law at its close. I hate law—and lawyers too, as far as that goes."

"You young chaps seem to know better what's for your good than your father's do. It want so in my day. However, I don't see what the scientific school has got to do with it."

"It gave me the theory of farming. I studied agriculture and zoology."

"Nonsense, and how to catch butterflies," Mr. Ashton, interposed, turning his paper inside out.

"And chemistry and modern language, if you will remember. I chose the course that seemed most to my taste; and I must now choose a pursuit in life in the same manner."

"Headstrong as ever," was the only reply the old gentleman deigned to make, and he resumed his reading.

George Ashton had never been a favorite with his father, was never understood by him. father and son viewing life through as totally different spectacles as could be possible. Mr. Ashton's ideas of parental authority were of the old school, his *ipse dixit*, right or wrong, being final. He had endeavored to rule everybody with whom he came in contact in the way in which he ruled his household, until he had fairly earned the name of a "dogmatic old curmudgeon." He had early marked out a life career for each of his three sons; two of them had followed it as a matter of course, and with fair ability and a good capital, they were plodding along comfortably. But George, the youngest, was of a different disposition. He was averse to going into trade, so his father decided upon a profession for him, and will he, nill he, the young man must follow it, or incur the parental displeasure. As a matter of course, the parental displeasure was incurred, and a stormy time they had of it at home, until, as a compromise, George was packed off to a scientific school. Here he found himself his own man, for the old gentleman was so disgusted that the only advice offered at parting was to "keep out of mischief and study something, whether useful or not.

"And you are really determined to go to farming?" asked the old gentleman at length, laying down his paper.

"I think I could make an honest living at it."

"And how much money am I expected to furnish?"

"About two thousand doll——"

"*What?* Two thousand dollars in addition to your aunt's legacy!"

"That makes but little more than six thousand in all."

"Six thousand dollars to sink in a farm?" Mr. Ashton whistled a bar of "Napoleon crossing the Alps," and added; "must be a mighty fine farm at that figger."

"Would you have me buy a place wholly run down, for half the money?"

"Couldn't you run it up again and put the odds in your pocket? If the land is there you ought to be able to put enough of the science you got at college into it to more than make up the difference."

"Bringing up worn out-land covered with dilapidated buildings and tumble-down walls or broken fences, may do for a pastime, but I prefer to put my money into it all at once, and make a fair start from the beginning. It is the cheapest way in the long run, and I didn't learn that at college."

"Umph!" Another silence.

"Can you let me have the money?" the young man asked after a reasonable pause.

"I'll think about it, but where's your farm?"

"The old Ascott homestead——"

"The old Harry!"

"And in the spring I intend to get mar——"

"*What?*" Mr. Ashton turned squarely round in his chair, dropping his paper upon the floor.

"It's a natural thing for a man to do. My father did it before me."

"And I suppose after you get the homestead, you'll expect old John Ascott's pauper daughter to keep house for you."

"Father!" exclaimed the young man with astonishment, "May Ascott is a *lady* if fortune *has* dealt hardly with her."

"Eh! I've hit the nail on the head, have I?"

"I have asked May Ascott to be my wife, so there is no going back upon that now."

"And you are asking me to help buy old Ascott's land to give it back to the daughter he left penniless."

"I asked you for two thousand dollars to help buy *me* a farm. That is not a third of the amount you gave Will when he went into business, and you know what Charlie has had."

"I know what you asked, but hark ye! I made up my mind once to have you study law and become an honest, respected member of society, you thwarted me in it, and went to a college where they taught 'science' instead of common-sense. I decided to have you go into your Uncle William's pork-packing house. You refused because you felt too nice for the business, and I let you follow your own course until you failed in it. I proposed to get you a clerkship in Washington, but somebody told you it unfitted a man for anything else and you fooled me again. Now that I forbid your marrying John Ascott's daughter, I suppose you'll do as you please about this also. But bear in mind, *not one cent of my money goes into a farm if the Ascott gal becomes an Ashton;* and not one cent of my money do you ever get if you disregard my wishes further."

"What are your objections to the girl?"

"She's an Ascott, and that's enough for me—but no more parleying, I won't hear it;" and Elbridge Ashton beat a hasty retreat, leaving his son in a most unenviable state of chagrin, disappointment and anger. He stood in thought a moment, leaning against the marble mantle, his eyes fixed upon a figure in the carpet, his brows knit and teeth set; then he looked toward the open door through which his father had vanished, and muttering to himself, "unreasonable and unforgiving," strode out of the house

CHAPTER II.

THE ASCOTT HOMESTEAD.

George Ashton could not remember when he first saw the stately old house; but it must have been in his earliest childhood, for his sweetest boyish recollections were associated with the old place. Prospect road was a famous drive from the city, and commanded a stretch of landscape, for miles, only broken on the extreme right by distant hills—the beginning of a mountain chain—while the intervening country was checkered with fields and meadows, forest and intervale. Upon the left, in charming contrast, lay the quiet city, nestling amid great elms and almost hidden by their heavy foliage: just beyond, the blue waters of the bay sparkled in the sunshine, a dark line against the horizon indicating the distant ocean.

The house occupied the highest point of Prospect hill, and as the visitor turned from the road, and paused between the huge stone posts that flanked the carriage-way, he only saw before him a smooth, hard drive way, winding through a grove of maples, that wholly shut out the surrounding landscape. In a couple of hundred yards however, it turned sharply around a clump of evergreens, and the house appeared but a dozen rods distant. It was a pleasing picture, with its wide old fashioned doorway protected by a portico as solid and substantial as the great block of granite that served as its floor, with its high gabled roof and projecting eaves, where the wasps loved to build their papery nests, and with its quaint dormer windows.

In those happy days it was known as Maplewood; and the Ascotts, who had been its occupants for several generations, were as plain and substantial as the old homestead itself. John Ascott was a well-to-do farmer, who, combining a proportionate amount of theoretical knowledge with the hard, practical common-sense, inherited with the land, from his father, had brought the farm, though not a large one, to the highest state of tillage, and himself to prosperity. At this time the immediate family consisted only of Mr. Ascott and his little daughter May, who alone was left to remind her father of the sweet mamma that had passed to the spirit land in the child's infancy.

John Jr., and William, older children by a former marriage, had grown to manhood, and had gone forth into the world. John, his father's idol, was in the West making a name for himself; but William, indulged and petted in his youth, wild and ungovernable in his later years, had gone to New York, and the family seldom heard from him, and only then when he needed money to make good the losses of reckless speculation—which it was more than once surmised were gambling debts. At this time George's father owned a country seat, Ashton Villa as he called it, adjoining Maplewood. Here George spent his childhood, with sweet May Ascott, his nearest neighbor, and playfellow, roaming the old place over in childish fancy, filled only with the simple joys of boyhood, and happy in his ignorance of the great earnest life that opens to all when childhood's hours have passed away. How memory pictures to him now the sheltered sunny slope when through the long summer days, they played house together, arranging bits of broken china and old-fashioned blue crockery upon dressers of pine shingles, as proudly as though their "play pretend" were all reality, and the fragments the richest products of the Orient. It is a picture of boyhood that the man will never forget; and it seems to him but yesterday that she came and laying her little flaxen head upon his knee, her face radiant with the new suggestion, whispered; "Georgie, let's play I'm your wife and this is our little house."

Oh, happy, careless childhood, filled with innocence and trustful confiding love! Oh, joyous springtime! Would your sweet flowers might bloom perennial in the heart, and exhaling their soft fragrance, brighten life's pathway with more than memories of happy hours!

All this was many years ago, and time wrought sad changes for them all. Need I dwell long upon the dark news that told John Ascott, one spring morning that his favorite son had been killed by an accident—only a brief month before he was expected to visit home; how William had become entangled in "speculation" with hints at darker doings, that had swept away Maplewood almost in an hour; how the broken-hearted father bowed his gray hairs in shame and anguish, and ere the spring-time came again, had passed away, leaving his little daughter, a sad-faced child of ten years, alone in the world. The childish friendship which had existed for many happy years, was broken; May was offered a home in the family of a distant relative in another State, and her early friend and playfellow saw her no more. In those darkest days of honest John Ascott's life Mr. Ashton loaned him money—which the man was never able to return—through no fault of his. Those were sad days, indeed, for a few months after Mr. Ascott's death George's mother called him to her bedside, and, giving him her blessing and a mother's parting kiss, fell asleep; and one fair June morning they laid her beneath the violets, and George, too, felt himself alone. Never his father's favorite, his mother had always been to him the dearest friend he had known upon earth. In disposition, and in many of his tastes he was like her, and between the mother and the son there existed a sympathy which admitted of no misunderstanding, and which drew forth all the gentleness of his nature.

After his mother's death, the father assumed to be George's guide and teacher, with what success may readily be imagined. George felt that never was boy so cruelly misjudged and misunderstood, while the father openly averred that never was boy so obstinate and perverse. So he passed his youth, his mind filled with half-formed fancies, his thoughts occupied with plans with which he knew his father had no sympathy, and to which he would not listen; and at the age of eighteen, he found himself drifting, with no fixed purpose in life, unless it were to thwart the ill-advised schemes of his father concerning him. Then he went to college, entering a course of instruction at first dictated by fancy, but afterwards pursued for the keen enjoyment it afforded him, trusting in the hope that it might, some day be useful to him in fighting life's battle.

It was near the close of his college course, and of his minority, that an incident occurred which perhaps, changed the whole course of his after-life; at least it formed a most important link in this truthful narrative.—[To be continued.]

HAWEIS ON VIOLINS.

Lecture by a popular London preacher at the the Royal Institution—Stradiuarius and the Amati—a fashionable amusement.

THE following article taken from the New York Herald, is published by request. No doubt it will be interesting to many readers.

A most interesting and original lecture on violins has been delivered by the famous and Reverend Mr. Haweis, in the theatre of the Royal Institution, in the course of which the Duke of Edinburgh's Stradiuarius violin, dated 1723, and another, which is the property of the Russian Imperial family, were exhibited; also a Caspar di Salo bass, found in Tarisio's bedroom with his corpse, and many specimens of great value and rarity from the South Kensington Museum. The lecturer said:—"I deal to-night with the construction, the history and the sound of the violin. To begin with the wood. At Brescia makers used pear, lemon and ash; at Cremona, maple, sycamore and, of course, pine. The wood came into the markets of Mantua, Brescia, Cremona, Venice, Milan, from the Swiss Southern Tyrol, unlimited in supply, often mighty timbers of great age—plentiful then, scarcer now. The makers had their pick; they tested it for intensity and quality. Cut strips of wood and strike them; you will see how they will vary in musical sound. When a good acoustic beam was found the maker kept it for his best work. In Joseph Guarnarius and Stradiuarius the same pine tree crops up at intervals of years. A good maker will patch and join and inlay to retain every particle of tried timber. Old wood is oddly vocal. As I sat in my room, surrounded by these instruments, I could not cough or move without ghostly voices answering me from the sixteenth, seventeenth and eighteenth centuries, and even the old-seasoned backs and bellies of unstrung violins are full of echoes. The supreme interest of the violin is not far to seek. It lies not only in its simplicity, beauty, strength, subtlety and indestructibility, which fit it for the cabinet of the collector, but it is the king of instruments in the hands of the player. It combines accent with modification of sustained tone. The organ has sustained tone without accent, the piano accent without sustained tone, the violin accent and sustained tone modified at will. Within its limits it is scientifically perfect; it has all the sensibility and more than the compass, execution and variety of the human voice. The violin is not an invention, it is a growth; it has come together; it is the survival of the fittest."

ANCESTRY OF THE VIOLIN.

On the screens were hung a variety of queer looking old instruments, whose endless shape and style, as the lecturer pointed out, showed the inexhaustible fascination exercised by the viol tribe over the human mind. Out of the rebek, the crowth, the rotta and guitar came forth the modern, or comparatively modern, violin—the most perfect of musical instruments. "About the eleventh century an instrument of the viol tribe emerged with frets, but 150 years were required to get rid of these marplots before even a step toward the true viol could be made. Before the end of the fourteenth century viols were made in great profusion, of every size and shape—the knee viol, the bass viol, the viol de Gamba, of which certain South Kensington specimens are before you. But the rise of the true violin tribe begins with the rise of modern music. About the time when Carissimi and Monteverde—1565-1672—discovered the true octave and the perfect cadence, part singing received a new impulse; the human voice was discovered to fall naturally into soprano, contralto, tenor and bass and viol instruments being adapted to these four divisions, the violin, tenor, bass and later contrabasso, before me, gradually separated themselves from the confused *nebulæ* of viols behind me, and shone out clearly as the true planetary system of the musical firmament." The lecturer then spoke of the violin makers of Brescia and Cremona, Gasper di Salo, Maggini, Andreas Amati and Nicholas Amati, the last named being the master of the great Antonius Stradiuarius himself. "For thirty years," explained Mr. Haweis, "this extraordinary man was content to work under the acknowledged influence of N. Amati. In 1668 he sets up for himself, but copies Nicholas till 1686; from 1686-94 his form fluctuates, but inclines to the earlier Brescian model (not in the corners), grows flatter, corners bold and full of character. In 1687 he makes the long or rather narrow model, which he did not adhere to. In 1700-3 he enters on his golden period after countless experiments. The last trace of the Amati scoop had disappeared. Some of the finest violins of the 'grand' pattern were made 1720-5. They have all the grace and boldness of a Greek frieze drawn by a master's hand. The arch of the belly, not too flat nor too much raised, is the true natural curve of beauty; on each side the undulating lines, as from the bosom of a wave, flow down and seem to eddy up into the four corners, where they are caught and refined away into these inimitable angles. The scroll is strong and elegant, the sound holes exquisitely cut. The varnish is not hard and silicate, but mellow as amber or sunlit water. There is a violin of 1736, bearing date and name; it was made in the master's ninety-second year. He made down to the last, but latterly seldom signed his work. Alas! that has been since done for him by thousands who would be at pains to make even a respectable tub." Finally, the lecturer brought one of the ablest and most interesting lectures which has ever been delivered in London to a close by playing on several violins, one after another, by way of illustrating their different tone quality. It is not often that the sober-minded English have an opportunity of seeing a clergyman fiddle in public, but now that a royal duke and a parson—the Church as well as the State—have handled the bow before an audience the love for the fiddle must become popular. It would not surprise me to hear that the latest fashionable accomplishment for ladies instead of lawn tennis is to cultivate what Addison terms "the only sensual gratification which mankind may indulge in to excess without injury to their moral or religious feelings."

MAGAZINES FOR MAY.

SCRIBNER for May is full of interesting material on subjects of general or timely interest. In addition to the book notices, Literary Criticism is represented by M. E. C. Stedman's study of Edgar A. Poe. Art Criticism is represented by a paper on "The Younger Painters of America," the first of three by Mr. Wm. C. Brownell. The other papers will follow soon, and will include the most vital work of the "new men." Modern Progress is represented by the second of Mr. Theo. De Vinne's papers on "The Growth of Wood-cut Printing." History is attractively represented by Schuyler's "Peter the Great," which is being studiously read all over the country. Out-of-door Life is recorded in Burrough's "Notes of a Walker," in which he replies to criticisms on his recent enumeration of some inaccuracies of American poets in dealing with nature. Timely Topics are represented by a paper on "Economic Defects in Christian Missions," which will interest the Ma missionary meetings; by a paper on "Congress and International Copyright," Fiction is represented by Mrs. Burnett's "Louisiana" here concluded; by Mr. Cable's "Grandissimes," whose story of Bras-Coupe in the April installment has been compared in dramatic strength to Victor Hugo and Manzoni; and by Mrs. Rebecca

Harding Davis's short story "Walhalla." The poetry is by Clarence Cook, Celia Thaxter and Juliet C. Marsh. The departments include papers by Dr. Holland on "Pettiness in Art," "International Copyright," and "Common Sense and Rum;" "Hints for the Yosemite Trip," with estimates of cost of a ten days trip; "Nerves in the Household," The Book Reviews, some "Bric-a-Brac," and and a very fresh department of "World's Work," including "Western River Improvement," "Centrifugal Milk-tester," "Transposing Piano," etc,. etc.

BRIC-A-BRAC.

AN OBEDIENT GIRL.

"Come out into the garden, love,
Where perfume fills the air;
I'll gather the fragrant blossoms, love,
To deck your sunny hair."
"Oh no, dear George," she sadly sighed,
"I can't enjoy such blisses;
Ma says I must stay in the house
And wash the supper dishes."

Two ragged urchins stood one day
Beside the great church door,
And watched the folks in rich array
From out the temple pour.

"My eyes! but ain't they tony, though!
And don't they sport the dress!
What be they, Joe?" "Oh, I dunno—
They're Christain folks, I guess."

"They be! Then, if we had the cash,
And nothing else to do,
And washed, and dressed, and cut a dash—
Should we be Christians, too?

[*Boston Transcript.*

THE NEW TENOR.

He drew in his breath with a gasping sob,
With a quavering voice he sang;
But his voice leaked out and could not drown
The accompanyist's clamorous bang.
He lost his pitch on a middle A;
He faltered on lower D;
And foundered at length, like a battered wreck
Adrift on the wild high C.

REASONS.

She never will crown with her earnest love
The life of some honest, loving man,
For she kindled the fire in the kitchen stove,
With the lightsome tilt of the kerosene can.

And he—his work had been laid away
Almost before it was well begun;
For he didn't know, they heard him say,
There was any load in the empty gun.

[*Burlington Hawkeye.*

"Yes, my love, it was fresh and glowing,
Blooming and beautiful—yesterday!
Now its odor is sickly, its petals are going,
Its beauty is vanished, throw it away!
Pray don't thrust it under my nose!
Who can endure a yesterday's rose?"

A RHYME OF THE TIME.

Miss Pallas Eudora von Blurky,
She didn't know chicken from turkey.
High Spanish and Greek she could fluently speak,
But her knowledge of poultry was murky.

She could tell the great uncle of Moses,
And the dates of the War of the Roses,
And the reasons of things,—why the Indians wore rings
In their red, aboriginal noses!

Why Shakspeare was wrong in his grammar,
And the meaning of Emerson's "Brahma;"
And she went chipping rocks, with a black little box
And a small geological hammer.

She had views upon co-education,
And the principal needs of the nation;
And her glasses were blue, and the number she knew
Of the stars in each high constellation.

And she wrote in a handwriting clerky,
And she talked with an emphasis jerky,
And she painted on tiles in the sweetest of styles;
But she didn't know chicken from turkey!

Last year, young D——waited upon the daughter of a rich pharmacist, hoping to marry her. At that time, whenever he spoke of his expected father in law, he always said, "That great savant," "The famous chemist," etc. Much to his disgust, young D——was refused by the pharmacist's daughter. And now, whenever any one speaks to him of his unattained father in-law, he says disdainfully, "Ah, yes, that old herb-gatherer."

A TOUGH QUESTION.

Children are often puzzled by questions which are not understood by their elders. During the late Franco Prussian war a Sunday-School scholar read about the prayers with which the Germans and French were petitioning Heaven for success to their arms. "Mother, asked a little girl of her parent, "I don't see what the Lord can do under the circumstances, do you? He can't give the victory to both of them, and it seems to me like a terrible dilemma to be placed in." Her mother, who was not entirely satisfied with the role which Great Britain played in the affair, remarked, "Well, my dear child, perhaps he will do as the English do, and remain neutral."

PATRICK'S EXPERIENCE WITH THE ELEVATOR.

Sez I, "Iz Misther Shmith in, surr?" Sez the man wid the soger cap, "Will yez stip in?" So I stips intil the closet, and all of a suddint he pulls at a rope, and it's trooth I'z teelin' yez, the walls of the building begun runnin' down cellar as though the divil was arther them. "Houly murther!" sez I, "what 'll become of Bridget and the childer which was litt below there?" Sez the soger cap man, "Be aisy, surr; they 'll be all right when yez come down." "Come down, is it?" sez I; "and is it no closet at all, but a haythenish balloon that yez got me in?" And with that the walls stopped stock still, and he opened the door, and there I was wid the roof jist over me head! And that was phat saved me from goin' up till the hivins entairly.—*Boston Transcript.*

For Women.

CONDUCTED BY MISS RAY CLARK.

SEED CASKETS.

BY ADELAIDE STOUT.

Here are rosewood caskets shut
Down with secret spring;
In them little pearls are hid,
Strung on finest string.

Here's a coffer filled with coin
Round and polished fair,
Yellow as our finest gold;
Minted with more care.

Yet they wear no stain, as oft
Doth our current gold:
Palms ne'er held them as a bribe
In their secret hold.

Here are jewels cut in jet,
Polished, and then hid
In the till that lies beneath
This quaint, carven lid.

The rich brown of this small boll
Cut in outlines sharp,
Seems as carved with vine and leaf,
In this pericarp.

There are white pearls that divers bring
From the cruel sea.
Spring the lock, and see how clear
The hidden pearls may be.

Like a softly tinted shell,
On finest cameo
Is this capsule, traced in lines
Softer far I trow,

Than are those the artist cuts
In the shell we prize,
Yet these gems are scarcely seen
By our careless eyes.

RECREATION FOR WOMEN.

BY MRS. M. L. SAYERS.

Rockeries.

Rockeries too frequently show the studied symetry characterizing art. A perfect hemisphere or pyramid, resembling a farmer's rock-pile is usually heaped up with a handful of earth high and dry on top, in which a fern transplanted from the mossy banks of a stream is expected to become a thing of beauty—a joy forever.

Rockeries belong to landscape gardening, and an imitation of nature only is appropriate in their construction. For a farm-yard where fowls run at large, let this be a permanent arrangement, planting perennials which will each year increase, and unrestrained, assume more natural positions among the rocks. Let the situation be upon the north side of any ivy-covered wall. This makes a fine back-ground.

Set a cross (or if desiring to adhere more closely to the natural, a cedar trunk lopped of its triennial branches) firmly in the ground, roll up around this huge stones (gray limestones taking on angular, massive shapes are the most striking), leaving a space which is wider around the cross, gradually terminating in an irregular point towards the front.

During yard-cleaning, throw into this space the trash; old shoes, bones, leaves and dead grass; fill up with ashes, hen-house sweepings and sandy loam. At the foot of the cross plant a woodbine or other hardy vine; behind it, tall-growing, perennial larkspur; in front, a fern; front-left, columbine; right, perennial phlox, chrysanthemum, lychnis, cowslip, daisies and pansies, the low-growing filling the point.

The evergreen creeping myrtle is pretty, but soon encroaches upon other less vigorous plants. The dielytra spectabilis, or bleeding-heart, is appropriate for this style of rockery, both on account of its habit and appearance. Here whole chains of bleeding-hearts lift themselves from this "rifted rock of ages" to the cross crowned with life eternal. Here perpetual verdure crowns this otherwise unsightly heap, it creeps through, fills, the crevices, and grows up outside till nothing is seen save a few jagged points of gray-stone, which only tend to the picturesque.

For a summer or temporary rockery of like appearance, a root of Madeira vine will soon cover the frame with its thick, succulent leaves, sending graceful feelers out into the air to fill it with delicate perfume. Nasturtion will creep up and thrust its orange trumpets through this overlapping foliage, like so many gold-crested chicks peeping through the maternal feathers.

Asters and candy-tuft, so difficult to be grown in open borders on account of insects, flourish here unharmed beneath the shadow of the cross, while snap-dragon and ten-weeks' stock are nowhere else so much at home.

Some readers will say this article cannot benefit me, as I have no north corner to be ornamented. For such as are denied this more natural situation comes the next and last resort; while stones are not usually associated with tropical growth, they may be used as a nucleus for curious shells, fossils and other such collections. Fill the space with sand; at the foot of the cross plant running cypress or yellow jessamine; in the rear, a stately canna or ricinus; in front, a banana, palm, or yucca filamentosa, on the right, cockscomb; on the left, cactus, portulaca and tradescantia.

UPHOLSTERING.

PANSY RAY.

I do not mean to treat of the word in the full acceptation of the term, but only to give a few "hints" in upholstering as practiced by a neophyte, and that neophyte a woman.

The "parlor set" consisted of a gentleman's and lady's chair, four smaller ones and sofa, in the unique Eastlake style, neatly upholstered with brown repp. Not a single rocking-chair among them. To be sure there was a cane-seated one, which had formerly occupied a place in the room very much after the same pattern as the set, but then it hadn't exactly the "air," so the only alternative was to get a new one or upholster the old one. The latter plan was chosen and carried out in this way.

Two stripes were worked on Penelope canvas, one for the seat and the other for the oval cane-work piece in the back. The pattern selected was oak leaves and a branch of coral, the leaves being worked in shaded green zephyrs and the coral in red, the ground work was then filled out with zephyr a little deeper shade than ecru.

Repp was procured for seventy-five cents which matched the set in color, and almost in quality; the gimp and gimp tacks the upholsterer was kind enough to throw in.

The repp was cut the required size, the stripes were basted on to it with gimp on each side, and then stitched with the machine. The bottom of the chair was cushioned with nineteen or twenty layers of sheet-wadding, held firm by being sewed through the cane, and the cane also served for springs.

The top was then put on and neatly tacked around the edge with tacks and gimp.

The back was treated in the same manner, except there was only half the amount of wadding used. A piece of brown cloth was tacked on the back part of the chair. And behold the result! A neat, almost elegant, chair, that any woman would be proud to point to as a specimen of her achievements in the art of upholstering.

Of course, you are to regulate your materials according to your purse, for instance, one of cheap cretonne or woven stripes can be procured for less than it would cost you to work one, and be almost as handsome.

Or if your pocket-book is quite plethoric you can procure more elegant stripes and material to match. Some of the latter class have been known to buy split-bottomed rockers and upholster them in a very elegant style, finishing them around the bottom with heavy fringe, costing from three to four dollars a yard.

Their chairs cost them from eight to nine dollars, but they were equally as handsome as those sold for eighteen or nineteen dollars.

If persons would forage among the rubbish and bring to light the chairs in which, when children, they were rocked to sleep to the accompaniment of some wonderful story, they would find them much resembling the chair of the period, and by using a little ingenuity, with perhaps, a piece nailed on here and there, to serve as strengthening plasters, upholster them in such a manner that they themselves would be surprised, after the rejuvenating process, at their youthful appearance.

But I will give you another leaf from the upholstery experience of "the novice." There was a square of repp left over from the chair, and this she utilized in upholstering an ottoman.

The ottoman frame was somewhat hexagonal in form, but the corners were not cut off enough to make it entirely so. A cushion was made of a number of layers of an old quilt with several layers of wadding on top, which were all sewed firmly together. This made a soft cushion, and one that would not flatten.

But an unforseen obstacle arose; the piece of repp was too small when the cushion was made—but trust a woman not to be outwitted—so instead of stitching the cretonne stripe on after the manner of the chair, the repp was cut diagonally across the square and the stripe set in, but as it was not as heavy as the rep it was lined with burlap.

The gimp having all been used on "that chair," another means was devised for fastening the strip on, the rep was laid over on each side of the cretonne, after the manner known in dress-making as piping, and then stitched. The ground work of the stripe was black, and black and brown never look well when in too close proximity.

One must, however, get used to obstacles and learn to surmount them. This evil was remedied by a row of herring-bone stitches worked in gold silk floss over the machine stitching between the stripe and the rep piping. This finish was equally as pretty as the gimp. The top being now completed, it was tacked on the frame, after which brown fringe four inches deep was tacked around the edge, the heading of the fringe having first had the gold floss worked on in larger herring-bone stitch. You would scarcely imagine what a pretty ottoman it is. And such a marvel of cheapness too.

GRANDMOTHER'S OPINION ABOUT SEWING MACHINES.

"Do I think sewing machines are a great invention?"

"Yes, one way you look at it, they are great institutions, but I do not think they have done any good in the world. I really believe womankind would have been happier, if the inventor had never been born.

They might have done good but like a great many other things, they have been perverted, and instead of a blessing, are a curse.

Now, suppose, a case for example, and there are thousands of just such cases, all over the country. Mrs. Gilson has half a dozen little children, her husband is not fourhanded, it is all they can do to make both ends meet; they cannot afford to hire sewing done, they are not able to keep a hired girl and the poor woman has her hands full, of course.

It is no light job, to cook victuals enough, to fill all those hungry mouths, not to speak of washing, ironing and general house work; then, there is the mending and making to keep them comfortably clad; every spare moment is employed in sewing.

The little ones are all dressed neat and plain. She works all the time to keep things up, but she does it somehow; where there is a will there is a way. After a while, she gets a sewing machine; and it is a good help.

She turns off the garments quickly. It is splendid, to get on with one's sewing so fast. So far it is well; it is really a help to her. But she is not content with plain dresses for the little girls, everything must be trimmed. It is so easy to make nice trimmings with a machine, and children look so pretty with ruffles and puffings, flounces and tucks. If it does take more cloth and time, and thread. She can do it herself—and so she stitches without any rest, every spare moment is spent at the machine.

The little girls are set about the housework, so mother can get more time to make their pretty dresses. By and by, she gets a back-ache, a side-ache, and her head gets confused with the humdrum click of the machine and the poor woman breaks down, her nerves are all unstrung and after a while the machine stops, for Mrs. Gilson is sick; worn out with hard work.

Hired help has to be employed.

Doctor's bills come in, and the children are neglected, and everything goes to ruin generally. You all know how it is—that sewing machine was the cause of the mischief. Had the poor woman just done her necessary sewing, it would have been well enough to have had a machine; but you see that could not content her; and half of the extravagance in dress and fashion is the result of the advent of sewing machines.

Girls are not instructed in the use of the needle as they used to be; good hand sewing is gone by, everything is stitched by machine; and hems stitched do not look neat, after a little while the dirt and dust will gather, and a gray streak borders every hem. I cannot say, that I admire undergarments trimmed with mourning, they do not look tidy; give me a neat hem, sewed by hand, that gives no chance for a gathering of dirt. The machine work rips, and ten to one if it is noticed till it gets to be a great rent.

I suppose it is because I am old-fashioned, that I like the old style of work the best.

No, I do not think the world is any better off, for the invention of sewing machines.

Many a nice healthy girl, has stitched herself to death, many mothers have gone to the grave, just in consequence of overworking themselves on a machine.

It is not a good exercise, it is hard: just as bad as spinning linen used to be for girls; a little of it, wont hurt any one, but to follow it up is death in the end. S. H. R.

LAMBREQUINS AGAIN AND WINDOW SHADES.

MRS. E. K. B.

"Effie" asks for directions for making pretty and inexpensive lambrequins. We have just finished some which I think are as pretty as any that I have seen, and although the work of making them is considerable, they cost but little money.

The foundation is of slate colored cambric which is faced all around with a strip three inches wide of Turkey red calico. The lower edge, instead of being cut in the deep points which, from being seen in too many windows are becoming almost monotonous, is curved upward in one deep concave scollop. The depth of the lambrequin on the sides is twenty-eight inches and in the middle, eighteen inches. The lower edge is also decorated with a pointed netting four inches wide, made of scarlet yarn and hanging from each point is a little scarlet ball.

Netting is an old fashioned trimming that adorned the bed-curtains and stand-covers of our grandmothers, and it is such pleasant, pretty work and can be made useful in so many different ways that I am very glad to see that it is being revived.

The lambrequin should stand out slightly from the window and ours is tacked to a curved strip of board that is fastened horizontally to the top of the window casing.

Where there are blinds to the windows these lambrequins can be used without other curtains, or there may be full flowing curtains of the same material.

WINDOW SHADES.

I have in mind some new window shades for a bedroom, that are to be made of nice, smooth, unbleached muslin with a border of red set two or three inches from the edge, and on each edge of the red a row of feather-stitching done with white knitting cotton. If there is time, there will also be a monogram worked with scarlet in the center and surrounded by an oval border cut from the red calico.

They will do very well without the centerpiece, although one need not hesitate to spend a little extra work on shades like these, for they will bear washing. I shall fasten them to the windows with the fixtures of some worn-out oil shades.

Of course, in making either lambrequins or curtains, one must have some regard for the prevailing colors in the carpet and furniture, and use colors that will harmonize.

A PLEA FOR "GOSSIP."

E. L. T.

I do not wish to say anything in favor of slanderous back-biting; or for the encouragements of the—— "They Say Club," those social vampires that flourish in every community. I wish to speak in favor of wholesome, though much abused gossip; little local happenings—which does no one harm, and yet is often abused as frivolous and unmeaning.

Granted, that the farmer's wife would be better engaged if she talked of every-day science and household hygiene, of literature, art, "Shakespeare and the musical glasses," but what time has the busy housewife to learn of such things? It may be said that she could make time for it, if she determined to do so; but how can she escape from her multifarious duties—from the bondage of the household?

Held down by the trammels of unavoidable, un-

ceasing work, what can she talk about to a stray visitor other than such trifles as Mrs. A's trouble with her servant or Mrs. B's sick chickens?

In a meeting of women who talk about their household affairs, there is far more real practical every-day wisdom discussed than in a meeting of literary young misses who give their opinion as to the relative merits of various authors.

I think such a body as the Kitchen Club Mrs. Annie Jack tells us of, cannot be too highly commended. I have no doubt all the members feel their wits greatly brightened by the meeting, if they do discuss no higher subject than cookies. Still I wish, whether they gossip or not, that housekeepers would give more attention to household science, so that in their cooking, their house and its appointments, they would violate no hygienic canons.

THE EMPRESS AUGUSTA, of Germany, had in 1870 as her reader a French gentleman named Gerard. One day he was reading to her a book on the war of 1870-71 and came to a passage in which the French were treated with a good deal of severity, "Skip that, if you please," said the imperial lady, with equal gracefulness and quickness.

MRS. JULIA ATZROTH, of Florida, has raised the first coffee grown in the open air in this country, so far as known.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING HOUSEHOLD MATTERS.

MARY WAGER FISHER.

To the RURAL readers in search of *starch* for "mourning" calicoes, or plain dark linens or cambrics of any sort, let me recommend the use of gum-arabic as being the most satisfactory of all starch for such purposes. Dissolve the gum in warm water—say at first a teaspoonful in a pint of water or less. Of course, the amount used must be in proportion to the required stiffness and the amount of fabric to be starched. Apply the solution to the surface of the fabric with a small, clean cloth, making only a small portion of the frock at a time moist with it. A little practice will make one an adept in the use and application of it. If you wish the goods to have a gloss, iron on the right side; a soft, new appearance is produced, if ironed on the wrong side. Forty or fifty cents' worth of gum-arabic will serve for such starching, and keep the mucilage bottle filled for a long, long time—two or three years in a small family. Old straw hats may be stiffened anew with it, and made quite presentable if carefully pressed. At all events, if you have a very dark, or black cotton or linen frock to "do up," invest five or ten cents in gum-arabic and try it. I am sure that you will never ask for a more satisfactory method.

Cleaning Stoves of Ashes.

To clean a stove hearth of ashes after coal-cinders and ashes have been removed from the pan, do not use a brush or broom, as that makes a dust. But take a woolen cloth, or even a "worn-out" cotton stocking, or piece of woven underwear stuff, and wipe off the hearth.

Cleaning Paint.

When you "clean house" this spring, soften the water with soda for cleaning painted wood—use no soap. Use a flannel or cotton-flannel cloth. Begin with closets, pantries and "crannies"—which should be made clean and "put to rights" first. This is really the most fatiguing part of house cleaning for the mistress, as much of it must be done by herself, and so it is better to attend to it before one's strength is half used up.

Good Knitting Yarn.

I would be glad to be informed where *good* stocking yarn can be procured. I pay from 12 to 13 cents per ounce for red stocking yarn in the city (Philadelphia), and the stockings will wear from one to two weeks on the feet of a certain three-year-old boy, when holes in the heels and knees appear. It is very discouraging to knit stockings under such circumstances. I have experimented with different brands of domestic yarn; but with about the same result. I know that old-fashioned home-spun yarn wears a great deal better; but where can it be had? I think there are many persons who are old-fashioned enough to knit—or new-fashioned—who would be equally glad to know where good, strong, soft yarn can be had.

PEN-THOUGHTS FROM EVERY-DAY HOUSE.

MRS. ANNIE L. JACK.

How balmy the air! I always think in spring-time of those lines of Whittier's:

"And all the windows of my soul
I open to the sun."

It seems as if the windows of the soul and of the house are wonderfully renovated by the spring air and sunshine. The children revel in them. Their brown cheeks have taken on a tan that only next winter's frost will remove; but better so—better the air and sunshine, and the free play of healthy lungs "open to the sun—" than pale cheeks, and a tendency to disease. No part of the house needs to be earlier aired and sunned than the cellar, and I am always glad when the windows and doors can be opened and a thorough ventilation takes place before cleaning. Then white smoking hot lime, with a good handful of salt in each pailful to destroy insects, a full brush and strong arm, and in half a day the cellar will smell sweet and wholesome. We mix a little cement with the refuse whitewash, and a little sand; these make a mixture that will fill up all holes where troublesome mice might creep through. A friend of mine, after cleaning all the cellars, burns a little sulphur in them, the fumes of which purify from mold, and destroy insects or fungoid growth. More important than the house-cleaning of parlor and spare bed-room is that of these the "lowest rooms."

BUTTER COLOR.

I HAVE just noticed in a late RURAL directions for coloring butter with the juice of carrots. We have tested the different methods of coloring butter quite thoroughly and some time ago discarded the use of carrots for this purpose; as we found that, aside from the trouble of preparing them, there was another objection to their use—when the butter is kept for some time (even for a few weeks), it is apt to acquire a disagreeable flavor from the decay of the vegetable matter in the coloring. Were it not for these objections I would prefer it to the prepared butter color which we buy; for if one uses a little too much carrot juice the butter will still be of a golden tint, while a very little too much of the other gives a disagreeble reddish tinge. Therefore great care is neccessary in using it—better use too little than too much at first, while learning how to proportion it. I never have found that the prepared color injures the keeping qualities of butter in the slightest degree, and the expense of using it is a mere nothing as a twenty-five cent bottle will color more than three hundred pounds. E. K. B.

DOMESTIC RECIPES.

Biscuit Making.

IF, when making biscuit, the saleratus is sifted with the flour instead of dissolving it in water, the biscuit will be lighter and better. I use a moderately heaped teaspoonful of saleratus to two cups of sour milk or buttermilk. I prefer buttermilk, but the buscuit must be mixed as soft as possible.

Brown Bread.

Three and a half cups of Graham flour; two cups of Indian meal; two-thirds of a cup of sirup; one pint of milk; one pint of water, or if you have not plenty of milk use all water; one teaspoonful of saleratus and one teaspoonful of salt. Steam four hours. It is excellent. I always make it to eat with baked beans. My husband thinks it is better than the famous Boston brown bread. MRS. P. C. C.

Stocking Supporters.

I think I have an improvement upon children's stocking supporters. Make a skeleton waist of rubber webbing and sew on to a stout band, which may be used for the drawers also. Then sew on V-shaped straps on both sides with buttons on, with which to fasten the stocking elastic. I knit seaming onto the wrists and bottoms of my children's flannel drawers, which I think much nicer than buttons.

To Use Stale Bread.

Soak the bread in hot water until soft; when cold add two eggs, half a cup of sweet cream, one teaspoonful of soda, a little salt and flour to make a stiff batter like fritters. Fry in hot lard or boil in water. To be eaten with sirup or whatever liked.

Graham Gems.

One pint of buttermilk, one teaspoonful of soda, a little salt if butter is not used, one tablespoonful of shortening, one tablespoonful of sugar, Graham to make a batter like Johnny-cake. MRS. J. G. BELL.

Silver Cake.

Two cups of granulated sugar; one small cup of butter; two even cupsful of sifted flour; whites of 12 eggs; juice of one lemon. Cream the butter, then add the sugar, stirring until very light. Beat the eggs to a *stiff* froth. Add the flour to the butter and sugar then the whites of eggs and stir all to even lightness. Bake in small square tins. Rose water may be used for flavoring the icing.

Ginger Snaps.

One even cup of butter; one cup of brown sugar; two cups or molasses; a teaspoonful of salt and two of soda. Any spice liked and flour to roll out. Put *all* but flour into a clean pan and boil five minutes. Then remove from fire and at once begin to add flour. Work as rapidly as possible and bake in a quick oven. MARY B.

NOTE.—We wish to thank Col. F. D. Curtis for a side of bacon which the family pronounce of the very best quality. E. M.

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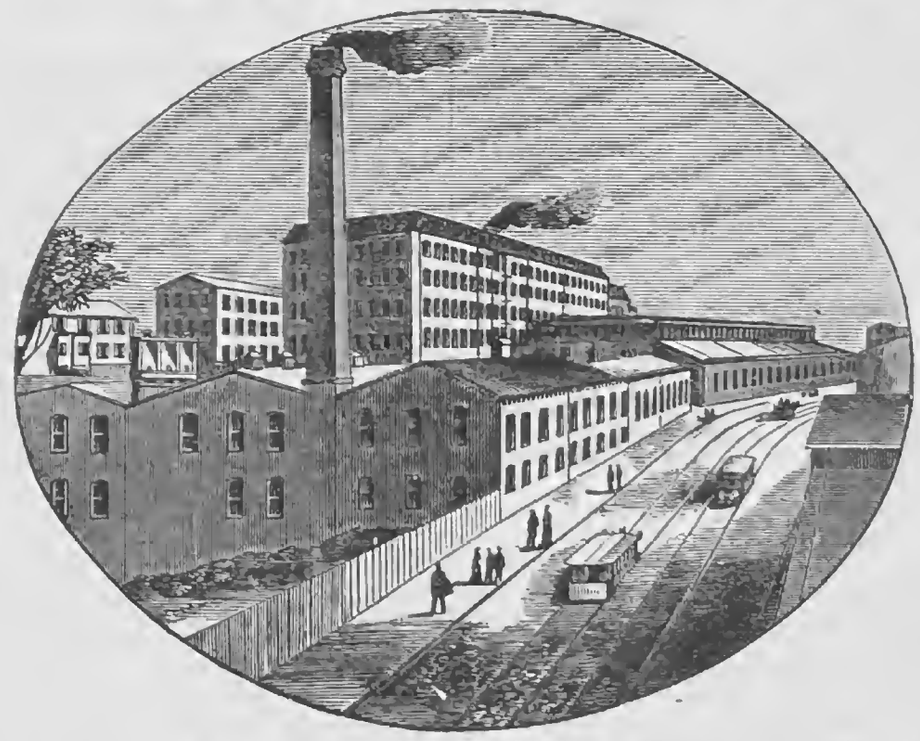

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News of the Week.

MISCELLANEOUS.

Monday, April 26, 1880.

THE bill in regard to the world's fair to be opened in N. Y. City in 1883, on the hundreth anniversary of the peace between the thirteen States and England, has passed both houses and received the President's signature. Thus the first step in this great enterprize has been taken and others will rapidly follow .....A Democratic Convention was held at Syracuse, N. Y., on the twentieth inst. The Tilden men were in the majority, and although the delegates to the National Convention to be held in Cincinnati were not instructed to vote for Tilden, there can be but little doubt that they will cast their votes for him.....President Hayes' private secretary, Mr. W. K. Rogers, it is rumored, is likely to be appointed Governor of Dakota.....The U. S. ship Constellation arrived at Queenstown on the 20th with succor for the famishing Irish people .....The House committee on war claims has reported adversely on 110 claims, involving $5,000,000.....It is stated that W. H. Vanderbilt has 54 million dollars' worth of four per cent. bonds registered in his name.....Fifty-two newspapers and magazines of this country are edited by colored men.....The chief of the bureau of statistics reports that the exportation of petroleum and its products during Feb. was 24,962,662 gallons, worth $2,302,755..... The women are steadily gaining recognition at the polls. The first woman's vote in Illinois, on the liquor question was given at Keithsburg a short time ago. It was a question of license or no license, the women, 165 in number, voting solidly for the latter. On the morning of the election a prayer-meeting of two hours' duration kept siege at the very gates of heaven for success, and it was granted....The mystery shrouding the assault on Mr. Whittaker, the colored cadet at West Point, an affair which we mentioned in last week's news, has not yet been cleared up. Last Saturday closed the 15th day of the investigations, and, with the evidence apparently nearly exhausted, the matter is still as bewildering a muddle as at the outset; nothing has been brought to light that will give a clue to the perpetrators....A tragedy took place in San Francisco on the evening of the 25d inst., which, by reason of the notoriety of the parties involved, has created great excitement in that city. Charles De Young, the editor and proprietor of the San Francisco Chronicle, was shot and instantly killed by I. M. Kalloch, a son of the mayor of the city. The trouble is an old one. Eight years ago, shortly after the arrival of Kalloch in San Francisco, the Chronicle contained an exposure of his alleged scandalous behavior in Boston, and when he entered politics last year this was again revived. Kalloch retaliated, reflecting dishonor on De Young's aged mother. For this he was shot by De Young last August, but recovered from the wounds; and now Kalloch's son, who is also a Baptist minister, enters the Chronicle office and assassinates his father's assailant. He was arrested

An exceedingly destructive tornado swept over a large area of the Western country on the evening of April the 18th. Its force was unparalleled. It leveled everything in its path, whole towns were demolished and almost obliterated from the earth, and hundreds of persons were killed and wounded. Ruin, desolation and death are the land-marks of its terrible track. Reports state that the violence of the wind was so great that trees three feet in diameter were for a space of several hundred feet, entirely lifted out of the ground, limbs twisted off and the bark in many instances peeled off as if struck by lightning. Telegraph poles were twisted off at the ground, the wires carried hundreds of rods and tied and knotted among the limbs as if they were made of cotton yarn. Cattle, hogs, sheep horses and poultry were whirled into the air and carried great distances. Eye witnesses describe the approaching storm as a frightful-looking black cloud, funnel-shaped and moving in the manner of a screw-propeller. The greatest destruction appears to have occurred in Missouri and particularly in the southwestern counties of the State. Here the little thriving town of Marshfield, with 2,500 inhabitants, was blown down and the ruins taking fire the town was in the course of a few hours almost obliterated. Whole families were killed in their homes. The death list reports 100 persons killed in this town alone. The storm came from the west and moved eastward. It seems to have spent its greatest fury between the 37th and 38th degrees of parallel, but its track was irregular, and destructive gales are reported also from Iowa, Illinois, Wisconsin, Michigan, Indiana, Ohio and southern Canada. It is impossible to give anything like an approximate estimate of the damage incurred. Later reports show that the destruction of life and property is much greater than was at first supposed.

AGRICULTURAL NEWS.

On Thursday, Saturday and yesterday a terrible storm raged along the line of the Central Pacific railroad in Cal., and throughout the greater part of the State. For the first two days a heavy unintermittent rainfall prevailed in the valleys, the rivers and streams rose; and then there was eminent danger of the flooding of all the low lands and the destruction of homesteads, villages and even of Marysville and Sacramento. Fortunately the rain changed to a snow storm on the Sierras and the danger has been averted. 'Twas the heaviest storm that ever swept over the Central Pacific Railroad region. All now promises settled fair weather.....A dispatch from Melbourne, dated March 23, says: "Fine rains have fallen in Victoria. The wool prospects are good and the labor market is improving."..... A cyclone struck the north line of Adams county, Ill., Friday evening doing great damage. Twenty houses and barns are known to be demolished, and several persons killed and wounded..... A break in the Erie Canal, near Schuyler, has prevented navigation for some days; but the work of repair is being vigorously prosecuted and navigation will be resumed to-morrow, April 27.

New Publications

are furnished by the World's Dispensary Medical Association, Buffalo, N. Y., and Great Russell Street Buildings, London, England, on terms to suit the times. A new edition of the People's Common Sense Medical Adviser, about 1,000 pages, nearly 300 illustrations, by R. V. Pierce, M. D., post-paid, $1.50. Invalids' Guide-Book post-paid, 10 cents; Motion as a remedial agent, illustrating movement cure for paralysis, diseases of females, stiffened joints, club feet, spinal curvature and kindred affections, 10 cents; Diseases of Generative Organs, 10 cents; Catarrh, its rational treatment and positive cure, sent on receipt of one postage stamp. Address as above.

NEAR GENEVA, N. Y.

ALBANY AGRICULTURAL WORKS.

DEAR SIR:—You will probably recollect that I got a Corn Drill from you about 30 years ago. Now the Wood Cylinder that distributes the corn is worn so it does not hold the screws. Will you please send me one with screws in, by mail or express, and I will remit you the price. I have drilled my corn with it ever since I got it, and am fully satisfied it saves a good deal of labor, and I can raise a considerable more corn to the acre than by the old fashioned method. Please let me hear from you. I am now an old man. I finished my 85th year yesterday. Truly yours, JOHN JOHNSTON.

A GREAT many persons become insane from sleepless nights that Hop Bitters would have prevented.

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Is it a disordered liver giving you a yellow skin or costive bowels; or do your kidneys refuse to perform their functions? If so, take a few doses of Kidney-Wort and nature will restore each organ ready for duty.

FOR THROAT DISEASES AND COUGHS.—"*Brown's Bronchial Troches*," like all other *really good* things, are frequently imitated, and purchasers should be careful to obtain the genuine article prepared by John I. Brown & Sons.

J. & J. DOBSON'S CARPETS.—At Nos. 40 and 42 West 14th Street, New York, Messrs. J. & J. Dobson, proprietors of the Falls of Schuylkill Carpet Mills, have a large and elegant store, filled with new goods in all the popular grades of carpets from their own factories. Having large capital and unsurpassed facilities for the production of fine goods, at the lowest cost, they offer to those in want of floor coverings an immense assortment at manufacturer's prices; thus enabling purchasers to save the profits usually made by the agent of the factory and the jobber. Using great care in the selection of the material, and watching closely every process in production, it is claimed for their goods that they combine the advantages of artistic designs, rich and harmonious coloring, and thorough wear in actual service. Besides the carpets of their own make, the firm imports large lines of Turkish and East Indian Carpets, Rugs and Mats, which they offer at very attractive rates.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, April 24.

Baltimore.—WHEAT—Southern red at $1.25@1.27; do. amber at $1.30@1.33; No. 2 Western winter red, spot and April, $1.28@1.28½; May at $1.25½@1.26½; June at $1.24@1.24½; August, $1.06@1.10. CORN—Southern white, 55@55c.; do, yellow, 50c.; Western mixed, 49@49½c. OATS quiet; southern at 41@43c; Western white at 41@42c.; do. mixed, 40@40½c.; Penn., 41@42c. RYE nominally 88@90c. HAY firm; prime to choice Penn. and Md., $18@20. PROVISIONS firm; mess pork at $11.25@11.50. BULK MEATS—Loose, shoulders, 4½c.; clear rib sides, 6½c.; do., packed, at 4½@7c. BACON—Shoulders at 5½c.; clear rib sides at 7½c. HAMS, 10½@11½c. LARD at 8c. BUTTER steady; prime to choice Western packed at 22@25c; roll at 20@22c. EGGS quiet at 10c.

Boston.—FLOUR steady; sales of Western superfine at $4@4.50; common extras at $4.75@5.25. CORN in fair demand; sales at 55@56½c for mixed and yellow; 53½@54½c for high mixed to arrive. OATS firm; sales at 52@54c for No. 1 and extra white; 50c for No. 2 white; 45@48c for No. 2 mixed and No. 3 white. RYE at 94c. SHORTS, fine feed and middlings at $26. BUTTER—New Northern—dairy lots, choice, 24@25c ₩ lb; do. fair to good, 21@23c; New Western—choice creameries at 28@30c; choice dairy packed, 22@25c; choice ladle packed, 22@24c; ladle packed, fair to good, 18@20c. CHEESE—There has been a firmer feeling; Choice Northern factory 14½@15c ₩ lb, fair to good at 13 14c, and common 10@12c; Western—choice 14@14½, fair to good 12@13c, common 9@10c. EGGS—Eastern at 15 cents, Northern 1½, 2@13c, Western 11½@12c ₩ doz. BEANS—Northern hand-picked Pea at $1 65@$1.75 ₩ bushel; do. do. Western, at $1.65@$1.70; do. common $1.60@$1 65; medium choice $1.40@$1.45; common to good $1.25@$1.30; Yellow Eyes $2.05@$2 20; Red Kidneys at $1.40@$1.50. Canada Peas 80c@$1.05 ₩ bushel for common to choice, Green Peas $1.50@$1.85. POTATOES quiet; Houlton and Maine Central Rose 50@56c ₩ bushel: Houlton Jackson Whites at 38@40c, Maine Central Jackson at 38@40, Vermont Rose at 45@50c, do. Jackson at 35@38, Peerless at 43@47, and Prolifics at 50@55c ₩ bushel. ONIONS $1.00@4.50 ₩ barrel, and Bermudas $2.75@$3 ₩ crate. APPLES at $2.50@$4.00 ₩ barrel, according to quality. CRANBERRIES at $9@$12 ₩ barrel. SEEDS—In Calcutta Linseed nothing doing, and prices nominal. We quote Clover Seed steady at 6½@7¼c ₩ lb for Western and New York; Timothy at $2.60@$2.75 ₩ bushel; Red Top at $2.50@$2.70 ₩ bag; Canary Seed at $2.46@$2.85, and American Linseed $1.50@$1.55 ₩ bushel. TOBACCO—Sales at steady prices. Crop of 1878—Conn. and Mass. wrappers 13@15c ₩ lb for common, 16@18c for medium, 20@27½c for fine, 30@40c for selection, 10@14c for seconds, and 6@7½c for fillers; Penn. assorted lots 11@12c for common, 12½@15c for fair, and 16@20c for fine; Penn. wrappers at 16@35c, and Penn. fillers at 9½@10½c; New York assorted lots—Common at 10@11c, and good at 12½@15c; Ohio assorted lots 8@14c. Ohio wrappers at 15@15c; and Wisconsin assorted lots 8@12c.

Chicago.—WHEAT steady with a fair demand; No. 2 Chicago spring at $1.12. cash and April; at $1.13 bid May; at $1.08¾ June; $1.03 July; No. 3 do. at 99c; rejected at 80c. CORN dull at 36½@36¾c. Oats quiet and weak at 29½c. RYE firmer at 72c. PORK dull but closed firm at $9.75@9.80. LARD steady, with a fair demand, at 6.90c. BULK MEATS fairly active at 6.20c.; short clear at 6.45c. BUTTER—Choice creamery, 24@26c.; fine to fancy dairy, nearly equal to creamery, 20@23; good to choice dairy, 17@18c.; medium to fair do., 15@16c.; common, 13@14c; good to choice roll, 15@17c.; medium to fair do., 12@14c.; common, 10@11c; grease butter, 6@8c. CHEESE—Choice to fine old cheddar creams at 14½@15c. ₩ lb; fair to good new do., skimmed, at 10½@11c.; flat skimmed at at 9½@10c., and common and poor stock, 6@7½c. EGGS—Prices steady at 9c. ₩ doz. for fresh, in cases, and 8@c. for loose lots, the demand being fairly active. HIDES AND PELTS—Green salted light hides, 2½c. ₩ lb: do. heavy cows, av. 60 lbs. and over, 9c; No. 2, or grubby and cut, all weights, 8c.; green salted bull, 6½@6¾c.; do. calf, 15@15½c.; dry salted hides, 14@15c.; dry flint, 18c.; dry calf, 18@19c.; deacons, 55c. SHEEP PELTS are salable at 50@55c. ₩ lb for the estimated amount of wool on each pelt SEEDS—The market was again unsettled, clover ruling a shade stronger, while timothy is dull and easy. Good to prime medium clover at $4@4.15 ₩ bushel; mammoth do. at $4 15@4.25; fair to prime timothy at $2.20@2.30; choice do. at $2 35@2.40; good crushing flax at $1.40, and common to prime Hungarian and millet at 60@80c. WOOL—A weak feeling has prevailed for some time past, and although former figures are named, consignments would not probably sell for the extreme outside figures given. Asking rates from store for eastern Iowa, Wisconsin, and Illinois wool range as follows: Tub-washed bright 58@60c, ₩ lb; do dingy and coarse 50@55c.; fleece-washed medium 55@58c.; do. fine 48@53c.; do. coarse 48@53c.; unwashed medium 40@42c.; do. coarse 33@35c.; do. fine bright 30@34c.; do. heavy 25@30c.; buck's fleece 20@22c. Consignments from western Iowa, Nebraska and Kansas sell at about 2c. ₩ lb less than this range, and burry and poor-conditioned lots at 3@5c. less. Colorado wool (unassorted) is quoted at 30@34c ₩ lb for medium to fine; at 27@30c for coarse to medium; at 25@28c for black, and at 22@25c for coarse carpet stock.

Cincinnati.—WHEAT, choice red, at $1.18½; No. 2 red winter at $1,18; No. 2 amber, $1.15. CORN, 40½@41c. for No. 2. OATS quiet, but firm; No. 2 mixed at 35½c. RYE firmer at 81c. PORK firm at $10. LARD stronger at $6.85@6.90c. BULK MEATS in good demand; shoulders at 4c.; clear rib at 6½c.; clear sides at 6¾c. BACON in fair demand and firm; shoulders at 4¾c.; clear ribs at 6¾c; clear sides at 7¾c. BUTTER—Medium and the low grades difficult to sell for more than packers will pay. Weather too warm for roll butter to keep in good condition. Fancy creamery at 28@28c.; prime to choice do. at 25@26c.; choice solid packed dairy, 22@23c.; choice roll, 18@20c.; prime do, 15@16c.; medium do., 12@13c. and inferior, 8@10c. ₩ lb. CHEESE—Market firm for prime to choice factory at 11½@12½c. ₩ lb. EGGS—The supply ample; demand fair at 8½c. ₩ dozen for fresh. POULTRY—A good demand, and with moderate receipts the market is firm. Young spring chickens sell at $2@3, common old chickens at $2.75@3.25, and choice hens at $3.40@3.75 ₩ dozen. Ducks are dull at $2@2.50, and geese at $2.50@3 25 ₩ doz. Live turkeys sell at 10@10½c. ₩ lb. SEED—The demand has fallen off for nearly all kinds except millet, and prices are not much better than nominal. Clover is offered at 6½@7c. ₩ lb, and timothy at $2.60@2.70 ₩ bushel. There is a fair demand for German and common millet at 95c.@$1 and Hungarian grass at $1 ₩ bushel. Dealers buy flaxseed at $1.25 1.30 ₩ bushel.

Detroit.—WHEAT easier; No. 1 white Michigan at $1.15 asked and $1.14½ bid; April, nothing doing; May, $1.14¾; June, $1 14¼. CORN quiet but steady; No. 1 yellow at 43c.; high mixed at 42c.; No. 1 mixed at 42c.; No. 2 do. at 41c. OATS in active request; No. 1 white at 38½c.; No. 2 do. at 38c.; No. 1 mixed at 35½c.; No. 2 do. at 35c. CLOVER SEED a shade better at $4.10 asked and $4 bid for prime.

Indianapolis.—WHEAT weak; No. 2 red winter at $1.12@1.13. CORN firm at 36@37c. OATS firm at 33@35c. HOGS higher at $4.35@4.60.

Louisville.—WHEAT nominal; none on market: prices firm at $1@$1.05. CORN quiet; No. 2 white at 42½c; do. mixed at 41c. OATS firm; No. 2 white at 37½c; do. mixed at at 35½@36c. RYE firm; No. 2 at 81c. PORK quiet at $11. LARD firm; prime steam at $6.90. BULK MEATS steady; shoulders, 4½c; clear rib, 6½c; clear sides, 6 3-8c. BACON steady; shoulders, $4.70; clear ribs at $6.87½; clear sides at $7.50. Sugar-cured hams at 9½@10½c. MILL OFFAL.—Scarce and firm. Per ton in bulk; shipstuff $16@$17. HAY.—Prime to choice timothy $15.50@$17.50, and mixed at $12@$14 per ton on arrival. BROOM CORN.—Medium to prime, 4@6c per pound for straight; crooked, 3½@4c. FIELD SEED. There is very little inquiry for anything but millet and Hungarian. We quote, delivered from store; Timothy, $2.70; orchard grass, $1.40; red top, 65c; clover, common red at $4.25, and sapling at $4.50; blue grass, clean, 55c; extra clean, 75c; German millet, $1; Hungarian, $1. STRAW—$10 on arrival.

Milwaukee.—WHEAT opened strong, advanced 1c, and closed unsettled and weak; No. 1 Milwaukee hard at $1.19; do. soft at $1.17; No. 2 Milwaukee, cash and April, at $1 10; May, $1.10½; June, 1.08½; No. 3 do. at $1; No. 4 do. at 94½c.; rejected at 85c. CORN strong and higher; No. 2 at 36¾c. OATS scarce and firm; No. 2 at 30c. BARLEY unsettled, No. 2 spring at 71c. PROVISIONS—Mess pork quiet at $9 80. LARD—Prime steam, 6.93c. HOGS quiet but firm at $4.20@4 35.

Philadelphia.—WHEAT—Market greatly demoralized; Penn. $1.25; June at $1.22½; July at $1.11½; southern amber for milling on track at $1.32; No. 2 red April at $1.29 bid and $1.31½ asked; May at $1.25½ bid and $1.25½ asked; June at $1.22½ bid and $1.22½ asked; July, $1.11½ bid, $1.12 asked. RYE comes forward slowly; Penn. 83c. CORN very dull; very little demand, either for local consumption, export or options. Penn. western and southern yellow on the track and grain depot at 53@53½; Delaware yellow afloat, 53c.; southern white 50c. bid and 51c. asked for car lots in elevator. OATS firm for choice grades, but low grades dull and NO. 1 white at 46½c.; No. 2 do. at 44¼@45¼c.; No. 3 do. at 43@43½c.; mixed at 41@43c. Ohio strained at 42½c. PROVISIONS dull but firm. City mess beef at $13; beef hams at $17. Smoked hams at 9½@10½c.; do. in salt and pickle at 7½@9c.; clear rib sides smoked at 7½c.; do. in salt, 7c.; shoulders in salt, 4½@4½c.; do. sugar-pickled, 5@5½c.; do. smoked, at 5@5½c. Dressed hogs at 5½@6½. LARD—Western kettle at 7.50@7.62c.; steam, loose at 7.25c.; do. butchers' at 7c. BUTTER strong on scarcity; creamery extra at 28@30c.; Bradford county and New York extras at 26@27c.; Western Reserve extra at 24@25c.; do. good to choice at 20@23c.; rolls quiet, but firm; Pennsylvania extras at 19@21c.; Western Reserve extras at 20@22c. EGGS steady; Pennsylvania at 11c.; western at 10½c. CHEESE scarce and firm; New York factory old at 15@15¾c.; western full cream, none here; do. good at 12@13c.; half skims, 11@12c. SEEDS—Clover quiet at 6½@7¼c.; timothy steady at $2.90@$3; flax at $1.70@1 80. FEED in less demand, but steady. Bran at $21.50@22.50.

St. Louis.—WHEAT opened higher, declined and closed very unsettled; No 2 red fall at $1.13@1.14¾ cash; $1 12¾@1.13¾ for May; $1.06½@1.08½ for June; 96@98½c. for July; 90½@93c. for all the year; No. 3 do at $1.07¾; No 4 do at $1.02. CORN lower at 32c. OATS 30½@31c. RYE steady at 74c. PORK strong at $10.25 asked. LARD strong at $6.80 bid. BULK MEATS firmer; shoulders at $3.80@3.90; clear ribs at $6@6 05; clear sides at $6.20@6.25. Bacon higher; shoulders at $4.40; clear ribs at $6 80@6 85; clear sides at $7@7.10. HOGS steady; Yorkers at $4.15@4.25; bacon at $4.25@4.30; butchers' at $4@4.35; select at $4.35@4 50; rough mixed at $3.80@4.10. CATTLE easy; supply fair; demand moderate; light to good shipping steers 1,000 to 1,400 lbs. average, $4@4.75; prime to fancy heavy, 1,400 to 1,600 lbs at $4 80@5.10; butcher grades mixed, at $3@4; SHEEP scarce and wanted; fair to fancy heavy, $4.50@6; sheared $3.@4.25.

Fertilizers.

Bone ash is nominally quoted at about $22 per short ton, on the basis of 70 per cent. phosphate of lime. Bones quoted at $22 50@$23 for Texas and South American mixed, and $25@$26 do. for shin and shank bones. Refuse bone black at $21@$22 per short ton on merit. Sulphate of ammonia at 3½c. ₩ pound on the basis of 26 per cent. of ammonia. Dried blood at $2@$2 30 per unit of ammonia short ton. Ammonia, axotine, etc., for the former at $2 62½@$2 75 per unit of ammonia, and about $2 25 do. for the latter, all short ton. Nitrate of soda, 4½c. Saltpetre, crude 6½@6¾. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent. ammonia, $35@$40; dissolved bone black, 15 to 17 per cent. of soluble phosphoric acid $30@$35; dissolved bone 13 to 14 per cent. of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent of soluble phosphoric acid, 3 per cent. of potash, 3 per cent. of ammonia, $40@$45; German potash salts, 25 per cent. of sulphate of potash, $15@$18 per ton; muriate of potash, 80 percent. 2@2½c per lb. land plaster 7.50; dried blood, 10 per cent of ammonia, $35@45 per ton; fish guano dry and ground fine, 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $45; unground fish guano, 6 per cent of ammonia, $25; castor pomace; $19@24; sulphate of soda, ground, and in barrels, $15@18 per ton; sulphate of ammonia 4½c. ₩ lb; bone black, 70 per cent of bone phosphate, $30@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $20 per ton; No.1 Peruvian guano, 10 per cent ammonia, standard, $55 per ton; Lobos $46 per ton; rectified $35 per ton; guaranteed $56 per ton; nitrate of soda, 5¼@5½ ₩ lb.

FORRESTER'S potato manure, $47.50; cabbage, $50; oat, $47.50; lawn dressing, $47.50; turnip, $52; grass, $45; hop, $47.50; strawberry, $42.50; wheat, $45; rye, $47.50.

STOCKBRIDGE'S manures quoted: Potato, $50; cabbage, $50; strawberry, $40; corn $45; seeding down, $40; orange tree, $35; onion, $50—per ton each.

MAPES'S complete manures for clay soil, $25.50 per 1,000 lbs.; for light soils $25.50 per 1,000 lbs.; "A" brand for general use, $20 per 1,000 lbs.; fruit and vine, $18.50 per 1,000 lbs.; cabbage and cauliflower, $23.75 per 1,000 lbs.; corn, $24.50 per 1,000 lbs.; potato, $24 per 1,000 lbs.; asparagus, $25.50 per 1,000 lbs.; gypsum, Nova Scotia, ground, ₩ ton, $7.50.

BOWKER'S "Hill and Drill Phosphate" $45; Bowker's Phosphate $40 ₩ ton, each; Bowker's "Food for Flowers," 55c. ₩ package and $3 ₩ doz; Bowker's "animal meal for lowls," $2 50 per cwt.; Ground oyster shells, $1 ₩ cwt.

BAUGH & SONS' prices for goods delivered at depot or boat, in bags and in 2,000 ₩ lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36; Baugh's raw bone superphosphate $40; Baugh's $25 phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent. of ammonia, $48.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, April 24, 1880.

BEANS AND PEAS.—Early in the week there were very liberal sales of beans for export including about 1,400 bbls.; chiefly marrows for Spain, and the market has ruled very strong. The feeling in the standard sorts is unusually steady for this part of the year, especially with potatoes ruling so low as they do. Fancy beans partake of the firm tone but there are no large sales of pea or kidney. Green peas steady at $1.80; Southern B. E. peas unchanged at $1.90@$2 per 2 bu. bag.

Marrow beans, prime, $1.67½; other, $1.50@1.62½; medium, prime, $1.47½@1.50; other, $1.30@1.42½; pea, $1.45@1.65; white kidney, $1.55@1.75; red choice, $1.50; other, $1.25@1.45; black, $2.05@2.10.

Receipts of beans for week, 2,350 beans; exports, 2,525 pkgs.

BROOM CORN.—There is little doing, with prices unsettled and nominal. Nominal quotations are for choice brush at 7@8c.; choice hurl at 8c.; stalk braid at 6@7c.; red and crooked at 3@4c.

BUTTER.—Supplies have largely increased and prices are lower and weak. This is the usual course of affairs in butter when perishable spring stock forms the supply.

THE PRODUCER'S PRICE CURRENT says:—"It is greatly feared that our dairymen are goingto commit an error this season in carrying too much spring and summer butter into the fall and winter. Those who held their butter last season and sold on the fall rise did better than those who sold steadily during the summer, and this experience will be likely to mislead a great many. The circumstances are now different. The low prices of last summer had the effect of closing most of the oleomargarine factories and it took them some time after the rise in the fall to get at work and re-establish their trade. The high prices during the winter and spring have given that article a wonderful increase of demand. It is not now probable that prices will be low enough this summer to drive it out of the field, if, as is claimed, it can be made and sold at a profit at 10c. per ₩. Any deficiency in the quantity of butter sent forward in the summer will, therefore, probably be supplied by oleomargarine, and in the fall the dairymen will find themselves with a very large supply on hand and the enemy in their path, in possession of the field, with all its connections made and offering its manufacturers a good profit at prices which would be very unsatisfactory to dairymen.

New Butter—Creamery best invoices 26c.; good to prime 24@25c.; fair to good 23@24c.; poor to fair 21@23c.; State, pails and tubs, choice, 25c.; good to prime 23@24c.; fair to good 23@23c.; poor to fair, 21@22c.; Western imitation creamery, 20@23c.; do. dairy fresh extra, 22@23c.; good to prime 21@22c.; fair to good 20@21c.; poor to fair 18@20c.; do. factory extra, 22c.; prime 21c.; fair to good 19@20c.; poor to fair 18@19c.; very poor 12@16c.

Receipts for week, 24,650 pkgs.; exports, 5,674 pkgs, mostly old.

CHEESE.—There is a freer assortment of new, but demand is fair, and prices are well supported. Old is in reduced stock, and prices steadily held.

New quoted at 14@15c.; fair good to very choice full cream, and 9@11½c. for skimmed and half skimmed; old State factory, best 14@15½c.; good to prime at 13¾@14½c.; fair to good at 13@13½c.; do. poor at 11½@12c. Ohio factory: Cheddar, fine, 14@14¾c.; do., fair to good, 13@13¾c.; flat, fine, 14½@14¾; flat, good to prime, 13¾@14¾c; flat, fair to good, 12½@13c.

Receipts for week, 14,730 boxes.

Exports, 12,400 do.

Liverpool cable, 75s.

Steam, 40s.

COTTON.—There has been more activity and prices showing wide fluctuations, closing weak at for April, 11.53@11.55c.; May, 11.57@11.58c.; June, 11.70@11.71c.;

July, 11.81@11.82c.; August, 11.89@11.90c.; September, 11.61@11.62c.; October, 11.09@11.11c.; November, 10.88@10.90c.; December, 10.85@10.88c.

DRIED FRUITS.—Apples are less freely offered, and there is a very good demand, especially for evaporated stock with prices steady. Peaches are quiet and unchanged. Small fruits are slow.

North Carolina apples, fair to good, at 7½@8½c.; choice, at 9@10c.; fancy at 10@10½c; Virginia, at 7@8c.; New York State quarters sliced at 7½@8½c.; patent evaporated, in cases, choice,, at 14½@15c.; good and prime at 13½@14c.; evaporated, choice sliced at 13@13½c., and good do. at 12@12½c. Evaporated peeled peaches, good to choice, at 27@28c.; North Carolina peeled, fancy, at 20c.; choice old at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7½@8c.; do. quarters at 7@7½c. Pitted cherries at 17½@19c. Blackberries nominal at 14c. Raspberries at 27@28c. Plums at 17@18c.

Exports for week, 200 pkgs. apples.

EGGS.—Receipts for the week, 17,875 bbls.; do. last week 16,630 do. The market has ruled weak since the recent heavy receipts and easy rates will rule until stock is less pressing. Receipts of Western are expected to fall off, but a good many eggs, the surplus of other cities, are seeking a market here.

Near Points, 13½c.; State and Penn., 11½@11½c.; Western, choice, 11@11½c; Southern, do., 10½@10¾c.; inferior, 10@10¼c.; duck, 15@16c.; goose, 25@27c.

FRESH FRUITS.—Baldwin and Russet apples now form the supply, ranging at $3@4 for fair to good; extra selections of Baldwins, $5. Exports for week, 3,126 bbls. Cranberries, $4@4.50 ₱ crate, held firm with scarce apples. Strawberries are doing better, owing to scarcity: Norfolk, 30@50c.; N. C. & Chas., 35@45c. Peanuts quiet and old rates are very full. Va. hand-picked 5½@6c.; extra prime, 5¼@5½c.; good to prime, 4¾@5¼c.; shelled, 5½@6c. Hickory nuts, 90c.@$1.

FLOUR—Has been depressed through the decline in wheat, and freely offered giving only moderate transactions.

Latest sales are at $3.50@4 60 for inferior to fancy superfine State and Western; $4.40@4 75 for poor to very good extra State odd lots and lines; $4 75@5.25 for very good to fancy do.; $4.40@4.75 for inferior to good shipping extra Western, and $4.75@5.25 for good to fancy shipping extra do.; inferior to very good white wheat extra, $5.00@5.75, very good to very choice do. at $5.75@6.15 (fancy brands held at higher figures); red and amber winter wheat, inferior to fancy trade and family, at $4.75@5.50; round hoop Ohio, $4.65@5 25; and trade and family brands of do. at $5.30@6.00; St. Louis at $4.75@5.65 for inferior to good extra; $5 65@6.75 for good to very choice; Minnesota clear, inferior to fancy, at $4 50@6.00; Minnesota "straight," inferior to very fancy, at $5.00@7.25, and patent very inferior to fancy at $6.00@8.25; unsound stock at from $2 60@5 00; city mill extra at $5.75@6.25 for fair to fancy West Indies; do. for England, $4.50@5.25 for poor to very fancy; do. trade and family extras, $6.25@7.00; do. for South America, $6.00@6.50; No. 2 at $2.65@3.85 for poor to very choice.

GRAIN.—Wheat has been much depressed and decidedly lower, rallying, however, a little towards the close; the decline resulted largely from speculative manipulation. Exports for the week have been 1,140,000 bush. Latest prices are for No. 1 white at $1.29@1.31; do. April at $1.30@1.31; do., May, at $1.26¾@1.27; ungraded white at $1.25@1.34; No. 2 red at $1.33@1.35; do., do. April option, at $1.34 @1.35¾; do., May at $1.29¾@1.32¾; do. June at $1.26¾@1.28¾; No. 2 amber at $1.32; No. 2 Northwest, May,, at 1.22¾@$1.23¾; No. 3 spring at 1.20; ungraded spring at $1.21@1.22. Corn has been unsettling, but closed strong and trade fair; latest sales are of New York No. 2, regular inspection, at 55¾@56¼c.; do., April, at 5.@55¾c.; do., May, at 47¾@48¾c.; do., June, at 47¾c.; do., July, at 48¼c.; New York steamer mixed at 55¾@56c.; ungraded mixed Western at 55@57c.; No. 3 at 56c.; No. 2 white quoted at 55½@56c.; steamer white at 55c.; yellow Western at 57¾c.; round yellow at 57@58c. Oats have been advancing but closed weak, with latest sales of No. 1 white 53c.; No. 2 white at 48@48c.; No. 3 white at 45c.; New York No. 1 at 42c.; New York No. 2 at 41@42c.; do., April, at 40¾c. do., May, at 38¾c.; No. 3 at 40c.; ungraded white Western at 44@46c.; ungraded mixed Western at 40@44c.; white State at 51@52c.; mixed State at 43c.; No. 2 Chicago at 42c.

HAY AND STRAW.—The offerings are more liberal but prices are well sustained.

Shipping hay quoted at 70c.; retail lots at 80@85c. for medium, and 85@$1, for better qualities; clover, 55@60. Straw at $1@1.05 for long rye; 65@70c. for short rye, and 50@60c. for oat.

Exports for week, 2,130 bales.

HOPS.—The demand is for light quantities, and prices still unsettled on other than choice lots. Quotations are for

	Cents per lb.
New York, fancy	Nominal.
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

LEATHER.—Quotations for hemlock sole are 23@26c. for light; 24@27c. for middle; 24@26c. for heavy, and 21½@c. for good damaged.

MAPLE SUGAR—Is scarce; it has seldom been so well sold up, cakes and molas, 12@14c.; sirup, in tin, 75c.@$1.

OIL-CAKE.—Western is quoted at $32 per ton.

POULTRY AND GAME.—Country scalded poultry is hardly wanted; near-by dry pickers and dressers, with what can be promptly called for, fully till present city wants.

Turkeys, choice, small, 14@15c.; medium, 13@14c.; fair to good, small, 12@13c.; large, 10@12c.; Phila., dry-picked, 14@15c.; capons, Phila. large, 21@23c.; small, 19@20c.; slips, 18@19c.; chickens, winter, large, Phila., 23@25c.; Phila., small, 27@30c.; spring, ₱ lb., 30@33c.; fall, Phila., dry-picked, 18@21c.; yearling, Phila., dry-picked, 15@17c.; fowls, Phila., dry-picked, 12@14c.; N. J., good to prime, 12@13c.; State, good to prime, 12@13c.; Western, good to prime, 10@13c.; poor to fair, 6@10c. Ducks, Phila. dry-picked, 18@19c.; squabs, white, ₱ doz., $1.50@2.75; dark, $1@1.50.

Live poultry has arrived freely, but has found ready sale at good prices. It hardly pays to send extremely small chickens.

Chickens, spring, large, per pair, 75c.@90c.; small, 50@60c.; fowls, Jersey, ₱ lb 12@13c.; Western, 11½@12c.; roosters, 6c.; turkeys, mixed, 11@12c.; ducks, Jersey, N. Y. & Pa., per pair, 75c.@$1; Western, 60@75c.; geese, Jersey, $1.50@1.75; N. Y. & Pa., $1.25@1.50; Western, mixed, $1@1.12; pigeons, ₱ pair 35@45c.

Wild pigeons obtained a run of trade during the low prices, and are now steady at better figures; quoted $1@1.12. English snipe and plover, $1.25@1.50; land snipe, 35@40c. Wild ducks not wanted.

PROVISIONS.—Hog products have been active and higher; mess pork quoted at for April at $10.60@10.70; May at $10.60@10.70; June at $10.65@10 75; July at $10.75@10.80, and August at $10.85@10.90. Bacon at 6¾ for long clear and 7 for short clear. Beef at for extra India mess at $18@20 for city and $19 for Philadelphia and at $10.50@11 for extra mess, and $10 for plain mess. Beef hams at $17.25@17.50. Stearine at 7¾@7¾c. for Western. Tallow at 6 1-16 for prime. Lard—Western steam at 6.35@7.37½ for spot; 7.32½ for April, 7.30@7.32½ for May, 7.35@7.37½ for June.

Receipts for week, pork, 2,100 pkgs.; beef, 735 pkgs.; cut-meats, 31,573 pkgs; lard 20,200 pkgs. Exports for do., pork, 7,500 pkgs.; beef, 1,950 pkgs.; cut-meats, 10,425,000 lbs.; lard, 10,043,100 lbs.

SEED.—Clover is quiet; Western is quoted at 6¾@7¾c., and State at 7@8c. Timothy is quiet at $2.40@2.50.

TOBACCO—Has not varied in price and trade moderate.

VEGETABLES.—Exports for week, 1982 bbls potatoes. The offering of new is larger but in many instances badly packed and called. Old quiet and in buyers favor for all sized quantities. Bermuda, now ₱ bbl. $6 00@6 50; Savannah, $4@4.50; Florida, Rose, $4@5; Chili Red, $4@4.50; chils, $2.50@3; Early Rose, N. S., bulk, per bbl. $1.25@1.37; Maine, per d.-h. bbl., $1.75; @1 87; State $1.25@1.50, in bulk ₱ bbl. $1.25@1.50; prolific N. S., per d.-h. bbl. $1.25@1.37; In bulk $1.25@1.37; Mercer, bulk, ₱ bbl. $1.00@1.12; Chili Red, bulk, ₱ bbl, $1@1.12; Peachblow, State, white, per d.-h. bbl., $1.50@1.75; red, $1.37@1.50; N. J. ₱ bbl, $1@1.25; Snowflake, State, $1.50@1.75; Peerless, State, $1.00@1.12; bulk, $1; Jersey, bulk, 70@75c.; Sweet potatoes, ₱ bbl. $2.75. There is a very fair demand for green stuff but buyers insist on prime quality and condition, stuff has to sell on its me its after novelty wears off. Tomatoes, Fla., ₱ bu. cr. $2@5; Bermuda, 60@9 c., beets Bermuda, new, ₱ crate $2@2.25; Fla., $1.75@2.50; cucumbers, Fla., $2.50@3; String beans, Sav. $4@4.50; wax beans, Fla., $2.50@3; string beans, Florida, round, $2.50@2,75; Fla, flat. $2@2.25; squash, Fla., white, $1@1.25; green peas, Norf., ½ bbl. crate, $3.25@3 50; N. C., ½ bbl, cr. $2.50@3; Ch'n & Sav., $1@1.50 Asparagus, Jy. per doz, bun. $3@4.50; Md. and Del $3@4.50; Norf., $3@4; kale, L.I. ₱ bbl., $1; spinach, L.I. ₱ bbl. $2@2.25; Baltimore, $2.00; radishes, Norf., ₱ 100 bunches, 25@75c.; squash, marrow, per bbl., $1.75; Hubbard, $1.75; cabbage, Norf., $1.50@3; Ch'n and Sav., $4@4 50; Fla., new, $4@4.50; rhubarb, L. I. & Jy. pr. 100 bunches $2.50@3; onions Bermuda, new ₱ cr $2 25; white, ₱ bbl., $4.50@6; yellow, $4; red, Eastern, $4; beets, Jersey, $2@2.35; turnips, Russia, 75c.@$1.25; carrots, $1.25@1.75.

WOOL.—There has been much less life to the market, with prices unsettled and rather easy, especially on the better grades. Quotations are for:

Ohio, Pennsylvania and Virginia, XXX and picklock, 58@59c.; XX, 54@56c.; X, 53@55c.; No. 1, 59@62c.; No. 2, 54@56c.; common, 50@53c.; combing, 58@61c.

New York Michigan, Indiana and Wisconsin, X and XX, 50@55c.; No. 1, 50@53c.; No. 2 51@56c; common, 47@50c.; combing, 54@59c.

Iowa, Vermont and Illinois, X and XX, 49@53c.; No. 1, 57@60c.; No. 2, 49@54c.; combing, 51@59c.

Missouri, Kentucky and Tennessee, washed fleece, 54@59c.; unwashed fleece, 41@46c.; unwashed combing, 42@47c.

LIVE STOCK MARKETS

NEW YORK, Saturday, April 24, 1880.

BEEVES.—Receipts for week, 12,108 head; do. last week, 13,101 do. The market has been buoyant and wholesome all the week; quality of stock was fine and recepts just scant enough to make some share competition among buyers. Very little stock sold below 9c. A few rough oxen sold at 8c., to dress 55 lbs.; common to prime steers, 8¾@10c., to dress 56@57 lbs. There was an absence of fat heavy cattle, but an average grade like the one just closed out is more suitable for the trade at this season than heavy weights. Exports for week, 1,300 live cattle; 4,210 quarters; 700 live sheep; 1,100 carcasses and 200 dressed hogs.

COWS AND CALVES.—Good to prime milkers wanted at $35@55 per head.

VEAL CALVES.—Receipts have moderated and prices are firmer for prime live. Dressed have had a further lo-e with a continuance of cool weather. Live calves, Jersey and Bucks Co., choice, 6¾@7c.; prime, 6@6¼c.; State, choice, 6@6¼c.; do. prime, 5¾@6c.; fair to good, 5@5¾c.; poor, 4@4¾c.; Mt. Holly, good to choice, 6@7¼c.; buttermilk, 3@4c.; grass, 2½@3c.; calves, hog-dressed, Jersey, choice, 9½@10c; good to prime, 8½@9c.; State, good to prime, 8½@9c.; fair to good, 7@8c.; poor to fair, 5@7c.

SHEEP AND LAMBS.—Receipts for week, 19,775 head; do. last week, 23,111 do. Butchers wanted all offering, and the pens were soon cleared at a small fraction advance from the high figures of Thursday. Two car loads of unshorn sheep were sold at 8½c., two cars at 8c., and several deck loads of common to fair at 6¾@7¾c.; a lot of 61 head of clipped do. at $5.80 ₱ 100 lbs.; 4 car loads at 5¾c. ₱ lb., and about the same number at 5¼@5½c.; a load of unshorn yearling lambs at 9½c., some clipped do. at 5½@6¾c., and a few spring lambs at $5.50@6 50 per head. Dressed mutton advanced ¼c. ₱ lb. and had quick sale at 10@10½c. for the best.

SWINE.—Receipts for week, 32,598 head; do. last week, 34,100 do. Nominal rate for corn-fed, 4½@4¾c. Supply all sold.

Country, dressed, 50 to 125 lbs., 7@7¼c.; 125 to 200 lbs., 6¾@7c.; 200 lbs. up,, 6¾@6¾c.; city dressed, 6¾@6¾c.

Halladay Standard.

VICTORIOUS AT

Phila., 1876—Paris, 1878

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GUARANTEED SUPERIOR

To any other Windmill Made.

17 SIZES—1 MAN TO 45 HORSE POWER

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$3,500,000 worth now in Use.

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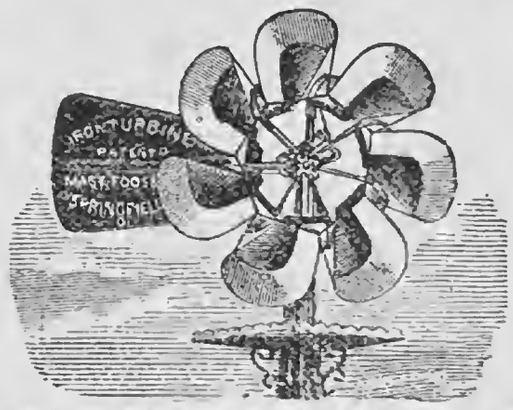
U. S. WIND ENG. & PUMP CO., Batavia, Ill.

NEW IRON TURBINE WIND ENGINE



The Strongest and Most Durable Wind Engine in the World. Sold by Dealers in nearly every County. Inquire for it. Every Wind Engine Fully Warranted.

Send for Circulars, Price-List and information to

MAST, FOOS & CO., Springfield, Ohio.

ADAMS WIND MILL.

Works in a lighter breeze than any other. Governs itself perfectly. Its operation can not be interfered with by ice or sleet storms. Well made, Strong, Durable. Illustrated circulars of all our goods sent free. Address, MARSEILLES MFG. CO., Marseilles, La Salle Co., Ill.

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For Simplicity, Durability and Power *this mill has no equal.* It runs equally well in light or heavy winds. Ice and sleet do not effect it Works well under all circumstances; never gets out of order. We warrant all our mills. Circulars and descriptive catalogues sent free on application to the Phelps & Bigelow Wind Mill Co., Kalamazoo, Mich.

CHALLENGE WIND MILLS

Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merit. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.

CHALLENGE MILL CO., Batavia, Ill.

IMPROVED CALIFORNIA WIND MILL.

Simple, Strong, Durable, Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers. CLARK & CO., SOMANAUK, ILL.

ANNOUNCEMENT.

LEWIS SCHILLING, the Originator of the **Celebrated Premium Bone Fertilizer**, formerly manufactured by him at the EXCELSIOR FERTILIZER WORKS, SALEM, OHIO, has sold out his **Salem Mill**, and has taken charge of the business of a New Company at **Alliance, Ohio.** The rapid growing demand for my Pure Premium Bone, and the want of Extensive Facilities for manufacturing, as well as the want of the necessary Capital to accumulate the stock needed to fill my orders, will account for the change in locality.

At Alliance I have the benefit of being at the Junction of the Pittsburgh, Ft. Wayne & Chicago and the Cleveland & Pittsburgh Railroads. I have a private track to my manufactory, and I will have the Capital to enable me to accumulate a large amount of stock ready for a rush of business at seeding time. My customers will please direct all letters pertaining to the purchase of Premium Bone, or the sale of Bones to

LEWIS SCHILLING, President Excelsior Fertilizer Co., Alliance, Stark County, O.

WANTED—Salesman for each State. Salary $75 to $100 and expenses. Goods sold by sample. LA BELLE MANUFACTURING CO., Chicago.

NEW HARDY PLANTS.

Japanese Maples, Rhododendrons, Hardy Azaleas, Magnolias, Roses, Purple Beech, Choice Conifers carefully pruned, in large quantities.

All kinds of Fruit and Ornamental Trees, Shrubs, and Vines. Price Lists free. Descriptive Catalogues 10 cents, including list of "New and Rare Plants."

PARSONS & SONS CO. (Limited.) Kissena Nurseries, Flushing, L. I.

TREES

The most *complete* assortment in the West. A particularly fine lot of *Standard Pear Trees.* Full stock of *Apple, Plum, Pear, Peach, Cherry, Quince,* etc. A select lot of *Grapes, Gooseberries, Raspberries, Currants, Strawberries,* etc., etc. An immense stock of

EVERGREENS

both common and NEW AND RARE, at bottom prices. *Ornamental Deciduous Trees, Shrubs, Vines, Roses,* etc., etc. Large lot of *Greenhouse Plants.* Trade-List and Greenhouse Catalogues free. Descriptive Catalogue, 10 cts. 27th Year. 400 Acres. 15 Greenhouses.

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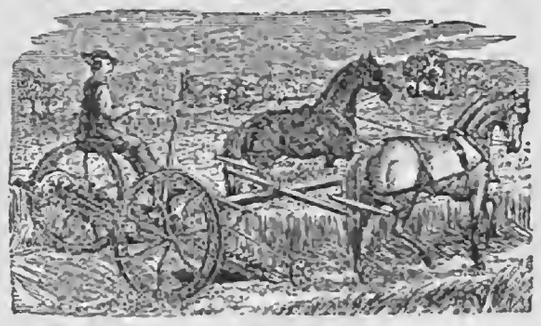

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Lightest Draft Mower IN THE World.

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STOCKBRIDGE MANURES For 1880.

Some years ago the Stockbridge Manures were only known to a few farmers in the Connecticut Valley. Now they are so extensively used in different parts of the country as to require two large factories, one in New York and one in Boston to manufacture them. This increase shows what farmers think of good fertilizers, and is not only due to the fact that they are reliable, well-made, and high-grade manures, but also to the fact that farmers have

FOUND THEM PROFITABLE TO USE.

Now that corn, and other farm produce is bringing such good prices, we anticipate that farmers will invest still more largely in our fertilizers.

Besides the Stockbridge Manures, we manufacture several high-grade Phosphates, and deal in first-class chemicals of all kinds. Farmers who intend to use Fertilizers of any kind, should

Send for our New Pamphlet,

which contains a large amount of reliable information, besido prices for 1880.

MAILED FREE TO ANY ADDRESS.

BOWKER FERTILIZER CO., 3 Park Place, N. Y. 43 Chatham St., Boston.

SPRING STEEL TOOTH **HORSE RAKES.**

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No Cogs or Ratchets, easiest Hand or Horse Dumping. Purchasers prefer them to all others for Durability and Efficiency. Fully guaranteed; so no risk is incurred in ordering from us. Responsible Agents wanted where we have none.

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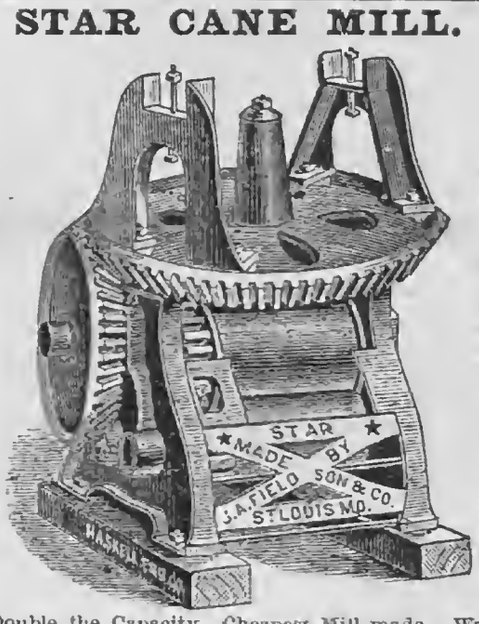

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DEATH TO MOLES

My Lightning Mole Trap gets them every time. Never fails. Sells like wild-fire. Only perfect Mole Trap in existence. $2.00 each, or $18.00 per dozen. Send for circular. Live Agents wanted.

ALFRED T. SINKER, Sole Man't, Indianapolis, Ind.

McSHERRY GRAIN DRILL

Unquestionably the Best.

Sows Fertilizers splendidly. It is very accurate. It regulates by cog wheels. It is light draft. It is easily managed.

It is strictly first-class in workmanship and construction. Works to the entire satisfaction of everybody who knows what a grain and fertilizer drill ought to do. Its sterling qualities have gained it a world-wide reputation, and all who appreciate excellence and accuracy, prefer the McSHERRY.

Send for pamphlet. Mention this paper.

D. E. McSHERRY & CO., Dayton, O.

The "Oliver Chilled" Plow.

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THE LEADING PLOW OF THE AGE.

Sells Best Where it is Best Known.

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OLIVER CHILLED PLOW WORKS, South Bend, Ind.

Branches at INDIANAPOLIS, IND., MANSFIELD, O., HARRISBURG, PA., DALLAS, TEX., ROCHESTER, N. Y. ST PAUL, MINN., ST. LOUIS, MO.

Reading for the Young.

FLORICULTURE FOR YOUNG PEOPLE. No. IV.

JOHN N. DICKIE.

Arrangement of Flowers in the Garden.

No matter how fine the flowers are you raise, they never will appear to advantage unless properly arranged. I would rather see a neatly laid out garden of dandelions, burdocks, thistles, ironweed, clover, etc., than a mixed up jingle of the finest flowers that ever bloomed. I saw a flower bed once I shall never forget. It was about twenty feet long and five feet wide. In one end was a bunch of asparagus (or "sparrowgrass" as they termed it) overshadowing a lot of sickly Portulaca. Next came some Gomphrena (English clover) grown in a clump, tall and spindling; then Bachelor Buttons, Pansies, a bunch of Hollyhock, Poppies and a number of other plants I cannot now recall, making what I may properly term a floral jam of the first magnitude.

Never crowd your flowering plants. Give them plenty of room and they will give you double the quantity of larger and finer flowers. Transplant at any time. I have set out plants not an inch high during a drought when the soil was apparently as dry as the dust in the middle of the road, and never offered to shade them, and still rarely lost one. As soon as they are in I pour water *by the side of the plant*. This does not wash away the soil, and is the only proper way to water young plants. Last season was exceedingly dry here. I had a lot of Japan Pinks sown in a frame late, and they were very small—not over a half inch high. I transplanted them on a hot day, in a dry soil, but only lost one plant out of a lot of over two hundred. In August I had the finest display of this flower I have ever seen.

To those just beginning the culture of flowers, I would recommend their arrangement in beds as often seen in kitchen gardens. In setting your plants observe this rule, viz., to set low flowering plants nearest the main walk, and the taller sorts in the rear. Portulaca is one of the lowest plants we have. Japan Pinks, in rich soil will grow a foot or more in hight. Verbenas should always occupy a front bed. Browallia should take a back seat; also Poppies, Salvias, Zinnias, etc. The rule is simple enough, and a little care in the arrangement will give you a flower garden worth the name.

But many of my young readers will not be able to have a flower garden, and will only have a half dozen varieties or so. Then let me tell you a very attractive way to arrange them. Get a little plot of ground, spade it deeply and manure it *moderately*, for soil can be made too rich for flowers. Now lay it out in drills two feet apart, each drill being long enough to take each variety. Put the lowest growing in front, and the next highest second, etc., until you form a sort of floral pyramid, which it certainly will be if you make the proper choice.

I shall have a large flower garden this year, and one of the beds will be arranged thus: At the rear, Ricinus (castor oil bean) then Cannas, then Salvias fronted by Balsams, Dianthus, Verbenas and Portulaca, in separate curved rows. This will make a beautiful bed, and my young readers of the RURAL can do as well.

Before closing this series of articles, I wish to caution my young friends about purchasing greenhouse flowers. Suppose you wish a dozen Verbena plants, the great majority of them will consist of a single stem with one flower thereon. Don't buy these. Insist on short plants with no flowers. You will then get something that will bloom in a reasonable time after planting them. Pansies forced into bloom in pots are never so good as these short, stubby ones which people reject, because they have no flowers. Of course, Geraniums, Fuchsias, &c., are a different class of plants, and can be bought safely in flower.

In closing, I must say, I hope to hear good reports through the columns of the RURAL from numberless little flower gardens throughout the country. Nothing is more elevating or refining than floriculture for the house, lawn and garden. When people raise flowers merely to sell, it becomes floriculture for money, and the work then loses half its charm.

Morrow Co., Ohio.

ROBINSON CRUSOE.

DEAR UNCLE MARK:—Kept indoors by a steady rain-storm, I find opportunity for fulfilling my promise to give the cousins a description of my island. It is not quite so desolate as Robinson Crusoe's for it is inhabited and in the place of his "man Friday," I have my Pink to blossom by my side, and to give color and fragrance to my existence; and instead of a cat, I have my cunning little Juaneta to cuddle in my arms for caresses. I fancy the scenery of my island, too, is grander than Alexander Selkirk's nor is mine a "lonely isle of the sea," but one of many, forming an archipelago of an arm of the Pacific known as Paget Sound, which is almost surrounded by the Coast Range whose lofty peaks are crowned with eternal snows, while the islands are clad in perpetual green. Protected on the north and east, by mountains, and fanned by the mild breezes from the ocean, on the south and west, our climate is uniform throughout the year, winter venting itself in rain. Deciduous trees drop their leaves here, as elsewhere, but this has little effect upon the appearance of nature, since majestic evergreens hang out their curtains of unchanging verdure and long moss, to conceal the bare limbs of their less modest neighbors. Here luxuriate the fir, cedar, spruce, hemlock, pine, juniper, yew, and manchineel. The fir grows to the height of 200 or 300 feet, and is valuable for ship-building, particularly masts and booms. The cedar is used for shingles stakes, rails, as it splits so evenly and smoothly. Wild flowers cover the open places on the bluffs while glaucous ferns fill the more fertile spots in the valleys; for our island is diversified with mount and vale, cataract and lake, the last filled chiefly with trout and covered with wild ducks and yew. In the dense forest, lurks the timid deer whose branching antlers make for a huntsman, a rack unique and appropriate, for his musket, shot and powder-flask, game bag and fur cap. On the main land we have the bear, black, and grizzly wild-cat, panther and other vicious animals and as king over them, (and perhaps not less dangerous) the Red Man, whose revenge is proverbial, and whose offspring inherit the treachery of Spanish ancestry. For a livelihood they hunt and fish, and carry on traffic with the Hudson Bay Fur Company by means of a jargon called Chanuke. It is amusing to hear them wor-wor, (talk) Chanuke. Miker is you. Cumtucks is understand; Miker cumtucks wor-wor Chanuke? means, Do, you understand Chanuke? Answer, Na whitea (yes), or Halo (no). Niker means I or me; clativa, go, begone; clatrowyler, good day, howdy; chuck, water; muce-muce, cow; eloce, horse; Highas Tlo, chief; Highas sockie Tie, God; ix, one; mox, two; eloon, three; locket, four; quinum, five.

The beach is strewn with shells and pebbles, the most curious of which is the "sea egg" (local name; Uncle Mark, please give us the right one) shaped like a trophy tomato, and bristling like a chestnut burr, with thousands of bony points which may be rubbed off leaving the shell smooth with a purple tint, and its beautiful tracery of natural lace work. [Sea egg or sea urchin are the correct common names for this class of radiates. The generic name is Echinus, and the species most common on the American coast is called Toxopneustes drobachiensis—which is even worse than Chanuke. U. M.] The "match-safe," or barnacle, with its half dozen delicate cells, is also curious, and would make a mermaids' vase with compartments for grouping different colors of flowers. The most valued of the pebbles is the agate, which is transparent. Others are beautifully marbled as Castile soap. Our Island is noted for the enormous size of its berries. Imagine you see Juaneta with a strawberry as large as a hen's egg, in each little dimpled hand, crushing it in her effort to grasp it, while the crimson juice oozes out between her fingers. In like proportion are raspberries and gooseberries and currants. Apples, pears and plums reach the greatest perfection here, but the nights are too cool for peaches and too damp for grapes. Plants may be transported from here with safety. I have tested it. Our florist, "Panama Jack," would exchange some for greenhouse plants, if "the cousins" will address him at Lopez Island, Washington Territory.

WILL-O'-THE-WISP.

AUTOGRAPH VERSES.

As some of the little readers of THE RURAL NEW-YORKER may receive autograph albums as presents from their friends, and be troubled to find some verse suitable for an "opening piece," I send the following to meet the emergency, and also a few verses suitable for little folks to write in their friends' albums:

DEAR FRIENDS:—
Here is a place
For you to trace
A pleasant word or two.
If hard to find
Words to you mind
Your name alone will do.

For a Boy's Autograph Album.

FOUR "BE'S."

Perhaps it may not *be* your fate
In life to *be* among the great,
But *be* it ever understood,
You mean to *be* among the good.

ANOTHER.

Always remember 'tis the wisest plan,
Not to give up, but do the best you can.

ANOTHER.

Be true to yourself; be true as the needle
That steadily aims its slim point to the pole;
Be true to your God and regardless of evi
In purity ever keep sacred your soul.

For a Girl's Album.

May the loved friends who walk by your side
And ever advise you aright,
Be heeded by you, then with Christ as your guide
Your path through the world will be bright.

ANOTHER.

The work we ought to do
To-day, should be well done,
It may not be our lot to view
To-morrow's rising sun.

For a Gentleman.

The eagle aims its flight to reach the sun,
By stern endeavor victories are won.

ANOTHER, IN SUMMER.

My mower waits 'mid fields of waving hay,
While with my pen "Forget Me Not," I'll say.

Niagara Co., N. Y. SOPHIA C. GARRETT.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK AND COUSINS:—I received the seeds sent me all right, and was doubly glad to get them, for I did not expect to get any because I wrote so late. I shall try my best with them, and next fall I will tell you how I succeeded. I must tell you, cousins, about my adventure in the woods. Wishing to get some rich soil for my Double Chinese Pinks my sister and myself climbed into our great wagon, and, driving a spirited span of greys, we set out for the woods. We drove back in the woods for about a quarter of a mile, when all at once the wagon tongue came out, and before we could stop the horses they ran against a tree, upsetting the wagon and spilling us on the ground. We scrambled to our feet again and looked around for our horses; they had broken loose and were running toward home. They soon ran against a tree, however, and one of them fell down, but not hurting itself seriously. We brought them back to the wagon, but we were unable to replace the tongue in its proper position; so mounting a horse each we went to get our big brother to help us. He soon had the wagon right side up, and, placing the soil which we had gathered in it, we started on the journey home, where we arrived in safety. We gave the horses over to our brother's care, and were soon engaged in putting the soil in boxes and sowing different varieties of seeds. MATIE.

Stryker, Ohio.

DEAR UNCLE MARK:—Here comes another of those letters asking to be admitted into the large circle of cousins, if you and the cousins are willing. Most of the letters I have seen in the RURAL are from those wishing to become members; why don't the other cousins wake up and write oftener? I intend to write again if this does not find an untimely grave in the waste basket. I intended to begin my garden this week, but if it remains as cold as it is to-day the seeds will be just as well off if not planted. I thank the RURAL for the seeds received, and hope they will do well. I think those of the cousins that have "big brothers" that are willing to help them with their gardens should consider themselves well off. But never mind, girls, those of us who have none will do the best they can. AGGIE.

Waushara Co., Wis.

DEAR UNCLE MARK: If you were to see the wild flowers that cover this wild and mountainous region throughout the summer you would think we needed anything else more than a flower garden here. But the sight of wild flowers creates a desire to cultivate and surround one's house with the beauties that have been improved by cultivation. I have several kinds already started in botes and by the time the ground is sufficiently warm out-of-doors to receive them they will be nearly ready to bloom. Brother John is thinking of cultivating a small patch of vegetables this summer the success or failure of which I will write you of together with my own. Yours truly,

Clearfield Co, Pa. ALLIE A. STOWELL.

DEAR UNCLE MARK:—I have been thinking a long time I would like to join the Horticultural Club. My father has taken the RURAL twenty years and we like it very much. I am going to try and raise a good many flowers this year if the chickens don't help me too much. They scratched so last summer that they spoiled nearly all our flowers and vegetables. But we are going to keep them shut up this summer, and I think we will have better success. We have a good many house plants, and I love to take care of them and see them grow. SWEET-BRIER.

DEAR UNCLE MARK:—I am a little girl eight years old and live at the edge of Hoopeston, Ill. We take your paper and like it very much. My papa is a preacher of the Christian Church in Hoopeston, and is a good papa, I think. We have lots of fruit and will have lots of flowers this summer. I have a pet bird and a kitten. The kitten's name is Mischief and the bird's name is Simon. As this is my first letter I will close for fear you will not publish it. I am getting a piece out of your paper to speak at school. I think it is very nice. Good-bye. MYRTA B.

Hoopeston, Ill

DEAR UNCLE MARK:—I am a little boy eleven and-a-half years old. I go to school about six months of the year. I wish to join the Horticultural Club. I take an interest in flowers, vegetables, fruit and bee-keeping, but as I do not know much about any of them, I wish to get all the information possible. I have just the dearest baby brother you ever saw (that is to me). My mother has a great many flowers. I like the RURAL very much. Yours truly, ALVIN L. POTTER.

N. H., Coos Co.

DEAR UNCLE MARK:—As I saw my last letter in print, I will try again. I will not have so many flowers to write about. I am pleased to think that Uncle Mark sent seeds to the cousins again this year. I wonder if any of the cousins have a bow and arrow. I have a bow with which I can shoot one hundred yards, if any of the cousins have a bow please describe it in the paper. I intend to have a garden this year. ROVING BOB.

Jacksonville, Ills.

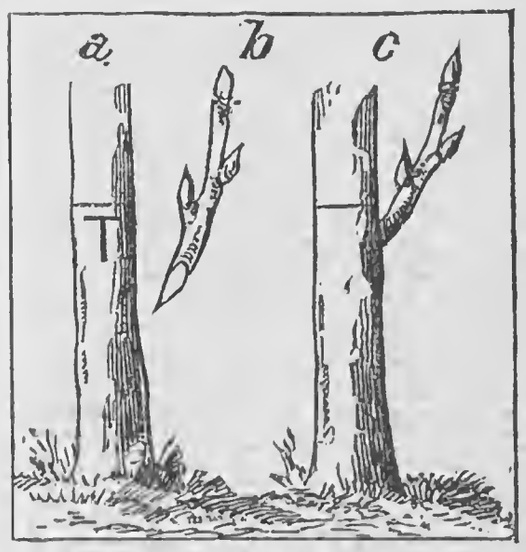
Various.

BRIEFLETS.

THE Marquis of Lorne, in the National Hymn or Anthem which he has composed, makes rhymes of "nurture," and "hurt her," and "hours," and "ours." . . . An incensed dairyman calls Oleomargarine "Bread Salve." . . . A contemporary says: "Let beginners abandon learning to graft until they have mastered the art of budding." Oh, no. The one is as simple as the other. In the one case a stem is inserted into a slit made in the wood. In the other, a bud is inserted into a slit made in the bark. . . . Our readers must not forget the "White Elephant" which we propose to introduce to them in due time. . . . There is very little doubt that London Purple will be used extensively the coming season in place of Paris-green. It is cheaper and just as efficacious. . . . Mr. William Parry places his "Queen of the Market" and Cuthbert at the head of the list as the most valuable hardy of Red Raspberries for home use or market. We shall be glad to find that there is some (even the slightest) difference between the Cuthbert and "Queen of the Market.". . . It is proposed to change the name of politician to pollutician, because the creature more than any other pollutes the stream of liberty. . . . Land and Home thanks its contemporaries for their entertaining obituary notices....The Herald says that the promised spectacle of an English earl in the character of an American stock breeder may arouse a few of our own wealthy citizens to a realization of the value of some of our almost neglected resources that invite enterprise and promise profit....H. B. Ellwangor mentions, in the Country Gentleman, the Jefferis, Fameuse, Jonathan and Northern Spy as the four best apples for table use yet produced. Though inferior to the Spitzenburgh in flavor, they are superior as regards crisp flesh, which is so tender that it almost dissolves in the mouth. The four sorts ripen in the order given, and furnish fruit from early autumn until late spring....Whatever else may happen to a nominee, he can count surely on one thing—on being proved by his opponents to be as vile a creature as ever lived.... Dr. Schenck told a story at Mr. Hamersley's dinner of a great divine who said that when he made an important mistake in speaking, he always corrected it on the spot, but that he passed a trivial error by without notice. Acting on this principle, when he referred to the devil as the father of lawyers instead of liars, he passed on, thinking that so *trifling* a mistake as that would hardly excite attention. A judge, at whom the shaft was aimed, immediately replied, that while the devil was probably necessary to lawyers, it was certain that he was absolutely indispensable to the very existence of the clergy....Mr. Collins, of Waterford, N. J., has been shipping cranberries since early in January. He picks out all imperfect berries and obtains in consequence a higher price than the current rate....If you could only persuade yourself to be glad that things are no worse, instead of grumbling that they are as bad as they are, you would materially increase the possibilities of happiness. . . . If you will settle down to the fact that success is hard to win, and then train your muscles to the work, you will get on far better than by regarding yourself as an unappreciated genius whom a cold world neglects.—N. Y. Herald. . . . Professor A. J. Cook, of the Michigan Agricultural College, finds London Purple very effective with the potato beetle. He finds one pound is enough for 100 gallons of water. It is more diffusive than Paris Green, and therefore needs less stirring to become well mixed with water. . . . The New York State Fair will be held in Albany September 13th . . . D. D. T. Moore, for many years the editor of this journal, is announced as editor of an agricultural department of the "Christian at Work." . . .

A GOOD METHOD OF GRAFTING.

A METHOD of grafting fruit trees is represented below. At a, the stock is represented, which may be any tree, not over six inches in diameter, or a branch of any form which it may be desirable to graft. A cut is made precisely as in budding, and the cion (b) is inserted instead of the bud. Completed a side view would appear as in c. *Any number of cions* from one to a dozen may be inserted, according to the size of the stock. Bast may be used to wind about the wound, but it is not needed. Grafting wax to exclude the air is sufficient. This method of grafting has many advantages over the methods usually practiced. If the cion should fail the stem is not injured and may again be grafted another year. The dotted line shows where the stock may be cut off when it becomes apparent that the cions have not taken. We have practiced this method, and with very little care success is almost assured. Of course, the cion should be nearly or quite dormant, and the bark part readily from the wood. Try it RURAL readers.



A METHOD OF BARK GRAFTING.—FIG. 140.

CLYDESDALE HORSES.—The sale of a draft of 19 of these from the shed of Lord Dunmore, on the 26th of February came off at Glasgow. They brought from $65 to $1,600, according to age and merits.

PERSONAL ITEMS.

Mrs. Nellie Grant Sartoris is to leave England next July for a visit to this country.

Mrs. General Sherman has raised and forwarded to Ireland $4,000 and is still at work.

Miss Jennie Flood, who is to marry young Grant, is not handsome, but her income is perfectly lovely—'tis $100,000 a year.

The only survivor of the bloody struggle at the Texan fortress of Alamo is Colonel Frank, W. Johnson, who is writing a history of Texas.

The widow of the late Gen. J. E. B. Stuart of Confederate cavalry fame, has been elected principal of the Virginia Female Institute at Staunton.

Mr. Yates says that Lord Beaconsfield was never in better health, and when the present crisis is over, will doubtless thoroughly relish a complete repose among the sylvan groves of Hughenden.

A fretful mother and cross child indicates ill-health, requiring only Hop Bitters to remove.

Implements and Machinery.

THE ALBANY CORN PLANTER

PLANTS ALL KINDS OF SEEDS WITH PRECISION.
Awarded the Highest Medal at the Centennial, as being the best Planter.
SAVES ITS COST IN PLANTING FIFTEEN ACRES OF CORN. One man and a horse can plant from seven to ten acres of corn in one day, with the Planter, at a cost of from $3.50 to $4.

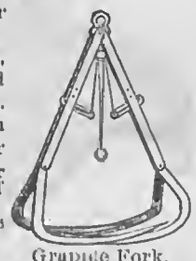
COST TO PLANT FIFTEEN ACRES BY HAND:

Marking, man and horse, 2 days, at $3	$ 6.00
Planting, twelve men, at $1	12.00
Board, ten men, two meals each, at 25c	5.00
Wasted, one bushel of corn	1.00
Total cost by hand	$24.00

Self-Operating
SULKY RAKE.
IMPROVED LION,
Best Rake Made in the World.
Send for Circular, etc., to O. H. P. CORNELL,
Proprietor Albany Agr'l Works, Albany, N. Y.

NOYES' HAYING TOOLS.
FOR STACKING OUT IN FIELDS OR MOWING AWAY IN BARNS.

Save labor and Money.
Are simple, durable and cost but little.
No trouble in getting over high beams, or to the end of deep bays.
Hundreds are in use.



Anti-friction Hay Carrier. Grapple Fork.
Wood Pulleys, Floor Hooks, etc.
Send for circular and designs for tracking barns to
U. S. WIND ENGINE & PUMP CO.,
Batavia, Kane Co., Ill.

FARMERS AND DEALERS, READ THIS!

These cuts represent our 20 Steel-Tooth Horse-Rake, with Iron Hubs (or Locust Hubs boiled in oil)—9000 in use—and our Positive Force-Feed Grain, Seed, and Fertilizing Drill (which can be changed to sow any quantity while Drill is in motion), with Pin or Spring Hoes—8277 in use and giving satisfaction. All manufacturers say theirs are the best. All we ask is, send for *Descriptive Circular and Price-List*, which contains letters from persons using them. All are *warranted*.
Hagerstown Agricultural Implement Mfg. Co.
State where you saw Advertisement. Hagerstown, Md.

GREAT WESTERN GUN WORKS, Pittsburgh, Pa.

Send stamp for Catalogue.
Rifles, Shot Guns, Revolvers, sent c. o. d. for examination
Breech-Loading Shot Guns, $20 to $300. Double Shot Guns, to $150. Single Guns, $3 to $20. Rifles and Cartridges, $8 to $75. Revolvers, $1 to $25. Send stamp for Price List. GREAT WESTERN GUN WORKS, Pittsburg, Pa.

ELGIN WATCHES
all styles, Gold, Silver and Nickel, $6.00 to $150 Chains, etc., sent C. O. D., to be examined. Write for Catalogue to **Standard American Watch Co., Pittsburg, Pa.**

THE
Genthner Hand Seed Sower,
IS SIMPLE,
CHEAP,
and EFFICIENT.

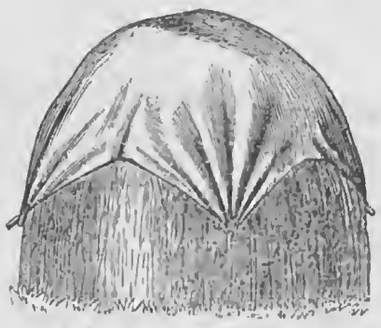
Any one can use it with facility and plant with accuracy. It will work readily on rough or smooth ground. It can be used to plant all kinds of vegetable seeds, as the openings in the seed-box can be adjusted to the size of any seed.

Retailed for only $2.00.

An energetic man wanted to act as Agent in every town.

Apply to
B. T. GENTHNER,
PATENTEE),
or to
B. H. DAVIS,
General Agent for the United States.
Patented Dec. 9, 1879 **FOXCROFT, Maine**

Implements and Machinery.



HAY CAPS AND STACK COVERS,
Tents, Awnings, Covers
FOR
Horses, Wagons or Goods.
And Everything Made of or Finished with Cotton Duck.

FLAGS AND BANNERS
OF SILK OR BUNTING,
FOR ANY SOCIETY OR NATIONALITY.
GILBERT HUBBARD & CO.,
202-208 South Water Street, Chicago, Ill.

INGALL'S PAT. LINK AND CHAIN
Will make or mend your chains, of all sizes, without tools. Inquire at your Hardware store or address

INGALL'S MFG. CO., Providence, R. I.

PRONOUNCED
the
BEST PLOW MADE
by the
Northern Ohio Fair of 1879,
State Fair of New York of 1879,
State Fair of Michigan of 1879,
and by the
Paris Exposition of 1878
when it competed with 187 other PLOWS, and received the GRAND GOLD MEDAL for being the BEST general purpose Plow in the world—an honor never before conferred upon a Hand Plow.)

Is the MOST EASILY ADJUSTED and MOST PERFECT SCOURING PLOW ever invented, and the thousands that are in satisfactory use all over the land demonstrate the fact that no other CHILLED PLOW manufactured is equal in EVERY RESPECT to the "GALE."

Distributing Agencies.

W. J. Walker, Agt.	Rochester, N. Y.
Enos Ott	Easton, Pa.
J. H. Parkins	Staunton, Va.
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John A. Hoffman	Vincennes, Ind.
Deere Mansur & Co	St Louis, Mo.
C. Merkle & Co.	Louisville, Ky.
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Baker & Hamilton	Sacramento, Cal.

Send for circulars to either of the above agencies, or to

GALE MANUFACTURING CO.
ALBION, MICH.

HOOSIER CORN DRILL!
60,000 IN USE.

Drops, with great regularity, one grain in a place, either 12, 16 or 20 inches apart, does the covering uniform in depth, and is both time and labor saving. A given area of corn planted with this machine contains as many plants as when hilled, but their arrangement is such that *each* plant has access to the *same* amount of plant-food that must necessarily be *divided* between from 3 to 5 plants when huddled together in a *hill*. Hence a healthy start and vigorous growth of the plants and the consequent production of **large, well matured** ears, by which the quality is improved, and the yield increased from 10 to 20 bushels per acre, over hill planting are natural results following the use of our **Corn Drill.** Send for circular.
HOOSIER DRILL CO., Richmond, Ind.

Miscellaneous.

LA BELLE CHOCOLATIERE.

One Hundred Years Old.
1780 1880
WALTER BAKER & CO.,
Dorchester, Mass.,
CHOCOLATE, BROMA AND COCOA

In their best and purest form, contain every ingredient that is needful for the sustenance and growth of the human system, being composed, as determined by chemical analysis, of starch, gum, gluten, oil, and a white crystallizable substance called theobromine, similar to theine in tea, but containing more nitrogen and being an important adjunct to nutrition.

SOLD BY GROCERS EVERYWHERE.

Our Book of Choice Chocolate Receipts sent free to any Address.

WE ADVISE YOU TO INSURE YOUR property in the
AGRICULTURAL INSURANCE CO.
Of Watertown, N. Y.,
The largest Company in the country which insures only farmers' property and residences. Over twenty-six years old.

Capital	**$200,000 00**
Net Surplus, over	**$235,153 81**
Assets, Jan. 1, 1880	**$1,137,549 73**

HANSEN'S DANISH LIQUID
BUTTER COLOR.
Prepared in vegetable oil by skilled chemists. Does not color the buttermilk. Imparts natural rich color and *enhances price* of butter greatly. Largest and fancy butter-makers have adopted it. Sample by mail, free.
WHITMAN & BURRELL, Little Falls, N. Y., Wholesale Agents for America.

AGENTS WANTED EVERYWHERE to sell the best **Family Knitting Machine** ever invented. Will knit a pair of stockings, with **HEEL** and **TOE complete**, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to The Twombly Knitting Machine Co., 409 Washington St., Boston, Mass

20 Gold and Silver Chromo Cards, with name, 10c. post-paid. GEO. I. REED & CO., Nassau, N. Y.

$777 A year and expenses to agents. Outfit Free. Address P. O. VICKERY, Augusta, Maine.

20 New Styles Chromo Cards, 10 cts. Best ever sold. Stamps taken. J. B. HUSTED, Nassau, N.Y.

WANTED.
Young Men and Ladies to learn Telegraphy. Good situations guaranteed. Address with stamp
J. A. SHERIDAN, Supt., Oberlin, Ohio.

KIDNEY-WORT
PERMANENTLY CURES
KIDNEY DISEASES, LIVER COMPLAINTS, Constipation and Piles.
Dr. R. H. Clark, South Hero, Vt., says, "In cases of Kidney Troubles it has acted like a charm. It has cured many very bad cases of Piles, and has never failed to act efficiently."
Nelson Fairchild, of St. Albans, Vt., says, "It is of priceless value. After sixteen years of great suffering from Piles and Costiveness it completely cured me."
C. S. Hogabon, of Berkshire, says, "One package has done wonders for me in completely curing a severe Liver and Kidney Complaint."
IT HAS WONDERFUL POWER. WHY?
Because it Acts on the LIVER, the BOWELS and the KIDNEYS at the same time.
Because it cleanses the system of the poisonous humors that develope in Kidney and Urinary diseases, Biliousness, Jaundice, Constipation, Piles, or in Rheumatism, Neuralgia and nervous disorders.
KIDNEY-WORT is a dry vegetable compound and can be sent by mail prepaid.
One package will make six qts of medicine.
TRY IT NOW!
☞Buy it at the Druggists. Price, $1.00.
WELLS, RICHARDSON & CO., Proprietors,
12 (Will send post paid.) Burlington, Vt.

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INVINCIBLE TRADE MARK
Established 1848.
Has the LARGEST SEPARATING CAPACITY
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THREE RIVERS, MICH.
Illustrated CATALOGUE Sent free

VIBRATING THRESHER

The "*Perfect*" Hog Ring leaves a smooth wire in the flesh, and a barb in front of the nose preventing all rooting.
The "*Perfect*" Stock Mark is applied with the "*Perfect*" Ringer and Ring, to any animals ear, with the owner's initials stamped on the Ring, before closing.
The "*Perfect*" Hog Holder is simple, cheap, durable, and easily applied. Holds the animal firmly while ringing. Ask Hardware Dealers for the "*Perfect*" or send $1.00 for Ringer and 100 Rings, 50c. for Holder, 35c. for 100 Lettered Disks to
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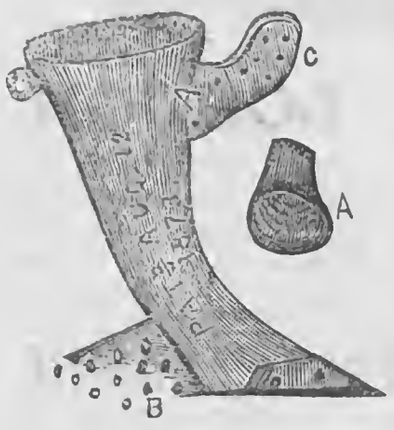
Patentees and Mn'frs., Ottawa, Ill.



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Force Feed Grain Drill.

Best Grain seed and Fertilizer Drill in the market. The cuts show our broadcast shovels set with steel to the middle of the boot, and the force feed attachment.

Highest awards at the Penn. State Fair in 1879. Send for circulars.
Address,
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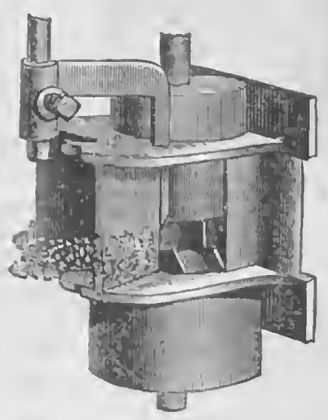

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Has the best improvements of any Hand Planter now in use. Plants with the accuracy of a hoe all the ground a person can walk over in a day. Seed for each hill passes in plain sight.
This is the easiest planter to use ever invented. Every planter fully warranted, and satisfaction guaranteed. Unusual inducements on samples this season. Circulars free.
WALLACE FISK,
South Byron, Genesee Co., N. Y.

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WITH
Patent Level Tread
AND
Speed Regulator.

HEEBNER'S IMPROVED THRESHING MACHINES. Send for Illustrated Circulars to
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The Aquapult (in operation.)

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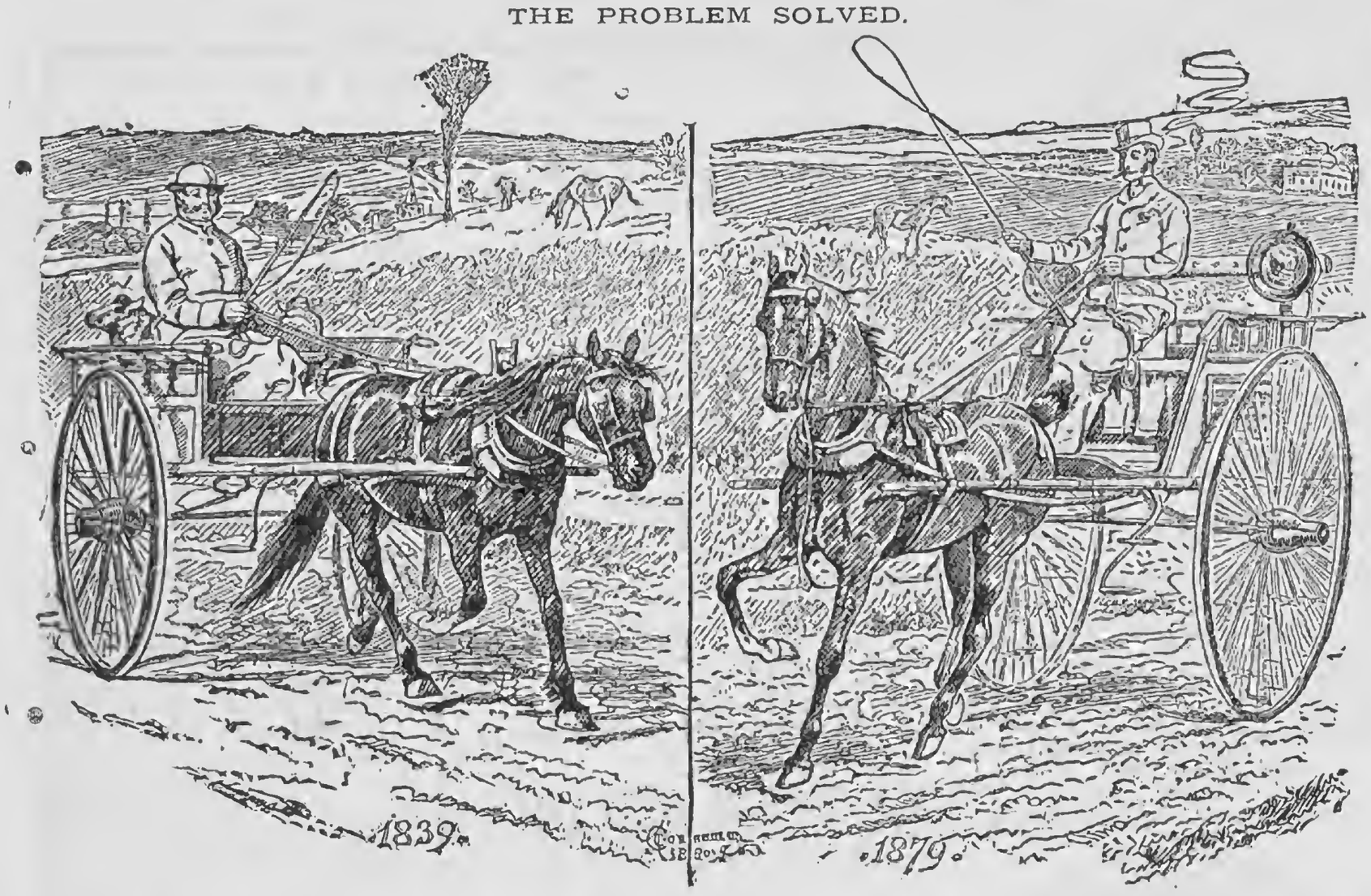
Middletown, Conn., U. S. A.
BRANCH WAREHOUSES: 55 & 57 John St., N. Y., 911 Lake St., Chicago, Ills.
Manufacturers of
PUMPS.
Hydraulic Rams, Garden Engines, Pump Chains, Curbs, etc.
Highest Awards at all the World's Exposition.
WORKS FOUNDED IN 1832.
The cut represents our **Aquapult** a newly-improved brass hand force pump, Fire Extinguisher, Garden Engines, Window and Carriage Washer, will throw water 60 ft. Sent to any address C. O. D., price $9. Illustrated Catalogue on application.

AUTOMATIC FRUIT EVAPORATOR. The Cheapest and best in market. For cut of Evaporator and Descriptive Circulars, address, DODGE & HINCKLEY, Fredonia, N. Y.

THE PROBLEM SOLVED.



ENGLISH FARMERS COULD LIVE THEN. THEY CAN'T LIVE NOW.—*Punch.*

Safety from a Pestilential Scourge.

Protection from the disease, not a medicinal agent which merely checks the paroxysms, is the grand desideratum wherever the endemic scourge of malaria prevails. Quinine does not afford this protection. The chief reason why Hostetter's Stomach Bitters has won such imminense popularity is that it prepares the system to resist the malarial pest. This it does by bracing, and toning the physical organism; regulating and promoting an equal flow and distribution of the animal fluids, and establishing digestion on a sound basis. Not only is fever and ague prevented, but the worst types of the disease are conquered by it. Such is the only just conclusion to be drawn from the overwhelming evidence in its favor. It is equally efficacious in dyspepsia, constipation, liver complaint, and general debility, and rheumatic complaint, and is a reliable diuretic and nervine.

E. P. ROE makes an offer of **Small Fruit Plants** peculiarly advantageous to all who have country homes. Send stamp for Ill. Descriptive Catalogue. Address,
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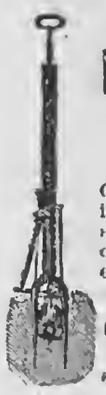
THE ISBELL
MOLE TRAP
IS INFALLIBLE ! !



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Wholesale and retail catalogues of reliable seeds free by mail, on application.

COOLEY CREAMER.
Awarded Gold Medal at Paris Agricultural Exhibition, 1879.

Butter made by this process, awarded Sweepstakes at International Dairy Fair, 1878, and Two Gold Medals and First Premium at same fair, 1879. First Premium at Royal Agricultural Exhibition, London, 1879.
It requires no milk-room.
It raises all of cream between milkings.
It affords better ventilation.
It requires less labor.
It is more thoroughly made.
It is cheaper,
and gives better satisfaction than any other way of etting milk.
Send for "Dairymen" giving full particulars and testimonials.
VERMONT FARM MACH. CO.,
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LAWN MOWER
HAND AND HORSE.

CROQUET MOWER $12
THREE PATTERNS OF HAND MOWERS 10 TO 20 INCH CUT.
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OUR SIDE WHEEL MOWER LIGHTEST AND SIMPLEST AND MOST DURABLE
ALL OUR MOWERS GUARANTEED.
CHADBORN & COLDWELL MFG. CO., Newburgh, N.Y.
Send for Illustrated Circular and Price-List.
We make NO SECOND-QUALITY Mowers.

ESTABLISHED 1864.

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ARE ABSOLUTELY PURE.

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GET UP CLUBS Among your neighbors and friends for our excellent Teas, Oolong, Imperial, Young Hyson, Gunpowder, Japan and Mixed, 60 cents per pound. This is the first time these Teas have ever been offered at 60 cents. Same quality is sold by other concerns for 80 cents and $1 00. **ALL EXPRESS CHARGES** paid on $5.00 orders when payment is received with same. A complimentary of 10 per cent. on $10.00 orders. Special inducements on large orders. Try our Basket Fired Japan 60 cents per pound, strictly uncolored. We warrant all goods or they can be exchanged or money refunded and all expenses paid. No house can compete with us, we are the oldest, largest and most Reliable Tea Importers in the business, dealing direct with the consumer. Our reputation for fair and honest dealing requires no comment. **BEWARE** of Cheap Teas that are offered for sale, they are dangerous and detrimental to health—dear at any price—slow poison. Buy from only Reliable Houses and if possible from first hands. We await your orders which shall receive our prompt attention. Goods sent by Express C. O. D. Yours Respectfully,
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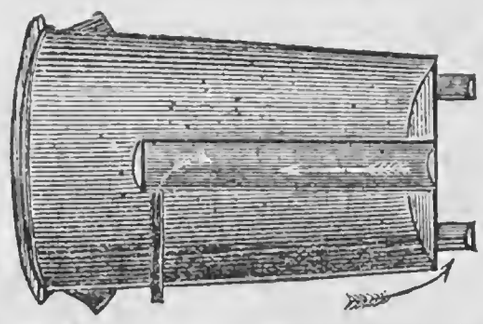
P. O. Box, 4235. 31 & 33 VESEY ST., NEW YORK.
N. B.—When ordering please state in what paper you saw this circular.



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A New Plan of Making Butter.
Saves time, saves labor, and gives the highest price for Butter. For particulars address
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Trade **LONDON PURPLE.** Mark.
Valuable insecticide for the extermination of the COLORADO BEETLE, COTTON WORM and CANKER WORM. For Prices, Circulars and opinions write.
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Professor C. V. Riley says: London Purple can be more effectually sprinkled or sprayed on to the plant than Paris-green, by virtue of its greater fineness.
Professor C. E. Bessey says: It promises to be a most excellent remedy. It quickly kills both the Larva and the Winged Insects.
Professor J. L. Budd says: A single application placed every one of the pests on their backs over the ground, either dead or in a dying condition, in less than six hours.

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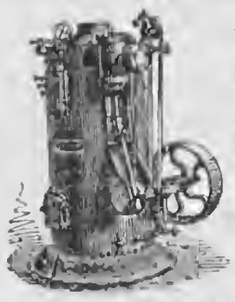

Compact, substantial, economical and easily managed.
Guaranteed to work well and give full power claimed.
Engine and boiler complete, including governor, feed-pump, drive-pulley, etc., etc. at the low price of

3	Horse power	$240
4½	" "	280
6½	" "	370

Manufactured at Springfield, Ohio. Send for Descriptive Pamphlet.
JAMES LEFFEL & CO., Springfield, O.
Or, 110 Liberty St., New York City.

THIS NEW
ELASTIC TRUSS
Has a Pad differing from all others, is cup shape, with Self-Adjusting Ball in center, adapts itself to all positions of the body, while the Ball in the cup presses back the Intestines just as a person would with the Finger. With light pressure the Hernia is held securely day and night, and a radical cure certain. It is easy, durable and cheap. Sent by mail. Circulars free.
EGGLESTON TRUSS CO., Chicago, Ill.

WATERTOWN

PLATFORM Spring Wagon
The Ne Plus Ultra.
EVERY WAGON FULLY WARRANTED.
This is the best, handsomest, lightest and strongest wagon of its kind in the market. Every Farmer and Dairyman should have one.
Correspondence solicited. Address
WATERTOWN SPRING WAGON CO.,
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PLANTS
For Conservatory.
Bedding Plants.
Basket Plants.
Window Plants.
The finest in cultivation; strong well grown plants. Catalogue free.
Ellwanger & Barry, Rochester, N. Y.

BOTH OUR NEW POTATOES,
ST. PATRICK AND **North River Beauty**
Unsurpassed in yield and quality, are fully described in our General Catalogue, mailed free on application.
PETER HENDERSON & CO.
SEEDSMEN,
35 Cortlandt St., New York.

A. R. LEDOUX & CO.,
Agricultural Chemists and Chemical Engineers.
Laboratories and Office, 17 Cedar Street, New York City.
Specialty—**Agricultural Analysis,** including fertilizers, feeding stuffs, waters, soils, marls, dairy products, &c., &c. Contracts made with clubs and societies at special rates.
Fertilizer works of all kinds erected, and superintended by contract.

THE ALBANY SEED STORE.
Established 1831.
49th YEAR.
PRICE & KNICKERBOCKER, Successors to

General Catalogue of Reliable
Flower, Vegetable and Field Seed, Vegetable and Flowering Plants and Small Fruits,
MAILED FREE. 80 PAGES—450 ILLUSTRATIONS
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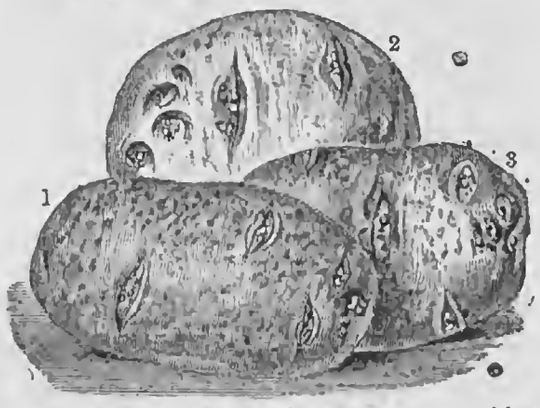
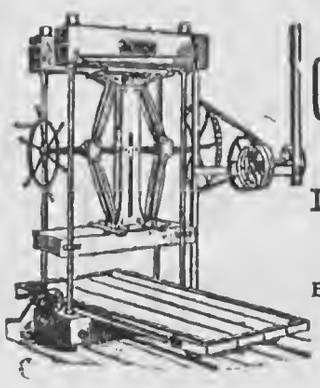
***My Annual Catalogue of Vegetable and Flower Seed for* 1880** rich in engravings, from photographs, of the originals, will be sent FREE, to all who apply. My old customers need not write for it. I offer one of the largest collections of vegetable seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. *Full directions for cultivation on each package.* All seed *warranted to be both fresh and true to name;* so far, that should it prove otherwise, *I will refill the order gratis.* The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other vegetables. I invite the patronage of *all who are anxious to have their seed directly from the grower, fresh, true, and of the very best strain.*
NEW VEGETABLES A SPECIALTY.
JAMES J. H. GREGORY, Marblehead, Mass.

THREE NEW POTATOES.



1. Pride of America.—In appearance resembles the Snowflake, a few days later; very productive, large size, an excellent keeper; of superior quality.
2. Matchless.—Tubers very handsome, round; pale-red; flesh fine-grained, pure white, and of excellent quality. A great cropper, an excellent keeper.
3. Silver Skin.—A cross between the Early Rose and White Peach Blow. Tubers medium to large. Skin smooth, silvery white, russetted. Flesh snowy white, fine grain, splendid quality, an excellent keeper.
Prices of each of the above, $1.00 per lb., 3 lbs. $2.50 by mail, prepaid. By freight or express at purchaser's expense, ¼ Peck, $3.00; 1 Peck, $5.00; ½ Bushel, $7.00; Bushel, 12.00; Barrel, $25.00. All other varieties at market prices.
Bliss' Illustrated Potato Catalogue, contains a descriptive list of all the new varieties recently introduced, with many other desirable sorts, beautifully illustrated. Centennial collection of 500 varieties. Also much useful information upon the cultivation of this valuable esculent. 10c. Address
B. K. BLISS & SONS, 34 Barclay St., N. Y.



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Cider Press
WITH
Double Platform
BOOMER & BOSCHERT PRESS CO.,
SYRACUSE, N. Y.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. XXXIX. No. 19.
Whole No. 1580.

NEW YORK, MAY 8, 1880.

Price Five Cents.
$2.00 Per Year.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Rural Architecture.

OUR NEW OFFICE.

As our readers are aware, we have for some time contemplated the removal of the offices of the Rural New-Yorker from No. 78 Duane Street, where the paper has been published during the past six years, to a more convenient location. It became necessary that we should occupy quarters which would facilitate the transaction of our enlarged and constantly increasing business. This removal has now taken place, and in the accompanying engraving we present to our readers a view of the building containing our new offices. It is most conveniently situated on the corner of Park Row and Beekman Street, the very center of the most busy region of this busy metropolis. The street in which the horse car is seen, in the engraving, is Park Row. As this street is the chief outlet from the old parts of the city to the streets on the east side, the sidewalks are always thronged with pedestrians and the roadway busy with vehicles of all kinds.

To the left in the engraving is Beekman Street, while diagonally across from the Rural office and in full view from all its windows lies one of the "lungs" of the city—the City Hall Park—with its green lawns, fountains, and shade trees. Directly opposite the Rural offices on Park Row stands the $11,000,000 Post Office, while within a block on either side are the Herald, Times, Tribune, World, Sun, Mail, Evening Express, Scientific American, Nation, Turf, Field and Farm, Practical American, Truth, and a score or two more political, scientific and specialist papers.

A GENERAL PURPOSE BARN.

The accompanying figures represent plans of a barn recently erected by one of my neighbors, Mr. F. S. Clark. It is most emphatically a barn for all purposes. The owner is not only a good farmer, but he is also a good carpenter, and these plans are the result of years of experience and due consideration of the purposes for which the barn was to be used.

The structure measures 58 x 36 feet, and is built on a gentle slope facing the west. Most men would have thought it impossible to arrange the building so that hay and grain could be driven into the third story, but the owner found this both possible and practicable. The basement, or first floor, is eight feet high. Besides the windows marked W, there are four panes of glass in each of the doors, D, which, together, give all the light that is needed. The space not otherwise marked is used in the fall for storing corn fodder, pumpkins, etc., and at other times for the stabling of calves and incoming cows. To serve this purpose better, pens are formed by panels which can be put up and taken down as occasion requires. One end of this floor and the entire adjacent side are built into the bank, as indicated at B. In this cool corner is constructed an ice-house, at the end of which the stairs, S, lead up to the next floor. At P, is a hog-pen, at H, a hen-house, the dimensions of each being indicated in the plan, and at S are stanchions for ten cows.

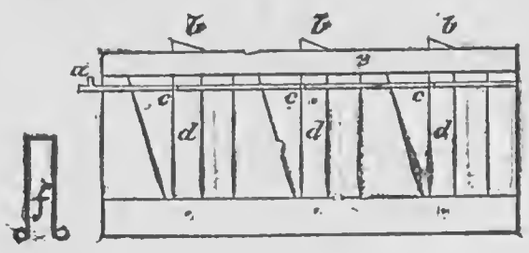
The second floor is nine feet high. Here is the horse-stable (indicated at H S), with adjoining harness room, box stall and a store-room for bedding. The stairs at S lead to the third story, and the open space not otherwise marked is used as a store-room for wagons, ma-

VIEW OF THE OFFICE OF THE RURAL NEW-YORKER.—Fig. 141.

chines and other farm implements. The floo in the horse-stable is perfectly tight with a slight inclination, so that the liquid can run into the hog-pen, and the manure is dropped through trap-doors either into the hog-pen or cow-stable, as may be desired.

In the third story is the thrashing floor, F, which is sunk two feet below the rest in order to drive in under the plate. The bridge from the embankment is shown at B. The frame is of hemlock, covered with pine boards one foot wide and battened with molded battens 3½ inches wide. The roof is covered with Michigan pine shingles and surmounted by a ventilator.

Mr. Clark has an improved stanchion of which the following is a description:—



STANCHION FOR CATTLE.—FIG. 141.

The fastening, *f* is made of ⅜-inch round iron, with an eye at each end. This is fastened on top of the top piece, *c*, by staples through the eyes. This fastening has the advantage over most others, that the cattle cannot reach it with their horns and unfasten themselves, as they sometimes do with others. The stanchions are represented as closed; *a* is a lever running the entire length of them; behind each latch, *d*, is a pin, *c*, in the lever. The lever runs loosely, and when the cows are turned out, it slides back; when they again come in their places, by pushing the lever from left to right, the pin *c* pushes the latch *d*, in place, and the fastening *f* runs up the incline *b*, and drops down, and the latch is closed.

M. E. MERCHANT

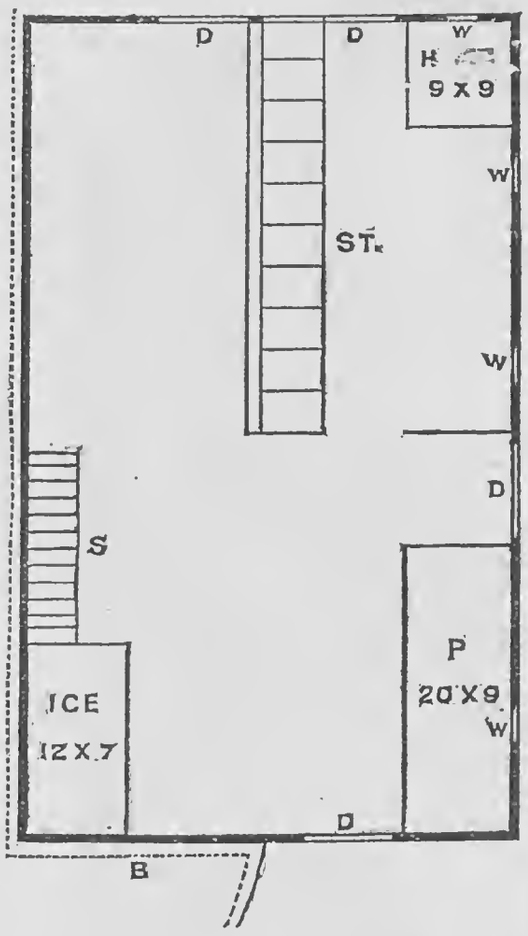
Chenango Co., N. Y.

Horticultural.

SOME NEW EVIDENCE IN RESPECT TO WEEVIL-EATEN PEAS.

PROFESSOR F. H. STORER.

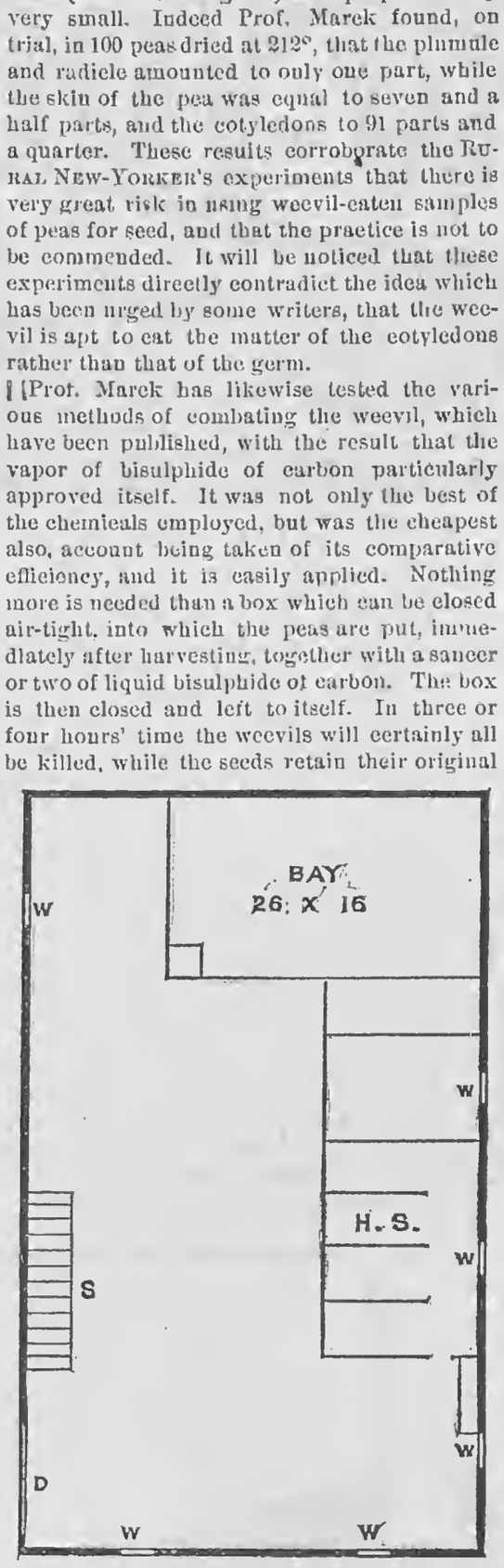
The Austrian, Prof. Marek, reports as the result of his investigation of weevil-eaten peas, that out of every 100 peas actually attacked by the weevil only 20 germinate on the average; that is to say, 80 per cent. of them are absolutely useless as seed. Among the 13 varieties grown by him, it was noticed that sugar peas were more readily attacked by the weevil than field peas, and that, as was to have been expected, two kinds which were sown three weeks earlier



BARN FIRST FLOOR.—FIG. 142.

than the others suffered special damage. The Bishop's pea was chosen for his more detailed experiments, and of every 100 seeds of this variety from 38 to 42 were attacked by the weevil, that is, 40 per cent., on the average. On weighing samples of sound and damaged seeds, it appeared that a given number of the latter were 23 per cent. lighter than the same number of sound peas. Out of every 100 of the damaged peas it could be seen that the radicle and plumule of 74 were so much eaten that they were manifestly unfit for germination, and only 13 seeds were found in 100 with their radicle and plumule unharmed; that is to say, the gnawed portions of the seeds were generally precisely those which are most essential for germination, and the risk is all the greater since these more vital parts of the seed (the so-called germ) are proportionally very small. Indeed Prof. Marek found, on trial, in 100 peas dried at 212°, that the plumule and radicle amounted to only one part, while the skin of the pea was equal to seven and a half parts, and the cotyledons to 91 parts and a quarter. These results corroborate the RURAL NEW-YORKER's experiments that there is very great risk in using weevil-eaten samples of peas for seed, and that the practice is not to be commended. It will be noticed that these experiments directly contradict the idea which has been urged by some writers, that the weevil is apt to eat the matter of the cotyledons rather than that of the germ.

Prof. Marek has likewise tested the various methods of combating the weevil, which have been published, with the result that the vapor of bisulphide of carbon particularly approved itself. It was not only the best of the chemicals employed, but was the cheapest also, account being taken of its comparative efficiency, and it is easily applied. Nothing more is needed than a box which can be closed air-tight, into which the peas are put, immediately after harvesting, together with a saucer or two of liquid bisulphide of carbon. The box is then closed and left to itself. In three or four hours' time the weevils will certainly all be killed, while the seeds retain their original



SECOND FLOOR.—FIG. 143.

form. They may be kept through the winter without further damage from the weevil, and are in a salable condition; though Prof. Marek recommends that, in using such seeds, from 25 to 35 per cent. more of them should be sown than would be needed if every pea were perfect. Next to the bisulphide of carbon, he found sulphide of ammonium an efficient agent, but it is somewhat objectionable in that it colors the peas and imparts to them a rather persistent and not agreeable odor. The vapors of alcohol, ether and prussic acid, applied in the same way as those of the bisulphide of carbon, all served a good purpose for killing the weevil, though the ether is hazardous on account of its easy inflammability, and the poisonous property of the prussic acid would naturally exclude it from common use. Probably the light naphtha distilled from Pennsylvania petroleum could be used with advantage, in the same way as the bisulphide of carbon, if proper care were taken in handling this highly inflammable liquid.

The idea of leaving the peas until the second year with the view that the beetles shall die off in the course of the summer, and so leave the seed free from insects, is an error, since the bugs do more harm while they are alive than there is gained by finally getting rid of them. By using solutions of chemicals, such as the sulphocarbonates and xanthates of potash or soda, or carbolic acid, the bugs may be killed without substantial detriment to the seeds, but the process is inconvenient since the seeds swell up in the liquids and need to be spread out and dried, unless they are to be planted immediately. But special appliances are needed for these operations, and care must be taken to avoid mold, and, at the best, the seeds become crumpled and wrinkled and lose the good appearance which is needed to make them salable. The old method of baking the peas to kill the weevil is not particularly commendable, since the insects are usually not all killed by it, while there is considerable risk of injuring the germinative power of the seed. Moreover, it gives the peas a dry, faded appearance, as if they had been kept for years.

HORTICULTURAL EXPERIENCE IN ALABAMA.

The climate of this locality is liable to frost from Oct. 15 until May, and to freezes after rains during nearly as long a time. My soil is a thin forest loam over sandy clay, with no lime discernible within reach. The forest growth consists of Hickories, the White, Red, Black and Chestnut Oaks, Maple, Gum, Sassafras, Pine, Sumach, Chestnut and Grape-vines—chiefly Labrusca.

Squashes.—Of the fine Northern squashes, I have planted packets marked Hubbard, Butman, Marblehead, Cocoa-nut and Yokahama. The only one of these that ever lived out its season and fruited well is the Cocoa-nut, and even this is generally, like the rest, early ruined by a white worm that eats out the pith of the vine, entering at any part of it. The so-called Hubbard, indeed, bore a little, but its fruit was nothing like that described. On the other hand, the Kershaw, large, white-necked, is never attacked by this worm and suffers little from the squash bug. It is a nice sort, but liable to rot about midwinter.

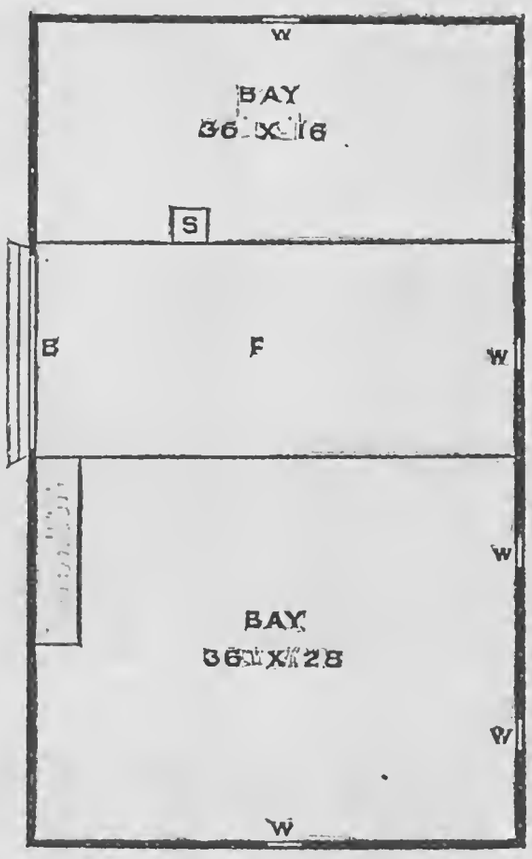
Turnips.—I sowed, early last spring, the Sweet German turnip and later, the Jersey Navet. The Sweet German was good through the summer, despite drought, and I ate it until after frost, while the Navet became tough and worthless after a few weeks. Both Sweet German and German Teltow produced tough and tender roots in the same bed and at the same time.

The Chufa does not sprout until about July, and is killed by either drought or frost; consequently it is worthless as forage and cannot hold its own with the native grasses, but dies out as soon as you cease cultivating it.

The Triomphe de Gand Strawberry withstands heat and cold well, but will not fruit well in strong, stiffish alluvial ground, where all growth is most luxuriant.

The Sweet Vernal Grass cannot live without so much weeding and watering that it is really worthless on the mountain.

Beets:—Vilmorin's Sugar is less thrifty, less vivacious, and makes greater demands on culture than the mangel-wurzel, but the latter is no forage plant here, as described at the North and in England, and its large root, worthless for the table, is also slighted by stock when they can get any thing else to eat. A good thrifty beet and carrot are much needed for milk in winter. I shall now try Lane's Sugar. I suppose that a sandy soil favors the production of sugar as is shown in Florida by the sugar-cane and the orange, and here by sorghum, peaches, melons, etc., but some potency latent in the seed must determine both the nature and quantity of secretions. When at college, in N. C., Prof. Mitchell at Chapel Hill, who had studied the geology and mineralogy of that region, affirmed that he could tell by the quality of sweet potatoes on which side of a line they were grown, the said line being the limit of the sand-stone formation in that vicinity. At the North I never found, except in New Jersey, a sweet potato worth eating; but I doubt if the growers know enough to procure the right sort of seed potatoes. This plant reaches perfection about Wilmington, N. C. I have met with none of equal quality out of the Carolinas; but Southeastern Georgia supplies the same conditions and, I suppose, with the same results.



THIRD FLOOR.—FIG. 144.

Beans present to soils remarkable tests. Here, for example, the Royal Dwarf Kidney, the White Marrow, the Algerian Pole Wax, the Limas and several speckled beans thrive and yield abundantly, while Ferry's Golden Dwarf Wax and Hawley's Scarlet-runner hardly bear at all. They probably require some specific manure.

In chemical analyses it is evidently important to designate the *variety* as well as species operated upon, and unless the chemist can differentiate varieties by the proportions of their relative constituents, his art is not adequate to the problems of horticulture. While the Hickory is the dominant growth here, I cannot get a Pecan nut to germinate. Certain Figs and the Shaw Cantelope grow luxuriantly, yet will not ripen their fruit. Gardeners need chemical tables exact and complete for the soils in which given varieties have reached perfection, and also thermometrical tables of the bottom heats, as well as of the atmospheric ranges of temperature. Difficulties in the germination of seeds oppose a chief obstacle to the popular development of both useful and ornamental cultures.—E. M. Lazarus, M. D.

Marshall Co., Ala.

THE CHERRY AS A LAWN, SHADE AND ORNAMENTAL TREE.

E. WILLIAMS.

In years past the fruit-planting mania has been confined chiefly to the Apple, Pear and Peach, the Cherry, save to a limited extent, being almost entirely ignored. This, no doubt, is due to the fact that the former offer a more reasonable prospect for certain profit in the way of a family or market supply, the latter being less certain of yielding a regular store of fruit, and the object of this brief article is, not to commend its extensive planting for the market, but for home use and embellishment. In making up a collection of trees for the lawn or about the house for shade, the Cherry could be very appropriately used to a considerable extent.

Among the long list of varieties, the habits of growth and the variation in foliage cover a wide range, and when clothed in royal robes of white blossoms in early spring, with the green leaves surmounting the whole by way of contrast, there are few trees more beautiful for the lawn. The blossoms very seldom fail, and if succeeded by a crop of fruit, or even by a partial one, it is just so much in its favor over a merely deciduous tree, and what reasonable objection is there to combining the useful with the ornamental in this way, save that it is not in strict accord with the established rules of ornamental planting. I favor and commend the innovation, if such it is.. Childhood's recollections of thousands of once happy country homes would lose half their charms if divested of the old Mazzard or Black Cherries and their associations. While there are hundreds and thousands of amateur and professional fruit growers in the country, who can count their varieties of Apples and Pears by fifties and hundreds, those whose fingers' ends will not suffice to number the kinds of their Cherries are comparatively limited.

Formerly Cherries were classified in three divisions:

1st. Heart varieties—those of tender, sweet flesh.

2d. Bigarreaus—with firm or solid flesh.

3d. Dukes and Morellos—with acid flesh.

The increase in number of varieties, however, and the modifications of the distinctive characteristics of the second class—the firm flesh—have been so great as to make it difficult to tell where the tender flesh of the Hearts leaves off or the firm flesh of the Bigarreaus begins, so that those of rapid and free growth are grouped together in one class, and the Dukes and Morellos, being of dwarfer habits, comprise the second class; but to the uneducated in pomolgical lore all our cherries are embraced under the names of white and black Ox-Hearts, English red, or pie cherry, and the common black; and to talk to many of the different varieties by name is to talk in an unknown tongue.

Twenty years ago Downing, in his "Fruits and Fruit Trees of America," enumerates and describes over 100 varieties of the first class and over 25 of the second class, many of which, however, are but little known.

Among the leading and best known kinds of the first class may be named: Yellow Spanish, Napoleon Bigarreau, Rockport Bigarreau, Coe's Transparent, Elton, Governor Wood, Cleveland Bigarreau, Ohio Beauty, Early Purple Guigne, Black Tartarian, Black Eagle, Tradeseant's Black Heart, Downer's Late Red, etc.

Of the second class are May Duke, Reine Hortense, Bell Magnifique, Belle de Choisy, Early Richmond, Late Duke, etc.

The black-knot sometimes and in some localities proves disastrous to the latter class, rendering them more uncertain than the others, while the fruit of the first class is largely dependent on the condition of the weather at the time of ripening, a few dull, warm days often sufficing to destroy the whole crop. Still, with all these uncertainties in view, I advise planting them more liberally than is usually done, for ornament as well as for use. A few bushels or even quarts of nice, perfect cherries are a good thing to have in their season. If the curculios manage to sting all of a light crop, the birds can take care of the young larvæ and the cherries too at the same time, and sing their sweetest songs while so doing. I admit it is rather provoking at times to have them take the "lion's share," and more, too, but the shade and beauty of the tree are yours, and to insure a share of the fruit, plant a few more trees.

Commence now—1880 is a good date to remember.

Almost any soil not absolutely wet is favorable to the growth of the tree. Either as a shade for the windows of the dwelling or about the door, on the lawn or along the border of a carriage drive, they can be used with propriety. For the latter purpose dwarf trees of the first class, worked on Mahaleb stocks are as desirable as the less vigorous trees of the second class.

A Remedy for the Pea Weevil.—A correspondent from Swoope's Depot, Va., says, in answer to a late inquiry in Querist Dep't, that he has found a safe protection for his seed peas, in storing them in a strong-scented cigar box, or in placing a lump or two of gum camphor among them.

Weevil in Peas.—For many years I have practiced pouring boiling water on peas before sowing, and letting them stay in the water over-night. They then come up quickly, and I am never troubled with the bothersome little bugs. M. E. A.

Field Crops.

SOME OF OUR LEADING GRASSES.

PROFESSOR W. J. BEAL.

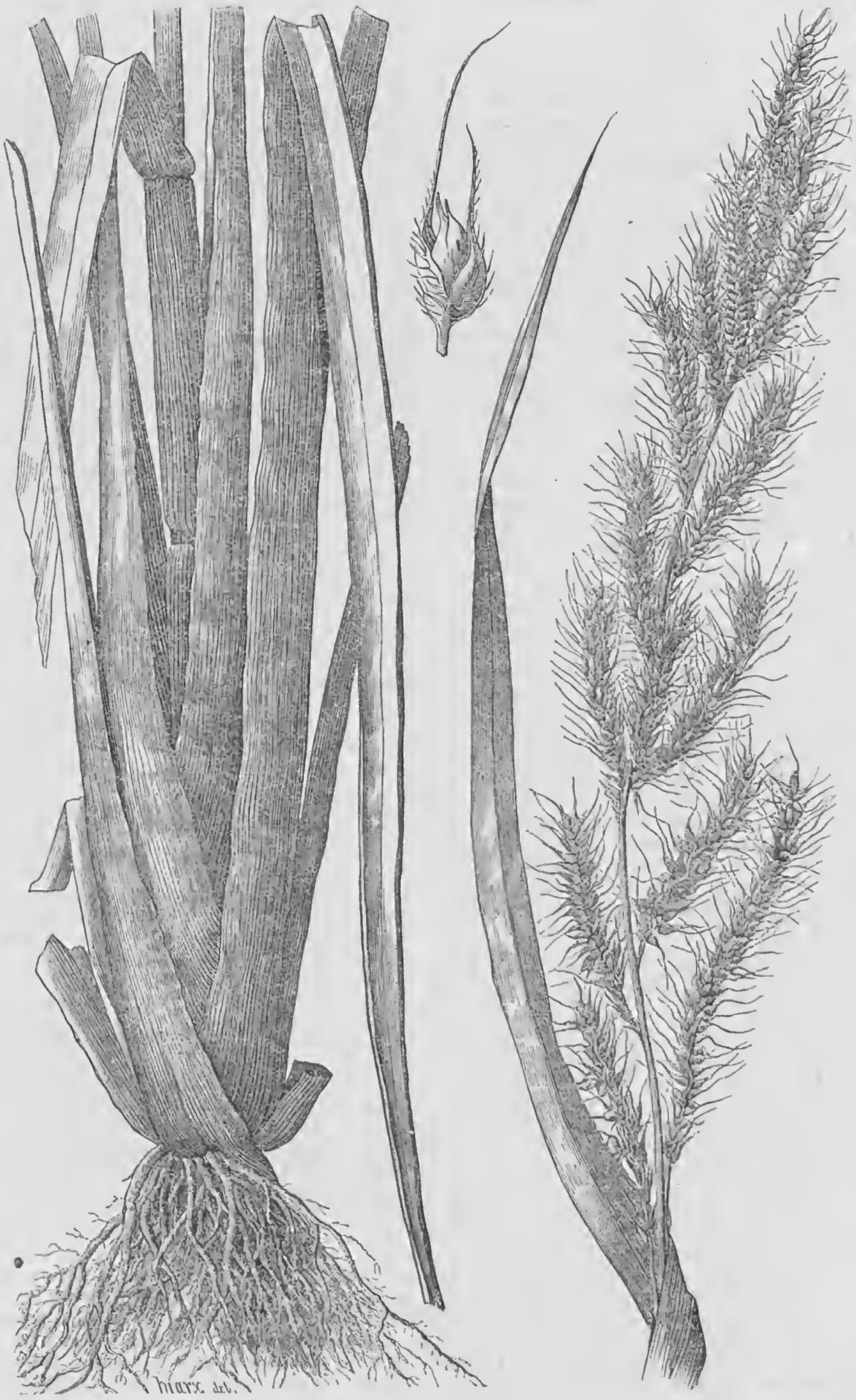
Drop Seed, Nimble Will.—Muhlenbergia Diffusa.

This is a low grass, about eighteen inches high with slender, contracted, much branched panicles. These come out one after the other at any time during the latter part of summer, and blossom at different times. The grass is a perennial and thrives on dry hills and in shade or partial shade. The rhizomas run and spread somewhat like June grass, only much less rapidly. The opinions as to its quality are various. The lower stems, after they begin to branch, soon become quite hard and woody. The leaves are very thin, and, except the woody stem, the whole plant is very light. Stock seem to like the grass. The genus is named after Dr. Muhlenberg, an American botanist. There are five other species, perhaps more, in the United States. They resemble each other very much in quality and appearance. In certain places, the writer has seen several of these in considerable quantity. Especially has he seen one species, M. Mexicana, three feet high, quite thick on rich river bottoms. Another, M. sylvatica, is found in thin woods in the Northern States. Another, M. glomerata, has dense panicles, not unlike orchard grass in appearance, except that the panicles are of lead color. It has frequently been collected on marshes and brought to me as a grass of great promise. Some call it wild timothy. The illustration gives a good idea of the first species named. The beginner will remember that the panicles branch much, new or younger panicles coming out from the sheaths of the leaves; that the roots-stocks branch and run; the leaves are thin and light, the stems hard and wiry. There are but few grasses which can be confounded with these species of Muhlenbergia.

MUHLENBERGIA DIFFUSA.—FIG. 145.

Barnyard Grass, Cock's-Foot Grass,—Panicum Crus-galli.

This is an annual which varies much in appearance, so much so that even very good botanists have labeled specimens under several different names. The flowers of some specimens have beards much larger than those in the illustration, while in other cases the beards are very short. The flowers of some plants are dark purple, others are deep clear green. This is a very rapid and rank grower, especially on rich, damp land. Isolated plants send out branches which run off quite obliquely, but when crowded they run up straight. The leaves, in good specimens, are half an inch or more in width, and the whole plant often four or more feet in hight. The culms, or stems, are branching at the base. This is very common in waste places, gardens and fields, where it is one of the prominent weeds. Stock are fond of it, as the stems and leaves are succulent and tender. It may be used for soiling, though alfalfa, red clover, rye, orchard grass, Indian corn are doubtless better. This comes from Europe.



PANICUM CRUS-GALLI.—FIG. 146.

LUCERNE.

For the benefit to Rural readers I here give the results of 14 years in the culture, uses and value of this plant.

What it is good for.—The green plant is eaten readily by horses, cattle, sheep, goats, swine and fowls. It is tender, succulent and very valuable for feeding milch cows—greatly increasing the milk and giving a pure article free from any foreign and unpleasant taste or impurity. Cured for hay, it is equal to the best varieties cultivated, and superior to the ordinary crops, insomuch that here, in the mountains, where the wild grasses are considered richer than the tame grasses of the States, the lucerne hay, without grain, is considered equal to feeding the wild hay with grain. In this country when the fields of lucerne are in bloom, the air is resonant with the hum of myriads of bees that steadily gather honey from the tiny blossoms.

The Yield.—After the first year the farmers cut annually four crops and often a fifth—a small crop, perhaps frosted, but excellent for milch cows. A good piece of ground will generally yield two tons to each cutting. Of course, that is over a general average, taking in all grades of land; but eight tons each year to the acre are no unusual crop here. It must, however, be borne in mind that our lucerne fields are well irrigated, receiving at least two waterings for each crop.

Starting and Cultivation.—Experience has taught us here that if the soil be good and smooth, it is best not to plow the ground, but when warm and moist—just nice for corn—sow the seed broadcast—about 15 pounds to the acre—harrow and cross harrow thoroughly, and if too light, roll or *brush* it down. If the ground is plowed, it should, by all means, be rolled. The plants will be up in about eight days, if all is right. As soon as the plants get up high enough to mow, the crop should be cut. This makes the plants *stool* and become more vigorous and strong. When in full bloom, the crop is mature for hay.

Lucerne will stand harder drought than any other cultivated plant. A large plant will put a tap-root down 10 feet or more; and yet no plant pays better interest for proper moisture. This crop does not impoverish the land but seems to draw most of its nourishment from the subsoil and clay beneath the soil. In Utah we consider lucerne the most valuable crop we grow and it is the only hay and feed, or fodder plant we cultivate, and were it not for this, many of our now smiling oases would still be barren desert. We could not progress without lucerne. J. E. Johnson.

Washington Co., Utah.

DOURA, DHOURA OR DORA.

In your issue of December 27th last, you give a picture of what you call Doura. To me it seems more like one of the many varieties of sweet Sorgo. No one would doubt its being of that family, either more or less sweet; but I should not call it Doura. I would sooner think it to be Imphee. Some of these sorts of Sorgo, as you say, are relished exceedingly by stock and the variety you describe is evidently a valuable one for that purpose. But if your readers follow your advice and send to a seedstore for "a small quantity of the seeds of Doura," I think they will get what you call Egyptian Corn. At least that is my experience. As much as 15 or 20 years ago I received a package of seed (from the United States Agricultural Depratment, I think) under the name of Dhoura corn. It was white and identical, no doubt, with what you describe as the Egyptian corn. A few days since I sent to a large seedsman in Philadelphia for white Doura corn, and have received exactly the same thing. One year ago I applied to the Agricultural Department for Doura corn and got the same thing, except that it was *brown*, under the name of Brown Doura. I had liked the white in other years after being well boiled, and wanted it for edible purposes, but found the *brown* unsatisfactory, and hence my application this year for the *white*. It is liked also by many when ground and made into mush and then fried, also for griddle cakes. There is no doubt that in the Eastern countries a very large population subsist largely upon this grain, and it is being introduced very satisfactorily into the western and drier portions of this State, and it endures the dry seasons much better than Indian corn or indeed, almost any other grain. I had hitherto supposed—and do not yet see, any need for changing my opinion—that Doura was a Sorgo with recurved heads, not very sweet, and cultivated only for its seed. It generally does "*send up only a single stalk.*" The variety you pictured is probably a better forage plant, but I should not know under what name to call for it, unless I ordered it from the Rural Office. I would like to try it. W. Beckwith.

Johnson Co., Kansas.

[Remarks.—We did *not* recommend our readers to buy *our* variety of Sorghum of seedsmen indiscriminately; but of *one* firm only which had *supplied us* with the variety which we deem of so much value as a fodder plant. We cautioned our readers, indeed, against buying any of the sorts advertised as Doura, Dora or Dhoura, Brown and White Egyptian Corn, etc., in the expectation of obtaining the particular kind which was raised at the Rural's farm last year and to which we have always alluded.

So far as we have thus far been able to ascertain, this kind of Sorghum will need a variety name. The Rural New-Yorker has contracted with a Southern farmer to raise several acres from seeds which we *know* to be of this particular sort. Unless the engaged crop should fail, it will be placed in our Free Distribution for 1880–'81. The land has been pre-

pared and the seed planted under the superintendence of our editorial correspondent now traveling in the Southern States.—EDS.]

CORN.

IN the discussion of this subject it is very evident that much more than is now known is to be learned about corn, its habits, culture and improvement. Every season develops some very important facts heretofore unknown. Scientific men and many farmers who do not pretend to know much about the physiology of vegetation, are continually discovering something of great value to the corn-grower. He that can grow most corn per acre at the least cost, stands at the head of the many successful competitors.

It is so easily adapted to the latitude of every State and to any locality, that there is no question as to its being the most profitable and useful of all the cereals. The flinty varieties do best in the North, while in the Southern States the soft Dents only can be successfully raised.

It appears that soils, full of alluvial elements —those we call the richest—do not produce the largest yield or the best grain. On the streams in the Southern States the soil has so much alluvial matter in it that too much stover is grown and not enough grain, while the uplands of some of the Middle and Western States, with not half so rich a soil, possess the happy medium of soil and climate, skill and culture which go to make the right proportion of stalk and grain.

According to the report of the Commissioner of Agriculture, Nebraska heads the list of average yields; Vermont, Maine and New Hampshire come next, while Florida, South Carolina and Georgia are last. A difference of 33 bushels per acre between the maximum and minimum States is certainly surprising. I have been satisfied for years that this difference does not arise from soil or climate.

I have in past years visited every Southern State east of the Mississippi, except three, and found the climate and soil in each much better adapted to corn raising than any one of the Eastern States. Alabama, whose average is 12 bushels, has farmers who have raised 206 bushels of corn per acre. South Carolina, too, boasts of a number who have made special yields of over 200 bushels per acre. If by a little science such large yields can be made in those States whose average is so low, there must be room for improvement, for skill and for advancement. PROF. E. A. BLOUNT.

THE COW PEA AS A WEED EXTERMINATOR.

WHEN I came upon the farm, two years ago, like every other novice in farming, I was looking out for "new fields to conquer." Seeing an article in a western agricultural paper upon the Cow-pea, written by a man living in Kentucky, I thought that this would give an opportunity to introduce something new into this part of the country. Owing to various causes of delay, however, I did not get seed until the first of June. I sowed a portion of them broadcast, at the rate of a bushel to the acre; drilled some in rows, and planted some in hills about three feet apart, with the rows one way—soil, a fair silicious loam well seeded with cockle-bur and fox-tail. The peas came up nicely, and bid fair to make a good crop. But, alas for human expectations! the cockle-bur and fox-tail grew also, and swallowed up the peas that were sown broadcast, leaving here and there a solitary one to mourn the loss of its companions. Had I depended wholly upon this method of cultivation, I should have lost my seed; but those planted in rows, which only received two plowings, did better. By the laborious method of hand-picking, (no other would answer, as the cockle-burs were so thick in the rows), I succeeded in saving "right smart" of seed.

Last season, thinking that I would be a "wiseacre" and profit by the experience of the past, still lingering under the impression that the Cow-pea would smother out all kinds of weeds, except the invincible cockle-bur, which it had failed to overcome in an equal "tussle," as soon as I thought all danger of frost was over, I sowed them in the orchard, some thick and some thin, at the rate of from one to two bushels to the acre—the orchard was very weedy, being infested chiefly with Spanish needles.

As before, the peas came up splendidly, and started off as though they intended to have their own way about it on that plot of ground. Here, surely, with the aid of the Cow-pea, I was going to "clean out" that orchard without much trouble. During the next harvest when I sent a hand into the orchard, at odd spells, to cut down the giant weeds, I thought that the Cow-pea might succeed in the South as an eradicator of weeds, but in this latitude —on the line between Iowa and Missouri—it would have to be cultivated as well as corn, or sown upon a clean piece of land.

Although the Cow-pea has not met my high expectations, I intend to give it another trial this season; whether I shall gain anything from past experience, or not, the sequel will show. At least I will have a clean piece of land to experiment on. My peas are mixed —mostly Whip-Poor-Will, which are recommended as the best variety for a Northern climate. W. E. P.

The Herdsman.

STOCK NOTES.

Water for Cows in Pasture.

FOR milch cows it is very necessary that the water for them is pure, otherwise it taints the milk, and from this neither good butter nor cheese can be made. Where there is not abundance of clear running water in yard or pasture, it should be supplied from wells or cisterns. If drunk from standing pools or small ponds, the water is always more or less foul, or so stagnant as to be unpalatable, and at times even unhealthful. In order to obtain a full flow of milk cows must have all the water they will naturally drink at morning, noon and night, otherwise they will not give full messes of milk, nor will it be of so good a quality. But a running stream, more especially when at pasture, where they can go and drink at pleasure, is still better than that drawn from wells for them three times per day, at regular intervals. Necessity, however, often compels the latter course. Some dairymen, in order to increase the flow of milk, stimulate their cows to drink an extra quantity of water, by extra salting their food or stirring a small quantity of bran or meal in it. But this is objectionable, inasmuch as it tends to lessen the richness of the milk. This also fills up the stomach so much as to dilute the gastric juice and thus injure digestion, and more or less of the food is consequently voided whole. If there be a gain in milk, then a loss in food follows by stimulating to an excess of drink.

THE PATRIARCHS OUTDONE IN OREGON.—A herd of nearly 24,000 head of cattle were lately started from Oregon for Montana. It required 120 men, mounted on horses, to do the driving. Provision wagons and outfits required 800 horses to draw them, and for assistant guards and stirring up game on the route 40 dogs were taken into the cavalcade.

A LARGE FOREIGN STOCK-BREEDER.—Earl Dunmore, a very wealthy Scotch nobleman, recently crossed the Atlantic and has gone to Montana with the intention of starting a cattle ranche on a large scale. He designs purchasing several thousand Texas cows and to cross these with the best sort of bulls—Short-horns and Herefords, we presume, although to them he may possibly add some others. We would suggest the Polled Angus of his native country. He intends to become a large shipper of beef to Great Britain.

SIDE-BONES.—As many do not know the meaning of this term as applied to horses, we will explain, for it is not as carefully guarded against as ring-bone, spavin or curb; but it is about equally injurious to the service of the horse, and is apt to be as hereditary. A side-bone is formed by the conversion into bone of the cartilage or gristle, just above and on each side of the hoof. In its natural state it is a smooth, solid, elastic substance, softer than bone. It most often occurs on horses with thin, flat feet, which characterize so many of the larger breeds of Europe, except those bred on the chalky or limestone soils of Normandy, La Perche, and some of the neighboring districts of France. This is why our best American breeders have lately preferred to import their large horses for the formation of their studs from the above districts, rather than from Flanders and Great Britain. The feet of those latter horses are so flat and thin that they are soon used up on hard roads, and especially city pavements, while the former will work on them without injury to old age, if kept properly shod.

ANGORA GOATS.—A superior importation of Angora goats has just been made from Geredeh, Asia Minor, by Col. C. W. Jenks, for the Hon. Richard Peters of Atlanta, Georgia. These goats are of greater size than any heretofore imported, and yield much larger fleeces, usually weighing 8 to 12 pounds. The staple is a fine silky mohair. It will not cost over one-third as much to produce this as raw silk and it will make a kind of goods equal to it in strength, lustre, and fineness. The mountain and hilly climate of our Southern States, is quite like the district of Asia Minor where these goats are bred, and there is no reason why they should not succeed in this country as well as in their own native domain.

MERINO SHEEP-BREEDING IN ENGLAND.—The 13 Merino sheep shipped from Australia to England, for the Duke of Manchester, to form a flock there, have arrived safely. Merino sheep breeding has been tried several times in England during this century, but was soon given up. The climate of the whole United Kingdom is too humid to breed Merinos successfully; they can endure any reasonable amount of severe dry cold, though not a long-continued dampness. But land is too dear in Great Britain to rear sheep merely for their wool—mutton there is the paying thing, and wool only secondary. The mutton breeds of English sheep give far superior flesh to that of the Merino, and the animals themselves, with their fine points and full, round, smooth outline, are such a contrast to the thin, angular, ungainly Merino, that an Englishman only looks upon it with disgust, in comparison with his own handsome native sheep.

TURNIPS FOR MILCH COWS.—In the RURAL of Feb. 21st, page 119, Henry Stewart in writing of "Bitter Cream," says:—"If turnips are fed, I defy any person to escape bitter cream and ill-flavored butter." My experience is quite the reverse of this. I have fed turnips (White French) for three winters to five or six cows giving milk, and no turnip flavor could be detected in the milk or butter. I have never had any bitter cream. My butter brings the highest market price. I have fed about six quarts per day to each cow at milking time.
Vernon, Vt. S. C. A.

A CHICKEN-EATING COW.—One evening as the cows were being driven from the pasture into the barnyard, a little chicken sat peeping in the gateway. As the cows passed through, a yearling heifer, putting down her head, took the little thing up and, giving it a bite or two, swallowed it, and passed on nodding her head and smacking her lips, as it were. We have a horse, too, that seemed to be trying to eat our young pig the other day. Are horses and cows becoming carnivorous? JENNIE WATSON.

PROLIFIC SWINE BREEDING.—Six sows of a fine white English breed, recently produced 90 pigs, which in our opinion, was 42 more than they could well nurse. Eight pigs to a sow is as many as can be properly suckled, and only six may be still better to insure a rapid growth, which is the main thing required for profit from birth to slaughter.

Dairy Husbandry.

COUNTERFEIT BUTTER.

A MORE unblushing and dangerous swindle has not been palmed upon the world for many a year, than the oleomargarine which nobody ever sees under its own brand, but which everybody is in danger of eating under the false name of butter. The American people are known as the greatest butter eaters, consuming a larger amount per capita, than any other people. When capital and apparent respectability combine, and through bogus scientific opinions and editorial advertisements in our large Dailies, seek to impose this counterfeit of butter upon the people, it is time that the agricultural press should come to the rescue of the legitimate dairy product, and stamp this vile counterfeit and those who are knowingly concerned in its sale under an honorable name, with the public condemnation they deserve.

The loss of money in buying the fraudulent article is unimportant compared to the danger to the public health. The examination of this oleomargarine under the microscope clearly proves that it often contains the germs of living organisms, which have survived the temperature (120°) used in its manufacture. These living germs may be of many kinds, trichina being among them. The original French patent for making it, Prof. John Michels asserts, gives directions for using the stomachs of pigs and sheep, so that trichina is likely to be found in it.

The letter of Dr. Dallinger, given in the American Journal of Microscopy, shows that these organisms, even in their fully developed living forms, are not killed by 142 degrees of heat, and that the germs of the whole septic series of organisms require at least 212 to 235 degrees of heat to kill them. Then it is evident that whatever germs this refuse fat and the stomachs of pigs and sheep may contain, are carried through uninjured into oleomargarine butter. And what real doubt can any one have that these materials contain these germs, when some of the best microscopists have declared that they have repeatedly found them? Prof. Michels, of New York, first described them; then Prof. Smith of Cleveland, and since, Prof. Thomas Taylor, Microscopist to the Department of Agriculture, gives his experiments, in the Scientific American. He says when dairy butter is examined, merely oil globules and a few chrystals of salt appear; but when a specimen of oleomargarine is examined in the same way, the field is speckled all over; and in using a power of 250 diameters, animal tissue is seen more or less over the whole field. One specimen was highly charged with animal tissue.

There can be no doubt of the absolute danger in the use of this spurious butter. Its manufacturers well know that if they comply with the laws, and stamp every package plainly with the name "oleomargarine," it will have no value in the market. They now resort to the cheat of compounding with it from 15 to 30 per cent. of creamery butter, and then principally sell it under that name. It is to be hoped that the efforts now making by Boards of Trade and dairymen, will result in compelling these men to drop their false pretenses and sail under their own colors. E. W. S.

THE TRUE PRICE OF MILK.

JONATHAN TALCOT.

LET us take another view of the milk and butter question as presented by Mr. Richard Goodman in the RURAL NEW-YORKER for Feb. 14th, page 104. In the arguments advanced by Mr. Goodman on the subject of furnishing city customers with pure milk and good butter, and the manner of doing it, I should probably not differ much from him; but his reasonings on the cost of making a pound of butter from the stand-point from which most dairy farmers are obliged to look at it, is not correct. Mr. Goodman says: "Now, if milk is worth from six to eight and ten cents a quart, how can the consumer expect to get good butter for 25 to 30 cents a pound, when it takes, on the average, 12 quarts of milk to make a pound of butter, from ordinary cows 12 to 20 quarts of milk are required to make a pound of butter. The milk of some of the thoroughbreds is much richer, and that of the Jersey cow, noted for her special butter-making qualities, is capable of occasionally producing a pound of butter from five quarts but a fair average is about eight quarts. At six cents a quart, such butter would be worth 48 cents at the minimum cost, and, as a matter of fact, good fresh butter cannot be put into the market, except, perhaps, for a short season in the early summer, at less than 50 cents a pound, and give the careful and cleanly farmer a living profit."

The word, *if*, used before milk, is the rock on which Mr. Goodman stumbles, consequently his argument as to the price of butter is valueless,—and just such arguments are used by a great many writers who wish to make a show, or to grind their ax on somebody's grindstone, and have the owner of the grindstone turn it for their benefit, while they are telling him it is for his benefit to do the turning and find the grindstone also, and sometimes it seems they make him believe it. Mr. Goodman's error is in the valuation of the milk. In all candor I would ask Mr. Goodman—can you sell your milk at your farm for six cents a quart, all you can produce the year through? If so, can New England farmers generally do so? Can they sell their milk at their respective farms for three cents a quart during the entire year—all they can produce? If these questions can be answered in the affirmative; then the farmers of New England ought to be the most successful in America.

It seems to me that the true price of milk is what it will net the majority of the dairy farmers at their farms, and the manufacture of cheese and butter is the only way it can be disposed of, that is accessible to all producers of milk, except a favored few who live in the vicinity of cities to which their milk can be carried by railroads and be thus disposed of to better advantage, than by making either cheese or butter, as the majority are compelled to do, in order to dispose of their milk at all. Let us see what milk has netted some of our dairy farmers in Central New York:—Statement of Armstrong Cheese Factory for 1879, commencing April 23d and closing Oct. 31st:—ratio for one pound of cheese 10 21 pounds of milk; value of one pound of milk, six mills 27-hundreths. Statement of Fabery Cheese Factory, commencing April 10th 1879 and closing Nov. 7th, milk for one pound of cheese 10.22 pounds; value of milk per pound, six and a half mills—both of the above statements are signed officially by the respective treasurers. Allowing one pint of milk for a pound, which is a little more, then from these factories the dairymen who supplied the milk, got a fraction over one and a quarter cent for a quart of milk furnished, instead of six cents, the basis of Mr. Goodman's estimate in regard to the value of a pound of butter made from milk, as quoted from the above-named letter to the RURAL NEW-YORKER.

Take another factory that is considered one of the best in its patrons and the person who makes the cheese, and this paid its patrons for 1879 a fraction over seven mills for a pound of milk, which would be about one and a half cent to the quart, which is only a quarter of the price at which Mr. Goodman based his estimate, thus showing conclusively that Mr. Goodman has not based his estimate on the true value of milk as produced by our dairy farmers, therefore his estimate cannot be correct Therefore, if all dairy farmers should make a first-class article of butter and cheese, in seasons like 1879, they would not get for their milk but about one-quarter the price of what Mr. Goodman based his estimates on, and in the best of seasons that may be likely to favor the dairy farmer in the near future, less than one-half of the price that Mr. Goodman puts upon milk per quart, will be likely to be realized by all dairy farmers who are obliged to have their milk manufactured into butter and cheese, even where a first-rate article is made.

Rome, N. Y.

Miscellaneous.

WHAT OTHERS SAY.

THE TAME GRASSES IN KANSAS.

The following paper is from the pen of our occasional correspondent, Professor E. M. Shelton, of the Kansas State Agricultural College. It is taken from The Industrialist, a college record, which is edited by Professor Shelton. Alluding to this article, Professor Beal says: "It is very valuable and most or all of it well worth printing. There is nothing equal to it for the West, and you cannot afford to omit it."

WHY WE NEED THE TAME GRASSES.—To most of us, our needs in this regard are painfully apparent; and I need not enlarge upon this topic. Our wild grasses, valuable as they are, notoriously cannot endure close cropping. Even under moderate pasturing, they rapidly fail, giving place to coarse and worthless weeds. Again, these wild grasses are among the very latest of our plants to appear in the spring; and the lightest touch of frost in the fall, robs them of all nutritive qualities. It is no exaggeration to say that the tame grasses will redoce our present feeding season at least one-third. But, pre-eminently, we need the tame grasses because they are indispensable to any improved system of farming which looks to maintaining the fertility of the soil, while exacting the utmost from it. In no way can our worn soils be replenished so cheaply as by turning under with the plow the great accumulation of vegetable mold, roots, and straw which constitute the turf of an old pasture field.

WHAT GRASSES SHALL BE GROWN?—We have to classify the grasses into two principal groups, according as they are valuable for pasture or mowing. Occasionally, as in alfalfa and the clovers generally, sorts may be found which are equally good for both purposes; but, generally, those sorts which are valuable for grazing have but little value when brought under the scythe.

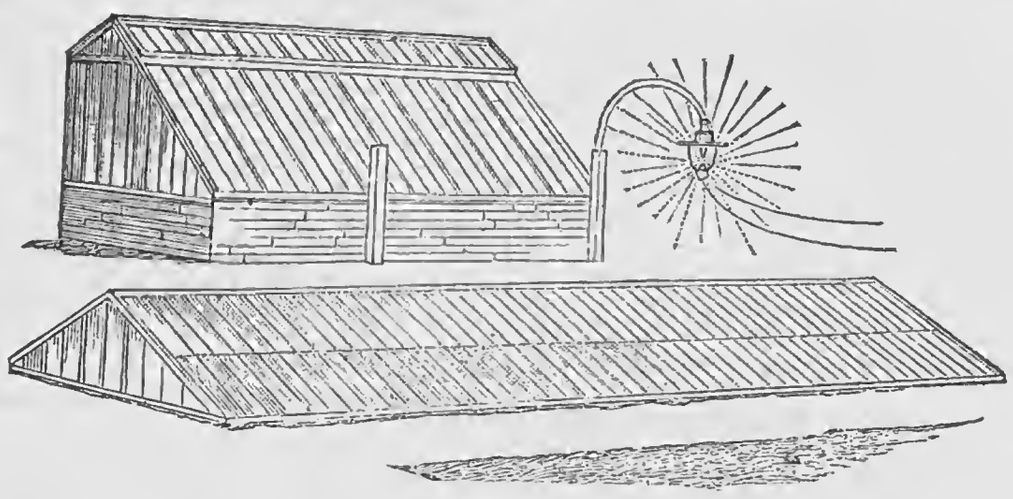
For pasture, I have no hesitation in recommending the following sorts, placing them in the order of their importance: orchard-grass, alfalfa, red clover, perennial rye grass (English blue-grass), Kentucky blue-grass. For mowing purposes, our experience has shown, very steadily, that alfalfa, red clover, perennial rye-grass and timothy are the best. So far as the matter of withstanding the effects of drought is concerned, these sorts will rank, with us, in about the following order: alfalfa, orchard-grass, Kentucky blue-grass, red clover, and timothy. With perennial rye-grass our experience has not been sufficient to warrant me in making any statement under this head.

CHARACTER OF THE SOIL, AND ITS PREPARATION.—In our experience, the best results have been obtained with all the sorts of tame grasses upon a fertile clay loam, resting on a permeable clay subsoil. But, let it be remembered, land cannot be too rich or too highly manured for the grasses. Indeed, we have found that not only are the largest yields obtained upon such fertile lands, but the influences of drought and insect depredations are greatly lessened. Of course, comparatively poor lands, in Kansas as elsewhere, will grow grass; but poor lands produce poor crops everywhere. Better far, commence the growth of the tame species of grass before the land has become impoverished by injudicious cropping.

But, whatever may be the character of the soil, prepare the land as well and thoroughly, by plowing and harrowing, as for any grain crop. This is a rule with scarcely an exception; and its violation in various ways explains a large proportion of the failures that have attended the attempted cultivation of tame grasses in Kansas. The question is asked me many times every year, "Why may I not scatter the seed upon the sod, as is often successfully done in the East?" This may be done; but the practice, so far as my observation has gone, has resulted in almost uniform failure. Where the prairie sod has been largely destroyed by the tramping of cattle, we have known blue-grass to succeed partially by this method; but even in this case, a better sod would have been obtained in less time by thoroughly subduing the land by two or three years of cropping, before applying the grass seed.

DO NOT SEED WITH ANOTHER CROP.—Oats are often recommended as an excellent crop with which to sow grass seed. The argument is, that the oats will shade and protect the young grass. But grass does not need shade, when sown in proper season: it needs the sun, and especially it needs moisture; and this the oat plants are continually taking from the soil, thus robbing the young grass plants from the start. I am aware that, upon favorable seasons, considerable success is often obtained by seeding the grasses with another crop. But upon these favorable seasons, a better and more vigorous start will be obtained without the rivalry of vigorous grains; and upon dry seasons a failure of the grass is almost certain, when seeded with a grain crop.

THE TIME TO SOW GRASS SEEDS is, I believe, without exception of any kind, in the spring; and of most of the grasses it may be said, the earlier they are sown after the frost has left the ground, the better. In a few instances and where the winter following has proved warm and open, we have had good success with timothy and clover sowed in the fall; but the result of sowing orchard-grass, alfalfa, and blue-grass, in the fall, has been almost invariably disastrous. With all kinds of grasses, we have obtained the best results when the seeding has been done in the spring. In looking over a field seeded last fall to a mixture of orchard-grass, clover and blue-grass, we find that the native grasshoppers have consumed and utterly destroyed a strip a rod in width, running entirely around the field; and the freezing and thawing of the winter have wrought sad havoc with the remainder. On the other hand, when the seeding is done late in the spring, the young and tender plants are consumed by the sun as fast as they appear above the ground. Seed sown during the last week of March, and any time during April, will rarely fail to germinate and make a vigorous growth. We have sown both alfalfa and orchard-grass during the early part of May, with excellent results.



FORCING PLANTS BY ELECTRIC LIGHT.—FIG. 147.

ALFALFA, OR LUCERNE, has been cultivated as a forage crop from the earliest period of history. It was well known to the ancient Romans; and, time out of mind, it has been a favorite fodder plant with the inhabitants of Central and Southern Europe. The early settlers of South American States—notably Chili—carried the seeds of this plant to their new homes, where it has been grown with great success ever since. From Chili its cultivation has rapidly extended over California and our western coast, whence most of our knowledge of it has been derived. The effect of the dry climates of South America and California upon the habit of the plant, has been quite remarkable. Alfalfa is more hardy, takes on a more luxuriant growth, and endures drought much better than its near relative, lucerne. For this reason, it is clearly to the interest of every grower of alfalfa to use seed of California origin.

In regard to the value of alfalfa for Kansas, I have no hesitation in saying that, all things considered, it is our most valuable clover, especially for the western and southwestern sections of the State. Nevertheless, a large proportion of those who undertake to grow alfalfa will fail in the first attempt. Let me emphasize two or three of the matters about which most of these failures cluster. Alfalfa must have old, rich and well-drained land to begin with; and the freer this is from weeds, the better. Prepare the ground thoroughly, by plowing and harrowing. Sow not less than twenty pounds of seed per acre; and sow this about the middle of April: harrow in lightly, following with the roller, if possible. Do not be discouraged if the plants make a feeble growth during the first season, as they always do. Do not pasture or mow during this first and critical season. The mower should occasionally be run over the ground, high enough to miss the alfalfa and cut off the tops of the weeds. After this first season, alfalfa will take care of itself and all the weeds within its reach. Alfalfa is perennial, perhaps eternal; at all events it will outlive the "oldest inhabitant." It makes the most pasturage for neat stock, and the best "hog pastures." It cuts the most hay; we cut four large crops from the same ground last season. And these briefly, are my reasons for believing in alfalfa.

ORCHARD-GRASS has proved one of the very best and safest of all the pasture grasses that we have tried. It is but an indifferent hay plant, yielding a light crop of woody, fibrous fodder. Upon very rich land, large crops of hay are claimed to have been secured; but this result we have never obtained, and the hay has proved with us scarcely equal to that cut from the prairie. But, in grazing, its valuable qualities soon become apparent to the farmer. I feel confident that it will yield fully twice the feed that can be obtained from the same area of blue-grass or timothy, and, in nutritive qualities, it is certainly greatly superior to blue-grass. It is consumed with great relish by stock of all kinds, especially if the grass has been cropped short. It seems to do equally well upon heavy clay and sandy soils; and any rich and well-drained soil seems suited to it. It germinates about as easily as oats; and, with good seed, no difficulty is experienced in getting a "stand" that will endure moderate cropping the first fall after seeding. As might be inferred from its common name, it does best when moderately shaded; and yet there are few grasses that will so well endure the prolonged sunshine of our dry seasons. For these reasons, we feel safer in recommending this grass to the farmers of central Kansas, for the purposes of pasture, than any other sort. It should, however, be remembered that orchard-grass will not make a sod, as blue-grass does. It always grows bunchy; and, to counteract this tendency, seed should be sown with a liberal hand. Not less than one and a half bushel of seed should be sown per acre; and two bushels would perhaps be better. We have usually sown a liberal sprinkling of Kentucky blue-grass seed with orchard-grass; but, almost invariably, it has been completely smothered by the orchard-grass. We have found that red clover does excellently with this grass, and aids in furnishing that variety of food so agreeable to the taste of animals.

Orchard-grass will endure late seeding better, perhaps, than any other sort; but this operation ought not to be delayed much beyond the middle of April.

PERENNIAL RYE-GRASS, OR ENGLISH BLUE GRASS.—In the eastern and southeastern part of the State, this old English favorite has given great satisfaction; and its cultivation in these parts is rapidly extending. In some respects, this sort is superior to orchard-grass, as it seems equally adapted for pasturing and mowing. Moreover, the seed grains are large; and a stand is as easily obtained as with oats. We are inclined to the opinion that this sort is especially valuable for our rich bottom lands, over a large part of the central and eastern portions of the State. But it is worth while to remember that perennial rye-grass yields a woody and comparatively innutritious feed; and it is peculiarly liable to ergot, a fact which our graziers will appreciate. I have frequently noticed this parasite in great abundance upon the rye-grass grown upon the College farm. Sow not less than two bushels of seed per acre, upon land that has been well and thoroughly prepared.

RED CLOVER the most generally valuable of all clovers and grasses, needs no particular mention here. In 1874 and '75, two exceptionally dry seasons, it failed almost entirely here, giving neither pasture nor hay. But, during the favorable seasons which have since prevailed, it has flourished abundantly; and has yielded more—both of hay and pasture—than is generally obtained in the East. Last year we cut two excellent crops of hay and a crop of seed from the same ground. Red clover in this State has one interesting peculiarity that is worth mentioning—when land is once seeded, it never "runs out," as is the case in the Eastern States, but thickens and spreads continually, by self-seeding. Red clover is worth a trial anywhere in the State; but, in very dry seasons, it lacks the "staying" qualities so remarkable in alfalfa.

KENTUCKY BLUE-GRASS can be grown almost anywhere in the settled portions of the State. We have never failed to secure a good stand, and ultimately a good sod—even during such very dry seasons as 1875—when good seed was sown upon well-prepared land and at the proper season, which is early in the spring. However, our experience with this grass—a very extended one, by the way—has convinced us that, for all useful purposes except lawns, in central and western Kansas this is one of the most worthless of the tame grasses. It starts early in the season, and for a short time yields a small amount of quite inferior feed; but in May it ripens its seed, the grass becomes brown, dry and fibrous, and in this dormant condition it remains until fall, and often until the following spring. We have invariably found that, in a field containing other sorts, cattle will not touch blue-grass until all these others are consumed, and starvation compels them to resort to the despised blue-grass.

We can easily see that this grass possesses great value for a region like Illinois, and Kentucky, where winter rains abound, enabling it to make a slow and continuous growth; but the Kansas winter is generally our driest season, and for this reason we doubt much if this old favorite sort has any place in our agriculture. To obtain a good stand quickly, blue-grass seed should be sown in the early spring; and, in amount, not less than three bushels per acre of ground.

TIMOTHY I have but little to say of; believing that, over a large portion of the State, it will not prove generally valuable. We have grown large crops, and I have seen many fine stands west of this point; still it suffers more from drought than any other sort that we have tried, and it rarely survives the ravages of the grasshopper.

IN TIMES of severe drought all these sorts, with the single exception of alfalfa, will fail to yield any crop worth the name. Most of those that have been mentioned, cannot be seriously injured by an ordinary dry season; and, on the return of rain, these will start with undiminished vigor.

It is worth remembering, too, in conclusion that our much-despised prairie grasses possess many valuable qualities, which entitle them to the grateful recognition of the husbandman. No known species of grass is better adapted to withstand the effects of drought; and I suggest that any one possessing a good field of prairie grass ought to take all pains to secure it against injury, both for its intrinsic value and as a precaution against a possibly dry season.

THE ELECTRIC LIGHT FOR PLANTS.—We have several times alluded to the experiments of Dr. Siemens regarding the use of the electric light for forcing. Dr. Siemens has furnished the Gardeners' Chronicle of London with particulars of the experiments as far as he has gone, and from that journal our illustration is reproduced. The engraving will serve to show the plan of arrangement. The light has been used in the interior of one house, and has also been placed on the outside of a melon-house between it and a strawberry-pit, as shown in the figure. The house within which the lamp was placed is a small, oblong conservatory, some 24 feet by 16 feet. The lamp was placed at a hight of about eight feet from the floor. In this house the plants nearest to the light were accelerated in their growth by some ten to fourteen days, and in some cases the leaves, as of a banana, were scorched by the rays. The lamp was used at night in this house for some three weeks, and in it were grown the Arums and Roses exhibited at the Royal Society and at the Royal Horticultural Society. Near to this house are situated the melon-house and the strawberry-pit shown in our sketch (fig. 147). Two posts will be observed, the lamp having been suspended, first on the one, then on the other, in such a way that the light fell on one end of the melon-house and then on the other end, the strawberry-pit being lighted at correspondingly different parts of its length in the same manner.

MEAT FROM AUSTRALIA.—The direct result, says the Mark Lane Express, of the successful experiment in connection with the Strathleven's cargo of foreign meat from Australia, is a proposal on the part of Messrs. McIlwraith, McEacharn and Co., of 34, Leadenhall Street, the importers, to form a limited-liability company to develop and carry on the traffic. It is to be called "The Australian Fresh Meat Company (Limited)," and the capital required is £150,000 in £10 shares, the whole of which are now offered for subscription. The prospectus states that "at the present time meat (of the quality of that sent in the Strathleven) can be purchased at 1½d. per lb. at the Australian ports of shipment," and that "an ample supply can be relied upon at an average cost not exceeding 2d. per lb." This estimate appears to be a very safe one, for beef especially is now a glut in the Australian market at 1d. per lb. wholesale, according to the Queensland and New South Wales Press.

NEW COLORS FROM THE RED CABBAGE.—Cauline is a new coloring substance prepared from the leaves of red cabbage, by infusing them for 24 hours in boiling water and evaporating. The color is violet blue. By adding four per cent. of baryta a pale green is obtained; this is baryta-cauline. Chloro-cauline, a greenish blue, is made by adding 20 per cent. of anhydrous chloride of calcium; by the addition of one per cent. of baryta and 20 per cent. of chloride of manganese, a bronze color is produced; eight per cent. chloride of zinc and five per cent. of soda yield an ultramarine blue color; and 20 per cent. of proto-chloride of tin gives a violet color.—Druggists' Circular.

Everywhere.

EUROPEAN CORRESPONDENCE.

PARIS, France, April 12, 1880.

JUST a year ago I much enjoyed my rambles through the various beautifully laid out parks of this magnificent city, admiring, at this time of the year, the remarkable beauty and deep green-tinted foliage of the many varieties of Rhododendrons, Holly, Laurel, Aucubas and conifers, adorning the landscape. But, alas! how disappointed when during the quiet hours of this beautiful morning, I again paid my visit to these well-known promenades. It is true, the stately Elms, Maples, Plane Trees, Chestnuts and other deciduous trees greeted me as of old, with their delicately tinted, virgin foliage, but the glory and pride, producing the wonderful effects of these parks by sun and gas light, have, at least for the time being, departed. All the large and massive groups of the beautiful Rhododendrons were destroyed by the severe cold during the past winter; no foliage or flower buds grace the stems, and in all probability nothing will save the plants but the most severe cutting back. The Laurels and Aucubas, the chief evergreen decorative plants here in Parisian parks, have already been cut down to the very roots. The Holly will have to share the same fate. All the magnificent specimens of the Magnolia grandiflora, of which there were so many in the grounds of the Champs d'Elysee, are dead—so are all the large and beautiful specimens of the Wellingtonia gigantea, Cedrus deodorus, Cryptomeria Japonica, Araucarias and many of the rarest and finest conifers.

In the Jardin de Tuileries nearly all the old, large and fine-headed standard Roses have died and must be replaced. The few evergreens are dead. In Parc du Monceau, the most beautiful in the city of Paris, all the fine and large specimens of the rarer conifers are dead, all the Magnolias grandiflora, several groups, containing over a hundred elegant specimens from 15 to 20 feet in hight, have died. The Laurus prunifolia, the various varieties of Hederas which adorned the magnificent entrance gates and the iron railings inclosing the park, have also died down to the roots. The same fate has befallen all the city parks and ornamental grounds. It will take years and millions of francs to restore the beauty and glory of the parks in this city, destroyed during the past severe cold winter.

The floral establishments exhibit just now magnificent collections of Azaleas and Rhododendrons covered with a mass of flowers of the most brilliant colors, from the purest white to the most fiery red and dazzling crimson. The Remontants and Bourbon Roses are also very fine. Of cut flowers, the Lily of the Valley and the deep-blue, sweet-scented Violet predominate. The streets are abundantly supplied with thousands of pretty flower-girls offering bouquets of those fragrant Violets at from two to ten cents each, varying in size from one to eight inches in diameter and containing from 15 to over 100 large, well developed flowers each. I suppose they would cost at least ten times as much in New York. Fine bouquets of Rose buds, artistically arranged and interwoven with delicate sprays of green, sell for from two francs up to 25 each, according to size. The markets are well supplied with early vegetables, such as lettuce, radishes, endive, cucumbers, asparagus, tomatoes, new potatoes, etc. W. R. BERGHOLZ.

RURAL SPECIAL REPORTS.

ILLINOIS, Baileyville, Ogle Co., April 20.—The first two weeks of this month were favorable, and during that time most of the spring wheat, oats and barley, were sown. There was a heavy rain on the night of the 15th; then it got cold and snowed a little on the 16th. Another severe storm—wind, lightning, thunder, rain and hail—set in on Sunday afternoon, 18th, doing considerable damage to roads, bridges, fences, etc. Cold, windy and snowy yesterday, froze at night; fair this morning—thermometer, 32°. This cold storm has injured tender plants, and has checked gardening and farm work. Some fear it has injured the fruit, but I think not materially here, as the buds were not far enough advanced. A large portion of the winter wheat was so badly frozen out in March that it has been plowed up, and the ground seeded to other crops, but it did not all winter-kill, as some fields have a promising appearance—that which was drilled in, is better in general than what was sown broadcast. Spring wheat that was sown early is up and looks well. The prices of wheat, corn and oats, etc., are lower than during the past winter, and farmers that have any to sell feel disappointed. W. B. D.

KANSAS, Iola, Allen Co., April 19.—We have had very high winds for several days and the ground is extremely dry, and needs rain very much. The prospects for fruit so far are favorable. There is a heavy immigration pouring into this county, and among us there is but little sickness. H. M. S.

MINN., Howard Lake, Wright Co., April 19.—Farmers are resting to-day, after having put in what wheat they could during the thaw of last week. This is the third cold spell since April set in. We had beautiful weather during a large portion of March, and some gardeners would uncover the shrubs and Grape-vines against my advice—probably, few Roses or Grapes will appear. Alarmed last month at the report that all fruit trees were killed, I hastened out to make an examination, and found our own apparently all right, as well as some of the neighbors'; while the trees of one or two are positively killed; that is, all of the standard varieties. Our Transcendent Crab, and some other varieties, we suppose, will stand as long as the Oak does. Early Richmond Cherries have delighted us by bearing a few cherries for two years, but are now dead from the unusually cold weather of last winter. Sorry to have to make this statement, as many were hopeful that we could raise Cherries in this region. Strawberries, Raspberries and Grapes are generally so abundantly grown that we ought to be reconciled to the loss of Cherries, yet we are so greedy and ambitious that we wish to raise or cultivate successfully all our neighbors have. Fall wheat is all killed in this neighborhood, so far as heard from, as the snow went off before some severe freezings. But little effort has been made to raise fall wheat in previous years, farmers generally taking it for granted that they could not do so. S. A. M.

OHIO, Cardington, Morrow Co., April 27.—April has so far been more stormy than for years. On the 23, 24, 25 of this month we had heavy thunder showers. Streams are overflowing. To-day was quite stormy, with some rain and sleet. Feed is scarce—hay, $10@15 per ton; wheat, $1 10; oats, 32 cts.; corn, 42 cts.; rye, 60 cts.; butter, 15 cts.; eggs, 8 cts.; potatoes, 35 cts. Plums, Peaches, Cherries and Apples are blossoming. Prospects for fruit of all kinds are good. Our wheat looks splendid—better than for years, and the acreage has been a third more. J. G. G.

OREGON, Long Tom, Lane Co., April 12.—The culture of wheat here has been very successful, the berry being unusually large and plump, unsurpassed, I believe, in any country. Add to this the fact that it is the chief staple here, and you can form some idea how disastrous the failure of this crop would be. It had long been our motto that "Oregon never fails." Last spring was a very wet one, and wheat grew rank, and visions of full granaries and good prices gladdened the heart of the tired farmer. Either the excess of dampness, or the extreme heat that followed it, or both causes combined, produced rust; but it was not until nearly harvest that it began to be whispered around that rust had struck the wheat. Fall wheat was not affected nor the earlier-sown spring wheat. It would be impossible in so short a space as this letter, to tell you half the disasters resulting from this failure of the crop here. The farmer, however, nothing daunted, strives to remedy the evil, and starts the plow still earlier, and much fall grain was sown. The winter has been rather unfavorable for the early sowing; cold rains and hard frosts, gave it a yellow, sickly look; but the last few days of warm sunshine have improved its appearance, and hope is again revived that the calamity of last year will not be repeated. The prospects for fruit are good. Apples have never failed here yet; they are of good size and fine flavor. Pears do well, and Plums are unsurpassed anywhere. While attention is paid in some places to the cultivation of Ferns, whole fields are covered with them here, and it is quite an object to get rid of them. E. B. B.

OREGON, Tangent, Linn Co., April 14.—There has been quite a demand for horses and men in this Wallamette Valley lately to go to work on the North Pacific railroad. The Company is pushing the work with vigor, and we live in hopes of being connected with the United States one of these fine days. Wheat was badly rusted last summer, but we are going to try it again to see if we won't have better luck next time. We depend too much on the wheat crop to bring money into our country; if we get low prices and poor crops, we are all "hard up"—it is not a good state of affairs. I feel greatly interested in reports of the New Amber sugar cane; if we can only grow it here with success, it will help us farmers a great deal and make us more independent, and if we could grow our own tea, it would stop another of the big leaks. It is not what a nation or a person earns, it is what either saves that makes it or him wealthy. R. L. S.

OREGON, Goshen, Lane Co., April 15.—Fall-sown wheat is good; very little damage from the frost; none from the Hessian fly or from disease, the former never having been seen in Oregon. The prospect is good for a full average yield per acre on twice the acreage of any former year. Our principal crop has been spring wheat; but the prevalence of rust on it for the last two years caused farmers to sow the winter varieties largely last fall. A large acreage of spring wheat also has been sown. The cold weather in March made wheat slow in coming up. W. R. D.

WASH. TER., Walla Walla, Walla Walla Co., April 14.—From the time of the first settlement of this Territory to the present day, embracing a period of 25 years, there has not been a failure of the wheat crop of Washington Territory. No insects have ever put in an appearance to harm it. No diseases of the wheat crop are known in the Territory. It is probably true that in some locations, where the soil is a heavy, clay loam, injury from frost sometimes has occurred, but such injury has been slight and does not often happen. In the poorest seasons known here the wheat crop has averaged 25 bushels per acre and upwards. Fall wheat looks promising, and farmers are busily engaged putting in the spring crop. The season is unusually late, but great confidence is felt that there will be a bountiful harvest. The acreage is increasing rapidly from year to year. This will exceed any previous year in the acreage of the crop. C. S.

The Querist.

ANSWERS TO CORRESPONDENTS.

Chicken Cholera.

A Subscriber, Burlington, Kans., asks for some remedy for chicken cholera. He has lost 100 fowls in the last few months by the disease, and is beginning to think he had better clear away the remainder and begin anew.

ANS.—There is a great number of "sure cures" for this malady, although, in spite of them all, fowls are dying of it every day, often, doubtless because the owner has no idea of what sort of treatment to give the affected birds. From a large number of "cures" which correspondents of the RURAL have mentioned in the last few years, as having proved thoroughly effective in their own hands, we cull a few of the best:—Make a mixture of two ounces each of red pepper, alum, rosin and flowers of sulphur, and put it in the fowls' food in proportion of one tablespoonful to three pints of scalded meal. In severe cases give one-third of a spoonful in a meal pellet, once a day, to each fowl, and put a small lump of alum in the drinking-water. A Kansas correspondent says he has cured fowls in the last stage of disease, with the above mixture.

Our correspondent, Mr. H. Hales, places the ailing birds in boxes or clean straw and cuts away such feathers as have become soiled by their evacuations, and as a means of sustaining life, feeds them twice a day with oatmeal gruel, into which is put some finely-chopped rue. This, of course, has to be poured down the throats of the sick birds. In addition, he sprinkles carbolic powder upon the straw in the boxes where the fowls are placed, dusts some into their feathers and gives them a teaspoonful or two of water slightly impregnated with carbolic acid, which can be obtained of any druggist. The ailing fowls are kept apart from those in health, and after the administration of this remedy they recover rapidly. He treated two or three dozen in this way and thinks he would have lost all of them had they not been so treated.

A lady correspondent says she fed bran mash, in which was a liberal dose of the common garden pepper—feeding every other day for two weeks, and had no more loss from chicken cholera. She says, "Whenever I see a chicken appear droopy, I give it a dose of pepper, and all is well."

Another writer says:—"To one gallon of sour milk add a tablespoonful of alum, set it in shallow vessels where the chickens can drink as often as they choose. We have used it three years and none of our chickens die of cholera when we attend to it in time."

Another cured her chickens of cholera by taking a lump of alum as large as a hen's egg and dissolving it in a half gallon of water. This she thickened with corn meal and gave it to her fowls three times a day.

Rice Corn.

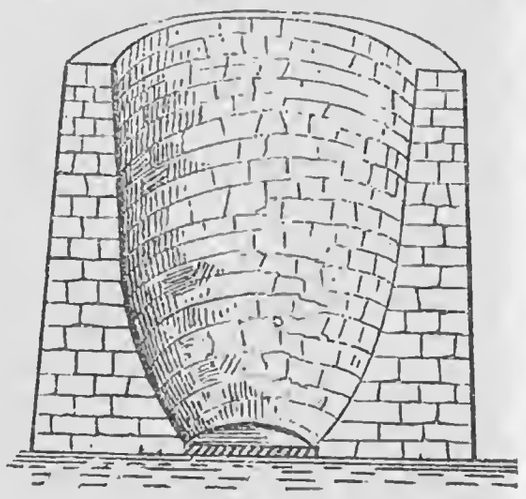
J. C. C., South Gilboa, N. Y., asks, 1, for some information about Rice or Egyptian corn; 2, where can the seed be bought, and, 4, at what price.

ANS.—This supposed-to-be-new cereal is variously called Pampas rice, Rice corn or Egyptian corn, and is thought to have been brought to the United States by the Mennonites, who lately came from southern Russia, and settled in western Kansas and elsewhere in the West. The kernels grow in a tuft like that which crowns sorghum. Each grain is a trifle smaller and rounder than a kernel of wheat, and is inclosed in a "shuck." The meal is not unlike that of Indian corn, and in color is intermediate between that of the white and yellow sorts. The grain can be eaten ground into flour or cracked like wheat, or used generally like any other cereal. A chemical analysis shows that its percentage of starch, fat, dextrine and sugar, which produce heat and fat in the animal organization, compares favorably with that of Indian corn, wheat, rye, and oats; and in its contents of flesh-forming albuminoids it surpasses all Indian corns, and ranks with wheat, rye and oats. It has a very small percentage of cellulose, or nearly non-nutritious woody fiber. The stalk, it is claimed, makes as good fodder as corn does, and a few acres will furnish a family with fuel for the winter in the Western prairies—a consideration of the first importance in that nearly treeless country. According to the Kansas State Board of Agriculture it resists drought in a marvelous manner. Moreover, it is claimed to be worm and frost-proof and to yield, even under very unfavorable conditions, as much as sixty 60-pound bushels per acre. According to the brief notices of it that have appeared in our "Everywhere" from time to time, and the lengthy report made by the Kansas State Board of Agriculture, no crop grown in the vast prairie regions of the West, subject to severe droughts and scorching winds from the Llano Estocado and the South generally, is so rich in fair promises for the farmer. 2 and 3, For seeds and prices write to the Plant Seed Company St. Louis, Mo.

How to Build a Stone Cistern.

M. B., Smithville, Ont., Can., being about to build a large stone cistern above ground so that the water can be drawn off in pipes at the bottom, asks what is the strongest shape, the best means of preserving strength to resist the pressure of the water, and whether the pipes and faucets would be liable to get out of repair.

ANS.—A stone cistern may be built as follows:—The shape which gives the most strength is an oval, and the walls must be thick at the bottom, gradually decreasing toward the top. This will give a cylindrical, or a truncated-cone shape on the outside, as shown in the engraving.



SECTION OF STONE CISTERN.—FIG. 148.

The stone must be laid in water-lime cement consisting of one part of Rosendale cement, and three parts of sharp, clean sand. When the wall is finished, the inside should be smoothly plastered (bottom included) with a coating of cement, without sand, at least half an inch thick, if the cistern is a large one. To make accurate calculations as to the strength of the wall, the size and depth of the cistern should be known. If the pipes are well laid they should not get out of repair in 50 years, if carefully used and laid below reach of frost.

Early Settlers in the United States.

W. N. R., Hubbardsville, N. Y., asks, 1, is there any book that gives the names of the immigrants that arrived in this country between 1620 and 1635, and where can it be found; 2, was Roger Williams a married man; and if so, did he leave any children.

ANS.—We don't know of any such book; but it is not unlikely that many of them could be discovered by a diligent search in the old archives of the various settlements made in that period of 15 years. These include the Plymouth Colony founded by the Pilgrim Fathers who left England in the Mayflower, Sept. 6, 1620; the Massachusetts Bay Colony, in which Endicott founded Salem in 1628, and which received a reinforcement of 400 newcomers in 1629, and an additional 700 the year following, when Boston was settled. In 1623 settlements were also made at Portsmouth and Dover, New Hampshire; another at Monhegan, Maine, in 1622, and another at Saco, in the same State about the same time, or at the mouth of the Pemaquid in 1626, according to Bancroft. Although Connecticut was settled in 1635, still as it was by emigrants from Massachusetts, they do not count in this connection. It would be necessary, however, to hunt up the archives of the Dutch settlements on Manhattan Island (New York City) as well as at Fort Orange (Albany), at both of which places the first permanent settlements were made in 1623, and both of which received considerable additions before 1635. All things considered, it is more than doubtful whether years of research would enable our friend to learn the names of all the immigrants to the English Colonies in this country during the above 15 years, to say nothing of the Spanish settlers in Florida, which is a part of this country—even in the most limited meaning of the term. 2, Roger Williams was certainly married, as we are told that he arrived at Boston on Feb. 5, 1631, accompanied by his wife, Mary, but whether he left any children we do not know.

Growing Peanuts.

E. W. K. Westfield, N. Y., wants to know how to raise peanuts in western New York, what kind of seed to get, what soil they require, and just how to go to work.

ANS.—In the first place you cannot raise peanuts successfully in western New York. The peanut is a Southern product and it requires a Southern sun to bring it to such perfection that it can be grown with profit. If, however, you are determined to try the cultivation of peanuts, begin on a small scale. Select a rich sandy loam, manure with well rotted stable manure, if a fertilizer should be needed, and in addition apply shell lime to the patch at the rate of 40 or 50 bushels per acre. There are two varieties of the nut recognized—the Virginia and the Carolina; the Virginia will probably give best satisfaction. Mark out rows each way about three feet apart and at each intersection plant two sound nuts an inch and a half deep. The planting should not take place before near the end of May or in the beginning of June; if planted too early the nuts are liable to rot in the ground. Germination will be facilitated if the shells are cracked or entirely removed before planting, but the kernels must not be bruised in the cracking. Although the peanut is a fruit, the result of a flower, it is developed under ground, the pods in growing being pushed into the surface soil. This peculiar habit necessitates that the top soil should be loose and mellow. Cultivate frequently and thoroughly during the season and let the crop continue to grow until killed by the first frosts. Then the nuts should be dug, dried and picked, when they will be ready for market. The yield ranges in the South from 20 to 100 bushels per acre, and the price from $1 to $2.50 per bushel.

Postage Stamps.

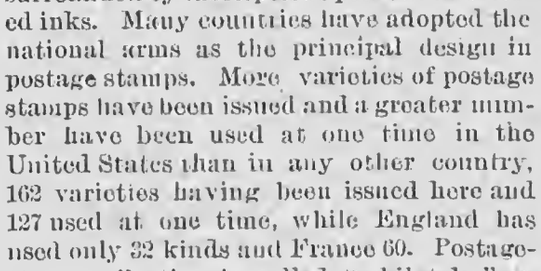
E. B. B., Long Tom, Oregon, asks the date of the first introduction of postage stamps and an account of their changes.

ANS.—The system of prepaying postage by means of small adhesive labels, to be sold to the public and received by the post-office as evidence of payment when attached to letters, was first advocated by Rowland Hill in 1837, and was adopted by the British Post-Office in 1840, the stamps being first used on May 6 of that year. The designs on the stamp have varied greatly with the time at which they were issued and the nations who have used them. The first adhesive stamp issued by Great Britain was the profile of the Queen, with the word postage above and the value below it; but this was objected to on account of the blackening—in cancellation—of the sovereign's portrait. Brazil, the second country to adopt the system, used first the simple figure of value and afterwards a portrait of the Emperor. The various German States seem to prefer numerals of value surrounded by inscriptions printed in colored inks. Many countries have adopted the national arms as the principal design in postage stamps. More varieties of postage stamps have been issued and a greater number have been used at one time in the United States than in any other country, 162 varieties having been issued here and 127 used at one time, while England has used only 32 kinds and France 60. Postage-stamp collecting is called "philately," on which several articles appeared in the RURAL about six months ago.

Marking Chickens.

D. D. C., Mt. Union, Ia., asks for some good plan for so marking young chickens that they can be distinguished from one's neighbors' of the same breed.

ANS.—Chickens can be marked by a very simple method, and in quite a number of different ways, by punching a hole in the web of the foot between the toes, by means of a small steel spring punch such as is used by boot-makers. The accompanying cut explains the matter. One hole may be between the middle and outside toes, or between the inside and middle toes, or in both these places, in either fool or in both; or two holes can be made instead of one in either or all of these places, so that the number of changes that can be made in marking according to this simple way is quite large. Of course, a record should be kept of the markings. The punch should have a sharp edge, and the marking may be done as soon as the chicks are hatched; but it is better to wait until they are a few weeks old; for otherwise it may be necessary to repeat the operation when they grow larger.



CHICKENS' FEET MARKED.—FIG. 149.

Eradicating Stumps.

H. B. Greenville, S. C., asks for the cheapest and best way of getting rid of stumps in a field.

ANS.—The cheapest and most effective way is to blast them out with cartridges of giant powder. This explosive is a preparation of nitroglycerine, many times as powerful as common powder, and its great force, being very sudden in its action, tears the stumps to fragments so that but little, if any, after-cutting is required to dispose of them. The giant powder is put up in cartridges about 10 inches long by 1 1-2 in diameter, and these, being of the consistence of cheese, can be cut into pieces, of the size required, with a knife. A piece two inches long is sufficient to throw out a good-sized stump. A hole is punched under the stump with a crow-bar; the explosive, with the proper fuse and fulminating cap attached, is put in the hole, water is poured in as tamping, and the fuse is fired. The explosion throws the stump out in several pieces, leaving the hole to be filled up afterwards. Experts have taken out 100 stumps in a day in this manner.

Heaves—Broken Wind—in Horses.

S. F. B., Bethel, Oregon, has a seven-year-old horse that has had little or no work most of the time, and never any heavy work, while he is well fed in winter on oats, timothy hay, carrots, and occasionally straw and bran for a change; a year ago, on driving him at a fair gait, it was noticed that he breathed loudly; no treatment was given, and now he has grown worse. At ordinary gaits this sort of breathing does not injure him, but brisk driving or heavy pulling necessitates frequent short halts, after which he goes on as before. A little excitement causes him to breathe still louder, and our friend asks, 1, what ails him; 2, the name of a good work on the treatment of ordinary diseases in horses and other domesticated animals.

ANS.—Keeping horses on feed of a bulky character, distending the abdominal cavity at the expense of the thoracic, will cause, on inspiration, a rupture of the wall of the air cells of the lungs from over-distention. As a certain amount of air is taken into the lungs at every inspiration, if from any cause a part of the lung will not dilate, then other parts are over-distended, hence rupture. There is no certain cure; but horses with this infirmity will, if fed properly, do a great deal of service. As treatment, feed on dry grain, carrots, turnips, and a little hay at night—very little water. Do not use for two hours after being fed or watered. Arsenic in small doses is a favorite remedy with dealers; doses—begin with three grains a day; increase to five in a week. Continue for a month. 2, Law's Farmers' Veterinary Adviser; price $3, to be had of the American News Co., Chambers St., N. Y.

Selecting Seed Corn.

W. S. M., in Rural of April 14, asks: "what kind of ears are best for seed among the varieties of corn grown by him, etc." The only way to measure the capacity of any grain is by the *product of one grain* and not by the acre. This is a point too often overlooked by farmers, because it is—I suppose—on too small a scale. If W. S. M. will take one stalk of each variety and, after ascertaining its product in ounces together with the stover it took to feed it, he will soon conclude which is "best." If he desires an eight-rowed variety, he must breed to it the same as one would breed stock to a color or any other quality. As in the animal kingdom so in the vegetable—one is as susceptible of improvement by breeding as the other. Always select even-rowed ears and ears whose rows are straight, not irregular on the cob. Ears that taper are best because better protected by the husk; and then, too, the silk—the female part of the plant—remains alive longer. My reason for selecting the top ear for seed is that it is always more fully developed, more uniform and more vigorous in its germination, having been better fertilized when in the silk. A. E. BLOUNT.

The Wild Onion.

L. H., Jericho, N. Y., asks how shall he get rid of this vile weed. It is a great nuisance in his pastures, so strongly flavoring the milk of the cows feeding there, that it can't be drank in the family, nor the cream used for making butter. Thus he has to keep his cows out of the pasture till the tops of the onions become so dry in June, that the cows will not touch them.

ANS.—The only way is to get a suitable, close three-tined fork, and dig out every root by hand, which can be rapidly done by children; or else plow up the pasture and put it into hoed crops. The wild onion spreads with great rapidity. We find it on gentlemen's lawns in various places, and they resort to the hand fork to get rid of it. Perhaps pouring a teaspoonful of oil of vitriol on each plant, as in the case of this tles, may kill the onion. This can be bought at a cheap rate by the gallon, but the person using it must be very careful not to let any of it drop on his clothes, for if so, wherever it touches, it will make a hole through the cloth.

Miscellaneous.

M. A. L., Preston, N. Y., asks, 1, where can King Philip's and Improved Dent corn be obtained, and will they thrive in this locality; 2, what ails his Flowering Maple—the leaves look all right when they first appear, and later on become spotted, like a sample sent; 3, are there any books published on the Kindergarten method of teaching; and if so, what books would we recommend for a young teacher who desires to teach by that method?

ANS.—King Philip is an Eastern variety, and will, no doubt, do well in the above locality; as for the Dent, we cannot say how well it may succeed, but it is worth a trial. Both varieties can be had from any large seedsman advertising in the RURAL. 2. The leaf sent is that of an Abutilon. The spots are natural and not indicative of any disease. 3. Though there have been several books published on the subject, none of them can impart a thorough knowledge of the system to a solitary student; one must be regularly trained. Kindergarten Culture, by W. N. Hailman, and Paradise of Childhood, by W. E. Wiebe, are books that will give an insight of the system. The American Kindergarten is kept at 93 East 10th St., N. Y. city.

R. Y., Beckwith, Tenn., has five one-year-old mules, all fillies; their fore-legs are sprung in the knee-joints, inclining inwards; otherwise they are in prime condition, having been well fed and sheltered, and he asks whether there is any remedy for the ailment.

ANS.—This sounds like one of the many forms in which "osteo-porosis" or "big head," as it is commonly called, attacks young animals; but the description of the symptoms are not full enough to enable us to decide the question definitely. Will our friend please answer the following questions, that we may reply in a satisfactory manner. 1st, How many animals are on his farm? 2d. How sheltered and fed? 3rd. Are any of these mules lame, and where? 4th. Are all of them affected in the same way, or are some lame behind? 5th. Have any of them enlargements about the lower jaw or face? 6th. How is their appetite? 7th. Is there any pain on pressure of the bones of the affected limbs?

M. A., Cumberland, Md., asks if it would be advisable to use Paris-green on melons and cucumbers as a remedy for the cucumber beetle and other insects.

ANS.—No, Paris-green is too dangerous a material to use indiscriminately on plants whose fruit or foliage is eaten. Not long since we noticed the poisoning of a whole family in Canada, by eating cabbage on which it had been sprinkled as a remedy for the cabbage worm. One such example ought to teach an impressive lesson in regard to the danger that attends its use. *To sprinkle this poison on cucumber vines is to jeopardize life.*

H. S. G., Fulton, N. Y., has bought some potatoes under the name of Beauty of Hebron, of a prominent seedsman, but they are so small and white in color that he doubts their being true to name, and therefore sends a specimen to us for identification.

ANS.—The potato sent is so imperfectly developed that even professional potato experts cannot identify it. It certainly does not look like the Beauty of Hebron. Its somewhat pale color is not an absolute proof that it is not what it purports to be; the color may change to some extent with the kind of soil in which the tuber is grown.

T. J. E., Pleasanton, Texas, asks how many cows can a bull serve, the cows to run loose in a pasture or to be herded; the bull to stay with them all the time.

ANS.—That depends on the age and vigor of the bull. While 25 would be enough for a yearling animal, a full-grown bull could serve double, or even three times the number.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, April 30th.

T. H. H.—W. I. C.—S. C. G.—D. H. M.—W. M.—B. B.—M. W.—W. J. B.—M. M.—W. S.—W. W D.—A Subscriber—E. S. S.—D. N. J.—A. B. A.—A. L. J.—J. P. R.—A. E. B.—J. A. M.—L. V. R.—H. B.—R. N. S.—T. K.—L. H. C.—F. H R.—S. H. Y.—T. E. H.—J. G. D.—L. J.—T. J. K., no.—M. S. R.—F. H. M.—S. R. O.—L. M.—H. R., thanks—H. R. T.—W. S. N.—A. E. M. C.—O W. D.—M. B.—M. A. C.—P. G. S.—G. G.—E. E. A.—F.—E. A. H.—A. S.—L. K.—M. R.—L. M H.—S. D.—T. S. R.—N. B.—Mrs A. S.—N. B.—L. K. S.—L. B.—E. S.—J. M. T.—H. W. M.—A R. L.—L. F.—R. P.—H. C H.—M. W.—L. W.—D. L.—D. S.—J. L. C.—E. M. B.—D. W.—M. E. T.—J. P.—H. J. S.—M. S.—W. H. B. F.—J. J. D.—J. J. J.—I. B W.—J. S., thanks—R. A. N., thanks—A. J. S., No—H. J.—J. O.—L.—H. R. M.—S. S.—D. O. L.—W. B.—H. G. E.—W. M. S.—H. W. T.—H. O. K.—L. P. D.

BULLETIN 38.—April 24, 1880.

FERTILIZER ANALYSES.

376. Mapes' Potato Manure, Guarantee, Ammonia 45-5 per cent., Phos. Acid, 8-10 per cent. Potash sulphate and muriate one half of each, 6-8 per cent.

377. Mapes' Grass and Grain Spring. Top-dressing. Guarantee, Ammonia 5-7 per cent Phos. Acid. 6-8 per cent., Potash, in form of sulphate and muriate, one half of each. 5-7 per cent.

378. Mapes' Complete Manure ("A" Brand) Guarantee Ammonia 3-4 per cent., available Phos. Acid. 10-12 per cent., Insoluble Phos. Acid. 2-4 per cent., Potash as Muriate 2 1-4 3 1-2 per cent.

379. Mapes' Corn Manure. Guarantee, Ammonia 4 1-2 5 per cent., Phos. Acid. 10-12 per cent., Potash as Muriate 6-7 per cent.

The above were manufactured by the Mapes' Formula and Peruvian Guano Co., New York, and sold by Albertus N. Clark, Milford.

380. Superphosphate made by Russel Coe, Linden, N. J., and sold by E. B. Clark, Agent.

381. Superphospbate made by Lister Bros., Newark, N. J.. and sold by Albertus N. Clark, Millford. Guarantee, Ammonia, 2.85—3.25, Available Phos; Acid, 10-12 per cent. Insoluble Phos. Acid, 1-3 per cent.

384. Ammoniated Bone Superphosphate made by the Geo. W. Miles Co., Milford, and bought from Manufacturers.

The above three were sampled and sent to the Station, March 22, 1880, by Joseph W. Nettleton, Milford.

386. Mapes' Complete Manure ("A" Brand) same as 378) sold at the Hartford Branch of Mapes' Formula Co., sampled and sent to the Station, April 3, by L. S. Wells, New Britain.

382. Ground Bone made by Lister Bros., Newark, N. J., and sold by Albertus N. Clark, Milford, Guarantee, Nitrogen, 2.50-3.09 per cent., Phos, Acid 11.50-13.50 per cent,

383. Ground Bone made by Peter Cooper, New York, and sold by E. B. Clark, agent, Milford.

Both the above were sampled and sent to the Station by Joseph W, Nettleton, Milford.

388. Bone Meal from Mapes' Co., Hartford, Guarantee, Ammonia 4-5, Phos. Acid 20-26 per cent.

Sampled and sent April 5, by L. S. Wells, New Britain, as were also the following:

390. St. Louis Castor Pomace made by Collins Co., sold by F. Ellsworth.

387. Muriate of Potash, 80 per cent Mapes' Co.

389. Sulphate of Potash, 70 per cent, Mapes' Co

ANALYSES OF SPECIALS AND SUPERPHOSPATES.	376.	377.	378.	386.	379.	380.	384.	381.
Nitrogen as ammonia.....	0 96	3 03	1 11	0 58	1 31			
" in organic matter.	2 96	71	2 02	1 86	2 26	1 13	1 90	2 22
Soluble Phosphoric Acid...	3 18	2 80	4 86	2 37	4 08	4 06	6 05	6 84
Reverted " " ...	5 45	5 09	5 04	7 24	6 12	2 02	1 65	1 75
Insoluble " " ...	1 77	1 30	2 45	4 50	1 66	7 30	6 26	2 44
Potash.....	7 70	6 61	3 30	3 15	7 21	1 35	1 76	
Chlorine.....	5 12	5 20	3 44	7	6 48	1 74	2 56	
Estimated value per ton....	$45 64	$45 32	$40 64	$38 32	$45 38	$29 75	$36 03	$32 55
Cost per ton.....	$49 00	$51 00	$40 00	$40 00	$48 50	$36 00	$38 00	$66 00

ANALYSES OF BONE, CASTOR POMCE AND POTASH SALTS.

	382	383	388	390	387	389
Nitrogen,	3 61	1 12	3 00	5 75		
Phosphoric Acid,	13 04	27 38	25 12	1 79		
Potash.				1 29	50 27	35 68
Cost of Potash per 100 lbs.,					$3 97	$4 19
Est. value of fertilizers per ton.	$28 63	$42 36	$45 97	$28 02	$45 83	$53 52
Cost of fertilizers per ton.	$30 00	$32 00	$42 00	$20 00	$40 00	$65 00

382. Contains 15 per cent. of salt cake or sulphate of soda, soluble in water.

388. The potash equals 79.8 per cent. of muriate of potash.

389. The potash corresponds to 66 per cent of sulphate of potash, but there is present 7.56 per cent. of chlorine, which is equivalent to 15.9 per cent, muriate of potash.

CORRECTION.—The per cent. of salt in "Refuse Salt Washings" No. 357, misprinted in last Bulletin, 67.02 per cent. should have been 67.92 per cent. The per cent. of salt in "Kiln Refuse" No. 358, printed 92.20 per cent., should have been 97.20 per cent. S. W. JOHNSON, Director.

THE
RURAL NEW-YORKER.
PUBLISHED EVERY SATURDAY.

CONDUCTED BY
ELBERT S. CARMAN.

Address
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No. 34 Park Row, New York.

SATURDAY, MAY 8, 1880.

REMOVAL.

THE RURAL NEW-YORKER is now in its new quarters, No. 34 Park Row, corner of Beekman Street.

MR. THOMAS, of Illinois, has introduced a bill into Congress imposing a tax equal to ten cents, on every pound of oleomargarine, and authorising the Commissioner of Internal Revenue to issue special stamps to be affixed to the packages thereof. Moreover, the bill provides a penalty of 100 per cent. additional tax and a fine of $1,000 for evasion of, or noncompliance with, the law imposing the tax. The passage of such a bill we believe to be impossible, and its introduction injurious to the interest it claims to subserve. It is of a piece with that foolish petition recently sent out for signature by the International Dairy Fair Association. The tendency of both is to bring contempt and ridicule upon the legitimate demands of farmers and dairymen in this matter. However earnestly these may desire the suppression of this new industry, they should be too intelligent to think for a moment that at this day this desirable object can be brought about by prohibitory taxation upon it, or by any other legislation hampering the manufacture of a healthful product. What we should insist upon is that the stuff shall be sold only under its proper name, and not as butter; that some easy mode of discriminating between the two shall be determined upon; that the healthfulness of the product shall be thoroughly investigated; and that due precautions shall be taken that it shall not be made either from materials or in a manner hurtful to the health of the public. The laws should be stringent on these heads, and measures should be taken to provide as well as possible that they shall be rigidly enforced. The justice and expediency of such demands must secure their prompt concession, for in them the vast dairy interests of the country insist upon only what must receive the hearty assent of every lover of honesty and fair dealing.

THE DEVELOPMENT OF NEW ENTERPRISES.

THE present enormous expansion of our industries consists more in the development of new enterprises than in the extension of the staple existing ones. It is true that every new-found industry or product helps to stimulate the old ones, but the vast increase in business which is made year by year is due to the new paths cut out by enterprising pioneers and into which crowds press and force their way as soon as the prospect of success is opened. This fact is so constantly obvious that we may be spared the labor of indicating examples. It is one that speaks for itself. Our greatest industry—agriculture—follows its fellows in their onward march but lags behind somewhat, being hindered greatly for want of those means by which other industries make such bold and successful advances; namely, association and capital. Yet agriculture is moving on, and new enterprises are carried on to sucessful developments.

Foremost among these is the foreign trade in meat and live stock. From the small beginning of four million pounds in 1875, the business has grown to fifty-four million pounds in 1879, and the shipments of the present year are still surpassing previous figures. In 1880, up to the 31st of March, nearly seventeen million pounds had been sent abroad, and the promise of still larger exports is very favorable. The extension of this business cannot fail to be of the utmost importance to American agriculture. It has as yet but just begun. The first dawn of day-light, as it were, has gleamed, and bears no comparison with the brilliance of noon-day that is to come. Let us consider the prospect.

Hitherto everything has been disastrous. Commercial depression, previously unexampled, bore heavily upon the English nation, and the purchasing power of those consumers to whom we must look for our market has been at the lowest ebb. The business was new and prejudice was evoked with the greatest vigor. Now, matters are changing for the better. The condition of the poorer classes of English people is rapidly improving, and already they are largely increasing their demand for cheap meat. They have found, too, that all the charges of unsoundness, parasitic infection, and poor quality, which have been made against our meat, have been invented by selfishness and malice, and they have learned and now understand the trick of exposing and selling our good meat as "home-grown," so that we may expect and prepare for a vast increase in the demand for our meats at a certain price, with which English farmers cannot compete. The price is profitable to us. Ten cents a pound, dressed weight, on shipboard, will well pay our farmers who own their own lands, and the business can afford to pay it.

Again, while England has been the subject of experiment, France, Germany and Spain have been watching the result. A hundred millions of people of these three nations await the opening of this business with them. Nine out of ten Frenchmen rarely eat beef. To procure it is beyond their means. So scarce is this meat in France that a piece of it is boiled first and the soup eaten for one meal, and then the meat is baked or roasted, in their rather poor way, and used for a second meal; meanwhile, the bones are digested until the gelatine is abstracted, for the furnishing of another meal. In Germany something of the same sort prevails, and American beef, in great part, must provide for their needs. The great West is fast becoming occupied, and herds are filling up the most remote valleys. The opportunity of the East and near West is coming, and will afford an opening for largely increasing the supply of meats. It is to such new opportunities, rather than to any large increase of our present staples—wheat, corn and dairy products—that we must look for the necessary development of our agricultural operations. There are others which might be suggested, as the beet sugar production which has a promising future, for one. But the subject is one that calls for individual thought, rather than public discussion, and as such we present it to our readers for their digestion.

A FALLACY AND A TRUTH.

WE often notice in the religious and other press, or hear from the pulpit, what seems to us to be a fallacy of inference. And yet, as usual in such cases, it contains an element of truth. Both seem to us to be found in Longfellow's beautiful stanza,

> "Lives of great men all remind us
> We can make our lives sublime
> And, departing, leave behind us
> Foot-prints on the sands of Time."

The next stanza in the poem brings out the element of truth more clearly, and we shall advert to it presently. But the fallacy in this stanza is so common! "Lives of *great* men?" Ah, but most men are *not* "great," and never can become so by ever so eager and long-continued striving. "Make our lives sublime?" Yes, one in a million may. The rest of us must be content to make them good, useful, perhaps even noble in some sense. But how few can ever make them "sublime!" And here is just the harmful fallacy. How often we hear or read it. The preacher says, "Harlan Page, an uneducated mechanic, was the means of saving a thousand souls. By like consecration you may do as much." Or, "Mary Lyon did a work whose blessed effects shall endure through all eternity." But Harlan Page was as truly a genius in his way as Edison or Milton in theirs. Mary Lyon was a Century Plant, and there may not bloom her like again for a hundred years. Why not say, "Look at Edison's inventions and go thou and do likewise?" One man in ten million may. The rest of us may not. We were not born inventors. The plow horse may not became a racer.

The Professor of Elocution says to his class, "Even Demosthenes had an impediment in his speech. See then what you, too, may accomplish by like patient elocutionary drill." Ah! but Demosthenes had something *back of* that impediment, struggling for utterance, and Philip was threatening the liberties of Greece! Eloquence was "in the occasion and in the man." Without these, "elocutionary drill" to all eternity will not make orators. It may indeed cure stammering, but it will not produce eloquence.

Or some writer or speaker says, in brief, "Look at Benjamin Franklin or Horace Greeley and learn two things:—first, what you, too, may become, and second, that a liberal education is not an essential to greatness." But you may draw neither inference fairly. You cannot become a Franklin or a Greeley (ten thousand chances to one); nor were these men without a liberal education, though neither of them went through college. But you *may* become a better and an abler man than you are, and you need not be uneducated, though it may be impossible for you to graduate from any college. *These* are fair and not fallacious inferences.

These slight hints perhaps sufficiently point out the fallacy, and our last sentence indicated our thought in regard to the element of truth in the "morals" so often pointed from the "lives of great men." The next stanza in the beautiful poem already quoted from, contains that element.

> "Foot-prints which, perchance, another
> Sailing o'er life's troubled main,
> Some forlorn and shipwrecked brother
> Seeing, shall take heart again."

Foot-prints of an *ordinary mortal*, not of a giant. *These* might frighten or dishearten. *Those* will encourage. And those are the only "foot-prints" the most of us can make. We can be kind and helpful and useful, and truly gentlemanly in heart, word and deed. We can magnify our calling and make it honorable. We can promote the material or intellectual and moral welfare of those among whom we live. We can give our children a better chance of growth and a better culture than we had ourselves. We may "live righteously in this present world;" not ostentatiously displaying a sentimental piety or religiousness, but *having*, and hence inevitably showing, that "downright uprightness" of character and conduct that all men everywhere admire; and really possessing that "purity" that "thinketh no evil" and "doth not behave itself unseemly."

Notice a few harmful maxims, "Aim high if you would shoot far." But we do not care to see how far we can shoot. That is child's play. We care to *hit the mark*, and to that end *aim at the mark*. Take another maxim, "They that aim at the sun shoot higher than they that aim at mundane things." True, but they never hit or bring down mundane bird or beast by that style of aiming. Sportsmen nowadays *aim at* the game they want to bag. So with any young man. A towering ambition is harmful. Let him learn to "think of himself soberly." He will soon find he is not a "mute, inglorious Milton," or a Napoleon, or a Webster. Let him seriously estimate what he is capable of doing and then *strain every nerve to do it*. Let him take an honest inventory of the physical, mental and moral gifts bestowed on him by nature, and set about the task of wisely using and increasing them. Let him not try to use powers he does not possess. Let him not think because the eagle can soar aloft with a lamb clutched in his talons, that therefore, the jackdaw must entangle his claws in the fleece of a ram. Nor, on the other hand, let him bury his one talent in the earth because his Lord did not give him ten talents.

The lives of great men are inspiring and most useful examples, if intelligently studied and wisely imitated. They are, we think, harmful as held up in many memoirs, pulpits, speeches and editorials. They are useful if they prompt us to as great faithfulness and diligence in the use of our small powers, as such men have shown in the use of their great powers. They are harmful if they prompt the ambition to attempt impossibilities, and thus follow a delusive "Will-o'-the-wisp," or to refuse to use diligence in the foolish belief that we have genius. Judicious teachers do not tell their pupils they may all be Presidents of the United States. It is a pity to "spoil a good blacksmith to make a poor minister or lawyer."

BREVITIES.

STUDY both politics and agriculture—but, agriculture *first*.

PROFESSOR Storer's article, in another column, will be found to confirm the results of our experiments with wevil-eaten peas.

LET our farmers combine to nominate and to support candidates who know something of agriculture and who will therefore study to promote its interests.

FROM what the writer of this note has seen of the much-praised Sorghum halepense in the South, we caution our readers against introducing it upon their farms in any part of the country where the roots are hardy enough to endure the climate.

IN sheer self-preservation New York has at last passed a law punishing "tramping" with a year's imprisonment; but as it defines a tramp as a vagrant without any visible means of livelihood, farmers may expect a visitation of peddlers of trifles in the ragged guise of the old terror.

HALESIA TETRAPTERA is very abundant among the mountains of western N. Carolina, where it has been in bloom for a fortnight. Our nurserymen deem this one of their finest, large shrubs or little trees, and charge about one dollar per single plant. It is rarely seen in Southern gardens. This is, in familiar language, the Snowdrop or Silver-Bell Tree.

IN reply to many inquiries, let us state that Early Amber Cane seeds are sold by all seedsmen for about $5 per bushel. As has repeatedly been stated in these columns, it is as easily grown as corn, four or five quarts being sown to the acre in hills or drills. Land that will raise 50 bushels of shelled corn, needs no special fertilizing, since an over-thifty growth is not desired.

BY a letter from President John G. James, of the State Agricultural College of Texas, we learn that the chair of Scientific and Practical Agriculture at that college, which has been endowed with the Congressional Land grant, will be filled by the Board of Directors next summer. Applications for the position can be filed at the President's Office, College Station, Brazos County, Texas, until June, 25th, 1880.

DON'T wait till the crops come up to destroy the weeds, but the moment they appear attack them. They can be destroyed early in the season with one-fifth to one-tenth the labor that they demand if left to multiply and enlarge later on. One of the best implements for this purpose is a harrow with fine, thick-set, steel teeth, sharp-pointed and sloping in the rear. These can be made wider or narrower, lighter or heavier, as required.

IT is said that there are 34 persons in the United Kingdom who are owners of above 100,000 acres each. The largest of these is the Duke of Buccleuch, who possesses 459,260, the acres gradually diminishing down to the Earl of Montrose, who has only 103,760. The total is 6,004,107 acres belonging to the above 34 persons. Our California and Great Western Plains friends, will have to whip up a little to obtain as large estates each as are specified above.

IN small gardens where it is desired to bring forward melons, beans, etc., as early as possible, the following plan, though far from new, will prove serviceable. Prepare the soil the same as if the seed were to be planted in the usual way. Then place four bricks so as to form a square at suitable distances. Plant the seeds within this square and cover with a pane of glass. In this way, as a matter of fact, miniature cold-frames are formed without much trouble or expense. The same plan may be adopted to forward any kind of flower seeds.

WRITING to the London Ag. Gazette, Prof. Morrow remarks: "In making estimates as to American agriculture, the necessarily rapid enlargement of the cultivated area from year to year must always be kept in mind as an important factor. This extension of the cultivated area is greater than the increase of population, so that, with equally good crops, the surplus for exportation grows larger each year." If our late wheat reports from all parts of the winter-wheat growing areas of our country, forecast one thing more than another, it is that wheat will rule low another season.

OF the two British Commissioners who lately visited this country to investigate American agriculture, Mr. Clare Sewell Read, Conservative has been relegated to private life, the electors of South Norfolk having, in the late election, preferred a Liberal land-owner to the only representative of tenant farmers that had a seat in the legislature. Mr. Read was a persistent stickler for tenant farmers' rights and prominently mentioned as Secretary for Agriculture on the hoped for establishment of a new Ministry of Agriculture. He and his opponent had the same number of votes, but on examination of the ballots it was discovered that while all those for his rival were correct on one of the ballots for Read, the voter's name was written on the back of it—a slip that rendered it inadmissable. His Tory principles caused his defeat in the late Liberal upheaval. Mr. Pell, the other Commissioner, has however, been re-elected.

THE Hon. F. P. Root states, in the N. Y. Tribune, that there is no soil that has proved more enduring for wheat than a calcareous clay loam of alluvial formation. Though this is the character of a large portion of Western New York, yet the alternate cropping with wheat and clover has resulted in exhaustion of the mineral properties of the soil. Years ago Mr. Root thought, while pursuing this alternation, that the abundant crops would never fail; but after following the system for ten years, his wheat became less fair and plump. The growth of straw was in most cases increased, but the yield of grain was less. The clover also began to fail so that he found it difficult to get a good seeding. Finally, in 1854 and '55, he met with a total failure, still having an abundant growth of straw. It was finally found that the use of mineral fertilizers was necessary to restore to the land its former productiveness, and the average yield of wheat in the past three years has been greater than in any like period in the previous quarter of a century.

THE members of the St Louis wheat ring are said to have combined with those of the Chicago ring to stiffen prices. For months wheat has been extensively sold to be delivered in May, the sellers in many cases never intending to deliver a bushel, but merely to receive or pay the difference between the price at which they sold and that at the date at which it was to be delivered. These at the opening of the month were "short" on wheat; whereas, those who had more on hand than they had sold, were "long." It was therefore to the interest of those "long" on wheat, to raise prices, hence they are the "bulls" in the market, whereas the others are the "bears," the former always tossing up prices and the latter pulling them down. The St. Louis "bulls," then, having combined with those of Chicago, are said to have made somewhat of a "corner" in wheat, sharply pinching the "bears," and to this movement is due the stiffer tone of the wheat market noticeable in our reports. This will hardly last, however, as the "bulls" of this week may be the "bears" of next, according to the obligations they have meanwhile incurred and the state of the market.

Literary Miscellany.

JOHN ASCOTT'S DAUGHTER.

BY CHARLES RICHARDS DODGE,
Author of "Louise and I."

(Continued from page 285.)

CHAPTER III.

CHASING A BUTTERFLY.

Upon a warm and pleasant afternoon towards the latter part of May, George Ashton took his gauze net and collecting apparatus and sauntered out to spend a few hours with nature, in the pursuit of knowledge and—insects. No doubt the reader's nose is slightly elevated at the bare suggestion of a grown up young man engaging in such an undignified pursuit, an amusement belonging particularly to the juvenile age. Dear reader, are you aware that we are all chasing butterflies, and the greater part of mankind chases them with no better success than attends the truant boy? See how he pursues the splendid creature from flower to flower, now almost possessing the gaudy prize, in a moment losing it as it soars above him, following it over field and meadow, and through tangled wildwood, here and there, up and down, breathless, panting and weary, while the fields are full of golden buttercups and tiger-lilies, and the woodland offers its rarer floral treasures for the mere gathering. How eagerly and earnestly is the pretty painted thing pursued, and when it alights again with what breathless caution does the youth draw nearer and nearer, and at last, exultant, the long-sought prize is grasped—and it lies in his hand a crushed and lifeless thing; its grace, its beauty, and all that made it worth having gone out with the feeble, vital spark! If you are a man of the world, what airy project are you pursuing, charmed only by the glitter of its wings as it floats so gracefully in the blue ether above you. Is it worth having, should you, one day, find it within your grasp? Will its possession repay you for all the toil and anxiety of pursuit? Or perhaps, your gentle nature chases a butterfly of fashion and society, running a race as mad and wild as ever did rosy-cheeked boy, only

"To find at eve its wings are soiled and torn,"

but this is a long digression.

Following in the footsteps of the truant youngster, George left his work in the laboratory at an early hour, upon this pleasant afternoon, and started out to chase buttertiles. To make their capture a certainty, however, he was provided with a deep net of white gauze secured to a pole as tall as himself; and at his side hung a collecting box lined with cork.

A cushion upon the end fairly bristled with long, sharp pins, with which to impale the helpless victims,—and his pockets were burdened with sundry bottles and pill boxes, all in the interest of science. He had rambled for a couple of hours unmindful of the direction taken, when he found himself approaching, as he thought, a large private park upon the estate of some country gentleman. Sauntering slowly along a neglected by-path that he knew must lead before long into a traveled road, his mind filled with pleasing fancies, his eye was suddenly attracted to a rare and beautiful insect hovering over a thistle bloom, not twice the length of his net-rod distant. It was a prize worthy of capture at any cost and he proceeded to reconnoitre. Fortunately its head was turned in an opposite direction, and as it gently opened and closed its richly-colored wings while resting with airy grace upon the flower, it displayed its rare beauty to the best advantage. A quick maneuver and the next moment the splendid creature was sailing high above his head. Was anything ever more provoking? After wheeling about a moment in mid air with no fixed purpose, it suddenly darted in the direction of the grove, and George, more eager for capture than ever, started after it in hot pursuit. With net held high in air, straw hat flying by its guard, and face flushed with exercise and excitement, over stone walls and across the field he flew—through briars and under-brush, on and on, until the very grove was reached. Will it enter? It passes the low shrubbery at the edge of the park, mounting high above a clump of young undergrowth in its flight, and plunging through the thicket in wild pursuit, the young man emerged upon the other side, breathless and hatless—and found himself face to face with a very pretty girl, lying in a hammock reading.

To state correctly which evinced the greatest surprise, the lady or the young man, would be an extremely difficult matter,—but the shock was so sudden she lost her book in the grass while indulging in a slight feminine scream, and he forgetting entirely his *Papilio* gave expression to a remark most easily indicated by the fifteenth letter of the alphabet and a row of exclamation marks.

"I didn't know,—that is, I thought—really pardon my rude intrusion," he stammered, as he stooped to pick up the fallen volume.

"Thank you," she replied, with evident embarrasment," no apology is necessary, but——"

She did not finish the sentence, and as the young man had nothing further to say, for a moment they simply stared at one another; then their eyes met, they both saw the ridiculousness of the situation and laughed in spite of themselves. She was rather above the medium in hight, with fair, fresh, complexion and full oval face. Her forehead was low and her brown eyes large and deep set, but her soft chestnut hair caught loosely at the back of her head particularly attracted George's attention. An awkward silence followed for a moment and the young man, not knowing what else to do, again begged the lady's pardon for his rudeness, said good afternoon, and retraced his footsteps to where his hat had fallen.

"Who is she?" he mused, "I have lost the butterfly, but what does it matter after such an adventure."

There was something so attractive in the face that had so suddenly burst upon him he felt irresistably drawn to it again, and before he was hardly aware of his intention, found himself once more confronting the beautiful girl.

"Excuse me,—I have lost—my handkerchief," he faltered.

"I have seen none," she modestly replied; "what was it like?"

"It had a blue border," he answered, looking full into her eyes.

"You have such a one on your neck now," she remarked, with a faint attempt at a smile.

"Have I, oh, thank you" he answered, blushing slightly.

There was evidently nothing to do now but to retire again, but something still held the young man, and in another moment he said "your face seems familiar, have we ever met before?"

"I do not know" she replied looking full into his eyes; you remind me of a friend I once had, years ago, though the resemblance is not very striking. We were playmates."

"Was his name George Ashton?"

"Are you George Ashton?" she asked archly

"You are May Ascott I know" he replied with warmth, putting out his hand to her.

"Yes, I am May Ascott, but I never dreamed we should meet again, after so many years." She rose from the hammock laid aside her book and advanced to greet him. "What are you doing here."

"Chasing a butterfly I should think from appearance," the young man answered, blushing now in real earnest." And you——"

The eyes of the fair girl fell at the question. She stood thus, a moment, and then looking into the manly face before her answered with nonchalance, "I am living here for the present—as—a governess."

"And I am at College in N——" George answered quickly.

"Then you are near."

"So near, I shall be happy to chase butterflies often in this direction—with your permission, Miss Ascott."

"I shall be pleased to see you. I am at leisure Wednesdays and Saturdays in the afternoon."

"I shall certainly come, and I am so glad we have met again after so many years. It is strange I should know you for you have hardly a look of the little girl with whom I played at Maplewood."

"It is pleasant to renew old acquaintance," the girl replied timidly.

"We must become good friends again, and I want to know what you have been doing all these years."

"I fear my story would not interest you. There has been little of interest in it for *me*."

They talked on a little while longer, until, mindful of his long walk across the fields to N——, George said good-bye, promising to come again at the earliest opportunity. Those were pleasant days indeed that followed, while they lasted, for in a few short weeks, school days were over, and the young man returned to his home in a distant part of the State.

CHAPTER IV.

A WILL AND A WAY.

It will not be necessary in this brief history to dwell long upon the three years of George Ashton's life that followed his leaving college. He had studied well, fairly earned his degree, and graduated with honor; but, after all, he found himself questioning in what possible way could his education be made to directly assist him in earning his bread. Many of his classmates who had taken "practical courses" as his father called them—civil engineering and the like—had stepped into good positions or found employment upon leaving the walls of Alma Mater. Others had become better fitted to enter business pursuits for which they appeared always fitted, but George seemed to be a round peg in the midst of a multiplicity of square holes. Could he have had his own way he would have spent the remainder of his days in the study of that mysterious nature with which we are surrounded—that enters so closely into our very lives, and of which we all know so little, but the question of bread and butter was so all-important a one—indeed one of the first questions to be considered in the solution of the "theories of *life*"—that he left the fields of scientific research for a book-keeper's desk, near home, at a merely nominal salary. Here he found himself in the squarest kind of a hole, through which he dropped completely before the year was finished. Several other holes were tried in like manner, with a like result—they were all square—and at the end of the three years we find him a good-looking young man of three or four-and-twenty, out of employment and chafing under the restraints of his father's house. As has been stated, he was not wholly dependent upon his father's bounty, for a maiden Aunt had left to him her little property amounting to several thousand dollars.

In the meantime the renewal of the acquaintance with May Ascott had led to something more than friendship upon his part. They had corresponded from the time he left college, and a year or two after, "fortune" threw them together for a whole summer, at one of the resorts upon the coast, whither she had gone with the De Fond villes, in whose family she made it her home. Thus their intimacy, strengthened by the sentiment of childish recollection, early ripened into that tender regard which often prompts brotherly and sisterly feelings rarely experienced by blood-relationship.

A few weeks previous to the opening of the story he enjoyed a brief sojourn in N——, and the date of this visit may be fairly called the turning point in his life. It was then that he told sweet May Ascott of his love for her, a love she had known and reciprocated long ere his lips had confessed it. It was then he told her of his plans for the future, and of his resolve to *do* something in the world. Then it was that he asked a promise of her, a sacred promise to become his wife, when hey were both ready, and received her woman's answer, trustful, confiding and true. He did not care if the whole world knew it then—his brothers had known of an attachment before, and holding their father's prejudice had ridiculed it—and he came home with a new impulse for work.

The idea of going into farming was no new thing with George Ashton. He had always hated confinement, and the thought of having to earn his living in business pursuits, in the ordinary acceptation of the term, was exceedingly distasteful to him. Here was a pursuit in which he might enjoy the freedom of out-door life, and while laboring for his daily bread, have opportunity, for the study of nature in its highest sense to gain a knowledge of its laws and learn how to apply them to the service of man. Yes, the farm was the thing! The lack of money to buy it had been the principal difficulty in carrying out the idea, but thanks to Aunt Jane's preference, this, in a measure, had been removed.

A little bit of sentiment, too, entered into this matter of buying a farm. After it was bought he hoped to bring a wife to it some day, and he knew by bringing her to the home of her childhood he would bestow a great happiness upon her. That was the sweetest part of the idea, and as a man has seldom the opportunity to perform so simple a business transaction, and, at the same time, do so charming an action for the woman he loves best in the world, you may be sure George was in earnest about it. May knew nothing of this, of course. To her it was but a farm, her husband's farm—that was to be—and she was going to help him make it a success; but to him it was not only a farm but *the* farm, in fact, May Ascott's farm, for she should never have been cheated out of it by the devilries of her rascally half-brother. He regarded it an exceedingly fortunate circumstance that Maplewood was in the market. When it passed from the Ascotts, it was bought for considerably less than its real value, by a gentleman who soon became tired of rural life, and for a term of years it had been under lease to a neighboring farmer.

It was now for sale, the time had come to talk of purchase, indeed George had "talked" purchase with the owner to as full an extent as was necessary short of actually closing the bargain. A little aid from his father was necessary, however, before that important transaction could be gone through with; he could well afford to assist him and he resolved to broach the matter at the earliest opportunity. After several weeks of waiting for the favorable moment—for he knew the old gentleman's weak points, and shrank from arousing his prejudices—the time arrived, and the request was made, with what success the reader is already aware.

It was a cruel disappointment to the young man for he had no idea that the old feelings of bitterness against an unfortunate neighbor, dead long years, could extend to the living daughter, but after all he felt himself more a man for the experience. His father dared to speak lightly of the woman he loved, had even threatened to "cut him with a shilling" if she ever became his wife, and stung and maddened by the fatal opposition, he was roused to a sense of manhood and dependence upon himself that he had never felt before. "Where there is a will there is a way," and when there is a woman in the case the *will* is generally a foregone conclusion and sometimes it's a pretty strong one. Mr. Ashton heard no more of the farm project, and supposed he had "sat down" on the thing so effectually that he should never hear of it again; but George kept his own counsel, made more frequent visits out of town, while towards his father conducting himself in so proper a manner that the old gentleman really had hopes of him.

Mr. Ashton felt in a particularly good humor one evening, a month after the occurrence related in the first chapter, and as George had just returned from the lawyer's, he too was in the best of spirits.

"Well, George," said his father, "I have about made up my mind to buy that Ascott place myself; it's good property."

"Do you really think so?"

"Yes, at the price you named I think it a good investment."

"I am glad you agree with me for once, father; your opinion is a compliment to my judgment."

"Do you think you could really manage such a piece of property?"

"I feel fully capable of it."

"And make some account of your chemistry and your botany and the bug-nonsense you learned at N——?"

"I certainly believe in science with practice, father."

"By the way, your cousin Jennie is coming here to spend a month. She's only a forty-second cousin, I suppose, but she's a smart gal, and ought to be included in the family. I like Jenny."

"Oh, she's a fair sort of a girl, I suppose; a little old fashioned," George replied.

"What did you say?" the old gentleman asked abruptly, eyeing his son very sharply.

"I said she was a fair sort of a girl, but rather *slow*."

"I don't understand you," said the elder Ashton, his eye growing a little colder.

"Well then, she's not the sort of a girl I should choose for a wife, if that's what you're driving at.'

"Oh, she isn't, eh!" his father replied sarcastically. "Perhaps when she owns Maplewood, and has a few thousands in her own right, you'll think differently."

"She will never own Maplewood, father," George made answer, his lip curling scornfully.

"The devil she won't, you young scapegrace. I'll buy the place to-morrow," and the old gentleman brought his fist down upon the table with such force that a pair of wine-glasses sitting near were shivered.

George looked at his father a moment, and then replied firmly, but with great calmness, "I hardly think you will."

"You—hardly—think—I—will. Why—why—damme—oh—ugh! What do yo mean, sir, by daring to talk to me in this way?" he fairly roared.

Having *just purchased it*, I am not ready to sell, besides as I shall marry Miss Ascott in less than a month I shall need it for a home for her.

The storm broke in its fury; the thunder crashed and rattled over the devoted head of the young man, while forked lightnings seemed to play all around him until the atmosphere grew livid. The torrents of wrath descended as though the flood-gates had burst their bars—and then there was calm.—[To be continued.]

BRIC-A-BRAC.

A noble lord, as proud and as fond as a man should be of his beautiful young wife, was just about rising to speak in a debate when a telegram was put in his hands. He read it, left the house, jumped into a cab, drove to Charing Cross and took the train for Dover. Next day he returned home, rushed into his wife's room, and finding her there upbraided the astonished lady in no measured terms. She protested her ignorance of having done anything to offend him. Then what did you mean by your telegram?" he asked. "Mean? What I said, of course. What are you talking about?" "Read it for yourself," said he. She read: "I flee with Mr.—— to Dover straight. Pray for me." For a moment words would not come; then after a merry fit of laughter, the suspected wife quietly remarked: O those dreadful telegraph people? No wonder you are out of your mind, dear. I telegraphed simply: I tea with Mrs.—— in Dover street Stay for me."

The other Sunday the Sabbath schools had a lesson which involved an explanation of the term hypocrite. In one of the infant schools a teacher labored very earnestly to give her class a correct idea of the word. One little girl said she always thought it was a great big animal, and she guessed she had seen one at a show, "Oh," the teacher said, "a hypocrite is a man who makes believe to be real good when he isn't. Sometimes a man will give a lot of money to a church just to make people think that he is better than anybody else. "Well, my papa ain't a hypocrite," spoke up a little girl back in the corner of the seat, "for he only gives a penny every Sunday.—*Carbondale (Pa.) Leader.*

Oh, dear! I feel so tired," sighed Mrs. Hickenlooper, as she sank into a chair. "Well, I should think you would be," growled Mr. Hickenlooper, as he put on his coat to go out; "you tramped around more'n seven miles this afternoon making your silly calls. I shouldn't call myself half bright if I did such a thing." And then he went down street, and walked nine miles around a billiard table poking ivory marbles with a stick, at 25 cents an hour, and she thought how hard he had to work at his business, poor man, when he came home at midnight and dragged his enfeebled limbs into bed. Some women are just like that.—*Rockland Courier.*

Luck is a good thing, but one cannot always afford to wait for it. Pluck is a better thing, because it is always ready to begin.

The covetous man is as much deprived of what he has as of what he has not, for he enjoys neither.

MAGAZINES FOR MAY.

The Phrenological Journal and Science of Health—Contents: Wilhelm Richard Wagner Portrait; Philosophy of Superstitution; Comparative Phrenology; Beer and Cider Crusades; Labor and Social Co-operation in France, With Portrait of M. Godin; A Society for Guiding Children; Bits of Natural History from South Carolina; The Young Folks of Cherry Avenue. A Mischievous Boy and a consequence; Colds—How Caused and Treated; Milk as Food; A Gentleman of Color on Brown Bread; Hard Reading; Remedies for Cold Feet; Notes in Science and Agriculture; Editorial Items; Answers to Correspondents; What They Say Personals, Wisdom, Mirth, Library, Publishers, Department.

A Glacier in Colorado.—A gentleman who has traversed the mountains in the vicinity of Leadville, and penetrated almost every one of their secret recesses, informed the Leadville Herald that there is within twenty-five miles of this city one of the most interesting curiosities of nature—a veritable glacier, presenting all the characteristics of the glaciers of Switzerland, both in magnitude and motion, its progress being gradually down the gulch. The scene of this curiosity is located in the Mosquito range, about fifteen miles north of the pass. The traveler states that he first discovered it about three years ago, when out on a prospecting tour. It was then nearly a a mile in length, and at the bottom of the gulch presented a sheer precipice of ice not less than one hundred and fifty feet in hight. Later in the season the place was visited again, when it was found that the great mass of ice had melted, until at its face it was not more than one hundred feet high, the loss from the surface reducing its length to about half a mile. Again, early in the following year, the place was visited, and the glacier was found to have regained its bulk, showing that the accumulation of ice and snow during the winter was about one-third its gross bulk.

The rocks on the side of this immense mass of ice show the mark of attrition, proving beyond all controversy that the glacier is in motion. The earth at the foot of the glacier, heaved up in great masses, shows that it is gradually moving down the gulch into the valley. During the summer a large stream of water flows from the face of the ice cliff. The glacier, as it progresses out of the deep gorge in which it was formed, may slowly melt away, so that it will not last for many years. It is out of the way of ordinary travel, and the route to the scene is exceedingly difficult.—*Phrenological Journal.*

For Women.

CONDUCTED BY MISS RAY CLARK.

FASHIONS.

Among the most popular goods for spring and early summer we still note Indian cashmere, ever a favorite with many ladies, because it is softer lighter, and more durable than any other, and can be had in every possible shade of color. Besides the well-known tints still in favor, the most fashionable colors of the season are heliotrope; the favorite tint for toilets of ceremony, weddings and receptions, dark myrtle-green, *aventurine*—a reddish-brown—slate; all shades of willow-green, steel-blue, and buff for mantles. All prune shades, whether inclining to blue-color or to bluish purple, are in great request.

All these shades also exist in tolle-de-laine, a material lighter than cashmere, of the same width and less expensive, and also in muslin-de-laine, a still thinner fabric, very suitable for summer toilets, either employed by itself or combined with silk. There is yet a lighter, almost transparent fabric, called batiste-de-laine, which makes up very prettily for evening toilets, and is trimmed with unbleached thread lace and bows of satin ribbon.

In fancy goods we have, woolen moire, to which combined with plain cashmere or tolle-de-laine, makes up very stylish walking-costumes: woolen damasse and woolen brocade also for the same purpose. Indian cashmeres in shawl patterns are still very fashionable for the trimmings and accessories of both walking and indoor costumes. Bands of Indian cashmere, in small Oriental patterns, are to be had ready prepared for trimming dresses, and either fringed or not, at pleasure. They are used more especially for trimming dresses of such shades as seal-brown, beige, navy blue, ciel-blue, sapphire-blue, &c.

Brocaded and armure silks are also much used for trimmings, and are more fashionable this year than Pekins.

We are told the mantelet is to be worn in the summer again; but at present the favorite mantle seems to be the paletot, or rather a new modification of the paletot, neither very long nor very short, with rather wide sleeves, and of a tissue different from that of the dress; very often in fancy fabrics, such as figured Indian cashmere brocaded silk, and damasse wool and silk stuffs They are trimmed with crimped fringe, feather borders, or embroidered galloons. Their style is novel in that they differ from the dress, and as two self-colors would form too crude a contrast, they are made in preference of some figured material in well-harmonized shades of color. If, however, a plain fabric is selected for the paletot, it is trimmed with wide bands of Turkish cashmere in palm-patterns, edged with fringe. A buff paletot—buff is quite the fashionable color for paletots—is often trimmed with Turkish cashmere, the pattern of which is set off by a seal-brown ground the mixture of plain with figured materials still prevails in all toilets. When there is a jacket or coat-bodice of figured material, it has a plastron or vest of the plain tissue; and the skirt, of the plain material, is trimmed with scarfs, tabs, or panels of figured stuff.

These combinations are made as well with inexpensive woolen fancy materials as with rich silks and brocades; thus, tolle or muslin-de-laine, combined with woolen, moire, damasse, or brocade, or any other woolen goods, make up very pretty for drosses. And a very neat and elegant style is to have the paletot of the same material as the trimmings of the dress.

The pretty Pompadour and Watteau patterns shionable in silk fabrics are also copied in woolen batiste, and will be still more so in summer in washing materials, such as cambric, percale, organdy and printed muslin.

Most of the new walking-costumes are made with the long-waisted, tight-fitting jacket-bodice, the basque of which is round, pointed, or square, according to taste, frequently also it terminates in coat-lappets behind.

It is easy this season to modernize last year's dresses so as to make them look fashionable again. I will give a few hints on this subject, which may prove useful to some of my fair readers:—

Suppose you have one of the long princess-shaped polonaises so fashionable at the commencement of last summer. It can be made to look quite new and stylish by being open at the back instead of front, and fastened with satin bows to match. A princess-dress can be freshened up nicely by having plastron and tablier of figured material added to them.

If the bodice of any dress is worn out or no longer fashionable, nothing is easier than to have a jacket or coat-bodice made of some other material. If your dress be a plain silk, have some brocaded ditto and have bias bands of the same for trimming the skirt If it be of figured silk, take plain satin of the same shade, or of the color of the grounding, if it be multi-colored, for the bodice and trimmings. Unless the dress is very elegant and as good as new, satinette will be quite sufficient for making it up. For a dress of cashmere, or any other plain woolen tissue, wool and silk brocade, or Turkish cashmere in subdued shades of color will look well for the trimmings, and figured cashmere may be combined with plain silk or cashmere.

Spring jackets for young ladies are made of fancy cloth in different shades of beige, gray, brown and cream color. They are made tailor-fashion, with no trimming beyond stitchings and fancy buttons.

The shapes of hats are more fanciful than ever this spring, some being turned up at the side, some in front, and some at the back. Leghorn or rice-straw appear to be the favorites, and are lined with satin in rich, dark shades of blue, violet and crimson, with large birds and feathers on the outside.

The new straw bonnets are large in shape, with wide brim protruding in front, but with little or no curtain.

The boundary line between the hat and bonnet is very difficult to find out, as some bonnets look quite as flaunting as hats, and turned up quite as jauntily, many having no strings even to distinguish them from the former.

Many ladies however still prefer to such fanciful shapes the white, trimmed capote, the strings of which are now made of very wide ribbon, frequently brocaded or floriated, and tied in a large bow on one side.

THE GUEST CHAMBER.

Every house should have its guest chamber. One of our most beautiful and delightful social obligations is the duty of exercising hospitality gladly and freely.

Mrs. Whitney, in one of her most charming books, speaks of the great difference that exists between people in their ways of receiving visitors.

With some there is a perpetual showing off and trying on, as it were, becoming manners and conversation The atmosphere is not like the air of every-day life and everything is pitched in too high a key.

Others feel as if an entertainment of friends were a social convulsion, so to speak, in which nothing should go on or be done until the intruder has departed.

The true hostess takes you into her own home-life and air, brightened, if you are loved, by your presence there, varying only from the beautiful daily order and warmth by numberless pretty little attentions which every one has leisure to pay on the busiest day, and yet which make one feel so welcome. The kind questioning about the welfare of the guest's own household, the ready interest in her domestic stories—of the sayings and doings of the little ones, or of her own plans and work; the easiest chair brought forward to the warm and cosy place by the fire, or if it is summer the gathered flowers at the plate; these, and a thousand other trifling courtesies give your visitor the good of her change of air and place, her social intercourse, from which she may return home refreshed and strengthened, and glad to give to another the same kind of pleasure and welcome she has received.

Such hospitality as this comes so near the home life that it may be long sustained and frequent. The guest chamber should not long be empty. In winter, warm and cosy and bright; in summer fresh and cool; ministering to the bodily needs, yes, and to something higher.

The great empty rooms of a pretentious house are often swept and garnished for the abode of such evil spirits as pride and covetousness, coldness and self-absorption.

Fill them with cheerful human presences, and let them be glad with human voices, and how soon your own especial grievance or disappointment will have completely vanished away, lost among more unselfish and brighter thoughts.

We need one another for help and for pleasure and for mutual instruction, for it is in the world, not out of it, that character is formed and disciplined and the great battle of life is fought.

There is no working class more active, economical, self-denying and prudent than the French. They display their marked ability for practical business in the payment of their immense war debt, in the prosperity—notwithstanding the revolution after revolution and continued political disturbances—of their artisans and small farmers.

Nowhere does one see the abject squalor of the London poor, but the peasant children are warmly clothed and shod and suitably fed. Yet their working hours last long beyond ours, and every expense is carefully regulated and all superfluity avoided.

But no one in France is too poor for recreation after work is done. In the evening kinspeople, friends and neighbors meet together in a homely manner for a little music, perhaps a little reading or recitation, at any rate for a lively and friendly talk together.

No matter how many drop in, no expensive preparations are made; at the most, cake and tea, or something of the same light nature may be handed, but generally the guests come after supper.

The result of this is that the hardest and most untiring workers are never overworked. They rest each other, and bring together new ideas and smiling faces until the whole atmosphere is one of hopefulness and kindliness. Would it not be well for us to imitate their courtesy and cheerfulness, their unfailing hospitality? It is hard to measure the good that may be so given and received.

E. F. M.

A RAINY-DAY SKETCH.

I have become so much interested in the "Women's Department" that I've concluded to offer this random sketch hoping, that as it has been a pleasure to the writer, it may prove of some slight interest to the many lady readers of the Rural.

A sensational newspaper reporter would retire in lofty disgust from the unfruitful tranquility of "our town," indeed, the social animation of the place partakes so much of the tread-mill character that the fact of a quiet citizen having been knocked down by a big man in a slouch hat, and carrying a dark lantern has furnished sufficient material for two months talk, sufficient material, in fact, to make a first-class tale of horror for our grandchildren.

I must refrain from this style, or, some one may think it poor taste to write so lightly of my home, but too much amiability must not be expected of one who has been listening to the rain pouring down every night and drizzling down every day for three weeks, with a day or two thrown in for "good measure."

Some of my sisters may say that "some days must be dark and dreary!" but think of three weeks of dark days! My husband, who is a farmer in the embryo state, shakes his head gloomily and says he is afraid the wheat crop will be ruined, and my baby boy presses his wee face to the window and says "rain tum down, mamma."

While writing this, a letter has been handed to me from my bachelor brother in Florida, and he wishes he had a home so I could visit him. He thinks I would meet a different style of humanity from any I've ever encountered, and he also writes that in his neighborhood, they do not ask if a man is smart, but "is he progresssive?"

The weather there is certainly progressive for when he wrote the thermometer stood 90 degrees in the shade.

"Is that pretty hot, dear?" I asked my husband and he answers, "Yes, regular collar-melting weather."

Before closing I will mention a kind of reading club which we have organized. We have marshalled our forces, and I trust the fortunate members of reading clubs will wish us *bon voyage*.

Bradley Co. M. P.

Miss Lillie Carpenter, daughter of the senator, keeps in her parlor a spinning-wheel that belonged to her great-grandmother. She is distinguished in Washington as a vocalist, and when she sings her favorite song, she spins flax as an accompaniment.

Never tell people of several faults at once. You will profit them nothing, but discourage them greatly. Rather set their faults gradually before them, as you see that they have courage to bear the sight with advantage.

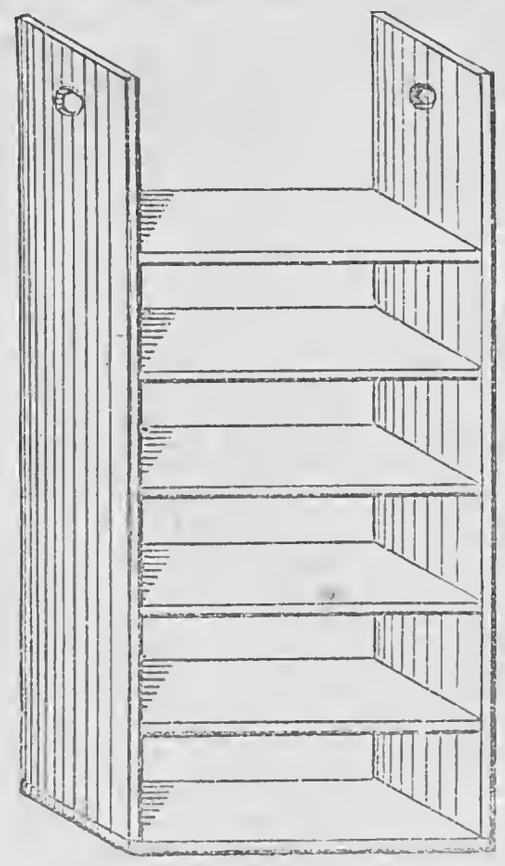
Domestic Economy.

CONDUCTED BY EMILY MAPLE.

MOUSE-PROOF MILK-SHELVES.

MARY BEAL M'LOUTH

It's not any trouble to have mouse-proof milk-shelves where the ceiling of the cellar is plastered. When we began house-keeping in an old house, and found it impossible to keep a dish of sauce, butter or pie in the cellar without covering, not only on account of the mice, but the dirt sifting through the floor above, I devised a remedy for both difficulties, and hope my success will be of some benefit to others. The illustration will show how the shelves are first made. Two pieces of two-by-four are fastened across two joists, as far apart as the shelves are long, and a nail driven on



MOUSE-PROOF MILK-SHELVES.—FIG. 150.

the inside edge of one and the outside edge of the other, and the shelves hung up. Then they can be taken out in the sun to be cleaned and dried. Our cellar is so damp that I cannot use much water in it, or the boards will mold. Get some old pieces of sheet-iron, and nail them at the ends of the shelves over the four joists. Do not bend in too square corners, so that the mice can find a foot-hold, and if you leave any cracks under, drive in some splinters, and fill them up. Keep barrels and boxes at least four feet from the shelves, so that mice cannot jump on.

PEN-THOUGHTS FROM EVERY-DAY HOUSE.

MRS. ANNIE L. JACK.

There have been, for the last two weeks, signs of spring, that are becoming every day verified. April in this cold, northern country is a very treacherous month, not as in the British Isles distinguished by sunshine and shower, but by sunshine and frost—chilling winds and flurries of snow succeed genial days and sunny hours, all alike trying to vegetation. The Snowdrops have bloomed and faded; Hyacinths push their crowns of promise into the day-light, and the trees bud and take on a green tinge. But any sharp morning we may find them stiff, and be reminded that we live in ungenial Canada. Yet our climate has its advantage, and is bracing and invigorating to the strong, while as Whittier says:

"There's iron in our Northern winds
Our Pines are trees of healing."

House plants seem to feel the effects of air and sunshine; our little greenhouse, of which I have several times written to Rural readers, is a marvel of brightness and beauty, the Geraniums especially vying with each other in color and variety, nearly twenty different sorts being in blossom, besides many duplicates of the popular kinds—some of the choicest were Rural gifts, and as such are proudly pointed out to admiring friends. I suggested the other day to "our special artist," that it would be quite an improvement in plant growing if we had handsomer flower-pots. Why not decorate them as we do our china? that is, those used in a sitting-room; then, when in flower, they would be ornamental for table or side-board, robbing wintry days of half their dullness.

The housekeeping department is in its transition state. We took a fancy for muffins the other day, and the amateur cook tried several recipes; but, although each was pronounced good, they were not considered just "the thing." At last, by a happy thought, we experimented with Graham flour in this wise: one quart of Graham flour, one tablespoonful of sugar, a little salt, three teaspoonsful of baking powder, one egg and a pint of milk. The flour, salt and sugar were sifted together; the egg and milk beaten up as for custard and made into a good stiff batter. They were put into muffin pans, baked twenty minutes in a hot oven, and pronounced a success. Another form of muffin, excellent for tea, was made by taking two cupsful of cold, boiled rice, a pint of flour, a little salt, a teaspoonful of sugar, three eggs and a pint of milk with two teaspoonsful of baking powder. The rice is beaten free of lumps and the eggs and milk well mixed and stirred with the other ingredients. Make the batter rather stiff and bake as in the other receipe. These little varieties of bread at this season of the year are very agreeable, and more healthful than a steady diet of fine wheaten bread. And, while writing on these things, let me say to housekeepers that no article of kitchen utensils repays the buying better than a soapstone griddle for all kinds of pancakes. I have only had mine three years, but often wonder how we did so long without it.

DOMESTIC RECIPES.

Rhubarb Marmalade.

Wipe your rhubarb with a damp cloth, and cut in pieces as for a pie. When cut, to every quart of fruit allow three-quarters of a pound of sugar. Lay the sugar over the rhubarb in a vessel large enough to contain the juice and melted sugar, and let it stand over-night. In the morning, put it in a preserving kettle, and let it boil gently. Take one lemon for every two quarts of fruit, and, while the fruit is boiling, mince the rind very fine. Ten minutes before the marmalade is done, put in the rind and juice of the lemon in the proportion named. This is a very old recipe, and a great favorite with all.

Spiced Beef.

Take a piece of beef—flat ribs or brisket—and remove the bones with a sharp knife. Mix together with a little water one teaspoonful of mustard, one of salt, one of powdered celery seed, and a small quantity of mace and allspice. Spread the mixture over the beef where the bones have been removed, roll up tight, sew in a cloth, and place in boiling water. Boil with the meat four onions, two of them with a clove stuck in each, one carrot, and a small bunch of sweet herbs. A piece of meat from six to eight pounds' weight, will require boiling from three to four hours, according to thickness. It is better to leave the cloth on until the meat is quite cold. It is intended to be eaten cold

Peach Batter Pudding.

Drain the sirup from a quart can of peaches and lay the pieces in a buttered baking-dish. Make a *soft* batter of one quart of milk, four beaten eggs, a tablespoonful of melted butter, a little salt, two and a half cups of flour with two teaspoonsful of baking powder. Pour this mixture over the peaches and bake in a quick oven. Add sugar, butter, and flavoring to the peach sirup, boil up and serve with the pudding. Mrs. A. B.

QUESTIONS ANSWERED.

Cream Cakes.

Mrs. L. E. M. asks for directions for making cream cakes.

Ans.—Into a pint of warm water stir a half pound of butter; place over the fire until it boils, then put in three-quarters of a pound of flour, stir and boil one minute longer. Turn into a dish to cool. Beat the yelks and whites of six eggs separately, and beat the yelks, then

the whites into the cooled paste. Drop in large spoonsful upon buttered paper, not letting them touch, and bake in a quick oven for about ten minutes. They should puff up to thrice their orignal size. When cool, split open with a very sharp knife and fill with a cream made as follows: Reserve from one quart of milk enough to mix smooth four tablespoonsful of corn-starch. Bring the milk to the boiling point, then stir in the corn-starch. Add two beaten eggs, two cups of white sugar and a spoonful of butter. When cool, flavor with vanilla.

To keep eggs.

S. C., West Northfield, Mass., asks how to keep eggs for six months.

ANS.—We know of nothing better than to pack on end, cover with salt lime-water and keep in a cool place. Proportions, a pound of stone lime and a pint of salt to two gallons of pure water. Be sure that the eggs are perfectly fresh when packed, also be careful not to crack the shells.

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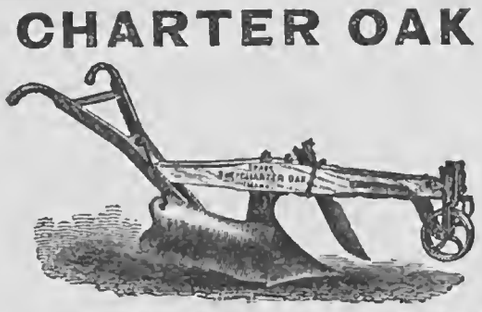

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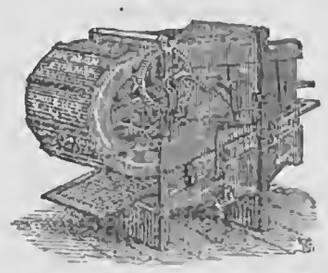

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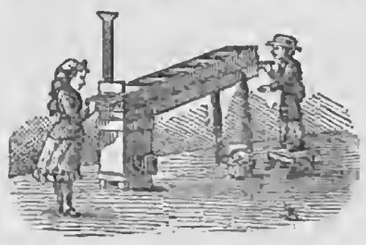

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JOHN VAN GAASBEEK Manager.

News of the Week.

MISCELLANEOUS.

Monday, May 3, 1880.

THE advancing civilization has brought the telephone to Alaska. A line is being laid by the Alaska Fur Company several miles in length. The natives have been told of it, but they cannot comprehend how people can speak through a wire.... The Kentucky Legislature lately passed an exceedingly stringent Sunday law providing for the punishment of all persons who work for pay on Sundays. The step was advocated by the Louisville papers and by a Citizens' League, of which a prominent clergyman was president. On the Sunday following the enactment, the police proceeded to enforce the new law by arresting the sexton and organist of the president's church, and the employees of the leading daily journal. 'Tis a pity the enactment should fit so badly, as some restraint was, no doubt, needed, but the law is doomed to fail ...Politicians of all shades are unusually busy just now, and their activity will increase with the approach of the presidential election. A number of conventions, both State and local, have been held in several States during the past week, for the selection of delegates to the national conventions. Instead of elucidating the pending mysteries of whom each party may nominate, every new convention seems to make "confusion worse confounded." At present it is impossible to forecast what men the two great parties will put in the field as opposing candidates. ....During the month of April the immigrants arriving at Castle Garden N. Y. numbered 45,274, which exceeds by nearly three thousand the highest number that has heretofore arrived in any one month, and the prospects are that there will be quite as many during May. The Immigration Commissioners are basing their estimates on a total of 350,000 for the year. The railroad companies are busy carrying the crowds westward....The nation is again at war with the Apache Indians, During the past month General Hatch's command has been in some severe engagements, and forced to make some exhaustive marching in prosecuting the campaign with the hostiles. Captain Carroll has been seriously wounded and some privates killed. The war scenes lie in Southern New Mexico and adjacent portions of Texas. Business had been almost paralyzed in this part of the country and the breaking up of this nest of thieving and murdering Apaches will be of immense benefit.

AGRICULTURAL NEWS.

THE English milk dealers in cities are still keeping up winter rates, as the supply is short.... During the three months ending with March 31, England imported 151,720,389 pounds of wool, valued at $41,565,677; of this vast amount, 105,575,062 pounds came from Australia... Three months of this year France sent to England only $20 worth of wheat instead of her usual heavy importations, while nothing whatever was received from Turkey or Roumania....Glanders is very prevalent among London horses....In the first quarter of this year England exported 934 horses valued at about three million dollars; last year for the same time the number was 778, and the year before only 415.... The English Derby, the horse race *par excellence* of the world, will, this year, be run for the last time at Epsom. In future it will be run near the mouth of the Thames, at Gravesend. The owner of the Epsom grounds is, on principle, opposed to horse-racing—and his principles are backboned by the fact that letting the land for villa residences will pay him better....In England the best American beef sells for 12c. per pound....Agricultural implements to the value of $2,933,388 were exported in '79, of which $393,978 were for mowers and reapers, and $159,822 for plows and cultivators....Australia headed the list of our customers with $664,756; then followed, in order, the United Kingdom, France, Germany, the Argentine Republic, Canada, the British possessions in Africa, Uruguay, Belgium, Mexico, Chili, Cuba, Porto Rico, Holland, the U. S. of Columbia closing the list with $21,086.. The following gives the imports of live animals into the United Kingdom for the last three years:

	1878.	1879.	1880.
Oxen and bulls, Nos.	... 23,231	... 21,662	... 46,089
Cows	... 7,191	... 3,652	... 8,561
Calves	... 2,957	... 3,461	... 3,893
Sheep and lambs ...	...173,805	... 137,961	... 113,390
Swine	... 1,761	... 2,606	... 5,996
	208,445	... 169,242	... 177,928
VALUES.			
	1878.	1879.	1880.
Oxen and bulls ...	£464,346	... £477,378	... £1,021,599
Cows	118,653	... 63,068	... 148,398
Calves	14,343	... 16,828	... 18,575
Sheep and lambs ...	379,032	... 291,326	... 246,778
Swine	5,592	... 9,120	... 21,354
	£981,966	£857,720	£1,456,704

A Minn. hen has astonished the "natives" by laying 32 eggs in 16 days—it is said The South last year is said to have raised 600,000,000 pounds of tobacco—12,000,000 pounds more than ever before. ..Ga. has 6,864,654 acres of wild land, the average assessed value of which is 23 cents an acre....In six counties of Ky. the average value of land is less than $1 per acre, and in nine other counties it is less than $2 per acre. The whole State has 18¼ acres to each inhabitant....The heaviest crop of cotton on an acre, of which we have any record, was that reported by T. C. Warthen, of Washington Co., Ga., in 1873—6,891 pounds of seed cotton yielding 2,096 pounds of lint, or a little over four bales of 500 pounds each. The rows were three feet each way, with one stalk left in each hill, giving 4,900 stalks. Allowing 100 bolls to the pound each stalk must have had 140 bolls. He was competing for a premium offered by the Ga. Agr. Society....During the past year the Hudson Highlands and Catskill Mountains contributed 200,000 evergreen trees and 100,000 yards of evergreen roping, which was sold in New York city during the holdiday season....Seth Green, the great fish culturist, advocates frog culture. He says that a little care and cultivation will produce a crop of frogs large enough for family use, after supplying the market Away with prejudice!....The Congressional Committee on Ways and Means reported lately the following changes in the tariff: Salt and wood pulp to be put upon the free list; all cotton goods 30 per cent. ad valorem; flannels, blankets, wool hats, and woolen knit goods, thirty per cent. ad valorem; other woolen goods of finer texture, 40 per cent. ad valorem; iron steel rails, trace chains, anvils, hammers and all tools used by farmers, carpenters, and mechanics generally, one cent. per pound specific .. The British bovine aristocracy has suffered a grievous loss by the death of the eighth Duchess of Oneida, daughter of the tenth Duke of Thorndale. Her relatives on both sides of the Fish Pond belong to the best strain of the Bates' blood. Her untimely end was due to congestion of the liver....Rains put out the forest fires in New Jersey, which, it is calculated, swept over 600 square miles of country, burning hundreds of acres of timber, including the most valuable red cedar woods in the country, thousands of cords of wood, and doing an estimated damage of $60,000 to the cranberry bogs. On Friday last, however, they burst out again, licking up all the oak and pine that remained standing and still more grievously injuring the cranberry beds, besides destroying a number of farm houses, stables, etc.; altogether they have been exceedingly disastrous to the sections they ravaged..... Western Massachusetts tobacco growers who were enthusiastic about growing Havana, are said to have found that it doesn't pay, and this year they will grow more seed leaf....Massachusetts imprisons ordinary tramps in the House of Correction or work-house for not less than six months or more than two years. Any tramp that enters a dwelling-house without the consent of the owner, or threatens violence, or carries fire-arms or other dangerous weapon, gets not less than one year imprisonment and not more than five .. Connecticut and New Hampshire pay $5 reward for arresting a tramp and prosecuting him to conviction....Of 250 prisoners in the Massachusetts work-house, at Bridgewater, 100 are tramps....A plague of rats is seriously injuring crops in some parts of India, especially about Cawnpore; they cut down the growing grain, while the fatalistic natives look on helplessly, murmuring "*Kismet.*".... Saturday, April 24, the last day of the Dexter Park sale of Short-horns, 66 head were sold for $14,155; or an average of $214.32 per head. They were from Hamilton Bros., Flat Creek Farm, Mt. Sterling, Ky.,.....The Duke of Bedford have converted what was an inland sea in winter and a noxious swamp in summer, the waters expanding into meres swarming with fish and screaming with wild fowl, by the labors of successive generation of engineers into 680,000 acres of the richest land in England, as much the product of art as the kingdom of Holland, and like it, preserved for human culture and habitation solely by continuous watchfulness from day to day. The present Duke is devoted to agricultural pursuits, and has placed one of his best farms at the disposal of the Royal Agricultural Society for experiments destined to improve the scientific knowledge of farmers all over the world..... The Lord Mayor of London has received a telegram from the Christian Committee at Bagdad which says? "A terrible famine is raging throughout Mesopotamia and Kurdistan. Immense masses of starving Christians are crawling hither for relief. Our resources are totally inadequate to meet their necessities."

What Better Evidence

could the people ask to substantiate the merits of Dr. Pierce's Family Medicines than the fact that they have not only yearly grown in popular favor in this country, but the foreign demand for them has became so great as to necessitate the establishing a branch of the celebrated World's Dispensary in London, England, that these blessings to the afflicted may be dispatched from that greatest commercial center of the world to every country and people? Golden Medical Discovery is a concentrated, potent, alterative, or blood cleansing remedy, that wins golden opinions of all who use it for all humors from the common pimple, blotch, or eruption, to the formidable scrofulous swelling, Internal fever, soreness and ulceration, yield to its benign influence. Consumption, which is but a form of scrofulous affection of the lungs, may in its early stages be cured by a free use of this God given remedy. See article on consumption and its treatment in "Invalids' Guide Book"—10 cents post-paid. Address, World's Dispensary Medical Association, Buffalo, N. Y.

WORCESTER, Mass., Feb., 3rd 1879.

DR. R. V. PIERCE: Dear Sir:—With trembling hand from my extreme age, being eighty-five, I write to inform you of the great benefit your Golden Medical Discovery and Pellets have been to me. Three years ago I was prostrated with pneumonia; and no one thought I would recover. By the use of those medicines I was raished to health, and by the blessing of God and your medicines I have enjoyed pretty good health since, though for years before this I suffered from weak lungs and a bad cough. Gratefully yours, MARY B. FISK.

Premature Loss of the Hair, which is so common now-a-days, may be entirely prevented by the use of BURNETT'S COCOAINE.

BRONCHITIS.—Throat Diseases often commence with a Cold, Cough, or unusual exertion of the voice. These incipient symptoms are allayed by the use of "*Brown's Bronchial Troches*" which if neglected often result in a chronic disease of the throat.

A. B. BARNES, General Western Agent for Bradley & Co. has removed to Nos. 46 and 48 West Lake Street, Chicago, Ill.

The Robbins Washer and Bleacher.

Lately we had special reasons for thoroughly testing the character of the Robbins' Washer and Bleacher made by the Bissell M'f'g Co., 50 Barclay Street, New York. The test has been fully made for upwards of a month in the family at the Rural Farm, and has demonstrated the great merits of this machine. As in the case of hundreds of others, the first impression of the mistress of the house was that the old-time use of "elbow grease" was essential to the thorough cleansing of the soiled clothing; but repeated trials of this device have convinced her that this belief was due merely to immemorial usage, and had no real foundation in fact; for on every occasion in which it was used this washer did everything that is claimed for it in an entirely satisfactory manner. We can therefore unhesitatingly recommend it to all our readers who may be in need of a first-rate washer and bleacher.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, May 1.

Baltimore.—WHEAT—Southern $1.14@1.15 for very common, $1.20@1.28 for inferior to fair red, and $1 30@1 35 for good to choice do.; Md. No. 1 red, at $1 29@1 31. For Western the market has declined quite sharply during the past week, and after a number of fluctuations the closing was firm at a trifle higher. No. 2 winter red spot and April at $1 22½@1 29½. May at 1 22@1 28½, June at 1 18¾@1 26, do July at $1 10¾@1 15½, and August at $1 08@1 10. Southern corn, offerings light. The sales range from 55½@55 cents for white and 50@52 cents for yellow. Western corn more than usually dull and prices irregular and unsettled, being firm for spot and easier for futures; mixed 48½@49¾ cents. OATS light and firm, with prices tending in holders' favor. Md. at 44 cents, Western at 41@41½ cents for mixed and 42 cents for bright, with the latter now held at 43 cents. RYE quiet and steady; good Western at 88 cents, and prime Md. at 90 cents. BUTTER—Strong demand for all the choice stock arriving, and the market is firm for all grades. New York Creamery at 21@23 cents; New York State new at 26@27 cents; Western new at 23@25 cents for choice and 20@22 cents for good to prime; Western rolls 22@24 cents for choice and 20@21 cents for good to prime and nearby stock 21@23 cents per lb for good to choice. CHEESE—A small lot of choice new has been received and is quoted at 15½ cents. New Western Factory is 12½@13 cents for choice and 11¾@12 cents for fair to good. EGGS—The receipts are liberal and the market is slow and easy at 10 cents per dozen for prime fresh stock. WOOL—The market generally is uncertain and feverish, especially in regard to the future. The stock is light and the new clip arriving is readily taken to supply manufacturers' wants, but there is no disposition to operate ahead. We quote good unwashed at 26@40 cents, tub-washed at 50@56 cents, pulled at 45@48 cents, and Merino at 35 cents per pound.

Chicago.—FLOUR dull; choice western springs at $5@5.50; Minnesota at $5.50@6.25; exports at $4.75@5.10. WHEAT active and firm. No. 2 Chicago spring at $1.12½@1.13¾ May; $1.11¾ June; $1.06 July; No. 3 do at 97c; rejected at 80@40c. CORN fairly active at 36¾@36½c. cash and May; 36½c. June; 36¾@36¾c. July; rejected at 34¾c. OATS fairly active at 29½c cash and May; 29¾c. June; 28¾c. July. RYE firm at 74¾@75c. BARLEY steady at 80c. PORK active at $10.05 cash and bid May; $10 20 June; $10 32½ July. LARD steady with a fair demand at 7c. bid cash and May; 7.05c. bid June; 7.10c. bid July. BULK MEATS quiet but steady; shoulders at 4.15c; short ribs at 6 30c. BUTTER—Demand moderate and supply light:—Choice to fancy creamery at 22@24c ₱ lb; fine to fancy dairy, nearly equal to creamery, 20@22c; good to choice dairy 17@18c; medium to fair do. 15@16c; common 13@14c; good to choice roll 15@17c; medium to fair do. 12@14c; common 10@11c; grease butter 6@8c. CHEESE—Trade fairly active; supply small. Prices rule steady and firm, choice to fine old cheddar creams at 14½@15c ₱ lb; fair to good new do. skimmed, at 10½@11c; flat skimmed at 9½@10½c, and common and sour stock at 6@7½c. EGGS—Market steady, under a moderate demand, at 8½@9c ₱ dozen, the inside for loose packages. HIDES AND PELTS:—Market dull; salted light hides 9½c ₱ lb; do. heavy cows, av. 60 lbs and over, 8½c; No. 2 or grubby and cut, all weights, 7½@7¾c; green salted bull 6½@6¾c; do. calf 14@14½c; dry salted hides 14@15c; dry flint 17c; dry calf 17c; deacons 55c. Sheep pelts are salable at 45c ₱ lb for the estimated amount of wool on each pelt. SEEDS—Timothy and clover firm: quote good to choice medium clover at $4@$4.30 ₱ bushel; mammoth do. at $4.25; fair to choice timothy at $2.40@$2.60; choice to fine Hungarian at 80@85c; millet at 80@90c, and flax at $1.40, on a basis of pure. HOGS—Market fairly active, packing at $4@$4.35, mainly at $4.20@$4.35; light $4.20@$4.50, chiefly at $4.40; choice heavy at $4.40@$4.60. CATTLE—Shipping firm with moderate offerings at $4@$4.80; butchers' steady at $2.35@$3.50; common at $2; stockers and feeders at $3@4. SHEEP—Market firm; wooled at $5.40@$5.60; clipped at $4.65 per cwt.

Cincinnati—BUTTER—There has been a further decline during the week of 2@3c perpound on all grades and a general improvement in quality which is equivalent to even more than this. The supple of Creamery is liberal and the bulk of the sales are now made at 25c for fancy; but 1c more is obtained for single packages. Some fine grass butter is now arriving, but with Creamery down to 25c it will not bring more than 22c and does not sell very readily at over 20c. The medium grades are worked off pretty well at proportionate prices, but packers have reduced their ultimatum to 12c. Butter ought to be all solid packed now, for roll is not wanted and goes to packers at low figures. Fancy Creamery sells at 25@26c, prime to choice do. at 23@24c, choice Western Reserve and Dairy 20@22c, prime Central Ohio 15@19c, medium do. 11@12½c and inferior 6@10c ₱ lb. CHEESE—The receipts have been short of the current demand, and the market is strong for prime to choice Northwestern factory at 11¾@12½c ₱ lb, and even new Ohio, none of which is fine, sells at 10@11c. EGGS—The receipts have fallen off and the market is firmer, with a fair local demand at 9@9½c ₱ dozen. HEMP—The market is quiet, with light receipts and only a moderate demand. Rough Kentucky sells at $100@$105 per ton on track, and $5@$10 more from store. Single dressed sells at 13@14c and double do. at 15c ₱ lb. HIDES—The arrivals are light and there is a good demand at full prices. Green hides bring 7@8c, green salted 8½@9½c, dry salted 13@14c and dry flint 15@17c ₱ lb. Sheep pelts sell at $1@$1.50 for prime to choice wool, and 25@50c for sheared. Damaged hides one-quarter to one-third less. SALT—The offerings are liberal and the demand is light. Ohio River, Kanawha and Michigan sells at $1.35 ₱ barrel of 280 lbs, delivered. Coarse Liverpool at $1.20@$1.30 per bag and Turk's Island at 45c per bushel. SEED—There is only a moderate consumptive demand but prices are well sustained. Clover is offered at 6¾@7c per lb and Timothy at $2.60@$2.70 per bushel. There is a fair demand for German and common Millet at 90@95c and Hungarian Grass at 95c@$1 per bushel. Dealers buy Flaxseed at $1.25@$1.30 per bushel.

Louisville.—FLOUR extra, $4; do. family, $4.50; A No. 1 at $5@5.25; choice fancy, $6@6.50 WHEAT steady at $1.05. CORN quiet; No. 2 white at 43c do mixed at 40c. OATS quiet No. 2 white at 36c. do mixed at 35c. RYE steady; No 2 at 82c. PORK dull at $11.50. LARD steady; prime steam at 7c. BULK MEATS firm; shoulders, 4½c; clear rib, 6.35c. clear sides, 65.7c. BACON firm; shoulders, 4¾c. clear ribs at 6.90c; clear sides at 7.40c. Sugar cured hams at 9½@10½c. BUTTER—Choice straight country packages are scarcer and hardly quotable. Creamery is a fraction lower. Other qualities quiet. We quote common to fair country at 14@18c. fair to prime at 18@22c. and choice to fancy at 24@25c; Western Reserve nominal, and Western creamery at 28@30c. FIELD SEED.—There is very little inquiry for anything but millet and Hungarian. We quote, delivered from store, German millet, 90c; Hugarian, 90c. FLAXSEED $1.10 per bushel on arrival.

Milwaukee—WHEAT opened firm, advanced 1-8c. and closed strong; No 1 Milwaukee hard at $1.16¼ do soft at $1.12¾; No. 2 Milwaukee at $1.09¾; No 3 do at 93c; No 4 do at 94½c; rejected at 89c. CORN steady, with a fair demand; No. 2 at 36½c. OATS in fair demand; No 2 at 29½c. RYE firmer, but scarce at 74½c. for No 1. BARLEY steady; No 2 spring at 65c. MESS PORK quiet at $10.10. LARD—Prime steam, 7c. HOGS quiet, but firm at $4.35@4.45.

St. Louis.—FLOUR dull; choice at $5; family at $4.85. WHEAT higher; No. 2 red fall at $1.12¾@$1,12 3-8; No. 3 do. at $1.09@$1.09 1-8; No. 4 do. at $1 bid. CORN higher at 33@33 1-8c. OATS firm at 30¾c. RYE easy@73¾. PORK firm at $10.25 bid LARD nominally 6¾c. HOGS easier; Yorkers at $4.25@4.35; bacon at $4.35@4.40; packing at $4 @4.25; butchers' to select at $4 40@4.55 CATTLE quiet and unchanged; sheep dull and nominal.

Philadelphia.—FLOUR—Western extras, $5; Minnesota extra medium $5.25; do. good at $5.50; do. choice at $5.75; do. fancy at $6@6 12½; Penn. do., fair, $5.50; do. good, $5 62½; do. do. choice, $5.75; Ohio do. good, $6; do. choice $6.15; Minnesota patents, fancy, $8.25 WHEAT —Market excited; No. 2 red May at $1.24 bid and $1.24¾ asked; June at $1.21¾ bid and $1.21¾ asked; July at $1 12¾ bid and $1 12¾ asked. CORN—Market was "cornered" for spot corn, and to cover contracts prices were forced up 1½@2c., but local lots were quiet, the inquiry being limited for consumption and export; Penn. western and yellow on track at 52@52¾c., chiefly at the latter rate; western mixed on track at 50¾c.; western rejected on track at 49c.; southern white on track at 52c. RYE steady; Penn. at 85c. OATS dull; No. 1 white at 45¾c.; No. 2 do. at 43½@44c.; No. 3 do. at 42½@43c.; mixed at 40@42½. PROVISIONS firm; city mess beef at $13; beef hams at $17; mess pork, car lots at $11.50@11.62½; extra prime at $9; smoked hams at 9½@10½c; do in salt and pickle at 7¾@9c; clear rib sides, smoked, at 7¾c.; do, in salt at 7c; shoulders in salt at 4½@4½c; do sugar pickled at 5@5½c; do smoked at 5@5½c; dressed hogs at 5¾@6½c LARD—Western at 7.62½c; do steam, loose, at 7.50c; do butchers' at 6¾c. BUTTER dull and weak; creamery extra at 27½@28c; Bradford county and New York extras at 24@25c; Western Reserve extra at 22@24c; do. good to choice at 18@21c; rolls dull; Penn. extras at 18@20c; Western Reserve extras at 19@21c. EGGS firm; Penn. at 11c; western at 10½c. CHEESE firm on account of scarcity; New York factory, at 14@14½c.; western full cream at 14c; do. good at 12@13c; do. half skims at 11@12c. LIVE POULTRY —Turkeys were scarce but not wanted, and old Chickens were in small supply but dull at 10@11c, as to quality. Winter Chickens were quoted at 17@20c., and spring do. at 20@25c. as to quality. SEEDS continue under neglect and wholly nominal. We quote Clover at 6½@7c., as to quality; Timothy at $3 for prime and Flax at $1.60. FEED was dull and unchanged, with light sales on a basis of $21 for winter bran to arrive and $21@22 for spring and winter do on the spot, as to quality. VEGETABLES—Potatoes—we quote Early Rose choice at 45c; some exceptional fancy lots at 47@48c; do fair to good, 38@43c; Snowflakes, 50@55c; Burbank's choice, 60@65c; Peachblows, 40@48c; York State Peerless at 30@40c; Penn. do at 20@30c; choice large well-assorted new at $5 ₱ barrel; fair to good do at $3@4; culls at $1.50@2.50. Florida new Cabbage at $3.75@4 ₱ barrel for choice and $3.25@3.50 for fair to good; Savannah and Charleston do at $3.50@4 ₱ crate; Norfolk do at $2@3, as to quality. Florida Beans at $2.50@2.75 ₱ crate for choice round; $1.75@2 for flat. Norfolk Peas, half-bbls., $1.50; North Carolina do, small half-bbl. boxes, $1.25; do., large, in half-bbl. boxes, $1.25; do. large, in half-bbl boxes, $1@1.25. Florida Cucumbers, $1.50@2 25 for fair to choice; do Tomatoes, good to choice, $3@5 ₱ crate for general receipts and $6@7 for Acme. Asparagus, $2@4 ₱ dozen. Florida Squashes, $1. 25@1.75 ₱ crate. Maryland Lettuce, $1.50@2 ₱ 100; Jersey choice do. at $4@5 ₱ 100; Radishes, 75c.@$1; Spinach, $1.50 ₱ bbl.; Rhubarb, $3 ₱ 100.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, May 1, 1880.

BEANS AND PEAS.—A liberation of recepts of beans has eased the market and prices are not named as strong as they were Still holders are not willing to sacrifice best marks of white beans and have not fallen off in demand. Green peas steady enough to use all receipts; quoted $1.80@1.85 for Wisconsin bbls. Southern B. E. peas unchanged at $1.90@2 ₱ 2 bu. bag. Marrow beans, prime, $1.70; other, $1.45@1 55; medium, prime, $1.40@1.45; other, $1.25@1.35; pea, $1.45@1.65; white kidney, $1.55@1.75; red kidney prime, $1.45@1.50; other, $1.25@1.35; black, $2.10@2.15.

Receipts for week, 7,400 bush.; exports, 575 pkgs.

BEESWAX.—There is very little doing, with prices unchanged. Sales at 24@25c. for Southern and Western.

BROOM CORN.—The dealings are small and prices without change. Nominal quotations are for choice brush at 7@8c.; choice hurl at 8c.; stalk bruid at 6@7c.; red and crooked at 3@4c.

BUTTER.—Prices declined to the present point early in the week and close quite steady, as the buyer have also considerable advantage in quality. Supplies are increasing and are mainly State. As before, half tubs and pails are making quite as satisfactory returns as creamery. Receipts from the West light. State Welsh begins to be quoted regularly.

New Butter—Creamery, choice, 25c.; good to prime, 23@25c.; fair to good 22@23c.; poor to fair 20@22c.; State, pails and tubs, choice, 23@23½c.; good to prime, 22@22½c.; fair to good, 21@22c.; poor to fair, 19@21c.; State, Welsh tubs, good to choice, 22@23c.; fair to good, 21@22c.; poor to fair, 19@21c.; Western imitation creamery, 20@22c.; do. dairy fresh, extra, 20c.; good to prime, 20@21c.; fair to good, 19@20c.; poor to fair, 17@19c.; do. factory extra, 21c.; prime, 20c.; fair to good, 18@19c.; poor to fair, 16@18c.; very poor, 12@13c.

Receipts for week, 23,850 pkgs.; exports, 5,312 do.

CHEESE.—The receipts have been larger and prices are easing up a little, with exporters very indifferent, expecting to see a still lower market when free arrivals set in. The exports for the week were 15,600 boxes.

New quoted at 14@14½c. for choice full cream; 13½@13¾c. for good and fine; 12½@13¾c for fair, and 10¾@11½c. for half skimmed.

Receipts for week, 14,825 boxes.
Exports, 12,000 do.
Liverpool cable, 74@75s.
Steam, 35s.

COTTON.—There has been a good business and the market closed firm at for May, 11,79@11.80c.; June, 11.83@11.89c.; July, 11.98@11.99c.; August, 12.06c.; September, 11.74c.; October, 12.14@12 15c.; November, 10.93@11c.; December, 10,97@10.99c.

DRIED FRUITS.—Apples have little demand, with prices unchanged. Peaches are quiet; small fruits are dull unchanged,

Quotations: N. C. apples, fair to good, at 7½@8½c.; choice, at 9@10c.; fancy at 10@10½c; Virginia, at 7@8c.; New York State quarters sliced at 7½@8½c.; patent evaporated in cases, choice, at 14½@15c.; good and prime at 13½@14c.; evaporated, choice sliced at 13@13½c., and good do. at 12@12½c. Evaporated peeled peaches, good to choice, at 27@28c.; North Carolina peeled, fancy, at 20c.; choice old at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7½@8c.; do. quarters at 7@7½c. Pitted cherries at 17½@19c. Blackberries nominal at 14c. Raspberries at 27@28c. Plums at 17@18c.

Exports of dried apples since Jan. 1st 4,325 bbls,; do. last year, 18,933 do.

EGGS.—Receipts for week, 17,200 bbls.: do. last week, 17,675 do. Heavy receipts continue late and buyers have had another easy market. There is some accumulation of Western and the fact gives no strength to prices.

Near Points, 13c.; State and Penn., 11½@12c.; Western, fresh, 11½@11½c.; Southern, 10½@11c.; off qualities or State, 10@10½c.; duck, 14@15c.; goose, 25@28c.

FLOUR.—The market has not shown much change this week, with trade moderate, and offerings liberal.

Latest prices are at $3.65@4.90 for inferior to very choice superfine State and Western; $4.60@4.85 for poor to good extra State, odd lots and lines; $4.85@5.25 for very good to fancy do.; $4.60@4.85 for inferior to good shipping extra Western, and $4.85@5.25 for good to fancy shipping extra do.; inferior to very good white wheat extras, $4.90@5.60; very good to fancy do. at $5.60@6.75; red and amber winter wheat, inferior to fancy trade and family at $4.75@6.50; round hoop Ohio, $4.75@5 35; and trade and family brands of do, at $5.35@6.50; St. Louis at $4.75@5.60 for inferior to good extra; $5.60@6.75 for good to fancy; Minnesota clear, inferior to fancy, at $4.75@6 25; Minnesota "straight," inferior to fancy, at $5 15@7.25, and patent very inferior to fancy at $6.10@8.50; unsound stock at from $2 60@5.00; city mill extra at $5.60@6.00 for fair to fancy West Indies; do. for England, $4.65@5.25 for poor to very fancy; do. trade and family extras, $6.25@7.00; do. for South America, $6.00@6.35; No. 2 at $2.70@4.00 for poor to very choice.

Receipts for week, flour, 74,647 bbls.; wheat, 770,889; corn, 1,133,459; oats, 322,892; grass seed, 2,958; rye, 17,000; barley, 16,400; malt, 41,518; beans, 7,332; cornmeal bbls., 3,753 cornmeal, bags, 919; rice, pkgs., 1,699.

Exports for week, wheat flour, bbl. 60,850; rye flour bbl. 40; cornmeal, pk. 3,379; wheat, bush, 1,266,332; corn, bush. 735,378; oats, bush. 1,902; beans, pkgs. 868; peas, bush. 10 133; rice, pkgs. 477.

CORN MEAL.—Sales at $2.25@3 for yellow Western and $3,10@3.20 for Brandywine.

FRESH FRUITS.—Apples are nearly run out and lots rating only fair bring good prices. Baldwins, $3@4 25; Russets, $3@3,50; a few extra spy, $5. Norfolk strawberries show green picking. Prime N. C. and Chas. steady at 30@45c. Cranberries no longer quotable. Peanuts dull, but the demand will revive with better weather. Va. hand-picked 5½@6c.; extra prime, 5⅜@5½c.; good to prime, 4½@5½c.; shelled, 5½@6c.

FURS AND SKINS.—The aggregate London sales of this year are reported as equal to $4,000,000. Market here dull.

GRAIN.—The market for wheat has been more active, and shows a very fair export movement, with prices closing strong; latest sales are of No. 1 white at $1.24@1 24½; do. May, at $1.23@1.23½; do., June at 1.21½; No. 3 white at $1.20; ungraded white at $1.20. No. 2 red at $1.27½@1.28½; do. May at $1.26½@1.27½; do. June at $1.24½@1.25½; ungraded red at $1.17@1.25; mixed winter at $1.24; No. 3 spring at $1.13@1.14; ungraded spring at $1.16@1.21. Corn is active, but closed weak with larger supplies; latest sales are of New York No. 2, at 52½@53c.; do., May, at 47@47½c.; do., June, at 47@47½c.; do., July, at 47½c.; New York steamer mixed at 52@52½c.; ungraded mixed Western at 51@53c.; No. 3 at 51@52c. Oats are offered more freely and closed weak with latest sales of No. 1 white 50c.; No. 2 white at 45c.; No. 3 white at 41½c.; New York No. 1 at 40c.; New York No. 2 at 39@40c.; No. 3 at 39c.; ungraded white Western at 42@48c.; ungraded mixed Western at 39@41½c.; white State at 48@50c.; mixed State at 41c.; No. 2 Chicago at 40c.

HAY AND STRAW.—Offerings are liberal, but prices about steady, as demand is fair.

Shipping hay quoted at 70c.; retail lots at 80@85c. for medium, and 85@$1, for better qualities; clover, 55@60. Straw at $1@1.05 for long rye; 65@70c. for short rye, and 50@63c. for oat.

Exports for week, 3,547 bales.

HOPS.—There is little trade, or only small lots taken, with prices essentially as last week. Quotations are for:

	Cents per lb.	
New York, fancy	Nomial.	
New York, new crop, good and choice	33	@36
New York, new crop, medium	31	@33
New York, new crop, low to fair	27	@29
Eastern, new crop	27	@35
Wisconsin, new crop	27	@35
Yearlings	7	@18
Olds, all growths	4	@10
Pacific Coast, new	30	@35
Pacific Coast olds (nominal)	5	@10

MAPLE SUGAR—On good demand at 11@14c. for State and Ohio cakes; 15@16c. for fancy Vermont; sirup, 75c.@$1 ℔ gal. in tin.

OIL-CAKE.—Western is quoted at $32 per ton.

POULTRY AND GAME.—Dressed poultry is fairly active for moderate receipts. Penn. can supply about all the market needs of fresh killed, high-priced and frozen fills out common want.

Turkeys, choice, small, 13@14c.; choice, medium, 12@13c.; fair to good, small, 11@12c.; large, 8@11c.; Phila., dry-picked, 14@15c.; capons, Phila. large, 21@23c.; small, 18@20c.; slips, 16@18c.; chickens, winter, large, Phila., 22@25c.; Phila., small, 27@30c.; spring, ℔ lb., 30@35c.; fall, Phila., dry-picked, 18@21c.; yearling, Phila., 15@16c.; fowls, Phila., 14@15c.; N. J., good to prime, 13@14c.; State, good to prime, 12@14c.; Western, good to prime, 10@13c.; poor to fair, 6@10c. Ducks, Phila. 18@20c.; squabs, white, ℔ doz., $2.50; dark, $1@1.50.

Spring chickens in fair demand for good sizes, small ones not wanted. Fowl doing well.

Chickens, spring, large, per pair, 75c.@90c.; small, 40@60c.; fowls, Jersey, ℔ lb 13c.; Western, 12@13c.; roosters, old and young 6@7c.; turkeys, mixed, 12@13c.; ducks, Jersey, N. Y. & Pa., per pair, 75c.@$1; Western, 60@75c.; geese, Jersey, $1.50@1.75; N. Y. & Pa., $1.25@1.50; Western, mixed, $1@1.25; pigeons, 25@40c.

English snipe and plover are scarce and firm at $2.80 ℔ doz. Wild pigeons are low quality, however, is against them. A few Mch. squabs have sold at $1. Wild pigeons 75c. in good order.

PROVISIONS.—Hog products have been fairly active and showing little change in price; mess pork quoted at for May at $10.85; June at $10.90; July at $10.95, and August at $11.05. Bacon at $6¾ for long clear and 7⅛ for short clear. Beef at for extra India mess at $18@20 for city and $19 for Philadelphia and at $10.50@11 for extra mess, and $10 for plain mess. Beef hams at $17.25@17.50. Tallow at 6 1-16 for prime. Stearine at 8c. for Western, and 8@8½ for city. Lard—Western steam at 7.37½ for spot; 7.40 for June; 7.45 for July; 7.50 for August.

Receipts for week, pork, 6,750 lbs.; beef, 925 pkgs.; cut-meats, 45,300 pkgs; lard 24,625 pkgs. Exports for do., pork, 5,052 pkgs.; beef, 2,820 pkgs.; cut-meats, 11,724,300 lbs.; lard, 6,280,275 lbs.

SEED.—Timothy has a light trade, quoted at $2.50@2.65. Clover is moderately active; Western quoted at 6½@7½c., and State at 7@8c.

TOBACCO.—There has been little trade this week and prices have not shown important change.

VEGETABLES.—In old potatoes a slow business is still reported, and there is likely to be an important decline when sprouting time comes with warm weather. New have only a fair sale. A sample of Texas has reached New York. Exports of potatoes past week, 1,150 bbls.; since Jan. 1st, 62,875 do.; same time '79, 43,950 do.

Bermuda, new ℔ bbl., $5@6.50; Chas. & Sav., $3@4.50; Fla., $3@4.50; culls, $2@2.25; Early Rose, N. S., bulk, per bbl, $1.25@1.37; Maine, per d.-h. bbl., $1.50@1.75; State $1.25@1.37; in bulk per bbl. $1@1.25; prolific Nova Scotia per bbl., $1.25@1.37; Peach-Peachblow, State, white, per d.-h. bbl., $1.50@1.62; red, $1.37@1.50; N. J. per bbl., $1@1.25; Snowflake, State, $1.50@1.62; Peerless, State, $1@$1.12; bulk, $1@1.12; Jersey, bulk, 50@75c.; Sweet potatoes, ℔ bbl., $2.50@2.75. There is the general inclination towards weaker prices for green stuff as the season advances. Peas are much lower. Oyster Bay asparagus is expected next week. Southern garden produce is in good demand, as restaurants and hotels are now using it steadily. Tomatoes, Florida, ℔ bu. cr. $2@4; Bermuda, ℔ box, 75@90c.; cucumbers, Fla., ℔ crate, $1@1.50; string beans, Sav. & Ch'n, $3.50@4; wax beans, Fla., $1@2.50; string beans, Fla., round, $1@2.50; do. flat, $1@2; squash, Florida, white, 75c.@$1; yellow per bbl., $1@1.25; green peas, Norfolk, per hf. bbl. crate, $1.75@2; North Carolina, hf. bbl. crate, 50c.@$1.25; asparagus, Jersey, per doz., bunches, $3.50@5; Md. and Del., $4@5; Norfolk, $4@5; kale, L. I. ℔ bbl., $1; spinach, L. I., ℔ bbl. $1.75; turnips, Norf., new, ℔ 100 bunches, $2.00@4; do., beets, $6@8; do., radishes, 50c.@$1; squash, marrow, per bbl., $1.75@2; Hubbard $1.75@2; cauliflower, Ch'n and Sav., $6@8; Norf., $1; do. cabbage, $1@2.50; Ch'n and Sav., $2.50@3.50; Fla., new, $3@3.50; rhubarb, L. I. & Jy., ℔ 100 bunches, $2@3; onions Bermuda, new ℔ crate, $1.75@2; turnips, Russia, ℔ bbl., 75c.@$1.25; carrots, $1.50@1.75.

WOOL.—Demand has been slack, and prices rather weak on fine fleeces, with generally less confidence. Latest sales are of XX Ohio at 56c.; No. 1 do. at 54c.; unwashed Ohio at 37½c.; medium unwashed Wisconsin at 42c.; fall California at 23½@24½c.; new spring do. at 36c.; Oregon at 40@45c.; Virginia at 42c.; East India at 42@45c.; Cape at 35@37c.; Montevideo at 42c.; English combing at 55c.; 1,000 lbs. scoured East India at 54½c.

LIVE STOCK MARKETS

NEW YORK, Saturday, May 1, 1880.

BEEVES.—Receipts for week, 15,915 head; do. last week, 12,208 do. There has been a very good market and the rather large offering for a spring week was well handled. The difference between Wednesday's prices and those of the close was only noticeable in some "giving away" of quality. A five-car lot of heavy corn-fed Colorados, was run out at about 9½c. to dress 56 lb.; a load of fair Texas Stillers at 8½c, to dress 56 lbs.; 23 cars of Illinois and Ohio Stillers, at 8½@9½c.; to dress 55@56 lbs. The range for common to prime Corn-fed steers was from 8½c.; to dress 55 lbs. to 10c. to dress 57 lbs.; 3 car-loads of distillery-fed bulls were sold at $4@4.15 ℔ 100 lbs. and a load of little State bulls at 3c. live-weight.

COWS AND CALVES.—Market very lightly supplied; common to fair, $25@40; good to prime, $45@55.

SHEEP AND LAMBS.—Receipts for week, 28.984 head; do. last week, 19,723 do. Supplies at the close were not heavy, but buyers had evidently supplied themselves liberally early in the week, and closing prices were weak and lower. Sheep were sold at 5@8c. for common to extra unshorn do. at $7.50@7 93½ ℔ 100 lbs.; spring lambs at 6½@10c. ℔ lb and $4@5.25 ℔ head. Dressed mutton declined more than ½c. ℔ lb, and was freely offered this afternoon at 9@9½c.

SWINE.—Receipts for week, 26,594 head; do. last week, 32,598 do. The expectation of light supplies has strengthened the market. Common to prime hogs, 4½@5c.; city dressed, 6½@6½c. Pigs at 6½c. Country dressed pork has almost ceased to arrive.

VEAL CALVES.—Live calves are easier with a fair demand. Hog-dressed calves have had another week of sales, but their time is shortening. We annex the Washington market and cattle yard rates:

Live calves, N. J. and Bucks Co., choice, 6½@6½c.; prime, 5½@6c.; State, choice, 6c.; do. prime, 5@5½c.; fair to good, 4½@5c.; poor, 3½@4c.; Mt. Holly, good to choice, 6@7½c.; buttermilk, 3@4c.; grass, 2½@3c.; calves, hog-dressed, Jersey, choice, 9c.; good to prime, 8@8½c.; State, good to prime, 7½@8c.; fair to good, 6½@7½c.; poor to fair, 5@6½c.

M. YOUNG'S

NEW GUIDE TO HORSE OWNERS.

Everything About a Horse Worth Knowing.

There is no one who Owns, Cares for or Works a Horse, who can afford to be without this work. It is just the handy, complete and Practical Manual that has long been needed by Horse Owners. It is written by a well-known Veterinary Surgeon and Horse Dealer of great experience, so that no matter of importance relating to the Horse in all its existence is neglected. This work thoroughly informs you about the Kind of Horse to Buy. To Detect Horse Jockey-Tricks. To Manage a Horse. To Shoe a Horse. To Break and Train Horses. To Cure all Kinds of Horse Diseases. There is nothing relating to Buying, Breeding, Rearing, Training, Shoeing, Feeding, Taming, Breaking and Doctoring Horses but is thoroughly detailed. In addition is given the **Art of Training and Taming Horses** by a New Method. And it tells—How to make a Horse Lie Down.—To Catch a Wild Horse.—To Teach a Horse to Pace.—To Make a Horse Stand.—To Make a Horse Sit on its Haunches.—To Make a Horse Come Down for Mounting.—To Make a Horse Follow you.—To Make a Horse Stand Still without Hitching.—To Break Horses to Ride.—To Prevent a Horse Running Away. Illustrated with Engravings.

It is invaluable when Horses are Attacked with Diseases requiring Prompt Attention, and in districts remote from Veterinary Surgeons, because it enables any one to Doctor their Own Horses. It gives the Best Rules for Telling the Age of a Horse, with a Fine Engraving showing the appearance of the Teeth at Each Year. Also, much other INFORMATION of great value to every Horse Owner. Actually worth as much as other Horse Books costing from five to ten dollars, but condensed so as to give all that is necessary to know, and **sent by mail post-paid on receipt of the price, 25 cents, or 5 copies to one address for $1.** Ask Four of your neighbors to buy one copy each, and thus get **your Own Book Free.**

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SONGS, One Cent Each

1 Baby Mine.
4 Ella Ree.
5 The Old Cabin Home.
6 The Little Ones at Home.
7 Old Black Joe.
10 See That My Grave's Kept Green.
13 Grandfather's Clock.
18 Where was Moses when the Light Went Out?
22 Old Folks at Home—Swanee Ribber.
24 Sweet By and By.
26 Whoa, Emma.
29 You'll Remember Me.
31 I Dreamt I Dwelt in Marble Halls.
33 When You and I were Young, Maggie.
34 Cottage by the Sea.
35 We Parted by the River Side.
36 When I Saw Sweet Nellie Home.
43 I Cannot Call Her Mother.
45 Take this Letter to My Mother.
49 A Model Love Letter—Comic.
50 Female Stratagem—Comic.
51 How to Kiss a Lady
53 Wife's Commandments—Comic.
54 Husband's Commandments—Comic.
56 Little Old Log Cabin in the Lane.
64 Marching Through Georgia.
66 Widow in the Cottage by the Sea.
68 The Minstrel Boy.
70 Take Back the Heart.
72 The Faded Coat of Blue.
74 Slavery Days.
75 Der Mule Shtood on the Shteamboat Deck—Recitation.
77 My Old Kentucky Home, Good Night.
78 Thou Art so Near and Yet so Far.
80 The Sword of Bunker Hill.
82 The Gray Hairs of My Mother.
84 I'll be all Smiles To-Night, Love.
86 Listen to the Mocking Bird.
88 Her Bright Smile Haunts Me Still.
92 Sunday Night, When the Parlor's Full.
94 The Gypsy's Warning.
98 Swinging in the Lane.
102 'Tis but a Little Faded Flower.
104 The Girl I Left Behind Me.
106 Little Buttercup.
107 Carry Me Back to Old Virginny.
109 Kitty Wells.
110 Billy's Appeal to His Ma.
112 The Old Man's Drunk Again.
116 I Am Waiting, Essie, Dear.
118 Slight Hints—Comic.
119 Take Me Back to Home and Mother.
120 Come, Sit by My Side, Little Darling.
121 Kiss Me, Mother, Kiss Your Darling.
123 A Flower from Mother's Grave.
124 The Old Log Cabin on the Hill.
126 The Skids are Out To-Day.
130 Coming Thro' the Rye.
132 The Babies on Our Block.
134 The Skidmore Fancy Ball.
135 The Hallway Door.
137 Darling Bessie of the Lea.
138 The Kiss Behind the Door.
139 I'll Remember You, Love, in My Prayers.
141 Old Wooden Rocker.
142 Speak, Only Speak.
143 Dancing Around with Charlie.
146 You May Look, but You Mustn't Touch.
147 My Daughter Julia.
150 There's Always a Seat in the Parlor for You.
152 I've no Mother Now, I'm Weeping for You.
154 Nearer, My God, to Thee.
158 Massa's in de Cold, Cold Ground.
159 Say a Kind Word When You Can.
160 Cure for Scandal—Comic.
162 Strangers Yet
165 I Cannot Sing the Old Songs.
167 Waiting, My Darling, for Thee.
170 I'm Lonely Since My Mother Died.
172 Tenting on the Old Camp Ground.
174 Flirtation of the Whip—Comic.
175 The Slave's Dream.
176 Don't You Go, Tommy, Don't Go.
180 Willie, We Have Missed You.
182 Over the Hills to the Poor House.
185 Don't Be Angry with Me, Darling.
186 The Old Village School on the Green.
191 Flirtation of the Fan—Comic.
194 Why Did She Leave Him?
196 Thou Hast Learned to Love Another.
203 There's None Like a Mother, If Ever so Poor.
204 You Were False, but I'll Forgive You.
208 Old Log Cabin in the Dell.
209 Whisper Softly, Mother's Dying.
211 Will You Love Me When I'm Old?
216 Come Into the Garden, Maud.
218 Where There's a Will There's a Way.
220 Annie Laurie.
222 Sherman's March to the Sea.
223 Lamentation of James Rodgers.
224 Come, Birdie, Come.
225 Now I Lay Me Down to Sleep.
226 Ever of Thee.
228 Love Among the Roses.
230 Der Deitcher Gal.
232 Old Arm Chair (as sung by Ned Barry).
239 The Sailor's Grave.
242 Farmer's Daughters; or, Chickens in the Garden
243 Oh! Dem Golden Slippers.
246 Poor, but a Gentleman Still.
249 Nobody's Darling but Mine.
251 Put My Little Shoes Away.
252 Darling Nellie Gray.
255 Little Brown Jug.
256 Ben Bolt.
257 Good-bye, Sweetheart.
260 Sadie Ray.

We will send ten of these Songs, your own selection, for 10 cents, fifty for 30 cents, and 100 for 50 cents, all post-paid, by mail. Remember, we will not send less than ten of these Songs by mail. Send one-cent or three-cent postage stamps. Order Songs by the numbers. **World Manufacturing Co., 122 Nassau St., New York.** Valuable Catalogue of Songs and Agents' Goods mailed Free. Mention this paper.

$1000, REWARD

For any Washing Machine that will Wash Cleaner, Quicker, with Less Labor and Wear and Tear of Clothes than the

ROBBINS FAMILY WASHER AND BLEACHER, Pat'd Oct. 3, '71.

THE ORIGINAL AND ONLY PERFECT SELF-OPERATING WASHER IN THE WORLD.

No rubbing required. No more yellow clothes nor hard work on washing day. No more rubbing clothes full of holes. Seeing is believing, and if you will try 1 once you will never again wash without it, nor use any other washing machine. IT IS THE BEST IN THE WORLD, and will wash anything from a lace curtain to a horse blanket, and cannot get out of order.

GOOD AGENTS WANTED, BOTH MALE AND FEMALE, TO WHOM LIBERAL INDUCEMENTS ARE OFFERED.

AGENTS CAN MAKE FROM $10 TO $100 A WEEK.

THE ART OF CLEANSING FABRICS

is yet imperfectly understood by thousands of good housekeepers. The numerous devices of friction rollers, pounders, squeezers, dashers, agitators, steam wash-boilers, etc., have all failed in one or more of the three essential points, namely; the saving of labor, wear and tear of clothes, or in perfectly extracting the dirt and discoloration; all of which are accomplished by the ROBBINS FAMILY WASHER AND BLEACHER.

WHAT IS IT REMOVES THE DIRT?

You may ask washerwomen and housekeepers and your answer from nine out of ten will be "Plenty of elbow-grease," or in other words, laborious rubbing upon the wash-board. And such is the case, for you first rub soap upon the cloth, and then you have to *rub it in* to make the dirt soluble; but does that remove it? No; to do that you must dip it in the water and rub repeatedly to *force water* through the fabric, again and again. That is what removes dirt after having been softened by the chemical action of the soap.

The way in which this could be most economically accomplished has been developed in the FAMILY WASHER AND BLEACHER, which embodies all the above points.

Mechanical devices take the entire time of a person during the whole wash, and will not remove streaks from clothes. With the Washer and Bleacher washing, baking and housework are contemporaneous operations —the fire doing the washing and baking, while the housewife does her housework.

It is harder work to operate these *mechanical devices* than to use the common wash-board. They are constantly getting out of order, and wear out in a short time. They wear out clothes faster than the rubbing-board, because the friction is so much greater.

All who have tried steam wash-boilers will unite with us in saying: They do not give satisfaction.

WE WILL EXPLAIN WHY.

As stated, water force is what removes dirt from the fibre of the cloth. A large body of water is required to hold in solution a comparatively small amount of dirt. Steam wash-boilers cannot accomplish the desired result. They do not contain enough water to hold the dirt in solution. While steam will not remove dirt, it is a powerful agent to assist in cleansing, because it expands the fabric, and causes the discharge of dirt and impurities from the cloth that cannot be forced out in any other way, unless by the application of heat and force of water combined.

In order to remove the dirt from steamed clothes, they must be washed out in water at nearly boiling heat, for if you use water at a lower temperature it causes the fabric to contract, which "sets the dirt," thus causing the clothes to turn yellow. An essential thing to be mentioned is the rotting of clothes by steam wash-boilers, because of the small quantity of water used.

Everybody knows that a large quantity of soap dissolved in a small body of water must necessarily form an exceedingly strong alkali, which, after the clothes are packed in the steam wash-boiler, is converted into steam, every moment becoming more concentrated till the clothes are removed. A few such washings and what is the result? Simply this: Your clothes fall to pieces of their own weight, and you pronounce steam wash-boilers (as they are) a failure.

THE PRINCIPLE OF THE WASHER AND BLEACHER embodies all the essential points. First, we have the desired heat, which expands the fabric and causes it to discharge the dirt. Second, we obtain a powerful suction beneath the clothes, which produces a rapid downward current or water force, through and through them, thereby removing the dirt. Third, we use a large body of water, which holds the dirt in solution. Fourth, we use but a small quantity of soap. Fifth, the washing is done by water, and not by steam. This process cannot injure fabrics. It cleanses thoroughly, rinsing the clothes being all that is required to complete the operation.

THE PHILOSOPHY OF THE WASHER AND BLEACHER IS THIS:

We have 5 lbs. of metal, which attains a much greater degree of heat than the water surrounding it, consequently the water underneath the Washer becomes hotter, and more expansive than in any other part of the boiler, and thereby thrown to the surface through the tube thus tending to produce a vacuum underneath the Washer at the bottom of the boiler, into which the water is rapidly drawn.

As it passes along the channels of the Washer, the curved and contracted throats of which prevent its flowing backward, and being held in contact with the hot metal it becomes hotter and hotter, consequently more expansive and more forcible until thrown to the surface, thus producing a powerful suction beneath the clothes through which the water must pass in a rapid downward current, thereby obtaining a water force which cannot be obtained by any other method known in cleansing fabrics. Thus, we get a combination, FIRST, WE HAVE THE DESIRED HEAT. SECOND, PERFECT CHEMICAL ACTION OF THE SOAP. THIRD, FORCE OF WATER—ALL OF WHICH ARE REQUIRED TO THOROUGHLY CLEANSE AND PURIFY ANY FABRIC.

THE IMPROVED WASHER

has a perfect fitting pipe, and is a combination of metals which does not become sticky or dirty. It comes out of the boiler as bright as new.

A WORD ABOUT BLEACHING.

There are few professional bleachers in the United States. The word "bleaching" implies the art of extracting vegetable or animal matter and discoloration from the various fibres which constitute all our different fabrics. This is done by a regular chemical process, consisting, first, of alkaline boilings; second, immersions in solutions of chloride of lime; third, solutions of acids. After each process the goods receive a thorough rinsing in clear water, then last of all processes to thoroughly extract all injurious matter, comes that of boiling in good soap and water. This leaves the goods pure and white as snow, ready to finish for the market. Now the question arises, can those fabrics again absorb and fix all their natural discolorations? We answer no, impossible. Then why is it (asks the housewife) my clothes become yellow and discolored? There are many reasons—poor soap, hard water, careless servants, not having strength to rub out the dirt yourselves, and not being able to use water by hand hot enough to keep the fabric expanded to the extent which is absolutely requisite to thoroughly extract the dirt or "bleach the clothes." Clothes should never be bleached but once, but thoroughly washed, and they will always be white. THE FAMILY WASHER AND BLEACHER will do it for you every time.

THE CAPACITY OF THE WASHER AND BLEACHER.

There are two sizes: No. 1, the family size; No. 2, suitable for small hotels, restaurants, and barber-shops, boarding houses, etc.

The Washer is composed of metal and cannot get out of order.

The family size weighs about 5 lbs., and is only 8 inches long by 5 inches wide, and 1½ in. deep.

The discharge pipe is 13 inches high over that, and is 1½ in. in diameter. It throws water in a solid, unbroken stream, at the rate of 6 to 8 gallons per minute. It will work in any flat-bottom boiler. It takes only 3 or 4 ounces of soap in 10 or 12 gallons of water, and will wash bed or table linen, a boiler full in 10 or 15 minutes, wearing apparel in from 10 to 30 minutes, and will remove streaks without rubbing; requires no previous preparation of the clothes, such as soaking over night. Take the clothes dry, and when the washer gets thoroughly at work, fill the boiler as full as it will hold by gently pressing them down with a stick. Use no chemical, only good soap and soft water. If the water is hard, it may be softened by a small piece of borax, which is harmless.

FOR LACE CURTAINS this Washer is invulnerable. It cleanses them as no other process can, and without the slightest danger of injury.

No. 3, or small hotel size, is 8½ in. long, 7½ in. wide, 1½ in. deep, and weighs about 8 lbs. It will work in a flat bottom boiler, holding from 15 to 25 gallons, and wash of average pieces from 1,500 to 2,000 per day; or it may be used in any smaller boiler that has a flat bottom large enough for it to rest upon.

For hospitals this Washer is pronounced by the medical faculty invaluable, being the most powerful disinfector known; leaving the fabrics pure as when new. By Engineers, mechanics, and scientific men generally, it is pronounced one of the most wonderful discoveries in the principle of hydraulics or water force ever brought to light. By bleachers and chemists it is said to be the most powerful method of removing dirt and vegetable matter from fabrics ever known. It is the greatest bleacher extant, and for that alone is worth ten times the price.

THE INDUCEMENTS WE OFFER.

We want a Local Agent in every town in the United States. We know from experience that reliable, energetic men can make money selling the Washer and Bleacher in any community.

We want first-class men as GENERAL AGENTS; men capable of managing one or more counties.

To such we give a duly executed Certificate of Agency.

We furnish descriptive circulars for distribution among families. Also large posters for advertising in public places. Printed directions for using are sent with each Washer.

The retail price of No. 1 WASHER, in New York, is $3.50; No. 3 WASHER, $5.00; No. 1, $24.00 per dozen; No. 2, $36.00 per dozen.

SAMPLE, OR SINGLE WASHERS.

WE SEND SINGLE OR SAMPLE NO. 1 WASHERS, PREPAID, TO YOUR NEAREST RAILWAY EXPRESS OFFICE, in any part of the United States east of the Mississippi and Missouri Rivers, also in Kansas and Nebraska, for $3.50. West of that line as follows, viz.; In Dakota, at Bismarck or Yankton; in Wyoming, at Cheyenne; in Louisiana, at New Orleans; in Arkansas, at Little Rock and Texarkana; in Texas, at Denison or Sherman, for $3.50; in California, at San Francisco, Sacramento, Marysville and San Jose; in Colorado, at Denver and Pueblo, and in Utah, at Ogden, for $4; in Idaho, at Franklin City, and in Texas, at Corsicana, for $4.50; in New Mexico, at Santa Fe or Los Vegas, for $5; in Portland, Oregon, for $5.50. Our reason for so doing is to induce people to investigate this matter, feeling assured that a trial will secure an agent for us.

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Remit by Post Office Order or Registered Letter, at our risk. We insure the safe delivery of all Washers ordered as above. Money may also be sent by draft on New York. Send for a sample and secure A BUSINESS THAT WILL PAY YOU WELL. When you order or write mention this paper. Address

BISSELL MANUFACTURING CO., 50 Barclay St., New York.

Reading for the Young.

REMINISCENCES OF A LITTLE GIRL.

MRS. M. J. GALPIN.

CHAPTER VII.

The Lakes of Killarney.

Upon arriving at the Lakes of Killarney Uncle Tom and his wife were deeply impressed with the view of the lovely waters, although but partially seen, and though tired and weary, they still toiled on to reach the town of Killarney, which is distant from the lakes about a mile from the north-eastern shore. It was a dilapidated withered-looking town, and although lords and earls lived in grand castles on the outskirts of the city, still it did not seem to help the "burg" very much. And how could it, when all the enlightenment and money were on the side of the rich? The poor might "scrabble" the best way they could. The town is overrun with beggars, and when the jaunting car that brings tourists to the lakes is seen, crowds of the poor miserable creatures flock around begging for alms. The Lakes of Killarney are composed of three lakes, upper, lower and Tore Lake. They really form but one lake as they are only divided by narrow channels. I find the following description of them which may prove interesting. The upper lake lies embosomed amidst the mountains, the others are situated at the outer base and are bounded only on one side by the mountains, while in the opposite direction they open upon a cultivated country, whose surface is dotted by numerous hills. The last two divisions of the lake are separated by a narrow peninsula, that of Muckross, and some small islands, Bricken and Dinas; the channel here is passable for boats. The upper lake lies three miles distant at the head of a navigable river, which flows through a romantic valley called the Long Range. Near the end of its course the river divides into two branches, one of which flows peacefully into the bay of Glena on the lower lake the other, forcing its way through a rocky channel empties with considerable impetuosity into the middle lake under the woods of Dinas Island. This river separates after passing the old Weir Bridge. Here are visible the different mountains surrounding the lakes. Among these mountains only Tore, Glena and Toomis rise from the lake, all the rest but surround them.

The hight of the seven mountains are as follows: Caru Tual, 3,414 ft., Mangerton, 2,756 ft., with the Devil's Punch Bowl; Tore, 1,764 ft., Eagle's Nest, 1,103 ft., Purple Mountain 2,739 ft., Toomies, 2,500 ft. The mountains that run directly from the water are clothed with verdure almost to the summit, and dotted with shrubs and forest trees of varied hue. The first thing that attracted the attention of the surveying party was the beauty and diversity of the foliage on the mountains and by the margin of the lakes. The Hawthorn grows here to an immense size, and when in blossom it seems as if the mountains were covered with snow, while the perfume is delightful. The Arbutus grows inwild luxuriance throughout Ireland, but seems to flourish with increased vigor around the lakes. Various toys are manufactured out of Arbutus wood, which gives employment and remuneration to a good many of the skillful poor, as they are always on hand to sell their curiosities to visitors and tourists at the lakes. Uncle Tom often said that one would have to see the Lakes of Killarney to appreciate their beauty and grandeur: for the combination of mountain scenery, with its ever changing shadows, and foliage of every hue reflected in the limpid waters unite to make them most delightful and seem to one like a gleam from Milton's Paradise Regained. If my readers would like a full description of these lakes, I would advise them to purchase a book "A Week at Killarney;" it is the most interesting book of travels I ever read. It was written by Mr. and Mrs. S. C. Hall. Uncle Tom gave me the book in 1850, and I have it yet, as Uncle has long since passed away to that land "where the wicked cease from troubling, and the weary are at rest."

It would occupy too much time to tell of all the sights and beauties of Killarney Lakes, but I will tell you about the famous echoes, and the noted O'Donaghue, who (so the legend runs) may be seen any bright May morning rising out of the lake, or riding into it on his famous steed.

Those who live in the East among mountains will understand all about echoes, but they are tenfold more beautiful on those lakes. Procuring a guide, who is also a bugler, the tourist embarks in a pleasure boat, and when far out on the lakes, the guide plays a tune on his bugle. As he ceases it may be heard repeated from the loudest forte to the faintest planissimo. Every note is perfectly reproduced to the ears of the delighted listeners, who can hardly believe but that some unseen musician lies hidden within the recesses of the surrounding mountains. There are various legends of the far-famed O'Donaghue, but this is the credited version of his origin. Long ages past O'Donaghue of Ross, was lord of the lakes, and the sworn foe to all oppression in any shape. He was just and generous, brave and hospitable, and after his mysterious disappearance he is supposed to come annually every May morning and revisit those lakes. He may be seen (so they say) gliding over the waters on his milk-white steed, which is richly caparisoned, while lovely youths and maidens precede him, strewing flowers along his pathway, and all around may be heard the softest, sweetest and most enchanting music. Happy the child of earth who is fortunate enough to obtain a glance at this far-famed O'Donaghue as he glides away o'er the rippling tide, for fortune and success are supposed to follow him all through a life long career.

I will now give you the legend of "O'Donaghue's pigs," and must then close this already too long chapter on the lakes and their interesting surroundings. And shure, did ye never hear of O'Donaghue's pigs? Such wonderful craythurs, so fat and handsome, more like cows, the wonder of the whole counthry they wor to be sure. Well, O'Donaghue was a little short of money (like a good many others in these days) and he says to his wife, "My darlin'" (for he was mighty fond of her always), "there is so much talk about those pigs I'll sell them." And she up and says, "Sell them, is it?" looking all kinds of ways at him. "Whisht," he replied, "and don't be after talkin' of what you don't understand. Keep to your parlor and lave the O'Donaghue to manage his pigs;" and he put a frown upon himself that would terrify the lake into a storm at any hour of the day or night. So he gets up and drives his pigs to market, and, shure, he was the wonder of the fair, seated on his snow-white horse, behind a flock of a hundred pigs. But you see, the pigs wouldn't be driven by any one but himself. The crowd around the pigs bought them all, and when he had sold them and buttoned up his money, he says to one, "Me good man, if you are discontented with your bargain just let me know, and I'll give ye yer money back." But the vagabond thought how soft the O'Donaghue was, for he knew he got the pigs for half their value. Now the home of O'Donaghue and the pig driver were in opposite directions, and it most broke the man's heart the uneasy way the pigs wandered, but when he thought of the fine bacon they'd make he went on, never heeding the trouble.

After two days' weary journey he came to a river ford, and if ever a bridge had been there it was washed away. The minute the pigs saw the water they dashed into it, and sure enough, every one of them turned into a green growing rush. There were his beautiful pigs with their broad bacon turned into green rushes. At first he set up an ullegawn (cry) that would shake the rocks, then he turned back to get his money from O'Donaghue. When he reached the castle, he knocked at the hall door with the Dane's hammer that hung there, and out comes the lady. "And what do ye want of me, good man?" she says. So he explained it to her, and then she says: "You must go up to the prince's bedside and shake him up, for he is asleep, and if that will not do, pull him by the foot." He did as he was bid, but could not wake him, so lifting up the golden quilt that covered him he pulled his foot, and just as sure as Mount Glena is darkening the water, foot, ankle, leg and thigh came off in his hand. Oh! how he blessed the O'Donaghue, the wrong way, as he stood holding the leg, while the prince still lay sleeping as sweetly as if the May breezes were blowing o'er him, so the man tucks the leg under the tail of his coat, and though he was trembling from head to foot, he walked past the lady as bold as a lion, and says, "thank yer honor, I've finished me business." He flew off like the wind, and the leg slipping from under his coat took to running before him. Whichever way he ran, it was before him, more than once he tried to make the sign of the cross, but he had no power. Sure, his feelings were not bettered when, on looking back, he saw the O'Donaghue coming after him. "Stop!" he cried, "ye beggarly pig-driver, what ails ye, that ye can't stop whin a gentleman speaks to ye. Give me my leg." "Shure, it ran away, sir; it's on before, sir," says the driver. "Where!" thundered out the prince, and the echoes from the Eagle's Nest to the Gap of Dunloe, shouted, "where!" "Oh!" laughed O'Donaghue, and the leg was in its right place again. "There," said the prince, throwing a purse toward him, "is your money, my pigs are at home again. I only wanted my turn at the Saxon's gold."

Marshall Co., Kan.

Dear Uncle Mark:—The other day I took down the Gladioli I received from you last year and it gave me such a lift of gratitude that I feel as if I must write to you, although I have not done anything for your column this winter. We have a little greenhouse that gives us great pleasure. It is very bright just now with flowers some of which came from the Rural, and are prized especially for that reason, as well as for their beauty. When the days are cold and dreary, we children call the greenhouse Italy, and sometimes I sit there with those very tantalizing seedsmen's catalogues, and dream of spring, and of our garden work. To-day it is snowing and blowing like—well—like March generally does in Canada, although the almanac says that next Saturday begins the spring. I wish it would come, though I have not yet decided what crop to venture upon this season. One of my sisters is attracted to try the pungent onion, and another makes a specialty of everlasting flowers. When I decide I will let you know how I prosper. Mamma told me all about meeting you in New York, and I am ambitious some day to see you myself. With kindest regards, Yours truly, Mary Jack.

Prov. Quebec, Canada.

The Puzzler.

Here is a new style of puzzle which offer the cousins an opportunity to show their ingenuity. The puzzle consists in combining the 168 words in the subjoined anecdote so that they will form another anecdote, containing the same words, but altogether different in sense. When the transformation is complete send the resulting anecdote to Uncle Mark who will publish a few of the most successful attempts. The cousins may think that the piece is too long, but its length is really an advantage as it gives a greater variety of words than a short one, and hence admits of being changed more effectually. It will prove a good exercise for the young grammarians.

During the late unpleasantness the Connecticut Fifth was at one time stationed at Kelly's Ford, Virginia, and while there received some recruits, among whom was Jones, an ideal Yankee. Jones was not familiar with fire-arms, and when posted as a sentinel for the first time, deliberately sat down and dissected his musket. While thus engaged, the officer of the day approached, expecting the usual recognition of his presence instead of which the sentinel continued his investigations. The officer was naturally indignant. "What are you here for, sir!" he demanded.

"Wa'al," was the reply, "I expect I'm a kind of a sort of a guard here. Who be you?"

"Wa'al," said the officer, imitating him, "I expect I'm a kind of a sort of an officer of the day here."

"Wa'al," replied Jones, "you jest hold on till I git this musket together, and I'll give you a klud of a sort of a s'lute."

Officer didn't wait, but went off admiring the vivacity of the American character.

HIDDEN TREES.

1. Metal I potted corn beef.
2. Asa go home at once.
3. Hand me the basket Talbot.
4. Hear the music in Namon's house.
5. Will you stay Ucca.
6. Do not be tell-tales.
7. I like beef steak.
8. I heard from Ed. Larsh last week.
9. Seta Camah accepts the situation.
10. Fristam a risk must be run.
11. I put Amar in Daisy's cottage.
12. I saw your mate Beb in the hall.
13. I met Lestur Pentine yesterday.
14. Philip, lumbago is in the back.

☞ Answer in two weeks. Little One.

CROSS WORD.

In England, not in France.
In vision, not in trance.
In obvious, not in plain.
In kernel, not in grain.
In gravel, not in sand.
In elbow, not in hand.
In slant, not in level.

The whole is a level.

Waterloo, Ind. "Gus."

PYRAMID PUZZLE.

Across: 1, a letter; 2, an heriform fluid; 3, Dignified; 4, a St. Andrew's cross; 5, a plant.

Down: 1, a letter; 2, Therefore; 3, To injure; 4, To sail fast; 5, a book; 6, an escape; 7, Ay; 8, a prefix: 9, a letter.

Waterloo, Ind. "Gus."

☞ Answer in two weeks.

SQUARE WORD.

A river of British America. A city of Peru. An island of the Grecian Archipelago.

☞ Answer in two weeks. L. O.

PUZZLER ANSWERS.—April 17.

Hidden Articles of Food.—1. Soup; 2. Fish; 3. Game; 4. Meat; 5. Salad; 6. Gravy; 7. Sauce; 8. Ragout; 9. Chowder; 10. Cod-fish-ball; 11. Salmagundi; 12. Sally Lunn; 13. Toast; 14 Omelet; 15. Bacon; 16. Souse; 17. Sausage; 18 Ketchup; 19. Tripe; 20. Meringue; 21. Dumpling; 22. Custard; 23. Blanc-mange; 24. Samp 25. Giblets.

A Square Word:

B A R D
A L O E
R O L L
D E L L

A Pyramid Puzzle:

F
I L K
B L E A T
B R E A T H E

Centrals form "*Flea*."

Half Square:

P A T T E M A R
A U R E L I A
T R A I N S
T E I N E
E L N E
M I S
A A
R

Various.

BRIEFLETS.

"Little as is known" (says Dr. Hexamer in the N. Y. Tribune) "of the nature of scab in potatoes, I think I have proven, to my own satisfaction at least, that since the exclusive use of commercial fertilizers, my potatoes have become entirely free from scab, and better than with the use of barnyard manure. . . . Dr. Engelhardt calls attention to a fact that is too much overlooked, viz., that ice from impure water is unfit for drinking; that it may contain fever germs and that it is far better to cool pure water by placing the vessel containing it on ice than by using impure ice in the water. . . . Beurre d' Anjou, it should be remembered, is, among dwarf pears, one of the very best. . . . "Everybody is confident and courageous over the promise of abundant crops," says the Pacific Rural Press (California). . . Our readers must not forget that our address is now 34 Park Row. . . . We have found that repairing lawn mowers is a costly and generally unsatisfactory matter. The best way to repair a lawn-mower that does not do good work is to buy a new one. . The advertising columns of the Rural New-Yorker are at this time of unusual variety and interest. . . They should be looked over *every* week as well by those who have nothing to buy as by those who have. . . The "White Elephant"—but we cannot explain that yet. . . Grapes, Currants, Strawberries, Raspberries, Blackberries, Gooseberries, Apples and Pears should be raised on every farm. Farmers do themselves and their families injustice by neglecting their cultivation. . . Land and Home calls the Daniel O'Rourke a new pea! . . About the middle of May the first wash should be given to fruit trees. Then again about the middle of June. No care given to fruit trees pays better than this. . Ouray, the Ute chief, recently purchased one of Mosely and Stoddard's Cabinet Creamerics. The order was given while in Washington, from an advertisement in the Rural New-Yorker. . . Inquirers will find London Purple in our advertising columns. From all the information we can get, there seems little doubt that it will take the place of Paris-green . . . Quite delighted with Mr. Warner's book which we have been looking over at odd moments of late, we again quote from its lively pages. He is jubilating over the fact that he has just completed the first hoeing of his garden. "The only drawback," he says, "to this rejoicing is that the garden now wants hoeing the second time. I suppose if my garden were planted in a perfect circle, and I started round it with a hoe, I should never see an opportunity to rest. I had pictured myself sitting at eve, with my family, in the shade of twilight, contemplating a garden hoed. Alas! it is a dream not to be realized in this world. . .

CATALOGUES, ETC., RECEIVED.

Inter-Ocean is the the name of a new weekly journal, published at Denver, Col., and devoted to all the interests of that new and rising country. It is a neatly printed paper of 20 pages, and cover, and seems to be quite orginal in its make-up. Price $4.00 a year.

Transactions of the Department of Agriculture of the State of Illinois for 1878. This volume contains also a very full and interesting description of noxious and beneficial insects peculiar to the State, by Prof. Cyrus Thomas, State Entomologist.

Seventh Annual Report of the New Jersey State Board of Agriculture; also containing the Report of the New Jersey Horticultural Society. The whole work contains some 260 pages, and is bound in pamphlet form.

Twenty-first Annual Edition of the Sorgo Hand Book. A short treatise on the Chinese sugar cane, and the machinery used in the manufacture of sugar. Blymyer Manufacturing Co., Cincinnati, O.

Schedule of Prizes offered by the Mass. Hort. Society for the year 1880. The amount appropriated for prizes is $3,050. Robert Manning, Sec'y, Boston, Mass.

Production and Distribution of Cereals of the United States, by J. R. Dodge. An extract from the Report on the Internal Commerce of the United States.

Catalogue of Strawberries, Raspberries, Blackberries, Grapes, Currants, Gooseberries, Rhubarb and Asparagus, fruit and ornamental trees by William Parry, Cinnaminson, N. J.

Seventh Annual Report of the New Jersey State Board of Agriculture, for 1879; a book in paper cover, containing many interesting facts and figures.

Quarterly Report of the Kansas State Board of Agriculture for the quarter ending Dec. 31, 1879; 168 pages full of valuable information.

The Cotton Mills of South Carolina, their names, location, capacity and history, published by the Board of Agriculture of that State.

No. 1 of Vol. 4 of the American Veterinary Review, edited by Dr. A. Liautard, President of the American Veterinary College, New York City.

Rules and Premium List for the Horticultural Department of the Cincinnati Industrial Exposition to be held in the fall of 1880.

Circular of Italian Bees, Colonies, Comb foundation, Extractors, etc. Sold by H. H. Brown, Light Street, Columbia Co., Pa.

Proceedings of the 25th Annual meeting of the Western New York Horticultural Society. An interesting pamphlet of 150 pages.

Essay on Horticultural Progress, read before the New York Horticultural Society, March 9, 1880, by Peter Henderson.

American Enterprise, as viewed by the foreign press; a small pamphlet published by Howard Lockwood, 74 Duane St.

Proceedings of the Kentucky Horticultural Society, at its annual meeting, held at Shelbyville, Ky., Jan. 13-15, 1880.

Proceedings of the American Poultry Association at this Seventh Annual Meeting, held at Indianapolis, Ind., Jan. 1880.

Forty Years among Small Fruits, by William Parry, Cinnaminson, N. J.

Proceedings of the Portage County (O.) Horticultural Society for 1879.

PERSONAL ITEMS.

President Tyler's widow has become an inmate of a convent in Georgetown, D. C.

A picture of Beaconsfield in a Brighton, England, hop-window has just been labeled: "Reduced to £2 12s. 6d; formerly four guineas."

Secretary Sherman is breaking ground for a handsome house, to be built within a few doors of that he now occupies in Washington. He drives out almost every afternoon in one of the best appointed equipages in that city.

Mr. McKellar owns the actual Cape of Good Hope and much land adjoining, whereon he has a large ostrich farm. From ten pairs of full-grown birds, which one man may look after, an income of $10,000 to $15,000, is is said, may be reckoned on.

The King of Bavaria, it is reported, is to be married to his cousin, Princess Isabella, daughter of the late Prince Adalbert and the Princess Amelie Philippine Pilar, Infanta of Spain. The King is now thirty-five years old, and his future wife is seventeen.

Professor Silliman, of Yale College, has been on an exploring trip to New Mexico. He says that here is no reason in the world why those great plains, heretofore considered uninhabitable, should not be converted into fertile farms. Professor Silliman says of General Hatch, who is now fighting some of the New Mexican Indians, that "he is as brave as a lion and as wise as a fox."

"Profoundly Grateful to God."

"I have been using your Compound Oxygen Treatment," writes Judge S. L. Bryan, of Salem, Ill., "for nearly two months, *and am profoundly grateful to God* and you for the benefits derived from its use. I have been for more than thirty years a sufferer from nervous disorders. Overwork and sedentary habits as a college student brought me into difficulty. Later in life professional labors added dyspepsia to my nervous calamity, and I have been a great sufferer for many years. My sleep has been bad, and I have had much irregularity in the action of the heart. The gas has nearly *relieved the disturbed heart-action, and my sleep is becoming as sweet and protracted as in early life.* I shall always remember you with gratitude, and appreciate the blessings of a progressive investigation which brings such results. I think you may congratulate yourselves that you stand in the front of a new medical advance that is to effect *a permanent revolution in the treatment of disease.*" Our Treatise on Compound Oxygen, which contains the record of remarkable cures in chronic diseases, sent free. Address Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

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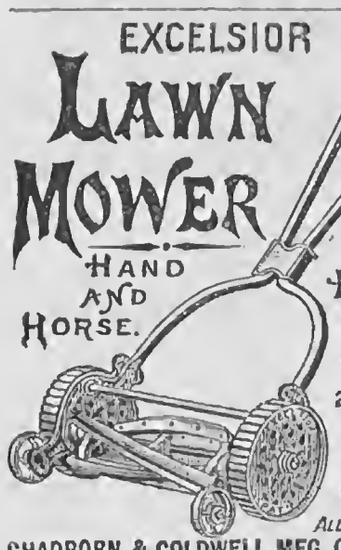

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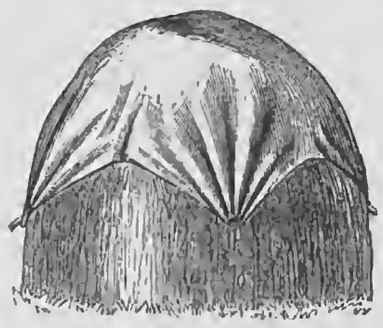

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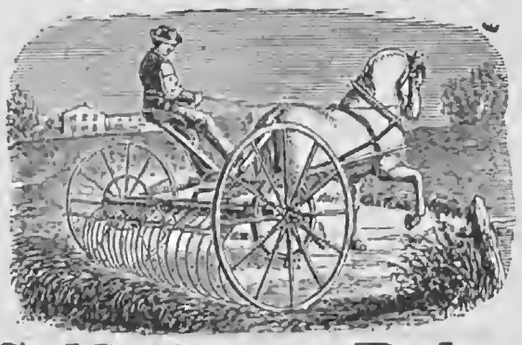

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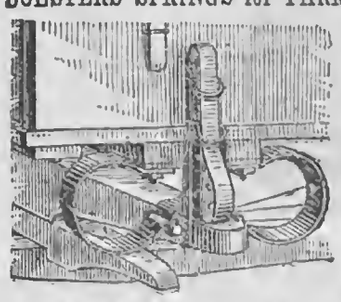

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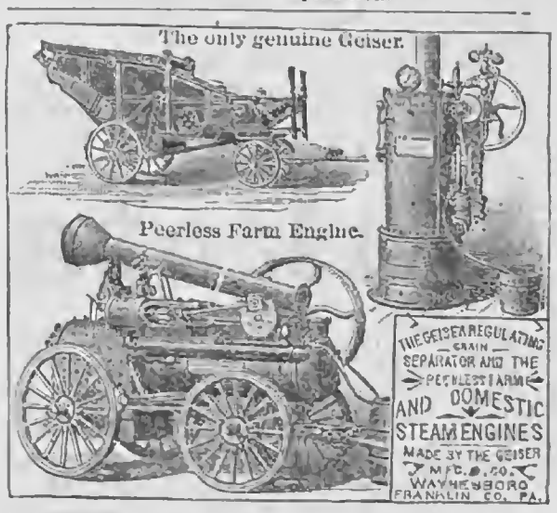

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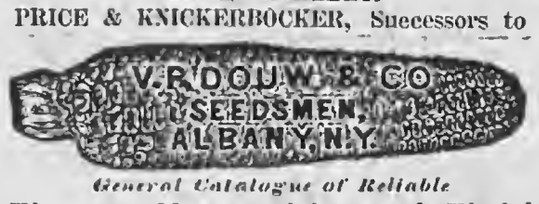

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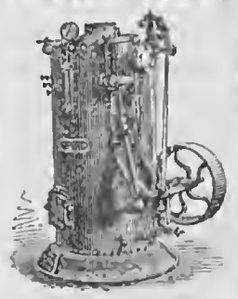

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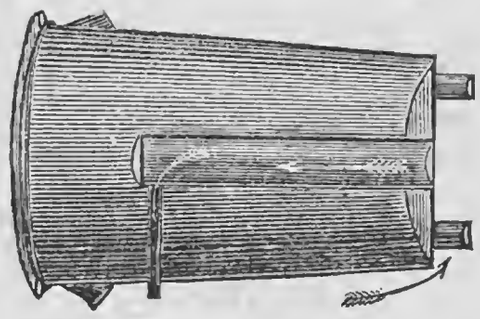

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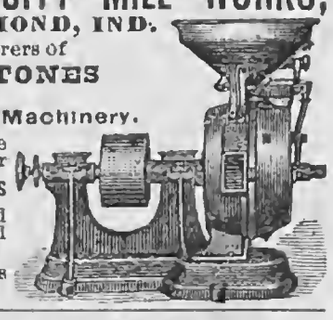

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Pomological.

LOQUAT—JAPAN PLUM. (ERIOBOTRYA JAPONICA.)

On a visit to Charleston, S. C., at the end of March, I saw a very fine tree of the above species, loaded with fruit just then beginning to ripen. The tree was some 12 to 15 feet high, with large, spreading branches, and the limbs were bending under their burthen of fruit. The exceptionally mild winter had been favorable, and no extreme of cold had injured the young yield.

The Loquat, or Japan Plum, is an importation from Japan, said to have been introduced by Commodore Perry's Expedition—another contribution from that prolific source of so many of our useful and ornamental plants. It is now propagated throughout the Southern States, and is valued not only as one of the most ornamental of our broad-leaved evergreens, but also for its fruit. The tree blooms in November, and the young fruit is thus exposed to the cold of the winter. In New Orleans, Texas and along the Gulf Coast the fruit is rarely injured and is a marketable object in the large cities.

As far north as this latitude, it can only be used as an ornamental evergreen, except in Charleston, where, protected from cold winds and from severe frosts by proximity to the sea, it occasionally escapes. The fruit when ripe is of a bright golden yellow, or orange color, oval in shape, from one to one-and-a-half inch in length and nearly an inch in diameter, fleshy and well flavored, with a single large seed. It belongs to the natural order Rosaceæ.

Aiken, S. C. H. W. RAVENEL.

[The specimen from which our engraving was drawn was presented to one of our editors during a late visit to Aiken, by Mr. Ravenel. —EDS.]

Educational Notes.

WESTERN FARMING.—V.

W. I. CHAMBERLAIN.

Our Agricultural Colleges.

It may not be out of place in this series of articles, whose object is to learn what we can from a comparison of the agriculture of different sections of our country, to study in the same way some of our schools of agriculture. If we, in one State, can learn anything from these schools in other States, we shall be the gainers.

Agricultural Colleges are not peculiar to the West, though the oldest and one of the best is in the West, and I propose to compare our own younger Ohio institution with this older one in Michigan, to see what we may learn from the comparison.

The Michigan school is, beyond question, as its name indicates, an *Agricultural* College. Agriculture is the "objective point" there. It is "the thing" in that school for the students to become farmers after graduation, and, in point of fact, just about one-half of all its graduates during the nineteen years of its existence, have made agriculture or horticulture their calling, and most of the other half have gone to the "mechanic arts." How different this is from the results in our ordinary universities and literary and scientific colleges, may be seen from very careful statistics which show that only one-and-a-half per cent. of their graduates become farmers.

Our State agricultural schools are alike in this, that their funds come chiefly from the land grants of the General Government. But Ohio and Michigan seem to have understood those grants quite differently. The law of Congress "donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," provides that the interest of the fund arising from the sale of such lands "shall be inviolably appropriated * * * * to the endowment, support and maintenance of at least one college (in each State) where *the leading object* shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are *relative* to *agriculture* and the mechanic arts, in such manner as the Legislatures may respectively prescribe, in order to promote the liberal and practical education of the *industrial classes* in the several pursuits and professions of life."

Now, the Michigan Legislature understood this to put agriculture first in importance; and the State law of 1861, submitted by a farmer, named the new school "The State Agricultural College," and declared that the new design of the institution, in accordance with the Congressional law, "is to afford thorough instruction in agriculture and the natural sciences connected therewith." And that "the institution shall combine physical with intellectual education, and shall be a high seminary of learning in which the graduate of the common school can commence, pursue and finish a course of study terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly upon agriculture and *kindred industrial* pursuits." And among other studies specified, the law declares that the institution shall teach "especially the application of science and *the mechanic arts* to practical agriculture in the field.

The Michigan Legislature, Board of Agriculture, and Faculty of the College seem to have thought and argued in the matter very much as farmers everywhere naturally will argue

JAPAN PLUM—Loquat. (Eriobotrya Japonica.)—From Life.—Fig. 151.

viz.: When Congress gave a part of the public domain, of the farm of the nation, it was to improve the rest of it and those who till it, just as a farmer sells a part of his farm to get funds to drain or otherwise improve the rest. The schools built on these land-grants should, therefore, be, first and foremost, schools of agriculture. We have universities and excellent denominational colleges and scientific and technological schools all over the land, to train young men for the learned professions, for business, commerce, arts, civil engineering and the like, and their graduates have almost exclusively been absorbed by those professions and callings. But there are absolutely no schools, except the agricultural colleges, to train men to become really scientific farmers, and to raise the pursuit of agriculture from an illiberal and degrading labor up to a liberal profession, and make the farmer, not a mere plodder, but an intelligent man and good citizen.

Now, the Michigan school has been all the while conducted on this plan: chemistry, botany, geology, zoology, physiology, anatomy, and other kindred sciences are taught with special reference to their bearings on agriculture. Greenhouses, gardens, orchards, farms, stock and all farm crops and work are so arranged and planned as to give clear scientific knowledge of, and thorough practical training in, every process and detail of nearly all kinds of agriculture and horticulture. The chemical and botanical laboratories are so arranged as to give each individual student a working acquaintance with those studies and their bearings on agriculture. Not only that, but, proceeding on the theory that the farmer is a worker, and that entire separation and freedom from physical labor during the four years of college life, would tend to create a distaste for labor among students, labor is made a part of the curriculum. The students, under the professors or competent foremen, spend three hours daily, in fair weather, working in greenhouse, or garden, or orchard, or stock yard, or field. Thus study and practice go hand in hand, training young men to be practical as well as scientific farmers, and all the time this excellent out-door exercise is helping to build up rugged constitutions, instead of undermining them, as study alone is apt to do, especially in the case of those accustomed to active out-door labor. And to further this idea, the long vacation comes in winter when profitable farm labor is almost impossible.

Again, in order to bring the results of scientific knowledge and experiment within the reach, not only of the sons of farmers, but of as many of the present farmers of the State as possible, a number of Farmers' Institutes are held each winter in different parts of the State, conducted, in part at least, by members of the Faculty, and largely attended by the farmers. No wonder the Michigan Agricultural College is each year growing in the affections of the intelligent farmers of the State. No wonder they deem it, in most respects, the model institution of its class in all our land.

Now, in Ohio the idea is quite different. At first, indeed, the institution was called "The Agricultural *and Mechanical* College," but soon it began to be felt that this title was far too limited, and it was accordingly changed by the Legislature to "The Ohio State *University*," with no special mention of, or partiality to, agriculture, but almost the reverse. We have not in Ohio, it is true, any great university like the most excellent one at Ann Arbor, Michigan, but we have many excellent colleges of liberal private endowments, and more than 50 years' *prestige*, that are doing, in the aggregate, the full work of the largest university. Such institutions are Marietta, Denison, Kenyon, Western Reserve, and Oberlin colleges, with an attendance at each of from one or two hundred to a thousand. And there are several younger but most flourishing colleges or universities of private endowment. These institutions are doing the work well of educating young men in the classics and in the sciences for the various liberal professions and higher callings in life. Recently, too, the most munificent bequest of a million and a quarter dollars' worth of rapidly appreciating property, in Cleveland, by the late Leonard Case, to establish an institution to be known as the "Case School of Applied Sciences," seems to render still less necessary the existence of another "university" in our midst, built, as the Columbus one was, on a State and National endowment given, primarily, in the interests of agriculture.

In point of fact, too, agriculture has a most subordinate position in our "university," scarcely a dozen out of the two hundred students being really in the agricultural course. The Professor of Agriculture, a most able and excellent man for the place, is bending all his energies to the work of his department. But it is only *a department*, and seems not to be the favorite one of the Legislature or Board of Trustees—seems, I say, for my impressions here may be incorrect; but the appropriation and the general tide of sentiment at the institution seem to indicate it. It is not "the thing" at the University, to study agriculture. Farm labor is at a discount. It is not *a part of* even the agricultural course. Farm labor is furnished and paid for, to those who need it to eke out slender means, but simply as a business arrangement. There are no greenhouses, or gardens, or orchards, or plats for small fruit culture, for practical instruction in botany, horticulture, floriculture and pomology, and even the farm is by necessity managed on paying business principles, and not in any sense as an experiment station for the solution of problems in breeding, feeding, testing new seeds and plants, and new methods, or fertilizers, or deciding any of those questions that require accuracy and skill and *money* for their correct solution, and that individual farmers could not afford to solve, even if they were otherwise fitted. And yet it is expected that the college farm *will* do this work, furnish labor for students and show a clean balance sheet of profits. Mr. Thorne, the excellent superintendent of the farm, feels keenly the injustice and incompatibility of such expectations. He must keep a show farm and barns, too, always on exhibition to all visitors; and this in itself is no little burden and expense. It is even in serious doubt whether the Legislature will vote the moderate sum of $5,000 for the establishment of an experiment station, with greenhouses and equipments, to enable the Professor of Agriculture and the Farm Superintendent to do the very work demanded by the farmers of the State.

Another point, too:—Acting on a different theory as to which is "Mahomet" and which is the "mountain" and which can more easily be made to "come" to the other in our modern miracle, instead of professors holding Institutes in different parts of the State, as in Michigan, the farmers are invited to an annual course of lectures at the university for two weeks in January. This course is thoroughly admirable, but only about a hundred farmers thus far have attended each year. It is hoped, however, that a much larger number will attend in future, and it is quite possible that the Ohio plan may prove as wise on this point as the plan in Michigan.

But from the whole outlook in Ohio, it is not surprising that many intelligent farmers begin to feel that we are in serious danger of losing our *Agricultural* College. And if we do, it will be the old Scriptural parable of Nathan, in regard to David and Uriah. The rich king will have "spared" the many "lambs" of his own numerous flocks, and taken our "one ewe lamb"—our one hope of a more liberal education for farmers and mechanics. Science and Literature, intrenched in more than a score of excellent colleges and universities in our State, in the interests of the liberal professions and more lucrative callings will have laid their hands on *our one school* and swerved it over to the same interests. Perhaps the farmers of the State will take a more stalwart view, however, and say "Agriculture feeds the State and furnishes her revenues, and agriculture will hold in her own right the institution founded on the agricultural resources of the nation, and intended for the elevation of agriculture in our State." If they take that view, our legislature will soon know and feel it, and act accordingly. And the same question is yet to be decided in many other States—whether our Agricultural Colleges shall be such both in name and in fact.

Farm Topics.

VALUE OF LEACHED ASHES.

T. H. HOSKINS, M. D.

I HAVE read Prof. Storer's article on the value of leached ashes (RURAL, p. 262) with much interest. Living in a region of country where ashes, leached and unleached, are to be bought cheaply and abundantly, and yet where there are many farms (of which mine is one) where they have perhaps as much value for fertilization as in southern New England, I have naturally been much interested in the subject. When I came into possession of my farm, 14 years ago, it had been "potatoed to death," like many another farm in Vermont. From a yield of 300 to 400 bushels of potatoes per acre it had in 30 years' use declined so that, even with a moderate dressing of manure, 80 to 100 bushels were a maximum crop. The land was what is so often called "run out," and gave only meager crops of grass and grain with the ordinary tillage. The soil is a light loam, but not strictly sandy. It is part of a large flat on the east shore of Lake Memphramagog, and was once undoubtedly lake bottom, the old beaches showing along the flanks of the hills 100 feet higher. Boring for water 38 feet, I have found it composed for that depth of alternate irregular layers of sand and clay, and clay is often turned up here and there with the plow, though there is no "hard-pan," except in occasional spots of small area.

Not believing that 30 years' use had utterly destroyed the value of a once very fertile farm, I concluded that growing potatoes for market year after year during that time, had probably exhausted the store of available potash; and, acting on that idea, in three years I made it again give crops of 400 bushels to the acre, much to the surprise of my neighbors, who said potatoes could not be made to pay there. In the same time the grass product was raised from one ton on four acres up to over two tons on one acre. All this was done by the free application of unleached ashes, part of it from fire-wood, part from a steam mill where spruce saw-dust was burned under the boilers, and part from a bark-extract factory where spent hemlock tan was used for generating steam. In three years I had applied over 100 bushels to the acre, and had as good land as anybody in the county. The whole expense was not over $15 per acre, well returned in crops, and leaving the land in a condition, as shown by these same crops and acknowledged by "the neighbors," that raised its salable value not less than $30 per acre. Not a dollar's worth of stable manure was used, and no other fertilizers were employed besides the ashes, except about $8 worth of ammoniated superphosphate per acre upon corn and potatoes, each year. When seeded to grass the growth was fully equal, by the testimony of early settlers, to the growth when the land was new.

So much for *unleached* ashes. I have also used a good deal of leached ashes, which work very differently. They are excellent for clover, and especially, for white clover, "bringing it in," and making a thick mat of it where very few plants could be found before. It proves a better application to a young orchard than unleached ashes, giving a thrifty, healthy growth, not so sappy and rank as when manure is used, or where raw ground bone and unleached ashes are applied, having been first mixed and wet down in a heap for three or four weeks before using. This compost is a "jumper" used in the nursery or on Grapevines, in the garden and upon grain, and pays well when pure ground bone can be had for $40 or less per ton. Leached ashes are not to be compared to unleached for potatoes or for grass proper, excluding the clovers. They are not nearly so good for corn or grain. For these purposes (looking to prompt returns rather than permanent value), leached ashes are not (with me) worth one quarter as much as the unleached.

Now for lime. This is a limestone country, there being extensive quarries where lime is burned on the next point north of me on the lake shore. Lime used in the way advised by Professor Storer, is utterly useless and worse than useless on my land. On the clay farms around the lake it works very well, improves the grass and benefits the hoed crops and grain. But on the light loams it "burns everything up," makes the grain rust and kills out the grass: this, whether used at the rate of one load or ten loads to the acre. I think, therefore, that we must attribute the usefulness of leached ashes to other constituents than the lime. I have long thought that we have not given enough importance to magnesia as a plant food that needs to be artificially supplied on some soils—not in large quantities, indeed, yet none the less needed. And may it not be that the magnesia in leached ashes accounts for some of its good effects? Also, may not dolomitic limestone (which ours is not) be worth more as a fertilizer for the same reason? I have experimented "some" with sulphate of magnesia in my composts, and have believed that I saw good results from its use.

Orleans Co., Vt.

LONDON PURPLE.

So far as we can ascertain, this insecticide is destined to take the place of Paris-green entirely, and there are many cogent reasons why it should. The color is a bright purple and it can therefore readily be detected upon the green leaves. It will adhere to the leaves also, so that a smaller quantity suffices. It is only a little over half the weight of Paris-green, so that the same weight will go twice as far. It is far less dangerous to human life, and its cheapness insures it, in a great measure, against adulteration. Professor Cook says that it can be put in the market at ten cents, or less, per pound, and that he has found one pound of the poison sufficient for 100 gallons of water. He also says—and this we have stated before—that it is more diffusive than Paris-green, and, therefore, needs less stirring to keep it well mixed with the water. It is death to the potato beetle, cotton worm and, in short, to all leaf-eating insects. We are in receipt of pamphlets from the manufacturers, Hemingway's London Purple Co., 90 Water St., New York, which tell the whole story and present testimonials from eminent horticulturists and experts whose testimony cannot be doubted. Our readers will please send for circulars which will be forwarded free, and which will fully answer any questions which may suggest themselves.

RECLAMATION OF BOG LAND.—The article on page 101 of the RURAL is an interesting one, but the method of reclaiming such lands could not be followed in the United States, so long as manual labor rules as high as at the present day. It is something like the finishing process of cranberry bogs, as practiced in New Jersey previous to setting the plants. These cranberry bogs, or, more properly, plantations, are usually formed from cedar swamps. They are first drained, the timber then cut off, the roots of the trees grubbed out, and the surface leveled. Sand or gravel banks line these swamps, and their soil is carted or wheeled in hand-barrows on to them to the depth required, and then they are set with the cranberry plants. The soil of these swamps is a rich muck of one to several feet deep. If thoroughly drained, plowed, seeded to grass and limed, they would make rich meadows, but till cranberries began to be attacked by insects, the scald, &c., they were much the most profitable crop that could be cultivated.

A. B. A.

Floricultural.

PLANS FOR GEOMETRICAL FLOWER GARDENS.

JAMES HOGG.

THE geometric style of laying out a flower garden is not only the most ancient, but is also the most capable of producing, within specified limits, beautiful and artistic effects. It also harmonizes better with the dwelling-house, as it can be made, in skillful hands, to partake of its architectural character. It is especially adapted for small places in this country, as here we have such a superabundance of natural scenery in its primitive state, that any style which forms a contrast to it and displays the operations of an intelligent mind, is pleasing in its effects. It is for this reason that people prefer to adorn their grounds with exotic trees and shrubs, in preference to native species, although the latter may be as beautiful as the former are. It indicates creative power, which always presupposes intelligence, hence it has been well said that "Art is but nature, for nature is but the art of God." Sir Joseph Paxton says in one of his essays that "the geometrical flower garden is, above all others, the most to be recommended, because of its readily admitting the greatest variety of flowers throughout the season." Sir Walter Scott has said: "Nothing is so completely the child of art as a garden. It is, indeed, in our modern sense one of the last refinements of civilized life. To attempt, therefore, to disguise wholly its artificial character, is as great folly as if men were to make their houses resemble as much as possible the rudeness of a natural cavern."

The gardenesque style and the picturesque style are both well adapted to places of large extent; they are, indeed, the only styles in which these can be laid out; for it would not be desirable, as a matter of taste, to lay out 10 or 20 acres as a geometrical flower garden, but the latter is a very desirable feature to introduce into the other two.

I give some plans of gardens laid out in this style, most of which have been carried out in practice; they will give my readers some idea of the way in which such gardens are to be laid out, and will enable them to exercise their ingenuity in devising plans for their own gardens. Such plans should always be mapped out on paper and drawn to a regular scale, with the distances from the various points marked on the map, so as to facilitate the plan being transferred to, or laid out on, the ground.

Care should always be taken when designs of this character are laid out in close proximity to the house, or are looked upon from the principal windows, to have them parallel to, or at right angles with, the house. If they are at all askew, they will be a continual source of annoyance to every person possessed of a mathematical eye, who sees them. In laying down the design on the ground, the first step is to lay down a center line or a base line, with a perpendicular line or one at right angles to it; sometimes three or four such lines may be required. How to lay down or to obtain such lines correctly on the ground is to be found in the few mathematical problems of which I give the solutions. These base and cross lines should remain in permanence until the work is finished, as, if removed from time to time, they can seldom be replaced correctly. Two or three balls of good stout twine and some good strong stakes, to be driven two feet into the ground, will answer for this purpose.

Where there are many intersecting points or subsidiary centers to be made, strike a circle of the diameter of these points or centers from the principal or central point; then, on the circle so obtained, measure the distance of the points, or centers, from the central base line and the vertical line intersecting it; this will test the work for errors in measurement and detect them, as it gives four fixed points to do it by.

Some of the best suggestions for figures to

be laid out on lawns without gravel walks, are to be found in the leaves of many plants, such as Caladinms, Callas, Maples and other trees and shrubs. By pressing some of their leaves and then arranging them on stiff paper, some very useful hints can be had.

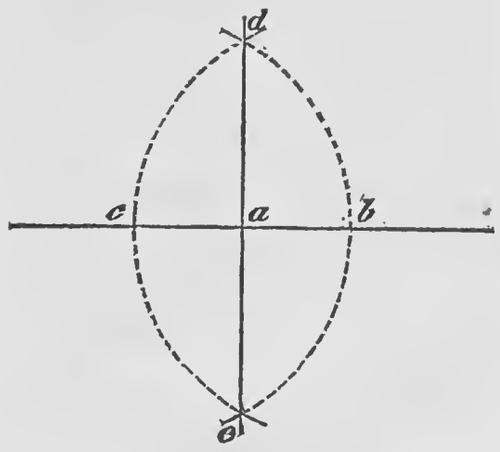

FIG. 152.

From any given point in a right line to erect a perpendicular or a line at right angles:—

On each side of the point *a*, take equal distances, as *a b*, *a c*; from *b* and *c*, as centers, with any radius greater than *a b* or *a c*, describe arcs cutting each other in *d* or *e*; then a line drawn from the point *a* through *d* or *e*, will be the perpendicular, or right-angled line required.

This is a ready way of getting the transverse diameter of a circle, laying out parallel lines, etc.

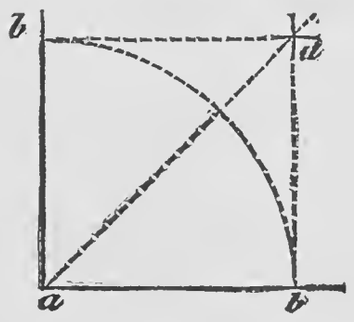

FIG. 153.

To divide a given angle into two equal parts:—

From the point *a* as a center, with any convenient distance, describe the arc *b b*; and from *b b*, as centers, with the same or any other convenient distance, describe ares cutting each other in *d*; then a line drawn from the point *a*, through *d*, will divide the angle into equal parts.

This problem is useful in laying out walks running at angles of 45 degrees to any straight line, and to determine the proper position for arbors, vases or statues when placed in angles of gardens.

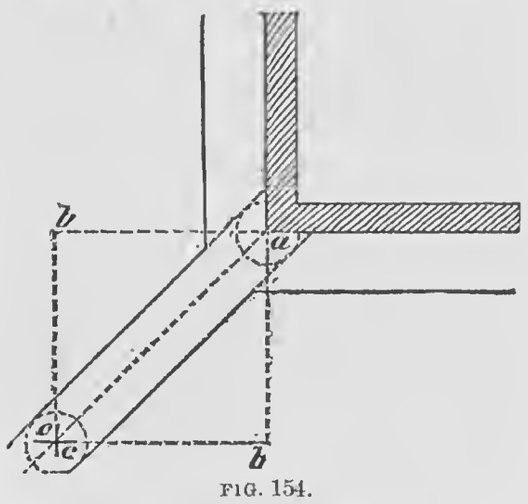

FIG. 154.

To set off a walk perpendicular to the corner of a wall:

Carry out the lines of the wall straight, each way, equal distances from *a* to any convenient points, as *b b*; from the two ends of these lines, with equal radii, describe two arcs; from where they bisect each other, as at *c c*, draw a line to the corner of the wall, *a*, which line will be the center of the walk. At *c c* and *a* draw two circles the width of the proposed walk; lines drawn from both sides of these circles will give the edge lines of the walk.

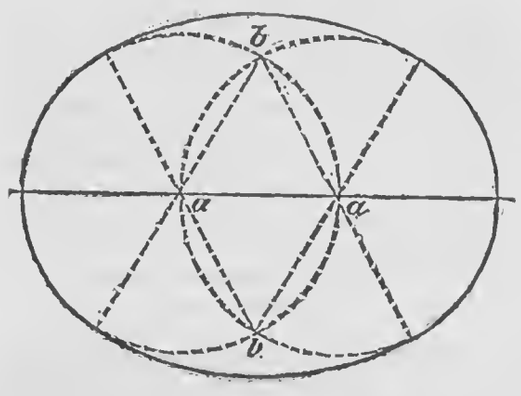

FIG. 155.

To describe an oval whose length is given:—

Divide the length into three equal parts, let the two inner points so found, *a a*, be the centers of two circles, which shall form the ends of the oval; the intersecting points, *b b*, of these two circles, will be centers to the two segments required to complete the figure. This makes an obtuse oval and is not geometrically correct, but is the one generally used in laying out gardens.

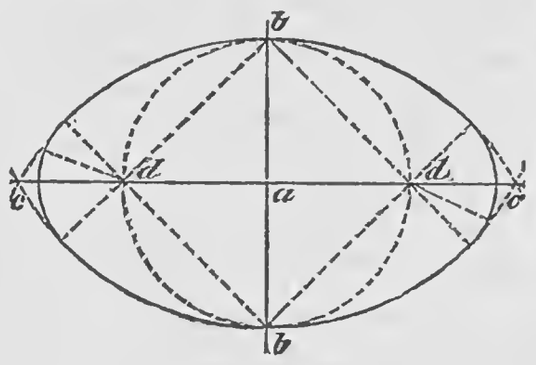

FIG. 156.

To describe an oval whose width is given:—

From the point *a*, where the conjugate and transverse diameters intersect each other, describe a circle whose diameter shall equal the given width. From the points *b b*, where the diameter intersects the circle, describe two segments which will intersect each other on the conjugate diameter, as at *c c*. Then, from the points *d d*, where the circle intersects the conjugate diameter, describe the quadrant of a circle which will connect the ends of the segments.

This gives a more acute oval or ellipse than Fig. 155, and one nearly geometrically correct. When laid down on a lawn or in a design for a garden, it looks much better than Fig. 155 which should only be used when the adjoining figures are circles or segments of circles.

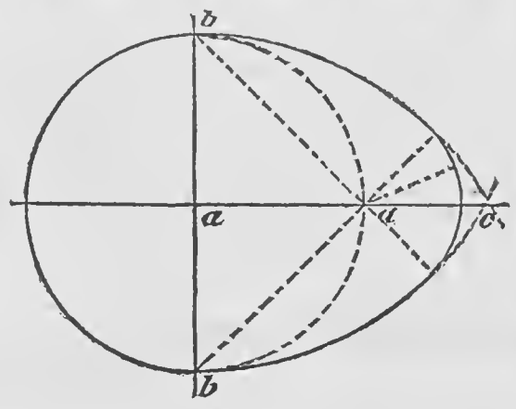

FIG. 157.

To form an egg-shaped figure:—

This is formed in the same way for one-half of the figure as in Fig. 156, with the addition of the semi-circle for the other half.

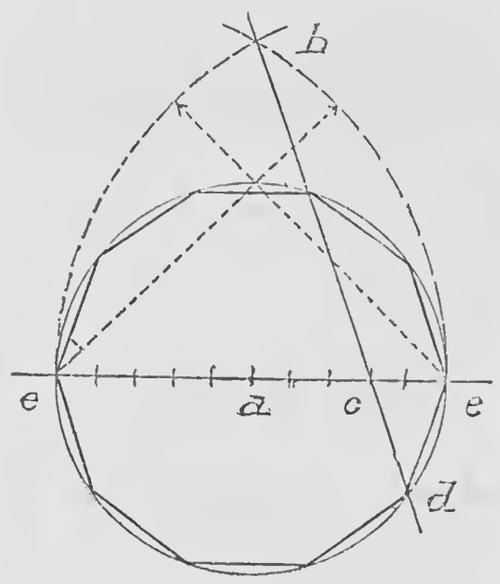

FIG. 158.

In a given circle to inscribe any regular polygon:—

Divide the diameter, *e e*, into as many equal parts as the polygon is to have sides; from *e e* as centers, taking the diameter of the circle as a radius, describe ares cutting each other in *b*; draw a line from *b* through the *second* division, *c*, until it intersects the circumference of the circle, as at *d*; the distance from *d* to *e* will be the length of one side of the polygon required; divide this distance off on the circumference and connect the points, and the polygon will be described.

I have given as an example a decagon, but any odd or even-numbered sided polygon can be laid out in the same way, always remembering that the line *b d* must pass through the second of the divisions into which the diameter is divided. In laying out a hexagon it is not necessary to lay it out in this way, as the side of a hexagon is equal to the radius, or half the diameter, of the circle, so that in it we have always a constant measure given.

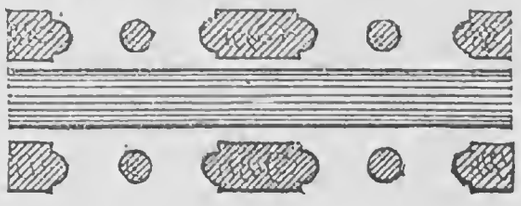

FIG. 159.

Figs. 159 and 160 are examples of flower beds to be laid out on the grass borders on each side of a straight walk leading up to the house, as, for instance, from the street or road—only every alternate circular bed should be planted with a shrub, and then not with any species that will exceed four feet high when fully grown, or that cannot be kept within that hight by pruning. Rhododendrons, Azalea amœna, Tree-Pæonias, the dwarf-growing Japanese Maples and the curious dwarf varieties of Retinosporas, Thujas, Abies and other coniferous evergreens are admirably suited for this purpose.

FIG. 160.

Fig. 160 would harmonize very well with houses in the Gothic or English cottage style. Fig. 159 is adapted to the Italian style. The semi-circular lobes at the ends of the square figures should be planted with low-growing, brilliant-colored flowers, or with plants of striking-colored foliage, but of dwarf habit.

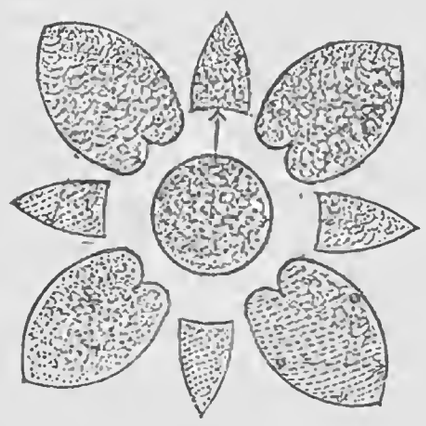

FIG. 161.

Fig. 161 is an example of flower-beds laid out on a lawn without and gravel walks surrounding the beds. The smaller beds should be planted with dwarf-growing, continuously-blooming, bright-colored flowers, such as Zonale Geraniums, Verbenas, etc. The larger beds may be mixed-planted, that is, with perennial herbaceous plants, scarlet Geraniums, plants with colored foliage, Gladiolus and similar plants. To display such figures, it is absolutely necessary to keep the lawn closely mown. The effect will be wholly destroyed, if the lawn is allowed to become a field of grass whose only value is the hay crop.

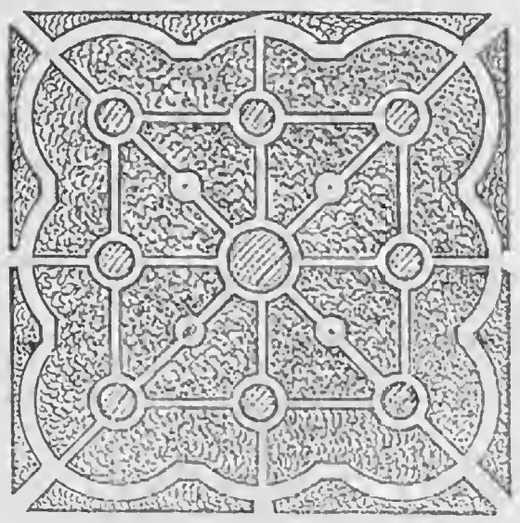

FIG. 162.

Fig. 162 is an example of a tetragon in which the narrow walks are to be graveled and the wide walk to be of grass, if it is so desired. If not, it may be reduced in width by adding to the width of the outer beds.

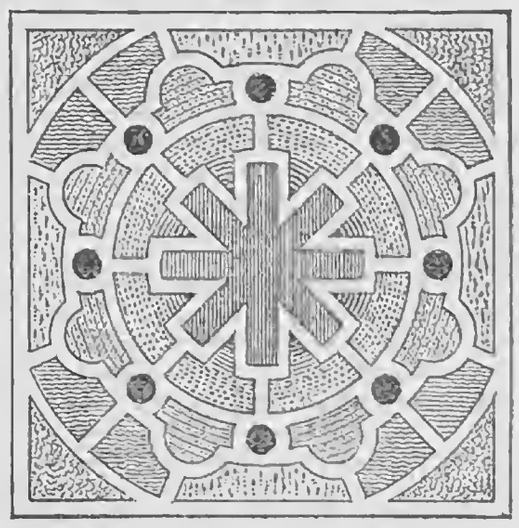

FIG. 163.

Fig. 163 is a combination of an octangular figure with a combination of circular and angular figures. The walks are of gravel. The beds in this figure are numerous and afford a good opportunity for planting largely in color.

Fig. 164 is a circular figure divided decagonally. The walks are of gravel and the larger

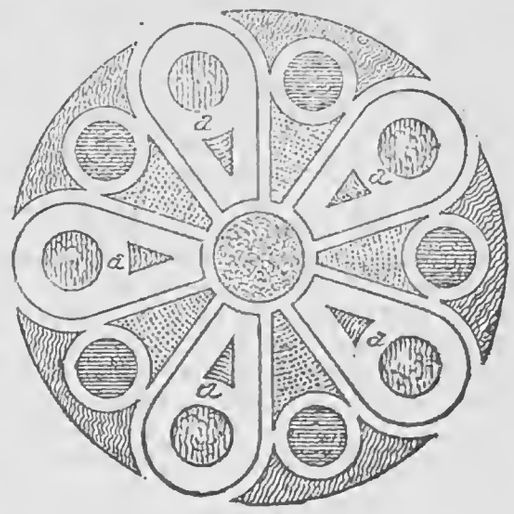

FIG. 164.

beds, *a*, are laid down in grass in which a circular and a trigonal figure are cut out.

Entomological.

RASPBERRY SLUGS.

I HAVE recently been asked what will destroy the worms that are making so many little holes in the raspberry leaves, and, thinking there may be others who would like to know, I will give here a brief *resumé* of what I have given verbally to others.

The raspberry slug that eats the holes above referred to, is, when full-grown, a little more than half an inch long, of about the same green color as the leaf upon which it feeds, with the exception that there is a line of darker green along the back. This is the larva of what is known as the raspberry saw-fly (Selandria rubi); not a fly in the sense of a two-winged insect; for it is a black insect with four transparent wings, and is related to the bees and wasps. The worm, or larva, has 22 legs), a pair to each segment of the body except the fourth; it is nearly cylindrical, thickly set with green tubercles, from which arise fleshy-looking, forked, pale-green, hair-like branches, the two forks bending, in most cases, towards the extremities of the body.

These worms are produced from eggs deposited in the leaves soon after they are expanded. For this purpose the female saw-fly has an ovipositor beneath the posterior part of the body, by means of which the eggs are inserted beneath the skin alongside of the veins. The young worm soon emerges from the egg, escaping through an irregular hole made in the side of the swelling caused by the presence of the egg in the leaf, and at first feeds upon the more tender parts of the tissue. As it increases in size, it gnaws irregular holes in the leaf, or notches in its edges, often leaving only the coarser framework. The worms come to maturity from the middle of May to the middle or last of June, according to the latitude. At this time they leave the bushes, descend to the ground which they enter, and change to chrysalids, from which the flies come in due time, to deposit their eggs for another brood of the worms.

The latter feed mostly at night on the upper side of the leaf, where they may be found in the morning or during cloudy weather. For this reason it is easy to reach them with substances that are used for their destruction. Several remedies have been recommended, but a little air-slaked lime dusted over the leaves in the morning while the dew is on, seems preferable to any of the others, for the reason that it destroys most of the worms and is harmless to the fruit. There are a few of the worms every season, often so few that no remedy seems necessary; but when they become very numerous so that the leaves are liable to be so eaten as to interfere with the growth of the fruit, the above remedy generally proves sufficient. G. H. FRENCH.

Carbondale, Ill.

The Herdsman.

SOME NEW INSTANCES OF BONE-CHEWING BY CATTLE.

PROFESSOR F. H. STORER.

ATTENTION has often been called, in the agricultural papers, to the fact that cows will sometimes munch bones very persistently in the pasture, and explanations have been offered both to the effect that the appetite of the animals is depraved and that they need some alterative medicine, or that they need phosphates to supply those carried away in their milk. Indeed, so firmly is the idea established that phosphates should be given in such cases, that some of the agricultural dealers in our American cities habitually keep and sell a coarse bone-meal, under the trade name "crushed-bone," which is prepared on purpose for feeding milch cows.

Some rather emphatic instances of this habit of cattle have recently been put on record, in the London journal "Nature." Mr. H. C. Donovan, writing from South Africa, says, "In the colony of Natal the cattle have an extraordinary liking for bones. They will stand for hours with a bone in the mouth quietly munching, sucking, or, perhaps more correctly speaking, levigating the bone with the tongue. I have not heard that cattle have the same habit in the other colonies of South Africa, but I have been told that cattle exhibit the same taste in some parts of South Australia. In Natal there is, I believe, a scarcity of chalk and limestone in the geological formation. Will this fact account for the habit? Do the cattle lick the bones in search of lime? I may mention that horses and other herbivorous animals in Natal do not exhibit the same taste."

In corroboration of the above letter, Mr. W. M. Williams remarks that in some parts of Norway the cattle have a similar habit of munching bones, "especially at the upper pastnrages around the 'sæters,' or mountain chalets, where they are commonly supplied with a daily modicum of fish bones and salt, which they eat with great avidity." He adds, "there is but little lime on the Norwegian "fjelds" the prevailing rock is mica schist."

In connection with these accounts, Prof. John Le Conte, of the University of California, recalls the fact that many years ago (in 1845), he published in one of our medical journals, an account of the same habit in cows in one of the Southern States. He says:—"The cows which live on the extensive savannas and pine-barrens lying on the north side of the Altamaha River, in McIntosh Co., Georgia, subsist upon very coarse species of grasses, which are probably deficient in some of the phosphatic or calcareous ingredients essential to healthy nutrition, for these animals are constantly observed to chew bones. They frequently remain stationary for hours, with the head elevated to prevent the saliva from escaping from the mouth; they will, by constant trituration, gradually reduce the bony mass to a very small size, when it is rejected as an unmanageable morsel. The cattle in this section of the State are usually rather lean, and cows brought from the fertile plantations in the neighborhood, if allowed to subsist on what they can procure in the savannas and pine-barrens, in the course of a year or two become equally thin; and ultimately fall into the habit of eating bones."

The Norwegian use of fish bones is plainly commendable, and it could readily be imitated in this country by feeding out the better sort of fish-scrap, such as is prepared in Maine expressly for foddering purposes. It is to be remarked, however, that in most cases such as were just now supposed, of an insufficient supply of the inorganic constituents of food; it is a lime-compound rather than a phosphate that needs to be given to the animals, as such. Phosphates had better be supplied to the animals in the form of grain or oil-cake or shorts, which contain much phosphate of potash, while the lime may be administered either in the form of whiting scattered upon the moistened food, or by placing a lump of chalk or other soft limestone where the animals can lick it when they please.

STOCK NOTES.

PLEURO-PNEUMONIA.—Com. Le Duc has sent to the Hon James W. Covert, Chairman of the House Committee on Agriculture, the report of Dr. C. P. Lyman on the subject of "pleuro-pneumonia, or lung plague of cattle, telling where and to what extent the disease exists in this country. It is merely a diary of his travels in the infected districts in Febuary and March, together with the results of his inquiries and personal examination of the circumstances attending the outbreak of the disease in the localities he visited. He sums up the outcome of his investigation as follows:—

"As a result of my investigation thus far, I find this ruinous foreign plague actually existing among the cattle in the following States: Connecticut, in Fairfield county; New York, in New York; Westchester, Putnam, King and Queen's counties; New Jersey, in Atlantic, Gloucester, Camden, Burlington, Ocean, Mercer, Monmouth, Middlesex, Hunterdon, Morris, Essex, Union, Bergen, and Hudson counties; Pennsylvania, in Philadelphia, Chester, Montgomery, Bucks, Lehigh, Cumberland, York, Delaware, Lancaster, and Adams counties; Maryland, in Carroll, Baltimore, Harford, and Cecil counties.

"The middle and southern portions of these States have not yet been visited. No examination has as yet been made in the District of Columbia, or of the infected territory of Virginia; but, as the plague prevailed quite extensively in both of these localities last season, it will no doubt be found still in existence when the investigation takes place." Now, prompt upon this trustworthy report, let us have legislation for the speedy suppression of the plague—a perilous manace to the West.

THE SHIRE OR MIDLAND COUNTIES HORSE.—This is one of the largest and most powerful horses bred in England for heavy farm, road and city truck work, Their weight is usually from 1,700 to 2,100 pounds. In breeding, special attention is paid to obtain extra-wide (not round), flat legs, to support such a weight of body and be capable, without injury, of drawing the heavily-loaded vehicles to which they are attached. The fetlock joint, or pastern, must be at the proper angle, neither too oblique nor too upright; the hoof clear and open; the sole so thick as not to wear down to the pavements, and so strong that the shoe-nails will hold well in it. The value of these horses in England alone, is estimated at sixty to sixty-five million dollars, while their annual cost of keep, harness and shoeing, is as much more.

The Swine-Herd.

SUFFOLKS.

The Different Families or Tribes; Breeding, Origin and Points.

COL. F. D. CURTIS.

THE white hogs of England have been so mixed and interbred that it is very difficult to determine where one breed begins and another ends. Most of the importations of white hogs of any name brought into this country cannot trace back, for purity of blood, beyond the breeder from whom they were purchased. They may be called by the general name of Yorkshire or Suffolk, but it will be found that the two breeds differ but slightly in some cases, and then again it will be found that the different importations of the same named breed will also differ.

These similarities and differences go to show that the white pigs of England have been mixed and cross-bred according to the fancies of breeders, or the notions of localities. While some breeders in England have adhered to the more common names of Yorkshire and Suffolk, others have given their pigs which were families of Yorkshires, fancy names, either after the county in which they resided or the town, or in some cases the pigs were called after the manor name. Thus there were Lancashire, large, small and medium: Leicester, Bedfordshire, Buckinghamshire, Middlesex, Manchester, Coleshill, Bushey Breed—probably the same as the Bush Abbey, and the Windsors. The latter were bred by the late Prince Albert and named by him after the castle of that name, which is one of the residences of the royal family. These pigs were afterwards called by others, Prince Albert Suffolks. Prince Albert when living, was a regular exhibitor at the fairs, and as emulous of prizes as other breeders. In 1846 he showed Bedfordshire pigs, and won a prize. The next year he exhibited Bedfordshire and Yorks, then Yorkshires, alternating with Bedfordshires and Suffolks; then Suffolks, and in 1854 he exhibited for the first time his pigs under the name of Windsors. The above list tells the story of English breeding, and explains the multiplicity of names given to pigs of the same blood. In many cases these same families of pigs we have enumerated, were called by different persons either Yorkshire or Suffolk, and, no doubt, pigs of the same family have been imported into America and have been designated by different names, when in reality they were of the same blood. It would puzzle a good judge to tell the difference between a well-bred Yorkshire or Suffolk, and the Lancashires which have been introduced into Ohio and some other States. All of these pigs are white and have essentially the same characteristics and good qualities.

Latterly the English breeders have begun, very properly, to designate these different families which they used to denominate "breeds," as the "small white breed," and the "large white breed." The term breed has been misapplied very often by English breeders. It takes years of careful breeding in a direct line to establish a breed; but a family may be started by cross-breeding, which was frequently done by English farmers who had an ambition to emulate other counties or other farmers, in originating pigs with a new name although the blood might be the same. Such families, by long breeding in a direct line, if they did not run out—which is usually the case—would become thoroughbred. Cross-bred pigs always show to better advantage than these thoroughbreds, because they will bear heavier feeding, and have stronger appetites and inclination to grow; that is to say, they possess the fine and delicate qualities of the thoroughbred, united with the strength of constitution and ability to consume and assimilate food, natural to grades. This gives them rapid growth and a precocious development, with the native roughness and coarseness so toned down that they often out-match the pure-bred progenitors to whom they owe their excellence. There are families among thoroughbreds, as certain sires and dams often possess special peculiarities, which are indicated in their offsprings.

American importers have been disposed to accept these different families as established breeds without question; hence, we have in this country a variety of Suffolks, which it would require considerable variation in a scale of points and description to fit exactly to the different tribes. This last term may be used as a synonym for family, and would be a better title for the branches of a breed rather than to call them each a breed with a different name. These tribes of Suffolks vary most in size and coating. Some of them are nearly naked, their coats being so thin; while others have a thick coat of hair. One tribe, often exhibited at the fairs of the N. Y. State Agricultural Society, may very properly be called the doll pigs, they are so small and fine. Suffolks are very handsome and the easiest to keep of any white pigs.

The young Suffolks are small and it takes them some time to make a start in growth. The mothers are prolific, kind and exceedingly docile. The maximum weight of full-grown Suffolks may be put down at 400 pounds, although 350 pounds would be nearer the average; while the minimum weight is about 250 pounds for grown hogs, and 150 pounds for pigs under a year old. The greatest objection to the Suffolks is the exceedingly fat character of the flesh, which unfits them for bacon, and makes the hams not so desirable as those of other breeds in which the lean meat is more largely mingled with the fat.

Stickney Brothers, of Mass., a number of years ago, were large importers of Suffolks. They have been extensively imported and bred by Hon. John Wentworth, Ill., and by Mr. Dinsmore, N. Y. These and other importers have selected strains or styles of the breed which suited their fancies, with thin or thick coats; or large or small in size as the case might be. A true type of Suffolk should correspond to the following standard:—Head small, very short; cheeks prominent and full; face dished; snout small and very short; jowl fine; ears small, thin, upright, soft and silky; neck very short and thick, the head appearing almost as if set on front of shoulders, no arching of crest; chest wide and deep, elbows standing out; brisket wide but not deep; shoulders and crop—shoulders thick, rather upright, winding outward from top to elbows; crops wide and full; sides and flank—ribs well arched out from back; good length between shoulder and ham; flank well filled out and coming well down at ham; back broad, level and straight from crest to tail, not falling off or down at tail; hams wide and full, well rounded; twist very wide and full all of the way down; legs and feet—legs small and very short, standing wide apart, in sows just keeping belly from the ground, bone fine; feet small; hoofs rather spreading; tail small, long and tapering; skin, hair and color—skin thin, of a pinkish shade, free from color; hair fine and silky, not too thick; color of hair pale yellowish-white, perfectly free from spots or other color; size small to medium.

Certainly this is a formidable scale of points for so small a pig.

Sheep Husbandry.

THE BEST BREED OF SHEEP FOR THE WEST?

IN the RURAL of Feb. 14, Mr. A. B. Allen lauds highly the English middle-wooled sheep, giving weights of choice specimens at various ages, and consequently the gain they made in given intervals. Now I think that such statements are apt to mislead the average farmer, at least here in the West, with regard to the most profitable sheep to keep. Is it possible for any considerable flock of his favorite Oxford Downs to attain such weights on what is ordinarily considered good feed. In the above article not a word is said as to the care, feed or numbers in the flock of the specimens extolled, and I will venture to maintain that the owner cannot obtain anything near such weights as those given with even a hundred kept together. I doubt not but the Oxford Downs are profitable sheep in some localities in the Eastern States, where land is poor, herbage scant and grain high-priced; but from my own observation I have come to the conclusion that the various sorts of Down sheep are vastly inferior as wool producers to the Leicester or Cotswold, to say nothing of the American Merino. Then again, while we of the West have to transport our stock such long distances to the seaboard, it would not be profitable to raise lambs either for the Eastern or European markets, for they shrink so rapidly when deprived of suitable food and care, that the starvation and rough usage incident to shipping would reduce them to a miserable condition by the time they arrived at their destination. It is partly due to the great shrinkage in transportation, most likely, that shippers here will pay the highest price per pound for animals of the greatest weight, provided they are well fatted, regardless of quality.

Hence the sheep raisers of the Western States must look to the production, not of market lambs, but of wool and mutton sheep, for a profit, and hence the question arises, what kind of sheep are best for these purposes. The Cotswolds, while great favorites with many on account of their large size, aptitude to fatten and great prolificacy, yet, although they grow a long, lustrous wool that sells well at the factories, they have the drawback that owing to the openness of their fleeces, they yield a light clip in proportion to their weight. The Leicesters are open to the same objection, besides being not quite hardy and far less prolific. A sheep, to be well adapted to the needs of Western sheep raisers, should be of large size, produce a very heavy fleece of valuable wool, and thrive well in flocks of several hundreds; for the sheep raiser here must have but few flocks, as the cost of fencing is very great—in many instances exceeding that of the land—which would preclude many divisions in their pastures.

I have read of a breed of sheep called the Improved Kentucky, originated by Robert Scott, of Frankfort, Ky., and described as having wool from ten to twelve inches long, surpassing the Cotswold's in fineness, softness and the number of fibers to the square inch, the fleece being so close as to scarcely allow of any parting; sheep extremely hardy, healthy, fattening on common pastures in the shortest time, and very prolific. Mr. Scott's flock often producing a third more lambs than the number of his breeding ewes; while another authority describes them as heavy-bodied, long-wooled, and producing a weighty fleece, good mutton and a heavy market lamb.

Now, if this description approximates anywhere near the truth, are not these the sheep that supply a long-felt want? for as they have a dash of Merino blood in their make-up, they would probably do to mass in large flocks, while from the length of staple and density of fleece, they would yield an unsurpassed clip of wool. Will not some one who knows all about them tell RURAL readers the "truth about it."

Gallatin, Mo. J. W. S.

Dairy Husbandry.

GREAT YIELDS OF MILK AND BUTTER.

WHEN reports of these are made, it seems proper that the owners of the animals ought to state whether they *themselves* have kept the daily record, or trusted this to hired help who might be liable to make mistakes.

A Holstein cow is said to have given 12 335 pounds of milk in ten consecutive months. If she kept on at this rate for 12 months the yield would amount to the extraordinary weight of 14,802 pounds. I would like to ask what feed was given to this cow to produce so much milk, and its cost? It would, doubtless, fetch a fair price in a *city* market, where people are fortunate who obtain such as is not more than half water; but what weight of cheese would this milk make, and what would be the value per pound of such cheese? Again, how much butter would it make and its value per pound? I have been told that it takes 20 to 25 quarts of Holstein milk to make a pound of butter; but with a Guernsey or Jersey cow, five to six quarts often make a pound. Now, if we add four times the quantity of water to the latter's milk, we have it just as rich as the former. Would this not be an easier process than to be obliged to draw from the udder of a cow such an excess of water contained in her milk, if quantity, irrespective of quality, is alone to be the boast.

As to the beef of Holsteins, I see it asserted by some of their breeders that it equals that of the Short-horn and Hereford in the London market. I have seen hundreds of fat cattle there from Holland, but the butchers informed me that it was not generally worth so much as the Short-horn and Hereford by a half-penny to a penny per pound—one to two cents of our money.

Jersey cows are represented as giving from 500 to 705 pounds of butter per annum. I do not wish to be understood as disputing the truth of these reports; but I assert that it is quite extraordinary for any cow to average over one pound of butter per day throughout the year—365 pounds in all; and when anything above this is reported, the evidence of it should be fully stated and indisputable, otherwise the great majority of dairymen will come to the conclusion that there is some mistake in making up the record. A. B. A.

A New Premium.

THE corresponding Secretary, Mr. Ingalshe, of the Washington County Agricultural Society, has suggested to me the excellent idea that agricultural Societies should offer premiums for the best records of dairy cows in connection with the National Dairy Cattle Club. Such premiums could be awarded upon the

certificate given by the Dairy Club, and might cover both the yearly and the periodic product of milk, or butter, or both. We doubt not but that the Dairy Cattle Club, through Secretary L. S. Hardin, 309 Greenwich St., New York City, would be glad to co-operate with both individuals and Societies in furthering this object. It would certainly be a new phase in cattle shows, and one of decided interest to dairymen. We hope to see the suggestion carried out generally. We shall certainly do it in Saratoga County. F. D. C.

CLEANLINESS IN MILKING.—To keep milk clean while in the act of drawing it, the cow must be clean, her bag and teats washed and wiped before commencing to milk her, and the milkman's hands be then washed. After straining and setting, see that no foul air can come from any quarter to taint the milk; and for this we must be particularly careful, for such is often borne on a strong breeze fully a mile off or more from the place where it originated. It is, of course, presupposed that all vessels used for holding the milk, are kept clean and entirely clear of every sort of odors. We have often seen the dairy house placed close to the cattle yard, poultry house, and, what is foulest of all, a dirty pig-pen. No wonder where this is the case so much butter and cheese are sent to market not fit to be eaten.

Miscellaneous.

THE TRUTH ABOUT IT.

[THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

ARE SUBSTITUTES FRAUDS?

THE popular mind is just now agitated in regard to some substitutions for staple products, among which glucose, made from starch, and oleomargarine, made from tallow, engage the attention of those interested in the manufacture and consumption of sugar and butter. Very naturally consumers suspect the virtue of these articles of food, made by chemical processes instead of by natural methods; and producers are jealous of them, because through them their craft is in danger. The first question which arises in the mind of a disinterested person is this:—"Are these substitutions frauds; or are they to be considered in the light of modern improvements upon old methods, by which the public is provided with cheaper articles of consumption, which may legitimately take the place of those which they are intended to displace?" A rational reply to such a query cannot be given by an advocate for either of the parties immediately interested. Some one only whose interests are not involved, and who understands well the character of the substitutions and the general history of such matters, can arrive at an impartial judgment in regard to them.

It should be considered that this is no new thing, that the very same sort of processes have been in existence with other substances for many years, and that industries which were once staple of their kind, have been entirely ruined and displaced by new discoveries. Formerly the production of indigo and madder occupied thousands of cultivators of the soil; but chemists found methods of producing artificial blues and reds so cheaply, that these dye stuffs could no longer be produced profitably, and the growth of them ceased. So, just at the present time, the owners of enormous capital interested in coal-gas manufactories and the lighting of cities, find their interests threatened with destruction by new and cheaper methods of making gas from water, and more certainly by the use of electricity in producing light. The aniline colors, produced from waste petroleum products and gas tar, and that are of such exquisite shades and of such remarkable cheapness, have worked wonderful changes in the business of making dye stuffs and colors. The discovery of Bessemer's process of making steel almost as cheaply as iron, ruined thousands of steel manufacturers, or forced them to remodel their works at great expense. Railroads destroyed canals, and steamships wrought ruin to the sailing ship builders; the introduction of cotton as a textile fiber, destroyed thousands of linen factories; and "shoddy" and "mungo," bear hard upon the patient and uncomplaining sheep and its owner, as well as torment and fret the unfortunate wearer of the half-rotten and miserable clothing that is made from them. On every hand, wherever we look we find this principle at work.

Tireless energy, skillful analytical and synthetical processes are busy every day in cheapening the cost of manufactured products, and so long as the restless activity of the human mind is in operation, so long may established interests fear danger from the inevitable substitution of new and cheaper articles of consumption. It does seem as though the common idea of the optimist, whether he be Mussulman heathen or Christian, that, "what is, must be;" and "it is useless to strive against the inevitable," must be accepted as an article of our modern creed, and no one must be surprised or discomfited to awake any morning to find his occupation gone and the products of his industry supplanted by some new invention.

So the bee-keeper must learn to view the attractive jars of glucose, containing a fragment of comb made of celluloid, by machinery, and flavored by chemical products to imitate his pure honey, with at least stolidity, if not without disgust; and the dairyman may as well make up his mind that his choice goods will have to compete with the product of the tallow refinery, and the cow must submit to the indignity and find a recompense in the thought that the interloping ox pays the penalty of its competition with her butter, in his death at the shambles. But the poor, deluded public! Nothing remains for them but to take what is offered them, "asking no questions for conscience sake," and quietly awaiting the time when the chemist shall cater for all their wants, and his laboratory assume the places of field, garden and dairy, and the science of living be represented by a cabalistic formula, something like C-O-H-N, with some complicated additions of a few other letters and some small figures.

In view of all these considerations, then, are we to look upon every substitute for an existing thing, as a fraud? Certainly not, so long as it comes to us for what it is, and not as something which it is not; and if it endeavors to live upon its own merits. H. S.

WHAT OTHERS SAY.

WHAT CROPS TO RAISE.—The best way is for a farmer to determine what crops in regular demand are best adapted to his soil and climate, and also to his own abilities; what proportion of each he can grow to best advantage, and then continue, with little variation, to cultivate about the same number of acres of each crop from year to year. The one who pursues such a course for a series of years, will meet with fewer losses and accumulate more than the one who changes from one crop to another according as the prices have ruled the previous year.—Am. Rural Home.

THIN SEEDING.—Mr. W. A. Armstrong says "There can be no doubt that the farmers of this country throw away millions every year in seed that does not grow, and the entire sum is absolute waste. Suppose a bushel of wheat is worth one and a half dollar, and on every acre sowed in the United States that amount is wasted, it would be $30,000,000 annual loss. Now, if that dollar and a half, the value of the wasted seed, were expended on every acre in added labor to secure superior fitting for the seed, there would be increase in the crop, besides the saving of seed; for with land well fitted there would be need of no more than a bushel of seed to the acre."

PEDIGREED SHORT-HORNS AND FANCY PRICES.—From the tables and the Scotch reports, says the Mark Lane Express, "it will be seen that putting 'fashion' aside, and reckoning Scotch and collective sales, the average price of pure-bred Short-horns at the present time is under £30, probably nearer £25 than £30. At this price they will pay to breed, and be readily purchased—if really good animals—by farmers even in a time of unexampled depression like the present. We are by no means singular in regarding the decline of 'fashion' in Short-horn breeding as indicative of the commencement of an era of far greater usefulness for the Short-horn breed of cattle. From various sources we find similar opinions expressed. The Leeds Mercury says:—At Birmingham the healthy reaction against the excesses of fashion in breeding was happily shown in the prices realized, as animals of real merit sold at fair prices, considering the depression of the times, while fashionably-bred failures were neglected. The fictitious values reached by scions of favorite tribes or families, when the 'Short-horn fancy' was at its hight, will probably never be attained again. Well-bred animals will bring their full commercial value, and that will be sufficient encouragement to good breeding.'" And the National Live Stock Journal (Chicago) for March, referring to the late sale of pure-bred Short-horns there, says:—"It is a good omen, and one auguring well for the Short-horn interest, that the senseless *furore* and speculative mania about so-called 'fancy,' or 'gilt-edged' pedigrees have received their quietus. The common sense and good judgment of intelligent men have revolted against the absurdity of a *pedigree* without an *animal*, and the tide in the right direction may be said to have fairly set in."

ACID IN CHEESE-MAKING.—Prof. Sheldon in his Dairy Farming writes as follows:—"Consciously or unconsciously, most cheese-makers employ acid more or less. The Cheddar dairymaid produces it by 'slip-scalding' and the use of sour whey; the Cheshire by allowing the curd to remain unpressed and warm for a day or more; and the Derbyshire by pressing the fresh curd, and later on salting it on the outside. But the great thing in cheese-making, where acid is intentionally employed is, or ought to be, to make the acid subordinate to the rennet, not the rennet to the acid; and as the acid in a high temperature is much more rapid and powerful in its action, it can easily overwhelm the rennet if it is developed too far. Salt checks the action of acid and rennet alike, and acid checks the action of rennet; hence it follows that the rennet should not be subjected to both checks together, except to a moderate extent. While very fine cheese is made by the aid of acidity directly developed, equally fine is made at a rather low temperature throughout, with a liberal use of rennet and a little or no acid; this gives the rennet the advantage it needs over the acid, because it comes into play faster than acid does at a moderate heat; and where the salt is not applied till the following morning, even though the temperature be low, the result is frequently found to be a cheese of a very good quality. Excessive salt and excessive acid each prevent the ripening of cheese; hence it follows that the rennet, which is the ripening agent in the cheese, should have a chance of getting good hold of the curd, and be well forward in it work, before either acid is developed or salt is applied. This it does very successfully in several methods of cheese-making, which are quite distinct from each other. Many cheese-makers, knowing the effect of acid in expelling the whey quickly from the curd, have employed it too freely, with the view of saving trouble to themselves. They have succeeded in this, but they have nearly ruined the cheese. Acid in cheese-making is indeed a good servant, but it is a bad master; it must always be used with the greatest discretion."

CURD, WHEY, AND CHEESE.—Again, Prof. Sheldon remarks:—"In the process of making cheese, the great bulk of the milk-sugar is not retained in the curd, but passes off in the whey; so it follows that if the whey is imperfectly got out, a too large portion of the milk-sugar is also retained in the cheese, and it is this that is the cause of sweet cheese. This sugar, too, or a portion of it, enters into fermentation in the cheese, forming, amongst other products, carbonic acid gas, which, in trying to escape, causes the cheese to heave and become porous. An excess of whey causes annatto, that is used for coloring cheese, to be unequally distributed, so that the cheese is not uniform color; or the lactic acid formed from the milk-sugar has a destructive effect on the coloring matter later on, causing it to fade and the cheese to become of a bad color. The presence of the whey and the fermentation caused by the milk-sugar cause the cheese to decay without ripening, in a manner that makes it a very disagreeable and unhealthful article of food. The necessity of getting out all the moisture, over and above the quantity which the cheese may safely be allowed to retain, will now be apparent. This is effected, first, by the cutting of the curd; second, by pressure; and third, by a moderate amount of acidity, where such is employed. Acidity in cheese-making is the most effectual means of expelling the whey, but it must be employed with great caution, for, though it is a capital servant, it is a bad master."

WORTH REPEATING.—Some of the Eastern farmers talk of killing the gosling ere the prospective golden egg is developed. They discourage sugar-beet growing before they have learned how to grow sugar beets. But of this faithless class is not Mr. W. A. Pearson, of Vassalboro, Maine. He planted five-eights of an acre last year, dressed with barnyard manure, sprinkled a mixture of superphosphate and plaster in the drill, thinned the plants to 12 inches in rows 30 inches apart, and got as much for his beets as would buy 75 bushels of corn, and was well satisfied with the success. He would have considered 120 bushels of corn per acre a good crop for Maine. Colonel Parker acknowledges the receipt of $447 for 166,915 pounds from 3¼ acres.—N. Y. Tribune and Millers' Weekly.

DAIRYMAIDS.—We take the following from the Dublin Farmers' Gazette: It ought not to be difficult, one would think, to induce respectable girls to turn their attention to dairy work; but, nevertheless, it is not easy to do so. Girls are eager to go into shops or become apprentices to millinery and dressmaking, although in either case they will not earn more than six or seven shillings a week, out of which pittance they must clothe, lodge and board themselves; whereas, a first-class dairymaid will earn £20 a year and often more, with comfortable board and lodging. There are many governesses who do not earn as much; but, then, girls who stand behind a counter for ten or twelve hours daily, or work like white slaves in the ill-ventilated work-room of a milliner or dressmaker, or have to bear with the tempers and try to hammer in some of the elements of education into the dull heads of a set of fractious children, are all "young ladies;" whereas, a dairymaid is "only a servant." It is low, ignorant pride that is at the bottom of the matter, and it is that which drives so many shop girls in large cities into evil courses.

PRESERVING GREEN CORN AND PEAS.—Green corn and peas contain a large quantity of sugar and albumen, and these substances ferment very readily if exposed to the air. In canning these vegetables, they should be packed when thoroughly well cooked and boiling hot, and should be inclosed air-tight immediately. They may be packed in glass cans, quite full, and occasionally the cans may be placed in a boiler with cold water gradually heated and boiled for 15 minutes. This acts as a preservative.—N. Y. Times.

ORIGIN OF EARLY AMBER CANE.—Mr. E. Y. Teas, a well-known horticulturist of Indiana, on his visit to Europe in 1860, purchased in Paris a few pounds of Chinese sugar-cane seed, which he planted. In the product of this lot of seed, one stalk appeared of different habit from the rest, and that ripened its seed before the rest of the plot was fairly in bloom. The seed from this stalk was carefully saved and planted separately, to prevent mixture. This cane ripened much earlier than any other had been known to, and the sirup from it was superior in taste and color to any previously produced. From its earliness and the beautiful amber color of the sirup, Mr. Teas named it Early Amber, and under that name distributed it far and wide. That it was a sport, different from anything that had ever been known, there is no doubt.—Colman's Rural World.

PLUMS.—Mr. J. J. Thomas, of the Country Gentleman names, the following 13 sorts, ripening at different times, as generally popular: Rivers's Early Favorite, Imperial Ottoman, Lawrence's Favorite, Prince's Yellow Gage, Green Gage, Lombard, McLaughlin, Washington, Smith's Orleans, Jefferson, Bradshaw, Reine Claude de Bavay, Coe's Golden Drop. Where the seasons are long, Roe's Autumn Gage is valuable in October. For market, take Lombard, Smith's Orleans, Pond's Seedling, Damson, Reine Claude de Bavay, Yellow Egg. Where it succeeds well, Wild Goose is a good market sort. For prunes, Italian and German prunes are valuable.

ARE WIND-BREAKS BENEFICIAL?—Mr. Batcham, in the Ohio Farmer, thinks not. He concludes an article thus: There is more of health and nutrition for growing trees or plants in the breezes of summer than most people imagine. The same is also true in reference to the inmates of our dwellings; and people make a great mistake who plant evergreens or other trees so thickly as to shut out, to any considerable degree, the sunshine and the winds from their home grounds. Every housewife knows how rapidly mildew is developed in cellars and closets during damp, sultry weather, and what a sure preventive of all fungus action is found in sunshine. Fungus spores of many kinds are floating everwhere in the atmosphere during summer, only seeking the right place of lodgment and sufficient heat and moisture to start them into growth. Some of these are known to be injurious to personal health; and the best means we have of guarding against their poisonous influences is the blessed sunshine—the greatest anti-fungoid known.

A HORSE BISCUIT is being manufactured in Russia to take the place of oats. It is made of crushed oats and the flour of gray peas, mixed with hempseed oil and salt, and is four inches in diameter. A day's rations weighs about four pounds, and is equal to ten pounds of oats. The horses like the biscuits when soaked in water, and if fed exclusively on them, though they lose in flesh, are still fit for fatiguing work.

Industrial Implements.

IMPLEMENT NOTES.

AS AN EXAMPLE OF STEADY progress in manufacture, may be mentioned the fact that six years ago Mr. W. W. Grier, Sec'y of the Dexter Spring Co., of Hulton, Pa., began making the above favorably known springs in the basement of his barn; whereas now, the business has become so enlarged that 40 hands are employed, and the monthly sales amount to over $10,000.

AN IMPROVED VIBRATOR THRASHER will soon be brought out by J. I. CASE & Co., of Racine Wis., already widely known for the excellence of their manufacture of all sorts of horse-powers and thrashing machinery. The Improved Vibrator is expected to *Eclipse* everything of the sort yet seen.

Everywhere.

RURAL SPECIAL REPORTS.

ARKANSAS, Beebe, White Co., April 29.—Crops are looking well, except that wheat is inclined to rust. Cotton is almost all planted, and some are plowing corn. Fruits look promising now, and my clover is a sight that draws the neighbors' attention. People aronnd here have been depending almost entirely on corn and cotton and have to buy from the North all the wheaten flour they use—they use a good deal of corn meal, however, for bread. That whirl-wind noticed in the RURAL's News, or an off-shoot of it, visited this section, passing by El Paso, a little town about ten miles away. It moved in the shape of a funnel. It struck the corn-crib of a friend of mine, scattered the corn, crib and fences so that not a trace of them could be found, killed the wheat over which it swept; then rose up from the ground for a bit, but soon descended in a piece of timber and burst its way through, tearing even the stumps out of the ground. It next struck a house of two large rooms and two shed rooms, killed the housewife and three children, one of whom was whirled a mile away where it was found with its brains out. The husband, Mr. Pool, was carried as far with a child in his arms, and knows not how he got to where he recovered consciousness, beside a stump. The child is getting well and he, too, is somewhat better. The only signs of where the house stood are a few stones that mark the site of the chimney. The man's pants, with a knife, store key and 30 cents in the pockets, were found ten miles away. He had $3,000 in a trunk, $2,000 of which were in money, the rest in checks, etc. The lid was torn from the body of the trunk and swept away with the $2,000 in a pocket attached to it. Both were found a mile away, while the checks, etc., and the rest of the trunk have not yet been heard of. Next morning a feather bed was found seven miles off in the yard of a man who recognized the tick and returned the bed; while a shawl and a skirt were picked up eleven miles from the ruined homestead. Eight houses, in all, were demolished, and another neighbor of mine was killed and several wounded. Corn is worth 75c. to 80c. per bushel; oats, 65c.; eggs, 10c. per dozen; butter, 15c. to 20c. per pound. Everything the merchants bring down here is of inferior quality; many of the farmers have to mortgage their crops, and so soon as the store-keeper learns this, he stops credit; so that some folks here have to live on "mighty" meagre fare for a large part of the year. H. B.

NORTH CAROLINA, Brookston, Warren Co., April 29.—"Old winter still lingers"—not exactly winter, but since our big rain in March, we have had pretty cool and dry weather. We had snow on the 8th inst., and the mercury was down to 29 deg. on the morning of the 12th; but little injury was done to vegetation. Early Peaches were nearly all ruined before that time and the dry winds have swept away the remainder, with a few exceptions. We have fair prospects for our usual full crop of grapes. The showing for other fruit is fair, Strawberries are suffering for rain, which has just now commenced falling, and they are probably safe. Wheat is above the average both in acreage and appearance. Corn planted early in the month is coming on unusually well. More than the usual area will be planted in cotton. Fodder, owing to the short crop of last year and the late spring, is scarce and high in price—from $1.25, away up to $2.00 per cwt. Many farmers, the writer among the number, are obliged to allow their cows to range on the commons—result, one cow aborted, all are thin and the milk-pail light—it doesn't pay. In consideration of having discovered a land where the potato blooms and grows and flourishes, and can be eaten fresh from one and the same hill for nine months in the year, I move that the "Major's" S. C., friends be instructed to promote him a grade or two. Though military titles, except private, seem to be pretty nearly all appropriated hereabouts, please tell him to move along up this way and we will give him anything in that line that he may ask for, besides rendering all the aid in our power in the making of new discoveries.

M. B. P.

[The Major would be pleased to accept this friendly invitation were it not that "his foot once more is on his native heath."—EDS.]

The Querist.

ANSWERS TO CORRESPONDENTS.

[All queries must be accompanied by the name and address of the writers to insure attention.]

Guernsey Cattle.

G. E. N., Afton, N. Y. asks for a description of the Guernsey cattle—their size, color and butter qualities, and where they can be bought.

ANS.—Guernsey cattle are either bred or descended from those bred on the island of that name. The cattle on this island are distinguished from those on the adjoining islands of Jersey and Alderney by their great uniformity of color, being usually yellow with white markings, coarser hair, less delicacy of form and limbs and by their yellow muzzles, those of the Jersey being black with a white fillet around them. The Guernseys are a trifle larger than the Jerseys and their butter qualities are as good, though as yet they have not, in individual instances or in herds, equaled the latter in amount of production. The earlier importations of Jerseys into this country had Guernsey markings and the buff nose occasionally re-appears in the progeny of the purest-bred Jerseys: but of late the line of demarcation between the islands has been drawn so close that there has not been for years, nor can there at present, any intermingling of the two breeds. Within a year or two past the Guernsey breeders in the United States have formed an association similar to that of the "American Jersey Cattle Club" and publish a Herd Register. Messrs. E. F. Bowditch, South Framingham, Mass., and Charles M. Beach, of Hartford, Connecticut, were early importers of Guernseys and usually have a good stock on hand, and will give any information to inquirers. There are also several prominent breeders of Guernseys in the State of New-York as well as at the West. The prices are about the same as those of Jerseys, from $150 to any sum above that, that fancy may suggest.

The Centrifugal Creamer.

J. F., Buffalo, N. Y., asks, 1, for information as to the new process of separating the cream from milk, by the Centrifugal Creamer; 2, where such business is carried on; 3, is it a success; 4, what is the cost of the machine.

ANSWER BY PROF. L. B. ARNOLD.

The last annual Report of the American Dairymen's Association contains the most complete account of the working of the Centrifugal Creamer I have seen published. This report is sold for the benefit of the Association by T. D. Curtis, Sec'y, Utica, N. Y., for 25 cents a copy. The machine is in use by E. Burnett, Southboro, Mass., and for sale by Whitman & Burrill, Little Falls, N. Y., of whom special information can be had by mail. I have seen this machine in operation at different times, and have carefully noted its peculiar work. It is a cream and milk purifier, as well as a separator. By exposing the cream, as it is separated, in the thinnest imaginable strata to the strong current of air occasioned by the rapid rotation of the machine, all foreign odors are carried away and the ripening necessary for easy churning and for hightening the flavor of the butter, is obtained instantly, instead of by long exposure to the air. All dirt and dust or other impurities heavier than the pure liquid milk, are, by centrifugal force, separated by being thrown to the side of the vessel containing the rotating milk, and held there, leaving the skim-milk cleaner and purer and sweeter than it can be obtained by any other means I know of. I have no doubt of the superior work of the machine, but there stand opposed to its general introduction the cost of the machine, and the motive power and skill to run it.

Norway Spruce Hedges.

G. W., Rock Fall, Ill., says that quite a number of Norway Spruce hedges have been planted in that vicinity, and he asks, 1, within how narrow limits can such a hedge be made to flourish for ten years; 2, can it succeed as an ornamental hedge in the shade of street trees or by the side of a fence; and, 3, would Arbor-vitæ be better under the same circumstances.

ANS.—1, That is optional with the owner. The Norway Spruce will bear quite severe trimming, and by judicious use of the shears the hedge may be kept from increasing more than about six inches in width each year. 2, No; the hedge may grow in the shade; but as an ornament it will not be a signal success, particularly if it, in addition, is hampered by a fence, on one side. In a dense shade the growth will be less compact, and the needles will fall off before their time; this may be ascertained by examining the inner and lower branches of any compact Spruce. Arbor-vitæ will do no better than the Spruce; it is of a slower growth and is less efficient as a fence. The best evergreen to plant in such a place would be the Hemlock—Abies Canadensis.

Lump in a Horse's Throttle.

L. H., Davenport, Ia., asks how to treat a horse with a lump, the size of a fist, on one side of its throttle—in other respects the animal seems in good health.

ANS.—This is a case of enlarged thyroid gland, due generally to some constitutional or local derangement, owing, maybe, to drinking gypsum-impregnated water. Give half a drachm of iodide of potassium mornings and evenings for a week in the drinking water, or dissolve it in a little water and mix it in the food. Clip short the hairs of the affected place, and apply every evening a part of an ointment made of two drachms of iodide of potassium and ten drachms of weak mercurial ointment. If the skin becomes sore or flakes off, discontinue this application for a few days or a week. The treatment may have to be continued for a few months before a cure is effected; should the treatment fail, the gland may be removed by a skillful surgical operation. Now will our correspondent tell us the precise size of a fist?

Chicks Dying in the Shell.

W. M., Wellington, Kan., has so far this year set eight or nine Light Brahma hens, but has had poor luck in getting a brood; as the chicks die in the shell, being unable to get out. The "skin" of the egg seems to draw like rubber over them, and he asks the cause and a remedy.

ANS.—The failure of the chicks to extricate themselves from the shell is probably caused by insufficient heat or moisture—most likely the latter. Moisten the eggs, on the 17th and 19th days of incubation, with warm water sprinkled into the nest—not too much. This will help to soften the shell. The drawing tightly of the skin over the chicks imprisoned too long in the shells, is due to the skin drying. Should the shell break and let the chick out at the natural time, there is then just sufficient moisture; should the chick fail to come out of the shell at the proper time, the skin naturally dries up over the little thing.

Miscellaneous.

N. E. B., Johnson's Junction, Ky., asks, 1, whether growing flowers in the house is injurious to the health of the inmates; 2, what is the design of the New York Flower Mission; 3, will any other cause than accumulation of blood cause congestion of the lungs, brain or other parts of the body.

ANS.—1, The presence of growing flowers in rooms is not perceptibly harmful or otherwise to the health of the inmates, provided the pots be kept clean, the soil be not permitted to become sour or water-soaked, and the rooms be properly ventilated. 2, The mission of the Flower Mission in this and other cities is, primarily, to supply the pleasure of flowers to poor sick people at their homes, or, oftener, in the hospitals and other public institutions. Here, however, they combine with this, religious exhortation and psalm-singing, together with little presents of an orange, an apple, or a nut, to such invalids as will accept it in the hospital wards. Their visits give a two-fold satisfaction by causing a ripple of excitement in the monotony of a sick room, and a pleasurable sensation to the visitors in sight-seeing and the belief that they are doing good at a very cheap rate. 3, Congestion, strictly speaking, is an accumulation of any liquid in any organ or tissue, but its meaning is generally limited in medical works to an abnormal amount of blood in the vessels of a part otherwise healthy, due, in most cases, to an enlargement of the minute arteries and capillary blood vessels. Congestion may also be passive from obstruction to the circulation from external or constitutional causes. The highly vascular organs, and those that receive the blood most directly from the heart, such as the brain, lungs, liver and spleen, are the most frequent seats of congestion; but the capillaries, spinal cord, and viscera are also often affected by it.

W. H. J., Newark, N. J., asks, 1, whether we have used the Mapes' potato manure, and, 2, with what effect; 3. how to treat corns on a horse's foot.

ANS.—1. Yes. 2. Good. 3. The subject of corns on a horse's foot was fully discussed as late as in our issue of March 20. Once more we urge upon our readers to preserve the various numbers of the RURAL so as to form a goodly volume at the end of the year. Our index will then show where articles treating on all, or nearly all, subjects of interest to farmers can be readily found. Such a work will be useful not for a month or a year alone, but for a lifetime. Many who throw aside each paper after reading parts only of what has cost much care and study, have no idea of the mass of varied information contained in a yearly volume. Regard for the interests of the great bulk of our readers, to whom our space belongs, must prevent us from discussing the same features of a subject at brief intervals, however willing we may be to oblige an individual correspondent, and we are continually receiving so many tokens of friendliness from our subscribers, that we are always disposed to reciprocate the good-will of every one of them. In the present case we repeat:—put a sole-leather shoe under the iron shoe and stuff under the leather with tow soaked in glycerine to keep the sole cool and moist. If the sole is very tender, the feet should be prepared for shoeing by keeping them upon a puddle of wet clay for a few days and by frequent dressings of cold water and by giving the horse a cooling medicine, such as eight to twelve ounces of Epsom salts.

S. K. R., Samsonville, N. Y., has a compost heap the basis of which is about a ton of barn-yard manure; during the past winter there have been emptied upon it all the urine from the house, the soap-suds on washing days, the salt and pickle from the pork barrel—making in all about two bushels of salt, besides some brine from the pork and fish of a friend in the village, and some wood ashes. He says that some of his neighbors now say it will ruin his crops if he applies it, and he asks whether it would injure corn and potatoes to use it upon them.

ANS.—It is a good compost for almost any crop; and it would be well if more of our farmers utilized in this way more of the valuable fertilizers that are generally considered waste refuse about the house. It can be used either in the hill, drill or broadcasted. The only risk in its use would arise from a possible excess of salt, but even this risk, which is extremely slight, can be avoided by spreading it over a somewhat larger area than it would cover if no ghost of a risk existed.

B. A., South Lowell, Ala., sends us a piece of a diseased apple tree branch and wants to know what ails it.

ANS.—The branch sent is affected with what is called twig-blight. It attacks the young shoots which, early in the season, wither and turn brown. The cause is unknown. The remedy consists in cutting away the diseased portions as soon as discovered. We have found that to all appearance a similar disease is very apt to attack the growth of the Apple and Pear, and more especially the Grape-vine, when during the late winter and early spring they are exposed to sleety weather, and the ice that thus forms on the branches is allowed to remain till melted off by the sun.

W. L. N., Newark, O., asks, 1, what we think of a specified cow-milker; 2, what are the ingredients in the Perfected Butter color, and whether it is harmless.

ANS.—1. Not having tried the cow milker we cannot give an opinion; to give an opinion of anything of which we have no actual experience is a risk we are averse to take, but would especially avoid it in regard to artificial cow milkers. 9, The Perfected Butter color has annatto for its basis. This substance is perfectly harmless and the very small quantity which enters into the butter, about one grain to the pound, or one part in 7,680, is an additional security against any possible injury.

A Subscriber, Woodstock, Ill., asks whether vinegar can be made from wild Crab apples.

ANS.—The juice of wild crab apples is bitter and acid; and without sugar, it is unfit for making vinegar. Vinegar is a product of the fermentation of juice containing sugar, and no liquid devoid of saccharine qualities can produce vinegar.

J. McG., Windsor, (one of the 23 in the Union) asks for the address of a firm who manufactnre wire-fence.

ANS.—Washburne, Moen & Co., Worcester, Mass.

E. A. S., Wellman, Iowa, wants to know where a Chinese yam can be had.

ANS.—Almost any nurseryman can supply it.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, May 8th.

J. M. L.—S. J. B.—E. S.—J. C.—R. C.—W. W.—I. S.—D. E. S.—W. D.—W. R. L.—B. S.—L. M.—Thanks.—A. E. A.—J. M. T.—A. W.—L. E. S.—J. R. B.—F. J.—Yes.—E. J. C.—D. N. E.—R. B.—H. A. K.—S. L.—Thanks.—L. C.—J. W. B.—H. B.—C. S.—F. J. B.—F. W.—G. H. P.—G. L. B.—W. P.—E. P. C.—W. F.—H. Q.—A. P. F.—B. W. F.—J. C.—D. W.—W. B.—L. L. G.—M. C. P.—E. V. C.—Thanks.—C. R. D.—B. A. W.—Mrs. D. T. S.—E. V. C.—C. O. M.—E. A. H.—M. F. V. D.—J. R. C.—M. B. P.—J. W. J.—S. K. R.—J. S. S.—A. M. G.—T. McC.—L. B. A.—G. H. F.—H. B.—L. S. W.—W. B. B.—A. B. A.—T. A. P.—J. C. B.—T. M. S.—F. H. G.—S. B.—L.

The Poultry Yard.

THE BEST POULTRY FOR THE BOSTON MARKET.

IN my opinion there is as much money lost by not selecting the right kind of poultry, by each for his own market, as by bad handling. I am not acquainted with any large market except Boston; but as a good deal of poultry comes there from the North and West, information with regard to the kinds wanted may perhaps benefit many readers of the RURAL.

And first as to chickens:—they should be yellow-fleshed, large and fat. The Asiatics fill these requirements best, and among them the best are the Light Brahmas. The Cochins are too thin on the breast, though when alive they present a wide front; but this is made up of feathers, not meat, and the old hens often have an unsightly bunch of abdominal fat projecting out behind, which looks as much out of place as that on the fat-tailed sheep. There is perhaps no chicken better than the Plymouth Rock to be killed when three months old; but after this age chickens of this breed begin to grow pale in color, while the Light Brahmas are in perfection from four till eight months old, when, if they have been well cared for, they are fit food for a king or a farmer—I don't know but the farmer should come first, as the more useful and ancient member of society. Whether there is any pe-

culiar taste to the yellow color or not, I am unable to say; but as long as epicures are willing to pay for it, it will not be best to question their judgment. Another point in favor of Light Brahmas is the color of their feathers—the whiteness of these gives the bird a neater look when plucked.

The best geese are produced by a cross with an Indian gander and Bremen goose; the offsprings grow larger and fatten better than either kind when kept pure. Most breeders here mate up their breeding flocks in proportion of three geese to a gander. The first eggs are set under hens, the second setting is placed under the old goose, though some make her lay a third litter. When the goslings are about three months old they are shut up in pens and fed on corn meal, beef scraps and whole corn (the latter being the last feed at night), for about four weeks, and are allowed all the water they want to drink, but not enough to play in. At the end of this time they are generally fat and heavy.

In marketing geese from July until October they are not drawn, nor are the heads cut off; as fast as picked they are thrown into a tub of cold water and remain there until morning, when they are boxed up and sent to market. In plucking ducks and geese, pull the feathers from the head towards the tail; in picking fowls and chicks, pulling them the other way will be best.

In regard to turkeys, I know of no better kind than what are here called the Rhode Island Black. They are large enough, healthy, fatten well, and their skin is yellower than that of any other kind with which I am acquainted. A *few* extra-large turkeys will bring an extra price during holidays: but if all go to raising thirty-pound turkeys they would not be worth as much as small ones. The best management of turkeys I have found to be to feed well from the beginning; and about the middle of September take extra care of them. Have ready for them, soon after day-light, a feed of corn-meal mixed with boiled potatoes, pumpkins or turnips mashed together while hot, and fed warm; give them all they will eat up clean; repeat this at noon, and at night give them all the sound yellow corn they will eat up, and you will have some nice turkeys for Thanksgiving, if they were not hatched too late. The late ones should not be sent to market until New Year's.

Bristol Co., Mass. THEO. G. LINCOLN.

A JEALOUS GOOSE.

SOME weeks ago two of my geese were sitting close together, their nests being not over 12 inches apart. They had chosen these positions and I made them comfortable there. There was a difference of about three days in the period of their hatching. Each goose was regularly mated with her gander, and the careful husbands each watched faithfully over his own spouse during the month. The first goose hatched eight goslings, and now comes the catastrophe. The mate of the goose that had three days yet to sit, was so "taken" with the goslings that, deserting his sitting spouse, he devoted himself to the aid of the fortunate pair that had already begun to enjoy the cares and pleasures of pat- and mat-ernity, becoming a sort of loving stepfather to the young brood. At this infidelity his goose was very much worried, and would quit her nest and follow him about, now querulously, now caressingly trying to induce him to return home and watch and wait as had been his wont for nearly a month. As I saw that he was a hardened deserter, and that he was doing a world of mischief to the expected brood by tempting the mother to abandon their care while following his faithless footsteps, I arrested and imprisoned him out of sight. Thereupon the sorrowing mother returned reluctantly to her duty, and in due time the brood of goslings began to come forth. But the mother was outraged and wrathful. No father to share her joys and cares! No marital help or caresses for the little ones or their ma! Brooding on this angered her mightily, and a more furious bird I never saw. With deep interest I watched her. No sooner would a gosling peep from the shell than she would pounce upon it, toss it about and follow it up until it was "deader than a door nail." Then she would grimly return to her nest and await for another to come forth, when she would repeat the same cruelty. After a couple of furious exhibitions of this kind, I took the remaining eggs and put them under a hen, but only one hatched. The goose finding nothing of her own and husband's left to vent her indignant fury upon, hunted up the rival whose better fortune had seduced her husband, and would, I am sure, have destroyed her brood also, had I not interfered. The jealous madam and her faithless partner are now ignorantly happy in the fattening coop. C. M. D.

Galveston, Texas.

Cost of Keeping Hens.

I am frequently asked the question, "What does it cost to keep hens." By referring to my books, I find that the cost for feeding 140 hens the six months, commencing Sept. 1st, 1879, has been as follows:—

94	bushels	wheat screenings	$42.30
10	"	corn	6.45
8	"	carrots	2.40
7	"	buckwheat	4.20
1	"	onions	1.25
590	lbs.	tallow scraps	6.45
110	"	corn-meal	1.10
120	"	barley meal	1.33
		cayenne pepper	.25
		Total cost	$65.76

This is 47 cents per head for the six months. As the hens can pick up a share of their living for the remaining six months, perhaps 80 cents are a fair estimate of the average cost of their feed for one year. Of course, the cost will vary somewhat in different localities, owing to the variation in the price of grain, etc.; but I think my estimate sufficiently accurate for all practical purposes.

In raising chickens I find that it requires more food to grow a large, than a small one; but after being fully grown, and when laying has commenced, I discover very little difference in the amount of food required by the different breeds. Hens that lay best should eat most. NELSON RITTER.

FOUR-TOED HOUDAN FOWLS.—We notice the French are selecting such to breed from in preference to the five-toed. This is a sensible move on the part of poultry fanciers. The fifth toe is a mere ugly excrescence of no use whatever, and it is only a waste of precious food to grow it. We may say the same of the Dorking fowl, and wish the English in breeding these hereafter, would follow the excellent example set them by their Gallic neighbors.

The Apiarian.

FEEDING BEES.

THERE are bee-keepers who say: "Better keep no bees than to feed them!" There are others who think they have done enough if, once a year, when the time of greatest need comes, they remember these little creatures with a small portion of honey, or sweetened water, or a piece of candy. But there are also some bee-culturists in the world—and, thanks to the spirit of progress, their number is increasing—who feed during the whole year; that is, whenever it may be deemed advisable as a matter of profit. Brimstoning bees, really robbing them of their honey, and securing large yields in good seasons, cannot be termed scientific bee-culture. On the other hand, wintering bees successfully, and, in order to secure a surplus during poor seasons, such as last year, decreasing the number of colonies without killing any bees, may be said to combine the science and art of cultivating bees. Most novices in apiculture are impelled by a desire to increase the number of their colonies as rapidly as possible. To attain this result, some have recourse to artificial swarming; they divide, twice and even three times, colonies which often are already very weak; but instead of advancing, they go backward. Others resort to speculative feeding to stimulate the queen in her laying and to bring about the development of brood in order to obtain a large number of natural swarms. This latter method will produce the desired result, if it is applied with a proper understanding of the subject; and, above all, if it is employed at the proper time.

Feeding may commence in the beginning of May, to bring about early swarming. In movable frame hives, this is done by inserting full cards of capped honey, or, in case these are lacking, lukewarm sirup of the consistency of mucilage—two parts white sugar and one part water brought to a boil, and fed every three to five days. Bees, like human beings, like warm food better than cold, and in this condition they will the more readily accept the sweets offered them. When sirup is fed, the feeder should be placed at the entrance, and so arranged that the bees enter it readily from the inside of the hive, while outsiders and robbers are excluded. What takes place when bees are fed for the purpose of stimulation? They regard as the product of nature what the hand of man spreads before them; they hasten to leave their habitations and go outside in search of the sweet nectar. All goes well if vernal sunshine and gentle zephyrs favor their excursions; but if the weather is bad, if rigorous winds follow closely upon seductive sunshine, and overtake the rovers in the open field, the poor workers are chilled, the weak colonies rapidly depopulated, and the brood perishes for the lack of care, and finally the colonies succumb. Although so few bee-keepers think of feeding during May, June and July, yet such unfavorable weather often occurs that young swarms and nuclei should be looked after—it will be found to pay. During such periods feed as often as every fifth day. If the amount already in the hive is not sufficient, it is better to feed now rather than later. If one tries spring feeding, even on a single colony, he will find it to increase rapidly in numbers, especially if the queen is young and the colony has a fair number of bees to start with. J. G. BINGHAM.

Miscellaneous.

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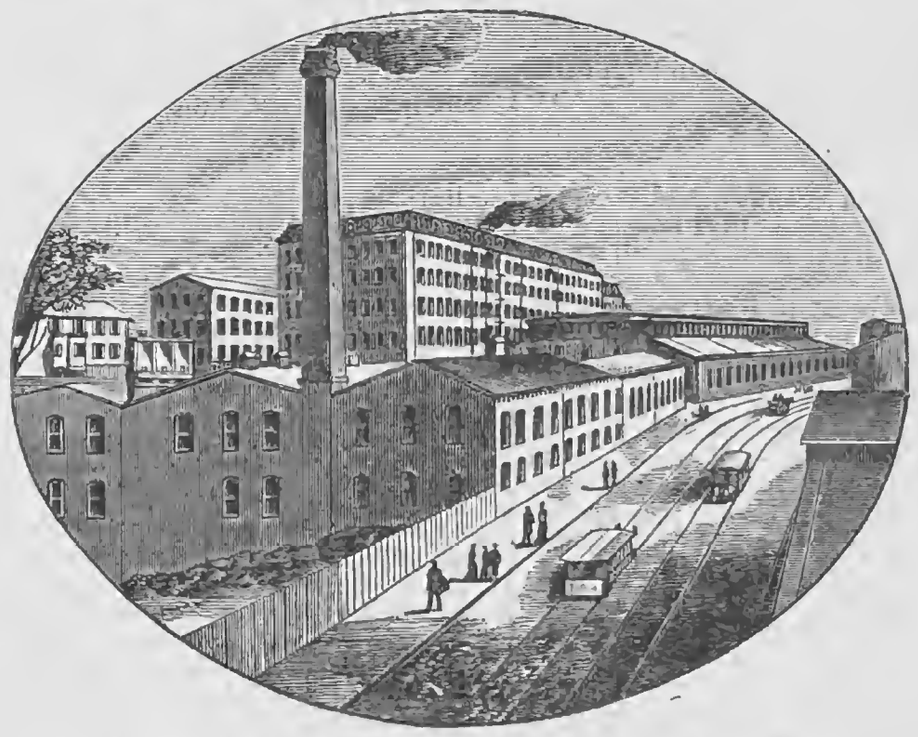

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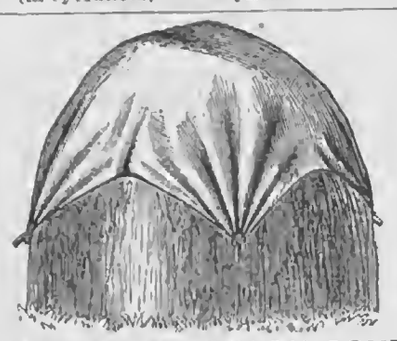

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THE
RURAL NEW-YORKER.
PUBLISHED EVERY SATURDAY.

CONDUCTED BY
ELBERT S. CARMAN.

Address THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, MAY 15, 1880.

CHEERFULNESS is the daughter of employment. Says Bishop Horne, "I have known a man to come home in high spirits from a funeral, merely because he had had the management of it."

OUR contributor, Dr. J. B. Lawes, of Rothamsted, England, in a late private letter to the RURAL NEW-YORKER, states as follows:

"We had a wonderfully dry spring and one well suited to get in our crops; but the wheat does not look well, and we shall require a large foreign supply."

WE have just been reading in the columns of a widely-circulated journal, that the most promising of the new fodder plants are Pearl (Cat-tail) millet and Doura, called also Egyptian corn, China corn, Pampas rice, etc. It is painful to those who really have the good of agriculture at heart and who have tested those plants, to see such reckless and mischievous commendations. All but one (possibly two) of the Douras send up but a single stalk, and are far inferior to Indian corn as fodder plants. Cat-tail millet for the North, is little less than a humbug.

SIXTY-ONE horses bred by the Earl of Ellesmere, on his estate of Worsley Hall, were recently sold at auction by his agent, Capt. Heaton. Brood mares went from 58 to 170 guineas ($290@850); fillies from 27 to 280 guineas ($135@1,400); stallions 85 to 320 guineas (425@1,600); entire colts, 40 to 280 guineas ($200@1,400). The average of the 61 horses was about $600—a well paying price for cart horses; as it is little more trouble to breed and rear them than cattle, they are so gentle and, on the whole, probably no more expensive; for the colts are so powerful they can be put to gentle work on the farm or road at two years old; the mares can be used almost to foaling time, and begin again a few days after foaling, while the stallions are all the better for constant labor, except during the breeding season, and even then they may be worked prudently about half of each day.

IT very frequently happens that young pear and other fruit trees blossom and, if permitted to do so, bear fruit the same season that they are planted. We have had the blossoms and fruit of such trees pointed out to us as evidence that the trees were thriving particularly well. Such evidence, however, is indicative rather of weakness than of vigor. There is nothing more harmful to young trees than to permit them to bear fruit the year of transplantation. Even for dwarf Pears, the third year is soon enough for them to bear, and the sixth year is soon enough for the generality of standards. Our readers will find that if they suffer young trees to mature fruit the first or second year, their vigor will, in most cases, be impaired for ever after, and having borne at this early age, they will not, as a rule, bear again in five or six years afterwards. The temptation to inexperienced fruit-growers to see their young trees in fruit as soon as may be, is considerable. It is because *we* yielded to such temptations, that we are now able to guard our readers against falling into the same error. Fruit-bearing is an exhausting process, and only trees that have arrived at a certain age or maturity can exercise the function without endangering their health and strength.

A CAPITAL idea has occurred to the managers of the Agricultural Society in Washington Co., Maryland. Instead of offering money premiums of one to five or six dollars for the exhibits, they have decided upon the plan of offering a choice among a few first-class agricultural journals, for which the association will pay the subscription for one or more years, according to the value of the premium. This is an example worthy of imitation. It is the best possible way of benefiting the prize-takers, as the premium itself gives instruction in the calling in which they are striving to excel. A silver chalice, with engraved monogram, may form a handsome and very acceptable premium, which the housewife who recieves it for the superior quality of her butter and cheese, or the farmer who wins it by raising the largest yield of grain to the acre, or for having the best pigs, sheep or cows, can treasure up as a pleasing memento of victory, but practically it is of no use except as an ornament. If the premiums, on the other hand, consist of money, it is generally the case that it is less profitably invested than by subscribing for an agricultural journal. We hope that this idea will prove to be catching, and that other Societies will adopt the same plan, not so much for the increase it is likely to give to our subscription list, as because an agricultural paper is a most benefical and suitable premium for agricultural products.

BEFORE the New York Legislature there is now a bill, called the Hepburn bill after its introducer, whose object is to put an end to the unfair discrimination in freight charges made by our railroads in favor of certain persons and places to the injury of the general public. From one end of the country to another complaints are high and deep of the abuses, in this direction, of the privileges granted to railroad companies by the public for the public benefit; but which have been perverted to the public disadvantage. This bill ought to pass, and those among our law-makers who oppose the just measure should be held in unfavorable remembrance at election time. We learn, however, that from most of the large towns through which railroads run, prominent business men are flocking to Albany to oppose it, and that the lobby that is scheming against it, is unusually busy and flush. Among the opponents of the measure there are few who are not directly or indirectly privately benefited by the public grievances it seeks to remove. Those merchants who are plotting against its passage have in nearly every case contracts with the railroad companies at exceptionally low rates, which give them unfair advantages in trade over their fellow townsmen in the same lines of business. Whence comes this right arrogated by the railroad companies to "build up" the business of certain places and certain men to the detriment of other men and other places? What rights the companies have were conceded to them by the People for their own benefit, and this certainly was not at first among them, nor do we remember that the People have ever since been foolish enough to add it to the original concessions. It is a grievous abuse that should be at once redressed. Even if the measure referred to, passes it will only place the present privileged classes on an equal footing in the race for wealth with their fellow citizens, a position which no fair-minded man should object to in a Republic.

AT this lively season our friends are mostly too busy to contribute largely to their favorite "Everywhere;" but from telegrams to the New York papers and other sources, we learn that rains have lately been general throughout the West from Texas to Minnesota, just in time to dissipate fears of drought in many places, to push on wheat and oats, and help crops of all sorts. Wheat is unusually advanced in quite a large number of places, such reports being specially noticeable from southern Illinois, Missouri, Texas and Georgia, some of it having been cut as early as the 1st of May in some parts of the last State, while in the neighboring State of South Carolina, although the spring was earlier than usual, the crops are said to be a fortnight later. All along the Ohio Valley the prospects for winter wheat are reported fine, and, indeed, all the reports we have seen from every section speak more or less enthusiastically of the outlook for it, though in several places the season is decidedly backward. This is exceptionally the case in Minnesota, but the outlook even there for wheat is reported good—that is, for the spring varieties. The cotton crop is, on the whole, in a fine condition all over the South, and the high prices of last year have stimulated the planters to put in a considerably larger acreage than usual. Accounts from the Southern tobacco fields, however, complain of a rather poor outlook, especially in Virginia, where the fly is particularly busy and numerous. There will be, most likely, a good yield of peaches, the reports of utter ruin to the crop, even from Delaware, having this year been much milder and fewer than usual, while some accounts venture to speak even buoyantly, especially those from the West and South—a rare exhibition of confidence from the peach regions. Where strawberries were nipped by the frost, the second bloom is producing a good crop, and there is little danger but our markets will be abundantly supplied. Apples, Pears, Cherries, and especially Grapes, seem to be "putting their best leg foremost" on the march to an abundant harvest, and, so far as quantity and quality of products are concerned, the farmer can, from present indications, sing hallelujah—but, by way of caution, how about prices?

BREVITIES.

OUR usual "comic" on the last page is omitted this week to accommodate our advertising patrons.

FRIENDS would oblige us and insure for themselves answers more promptly, if they would send all questions pertaining to Domestic Economy to Mrs. Emily Maple.

IN the use of the concentrated fertilizers, we oblige our hands to mix them with an equal bulk of *moist* (*i. e.*, not dry) soil. This insures against some loss. They are not blown so far off by the wind and the distribution is more equal.

THE Pacific Rural Press, we see, gives Ellwanger and Barry's cut of Souvenir du Congres Pear. But the Press is wrong in saying that it has just been made public. The RURAL NEW-YORKER gave its own illustration of this pear over five years ago.

THE oleomargarine men are just now spending a "mint" of money in advertising their concoction. Well, they ought to be able to afford a good round sum, as they sell for butter prices what costs them about 10 cents a pound, according to some estimates.

A FACT worthy of note is one stated in the London Agricultural Gazette. A writer states that he commenced cutting Prickly Comfrey on the 23d of April for two dameless young lambs about 18 days old, that *would eat nothing else*. They ate it greedily at once!

RURAL FARM, Long Island, N. Y., May 8.—Weather rather dry. Grass is growing finely. Wheat never looked better. We hope to have interesting reports to make respecting our 25 varieties. We are now preparing the ground for comparative tests of many new sorts of potatoes.

OF the little orchard of forty dwarf Pears and Apples (Apples on Paradise stock), which we planted at the RURAL'S Farm last fall, not one has been injured in the least by the past winter. Years ago our experience in fall-planting was very different. A large proportion were injured—some killed. But the winter was a severe one.

IT may now be seen that many of the agricultural journals who were at pains to speak of Commissioner Le Duc as a fool, etc., for his advocacy of the Northern sugar industry, are now urging farmers to plant Early Amber Cane. But we have not seen that they have apologized to the Commissioner, or acknowledged that in this instance they were themselves the fools.

ALEXANDER DELMAR, the statistician, shows that from 1848 to 1856, it cost an outlay of $2,256,000,000 in capital and labor, to dig $450,000,000 out of California mines—a poor show for the mines, that! The same vast outlay invested in digging the soil with the rudest of our modern agricultural tools, would have made a return of—how many more hundreds, aye, thousands of millions?

BAD news comes from the tobacco fields of Virginia. Intelligence received in Petersburg on the 6th inst. from different sections of the State, reports a greater scarcity of tobacco plants than has been known for a number of years, while those growing are being rapidly destroyed by the tobacco fly. So discouraged are farmers that in many cases the ground prepared for tobacco is being planted with corn and peas. Not more than one-fourth of the usual crop is expected to be made this year.

THE extraordinarily large number of immigrants settling among us this year, must add considerably to the home demand for farm products of all kinds, inasmuch as very few, if any, of the new-comers will be able, the first year, to contribute materially towards raising their own sustenance. It is reasonably estimated that, during the twelvemonth, an addition of at least 300,000 will in this way be made to the mouths that will have to be fed within our borders—a goodly army it will require heavy requisitions on our commissary stores to maintain.

IN the RURAL of April 24, appeared an editorial article headed "How to Buy a Horse," written at the result of our thoughts upon the points to be observed in an intended transaction of that sort. The article has been pretty widely copied by our contemporaries, but in very few cases has due "credit" been given to this paper. While some have assigned its origin to other papers, others have boldly appropriated it as orignal matter. A little more care, gentlemen editors, a little more care in giving "credit," or a little more honesty—unless the mistakes were due to that scapegoat, the compositor.

HORSES, if well bred, and kindly broken, and not over-fast driven, or strained at heavy loads before eight years old, are in their prime from that age to 16, and serviceable on till 24 to 30 years of age. We have seen horses at these later ages, when properly used, which appeared more like colts than aged animals, and were still equal to a good day's drive on the road or work on the farm. A friend of ours kept a saddle horse till past 45 years of age, and he was still an active traveler. He probably might have done good service till 50 or more, had he not been accidentally killed. If you wish to obtain serviceable horses to the above ages, be very careful in breaking and using them till eight years old. At this age bone and muscle have attained their full strength, and horses may with impunity be worked harder than when younger.

ON Friday last the first barrel of flour from *this year's* wheat crop, reached this city from Americus, Ga., and was sold by auction at the Produce Exchange for $15. It will now be sent to Liverpool, where it will be resold in the same way, the proceeds to be devoted to the repairs of the Episcopal Church at Americus. Considering the remarkably early date at which the product came to market, and the worthy object which its price is to benefit, it seems to us that the members of the Exchange were very tame in their "bidding"; surely here was a splendid opportunity for vigorously "bulling" the flour market.

IN the nine months ending March 31 last, our aggregate exports of wheat and of flour reduced to wheat, from all the Atlantic ports, amounted to 118,840,522 bushels, against 95,864,254 during the corresponding period last year. Their declared value was $147,324,771, against $103,143,510 last year. The vast preponderance of our wheat exports over those of all other breadstuffs, is shown by the fact that the total value of the latter was only $35,307,455, making the aggregate of all our exports of breadstuffs, $182,632,226, against $132,032,530 last year—an increase of upwards of $50,000,000, with greatly increased exports from California and Oregon not included.

WE have of late received so many packages of plants and seeds to be tested in our Experiment Grounds, that we have not attempted to acknowledge their receipt by letter. Those who have sent them, however, may feel assured that we shall try all that seem to be worthy of trial, and that we shall report upon all that prove of special value. In the case of Grape-vines, we have been requested to return in the fall the season's growth of cane. This we cannot agree to do. We have also been cautioned against giving away or selling buds or cuttings. We can only repeat what we have grown tired of repeating, viz.: that we have never sold cuttings, buds, seeds or plants of any description, and we hold that we have no right to give away plants sent to us to be tested, until such plants are offered for sale generally.

THE Chamber of Commerce of this city is petitioning Congress to remove the import duties on salt, and similar bodies in other cities either have already sent like petitions to Congress, or intend to do so. There is little doubt but that the request will be granted. Now let the Legislature of New York State remove the odious tax it has imposed on foreign salt in the shape of discriminative canal freight, in favor of the Onondaga Salt Works. Wherein lies the equity of taxing the farmers and other residents of Western New York and of all the Western States for the benefit of this company? Outside of the railroads, there is not a corporation in the State that has done more to corrupt our Legislature, through means of a powerful Albany lobby. Doubtless it is to this nefarious influence, that the imposition of this hateful tax and its continuance, are due. How long shall its baneful incentives pervert legislation?

A BILL is now before the California Legislature imposing a tax, in the shape of a license, upon every bull, jack or stallion kept for the purposes of propagating their kinds. The name, age, pedigree and classification of each animal are to be recorded, and the record must be open to public inspection. The sum realized from the licenses is to be paid into the "Stock Breeders' Fund," which is to be distributed as premiums on stock at exhibitions to be held at the annual State fairs, after a deduction of $500 salary to be paid to an officer having charge of the distribution of the fund. The passage of such a bill should be strenuously opposed by all who desire the improvement of the live stock of the State and the consequent increase of its wealth. Instead of taxing the first-class males, it would pay the State to offer bounties for them, as is profitably done by the British Government of India, especially with regard to thoroughbred horses.

"THE Land of the Free and the Home of the Brave" seems destined to monopolize nearly all the exodusters from "effete Europe" this year. Of the 13,363 emigrants from Liverpool in March, 12,167 came directly to these hopeful shores; 812 went to British North America, but many of these, too, will come to the States either rightaway, or after they have become disgusted with their more northern homes, as thousands of Canadians, for instance, are becoming every month. Indeed, statistics show that the emigration from Canada to this country, is heavier than the immigration to the Dominion from the rest of the world. Of the rest of those Liverpool exodusters 170 went to South America, 28 to Australia, 67 to the West Indies, 62 to China and 36 to the West Coast of Africa. The total emigration from that port during the first quarter of this year was 23,764, an increase over the corresponding three months last year, of no less than 13,437!

ONE of the most interesting events in the horticultural world of late, is a sale at auction of one of the choicest collection of Orchids to be found on this side of the Atlantic. It was a private collection, belonging to Mr. Geo. Tweddle, of Albany, N. Y. The sale took place at the seed store of Messrs. Young & Elliott, Cortlandt St., this city. The collection consisted of 359 specimens in about 300 varieties, and brought a total of $6,500, or, on an average more than $18 apiece. The event had called together the most noted Orchid fanciers from all parts of the United States. We give the names of a few of the highest-priced specimens. Vanda Suavis var. Veitchii, was considered the choicest plant in the collection, and brought $250, and Vanda tricolor var. Corningii sold for $225; both were bought by Mr. Corning, of Albany, N. Y. Saccolabium guttatum Halfordiannm was bought by De Witt Smith, Lee, Mass., who paid $200 for it. The following were bought by Mrs. Morgan of this city, a lady who is noted for her excellent taste in matters of art as well as in the selection of plants: Cattleya labiata, $175; Angraecum Sesquipedale, $135; Odontoglossum Alexandria, $100; Odontoglossum vexillarium, $100. A large number of the plants brought between $30 and $50 apiece. These prices demonstrate that fanciers for really choice varieties are not lacking.

For Women.

CONDUCTED BY MISS RAY CLARK.

COLLOQUY WITH THE MAY BIRD.

BY MARY F. VAN DYCK.

"Sweet bird of May, what do you say
In your merry rounde-lay?"

Ans.—"I welcome spring, and love to sing
To every bud that's opening."

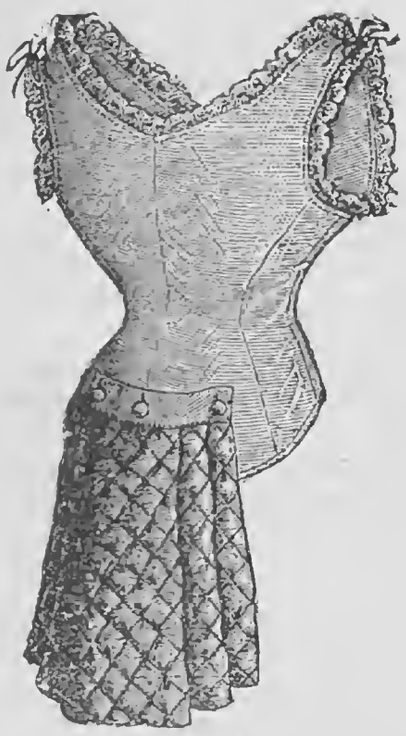

FIG. 165.

"Where do you go, I'd like to know
To hide from winter's frost and snow?"

Ans.—I wing my flight, on pinions light
Where southern skies are warm and bright."

"Why come again? Methinks I fain
Would ever in that clime remain."

Ans.—"Ah, friends are here, I loved last year
And you are one of them, my dear."

"Then why so shy? Come nearer by
And look me bravely in the eye."

Ans.—"I cannot stay, I must away
And line my new-made nest to-day."

"Nay, bide with me, and I will be
As kind, as kind can be, to thee."

Ans.—"And leave my mate, all desolate
Who now my coming doth await?"

"Nay birdie blest I was in jest,
I'm glad your love hath stood the test;
Ye powers above, grant one I love
May as this birdie, faithful prove!"

FASHIONS.

FIG. 165—UNDER-BODICE, WITH DRESS IMPROVER.

The bodice is of fine twilled muslin, trimmed with lace; the improver of satin or other material, well wadded and quilted. A corset-cover, or other under-waist pattern may be used. The improver can be cut readily without the use of a pattern.

FIG. 167—HOME-DRESS FOR YOUNG LADY.

The dress is of beige, trimmed with the same. There are many other materials suitable for making this dress. A combination of colors or goods would be as appropriate as to have it constructed of the same throughout.

FIG. 166.

FIG. 166 and 169, Bonnet of Old-gold colored Chip. (The back is shown in Fig. 169, the front in Fig. 166); The bonnet is trimmed with old-gold twilled silk strings of the same; a bouquet of tea-roses ornaments the sides; the bandeau is composed of tea-roses and forget-me-nots.

A WOMAN'S FIRST CORN CROP.

I HAVE thought it would be interesting to you to know what a woman accomplished with the Blount's Corn. My husband prepared a plot on upland prairie, half of the plot had been manured slightly, the other half had not received any manure, whatever. On the 3d of May last I gave the corn to one of the little girls to drop, and I took the hoe and made the hills and covered the corn, planting one hundred and twenty-two grains. In each hill on the part of the ground unmanured I put about half gallon of manure from where a straw stack had been eaten down, the other hills were planted just as the ground was.

A drouth followed, and some of the grains I soon discovered were perishing, and I began to carry water and put on the hills, afterwards sprinkling over the top some dry earth to prevent baking. One hundred came up and lived until the 29th of July, five were blown down and broken off in a storm.

On the 6th of June I carried chicken manure and put one-half gallon on each hill, in two weeks I put on the same again. During this time the corn had to be watered a great deal, for the drouth continued, and I was determined to win the laurels (if won) myself. I would not let any one haul the water (which might have been done) but carried it myself drawing it in the morning into a barrel and carrying it in the evening. This I continued until the corn was shooting ears, when we had a good rain.

The corn grew up ten to thirteen feet high and we had an average of three ears to the stalk. Aside from preparing the ground for planting and plowing the corn once, I did all the work, hoeing it well three times, and removing the suckers until reading in the RURAL that you intended to leave them on, I then let them grow.

FIG. 167.

I planted the corn inside of the prescribed space two feet all around. On the 1st of September we moved from the farm into town, to put our children in school, and just after we moved, two or three unruly cattle broke in and destroyed some of our corn and fodder, and this is the reason I did not report. On the 10th of September, Mr. Cone cut the corn and put into shocks.

In three months from that date it was shelled and weighed, and the result was 117 pounds of shelled corn and 19 pounds of cobs.

We all (and especially myself) were proud of the corn, and think yet that it did exceedingly well, though I was disappointed because of some of it getting destroyed and thus spoiling, as I thought, my chance for any premium, after all my hard work.

Please have patience with this—I fear—tiresome description of a woman's first corn crop. I *must not* intrude any longer on your time and patience. Let me tell you, however, that although we are citizens of Memphis and expect to be there next year anyway, we cannot do without the RURAL.

Memphis, Mo. MRS. M. C.

HELP FOR "FARMERINE."

I SYMPATHIZE with "Farmerine" in her perplexity, and as my principal business for years has been making "auld clois luik a'most as guid as indoors weather, but let it shine! And as it is new," perhaps I can help her with that "shiny" silk.

To tone down the "shine" get two yards of silk-finish velveteen, or the pretty and fashionable corduroy that looks and wears as well as real velvet.

Trim a walking skirt with alternate bias bands of velvet and silk. Commence the bottom of the skirt with velvet six inches wide. Gradually lessen the width of the bands until it is trimmed 22 inches deep. The suit may be finished with a a polonaise looped high in front and on the sides. A polonaise can be made of old goods easier than a basque, as it can be pieced without the seams showing.

The sleeves may be trimmed to the elbow with alternate folds of velvet and silk to match the skirt; make a collar of velvet extending to the darts in front. The sides of the polonaise may be trimmed with the velvet sewed in at the side seams and turned back with buttons. For girl's suits there is a pretty all-wool basket cloth, single width, in shades of blue and green, it is very stylish and pretty. It is sold at 50 cents a yard.

O. W. D.

To the lady who wishes to utilize her old black silk. If she will dip it in black dye, the same as if she was coloring goods of another color black, it will remove the gloss and make it appear more like new silk. If she could get two or three yards of the pretty satin-striped goods used for trimming this spring (it is inexpensive) she might get a dress and jacket both out of the old dress.

For patterns both Butterick and the Domestic are used, and if she is not so very skillful, she cannot help but get it right, as the patterns are true.

"CONSULTRIX."

CHEERFULNESS has been defined to be "sunshine in the heart." Don't keep it bottled up, in the largely a matter of physical condition, consider it duty to keep well, and don't set yourself up as superior to Mother Nature. Good eating, good sleeping, good air, and a habit of starting the day right and closing it well, will enable most people to be as sure of their supply of good nature as the farmer is of his winter stores. First among your house-plants, good wives, cultivate cheerfulness, chief est among your family supplies, father, plan to have amiability. As for the dear children, they take to merriness as naturally as a dog's tail does to wagging, if you give them half a chance.—Golden Rule.

PRESERVING LOCALITIES.

MARGARET B. HARVEY.

THERE is one thing in which I wish especially to interest the women of our land—for they are able to influence the men.

It is the question of preserving botanical localities. If any farmer had upon his place a great natural curiosity, such as Niagara Falls or the mammoth Cave, no one would need to say a word to him as to whether he ought to keep it intact or not. But if he owned the habitat of a rare, native plant—what then?

Looking over Bartram's Flora, of Philadelphia, one finds mentioned genera belonging to the vicinity, which are no longer found in it; why? This is due to many causes, no doubt, but largely perhaps, to ignorance and carelessness.

Every one knows how rare is our choice, natural plant, the trailing arbutus. What, short of actual wantonness could ever allow it to degenerate and die out? What right have mere curiosity hunters to defraud succeeding generations, by tearing out the precious roots? And the same way with

FIG. 168—BORDER FOR EMBROIDERY.

ferns. Who could wilfully do such a thing as pull up the sources of their fairy, feathery life, merely to fill vases and decorate walls?

Whoever does this is a vandal.

Fortunately, our magnificent park will save for posterity many rich floral treasures. We have, on the rocks of Laurel Hill, a fern which is not known to occur anywhere else east of Kentucky, except perhaps in the Alleghanies. Nothing can disturb it. In the neighborhood is another rare fern, scarce occuring elsewhere, except in Siberia. It is to be hoped that will be let alone.

Then we have the choice orchids—Showy Orchis and Adam and Eve—as well as the Dielytra, Corydalis and some other flowers, beyond the reach—devoutly let it be wished—of destroyers.

It is not too much to say that for our country's honor, we women ought to exert our best influence to keep our national flora from becoming extinct.

NOTES OF WOMEN.

MRS. SCOTT SIDDONS was reading to a fashionable audience at Columbia, S. C. In the midst of a selection from "King John," at the point where the Prince is sentenced to be blinded, she stopped abruptly, said it was impossible to proceed, and walked off the stage. The people thought she was overcome by emotion, aroused by the passage which she was reading, and so they applauded her for the supposed display of womanly feeling. But they were mistaken. A party of young men in a box had annoyed her by conversation and inattention, and she returned to explain that unless they behaved better she would read no more They were quiet thereafter.

THE CROWN OF ENGLAND'S QUEEN.—The Imperial State crown of her Majesty Queen Victoria was made in 1838, of jewels taken from old crowns, together with many supplied at her command. The cap is of crimson velvet, bordered with ermine fur, and the gems are diamonds, sapphires, rubies,

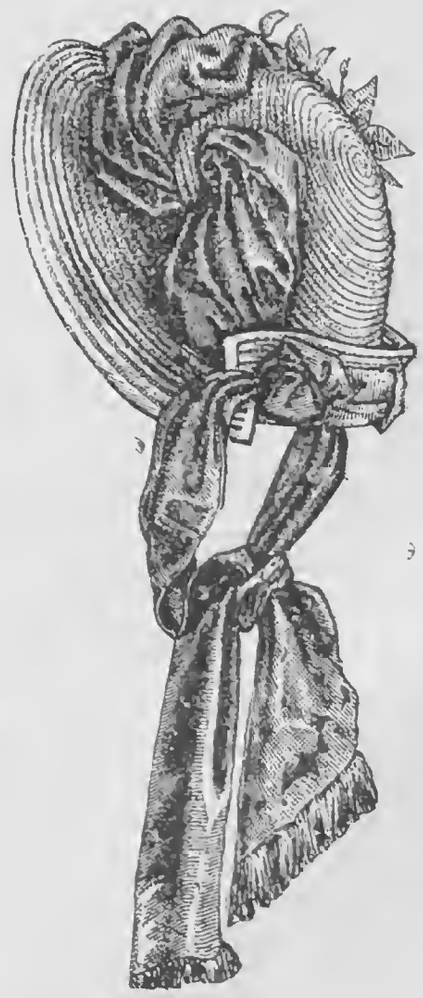

FIG. 169.

pearls and emerald. The whole crown weighs nearly forty ounces. There are eight sapphires in the first band of jewels.

MRS. G. W. QUIMBY, of Augusta, Maine, who has for several years served so efficiently as member of the Visiting Committee, has been appointed trustee, in response to a general request, amount-

ing almost to a demand, of the State lunatic asylum, and in accordance with a bill passed by the legislature, providing that one of the six trustees of the insane hospital shall be a woman.

MISS NETTIE E. WAUGH, of Peoria, Ill., in a paper she has written for the Educational Weekly, on Primary Education, says, "that love and affection in school are what sunshine and shower are to vegetation."

CORRESPONDENTS' CORNER.

DEAR MISS CLARK:—Please send us a pattern for the center of a Java canvas tidy, through the RURAL. I have a very nice border taken from the "RURAL" and would be grateful for a center. I am much interested in the "Woman's Department" and think it a very valuable part of the paper to the farmers' wives. MRS. H. W. R.

Beaver Co., Pa.

ANS.—The pattern asked for will appear in issue of May 22. R. C.

Literary Miscellany.

POOR LITTLE JOE.

PROP yer eyes wide open, Joey,
For I've brought you sumpin' great.
Apples? No, a long sight better!
Don't ye take no int'rest? Wait!
Flowers, Joe—I knowed you'd like em—
Ain't them scrumptious? Ain't them high?
Tears, my boy? What's them fur, Joey?
There—poor little Joe! don't cry!

I was skippin' past a winder,
Where a bang-up lady sot,
All amongst a lot of bushes—
Each one climbin' from a pot:
Every bush had flowers on it—
Pretty? Mebbe not! Oh no!
Wish you could have seen 'em growin';
It was such a stunnin' show.

Well, I thought of you, poor feller,
Lyin' here so sick an' weak;
Never knowin' any comfort,
An' I puts on a lot o' cheek.
"Missus," says I, "If you please, mum,
Could I ax you for a rose?
For my little brother, missus,
Never seed one, I suppose."

Then I told her all about you—
How I bringed you up—poor Joe,
(Lackin' women folks to do it).
Such an imp you was, you know—
Till yer got that awful tumble,
Jist as I had broke yer in
(Hard work, too) to earn yer livin'
Blackin' boots for honest tin.

How that tumble crippled of you,
So's you couldn't hyper much—
Joe, it hurted when I seen you
Fur the first time with yer crutch.
"But," I says, "he's laid up now, mum,
'Pears to weaken every day;"
Joe, she up an' went to cuttin',
That's the how o' this bokay.

Say! It seems to me, ole feller,
You is quite yerself to-night;
Kind o' chirk, it's been a fortnit
Sence yer eyes has been so bright.
Better? Well I'm glad to hear it!
Yes, they're mighty pretty, Joe;
Smellin' of 'em's made you happy?
Well, I thought it would, you know.

Never seen the country, did you?
Flowers growin' everywhere!
Sometime when you'r better, Joey,
Mebbe I kin take you there.
Flowers in heaven! 'M—I 's'pose so;
Don't know much about it, though;
Ain 't as fly as w'ot I might be
On them topics, little Joe.

But I've heerd it hinted somewher's
That in heaven's golden gates
Things i s everlasting cheerful—
B'lieve that's what the Bible states.
Likewise, there folks don't get hungry;
So good people, when they dies,
Finds themselves well fixed forever—
Joe, my boy, wot ails yer eyes?

Thought they looked a little sing'ler,
Oh, no? Don't you have no fear;
Heaven was made fur such as you is!
Joe, wot makes you look so queer?
Here, wake up! Oh, don't look that way.
Joe, my boy! Hold up your head!
Here's your flowers, you dropped 'em, Joey!
Oh, my God, can Joe be dead?

JOHN ASCOTT'S DAUGHTER.

BY CHARLES RICHARDS DODGE,
Author of "Louise and I."

(Continued from page 285.)

CHAPTER V.

HOW IT WAS DONE.

TWENTY-FOUR hours afterwards George Ashton found himself upon a railway train, on his way to N——. He sincerely regretted that he had actually quarrelled with his father, not so much that it had compelled him to leave the paternal roof, as that a separation had been brought about under such unpleasant circumstances. But then, he reasoned, it would have come, sooner or later, for he would not, could not renounce the woman he loved, and his father's prejudices were never overcome. Arriving at his destination he hastened to the home of Mr. De Fondville, presenting himself before May, unexpectedly and almost unannounced.

"Well, May," he commenced, after the usual greetings, "you have a nice sort of a man for a lover."

"Why how you frighten me George. What has happened?"

"I am an outcast, and worse than that, two thousand dollars in debt," he answered throwing himself down upon a sofa near.

"An outcast! What do you mean?"

"I've no shelter over my head, nor means to procure one, as father has shut his door against me, and all my money is in that piece of ground."

"If you mean you have bought the farm," she said, seating herself beside him upon the sofa, "you certainly have a shelter over your head, if there is a house on it, else what will you do with me, when—when we go there to live; but what do you mean by your father shutting the door upon you?"

He has quarrelled with me, because I refuse to follow his dictates, not only in the matter of a pursuit in life, but in the selection of a wife also."

"Oh, George," she said, drawing near him, "he does not like me."

"Rather say he is infatuated with a little good-natured, namby-pamby forty-second cousin of mine, for whose society I have never cared two pins."

"Is that really *all?*" she asked, earnestly.

"And that I won't go into business—"

"Does he know—?"

"Yes, I told him last night I should be married soon, should marry you, and it was the idea of losing Jennie for a daughter-in-law that so enraged him. Never mind, I have bought the farm with aunt's money as far as it would go, and given Mr. Stone a mortgage for the unpaid balance of two thousand dollars."

"That is a large amount of money to owe when one is just making a start in life. Aren't you frightened, George?"

"No, darling, I have done it all for you, and I think you will help me pay off the debt by your sensible advice and good counsel."

"I am going to do all I can, of course, but I am afraid I shall not help you much."

"We shall see about that," he answered, pressing her hand fondly.

"You have not yet told me where the farm is located. Is it far from dear old Maplewood?"

"Not very far. There will be considerable to do to the place in the way of repairs, for tenants are not owners.

"And every cent of the money is spent," she mused half audibly.

"Oh no, we are not so badly off as that. I have reserved a thousand dollars for working capital, but I am afraid it will not go far, there will be much to buy."

"Don't buy too much then at the start."

"That is good advice May, surely."

"Is the house furnished?"

"Furnished——!"

"Yes, *furnished.*"

"Bless my soul! I never thought of that. I don't believe there is a chair on the place," and George looked at his companion with a very curious expression upon his countenance.

"And you are to take me there in less than a month?" As she said this she laid her hand lovingly upon his shoulder, looking with her great brown eyes full into his own.

"What a stupid fellow," he exclaimed. "I never thought of furniture at all. We must have some—mustn't we?"

"I rather think we *must*, ha, ha, ha, it is too funny!"

"Well, it may appear very funny to you, but I fail to see the humor of it."

"And what are we to live upon, pray?" she went on to ask.

"On the farm—we can grow all we can eat, of course, so the living is arranged—"

"*Of course,*" she replied, mimicking his tone of voice, we can grow broad-cloth coats, and kid gloves, and——"

"Hang the kid gloves, May, I'm going to work now in earnest. I've clothes enough for the present—if—if you have," he added, looking up hastily.

"Ha, ha, ha, you do make me laugh in spite of myself," said the little lady merrily, "though, as you say, its no laughing matter."

"No it isn't, especially in regard to that furniture. I'll have to manage it somehow." He arose from his seat, took a turn up and down the room, and again confronting the girl added, "Its expensive stuff isn't it?" I never bought any in my life."

"Nor I, but I think I can show you a way out of the difficulty, if you will let me."

"I am all ears," he replied, "although there is really nothing mulish in my disposition."

"I have saved a little money since making it my home here, and have a few hundred dollars more than I shall need for the present; we can use that. Do you think it will be enough?"

"Why May, we couldn't use your money in that way. No, no, girl, hold on to what you have, by all means."

"Wouldn't it be mine all the same if I bought the furniture?" she asked. "I think the house will be my domain any way, for I can't help you out of doors."

"I don't know; but I would rather enjoy feeling that I owned everything, and you into the bargain."

"Indeed! Well, now, I regard it that 'what's your's is mine, and what's mine is my own,' but really, to be sensible, rather than sentimental, you haven't the money to buy the furniture, and I have; we must have some, and there isn't any; now what is the most reasonable thing to do under the circumstances?"

"Use your money, I suppose," he answered.

"Then we will select it next week, and after getting what we need, and putting by something for contingencies, if there is anything left we will spend it in books."

"We can't afford books, May."

"Yes, a few books will be necessary, for we shall both be very inexperienced and do a great many foolish things that will take money we might have saved, so I think it is a good rule to follow to endeavor to learn what others have done before us, and try to begin where they left off."

"Good argument—but you needn't be afraid of my farming as my grandfather did,—he was a farmer—just because he was my grandfather. You are a queer little woman, I declare, won't you take the farm for the first year, and employ me at so much a day and board?"

"You wouldn't do as I said."

"Oh yes, I would," he answered, playfully.

"Then you would be the first man that ever put implicit confidence in a woman's *say so*, you men know it all, and you *are* knowing enough to say nothing about your mistakes. But you have still to tell me where the farm is located. I believe I asked you before if it is near my old home. Is it in sight of Maplewood?"

"I think you might be able to see Maplewood *from the top of the house*," he answered, looking away in an opposite direction.

How many pleasant hours they passed during the week that followed, talking over their immediate future, and making arrangements for that great event which every young man thinks, in his own particular case, is the most wonderful thing that ever happened.

George Ashton was a smart enough young fellow—well-informed, and possessed of excellent judgment in most things—but one of his worst faults was a disposition to take things for granted, neglecting to look far below the surface, or to weigh carefully all the pros and cons. May had seen this trait in him and she felt it would operate seriously against his full success as a farmer, unless he should work hard to overcome it. The furniture matter was a fair example of his manner of treating a subject. He had been over the farm, estimated the repairs that would be needed, figured carefully upon tools and implements, and made fair allowances for stock even to the minutest particular. All this arrayed, he took for granted there was nothing further to be done, but to go to work when the time came, and trusted that all would go on swimmingly from the start. Not so with the woman he had chosen for his wife. She had been reared in a hard school—the school of bitter experience, having to depend upon herself from early girlhood. She was just the kind of a woman George needed for a wife, and it was truly a turning point in his career when she gave him her promise. But for one thing she would have been perfectly happy in the anticipation of coming events, and that was George's quarrel with his father. She could hardly think a man so hard and unreasonable, and yet it must be so in this case or he would never have shut the door against his boy upon so slight a provocation. Could it be that George had deceived her? Perhaps Mr. Ashton was displeased with *her*, though she had never seen him in her life. The doubt gave her pain, but she could not bear to hurt the feelings of her lover by expressing it, so she kept it to herself and only resolved to get at the truth by a woman's tact if possible.

CHAPTER VI.

"FOR BETTER, FOR WORSE."

CAN the reader call to mind a perfect spring day, when the air is soft and balmy and the atmosphere is teeming with new life, when all nature seems filled with an entrancing witchery and every blade of grass and swelling bud whispers a hope? I have seen such days and their skies are bluest blue and great white banks of sheeny clouds float lazily across them. Their forests are painted in softest grays, and happy birds are twittering their tales of love in every tree.

A sweeter spring-day could not have come to gladden earth than that upon which George Ashton took his bride to Maplewood, and a sweeter bride than May Ascott, George had never seen. It was a very quiet wedding, though the De Fondville's did all in their power to make the occasion a joyful one. Mr. De Fondville gave away the bride, and Blanche, a fair haired girl some four years younger than her friend, the little governess, acted as bridesmaid. No relatives were present, as there were none May could call near of kin and George's family choose to stay away. They were all invited even to Elbridge Ashton, Esq., but he took no notice of the affair whatever. The brothers politely sent regrets, though George hardly expected so great a show of civility, for he knew policy inclined them to the opinion of his father.

It was a very pleasant little wedding, so Mrs. De Fondville said, and to that kindly woman a large share of the credit was due. She had grown to love the orphan girl, and to regard her almost as one of her own family, and now that she was really going out from their pleasant home and fireside, she felt a true motherly sorrow at the parting. It was the pleasantest home May had known since her father's death, and when the farewells and God-speeds had been spoken, and the carriage rolled down the broad avenue leading to the highway, she felt that she was indeed leaving home."

A bridal trip other than to the new home had not been deemed expedient, George remarking grimly that affairs on the farm needed their immediate attention, while May archly suggested that perhaps they could'nt afford it. So they were going directly to Maplewood, at least that was George's destination, and his wife was going to "the farm" wherever that might be, for she was yet in ignorance of the surprise that awaited her. When the furniture was purchased she had expressed a desire to visit the farm and see that everything was in proper place, but George had dissuaded her, saying that old Mrs. Briggs, a former housekeeper of his father's, had been engaged to put things in order and would have the house in readiness to receive them.

How closely the young wife watched the stations as they neared the town of S——, and when at last their destination was reached, with what feelings of mingled joy and sadness did she again behold familiar scenes fraught with tender memories of other days. And when the dusty town lay behind them and their carriage sped along the dear old road to the home of her childhood how her pulse thrilled with delight.

"Oh, George," she exclaimed, "it seems like a dream. Do we pass Maplewood on our way to the farm?"

"You will see it, darling," was his reply; "but it has changed somewhat since the long ago when we roamed over its hills and meadows, a pair of careless, happy children."

"We are coming near it," she exclaimed, joyfully, "if I remember rightly, this is the farm Steve Hascall, as father used to call him. Who owns Maplewood, George?"

"Yes, this is the Hascall place, but 'Old Steve sold out and went West with his son years ago. The present occupant has been married but a little while, and there is a very romantic story connected with the first meeting with his wife." Of course, George told the whole story, spinning it out to its utmost length. "This is Maplewood," said he at last, as the avenue of trees leading up to the house came in view. "Shall we drive in, May, just for the fun of the thing, the present owner is a friend of mine?"

May said nothing, but she held her husband's hand tightly as they rode up the old familiar drive-way, more shut in than ever by the trees, and as the house came in view, the mists gathered in her eyes,

The carriage rolled to the doorway, and as it stopped in front of the great open porch, at George's command, Mrs. Briggs appeared, dressed in her Sunday best, and addressing "Mr. Ashton," welcomed them most hospitably.

"Let us go into the house, May, I think Mrs. *Smith* will be glad to see us," and he put up his hands to assist her to alight.

"I do not quite understand this," she whispered "is it proper for us to make a call here at this time?"

"Come," said he, taking hold of her hand, and in another moment they were on the broad door stone.

"Walk into the parlor," said Mrs Briggs kindly, "I will come to you, Mrs. Ashton, shortly," and she threw wide open the doorway and vanished in another direction."

May had followed her husband into the pretty room as one walking in a dream, but as her eyes fell upon the familiar carpet and the furniture they had purchased together only a week before, she comprehended it all at once, and throwing her arms around her husband's neck, gave expression to her intense feelings in a flood of tears.

An hour later, as they all sat down to a delicious tea prepared by the kindly old lady, Mrs. Ashton was installed mistress of Maplewood, and entered upon the duties of her office with grace and dignity.—To be continued.

MAGAZINES FOR MAY.

ST. NICHOLAS FOR MAY opens with an important "Talk with Girls and their Mothers," by Washington Gladden, and contains the first installment of Noah Brook's new serial for boys—a base-ball story entitled "The Fairport Nine," and finely illustrated by Redwood.

Of complete short stories there are five, all with pictures: "Topsyturvy's Dream," a fanciful tale by Edgar Fawcett: "The Boy and the Giant," a Bible story retold by Susan Coolidge; "Sally's Soldier," a Decoration-day story, with pictures by Zogbaum; "Two More of the Major's Big-talk Stories," being a sort of modern Munchausen adventures in the desert of Sahara, with comical and spirited illustrations; and "A Term at the District School," from a girl-scholar's point of view.

There are two Natural History articles: "The Story of Lizbeth and the 'Baby,'" an account of horned lizards, with pictures from life by F. S. Church; and "Curious Facts Concerning Ants," with five illustrations.

Louisa M. Alcott's serial, "Jack and Jill," describes how Frank and Gus ran away with a locomotive engine, and what fun the boys and girls had on Washington's Birthday, with *tableaux vivants*, music, and a feast.

"Oriental Jugglery," an illustrated paper, tells of some wonderful tricks and feats by Hindoo jugglers. "A. D. 1695" explains, with the aid of pictures, an interesting piece of history. "How to Care for the Sick" is a practical article, giving young folks clear and safe advice concerning nursing, how to act and what to do in a sick room.

There are, besides, an out-door poem by Lucy Larcom; a humorous piece on "Ancient History," by Margaret Vandegrift, with illustrations by E. B. Bensell; some funny pictures by L. Hopkins: and two drawings by Addie Ledyard.

The Departments provide stories and pictures for the very little folk, and pictures, items, letters and puzzles for everybody.

ECLECTIC MAGAZINE.—This excellent periodical is at hand, and contains, besides its literary attractions, a fine steel engraved portrait of the venerable Dr. Leonard Bacon. The literary contents are varied and interesting, comprising the following articles: "Copyright," by Mathew Arnold; "The Northeast Passage: Narrative of Lieut. Palander, Swedish Royal Navy, Commander of the Exploring Vessel;" "An Eye-Witness of John Kemble and Edmund Kean," by Theodore Martin; "Yoshida-Torajiro," a bit of Japanese Biography; "Radient Matter," by D. Pidgeon; "The Bells of Lynn," a poem; "Henri Regnault;" "White Wings: A Yachting Romance," by William Black; "Greek and Christian Views of Beauty," by Rev. R. St. John Trywitt; "Chippers of Flint;" "Fate, or God?" by Paul H. Hayne; "Mademoiselle de Mersac," a story; "On the Art of Sketching from Nature in Water-Colors," by Walter Severn; "Chinese Proverbs;" "An Old Boat," a poem; a biographical sketch of Dr. Leonard Bacon (to accompany the portrait); and copious Editorial Departments on "Literary Notices," "Foreign Literary Notes," "Science and Art," and "Varieties."

THE AMERICAN ANTIQUARIAN.—CONTENTS:—The Mound Builders. By Stephen D. Peet. Brady's Leap, and Other Facts of Indian History. By J

P. Woodruff. Exploration of a Rocky Shelter in Summit County, Ohio. By M. C. Read. Was La Salle the Discoverer of the Mississippi? Letter from Pierre Margry. The Numeral Adjective in the Klamath Language of Southern Oregon. By Albert S. Gatschet. The Sign-Language of the Indians of the Upper Missouri, in 1832. By Col. G. Mallery. Wampum Belts of the Six Nations. By Rev. W. M. Beauchamp. Correspondence.—Relics in Vermont; Relics in Michigan; Works in Ohio. Linguistic Notes; By A. S. Gatschet. Index of Articles on Archæology, Anthropology and Ethnology, which appeared in American and English Periodicals during 1879. By C. H. S. Davis. Editorial Notes.—Book Reviews; New Books.

This magazine is particularly adapted to the lover of antiquities, as a source of information and enjoyment. Those less inclined to appreciate its merits, cannot fail to pronounce it of much value.

HARPER'S MAGAZINE.—Contents: The Red River of the North, Henry Van Dyke; Old Catskill, Henry Brace; Music and Musicians in England.—II., Mrs. John Lillie; On Chloris Walkinge In Ye Snowe.—A Poem, Robert Herrick, with an Illustration; The Shad and The Alewife, James W. Milner; Home Studies in Nature.—II., Mary Treat; When?—A Poem, A. T. L.; The Metropolitan Museum of Art; "Salgama Condita."—A Story, Mrs. Lizzie W. Champney; White Wings: A Yachting Romance, William Black; Civil Service Reform in New York, Edward Cary; Our Beginnings, Angeline Teal; Lost.—A Poem, Alfred H. Louis; Our National Guard, Colonel H. M. Boles; Mary Anerley.—A Novel, R. D. Blackmore; To a Bluebird.—A Poem, George P. Guerrier; Editor's Easy Chair; Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

THE AMERICAN NATURALIST.—Contents: The Structure and Action of a Butterfly's Trunk, Edward Burgess; The Critics of Evolution, J. S. Lippincott; Hall's Second Arctic Expedition, Ellis Horner Yarnall; Sketch of North American Anthropology in 1879, Otis T. Mason; Editors' Table; Recent Literature; General Notes; Zoology; Anthropology; Geology and Palæontog; Geography and Travels—Asia; Microscopy.—Organisms in Ice from Stagnant Water. American Society of Microscopists; Scientific News; Proceedings of Scientific Societies; Selected Articles in Scientific Serials.

An examination is necessary to unfold the characteristics of this magazine. It treats of various phases of natural science in such a manner as to entertain the reader as well as to impart instruction.

DEMOREST'S MAGAZINE.—Contents: Picture in Oil, "Wild Flowers"; The Columns of St. Mark's, Steel Engraving; Colored Steel Fashions; Zenobia, Lizzie P. Lewis; Bessie, James Grant; A Memory, Harriet Ware Stillman; An Old Tramp, Margaret Lee; A Great Vexation, Rose Geranium.—As she Sees It—As He Sees It; Rhapsody of a Carpet, Margaret B. Harvey; Three Celebrated Opals, K. M. H.; May: Eileen A'roon, Edyth Sherwood; A Farmhouse in the Black Forest; The Beauty of the Seasons, E. B. Cheesborough; Talks with Girls—Human Work, Jennie June; The Trumpet Major, Thomas Hardy.—Chapters 15, 16, 17; The Little Italian Wanderer, Corinne; The Romo of a Viennese Artist; Architectural Design of a Church; House and Home; Young America's Corner; Fancy Work; Editorium; World of Science; Fashions; Ladies Club.

DOMESTIC MONTHLY. Contents. Fashions, Illustrated; A Bowl of Surturbrand, by M. A. Lorillard; Love's Message in the May, Poem, by Caroline A. Merighi; Ill-Nature; Some Time, Poem, by Lucy Marion Blinn; Art Papers, by Our Art Contributor; The Soul's Paradise, Poem; Beside the Stile, Poem; Finding Rest, by Marie S. Ladd, The Ends of the Earth, Poem; A Missed Opportunity, Poem; Fact, Rumor and Comment; Regeneration Poem, by M. S. L.; The Popular Favorites; Household Department; New Books; Notes; The Fate of a Fast Young Man, Poem; Answers to Correspondents; Mosaics; Publishers' Department.

BEWARE of idleness, the listless idleness that lounges and reads without the severity of study, the active idleness for ever busy about matters neither very difficult nor very valuable.

An Indian at San Diego, Cal., was told that a voice through the telephone was that of the Great Spirit, and when it said, "Give up those stolen horses," he immediately confessed that he was a thief.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CHURNING EXPERIENCE IN "EVERY-DAY HOUSE."

ANNIE L. JACK.

AN article in the RURAL of April 23, has forcibly reminded me of some of the experiences of my own life, and I have jotted them down to add to the replies that will doubtless be sent in on the subject. When I first came to "Every-day House" and went through the duty of inspection of the premises, I was very curious to understand the use of a large wheel that filled up a corner in one of the cellars. These apartments are light and airy, and the one I mention adjoined the milk room, where was kept with scrupulous neatness by the housekeeper the milk of ten cows. "Oh! ma'am," she said, in answer to my question, as to the use of this circular piece of furniture, "that is the dog-power," and I then learned that the process of churning was accomplished by the handsome collie dog, with which I was just making friends. But I found out soon that Collie was not so tractable as he seemed; that he had an intuitive knowledge when churning day came, even if the regular day was changed, and took opportunity to go visiting on those particular mornings, leaving the Canadian "help" to do the work of butter making. The churn was a heavy square box, and I thought it too hard work for the girl alone to attend to, as was often the case in busy seasons. So we began to purchase anew—and of that trying time our attic can well testify.

Several Canadian patents were tried and failed—one in particular excites my indignation even now when I see it among the other cast-by tools in the garret. It was a box—not very deep but square—with wheels inside and a crank handle. I have forgotten the patentee, but have often wished he had to turn it for every purchaser *till* the butter came. I am sure he would confess the punishment greater than he could bear. The work of turning the crank was not hard; but the *time* it took before there was any sign of butter, would have tried Job worse than any of his troubles. Never shall I forget one summer night of that trying season, walking up the green lane with a friend, discoursing of many things, and enjoying the moonlight and flower-perfumed air—there came to our ears as we neared the house, a shrill peculiar note. *I* knew it too well; for with every turn of the handle of that churn, one cog wheel touched another and gave out a peculiar and hideous shriek. But my friend stopped and listened, "What a strange noise! a bird in distress evidently" was the observation, and I was thankful that the zealous churner, seeing our approach, had stopped the dismal noise, for it was the girl who, after churning the greater part of the day, had brought out the churn to the night air, and with laudable ambition was determined to *make* it *come* before bed-time. But that was the last time I could be induced to try it, and, almost in desperation, I wrote to the agent in our city to send me a Blanchard churn then highly recommended in the leading agricultural journals. I have no interest in the sale of these articles; know nothing of them or their maker except the comfort I have felt from the use of mine; but peace has reigned triumphant since its arrival, six years ago. It makes as good butter as any I have tried, and we have never failed, winter or summer, to have it *come* in good season, with ordinary care. The children find it no task to churn, so easy is its motion, and I have no motive in recommending it; but a true sympathy with suffering butter makers.

THE CAN QUESTION AGAIN!

WHEN the can discussion was first opened by Mrs. Wager-Fisher, I resolved, though much interested in the subject, to keep quiet; but the more I read about it the greater becomes my concern and (slight) indignation, and as there is a long time before tomatoes are ripe, I feel impelled to advance to the rescue of glass jars (Mason's Improved in particular), rubbers and metal rings.

I have used glass jars—and *only* glass jars—such as the Dexter, Hero, Gem, and Mason's, for years and years, and have never had the rings or rubbers stretch enough to cause me the least trouble, but I cannot explain the reason, as I take no particular care of them, only when I wash and put them away, I place the rubber inside and loosely screw the cover on.

This is done to keep the cans ventilated and free from scent. I have no fault to find with *any* of these cans—although the Mason, with the porcelain-lined top, is my especial favorite—unless it is because they will not stand as rough usage as cast-iron; and I cannot understand why so much fault is found by some with the Mason, as I consider it an excellent keeper and *easy* to seal and unseal.

Most cans will sometimes trouble one a little about opening (it depends greatly on the contents; maple syrup is often very hard), but by pouring warm—not hot—water on the top of the can and renewing it or leaving it on a few minutes, I do not find it necessary for hands stronger than my own to unscrew it.

I think Mrs. Wager-Fisher's failure to keep her tomatoes was owing to their being in too warm, or not *cold* enough a place. I keep tomatoes and all canned fruit and jellies in a dark, dry cupboard in a very cold, but not freezing, cellar, and consider it essential that canned fruit, to keep well, should be put away from light and heat. I think it possible, but not probable, that they fermented from being stale, over-ripe or not hot enough when canned, but if fruit is kept in a cold place and is good a month after canning, I consider it almost certain to keep a year or more. I am very much prejudiced against using tin cans for fruit that is at all acid, as the action of the acid on the tin must render it more or less unhealthful, but if Mrs. Fisher will use any of the above cans and be careful to have her tomatoes scalding hot (I like them best baked) when canned, keep the cans reversed a couple of hours and then put them in a cold place, I am sure the contents will keep as long as she wishes. Hoping she will have the best of success this season, I remain a true friend of all busy housekeepers. S. JENNY PATTEN.

DIPPING CANDLES.

I have dipped candles for many years, and think my method is easier than that published in the RURAL of Sept. 13th. I wind the wicks around a baking-tin, the shortest way. Then cut, open and twist them around a straight stick, six on each stick, as that is about the number for my kettle, which is a tall three-gallon iron one. I allow ten such wicks to each pound of tallow. Place two chairs, with wide fronts to support the poles (old rake handles will answer); lay down some boards between chairs, covered with waste papers to catch the drippings. It is best to prepare the wicks the day previous. Heat the tallow hot in the kettle, set it into a large pan that will not leak, so that if any should run over, the pan will catch it. Keep hot water on the stove near you all the time, as you will need it to fill up the kettle, after the candles begin to grow. Place your chair convenient to your kettle and make it your business to stay there till the candles are large enough, which will take from 28 to 30 times dipping. The first time the wicks are dipped they must be straightened by stripping them down with the fingers, and place them an inch apart on the rods. After that two sticks may be dipped at a time. Keep the kettle as full as can be and not run over, by adding hot water. Dripping candles is work that cannot be put aside till it is finished after it is once commenced. If the tallow-and-water gets too cold in the dipping kettle, it may be reheated, and if the tallow is short, the ends of the candles may be cut off and melted, and put in the dipping kettle. I usually do this, so as to use up the tallow as closely as possible.

The Boiling of Woolen Cloth.

Wool or woolen cloth ought never to be boiled as some recommend in coloring it. It may be heated, but should never be brought to the boiling point, as that makes it tender, as I found to my sorrow a number of years ago, when coloring woolen stockings. They soon looked as though the moths or mice had been at work at them. AUNT EDITH.

CANNING TOMATOES.

RECENTLY the subject of tomatoes has been discussed, and I believe there is one item which has not been mentioned, viz: that tomatoes should be thoroughly cooked before canning; if, on using, you find them too thick, add a little water. This has been my practice for years, and I have had good success. I think the kind of can matters little, providing it is air-tight. Here is my mode of preparing them for the table:—put them in a sauce-pan—any kind you like, as you can have them prepared for the table in one-half hour. To one quart of tomatoes add a lump of butter the size of a walnut, half a teaspoonful of salt, a little pepper and one heaping tablespoonful of sugar; if granulated, two, as it rolls off the spoon; and break in small pieces of stale bread, while they are cooking; you can use crackers but I like bread best. Do not put in too much, or make it too fine. People have frequently asked me how my tomatoes were prepared—they were so nice. It is amusing to hear people talk about buying them at nine cents a quart, as we are obliged to pay eighteen or twenty cents. A friend recently gave me a recipe for making a nice starch polish, which I will also give the RURAL ladies, as I think it excellent.

Chinese Starch Polish.

Spermaceti four ounces; white wax, two ounces; stearine, or paraffine, one-half ounce; ultra-marine blue, one-half grain. Melt together and let cool: use a piece the size of a hickory-nut, for one-half dozen shirts; put in the starch while cooking, also add one teaspoonful of kerosene. The clothing should be dried first, and then dip bosoms and wristbands, cuffs, etc. in while it is as hot as you can bear your hands in it, and rub it thoroughly into the cloth; dry the articles. Then make a thin, cold starch; dip them in and roll them up about two hours before you wish to iron them. To do it well, you should have a polishing iron, which costs 40 cents here. First iron the bosom the usual way; then take a clean cloth; dip it in warm water, and slightly moisten the bosom; take the hot polishing iron and rub it quickly back and forth over the goods, not making long strokes. I think this an excellent thing where people live in the country and do not have the benefit of a skilled laundress. Several years ago one lived near me, and I occasionally would go in and watch her work, and she kindly instructed me in the art of ironing starched clothes, and I have since found it a great benefit to me, for when I must change help, as we all must sometimes, and the new girl does not know how to starch clothes well, I can instruct her myself, and I rarely have to show her twice.

"CONSULTRIX."

"Which is the Best Churn?"

I think I can help Elinor Brooks out of her dilemma. If she will try the "Acme," or "Revolving Barrel Churn," she cannot fail to be perfectly satisfied with her choice, as we are with ours, having purchased one of that kind last fall. Ours is one of the smallest size made, holding 16 gallons, capable of churning the cream of from one to eight cows. It is simple, easy to clean, having no inside fixtures and no cream adheres to the sides, that is not churned. The butter comes, with us, in 10 or 15 minutes, several times coming in five minutes. When the cream is thick and cold, as it is in winter, I warm a pan of milk and put it in the churn with the cream.

MRS. L. J. CARPENTER.

DOMESTIC RECIPES.

Strawberry Pudding.

Cream, a cup of sugar and a tablespoonful of butter: add the beaten yelks of five eggs and two cups of *fine* bread-crumbs soaked in a quart of sweet milk. Flavor with lemon or vanilla. Pour into a deep pudding-dish and bake until the custard is "set." Roll a pint of nice strawberries in powdered sugar, spread over the pudding and cover with a meringue made of the beaten whites and three tablespoonsful of powdered sugar. Return to the oven until the top is delicately browned.

Chicken Pudding.

Cut up a tender fowl into small pieces and boil slowly one-half hour. Season with pepper and salt. Put the pieces into a dish to cool, and set the liquor aside for gravy. Make a batter of a quart of milk, three cups of sifted flour, two tablespoonfuls of melted butter, four well-beaten eggs, two teaspoonsful of baking-powder and a little salt. Put a layer of chicken into the bottom of a baking-dish, pour a cupful of batter over it, then another layer of chicken and batter until full. Have batter for the upper crust. Bake in a moderate oven for about an hour. Skim the gravy saved, boil down, thicken, season, add a little chopped parsley and pass with the pudding.

A. B.

New Publications.

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News of the Week.

MISCELLANEOUS.

Monday, May 10, 1880.

The sub-committee, appointed by the Committee on Ways and Means, consisting of Messrs. Wood, Felton, Phelps, Garfield and Kelley, have reported favorably on the bill introduced some time ago by Representative Hurd of Toledo, prohibiting the transportation of merchandise from one point to another in the United States through the Dominion of Canada. The bill also prohibits custom officers from sealing cars to be transported through Canada and imposes a duty of 30 per cent. *ad valorem* upon every car manufactured in Canada that is brought into the United States....In Howard county, Ark., two young ladies aged 18 and 20 years, quarreled a week ago concerning certain gossip in circulation; Linda Stephen was instantly killed by Mary Stokes who stabbled her in the neck....A report of the War Department concerning the survey for a ship canal across the peninsula of Florida, from the Atlantic to the Gulf of Mexico, just submitted to Congress, indicates that the traffic through the canal would not pay satisfactory dividends. ..The baby elephant whose advent into this world we noticed in the RURAL, made his debut a week ago in the circus now exhibiting in Philadelphia. Hebe, the mother, walked slowly round the ring, with her baby trotting along between her fore legs. Hebe seemed anxious to keep the young one close to her, and—occasionally pushed him back when he seemed eager to go ahead. When she came to a halt, the baby ran out, and gazed curiously around at the crowded seats, and raised his trunk in the air. After gazing a few moments, without fear at the strange sight, the baby returned to his favorite positions. The following are the principal collections made by Professor Nordenskjohl and his staff during their recent expedition:—A rich collection of invertebrate animals made in dredging by Dr. Stromberg, the zoologist; a collection of flowering plants, lichens and algæ, made by Messrs. Kjellman and Almqvist; bones of the Rhytina Stelleri, from Behring Island; fossil plants from Japan and Borneo, and a fine collection of various articles in use among the Esquimaux.

A terrific oil fire is reported to have taken place in the neighborhood of Bradford, Pa., on the 6th inst. About 800 oil wells and hundreds of thousands of barrels of oil were burned in a short time. Several fires which originated almost simultaneously a few miles from each other devastated a large tract of the country and destroyed every dollar's worth of property of hundreds of persons. One of the largest fires originated thus: Two men were attempting to explode a nitro-glycerine torpedo in a well owned by the Oakshade Oil Company about three miles northeast of Bradford. A flow of oil threw the torpedo out of the hole against the derrick. Instantly there was a terrific explosion which scattered the building and machinery in a thousand directions. The oil caught fire and shot up a blazing column a hundred feet high, and the fire soon spread to Rew City two miles distant. This village was speedily consumed and the inhabitants, about 600 number, had to run for their lives.

AGRICULTURAL NEWS.

Bushels of seventeen-year locusts were unearthed by Peter Welrich of North Lebanon, Pa., while plowing in an old orchard last week, the sod of which had not been disturbed for many years....After May 3, the elevator charges on grain delivered here by the N. Y. Central Railroad have been one cent per bushel, arise that was hastily announced by the elevator men and caused no little indignation on the produce exchange. Crop reports from all parts of Ala., say they are several weeks behind, and the weather is unfavorable ....Dr. Asa Fitch, the well known entomologist is dead....By late accounts the drought in Western Kansas is extremely severe and the new settlers are throwing up their claims and leaving to avoid starvation. The Kansas City Times says that if rain comes not soon there won't be 1000 people left in Ness, Hodgman, Lane, Trego, Grove, Wallace, Sheridan and Graham counties, which are mostly as yet unorganized on the Western border. The winter wheat was killed by lack of moisture, and folks are sacrificing stock and everything for food....The Corning N. Y. Farmer's Club has formed a sorghum sugar cane association, and $1000 have been lately subscribed to the industry. ..Although Ireland, in places, is starving, she still sends a goodly part of her best food to England. During one week lately she sent 9,764 cattle; 2,148 sheep; 6,511 pigs, besides 651 horses, and the cattle trade is still steadily increasing....The Queen has made a baronet of Mr. Henry Allsopp, of Hindlip, Hall, Worcestershire, the famous Short-horn owner....Lord Skelmersdale, another well-known Short-horn owner, and prominently connected with agriculture, has also been honored with an earldom.. .This was the owner of the late *first*, not eighth, Duchess, spoken of here last week. He personally purchased her here in 1873, at the great sale of Messrs. Wallcott and Campbell, for $30,600. ....In 1879, England had, in Jan., 15 hours of bright sunshine in 31 days; this year she had 42 hours; in Feb., '79, there were only 39 hours; in Feb., '80, 51½; in March, '79, 91 hours; in March, '80, 141—or 234.8 hours of sunshine in the first quarter of this year, against 137.5 in '79, and 141 in '78... The rainfall of the quarter, too, was less than half the soaking downpour of the same period last year.... The Florida oat crop is pronounced a failure on account of rust....The La. sugar crop is said to be the best ever known. About $80,000,000 are invested in the sugar industry in La....The merchants of Manhattan, Kansas, were unable to discover who habitually robbed them, until a detective advised them to search the students' rooms in the State Agricultural College. The result was the recovery of $400 worth of boots, clothing, jewelry and other things, and the confession by seven students that they were the thieves....

The annual meeting of the Mississippi Valley Cotton Planters' Association will be held in Vicksburg, on Tuesday, May 18—J. H. D. Bowmar, Sec.... On the 6th inst. about 25 canal boats arrived at this city from Buffalo—the first arrivals of the season—their cargoes amounting to about 190,000 bushels of grain....The first barrel of Georgia flour was resold on the Produce Exchange here on the 8th for the benefit of the Calvary Episcopal Church of Americus, Ga....The Virginia Angora Company has been chartered in the Old Dominion with a capital of $2,000,000, for the purpose of purchasing 200,000 acres of land in that State and stocking it with Angoras. California stock will be crossed with the Maltese....Darwin has written a new work—on the Circumnutation of Plants.... Thousands of tons of Limburger cheese are produced every season, mostly in the State of New York and Wisconsin, at a cost of less than half that of the imported article. It finds its market and is consumed mostly by our German-American population. It is more profitable to the farmer and maker than any other kind of cheese, because from a given quantity of milk more weight is obtained and better prices are realized....An English writer says that in the four colonies of Queensland, New South Wales, Victoria and South Australia there were, at the end of the year 1878, 6,141,749 head of cattle and 45,288,606 sheep. Taking one-fifth—the usual average—of these cattle as suitable for fattening purposes, we have a million and a quarter, or, making a further allowance for animals falling below the standard, a round million of fat beeves yearly. About three-quarters of these would be required for home consumption, and 50,000 more for the trade in canned meats, leaving for export 200,000 head. At 760 pounds per head, this gives England a possible meat supply of 150,000,000 lbs. yearly from Australia. * * It is stated, too, that under the encouragement of a brisk foreign trade, this production could be greatly increased....Finlay Dun, the late London Times' correspondent in this country on agricultural matters, has issued a prospectus of a Shorthorn and Jersey show and sale, at Agricultural Hall, Islington, London, to be held next June 16 and 17. Among the patrons are the Dukes of Devonshire and Manchester; the Marquis of Huntley; the Earls of Huntington, Morton, Cooper, Egmont, Zetland, Ellesmere, and Beetive; Lords Skelmersdale, Chesham, Fitzhardinge and De Feyne, and about 20 other prominent men, among them many well-known breeders—truly a fashionable lot .... Prof. Wickersheimer, a celebrated taxidermist attached to the Anatomical Museum of Berlin, has just discovered a liquid which, injected into the veins of dead meat, not only preserves it for several weeks from decay, but keeps it perfectly fresh and in possession of its natural flavor. Having treated a slaughtered calf with his new preparation, and subsequently caused it to be exposed for a fortnight to the air and weather changes, hanging in the open front of a butcher's shop, he invited a select party of scientific celebrities to partake of the meat thus tested, providing for them, however, other viands in case the prepared veal should fail to suit their palates. The professor's guests, however, found his *piece de resistance* so toothsome and delicate that they confined their attentions to it exclusively, neglecting all the other solid items in his *menu*.... Maple sugar made from the sap of a tree in Williamstown, Vt., at the roots of which the brine from the farmer's beef and pork barrels had been emptied last autumn, is reported to have been so salty as to be worthless....A refrigerator vessel, the Frigorifique, fitted to transport fresh meat from South America to France, which has been lying some time in the Seine, has been sold at the instance of an English creditor to an English company for 1,111,000 francs, who will use it probably in the Australian meat trade....

Scrofulous swellings, carbuncles and boils, blotches, pimples and eruptions, enlarged glands, internal soreness, torpid liver, and general clogged condition of the system, all yield in due time to nature's sovereign remedy—Dr. Pierce's Golden Medical Discovery. Sold around the world by druggists and chemists. Foreign trade supplied from London branch. World's Dispensary Medical Association, Proprietors, Buffalo, N. Y., R. V. Pierce, M. D., President.

WEST BLUE MOUND, Wis., March 8th, 1879.

Dr. R. V. PIERCE:

Dear Sir—Having suffered many weary months from liver complaint without relief, I was last summer induced to try your Golden Medical Discovery and Pellets. At the time I was scarcely able to walk. Owing to their effect I commenced to improve rapidly and am now as well and strong as ever. I thank you from the depths of my heart for the good they have done me and wish you all success. Yours truly, MRS. S. STAGNER.

Professor Blot, the lecturer on Cookery, says that housekeepers should insist upon obtaining BURNETT'S FLAVORING EXTRACTS, as the strongest and most healthful.

SORE THROAT, COUGH, COLDS and similar troubles, if suffered to progress, result in serious Pulmonary Affections, oftentimes incurable. "*Brown's Bronchial Troches*" reach directly the seat of the disease, and give almost instant relief.

THE truth is that no person pursuing indoor occupations, can expect to escape the consequences. Those great organs, the liver and kidneys, they will become inactive, and they need just such a remedy as Kidney-Wort to enable them to keep in healthy condition.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, May 8.

Boston—NEW BUTTER—Market lower: Choice northern dairy, 20@22c.; Fair to good northern dairy, 18@20c.; Common and bakers', 16@17c.; Choice western creameries, 26@27c.; Good Western creameries, 22@23c.; Choice western dairy-packed, 20@22c.; Choice western ladle-packed, 18@21c.; Common and bakers', 16@17c. CHEESE—Supply and demand both limited. New whole milk, 14c.; New half skims, 11@12c.; New skims, 8@9c. EGGS—Market dull; Eastern; fresh, 12@12½c. per doz.; Northern, fresh, 11½@12c.; Vermont and N. H., 12@12½c.; Western, fresh, 11@11½c.; Egg oats, 38@42c. VEGETABLES AND DOMESTIC FRUIT—Supply heavy; market dull. Baldwin and Russet apples range from $3.50@$4 per bbl for No. 1, and $2.50@$3 for common to good. The market is well supplied with Florida tomatoes, which sell at $4 per crate, and cucumbers at $1.25@1.75 per crate. Norfolk cabbages sell at $2.50 per bbl; Florida wax beans at $2.50 per crate; Norfolk Peas are very dull at $1@1.75 per ½-bbl crate; asparagus sells at $3@4 per doz; Bermuda onions, $1.75 per crate, and potatoes at $6 per bbl; strawberries, 20@25c. per box. RYE 95c. per bush. BARLEY, No. 2-rowed State, 70@80c; No. 6-rowed Lake Shore, 80@84c.; No. 6-rowed C. W., 90c@$1; Barley, rejected, 55@60c. SEEDS—Canary seeds are easy, and not quotably lower, and the demand is fair. Sicily $2.45; Smyrna $2; Malaga $2.40; Dutch $2.40; Hemp $1.65; German rape $2.50. Grass seeds firm, with the exception of timothy, which is easier and dull, incidental to the season. Timothy $2.85@2.95; Hungarian $1.25; Red Top, sack, $2.85@$3; Kentucky Blue Grass, $1.25; Red Clover, 7½@8¼; White Clover, 25c.; Millet, $1.35; Orchard Grass, $2 LIVE STOCK—Prices of beef cattle per hundred pounds, L. wt.: Extra quality, $5 37½@5.50; First $4.87½@5.25; Second, $4.37½@4.75; Third, $4@$4.25; Poorest grade of coarse oxen, bulls, etc., $3.25@3.87½. Prices of northern and eastern beef cattle ranged from 4c. to 7½c. per lb, dressed weight. PRICES OF SKINS: Calfskins ₱ lb, 12½@13; Wool sheep skins, ₱ skin, $1.50@3. WORKING OXEN—We note sales of 1 pair, girth 7 feet 2 inches, live weight, 3400 lbs, $170; 1 pair, girth 6 feet 6 inches, live weight, 2500 lbs, $90; 1 pair, girth 6 feet 10 inches, live weight, 2800 lbs, $100. MILCH COWS—The supply lighter than of late, and trade dull. We quote sales of 5 choice milch cows at $50 each; 5 do. at $45; 6 at $36 each; 1 at $40; 2 cows and calves at $31 each. Good cows always command a ready sale at fair prices. VEAL CALVES.—The supply has been largely increased. We quote at 4@5c for a good article; which is little change in price SHEEP AND LAMBS—At Brighton western sheep cost from 6 to 8c, ₱ lb, landed at the abattoir. The market for sheep was fully up to the rates of last week. Range on sheared sheep, 3½@5½c; some yearlings at 6@6½c. Lambs 7@8c. SWINE.—Fat hogs, 5¾@5¾c ₱ lb. Store pigs—wholesale, 6@7c ₱ lb; retail, 6½@7½c ₱ lb. Sucking pigs $2 to $4 ₱ head.

Baltimore.—WHEAT advanced towards the end of the week eight to ten cents per bushel. Southern, $1.35@1.37 for Fultz and $1.40 long berry; No. 1 Md. red, at $1.42½ Western advenced 7½c. for cash; 6c. for May, 3½c. for June and 2½c. for July; No. 3 winter red $1.20; No. 2 do., spot, at $1.32½; May, 1.30; June, $1.24; July, $1.14. CORN, white, 52@54c.; yellow, 51@54c.; Western white, 52@52½c., closing at 54c.; mixed, 49@52c.; rejected, 48c. OATS—Md. at 45@48c.; Western, 43@44c. for mixed and 44½@45c. for bright Western. RYE, 90c. for good to prime. BUTTER—Demand prices steady: New York Creamery at 26@27c.; New York State new at 26@27c.; Western new at 23@25c. for choice and 20@22c. for good to prime; Western rolls, 22@24c. for choice and 20@21c. for good to prime, and near-by stock 21@23c. per lb. for good to choice, CHEESE—The receipts of New York State new are fair and the market is moderately steady at 15c. for choice and 14@14½c. for good to prime. Western Factory is quoted 12½@13c. for choice and 11½@12c. for fair to good. EGGS—The supply is less liberal and the market is firmer at 10@11c. per dozen, the latter for strictly choice fresh. WOOL—The market is weak and easier, with very free receipts and a full stock of all kinds offered. We quote good unwashed at 34@36c, tub-washed at 45@50c., pulled at 40@45c., and Merino at 28@30c. per pound.

Chicago.—BUTTER—Dealers are keeping well closed out inview of the near approach of the season for "grass" butter, and the markets at the east are all more or less unsettled for the same reasons. Choice to fancy creamery at 21@23c ₱ lb; fine to fancy dairy nearly equal to creamery, 19@20c. good to choice dairy 17@18c; medium to fair do 15@16; common 13@14c; good to choice roll 15@17c. medium to fair do 12@14c; common 10@11c; grease butter 6@8c. CHEESE. Prices rule firm and strong. Full cream, good to choice, 13@14c ₱ lb; sour stock about 8½@9½c. Part skimmed about 11@11½ for prime; 10½@11c for good and common hard skimmed about 7@9c. ₱ lb. In a small way choice cheddar creams will bring 14½@15c. Hogs common to fair at $4@4.20; good to choice mixed at $4 30@4 40; choice heavy at $4.45@4.50. CATTLE firm common to good shipping at $4@4.30; good to choice at $4.50@4.95; all were sold. Sheep clipped at $4@4.65.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, May 8, 1880.

BEANS AND PEAS.—The bean market is generally steady; of course home sales are moderating with the increasing warm weather, but the export trade has revived and thus lends activity to the market. Green peas, steady $1.80. Southern B. E. peas at $1.90@2 ₱ 2 bu. bag. Marrow beans, prime, $1.10; other, $1.45@1.55; medium, prime, $1.40 other, $1.25@1.35; pea, $1.45@1.55; white kidney, $1.45@1.65; red kidney, prime, $1.45@1.50; other, $1.25@1.40; black, $2.10@2.15. Lima, Cal., $5. Receipts for week, 4,600 bush.; exports, 2,550 pkgs.

BUTTER.—The market is weak and declining; buyers make sparing purchases, now that grass stock can soon be obtained in straight lots. Western butter is not up to its usual spring mark in quality, and in dairy and factory the falling off in prices is the most noticeable. We can merely annex the closing rates. Prices are liable to sudden fluctuation at this season, and shippers must not count upon better or even supported prices, until stock becomes sound and solid enough to invite exportation.

Comparative receipts and exports from June 1.

	Receipts, pkgs.	Exports, firkins
June 1, '79 to May 1, '80	1,372,436	292,201
June 1, '78 to May 1, '79	1,334,178	284,422
June 1, '77 to May 1, '78	1,150,708	173,450
June 1, '76 to May 1, '87	1,160,068	148,988

New Butter—Creamery, best invoices, 24@24½c.; good to prime, 22½@23½c.; fair to good 21@22c.; poor to fair 19@21c.; State, pails and hf. tubs, choice, 21@22c.; good to prime, 20@21c.; fair to good, 19@21c.; poor to fair, 18@19c.; Welsh tubs, good to choice, 20@21c.; fair to good, 19@20c.; poor to fair, 17@19c.; Western imitation creamery, 17@20c.; do. dairy fresh, extra, 20c.; good to prime, 17@20c.; fair to good, 16@17c.; poor to fair, 15@16c.; do. factory, special marks, extra, 18c.; prime, 16c.; fair to good, 14@15c.; poor to fair, 13@14c.; very poor, 9@12c.

Receipts for week, 25,550 pkgs.; exports, 6,200 do.

CHEESE.—The arrivals have been steadily increasing the past week, and as the early supplies include, as usual, a good many undercured lots, there has been a strong effort to sell them, which has given a very irregular and yielding market. The shipments have been 18,250 boxes, and in connection with the home trade there has been sufficient done to prevent material accumulations. The market leaves off weak in anticipation of still larger arrivals the coming week.

COMPARATIVE RECEIPTS AND EXPORTS FROM JUNE 1.

	Rec'ts. pkgs.	Exp'ts. lbs.
June 1, '79, to May 1, '80	2,323,795	105,448,649
June 1, '78, to May 1, '79	3,017,000	135,209,154
June 1, '77, to May 1, '78	2,382,864	107,182,584
June 1, '76, to May 1, '77	1,940,640	84,210,570

Quotations are for

New, 13¾c. for choice full cream; 12¾@13¾c. for good and fine; 11¾@12c. for fair, and 10@11c. for half skimmed. Ohio factory flat at 13¼@13½d. for full cream; 12@13c. for fair and good lots; 10@11c. for half skimmed.

Receipts for week, 26,562 boxes.
Exports, 17,000 do.
Liverpool cable, 71s.
Steam, 35s.

COTTON.—There is a liberal demand for export and prices are quite steady. Speculation is moderately active; latest prices are for May, 11,71@11.72c.; June, 11.75@11.76c.; July, 11.85@11.86c.; August, 11.93@11.94c.; September, 11.5lc.; October, 11.08@11.09c.; November, 10 81@10.82c.; December, 10.81@10.82c.

DRIED FRUITS.—Apples have a better demand and prices ruling firm. Peaches are quiet and unchanged. Small fruits are slow.

Quotations are for N. C. apples, fair to good, at 7¾@8¼c.; choice, at 9@10c.; fancy at 10@10½c.; Virginia at 7@8c.; New York State quarters sliced at 7½@8¼c.; patent evaporated in cases, choice, at 15@15½c.; good and prime at 14@14½c.; evaporated, choice sliced at 13@13½c., and good do. at 12@12½c. Evaporated peeled peaches, good to choice, at 25@28c.; North Carolina peeled, fancy, at 20c.; choice old at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7½@8c.; do. quarters at 7@7½c. Pitted cherries at 18½@19c. Blackberries nominal at 11c. Raspberries at 28@30c. Plums at 17@18c.

EGGS.—Receipts for week, 16,150 bbls.; do. last week, 17,200 do. Supplies, though lighter, continue ahead of the demand. Buyers' wants are not large at this season, when trade is so divided among fresh green stuff and cheap spring fish. The weather has turned warm and buying ahead is done with.

Near Points, 12½c.; State and Penn., 11½@12c.; Western and Canadian, fresh, 11½@11¾c.; poor lots, 10@11c.; duck, 13@14c.; goose, 22@24c.

FLOUR—Has been freely offered at easier prices, but closed firm and more active.

Latest prices are at $3.60@4 80 for inferior to very choice superfine State and Western; $4.35@4.75 for poor to good extra State, odd lots and lines; $4.75@5.25 for very good to fancy do.; $4.40@4.75 for inferior to good shipping extra Western, and $4.75@5.25 for good to fancy shipping extra do.; inferior to very good white wheat extras, $4.75@5.50; very good to fancy do. at $5.50@6.75; red and amber winter wheat, inferior to fancy trade and family, at $4.75@6.10; round hoop Ohio, $4.75@5 25; and trade and family brands of do. at $5.35@6.50; St. Louis at $4.75@5.60 for inferior to good extra; $5.60@6.75 for good to fancy; Minnesota clear, inferior to fancy, at $4 75@6.25; Minnesota "straight," inferior to fancy, at $5 15@7.25, and patent very inferior to fancy at $6.10@8.50; unsound stock at from $2 60@5 00; city mill extra at $5.60@6.00 for fair to fancy West Indies; do. for England, $4.75@5.25 for poor to very fancy; do. trade and family extras, $6.25@7.00; do. for South America, $6.00@6.75; No 2 at $2.70@4.00 for poor to very choice.

Receipts for week, flour, 24,000 bbls.; wheat, 258,300 bushels; corn, 530,200; oats, 242,400; rye, ——; malt, 90,269; barley, 9,100; cornmeal, 4,325 bbls.; rice, 1,521 pkgs.

Exports for week, flour, bbls., 59,000; wheat, bush., 742,100; corn, 742,450 oats, 8,550; rye, ——; malt, ——; barley, ——; peas, 18,983; cornmeal, bush., 3,890; rice, pkgs., 1,853.

CORN MEAL.—Sales at $3.10@3.20 for Brandywine and $2,25@3 for yellow Western.

FRESH FRUITS.—Apples are nearly out of market; fair to choice Baldwins, $3.50@5.00; Russets, $3@3.50; Strawberries in fair demand when well ripened, Norfolk is sending some good Wilsons; but many of the steamer crates are green. Norfolk seedling, per quart 20@26; scarlet 15@20c; N. Carolina 20@30c; Chas. 15@25c. Peanuts dull, and a shade off from former rates. Va. hand-picked 5¾@5¾c.; extra prime, 5c.; good to prime, 4¾@4¾c.; shelled, 5¾@6c.; hickory nuts 90c.

FURS AND SKINS—Weak at former figures. Supplies continue to arrive.

GRAIN.—Wheat has shown a fair export demand. Some 700,000 bush. shipped for the week, and prices closed firm; latest sales are of No. 1 white at $1.23½@1.25¾; do. May, at $1.23@1.24¼ do., June at 1.22¾; ungraded white at $1.20@1.22¾; No. 2 red at $1.23¾@1.30; do. May at $1.23¾@1 30; do. June at $1.25@1.26¾; do. July at $ .1-; ungraded red at $1.18@1.23¾; mixed winter at $1.23½, No. 2 umber at $1.27; ungraded amber at $1.25¾. No 2 Chicago and Milwaukee spring in store at $1.24, New York, No. 2 spring, May option at $1.23; No. Northwest spring May at $1.24¼-No. 3 Milwaukee at $1.14; ungraded spring at $1.11. Corn is in larger receipt and offered lower; latest sales are of New York No. 2, regular inspection at 50¼@52c.; do., May, at 48¾c.; do., June, at 47½c.. do., July, at 47¼c.; New York steamer mixed at 51c.; ungraded mixed Western at 50@53c.; No. 3 at 50c; steamer white at 51@51½c.; No. 2 white at 53@53¾.; New York low mixed at 52c.; 4,500 bushels white Southern at 56c. Oats are active and closed firm; latest sales are of of No. 1 white 50c.; No. 2 white at 45¾@47c.; No. 3 white at 44c., New York No. 1 at 45c.; New York No. 2 at 44¾@45c.; do. May at 40c.; do. June at 38¾@39c.; No. 3 at 4 @43¾c.; ungraded white Western at 45@50c.; ungraded mixed Western 42@45c.; white State at 43¾c.; mixed State at 45@45¾c.; No. 2 Chicago at 41c.

HAY AND STRAW.—Offerings are liberal, but demand is good and prices are sustained.

Shipping hay quoted at 70c.; retail lots at 80@85c. for medium, and 85@$1, for better qualities; clover, 55@60. Straw at $1@1.05 for long rye; 65@70c. for short rye, and 50@60c. for oat.

Exports for week, 2,550 bales.

HOPS.—There has been very little stir to trade on export account, but brewers buy sufficiently to use the moderate receipts, prices are unchanged. Quotations are for:

	Cents per ₱
New York, fancy	Nominal.
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

LEATHER.—Quotations are for hemlock sole, 23@25c.; for light two, 24@27c.; for middle do., 23@26c. for heavy do. and 21@24c. for good damaged.

MAPLE SUGAR—Supplies seem to be remnants of lots, and not being attractive, they sell hard. The stock now offering quoted, 9@12c. for cakes. Syrup in tin, 75c.@$1 gal.

OIL-CAKE.—Western is quiet, quoted at $32 per ton.

POULTRY AND GAME.—The market for dressed is easy; the remnants of frozen helps to give the supply a show of bulk. Poor lots have no outlet and prime near points and fresh killed fully supply all inquiries.

Turkeys, choice, small, 11@12c.; choice, medium, 9@10c.; fair to good, small, 9@10c.; large, 7@9c.; Phila., dry-picked, 12@13c.; capons, Phila. large, 25@26c.; small, 21@24c.; slips, 20@21c.; chickens, winter, large, Phila., 25@27c.; small, 23@24c.; spring, Phila., ₱ lb., 30@35c.; fall, Phila., dry-picked, 20@21c.; yearling, Phila., dry-picked, 16@18c.; fowls, Phila., dry-picked, 14@15c.; N. J., good to prime, 13@14c.; State, good to prime, 12@14c.; poor to fair, 5@10c.; ducks, Phila. dry-picked, 18@20c.; squabs, white, ₱ doz., $2.75@3; dark, $1.50@2.

Large spring chickens in good request and firm; small plenty and low. Fowls have been quite plenty for a day or two and lower, but have met a fair demand; a few choice lots by the single coop have sold ¼c. above quotations. Turkeys very dull and much lower. Ducks and geese steady. Pigeons, if very large and strong, sell well, but small ones are neglected.

Pigeons have ruled low all the week. Demand good as there is little other game in market. English snipe and plover, $2.12@2; sand snipe, 50@60c.; wild pigeons, 65@75c.; squab, 87c.@$1.

PROVISIONS.—Provisions have been dull and easy in price: mess pork quoted at $10.80@10.90 for new in job lots on spot; $10.80 for May and June; $10 85@10.90; July and $10.95@11 for August. Bacon at 6¾ for long clear and 7 for short clear. Beef at for extra India mess quoted at $18@20 for city and $19 for Philadelphia, and at $10@10.50 for extra mess, and $9.50@10 for plain mess. Beef hams at $17. Lard—Western steam at 7.20 for spot lots; 7.17½@7.20 for May; 7.20@7.23½ for June; 7.25@7.27½ for July, and 7.30@7.32½ for August. Stearine at 7½c. for Western.

Receipts for week, pork, 5,000 pkgs.; beef, 1,280 pkgs; cut-meats, 40,457 pkgs.; lard 25,472 pkgs. Exports for do., pork, 6,525 pkgs.; beef, 2,835 pkgs.; cut-meats, 12,129,239 lbs.

SEED.—Clover is moderately active and steady. sales at 6¾@7c. for Western, and 7@8c. for State. Timothy is quiet at $2.60@2.65.

TOBACCO.—The export demand continues small and the home trade moderate. Prices unchanged.

VEGETABLES.—Exports of potatoes for week, 2,200 bbls. For such limited demand as exists sellers of old potatoes obtain full prices for selected lots. It looks as though an important part of the crop has been held too long and an early and decline is looked for. New potatoes in fair demand, but no very good styles are arriving in wholesale lots. Southern green stuff is easy with weather that will soon allow nearer points to compete for a share of trade.

Bermuda, new ₱ bbl., $4.50@5; Chas. & Sav., new $3@4; Fla., new, $3@4; culls, $1.75@2; Early Rose, Maine, per d.-h. bbl., $1.50@1.75; State $1@1.25; in bulk per bbl. $1@1.25; Peachblow, State, white, per d.-h. bbl., $1.50@1.75; red, $1.37@1.50; N. J. per bbl., $1@1.25; Snowflake, ₱ d-h bbl., $1.50@1.75; Peerless, State, $1@1.12; bulk, ₱ bbl. $1; Jersey, bulk, 50@75c.; Sweet potatoes, $2.75@3.00 Tomatoes, Bermuda, ₱ box 50@85c.; cucumbers, Fla., ₱ crate, 75c.@1.25; string beans, Sav. & Ch'n, $2 50@3; squash, Florida, white, 25c.@50; yellow, per bbl., 75c.@$1; green peas, Norfolk, per hf. bbl. crate, $1@1.25; asparagus, C. Bay, per doz. bunches, $2 50@3; Jersey, $1@2.50; Md. and Del., $1@2.50; Norfolk, $1@2; kale, L. I. ₱ bbl., 75c.@$1; spinach, L. I., ₱ bbl. $1@1.75; turnips, Norf., new, ₱ 100 bunches, $1@2; beets, Norf., do., $3@5; do., radishes, Norf., 50c.@$1; squash, marrow, per bbl., $1.75@2; Hubbard, $1.75@2; cauliflower, Ch'n and Sav., $4@7; Norf., $3@4; do. cabbage, $1@2.25; Ch'n and Sav., $1@2.25; rhubarb, L. I. & Jy., ₱ 100 bunches, $1.50@2.50; onions Bermuda, new ₱ crate, $1.50@1.62; turnips, Russia, ₱ bbl., 75c.@$1.25; carrots, $2@2.25.

Hot-house products not much wanted. Cucumbers, selected, per doz. $1@1.50; seconds and culls, ₱ doz., 25@75c.; radishes, per 100 bchs., $2@2.50; lettuce, ₱ bbl., $2.50@3.50; carrots, ₱ 100 bchs., $2.75@3.

WOOL.—The market continues dull and buyers have the advantage. Manufacturers are fairly well supplied and are indifferent pending developments on the new clips. Quotations are for domestic fleeces:

Ohio, Pennsylvania and West Virginia, XXX, 58@60c.; XX, 54@56c.; X, 51@56c.; No. 1, 58@60c.; No. 2, 55@58c.; coarse, 45@48c.; combing, 55@60c.

New York Michigan and Wisconsin, X and XX, 50@54c.; No. 1, 57@60c.; No. 2, 54@57c; coarse, 43@46c.; combing, 54@59c.

Indiana, Kentucky and Tennessee, X and XX, 50@54c.; No. 1, 57@60c.; No. 2, 54@55c.; coarse, 42@45c.; combing, 55@58c.; combing unwashed, 43@47c.

Illinois, Iowa, and Minnesota, X and XX, 47@50c.; No. 1, 55@57c.; No. 2, 50@53c.; coarse, 40@43c.

Georgia, Alabama, Mississippi and Louisiana, fine unwashed, 43@45c.; medium unwashed, 42@44c.; coarse unwashed, 20@37c.; burry, 20@30c.

LIVE STOCK MARKETS

NEW YORK, Saturday, May 1, 1880.

BEEVES.—Receipts for week, 13,755 head; do. last week, 15,915 do. There has been a good, strong market, and the closing tone promises well for next week. Prices run quite uniform. Medium to prime steers, 8½@9¾c., dress 56 lbs.; top grades, 9¾c. Export demand fair.

COWS AND CALVES—Quiet at $25@40 per head for common to fair, and good to prime are only worth $45@55 here.

VEAL CALVES.—Live have ruled low the entire week. In dressed, the regular river shipments of warm weather now quoted.

Live calves, N. J. and Bucks Co., choice, 5½@6c.; prime, 5@5½c.; State, choice, 5c.; do. prime, 4½c.; fair to good, 4@4½c.; poor, 3½c.; Mt. Holly, good to choice, 6@7c.; buttermilk, 3½@4c.; grass, 3c. Hog-dressed, Newburg, choice, 8@8½c.; good to prime, 7@8c.; fair, 6@7c.

SHEEP AND LAMBS.—Receipts for week, 20,350 head; do. last week, 28,967 do. At 60th st. heavy shipping sheep and prime slaughtering wethers sold fairly at about previous prices, but common and light sheep were dull and in buyers' favor. Trade at Jersey City was slow, and nearly all grades of sheep declined ½@¾ ₱ lb. Lambs were scarce, in active and higher. Common to choice clipped sheep sold at 5@6c.; a load of unshorn do. at $6.35; some poor unshorn yearlings at 7½c.; and spring lambs at 9@10c.

SWINE.—Receipts for week, 31,956 head; do. last week, 26,598 do. Receipts all sold: nominally at $4.60@4.80; city dressed 5¾@6c.; pigs 6½c.

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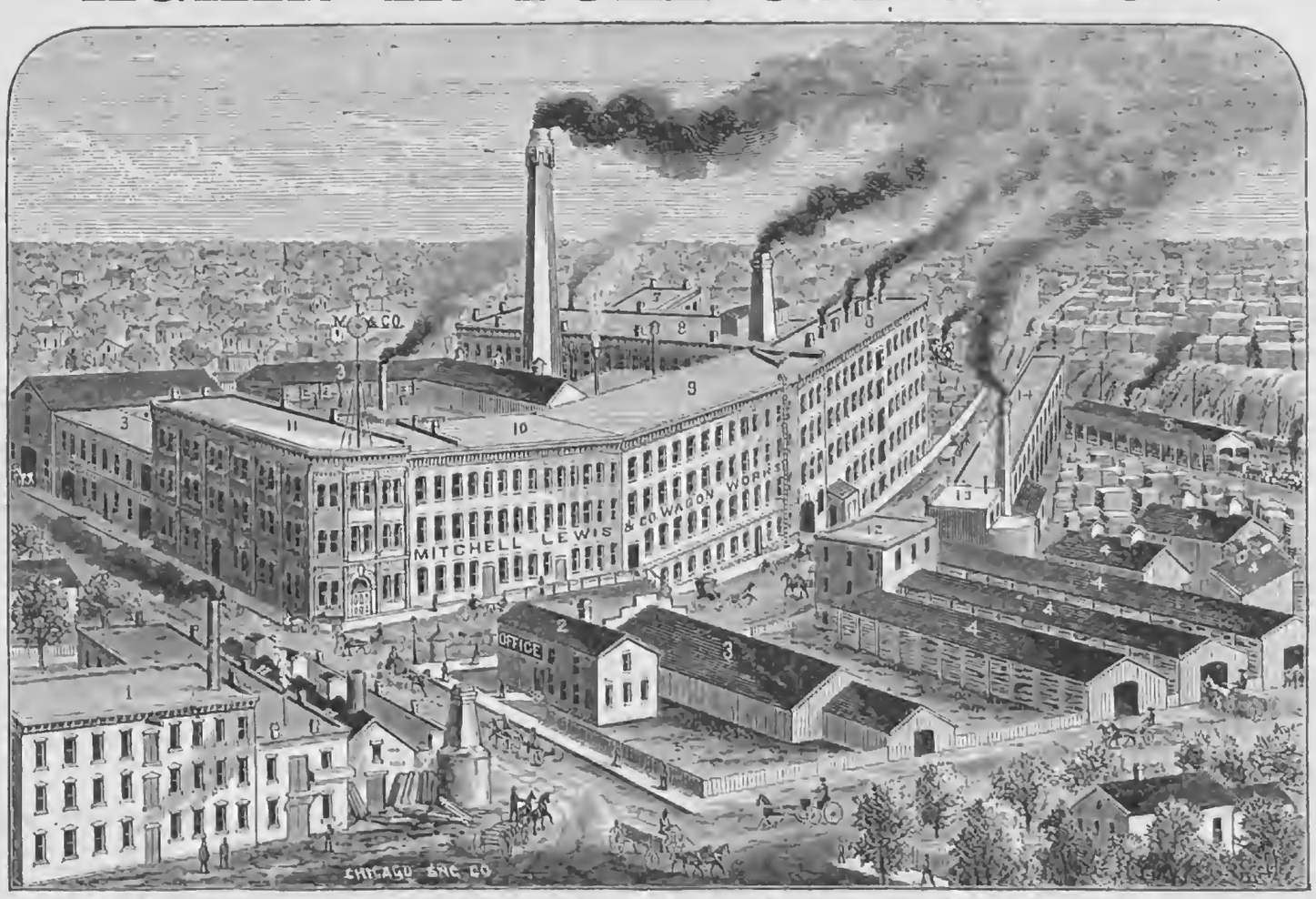

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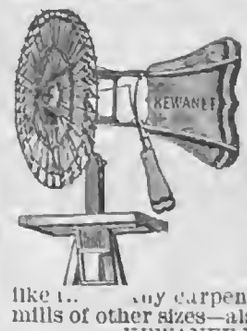

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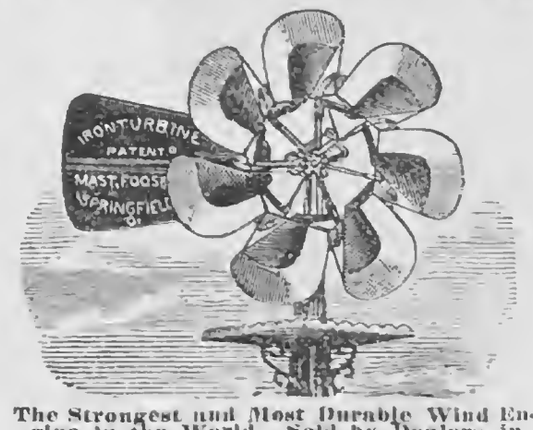

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Reading for the Young.

BIRD SONGS.

In the old cherry tree by the garden gate
A robin sings sweetly, both early and late;
Her nest is up high in the branches, and there
Four nice little robins are waiting her care.

With a worm in her mouth she flies to the tree,
And oh, how they chirrup, their mother to see.
The worm is divided, and, taking a rest,
She sings them a song by the side of the nest.

God made all the birds and taught them to sing,
And fly through the air with light, rapid wing.
They come ere the forest with green leaves is gay,
And warble their songs all the long summer day.

SOPHIA C. GARRETT.

TALK ON BOTANY—NO. 1.

UNCLE MARK.

LAST summer several articles on botany appeared in these columns for the benefit of the cousins, and particularly for the members of the Horticultural Club, who are supposed to take a lively interest in everything concerning plants. During the winter these articles were not continued, because to study this science to advantage, it should be pursued in the summer, when nature is everywhere giving illustrations of the lessons, and "specimens" for examination can easily be had. Summer is now again at hand, with all its riches of vegetation open for our enjoyment, and, with the permission of the cousins, we will again take up the botany lessons. My little nieces and nephews will find it a highly interesting play to examine the wild flowers and plants that greet them on every hand; to learn their structure and habits; for it is but play to those who interest themselves in the matter. By early giving their attention to this and similar studies, they will acquire habits of observation, and become familiar with numerous facts that may be of untold value in after life. But it is not only the young folks who may profit by a knowledge of botany, the older folks, too, will find it greatly to their advantage. Every farmer should be familiar with the structure of the plants he cultivates, with their mode of fertilization, their habits, etc. And even those who are not farmers and do not, in any way, make a business of the cultivation of plants, will profit by a knowledge of botany. It will furnish material for thought and reflection, and open to the mind a world of enjoyment, from which they are otherwise effectually shut out. It teaches one to "Look through nature up to nature's God."

The natural mode of propagation with most plants is by seed. Of course, everybody knows what seed is. There is not a cousin who, when the word seed is mentioned, does not immediately form an idea in the mind of some small grain to be sown in the ground and from which plants are expected to grow up. In a botanical sense a seed is always the product of a flower. It is a very peculiar organism, and possesses singular powers of very great interest to the students. Thus the smallest seed, but little larger than a particle of dust, contains within its tiny coats the power to germinate and develop into a plant with roots, stems, leaves and flowers, like the plant which produced the seed. The giant Oaks of our forests, which now so majestically spread themselves and tower heavenward, the very symbols of strength, were once small acorns, of which a boy might hold a dozen in his hand; and the acorns that now drop from the lofty tops of these Oaks may, if placed under favorable circumstances, develop into as sturdy trees as their parents. The seed is thus a wonderful concentration of power and possibilities, and in the case of nuts, the future tree is literally contained in a nutshell.

But the seed not only has power to grow into a plant; it has other peculiarities which can be discovered only as the plant develops. Take, for instance, two peas; they may be exactly alike as far as any one can discover. They are precisely of the same form, color and size; you may cut them open and examine the *cotyledons* (seed leaves, or the first pair of leaves that appear when the seed begins to grow) and the *embryo* as closely as you please, and still you can discern no difference between them. They are "as like as two peas," yet when planted one may grow five feet high while the other will only reach two feet in hight, and though planted at the same time, the latter may bear fruit two or three weeks before the former. In short, they are of different varieties. But this could not be discovered in the peas. It is the same way with multitudes of other kinds of seed. Half a dozen Pansy seeds may be alike; they may grow up, and still the plants are alike, but when the flowers appear the markings on these are quite different. What these markings should be, we may assume with tolerable certainty, was already determined in the seed, but the most careful examination would fail to reveal it. (The coloring of flowers, however, is greatly influenced by the kind of soil in which the plant grows, but not in the same degree with all plants.) It is this power of the seed to develop peculiarities and distinctions that exist only in its kind of plants that is especially interesting and puzzling. We know it has this power, but just why or how it is brought about none can tell.

A great deal may be said about the seed, its parts and their relation to each other, but it is not my purpose to describe it here at present. Later on, when we shall have become familiar with the general structure of plants, and how they live and develop, we will again take up this interesting subject. We will now begin with the germination, or beginning of growth, of the seed, and try to follow the plant as it develops till it has run its course, and we shall have studied its many interesting features.

When a perfect seed is placed under favorable conditions for growth, that is, in a place where it can get the necessary amount of moisture and warmth, a startling change at once sets in. The seed-coats begin to absorb moisture; the whole body swells into larger dimensions; it can no longer be contained within its narrow coverings, and finally, like a chick that bursts its shell and struggles to get out, the enlarged embryo bursts the seed-coats and a tiny germ becomes visible. Then we say that the seed is sprouting. It is now no longer a dormant seed, it is a living organism which has wants that must be supplied. These wants are as yet only warmth and moisture. The growing germ needs nourishment, but this it gets from stores within the seed; it is not yet able to absorb nourishment from the ground. Any one of my nieces and nephews can easily follow this interesting process by watching the germination of a pea. In a short time the germ will extend itself in two opposite directions, one part growing upward forming the stem, or *ascending axis*, of the plant, and the other, called the *descending axis*, growing downward, into the ground, and forming the roots.

This disposition of the plants to grow in opposite directions is marked from the start, and continues through its whole life. As soon as germination begins the stem end of the embryo turns upward in search of light and free air, while the root end as persistently avoids the light and buries itself deeper and deeper in the moist and nourishing bosom of mother earth. This fact I accidentally discovered while a boy. I had planted some horse-chestnuts in my garden, and being anxious to have them grow they were often dug up to ascertain how they were progressing. At last I found that several of them had germinated, but the sprouts were all pointing upward. This, I thought was a mistake, as I had the idea that the roots must be formed first; how else could the plant grow? Accordingly I turned them all round so that the germs pointed directly downwards, and I felt proud when I had made this correction, for it would have been a dreadful mistake if the young chestnuts should form their roots in the air, or else have no roots. But how great was my surprise when three days later I again dug up the nuts and found that the sprouts which I had so carefully turned were again pointing upward, having grown nearly three-quarters of the way round the nuts, while a root end, which had made its appearance on each germ, was with equal zeal striving downward. I then concluded to let them have their own way about it.

It is said above that the nourishment needed by the young plant till it is able to shift for itself, is taken from the seed. This nourishment consists, principally, of starch and is either stored in the embryo itself, that is, in the cotyledons, or around it. When it is stored in the cotyledons these become greatly thickened as may be seen in the germinating bean and to still better advantage in the pea and horse-chestnut. When the nourishment for the young plant is stored around the embryo, the seed-leaves are thin and get a green color as soon they are above ground.

Two of the most important divisions of flowering plants are formed upon the number of seed-leaves found in the seed. One division has but one seed-leaf and is therefore called *Monocotyledonous*, that is, one cotyledon. To this division belong all the grasses, Palms and Lilies. The other division has two seed-leaves and is therefore called *Dicotyledonous*, meaning two cotyledons. To this division belong our forest trees, the bean, pea, melon and a multitude of other plants. The pine trees have more than two cotyledons, and are called *Polycotyledonous*.

It will be interesting for young botanists to watch the germination of their garden seeds, and learn which plants have one cotyledon and which have more than one. Moreover, some plants raise their cotyledons above ground, like the bean and the melon, but others keep their cotyledons below ground and only shoot up the young stems with leaves quite like all the succeeding ones that are formed on the plant. The pea is an example of this. It is easy to insert the finger in the ground and lift the whole embryo plant just as it peeps into appearance, and then examine it carefully for all the parts that have been mentioned. Find the *ascending* and the *descending* axis, and the cotyledons; ascertain how many there are of the latter, whether they are large or small, and if they remain in the ground or are raised on the ascending stem. Nothing is more convincing or better remembered than what one sees with his own eyes.

I could continue to speak about the young plant much longer, but this talk is already long enough, and we have got the plant fairly under way from the seed. In the next talk on botany we will follow the descending axis, learn about the development of the roots and examine some of the most important forms of these.

LETTERS FROM THE COUSINS.

DEAR UNCLE:—I want to write to you and thank you for the seeds which I received some time ago. I wrote you a letter some time since which very likely you did not receive, although it was directed to you. I think that some one else at the RURAL office must have seen and coveted it. Anyway I was a little surprised to find my poor letter in the place of honor at the head of the reports from "Everywhere." I am looking forward to considerable trouble with vermin this season, as they were so plentiful last year. It was necessary for me to examine my corn every day or two and I kept my squashes free from bugs by scattering lime and wood ashes plentifully over them, but after I had tossed up my hat and crowed, I found that most of the vines were turning yellow, and I was disgusted to find that numerous worms had got the inside track, by tunneling within the vines nearly their whole length. The best way to treat Smilax is to take up the bulbs and keep them dry for a couple of months in the summer, and set them in fresh earth in the fall. I will say nothing about the weather for fear of seeing my letter in "Everywhere," otherwise I would write you three or four sheets beside this, but perhaps it would be as dry as many reports are. I believe the rest of what I have to write I will say next time.

Suffolk Co., Mass. C. A. BUTTERWORTH.

DEAR UNCLE MARK:—I received the seeds, and I am very thankful for them. It snowed here on Saturday night, the 17th ult., two inches deep in some places. As I live in Colorado, which is a dry country, we have to irrigate, which is a great deal of trouble, for sometimes the ditches overflow and flood the gardens and do a great deal of damage in one night. Last year we had a very handsome garden, but we had any amount of trouble; for once on a bright day some of the seeds in boxes were put out to get some air, and a shower came up, and as they were put under the edge of the roof so as not to burn up in the sun, the rain dripped upon them and nearly ruined them. At another time we set the boxes in an unfinished room because it was cool and moist there, and the rats ate the tops of some of the plants. We were sometimes almost discouraged, but when our beautiful Phlox and dear little Pansies and all the rest bloomed all summer long, we felt well paid for our trouble. It will be so pleasant to think that so many of the cousins living so far apart, will have flowers alike next summer. Your affectionate niece, MARY NETTIE BLOUNT.

Larimer Co, Colorado.

UNCLE MARK:—Many thanks for the seeds you sent me. I planted about half of my China Pink seed in the hot-bed and have between 30 and 40 plants up and looking nicely. We have several kinds of plants in blossom now, among them, three varieties of double Petunia, Chinese Primrose, Heliotrope, Geraniums, Sweet Alyssum, and others. We have a Heliotrope raised from seed last spring, which is five feet high, and is covered with buds and blossoms; the first bunch that blossomed was seven inches long and five inches wide. My Callas, two years old last fall, had four blossoms last winter and has two this winter besides a bud that did not open because the plant was changed from a cool room into a warmer one. We water it with hot soap suds. I want to tell the cousins how to treat Balsams: when they begin to branch out pinch off all but the main stem; the flowers are nicer and the seeds will be better. EDITH A. HUNT.

Cuyahoga Co, O.

DEAR UNCLE MARK:—I have read the cousins' letters with much interest for some time, and thought I would like to be a member of the Horticultural Club. Will you please put down my name on the list. I am very fond of flowers. My auntie and I take all the care of ours. We have not, as yet, a very large variety. I have to walk over a mile to school. We have a most excellent teacher and a good attendance. I love to go to school, and am getting along very fast in my studies. My eldest sister is a musician. In vacation I take music lessons; but when I am going to school I do not have time to do that, and attend to my studies too. Papa has not taken the RURAL very long, but likes it very much. But I must close. Good-bye. With lots of love to the cousins, and also to yourself, I remain your affectionate friend. WINIFRED STEVENS.

Dorchester Co., Maryland.

UNCLE MARK AND MEMBERS OF THE HORTICULTURAL CLUB:—I want to ask the same question that one or two others have asked: why don't more of you write? Although this is my first, if it is not rejected I shall probably write again. Have any of you sent for the system of short-hand writing advertised in the RURAL? I have and am learning it as fast as I can. I had a strawberry bed last year, and did all the work and sold a few berries. I expect to have a good many this year. Well, I must close or Uncle Mark will not let me in this time, or any other. I shall try my hand at grafting this spring. Your cousin,

Factory Point, Vt. WALLACE.

Various.

BRIEFLETS.

EARLY Amber Cane seed germinates freely, but grows very slowly for several weeks. It is not easily distinguished at this stage from grass, and it is of importance that the land should be kept clean....Plant Nasturtiums—beautiful as flowers or vines, useful for their leaves and fruit as salad and pickles....A beautiful sweet, of a most peculiar flavor, the London Farmer tells us, is made for the dessert by candying the leaf stalk in a green state of that most noble and right regal herb, Angelica....Have you ever tried Silver-Hull buckwheat?....Every garden should have a little patch of sweet and medicinal herbs, such as Angelica, Anise, Sweet Fennel, Rosemary, Rue, Horehound, Wormwood, Thyme, Sage, Caraway, Basil, Lavender, Saffron, Marjoram, Hyssop, etc....Roses need the richest soil—and it should be deep. Cow manure is excellent for them....A Minister of Agriculture is what the London Farmer has asked for, and maybe now expected as the first-fruits of the Liberals, as an overdue debt that will be paid to please and conciliate the British agricultural interests....The Mark Lane Express says that Mr. Thornton has said some very plain things to Shorthorn breeders, boldly declaring that a pedigree should be something more than a string of names. He does not believe in a return to fancy prices. If fancy prices do not return, fancy breeding will soon become a thing of the past. The Mark Lane Express would hail such a result with great pleasure, not because it wishes to see the aristocracy tire of breeding Short-horns, but because they have bred them in an artificial manner to the detriment of the Short-horn breed of cattle. . .

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN 41.—MAY 1, 1880.

FETILIZER ANALYSES.

385.—New York stable manure, sold by H. A. Peck, First Avenue cor. Thirty-eighth St., New York, sampled and sent March 30, by John H. Jennings, Greens Farms, from cargo purchased by him.

Moisture	69.295
Organic Matter*	19.772
Potash	.633
Soda	.145
Lime	.742
Magnesia	.288
Oxide of Iron and Alumina	.554
Phosphoric acid	.670
Chlorine	.110
Sulphuric acid	.156
Sand and Insoluble matter	7.426
Carbonic acid	.209
	100.00

* Containing 0.118 Ammonia and 0.693 total Nitrogen.

This has very nearly the same composition as the sample of New York stable manure analyzed in 1873 for the Board of Agriculture; the results published in report of Board for that year, p. 350. This, however, contains about nine per cent. less of moisture and insoluble substances and the proportions of fertilizing matters are correspondingly greater. The cost of this article was six cents per "bushel" of about 40 quarts. Mr. Jennings states that several hundred small cargoes of 50 to 75 tons each are bought at Greens Farms every year. The cargoes are unloaded on the shore where wanted.

394.—Cotton-seed meal, sold by Smith, Northam & Robinson, Hartford. Sampled and sent by R. E. Pinney, Suffield.

395.—Strictly pure bone, sold by H. J. Baker & Co, New York. Sampled and sent by J. H. Jennings, Greens Farms.

	394	395
Nitrogen	7.20	4.08
Phosphoric Acid	3.33	22.72
Potash	2.11	
Estimated value	$37.95	$43.62
Cost	$25.00*	$32.00†

* In 10 ton lots. † In New York?

S. W. JOHNSON, Director.

CATALOGUES, ETC., RECEIVED.

THE RELATIONS OF RAILROADS TO THE PUBLIC.—This pamphlet of 18 pages is a statement on the above momentous subject, prepared by Mr. F. B. Thurber, of this city, in reply to inquiries submitted to him by the Chief of the Bureau of Statistics, at Washington, D. C. Mr. Thurber has long been one of the most persistent and strenuous opponents of the unfair and oppressive freigh discrimination practiced by railroads, and in this work his views and reasons therefor are forcibly and succinctly expressed.

FOURTEENTH ANNUAL REPORT of the Northwestern Dairymen's Association, with addresses and discussions at the Annual meeting in Harvard, Ill., Feb. 10, 11 and 12, 1880. This report, of 119 pages, contains a large fund of information of interest and great use to all engaged in any department of the dairy business. Copies can be obtained of R. P. McGlincy, Secretary, Elgin, Ill., price 36 cents, including postage, and we urge every one of our readers interested in this industry to send for one.

TRANSACTIONS of the Nebraska State Board of Agriculture from Sept., 1876, to Sept., 1879. This volume, of 350 pages, contains in the first 200 pages, a great deal of useful and instructive information with regard to the agriculture of this vigorous young State, while the remaining 150 pages are devoted to its horticultural progress and advantages. Daniel H. Wheeler, Sec., Plattsmouth, Neb.

PORK PACKING AT THE WEST.—This pamphlet, of 32 pages, by Charles B. Murray, Editor of the Cincinnati Price Current, presents a complete and reliable history of the pork-packing operations at the West and elsewhere in the United States for the year ending March 1st, 1880, together with other facts intimately connected with the business.

QUARTERLY REPORT of the Chief of the Bureau of Statistics, Treasury Department, relative to imports, exports, immigration and navigation, etc., of the United States for the three months ending June 30, 1879. Joseph Ninmo, Jr., Chief of Bureau.

PROCEEDINGS OF THE NEW JERSEY STATE HORT. SOCIETY at its annual meeting, held at New Brunswick, Jan. 15th and 16th, 1879. E. Williams, Recording Sec.

DEPARTMENT OF AGRICULTURE Special Report—No. 23—upon the condition of crops and live stock for April, 1880.

THIRTY-EIGHTH Annual Report of the transactions of the Queens County (N. Y.) Agricultural Society for 1880.

PERSONAL ITEMS.

Mrs. Gillespie of Morgan County, is 103 years old, and walks two miles to church every Sunday.

Matilda Stevenson lived to be 105 years of age before she made a profession of faith, and was baptized at Paris, Ky., last Sunday.

Mrs. Waty Clark of Oswego, N. Y., still lives at the age of 106. She has been the mother of twelve children, and, until very recently, had her faculties unimpaired.

Baltimore loses another centenarian in Sarah Springer, who died recently, aged 103. She leaves thirty-one grandchildren and twenty-eight great-grandchildren.

Trees, Seeds, Plants, &c.

ROOT CROPS
FOR
FARM STOCK

Our priced circular, with instructions for the culture and winter preservation of MANGELS, CARROTS, and other ROOT CROPS, sent free on application.

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Green plants (which, if properly planted in June, will yield a crop of fruit next year), carefully packed in damp moss, at $3.00 per 100, $20.00 per 1,000.
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"40 Years' Experience in Pear Growing," telling how to avoid the blight and *insure good crops.*
"40 Years' Among Small Fruits," telling what and how to plant. Either sent by mail for 15c.; both for 25c. *Catalogues* free.
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Japanese Maples, Rhododendrons, Hardy Azaleas, Magnolias, Roses, Purple Beech, Choice Conifers carefully pruned, in large quantities.
All kinds of Fruit and Ornamental Trees, Shrubs, and Vines. Price Lists free. Descriptive Catalogues 10 cents, including list of "New and Rare Plants."
PARSONS & SONS CO. (Limited,)
Kissena Nurseries, Flushing, L.I.

Miscellaneous.

STOCKBRIDGE MANURES
For 1880.

Some years ago the Stockbridge Manures were only known to a few farmers in the Connecticut Valley. Now they are so extensively used in different parts of the country as to require two large factories, one in New York and one in Boston to manufacture them. This increase shows what farmers think of good fertilizers, and is not only due to the fact that they are reliable, well-made, and high-grade manures, but also to the fact that farmers have

FOUND THEM PROFITABLE TO USE.

Now that corn, and other farm produce is bringing such good prices, we anticipate that farmers will invest still more largely in our fertilizers.
Besides the Stockbridge Manures, we manufacture several high-grade Phosphates, and deal in first-class chemicals of all kinds. Farmers who intend to use Fertilizers of any kind, should

Send for our New Pamphlet,

which contains a large amount of reliable information, beside prices for 1880.

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$125 Outfit free to Agents, and all expenses paid. Address H. B. Shaw, Alfred, Me.

I WILL SEND Preston's Patent Hand Protector for Husking Corn, Post Paid, on receipt of retail price..... 25 cents.
Preston's Metallic Husking Pin ..... 10 cents.
Preston's Prepared Solder for family use... 10 cents.
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Agents wanted in every town in the United States.
Send for sample and terms to Agents.
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Agricultural Chemists and Chemical Engineers.
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Specialty—Agricultural Analysis, including fertilizers, feeding stuffs, waters, soils, marls, dairy products, &c., &c. Contracts made with clubs and societies at special rates.
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FISK'S AUTOMATIC SEED PLANTER Has the best improvements of any Hand Planter now in use. Plants with the accuracy of a hoe all the ground a person can walk over in a day. Seed for each hill passes in plain sight.
This is the easiest planter to use ever invented. Every planter fully warranted, and satisfaction guaranteed. Unusual inducements on samples this season. Circulars free.
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Buy our 1880 Eagle Machine.
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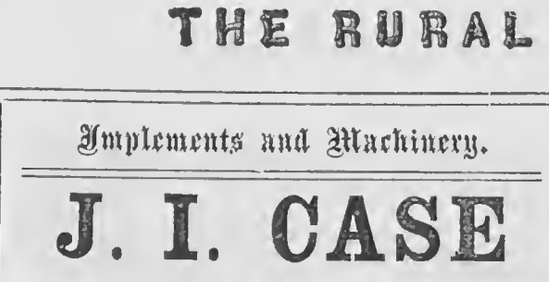

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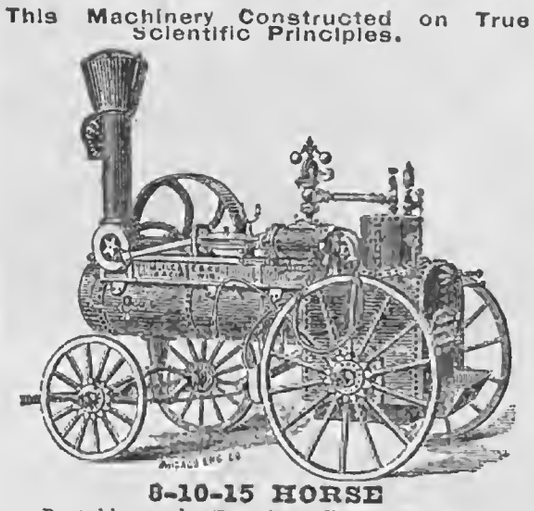
This Machinery Constructed on True Scientific Principles.



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MONITOR JUNIOR
The "King" of the Clover Machine Family,
It is the most perfect Clover Thresher, Separator, Huller and Cleaner in the world. The Threshing and Hulling Cylinders run under-shot. We shall also continue to manufacture the old "Monitor," with *Threshing* and *Hulling* Cylinders running *overshot*. Send for price list, terms, and descriptive catalogue
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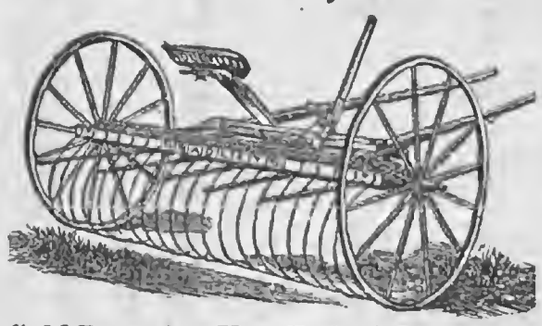
Say you saw this in RURAL NEW-YORKER.

Established **Bradley's** 1832.



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Send for illustrated circulars of Bradley's Reapers, Mowers, Hay Rakes, &c., to BRADLEY & CO., Syracuse, N. Y.

Miscellaneous.

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$777 A year and expenses to agents. Outfit Free. Address P. O. VICKERY, Augusta, Maine

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Capital.....$200,000 00
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It is strictly first-class in workmanship and construction. Works to the entire satisfaction of every body who knows what a grain and fertilizer drill ought to do. Its sterling qualities have gained it a world-wide reputation, and all who appreciate excellence and accuracy, prefer the McSHERRY.
Send for pamphlet. Mention this paper.
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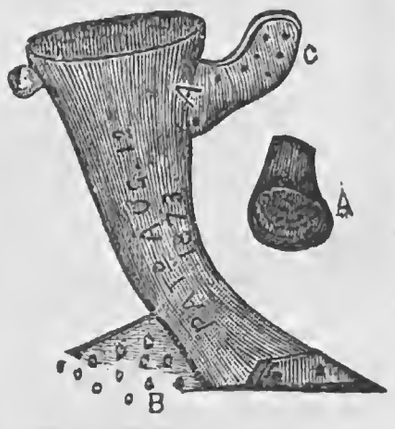

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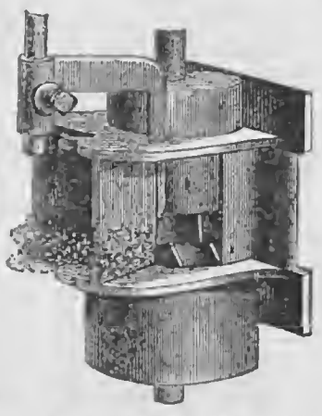

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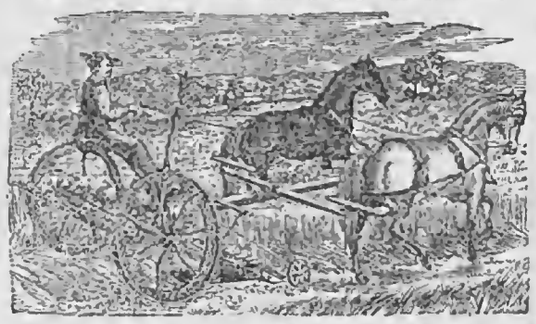

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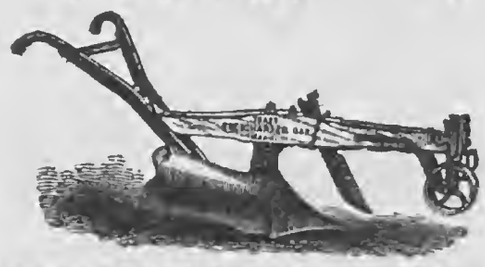


SWIVEL PLOW.
THE ONLY PERFECT SWIVEL PLOW.
WALPOLE, N. H., April 13, 1878.
HIGGANUM MF'G CORP.:—You wanted to know how I liked the Charter Oak Swivel Plow No. 160. I would say that I have used it on all kinds of land, and think it the best plow I ever saw or used. I have used seven or eight different kinds of swivel plows and this beats them all in doing good work, and draws much easier. I would not exchange it for any plow I ever saw.
Yours in haste, O. J. HUBBARD.
Manufactured only by
THE HIGGANUM MF'G CORPORATION.
Higganum, Ct.

SPRING STEEL TOOTH

HORSE RAKES.
Highest Award. Medal of Honor.
AT THE
Centennial and Vienna Exhibitions.
CHAMPIONS OF THE WORLD.
No Cogs or Ratchets, easiest Hand or Horse Dumping. Purchasers prefer them to all others for Durability and Efficiency. Fully guaranteed; so no risk is incurred in ordering from us. Responsible Agents wanted where we have none.
Send Stamp for Catalogues of RAKES, THRESHING MACHINES, &c.
WHEELER & MELICK CO.,
Albany, N. Y.

FARMERS AND DEALERS, READ THIS!

These cuts represent our 20 Steel-Tooth Horse-Rake, with Iron Hubs (or Locust Hubs boiled in oil) —300 in use—and our Positive Force-Feed Grain, Seed, and Fertilizing Drill (which can be changed to sow any quantity while Drill is in motion), with Pivot Spring Hoes—217 in use and giving satisfaction. All manufacturers say theirs are the best. All we ask is, send for *Descriptive Circular and Price-List*, which contains letters from persons using them. All are *warranted*.
Hagerstown Agricultural Implement Mfg. Co.
State where you saw Advertisement. Hagerstown, Md.

Humorous.

THE habits of fruit are peculiar. We have seen a raisin box, a fig drum and an apple stand all day on the corner of a street.

WHAT a howling there will be among the "penny gaff" cockney actors this summer when these "blarsted Hamericans, you know," get to playing in summer! "They talk through their noses, you know, and they cawnt speak the vernacular eyether, you know.

A Word to Tourists.

You cannot have a better companion on your journey than Hostetter's Stomach Bitters. That prime medicinal agent will enable you to drink brackish water without running the risk of disordered stomach and bowels, will neutralize the influence of foul or miasmatic air, and will prove a most agreeable and wholesome stimulant and means of counteracting the fatigue of traveling and seasickness. Change of climate, water or diet, is apt to induce harassing and often dangerous diseases. The three changes combined are fatal to thousands of emigrants and travelers every year. Is it not, then, of the last importance to know that Hostetter's Stomach Bitters are an absolute preventive of the hurtful consequences arising from these causes? Travelers, voyagers, and emigrants to new countries cannot be too often remtnded of the fact that this agreeable vegetable tonic is the most reliable safeguard against disorders to which they are far more liable than the habitual denizens of healthy regions.

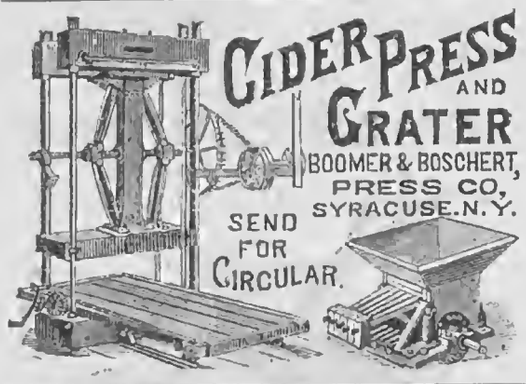
AHEAD OF ALL COMPETITION!
1880.

EIGHT SIZES FOR HAND USE.
Weighing from 22 to 51 lbs.
THREE SIZES FOR HORSE POWER.

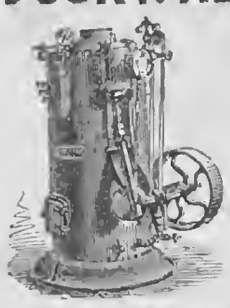
The very large increase in our sales last year prove that these Machines fully sustain the awards "AS THE BEST" made to them at the great Centennial "*hundred day trial*," in Philadelphia, in 1876, and their complete victory at the Paris Exposition in 1878. We offer for 1880, Machines from entirely new patterns and greatly improved in every respect.

Examine our new Lawn Sweepers. Hand or Horse size.

GRAHAM, EMLEN & PASSMORE.
Patentees and Manufacturers,
631 Market St., Philadelphia, Pa.
Send for Descriptive Catalogue with prices.



BOOKWALTER ENGINE



Compact, substantial, economical and easily managed.
Guaranteed to work well and give full power claimed.
Engine and boiler complete, including governor, feed-pump, drive-pulley, etc., etc. at the low price of

3	Horse power....	$240
4½	" "	280
6½	" "	370

Manufactured at Springfield, Ohio. Send for Descriptive Pamphlet.
JAMES LEFFEL & CO., Springfield, O.
Or, 110 Liberty St., New York City.

WATERTOWN

PLATFORM
Spring Wagon
The Ne Plus Ultra.
EVERY WAGON FULLY WARRANTED.
This is the best, handsomest, lightest and strongest wagon of its kind in the market. Every Farmer and Dairyman should have one.
Correspondence solicited. Address
WATERTOWN SPRING WAGON CO.,
Watertown, N. Y.

ELGIN WATCHES
all styles, Gold, Silver and Nickel, $6.00 to $150 Chains, etc., sent C. O. D., to be examined. Write for Catalogue to Standard American Watch Co., Pittsburg, Pa.

GREAT WESTERN GUN WORKS, Pittsburgh, Pa.

Send stamp for Catalogue.
Rifles, Shot Guns, Revolvers, sent c. o. d. for examination
Breech-Loading Shot Guns, $20 to $200. Double Shot Guns, to $150. Single Guns, $3 to $20. Rifles and Cartridges, $8 to $75. Revolvers, $1 to $25. Send stamp for Price List. GREAT WESTERN GUN WORKS, Pittsburg, Pa.

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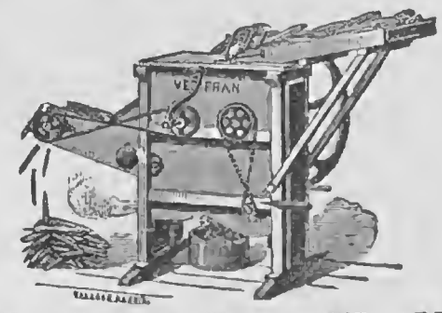
Millers' International Exhibition
TO BE HELD IN THE
PERMANENT EXPOSITION BUILDINGS AT CINCINNATI,
Opening MAY 31st, and closing JUNE 26th
A GRAND DISPLAY OF
MILLS and MILLING MACHINERY
FROM ALL PARTS OF THE WORLD.
Six 200-Horse Power Automatic Steam Engines
IN CONSTANT MOTION.
ATTRACTIVE EXHIBITION OF GRAIN AND FLOUR
FROM EUROPE AND AMERICA.
TEN COMPLETE FLOUR-MILLS
IN DAILY OPERATION.
A VIENNA BAKERY,
Operated by AUSTRIAN WORKMEN, will make daily tests of flour ground in the building.
MUSIC AFTERNOON AND EVENING.
Open daily from 9 A. M. to 10 P. M. Reduced Railroad Fares. Admission 25 Cents.

(CIRCULAR.)
GET UP CLUBS Among your neighbors and friends for our excellent Teas. Oolong, Imperial, Young Hyson, Gunpowder, Japan and Mixed, 60 cents per pound. This is the first time these Teas have ever been offered at 60 cents. Same quality is sold by other concerns for 80 cents and $1.00. ALL EXPRESS CHARGES paid on $5.00 orders when payment is received with same. A couplimentary of 10 per cent. on $10.00 orders. Special inducements on large orders. Try our Basket Fired Japan 60 cents per pound, strictly uncolored. We warrant all goods or they can be exchanged or money refunded and all expenses paid. No house can compete with us, we are the oldest, largest and most Reliable Tea Importers in the business, dealing direct with the consumer. Our reputation for fair and honest dealing requires no comment. BEWARE of Cheap Teas that are offered for sale, they are dangerous and detrimental to health—dear at any price—slow poison. Buy from only Reliable Houses and if possible from first hands. We await your orders which shall receive our prompt attention. Goods sent by Express C. O. D. Yours Respectfully,
THE GREAT AMERICAN TEA COMPANY,
P. O. Box, 4235. 31 & 33 VESEY ST., NEW YORK.
N. B.—When ordering please state in what paper you saw this circular.

THE NATURAL BUTTER COLOR
Was awarded the diploma of highest merit at the International Dairy Fair, New York, by the Committee of Judges, also at the St. Louis and Illinois State Fairs. It is the cheapest and best in the market. Cheese color by the gallon. For sale by dealers. Manufactured by R. S. WHITE & CO., Fort Atkinson, Wis. Write for circulars and price list.
Mention THE RURAL NEW-YORKER.

BADGER STATE
Butter Color.
Received the only honorable mention granted to any Butter Color at the International Dairy Fair of 1879. If not for sale by your dealer, send for circular &c. to the manufacturer, E. SHELDON, Fort Atkinson, Wis.



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FOR HAND OR POWER.
Just the Thing for Mill, Farm or Plantation.
Power and Hand Corn Shellers of all sizes and to suit all wants.
HORSE POWERS, JACKS, &c.
Write for Descriptive Circulars and prices. Address SANDWICH MANUF'G CO., Sandwich, Illinois.

WANTED—Salesman for each State. Salary $75 to $100 and expenses. Goods sold by sample. A BELLE MANUFACTURING CO., Chicago.

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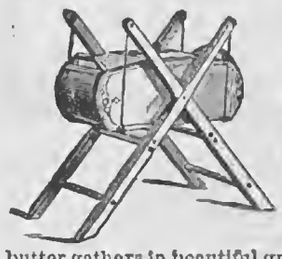

AWARDED FIRST PREMIUM over all competitors at only practical test ever held at International Dairy Fair. The box contains no floats or inside gear, which mash the butter-globules; no corners in which the cream can lodge, to be washed into the buttermilk and lost when the butter separates. The butter gathers in beautiful granules (in the best possible condition for washing in the churn with cold water and brine). This churn needs only to be seen to be appreciated. Circulars sent on application to
VERMONT FARM MACHINE CO.,
MANUFACTURERS OF THE CELEBRATED
COOLEY CREAMER,
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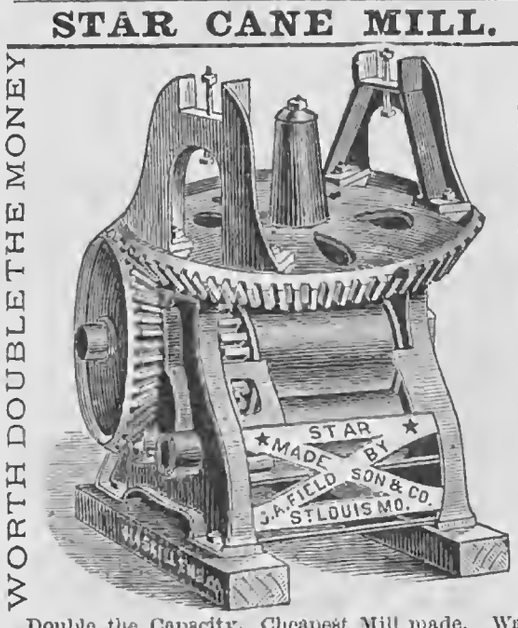
STAR CANE MILL.



WORTH DOUBLE THE MONEY GRINDS TWICE AS FAST.
Double the Capacity. Cheapest Mill made. Warranted in every respect. Manufactured by
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No. 922 North Second St., St. Louis, Mo.

DO YOU WANT TO BUY A BUGGY?
DO YOU WANT TO RIDE EASY?
DO YOU WANT TO RIDE SAFELY?
THEN DO NOT BUY A BUGGY
Till you send for a free circular from
THE DEXTER SPRING CO., Hulton, Pa.
THE DEXTER is a wonderful Spring.
Say you saw this in the RURAL NEW-YORKER.

THE CLIMAX MOWER AND REAPER.
Send for Catalogues and Price Lists.
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CHANGEABLE SPEED
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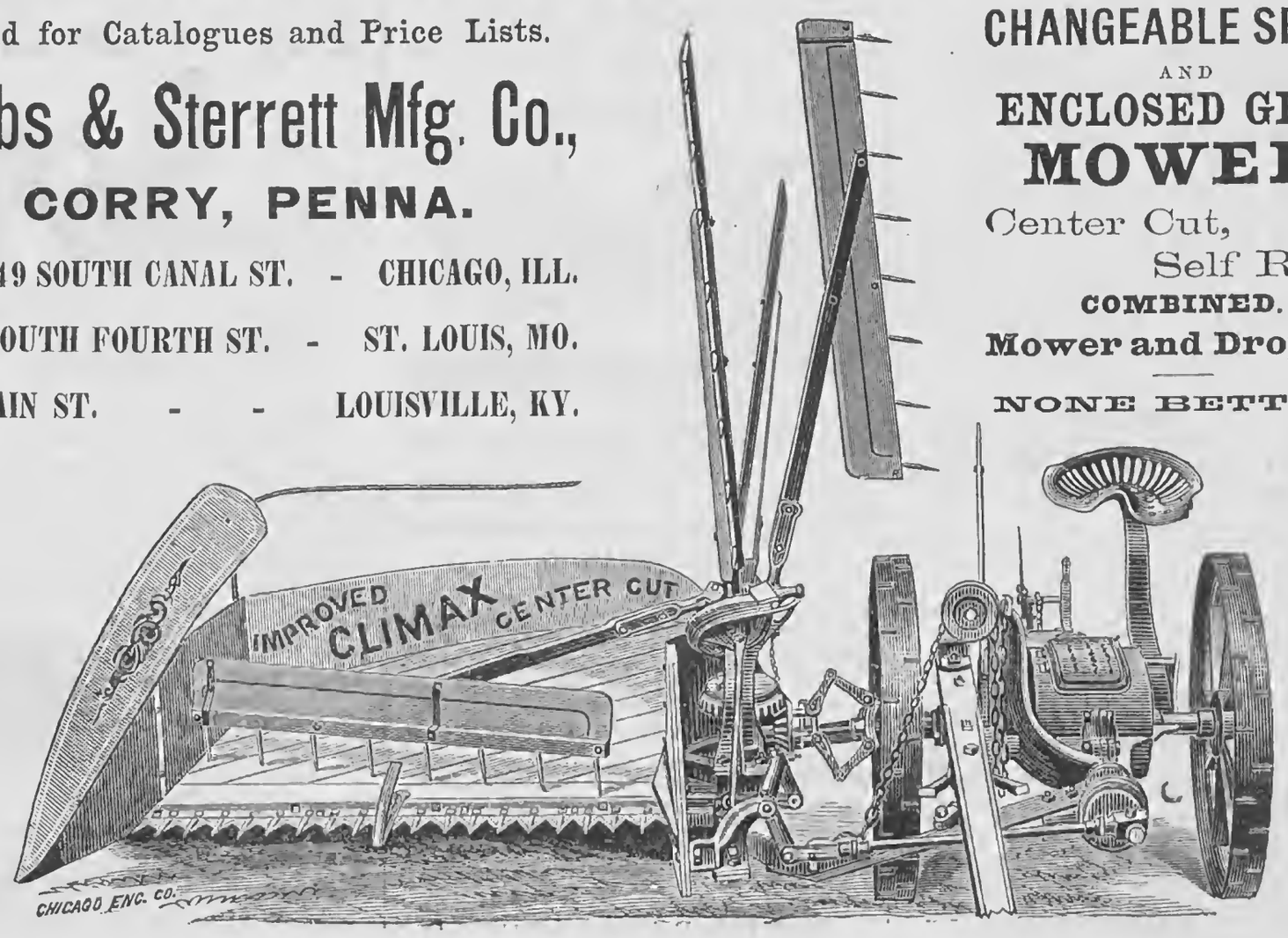
ENCLOSED GEAR
MOWER.
Center Cut,
Self Rake,
COMBINED.
Mower and Dropper
NONE BETTER.



THE RURAL NEW-YORKER

A JOURNAL FOR SUBURBAN AND COUNTRY HOME.

Published Every Saturday.

VOL. XXXIX. No. 21. WHOLE No. 1582. | NEW YORK, MAY 22, 1880. | PRICE FIVE CENTS. $2.00 PER YEAR.

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Rural Architecture.

A $1,500 DWELLING-HOUSE.

WE here present our readers with plans of a convenient, economical and handsome dwelling-house or cottage, which was recently built by one of the RURAL'S friends. Economy and utility are the objects aimed at in these designs, the whole house having been built for $1,500. To this end, the structure is made nearly square and thus the greatest amount of room is afforded with the least expenditure of materials, the same principle being carried out also in the arrangement of the rooms. The outside appearance is pleasing and even ornamental; the piazza and deep windows in the first story, the form of the roof and the ornamental chimney give a stylish air to the whole structure, which is lacking in many buildings of double the cost.

In the first story is a spacious parlor, besides sitting-room, kitchen, pantry and hall. No room is set apart especially for a dining-room, but either the sitting-room or the kitchen may be used for this purpose, as the occupants may desire. The location of flues, grates and stoves is plainly indicated in the plan.

In the second story are one large bed-room, a living-room of the same dimensions and two hall bed-rooms, all provided with the necessary closets. The cellar is not shown in the plan, but this each builder can make of a size that will suit his purposes, either under the whole, or under only a part of the house. It is a house suited for the country or a small village lot, and is admirably adapted to the wants of a small family. If a spacious and frost-proof cellar be built under the house in which to keep dairy products, fruits and other things, it will make an excellent farm-house. In that case, care should be taken to erect it on a spot with good, natural drainage, in order to make the cellar as dry as possible, and if the ground is at all disposed to hold moisture, three or four drains should be laid about two feet below the cellar floor. Put in windows enough to properly light the room, and coat both walls and floor with cement. A light, dry, frost-proof cellar is indispensable to a comfortable farm-house. We trust the plans may prove of service to such of our readers as are thinking of erecting a new dwelling.

We will also take this occasion to urge upon our friends the oft-repeated injunction to plant suitable vines and shrubbery about the house. A dwelling-house, no matter how comfortable or how artistic and ornamental may be the design, looks, at best, bare and uninviting when unsupported by green foliage. Thus a mixture of Clematis, the Dutchman's Pipe, (Aristolochia Sipho,) Wistaria, and even the common Virginia Creeper, planted near the piazza in good soil, encircling the trellis-work and climbing over the roof, adds a charm and comeliness to the simplest cottage, which no skill of the best architects can ever supply.

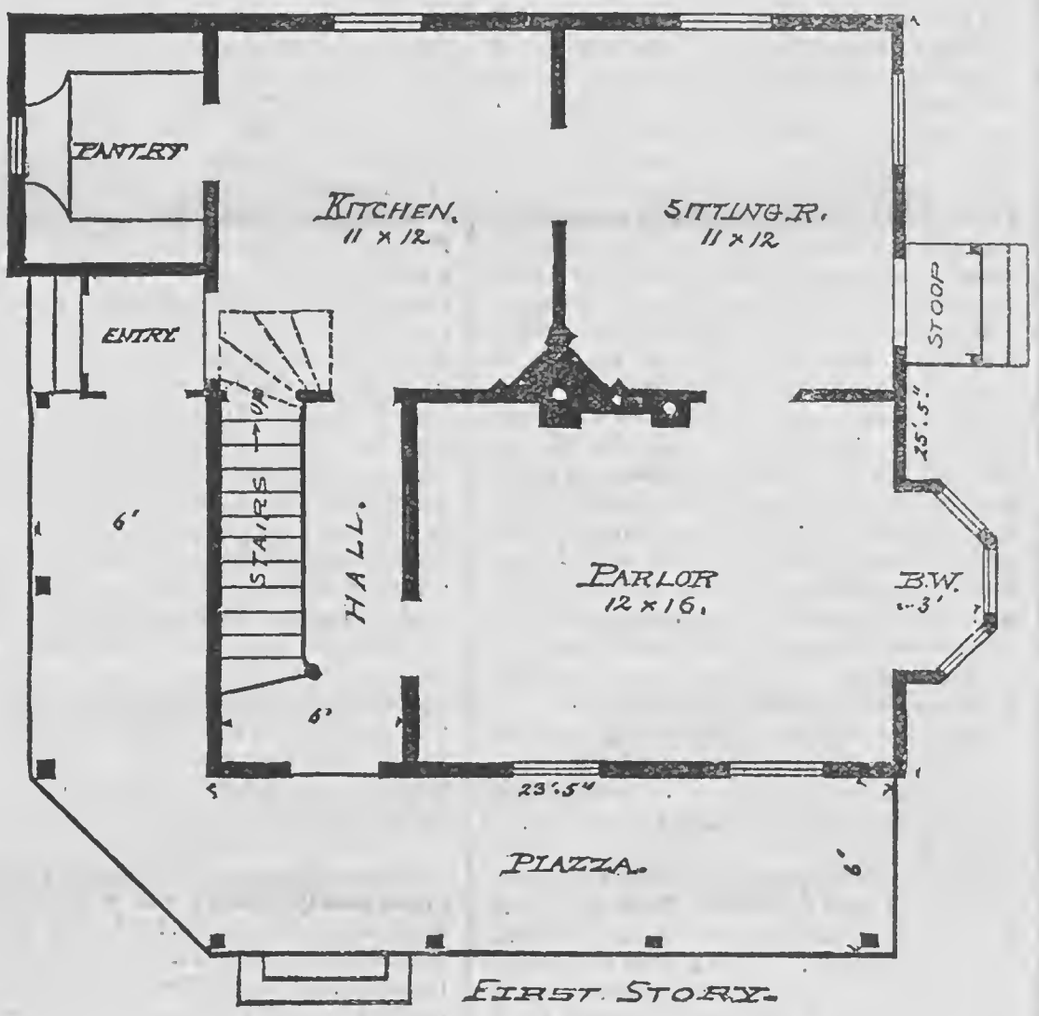


FIG. 171.

Front Elevation of a Suburban or Country Dwelling.—Approximate cost $1,500.—Fig. 170.

Farm Topics.

THE SORGHUM SUGAR INDUSTRY.

I. A. HEDGES.

EVIDENCES are fast accumulating of the success that awaits upon the manufacture of sugar from Sorghum in the Northern States. At present the increase in the growth of Sorghum is getting ahead of the skill, throughout the country, needed to utilize the crop in this way. I have foreseen this for some time, and have urgently appealed to our Agricultural Colleges to include sugar making from this product among their regular studies. Our Board of Agriculture, here in Missouri, has awakened to the importance of the matter, and others are in correspondence with our Cane Growers' Association on the subject. I have constantly, of late, warned people against over-production. What we need now is profitable *results* from field crops. To grow one is not difficult, and in utilizing it in sugar making the days of laboratory experiments have gone by. We must now come to practical work upon a paying basis. This, I am pleased to say, is to be done this year by quite a large number of establishments of fair proportions. Of these, one in Minnesota is owned by the Hon. Seth H. Kenney; in the same State there is another at New Ulm, and a third at Fairabault. One near St. Louis is run by Mr. C. M. Schwarz, an occasional correspondent of the RURAL and Corresponding Sec'y of our Cane-Growers' Association, and our expert, Mr. C. W. Belcher, late superintendent of the Belcher Refining Company, of this city. Crystal Lake, Ill., boasts of one, under the management of your correspondent. Mr. Russell, while there are two or three in Kansas, some in Texas, one at San Buenaventura, Cal., and one at Corning, New York, under charge of Mr. C. J. Reynolds, Secretary of the Farmers' Club of that place, who will plant about 100 acres this year.

Most of the above establishments belong to organized companies, although a few are owned by enterprising private persons. The plan of organized companies is commendable, for the reason that it aggregates a community of interests and means for the enterprise, thus making the burthen much lighter individually. I say *burthen*, because at the present stage of the industry, no great financial success can be anticipated; but what farmer ever opened a new farm, either in the timber or even prairie region, and made any considerable cash deposits in bank the first year, especially if he had only just entered upon an apprenticeship in the business. Very few manufacturing concerns, with a full complement of experienced workmen, find any considerable balance on the credit side of their ledger at the close of the first year In this industry where there is one thoroughly well qualified man to lead in the general supervision, and take direct charge of the boiling, there need be no fear of a failure to attain a fair measure of success.

This fact lays stress upon the importance of an education in the art of sugar making. Suppose it should cost the State $10,000 to erect works and carry through a series of sugar-making operations on a college farm, thus educating annually 50 or more intelligent young men, and qualifying each to take charge of sugar works capable of using the crop from 500 acres of Sorghum, each acre yielding 1,000 pounds of sugar and as much more excellent molasses, for both of which there is always a ready sale throughout the country, besides affording an offal in the shape of a rich, saccharine, herbaceous scum, sufficient, when added to the seed tufts, to fatten at least two hogs to the acre, or their equivalent in neat stock—supposing, I repeat, to do all this should cost the State $10,000, how long should a wise Legislature hesitate to vote the requisite appropriation, in view of these considerations. Moreover, such college works once erected, would be self-sustaining. It may be objected, however, that there is none among the Faculties of our agricultural colleges sufficiently well acquainted with the business to teach it practically to others; but the ignorance of the Professors will certainly not be removed by the neglect of the colleges to teach the business. Plenty of folks, thoroughly well able to give ample instruction in the process, can be readily found down in Louisiana, and though their words may be uttered in the appropriate "darky" dialect, still they convey full information, and the old "coons" will soon fit the boys for graduation in sugar making. Should this source fail or be objected to, I have no doubt our Missouri Agricultural College will be prepared to fill all demands for competent foremen in a year or two.

If the farmer who intends to grow Sorghum for sugar making, expects to have good results, he must cultivate the crop with great care—no slipshod, half-done farming is good for anything in this connection; for there is no crop more susceptible of favorable or unfavorable effects from conditions of soil and culture. Last season I received one sample of cane, the juice of which was as salty as an ordinary city boarding-house's dinner soup, and on inquiry I found that the cane was grown on the saline land near Salt Lake, Utah. I have worked cane that had been grown on land freshly manured with horse-stable manure, and the steam from the evaporators as well as the flavor of the sirup both testified to the fact. But deep-plowed clover land or that fertilized with plaster or lime, will surely yield good cane.

The question is often asked me, why does this cane do so much better now than formerly; to which I answer, because of its improvement by our methods of culture. Had not Mr. L. Wray, or some one else, placed in our hands the several varieties of Imphee from the Zulu-Kaffir land, which we have been crossing and hybridizing and shifting from one latitude to another, it is probable that we should either have never included the crop in our culture, or soon have let it fall out, as the pure Chinese cane is very little sought for, nor are any of the distinct varieties of Imphee as reliable for sugar as the new hybrid, the Orange cane. In spite of all my familiarity with these canes, it puzzles me to state the parentageof this last cross, hence I adopted for it the name suggested by A. M. Schwarz, who said that when ripe it assumed an orange color in the stalk, as well as in the juice and sirup and in the seed when shelled. I shall subject it to further tests this season in order to learn its true merits, and if it fulfills its present promises, we shall have gained an important step in advance.

SORGHUM SUGAR MAKING IN NEW YORK.

J. C. REYNOLDS.

In the spring of '78, I obtained from Gen. Le Duc a small quantity of the seed of Early Amber cane, and planted it June 3d. The season proved a good one; corn ripened generally through this State. The cane ripened before my corn, and I saved perhaps 60 pounds of seed. With very crude machinery I worked up small quantities of this cane at four or five different times, one batch having been made only before frost, owing to my being so much hurried with other work. The sirup I made after the cane had been severely frozen and thawed out was decidedly the best. I have regretted since that I did not attempt to make sugar then, as the next season's crop did not mature. The next spring—1879—I distributed the seed I raised, among my neighbors, and a quantity was obtained from Washington Quite a number of small pieces were planted; but, as very few had ever had experience in planting such small seed for a field crop; and as the early part of the season was very dry, many failed to firm in the seed; others planted it too deep, and but little of it came up. It was a very poor corn season here. We had early frosts in the fall. The result was none of the cane matured, and I may safely say here, that there is no use of attempting to grow this cane where corn will not grow well and mature; but there is now no question but that it may be raised, at a reasonable profit, on good corn ground, or where corn would grow and do well.

Last fall we—that is ten of us—purchased a small one-horse Victor mill, and worked up our cane, making what would be generally accepted as a good article of sirup. We had two evaporating pans, holding 40 gallons each, and a 50-gallon defecator. We used Stewart's and Clough's chemicals and some others. Some of the sirup was better than others owing to the different modes of working the chemicals, and some was quite good that had no chemicals in it.

The farmers who grew it here were generally well pleased with the result under the circumstances. I have some of the sirup that has stood in a warm room through the winter, and 30 per cent. of it is now sugar, with well defined crystals. Some of the poorest of our sirup was sent to a chemist in New York, who reported 37½ per cent. of pure cane sugar. The results of our last season's experiments have satisfied me that we can grow in this State from 10 to 15 tons of cane to the acre, and I think I rate it low at an average of 200 gallons of sirup to the acre. The amount of sugar from a gallon of sirup will depend very very much on the soil on which it is grown. I am told that at Crystal Lake, Illinois, the juice from their cane stood a saccharometer test of but 8° to 9°, while ours went as high as 11°. The Crystal Lake factory made a good article of sugar, and 45,000 pounds for their season's work. A gentleman who assisted in working up at that place and raised 10 acres himself, told us that he considered Sorghum cane a paying crop there at two dollars per ton, as they could raise 10 tons per acre; that they could not get a profit equal to that from Sorghum, from either corn or oats. He also told me that they got but four or five pounds of sugar to the gallon. The report is in general circulation that 10 to 11 pounds can be made from a gallon. This I cannot believe until I have had more experience. Such a result might have been obtained on a very small scale from a few well-ripened stalks in the vicinity of Washington or St. Louis, Mo., but for a general field crop I think it is too high.

First-class sirup can be made in an ordinary open pan; but the sugar will be such as is known as sugar-house sugar. First-class, light sugar can only be made with a vacuum pan. I obtained the best crop by planting in rows, three-and-a-half by one-and-a-half feet in the row, 8 to 12 seeds to the hill. Then thin out to five stalks. From 90 to 100 days are required to mature the crop. I think there is no doubt but that we can raise a much larger amount to the acre in New York than they can in Ohio, or Illinois. Those who have, the past season, experimented with small mills, will perhaps be surprised to learn that with a large mill, having the proper carriers, cane to the depth of five inches on the carriers will feed through the rollers when the faces of the last rollers nearly touch each other—steel to steel—and extract but 80 per cent. of the juice, while in the small mills not more than 50 or 60 per cent. is taken out. It requires heavy mills and strong power to get a large percentage of the juice. Where a few farmers wish to obtain a barrel or two each for his own use, they can club together and buy a two-horse mill—worth say $100. I would not have a smaller one. Then have a tinsmith make three well-braced, galvanized-iron pans, holding not less than 100 gallons each; put up a large shed; build good arches for the pans, with pretty large flues to carry off the smoke, and you are ready for business. Read the papers carefully, and you will find out just how much lime to use—especially after some practical experience—and how to treat the juice with the porous alum. There will be, no doubt, many patent compounds offered the coming season for cleansing the juice. My advice would be: Don't buy them until you know for certain that some practical sugar works are using them.

Corning, N. Y.

NOTES FROM THE RURAL FARM.

We have known the RURAL FARM for the past fifteen years, and never before during that period has wheat at this season presented a sight so beautiful—so entirely satisfactory. The stems are strong, the leaves broad, the hight is uniform and the color is of that deep, rich green, that gives assurance of freedom from *all* disease. We attribute this perfection of growth to three causes: first, a thorough preparation of the land by the use of the harrow and roller; second, to early sowing, and, last, to an unusually favorable season. Perhaps we ought to add a fourth cause, viz., concentrated fertilizers which were used more freely than ever before, though by no means in extravagant quantities, except, it may be, upon several small experiment plots. Adjoining our main wheat field (Clawson) is that of a neighbor. Stable manure of a fine quality was spread over it with a liberal hand. The wheat was sown (drilled) ten days later than our own. The land is much the same; the variety of wheat the same; but the difference in favor of the RURAL field may be seen at a glance. Whether this is owing to the difference in manures, or in the time of sowing, or to the more careful preparation which our land received, is a matter of conjecture. It is possible that harvest time may tell another tale. But whether so or otherwise, every season brings to us the proofs that the labor spent in a thorough preparation of the land to be cultivated, is abundantly repaid; a commendation that, however trite, is disregarded by a majority of our farmers.

Varieties of Wheat.

We are trying Fultz for the first time. For years past we, and the farmers of this part of the country generally, have been sowing Clawson, and we have thought that for yield and hardiness there is nothing like it. But at this time the Fultz is not only ahead of the Clawson, but, as regards tillering, strength and thickness of stem, it is superior to any other of our 25 varieties. "Shumaker," sent to us by the Michigan Agricultural College, is perhaps the next most forward. This was sown broadcast upon a plot of one-twentieth of one acre, and the seeding was so scanty that the plants gave little promise, late in the fall, of ever covering the ground as they do at the present time. "Knight's Excelsior" is also looking remarkably well. This may possibly be some old variety. It was found in a field of "Lancaster" by Mr. James R. Knight, of Ohio, who sent us a small quantity for trial. Defiance and Champlain were both sown with a view to testing them as winter varieties. The former looks strong and heavy; the latter, poorly. It may be, however, that salt, sown at the rate of 240 bushels per acre, has harmed it. "Silver Chaff," "Gold Medal," "Gold Drop," "Oregon," "Bentley," Mold's "white" and "red" "Metz" have made a fine growth. "Fultzo-Clawson," a cross made by our friend, Mr. Wysor, and claimed to be the largest kernel of any known variety, is, we regret to say, considerably behind many others.

"Yellow Missouri" (from the Com. of Agriculture) has been attacked by a fungus known as Erysiphe communis. The stalks are so enfeebled in consequence that the entire plot has assumed a decidedly yellow cast. The "Asiatic" wheat is a failure, not one of the kernels having germinated. "Lost Nation," a spring wheat highly valued in Vermont and Canada, and sent to us for trial by our friend, Dr. Hoskins, bids fair also to prove a failure.

Whether for good or ill, we are planting all of our corn (ten acres) with a corn drill. It drops a kernel every 12, 16 or 20 inches, as desired, and covers nicely. Much time and labor are thus saved, if—planted in this way—the corn should thrive and yield as well as if planted by hand.

The soil is in splendid condition for working—we have neither too much nor too little rain—the sun is bright and warm and, in fact, a more auspicious spring never favored the farmers and gardeners along "old Long Island's sea-girt shore."

Field Crops.

THE "FIELD" OR "COW-PEA."

Much has been said and written of late upon the value of this plant both as a manurial agent for improving exhausted soils and as a valuable stock feed; and probably nothing has been exaggerated as to its intrinsic worth—especially to Southern agriculture. Though long a resident of the South, and generally grown, it has been hitherto treated as a mere side, or catch, crop, no particular pains having been taken to grow it as a specialty, with proper cultivation to develop large, remunerative yields.

Maturing mostly at that period of the year when our other staple crops of cotton, corn, etc., are requiring every energy, this one has been suffered to remain and be consumed at will by stock turned in to glean the fields, thus extravagantly wasting it, often to the detriment or death of the animals. As far back as twenty-five years ago, an animated discussion took place in our Southern agricultural papers, as to the benefit or value of the pea for stock. Our journals were filled with able, spirited contributions, "*pro* and *con*," some contending the pea was destructive to hogs and cattle, great numbers of those feeding on it dying in the spring, especially upon the lime lands of Georgia, Alabama and Mississippi. Some planters even abandoned the production of the plant, owing to such losses regularly occurring among their stock. It was contended that the limestone waters consumed with this food in the fields, had to do with this sure annual mortality among stock. At last, the general conclusion was reached that some varieties of this plant—even the most valuable—when eaten greedily by cattle and hogs, would produce very serious consequences. Late varieties—vulgarly called "Tory" pea, "Little Black," "Red-ripper"—small and hard when taken into the stomach of the animal without due mastication, were as fatal as a surfeit of clover; while larger, softer varieties might be eaten without any apparent evil consequences.

The hogs were observed to die in spring after having been fattened upon the pea, and there was no known help for the peculiar wasting that occurred after this crop had been eaten and the animal, depending upon Indian corn and poor pastures for support, died. Such is the fact; and great precaution must be used in feeding hogs when taken from a surfeit of this food. I think the cause of this can be satisfactorily found in the sudden development of the animal upon highly concentrated food followed in the spring by as sudden poor and insufficient aliment like that usually given here to stock; hence they are predisposed to fall victims of every disease. But this does not destroy the value of this plant as an article of stock food. Analysis proves its highly nitrogenous, muscle-making qualities; and when properly prepared in coarse meal, or boiled or steamed, there is nothing to compare to the pea as a milk and butter-making element, as it produces the richest, sweetest-tasted milk and cream, not excepting that produced by clover, to which family it properly belongs.

A very fine combination of food for milch cows, I have been using for years, is the following, and if any one can produce a better in the food crops we have, I would be pleased to see it:—two bushels of corn meal, one of pea meal and one of cotton-seed meal, mixed well together, with hay or dry forage during winter and green pastures in summer, form as complete a grain sustenance for the animal, with abundant elements of pure, sweet milk, as can be found in any other combination; oatmeal also added might improve it. Two quarts of this nights and mornings, with hay or grass, form a cheap and perfect food for cow and calf.

The varieties of the pea or bean—as 'tis now changed in its family relation—are very numerous, and have been probably produced by sports of nature and by mixing. There are, however, distinct early and late-maturing varieties, the members of each class having their special advantages in our Southern agricultural economy. The varieties commonly known here as Speckled, Partridge and Goat-peas, will, under a summer sun, ripen in 60 to 70 days from the time of planting. The later sorts, as Clay-Bank, Tory, Little Black, Red-ripper, planted in June, ripen in this latitude (33°) late in October or November, if the frost does not interfere too soon. These later sorts are great runners, and are esteemed highly for manurial purposes, affording vegetable matter and a fine cleansing crop for other rotations in grain or cotton.

Of the benefits of the pea in Southern exhaustive farming, much could be written. Its wealth of vine and foliage, promises to add largely to the supply of humus which is being exhausted from our soils by the constant use of hoe and plow. It will also prove valuable for the Middle and even Northern States for this purpose. Some earlier varieties that require only 60 to 70 warm days to mature seed, will develop quite a long way North. 'Tis known that the Chinese in their wonderful economy in manurial agencies, have employed this, or similar bean plants, for ages. Flooding their plats of land where these have been grown broadcast, they tread the vines into the soil or mud with their feet, in preparation for a cereal or a cotton crop. With our sparse population and cheap lands, we find, however, plow and horse cheaper machines than human muscles, for by these means larger areas can be successfully manipulated and turned under at proper seasons, giving life and renewed vigor to old lands in the production of grain or cotton.

Burke Co., Ga. W. B. JONES.

Orchard Grass.

An article in the RURAL, page 297, speaks deservedly highly of this grass for grazing purposes; but adds, "it is but an indifferent plant for hay, yielding a light crop of woody, fibrous fodder." This latter is owing to grass being left to form or ripen its seed before cutting. It should be mowed, to be cured for hay, just before or at the moment it begins to blossom, and, as it is a coarse grass and dries quickly, it should not be left exposed to the sun any longer than, if even so long as, rank timothy. On good soils the yield thus will average fully two tons per acre of as good and palatable hay for stock as red top or timothy. I have occasionally seen nearly three tons thus cut and cured from an acre.

One-and-a-half to two bushels of seed are recommended to be sowed to the acre. Better sow three bushels; then it fully stocks the ground, and does not come up in bunches. No other seed ought to be sowed with it, not even clover. My orchard grass on the first of May, although the past April was extra-cold and the season late, was 7 to 13 inches high—almost thrice the hight or any other grass, and nearly double that of clover. C.

GROWING THE SUGAR BEET AND MANGEL WURZEL.—Mr. William Crozier, of Northport, Long Island, is one of the most successful and

largest growers of root crops for stock feeding in the United States. In one respect his application of fertilizers is different from any we have heard of in our country. Before planting, he manures the land well with stable dung, then when the crop gets three to four inches high, he mixes 100 pounds of blood guano with 200 pounds of fine bone dust and 400 pounds of coarse salt, and spreads this amount of mixture, broadcast, per acre. The salt is refuse, and costs only $3 per ton in New York City. After spreading the above compost, it is plowed in lightly with a horse cultivator running between the rows of roots. Mr. Crozier learned this method in Scotland. One would suppose as his farm is only a few miles from the ocean, salt would be of little benefit, but he finds it not only good for roots but also for wheat.

Floricultural.

GARDEN FLOWERS IN MAY.

WILLIAM FALCONER.

THE wealth of blossoms everywhere apparent during the month of May, is far too great for reference in one article; hence I will confine myself to a few of the prettiest among the hardy plants, and which are now (8th) in bloom:

PHLOXES.—Moss Pinks, white, red, pink and crimson, are solid carpets of flowers, and they luxuriate in open, dry, sunny spots where little else will grow. They are at home running wild in the grass or scrambling among stones, and are capital things for covering sunny banks. Their evergreen nature renders them cheerful in winter, and they are very hardy. Other verual Phloxes, like reptans and amœna, are showy and profuse and excellent garden plants.

CANDYTUFT.—The evergreen Candytufts are desirable border plants, and, according to kind, are from now until July a snowy mass; these will be succeeded by annuals of various hues—white, lilac and purple. Their relative, Arabis albida, or Rock Cress, has been a mass of white since a fortnight; and the Aubrietias, mossy clumps of purple and lilac The Rock Cress is very hardy and easily grown, so are the Aubrietias, only they prefer less sun heat than they sometimes get with us in summer.

PINKS.—It is too soon for Pinks yet, but their friends, the Chickweeds, are advancing in force. There are some fair Cerastiums; but C. tomentosum, a dense wooly-leaved one, is one of the best, though not always reliable. Stellaria Holostea, a common European wood plant, is one of the very finest hardy plants I know of. Grown in masses in sunny places, it is now a carpet of green checkered with opening buds that, in a week, will expand to snow-bank denseness.

SAXIFRAGES,—The large-leaved section, as Crassifolia and Cordifolia, are well suited to our gardens, and bear massive pinkish-purple flower bunches in April and May; they are evergreens, but rather coarse. S. ligulata, from the Himalayas, is earlier and prettier. S. ciliata, from the same place and as early, is not so reliably hardy. S. peltata, the California Umbrella-plant, from rough and naked root-stocks has sent up many ample pink bouquets, handsome while they last, but in a week they will be gone to be immediately succeeded by leaves two to four feet high and like great, green umbrellas. It loves a wet place, and will even grow in water. Our Virginia and Alleghany Saxifrages are also in flower. The mossy Europeans do not thrive here as ordinary garden plants.

GLOBE FLOWERS.—The European and Asiatic Trollius are handsome garden plants, with yellow and orange flowers, and nearly allied to the pretty spring Adonis which is now past its best. The Marsh Marigolds, single and double, too, are very showy; they like a damp or wet place.

ANEMONES.—The woods are aglow with wind flowers; these, together with the purple, rose, and double-flowered varieties of the same, are good garden plants when they get a little summer shade. The double red Anemone fulgens is better suited for frames than open borders. The European Pasque Flower and Nuttall's form of it, are both good and seasonable garden favorites. The Rue Anemones and the pretty little Isopyrum biternatum, from the West, are much like common wind flowers, but larger and more copious.

PRIMROSES.—In a shady rookery English Primroses are as vigorous and floriferous as if at home in a Kentish wood or Surrey glade, and beside them in equal thrift are growing Polyanthuses and other single and double garden Primroses. The Cashmere Primrose, a new species from Asia, is equally hardy, and unfolds its globular heads of lilac blossoms while the other sorts are still unresurrected. It is not the cold of winter that destroys these gems in our gardens, but the summer's heat and drought, muggy, warm weather succeeding drenching rains, and exposure to sunshine in winter.

IRISES.—A great many varieties of the common dwarf Iris are now in bloom; also the pretty I. cristata and a few other species. They will soon be succeeded by larger and more showy kinds. Most of the bulbous Irises are past. All are accommodating garden plants.

TULIPS.—These in gandy array are at their best, or in open warm places nearly done with. The variously streaked sorts so common of old, are losing favor, and "selfs," that is those of one color only, becoming fashionable. The species are as beautiful as the varieties, and perhaps T. Greigi, a species with large, glowing red, cup-shaped flowers with dark spots at the base of the petals, and brown-spotted leaves, is the handsomest of all. Tulip blossoms are of various forms as well as of many colors; some are cup-shaped, others open and reflexed, some, like Acuminata, have long, narrow-pointed flower leaves, which in others, like the Parrot Tulip, are very ragged. They are excellent garden plants, and if in good soil and left undisturbed, they increase yearly in vigor and number.

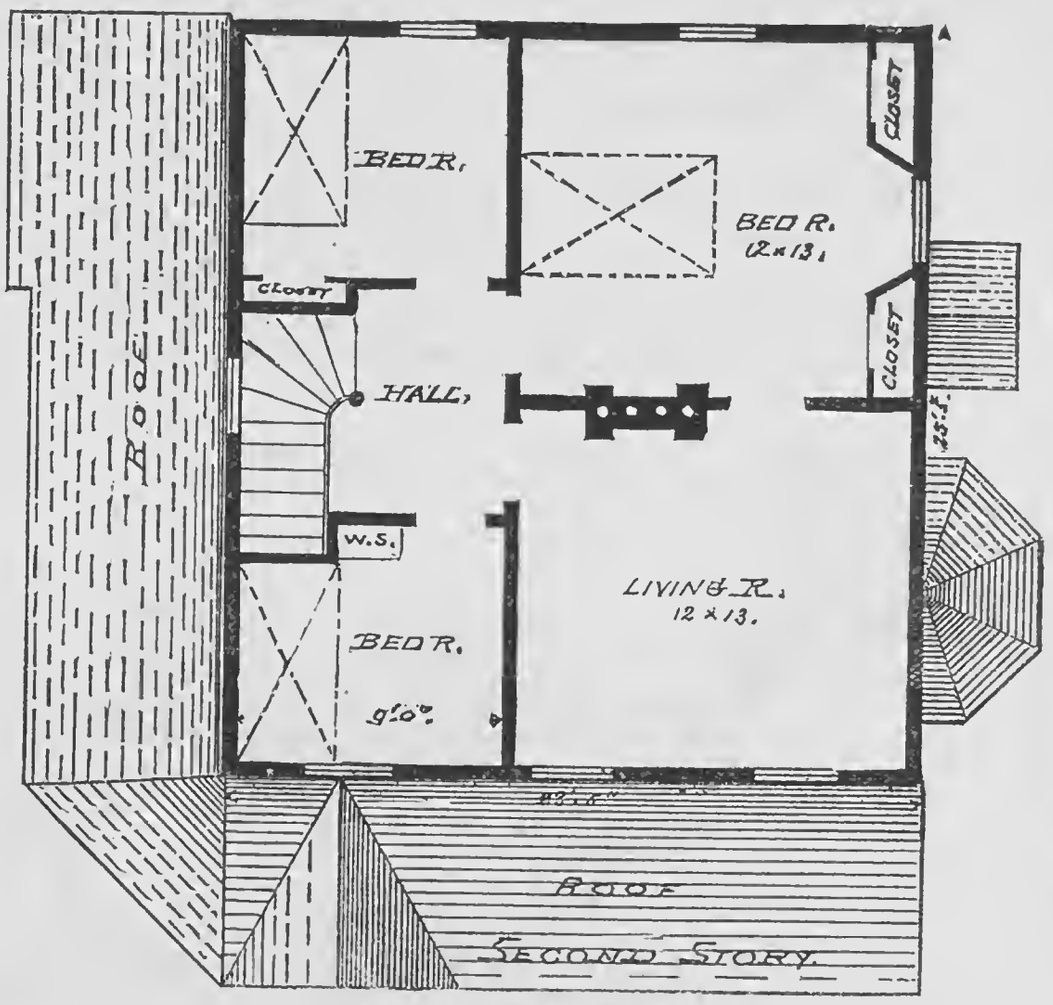


FIG. 172.—SEE FIRST PAGE.

DAFFODILS AND JONQUILS.—These are good and desirable plants. In good, moist earth they are quite at home. There is an immense variety of these Narcissuses, and all the cheap ones are hardy, free-flowering and well worth growing.

DICENTRAS.—D. spectabilis is one of our very finest garden plants; it is usually known as Bleeding-Heart. A young lady at our Cambridge high school says—she "guesses there are more bleeding hearts among the boys at her school than there are in the borders at the Botanic Garden." But there are other pretty Dicentras, like D. eximia that lasts the year throughout; D. Cucullaria that blossoms in the spring and dies; and many kinds of Corydalis, which are near of kin to the last—as C. aurea, nobilis, tuberosa, and the like.

OTHER BEAUTIES.—But these do not comprise a tithe of the beauties of this May-day: The creeping Forget-me-not is wandering all over the rockery, and many kinds of white, yellow and blue American Violets are scattered, like weeds, among the stones. Viola cornuta and some of its varieties are quite handsome, and though not here, as in Europe, applicable for bedding purposes, are quite showy in a moist border. Last year's Pansies have scattered seedlings hither and thither, but all poorer than their parents; hence we must get our Pansies by selection, care and, if possible, frame culture. Lady-loves, harbingers of spring, are lovely weeds. Epimediums from Japan, white, red, purple and lilac, are handsome in the borders, where, too, the spring Orobus is a cushion of purple, and Doronicum Caucasicum, a mass of showy yellow. The Dogs-tooth Violets of American and European origin and of many colors, white, yellow, rose and purple, and with plain or variegated leaves, though past their best, are still in profusion in the rockeries and wild places, and borders of Periwinkle ("myrtle") are studded over blue or white. Clumps of Bellworts luxuriate in wood-like places. Spring Beauty is at home in the same situations, and Helonias bullata has reared aloft its rose-knobbed drumsticks by the spring. Trilliums, white and purple, plain-leaved and mottled, are blooming among the bushes and rocks, in company with a host of other pretty wild flowers.

Pomological.

FRUITS IN MINNESOTA.

APPLES.—The list of large Apples that can be grown in this State is very short. The Tetofsky, Duchess of Oldenburg, and Wealthy are the only ones recommended for general cultivation by our State Horticultural Society. Some others, like the Haas and Alexander, do well in some localities, but cannot be relied on. The Tetofsky and Duchess are already well known, and the Wealthy is becoming so. This is a seedling which Mr. Gideon, of Lake Minnetonka, its originator, claims is a cross between the Crab and some large Apple. That it has some Crab about it, is evident from the fact that some trees grown from the seeds of the Wealthy, bear only small crabs. It is a very valuable Apple for our State, in fact, for the entire North. The tree is a fine, vigorous grower and seems as hardy as most of the Crabs, and the fruit is large, of fine color and quality, and will keep till midwinter. What we are most seeking is an Apple equally hardy and good that will keep till spring; and we think we shall find it by and by, as every fruit grower in the State is trying for it. Of the Crabs we have a fine variety, ripening from the first of August till spring. The Early Strawberry [We do not know of a Crab of this name.—EDS.] is the earliest and among the best. As an eating apple it is equal to the Tetofsky. Then follow the Transcendent, Hyslop, Orange (?), Bryer's Beauty, Meader's Winter, Minnesota and some others. And most of these are excellent for eating as well as cooking.

PLUMS.—With the tame Plums we can do nothing; and many of the native Plums from States south of us, like the Miner and Lombard, and I might add, the Weaver and Wild Goose, utterly fail. These latter, perhaps, should be further tried, though I have no confidence in them. Some of our native Plums are very fine.

CHERRIES.—The Early Richmond and Kentish Cherries try hard to stand our severe winters, and sometimes make quite a success.

PEARS.—I have one Pear tree, Clapp's Favorite, on Mountain Ash roots, which I set in my grounds, as a graft, the spring before the "hard winter of '72 and '73," which has never been killed down. The Flemish Beauty was top-killed for several years, but has stood the past five winters. On the whole, we cannot depend on growing Pears.

THE SMALL FRUITS all do well, except Blackberries. The Doolittle does the best of any of the Black Caps, and the Turner and Philadelphia of the Reds. The Wilson is the chief Strawberry, but the Charles Downing is increasing in favor, and some of the best of the new seedlings are being tried. Of Currants, the Red Dutch, Victoria, White Grape and Black Naples, are all that can be desired. While we cannot grow a great variety of fruit, what we do grow are the best of their kinds. I speak of the open prairie in the center of the State. In the southern and eastern parts of Minnesota on the Mississippi, some varieties succeed, that fail here.

Meeker Co., Minn. G. W. FULLER.

Cherry and Pear Trees for the Lawn.

I wish Mr. Williams would add to his excellent article in the RURAL of May 8, on cherry trees, a list of such as grow up of the handsomest shape and largest size; also, the same of pear trees; for these, in one respect, are more ornamental than Cherries, because, in addition to their lovely blossoms in spring, they show such an abundance of rich, luscious fruit from July on to November.

All along the north side of Long Island, in Westchester county, and I dare say in other localities, cherry trees may be seen of a girth of nine to ten feet, and perhaps more around the trunk several feet above the ground, and 35 to probably even 50 feet in hight. I know trees of the grand appearance of a medium-sized Oak, and at a little distance from them, they might be taken for such.

Certain kinds of pear trees in a favorable soil attain an equal size; and both may be made a beautiful adornment of the lawn. When in full bloom such large tree are scarcely less showy and magnificent than the Magnolia; for although their flowers are so very much smaller, the great abundance of them makes up a mass quite equal in appearance to the large ones — at least, a short distance off. [But they do not last half so long.—EDS.]

In the vicinity of Detroit, and I believe also on the west bank of the Niagara River above the Falls, pear trees may be seen 60 feet high, and still bearing fruit, although planted by French settlers two centuries ago or more.

There is one sort of Cherry at present little known among us, called the Dychouse, which is particularly ornamental for the lawn. Those I have, grow up in the shape of a hay cock, with long, pendant branches reaching nearly to the ground, like the Weeping Willow. The hight of mine at present is only seven to ten feet. In richer ground they would doubtless have grown much larger by this time, as I procured them from Kentucky, and set them out in the spring of 1871.

The merit of this sort of Cherry, aside from its being ornamental, consists in its hardiness, growing fairly in a poor soil, and producing annually an abundance of fruit which in size and flavor is much like the common pie cherry. When fully ripe, it is tender, juicy, and slightly spicy; and although too tart for the taste of some, for my own part, I am very fond of it. Another great merit—the birds are rather shy of this fruit. A. B. A.

Arboricultural.

HOW TO GROW AN OSAGE ORANGE HEDGE.

JAMES HOGG.

THERE are two methods of raising the Osage Orange, one from seeds and the other from cuttings of the root. The tree is dioecious; that is, some of the plants are male, bearing only staminate flowers, while others bear pistillate flowers and seeds, but both are alike available for hedge purposes. Each fruit produces a large number of seeds, about 5,000 of them filling a quart measure. The tree is closely related to the Mulberry, and its large orange-shaped berry is an aggregation of numerous seeds with their pulpy adherent matter closely compressed together and adherent.

It will not do to sow the oranges or fruits in the soil in their natural state, as it would be a great waste of seed and the plants would come up in thick clusters. The proper way is to buy the seeds of some of our leading seedsmen who have them by the bushel. The seed is mainly procured in Texas or Arkansas, and is obtained by washing the ripe fruits in water until all the pulp is washed away; the seeds are then dried and are ready for market. The seed should be sown either in autumn or spring, choosing a good piece of well manured garden soil, well spaded and pulverized. Open drills with a hoe—as you would for peas—from six to eight inches apart, sow the seeds about two inches apart and cover them about an inch and a half deep. When sown in the autumn, they will not make their appearance until next spring. When the plants are up, all they need is an occasional hoeing or stirring of the ground and to be kept carefully clean of weeds. If the soil is very strong and rich, they may be suitable for transplanting after one year's growth, but they generally require two years' growth for this purpose.

The best season for planting hedges is as early in the spring as the ground is mellow enough to work well. Spring planting in our northern latitudes is to guard against the heaving out of the young plants by the coming out of the frost at the breaking up of winter. Southward, where this does not occur, autumn planting succeeds very well.

The line of fence or hedge should be laid out and plowed and finely pulverized two or three feet wide; then stretch a line for any convenient distance and dig out a trench eight or ten inches deep, keeping its upright or firm bank next the line; then on the opposite side dig another trench six inches from the first line, and in these two trenches set the young plants twelve inches apart, breaking joint in the second row with those of the first line; that is, set the plants of the second row midway of

the spaces between the plants of the first row. As the plants are set, fill the earth into the trenches and press it firmly round the stems of the plants with the foot, and, finally, level the whole off nicely with a rake or hoe.

Previous to planting, the plants from the seed-bed should be carefully sorted out, and those of corresponding size and strength planted together. Each plant should be cut down, before planting, to within two inches of its ground line in the seed-bed, and all the larger roots shortened back about one-third of their length. Care must be had not to allow them to become dried by the wind or sun. The season after they are planted each plant will throw up several shoots; these are to be shortened back the ensuing spring to within six inches of the ground; and then for the ensuing five or six years the growth of each year is to be shortened back to twelve inches, making the hedge five and a half or six and a half feet high at the end of the term. The hedge should be kept gradually trimmed on the sides as it grows, to make it thicken, observing to so trim it that the sides have a sloping form, and not a perpendicular one. The sloping form gives the light and rain a better opportunity to act on the foliage than does the perpendicular one, and so prevents the hedge from becoming bare at the bottom, and also prevents the top of the hedge from being broken or spreading out of shape owing to the weight of heavy snows in winter. Early in the spring or in the autumn is the best season for trimming a hedge; summer trimming in this climate, owing to our intense summer heats, is always injurious, as the plants are too suddenly checked in their growth, and are rendered liable to attacks of mildew or other diseases.

No weeds, especially coarse-growing ones, should be allowed to grow near a hedge; they are sure to injure it, and often produce gaps in it by smothering its growth. It is only vexation and vanity of spirit to plant a hedge unless you mean to take good care of it. Doing that, it is the cheapest and most beautiful fence you can have, and fully repays the cost and time it requires to get it into shape.

THE AGENCY OF INSECTS IN FERTILIZING KALMIA.

PROFESSOR W. J. BEAL.

In an editorial of the RURAL for April 24th, there are some sound remarks about "The dependence of flowers upon insects for their pollenation," and "jumping at conclusions." The writer says, "It has been stated that Kalmia latifolia is of this class." "The theory is that insects at this stage of the flower's development, working at the nectar tubes below, free the anthers from their pockets, whence it follows that insects are essential to the fertilization of the Kalmia ovules!" He adds "The writer of this note for a week or more past, has had the opportunity, among the Kalmia groves and thickets of South Carolina, of observing how entirely mistaken this pretty theory is." He goes on to say that he has seen the anthers liberated from their pockets in the corolla without the aid of any insects. He has seen these things with his own eyes, and I have no doubt he has seen correctly. This shows the need of careful observations and frequent repetitions of observations in different places and under different circumstances. The author referred to, if he is well read on the subject, must know that many examples have been discovered in which plants were developed in a different manner in different countries, and that insects act differently on plants in different countries. We must be careful and not do what the author of the article has done in this case—"jump at conclusions."

Some time in 1866, when a student at Harvard, I spent many hours watching the behavior of honey bees and wild bees on Kalmia angustifolia, and took notes on the spot. The plants were thriving in their own home. Two years later some of these notes were printed in volume first of the American Naturalist. The particulars are given describing the behavior of the insects as they are seen to pull the stamens from their pockets. "A single visit from an insect is sufficient to release all the anthers. By noon it was a difficult matter to find a flower which had not been visited in this way." Further on the notes read. "Insects seem to be absolutely necessary for the perfect fertilization of Kalmia angustifolia and K. latifolia (planted in the gardens), for I tied small sacks of mosquito netting over some flower clusters, and found that when the bees were kept away, the flowers withered and fell off, most of the anthers still remaining in the pockets, and the filaments so decayed that their elasticity was entirely gone." Other remarks follow. My conclusion, so far as the plants I studied in that place in 1866 are concerned, I still have no reason to doubt, but I was not authorized in concluding that all plants of these two species in all countries were fertilized in the same manner. In his neat little book on "How Do Plants Behave," Dr. Gray refers to my notes as authority for his statements on the fertilization of Kalmia by bees.

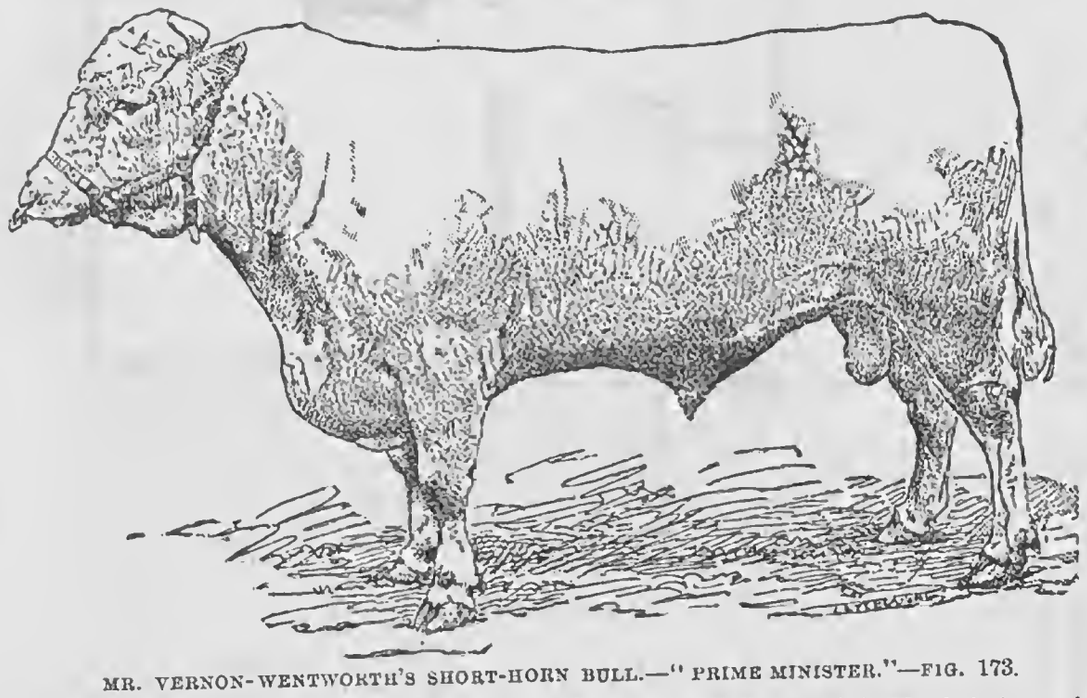
Plantago lanceolata has often been mentioned as a plant the flowers of which are not visited by insects. The pollen is dry and shakes out easily. The wind no doubt aids in scattering it, but I have repeatedly seen bugs, flies, and small wild bees crawling about these flowers. Many examples of a similar nature could be given.

The Herdsman.

OUR ANIMAL PORTRAITS.

"Prime Minister."

We have frequently here given portraits of choice Short-horns belonging to aristocratic tribes or families, which from the earliest days of their calfhood were carefully fed and handled



MR. VERNON-WENTWORTH'S SHORT-HORN BULL.—"PRIME MINISTER."—FIG. 173.

for the show yard. As a rule, these were more useful as specimens of what care and good treatment might do for an animal of choice original stock, than for any good they did by perpetuating the special excellencies for which they won prizes and renown, for the preparation for the show yard is hardly conducive to prolificacy. In the accompanying portrait of Prime Minister, reproduced from the English Agricultural Gazette, we present to our readers a beast of a character entirely different from that of these showy selections, although an animal as well-shaped as need be, but heavy and useful rather than calculated to catch the public eye and win the crowd's admiration. With the exception of winning 1st prize as a yearling at the Malton show, in Yorkshire, in 1877, his life has been happy in that it has been uneventful. His owner, Mr. F. W. J. Vernon-Wentworth, has since used him in a good herd of heavy Yorkshire cows, and the calves of his "get", which are not needed in the herd, are eagerly sought for by the tenantry in the neighborhood, a demand satisfactorily explained by his good outlines and serviceable pedigree. His immediate progenitors, like himself, were useful rather than showy animals, both on the side of sire and dam, though he has in him the blood of Lord Ducie's Bessy tribe, the Honeys of Kingscote and the celebrated Princesses. Although his sire and dam are both in the Herd Book, his name finds no place there. It is to bulls of this homely sort, whose prime lineage is enhanced by desirable personal qualities, and which have not been deteriorated by pampering, that we must look for the improvement of our herds, rather than to animals whose dead ancestors are their chief merits, or whose highest glory is that they have been the pets of the show yard.

ANGUS CATTLE.

This is a black polled breed of cattle, peculiar to Scotland; and its improvement from stolen crosses of Short-horn bulls on the females, has increased their size, refined their points and enable them to mature at almost as early an age as Short-horns. Taking a remote cross thus, and then breeding strictly back has not struck off a single shade of pure glossy black color of the Angus, or lowered the quality of its beef, which has ever borne the highest price of any sort in the British market except that of the Highlanders.

Being extra-hardy and thrifty, it is a matter of congratulation that a few Angus bulls were imported into Kansas in 1873, by the late Mr. George Grant, to help stock his Victor settlement there. Mr. Clark, who was associated with Mr. Grant in stock breeding, took four of these Angus bulls for himself, and crossed them on the poor native cows of the State, called Cherokee. The half-bred produce of these was a wonderful improvement, about two-thirds of the calves coming black, and growing up hornless. The steers are of extra-quiet disposition, hardy, thrifty, and fatten easily and kindly. When brought to the Kansas City market they brought a higher price than any other cattle, and a greater demand immediately sprang up for them from the butchers than Mr. Clark has been able to supply.

Mr. Clark is now going to import both bulls and heifers from Scotland, for the purpose of breeding the pure stock in Kansas hereafter. He will, doubtless, be able to dispose of their calves as soon as fit to be weaned, at high prices, and thus make the importation not only profitable to himself, but highly advantageous to the country.

The late Mr. Wm. McCombie, of Aberdeen, Scotland, was the greatest improver of Angus cattle, and took first prizes wherever he exhibited his animals, not only in Scotland and England, but also in France. On one occasion, at the Falkirk market, his father exhibited about 1,500 head of black polled cattle, but he was a cattle dealer rather than a breeder, and these were then of the unimproved sort. The son, of whom we have spoken above, usually kept 100 head of choice animals for his own breeding stock, and when Queen Victoria made him a visit, he had 400, gathered from his own and neighboring herds, brought together for Her Majesty to look over, which she did with the greatest admiration. When will our cattle breeders exert themselves in the same way to gratify the bovine taste of their fair countrywomen?

We regret to see that a prejudice is entertained against these superior animals in New Mexico, and some parts of Texas, simply because scrub Mexican black, hornless bulls and cows of Spanish descent, have been long bred there. This causes the ranchmen to think the Scotch the same as their own natives. But if they would only consider their much greater size, superior form, and finer points, their prejudices against them would immediately give way. We fear, however, they are too ignorant to do this, and in consequence of it will deprive themselves of the means of making a great and rapid improvement in their herds, unless they resort to Short-horn bulls, which, of course, would improve the native stock still faster, except in the matter of leaving more or less of horn upon their progeny.

Dairy Husbandry.

HISTORY OF A POOR FARM.—No. 25.

Milk, Its Value and Cost.

Milk producers are the worst-used individuals. Few other persons are so maligned, suspected, abused or deprived of the ordinary liberties of a citizen. A man may take suet or beef-fat and work it up into the semblance of butter, and palm it off on an unsuspecting public with impunity. Another may sell glucose for sirup or honey; or chicory for coffee, if indeed worse stuff is not prepared for the coffee pot, and no man can say a word to him—that he cares for. But if a customer wants a few gallons of cream from a milk-man, the good skimmed milk must go to the pigs; for it cannot be sold to the thousands of poor persons who live in towns and cities, without breaking the law. At least this is the case in the large places, where the milk business is under the strictest regulations.

"That is all wrong" remarked Dr. Jones. "Skimmed milk is as healthful a food as pure milk; it is not so rich, that is all. The Boards of Health, who have charge of this business might as well prohibit bakers from selling bread without butter as a dairymen from selling milk without cream. Thousands of poor people are often glad to eat their bread dry, and would as gladly drink their milk without cream. In fact, skimmed milk and bread are a most excellent food for young and old persons, and for some the skimmed milk is better than full milk."

"Skimmed milk could be sold in the cities and towns for three cents a quart; any milk-man could find customers on his route, who could buy three quarts of this milk for nine cents with more advantage than one quart of whole milk at 10 cents. The difference would be equivalent to a full meal in place of semi-starvation for many a poor family; while for others the extra two quarts of good milk would mean pies, puddings, custards, and many other delicacies for thousands of families who are not poor, but are forced to practice economy."

"I don't see how the poor women in the towns and cities can get along and feed their families with so little milk," remarked Miss Martin. "I believe a pint is the average quantity delivered, and that will simply color a few cups of tea and coffee. For cooking, skimmed milk, and sour milk, too, are indispensable; and what a number of nice dishes may be made of it. I never throw out sweet skimmed milk to the pigs without feeling as if I were wasting good human food, 'taking the children's bread and casting it to the dogs,' as it were. I wish I could sell my skimmed milk for one cent a quart. That would add to our income and I have no doubt, as you say, be a great help to a number of poor people."

"There is a good deal of foolishness in the world" said my old neighbor "and I notice it more now than when I was younger. What a pity folks cannot be honest; then we should not need to be troubled with so many laws and rules at every turn. But why is it that the dairymen get two cents a quart for their milk, and those who buy it pay eight or ten cents?'

"There is a good deal squeezed out of milk" I replied. "A farmer can make milk for two cents a quart, with a fair profit. The railroads could carry it 100 miles for 20 cents a hundred pounds in place of 50 cents or a dollar which they now charge. That would bring it into market at 2½ cents. By a systematic delivery, skimmed milk being sold at the same time and double the quantity being delivered by each wagon, the cost of distribution would be about 2½ cents, making the total cost to the consumer five cents in place of eight or ten now. This reduction would lead to a large increase in the demand; more cows would be kept and the cost of keeping 40 cows in place of 20, would be reduced proportionately. More manure would be made and the poor farms in the country would soon become rich. What enormous results often spring from very insignificant causes!"

"Hold on a minute!" said Mr. Martin. "That all depends. How can a farmer produce milk for two cents a quart? Let us begin at the beginning before you fly up so high on that big manure pile."

"A cow," I replied, "will consume 20 pounds of hay and eight pounds of meal in a day. These are worth 18 cents. These are the dearest kinds of food. I can feed a cow as well by substituting corn-stalks, roots, straw, coarse hay, malt sprouts, cotton-seed meal and rice-meal for three-fourths of the hay and corn meal, at one-half the cost or less; so that the 18 cents are reduced to about 11 cents a day. How are your cows milking now, Miss Martin?" I asked.

"Only eight are milking now, and I am getting about 220 pounds a day."

"That is equal to 100 quarts, or an average of 12½ quarts, and you have two cows dry. The 10 cows are yielding, then, at two cents a quart, $2 daily, or 20 cents each, including the dry ones. Mine are doing better than that, as I have some heavy milkers, and my herd is much improved since I replaced some natives with Ayrshires. Twenty cents a day leave some profit anyway, if not out of the milk, at least out of the roots, hay straw, fodder, etc., etc.; which must be marketed that way or not at all."

"My cows won't do that," remarked the old gentleman; "we don't get five quarts a day, one with another."

"Our cows are poor ones, grandfather," replied William. "We have had no change of stock since I can remember, and some of them are very old."

"Yes, I know, they are like myself, worn out: but they were your grandmother's calves; she raised them—the last she raised; and as long as they can eat, poor things! they shall have a home and something to eat. Next year you shall have some Ayrshires; but the old cows shall stay; our old stock is run out and we must change; that is certain. Our old ways are of no account now. They used to do for us; but we wanted little then, and now one wants a good deal. How the world moves, surely! My old head could never do the figuring that has to be done now to live. It is worse than the old school books which I thought were made up to puzzle the boys. Here is Fred figuring and figuring night after night, and you have to come to a matter of three cents a day in the keep of a cow, to make ends meet. We didn't work so close as that years ago. I see how it is. Men are crowded now where they used to have elbow-room; and if one does not push and elbow his way with the crowd, he will lose his place. I am glad I am out of it. Here's Fred telling me of growing plants under the electric light, so that they can grow night and day. What are we coming to?"

"Who can tell?" replied Dr. Jones. "The

period is one of wonderful interest, and agriculture is by no means behind other interests in this respect. What is in store for the young folks cannot be dreamed of, any more than we could have imagined, 25 years ago, what are now affairs of the commonest kind."

"Don't let us borrow trouble," said I. "We are living in the present. Let the young folks take care of their own world and time, as we have taken care of ours, and as the old folks took care of theirs. The human race will live, never fear. The question now before us is, can we live by making milk at two cents a quart. I would like, certainly, as our old friend remarked, to have a larger margin than three cents a day on the keep of a cow, but as a Mercutio once remarked of a wound, "It is not as deep as a well, nor as wide as a church door, but it is enough." If one can secure even three cents a day, clear profit, on a cow's keeping, he is safe; but we can do better than that, even in selling milk at two cents a quart."

"Be sure of one thing," said Mr. Martin, "and that is, one must figure closely whatever work he is doing. We *are* crowded; that is certain; and in a crowd there will necessarily be squeezing and pushing. In fact, we must make up our minds to work for a living only. Against that we shall always have the advantage—which some have not—that our living is a safe, sure and agreeable one."

"If we can make our cows pay for their feed and something over, without counting the manure which will produce other crops for sale, I don't see that we have such a bad business." said Fred. "If we get on this farm 1,000 bushels of early potatoes and 100,000 ears of corn to sell this year, which we expect, from the 400 loads of manure we have made the past winter, and have the cows pay their expenses, I think the poor farm can get along."

THE MILK TRADE.

The milk business is not a satisfactory one to the producers. By the strictest business methods, hard work and some skill in managing his dairy, one may produce milk for two cents a quart. But what other person than a dairyman is expected to sell his product at cost? Yet, on the average, two cents is about what milk brings to the producer when it is shipped to city markets. Sometimes two-and-a-half cents may be procured and occasionally an unusually fortunate man may get three cents the year round. But the latter price is exceptional and is the result of a permament arrangement with some particular dealer who has a specially good class of customers. Now, if two cents are to be taken as the ordinary value of milk to the producer, one that is interested in the business very naturally inquires who gets the difference between that and the usual selling price in the cities, which is six or eight cents a quart. To pay 200 or 300 per cent. of the value of any staple article for the service of distribution, seems to be excessive, and fairly beats the cost of carrying grain to market, which is rarely more than 200 per cent. of its first cost, and it is carried 1,000 miles; while milk is seldom carried more than 100. In the first place, the railroads exact one-and-a-quarter, one-and-a-half, or two cents a quart for transporting milk from 20 to 100 miles. For 20 miles I have paid one-and-a-quarter cent per quart on "special rates," which is considered a favor. The milk I am now sending to market nets me two-and-a-half cents on a contract with a dealer; one-and-a-quarter cent for freight added makes three and three-quarter cents.

The milk, I know, is retailed at six cents, which gives two-and-a-quarter cents to the retailer for delivery. For this he brings the milk from the depot, and delivers it in average lots of one pint to his customers. One wagon will make about 400 deliveries, equal to 200 quarts, in a day, and the waste of dipping 400 times in the can loses 10 per cent., so that $4,50 a day is not very liberal pay out of which to keep a horse, pay a man, lose 20 quarts of milk, and make a living for himself. The retailer, who is the most abused man in existence, and is often the suffering victim of prejudice, ill-will, and ignorance, is clearly not to be considered as an extortioner. The railroad companies fare the best; for the milk business avowedly pays them better than any other of their freights, while it is less costly. Doubtless milk might be carried 100 miles for half a cent per quart, which is 22 cents per 100 pounds, a rate for which freight may be carried 1,000 miles at a profit. But the railroad returns the empty cans free, which is to be considered. On the whole, some saving can be, and should be, made in the freight.

When one has a definite thing to contend with he may act with some satisfaction. But when everything is uncertain there is trouble. The bulk of the milk business is done in uncertainty. Those who have regular consignees under contract to take so many quarts daily, may be counted happy, with all their admitted troubles. But those who consign to a commission agent, like the troubled sea, never rest. These are the unhappy men. The agent may be honest and capable, but if milk comes pouring into the market in usual supply when from some unaccountable reason there is a greatly decreased demand for it, it may pour into the gutter and be declared sour; or the price may fall, as it sometimes does, to 60 or 75 cents a can of 40 quarts, or not enough to pay the freight. Then again, the market is full of irregularities. One commission agent may have, in the course of years, gathered up a business connection of a superior kind and can dispose of his milk better than another who deals with a poorer class of retailers. Everyone cannot get to the top of a ladder at one time, and the one at the top can hold his place against all comers.

To get hold of the best commission men is not easy. They are greatly sought after as a matter of course, and can get much more milk than they can dispose of. Sometimes when they are short, they fill out their supply from others, paying a little more than the ordinary rates, and in this and some other ways, some irregularity in price is unavoidable. When a short supply meets a good demand, milk will jump up to $1.50 or $1.75 a can, or even more; but one man may get the top price and another may not. All this is very unsatisfactory to the producer; but what can be done? After some experience in the business I am sure that there is as much honesty in the milk trade as in any other, and that the constant outcry of fraud and adulteration is made by persons who know nothing of what they are crying out about. But what shall be done to secure to the dairyman every cent which he ought to have?

I see only one way, and that is to make contract with dealers, if possible directly; and if it cannot be done directly, to organize local associations and have a special agent to receive and sell the milk in bulk; then every member is sure of having his milk sold and of receiving the highest possible price for it. Such associations now in operation are found to be very satisfactory and have done away with all trouble, so far as their members are concerned. A MILK PRODUCER.

PETITIONING CONGRESS AGAINST OLEOMARGARINE.

We have just received from Mr. Francis D. Moulton, President of the National Dairy Fair Association, the manuscript of the following letter intended to be sent to Congressman Thomas, of Illinois, together with that petition against abuses in the manufacture and sale of oleomargarine, given at length in our issue of April 22:

HON. JOHN R. THOMAS, House of Representatives
Washington D. C.

Dear Sir:—I send you by express to-day petitions signed by over twelve thousand dairymen and dealers in butter and cheese in the United States, praying for the passage of laws by Congress putting the manufacture and sale of oleomargarine under proper restrictions. Over 7,000 of these petitioners are residents of the State of New York which produces over half the butter and cheese made in the United States.

New York and other States have enacted laws on the subject; but they have proved ineffective. The manufacturers of oleomargarine have directly or indirectly evaded them, to the great injury, not only of producers of, and dealers in, natural butter, but also of consumers. The article has been sold under the name of butter and is being exported to the great injury of American dairy products in foreign markets. The question concerns every owner of the 13,000,000 milk cows in the United States, and of the land valued at over $1,300,000,000, on which they are supported. It affects an interest that has, within a few years, risen to the foremost place amongst our agricultural industries, and was fast outstripping all others. It affects a class of men who have proved themselves the most intelligent, enterprizing and thrifty of American citizens. It affects a branch of commerce which is paying annually many millions of dollars to the transportation companies of the U. S., and furnishes an important item of our exports. It affects an industry which, if properly protected and encouraged, will increase our exports more than any other article of American produce, it being within the powers of this country to supply the whole world with butter and cheese cheaper and better than can be made in any other country. The industry is more beneficial to the country than any other. Its tendency is to make every occupant of land its owner, to promote intelligence and advance the best interests of the country. The industry improves instead of impoverishing the land.

The followers of the dairy industry have never asked for aid at the hands of the Government, and only now ask for protection against fraud. They do not seek support against fair and honest competition; but they need the strong arm of the law to protect them from counterfeiting and dishonesty that affect the welfare of the whole country.

The question has attained national significance. In all sections of the country, the dairymen feel the effects of the evil and cry for relief. The agricultural and dairy press of the whole country is earnest in support of the dairymen's demands, and has raised its voice against the wrongs from which they suffer. All other means have failed to stamp out the fraud. The country now requires the adoption of such measures as will effectually cure the evil. I can hardly hope the full prayer of the petitions I send will be granted; but they serve to show how deep the feeling is, and represent the spirit of the people against the fraudulent sale of oleomargarine.

I would recommend the passage of a law, embracing the following features, which would be fair and safe for all concerned:—

1st. Prohibiting the admixture of other fats with butter, milk or cream for making any compound to be sold as butter.

2nd. Prohibiting the use of coloring matter to disguise the tissue fat of animals, manufactured for use and sold as butter or oleomargarine.

3d. Prohibiting the sale of oleomargarine as butter, and the use of the word, butter, in marking, branding, selling and shipping any other article than natural butter.

4th. Prohibiting the exportation of oleomargarine invoiced under any other name than oleomargarine.

5th. Prohibiting the use of ingredients other than caul fat of healthy beef cattle in the manufacture of oleomargarine or similar compounds intended for use as human food.

6th. Placing the manufacture and sale of oleomargarine, and other admixture of fat or grease offered for sale as food under the supervision of the National Board of Health, to prevent the use of refuse or diseased fats in its manufacture.

And including such other enactments as may be necessary for the full protection of all producers and consumers of legitimate articles. I also inclose letters on the subject, received from representative men in different parts of the country.

Hoping for your best attention and trusting that Congress will see the importance of immediate action, I am

Respectfully yours
FRANCIS D. MOULTON.
Pres. International Dairy Fair Association.

Miscellaneous.

WHAT OTHERS SAY.

THE CURCULIO.—From the agricultural columns of the N. Y. Tribune we take the following notes from an article by Prof. A. J. Cook: "Early in the season, if there are no weeds, grass or rubbish beneath the plum, peach or cherry trees, it will pay to lay pieces of board or bark or chips beneath the trees. The beetles will hide beneath these traps by day, and can be easily gathered up and destroyed. Mr. A. S. Dyckman, of South Haven, Michigan, whose plum orchard has been immensely profitable, states that this method saves him $300 annually over the old method of exclusive jarring. Mr. Dyckman uses oak-bark, places two small pieces beneath each tree, on opposite sides near the trunk, with smooth surface down. He employs boys to gather the insects, and pays them according to the number they find. This insures close examination. The curculios are placed in an open bottle, closed by the thumb of the one who is gathering them.

Often the character of the orchard precludes this method, and even when practised, it needs to be supplemented, late in the season, by the jarring or sheet process. This is not expensive, and often brings a tremendous profit. To practice this we have only to put a sheet—a white sheet is best—beneath the tree, and give the limbs a sudden jar. The little beetles fall to the sheet, when they can be caught and killed. For a few trees the sheets can be tacked or sewed to a cheap rectangular frame, with a narrow slit on one side, so that the trunk of the tree can be brought to the center of the sheet's surface. With but a few trees, two persons can carry this sheeted frame from tree to tree. In large orchards it can be placed on one or two wheels, when one person can easily manipulate it. The mallet should be of rubber, or else cloth-bound, so that in striking the branches they may not be injured. A sudden jar is what is needed to fell the insects. From several years' experience, I know that with caution no damage need be done.

The trees should be jarred very early in the morning, or just before dark, when the weevils are mostly in the trees. The jarring should begin as soon as the fruit sets, and continue as long as the insects are caught. The frequency of jarring, whether once or twice daily, or less, will be indicated by the success in catching the beetles. Let all remember that these little weevils are very small, and when they curl up to fall, look like dried buds, so that the inexperienced eye hardly sees them. Look very carefully, or you will be deceived in thinking that you are free from the pest, when, indeed, your trees are fairly overrun. A brother of mine commenced a few years ago to raise plums exclusively for the curculio. Not thinking this profitable, he began three years ago to use the sheet, and now he has plums "to sell and to keep."

HYBRID FISH.—At the meeting of the American Fish Cultural Association in this city, March 30, Mr. R. B. Roosevelt read a paper on hybrids, in which he said that, since the creation of the fish hatchery commission several attempts have been made to cross varieties of fish, and with success in the following varieties: Salmon trout with white fish; salmon trout with brook trout; brook trout with freshwater herring, with California salmon, and with the California mountain trout; shad with striped bass and with herring. Of these crosses there are the young, now in the hatching-house, of the salmon trout brook trout, brook trout California salmon, and brook trout California brook trout. It is observable of all hybrids that they are usually more shy and wild than either of their parents, and that in appearance they generally favor their larger parent. The crosses between the brook trout and California salmon and the salmon trout and brook trout bid fair to be fine fish. Those now in the hatchery are eight inches long.

It was hardly to be expected that so wonderful a discovery as the creation of a new species could be made without trouble, and we should rather be surprised at the success already achieved in hatching the young of the cross at all. The number of combinations possible is very large, and the pains and care expended in improving plants, vegetables and land animals may yet succeed with fish.—Scientific American.

SHEEP AND DOGS.—Mr. Bourne says, in the Fruit Farm, that he watches closely and keeps plenty of bells on the sheep. The sheep-killing dog is a sly, cowardly scoundrel, and doesn't like noise. If we kept half of our sheep belled, he has no idea the flock would ever be molested by dogs.

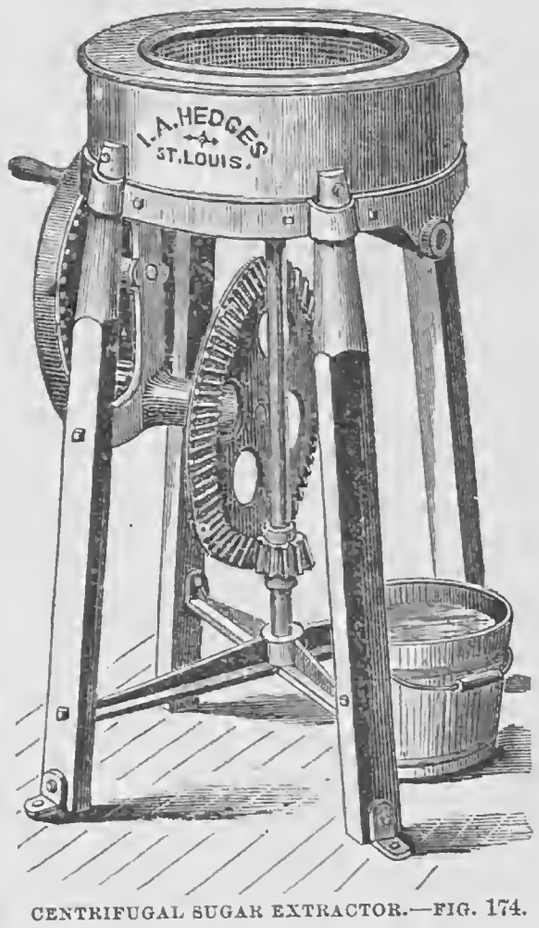
Mr. Grubbs.—A pet sheep turned out with the flock will whip a dog.

Mr. Miller.—Yes, I saw this tried the other day. A pet sheep was following me as I rode over the farm, and it ran at a dog and made him travel. I must not forget to mention their great value of sheep as scavengers. The clean out all the fence corners, destroy sassafras, briers, etc., and will soon make a farm clear.

Industrial Implements.

CENTRIFUGAL FOR SORGHUM SUGAR.

In the new industry of Sorghum-sugar making, one of the chief difficulties with beginners has lain in the absence of some convenient and effectual device for separating the sugar from the molasses. To meet this desideratum Mr. I. A. Hedges, President of the Mississippi Valley Cane-Growers' Association, has lately invented a hand centrifugal, a cut of which is



CENTRIFUGAL SUGAR EXTRACTOR.—FIG. 174.

herewith presented to our readers. A machine larger in size, but the same in design, is also made for power, with pulleys instead of the hand gear. Of this hand centrifugal Mr. Hedges writes us: "This little machine is serving the needs of our beginners in this industry, while learning lessons in the primary department. I send you a sample of sugar made from the juice of the Early Orange cane—a new hybrid—by Mr. J. W. Allen, of Jackson Co., Mo., who used only the most simple process, never expecting to make any sugar at this time; but he found it well crystalized, and upon getting a centrifugal and swinging it out, he found himself in possession of a quantity of sugar that excels any made from Sorghum, before tested by our sugar refiners.

The polariscopic test showed 97.2 per cent. As some of the readers of the RURAL may not understand this, it may be well to say that 100 per cent. indicates pure sugar, hence this lacks 2 4-5 per cent. of absolute purity. This certainly is highly encouraging, and great was Mr. Allen's joy to find that on the first working of his centrifugal, a bucketful of melado, or mush sugar, all swung out dry in less than five minutes, and this, too, in the presence of many who were skeptical about the production of sugar from that source."

Everywhere.

RURAL SPECIAL REPORTS.

CANADA, South Monaghan, Ont., May 10.—Nine-tenths of the winter wheat has been killed in this section, and farmers are plowing it up and sowing barley principally in its place. Some are harrowing in spring wheat. The acreage sown to wheat last fall was larger by far than for years before. We have heard no news about the Hessian fly so far.

W. H. S. M

FLA., Starke, Orange Co., May 6.—We had a very warm winter here, in fact no winter at all. We have had strawberries ever since Christmas, and many have had ripe tomatoes all winter. Through January we had no rain at all, and have had but little since, so that the ground is very dry. In some localities not far from here there has been no rainfall at all for a long time and people are losing most of their newly set orange trees. The long-continued dry spells, which are usually followed by just as long wet spells, are great drawbacks to general farming in this country. The last of March and first of April we had very cool weather, with light frosts, doing no harm to anything, however, except to young cotton plants; they will not stand much cold, and many had to be replanted. Most of the farmers in this section are planting more cotton than usual. The peach crop is an entire failure in this section. Plums and quinces are nearly so. It is an unusual thing for peaches to fail entirely here, and no one seems to have any idea as to the cause. Our Bananas are already putting out buds and fruit; they, as well as Guavas, have been growing all winter. Our Guavas were killed to the ground a year ago last January. They were then two years old from seed. They are now eight feet high, loaded with fruit and still blooming. I think the fruit is the most delicious we have, but it must be eaten where it grows, as it will not bear transportation except converted into jelly. It is rather early to judge of the orange crop, but it promises well at the present time. I attended the State fair at Jacksonville in February, and should have sent you an account of it at the time only that the exhibition was so meager it seemed hardly worth while. But there was one exhibit sent in which deserves mention. It was sent by a lady in Gadsden Co., and consisted of 360 sorts of preserved and canned fruits, vinegar, wines, jellies, etc. The exhibit included:—of brandied fruits 12 varieties; of wined, 11: of cordials, five; of wines, nine; of catsups, 27; of sirups, 11; of vinegar, five; of pickles, 69; of canned, 15; of jellies, 81; of preserves, 115. They were elegantly put up, and were all made within five months from fruits produced on her own estate.

I. S.

ILLINOIS, Ludlow, Champaign Co., May 6.—The month of April was favorable to wheat, grass and the spring crops, which here consist of oats and flax. There has been an unusual number of hard "blows" accompanied by thunder, and on the night of April 24 a hail storm with heavy rains, which made the ground too wet to work for the first half of the week. No material damage has been done, however, in this vicinity. A large breadth of flax was sown which generally is above ground, and now every available horse is at work plowing for corn. There were white frosts on the last night of April and the night before, but they were too light to do any damage. There are still promises of abundant fruit. Peach trees bloomed very full and are so far advanced as to endure pretty hard frosts. Cherry trees are a mass of bloom; and apple trees, except a few of the latest varieties, are out in pink and white. But if "figs in January betoken frosts in May," the fruit has still a narrow gauntlet to run. Some blossoms might be spared, however, and still a large crop remain. "G."

KAN., Parsons, Labette Co., May 5.—Corn planting is over. Four-fifths of it has been done two weeks. Owing to an unusual spring drought there is little of it out of the ground, and that little got damaged by frost, of which we had a touch several nights last week. Wheat and oats have been seriously damaged by drought, assisted in some cases by chinch-bugs. Rye is headed out. We had three-quarters of an inch of rain on Monday the 3d, which, with a temperature of 80°, has imparted verdure and growth to grain, grass and trees. Our farmers are selling the balance of their corn at 25 to 27 cents. It all goes to Texas. The Texans failed to raise a grain crop last year; but by the enhanced value of cotton, they are in a much more prosperous state than usual. It is intelligently reported that while they have paid three millions of dollars for grain and flour, they have received twenty millions additional for their cotton crop. By the way, there are unfavorable reports of injury to the wheat crop in Texas from rust. If I remember rightly, we have been out of the track of the several cyclones which the RURAL has reported as having prevailed in Kansas, Arkansas, Missouri, etc. In relation to the one that wrought such terrific destruction at Marshfield and neighborhood, in Mo., I have to say: On the Sunday evening on which this disaster occurred, I was sitting outside my house and noticed in the southeast continuously intermittent flashes of lightning. This I have learned is a sure sign of great atmospheric disturbance. At this moment a very violent wind that set in from the northwest, made me feel certain of a storm in the southeast. I determined, then, to see if a storm did occur at this time. I fixed the time at 7:30 P. M., and located the storm about Springfield, Mo., or in northern Arkansas. On Monday evening I was *just excited* when, at supper, one of our girls being just home from school, said, "Papa, there was a great storm at Marshfield in Missouri, last night; two to three hundred lives were lost." *Where* is Marshfield? I asked. "Fifteen miles from Springfield," she said; of course, I had for once made a prediction that was verified. I have scanned closely the time the cyclone passed Springfield, and think the time is not 15 minutes different from my observation. Of course, I could have no idea of the extent of the calamity. Two years ago, a tornado that occurred in Wisconsin, gave the same indications I have given, the electricity being fainter from being more distant, but accompanied by a most violently heavy wind from the south, which continued all night. The wind, of course, indicated a vacuum northward. By the way, nearly everybody here is exceedingly in dread of these things, which is quite unreasonable, as a cyclone is not fatally destructive outside of a space of, say, 100 to 2,500 feet. J. B.

KANSAS, Everett, Woodson Co., May 2.—The spring was cool, dry and backward; but wheat is in fine condition—from six to eight inches in hight. Oats need rain, but are not damaged by the drought yet. Corn planting is mostly finished and some fields are up. The prospect for an abundance of all kinds of fruit never was better. All young apple trees that are three and four years old have blossoms on, and small peach trees that were planted last year blossomed this spring. Stock is in good condition and in fair demand. The sheep craze has struck some of our farmers, and they are selling off their cattle, intending to buy sheep, after shearing, and get rich (?) in short order. J. J. D.

KY., Milton, Trimble Co., May 12.—We had a sharp frost this morning, which will about finish the fruit crop of this vicinity. The Ohio River is almost bankful. Wheat in some places looks quite yellow; but generally it offers the best prospect we have had for years. We are about half done planting corn; ten days earlier than usual. Distillery hogs are dying rapidly with the so-called hog cholera. Stock of all kinds on pasture are doing well.

S. E. H.

MINN., St. Paul, Ramsey Co., May 3.—Wheat seeding in the southern part of the State has been generally accomplished in good shape. The ground was pulverized nicely and the generous rains which fell during the past week have started the growth of the grain sown. Farmers are cheerful and hopeful. The acreage of wheat sown is fully equal to that of any year in the past. Along the line of the St. P. and Sioux City R. R., a road which traverses the State in a southwesterly direction from St. Paul, there will be a large increase in flax and Amber cane planted—it is safe to assume an increase of 100 per cent. over last year. Both linseed mills and individuals have loaned to farmers flax seed, and the favorable results of last year in special directions, have stimulated the farmers to turn their attention and energies to stock farming and to the cultivation of flax, Indian corn, oats, and Amber cane, and *less to wheat.* J. B. C.

N. Y., Greenwich, Green Co., May 3,—I have just returned home from a trip to the State of Nebraska where I spent a number of days at sundry places along the Union Pacific R. R. in the Great Platte Valley, visiting people formerly from Washington Co., N. Y. All seem to be pleased with the country, calling it the Garden of Eden of America. While at Waterloo, Neb., I met an old neighbor who went there last spring, and began to raise seeds. He raised, on one acre, 820 pounds of cucumber seeds; and what was remarkable to me, his squashes when eaten by the maggot in the root—which is sure death to them in the East—would root down at the joints and produce good seeds. He raised 2,200 pounds of squash seed. He said that by actual measurement the vines grew 14 inches in 24 hours, and that it was the finest country for all kinds of vegetables in the world. The immigration to that country this spring was immense. During the month of February last, 152 carloads of stock and household goods and 132 immigrant teams, averaging four persons to each team, crossed the Missouri River bridge at Omaha going west to settle. The Land Department of the Northern Pacific R. R. sold over 26,000 acres of land to 259 purchasers for over $126,000, at the average price per acre of $4.81; and since then the immigration and sales of land have been constantly on the increase. I don't wonder that Horace Greeley, after riding over, and taking a view of that great valley, said: "Go West, young man, go West, and grow up with the country;" for if a man can't make money in that country, he deserves to starve. O. K. R.

N. Y., Starkey, Yates Co., May 3.—After an unusually mild winter we got to work in earnest. Wheat on open soils is looking fine; on stiff soils it is not doing so well; on hard, clayey knolls, it is badly out; but if nothing adverse occurs, a better than average crop may be looked for. The breadth sown last fall was greater than usual. In this vicinity fruit blossoms seem all right. Peaches are forward and blossomed early. Grape vines seem all right, and grapes are a staple crop in this section. The subject of drying fruit by rapid evaporation, is receiving a good deal of attention; but not greater than it deserves. If the demand for this kind of dried fruit is to continue—and I do not see why it should not—it would be well for fruit-growers to cultivate varieties of fall apples on purpose for drying. Among the best, if not the best variety for this purpose, is the Clyde Beauty. It is not grown as much by nurserymen as it deserves to be. It is a large, fair apple: color, light straw, striped with red; flesh, very white, tender and crisp. It makes a much better dried apple than any winter apple I know of. Some seem to think that the demand for dried apples will soon be met, so that it will not be safe to extend it much. That may be true of apples dried in the old-fashioned way, but not of those dried by artificial heat. W. H. O.

OHIO, Westfield, Morrow Co., May 6.—On the last day of April we had a sharp frost which killed some fruit, but enough for home use is left. Wheat still looks fine. Young grass has come up and looks promising. Planting corn and potatoes is now the order of the day. J. B B.

PA., Corry, Erie Co., May 10th.—At present it is warm and pleasant, and farmers are busy putting in their crops. Fruit trees of all kinds are coming out in full bloom, and everything looks promising. Hay is worth $10 per ton; oats, 50c per bushel; potatoes, 25 to 30c; butter, 18 to 22c per pound; eggs 10c per dozen, and the market is not over-stocked at present prices. C. D. S.

TEXAS, Waco, McLennan Co., May 5.—Within the last week or ten days we have had exceedingly fine rains, and all kinds of vegetation are growing rapidly. Until then the wheat and oats began to show the need of rain, and a week more of dry weather would have cut off the oats almost entirely. Some oats in the sheaf are already on the market, and it is hoped it will bring down the price of corn, which sells at 60 cents per bushel. My Ennobled oats is growing finely, being now about 15 inches high; it was planted on the 1st of April, in drills, and it tillers beyond anything I ever saw in a grain. I counted as many as five shoots from one stalk. My mangels all came up, but I have lost all but a few from the ravages of worms and insects. My garden—the vegetable department—has been literally destroyed by them. Every imaginable kind of worm, bug, fly and flea, both great and small, seemed to sweep down on me, and to cut and slash until they ate everything worth eating in the vegetable garden. Then they made a detour upon my flower garden and left me there only a few Pansies and Phloxes. My choicest flowers seemed to be the daintiest dish for them. I have used every preventive I ever heard or read of to stop or check them, but they seemed bent on destruction, and no single article or application amounted to anything. I had a struggle to save my Cuthbert Raspberries and fine Grapes and Coffee plants, and only did so by covering them with gauze. My Strawberries were not interfered with, and are growing beautifully. Gen. Le Duc, our worthy and efficient Commissioner of Agriculture, sent me a few of the "Sharpless" and "Forest Rose" on Feb. 20, and on the 20th of April I plucked a few handfuls of large, luscious, berries from the vines. A Sharpless measured over five inches in circumference from a plant two months old from the pot. The planters are joyous over the prospects of large crops this year, as they have never had a more propitious season thus far. My Blount's corn is nearly head-high and still going up. A. S. S.

WASHINGTON TERRITORY, White River, King Co., April 30.—No winter wheat is raised in this section; double last year's area of spring wheat will be put in. E. H. A.

WIS., Necedah, Juneau Co,, May 3.—Spring grain about all sown. Season three weeks late. Had considerable cold rain. Grass coming on slowly, but cattle doing well, grazing—came through the winter in good condition. This is a great lumbering center. Cranberries are largely cultivated. Small fruits of all kinds do well upon our intervale lands. This region is especially a grazing district, while "considerable" of the land will make excellent farms. This is especially the case along Yellow River, from eight to twenty miles north of this village. We are building a schoolhouse, but we have but few neighbors, so I have concluded to donate 40 acres of land each to persons with families who will build and live upon the land—all convenient to school, rail-road station six miles off. Men and larger boys find employment in lumbering camps north of us all winter at good wages, young women and girls command from $1 to $3 per week and are scarce. Net cost of raising a three-year-old steer, about $15. They generally sell at from $30 to $35. Sheep are healthy and pay well. Hay is excellent and cheap—pasturage free. Timber of all kinds plentiful and to be had for little more than the hauling. We have no ague; no chills and fever; health proverbially good. Wheat, $1.05; oats, 40c.; corn, 50c.; rye, 70c.; barley, 60c.; potatoes, 30c. to 40c.; butter, 20c. to 25c.; eggs, 15c.; wild hay in stack $3 to $5; timothy and clover hay at Necedah, $8 to $10; common lumber, $8 to $10. THO. MCCONNELL.

[We are assured by the donor that the above is a *bona fide* offer, and therefore think it worth publishing; but we have no personal acquaintance with the writer or his belongings.—EDS.]

WIS., West Salem, La Crosse Co, May 5.—In regard to the device for preventing cows from sucking themselves, illustrated in the RURAL of April 17, and its being patented by some Yankee, I would say that I made and used a similar device more than 25 years ago to prevent calves from sucking cows. Winter wheat here is badly winter-killed—heaved out. There was a good deal sown last fall. Very little old wheat still remains in farmers' hands. Early-sown spring wheat looks good. W. J.

WIS., Louisville, Dunn Co., May 4.—Weather warm—87 deg. in the shade. Small grain nearly all sown. Winter grain all dead. Clover, ditto, except some of last year's seeding. Help plenty at $16 to $20 per month for the season. Wheat, $1 05@90e; corn, 40e; oats, 30c; potatoes, 40e; butter, 20c; eggs, 10e. Not as much wheat sown as last year. A great many farmers are sowing salt on their wheat. L.

The Querist.

ANSWERS TO CORRESPONDENTS.

[All queries must be accompanied by the name and address of the writers to insure attention.]

How to Rear a Motherless Colt.

W. H. B., Brydges, Ont., Canada, asks how to rear a colt whose ram died shortly after the little one's birth.

ANS.—There is considerable difference of opinion, and consequently of practice as to this. But the most successful way according to our experience, is to give it a sufficient quantity of cow's milk, fresh drawn and warm from the bag, to keep it thriving well. How much of this will be necessary per day, can only be ascertained by experience, as colts differ so much in size. As mares' milk is richer than cows' milk, the richest kind of common cow's milk should be sought for, to feed the colt. If it cannot be found sufficiently rich, a little pure sugar should be mixed with it, and always feed the milk warm. Perhaps Guernsey or Jersey cow's milk might be found too rich, and therefore be apt to make the colt too loose in the bowels. It used, and this sort of milk does this, change for that of a poorer quality. As soon as the colt can be tempted to eat oats, give a half pint mornings, noons and nights, and gradually increase this quantity to two or more quarts per day. After a few weeks, one-fifth of the quantity of wheat bran may be added to the oats, gradually increasing till mixed half and half. Some prefer oat-meal to whole oats, which may be better, if it does not scour the colt. To the above—for the first few weeks—add a tablespoonful of oil (linseed) meal, if to be had unadulterated; if not, then flaxseed; pour hot water enough on this to make a thin gruel; beat up an egg and mix it in. This is to be used every day, adding one-sixth of it to the cow's milk; which should be fed six times per day. If the colt scours, add a little more oil meal to its feed each day. The colt can be taught to drink the milk in the same manner as a calf. After being kept as above a month or so, some people boil clover hay and feed the water in which it is boiled to the colt. Always have it milk-warm when fed, and have it made fresh every day. Begin sparingly, lest it should scour the colt. Turn it out to rather a short, sweet pasture as soon as you please, and let it learn to nibble the grass; but be careful it doesn't eat much to begin with; gradually accustom the colt to it, or this will scour him. Never feed sour milk; always have it fresh and sweet, and see that the water used for the oil-meal gruel is pure and fresh, and also when the colt is old enough to crave it for drinking. When it rains or a strong, raw wind blows, shelter the colt well. When three or four months old warmed skim-milk can probably be gradually substituted for new milk.

Origin of Mineral Constituents of Aerial Plants.

E. S. C., Bergen Co., N. J., says: "In the ashes of air plants (Florida Moss, *e. g.*) we find potash, phosphoric acid, etc. Such constituents of plants cannot come from the atmosphere. Where do they come from?"

ANSWER BY PROFESSOR S. W. JOHNSON.

The Florida moss or aerial orchids and other parasitic plants derive their phosphoric acid and their mineral elements generally from the medium in which they are rooted. The Florida moss I have never had an opportunity to observe growing, but I suppose it lives upon living trees, and if so, probably it feeds, to some extent, on their juices. We have in our Northern forests a kind of lichen, commonly called moss, which grows upon dead pine or spruce trees, from whose branches it depends, often to the length of a foot or more. All our Northern forest trees and our fruit trees as well, support upon their old exterior bark, a large vegetable population of fungi, lichens and mosses. The outer bark of old trees contains no little amount of mineral matters, and is, in all essentials, a "soil" rich in humus, being as dead as the muck of a swamp, and only needing steady moisture to support vegetation. Some of the aerial orchids which grow upon a bit of dead wood, would appear to have very slender supplies of phosphates, alkalies, etc. Such plants are very succulent and really require and contain but a small amount of ash elements. It is not unlikely that a part of the mineral matters they need, is supplied by soil on the wing, *i. e.* the dust which is stirred up by every wind and from which the atmosphere near the earth's surface is never long free.

[We were not aware that Florida moss was attached to the trees upon which it grows.—EDS.]

Preserving Timber.

C. B. S., Langsville, Ohio, says that he has seen a recipe for preventing timber from rotting, which directs that the timber should be placed in a pit or vat with quick-lime around and between each layer. Then sufficient water should be used to slake the lime. It is said that timber so treated will be rendered almost indestructible, and our inquirer asks, how long should the timber remain in the lime; should it be seasoned or not previously; will a seasoned post last longer than a green one.

ANS.—The effect of caustic lime (quick-lime) upon timber is to coagulate and render insoluble in water the albumen of the wood. As albumen is exceedingly ready to ferment and decompose, this renders the timber more durable. The practice of using lime as a preservative of timber, used to be very common among ship-owners, who would fill the spaces between the inner and outer skins of the hull of a ship with lime, or else seek a cargo of lime for every new ship. For fencing the practice is to put the posts in a pit, intermingled with some quick-lime, and when the pit is filled, to apply water to slake the lime. The posts are left in the slaked lime for 20 days or thereabouts that they may become saturated. The heat of the slaking lime will aid in curing the timber, driving out air and water, which will be replaced with lime as cooling occurs. Thus green timber may be operated on better than seasoned, as the effect will be more thorough. A seasoned post unprepared in any way will last much longer than a green one.

Cutting Potatoes—Exterminating Poultry Lice.

W. H. B., Irving, Kans., asks, 1, if potatoes should be cut when planted or some time before; 2, are small potatoes as good for seed as large ones; 3, the name of the earliest potato; 4, the address of the national seed department at Washington; 5, some way of ridding a hen-house of lice.

ANS.—1, Varieties that contain much moisture should be cut at least a week or so before they are planted, so that the cut surface may dry somewhat; they will then be less liable to rot in the ground. If cut immediately before planting, the pieces should be rolled in plaster. 2, No. 3 Alpha is among the earliest, if not the earliest potato in cultivation. 4, In all matters relative to the Agricultural Department address Gen. W. G. Le Duc, Commissioner of Agriculture, Washington, D. C. 5, Remove all the bedding from the nests and burn it; put into an iron pot, in the center of the house, a pound of brimstone and with it a lump of iron heated red-hot. Close the house as nearly air-tight as possible and leave it so for a couple of hours; then open and ventilate. Dust out the house and sweep it thoroughly. Wash every part of the house and appurtenances with a solution made of a pound of potash dissolved in a quart of hot water. Go over everything again with kerosene applied with a paint brush which may be also used for the preceding operation. Put fresh bedding in the nests, and if any lice are on the hens they will soon get off on to the warm nests, and be killed. Too much trouble! Well, it is a trifle troublesome; but, then, it's very effectual.

Remedies for Spavin and Wind-sucking.

L. F. S., Delaware, Ohio, asks, 1, if anything can be done to alleviate the lameness caused by a very small spavin on a horse; 2, can any thing be done for a young horse just contracting the habit of wind-sucking.

ANS.—1. If within reach of a veterinary surgeon have him fire and blister the hock joint at once; then, after a rest of four to six weeks, if the lameness has not disappeared, repeat the operation or apply a strong blister (pulo cantharides, 1 oz.; lard, 6 oz.) well rubbed in, and as soon as the place on which it has been applied heals, repeat. A long rest (pasture), with a succession of blisters, will relieve the lameness. We should prefer the firing and blistering at once. 2. Wind-sucking and cribbiting go hand-in-hand, and are induced by indigestion and want of work. A strap placed around the neck tightly will sometimes prevent it; also keep salt in the manger to occupy the animal and improve digestion.

The Bunker Hill Monument.

E. W. B., Factory Point, Vt., asks when the Bunker Hill Mounment was erected, of what material is it made and its dimensions.

ANS.—The corner-stone of Bunker Hill Monument was laid by Gen. Lafayette during his visit to this country, on June 17th, 1825, the 50th anniversary of the battle it commemorates; but the structure was not completed until 1842, and it was dedicated on June 17th, 1843. Daniel Webster was the orator both on the occasion of the laying of the corner-stone and the dedication of the monument. It is an obelisk, built of Quincy granite, and measuring 221 feet in hight, 31 feet square at the base and 15 feet square at the top. Inside of the shaft is a round, hollow cone, seven feet wide at the bottom and four feet two inches wide at the top. It is encircled by a winding staircase of 294 stone steps, which leads to a chamber immediately under the apex, eleven feet in diameter. This chamber has four windows, which afford a wide view of the surrounding country, and contains two cannons, named respectively Hancock and Adams, which were used in many engagements during the Revolutionary war. The entire cost of the monument is something over $150,000.

Glycerine.

P. S. W., Newmarket, Va., wants to know what glycerine is made of, and if it is poisonous.

ANS.—Glycerine is a substance produced from animal fat in the process of soap-making. It consists of carbon, hydrogen and oxygen, and is not poisonous. Its soft, agreeable qualities fit it eminently for use in cosmetics and perfumery; it is used in many diseases and is an excellent ingredient in toilet soaps, hair tonics, etc. A glycerine ointment of much repute for chapped hands is made as follows: one-half ounce of spermaceti is melted together with a drachm of white wax and two fluid ounces of oil of almonds, by a moderate heat. The mixture is then poured into a wedgewood mortar, then a fluid ounce of glycerine is added to it, when it is rubbed till the ingredients are thoroughly mixed and cold. Nitro-glycerine, a powerful explosive, is formed by treating glycerine with concentrated sulphuric and nitric acids.

Birds and Cherries.

S. C., West Northfield, Mass., in RURAL for May 1, page 283, asks how to keep birds from destroying cherries and other small fruits. The best way I have found to do this is to plant so many trees as to have plenty of fruit for the birds and myself too. I have only a few acres devoted to fruits, but on them I planted, ten years ago, 24 cherry trees of various sorts and great quantities of the smaller fruits. The result has been that ever since the fruits began to bear well I have had all I wanted in abundance for my family and friends, and also for the birds. I love to see birds on my premises, and if for nothing else I would plant plenty of fruit in order to induce them to come and nestle in the trees and shrubbery around my cottage. I never permit a gun to be fired on the premises, and quail are so tame as to come often within 20 feet of my dwelling, and run all about the lawn and in the garden without fear.

A. B. A.

Evergreens for Cemeteries.

H. K., Bath, Pa., asks what ornamental evergreen trees, that do not grow high or spread much, are suitable for planting in a cemetery plot.

ANS.—There are numerous evergreens which are suited for this purpose. Of Arbor-vitæ, the varieties compacta, maculata and the Golden Oriental are very handsome shrubs. Juniper Canadensis pyramidalis, and the Swedish Juniper will also answer, and so will Golden Yew (Taxus elegantissima), T. stricta, several Retinosporas, the Sun-ray Pine, (Pinus Massoniana), if a specimen can be obtained, Rhododendrons, hardy Azaleas, and in any others. Select from a reliable nurseryman's catalogue in which descriptions are given of the different varieties, which will enable you to judge of what they are.

Shoulder Lameness—Stringhalt.

A. S. L., New London, O., has a horse stiff in the shoulders, and in warm weather his neck gets sore under the pad, but it will heal again on the advent of cold weather. On starting with a load, he dives forward and is hard to govern; 2, he also has a one-year-old colt troubled with stringhalt, and he asks for remedies for both ailments.

ANS.—1. The horse is of a nervous disposition and worries while at work, especially when starting a load, and requires a steady and careful driver to preserve his usefulness. Bathe the shoulders with a mixture of tincture of arnica and myrrh, equal quantities, nights and mornings; also procure a collar that will fit his peculiar neck. 2. Stringhalt is a hereditary disease, and is only an illustration of the importance of breeding only from sound mares. There is no cure for it.

Speedy Cut.

W. L. M., Zanesville, Ohio, has a five-year-old horse with a good deal of speed in him; but when going fast he hits one knee with the opposite fore-foot, while at a slower gait he hits lower down, and he asks for a remedy.

ANS.—This sort of interfering is called speedy cut, and is seldom, if ever, entirely remedied. It may, however, be partly prevented by special attention to shoeing, and dealers in saddlery and other horse-furnishing goods sell caps or straps, especially intended for application on the knee, as well as speedy-cut boots, in which there is a pad buckled on the inside of the leg, reaching from the knee to the fetlock.

Shrinkage of Corn Ears.

J. J. S., Mendham, N. J., asks what should be the shrinkage in 21 loads of corn ears put into the crib in the fall and taken out the following April.

ANS.—Newly gathered, sound and ripe corn will shrink in the crib 25 per cent. in weight and 15 per cent. in bulk from November to April. Therefore, if 21 loads were put in, about 18 should be taken out, or a loss of about one-seventh would occur. If the corn is partly unsound, with many nubbins in it, the shrinkage will be proportionately greater.

Miscellaneous.

J. W., Westfield, N. Y., has a farrow cow seven years old, that two months ago lost her appetite for a few days, then got down and could not get up again for 18 hours. For three weeks afterwards she got up occasionally with great difficulty, but for the last five weeks she has been unable to rise at all. She is in good store condition with an excellent appetite, but appears to be unable to use her hind-quarters, and our friend asks what ails her and how to treat her.

ANS.—The cow should be assisted to rise and supported for a time, if unable to stand, by means of two strong sacks put under her and held by ropes fastened to beams above. What the trouble may be precisely is impossible to say without knowing more about the circumstances. It is possible and probable that the trouble arises from disorder of the spine and the nervous system of the loins and hind-quarters, which center in the lower part of the spinal cord. But to indicate any other treatment than to assist the cow as above and feed her well, would be somewhat delusive, and might be dangerous.

TO MANY INQUIRERS.—The articles on Sorghum, the milk trade, and on the Osage Orange were written to answer a number of inquiries more fully than the space that can be spared to an answer in this department, would admit. It frequently happens that when queries on any subject accumulate, or come so fast as to show a general interest in the subject, we publish an article telling all the truth about it, and so answering several questions at once. In such cases, of course, no special answers are needed. By the way, it's a good idea for our friends to tell us just what they want, for it's not at all unlikely they know what this is at least a trifle better than even we do; and we wish them to fully understand that the paper is theirs, and that it is our endeavor and ambition to make it all every one of them can reasonably desire.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, May 15th.

I. S. M. E. S.—C. D. S.—E. A. C.—G. P.—S. W. S.—L. U. D.—A. C. P.—E. E. L.—W. W. C.—L. F. N.—M. F. C.—A. A. C.—F. C. L.—L. B.—C. C. M.—J. M. L.—G. N.—H. L. P.—W. L., thanks.—L. D. L. B. B.—S. T.—S. P. D., thanks.—C. D. B.—M. G.—L. P.—D. D. C.—C. G.—L. H.—T. W. L.—J. B. H.—J. B.—E. S.—J. S. M.—J. W.—N. P. R.—D. B.—S. W. J.—J. B. B.—M. H. H.—E. W. S.—C. D. S.—S. D. R.—A. B. A.—F. H. M.—E. D. R.—F. H. S.—C J. R, thanks.—O. K.—R. S.—E. G.—E. P.—A. P—J. L. S.—C. W.—L. S. S.—M. J. C.—G. M. M.—S. E.—W.—J. C. Con.—A. L. J.—W. A. H.—D. C, C.—I. O.—F. D. C.—E. P.—C. W. B.—L. E. S. thanks.—E. A. S.—Y. H.—C. C. D.—Yes.—L. F. P. G.—W. D. C. M.—F. A. W.—No.—C. D. S.—G. M. D. I. C. S. I. S.—W. D. A.—T. U. I.—P. E. E—C. W. L.—F. T.—L. L. M.—Yes.—B. L. C.—P. L. W.—C. D. S.—L. C.—S. R. W.—C. L. P.—H. L.—C. M. M.—C. C. P.—U. P.—W. F.—J P. T.—J. H.—V. L., thanks.—C. P. R.—L. N.—W. C. T.—W. M., thanks.—L. P. M.—C. P. L.—N. P.—J. C. L.—W. L. F.—C. T. W.—L. C.—L. L. G.—M. M. C.—L. G. P.—R. B. W.—G. B. L.—S. W.—C. C.—D. L. L.—T. E. J.—W. E. S.—G. B. B.—R. A. N.—H. J. S.

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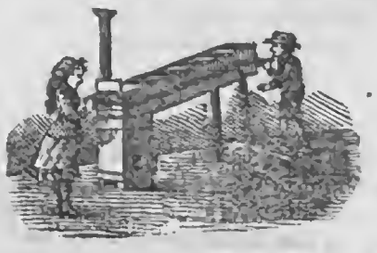

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RURAL NEW-YORKER.
PUBLISHED EVERY SATURDAY.

CONDUCTED BY
ELBERT S. CARMAN.

Address THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, MAY 22, 1880.

MR. H. W. RAVENEL, a well-known Southern botanist, lately found near Charleston a tree of Cornus florida, bearing reddish-purple involucres. Pinkish involucres of this species are not uncommon. Dr. Asa Gray, in reply to our inquiry, said that he had never seen them of a decided red and requested that we would forward specimens. Professor Meehan, on the other hand, thinks that he has seen them of that color. In any event they are not offered by nurserymen, and those desiring to communicate with Mr. Ravenel with a view of introducing the variety, may write to him at his home, which is Aiken, S. C.

PITTOSPORUM Tobira is an evergreen shrub with obovate, thick, glossy leaves and white, fragrant flowers in terminal clusters. We have lately seen hedges of this beautiful plant in the South, and for this purpose—if ornament alone is desired—we know of no other more handsome. It will bear cutting to any desired extent, grows luxuriantly thick, and is, during the entire year, of a fresh green color that delights the eyes. It is hardy in the climate of Aiken and Augusta, and probably for some distance northward—but how far we are not informed. We urgently commend it to our Southern readers either for ornamental hedges or solitary specimens. It grows freely from cuttings.

SHADE TREES by the road side are often set out with much care and at a considerable expense, then left to grow as they please, completely neglected. Thus they soon become unsightly objects along the road instead of adorning it. They should be invariably staked, if necessary, to keep them straight, the ground kept loose around them, and, if in any danger of suffering from drought, be well mulched. Above all, cut away all sprouts as fast as they appear, for they suck out the life of the tree, and are frequently the cause of its dying. Trim the trees nicely and artistically, as they grow, and in a few years they will make a grateful summer shade, and a magnificent adornment of the public road.

DURING the writer's late visit to the so-called "Thermal Belt" of North Carolina, we were much interested in the operations of an old Michigan gardener, Mr. A. Braman, who had purchased land upon the south side of Tryon Mountain, and was cultivating many kinds of fruits upon one of its "flats" which he had cleared. Among them the Grape was receiving a large share of his attention. He uses the roots of the native vines cut into three-inch pieces as stocks. A slit is made in one end of the root, the cion cut wedge-shape and inserted the same as in ordinary cleft-grafting. The cut portions are covered with wax and the completed graft placed in the soil of boxes which are kept in the cellar from early March, when the grafting is done, until mid-April, when they are planted where they are to fruit.

Sometimes he works the cions upon roots in the ground. Treated in this way they generally fruit the first season. We were shown a "French" vine that last year (the year of grafting) made a growth of 40 feet and bore several bunches of grapes. This "Thermal Belt," of which Tryon Mountain is a part, possesses a remarkable climate. Light frosts are rarely known, and freezing weather, owing to the dryness of the air probably, rarely injures fruit buds.

GEN LE DUC reports to Congress that since the first discovery of gold in California, in 1849, this country has paid to foreigners eighteen hundred million dollars for imported sugar, while the mines of the Golden State and of the other Western States and Territories have yielded only seventeen hundred millions, so that it has taken one hundred million dollars more than all the gold we have produced to pay for the foreign sugar we have consumed. If sorghum, and beets too, shall in the future add to our home production of sugar, even approximately as much as present indications promise, what an enormous amount of wealth that now goes to support other nations will be kept at home to enrich our own population, and of this no small proportion must find its way into the pockets of the growers of the crops—the farmers of the country. The possibility of producing sugar from sorghum is now as well established as the possibility of producing sugar from beets, but in both cases it still remains to be practically proved whether this can be done profitably in this country, as a general branch of business. The making of sugar from sorghum has at least this advantage over the making of it from beets, that to do the latter profitably requires several hundred thousand dollars of capital, whereas, from all accounts, as many thousands are sufficient in the former industry.

A JOINT resolution has been introduced into Congress instructing the Attorney-General to bring suit in the name of the United States, to cancel the letters-patent issued, in 1868 and 1871, to Nelson W. Green, for tube or driven wells. The resolution is based on the ground that Green was not the original inventor, and that this process of well making had been in use in many parts of the country, and had, consequently, become public property, for years before the success of other patentees of devices connected with it, suggested to Green the idea of claiming a patent for it. The groundless nature of Green's claims were fully set forth in the RURAL so long ago as Sept. 30, 1876, in the most exhaustive article that has appeared on the subject, entitled "The Tube Well and its History?" The large interest the patent beneficiaries have in the "rights," and the comparatively small tax each user of the well is forced to pay, can alone account for the continuance of this patent in force until the present day; for on this account the former are ready to incur the heavy expense inevitable in an appeal to the U. S. Supreme Court, an outlay rather than incur which the latter reluctantly pay the $10 royalty exacted. But though the individual tax is comparatively small—as are nearly all taxes—yet the manner of collecting it is so odiously exasperating, and the aggregate exaction so heavy that it is full time that the public, through its Representatives in Congress, should put an end to the baseless imposition.

POWER OF A GROWING TREE.

THE force exerted by a growing tree is well known to be very great. This fact, however, is worked to death by moralists, who are ever on the watch for a little fact upon which they can hang a moral. A worn-out example of this kind recently appeared, we regret to say, in the columns of a respected contemporary, with new embellishments and additions, which only served to make the story the more ridiculous. A mill-stone 5½ feet in diameter and seven inches thick—the size is extraordinary, but that only adds to the zest of the story—and having a central hole—why is it not called the "eye?"—11 inches in diameter, was laid in an orchard and then forgotten. A filbert—formerly it was a little acorn, from which a great oak may grow; but now a little filbert, from which only a poor, weak, dwarf shrub could grow—was dropped by accident in the eye of the mill-stone. This was in 1812. As the trunk grew within the hole, many persons came and saw and pondered wisely as to the probability that the stone would be carried up in the air by the growing filbert, or would the "filbert tree" die in the attempt. And actually in 1868, we are told, the tree lifted the ponderous stone and raised it in the air. This exemplifies the power of perseverance, patience, pertinacity, modesty and close attention to one's business, with a single eye to attain some great end. That is a very good moral. Never mind about the truth of the story or that it includes errors of fact. A Filbert is a shrub and never attains the thickness of 11 inches. Moreover, the growth of the trunk of a tree is in thickness and not upwards, and the lifting of the stone in the way mentioned is an impossibility for a giant oak, much less for a poor, weak hazel bush.

TARIFF REVISION.

LAST week we announced here that the Congressional sub-Committee on Ways and Means in charge of the matter, had in their report to the full Committee recommended that the importation of foreign salt should be put on the free list along with several other articles. Since then, however, the salt monopoly of New York, Michigan and the Kanawha Valley has brought such potent influences to bear on the Committee that the article relating to salt has been stricken out of the tariff bill finally reported to the House, so that the duty on it still remains at twelve cents per 100 pounds in bags, and eight cents per 100 pounds in bulk. From present appearances, however, no definite action is likely to be taken this session on the subject of tariff revision—a complete victory for the protectionists. We cannot say that we are altogether sorry for this; for although it was proposed to place a few agricultural implements on the free list, yet the striking of salt from it greatly lessened any benefit the revised code might confer upon agriculture, while the lowering of the duties it proposed upon foreign wool and woolen goods was a very objectionable feature to the increasing industry of sheep husbandry among us.

As long as a protective tariff shall remain in force for the benefit of the manufacturers of the country, so long shall we strongly protest against the lowering of the present duties on wools and woolen stuffs; for while the manufacture of almost every article farmers use is fostered, to their loss, by protective duties, almost the only direct protection agricultural products receive or demand is that afforded to sheep husbandry by the present tariff. That this industry should prosper among us is of high importance, not to the stock owners of the country alone, but to the community at large, and to this prosperity it is essential that the conditions under which it is at present thriving should be permanently exempted from Congressional meddling and muddling. If, in revising the tariff, Congress shall insist on lowering the import duties on foreign wools and woolen stuffs—almost the only duties by which the agricultural classes are benefited—then must the agricultural classes insist on the lowering or entire removal of the duties on a multitude of other articles by the present high tariff on which these classes are seriously injured.

DISTANCE LENDS ENCHANTMENT.

A FEW days since we heard a man of culture, who was born in the City of New York, and whose life of half a century has been mostly spent here, remark that he knew more about the public institutions of Paris and London, of their locations, surroundings and contents, than he did about those in New York. This will seem strange to many of our readers, but we have no doubt there are thousands of them who can say the same truthfully.

Business men have their business to attend to, and postpone visits to places where they can, as they say, go at any time, until it is more convenient, and the writer of this is not an exception. There are many places of interest in the city to which our first visit was made in company with friends from out of town, whom we were glad to accompany on their round of sight-seeing. So, while we may seem to be censuring others for negligence in improving their opportunities, we will not try to hold ourselves blameless. Many spend a week in Washington, and although that time is only sufficient to give a hasty look into the places of interest with which that city abounds, to thoroughly study which would require months, they return better able to tell a stranger where and how to see the sights worth seeing than they are to direct him to spend his time to the best advantage in New York.

We have a friend living in Brooklyn who once told us he thought that instead of taking his customary summer trip to the country, he would take rooms in a New York hotel, and spend the time in seeing the sights of the City—and he could do worse. The truth is we are not sufficiently familiar with the things right about us, and this we mean to apply to our country friends as well as to dwellers in the cities. There is many a flower-garden, lawn and yard in the country stocked with plants and flowers of foreign origin, with whose names and habits the growers are more familiar than with hundreds of varieties of natives among which they have lived all their lives. Every year our florists import from Europe plants that are native Americans, only for the reason that their merits are appreciated there and they are raised for market, and can be imported cheaper than they can be purchased here, because no one makes a business of supplying the market.

BREVITIES.

WE have just received from Dr. McAboy, "the man of the Thermal Belt," (N. C.) a box of young peaches. They are about two inches in length and three in diameter. The Dr. says: "I send them to show you the 'Thermal Belt' still survives and is triumphant."

COULD potato cultivators have foreseen the mildness of the past winter, they would have done well to plant their potatoes last fall.

OUR correspondent from Waco, Texas, sends us the first report we have received as to the RURAL'S Ennobled Oats. He says: "They are growing finely, being now (May 5) 15 inches high. They tiller beyond anything I ever saw in a grain." That is good. We hope all reports may prove of the same tenor.

ADVERSE comment has been made upon our statement that young Tulip trees may be easily and safely removed by cutting back (or off) the entire stem to within an inch or so of the neck, leaving only the neck and roots to be planted. It is a pity that writers for the sake of writing will obtrude ingenious theories against ascertained facts. It is *the* way to transplant the Tulip, and the only way by which young trees may be removed with safety from the forests. We speak in this instance from an experience that makes us out of patience with the opposition of those who evidently don't know what they are talking about.

THE Editor of the Agricultural columns of the N. Y. Times says: "Every one who plants peas should select the sound ones and steep the rest in boiling water for a minute or two, which kills the weevils but not the seed." We think that in separating the two kinds, every weevil would creep out as fast as ever he could, and that none would remain to be killed by the boiling water. Again, if the weevil hole had not already destroyed the germ, the boiling water certainly would. Finally, what's the use of saving the weevil-eaten peas when less than ten per cent. will be found to be worth sowing?

THE reports on growing crops throughout the country, during the past week, are largely of the same favorable tenor as those of the week previous, except in the more southern parts of the trans-Mississippi region, in which drought and hot winds are said to be doing considerable damage, especially in the frontier settlements. The effects of these are reported to be particularly disastrous in western Arkansas and Kansas, as well as in New Mexico, Colorado and southwestern Nebraska. Throughout nearly the whole of this region great distress is reported, and greater expected; but, then, the advance guard of agriculture and civilization all over the West has always had to bear the brunt of a world of hardships.

DR. W. B. JONES of Herndon, Ga., sends us the following varieties of the Cow "Pea:" Tory, Little Black, Java, Red Ripper, Poorland, Blackeye Crowder, Goose, Goat, Early Favorite, Three-crop, Conck, and Little Lady. He says Tory, Black and Red Ripper are late varieties—will volunteer after oats and are almost as indistructible as Vetch. The other varieties are earlier. The Three-crop Pea is said to produce three crops from earliest to latest planting. The Lady Pea is a table variety. There are varieties in Florida called Conck Peas which bear vines from 25 to 50 feet in length, but they are late to mature and better suited to the climate of Florida. We were unable to give full separate accounts of the many varieties of the Cow Pea which we raised last year, for the reason that they were sown too closely together. We shall avoid this mistake the present season.

LAST week we told here of a remarkable sale of orchids in this city; on the other side of the continent, too, there was lately a notable sale of bulbs by Carlo Corilla, "Botanist to the Court of Brazil;" a man of very prepossessing appearance, gentlemanly demeanor and persuasive foreign accent, all of which readily gained him the confidence of a number of wealthy San Francisco ladies. To each of them he confided that the failure of remittances compelled him to sell some rare bulbs of Brazilian Lilies, which he had intended to present to Mrs. Hayes on his approaching visit to the White House. The flower we are told, was to be a great scarlet bell, with ecru ruchings on the petals, a solferino frill around the pistils and a whole bottle of perfumery in each stamen. He sold about 50 nearly worthless bulbs for four dollars apiece—and those trustful San Francisco ladies also.

SHIPMENTS from the West to the seaboard, by rail, during the past fornight have been lighter than for years, owing to the persistence of the combination of railroads in keeping up freight rates, while shipments by the lake routes have been proportionately heavy. It is consequently expected that the trunk-line managers will soon be forced to lower their rates in order to secure business enough to keep their rolling stock moving. It is reported that several of the southwestern lines are already violating their agreement by making special contracts with large shippers, and "cooking" fictitious way bills. Already Railroad Commissioner Fink has warned the Peoria road against this underhand practice; but the warning is hardly likely to prove effective, unless the general rates are soon cut. The public is likely to be benefited by this dissension among the railroads—isn't there an adage to the effect that when certain classes fall out, honest men are likely to get their due?

YEARS ago a floricultural journal was started in Brooklyn (N. Y.) by the seedsmen, Beach, Son & Co. Mr. James Hogg was made the editor, though for some reason his editorship was of short duration. Later the seed establishment and journal moved to New York, where both were continued until a few weeks ago, when the well-known firm of B. K. Bliss & Sons bought them out. The first number of the American Garden, as published by the Messrs. Bliss and edited by our esteemed friend and contributor, Dr. F. M. Hexamer, is before us. There are twelve pages in each number, about the size of those of its distinguished namesake, the London Garden. Four numbers are issued per year, and the price is 25 cents, or ten cents for each number. We have no doubt at all that this handsome little quarterly will meet with all the success it deserves, and from all we know of its editor and the enterprise of its publishers, its deserts will prove of no mean order.

For Women.

CONDUCTED BY MISS RAY CLARK.

COUNTRY GIRLS.

Up early in the morning,
Just at the peep of day,
Straining the milk in the dairy,
Turning the cows away—
Sweeping the floor in the kitchen,
Making the beds up-stairs,
Washing the breakfast dishes,
Dusting the parlor chairs.

Brushing the crumbs from the pantry,
Hunting for eggs in the barn,
Cleaning the turnips for dinner,
Spinning the stocking yarn—
Spreading the whitening linen,
Down on the bushes below,
Ransacking every meadow,
Where the red strawberries grow.

Searching the "fixings" for Sunday
Churning the snowy cream,
Rinsing the pails and strainer,
Down in the running stream—
Feeding the geese and turkeys,
Making the pumpkin pies,
Jogging the little one's cradle,
Driving away the flies.

Grace in every motion,
Music in every tone,
Beauty in form and feature,
Thousands might covet to own—
Cheeks that rival spring roses,
Teeth the whitest of pearls;
One of these country maids is worth
A score of your city girls.

FASHION NOTES.

Street dresses are all short.

Gold glitters and sparkles on everything.

A great deal of red is used on black dresses.

New suits of white nainsook are flounced to the waist.

Languedoc lace is much used for trimming evening dresses.

Crepe lisse ruchings are set inside the brims of small bonnets.

Heliotrope and cream is the favorite combination of colors this season.

New dress buttons come in two sizes—one intended for the coat and the other for the dress waist.

Plain colored French buntings will be combined with figured foulards for wear at watering places.

Wide round collars, a full frill of deep embroidery edged with wide lace, are the fashionable style for children's wear.

Narrow plaitings form a favorite trimming for the foot of skirts; these are each three inches wide when finished, and are made to lap an inch upon each other; the plaiting is then pulled out of its flat folds to look as bunchy as possible.

Surtout suits, consisting of long coats of elegant shape, slashed in the back nearly to the waist, lined with bright silk, provided with handsome buttons and worn with skirts finished by simple knife plaitings, are a favorite style for handsome walking dresses.

The cheviots of pure wool loosely woven are among the favorite fabrics for spring costumes that will also serve for traveling dresses during the summer. They have what was called last year the "flannel finish;" are evenly but loosely woven, and are without luster. They are in small pin-head checks of cream with brown, two drab shades, pale olive with darker green, and two shades of gray.

There is a great display of fancy in the matter of trimming for bonnets. Flowers, both larger and smaller than in nature, are used—gigantic violets and carnations, and Lilliputian chrysanthemums. The predominant trimming at present is of gold, in the form of galloons, cords and pins simulating large nails, and red in the way of ribbons, linings, feathers and flowers.

Pretty percales and cambrics have dark blue, lavender or gray grounds, strewn with white polka dots. They are trimmed with narrow gathered ruffles edged with Russian braid edging or with torchon. Tucked yokes are on some of these dresses and a band edged with torchon lace borders the yoke, while below the yoke the waist forms a side plaited basque to be worn with a belt. Bands of plain blue gingham border the ruffles of striped blue and white cambric dresses.

Buttons are a matter of great importance in modern toilettes. They are most fanciful and varied in style. Some are of enamel with flowers in the Japanese style, others of tortoise shell inlaid with gold, of carved mother-of-pearl, of engraved steel, steel cut in facets, cut jet, etc., but the most artistic are those of china, painted by hand and enameled. Some of these are quite little marvels, each button of the set being ornamented with a different pattern and becoming real works of art.

No. 175.—Square; cross and Italian stitch.

The square is worked in cross and Italian stitch—it is suitable for the center or corner of a serviette; or it may be inserted between other squares of guipure netting or satin, for antimacassars, sofa-cushions, &c.

"MOTHER USED TO SAY SO."

We often hear this said as a last and conclusive argument by grown people and heads of families "Mother used to say so."

Weary mothers, bearing the burden and heat of the day, striving to sow good seed in the minds of their children, often feel sick with discouragement that they can see no immediate result of their labors. If they could look into the future they would see abundant cause for rejoicing. They would see in the mature years of their children that their own steadfast adherence to right principles, had given a lasting bias to their young minds, all the more strong, perhaps, because their parents had lived uprightly from a pure love of virtue, and not merely "to have an influence."

A friend was not long since relating to me a wrong that some person had wilfully done her and persisted in, and which she felt like resenting in the same spirit "but," said she, pausing, "Mother used to say that it was better to suffer wrong than to *do* wrong," and as she said it her flashing eye became moist with tears, and her voice steady with quiet tenderness, and a mother's influence came back with power to soothe and bless the irritated spirit of the child who had now reached the years of womanhood, and was obliged in her turn to take up life's conflicts. B. C. D.

Walworth Co., Wis.

FIXING UP.

It takes a great many more things in these days to make people comfortable, than it used to when I was young; but I must allow, that I like to see pretty things around a house, scattered here and there, provided they do not cost more than a family can afford to pay for them. If people are ingenious, and can make nice things themselves, at home; it is a fine thing and nobody's business either; and it is probable that they enjoy making them, full as much, as they do seeing and using them after they are finished And then, the idea that one can make such things, all themselves, with little expense, is certainly very satisfactory. I saw one of the neatest rooms, furnished handsomely with an outlay of a very little money. I have seen furnishings that cost seventy-five dollars, that did not look as elegant, as the fixings in that great chamber; and that did not cost five dollars. Now, as the young couple were just starting in the world, and neither of them had a penny that they did not earn themselves, I thought how commendable it was, that instead of feeling sad, and envious towards those who were better off, they should establish themselves so comfortably, in their own pleasant home. They were so happy in doing it all, that it seemed, as if pleasant memories and happy thoughts, were driven into their heads with every nail, and fastened there, with each stitch. If all young folks would be content to begin life as they did, and only get what is needful to begin with and only allow such luxuries as they could afford or make themselves, it would do to get married; but when they all think they want the best of everything and a house full of it too; and run in debt to start with, they had better live single to the end of the chapter; for it would be but worry and botheration all the way through, and when too late, they would discover their mistake.

Grandmother.

CRITICISM ON "SOAP BOILING."

I have thought of writing a few lines for our column for a long time, but have kept putting it off because I did not know what subject to write on. As the season for boiling soap is near at hand, I think of a piece I read last summer or fall on that subject that I think was almost absurd. The person, in telling of her way of making soap, said "she had a kettle that held 80 gals., and had her ashes fixed in such a way that the lye was weak, and then boiled it down until it was strong enough to make soap." Now I thought what we were all trying to do and find out was, to save as much time and labor while doing our work, as possible.

I do not think that standing around a kettle keeping up fire and smoking your eyes out, as is usual at such times (for who ever knew the smoke to go any other way than in your eyes?), is just as pleasant as it might be. As for myself, I am fortunate enough to have a husband who is willing to do most of the soap boiling. He always tries to have his lye strong enough to carry an egg at the beginning, then it takes but a few hours to make a kettle of soap.

I love the Rural and always read the letters in our department with great interest. I have a great deal of trouble to preserve the papers, for I have two little boys who like it almost as well as I do, but are not as careful about preserving it.

Fault Finder.

A NICE BED COVERING.

White bed spreads are the nicest outside coverings for a bed, as they can be easily washed, and when clean, are always good as new. A very pretty design for one is made by taking two breadths of unbleached, 40-inch cotton cloth, and sewing it together in the middle. Five yards and a half is a great plenty. A box of stocking yarn

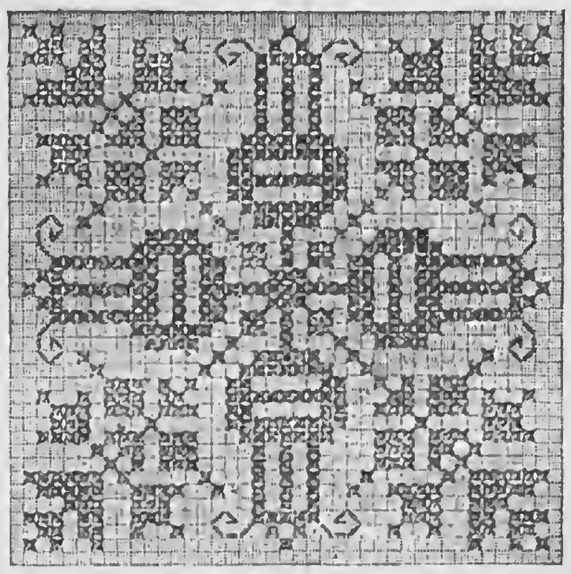

Fig. 175.

No. 8 is needed. Sew the cloth on quilting frames as you would a bed quilt. Stretch it smoothly, then with a chalk and line, mark it corner-wise, in diamond form, having the checks about an inch and a half in size, then with a large needle, and a yard of cotton yarn threaded, take a stitch half an inch in length, bring the needle back half way, keep the stitches close together, so it will look like a small cord; it is very rapidly done, if you like to do it. A knot in the center of each diamond looks pretty. A row of Roman heraldry all round the quilt, is a pretty finish. A hand hem finishes up the spread, and it is a nice, durable article that will last for years; is easy to wash, and is as heavy as is needed. S. H. R.

LOVING WISELY, BUT NOT TOO WELL.

"The man or woman who has never loved, hugged, kissed, played with, listened to, or told stories to a child, has missed one of the cardinal joys of life." Exchange.

Nothing truer was ever written. It is impossible not to love and caress a bright, healthy, laughing child, but it takes more than human wisdom to restrain such affection within its proper bounds; to love discreetly so as to be able to see and correct their faults gently, to have patience with their shortcomings, to restrain their wilfulness and to take a wise course between over indulgence and unnatural repression. This is truly an art. Blind affection springs from the selfish propensities and not from a development of the highest qualities of the mind. It is the purest kind of affection which sees the faults of those we love, although it is thought by some to be a lack of it. Do we not see daily examples of parents who love their children, if not too well, at least unwisely? It is a fault that wrongs all concerned, the little ones whose faults go uncorrected, and the older ones who indulge their selfishness at the expense of spiritual growth. B. C D

HINTS.

I would like to add something to "Grandmother's" advice relative to cleaning painted floors. The first time you wipe it up after it is newly painted, be sure to use only skimmed milk—that seems to render the paint very durable.

Perhaps some one would like to know how to utilize small pieces of canton flannel that collects so rapidly in a family. You can get rid of the long, narrow pieces by making wicks of them for kerosene lamps. Make them double, sewing the raw edges together. I have used no other for the past nine years.

Let me suggest to mothers who are making dresses and aprons for the little ones, to make the sleeves an inch or more longer than needed, letting the surplus length project at the arm size, and when the sleeve needs to be lengthened (and it seems to me that no part of a child grows as rapidly as the arm) it is so easily done by ripping out the sleeve and sewing it in again at the top of the sleeve. Mrs. P. C. C.

A Timely Suggestion.—Parents should teach their children to gargle their throats, for it may be the saving of their lives. It is easier to teach them this somewhat difficult and awkward feat while in health than to attempt it when they are prostrated by disease.

PARIS WIT AND GOSSIP.

Mme Woillez: Grief counts the minutes; happiness forgets them.

Sanial Dubarg: The more a woman is idle the more her heart is occupied.

Mme de Sartory: words are the key of the heart.

Suard: No woman speaks of women without thinking a little of herself, and never thinks of herself without thinking a good deal of others.

Mlle. de Seudery: A jealous man always finds more than he looks for.

A wife no more believes in business which takes her husband away from her, than a manager believes in the sickness of an actress, or a publisher in that of a writer.

Nicole: Ugliness and beauty depend upon the caprice and the imagination of men.

Mme de Genlis: Ugliness, after virtue, is the best guardian of a young woman.

Mlle de Seudery: One of the noblest effects of love, is to produce liberality.

Mme Staal Delaunay: Liberty is incompatible with love. A lover is always a slave.

Lemontez: The abuse of books kills the health and the modesty of women.

Adolph Ricard: To marry when you are sixty a beautiful girl of twenty-five is to imitate those silly creatures who buy books simply for the pleasure of their friends.

Bigniout: Beauty deceives women in making them establish on an ephemeral power the pretensions of their whole life.

Mme. d'Aulnay: Love, like fear, makes us believe everything.

Louis Desnoyers: Women who love are always afraid they are not loved. Women who do not love always flatter themselves that they are loved.

Mme. Deslordes Valmou: Nothing is so near love as pity.

Adrien Dupuy: In love, to give a portrait is to promise the original.

Mme. de Sartory: No conversation is more tiresome than that of a lover who has nothing to desire and nothing to fear.

Mme. de Coigny: A coquette who takes a lover is a sovereign who abdicates.

Mme. de Epinay: The trade of woman is very hard.

Segur: Men make the laws, women make the customs.

Fontinell: To be able to please is already a great advance toward persuading.

Literary Miscellany.

JOHN ASCOTT'S DAUGHTER.

BY CHARLES RICHARDS DODGE,
Author of "Louise and I."

(Continued from page 285)

CHAPTER VII.

IN THE TRACES.

"I declare, May, here is an idea," George remarked one evening, looking up from his newspaper.

"What is it?" she questioned.

"It's an article on tree-planting. Why can't I set out a lot of maples along Prospect road? Here's an old farmer that planted trees twenty years ago, not only in the public highway, but all over his farm, wherever he could find room for one, and he tells here how much his farm has enhanced in value, in consequence. I'm going to put that into practice."

"You ought to take two or three good agricultural papers, George; doubtless you will find new ideas every day."

"I know it," he answered, "but goodness me! I can't afford it."

"Yet you are always ready to put improvements on the farm," his wife made reply; "wouldn't it be well to profit by the experience of others, and perhaps save money enough to pay for the papers? I shall find them useful too."

"For covering the shelves in the pantry?

"Why, aren't you hateful? No, to assist me in getting up new delicacies for *you* to eat. Then there are always hints towards making home pleasant, and descriptions of little household elegancies innumerable. I saw in a paper a few days ago a clubbing list of journals that would be furnished at reduced rates if a number were taken at the same time, and I cut it out. I'll go and get it."

When she returned George took the list. Going over it together they selected four good periodicals, which it was found could be furnished at the price of three. He then made a memorandum of them in his note-book for future reference and their conversation was resumed. A few days after he was astonished at finding one of the journals in his box at the post-office. He asked May what it meant, but she merely made a remark about specimen copies and went on with her work. In a day or two there were two more, and he began to "mistrust" a mouse in the meal tub, and after the fourth made its appearance he suggested to his wife that there were two or three scientific periodicals he would very much like to take, provided he could be put on the free list.

"Seriously, May," he asked, "how did you subscribe for them?"

"Oh, I just wrote to one of the publishers," she answered, demurely.

"But the money?"

"I sent it by mail, of course."

"But where did you get it?"

"Oh, that's another question—where do you suppose?"

"I wish you wouldn't tease a fellow so."

"Well, then, I saved it."

"Out of what, pray?"

"Out of our regular monthly allowance for general housekeeping expenses."

"Why, May! Have you any more?"

"George Ashton, that is unfair. I shall object, as they say in law. But I will give you a piece of advice, the sentiment of which is as old as the hills, and which by applying to your farming operations, may enable you to purchase your own periodicals: *Save where you can—spend when you must.* Now that's real easy to remember, isn't it?"

"Easy enough to remember," her husband answered.

"Please remember it then, George."

They had been upon the farm just six months and the young farmer was beginning to realize that there was a deal of real hard work in farm life, with little time for play. At first he made many mistakes, and had to do some of his bad work over again, but in the main he felt that he was upon the right track. His college experience was no small help to him now, and he thanked his stars that he had been wise enough to study thoroughly two sciences: chemistry and zoology. He read up upon the subject of fertilizers, and with his previous chemical knowledge readily posted himself as to the exact value to him of the different kinds in the market, as well as the value of the manure made upon the farm. He then talked with

his rural neighbors, learned their experience, and after familiarizing himself with the particulars, endeavored to find out the peculiarities of the different portions of his farm, that he might put his crop where the conditions of growth would be most favorable. He had no experience of his own to assist him and little knowledge of the routine operations of ordinary farm life, so he was obliged to rely to a certain extent upon an Irish farm hand, who had been upon the place for several years. "Old Peter" generally hit the nail squarely on the head when he ventured an opinion, but he was never able to give the why's and wherefores, so the young proprietor usually conducted his "practice" after a formula of about equal parts of Peter's experience and his own reason, with a good, strong sprinkling of "science," as his father had called it.

His college lectures had given him knowledge of the principles of stock breeding, and although not a stock farmer, the knowledge was nevertheless useful to him. When the potato beetles first made their appearance, he was ready for them. He knew the whole tribe down to their forty-second cousins, and lost no time in declaring war against the small first brood as soon as they appeared. As a consequence he had a very small second brood to contend with, while his neighbors were eaten up before they were hardly aware of an attack. Then he discovered one day a new insect attacking his corn—he was always looking out for specimens for his cabinet—and the further he examined, the greater he found the damage. It was entirely new to him, it is true; but through his studies he had gained a knowledge of the family to which he clearly saw it must belong, and a remedy suggested itself at once. Not fully satisfied, however, he looked the matter up in one of his text-books, and finding that an allied species was often quite destructive in Europe, learned the means that had been employed to prevent its ravages there, and saved his corn crop. He was well posted upon the bird question, knew his friends from his enemies, and was content to have a little fruit spoiled for the sake of the benefit received from the presence of the saucy bipeds at other seasons. In short, he farmed with his eyes open, and sought to take advantage of everything that would save either money or time, for he early made the discovery that *time is money*.

His hobby was improvements, and wherever he saw an opportunity to add to the resources of the farm by the outlay of a little money, he put the money into it hoping to get it back again with interest in a year or two. Under-draining a swampy piece of ground was about the worst of his miscalculations, for having had no experience in such matters, and Peter never having seen the operation performed, he hired it done by the day and it cost him roundly. Even May suggested that he had better send the men off, and complete the work himself, after they had been employed a reasonable time, but George thought it ought to be done right—so they made a "job" of it. It was a great benefit to the farm, of course, for more hay was needed than the mowing fields could produce, and the swamp in its former condition was worth very little for any purpose. It would require the hay crops of a number of years to pay the cost, but in the end George thought it would be a gain.

Then he constructed a fish-pond at the lower end of the farm, beyond this old swamp, conducting the water of several springs into it. It was another of those nice little farm improvements, that, done cheaply are a source of profit in a very short time, but in this case the estimated cost and the actual expense when finished bore about the same ratio to each other as 1 to 3, and he charged himself with a heavy bill of "experience."

Fortunately the crops were good in his first year; he realized fair prices for what he sold, and altogether congratulated himself that he was a successful farmer. May wanted "to see the books for it." The accounts were therefore examined, and it was found they had barely made a living, the "working capital" was about exhausted, and the improvements had swallowed up nearly the entire profits of the summer's labor. Provision had been made for the winter, and George felt that with a little rigid economy and more careful management, another year he would certainly come out ahead. But for all this, many evenings were spent in figuring and in making calculations, which occupation May regarded ominously, though the young farmer said nothing.

CHAPTER VIII.

CLOUDS.

In all the months that the young couple had passed since coming to Maplewood, little had been seen of George's family. His brothers had each called once. Charlie's wife had been out to the farm several times to see May, for whom she professed a liking, the young wife returning the calls, after waiting as long as strictest etiquette would admit. It was during the last visit to S—— that an incident occurred which brought the first real unhappiness of her married life. Driving in from the farm one day to attend to some necessary purchases, she carried with her, at George's suggestion, a can of sweet cream for Charlie's wife, and at her own suggestion—unknown to her husband—a roll of delicious butter for old Mr. Ashton, though he had never deigned to show his face at the farm. She had about finished her call at Charles's, and left the package of butter to be sent to Mr. Ashton, when to her great surprise the old gentleman walked in.

"This is May, father," Sarah said by way of introduction.

"How d'ye do?" said he, politely, "I'm glad to meet ye."

"It gives me pleasure to meet you," she answered, pleasantly, "I think you hardly remember me as——"

"What name, please?—I'm a little deaf."

"May Ashton, father, George's wife," Sarah interposed.

"Oh, it's that Ascott gal, is it?" he replied, looking hard into her face, "I told George if he brought an Ascott into the family I would disown him, and I have."

May was ready to sink into the floor with mortification and astonishment. Her cheeks burned like fire and her eyes swam so that, for the time, she saw nothing. Composing herself in a few moments, she said as she rose to go, "Pardon me, sir, for intruding myself in your way; George did not tell me that or I should never have become his wife." Then holding out her hand to Sarah, she whispered, "good bye," and then started hastily for the door.

"Don't mind him, sister May," said Sarah, throwing an arm around the poor girl, as they stood alone in the hall, "it is all for the best, and *we* love you dearly. I will come and see you to-morrow. Don't think of it again," and kissing her tenderly, she led her to the carriage.

How she reached home, she never knew, for hidden behind her veil, pent up anguish found expression in blinding tears. Upon reaching the house, she sought her room immediately, and, throwing herself upon the bed, cried as though her heart would break, reproaching herself for not questioning her husband more closely regarding the difficulty with his father, 'ere she became his wife. In an hour she grew more calm, though the red swollen eyes and tear-stained cheeks, and the deep drawn sob, at regular intervals, told how poignant was her grief. In this condition, George found her, upon returning from his afternoon's work. Amazed and astounded, he approached the prostrate girl, throwing himself on his knees at the side of the bed.

"My darling wife, what is the matter? Tell me," he exclaimed, passionately seizing her hands, and looking into her face. She slowly turned towards him, her brown eyes resting pathetically a moment upon his own, and her lips attempted to speak.

"You—your—father—" she commenced, but a great choking sob refused her further utterance, and throwing her arms around her husband's neck she again gave herself up to her grief.

It was an hour or two before she could gain sufficient control over her feelings to tell what had happened, and thus George heard a recital of the brief words that had brought so much unhappiness to his household. At first his anger knew no bounds; he would resent the insult even if it had come from his own father. May entreated, and he changed his mind. Then he wrote a scathing letter covering an entire page and a half of foolscap. Finding this too wordy he tore it up and gave instead half a page of wholesome advice, in more condensed form; but he never sent it, for May said no, and he did not like to disregard her wishes. It was a bitter drop in the young wife's cup, and for a time the source of great unhappiness, causing the first real disagreement that had occurred in their wedded life. She reproached her husband for deceiving her when she had first questioned the state of old Mr. Ashton's feelings before their marriage, and he in turn used all the arguments in his power in a vain endeavor to make his wife view the matter in the light in which it appeared to him.

"Am I never to be forgiven, May, for the sin of marrying you in spite of my family? I thought I was giving you a proof of my devotion. It seems to me quite enough to have incurred my father's displeasure without having to lose my wife's affection into the bargain."

"It was a selfish devotion," she answered; "or you would never have subjected me to so much misery and unhappiness, as I have experienced in these last few weeks. It was *cruel*, George."

"Heaven and earth! May, you will drive me distracted. I, cruel and selfish, and toward you?—You for whom I would have made any sacrifice in the world—nay, did sacrifice friends, fortune, and nearly everything but my name, to show how deeply I loved you? Yes, perhaps I was selfish, selfish in the thought that I could not endure to live without you—and cruel in my selfishness by keeping from you the foolish prejudices of an old man who had never seen you. Had I loved you less, my course might have been different. You have often reproached me of late, and as often told me our marriage would never have taken place had you dreamed of such opposition. May I now ask you, kindly, in view of such a course where *your* love could have been?"

"Duty, George, may outweigh love."

"Duty to whom?"

"Duty to each other," his wife answered, adding, as she threw herself upon the sofa; better a hopeless love than an unhappy marriage."

"You are as unreasonable in your alternatives as my father—more so in fact—for he forced me to choose between the girl I loved, or a few paltry thousand dollars,—both supposibly desirable—you would have me choose between disappointed love on the one hand, and a life of wedded misery on the other. Thank you, I do not care to take either horn of the dilemma."

"You are hateful!" she exclaimed, rising hastily from her reclining posture, a vivid spot of carmine burning upon either cheek."

"Come, come, May! must we thus early in our married life set up a skeleton in the domestic closet? Forget my father's petulant words, and in your own consciousness of right, live above them."

"I can never see it as you see it," the young wife answered, "for you know little of a woman's nature, which cannot—no, *will not* bear insult and contumely from those that never have been wronged in thought or deed."

"Well,—all is if you prefer to hang up the skeleton, let it hang, I shall take precious good care not to rattle the dry bones, I assure you," and with an impatient toss of the head, the young man quitted the room and walked rapidly in the direction of the barn.—[To be continued.

Events are not in our power; it is always better to make a good of even the worst.—Berkeley.

NEW PUBLICATIONS.

The American Anthem Book, by A. N. Johnson, J. H. Tenney and A. J. Abbey. Published by Oliver Ditson & Co.

Things go by fashion, even in church worship, and the present fashion is something like this: the choir to sing one good anthem, by way of opening piece or voluntary, and, for the rest of the time, merely to lead the congregation in their well-worn and simple tunes.

It is evident, then, that we need a large variety of Anthems, such as average chorus choirs can sing; and average chorus choirs cannot sing difficult music.

The American Anthem Book is, we understand, principally the work of Messrs. Tenney and Abbey, who have been "saving up" anthems for it for years. The third author has contributed his valuable critical knowledge, and arranged the anthems to suit the needs of choirs, with which no one person is more familiar.

There are anthems for every Sunday for two years in the collection, and all seem to be in good form and fine taste, as well as easy.

Art Needlework for Decorative Embroidery: A Guide to Embroidery in Crewels, Silks, Applique, &c., with Instructions as to Stitches and Explanatory Diagrams. Containing also, A Short History of the Art of Embroidery. Reprinted with additions from the English. Edited by Lucretia P. Hale. Boston; S. W. Tilton, & Co.

Now that the decalcomanie fever has abated, and those who care truly for art have set themselves to make a study of it in one or more of its various branches, works like "Art Needlework" are necessities. The book is carefully edited.

Coligny. By Walter Besant, M. A. Published by G. P. Putnam's Sons. Price $1.25.

This volume endeavors to show how one man of indomitable patience, steadfastness and clearness of brain, brought together the Protestantism which lay scattered over the whole country. When the cause seemed really won, the Admiral was slain by an act of treachery, the equal of which has not been recorded. The author says, "other great men adorned that age of struggle and upheaval: he overshadows them all. It is in the earnest hope that his history may serve at once as an encouragement and an example that I send it forth."

The American Primer, No. IV.: entitled, The Throat and Voice. B. J. Salis Cohen, M. D. Philadelphia: Lindsay & Blakiston. Price 50 cents.

The author has aimed to explain in clear and concise language the structure of the throat, its ailments and their treatment; the production of the voice; its modifications, defects and preservation. This is an admirable treatise belonging to a series of works which must have value for everyone interested in science and hygiene. It gives the information that all should have, and still it is not pretentious nor detailed beyond the demand of every reader.

The Manliness of Christ, by Thomas Hughes. New York. Houghton, Osgood & Co., publishers. Price $1.00.

The motive of the book is truly a good one. It treats of the character of Christ in relation to every day life, showing a perfect life, the equal of which has never been attained. To preach merely of His divinity is not sufficient to reach the many who need a living example, or a knowledge of such.

Some Practical Hints on Wood Engraving, by W. J. Linton. Boston: Lee & Shepard, publishers. Price, $1.25.

This work treats of various modes of wood-engraving. Much information is given in a condensed form, but the reader will be rewarded with entertainment as well as mere facts.

MAGAZINES FOR MAY.

Lippincott's Magazine.—Lippincott's Magazine for May opens with an illustrated paper on Richfield Springs, which, besides an attractive description of this much frequented watering-place and much information that will be useful to all who think of spending part of the summer there, gives some interesting particulars about Fenimore Cooper and Judge Nelson, whose farms at Cooperstown lie within an easy drive from Richfield. A descendant of the famous novelist, Miss Constance Fenimore Woolson, contributes to this number a quaint and touching story entitled "Miss Grief." The first of a series of "Studies in the Slums," by Mrs. Helen Campbell, gives a striking account of the mission in Water Street, New York. The concluding paper of Octave Thanet's able discussion of the condition of "The English Workingman" deals with another and not less pressing social problem. "The Backwoods of Guatemala" are graphically pictured with both pen and pencil in Dr. Oswald's "Summerland Sketches." Nena Sturgis has an illustrated article on "Ancient Maskers and Modern Carnival." F. M. Osbourne gives an amusing account of a "Funeral in a Chinese Fishing Village," and Phebe D. Natt describes the methods of instruction in the various "London Art Schools." There are several short stories, including a lively sketch of negro life by Jennie Woodville; "Adam and Eve," by the author of "Dorothy Fox," grows in interest, and the "Monthly Gossip" is full of good things, embracing reminiscences of Charles Dickens and the Countess Ida Hahn-Hahn, with several short articles on social and literary topics.

The Herald of Health.—Contents: The Secret of a Clear Head. (5) By J. Mortimer Granville; Crooked Spines, by Dio Lewis, M. D: Paternity, by Julia Ward Howe; Our Dessert Table; Her Face is Her Fortune—The Dashing Waters' Sorrow—Believe and Trust—Happiness. Topics of the Month; Eat Slower; Supposed Cause of Intermittent Fever—Health Hints for May; The properties of a good Apple—Effects of a slight Wound—Milk Record of Hygienic Progress. Studies in Hygiene for Women; Womens' Dress; Benefits of a Cheerful Disposition—The Coming Woman—Neglecting Cold in the Head; Peevishness a Disease—Hindoo Girls—One Use of the Brain—Chilblains; Current Literature; Health Foods.

Supposed Cause of Intermittent Fever.—For a long time investigators have been seeking the cause of intermittent fever. In a recent number of a German scientific periodical are given the investigations of two eminent scientists which go to confirm Prof. Salisbury's investigations made in this country 20 years ago. These two investigators spent several weeks during the Spring of 1879 in the Agro Romano, notorious for so much of the worst form of ague and remittent fever.

They examined minutely the lower strata of air, the soil, and the stagnant water of the region and found in it in great abundance a microscopic plant of a peculiar shining color, longish, of oval shape, and capable of motion. In order to test the matter thoroughly, they filtered out a quantity of these plants, dried them, and then inoculated healthy dogs under the skin with the residuum. The result was the animals suffered with malarial fever, having it with all those peculiar features which are observed in human beings. While this is, perhaps, not conclusive, it certainly is very suggestive, and goes far to prove the truthfulness of the germ theory of disease at least so far as malarial fever is concerned. The spores were found not only in the water but in the soil and lower strata of air.

The hygienic lesson to be learned from these investigations is, to get rid of the stagnant water which is filled with them, by thorough drainage. There is nothing new in this; but old lessons must be repeated over and over again before they are learned by heart.—*Herald of Health.*

Sabbath Reading.

THE GOLDEN SIDE.

BY M. A. KIDDER.

There is many a rest on the road of life,
If we only would stop to take it;
And many a tone from the better land,
If the querulous heart would wake it.
To the sunny soul that is full of hope,
And whose beautiful trust ne'er faileth,
The grass is green and the flowers are bright,
Though the wintry storm prevaileth.

Better to hope, though the clouds hang low,
And to keep the eyes still lifted:
For the sweet blue sky will soon peep through,
When the ominous clouds are rifted.
There was never a night without a day,
Nor an evening without a morning;
And the darkest hour the proverb goes,
Is the hour before the dawning.

There's many a gem in the path of life,
Which we pass in our idle pleasure,
That is richer far than the jeweled crown,
Or the miser's hoarded treasure;
It may be the love of a little child,
Or a mother's prayer to heaven,
Or only a beggar's grateful thanks
For a cup of water given.

Better to weave in the web of life
A bright and golden filling,
And to do God's will with a ready heart,
And hands that are swift and willing,
Than to snap the delicate silver threads
Of our curious lives asunder,
And then heaven blame for the tangled ends,
And sit to grieve and wonder.

As to serving the Lord with cold hearts and drowsy souls, there has been too much of it; and it causes religion to wither. Men ride stags when they hunt for gain, and snails when they are on the road to heaven. Preachers go on see-sawing, droning, and prosing, and the people fall to yawning and folding their arms, and then say that God is withholding his blessing. Every sluggard, when he finds himself enlisted in the ragged regiment, blames his luck, and some churches have learned the same wicked trick. I believe, that when Paul plants and Apollos waters, God gives the increase; and I have no patience with those who throw the blame on God, when it belongs to themselves.—*C. H. Spurgeon.*

Christianity is its own best evidence. Give us more and more of real Christianity, and we shall need less and less of its evidences. "Ye are my witnesses," says Christ to His disciples. One truly Christian life will do more to prove the divine origin of Christianity than many lectures. Hence, it is of much greater importance to develop Christian character, than to exhibit Christian evidences.—*J. Monroe Gibson.*

God always has an angel of help for those who are willing to do their duty. How often have we been afraid to undertake some difficult work for Him; but as soon as we laid hold of it the rock of hindrance was removed. The tempter told us that if we attempted to save some hardened soul we should encounter an immovable adamant. We had faith enough to try; and prayer brought the power which turned the heart of stone to flesh. Evermore the adversary is busy in frightening us from labors of love for our Master.—*Theodore Cuyler.*

Meditate long, meditate humbly on what it is to have a Creator, and comfort will come at last. If broad daylight should never be yours on this side the grave, He will hold your feet in the twilight that they shall not stumble, and at last, with all the more love, and all the more speed as well, He will fold you to his bosom, who is himself the Light Eternal.—*F. W. Faber.*

Let us serve God in the sunshine, while he makes the sun shine. We shall then serve him all the better in the dark, when he sends darkness. It is sure to come. Only let our light be God's light, and our darkness God's darkness, and we will be safe at home when the great nightfall comes.—*F. W. Faber.*

THE success or failure to be a good and true man depends largely upon one's obedience or disobedience to the convictions of duty which every man at times feels.—*Golden Rule.*

THE world judges of benevolence by what it sees in the hand; God judges of benevolence by what He sees in the heart.—*John Cumming.*

REPENTANCE without amendment is like continual pumping in a ship without stopping the leaks. —*Palmer.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

TIMELY HINTS FOR HOUSE-KEEPERS.—No. 1.

MRS. L. P. ROBINSON.

Before House-cleaning.

As house-cleaning time rolls round, I can but reiterate the oft-repeated advice, "Don't tear up the whole house at once; don't rush things; don't overtax your strength at first and then drag through the remainder half sick, but go moderately about it."

Take some warm, sunny day and begin with the garret. Once a year—and spring is the most convenient time—overhaul every bag and basket, every box and barrel, unrolling and shaking out the contents of each. In this way the accumulation of useless articles will be prevented and all moths destroyed. You will probably discover some garments that you had forgotten, that, with a little ingenuity, can be made over for Jessie or John, and do nicely for spring wear. Place all such articles together in a basket to be conveyed to your sewing room, so that when an opportunity presents itself they may be at hand, and so prevent delay in hunting them up.

You will find good cleaning cloths, both cotton and woolen, and these should be laid in some convenient place. You will look into your carpet-rag barrel, fastening the ends of the balls neatly and putting the uncut rags where they can be easily picked up, to be cut and sewed in odd moments; they should all be sewed up once a year. My grandmother instructed me in the art of cutting carpet-rags; everything must be cut lengthwise, almost by a thread. I have since learned that it answers equally well to round the corners of coarse, firm material, and cut around the whole piece, leaving it in one length from beginning to end. In this way I can make a ball with but very little sewing.

The paper rags must be assorted, the white ones kept carefully by themselves, and placed in readiness for the rag-man.

The piece baskets should not be neglected, but subjected to the same scrutiny. The new remnants of worn-out cotton garments give to Jessie for her patch-work, the woolen scraps roll together, to be cut in narrow bias strips, and knit into a pretty hearth-rug at your leisure. Empty the box containing the dried fruit. Shake the bags and turn them wrong side out, or, what is better, have clean ones; then, after a careful examination, if no sign of worms be found, put them again in the bags. As apples are more liable to be affected than other fruits, it is safest to put them in a dripping-pan in the oven and heat them hot.

Carry out and destroy everything that you are sure can be of no further use—things that will find their way into a garret, such as broken dishes, leaky tins, old dilapidated furniture, old boots and shoes. By the way, old leather makes a bright, hot fire, and is just the thing for a quick blaze in case of an emergency.

All old carpeting or bedding should be hung out in the wind, and the fur robes also, before packing them away in tansy and ailanthus seeds or tobacco, to prevent the ravages of the ever-present moth.

Some one has recommended—and I heartily indorse the suggestion—that every house should hold a trunk containing half-worn clothing, sheets and pillow-cases, in readiness for sickness. For this purpose a double-gown, made of two calico dresses, might prove serviceable, as well as some soft handkerchiefs, bandages and lint; also, plenty of linen, cotton and woolen pieces. While overlooking the various receptacles of such articles, it would be well to remember this timely hint, and collect them against a time of need.

After having accomplished so much, you will then be prepared to clean in earnest, sweeping down the cobwebs as far as practicable, washing the windows and mopping up the floor; then, when the boxes, baskets and barrels are once more in the corner, if you have worked according to the preceding suggestions, you can calmly rest upon your oars until the weather grows warmer, in full consciousness of having faithfully performed a most disagreeable task.

CANNING TOMATOES IN TIN.

IN the early days of our house-keeping we firmly resolved that all our fruit, tomatoes, etc., should be canned in glass, and nothing else—fruit so preserved was so pure, could always be seen, admitted of no chance of becoming poisonous, etc. Well, that resolve was persevered in for the first five years, and in that time I do not think that we ever saved one-half dozen cans of tomatoes. All other articles, except peas, kept well enough; but the tomatoes would either sour, or become tasteless, although they looked bright and fresh. Some one advised a change to Rockingham ware as the nearest approach to glass. That was tried with a little better result. Next stone-ware received a trial, but that also, sometimes failed. As a last resort tin was tried and since then no trouble is experienced. Our tomatoes are just as good as need be. Being very fond of them sliced we made an attempt to preserve them for that purpose for winter, during our last canning season. The tomatoes, Golden Trophies, were pared the same as apples without scalding, and cut in thick slices into the cans, holding one quart or a little more each. The cans were then placed on the stove and slowly heated through, no water was put with them, and when hot enough to raise steam the lids were pressed on and fastened down with putty. Those tomatoes were a treat to us all through the winter. They came from the cans in whole slices and were eaten with vinegar, salt and pepper. Why any one should desire tomatoes to keep better than they did in tin is a problem. M. F. M'CLOUD.

DOMESTIC RECIPES.

Orange Sherbet.

Four quarts of water; four pounds of granulated sugar, four beaten eggs, the juice and grated rinds of four oranges and juice of two lemons. Beat the sugar and eggs together, then add the water and grated rind. Freeze like ice cream. The strained juice of the oranges and lemons should not be added until the mixture begins to freeze.

Strawberry Meringue.

Make a good pie crust, roll out quite thin, cut out round as large as a pie plate and bake on a flat tin. When a light-brown, take out, lay strawberries rolled in sugar over it, and cover with a meringue made of the whites of four eggs and four tablespoonsful of powdered sugar. Return to the oven and bake until the top is browned. Eat cold.

Strawberry Ice-Cream.

Three pints of thin cream, two pounds of powdered sugar and three pints of *ripe* strawberries. Mash the fruit, strain through a fine wire strainer, add the cream and sugar and freeze as rapidly as possible.

Excellent Lemon Pie.

Two cups of granulated sugar, four eggs, two lemons, two and a half tablespoonsful of corn-starch, two tablespoonsful of butter, two cups of boiling water. Beat yelks very smooth, add the corn-starch, stir into the boiling water, add the sugar, juice, grated rind and butter. Let thicken over the back of the stove; then pour into pie-tins lined with good paste. Bake until you think the under crust is well browned. Beat the whites until a stiff froth, add four tablespoonsful of powdered sugar; spread over the top and return to the oven until slightly browned. MARY B.

Raspberry Shrub.

Place red raspberries in a stone jar and cover with good, although not too strong, cider vinegar, and let stand over-night. In the morning strain, and to each pint of this juice allow a pint of sugar. Boil 10 minutes, then bottle and seal at once. MRS. C.

Raspberry Vinegar.

Fill a stone pot with raspberries, either red or black; cover with the best of vinegar; set in a cool place and let stand for a week. Strain the whole through a thin bag, crushing out all the juice from the fruit. To each pint of this liquor add a pound and a half of lump sugar; boil until the sugar is dissolved; remove any scum and take from the fire. When cool bottle and cork tightly. Two tablespoonsful of this vinegar stirred into a tumbler of ice-water makes a most refreshing summer drink. MRS. A. L. M.

Pickled Cauliflower.

Separate into small clusters. Make a brine, bring to a boil, skim, put the cauliflower into the boiling water and *simmer* five minutes. Take out into a pan of very cold water. Prepare vinegar for pickling with mace, black and a little cayenne pepper, celery salt or seed and a few cloves. Pour over hot. A. P.

Asparagus.

It is much better to roll up the bunches in muslin than to depend upon a string. Boil in salted water until very tender. Toast some slices of thin bread, dip into the water in which the asparagus was boiled, butter plentifully. Take up the asparagus and place upon the toast. Two or three tablespoonsful of melted butter may be turned over it and a little vinegar added, if liked.

Miscellaneous.

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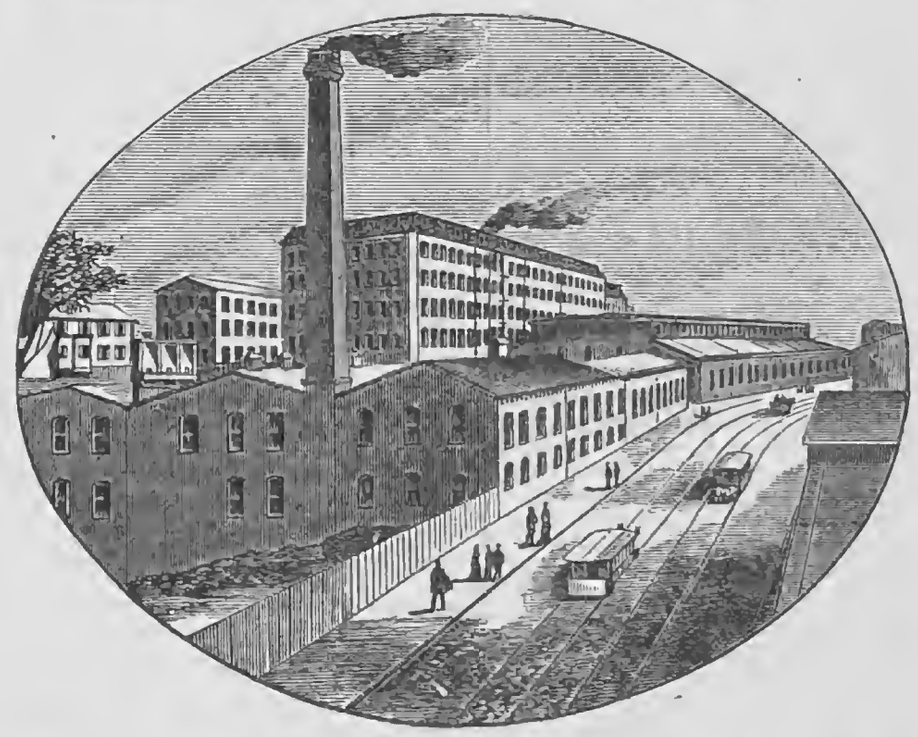

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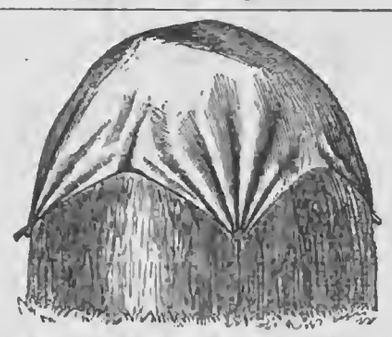
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(Will send post paid.) Burlington, Vt.

News of the Week.

HOME NEWS.

Monday, May 17, 1880.

The New York Chamber of Commerce held its 112th annual banquet lately at Delmonico's, this city. Two hundred gentlemen sat down to the feast among whom were John Sherman, the Secretary of the Treasury, R. W. Thompson, Secretary of the Navy, and many other statesmen and celebrities. Secretary Sherman in responding to the toast, "the Financial Prosperity of our Country," commented highly on the prospects of the nation. The domestic commerce is so large that all modes of transportation by land and by water are fully employed. Production in all branches of industry is greater than ever before. Great crowds of immigrants are daily arriving on our shores, and it is now established that the mineral resources of our country are greater than the wildest imagination would a few years ago have dared to conjecture.... The permanent exhibition in Fairmount Park at Philadelphia was re-opened last week, on the anniversary of the opening of the Centennial Exhibition in the same building. An address was delivered by Col. Forney.....There has been a bloody fight in Tulare county, southern California, between the squatters on some railroad lands and the officers sent to dispossess them by the company. Six men representing both sides were killed, and the squatters thus far are the victors. .....Victoria's band of savages continues its career of murder and ravage on the isolated Arizona ranchmen, while it is reported that a party of 25 miners, prospecting in the lower Gunnison valley, near Indian creek, were attacked by Ute Indians on the 7th and 12 of them were killed.....The corner-stone of the new hall to be erected as an addition to Wellesley College is to be laid on the 27th by Mrs. Valeria Stone of Malden, N. Y., who gave $100,000 for the building, and Mrs President Hayes has accepted an invitation to be present and assist at the ceremony, and possibly the President himself will attend. President Porter of Yale college will make the address. The new building will be called Stone Hall, and is intended as a dormitory principally, and suited to accommodate one hundred students. It is to be fitted up with every convenience, with chambers, music-rooms, parlors and four small dining-rooms..... The reduction of fares by the Boston and Albany and the Southern road comes at the same time with a general reduction in all parts of the country. The Chicago and Alton, Illinois Central and other leading roads in Illinois have cut down rates from four to three cents a mile. Other Western roads have taken the same course, and the Atchison, Topeka and Santa Fe, which dropped from six to four cents a mile a year ago, reports that its passenger business "fully justifies the reduction." The New York Central has always protested against the fixed rate of two cents a mile imposed by law on that line, but it is not improbable that the exceptional cheapness of passenger fares over that road, by stimulating travel and the growth of a rural population, has been one important cause of the prosperity of the Central. Some railroad manager by the adoption of a uniform rate of 3 cent a mile will yet fill his cars and increase his profits,...A severe storm visited portions of Ohio and Illinois Sunday and Monday of last week. The village of Olsey, near Winchester, Ill., was almost destroyed by the wind, 20 buildings being wholly or partly demolished; loss over $25,000. In McLeon County $100,000 worth of property was damaged. Twelve buildings and an 160-acre orchard in Arrowsmith township were destroyed. Mr. and Mrs. Edward Reese in Empire township were carried a quarter of a mile in their bed and set down in a corn field. ....Cremation is being practiced more and more, and Washington, Pa., seems to be the accepted place in which to convert the frail mortal remains into ashes. Last week one Augustave Poetz was cremated at that place. In less than three hours the incineration was complete. The ashes will be taken to Europe by a daughter of the deceased.... We have several times during the last couple of months noticed in the News the terrible forest fires that have long been raging in Pennsylvania and New Jersey. But on the 14th the fire fiend put an awful climax on his destructiveness. The whole thriving little town of Milton, Pa., was destroyed by the flames. The fire is supposed to have originated from sparks from the saw-mill attached to the car-works. In all 666 buildings were burned. Only two places of business escaped destruction. The vaults and books of the banks are uninjured. The people of the town are almost wholly destitute. The total loss of property amounts to nearly $2,000,000....The forest fires in the above named States are still raging, although the inhabitants of the ill-fated districts are fighting the fire with great determination. Pitiful accounts are given of the desolate condition of the country over which the fire has swept. Timber to the value of hundreds of thousands of dollars is destroyed.

A bill has been introduced in Congress as an amendment to the "Morrill Act" of 1862, adding 10,000 acres of land for each Senator and Representative, based on the census of 1850, to the endowment already given agricultural and mechanical colleges....The case of the colored cadet Whittaker, at West Point, upon whom an outrage was perpetrated, which we have heretofore noticed, seems at last to be clearing up. A note of warning to the effect that an outrage would take place was found in Whittaker's room. Five different experts in handwriting employed by the court declare that this note was written by Whittaker himself. Moreover, this note was written upon half a sheet of note paper and the other half, upon which he had begun a letter to his mother, was found in his room, and a microscopic examination of the edges establishes as a fact that the two pieces were once connected. Whittaker still denies that he did it himself.

AGRICULTURAL NEWS.

RUSSIA has half a million acres under sugar beets and 300 factories for working the roots up into sugar. Four years ago she made her first exportation of beet sugar—half a ton. She now exports 65,000 tons yearly. Beet culture *is said* to give there a net profit of $30 per acre.....The Kentucky Legislature has appropriated $500, to be used under the direction of Col. Bowman, State Commissioner of Agriculture, in analyzing artificial fertilizers offered for sale in that State. Firms dealing in commercial fertilizers are required to submit samples for analysis, and the article sold must come up to the sample in quality.....The will of Lewis Clapp of Lee County, Ill, leaves $150,000 for the endowment of an agricultural college on condition that the county add $100,000 to the amount.....The U. S. Senate patents committee has decided to report the bill providing that no costs shall be recovered against innocent users of patents where plaintiff does not recover damages of $20 or over.....The anti-discrimination bill, having passed the House of Representatives in Albany, is still before the Senate Committee on railroads. By lengthy arguments and other tactics, the managers of the roads are doing their utmost to delay action upon it until it shall be too late for the Legislature to interfere during the present session.....A A new creamery has been organized at Waterville, Onedia Co., N. Y., with P. B. Haven for Pres. and F. S. Risley for Sec. It will be on the Fairlamb system—that is, the patrons of the company will skim their milk at home, the cream only being taken to the factory. Thus all will have at a moderate cost the advantage of an experienced butter maker; the trouble and expense of churning at home are avoided; the skimmed milk is kept for home use; an agent of the factory collects all the cream and returns the buttermilk, thus saving an immense deal of travel on the part of the farmers.. ..A discussion has arisen in British official circles concerning the necessity and expediency of existing restrictions upon importing cattle, especially from the United States. The rarity of cases of infectious or contagious diseases discovered in the cattle imported hence in 1879, is pointed out in a recent article in the Pall Mall Gazette. It refers sympathetically to the efforts of Evarts and the United States, and says that the most of such cases might well be the result of the hardships of an Atlantic passage and possibly avoidable by the improvement of transit facilities. The Gazette further says: "As prominent Liberals objected to the course adopted by the Privy Council at the time the restrictive cattle orders were issued, and as the present Vice-president of the Council is one of the most outspoken opponents of the act on which the orders are based, it seems highly probable that a reconsideration of the prevailing policy will not be long delayed....

PRESIDENT HAYES.

The validity of Mr. Hayes' title may always be questioned, and his administration criticised, but the payment of one dollar gives a valid title to one bottle of Dr. Pierce's Golden Medical Discovery, and its administration can never be criticised in cases of coughs, colds, incipient consumption, and general debility, for leading physicians of all schools indorse the Discovery and prescribe it in their practice. Sold by druggists.

Creameries on Trial.

THE manufacturers of The Ferguson Bureau Creamery announce that they will send out their Creameries on trial.

This apparatus has given such universal satisfaction for the last three years, and they have such confidence in its perfect adaptation to the wants of all dairymen, that they freely offer to send one to any reliable party, of such size as they need, on 30 days trial. If it does not work satisfactorily it may be returned.

In the last year they have sent out over two hundred Creameries on these terms and NOT ONE has been rejected.

Particular attention is called to the fact that the Creamery can be used with either ice, running spring water, or cool well water, and that it is especially useful in cold weather. After a person becomes accustomed to it, they will be able to use it nearly the whole year without artificial cooling, by taking advantage of the cool night air, according to the directions.

No other Creamery is offered on such liberal terms, and no dairyman in justice to himself and to his wife, (for they are especially adapted to dairies where women do the work) should buy any apparatus until he has given the Bureau Creamery a trial.

They also offer to send their Concussion Churn on the same terms.

Messrs. Wells, Richardson & Co., the well known manufacturers of the Pefected Butter Color, are largely interested in The Ferguson Manufacturing Company, and we have their guaranty that all the business of the Company will be done in the most honorable manner.

We advise all our readers in want of milk setting apparatus to correspond with the The Ferguson Manf'g Co., of Burlington, Vt.

FOR COUGHS, COLDS, CATARRH and Throat Disorders, use "*Browns Bronchial Troches*," having *proved* their efficacy by a test of many years.

Frank Leslie, Esq., of the "Illustrated Weekly," says: For some time past I have been using BURNETT'S COCOAINE, and think it far preferable to anything I have ever used for the hair."

Thousands of ladies to-day cherish grateful remembrances of the help derived from the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It positively cures all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

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Kidney-Wort acts first by overcoming in the mildest manner all tendency to constipation; then, by its great tonic and invigorating properties, it restores to health the debilitated and weakened parts.

OUR readers will do well to notice the advertisement of Hermon W. Ladd, XX Col, in our paper this week. Here is a good bed for a little money, and it is appreciated, as the enormous sales of the past year fully proves.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, May 15.

So little of last harvest's products still remain in the hands of the farmers, and so few are the purchases they have now to make in quotable commodities, that we shall, for an interval, suspend most of our quotations in markets outside of New York, substituting therefor, matter of more interest to our readers. When our market reports are fully resumed, we shall have completed arrangements for making them more complete and trustworthy than they have been even in the past.

Boston.—BUTTER—The prices have tended in buyers' favor, although the receipts have been sold up closely. The weather has been so warm that the receipts have been affected by it, and the butter is not in so good shape as in cold weather. The market is weak at lower prices at the close. NEW BUTTER—Choice Northern dairy, 19@21c; fair to good Northern dairy, 16@18c; common and bakers', 15@16; choice Western creameries, 22@24; good, 20@22; choice Western dairy-packed, 18@20; choice Western ladle-packed, 17@18; common and bakers', 15@16. CHEESE.—The demand is light. New whole milk, 14@15; new half skims, 11@12c; new skims, 8@9c. EGGS.—There is a generally dull tone to the market, and a good supply of Western and Northern. There are not so many Eastern eggs, and they are firm at quotations. Eastern, fresh, 12@12½c, ₰ doz.; Northern, fresh, 11½@12c; Vermont and N. H., 12@12½c; Western, fresh, 10½@11c; P. E. Island, 11½@12c; egg oats, 38@42c.

Chicago.—WHEAT irregular; options higher and cash lower; No. 2 Chicago spring, $1.18 cash and May; $1.13½@1.15¾ June; $1.08 July; No. 3 do at 96½@97c; rejected, 80@88c. CORN steady and firm at 37½c. cash and May; 36⅞. June; 37½c. July; 37½c. August. OATS quiet, but firm at 30¼c. cash; 30¼@30½c. June; 28c. July. Pork easy at $10.30@10.35 cash; $10.32½@10.35 June; $10.45@10.47½ July; $10.57½@10.60 August. Lard easier at $6.92½@6.95c. cash; 6.95c. June; 6.97½@7c July. Bulk meats in good demand and a shade higher; shoulders at 4¾c.; short ribs at 40c; short clear at 6.60c Eggs were quoted at 8@8½c. per doz. The inquiry was only fair. BUTTER.—The demand continues moderate, buyers not caring to stock up at present prices, a further decline being looked for. Sales to a fair aggregate were effected at the following quotations. Creamery, 19@22c; good to choice dairy, 16@19c; medium, 14@15c; inferior to common, 8@10c. CHEESE.—There was a weak and unsettled feeling in this market. Fine mild grades still find buyers at outside quotations, but most of the trading is at inside to medium figures. Full cream, new, 13½@14c; part skim, new, 10½@11½c; full skim, new, 8@10c; low grades, 6@8c. HOGS—Market weaker and 50 lower than yesterday; common to rough mixed at $4@$4.30; good to choice mixed at $4.34@$4.45; choice heavy at $4 50@$4 60; light at $4.20@$4.50. CATTLE—Market firmer for good; common to fair shipping at $4@$4.25; good to choice at $4 40@$5; butchers' quiet and slow; bulls at $2@$3; cows at $2@$3 50; stockers and feeders active and firm at $3@$4.20. SHEEP—Clipped in good demand at $4.50@$5.10; wool at $5.75@$6 per cwt.

Detroit.—WHEAT firm; No 1 white Michigan at $1.16½ bid; May, $1.16½; June, $1.13½; July, $1.10½; CORN quiet and unchanged. OATS scarce and firm; No. 1 white at 40½c.; No. 2 do. at 40c.; No. 1 mixed 37½c.; No. 2 do at 37c. CLOVER seed dull and neglected; prime nominally $4@4.10.

Milwaukee—WHEAT opened unsettled, advanced ¼c. and closed dull; No. 1 Milwaukee hard and soft nominal; No. 2 Milwaukee, cash and May at $1.12¾; June at $1.12; July at $1 08¾; No. 3 do. at 98½c.; No. 4 do at 91c.; rejected at 85c. CORN quiet but firm; No. 2, 37½c. OATS firm; No. 2 at 30¾c. RYE firmer at 80c. for No. 1. BARLEY firm; No. 2 spring at 69c. PROVISIONS quiet, but firm. Mess pork quiet at $10.25 cash and May; $10.35 June. Lard—Prime steam at 6.90c. cash and May; 7c. June. Hogs firm and unchanged at $4.25@4.40.

St. Louis.—WHEAT unsettled; No. 2 red fall at $1.12@$1.12⅛ cash; $1.12⅛@$1.12 7-8 May; $1.05⅞@$1.05¾ June; 85½c, July; 92@92½c, August; No. 3 do., $1.07½ bid. CORN at 35⅛@35⅜c cash; 34 7-8@35c, May; 34½c, June; 35 5-8@35¾c, July. OATS firm at 31 1-8@31½c, cash; 30 7-8c, May; 30 5-8c, June; 35¾c. July. RYE firm at 90c. PORK strong at $10.50 cash; $10.60@$10.67½ July. LARD held $6.90, asked. BULK MEATS firmer, shoulders at 4c; clear ribs at $6.25@$6.30; clear sides at $6.45@$6.50. BACON firmer; shoulders at 4 5-8c; clear ribs, $6.95; clear sides at $7.20.

Toledo.—WHEAT weak; No. 3 white Wabash, $1.17; No 1 white Michigan at $1.16; amber Michigan at $1.22; No. 2 red winter spot, at $1.22; May at $1.20¾; June at $1.15¾; July at $1.05; August at 99¾c.; No. 3 red Wabash at $1.13; western amber at $1 22; No. 2 red mixed at $1.17. CORN weak; high mixed at 42½c.; No. 2, spot, 41¾c.; May at 41¾c.; rejected at 40¾c.; damaged at 37½c. OATS dull and nominal.

Fertilizers.

Bone at $23.50@$24.00 per short ton for Texas and South American mixed, and $26@27 do. for skin and shank. Sulphate of ammonia continues firm at 3¾@3⅞c. per lb; some sales as high as 4c. have been made for the home market. Dried blood in good demand at $2.25@2 37½ per unit of ammonia for short ton. Tankiug in request at $3@3.12½ per unit of ammonia, phosphates gratis, per short ton. Ammonite, azomine, etc., in good demand at $2.62½@2.87½ per unit of ammonia respectively. Bone ash continues unchanged at $23@24 per short ton on the basis of 70 per cent phosphate of lime. No stock.

Nitrate of soda, 4¾c. Saltpetre, crude 6@6. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent. ammonia, $35@$40; dissolved bone black, 15 to 17 per cent. of soluble phosphoric acid $30@$35; dissolved bone 13 to 14 per cent. of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent. of soluble phosphoric acid, 3 per cent. of potash, 3 per cent. of ammonia, $40@$45; German potash salts, 25 per cent. of sulphate of potash, $15@$18 per ton; muriate of potash, 80 percent. 2@2½c per lb. land plaster 7.50; dried blood, 10 per cent of ammonia, $35@45 per ton; fish guano dry and ground fine, 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $45; unground fish guano, 6 per cent of ammonia, $25; castor pomace; $19@24; sulphate of soda ground, and in barrels, $15@18 per ton; sulphate of ammonia 4½c. ₰ lb; bone black, 70 per cent of bone phosphate, $30@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $20 per ton; No. 1 Peruvian guano, 10 per cent ammonia, standard, $55 per ton; Lobos $46 per ton; rectified $65 per ton; guaranteed $56 per ton; nitrate of soda, 5¼@5½ ₰ lb.

FORRESTER'S potato manure, $47.50; cabbage, $50; oat, $47.50; lawn dressing, $47.50; turnip, $52; grass, $45; hop, $47.50; strawberry, $42.50; wheat, $45; rye, $47.50.

STOCKBRIDGE'S manures quoted: Potato, $50; cabbage, $50; strawberry, $40; corn $45; seeding down, $40; orange tree, $35; onion, $50—per ton each.

MAPES'S complete manures for clay soil, $25.50 per 1,000 lbs.; for light soils $25.50 per 1,000 lbs.; "A" brand for general use, $20 per 1,000 lbs.; fruit and vine, $18.50 per 1,000 lbs.; cabbage and cauliflower, $23.75 per 1,000 lbs.; corn, $24.50 per 1,000 lbs.; potato, $24 per 1,000 lbs.; asparagus, $25.50 per 1,000 lbs.; gypsum, Nova Scotia, ground, ₰ ton, $7.50.

BOWKER'S "Hill and Drill Phosphate" $45; Bowker's Phosphate $40 ₰ ton, each; Bowker's "Food for Flowers," 35c. ₰ package and $3 ₰ doz.; Bowker's "animal meal for fowls," $2 50 per cwt.; Ground oyster shells, $1 ₰ cwt.

BAUGH & SONS' prices for goods delivered at depot or boat, in bags and in 2,000 ₰ lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36; Baugh's raw bone superphosphate $40; Baugh's $25 phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent. of ammonia, $48.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, May 15, 1880.

BEANS AND PEAS.—Supplies of beans are light, but there are plenty in store. Prices are steady, but any attempt to add to present rates for good marks would check the limited demand of the season. Extra marks that are always held with a view with a view to hot weather trade are firm and not now pressed for sale. Quotations for the various grades of prime seldom run so equal as at the movement. Peas are steady. Wisconsin green $1.80 ₰ bush.; Southern S.E. peas at 95c@$1.00 ₰ bu. bag; Marrow beans, prime, $1.67@1.10; other, $1 45@1.55; medium, prime, $1.3.@1.40; other, $1.20@1.25; pea, $1.45@1.65; white kidney, $1.50@1.70; red kidney, prime, $1.30@1.60; black, (or turtle soup) $2.20 Lima, Cal., $5.

Receipts for week, 2,350 bush., exports, 375 pkgs.

BEESWAX.—There is little doing, with 24@24½ c quoted for Western and Southern.

Exports for week, 1,810 ₰s.

BUTTER.—Prices are extremely low and express a weak future. This, however, is the worst part of the year to quote when lots are so mixed. They now include white, white bottoms, experimente in coloring and a few pure grass invoices. Shippers are in market at the new rates, and want only upper grades when they pay 19@20c. Welsh tubs are a favorite purchase with them at present. Western does not arrive freely, as the state drops any further when quality becomes generally attractive there will not be much room for ordinary Western packed. Large shipments of Iowa creamery are promised. Few marks of creamery fill up their usual merit of excellence, and some of the best grocery buyers are rejecting some brands for selections of fine half tubs. Quotations: Creamery, choice, 23c.; fair to prime, 20@22c.; poor, 17c., State, pails and ht. tubs, choice, 20c.; other, 14@18c.; Welsh tubs, 14@19c.; Western imitation creamery, 15@18c.; do. dairy, 15@17c; do. factory extra, 16c.; other, 13@15c.; very poor, 9@10c.

Receipts, 29,300 pkgs.; exports, 5,064 do.

CHEESE.—Early in the week the maket broke sharply, to correspond with what is in the country; down to 12½c. has been accepted for fancy factories. The reduction in prices and the improved quality of the stock arriving brought a much freer export demand, and towards the close there was a steadier feeling. The exports for the week have reached 29,930 boxes.

Latest prices are at 12½@12¾c. for choice full cream, 11¾@12c. for good and fine; 10½@11c for fair, and 9@10c. for half skimmed. Ohio factory dat at 12¾@14¾c. for full cream; 10½@11½c. for fair and good lots; 9@10c. for half skimmed.

Receipts for week, 30,100 boxes; exports, 28,750 do. Liverpool cable, new cheese, 68s. Steam, 58s. 6d.

COTTON.—There has been an active business for export and prices closed strong; latest prices are for May, 11.67@11.68c.; June, 11.72c.; July, 11.79c.; August, 11.82c.; September, 11.38@11.39c.; October, 10.91@10.95c.; November, 10.71@10.76c.; December, 10.71@10.76c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	9¾	9¾	9 ¾
Strict ordinary	10	10¾	10⅜
Good ordinary	10¾	10⅞	10⅞
Strict good do	10 13-16	10 15-16	10 15-16
Low middling	11 5-16	11 7-16	11 7-16
Strict low middling	11¾	11⅞	11⅞
Middling	11 11-16	11 13-16	11 15-16
Good middling	12 1-16	12 3-16	12 3-16
Strict good middling	12 5-16	13 7-16	12 7-16
Middling Fair	12 13-16	12 15-16	12 15-16
Fair	13 7-16	13 9-16	13 9-16

STAINED.

Good ordinary	9	Low middling	10 9-16
Strict good ordinary	9 15-16	Middling	11 3-16

DRIED FRUITS.—Apples have a fair jobbing demand and prices steady. Peaches are quiet and unchanged. Small fruits are slow and without quotable change.

Quotations are for N. C. apples, fair to good, at 7¾@8¾c.; choice, at 9@10c.; fancy at 10@10¾c.; Virginia at 7@8c.; New York State quarters sliced at 7¾@8¾c.; patent evaporated, in cases, choice, at 15@15½c.; good and prime at 14@14½c. evaporated, choice sliced at 13@13½c., and good do. at 12¼c. Evaporated peeled peaches, good to choice, at 27@28c.; North Carolina peeled, fancy, at 20c.; choice and at 17@18c.; Georgia prime at 16@17c.; fair to good at 14@15c.; common at 10@12c.; unpeeled halves at 7¾@8c.; do. quarters at 7@7¾c. Pitted cherries at 18¾@19c. Blackberries nominal at 11c. Raspberries at 28@30c. Plums at 17@18c.

EGGS.—Receipts for week, 18,450 bbls.; do. last week, 16,150 do. The demand does not prevent supplies from accumulating—a bad feature for spring when warm weather is near. The over stock is severely felt, and low prices seem settled ones. Buyers are urging loss off at this early date, and that fact makes holders anxious about stored stock. Good marks of Western have sold down to 10½c. Quotations:

Near Points, 12@12½c.; State and Penn. and Canadian, 11@11½c.; Western fresh, 11c.; poor or held, 10@10½c.; duck eggs are no longer a specialty, now counted in with hen. Goose scarcely wanted; 18@20c.

FLOUR—Trade is fair, well distributed on export and local trade account, with prices without important change.

Rates, prices are at $3.60@4 75 for inferior to very choice superfine State and Western; $4.40@4.75 for poor to good extra State, odd lots and lines; $4.75@5.25 for very good to fancy do.; $4.40@4.75 for inferior to good shipping extra Western, and $4.75@5.25 for good to fancy shipping extra do.; inferior to very good white wheat extras, $4.30@5.60; very good to fancy do. at $5.30@6.75; red and amber winter wheat, inferior to very fancy trade and family, at $4.75@6.65; round hoop Ohio, $4.85@5 35; and trade and family brands of do. at $5.40@6 65; St. Louis at $4.85@5.65 for inferior to good extra; $5.65@6.75 for good to fancy; Minnesota clear, inferior to fancy, at $4 75@6 65; Minnesota "straight," poor to fancy, at $5 40@7.25, and patent inferior to fancy at $5.50@8.50; unbound stock at from $2 60@5 00; city mill extra at $5.60@6.00 for fair to fancy West Indies; do. for England, $4.40@5.25 for poor to very fancy; do. trade and family extras, $6.25@7.00; do. for South America, $6.00@6.35; No. 2 at $2.75@4.00 for poor to strictly fancy.

Receipts for week, flour, 79,760 bbls.; wheat, 2,298,750

bushels; corn, 1,057,775; oats, 400,074; rye, 78,200; malt, 75,200; barley, ——; cornmeal, 2,100 bbls.; rice, 200; grass seed 1,175 pkgs.

Exports for week, flour, bbls., 56,600; wheat, bush., 1,078,825; corn, 411,100 oats, 44,001; rye, ——; malt, ——; barley, ——; peas, ——; cornmeal, bush., 3,250; rice, pkgs., 1,031.

FRESH FRUITS.—Apples are scarce, but demand is about over. The range is $3@4 for Russets to prime Baldwins. Norfolk gooseberries have sold at $7 per bbl. Strawberries turn out very irregular in quality, especially Norfolks. Maryland has begun to ship. Md., 20@25c.; Norfolks, 12@22c.; N. C., 20@25c.; Chas., 15@20c. Hot-house grapes, B. Hamburg, $1 per lb. Peanuts dull at the recent decline—N. Y. classifications:—Va. hand-picked 5¼@5¾c.; extra prime, 5c.; good to prime, 4½@4¾c.; shelled, 5½@5¾c.; hickory nuts 20c.@$1. Pecans are all in distributors hands.

Receipts of peanuts, 1,350 bags per week.

GRAIN.—Wheat has been active and showing frequent fluctuations, closing, however, strong. The receipts for the week reach 1,100,000 bush.; latest prices are for No. 1 white at $1.27½@1.28; No. 1 white, May, at $1.27½@1.27¾; do., June, at $1.25@1.25½c.; No. 2 white at $1.25 ungraded white at $1.25@1.26¾; No. 2 red at $1.34½@1.35½; do. May at $1.33½@1.35; do. June at $1.28@1.28½; do. July at $1.17½@1.17¾; No. 3 red at $1.26¼; ungraded red at $1.29@1.33½; mixed winter at $1.29½@1.30; ungraded amber at $1.25@1.30½; No. 2 Milwaukee spring at $1.24; No. 2 Northwest spring, May option, at $1.24; No. 3 spring at $1.10@1.11. Rye at 87@91c. for State. Corn is active for export and rules strong in price; latest sales are of New York No. 2, regular inspection, afloat, at 51½@53c.; do., May, at 51@51½c.; do., June, at 49@49½c.; do., July, at 49½c.; New York steamer mixed, in lots, at 51@52c.; ungraded mixed Western at 50½@53c.; No. 3 at 50½@51½c.; New York low mixed at 51c.; yellow Western at 53@55c. Oats are active and higher latest sales are of of No. 1 white 49c.; No. 2 white at 45½@47c.; No. 3 white at 44@45c.; New York No. 1 at 44c.; New York No. 3 at 43@44c.; do. May at 40½@42c.; No. 3 at 42c.; ungraded white Western at 45@49c.; ungraded mixed Western at 43@45c. white State at 49c.; mixed State at 43c.; No. 2 Chicago at 43c. bid.

HAY AND STRAW.—There is a fair trade and prices held steady.

Shipping hay quoted at 70c.; retail lots at 80@85c. for medium, and 85@$1, for better qualities; clover, 55@60. Straw at $1@1.05 for long rye; 65@70c. for short rye, and 50@60c. for oat.

Exports for week, 2,900 bales.

HOPS.—Export demand continues slack and trade from brewers moderate; prices show no decided change. Quotations are for:

	Cents per lb	
New York, fancy	Nominal.	
New York, new crop, good and choice	33	@36
New York, new crop, medium	31	@33
New York, new crop, low to fair	27	@29
Eastern, new crop	27	@35
Wisconsin, new crop	27	@35
Yearlings	7	@18
Olds, all growths	4	@10
Pacific Coast, new	30	@35
Pacific Coast olds (nominal)	5	@10

LEATHER.—Sales at 23@25c. for light hemlock sole; 24@26c. for middle do.; 23@25c. for heavy do.; 21@23c. for good damaged.

MAPLE SUGAR.—Regular demand over.

OIL-CAKE.—Western is quoted at $31.50 per ton.

POULTRY AND GAME.—Dressed poultry is slow of sale, a good many course dressed, fresh killed, dry-picked offering. Frozen turkeys closing out at 10@12c. for best. Poor runs from 3 to 9c.

Turkeys, Phila., dry-picked, large, 8@9c.; capons, Phila. large, 23@25c.; capons, small, 20@21c.; slips, 18@20c.; chickens, Phila., small, 27@28c.; spring, Phila., ℔ lb., 30@31c.; fall, Phila., d.-p., 20c.; fowls, Phila., dry-picked, 12@14c.; Jersey, good to prime, 12@13c.; State, good to prime, 12@13c.; Western, good to prime, 11@12c., poor to fair, 5@9c.; squabs, white, ℔ doz., $2.50@2.75; dark, $1@1.50.

Live poultry has sold well, a Jewish holiday helping trade.

Chickens, spring, large, per pair, 70c.@80c.; spring, small, 40@50c., fowls, Jersey, ℔ lb, 11@12c.; Western, 10@11c., roosters, old and young, 4@5c.; turkeys, mixed, 9@10c.; ducks, Jersey, N. Y. & Pa., per pair, 75c.@$1; Western, 60@75c.; geese, Jersey, $1.50@1.75; N. Y. & Pa., $1.25@1.50; Western, mixed, $1@1.25; pigeons, 30@40c.

Game is scarce; the most of pigeons is over, Penn. flocks having scattered. Prices double what they were three days ago. Snipe dull at $2 for English and plover. Sand, 50@60c. Pigeons, $1.00@1.75; squab, $1.50@1.62.

PROVISIONS.—There is a more active trading and a generally firm market mess pork quoted at $11.20 for May and June; $11.25@11.30 for July; $11.30 for August, and $11.35 for September. Bacon at $6.75 for long clear and $7 for short clear. Beef at for extra India mess $18@20 for city and $19 for Philadelphia, and at $18@$20 for extra mess, and $9.50@10 for plain mess. Beef hams at $16.50@17. Lard—Western steam at 7.30 for spot lots; 7.30 for May; 7.30@7.32 for June and 7.35@7.37½ for July. Stearine at 8c. for choice. Tallow at 6c. for prime.

Receipts for week, pork, 6,600 pkgs.; beef, 1,150 pkgs; cut-meats, 32,500 pkgs; lard 19,600 pkgs. Exports for do., pork, 3,875 pkgs.; beef, 2,851 pkgs.; cut-meats, 5,140,625 lbs.

SEED.—Clover is firm at 6¾@7½c for Western and 7@8c. for State. Timothy is quiet, quoted at $2.65@2.75.

TOBACCO.—There is no improvement in demand, with prices essentially as quoted for some little time back.

VEGETABLES.—The market is weak for old potatoes. None sell but sound selected. New are in fair demand with easier prices for better stock.

Bermuda, new ℔ bbl., $4.50@5.50; Chas. & Sav., new $3@4.50, Fla., new, $3@4.50 culls, $1.75@2; Early Rose, Maine, per d.-h. bbl., $1.50@1.75; State $1@1.25; in bulk per bbl. $1@1.25; Peachblow, State, white, per d.-h. bbl., $1.50@1.75; red, $1.00@1.50; N. J., per bbl., $1@1.25; snowflake, State, ℔ d-h bbl., $1.50@1.75; Peerless, do. $1@$1.12; bulk, ℔ bbl. $1, do Jersey, bulk, 50@75c.; sweet potatoes, $3.00 Southern stuff is abundant with an easier tone. Asparagus plenty and cheap. Tomatoes, Fla, ℔ bu. cr. $2@3, Bermuda ℔ box 50@60c.; cucumbers, Charleston and Savannah, ℔ crate $3.50@4.00; Fla, ℔ crate, $1.50@2; string beans, Sav. & Ch'n, $2@2.50; green peas, Md., ℔ bbl. $6@6.50, York river ℔ ½ bbl.$2; do.℔ bbl,$3@4, Norfolk per ½ bbl. crate,$1.50@1.75; asparagus, O. Bay, per doz. bch., $4; Mon. Co. $1.50@1.75 do. Bur. $1@3.25 do, Md. and Del., $1.25@1.75; sale, L. I. ℔ bbl., 75c.@$1; spinach, L. I., ℔ bbl. 50@75c.; turnips, Norf., new, ℔ 100 bchs., $1@3; beets, Norf., do., $3@4; radishes, n'rby, long ℔ 100 bunches $2@2.50; round ℔ 100 bunches 87c.@$1.00. squash, marrow, per bbl., $1.75@2.00; Hubbard, $1.75@2; cauliflower, Norfolk, $2.50@3.00; cabbage Norf. $1.50@2; do. Ch'n and Sav. $1.25@1.75; rhubarb, L. I. & Jersey, ℔ 100 bunches, $1.00@1.50; onions Bermuda, new ℔ crate, $1.50@1.62; turnips, Russia, ℔ bbl., 75c.@$1.25; carrots, $2@2.50.

WOOL.—Domestic grades have little attention with prices unsettled and easy. Foreign are more active and firm. Quotations are for domestic fleeces:

Ohio, Pennsylvania and Virginia, XXX and picklock, 54@56c.; XX, 50@53c.; X, 50@52c.; No. 1, 57@60c.; No. 2, 60@51c.; common, 47@50c.; combing and De Laine, 55@60c.

Michigan, Indiana and Wisconsin, X and XX, 48@50c.; No. 1, 55@60c.; No. 2 and common, 47@52c; combing and De Laine, 58@58c.

New York, New Hampshire and Vermont, X and XX, 45@48c.; No. 1, 55@51c.; No. 2 and common, 46@51c.; combing and De Laine, 50@57c.

Iowa, Illinois and Western, X and XX, 45@47c.; No. 1, 54@56c.; No. 2, and common, 45@49c.; combing, 52@55c.

LIVE STOCK MARKETS

NEW YORK, Saturday, May 15, 1880.

BEEVES.—Receipts for week, 12,858 head; do. last week, 13,755 do. The light supplies were easily handled; and though trade was somewhat slow at the close prices of Wednesday were well supported. Common to fair steers were sold at 8¾@9½c., to dress 55@56 lb., and good to prime at 9½@10¼c., to dress 56@57c. A large number of Texas and Colorado stillers changed hands at 8¾@9¾c. to dress 55@56 lb.

COWS AND CALVES.—Supplies are small, good cows being wanted in the interior. Nominal prices, $25@40. com. to fair; good, $45@60.

VEAL CALVES.—Demand good, but with plenty of stock prices are easy.

Live calves, N. J. and Bucks Co., choice, 6½c.; prime, 5½@6c.; State, choice, 6c.; do. prime, 5½c.; fair to good, 4½@5c.; poor, 3@4c.; Mt. Holly, good to choice, 6@7c.; buttermilk, 3@3½c.

SHEEP AND LAMBS.—Receipts for week, 27,147 head; do. last week, 20,350 do. At larger supply for the week made the market drag considerably. Lambs very weak. Clipped sheep sold at 4½@4¾c.; a deck load of unshorn do. at $6.35; some clipped yearlings at 5½@6c.; Southern lambs at 7½@9c., and Jersey do. at 9½c.

SWINE.—Receipts for week, 32,088 head; do. last week, 34,655 do. Supplies all sold; nominal quotations, 4¾@5c.; city dressed, 5¾@6¼c.

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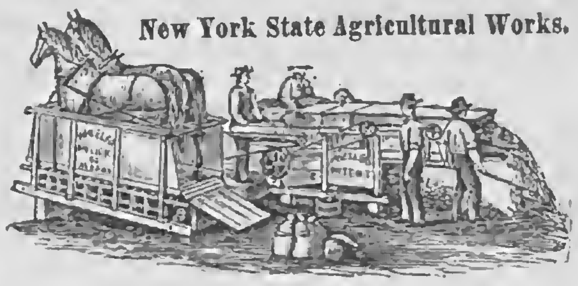

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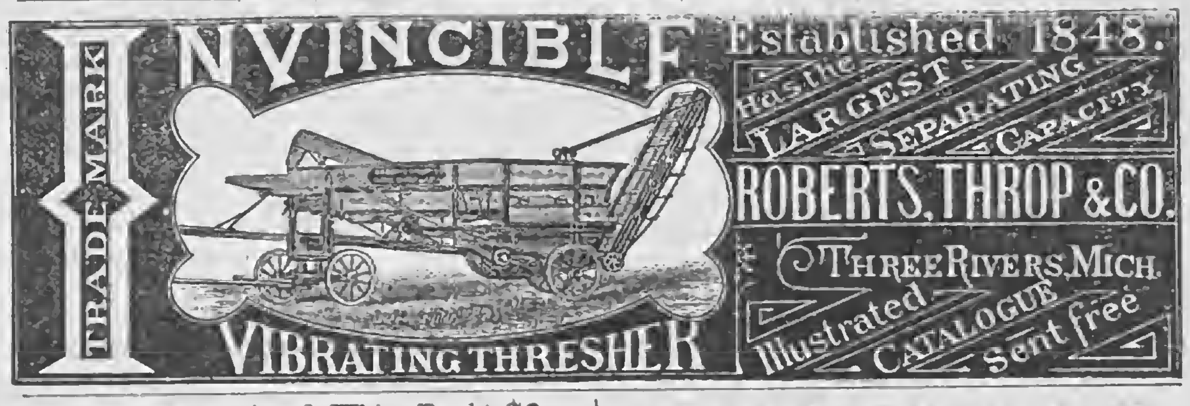

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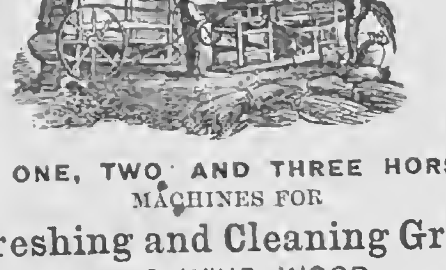

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MACHINES FOR
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Patented, Manufactured and Sold by
A. W. GRAY'S SONS,
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MANURES
For 1880.

Some years ago the Stockbridge Manures were only known to a few farmers in the Connecticut Valley. Now they are so extensively used in different parts of the country as to require two large factories, one in New York and one in Boston to manufacture them. This increase shows what farmers think of good fertilizers, and is not only due to the fact that they are reliable, well-made, and high-grade manures, but also to the fact that farmers have

FOUND THEM PROFITABLE TO USE.

Now that corn, and other farm produce is bringing such good prices, we anticipate that farmers will invest still more largely in our fertilizers.

Besides the Stockbridge Manures, we manufacture several high-grade Phosphates, and deal in first-class chemicals of all kinds. Farmers who intend to use Fertilizers of any kind, should

Send for our New Pamphlet,

which contains a large amount of reliable information, beside prices for 1880.

MAILED FREE TO ANY ADDRESS.

BOWKER FERTILIZER CO.,
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KEWANEE
Wind Mill.

Solid wheel. Strong, durable and self-regulating.

Price of 10-foot Mill, $50.

Any carpenter can put them up. Wind Mills of other sizes. Also pumps, pipe, tanks, &c.
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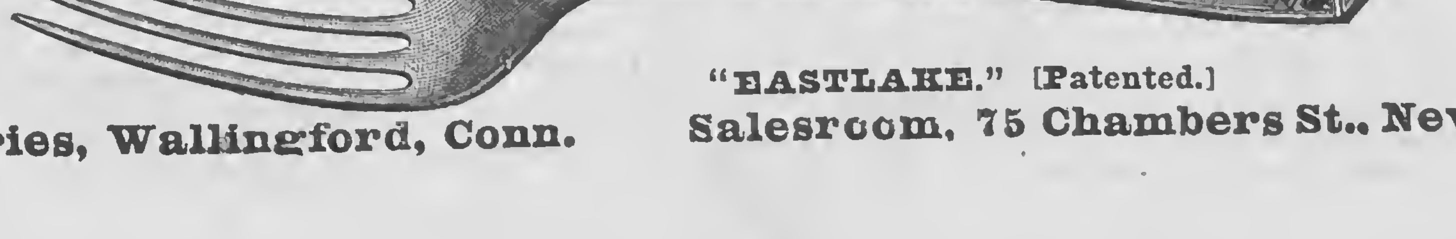

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Reading for the Young.

DOUGH-FACES.

MRS T. H. GRIFFITH.

Did you ever see one? I never did except in one place where we lived, and there the young people made "playing the ghost" one of their principal pastimes, and as a dough-face was considered quite an indispensible addition to the ghostliness of the object, I became quite familiar with it, and often had a hand in the fun. Many a time, winter evenings, when the room was filled with young folks, chatting pleasantly before the brightly blazing fire, half a dozen of us slipped out, and, mixing up some flour and water into a stiff dough, made holes in it for eyes, nose, and mouth, and selecting one of the tallest of our group, fastened it on amid suppressed laughter, winding a sheet about the form to add to the horrible effect. Then slipping back into the room unperceived, we managed to darken it, so that when the ghost glided in, the effect would be to witness boys and girls, both, often times, running pell-mell from the room, in dire confusion, screaming as they went, and tumbling over each other in their eagerness to get away from what looked the exact image of a ghost. Of course we never intended any ill results, and thought of none; but, with the natural recklessness of youth, pursued "the fun of scaring each other," until something occurred which proved so serious in its results, that we entirely abandoned the abominable practice. It was a beautiful summer evening; just one of those quiet, calm, moonlight nights when to stay indoors seems a punishment. I had gone to stay over night with a friend about the same age, whose folks had gone away on a visit leaving her alone to take charge of the house.

Their house stood upon a main road, and was a large gloomy affair, with a wonderful growth of evergreens and shrubbery in front serving to hide it from the view of the passer-by, and extending the whole length of their yard. The road was extensively traveled, and as we sat together on the front portico, calling up to each other's remembrance the tricks we had daringly played on different people, an idea popped into my mischief-loving head, which I immediately developed in detail to my companion. No sooner was it laid before her than it was received with enthusiasm; and entering the house we began our preparations, emerging in about half an hour, wrapped in sheets, and peering out from the eyes cut in our wrinkled, dough-faces, ripe for mischief Our plan was to hide behind the dense shrubbery until we saw some one approaching, then we were to steal softly out into the road, beckoning and groaning, and if we succeeded in frightening them, we were to pursue them as far down the road as prudence would permit.

The first of our victims was a tall, dandy young man, who came along with independent stride, whistling a merry air, whom I instantly recognized as my sister's beau, but as he looked neither to the right nor left, we were unperceived. But, not liking to lose our fun, nor thinking it best to appear directly in front of him for fear of being recognized, we ran along the inside of the fence, shielded by the evergreens, until we reached the bottom of a little hill, where we climbed, or rather rolled over, as our winding sheets rather impeded the free use of our limbs, and waited his coming in a fence corner.

As he reached the top of the little eminence, we glided out and burst forth with our hollow groans. Answering us with a shriek of laughter, he bore down upon us, running so swiftly that we had no time to escape, but were forced to bear the severe pinches with which he tested us to see if we were flesh and blood, at last making us scream out for mercy, when he released us, saying, "That's it; stop shamming. I thought I'd make you squeal, although I must own you are a plucky kind of ghosts. I can soon put you into the way of a rich joke, girls. Old Finley's coming along back there on his mule. Stay right here in the fence corner, and walk out as he comes up. It may be possible you may succeed in scaring him out of the even tenor of his way. The effect of such a thing would be simply sublime." This little piece of intelligence put us into a perfect transport of delight, for be it known that "Old Finley," as he was familiarly called, was a "thorn in our flesh;" in fact, we had always considered it a great and undeserved kindness that he was permitted to live. Such a crusty old fellow as he was, never so much as giving you a civil "howdy" when you passed him on the road, and seeming to think the bony, vicious old animal he rode the only being, worthy of notice.

How he lived nobody knew, and I don't think, anybody cared. At least, however curious we might have been, not one of us had ever found the courage to approach the old log-cabin, guarded as it was, day and night, by the fiercest of dogs. All we knew was, that each night we saw him ride past on his old mule, and every morning, just at dawn, back again, and at no other times, never lifting his head to speak to a living soul, never looking any one in the face, but keeping on his lone, solitary way from choice, repelling all attempts at acquaintance with a gruff, "Don't know you, sir." And so, because he was surly, and old, and poor, we young folks hated him, and counted an opportunity to persecute him one of the choicest privileges which could fall to our lot.

He certainly was a queer looking object as he came over the brow of the hill, astride the long-eared, old mule; his broad-brimmed straw hat, tattered and torn, flapping over his yellow, wrinkled face, while every other moment, he would dig his heels into the poor creature's sides with a "Git along, b'y." Indeed, we found it a matter of great difficulty to preserve the decorum considered a necessary adjunct to a ghostly character; but by dint of half smothering ourselves with our shrouds, we were enabled to keep from betraying ourselves; although I laughed so hard that the tears flowed abundantly down my cheeks, wetting the dough into a very sticky and unpleasant consistency.

As he came slowly down the hill, we stalked from our hiding-place, and with a hideous groan, arrayed ourselves before him. We had no idea it would happen the way it did, of course, but as we appeared before the eyes of the mule old Finley was riding, the terrified creature stopped short, then wheeled about with a frightened snort, and clearing the low fence with a bound, galloped away, leaving his master in the middle of a frog-pond to look out for himself.

At first we laughed in triumph over our successful venture, but when two or three minutes had elapsed, and the old man still lay on his back where he had fallen, apparently motionless, our hearts grew still for fear, and we called Will, who had stopped to see the fun, and throwing off our encumbrances, helped him draw the dripping old man to a dry spot. To our horror we found that he had sustained a serious injury, and conveying him to the house, sent for a physician. And then, such a night as followed. Oh! how we worked, and how willingly we obeyed every command given, while our hearts failed us for fear of what might yet be. But when morning dawned, it found him much more comfortable, but uneasy and anxious to get home. "Jimmy will wake and fret," was his constant cry, and, at last, we were obliged to remove him to the old log cabin in the woods. And then the story of his steady tramping to and fro under cover of darkness was revealed. It seems that for many years he had sheltered and cared for an idiot brother, and, unable to leave him during the day, spent the hours of the night at work in the paper mill about four miles away, thereby earning sufficient to cover all their wants. Indeed, he had contrived to lay up quite a little sum, which, together with what our parents were obliged to furnish for damages, occasioned by our thoughtlessness, made the two quite comfortable for the rest of their lives. But we had learned a lesson we were not likely to forget, that sometimes true heroism hides beneath a ragged vest, and, you may be sure, that was the last of *our* dough-faces.

LETTERS FROM THE COUSINS.

Dear Rural Friends: "The spirit moves" me to write, and so here I am wielding a "quarrelsome pen." I have just finished reading the Rural of the 24th (of April), and felt like shouting when I came to Peaceable Bob's letter. Good for you; just what those girls need! Now, I will tell you that that girl, Frizzle Top, who wrote to you awhile ago is a relative of mine, and such a "cut up" as she is never was seen before. I think her equal to Madcap Mollie. One evening she, with two of her most intimate friends, dressed up as nuns. What looking things they were! Perhaps I can describe them to you. All three had on plain black skirts black waists, white bands around their faces, resembling a bandage for toothache; and capes pinned around their heads in a loose way, falling to the bottom of the dress.

The tallest one, who represented Lady Superior, had a large rosary and cross. Well, they walked up Euclid Ave., and no one knew who they were. When they came up to the C. church, they went up the steps and, as luck would have it, the vestibule door unlocked and actually they went in, and after a while came out and went to the cemetery, and knelt on some of the graves. It being such a public place, people could see them easily, and really believed them to be nuns, sent here to visit the Catholics. Now what do you think of that? She (F. T.) has just received about fifty plants from the greenhouse, and I suppose you will have a full report about her success with them, and the seeds you sent her, soon. I now sign myself for the first time, The Little Detective.

Willoughby, Ohio.

[Since the correspondent challenges an opinion I must say that I cannot sanction this "cutting up" of Frizzle Top and her fun-loving friends, and I advise them to read the story of the Dough-faces on this page and learn how they came to grief. Suppose some one should have discovered who they were and dismantled them before all the people in the cemetery, would they not have been thoroughly ashamed? Moreover, though these three thoughtless girls have themselves no respect for the Catholic religion, it is exceedingly bad grace to mock and ridicule, in that manner, what others regard with reverence.—U. M.]

The Puzzler.

HIDDEN COLORS.

1. This car let us take.
2. Arctic rims on the pole.
2. I live in Frederick, Md.
4. What big rays are round the gas.
5. Nero and Draco wrote with blood.
6. Dundee is in Great Britain.
7. The bib lacks starch.
8. Did Shaw hit Eva?
9. The voice of Agre enchants me.
10. Hand me that spur, please.
11. See the cub, Lucila.
12. Mamma, Zarine wants my hat.
13. Mag entails disgrace.
14. Do not yell, Owen.
15. Can you spin, Katie?
16. Why do you cry, Stalley?
17. We had rabbit pot pie.
18. Lib, row Noah home?
19. Do you play the viol, Ettie?
20. Ah, Paul, I lack sincerity.
21. Never, Millo; no use coaxing.
22. We crossed the bayou in a boat.
23. The line got tangled.
24. I tell you, Sal, Monco lords it.
25. Mamma, uveous means like a grape.
26. I scorn Colorado.
27. I went into my chamber.
28. Rub your watch chain.
22. Mamma, Roona has come.

☞ Answer in two weeks. Little One.

HALF SQUARE.

1. A kind of mixed linen.
2. A group of scattered islands.
3. Having a tongue.
4. Musical instruments.
5. A kind of food.
6. The 15th day of March.
7. Inclined.
8. Place of seal.
9. A letter.

Waterloo, Ind. "Gus."

☞ Answer in two weeks.

PUZZLER ANSWERS.—May 1.

Hidden Trees.—1. Talipot; 2. Sago; 3. Kettal; 4. Cinnamon; 5. Yucca; 6. Belel; 7. Teak; 8. Medlar; 9. Tacamahac; 10. Tamarish; 11. Tamarind; 12. Terebrinth; 13. Turpentine; 14. Plum.

Cross Word.—LIBELLA.

Pyramid:

C
G A S
M A N L Y
S A L T I E R
C O R E O P S I S

Square Word:

P I C
I C O
C O S

Various.

BRIEFLETS.

The Pacific Rural Press reports strawberry blight in California. . . Robert Fortune is dead. He devoted his life to the enrichment of his country (England) with new and valuable plants. Our own country, as we have recently shown, is greatly indebted to the good man for many of our finest ornamental plants. . . The moles have given us no rest this winter. . . Mr. Griffin thinks the furniture made in New Zealand the most beautiful he has ever seen. It is made of Kauri wood. . . The gum from Kauri wood is so transparent that one can see through a block a foot in thickness. It looks like amber. . . There are 795,000 paupers in England, and the crown jewels, if turned into money, would feed them all.—N. Y. Com. Advertiser. . . The New York Tribune says oleomargarine is pronounced oleomarg*ah*reen, with the *g* hard. Nearly all the papers we have seen prononnce oleomargarine have pronounced it a fraud. And perhaps that is the best way, as it requires fewer letters and is much more easily pronounced.—Norristown Herald. . . Busy, busy, busy; busy as a bee. . . Those farmers who have best improved the winter months will find the most to do now. And they will do it with more pleasure and more effectually for the winter's study, . . Mr. S. B. Parsons read an essay upon "Woman in Horticulture" at the last meeting of the N. Y. Hort. Society. . . Pride of the Hudson Raspberry is again killed to the ground with us. . . The Rural New-Yorker thinks it has fully demonstrated that weevil-eaten peas are substantially worthless. We have yet to hear from Major Freas, of the Germantown Telegraph, however. It will be remembered that we have an immense wager with that veteran on the result of a test which he is to make. . . A sowing of bone-flour may now prove of much advantage to lawns. . . The curculio deposits her eggs on plums and most stone fruits when very small. The larvæ soon hatch out and eat into the flesh, when the fruit begins to decay and finally drop off. The only feasible method of saving the plum, apricot, etc., is by jarring the trees and catching the insects upon sheets spread out underneath. If there are plenty of curculios in your locality, kind reader, you need not hope to gather plums from your own trees, unless you are willing to adopt the above method of destroying the beetles. . . In sending us specimens, please write your name upon the packages. It is now permitted by the P. O. Dep't. . . Speaking of destroying the curculio, a fruit grower in New Hartford, N. Y., proposes to cut the ends of three-eights iron bolts square, and insert them in the trees, leaving the heads projecting an inch and a half or two inches, to receive the blow of the hammer. It will take the bark a good many years to grow over them. . . Mr. Allen tells us that chicken cholera usually comes from close, foul, dirty roosting houses, or small, dirty yards. Give them pure air, decent food and water and plenty of exercise, especially on grass, and the cholera will never come. . . The promise of the strawberry crop in New Jersey is that of a heavier yield than ever before. . . We read in a contemporary that Mr. E. W. Durand of Irvington, N. J., boasts of being the propagator (originator is meant, we suppose) of over 2,000 varieties of Strawberries. The public may be permitted to hope that out of so great a number, at least one variety will prove to be of some value outside of his own grounds. So far as we are informed the great splurge made over his varieties has been equalled only by the disappointment of the majority of those who have tested them.

CATALOGUES, ETC., RECEIVED.

Quarterly Report of the Kansas State Board of Agriculture for the quarter ending March 31, 1880. This first quarterly report is a volume of 120 pages. Of these the first 44 pages contain valuable tables, giving by counties, the value *per capita* of the products of the farm for 1879, the real value of the assessed property *per capita*, tax on each $100 of assessed valuation, number of school districts, school houses, teachers, average wages and value of school buildings and grounds in each county; the acreage of corn and wheat to the square mile ranked by counties, and the area in square miles of each county, besides a mass of other statistical information of use and interest to actual residents and emigrants seeking an eligible place of settlement. Its special feature, however, is an extended manual on swine husbandry, covering the remainder of the work, giving the practical experience of swine breeders for every county, and valuable facts concerning the treatment, breeding, and cost of raising pork for market, together with many and varied suggestions for the profitable care and management of swine. The work may be had by applying to the Secretary of the Board, J. K. Hudson, Topeka, Kansas.

Practical Artificial Incubation.—This handsome work, of 110 pages, is a *resumé* of the progress made in the past few years in artificial incubation in this country and in Europe, with a description of a score of leading incubators in successful operation here and beyond the Atlantic. It has also an instructive chapter on the care, management and diseases of young chicks, and is profusely illustrated. We have frequent inquiries with regard to incubators, and we would strongly advise all interested in this branch of poultry-raising to send for this exhaustive little work, which is by that adept in poultry keeping, J. F. Ferris, Editor of the Poultry Monthly and the Fancier's Journal, Albany, N. Y. Prices: 50 cents, in handsome granite covers; 75 cents, in durable cloth, and $1 in fine cloth, gilt edges. Sent, postpaid, on receipt of price.

The Native Flowers and Ferns of the United States. By Thomas Meehan. Philadelphia: Charles Robson & Co. We are now in receipt of Parts 21, 22, 23 and 24, Vol. II, Series 2, of this beautiful and valuable work. Among the most interesting of the colored plates of the present installment are Calypso borealis, Cassia nictitans (Wild Sensitive Pea), Cuscuta Gronovii (common American Dodder), Gentiana Andrewsii (Closed Gentian), Calochortus venustus (Mariposa Lilly); Butterfly Tulip, Pentstemon secundiflorus, Kalmia angustifolia (Dwarf Laurel) and many others. These parts close the second volume of the second series. May the next series speedily appear—when we shall take much pleasure in announcing the fact to our readers, many of whom we find are as deeply interested in the work as we ourselves are.

American Grape Growing and Wine Making, by Professor George Husmann; published by the Orange Judd Company, New York, price $1 50 Professor Husmann is a recognized authority in the cultivation of the Grape and in wine-making, and this new work is much to his credit. He describes briefly some of the old and most of the new and promising varieties under each of the three classes to which Grapes respectively belong, viz: Labrusca, Æstivalis and Cordifolia; and he also gives a concise but plain statement of the propagation of the Grape-vine, with the different modes of training and its care and culture at all seasons of the year. Some 50 pages are devoted to an excellent treatise on the manufacture of wine. The book contains 240 pages, is neatly printed on tinted paper and substantially bound in cloth.

Address by Horatio Seymour, before the N. Y. Agricultural Society, at the meeting of Jan. 21, 1880.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN 42.—MAY 8, 1880.

FERTILIZER ANALYSES.

397. Sulphate of potash, 90 per cent., bought of H. J. Baker & Bros., 215 Pearl St., New York, sampled and sent April 26 by M. S. Baldwin, Secretary of the Naugatuck Farmers' Club.

398. Castor pomace, bought and sampled as 397.

399. Pine Island guano, made by Quinnipiac Fertilizer Co., New London, sampled April 28, by R. B. Bradley & Co., dealers, New Haven.

	397	398	399
Nitrogen		5 06	5 70
Sol. Phos. Acid			86
Rev. " "		1 86	4 03
Ins. " "			2 42
Potash	49 17	1 02	4 37
Chlorine			4 40
Estimated value	$73 76	$24 50	$39 52
Cost	$72 00*	$19 00*	$40 00

—* In New York.

S. W. Johnson, Director.

PERSONAL ITEMS.

Laurel, Del., has lost its centenarian in the person of Grace, a negress, who has just died aged 115.

An old lady, aged 96, of Carmel, N. Y., was the chief mourner, and went to the grave at the funeral of her daughter, aged 76.

Harry Skinner of Powell County, Ky., has thick hair coming on his bald head, and has lately cut several teeth, although he is nearly 90.

Gen. Garfield himself owns a thriving farm, his oldest brother is a Michigan farmer, and his two sisters are farmers' wives.

Mr. Brown-Jones-Robinson Smith, a Boston artist, painted an orange peel on the sidewalk so naturally that six fat men slipped down on it.

Congressman Dwight, of New York, who owns 25,000 acres of wheat land in Dakota, has organized a stock company for farming purposes.

Ruthia Simpers died in the Elkton, Md., almshouse, aged 110 years. She was born a slave, but had enjoyed fifty years of freedom, having been manumitted.

Mr. and Mrs. Bloomer, the latter the inventor of the Bloomer costume for women, recently celebrated their fortieth wedding day in Council Bluffs, Iowa. They formerly lived in Seneca Falls, N. Y.

Allsop, of pale ale celebrity, who was defeated in East Worcester by Mr. Gladstone's son, is to be made a baronet, and Guiness, of double X celebrity, now a baronet, is to be made a peer, under the title of Lord Ardilaun of Ashford, his seat in Galway.

No Charge For Consultation.

After more than ten years' experience in administering that new and remarkable remedy for chronic diseases, now so widely known as "Compound Oxygen," and after a careful observation of its action in the largest range of diseases, some of them of the most complicated and hopeless character, *we are now prepared to treat that special line of cases which are usually regarded by the profession as beyond the reach of medical skill.*

Not that we will promise a cure in any and every case that may come to us. But we invite a statement, by letter or otherwise, of the case of any of that large class of suffering invalids to which we have referred. This will be carefully considered, and compared with other and similar cases which we have had under treatment, and as honest and intelligent an opinion given us it may be in our power to render. *For this we will make no charge, whether, after consultation, the Oxygen Treatment be ordered or not.* Send for our Treatise on Compound Oxygen, which will be mailed free. You may find in it the record of a case just like your own, which we have successfully treated. Address DRS. STARKEY & PALEN, 1109 and 1111 Girard St., Philadelphia, Pa.

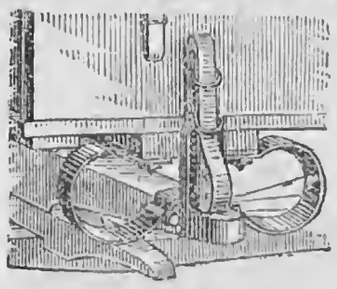
Miscellaneous.

$777 A year and expenses to agents. Outfit Free. Address P. O. VICKERY, Augusta, Maine

$125 Outfit free to Agents, and all expenses paid. Address H. B. Shaw, Alfred, Me.

Implements and Machinery.

SOMETHING NEW!
PULLIAM'S PATENT
BOLSTERS SPRINGS for FARM WAGONS.



This valuable device is suited to wagons of any size—made of the best steel and warranted—are attached by four bolts through the bed—can be put on by any person. They remain on the wagon for all uses and work equally well whether with empty or loaded wagon. There is no use for a spring seat—they make a comfortable spring wagon out of a farm wagon—and save largely in wear and tear. We want Agents every where. Send for description and prices, and mention this paper.
SEMPLE & BIRGE MFG. CO., St. Louis, Mo.

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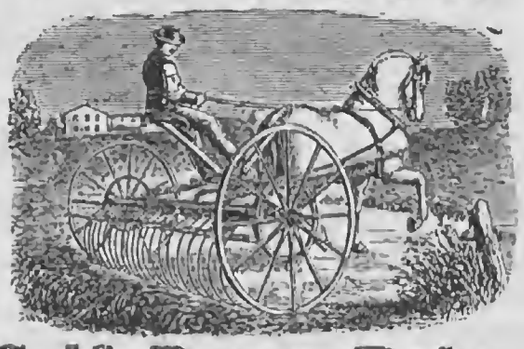

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A boy or girl can operate it. This rake has been thoroughly tested, and is warranted to be first-class in every respect, made of the best material, and to do good work under all circumstances. Also, the

Meadow King Hand-Dump Rake.

If there is no local agent in your vicinity, send for circulars giving full description, to
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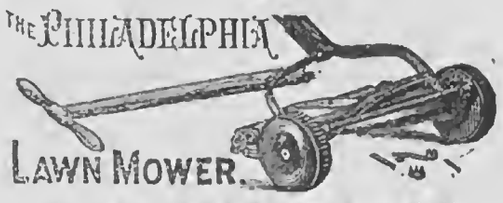

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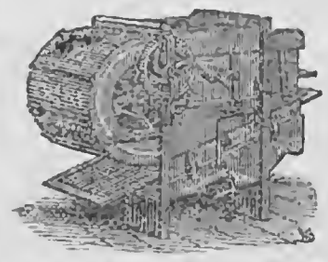
The "Centennial" Fanning Mill.



The best mill in the world. It separates Oats, Cockle, and all foul stuff from wheat. Is also a perfect-cleaner of Flax, Timothy, Clover and all kinds of seeds. The great improvement over other mills is that it has two shoes. It is especially adapted for warehouse use. Send for Descriptive Circular and Price List. Liberal discount to dealers. Address,
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Are simple, durable and cost but little.
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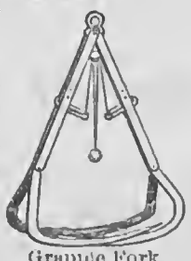

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No Cogs or Ratchets, easiest Hand or Horse Dumping. Purchasers prefer them to all others for Durability and Efficiency. Fully guaranteed; so no risk is incurred in ordering from us. Responsible Agents wanted where we have none.
Send Stamp for Catalogues of RAKES, THRESHING MACHINES, &c.
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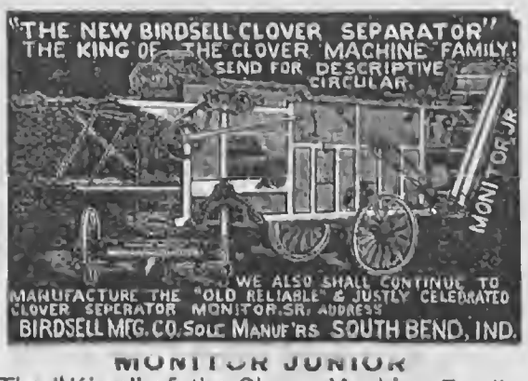

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The "King" of the Clover Machine Family.

It is the most perfect Clover Thrasher, Separator, Huller and Cleaner in the world. The Threshing and Hulling Cylinders run under-shot. We shall also continue to manufacture the old "Monitor," with *Threshing* and *Hulling* Cylinders running *overshot*. Send for price list, terms, and descriptive catalogue.
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WANTED—Salesman for each State. Salary $75 to $100 and expenses. Goods sold by sample. LA BELLE MANUFACTURING CO., Chicago, Ill.

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THE BOREL & COURVOISIER SWISS WATCHES
HAVE BEEN AWARDED
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the Paris Exposition of last year, based on the greatest superiority of of performance during the test made manufactured of the best material and finished by skilled hand labor er beyond peradventure. Messrs. B. tion in prices, so as to bring their Great care is taken in the finishing those adjusted for railroad use. Call Improved B. & C. Watches. The relative merits of Swiss Watches, as manufacture. Can a country that *Hundred* years be ignored? Give and they will demonstrate to you you to institute an impartial compari-

The Jury of Awards' decision was workmanship and extreme accuracy by the Judges. These watches are and made with improved machinery, thus insuring an accurate time-keep- & C. have made a still further reduc- watches within the reach of all of their movements, particularly on your jeweler and ask to see the public is asked to investigate the compared with those of American has made watches for the past *Two* the Borel & Courvoisier fair play, that none can excel them. We ask son before purchasing.

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HIGGANUM MFG. CORPORATION,
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Manufacturers of Agricultural Implements of all *description.*

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The Best Thresher on Wheels!

It is not a vibrator, neither is it an apron machine, but the best points of both are combined, with new and original features of its own. It is wonderfully simple in its arrangement. It is admirably perfect in its threshing and separating qualities. It saves all the grain, and cleans it ready for market. It runs easily, is constructed durably, is finished beautifully, is the most economical, least expensive, and altogether the most satisfactory machine in the market.

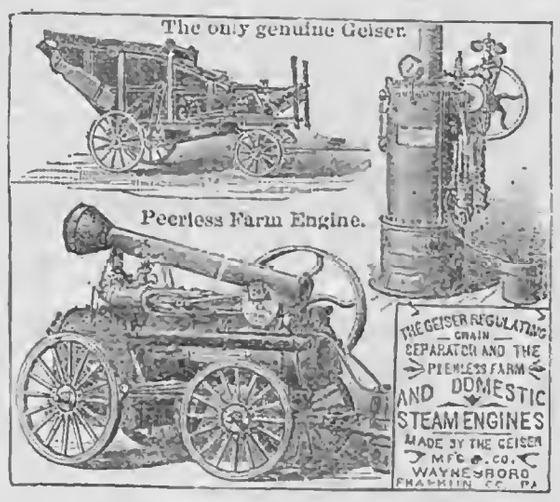
It will handle wet grain as well as dry. In threshing Flax and Timothy it has no equal, threshing and cleaning both as well, and nearly as rapidly, as wheat, and requires no change except the sieves. It has more square feet of separating and cleaning surface than any other machine made, and cannot be overloaded. It is both over and under blast at the same time.

Our clover hulling attachment is a new and very desirable feature. It does the business more rapidly and better than an exclusively clover hulling machine.

Separators of the various sizes fitted for Steam or Horse-Power, as desired.

An Improved Pitts Power, an Improved Woodbury Power, and the Elward Equalizing Power, all mounted on four wheels, are manufactured by us, and are not surpassed by any in the market.

For Price-Lists and Circulars, address the manu'frs.
SEYMOUR, SABIN & CO.,
Stillwater, Minn.



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Eureka Drain Tile Machine

This Machine is substantial and durable in construction; simple in its arrangements; easy of access to its wearing parts; having STRENGTH THAT EVEN GROSS NEGLECT could scarcely BREAK,—leaving little to be desired as an EFFECTIVE TILE MACHINE.

We drive this Machine by either horse or steam power, being well suited to either. Our Tile dies range in size from 3 to 9 ins. in diameter; and in shape we vary them to suit the taste of customers. As a Brick Machine it is also a complete success. It is fully warranted as a Tile or Brick Machine. Send for circular.
CHANDLER & TAYLOR, Indianapolis, Ind.

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Surpasses all others in quantity and quality of butter made. It secures matured and ripened cream, which makes butter of the best texture, flavor, and of unequaled keeping quality. It excludes flies, dust and odors; is constantly at the correct temperature (58° to 60°); has room for the cream and butter, and saves three-fourths the labor. It can be used with either ice or water, and both summer and winter.

THE FERGUSON CONCUSSION CHURN is the best. It combines scientific principles with the best labor saving devices. No floats or paddles. Brings the butter in granular form, and secures the largest yield. Before buying any other Churn or Creamery or any pans, or cans, send for large illustrated circular to THE FERGUSON MF'G CO., Burlington, Vt. Reliable Agents Wanted.

Humorous

"TALK is cheap." Is it? Just hire a lawyer once.—Syracuse Herald.

ECCENTRIC old lawyer to new footman, "Now then, Patrick, call me a cab." Pat, who thinks this is a dodge to try his sincerity; "Och, no, yer honor, it's not mesilf that'll be callin' ye names at all."

"CONDUCTOR, why didn't you wake me up, as I asked you? Here I am miles beyond my station."

"I did try, sir, but all I could get you to say was, 'All right, Maria; get the children their breakfast, and I'll be down in a minute.'"

AFTER a telegraph pole had fallen on a Savannah negro's head he threw up his hands and shouted: "Don't hit me again wid your club, Mr. Policemen. It wasn't me that stole der chickens. It was Deacon Henry." Then he looked, saw what hit him and walked off: saying: "Golly, I'se in luck 'dis morning. I'spected dat de policeman had me shuah dat time."

"YOU must not play with that little girl, my dear," said an injudicious parent. "But, ma, I like her; she is a good little girl, and I am sure she dresses as pretty as I do, and she has lots of toys." "I can not help that, my dear," replied the foolish mother; "her father is a shoemaker." "But I don't play with her father, I play with her; she ain't a shoemaker."

A FRENCH traveler, arriving late at a railroad station in Paris, found the ticket-office closed and readily accepted the offer of a gentleman, who could not use the ticket he had purchased, and seated himself in the train just in time. Arrived at the collecting-station he presented his ticket, and was asked for "his own." His reply brought the question. "Did you think to travel by this ticket?" "Yes: why not? "Well, it is a ticket for a dog!"

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Of the kidneys and bladder is sometimes exhibited which it is very desirable to overcome in its incipiency, as this symptom is but the forerunner of disease. When these important and sensitive organs grow dormant they may be safely stimulated with Hostetter's Stomach Bitters, which in connection with its tonic and alterative, possesses useful diuretic properties. As it is through the kidneys that the blood is strained, surrendering certain liquid impurities injurious to health, it will be seen that by promoting the action of the kidneys, the Bitters serves the double purpose of keeping them from falling into a state of morbid degeneration, and also of depurating the blood. That fluid is also enriched by this supreme medicine, and the bowels, stomach and liver invigorated and regulated by it. As a general invigorant also it has the highest reputation.

CIDER PRESSES AND GRATERS.
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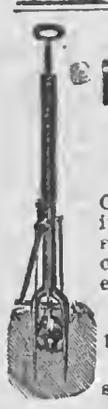
For Young or Old.

Do Your Own Printing!

$3 Press for cards, envelops, etc. 14 other sizes, $8, $14, $25, $44, &c. Type setting easy by printed instructions. Do your own printing and advertising. Money made fast in any place jobbing or running a paper. Catalogue of Presses, Type, Cards, &c., for 2 stamps. Kelsey & Co., Man'f'rs, Meriden, Conn



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MOLE TRAP
IS INFALLIBLE!!

IT NEVER FAILS to catch and kill. Lawns, Gardens, Parks and Cemeteries cleared of this aggravating pest in short order, by using this trap. Can be set in an instant by any one. Does not get out of order. PRICE, $2.00 EACH. Sent by express on receipt of price, by

YOUNG & ELLIOTT,
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Wholesale and retail catalogues of reliable seeds free by mail, on application.

PAYNE'S FARM ENGINES

Established 1840.

Patent spark-arresting Farm and Dairy Engines of all sizes, from 2 to 12 horse-power, mounted or unmounted. Warranted to be the Best and Cheapest engines made. Prices from $150 upwards. Send for Illustrated Catalogue "A" which will give you full information and prices to

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Box 841, Corning, N. Y.

RICHMOND CITY MILL WORKS,
RICHMOND, IND.
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MILL STONES
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We manufacture the best French Burr CORN AND FEED MILLS in the country. Send for description and prices.

State you saw this in RURAL N.-Y.

TIGHT TIMES AT HOME.

Paterfamilias (reading.) "Seventeen valuable Beasts poisoned by eating the Branches of Yew——"

Materfamilias. "Thu—t—t—thut— Oh dear! Butcher's Meat will be up again!"

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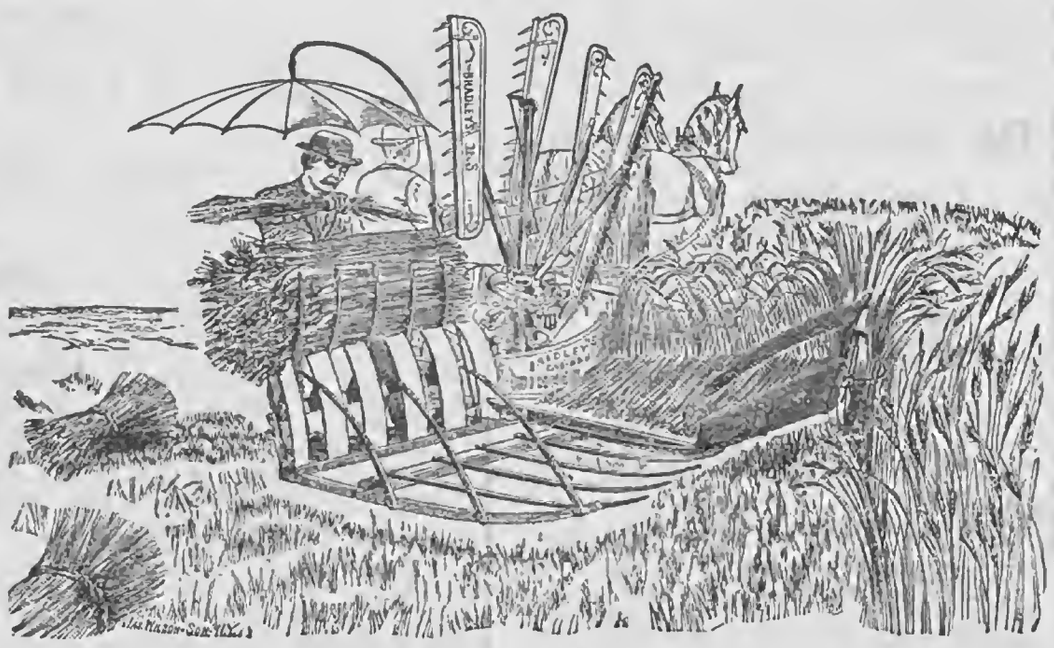
ESTABLISHED 1832.



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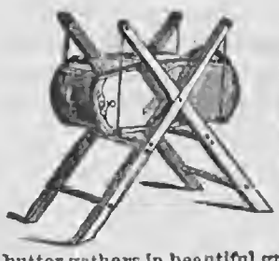

AWARDED FIRST PREMIUM over all competitors at only practical test ever held at International Dairy Fair. The box contains no floats or inside gear, which mash the butter-globules; no corners in which the cream can lodge, to be washed into the buttermilk and lost when the butter separates. The butter gathers in beautiful granules (in the best possible condition for washing in the churn with cold water and brine). This churn needs only to be seen to be appreciated. Circulars sent on application to

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THE NEW
BLANCHARD CHURN
THE NEW

We have perfected a *radical* and *valuable* improvement in our celebrated Churn, which needs but to be seen to be appreciated. Now offered for the first time to the dairy public.

It received the HIGHEST PREMIUM at the International Dairy Fair in New York City, in competition with all the leading churns in the market.

Nine sizes made, churning from one to one hundred gallons. Warranted to be exactly as represented.

Send to any dealer in REALLY first-class Farm and Dairy Implements for a Descriptive Circular of "THE NEW BLANCHARD CHURN," or to the Sole Manufacturers, PORTER BLANCHARD'S SONS, CONCORD, N. H.

JOHNSTON HARVESTER CO.,
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MANUFACTURERS OF HARVESTING MACHINES.

COMBINED MOWER AND REAPER.

Wrought Iron Frame, Adjustable connections, Malleable Rake Standard, Changeable Speed, Light Simple and Durable. It has carried off the highes honors both at home and abroad. Look out for cut of the Wrought Iron Harvester (King of the Reapers) in next issue, May 29th.

SIMPSON, HALL, MILLER & CO.,
Manufacturers of
FINEST QUALITY SILVER-PLATED TABLE WARE
OF EVERY DESCRIPTION.
Sales Room, 36 East 14th St., Union Square, N. Y. Factory at Wallingford, Conn.
SEND FOR ILLUSTRATED CATALOGUE.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 22.
WHOLE No. 1583.

NEW YORK, MAY 29, 1880.

PRICE FIVE CENTS.
$2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Industrial Topics.

OLEOMARGARINE.

What It is and How It is Made.

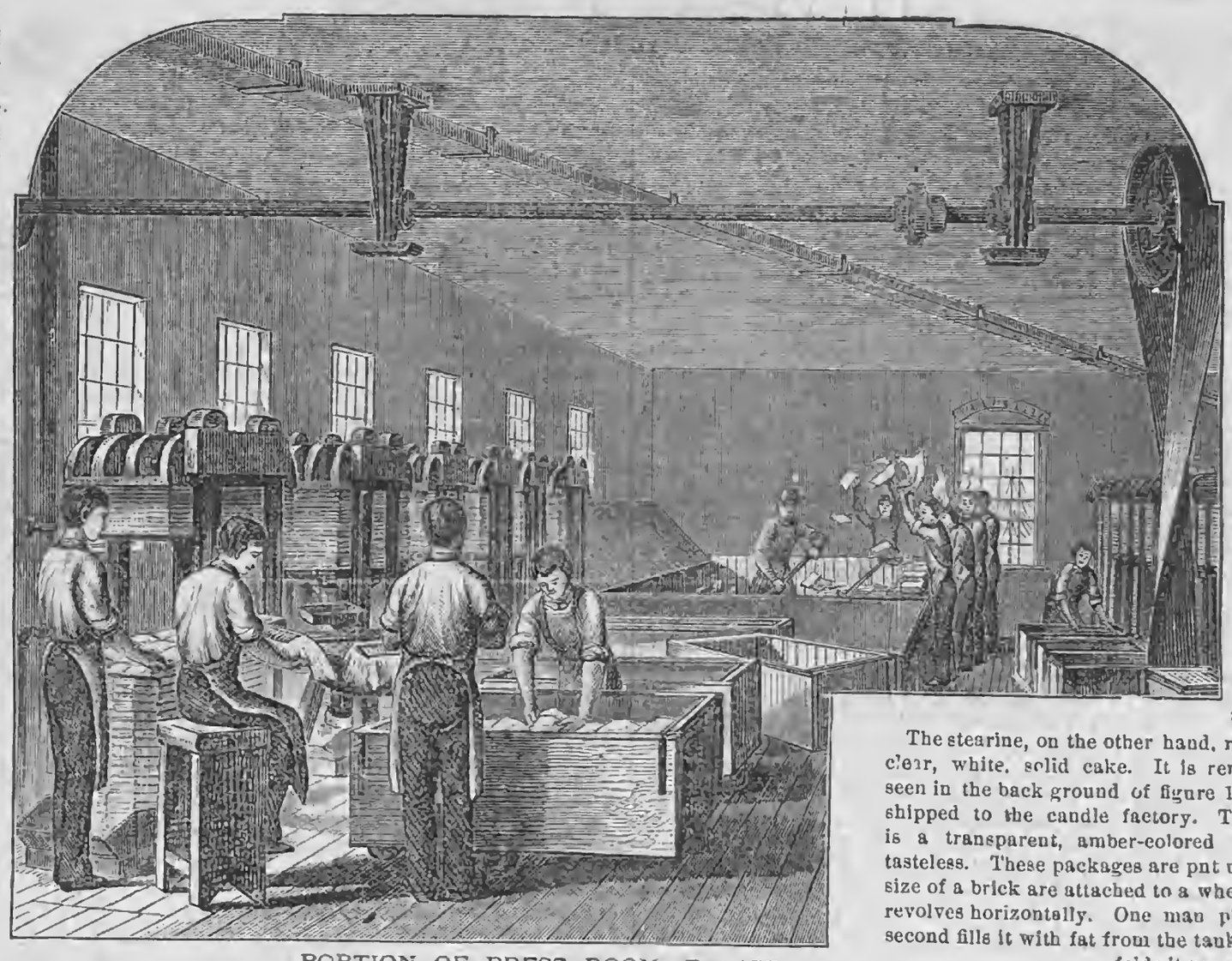
So much has been said about oleomargarine that our readers are quite familiar with the term, without, perhaps, having any clear idea of what the substance is and how it is produced. A brief description of the process of manufacture, with illustrations, will therefore prove alike interesting and instructive, especially as the article is just at present causing some agitation in the dairy world.

How It Originated.

The process by which oleomargarine is made was first discovered some ten or twelve years ago by the French chemist M. Mége-Mouries, who was commissioned by his government to investigate certain questions in domestic economy. He began work on the theory that the formation of the butter contained in milk was due to the absorption of fat from the animal tissues. Taking this as a hypothesis, he instituted a series of experiments with beef fat, which terminated in the production of a substance that greatly resembled butter and which is now known as oleomargarine. It is under the patent taken out on his process that the bulk of it is now manufactured. The extensive establishment in this city situated at West 48th St., North River, and owned by the Commercial Manufacturing Company, was commenced in 1876, and it has now assumed such proportions that it turns out, on an average, 45,000 pounds of oleomargarine a day. To fully comprehend the subject we will follow

The Process of Manufacture

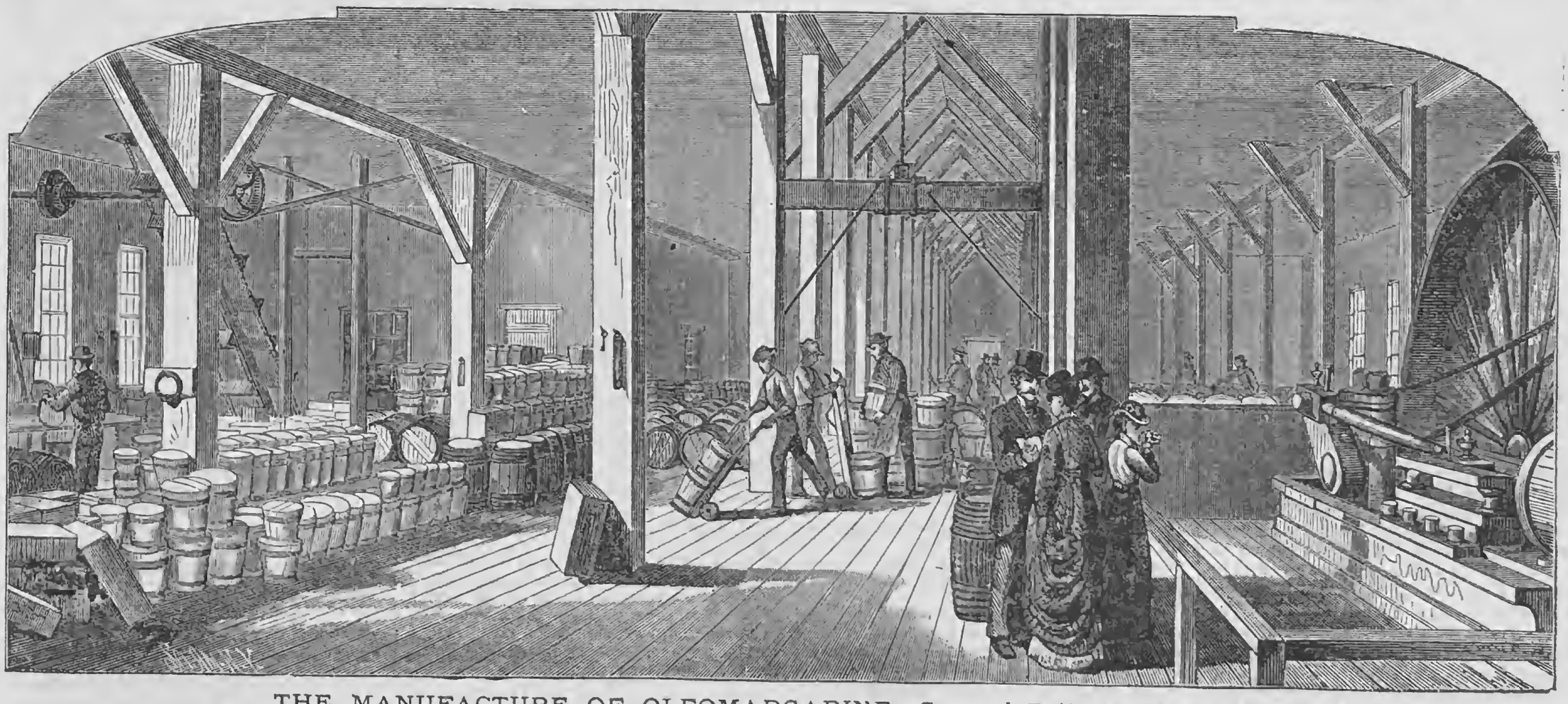
step by step, from beginning to end, and by means of our abundant illustrations it will be readily understood. The fat from the beeves killed during the day at the several abattoirs in the city, is brought to the factory each evening, where after having been weighed, it is thrown into large vats, thoroughly washed in several waters of different temperatures, and sorted. The pieces containing a comparatively small percentage of oil are separated for the making of soap, while the richer portions are thrown into an adjoining vat. In the next step of the process this selected and cleansed fat is elevated to the floor above, where it is thoroughly cut up by going through a hashing machine, and then melted. The object in hashing it is to break up the tissues so that the oil can be separated therefrom at a low temperature; if the fat were to be melted at a high temperature, the oil would be tainted by a rank, tallowy flavor which would render it worthless as an article of food. From the hashing machines the fat is conveyed to the melting tanks, shown at 4 in fig. 180. These consist of a series of iron kettles, or caldrons, raised some distance from the floor, and having double sides, the space between which is filled with hot water. The water is heated by steam and melts the fat at from 122° to 124° F. During the process of melting the fat is stirred by arms attached to a revolving shaft, which may be seen in the engraving; but when the melting is completed, this stirring ceases and the tissue settles to the bottom. The liquid portion is then siphoned off into square wooden tanks on wheels and drawn into the press room to rest and await the granulation of the stearine, which takes place in the course of about 36 hours. When thus granulated, the fat greatly resembles granulated clover honey, and is nearly odorless.



PORTION OF PRESS ROOM.—Fig. 177.

The next step consists in separating the stearine from the oil, or oleomargarine proper. This is accomplished by straining under pressure. The operation may be seen in fig. 177, which represents a portion of the press-room. To the left in the figure are seen several hydraulic presses under each of which is placed a series of galvanized iron plates. The now refined fat is removed from the tanks by the hands and packed in cloths of the heaviest duck. Some eight or ten of these packages are placed on each iron plate, and when all are thus filled, a slowly increasing pressure is brought to bear upon the packages under which the oil percolates out through the cloth, and is collected in a tin basin underneath, from which it runs into a tank fed by all the presses.

The stearine, on the other hand, remains in the cloth in form of a clear, white, solid cake. It is removed by a flirt of the cloth, as seen in the back ground of figure 177, and is then broken up and shipped to the candle factory. The oil, as it runs from the press, is a transparent, amber-colored liquid without odor and almost tasteless. These packages are put up very rapidly. Forms about the size of a brick are attached to a wheel which is raised on a stool and revolves horizontally. One man places the cloth over the form, a second fills it with fat from the tank-car standing by, while a third folds it up, and a fourth puts the packages under the press. Large quantities of the oil are barreled and exported to Europe, especially to Holland, where it is churned and made into oleomargarine. Following this comes the process of churning, the scenes of which are



THE MANUFACTURE OF OLEOMARGARINE.—General Delivery Room.—Fig. 176.

shown at 3 in the large cut. The oil is drawn from the tank into the churn which is provided with a rapidly revolving shaft. It is here mixed with the coloring matter and twenty per cent. of fresh milk. The milk is added to impart to the product the flavor of butter; for although the oil is richer in fat-globules than cream, it has but little of the volatile fats which give to butter its peculiar agreeable flavor. On the other hand the absence of these volatile fats enables oleomargarine to be kept much longer than butter without becoming rancid. Having been agitated in the churn for about forty minutes, a faucet is opened and the emulsion which is still a yellowish liquid, is drawn off into a tank-car half filled with broken ice. Unlike the churning of cream by which the butter is formed in the churn, this oil does not granulate by agitation, but when drawn from the churn on to the ice and thus suddenly chilled, it immediately granulates and partakes of the consistency and appearance of butter. This stage of the process is illustrated at 3 in the lower left-hand corner of figure.—While the liquid is pouring into the tank the men are thoroughly mixing it with the ice to perfect granulation. The beef fat has thus taken three important steps toward becoming an article of commerce; viz: first the melting whereby the cellular tissues containing the fat are separated: second, the separation of the stearine from the oil by straining under pressure; and, third, the churning and granulation. It is now a solid substance flavored by the addition of milk colored with annatto, and has every appearance of butter.

It is next placed on tables, as seen in the upper portion of figure—which represents one day's churning. The pieces of ice are carefully removed and salt is added, as in the case of butter. When an extra-good article is desired, it may be churned a second time with a larger quantity of milk. It will thus get a fair proportion of the butyric elements which give first-class creamy butter its delightful flavor, and, when properly handled, such oleomargarine may even be made more palatable than many grades of butter sold by the city retailers.

When a sufficient quantity of salt—about five per cent.—has been added, the oleomargarine is ready for packing and shipment. The packages are put up in two forms—either in tubs of about fifty pounds each, which process may be seen in fig. —, or in small packages of one or two pounds for the retail market. Figure — shows the general-delivery room of the Commercial Manufacturing Company, with tons of the product ready for shipment.

The wholesomeness of the product can hardly be questioned when made from fresh beef fat of healthy animals, *and from this only*. On this point, however, the law should make provisions, if found necessary. At the above-mentioned manufactory the strictest cleanliness is maintained throughout the whole process, not merely as a matter of choice, but as a matter of necessity; for if the many tanks and vessels, straining cloths, etc., were not cleansed at the end of each day's churning, they would soon become unfit for use and taint the oleomargarine to a degree that would impede its sale, which would be an unwise policy, as the object is to make it resemble butter as closely as possible.

Is it Butter?

Oleomargarine is *not* butter, and though it is a substitute for butter, which, on account of its cheapness may be appreciated by the poor in cities, it should under no circumstances be sold as butter or under any other name than oleomargarine.

The manufacturers neither wish nor are they able to sell it as butter, as they deal only with wholesale houses and commission men who are well aware of what they are buying, but the temptation to fraudulent dealing lies with the retailers, who may, and do, palm it off as butter. On this point the law cannot be too stringent. To sell it for what it is not, is to obtain money under false pretenses—a deliberate fraud, which should be severely punished; but, on the other hand, when given to the public for what it is, and the article is wholesome and nutritious, it will be a waste of effort to attempt to entirely suppress its manufacture.

THE MANUFACTURE OF BLOOD GUANO.

Before describing the process by which the refuse of the slaughter-house is converted into an article of great commercial as well as agricultural value, I will speak of the butchering of hogs after the fashion with which I am acquainted.

Poor piggy is first ushered into a pen where he is caught by a hind leg by means of a slip noose, and straightway suspended in the air, when he is ready to be "stuck" or bled. The "sticker," if seen in his panoply in the street, might remind one of a knight of old, clad in armor of rubber, except that there is no visor to his helmet. Suspended over a vat in which his gushing blood is caught, the hog receives his death wound, which is given so quickly and "scientifically" that the motion of the slayer is scarcely perceptible. When bled, the carcass is lowered into a tank filled with water heated by steam, and there scalded. Having been taken out of the scalding tank, it is laid on the scraping table, which is about 25 feet long, where it is scraped—that is the hair or bristles are removed. The "scrapers"

PACKING IN FIRKINS.—FIG. 178.

work in pairs, each pair having a particular part to scrape. When the hog reaches the end of the table it is devoid of bristles and outwardly as clean as it can be made. It is now ready for disemboweling; an operation performed by five cuts of the knife, after which it is washed. While the carcasses are on the "spreaders"—as the pieces of wood by which they are suspended are called—they are weighed, and according to their weights they are placed in "racks." Thus a hog weighing 162 pounds, dressed, would be called "160 pounds down," and one weighing 164 pounds, would be called "165 pounds up:" so that a person can tell within a trifle just how much the hog weighs when it is suspended in the "racks." From the time the carcass leaves the "stickers" until it reaches the "racks" generally occupies only about three minutes, although in timing the operations from the moment in which the animal ceases to bleed until it is in the racks, I have found they sometimes take only a single minute.

The entrails and other refuse, the removal of which formerly cost money, and the blood which used to be run into the sewer, are now carefully saved and conveyed by means of chutes to a lower story where the driers are situated. These are long, iron cylinders "jacketted;" that is, having one cylinder inside another, with a space of from one to two inches between the two. They have solid ends or "heads," through which run revolving, hollow shafts extending through the center of the cylinders, and from these hollow arms project at intervals connecting with hollow cross-pieces running parallel to the center shaft. All these are pierced with holes. On the top of the cylinder is a single large "manhole," or opening, through which the cylinder is "charged" or filled. This is fitted with an air-tight cover to prevent the escape of any vapor.

When the drier has been charged, steam is admitted into the jacket and also into the hollow shaft whence it escapes through the perforations in the connecting arms and cross-pieces, and as these revolve with the shaft, they serve to mix the "charge," which, when dried, is removed through the smaller manholes on the bottom of the cylinder.

The charge, when first put into the drier, is a semi-fluid conglomeration, but when it is removed it is as fine as flour. Unlike fish guano, blood guano emits no smell during its transformation, as the vapor is condensed by a "condenser" or a fan which draws the steam through water where the vapory part of it is condensed into water, and whatever air has been admitted with it is blown into the fire, where everything suspended in it is burned. A drier 15 feet long by five feet in diameter will hold about six tons of refuse, which will turn out about two tons of guano. The time occupied in drying a charge is about eight hours. The value of the guano depends mainly upon the amount of ammonia in it, which is determined by chemical analysis; but it is worth, on an average, $30 per ton. Blood guano is subject to the same adulterations as fish guano, but, even with these, it would burn any seed planted in contact with it.

Edward J. Boyd.

PACKING FOR THE RETAIL MARKET.—FIG. 179.

Farm Topics.

OSAGE-ORANGE SEED.

How Prepared for Market.

As this plant—Maclura aurantiaca—has for a number of years stood in the front rank as a hedge plant adapted to almost every soil and climate of the United States, and as it is propagated chiefly from seed gathered in Texas in the fall and winter from the native Orange trees—Bois d' arc—a sketch from this place, where it is largely prepared, of the manner in which the seed is fitted for market, will probably interest many readers of the Rural and suggest to them a way of detecting spurious or old seed.

The seed is prepared by companies of mill-owners, each of whom obtains a permit for gathering it over a large section of country, often embracing 10,000 acres. The following is the usual form of permit:—

This is to certify that I have this day assigned my right and title to the *present crop* of Osage-Oranges, now growing on my League and Labor of land, situated on the waters of the Trinity River, Collin Co., Texas, to John Jones, of aforesaid Co., for and in consideration of $2, the receipt of which is hereby acknowledged. James Smith.
This 20th day of November, 1879.

Having received the permit, the company pays from $2 to $2.50 per thousand for oranges delivered at its mill on some convenient water-course, in pyramidal piles of not more than 10,000 in each stack of sound fruit of good size and color.

The mills used in primitive days were very simple, consisting of cylinders garnished with rows of teeth passing around them in screw-fashion, and inclosed in concave boxes, the insides of which were also armed with teeth that "meshed" with those on the cylinder, or rather acted as female screws to them. These have been succeeded by mills which press the oranges into pomace which passes through the strainers without injury to the seed, and is so fine that when the mass reaches the washer, the seed can be separated without trouble. The washing-box, about thirty feet long, three feet wide and as many deep, is sunk in the water, its top coming within a few inches of the surface. On this box rests the separator, with screens, rakes and pump. Water is pumped on to the mass of pomace and seed, which is worked up into a soft, watery pulp, from which the seeds drop down through the screen into the washing-box, while the pomace is floated away by the natural current in a running stream, or by an artificial current produced by the movement of a paddle-wheel in the rear of the box, if the latter is in "dead" water.

Now comes the "drying"—the most particular part of the business; for in this process if the seed is not carefully handled it turns black and on this account is rendered unsalable. Drying platforms should be erected at an inclination of 20°. to the south, and have an area of at least twelve square feet to the bushel. The seed having been carefully spread out, should be moved about often so that it may become of a bright brown color. After the drying has lasted three or four days—or until the seeds are thoroughly dry—they are sacked, weighed and branded, and are then ready for shipment.

The price of seed varies a great deal in accordance with the relation of supply and demand. When a short crop meets a brisk demand the price is high; when a large crop encounters a slack demand, prices are low; and, indeed, a large crop usually brings prices down to nearly cost, which is about $4.50 per 33-pound bushel at the mill. A thousand good-sized, sound oranges will yield one bushel of seed, if rightly handled and washed. A bushel contains 220,000 seeds, but in nurserying them I have always been satisfied if I obtained 100,000 plants. These sell from the nursery by the thousand, bringing from $2 to $2 50 per thousand according to the locality. In Kansas, Missouri and Nebraska millions of them have been sold at about the above prices, whereas, if farmers had bought their seed, and, having selected a choice plot of land, had raised their own plants thereon, many dollars could have been saved.

Worthless seed, caused by mill-men "souring" their oranges, can be detected by letting a small quantity drop into still water—if they sink they are sound: but if they rise and float on the surface, they have been heated, and it is advisable to let them "severely alone." One thing is remarkable about Bois d' arc timber—the longer it stays in the ground, as posts or pickets, etc., the sounder it seems to get. Near here a gate-post of this sort, put in 33 years ago, is perfectly sound and solid to-day.

Collin Co., Texas. Will N. Wallis

Entomological.

METHODS OF DESTROYING THE TOBACCO WORM.

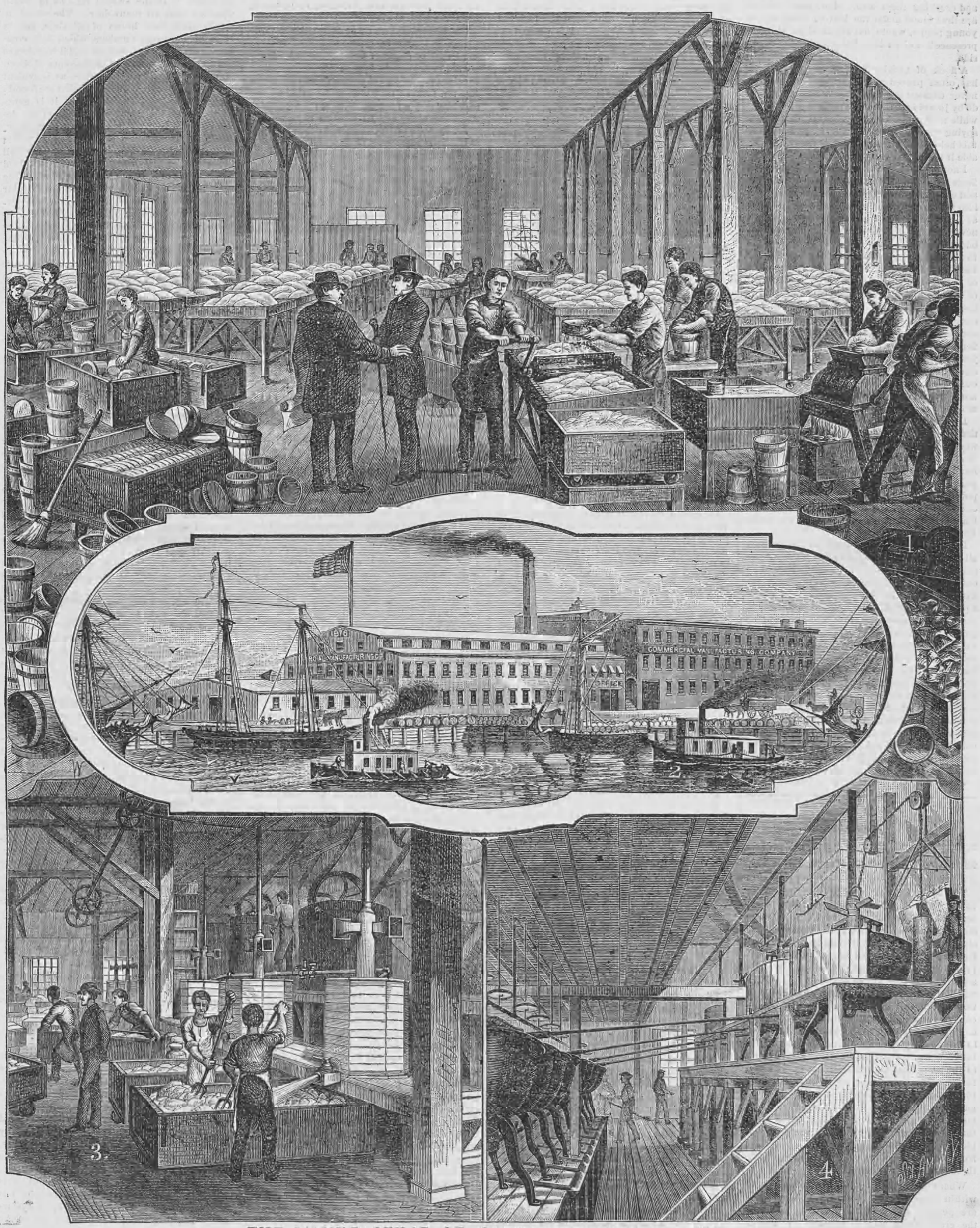
In the tobacco worm we have by far the largest insect known to be excessively injurious to crops In comparison with the little codling moth, it is a veritable monster. That an insect so large can for years increase in numbers in spite of all the efforts and devices of tobacco growers for its extermination, seems a trifle strange. The spread of this pest may be compared to that of the potato beetle. The enlarged area devoted to the "weed" and the introduction of the tomato into general cultivation have given it ample opportunity to multiply; for it may be held as a rule that undomesticated creatures of all kinds increase in numbers the more liberal and easily attainable is their supply of food.

The insect is pre-eminently a tobacco feeder, although it also eats the tomato; but this is merely its second choice. Under my observation last year the foliage of a field of tomatoes next to a tobacco field, was attacked only to a slight extent by the larvæ, while the tobacco plants were loaded with them. On the previous year no tobacco was raised on the farm, and the tomato field was full of worms which damaged and ate great quantities of even green tomatoes. In the Canadian Entomologist for Nov. 1878, Rev. C. J. S. Bethune, of Port Hope, Ont., says: "A market gardener who lives close by me, informs me that on one day during the summer, he and his assistants together gathered four bushels of the worms

off an acre and a quarter of tomatoes. During many days following, they seemed almost as numerous as ever, in spite of continuous hand-picking. I have never noticed them on potato plants. If they feed on this plant at all it is their third choice of food. To entirely prevent injury to the crop from these insects would demand an outlay of more labor and money than all the other requirements from the seed-bed to the tobacco shed.

In the vigorous war of extermination many measures have been resorted to, and among them the plan of growing clumps of Evening Primrose—Œnothera Lamarckiana—the flowers of which the moths resort to in great numbers at twilight, as they also do to the wild Evening Primrose—Œnothera biennis—and the Jamestown Weed—Datura stramonium. The former of these weeds grows everywhere and is so plentiful as to prove very noxious in many localities, especially on half-cultivated lands. It produces an abundance of blooms from which the moths sip their evening repast, with their long, flexible tongues. The fine, large varieties cultivated by seedsmen, produce larger and more numerous blooms, and therefore are sure to attract a large number of hawk moths every evening. At dusk the operator may arm himself with a long, flat bat or insect net, and proceed from clump to clump of the flowers, or station himself at a single one. If one is careful and knocks down his game at every attempt without frightening others, he will succeed in killing many, otherwise they will become very wild and difficult to reach. They are very aptly named "hawk moths" for no falcon is more dexterous in flight. Of course, every captured moth should be destroyed, as a female often contains thousands of eggs, whence others come. Seeds of the Œnothera may be sown during the summer, and the roots be planted out where desired the following spring. They will begin to blossom by the first of July, which is just the time the moths first appear on the wing. Seeds sown early in the spring in a hot-bed, will, however, produce plants which will bloom nearly as early in July as those from roots.

Another good way to kill the moths is to take a torch of any kind—a fishing jack filled with pitch pine, or an oil fishing light—and, while one carries this through the tobacco lot, an assistant, with shingle or bat in hand, can readily kill every moth which the light attracts or reveals, as they are busily engaged laying their eggs. Contrary to the statements of some entomolgists, who assert that they fly only in evening and morning twilight, they are actually found at any hour of the night, flying close to the ground among the young plants, carefully distributing their eggs here and there—a single one to the under-side of the leaf



THE MANUFACTURE OF OLEOMARGARINE.—Fig. 180.

1. One Day's Churning.—Working and Salting. 2. View of the Works from the River. 3. Churning Room. 4. Melting Room.

The way most followed in exterminating the pests, however, is to pick off the worms from the growing tobacco continually from the 10th of July to the final harvest, crushing the small ones between the finger and thumb, and throwing the large ones violently on the ground, or stamping them under foot. To this the thorough grower adds the precaution of looking on the under-side of the leaves for the eggs, and crushing them also. Many small worms are thus found under the leaves, especially of young plants, where but slight signs of their presence is noticeable by holes seen on the upper side.

A flock of turkies kept in the tobacco field has often proved most advantageous. They never damage the tobacco—as hens are apt to do by jumping up among large and tall plants—while they walk carefully among the stalks, spying out and devouring every worm. Thus this helpful fowl would prove doubly profitable if fed in this manner.

I notice that skunks prowl about the tobacco fields every night in cutting time, and dig out and eat a great many worms that have crawled into the ground to change into pupæ. As near as I can get at the truth about it, the skunk never touches the tobacco worm on the leaf, but after it reaches its full growth and resorts to the earth, it immediately becomes a delicious food for him. The number of fresh holes or cavities each morning denotes the reduction of tobacco moths that would otherwise have to be fought in the next year's campaign. The number of insects devoured by skunks is enormous, but, of course, they feed on beneficial insects as well as on those which are injurious to crops. The amount of worms destroyed by several species of microgaster and other parasites, is exceedingly small; neither are the worms ever attacked by any epizootic, at least as far as my observations have reached.

Dr. Hagen, of Cambridge, Mass., is confident that an epidemic can be started among the worms or moths by bringing a few specimens in contact with a yeast fungus, or by sprinkling prepared beer mash on the plants. This yeast, or batch of fungus spores, produces a poisonous mold in the insect, and spreads from one individual to another, until a fatal pestilence is in operation. This discovery was made by Dr. Bail, of Prussia.

In pursuing methods of destroying the worms all poisonous applications to the leaves of the plant, are very improper in this case. The only chance to use poison, in killing the pests without putting it on the tobacco, is to follow a plan published, I think, in the RURAL several years ago:—Place a mixture of any powerful poison and honey or sirup deep down in the tubes of the Evening Primrose flowers. Every moth which partakes of this will, of course, immediately die. But in my experiments with arsenic and honey, and cyanide of potassium and sirup, I did not observe a single moth approach any of the poisoned flowers. The experiments, however, were few and not very perfect. Any method to trap or kill the moths must be considered a very prudent measure, for striking down a moth is a *coup de grace* which kills thousands of worms at a stroke.

Wayne Co., N. Y. W. L. DEVEREAUX.

The Apiarian.

BEES AND THEIR PASTURAGE IN UTAH.

THE bee in Utah is quite a power, especially as we make sugar from neither maple trees, beets, nor sugar cane, and have only Chinese Sorghum and bees to help us to sweetening; all else is imported. Our climate is wonderfully free from moisture and rainfalls are rare, especially in southern Utah; these causes make a scarcity of bee forage growing wild within reach of bee industry. In the northern portion of the Territory, winter generally brings enough snow to make the wild flowers bloom more profusely than at this place (St. George). In this country the inhabitants live in villages between the foothills, and generally have to go to the river bottoms some miles away to make farms. The towns are provided with water for gardens, and here the bees are kept. The gardens and orchards furnish forage in a great measure, which together with wild flowers that bloom early, and the great American bee plant that grows on sandy wastes and blossoms from January till September, serve to keep these little honey gatherers busy.

Where the fields and lucerne meadows are within three or four miles from town, there are periods when at the blooming stage of the crops, great help is afforded in honey-making. In some sections the bee plant grows in tracts of many acres and often borders highways in such manner as to make bee forage plentiful and rich; in other regions the seed is sown to get it started, after which the plant reproduces itself without any further trouble. Where this grows abundantly there is no need of growing plants on purpose for bee pasture; where it is scarce we plant patches of Mignonette, sweet clover, and squash and melon vines and such garden flowers as are most productive of honey and pollen.

In my long experience of bee keeping I have found three plants superior to all others for the production of honey, viz:—the purple-flowered bee plant, next Mignonette, and third melilot, or sweet clover. The two last named will make honey so perfumed as to be far superior to that made from any other plants, and such honey brings fancy prices in markets where it is known and tested. Lucerne makes a nice amber honey and is worked on strongly by the bees, but it does not produce like the plants named above. The mesquite, a shrubby, sprawling tree of the Pulse family, produces a burden of bloom, often twice a year, similar to that of the Filbert and Chestnut, from which an immense crop of pollen is gathered and some honey also.

The Lycium and several other honey plants are abundant here. Our average yield of honey would perhaps be about 50 pounds, each season to the colony. Our varieties of bees are Italians and hybrids. In northern Utah the bee industry has been greatly retarded by thousands of cases of foul brood—no case has as yet occurred in southern Utah.

At its last session our Legislature passed a law providing for the destruction of colonies affected with foul brood, which will materially lend encouragement to the industry. The bee-moth is very destructive here to weak and queenless colonies, but in strong colonies there is no danger. Thus far there have appeared no other serious enemies.

To beginners in the business I offer this bit of valuable advice:—don't be in too great haste to increase your colonies or to eat honey—you will get on much faster by going slowly; that is, never weaken your colonies by dividing, or by robbing them of honey: when not rich with honey and full of bees, then two frames taken out from a full hive at a time, will give room to work. I started here with one hive for which I paid $15 In six years I had 200 colonies; and had lost, by improperly weakening the colonies for increase, an equal number. Had I been more patient, I doubt not I might have had 500 strong colonies, and lost none.

In case a colony becomes queenless, it is quite probable that there are but few, if any, young bees in the hive—now, the young bees are the wax workers, and unless there are some in the hive you cannot get a queen cell made: the old bees won't do it. When, therefore, a frame of eggs is put into a hive that a queen may be made, be sure to put in also a good quantity of young bees, or the work is profitless. This I have learned by dear experience. A fertile worker is a great nuisance, and difficult to get rid of, but it can be done as easily as anything else: thus, remove the hive containing the fertile worker several rods from the old stand, and on the old stand place another hive, with a frame of brood and a queen; now take all the frames out of the removed hive, and brush off all the bees and return the frames of stores to the hive in the old place. The workers will return to the old home, accept the queen, and it is done. J. E. JOHNSON.

Washington Co., Utah.

[We can indorse the caution given above in regard to weakening colonies too much by division. Every colony should be kept buzzing full of bees throughout the season. One strong, active colony will gather more surplus honey during the season than two weak ones, and suffer less from moths and other bee enemies.—EDS.]

Field Crops.

SELECTING SEED CORN.

IN the selection of seed corn there are, I think, certain rules which may be safely followed by growers of all sections, whether North or South. First, the ears chosen for seed should be sound and well filled out at the tips. Then, from among ears passing this examination, those should be selected having the greatest depth or length of kernel combined with smallness of cob. These two conditions should, I think, be constantly kept in mind as having a certain relation to each other. If we select ears supplying the former conditions only, we shall find our corn growing earlier, smaller and more flinty. If we regard the latter condition only, we shall find it growing larger but later and deficient in weight. In order to obtain the maximum yield the variety, whatever it be, should employ as long a time as possible in its growth and development, reaching the stage of perfect ripeness only on the verge of frost, and in selecting according to the above rules, I think the grower in each latitude will obtain the variety best suited to his soil and climate.

As is well known, every latitude has its own peculiar variations in respect to size of stalk, and depth and hardness of kernel; but the maximum yield per acre does not materially differ in all the great corn-growing sections, showing that there must be a relation between grain, stover and space occupied, and that only a certain amount of grain can be expected from a given area, no matter what the length and size of stalk or number and size of ears. But to obtain a maximum yield in a given locality, a variety adapted to that locality by long and careful selection must be employed. The flint varieties of the North and East will not reach their greatest perfection in the South and West, and *vice versa*.

The distance for planting should be in proportion to length of stalk, length of season, and length or depth of kernel, and all efforts toward improvement may be lost by planting too closely. In regard to length of ear, there does not seem to be much to be said, as the advantages in a long ear are not very apparent, particularly as length seems to be gained at the expense of thickness and depth of kernel. Two short ears to the stalk generally yield as much as one long one, and often more. But among dent varieties it is thought desirable to eliminate as much as possible the flinty tendency and select the rougher ears, and the duller creamy shades of color. Among the flint varieties it might be advisable to select those ears showing the dent, should any be found that are well filled out, thereby encouraging the tendency toward improvement in quality for feeding purposes, since the dent in the kernel means softness and sweetness. "G."

Ludlow, Ill.

SOWING CORN FOR FODDER.

ON many farms there are places where spring crops cannot be effectually planted. These spots may be found in poor places in the meadow where the grass is light, or in a portion of a new seeding where the seed has failed to "catch," or perhaps in some hollow which was too wet for early plowing and planting. In such cases it will be profitable to sow the ground with corn for fodder for next winter, or for feeding green next August or September.

It is a very common mistake in sowing corn for fodder to use too much seed. If sown too thick, the stalks will be slender, with few leaves and nearly destitute of saccharine matter. In thick sowing we get a heavy, bulky crop; but it is of poor quality. Doubtless one bushel per acre will yield a crop of more value in real nutriment than if double the amount of seed is used. The best way is to drill in rows about three feet apart, so that horse culture may be employed. When thus grown, the stalks will be highly nutritious as stock food, and the nubbins that will grow on the stalks will add greatly to the feeding value of the crop.

For summer feeding corn should be sown as early as it will germinate quickly. For fall feeding it should be sown at intervals of about ten days, and seeding continued until late in July. The late sowings may follow any early crop which may have been removed, as early potatoes, peas, etc. G. A. GOFF, JR.

Chemung Co., N. Y.

Sorghum halepense in Ohio.

Mr. Batcham writes us that the experiment of leaving this plant without protection the past winter at his place, in northern Ohio, was tried, as promised in his article in the RURAL of April 24, and succeeded perfectly—not a root seems to be injured. But the past winter was so mild that frost did not enter the ground more than about three inches, and owing to the drought of last summer, all the roots were below that depth. Mr. B. repeats the belief that stock farmers may find this plant of real advantage in seasons of drought in southern Ohio, Indiana, Illinois, etc., as well as farther south, by protecting it a little in winter as suggested in his article. He thinks those who have the roots or seeds for sale would do well to advertise them in the RURAL.

During our recent visit to the South, we met one farmer who said that if he were obliged to cultivate Sorghum halepense, he would throw up his farm. He had planted a small patch two years ago, and was digging up every root he could find. It spreads with wonderful rapidity both by the root-stocks and by the seeds which birds drop everywhere. In another part of the South, it had so taken possession of a garden, that it was necessary to destroy or remove many Roses and Shrubs, an asparagus plantation and a strawberry patch, before the grass could be exterminated. In another place, it had so taken possession of a raspberry plot that the owner has found it impossible to hoe or dig it out. Hogs had been turned in and even they, though evidently relishing it, seemed to find it hard work to root it out.

Now is the time when the weeds are likely to gain a foothold on the farm among the field crops, and now is the time that the most desperate and determined effort should be made to extirpate them. Keep the cultivator going in the corn field and among all other crops where a cultivator can be used. One day's thorough work when the weeds are just starting will prove of more avail than three days' hard labor when they are four inches high.

The Herdsman.

STOCK NOTES.

Bone-Chewing by Cattle.

I HAVE just seen, in the RURAL of May 15th, Prof. Storer's remarks on "Bone-chewing by Cattle." In the swamp regions of South Carolina there are many deer. The bucks annually shed their horns of all sizes, yet, in spite of the great numbers which fall, comparatively few are picked up, and it has always been a standing puzzle what becomes of them. Many are gnawed by squirrels, as is evident from the tooth-marks on the few that are found; others are buried by beetles. But it is generally believed there that most of them are destroyed by cattle, which are often seen chewing them, as described by Prof. Storer. But the point is that it is a *limestone country* full of springs, so that most of the water obtained by the cattle is strongly impregnated with lime salts. (See an article by me in the Popular Science Monthly for June, 1876, on "Subterranean Springs in South Carolina.") This militates strongly against Prof. Storer's theory that the cattle are satisfying a craving for lime. Mr. Henry W. Ravenel, whose article on the Japanese Plum appears in the same number of the RURAL NEW-YORKER, was, in his younger days, an ardent deer hunter as well as a planter and botanist, and, if my memory serves me, it was he who first called my attention, years ago, to the fact which I have mentioned. Perhaps he can throw some light on the subject. ROBERT WILSON.

Talbot Co., Md.

IN REARING CALVES, after a fortnight old, skim-milk may be gradually substituted for new milk, by adding a table-spoonful of flaxseed, well boiled, to their allowance mornings and nights. If flaxseed is not to be had, then substitute oil meal. Steep one-quarter of a pound of this in boiling water, and add to each gallon of skim-milk fed to the calf. As the animal increases in size, gradually increase the quantity of flaxseed or oil-meal. Take special care that the milk be sweet, and feed it blood-warm. After a while, oatmeal or fine middlings may be added to the milk, and as the calf gets to be two or three months old, Indian meal and wheat bran, mixed half and half, may be used instead of oat meal and middlings; but the flaxseed or oil meal should be kept up, and the calf carefully watched to see that this change does not scour it, and if so, go back to the oat meal and middlings again. Let the calf run in a good grass pasture if convenient, and after a proper time it will take gradually to grass as a part of its rations.

HAIR ON THE LEGS OF CLYDESDALE HORSES.—One of the good points for this breed of horses, is to have abundance of long, coarse hair on the inside of the legs, from the knee-joint down to the fetlocks, as it is contended that this indicates greater vigor in the animal than if it showed less. In order to have his horse take a prize at a late exhibition in Scotland, a farmer attached false hair to the fore-legs of his horse. After the judging was over the false hair was detected, and the exhibitor lost his prize and got a severe public reprimand from the President of the Scotch Society.

As for hair on the legs of a horse, we say the less the better. Long, thick fetlocks, when the ground is muddy, get so heavily loaded as to greatly impede the action of the horse and compel him to carry such an extra-heavy weight attached to his ankles as to tire him much sooner at his work than if he had clean legs and pastern joints. Moreover, this superabundance of hair often causes "grease," a very disagreeable and injurious disease. The most vigorous, muscular and hardiest of heavy farm and cart horses are the French Percherons, and they have nothing like as much hair on the legs as other large European breeds.

TEXAS CATTLE.—The number of these seems to be increasing astonishingly, as we may judge from an article in the San Antonio Express. It says the drive into the bordering States this year, was not less than 300,000, The largest percentage of these were one and two-year-old past steers, which are already contracted for in advance, at good prices, with the more Northern ranch-men. The animals are said to be in extra-fine condition, and the drive began much earlier this spring than usual, as the mild past winter has been extra-favorable for the growth of pasturage. Yearling steers commanded $6 on the average; two-year-olds and cows $9; three-year-olds $10; beeves, $13. The average worth when market is reached, is estimated at $11 per head, making $3 300,000 for the lot—a goodly round sum for the Texan ranch-men to realize in a single year for their cattle.

THE NORTH AMERICAN AYRSHIRE REGISTER, Vol. IV, is now being prepared and will soon be issued. Ayrshire cattle whose pedigrees

trace back to importation, will alone be received. Eligible pedigrees should be sent in at the earliest moment to E. Lewis Sturtevant, So. Farmingham, Mass.—terms one dollar for each pedigree accepted.

Sheep Husbandry.

THE BEST BREED OF SHEEP FOR THE WEST.

HENRY STEWART.

THERE is perhaps more disappointment in regard to sheep than any other sort of live stock. With the exception of swine, no other stock is so easily impressed by breeding and feeding as sheep. Therefore, a skillful shepherd may soon get up a model flock, as regards size, healthfulness and fleece, which *enraptures* (there is no better or truer term for it) the ordinary sheep-man and impels him to go and do likewise. But he soon finds that is not so easy. The model flock has been skillfully bred and tended, generously fed with roots, grain, oil-cakes and rich pasture, and they are plump and covered with a silky wool of great length, closeness and beauty of staple. The envious beholder picks out and purchases a few sheep from this flock and intends to astonish the natives at home and sweep all the prizes at the fairs. He puts them in a good pasture (for him), but a poor one for the sheep, feeds them liberally with grain, but gives them too much; keeps them sheltered from every wind of heaven lest it might visit them too roughly; and in a short time finds his pets looking downcast about the jaws, dull about the eyes, with a dry, harsh fleece; some of them begin to cough, run at the eyes, take on diarrhea and, in general, the flock becomes what the old poet knowingly remarked "*infelix pecus*." By and by the model sheep "go to the dogs," literally and otherwise, and the owner says, "Oh, these high-bred sheep will not thrive in this country; they are too tender for our very changeable climate; the food is not right and, in short, they are exotics which require the best of nursing."—And he is right.

We have imported the finest South-Downs, Leicesters, Lincolns, Cotswolds, Hampshire-Downs, Oxford-Downs, Shropshires and black-faced Scotch, and have tried them here and there, and where are they now? A few flocks have become acclimated, pulling through the trial "by the skin of their teeth," and with the aid of the most careful management; and the *farmer*—"as is a farmer" and not a breeder—is yet to be seen who has been able to keep a pure-bred flock up to the standard which he hoped to attain. In the East, in small flocks and upon highly cultivated farms, there have been some successes which, however, have been in general narrow escapes from failures, and these have been owing to a concatenation of favorable circumstances.

For the West, with its spare herbage, its dry summers, its hot sun, its windy and dusty plains and its fluke-infested swales and marshes, none of these heavy-bodied breeds of sheep will be found satisfactory. I do not think even the hardy South-Down can there be kept in good condition; certainly not any of those of the Walsingham breeding, which are brought into this country looking "as pretty as a picture" and as if modeled by an artist and dressed by a fashionable barber; but which are too artificial for common use. I might here except from the general term "West," those delightful fields found in the blue-grass region of Kentucky where Mr. Robert Scott, the originator of the Improved Kentucky sheep, resides. There the Cotswold and other kindred (in every sense) breeds may thrive to perfection; for climate, soil and herbage cannot be excelled anywhere.

In reply to J. W. S. who, in the RURAL of May 15, asks for the information, I would say that the Improved Kentucky sheep is the offspring of selected native ewes crossed with Merino, Leicester, South-Down, Cotswold and Oxford-Down rams for 40 years past. The foundation is seen to be a grade Merino—and I would here remark that the grade Merino is the best possible basis upon which to found a flock in the West; the better for the better selection of the native ewes chosen for the first cross. Now J. W. S. says there is a *dash* of Merino blood in this breed. But the dash is a very heavy one, because it is the foundation cross. What is this *dash* of blood that is so often talked of? It is a cross which makes a half-bred, and unless it is diluted by returning to the former breeding, it remains a half-cross and not a dash at all. The line of breeding of Mr. Scott has been peculiar. He has taken all the best breeds and has crossed until he has procured a type that suited him, finishing with the large body, long and lustrous wool and close fleece derived from the imported sorts upon the hardy and already acclimated half-bred Merino and best native sheep. These he has interbred and made into a breed that will do for Kentucky and other favorable localities; but for the open prairie States and the plains which are called the West, I have some doubts of even these.

The Merino is the sheep for the West, upon which to found a hardy, successful and profitable flock. The common native—which is a run-down, close-bred, Spanish sheep, originally of Merino blood mixed with some modern Merino—is hardy, cheap, and to the manner (and the manor) born. It can be purchased for $1.50 to $2.50 a head. When crossed with pure Merino, the second cross produces a grade of wool that often sells for more than that of the pure-bred. It herds well, is content with poor fare upon which a big sheep would starve; its fleece is a coat of mail, water-proof and almost air-proof, with its close, well-oiled and yolked surface; and it may be enlarged in size, weight and length of fleece, by selection of rams of the best kinds. Profit is what we work for. Beauty of form and size are nothing as compared with the market value of the produce. And I will venture to say that 99 per cent. of the money made in the West is made from sheep of Merino blood, and 99 per cent. of the losses is made from flocks of the pure-bred, long-wool breeds.

Lastly, in the nearer West, where sheep are kept on farms, and necessarily in small flocks, the best success will be with native sheep or high-grade Merinos, crossed with long-wool or medium-wool sheep, Cotswold, Oxford-Downs, Hampshire-Downs or Shropshires; or with grades of these crossed with Merino rams. But, if in England—a small pocket country compared with ours—it is found necessary to vary the kinds of sheep for different localities, how much more necessary must it be in our vast expanse, to find different varieties of sheep to suit the peculiar circumstances of widely differing localities? No one variety can be the best everywhere.

TREATMENT OF SHEEP.

FROM the breaking up of winter to the settled weather of early summer is the most critical period of the year with sheep, and they require more attention during this time than at others. There are the yeaning of the ewes, the care of the lambs, the washing and shearing of the flock, the turning out to pasture, which last is so abrupt a change from dry to green, succulent food that it is apt to give scours for several days, proving often quite injurious, especially to the ewes and lambs. To obviate this, the sheep should be turned out for only an hour or so to begin with, gradually increasing the time till they can graze the whole day without subjecting them to looseness. If not previously fed a little flax-seed or oil-meal daily, two to three or four tablespoonsful should be given now to each animal, according to its size, early in the morning and again at evening. This tends to keep the bowels in good order, assists in digesting the food, and adds to its nutriment.

In respect to washing sheep, flock-masters are often tempted by a few warm days in May to do this too early. It must be recollected that river and pond water is still quite cold, and if too much so, it gives such a shock to the system as to prove injurious to the condition of the sheep for some time. After washing, be particular to turn into a perfectly dry and well-littered yard, or on to a dry, clean pasture; otherwise the sheep will gather up more dirt into its fleece before shearing than was washed out of it in the general ablution.

Shearing now is the most dangerous change of all; and if warm, dry weather does not follow, the sheep are apt to take severe cold, resulting in inflammation, and perhaps death. To be exposed to a raw easterly wind or a rain-storm till several weeks after shearing, is particularly dangerous; and on the expectation of any such, the flock ought to be well sheltered till the wind shifts to a more favorable quarter, or the rain ceases. The change from a thick, warm fleece to a bare skin, is as great for a sheep as for a man to cast off heavy winter clothing, for a light, thin summer dress; and it is equally dangerous, unless the poor animals are well protected from raw, chilly weather.

Be careful to keep the sheep well salted, for this not only improves their appetite and condition, but is also a preventive of various diseases. Some flock-masters assert that by the free use of salt, they have prevented rot, which otherwise would have occurred, and even after an attack of this loathsome and dangerous disease, have thus cured it. Some breeds of sheep want much more salt than others; and again when feeding on different kinds of grass, or in wetter or drier pastures, a greater or less quantity of salt is required to keep them in good condition. For these reasons the sheep should have free access to at all times to salt, to take little or much, the same as man does according to the craving of the appetite.

The best kind of salt for this purpose is the Liverpool rock, which ought to be placed in large lumps in open boxes in different parts of the pasture, where the sheep can come and lick it as often as they choose. In this way they will never take an excess. This salt costs a higher price than common salt, but the giving of it is attended with so much less labor that we think it the cheapest in the end. The best way we have found to give fine, common salt, is to take long troughs, smear the bottom of them with tar, and sprinkle it with as much salt as will stick to the tar. Sheep cannot then well take an excess of this, and the little tar they get with it is very healthful for them.

The Swine-Herd.

CHESTER WHITES.

COL. F. D. CURTIS.

Origin and Good Qualities.

THE most ancient breed of American pigs is the Chester White, or, as it was formerly called, the Chester County White. The Chester county, where they originated, is in Pennsylvania, south of Philadelphia. The late Paschall Morris informed me that Chester Whites were started by crossing native hogs of the county with a Bedfordshire boar imported by Captain James Jeffries in 1818. It will be recollected that the Bedfordshire hog was one of the numerous families of the Yorkshire bred in England. In the early breeding of these crosses with this imported boar, two families were started, one with more of the Yorkshire type, with small, erect ears; and the other inclining more to the native, with large, lopped ears. Subsequent crosses were attempted with the Suffolk and Berkshire breeds. These latter crosses were not followed up, the best breeders continuing to breed in a straight line with the original cross. The presence of black or blue skin spots, with an occasional fleck of black hair in some instances in Chester Whites, goes to show that there is still a taint of Berkshire blood running in some families. When Joseph Harris wrote his work on the pig, the Chester Whites were so mixed and uncertain in their breeding, that he did not think they were sufficiently established to be called a breed. A number of years later, in 1872, at the National Convention of the swine breeders, they were admitted as a breed, with the following standard and description:—

Head, short and broad between the eyes; ears, thin, projecting forward, and lopping at the point; neck, short and thick; jowl, large; body, lengthy and deep; back, broad; hams, full and deep; legs, short and well set under the body for bearing the weight; coat, thin, white and straight—if a little wavy, no objection; tail, small and with no bristles.

Chester Whites, when they breed closely to this standard, are entitled to be recognized as thoroughbred. They do not seem to be as popular now as they were a few years ago. The chief reason why they have lost reputation has been from the fact that in the absence of any authenticated and recognized standard of characteristics, cross-bred pigs of all sorts, if they were only white, have been sold and sent out through the country as "pure Chester Whites." These impositions naturally caused distrust and disgust with the breed, as the innocent purchasers supposed their pigs to be of genuine blood.

There always have been careful breeders of these pigs in Chester County and elsewhere, and in their hands they have become valuable. They possess the merit of desirable color (white), and of being capable of making a large growth. They are exceedingly hardy and vigorous. The young pigs are strong and active. The mothers are very prolific and remarkable for their supply of milk. These qualities, together with docility, make them exceedingly profitable breeders. There is no better breeding sow, all things considered, than a Chester White. For profit to breed pigs to make pork, there is much improvement when a sow of this breed is crossed with a Suffolk or a Victoria, or other boar of fine qualities. The pigs from such a cross, for fattening, will be as near perfection as it is possible to make them—more perfect than if either breed had been bred by itself. The reasons to an experienced breeder are well known. From the sire are obtained fineness in bone and quality in general; from the dam, constitutional vigor which carries with it a strong appetite, strong digestion and rapid growth, with the benefit of bountiful suckling. Chester Whites rank with the large Yorkshires and Poland Chinas in size, being coarser in bone than the standard of either of these breeds. They have good coats of hair, which fit them better for the American climate than the Yorkshires.

We should much prefer the use of a Chester White female rather than of a male in crossing with other breeds. The use of such a male with a smaller breed would not be sound philosophy, or satisfactory in the results. Where a large growth and heavy weight are desired, Chester Whites will meet the demand, since, when full-grown, they may be made to weigh from 500 to 600 pounds, or even more. The pigs at nine months of age, will reach 300 pounds. The flesh is not so fine as that of smaller breeds, and on this account it is an improvement to cross the females with more refined stock.

The Poultry Yard.

Profit in Poultry.

Last spring I had 14 pure Buff Cochin hens. I sold $23 worth of eggs and chickens and have 18 fowls on hand—four more than I started with, which at the least market price, would be $1.50. I have kept no account of the eggs and chickens used by a family of six. The fowls had the run of the farm where they found most of their feed. I think the eggs paid for their feed, leaving *gratis* the chickens we used at home.

Nelson Ritter says in RURAL of Jan. 31, that it doesn't pay to raise high-priced poultry. I have not found it so. In the first place, the Buff Cochins lay all winter when eggs sell for the best price, and they are ready to sit early in the spring. They are so gentle and tame that they make the best mothers; they don't fly off the nest and break their eggs when I go near them, as the common varieties do, and they are as large as two of ordinary sorts, my cockrels weighing ten pounds when seven months old. We sell our chickens by the pound, five cents live weight being the most paid last season. Eggs were from five to 15 cents per dozen. The common chickens would only bring $1.75 per dozen while the Cochins sell for $4.00 per dozen. M.

Hamburg Fowls vs. Crow's Meat.

MY excellent friend, Col. Curtis, says, in the RURAL of May 1, that Hamburgs are not much better for the table than a *crow!* As I have never been so lucky as to get a taste of crow's meat, I cannot tell as to its quality, and am not therefore able to dispute the assertion. But as I have kept a considerable lot of White Hamburg fowls for several years past, and have had any number of them cooked for my table, from four-month-old chickens to two-and-a-half-year-old hens, I can vouch to their making as savory a meal as anything in the fowl line, outside of Games and Dorkings. I have also kept White Leghorns, and find their meat is of the same quality as that of the White Hamburgs, and not a whit better. I fancy the Colonel was unfortunately served up with a *very ancient* "*biddy*," or had a very poor cook. I should be glad to have Col. Curtis sit down to a Hamburg dish with me some convenient day.

A. B. ALLEN.

HOW MANY EGGS PER ANNUM will the best non-sitting varieties of hens lay? We have heard of single Hamburg and Leghorn hens producing 250 to 300 eggs each per annum; but what we would like to know is, can a flock of 10 up to 50 average this? There is no doubt with proper care in selecting to breed from, and in time, such a flock could be brought up to this great average. The difficulty, however, in selecting breeders from a flock, is to ascertain which hens out of it lay the most eggs; for there are some, even among the non-sitters, that lay few; and if their eggs are hatched, the chickens, like their mothers, would probably grow up poor layers. In order to increase the average laying of a flock, eggs for hatching must be selected from those hens which lay the greatest number. Now, who will go into this, and give us hens that we can depend upon, every one, to lay an assured number of eggs per annum, as with cows which will give a certain quantity of milk or butter per annum. Yet to be certain of this, the former, like the latter, must be kept separate. Who will take the particular trouble to do this? It would be well worth one's while; for he could rapidly sell the chickens thus produced, at a large price.

Miscellaneous.

WHAT OTHERS SAY.

THE CENTRIFUGAL CREAM SEPARATOR.—The following extracts from the address of Mr. Edward Burnett, of Southboro, Mass., before the last convention of the American Dairymen's Association, as given in its fifteenth annual report, give a description of the operation of this device, of which Prof. Arnold said, in a late RURAL, that it was the most complete account he had ever seen:—

All dairymen know that the separation of cream from milk is the result of gravitation; the fat globules being of less density than the watery portions of the milk, rise to the surface. Now the centrifugal machine produces a very powerful and forced gravitation, which develops this separation almost instantly and with great rapidity. At 120 revolutions per minute a weight six inches from the shaft, would be equal to two and one-half times its specific gravity.

At	600	revol's	per	minute=	61½	times its spec.	grav.
"	1,070	"	"		170	"	" "
"	2,000	"	"		684	"	" "
"	3,000	"	"		1,537	"	" "

MY own machine, patented in September, 1868, by D. M. Weston of Boston, has probably the largest capacity of any in the world, the

basket being about two feet in diameter with a 12-inch opening on top and a depth of about ten inches. It is constructed in every particular like a centrifugal hydro-extractor, with the exception that instead of the cylinder being perforated, it is perfectly tight, with a top flange extending inward towards the center. In this cylindrical basket are ten floats or dams from top to bottom, for the purpose of compelling the fluid or milk to travel with the machine. This is substantially all, and it can be used for separating various fluids or solids of different specific gravities. Our first experiment was at 1,200 revolutions a minute, running about twenty minutes, then stopping the machine slowly, and, when at rest, skimming off by hand the cream which lay on the surface in large, thick patches, and of the consistency of clotted cream. At a subsequent trial we used a bent tube, and scooped off the cream while the machine was in motion. Now I have adopted a simple arrangement by which I catch the cream thrown over the flange already described, in a stationary pan, on top of the curb, which surrounds the basket, and lets off the skim-milk by valves in the perpendicular wall, which are perfectly controlled, even when at full speed. This enables me to use it as a continuous machine, and I now handle with it about two tons of milk daily. Having increased the speed to 1,500 revolutions per minute, we run about eighty gallons per hour.

The most favorable results are obtained when the milk is warm from the cow; it then throws off the thickest cream in the shortest space of time. Let me here state that the pressure exerted on the walls of this cylindrical basket is 200 pounds to the square inch, or fifty pounds greater than a government inspector requires on a new high-pressure steam boiler, so that a machine must not only be constructed of the best material, but in the most thorough and workmanlike manner. Mr. Weston is still experimenting and hopes to improve on this simple method which I am now using; and lately I have seen one of his new continuous machines for delivering both the cream and skim-milk at the bottom.

With this short description of the machine I will now give you a few results from my various experiments. On the 4th of last June, mixing thoroughly all my morning's milk, 704 pounds were run into the centrifuge and yielded 35 pounds, 8 oz., or one pound of butter to 19.83 pounds of milk. This was churned in an old-fashioned barrel churn, after twenty-four hours, at a temperature of 50°, and the butter came in exactly seventeen minutes. Of the same milk 660 pounds, set tweny-four hours in deep pails immersed in water at 45° and skimmed very carefully by hand, yielded 32 pounds 4 oz., or one pound of butter to 20.46 pounds of milk. This was churned, after standing twenty-four hours, at 60°, and it took fifty-three minutes to bring the butter. I wish to call your attention to the difference of temperature in the churning of the two different lots of cream, 10° in favor of the centrifuge; and the length of time occupied with that cream was only seventeen minutes, against fifty-three with that from the pails. About these same results, in favor of a slight gain for the machine, were obtained from many subsequent experiments, but a neighboring farmer and butter-maker, who had rather laughed at "Burnett's new-fangled machine," after a good deal of persuasion on my part, this winter divided his milk, setting one-half, or eighty quarts, in small pans twenty-four hours—his usual method—and placing these in a cold, damp cellar at a temperature of about 55°. The other half in ten or fifteen minutes was separated by my machine and yielded eight and three-fourths pounds of butter against five and one-fourth in the pans. Making a second experiment at my suggestion and using a tank and some of my deep pails with the same quantity of milk (eighty quarts), he obtained 6¾ pounds of butter from the machine and six and one-fourth pounds of butter from the pails. He also found, on churning, a great saving of time with the machine cream, which occupied only eleven minutes against one hour with the cream set in deep pails. I cannot vouch for the accuracy of this experiment, but will simply say that he is a very good farmer, and one that naturally would take great pains in doing it thoroughly. Wishing to try the effect of old milk, I took, July 1st, and set a portion of the morning's milk thoroughly mixed in pails in a tank, the water at from 45° to 50°. The next morning, twenty-four hours afterward, 165 pounds run through the machine, yielded eight pounds, or one pound of butter to 20.62 pounds of milk; 126 pounds skimmed carefully in the pails by hand, yielded six pounds, or one pound of butter to twenty-one pounds of milk.

As you will observe, in all my trials there is a slight gain in favor of the centrifugal machine over the ordinary methods, and the Germans, with their repeated experiments, have also invariably found a gain of from three to six per cent. The cream obtained by this method is remarkable for its peculiar, sweet flavor and smoothness. Running it off slowly, then cooling below 50 deg., it is even thick enough to cut with a knife. I have obtained a ready sale for it in Boston at an advanced price, and send it down every night in glass pint and quart fruit jars. The skim-milk is very thin and blue, and has a hard peculiar flavor, although perfectly sweet and remarkable for its freshness, like the cream. After running off the last of the skim-milk we find a most offensive and greenish slime on the rear walls of the centrifugal basket, from 1-16 to ¼ of an inch thick. Of this the following is an analysis:

Water	67.38
Fat	3.25
Ash	3.88
Caseine	25.49
Decomposed products, etc.	100

Of it the analyzing chemist says:—"I do not know in what quantities you get this refuse, but the best use of it, I should think, would be for fertilizing purposes, as it is very rich in nitrogen and phosphate of lime." Hence it appears that the rapid centrifugal motion cleanses the milk or cream far more effectually than the best made sieve could do, and it is only natural to suppose that butter obtained from such cream should be proportionately finer.

THINKING, perhaps, that by the great force by which the cream is thrown off from the machine a breaking of the globules might take place, which would, in theory, account for the rapidity of churning, I asked my friend, Dr. E. L. Sturtevant, to come up with his microscope and spend the day at my dairy. His report says:—"The centrifugal cream has certain peculiarities as examined under the microscope. First—its absolute purity, each globule standing out distinct and round and no foreign material of any nature to be detected: second—contrary to my expectations there are no ruptured globules: third—there was a noticeable uniformity between the sizes of the globules of each sample, the first cream taken from the machine having larger globules than the last cream. When, however, the machine is run continuously this should become not so evident. The butter obtained from the centrifugal cream is like any other good butter, except that we have noticed a slight loss of color."

AN important fact lately developed by Dr, Sturtevant is its melting point, 98°, being remarkably high. He found exactly the same result, however, from my own dairy as from that of my neighbor, which furnished two samples from the same milk treated by the machine, and by the ordinary process, the points being 98° and 94° respectively. During the past few months I have had constructed a perforated basket for extracting the butter-milk by centrifugal force, and now treat all my butter by this method most successfully. After two or three rinsings in brine, it is removed from the churn while in small pellets and placed in a cloth. It is then put in the basket of the machine, which, in less than a minute after full speed is obtained, is brought to a standstill. The texture of the butter is fine and the grain uninjured and very solid.

WHAT IS THE VALUE OF GYPSUM TO THE FARMER? asks Geo. Geddes in the N. Y. Tribune. That eminent farmer, John Johnston, now nearly ninety years of age, crowned with the respect and love of all that know him, and surrrunded by a great circle of friends at his home in Geneva, N. Y., has said, more than once, that he would use gypsum on his farm if it should cost him $40 per ton. Some very carefully conducted experiments made at the Michigan Agricultural College showed that one bushel of gypsum sown on one acre of newly seeded clover and timothy, produced an increased yield of a ton of hay, in the two and a half years following, it having been mowed four times during that period. Supposing a ton equal to 25 measured bushels, and the gain to give $5 for this one bushel, we have $125 as the net gain from the use of a ton. Let prudent men cut down these figures till they think they are within proper limits, and then make some trials of this wonderful fertilizer. How does this mineral produce such wonderful results? No man can tell. The scientific man has taken it apart and determined exactly what it is, but why it produces such wonderful effects he has no more knowledge than any of us—and all he or we know on this point is what we have learned by trying experiments, marking results, and comparing notes with each other. The discovery of its power to make crops grow was an accident, and that discovery was made very recently.

There are some very strange things about gypsum, of which we farmers have not been able to learn much. In some places no good results can be seen from its use. On drained, muck swamp the effect is not discernible by the eye, and in some years, though rarely, farmers who are constant users of it say they see no good from it on any land. Farmers generally believe its great use is to mitigate the bad effects of a drought. After barley and oats have come up, and there is little or no rain, they sow their gypsum, and sometimes the effect is very marked. But if the season promises to be a wet one they do not often sow it on these crops.

REMARKABLE YIELD OF BUTTER OF A JERSEY COW.—In a series of interesting articles on Jersey cows in the Country Gentleman, by Mr. Kellogg (Hark Comstock, we wish he would drop this latter homely fictitious name, and hereafter use his real one in his writings), he speaks of one belonging to Mr. Sohier of Scituate, Mass., which made the astonishing weight of 705 pounds of butter in a single year. We hope there was *no mistake* in keeping the record of this great yield; but for fear of this, we think other trials should be made in the presence of at least two well educated and careful persons, from the milking to its straining, where set away, to the skimming of the cream, its churning, and finally to the weighing of the butter. The cows which excelled in various trials described by Mr. K., were of broken colors, generally of yellow, red, or fawn and white, as well as of solid colors. This shows the absurdity of trying for years past to make dark, solid colors, and black points, the criterion alone of the best-bred Jersey stock. It was an injurious, silly fashion, got up in England, and has tended to injure the breed in most cases whenever followed.

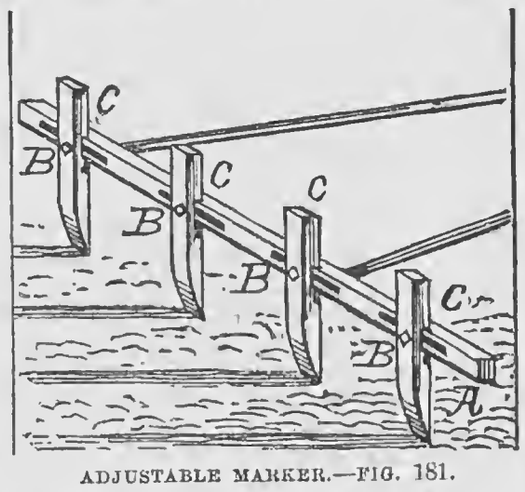
OKRA.—Mr. Hyde, in the N. Y. Times, says of this: "It must not be sowed till the ground is warm, and the land should be so rich that it will push the growth rapidly. It makes a very rich soup, and is also boiled, as asparagus is, and makes a delicious and wholesome dish. After being boiled it may be served on toast, like asparagus, or dressed as a salad. The young seed-pods are the edible part, and these may be cut into slices, strung on strings, and dried like apples for winter use. We trust the time is coming when okra will be considered a necessary in every farmer's garden. Nutriment and health are found in this vegetable. The dwarf and prolific varieties are the best."

ONE and a quarter pound of oatmeal, says Dr. Parkes, will supply as much nitrogen, and almost as much fat to the body, as one pound of uncooked meat of ordinary quality. A man gets quite three times as much nourishment at the same cost in oatmeal as in meat, and the oatmeal is more cheaply cooked. Indian corn (maize) is even cheaper, and one and a half pound of maize is equal to one pound of uncooked meat in nitrogen, and surpasses it in fat.

A SIMPLE ADJUSTABLE MARKER.

THE accompanying drawing represents a very simple, home-made, adjustable marker, which can be so constructed that any width of rows, within the limits of the particular implement, can be marked out. It can be made of any dimensions desired according to the use to which it is to be put, whether hand or horse, and with two, three, four or more teeth.

It is only necessary to describe the method of its construction. Through the horizontal square stick of timber, A, a series of slots B, B, B, B are



ADJUSTABLE MARKER.—FIG. 181.

made the width of the diameters of the bolts to be used. The slots may be from six inches to one foot long. Through these the bolts are passed and also through the "markers" C, C, C, C, their distance apart being regulated by sliding them to or fro in the slots. A notch, one inch in depth, and the width of the horizontal stick, should be cut across the face of the markers to keep them in a perpendicular position. Bolts may be put through the timber near the ends of the slots, perpendicularly to resist any tendency to split.

Ontario Co., N. Y. WILLIAM R. BROOKS.

WORMS IN PEACH TREES.—When the leaves roll up and look yellow, you may be sure there are worms at the roots. Pour boiling water around the stems of the trees near the ground—if soap-suds all the better—until the roots are completely saturated; don't be afraid of injuring the tree, and in a few days you will see the leaves unroll and turn green and the tree become thrifty again. I have tried this remedy for more than 23 years and never knew it to fail. J. F. C.

THE END OF THE RILEY CONTROVERSY.

Editor of the Rural New-Yorker:—Sir:—On account of the subscribers to your journal who have known me for a number of years, either personally or as a contributor to your columns, I call attention to the fact that Mr. Brisbin Walker stultifies himself in his letter in your issue for April 17th. He first asserts that my statements regarding him in my letter of Feb. 2d, are "absolutely untrue," and then admits their truth by confessing that he was engaged as set forth by me. He neither denies that he was paid for the work he was engaged to do while in Washington, nor explains why the letter which I addressed to him as the editor of the Washington Republic and which I reproduced, was never published. He contents himself with some malicious opinions and assertions which, as I have already told him to his face that he deliberately falsified for a purpose, I care not to further notice. Respectfully,

Washington, D. C., April 30. C. V. RILEY.

Industrial Implements.

FARM GRIST MILLS.

BY the first of July, Livingston & Co., Pittsburgh, Pa., expect to have ready one of the best cheap farm grist mills in the market. It will run from eight to ten bushels of feed per hour, and will be extremely simple and convenient. It will deliver straight into the bag and thus save much handling. It will shave the grain and leave the feed light, the peculiar construction of the grinding parts rendering its action on grain similar to that of the best burr. It is guaranteed to give satisfaction, otherwise the money will be refunded—price $30. Of their present grist mill—which retails, delivered, for $15—over 1,500, they tell us, were sold the past season; and for its price we know of none that surpasses it in merits. It can be run by hand or power, and grinds all sorts of grain fine or coarse. The grinding parts are made of hard, chilled iron and are self-sharpening. All parts that are broken can be replaced at small cost. Its capacity by power is from three to five bushels per hour, according to the speed at which it is run. Five or eight-inch pulleys can be furnished with it, as desired.

A Growing Industry.

The market for evaporated fruit, and the prices obtained, have been so profitable in the past as to merit attention, and the fact that a first-class article can be produced by the farmers themselves at a trifling cost for the necessary appliances, bids fair to soon revolutionize old methods. On a recent visit to Pa., one of our staff, as usual, personally examined the evaporator and its product, manufactured by the American Drier Co., of Chambersburg, and we strongly indorse its claims. As a cheap, portable evaporator for farmers' use it is the best we are acquainted with. The evaporation of fruits, berries and vegetables by improved methods is essentially an American idea, and the product has already acquired respectable dimensions in our export trade. It would be difficult to make even an approximate estimate of the annual value of our fruits and berries. Were they as carefully utilized as are our other crops and the statistics relating to them as accurately tabulated, the magnitude of the fruit business of the country would astonish even those who think they are well acquainted with it.

Everywhere.

NOTES FROM KANSAS.

THE month of April 1880, will be one not readily forgotten by residents of Kansas. It gave to those who have been dwellers in the State but a few years a faint idea of what the early pioneers of 20 and 25 years ago had to go through in making homes in Kansas, when it was then still "in the wilderness." Strong southerly winds, dry, and at times warm bringing with them clouds of dust, were repeated every few days throughout the month. They were fortunately more disagreeable than hurtful, and did but little damage, except in a few localities where light clay soils were blown away from the roots of the grain. Farmers were beginning to wear anxious faces and watch with interest every indication of rain. On April 28, their anxiety was relieved by a nice, soaking shower of several hours' duration and extending over the entire eastern half of the State, and again on May 8, another rain spread over about the same territory. These fine rains have brought much-needed relief to the spring crops, and were of great benefit to corn planting or corn already up; but they came too late to save all the winter wheat. The dry, open winter, with some severe freezing in the northern half of the State, followed by the dry winds of April, worked great dam-

age to our winter wheat crop. The early varieties, and more especially the Red May, had jointed before rain came, and is now heading quite short, and much of it is being replowed and planted in corn. The later varieties are very much improved since the rain, and will make a fair average in the eastern half of the State. That which was well put in, will be good; but under the most favorable circumstances, the entire wheat crop of the State cannot yield more than half an average. In the frontier counties lying just west of the center of the State, the wheat crop will be almost a complete failure.

Farmers are beginning to see the fallacy of depending altogether on one crop in a climate and latitude so favorable to the production of a large variety of crops and so favorable to stock raising and fruit growing. Hereafter wheat-raising will not be made so much of a specialty, and diversified farming will become more the rule. Every farmer now wants cattle and sheep, the demand for the latter being so great that sheep dealers cannot supply it.

The acreage of corn and forage plants this season will be greatly increased over that of previous years, and for these the season so far has been very favorable. The introduction of Doura, or Egyptian corn, into Western Kansas is one of the wonders of agricultural production. The past dry season has forced the farmers of that region to cultivate such crops as are best adapted to their climate, and Doura, Sorghum and Broom-corn, all of the sugar-cane family, seem to be specially suited to their wants, and this fact, coupled with the quantitative analysis made by the State Board of Agriculture, showing Doura to be superior to Indian corn and equal with wheat in nutritive qualities, has given an impetus to its propagation, that is scarcely credible. Pawnee county alone will plant 8,000 to 10,000 acres this season, where two years ago it was almost unknown.

The tenacity with which Kansas fruit clings to life is a surprise to all. Six different times during last winter and spring the fruit buds were reported by the farmers to be entirely killed, yet to-day the trees are well stocked with fruit, and the crop will be but little short of an average one. The weather for the past week has been warm—winds easterly and southerly, with almost daily thunder showers in some parts of the State. I have just learned that a fine shower of rain visited the upper Arkansas valley on the 12th, which will help the grass and bring joy to the hearts of the cattle men and sheep men of that portion of the State. Showers sufficient to benefit the grass have also visited some of the northwest counties in the past week. H. R. H.

Topeka, May 12.

RURAL SPECIAL REPORTS.

ILL., Highland, Madison Co., May 10th.—During these last two weeks we had very dry weather, but the rain is falling at last. The wind storms of last April have done some damage around here; houses were unroofed, apple trees uprooted, etc. Roads are in very good condition. Very little grain is being hauled to market, farmers being all too busy with corn planting—some corn planted a week ago is already up. Wheat is very fine, in some places the heads are all out. Many self-binding harvesters will be bought this season.

C. R.

KANS., Fontana, Miami Co., May 10.—The weather has been so dry here for so long a time that it has ruined the wheat crop with the help of the chinch-bugs. The prospect for fruit, however, is good at present. Apples, peaches, pears, grapes, blackberries, cherries and plums, will all be abundant. W. P.

NEW YORK, Elmira, Chemung Co., May 17.—With the exception of a few cold days the past week, with frosts on the nights of May 13 and 14, the spring thus far has been decidedly favorable for farmers. The weather has been good for doing all kinds of spring work, and farmers generally are well up with the season, spring planting having been pretty well finished. As far as I am able to learn, the frosts have done little harm, and if we escape having more the fruit crop in this section will be abundant. The successive hard frosts a year ago completely destroyed the fruit crops on many farms hereabouts, so that many orchards took a vacation last summer: hence they have blossomed unusually full this spring. On looking over our orchards, I find many blossoms destroyed; but many yet remain uninjured, so that I judge fruit will be plentiful. Indeed, I believe the frosts have been an advantage to our fruit growers, as they may have prevented an over-production, which is not to be desired. I speak more generally of Apples. Small fruits, especially Strawberries, have suffered some from the frosts, and the yield from many beds will be materially lessened, I believe. The tobacco crop of the '79's growth has been about all bought up and the unsold crops being so few and scattering, buyers have left the field. The crop generally has sold low, averaging, I believe, not more than 9 or 10 cents per pound. But despite the low prices farmers are preparing for an increase rather than a decrease in acreage. I am sorry for this, for a large acreage means poor crops and low prices. The tobacco-growing business has reached a stage, I believe, where only the best soil and culture will yield profitable returns to the grower. Not a few beginners make a serious mistake in planting out too many acres, thinking to get rich in a few years. Experienced growers have learned that one acre of good tobacco will yield more profit than two acres of poor. G. A. G. JR.

NEW YORK, Corning, Steuben Co., May 20.—Fruit prospects at the present time are good, as everything is blossomed full. On the night of April 30, the ground froze hard, and on the 9th inst., at 1 P. M., the thermometer marked 92 deg. in the shade. The condition of winter wheat is improving rapidly and promises a better crop than we expected. We have had a great deal of high winds this spring, and forest fires are doing much damage to forests and crops, and destroying many buildings and miles and miles of fence. Swallows made their appearance the 28th ult. I should judge from what I am able to learn, that a considerable area of Amber cane will be planted. A larger acreage has been sown to oats than last year. Planting is progressing slowly and work is crowding us, for we have to fight fire so much we cannot keep up. F. H. D.

TEXAS, Fredericksburg, Gillespie Co., May 8.—Owing to drought and cold spells last winter wheat crops have been looking bad, and will turn out below an average. No disease, except a little rust. No signs of the fly. Wheat is a very uncertain crop in this section. There has been no material increase of acreage under it this year. A. L.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Corn Fodder, Hay and Corn Meal.

B. P., Jr., Corning, N. Y., asks whether corn-stalks can be cut fine enough to feed, without much waste, to horses, cattle, etc., what would be the relative value of dry stalks compared with good hay or ground corn.

ANS.—We suppose our correspondent intends to ask the comparative value of corn fodder when used as a part of the ration. It is not a complete food in itself, and although its value may be compared with that of hay and corn-meal, yet it is not to be inferred from this that it would be profitable to feed wholly upon it, as it is deficient in albuminoids; still it may be made an important part of the food for wintering stock.

In the following table we compare corn fodder in various conditions, as green fodder, dried when in tassel, and late-cut, dried corn stalks, showing the wide difference in value:

FOODS.		Water.	Ash.	Albuminoids.	Woody fiber.	Carbohydrates.	Fat	Albuminoids.	Carbohydrates.	Fat.	Nutritive ratio.	Dollars per 100 lbs.	Compared with av. Hay—$1.
		Organic substances.						Digestible nutrients.				Money value.	
GREEN FODDER.													
Norfolk White maize	85.7	0.8	1.1	0.9	4.9	7.4	0.3	0.5	7.4	0.1	14.9	0.69	0.14
Southern "	85.7	1.1	1.3	4.6	7.1	0.9	0.9	7.6	0.1	9.2	0.11	0.17
Hungarian grass	75.0	2.2	3.9	8.7	10.5	0.5	1.8	11.5	0.3	6.7	0.19	0.30
Average grass	70.0	2.1	3.4	10.1	13.4	1.0	1.9	14.2	0.5	8.1	0.33	0.36
HAY.													
Average hay	14.3	6.2	9.7	26.3	41.4	2.5	5.4	41.0	1.0	8.0	0.64	1.00
Dry corn stalks	15.0	4.2	3.0	40.1	36.7	1.0	1.1	37.0	0.3	34.4	0.39	0.61
Cured corn fodder	27.3	4.9	4.4	25.0	37.9	1.3	3.2	43.4	1.0	14.4	0.57	0.91
Corn meal	12.9	1.2	8.7	1.8	71.9	3.5	7.3	68.3	2.6	10.2	1.04	1.69

This table gives a good comparison of corn fodder in all its various conditions. Southern White, cut when in tassel, and having 85.7 of water, has a ratio of 1:9 2. as good even as corn meal; and then it will be seen that nicely cured corn fodder, cut at the right time, has a nutritive ratio of 1:14.4, whilst dry, common corn stalks, cut after the corn is ripe, have a nutritive ratio of 1:34.4—the former being nine-tenths as valuable as average hay, and the latter being a little more than half the value. The reader will understand that the nutritive ratio means that the food contains one of albuminoids, or muscle-forming matter, to so many of carbohydrates, or heat and fat-producing elements. Now for oxen at rest or store animals, 1:12 has been found sufficient; but for growing or fattening animals, or milch cows, about 1:5 is necessary to produce a good result, and it will be seen that corn fodder, in its best estate, is not rich enough in muscle-forming substance. The best clover hay has a nutritive ratio of 1:5, which accounts for its being so excellent in growing young stock. Average meadow hay keeps store stock well, but it will not grow young animals or fatten older ones fast enough for profit. Even these need some more nitrogenous food, such as wheat or other bran, oil or cotton-seed meal, or a mixture of the best clover hay.

Now, if corn is harvested early, say as soon as the ear begins to glaze, and put up in good-sized, well-bound shocks, the stalks may be used to good advantage by cutting them short and feeding with them two pounds of good bran to the bushel of cut stalks, or, better still, half a pound of oil meal and a pound and a half of bran to the bushel of cut stalks. Moisten the stalks and sift on the ground meal, stirring all together, and let it lie in a mass for a few hours and warm up, but not ferment too much.

The object of cutting the stalks is to render them more easily masticated, and by mixing the more palatable leaves and small stems with the coarser parts, have them all eaten together. The whole stalk should be utilized, and when it is shaved up into three-sixteenth inch lengths the tough rind is broken into shreds, and it all becomes palatable to stock, especially after mixing the bran, or oil-meal and bran with it, as above described. Don't allow any one to beguile you into cutting corn stalks two inches long, on the plea that the pieces will lie flat and not hurt the mouth. Stalks will be still flatter if you don't cut them at all. If it is an advantage to cut at all, the advantage continues in the same proportion down to a fine chaff. When shaved up as described, no animal's mouth will be hurt in masticating them. If the feeder has the advantage of an engine to cut with, he may go still further, and after he has mixed up the cut corn fodder and bran, place it all in a steam box and let on the steam and cook all soft. A thorough worker will report most favorably on the experiment. But it will be a cheap and good way to winter stock without cooking.

Queries About Sheep.

H. W. Huntingdon, Pa., asks, 1, which is the most profitable sheep—fine-wooled or coarse-wooled; 2, why does fine wool bring only the same price as coarse, when the clip is only half as much. Our friend remarks that if there is really no difference in price, farmers should ponder on the matter with a view to getting rid of their fine-wooled sheep. He sends us a sample of wool from what are supposed to be Merino-South-Down sheep, and asks 3, our opinion of it. The sheep are very hardy and clip five or six pounds of wool. Some of them have lately been worried by dogs that bit them under the fore-legs, making holes from the size of a buck-shot to that of a bullet. They bled very freely, mortification soon set in and they died; and he asks, 4, whether the presence of goats with the flock would be likely to prove a protection against dogs; and whether bells are of any real use in that connection, of which he is a trifle skeptical inasmuch as some of his worried sheep were so "protected," and he also wants to learn, 5, what is the best treatment for sheep bitten by dogs.

ANS.—1. There are several reasons why some farmers keep fine-wool sheep and some coarse-wool. "Many men of many minds," and many farmers could not keep long-wool sheep if they wished to. Long-wools are heavy-bodied sheep which require high feeding, the best of care and a good deal of skill for success, while any one can keep the fine-wool sheep which are able, in fact, to take care of themselves. Coarse, long wool is in request for the coarse, open-textured cloths that are now fashionable both for men's and women's clothing, and fine wool is used for the less used broadcloths and cassimeres, and the soft cashmeres and French merino still worn by ladies who are less demonstrative in dress than the majority at the present. The home woolen manufacture now uses every class of wool from the poorest Texan and Californian to the finest merino and the longest and most lustrous Lincoln; and there is opportunity for farmers to grow just what suits them best, and always be sure of a market. But while the fashions change suddenly and so greatly, there will always be differences in the value of wool, and one cannot always be changing his plans and his flocks. The most profitable sheep now are the cross-breeds. In England these are the Shropshires, Hampshires and Oxfordshires; and in America the grade Merinos, the Cotswold-Merinos, the Merino-Cotswolds and the Merino-South-Downs. 2. Some years ago merino wool was worth $1 a pound, and small 80-pound sheep sold then for $1,000 a head; but it became unfashionable to wear broadcloth and, suddenly, the fine-wool Merinos were worth no more than their skins, and the Cotswold and Leicesters took their place in the estimation of enthusiastic speculators and farmers. The reason why they have not "come down like a stick" after having "gone up like a rocket," is that these sheep are very difficult to raise and but few farmers can keep them with success. The probability is that long, coarse wool will always be 10 cents a pound higher than fine merino on this account, and because we cannot grow enough at home to supply our wants, and have to import it from Canada and England. 3. The sample of wool sent is an excellent medium clothing wool, and will probably sell for as much as the best full-blood merino, because it is used for such staples as flannels, blankets, and popular makes of cloth. 4. Goats are no protection to sheep nor are bells. The belief is a popular fallacy, entertained only by those who know nothing of dog-nature. 5, When a sheep is bitten by a dog, the wounds should be dressed thoroughly with turpentine to cause suppuration before healing takes place.

Remedies for Gapes in Fowls.

C. F., Troy, Ind., having been very unfortunate in losing chickens by gapes, asks for a remedy.

ANS.—An effective remedy for this thinner of the poultry yard is that described by Gen. Noble, in our issue of Jan. 25, '79. He slaked a barrel of lime-wash to about the thickness of paint, and into this stirred from ten to twelve pounds of sulphur flour. Into each pailful used, he mixed a tablespoonful of carbolic acid, and with a brush sloshed every part of the hennery, roosts, floor and walls with the mixture. This was repeated several times, especially with each new brood, to the entire disappearance of gapes from among his poultry. Of course, a smaller quantity of all the ingredients would suffice for smaller quarters for fowls. As related in a RURAL Brevity in our issue of June 7th, '79, a friend of ours has found an effective remedy in dry, caustic lime. A pinch of it was dropped into the bird's throat, which was then let go, and by next day it had recovered. That's about the easiest "cure" we know. A trifle more troublesome is that found out by an Englishman, as told in the RURAL, July 19th, '79. Taking two parts of sulphur and one of salt, he mixed them with water to the consistency of thick cream—using the finger to mix the sulphur, as it doesn't readily mix with water. Then having dipped a feather into the mixture he thrust it about three inches down the bird's throat, working it up and down a few times, and repeated the operation three or four times at intervals of a couple of days. A still easier remedy is one given in our issue of Aug. 9th, '79, by a correspondent who got rid of the pests by simply removing the chickens and their coops away from the house, and placing them under a tree in the orchard or meadow, having mowed the grass where there was any. In the RURAL of Nov. 8th, '79, Col. Curtis tells how he cured a chick of gapes by making it inhale tobacco smoke until it was stupified. This he did by placing the little wretch in a coop with a vessel by its side, containing burning tobacco, the smoke of which was prevented from escaping by means of a covering over the coop. The above is a condensation of the chief remedies for this ailment, given in the RURAL last year, and about as many are given every year, so that if our friend had saved all the back numbers, she would probably have saved all, or most, of her chicks too.

Timber Preservation.

C. B. J., Langsville, O., asks, 1, whether there is any better mode of preserving timber than by treating it with lime, as described in the "Querist" last week, cost considered; 2, is there any marked difference in the durability of timber cut now, in the fall, or in winter.

ANS.—1. There is no easier and better method, all things considered, than that with lime, for preserving timber, because it is so cheaply and readily practiced. There are many other methods, as saturating with creosote; sulphate of zinc; and other chemical antiseptic substances, known as "kyanizing," "burnetizing," etc., based either on the substances used or the inventors' names; but they need machinery, tanks, hydraulic presses, etc., which are not available for general use. 2. Timber cut in August or September, when in full leaf, is the most durable. The leaves should be left on to draw out the sap before the trees are trimmed. The timber seasons very rapidly afterwards. If the bark is removed from timber when it is cut, it seasons rapidly, and no "powder post" or other insect damage is incurred, because the surface hardens rapidly and the beetles find it difficult to bore into it to deposit eggs, or else find no shelter for them.

G. C. K., Picton, Ont., Canada, asks for the address of a reliable dealer in eggs in this city.

ANS.—An examination of our advertising columns—often an interesting and always an instructive part of the paper—will show the name of E. & O. Ward, 279 Washington St., whom we can recommend.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, May 22d.

W. N. W., thanks.—A. B. A.—G. G., Jr., thanks—H. R. H., thanks.—J. A. P.—J. E. B.—J. T. L.—J. G. A.—K & C.—G. E. N.—L. S. H.—J. L.—E. M. K.—E. W.—J. S. S.—F. H. D., thanks.—J. W.—N. J. S.—A. L. J.—C. H.—R. E.—M.—A. B. A.—A. L.—A. B. A.—H. S.—L. S. H.—A. L. J.—"May Maple." J. A., thanks.—N. S.—J. E. M. C.—C. E. J.—J. H. D.—H.—Jot.—R. C. H.—W. L.—N. R. Foxie.—W. C.—R. H.—T. L. O. K. R.—M. S.—T. H. R.—W. L. S.—X. Y. Z.—A Subscriber.—R. A.—T. B., thanks.

THE
RURAL NEW-YORKER.
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ELBERT S. CARMAN.

Address THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, MAY 29, 1880.

BEAUTIFUL NORWEGIAN PONIES.—We wish some of our enterprising horsemen would follow the example of the celebrated violinist, Ole Bull, and import a few of these for stud breeding in our country. They are of such handsome fancy colors, so fine of form, gentle, and at the same time spirited, that they would immediately become fashionable and command high prices. Two of Ole Bull's importations are of a light cream color, and two others of a bright salmon. The four have long white tails and beautiful flowing manes. They are valued at $1,000 to $2,000 each.

COMPARATIVE VALUE OF DIFFERENT MANURES.—Prof. Voelcker, of England, in analyzing these, reports poultry manure, fresh, as containing about two per cent. of ammonia; dried, a little over four per cent.; farm-yard manure, three-quarters per cent.; Peruvian guano from the Chincha Islands (all exhausted several years ago) used to yield 16 to 18 per cent., but that latterly obtained from other Peruvian islands only gives from three to eight per cent. of ammonia. The latter is richer in phosphate of lime than the former, containing as high as 40 per cent. Pigeon dung is richer than that of poultry when both are fresh, in consequence of more moisture and silicious matter being found in the latter. Soot unadulterated contains three and a-half to four per cent. of ammonia.

Many persons have heretofore thought chicken manure as rich as Peruvian guano from the Chincha Islands used to be; but from Prof. Voelcker's analysis above, they will see that it is only from one-eight to one-ninth as valuable as that, and about half as rich as the poorest quality now obtained from Peru.

BROOM CORN, as many of our readers may know, was introduced to this country by Dr. Franklin. He saw a seed on a broom, planted it, and the seeds from this single plant were the beginning of broom corn as an American agricultural product. The credit for the broom-making industry is due to the Shakers, who, raising the plants in their gardens, manufactured the brooms and sold them for 50 cents, or more, apiece. Immediately after the war, so great was the profit from its cultivation, that it was soon overdone and the many who had rushed into the business were soon discouraged and abandoned it. Now it is cultivated in all parts of the country. The stalks grow very tall; the seeds, if left to mature and ground with corn or oats, are deemed excellent for fattening cattle. But as the straw is brighter and more desirable if cut while the seeds are in the milk or dough state, the seeds are not gathered. These should be planted on good soil, in drills three feet apart, the seeds one foot apart in the drill.

THE WOOL CLIP in Great Britain this spring, on account of the great loss of sheep during the past year, it has been supposed by many would fall 25 to 30 per cent. short of an average. This, and even more, it is confessed, will be the case in some districts; but Mr. J. L. Bowles, of Liverpool, who has taken great pains to ascertain the loss of the whole United Kingdom, sets it down as not to exceed 10 per cent. Our own flock-masters should now take this into consideration, and be careful not to set so high a price on their w ol after shearing as to prevent manufacturers from purchasing freely. If it costs too much there will be no profit on their fabrics, and they must curtail their production. This will lessen the demand for wool, and consequently the price must fall. Wheat growers, or rather the purchasers, by advancing the price too much at one time last year, lessened exportation. Prices then declined, and many of them met with heavy losses.

ONE of the oldest and most respected agricultural editors of our country writes as follows:

"You cannot better edit the RURAL NEW-YORKER than by spending as much time as possible on your example crops. No other editors that I know are doing this, and your reports of the same will give your periodical a reputation and confidence with the public unprecedented in American agricultural literature."

Some force may be added to the above opinion when it is considered that the RURAL has no plants, or seeds, or implements, or, indeed, anything else except itself, for sale. We have only the truth to tell, and we have no interests to restrain or bias us in telling it. We earnestly desire to promote the interests of agriculture and horticulture by praising that which is good, and condemning that which is bad—and this we shall do in so far as we have judgment and knowledge to guide us.

WELLS FOR THE FAR WEST.

A PROPOSITION is before the House of Representatives, in the shape of an amendment to "the Agricultural Appropriation Bill," which provides that the Commissioner of Agriculture shall be empowered to contract for the sinking of artesian wells for the purpose of reclaiming the arid and waste lands of the West by means of irrigation. While it has justly been considered doubtful if wells can be made available for this purpose, yet the bare chance that they may be usefully and profitably employed is of such vast importance that it is to be hoped the amendment will prevail. The cost of making the experiment will be very small, and if one successful attempt is made under such circumstances as will show that the project is feasible, it will set at rest the question of the value of our vast territory in those regions that are now arid and waste. If the supply of water is of no greater volume than shall permit these at present worthless lands to be used for grazing cattle, the expenditure will have been a judicious one for the Government, for it will give a certain value to millions of square miles of land which is now utterly worthless. This is eminently a case in which the public funds may be justly expended and a business which may be very properly entrusted to the present Commissioner, who has proved himself both enterprising and energetic.

THE WEATHER.

REPORTS of drought are far more common in the West than in the region east of the Alleghanies, but this year complaints are beginning to be as loud in the latter region as in the former. May is a pivotal month, so far as agriculture is concerned, in the Northern States; for the rainfall, though not sufficient in itself for the crops, yet usually is considerably heavier than in June or July. In the Atlantic and Middle States the rainfall in May is usually about three and three-quarter inches, but the weather observations indicate that up to the present time during the month there has been a deficiency of about 50 to 60 per cent. Moreover, the prevailing winds have been of a drying kind, abstracting much of the moisture previously held by the soil, and so free of clouds or aqueous vapor of any sort has been the atmosphere of late, that the sun's rays have reached the earth with great absorptive power, robbing even the subsoil of its watery stores. The winter, too, was so unusually mild that the snow-fall on the Appalachian chain was comparatively light, and even the occasional spells of hot weather, sending the thermometer, now and then, up among the nineties, have failed to melt the snow enough to raise the streams flowing from the Alleghanies.

Mr. Austed, the English expert, in a late work shows, as the result of careful observations, that in England the average annual amount of water taken up from the exposed water surfaces is at least 17 inches, and in some districts as much as 30. Mr. Greaves, a distinguished civil engineer, concludes from a multitude of observations that the evaporation diminishes the supply afforded by the rainfall by 75 per cent. in the British Isles, and as the climate of the United States is drier than that of those islands, it is likely that the quantity taken up will be at least as great. The recent forest fires that are doing and have done such a world of mischief in New Jersey, Northern Pennsylvania and some of the other States, are, no doubt, largely due to the abnormal drought, and unless Providence soon sends us a copious downpour, it is more than probable our crops will suffer even more seriously than they are now suffering, from the same cause.

DEVELOP THE HOME CHEESE MARKET.

THE foreign market seems to have a strange fascination for dairymen. They are affected favorably or otherwise by any change in the market for cheese in England, and that market rules our prices here like a magician's wand.

There has been much written upon the necessity of developing our home market for cheese, of working for the greater market at our doors rather than for the smaller one three thousand miles away. But distance so "lends enchantment to the view" that no home considerations can be seen. The cheese is all made to suit the supposed taste and conditions of the foreign trade, and what can't be sold for that trade is worked off on the home market.

Cheese for long shipment must be made too dry to suit the best home taste, and thus all our cheeses are made so dry as to appear poorer in cream or butter than they really are. Such cheeses require long and skillful curing to develop all their good qualities, and our dairymen have not taken the trouble to construct proper curing rooms; they therefore push them upon the market as early as possible, calculating that they may ripen on the ocean voyage. Most of our cheese finds its way into the hands of commission merchants or dealers within 30 to 35 days after being taken from the hoop. These commission men have no proper facilities, even if they had the knowledge, for curing cheese. They do have them taken from the boxes and dressed a few times to keep them from spoiling, when held for a longer period than expected; but this is a matter of simple preservation and cannot be considered any proper curing. And in this questionable state they come to the retailers' hands and are disposed of to parties who need sympathy during their consumption.

It must be evident that this cheese is not likely to build up the home market, to enlarge the class of cheese eaters, but rather to discourage the consumption of this important article of food, which ought to be used in quantity second only to butter; whereas, while at least 600,000,000 pounds of butter are consumed annually by our people, not more than 150,000,000 pounds of cheese are consumed. From 120,000,000 to 140,000,000 pounds of cheese are yearly exported, and this fixes the price of all the cheese that is made in this country, while, if one-half of the effort that has been made to build up this foreign market had been given to suiting the taste of our own people, the home consumption might have been increased to a larger amount than the whole foreign trade. If the per capita consumption of our population should be increased simply one ounce per week, it would aggregate 140,000,000 pounds per year.

But the fact is not to be disguised that absolutely no general effort has been made to increase the home market. At the meetings of our Dairymen's Associations certain factory managers, who saw the importance of increasing this home market, have given the result of an effort in making cheese suited to this local trade and of presenting it before the people of the district. And in every case the increased consumption was equal to ten pounds per capita per annum for the district canvassed, an increase which, if extended among our whole population, would require double our present make to supply. All that was done to this end consisted in making a softer and apparently more rich and buttery cheese, and curing it better before placing it in the hands of the retailer. But in every instance the public appreciated the extra quality of the cheese, and extended its patronage accordingly. If the factories would co-operate in making a concerted effort to suit the home taste for cheese, not five years would pass before the price of cheese, as of butter, would be fixed in the home market and not in the foreign market. The latter would still be important, but it would not, as now, fix the price on home consumption. The first consideration in improving the home market must be an improved system of curing. The inability of a large proportion of factories to hold any part of their stock for more thorough curing is a serious obstacle to supplying the home trade with a strictly fine cheese.

BREVITIES.

WE are sorry to find that our specimen of the Blood Birch has been much injured by the past winter.

IN consideration of the partial or total failure of the hay crop in many parts of the country, fodder plants should be largely sown while there is still time.

WE have planted about one acre (not measured yet) of Blount's corn, 16 inches apart in the drills, these four feet apart. We propose to give it plenty of room.

A NOTE from the RURAL farm informs us that owing to the hot, dry weather of the past week, the hay crop is ruined. Wheat on high, sandy land is severely scorched in places.

WE have been reading what has been said of the value of the Soja bean, and fail to see wherein it is more desirable for cultivation than several varieties of our Cow-pea (bean).

IT is necessary that we should again state that the several Free Plant and Seed Distributions of the RURAL NEW-YORKER are closed. The next Distribution will be announced about Sept. 1st.

WE have always raised our sweet potatoes in ridges a foot high, setting the plants a foot apart. A friend who has tried both ways says he prefers hills. Four plants are set in each hill and the hills four feet apart.

PROF. COOK, (Rutger's College, New Brunswick, N. J.), reports the yield of Clawson 19½ bushels per acre; that of Foltz at the rate of 30½ bushels. This same marked difference has been found for three years in succession.

ZINC COLLAR PAD. We see this highly recommended as a cure for sore-necked cattle mules and horses. Can any of our readers who have long and faithfully tried this pad inform us as to its merits? It is said to act as an astringent and quickly cure sore shoulders.

AT the late show of the Ayrshire Ag. Association, a serious charge was made against the representative of the Duke of Buccleuch by the judges. Three of his finest cows were found to have had their teats tightly bound with tape, the object being to give a full appearance to the udder.

THE Japan Climbing Fern (Lygodium scandens) is a handsome vine and a fine acquisition among our newer plants. The trouble seems to be, as compared with Smilax, that it makes most of its growth in the spring. To be really profitable to the florist, each string ought to bring at least one dollar.

WE have been looking over a selection of new Pelargoniums, and have noted the following as the best: Victor Hugo, a dwarf; flower double, salmon color. Jealousy is a single of a yellowish salmon. The flower is very large and the petals imbricated. Le Candeur bears a small, but compact truss, nearly white at first, changing to rose. Mad. Thibaud is a violet rose, large, double. Naomi bears a a small truss, but the individual flower is remarkbale for its size and singular shape. Color pink with a dash of violet.

MANY of our readers have never even tried the experiment of planting corn in drills. We are much in favor of the plan from experience, and should feel sorry if obliged to go back to the old system of checks or hills. We are now using a corn drill which drops a grain every 14 inches and covers. The drills are four feet apart. This is for Blount's corn. For varieties that do not grow so tall and sucker less, 3½ feet would be a sufficient width for the rows. It "stands to reason" that four kernels planted 14 inches apart will grow and develop better than four kernels planted together. We doubt if the extra labor in cultivating is enough to be taken into account.

BY all accounts from that quarter enormous amounts of commercial fertilizers were this year used in the Southern States, especially in those that touch the Atlantic—more even than ten or twelve years ago. At that time thousands of planters ran heavily into debt for these means of restoring the fertility of the soil exhausted by the reckless cropping of the improvident days of slavery, and it took many of them years of anxiety and economy and the sale for a song of many of their acres to get rid of the load they had thus imprudently placed upon their shoulders, while not a few slipped from under it either through the bankruptcy court or across to Texas. It is to be hoped that the experience of those bitter days has taught the planters a lesson of prudence, for this is needed even in well-doing. As for the dealers, trust them to look out for their own interests without prompting.

THE forces that have controlled the grain market for several months have produced important changes in the routes of shipments, some of which will doubtless be permanent. By these New Orleans has certainly been the greatest gainer, and Boston probably the greatest loser. While the former has had a heavy surplus of grain beyond its capacity of storage and vessel room, the latter has had a great surplus of freight room, as well of storage capacity. During the month of March the Crescent City, indeed, ranked second only to New York as an export point. For this rush of business the Queen of the South is indebted mainly to the Father of Waters, and to Jay Gould who is vigorously sustaining the barge system, by which a large proportion of the Western products that formerly came eastward on their way to a foreign market, now seek it by this southern route.

WE find the following in the agricultural columns of our respected contemporary the Germantown Telegraph:—"Five hundred thousand dollars won! This is the amount, more or less, that we believe was wagered between the Telegraph and RURAL NEW YORKER as to the germination of weevil eaten peas. The latter proposed that not over fifteen out of a hundred planted would grow; and, having contested this point we secured the hundred hollow peas, which seemed to be mere shells; they were duly planted; and *forty* have made their appearance and look as vigorous as those untouched by the weevil. A check for the amount is now in order. When it is received and paid, those who furnished us with the seed may call upon us for their promised share. Meantime it will be also in order for the RURAL to acknowledge the corn, or pea just as it pleases." The test which the veteran editor of the Telegraph has made, shows a higher percentage of vitality for weevil-eaten peas than did our own tests or the many others which have from time to time been published in these columns. Granting that the Telegraph test was made in the best of faith, yet it is not unreasonable to suppose that the chance of winning so large a sum may have caused the young plants to seem more vigorous than they really were. We hold the editor in duty bound to tell us how many of the 40 plants bear fruit. Meanwhile, since an alternative is offered us, we freely "acknowledge the *corn*."

Literary Miscellany.

THE DELINQUENT SUBSCRIBER.

ONE day last week, while sad and dreary
As we wended, weak and weary,
Across the unswept floor:
We heard, at first, a gentle tapping,
Then it became an earnest rapping
At our sanctum door.

"Come in!" we said; yet while we pondered
And in silence we still wondered
What for us could be in store:
Then, the door-bolt gently turning,
In he walked. Our cheek was burning!
Thoughts of crimson gore.

"Are you the man who does the writing?"
(What word will rhyme with this but fighting?
Quickly thought we, o'er and o'er).
"Sir, we are," we gently told him,
Nodding to the boys to hold him,
If he tried to beat us sore.

"Then you'll please give me a credit
Opposite that little debit
For two dollars more;
I like your paper and will take it
As long as you strive to make it
As good as it has been before."

We jumped! he dodged! thus we missed him,
Or we should have surely kissed him,
No matter if the boys did roar!
So seldom treated in this manner,
We felt inclined to sing hosannah!
Only this and nothing more.

JOHN ASCOTT'S DAUGHTER.

BY CHARLES RICHARDS DODGE,
Author of "Louise and I."

(Continued from page 334)

CHAPTER IX.

"BOOK-FARMING."

ONE afternoon the proprietor of Maplewood was at work mending a bad fence at the lower end of the farm, where it joined the Wilkins' place. Silas Wilkins had lived on the "back road," as it was called, ever since George could remember, and when "young Ashton" took the reins in hand, old Silas presumed to give that gentleman a great deal of "necessary" advice as to the surest way for him "to make a livin' off o' such worn-out land." The pseudo-farmer was sharp enough to take it all in as law and gospel, but the advice somehow did not always receive a practical application, often to the apparent disgust of the elder farmer. Lately the old fellow was inclined to sneer a little, but he always kept his weather eye open when anything new was going on, noted the improvements, and croaked not a little about sinking the whole place.

"Seems to me you take a pesky sight o' trouble, George for them 'ere high-toned cattle o' yourn." The old man said as he appeared on the ground.

"I'm bound to have tight fences, Uncle Silas. I can't afford to lose any of my cows, they cost too much."

"Do you think I'd shoot 'em if they came on my land?"

"Of course not, but your fences are so bad I'm afraid they'd be in the highway before I could get to them."

"Thank ye—"

"No offense meant, I assure you," said George; "but it's so much cheaper and easier to keep things in repair than to build new, I often wonder you don't fix them."

"I suppose they orter be fixed," the old farmer answered, thrusting his hands deep into his pockets, "but there's so tarnal much of it to do, I can't find time to begin."

George thought to himself, "You had better be fixing them now instead of gassing here with me," for Uncle Silas would talk as long as there was anybody to listen to him. He loved argument, and would discuss politics or religion "until the cows came home," as the boys in the neighborhood put it. To-day the subject was feeding stock, though to the old gentleman's credit, let it be said, he showed little inclination to argue and for once was inclined to listen.

"Wall," said he at length, "you may feed accordin' to the book rules if you want to, but I tell ye a cow'll eat just so much anyhow, and in the long run I've found that feedin' medder hay, with a few turnips for a relish, comes about as nigh the mark as you can git."

"I agree with you fully," George answered; "good meadow hay is 'A No. 1,' and the roots are well enough for a relish, but supposing you could feed other things that didn't cost half as much, that would answer just as well, and so save a part of your hay for market."

"*What* is as good as medder hay that don't cost half so much?"

"You had a pretty large stock of oat straw last fall, didn't you——?"

"Neow, George! Oat straw as good as hay! Oh, ho, ho! that won't do."

"But I can *make it* as good as hay at a very little extra cost, and that is where the book learning, as you term it, becomes available."

"How?"

"Well, chemistry, or rather chemical analysis, shows just what are the constituent parts of hay, straw, roots, or, in fact, anything that grows upon the farm, and gives the quantity of digestible matters they contain. Taking good meadow hay as the standard, and knowing its constituents, we will call it worth, for feeding purposes, twelve dollars a ton. By the same means I find that the amount of digestible matter that is nutritive in straw is not so large, and that for feeding it is worth but seven or eight dollars. To make it worth, then, as much as good hay, I must find something to mix with it that has a much larger amount of digestible matter, such as oil cake, for example. Now, by taking 200 pounds of oil cake, and mixing it with 1,800 pounds of oat straw, I get a mixture containing digestible matters equal in feeding value to those in my ton of meadow hay."

"I never heard of that," Mr. Wilkins remarked

"Some farmers buy fish scrap and dried blood for the same purpose, and by their use, are enabled to feed all sorts of poor stuff like straw or corn-stalks, with as good results as they can get from feeding timothy or clover, even."

"That's 'science' is it?" asked the old man, leaning his elbows upon the fence, and supporting his head with his hands.

"Yes, that's one kind of 'book-farming' Uncle Silas."

"Wall, dum me, George, if I shouldn't call it *common-sense*."

"After you have learned it," suggested the other.

"But you don't mean to say that stock will eat *fish*?"

"Sheep will learn to eat it, and it goes as far as corn with them. I knew of a man that kept a large flock of sheep all winter on straw, by giving each animal half a pound per day of dried fish refuse from the fish oil manufactories."

"I don't know about that," the old man answered, shaking his head; it's agin natur'."

"How so?" George asked.

"Seems to me if the Lord had intended grass-eatin', animals to live on meat and sich, they'd a' been got up different—it certainly is agin natur'."

"As to that it is a part of the economy of nature for all animals to obtain nitrogen from their food—it is necessary for their very existence—and if we can furnish it to them artificially, or in other way than that to which they are accustomed, nature's ends are subserved, though by different means. However, that isn't 'science' as you call it, though it is through the application of scientific knowledge and principles that we are enabled to make a proper use of such things, and to farm economically. Come up to the house some time, and I'll give you a few books to read upon the subject."

"Thank ye, George; mebby I will—some day—but I'm 'frald it's hard larnin' old dogs new tricks. Howsomever, you had sich good luck with your fertilizers last year, I believe I'll try some this spring—if you'll tell me what you used."

"All right, come up some evening, and I'll tell you not only what I used but *how* I used it, and there's where a big slice of the 'luck' comes in. There, I guess that will do for to-day," the young man remarked as he drove the last nail, and picked up his tool-box and coat. "I'll fix the rest to-morrow."

"I'll talk with ye again some time," said Mr. Wilkins, turning to go. "Good-day—I guess there'll be snow to-morrow."

The young man started across the meadow in the direction of the house, but he had hardly proceeded forty rods when the old gentlemen's voice was heard calling after him. "I say, George, you needn't fix that piece of fence back of the pond, I'll tighten it myself in the mornin'."

May thought her husband was in a very good humor from some cause or other, as he came in ten minutes later, whistling right merrily, and she asked him the reason, but he only answered, "I've been trying to convince neighbor Wilkins of the error of his ways."

On his way home, farmer Wilkins reflected: "Book-farmin' ain't such a terrible thing after all; accordin' to young Ashton, it only means to *know* what you want to do, and then to *learn how to do it the easiest and cheapest way*. I guess the world has turned clean over sence I was a boy."

CHAPTER X.

SHADOW AND SUNSHINE.

THE cloud hung over the little household for weeks. May's feelings had undoubtedly been wounded deeper than her husband could possibly know, and it was hardly to be expected that she would forgive and forget in a moment. George was ashamed of his hasty words when he came to reflect upon them, and won his wife's forgiveness through a kindly and sympathetic manner towards her. Allowing time for the wound to heal, he again brought all his arguments to bear upon the case, appealing to her reason and good sense. Throwing the entire blame upon his father's obstinate prejudices, he finally reasoned her into the belief that it had been for the best—deceit and all, and the skeleton was banished. Sarah showed herself a true sister at this time, and was very warm and friendly, though Charles, her husband, kept upon as strictly neutral ground as policy would admit. Between William and George there was a decided coolness, so much so, they rarely met.

A visit from Blanche De Fondville brought a pleasant change to the young couple, relieving the monotony of winter farm life. She was lively and interesting, and when she entered the cozy little parlor upon her arrival, it seemed as though a whole basketful of sunshine had dropped into the midst of the little household.

"Why May," said she, with animation, "it seems so funny to see you at the head of an establishment, and such an establishment! It's so romantic a little place, even in winter, what must it be in summer? Love in a cottage, meadows and buttercups, purling streams and warbling birds—I think I shall settle here for life."

"We *are* very happy, Blanche; but our buttercups are only butter bowls, the cows feed in the meadows, and the warbling birds that most interest us are chickens."

"Or turkey gobblers," interposed George.

"Dear me! how very unpoetical. There! I'm all prose now. I should have said happiness in an old farm-house, cow pastures and milk pails, muddy brooks—where the geese and ducks feed—and noisy chickens. *Ahem!* I have heard of your farming operations, Mr. Ashton; papa says you are doing splendidly—are you?"

"That's a question I am asking, Miss De Fondville. It's hard enough work I know at present but they say 'it's a long lane that has no turning.'"

Blanche's coming was a bit of sunshine truly, and May, who had allowed herself no respite from the round of duty which becomes a part of a woman's existence upon the farm, now took time to sit down and enjoy life. Of course, Blanche was shown over the farm. The improvements were pointed out to her and dilated upon, stock put on dress parade and inspected; she was initiated into the mysteries of dairy farming and forthwith declared she would accept the first sensible young farmer that offered her his hand, heart and an interest in his broad acres.

"Provided his family have outlawed him," said George, grimly.

"With or without, if he only owns the farm."

George winced, but added, "and it isn't mortgaged."

Blanche was entirely ignorant of having hinted at anything personal, but she dropped the subject until May and herself were alone again.

"Did I step on anybody's toes yesterday when I alluded to owning the farm?" she asked, "Mr. Ashton suggested 'mortgage' so soon, I didn't know but I had given a thrust in the dark."

"Yes, Blanche, there is a mortgage of two thousand dollars on the place, which we will have to pay off one of these days. It could have been partly cleared away by this time, but it has cost so much to bring the farm up to George's ideas. Of course, you know all about old Mr. Ashton's shutting the door upon George when the farm was bought?"

"Foolish old man!" said Blanche.

"I never knew until a little while ago the true reason for

"Why, was there another reason than the one given?"

"Yes, I had it from the old gentleman's lips."

"Then you have seen him, May?—is he *very* cross?—do they keep him chained or only muzzled? But the reason?"

"Because his son married an Ascott!"

"May!!"

"Oh, Blanche, it has made me so unhappy. No one knows how cruel a stab he gave me, or how deep is the wound. Many and many a night I have cried myself to sleep, when George had been dreaming for hours, and many and many a time I have waked in the dead of night with his cruel words ringing in my ears. 'An Ascott!' My dear, gentle father was an Ascott, and the insult was more to him than to his daughter."

"Your father was one of Nature's noblemen, May. Do you remember an old friend of his named Stephen Hascall?"

"Yes, he was a near neighbor."

"Papa met him when in the West last fall, and learning he was formerly from S——, mentioned your name. The old gentlemen was delighted, of course, to meet a friend of "little May Ascott's," as he called you, and he gave papa the whole history of your family, down to the time when you went away from Maplewood. Your father and Mr. Ashton had trouble with each other regarding a money transaction, and that, perhaps, will explain his feelings toward you."

"An Ashton brought me back to my father's old home, and when I think of that I always feel like forgiving the old gentlemen his cruel words."

"My patience! I should be *for giving* the old, gentlemen a piece of my mind as often as circumstances would admit; but let us talk upon some pleasanter subject."

These few brief weeks of Blanche's visit were happy ones to May, and when they had passed and the parting hour had come, it seemed not only as though a member of the household had been taken away, but that a part of herself was gone.

"Parting is such sweet sorrow,"

Juliet lisped to her lover as she bade him "sweet good night" in the Garden of the Capulets. There is a sorrow in parting, and there is a peculiar sense of sadness, a pathetic yearning, that always comes at the close of a pleasant visit, or the end of an interesting novel, as we say good-bye to the characters, and resume again the thread of uneventful every-day life.

It was the second year upon the farm. Spring was backward, and things had gone wrong from the start. George was anxious to make a good season, and to hasten matters he put in his corn when the soil was too cold and wet, and it rotted in the ground. He had sold some of his hay about midwinter thinking there was enough in the "big bay," with other kinds of feed, to carry him through, and was obliged to buy in early spring at a high price. Peter broke his leg about this time, and his place had to be supplied by a raw hand who seemed to make more work than he performed. Farmer George was "down in the mouth," and began to realize that in farming, as in stock speculation, there must be margins—and that due allowance must always be made for contingencies. But he worked the harder, and adopting May's motto, saved when he could and spent only where it was absolutely necessary. In a month or two old Peter made his appearance. The crops were now doing finely, and as the skies brightened the young farmer began to think of one or two needed improvments that had been planned the year before, and to figure on the finance question. One of these was an addition to the barn that would enable him to keep more cows through the winter, and thus extend his dairying operations. He thought it all over, made close calculations as it seemed to him, and "the improvements went on." It turned out another *draining* experiment—it certainly drained his pocket—for the work cost more than the sum stated by the carpenter, and other estimates were sadly out of latitude.

The season, backward and cold at the start, was now making up for lost time with a vengence and in consequence everything suffered in a greater or less degree from drought. The corn grew well of course the wheat was almost ready to harvest but other crops suffered greatly, and the grass, particularly upon the upland, was badly burned. To make matters worse, when the needed rain made its appearance, it came just at harvest time, accompanied with violent wind and hail, and the grain fields were swept, the wheat lodging so badly in places it was hardly worth cutting. Altogether it was a bad season, and older farmers than George Ashton made calculations for a "snug" winter. He said little to May about his troubles, however, for he knew it would only give her needless worry, but he resolved to put no more improvements upon the farm in any way, shape or manner, unless there was the money in hand to pay for them and a good surplus in bank, besides, for contingencies.

In spite of it all, October brought a joy to Maplewood, though poor little May was shut in her room for over a month, and motherly Mrs. Briggs had to take charge of the housekeeping department, and direct Susan, the maid-of-all-work, in her, now arduous duties. George was as happy as possible under the circumstances, gladly giving his wife a large share of his company, now that the busy season had passed—and for a time his difficulties were forgotten.—*To be continued.*

SKETCHES OF GERMAN LIFE.

BERTHA A. WINKLER.

Cooking and Baking.

FEW travelers have thought it worth the trouble to bestow more than a parting glance upon the peasants' mode of living. They describe courts and princes, converse with diplomatists, dine with merchants and associate with the elite of the place; while the peasant, the bone and sinew of Germany, is but casually noticed or only mentioned as a droll, picturesque specimen of German curiosities. The few books which describe the home-life of the humbler classes are so fraught with error as to give the reader but a vague, confused impression of the real life and character of the people. For example, an author, describing the various German dishes, invariably mentions, in connection with black bread, coffee as being the favorite and indispensable beverage among all classes. Now, coffee costs from thirty to fifty cents, and sugar from fourteen to eighteen cents a pound, and the poor, pinched peasants who are obliged to eat this same black bread in one instance cannot afford to indulge in such expensive fare in the other. It is true that, notwithstanding their wine and cider, coffee is a favorite beverage among them, and but for the want of means to obtain it, would be in universal use. As it is, however, in rural districts, none but the well-to-do *burger* drinks his cup every Sunday morning. Among the poorer class, where coffee is only indulged in at weddings, Christmas and other festive occasions, a pound is made to last a whole year. "He is whittling a beggar's staff" is a common saying among them if they see one of their neighbors indulge in coffee or meat on week days.

There is a uniformity, a simpleness and frugality in their culinary department which deserves to be better known among Americans, whose pies and puddings would be considered a ruinous extravagance by a German housewife.

A peasant's breakfast in Wurtemburg, Germany, consists of a dish of boiled, unpeeled potatoes and one of bread soup, which is simply boiling water poured over thin slices of bread and flavored with onions fried in butter. At ten o'clock he has a lunch of bread and cider, or wine. At twelve a dish of vegetables mixed with flour or dumplings and boiled until it is a kind of thin pudding All vegetables are prepared in a similar way as flour is the substitute for meat. Very often a dinner consists of nothing but a mixture of flour, eggs and milk. It is then called "Mehl-speisse." Mush is a favorite dish, but the milk is poured into it while boiling and, in eating, the plates are entirely dispensed with, as the pan is placed in the center of the table within equal reach of all and each dips in with his spoon and conveys it direct from pan to mouth. Supper is only a repetition of the morning meal with the addition of a pot of sour milk to be eaten with the potatoes. On Sundays those who can afford it have coffee and white bread, others have only milk-soup for breakfast. The dinner is then cooked with meat, and supper consists of fried meal with potatoes or green salad according to the season. The large black loaf is placed upon the table at every meal for each to take a slice until it is gone.

This kind of food is certainly only confined to the peasantry. But the middle class, such as trades people and mechanics, do not fare as well as the common day laborer in America. It is only among merchant-princes, the nobility and in hotels that one can find the tables loaded with the richness and variety so often described by travelers

The cellar, which is always the pride and boast of the peasant, contains long rows of barrels filled with wine, cider and vinegar; huge piles of potatoes and turnips, and, of course, a barrel of sour-krout. Upon a shelf fastened in beams overhead, are from fifteen to twenty loaves of black bread, two feet long and half as wide and thick, with one or two white loaves for Sunday use.

In this locality it is not the custom to do the baking at home. Each village has one or two grand ovens, to which the loaves are transported after being kneaded at home. The baking is generally done every two weeks, and always at night when the field work cannot be attended to and the occasion can be turned into general merry-making by the young folks who always continue to drop a hint to their friends that the baking would be done on a certain night. By a sort of prearrangement unknown to the old folks who would not consent to such nonsense, some five or six chaps and as many damsels drop into the bake-house successively for a chat. By-and-by a fiddler, apparently all unconscious of the group that is so anxiously expecting him, passes the door playing his fiddle as merrily as possible. The sound of the violin brings them all to the door. The old folks begin to see the *trick* and moved by the

shower of entreaties which meets them from all sides and perhaps the recollection of their own youth, give their consent and the fun begins. But such a dance! the girls short skirts forming a perfect balloon as they are whirled around and around by their partners, whose gymnastic feats of throwing their feet in the air and kicking some lady in the side, rather hightens the excitement, as each one strives to outdo the other in agility. At half-past nine the bread is baked, the dance ceases, some one runs for a jug of wine and the fresh-baked loaf is attacked with pocket-knives amidst jokes and laughter, while the place is filled to suffocation with tobacco smoke, which does not seem to annoy anyone in the least. In another half hour each one, after helping to carry the loaves to the owner's house, goes home very likely with feelings similar to those of our young folks at house-warming or carpet-rag parties. For we hear that many a tender union looks back for its commencement to a merry evening in the bake-house.

In strange contrast to such gatherings are the evenings when an old person takes possession of the bake-house. Then all the old women of the neighborhood congregate and the place becomes a regular repository of village gossip. Little then but what undergoes a thorough process of investigation. From the coffee-pot, which always stands on neighbor so-and-so's fire-place, down to the broom-stick, on which some other mysterious neighbor is supposed to journey to the witches rendezvous. But, singularly enough, nobody seems to think long about it. One neighbor greets the much-talked-of other neighbor in the usual friendly manner. Everybody appears to know they have been the subjects of similar tales. It seems to be a subject of chronic disease among village gossips, and these bake-houses are just the place for them. Imagine a dark night, a black low-roofed building, within the dim, fitful glimmer of burnt-down logs, shadows deepening on the wall and in corners, and a group of women talking in low tones and starting at every crackling cinder, and you will not wonder that the evening's conversation is wound up with some wierd account of ghosts and witches. The Germans are imaginative, and if the grandmother has ever been frightened by an oddly branched tree at night the grandchildren are sure it was the headless rider of some ruined castle.

Apropos of castles, I hear there is an old ruin in this vicinity once the fortress of a powerful count, and we will pay a visit to it in the coming season.

BRIC-A-BRAC.

THE cattle on a thousand hills
Contribute to the milkman's wealth,
So does the water from the rills
That's slipped into the cans by stealth.

IN England young gentlemen speak of their fathers as "the Governor," "pater," "the overseer," etc. Here we are more civilized. We say "dad," "the boss," or "the old man." In heathen countries they say "father," but they are away behind the age.—New York Commercial Advertiser.

THE poet Tennyson is worth $1,000,000, and we don't see what use there was in his writing "Come not when I am dead." They'll be on hand, every one of them, when the will is opened.—*Cincinnati Enquirer.*

A SONG OF SPRING.

"Oh, whad is dthe use of repidig?
Drive care ad sorrow away,
Do-morrow dthe sud bay be shidig,
Aldough id is raldig do-day."

Theodore Martin has omitted some of the minor episodes of domestic life of the Queen and Prince Albert, which would, perhaps, have cost him his spurs, had he related them in his "Life of the Late Prince Consort." When the august pair were first married, although the match was one of love, at least on the Queen's part, Her Majesty could not always control her temper, and on the occasion of one of those trifling quarrels which occur even in the best regulated families, she threw a teacup at the Prince's head. He, excessively indignant, retired to his apartments and locked the door.

The Queen's anger having somewhat abated, she thought him sufficiently punished, and knocked at his door. To the question, "Who's there?" she replied in imperious tones, "The Queen." Prince Albert did not answer, and she went away. By-and-bye she thought she would try again, and to the "Who's there?" answered "Victoria." Again there was complete silence, and she again retired. With the perseverance characteristic of a woman alarmed at the trouble to come, she determined to try a third time, and in response to "Who's there?" replied, sobbingly: "Your own loving wife." This brought Prince Albert to terms, and peace was re-established. It is said there was no more teacup throwing in the happy family.

CHEW caramels, with false teeth in;
Untie your shoes with mittens on;
Throw bowers away, and try to win;
Take passage when the train is gone.
You may do all of these, indeed;
And 'twould be nearly as surprising
As 't would be, if you should succeed,
In business without advertising.

A YOUNG woman from Springfield, Mass., who is teaching the Indians, at Hampton, Va., was recently drilling a company of girls on the hymn, "Yield not to temptation," and trying to explain to them the meaning of the words. Some time after the class was dismissed a pupil came to her and said, "Me victory!" meaning that she had gained a victory. Being asked to explain, she said: "Indian girl, she big temptation to me; I no yield; I fight her."—Price Courant.

For Women.

CONDUCTED BY MISS RAY CLARK.

BLUE FLOWERS.

You ask which flowers I love the best,
When spring calls forth her pretty train,
And each in pretty garments dressed,
She sends them forth o'er hill and plain?
Give me blue flowers
To grace my bowers,
"The perfect color"—heaven's own blue,
Meek violet,
In emerald set,
And glistening with the fragrant dew;
Or by the brook,
With downcast look,
The nodding harebell's fairy form
I love to see
Where lowly she
Doth bend her head to meet the storm.

Blue flowers! Oh, give me the fair blue flowers,
So pleadingly their azure eyes
Uplook to mine at morning hours;
Taking their color from the skies;
Of heaven they learn,
To heaven they turn
Their opening bells at break of day;
And heaven doth shed
On each fair head
And blessing on them where they lay—
A blessing meet,
For flowers so sweet,
A portion of her glory bright,
Our prayer should be,
Oh, thus may we
Be "clothed upon" with robes of light.

SIMPLE HOUSEHOLD ART.

IN nothing has our age shown more rapid progress than in household decoration and the desire to make our daily life beautiful. Not in any respect is the change more striking than in the increased love for rich and bright colors, and appreciations of their glowing harmonies.

Formerly, only the wealthy and highly cultivated evinced such tastes, and the middle or lower classes either chose the gaudiest and most glaring mixture of hues, or clung to sober drabs and grays and somber blacks as most genteel.

Now, every eye is being subtly trained by the patient teaching and the open scroll of Nature through the flower garden. Even the narrow window-ledge has space enough for the boxes of geraniums—a dazzling mass of scarlet and green almost as radiant as the light that nourishes the blossoms into perfection.

The side of an old fence will support an airy and light tapestry of swinging morning-glories, white, purple and rose-colored.

The kitchen gardens glow with the velvety splendors of nasturtiums, or the soberer and more delicate borders of thyme and parsley and other low-growing herbs for scent and savor.

One of the visitors at the White Sulphur Springs last year went often in her rambles to the poor homes in the neighborhood, trying to interest the people in the cultivation of beautiful flowers, and doubtless in one or two more years the fruits of her kindly lessons will be richly evident. Indeed, one need only visit a market stall with its prettily-arranged vegetables, the crisp, green lettuce, the crimson radishes, the silvery white onions placed side by side, to see how far the delight in color has spread and grown.

In-doors the change is seen in the rich, dark colors of the stained floors, and the more artistic designs of even the least expensive carpeting. There is an appreciable saving of time and labor also in the oiled or stained floors, which can be so easily kept clean.

If one is not able to afford the money needed for the purchase of center carpets or rugs, they can be manufactured with exercises of a little taste and industry.

First of all, a strong foundation of coarse cloth—a coffee or salt-bag or some such strong material is needed. Then the colors should be chosen and the pattern carefully drawn off before the work is is begun.

The outside border is prettiest of crimson, as the red lights up the room and contrasts beautifully with the dark floor. Then dark-gray and black as a background (so to speak) to the brighter colors, and a narrow line of buff running between the two will often light up a pattern charmingly.

The softer rugs are made of strips of flannel or cloth cut in narrow pieces three or four inches long, stitched through the middle, and both ends turned over, leaving a fluffy, thick surface, pleasant to the tread of tired feet.

This is a very simple household art, but if it makes home beautiful, it is worth much.

Perhaps the daintier arts of embroidery and panel-painting may scarcely touch the affections as much as that homeliest but indescribe air of comfort and welcome which some very simple rooms may wear. It is like a smile of joy on a plain face, brightening it into positive attraction.

It is astonishing when one once begins the work of making home beautiful how constantly material may be found for accomplishing it.

Scraps of bright or dark-colored clothes, tiny pictures, almost anything can be used. From the world of wood and meadows one may gather at will a rich store of mosses and ferns and scarlet berries for all sorts of rare, picturesque grouping.

Then it is always safe to trust Nature with the delicate traceries and intermingling of tint and color and finer shade.

By living much out-doors one learns unconsciously the secrets of these, although it may be impossible to render a reason, the hands will grow more skillful, the eye and ear truer to all that is beautiful. E. F. M.

DAHLIAS.

As everyone has some one particular flower that they love or prize above all others, we expect each one to "sing" the praises of their favorite. While Mr. Vick is bringing his Phloxes to perfection, and Mr. Bliss his Pansies, and Mr. Henderson his Roses, why don't some one grow eloquent over the "Dahlia." As it is my particular flower, and as no one else seems disposed to tell of its beauties, virtues, etc., I shall begin by telling how easily they are grown.

Unlike some flowers, the very choicest double Dahlias bear seed as readily as the more single ones, and as they sport in endless varieties of color it is always a surprise to grow them from seed. After they bloom, no trouble is experience in keeping the young tuberous roots over winter. The bloom ripens them and they remain hard and plump, with no more signs of decay than in older ones that have grown for years.

They are very susceptible to frost both while growing and when stored away, and the light colors more so than the darker ones. They can be multiplied in endless numbers as they can be divided to the single eye, which is all that should be left to each root. They also grow from cuttings readily, this is the way the pot grown roots sold by our florists, are propagated.

After years of experience in cultivating them in large numbers I have never known one to change color or degenerate. A good flower once, is a good flower always. Seedlings sometimes improve in form for five years, but they never vary their color.

They revel in a damp, rich soil, and always bloom better in a shady cool location, the north side of a building, or fence, suits them exactly, if damp enough; in such a location they will begin to bloom early in June and last until frost.

Of manures, cow manure well rotted seems to suit them best. For lawn planting, they are well suited as the sod may be cut and turned back, the plant set in and the sod turned again to its place, and grass and plant both grow finely. Our finest specimens are grown in this way.

For winter storing pile them up in the same way as potatoes and keep them from frost. There is no need of packing in sand, sawdust or anything else if the roots are ripe. Being very bulky it is something of a job to pack them in boxes.

MARY F. MCCLOUD.

USEFUL HINTS.

TO CURE A FELON.—Do not put the fingers in hot water or put on hot poultices. Apply cold poultices. The third or fourth day after a felon makes its appearance it should be opened with a sharp, penknife, making a short, deep lengthwise cut. This will cause it to discharge, and it may continue to do so for two days or more. Put on *cold poultices* until the discharge stops, and keep them on until the wound heals. The finger or hand should be carefully wrapped up for two weeks afterward, as it will be tender. Treated in this manner, a felon will not deform the finger or hand. It will require courage to bear having a felon cut, but in a short time the relief afforded by it will be so great as to call forth feelings of gratitude.

A SUFFERER.

OLD newspapers will put the finishing touch on newly cleaned silver, knives and forks and tinware, better than anything. Rub them well and make perfectly dry. They are excellent to polish stoves that have not been blackened for a length of time. For polishing windows they may be used to advantage, and for linings of carpet. As all housekeepers know, these are but a few of the many ways to utilize old papers.

REMOVE all dust from a garment every time it is worn. Black especially should be treated in this way. Shake it thoroughly and brush with a brush or old silk, or other material, being particular that the dust that settles in the folds is all removed.

THE wings of turkeys, geese and chickens should never be thrown away. This, probably, is needless advice to country ladies, but many may not have utilized them in any way but that of brushing the stove-hearth (an established custom). An exchange says that they are excellent for cleaning windows, and, of course, much more economical than chamois. They are also useful for putting on paste when papering walls. The country housekeeper will find this suggestion timely when about to present her walls with a new coat, and finds, after purchasing the paper, the needed brush has been forgotten and the store miles away.

ABOUT WOMEN.

MRS. A. C. BOWSER won the prize of one hundred dollars for the best poem on the Centennial of Nashville.

MISS ALCOTT entertained at Concord last week all the women-students of Boston University, and several of the professors.

THE seventieth birth-day of Mrs. Ann S. Stephens, the well-known novelist, was recently celebrated by a dinner given in her honor by Edward Dickerson. Mrs. Stephens still seems as hale and hearty as an English woman of fifty.

STEPHANIE, the bride of the good and clever Austrian Crown Prince, is shortly to have a foretaste of her future honors. A Vienna Musical Society is going to Brussels by special train simply to serenade her pretty young ladyship.

MRS. FRASER, the venerable mother of the bishop of Manchester, to whom he has recorded himself as owing most of what he is, intellectually and morally, has just died of paralysis. She was nearly ninety.

FELICITAS VON VESTVALI, the lady who for twenty years was known and admired in Germany for her representations of Hamlet, Othello and other Shakespearean characters upon the stage, recently died at Warsaw. She possessed a singularly strong bass voice and a strong cast of features.

MARY CUSTER lives alone in a shanty at Sioux Falls, Dakota, surrounded by books, which a careful education enables her to enjoy; but she earns her living at a washtub, refusing all offers of higher employment, and declaring that she only wants to be let alone.

MISS LOUISA ALCOTT has no regular study, and is said to be indifferent to her surroundings when at work. She uses whatever pen, ink or paper is nearest, composes rapidly, and writes in a free, back-sloping hand, never copying her MS., and rarely going back to make alterations.

A NOVEL feature was recently introduced into a "Class Social" at Lasell Seminary, Auburndale, Mass., where all the members of the class wore dresses cut and made by pupils in the dressmaking department; and a simple supper was offered, prepared from knowledge acquired in the cooking department, presided over by Miss Parloa.

MRS. ANNE THACKERAY RITCHIE is the mother of a baby son. About the little fellow, says the New York Tribune, will centre good wishes fromt the world over; for in whatever region English literature is read there will be kindly thoughts for the grandson the great and beloved Thackeray would have so rejoiced in, could he have lived to see him.

MAY AGNES FLEMING, the novelist, was only thirty-nine years of age when she died last March. See was a good, true woman, devoted to her children, and a prolific writer of novels, which were always interesting, humane in motive, and free from injurious tendencies. She will be greatly missed in the line of popular literature. She supported and educated her children mainly, and managed to save out of her earnings about twenty thousand dollars, which is divided among them.

She was to have sailed on the 19th of April for Europe, to be absent for a while, her health having suffered for some time previous to her decease, though she never relinquished her work or her cares.

Sabbath Reading.

A SABBATH PRAYER.

BY MERRY MAY.

"There remaineth, therefore a rest for the people of God."

Lord, I thank Thee for the Sabbath,
A sweet rest upon my way;
Help Thou me to keep it holy,
As becometh Thine own day.

For this week of tender mercies,
Showered upon me full and free,
Let me now in true thanksgiving,
Show my gratitude to Thee.

For the week just dawning, Father,
Guide in righteous word and deed
Hold my hand and let me follow,
Wheresoever Thou may'st lead.

Every hour and golden moment,
I will consecrate to Thee,
Help me use them for Thy glory
I am Thine while Time shall be.

When my earthly work is ended,
Be my dying moments blest;
Be Thy smile as I shall enter
The long Sabbath of Thy rest.

A TRUE INCIDENT.

WHEN the Boston train came steaming into the depot, the crowd rushed for seats. As a band of recruits mounted the platform, they shouted back to their friends who had accompanied them to the train the various slang phrases they could command, interspersed with an oath now and then. As the train moved off they pushed each other into the car, where many ladies were seated, including a Mrs. B—— and her two boys. Then the oaths came out thick and fast, each one evidently trying to outdo the others with profanity. Mrs. B—— shuddered for herself and her boys, for she could not bear to have their young minds contaminated by such language. If the train had not been so crowded she would have looked for seats elsewhere, but under the circumstances she was compelled to remain where she was.

Finally, after this coarse jesting had continued for nearly an hour, a little girl, who, with her mother, sat in front of the party, stepped out timidly from her seat, and going up to the ringleader of the group—a young man whose countenance indicated considerable intelligence—she presented him with a small Bible. She was a little, delicate-looking creature, only seven or eight years old, and as she laid the Book in his hands she raised her soft eyes appealingly to his, but without saying a word went back to her seat.

The party could not have been more completely hushed if an angel had silenced them. Not another oath was heard, and scarcely a word was spoken by any of them during the remainder of the journey. The young man who received the Book seemed particularly impressed. He got out of the car at the next station and purchased a paper of candy for his little friend, which he presented to her. He then stooped down and kissed her, and said that he would always keep the little Bible for her sake.

The little girl's mother afterward told Mrs. B—— that her child had been so troubled by the wickedness of these young men, that she could not rest until she had given her little Bible, which she valued so highly herself.—*Christian Advocate.*

WE live in the midst of revelations. We are continually receiving what we ordinarily call inspirations. There is hardly ever a complete silence in our souls. God is whispering to us well nigh incessantly. Whenever the sounds of the world die out in the soul, or sink low, then we hear these whisperings of God. He is always whispering to us, only we do not always hear, because of the noise, hurry and distraction which life causes as it rushes on. F. W. FABER.

There is a great significance in the name "Gethsemane."

It means "oil-press," and indicated that the

orchard or garden was a place used for the manufacture of olive oil. This was done by crushing the berries and expressing the juice. That process typifies the crushing of our Lord under the awful weight of sin and the wrath of a holy God which, voluntarily assumed by Christ, broke him down in indescribable agonies of body and soul and crimsoned the soil of the garden with his bloody sweat.

What sacred, and yet what sorrowful, memories center there.

"Gethsemane, can we forget
Thy struggling agony,
When night lay dark on Olivet,
And none to watch with Thee?"

LEARN to entwine with your prayers the small cares, the trifling sorrows, the little wants of daily life. Whatever affects you—be it a changed look, an altered tone, an unkind word, a wrong, a wound, a demand you can not meet, a change you can not notice, a sorrow you can not disclose—turn it into prayer, and send it up to God. Disclosures you may not make to man you can make to the Lord. Man may be too little for your great matters; God is not too great for your small ones. Only give yourself to prayer, whatever be the occasion that calls for it.—*Winslow*

LET me urge upon Christian households to hold social Bible-parties, as the world holds social dancing-parties. Why should not a score of young Christian folks gather in a parlor, and each read and explain a portion of Scripture, prepared for the occasion? Why should not ice cream taste as good, and music sound as good, and greetings be as agreeable, after that, as after a silly gossip and a "dance?"—Howard Crosby.

HIS words had power, because they accorded with his thoughts; and his thoughts had reality and depth, because they harmonized with the life which he had always lived. It was not mere breath that this preacher uttered; they were the words of life, because a life of good deeds and holy love was melted into them. Pearls, pure and rich, had been dissolved into the precious draught.—Nathaniel Hawthorne.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ABOUT WASHING DISHES.

MARGUERITE.

MY thoughts went moralizing this morning over the dish-pan and about it as well as on the subject of housekeeping in general. The reading of the RURAL, for April 24, with its helpful talks, started a train of thoughts. How often have I declared my hatred for dish-washing and felt it, too, to such an extent that I sighed because I was born a woman. Now I'm ashamed of this—heartily so—and would be far from confessing it, if I were not in hopes of helping some one else. As I grew to womanhood I wanted to like the things I had to do, even if they were homely duties, and then there were such glorious texts to help me: "Whatsoever thy hand findeth to do, do with thy might;" and "Do all things to the glory of God."

If we do our work with our might and for the glory of God, we certainly must do it well. I believe half the trouble over the dish-pan is because mothers draft the girls into service without the proper drill.

Dish-washing can be made pleasant work, and no harder on hands that many other things that need to be done. Let me tell you of my equipments, which are simple: An iron sink, low enough so that I can sit down and work easily—for I am not one of the strong ones. It stands on legs, which makes it easier to do this. A large, flat pan in which to wash the dishes; a flat, six-quart pan in which to rinse them, and a long, shallow one in which to drain them. Pure linen cloths are ready to wipe them, three-fourths of a yard long, and shelves ready cleared and wiped, upon which to place them, with plenty of hot, soft water, to be used for the purpose. A little system in getting dishes in order for washing, and shelves neat and clean to place them upon, and dish-washing is nothing to be dreaded by anyone.

"Oh, but the kettles!" some one exclaims.

Kettles need not be hard to wash, if good management is used. Take them off the stove the moment they are emptied, and fill them with cold water, and they will be as easily washed as a dish. Never use soap in dish-washing, except in extreme cases. I consider it too impure for dishes off of which one eats, unless a very thorough rinsing follows.

"Why?" some one asks.

Because parts of the ingredients of soap are very filthy indeed. Better use borax. I have stepped into people's kitchens many a time to help with dishes when I felt as if my service would be acceptable, and afterward I was thankful the duty of eating came first, else I would have had no appetite. Sometimes a piece of "factory" would be given me, full of stains from former service, to wipe them with; or they would be washed in soap-suds without rinsing; or the same wet cloth was mopped and re-mopped over a quantity of plates; or the dishes were cold, and I would return to my easy-chair feeling as if something disagreeable had occurred. Hundreds of mothers and mistresses put girls to the work without ever a thought of teaching them to have pleasure in it, or how to do it well, while there are hundreds more that do not know themselves how to do the work comfortably. I never intend my daughter shall hear me say I dislike the work, and although she is not six, she helps me over many a tired place by washing them for me, with her sleeves pushed above her elbows and standing upon her stool. She does her work well and is very apt in learning, and careful, too; besides, she is so happy because "she is such a help to mamma."

When done, always rinse the wiping cloth in clean water, or if of necessity soap must be used, rinse out carefully and hang up to dry, that it may be ready for the next time. A goodly supply of cloths for this purpose should be provided, and, of course, used only for this. I have a set of sleeves of the cloth, made straight, with a cord around the wrist to be drawn over the arms and secured by elastic. So if I'm wearing lace or cuffs that I cannot easily remove, I can don them and help Bessie with the dishes any time, and while this lightens her labor, at the same time I am overseeing my household and becoming acquainted with its needs.

HARMLESS HAIR-DYE.

MRS. J. B. H., asks for a recipe for darkening the hair. She does not wish to use a patent hair-dye, but thinks there must be something that will have the desired effect without doing any injury. All hair-dyes contain more or less sugar of lead, nitrate of silver and other injurious ingredients and we know of nothing harmless that will help our questioner. But some of the RURAL readers may be able to offer the desired information.

NOTE.—Dr. Hoskins says that solution of iodide referred to in his article upon goitre, in the RURAL of April 7, was that of the United States Pharmacopœa.

DOMESTIC RECIPES.

Cherry Pudding.

One quart of scalded milk, not quite a pint of Indian meal, a scant half pint of sifted flour, four well beaten eggs, two teaspoonsful of baking powder, a teaspoonful of salt and a pint of whole, ripe cherries. Let the milk stand after heating until tepid; stir in the meal and flour, reserving a tablespoonful to mix the baking-powder with; add the eggs and salt, then the cherries and baking-powder. Turn into a pudding mold or bag and steam two hours. Eat with sugar and cream or butter-sauce.

Strawberry Farina Pudding.

Fill coffee-cups loosely with strawberries and pour over farina of a consistency thin enough to fill the interstices between the berries and yet thick enough to be firm when cool—three tablespoonsful to a quart of milk is the quantity of farina I use. Turn out on to a flat dish or arrange in a large glass dish. Eat with cream and sugar flavored as liked. This makes a pretty as well as healthful dessert.

MRS. A. B.

Blackberry Cordial.

Put eight quarts of ripe blackberries in a preserving kettle and cook slowly until well scalded through. Strain, pressing out all the juice. Tie up in a bag two ounces of whole allspice, one ounce of cinnamon bark, one ounce of whole cloves and one nutmeg. Measure the juice and to each quart allow one pound of loaf sugar. Put juice, spice and sugar together and boil fifteen minutes. Skim, let cool, then add of pure good brandy one pint to three pints of juice. Bottle and cork. This is excellent for diseases of the bowels.

MRS. J. M.

Breakfast Cakes.

One coffee-cupful of new milk, one of water, the beaten yelks of three eggs, a teaspoonful of sugar, one of salt, four tablespoonsful of potato yeast and sifted flour to make quite a stiff batter. Stir well and put in a warm place to rise over night. In the morning beat whites to a stiff froth and stir in. Bake on a griddle. These are excellent. MRS. B. D.

Veal Cutlets.

Make a batter of a cup of milk, a beaten egg, pinch of salt and flour with a half teaspoonful of baking-powder mixed in. First fry the veal a nice brown in drippings or butter, then dip into the batter and fry again brown. Any batter that may be left may be dropped by the small spoonful into the hot fat, turned and when browned placed on the meat. The veal should be cooked thoroughly—three-quarters of an hour, at least, over a moderate fire. Serve with a few slices of lemon. A. E. M.

Horse-radish Sauce.

The following method of preparing horse-radish we have found an excellent relish with cold ham, corned-beef or eggs. One tablespoonful of melted butter, one of prepared mustard, three of grated horse-radish one of vinegar, one teaspoonful of sugar, and half a teaspoonful of salt. Beat together until thoroughly mixed. This will keep for two or three days. E. K. S.

Miscellaneous.

Trade **LONDON PURPLE.** Mark.

Valuable insecticide for the extermination of the COLORADO BEETLE, COTTON WORM and CANKER WORM. For Prices, Circulars and opinions write.

HEMINGWAY'S LONDON PURPLE COMPANY, (Limited) 90 Water St., New York.

Professor C. V. Riley says: London Purple can be more effectually sprinkled or sprayed on to the plant than Paris-green, by virtue of its greater fineness.
Professor C. E. Bessey says: It promises to be a most excellent remedy. It quickly kills both the Larva and the Winged Insects.
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SAVED BY PURCHASING DIRECT FROM

INTERMEDIATE PROFITS.

THE MANUFACTURERS.

We have now open an immense stock of the most approved varieties of CARPETS and FLOOR COVERINGS
MANUFACTURED BY OURSELVES
Expressly for this season's Retail Trade, consisting of AXMINSTERS, WILTONS, VELVETS, BRUSSELS, INGRAINS, &c., &c., in
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These goods will be found to combine in an unusual degree, Elegance of Appearance and Positive Wearing Qualities, and are well worthy of the inspection of intending purchasers.
We also offer a Full Line of TURKISH and EAST INDIAN RUGS and MATS, CHINA MATTINGS, OILCLOTHS, &c., &c., AT THE LOWEST POSSIBLE PRICES.
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CARPET MANUFACTURERS AND RETAILERS,
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500 Male and Female Agents wanted immediately for an honorable, light, local business. An article of consumption needed in *every family*. Large profits. Thousands of patrons. C. L. VAN ALLEN, Albany, N. Y.

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AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with HEEL and TOE complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to The Twombly Knitting Machine Co., 409 Washington St., Boston, Mass.

20 New Styles Chromo Cards, 10 cts. Best ever sold. Stamps taken. J. B. HUSTED, Nassau, N. Y.

20 Gold and Silver Chromo Cards, with name, 10c. post-paid. GEO. I. REED & Co., Nassau, N. Y.

WE ADVISE YOU TO INSURE YOUR property in the
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Of Watertown, N. Y.,
The largest Company in the country which insures only farmers' property and residences. Over twenty-six years old.

Capital	$200,000 00
Net Surplus, over	$235,153 81
Assets, Jan. 1, 1880	$1,137,549 73

XX COT (not painted, White Duck) $2.

Makes a perfect bed. No mattress or pillows required. Better than a hammock, as it fits the body as pleasantly, and lies *straight*. Folded or opened instantly. Self-fastening. It is just the thing for hotels, offices, cottages, camp-meetings, sportsmen, etc. Good for the lawn, piazza, or "coolest place in the house." Splendid for invalids or children. Sent on receipt of price, or C. O. D. For 50 cents extra, with order, I will prepay expressage to any railroad station east of Mississippi River and north of Mason and Dixon's Line. For 75 cts. in Minnesota, Missouri and Iowa.
HERMON W. LADD, 108 Fulton St., Boston; 207 Canal St., New York; 165 North Second St., Philadelphia; 94 Market St., Chicago, Ill. Send for Circulars.

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BERRY CRATES & Baskets. In use 10 yr's Best and Cheapest made
Send for Free Circular.
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GUTHBERT RASP Berry
Green plants (which, if properly planted in June, will yield a crop of fruit next year), carefully packed in damp moss, at $3.00 per 100, $20.00 per 1,000.
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Little Silver, Monmouth Co., N. J.

KIEFFER'S HYBRID BLIGHT PROOF PEAR.
"40 Years' Experience in Pear Growing," telling how to avoid the blight and *insure good crops*.
"40 Years' Among Small Fruits," telling what and how to plant. Either sent by mail for 15c.; both for 25c. *Catalogues* free.
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IMPORTED CLYDESDALES
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HAMBLETONIANS,
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HIGH CLASS POULTRY, Grape Vines, Small Fruits, finer than ever.
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Fertilizers.

STOCKBRIDGE MANURES
For 1880.

Some years ago the Stockbridge Manures were only known to a few farmers in the Connecticut Valley. Now they are so extensively used in different parts of the country as to require two large factories, one in New York and one in Boston to manufacture them. This increase shows what farmers think of good fertilizers, and is not only due to the fact that they are reliable, well-made, and high-grade manures, but also to the fact that farmers have

FOUND THEM PROFITABLE TO USE.

Now that corn, and other farm produce is bringing such good prices, we anticipate that farmers will invest still more largely in our fertilizers.
Besides the Stockbridge Manures, we manufacture several high-grade Phosphates, and deal in first-class chemicals of all kinds. Farmers who intend to use Fertilizers of any kind, should

Send for our New Pamphlet,

which contains a large amount of reliable information, beside prices for 1880.

MAILED FREE TO ANY ADDRESS.

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3 Park Place, N. Y.
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FARMERS about purchasing fertilizers and wishing to save from 100 to 2,000 per cent., can do so by sending stamp to GEORGE CASPER, M. D., Manatee, S. Fla

News of the Week.

MISCELLANEOUS.

Monday, May 24.

Who shall be the next President is the conundrum that politicians everywhere and of every party and shade are now puzzling their brains to solve. The screws are being tightened more and more on the party machine. An extraordinary amount of lobbying and wire-pulling is going on, and voters are gradually being whipped into the ranks. This is about all that can be said of the politics at present. The same speech-making, lobbying and demonstrations, that take place in one part of the country or in one neighborhood, are repeated with only slight variations in all cities, towns, villages and neighborhoods all over the Union....A Western national fair is to be held at Bismark Grove, Lawrence Co., Kans., from the 13th to the 18th of Sept. next...One thousand and ninety-six miles of railroad have been built in the United States so far this year, against 391 miles for the corresponding period last year....A meeting of the National Watchmakers' and Jewelers' Association was recently held in Chicago. The president read an address in which he showed that 3,000 watches per day are required in order to supply the demand in the United States. The daily production from the several watch factories throughout the country is as follows:—The Waltham, 750; Elgin, 500; Springfield, Ill., 80; Hampden Watch Company, 90; Howard, 20; Lancaster, 56; Rockford, 40,....

The new rules recently adopted permitting ferry boats in Eastern waters to carry distinctive lights in addition to the regular lights required, were approved by the Secretary of the Treasury Friday, to take effect at sunset on June 1....The House Commerce Committee have instructed their chairman to attempt to pass the River and Harbor bill Monday under a suspension of the rules. The committee also voted to authorize Mr. Deuster (Winconsin) to report favorably to the House his bill "To regulate the carriage of passengers by sea." It specifies the amount of vessel space which must be allowed each emigant passenger, the size of his berth, hospital accommodations, the carriage of explosive or other dangerous articles on emigrant passenger vessels, etc. . . A volunteer company of one hundred men has been organized at Leadville, Col., to go into the Ute reservation. All are old soldiers, under command of experienced leaders, well equipped and thoroughly armed for the summer. The leader of the expedition is Maj. Kline, formerly of the celebrated Bucktail regiment of Pennsylvania. There is a rumor that Indians have been seen in the vicinity of Roaring Forks, but it can be traced to no reliable source. ....It is stated, that, for some reason or other, ex-convicts have a decided preference for life in Chicago; the average arrivals of this enterprising class of society is estimated at about 10 a day.

AGRICULTURAL NEWS.

In this State the measure known as the tramp law became a law last week by expiration of the time it remained in the hands of the Governor. By its provisions all roaming beggars and all vagrants without visible means of support are held to be tramps; and any act of vagrancy by a person not a resident of this State shall be evidence that the party so acting is a tramp. The entering of a building against the owner's will, or the injury of another's property or person, or threats thereto, although short of actual burglary, felony or misdemeanor, shall cause the offender to be guilty of acting as a tramp, and on conviction thereof, imprisonment in the State prison at hard labor for not more than three years will follow; but the lower grades of offense are punishable with imprisonment not to exceed six months. Any person may ap prehend a tramp; but the Act does not apply to those under sixteen years of age nor to blind persons, nor to those who do not stray outside of the county in which they belong. This is the same bill that Governor Robinson vetoed.....The flock owners of most parts of New Mexico are much depressed, owing to the great mortality among their sheep, and especially among the newly dropped lambs, owing to the severe drought that has prevailed in that section for months back. Fully 20 per cent. of all this season's lambs have died south of the Arkansas River, and still heavier losses are expected, unless rain comes soon. The wool, too, is depreciated in value, owing to being dried up.. The Mich. Wool Growers' Association, at a late meeting, recommended that all the samples of wool for exhibition at the State, District and County exhibitions of agricultural societies be placed on black cambric with the breeder's name and post office address attached to the sample, the weight of the fleece, the number of days' growth, the sex of sheep, and where practicable, the weight of the carcass; also that the samples be stitched to cloth, so that it may be folded up or rolled, and thus kept from dirt or dust ... The chief of the Bureau of Statistics says that during April the total value of our exports of breadstuffs was $21,679,115 against $14,168,630 last year. For ten months ending April 30 last, we sent abroad breadstuffs to the value of $207,306,-16 against $149,085,266 in the corresponding period in '79....Com. of Agriculture, Killebrew, of Tenn., says the wheat yield per acre in that State will be only two-thirds of that of last year, but the acreage is larger than ever before. The tobacco fly has injured the tobacco plants very badly. Cotton promises well. Fruit is a failure....The appropriation made by Congress for the Agricultural Department for the ensuing year amounts to $213,000,.... The cattle men of Northwest Texas have formed a combination, the object of which is to place all cattle to be shipped at disposal of the railroad that will make the best rate. If the freights are not sufficiently low the cattle, amounting to upwards of 2,000 car-loads, are to be driven to Kansas..... Reports from Texas, Kentucky, Indiana, Ohio, Wisconsin, Missouri, Michigan, Nebraska, Minnesota, Iowa and Illinois, show that winter wheat has greatly improved in Southern Illinois since the late rains; early varieties in head. Spring wheat generally needs rain, except in Minnesota. Oats and flax are a good stand with large acreage. Corn in Kansas is all planted; in Illinois not yet finished. Fruit is coming to market in large quantities.... .Immense shipments are daily being made to western points by our agricultural implement manufacturers.....In western Pennsylvania and Eastern Ohio the fruit crop has not been injured by the frost, and an abundant yield is confidently expected. Cereals in many instances promise a larger yield than known for several years ... Twelve hundred analyses of fertilizers, feeding stuffs, etc., were made during the past year in the laboratory of the Royal Agricultural Society of England....There seems this year to be a regular sheep "craze" all over the country, but especially in the West ...The pleuro-pneumonia is prevailing to some extent in the State of Delaware. A few days ago Mr. John S. Harrington, of Milford hundred, killed three head of valuable cattle that had been attacked with the disease. This is the surest way to check the spread of this plague if done in time.....In a recent address in England, Mr. Gladstone stated that the country annually imports $25,000,000 of foreign fruits. The exports from the United States to England are steadily increasing, among which apples and cucumbers are two of the leading kinds....The New-Jersey State Board has appointed Dr. William R. Newton, of Paterson, Milk Inspector. He will visit various sections where milk is sold and test its quality by approved instruments. Adulterated milk will be forfeited, and fines imposed...

His Last Dose.

Said a sufferer from kidney trouble when asked to try Kidney-Wort for a remedy: "I'll try it, but it will be my last dose." It cured him and now he recommends it to all. If you have disordered urine do not fail to try it.

Thousands of ladies to-day cherish grateful remembrances of the help derived from the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It positively cures all female complaints. Send to MRS. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamplets.

The Age of Miracles

is past, and Dr. Pierce's Golden Medical Discovery will not raise the dead, will not cure you if your lungs are half wasted by consumption, or your system sinking under cancerous disease. It is, however, unsurpassed both as a pectoral and alterative, and will cure obstinate and severe disease of the throat and lungs, coughs, and bronchial affections. By virtue of its wonderful alterative properties it cleanses and enriches the blood, thus curing pimples, blotches, and eruptions, and causing even great eating ulcers to heal. Sold by druggists.

A COUGH, COLD, CATARRH or Sore Throat requires immediate attention, as neglect oftentimes results in some incurable Lung Disease. "*Brown's Bronchial Troches*" will almost invariably give relief. Imitations are offered for sale, many of which are injurious. The genuine "*Brown's Bronchial Troches*" are sold *only in boxes*.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, May 22.

Boston—PRODUCE—The market is well supplied with the various articles under this head, which are selling at moderate prices. The following prices are paid by receivers: BUTTER—New York and Vermont—choice creamery, 21@23c ℔ lb; Franklin Co., Vt., dairy, 20@21c; New York and Vt. dairy choice, 19@20c; fair to good, 16@18c; Western—choice creameries at 22@23c; choice dairy packed, 18@19c; do. ladle packed, 16@17c; ladle packed, fair to good, 14@15c. CHEESE—very quiet—New choice full cream, 13@13½c ℔ lb, fair to good at 12@12½c, and common at 9@10. EGGS—Eastern are selling at 12 cents, Northern 11½@12c, Western 11@11½c ℔ doz BEANS—Northern handpicked Pea at $1.80@1.85 ℔ bushel; do do Western at $1.70@1.75; do common $1.60@1.65; medium choice $1.45@1.50; common to good at $1 30@1 35; Yellow Eyes $2.10@2.25; Red Kidneys at $1.40@$1 50. Canada Peas 80c@$1.05 ℔ bushel for common to choice. Green Peas $1.50@1.85. POTATOES are very dull; we quote Houlton and Maine Central Rose 40@45c ℔ bushel; Houlton Jackson Whites at 30@35c, Maine Central Jacksons at 35@38 Vermont Rose at 40@45c, do Jackson at 30@35, Peerless at 35@38, and Prolifics at 40@45c ℔ bushel. ONIONS $4@4 50 ℔ bbl. and Bermudas $1.75 ℔ crate. APPLES at $2.50@4.25 ℔ bbl, according to quality. DRIED APPLES are quoted as follows: East and North, new sliced, at 6@7c @ lb; do do, quartered, at 5@6c; old quartered and sliced at 3@5c; evaporated, choice new, at 14@15c; do good, at 12@13c.

Chicago.—BUTTER—For the better qualities of creameries and dairies there is about the usual local and shipping demand at former prices, but common stock is slow sale and weak. Roll butter is about out of the market. We quote: Choice to fancy creamery 20@21c ℔ lb; fair to good 18@19c; fine to fancy dairy, nearly equal to creamery, 17@18c; good to choice dairy 15@17c; light-colored but sweet, or packing stock, 12@13c. CHEESE—Trade is slow almost to dullness in this market, and the feeling is one of weakness, the demand having fallen off heavily of late, while stocks show considerable of an increase. Eastern markets were reported lower, and all are anticipating a further decline. Prime full cream cheddars were quoted at 12@12½c ℔ lb, and sour stock 7@8c, fair to good flat shapes selling slowly at 9@10c for part skimmed and poor lots not wanted. Hard skimmed stock was quoted at about 6@7c. EGGS—We quote the market firmer and stronger under light receipts, and sales were readily effected on yesterday at 9½c ℔ doz. in cases, with loose quoted at 9c.

Cincinnati.—BUTTER.—The receipts have materially increased during the last few days, but with a better local demand the tone of the market is stronger and prices of the better qualities of creamery and dairy are fully sustained. As regards creamery, some dealers ask and obtain 23c for single packages of selections, but there is scarcely a quotable price the great bulk of the sales being at 22c and under. There is no surplus supply of fine butter but there is more of the medium and lower grades than the local demand requires, and packers are taking these quite freely within range of the quotations. Fancy creamery sells at 20@22c. choice Western Reserve and dairy at 15@17c; prime Central Ohio 12@13c. medium do. 9@11c and inferior 6@8c ℔ lb. CHEESE—The arrivals are steadily increasing and the market is easier for prime to choice factory at 10@11c per lb, and inferior ranges down to low prices. EGGS—Have advanced under light receipts and a better local demand to 12@12½c per dozen, but the market closes dull and a decline is imminent. POULTRY—The receipts have increased largely and although there is a fair demand prices rule lower. Prime to choice old chickens sell at $2 75@$3, and only a few extra hens bring $3 25 ℔ dozen; small spring chickens are steady at $1.50@$2, but prime half-grown sell at $2.50@$3. Ducks are dull at $2 50@$2.75 per dozen. Geese are not wanted; turkeys sell at 6c per lb. WOOL.—The Price Current of the 20th says:—There is considerable activity in wool notwithstanding the adverse reports from the Eastern markets where the demand from manufacturers is unusually light, and it is mainly supplied by the foreign production. The receipts here are rapidly increasing and prices have suffered a further decline of 1@5c. per lb the large decline being on tub and fleece washed which is beginning to come in from Southern Ohio and West Virginia. There are liberal receipts of unwashed from Kentucky, Indiana, Illinois and some from Wisconsin. Dealers are buying freely at quotations which are 6@8c. per lb. higher than they were a year ago, and are even higher than they were at the beginning of last winter and they seem to be quite satisfactory to producers. Considerable wool which has contracted at 37@40c on the sheeps' backs in Kentucky early in the spring has been resold in this market at 31@32c. Producers got the benefit of the higher prices and speculators had to stand the loss. The fact is that comparatively little wool was taken by consumers at the high prices which have prevailed the latter part of the winter and early in the spring the trading being mainly between Eastern dealers who are really responsible for running prices up to the point which attracted large imports of foreign wool which glutted the market and took the edge off the market for the new clip. The impression here is that wool is now at reasonable prices, but if the Eastern dealers and manufacturers hold off much longer it may go lower. Burry and fleece grown wool is relatively lower than usual, also dealers do not care to handle it.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, May 22, 1880.

BEANS AND PEAS.—There has been an active export demand for marrows for Europe and Havana; a few red kidney also going to Cuba. Marrows have only a fair spring trade. Light receipts help to stiffen or steady the general stock. Green peas are pressed for sale and with something off in quality. Wisconsin are lower; quoted $1.72½@1.75, with sales for export at $1.75. Southern B. E. peas quiet at $1.90@1.95 ℔ 2 bush. bag; marrow beans, prime, $1.62½; other, $1.45@1 57½; medium, prime, $1.40; other, $1.20@1.30; pea, $1.45@1.65, white kidney, $1.50@1.70; red kidney, prime, $1.45@1 50; other, $1.30@1 40. Receipts for week, 3,775 bush. beans; exports, 3,450 pkgs.

BEESWAX.—Small sales have been made at 24@25c. for Western and Southern. Exports for week, 2,460 lbs.

BUTTER.—The market has not passed its spring ordeal wherein uncertain values and reluctant trade perplex the seller. With best qualities named down where they are, it is not surprising that white, streaked or under grade lots tend to accumulate or offered at figures which they would settle to, if allowed to accumulate. Receipts from very near points are light, owing to short grass consequent upon the dry spell, and the increasing city use for for milk. Creamery butter, as a rule, is not more attractive than fine grass half tubs. The Producers' price current substantially remarks, "that the extended use of patent dairy processes among farmers has sent many packages into use marked 'creamery', which are not up to the standard organized creameries." It's all right that such packages are so marked, but shippers must learn that quality under the stencil plate is what decides trade in New York. The sending of imperfect stock in this way will only tend to make standard brands the stronger, and if dairymen want to compete with the established grades, they must put forth their best manufacturing efforts. Western butter contains few straight parcels; factory, which takes the place of old-fashioned store packed, seldom makes upper figures. Shippers pay full rates for both State and Western when quality meets their taste. Quotations: Creamery, choice, 22@23c.; other, 16@20c.; State, pails and hf. tubs, best, 20c., other, 14@17c.; Welsh tubs, 16@20c.; Western imitation creamery, 14@17c; do. dairy, fresh, 10@13c.; do. poor to prime, 13@15c.; do. factory extra, 14@16c.; other, 10@14c.; very poor, 8@9c. Receipts, 29 825 pkgs.; exports, 8,585 do.

CHEESE.—The receipts have been quite full this week, and shippers have shown a considerable degree of interest. The fancy factories have been taken up close to the offerings and at the close there is a firm feeling as to prices. Sales generally have been at 12½c. for fancy to 12¾c. for special lots and at 12@ 2½c. for grades about choice. The exports for the week are 38,300 boxes. Latest prices are at 12½c. for choice full cream; 11@12c. for good and fine; 10@10½c for fair, and 8@10c. for half skimmed. Ohio factory flat at 11¾c. for full cream; 10@11c. for fair and good lots; 9@10c for half skimmed. Receipts for week, 43,388 boxes; exports, 41,351 do. Liverpool cable, new cheese, 68s. Steam, 38s. 6d.

COTTON.—There has been less export demand but the market closed strong at for May, 11.16@11.58c.; June, 11.61@11 66c.; July, 11.70@11.76c.; August, 11.73@ 1.75c.; September, 11. 55@11.16c.; October, 10.68@10 69c.; November, 10 50@10.51c.; December, 10 50@10.51c.

DRIED FRUITS.—Apples have a light demand and other articles have only a jobbing trade. Prices are unsettled and rather nominal. Quotations are for N. C. apples, fair to good, at 7@5½c., choice, at 9@9¾c.; New York State quarters sliced at 7½@7¾c.; patent evaporated in cases, choice at 14@15c.; old and prime 13½@14c.; evaporated, sliced at 12@13c. Evaporated peeled peaches, good to choice, at 20@22c.; North Carolina peeled choice, 16@17c.; Georgia prime at 15½16c.; fair to good at 13@14c.; common at 10@12c.; unpeeled halves at 7@ 8c.; do. quarters at 6@6½c. Pitted cherries at 17@18c. Blackberries nominal at 13@13½c. Raspberries at 28@ 30c. Plums at 17@17½c.

EGGS.—Receipts for week, 15,000 bbls.; do. last week, 18,450 do. Daily supplies are smaller, but there is accumulation enough in store to deaden the market, and our rates are as full as have been obtainable during most of the week. Hardly anything now sells at mark, and losses in count will be quite numerous, with an extra summer month as May has turned out. Near Points, 12@13c.; State and Penn., 11½@12c.; Western fresh, 11@11½c.; Canadian, 11½@11¾c; held Western, 10@10¾c.; goose, 18@20c.

FRESH FRUITS.—Russet apples are closing out at $2.50@4 ℔ bbl. Strawberries are in demand, but the quality of most lots indicate dry weather and few make top rates. Md. range 12@20c.; N. C., 12@16c.; Norfolk, fair order, 10@12c.; poor, 5@8c.; Chas., 8@10c, choice Southern cherries, 14@20c. ℔ lb, other, 6@10c.; Gooseberries, 5@8c. ℔ quart. Hot-house grapes, B. Hamburg, $1.00 per lb. Peanuts dull and weak; Va. hand-picked, 5½@5¾c.; extra prime, 4¾@5c.; good to prime, 4¼@4¾c.; shelled, 6½c., best; hickory nuts, 90c.@$1.

FLOUR.—There has been more life to the market, but buyers having the advantage with full offerings. Lates prices are at $4.60@4 75 for inferior to very choice superfine State and Western; $4.40@4.75 for poor to good extra State, odd lots and lines; $4.75@ 5.25 for very good to fancy do.; $4.40@4.75 for inferior to good shipping extra Western, and $4.75@5.25 for good to fancy shipping extra do.; inferior to very good white wheat extras, $4.90@5.60; very good to fancy do. at $5.60@6.75; red and amber winter wheat, inferior to very fancy trade and family, at $4.75 @6 65; round hoop Ohio, $4.85@5 35; and trade and family brands of do. at $5.40@6 65; St. Louis at $4.85@5.65 for inferior to good extra; $5.65@ 6 75 for good to fancy; Minnesota clear, inferior to fancy, at $4 75@6 65; Minnesota "straight," poor to fancy, at $5 40@7.25, and patent inferior to fancy at $5.50@8.50; unsound stock at from $2 60@5 00; city mill extra at $5.60@6.00 for fair to fancy West Indies; do. for England, $4.40@5.25 for poor to very fancy; do. trade and family extras, $6.25@7.00; do. for South America, $6.00 @6.35. No. 2 at $2.75@4.00 for poor to strictly fancy. Receipts for week, flour, 77,000 bbls.; cornmeal, 375 bbls.; wheat, 769,700 bush.; corn, 514,000 bush.; oats, 167,500 bush.; rye, 10 900 bush.; malt, 55,700 bush.; rice, 330 pkgs. Exports for week, flour, 58,800 bbls.; cornmeal, 3,775 bush.; wheat, 1,575,300 bush.; corn, 1 079,300 bush.; oats, 3,450 bush; peas, 2,875 bush; rice, 1,575 pkgs.

CORN MEAL.—Sales at $3@3.15 for Brandywine and $2.60@$2.75 for yellow Western.

GRAIN.—Wheat has been arriving moderately well the demand has been less active and prices have tended lower; latest prices are for No. 1 white at $1.26½@1,26; No. 1 white, May, at $1.25¾@1.26¾; do., June, at $1.23@1.23¼c.; No. 2 white at $1.24¼; ungraded white at $1.20@1.25; No. 2 red at $1.31@1 32; do. May at $1.31@1.31½; do. June at $1.25@1.25¾; do. July at $1.14½; do. August at $1.10@1.11; ungraded red at $1.23@1.30; ungraded amber at $1.28¾@1 30; choice Green Bay spring at $1.22; No. 2 Chicago, Minnesota and Milwaukee spring at $1.20¼ @1.21; New York No. 2 spring at $1.13; No. 2 Northwest $1.12½; No. 3 spring at $1.05¾@1.12¾. Corn has been fairly active and closed steady at New York No. 2 at 55¼@55¾c.; do., May, at 52@53¼c.; do., June, at 49¾@50¾c.; do., July, at 49¼c.; New York steamer mixed, at 54¾c.; ungraded mixed Western at 53@ 55¾c.; No. 3 at 54c.; No. 2 white at 56@57¼c. Oats have been active and closed strong; latest sales are of of No. 1 white 48@48¾c.; No. 2 white at 46¾@47c.; No. 3 white at 45@45¾c; New York No. 1 at 46¼c.; New York No. 2 at 46@46¾c.; do. May at 43¾c.; do. June, No. 3 at 41c.; ungraded white Western at 43¼@46c.; white State at 45@48¾c.; mixed State at 45c.; No. 2 Chicago at 46¾c.

HAY AND STRAW.—A good steady trade noted and prices generally strong. Shipping hay quoted at 75@80c.; retail lots at 80@85c. for medium, and 90@$1.10 for better qualities; clover, 55@60. Straw at $1@1.10 for long rye; 65@70c. for short rye, and 50@60c. for oat. Exports for week, 3,500 bales.

HOPS.—Trade is confined to small lots, and the situation generally is essentially as last week, no disposition shown to give way in prices. Quotations are for:

	Cents per ℔.
New York, fancy	Nominal
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

LEATHER.—Quotations are for hemlock sole, 23@25c for light; 23@26c. for middle; 23@75c. for heavy; 21@ 23c. for good damaged.

OIL-CAKE.—Western is quoted at $31.50 per ton.

POULTRY AND GAME.—In dressed the demand is mainly for choice fowls and good weighty spring chickens. Carefully iced State and Western have sold well. General wants of trade not large. Turkeys, choice small, 10@12c.; fair to good, frozen, 6@8c.; do., poor, 3@5c.; Phila., dry-picked, 8@10c.; capons, Phila. large, 13@15c.; small, 20@21c.; slips, 18@ 20c.; chickens, spring, Phila., large, ¾ lb., 33@36c.; small, 30@31c.; roasting, d.-p., 21@23c.; fowls, Phila., d.-p., 13@15c.; Jersey, good to prime, 12@13c.; State, good to prime, 12@12½c.; Western, good to prime, 11 @12¼c; poor to fair, 5@9c.; ducks, spring, large, 33@ 35c; Phila., dry-picked, squabs, white, ℔ doz., $2.50@3.62; dark, $1.25@1.50. Live poultry is steady, with an occasional cross exceeding top prices. Live turkeys hardly pay for shipment, the lower price is for Southern. Chickens, spring, large, per pair, 70c.@90c.; do., small, 40@45c.; fowls, Jersey, ℔ lb., 12c.; Western, 12@ 13½c.; Southern, 11½@12c.; roosters, per lb., 4@5c.; turkeys, mixed, 6@9c.; ducks, Jersey, N. Y. & Pa., ℔ pair, 60@75c.; Western, 45@55c.; Southern, 40@45c.; geese, Jersey, $1.50@1.62; N. Y. & Pa., $1.25@1.37; Western, mixed, $1@1.12; pigeons, 30@45c. The leading item is wild pigeons. They were scarce early in the week, but have dropped to 75c. @$1. Wild squab, 60@75c. English snipe and plover (ice house), $2.25@2.50.

PROVISIONS.—Hog products have less active and closed weak. Mess pork closed $11.15@11.20 for May $11.20@11.35 for June; $11 25 for July; $11.25 for August, and $11.30@11.35 for September, and $11.40 for October. Bacon at 6¾c. for long clear and 7c. for short clear. Beef hams at $16.50@17. Beef—Extra India mess quoted at $18@20 for city and $19 for Philadelphia, and at $10@10.50 for extra mess, and $9.50@10 for plain mess. Tallow at 6¾c. for prime. Stearine at 8c. for choice Western. Lard—Western steam at 7.17½ for contract grade on the spot; 7 17½ for May and June deliveries; 7.22½ for July; 7.27½ August, and 7.32½ for September. Receipts for week, —— pkgs.; beef, 350 pkgs.; pork, bbls., 2 050; cut-meats, 32,850 pkgs; lard 13,000 pkgs. Exports, beef, 2,175 pkgs.; pork, bbls., 4,200; cut-meats, lbs. 14,210,581; lard, lbs., 5,845 200.

SEED.—Clover is firm; Western is quoted 6¾c., and State at 7@8c. Timothy is quiet at $2,65@2.75. Flaxseed sold at $1.65.

TOBACCO.—The export demand is moderate, and trade from local sources very light; prices are unchanged.

VEGETABLES—Old potatoes are fast being turned into a general stock. Low grades of any variety offered at $1 and selections are show at $1.50@1,75. New pot toes have a better movement with the natural improvement in quality. Bermuda, $5.00@5.50; Chas. & Sav., red, $4@4.50; do. peerless, $3@3 50; Fla. $3@4; culls, $1.75@2. For green stuff. Southern and near by, the market is active, but the sales are mostly in small lots, and that fact keeps prices tame when receipts are likely to be steady and near point stock tops Southern. Tomatoes, Fla, ℔ bu. cr., $1.50@2; Bermuda, ℔ box, 50@65c.; cucumbers, Charleston and Savannah, ℔ crate, $3@ 3.50; Fla., $1@2; string beans, N. C., ½ bbl. crate, $4@ 4 50; Sav. & Ch'n. round, $1.75@2; Sav. and Ch'n, flat, $1.25@1.50; green peas, Md., ℔ bbl., $3.50@4.50; York river, ℔ ½ bbl., $1 50@1.75; Norfolk, large, ℔ ½ bbl. 75.@$1; asparagus, O. Bay, per doz. bch., $1.50@2; Mon. Co., per doz., $1.25@1.50; Bur., 75c@$1 Md and Del., 75c.@$1.25; spinach, L. I., ℔ bbl., 50@75c.; turnips, Norf., new, ℔ 100 bchs., $1@3; beets, Norf., $2@3; Jersey, $7@8; radishes, near-by, 75c.@$1; rhubarb, 40@ 50c. lettuce, per bbl., $1.75@2.50; cabbage, Norfolk, $2.25@2 75; rhubarb, L. I. & Jersey, ℔ 100 bunches, $1.00@1.25; onions Bermuda, new, ℔ crate, $1.75; turnips, Russia, ℔ bbl., 75c.@$1.25; carrots, $2.00@3.

WOOL.—There has been very little interest shown by buyers through this week, and the feeling is rather weak. Ohio, Pennsylvania and Virginia fleeces quoted at 48@50c. for X, and XX,; 52@54c. XXX and picklock; 51@53c. for No. 1; 48@50c. for No. 2. N. Y., Michigan, Indiana and Wisconsin, at 45@ 47c. for X and XX 52@54c. for No. 1; 41@46c. for No. 2. Iowa, Vermont and Illinois at 43@45c. for X and XX; 50@53c. for No. 1; 44@45c. for No. 2, and 50@55c. combing.

LIVE STOCK MARKETS.

NEW YORK, Saturday, May 22, 1880.

BEEVES.—Receipts for week, 14,574 head; do. last week, 12,857 do. The week has been a steady one in beef cattle and prices close firm without any upward tendency. Sellers claimed that present prices do not pay Western owners, and seemed to want butchers to divide some of the improvement that has developed in dressed beef. There was, however, no holding for an advance price Wednesday last. About a dozen car-loads of Illinois and Ohio stillers were sold at 8¾@9¾c., to dress 56 ℔; common to fair native corn-fed steers at 8¾@9¾c., to dress 55@56 lbs., and good to prime at 9¾@10c., to dress 56 lbs.

COWS AND CALVES.—Supplies will be likely to enlarge, if pastures hereabouts does not recuperate.

Sales during the week have ranged at $25 to $55 for common to prime cows.

VEAL CALVES.—The demand has ruled fair and a choice grade of live would have met a brisk market. Such lots as have arrived, are regarded as well sold as follows:

Live calves, Jersey and Bucks Co., choice, 6c.; prime, 5@5½c.; State, choice, 5¼@5¾c.; do. prime, 5@5¼c.; fair to good, 4@4¾c.; poor, 3@3½c.; Mt. Holly, fair to choice, 5½@6¼c.; buttermilk, 3@4¼c.

SHEEP AND LAMBS.—Receipts for week, 28,674 head; do. last week, 27,147 do. There was a good export demand for heavy wethers, but light and medium butchers's sheep sold rather slowly at about previous prices. Lambs also slow, and the advance obtained Monday was barely maintained. Choice sheep were sold to exporters 6¼@6½c., but most transactions were at 5¾@6c.; two loads of Virginia lambs were sold at 7¼c.; a deck-load of Penn. do. at 8@8¼c., and several lots of Jersey do. at 9@9¼c.

SWINE.—Live nominal at $4.50@4.80 per 100 lbs.; northern unsold at close. City dressed, State, 6¾@7¼c'; western, 5¾@6¾c.

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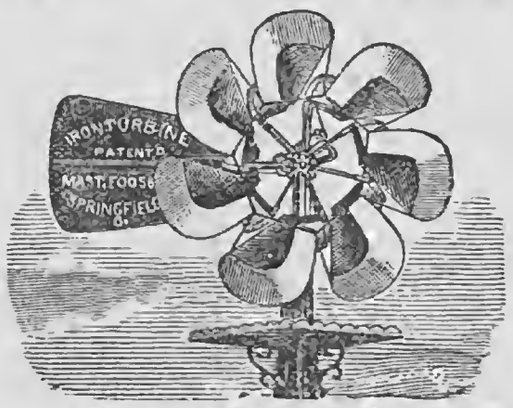

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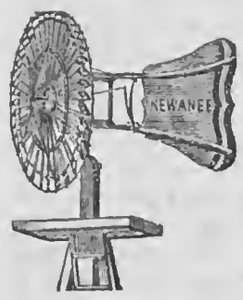

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It is now nearly a year since we made the above offer to the public; up to this date we have not had a single application for the money. During this time we have shipped thousands of our Washers to all classes of men and women in every State and Territory in the Union, and the universal verdict is, "It does all you claim for it." "We would not be without it at any price." "The longer we use it the better we like it." &c., &c. We have advertised extensively in nearly all the large and influential newspapers, which upon investigation have never failed to indorse us as well as our WASHER. In fact, we are so well known to the press generally, that we take pleasure in referring to the following prominent journals, all of which have given us flattering editorial mention, viz.:

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New-York Weekly Witness.
New-York Weekly World.
New-York Weekly Tribune.
New-York Weekly Times.
Moore's Rural New-Yorker.
New-York Christian Advocate.
New-York Illustrated Christian Weekly.
New-York Christian at Work.
New-York Methodist.
New-York Baptist Weekly.
New York Cricket on the Hearth.
Rochester Rural Home.
Boston Weekly Globe.
Boston Youth's Companion.
Boston American Cultivator.
Brattleboro Household.
St. Louis Globe-Democrat.
St. Louis Journal of Agriculture.
St. Louis Christian.
St. Louis Observer.
Philadelphia Saturday Evening Post.
Baltimore American.
Chicago Inter-Ocean.
Chicago Standard.
Chicago Farmers' Review.
Chicago Prairie Farmer.
Cincinnati Gazette.
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Cincinnati Times.
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Cincinnati Christian Standard.
Cincinnati Journal and Messenger.
Cincinnati Christian Review.
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When the newspaper reader considers the thousand things that appear in the advertising columns of his paper, set forth in the most glowing style—which too often, we regret to say, result in great disappointment, not to say disgust, to those who answer them—we cannot but expect that there are thousands who would look upon us and our statements with considerable doubt and incredulity, were it not for the fact that the evidence we offer is unparalleled in the history of advertising. Would the papers we name lend their influence to deceive and injure their readers? Besides the testimony of the press, we have thousands of commendatory letters, many of which we have from time to time published in our advertisements.

If you want good paying employment, send for a sample Washer; try it first, and then go to work canvassing your neighbors. You can soon build up a good, profitable business. If you want to lessen the labors of your mother or wife, send for one, and, above all, if you want clean and snowy-white linen, send for one. A trial will more than satisfy you.

No. 1 works in boiler holding 10 to 15 gallons. No. 2 works in boiler holding 15 to 25 gallons. Price No. 1 $3.50; Price No. 2 $5.00.

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TALK ON BOTANY.—NO. 2.

UNCLE MARK.

Roots.

IN the last talk on botany I spoke of the seed and how it begins to grow. We noticed that when a sound seed is put in a place where it gets the necessary amount of moisture and warmth, it begins to swell up, the embryo breaks through the seed-coat, and it then grows in two directions, one part rising upward into the air, the other going downward into the soil. The portion that grows upward, forming the top of the tree or plant, we learned was called the ascending axis, and the portion growing downward, forming the roots, we named the descending axis. In this talk we will follow the descending axis, or, in other words, the roots, and try to find out what they really are, and what service they render the plant.

In the first place what is the root? "Why," you say, "the root is that part of the plant which is under ground." That is a very good answer, and true in a general way, but it is too sweeping. It takes in too much. Not everything of a plant that is under ground can be classed as roots, and, besides, some plants have roots that do not enter the ground at all. A potato, for example, is not a root, though it grows under ground, nor is a Lily bulb, and the bulb of the Tulip. A peanut, too, is developed under ground, but it is a fruit—a very different thing from a root. At this stage of our progress, I shall not tell why these things are not roots, that will all be clear to you in due time. It is difficult to get a short definition for the root, such as you could easily remember and which would fit the case exactly. I shall therefore only tell how it may be known from the stem. A stem is characterized by bearing buds which develop into leaves and branches, the root usually has no such buds. But the most distinctive difference lies in the mode of growth. The stem, when young, lengthens throughout every part; the root does not; it lengthens only by additions to the tip.

The office of the root is twofold. It serves to hold the plant fast to the ground or other support, and it also absorbs nourishment for the sustenance of the plant, just as animals and people must eat in order to live and grow. In figure 182, we see the ordinary form of the root of a young tree. The point indicated by the dotted line at *a*, is called the *crown*. It is the point of division between the root and stem, and is usually at the surface of the earth. The smaller roots at *b b*, are called rootlets, and the very small ones at *c c*, are called fibers. This is the most usual form of the root, but there are many modifications, and in order to understand these more readily they have been classed together in groups, like everything else in science, and each group received a name whereby it may be known. Different botanists class the roots somewhat differently in some respects, but we will here notice only the simplest and most common forms.

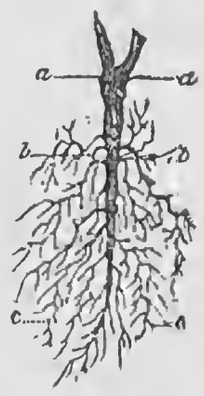

FIG. 182.

According to their mode of growth they may be put under two principal divisions, which for ease of understanding we will call, 1st, those that form a *tap-root*, and, 2d, those that have no tap-root. The tap-root is very marked in the figure above. It is the thick root proceeding from the *crown* and growing straight downward, and from the sides of which smaller roots, or branches are sent out. A large number of the *dicotyledonous* plants, (what is the meaning of that word?) have this kind of root in more or less marked degree. The maple, beet, carrot, turnip are good examples. The *monocotyledonous* plants, on the other hand, do not, as a general thing, have a tap-root. Indian corn and all other grasses, the Lilies, etc., are examples of this.

Again, roots are classified according to their shape. Thus the root seen in figure 184 is spindle-shaped or *fusiform*; the root in figure 183 is turnip-shaped or *napiform*, while the Dahlia root shown in figure 185 is said to be *fasciculate*, because it grows in a cluster. Some peculiar forms, like those in figure 186 are sometimes met with; *a*, is the root of a Pelargonium with the fibers enlarged at regular intervals, a style that is called necklace-like, or *moniliform*. At *b*, is figured a root of a Spiræa with enlargements at the ends of the fibers; this form is called *nodulous*. It is convenient to remember these last names, and when you get so far that you can analyze plants it is necessary that you should know them, but in the case of very young botanists I shall, at the present stage, not insist upon their being remembered. You have noticed in nature that some roots are greatly thickened and fleshy, while others are merely fine threads. These fleshy roots characterize more particularly *biennial* plants, or plants that live two years. This fleshy material consists principally of starch and is nourishment stored up for the future use of the plant. In many instances such roots have an agreeable taste and are very wholesome; they are then used as food. Radishes, beets, turnips, carrots, parsnips, etc., are all familiar examples.

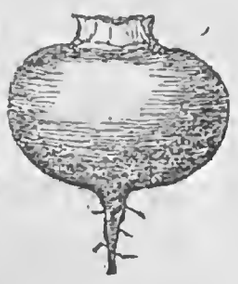

FIG. 183.

But we will now pass on to a highly interesting part of our subject, that of how roots grow and how they manage to absorb food for the plant. All plants, and every part of a plant, the leaves, the twigs, the wood, the roots, are made up of a multitude of separate cavities or little chambers, called *cells*. These cells are so small that

FIG. 184.

they cannot be seen by the naked eye, but under a microscope they become quite apparent. They are packed closely together side by side, forming a structure, not unlike a honey-comb. If you can imagine a number of little pill boxes, all having the lids on, being piled up side by side, and one on top of another, in some regular order, then you can get an idea of how these little cells are united together to form the fabric, or *tissue*, of which

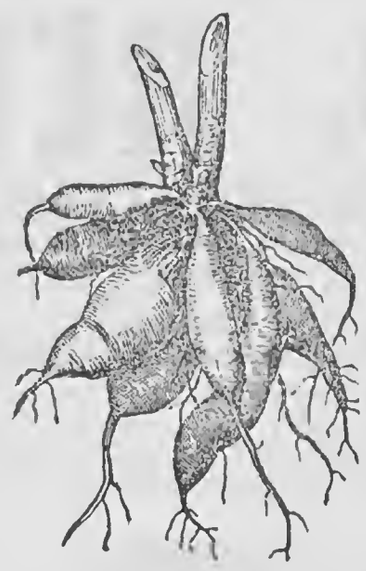

FIG. 185.

plants consist. All growth is simply a multiplication of cells, and to whatever portion of the plant these cells are added there it will increase in size, that is, it grows. Thus when the tree grows in thickness there is a formation of cells under the bark; when the young shoot grows in length there is a formation of cells in the young and tender part of it. So, also with the root, when it grows in length and thickness it is because there is a formation of

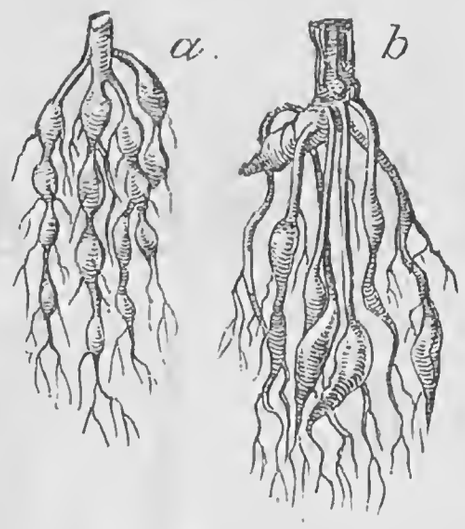

FIG. 186.

new cells which are added to its tissue. Figure 187 represents the tip of a root of a young maple much magnified. The little hairs you see are called *root-hairs*, and the little meshes are the cells. Both the *root-hairs* and the cells are also seen in figure 188 which is a much more highly magnified portion of the root. I said above that roots did not lengthen throughout the whole body, but grew only at the tips, a characteristic which dis-

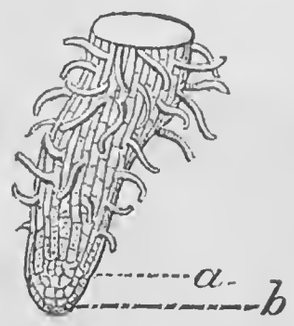

FIG. 187.

tinguished them from the stems. The root, however, does not grow at the very end, but the new formation of cells takes place a little distance from the end as at *a*, (fig. 187) while *b* is a cluster of older and more hardened cells. Why this is so is readily understood. As the root pushes its way into the ground it meets with much resistance, and the cells that are just forming would be too soft to bear the hardship of penetrating the hard soil.

The absorption of plant food takes place through the root-hairs or fibrils, plainly seen in figure 188. These little organs are so small that they can seldom be seen with the naked eye. There are no openings or mouths on the roots through which the food passes. The nourishment must all be dissolved, that is, in a fluid or watery state, so that it can be imbibed through the thin walls of the root-hairs. You will see from this that plants live by drinking rather than eating. The liquid that is thus imbibed is called *crude sap*, and passes through cell after cell as it rises upward to the leaves of the plants, where it is assimilated and then used for the building of new cells. The root-hairs are only found on the young fibrous roots; when the skin becomes too crusty the root-hairs perish. They also perish in the fall when growth ceases, which indicates that the proper time to transplant trees and shrubs is in the fall and winter, when there are but few root-hairs to be injured.

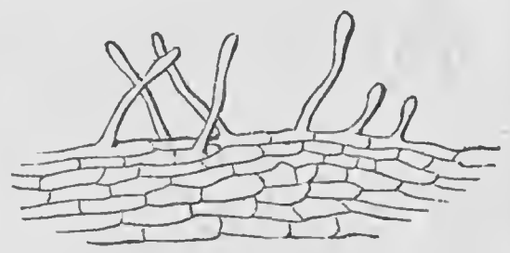

FIG. 188.

There is yet much to say about the roots, but we will save the rest for another issue.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—Having seen my other letter in print I will write again. I told you when we joined your Horticultural Club that our plot was fenced with Currant bushes, I want a little instruction about pruning these bushes; will you please tell me whether it is the old wood or the young shoots that should be taken out? Father received his package of seeds all safe, and he wishes me to thank you for them. Mother has saved the Bebb's Aquilegia, Iris and Hybrid Pentstemons. Dear Uncle Mark, my patience is almost exhausted waiting for the grape seeds to come up. They have been sowed nearly three months, but have not showed their heads out of the earth yet. I love gardening, and rejoice that it is nearly time to sow my seeds. There has been scarcely any snow here this winter. I am afraid my letter is getting too long. I remain your ever loving niece,

Bruce Co., Ont. AMANDA M. BURNHAM.

[Since you want your Currants to form a kind of hedge about your garden, all the pruning that will be necessary is to take out the old dead wood, and to trim the strongest of the young shoots so that the hedge will make an even and moderately close growth. I am sorry that the grape seeds are trying your patience so hard; but you must not give up. Remember, that I said at the time they were sent, that it might take three months or more before they would grow. I have received reports from many of the members telling how finely theirs are growing. The seeds were all of the same lot.—U. M.]

DEAR UNCLE AND COUSINS:—I have long been thinking of writing to the dear old RURAL, and to-night I have a few spare moments which I shall improve by writing. I have seen from the letters that most of the cousins are members of the Horticultural Club, and I hope that you will put my name on the list. I received the seeds from the free seed distribution, about a month ago; and planted them in a box, I don't know whether it was the proper way to plant them or not, but I hope it is. I am a great admirer of flowers, but don't have very good luck with them. Last year the chickens destroyed them for me, but I don't think they will this summer. I wish the cousins would write oftener, especially those who write the best letters. Please tell me if I did wrong by planting those seeds in a box. Ever a true Rural Cousin. ZEREPHA.

Fayette, N. Y.

[There was nothing wrong in planting the seeds in a box; but if you leave them to the care of "good luck" for the future, you may have reason to bemoan a failure in their cultivation.—U. M.]

DEAR UNCLE MARK:—I have for a long time thought I would like to join your Horticultural Club; will you please accept me as a member? I have not seen many letters from Wis. Will some of the cousins tell me a pretty way to make a stone heap? Do flowers do as well on them as in low beds? I wish "Will O'The Wisp" would send some of those pretty shells up to us poor mortals who never saw the ocean. I went "May flowering" yesterday and found a lovely bouquet of sweet flowers. FANNIE L. ATWOOD.

Sheboygan Co., Wis.

Various.

BRIEFLETS.

A GOOD RURAL friend from the Far West writes us as follows: "Hope your new location will prove to be a pleasant one. You are near the City Hall, Post Office and Park, and up to your eyes in the Newspaper Kingdom. Park Row is a sort of type-ical paradise; a leaden heaven with devils (var. printers) to match; a sort of black hole from which issue daily rays of light to enlighten us dim specimens of the human race divine. . .

Our politicians always swear,
Just when they've planned their biggest steal,
The public weal's their greatest care;
But they've a wheel within that weal.—*Puck.*

Okra can be raised in the North as well as in the South. It is strange so much is thought of it there and so little here. . . Sow parsnips early. Long Smooth or Hollow Crown and Sutton's Student are the best sorts. . . It is a wise fly that knowns the difference between oleomargarine and butter.—Hackensack Republican. . . Did you ever see a cherry's spit? Yonker's Gazette. Did you ever hear a peach's stone?—Saratoga Sun. . . "Emma R." asks the Springfield (O.) Tribune this extraordinary question: "Do you think it right for a girl to sit on a young man's lap, even if she is engaged to him?" Whereupon the editor gets off a very extraordinary falsehood "We have had no experience in the matter referred to" he says. Why didn't he say, "If it was our girl and our lap, yes; if it was another girl and our lap, yes; but if it was our girl and another fellow's lap, never."—Chicago Tribune. . . Mr. Vick's magazine for May gives a colored plate of Coleus. Few plants are more showy—few possess a wider range of brilliant leaves. Mr. Vick selects for his specimens Hero, Multicolor, George Bueyard, Garnett, Souv. de Lierval, Kentish Fire, Prince Albert, Seventy-six, Verschaffeltii major, and the old Verschaffeltii which is still one of the best. . . How to get rid of Couch Grass (Tritlcum repens)—just bury it! Nothing is easier. . . Young trees should now be washed with lime and soap or something of the kind. Color with mineral paint or lamp-black. It is now the season when the borer deposits its eggs. Our experience is that such washes are distasteful to this insect, for which reason trees so treated are passed by. . . Mr. Ives uses gypsum on manure heaps thinking that the sulphuric acid in the gypsum unites with the ammonia in the manure, forming sulphate of ammonia which is not volatile. . . Mr. C. A. Green thinks that it will pay to lay a board between the rows of Strawberries for the pickers to walk on and to keep the soil beneath moist and loose. . . Mr. Vick says, for squash-bugs, use a teaspoonful of saltpeter to a gallon of water.

CATALOGUES, ETC., RECEIVED.

PROCEEDINGS of the Davenport Academy of Natural Sciences, Vol. II, Part II. July, 1877–Dec., 1878. J. Duncan Putnam, Corresponding Sec., Davenport, Ia.

F. R. Pierson, Tarrytown, New York. Illustrated catalogue of seeds, plants, fruits, trees, for the greenhouse, garden and farm. This will be sent free to all applicants. It is a sort of resumé of what farmers and gardeners most need at this season, including many novelties of tested merits.

REPORT of the Second Annual Fat Stock Show held by the Illinois State Board of Agriculture in the Exposition Building, Chicago, Nov. 10-15, '79; also premium list of the third fat stock show to be held under the same auspices and in the same place Nov. 15-20, '80 S. D. Fisher, Sec., Springfield, Ill.

SEED-TIME AND HARVEST.—A new illustrated quarterly magazine devoted to the improvement of our American gardens, edited and published by our occasional contributor, Isaac F. Tillinghast, La Plume, Lackawana Co., Pa. No. 2 of this useful pamphlet is before us; it contains some 24 pages, with descriptions and illustrations of some flowers and vegetables and a price list of seeds. We think this enterprise will prove a success, chiefly because of the good judgment the publisher possesses, which, among other ways, is manifested by the very favorable opinion he expresses of the RURAL NEW-YORKER.

THE Secretary of the Missouri State Horticultural Society has sent us a circular to the effect that a convention will be held in St. Louis, Mo., on the 8th of next September for the purpose of effecting an organization to be called the MISSISSIPPI VALLEY HORTICULTURAL SOCIETY, the particular place and programme of meeting to be hereafter published. To this convention all persons interested in the horticultural growth of the country are invited, without regard to locality. An extensive horticultural exhibition will also be held at the Merchants' Exchange, St. Louis, Mo., on September, 7th, 8th and 9th, for which premiums to the amount of $2,500 are guaranteed. The convention is called by the Presidents and Secretaries of most of the State Horticultural Societies of the Western States.

A list of premiums, too long for publication, is added. The highest premium, $200, is offered for the best collection of horticultural products by any State Horticultural Society. Liberal premiums are offered for collections of apples, pears, peaches, grapes, plants and flowers, and other garden products.

Information, premium lists and circulars may be had by addressing the Secretary, S. M. Tracy, at 600 Olive St., St. Louis, Mo.

PERSONAL ITEMS.

"Goldsmith Maid," the famous trotter, has a fine colt.

Birmingham, England, though only a borough, is represented by two Cabinet Ministers—Messrs. Bright and Chamberlain.

President and Mrs. Hayes slept recently, at Mount Vernon, in the bed used by President and Mrs. Washington, and the guardian of the place says that all the Presidents have been accustomed to occupy that bed from time to time.

W. Harry Rouscoe was sent to put down a carpet in Mr. Houser's house at Fort Wayne. He was a stranger to Mary Houser when he began, but before he got through he was her accepted lover, and that night they eloped and got married.

Mr. Edward King, the well-known correspondent and magazine writer, is described as a short, burgher-shaped blonde of thirty, who looks as though his diet might be a judicious mixture of New England codfish and Old England beer, the one for brain nurture, the other for adipose.

Mr. Gladstone is said to be the best Greek scholar in England, if not in Europe, and when High Commissioner to the Ionian Islands, in 1859, he addressed the local parliament in modern Greek with much fluency and eloquence, to the intense astonishment of the natives.

The German papers tell this story in connection with Baron Rothschild's death:—A meets B, weeping and sobbing aloud. Says B, "Why do you weep?" "Because he is dead—the powerful, the rich Baron." "But," replied A, "why do you cry so much? he was no relation of yours!" "That's just what I am crying about," howled B, more affected than ever.

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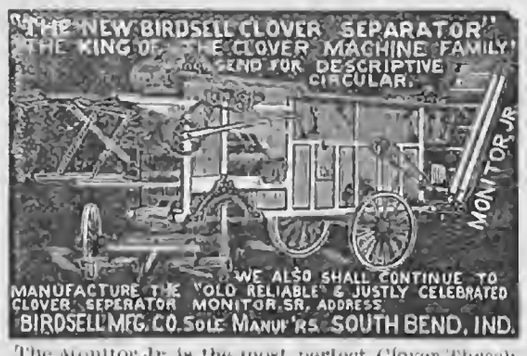

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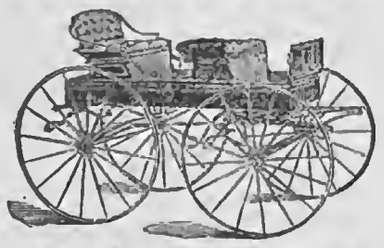

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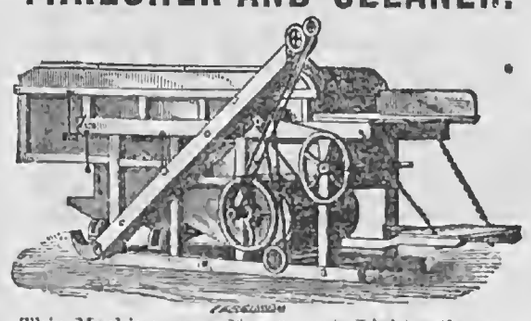

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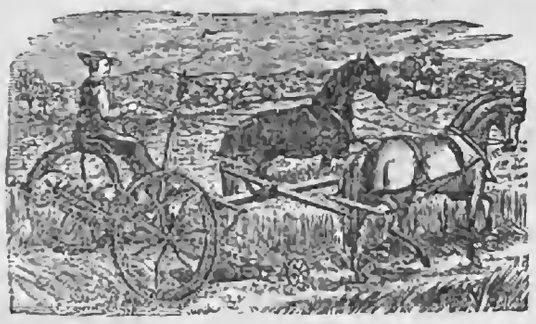

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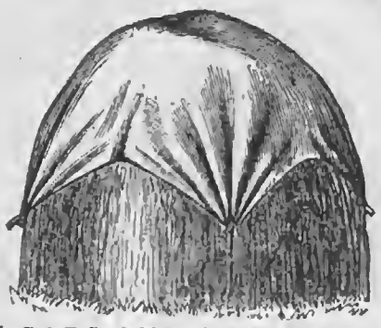

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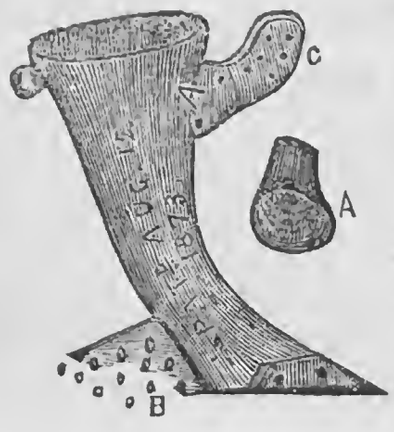

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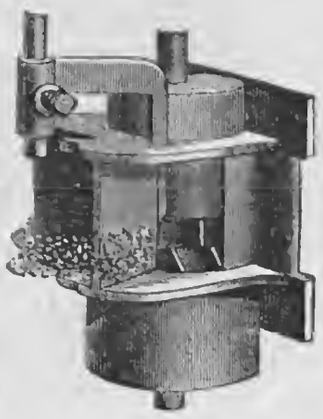

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A GREAT many men who start out to reform the world leave themselves off for the last job. —*Middletown Transcript.*

"WILL the action lie?" inquired the anxious client. "Yes," replied the facetious attorney, "the action will lie if the witnesses will."

A TALL man having rallied a friend on the shortness of his legs, the friend replied: "My legs reach the ground—what more can yours do?"

THE puzzle blocks originated in Philadelphia, where the blocks of houses are so much alike that a man is puzzled to know when he gets home.—*New Orleans Picayune.*

WHEN President Lincoln was taken down with measles, he wrote to Colfax, that he might let the army of office-seekers approach, as he had now something that he could give them.

"I KNOW a victim to tobacco," said a lecturer, "who hasn't tasted food for thirty years." "How do you know he hasn't?" asked an auditor. "Because tobacco killed him in 1850," was the reply.

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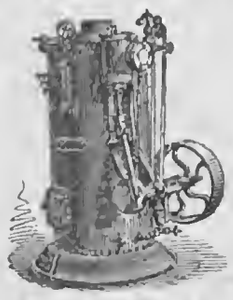

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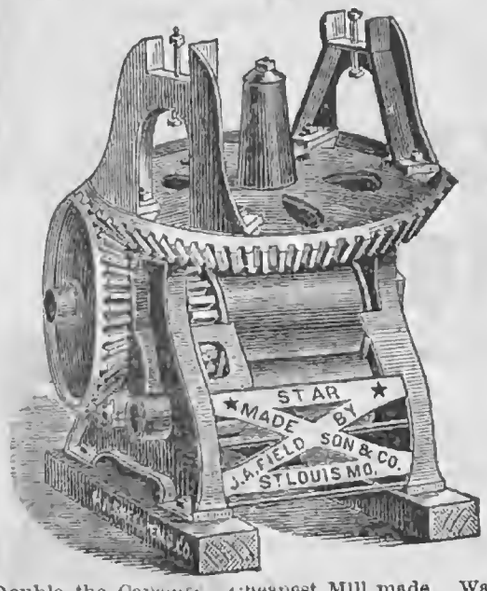

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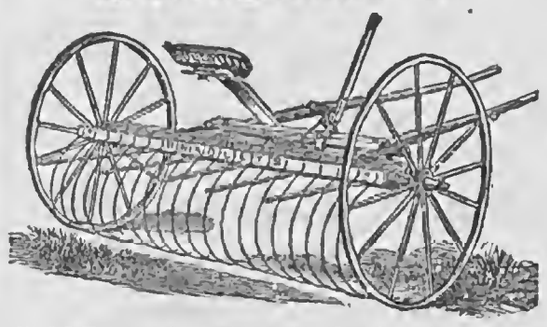

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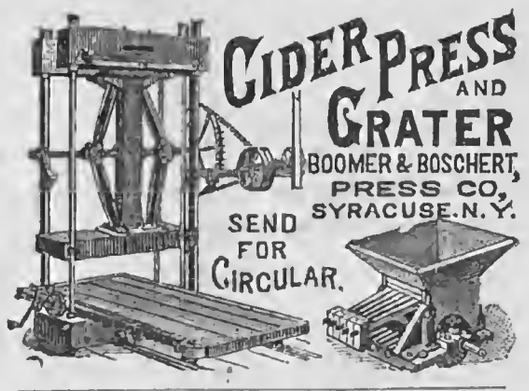

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Arboricultural.

THE MISTLETOE.

TAKEN out of the region of romance and song, the Mistletoe loses the charm which poetry has thrown around it. Among its fellow plants it bears decidedly a bad character. Botany has put the mark of disgrace upon its name, as a thief and robber—Phoradendron. It is the very pirate of plants. Many plants are parasitical; those like the Dodder and Dutchman's Pipe, in a weak, lazy way, seeking, like beggars and tramps in the vegetable kingdom, what they can get from the elaborated sap of others, but this thing begins life with an apparatus of green leaves purposely to work up and appropriate the nourishment which it intends to extract from some host. With "malice aforethought," and provided with ready-made tools designed for robbery, the criminal stands confessed. How the predaceous habit became developed and inherited from a line of honest ancestors, the evolutionist must determine.

We have but one species of Mistletoe east of the Mississippi, infesting various trees. Whether it has a special partiality for, or an aversion to any particular host, does not seem to have been accurately observed. I have seen it more abundant on the Water Oak than on any other tree. In the pine forests on the seaboard of this State, where the flats and damp depressions are occupied by the Pond Tupelo (Nyssa aquatica), almost every tree is infested. So also is the Black Gum (Nyssa multiflora) a favorite, but I have never seen it on any resin-bearing trees—Pines, Junipers, etc.

The plant is dioecious—blowing in April, and maturing seed about November and December. The pearly-white berries each contain a single, oval, flattened, pointed seed, surrounded by a transparent viscous fluid. In dropping from the tree, they adhere to any limb on which they fall, and thus propagate and increase, so that, after a while, a tree may almost be robbed to death by these greedy parasites.

In December last I crushed some of the berries on a limb of our European Cherry—Cerasus Caroliniana. There they have remained up to this time—May. On gently removing the inclosing membrane of the seed, I find small, green plantlets about one-fourth of an inch long, with a thickened disc at the base, adhering closely to the bark.

The Mistletoe has no roots. It has no use for them, as it makes the roots of its host do service for both. Its connection with the host is rather a grafting process, as may be seen by examining a section just at the point of union, where the amalgamation of the woody tissue is complete. The crude sap ascends into the Mistletoe branch as it does into that of the host, and is there elaborated by its own machinery of leaves, etc.

H. W. RAVENEL.

Aiken, S. C.

THE UNION OF THE MISTLETOE WITH THE TREES UPON WHICH IT GROWS.—We have procured half-a-dozen or more of the branches from which this parasite grows and sawed them in two lengthwise. The union, as Mr. Ravenel remarks, is similar to that of a cion with its stock, and so perfect tha it is impossible to determine where the one begins or the other ends.

THE MISTLETOE (Phoradendron flavescens).—From Life.— Fig. 18

USEFULNESS OF SHELTER BELTS.

IN the RURAL of May 15, a quotation is made from M. B. Bateham, to the effect that, as he thinks, wind-breaks are rather injurious than beneficial. Highly as I respect the opinion of Mr. Bateham on the subject of horticulture and kindred matters, and true and weighty as are the reasons given in the quotation in question for the conclusion he announces, I may be allowed the remark that there are two sides to the question, and that, while it is quite possible to plant trees about our dwellings and farms so in excess as to create the objectionable conditions he deprecates, it is not only possible, but lamentably true, that the reverse is almost universally the actual condition of affairs.

To demonstrate the fallacy of Mr. Bateham's position, in its application to the ordinary practice of our people, I need only call attention to the well-known fact that in his own State (Ohio), as well as in our State (Michigan), where there is one person (outside of cities and villages) who plants trees in excess, there are hundreds who neglect planting almost wholly, if not altogether.

My reason therefore for this note of dissent grows out of the apprehension that the qualified objection of Mr. B. is very liable to be accepted by the average land-holder as a reason for the neglect of planting. In view of all the circumstances, I will venture to the opposite extreme, and refer the reader to the well-known facts underlying the science of meteorology, that in the early history, not of Ohio and Michigan only, but of all the northern timbered States, the exemption from drought and from extremes of temperature, before the clearing away of forests, was so decided that the change has, to a greater or less extent, driven some of the more tender fruits quite out of cultivation over extensive stretches of territory; and that some of them are yet grown in other regions only in a very precarious and unprofitable way, but slightly better than absolute failure. That this condition of affairs is mainly, if not wholly, due to the wholesale destruction of the original forests will, I think, hardly be questioned, since the results are the outcome of meteorological principles well understood and generally recognized. Indeed, a very slight knowledge of the laws which control the relations of heat and moisture, will serve to establish the fact that the free admission of all winds to the surface of the land, without the restraining influence of a timber covering, will rapidly dissipate the surface moisture, and that this drying of the surface proceeds at a rate greatly dependent upon the velocity of the wind. The first and the most observable result of such exposure is the hastening of drought or the increase of its intensity.

There is, however, another and a less obvious, although no less certain and calamitous result of this drying process; and this is the result, indeed, from which the fruit culturist has everything to dread. I allude to the fact that the moisture thus summarily seized upon and dissipated has carried with it a certain and definite portion of the heat of the soil, leaving it cooler, and hence just so much more easily reduced during cool nights to and below the freezing point, with results such as we too frequently witness.

I am the more alive to the danger of misapprehension on this subject, from the fact that during my fifty and more years' residence in lower Michigan I have seen this problem fully wrought out under my own eye, and all the calamitous results I have spoken of demonstrated fully and unmistakably, and I cannot too strongly urge that even the real qualifications of Mr. Bateham, if urged at all, be put forth with a consciousness that, as the rule, the danger lies in the opposite direction.

T. T. LYON.

ERIOBOTRYA JAPONICA.

IN the notice of this tree by Mr. Ravenel, in the RURAL of May 15, there are two or three mistakes, not on his part, but in the popular traditions concerning it at the South. It was not introduced into the Southern States by the Wilkes' Expedition, but was grown there as far back as 1828 at least; for it was noticed previous to that date by the Agricultural Society of South Carolina, in their Desiderata. It was grown by the late Wm. Prince, of Flushing, and the late Thomas Hogg, of this city, nurserymen who had a considerable trade with the South at that date, and through whom it, no doubt, was introduced into many private collections in that section of the country. It fruited in Mr. Hogg's greenhouses many years ago. The popular name of Japan Plum is a misnomer, as the tree is a species of Medlar. The real Japan Plum was fruited by me, and described and figured in the Agriculturist some seven or eight years ago. I had three varieties sent to me by my brother, Mr. Thomas Hogg.

JAMES HOGG.

Care of Newly-set Trees and Shrubs

IN view of the drought which prevails in many parts of the country and its unusual severity over extensive districts, we would suggest to those who have planted trees or shrubs the past spring that there is one method, and so far as we know, only one, by which they may be protected against injury or death from that cause. Surface watering has been shown to do more harm than good. The ground is made hard and compact, thus becoming a better conductor of heat while it becomes less pervious to air and moisture. A portion of the surface soil should be removed, and then pailful after pailful of water thrown in until the ground, to a depth of two feet and to a width about the stem of not less than three feet in diameter, has become saturated. Then, as soon as the water has disappeared from the surface, the removed soil should be well pulverized and returned. A covering of boards, straw or hay, or even of sand or gravel, may then be applied, and the tree or shrub, thus treated, will pass through ten days of additional drought in safety.

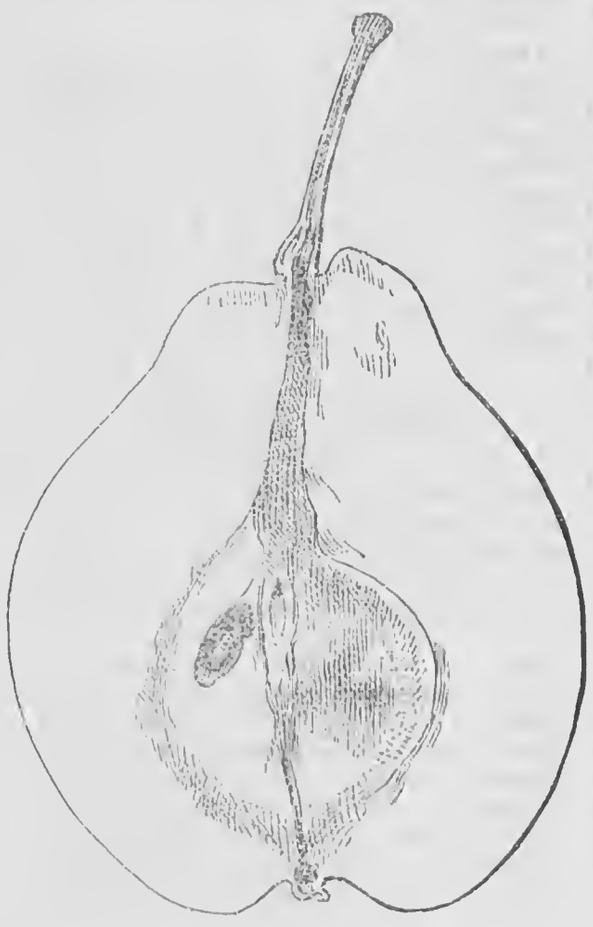
As soon as rain comes to wet the earth thoroughly, we think it is better to remove the mulch. Nothing is then gained by permitting it to remain. Mellowing the surface soil about the trees, thus keeping it free from grass and weeds, is then the most that is needed. We would repeat that the present is the season when the female borer deposits her eggs on the stems of fruit trees, and the wash of lime, potash, sulphur, etc. (darkened with lampblack), should now be applied and re-applied during June and July, as soon as washed off by rain.

Pomological.

THE SEEDLING PEAR—IRONS'S FAVORITE.

This new Pear was first brought to my notice in 1877, since which time I have been watching it somewhat critically, and am happy to state I have yet found nothing to dissipate the favorable impression made on first seeing it. A plate of this pear on exhibition at the annual meeting of the New Jersey State Horticultural Society, last January, received marked attention and commendation from those present.

Its chief points of value are its superlative keeping qualities, one gentleman asserting "it required no more trouble to keep it than so many potatoes," and its handsome showy appearance. In size and form it is very like the Bartlett, as will be seen by referring to the engraving below, which, while giving the general outline with striking accuracy, is rather below the usual size. In color it possesses the rich golden yellow of a well ripened Bartlett, and although it does not ripen until March and April, yet, strange as it may be, it assumes its brilliancy of color even when hard and quite unripe.



IRONS'S FAVORITE.—FIG. 190.

Regarding its early history and the growth of the tree, Mr. H. E. Ackerson, Hazlet, New Jersey, an experienced and practical fruit grower, who has had trees of this Pear in fruiting for some years, writes:—"The Pear called Irons's Favorite originated on the farm of Mr. James Irons, on the shore of Barnegat Bay. It was first discovered in a swamp near at hand, and was removed, when a very small tree, to Mr. Irons's yard. How many years it has been in bearing I don't know; but it is now a large tree and has borne as high as five barrels, or fifteen bushels, of fruit in one season. In growth, the tree, to some extent, resembles the Bartlett, but is rather more spreading. The foliage is a light green, and remains on the tree until very late in the season—being in this respect the most remarkable of any Pear that I have yet seen. The pears are very regular in size and are very evenly distributed throughout the tree. It is an *excellent keeper* and requires no more care in handling than an ordinary apple, and does not come in season until March. The tree has, with me, been a hardy, healthy grower and a good bearer, and has never shown the least disposition to blight. Although not of the best quality in flesh or flavor, I esteem it, taking all things into consideration, the best *winter* pear I have ever seen."

The principal features of this Pear may be therefore summarized in the following manner: The tree is of free growth; an early, regular and prolific bearer, and thus far free from blight, it never having been known to blight at all. The fruit is of fair size, very handsome and showy, and an exceedingly good keeper, but decidedly inferior in quality. Since, lamentable as it is, it is yet a fact that appearance counts for much more than quality in the markets, I am satisfied this will prove a highly profitable pear to the fruit-grower; but can never become popular with amateurs, except as a fruit for culinary purposes. In this last regard it has a marked resemblance to that prince of culinary fruits, the quince, and is said to approach it more closely in this respect than any other pear. Having never tested it except as a dessert fruit, I cannot vouch for this; but can testify to its resemblance to the quince in the consistency of its flesh and, like that fruit, in its abundance of what is now termed, "bouquet."

Little Silver, N. J. J. T. LOVETT.

Horticultural.

INTRODUCTION OF PLANTS THROUGH COMMERCIAL AGENCIES.

JAMES HOGG.

Apart from those who make a speciality of botanical studies, few persons are aware of the great number of plants introduced into our country through the indirect agencies of commerce, especially in the neighborhood of our seaport towns. Some thirteen years ago, a gentleman given to botanical investigations published an article on this subject in the Proceedings of the Academy of Natural Sciences of Philadelphia. This drew the attention of other gentlemen of similar tastes to the subject, and lists of the foreign plants they found in the ballast grounds of Philadelphia and Pensacola, were published in the previous-named work and in the Botanical Gazette. In 1878 and 1879 several members of the Torrey Botanical Club in this city, took up the subject and investigated the various wharves, ballast grounds, and fillings-in of lands in the neighborhood of this city, with some very curious results.

About the year 1868 the Central Railroad of New Jersey commenced filling in about 300 acres of marsh land extending southwesterly from Jersey City to Communipaw. The tract was about three quarters of a mile in length and about half a mile in breadth. It was filled in to about two feet above the highest tide level with all sorts of materials—sand, earth, gravel, ashes, cinders, garbage, city refuse, dredgings from the docks and such ballast material as could occasionally be obtained. In 1878 from the middle of May until the end of October it was visited by some of the members of the Torrey Club every two weeks, and the result was that they collected sixty-eight species of plants not indigenous in this section, and, with three or four exceptions, all natives of Europe, the East Indies and South America.

Extending their explorations to other localities in the neighborhood of the city, they last year made frequent visits to Hunter's Point, the Atlantic Docks, Gowanus Creek, Hoboken, Weehawken, the Harlem Flats, and the northerly end of the Eighth Avenue, and were rewarded by being able to collect 190 more species which they were able to determine, making 258 species collected in two years, which were foreign to this section.

Besides those which they were able to determine, they also collected a number of others which, up to last January, they had not been able to make out. The species found, were mainly natives of Britain, Germany, and the Mediterranean region; a few were from the West Indies, Central and South America, the Southern States, and one from the Cape of Good Hope. In some few cases only a single specimen was found, but several were found in large quantities, and evidently had come to stay, if they could withstand the severe cold of our winters.

Some of them were uninteresting weeds; uninteresting to any but botanists, except that in a few years they may become pests to our farms and gardens. If once thoroughly established in this section, it will not be many years before our cultivators will be wondering whence came some troublesome weed, which they had never seen before, taking possession of their cultivated lands. Some of them, however, were plants which we cultivate in our gardens and greenhouses, and others, although not cultivated, were, nevertheless, plants of some beauty or useful in the arts or in manufactures.

HOW TO SAVE STRAWBERRIES IN A DRY, HOT SEASON.

Just as our strawberries began to ripen one season, a very violent, hot, southern wind prevailed, which dried up the ripening fruit and began to shrivel the green. Having an abundance of clean, coarse, water-meadow hay in a stack, we took from this and spread it about three inches thick over the strawberry bed, and let it lie there till the evening of the third day. We then raked it off the outside row and found the berries filled out large and full as in cool, calm weather. We picked the ripened fruit from this row, and the next evening raked off the hay from the second row to cover the first, and thus proceeded from day to day till rain fell and the weather became cooler. Then we removed all the hay from the bed, except what was wanted to mulch under the vines, to keep the berries clean from the ground.

If the fruit of two rows were wanted, one for tea at evening and the other for breakfast the next morning, we raked off two rows, leaving one uncovered during the night, as it seemed all the better for getting the dew, and the berries were fresher and finer for picking in the morning than even those were in the evening.

Clean straw, we presume, would have been just as effectual as hay, and either of these, scattered thinly at night over a bed of strawberries, would preserve them from frost. It would be prudent for those who grow only a small patch of strawberries for their own eating to have a little straw or hay on hand with which to cover them in case of severe drought or frost.

Farm Topics.

WESTERN FARMING—VI.

W. I. CHAMBERLAIN.

Drought.

The great enemy to successful farming in some parts of the West is drought. Nearly all parts of our land are more or less subject to it, but some parts of the West are peculiarly so. In such regions two questions become important:—first, can we, as individual farmers, so plan tillage and crops as to counteract the disastrous pecuniary effects of drought? Second, can the farmers of an extended region subject to drought, by concerted action so change the physical conditions and features of the region as to make droughts less frequent and less severe?

The first question is most easily answered, and I will try to answer it by specific reference to a certain drought region with which I am most familiar, and whose lessons I have learned to my cost. Experience is an expensive teacher, but she teaches very thoroughly. The region to which I refer is the Ohio Western Reserve. It lies in the north-eastern part of Ohio, and is about 125 miles long, east and west, by about 50 miles wide, north and south. Most of the soil is clayey except near the rivers and creeks, and dairying has very largely predominated in its agriculture, and as pursued here has, I doubt not, increased our liability to severe droughts; and I believe and shall try to show in another article, that a general concerted change in our style of agriculture will greatly diminish their frequency and severity. But such general change is difficult to secure, and it therefore becomes the individual farmer to shape his own farming to the existing state of things. We have been badly pinched again and again, and surely ought to learn wisdom. Probably three years out of four we have quite a severe May drought. Sometimes it begins by the middle of April and extends till after June 1st.

The lake, especially after a severe winter, when the ice is slow in thawing, is cooler than the adjacent land, and prevailing north winds are the rule. And north winds are not the rain-bearers here, in May at least. By about June the first, other more complicated meteorological causes change the prevailing currents, and we *usually* have more or less abundant rains, but about one year in four or five our soil becomes so hot and dry it seems impossible for the rain to condense above it and fall upon it, any more than on Sahara, and the terrible drought lasts till September; and unless the June rains are very copious, even in years when they come, our old meadows cannot recover and give a heavy crop of hay. And so about one year in three there is great scarcity of hay and pasturage, and dairymen see hard times, and hundreds of cows are sold at ruinous prices to shrewder men from other counties or States. This has occurred again and again.

Is there any need of it? It seems to me not. Like causes produce like effects, and hence there is considerable uniformity in the matter from year to year, and we can plan accordingly. As for hay, there is no trouble if we will but plow and seed properly. But little plowing has been done here till recently. The farms have been divided between permanent pasture and permanent meadow. If rains are abundant and regular, week by week, feed, too, is abundant—if not, not. But, now, if we have good clover fields, the April rains push the clover so that it covers the ground and grows well till the June rains give it a sufficient rankness at time of blossoming. And if cut early on rich ground, the June and early July rains insure a heavy second crop. On rich ground, I say, for richness is in part a substitute for moisture.

Another means of securing abundant hay for winter is to sow Hungarian grass. But this requires skill and care in advance of sowing. The ground must be plowed early, say in April, while moist enough, and cultivated often enough to keep it well pulverized and mellow and moist. Then if even a light rain comes early in June, and the seed is promptly sown and brushed in with a smoothing harrow, and the ground "firmed" with the roller, the crop is almost sure on rich ground. It comes up in less than a week, and in two weeks more it shades the ground, if rich, and its roots get so good a hold on the turf or manure below, that there is sure to be a crop.

If the pastures become too short, the flow of milk in August can be kept up by "half-soiling;" that is, by stabling the cows at night and feeding Hungarian grass or fodder corn or second crop clover. The individual farmer can even make money out of our droughts, too, by the sale of hay wisely kept over from years of plenty, or by buying cows very low in fall and wintering to sell at a brisk advance in spring, or by wintering cows at so much per head for his less provident neighbors. He can, too, raise wheat and corn, the two crops least damaged by May and August droughts. Such are specimens of the means by which the shrewd individual farmer may prevent for himself the disastrous pecuniary consequences of drought, and even make it put money in his pocket.

But is it possible by concerted action so to change the physical conditions of the Western Reserve, for instance, as to make droughts actually less frequent and less severe. This must be answered in another number.

INDIAN CORN AS A STARCH CROP.

PROFESSOR F. H. STORER.

It is interesting to note from time to time how easily Indian corn retains its supremacy among American field crops and how widely and in what varied directions its influence is felt. The comparatively recent extended use of corn as a commercial source of starch, and of glucose, shows perhaps more clearly than anything else the merit of the crop, and serves to define with a considerable degree of precision the place and standing of corn as compared with the other products of American agriculture.

It is not many years since the potato was extolled as capable of producing, upon a given area of land, more nutritive matter than any other crop; but, as analysis shows, the merit of the potato is in great part due to the starch which is contained in it in large proportion. Yet the statistics of American commerce show that, considered as a sort of merchantable starch (and glucose), corn has become much more important than the potato. In a word, the potato, when put in competition with maize, has failed to justify itself at the very point where the natural superiority of the potato would have seemed to be the strongest. It may be said, in passing, that the old notion of the superiority of the potato among nutritive crops was disproved years ago, and in no way more clearly than by the "hog-crop" of America, which, as every one knows, could not possibly be produced by potatoes alone, though readily raised upon corn.

It is true enough that the potato has for many years suffered more or less from disease and has been greatly discredited on account of its liability to the attacks of the rot-fungus, to say nothing of the Colorado beetle, but these considerations make it appear only the more clearly that the failure of the potato to hold way with maize must be due to its real inferiority as a crop, under the conditions of soil, labor, and climate, which obtain in this country. The yearly production of millions of pounds of starch and of glucose, from Indian corn; and the constantly increasing consumption and export of these products point clearly to the conclusion that as a source of these materials the potato has been beaten in the race. It is true, of course, that a great deal of potato starch continues to be made in some parts of the country. Indeed, potato starch is even now quoted in the market reports as selling for a cent more per pound than corn starch, and there is little doubt that for some particular purposes it is better suited than the other kinds of starch. Potato starch still profits, withal, to a certain extent from its old reputation, and from the fact that it (and not corn starch) is specified to be used in many receipts employed in household economy and by manufacturers. But for the great general uses to which starch is put, and notably for making glucose and "corn sirup," the product obtained from corn stands pre-eminent.

All this, like the current export of cattle and grain to Europe, marks one particular phase of American agriculture. It is one more item, among many, going to prove the immediate advantage of our system of "extensive" farming. That is to say, the system of growing small crops at little cost.

It is not at all unlikely that, even with a climate like ours, the potato might hold its own against maize as a starch-producing crop, in countries where high farming is practiced; for as much starch can be got out of 250 bushels of potatoes as from 80 bushels of corn; and, taking one year with another, it would be easier on the whole to raise 250 bushels of potatoes to the acre than 80 bushels of corn, and easier still to increase this yield of potatoes than to increase this yield of corn. It is true, in fact, that in Germany large quantities of starch and of glucose are made every year from potatoes, although corn succeeds well enough in the southern parts of that country, and admirably in many parts of Austria and Italy. But here

In America, experience has shown that, under our system of farming, corn has a certain advantage over the potato. If it be admitted, for example, that it is as easy to get 40 bushels of corn to the acre from the generality of our American farms as to get 100 bushels of potatoes, then corn will take the precedence as a source of starch, for the average yield of starch per bushel from corn and from potatoes is rated at 25 pounds and eight pounds respectively. Even if it be supposed that it is as easy to grow 150 bushels of potatoes as 50 bushels of corn, the potatoes would give only 1,200 pounds of starch while the corn would give 1,250 pounds.

The superiority of corn over potatoes, as a starch producer, under the conditions which control American agriculture, was shown years ago in very much the same way, though not quite so clearly, when the distillation of spirit from corn came to prevail in this country instead of the German practice of distilling from potatoes. The spirit is derived from the starch in either case, and it may be said in general terms that the crop best fitted for producing starch cheaply will be best suited for distillation.

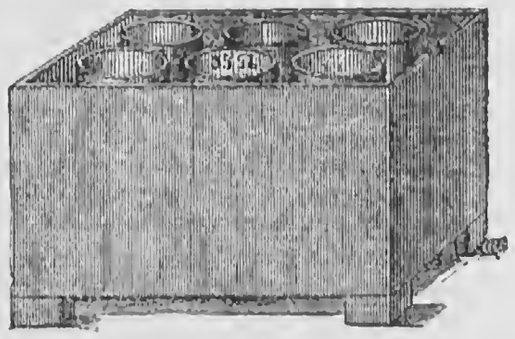
Dairy Husbandry.

DANISH BUTTER MAKING.

L. S. HARDIN.

It is one of the peculiarities of butter-making that the more modern the adoption of the occupation by a nation or class of people, the higher they carry the art. In this country for a long time the dairymen of the Eastern States carried the palm. The new West took up the occupation and carried the art to a degree of excellence that has won all the prizes and the highest market quotations. So it is in Europe. Ireland, Holland and the German States have in the past made all the fine butter consumed in Great Britain and the Continental capitals, but of late years Sweden and Denmark have come rapidly and prominently to the front. It was in these extreme northern latitudes that the art of butter-making may be said to have obtained a new lease of life. It was here that the effect of intense cold upon cream-raising was first discovered, a practice that now bids fair to supersede all other methods in use upon this continent. It was here also that was first practiced and has now become a national industry the manufacture and packing of butter for export to Brazil and other tropical countries. Of this latter practice I propose to give illustrations and a description with the assistance of the pamphlet of Chr. Hansen, of Copenhagen, Denmark.

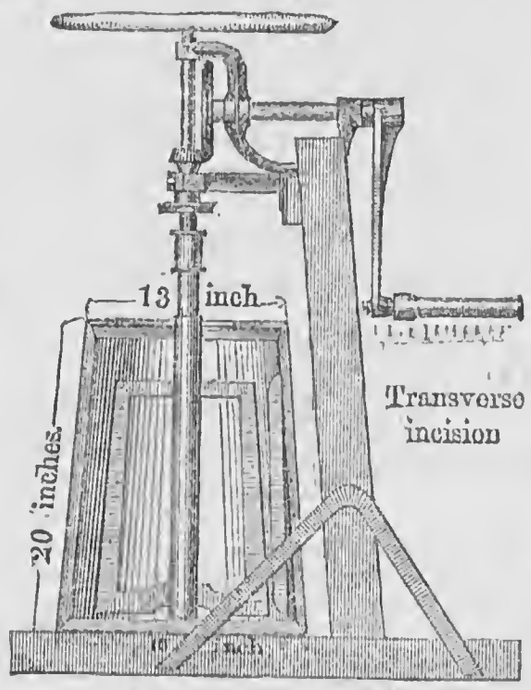
In order to perfect butter for the tropical market, great care is necessary in its manufacture. It goes under the name of canned butter, and is put up somewhat on the order of our imitation creamery butter that is so commonly quoted in our markets; that is, it is first made by private dairies, but under specific directions of the company that does the canning and shipping.



MILK COOLER.—FIG. 191.

For their own consumption and that of the English market the butter is usually made from sour cream; but when it is to be shipped to warm countries, it is invariably made from sweet cream. Owing to the long winters in this extremely northern latitude, the feed of the cows is mostly grain, straw and dried grasses, with some roots and oil-cake. In the matter of cleanliness the most scrupulous care is imposed upon the dairyman. The cows must be not only healthy, but at least eight days from calving. Care must be taken that no dirt gets in the milk pail at the stable, and as soon as the milking is finished, the milk is poured into cooling pails, 20 inches deep and seven inches in the diameter, and placed in a vat, (Fig. 191,) and water, filled with broken ice, put around the pails, so that the temperature of the milk is rapidly lowered to nearly the freezing point.

The milk is allowed to stand in this ice-water twelve hours, when the cream is skimmed off. The cream taken off at night is kept in ice-water over-night to be mixed with the cream that is taken off in the morning, when it is all immediately churned. The style of churn used, (Fig. 192,) is a stationary barrel with a revolving vertical shaft and attached wings. This turns at the rate of 150 to 200 revolutions a minute. The churning is commenced at 51 degrees and rises to 60 degrees by the time the butter comes. The liquid coloring matter is added in the churn—1 drachm of Hansen's mixture to 150 pounds of milk.



HAND CHURN.—FIG. 192.

The churning lasts from 30 to 40 minutes, and when the butter comes in granules the size of a pin head, the churn is stopped. The butter is taken out with a sieve that allows the buttermilk to drain off, and is then placed in a smooth, wooden trough, (Fig. 193.) No water or brine is allowed to come in contact with the butter. Sometimes a machine is used in working; but more frequently it is done by hand, (Fig. 194.) The butter is then weighed and salt, to the amount of half an ounce to the pound, is added. The butter is then rolled into lumps of four pounds, (Fig. 195), and placed in cold water to stand from three to seven hours for the salt to thoroughly dissolve. It is then worked by machine.

FIG. 193.

After this the butter is packed in wooden tubs or firkins, (Fig. 196,) holding from 80 to 100 pounds. The butter must be sent at least twice a week to the canning establishments, where it is classified in from three to five brands. The following were the ruling rates in November, 1879:

1st class,	35	cents.
2d "	32½	"
3d "	30	"
4th "	27½	"
5th "	25	"

At the same time the best sour-cream butter sent to England, was quoted at 30 cents. It would be well for our creameries that insist upon letting the cream sour, to think of this.

In testing the butter for canning it is placed in large, ventilated rooms, with an even temperature of 60°, kept thus by steam in winter and ice in summer. The butter remains in this room two days before it is tested, the theory being that a uniform temperature must affect all the butter tested before a uniform trial can be made. To those whose butter is classed in the lower grades, written information is given as to wherein lay the defects, so that in future these troubles may be avoided.

Only butter of the three highest grades is packed in tin. The butter for tinning is worked over again and salt added until it will contain about three per cent. of salt. This is done by steam butter-workers which are unknown in this country. The tin cans hold from half a pound to 28 pounds, the smallest holding the finest brand. The butter is pressed or stamped into the cans so closely that all air is excluded. The cover is quickly soldered to the can, and care must be taken that no part of the butter is melted in the operation. The cans are varnished, labeled and packed in wooden boxes with an intermediate layer of the husk of rice. (Fig. 197.)

PACKAGE READY FOR SHIPPING.—FIG. 197.

We are not told what the extent of this industry is, but it is strange that no effort is made in this country to take part in supplying the tropical market with fine butter. The question of how well butter will keep hermetically sealed in tin, is still an open one, though marvelous tales are told of its quality even after many months of travel in southern seas. To northern tastes, however, it will long be preferred even when slightly off-flavor to the substitutes of oil that are used in tropical climates.

THE TRUTH ABOUT IT.

[The object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

"SAVE ME FROM MY FRIENDS"

The dairymen may well make use of the above exclamation when they consider the unwise efforts that are being made to restrict the manufacture and sale of oleomargarine. There is a large amount of buncombe and nonsense in the talk about this stuff, and an extraordinary large amount in the proposed law recited in Mr. Moulton's communication which was printed in the RURAL NEW-YORKER of May 22. There are six clauses in that proposed law, all of which might be combined in one, to the effect that no substance other than that made from cream from the milk of cows should be sold, offered for sale or exported under the name of butter.

FIG. 194.

But such a law would be manifestly one-sided and incomplete unless the making, selling, offering for sale or exporting of cheese made wholly or in part of any other substance or material than milk, either pure or skimmed, were incorporated with it. Why should butter makers be satisfied with the exclusion of oleomargarine from competition with their product when the creameries are permitted to skim their milk, make butter of the cream and add oleomargarine to the skim-milk and sell the cheese so made as full-milk cheese? In fact, private dairies suffer much more from the competition of creameries that, so to speak and in fact, procure their cream for the price of the oleomargarine, and getting full price for their cream can afford to sell butter so much cheaper than an honest dairyman. By all means bring in the cheese and don't leave the creamery men to laugh in their sleeves at the foolish fuss made by the butter makers.

The fact is that all this fuss is really made in the interest of the creameries that would prohibit the use of the stuff to others and would yet use it themselves. It was a merited rebuff which the oleomargarine bill received in the N. Y. State Legislature on May 18, when an amendment was tacked on to it providing

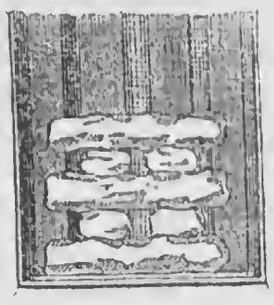


FIG. 195.

that rancid butter and indeed all butter should be branded and labelled, just as was proposed for the oleomargarine. Let us have exact justice; and the same sauce for the goose as for the gander. If a dairyman will use cream from filthy milk, in which mice have been drowned, for instance; or in which a cow has plunged her dungy foot; or in which the filth from foul hands and soiled udders has flowed, he surely cannot, without a grin of sarcastic maliciousness, put his name to a petition praying that the Board of Health shall "supervise the manufacture and sale of oleomargarine" or prohibiting the use of ingredients other than the caul fat of healthy animals in making that stuff, or the use of coloring matter to disguise it.

Let this thing be done squarely and fairly. Let a law be enacted that any person who sells or offers for sale any butter or cheese or other product of the dairy which is made wholly or in part of any oil or grease, whether it be called oleomargarine or by any other name, or that is not in reality precisely what it pretends to be, and is not conspicuously labeled or branded on the covers of the packages in conformity with its character, shall pay a penalty of $100; half to go to the informer. No dairyman can ask any more than that, and no honest maker of oleomargarine can do any less. Then let the makers of rancid butter look out for themselves, and if oleomargarine beats it out of the market, well and good, for it deserves that fate. H. S.

Feeding Sour Milk to Cows.

Some maintain that feeding sour milk to cows affects their butter injuriously; but we never made sweeter or nicer butter than we have been turning out this spring when feeding sour milk to the cows from whose milk it was made. Last spring we did not feed it; but gave each sixteen pounds of hay and three quarts of oats and corn—cob taken out—ground together, and then the average yield of milk per cow was from 13 to 14 pounds per day. This spring we have been feeding the same amount of hay, two quarts of oats and corn ground together—cob again taken out—two quarts of wheat bran and the sour milk from the herd, and the average yield of each per day, has been from 21 to 22 pounds of milk—an increase of over one-third. The cows are the same as last spring, with the addition of two others—one a cow we bought and which is thought no better

FIG. 196.

than the rest, and the other a two-year-old heifer which gives from 25 to 27 pounds of milk per day now. I don't expect the feeding of sour milk will make so much difference during the latter part of May, June and July, but, after that, I expect as great a difference as now. It is estimated that by using the sour milk in this way, one cow more can be kept for every ten in the herd; but on this point I cannot speak definitely. We take our milk to a creamery, so there is no guess-work with regard to the weight. G. E. NICHOLS.

Chenango Co., N. Y.

EWES FOR MILK AND CHEESE.—These have been so improved in milking capacity in the Department of Aveyron, France, that large flocks give sufficient per head per annum to make over 50 pounds of cheese of finest quality, selling for over 30 cents per pound, making the amount derived from each ewe, $15. In addition to this, she suckles her lamb for a couple of months or so, which is probably worth the cost or more of the keeping of the dam for a year. The best quality of ewe's-milk cheese, is the Roquefort. The process of making this is very peculiar, and requires so much labor and experience in doing it, that we think no people will attempt soon to rival the Department of Aveyron in its manufacture. But there are several other foreign varieties of cheese more simply and cheaply made, and which sell here for 20 cents per pound and more, that we can imitate if so disposed, and as there is likely to be an excess of ordinary-made in our country this season, dairymen would do well to give a part of their attention to the production of such.

BUTTER IN TEXAS.—It is a somewhat strange fact that although no State in the Union supports so large a number of cattle as Texas, butter and cheese are actually imported in large quantities, and among the consumers of these imported articles may be found farmers who themselves keeps small herd of cows. Cattle are there raised mainly for their beef and every effort is aimed at the production of large beef animals, while dairy products are considered to be of less importance. To this end the calves are allowed to run with the herd and suckle their dams at pleasure, and a cow once accustomed to give milk to her offspring will obstinately refuse to be milked.

THE BUTTER COLOR COMMITTEES.—At the late International Dairy Fair, the original committee on dairy butter coloring did not attend, and Mr. John Stewart, Mr. H. C. Sherman and Mr. E. D. Mason were appointed substitutes. After they had served, it was found that Mr. John Stewart was personally

interested in the manufacture 'of hutter color, and, therefore, not elegible. The other members sent in different reports, one being in favor of Wells, Richardson & Co's' well-known Perfected Butter Color, and the other of a Western preparation. This being an equal division of the Judges, the Executive Committee appointed a new committee of Judges, consisting of Mr. John Ellsworth, Mr. Howard Murphy and Dr. Marquis. This last committee, unlike the first, made careful comparative tests of each color exhibited, and were unanimous in awarding the prize to Wells, Richardson & Co.

This statement is made to show your readers the errors made in a statement printed in your columns a short time since, and signed by John Stewart, of Anamosa, Iowa. To those readers of the RURAL NEW-YORKER who know Messrs. Wells, Richardson & Co., or Mr. Van Patten (a member of the firm) who represented them at the Dairy Fair, the statement that they used, or attempted to use, any undue influence with the Judges will be known to be wholly without foundation, and can only reflect on the writer thereof.

ONE WHO KNOWS.

The Herdsman.

GREAT SALE OF JERSEY CATTLE.

ON May 26, the first of two sales of Jersey cattle under the management of Messrs. Peter C. Kellogg & Co., took place in this city, and was remarkable for the high prices obtained for some of the animals. The attendance was unusually large and the bidding extremely spirited. The chief purchaser was Mr. Lawson Valentine, of Houghton Farm, Orange Co., N. Y., who seemed determined to obtain a fine selection of these choice cattle for his Experimental Farm. One of the most notable incidents of the sale was his purchase, for $600, of the bull calf of Col. Hoe's famous cow Alphea, whose large yield of milk produced quite a sensation in 1871, and whose descendants have since well sustained her reputation. Later $1,000 was offered for the calf, but declined, nor would the owner name any figure at which he was willing to sell it. The cows Lass Edith and Myra II. were of very similar strain being full of the blood of Alphea and her full brother, Jupiter, and, moreover, both had been tested very high for milk yield during the current month, both which facts will account for the high prices they brought. The following is a full account of the prices got for each consignment and the average price brought by each lot.

A. B. Daring's lot.—Ramapo, 4,679, bull calf, 7 months old, out of Eurotas, Lawson Valentine, Mountainville, N. Y., $600.

Cornelius Wellington's lot.—Worombo, 4,619, bull calf, 6 weeks old, Jersey Belle of Scituate strain, Moulton Brothers, Vermont, $185; Roma, 9,908, heifer, 4 months old, same blood, same buyers, $240; Superb, 8,554, heifer 21 months, in calf to Black Defiance (double grandson of Jersey Belle of Scituate), P. Thorne, Dutchess Co., N. Y., $250; Miss Muffit, 9,907, heifer, 18 months, in calf to Black Defiance, John I. Holly, Plainfield, N. J., $400. Total for four head, $1,075. Average $268.75.

John T. Foote's lot.—Little Ethel, 5,864, cow, 3½ years, Thomas Barbour, Paterson, N. J., $175.

F. H. Falle's lot.—Butter Boy, 3,242, bull, 3 years out of Oak Leaf, Lawson Valentine, $150; Winglet 1,230, cow, 13 years, imported, Eli Barnett, Long Island, $85; Myrita, 2,819, cow, 7 years, by Mercury, W. Crozier, $175; Trudie II., 4,084, cow, 5 years, Moulton Brothers, $400; Myra, II., 6,259, cow, 4 years, L. Valentine, $1,400; Lass Edith, 6,290 cow, 4 years, L. Valentine, $1,425; Tasma, 7,200, heifer in milk, 2 years, James Stillman, New York, $485; Lass Edith II., 10,036, heifer, 14 months, Moulton Brothers, $325; Donnabel, 10,037, heifer, 14 months, J. Stillman, $810. Total for nine head, $6,055. Average, $672.78.

John D. Wing's lot.—Babylon, 4,723, bull, 22 months, dam Echo, II., J. N. Borland, New London, Conn., $110; Maple Blossom, 7,357, heifer, in milk, 27 months with heifer calf at foot two days old, Thomas Barbour, $580; Empressa, II., 7,362, 2 years, by Lord Lawrence, with heifer calf one day old, Thomas Barbour, $835; Godiva II., 10,094, heifer 18 months, by Niobe Duke, T. Barbour, $325; Timid, 10,095, 18 months, by Niobe Duke, T. Barbour, $200. Total for five head, $2,050. Average, $410.

B. F. Bowditch's lot.—Mattette, 5,881, cow 3½ years, Edwin Thorne, $180; Nix, 6,800 cow, 2½ years, L. M. Rutherford, Hackettstown, N. J. $125; Niopo, 7,494, heifer, 22 months, John Taylor, Bayside, L. I., $260; Nigella, 7,895, heifer, 22 months, J. Stillman, $155; Nitrate, 7,896, heifer, 22 months, L. M. Rutherford, $200; Hilla, 7,898, heifer, 20 months, E. Thorne, $205; Bibi, 7,899, heifer, 20 months, T. Barbour, $225; Nilette, 7,897, heifer, 21 months, E. Thorne, $200; Duxilla, 7,900, heifer, 19 months, W. M. Oliffe, Mott Haven, N. Y., $270. Total for nine heads, $1,820. Average, $202.22.

J. L. & G. S. Spofford's lot—Lottie Pearsall, 2,652, cow, 8 years, by Southey, Hoover & Co., Columbus, Ohio, $130; Lady Lurgan 3,531, cow, 6 years, same sire, E. Thorne, $190; Sunlight, 4,349, cow, 4½ years by Trusty, T. Barbour, $310; Lady Adelaide 4,350, cow, 4½ years, by Sooty Pioneer, T. Barbour, $250; Honeydrop, 10,032, heifer, 3 years, by Guy Warwick, in calf by Sly Boots, A B. Darling, $605. Total for 5 head, $1,395. Average, $275.

J. M. Mackie's lot.—Gray Hebe, 4,907, cow, coming 5 years old, J. Stillman, New York, $130; Pine Cliff Grand Duchess, 6,769, heifer in milk, 28 months, L. M. Rutherford, 135; Handsome Hebe, 6,763, cow, 3 years, 4 months, L. M. Rutherford, $180; Belle of Barrington, 5,830, cow, 3 years 9 months, D C. Waterhouse, New Haven, $205. Total for 4 head, $650. Average, $162 50.

Charles R. Charity's lot—Roselle of Ridgewood 7,192 cow, 3 years and 3 months, by Duke of Burlington (a son of Favorite of the Elms) W. S. Wickham, $100; Rosedale, 2,235, cow, 6½ years, T. H. Falle, $131. Total for two head, $231. Average, $115.50.

D. F. Appleton's lot.—Pearl of Ipswich, 5,582, cow, 4 years, by Agawam; T. Barbour, $200; Hannah of I., 3,923, cow, 5 years and 4 months, same sire, J. I. Holly, $330; Amy of I., 5,583, cow, 3 years and 10 months, by Briton, Hoover & Co., $190; Girl's Duchess, 5,589, cow, 3 years and 4 months' by Royal Duke of Ipswich (son of C. L. Sharpless, Duchess, 101) J. Stillman, $220; Bright Eyes of I., 9,214, heifer, 9 months, by Duke, Jr., T. Barbour, $100; Diamonds of I., 9,215, heifer, 8 months, same sire, J. D. Wing, $90. Total for six head, $1,130. Average, $188 33.

Cream Cottage Stock Farm lot (John Vasseur, Manager).—Imogene, 4,552, cow, 4½ years, J. C. Besson, Hoboken, N. J., $80; Blackie, 9,370, heifer, 12 months, J. D. Wing, $80. Total for two head, $160. Average, $80.

J. C. & D. Pennington's lot.—Ocean Queen, 1,405, cow, 9 years, imp., Hoover & Co., $100; Creole Louise, 9,271, heifer, 2 years and 3 months, T. Barbour, $175; Aspirante, 9,272, heifer, 2 years, Hoover & Co., $170; Consort, 9,273, heifer, 13 months, D. Collamore, $75; Bergere, 9,274, heifer, 12 months, T. Barbour, $120. Total for 5 head, $640. Average, $128.

H. C. R. Watson's lot.—Councillor, 4,468, bull, 26 months, sire imp. Tormentor, Moulton Brothers, $100.

William Watson's lot.—Ninette, 4,291, cow, 5 years, S. B. Smith, Roxbury, Conn., $180; Young Kitty, cow, 3 years, imp., T. Barbour, $105. Total for 2 head, $285. Average, $142 50.

Total for 56 head, $16,366. Average, $292 25.

THE JERSEY CATTLE CLUB.—The adjourned meeting of the American Jersey Cattle Club to receive the report of the committee to whom was referred the subject of a new constitution for the government of the club, at the last annual meeting, April 21, was held on Tuesday at the St. James Hotel in this city. The committee appointed to act in the matter consisted of Messrs. D. F. Appleton, John D. Wing, H. M. Howe, S. J. Sharpless and F. A. Potts. Besides these there were present our esteemed contributor, Mr. R. Goodman, Lenox, Mass., and Messrs. George E. Waring, Jr., Newport, R. I.; T. H. Malone, Nashville, Tenn.; Dr. Alsop, Mass.; W. T. Taylor, N. Y.; T. J. Band, Sing Sing, N. Y.; P. F. Billinger, Herkimer, N. Y.; Samuel Galle, White Plains, N. Y.; Benjamin Swan, Jr., Oyster Bay, L. I.; Benjamin Kittredge, Peekskill, N. Y. The committee presented its report and after a somewhat lengthy discussion of some of its features, it was adopted. The object of the association is to advance the breeding of Jersey cattle and to publish a Herd Book for the registration of pedigrees. The association has now over 15,000 animals registered in its Herd Book. The officers of the club are:—R. Goodman, Pres.; Thos. J. Hand, Treas.; George E. Waring, Jr., Sec.; Executive committee, T. H. Malone, H. M. Howe and W. S. Taylor.

CONTROLLING THE SEXES OF ANIMALS.—Mr. D. D. Fiquet, of Houston, Texas, in a letter to the Country Gentleman says, he has repeatedly done this, and is confident he can continue it indefinitely, by food alone. When he wishes to obtain a heifer calf, he feeds the cow light, cooling food for some days before putting her to bull, at the same time he feeds the bull with rich, heat-producing food. When he wishes to obtain a bull calf, he reverses the system. He experimented on 18 cows of his own and three of his neighbors, all of which bore calves of the sex he desired. He appends certificates of his neighbors as to the truth of his statements.

For years past we have heard of many systems of controlling the sexes of offspring, all of which were confidently believed in by their discoverers, but every one has failed when put to a general trial. If this of Mr. Fiquet should succeed, it will prove a great boon to stock breeders of all kinds of animals; for it is a matter of great importance to them to be able to control the sexes of their produce. Sometimes they are in want of females from certain of their animals, at other times of males only, and their success or failure in their business, often depends upon whether they do or do not succeed in this.

Sheep Husbandry.

SHEEP.

PERHAPS no branch of profitable stock growing has commanded so little systematic effort here as sheep raising. Almost every farmer has kept a few—say one to three or four dozen as a home necessity, while a very few make sheep a specialty. But the present favorable price of wool, and the growing demand for mutton, are creating a "boom" in the sheep business. While the motive, in the main, is profit from buying and selling, I think the result will be a forward movement toward a profitable business, to which this part of the country is surely adapted—systematic sheep husbandry. As evidence of such result, farmers talk of "going into sheep." Many have increased small flocks by purchase, and express an intention to breed up, by the use of blooded bucks. This, to my mind, is the *poor man's* best method of obtaining a paying flock of improved sheep. Let him buy what good young native ewes he can *pay and care for*, and then breed them to the best bucks obtainable.

That sheep will succeed in this Ozark mountain range, is suggested by the healthfulness of small native flocks without more care than stock cattle get—liberty to care for themselves. Pure atmosphere and dry range are favorable to the health of sheep. We have both here. Blue grass, perhaps the sheep's choice of all grasses, only wants opportunity here, and then as fast as this occurs by failure of coarser grasses, it grows spontaneously as though some Kentucklan had passed this way, broadcasting the public pastures—prairie and woodland—on every hand.

The price of stock sheep has wonderfully advanced in the last 18 months. Good young native ewes then cost $1.25; now, $4.

Springfield, Mo. M. O. T.

The Poultry Yard.

CHICKEN CHOLERA.

PASTEUR, the great French chemist, has made public, through the French Academy of Sciences, the result of his study of cholera in fowls. He declares that chicken cholera is caused by a microscopic parasite—"le microbe"—and so carefully has he studied it that he knows what it feeds upon and can produce and kill it at will. It finds its food in the body of the fowl, and when the microbes have eaten all of this, they die of hunger, and the broods are afterwards proof against the disease, but, unfortunately for them and their owners too, before they reach this happy condition they generally die. The experiment by which he proved the truth of his theory is the most interesting part of the discovery.

Of eighty healthy fowls, which had never had the disease, twenty died immediately after being inoculated with the cholera poison in a virulent form. The poison was then very much reduced in strength, and a second score of the fowls were inoculated with it. They all suffered from the disease in a slight degree, but they all recovered, and, when afterward inoculated with poison of full strength only eight of the twenty died. A third lot of twenty was then inoculated twice with the weaker poison, and only five died when they were afterward tested with the stronger "mixture." The final score of fowls were inoculated four times at regular intervals, and thereafter it was impossible to give any one of them such a dose of microbes as to cause its death. The conditions of the experiment are said to have been such as to leave no room for doubt as to the results obtained. Consequently, it appears that chicken cholera must be added to the number of diseases preventable by inoculation.

Pasteur thinks there is a relation between chicken cholera and the disease called "sleeping sickness," common among the negroes of Senegal, which is said to be caused by eating fowls afflicted by a certain throat disease. Some sanguine men see in the discovery of this relation between man and the brute an analogy to that made by Jenner, 80 years ago, of the relation between small-pox in the human subject and cow-pox in the brute; while others see afar off in it the possibility that cholera, and even yellow fever may be placed beside small-pox in the list of preventable diseases, by the use of the virus from some one of the lower orders of creation.

Field Crops.

HAY AND HAY-MAKING.

HENRY STEWART.

IF one were asked what is hay, he would be apt to reply "dried grass." But this is a very incomplete definition; he might as well say that bread is a mixture of flour, water, a little salt, and some yeast, quite ignoring the chemical changes which occur in the fermenting and the baking of the bread, and upon which much of its nutritive quality and the whole of its healthful digestibility depend. So with hay; it is grass, not only dried, but cured; and in the proper curing a considerable change occurs in its condition, which adds to its nutritive value and its digestibility. I do not know if accurate analyses have been made of well-cured hay as have been made of green and dry grass. I have met with none; but I know that a very nutritious drink may be made from hay, and that the value of the decoction depends altogether upon the manner in which the hay has been made. The tests to which I have been used, are cows, the milk pail, and the churn; and many others have made observations in the same laboratory, with the same result, viz.: that there are great differences in hay, all depending upon the time of cutting and the manner of curing.

While these tests are satisfactory in practice, it is desirable that some accurate analyses should be made of hay as found in the farmers' barns, made from grass and clover, or clover alone, cut when fully ripe, roasted in the full sun and carried, all brittle and parched, to the barn; and that made from grass or clover, or both together, cut just past the blossom or in full blossom, and cured in the cock, without exposure to the scorching sun, and with the usual fermentation which occurs under these circumstances. It would be of great interest to know precisely in what respects the feeding value of the hay is increased in the curing in such a manner as to affect not only the yield of milk, but the production, quality, and color of the butter. Professor Storer has given us some exceedingly interesting papers in the Bussey Institution Bulletins, and he would add to the obligations which the agricultural public owe to him, if he would investigate this subject of hay the coming season and explain these points.

The fact remains, however, that hay is as it is made, good or bad; and it is made or marred in the cutting and curing. Ripe grass will not make good hay, because in the ripening the soluble or digestible portions are converted, in part, into insoluble woody fiber; as, for instance, in red clover in which the difference makes a loss of nearly one-third of the albuminoids and carbohydrates, and an increase of more than a third in the crude indigestible woody fiber, as shown by the tables of Wolff and Knapp. Notwithstanding that this fact is well known, the idea is prevalent that hay should be made of well ripened grass, and more than half the crop is thus made, with a loss of one-third of its feeding value. Another loss is made in the usual system of curing. The grass is cut and lies in the swathe until it is dried; when it is at once raked up and drawn to the barn or stack. The two losses together cannot be less than 50 per cent. of its value; and, in fact, in feeding such hay after having fed that made as it should be, I have found the shrinkage of milk to be fully one-half, unless the deficiency has been partly made up by an extra allowance of meal. But it cannot wholly be restored even then. Let us follow a crop of hay from the field to the barn and recount the process as it should be.

When the clover is in full blossom, and here and there one may see a brown head, is the time to cut it? If timothy has been sown with the clover, that is hardly yet in blossom, and then, one has "Hobson's choice"—either to spoil the clover by delay or lose something by cutting the timothy too early. But the latter is preferable: the loss is one of the disadvantages of mixing this grass with clover. I prefer orchard grass to timothy, because that and the clover are in prime order for cutting together. The mower is started as soon as the dew is off, and if there is not help to turn the cut grass in three hours after it has been cut, the cutting should cease and all hands go to turning. If one has a hay tedder, so much time will be saved in the hay-making as will go a great way towards paying for the implement in one season. As soon as the grass which has been cut—and which will have been about one acre per hour with a fast-walking team and in good grass—has been turned (the time will depend somewhat on the weather), the horse rake should be put to work, and as the hay is gathered into windrows, it is put in cocks of about 200 pounds, which will be about four to five feet in diameter and five or six feet high. These should be put up carefully and the sides raked down to shed rain if a shower should come on. When clover alone is grown, the cocks should be made somewhat smaller, about four feet wide and high, and they should be opened after two days, turned and put up again; or left longer in the windrows. Clover being more succulent than grass, needs more careful drying, but it may be more easily spoiled by over-drying.

Hay caps are very convenient to have, and cost about 18 cents each. They are squares of brown cotton sheeting, 48 to 54 inches wide, with short twine loops at the corners and a hickory peg a foot long, tied to the loop with a piece of twine also a foot long. These will be completely water-proof if steeped in sugar of lead solution and dried. Ten of these will cover a ton of hay and make it safe against a week's rainy weather if need be. The caps are thrown over the top of the cocks and held down by thrusting the pegs through the loops into the hay. To be safe against a sudden thunder storm is to be happy, in haying time and one may rest easy when the thunder rolls at night, if the hay is cocked and capped.

As soon as the hay is raked, or sooner if there is a spare horse, the mower is started again, and cuts until night. This process is repeated until all the hay is made. The cocks will heat and sweat, and it is this fermentation which improves the hay, and by which the cellular fiber is, in part, changed to starch, or at least is made more digestible; the starch is changed in part to gum and possibly in the ripening process which goes on, some sugar may be formed. This *may* be, if it is so or not, no one knows, that I have been able to learn of, whatever may be thought or believed; and this is a point which should be investigated and set at rest by some competent person. The fact is that this curing and ripening in the cock is a very important part of hay-making; some farmers have it done in a fashion in the barn, by putting away the hay

somewhat damp, but there it cannot be controlled as it can be in the cock. It will be wise to watch the cocks and perceive, by pushing in the hand, if all is safe within them.

When the hay is all made, it should be put under cover at once. A roof of some kind over it is indispensable. A hay shed can be put up for a very small sum, and if there is not room in the barn or over the stables, it will be an economy to provide a long hay shed 20 feet wide, made of posts 16 feet long set eight feet apart along the sides, joined at the top by plates, and braced. A single roof of half-inch dry boards, set close together, will be sufficient to carry off the water, the little which may enter at the cracks will do no harm. Every two feet in length of such a shed will hold a ton of new hay. When the hay is drawn one man or boy should go about half an hour ahead of the wagons, and throw over the cocks and open them to give the hay a final airing and evaporate any excess of moisture. In feeding hay thus made, one secures every good quality of the grass without loss and adds to them somewhat in the process of curing.

Scientific and Useful.

THE TESTING OF VINEGARS.

M. BENJAMIN, PH. B.

In the January 24th issue of the RURAL NEW-YORKER, among the questions given in "The Querist" is one relating to vinegar testing. Inasmuch as the writer has been further questioned in regard to the methods employed, it may not be considered amiss to treat the subject more fully.

The strength of vinegar, or, more properly speaking, the amount of acetic acid it contains, may be estimated by means of a hydrometer, called an acetometer; just the same as whiskey and other liquids containing alcohol are tested by means of an alcoholometer. Two varieties of the acetometer are made and sold, one of which is graduated from 0° to 6o Beaumé; the other is divided into 100 parts and gives the percentage, in grains, of acetic acid contained in the sample. However, when we come to consider the fact that all vinegars containing less than three per cent. of acid, are said to be diluted with water, and that the strongest vinegar holds less than five per cent. and also that its specific gravity, on the scale of which water is the unit, varies but from 1.017 to 1.019 in malt vinegar, and from 1.014 to 1.022 in wine vinegar, it will be seen that the hydrometer yields results which cannot be relied upon. If such results were accepted, it would be a very simple matter to dilute the vinegar with water and then add some heavy, soluble salt which would increase the density until the desired specific gravity was secured.

The other methods employed in tested vinegars are mostly based on the determinations of its acidimetry.

A method given by Blyth consists in taking 110 cubic centimeters of the sample and distilling it until 100 cubic centimeters have been drawn over. The distillate will contain 80 per cent. of the acetic acid. Its specific gravity may then be taken, from which the percentage is readily calculated. It is necessary, however, to both test the distillate for hydrochloric acid and to determine the strength of the original sample in order to obtain correct results.

Another method and the one which is probably used the most, is the direct estimation of the acidity of the sample. This is effected by the use of a standard solution of sodic carbonate. This solution is made by dissolving 53.043 grammes of pure dry sodic carbonate in one litre of distilled water; one cubic centimeter of this solution is equal to one cubic centimeter of acid; 530 grains dissolved in 10,000 grains of water is also used to make the standard. One fluid ounce of the vinegar is poured out into a small beaker or flask and a few drops of litmus solution added; this will immediately turn red on account of the acid in the vinegar. The standard solution is then poured in from a burrette, drop by drop, until all effervescence ceases (owing to the liberation of carbonic anhydride) and the blue color appears. Towards the end of the operation it is best to boil the liquid so that the last traces of acid may be expelled.

Otto's acetometer is sometimes employed for this purpose. This instrument is a glass tube engraved with two scales on its surface, one at the bottom for measuring the vinegar and one at the top for measuring the test liquid. A quantity of litmus solution is poured into the tube and then either five or ten cubic centimeters of the sample added, that is, up to the mark where the upper graduated scale begins. A standard solution of 1.369 of ammonic hydrate is added until the acid is neutralized and the liquid becomes blue. The number of cubic centimeters used indicates the percentage of acid.

The objection to the use of these last three methods is that they are only reliable in case the vinegar contains no other acid than acetic. The adulteration of all sorts of food and of articles used in the household economy has become so common that even vinegar is rarely to be bought pure.

The most common adulterants are sulphuric acid, nitric acid, tartaric acid, hydrochloric acid and sometimes metallic salts. The first four must be eliminated in order to obtain the correct amount of acetic acid contained in any sample, and the latter adulterant would vitiate any results secured by means of a hydrometer.

Miscellaneous.

WHAT OTHERS SAY.

KINDNESS IN HANDLING DAIRY STOCK.—It is important that dairy stock, from the young calf to the old cow that is being fed for beef, should be handled and treated kindly. If a calf is handled roughly and becomes wild and vicious thereby, when it becomes a cow you may expect the same, but if handled carefully and treated with kindness, when grown up she will be mild and gentle. It may not always be so, but in general it is. There have been many cows spoiled by the person having the care of and milking them, by whipping or frightening them whenever they come in his way, or if when milking, a cow hoists her foot or kicks (which is generally caused by pain), such a fellow stops milking and commences whipping, or, worse, kicking the cow, and she becomes enraged, holds up her milk, kicks back, and is finally ruined. Never whip a cow for kicking, if she does knock the milk pail out of your hand and sometimes upset and knock you, but be kind and gentle with her, and milk her out with as little excitement as possible, and if she gets over her kicking propensity it will be by mild and not by harsh treatment. Never whip a cow because she kicks, for it will do no good, but will do a great deal of harm." So speaks Mr. Parcell in the Report of the N. J. A. S.

MILK AND BUTTER PRESERVATIVES.—A high German authority in dairy matters, Dr. De Kleuze, of Munich, says that the preserving compounds so widely advertised are nearly always composed of varying proportions of bicarbonate of soda, sometimes mixed with common salt, boracic acid, borax, mixtures of borax with common salt, salicylic acid, and of late a mixture containing half of boracic acid and half of sulphate of potassium. Bicarbonate of soda has been in use a long time, and is still largely used. It acts by neutralizing the lactic acid which is formed in the milk, but its action is not satisfactory, as it is liable to give the milk a soapy taste. Salicylic acid is also unsatisfactory as well as expensive. Boracic acid is a powerful antiseptic, and preferable to borax.

For dairy use Dr. De Kleuze finds the above-mentioned mixture of boracic and sulphate of potassium superior to all other preservatives, and perfectly harmless as well as cheap. It can be obtained at any druggist. Sixty grains to a gallon of milk or a pound of butter are sufficient to prevent souring or rancidity.—Scientific American.

THE RAGE FOR SENSATION.—"The Hour" remarks: "Nothing is more characteristic of American life than the extent to which it is influenced and colored by sensational elements. Every year, nay every month and every day, develop fresh evidences of this tendency. It is observable alike in literature, business, politics and society. Even religion, or at least the outward manifestation of it, is not free from this besetting evil. The preachers who attract the largest audiences are invariably of a sensational turn. Many churches are social and religious clubs, in which wealth and position in society are the sources of spiritual pride as well as of secular exclusiveness."

AGAIN: "The representative men in our halls of legislation owe their position not to solid, but to showy and superficial qualities. Instead of being well grounded in political history and philosophy, they are versed in the wisdom of caucuses and the arts of conventions. They compass their ends, not by argument, but by manipulation. Their speeches abound in pretentious generalities which mean nothing, and in asseverations of principles which they never dream of putting into practice. The secrecy with which they pull their wires makes their triumphs appear only more startling. They may say much or little, but alike in what is said, and in what is left unsaid, is the suggestion of a desire to create a sensation. But adroitness of political management is seldom found united with elevation of character or aim, and thus it is that our shrewdest politicians, in sacrificing so much to the sensational, lose the simplicity and strength of independent manhood."

By setting trees twelve feet apart, in a very few years they can be made use of for live fence posts; and by using them for this purpose the fence will not be tumbling down every two or three years. Maple, Chestnut, Butternut or some such trees should be used, as they will serve two purposes:—for fence posts, and then the Maple will give sugar, the others nuts.—New England Farmer.

IF churns are advertised to make butter in five minutes, one may be quite sure that they are bare-faced humbugs. I saw once a trial, says Dr. Kleuze in the London Agricultural Gazette, at which churns were produced which had been advertised to make butter in three minutes. Well, the minutes grew and swelled into quarters of hours, and, in fact, they were the longest minutes I ever passed.

FOR BEEF, MILK, CHEESE AND BUTTER.—In those sections of country where beef is an object, the Short-horns will answer the best purpose; for the production of milk and cheese, the Ayrshires, while for butter-making the Channel Island cattle hold the first rank, and of those my preference is for the "thoroughbred Jersey."

So?—Mr. Conover, in the New Jersey State Board of Agriculture's Report, says: "To produce a poor grade of butter will not pay, because oleomargarine or refined tallow can be produced so much cheaper (and in fact really a better article than rancid butter), that it will ultimately take the place of all the poor grades of butter."

TO MAKE SHEEP PAY.—To benefit to the full extent by raising and keeping a numerous flock of sheep, roots must be grown for winter use, and when this is found to be true, and roots are grown on a proper field system, so as to cost but from five to eight cents per bushel, sheep husbandry will go ahead.

MINERAL AND FARM MANURES.—Dr. Lawes says: "I may say that 42 pounds of nitrogen, applied in the form of nitrate of soda, with mineral manures, to one acre of barley, has, for 25 years in succession, produced as large a crop as an annual application of 14 tons of farm-yard dung per acre."

MENDING ROADS.

A FAVORITE method with too many of the overseers of roads, is to repair them by scraping out the soft, loose earth or mud from the ditches alongside, and then gathering all the weeds from the gardens or other places, and loose trash generally to fill up the holes. These soon rot, the loose earth is ground out, and there is left a mud hole bigger and more unsightly than the original one. Such holes should be invariably filled up with pure gravel, if to be had; if not, with the driest, hardest soil to be found near by. A subsoil is better for this than a surface soil, as it has less vegetable matter in it to decay and form mud. After roads are smoothed and all ruts and holes filled up, they should have a coat of gravel, if to be obtained even at a considerable cost, unless they are macadamized. Then they can be kept hard, smooth and dry for a long time, without additional expense.

UTILIZING SEWAGE.—The chemist says that 200 ounces of ammonia exist in the average annual discharges of people. This is now nearly all lost from want of proper earth or water-closets and applying their contents to the soil. Could this be done, millions of bushels of grain, and thousands of tons of grass would be added to the world's products; many diseases which now afflict humanity would be stamped out, and the water we drink would be purified from much that is deleterious. We little know now how often rain water, leaching through fecal matter, finds its way into springs and wells, and yet when drawn out, it looks so pure and tastes so well, that the poison within it is not suspected; it cannot always be detected even by the most perfect analysis.

TO MAKE PLUM TREES BEAR.—When the blossoms are coming out, dig a trench around close to the tree and fill it with boiling water. This will kill the curculios before they leave the ground, and you will be rewarded with trees loaded with luscious fruit. Try it. J. F. C.

Industrial Topics.

COLLAPSE OF THE IRON BOOM.

As a rule, "booms" are worked in the interests of certain classes, and when the reaction comes, as come it always does, some have to suffer, and it not unfrequently happens that those for whose special benefit the "boom" was started are among the crippled. During the past spring, farmers as well as others of the general public, have been mulcted pretty heavily by the unreasonable rise in the prices they have had to pay for all goods into the manufacture of which iron entered. This iron "boom" began last summer when the "iron men" saw that the return of prosperity would cause such an advance in the railroad and other industries which make large use of the commodity that the demand for iron would, for some time, greatly exceed the supply, and that before the furnaces that were out of blast could resume operations, or the rolling mills turn out the necessary supply, they could bring about a combination that could fix almost its own price on the product so much in demand.

Last summer, before the "boom" set in, pig iron was worth from $16 to $17.50 per ton; bar iron, $1.75 to $2.25 per cwt.; nails, $2.50 per keg, and other articles of iron in proportion. By the following December, however, prices had advanced from 60 to 100 per cent. and in February, '80, No. 1 pig was worth $50 per ton; bar iron, $4 per cwt., and nails $5.75 per keg. These were the ruling prices at the time when the manufacturers were compelled to buy. Plows and all other kinds of agricultural implements as well as machinery for the season must be manufactured at once, and the makers were compelled to pay the advanced rates for the crude material and, in their turn, to put up the price of the manufactured goods to the consumers. Some of the most wealthy and enterprising of them began to import iron from Europe, for they found that, after paying the expense of transatlantic handling, the ocean freight and the import duties, they could lay down the foreign product even as far West as Chicago at figures lower than they would have to pay for the iron made in this country. This introduction of foreign competition, together with the enormous amounts turned out from the new furnaces that were here and there started in the United States, and the long-disused old ones that were relighted in response to the heavy demand and exorbitant prices, soon overstocked the market and broke all the iron combinations, so that last April pig iron dropped $10 per ton; and at the present time it is selling for about $22, and nails at $3 per keg.

This fall, however, comes too late to be of any material benefit to the farming community as far as the prices of agricultural tools and machinery are concerned, for the iron in nearly all these at present on the market, was bought at the high figures that ruled last winter.

The only people who have reaped a benefit from this iron "boom," were the speculators, who bought heavily at low figures on a rising market, and sold out at high prices, and some of the furnace men and ore owners. Many of the speculators, however, were caught on the fall, with large high-priced stocks or contracts on hand, and have lost all or a great part of their winnings, while many of the furnace men have hardly been compensated for the heavy cost of starting their works, and others have on hand a hateful burthen in the shape of onorous contracts with the ore men. Of the latter too, many have the regret of having missed heavy profits by holding their stock in the hopes of higher prices.

The Millers' International Exhibition.

This Exhibition opened in May 31st, at Cincinnatti, Ohio, and will remain open until June 26. It is attracting all over the country even more attention than its originators anticipated, although the preparations made for it both here and abroad must make it the finest display of the sort that has ever been made in any country. The large hall of the Permanent Exhibition building is filled with all kinds of milling devices and machinery contributed by our own country and Europe, including ten complete flouring mills, showing in actual operation all the new processes of making flour, feed, etc., etc. There will also be a complete display of cereals of all sorts, as well as of flours, feeds, breads, cakes, etc. and a fine exhibit of the various methods of bread-making in use in all parts of the globe. Such an Exhibition will be of great use and interest not to the millers alone, but to the farmers of the country also, and the general public; for whatever cheapens or improves the processes of converting grain into flour is of importance, alike to the producers of the former and the consumers of the latter. Moreover, it will tend to enlarge our foreign markets for milling machinery, especially in Great Britain, for so much attention has of late years been bestowed on this branch of industry by the inventive genius of the country, that our machinery and processes are now ahead of those of any other country, and this Exhibition will serve to demonstrate this fact to others, and so secure their trade. Doubtless also, comparison of our own goods with those of other countries will suggest still further improvements in some of the former, and lead perhaps to the introduction of some of the latter among us.

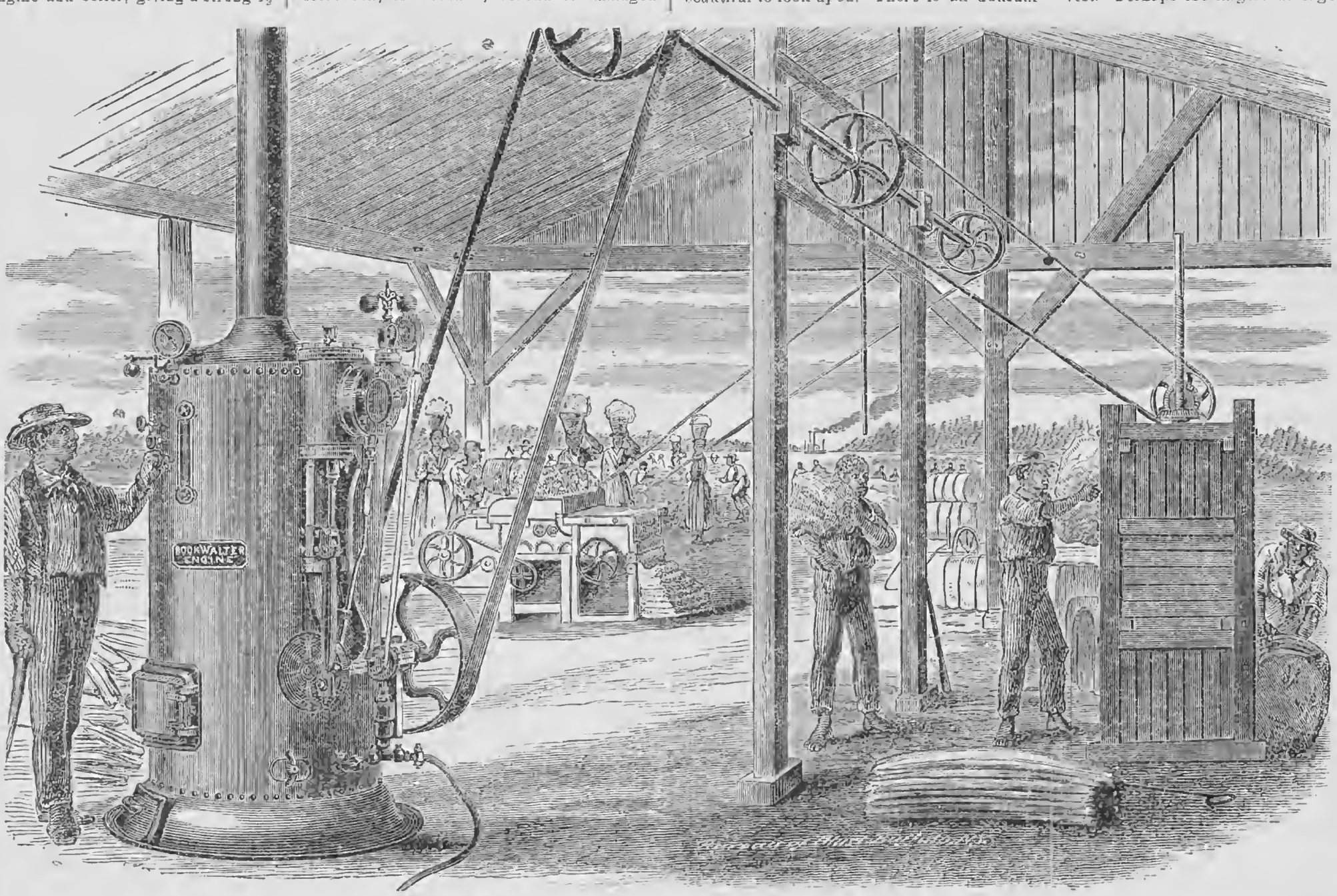
This is the first Exhibition of the kind—international in its scope—which has ever been held in the United States or any other country, and the prospect is that it will be crowned with the success, the labor, foresight and great enterprise of its originators richly deserve.

Industrial Implements.

THE BOOKWALTER ENGINE.

We have frequently dwelt in these columns upon the numerous economical advantages of steam power for many agricultural purposes. Among the most obvious of these are:—driving grain thrashers, feed mills, corn mills, wood saws, cotton gins, presses, etc. The great reduction in the price of engines and the many improvements lately made in their construction remove obstacles to their use, that formerly existed. At this day engines can be procured so simple yet complete in their construction that any ordinary farm hand can run and manage them. In the very front rank of this kind is the Bookwalter engine, which has won a highly favorable reputation throughout the United States and in many foreign countries. It is widely in use for driving all sorts of machinery, and those who have tested its many merits are loud in their praise of its cheapness safety, durability, power and thorough efficiency. We have recently received from its manufacturers, Messrs. James Leffel & Co., of Springfield, Ohio, a very neat pamphlet of 38 pages, giving prices and full description of this engine, and containing a number of letters from customers who have tested it, together with a good deal of other interesting information. These pamphlets are sent, free, on application to all intending purchasers of steam power.

The accompanying cut represents the Bookwalter engine driving a cotton gin and press, as many of our readers in the Cotton States have doubtless seen it, for the engine has had a wide sale in that section. It will be seen that the belt on the engine pulleys runs direct to a suitable pulley on the line shaft and that the gin and press are driven by belts attached to pulleys on this shaft. Of course, the same arrangements will answer for driving corn mills, wood saws and various other kinds of machinery. As important as steam power is to many of our Northern farmers, it is of much greater importance to the Southern cotton planter, and since the recent introduction of improved engines planters find that they cannot afford to wear out their horses and mules during the ginning season, when good, reliable, efficient and cheap steam power can be had for the purpose, which will do so much more and better work. Messrs. James Leffel & Co have fully demonstrated that a good, safe and reliable engine and boiler, giving a strong 4½ horse power can be made for the low price of $280, and one of 6½ horse power for $370. A good engine at such low prices will prove of special benefit to the agricultural interests of our country, and we trust many readers of the RURAL NEW-YORKER will deem it to their interest to avail themselves of the opportunity of making so desirable an investment.



THE BOOKWALTER ENGINE AT WORK.—Fig. 198.

REMOVAL.—Lewis Schilling, the originator of the celebrated Premium Bone fertilizers, has removed from Salem to Alliance, Ohio, accepting the presidency of the Excelsior Fertilizer Co. at that place. He now has two large factories at work and will soon be able to fill all orders for his celebrated brand of fertilizers.

Everywhere.

RURAL SPECIAL REPORTS.

ARK., Greenwood, Sebastain Co., May 22.—No rain since April 28, until a light shower today. Wheat crop not up to the average. Early-sown is now ready for the reaper and thrasher. Wages $1 per day. Oats not half a crop, and headed. Irish potatoes a light crop, but many farmers will plant for a second crop, in June. Considerable late corn will then be planted. The recent dry weather does not seem to injure cotton. The most of it looks well, but the leaves of corn in some fields begin to curl. Blackberries are half grown, and early peaches will soon ripen. R. R.

ILL., Baldwin, Randolph Co., May 22 —We are having splendid weather for all kinds of grain. We have had plenty of rain, but will need more to keep things growing. Wheat is nearly all headed out and to a person riding along the road it looks as though we were to have, if anything, a better crop than last year; but one who closely inspects the growing grain will find that the outlook is not nearly so favorable as at this time last year for as great a yield per acre as that of last harvest, though owing to the increased acreage about as heavy an aggregate yield may be obtained. Farmers who have held back their wheat for higher prices now are somewhat "in the dumps" at the fall of prices, and as there seems to be slim chances of a rise, they are selling a considerable quantity at figures much below those obtainable last winter. The prices now do not go over a dollar a bushel, while some time ago as much as $1.25 could be readily obtained. During the past winter wheat was damaged more than usual; when thrashed the weevil infested most of it, and afterwards it heated in the granaries, and that which was kept till now is mostly musty and brings only from 75 to 90 cents per bushels, its retention entailing a loss of from 35 to 50 cents per bushel on the owners. When to sell his produce is the puzzling question for the farmer. While the market is advancing he naturally waits to see how high it will go in order to sell at the topmost figure, and when a drop occurs he waits to see whether prices will not go up again, and all the time his stores may be robbed by vermin or damaged by other causes. For myself I think the best help towards forming a correct judgment in such matters is a careful perusal of a good agricultural paper, for by studying the markets in it and the frequent hints and information given here and there with regard to the state of the crops and markets in other States and countries, one is in a fair position to form a correct opinion as to the best time to sell his products—especially if he is not too greedy, and is willing to sell at a fair profit rather than run the risk of a loss. For, of course, in all such cases a man becomes a speculator by holding his crops back after a good price can be obtained for them, on the chance of getting a better, and as those whose business is speculation are better "posted," it is only natural the novice should often meet with reverses in competing with them in their own business. Corn is up in first-rate condition and is being promptly cultivated. Oats look well. There are assurances of an immense crop of fruit, and altogether our prospects are fine for an abundant harvest. N. J. S.

IND., Hall's Corners, Allen Co., May 24.—The Ennobled Oats are about 15 inches high and are growing fast; the Cow-peas are very nicely up and growing well; my Mangels are just coming up; the Cuthbert Raspberries are growing, and as for the balance of the seeds—which I gave to the care of my wife—they are generally doing well. A word in reference to Blount's corn:—Our district fair offers a premium for the best acre of corn, and the Indiana Farmer Co. offer $200. in seven premiums to boys under 18 years. I fenced off one acre for one of the boys for the trial with this corn. It is well up and he has a good, even stand, and I think he will be hard to beat, if the season is favorable. The little patch we planted last year was a good schooling for us in raising Blount's corn. Crop prospects in this part of the county are very favorable for wheat and oats; potatoes, too, are very promising, but the bugs are very plentiful. Corn is not all planted on account of heavy rains. Fruits, such as apples, will be very abundant Peaches are in very full bearing, though the trees are scarce, as they usually winter-kill in this place. Cherries, early very plentiful; late, scarce. Small fruits, such as currants, gooseberries and raspberries are abundant. The worms are working hard to destroy the leaves on currants and gooseberries. Strawberries are getting ripe and bearing full. The hog prospect is not good, as there is a good deal of cholera at this time. Cattle and sheep are doing well, as there is an abundant pasture. W. H H.

MINN., Township of Winnebago City, Faribault Co., May 20.—A dry cool April enabled us to complete one small grain sowing by about the 25th. A continuation of dry weather created fears among the farmers that the grain could not germinate; but a kind Providence removed the anxiety by sending copious showers, and to-day our prairie farms are beautiful to look upon. There is an unusual number of acres under wheat, all looking of a fine healthy color. Oats and barley also look well. Corn is just above ground on some fields, while the greater part is just ready to come up. Early potatoes are up. Garden seeds all started early and show plainly in the rows. The seeds received from the Rural Grounds are all growing finely. I expect to be able to show the premium mangel; but will cheerfully waive my claim to any one more successful. Everything pertaining to the agricultural interest appears in a thriving condition. No. 2 wheat here is fetching $1.05. I write this from near the Blue Earth River, a stretch known here as the Blue Earth Valley, a country unsurpassed in beauty and richness of soil. Every crop that is put in the ground soon starts to life and with astonishing rapidity. Our meadows, which one month since were brown and sear, to-day are covered with a verdant growth of the richest grasses over a foot in hight in many places. Dry seasons, the past two years, have occasioned many to feel discouraged—new-comers principally who were dependent on the grain they sowed for support—but those who began stock raising some years previous and had cattle and swine to fall back upon, feel no embarrassment on account of drought. We have railroads running at right angles through the county, so there is no lack of conveyance for marketable produce. The Sioux City Road will be completed this summer to Fort Dodge, Iowa, so there will be a continuous line of road from St. Paul to the former place. The Southern Minnesota Road is completed from La Crosse to Jackson, a distance of 225 miles west of the Mississippi. Farming lands here are worth from $10 to $15 per acre, on an average. Some located near towns, are higher. There are many places for sale, unimproved and improved, the latter belonging to owners who have gone on farther west and taken up homesteads, some being embarrassed and others of that migratory class who never remain long in a place. I moved in here last fall paying $2,600 for 175 acres of which 130 are broken, together with a good house and barn, two wells and a grove of trees. This is the average price of improved farms here. H. F. S.

MICH., Watson Co., May 23.—Corn planting is about half done in this vicinity, and wet weather prevails to such an extent that we cannot finish. Wheat looks well; grass, ditto, and there will be an abundance of fruit of all kinds. As the weather is warm, everything that has been planted or sown is growing finely. It is unusual for Roses to bloom in May; but we have now some white Scotch Roses in full bloom. Never since my remembrance was wheat so forward at this season of the year as now. H. D. E.

MO., Springfield, Green Co., May 23.—The farmer's Bible tells him every year if he sows he shall reap, and right liberally did the farmers of this country sow for this coming harvest. Perhaps the largest acreage is now in wheat ever sown here. Every farmer just now looks upon his field and asks, "What will the harvest be?" The answer comes from the waving field in a significant nod of countless heads, indicating a large, satisfactory yield. Wheat in this country never looked better. The present outlook for all crops is good—the farmer is hopeful and happy now! Fruit has suffered somewhat by cold since blooming; but frost has in most cases kindly done what few of us had nerve to do, thinned the over-crop, but as yet there is enough for an abundant yield. Grass is luxuriant, hence cattle, sheep etc., are happy—growing fat.

All stock appear to be very healthy and give promise of profit excepting hogs, which have suffered terribly here for two or three years with the "hog cholera," and in some parts of the county they are still dying. H.

MONTANA, Glendale, Montana Co., May 16.—The season in this part of the country is quite late; grass is just starting We still have snow. Stock-raising is the principal agricultural occupation engaged in here. J. A. M.

NEW JERSEY, Tom's River, Ocean Co., May 24.—After a severe drought of several weeks, we had copious showers from the evening of the 22nd to the morning of the 24th of May. These have considerably revived vegetation, but grass had been so scorched and stunted in its growth that the crop of hay will be very short, even if abundant rain falls through the rest of the month and June. A cool, wet May is necessary to make a good hay crop in this soil and latitude. The weather has been excessively hot, for the season, for several days past—thermometer rising at noon in the shade of the veranda, on the south side of my cottage, to 99°, and on the north side, to 93°. We must have more rain and cooler weather soon, or our strawberry crop will be of no account, and peas and early vegetables will suffer badly. A.

NEW JERSEY, Essex Co., Newark, May 25.—The five weeks' drought, I am afraid, will play havoc with our strawberries. I began watering yesterday, but it takes a big lot to wet ten acres. The grass crop in this State is "gone up the spout." P. T. Q.

PA., Paghtown, Chester Co., May 22.—The weather is very warm and dry—no rain since April 27. Wheat looks well, however, and is coming in head. Rye is in bloom. A great amount of potatoes has been planted about here; they are up, and plenty of bugs rejoice thereat. Corn is all planted and some is up. Grass is short from want of rain. Apples will be a pretty fair crop and pears a slim one. Peaches, cherries and plums will be only moderate crops. C. W. H.

PA., Franklin Co., May 19.—Ground very dry and roads dusty. Corn needs rain very much, but wheat never looked better. Rye is headed. The grass crop will not be large unless we get rain soon. Fruits will give only a medium yield owing to late frosts. But "hard times" are over. D. B. M.

SOUTH CAROLINA, Aiken, Aiken Co., May 24.—We have just had a good rain after a dry, hot time. It starts everything. When my late Peaches came into bloom, the leaves failed to come out until the fruit was as large as a hickory nut. Then the leaves came here and there—mostly on the ends of the twigs—and on close examination I found the leaf buds dead, and they had mostly dropped off. The snowfall following the hard freeze on November 21 last—an unheard of thing hereabouts before that—killed the leaf buds of the new growth and did great damage. Last summer was exceedingly dry from the commencement to late in July, or the first of August; then the midsummer rain started the second growth, which was unusually strong and vigorous, and in the fall this late growth was very tender and full of sap. Then came the freeze that did the mischief which it will take an entire season to repair. The bad effects were very plainly to be seen on the Peach trees in my garden, as well as on the Grape-vines, Rose bushes, etc. B. O.

VA., Palmeville, Amelia Co., May 22.—Since my last writing the farmers' prospects have changed in this county, and I think I may say in the whole State. We had a mild, dry winter up to the first of March; then wet, cool weather during the month, and since that time it has alternated between the extremes of heat and cold, ranging from frost to 80° in the shade, with no rain whatever, which, of course, has worked destruction to fruits, vegetables, tobacco plants and oats. Wheat, which was looking well two months ago, is now looking very bad in consequence of cold, dry weather and the fly. In the tobacco belt there will be a large crop of corn from the present outlook, many farmers having planted corn on their tobacco land. Of wheat and oats there will be half a crop with about ten per cent. of a crop of tobacco, the cold and fly having destroyed the plants almost entirely. J. W.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Scale of Points of a Short-horn Cow.

W. L. H., Herkimer, N. Y., asks what are the points of a Short-horn cow.

ANS.—There are several scales of points by which judges guage the merits of Short-horn cattle, but they differ only in slight matters. The following is the scale adopted by the Agricultural Society of this State in judging of Short-horn cows, and with slight modifications it is adapted to bulls also, and, indeed, to all beef cattle—the Herefords, for instance—as well as to Short-horns.

Pedigree—Should show unbroken descent on both sides, from known animals derived from English herds, as found in the English or American Herd Books, and *without this an animal cannot compete in this class.*

Head—Small, lean, and bony, tapering to the muzzle	3
Face—Somewhat long, the fleshy portion of the nose of a light delicate color	2
Eye—Prominent, bright, clear; "prominent" from an accumulation of adipose substance in the socket, indicating a tendency to lay on fat; "bright," as an evidence of good disposition; "clear," a guarantee of good health	2
Horns and Ears—The horns should be light in substance, waxy in color, and symmetrically set on the head. The ears should be large, thin, and with considerable action	1
Neck—Rather short than long, tapering to the head; clean in the throat, and full at its base; thus covering and filling out the points of the shoulders	2
Chest—Broad from point to point of the shoulders, deep from the anterior dorsal vertebra to the floor of the sternum, and both round and full just back of the elbows, or, in other words, "thick through the heart."	14
Brisket—Deep and projecting, indicating a disposition to lay on fat	5
Shoulder—Where weight, as in the Short-horn, is an object, should be somewhat upright, and of a good width at the points, with the blade-bone just sufficiently curved to blend its upper portion smoothly with the crops	4
Crops—Must be full and level with the shoulders and back	8
Back, Loin and Hips—Should be broad and wide, forming a straight and even line from the neck to the setting of the tail; the hips or hocks round and well covered	8
Rumps—Laid up high, with plenty of flesh on their extremities	5
Pelvis—Should be large, indicated by the width of the hips (as already mentioned) and the breadth of the twist	2
The Twist—Should be so well filled out in its "seam" as to form an even and wide plain between the thighs	3
The Quarters—Long, straight and well developed downward	5
The Carcass—Round; the ribs nearly circular and extending well back	4
The Flanks—Deep, wide and full in proportion to condition	3
The Leg—Short, straight and standing square with the body	2
The Plates—Of the belly strong, and thus preserving nearly a straight underline	3
The Udder—Should be pliable and thin in its texture, reaching well forward, roomy behind, teats wide apart and of convenient size	3
The Tail—Flat and broad at its root, but fine in its cord, and placed *high up* on a level with the rump	2
The Coat—Should be thick, short, and mossy, with longer hair in winter; fine, soft, and glossy in summer	2
Carriage—Of an animal gives style and beauty; the walk should be square, the step quick, and the head up	2
Quality—On this the thriftiness, the feeding properties, and the value of the animal depend; and upon the touch of this quality rests in a good measure the grazier's and the butcher's judgment. If the "touch" be good, some deficiency of form may be excused; but, if it be hard and stiff, nothing can compensate for so unpromising a feature. In raising the skin from the body, between the thumb and finger, it should have a short, flexible and substantial feel; and, when beneath the outspread hand, it should move easily with and under it, as though resting on a soft, elastic cellular substance, which, however, becomes firmer as the animal ripens. A thin, papery skin is objectionable, more especially in a cold climate	15
Total	100

Lightning Rods, etc.

N. S., Walnut, Kansas, says, there are agents traveling through that part of the country selling a tubular copper lightning rod, which they claim is much superior to all others, but it costs twice as much as ordinary rods. He has a new house which he wants rodded, but he is undecided as to the kind of rod and therefore asks our advice. 2. He sends the wings and head of a beetle which he thinks is eating the leaves and blossoms of his Blackberries, and asks its name; 3, also that of a plant, a specimen of which he forwards; it grows very tall and he has trouble to keep it down, and asks if it is of any value as a forage plant.

ANS.—1. We emphatically advise our friends not to buy these new-fangled lightning rods, and if the agents should prove troublesome, they should be sent off the premises without much ado. Being copper, which is a good conductor, the rod may be very efficient, but an iron rod that will serve the purpose just as well may be put up for one-sixth the cost. Copper is a better conductor than iron in the proportion of twelve to two-and-a-half, but by increasing the amount of iron in the same proportion, the iron rod will be as efficient. It is a disputed question whether the discharge of lightning is conducted away on the surface or through the body of the rod. Lightning-rod men generally favor the theory that the discharge passes on the surface entirely, and they are anxious to impress this idea upon the farmers, because they would then be justified in charging a high price for rods wrought into fantastic shapes for the purpose of giving a large expanse of surface. While the discharge may pass more readily on the surface, because it there meets with less resistance, it is also certain that it passes in part through the body of the rod. The cheapest and at the same time a very efficient rod may be put up of bar or round iron, which should not be less than three-quarters of an inch in diameter. Let it project four or five feet above the highest chimney, or other elevated point of the building, and cap it with a copper point which should be coated with nickel or gold leaf to prevent it from being tarnished. Put metal couplings over the joints and let the ends of the rods touch each other within these couplings to facilitate conduction. Let the lower end of the rod terminate at the bottom of a well, if possible, or, if no well is close by, bury it deep enough to reach the moist earth; and if the terminus is surrounded with pieces of charcoal or iron, or, if several bars are connected underground so that they spread out like the fingers of a hand, the better will be its conducting power. Use no insulators; they are of doubtful advantage; but fasten the rod directly on the building. Finally, paint the whole rod, except the point, with some good mineral paint that will prevent it from rusting. Such a rod can be made and put up by any blacksmith, and it will cost only a trifle compared with the prices of the fancy article sold by professional lightning-rod peddlers. 2. The beetle belongs to the family Scarabæidæ and the genus Melolontha; the specimen sent is too crushed to determine the species. This genus is very destructive to plants both in the larval and imago state. The larvæ eat the roots of grass and other plants, and the perfect insect feeds on the leaves. Though we have not heard of its attacking the Blackberry, yet it is not unlikely to be the case. Ascertain at what time they work, then shake them off on a cloth and kill them with hot water or otherwise. 3. The leaves sent were those of the sweet clover—Melilotus alba. It is a leguminous plant cultivated in some places for forage; but it is too coarse for this purpose, and spreads like a weed. It is an excellent honey plant, and hence is often sown by bee-keepers near their apiaries.

How many sheep?

W. F., Almonte, Ont., has 300 acres of land, half of which can be cultivated, while the rest, being rough, stoney and bushy, is unfit for tillage. Although a novice in the business, yet he is thinking of going into sheep husbandry exclusively, and asks how many sheep could he raise successfully on his land, and would the industry be likely to turn out profitable. Wool is now selling for 35 cents, and lambs will bring from $2.50 to $3 in the fall. The winters there are long, necessitating from six to seven months' feeding.

ANS.—The question cannot be answered precisely without knowing several points of which no information is given. The number of sheep to be kept depends upon the amount of pasture, the condition of grass and the amount of feed for winter use. If there is fair feed on the 150 acres of rough land, 300 sheep could be kept on that portion of the farm in the summer; the better way would be to divide the land into five fields, and pasture each in succession. The land might be improved without plowing by scattering grass and white clover seed on it, and the sheep will trample it in and manure it. In time, by gradually clearing off the brush, the 150 acres may keep three or four sheep to the acre. If the rest of the farm is in grain, hay and roots, winter feed for 300 sheep can be easily produced. Ten or 12 acres of mangels and the straw, with some hay, would feed a flock of this size. Whether it would be profitable or not would depend on the management. A flock of native Canadian ewes and Cotswold rams, well managed, could not fail to be profitable. The long winter's feeding is an advantage in respect of making a large quantity of manure; for this, gather leaves from the woods for bedding and keep all the straw for feeding with the roots.

Foot Rot in Sheep.

J. H. B., Topeka, Kan., asks for a remedy for foot rot in sheep, how to treat it and the cost.

ANS.—This disease is contagious and may spread through the whole flock, unless prompt preventive measures are taken. In it the whole hoof becomes inflamed, blisters form on the heels and between the toes, which break and in a few days form ulcers which excrete fetid matter. The fore feet are usually affected, and the sheep then goes about feeding painfully on its knees. The hoof is lost in course of time and a sore stump alone is left. It is usually the result of feeding on wet pastures. It should be treated on the first appearance of lameness, for afterwards the whole condition of the animal is demoralized. All raw, loose or diseased horn should be cut away, and if any pus, or matter, is found under the horn it should be removed. The feet should then be washed with carbolic soap and water twice a week, and after each washing a piece of soft tow or lint steeped in the following mixture should be bound on the foot and between the toes: oxide of copper, four ounces; arsenic, half an ounce; acetic acid, three ounces; honey, eight ounces. We have also heard of excellent effects from washing clean the affected part with Buchan's Carbolic Soap number 12, and then applying Buchan's Cresylic Ointment. No. 13 soap costs 50 cts. a cake which will wash 100 sheep. A four-ounce box of cresylic ointment costs 25 cents, and is enough for 12 or 15 sheep. The above soap, it is also claimed, is an excellent remedy for all kinds of skin sores in horses and cattle generally.

Early or Late Foals—Which?

R. H., Scranton, Pa., asks what is the best season at which foals can be dropped, and whether it is better that they should be dropped early or late.

ANS.—February or March is as good a time as any. If the dam is then well fed she will have plenty of good milk, and the foal will soon learn to eat with her, supplementing her milk, and when it goes to the pasture with her in April or May it will be in condition to crop the young, succulent grass. If foaled as late as May or June, and put on the pasture which is already becoming rank and dried up, it won't eat the grass while any of it is yet in good condition, and, supported on its mother's milk alone, it will not grow fast and large, and when old enough to graze, the grass that is left is of too woody a fiber for young foals—colts or fillies. Rather than have a foal dropped later than the commencement of June, it would generally be well to wait and breed for an October foal to be with the dam all winter, and be in fine condition for pasturing in spring.

Sowing Alfalfa.

J. A. P., Portsmouth, Va., asks, 1, whether Alfalfa would do well in that section; 2, whether it can be seeded to advantage in September; 3, does it require a rich soil, and, 4, what is the best fertilizer to use in seeding it.

ANS.—Alfalfa ought to do well in that section. 2, Alfalfa seed is generally sown in the spring at the same time and in the same manner as clover. We should not consider it safe to seed down a very large area in the fall. Try a small plot as an experiment and report the success to the RURAL. 3, It requires a very rich, deep, mellow soil. A sandy and thin soil is unsuited for it. 4, This question must be decided by the character and needs of the land, rather than by the seed. Any fertilizer rich in ammonia, will be of value to the crop. Should the land be deficient in other elements, as lime or potash, for example, these should be supplied.

Miscellaneous.

W. S. R., Newark N. J. finds his pretty rose bushes infested with the green fly and also with some green worms, and asks what they are and what will kill them.

ANS.—The green fly is so common that no description is necessary; but it would not be safe for us to attempt to name the worms without having seen them. It may possibly be the rose-slug—Selanderia rosæ—which is the larva of a saw-fly, though this pest seldom appears until later in the season. Syringing with a weak solution of carbolic acid, coal oil or whale oil soap will kill them.

J. D. S., Bowling Green, Ky., has a two-acre lot overgrown with burdock and he wants to know how to get rid of it.

ANS.—Thorough cultivation is the cure. The root of the common burdock, Lappa officinalis, is biennial, and the weed need, therefore, not be found on the land more than two years, if prevented from going to seed. There is no easier or surer way of extirpating it than by thorough culture.

A. O., New Tacoma, W. T., wants some books that will give him instruction in propagation and general horticulture.

ANS.—Barry's Fruit Garden is a good work on the propagation and care of fruit trees, price $2.50, and Henderson's Floriculture and Gardening for Profit, $1.50 each, will give instruction in the culture of flowers and vegetables respectively. Mr. Roe's new work on small fruits is also excellent.

S. F. B., Buckeye Center, Ill., wants a good work on photography.

ANS.—Abney's Treatise on Photography, price $1.50, is a good work, and so is Vogel's Handbook of Photography, $3 50; both can be had of D. Van Nostrand, 23 Murray St., N. Y. City.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, May 30th.

C. O.—F. G. A.—I. E. N.—W. H. D.—C. K.—F. R. N.—F. W.—W. C.—N. E.—J. R., thanks.—G. R.—J. R. S.—Mrs. S. A.—C. O.—D. J.—P. J.—S. B. C.—C. D. S.—Wm. E. V. S.—M. A., yes.—S. G. C.—G. G.—J. C. S.—A. M. S.—O. W. D.—R. W. H.—W. H. M.—"Pansey"—S. C. G.—T. T. L., thanks.—S. C. B.—N. C.—G. B.—H. F. S.—J. W. R., M. D.—J. G. B.—"Chandler"—G. McF.—M. B. B.—D. S. M., thanks.—A. B. A.—May Edgerton.—W. H. H.—W. A.—L. R. McH., thanks.—W. W. W.—R. R.—G. E. N.—A. T. L.—W. C.—R. N.—H. S.—J. P.

THE
RURAL NEW-YORKER.
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SUBSCRIBERS of the RURAL NEW-YORKER will greatly oblige us if they will promptly notify us of any irregularity in the receipt of their papers. The many changes rendered necessary by our removal and an unusually large number of complaints make us desirous of rectifying any further derangements at present unknown to us as speedily as possible.

GRADE SHORT-HORN BULLS.—We regret to learn that many of these are taken to the Far West by unprincipled breeders, and sold to the ignorant ranchers as full-bred, thus greatly injuring the reputation of the latter among them, because the stock of even the very best grade bulls cannot by any possibility be nearly equal to that of thoroughbred. In breeding from grades, the tendency of the progeny is to go back to the bad points of its common dam, rather than to the superior points of the sire. If the ranchmen would demand a herd-book pedigree of all from whom they purchase they could not then be cheated in the quality of the animals, or, if so, by referring to the herd-book, the cheat would be instantly detected, and the seller of the grade for a thoroughbred might be prosecuted and heavy damages got from him, as was recently done in a case of the kind in England.

AN OBJECTIONABLE PRACTICE.—To our view, the beauty of the surroundings of many country homes is seriously marred by the very common practice of cutting off the lower branches of the trees so as to expose a bare trunk from eight to fifteen feet in hight or more. This is especially detrimental to the appearance of evergreen trees whose beauty in a great measure depends upon a full growth of their lower foliage, even though it rests upon the ground. Deciduous trees, however, when thus cut up, have the look of being held up in the air, while the grounds are robbed of that shady, verdant fullness, which is so essential a part of landscape beauty. A forest viewed at a distance is grand. The tall, naked trunks are in keeping with its extent. But to those who seek the woods for pleasant walks, the smaller trees, the shrubs, the undergrowth, and not the tall trees, are the immediate objects of interest. To cut off the lower branches of trees is to remove the tree out of—above the lawn, while the rude stems are alone left for ornament.

"THE" AUTHORITY.—The street signs of New York are always interesting and especially so just after the May movings. A rural paper published in the City of New York celebrates its removal with a perfect eruption of signs. One of these reads "The American Horticultural Authority." "*The* Authority" is good, and it was well to put it on the sign, as it might not be discovered by reading the paper.

The above is truly sarcastic—isn't it? We frankly confess it hurt us. Argue as we would that it was the outcome of greed and ill-nature—yet we felt that we deserved the scathing reproach in a measure. Oh! that that sign had never been painted! The object of the sign was in truth to inform those who might not discover it from reading the paper, as well as those who do not read it at all, that the RURAL NEW-YORKER IS THE American Horticultural Authority. Has the American Agriculturist, in its self-laudations, never made equally astounding claims, the truth of which nobody might, could, would, or should otherwise ever have suspected! Why then should the A. A. hobble across the park during this "heated term" to read our signs and to cast its sarcasms at this bit of pretension? Why?

After thinking the matter over awhile full of shame and—remorse, we recalled a little circumstance that at once allayed a part of the sting. It was not many months ago that the A. A. earnestly solicited us to purchase a fifty-thousand dollar interest in its management. Aha! thought we—had we done so—would the A. A. then have objected had we assumed to be "THE American Horticultural Authority?" And would the assumption have been any the less pretentious?

THE CENSUS.—We would remind our friends that the taking of the Census begins to-morrow, June 1st. It is highly important, on several accounts, for the interests of agriculture that full and truthful answers should be returned to all questions relating to farming and farm products, and we trust our friends will not only be themselves careful in this matter, but urge the necessity of care upon their neighbors also. The enumerators are strictly instructed to observe courtesy towards all with whom their business brings them into relation, and any failure in this respect should be reported to the Superintendent. At the same time it must not be forgotten that the public should aid them in their duties by returning full and prompt answers to all legitimate questions. Any refusal in this matter subjects the offender to legal penalties. A word of caution may also not be out of order here. Many swindlers will doubtless make use of this opportunity to exercise their calling, and we warn all farmers and others to be on their guard against such rascals, and to sign absolutely nothing they have not read, and which they do not clearly understand. The law provides that the census enumerators must be taken from the districts in which they operate, and no difficulty should therefore exist in identifying them.

CARRIAGE AND HEAVY DRAFT HORSES.

BOTH kinds of these horses have been scarce and dear in our city markets this spring, and the country has been scoured in every direction with the hope of obtaining a supply equal to the demand, but with only partial success. For many years to come, we are persuaded that such horses, if rightly bred, will be the most profitable stock that can be grown in our country, for there is not only an active and increasing home demand, but they will also be wanted for foreign exportation.

A horse for the gentleman's carriage should be extra-well bred; that is to say, he must have a good share of race-horse blood in his veins, either immediately or remotely, otherwise he will be lacking in style, spirit, action and endurance, all of which are essential to be combined in fine carriage horses for a gentleman's driving, either single or paired.

For the buggy or light wagon, a hight of 15 to 15½ hands with a weight of 1,000 to 1,100 pounds, is the best size; but for pairs for the carriage and the coupé, they should be 16 to 17 hands high, and weigh from 1,200 to 1,300 pounds. This enables them to make a fine, lofty show, and gives them substance and power enough to take a heavy carriage full of people, not only easily over city pavements and through the park, but also over rough country roads, when gentlemen go to their summer residences.

Unlike the Europeans, we are sadly deficient in horses for heavy draft—such as are large and powerful enough to work the heavy clay soils of our farms, and for the use of city carts and truck wagons. These should be rather short in the leg, of block (pony) build, and with the best of feet and legs. They may be from 16 to 17½ hands high, and weigh not less than 1,400 or overgo 1,800 pounds. For the above purpose it is much more economical to use horses of these sizes than smaller ones, but they must not be made up of coarse bones and flabby flesh. Their bones should be fine for the size and the flesh firm—tough muscle, not butcher's meat—and the cords and sinews be like whalebone. The action must also be good, the walk fast, and the trot reasonably quick, with an indomitable will and a courage that never balks at a heavy pull.

Now is the time for farmers to decide upon the best and most suitable stallions to which to breed their mares. The value of the offspring greatly depends on this, and they should not mind an extra price for service, when the produce at full growth is likely to bring twice or thrice what it could be sold for if got by an inferior male.

AGRICULTURE AND THE TARIFF.

LAST Thursday, May 27, the United States Senate held some discussion anent one feature of the bill making appropriations for the Department of Agriculture. The bill authorizes the President to appoint nine Commissioners from civil life whose duty it shall be to investigate thoroughly all the various questions relating to the agricultural, commercial, manufacturing and mining interests of the country, so far as the same may be necessary to the establishment of a judicious tariff. In the prosecution of its inquiries, the Commission is empowered to visit such portions of the country as it may deem advisable. Should the bill pass with this feature incorporated in it, no legislation on the tariff must be looked for during the present session of Congress. Indeed, there is little doubt but that the main reason why the measure receives the hearty support of the Protectionists in that body, is to be found in the delay its adoption must necessitate in legislation lightening the duties on some foreign imports. So long, however, as its tendency is beneficial to agriculture, we do not care to scrutinize too closely the motives of its supporters, on the principle that it's churlish to "look a gift horse in the mouth."

We are strongly of opinion that the proposed investigation is essential to any alterations in the present tariff, that will prove at all satisfactory to the vast agricultural interests of the country. In legislating on this subject in the past the interests of agriculture have been, to a great extent, neglected or sacrificed in favor of those of other industries. This injustice, we are willing to admit, has been largely due to the ignorance of our legislators with regard to the effects of many of their enactments upon the agriculture of the country. All corporate interests have always been prompt in presenting to Congress generally a one-sided view of the bearing of legislation affecting their own welfare; the agricultural classes alone have never had recourse to the often doubtful methods by which other industries have secured legislative action favorable to their own prosperity. What success has attended agriculture in this country has been in spite of legislation; what reverses it has met with have more than once been precipitated or aggravated by it. With both branches of Congress composed mainly of lawyers, together with a pretty liberal sprinkling of those engaged in other professions and callings which have nothing to do with agriculture beyond drawing a large share of their support from its labors, there is urgent need of more light among our lawmakers upon agricultural topics than can come from the handful of Congressmen whose chief pursuit is farming—when politics and other avocations leave them any leisure for it.

Let us, therefore, have a thorough investigation of the bearing of legislation upon the rights and needs of agriculture, the prime interest of the country, not only with reference to the taxation of foreign goods imported into the country, but with regard to internal taxation also. But as past experience has taught us to be very moderate in our expectations of Congressional action for the benefit of agriculture, we shall be content, *for the present*, with the limited investigation proposed in the above bill.

BREVITIES.

THE London Garden of May 15 gives a colored plate of three magnificent Hybrid Tea Roses, viz: Duke of Connaught, Pearl and Beauty of Stapleford:

THE English papers are protesting—as well they may—against the stupid regulations which are being enacted by Belgium, France, Italy and other governments as precautions against the Phylloxera.

TRAIN a single tomato plant up the side of a barn, kitchen, shed or arbor, the same as one would train any other vine without tendrils. Most persons will be surprised at the quantity of fruit it will yield.

WE can now speak from experience with regard to London Purple. Three tablespoonfuls of the Purple to a peck of plaster are quite effectual in killing the beetles. It seems in every way preferable to Paris-green. It is perhaps needless to say that the flour and Purple must be thoroughly mixed. Perhaps a smaller proportion of the Purple would suffice.

WE take the credit to ourselves of having discovered that Defiance wheat is valuable as a winter variety for this climate. If at *this time* we were called upon to decide which of all our winter wheats in the most promising, we should have to say the Defiance. But the appearance of our experiment plots has changed very much since early spring, some of the most promising then being the least promising now. And there is still time for further changes.

THE strawberry meeting of the Michigan Pomological Society, will be held at Battle Creek, Mich, on the 16th, 17th and 18th of June. The meetings of this society are always of extraordinary interest and all lovers of horticulture will profit by attending. Arrangements will be made for the entertainment of delegates from abroad and representatives of local horticultural societies. A number of prominent horticulturists will address the meeting.

A WRITER in the Mark Lane Express, referring to our International Exhibition of sheep and wool at Philadelphia next September, says: "In order to induce foreigners to exhibit, the United States has passed a bill exempting exhibits from duties, provided they are imported solely for exhibition. This concession is rendered almost useless by the niggardly condition that if the commodities are afterwards sold in the States, they will be liable to the duties current at the time." The comment is made upon the above as follows:—"International exhibitions are quite out of character with prohibitory tariffs, as these are outrages upon the proper principle of international trade.'

FOR months past it has been a continual complaint of those visiting the horse marts of this city in search of powerful draft horses and fine large pairs of carriage horses, as well as of single coupé horses, that there were not nearly enough in the market to supply the demand, and both dealers and private buyers have sent out and scoured the neighboring country in vain for them. It will pay our farmers—and that well—to pay special attention to the raising of horses suitable to supply this rapidly growing demand, which is not confined exclusively to this section, but extends, with more or less urgency, all over the country.

EUROPEAN CROP PROSPECTS. Across the Atlantic, too, there has been a more or less severe drought, but it does not seem to have hitherto done much damage to crops. The London Times in its issue of May 27th, says: "Experts predict that there will be a great harvest here and in France where the appearance of the wheat is all that could be desired." Of the English crops the same high authority says;—"Some rain would do good, but a continuance of dry weather will do no harm." And again, "The aspect of the weather, which is now anxiously watched by those interested in pasturage and root crops, does not seem to concern operators in the wheat market." It is estimated that if the promises of the wheat harvest are realized, it will save England and France together fully twenty million pounds sterling, or about one hundred million dollars, nearly all of which would otherwise come to this country.

THE large sale of Jersey cattle in this city a few days ago, marks a new departure in judging of the points which are to determine the value of animals of this fine breed. Heretofore, whenever they have been brought under the auctioneer's hammer, importation, registration and fancy colors have mainly determined the prices which they brought; but under the impulse of the recent movement of several associations looking to the record of performances of cows at the pail, each cow at the late vendue was sold mainly upon her actual butter record, though, of course, the other points were not wholly neglected in the transaction. In the sale of bulls, too, the record of their ancestresses at the pail went a great way towards fixing their price. It was also remarkable in that the prices obtained for Myra II. and Lass Edith—$1,400 and $1,425 respectively—are said to have been the highest ever brought in this country by Jersey cattle at public sale.

THE Veterinary report of the British Privy Council for 1879, just issued shows that during last year 101,302, cattle, 193,263 sheep and 18,843 pigs—313,408 animals in all—left the United States and Canada for the United Kingdom. Of these 14,024 were thrown overboard at sea, 1,249 were landed dead, 455 were so much injured or exhausted that they had to be killed immediately after landing. Thus out of 313,408 animals 15,728 were either lost overboard, or as the Mark Lane Express puts it, "had to be killed to save their lives." This makes more than twenty per cent. We have long urged the necessity of reformation in the method of transporting live stock in the long voyage across the Atlantic, and been especially earnest against shipments during the stormy and inclement months of winter, during which most of the above casualties occurred. As the losses incurred by the shippers seem powerless to effect a reformation in this matter, the law should soon prohibit such reckless cruelty to animals.

THE SESSION OF THE NEW YORK LEGISLATURE has come to a close, leaving much disappointment at the non-fulfillment of most of its promises of reforming flagrant abuses. With regard to railroad legislation, through the machinations of a powerful lobby the Anti-Discrimination bill and the bill creating a Board of Railway Commissioners to overlook railroad affairs, were both lost. The $50,000 spent by the Hepburn Committee in investigating the abuses in railroad charges against which the former bill was directed, are not, however, to be regretted, as the odious injustice of these abuses has been so clearly demonstrated that the force of public opinion must soon overcome lobby influences, and insure legislation against them. Among the laws passed by both Houses and in which the farmers are especially interested are, the anti-tramp law; Senator Halbert's bill "To Prevent Deception in the Sale of Butter," providing that oleomargarine tubs shall be stamped legibly, and Mr. T. Skinner's bill appropriating $20,000 for an agricultural experiment station. As our readers are aware, the RURAL NEW-YORKER has earnestly advocated all these measures, and it will certainly do its utmost to insure proper legislation anent railroad freight changes during the next session of the legislature.

THE DROUGHT AND THE CROPS.—East of the Alleghanies the long drought has affected the agricultural interests very injuriously. For nearly six weeks little rain has fallen, and although on yesterday, May 30, there was a widespread rain over most of that section, still it came too late and was not heavy enough to more than cause a partial recovery of the damaged crops. The hay crop has suffered most, and farmers estimate it will not be more than half a crop. Grains have suffered less and in them 25 per cent. is about the present estimate of the loss. Garden truck of all kinds has been damaged considerably by the dry spell, except potatoes which seem to have suffered more from the Colorado beetles. Among fruits apples alone seem in fair condition. Young peaches have fallen and withered in many places, and cherries have been picked before ripe, to prevent an entire loss. The loss in strawberries is put down at 35 per cent. In the West the winter wheat in most of the States is in fine condition. In Texas and Kansas drought has injured the wheat crop seriously, but recent rains will produce half or three-quarters of an average yield per acre. In the Northwest wet weather caused a late planting of corn and spring wheat, but both are now doing finely. In the South a good stand of cotton is the rule; late rains have greatly benefited the crop, but have given a start to the worms in some sections. On the whole the harvest prospects are a good average.

For Women.

CONDUCTED BY MISS RAY CLARK.

THE ROAD TO SLUMBERLAND.

WHAT is the road to Slumberland?
And when does the baby go?
The road lies straight through mother's arms
When the sun is sinking low.
He goes by the drowsy "Land of Nod,"
To music of "lullaby."
When all wee lambs are safe in the fold,
Under the evening sky.

A soft little night-gown, clean and white,
A face washed sweet and fair;
A mother brushing the tangles out
From silken, golden hair;
Two little tired, satiny feet,
From the shoe and the stocking free;
Two little palms together clasped
At the mother's patient knee.

Some baby words that are drowsily lisped
In the tender Shepherd's ear,
And a kiss that only a mother can place
On the brow of her baby dear;
A little round head which nestles at last
Close to the mother's breast,
And then the lullaby, soft and low,
Singing the song of rest,

And close and closer the blue-veined lids
Are hiding the baby eyes,
As over the road to Slumberland
The dear little traveler hies.
For this is the way, through mother's arms,
All dear little babies go
To the beautiful City of Slumberland,
When the sun is sinking low.

DESCRIPTION OF CUTS.

FIG. 199, Ladies house and walking costume.
FIG. 200, Back of house dress.
FIG. 201, Back of walking dress.

There are many materials that may be used for the construction of these suits. A combination of plain and novelty goods would be suitable for either, but especially for the walking costume. The new lace bunting would be appropriate for the house dress: this material is an improvement on the old style of bunting, having a finer and cooler appearance.

FIG. 202—PINCUSHION.

The square cushion may either be covered with cambric or silk. The flounce, which is placed round the cushion, is of pink silk, edged with a small coquille of very narrow lace. The cover is of white muslin, ornamented with a border with silk in cross-stitch. It is edged with lace, and ornamented at each corner with a bow of ribbon.

HANGING BASKETS OF MOSS AND SHELLS.

HANGING baskets are among the prettiest of floral ornaments, and the variety of materials that may be used in their construction is almost countless. With good taste, skill, and neatness, many ordinary and homely articles may be converted into ornaments that will embellish the most refined dwelling.

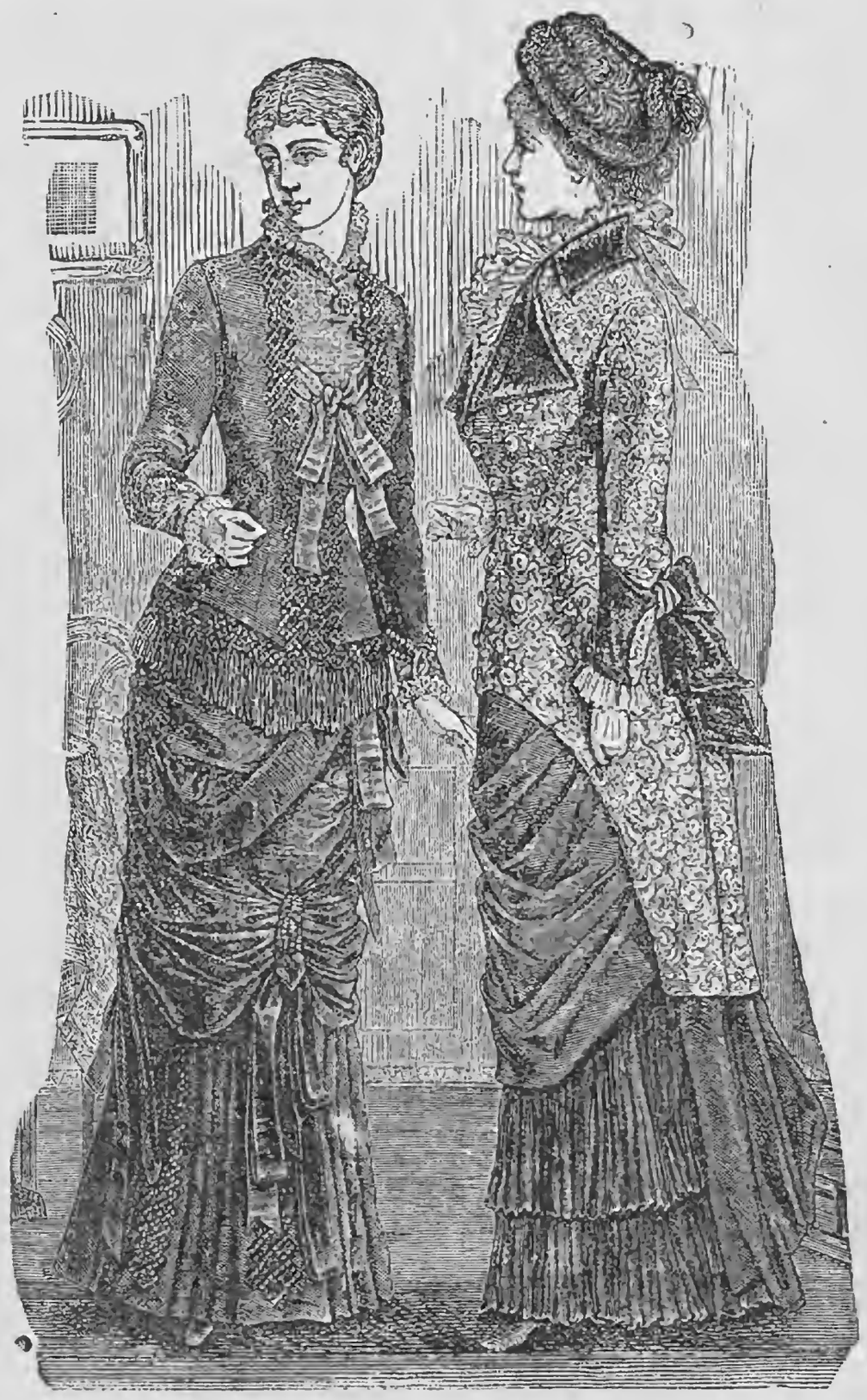
Two beautiful hanging baskets are made as follows:—The materials required for the first are sea shells, corals, sea weeds and mosses, or any other marine treasures, some asphalt, cement, and a common red flower pot. Make the pot quite warm, and at once apply the asphalt, giving two coats if necessary. Then around the upper rim cement a border of white scallop shells, and two double reversed rows round the center of the pot, using smaller shells. On the bottom fasten clusters of "branch coral" in such a way that the ong narr ow parts unite in the center below the

FIG. 201.

FIG. 200.

bottom of the pot. Between these cement clusters of sea weeds, if you have them at hand; if not, purchase carrageen (Irish moss) and Iceland moss from the druggist's, dip the ends into hot cement, and fasten the clusters closely over the whole bare surface. When entirely dry, touch the extreme ends with dammar varnish, and dust a very little fine frosting upon the surface, occasionally applying touches of green, blue, violet, and crimson distemper colors, which will relieve the dullness of the black and white Branches of coral are next fastened around the very edge of the pot, and on each side projecting pieces, to which the suspension cords may appear to be attached, though for safety they might better be passed through holes cut in the pot.

The companion to this beautiful basket has for the foundation a pot of the same kind, but the class of materials is different, consisting of lichens, hardened fungi, burrs, cones, bark, etc. In order to impart the necessary "bit of color" to the rich browns and wood-colors, holes are cut in the sides and bottom of the pot, and lycopodium or saxifrage (sarmentose) and feltonias introduced, which soon root, and mingling with the rugged covering, form a charming object. Around the rim of the pot fasten a border of the shell-like fungi, taking single sections and arranging them uniformly; fill the interstices between these with the exquisite lichens, in various shades of blue and



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pale green. Around the centre make the double row of the smaller fungi, and fill the spaces with sealing-wax moss, or in lieu of this use the rock moss, and touch the tips with scarlet sealing-wax dissolved in hot alcohol. Between these light rows fasten burrs, cones, etc., neatly arranged between the holes filled with lycopodium. On the bottom cement light gnarled roots or branches, arranged in the same manner as the coral branches on the marine basket, and the same at the top. The various colors of greens, browns, and wood-tints form a lovely combination, and when these baskets are stocked with vines and plants they are very effective. Nothing is so appropriate for the rustic basket as a fine group of ferns, and creeping-fern, Lygodium palmatum, and Japanese climbing-fern, Lygodium scandens, to climb up the supports, then reach over and festoon the extended branches. —Weekly Globe.

HINTS.

VENTILATOR FOR SICK OR SLEEPING ROOMS.—A good ventilator for sick or sleeping rooms can be made in the following way:

From a plank of the thickness of the window sash cut a piece four inches wide and as long as the window is wide, so that by lowering the upper sash the plank can be put in at the top and the sash set up tight to it. In the center of this plank mortice a hole two inches high and seven inches long.

With some pieces of one-half inch by six inches stuff make a tube two by seven outside, of sufficient length to extend four or five inches inside of the window jamb, when one end is secured in the mortice in the plank. Make at the inner end of the tube a turn extending up to within a few inches of the ceiling and have this turned up portion of three or four times the capacity of the horizontal part, say four by six inches inside.

As the upper sash is lowered a space is left between the two sashes that must be closed and can be done by fitting a thin piece of wood back to the glass and tacking it to the top of the lower sash.

Simple and cheap as this contrivance appears, it is a perfect success in practice. In a room in which a fire is kept burning a rapid current of air constantly enters, and passing through the tube into one of four times the size, it only has one-fourth the velocity, and being driven directly up against the ceiling is so diffused that no evidence of draft is discernable in the room. Small as the opening is, it is large enough to provide perfect ventilation to any ordinary-sized room.

MRS. J. E S.

AMMONIA FOR HEADACHE.—There is nothing that will relieve the headache so efficaciously, as very warm water, with a few drops of spirits of ammonia mixed with it. Have the water as hot as the hand can bear, and bathe the head freely with the solution; it acts like a charm. The same remedy is good for bruises, or blows the head or any part of the body; it takes out the soreness and removes the black and blue spots quickly. I know of nothing that is so efficacious, and it is very simple, and quiet to apply. The bumps that are always happening to children, can be cured in a few minutes, by a thorough application of ammonia and hot water, and just as soon as the pain is gone, they are ready to run, and try it over again. S. H. R.

THE USE OF THE LEMON.—There are three ways of making lemonade: To squeeze the juice into cold water—this is the shortest way; or to cut it in slices and soak it in cold water, or to cut it in slices and then boil it. Lemonade is one of the best and safest drinks for a person, whether in health or not. It is suitable to all stomach diseases; is excellent in sickness. The pips, crushed may also be mixed with water, and used as a drink. We advise every one to rub the gums daily with lemon juice, to keep them in health. The hands and nails are also kept clean, white, soft and supple, by the use of lemon instead of soap. It also prevents chilblains. Lemon is used in intermittent fevers, mixed with strong, hot, black coffee, without sugar. Neuralgia may be cured by rubbing the part affected with a cut lemon. It is valuable, also, to cure warts, and to destroy dandruff on the head by rubbing the roots of the hair with it.

A MICHIGAN LETTER.

WE have lately attained to the possession of a small farm and old-fashioned farm-house about two miles from a small city. The place, although dilapidated, was lovely to our unaccustomed city eyes, with its glory of evergreen, maple, oak, and fruit trees surrounding the low built square farm house; but the house needed such an appalling amount of repairs that I confess I was dismayed. But my two daughters and I, attached the desolate rooms with such good results that when I go through them now I feel very complacent. It has occurred to me that I might give a few hints as to furnishing comfortably and economically.

During the winter we made for a low wooden mantel in the parlor, a lambrequin in this way. We covered a board the size of the mantel piece with seal-brown canton-flannel (two yards is enough) cut in scallops one-quarter yard deep, and pinked the edges. One-half yard of drab opera flannel was cut in points to fit the scallops and these were embroidered with scarlet and blue silk—or worsted in herring-bone and chain stitch. On the point of each scallop an ivy leaf of bright velvet or satin, was put on in button hole stitch, and points and scallops were finished with tassels of white opera flannel bound and tied with scarlet. A corner bracket covered with the same kind of flannel, was very unique. A description of it will be given at another time. MRS. O. W. D.
Mich.

ALICE AND PHŒBE CARY.

EXTRACT from a correspondent's article in the Inter-Ocean, of Denver, Colorado:—

My first recollection of "the girls," as they were called at home, dates back to the time of the accident to little Alice their niece. Phœbe accompanied by the child was making a tour of inspection over a closed house which a friend had placed in her charge; through some inadvertence the gas had escaped in one of the rooms to such an extent, that, on the lighting of a match there was an explosion. The child's clothing became ignited and before Phœbe could extinguish the flames, terrible burns were inflicted on the arms and neck of the little one. This occurred in their struggling times in New York, when they were establishing their literary reputation, and they endeared themselves to a large circle of friends by their devotion to their niece when time was indeed money to them.

Emerson says "There is some reason to believe that when a man does not write his poetry, it escapes by other vents through him, instead of the one vent of writing. Clings to his form and manners, while poets often have nothing poetical about them but their verses." This was in the main true of the Cary sisters. Although thoroughly refined and lady like in themselves and their surroundings their prosaic way of viewing things with their practicality placed the poet element so far in the background that it was never visible.

Alert, brisk, chatty, conformable in their manners, one would never surmise in conversing with them that such exquisite imagining as they were mistress of, was lying embryonic in their brain. Spiritualism had taken firm hold of the minds of both sisters. It did not take the form of Swedenborgianism, but they believed most firmly that after death the departed spirit could place itself *en rapport* with beings of this world. Alice died the death incidental to a long and lingering disease, but that Phœbe died simply because she wished to is our firm belief. Passing through New York about two months after the death of Alice, I called at their snug little home on 21st street.

She greeted me with her usual warmth and nothing in her manner evinced the terrible sorrow the death of her sister had caused her, but when I said "What are your plans for the future, Phœbe?" She answered. "I have no plans for the future, wherever Alice is I am sure she wants me." All are acquainted with the peculiar features of her death which occurred so shortly afterward. The absence of all characteristics which accompany real disease, and the quiet way she gave up life proved that she was simply "going to Alice, who wanted her."

KISSING ON A WAGER.

AT a party of young people in Paris, conversation happened to turn on the subject of kissing, and the question was propounded, who, of the young men present, could boast of having given, or being able to give, "his girl" the most kisses. Various were the replies this question called out. Finally a young man and the girl to whom he was betrothed bet 200 francs that they could kiss 10,000 times in ten hours, providing they would be allowed to take an occasional glass of wine "between." Two persons were appointed a committee to count the number of kisses, and the work began. During the first hour they counted 2,000 kisses. During the second hour the kisses were not nearly as numerous, for the committee only counted 1,000. After the third hour, during which they managed to score but 750, further operations were brought to a sudden standstill. The lips of the young man were seized with a cramp, and he

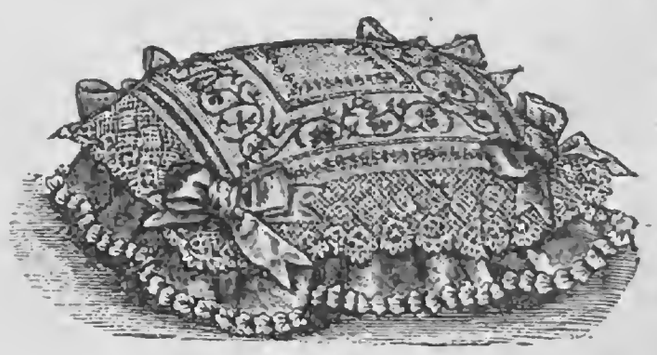

FIG. 202.

was carried off in a fainting condition. The girl a few days later was stricken with brain fever, which nearly carried her off to a land where kissing, under any form, is unknown. When the people who had won the bet demanded their money, the parents of the girl refused to pay her share of it. The matter was then taken to the courts, and there it was decided that the bet must be paid.

A LADY with more money than learning, called at a jewelry shop, recently, and asked to see their solitaire diamond rings. A tray of single stones was shown to her. She looked them over carefully, and at last selected one. "That is a very pretty stone," she said, "and if you will assure me that it is a solitaire, I will take it."

YELLOW and red are the colors particularly pleasing to the ladies this season.

Literary Miscellany.

THE SIMPLE CHURCH.

BY I. D. VALENTINE.

I've been to Quaker meeting, wife, and I shall go again;
It was so quiet and so neat, so simple and so plain:
The angels seemed to gather there, from off the other shore,
And fold their wings in quietness, as tho' they'd been before.

There was no high-priced organ there, no costly singing choir,
To help you raise your hearts to God, and holiness inspire;
But sitting still in silence, we seemed to feel and know
The still, small voice that entered in and told the way to go.

The walls were free from painting and costly work of art,
That in our modern churches seems to play so large a part;
For it seems that each, endeavor to please the eye of man,
And lose all thoughts of plainness in every church they plan.

The windows had no colored glass, to shed a gloom around,
But God's pale sunlight entered unrestrained and all unbound,
And centered in a little spot, so bright, it seemed to me
A glimpse of brightness, somewhat like our future home will be.

There was no learned minister, who read as from a book,
And showed that he had practiced his every word and look;
But a sermon full of wisdom was preached by an old Friend,
That took right hold of all our thoughts, and held them to the end.

He used no long, high-sounding words, and had a singsong way
In drawing out his sentences, in what he had to say;
But told the truth, and told it so that every one who heard,
Seemed to feel the prompting spirit, more than just the spoken word.

There was no pulpit decked with flowers of beauty rich and rare,
And made from foreign costly woods, almost beyond compare;
But plain and simple as the truths that we had that day heard,
The common painted gallery did much to help the word.

There was no bustle, noise, or stir, as each one took his seat,
But silence settled over all, so solemn, but so sweet,
As each one in his solemn way implored for strength to know
The right from wrong in everything, and asked the way to go.

It seemed when I was there, wife, so peaceful and so still,
That I was in God's presence, and there to do his will:
This simple, peaceful quiet did more to move my heart
Than any worship yet had done, with all its show and art.

I'm going there again, wife, and you will like it too:
I know what it has done for me—'twill do the same for you:
And you, when once you've entered through the plain but open door,
Will wonder why you've never tried the simple church before.

JOHN ASCOTT'S DAUGHTER.

BY CHARLES RICHARDS DODGE,
Author of "Louise and I."

(Conlinued from page 349)

CHAPTER XI.

A MILL-STONE.

"George, to-morrow is the anniversary of our wedding, do you know it?"

"That reminds me, May," he answered thrusting his hands into divers pockets," "I've a note somewhere about me from Charles and Sarah. Never mind, I can't find it now, but we are expected to dine there to-morrow, whether in honor of the occasion or not, I can't say. Of course we will go?"

"How pleasant," May answered "I think of nothing now to prevent."

"I had not forgotten the anniversary, Puss, and only wish I were able to give you a handsome souvenir—silver service or something."

"Oh, George, we must not think of such things."

"I'm going to try to pay off a part of the mortgage next year, and when we get out of debt—

"I am frightened every time I think of the two thousand you owe. I fear you have made a mistake in not paying up Mr. Stone first, and putting on the improvements later. Your interest money is no small amount, and it comes due, regularly, twice a year."

"Perhaps you are right" George replied, as he gazed out of the windows with a far away look in his eyes. "I think, though, the improvements will help me to pay the debt all the sooner, for Maplewood is even now, more than two thousand dollars better, as a piece of property, for what has been done."

"It was a hard winter for us, and we are a little behind you know."

"Don't worry, May, if we have any sort of a season, I am going to get a little ahead this year. My trout are about large enough to sell, and that is a farm crop we had not taken into consideration at all."

It certainly had been a hard winter, as May had suggested, a winter so full of experience for the young couple that they hoped never to see such another one. They had lived through it, however, and now that the spring had come again, bringing with it a promise of better things, they felt more hopeful for the future.

When the morrow dawned, it was but a repetition of the lovely day that smiled upon their marriage two long years before. "It is a good omen, May," her husband remarked as he assisted her into the carriage, as they were starting to spend the day with Charles and Sarah.

"I trust it will prove so," she answered earnestly.

"Now Susan, bring 'Jack Bunsby,'" said the young man, and he completed tucking the afghan around his wife.

"I wish you wouldn't call that child such awful names, George, really——"

"Well, John Ascott, then," he answered, giving the little fellow a toss in the air, and carefully depositing him in his mother's lap.

"Are you trying to kill him?"

"No, Puss, exercising him, that is all. Are we ready now? Look out for tramps, Susan."

They drove rapidly down the avenue of Maples, ruby tinted with swelling buds ready to burst into a million leaflets, and as the carriage emerged into Prospect road, a vision of enchanting loveliness burst upon them. The landscape, but lately marked by fields of sombre brown—save here and there with the richer umber of the ploughshare's painting—now touched by the magic wand of spring, and kissed by the sunbeams, appeared in undulating waves of tender green; and where the distant back-ground of forest and mountain lay cold and gray against the sky, catching the inspiration of awakening nature, now flushed into a hundred tints of purple. Happy birds sang in the trees and hedges; nimble squirrels stared timidly out from their hiding places to greet them as they passed, and the very air seemed filled with tiny forms of insect life, glad to greet again the warm sunshine. Before them the blue waters of the bay stretched away to meet the deeper blue of the ocean, flecked and dotted with innumerable sails—tiny atoms upon the world's great highway—ocean and ships losing themselves at last in the distant horizon.

"I wonder, May, if there is a ship sailing over the ocean to us?"

"I hope so," his wife answered, her eyes looking far beyond ships or clouds; "but we must not idly wait its coming or 'twill never anchor in our port."

"When our ship comes in—who knows——"

"Ah, George, how many are waiting, waiting, waiting for the ship that *never* comes."

"Here's our ship. Wake up Bunsby, and take a squint at your native heath. You're a regular little Clyde built clipper, with breadth of beam and depth of hold sufficient to entitle you to first-class register. How many tons burden, May? Give me the little scamp, I want to teach him to drive. I'll have him on the milk wagon before next spring——"

"You'll have him under the wheels in another minute."

Arriving at Charles' they were warmly welcomed by Sarah, and an hour was very agreeably spent in conversation. Thinking, however, that the two sisters-in-law might wish to have a cosy time by themselves, George, with the usual kind consideration of husbands under such circumstances, stepped around to his brother's place of business to hear the news.

"Have you taken up that mortgage, George?" his brother asked, at the very outset of the conversation.

"No—why?"

"Because Stone is dead."

"Joseph Stone, *dead!*" he exclaimed, in astonishment.

"That was the report at the bank this morning, How will it affect you?"

"Badly enough, under some circumstances."

"They say he was considerably involved."

"The deuce!" said George, reflectively; "then I had better be looking up two thousand dollars before the foreclosure, for I suppose his creditors will want to settle in a hurry."

"I believe the law gives six months," Charles remarked.

"But they may not give me six months in which to take up the mortgage. Hang the thing! I wish it had been paid off."

"Well, why haven't you paid it off, or a part of it at least. What have you been doing with your money?"

"Improving the farm," the younger brother replied.

"And what will your improvements amount to if they force a sale?"

"That's the mischief of it. Have you any money to loan Charles?"

"I'm sorry to say I haven't. That is, I have none to spare, but I think you will have no difficulty in raising it almost anywhere, its such a safe investment. I wish I had the money, George!"

"I wish you had," the young man answered with a deeply drawn sigh.

"Father could fix you up all right—if he would."

"Don't speak of father, for heaven's sake, unless you wish to irritate me. But I must raise it somewhere, for it would break May's heart to be obliged to leave Maplewood a second time. Don't mention this at the house, Charles. She'll know of it soon enough, I'll warrant."

The dinner would have been a most enjoyable affair, but the news of the morning had thrown a damper over George's enjoyment, and May, reading his face at a glance, felt that something unusual had happened, though she refrained from questioning until a more favorable opportunity. On the way home she learned of the unpleasant rumor and her mind was filled with dark forebodings in consequence. She openly regretted that the indebtedness had been allowed to run without effort to lessen it, fearing that it was even now too late to redeem themselves.

"I know I can raise the money, May," her husband assured her. "There isn't a safer investment in the town of S——. Charlie told me this morning that Maplewood was considered one of the best pieces of property in the township, since it came into my hands. Don't worry—it may give me a little present annoyance, but I entertain no doubts for the future. Keep courage, little one, and some day, rest assured, we shall own Maplewood out and out."

CHAPTER XII.

A PROSELYTE.

The season opened most auspiciously, and the young farmer was so busy with his spring-planting and other duties and employments of the farm that crowd so closely upon each other at this time, that the death of Mr. Stone hardly came into his mind. He had broached the matter of a loan at the bank, should it become necessary, and Mr. Bond, the Treasurer, had spoken favorably of Maplewood as security for even a larger amount than that asked, and resting upon this security George had given his whole time and thoughts to his farming operations.

He was impressed with but one idea now, and that to make the farm yield its utmost, and to put aside every dollar that could be made by combined thrift and economy, to the end of getting on his feet again. May, like a heroic little woman as she was, determined to do her share in paying off the mortgage. She set her wits to work to devise new modes of economy in the household department; doing her own millinery and dress making, and in addition to other duties took the entire management of the dairy upon herself. George protested against her doing so much, but she was as firm as a rock, having made up her mind to it—what woman is not—so nothing more was said. They were working for an object, and their labor was as sweet as the sleep that came to them when the toilsome hours were over.

Ye aimless ones in life's field of duty, what will the harvest be when your days are gathered into yellow sheaves? What golden grain will fall upon the threshing floor as one by one the garnered years shall come beneath the flail of time?

Old Silas Wilkins was quite a frequent visitor at the farm-house now. Since his talk in the winter upon stock feeding he had been slyly experimenting, and having satisfied himself that his cattle "didn't look any wuss" for the new feed when spring came, he resolved to give the fertilizer question a trial as well. So he talked with his younger neighbor, using shrewd arguments while doggedly sticking to his own opinions, making mental notes, however, as the young man dilated upon "the science of the thing," or explained its practical bearings. In fact, he sent the old gentleman home upon sundry occasions, with his head so full of "organic matter," "nitrogen," "phosphoric acid," "soluble salts," "ash constituents," etc., that his ideas were entirely "reverted," "reduced" or "precipitated" into a jumble of meaningless absurdities. Then the "book men" were at a discount" and "the old, sensible way" was declared the best after all. But George finally simplified things by practical illustration, and the force of example was so strong Uncle Silas could not help dabbling a little himself, and before the spring was over had actually spent a whole hundred dollars in fertilizers purchased and used under George's direction.

The two become great friends of course. The older man doing many a good turn for the younger farmer, but in so quiet a way, it would have been cruel to have acknowledged it. The fun of it was, Uncle Silas considered he had found an apt pupil in the *ancient* art of agriculture and he pointed with pride to George's fertile acres as an example of what had been accomplished by his own counsels and advice, aided by a little book larnin'" The young man humored the elder farmer in his vagary, by consulting him upon many questions of practice, often finding that his old friend could teach him many things most advantageous to know. Another thing that amused George was the manner in which the walls and fences around the Wilkins' farm grew better and better. Things were undoubtedly brightening, but humor gave way to astonishment, when one afternoon a couple of handsome Jerseys were observed quietly feeding in the meadow adjoining the Maplewood possessions.

"What's up! Uncle Silas, whose cattle are you pasturing there?"

"Well, I'll tell ye, George," the old fellow began in a confidential strain, taking a big bite from a plug of tobacco. "ye see I had a fust rate chance to get 'em cheap. I don't suppose they're any better cattle than those two old red cows down thar by the brook, but they were such powerful milkers, I thought mebby it was a special inducement to buy. But them red cows are fine milkers too, I'll warrant ye! No better cattle in the country! What do you get a pound for butter, George?"

One evening May and her husband were sitting together talking over future plans and prospects, when there came a series of quick, sharp raps upon the front door. It was so sudden both started to their feet and for a few seconds stood as if waiting a repetition. In a moment George came to his wits, and opening the door, a sombre apparition in the shape of a little dried up old man walked in.

"Mr. Ashton, I suppose?" said he. "Ah, good evening madame! A right cosy place this! H'm!"

"Will you be seated sir!"

"Thank you, Ahem! When my late client, Mr. Stone—Mr. *Joseph* Stone—owned this place, it hadn't as cosy a look as it seems to have now. You believe in home comforts I see. H'm!"

"Your business, sir!" George asked quietly.

"Oh yes—my late client Mr. Stone—Mr. *Joseph* Stone—held a mortgage on this place, I believe, for two thousand dollars, bearing interest at six per cent., payable semi-annually. H'm! and the little old man stared around the room most sharply.

"Yes, there is a mortgage which I suppose must be taken up prior to the settlement of the estate of your *client*—late client I should say, and it is doubtless upon this business that you have called to night?"

"Ye-as, exactly! *exactly!* H'm!" I supposo you are ready to take up the mortgage?" he said, looking George squarely in the eye for the first time.

"Well,—No-o,—I am not ready at the present moment, but I think it can be arranged in a few days. Of course his administrator will give me a reasonable time?"

"*Executor*, sir. The deceased appointed an executor in his will—but that is of slight moment. As to the time,—Ah! yes—a month will servo your purpose, sir; that will give you till the middle of June, and in case the mortgage is not taken up by that time, it will be my painful duty to foreclose."

"I shall be ready, sir, by that time, and thank you for your timely notice"

"You have improved the place, Mr. Ashton, very much since, ah—my late client, Mr. Joseph Stone was its possessor. Do improvements *pay*, Mr. Ashton? I suppose the madame enjoys her old home. It really grieved me when I sold out old John Ascott, fifteen years ago. H'm!"

"My wife has not forgotton it, sir; it is not neeessary to recall it."

"Ah! beg pardon, madame, no offense was intended, I assure you. We will give you one month, Mr. Ashton. Good evening, madame! Good evening, sir. Don't trouble yourself to come to the door. Really, a fine evening. H'm! *One month* from to-day, Mr. Ashton. Good night!"

"One month from to-day, my darling," said George, as he entered the sitting-room again, "and then——"

"Oh, husband, if——"

"No, no, May, it must not, it shall not be. Maplewood is yours now, and none there are who shall take it from you. I *can* raise the money."—*To be continued.*

THE EYE OPENER.

The frequency of inquiries from our subscribers, about the reliability of different parties who are doing newspaper advertising, convinces us that publishers can not be too careful in the selection of suitable advertisements for their columns. A number of our contemporaries are running advertisements for parties known to us to be unreliable and "tricky" concerns. The RURAL NEW-YORKER has rejected over $5,000 worth of advertising since January last, coming from parties whose reliability we could not fully endorse; and an examination of our pages will convince our readers, that they are free from all such class of business, and will also prove that in in point of legitimate and reliable advertisements the RURAL NEW-YORKER is second to no paper in this country. To keep these pages pure and reliable, requires the very closest scrutiny, and oftentimes it is attended with much expense; for in so far as it is possible, we admit no advertisement until one of our staff has personally examined the articles, and also ascertained the reliability of the advertiser.

Two instances happened during the past fortnight, one coming from Philadelphia and the other from Texas, the former signed "Toxicologist" and the other R. R. Land Commissioner, both of which were held for examination.

On a recent visit to Philadelphia one of our staff called on the Toxicologist, at 213 Lodge St., and found the place to be a second-class lager beer saloon. Upon inquiring, he found that the would-be advertiser had his mail sent to this place, called in the morning, got it and went away, no one knew where, or at least they pretended not to know, and we naturally conclude the party belongs to the class of "not-to-be-found" advertisers.

In the case of the Texas "R. R. Land Commissioner," above referred to, we learned from reliable parties, in answer to the tracers sent out from this office, that this man, Wilson, was in no way connected with any R. R. company, and that he was a tenant on a small farm which he had recently taken to work on shares, and we advise him to get located in a county where there is a railroad, before entitling himself R. R. Land Commissioner; as he may in that way get his advertisement in some paper from which he can realize some sales of his "valuable book" for "only $1." When newspaper publishers get into a position to care more for their readers than for the many dollars that come through this class of advertising, and insist on nothing less than reliable and trustworthy advertisements appearing in their columns, readers of papers will then have confidence in the entire paper and thus help all legitimate advertisers to receive much better returns. We will thank any of our readers who do not get satisfactory returns from any parties who advertise with us, to notify us of the fact, for in so far as it is possible we hold ourselves responsible for the trustworthiness of our advertisers.

COTTAGE HOSPITALS IN ENGLAND.

The case of the sick is dear to the hearts of the ladies of England, and ministering to them has always been justly considered one of the special missions of women. The problem of how to help the poor to help themselves, rather than to demoralize and to degrade them to the rank of ordinary paupers, by an elaborate system of indiscriminate alms-giving is one of the most difficult in political economy, and one which has been frequently discussed in connection with this subject. Especially must it claim attention in times of depression, trouble, and need. With a view to ameliorate the sufferings of the poor, the system of cottage hospitals has attracted great and increasing attention during the last twelve years. It has been computed that in that time there have been erected throughout the country more than one hundred hospitals which truly deserve the name

of cottage—that is to say, a refuge can be obtained for the sick or hurt, which is small, familiar, safe, friendly, near at hand, with skilled assistance, good nursing, and native fresh air, and to which they are privileged—nay, invited—to contribute something towards its support. By this system the disadvantages and evils incumbent on the sick person being removed to a large hospital some distance off, and being placed amongst strangers, are entirely obviated. On the other hand, the advantage of removing the sick poor from their own crowded, ill-ventilated, unsuitable, and wretched abodes to a clean, plain room of a cottage hospital in the neighborhood, with its regular medical attendance and good diet, is unquestionable. It must be an enormous boon to a locality if efficiently managed.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

LOG-CABIN SKETCHES; OR JESSIE SEABRIGHT'S DIARY. NO. 12.

MAY MAPLE.

March 20th, 18——

Our little Alicia is just six weeks old, and already she is queen of the household. Bertie wonders every day what we should do now without the baby. I wonder why so many homes are childless, when there are so many little ones reaching out tiny, helpless hands for loving care—fatherless and motherless little ones, who would with their innocent mirth brighten up so many sad and weary hearts, and in the bye-and-bye be a comfort in the declining years to the kind, yet judicious foster parents. Our baby's mother died when her little one was but two days old, and I brought the child home with me, that it might be properly cared for till other arrangements could be made by the bereaved husband and father. Night and morning he came with a cup of milk for the little Alicia, so named by her mother, almost with her latest breath.

As the days passed one after another, I began to wish I could keep her, for I was fast learning to love the baby as though it were my own; and yet it seemed impossible, for we had as yet, no cow, and when Mr. R. should go away, as he talked of doing, there would be no milk to be had within a reasonable distance. There seemed no way for us to keep the child, even for sweet Charity's sake.

But when the house of Mr. R. was once more put in order after the funeral services, and the neighbors had all returned to their homes, the death-like stillness about the house was too much like torture to him, and he concluded to shut up the house. Finding how much I desired to adopt the little one, he said we might have the child; and he would be very glad to get board with us for a certain length of time, and let us have the cow and such household stuff as we might wish to take in exchange. So I hug little Alicia to my heart, and give her a mother's love and care, and many times a day call her "Blessings," for I feel that we are favored above many.

Well, with the new baby came new experiences and observations in another direction. When Bertie was small, I was living near mother, and, of course, went to her on all occasions, if I even imagined my darling was not as well as usual. But he seldom received any medicine from her advice, unless he was afflicted with canker; then some golden-thread roots were steeped, and when the liquid was strained, it was sweetened with loaf sugar, and a small piece of borax, powdered and put into the sirup; and this was used as a wash for his mouth. She used to say that infants need a little water often, and if a teaspoonful was put into the mouth every hour or two, there would be less trouble with sore mouths.

But little Alicia has been very well thus far, and knows nothing of "doping." Still, as even the healthiest children are liable to sudden attacks of various diseases, I shall be a close observer of the ways of experienced mothers, and jot down such experiences in my journal as may be likely to benefit myself or others. At present physicians and drug-stores are not numerous here, and often it is that some dear, old grandmother, or elderly matron is called upon to advise what to do for the suffering, and frequently such prescriptions as she may be able to give from long experience, are far more efficacious than a learned "medicine man's" would have been.

PEN THOUGHTS FROM "EVERY-DAY HOUSE."

ANNIE L. JACK.

Rhubarb or "pie plant" being now very plentiful, we have secured some for the winter according to the following recipe:

Rhubarb Marmalade.

Peel six oranges; take out pith and pips; slice the pulp into a stew pan; add half the peel cut small, and a quart of rhubarb, with a pound of sugar for this quantity. Boil twenty minutes, and you have a very delicious preserve that tastes like none other, and is especially agreeable to those fond of marmalade.

As the time for jellies is near at hand, I would give as my experience in preserving from mold, that the surface of the jelly be covered when cold with a quarter of an inch of powdered loaf sugar. Thus protected, it will keep for years without sign of moldiness. It is almost discouraging to feel the weight of care that comes upon the busy housekeeper with the advent of spring and summer. Like the bees, we must prepare for winter, and gather the fruits in their season, and though there seems what Artemus Ward used to call "a muchness" of experience on the "can" and "jar" question, it is really useful to us all, and if in a multitude of counsels there is wisdom, what wise women we Rural readers shall be on this vexing subject! For I hold that nothing is more provoking in the annals of housekeeping than to bring up a jar of fruit from the cellar in anticipation of a treat, and find it frothy and soured. Yet we have all, no doubt, known this to happen at some time or other, and it is well to search and find out the cause for such a very disappointing effect.

Give Baby a Drink.

I have no doubt that much fretfulness in little ones is caused by their suffering from want of fresh, cold water. Give a little at a time, every hour or two, especially when teething. My own babe often at night awakes crying, after an hour or so of sleep. I have found that at such times a drink of water will do more to soothe and quiet him than anything else I can do.

E. M.

DOMESTIC RECIPES.

Graham Gems.

I have seen in the Rural, at different times, recipes for the above gems, but I have never thought them equal to those used at the Dansville Water-cure. It seems to me that so-called gems made with buttermilk and soda are not gems at all, but biscuits. Gems correctly made, need no soda to make them light and toothsome. The first requisite is nice fresh flour of white wheat. Take equal parts of sweet milk and cold water, say one pint of each. Sift in the flour from the hand, stirring constantly until a little thicker than for griddle cakes. First heat the oven very hot, then put in the gem pans and heat, grease slightly, and with a spoon drop in the batter (the pans being meanwhile in the oven) and bake about 20 minutes. If correctly made they will be very light. After the first panful the irons do not require greasing.

At this season of the year cooks have to rack their brains for something new to tempt the failing appetite, and as the winter supplies have run low and fresh fruit and vegetables are not at hand, a change or variety is hard to get. By way of varying our light bread we sometimes make

Cinnamon Rolls and Rusk.

For rusk, take a loaf of bread at the last kneading, work in a lump of butter and a little sugar. Let rise; make into little cakes; again let rise, then bake. For cinnamon rolls, roll the dough into a sheet half an inch thick, spread with butter, sugar and cinnamon. Commence at one side and roll up; then with a sharp knife cut into cakes half an inch thick, and let rise and bake.

Flour Gems.

These are made by taking a cup of sweet cream, one beaten egg, and stirring in fine flour until a little stiffer than griddle cakes. Bake the same as Graham gems.

Mrs. C. E. J.

Rice Cake.

Eight beaten eggs, a pound of white sugar, half a pound of butter, a pound of rice ground very fine, a little salt, three tablespoonsful of milk and any flavoring liked. Cream the butter and sugar, add the eggs, then the milk and salt, stirring in the rice last. Bake in small pans.

Pine-Apple Pudding.

Line the bottom and sides of a buttered dish with thick slices of stale sponge cake, pare and slice thin a large, ripe pine-apple, place in the dish a layer of fruit, then sprinkle with sugar, then more fruit and sugar until all is used. Cover with slices of cake, which have been dipped in cold water. Invert a buttered plate over all and bake in a moderate oven one hour and a half.

Mrs. Brady.

Pine-Apple Cracker Pudding.

Roll enough crackers to make two teacupsful of fine crumbs. Melt half a teacupful of butter, mix with the crumbs thoroughly. Slice thin two pine-apples. Butter a pudding dish and put in crackers and the sugared slices in layers. The crackers should make the last layer. Pour over half a teacupful of water, cover with a dish and bake slowly one hour and a half. Remove the cover just before it is done and brown the top.

Mary B.

Miscellaneous.

Trade **LONDON PURPLE.** Mark.

Valuable Insecticide for the extermination of the COLORADO BEETLE, COTTON WORM and CANKER WORM. For Prices, Circulars and opinions write.

HEMINGWAY'S LONDON PURPLE COMPANY, (Limited) 90 Water St., New York.

Professor C. V. Riley says: London Purple can be more effectually sprinkled or sprayed on to the plant than Paris-green, by virtue of its greater fineness.
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IT HAS WONDERFUL POWER. WHY?
Because it Acts on the LIVER, the BOWELS and the KIDNEYS at the same time.
Because it cleanses the system of the poisonous humors that develope in Kidney and Urinary diseases, Biliousness, Jaundice, Constipation, Piles, or in Rheumatism, Neuralgia and nervous disorders.
KIDNEY-WORT is a dry vegetable compound and can be sent by mail prepaid.
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Rose Growers, West Grove, Chester Co., Pa.

MAGAZINES FOR JUNE.

SCRIBNER'S MONTHLY is well illustrated in the June number, and appeals to a wide range of literary taste. For lovers of light reading there are papers on "Rocky Mountain Nights" (both poetical and practical); "Spring Hereabouts," *i. e.*, in New York and suburbs, with illustrations; "Thackeray as a Draughtsman," with over thirty reproductions of the novelist's sketches; "Life in Florence," a sprightly paper from an American point of view; "My Friend, Mrs. Angel," a humorous story of Washington life. The current political interest is appealed to by H. J. Raymond's journal of "The Philadelphia Convention of 1866," and Henry King's picturesque sketch of "A Year of the Exodus in Kansas," and indirectly by Principal Grant's third paper on "The Dominion of Canada." Other papers, more solid and of a curious interest, are Mr. Scudder's paper on "William Blake, Poet and Painter," with portrait illustrations, including "The Chariot of Fire," and others never before engraved; Rev. Isaac H. Hall's account of "The Cypriote Inscriptions," the specimens of which in the Metropolitan Museum were deciphered by him; and Richard A. Proctor's "Sunspots and Financial Panics," an intended refutation of Professor Stanley Jevon's elaborate theories, based on a former playful suggestion by Professor Proctor that these two phenomena are intimately connected. The re-appearance of the sun-spots, and the recent rumors of a financial panic, give interest to this paper. Schuyler's "Peter the Great" is interestingly illustrated, and deals with Peter's first marriage, the administration of Sophia, the eternal peace with Poland, old Russian sports, etc., etc. Mr. Cable's "Grandissimes" is rapidly justifying the high claims made for it by the publishers. This installment is said to be the most dramatic in the story, possibly excepting the episode of Bras-Coupe and the closing part. The departments contain many articles of special or timely interest, such as "The Political Machine," "The Shadow of the Negro," "Beaconsfield and Gladstone," "Letters to Young Mothers," a review of "The Art Season," "Steam Catamaran," "Seamless Paper Boxes," "Cheap Ventilation," "The Phonograph in the Moon two Centuries ago," Recent Books of Travel, Fiction, "Regenerative Gas-Lighting," "The Culture of the Rose," etc., etc.

DOMESTIC MONTHLY.—With the arrival of warm weather, and the probable approach of still warmer weather, the Domestic Monthly presents its attractive list of fashionable, useful and indispensable novelties appropriate to the season.

In the literary department a new serial entitled "Bertine: an Episode," by Ellis Conway, is begun. Among the other authors represented by contributions in prose or verse, are Mrs. Merighi, Mrs. Howell, Howard Glyndon, Florence B. Getchell and others.

News of the Week.

MISCELLANEOUS.

Monday, May 31.

THE two impending great conventions and their possible results are at present the themes on which all politicians are spending their eloquence. The Republican Convention will be held in Chicago June 2nd and the Democratic Convention at Cincinnati. Some of the knowing ones predict that if the conventions will adopt the unit rule the votes on the first ballot will fall about as follows: At Chicago, Grant 400, Blaine 217, Sherman 81, Washburne 14, Edmunds 34, Windom 10; at Cincinnati, Tilden 184, Bayard 37, Seymour 40, Hancock 84, Thurman 49, Randolph 18, and 22 more votes divided between four other candidates. This shows the most prominent candidates and their present popularity..... By a joint resolution the President has been authorized to call an International Sanitary Conference to meet at Washington, the object of which shall be to secure an international system of suppressing yellow fever and cholera in ports liable to be infected with these dreaded pests....A large number of miners in Leadville, Col., are on a strike. They want four dollars per day of eight hours' work....The heat in the vicinity of New York has been intolerable during the latter part of May, the thermometer rising higher than it has done for a quarter of a century past at this season. On the 27th 28 fatal cases of sunstroke took place in New York and Brooklyn....Denis Kearney, the San Francisco agitator, whose imprisonment we have heretofore noticed, is again out of jail on a writ of *habeas corpus*....Thirty-six Indian chiefs, including Red Cloud and Spotted Tail, are inspecting the Indian school at Carlisle, Pa. Red Cloud and Spotted Tail have children in the institution....

The five-mile single-skull race between Edward Hanlan of Toronto, Ont., and James Riley of Saratoga for $2,000, contributed by citizens of Washington, was rowed the 26th ult., over the Potomac river course at Washington. Hanlan took the lead at the start and increased it as he pleased winning by three-sixteenths of a mile in 36 minutes, 24 1-10 seconds. Riley's time was 37 minutes, 21⅝ seconds. Though the weather was intensely warm, 30,000 people witnessed the race.....The annual meetings of the Congregational societies were held at Boston the 26th ult. The publishing society reports having printed 3313 pages during the year, and asks for a permanent fund of from $10,000 to $100,000 to publish religious books in cheap forms. The net assets are $34,373 and the sales of the year are $80,089, against $75,962 for the previous year. Ezra Farnsworth was chosen president, vice J. R. Bradford, who declined a re-election. The American missionary society has taught during the year 7,027 pupils by 190 teachers, of whom 1,600 were in normal and collegiate departments. During the past 19 years it has spent $4,800,000 in the South, of which $3,000,000 was to educate negroes .....Clark Mill's Jackson's equestrian statue on the capitol grounds at Nashville, Tenn., was unveiled last week with impressive ceremonies before an assemblage of 20,000 people.....

The United States sold at auction last Tuesday a piece of property rich in historic associations and having the makings of great commercial value—the water-power at Harpers Ferry, W. Va., together with the old engine-house in which John Brown barricaded himself in 1858 and the ruins of the old musket works, arsenal and other buildings destroyed on the approach of the confederate forces at the beginning of the war....The Sibley cotton mills were organized at Augusta, Ga., Wednesday, with an authorized capital of $100,000, $600,000 being subscribed. One of the largest factories in the South will be erected immediately. The Augusta cotton mills have paid from 8 to 20 per cent. a year since the war....Assistant Treasurer Hillhouse reports that at the present rate of silver coinage the stowage capacity of the vaults will be exceeded; there are $28,000,000 of silver on hand, weighing over 500 tons.....Decoration Day was celebrated in New York as usual by a fine parade of the military and processions to the several cemeteries where the soldiers' graves were generously decked with flowers. The day was beautiful. A heavy rain the night before had cleaned the streets, and a cool breeze from the southwest had a pleasing exhilarating effect on everybody. ....The Sixth Commencement of Purdue University, Lafayette, Indiana, will take place on Thursday, June 10th. The preceding Monday, Tuesday and Wednesday will be occupied by examinations of classes.

Heavy fire losses are usually expected during dry times, but the six weeks after April 1 show losses, according to the New York Bulletin, of $13,000,000, or over $2,000,000 a week, a large average for this season of the year. Of this sum, however, $5,000,000 are from small fires less than $25,000 and forest fires, so that the losses from serious conflagrations are about $8,000,000....An excursion train from San Francisco to Santa Cruz., on a narrow-gauge road went through a trestle at Santa Cruz lately, killing 16 persons and injuring 40....Sitting Bull's Sioux are holding the buffalo country on both sides of the line between the Dominion and the United States, and the Crees, Blackfeet and other tribes friendly to the whites are literally starving. Sitting Bull's braves are also chasing buffaloes into the United States and raiding on American ranches in spite of the mounted police, and it is said that they are trying to join other tribes with them to carry on a plundering campaign upon the settlements on this side of the line....Nearly 80 persons have been killed by Indians in Seroco county and the Mogullon mountains in New Mexico last month. Some settlements will have to be given up till the Indians are subdued.

AGRICULTURAL NEWS.

CHINA is rapidly recovering from the terrible effects of the last famine, and the population is showing signs of once more being able to purchase foreign produce....The wheat crop of Australia harvested in January, 1880, was at first estimated at 500,000 tons, then at 400,000. The latest advices from that colony state that there were 1,480,000 acres of land under wheat, with an average yield of about 11 bushels per acre, which would give a gross outturn of 16,280,000 bushels, by far the largest quantity ever produced in a single season in the colony. Deducting from this the requirement for seed and home consumption, say for seeding 1,600,000 acres, and 6 bushels per capita for 257,000 population, will take 1,325,000 bushels for food, or for food and seed 2,915,000 bushels, leaving a surplus of 13,375,000 bushels for export.... This represents 361,500 tons shipping measurement, 2,240 pounds to the ton. About 3,912,400 bushels of the new crop had been shipped up to the 1st of April, 1880. It is expected that New Zealand will have 100,000 tons of surplus wheat available for export from the crop harvested during February, 1880....Exports from this city for week ending May 22 embraced 3,330 live cattle, 5,440 quarters beef, 1,980 live sheep, 1,740 carcasses mutton, 115 live hogs, 200 dressed hogs....In their New Orleans circular of May 32, Schawbacher and Hirsch say: "The Southern crops promise largely on the whole, and those of Louisiana—cotton, sugar and rice—are unusually promising, and without any serious injury in the future will be immense.....Apples in some portions of Middlesex and Worcester counties, Mass., are being ravaged by canker-worms.....The Toronto Globe of Tuesday says that the prospect for fruit this year throughout the entire western part of Ontario is the best for many years. Orchards are, as a rule, one mass of blossom; and should they escape frost for the next two weeks, the crop will undoubtedly be a large one. Small fruits show equally as well as the larger kinds.....Telegrams from northern Texas on May 28, say that that region had just been visited by heavy wind and rain storms doing considerable damage to crops.....A Leicestershire (England) farmer writes to the Mark Lane Express: "Hundreds of farmers have lost the whole of their flocks of sheep. It has been one of the most disastrous seasons (for sheep) ever experienced."....The condition of the mohair flocks all over Asia Minor some weeks ago caused the greatest concern. The intense cold (the snow in many places having been four to six feet deep, and rendering it impossible to reach the animals, was causing the death of hundreds of thousands. Angora and two other districts reported a loss of 30 per cent., and the mortality was continuing..... It is significant of depression in England that the marriage rate was lower in the last quarter of 1879 than in any since civil registration was established in 1837. The birth rate was lower than in 1850, and the death rate, too, below the average.....The money spent for tobacco in this country, according to The Retailer, exceeds in amount the expenditure for bread.....The Island of Elba, Napoleon's first exile home, has been devastated this spring by an army of locusts from Africa.....The stock of lard at Chicago has increased about 5,000 tierces during the past week, and the supply on hand is now estimated at 148,000 to 150,000 tierces. The stock of mess pork is about 220,000 barrels.—.....A company of speculators are urging the city fathers of Paris to allow them the exclusive privilege for 50 years of cultivating "market truck" on the entire extent of the fortifications and in the ditches at the foot of the ramparts. These market gardeners estimate that it will cost them about 300,000 francs and a year's hard labor to put the fortifications in a good state of cultivation. They offer to pay a rent of 100,000 francs per year for this privilege, provided the concession shall continue for 50 years. It appears that this piece of ground, having a total length of over 33 miles, could be made to produce alone more vegetables than all the market gardens of Paris.....Telegrams just received from Northern Texas tell of the entire destruction of the thriving town of Bonham by a tornado. Great damage has also been wrought throughout a large section of country by very severe storms of wind and rain. Fences, crops and stock have been much injured.....One day of May remains, and the immigrant arrivals at Castle Garden up to Saturday night had already reached the enormous total of 53,497 for the month. When April showed an aggregate arrival of 46,821 immigrants the result was deemed extraordinary, as indeed it was, since the number for April of last year had been but 11,601. Yet May has already far outdone the record of last month.....Mr. Henry G. Vennor comes forward again with his direful prophecies of storms, heat, cold, &c. His letter is dated at Montreal, May 18, and in it he says: "I believe that June will be an intensely hot month, and probably the '1st of June' will be fall-like, with frost again. July will be a terrible month for storms, with terms of intense heat, but another fall-like relapse, with frosts, will, in all likelihood, occur a few days before the 20th. I fear the storms of thunder and hail will be of unusual severity during July. I must claim the verification of my prediction relative to a cold wave, with frosts, over 'a large portion of the United States between the 10th and 15th of May.' The relapse toward the close of the present month (May) will be more severe than that just past."

Around the World.

A fame that is world-wide and acquired in the short space of a few years, must have true merit for its support. Dr. Pierce's Family Medicines have gained such fame and the foreign orders for his Golden Medical Discovery—the greatest blood-purifier of the age, for his Pleasant Purgative Pellets (little sugar-coated pills), and other remedies became so great, that a branch of the World's Dispensary has been established in London, England, for their manufacture. From this depot they are shipped to every part of Europe, and to the East Indies, China and Japan, and other countries. Their sale in both North and South America is perfectly enormous and increases yearly. World's Dispensary Medical Association, Proprietors, Buffalo, N. Y., and Great Russell Street Buildings, London, England.

ROYAL CENTER, Cass Co., Ind., Feb. 28th, 1879.

Dr. R. V. PIERCE:

Dear Sir—I take pleasure in writing my testimony with others in regard to your valuable medicine. For a long time I have suffered from disease of the lungs and until I used your Discovery found nothing that did me any good. Thanks to it, I am relieved and recommend it to all.

Yours truly, MARY KENNEL.

A Man takes to Himself the Credit of a Valuable Discovery Made by an Old Lady.

In the columns of this paper there appears an advertisement of a very valuable remedy said to be the first absolute cure for diseases of the kidneys and bladder, under the name of Day's Kidney Pad, which was discovered by a Mrs. Burton, and first used by her in curing Oliver C. Day of an affection of the kidneys, that had become so malignant that physicians pronounced him incurable. And now, while great credit is certainly due to Mr. Day for his efforts in bringing before the public this wonderful remedy, would it not have been more appropriate to have attached the name of the actual discoverer to this excellent remedy, and given to her, to whom he owes his life, the prominence and credit he now enjoys?

Women that have been bedridden for years have been entirely cured of female weakness by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

Why Wear Plasters?

They may relieve, but they can't cure that lame back, for the kidneys are the trouble and you want a remedy to act directly on their secretions, to purify and restore their healthy condition. Kidney-Wort has that specific action.

Burnett's Flavoring Extracts are used and endorsed by the best Hotels, Confectioners, Grocers, and the first families in the country.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, May 29.

Boston.—PRODUCE.—The market is well supplied and prices are moderate. The following prices are paid by receivers:—BUTTER—New York and Vermont—choice creamery, 20@22c ₩ lb; Franklin Co., Vt. dairy, 18@19c; New York and Vt. dairy choice, 17@18c; fair to good, 15@16c; Western—choice creameries at 21@22c; choice dairy packed, 17@18c; do. ladle packed, 16@17c; ladle packed, fair to good, 14@15c. CHEESE—quite firm—New choice full cream, 12½@13c ₩ lb, fair to good at 10@12c, and common 6@9c. EGGS—Eastern are selling at 11½@12c, Northern 11½@12c, Western 11@11½c ₩ doz. BEANS—Northern hand-picked Pea at $1.80@$1.85 ₩ bushel: do do. Western, at $1.70@$1.75: do. common $1.60@$1.65; medium choice $1.45@$1.50; common to good $1.30@$1.35: Yellow Eyes $2.10@$2.25; Red Kidneys at $1.40@$1.50. Canada Peas 80c@$1.05 ₩ bushel for common to choice. Green Peas $1.50@$1.85. POTATOES are more active; we quote Houlton and Maine Central Rose 45@55c ₩ bushel: Houlton Jackson Whites at 30@35, Maine Central Jacksons at 30@35, Vermont Rose at 40@45c, do. Jackson at 30@35, Peerless at 30@35, and Prolifics at 45@50c, ₩ bushel. ONIONS—Bermudas, $1.87½@$2 ₩ crate. APPLES at $2.50@$4 ₩ bbl. according to quality. DRIED APPLES are quoted as follows: East and North new sliced, at 6@7c ₩ lb: do. do quartered, at 5½@6½c; old quartered and sliced at 3@5c; evaporated, choice new, at 14@15c; do. good, at 12@13c.

Chicago.—BUTTER.—The demand during the week was quiet, with prices showing no quotable difference from those ruling at the same time last week. The demand for the better grades is merely local, though they move off briskly at figures quoted, but the poor sorts drag a little. Creamery 19@22c; good to choice dairy 16@19c; medium 13@14c; inferior to common 8 to 12. CHEESE.—Fair sales were made on export account but the demand from other sources was light. Full cream cheese was held with some show of firmness, but pure and full skim goods were hard to move except at shaded prices. Stocks are steadily augumenting, and the tendency of prices continues in a downward direction. We quote: full cream, new 10½@11½c; part skim, new; 8½@9½c; full skim, new 5@7; low grades 4@5.

Cincinnati.—BUTTER.—Since Saturday butter has ruled easier, with only a moderate trade, and all grades of Dairy Butter have declined 1@2c, but there is no surplus of creamery, and prices are well sustained. There is a little increase in the local demand for the medium grades, but the receipts are large and the bulk of the supply has to be sold to packers, who will not pay over 12c. for prime stock, and get some good lots at 9@10c. There is no grease butter of consequence here, and there is very little if any accumulation of stock of any kind in receivers' hands. Fancy creamery sells at 20@22c, choice Western Reserve and Dairy at 14@16c, prime Central Ohio 11@12c, medium do 9@11c and inferior 6@8c. per lb. CHEESE The receipts are liberal and the market rules easier at 9½@10c per lb for prime to choice factory, although there is a fair consumptive demand. EGGS.—There was a strong market for a day or two the past week but it has been slow and drooping since Saturday and closes dull at 10@10½c. per dozen for fresh. POULTRY.—The market has been heavy under usually large receipts and prices have steadily declined, closing dull at the lowest point. Spring chickens sell at $1.50@3.00 per doz. according to size; and common to prime old do. at $2.00@2.50 per doz. Geese are not wanted; Turkeys sell at 5@6c. ₩ lb. CATTLE have been in fair local demand and prices have made a slight recovery, ruling 10@15c higher than during the preceding week, and closing with a fair degree of firmness for butcher qualities, but dull for shipping lots. Fair to good shipping steers $4@4.60 per 100 lbs gross; good to choice butcher grades $3.75@4.50; fair to medium do. $2.75@3.50; common do, $2.00@2.50; good to extra fat cows and heifers $3.75@4.40; fair to good heavy oxen, $3@4.25; fair to good feeding grades $3.75@$4.40; common to good stockers; 2.50@3.50. SHEEP have ruled quiet at about steady prices during the week closing easy. Common to fair 2½@3½c, good to choice 3½@4½c per lb. Lambs have been in good supply but without much further reduction in prices, the market ruling quiet and easy to-day. Common to fair 3½@4½c. good to choice 5@6c ₩ lb.

Wool.

The Cincinnati Price Current of May 27th says:—Continued dullness in the Eastern markets and the inability of dealers here to realize on their recent purchases, or even cost on their early takings, is having a depressive effect on the market here, and prices have suffered a further decline of 2c per pound on fine, medium and delaine, fleece, washed and pulled Wool, and 1c on medium clothing, long combing and delaine unwashed. The offerings from producers have largely increased in Southern and Central Ohio, and in fact from nearly all sections tributary to this market. Dealers at present seem to be "all at sea" about the future course of the market. They did not expect to see prices go so low as they have done, and now there is nothing to prevent a further decline if manufacturers continue to hold off, as they seem disposed to do. Dealers seem to feel that they are working in the dark, but they are disposed to follow the market, trusting that the average cost will be low enough for a final outcome. They are carrying nearly all the stock which they have bought this season. Perhaps it is the best policy for manufacturers to pursue to let others carry the Wool until they want it, as the shrinkage is no inconsiderable item, but it is in marked contrast to the course they took last year. We give revised quotations.

Chicago.—The arrivals are rather light for the season and a quiet state of affairs exists both here and of other points. Asking rates from store for Eastern Iowa, Wisconsin, and Illinois wool ranges as follows: Tub-washed bright 50@55c ₩ lb; do. dingy and coarse 45@48c; fleece-washed medium 48@50c; do. fine 43@45c; do coarse 40@44c; unwashed medium 30@35c; do. coarse 26@30c; do. fine bright 25@28c; do. heavy 20@25c; buck's fleece 18@20c. Consignments from Western Iowa, Nebraska and Kansas sell at about 2c lb less than this range, and burry and poor conditioned lots at 3@5c less. Colorado wool (unassorted) is quoted at 28@32c ₩ lb for medium to fine; 25@27c for coarse to medium; at 25@26c for black, and at 22@24c for coarse carpet stock.

Fertilizers.

Bone at $23.50@$24.00 per short ton for Texas and South American mixed, and $25@27 do. for skin and shank. Sulphate of ammonia continues firm at 3¾@3¾c. per lb; some sales as high as 4c. have been made for the home market. Dried blood in good demand at $2.25@2.37½ per unit of ammonia for short ton. Tanking in request at $3@3.12½ per unit of ammonia, phosphates gratis, per short ton. Ammonite, azonitue, etc., in good demand at $2.62½@2.87½ per unit of ammonia respectively. Bone ash continues unchanged at $23@24 per short ton on the basis of 70 per cent phosphate of lime. No stock.

Nitrate of soda, 4¾c. Saltpetre, crude 6@6. The above are wholesale prices; at retail, goods are delivered at boat or cars at the following rates: pure ground bone 47 to 50 per cent. bone phosphate and 3 to 4 per cent. ammonia, $35@$40; dissolved bone black, 15 to 17 per cent. of soluble phosphoric acid $30@$35; dissolved bone 13 to 14 per cent. of available phosphoric acid $30; ammoniated superphosphate 10 to 11 per cent. of soluble phosphoric acid, 3 per cent. of potash, 3 per cent. of ammonia, $40@$45; German potash salts, 25 per cent. of sulphate of potash, $15@$18 per ton; muriate of potash, 80 percent. 2@2½c per lb. land plaster 7.50; dried blood, 10 per cent of ammonia, $35@45 per ton; fish guano dry and ground fine, 10 to 11 per cent of ammonia, 20 per cent of available bone phosphate, $40@45; fish guano, 8 per cent of ammonia, $45; unground fish guano, 6 per cent of ammonia, $25; castor pomace; $19@24: sulphate of soda, ground, and in barrels, $15@18 per ton; sulphate of ammonia 4½c. ₩ lb; bone black, 70 per

cent of bone phosphate, $30@32; ground South Carolina phosphate, 57 to 60 per cent of bone phosphate, $20 per ton; No.1 Peruvian guano, 10 per cent ammonia, standard, $55 per ton; Lobos $46 per ton; rectified $65 per ton; guaranteed $56 per ton; nitrate of soda, 5¼@5¾ ₩ lb.

FORRESTER'S potato manure, $47.50; cabbage, $50; oat, $17.50; lawn dressing, $47.50; turnip, $52; grass, $45; hop, $47.50; strawberry, $42.50; wheat, $45; rye, $47.50.

STOCKBRIDGE'S manures quoted: Potato, $50; cabbage, $50; strawberry, $40; corn $45; seeding down, $40; orange tree, $35; onion, $50—per ton each.

MAPES'S complete manures for clay soil, $25.50 per 1,000 lbs.; for light soils $25.50 per 1,000 lbs.; "A" brand for general use, $20 per 1,000 lbs.; fruit and vine, $18.50 per 1,000 lbs.; cabbage and cauliflower, $23.75 per 1,000 lbs.; corn, $24.50 per 1,000 lbs.; potato, $24 per 1,000 lbs.; asparagus, $25.50 per 1,000 lbs.; gypsum, Nova Scotia, ground, ₩ ton, $7.50.

BOWKER'S "Hill and Drill Phosphate" $45; Bowker's Phosphate $40 ₩ ton, each; Bowker's "Food for Flowers," 35c. ₩ package and $3 ₩ doz.; Bowker's "animal meal for fowls," $2 50 per cwt.; Ground oyster shells, $1 ₩ cwt.

BAUGH & SONS' prices for goods delivered at depot or boat, in bags and in 2,000 lb lots: Ammoniated dissolved bones, $35; pure bone meal, from raw bones, $36; Baugh's raw bone superphosphate $40; Baugh's $35 phosphate, $25; Baugh's A. A. nitrogen, 13½ per cent. of ammonia, $48.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, May 29, 1880.

BEANS AND PEAS.—Marrow beans continue to sell freely for export, and prices firm for all good shipping qualities. Mediums are quoted full, local wants very light. Pea and other fancy beans quiet. Green peas lower to sell. Southern B. E. peas as before. Marrow beans, prime, $1.62½@1.65; other, $1.50@1.60; medium, prime, $1.37½@1.40; other, $1.20@1.30; pea, $1.45@1.65; white kidney, $1.50@1.70; red kidney, $1.30@1.50 black, $2.

Receipts of beans for week, 1,360 bush.; exports, 2,825 pkgs.

BUTTER.—Receipts are immense and prices are weak from creamery to factory. Stock has shown badly owing to the severe weather. Ice is so high that it hardly pays to store much of the grade now arriving, and sellers let under or imperfect lots run out as they can. The demand is for fine, especially when 18@22c. is the general asking rate for prime table stock. Shippers have purchased liberally, and in fact make the ruling rates. We hear of a movement on the part of commission men to make a charge to their consignors for butter placed in cold storage. The price of ice has advanced so heavily this season that the cost of cooling and holding butter in cold storage is adjust to the commission merchant, and a division of expense would be proper.

Creamery, State, fancy, 22c.; State and Western, fine, 20@21c.; good to prime, 19@20c.; fair to good, 18@19c.; sweet cream, fine 21c.; fair to good, 18@19c.; State, firkins, choice yellow, 21@22c.; State, pails and hf. tubs, choice, 19@20c.; good to prime, 13@19c.; fair to good; 17@18c.; poor, 14@15c.; Welsh tubs, good to choice, 18@19c.; fair to good, 17@18c.; poor, 14@15c.; Western imitation creamery, 12@16c.; dairy, fresh, 16@17c.; good to prime 14@16c.; fair to good, 13@14c.; poor to fair, 12@13c.; Western factory, prime, 14c.; fair to good, 12@13c.; poor to fair, 10@12c.; Western, very poor, 8@9c.

CHEESE.—In the early portion of the week the market failed to respond to the higher country sales but later on demand becoming quite active prices gradually worked better and the market leaves off firm at 12½c. for the best factories. The shipments reach 54,300 boxes, which about absorb the receipts of the better grades.

Quotations are 12½c. for choice full cream; 11½@12c. for good and fine; 10½@11½c for fair Ohio factory flat at 12c. for full cream; 10½@11c. for fair and good lots.

Receipts for week, 40,000 boxes; exports, 50 000 do. Liverpool cable, new cheese, 71s. Steam, 35s. 6d.

BROOM CORN.—Trade is slack and prices unsettled. Latest prices are for brush and short broom, choice ₩ lb, 7@8c.; do., do., common to good 5@6½c.; hurl good to choice, 7@8c.; do. common to fair 5½@6½c.; red and crooked at 3@4c.

BEESWAX.—There is little doing with prices steady quoted at 24@25c. for Western and Southern.

Exports since June 1, '80 46,775 lbs.; same time last year 50,300.

COTTON.—The market is moderately active only and closed at for May, 11.33@11.36c.; June, 11.38@11 40c.; July, 11.56@11.57c.; August, 11 63@11.64c.; September, 11.23@11.24c.; October, 10.72@10 73c.; November, 10 52@10.54c.; December, 10 53@10.54c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	9¾	9¾	9¾
Strict ordinary	9 15-16	10 1-16	10 1-16
Good ordinary	10¼	10¼	10¼
Strict good do	10 13-16	10 15-16	10 15-16
Low middling	11 5-16	11 7-16	11 7-16
Strict low middling	11¼	11¼	11¼
Middling	11 11-16	11 13 16	11 13-16
Good middling	12 1 16	12 3-16	12 3-16
Strict good middling	12 5-16	12 7-16	12 7-16
Middling Fair	12 13-16	12 15-16	12 15-16
Fair	13 7-16	13 9-16	13 9-16

STAINED.

Good ordinary	8 15-16	Low middling	9-16
Strict good ordinary	9¾	Middling	11 3-16

DRIED FRUITS.—There is lis little life to the market, with prices generally unsettled and nominal.

Quotations are for N. C. apples, fair to good, at 7@8½c.; choice, at 8@9½c.; New York State quarters sliced at 7½@7¾c.; patent evaporated, in cases, choice at 14@15c.; good and prime 13½@14c.; evaporated, sliced at 12@13c. Evaporated peeled peaches, good to choice, at 16@18c.; North Carolina peeled choice, 16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c.; common at 10@12c.; unpeeled halves at 7@8c.; do, quarters at 6@6½c. Pitted cherries at 17@18c. Blackberries nominal at 13@13½c. Raspberries at 28@30c. Plums at 17@17½c.

Exports for week, 4,515 bbls. dried apples.

EGGS.—Receipts for week, 14,525 bbls.; do. last week, 15,025 do. The market has been neglected, owing to the detrimental effect of the unseasonably hot weather upon stock. Buyers are making very close treaties, and when anything like a wholesale trade is made, full assurances for losses are required. The outlook is bad for stored Western.

Near Points, 12½@12½c.; State and Penn., 12c.; Western fresh, 10½@11c.; Canadian, 11@11½c; poor to 8, 10c.; goose, 18@20c.

FRESH FRUITS.—Apples are only nominally quoted A feature of the season is a display at this late date of Spys kept without ice and turning out splendidly. Strawberries have not shown up well, the weather has been so dry. Parcels for distant points have met softening, hot weather, and the market has ruled low most of the week.

N. J., choice, per qt., 16@20c.; poor to good, 10@15c.; Del., choice, 14@16c; poor to good, 10@15c.; Md., choice, 17@18c.; poor to good, 8@11c.; Norfolk, 2@8c. Apples—Russet, choice, per bbl., $3.50@3.75; poor to good, $2.50@3. Cherries, choice, per lb., 11@15c.; fair to good, 10@12c.; common, 6@8c. Gooseberries, Md., per qt., 7@8c. Peanuts quiet and weak; Va. handpicked, 5¼@5½c.; extra prime, 4¾@5c.; good to prime, 4¼@4½c.; shelled, 5¼@5¾c., hickory nuts, 90c.@$1. Hot-house grapes, 1b. Hamburg, $1 per lb.

Exports of apples since Jan. 1, 87,950 bbls.; same time last year, 50,100 do.

FLOUR.—There are free sellers and prices weak at the decline quoted.

Latest prices are at $3.35@4.50 for inferior to strictly choice superfine State and Western; $4@4.40 for very poor to good extra State, odd lots and lines; $4 40@5.00 for good to very fancy do.; $4.00@4.45 for inferior to good shipping extra Western, and $4.45@5.00 for good to fancy shipping extra do.; inferior to very good white wheat extras, $4.60@5.35; very good to fancy do. at $5.35@6.50; red and amber winter wheat, inferior to fancy trade and family, at $4.40@6.25; round hoop Ohio, $4.40@5 00; and trade and family brands of do. at $5.10@6.50; St. Louis at $4.50@5.35 for inferior to good extra; $5.50@6.65 for good to very choice; Minnesota clear, very inferior to choice, at $4 00@5.85; Minnesota "straight," poor to fancy, at $5 10@7.00, and patent inferior to fancy at $6.50@8.50; unsound stock at from $2.25@5 00; city mill extra at $5.60@5.85 for good to choice West Indies; do. for England, $4.35@5.00 for very poor to fancy; do. trade and family extras, $6.00@6.75; do. for South America, $5.90@6.35; No. 2 at $2.35@3.50 for poor to very fancy.

Receipts for the week.		Jan. 1 to date	Cor. Per. last yr.
Flour, bbls	83,015	1,733,066	2,113 032
Wheat, bush	1,540 370	12,0 3,909	16,817,2 6
Corn	2,155,180	17,013,101	12,118 0 3
Oats	517,275	4,827,368	3,825,587
Grass seed	106	130,275	195,482
Rye	80,206	469,181	761,708
Barley		764,259	857,588
Malt	53,500	1,027,995	729,048
Cornmeal	2,370	28,573	62,516
Rice, pkgs	668	35,631	20,881
Exports for the week.			
Flour	63,617	1,228,760	1,410,512
Cornmeal, pk	3,633	76,385	75,230
Wheat, bush	1,465,758	19,079,021	18,026,676
Corn	1,042,583	14,260,829	12,412,587
Oats	2,483	27,405	281,995
Peas	11,000	209,265	178,764
Rice, pkgs	761	17,437	17,074

GRAIN.—In wheat there has been a good deal of excitement in No. 2 red, which has been cornered for this month's (May) delivery, and the extreme prices for the moment check export trade; other grades are fairly active: latest sales are of No. 1 white at $1.29@1.29½; do., May, at $1.29¾@1.29½; do., June, at $1.25¾@1.25½c.; ungraded white at $1.25@1.27½; No. 2 red at $1.40@1 42¾; do. May at $1.42@1.43; do. June at $1.26¾@1.27½; do. July at $1.16@1,16¾; do. August at $1.11½@1.12; ungraded red at $1.26@1.27; No. Northwest spring at $1.30@1 31; do., May, at $1.20. Rye at 95c, for Canada in bond. Corn has been active and fluctuating frequently; latest sales are of New York No. 2 at 54¾@55½c.; do., May, at 55c.; do., June, at 50¼c.; do., July, at 49½c.; New York steamer mixed at 54c.; ungraded mixed Western, 52½@55¼c.; No. 3 at 52½@53c.; yellow Western at 53@58c.; No. 2 white at 58c. Oats have been active and advancing, closing, however; weak; latest sales are of No. 1 white at 43½c.; No. 2 white at 45@45½c; No. 3 white at 43c; New York No. 1 at 46¼c.; New York No. 2 at 45@46½c.; do. June, at 40@40½c.; No. 3 at 41c.; ungraded white Western at 44@48c.; ungraded mixed Western at 42@45c.; white State at 46¾@48½c.; No. 2 Chicago quoted at 45c.; No. 2 July at 41c.

HAY AND STRAW.—The dry weather tends to give us very small supplies, as farmers are not willing to forward accumulations; prices are very strong.

Shipping hay quoted at 75@80c.; retail lots at 80@85c. for medium, and 95@$1.10 for better qualities; clover, 55@60. Straw at $1.05@1.15 for long rye; 65@70c. for short rye, and 50@60c. for oat.

Exports for week, 1,768 bales: since Jan. 1st, 41,500; same time last year, 25,350 do.

HOPS.—Brewers are buying more freely, and the market is strong at the prices current for several days. Quotations are for:

	Cents per lb.
New York, fancy	Nominal
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

OIL-CAKE.—Western is quoted at $32.25 per ton.

POULTRY AND GAME.—The call for dressed turkeys is light; steamers and hotels taking the principal parcels. A few fancy Vermont frozen have sold at 15c. Scalded fowls from distant points not wanted. City killers can now furnish good, showy stock, and it has the merit in warm weather of being fresh. With scarce ice the general market is weak.

Turkeys, choice small, on ice, 8@10c.; fair to good, frozen, 6@8c.; do., poor, 4@5c.; Phila., dry-picked, 8@10c.; capons, Phila. large, 20@22c.; small, 18@20c.; slips, 18@20c.; chickens, spring, Phila., large, ₩ lb., 33@35c.; roasting, small, 28@31c. Phila., dry-picked, 20@22c.; fowls, Phila., yearling, 13@14c.; Phila., dry-picked, 12@13c.; Jersey, good to prime, 11@12c.; State, good to prime, 10 @11c.; Western, good to prime, 10@11½c; poor to fair, 5@8c.; ducks, spring, large, ₩ lb., 30@35c.; Phila., dry-picked, —— squabs, white, ₩ doz., $1.75@2.00 dark, $1@1 25

Live poultry—Spring chickens plenty; generally sold by the pound at quotations. Fowls declined early in the week but are not very plenty to-day and rule steadier. Frozen turkeys being plenty, live might be kept at home for the present. Ducks dull; lower. Geese slow,

Chickens, spring, large, per lb., 24@25c; do., small, 22@23c.; fowls, Jersey, 11c.; Western, 10@10½c.; Southern, 9@10c.; roosters, old and young, 4@5c.; turkeys, mixed, 7@8c.; Southern, 6@7c.; ducks, Jersey, N. Y. & Pa., ₩ pair, 55@65c.; Western, 40@50c.; Southern, 40@45c.; geese, Jersey, $1.50@1.62; N. Y. & Pa., $1.25@1.37; Western, mixed, $1@1.12; Southern, 75c.@$1; pigeons, 25 45c.

Supplies of game are light, but the demand is unimportant. Bay snipe now included. Dowitch, $1.50 ₩ doz.; yellow-legged $1.75; sand, do., 50@60c.; Eng. snipe and plover, $2.25@2.50. Wild pigeons, 50@65c.; do., squab, 50@65c,

PROVISIONS.—Hog products have been unsettled and dull, closing at for pork, $10.30@10.95 for May; $10.85@10.95 for June; $10.95@11 for July; $11.05@11 10 for August; $11.05@11.15 for September, and $11.20@11.25 for October. Bacon at 6¾c. for long clear and 6¾c. for short clear. Beef—Extra India mess quoted at $17@19 for city and $17@19 for Philadelphia, and $10@10.50 for extra mess, and $9.50@10 for plain mess. Beef hams at $18@18.50. Lard—Western steam at $6.90 for spot June; $6.95 for July, and $6.97½@7 for August. Stearine at 8c. for city.

SEED.—Grass is quiet. Clover is quoted at 6¾@7c, and timothy at $2.65@2.75.

TOBACCO.—The market has been very quiet this week and shows no change in prices.

VEGETABLES.—Selections of old potatoes quoted at $1.75. Other lots have irregular rates down to $1 for useful. New in good demand.

Bermuda, ₩ bbl., $4 50@5.00; Chas. & Sav., Chill red, $3.50@4.00; early rose, $3.50@4.00; peerless, $3.00@3.50. Fla. $2 75@3.50; culls, $1@1.75. Garden truck has had a good demand when prime. Stale or wilted lots have no regular price. Tomatoes, Cha's. and Sav., ₩ cr., $1.50@2; Fla., $1@1.50; Bermuda, 50@60c.; cucumbers, Charleston and Savannah, $2@3; Fla., ₩ crate, 50c.@$1.50; string beans, Norf., ½ bbl. $3 75@4; N. C., bu. crate, $2 Sav. & Ch'n. per crate, $1.@1.50; green peas, Jersey, ₩ bbl., $3@3.50; Md. and Del., $1@3; asparagus, O. Bay, per doz. bch., $1.50@2; N. J., $1.25@1.50; turnips, Jersey, ₩ 100 bunches, $8; beets, Norf., $1@3; Jersey, $7@8; radishes, near-by, 75@87c.; round, 40@50c.; lettuce, per bbl., $1@1.50; cabbage, Norfolk $1.50@2.25; rhubarb, L. I. & Jersey, ₩ 100 bunches, $1@1.50; onions Bermuda, new, ₩ crate, $2@2.25.

WOOL.—Trade is dull and dragging; manufacturers being well supplied, and await the marketing of the new clips.

LIVE STOCK MARKETS

NEW YORK, Saturday, May 29, 1880.

BEEVES.—Receipts for week, 14,185 head; do. last week, 14,734 do. Butchers' wants have been moderate with weather that has forced consumers to the lightest description of diet, and the week has been a dull one. At the close there was rather more confidence displayed, nothing of importance remained in the yards. Light Texas stillers sold at 8¾c., to dress 56 lbs., and 50c. per head; Native stillers at 8¾@9c., to dress 56 lbs. Some of the cattle which were in last Tuesday night's wreck were sold as low as 8c., to dress 55lbs.; but from 8¼c. to 9¾c., to dress 56lbs. represents the general range for native corn-fed steers; Colorados sold at 8¼@9c., to dress 56 lbs., and a number of fat distillery-fed bulls at 3¾@4c., live weight.

COWS AND CALVES.—There is some increased demand for prime milkers, but not enough to invite heavy receipts, as special orders can be filled from near points. The range is $25@55,

VEAL CALVES—Dull and low, with unfavorable weather for retail small meats.

Live calves, Jersey and Bucks Co., choice, 5¼c.; prime, 5@5½c.; State, choice, 5@5¾c.; do. prime, 4¾@5c.; fair to good, 4@4¾c.; poor, 2¾@3½c.; Mt. Holly, fair to choice, 5@6c.; buttermilk, 2½@3c.

SHEEP AND LAMBS.—Receipts for week, 23,761 head; do. last week, 28,674 do. This market largely shared the dull tone of the live stock trade consequent upon the thermometer in the nineties. Sales were at 3¾@6c. for sheep; 4¼@5¾c. for some common yearlings; 6¾@7c. for Southern and Western lambs; 6¼@7¾c. for Pennsylvania do; and 7@8c for Jersey do. A carload of choice State wethers was delivered on contract at 6c.

SWINE.—Receipts for week, 25,628 head do. last week, 29,282 do. Packers have used up the entire offering and there is no recent quotation. Hogs, city dressed, State, light, 7@7½c.; 150 to 200 lbs., 6¾@7c.; city dressed, Western, 5¾@6c.

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Address 189 & 191 Water St.

DAY'S Kidney PAD

A CURE for the most prevalent and fatal diseases that afflict mankind **FOUND AT LAST.**

Internal medicines never did nor never can cure **KIDNEY DISEASE. STOP IT NOW:** apply Day's Kidney Pad **AT ONCE,** and be cured of all affections of the **Kidneys, Bladder and Urinary Organs.** It is the only treatment that will cure **NERVOUS AND PHYSICAL DEBILITY,** and that distressing complaint, **"BACK ACHE."** It will annually save many times its cost in medicines and plasters, which at best give but temporary relief. Sold by Druggists or sent by mail on receipt of price, $2. Our book, "How a Life Was Saved," giving a history of this new discovery and a large record of most remarkable cures, sent free. Write for it.

DAY KIDNEY PAD CO., Toledo, O.

A Cure for Foot Rot,

Best & Cheapest.

Buchan's Cresylic Sheep Dip prevents and cures the scab and all parasitic diseases of the skin.

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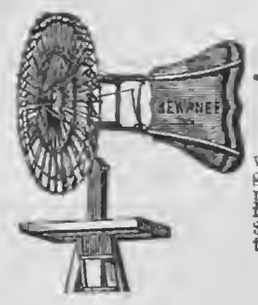

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Wind Mill.

New ten-foot diameter of wheel. One-horse power: elegant and durable; made expressly for raising water for farm and house uses. PRICE $50.00. Any person can set them up.

KEWANEE MF'G CO.
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$1000, REWARD

For any Washing Machine that will Wash Cleaner, Quicker, with Less Labor and Wear and Tear of Clothes than the

ROBBINS FAMILY WASHER AND BLEACHER, Pat'd Oct. 3, '71.

THE ORIGINAL AND ONLY PERFECT SELF-OPERATING WASHER IN THE WORLD.

No rubbing required. No more yellow clothes nor hard work on washing day. No more rubbing clothes full of holes. Seeing is believing, and if you will try it once you will never again wash without it nor use any other washing machine IT IS THE BEST IN THE WORLD, and will wash anything from a lace curtain to a horse blanket, and cannot get out of order.

Good Agents wanted, both Male and Female, to whom Liberal Inducements are offered. Agents can make from $10 to $100 per week.

INDISPUTABLE EVIDENCE.

It is now nearly a year since we made the above offer to the public; up to this date we have not had a single application for the money. During this time we have shipped thousands of our Washers to all classes of men and women in every State and Territory in the Union, and the universal verdict is, "It does all you claim for it." "We would not be without it at any price." "The longer we use it the better we like it," &c., &c. We have advertised extensively in nearly all the large and influential newspapers, which upon investigation have never failed to indorse us as well as our WASHER. In fact, we are so well known to the press generally, that we take pleasure in referring to the following prominent journals, all of which have given us flattering editorial mention, viz.:

New-York American Agriculturist.
New-York Weekly Sun.
New-York Weekly Witness.
New-York Weekly World.
New-York Weekly Tribune.
New-York Weekly Times.
Moore's Rural New-Yorker.
New-York Christian Advocate.
New-York Illustrated Christian Weekly.
New-York Christian at Work.
New-York Methodist.
New-York Baptist Weekly.
New York Cricket on the Hearth.
Rochester Rural Home.
Boston Weekly Globe,
Boston Youth's Companion,
Boston American Cultivator.
Brattleboro Household.
St. Louis Globe-Democrat.
St. Louis Journal of Agriculture.
St. Louis Christian,
St. Louis Observer,
Philadelphia Saturday Evening Post.
Baltimore American.
Chicago Inter-Ocean,
Chicago Standard.
Chicago Farmers' Review.
Chicago Prairie Farmer.
Cincinnati Gazette,
Cincinnati Star.
Cincinnati Times.
Cincinnati Herald and Presbyter.
Cincinnati Christian Standard.
Cincinnati Journal and Messenger.
Cincinnati Christian Review.
Dayton Religious Telescope.
Dayton Herald of Gospel Liberty.
Springfield Farm and Fireside.
Pittsburg Methodist Recorder.
Pittsburg Presbyterian Banner.
Detroit Free Press.
Detroit Post and Tribune.
Detroit Christian Herald.
Detroit Christian Advocate.
Toledo Blade.
New Orleans South-western Christian Advocate.
And many others.

When the newspaper reader considers the thousand things that appear in the advertising columns of his paper, set forth in the most glowing style—which too often, we regret to say, result in great disappointment, not to say disgust, to those who answer them—we cannot but expect that there are thousands who would look upon us and our statements with considerable doubt and incredulity, were it not for the fact that the evidence we offer is unparalleled in the history of advertising. Would the papers we name lend their influence to deceive and injure their readers? Besides the testimony of the press, we have thousands of commendatory letters, many of which we have from time to time published in our advertisements.

If you want good paying employment, send for a sample Washer; try it first, and then go to work canvassing your neighbors. You can soon build up a good, profitable business. If you want to lessen the labors of your mother or wife, send for one, and, above all, if you want clean and snowy-white linen, send for one. A trial will more than satisfy you.

No. 1 works in boiler holding 10 to 15 gallons. No. 2 works in boiler holding 15 to 25 gallons. Price No. 1 $3.50; Price No. 2 $5.00.

WE SEND SINGLE OR SAMPLE No. 1 WASHERS, PREPAID, TO YOUR NEAREST RAILWAY EXPRESS OFFICE, in any part of the United States east of the Mississippi and Missouri Rivers, also in Kansas and Nebraska, for $3.50. West of that line as follows, viz.: In Dakota, at Bismarck or Yankton; in Wyoming, at Cheyenne; in Louisiana, at New Orleans; in Arkansas, at Little Rock and Texarkana; in Texas, at Denison or Sherman, for $3.50; in California, at San Francisco, Sacramento, Marysville and San Jose; in Colorado, at Denver and Pueblo, and in Utah, at Ogden, for $4; in Idaho, at Franklin City, and in Texas, at Corsicana, for $4.50; in New Mexico, at Santa Fe or Las Vegas, for $5. Our reason for so doing is to induce people to investigate this matter, feeling assured that a trial will secure an agent for us.

Send for sample and secure A BUSINESS THAT WILL PAY YOU WELL.

When you order or write, mention this paper. Address,

BISSELL MANUFACTURING CO.,
50 BARCLAY ST., NEW YORK.

FOR A DESCRIPTION OF THE WASHER AND BLEACHER SEE OUR ISSUE OF MAY 8TH.

Reading for the Young.

HINTS FOR THE MEMBERS OF THE HORTICULTURAL CLUB.

THE very warm weather, which has lately visited nearly all parts of the country, will naturally tend to curb the activity of young horticulturists, and garden work will perhaps be pursued with less ardor than in early spring. But, whatever your inclination may be, there are two conditions indispensible to successful gardening, which you must not lose sight of; namely, the plants should have, first, the necessary supply of water, and second, clean culture. I place the condition of water first, because upon it depends all plant growth. Sahara would not be a desert if it had a rich supply of water. Those of you who live in portions of the country liable to suffer from drought, know from experience how necessary water is to plant life, while others, who live in sections where the crops are seldom stunted for want of rain, may not be so familiar with this fact. But what I mean to say now is, that, if necessary, you must water your garden crops. Water diligently and thoroughly, if rain should fail you. But even the mere task of giving a plant water is something of an art that must be learned before one can do it nicely. It is hard work to carry water, and it should therefore be applied in such a way that it may do the most good. I have sometimes seen people pour a pail of water over a plant in a manner that caused more harm than good. The water would run away in long snakes in all directions, hardly wetting the ground, and, by the violence with which it was thrown on, several leaves or even branches would sometimes be broken. First loosen the ground about the plant as deeply as can be done without injuring the roots, and then, at a little distance from the stem, make a circular basin round the plant with the hand or with a trowel and pour the water gently into this.

Water thoroughly; fill up the basin about the same plant two or three times, as fast as the soil can absorb the water, till the roots are thoroughly soaked, and when finished, level the ground again as it was before you began. One such good soaking every three or four days in dry weather is much better than a superficial spattering every day, and less troublesome. Of course, on a large scale so much care cannot be exercised in the work, but in small gardens, like those of the members of the club, this is the best way to proceed.

Now as to clean culture. No cultivated plant can do well when surrounded by weeds, and no good cultivator will tolerate them. They not only interfere more or less with its growth by smothering it, but they live at the expense of the cultivated plant by absorbing the moisture and nourishment which belong to it. This is the season for weeds. Be watchful, therefore, that they do not get the start of you. Use the hoe and rake vigorously in your gardens. It will give you a healthful exercise, develop muscle, and each faithful worker will enjoy the exquisite satisfaction that a cleanly hoed garden, full of thriving, promising, petted plants, always gives to its possessor.

UNCLE MARK.

REMINISCENCES OF A LITTLE GIRL.

MRS. M. J. GALPIN.

CHAPTER VIII.

WE will now follow the fortunes of Uncle Tom and wife, after their departure from the Lakes, as they wandered here and there with the surveying expedition. Sometimes they went through lovely valleys that would remind one of the beauties described in "Rasselas Happy Valley," and anon over precipitous and frowning mountains, whose summits reminded one of the poetic lines, "Skylark never warbled o'er." Dashing cascades, rippling streams and laughing brooks interspersed themselves along the route, cheering or awing them by turns. But all things have an end, and so had this ordinance survey. After months of hardship and work they at last returned to their starting point, the city of Athlone, and here, one stormy night, when the wind howled in unabated fury and the elements seemed determined on settling all their differences, our little heroine put in an appearance in the home of Uncle Tom. She was a wonderful baby. A crop of silky, silver hair adorned her head, and her eyes looked like violets peeping from beneath the snow. She gave good evidence of being hearty by the exemplary manner in which she used her lungs, to the demoralization of Uncle Tom, who was afraid that there was something wrong with the precious child. She was a living curiosity to him, and even to the hour of his death he worshipped and idolized her. He was but twenty years old at her birth. The child was named Therese after one of his sisters, who had always been his favorite. Uncle Tom had now a good, lucrative profession, so that he no longer dreaded the wolf of hunger at his door, and so happy was he in watching the development of the little Therese, that he felt his heart full of love to all mankind. There's nothing in the household like a baby. It will serve to bind hearts together that otherwise might grow estranged.

Well, this wonderful baby grew and thrived like most other healthy babies. But when about two and a half years old she was taken with that dread disease, the small pox. For days the little life fluttered in the balance, but a pure, strong constitution carried her safely through the danger, and she recovered, although nearly every little one smitten in their street died of the fell disease. About this time Mrs. Silk sent for her oldest child, the little Katy we have previously spoken of. She became ardently attached to her baby sister, and all through their lives up to the present time, that love has stood the test of absence, sorrow and all else combined that fall to the lot of mortals on this mundane sphere. When Therese was about three years old her parents moved from Athlone to Maryborough, as a better position was here offered to Uncle Tom. Upon his arrival at that place he leased a pretty cottage which became their home. It is useless to think of buying a home in Ireland as we do in America. There all the land belongs to the "crown."

Our heroine was now in her element. The garden was full of flowers, and one white Moss-rose was her especial favorite. A noble Ash tree stood on one side of the garden gate, one of whose gigantic limbs supported a splendid swing, where Katy and the little Therese used to enjoy themselves by the hour, mornings and evenings, swinging to their hearts content. Uncle Tom had changed his given name to Peter, in order to elude pursuit and persecution. But when the Methodists, with whom he had united, found out that he was a turn-coat priest, they commenced orthodox persecution. Men who owed Uncle Tom for surveying failed to pay him, reverses followed so that his soul was once more enveloped in gloom. He was at this time, too, suffering from asthma and unfit to do anything. The rent was remiss, and the landlord, being a "good Christian," served a writ of ejectment on him. A *posse* of police was sent to throw the family out and leave them to starve or to die as they might. You see, in those benighted days people could be thrown into jail for debt if the creditors saw fit.

In this case the police shrank from the task; but some of the persecutors ran up the stairs like demons, and seizing Uncle Tom who was lying helpless in an easy chair, they proceeded to haul him off. At the sight of this the police grew indignant and threatened to arrest any man who did not leave him alone. Others proceeded to throw out the furniture, but Aunt Katy quietly took an old blunderbuss from the closet which so frightened them that they ran away. The joke of it was that the blunderbuss was unloaded, and had an old rusty lock that no amount of oil could make work.

Little Katy, meanwhile, watched her chance and as the minister was on the stairs haranguing the police (a minister was among the persecutors) she came with full force against him, tumbling him from the top to the bottom of the steps, where he lay in an ignominious heap, too thoroughly demoralized to make further trouble. The police, now completely aroused, cleared the rabble away, and in the name of the law placed a guard round the house, so that outsiders could not get in, nor Uncle Tom and family get out. They were virtually prisoners for debt, but the Lord of Hosts raised them up friends in the midst of their tribulations. The attending physician proved himself to be a noble man at heart, and came forward to the rescue of the unfortunates, paying their rent and giving medical attendance free of charge. When the demands of the law were satisfied, there was nothing farther left for enmity to do, except to worry them. Uncle Tom was sick for weeks, owing to the prostration brought on by the excitement. Not long after this persecution the chief leaders of it came to grief. The ungodly minister was detected in grave misdemeanors, and dismissed in disgrace from the church. Others of the leaders were similarly troubled. One of the chief miscreants was afflicted with a loathsome disease, and he died in the greatest agony. These facts involuntarily call to mind our Savior's words, "that vengeance is mine saith the Lord, and I will repay."

I have dwelt so long on these scenes, that I will now let our heroine take another chapter. During all these troubles that fell on her parents she clung to them with child-like love, not knowing or understanding their import. What a blessing it is that we all have a guileless childhood to look back to in after years. How I wish that the trustfulness and grace of childhood might forever remain, like a halo of light, to crown the closing years of our chequered and fading life. I would transpose Tom Moore and say:

"You may break, you may ruin the heart if you will,
But the charm of our childhood will cling round it still."

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I received some seeds some time ago from the Free Seed Distribution and I am very thankful that I am considered a "cousin." I received a Gladiolus bulb last year, but just as it was coming in bloom some one stepped on it, and broke it off completely, but I have saved the bulb and planted it this year. I received the radish seed and corn also and we enjoyed the radishes very much. I planted Pansy seed last year but they didn't bloom. I bought more seed this spring and have started it in boxes also the seed you sent me. Will Pansies remain in the ground through the winter? What plants are the best for a rockery? Wishing all the cousins success, I remain your loving niece.

Monmouth Co., N. J. NELLIE PREST.

[Pansies will remain in the open ground during the winter without much injury, but it is not the best possible way to keep them. A better way is to sow the seed in August in a seed bed, and when they are so large that they can be transplanted, set them two inches apart each way in an open frame. When cold weather sets in a sash should be put over them, but on sunny days it should be raised a few inches to prevent the air underneath from getting too hot, and on mild days toward spring it may be entirely removed. Thus you will have fine plants to set out on the flower beds early in the season. Only the young plants should be wintered this way, unless it is desired to have flowers very early in the spring; then some old plants may be taken up in the fall and kept in cold frames during the winter. On the flower bed Pansies should be planted close together in clumps. It is a plant that does not spread very much, and a few straggling specimens with the naked ground visible between is not a very inspiring sight, but when the plants stand so close together that they form one mass of rich bloom the effect is very pretty.

The following plants are suitable for a rockery The Checkerberry, Mitchella repens, the flowers are fragrant and the fruit of a bright red color; the Partridgeberry, Gaultheria procumbens; the Anemone, Hepatica triloba, and the Rue-leaved Anemone, Thalictrum anemonoides; the wild Strawberry, several species of the Bellflower, Campanula; several kinds of Stone-crop, Sedum; Mountain Pink, Dianthus montanus; Money Wort, Lysimachia nummularia; Lobelia speciosa, and many more. Many of the plants in common cultivation in the garden will do very well in a rockery.—U. M.]

UNCLE MARK AND RURAL COUSINS:—How do you all do? I am afraid that you are not very well to judge by the looks of our letter column. Our winter school has been out some time. I have a few house plants this winter. I have a Calla which is real thrifty; it has had two blossoms on it. I also have an Abutilon and a Fuchsia which have had flowers on, and my Rose Geranium has buds on it. I have a white Fuchsia which I have had about a year and which is three feet tall. I have not cut it back, because I expected it to blossom. I thank you for the seeds, and I will write presently and tell you of my success. With this I remain yours truly, CLARA A. MEAKER.

Broome Co., N. Y.

DEAR UNCLE MARK:—I live in Delaware County, Iowa, where the No. 1 butter was made that took the first premium at the world's fair held in Philadelphia. We take the RURAL and like it ever so much. I would like to join the Horticultural Club. I am 14 years old, have a brother 12, a sister nine and a little shaver of a brother four years old. We have a very good garden and a few flowers. My brother Frank likes to play with the calves, and yoke them up. Nellie has a few flowers in the yard and she hopes to get more. WM. S. CHILDS.

Delaware Co., Iowa.

DEAR UNCLE MARK:—My papa takes the RURAL, and the letters which have been written by the young folks are so interesting that I thought I would ask permission to join your club. I have a bed of Strawberries which my father gave me. I love flowers very much, and I love to work in the garden. I have peas planted and lettuce. I would be glad to have some of your seeds, if I am not too late. As this is my first, I will close with love to all the cousins. ALLIE PIERSON.

East Orange Junction, N. J.

DEAR UNCLE MARK:—I would like to join the Horticultural Club. I have got a little garden all to myself in which I grow Lady Slippers, Four O'clocks, China Asters, Zinnias, Nemophilas and other things, and I have also three kinds of foliage plants. My pet is a hen that will let me stroke her when I please, and will eat from my hand. I am ten years of age, but I have not been to school more than three months in two years because I have been sick. This is my first letter.

New Haven, Conn. EDDIE C. JONES.

The Puzzler.

HIDDEN MINERALS.

1. It is just one o'clock.
2. Wear a frock coat.
3. It is late at night.
4. Poor Remar bled terribly.
5. Mag ran it easy.
6. It is Andrew.
7. Ella vaulted from her pony.
8. Don't let music lay round so.
9. Give me a quart, Zillah.
10. The thorn blended with the rose.
11. His address is Otho Gasteld, Sparta.
12. Tom, I cannot go.
13. How grave Lewis seems.
14. Philip Ebble stands it well.
15. He forgot his part.
16. Adam, Anthony, Aaron.
17. Push a levy this way.
18. That rap is at our door.
19. Mrs T. Alconda has arrived.

☞ Answer in two weeks. LITTLE ONE.

HALF SQUARE.

1, A fine deep-red ochre; 2, a genus of birds; 3, in the middle; 4, an apsis; 5, procured; 6, a prefix; 7, a letter. GUS.

☞ Answer in two weeks.

A NAME PUZZLE.

Place three male names so as to form a fourth.

☞ Answer in two weeks. L. O.

PUZZLER ANSWERS.—May 15.

HIDDEN COLORS.—1. Scarlet; 2, crimson; 3, red; 4, gray; 5, roan; 6, dun; 7, black; 8, white; 9, green; 10, purple; 11, blue; 12, mazarine; 13, magenta; 14, yellow; 15, pink; 16, crystal; 17, drab; 18, brown; 19, violet; 20, lilac; 21, vermilion; 22, bay; 23, tan; 24, salmon; 25, mauve; 26, corn color; 27, amber; 28, ruby; 29, maroon.

HALF SQUARE:

E S T O P I L L A
S P O R A D E S
T O N G U E D
O R G A N S
P A U N E
I D E S
L E D
L S
A

Various.

BRIEFLETS.

MR. IDELL says that the Leconte finds no sale in the N. Y. market. It is a second-rate pear, and, although Mr. Parry quoted them at $4.50 per bushel, he found plenty that sold for half that amount....A writer in the N. Y. Tribune says that an inventive genius filled a small tarlton sack with a spoonful of cayenne pepper and tacked it over a rat-hole. When the rat bounced out his eyes were peppered by the siftings from the shaken sack. He squeeled like a pig and escaped. The whole tribe have since migrated....So soon as fairly tried, we wish our readers would tell us how they value London purple as compared with Paris-green. ....We are using the former for the potato beetle and prefer it to the latter....Barbed-wire fences. We should be glad to hear from our readers who have tried them, how well or ill they are pleased....Mr. Bishop says: "Probably one acre of tobacco costs as much as about eight acres of corn, as it depends upon contingencies to which corn is not so liable. At best it must be expensively raised, for cheap tobacco will not pay....Mr. Conover puts the dairy belt as lying between the 40th and 45th parallels....If the proprietor of a farm is too indolent to take an interest in his business and to properly guide his hired men, can it reasonably be expected that the hired men will give him their best services? Lazy farm-owners are the most fault-finding and dissatisfied of men....By the aid of the electric light, it is supposed that fruits and flowers of all sorts can be grown to order in from one minute to an hour. It will not be difficult to raise strawberries weighing a ton, watermelons a mile long, etc....Mr. Parry once upon a time imported over three hundred varieties of Pears from France and cared for them tenderly, but failed in the matter of profit, although the list included those sorts most esteemed for high flavor, rich and delicious qualities....He had heard prominent horticulturists—those to whom we commonly look for instruction—say that "high flavor" should be first and profit second in consideration. But he had learned from sad experience that fruit which cannot be grown at a profit will not be much grown for market. Wherefore, friends, let us plant Wilson Strawberries, Thwack Raspberries, Curculio-proof Plums, and blight-proof Pears! ....If there is one thing that Mr. Quinn despises more than all others it is dwarf Pears....

A NEW FIBER PLANT.—The American Consul at Vera Cruz calls attention to a new plant of this sort, a species of Cactus, commonly known as Pita. Some of the fibers are 16 feet long, strong and silky, and capable of minute sub-division. The plant grows wild and there are millions of acres of it. Strong and extremely beautiful handkerchiefs, more like silver tissue than linen, have been woven from specimens of the fiber sent to England. Maybe this will turn out a valuable addition to our fiber plants—but how about the exalted hopes entertained a dozen years ago of ramie?

CATALOGUES, ETC., RECEIVED.

REPORT OF THE BOARD OF COMMISSIONERS of the Seventh Cincinnati Industrial Exposition 1879—a volume of 408 pages.

LIST of Premiums offered by New York Horticultural Society for the Summer Exhibition, to be held in the new Metropolitan Concert Hall, on the corner of 41st Street and Broadway, on the 16th, 17th and 18th of June, 1880.

THE NATIONAL PRESS, a Monthly in the interests of the cider trade, published by Geo. B. Boomer, 15 Park Row, N. Y. This is a bright little periodical of eight pages, costing 50c. a year, and the standing of its owners as among the best experts in practical cider making, bespeaks for it a large circulation among those interested in this industry. We wish it all the success it is sure to deserve.

OHIO. POLAND CHINA RECORD.—This very handsomely gotten up work of 368 pages, strongly and neatly bound in cloth, is prefaced by a full history of the origin and spread of this fine breed of swine; after which comes an account of the chief herds of the breed, followed by the pedigrees of 293 boars and 738 sows. The work is published and for sale by Peter G. Thompson, Arcade Book Store, No. 179 Vine St. Cincinnati, O. Price $3.

REPORT UPON THE COTTON INSECTS. This exhaustive report was prepared under the direction of the Coms. of Agriculture, by J. Henry Comstock, Entomologist to the Dept. of Agriculture. The greater part of the materials for this compilation of 511 pages were collected under the direction of Prof. C. V. Riley, as Entomologist of the Agricultural Department, previous to the appointment of Prof. J. Henry Comstock to the position on May 1st 1879. The latter, however, has systematically arranged the mass of collected information, added materially to it, drawn conclusions from it, and, in short, very efficiently edited the work, which gives all the information at present known with regard to the cotton worm and its doings. We shall probably take occasion, later on, to refer more at large to the contents of this volume, and meanwhile advise our friends in the cotton belt to apply for a copy of this work on a topic of much importance to their interests.

PERSONAL ITEMS.

Senator Gordon of Georgia, has resigned his seat in the United States Senate, and Ex-Governor Brown, of war notoriety, has been appointed in his place.

Alexander Dumas's fortune is estimated at $500,000, outside of his art collection, worth nearly as much. Every penny of it he has derived from his literary labors.

It is intimated by a Ga. paper that General Longstreet, our new ambassador to Turkey, will take special pains, while at Constantinople, to induce the Sultan to buy a farm in Georgia and move over.

Mr. Gladstone at the Royal Academy dinner observed to Lord Derby, who sat next to him, in a tone which was perhaps intended to be, certainly was, overheard, that he did not propose to retain the Premiership longer than eighteen months.

An enterprising member of the St. Louis Dental Association has discovered that George Washington wore a set of false teeth that cost him $500, though a much better set can now be had for $50. The teeth were made of ivory blocks, set on a gold plate.

On April 3 Mr. Vennor wrote from Montreal to a New York contemporary: "May in New York will be cold and wet, and same up to the middle of June." There have been two slight showers in twenty-eight days, and the month averages the hottest May on record. So much for Vennorian vacticinations!

Lord Ripon, the new Viceroy of India, known here in connection with the Geneva Award arbitration, is one of the few Roman Catholic noblemen who did not swerve from the Whigs during the reign of Lord Beaconsfield. The Indian Vice-royalty is generally regarded as a poor peer's prize, and he is probably the wealthiest man in point of hereditary wealth who ever held the office. He has but one child, Earl de Grey, who, as well as Lady Ripon, is a Protestant. Lady Ripon is held deservedly in the highest estimation, and will be likely to have a good influence on social life in India, which by all accounts stands much in need of it.

"Growing Young Again."

A gentleman, the cashier of a Western bank, who had used Compound Oxygen for a little over a month, says in a letter: "I gained eight pounds while I was taking it, and almost began to think that I was growing young again. As I had no distinct ailment, *but only a general sense of good-for-nothingness accompanied by extreme nervousness and an inability to sleep long at a time*, my case is not so striking as many others which I have read of in your pamphlet; but there must be multitudes in my condition who would use your preparation gladly if they knew of it." Our Treatise on Compound Oxygen, which is sent free, contains a large amount of information in regard to this new treatment. Address Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia.

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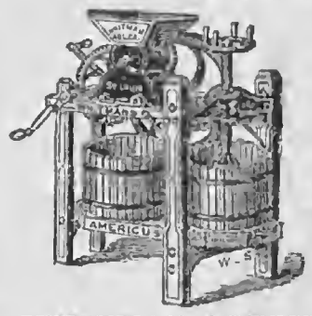

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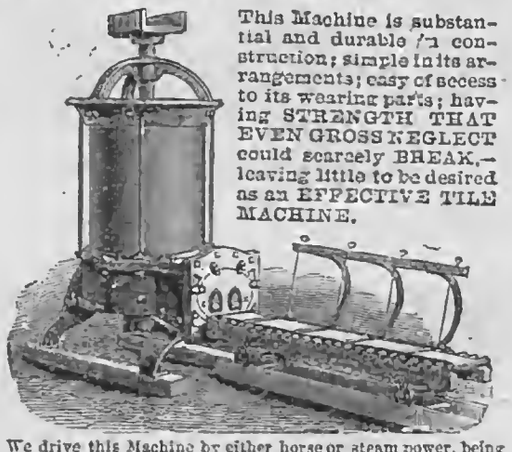

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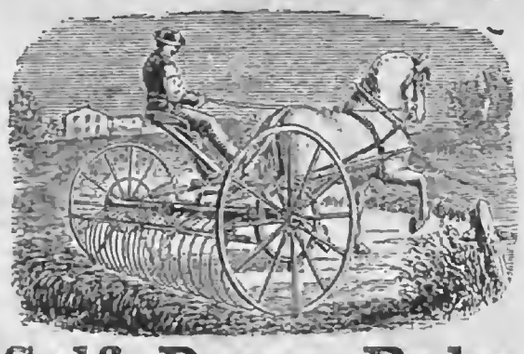

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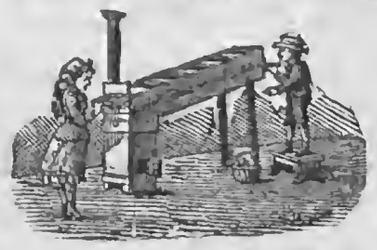

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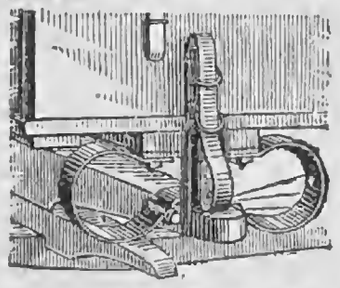

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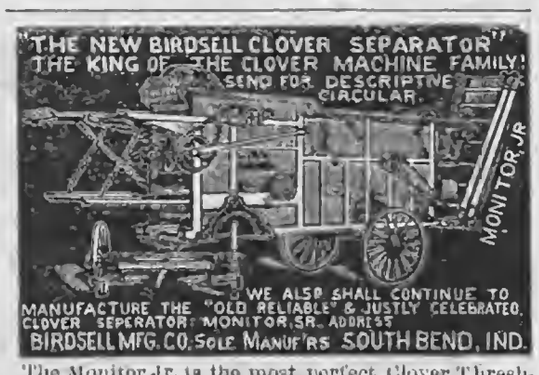

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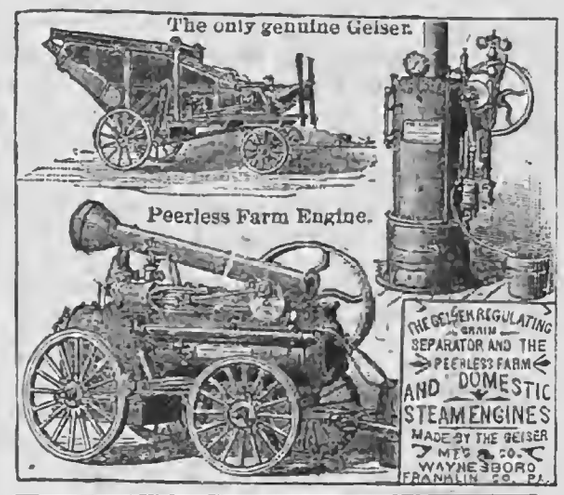

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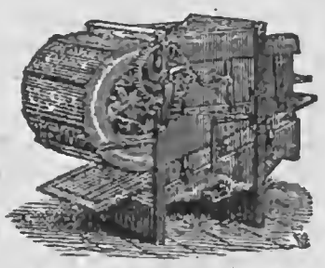

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Surpasses all others in quantity and quality of butter made. It secures matured and ripened cream, which makes butter of the best texture, flavor, and of unequaled keeping quality. It excludes flies, dust and odors; is constantly at the correct temperature (58° to 60°); has room for the cream and butter, and saves three-fourths the labor. It can be used with either ice or water, and both summer and winter.

THE FERGUSON CONCUSSION CHURN is the best. It combines scientific principles with the best labor saving devices. No floats or paddles. Brings the butter in granular form; and secures the largest yield. Before buying any other **Churn or Creamer;** or any pans, or cans, send for large illustrated circular to **THE FERGUSON MF'G CO., Burlington, Vt.** Reliable Agents Wanted.

Humorous.

"Good morning, Patrick; you have got a new coat at last, but it seems to fit you rather too much." "Och, there's nothing surprising in that; sure I wasn't there when I was measured for it."

Demand and supply average up pretty well after all. Although paper has doubled in price, the country publisher has the satisfaction of knowing that his old clothes would bring more at the rag-man's.

When, upon inquiry after a young lady's health, we learn from her own lips that she is "nicely," we know that she was born in New England, and that she would be "purty well" out West and "tolerable" in the South.

"What! twenty-five cents a pound for sausages. Why I can get 'em down at Schmidt's for twenty cents." "Vell, den, vy didn't yer?" "'Cause Schmidt is out of 'em." "Vell, den, uv I was owit of 'em I sell 'em for twenty cents, too."

Mistress—"Who were you talking to, Jane?" Cook—"Only my eldest brother, mum. He's—he's in the perliee." Mistress—"Indeed! What is his name?" Cook—"John Smith, mum." Mistress—"But your name is not Smith." Cook—"No, mum; but you see, he's—he's bin married!"

Professional pomposity is well taken off in the following anecdote:—Shields doctor (looking learned and speaking slowly): "Well, mariner, which tooth do you want extracted? Is it the molar, or incisor?" Jack (short and sharp: "It is in the upper tier, on the larboard side. Bear a hand, you swab, for it is nipping my jaw like a lobster!"

Street letter boxes are somewhat new in Georgia, and the police have a great deal of trouble in keeping them in their places. A countryman came into Macon the other day and wanted to feed his horse. Not seeing a box convenient, he tore off the top of one of the post-office boxes and fed his horse in it.

An uptown jeweller hung a watch in his window and labelled it "Look at this watch for $10," and the unsophisticated gentleman from Africa who stared at the article and then went in and wanted the $10, had to get down on the floor with the jeweller and roll over and under him a number of times before he could be made to understand that he couldn't have any $10.—*Boston Post.*

Check the First Approach

Of rheumatism, and further attacks may be escaped, if proper precautions against exposure are taken, and there be no hereditary predisposition. Unfortunately, people who ultimately become chronic sufferers, too often neglect the trifling twinges and premonitory stiffness which herald the advent of this agonizing malady. Among the diseases for which Hostetter's Bitters has been found efficacious this is one, and the medicine being perfectly safe, it is certainly to be preferred to drugs used for its cure, which are frequently useless, and nothing more nor less than poisonous. The substitution of this pleasant and pure blood depurent for medicines inimical to life in a slight overdose, is a measure which may fitly be urged upon persons who desire to obtain relief safely, or who have failed to obtain it from the numerous pseudo remedies for this disease in the market.

OTHELLO AS HE APPEARED AFTER DESDEMONA'S FIRST KISS.

ESTABLISHED 1864. C. GILBERT'S STARCHES ARE ABSOLUTELY PURE.

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Grain Threshers unequaled in capacity for Separating and Cleaning. Combined Grain and Clover Threshers, fully equal to regular Grain Machines on grain, and a genuine Clover Huller in addition. Engines! Positively the most desirable for lightness, economy, power and safety. Boiler has horizontal tubes, and is therefore free from the objectional features of vertical boilers. Horse Powers: Both Lever and Endless Chain. All sizes. Mention this paper and address

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RECTANGULAR & SQUARE BOX CHURNS.

Cheapest and best. No inside fixtures, and *always reliable.* Six sizes of each kind made. Three sizes of the Lever Butter Worker made. Best material used and every Churn and Butter Worker *warranted* exactly as represented. One Churn at wholesale where we have no Agent. *Send Postal for Circulars.*

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We have perfected a *radical* and *valuable* improvement in our celebrated Churn, which needs but to be seen to be appreciated. Now offered for the first time to the dairy public.

It received the HIGHEST PREMIUM at the International Dairy Fair in New York City, in competition with all the leading churns in the market.

Nine sizes made, churning from one to one hundred gallons. Warranted to be exactly as represented.

Send to any dealer in REALLY first-class Farm and Dairy Implements for a Descriptive Circular of "THE NEW BLANCHARD CHURN," or to the Sole Manufacturers, PORTER BLANCHARD'S SONS, Concord, N. H.

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Patent spark-arresting Farm and Dairy Engines of all sizes, from 2 to 12 horse-power, mounted or unmounted. Warranted to be the Best and Cheapest engines made. Prices from $150 upwards. Send for Illustrated Catalogue "A" which will give you full information and prices to

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52 Gold, Crystal Lace, Perfumed & Chromo Cards name in Gold and Jet, 10c. CLINTON & BRO., Clintonville, Ct.

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Is the only successful String Binder yet produced. This Machine has been thoroughly and successfully tested for three years, and is

NOW ON THE MARKET.

The following from the Rural New-Yorker, of July 26th, 1879, is a brief description of its operation:

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THE BINDER WORKED TO PERFECTION

throwing off the bundles well bound and in good shape.

The size of the bundles is gauged by a foot lever, which is at all times under the control of the driver.

The machine is light, well constructed and easily handled and it would seem to be an event decided in advance that the sales will be large."

THE JOHNSTON HARVESTER CO.'S STRING BINDER.

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. XXXIX. No. 24. Whole No. 1585. | NEW YORK, JUNE 12, 1880. | Price Five Cents. $2.00 Per Year.

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Biographical.

PROFESSOR WILLIAM JAMES BEAL.

BY CHARLES W. GARFIELD, M. S.

The name of Professor W. J. Beal is familiarly associated with the horticultural literature of the past decade. Every week some contribution from his ready pen finds its way into papers devoted to rural interests. Having always been a keen observer of nature, he has a mind stored with facts that are of general interest, and as he writes them out in his modest style, the constant surprise of the reader is, that the things treated and the facts stated are not observed by everybody, because of their commonness and simplicity. Prof. Beal's life and education have been admirably suited to his preparation for the work he is now doing.

Wm. J. Beal is of Quaker parentage, and was born March 11, 1833, near Adrian, Lenawee County, Michigan. His father was a farmer, and William as a lad upon the farm early showed signs of the peculiar bent of mind which resulted in his choice of Natural History as a field for his special life-work. As a schoolboy he was a favorite, because of his knowledge of all the peculiarities of the neighborhood and his inventive genius which brought out contrivances for the amusement of his school-fellows and assistance in their games and plans. From the common school he went to the Raisin Valley Seminary. His earnest advocacy of the labor system in Agricultural Colleges, did not originate in any admiration for a similiar system practiced at this Seminary, for, it is said, he entertained as a student a wholesome dislike for it there. His knowledge of the trees, the plants, the stones, and the animals of the vicinity, made him a leader in this second stage of his education. From this Seminary he went to the Michigan University, taking the degree of Bachelor of Arts in 1859 His college education was "worked on." Having very little means to assist him in his course, he had recourse to a variety of alternatives to secure the necessary funds for his support. He worked on the farm, taught country school, and occasionally resorted to the vigorous driving of the buck-saw in the streets, to maintain himself.

For two and one-half years after graduating he taught in Friends' Academy, Union Springs, Cayuga Co., New York. Desiring to have a broader training in the natural sciences, the young teacher decided to make the best possible use of his funds accumulated as an instructor, and betook himself to Harvard University, where as a special student under Prof. Aggassiz and Dr. Gray, he laid a broad foundation for future usefulness, and conceived some of the methods of teaching which have in his hands proved so successful. Two years after entering Harvard he took the degree of B. S. and for nearly five years thereafter taught in Howland Institute at Union Springs, N. Y.

Early in 1869 he moved to Chicago and was successful in teaching and lecturing upon natural history in the seminaries and colleges about Chicago for nearly two years. In 1870 he was first called to the Michigan State Agricultural College to teach Botany, and was during that year elected by the Board of Agriculture, Professor of Botany. His method of teaching was original and popular from the first. He acted upon the principle that the best instructor was Nature, and told his students to go and learn of Her. He regarded his work as that of a rectifier rather than a producer. The erroneous conclusions of his students he seldom corrected, but the facts they were taught to hunt for in the fields, forest and stream.

In 1872 the Chair of Horticulture was added to Botany, and Professor Beal has had charge of the two departments up to the date of this article. During the years that Professor Beal has been connected with the Michigan Agricultural College, he has had very tempting offers to go elsewhere; particularly has the Chicago University striven to attach him to its Faculty, and in 1877, it gave him the honorary degree of Master of Science.

Prof. Beal is aggressive in his methods of work; he believes in keeping the institution with which he is connected in the minds of the people, and was influential in 1875, in starting the project of holding Farmers' Institutes about his State under the direction of the college, which have become so popular in subsequent years. He is often called out to lecture and, whenever possible, accepts the invitations. By this means he has made a large acquaintance and become deservedly popular. His addresses are not rhetorical, but simple statements of observations and experience. He cares more for facts than fine figures, and there is nothing he enjoys better than to answer questions that bring out his knowledge of facts. He has worked hard to give his department of the college a good position and was instrumental in securing a very attractive greenhouse as an accessory to his work, and recently projected a laboratory and museum which the Board has lately erected in accordance with his plans. He takes copious notes upon everything he observes, and does not confine his observations to his own department. By this means he has become very ready in conversation upon all rural topics, and his counsel is sought in the purchase of stock and implements, and the use of fertilizers, etc., as well as in the naming of plants. He was married to Miss Hannah Proud in 1863, and has one little girl ten years of age.

The published writings of Prof. Beal are found scattered through the leading educational and agricultural periodicals of the past decade. His best contributions to science may be found in the volumes of the "American Naturalist;" "Proceedings of the American Association for the Advancement of Sciences;" "American Journal of Science and Art," and the "Proceedings of the American Pomological Society;" his contributions to educational methods have mostly appeared in the "Illinois Teacher" and "Michigan Teacher," while his articles for practical horticulturists are scattered through the leading agricultural periodicals since 1872, and some of the very best of them may be found in the Agricultural and Pomological Reports of the State of Michigan. The readers of the Rural New-Yorker are especially indebted to him for valuable articles contributed to its pages during the past few years.

Prof. Beal is a prominent member of the Michigan State Pomological Society and is Master of a leading County Grange. Just now he is interested in a series of experiments suggested to him by Darwin's work on "Cross and Self-fertilization of Plants," and he believes that many facts of great practical utility to the farmer and fruit grower, may be worked out from ideas suggested in this book, if experiments are properly conducted. It is difficult in a short article to indicate the lines of work followed out by a busy investigator like Prof. Beal. At the age of 47, he is now in the midst of his usefulness, and if life and health are spared him, he will contribute largely to the horticultural progress of the next score of years.

PROFESSOR WILLIAM JAMES BEAL.—From a Photograph. Fig. 203.

Farm Topics.

NOTES FROM THE RURAL FARM.

We are sometimes asked questions like these, while explaining our experiments to friends:—"Why do you plant potato pieces six inches apart? Don't you *know* without experiment that that is too close? Why do you plant single eyes two feet apart? It is a waste of time and labor."

Here is a wheat plot that is burnt up. Here is another with heads scarcely over an inch long. Here is another plot with barley, oats, rye mixed in with the wheat which itself is mixed, showing several different varieties. The crops grown upon our experiment plots are, in fact, half of them failures from one cause or another—generally because they are not adapted to the place or because they are inferior to old varieties of the same species wherever grown. And thus it is that curious visitors who judge of things merely as they appear, while they overlook the necessities of the case, hold us or our poor judgment or poor farming, responsible for the failures which, as much as our successes, are the very objects of experiment grounds. If all *experiments* were as successful as the ordinary farm practice, while occasionally decided improvements were made, there can be no doubt that experiment farming would be the rule and not the exception. It is the *cost* in time, labor, patience and money that constrains the farmers, as a class, to hold on to that which is good or at least to that which is the best that they know of, and to leave experiments and their heavy proportion of failures to those who can afford to make them;—to those who can utilize them almost the same as if they were successes.

In one sense, it matters very little to us which kind of our twenty-five varieties of wheat turns out the best; which of our seventy-five kinds of potatoes yields the best or is the best in quality; which is the most profitable way to plant them, to single, double or triple eyes; six inches apart or two feet apart, in drills or hills, in ridges or flat, shallow or deep. We are interested in the results whether they be good, indifferent or bad. It may be as valuable to our readers to be informed that the much-praised Mold's winter wheats are failures in our climate, as that Defiance wheat proves to be more valuable as a winter than as a spring wheat. When new varieties of seeds are extensively advertised, with what seem to be trustworthy reports of enormous yields, tempted, as our readers may be to purchase them, they would probably be deterred from doing so, or at least be induced to await further tests, were we to report the failure of such seeds after careful trial at this farm. Indeed it is in this way that we have thought our tests have proven most serviceable to our readers.

We have just completed planting a field of three and a-half acres. It had been in pasture for six years and was plowed under late last fall. We have used concentrated fertilizers only—a light sowing broadcast and a dressing in the furrows before planting. A part of the field has been planted to Blount's corn, the seed saved only from the topmost ear of stalks which bore three ears or more; a part to Chester Co. Mammoth, a yellow Dent with 20 or more rows; a part to Queen of the Prairie (also a yellow Dent) which is said to mature if planted after the wheat crop is harvested; a part to several new sorts of sweet corn; a few hills to "Cuzco" corn which from tests made several years ago, we are assured will not ripen in this climate. [Cuts, it will be remembered, were given in the Rural New-Yorker of March 13 last, of the immense kernels which this corn bears. The several lots sent to us by friends have been distributed and planted in the South.—Eds.] We have also planted many kinds of bush-beans sent to us by seedsmen and friends; also eleven varieties of the Southern cow-pea (Dolichos); also new squashes, melons, etc. A considerable part of the field, however, is given to experiments with potatoes. To ascertain the distance at which it is most profitable to plant potatoes in drills, cut to single eyes, we have pursued the following plan, selecting the Beauty of Hebron as the variety in every drill:

66 pieces weighing	2 lbs.		in drills	33 feet long.	
49 "	"	1 10 oz.	"	"	"
40 "	"	1 6 "	"	"	"
33 "	"	1 6 "	"	"	"
30 "	"	1 2 "	"	"	"
28 "	"	0 14½ "	"	"	"
25 "	"	0 14 "	"	"	"
20 "	"	0 14 "	"	"	"
18 "	"	0 12 "	"	"	"

The following with two pieces (each single eye) placed close together:

66 pieces weighing 2 lbs. 2 oz. in drill 33 feet long.

That is to say two pieces are placed 12 inches apart.

60 pieces weighing 1 lb. 12 oz. in drill 33 feet long.
50 " " 1 " 8 " " "
40 " " 1 " 6 " " "

The following with three pieces placed close together (each and all single eyes):

90 pieces weighing 2 lbs. 10 oz. in drill 33 feet long.
75 " " 2 " 8 " " "
48 " " 1 " 6 " " "
64 " (four pieces put close together) weighing 2 lbs. 9 oz. in drill 33 feet long.
80 pieces (five pieces) weighing 3 lbs. 4 oz. in drill 33 feet long.

We have also planted 35 varieties of unnamed seedling potatoes, each of which is claimed by its originator to excel all others in some or all respects. As in the preceding tests, they were cut to single eyes, the weight of each kind carefully taken and noted.

A friend and a well known celebrity in agricultural practice and journalism made the statement a few days ago that *potato-skins*, cut to single eyes, would yield as well and as large tubers as if the flesh were added. "Have you never found" said he "the seed potato at harvest as sound as a dollar with just as many potatoes in the hill as where the seed piece or potato has rotted and disappeared?" For obvious reasons, as it appears to the writer, this is a mistaken theory. Nevertheless, we have planted a row of potato-skins cut to single eyes and shall give them the same care as the others, and report results to our readers in due time. We are fully aware that the eyes will grow, having seen vines from such eyes a hundred times growing out of rubbish heaps and the like. But we anticipate from those skins, cut to single eyes, "small potatoes and few in a hill."

Alas for the bright expectations of two weeks ago! Silver Chaff and Shumaker wheats, growing upon sandy loam and gravelly subsoil, are burning up, and others of our wheat plots are suffering. The grass is burnt to pieces and the clover droops its diminished heads.

Holidays for Hired Men.

"Boys, we have had two months of hard work, digging trees, packing and planting. I am about tired out, and am going to take a vacation. You may take one also—Saturday you may have to yourselves—go fishing or wherever you please." I did not grant the above expecting to make money by it, yet I verily believe I shall. It is economy for me to rest—I can accomplish more during the year by so doing. Why, then, is it not good economy to give the laborers a rest also? A day's recreation works wonders—who has not realized the fact? But, aside from this, the boys will feel that they have in a measure succeeded in satisfying me with their efforts. This thought relieves the long, weary working hours, I can assure you. Our laborers have procured musical instruments, and practice regularly at noon under the shady trees. I have heard more artistic strains, but none that gave me greater satisfaction. Don't cut short the noon rest of your laborers. The system needs rest after taking food. I am asked, "Would it not be better economy for you to let your men board themselves—they would live on cheaper food than you give them? "No, they would not provide food nutritions enough to enable them to do the work they now do." The labor question is important; let us consider the subject thoughtfully. Agricultural papers have a great deal to say about the welfare of all farm crops; but very little about the welfare of those by whose labor they are raised.

CHAS. A. GREEN.

Farm Economy.

THRASHING AND THRASHING MACHINES.

PROFESSOR I. P. ROBERTS.

In the days of our fathers the horse had largely superseded the flail of our grandfathers in thrashing grain. As soon as barns of sufficient size were erected, the change from human muscle to horse muscle appeared both wise and economical, for it obviated much hard labor and was far more expeditious. At the same time it furnished a fine opportunity to give the colts the first lesson of their education; coupled to an old horse and given the outside of the course, their steady tramp through straw knee-deep, soon curbed their youthful ardor. The next advance was the chaffer that thrashed the grain, but left the separation of grain and straw to hand labor—and dusty, hard work it was. Then came the shaker attachment which separated the straw. This was a great improvement over the single chaffer. Then came the full-fledged thrasher and cleaner, followed soon by the long straw carrier or "stacker" attachment, all driven by horses, and lastly the horses have been superseded by the portable engine.

In all this, how much have we gained? In rapidity we have gained much, and in case the grain is taken directly from the shock to the machine, we have gained something in economizing, handling, and storage-room, and in avoiding waste. But in this climate but few, comparatively, can avail themselves of the cheaper method of thrashing direct from the shock, and even by this cheaper method the expense, when the crop is small, is not so very much less than it would be to flail it, or tramp it out with horses.

The land within a radius of six miles from Ithaca is not first-class for wheat, and an average day's work for a steam thrasher does not exceed 400 bushels of merchantable grain. under favorable circumstances, the account would stand about as follows:—

Thrashing 400 bushels of wheat at .05	$20.00
Team and man to remove water-box, etc., to next job,	1.00
Coal,	1.50
Nine meals for thrashers, at 25c,	2.25
Seven workmen at $1.25 per day	8.75
Board for four horses (thrashers)	1.00
Total	$34.50

Or very nearly 8¾ cents per bushel. Under unfavorable circumstances, and when the wheat was not very good, it has frequently stood with me as follows:—

Thrashing 300 bushels of wheat at .05 cts.	$15.00
Team and man to draw water-box., etc.	1.00
Coal	1.50
Twelve meals, (thrashers came night before)	3.00
Board of four horses, (thrashers,)	1.40
Eight hands, (straw put in straw barn) at $1.25	10.00
Total	$31.90

This is over 10 cents per bushel, and several men last winter offered to board themselves, thrash with a flail and run once through the fan for 10 cents per bushel, and if I am correctly informed, several small crops were thrashed for that price. It appears to me we have gained much in rapidity, but little in economy. But, as a rule, there is no haste to get the wheat to market, for, according to the table given by Mr. E. M. Gilsam, the average price of wheat for May, during the last ten years, has been $1.49 2-5; for September $1.29¾. Some loss occurs in holding till May, but not nearly enough to balance the gain of 20 cents per bushels.

Having erected a new barn last summer and wanting a small engine and boiler to cut feed for the dairy, and being thoroughly disgusted with thrashers, a new departure was inaugurated. A two-horse thrasher and cleaner ($160) was placed in the grain mow on the third floor, and the grain stored immediately around three sides and over it. The machine was inclosed about one foot from the sides and two feet from the top, with a tight box, the sides of which were composed of movable doors, a small hole being left in the end for the straw and carrier. The top of this box over the machine is pierced with a tight, square wooden tube 10x12 inches, which extends with turns to the manure cellar, where is placed a small suction fan—cost $35. On the second floor, just beneath the thrasher, on a frame four feet high, stands a common fanning mill: and the wheat from the thrasher passes directly into it. The machine is capable of thrashing a bushel in three minutes, and averages a bushel in four minutes, at the same time that the suction fan and fanning mill are in operation. The hands necessary to run it are, a feeder, a grain-pitcher, a straw-pitcher and an engineer—four in all. The suction fan removes nearly all dust and deposits it in a box filled with water.

The fan cleans the grain ready for market. The cost to us (the workmen are hired by the year) is little more than the wear of machinery and value of coal, as everything is under shelter, and stormy days alone are used for thrashing, and we haven't half grain enough to occupy them. So far it works like a charm—no thrashers to pay; no dust; no hurry; no worry; no waste.

Cornell University, Ithaca, N. Y.

POISONED WELLS.

Some time ago we took occasion to refer particularly in these columns to a note from a correspondent in reference to the probable fouling of a well from a cesspool. We seized the opportunity to explain fully, with a diagram illustrative thereof, the theory of the operation of well poisoning in this way. The subject is of such surpassing importance that we return to it to notice an instance strikingly corroborative of our remarks and caution then made, and which comes to us in the interesting report of the Rutger's Scientific School, which is, in fact, the New Jersey State Agricultural College. The subject is taken up in a paper on "The well waters of New Brunswick" by C. W. Cutler, a student of the chemical course. Incidentally it may be remarked here that one of the excellent methods of this excellent school, of which but little is heard, although much is done in it, is to exercise the students in original analytical investigations, which they are expected to carry out without help from the professors, gradually passing from single to elaborate subjects. It was in this way that this young student undertook to examine the wells of New Brunswick with some remarkable results.

Twenty-four wells were examined. Of these eight only were good; two were passable, but fourteen—or more than one-half—were bad to very bad. When well water is found to contain more than 40 grains per gallon of solid matter it is to be suspected. When the solid matter in solution largely surpasses this quantity the pollution becomes dangerous. And here is a well in the city of New Brunswick which contains 202 grains, or nearly half an ounce of solid matter per gallon in solution, with a considerable proportion of albuminoid ammonia. Another of the contaminated wells contained four-tenths, or nearly half a pound of albuminoid ammonia in the million parts of water, although the solid matter was but 38¼ grains per gallon; this case shows clearly the foul origin of the contamination. A well was examined into which the matter from a cesspool 60 feet distant, had percolated through a bed of sandstone. Another source of mischief was found in the entrance of various kinds of vermin into the well, and their death and decay in the water. Some old wells are spoken of in the report which had many inches of sediment at the bottom, chiefly consisting of the remains of toads, snakes and other vermin.

Here is a monstrous evil existing under the shadow of many a fair homestead—a lurking danger, like the genius of evil, hovering in the dark over many a household, all unsuspecting of it. It is not only here and there; it is on every hand; the farm, from its want of drainage, being in more danger than the city house, and the better class of rural dwellings being worse placed than the farms, because of the modern improvements which gather the refuse of the household in a concentrated form under ground, but out of sight, and of the largely increased wastes from a more refined household. It may be that we suffer from our excessive refinement in thus hiding away our filth; that the only safe disposal of house wastes is in the shape of manure, and that to be safe the wastes of a house should be kept in sight and used as are those of the stable—to fertilize the soil. If we could but come to that in any practicable manner, we might add millions of dollars to our aggregate yearly income, and secure pure water, and with an undoubted freedom from much disease of mysterious (when unsuspected) origin.

PURIFYING WATER.

The great objection to most water filters is that, like the brick dividing wall in a cistern, they are made a solid fixture and cannot be easily removed and replaced without considerable trouble and expense when they become foul, which is invariably the case in a longer or shorter time. One of the best and cheapest we have yet heard of we find described by an English gentleman in the Metal Worker, which we copy below for the benefit of all who desire a pure, healthy beverage.

Take any suitable vessel with a perforated false bottom; cover it with a layer of animal charcoal; on the top of that spread a layer of iron filings and borings, the finer the better. These are to be mixed with charcoal dust; and on the top of them is placed a layer of fine, clean silicious sand. This will give you a perfect filter. The foul water, however, should be allowed to trickle very slowly through the filter, if one would produce a fine sample of drinking water. The iron filings, before being placed in the filter, require special treatment. They must be well washed in a hot solution of soda or potash, in order to remove the oil or other impurities. Then they must be thoroughly rinsed in clean water, in order to take out every trace of soda. The filings should be mixed with an equal measure of fine charcoal. The deeper the bed of iron, the quicker they will act. Of course, if the water is very foul, an unusual depth of filings and a very slow rate of filtration should be employed.

The above is a simple, cheap and very efficient filter, superior to any other that I know of, and has the advantage of being free to every one who chooses to make it.

The addition of permanganates will not destroy bacteria, or microscopic organisms, but the addition of hydrochloric acid will. If it is desired to purify water containing bacteria, hydrochloric acid must be added, until the water is slightly acid, to test paper. This will destroy the whole of the animalculæ; then sufficient lime water must be added to neutralize the acid. The lime is precipitated by means of the oxalate of ammonia. The final treatment is to filter through the iron filter which I have just described. The foulest ditch water, treated as above, is rendered quite pure and fit for drinking.

The above is exceedingly interesting to our readers, some of whom have asked where to obtain iron sponge for purposes of filtration. The filter described above does away with the use of the iron sponge entirely, while retaining all the advantages of that material. We believe at the present time there is no manufacturer of iron sponge in the United States, nor have we heard of any place where it can be obtained.

Iron filings and iron turnings, or borings, as they are called, can be obtained in almost any town in the country—certainly in any town where there is a foundry or machine shop. We wish to mention one precaution necessary in obtaining them. No brass, copper or zinc should be present in them, and they should be carefully looked over in order to make sure of their purity. Dust, dirt and oil may be easily removed, but zinc would be readily dissolved, to the great detriment of the filtered water.

The Curing of Gold Leaf Tobacco.

The old-fashioned method of curing tobacco on the stalk, is gradually yielding to the new and improved way of gathering the leaves as they ripen and curing them on a simple hanger made for the purpose. The fancy yellow tobacco of my section, is cured by artificial heat graduated by a thermometer, and in this, and in no other, way can the gold color be obtained. For instance, the tobacco is gathered from the field and put into a house made almost air-tight, with windows, so as to give air when necessary. In this is arranged a flue or heater so constructed that any degree of heat may be obtained from 90 to 200 deg. The house in which the tobacco is hung is heated to 90 deg. at the start. This is the yellowing process and is kept up for 24 to 30 hours. By this time the green tobacco will have assumed a golden-yellow color. When this occurs the heat is increased at the rate of five deg. per hour until it reaches 120 deg. At this it is kept until the tobacco shows indications of being dry, to reach which condition will generally take three to four hours. The heat is then increased at the rate of 10 deg. per hour to 180 deg., where it is kept until the tobacco—stem and stalk too, if men will still insist on curing a worthless article—is perfectly dry. The least sap will run back to the leaf the first rainy day, and turn it red, and thereby impair its value 50 per cent.

By this process of curing, you get a beautiful gold leaf and a mild and fine flavor, an article fit for a king to chew or smoke.

Ashville, N. C. S. C. SHELTON.

Field Crops.

SOILING CROPS.

To have enough and to spare is the secret of contentment. No farmer or dairyman can have enough for his stock if he depends on pasturing; if he should have, he certainly cannot have enough for his pocket, because his farm is not stocked heavily enough for profit, and never can be, with pasture only for summer feed. Pasturing may be very well where land is cheap and products bring but a small price, and where a subsistence is easily procured or the wants are few. But where land is worth more than $30 or $40 per acre pasturing is unprofitable, for the feeding of a cow costs too much. Pasturing is not consistent with high farming, which is only another name for good farming, because it is wasteful and uneconomical and does not develop the resources of the farm. If the farm is to be fully worked and every one of its resources fully developed, the pasturing of a field should be but a part of the process for getting it into the best condition for producing another course of crops, unless, indeed, it be a field which is fitted for no other purpose, and then it can be better utilized than by being constantly trampled, fouled and gnawed by cattle.

For profitable farming, pasturing should always be combined with soiling crops; but when, as is now occurring, pastures and hay meadows alike are dry and burned up under unseasonable and torrid suns, and yield no fodder, soiling crops are indispensable for the salvation of the stock. Soiling crops may be made an occasional help in this way, but they are the most valuable when used systematically and made a part of the routine of the farm. Sometimes a field needs summer-fallowing; it is clothed with weeds; it is worn out; it can no longer be profitably worked. Such a field may be used for soiling crops and may be brought out of its poverty-stricken and wretched condition, like the maniacs of Scripture who were brought out from among the tombs "clothed and in their right minds." It is in turning a piece of useless land to such a good purpose that one of the principal benefits of growing soiling crops consists; another is the producing from one acre of ground as much feed as could be procured from 10 acres of pasture; and another, which is specially pertinent just now, is the substitution of green fodder crops for grass and hay, which have partially or wholly failed in dry seasons.

The best soiling crops are those which grow rapidly; thrive in hot and even dry weather, being deep-rooted and naturally adapted to tropical or subtropical climates; and which yield a heavy burden of nutritious fodder. Corn is doubtless the most available of all the green fodder crops; but it is not early enough, nor does it possess all the desirable qualities, to make it the only sufficient one for our use in regular soiling. It is, however, the best single crop for partial soiling, and if but one can be grown; and it may easily be planted consecutively so as to give a succession of

enttings while green. For the present emergency the very useful early crops, as oats and peas, either together or alone, need not be considered. We are in a dilemma just now and must have something special that may extricate us from it. Corn is the best resource in this case; an early, rapid-growing kind for early use, and a large late-growing kind for fall and winter feeding. It is a great advantage that corn can be grown excellently by the use of fertilizers when manure is scarce. A piece of land, I care not how poor, may be plowed and prepared by good harrowing, and planted with corn of the following kinds:—Early Concord, Narragansett, Pratt's Early, Stowell's Evergreen and Mammoth Sweet, for summer and early fall cuttings; and Blount's Prolific, Chester County Mammoth, Southern Dent, King Phillip, or any other large-growing varieties for late fall and winter use. It does not matter that the variety is one that when grown in the usual manner, has very large and woody stalks; this can be changed by close planting, and the corn, confined laterally, seems to desire to free itself from bondage by escaping upwards and grows to a great hight, yielding stalks 12 or 14 feet long and but 1 or 1½ inch thick at the butts. The sweet varieties do not grow so tall, but I have grown the first three kinds with stalks 8 feet high, in rows 30 inches apart, yielding at the rate of over 400 pounds to the square rod, and having a considerable quantity of ears upon them. The larger kinds will make more than this when fully grown, *if the soil is richly fertilized.* Six hundred pounds per acre of concentrated special corn manure are sufficient to produce this yield.

The seed may be sown by hand in furrows made with a small plow, single grains being dropped about two inches apart, or three grains at every six inches. The fertilizer should be broadcasted and harrowed in before planting. The larger kinds may be planted in the same way, but in rows 36 inches apart. These distances are ample; if greater, the stalks may be too thick for the best use when cured for winter feeding. But let no one be misled into sowing fodder corn broadcast. The frequent cultivation of the crop, so long as a horse can pass in the rows, is necessary for the proper maturing of the nutritive qualities of the fodder. If this is not done the crop will be one-half lighter in weight and deficient in feeding value. The planting should be done in consecutive strips. One day's planting may consist of a quarter of an acre or more, according to the quantity of stock to be fed—a few rows of the Concord or Narragansett, followed by the others in consecutive order. The next week another plot may be planted in the same way; or sufficient for two weeks' feeding may be planted in each plot in one week, so that the whole planting may be made and finished in the week.

The next useful crop will be Hungarian grass, which may be sown on the first cleared corn ground. On good soil this will yield seven or ten tons of green fodder, or two and a-half to four tons of dry hay, to the acre. This grass may be sown as late as the 1st of August and make a good crop. Half a bushel of seed per acre is sown broadcast and harrowed in with a light harrow.

For winter use there is nothing so good as roots, and of all the roots, mangels are the best, and of all the mangels, the Yellow Globe stands first. This may be sown up to the 15th of June and yet make a good yield. Six pounds of seed per acre are sown in rows 30 inches apart, a liberal dressing of artificial manure, 200 to 300 pounds each of blood guano and superphosphate of lime per acre, for instance, being sown broadcast and harrowed in. Mangels, like all the beet tribe, are soda-loving plants, and 300 to 400 pounds of refuse salt per acre will tell a plain and satisfactory story at the harvesting. A quarter of an acre of Yellow Globe mangels will give one cow one bushel a day for six months, with a moderate crop; a good crop will double this yield.

Another fodder crop that is not often grown or used in this way is rye, sown on rye or oat stubble; or sown among corn at the last working. This makes a good growth by October, and will furnish either cut fodder or late pasture, and in some cases early pasture again, in the spring. This is a very valuable resource, and it deserves the good opinion of farmers and dairymen who keep their farms fully stocked, as indeed all should do. I have sown five bushels of seed per acre, as a thick growth is desirable; but three and a half or four bushels will give a close stand.

Of the newer fodder plants that have been highly recommended for soiling or feeding green, I can say very little that is satisfactory. The much praised so-called Pearl millet—the Southern "Cat-tail" millet—I have found by no means equal to sweet or other corn. I am now trying "Doura," a variety of sorghum vulgare, and have reason to hope much from this plant. I find it highly recommended in the report of the East Indian Government's experimental farm at Madras as a green fodder crop under the native name of "Cholum," and the common name of "Great millet." It has there yielded at the rate of 70,000 pounds per acre up to 90,000 in one cutting only, with high culture; while "Pearl millet" (known as "Cumboo" or Spiked millet) is said to be inferior to Doura both in yield and in feeding value. It would be very unsafe and unwise to attempt to grow a doubtful plant in an emergency, when a failure would be disastrous; but it would certainly be a good thing to try a small plot of Doura the present year, so as to learn some thing of its value for a soiling crop for future use. H. S.

CYNODON DACTYLON.—FIG. 204.

LESPEDEZA STRIATA.—FIG. 205.

CORN FODDER.

THE excessive drought of May has been so disastrous to the growth of grass, that even if we should have abundant rain through this month, there will not be over one-third to one-half a crop of hay cut this season. The drought has also shortened the growth of the straw of rye, wheat, and oats; there will consequently be a much lessened bulk of this to fall back upon to use instead of hay, of which straw is a tolerable substitute, if meal and bran be added to feed with it. This great drought has likewise prevented a considerable quantity of the seed sown for roots from yet coming up, and the growth of beets and mangels will be much lessened. If we have suitable weather in July and August, good crops of ruta-bagas and flat turnips may be grown, but these are only a partial feed, and in the aggregate, will do little for the general support of stock during winter. Corn-stalks now must be our chief reliance for the loss of summer pasture and of hay for winter.

With due attention this sort of fodder can be fairly grown even in a dry time. Plant the corn three inches deep in a good loam and four inches in a very light soil; roll well or spat down hard over the kernels with the back of the hoe, and the seed will be pretty certain to vegetate, as so much of soil pressed firmly upon it will keep it moderately cool and moist. As soon as it comes up, keep the ground constantly stirred and the corn will grow. But after so long a spring drought, the probability is we shall get an abundance of summer rain, and if so, a good growth of corn stalks can be obtained, planted even as late as the middle of July.

We suggest planting in drills, and having the rows three feet apart, so that the horse cultivator can work freely among them, which is essential to stimulate a good growth. The stalks shoot up so much more freely with the rows at this distance, that about as large a crop can be obtained as if they stood closer, and by admitting plenty of sun and air, they are of a superior quality.

Of the kinds of corn to be grown for fodder, the sweet varieties are the best by all means, in consequence of the stalks being more nutritious, sweeter and tenderer than the common kind. There are various sorts of these—dwarf, intermediate and mammoth. The stalks of the first grow from 4½ to five feet high; the second 5½ to six feet; the third seven to eight feet in ordinary soil; but in quite a rich soil still higher.

For economy of feed, and we may also add for profit derived from the crop, we prefer the dwarf sorts; and certainly would not go beyond the intermediate, such as Stowell's Evergreen Sweet corn. But of the latter, we found that our cattle would not eat the butts of the stalks within two feet of the ends, while both horses and cattle eagerly devoured the whole of the dwarf stalks. Now, admitting the latter to cut only 4½ feet in length, and the former six feet, in consequence of the refusal of the animals to eat the difference of length of the butts, just as much fodder is got from the dwarf-grown as from the intermediate. People generally do not think of this, but we have carefully experimented on it for years past.

Aside from this, other things are to be considered in favor of the dwarf sorts. They do not exhaust the soil so much in their growth as the larger ones, and they are so much more easily handled after cutting that the labor of doing this is considerably lessened. They are also more quickly dried, and can be more safely stored away. There is, too, very little danger of their molding when put away. We have repeatedly put this sort of corn stalks into the mangers of our horses and cattle in the winter, alongside of the best of hay and they would invariably eat all the former up clean before touching the latter. Corn-stalks can be grown at a cost of $3 to $5 per ton. In many sections hay will probably be worth next winter from $20 to $40, according to locality.

FORAGE GRASSES.

PROFESSOR W. J. BEAL.

BERMUDA, WIRE OR SCUTCH GRASS—Cynodon dactylon. This comes from Europe and is a perennial, thriving from Pennsylvania southward. The stems are "low, diffusely-branched and extensively creeping with short flat leaves." In the Southern States it has long been known as a favorite grass for pasture.

The branching and creeping stems help to hold the loose sands in place. Gould says:—"We are assured that it is identical with the Durva or Doorba grass of Hindoostan, where it is the most common and valuable fodder grass of the region." The seeds rarely ripen. The grass may be easily distributed by chopped root-stalks or short cuttings sown and harrowed in. Prof. Killebrew says:—"It will throw its runners over a rock six feet across, and soon hide it from view, or it will run down the sides of the deepest gully and stop its washing." It will stand heat and dry weather remarkably well.

JAPAN CLOVER—Lespedeza striata. In the report of the United States Department of Agriculture is given a good figure with some explanation of this clover. Our cut is copied from that report. It is a low plant which lives on from year to year—a perennial. The flowers are very small and the fruit also. It has a clover-like look, as will be seen by the leaves, which are trifoliate. Professor Killebrew, of Tennesee, is quoted in the report named above. This clover was first noticed in 1849, in the vicinity of Charleston, South Carolina, the seeds having probably been brought from China or Japan in tea boxes. After this it spread rapidly and grew with great luxuriance on the poorest soils, retaining its vitality in the severest droughts. Sheep are very fond of it; cattle will eat it. It is spoken of highly by several writers in the Southern States for pasture and for plowing under, but it is said that it does not flourish north of the 36th degree of latitude.

Dairy Husbandry.

THE HOME MARKET FOR CHEESE.

A WESTERN FARMER.

ENGLAND imported last year four pounds of American cheese for every individual of the population. Estimating on the usual basis of five persons in a family, this would give an average consumption of 20 pounds of foreign cheese for each family. If we estimate the native production at four times the quantity imported (a very low estimate), this would give 100 pounds of cheese in the aggregate to each family per annum, or 20 pounds to each individual. If the consumption here were equal to that in England, we should use very nearly 1,000,000,000 pounds of cheese yearly, which, with the amount exported, would require a production of 1,150,000,000 pounds. Our present total product is less than 300,000,000 pounds.

The question then occurs, how can we induce our people to eat half a pound of cheese per week per head. This seems to be a very small requirement and a very moderate allowance which any person with a moderately good appetite could very easily and very profitably consume. It is certainly not the capacity that is wanting, but the desire. How then can this desire for cheese be stimulated up to the point required for the consumption of six or seven times as much cheese as is now eaten? There are some ways and methods that occur to a person of practical business acquirements, and of these the principal ones are: first, to make a really good and attractive article; and second, to acquaint the public with the fact that it can be procured at a reasonable price.

It was said of old that "the children of this world are wiser than the children of light." It is equally true in our days, and we, "the children of light," the honest, upright, industrious, skillful, but modest and retiring dairymen, may take a lesson from "the children of this world," the quacks, the humbugs, the confidence-men, and all those whose individual possession of "cheek" would supply the whole world of dairymen with a stock in trade and leave a large surplus to draw upon for emergencies; the Barnums, the Wall Street sharks and others "who draw all men unto them." They simply put their light, not under a bushel, but upon a hill, where it can be seen, and set forth their business so that every man, woman and child may know of it. Let us take a line and a precept from the lightning-rod man, the "strawberry tree" peddler, and others who canvass from house to house and find customers wherever they call. Why should not those who have a legitimate business, and whose mission is to do good and serve a useful purpose, use those means which, made to serve a good end, are honorable and effective? Let dairymen send out samples of their product to every village store and even canvass the towns and cities, making arrangements with grocers and others to retail their goods. If these are well made—of whatever quality they may be, and whether full cream, half cream, or skim—once they are introduced the work is done, the demand has been created, the desire has been evoked, the want has been made known.

The value of cheese as an article of food needs no elaborate demonstration; it speaks for itself, and if once the children even could be made acquainted with it they would "cry for more" and the parents would soon join in the demand. But it will not do to send out to our foreign customers the best cheese, and supply home consumers with the skims, the off-flavored, the huffy and the tainted refuse. To find a really good cheese at a grocery store is very difficult, and the wonder is that the mean stuff there retailed finds any sale at all. The fact, indeed, that it sells, argues that good cheese would go off with great rapidity and that the required increase of 600 per cent. on our present home consumption would soon be reached.

This business is in the hands of the dairymen themselves, and if they will first reform their practice and offer no poor cheese to the consumer (except a pig), and, in fact, make no poor cheese, be thoroughly honest to themselves and do themselves perfect justice, not belying their own skill and business capacity, and use the ordinary business methods of attracting customers and of keeping them when they have been secured, the result will surpass their most sanguine expectations and prove to them that the ancient adage to the effect that "a man is not without honor save in his own country and among his own people" is in no wise applicable to them.

The Herdsman.

DEER'S HORNS EATEN BY CATTLE.

PROFESSOR F. H. STORER.

THE observations on this subject communicated by Mr. Wilson, in the RURAL of May 29th, corroborate fully those made in Scotland some years since, as set forth by Dr. Lankester (in his "Lectures on the Uses of Animals") in the following terms:—"The question has been asked, what becomes of stags' horns after they are cast, and there is a very prevalent notion that the deer eat them. This has arisen from the few which are found compared with the numbers which are known to be thrown off. That both stags and hinds occasionally gnaw the horns is beyond doubt, and the yearning for a supply of phosphate of lime is probably the inducement to partake of this kind of food. Not only do the deer eat horns, but all the bones they meet with in the forest. It may also be added that where deer are, there are generally other animals, to whose welfare phosphate of lime is necessary, and who would assist in the same way in the destruction of the fallen antlers."

Since some slight misapprehension seems to have arisen in respect to the notes on bone-chewing which were published in the RURAL of May 15th, I would remark that the opinion that grass-eating animals gnaw bones for the sake of the phosphates contained in them, has long been held and is familiar to most students of agricultural literature. It is referred to in several well-known elementary treatises on agriculture. I had never had any doubt that the common opinion that bones are eaten by cattle for the sake of the phosphates is correct as regards many localities, where lime-compounds are naturally so abundant in the soil that there is rarely, if ever, any lack of this substance in the plants upon which the cattle feed. I urged only that when phosphates are lacking in fodder, the administering of doses of bone-meal is hardly the best way of supplying the want.

On the other hand, it is perfectly well-known that the food of cattle is often deficient in lime rather than in phosphates, as, for example, when the animals get comparatively little hay or grass, but large quantities of grain, potatoes, roots, distillery slop, the residue from beet-sugar making, or the like, together with some straw; and in such cases chalk can be used to better advantage than bone-meal to supply the deficiency.

This second conception, that lime is needed in certain cases, is unquestionably of equal importance with the old familiar notion of giving phosphates as food, which is, in its turn, doubtless true in some special instances. As was just now intimated, it may often happen that the better the cattle are fed, in the ordinary sense of the word, the greater will be the risk of their not getting lime enough in their food; but at the same time the less sense will there be in giving them bone-meal when they need chalk.

The instances of bone-chewing cited in the RURAL of May 15th were specially interesting in that the persons reporting them were inclined to believe that the animals craved lime in those special cases. The observations tended to show that even in some poor pastures, as well as in the special cases of rich feeding just now alluded to, it may be well to place lumps of chalk where the cattle can lick them. A still stronger statement of this view of the matter will be found in the following abstract, taken from Volume 13 of the Journal of the Royal Agricultural Society of England. "The cattle in some mountain vales in the county Cumberland are liable to an affection of the stomach, provincially called "Crobbek" or "Crovek," exhibited in a fondness for chewing bones, leather and clothes. If this disease is suffered to go on unchecked, the bones of the legs make a rattling noise in walking, the joints swell, the animal loses its appetite, and spends its time in hunting round the field for bones, etc., instead of depasturing and ruminating, and eventually dies. A change to rich keeping for a few weeks in the earlier stages, is the ordinary and effectual cure. It is remarkable that limed land is not liable to this disease."

Sheep Husbandry.

WHAT ARE THE MOST PROFITABLE SHEEP?

HENRY STEWART.

WITH wool at 50 to 60 cents for fine and combing, sheep are in the ascendant; "those want them now who never did before, and those who always had them want the more." The question is asked, "Which is the most profitable sheep to keep?" Those who ask this question are acting very judiciously, because, not knowing much about sheep, they are very apt to go astray at the start and lose their time and their money, unless they start aright. It is a popular opinion that there is most profit in the largest and most attractive-looking breeds and in growing long wool, which is greatly in demand and of which a heavy fleece is produced. Unfortunately this opinion leads many into trouble; for they procure sheep at a high price and which need costly keeping, that are unsuitable and run down very fast, and finally fail entirely.

COTSWOLD-MERINO EWE.—FROM A PHOTOGRAPH.—FIG. 206.

At the outset it may be stated concisely that there is no one sheep that is the best under all circumstances; that sheep must be chosen with regard to the circumstances under which they are to be kept, and that, as a rule, there is the most profit in the kind which costs least. I will show this by figures. Let a person begin with a flock of 50 ewes and one ram. The cost and income of the flock will be about as follows:

	Good natives.	Pure-bred sheep.
Paid for 50 ewes	$200	$1,250
One pure-bred ram	25	100
Feeding and care for one year	150	300
	$380	$1,650
Value of lambs at $3	$150	$210
200 pounds of wool at 40c	80	....
400 pounds at 55c	....	220
50 ewes sold fat	250	....
Value of sheep on hand (4-5 of cost)	....	1,080
	$480	$1,510

The natives will have paid back their cost with $100 profit and $100 more in manure, while the pure-bred sheep will have lost about 10 per cent. of their cost under the most favorable circumstances. For no one who keeps a flock of costly pure-bred sheep can expect to sell the lambs for more than their actual market value, and the profit from the extra price paid for the flock must come from the wool, in greatest part. The experience of nine out of ten persons who have been misled into keeping thoroughbred long-wool or even fine-wool sheep has been even worse than the example here given.

Let us follow the fate of the native flock. The owner who picks out a lot of good, sound grade Merino ewes and selects a pure-bred Cotswold ram, one or two years old, of compact build, broad-loined, with deep brisket, short legs, fine head, broad forehead and a close fleece of long, silky wool, and crosses him on his ewes, will soon have a flock which in every respect will be as good as the pure-bred flock which would have cost six times as much, and in five years it will probably greatly surpass the pure-bred flock in quality and appearance, under equally good management. The difference in profit is very readily seen.

Pure-bred sheep are for the breeders. Farmers must have pure-bred rams to use with their common sheep to improve the produce; but the keeping up of a flock of high-bred sheep is a work that requires special skill in management, and knack as well as knowledge in breeding; and there is no profit in it to one who is not already an adept in the management of a flock. Perhaps the best sheep under any circumstances for a farmer to raise, is the cross of the native grade Merinos with pure Cotswold rams. The second cross have all the hardiness of the dams and some of the excellencies of the sires. The wool is in demand and always will be. The lambs are the best market lambs, will reach a weight of 60 or 70 pounds at six months, and when two years old will make the best of mutton and a carcass weighing 100 pounds, dressed. The fleece will weigh double that of the dams, and the third or fourth cross cannot be distinguished from pure-breds. These facts have been proved by experience. The cross of Cotswold-Merino is a favorite one in Germany, Austria and Hungary, and fine specimens of this cross were shown at the last Paris exhibition. In our own country Mr. Harris, of Rochester, N. Y., and the Gerrish Bros., of Webster, New Hampshire, have been breeding in this way for several years. The portrait of an ewe given here with is one of the Messrs. Gerrish's flock. She is 12 years old, and is a cross of Cotswold on Merino; she has all the appearance of the Cotswold, and her age speaks for her constitution.

As a matter of course, the cross-bred sheep so nearly approaching the character of the pure-bred race, require better feeding than the original smaller ewes. One cannot have a fleece and a carcass doubled in weight without providing the requisite feed. But we have the hardiness and the vigor of constitution of the cross-bred races, which confer a greater adaptability to the ordinary circumstances of the farm and our exacting climate, and these are the attributes of a sheep which is really the farmers' sheep—the one for profit under the widest range of circumstances.

But some may have a fancy for other breeds. South-Downs, for instance, whose mutton is the choicest in the market, and whose lambs are the fattest and most desirable; or the Shropshire, differing only from the South-Down in its longer wool, larger body and heavier fleece; or the Hampshire or Oxford-Downs, all dark-faced sheep, but cross-breds having Cotswold blood in them. If so, there is no objection. It is a matter of liking only, excepting this: that the Cotswold is a pure breed as is also the South-Down, and that the others are cross-bred sheep, of thirty years' standing, it is true; but still cross-bred; and I would choose an old-fashioned pure breed for the crossing on our natives rather than one of the newer cross-bred races. These cross breeds are very popular and profitable in England, but it does not follow that they would be so here. In this country, with our different climate and methods of agriculture, we should produce our own cross-bred races which should have all the hardiness of natives, as indeed they will be, and no longer depend upon importations. We have an excellent basis in our native grade or mixed Merino sheep, and those who can or will, may very soon have a thrifty and profitable flock with the expenditure of very little money; and an investment which pays three dividends in the year, in the shape of wool, lambs and a valuable manure heap; and which is always available in the shape of mutton.

Arboricultural.

THE RECENT DROUGHT.

PEOPLE talk of the late drought as if, simply as a drought, it was a very remarkable occurrence. We have not heard it qualified as the most severe within the memory of the oldest inhabitant, although it would not surprise us if we met such an expression, because it would be nothing more than we have heard remarked of a drought several times during the last twenty years. Nevertheless, if as a drought it is not altogether unprecedented, there certainly are features pertaining to it which are well worthy of consideration. For instance, it has occurred at a season when droughts are little noticed. About this time, bright, clear, spring weather is looked on as a godsend. Work goes on merrily. Walking is good. Early plowing is done promptly and the outlook is cheerful for a long season of prosperous work. It is true there is the fear of late frosts, that always goes with an early spring, but we have had nothing of the kind that has done us harm this year. Spring has come on slowly and steadily, so slowly and steadily that sometimes we were tempted to call it, for any earliness it showed, an ordinary spring after all. Yet such is the insidious and almost imperceptible influence of a long succession of warm days, interspersed though they may be, among many cold ones, that the spring has proved, after all, an unusually early one. The first of June, instead of displaying only the early spiraeas, lilacs, etc., offered the mere remnant of rhododendrons and azaleas, and scarcely as much as the remnant of most flowering shrubs. Roses were in bloom at least two weeks earlier than usual, doubtless also, unnaturally forced by extreme heat and dry weather.

Lack of water has produced lack of richness and durability of texture among the petals of all classes of flowers. Indeed, the peculiarities

of the season have been such that scarcely any foresight and punctuality in planting at the proper season could prevent unhealthy and imperfect growth. We say foresight and punctuality in planting at the proper season, but in thus speaking, we desire to restrict the statement definitely to the current year. Careful observers may readily discover, if they choose, special qualities peculiar to any piece of land where crops are now doing well. They will always find that such land has been thoroughly and permanently enriched by the well-managed culture of years. It must be strong, healthy land just as we must have strong, healthy frames to endure all sorts of severe and unexpected strains. Green crops—clover, etc.—have been doubtless, turned under from time to time. We may always safely infer, if we do not know, that any land bearing at the present time vegetation uninjured by drought, must have had long and persistent good culture, especially by the proper rotation of crops. On such land we could have ventured, even in these difficult times, to transplant evergreens possessing fibrous roots, well mudded and mulched, with a fair prospect of success. The unfortunate result of planting evergreens during the past spring without these favorable conditions, many will learn with chagrin. Everywhere the need of intelligent and persistent culture and fertilizing must be evident, whatever the crop may be, if we expect to meet with success the strain of seasons like the one just passing away. It may be hard for some to believe, but it is a fact, nevertheless, that much land thus managed will pass through a series of these strains as well as though irrigated.

Pruning.

Pruning in America is either a lost art or an art never learned. When we make such broad assertions, we wish to be understood in a broad sense altogether. It may, doubtless, be asserted, on the other hand, with entire truth, that various vineyards, pear and apple orchards and small fruit patches, are pruned sufficiently well to yield fine crops of fruit, but we believe never the finest. What we miss is a comprehensive practice of pruning, based invariably on the same general principles, but applied to each specimen in a manner suited to the individual peculiarities of that particular plant. We would wish that a process of pruning, pinching and thinning out buds, could be devised in strict accordance with the nature of the plant, just as the doctor studies the constitution of his individual patient. Original methods created by the needs of the case in hand—that is what we want. It is not systems we want, for with them we are well supplied between the Dubricul, or spur system, the renewal system and now, finally, the extension system. They have their merits in the treatment of certain cases, but everywhere we come unexpectedly on peculiarities of constitution and environment to which they do not apply without modification. In other words, Nature does not intend us to have a book of recipes for obtaining her most satisfactory developments by a sort of rule of thumb. It is for this reason that we are now and then much astonished by the perfect results obtained by an original amateur of long experience who does not claim to have any system whatever. All this is apropos of the little-understood need for pruning at this season of the year throughout all classes of ornamental and fruit-bearing trees and shrubs. It behooves us to look carefully after this need of ornamental trees especially. Perhaps we may find we are neglecting golden opportunities for obtaining the best results.

The Naturalist.

A PLEA FOR THE MOLE.

In a late number of the RURAL, a correspondent from South Carolina inquires how to get rid of the mole in his pea-nut patch; and the RURAL confesses its inability to give an effectual remedy, saying substantially, "It's hard to kick against the pricks." It is hard to keep moles away from the garden or from any piece of land in which mole food abounds. To keep them away from such a place is to *kill* them first.

When a boy in the land of "pea-nuts," near the home of the above correspondent, I was taught to make war upon the mole, which I kept up for 40 years, not knowing at the last how much good or *harm* I had done; but I am satisfied that the last half of the 18th verse of the 9th Chapter of Ecclesiastes, is quite true of me in the mole war. More than 50 years' acquaintance with the little animal has brought me to the conclusion that "wisdom is better than implements of war" in this case. It has been a long while since I killed one, except by accident, as sometimes one friend kills another. Our business relations for some years have been such as to make us friends. I have been growing nursery stock—small fruits, flowers, etc.—in which he has operated with me as "hired help." I have had hands who were such good workers that a little awkwardness, by which a few plants were sometimes killed, was excused, and they were retained. So I treat the mole, and for the same reason.

It is true he does sometimes destroy a plant while catching my enemies in a flower bed; but it is by accident. He is very useful in the strawberry grounds catching the worst enemy to strawberry growers. In hunting the white grub, however, he passes under a hill of plants, and so admits the air that the plant dies. On examination, the root is found to be eaten away and the evil is charged to the mole, when, in fact, he only ate the grub that killed the plant. A little observation has shown that, grounds manured with chip manure or sawdust are more frequented by him than others, and simply because he is most needed there; for after such manure or mulch comes a crop of this strawberry foe. But it may be said that the mole eats "pea-nuts" in S. C.; yes, and he nibbles a yam sometimes in Missouri He eats roots and grains when unable to find plenty of bugs and worms; and when all the bugs and worms are dead, it will be early enough to kill the mole to save the pea-nuts and potatoes.

Shall we muzzle the ox that treadeth the corn, or kill the bird that catches daily a thousand hurtful insects, because he eats a dozen berries? The best pickers I ever had I allowed each to eat a quart of berries per day while at rest, but not one berry at any other time. It worked well as a rule, and I am willing to allow the birds, and the moles too, to test the quality of the fruits they protect so well. "The laborer is worthy of his hire;" and if even the moles serve us, we should pay them for it. As a matter of friendship, we may spare them. When moles, toads, birds or *snakes* do us more good than evil, they are profitable, and our friends, and should be treated as such. Those were dark days of barbarism when horticulturists killed alike their friends and foes, without investigation. These are better days for the birds than those—most of them with thoughtful men are safe because useful, and so should everything useful be esteemed.

Even the homeliest faces on many of our fellow-men are tolerable to all, and even admired by many, because sometimes worn by persons of worth and real goodness. So of the huge old, homely toad—I confess to a real friendship for him. I would gladly have one sit under every Dahlia or other plant and sing. Sing? Yes, his voice is musical to me. And now the *mole*—why is he killed while we spare and esteem the toad? Because we *see* the toad catch flies and bugs in great numbers, he does it quickly and fast so that the fair ladies, (sensible ones) spare him for their beautiful flowers' sake. But the humble mole, like a real Christian, does not sound a trumpet or perform any part of his service to be seen and praised of men. He is persecuted by those he befriends, because they do not understand and appreciate him. He goes about doing good, and is killed without law for the harm others do. It has been a question, and may be yet with some, whether the mole is friend or foe. Some kill him because others do; some, not sure of his guilt or innocence, kill him "at a venture;" those who have decided against him kill him by rule. Now if that South Carolina inquirer has tried and condemned him in his "pea-nut" court, I, as the silent mole's friend, respectfully appeal to the supremacy of the grub-worm district of the strawberry court of the United States, where I ask a thorough investigation and a just decision. The merits of the case having been thoroughly canvassed before such an intelligent and impartial tribunal, I have no fear but a decision will be rendered in favor of my friend, the mole.

Springfield, Mo. JOT.

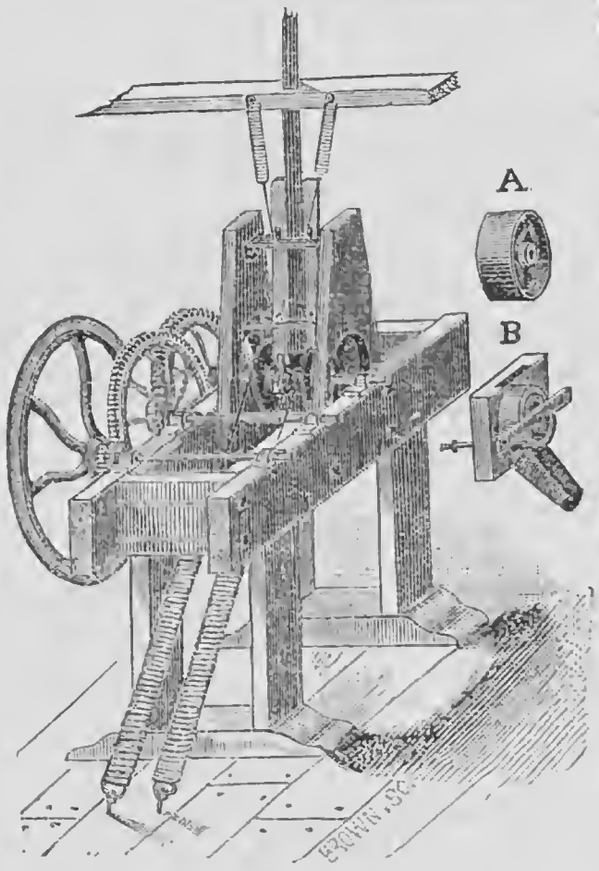
Industrial Implements.

THE MINNESOTA CHIEF THRASHER.

It is doubtful whether any thrasher made in this country has won a wide popularity so rapidly as the Minnesota Chief, manufactured by Seymour, Sabin & Co., of Stillwater, Minn. Since January 1878 upwards of 3,000 machines have been sold by this firm, and last season they received orders for 700 thrashers more than they could possibly turn out, although they were making six, and sometimes seven, every working day. Since then, however, their works have been so enlarged that even with the increased demand for their goods, they are confident of being able this year to fill all orders. Their aim has always been to make the best possible machine. In this, simplicity and stability of construction as well as capacity are, in their opinion, essential. They saw that the machine must be so constructed that unskilled labor could operate it; that it must be made of the best material so that it could travel over rough country roads, and be crowded to its full capacity without overstraining the working parts; that it must have capacity to thrash large quantities of grain, in view of the enormous increase in crops; that it must be suitable to thrash not wheat alone, but oats, clover, timothy and flax, also. These requirements they have embodied so successfully in their machines, that the sale of these has not been confined to the "home market" only, but has extended from the slopes of the Alleghanies to Oregon, and from Lake Winnipeg to Mexico. Of this machine Finlay Dunn, the special correspondent sent by the London Times to investigate the agriculture of this country, lately wrote: "Over several fields we drive to see the work of the Minnesota Chief thrasher with attached winnower and elevator, made at the convict establishment at Stillwater, capable of thrashing out readily 1,000 bushels a day, driven by a 10-horse portable Minnesota Giant farm engine, fed with flax straw, the extra capacity of furnace required for the bulky fuel being extemporized by introducing within the furnace-door a six-foot tube, into which the straw is packed, dried and is pushed into the furnace. The produce of 36 to 40 acres is thrashed daily: 16 men, a pair of horses and two teams of oxen do the work, including drawing water and taking the wheat to the granary, at a cost frequently within 60 cents an acre." One of our staff lately inspected all the works of the corporation and found them running to their full capacity, the firm being determined to turn out from 1,500 to 2,000 first-class thrashers this season.

THE RYTHER ROTARY MOTION AND ROTARY AND GRINDER.

This handy attachment can be used for grinding grain or feed, shelling corn, cutting fodder, turning a fan-mill or a grindstone, churning, etc., etc., much more cheaply, it is claimed, than these operations can be performed by a geared mill. The rotary is so constructed that the work is all done by the lift or upward stroke of the wind-mill to which it is attached. It can either be connected with the pitman rod and worked directly under the mill, or be operated off by the side of the latter, so that the mill can stand over a well and pump water while the rotary can perform its various offices in the granary or barn. The principle on which it works compensates for the irregular



motion of the crank operated by a pitman rod, as well as for the irregularity in the motion of the wind-wheel. The wheel for running it needs no more rigging than is required for ordinary pumping. This device is valuable alike to stock raiser and farmer, as well as to the manufacturers and dealers in all kinds of windmills. It is made by Clark & Co., Somonauk, Ill., who will furnish machines and full information to all applicants.

AN EXCELLENT POTATO-PLANT DUSTER

The Troy Stamping Works (Troy N. Y.) have sent to us for trial one of their contrivances for dusting potato or any other plants with London-purple or Paris-green mixed with plaster or flour. We commend it to our readers as the simplest and most effectual contrivance of the sort we have ever used, and we have used half-a-dozen or more that have at various times been sent to us. It saves so much labor—performs its work so effectually—that we take pleasure in writing this note entirely in the interests of our readers, and without the knowledge or solicitation of those who have the duster for sale. It is well to remark that the long wooden handle is not to be shaken, as one naturally supposes at first. This remark will be understood by those who attempt its use. With this machine it is nearly as easy to dust a potato patch thoroughly as it is to walk over it leisurely.

The Apiarian.

SEASONABLE HINTS.

The present season is well-nigh the busiest time of the year for the apiarist. The white clover, which, in the majority of localities, is the main honey plant, is now in full bloom; the queens are breeding rapidly, and swarming is the order of the day. This is the season that is especially trying to beginners in the business. When one has no experience to assist him, he is apt to be undecided as to what is the proper thing to do and how to do it, and consequently there will be an embarrassing lack of system in the work.

The first and great care of the apiarist should be to see that each colony is provided with a laying, prolific queen. An old queen, or one that, for any reason, has become less vital and has deteriorated in her laying propensity, should never be tolerated. In the honey season, when the workers live but a few weeks before they wear out, it is of importance that the colonies should be re-enforced with a constant and copious supply of young bees. Where such re-enforcement is lacking there will be a corresponding deficiency in the store of surplus honey, as well as in swarms. It is well to keep a few queens on hand in nuclei, so that if any accident should happen to a laying queen, a new one can be substituted without delay. Should a queen be killed by accident and a new one not be introduced, the workers will go to work and rear a queen from a worker egg, or young larva; but this process takes sixteen days, and five or six days more elapse before the young queen is fertilized and begins laying; hence, three weeks, in all, are lost. A prolific queen is estimated to lay over two thousand eggs a day when at her best. The total loss of bees to the colony would, therefore, be nearly 50,000 by a three weeks' absence of a queen. Those who take no warning from these figures do not deserve to succeed in apiculture.

Having prolific queens in the colonies, it next becomes important to see that there is room for them to lay. When honey is plentiful the bees will store rapidly; use the extractor freely, therefore, and let no more honey be stored in the brood nest than necessary. This extracted honey can be stored in barrels, if the quantity is large, and shipped to commission-men; but it is much preferable to endeavor to develop a home market for the article, and there sell it at retail. To this end, put it up in as attractive a form as possible. Glass jars, properly labeled with the name of the producer and the kind of honey, and containing from two to five pounds each, are perhaps the best sort of packages.

Keep, also, a watchful eye on the sections for storing surplus honey. The queen should never be allowed to lay eggs in these; but if there is sufficient room for her in the brood-nest, there is but little danger that she will enter the upper story for the purpose of laying. The size of the sections in which to store surplus honey will, of course, vary somewhat with the form of hive. We have found sections measuring 5½ by 5½ inches very desirable. These will hold, when filled, nearly two pounds of honey each.

The increase of colonies is also a subject of first importance. All successful apiarists do not agree as to the way to increase; some still prefer to have their colonies swarm naturally, while others—and these are in the majority—are in favor of artificial swarming. The method of forming nuclei and gradually increasing these to full-sized colonies, by adding bees and frames from other hives, is undoubtedly the best. The nucleus should, for this purpose, be started in an ordinary hive, with about a quart of bees, two or three frames of brood and honey, and a queen cell; or, if no queen cell can be had, there should be eggs or young larvæ less than three days old, from which to rear a queen. The bees will usually accept the situation quite cheerfully, and straightway begin to rear a ruler. Towards the fall should there be several nuclei too weak for wintering, these can be united into one or more strong colonies.

Do not let the number of drones be increased indiscriminately. This useless class of bee society corresponds to the loafers and tramps of the genus homo. They do not contribute to the prosperity of the hive, and they do not even make their own living. Nor can it be urged in their favor that they, as male members of the family, sustain the relation of protectors to the weaker sex, for they are utterly defenceless when attacked. Unlike the neuters, they are devoid of that small appendage in the abdomen, which is held in such high respect by small boys, and whose effect when used is like that of alcohol—stimulating but not nourishing. Catch and kill off these useless inmates of the hive wherever they may be found, and cut out all drone comb that is built in the brood-nest. Some, of course, are needed to fertilize young queens, but enough for this purpose will escape attention.

Miscellaneous.

WHAT OTHERS SAY.

COLORADO POTATO BUG DESTROYER.—We find the following in Cornell and Wood's Farmer's Guide:—Take Mandrake roots (easily gathered) dried for a week or more in the shade; put one-quarter bushel in a barrel (one head being removed), fill with water and let stand for two days, stirring now and then; strain the liquid through a cloth into a garden sprinkler; sprinkle toward sunset only those plants on which the young brood hatch and before they scatter to adjacent plants. This is an entirely safe remedy and just as effective as Paris-green and is less difficult to apply.

TEMPLES OF ROSES—MANY WEEPING TREES, ETC.—We have seen at flower shows ill-directed attempts to build temples of roses, and sometimes they have been made into the shapes of human beings, eagles, flags, etc. The mind at once revolts at the sight of solid and massive structures attempted with so fragile and delicate materials as flowers. Nearly as unfit is the attempt to build solid gateway arches of delicate foliage. There is another practice, much less objectionable, but still carried too far—the abundant planting of weeping trees. These are mostly unnatural to some extent, and if employed at all, the most graceful should be selected, and sparingly introdneed. They sometimes assist in the variety of a sky outline. Many of them came in the first place from an unnatural twist of a branch, propagated and continued by grafting. The above is from the Country Gentleman. We would make one suggestion:—No matter what the size of the grounds—unless a graveyard is included—one Weeping Willow, at most, is enough.

COMMON SENSE is defined by Prof. Huxley to be science exactly in so far as it fulfills the ideal of common sense—that is, sees facts as they are, or, at any rate, without the distortion of prejudice, and reasons from them in accordance with the dictates of sound judgment. And science is simply common sense at its best; that is, rigidly accurate in observation, and merciless to fallacy in logic....The course of nature as it is, as it has been, and as it will be, is the object of scientific inquiry; whatever lies beyond, above, or below this, is outside science.

THE Mass. Ploughman thinks that when the consumers are really in earnest to get good milk and are willing to pay for it, no doubt a way will be found to supply it. Already a plan has been adopted by at least one party that prevents milk from being tampered with while in transit; namely, that of locked cans, the key being in the keeping of the lady in whose family the milk is to be used.

"I HONESTLY believe," says the New England Farmer, "that the farmer who will work his brains until noon, and his hands the balance of the day, will outstrip him who rises at five and toils until nine at night."

THE Grocer thinks that if the dairy interest continues to increase as it has been doing heretofore, in a few years hence no other country need make butter and cheese, as this country will be able to supply the requirements of the world at a lower rate and of a better quality than they can make it themselves.

MAJOR FREAS thinks that of late years it is generally noticed that both apples and pears are more perfect than formerly, being less injured by insects; and he has not a doubt but this is owing to the incessant labors of the imported house-sparrow. Those who become especially observant of their industry for a single season must be convinced of the fact.

AGAIN the Editor of the Germantown Telegraph says they are always present in his own garden, among the fruit at all stages, yet with the most careful observing he has never seen or known them to touch any kind of fruit whatever. They eat insects only, and they are the most industrious and efficient insect-destroyers we have—better than any native bird. It is true, he says, that before the appearance of insects they will subsist upon vegetable matter, and this food may be the blades of grass, any winter garden crop, the tender foliage upon trees, etc., but this is the extent of their offending. The charge that they sometimes eat the young fruit-buds is not sustained. [We would remark that we have seen the sparrow eat the grains of sorghum, nearly destroying the panicles; have seen them pull open the ends of the husks of corn and eat the kernels as far down as they could reach, and we have seen them eat strawberries.—EDS.]

BE CHEERFUL.—An ill-tempered, gruff, glum man, cannot keep friends, and without friends it is impossible to succeed in business. We do not wish to be understood, says the Grocer, as advocating an easy good nature, which lets everything take its own way, without caring particularly. Such cheerfulness as that is the direct outgrowth of laziness, and will be sure to result in ruin. Be cheerful with your employes; it brightens them up, and they will work all the better for it. Be cheerful with your customers, and they will like you the better, and you can hold their trade. A man who is cheerful is generally a man who is good, and he inspires confidence. Don't stay up until the "wee sma' hours," for if you do you will find it impossible to be cheerful. A man can't smile when he has a bad headache, and a headache is a necessary concomitant of late hours. "Don't cry over spilt milk," is a good maxim. If anything has gone wrong, don't make it worse by getting mad, swearing and kicking up a row generally, but go to work to remedy the evil. All the swearing and fussing in the world won't help you when a barrel of flour has broken, or any other accident happens in your store, and the time you spend in getting mad might be much more profitably spent in doing something else. Misfortunes always come easier to a man with a cheerful spirit.

THE WHEAT CROP OF THE WORLD.—The wheat crop of the whole world for 1879 shows a deficiency of over 375,000,000 bushels, nearly 200,000,000 bushels of the deficiency falling to Europe. The following table, compiled from the *Bulletin des Halles et Marches*, by the Scientific American, shows the yield for each large wheat raising country compared with the average yield:—

	Average yield. Bushels.	Yield for 1879. Bushels.
United States	337,500,000	337,500,000
France	230,172,000	173,125,000
Russia	180,000,000	157,500,000
Germany	99,000,000	90,000,000
Spain	94,500,000	78,750,000
Italy	87,550,000	67,500,000
Austria Hungary	76,500,000	63,000,000
Great Britian	83,500,000	47,500,000
Turkey	34,500,000	29,500,000
Roumania	27,000,000	22,500,000
Belgium	19,150,000	14,650,000
Portugal	6,750,000	5,675,000
Algeria	20,500,000	16,875,000
Canada	13,500,000	13,500,000
Australia	13,500,000	14,650,000
Egypt	13,500,000	11,500,000
Netherlands	4,615,000	3,375,000
Greece	3,500,000	3,375,000
Servia	3 375,000	2,812,500
Denmark	2,250,000	2,250,000

A PROPOSED AGRICULTURAL COLLEGE NEAR NEW YORK CITY.—At a meeting of the Farmers' Club on the 1st inst., at their rooms in Cooper Union, this city, it was proposed to establish an agricultural college somewhere near New York city—perhaps on Long Island—in which to teach the science and practice of farming and gardening to young men, free of charge. As an initiatory step a large committee on organization was appointed. The following are some of the gentlemen on this committee, nearly all of whom are from New York or its immediate neighborhood: A. S. Heath, M. D.; Nathan C. Ely, Robert J. Dodge, Richard Kelly, Hon. John Jay, Edward Schell, Hon. James W. Covert, Erskine S. Bates, M. D.; Lawson Valentine, Wm. H. Gedney, Thomas Kinsella, James D. Hopkins, D. V. S.; Henry E. Pellew, Dr. Albert R. Ledoux, Col. F. D. Curtis, Thomas G. Knight, James Wood, Col. F. G. Wentworth, Wm. S. Schermerhorn, Col. Wm. Crozier, L. S. Hardin. In a speech on the subject, Dr. A. R. Ledoux, formerly of the North Carolina Experiment Station, said: "Let us select 1,000 acres of good land within an hour's ride of the city and stock it with model houses and tools. Let there be a practical dairy, conducted on the most approved plan, a model barn, greenhouse, museum, etc., etc. Let there be *free* instruction in farm and garden; in the care of stock and in dairy work. Let there be furnished rooms which students of agriculture may occupy and pay for by work. Let there be established in conjunction with this field work, but in the city, free evening lectures by the most eminent Professors on the Chemistry, Botany, Zoology, Entomology and Physiology of the farm work and farm life. Let these also be supplemented by lectures on agriculture, etc., and to these lectures let all be invited.

What will be the results? An establishment entirely divorced from literary institutions; where the home-spun of the farmers' boy need not feel ashamed beside the broadcloth of the collegian; the opening of a door to the honest mechanic and laborer of this crowded city, through which he can enter an honest, healthful calling and in time secure a home and a livelihood; a place where our farmers' sons can see the most approved machinery, methods and systems; a place where we all can go and learn something new and useful. Through the chemical analyses of the "Station," we can be protected in our purchase of fertilizers, and can learn the quality of our soils, marls, peats, waters, feeding-stuffs, etc., etc.

Establishing, one by one as we are, Experiment Stations in our States, we shall soon, I trust, be on a par with Germany with her 75 Stations and numerous agricultural schools, and nothing in this or any other land has been attempted more pregnant with great and priceless possibilities for good to the farmer and the laborer than this College and Station of which we have been told this afternoon."

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN 43.—MAY 29, 1880.

FERTILIZER ANALYSES.

Canada Ashes.

400. ASHES from stock of W. W. Cooper, Suffield. Sent by R. E. Pinney, Suffield. Cost 35 cents per bushel of 42 pounds.

401. Canada Leached Ashes from stock of James A. Bill. Sent by Otis Snow, Rockville. Cost 21 cents per bushel.

	400	401
Potash	4.66	1.26
Soda	1.20	.54
Lime	34.02	24.37
Magnesia	2.41	2.43
Iron oxide and alumina	1.41	2.13
Phosphoric acid	1.19	1.26
Sulphuric acid	95	10
Carbonic acid	19.25	14.99
Silica and sand	11.11	15.71
Charcoal	6.86	3.11
Water at 100 degrees	13.42	32.02
Combined water and loss	3.52	2.08
	100.00	100.00

Sample 400 is apparently unleached ashes and the analysis closely resembles in most particulars one made at this station last year on hickory ashes. The sample has evidently been exposed to wet and may have lost a portion of alkali. Reckoning in it the potash at 7 1-2 cents, lime at 1-4 cent (cost at kiln in New Haven), magnesia at two cents, phosphoric acid at seven cents and sulphuric acid at one-half cent per pound, the estimated value of 100 pounds is $0.57 1-2, while the cost is $0.83. Allowing lime to be worth at Suffield one-half cent per pound, to cover transportation, would raise the valuation to $0.66. On the other hand, considering the potash worth no more than in muriate (4 1-2 cents) would reduce the value 14 cents per 100 pounds. The ashes are really worth about 50 to 65 cents per 100 pounds, the former price for ordinary crops, the latter for tobacco where muriate of potash is objectionable. The valuation of fertilizers like this sample is less exact than in case of superphosphates, etc., because the ingredients, like lime which make up a large part of its weight, have variable commercial values, according to locality and state of market.

401 has essentially the composition usually found in leached wood ashes. It contains, indeed, more sand and silica than the average, but also more potash, while lime and phosphoric acid are up to the average.

Superphosphates, Etc.

404. Lombard & Matthewson's superphosphate.

410. Quinnipiac Fertilizer Co.'s superphosphate.

411. Fish and Potash, manufactured by the Quinnipiac Fertilizer Co., New London.

412. Pine Island Guano, manufactured by the Quinnipiac Fertilizer Co.

415. Bradley's Superphosphate.

404. Sent by John D. Gaylord, Ashford. The others by S. R. Gridley, Pres. Farmers' Club, Bristol.

410, 411, 412, from stock of S. A. Weldon & Son; 415 from stock of Wilcox & Judd.

	404	410	411	412	415
Nitrogen (organic)	3.61	3.22	4.52	4.79	3.06
Sol. Phos. Acid	5.10	1.26	1.27	92	7.48
R'v't'd " "	8.15	6.88	3.77	5.57	87
Insoluble	2.97	4.68	1.88	2.47	1.25
Potash (as muriate)		2.05	1.92	4.60	1.46
Estimated value ₱ ton	$44.83	$36.81	$32.42	$39.09	$35.57
Cost per ton	$40 00	?	?	$42.00	?
Estimated value ₱ bag 100 lbs.		$1.84			$1.78
Cost per bag		$2.00			$2.15
Estimated value ₱ bag 167 lbs.			$2.70		
Cost per bag of 167 lbs.			$3.00		

The ton price of same braud as 410 (at New Haven) was given in Bulletin 39 as $38; that of 411 as $34, and that of 412 (in Bulletin 42) as $40.

Specials, Bone, Cotton-Seed Meal.

407. Stockbridge manure for corn, manufactured by Bowker & Co., N. Y., Boston and Rochester.

409. Stockbridge manure for roots, manufactured by Bowker & Co., N. Y., Boston and Rochester.

413. Kitchen garden fertilizer, manufactured by Bowker & Co., N. Y., Boston and Rochester.

The above are from stock of S. A. Weldon & Son and were sent by S. R. Gridley, Pres. Farmers' Club.

405. Ground bone, manufactured by Lombard & Matthewsou. Sent by Jno. D. Gaylord, Ashford.

406. Ground bone, manufactured by Edmund Smith, South Canterbury, sent by B. Corbin, Fair Haven.

402. Cotton-seed meal, from stock of C. H. Carrington, Naugatuck, sent by M. S. Baldwin, Naugatuck.

	407	409	413	405	406	402
Nitrogen as ammonia	1.58	1.40				
Nitrogen in organic matter	3.13	2.70	2.98	5.05	4.08	6.89
Soluble phosphoric acid	5.16	4.70	5.12			
Reverted "	84	1.16	74			
Insoluble "	42	68	35	21.06	20.99	3.49
Potash as muriate	6.75	8.08	9.82			2.07
Calculated value ₱ ton	$40.70	39.16	35.38	40.15	39.39	36.94 *
Cost	4.00†	5.00†	3.00‡	32.00*	30.00*	30.00*

—† per 200 lbs. ‡ per 100 lbs. * per ton.

S. W. JOHNSON, Director.

Everywhere.

RURAL SPECIAL REPORTS.

ALA., South Lowell, Walker Co., May 25.—Wheat is badly rusted and is only about half a crop. Cutting has begun. B. A.

CONN., Columbia, Tolland Co., May 31.—The season has been unusually dry thus far. In many cases corn has failed to germinate, and in others has dried up after the germinal shoot had started. Trees that have been set are likely to dry up, unless special care is taken, and careful mulching practised. The potato beetles appear in force and promise to need lively work in their destruction, or else the destruction of the potato crop is inevitable. In some instances garden vegetables have died in consequence of the severity of the drought. Sorghum is being planted more extensively than ever before, and it is probable that large quantities of sirup will be manufactured. The same is true of onions; but they are being injured by cut-worms. Butter is growing dull, and is in little demand, except what is required in local markets to supply customers. W. H. Y.

KANSAS, Council Grove, Morris Co., May 29.—Heavy rains fell all over this section on May 25. While the dry weather had done considerable damage to wheat, corn and other crops have not materially suffered. The rain will cause the wheat to turn out much better than was expected, and other crops are in excellent condition. The prospect for crops in this part of the Neosho Valley is at present very flattering. In fact, the condition of crops will compare favorably with the best seasons during the past ten years. L. H.

KAN., Republic Co., May 29.—The usual rains are a month behind, but they have come at last, and the drought is considered over. Crops will do a long time without more rain. Fall wheat will be short and thin on the ground, but the heads are of good length and well filled. Other small grains are late, but may do well. Corn generally looks well. F. E. H.

MICH., Watson, Allegan Co., May 22.—Corn planting is about half done in this vicinity, and wet weather prevails to such an extent that we cannot finish. Wheat looks well: grass, ditto, and there will be an abundance of fruit of all kinds. As the weather is warm, everything that has been planted or sown is growing finely. It is unusual for roses to bloom here in May; but we have now some white Scotch roses in full bloom. Never since my remembrance was wheat so forward at this season of the year as now. H. D. E.

MICH., Lansing, Ingham Co., May 27.—It has been a very wet spring here. W. J. B.

NORTH CAROLINA, "In the Valley of the Tryon," Polk Co., May 25.—Yesterday and the day before we had most refreshing showers. Everything seems to be growing with great rapidity. The oat crop that was sown in August last is now fast turning in color and will soon be ready for the harvest. Wheat is generally cut and in the shock by June 10th. The prospect now is quite encouraging for a good crop of wheat.

All kinds of fruit seem to be progressing well, and we are likely to have a most abundant crop. The summer travel to these mountains is now just beginning. It comes from Florida and all the coast regions of Georgia and South Carolina, and some from Alabama and Louisiana. Visitors come to avoid the "malaria" of their Southern homes, and to invigorate enfeebled constitutions by breathing pure air and drinking pure water among the mountains—the highest in N. C. in the great Appalachian chain.

Prices of all kinds of produce rule high here, and one wonders why it is so. Corn is worth to-day 80 cents per bush.; wheat, $1.25; flour, $4 per cwt.; hay, $20 per ton at the railroad station; butter, 15 cents per pound; eggs, 10 cents per dozen; bacon, Western, $8 per cwt. The reason why all kinds of grain rule so high is to be found in the fact that from the southern slope of the mountains to the ocean the great bulk of the people grow cotton almost exclusively; not that corn and wheat do not thrive well here, but cotton is, if not a paying crop, a crop that commands the cash whenever it is offered. There is always a market and a price for cotton.

[We take the liberty of stating that the above communication is from Dr. McAboy, a clergyman and a physician, who, though of Northern birth and education, was induced to settle in the delightful Tryon Valley some ten years ago for the benefit of certain members of his family who were not in the enjoyment of vigorous health. The writer spent several weeks at his hospitable home. The doctor is full of enthusiasm respecting the grandeur of the scenery, the salubrity of the climate, the fertility of the bottom lands and the adaptation of the "Thermal Belt" to fruit growing in general, and, it is but fair to say, that visitors soon find that his enthusiasm is highly contagious. The doc-

tor's address is Lynn P. O., Polk Co., N. C., and we are assured that he will take pleasure in answering any questions relative to the Tryon Valley, and this, too, without, so far as we can judge, any selfish motive. The writer of this and many acquaintances afflicted with throat and pulmonary weaknesses of various kinds, were much improved by the climate, and we are glad of the opportunity of recommending it to those of our readers who may be suffering from the same causes.—EDS.]

NEW JERSEY, Montclair, Essex Co., May 29. Our hot term is virtually at an end, at which all rejoice. Commencing on the 23rd, with a temperature of 90 deg. it rose daily to 94 deg. 96 deg. 99 deg. culminating at 102 on the 27th. With more air stirring, the latter temperature was more endurable than that of the preceding days. On the evening of the 27th. there were slight indications of showers in the distance, resulting in a cool breeze from the north, which sent the temperature down to 60 deg, on the morning of the 28th. During the day shower indications came nearer, but passed to the south and east, reaching Newark, New York city and probably the RURAL FARM. We bide our turn hopefully and the indications this evening are that a rainfall is near at hand. The "oldest inhabitant" does not recall so hot and dry a May. Vegetation wilts at midday as it is wont to do in August. The hay crop in old meadow is lost beyond redemption and the most promising crop of strawberries is irretrievably injured. Much corn and potato planting has been deferred for want of sufficient moisture to cause the crop to vegetate. Plowing sod ground has been almost impossible. Newly set trees and plants have died to a greater exteut than ever before, being literally burned up. Life in many a plant has been retained only by irrigation.

Roses, rhododendrons, weigelas etc., have had a hard struggle to open their flowers which have been of very brief duratiou, with less color and character than usual, some being actually scorched by the intensity of the sun's rays before unfolding their petals; but the redeeming feature of this drought and heat is the readiness with which the most persistent weeds die, and great has been our satisfaction in their destruction. A twenty-four-hour rain, steady and gentle, is greatly needed. E. W.

NEW YORK, Sharon Center, Schoharie Co., May 29.—May has been a remarkable month in some respects—very cold in some parts, very hot in others, and unusually dry all the time. In the early days of the month we had ice, and in the closing days the thermometer staid steadily up about 90° in the shade. On the evening of the 20th a thunder storm accompanied with hail passed over the town doing considerable damage—a church was struck by the lightning and several trees up-rooted, a number of persons knocked senseless, and several hop-yards cut clean to the ground. Since that time we have had a very rapid growth of crops, corn planted ten days ago is all up; one can see the rows across the fields; mangolds and beets started the same or next day are all up. Cucumbers and melons planted five days ago were up last night. Grass is very poor. Last year's seeding is of no account; old meadows and pastures are short and thin. Wheat may be half a crop; several pieces have been plowed up. Stock of all kinds, however, are in very good condition. Cows can be had for $30—rather a low figure when butter and cheese bring 20 and 12 cents a pound repectively. The article upon home consumption of cheese in the last RURAL reminds me of a little incident which proves the truthfulness of all said therein. A grocer at Canajoharie ordered three cheeses from our factory at Sharon Center. When they were delivered, one of them was cut. There happened to be a number of heads of families in the store at the time, and, of course, each one had to have a taste; the result was when the last man had gone to dinner, the last pound of that cheese had gone also, and the grocer had to order cheese very often to keep a supply. Had the cheese been poor, everybody knows what would have been the result. L. S.

OREGON, Portland, Multnomah Co., May 26.—A gentleman who has traveled somewhat extensively through the Willamette Valley during the past two weeks reports that, in a residence of nearly thirty years in Oregon, he has never seen a more encouraging outlook for the wheat crop. In almost every locality visited the young plant appeared to be growing finely, being of excellent color and healthy. With a moderately favorable season for the next two months, a harvest of unusual abundance of the "staff of life" is assured. Similar reports reach us here from the wheat-growing sections east of the Cascade Mountains, and there seems to be good ground for the estimate of a surplus of at least 250,000 tons of wheat to find its way to the markets of the world. Fruits and vegetables are also said to promise well, and Oregon will still retain the appellation of the land of plenty. H. L. S.

PA., Rockland, Venango Co., May 23.—The weather here is very dry. Vegetation is suffering for rains. Frost two weeks ago injured to some extent the fruit crops, except apples; but did not entirely kill the rest. The present prospect is good for an immense crop of apples. If the drought continues much longer the hay will be very slim. Wheat is looking very bad—the outlook is not as good as in March. The freezing and thawing of that month must have injured it somewhat; then the dry weather is not helping it at all.

G. L. J.

TEXAS, Dayton, Liberty Co., May 23.—The season has been all that the greatest grumbler could desire. Corn and cotton are now rioting in our glorious sunshine. The former is in silk and tassel. My "Blount's Prolific" is not the same as I got from the RURAL. It is only knee-high and in tassel, while last year it was 10 to 12 feet high. This was purchased from Mr. Carson in New York City, so I think *he* has been swindled by some one. Mold's Ennobled Oats are 30 inches high, but look sickly, I am sorry to say—they are yellow. I have sprinkled them with ashes, salt and lime, but this treatment apparently does no good. I suppose the seed was sowed too late—February. In this latitude—30°—it ought to have been sown in October. My cow-peas went down in a frost, as described by your Waco correspondent. I thought they were *peas*, but it seems they are *beans*. I could have saved them easily, as I did my melons, cucumbers and Limas, but I got fooled that time. However, your Alabama advertiser supplied me with a quart that are now growing nicely—so nobody is hurt. The mangels are undergoing a crucial test from some insect, and I am doctoring them with ashes. My Cuthbert raspberries died, owing, I think, to too much petting. In the same row I have a dozen Kittatinny blackberries, from your advertisers, E. & J. C. Williams; they are doing nicely, but I have let them alone. A large area of cotton has been planted this year in our neighborhood—about double that of last year. From 7 to 11 cents a pound makes all the difference from penury to plenty, and if no cotton worm appears, Texas will march up to the front rank of cotton-growing States. Yet the cotton worm ought not to be a set-back with any prudent man. Years ago when "Daily Rural Life" enlivened your columns, I sent him a vial of cotton worms, stating that I had no faith in Paris-green, but he insisted that I should persevere, and ever since it has been a perfect success. While my colored brother's field, just over the fence, was a forest of withered stalks, mine was green and blooming until Christmas. I have never been able to get a negro to use it. They are afraid of it seemingly, or think it is "conjuring." The great mistake made is in not having the poison on hand, so as to give it at the right moment. I buy mine before the cotton is planted and thus make certain work of it. One year I had a pet acre of the Dickson seed, and, though I had plenty of Paris-green, I concluded to stifle them with finger and thumb. I succeeded effectually, but it was a tedious, nasty business, and I never could get any of my boys to do it, and I really don't think I would do it again unless from necessity. This may aid some of the new-comers, who know nothing of the cotton worm, for this is the *truth*. G. G.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Fence Law in New Jersey.

G. G., Bergen Co., N. J., says that a large tract of land adjoining his place has lain in common for years. The division fences will hardly sustain their own weight, no one being willing to repair his share. Stray cattle collect on the common and are constantly raiding the adjoining fields, and our friend asks who is responsible for the damage; would it be just to impound such cattle, in view of the worthlessness of the fence, and demand damages from the owner.

ANS.—If the division fence has been apportioned in accordance with the provisions of the New Jersey Fence Act, your neighbor will be liable for the damage caused by his neglect to repair his portion of the fence. If the neighbor refuses to repair his portion of the fence, you may repair it, and upon an appraisal of the expense of such repairs by any two of the township committee residing nearest the land, and the non-payment of the amount appraised, you may sue him and recover the amount appraised together with the commissioner's legal fees. If the division fence has not been apportioned and each one's share remains unascertained, neither can claim for himself or impose upon the other the provisions of the fence act. If you cannot mutually agree upon the portion of fence to be maintained by each, you must then call in two of the township committee, who will determine the portion of such fence that each must maintain. Their decision is binding upon the parties and upon succeeding owners. Cattle owned by, or in charge of, your neighbor, coming upon your premises through his defective fence, may be impounded, or the neighbor may be sued for the trespass. If the cattle stray from the highway, or are turned without your neighbor's consent upon his land and then trespass upon your land, you may impound the cattle or sue the owners for trespass. One may turn his land into common, but may not remove division fences without first giving twelve months' notice in writing to the adjoining owner, of his intention. Should he remove the fence before the expiration of twelve months, he becomes liable for all damage caused by the removal, and after the removal of the fence he must see to it that the land is not used in such a manner as to work injury to the adjoining owner.

Improving a Muck Swamp, etc.

L. D. Belmont Station, N. Y., has a black muck swamp in which the muck is from three to thirty inches in depth, and he asks, 1, whether in improving it, it should be underdrained before plowing; 2, what kind of manure should be used; 3, and what kind of grass seed should be sown on it; 4, is Prickley Comfrey a humbug; 5, what is the best method of clearing up laurel and blueberry land and the best plow for the first plowing.

ANS.—1, The swamp should be drained: not necessarily with tile, but perhaps open drains may serve the purpose, especially if the land is to be used for grass. The ditches may be made two feet deep and four or five feet wide with gentle slopes, and seeded on the sides. 2, If the swamp is dressed with 100 bushels of lime per acre, no other manure will be required for some years. 3, The best grasses for such land are red-top; fowl meadow grass, (one bushel of each) and five pounds of timothy. This will make hay or pasture. 4, Prickley Comfrey is not exactly a humbug. It will produce a good deal of fodder on good soil, but will not thrive on poor soil, as has been claimed for it; some cows will eat it eagerly and some cannot be coaxed or starved to eat it. We don't think it will ever be so valuable as corn, but as it is a perennial and grows very early in the season it may serve a good purpose in some cases. 5, Laurel and brush land is best plowed with a pair of oxen, or a steady team of horses or mules and a sharp-edged steel or chilled plow with a sharp, steel coulter. A Syracuse chilled plow may answer the purpose. It might be well to write to some plow makers whose addresses may be found in our advertising columns, and procure a plow that is suitable for such work, or get one made expressly for it.

Warbles in Cattle.

W. A., Shell Rock, Ia., has a valuable young Short-horn bull on whose back a little lump appeared about two months ago. Since then it has grown very fast and looks now like a big, ugly-looking seed wart, and a lot of small ones have appeared around it, and our friend asks the cause and a remedy.

ANS.—These tumors are caused by the larvæ of the common gad-fly—œstrus bovis. The larvæ are commonly called wormals, wormils, wournils or warbles. The fly attacks the animal, pierces the skin and deposits its egg in the orifice. In a short time a swelling appears which grows larger by the deposition of lymph and the growth of the larva. Before long the latter is discharged, drops usually to the ground and, when fully developed, assumes wings and soon begins to deposit its eggs as its mother had done. When the fly is about, cattle may be seen galloping about the pasture with tail uplifted, and evidently in a state of great excitement. The tumors sometimes reach the size of a walnut, and animals plagued with a number are feverish and suffer considerably. Usually they do not need treatment, but in bad cases the grubs can be squeezed out by the pressure of the fingers. Sometimes the knife is required to make the opening large enough for the expulsion of the "bot." Bathe the wound with a solution of carbolic acid and water—1 to 40.

Putting up Pickles for Sale—Making French Wash for Fences—Walnut Stain for Wood-work.

D. M. H., Richmond, Va., asks, 1, how pickles are put up "commercially;" 2, how to make French gray wash for fences; 3, how to stain wood-work on the inside of houses a walnut color, at the least cost.

ANS.—Pickles are put up for sale in the following manner:—The small cucumbers when gathered are laid upon broad trays on tables and sprinkled with salt, and left to drain for a day. They are then sorted into sizes, and put into large casks with brine, where they are kept until wanted for sale. They are then drained from the brine and washed in fresh water, drained and put with some spices into glass bottles, jars or kegs, which are filled up with vinegar, the best being pure cider vinegar of moderate strength. Such pickles are not green but of a brownish tinge, and are chosen by those who prefer quality to looks. The green pickles are "coppered" and packed in diluted acetic acid, but these are not at all wholesome or desirable. 2. A French gray wash for fences is made of lime wash to which glue water and a little lamp-black and Prussian blue are added. The lamp-black makes a steel gray; the blue added gives the tinge known as French gray. 3. Walnut stain is made by brushing the finished wood with asphalt varnish thinned with turpentine. This varnish consists of asphalt dissolved in turpentine, and if it cannot be procured ready-made, it is easily prepared. One coat is sufficient. A sample piece should be tried first.

Relative Value of Pine and Oak Ashes as Fertilizers.

W. W. W. Griffin, Ga., asks, 1, is there any value in pine ashes for fertilizing purposes, and, if so, what is their value as compared with that of oak ashes; 2. will salt marsh muck make a good fertilizer for asparagus and other vegetables, and, if so, how should it be prepared.

ANS.—1. Pine ashes contain about as much of the fertilizing elements as oak wood, but pine wood yields but half as much ash as oak. The following will give the exact proportions:

	Pine.	Oak.
Total ash per cent.	2.4	5.1
Potash per cent.	0.4	0.5
Soda per cent.	0.2	0.2
Magnesia	0.1	0 2
Lime	1.2	3.7
Phosphoric acid	0.2	0.3
Sulphuric acid	0.1	0.1
Silica	0.2	0.1

It is seen that pine ashes are richer in potash and phosphoric acid than oak ashes, weight for weight, although the pine yields less ash than the oak. 2. Salt marsh mud makes an excellent basis for a compost, and when mixed with manure in cow pens or in stables it will make a good fertilizer for asparagus or any other crop for which stable manure is used. Alone it is of no use for such crops, but used as a top-dressing for grass it has been found very useful.

Miscellaneous.

G. E. N., Afton, N. Y., has a sugar bush of about 500 trees on 20 acres, and he asks, 1, whether he can "underbrush" it and sow grass seed, so as to make a good pasture, or will the trees give too thick a shade; would it be advisable to burn it—it is small and last fall about half of it was cut—or let it lie a year or so and rot. He also asks what grass seed he should sow and how treat the land to make a good pasture; 2, where can drain tile be had near him.

ANS.—If the trees shade the whole of the ground, grass will not grow much, and should not for the good of the trees. If quite scattering, sow orchard grass, red top and blue grass mixed. If the land lacks potash (as sandy soils usually do, and as clay soils more commonly do not), burn the brush, but be careful not to scorch the maple limbs. The grass seed will probably catch without harrowing, if sown in September or March. 2. W. Bender, Albany, N. Y., is the nearest dealer in tile drains that we know of. Prices, etc., will be furnished by him on application.

H. W., Rochester, N. Y., makes several inquiries as to lawn mowers, and desires to know whether those with "iron rollers" are the best. His lawn is small, smooth and the turf velvety and he desires so to keep it.

ANS.—The Buckeye lawn-mower (Mast, Foost & Co., Springfield, O.,) is, as claimed, easy to work, handsome in appearance, simple in construction and durable, so far as we can judge from one season's use. The Excelsior and Philadelphia are both excellent machines. The former may be purchased with or without an iron roller. For your use, we should think the small wooden roller would suffice.

E. D. L., Speedville, N. Y., 1, asks where the Clipper mower is manufactured; 2, where and by whom is the spring-toothed harrow made.

ANS.—1, The Clipper Mower Co., Keene N. H. It is sold by R. H. Allen, & Co. of this city. 2, Wheeler, Melick & Co, Albany, N. Y.; Olin & Co., Perry, N. Y., and Harrison M'f'g Co, Janesville, Wis.

J. G. A., Baltimore, Md., asks how far apart should raspberries be set in the rows and how far apart should the rows be.

ANS.—It will depend upon the vigor of the varieties. Strong-growing sorts should be planted about five feet apart in the rows, and the rows five and a half to six feet apart; weaker varieties may be set a foot to a foot and a half closer each way.

G. G., Dayton, Texas, has a seedling orange tree, thirteen years old, that has never borne fruit. It has five stems as thick as his wrist, and he asks whether we would advise him to cut off all but one.

ANS.—We should cut it back, and root-prune it.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, June 5th.

B. A.—A. L. J.—E. H.—B. A.—F. H. S.—S. R. M.—E. D. L.—L. H. E.—D. C. M. P.—P. N. S.—G. M. I.—B. G.—J. H. C.—G. I. F.—C. L.—W. B. H.—P. B.—E. A. M.—E. W.—A. A.—H. S.—C. A. G.—S. G. J.—O. W. D.—W. C. G.—T. H. H.—W. I. C.—W. H. Y.—F. E. H.—S. T.—R. H. M.—S. L.—W. G. R.—H. M. I.—T. H. H.—G. G.—L. M. R.—W. T.—A. R. M.—S. K.—W. W. W.—W. S. H.—T. R.—J. J. J.—R. K.—T. L.—C. F. M.—J. J. B.—C. M.—R. L.—O. W. C.—G. G.—J. C. T. L.—M. B. B.

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SATURDAY, JUNE 12, 1880.

A REQUEST.—We would thank our farmer readers if during the approaching harvest they would send us by mail any heads of wheat of new or little-known varieties which they may deem of special value. According to recent postal laws, the name of the variety and the name and address of the sender may be written upon the envelope or box containing the article sent—a matter of importance to us, since we could not otherwise place them together, if many of our friends would comply with our request. Of course, we do not want old varieties, like Fultz, Clawson, Mediterranean, etc., etc., of which we have already presented engravings, while little that is not already well known can be said regarding them. We should also be pleased to receive any heads that are remarkable for their size and weight.

KEEPING UP WITH ONE'S WORK.—We have never tried harder than during the present season to keep ahead of our work upon the farm, and we have never been less successful. The mild winter was favorable for putting all things in order, and for the accomplishment of much work that in severer winters is necessarily left until early spring; and we did not neglect the opportunities thus offered. Nevertheless, the drought through which we have passed has thrown us so behind that the corn and potato fields—now that rain has come—are crying out for cultivation. We are constantly advising system, fore-handedness, promptness on the farm—and the advice is, no doubt, good—but really rain in excess, drought, frosts, insects, crippled horses, inability to procure extra labor when most needed, and other causes often make us feel like laughing to scorn our own advice. Still there is this consolation that farmers who do all they can to keep up with or ahead of their work, are in vastly better circumstances to bear with such drawbacks than those who are always behind.

SHEEP HUSBANDRY INVESTIGATION.

AMONG farm animals, in every country, the sheep has a prominent position. Meeting the vital human wants—food and clothing—"golden hoof" is also quite generally deemed essential to good husbandry to sustain the fertility of the soil. The present era is one of unusual interest in this branch of rural effort, from the recent revival of manufacturing, the variety of wool demanded, and the increasing home use and foreign demand for fine mutton. The business is in a transition state in which place, soil, feed, skill, science and various circumstances aid in determining whether wool-growing, lamb-raising, mutton-producing, or a combination of these specialties be pursued.

General Walker, in his census work, has recognized this fact, and proposes a thorough investigation of the subject, which has been committed to Mr. J. R. Dodge, a recognized expert in this line. The inquiry, in addition to the regular enumeration of sheep and fleeces, involves the distribution of breeds, the tendencies of breeding, the time and material of feeding and grazing seasons, the cost of keeping, the economics of lamb raising and mutton production, casualties and their causes, diseases and their prevention. It is far more exhaustive than any statistical inquiry upon the subject heretofore undertaken and demands the willing and earnest co-operation of the most intelligent flock-masters in all parts of the country. Public spirit and personal interest unite in equal inducements to painstaking endeavor on the part of individuals making these returns. The result should be of incalculable advantage to the future of wool growing and meat making. It is beginning to be recognized that the entire business of stock growing is to be based, in the future, on the strictest business methods and soundest scientific principles.

HOW TO BEAUTIFY COUNTRY SCHOOL GROUNDS.

OUR school houses, taking them together, are a disgrace to farmers and, in fact, to our civilization. The ornamentation of country school grounds is a subject which is being agitated by several of our horticultural societies. But the trouble seems to lie in the apathy of the farmers themselves, the very ones who are to be benefited through the refining influences that such ornamentation and the work attending it, secure to their sons and daughters. Is there no simple way of waking up the farmer to an appreciation of this? The first steps in this direction need not involve any considerable outlay of money, which, we take it, is the great stumbling-block in the way of a beginning. When once fairly begun, we have a strong faith that the utility of the work would so commend itself even to those who, as Pres. Lyon expresses it, "begrudge a few feet of ground for an evergreen tree, because the same space might be profitably occupied by a potato hill," that it would be vigorously continued until the grounds about country schools were made, not only beautiful, but a means of imparting to the scholars lessons scarcely less valuable than those of arithmetic, writing, geography and grammar, to which country school instructions are in the main confined.

It has long been a matter of surprise to us that the study and cultivation of plants are not made a first consideration in country schools, since the pupils (or a majority of them) have to look to plant-growing as the basis of their future occupation through life. Nor is it necessary that such studies should be more than elementary. Gray's first book in botany ("How Plants Grow") is a book that any pupil who is capable of learning elementary arithmetic, could easily understand; and this studied in connection with a plot of ground for the cultivation of plants from the seed, could hardly fail of giving that first insight into plant life, which in many cases—if not in all—would incite the apt scholar to diligent study in after years.

Suppose that each school were to start with a bed ten feet square, and that each seasonable day an hour were devoted first to its preparation, then to planting the seeds, then to the care of the plants—then to the transplantation for the purpose of beautifying the school grounds.

We are presuming now that only seeds of hardy perennial shrubs and trees or herbaceous plants were sown. For this purpose, is anything more needed than that the teacher should be instructed that that is a part of his duties? The seeds themselves would cost little—nothing. The RURAL NEW-YORKER would be glad to distribute them without charge. In this way in three or four years the grounds of our naked-looking school-houses might be beautified with such handsome hardy plants as Weigelas, Deutzias, Berberries, Callicarpas, Calycanthuses, Bush honeysuckles, Viburnums; vines of various kinds, Yuccas, Phloxes, Irises, Cardinal flowers, Poppies; magnolias, maples, catalpas and many others which are known to grow freely from seeds. The seeds of fruit trees might also be planted, which would soon give the stocks upon which any superior fruit of the neighborhood could be grafted, while the useful art of grafting or budding might thus be taught.

Is there anything very complex or visionary about the above suggestions? If so, tell us what they are, friends, and suggest some more practical plan by which we may some day hope to enlighten our "town Superintendents and district Boards," to the end that our farmers' school-houses may be elevated at least to the æsthetic level of their barns.

THE ARMY WORM.

Its Appearance on Long Island (N. Y.) in vast Numbers.

Wheat, Rye and Corn Fields Destroyed.

The Entire Crops of the Island Threatened.

THE following dispatch, under date of the 5th inst., 12 M. has been received from the RURAL FARM:

Five days ago we first noticed the Army-worm in our wheat. It has increased in numbers with marvelous rapidity. On the east side of the farm, one plot of wheat is half destroyed, nothing but the stalks remaining. An adjoining piece of fodder corn is also attacked. They seem to show very little choice of food. In some parts of this farm the grass and clover, and even all sorts of weeds, are alive with them. We have trodden upon a dozen at one step. In several respects they act like what is known as the cut-worm, burying beneath the surface soil, though only when the heat of the sun becomes intense, and cutting off and devouring all herbage before they take to the leaves of taller plants. They cannot endure heat. If, while feeding, the leaf and worm be carefully placed upon a post or other hot surface, it ceases eating and at once endeavors to escape. It drops to the ground if touched or disturbed. Hot weather would, therefore, be welcomed as offering some, and, indeed, so far as we can see, an only hope of arresting their havoc. We have instituted inquiries in many parts of the Island. One report from Christian Hook says: "Forty acres of rye devoured in 60 hours." From the Oyster Bay region we learn that wheat, rye and corn are being destroyed rapidly. The farmers of the Island are in consternation and the outlook is sad indeed.

LATEST.

Monday, June 7th., 10 A. M.

Yesterday was favorable to the depredations of the Army-worm, being still and overcast in the morning and cool in the afternoon. Their destructive work of the day is very apparent. We have found hundreds under old, half-decayed rails. The largest are fully two inches in length. Some farmers are plowing trenches about the infested fields. It may be worthy of note that the west half of the farm is free of them. Finding that the Army-worm is relished by poultry, we have confined our flock in an acre field of young corn and wheat, depriving them of their usual food. The sparrows are feasting upon the worms. They seem to be traveling North. They have also made their appearance in portions of Monmouth Co., N. J., in vast numbers. They eat the leaves and beards of the wheat and then go in quest of other fields to conquer. Clover has there suffered comparatively little. After about a week's destructive work they seem to disappear as mysteriously as they came.

[NOTE.—Below we present our readers with life-size engravings of this destructive pest. At, a, is seen a very good illustration of the worm or larva, though when well-fed it is considerably larger; b, is the moth or fully-grown insect which lays the eggs from which the larva is hatched, and, c, is the same insect in the pupa state. This insect is known to entomologists under the name of Leucania unipuncta, and the larva is commonly called the Army-worm. This pest appears especially after hot, dry springs, as has

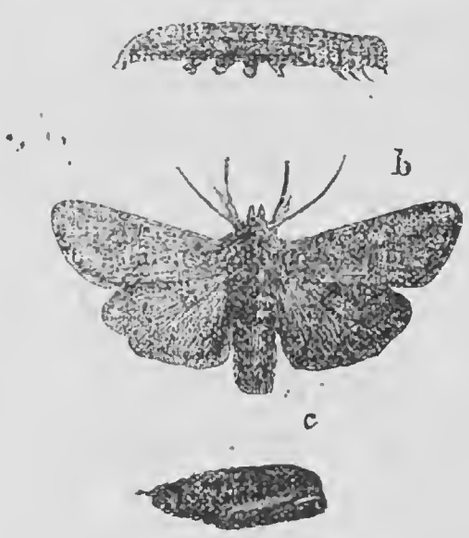

FIG. 207.

been the case the present season. The worms then spring into existence suddenly, as if by magic, and advance to their work of destruction in countless multitudes. The moth is of a yellowish-drab color, with a small white dot near the center of each of its forewings, and a dusky oblique stripe at their tips. On the under-side the wings are paler and more glossy than above. It is a night-flyer, and deposits its eggs at night on blades of grass, in April and early May. The eggs soon hatch and the worms begin their havoc. The larva, as stated above, sometimes grows to a length of two inches, though it is generally smaller. It is of a dull gray color, with three yellow lines on each side, the lowest one being the broadest and brightest. When full-grown they enter the earth and assume the pupa state, in which condition they are supposed to pass the winter.]

BREVITIES.

BREEDING draft horses pays large profits to Western farmers and they are at present the most profitable stock of any kind that can be raised.

OUR South Carolina friend, Mr. S. Ott, writes us under date of May 24, "The RURAL Doura is doing finely and getting its fifth and sixth leaves.

SIFT coal ashes through a flour sieve. There is nothing better with which to mix London Purple, Paris-green, hellebore, etc., for the destruction of potato beetles and other insects.

THE CRYSTAL CITY STRAWBERRY, produced the first ripe fruit of the season, on June 1, at Clifton, Monroe Co., N. Y. as we learn from Mr. C. A. Green. The soil is clayey and several days later than the surrounding sands.

IT should be borne in mind that the next annual meeting of the American Association of Nurserymen and florists will be held in Chicago, commencing June 16th and continuing three days. For particulars address T. S. Hubbard, Fredonia, N. Y. or D. W. Scott, Secretary, Galena, Ill.

THE American Drier Co. (Chambersburg, Pa.) write us under date June 1st. "Our advertisement with you is paying us *well—very well indeed*, and among the best people. We ship three machines to-day, that we trace to our advertisement with you." The italics are those of the writer.

"MRS. STRANG" is the name of the first Golden Tricolor Pelargonium (Geranium) that bears double flowers. Mr. B. S. Williams, of London, informs us that they are of a scarlet color, very double, while the leaves are richly colored. We did not suppose that it was among the possibilities to combine the two.

MR. E. WILLIAMS, who is always ready to find out the truth of things by his own tests, writes us as follows: "Of 300 bug-eaten peas, 30 germinated and appeared above ground. *Seventeen* are now visible with little vitality. How different the case would have been had the season been less dry, deponent saith not.

OUR esteemed contributor, Mr. W. I. Chamberlain, has been elected Secretary to the Ohio State Board of Agriculture. The appointment is all the more honorable in that the office came to him unsolicited, and we have no doubt but his manner of performing its duties will justify the choice of the Board.

WE shall shortly begin a series of articles, about one column in length, each week, on "The Dairy Cow," how to breed, feed and take care of her, by that experienced dairyman Dr. Henry Stewart. We have no doubt that they will include a good deal of matter useful to our readers, especially to those who keep but one cow. The articles will be illustrated.

WE are sorry to learn that the herd of cattle of our distinguished correspondent, Dr. J. B. Lawes of Rothamsted, England, has suffered both from pleuro pneumonia and anthrax. "The chief pathological interest in this outbreak," says Prof. J. Wortley Axe, "is the existence of anthrax and pleuro-pneumonia in the same herd, and even in the same animal at one and the same time."

DR. LYON PLAYFAIR, the eminent British chemist, indorses Mr. James Caird, the eminent British agricultural authority, in his opinion that British farmers, in view of American competition, must to a great extent abandon the production of wheat and cheese in favor of more perishable products—just what the RURAL NEW-YORKER said months ago, when it declared that the British farmer must, ere long, become a milkman, poultryman, or "truck" gardener.

IN open winters and in spring and autumn, in freezing and thawing weather, roads in the clay soils of the West often become next to impassible, and for weeks and sometimes for months, farmers cannot draw their produce to market, and thus often suffer heavy loss by keeping it on hand. The cheapest roads in the end are the macadamized. It has been remarked by wise men: "Let the country make good roads and the roads will make the country"—and there is much of truth in the adage.

ONE of the most grievous charges in the mouths of many against the Commissioner of Agriculture has been the smallness of his salary. It is said that no man of transcendent ability would work for $3,000 per annum; Gen. Le Duc did work for $8,000 per annum, therefore—etc. We are glad to see that the Senate last week, in making appropriations for the Agricultural Department, lightened the load of opprobrium under which the Commissioner has been suffering on account of the meagreness of his stipend, by adding $1,000 to it.

LAST Thursday, June 3, the United States Senate passed by a large majority, the clause in the Agricultural Appropriation Bill, appointing a Commission of nine to investigate all questions relating to agriculture, etc., so far as they relate to the enactment of a judicious tariff. In the discussion concerning the matter, Senator Eaton, of Connecticut, as one of the sticklers for the manufacturing interests, said that were it not for the present tariff on wool, Connecticut could make woolen goods more cheaply than they are made in England. Thereupon Senator Coke, of Texas, replied that if Mr. Eaton would join him in striking off the import duties on iron and steel, he, as one of the representatives of the Lone Star State and her wool, would vote to strike off the duties on foreign wool. That assertion exemplifies the principle which the farmers of the country must maintain in this matter. They are heavy losers by the extra prices they have to pay for nearly all home-made goods, on account of the shutting out of foreign competition in our markets by a protective and often a prohibitory tariff. Among the few products of their own, the production of which is fostered by the tariff, wool holds probably the most prominent place. If this stimulus to the production of wool among us is weakened by the lowering of the import duties on foreign rivals, then must the agricultural classes insist that, as a part of the benefit they derive from the tariff has been taken from them, a part of the disadvantages they suffer from it shall also be removed. If the protectionists of our manufactures are anxious to make thousands of agricultural voters converts to Free Trade, let them go ahead in their efforts to injure the sheep husbandry of the country by cutting down the taxes on foreign wools in the interests of their pet manufacturers. Hitherto the growers and manufacturers of wool have acted generally in unison, and it will not be to the ultimate benefit of the latter to aid in injuring the former, by supporting any modification of the present tariff on wool.

Literary Miscellany.

DECORATION DAY.

It came with peace and brightness,
The ushering of the morn;
The day of fond remembrance
To the soldiers who have gone.

All nature seemed respondent
To the honored brave,
For God had sent the sunshine
To illuminate each grave.

Hushed, the din of battle;
Stanched, the flow of blood;
Instead, the thoughts of thousands
Went out to the flowery flood.

These gifts of rarest beauty,
Were tributes to the forms,
Now buried 'neath the dust,
Away from the beating storms.

'Tis well to thus remember
And honor duly pay,
By deed, as well as word,
The fallen in the fray.

But spare the costly deed,
If the widow and the child,
Be left in need of food
Or shelter in the wild.

Their souls were called away;
God gives them *their* reward;
The living claim *our* care,
Stretch forth the hand well stored.

—*Anon.*

JOHN ASCOTT'S DAUGHTER.

BY CHARLES RICHARDS DODGE,
Author of "Louise and I."

(Continued from page 366)

CHAPTER XIII.

"TO BE, OR NOT TO BE."

"A MONTH from to-day" is a long step into the future, so long a step in this instance that our young farmer friend felt in no haste, particularly as it was a very busy season of the year, and there was no pressing need of hurry. The money could be obtained from the bank a week before the time specified, in fact it was as good as promised already. The transaction would only require one day at the longest—days were valuable things now—and that was the end of it for the time being. It certainly was a busy month at Maplewood. George was ambitious and anxious to make the most of the season—and some money too—so, gave little thought to the mortgage till within a few days of the date for taking it up, and then he went about it in earnest.

Arriving in town he drove directly to the bank and inquired for Mr. Bond, the Treasurer. To his chagrin he found that important functionary out for an hour or two on business, and was requested to call later. He felt that two hours was a long while to wait, but there was no help for it, so he went around to his brother's to attend to some minor matters of business, and fortunately found Charlie in.

"I've three days left me to pay off that confounded indebtedness," he announced upon entering.

"Well, have you the money?"

"That's why I am in town to-day. I think Mr. Bond is going to make it all right for me. I mentioned the matter some time ago, and there was no objection."

"Have you seen him to-day?"

"No, I have not. He was out when I called at the bank, but is expected to return in an hour or so."

"I think you had better see him as early as possible."

"Why Charles?"

"Because two other persons are negotiating heavy loans, and you may not be accommodated. French told me so this morning at the bank."

"You don't say so! Then I'm off at once. I'll see you later," and the young man started out abruptly in search of Mr. Bond.

"Come around to dinner, George," said his brother as he quitted the store.

"All right, when—if I get the business fixed."

Returning to the bank it was ascertained that Mr. Bond had been in for a brief moment, and had gone out again. Would doubtless be found at Judge Coke's office, though he might be elsewhere; impossible to name any particular time for return. With this most unsatisfactory information the young man drove rapidly down Main street in search of the missing Treasurer. Stopping at Judge Coke's he learned the additional information that the object of his search had been gone nearly a quarter of an hour, and had left the office in company with Mr. Ashton, Senior. Here was a pretty pass. Supposing he should meet Mr. Bond in the street; he could not broach the subject of the loan in his father's presence. No, no, not for worlds would he do that. So he drove around to the bank again, resolving to wait and see the gentlemen in the privacy of the back office.

With what anxiety did he watch the clock and count the minutes as the long finger jerked from space to space around the circumference of the quaint, old-fashioned dial. He was nervous and could not help it, and the thought of Charles' suggestion, did not make him any the less so. Then his mind turned to May—he could not help thinking how anxiously she would watch for his return, and as he fidgeted in his chair it seemed as though the old clock was saying, with every swing of its great brass pendulum, "*fore-close, fore-close.*" He jumped up, strode upon the sidewalk, and approaching Dolly, standing quietly and patiently where he had left her, stroked her nose a moment and then walked into the bank again. It was fully half an hour after when Mr. Bond made his appearance. George stated his business in a few words, and with palpitating heart awaited the Treasurer's answer.

"I am very sorry, my boy, that you did not come two or three days ago; *all* the available funds of the bank have been loaned since that time. I presented your case to the trustees some weeks ago; there was no objection to letting you have the amount asked, and I would have reserved it had I known positively that it was wanted. I am truly sorry George, but there is no help for it now."

"The young man dropped his head, but only for a moment; then he arose to go.

"Have you any idea, Mr. Bond, where I *can* get it. I think Maplewood is safe property to loan money on."

"None better. You have made a splendid place of it, even in the two years. How much time is there left you."

"Three days——"

"Oh, dear me! I was hoping it was longer. A week later I *might* be able to help you get it in another quarter. Who represents the Stone estate."

"Old Skinner, I think."

"Then you will have to work lively, for he will not give you two days of grace, if he can help it. Let me see—ah!—you might try Harkness, though he will want seven or eight per cent."

"I could afford to pay that for a short time."

"You can't *afford* to pay it, George, though it may be necessary under the circumstances."

"I mean that the season promises well, now, and I hope to make a good margin this year."

"You may tell Harkness, from me, that he ought to let you have the money at six—seven at most—if he has got it; and if he hasn't, I don't know where you will get it. Money is in demand just now."

Old Mr. Harkness was as kindly disposed as Mr. Bond had been, but he had nothing to loan at any interest at the present time; nor could he offer the least suggestion as to where such an amount could be raised on such short notice. Disappointed and sick at heart, the young farmer now made his way to his brother's store, meeting him almost upon the threshold on his way to dinner.

"Well, what luck?"

"No luck, and no money."

The deuce! I feared it would be so. Why don't you swallow your pride and go and see father, have a talk with him, and borrow the money in a business-like way, as you would from a stranger?"

"I could'nt do that, Charles."

"Well, it seems to me you had better do that, and keep a shelter over your wife's head than to turn her into the highway."

"Oh my God, don't lisp such a thing—No, no, no, I will try elsewhere. With such a farm as mine to offer as security it is a loan anybody ought to jump at."

"None have jumped to any alarming extent this morning."

"Can William help me?"

How a drowning man catches at a straw! George asked the question almost knowing it to be a hopeless one, and Charles answered it precisely as it was thought he would. William had some money, it was true, but whether he would choose to assist his unfortunate brother was another matter even if it was to be spared. The reminder that "he always was a queer devil, his father's own boy" did not help the doubt in the least. Nevertheless George decided to make the effort and a little after two o'clock called at his brother's place of business. He was to be seen and appeared quite sociable and much more talkative than upon any previous occasion since May had "become an Ashton." The subject of the loan was introduced, followed by about the same measure of success that had attended the two former efforts.

"What kind of a mood did you find him in?" asked Charles as his younger brother again appeared before him.

"Amiable and unaccommodating."

"Humph, I feared it would be a still hunt."

"Oh curse it all!" George exclaimed vehemently "Is my father trying to ruin me?"

"Why what do you mean?" Charles asked anxiously.

"William has been advised by father not to loan me a cent should I ask it, on the ground that there was too much risk in taking the farm for security. What do you think of that?"

"I think *that* knocks a big hole in your kite, as far as getting any assistance from the family is concerned. I know he swore all sorts of things when you bought the place and married May in spite of him, but I supposed he had in a measure, gotten over it. Well, don't worry, brother, perhaps it can be fixed up in a day or two, though bless me if I see a glimmer of light now. Trust me if I can be of any assistance to you, I shall be on hand."

"Father is deucedly down on George," Charles remarked to his wife, that evening." I vow I think the thing has gone about far enough; its getting unchristian now. But one thing is certain, if something is'nt done within three days Maplewood goes under the hammer."

CHAPTER XIV.

"A FRIEND IN NEED IS A FRIEND INDEED."

It was an anxious day for May, but she tried to busy herself with her duties as usual, watching the clock, hour by hour, and going to the window a hundred times, it seemed, to see if her husband was returning. As the day wore on, her anxiety grew to positive nervousness, and the sound of every passing carriage made her heart flutter in her bosom, beyond control. It was between four and five o'clock in the afternoon when George returned, as she saw him drive around to the barn, without stopping a moment at the door, she knew intuitively that his mission had been hopeless.

"It was just as I feared it would be," said she, "though I hoped you would get it at the bank. When you did not come to dinner I knew you had been disappointed."

"Yes, the first day's disappointment, my dear girl, but it should not discourage us—there are two more you know."

"Two thousand dollars is *so much* money, and friends are *so few*."

"Yes, May, it is the way of the world; *friends* are few when their help is needed. It is only when we stand upon the top round of the ladder of prosperity that friendship is warmest. We must be our own friends in the future, if we ever get out of this scrape; and then we may value friendship for what it is worth, asking no favors and bestowing them only where love prompts."

"If talking would only help present needs, you might talk all night long—what will you do now?"

"Sleep over it to-night, and try it again to-morrow, and to-morrow——"

"And, *then*, if you—fail?"

"*I must not!*"

If human will were only law, what great deeds would be accomplished, deeds that would electrify the world! To wish to perform—to will to perform—and to *do* are such widely different things that when we come to the sticking point, we are very apt to show ourselves mere creatures of circumstance. How many title pages have been written to volumes existing only in ambitious desire, castles-in-Spain, methinks, thought-reared—never to be attained. I think Shakespeare expresses the sentiment more strongly where he says, "If to do were as easy as to know what were well to do, chapels had been churches, and poor men's cottages princes' palaces."

George had plenty of will, and plenty of energy too, especially where there was so much at stake, but he was not able to overcome insurmountable obstacles, and as he felt the time lessened to so small a compass, he almost lost faith in himself. He had spent another weary day, unsuccessfully, and could not understand why the money was not forthcoming from some source. The season was a most favorable one for his farming operations, the crops thrifty, and promising a golden harvest. His stock were in splendid trim, everything in thorough repair, and the farm generally in a prosperous condition, yet no one would advance him the amount he desired even with such security.

At one time he could have raised half the amount, but with a single thousand he was no better off than before. Time had been winging, and but one day remained in which to save the farm. Could he do more than had already been done to avert the calamity that was inevitable?

After breakfast the young man ordered Dolly harnessed and was preparing to go to town to make one last effort, when his old neighbor made his appearance in the stable yard.

'Good morning, Mr. Wilkins."

"Good mornin" George. What's this I hear about the farm bein' sold? It's sumthin' new to me. I didn't know there was a mortgage on it."

"Well, I know it, Uncle Silas, to my sorrow."

"Mortgages are unhandy sort o' things to have a' top of a house, that's sartin. Can't ye raise the thing?"

"No, a man's friends always desert him when there is any money wanted."

"That depends on the kind of friends, my boy. But never mind that now; I've come over to see if I can be of sarvice to ye in any way?"

"I truly thank you for your good intentions, but ——"

"I'm a plain sort of man, and I ain't used to fine speeches, but I've got five hundred dollars in my breeches pocket that the old lady and I saved to bury us with, and you are welcome to it if you want it. Give me your note for a year, and we won't take any account of the interest, that's all."

"I—I feel grateful to you, Mr. Wilkin's," the young man answered, a sudden moisture gathering in his eyes. "Your kindness touches me—but—that amount alone would not do."

"It's none of my business, but may I ask how much of a mortgage they hold agin ye?"

"Two thousand dollars."

"Two thousand dollars? why, you tarnel little foo——. Excuse me, George, but it's my opinion some of the improvement money orter have gone in another direction."

"I know it now."

"I'm sorry for you, and I shall hate to lose a good neighbor, if it comes to that, but if I can be of any sarvice to ye, just rely on old Silas Wilkins every time. If your father wasn't such a cross-grained old nummy, he'd have pulled you out of the rut himself, in spite of your doing the best thing you ever did in your life agin his wishes. You've got grit, and you deserve a better fate."

"I feel sure of *your* friendship, Uncle Silas, and I am deeply grateful for your kind words."

"Wal, guess I'll trudge back across lots. If you want the five hundred you know where it is. Good day!"

As Mr. Bond had suggested, Old Skinner gave no grace at all, and the sale was announced at once. It was a memorable day to the little household, and one they might remember always. The red flag floated defiantly at the entrance of the Maple drive-way, from an early hour in the morning. The yard was filled long before noon with idle men, sitting around in groups talking and laughing while awaiting the commencement of proceedings, and there was no privacy anywhere. The appurtenences of the farm were examined, the barn and out-buildings inspected, and even the sanctity of the house was invaded by prospective buyers, or others drawn thither by idle curiosity. It was for the young farmer's interest to have everything appear to as good an advantage as possible, and he lost no opportunity to explain the value of the improvements and to call attention to the splendid condition of everything about the farm. It was certainly a fine piece of property and an unusually large number of bidders had been attracted by the sale.

George had indulged himself in the hope that at the last moment, if not before, some one would come forward and help him over his present embarrassment. He had indeed worked hard to save the property in the limited time that circumstance had left to him, and he could not become reconciled to the thought that Maplewood would soon slip from his possession. When Mr. Skinner appeared with the auctioneer, hope had not wholly died within his bosom, but with the reading of the schedule of farm property, came the unwelcome conviction, that all indeed was lost.

The bidding was spirited from the outset and considerable rivalry was manifest as the sale went on. After "five thousand five hundred" had been reached there were only two or three bidders in the field, and the figures crept slowly upward by hundreds and fifties until "six thousand" was taken.

"Twenty-five"—"fifty" "seventy-five——"

"Will it stick there?" George queried mentally. "Aunt Jane's little fortune is barely covered."

"Six thousand one hundred—going—going—Shall I have the twenty-five? Six—thousand—one—hundred,—all done, once, twice—thr——"

There was a stir at the outer edge of the crowd, a middle-aged gentleman, a stranger, stepped from his carriage and made his way hastily to the spot where the auctioneer was standing. There was a look of purpose in his face, and a lofty bearing in his manner that commanded attention and respect. As he approached there was a momentary pause in the proceedings.

"I hope I am not too late," said he, rapidly glancing over the group of men gathered around the auctioneer—"Will you please repeat the last bid?"

"Six thousand, one hundred dollars, sir," spoken in an undertone——

"Thank you."

"All done—once, twice——"

"Six thousand *five hundred*," called the newcomer.

A murmur of approval swept over the company, and all eyes were turned toward the bidder, while the previous "taker" showed evident dissatisfaction at the new turn of events. Of course the property was knocked down at the figure called, and the gentleman stepped to the side of the auctioneer.

No one knew him or could tell from whence he had come. He had secured the property, and that was all that was known concerning him. Everybody was astonished and the auctioneer grew quite deferential, while the little lawyer became so obsequiously polite as to make himself ridiculous.

The sale affected, the company dispersed as it had come together, the stranger rode away with the lawyer, without as much as looking at the farm he had purchased, and the unhappy Ashtons were left to their reflections.—[To be continued.

THE OLD BARN.

Was ever perfume sweeter than that all-pervading fragrance of the sweet-scented hay? was ever an interior so truly picturesque, so full of quiet harmony?

The lofty haymows piled nearly to the roof, the jagged ax-notched beams overhung with cobwebs flecked with dust of hay-seed, with perhaps a downy feather here and there. The rude, quaint hen-boxes, with the lone nest-egg, in little nooks and corners. How vividly, how lovingly, I recall each one!

In those snow-bound days, when the white flakes shut in the earth down deep beneath, and the drifts obstructed the highways, and we heard the noisy teamsters, with snap of whip and exciting shouts, urge their straining oxen through the solid barricades; when all the fences and stone walls were almost lost to sight in the universal avalanche; and, best of all, when the little district school-house upon the hill stood in an impassable sea of snow—then we assembled in the old barn to play, sought out every hidden corner in our game of hide-and-seek, or frolicked in the hay, now stopping quietly to listen to the tiny squeak of some rustling mouse near by, or it may be creeping cautiously to the little hole up near the eaves in search of the big-eyed owl we once caught napping there. In a hundred different ways we passed the fleeting hours.

The general features of New England barns are all alike. The barn that we remember is a garner full of treasure sweet as new-mown hay. You remember the great, broad, double doors, which made their sweeping circuit in the snow; the ruddy pumpkins, piled up in the corner near the bins, and the wistful whinny of the old farm-horse as, with pricked-up ears and eager pull of chain he urged your prompt attention to your chores; the cows, too, in the manger stalls—how sweet their perfumed breath! Outside the corn-crib stands, its golden stores gleaming through the open laths, and the oxen, reaching with lapping, upturned tongues, yearn for the tempting feast, "so near and yet so far." The parti-colored hens group themselves in rich contrast against the sunny boards of the weather-beaten shed, and the ducks and geese, with rattling croak and husky hiss and quick vibrating tails (that strange contagion), waddle across the slushy snow, and sail out upon the barn-yard pond. Here is the pile of husks from whose bleached and rustling sheaths you picked the little ravelings of brown for your corn-silk cigarettes. Did ever "pure Havana" taste as sweet?—*Harper's Magazine.*

MAGAZINES FOR JUNE.

ST. NICHOLAS, has an out-door, summer-y character sustained throughout, in the poems, the prose, and the seventy-two pictures.

Among its striking features is an account, by Olive Shorne Miller, of the Children's Aid Society's delightful charity, The Summer Home for poor city children, at Bath, L. I., with seven pictures made by Jessie Curtis from sketches taken on the

spot. Another article is written by Daniel C. Beard, explaining to young people How to Camp Out cheaply, easily, and comfortably.

There are long installments of the two serials—Jack and Jill by Louise M. Alcott and the Fairport Nine, by Noah Brooks.

The number contains five complete short stories all illustrated: Little Miss Stone, by Mary Wager Fisher. Bessie Ainsley Doctors the Doddses. The West Wind's Last Cruise by Frank H. Converse; Lost and Found, a tale of English life; and Marion's Story.

Mrs. R. Swain Gifford contributes a fine picture and a few paragraphs about some interesting ducks called Old Squaws, whose musical cry, He got no Gun! is said to be irritating to sportsmen.

Among the funny things are the verses Ah Lo, with two comical pictures by Hopkins, and the curious Chronicles of the Molbos—a thick-witted people living in Jutland—with three humorous illustrations by Frank Beard. Short poems and bright pictures are scattered through the number, and there is a full-page illustration of curious modern head-dresses of European men.

Two Famous Old Stones, from Rosetta, near the mouth of the Nile, and from the ancient country of Moab, are described and pictured, and their history and importance are explained.

PHRENOLOGICAL JOURNAL.—Contents: Robert Collyer. Portrait; Gifts of Healing; Comparative Phrenology.—The Frontal Bone in the Carnivora, Rodent and Bird, illustrated; The Physiologists and Localized Brain Function; Popular Mistakes; The Pantheon at Rome, illustrated; Henry Fawcett, M. P. Portrait; Unity of the Human Species. III.; Rev. Joseph Cook as a Phrenologist; M. Godin, Founder of the Familistere; The Young Folks of Cherry Avenue. VI.; Milk as Food—No. 2; False Exercise; Human Obligation; Poetry—Echoing Bells; Notes in Science and Agriculture; Editorial Items; Answers to Correspondents; Personal—Library—Index—Publishers' Department. Extract from article on Robert Collyer:

While Mr. Collyer was settled in Chicago an interesting incident occurred:

One of his parishioners happened to visit Ilkley, the birth-place of his pastor. That little village had grown to be a considerable town Low, thatched houses had made way before fine mansions, and the smithy in which the boy scholar had worked and studied, still existed, but the day of its disappearance was very near. The visitor inspected with some interest an old anvil standing n the shop.

"How long has that anvil been here?" he asked of the proprietor.

"Why," said the blacksmith, "it must have been here nigh thirty or forty year."

"Well," said the gentleman, "I will give you twice as much for it as will buy you a new one."

"Certainly," replied the puzzled smith; "but I would like to know what you want with this anvil."

"I will tell you. There was formerly an apprentice in this shop who used to work on it. That boy has now become a prominent man. Thousands love and honor him as a friend and a teacher, and I wish to carry this anvil with me to America, as a memorial of the humble beginning of his life."

The bargain was completed, and the anvil is now carefully preserved by the society of Unity Church.

LIPPINCOTT'S Magazine for June presents an unusually rich and varied table of contents. Dr. Weir Mitchell's paper, the first of two, on the Yellowstone Park; "The Career of a Prairie Farmer," by Mary Hartwell Catherwood; Dr. Felix Oswald concludes his series of "Summerland Sketches:" The eminent French sculptor Carpeaux, a child of the people, in whose career success and misfortune were strangely blended, is the subject of an interesting paper by Olive Logan. Helen Campbell continues her series of "Studies in the Slums." De Lancey Nicoll has a timely paper on Lawn Tennis, giving a full description of the game. "Our Young Kindergartner, by a writer who is evidently versed in the science and practice of the Frœbellan system, will have a deep interest for parents and for all to whom the best method of educating young children is a subject of anxious thought. "Social Aspects of the Forties" is a well-written paper, and "German Boys and Men," by Marriott Pyne, gives a good notice of the social foundations of the greatest military empire of modern times.

The poetry of the number deserves especial mention. "Old St. David's at Radnor," by Longfellow, is in his happiest manner, pensive in tone, limpid in flow, and striking in imagery. Paul Hayne has a fine sonnet entitled "Spiritual Illumination," and Mrs. Caroline A. Mason one almost equally good, called "An Open Secret." "Adam and Eve" grows in interest, and there are several good short stories, while the "Gossip" contains some anecdotes about Carlyle, and other readable matter.

APPLETONS' JOURNAL.—This number contains a paper by Appleton Morgan, resuming the discussion he began last year on the authorship of the Shakespeare plays. Mr. Morgan in this article reviews all the various theories of their authorship, and gives a most graphic and striking picture of the Shakespearean period. Whether one agrees with Mr. Morgan or not, it is impossible not to enjoy his pungent and suggestive comments. There is the first half of a novelette by Victor Cherbuliez, entitled "Herr Drommel's Inconsistencies," in which the brilliant characteristics of that writer appear at their best. The story is full of wit, point, fresh characterization, and the main situation is certainly a novel one. Herr Drommel is a German savant, who is made the butt of the author's brilliant satire. There is another selection from "Senior's Conversations," giving utterances from Lamartine, Renan, and others. It is eminently readable. There is a very entertaining paper on Burton's "Anatomy of Melancholy;" a paper on Siberia, which gives quite a new idea of that much-talked-of-country, by which it appears that a banishment to Siberia is not the terrible thing it has been supposed to be. There is a second paper on "Health at Home," from Dr. Richardson; an article on Gottfried Keller, the Swiss novelist; one on "Dreams," which is full of strange matter; a paper on "Infernal Machines," and the "Spanish Theatre." The editor's departments complete the number, which is full of valuable and very readable material.

THE MUSICAL HERALD: Published at Music Hall, Boston, Mass. It is worthy of much commendation. Besides the music it contains literary matter pertaining to the subject, which is pleasing and instructive.

THE DELINEATOR: Published by E. Butterick & Co. This periodical continues to illustrate and describe the prevailing fashions in a way to meet the requirements of the many with varied tastes.

THE YOUNG FOLKS' MUSICAL: This monthly is presented in its usual interesting style, suitable for the young people.

BRIC-A-BRAC.

IF you would show your new-bought clothes,
Built in the latest style,
The safest way to do the thing
Is, when the choir stands up to sing
Glide down the middle aisle.—Puck.

SHAKESPEARE was married when he was 18 Dante at 23, and Brigham Young when he was 18, 19, 20, 21, 22, 23, 24 and so on.

CLUBS—DOMESTIC AND OTHER.

Knock, knock, knock,
Knock till you're black and blue;
I'm not going down to-night
To open the door for you.

You would go drink at the club
Till your boots were full of snakes,
And now you can roost on the mat
Till the light of the morning breaks.

HERE is a small triumph for Mr. Darwin: "Why, my dear," said a lady to her friend, "where did you get that beautiful monkey?" "Oh!" was the reply, "my husband travels a great deal, you know, and he gave me the monkey that I might not forget him in his absence."

COURTING AT MIDNIGHT,

The married man of the Modern Argo says:—

When the courting at midnight is ended,
And he stands with his hat in his fist,
While she lovingly lingers beside him
To bid him "ta-ta!" and be kissed,
How busy the thoughts of the future—
You bet you his thoughts he don't speak—
He is wondering how they can manage
To live on six dollars a week.

A SERVANT girl applied for work at the State Normal School, Salem, Mass., bearing the following testimonial from Gail Hamilton:—"I have found her invariably good tempered, *immunda* (dirty), cheerful, obliging, *exitiosa* (destructive) respectful, and incorrigible. With neatness and carefulness and economy she would make an excellent servant. I heartily recommend her to all Christian philanthropists, and her employers to divine mercy."

A LOVER'S TWO WATCHES.

When the maid I mean to marry
I of evenings go to see
I invariably carry
Watches twain along with me.
One is hours and hours too fast,
T'other hours and hours too slow:
By the first we meet, the last
I consult when I go.—Gallant French Poet.

OF the late Bishop Ames the following anecdote is related: While presiding over a certain Conference in the West, a member began a tirade against universities, education etc., thanking God that he had never been corrupted by contact with a college. After proceeding thus for a few minutes, the Bishop interrupted him with the question. "Do I understand that the brother thanks God for his ignorance?" "Well, yes," was the answer; you can put it that way, if you want to." "Well, all I have to say," said the Bishop, in his sweet, musical tones, "is that the brother has a great deal to thank God for."

THE farmer turns the furrow
With a careless unconcern;
And—
The farmess works the handle
Of the big, old-fashioned churn.
Their son sorts out the 'taters
For plantin,' in the cellar:
While—
Their daughter on the back porch
Is talkin to her feller.

As a lazy tramp came down the street
With free and easy gait,
This welcome sign his eyes did greet:
"Free chops to those who wait."
"Now here," he said, "I'll get some food,
Without the slightest tax;"
They led him to a pile of wood,
And handed him an axe.—Boston Times.

LAWYER C. (entering the office of his friend Dr. M., and speaking in a hoarse whisper): "Fred. I've got such a cold this morning that I can't speak the truth." Dr. M.: "Well I'm glad it's nothing that will interfere with your business."

WASHINGTON never told a lie, but if the Gem Puzzle had existed in his day we fear that he might have—have said; "Oh, I've done it, done it lots of times; but I can't tell just how."—[Boston Transcript.

For Women.

CONDUCTED BY MISS RAY CLARK.

PERPLEXITY.

OH, what shall I do for a bonnet?
I've nothing to wear,
And the styles are so queer—
It's not want of variety
That causes anxiety;
'Tis distracting to choose
'Mong the shapes and the hues
Of braids, straws and chips,
Red, brown, and sage dips,
Bleached, unbleached, and black—
Of styles there's no lack.
The question's so vexed
I declare I'm perplexed
With fruitless thinking upon it.

Oh, what shall I do for a bonnet?
The spring's almost gone,
And June's coming on,
And a friend writes to me
My new bonnet to see.
What can a blonde do
If she may not wear blue?
Only yellow and red
Are now worn on the head;
But my cheeks would look sallow
If set off by yellow,
And my hair would look ashen
If dressed in such fashion.
It would not be right
To become such a fright.
My old broad-brimmed hat
Would be better than that,
And I've half made my mind up to don it.

Oh, what shall I do for a bonnet?
I've searched several hours
For suitable flowers.
Would hollyhocks do?
They are certainly new.
There are exquisite copies
Of sunflowers and poppies.
How would dandelions suit?
Or suppose I have fruit—
Ripe cherries and hops
Are shown in the shops;
I might wear a few bunches upon it.

Oh, what shall I do for a bonnet?
Shall tinsel chains dangle,
Or beaded fringe tangle?
Shall gold-dust besprinkle,
Or black bugles tinkle,
With gilt balls on top,
Like a pawnbroker's shop?
Or perhaps I should take
A gilt spade and rake,
To show that my taste
Is simple and chaste,
As a poet's should be who writes sonnets.

Oh, what shall I do for a bonnet?
Shall green lizard's crawl—
Or blue flies—over all?
Shall butterflies hover
To mark Nature's lover?
Shall dragons surprise
With fiery glass eyes?
Shall brown beetles creep,
Or grasshoppers leap?
Oh, what shall adorn my new bonnet?

—Harper's Bazar.

TO THE LADIES.

IT is to be hoped that the ladies will not wait for a personal invitation to contribute their mite to the columns devoted to their interests. Questions, hints or other communications are always acceptable and are solicited. R. C.

WHAT SHOULD WOMEN LEARN?

E. L. T.

WITHIN the past few years much has been written about female emancipation, and equal education for boys and girls. The inefficient systems of female education have been recognized from the days of Deane Swift down, but much of the present higher educational idea, is surely at fault.

Women are to learn all their mothers learned, and all their brothers learn too; they are to stoop over desks more, do more sums, and pass more examinations.

Instead of learning more household science, and everyday hygiene, they are to amuse themselves with Euclid, or delve, like fair ghouls, in the graves of dead languages. There certainly is no objection to their studying Greek, especially if they would read the story of Nausicaa, and following her example, learn to play at ball, even if they do not, like her, wash the household clothes.

But for the average country girl, who, when she marries, must expect to be housekeeper, head nurse, and half a dozen other things besides, the dead languages and higher mathematics are not as useful as an accurate, if not very deep knowledge of natural sciences and philosophy. And here let me quote from Canon Kingsley to define an educated person: "An educated person is one, who, though wholly innocent of book-learning, has all the faculties of mind, body, and heart, fully, proportionately, harmoniously brought out, developed so as to form at once a reverent yet self-assured, a graceful yet valiant, an able and yet an eloquent personage."

Above all, let science enter into the course of training. That name—science—is a bugbear to many girls, but let them remember Huxley's definition—that science is really clear, logical common-sense, capable of forming correct judgments and exact deductions.

I may write again concerning that almost infant science, which every woman may and should study above all others, namely, bio-geology.

SHOPPING.

PEOPLE who go shopping ought to be fair and above-board, never giving more trouble than they are obliged, and not expecting unreasonable sacrifices. If they consider that they have been trifled with, annoyed, or cheated in any shop, they ought never to enter it again. Still, the customer must not be unreasonable, any more than the shopman must be rude and independent. The enjoyableness of shopping rests entirely on the sense of fair dealing and security, which the best shops are remarkable for; and that shopping is enjoyable few women will deny. It brings many new ideas and "wrinkles"—a large experience in judging of value and comparing in kind—the colors and materials are often very beautiful, and arranged with real taste—one sees much of human nature—in fact, in shopping one learns a good deal in more ways than one. The politeness, equability of manner, and real wish to help and accommodate people's tastes; the intelligence of the attendants, and the tact with which all confusion and delay are avoided, which are found in the first-rate establishments, and which are no doubt attained by the perfect system and organization which ability and capital command, render shopping in the present day more than pleasant—sometimes delightful—and "delight," of course, means "grist to the mill." A good salesman never lets a customer slip, because he always contrives to please, but a bad salesman is indolent, dilatory, and surly. Custom gravitates to courtesy and to establishments careful of their own good name.

But in these matters ladies must be their own protectors; and even out of consideration for those establishments where civility is the rule, they ought to note the mischievous practice at other shops of trifling with a customer's time and temper, and the mistaken policy of dunning people to buy what they don't want, instead of providing them with what they require, or politely refusing their application. M. E. H.

OUR MOTHERS.

IN the formation of character, we owe to our mothers more than to any other human agency, for it is their hands that first twine the tendrils of our hearts, guide our foot-steps aright, lead us in the path of virtue, and in the dark, dreary night of pain, their watchful vigils keep beside the couch of their dear ones. Whose but the all-seeing eye of Jehovah can fathom the depths of anxiety they feel, and who can tell of the ceaseless prayers which they offer for their sin-stricken children?

Their influence ever shines with an unsullied light which softens and purifies the wayward impulses of the youthful mind, and guides it onward in its course toward heaven. How, then, can we pay just tribute to our mothers—with what measures of gratitude and affection shall we requite them for their maternal care?

To those who have lost their mothers in early life, there is the hallowed spot, sacred to memory, where they retrospect the past—recall days and nights when their mothers kept watch over their sinless years, and where they may look forward, with faith and hope, to the blessed re-unions of the everlasting future.

Friends may be torn from our hearts, hopes may be blasted, and our love for others may grow cold, yet every principle of gratitude and every feeling of virtuous sensibility requires that we should cling to our mothers and love them still.—Freemason.

HOW TO BE BEAUTIFUL.

CURLS and cosmetics are all in requisition to enhance the beauty of "the human face divine," but what is the result? Youth's roses only flee the faster—old age will creep on apace; rouge cannot hide its wrinkles, nor can it make any face beautiful. We are decided believers in the old adage, "Handsome is that handsome does." No face has true beauty in it that does not mirror the deeds of a noble soul. There is not a thought, word, or deed that does not leave its autograph written on the human countenance; and we care not whether kind Nature has given her child an ugly face or a handsome one, if the heart that beats underneath all is warm and loving. And if the soul that looks out from the eyes be true and pure, that face will be beautiful always, for it has found the true fountain of youth; and though time may fold the hair in silver, and furrow the brow, yet there will ever be a beauty lighting it up that years cannot dim, for the heart and soul never grow old.

FASHION NOTES.

AMBER color is coming into fashion.

Fancy costumes have parasols and fans to match.

Spotted materials will be worn by leaders of fashion.

There are many new materials in cashmere coloring.

Japanese sunshades will be used this summer.

The fashionable bonnet is the small capote.

Ecru embroidered muslins are among stylish novelties.

Some of the new laces appear to have been dipped in coffee.

Hoods will be revived and used to excess on all kinds of wraps.

Spanish lace will be the fashionable net for summer polonaises.

Some touches of color brighten every black toilet that is not mourning.

Worth is exercising his genius just now in creating Spanish costumes.

A young girl always looks well in a simple toilet with a small tunic formed by a scarf.

New black Chantilly lace mitts are very fine have very long tops, and are sold at very high prices.

New chimeses fastened by buttons hidden in the pleats of the embroidery and lace on the shoulders.

The shoe is gradually replacing the boot for outdoor as well as indoor wear, especially in Europe.

Coat sleeves of dresses are made very high on the shoulders and stand upward like men's coat sleeves.

Large hats and bonnets, though not general, are worn more and more as the season advances.

The basque, jacket, and coat-bodice are favorites for summer dresses. In washing materials, as well as in wool or silk fabrics, combinations of figured with plain tissues are extremely fashionable. Thus, take some floriated chintz and some plain buff percale—you can make the short round skirt of the percale, trimmed with a series of very narrow-gathered or fluted flounces; the second skirt, to be open and slightly draped on the left side, will be of chintz, as well as the jacket-bodice, trimmed with collar, revers, and cuffs of buff percale to match the dress, simply stitched round.

A more elaborate toilet can be made thus: front of skirt of shirred pale blue cambric; the sides and back of foulard d'Alsace of some pretty Japanese pattern, multi-colored, over a pale blue ground, draped up over an underskirt of the cambric, only a small portion of which shows, and is covered with narrow flutings. The upper skirt forms the side-panier and the tournure. The bodice is of foulard d'Alsace (which is a nice sort of percale) with a plastron of shirred cambric to match the underskirt. It may be trimmed with Breton or fine torchon lace, but no trimming is postively required. The skirt, well draped, need not have any; and the bodice may be merely outlined by a narrow fluting all round. The sleeves should be extremely tight and not very long, and finished round the wrists, as well as the bodice round the neck, with a fluting of fine muslin of Bretonne lace.

Delicate bows of Byzantine lace, a very beautiful close-meshed linen point, are the newest things to wear with collars.

Bow and arrow combs and ornaments for the hat and hair show the tendency of popular fancy for archery.

Brocaded ribbons, both in floriated patterns and in the very fashionable spotted style, form a nice variety in the new models of the season. These are either in self-colors (the whole effect of the pattern depending upon the contrast between the bright and dull texture of the material), or else they are in multi-colored miniature patterns, in vivid tints, over a dark or neutral ground.

The great rage of the season is for dotted fabrics. Large dots, little dots, polka dots, Japanese dots, Chinese dots, French dots, printed dots, brocaded dots, light dots, dark dots; dotted dresses, dotted mantles, plain fabrics trimmed with dotted ditto, and dotted fabrics trimmed with plain ones; dots of every size and of every style; dots for ever—such is Fashion's decree for this season. The rage for dots equals that for stripes which reigned a short time ago.

Large roses in various shades, clusters of unnatural-looking poppies, immense pansies in every shade of violet and yellow, and big red carnations are among the favorite flowers, and are made of the richest materials—silk, satin, velvet and plush, combined with the finest muslin and cambric, and are mounted with soft India-rubber stems and foliage. Heliotropes, lilacs and daisies are also made up in close garlands for the trimming of both the inside and outside of bonnets.

FRIENDLY WORDS.

From the many encouraging words received we select the following:

"We are very much delighted with John Ascott's Daughter and think it appropriate for the paper. A. T. G.

Alleghany Co., N. Y.

"Don't let the Rural stop; can't keep house without it. J. E. P.

Miss.

A lady who had received a severe bite on her arm from a dog went to Dr. Abernethy; but hearing of his aversion to hear the statement of particulars she merely uncovered the injured part and held it before him in silence. After examining it he said, in an audible tone, "Scratch?" "Bite," said the lady. "Cat?" "Dog," replied the lady. So delighted was the Doctor with the brevity and promptness of the lady's answers, that he exclaimed: "Zounds, madam, you are the most sensible woman I have met with in all my life!"

Love of power, and of fortune as a means to it—and some one has resolved the love of money into a love of power—is not an affection: it is a passion: one of the passions that swallow up the affections: the gentler affections are overborne by the violence of the passions, or discarded as standing in their way—the way of their gratification—but, in taking their departure, the affections also take away with them the happiness.

The game of from 25 to 40 will puzzle the census taker more than the little game of 13-14-15. He will be awfully puzzled when a maiden lady with corkscrew curls and false teeth tells him that she was "born in 1860 and he can count it up himself." He'll be ready to swear that she has jumped "15" from the lower left hand corner.

A typical Boston girl is credited with saying lately: "I can go without my spring bonnet, and wear my thick boots up into June; I can even, if must be, do without a new summer dress; but I can't no, I won't let these seraphic concerts go by for they are treasures in heaven, and I grow an inch in spirit every time I go to one."

The Census.—As the census-takers have now commenced business it will be necessary to come to a decision upon the question of age. Bear in mind that the same form was carried out 10 years ago, and the "Paul Prys" may set themselves to investigating, so be careful what discount is taken off of the original amount.

A familiar instance of color-blindness is that of a man taking a brown silk umbrella and leaving a green gingham in its place.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE MEETING OF THE KITCHEN CLUB.

ANNIE L. JACK.

Cooking Conveniences.

The Hon. Horatio Hupperton lives at some little distance from our village, and his wife, though gracious and kind, has never been on "club" terms with *all* the members, though a few of us have enjoyed the pleasure of her friendship. But the other day to my surprise she suddenly remarked, "My dear" (a way she has of being patronizing at times), you have never had the "club" in my kitchen. Now the day of your next meeting, cook is to be away to a pic-nic, and Martha, the housemaid, can stay in the nursery with Jane. So try to let the members know that you will put off meeting at your house till next month, for by that time I may be away to the sea-side."

I made the suggestion to the members, and we agreed to meet at Every-day House and walk over to Hupperton House all together. It was a bright, pleasant afternoon, and the air was rich with perfume of apple and pear blossom. The fading lilacs were everywhere to be seen; and here and there we passed a clump of hawthorn, snowy white and sweet to faintness. The kitchen into which we were introduced by our hostess was furnished with every possible convenience. At one side was a shining range, with numerous griddle holes and plates of the latest approved style. The fire was carefully shut down and guarded to suit the afternoon heat, yet was in such a state that by opening a damper or two it could soon be tempered to cook the six-o'clock dinner. We were all absorbed in the study of the range as soon as we entered the kitchen, it being part of our subject of "Cooking Conveniences."

Miss McGregor could do nothing but admire the array of porcelain saucepans, that were of every size upon the shelves; while the attention of Miss Whitand was taken up with the beauty of the wood-work, which was of ash without paint, polished and varnished to brightness. The walls were tinted to what may be described as a pale smoke color, and the floor was of polished oak. "No scrubbing or painting needed," said the pale, little minister's wife, with a sigh of gentle envy. The pretty pie-crimpers and perforated spoons were ornamental as well as useful, while the pudding boiler excited the admiration of such of the members as had not seen this useful adjunct to pudding cooking. The four largest porcelain kettles had steamers to fit, and the dish-pan was in three compartments, the last being full of small holes with a tray underneath as a drainer. There was a dish-cloth of woven steel rings for scraping pans, and pots and mops of every size and fineness for the different articles to be washed. Water, of course, hot and cold, was close at hand, while the combined flour-scoop and sifter took Miss McGregor's attention almost as much as the neat, little gray strainer. "Well! well!" she kept repeating, "how easy folks can have things if they only have the "siller to buy." There was a marble board for paste rolling, and cake and biscuit cutters of every shape and size. We paused over a curious contrivance for taking pies out of the oven—thereby saving stooping and finger burning, and turned over the numerous egg beaters with some curiosity in view of the workings of the same.

We had no cake for tea, but the lightest of flaky biscuits, regarding which our hostess, when questioned as to the recipe, explained that they were made like common biscuits, only in the milk was placed a bit of ice, and it had been kept in the refrigerator till icy-cold. "I made them *myself*," she added proudly, and knowing how seldom she engaged in culinary art, we appreciated and praised the puffy morsels as they deserved. This matter of mixing biscuits with ice-cold milk or cream is of great importance, as any one may ascertain who has ever tried *snow* in winter mixed with the milk, which is used to wet the flour. Besides the apple jelly on the table, there was a pretty dish of frosted oranges, of which I obtained the recipe:—"Pare and remove the white skin and divide into lobes. For a dozen oranges, take a cup of sugar and mix with a few drops of coloring as used for jellies and ices. Dry this and then crush again into powder. Whip two whites of eggs, and add a tablespoonful of water. Dip your oranges in a little white powdered sugar, then into the egg and water and afterwards put half of them into the red sugar. Lay on white paper to dry while you melt one ounce of gum-arabic in two table-spoonsful of hot water, and add a cup of sugar, stir till thick and clear. Peel two more oranges and dip in it. You can place them to suit your fancy in a glass dish, and garnish with orange leaves if you happen to have some, as had our hostess; otherwise select some pretty vine to trim the dish. The effect on a tea-table is very pretty, and some of the younger members seemed to consider it the "bonne bouche" of the whole entertainment.

TIN CANS, CORN AND TOMATOES.

Being a young housekeeper, and wishing to know the best way of keeping fruit, I have been much interested in the canning question, and am surprised that almost all the ladies that have written prefer glass for tomatoes. My experience is that tin is better than either glass or stone. Two years ago I put my tomatoes in both stone and glass. I was very careful to cook them well, to seal them well while hot, kept them in a cool, dark place, and almost every one spoiled. Last year I prepared them the same way, except that I put them in tin cans, and when opened they were perfect. In canning tomatoes I always put sweet corn with part of them. Cut the corn from the cob, and when the tomatoes have boiled a few minutes, put in one-third as much corn as you have tomatoes; boil all about a quarter of an hour, then seal. They are very nice. I am glad that the ladies write about canning fruit now before it is ripe, for so often I have read recipes that I should like to have tried had it not been too late in the season. I think we ought to write about canning and preserving fruit just before that kind of fruit is matured, or at least before the season is over. This is the first year we have taken the "Rural," and I think it is different from many papers, in the respect that it becomes more interesting each week.

Mrs. G. McFarland.

DOMESTIC RECIPES.

Delmonico Pudding.

One quart of sweet milk; the yelks of five eggs; three tablespoonsful of corn starch, mixed smooth in half a teacupful of milk; a teacupful of sugar and any flavoring liked. Bring the milk to the boiling point, stir in the corn starch, then the sugar, and lastly eggs. Draw to the back of the range and let thicken for two or three minutes. Be very careful not to burn. Turn into a pudding dish and bake about half an hour. Beat whites to a stiff froth; stir in four tablespoonsful of powdered sugar; flavor; spread over the pudding and return to the oven to brown.

Puff Strawberry Pudding.

Sift two teaspoonsful of baking powder with a pint of flour; beat well an egg; add a little salt; mix with sweet milk till of the consistency of thick batter. Place well-greased cups in a steamer; put into each a spoonful of batter, then a spoonful of strawberries and cover with another spoonful of batter and steam 20 minutes. Eat with cream and sugar, or a liquid hot sauce with a cupful of strawberry juice added. E. M.

Strawberry Sauce.

Cream and half a cup of butter with a cup and a half of granulated sugar; add a pint of crushed strawberries and the beaten white of an egg. Nice for batter puddings.

Mrs. L. A.

Spiced Gooseberries.

Remove stems and blossoms from ripe gooseberries, wash and boil down in a sirup made of three pints of sugar to a pint of vinegar. When very thick add ground cloves and cinnamon. Careful not to burn.

Sweet-Pickled Cucumbers.

Wash, pare and quarter ripe cucumbers, take out seeds, wash and place in strong brine for two days. Take out, place in cold, clear water for an hour, then throw into alum water—a lump the size of a small hickory-nut to a gallon of water—for another hour. Make a sirup of a pint of good vinegar, a pound of white sugar and a tablespoonful each of broken cinnamon and cloves. Make enough of this sirup to cover the pieces, and boil until tender.

Pickled Walnuts or Butternuts.

Gather when well grown but tender enough to run a needle through them. Put into strong brine for three days, changing once. Take out; wash; place in sun, turning frequently until black. Bring good vinegar to the boiling point, add whatever spice liked, put the nuts into a jar and pour over the hot vinegar. They will be ready to eat in a week.

Mrs. Brady.

Gooseberry Jam.

Look over, wash and stew in a little water. Press through a coarse wire sieve and return to the kettle. To each pound of the pulped gooseberry add three-fourths of a pound of granulated sugar. Boil three-quarters of an hour, stirring constantly. Put into bottles or wide-mouthed jars and secure like jelly.

Currant Jam.

Pick from the stems, wash, put into a preserving kettle and boil gently 20 minutes, skimming as needed. Add sugar in the proportion of a pound of sugar to a pint of the boiled fruit. Boil half an hour longer, stirring almost constantly. Mrs. L. Brown.

Strawberry Jelly.

Remove hulls, wash, drain, then put into a kettle over a slow fire. Crush, and when quite hot take from the fire and when cool enough to handle strain through a coarse flannel bag. Boil juice 15 minutes, skim, add a pound of sugar for each pint of juice, and boil 15 minutes longer. If the jelly be not very firm let it stand in the sun for a few days covered with pieces of window glass. I. A.

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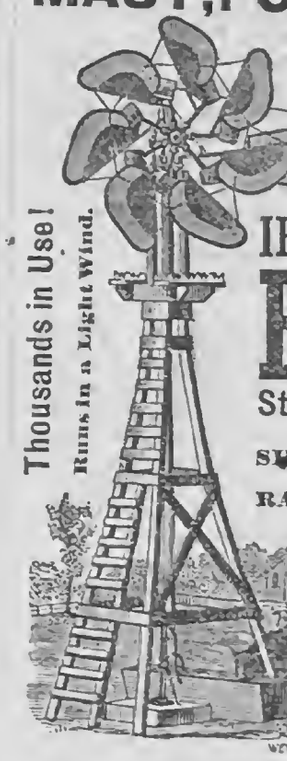

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News of the Week.

MISCELLANEOUS.

Monday, June 7.

Violent tornadoes in Connecticut and Northern Texas have done an immense amount of damage. .....The American Union telegraph company opens for business with, as it claims, 50,000 miles of wire, extending from Portland to Omaha and Kansas City, south to Nashville, and northward throughout Canada.....The Pacific Mail steamship company passed under the control of Jay Gould at the annual election of officers on Wednesday, when a list of directors headed by Gould was chosen, 127,300 out of 200,000 shares being cast in its favor. J. B. Houston was elected president, and the line will be run hereafter to suit the Pacific roads.....The public debt was reduced by the immense sum of $15,928,033 in May, making the whole reduction since June 30, 1879, $74,820,536. The secretary has been buying $3,000,000 a week of the 5's and 6's, and the former are now down to $483,848,700 and the latter to $22,001,900. The reduction is of course attributable to the great income from duties and the internal revenue consequent upon the revival of business. Another month as favorable as May would carry the gain on our indebtedness up to $90,000,000 for the fiscal year..... During the last five months 135,000 immigrants have arrived—the largest number for the same months in the last 25 years.....Takata Agee, Secretary of the Japanese Legation at Washington, committed suicide by shooting himself through the head at about seven o'clock on the morning of the 6th inst. The Japanese minister refuses to give any information as to the probable cause of the rash act, and he has instructed the Legation to give it no publicity..... The last days of Congress will be occupied with the most important of the work still remaining. It has been agreed that no bills of a political character should be considered. The greater part of the time for the remainder of the session will be occupied by the House in discussion of the resolution for counting the electoral votes, the bill to change the law relating to the appointments of special deputy marshals, and the bill defining the term of office and duties of chief supervisors of elections. The greater part of the week will be occupied in the Senate in discussing the Sundry Civil and General Deficiency Appropriation bills. The Senate will be unable to finish the appropriation bills by next Thursday, the 10th inst., which has been fixed by the House for adjournment, and the House resolution will probably be amended by the Senate to fix the date of adjournment on the 15th inst. Already many members have left the city for their homes, anticipating the final break up this week....The large tannery belonging to Danziger & Co., Chicago was burned on last Sundday afternoon. Total loss $150,000, which was covered by insurance....During a recent revival in the Brooklyn Tabernacle, (Dr. Talmage's church), four hundred and sixteen converts joined the church, and 120 or these were baptized on the 6th inst.....As we go to press no news of importance have yet arrived from the Chicago convention, which has been in session during the past week. Ballot followed ballot in rapid succession this morning. The 12th vote just telegraphed 3.30 P. M. as follows: Grant 305, Blaine, 283, Sherman 93, Edmunds 31, Washburne 33, Windom 10, Garfield 1, Harrison 1, Hayes 1.

AGRICULTURAL NEWS.

Statistics show that the exports of the country are steadily increasing. Last April that of breadstuffs was 33 per cent. greater than in the corresponding month last year, the total shipments including grain, during that month this year, aggregating in value the large sum of $21,670,000.. ....The average yield of cotton on the famous Sea Islands, near Charleston, S. C., under the slave system, was from eighty to one hundred pounds an acre. With free labor it has been increased to two hundred and fifty pounds, and some planters last year made a net profit of $100 an acre.... ... The King of the Belgians offers a prize of 25,000 francs, or $6,250 for the best work on "Means for Improvements on Low and Sandy Coasts," such as those of Belgium. The competition is open to writers of all nationalities. Foreign writers must send in their essays to the Ministry of the Interior, at Brussels, on or before January 1, 1881. The award will be made by a jury of seven persons, consisting of three Belgians and four foreigners of different nationalities, who will be appointed by the King. The successful work will be published by the Belgian Government in 1882.....The Chautauqua County Farmers' Board of Trade, the project or which was mentioned here some weeks ago, was opened at Jamestown, N. Y., on June 1. The Exchange was formally tendered to the Farmer's Organization with appropriate remarks from the President of Jamestown, a speech by ex-Gov. Fenton, and responses by the President of the Board of Trade. The Exchange was declared open for business transactions. The offerings were 861 packages of cheese and 267 packages of butter, from 18 factories and way dairies. The buyers were numerous. The prices were 10 cents to 12¾ cents for cheese, 19 cents to 21¾ cents for creamery butter, and 18 cents to 19 cents for dairy butter .....A correspondent from Fargo, Dakota Territory, under date of May 24, says:—Interviews with nearly 100 farmers from various sections of the valley show that the universal conclusions among them is that the crop prospects were never better. Wheat is 20 per cent. better this year than last year at the same date. The yield of wheat tributary to the Northern Pacific railroad last year was 6,000,000 bushels. The acreage and prospects for 1880 indcate 10,000,000 bushels. The wheat seeded just before the last storm three weeks ago is stronger, brighter and better than later seeding.... Millions of locusts have appeared in Suffolk county, Long Island, N. Y. They are said to be attacking the trees and bushes, and stripping them bare. In many places they are so thick as to bend the bushes to the ground, and the highways are lined with the old wings and body-cases cast off by them. The woods appear to be full of them, and the peculiar roaring sound made by their wings can be heard for a great distance. They are said to be the 17-year variety; but then, as the genuine 17-year locust is said to have appeared some two or three years ago, this is a question. But, at all events, the farmers are much alarmed for the safety of their crops. The army-worm has appeared near the Great South Bay, L. I., and is doing some damage there. The potato bugs are also troublesome to the farmers, although they are said to disappear before the locusts and the army worm .....The strawberry and pea pickers in south New Jersey are busy. The crop is not so much injured as was at first feared, the rain coming just in time to save it from total loss, and the growers entertain hopes of a fair return for their labor.....The drought was welcomed by New Jersey sportsmen. The eggs of woodcock have been permitted to hatch, and the young escaped the floods. The birds will be very plentiful. As the birds lay their eggs in marshes, thousands of them are annually destroyed by being submerged in water.....Bowie's Liverpool circular of June 1, estimates the loss of sheep in the United Kingdom from rot at 2,900,000, and this will be followed by a deficiency of about 2,400,000 lambs as most of the sheep which have perished were breeding ewes. .....The movement of flour and grain to the East through Buffalo, N. Y., this year is very large; in fact, it has been heavier thus far than in any preceding season. The receipts of flour for May were 64,490 barrels in excess of those for the corresponding month in 1879, and 82,790 barrels for the season, or double the arrivals for last year. The grain movement is equally as gratifying, the excess for the month standing at 3,172,687 bushels. For the season up to May 29, the receipts compare as follows: In 1880, 22,071,641 bushels, to 8,881,929 in 1879. The exports by canal were also unusually large. The totals for all kinds of grain compare as follows: 1880, 11,532,529 bushels; 1879, 6,506,000 bushels, and 1878, 13,000,400 bushels.....To fill up the gaps in the Paris parks caused by the destructive effects of the winter, as described some weeks ago in our "Everywhere," 54,000 evergreen trees and 30,000 deciduous trees are required. In the Champs Elysees 3,200 trees were killed and 6,000 had to be cut down to the roots. Yet amid this great destruction it is pleasant to know that the great cedar of Lebanon in the Jardin des Plantes remains unharmed, notwithstanding the report that it had perished....By official record, the rainfall in Paterson, N. J., in May was the lightest in that month for nearly half a century, excepting in May, 1836, when it was only 0.63 inch. The rainfall for May, 1880, was 0.85 of an inch; in May, 1843, one inch, and in May, 1875, 1.33 inches. The present year the month began with a temperature that made ice half an inch thick. On the 4th the temperature amounted to a mean of 83 deg., with a maximum of 79 deg., showing an upward range of 49 deg., in four days. The extreme range for May, 1879, was 36 deg., or 20 deg. less than the present month....A leading Liverpool grain circular telegraphed hither on June 5, says: "The grain trade during the past week was unchanged, and the demand at various markets inactive. Previous prices were, however, well maintained for choice wheats, but barely for secondary. There was a fair inquiry for cargoes off coast for both the United Kingdom and the Continent, but they are held somewhat above buyers' ideas. There is hardly any disposition to operate in wheat on passage and for shipment. On the spot, since Tuesday, the transactions in wheat have been moderate. Corn was dull, tending downward. To-day's market was thinly attended. The demand was slow, and in the limited sales of wheat, except for choicest qualities, millers have the advantage of 1d. The market is about cleared of California off coast, chiefly for the Continent, at extreme rates. Flour was very dull and nominally rather cheaper. Corn was in fair request,".... A Paris dispatch says: "The ravages of the phylloxera are becoming more serious daily. In July last it was computed that one-third of the total surface devoted to wine-growing had been irretrievably devasted, and as the plague has been steadily increasing all this year, it is estimated that 40,000 acres have been added to the total amount of land lost. A society of wine-growers has been formed for the purpose of utilizing and applying scientific means for destroying the insect. ....The first car-load of new wheat arrived at St. Louis on May 29, from Texas, and sold at auction at $1.62, a bushel. A premium of $125.00 in addition was made up for the shippers by several of of the grain dealers in recognition of the event. .. Exports from New York in the week ending with Saturday May 29, included 3,400 head of live cattle, 9,550 quarters beef, 3,516 live sheep, 3,100 carcasses mutton, and 300 dressed hogs. 414,000 bushels of wheat and 455,000 bushels of corn....The area in wheat along the line of the Northern Pacific railroad this year is estimated at 10,000,000 acres against 6,000,000 last year. A yield of 20 bushels per acre would make 200,000,000 bushels as the crop of that region. ...The Mark Lane Express of May 31, in its review of the British grain trade for the past week, says: "The showers and warm winds of the past week have promoted vegetation wonderfully. If the weather from now to harvest should even be unusually dry, it will probably be beneficial to the wheat crop." The supplies of English wheat continued small, but trade was not very animated either in Mark-Lane or in the provinces. Prices were fairly steady, and only receded for inferior produce, of which, however, a large proportion of the offerings in London consisted..... The tons of Paris-green that have been used by New Jersey and Long Island farmers in the destruction of potato bugs it was supposed would rid them of the pest for this season. But the bugs appear in greater numbers than ever before, and to make it more serious have adopted a new place of attack. They cluster around the vine before it has shown above the drill, and feed upon it until the seed rots. In uncovering drills where the crop has been too long sprouting, hundreds of young bugs are found clustered around the tender stalks....The arrivals of immigrants during the past week aggregate 12,511....An International Exhibition of sheep, wool and wool products will be held at the Exhibition Building in Philadelphia next September. Congress has passed an act admitting free of duty all importations intended for show only at this exhibition, and directing the Commissioner of Agriculture to "attend and make a full and complete report of the same." There will be an excellent opportunity for our raisers of fancy stock to enter their stock and see how they compare with those of other countries. Considering that the importations of the raw material to the United States amounted to 70,247,972 pounds of wool for 1879 as against 35,798,515 for 1878, it is very evident that too little attention is paid to the raising of this much-needed article....On May 27 the Senate spent the day in the routine consideration of the Agricutural Appropriation bill, and passed it. The salary of Commissioner Le Duc was increased to $4,000 Mr. Windom advocated the amendments proposed by the Senate Appropriation Committee, the principal of which is to add an appropriation of $15,000 for the purchase of machinery and apparatus for experiments in manufacturing sugar from sorghum and corn-stalks and other sugar-producing plants. The Committee proposed an amendment appropriating $7,000 instead of $5,000 for, experiments in connection with the culture and manufacture of tea 3,000 instead of 5,000 for experiments for the improvement of the varieties and culture of cotton... Mr. Hammond moved that the first amendment should read $8,000 and the second $2,000. Experiments in South Carolina and other Southern States had shown that tea could be cultivated in this country. We were importing $20,000,000 or $25,000,000 worth of tea annually, and should encourage everything tending to domesticate this plant and make its importation unnecessary. He explained the second part of his amendment by stating it was too late in the season to make such experiments in cotton this year. There was no occasion to import cotton-seed, because the finest grades of cotton in the world are American, and $2,000 was an ample amount for this appropriation. Mr. Hampton's amendment was agreed to. Mr. Allison moved to amend the Committee amendment so that experiments in manufacturing sugar from sorghum and corn-stalks, etc., shall be carried on, and machinery erected, in one of the chief corn-growing States. In opposition it was urged that Washington was the place to erect machinery, where experiments could be carried on under the direct supervision of experts. Mr. Allison's amendment was rejected—yeas, 16; nays, 35—and the Committee's amendment was agreed to. Other Committee amendments and some other unimportant amendments were agreed to, and the bill passed. It adds about $28,000 to the bill as it came from the House.....The exports of cattle from Boston port for the first four months of the year were 18,194, of sheep 5713, of hogs 1373. The total up to the present time is about 27,000 cattle, 12,000 sheep and 25,000 hogs.

HIGGIN'S SALT.

Higgin's Salt *must* be the best, for it has, in most sections, within four years almost run the Ashton brand out of the market as a first-class dairy and table salt. For a time the agent of the Ashton brand tried to stem the tide by talking of its old-time reputation, just as the importers of raw sugar talked about the superior sweetness of their half-manufactured product when the clean and pure refined sugars first came into use. Now, however, as a last resort, the versatile agent of the Ashton brand is endeavoring to distract attention from the inferiority of his salt by loudly crying that the New York agents for Higgin's also sell oleomargarine, the inference being that Mr. Higgin and the hundreds of salt dealers who handle the Eureka for their best salt also deal in oleomargarine and that dairymen should use only Ashton's salt. Apropos to this the American Dairyman suggests that "he hates not Oleo less, but Higgin more;" at any rate, his effort to grind his little salt axe by appealing to the prejudices of dairymen is amusing. Dairymen are, doubtless, smart enough to see through this, and consult their own interest by using the best salt, no matter who sells it. Higgin's improved process has been granted a patent by the English Government; the Eureka Salt is used in the Queen's dairy and by the most successful and progressive dairymen everywhere. Notwithstanding it has only been known in this country for four years, it is for sale by nearly all the salt dealers from Maine to Texas and from the Atlantic to the Pacific. In 1876 there were 5,950 sacks imported; in 1877, 32,800 sacks; in 1878, 69,045 sacks; and in 1879, 93,000 sacks.—*American Grower.*

The Wabash, St. Louis and Pacific Railway, with their usual enterprise, are now running two express trains daily through to Denver, Pueblo, Colorado Springs, and all points west, with Pullman Palace and Horton reclining chair cars on each train. This line has a fine passenger equipment and makes excellent time. Round trip excursion tickets are now for sale by their enterprising General Eastern Ticket Agent, Mr. E. I. Burritt, at 271 Broadway, New York. He will see that tourists and travelers receive all the attention and information that can be given. The Wabash, St. Louis and Pacific now control over 2,500 miles of railroad, and their trains are celebrated for quick time, and comfortable cars. Their system of through cars is acknowledged to be the most complete in the world.

The collapse of the iron boom has already caused the failure of several large operators in iron both here and across the Atlantic. Week before last an English iron firm failed for upwards of $3,000,000, and last week Campbell & Co., of this city, followed suit to the tune of about $2,500,000. The downfall of these heavy dealers is sure to cause the bankruptcy of many smaller operators in iron. —another proof of the evils inseparable from "booms" in any industry.

Catarrh Sometimes

commences with a cold, but its cure *always* commences with the use of Sage's Catarrh Remedy. This old, reliable, and well-known remedy has stood the test of years, and was never more popular than now.

Thousands of ladies to-day cherish grateful remembrances of the help derived from the use of Lydia E. Pinkham's Vegetable Compound. It positively cures all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

One Box or Six Bottles.

If you are suffering from a combination of liver or kidney diseases, and constipation, do not fail to try the celebrated Kidney Wort. It is a dry compound, as easily prepared as a cup of coffee.

Burnett's Cocoaine is the best and cheapest Hair Dressing in the world. It kills dandruff, allays irritation, and promotes a vigorous growth of the Hair.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, June 5.

Butter and Cheese.

Boston—Buyers have not taken hold with any snap, and a good many of them object to paying over 18c. for the best lots of Vermont, and there are more sales at that price that at 19c. The best lots of York State will not bring over 18c. Northern—Choice New York dairy, ₱ lb, 17@18; Choice Vermont, ₱ lb, 18@19; Fair to good, ₱ lb, 15@16; Common, ₱ lb, 13@14. Western—Choice creameries, ₱ lb, 20@22; Fair to good, ₱ lb, 18@19; Choice dairy-packed, ₱ lb, 17; Choice ladle-packed, ₱ lb, 14; Common, ₱ lb, 12@13c. There is no accumulation of receipts in cheese, but the market is hardly so stiff, as this article is relatively much dearer than butter, and there must very soon be a large supply. About 12½c. is an outside price for anything, unless it is a fancy lot. New whole milk, ₱ lb, 12½@13; New half skims, ₱ lb, 10@11; New skims, ₱ lb. 6@8.

Chicago.—Butter—The market remains quiet and weak. Good to choice grades are becoming more plentiful, and they are the weakest. A light business was doing at the following prices: creamery, 18@21c.; good to choice dairy, 15@18c.; medium, 12@14c.; inferior to common, 8@11c. Cheese remains dull and heavy. The following prices were only indifferently sustained: full cream, new, 10@11c.; part skim, new, 8½@9½c.; full skim, new, 5@7c.; low grades, 4@5c.

Cincinnati.—The arrivals of butter have not been excessively large during the week, but the local consumptive demand has been so largely supplied by suburban farmers' wagons that the regular receivers have had a light trade, and prices have declined 1@2c per lb on the medium and better grades. The lower qualities are scarce, and the quotations for them are merely nominal. Packers are taking the bulk of the current receipts and as they will not pay over 10@11c the sales are mainly at these figures. Fine Dairy is sold to retailers at 15c, but this is extreme, and round lots sell mainly at 13c. Creamery is plenty and sells at 20c. as a rule, but 1c more is obtained for selections of special brands, in a small way. Fancy creamery sells at 20c and fair at 18@19c, choice Western Reserve and Dairy at 13@15c; prime Central Ohio 11@12c, medium, do 9@10c and inferior 6@8c. ₱ lb. Cheese—is in only moderate supply and with a fair demand the market has ruled steady and closes firm at 9½@10c per lb for prime to choice factory.

Philadelphia.—Butter.—Supplies during the week were light, particularly of choice goods, but the demand was limited to small selections for table use, and the market for lines of all kinds was dull and weak. Now and then a jobbing selection brought 1c or 2c more than quoted rates, but our figures are full high for general wholesale trade. We quote creamery extras at 20@21c; do. good to choice, 17@19c; limitation creamery, 12@13c, as to quality; Erauford tubs, extras, 19c; York State tubs, extras, 18@19c; fair to choice, 15@17c; Western dairy extras at 14@15c; do. fair to good at 11@13c; factory packed, 11@15c, as to quality; common grades, 8@9c. Rolls—Fancy, 14@15c; none here; do., fair to prime, 9@12c. Prints—Fancy at 22@25c; do. firsts at 17@20c; do. seconds at 10@15c. Cheese continued in small supply, and prices were well maintained under a steady good demand. We quote New York factory, full cream, at 13c; selections, 13½c; do. fair to good, 11½@12½c; do. half-skims, 10@10½c; Ohio new, full cream, 11½c; do. half-skims, 10@10½c; soft full skims, 8@9c; hard do. 4@6c.

PRODUCE AND PROVISIONS.

New York, Saturday, June 5, 1880.

Beans and Peas.—Marrow and prime white kidney beans are steady and firm supported by a good export demand. Peas scarce. Medium and red kidney quiet, but the former are not unseasonable. Southern green peas quiet and weak at $1.65@1.70 ₱ bush. for Wis. bbl.; Southern B. E. nominal $1.30@2 ₱ 2 bush. bag. Marrow beans, prime, $1.62½@1.65; other, $1 60@1.60; medium, prime, $1.35@1.37½; other, $1.20@1.30; pea, $1.45@1.65; white kidney, $1.50@1.70; red kidney, prime $1.45@1.50; other $1.30@1.40; black, or turtle sup., $2.20

Receipts of beans for week, 1,416 bush.; exports, 3,995 pkgs.

Beeswax.—Trade is quiet, with 24@25c. quoted for Western and Southern.

Broom Corn.—Transactions are small, with prices generally unchanged.

Latest prices are for brush and short broom, choice ₱ lb, 7@8c.; do., do., common to good 5@6½c.; hurl good to choice, 7@8c.; do. common to fair 5½@6½c.; red and crooked at 3@4c.

Butter.—Buyers have the "low price" fever and with the enormous receipts sellers are forced to humor their views. General good grades of stock, however, has enlarged consumption and that fact is encouraging when such unwieldy supplies have to be handled. Exporters, too, have made a noticeable pull upon the surplus but most of the transactions have been at their dictation of rates. The best export price named this week is 18c. Mixed and straggling parcels have sold down to 12@14c. The common grades have gone to Germany. Quotations are Creamery, fine, 19@20c.; good to prime, 18@19c.; fair to good, 17@18c.; sweet cream, 17@19c.; yellow firkin choice 19@20c.; other 17@18c.; State, pails and hf. tubs, choice, 18c.; fair to prime, 15@17c.; poor 12@13c.; Welsh fair to choice 15@17½c.; poor 12@13c.; Western imitation creamery, 12@17c.; dairy, fresh, 16@17c.; good to prime, 14@15c.; fair to good, 12@13c.; factory fine 14½@15c.; fair to prime, 12@14c.; poor 10@12c.; very poor 8@9c.

Mr. E. Phillips, a prominent broker, gives us the following distribution of dairy products abroad for the past year: Butter to Great Britain, 876,390 pkgs. to the continent 124,143; cheese to Great Britain 2,001,102 boxes; to the continent 2,934 do.

Comparative receipts and exports for the past four years:

	Rects., bxs.	Exp'ts, firkins.
June 1, 1879, to June 1, 1880..	1,490,750	310,805
June 1, 1878, to June 1, 1879..	1,600,000	303,140
June 1, 1877, to June 1, 1878..	1,233,100	186 208
June 1, 1876, to June 1, 1877..	1,377,200	55,550

CHEESE.—The receipts have been large, an though the exports have reached fully 74 000 b the market has ruled lower and closed easy considerable of an accumulation carried over.

Latest sales are 12½c. for choice full cream; 11¾@12¼c. for good and fine; 11¼@11⅝c. for fair Ohio factory flat at —c. for full cream; 10@11c. for twin and good lots; 8@10c. for half skimmed.

Comparative receipts and exports past four years.

	Rec'ts. pkgs.	Exp'ts. lbs.
June 1, '79, to June 1, '80....	2,490,100	112,629,800
June 1, '78, to June 1, '79....	3,130,900	142,213,750
June 1, '77, to June 1, '78....	2,675,000	117,452,450
June 1, '76, to June 1, '77....	1,119,850	91,445,335

COTTON.—The market has been active and closed strong at for June, 11.52c.; July, 11.61c.; August, 11.69@11.70c.; September, 11.24@11.25c.; October, 10.76@10.77c.; November, 10 58@10.60c.; December, 10 58@10.60c.; January, 10.67@10.69.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	9 3-16	9 3-16	9 3-16
Strict ordinary	9 13-16	9 15-16	9 15-16
Good ordinary	10 9-16	10 11-16	10 11-16
Strict good do.	10 15-16	11 1-16	11 1-16
Low middling	11 7-16	11 9-16	11 9-16
Strict low middling	11 11-16	11 13 16	11 13-16
Middling	11¾	12	12
Good middling	12 5 16	12 7-16	12 7-16
Strict good middling	12 9-16	12 11-16	12 11-16
Middling Fair	13 1-16	13 5-16	13 3-16
Fair	13 11-16	13 13-16	13 13-16

STAINED

Good ordinary	8¾	Low middling	10 9-16
Strict good ordinary	9 13-16	Middling	11 3-16

DRIED FRUITS.—The market generally is very slow and is without decided change.

Quotations are for N. C. apples, fair to good, at 7@5½c.; choice, at 8@8¾c.; New York State quarters sliced at 7¾@7¾c.; patent evaporated, in cases, choice at 14@15c.; good and prime 13¾@14c.; evaporated, sliced at 12½13c. Evaporated peeled peaches, good to choice, at 20@22c.; North Carolina peeled choice, 16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c.; common at 10@12c.; unpeeled halves at 7@8c.; do. quarters at 5@6¾c. Pitted cherries at 17@18c. Blackberries nominal at 13@13½c. Raspberries at 28@30c. Plums at 17@17½c.

EGGS.—Receipts for week, 13,530 bbls.; do. last week, 14,625 do. With smaller receipts the market has shown more buoyancy during the past few days and extra fresh lots close firm. A good many old Western remain to be worked out, and 11½c. is yet the top.

Near Points, 13½@14c.; State and Penn., 12½@13c.; Western choice, 11@11½c.; Canadian, do. 11¼@11¾c.; off grade Western 10½@11c.

FLOUR.—There is a stronger demand with prices in favor of buyers through liberal supplies.

Latest prices are at $3.85@4.50 for inferior to strictly fancy superfine State and Western; $3.90@4.35 for very poor to good extra State, odd lots and lines; $4.35@4.85 for good to strictly choice do.; $3.90@4.35 for inferior to good shipping extra Western, and $4.35@4.85 for good to strictly choice shipping extra do.; inferior to very good white wheat extras, $4.60@5.35; very good to fancy do. at $5.35@6.50; red and amber winter wheat, inferior to fancy grade and family, at $4.40@5 25; round hoop Ohio, $4.40@5.00; and trade and family brands of do. at $5.10@6.35; St. Louis at $4.50@5.50 for inferior to good extra; $5.50@6.50 for good to very choice; Minnesota clear, very inferior to choice, at $4 00@5.75; Minnesota "straight," very poor to fancy, at $5.10@7.00, and patent inferior to fancy at $5.50@8.50; unsound stock at from $2.25@5.00; city mill extra at $5.60@5.90 for good to choice West Indies; do. for England, $4.15@4.75 for very poor to very choice; do. trade and family extras, $6.00@6.15; do. for South America, $5.90@6.35; No. 2 at $2.35@3.50 for poor to fancy.

Receipts for week: flour, 100,300 bbls; corn meal, 3,144 bbls.; wheat, 1,581,300 bush.; corn, 817,200 bush.; oats, 544,450 bush.; rye, 17,250; malt, 75,710; rice, 591 pkgs.

Exports: flour, 75,300 bbls.; cornmeal, 3 812 bbls.; wheat, 1,258,500 bush.; corn, 1,6 5,500; oats, 4,000 bush; peas, 2,250 bush.; rice, 1 200 pkgs.

CORN MEAL.—Sales at $3 15 for Brandywine, and $2.50@2 75 for yellow Western.

FRESH FRUITS.—There is a little call remaining for fine russets. The limited supply ranges at $3@4.75 ₱ bbl. Strawberries have had a varied week. Early pickings were ruin beaten and sandy and very low prices ruled on several days. A better style of fruit is now arriving and fancy bring good prices. "Great American" "Boyden's No. 30," "Jucunda" and "Trumpet" are making a good moderate display.

Up-river good to prime ₱ qt. 16@20c.; good to prime ₱ 3 to qt. cups 5@7c.; Staten Island, Wilson, ₱ pint 6@8c.; Jersey, Mon. Co. prime ₱ qt. 12@14c.; prime to fair ₱ qt 8@10c.; pints 4@7c.; So. Jersey ₱ qt. 5@9c.; M'd and Del. ₱ qt. 5@8c. Cherries, sweet, fancy ₱ lb. 14@15c.; fair to good, 10@12c.; common, 5@7c; Southern, sweet, good to prime, 10@12c.; common 5@7c.; sour 5@6c. Gooseberries, Md., ₱ bush. $2@2.25. Hot-house grapes, Black Hamburgs ₱ qt. $1. There has been a better demand for peanuts and holders have established an advance of ½c. ₱ lb; prices firm as quoted. Peanuts, Va. hand-picked, 5¾@6c.; extra prime, 5½c.; prime 5c.; shelled, 5¾@6c., hickory shellbark, ₱ bush 90c.@$1.

GRAIN.—Wheat has showed a full export demand with prices lower; latest sales are of No. 1 white at $1.26½@1.27; do., do., June, at $1.24¾@1.25¾c.; No. 2 white at $1.25; ungraded white at $1.24@1.26¾; No. 2 red at $1.28¾@1.29¼; do., June, at $1.26½@1.27; do., July, at $1.16@1.16¼; ungraded red at $1.18@1.20¼; mixed winter at $1.25; No. 2 amber at $1.27@1.27½; ungraded amber at $1.28@1.28½; choice hard spring at $1.20; No. 2 spring at $1.08@1.10; ungraded spring at $1 18. Rye at 95@97c. Corn has been active and closed firm; latest sales are of New York No. 2 at 54@54¼c.; do., June, at 51@51¾c.; do., July, at 50@50¾c.; New York steamer mixed at 53½c.; ungraded mixed Western at 53@53¾c.; No. 3 at 52½@53c.; New York yellow at 56c.; low mixed at 55½c.; No. 2 white at 57c. Oats are active and showing sharp changes in prices; latest sales are of No. 1 white at 43c.; No. 2 white at 43½@44c.; No. 3 white at 41¾@43c.; New York No. 1 at 42c.; New York No. 2 at 42c.; do, June, at 41c. No. 3 at 41½c.; ungraded white Western at 43@46¾c.; ungraded mixed Western at 40@43c.; white State at 46@47c.; mixed State at 42½@43c.; No. 2 Chicago quoted at 42c.

HAY AND STRAW.—There is is a liberal demand and prices are firm; latest prices are for:

Shipping hay quoted at 75@80c. for medium, and 90@$1,10 for better qualities; clover, 65@70. Straw at $1.05@1.15 for long rye; 65@70c. for short rye, and 55@60c. for oat.

Exports for week, 41,000 bales.

HOPS.—The market has been very steady for several days, and demand moderately active. Quotations are for:

	Cents per lb.
New York, fancy	Nominal
New York, new crop, good and choice	35 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

MAPLE SUGAR.—A few tardy parcels quoted at 9@12c. for cakes. Syrup steady at 75c.@$1 ₱ gal. in tins.

POULTRY AND GAME.—There is a fair demand for moderate receipts of carefully iced, good order stock; turkeys selling slowest of any sort. It is hardly safe to send scalded poultry after the season settles warm.

Turkeys, choice small, on ice, 10@11c.; fair to good, frozen, 6@8c.; do., poor, frozen, 4@5c.; Phila., d.-p., 10 12c.; chickens, spring, Phila., large, ₱ lb., 34@35c.; small, 25@32c.; roasting, Phila., dry-picked, 20@22c.; fowls, Phila., yearling, 14@15c.; Phila., dry-picked, 12@12½c.; Jersey, good to prime, 11@12c.; State, good to prime, 9@11c.; Western, good to prime, 8@10c.; poor to fair, 5@8c.; ducks, spring, large, ₱ lb., 25@30c.; small, 23@25c.; Phila., dry-picked, 12@13c.; squabs, white, ₱ doz., $2.00; dark, $1@1.50.

Live fowls dull, turkeys extremely so. Spring chickens have a steady sale when of good weight.

Chickens, spring, large, per lb., 24@25c; do., small, 22@24c.; fowls, Jersey, 10c.; Western, 9c.; Southern, 8½@9c.; roosters, old and young, 4c.; turkeys, mixed, 7@8c.; Southern, 6@7c.; ducks, Jersey, N. Y. & Pa., ₱ pair, 55@56c.; Western, 40@50c.; Southern, 40@45c.; geese, Jersey, $1.50@1.62; N. Y. & Pa., $1.25@1.37; Western, mixed, $1@1.12; southern, 75c.@$1; pigeons, ₱ pair, 35@40c.

The supply of game is small, but there is no urgent call. Eng. snipe, ₱ doz., $2.50; sand, 25@30c.; wild pigeons and squab, 75c.@$1 per doz.

PROVISIONS.—Hog products have been moderately active and prices generally steady. Mess pork, $11.10@11.15 for June; $11.30@11.30 for July; $11.50 for August, and $11.35@11.40 for September. Bacon at 6¾c. for long clear and 7c. for short clear. Tallow at 6¼c. for prime. Stearine at 8¼@8¾c. Beef hams at $18.50 for fresh and cured. Lard—Western steam at $7 for spot lots; $6 97½ for June; $7@7.02½ for July, and $7.07½ for August deliveries.

Receipts for week: pork, bbls., 5,465; beef, pkgs., 500; cut-meats do. 21 00; lard do. 18,500.

Exports, pork, bbls., 5,450; beef, pkgs., 2,725, cut-meats, lbs. 8,622,225; lard lbs. 3,919,200.

SEED.—Grass are quiet. Clover is quoted at 6¾@7c for medium Western and 7@8c. for State. Timothy at $2.65@2.75.

TOBACCO.—Export demand is moderately active and prices generally steady. Quotations are for

KENTUCKY LEAF.

	Light.	Heavy.
Common lugs	4 @ 4½	4½@ 5¼
Good lugs	4¾@ 5¼	5¾@ 6¼
Low leaf	5½@ 6¾	6¾@ 7¾
Medium leaf	7 @ 7¾	8 @ 8¾
Good leaf	8 @ 8¾	9 @10¾
Fine leaf	9 @11	11 @ 12
Selections	12 @—	13½@14

SEEDLEAF.

	Crop of 1879.
New England Havana seed	18 @25
do. seconds	10 @13
do. fillers	5½@ 7
Penn. assorted lots, fine	18 @22
Ohio assorted lots	7½@10
Wisconsin assorted lots	7 @10
Wisconsin Havana seed	16 @18

VEGETABLES.—Exports of potatoes for week, 2,200 bbls. Common useful to best old potatoes range at $1@1.75 ₱ bbl., rose and snowflake selling quickest. Prime new in good demand; poor lots neglected.

Bermuda, $4@4 50; Norfolk, $2.50@3.50 Ga. & Sav., $3.50@4.00; Fla. $2.75@3.75; culls, $1.50@1.75. Southern truck has not turned out attractively this week. Near by items in good sale. Tomatoes, Cha's. and Sav., ₱ cr., $1@1.75; Fla., ₱ cr., $1@1.50; Bermuda, ₱ box, 30@40c.; cucumbers, Charleston and Savannah, ₱ cr., $2.25@2.75; wax beans, Norf., ₱ ½ bbl. crate, $3.00; string beans, Norf., round, ₱ ½ bbl., $3@3.25; flat, ₱ ½ bbl., $2.75@3; N. C., bu. crate, $1.50@1.75; Sav. & Ch'n, per crate, 75c.@$1.25; green peas, L. I., per bag, $2@2.25; Jersey, ₱ bbl., $3@3.50; Md. and Del., per $3@3.50; asparagus, O. Bay, per doz. bch., $1.50@2; N. J., $1.75@1.75; turnips, Jersey, ₱ 100 bunches, $6; beets, Jersey, per 100 bunches, $5@6; radishes, per 100 bunches, 50@75c.; lettuce, per bbl., $1@1.50; cabbage, Norfolk, $2.50@3 25; rhubarb, L. I. & Jersey, ₱ 100 bunches, $1@1.50; onions Bermuda, new, ₱ crate, $2@2.12; Maryland, yellow, ₱ bbl., $5@5.10.

WOOL.—The market rules weak and dull, buyers generally awaiting the reports from the new Western clips. Ohio, Penn. and West Virginia washed fleeces quoted at 50@52c. for XXX and picklock; 46@48c. for X and XX do.; 50@55c. for No. 1, and 46@48c. for No. 2; 44@47c. for X and above N. J., State, Mich., Wisconsin and Indiana; 50@55c. for No. 1; 44@47c. for No. 2, and 40@42c. for common.

LIVE STOCK MARKETS.

NEW YORK, Saturday, June 5, 1880.

BEEVES.—Receipts for week, 15,687 head; do. last week, 14,135 do. Buying has been exceptionally free during the past week as light receipts are anticipated for next week. Light and medium steers ruled the demand, heavy weight seemingly not wanted unless put down on the rate for market styles. The week has not been profitable for owners; range at the close, 8¾c. for latter, to dress 55 lbs., and 9¾c., to dress 56 lbs.

COWS AND CALVES.—With small arrivals the market is weak; $35@50 is a full range, and this would be broken with free receipts.

VEAL CALVES.—Supplies have run light and the market has favored sellers.

Live calves, Jersey and Bucks Co., choice, 6c.; prime, 5¾@5¾c.; State, choice, 5¾@5¾c.; do. prime, 5@5¼c.; fair to good, 4@5c.; poor, 3@3¾c.; Mt. Holly, fair to choice, 5¾@6¾c.; buttermilk, 2¾@3¼c.

SHEEP AND LAMBS.—Receipts for week, 32,652 head; do last week, 23,761 do. There was a fair trade in sheep at steady prices. Lambs were more abundant and the singular excitement which was the leading feature in yesterday's market was scarcely perceptible to-day. In fact sellers were compelled to yield about ¼c. before it was possible to clear the pens. Sheep sold at 4@5.35; Southern and Western lambs at 7@8¾c.; and Jersey do. at 8¾@9¾c.

SWINE.—Receipts for week, 22,648 head; do. last week, 25,848 do. The feeling is firm owing to an advance in dressed on change. Live quoted nominally at the close at 4¾@4¾c.; city dressed, heavy to light 6¾@6¾c., pigs 6¾c.

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STRAWS.

A. H. NEWBERT, Appleton, Me., May 17th, 1880.: When sending another order for Higgin's Salt says: "I think 'Eureka' is the *Boss* and will entirely supercede the Ashton here.

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JOHN OLIVER, West Harptree, England: Goliath's Sword and Higgin's Salt—there is none like unto them.

N. M, PRESCOTT, Castle Rock, Minn: Eureka is the best salt I have ever used.

J. R. EMERSON & SON, Plattsburgh, N. Y.: Eureka Salt is the best in the world for dairy and table use.

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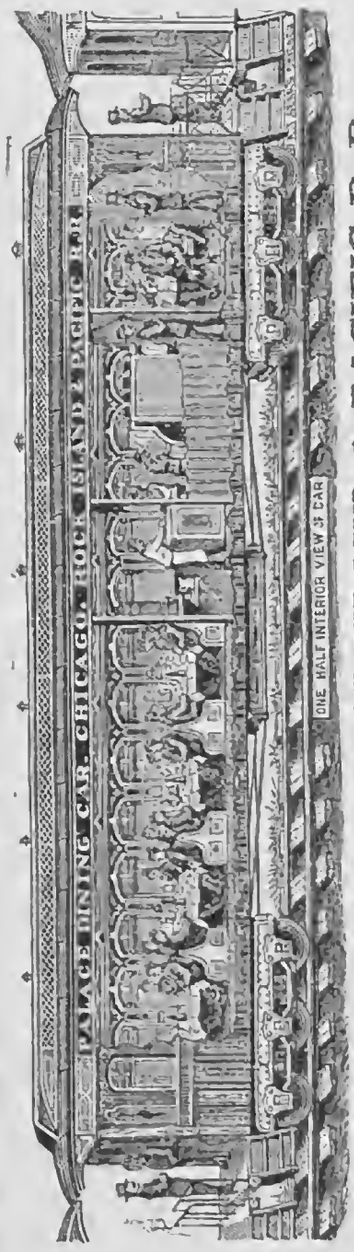

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REMINISCENCES OF A LITTLE GIRL.

MRS. M. J. GALPIN.

CHAPTER IX.

After the recovery of Uncle Tom from his severe attack of asthma, he, by the advice of friends, concluded once more to change his habitation as he could not bear the locality wherein he had suffered so much. When, therefore, all his worldly affairs were adjusted, he determined to turn his back forever on the scene of his misery. There was in the neighborhood, a favorite romantic spot, called "Mullen's Mill," where Katie had often taken the little Therese, and when Therese heard that papa was going away, and she might never more see her favorite haunt, she decided in her childish heart to go and see the old mill once more, and feed the swans once again, as they glided to her side over the glossy surface of the silver lake, whose waters turned the mighty wheels of the giant old mill. Watching for an opportunity, she slipped away unknown to all the household and proceeded along the well-known road to the favorite place; but every one seemed to know she was doing something wrong. At least her conscience whispered so. The rude beggar boys yelled at her and threw stones, the dogs barked in their kennels, and it seemed as if everything reproached her for running away. Still she had no thought of turning back, but pressed on with flying footsteps till she reached the goal of her desires. Taking bread from her pocket she called to the swans, and they glided swiftly, with their proudly arched necks, to the side of their little friend and received her gift. After playing till she was tired she at last concluded to go home. But to do this, she had to pass the gates of the mill yard, which were open, and she was afraid of the ganders and turkey-cocks that were within. This was a trying situation, and she began to cry and wish she had staid at home. But she must get by, or home would never be reached. Swiftly and stealthily she tried to pass the open gates of the barnyard, but alas! one of the old "boss" ganders espied her, and sounded the battle cry, which was echoed by the gobble of the turkey-cocks. Both parties combined their forces, and made an attack on the unfortunate Therese. She flew down the road as fast as she could run with a flock of geese and turkeys chasing her in the rear. To make her case worse, she had on a bright scarlet dress, trimmed with braid which seemed to irritate the turkeys. Her silver curls, which at this time floated to her waist, were flying on the breeze like the pennons from some flagship. No grass grew under her feet, nor did she stop to look back and see what was the force of her enemies.

Wild with terror and affright she took the wrong turn on the home road, and now was lost among strange streets. Wandering into the beggars locality commonly called, "tea lane," or "beggars row," she espied a boy who, because he was such a nuisance and mischief in general, had received an odious nickname. Upon seeing him she was more frightened than ever, and tried to run, but the boy planted himself in the road, and squaring off, he asked her, "where are you going now you young runaway, shure it's a fine colleen bawn you are, running away from your father's like a wandering gypsy. Come here, an' I'll take ye home to yer mother." Taking her unwilling hand he led the crying Therese safely back to her own home, and then left without waiting for the thanks that would have been showered upon him by the grateful parents. Now, children, do not judge a wild, bad boy too harshly; because in his inmost heart there is always a germ of a better nature which may be influenced for good. Always speak gently of the erring ones, for no one knows what were the powers which lead them astray.

During the absence of the little Therese consternation and dismay reigned in Uncle Tom's household, every imaginable place was searched for the fugitive, but to no avail. They were about to organize a band to go in search of her, when the disheveled little truant appeared to allay their fears. Coming in while they were debating as to her whereabouts, she exclaimed, "why, papa, I'm here." Upon being reproved and talked to for her misdemeanor, she replied, that she only just wanted to see the swans once more, and bid them good-bye, as she should never, never see them again. By this time the floodgates of grief were opened and she sobbed herself to sleep in her father's arms. I don't think we grown folks realize sufficiently what sorrow little ones experience at the loss of what they highly value.

Uncle Tom and family were ready for their departure in a few weeks after the escape of Therese from the enraged ganders and goblers. When all was ready they told little Therese to bid good-bye to her friends, and going into the garden, she kissed her white rose good-bye and plucked one to keep. She then took one more swing from the limbs of the giant ash tree that stood beside the garden gate, and between tears and sobs she was finally lifted by her father into the jaunting car that awaited them at the door. The city of Bandon was the point at which they agreed to settle; so away they went with hopeful hearts of better days yet in store.

Nothing of note occurred during their trip. Like all children, Therese soon forgot her troubles in the new scenes that surrounded her, and she looked forward with eagerness and delight to her new home. After journeying some days, they arrived at their destination, and, renting a good house surrounded by a garden, they were again, in a few days, comfortably settled. About a year after their arrival in Bandon, Uncle Tom's old enemy, the asthma, took hold of him again, and all doctors agreed that he was obliged to change climate or he could never recover. Uncle Tom had a rother who a few years previous had gone to merica. He determined to write to him and see what he thought about his exiling himself from his native land, and also what would be the chances for his profession on that far off shore. The Irish famine had just commenced and everything was looking rather dreary.

Our little heroine knew naught of trouble; she now, in addition to a beautiful garden, had a pair of pet Bantam chickens, which were her heart's delight; she also had a pet goat that furnished milk and butter for the family. While waiting to hear from his brother James in America, Uncle Tom had an offer from young Lord Cornwall to take a young son of his, of whom he was ashamed, to America with him, and that if he would do so they would give him $2,500 at the start, and afterwards $50 a year till his majority. Money was a tempting bait just at that time, and as Uncle Tom had no son of his own, he concluded, upon consultation with his wife, to take the boy if he should determine to emigrate to America.

In due time an answer arrived from his brother which decided him in his intention of emigrating. Once more the family prepared to "pull up stakes" and try in a foreign land, where both peace and plenty reigned, to make a home and fireside. Little Willie Cornwall went with them. His aristocratic father little dreams to-day, if alive, that his grandson, is now in the South a fine young man. His own son Willie has gone to the spirit land; he died at the early age of twenty-four years. But we will reserve their "farewell to Erin" for another chapter. The voyage across the Atlantic was full of hair-breath escapes. In former days the crossing of the sea was deemed a grave matter, and those who once parted hardly ever hoped to meet again. If they could only have glanced into the future a few years, how wonderful the change would have appeared to them. We who have seen each step of progress, cease to wonder.

LETTERS FROM THE COUSINS.

Dear Uncle Mark:—We have had a very dry spring; no rain to speak of has fallen. Everything has been drying up and the weather was as hot as in July till a few days ago. Since the middle or March the dust has been blowing every day with very few exceptions. Sometimes it was so thick we could not see a quarter of a mile. I planted some of the white tailed radishes, March 20th, but the dust buried them so deep they could not grow. I have planted some more and they are doing fairly. My bulbs did not flower, they were full of buds but all withered before they opened. I would have had a beautiful show if it had not been so dry. All the watering I could do was of no use.

I received the seeds you sent me in the spring and have many of them growing now. I have Phlox, Pinks, Cockscombs, and Mignonette up and doing well. I have also some of the melons and okras up. My grape seed laid dormant all winter. May 1 two came up; one plant was very small and died soon after; the large one is growing nicely. I suppose more will come up yet.

I planted the sweet corn in two lots; 1st, the corn I got from you; 2nd, that which the calves picked off when just right for eating, and I ripened it in the house. The last came up better than the first. I did not think corn picked so green would grow. The rains have now set in, and I hope for a better season. The wet weather came none too soon, as some of my plants were withering and in some places on the bluffs the prairie grass was dying. Yours truly,

Dodge Co., Neb. Wm. J. Mason.

[Here is a young gardener and experimenter who is doing excellent work. He works understandingly and therefore learns something. He now knows for a certainty that corn which has been imperfectly ripened on the stalk, will, nevertheless, grow and do well when planted; and he will doubtless follow up the experiment, and see if the same is true of all kinds of farm and garden seeds. You are doing well, William, go ahead.—U. M.]

Dear Uncle Mark:—I see no letters from the cousins in this county, and I wish to join your Horticultural Club, and thus become one of your nephews. I attend school, and am getting along with my studies very well. I live in one of the finest valleys in Central New York, and enjoy reading the cousins' letters very much. The trees are all in bloom, and our flowers are looking splendid. My father was a member of the 148th Reg't. N. Y. State, and all the ex-soldiers here are going to have a march on Decoration Day, and if the weather continues warm, they will have plenty of flowers by that time, to decorate the graves of their dead comrades. I should like to come to New York very much and see the largest city on this continent. I study geography and have "big ideas" of the cities I find located on my maps. But as this is my first attempt, I must close for fear you will consign this to your waste basket. If I see this in print, I may venture to try again. Orren Salisbury.

Yates Co., N. Y.

Dear Uncle Mark:—I am always interested in the cousins' letters and have often thought I would write, too. I would like to join the Horticultural Club if Uncle Mark will accept me. My father has taken the Rural for several years and thinks it is the best paper published. We raised 22 pounds of Beauty of Hebron potatoes from one small potato which had 13 eyes, planting one eye in a hill. We raised 12 ears of Blount's Prolific corn from one kernel of corn planted. I am very fond of flowers and raise several varieties every year. We planted seeds from the Free Seed Distribution last year, but only the Hollyhocks germinated. I must close or my letter may find its way to the waste basket.

Yours truly, S. H. C.

Ovid, N. Y.

Dear Uncle Mark:—I thank you very much for those seeds. We planted some hardy flower seeds to-day. We have started many varieties in the house—Mimulus, Carnations, Vinca, Cannas and many others. I will tell the cousins of our dog, Tiger, for I think he is very intelligent. He will speak, (bark), shake hands, (or rather, *paws*), sit up, or roll over, whenever he is told to do so. He will also hold a piece of bread upon his nose, while we say—"ready—take aim—fire!" when he will instantly throw it up and catch it in his mouth. Rena Violet.

Linn Co., Mo.

Dear Uncle Mark:—I am a new cousin. My papa commenced to take the Rural this year, but I would like to join your club; I am very fond of flowers, Mamma tells me I will be a botanist. We have a piece of land to raise our flowers and garden produce on. We have received all the seeds that was given by the Rural to its subscribers. And now Uncle Mark if you will let me join the club and send the club seeds to me I will do the best I can. Being a boy of only ten, don't expect as much as from a man. Respectfully yours,

Charles M. Crittendon.

Winnebaha Co., Dak., Ter.

Various.

BRIEFLETS.

The members of a young ladies' debating society in Troy have decided in favor of long courtships. Level-headed girls! Observation has taught them that there is a wonderful falling off of confections, balls, carriage-rides and opera when courtship ends and the stern realities of married life begin.—Norristown Herald. . . . . G. H. & J. H. Hale say that of the newer sorts of strawberries, Miner's Great Prolific is the best for general cultivation. . . . . They praise Pres. Lincoln as the largest and best in quality of newer sorts, having grown berries *eleven* inches around from plants set September 1st. Sharpless, they say is very vigorous and irregular in shape. But is not Pres. Lincoln more irregular in shape than Sharpless? Great American (as usual) fails with them. . . . . "It is said that the male wasp does not sting." But as a male and female wasp wear the same kind of polonaise, and look as much alike as twins, the only way to distinguish their sex is to catch one and examine its arsenal. If it stings you it is a female; if not, it is a gentleman wasp.—Norristown Herald. . . . . Referring to the support of various political journals to various candidates, the Nation says:—"We know of no question more interesting just now than the morality of passing five months in lauding and declaring worthy of the highest place in popular confidence a man whom during the previous five months you have been describing as a tricky rascal. Is there room," the Nation asks, "in the Christian system for this sacrifice of editors to the exigencies of practical politics?" What has put it into the Nation's head that political editors belong to that system! . . . . . Oleomargarine does not lack for synonyms. Butterine, Ambrosia, Oilymargarine, Woodcosaw-dusterine, Grease-butter, Sham-butter, Fat-butter, Stuff, etc., are among them. . . . . The Rural reports, as to the value of the newer sorts of strawberries as tested at the Rural Grounds, are well supported by careful horticulturists. Prof. Husmann, of Coleman's Rural World, has the following to say of the Crescent Seedling: "The Crescent Seedling we believe to be a good deal like the Ben Davis apple. There is money in it, as it is early, immensely productive, of good size and color and moderately firm; but the less said about its quality, the better. . . . . The Hour says that the man would be a great benefactor to his race who would invent a method for closing doors noiselessly. . . . . Mr. Bailey claims that he can, by his system of preserving green fodder (ensilage), produce milk at one cent per quart, beef for four cents per pound, butter for ten cents per pound, etc. We are sorry that he claims so much. . . . . It is reported, says Puck, that Mr. Edison has discovered that oilymargarine makes capital axle-grease, and that it can also be utilized as pomade. . . . . Providence is impartial. For example: It raineth upon the Just and Jerseyman "equally the same." . . . . The Philadelphia North American tells of a man given up by the doctors. When a man is given up by Philadelphia doctors, it is strong evidence that his money is all gone.—Boston Post. . . . . How to enjoy four springs in one season: Go to Florida in March; to Aiken (S. C.) in April; to the "Thermal Belt" of N. C., in early May, and North in late May. . . . . "Major" of the Rural New-Yorker has received many inquirers as to the healthfulness and other characteristics of the "Thermal Belt" of North Carolina since his visit to that Paradise. Friends may write to Dr. McAboy (Lynn, Polk Co., N. C.) with the assurance that they will receive prompt, courteous replies. . . . . Ellwanger & Barry (Rochester, N. Y.) will send their plant catalogue free to applicants. . . . . Green plants of the great Cuthbert are now offered in our advertising columns. These, if planted now and well attended to, will grow bearing canes for another year. Better late than never. . . . . We might tell our readers of many other interesting things offered in our advertising columns. But they must look for themselves. . . . . The father of Mr. A. B. Allen, our valued contributor, was one of the earliest breeders of Merino sheep. He had a flock in 1813. Mr. Allen well remembers, when a schoolboy in New York in 1811, seeing a flock of Merino sheep that had been imported from Spain, landed near the Battery. They were driven up the city to Chatham St., and so into the country, for it was all country then, with a few scattered houses above Chatham Square. They followed the Spanish shepherds and their dogs that came out with them, and no one could turn them back from these or to the right hand or the left. Two years after, Mr. Allen's father put his family on a New England farm and the son was sent out to watch the sheep with his dogs. It will appear, therefore, that he has had an early apprenticeship in sheep husbandry. . . . . Mr. Dunham, of Wayne, Ills., is the largest importer of the celebrated Percheron-Norman horses which are probably the best and finest of all large farm horses as well as for the city dray, truck wagon and heavy express. We learn that Mr. D. has sold about two hundred thousand dollars worth within the past ten years of his own importation and produce bred from the same. He keeps nearly 100 head in his stud, has immense barns and stables for them and numerous large paddocks on his farm a mile square. It is a great and growing business in the West. . . . . The respected name to whom Mr. Roe has dedicated his really fine work "Success with Small Fruits" is a happy selection.

"I dedicate this Book to
Mr. Charles Downing,
A Neighbor,
Friend and Horticulturist,
From whom I shall esteem it a privilege
To learn in coming years as
I have in the past."

CATALOGUES, ETC., RECEIVED.

Outlines of Phrenology.—This little work of 105 pages, 12 mo., by F. E. Aspinwall, M. D., is intended mainly as a chart for the use of practical phrenologists, but is also useful for students and others who may desire to acquire an elementary knowledge of phrenology with a little outlay of time and labor. Published by D. M. Bennett, 141 Eighth St., N. Y. Price 50 cents, paper-bound.

Beet Sugar and Cultivation of the Beet, by E. B. Grant, Lee and Shepard, Boston, and Chas. T. Dillingham, N. Y. This work of 154 pages, 12 mo. is a new edition of a work very useful in the present condition of our sugar industry. The high prices of sugar during the late war induced the author to visit Europe and investigate the beet sugar industry there, and this volume contains the result of his researches. The work is handsomely bound in cloth and is full of practical and statistical information.

Success with Small Fruits by Edward P. Roe. Published by Dodd, Mead & Co., New York.

We have not had time to read—as it deserves to be read—this elegant work of 313 pages with their superb illustrations. Unless the price is too high (it is not stated), the work will no doubt find its way into the hands of all small-fruit growers. Mr. Roe quotes liberally from the teachings and writings of experienced horticulturists, and very liberal, not to say indiscriminate, credit and praise are given to them and to Mr. Roe's friends in general. The book is written in an enthusiastic, free, sprightly style that impresses upon the mind its instructive portions with scarcely an effort of the memory. We are free to express the opinion that it is far in advance of any other treatise on small fruits heretofore published.

Report of the Conn. Board of Agriculture and Experiment Station for 1879. This work of 402 pages, 8 vo. contains the Sec's. report, and essays on Agricultural knowledge, by R. S. Hinman; Preservation of Food, by the Sec. T. S. Gold; Home Supplies of Food, by J. B. Olcott; Food of Man, by Dr. E. L. Sturtevant; Butter as Food, by our contributor Richard Goodman; Sugar-producing Plants, by Prof. Collier, Chemist to the Department of Agriculture; Compensations of Agriculture by J. M. Hubbard; Fruits and Fruit Gardens for Farmers, by Alfred H. Augur; Fermentation, by Prof. W. H. Brewer; Bread, by Leander Wetherell; and Diseased Meat, by Noah Cressy, M. D. V. S., besides reports on Pomology and on Farm Experiments with Fertilizers, the latter a lengthy report of 58 pages by Prof. W. O. Atwater. As an addition to the above matter, is the Annual Report of Conn. Agr. Experiment Station, embracing 159 pages of highly useful information much of which has been already given to our readers in the Fertilizer Analyses, by the Director, Prof. S. W. Johnson, which from time to time have appeared on these pages. T. S. Gold, Sec., West Cornwall, Conn.

PERSONAL ITEMS.

A. G. Burgess of East New York has produced a new seedling which he calls Wistaria Gigantea. It bears much bigger flowers than the old sort.

The young women of Onoko, Texas, have taken to a fashion of cutting their hair as short as scissors will do it. They wear little slouched hats on the sides of their smooth heads, and look as rakish as pirates.

Dr. Peck of Indianapolis has amputed the legs of a young girl on account of decay in the bones, produced by excessive rope jumping. He advises parents and teachers to prohibit this play under all circumstances.

The average speaker uses 120 words a minute. John Sherman once delivered a speech at the average of 170 words a minute, and Ben Pitman reported it so plainly in phonography that his wife (who was recently cremated) copied the signs into ong hand without having heard of it.

The toadies to be most recently fooled by a bogus English lord are those of Columbus, Ohio. He called himself Lord Arundel, and he was welcomed at once to fashionable homes, though he was plainly an uneducated cockney. He was invited to the floor of the Legislature, and the women doted on him. After borrowing all the money possible, he absconded.

The late Lord Derby and Mr. Gladstone's favorite author was Homer. The present Lord Derby said recently of his father that "the only thing he knew perfectly was Homer, and even at that Mr. Gladstone beat him." Mr. Bright's favorite author is Milton, a copy of which he always carries in his pocket. Mr. Lowe, in his great speedhes on the reform debates of 1868, laid Virgil and Ovid heavily under contribution.

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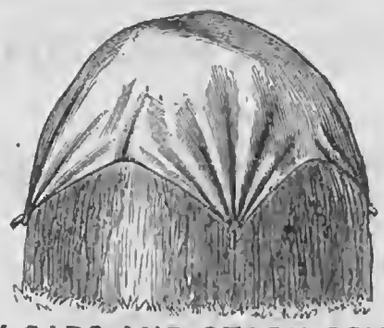

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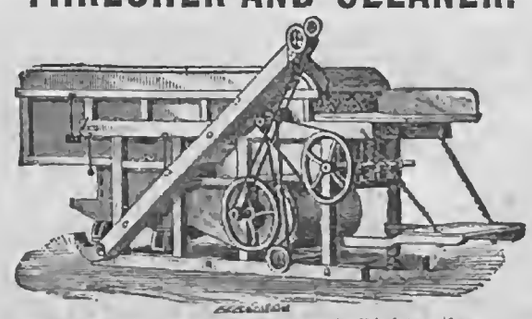

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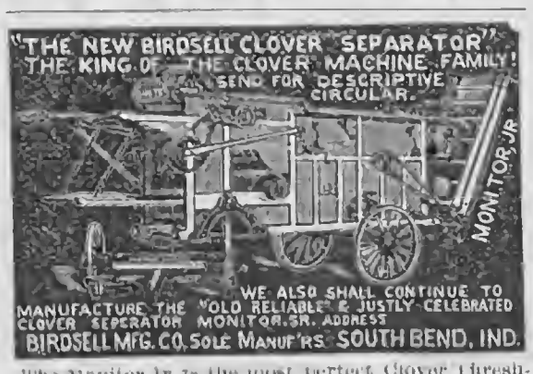

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WE ADVISE YOU TO INSURE YOUR property in the
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The largest Company in the country which insures only farmers' property and residences. Over twenty-six years old.
Capital $200,000 00
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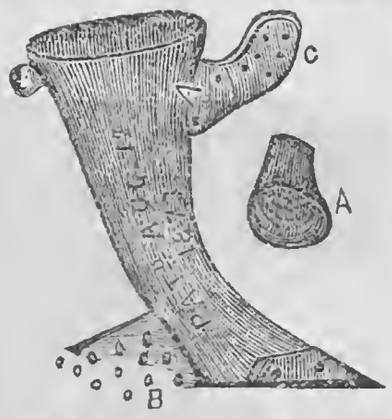

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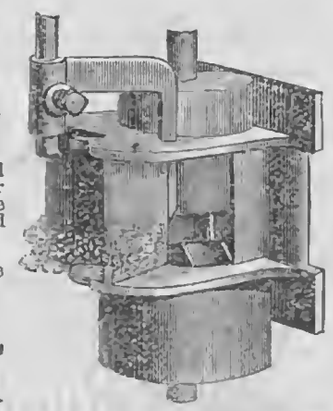

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Send for pamphlet. Mention this paper.
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"A PLACE for everything, and everything in its place." A man at Yale nails his slippers on the wall four feet up, and then all he has to do of an evening is to wheel up his easy chair in front of them and pull out his meerschaum.

THE editor of a newspaper that has adopted phonetic spelling, in a measure, received a postal card from an old subscriber in the country, which read as follows: "I hev tuk your paper for leven years, but if you kant spel enny better than you hev been doing for the las to munths you may jes stoppit."

THE teacher of a Sunday-school class in one of the East Bridgeport churches gave the little ones a description of the flood, and when she had finished inquired if any one could tell who went into the ark with the animals. A perfect chorus of hands flew up in response. Turning to a little fellow, the teacher said, "Tell me who went into the ark with the animals?" "P. T. Barnum," promptly replied the youngster. The lesson closed.

Avoidance of Malaria.

Health may be preserved as well as recovered in malarial stricken districts, if a measure which experience suggests, and the value of which the most positive evidence confirms, be adopted. This is to add stamina to the physique and vigor to the constitution with Hostetter's Bitters. This leading and time-honored medicine, which has met with emphatic approval in professional quarters, has for over one-quarter of a century been the regnant anti-febrile specific of the United States. Nor is it scarcely less esteemed in the tropics, where the torrid heat exhales from dank, decaying vegetation the air-poison which produces the worst forms of fever and ague and bilious remittent. Not only is it a specific for these maladies, but a standard remedy for dyspepsia, constipation, biliousness, rheumatism and debilitating maladies. Emigrants to the far west find it their surest medicinal safeguard.

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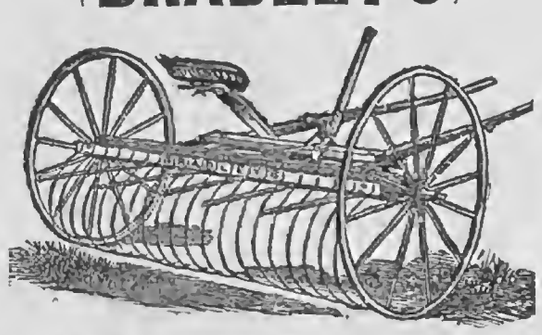

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Send for illustrated circulars of Bradley's Reapers, Mowers, Hay Rakes, &c., to **BRADLEY & CO.**, Syracuse, N. Y.

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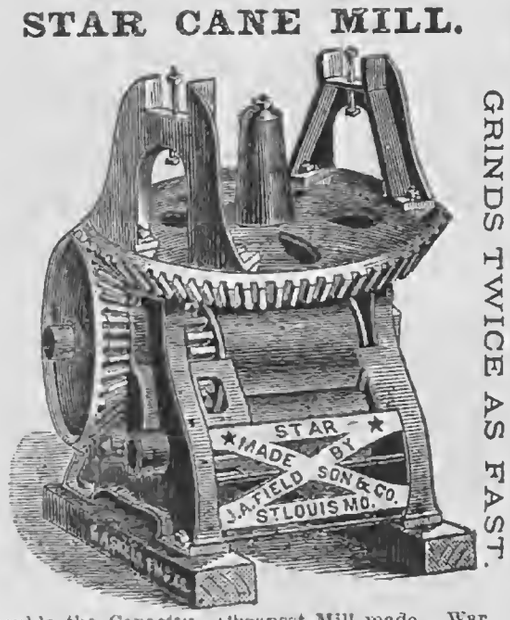

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PLATFORM Spring Wagon

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EVERY WAGON FULLY WARRANTED.

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Correspondence solicited. Address
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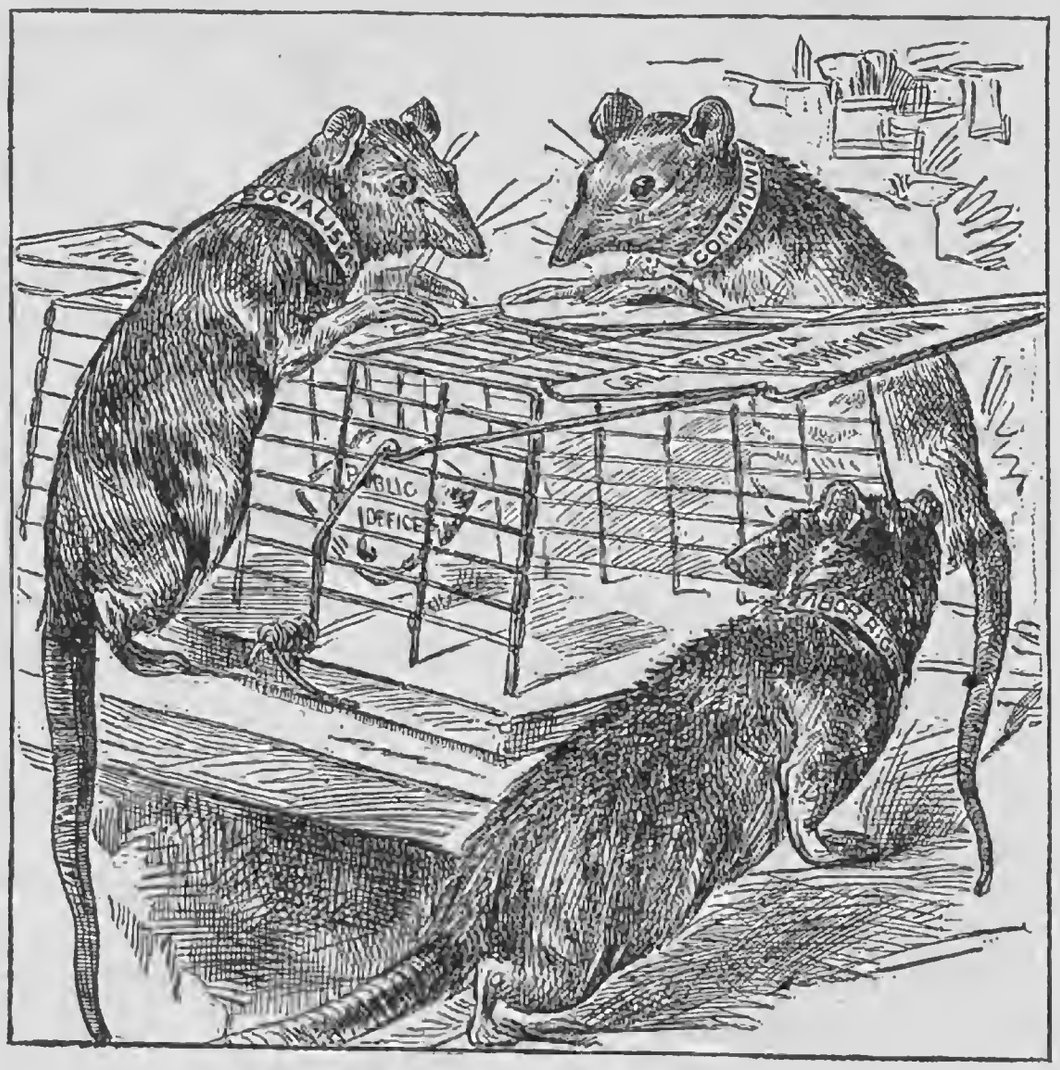

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If you wish to purchase a 2, 3 or 4-HORSE RAILWAY POWER OR THRESHER; A 6 to 10-HORSE LEVER POWER OR THRESHER; A 6 to 12-HORSE STEAM THRESHER, and make the best investment of your money, send for descriptive Circular and Price List to

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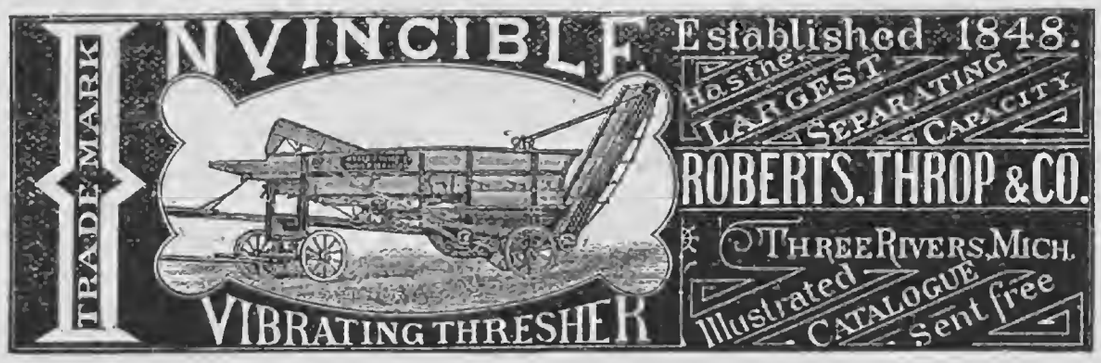

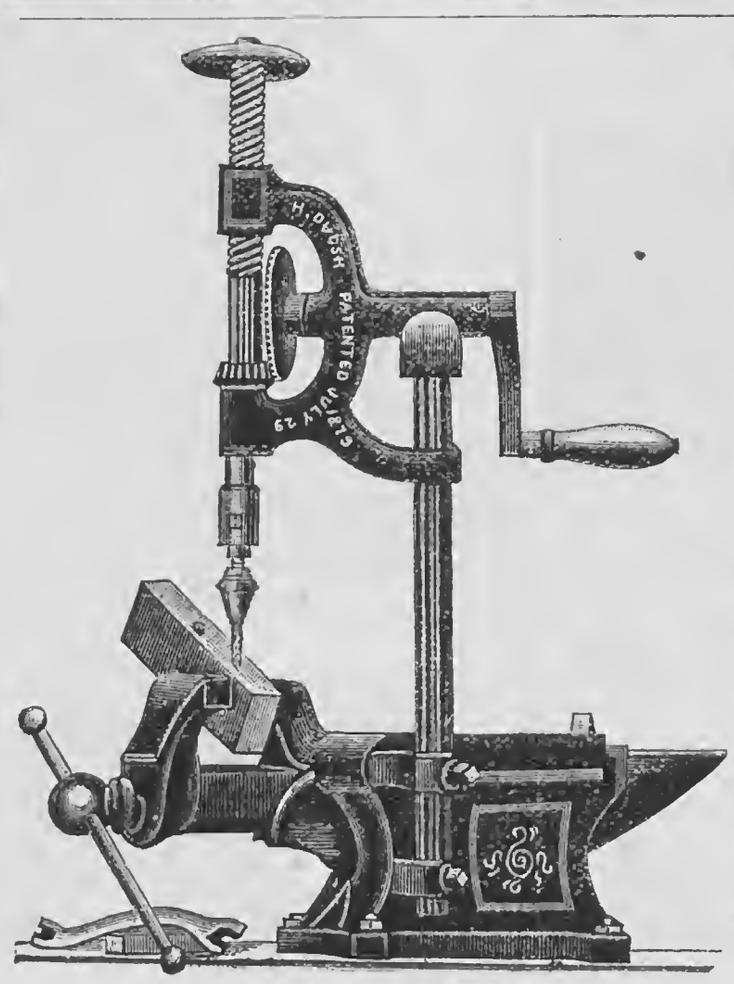

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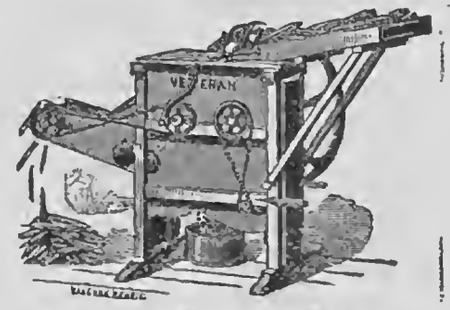

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It will handle wet grain as well as dry. In threshing Flax and Timothy it has no equal, threshing and cleaning both as well, and nearly as rapidly, as wheat, and requires no change except the sieves. It has more square feet of separating and cleaning surface than any other machine made, and cannot be overloaded. It is both over and under blast at the same time.

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An Improved Pitts Power, an Improved Woodbury Power, and the Elward Equalizing Power, all mounted on four wheels, are manufactured by us, and are not surpassed by any in the market.

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For Young or Old.

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'THOMAS' PORTABLE ENGINE.

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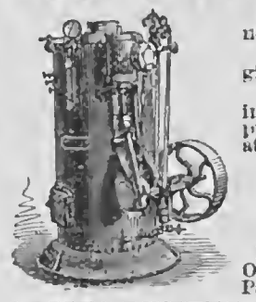

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4½	" "	280
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Send stamp for Catalogue.

Rifles, Shot Guns, Revolvers, sent c. o. d. for examination

Breech-Loading Shot Guns, $20 to $300. Double Shot Guns, to $150. Single Guns, $3 to $20. Rifles and Cartridges, $3 to $75. Revolvers, $1 to $25. Send stamp for Price List GREAT WESTERN GUN WORKS, Pittsburg, Pa.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XXXIX. No. 25. WHOLE No. 1586. | NEW YORK, JUNE 19, 1880. | PRICE FIVE CENTS. $2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Field Crops.

THE ELDORADO WHEAT.

LAST winter a subscriber to the RURAL, Mr. H. N. Likely, of Fremont Co., Colorado, sent us a head of wheat for name, which on account of its peculiar shape, and the reports of the marvelous productiveness of the variety, we have here reproduced for the benefit of RURAL readers. The sender describes it as a spring variety which in that locality is known as Seven-headed wheat, and states that it requires no extra cultivation to raise from fifty to seventy-five bushels per acre, and he has never known it to be troubled with insects, rust or smut. The story there goes that a farmer in that neighborhood found a single plant growing on his land some few years ago, from which he saved the seed and from the product supplied his neighbors.

Professor A. E. Blount, of the State Agricultural College of Colorado, writes us concerning it as follows:—

The name is Eldorado—some call it "Seven-headed wheat" and Egyptian wheat." The Egyptian has seven heads and is the same as Seven-headed. The Eldorado has as many as 15 heads from and on one rachis, and the peduncle is much stiffer and stronger. The largest yield I know of is 90 bushel per acre in this valley. Last year I sowed on a plot, 14½ feet. wide by 275 long, 14 ozs. of very inferior, cracked grain. Only about a third of it came up. I cut it on July 24 with a sickle and thrashed out 127½ pounds, or 2.1-8 bushels—at the rate of a little over 90 bushels per acre. I am not able to speak concerning the flour it would make. The grain is very white, but the white is not uniform. The gluten and starch "set" somehow in the dough state of its ripening, which leaves the face of the grain white while other parts of it are transparent. The Egyptian wheat has the finer and more handsome grain; but it is not nearly as prolific as the Eldorado.

SORGHUM HALEPENSE—AGAIN.

M. B. BATEHAM.

FROM what the writer of this note has seen of the much-praised Sorghum halepense in the South, we caution our readers against introducing it upon their farms in any part of the country where the roots are hardy enough to endure the climate.

The above appeared among the editorial Brevities in the RURAL of May 8. I wish the editor had stated what new objections, if any, he had discovered in the South. [The chief objections made against this fodder plant are mentioned in RURAL for May 29.—EDS.] The difficulty of eradicating it from the soil where it once has possession, would have no serious weight with our Southwestern farmers where land is cheap, and they would prefer to have no trouble in re-planting. The next objection is the coarseness of the stems and their woody nature if not cut early and often during the season, but this should, of course, be avoided by frequent and timely hoeing. I have no sort of interest in the dissemination of this grass, but having recommended it to the stock farmers of the Southwest, especially dairy farmers, as a possible means of lessening the disastrous effects of the summer droughts, I should like to know if there are good reasons for recalling that advice.

I have received letters the past year from several farmers of the South, who have used this grass for quite a number of years, and give it the very highest commendations; and as far as my reading has gone, the weight of testimony is decidedly in its favor. One year ago I sent a small handful of the roots to the noted dairy farmer and cheese and butter manufacturer, W. B. Straight of Hudson, Ohio, for him to test, with myself, the ability of the plant to endure the winters of Ohio. He was so well pleased with its appearance during the drought of last summer and its perfect resistance of the winter—though this was too mild to afford a proper test—that he has determined to plant several acres of it the coming season.

It may be remarked here that Mr. Straight is the most active partner of the firm of S. Straight and Son who are the owners of a dozen or more cheese factories and creamery establishments in Summit Co., Ohio, the products of which are all brought daily for curing, packing, etc., to their great central depot at Hudson. Mr. S. is also the owner and manager of a farm of 150 acres with a dairy of twenty choice cows on which he has for several years been experimenting with the soiling system of feeding, in the hope that he may be able to teach the dairy farmers of the county better systems of feeding than they have hitherto practiced; so that it will be inferred that his name carries much weight among the more intelligent class of such farmers. The following is an extract from a recent letter to me on the subject of grasses for withstanding drought.

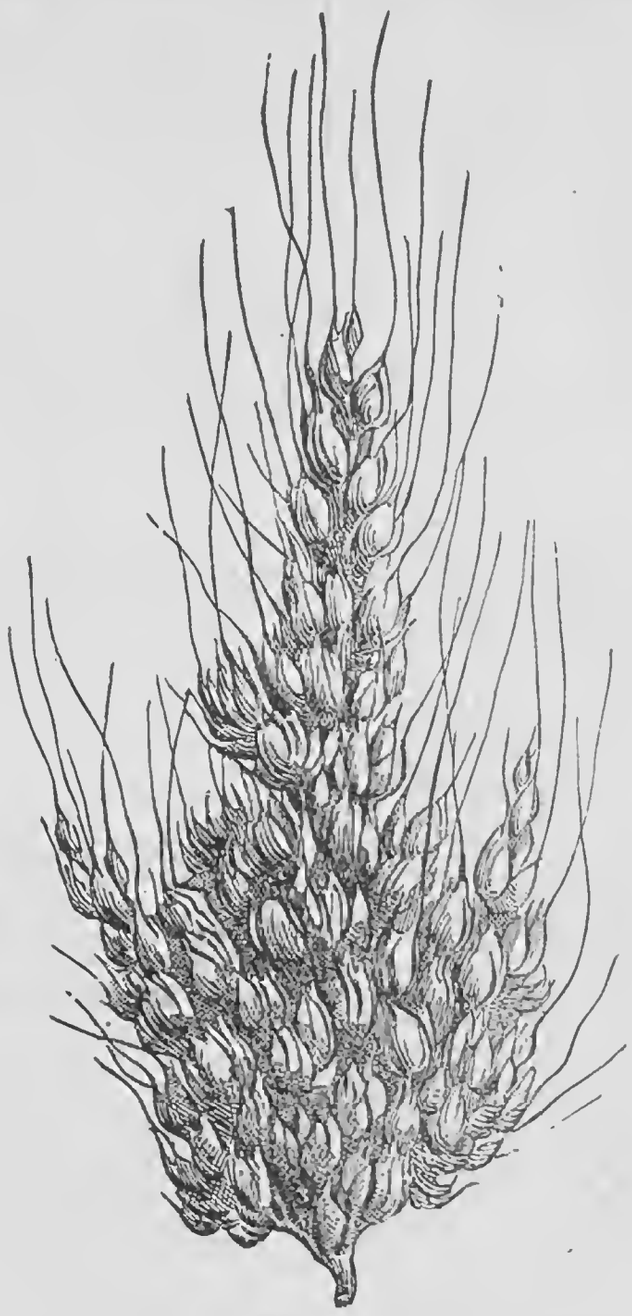
"I left the roots of that Green Valley or Johnson grass you sent me last spring (which I put in my garden) in the ground all winter without any protection, and I see that it is growing again from the roots and has spread considerably. Last winter was mild and the roots might not survive such treatment through a cold winter. I should, however, if raising it, mulch the ground with coarse straw manure in the fall, and perhaps ridge the land with the plow, which would not only protect from frost but contribute richness. I am under the impression that it will prove to be a great addition to feed for this section in years of drought, if the farmers would be willing to perform the labor and have the patience to wait for it. We must, if possible, secure and cultivate forage plants and grasses that will withstand dry weather such as we are now having. Even clover is now (May 19) commencing to head, and orchard grass, except in very rich ground, is not doing well. We need forage plants and grasses that *root deep*, sending their roots down after moisture instead of those, like timothy and such grasses, whose roots lie near the surface to perish in time of drought.

I am of the opinion that as our forests are cleared off, the evaporation will be greater, and it will be more necessary to provide deep-rooting plants instead of shallow-rooting ones.

FORAGE GRASSES.

PROFESSOR W. J. BEAL.

WE often hear of the nutritious native grasses which abound on the Western prairies of the United States. In many places the climate is very dry. The grasses grow during the coolest or the wettest portions of the year, and remain partially cured just where they stand, retaining their nutritive qualities. There is no rain to wash out the virtue of the leaves and stems.



ELDORADO WHEAT.—From Life.—Fig. 207.

INDIAN-GRASS—Andropogon furcatus. — In many portions of the dry prairies, the prevailing grass is Andropogon furcatus. Of this there are several local names one of which is broom-grass, but there is no one good common name by which the grass is known. It is common in dry, sterile soils in the Northern and Southern States, especially in open places, along banks, on the dry borders of marshes and in oak-openings. It grows from four to six or more feet in hight. There are usually three to five spikes together, which are well represented in the illustration. The flowers appear late in the season—in September in the Northern States. The stems are stout, hard, and woody; the leaves tough. It is well adapted to a dry climate. It is one of the principal native grasses for hay in Kansas, Nebraska, and the neighboring States. According to one author, who has studied the subject, 28 per cent. of the bulk of the prairie grasses are composed of this species.

BROOM GRASS, BROOM SEDGE.—Andropogon scoparius—is another grass of the same species common in the same places as the last. The stems are finer and branching; the leaves are finer. The grass grows from one to three feet high. Both of these Andropogons grow in bunches or tufts. The leaves and stems of both are often purplish. The latter is the finer of the two as a pasture grass, but produces less feed. About 15 per cent. of the bulk of prairie grass, according to the report above mentioned, are composed of this species. While young and just starting the tufts make good feed, but after the stems appear it is much less palatable to cattle and all kinds of stock. The Agricultural Report for 1878 quotes Mr. C. Mohr, of Mobile, as saying this is "one of our most common grasses, covering old fields and fence rows, and extensively growing in the dry, sandy soil of the pine woods. Much despised as this grass is as a troublesome, unsightly weed, it has its good qualities which entitle it to a more charitable consideration. In the dry pine woods it contributes, while green and tender, a large share to the sustenance of the stock." There are several other species less abundant than these, but much like them in quality or mode of growth. They are useful to pioneers, but their place should soon be supplied by grasses or other forage plants of better quality. No doubt these could be improved in time by judicious selection of seeds and careful cultivation for some generations.

Pomological.

THE YELLOWS IN PEACH TREES.

JAMES HOGG.

LATELY, in looking over some old farm and garden magazines, I found the disease known as the "Yellows" which is so injurious to peach trees, discussed by many writers, all of whom failed to determine what it is, or how it originated, and our most expert pomologists of a later day are equally puzzled as to its origin, and baffled in their efforts to find a cure for it. So far as I am aware, none of our botanists who have made a specialty of vegetable physiology and pathology, have turned their attention to it. This is unfortunate, for if they were to devote themselves to the elucidation of these subjects, the results of their labors would be of great value to cultivators, of nearly, if not of quite, as much importance as the study of the kindred sciences in animal life, has in the hands of the veterinary surgeon been to the breeder and grazier. When reading the description of the symptoms of the disease, the accounts of its virulence and the proofs of its contagiousness, I was struck with the analogy it bore to some diseases incident to animal life. I propose to give some suggestions on the subject, hoping that the attention of some of our botanists, especially of those who have had a medical education, may be drawn to the subject.

The first appearance of this disease among peach trees was in 1797 in the neighborhood of Philadelphia, whence it spread rapidly through Delaware, New Jersey, Maryland, New York

and the New England States, and then worked its way westward, almost totally destroying the orchards then existing. The disease is characterized by two peculiar symptoms:—the premature ripening of the fruit; and the growth of very slender shoots from the body or large limbs of the tree. The first symptom is always manifest, if the tree is in fruit, but all the fruit is seldom affected the first season, the disease only showing itself on one or two of the larger branches, the fruit on which ripens from two to four weeks before its proper time. The fruit is insipid or slightly astringent in taste and more or less purple in color, or having purple blotches which frequently reach to the stone, producing purple specks or lines throughout the pulp. The fruit diminishes in size for two or three years, when the tree dies, every twig and branch and even the roots being thoroughly diseased.

The second symptom generally, but not always, manifests itself the first season of the disease. The stems of the slender shoots vary in size from that of the smallest to that of the largest knitting needle. The leaves are thickly set on these stems, are very narrow and small, and quite different from those of the natural size. In color they vary from a reddish hue to yellow or white. The shoots come out in clusters, sometimes singly, most commonly on the body near the root, on the large limbs and occasionally near the extremities of the branches. These are well marked signs of the disease, and are not to be attributed to the worm or any other malady to which the tree is subject.

So poisonous and contagious is the disease, that a knife used in pruning a diseased tree will communicate the malady to a healthy tree, if it is afterwards pruned with it. Seedlings raised from the stones of diseased trees will develop it, even when budded from healthy ones. Buds from diseased trees inserted into healthy stocks, either of the peach or plum, will disease the stock; and the roots are as contagious as the rest of the tree, for if fresh, healthy trees are planted where the diseased trees have stood, they will become diseased. Some even say that the disease can be communicated by the branches of such trees coming in contact with those of a healthy tree.

No cause has yet been discovered for the disease. It attacks trees grown in all kinds of soil, perhaps fewer in rich, heavy soils than in light sandy soils. It is exclusively an American disease, being unknown in Europe. Mr. William Prince of the old Flushing nurseries, conjectured that the contagion was carried from one tree to another by the pollen distributed by the winds or by bees, and this theory is the one generally accepted by pomologists. If it is correct—and I think it is—then it probably is a disease of the procreative organs of the flower, similar in character to syphilitic and scrofulous poison in animals.

This may be a strange opinion to advance, yet I think it may be found to have some foundation, if we consider the analogies between vegetable and animal life, which modern investigation has brought to light. It is known that many plants have a temperature higher than that of the atmosphere surrounding them, and that some flowers, especially at the time when fertilization takes place, show this difference in a very marked degree, in some the difference being over 50 degrees We also know that when the proper time for fertilization has arrived, there is generally, if not always, an exudation from the stigmas. We have in Diatoms—minute vegetable organizations—plants which have the power of incrusting themselves with shells like oysters; in the antheridia of Cryptogams we have curious filamentary bodies called phytozoa, which are closely analagous to the spermatozoas found in animal life. Lately, it has been announced that, when we get down to the lowest, microscopic protoplasm cells, they are all of the same character and develop into vegetable or animal organisms indifferently. We have so-called carnivorous plants which appear to require animal food to attain their full development; and some microscopists claim to have found rudimentary nerves in the leaves of some plants. We well know that plants sleep at night and require rest. The various modes of reproduction among plants from the lowest to the highest classes, have their parallels both in principle and in plan in the corresponding classes of animal life. Respiration and perspiration are alike common to both, and in many other points there are similar analogies.

The colored blotches, the general *malaise* and enfeeblement of the tree, and its virulent contagiousness through the organs of reproduction, are certainly suggestive of a similarity to the diseases I have mentioned, modified, of course, by the difference in organism. The late Dr F. I. Bumstead, who was the Ricord or the Diday of this country in the treatment of the disease first mentioned above, says in his voluminous work on that subject, that a diseased father may infect an ovum in the womb of a healthy mother, who may herself be contaminated through the fœtal circulation. This he states to be an established fact, and that it is admitted by Ricord, Diday, Depaul, Acton, Harvey, Tyler Smith and Balfour, all authoritative writers upon this specialty, although the contamination of the mother through the fœtus is not always a necessary consequence of a contaminated ovum. Dr. Bumstead was also a botanist of large attainments, and in exchanging views with him on this subject, he saw no reason why some of the diseases of plants might not be communicated to healthy plants through the pollen of those which are diseased.

BROOM SEDGE.—ANDROPOGON SCOPARIUS.—FIG. 208.—(SEE FIRST PAGE.)

It will not do to say, with unproven dogmatic assertion, that the Yellows is caused by changes in climate and in atmospheric condition, for it does not attack all the trees in an orchard simultaneously, but spreads gradually from one or two diseased trees; neither is it due to injuries from insects, for none are found upon them that could produce any such results. Over-production, to which the peach tree is very prone, may have something to do with it, by enfeebling it and destroying or injuring its powers of reproduction. In that case, thinning out the fruit would be a preventive, for the energies of a plant are devoted to the production of the seeds and are readily exhausted by over-production. No cure, or mode of cultivation that will effect one is yet known, so that the only mode of staying its spread, is to take out the diseased trees, root and branch, and burn them as soon as the symptoms show themselves.

I am strongly inclined to the belief that other diseases among fruit trees are analagous to those found in animal life. The cracking of the fruit in many varieties of pears, the pear blight, the black-knot in plums and cherries, and such diseases as gangrene in some plants, I think are of this character. They are commonly attributed to insects or to atmospheric influences, or to some mechanical action of light or heat upon the juices of the trees; but after years of reading and observation I can only arrive at a Scotch verdict of "not proven." I think that the line of investigation should take another direction than that which has been hitherto pursued, and that the obscure diseases of vegetable life, of which we know so little, might have some light thrown upon them, were they studied by those who have a knowledge of the diseases incident to animal life. It is certainly an interesting and important field for investigation, and I commend it to our Agricultural Department and Agricultural Colleges.

Timber or Fruit—Which?

Many amateurs and too many regular nurserymen have an idea that thrifty, rapid growth is a benefit in growing young fruit trees. The young plants are placed in very rich soil, highly cultivated and forced along at the most rapid rate. These men are only growing timber, and very brash stuff at that; for, to have fruit trees to bear and mature good fruit and to be also long-lived, we must not force matters at all. The soundest and most valuable timber grows the most slowly, and is never found in wet soils which would induce late growth, and consequently imperfect ripening of the season's growth.

In growing fruit trees, if it is found that the soil is too rich, or too wet, resort must be had to transplanting, or root-pruning. This may be accomplished on a small scale by cutting off all roots outside of a circle, say, of three feet from the trunk with a sharp spade; but if there are too many, use the plow to cut the roots, throwing a furrow from the rows, to be turned back again before winter sets in.

To insure heavy crops of sound fruit, plenty of roots and perfectly ripened wood is required, but the roots should be near at home—near the trunk while the tree is young. Older trees which bear must be allowed to spread their roots, unless the soil close to the tree is enriched annually. This is the best plan, as wandering roots work slowly, and are apt to travel so far from the trunk as to get out from the shelter from the hot sun, which the foliage above would give them.

To get a tree into bearing early, where the life of the tree is not an object, it is only necessary in June to root-prune quite close to the tree. This is an attack upon the life of the tree, and at once timber growth is stopped, and fruit buds form that season for next year. Forcing fruit trees in a nursery, to make them look well, then selling them to a green-horn, who follows the same plan to produce fruit, is killing the goose to get two golden eggs.

S. RUFUS MASON.

Dodge Co., Neb.

Horticultural.

TOMATO—LOGICAL.

THIS fruit (it is certainly more like a fruit than a vegetable) is susceptible of vast improvement by a moderate degree of attention. It is so very luxuriant in foliage, and so prolific of fruit, that it overbears, and is sure to produce large quantities of inferior tomatoes—inferior in size, shape, color and flavor. There is no garden plant which will respond more quickly to proper care and fertilizers, and none that will so amply repay the amateur or professional gardener for studying its necessities.

The seed in the hot-bed must be forced along rapidly, and the plant kept stocky by frequent root-pruning after the second pair of leaves appear. It must be transplanted twice to cooler beds to induce roots and stockiness; must be set out in the ground only after all possibility of cool nights is over; then left to itself (except thorough hoeing and weeding) until flowering begins.

Supposing that the plants are now well grown, we will begin to stimulate and repress. Water every third day with good, rich liquid manure all through the season. This will produce an enormous growth of new shoots and close foliage, and enable the plant to bear well. Nip off three fourths of these shoots, leaving those which bear the most flower buds; tie the long, heavy stems up to laths stuck into the ground, exposing the fruit to the full sun; mulch heavily all round the main stem for three feet, and thin out the fruit where it grows too closely.

This thinning out requires an amount of moral courage which few amateurs possess. The fear of not having enough tomatoes is a dreadful feeling, but when we once learn that a few splendid large fruits are infinitely better in every way than a great many small, ill-shapen ones, we learn to look upon the excess as enemies to the plant, exactly as we view the great green worms, and then our courage comes.

Now for seed for next season!! More moral courage, and a repression of that curious longing for the first fruits, which all amateurs experience, must govern us, or our seed for next year will produce later and weaker plants. Select the earliest fine tomato; *cut* off every other one from the same cluster; tie loosely around its stem a white string as a mark, and grow that particular fruit as if all your future enjoyment of tomatoes depended upon it—as it really does. When dead-ripe on the vine, pick it and at once wash out the seeds, and dry them in the shade. Tomatoes are said by some to be very unwholesome food, but I have never yet found any ill effects from them, except when there was none to be had; then they do distrub my system terribly.

S. R. M.

RASPBERRY BLIGHT.

THE New Jersey Experiment Station received some time ago from E. Williams, Esq., of Montclair, Essex Co., N J., specimens of raspberry canes which had been killed by some cause. Mr. Williams says that the disease prevails over a wide extent of country, that it has entirely ruined some plantations and its injurious effects are experienced in many others. The specimens were submitted by the Station to examination by the Camden Microscopical Society and the following report has been received from them:

"The canes were found to have their epidermis ruptured in many places, the result of a growth of a fungus which had attacked them either during the winter or in the early spring months. In order to determine the species, one of the canes was submitted to J. B. Ellis, Newfield, N. J., a reliable authority on microscopic fungi. His reply is as follows:

'On receiving the stems of Rubus, I went and looked at my red raspberries which were all killed to the ground last winter and I found the canes near the ground had the bark ruptured like your specimens. The trouble with my canes was the red rust (Uredo) which took the leaves off, the middle of last summer, thus enfeebling them so that they died before the middle of January. There was a fungus on one of your specimens, an Asteroma, perhaps, or the mycelium of some fungus, but I do not think this *caused* the trouble. If, as in my case, the Uredo was the cause, the prevention of this would be a remedy, to effect which enrich the ground and cultivate well to cause a strong growth, and if necessary further, apply lime or sulphur to the affected leaves.'

In this instance, as in many others, we may see that a weakened or diseased condition offers the opportunity for a fungoid attack, showing by analogy the intimate relations between vegetable and animal life. When our systems are reduced from their normal condition by over-exertion, or by weakened vitality, our bodies are more liable to disease than if the normal condition were maintained If the growing plant is kept healthy and vigorous, fungoid attacks detrimental to its existence are not to be expected, as the conditions are not offered for them. This healthy condition of vegetable growth can best be had by cultivation, and a supply of good manure in proper season. And here must be sought the remedy in the case of the Rubus blight.

"ISAAC C. MARTINDALE, Chairman."

"The best fertilizers for promoting the healthy growth of the raspberry," says George H Cook, Director of the Experiment Station, "will probably be barnyard manure with from 200 to 400 pounds of muriate or sulphate of potash per acre. In case barnyard manures cannot be got, the potash manures may be used alone broadcast, or they may be composted with muck or loam. In any case, however, care must be taken to have the manures well mixed with the soil, so that they may not injure the plants."

PROPAGATING STRAWBERRIES.—When the last berries are picked, the plot should be thoroughly weeded, and if new plants are not desired, all runners should be cut off To obtain extra-strong young plants, plunge, in July, four inch pots in the ground to the rim, fill these with soil, and let the first joint of each strong runner take root in a pot, and pinch off the tip of the runner. Such plants can be transplanted with ball and will be much stronger from the start than those produced by the ordinary method of propagation

Farm Topics

NOTES FROM THE RURAL GROUNDS.

Japanese Judas-Tree.—Cercis Japonica.

We are indebted to Japan for many beautiful things, some of which, though introduced several years, are still rare, and not half as well known as they should be. One of the most beautiful is the Cercis Japonica, a veritable dwarf among dwarf trees, our own specimen, about seven years old, being less than five feet high. It blooms in early spring, before the leaves appear, and all the wood, except last year's growth, is literally covered with its beautiful, pea-shaped flowers. Its picturesque form, whether in flower or leaf, would delight an artist. Its proper place is as a specimen on the lawn some five or six feet from the edge of a walk. It is one of the few trees entirely free from insects. Our own specimen is now for the first time abundantly set with fruit; but whether it will reproduce itself from seed we do not know. It is distinct from C. Siliquastrum and our native species, and is found in few catalogues, but is worth a great deal of trouble to procure.

Glaucous Fescue Grass.—Festuca Glauca.

One of the prettiest objects in our herbaceous border just now (and at all times), is the Festuca glauca, perhaps the most beautiful of all dwarf grasses. Its graceful form and unique color are simply charming. It is not a new plant, but among us it is yet so rare as to be seldom seen. It is not only beautiful, but very useful and thoroughly hardy. We use it not only in the border, but in the greenhouse during the winter. It seems never to be out of place. In the sun or in the shade; in the border or in the shrubbery; as a plant for filling in or placing along the edge of the table in the greenhouse, room, or conservatory; in a hanging basket or on the rim of a vase, it is always beautiful and seems to adapt itself to all places alike. We would on no account be without it.

Out of Place.

People who travel on the New Haven R. R., have their attention arrested at Woodlawn Cemetery by a huge anchor laid diagonally on the slope of the lawn; not an anchor of iron, but one of "ribbon lines." There are doubtless those who admire this, but we do not. We have no fault to find with its mechanical execution—and it is purely mechanical. The colors are gay and striking, and serve to arrest the attention, which was, no doubt, the object of those who made it. We object to it, however, on the score of propriety and good taste. From this point of view it is wretchedly bad, and altogether out of place in Woodlawn Cemetery, the natural features and furnishings of which are very beautiful. Whatever may be thought of "carpeting" and "ribbon lines" elsewhere, they are altogether out of place in a cemetery. There, of all places, we should have Nature in her pure and simple forms of which flowers constitute a most attractive feature. We should not be disappointed if the dead rose out of their graves some night, and pitched that anchor into the Bronx River.

Lygodium scandens hardy.

It will interest all plant growers to learn that the Japanese Climbing Fern (Lygodium scandens) proved to be hardy last winter. The spores from an old plant came up freely all over the house, and some of the young plants were, last year, put in a slightly sheltered border, prepared for hardy Lady-slippers—Cypripediums. The plants are now growing freely. The past winter, it is true, was a mild one; but it was very changeable, and more trying to plants than a greater degree of continuous cold. Our thermometer, notwithstanding, went 5° below zero. We have put out other plants in various exposures for further trial. Plants for trial should be put in the ground early, to enable them to become well established before winter.

Fruits.

Late Emerald and Early Ruby gooseberries have again mildewed. We now give these up as useless in these grounds. Porter and Downing are, as usual, crowded with fruit.

Clapp's Favorite Pear, at six years old from the nursery, is 12 feet high and is bearing its second crop. It is a fine grower.

Grapes.—Wilder, Goethe, Salem (Rogers's) are full of flowers—so are Eldorado and Secretary (Ricketts's); also Concord and Delaware. Victoria and Lexington (Miner's Concord Seedlings) are in bloom for the first time. Florence (Hubbard) is in bloom, though this is but its second year. Lady Washington bears two racemes of flowers. Newburg and Highland, also Mr. Ricketts's, are blooming for the first time. Several of our own seedlings, four years old, are also in bloom for the first time.

Peaches are laden with fruit, and the fruit is laden with rose-bugs which are fast destroying them. We do not remember ever before to have seen so many rose-bugs. Late Tuckahoe, Jewell's Late White, Honeywell, Steadly and Leatherbury are all bearing abundantly—most of them for the first, several for the second year. We received them three years ago from Messrs. A. Hance & Son for trial.

Bassett's American Plum is again wreathed with fruit, which thus far we have found neither curculio-proof nor of any value for eating. The latter, however, was never claimed for this little plum.

Blackberries were never more heavily set. We shall have several new sorts to report upon.

Raspberries.—Pride-of-the-Hudson fails entirely again. We shall not get a berry. It was unfortunate for Mr. Roe that this berry ever stood a winter on the Hudson, for it has disappointed many persons that have reported to us, and perhaps thousands who have not. Gregg is well set with its close clusters. Montclair was not injured by winter and is full of sets.

Erwood's Everbearing, is very hardy, too, and full of sets. Delaware was killed back. Cuthbert, though not so prolific this season as Montclair and one or two others, is very vigorous, and has not been injured by the past season in the least. Brandywine, Highland Hardy, are also in fine condition. Henrietta and Belle de Fontenay (probably the same) have not been harmed. The old kinds Naomi (Franconia) and Hornet will not fruit this year. They rarely ever do, being too tender for our winters.

Quinces, though they bloomed profusely and the season seemed highly favorable for the setting of fruit, will bear a small crop.

"Champion," the new seedling of the Messrs. Hale, though planted in the spring of last year, bears two quinces. The tree is scarcely three feet high.

FINGER-SPIKED INDIAN GRASS.—ANDROPOGON FURCATUS.—FIG. 209.—(SEE FIRST PAGE.)

WESTERN FARMING.—VII.

Drought No 2.

W. I. CHAMBERLAIN.

I closed my last with the question whether concerted action in agriculture could so change the physical condition of any region subject to droughts, as to render them less frequent and severe. I think it can. The reverse of this has often been proved true. I mean that wide-spread mismanagement and neglect have often brought on or increased droughts. The destruction of forests notoriously leads to such results. Neglect of proper tillage has done the same. Palestine was once a land "flowing with milk and honey." Now, robbed of its forests and without proper cultivation, its hills once green with vineyards and olives are covered only with stunted shrubs, and the land o longer receives both "the early and the later rains." The destruction of the forests in parts of Ohio to furnish wood, timbers and railway ties, has since my remembrance greatly increased the frequency and severity of our droughts. No doubt their re-planting would have the reverse effect, if they were largely planted and given time to grow. But this requires much faith and patience, great expense and loss of use of land, the delay of many, many years, and a concert of action hard to secure. Are there other and shorter methods for the dairy regions of Northern Ohio? Take the recent history of Kansas, so well known to all, as a help in answering this question. Droughts are still somewhat frequent and severe, especially in Western Kansas, but by no means so frequent or so severe as even a few years ago. The rain area has steadily *followed the area of actual increased tillage* westward, and both have gradually but surely and largely encroached on the area once rainless in summer. Thousands of square miles are now fertile and well watered fields, that once stood on our maps within the boundaries of "The Great American Desert." All who are familiar with the growth of Kansas agriculture know this to be the fact.

Now what is the cause of this? Simply a change in the physical conditions of the country *caused by the hand of man.* Is this atheistic? I think not. God "sends his rain upon the evil and the good,' but he sends it in conformity to certain meteorolgical laws, known in part at least.

By observing carefully these laws, and making certain physical changes, we may "move the arm that moves the world." Not by simple prayer that *our* fields should be watered by a species of favoritism, but by complying with the laws by which He works. And as an earthly monarch is more honored and beloved if he rewards conduct according to established principles of justice, than if he rules by unreasoning favoritism, so, it seems to me, a God who thus rules is more worthy of our honor and love than one who rules in the way of special favoritism. At all events, the God who rules the universe seems to rule in the first of these ways. Conduct seems to be rewarded or punished in its own plane. For instance, the farmer who is agriculturally wise and skillful, is rewarded by agricultural success, even though he be a moral monster, while even the veriest saint in temper and moral conduct, if he be agriculturally lax or even unskillful, shall suffer agriculturally therefor. But I am in danger of forgetting that this is not a theological discussion. I commend this line of thought to the clergy. "Whatsoever a man soweth that shall he also reap" is a good text to preach from.

Now, in Kansas the reasons of the change were obvious. Generations of buffaloes in pasturing its prairies had tramped "The Great American Desert" like a floor. The rains of even the rainy season fell on such earth almost as on a roof, and ran off in torrents down the streams, leaving a dry, compact soil and subsoil. From this soil and subsoil there was little possibility of evaporation in summer, and still less to invite the precipitation of moisture upon it. In fact in summer the surface became so dried and heated by the winds and the heat of the sun that the fall of rain upon it was well-nigh impossible. It does not rain upon Sahara even though clouds full of moisture try to pass over it, wafted by the winds. The heat from beneath dissipates those clouds into invisible vapor. The mixture of cooler air, usually from beneath, with warm moist air is necessary to precipitate moisture in the form of rain or even dew. Every child knows how dew forms even in day-time on the outside of a pitcher of cold water. This cold surface robs the warmer surrounding atmosphere of a portion of its moisture, and the more moisture there is in the air, and the greater the difference between the temperature of the air and of the pitcher, the more will "the pitcher leak" as children express it.

Now it happens in a similar though not in the same way that the cooler surfaces of lakes, ponds, swamps, forests and even *cultivated fields* produce rain. Such surfaces increase the moisture in the adjacent atmosphere, and make it more likely that cool currents from below shall mix with the moist, warm atmosphere above and produce condensation of vapor in the atmosphere, and precipitation in form of rain. Where the physical conditions of a region are such as constantly to send upward cooler currents into an atmosphere constantly fully charged with moisture, rains are almost constant, and often immense; cool currents are heavier and hence remain below, unless forced upward by some cause. But often a range of hills or mountains will send upward cool trade winds and seem to wring out all the moisture in the atmosphere. Sometimes the conditions are reversed, and warm, moist monsoon winds, rising along the mountain sides, meet a cooler atmosphere and precipitate all their own moisture. Such is often the case in the tropics, for example, at Cherrapongee, India, where the rainfall from this cause is absolutely immense, being 610.3 inches instead of 30 or 40 as in most parts of this country.

The point I wish to make is this: God, indeed, as I have already quoted, "sends His rain upon the evil and the good." But he does so because he sends it according to definite laws already understood, in part at least. One of His laws, briefly stated in Scripture as a moral truth, is not less surely a physical one. It is this: "He that watereth shall be watered also himself;" or, in other Scripture language, "To him that hath shall be given." Nor is there injustice in the law, but wisdom and beneficence. It is the law of accumulation and reward. At all events, it obviously *is the law*, both moral and physical, and wisdom tells us to shape our course accordingly. In regard to rainfall the law seems to be that if any region has its soil in condition to receive and retain in proper absorption a large part of previous rainfalls, it is *more likely* to get future rainfalls. The Kansas soil is, by cultivation, fast coming into that condition, and its farmers are fast receiving their reward in more frequent and abundant summer showers. Cannot we do the same thing on the "Western Reserve" of Ohio? Generations of cows have tramped our pastures and even our meadows till they have become hard and arid in summer time. They often become as hot and dry almost as the desert of Sahara, and when they once become so dry as they often do in May, for reasons given in my last, it is hard for showers to begin in June, and so about once in five years we have a fearful four months drought. In other years we have a four weeks drought in May and often another in July or August.

Now I fully believe that concerted action

can greatly change all this. If a large portion of area is *put under cultivation* for crops, it will absorb the spring rains and invite the summer showers. This year, in May, I laid out several thousand feet of tile drains. Part of it was in spring-plowed land, part in growing wheat and part in spring grass land. In the first, both soil and subsoil were thoroughly moist, even after four weeks of drought. In the second the *soil* was partly dried by the growth of the wheat, but the subsoil was thoroughly damp. But in the third (the grass ground) both *soil and subsoil* seemed as dry as dust to a depth of three feet. "Seeing is believing," and I have often seen the same thing before in draining. There was truth in the sarcastic remark of the grain-raising, Stark-County Dutchman to the long-faced, drought-bemoaning, Western-Reserve dairyman. He said: "Yon shoost raise plenty of wheat and oder grain, and you gets plenty rains in harfest. Shoost try him once!"

Proper cultivation of the soil in our dairy regions and the devotion of a considerable part of our area to grain and vegetable raising, are, it seems to me, our remedy for drought. It may, yes, will, necessitate the tile-drainage of much of our clay soil; but so much the better. Not only will concerted cultivation be our remedy, but individual cultivation, as I showed in my last, will prevent the disastrous effects of drought when it occurs; and this fact will, in time, lead to general cultivation. If the latter does not entirely prevent the occurrence of droughts, it will prevent their crippling our industry for the summer and bringing financial distress. Wheat and corn can stand drought. Exclusive dairying is a mistake, I think, in this region. Indeed, exclusive pasturage belongs to a rude, uncivilized age, or to rough, hilly, non-arable regions, and the sooner we find it out, the better. We are already learning it. My own farm will harvest more wheat this year than some whole townships did five years ago. And I find that the more I plow, within reasonable limits, the more cows I can keep, and *vice versa*. The straw increases the manure pile, and the latter increases next year's wheat and straw, and the sale of wheat and the buying of shorts increase both the ready cash and the richness of the manure. On drained clay soil, dairying and grain-raising go admirably hand in hand. I shall preach and practice this doctrine till I see good reason to believe it false. And when all my neighbors practice it, as many already do, I believe our droughts will be diminished in frequency and severity, and their effects be far less disastrous when they occur.

Farm Economy.

THE TRUTH ABOUT IT.

[The object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—Eds.]

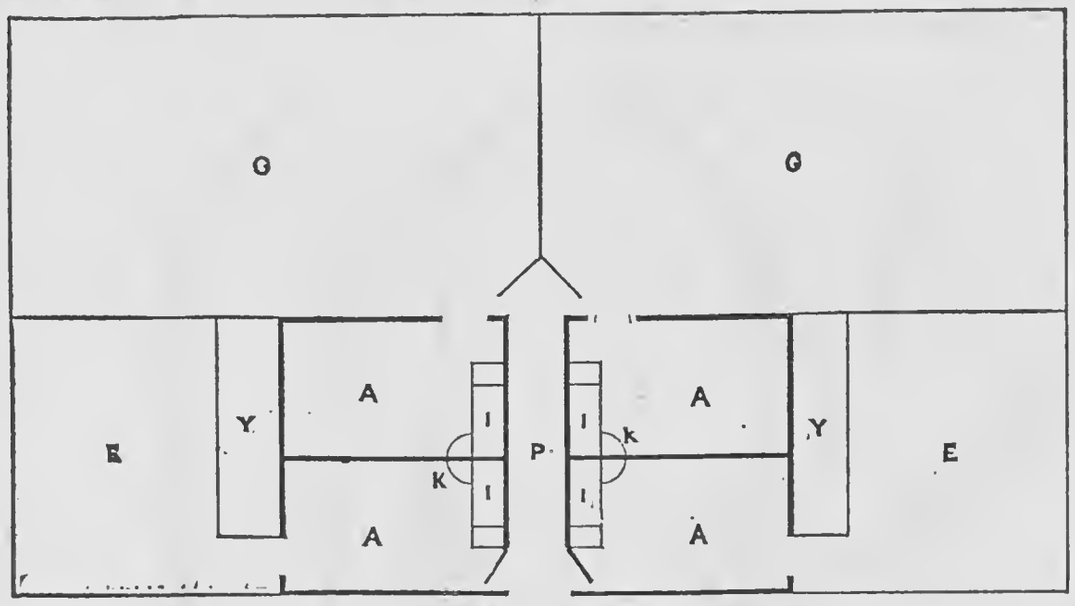
ENSILAGE OF GREEN FODDER.

HENRY STEWART.

Ensilage is having a "boom," with other things more or less important. The boom has evidently for its purpose the making of money, for there is talk about patenting some of the proposed devices for making it more effective, or at least this result is claimed for the said devices. Moreover, one may know all about it by buying "my little book," and the corn for producing the fodder may be had of the author of the said book for 60 cents a pound. "There's money in it," doubtless, if a sufficient number of persons can be induced to buy the book and plant the corn; not to say anything about making patent silos to put the corn in. The truth about this matter is simply this: ensilage has been practiced for many years, and in the simple manner in which the fodder has been preserved it has been a profitable practice. But with the costly modern appliances with which the practice is now encumbered, it is questionable if it can be made to serve the purpose of a farmer, or can be of any use excepting as one of the modern improvements adapted to the fancy farming of lawyers and other professional business men, who find in such pursuits agreeable relaxation from business cares and an easy way of disposing of their surplus funds.

Stripped of all nonsense of masonry silos, which cost more than a good barn, and of useless refinements, the practice is nothing more than an old-fashioned method of preserving green fodder, pressed compactly in air-tight pits or trenches dug in the ground and covered with earth. In fact, the pit itself is only a matter of convenience; the fodder could be as well preserved in the same manner in which potatoes or roots are pitted, if only it is effectually kept from contact with air. Notwithstanding all the fuss about the so-called new method, there are farmers within 50 miles of New York who have been practicing ensilage for several years. The old-fashioned plan of pitting apple pomace or of keeping it tightly pressed down in barrels or boxes is but another plan of ensilage in all essential points.

Originally the silo was a trench dug in the ground three or four feet deep, six or eight feet wide, and as long as might be needed, and in this corn fodder, as it is brought from the field; green, newly-cut clover or lucern; or



PLAN OF STABLE FOR BULLS.—Fig. 210.

beet-pulp or leaves were packed and pressed down as compactly as possible. A small quantity of salt was scattered in the mass as it was packed, and when the trench was filled, the fodder was heaped up three or four feet high above the surface; this was covered with straw and then with earth a foot or two in depth, beaten down very solidly. In a short time, as might be expected, the green, succulent fodder would heat and ferment to some extent and until the oxygen in the mass was exhausted, when the change was arrested, and if the covering was kept close and tight to exclude air, the fodder remained in that condition until removed for use some months afterwards. The mass shrunk and settled down, pressed by the weight of the earth upon it, and this was beaten firmly as each subsidence took place, until the heap was reduced, perhaps, to the level of the surface, and the whole contents were inclosed in the trench. This is the whole of the process of ensilage as it has been practiced for forty years in Europe.

Recently, however, some French journalists and agricultural writers have doubtless improved the practice in some respects, by lining the walls of the trench with cement or masonry and covering it with a roof, and by cutting the fodder into chaff. The feeding value of the preserved fodder, however, remains the same. As compared with green fodder, it is improved to some extent by the process of fermentation in digestibility and nutritive value, but not in any greater degree by the more costly character of the improved silos. These are useful, if at all, in saving labor in the work by their convenience and permanent stability. That is all. The improved process is one to be tested before it can be made of general use, as few farmers have $500 to spend on an experiment which may perhaps save $20 yearly.

The Herdsman.

A STABLE FOR BULLS.

L. S. HARDIN.

Of the great number of practical and fancy breeding farms it has been my privilege to visit, I do not recollect ever having seen a distinctive building designed and set apart for the special occupation of bulls. They are usually put in box-stalls in different buildings, and while the favorite breeding bull often has a small yard to exercise in, others that are only held for sale usually have to stand chained in one place for an indefinite period. Even the most complete breeding establishments have been designed with no thought for the comfort of the younger bulls in winter, outside of the limited accommodations of a box-stall or a place in the stanchions. The design herewith submitted was originated and used by myself for many years on my place near Louisville, Kentucky, and was found to meet all the requirements demanded of it so completely that I am tempted to submit the design to criticism and adoption, if thought necessary or advisable by those who have felt a need for such a building. It is generally conceded, and often claimed as absolutely necessary to health and vigor, that bulls should have some exercise, and to my way of thinking they are all the better for a moderate amount of exposure. In the stable here represented, the floors of their stalls were kept clean, but no bedding was ever given them, while they had the full run of the yards. These should be made as large as circumstances will admit of.

Every breeding establishment should have two bulls to breed from. This will save the dangerous necessity of introducing new blood; for these two strains can be crossed and bred together, if judiciously done, to almost an unlimited extent. These two bulls are given the larger yards, G, G, and if the fences are solid—as they certainly should be—there will be no ill-feeling between the bulls. When the fence is built, be sure and put the stringers on the *inside* of the posts. The boards are put on upright, and face inward. The bull cannot then push any of them off, as he is apt to do if the boards are nailed on the outside of the posts. The partition between the two bull yards should be doubled, with broken joints, so the bulls cannot see each other. It is very wrong to have doors made to the stalls; for the bulls are certain to get them loose playing with them, and then tear them from the hinges. There should be no opportunity given them to get into mischief.

The water tubs, K, are stationary, partially sunk in the earth and supplied by pipes from the cistern, laid under ground. The stalls are six feet by ten, and there is a sliding door over the mangers, I, I, so the feeding can be done from the alley-way.

In summer these water tubs must be cleaned out at least twice a week, for it is astonishing how foul the water becomes by meal and other ground foods getting into the tub. The alley-way should be four feet wide, and the sliding doors over the mangers kept always closed, or the bulls will get to "blowing" at one another, which is a novel but a fearful sound. The roar of a lion is but little more terrifying to the uninitiated.

When a number of cows happen to drop their calves about the same time, two at least, if not more, of these stalls can be utilized for breeding purposes, though the door openings should then be closed to keep the calf from getting swamped in the manure pits, "Y." These pits should not be more than three feet deep and walled with stout boards to keep the banks from caving in. The upper story of this building may be utilized for grain or other purposes, or the structure may be like my own—but one story high. It was never my practice to take the bulls out of these yards for service, but to turn the cows into them. If the bull was vicious or unruly, a long four-horse whip would master and control him. He feared the crack and sharp cut of it more than the effects of a club or other blunt instrument. It was never my misfortune to have such a bull; but I have seen the above plan practiced on bulls that required such treatment.

A stout bar should be run parallel with the manger and about two feet above it to keep the bull from rearing up and putting his front feet in the manger, which he is certain to do if not prevented. Jersey bulls are usually light, active and energetic, so that it is refined cruelty to keep them constantly tied up in a stall or even confined to a box-stall. At the same time they are far more apt to become impotent if not allowed some exercise. If turned into the pasture with the cows, you not only lose the date of taking the bull by many of cows, but your high-toned Jersey bull is a dangerous customer to meet in a large pasture, and few purchasers with ordinary physical prudence can examine the cows with comfort while this obstreperous gentleman is taking into consideration the question whether or not he will resent the intrusion. The right place for a Jersey bull is a small yard, with a comfortable stall attached to it.

STOCK NOTES.

Transportation of fresh meat across the ocean by cold air instead of ice, is now being agitated. Our readers may be curious to know how this is done. The carcasses, after being dressed, are quartered, and then hung up in a close compartment on board ship. Cold air is now introduced into this, by an apparatus made for the purpose, worked by a small quantity of steam from the ship's boilers. The air is compressed, then rapidly exhausted, and worked over and over again to continue the process. There is a great saving of ship's bulk by using this cold air instead of ice, as it does not occupy more than one-fourth the room to keep the meat cold, sweet, and fresh, till its arrival at its port of destination. There is another advantage in the use of this cold air, and that is, if the ship's voyage be prolonged by any accident, it can be kept up indefinitely; whereas ice might be exhausted, and the meat spoiled before getting into port.

A Great Mass Meeting of Short-horn Breeders and all interested in improved cattle, is to come off at Lexington, Kentucky, early in July—just before the large sales of cattle are to begin there. The day previous to the commencement of these, all present will be invited to partake of a public banquet at the Phœnix Hotel. Speeches will follow, and a free interchange of opinions on cattle interests in general and particular. We have no doubt, the results of this great meeting will be much to the benefit of all participating, and we call the attention of our friends to it, no matter in what quarter of the United States they may reside.

A Great Butter Short-horn Cow.—Elcanor, belonging to W. Armitage, of Yorkshire England, made 24½ pounds of excellent butter from the cream of a single week. Her portrait is now inserted in the English Herd Book. Thus it will be seen when bred for the purpose Short-horn cows can excel in the dairy as well as at the shambles. We have well attested accounts of their giving, over and over again, from 30 to 39 quarts of milk per day of a fairly rich quality.

For the Royal English Agricultural Society's Annual Show, which is to come off at Carlisle in July, 486 horses have been entered, 434 cattle, the same number of sheep, and 146 pigs. The prizes offered for them are £5,676, about $27,500—an encouraging sum to be distributed among the breeders of choice live stock.

Remedy for Worms in a Horse.—In reply to a late inquiry in "Querist," a correspondent writes that in his experience the following recipe has never failed to cure:—half a cup of pure hard-wood ashes finely sifted and mixed dry with the mash. If one dose should not be sufficient, repeat it after a day or two.

Dairy Husbandry.

MARKET TERMS FOR BUTTER AND CHEESE.

To those who are familiar with them, the current terms of trade seem simple and appropriate enough, but to the stranger, and often even to an interested party, the exact meaning of these queer terms are as unintelligible as Hebrew verbs. Every dairyman and dealer, however, should be familiar with the language of his trade, not only in usual phrases of commerce, but even in the local "slang" of the market he sells in; for each market has its own pet phrases. The terms that I shall review and do my best to throw a reasonable amount of light on, are those in use in the city of New York, and with few exceptions they are more or less used in all the important markets of the country.

When one merchant listens to the story of a big or brilliant sale told by another merchant, if he does not altogether believe it, he calls the story a "little off color." If it is a simple narrative that challenges his belief he says, "He is giving it to me straight." "Funny business" implies that there is some crookedness in the transaction. There are, of course, numbers of these local phrases that are often exceedingly apropos, of so concise a meaning that it would require quite a lengthy explanation to convey the same idea.

In dealings in cheese and butter there is a slight difference in the terms used, though they are often used convertibly, the one for the other. The term "culls," more particularly applied to packages (printed usually "poks") of butter, though sometimes to cheese, means those that have been left out of lots, either rejected or not needed. This creates a loss on the "culls" not always through the fault of the maker, though usually it occurs from want of good quality in the goods, or proper taste and neatness in selecting and making up the vessels that contain the butter.

A term that often misleads the stranger is "spot stock" or "spot lot," which simply means a lot of packages, either butter or cheese, that are on the spot; that is, in the city and not on consignment to arrive in the future; for "futures" are traded for in butter and cheese the same as for stocks and bonds. The term "outside quotations" means the two extremes—the highest and lowest prices.

The means by which these "prices" or "quotations" are arrived at are interesting

In former times, commonly known as "those good old times," in large towns and cities the merchant who handled the greatest value of goods and, consequently, was the most important character in the trade, would be appealed to every morning by the smaller dealers to learn what he was paying for certain classes of goods. His dictum generally governed the market, and being able to put the price up or down at his sole pleasure, he would often do it to suit his own stock on hand to the evident disadvantage of his contemporaries, who might have small stocks while he had large, or *vice versa*. To take this large power out of the hands of individuals and put it where all could reach the benefit of it and have it work harm to no one, "Boards of Exchange" were organized.

The Board of Exchange in this city is an association of cheese and butter merchants who meet every noon in a large room called "'Change." Here the Secretary calls the meeting to order, and calls in a loud voice to know if any one has butter to sell, calling first "creamery, State," then "Western," "selections," "firsts," "seconds" and "thirds," these terms applying to the quality of the goods offered. After the sales of butter, he calls "cheese"—"fancy," "good to fine" and "poor to fair." The purchases are all made without inspecting the goods, but a standing committee settles all disputes that may arise between the parties to these trades, and one of the committee is appointed an inspector to examine the goods, if called upon to do so. The terms above used by the Secretary are all defined in the by-laws of the association. After 'Change is adjourned a committee meets to determine what quotations shall be, and, governing themselves by the sales and purchases made that day on 'Change and outside transactions that they know of, they set the quotations. The general knowledge as to the number of packages received in the city and exported, prices, sales, etc., is all considered private information and not to be given to any one who is not a member of the Exchange.

The following terms used at the Exchange have the meanings following: "Straight lines or lots" means packages of uniform quality and appearance usually coming from the same maker or shipper. "Home demand" applies to sales in the United States, while "foreign market," of course, means any market out of the country, though England and Germany take fully ninety-one hundredths of our butter and cheese that are sent abroad. "Pails" are the return-butter pails that come mostly from Orange county or makers nearby who require the packages sent back to them. "Tubs" are usually Welsh tubs and other makes of like size and appearance. "Firkins" are the small barrels in which butter is packed, while "half-firkins" are the same sawed in halves. "State creamery" means that made in New York, while "Western" means from any State west of New York. "Imitation creamery" means butter ground together until of uniform appearance and put up in tubs like regular creamery. "Factory" butter is usually a little better than creamery, it being made at cheese factories where the top cream only is skimmed off. The term "unbroken invoices" means all the goods included in an invoice, thereby not allowing picking over or culling. "Ohio flats" are a certain style of cheese made much flatter than those of the usual shape; it may be full-milk or skimmed. "Lard butter" is a mixture of pure lard and about 10 per cent. of good butter. H.

The Poultry Yard.

ADVANTAGE OF HENS HAVING A GOOD RANGE.

LEAVING home late in November last, to be absent till the following May, I had my little flock of white Hamburg fowls removed to a neighbor's, for fear they would be stolen, if allowed to remain at my untenanted place. To keep these fowls from mixing with his own, my neighbor had to confine them to a yard of about 20 feet square adjoining their roosting house. During this time, they did not lay half as many eggs as a similar flock had done kept at home during three months of the preceding year. In May, I brought these hens back to my own place, where they have a good run on a grass lot and a small space of plowed ground. A few days after this they began to increase the number of their eggs, and in about a fortnight, they more than doubled them daily—some days, trebled them. As their food and water were precisely the same at both places, I can only account for this increased egg-production by the hens having a run where they could get plenty of fresh grass, some insects, and pick up various things from the ground, which we can not well observe, and which are known and appreciated only by the hens themselves. Hamburgs and Leghorns are great grass eaters, and I have sometimes thought that when of a good quality it was equivalent to one-fourth of the other food given them for their nourishment. When kept by my neighbor, the poultry had pork scraps occasionally, which were equivalent, for meat, to the insects they now catch in the open field. A.

Miscellaneous.

THE OUTSIDE AND THE INSIDE OF SOME THINGS AGRICULTURAL.

The Growing Taste for Rancid Butter.

IT is a curious fact that in the discussions which have been going on for months past on the question of oleomargarine *vs.* butter, no recognition has been made of the existence and steady increase of the taste for rancid butter among the heartier-feeding and robuster class of laboring men. To be sure, this form of a depraved or cultivated taste is scarcely seen or noticed in the butter and cheese-producing portions of the country, nor so much in cool latitudes; but when one gets into great cities with their dense population, or into towns or cities of any size, south of the Ohio River, the existence of a decided and increasing taste for rancid butter becomes as plain as any other new thing. After all, what are the physiological or other reasons why stout stomachs may not acquire a liking for butter in a certain stage of decomposition as well as for some kinds of cheese—Limburger, for instance, which to many persons is as offensive, both to taste and smell, as the best or worst of the kakodyles.

It will probably be shown, in course of time, that the obstacle to the wide and general adoption of oleomargarine as a complement to common food, will not be found in the fact that it is an artificial production, or that it is made out of offensive and unhealthy materials, but that, being fat or tallow, and these alone, or mostly, it does not satisfy a want which centuries of civilization have created in the human stomachs. It is possible, if means were taken to ascertain the direction of popular taste, the lower grades of butter might be so handled as to suit it, and to the satisfaction and profit of all concerned; for in the light of the facts before us, we can scarcely doubt that, in course of time, there will be as widely divergent tastes for butter as for cheese, with as wide difference in the smell and flavor of the butter of the future, as between the new and delicate full-milk, and the fully matured and strong-scented Limburger cheese.

Kumyss.

How many readers of the RURAL NEW-YORKER have heard of Kumyss or are aware of the extent to which it is being manufactured in Chicago and consumed in that city and its vast two or three hundred miles of neighborhood? Kumyss is fermented cows' milk, the word being an adaptation of Koumiss, the Tartar appellation for fermented mare's milk. Kumyss is a food, not a medicine—or rather belongs to a class of foods, which are at the same time medicines, like blood, cod-liver oil and buttermilk (which it considerably resembles) of animal, and huckleberries and celery of vegetable origin. The chemical composition of a quart bottle of the Tartar Koumiss (which that made from cow's milk closely resembles), according to the analysis of a London chemist of reputation, is as follows:

Water	10,662	grains.
Alcohol	193	"
Caseine and Albumen	128	"
Lactose	582	"
Lactic Acid	130	"
Fat	36	"
Ash	90	"
Carbonic Acid	180	"
Total.	12,000	"

Kumyss is a pleasant, wine-like beverage charged with carbonic acid, generated in course of fermentation. It is put up in strong bottles and drawn by a champagne tap. It has all the properties of milk in more digestible form, and is admirably adapted to cases where milk, under the ordinary form, cannot be taken and digested. Its manufacture is a difficult and delicate rather than a costly process, and for this reason it is at present confined to few hands. But it is so valuable as a food medicine that its consumption must be, sooner or later, greatly extended and its manufacture accordingly. This brief description of Kumyss is the "outside" of some of the new things agricultural, the "inside" being that, sooner or later, dairymen and milk producers may quite reasonably anticipate and be prepared for, a vastly increased demand for milk, over and above that wanted for butter and cheese and town and city consumption.

Potash.

It is probable there is no one subject occupying the attention of horticulturists and fruit growers more than potash and its relations to the successful production of fruits, and especially the sour fruits. One can scarcely take up a publication devoted to any form of agriculture, without coming across the experience of some cultivator of fruits, who reports the beneficial effects of the use of potash in the form of its commercial salts, or ashes leached or unleached. Here, it is the case of barren orange trees which have been made fruitful; there grape vines have been rescued from the dominion of blight, mildew, and rot; in one place pear trees, liberally fertilized, have been saved from blight; in another, the yellows have been banished from peach orchards, and besides, it is known and conceded that on soils otherwise comparatively barren, if they are the product of shales and rotted granite, the most productive apple orchards are to be found. In the matter, too, of vegetables which have sour juices, like pie plant and the tomato, manures and fertilizers for them are powerful for their good, in proportion to the quantity of potash they contain. Moreover, we are told that potash is the base, without which few or none of the vegetable acids can have an existence, and that in its absence, there can be neither starch elaborated nor sugar formed. Yet with all these experiences in its favor and all these facts made known, chemists, whether agricultural or otherwise, have left us in the dark as to the why and the wherefore, as to the method and the manner in which potash acts in producing these phenomena on vegetable life, growth and development. And this leads to the suggestion, that if some one having opportunity, inclination and leisure, would undertake the task of going over half a dozen of the better agricultural papers and magazines of the country and gathering from them all the items relating to the good or bad effects of potash when applied to fruits and vegetables, such a collection, if published, would not only be exceedingly valuable to the practical gardener and fruit grower, but also help to solve the problem of the *role* of potash in the life of vegetation. B. F. J.

WHAT OTHERS SAY.

GRAIN FOR MILLING.—The Millers' Exhibition now being held at Cincinnati, is proving very successful. Among the reports made to it by special committees appointed to investigate various subjects, the following on "Grain for Milling" is of special importance to farmers:—We have met with much difficulty in determining which is the best wheat for milling in the United States, on account of the vast extent of wheat growing districts, extending through twenty-three degrees of latitude and fifty-seven degrees of longitude, having a length of 2,800 miles and a breadth of 1,700, covering an area of 3,260,000 square miles, embracing all the States in the Union but three, and the entire Territories, with every variety of soil and climate. We find the same varieties of wheat grown in different States, while possessing the same general properties, differing materially in value for milling. The Fife wheat of Northern Minnesota and Dakota is far superior to the same variety grown in Iowa, Wisconsin, or Illinois. The Boughton or Tappahannock wheat of Virginia, Tennessee, and Georgia, is much more rich in gluten than the same kind grown in Indiana, Ohio, or Illinois.

WE ALSO find a great diversity of opinion as to the merits of particular kinds of wheat grown in same localities, making it a difficult matter for your committee to determine which are really the most desirable varieties of wheat for milling purposes.

We are of opinion that a general discussion at this meeting of the association, where all the large wheat districts are fully represented, will do more to settle which are the most desirable wheats to use than any report your committee would be able to make. From the information before your committee, mostly obtained from correspondence, we find the following varieties among the best for milling purposes:

Winter Wheat—Longberry Amber, Lancaster, Indiana Red, Alabama, Orange, Velvet Chaff, Boughton or Tappahannock, Jennings.

Spring Wheat—Minnesota Fife, China, Mammoth or Rio Grande.

The Longberry Amber is extensively grown in Virginia, and, with the Lancaster, is most sought by millers, being rich in gluten, and possessing properties very desirable for shipping to warm climates.

The Indiana Red is spoken highly of as a fine glutinous wheat; also the Alabama, the latter being but little raised, owing to its light yield per acre.

The Jennings is a white wheat, hard, gives excellent color and good strength.

The Orange makes a good family flour of fair strength, and yields well in flour.

The Velvet Chaff possesses good strength, and yields fairly in flour, is an early variety, grows a stiff straw, and is well adapted to strong and rich soils, where most varieties would produce too rank straw and lodge.

The Boughton or Tappahannock is highly spoken of in some localities, while in others it is not considered a desirable wheat; it is a white wheat, not particularly rich in gluten, but makes a good family flour; is easily damaged by moisture.

The Fultz and Clawson are taking the lead with farmers, yielding largely, but are very undesirable for millers, being soft and weak and containing little gluten compared with the first-named varieties.

The Clawson is used somewhat to mix with damp, strong wheat.

In spring wheat the Minnesota Fife is incomparably the best of any spring variety. It is rich in gluten, very hard, and yields immensely in middlings for purification and manufacture into patent flour; it is essentially "bread-making" wheat, producing a large number of pounds of finest bread from a fixed number of pounds of flour. This wheat is grown extensively in the Northwest, attaining its greatest perfection in extreme northern latitudes, particularly in Northern Minnesota and Dakota. In Wisconsin and Iowa it is much the best spring wheat grown.

The Rio Grande, China, or mammoth, is a large-berried, heavy wheat, yielding well in flour, and next to Fife in glutinous properties, it is particularly adapted to weak lands, having a rank growth of straw, and standing drought remarkably.

The Canada Club we consider the next best spring variety, but it is soft; it makes an excellent family flour when strength is not a particular object.

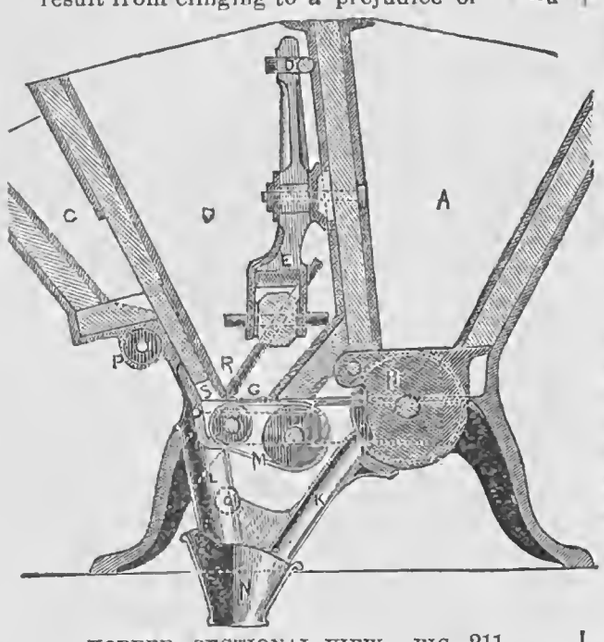
The Lost Nation or Prussian Fife we consider the poorest spring wheat grown, having a thick bran, very soft, weak in gluten, not even making a white flour. It is grown extensively in Wisconsin, Iowa and Minnesota, yielding well, and is considered by farmers as being safer for a crop than Minnesota Fife, China or Club.

"WALDO" the instructive correspondent of the Ohio Farmer says:—"I live in a neighborhood where broom corn is extensively grown, and those who have followed the business regularly have done well at it, but once in every few years the price goes up to a figure which makes it very profitable, and there is a large number of farmers who, with no experience in managing the crop plant largely of it, and I have known the price to fall in one year from $200 to $40 per ton. As this is below the cost of production under any circumstances, and it will cost an inexperienced farmer much more to get the crop ready for market than the one who understands it, it is easy to see that the new beginner is likely to get enough of it in growing one crop. As I look back over my own experience for twenty-five years on the farm, I can trace more failures and losses to changes than to all other causes combined, and it has been a dear lesson learned in the school of experience, to stick to a regular system in farming. 'But,' do you ask, 'should we make no changes, but follow in the same ruts worn by our ancestors?' By no means; but because your neighbor has cleared $40 per acre on a broom corn crop, or made a fine profit on wool, don't put your whole farm in the former, or sell off your stock and invest in sheep."

SPEAKING OF CHICORY, the Grocer says:—"But the most of it is kiln-dried, and after roasting is ground into a brownish red powder, to be used as a mixture with or substitute for coffee. It is stronger than pure coffee in equal quantities, and gives a good color to the decoction. It has a large consumption among the poorer classes of Europe, and is used largely at European hospitals on account of its superior qualities of nutrition and a total absence of nervous stimulating qualities, such as are found in coffee. The nutritious substance, according to the analysis, represents 66 per cent., while coffee represents only 31 per cent. A great deal of this favorable result must be attributed to the presence of a kind of starch in the root, which is transmuted by kiln drying into gummy extractive matters of highly nutritious character. Chicory is considered abroad, as the most suitable of all substitutes for coffee, as the aroma which is developed by the roasting of the chicory root, is similar to that of coffee, when roasted.

[Most of the ground coffee purchased at coffee or grocery stores is largely adulterated with chicory—and the adulteration, in our opinion, is a very desirable one. We would ask our readers to purchase a pound of bean coffee and have it ground. Then add from one-eight to one-quarter of a pound of good chicory and mix them well together. We think that, prepared just the same as pure coffee, except that a less quantity serves, it will generally be preferred—at least, by those who are not informed of the adulteration. Chicory is a composite flower (Cichorium Intybus), resembling the Ox-eye daisy, though blnish in color. Though somewhat scraggy in its growth, it is still showy, and may easily be cultivated in garden plots. The roots may be saved, dried in the oven, and ground the same as coffee.—EDS.]

CIRCUMSTANCES ALTER CASES.—"One thing is certain, obstinate controversy is seldom productive of large yields," says Conrad Wilson in his Station Record. "Fifty bushels of wheat per acre, or a hundred bushels of corn, though possible under right conditions never result from clinging to a prejudice or delu-



HOPPER, SECTIONAL VIEW.—FIG. 211.

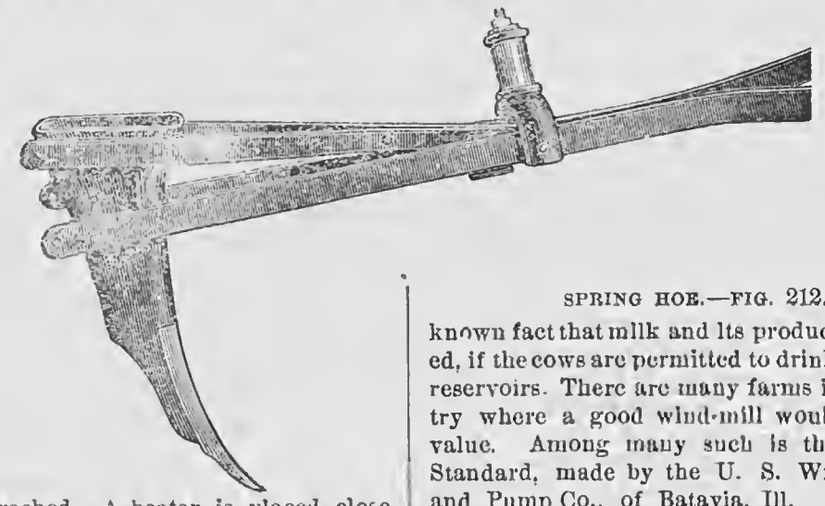
sion. One man may astonish us with the yield he gets by plowing three inches deep, while another gets a result equally magnificent with ten inches. Yet if the two cases were reversed, both crops would be failures. Each of these men is right for his own locality and conditions, but not necessarily right for another man, or another farm This has been so from the beginning, and will be so till the end of time."

IN England if butchers deal in bad meat they must expect to get into trouble. A butcher at Brighton, says the Agricultural Gazette, was a few days ago sent to prison for a month with hard labor for having unwholesome meat in his possession. A portion of the stuff had been manufactured into sausages and sold to another butcher, who is now in prison for having disposed of them to customers. The sentence is unusually severe, but the Bench explained that they had determined to put a stop to the traffic in diseased meat.

THOUGH rather late to be serviceable the present season, we commend the following remarks of Professor Beal: Agriculture is a pretty broad field to work in, and if a man expects to carry on all branches of it in one establishment successfully, he will awaken sooner or later to a great disappointment. Some thing or things must be made specialties. Now it is a question in my mind just how good a vegetable garden a farmer can afford to have. If he aims to make one as good as his neighbor's, who is a market gardener, he will very probably fail in some of his main farm operations sufficiently to neutralize the success of the garden test. My impression is quite in accord with that of the essayist (Mich. Pom. Soc.) when he indicates that the farmer can afford to do pretty well in the garden what he can do by horse-power. The garden of the farm can be made to furnish the larger part of an excellent living for the family at a slight expense, if deftly managed; but most farmers do not seem to know how. They seem to think the garden must be a piece of ground set off and dedicated to this purpose forever, to be shut in by a high fence, to be entered by a small gate, to be ornamented with beds of short rows lifted up higher than the general level. Perhaps this notion is an imported one from some country where land is high and horses are not, at any rate it does not apply to us, and I commend to the farmer a system of long rows which can be attended to by a horse and cultivator like any other farm hoed crop. When once such a plan as this is adopted the garden will not be called an expensive luxury, and making garden will not be the dread of the year.

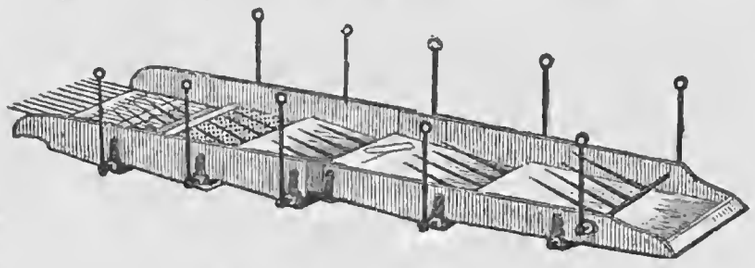
men in this connection, their long experience has enabled them to construct a machine admirably fitted to meet these needs. The specimen of the "Invincible" separator herewith represented, is a 36-inch cylinder designed expressly for steam power, having extra length and extra rakes or shaking fingers. The firm also build another machine, with a 33½-inch cylinder, to be operated by steam power, and two others, one with a 27 and the other with a 30-inch cylinders for horse power. The separator is constructed diverging from the cylinder to the discharge end, a feature which with the circular top, allows plenty of room for the straw to be well shaken up on its way to the stacker. In the steam machine the separating pan is 51 inches wide, giving, with the great length and extra rakes, ample separating capacity. The pan is cut into two equal sections (Fig. 213) each of which is operated by two pitmans attached to the double crank shaft. Thus they work one against the other, and this alternate motion of the two sections produces a counterbalance that relieves the separator from much of the strain.

The front section of the pan is swung directly under the cylinder, and, the concave being perforated, a large amount of grain passes through and is separated in the very operation



SPRING HOE.—FIG. 212.

of being thrashed. A beater is placed close to the cylinder directly in the current of the grain and straw, causing a stoppage of the entire mass, which then drops down upon the first set of rakes or shaking fingers, so that by this immediate agitation of the straw at the cylinder, the separation is begun at once, and is fully completed before the straw is delivered to the straw-carrier. The lower or rear pan is perforated, and, acting as a riddle, keeps the shoe free from straw and much other mat-



SEPARATING PAN.—FIG. 213.

ter liable to clog the sieves. The shoe, placed directly under this rear pan, has a strong blast and abundant sieve room, and is the most effective now in use for cleaning the grain. A folding straw-carrier in two sections is furnished in lengths to suit, and can be adjusted to any angle while in motion. A novel feature of the straw-carrier is the device for regulating the run of the carrier belts, keeping each

WIND-MILLS.

THE waste of time and the hard work are by no means all the objections to hand-pumping. Every intelligent farmer knows that neither the boys nor the hired help are always reliable, and the old gentleman himself is sometimes tired or absent from home in the evening; the stock are neglected until next day, when the cattle, almost famished, fill themselves so full of cold water on a winter's morning, that they stand and shiver for hours, to their great injury; and if water is any considerable distance from the yard in brooks or springs, in severe weather they will not go for it until very thirsty; when the results are the same. Every stock raiser also knows that cattle are more or less uneasy, and become unruly when not well supplied with water, and are continually breaking through inclosures, damaging crops, and straying from home in pursuit of it.

An artificial pond, in warm weather, soon becomes offensive and filthy, and cattle that are forced to drink of it or die from thirst, become subject to disease, while it is a well-known fact that milk and its products are tainted, if the cows are permitted to drink from such reservoirs. There are many farms in the country where a good wind-mill would prove of value. Among many such is the Halladay Standard, made by the U. S. Wind Engine and Pump Co., of Batavia, Ill.

THE BUCKEYE GRAIN DRILL

FOR more than 23 years this drill has been before the public, and in that period its reputation and sale have extended over the whole country. It is made by the well-known Messrs. P P. Mast & Co., of Springfield, Ohio. The new drill brought out by the same enterprising firm last season, has proved a great success both as a plain and combined drill. In this connection we herewith give illustrations of their new land measurer, which is a new departure in land measures. This is placed in the end of the hopper (Fig 215); but is so incased as not to be disturbed by the grain. It indicates the acres and portions of acres sown. In Fig. 211 is shown the hopper bottom of the combined grain and fertilizer drill, with the grain, fertilizer and grass seed sections. A, represents the wheat or grain hopper; B, the hopper for fertilizer; C, the grass seed hopper; D, pitman connection; E, the agitator arm; F, the agitator with pin moving over the belts; G, galvanized bottom with openings over the belt; H, wheat or grain feeder and cup; K, spout or conductor from wheat hopper; L, spout or conductor from fertilizer hopper; M, leather belt for feeding fertilizer; N, spout to which rubber tubes are attached; P, grass-seed feeder; R, slide for regulating the quantity of fertilizers; S, is the point where the fertilizer is discharged from the belts.

The fertilizer and grain hoppers are combined in a double hopper; both grain and fertilizer passing down through the hoes are deposited together in the ground. The method of feeding the fertilizer consists of a series of endless belts carried by two shafts on which are a series of small pulleys—the whole being placed in the bottom of the hopper. The fertilizer coming in contact with these belts is carried back and dropped into the tubes, the quantity being regulated by a parallel slide

as to sow a large or small quantity as desired. There is also an agitator moving very slowly in the hopper which prevents any possibility of arching. At Fig. 212 is shown the spring hoe—an important improvement furnished with a solid rubber spring.

LAND MEASURER.—FIG. 215.

Last season we illustrated the new force-feed principle of this drill, and since then over 6,000 of the new drills have been thoroughly tested in practical farm work in all parts of the country, and in all cases they are reported to have given entire satisfaction.

Zinc Collar Pads.

OF the many answers we have received to our inquiry about the above device, in the RURAL of May 29, we have room here for only a couple, which, however, may be taken as fair specimens of the rest.

S. L., Sharon Center, N. Y., Says:—"That zinc collar pad is all it is said to be. I have tried it with satisfaction on a horse. The neck has healed; and the mane is growing again, although the horse is used every day."

R. H. C., Orleans, Neb., says:—"Five years ago, while 'freighting on the plains' Jerry's neck became so sore that he could graze only on a sidehill. I gave him a zinc collar pad and in in a few weeks his neck was entirely well, without having been idle a day. I discontinued its use, and the soreness returned. For the past four years I have not allowed him to be harnessed without the pad, and he has not had a sore neck for the last four years, and that is all I know about the zinc collar pad."

Everywhere.

RURAL SPECIAL REPORTS.

ILLINOIS. Edwardsville, Madison Co., June 5.—The wheat crop prospects here are finer than for years. The acreage sown is about 25 per cent. more than ever before known. As our farmers now have the self-binding harvesters they have crowded every available piece of land with wheat, leaving hardly enough for corn, etc. We have just begun harvesting here. Corn looks well. Oats are very short, owing to the dry season. Fruit will be a full crop. Apples and peach trees are overloaded. Berries and grapes look well. Strawberries are just ripe—a large yield and fine berries. The Army-worm has made its appearance in different parts of the county; but too late to hurt wheat, I think. C. P. B.

ILL., Ludlow, Champaign Co., June 5.—Until about the middle of May farmers hereabout had little to complain of save one or two violent and destructive downpours of rain, and corn planting went on vigorously, but a period of hot, showery weather followed which so hindered the work that probably as much has been planted during the last two weeks as during the first half of May. That first planted has generally received the first plowing, and the stand is on all sides reported good. It was feared the wet period had injured wheat and oats, but the weather at present, cooler and dry, is favorable. Potatoes promise well—few beetles. There is unusual freedom from insect pests. Strawberries and cherries are abundant and ripe, worth from eight to 10c. per quart, retail. Apples are not as abundant as the profuse bloom promised. Late corn planting and a prospective early harvest will make the next six weeks a busy season for farmers. "G."

IOWA, Viola, Linn Co., June 7.—We have had heavy rainfalls for the last week, washing out in some places to the disadvantage of the railroads but not of the crops as yet. The rains came in time to save the grass. The weather had been very dry through April and May, more so than usual. Oats and corn look well for the season. If the rains will hold up long enough to enable the farmers to head the weeds in the corn we are pretty sure of a good crop. I did not get my Ennobled oat sowed as soon as they should have been, but they are branching out nicely. Two of my Ables Sibirica are up. None of the magno-

INVINCIBLE THRASHER.—FIG. 214.

Industrial Implements.

THE "INVINCIBLE" THRASHER.

THE Invincible Thrasher, a cut of which is here presented to our readers, is made by Roberts, Throp & Co., Three Rivers, Mich. The wide popularity it is winning is a well deserved tribute to the mechanical skill and persistent efforts of its manufacturers and patentees. Having spent nearly a life-time in studying the needs of farmers and thrasher side in line one with the other. Thrashermen have been annoyed a great deal by the tendency of the carrier belts to "climb," as it is termed, and this improvement will be appreciated. One of the most striking features of the entire machine is the improved elevator which carries all the tailings through a closed chamber up an inclined plane outside the separator, without angle or shake spout, direct from the tailing spout of the shoe to the cylinder; so perfect is its operation that sticking and spilling are entirely avoided. But space forbids any more extended description of this excellent thrasher. We advise all our friends interested

lias have made their appearance yet. The beets are up looking fine; so are all of the flower seeds that the RURAL sent. The Cow-peas I did not value for this section, although I planted them. I think they will be worth little in Iowa where grass and grain grow so luxuriantly. Strawberries are getting ripe; the raspberry canes were badly winter-killed. Apples and cherries are mostly blighted from cold winds. D. C. W.

NEW JERSEY, Red Bank, Monmouth Co, June 10.—The ravages of the army worm upon the wheat, corn and timothy crops in Ocean and Monmouth counties and other parts of New Jersey continue. The rapidity and thoroughness with which these worms do their work are appalling, and coupled with the late drought this new scourge is likely to make the year 1880 one of serious disaster to a large part of New Jersey. About Long Branch the worm appears in the greatest numbers. Forty loads of sod cut on Tuesday by Superintendent McKay, of Hollywood, to replace bare spots, were totally eaten up in three hours, looking as though a fire had swept through them. In the vicinity of Freehold the worm has made terrible ravages upon the corn-fields. Between Red Bank and Long Branch the Central New Jersey Railroad track is black with the worms which are traveling westward. C. H. C.

NEW JERSEY, Shrewsbury, Monmouth Co., June 7.—The new pest, the army bug, which has just put in an appearance here, is completing the terrible destruction commenced by the great drought. Reports from Long Branch, Mechanicsville, Morrisville, Middletown and Tinton's Falls say that the ravages made by this bug have been very severe. It is reported that acres of timothy and rye were destroyed in one night. On the farms of Samuel Hendrickson, near Rumson, and George Stillwell, at this place, the damage is very great. About Freehold and Marlborough, and on toward Keyport, the bugs are found in great numbers and move in solid phalanx. When once they attack a wheat, rye, corn or grass field they do not pass out of it until they have left nothing edible in it. The "bugs," for some cause, avoid clover fields, but will strip a timothy field quicker than a mowing-machine. The greatest depredations are reported at New Bedford. The appearance of the bug was sudden and it was not recognized, twenty years having elapsed since the army bug last visited this region. One instance of the destruction accomplished by the pests was noted on Wednesday night last in the fact that the bugs entered an eight-acre lot of timothy, ready for harvest, and in twenty hours totally destroyed it. L. M. R.

NEW JERSEY, Long Branch, Monmouth Co., June 8.—Hollywood Park, the summer residence of John Hoey, of New York, and the pride of Long Branch, has been almost devastated of its beautiful lawns by the army worm, 40 acres having been destroyed since Saturday. The worms are moving in multitudes toward the sea, and have taken possession of the piazzas of the hotels. The drives are also black with them. L. H.

N. Y., Fluvanna, Chautauqua Co., June 3.—Crops are looking well: corn is coming up: grass fair. I am cutting my orchard grass for soiling—well headed out Wheat is heading a little and looks well. Potato beetles are over-abundant. A timely rain has averted serious injury from drought. Crops in general are looking well. My weevil eaten peas, sown at the rate of 14 pecks to the acre, are about as thick now as when I usually sow eight pecks of pretty sound peas. H. A. W.

N. Y., Mineola, Queens Co., L. I., June 9.—The army worm has made its appearance in Queens County in remarkable numbers, causing extensive damage to the grain crop. The worms are working north in Oyster Bay town, and fields of wheat of thirty acres each have been destroyed. H. R.

OHIO, Fostoria, Seneca Co, June 1.—The wheat crop is splendid in this section of the State; there is every prospect of a larger yield to the acre than we have had for years No foe has molested it and the acreage sown is larger than I have ever known. At present the weather is very wet—too wet for corn.

A. S. W., M. D.

OHIO, Camden, Preble Co., June 1—My Mold's oats are two feet high and have tillered out finely—they are far ahead of our native oats. My mangels are doing well, though I sowed the seed too thick and had to transplant a lot of them; but the weather has been so favorable that they are getting on finely. My Cuthbert raspberries are growing first-rate. Corn is coming on well; meadows, I think, will be light; wheat is good, but we can never tell how a wheat crop will turn out until we get it in the bushel, it is subject to so many casualties. The prospect is fine for oats and flax. So far as I have seen there will be but few cherries; but we shall have a good crop of apples. W. M.

PA., Derry Church, Dauphin Co., June 3.—We have had a very dry season—had no rain of any account for about five weeks until May 29, when we had a very fine soaking rain, which lasted till the next afternoon. Previous to the rain, the roads were very dusty and the earth quite dry. Wheat, rye and oats look well; corn is rather backward. Grass is short and the hay crop may not be very good. Fruit promises to be abundant. S. E. R. S.

PA., Waynesboro, Franklin Co, June 7.—We have had fine rains since my report of 19th ult Grass will be an average crop. Wheat has blossomed and is excellent. Corn now grows rapidly—stands eight inches and less About 50 children have died here of diptheria within the last six months, and there are some cases yet. D. B. M.

TENN., Nashville, Davidson Co., June 9.—The report of the Commissioner of the Bureau of Agriculture for May says that; owing to the dry weather in the early part of the month, serious apprehension was felt for the safety of all the crops, but the propitious rains of the latter part of the month have materially changed the condition of things. He makes the following averages for the crops named: Wheat, 67; corn, 94; tobacco, 77 in Middle and 81 in West Tennessee. The fruit prospect is very fine except in regard to peaches, which will not be an average crop. The grass crop is unusually fine, and will be large. The cotton average for West Tennessee is over 100, and for Middle Tennesee 97. R. M. R.

VA., Petersburg, Dinwiddie Co, June 8.—Not only crops are suffering seriously from the protracted drought, but in some adjacent counties the streams are fast drying up. Mills which never before suffered from want of water are compelled to cease operations. The Appomatox River at this point is so low that the mills here are making only half time. Without an early fall of rain, serious results may follow. R. Y.

VA., Newbern, Pulaski Co., June 7—My Fultzo Clawson wheat is looking well. As it is a new sort, I didn't think it prudent to sow more than a half acre of it. It is perfectly clean, and will be harvested about the 20th inst. My Broughton and Fultz wheats will be harvested in from three to five days from now The former is included in my experiment plot of 27 acres, and is unusually fine. Both of these varieties can be relied on for extreme earliness. In an emergency they could be cut here now without any risk of the kernels shrinking much. H. L. W.

The Queries.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Castrating Lambs.

W. L. M., Little Rock, Ark., asks when and how should lambs be castrated.

ANS.—The operation should be performed as early as possible, as there is danger of ill effects resulting when the lamb has become older. A lamb a week old may be deprived of the whole scrotum and testicles, by one stroke of a pair of shears, without any danger or the loss of more than a few drops of blood. But when the lamb has become some months old, the organ has become fully developed as to nerves and vessels, and a more careful operation must be performed. An excellent method is for the operator to sit upon a long bench, with one of the lamb's hind legs beneath each of his thighs, the head and fore-legs being held by an assistant. Taking the scrotum in the left hand, he presses the testicles toward the lower end, making the skin tight and smooth. He then makes a free incision with a sharp knife at the bottom of the scrotum beneath each testicle; the membranes which surround them are cut through, the cords and vessels which are attached to them are scraped, not cut, asunder, and the operation is completed. To castrate a mature ram, an incision is made at the bottom of each compartment of the scrotum, each testicle being removed separately, the cords and vessels being always scraped asunder. The main point to secure is to have the wound at the bottom of the scrotum, so as to allow the pus, which will form within it, to escape. If this pus is retained in the wound, it becomes absorbed, inflammation is communicated to the adjacent parts, and a fatal termination is likely to ensue. To prevent this, a small lock of wool is sometimes left in the wound, by which it is kept open and the danger averted.

Asparagus Culture.

J. B, East Schodock, N. Y., has a muck swamp which he is getting under subjection. He would like to plant it to asparagus, and asks, 1, if asparagus can be grown on that kind of soil, and will it thrive where there is water standing at times; 2, how deep should the roots be set and how to proceed with their culture.

ANS.—1. If the muck swamp is thoroughly drained so that no water will, at any time, stand within two feet of the surface, asparagus may be grown there successfully; but if it is liable to inundations at odd times, or if it can only be partially drained, neither asparagus nor any other crop can be relied upon. In this latter case, it will be best to seed it down with grass and turn it into permanent meadow. When properly drained, asparagus generally grows to an immense size on muck land. The roots do not send up so many sprouts as on a heavier soil, but these are usually large and vigorous. 2. Plant in the spring strong one-year-old plants. They should be set in rows three feet apart, and the plants one foot apart in the rows and six inches deep. The first year all the shoots should be allowed to remain and strengthen the plants, and only a very few should be cut the second year, and it is preferable to leave them all, this season also. The fall treatment consists in cutting off the tops, and in December give the rows a covering of long manure, which is to serve as a winter protection. In the ensuing spring this manure may be dug under, and the rows should, in addition, have a light dressing of salt scattered over the surface.

Olive Culture.

E. D. R., Winfield, Kan, inquires for information about Olive trees, their culture and where they can be purchased.

ANS.—Olives in the North can be grown only as greenhouse plants. In the Southern States they thrive well and are grown with ease. Little more culture is given them than the mere setting out, although pruning and special culture after the style of European olive yards would doubtless benefit them The best variety in this country is said to be the Mission olive of California, and doubtless California is the best place in which to buy olive plants. They are grown on the Pacific Coast to a considerable extent, and several nurseries have them for sale. Olives can also be purchased to advantage in the South of Europe; but only in small quantities. Nurserymen seem to neglect, both in Europe and America, the culture of olive plants, notwithstanding the fact that as a crop it is profitable in Southern Europe as well as in many sections of the Southern States. It is not at all likely they would stand the winters of Kansas, but they can be readily grown in the greenhouses and obtained for the purpose in very small numbers from The Parsons and Sons' Co., Flushing, L. I., or from Wm. Saunders, Agricultural Department, Washington, D. C.

Inflammation of the Fetlock Joint.

C. E. M., Lower Kingsclear, New Brunswick, has a young mare that became lame over two months ago in the fore fetlock. He got a bottle of Kendall's Spavin Cure, and after using it a few days, the place swelled very much, and seeing the tumor was going to "gather," he poulticed it with carrots and it broke in three places—two on the outside and one on the inside of the leg. He kept on poulticing for about a fortnight and now the joint is again swollen just as badly as ever, and the mare is just as lame as before. Two of the sores have healed, but one on the outside still runs a thin substance that thickens as it flows down the foot, and he asks for a remedy.

ANS.—From the description this is a case of "synovitis" or inflammation of the joint, and the consequences are serious. Spray the joint for a few days with cold water four or five times a day; after which take tincture of iodine and water, equal parts, and inject with a fine syringe half a teaspoonful once a day; at the same time paint the joint with the tincture twice a day until it blisters. The horse should be kept in the stable until after the blister dries, tied so that he cannot use his tongue on the affected joint.

Paralysis in Sows.

L. H. E., Chapman, Kan., has a sow about 13½ months old which had six pigs on April 9. On May 20, she lost the use of her hind legs. The pigs have been weaned, and the sow has been well fed on swill, corn and weeds; but she does not get up, though her appetite is good and she is in fair condition. She can use her fore-legs well, but not the hind ones. The trouble seems to be in the back, kidneys and hips, and our friend asks for a remedy.

ANS.—This is a form of paralysis quite frequent in the lower animals, resulting from various causes, as injuries to the back, blood poisons, and *eating poisonous weeds*. Commence treatment by a good cathartic (jalap one to three drachms), after which small doses of strychnia (one-third grain), should be given twice a day, and apply a blister of mustard along the spine and three inches on each side from the withers to the sacrum.

L. M., Clarke Co., Ky., says that in July and August several sales of Short-horn cattle will be held in Clarke and Bourbon Counties, Ky., and some Canadian farmers have written that they would come and buy stock at these sales, if it is allowable to carry cattle from the United States into the Dominion for breeding purposes, and our friend asks us whether it is allowable or not.

ANS.—By the Order in Council, issued at Ottawa about April 28, the introduction of American cattle into Canada was prohibited, except in transit, under specified restrictions No exception was made, so far as appears by the telegram received at the above date in this city, in favor of American cattle for breeding purposes.

Brood Sows.

S. R. H., Topeka, Kans., asks how long can sows be profitably kept for breeding purposes.

ANS. As a rule it is well not to keep them after they are four years old, for thenceforth their powers of gestation generally grow weaker, and they are not so likely to save all the pigs they may drop. A brood sow is generally at her best when from two to three years old, alike in the number and quality of her pigs and in the amount of milk she secretes. If the sow drops her first litter when about a year old, each subsequent litter will usually increase until the fourth.

Miscellaneous.

S. W., Rochester, N. Y., says: Twenty-seven years ago a father gave to his son a trust deed of a farm which was to remain his during his life-time. At the son's death, the property was to belong to the grandson. The trustee never qualified or acted as such, and died a dozen years ago; and the grandson has died since; but the father still lives. Some time ago he mortgaged the farm; the mortgage has been foreclosed and the farm sold at sheriff's sale. The purchaser never knew of the trust deed until an action was begun to recover in behalf of the son to whom it was originally deeded, and we are asked, 1, whether a recovery can be had, and, 2, whether a judgment dated previous to the mortgage would be a lien upon the farm.

ANS.—The statute of limitations would seem to be a sufficient bar to the establishment of the son's title; at all events, an unrecorded deed could not defeat the right of the purchaser under foreclosure sale. A judgment docketed prior to the mortgage would remain a lien in preference to the latter for ten years, after which time, no levy having been made, the lien would be raised in favor of incumbrances or purchasers in good faith.

J. W. C., Lovettsville, Va., sends a plant for name, the seed of which was found in his clover seed. He has tried to extirpate it for several years, but without success.

ANS.—It is Lepidium campestre, a sort of Pepper-grass called Yellow-seed. It belongs to the order of Cruciferæ to which also belong all such plants as nasturtiums, cress, cabbage, horse-radish, radish, &c., &c. Being an annual it is not difficult to get rid of, if prevented from going to seed.

M. R. Seneca Falls, N. Y., asks whether the age of the stallion has anything to do with the character of his progeny.

ANS.—The records of race horses and trotters seem to indicate that the age of the sire has little or no influence upon the character of his get, as some of the best of these, both as performers and sires, have been the offsprings of two and three-year-old colts, while others have been the progeny of sires from 25 to 30 years old, or even older.

S. H., South Oshawa, Ont., asks, 1, if rye bread is wholesome; 2, is rye a sure crop in northern Ontario; 3, how many bushels per acre should be sown on new land; 4, is it a good feed for horses and pigs.

ANS.—Rye bread is the "staff of life" for whole nations, there can therefore be no question as to its wholesomeness. 2. Yes. 3. One and a half to two bushels. 4. It is, but it is not much used as a feed for animals, except as a foddering crop, for which purpose it is excellent sown, say, in August for late fall soiling or in the fall for spring soiling.

J. B. P., address mislaid, asks whether the plants from the magnolia seeds sent out by the RURAL will blossom without grafting or budding, and how would it do to graft an oleander on a magnolia.

ANS.—Yes, they will blossom in due time without grafting. The oleander could not be grafted on a magnolia. It is only plants of a close relationship that can be grafted upon each other.

A. F., Camden, Maine, has 1,000 pounds of ground bone, and he asks how much muriate of potash he shall mix with it to make a good manure.

ANS.—It will depend upon the character of the land to which it is applied, and the crop that is to be benefited by it: about 200 pounds will do for a general-purpose manure.

L. A. W, Farmingdale, N. Y., asks, 1, how to propagate syringa and hazel-nut bushes; 2, whether a specified pump is a good one.

ANS.—1. Propagate the syringa by cuttings, suckers and by division of the old bush; the hazel is propagated by nuts planted in the fall or spring. 2. Yes.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, June 12th.

C. A. G.—S. R. M.—W. T. B.—M. A. P.—M. J. G.—W. M.—S. J. G.—N. J. A.—D. K.—M. E. A.—C. B. S. H.—D. S. U.—A. B. A.—H. A.—F. M. B.—E. W. S.—J. V. D. P.—J. J.—G. B. H.—A. S. W.—C. F. A.—R. L.—R. H. C.—G. H. C.—A. L. G.—J. B. P.—B. F. J.—O. W. D.—A. L. J.—"May Maple," thanks.—M. J. G., thanks.—J. T.—W. D. P.—H. S.—A. P. A., thanks.—S. E. R. S., thanks.

THE
RURAL NEW-YORKER.
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SATURDAY, JUNE 19, 1880.

It pays well, as we have often said, to pass coal-ashes through a fine sieve—a flour sieve, for instance. This sifted ashes when perfectly dry, as it should be kept, is one of the best substances with which to mix London Purple, Paris-green or Hellebore for the destruction of potato beetles, fruit slugs, currant and gooseberry worms and the like. Being lighter than plaster or flour, it does not fall so quickly, but settles upon every part of the plant—the stem, the under part of the leaf as well as the upper part. It may be said also that it adheres to leaves for a longer time and is not so readily washed off by rains.

Hints about work may be useful or simply ridiculous. It may even be admitted, to stretch a point, that farmers are so careless as to need reminding every month of what work should be done, and reasonably that many valuable suggestions may be made that will really be of advantage. But these suggestions should be timely and in advance of the season, that a reader may be instructed in good time. It is hardly reasonable, however, for a leading journal to recommend farmers to roll their clover fields in May to drive any roots that may have been lifted by frost back into the ground. All such roots will be dead; or, if still living, a heavy roller would bend them over and break or crush them and certainly finish them. In May clover is far too advanced for rolling, and in fact clover never should be rolled. Grass may be rolled with advantage, but to hint that clover should be rolled in May argues very little accurate knowledge about the plant.

The Army Worm is fast disappearing from those parts of Long Island first infested, after working an amount of damage which it would be difficult to estimate. Its appearance in many other parts of the Island is reported. The present hot weather, however, will probably put an end to their depredations. The most efficacious method of destroying them has been that of plowing trenches about the infested fields. In loose soils it is almost impossible for them to climb steep ascents. We dug a hole four inches deep with a hoe, placed therein fifty and watched them for an hour. Not one succeeded in reaching the top, the soil constantly giving way under their short, stubby legs. Another excellent method of catching them is that of laying boards about the fields. The Army worm creeps under these for shelter from the hot sun, and may thus be captured in immense quantities. Under one board 20 feet in length, we have found, on turning it over two or three times a day, as many as 500 at once.

Poultry and the Army Worm.—The most important note of experience we have to make respecting the Army worm is this: It will be remembered that we confined our flock of poultry—about 75 in number—in a fenced garden, about half an acre, or a little more, in area. Here were two plots of wheat—Silver Chaff and Shumaker—and between them the Rural Sorghum and fodder corn. The Silver Chaff was perhaps one-half destroyed when the fowls were confined within the inclosure. The Shumaker was not so much injured. But the pests were destroying the corn rapidly, the leaves being only a few inches in hight. The hens were thus shut in for two days. The third day there was scarcely an Army worm to be found. Though we saw them eat a goodly number, we cannot believe that the sudden disappearance of the worms was because the hens eat them up. One would suppose that there were worms enough to supply a feast to 75 fowls for a week at least. In other fields of our farm not accessible to the poultry, the worms are at this writing (9th inst.) as abundant as ever.

Pinching.—Pinching is a species of pruning so far as it is used in horticulture. Its fitness for other purposes we need not discuss. During the month of June wonders can be accomplished by pinching the young growth of our finest evergreens, such as spruces, Silver firs, pines, etc. Especially do the Silver firs respond to this treatment. A specimen of the Nordmann's Silver fir, for instance, may be kept in perfect symmetry by pinching the leader and a few rampant side shoots while in their softest stage of full growth; and not only that, but the same plant may be made to take on the most comely curving and weeping shapes by simply pinching a part of the upward tending shoots. In fact, in the case of many plants, the use of the pruning-knife might be almost discarded, if pinching were practiced intelligently from an early age.

Many know what an influence on the size and quality of grapes is exercised by a system of well devised pinching. The sap may be thus forced back from the mere production of excessive wood, and employed in nourishing embryo grapes by simply pinching off some of the young growth beyond the newly formed bunch. Nor is pinching less valuable for the development of the beauty of ornamental trees.

But let us utter one word of warning against pinching too much and removing too many leaves. Our hot, changeable summers bear heavily on plants thus treated. Europeans can pinch very closely in their more equable and moister climate. But when Europeans come over here and treat our plants as they have been accustomed to manage their own at home, something is sure to suffer.

HONOR TO WHOM HONOR IS DUE.

Gratitude has been defined by a satirist as "a lively sense of favors to come." The sharpest point in the best satire is its close approach to similitude with truth, and the edge of the above adage lies in its very close application to the common events of human life. It is said that "the good that men do lives after them," and "the evil they have done dies with them." But this is far from true in ordinary affairs, indeed the contrary is the more frequently true. Perhaps one of the most useful men was Benjamin Franklin, to whom we owe the introduction of many of our commonest but most valuable household and industrial conveniences, many scientific discoveries and a vast amount of practical sense and wisdom bound up in small packages and known as proverbs, which are only inferior in the aggregate value to the proverbs of Solomon himself.

As an agricultural nation, we should never forget, as we use plaster or dilate upon its value as a fertilizer, that it was to Franklin's observation and ready application of valuable things to practical purposes, that we owe the introduction of plaster for this use. He observed the effect of this mineral upon the grass at the gypsum quarries, near Paris, and on returning home he tried it with remarkable effect, and thus brought it into use as a fertilizer. This truly scientific observer was the first to discover that lightning was simply an electrical discharge, and his discoveries led to the use of lightning rods as means of safety from the lightning stroke. We recently remarked that it was to his sagacity we owed the introduction of Broom corn, and it is but just that now and then our indebtedness to such men should be recalled lest their services may be forgotten and our gratitude fail to be bestowed as it deserves to be.

OUR CEREALS.

The Bureau of Statistics has lately published some interesting data in regard to the production and distribution of cereals in this country. In the 10 years from 1868 to 1878 our total production of cereals increased from 1,450,000,000 in the former year to 2,302,000,000 bushels in the latter. Of the whole national supply only three per cent. was exported in 1868 and ten per cent. in 1878, while in the twelve months ending June 30, 1879, nearly eleven per cent. of our entire yield was sent abroad—246,000,000 bush. Of corn we keep for home consumption 93½ per cent. of all we raise; of barley, 88 per cent.; of rye, 80 per cent.; of wheat, 75 per cent.; of oats, 99 per cent.; while the whole amount of our buckwheat is kept for home use.

Although corn is grown in all parts of the country and constitutes five-eights of our whole cereal crops, less than one-fourth of the States grow more than they require. Nearly all the surplus is produced by the single group of Ohio, Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri. Michigan, Wisconsin and Minnesota produce hardly enough for home use, while the seven States above named yield at the average rate of sixty-two bushels to each inhabitant. As late as 1859, the fifteen slave States produced 52 per cent. of the whole corn crop; but at present it is doubtful if any of them grows enough for home consumption, for in 1877 all the Southern States produced only 10,000,000 bushels more than in 1859, while the yield of the other States had swelled in the same period from 400,000,000 to 900,000,000 bushels. The center of production has moved west more rapidly than north, until now forty per cent. of the entire yield is raised beyond the Mississippi.

In the great corn belt the number of swine and cattle raised is proportionally much larger than in other sections, especially in Indiana and Illinois, and here most of the surplus corn is concentrated in these animals for shipment to other States and to Europe. Owing to the deficiency of capital to buy animals in the more newly settled States, much of their surplus corn is exported in the bulkiest form, and that, too, over the greatest distances, owing to their remoteness from market.

Of our wheat the Atlantic States produce only 17 per cent. against 30 per cent. in 1860. The central States in the same period have fallen from 54 to 40 per cent.; while the trans-Mississippi States have risen from 14 to 42 per cent. The New England States produce only three-tenths of a bushel of wheat to each inhabitant; the Middle States three and a third bushels per head; that is, only a trifle over half what they need; while Kentucky and Tennessee produce about six bushels; the Southern, Atlantic and Gulf States nearly as much; and are therefore over self-supporting, for owing to the large amount of corn consumed by negroes and others in the South, an average of about four bushels of wheat per head is held to be enough from Maryland to Texas. The area suitable for wheat in the Far West is much larger than that adapted to corn, inasmuch as the former can be grown from 2,000 to 5,000 feet above the level of corn culture, so that vast regions in Washington Territory, Dakota, Wyoming, Idaho and Montana, from which corn growing is virtually excluded, are admirably adapted to wheat culture.

BREVITIES.

Professor Riley says: "The worms (Army worms) abound during wet springs, preceded by one or more very dry years." This is evidently incorrect in the present case.

One of our plots of wheat, Yellow Missouri, presents a remarkable appearance. It consists of stems and heads only, every leaf having been devoured by the Army worm.

There is no plant that the Army worm seems more fond of than Timothy. There is scarcely a head left in the vicinity of the Rural Farm. During a short ride last Friday there were so many worms in the road that the tires of the wagon wheels were "muddy" with their mashed bodies.

We have ascertained that there is an atrocious amount of swindling going on (hereabouts at least) in the matter of selling hay by weight. For instance, a load of hay sold a few days ago was honestly weighed near the Rural Farm and a certificate given for 1,700 pounds. The purchaser, upon reaching Brooklyn or at some intermediate place, had it weighed again, and this load of hay under that certificate, as we ascertained by following it up, was sold in Brooklyn for 3,100 pounds!

A correspondent (S. G. C) writes us: "I think the Aquilegia is a humbug. I could send seed that is much ahead of those in color, size and beauty." Our correspondent is mistaken. The Bebb's Hybrid Aquilegias will not bloom until the second year. We distinctly stated that this seed was mixed with common and perhaps *worthless* sorts, but that enough of the "Bebb's Hybrids" would be found in each package to enable each subscriber to grow several plants.

Mr. W. I. Chamberlain is preparing to make an extended tour of agricultural observation through the great West and examine carefully the work done and the methods employed in some of our wide-awake Western States. After his return, the Ohio State Board of Agriculture, of which Mr. Chamberlain is now secretary, will hold a consultation with a view to decide more definitely as to its future work, so as best to promote the true interests of Ohio agriculture. In this work the Board asks and should receive the hearty co-operation of all.

Tornadors have been unusually numerous and destructive during the past week. One in Iowa killed 20, chiefly women and children, and wrought an enormous amount of mischief over a course half a mile broad; Illinois was visited by another; Texas and Maryland by others, and yesterday (Sunday) we had a juvenile one in this city and neighborhood. The aggregate loss in demolished homesteads, ruined crops, fences, barns, etc., must be up among the millions—to say nothing of the still more deplorable loss of so many human lives. The latest accounts from northern Texas tell us that the tornado and rain-storm noticed last week were far more disastrous and destructive of life and property than the first accounts represented.

A friend in Monmouth Co., N. J., writes us: "Rose bugs, for the first time since I have been here, have badly attacked my grapes. I could find no remedy for them in the books, except picking them off by hand. The servant girls and all turned out to do this, for it was a serious job. At second picking we did not get nearly so many as at first. I think a third picking will clear them out. Do you know any remedy for them?" We do not know of any better remedy. A good idea is to plant, near vines, plants which they prefer; such for example, as Sassafras, Spiræa sorbifolia and others. At the Rural Farm, Rose bugs have never before been so abundant. Ripe and ripening cherries are crowded with them and the same may be said of young corn plants and even potato leaves.

It costs but little more to raise Percheron horses than common animals, and the half-breds bring double prices; three-quarters to seven-eighths-bred, three to four times as much; full-breds all the way from $500 to $3,000 each. Next to Percherons, fine carriage horses pay best, and the West has a little material on hand to produce such, and can rapidly multiply it if disposed. Trotting horses are always a complete lottery, and the general breeding of them—especially by farmers—is attended in the long run with a heavy loss. It is, moreover, demoralizing to farmers' sons now growing up, and we want to turn their attention from this gambling business.

Gardening Illustrated" is the name of a floricultural weekly journal of 16 pages published in London by Mr. Wm. Robinson, founder and editor of the Garden, which is now well known and justly esteemed in America. This "Gardening Illustrated," though first published but two years ago, we learn from trustworthy authority, has reached a circulation of 50,000 copies per week, which is probably a greater number than that of all the other journals of the same class published in England combined. We congratulate Mr. Robinson who, for his never-faltering love of "The art which does mend nature—" has wrought great good in the horticultural world.

The Agricultural Gazette of May 24 says, referring to the Royal Speech upon the opening of Parliament:—"It has not one word in recognition of the straits of British agriculture. It is certainly no wish of ours that agriculturists should be treated in any way different to other classes. And that legislation should be carried on for the general interests of the nation, and not for those of any particular section, is a truth we do not care to dispute. Yet the cheap satisfaction of knowing that their trial has not been unnoticed—as well as the good faith and spirit with which that trial has been endured—might have been afforded to the tenantry of Great Britain without any one being the worse for this acknowledgment having been conceded."

The Pacific Rural Press of April 17th, is a double number. That is, it is just about twice the size of the Rural New-Yorker. We are always pleased to see evidences of prosperity and enterprise in our agricultural and horticultural press, which, according to all accounts (with a very few exceptions), is not so well sustained by the farmers of our farming country as it should be. The pressure of farm work at this season often renders it difficult for us to look through our exchanges promptly. Hence it is that the Rural Press of the above date escaped us until now. The editors thus modestly refer to the number. "It has cost a long pull on the editorial oar; it has gone down into the publishers' pockets to the lower hem. If it is good, we are glad of it. If it is poor, no harm will be done except to our own conceit."

Sunstruck Hemlocks.—Having enjoyed special opportunities for observing the effect of the recent drought and excessive heat on many thousands of evergreens, we wish to express our sympathy for the hemlocks. They have been in many cases literally sunstruck. The ground was hot and dry and the hemlocks just in their tenderest growth. Under these unfortunate conditions, the sun's rays, made fiery by the heat of 95 degrees Fahrenheit in the shade, struck many hemlocks to the heart in an hour. In one instance we observed a broad-leaved hemlock (Abies Canadensis macrophylla) that had grown vigorously three years in the same spot utterly dead, sunstruck. And this case is only one of several similar cases we have noted. Other evergreens suffered at the same time, and even the young growth of deciduous plants was burned in spots, yet nothing has been, according to our observation, as much scorched and killed as the hemlock and its varieties.

We have recently had the pleasure of visiting two of the most successful small fruit-growers who ship fruit to this market, namely Mr. J. T. Lovett, Little Silver, N. J. and the Rev. E. P. Roe, Cornwall-on-the-Hudson. Mr. Lovett is now thoroughly established and his well stocked nurseries are kept in excellent order. Both places had suffered from the recent severe drought, especially the strawberry crop. We found that the strawberry season in New Jersey was at least eight or ten days earlier than at Mr. Roe's place. Mr. Roe has about 100 varieties of strawberries, and some of the newer sorts are very promising. One plant of the Bidwell picked out at random, was laden with a fruitage of 75 berries, ripe and green, besides abortive flowers; another plant of the Seneca Queen, also taken at random, had 48 berries. Mr. Roe's ideal strawberry culture is hill culture with the rows three feet apart and the plants one foot apart in the rows. We have had a number of the best new strawberries engraved and shall in due time present them to our readers.

Typhoid Fever from Milk Affected by Impure Water.—An outbreak of typhoid fever recently took place in England, caused by using milk contaminated with fever germs. A physician was sent to the farm from which the milk came, to ascertain the cause of this. The farmer showed him the brook where he washed his milk cans, and the water looked clear and without any sign of pollution. But the physician was not satisfied with this examination, and being confident that there must be pollution somewhere, he followed the stream up for two miles, and then found pollution enough to poison a large town. A sewer emptied here into the brook, a stagnant cesspool overran into it in wet weather, and near-by in the water, lay a number of putrid carcasses of pigs and calves, which had died probably of typhoid fever, for that had been prevalent lately among the domestic animals around. This shows the wicked carelessness of people in not immediately burying dead animals deep in the ground, at a distance from any well, spring, or stream. It should also incite all where a fever breaks out, to search instantly for the cause and persevere till it is ascertained and removed.

Literary Miscellany.

THE PRESS AND THE PLOW.

We envy not the princely man,
In city or in town,
Who wonders whether pumpkin vines
Turn up the hill or down.
We care not for his marble halls,
Nor yet his heaps of gold,
We would not own his sordid heart
For all his wealth twice told.

We are the favored ones of earth,
We breathe pure air each morn,
We sow, we reap the golden grain,
We gather in the corn.
We toil—we live on what we earn,
And more than this we do—
We hear of starving millions round,
And gladly feed them too.

The lawyer lives on princely fees,
Yet drags a weary life,
He never knows a peaceful hour,
His atmosphere is strife.
A merchant thumbs his yardstick o'er,
Grows haggard at his toil;
He's not the man God meant him for;
Why don't he till the soil?

The Doctor plods through storm and rain—
Plods at his patient's will;
When dead and gone, he plods again
To get his lengthy bill.
The printer—bless his noble soul!
He grasps the mighty earth,
And stamps it on our daily sheet,
To cheer the laborer's hearth.

We sing the honor of the Plow,
And honor of the Press—
Two noble instruments of toil,
Each with a power to bless.
The bone, the nerve of this fast age,
True wealth of human kind;
One tills the ever-faithful earth,
The other tills the mind.

JOHN ASCOTT'S DAUGHTER.

BY CHARLES RICHARDS DODGE,
Author of "Louise and I."

(Continued from page 381.)

CHAPTER XV.

THE NEW OWNER.

The day following the sale was cold and dreary. It had rained incessantly from day-break, and there was every prospect of a long storm. Within, without, was dark and gloomy. May was sitting by the window, her forehead pressed against the pane to cool its burning fever, and was alone with thought. Her eyes seemed to rest upon the bed of myrtle trailing beneath the window, but in truth they were so filled with the heavy mists that hung upon their lids, she saw nothing, nor heeded nature's tears, even, as they fell patter, patter upon the sill before her. George had come in from his chores quite early in the day, and for an hour had been sitting in another part of the room in a large rocking chair, his hands clasped together behind his head, his face turned upward to the ceiling. Neither had spoken for the full hour and each felt that but one drop more was needed to fill their cup of misery to overflowing.

"It is over, May," said her husband, at length, "and we are just where we stood a little over two years ago."

"Yes," she answered, sadly.

"We have lost our home——"

"But we have health, George—that is a great blessing in itself. Then you will have all the money you first put into Maplewood, and a little for the two years, hard work. Let us be thankful——"

It was bravely begun, but her voice faltered, and she did not finish the sentence. George arose from his seat and nervously paced up and down the room for some moments, his hands crossed behind him.

"If I only knew what that dignified old fellow was going to do with the farm—" he commenced reflectively. "Skinner is coming to-morrow with the papers, and then I suppose, we shall know all about it."

"Yes—we shall know all about it," his wife answered, giving a peculiar emphasis to the words. She paused a moment, and then added: "And I shall leave dear old Maplewood forever."

"It is that, that makes it so terrible to me," George exclaimed with feeling. "Oh heaven! was ever a man's life more unfortunate.'

At this juncture carriage wheels were heard in front of the house. The horses stopped, some one alighted and stepped upon the broad door-stone; there was a knock at the door and in a few moments George was astounded to see the tall figure of his father enter the room.

"Why father!" he exclaimed.

"It seems you've not forgotten me."

"No, sir. I have not forgotten you."

"And I don't intend you shall," Mr. Ashton answered looking out from under his great shaggy eyebrows in the direction of May. "*You're* well, are you?"

"Will you be seated, sir?" she asked, starting to leave the room.

"You're coming back, ain't ye? I want to say something to ye."

"I presumed I should be intruding."

"Well, no, I guess not. Sit down both of ye. So you are in trouble, George?"

"I *have* been in trouble, but it is all over now."

"It is, eh? That's all right, and leaving Maplewood won't come so hard."

"Do you come here to taunt me, father."

"Well no, but I heard the farm was sold yesterday, and I came round to see if I could do anything for ye."

"Rather late for that. You could have helped us day before yesterday considerably."

"Let me see. Six thousand and something it went for. That gives you back your aunt's money, perhaps with interest, for the two years. That's better luck than might have befallen ye."

"Is that all you have come to say?"

"That's *about* all I have come to say to you, and after I have had a little chat with your wife I'll go."

He turned towards May, and for a momont there was an awkward pause.

"Umph! hem! I never thanked ye for that butter you was good enough to leave with Saray for me a year ago. It was *very* good butter. Hem I was sorry when it was gone. I—I—didn't treat you jest right that day, but fact is—ahem!—you appear to be a different sort of a gal from what I thought you were. To tell the truth, I've made up my mind that there's a good deal of the Ashton about ye—your father was too fond of books to suit me—so I—well—I didn't like the notion of your being turned out of the old place a second time, and—there! I guess I'd better go home before I do something foolish. Here's the deeds, May, I bought Maplewood myself, and as your father—poor man—wasn't able to give it to ye, jest take it as a weddin' present from me, *improvements* and all."

"Father!"

"Forgive me, May, for the trouble I've made ye. I'm a crusty old dog, I know, but tho sayin' never too late to learn or never too old to mend, or something of the sort, fits me exactly. We'll let bygones be by-gones and say nothing more about it."

"Father, you have made us happier than you can know."

"Never mind the thanks, George. It's ended all right, so we'll rub out the old score and begin again. But I told ye, if you displeased me and married the Ascott gal, not a cent, and I've stuck to it. I will say for your comfort, however, that you've run the farm mighty pretty—all to that mortgage business, but it'll be a lesson for yo in the futur' never to put on improvements, or do anything in fact *with other people's money*. Not even Mrs Ashton's here. But I'll warrant ye she's got sense enough to take care of her own—trust May for that. Now, daughter, just let me take a look at that young man I've heard so much about, and I'll scamper."

"Of course you will stay to dinner, father," said George. "You mustn't drive back in all this storm."

"Of course you will stay," May urged. "I've—more of that butter."

"There, I'll stay," and the old gentleman's eyes twinkled merrily.

He stayed to dinner and spent the afternoon; then he stayed to tea, and finally stayed all night, and as the morning dawned with bright skies and a clear, sweet atmosphere after the storm, he stayed all the forenoon to go over the farm with George. It seemed like a dream to the young couple after the dark experience of the last week, and it is safe to assert that three happier people could not be found in S—— than the three that gathered around the family board upon this bright June day.

CHAPTER XVI.

CONCLUSION.

Five years have passed since May Ashton came into possession of Maplewood. With capital at his command George has become a successful farmer, and is accumulating a fair share of this world's goods. His father is still hale and hearty and takes a just pride in his son's achievements. He is a frequent visitor at the farm, spending weeks at a time with his children, or to come more nearly the truth, with his grand-children, for he makes a complete nursery-maid of himself upon these occasions.

John Ascott Ashton is a blue-eyed, fair haired little fellow, nearly six years old, his mother's idol and "her own boy" in every sense of the word. Elbridge Ashton Jr., almost three, is a chip of the *old* block—a thoroughly wide-awake irrepressable, his grandpa's idol of course.

"What are you going to do with the boys, George?" the old gentleman asked one day, as they were playing in the library.

"Bring them up with the idea that they must earn their own livings." George answered "I shall give them liberal educations, and then let them follow the bent of their inclinations."

"Elbridge there, reminds me of his father when he was a little cub. I guess you had better send that boy to the scientific school, and he'll take care of the family one of these days. The other fellow, though, is an Ascott; he wants regular college larnin' and perhaps someday he'll turn out a member of Congress or a minister—or something. Who knows?"

William and Charles are jogging along in business with fair success. They often spend Sunday at the farm and are proud of their younger brother and his wife. Sarah and May see each other very often and have grown to love each other almost as own sisters. May's old friends at N—— are still warm and friendly, and George will ever remember, with gratitude, Mr. De Fondville's kind offer of assistance, at the time the farm was sold, even though the letter was delayed in transit until the farm was in May's possession.

Old Silas Wilkins and his good wife are still alive, but George has leased the farm, allowing the old people to remain upon it. The old gentleman does little work, but he still continues to give good advice and loves an argument as well as ever. He says he believes in book-farming, "perviden a man has got a powerful sight o' common sense into the bargain."

A word for George and May; they have never forgotten the lessons of their early farm experience nor the dark cloud that threatened the happiness of their married life. As a pilot learns the dangerous reefs and shoals but to avoid them, so they are steering their precious bark, by a sure chart and compass, over a sunlit sea toward that fair haven where storm is never known.

Here let us leave them—floating down life's stream together—successful through earnest purpose, happy in their success, mindful of the nobler aims of life, while living for each other, and proving to the world that love and duty ever should go hand in hand.

BREAD-MAKING IN SPAIN.

The bread in the south of Spain is delicious; it is as white as snow, close as cake, and yet very light; the flour is most admirable, for the wheat is good and pure, and the bread well kneaded. The way they make this bread is as follows: From large, long panniers filled with wheat, they take out a handful at a time, sorting it most carefully and expeditiously, and throwing every defective grain into another basket. This done, the wheat is ground between two circular stones, as it was ground in Egypt two thousand years ago, the requisite rotary motion being given by a blindfolded mule, which passes around and around with untiring patience, a bell being attached to his neck, which, as long as he is in movement, tinkles on; and when it stops he is urged to his duty by the shout of "arra mula" from some one within hearing. When ground, the wheat is sifted through three sieves, the last of these being so fine that only the pure flour can pass through it; this is of a pale apricot color. The bread is made in the evening. It is mixed with sufficient water with a little salt in it, to make into dough; a very small quantity of leaven or yeast in one batch of household bread as in Spain, would last a week for the six or eight donkey loads of bread they send every day from their oven. The dough made, it is put into sacks and carried on the donkeys' backs to the oven in the center of the village, to bake it immediately after kneading. On arriving there the dough is divided into portions weighing three pounds each. Two long, narrow wooden tables on trestles are then placed down the room, and a curious sight may be seen. About twenty men, bakers, come in and range themselves on one side of the table. A lump of dough is handed to the nearest, which he begins kneading and knocking about with all his might for about three or four minutes, and then passes it on to his neighbor, who does the same, and so on successively until all have kneaded it, when it becomes as soft as new putty and ready for the oven Of course, as soon as the first baker has handed the first lump to his neighbor, another lump is given to him, and so on until the whole quantity of dough is kneaded by them all. The bakers wives and daughters shape the loaves for the oven, and some of them are very small. They are baked immediately.—*Colorado Farmer.*

WHAT A VOLCANO CAN DO.

Cotapaxi, in 1738, threw its fiery rockets 3,000 feet above its crater; while in 1754, the blazing mass, struggling for an outlet, roared so that its awful voice was heard at a distance of more than 600 miles. In 1797 the crater of Tunguragua, one of the great peaks of the Andes, flung out torrents of mud which dammed up the rivers, opened new lakes, and in valleys 1,000 feet wide made depcsits 600 feet deep. The stream from Vesuvius, which in 1837 passed through Torre del Greco, contained 33,000,000 cubic feet of solid matter; and in 1793, when Torre del Greco was destroyed a second time, the mass of lava amounted to 45,000,000 cubic feet. In 1760 Ætna poured forth a flood which covered eighty-four square miles of surface, and measured nearly 1,000,000,000 cubic feet. On this occasion the sand and scoria formed the Monte Rosini, near Nicholosa, a cone of two miles in circumference, and 4,000 feet high. The stream thrown out by Ætna in 1810 was in motion at the rate of a yard a day for nine months after the eruption; and it is on record that the lava of the same mountain, after a terrible eruption, was not thoroughly cool and consolidated ten years after the event. In the eruption of Vesuvius, A. D., 79, the scoria and ashes vomited forth far exceeded the entire bulk of the mountain; while in 1660 Ætna disgorged more than twenty times its own mass. Vesuvius has sent its ashes as far as Constantinople, Syria and Egypt; it hurled stones eight pounds in weight to Pompeii, a distance of six miles, where similar masses were tossed up 2,000 feet above the summit. Cotopaxi has projected a block of 100 cubic yards in volume a distance of nine miles; and Sumbawa, in 1815, during the most terrible eruption on record, sent its ashes as far as Java, a distance of 300 miles of surface, and out of a population of 12,000 souls only 20 escaped.—Weekly Journal.

FLOWERS.

Parisians are genuine flower lovers. Even in the densest quarters of Paris you may see peeping over lofty walls, or at the bottom of some tunnel-like archway, fragments of groves, which, on nearer acquaintance, will be found to be cooled by fountains and adorned by statuary. Romancers exaggerate them into parks, but as a rule they cover only a few square yards. In the Faubourg St. Germain, it is true, there are some delightful gardens of considerable extent, where one may walk by moonlight and listen to the buzz of the mighty city around. Those who cannot enjoy the luxury of a plot of ground make gardens in green boxes on their window-sills, or buy pots of sweet basil, the heliotrope night-shade, jasmine and mignonette at the Qua, aux Fleurs. On certain days of the year—the Ste. Marie, for example, every third person being called by that name—the streets of Paris resemble a fragrant Birnam wood. Everybody is moving about, bearing gigantic bouquets or portentious pots of flowers, for it is the custom to make presents of this kind on such occasions. The imperial flower is the violet—a singular desecration of that modest child of the woods.

HOME.

I never saw a garment too fine for man or maid there never was a chair too good for a cobbler or a cooper or a king to sit in; never a house too fine to shelter the human head. These elements about us, the glorious sky, the imperial sun, are not too good for the human race. Elegance fits man. But do we not value these tools a little more than they are worth and sometimes mortgage a house for the mahogany we bring into it? I had rather eat my dinner off the head of a barrel, or dress after the fashion of John the Baptist in the wilderness, or sit on a block all my life, than consume all myself before I got to a home, and take so much pains with the outside that the inside was as hollow as an empty nut. Beauty is a great thing, but beauty of garment, house and furniture are tawdry ornaments compared with domestic love. All the elegance in the world will not make a home, and I would give more for a spoonful of real hearty love than for whole shiploads of furniture and all the gorgeousness all the upholsterers in the world can gather—Dr. Holmes.

VARIETIES.

If "conscience makes cowards of us all," ought not the best soldier to be one without a conscience?

If a man can be happy and contented in his own company he will generally be good company for others.

To attain long life—love nothing too violently hate nothing too passionately; fear nothing too strongly.

Moderation is the father of health, cheerfulness, and old age. Excess has a family too numerous to be counted.

Edison will next turn his attention to the construction of an electric pan-cake machine for Vassar College.—Boston Post.

What makes people so discontented with their own lot in life, is the mistaken idea which thoy form of the happy lot of others.

NEW PUBLICATIONS.

The Prodigious Adventures of Tartarin of Tarascon. Translated from the French of Alphonse Daudet 12mo. Cloth, $1.00. Paper, 50 cents. Boston, Lee & Shepherd.

"The Prodigious Adventures of Tartarin of Tarascon," by Alphonse Daudet, is a very picturesque book—a very good satire—and admirably translated. Indeed, Mr. Minot has caught the author's style so well, one might easily believe at times he was reading the original. The book differs very much from Daudet's more recent works. It has a breath of fresh life about it which if not so finished in style, is very charming. The pictures constantly bring Gerome to mind. The satire, if not original, is presented in an original way. Tartarin is a would-be hero. "Don Quixote and Sancho Panza in the same man! You understand what an ill-assorted household theirs must be! What combats! What altercations! Tartarin-Quixote, getting excited over Gustave Aymard's narratives, and crying, 'I go!' Tartarin-Sancho, thinking only of rheumatism and saying, 'I stay!'" Tartarin-Quixote persuades himself that he has been, and fought, and conquered. He tells the simple Tarasconians, who idolize him, grand stories of his achievements. "He does not lie; he deceives himself. The descriptions of Algiers and of African scenery elsewhere are very vivid. One can almost see the colors. Of course poor Tartarin is cheated and made fun of in all directions. In his good nature, generosity and untold wealth, he is not unlike the Nabob. It is a foundation for the reality of all future stories from Tartarin-Don Quixote.

The True Story of the Exodus of Israel, together with a brief view of The History of Monumental Egypt, Compiled from the work of Dr. Henry Brugsch-bey, edited with an introduction and notes by Francis H. Underwood. Price $1.50. Boston, Lee and Shepard.

"The True Story of the Exodus of Israel" sounds like a challenge. But whatever may be the conclusion to which it leads, the main question is—Is it true? If it is *not* true, people may still believe that the waves of the Red Sea continue to roll over the chariots and armor of the drowned Pharaoh's host. If it *is* true, it will lead to a more reasonable view of the ancient story. Dr. Brugsch, after thirty years of exploration and study, has been able to fix the residence of the Israelites in Egypt, and the birth-place of Moses. Having a thorough knowledge of the geography, ancient and modern, he shows the errors of the translators and commentators. This account Dr. Brugsch declares to be wholly in accord with Scripture. The book is valuable in other respects, especially for the new light thrown upon the immense antiquity of the kingdom, and its wonderful monuments with their wealth of historic inscriptions. It is illustrated with a map of Ancient Egypt, reproduced from the original in Dr. Brugsch's "Egypt under the Pharaohs."

Odd or Even. By Mrs. A. D. T. Whitney. Boston: Houghton, Osgood & Co.

This new novel by Mrs. Whitney adds another to the list of her many interesting productions. While free from the sensational characteristics of a host of modern books, it partakes of the freshness of the times. The delineations of character and pictures of scenery are points of excellence. To be in communion with the people and in view of the scenes so vividly portrayed would be a pleasure not always experienced. The reader concludes upon reflection that imaginary powers are exceedingly elastic, or that the writer's path in life has lead through naught but flowery vales. Her standard of morality is elevated and calculated to impart a lesson which none should fail to heed.

Elsie's Widowhood. By Martha Finley. Published by Dodd, Mead & Co., New York.

This little book is designed to prove a pleasing story and also a means of showing how trial and affliction may be borne with untiring grace, if the love of Christ be the motive power.

BRIC-A-BRAC.

As it will soon be time to ask: "What are the wild waves saying?" we take this early opportunity to candidly confess that we do not know.

If there's a note that's due, you bet
You'd better remember it while you may:
For it's important you shouldn't forget
To-day was to-morrow yesterday.

A HUSBAND telephoned to his wife: "What have you for breakfast, and how is the baby? The answer came: "Buckwheat cakes and the measles."

THERE was a lady named Ella,
Who carried a silk umbrella:
There came a typhoon
Which made it a balloon,
And floated her off with her fellow.

A STORY is told of General Butler's sarcastic retort upon a Massachusetts judge whom he was teasing for a ruling favorable to a cause he was defending in court. The judge got out of patience at last, and somewhat testily exclaimed: "Mr. Butler, what do you think I sit here for?" The General quietly shrugged his shoulders and replied: "The Court has got me now."

"HERE, John, don't eat those crackers up,"
Said she with a hateful snap;
"They're some I've saved on purpose
To put in the baby's pap."

"Well," said John, edging for the door
And reaching for his hat:
"What makes you look so cross about it, then?
Aint I the baby's pap?"

THE PARROT'S PRAYER.—Capt. James Etchberger has a parrot who can say several words in good English. The parrot used to be in the room in which the Captain's family met to pray. One morning the parrot went out into the garden, when a large hawk flew down and caught the parrot in his claws, bearing it off over the tree tops. All at once the parrot shrieked out, "O Lord, save us! O Lord, save us!" which frightened the hawk so much that he dropped his prize

NEVER SO STRANGE A YEAR.

THERE never was so strange a year;
The seasons seem all out of gear;
The summer took so much of fall,
We had no autumn days at all;
The fall, in order to get square,
Took all of winter it did dare;
And winter evens up the thing
By lingering in the lap of spring.—Puck.

AN old farmer out in Indiana says, that for his part he don't know where the present rage for trimming bonnets with birds is going to end Only four or five years ago he bought his daughter a humming-bird; next year she wanted a robin, the next a pheasant, and afterward he had to chain up his Thanksgiving turkey or she'd have had that perched on top of her head.

FATE OF A DASHING YOUNG MAN.

A dashing young man in St. Paul
Loved a maiden exceedingly tall;
Two nights in a week
He would muster up cheek
And make the fair creature a call.

One day her pa shouldered his gun,
And went out to discover the son
Of a sea-cook who would
On a young heart intrude,
And say he was only in fun.

He met the young man in his store,
And blew him out through the front door;
A father-in-law jury
Let him off in a hurry,
But the boys shunned that girl evermore.
—*Chicago Times.*

SAYINGS BY JOSH BILLINGS.—Those who are too proud to enquire what a thing kosts when they buy it, are the fust ones to find fault when they cum to pay for it.

Thare iz a grate deal ov religion in this world that is like a life-preserver, only put on at the moment ov extreme danger, and then half the time put on hind side before.

Pashunce iz a good thing for a man to hav, but when he has got so much ov it that he kan fish all day over the side ov a boat, without enny bait on hiz hook, laziness iz what's the matter ov him.

It iz the prudes in this world that need the most watching, coquets are too karcless to be dangerous. Most men are like a hop vine, if they don't hav sum kind of a pole to klimb, and then stik to it, they won't promulgate much hops.

ONLY a woman's hair,
Binding the now to the past,
Only a single thread
Too frail to last.
Only a woman's hair
Threading a tear and a sigh,
Only a woman's hair
Found to-day in the pie.
—Steubenville Herald.

HOW SHE AVENGED HERSELF.

In the absence of the head of the household, the nurse furnishes the census-taker with the information he desires:

"My master," she says, "is an idiot."

"Completely?"

"Completely. Not of the violent kind, but harmless. His wife is eighty-two years old. Only one child, a son aged thirty-five. No, he can neither read nor write."

"Thank you, mademoiselle."

"Do not mention it, sir."

"Catharine," says the butler, when the official departed. "Where do you expect to go when you die? You know master belongs to the Academy, and missus is only thirty, and their boy is at the infant school."

'I know it; but I'll teach them to sack me for having a few habitual discre a ies in the marketing account. Avenged !"

Queries to the moved:

Well, how do like your new quarters?
Are you all settled yet?
How did the stove-pipe fit?
Did the carpet stretch out all right?
How did the crockery pan out?
Found your tooth-brush and razor yet?
How does the furniture look now?
Don't you wish you had never moved!
Yonkers Statesman.

AN EDUCATED HORSE.

"You ask if we have any particularly bright horses," replied a hook and ladder man. "Here is Peter; he's been with us nine or ten years, and we rather brag on him. Let me introduce you. Peter, here is a chap from the Detroit Free Press."

Peter nodded his head and pawed the floor.

"Peter, have you been to a fire to-day?"

He shook his head.

"Were you out yesterday?"

He nodded.

"Peter, how old are you?"

The horse pawed thirteen times with his right foot.

"That's right, old boy. Do you remember when a loafer stabbed you at a fire?"

He did.

"Where is the scar?"

Peter bent himself almost double to bite his hip at a spot where a scar could be traced.

Now, Peter, show the Detroit man how you take your place at the pole.

Down went the chain, and the horse covered the distance at two jumps.

"Now walk round the truck and come and take my hat off."

The horse obeyed to the letter.

"Now," continued the man as he laid down on the floor, "step over me."

Peter lifted up his feet very high and stepped softly over, and returned to his stall.

"That horse is one of us," said the man as he brushed the dust off and sat down. "We can rest the foot of a ladder on his back and he will not move. Wherever we stand him at a fire there he will stay without watching He eats with us, chews tobacco, likes beer and would learn to play dominoes in a week if he could only handle them.—New York Letter.

PARABLES.

I knew a man to whom the boon was given
Into the beauty of eternal heaven
To gaze one wondrous day:—
He looked,—and turned away.

I knew a man upon whose dazzled sight
Once, through the utter blankness of the night,
A star of Truth did rise:—
He saw—and veiled his eyes.

I knew a man who stood one summer morn
Between two paths; and him a voice did warn:
"This path,—not that, my brother!"
He heard—and took the other.

I knew a man to whom a human soul
Turned trustful once with sweet self-uncontrol:
Before Love's supreme call
He faltered—and lost all.—*Barton Grey.*

"MY boys," said a strict churchwoman to her children at the beginning of the recent Lenten season, "I should like very much to have you deny yourselves something during the solemn weeks of Lent. Will you do it?" "I will, mamma," said Johnny, a sedate child, who was very fond of griddle-cakes; "I'll do without my cakes in the morning." "That's a good boy. And what will *you* give up, Harry?" she asked of his little brother, a bundle of the purest mischief that ever lived, who was fond of play, but had no love for books. "Oh, I'll give up going to school, mamma, for my part," was his ready answer.

YOUNG ladies who wish to have small mouths are advised to repeat this at frequent intervals during the day: "Fanny Finch fried five floundering frogs for Francis Fowler's father."

SNATCHES OF HISTORY.

CARDS were invented in France in 1390.

Windmills were first known in Spain, France and Germany in 1299.

Alexander the Great died 323 years before the Christian era.

Mexico was colonized just one hundred years before Massachusetts was

The Egyptians made glass and colored it beautifully three thousand years before Christ.

The first building of the Egyptian pyramids is supposed to have been about 1500 years before Christ.

Excess in dress was restrained by law in England under Edward IV, 1465, and again in the reign of Elizabeth in 1574.

Sir John Chardin, in his "Travels in Persia," says that the Persians smoked tobacco long before the discovery of America.

The Habeas Corpus—the people's writ of right, passed for the security of individual right—was made a law May 27, 1672.

Charles Lamb was born of very humble parents, and received his education at Christ's Hospital, London, a great free public school founded in June 155, by Edward VI., the boy-king, only ten days before his death.

Lord Macauley was born at Rothley Temple, the country-seat of a relative, on the 25th of October, 1800. He died on the 28th of December 1859, at his residence, Holly Lodge, Kensington, a north-western suburb of that modern Babylon—London.

The Romans looked upon the comet of the year 44 B. C. as a celestial chariot of fire conveying the soul of Julius Cæsar to the skies. The great comet of 1600 was deemed a presage of the revocation of the edict of Nantas. Even that of 1811 was thought to have forshadowed the Russian campaign and the burning of Moscow.

For Women

CONDUCTED BY MISS RAY CLARK.

DOMESTIC GREETING.

AS HOMEWARD comes the married man
He's met by wife at door,
With fond embrace and loving kiss,
And—"Baby's throat is sore!

"And did you think to stop at Brown's
And get that marabout
I ordered yesterday? And, dear,
Fred's boots are all worn out?

"I'm glad you are so early, John,
So much I miss you dear——
I've had a letter from Mamma—
She's coming to live here.

"How very glad you look, dear John;
I knew that you would be—
The flour's out, the butter, and
You must send home some tea.

"That plumber has been here again—
If you don't pay he'll sue:
And Mr. Prendergast called in
To say your rent was due.

"Fred's trousers are all cotton, John;
You thought they were all wool—
O! that reminds me that your son
Was whipped to-day at school.

"The roof has leaked and spoiled the rugs
Upon the upper hall;
And Jane must go, the careless thing!
She let the mirror fall.

"To-day, as she was moving
(The largest one, dear John),
Of course it broke: it also broke
The lamp it fell upon.

"What makes you look so grave, my love?
Take off your things and wipe
Your feet—and only think, to-day
Jane broke your meerschaum pipe,

"Oh, John! that horrid, horrid word;
You do not love me, dear,
I wish that I—boo-hoo—were dead—
You're cross as any bear."

BRACKET AND COVERING.

WHEN the mantel lambrequin described in my last article, was finished, there was a half yard of brown canton-flannel left and there was a corner that needed a bracket. A cover to a wooden cigar pail was sawed to fit the corner. I have learned to use saw, hammer and nails very well, and insist upon my girls learning also, so we are not dependent upon the busy farmer and his "men" for any little work that requires their use. The bracket was covered with the cloth tacked on smoothly with window shade tacks, and a lambrequin eight inches deep, cut in three irregular scollops and pinked. The points to fit or t · fill in the scollops were of dark blue opera flannel Each brown scollop was decorated with two slender lily leaves of salmon-colored flannel vined with green silk and button holed loosely on. Between the leaves was a lily bud of white flannel embroidered with scarlet and blue in herring-bone stitch. (Never mind following nature very accurately; improve on her!!) The points were embroidered with herring-bone and chain-stitch in bright colored silks and worsted. The ends of the scollops and points were finished with tassels of the salmon-colored flannel tied with blue. The bracket is very bright, pretty and cheap.

The cigar pails can be found at any tobacco store, and cost only 10 or 12 cents, pail and cover. The pails we find very durable and useful on the farm.

A high, narrow mantel in the "spare room" is decorated in a fanciful Japanese manner that I may describe at another time. MRS. O. W. D.

HOW TO MAKE A CARD RECEIVER.

IN the autumn when the long brown cones had ripened on the Pine, Norway Spruce, and other Fir trees, it struck me that something pretty might be made of them; so, after comparing their beauty, I decided on the cones of the Norway Spruce, and accordingly collected a quantity of them.

Our center table had no card receiver and I had no money to buy one I concluded therefore to try if one could be made of the cones; I cut each scale or shell from them, and sewed them on six leaves of exactly the same size, cut from card-board.

These leaves were wider at the top than the bottom, when I had sewed the brown scales on them, so that each scale covered the one above, to the point where nature had burnished it.

I sewed all six scale covered leaves together, and covered the seams with scales. This formed a bottomless basket measuring 8 inches across the top, and each leaf forming a scallop. I next cut a card-board bottom, which measured 4 inches across, this I covered with glazed cambric, the color of the scales, and sewed firmly at the bottom of the leaves; I then put another row of scales around this to hide the stitches. The basket was lined with quilted crimson satin, and finished around the top with a silver cord.

The scales I varnished with copal varnish and after this had dried off, I set my basket out for use.

EULALIE.

WHITEWASHED BABIES.

A MISSIONARY stationed at one of the South Sea islands determined to give his residence a coat of whitewash. To obtain this in the absence of lime, coral was reduced to powder by burning. The natives watched the process of burning with interest, believing that the coral was being cooked for them to eat. Next morning they beheld the missionary's cottage glittering in the rising sun white as snow. They danced, they sang, they screamed with joy. The whole island was in commotion. Whitewash became the rage. Happy was the coquette who could enhance her charms by a daub of the white brush. Contentions arose. One party urged their superior rank; another obtained possession of the brush, and valiantly held it against all comers; a third tried to upset the tub to obtain some of the precious cosmetic. To quiet the hubbub, more whitewash was made, and in a week not a hut, a domestic utensil, a war-club or a garment but was as white as snow; not an inhabitant but had a skin painted with grotesque figures; not a pig that was not whitened, and even mothers might be seen in every direction capering joyously, and yelling with delight at the superior beauty of their whitewashed babies.—Chambers' Journal.

ABOUT WOMEN.

Eugenie has arrived at Cape Town, South Africa.

A college for young women is about to be established at Norfolk, Va., by the citizens of that place.

Mrs. John C. Green has given $100,000 to the American Sunday-school Union, to be used in developing a higher order of Sunday-school literature.

The Queen has declined to let the Prince and Princess of Wales occupy Windsor Castle during the Ascot races unless they will allow her to revise the list of their guests.

Mrs. Harriet Beecher Stowe and her family have returned to Hartford, Ct., from their winter home in Mandarin, Fla. Her orange grove at Mandarin during the last year brought her a profit of $2,000 an acre.

Adelaide Neilson blushingly acknowledged to a reporter that this is her final farewell to America, and that she is going to change her name—or Addie new one to it.

Mrs. L. A. Cones, of Cincinnati, has recently been appointed official reporter for the courts of Washington county. This, says the Dayton Record, is perhaps the first case of a lady's being appointed to such an office in this state.

MISS KATE FIELD will soon go to Europe to consult Worth with regard to dress, to see about establishing relations between the London and New York Ladies' Co-operative Dress Associations, and to procure fresh music and novelties for her monologue.

Madame Jenny Lind Goldschmidt lives in a large and pretty house in South Kensington, within a few doors of Madame Albani. It is surrounded by trees and flowers, and furnished with the modern art draperies and quantities of pictures and old China.

The local examinations of high and middle class boys and girls at Cambridge, Eng., the past year, show that the girls care much more for English history than the boys, and that many of them have acquired a most useful grasp of the principles of political economy.

Miss Howard, a popular lady physician at Tientsen, China, is a Canadian girl, and received her education at the Michigan University. For successfully treating the wife of a prominent Chinese statesman, she has been sent to Pekin in a royal barge loaded with presents.

Mrs. John M. Paul, "Miss Belle Cook," of California, who was to ride the twenty-mile race on horseback next September at Minneapolis, Minn., with a prominent female rider of Minnesota, was attacked by a robber a few days ago at her home, wounded by two pistol shots and struck on the head with a pistol.

Mrs. Gladstone, the wife of the famous English statesman, is said to be the most popular member of the distinguished family to which she belongs, mainly on account of her faithful discharge of the duties appertaining to her social position, and the thoughtful kindness and consideration she habitually displays in her relations with deserving women who belong to the classes frequently snubbed by aristocratic ladies.

Miss Lizzie M. Guthrie, whose name is widely known in connection with missionary enterprises in India and Japan, died on Saturday in San Francisco. She was on her way to Yokohama, having been in this country the greater part of the past year recruiting her health. She was going out again under the auspices of the Woman's Foreign Missionary Society of the Methodist Protestant Church, and was the first missionary sent out by that society.

At the marriage of the Princess Pauline of Wurtemburg, to Dr. Willem, the clergymen in a brief address preceding the ceremony reminded the bridegroom that in marrying him the royal bride had surrendered a good deal that was grand and valuable in life. When the bride's turn came, however, to make the marriage response, she added to the syllable "yes" the following words in a quiet tone: "I declare I give up nothing that can at all be valued in comparison to the happiness awaiting me, and I consider my lot a most enviable one."

QUEEN VICTORIA'S DAUGHTERS.—Of the five daughters of Queen Victoria, the Princess Beatrice, the youngest, will soon have remained the longest unmarried. The Crown Princess of Germany married at eighteen; the late Princess Alice, of Hesse, was married when she was nineteen; the Princess Helena married at twenty; the Princess Louise, who had until that time remained longest single, when she married the Marquis of Lorne, was about the same age that her young sister is—that is, twenty-three. It is natural enough that there should be gossip and rumors about the wedded fate of the last of the quintet. Romance has not been absent from the stories told about her, but the truth seems to be that the princess has chosen, up to this time, to be the confident and companion of her mother, the queen, rather than to leave Windsor, Balmoral and Osborne, without any of the daughters of the widowed monarch.

Sabbath Reading.

ENEAS RESTORED TO HEALTH.

BY SOPHIA C. GARRETT.

[*Acts*, ix *Chap.* 33—34 *Verses.*]

For eight long years, the suffering Eneas lay
In weariness upon his lowly bed,
When morn's first rosy flush
With soft, fair light, illum'ed the eastern hills,
He slowly raised his drooping head,
And from the open casement gazed
Upon the scene that met his longing eyes
Wher'er he turned them.

Around him stood fair dwellings
Wreathed with graceful vines and fragrant flowers,
And shaded by majestic trees,
Among whose branches gleamed rare tempting fruit;
All gemmed with countless drops of glittering dew;
And these in wondrous beauty met his raptured gaze.

For eight, sad, weary years
Had he looked forth upon the varied scene
Of blushing morns in early spring,
Or when bright summer glorified the earth;
But never seemingly before
Had they revealed themselves to him
With such enchanting loveliness
As on that fair sweet morning,
When the noble man of God
Sought out his lowly couch
Where he had lain so patiently
Eight slowly passing years,
And said to him: "Eneas,
Jesus Christ maketh thee whole!
Arise and make thy bed."

O, words of wondrous meaning!
Miraculous the change they wrought
Upon the palsied Eneas.
He rose with thankful heart
And walked abroad in health,
With manhood's strength and vigor,
Like a new joyous being
Endued with life a-fresh,
By the All-Wise Creator.

GRAPES AND THORNS.

We must not hope to be mowers
And to gather the ripe gold ears,
Until we have first been sowers,
And watered the furrows with tears.

Is it not just as we take it—
This mystical world of ours?
Life's field will yield, as we make it,
A harvest of thorns or flowers!—*Alice Carey.*

REMEMBRANCE OF GOD'S NAME.

"I have remembered Thy name, O Lord, in the night, and have kept Thy law."—Psalm cxix. 55.

We remember many things when awake in the night; indeed, it is often the activity of memory that keeps us from sleeping at that season; and well is it for us, if, like the Psalmist, we can so employ those wakeful and often weary hours, as to find the highest refreshment in them, by making them seasons of communion with God. The remembrance of His character; it means the thought of all that He is to us, as our Father in Christ Jesus, all wise to guide, all merciful, all good, all sufficient; there is much here to afford food for remembrance. It means, too, a remembrance of all that He has been to us, of all that He has done for us, of all that He has revealed to us in the past. "Commune with your own heart upon your bed, and be still" when you thus remember the name of the Lord! For such remembrance may be sorrowful, yet it opens the door to pure and holy gladness to all those who love His name. Think also of all He has promised to do for us! this opens a wide field.

But if in the night watches there is comfort in such remembrance of God, still more in the night of affliction, when oppressed by sorrow, bereavement, anxiety or sickness, do we find in the remembrance of this name a strong support. For true it is, and will ever be, that "the name of the Lord is a strong tower: the righteous runneth into it, and is safe." And though we may truly say, "But, alas, I am not righteous!" the revelation of this name as revealed in Jesus Christ the righteous, through whom we have access and acceptance with the Father, is a ground of confidence for the sinner which can never be shaken. Through His dear Son the Lord has made Himself known to us; "the only begotten Son, which is in the bosom of the Father, He hath declared Him."

Dear, patient workers for Jesus, look up for the grace that is sufficient for all difficulties and all discouragements, and look on by faith to the day when you shall see, what God asks you perhaps now to take on trust, that "your labor is not in vain in the Lord."

In that day you shall find how the long years of "ploughing were not lost, but were most surely preparing the way for the precious seed; how every grain you once scattered for Him, watered by your prayers, and perhaps by your tears, has been guarded and watched over by your Lord, and turned into golden sheaves, to be laid down by you in the day of harvest at his feet, saying, "Not unto us, O Lord, not unto us, but unto Thy name be the glory,"

"He knows." What a wonderful confidence in His heart and resources is silently implied in that word! If He knows that you need, you may be quite sure that you will not want. "He knows;" and His fatherly heart is our guarantee that to know and to supply our need, are one and the same thing with him; and His deep treasure of exhaustless good is our guarantee that our need can never go beyond His fulness, nor He ever, like us, see a sorrow He cannot comfort, a want that He cannot meet.

Truth, when it is won, is the possession of the whole nature. By the action of the whole nature only can it be gained. The king must go with his counsellors at his side and his army at his back, or he makes no conquest. The intellect must be surrounded by the richness of the affections and backed by the power of the will, or it attains no perfect truth.—*Phillips Brooks.*

Take comfort! Earth is full of sin,
But also full of God.
The staff supports thy trembling limbs,
While falls the needed rod.
There's sorrow, and Jehovah;
There's toil, and blessed sleep;
Let smiles then blossom round your lips
As oft as eyelids weep.

"Did it ever strike you," said one, "what grand men we ought to be, who have been praying so many years?" If prayer to us has been a reality, if besides being petition it has been communion with God, how near him ought we to be by this time, and how like him ought we to have become. Communion with Christ should make us Christ-like.

Many a true heart that would have come back like a dove to the ark, after its first transgression, has been frightened beyond recall by the angry look and menace, the taunt, the savage charity of an unforgiving spirit.

The laws of nature are not, as modern naturalists seem to suppose, iron chains by which the living God, so to say, is bound hand and foot, but elastic cords rather, which he can lengthen or shorten at his sovereign will.—*Philip Schaff*

If you tell your troubles to God, you put them into the grave; they will never rise again when you have committed them to him. If you roll your burden anywhere else it will roll back again like the stone of Sisyphus.—*Spurgeon.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN THOUGHTS FROM "EVERY-DAY HOUSE."

ANNIE L. JACK.

"Let it alone," said our family naturalist, as a little visitor was intent on stoning a small toad that was hiding under a currant bush. "What for?" queried the young citizen, and the answer our country boy gave was—"Because he is one of our best workers and asks no wages." The same two lads exchanged the same kind of remarks over a lace-winged fly that was deemed a fit victim for torture, and it occurred to me, as I listened, what a pity that among other *'ologies* children are not taught to know friends from enemies in the insect world. We cherish the toads in our garden as a company of useful scavengers, and do not like to see them injured. A friend of mine, whose dahlias were troubled by slugs, found that by sowing seeds of lettuce around every plant, the slugs would feed on them and not touch the dahlias. When the latter get strong and hardy, the lettuce can be hoed out. We have to study these things when engaged in land culture, and it is within the province of all the younger members of a family, to make this a practical part of their education. I always like to see the little girls in a house carry any specimen they may find of the Calosoma to their house plants, for nothing is more useful to clear plants of the green aphis than these pretty little spotted creatures. A large rose bush that had been housed all winter and subjected to repeated tobacco fumigations was cleared of insects this spring as soon as set out-of-doors by a pair of yellow birds, that made its leaves a daily resort for food. The knowledge of these things is very useful to amateur florists and gardeners and a part, I think, of household economy, for it is indeed an adornment to every home to have clean and insect-free plants, that add to the beauty of home and every-day life.

HOW I SAVE MY SLEEVES.

ALICE P. ADAMS.

To me it is always aggravating in the extreme when I have put on a clean calico to be obliged to roll up my sleeves while I wash the breakfast dishes and perform sundry household duties. When I take them down they are full of wrinkles, soon become limp and soiled, and my dress has to be washed long before it would otherwise become necessary. Moreover, fashionable sleeves are so small that it is almost impossible to push them above the elbow.

I have known women who never rolled their sleeves and yet always looked as neat as a pin, but mine have to go up, or else they are spotted and splashed—that is, until lately. One day, when passing the Chinese store in Los Angeles, a bright thought came to me, and I went in and inquired for the straw Chinese cuffs that men use to protect their wrists when pruning orange trees, etc.

I selected the smallest pair, for which I paid 25 cents, and as they were rather loose, when I reached home I sewed on each a small tag of drilling. Now I save both my sleeves and temper, for every morning when I commence my work I slip on my cuffs, fasten the bits of drilling to my sleeves with safety-pins, and there they are, and generally stay until I am ready to put on an afternoon dress. I don't think I have once rolled up a sleeve since my purchase was brought home; I never even take off my linen cuffs when I wash the supper dishes, and I never had so few holes to patch, for they are a protection against *wear* as well as dirt.

I do not know whether these cuffs can be procured in the East or not, but if so I would advise each of the Rural sisters to invest in a pair, for though they cannot, strictly speaking, be called "things of beauty," they are "a joy forever."

SUGGESTIONS.

Rectified benzine for moths.

Keep a bouquet of fresh flowers upon your dining-table.

Scales of fish may be loosened by pouring hot water over the fish.

Why not butter the *edges* of slices of toast bread, as well as the center?

Housekeepers, fresh fruit has come. Do away with pies and puddings.

In cooking fish, preserve the shape if possible. It improves the appearance, if not the flavor.

Never make jelly in damp or cloudy weather—it will be neither firm nor clear.

If you roast your own coffee, do it with the greatest of care, as herein lies the secret of success in coffee making.

To young housekeepers we would say that in cooking it is far better to have a few, very few, dishes delicately and carefully prepared than to provide more and have them less inviting.

Of the numberless and worthless remedies for getting rid of red ants that annually go the rounds, that of sprinkling guano upon the pantry shelves is one of the latest.

Cure for a Felon.

I believe it is better to scatter a felon, thereby saving pain and trouble. The following prescription I had from an old lady, with the affirmation that in the course of a long life, she had never known it to fail if applied in season, and I can add the same, having had an opportunity to test it several times in my own family—the last time, only the past week, and with complete success. The first time I tried it the felon had been in progress several days, and become very painful, with red streaks running up the arm, while in the armpit the glands were swollen, forming what is commonly known as kernels; but after two days' application of the plaster, the swelling and pain ceased, and the felon was "no more." Take equal parts of lard, soap, salt, and spirits of turpentine. Shave the soap, and mix with the other ingredients, and apply as a plaster. Some use kerosine, where turpentine is not at hand, but I prefer the turpentine. If the skin is thick it is well to soak in hot lye before applying the plaster.

Mrs. W. C. Gifford.

DOMESTIC RECIPES.

Pickled Cherries.

Take fine ripe cherries with stems on, and to each quart allow a pint of good vinegar and a coffeecupful of white sugar. Boil sugar and vinegar together ten minutes, skimming as needed. Pour cold over the cherries. Spice may be added if you please, but the stones give a pleasant flavor of themselves.

Raspberry Jam.

Clean the fruit and crush *thoroughly*—this prevents its becoming hard. Boil 15 minutes before adding sugar—three-quarters of a pound of sugar to a pound of fruit—and then boil 30 minutes longer. Jams require almost constant stirring, and a small wooden paddle with a handle at right angles is the most convenient article I know of to do this with.

Mrs. Brown.

Drop Biscuit.

One quart of fresh buttermilk; one beaten egg; two tablespoonsful of melted butter; a little salt and a teaspoonful of soda. Flour for a stiff batter. Drop with a spoon into hot gempans and bake in a quick oven.

Dry Bread.

To a cup of sweet milk add a little salt, a spoonful of sugar and a beaten egg. Into this dip slices of dry bread; let soak a minute and fry on a buttered griddle until a light brown each side, Mrs. R. C.

Croquettes of Fish.

Remove all bones from dressed fish; mince; add seasoning, and for a small quantity add one egg beaten with a teaspoonful of flour and one of milk. Make into little balls; brush the outside with an egg, dredge with cracker crumbs, and fry to a deep brown. A nice gravy can be made by adding a pint of water and an onion to the bones, heads and tails; boil, season and thicken, Mary B.

New Publications.

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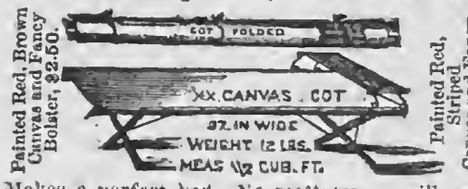

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are developed because the blood is poisoned with the humors that should have been expelled naturally.

KIDNEY-WORT

will restore the healthy action and all these destroying evils will be banished; neglect them and you will live but to suffer.

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The request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness.

News of the Week.

MISCELLANEOUS.

Monday, June 14.

The result of the Chicago Convention has taken the country by surprise. Gen. James A. Garfield of Ohio was nominated for President, and Chester A. Arthur for Vice-President. Grant, Blaine, Sherman, and Washburne all went down, and a comparatively obscure Senator from Ohio received the nomination. The Democratic Convention, which will be opened at Cincinnati the 14th inst. will in all probability create as much excitement as the one just closed....The Barnum's museum company, organized with $3,000,000 capital, and including Barnum, William H. Vanderbilt and others, has bought the Madison Square property for $800,000, and will erect the largest exhibition building in the world, including under one roof a museum, opera-house, coliseum, theater, hippodrome, tropical garden, etc., to be finished and opened early next year.........Bogus medical diplomas have been issued by the faculties of several medical colleges in Pennsylvania. Prominently among these are named the American University of Philadelphia, and the Eclectic Medical College of Pennsylvania. John Buchanan, Dean of the former institution, also known by an *alias*, and a couple of other officers have been arrested ....Ex-Gov. Albert G. Brown of Missippi, was thrown from his horse into a pond and drowned, near Jackson, Miss., on Saturday last. He had served his state in the legislature, as Governor, as Representative in Congress and as U. S. Senator for many years. Like many another retired statesman, he considered farming, in the abstract, the noblest of occupations.

Another terrible disaster, involving great loss of human life, took place in the Long Island Sound on Friday night the 11th inst. The steamer Narragansett of the Stonnington line on her trip from New York to Boston, having about 300 passengers on board, was run down and sunk by the Stonnington, another steamer, coming from Boston. The immediate cause was an impenetrable fog, through which the lights could not be seen; but it appears that the ship owners are not blameless for not having provided the boats with electric lights, nor are the officers held entirely guiltless in public opinion. The Narragansett ran across the bow of the Stonnington and was struck amidships by the latter, the blow crushing in her wheelhouse, and upsetting the boilers and furnaces. A panic ensued among the passengers. The boats were found out of order, the lights were extinguished by the collision, and even the life preservers could scarcely be found. The coals from the furnaces put fire to the ship, and in an incredibly short time, the ill-fated steamer burned down to the water's edge and sank. Of the 300 passengers, as nearly as can be ascertained, about 50 found their death either in the water or in the flames. The boats from the Stonnington and from the steamer City of New York, which had come up in the meantime, picked up the rest. It is reported that several persons who saw themselves face to face with death, deliberately blew out their own brains.

AGRICULTURAL NEWS.

THAT first barrel of flour from this season's wheat, that arrived in this city on May 6, from Americus, Ga., and which was sold here for $15 for the benefit of the Episcopal church of that lively little town, has been resold in London, England, for £5—about $25....New Orleans papers state that from the present outlook a magnificent crop of sugar will be harvested this season....The annual election of the Butter, Cheese and Egg Exchange was held here on June 10, with the following result: President—Washington Winsor; First Vice-President—George B. Douglas; Second Vice-President—W. H. L. Totten; Third Vice-President—E. C. Williams; Fourth Vice-President—B. E. Van Valkenberg; Treasurer—John A. Smith; Secretary—T. Mortimer Seaver; Members of the Executive Committee—John A. Willet, Lloyd I. Seamen, L. F. Dodd, C. A. Meader, M. B. Miller, William H. Ludlum, F. Blohm, J. H. Meyer; Inspectors of Election—C. B. Brown, L. W. Butler, John C. Mahr.. .The honey crop of the United States is assuming large proportions. Its annual value is now estimated at $8,000,000, and that of wax at $6,000,000. Our exports of honey and wax are steadily increasing....A disease among the swine of Passaic county, N. J., lately broke out, and is said to baffle veterinary skill. Large numbers have died with it....Last year dogs in Illinois killed 27,338 sheep, valued at $65,384—more than all the sheep-killing dogs in the Republic are worth....The sale of Short-horns, at Kansas City, May 19th and 20th, by the Hamiltons and others, aggregated 190 head, averaging $117.47, producing a total of $22,320....An exhibition of apparatus and products relating to bee culture, will be held at Schwerin, Germany, on August 18th and 30th next....The visible supply of wheat has decreased 800,000 bushels, and the visible supply of corn has increased 623,000 bushels.....In the Northern part of N. Y., a number of creameries and several Limburg cheese factories have not opened this spring for a lack of milk. Many farmers in that section sold off one-half or two-thirds of their dairy stock last season, before the rise in dairy products took place, and this season cows are so high, comparatively, that they cannot afford to buy.... A telegram from London, on June 8, says:—"A monthly cotton circular states that Egypt can hardly be expected to yield another monster crop, and so far the indications are quite the other way, the plant being very backward. Authorities say it is from three weeks to a month later than last year."....A farmer in Dearborn County, Ind., had a roof 14 feet square come crashing down into his orchard during a tornado, four weeks ago, and has not yet been able to ascertain where it came from, even after diligent inquiry in the track of the hurricane.....A Chicago paper says:—"An operator furnishes the following synopsis of the expenses in sending a bushel of wheat from this city to Liverpool: Storage here, 1¼c.; freight to Buffalo, 6c.; marine insurance, 1¼c.; Buffalo charges, ⅝c.; canal freight, 6c.; expenses in New York, 1c.; ocean freight, 8c.; ocean insurance, 1c.; total 24⅝c. The Beerbohm quotation of 10 shillings per cental last week is equal to $1.44 per bushel, leaving $1.19⅜ per bushel as the present value here based on present quotations in England."....The first wheat of the new crop from Virginia and South Carolina was sold on 'Change at Baltimore, Tuesday, June 8. It comprised 450 bushels of the Fultz variety, and brought $1.55 per bushel...... The raising of Angora goats in Western Texas is increasing, and is alleged to be a profitable business. It is said the meat is much better than mutton, and each goat yields about two pounds of hair annually. In the Eastern markets it is worth now fifty-five cents per pound... May-beetles have been swarming to an unusual extent on the oaks around Mobile, Ala., during the past month, absolutely defoliating the oak forests.....A premium of one cent per pound on beet sugar, made in Massachusetts this year, will be paid by that State, provided the quantity does not exceed 700,000 pounds.....It is estimated that the orchard fruits of the United States approach an unusual value of $75,000,000. The New Hampshire apples are said to be the best in the country. The varieties most prized there are the Early Williams, Hubbardston, Nonesuch, Golden Pippin and Baldwin. These, together with the Rhode Island Greening, Connecticut Russet and Porter, are used for the export trade. New Hampshire produces annually $750,000 worth of fruit...... The Mark Lane Express of June 7 in its review of the grain trade during the past week, says: "In consequence of the showers the wheat crop has gained strength, is growing rapidly and is now coming into ear in the earlier districts. At the market on Monday, the first cars shown were grown in Sussex from red winter American. Unless there is some unexpected change, the harvest prospect is fairly promising. The deliveries of English wheat at the provincial markets have been less than half of those of the corresponding week last year. Holders show considerable firmness, which prevented any decline being caused by the improved appearance of the growing crop. Imports of foreign into London have been made moderate. There was an unusually small proportion of American. Arrivals of Indian have begun and assume an increased proportion which bids fair to compensate largely for the contracted Russian export. Business during the week was quiet and prices of most descriptions were unchanged. Red winter American improved 6d. per quarter in consequence of small offering. Relative to the announced intention of the American ring to force up the price of red winter before the end of June, the probability of a material advance is remote, as the London trade has hitherto shown extreme disinclination to follow the American speculative fluctuations. Arrivals at ports of call have been very moderate The demand for wheat was less active in consequence of the favorable weather and buyers having supplied themselves freely. Both red winter and No. 2 spring declined slightly. The coast is now bare of maize, the nominal value being about 25s. 5d Buyers of wheat for shipment, despite lower offerings from America, continue very reserved. There is a moderate demand for maize at about the late rates. The imports into the United Kingdom for the week ending May 29 were 722,721 cwts. of wheat and 130,188 cwts. of flour........ Be careful when working with Paris-green about potato vines. Last week, a lad of our acquaintance, says an Exchange, who was mixing the poison for the purpose of killing potato bugs, rubbed his sleeve across his sweaty forehead, and in a few minutes his face swelled so as to blind him for several hours, threatening permanently to destroy his eyesight.....North Carolina is taking an active interest in fish culture. All the leading streams in that State are now being stocked with the best varieties of fish Seth Green says that if the State would only protect the fish it plants there would in five years be five fish a day for every inhabitant....The farmers of Maine have felt downcast in prospect of a light crop of hay; but late rains have cheered them, and they now consider the hay safe....The next Stock Show, at Chicago, will come off from the 15th to 20th of November, 1880....The Twentieth Annual Fair of the Oregon State Agricultural Society, will be held at the Fair Grounds, near Salem, commencing on Thursday, July 1st, 1880, and continuing until Thursday evening, July 8th. Half-fare rates have been secured on all the railroad and steamer lines on the North Pacific Coast. M. Wilkins, President. E. M. Waite, Secretary....Much machine-belting is now made in California from the entrails of sheep. It is said to be far stronger and more durable than that made of hemp....A Jersey Red sow, owned by Howard Darnell, of Mount Laurel, N. J., lately gave birth to a litter of twenty-two pigs.... The dreaded army-worms can now be found in some wheat fields about Freeport, L. I., and they are increasing in numbers.....Gen Miles, the Indian fighter, says that the average Colorado squatter sells his gun and ammunition to Indians for about four times their value, and expects to have a new gun and ammunition furnished him when the Indians begin to kill....Col L. L. Polk, Commissioner of Agriculture of North Carolina, has resigned.....The first cotton bloom was received at New Orleans Saturday, June 5th, from Washington county, Mississippi, 125 miles above Vicksburg....Four men are reported to have been hanged last week by a mob in Brown county, Texas, for "crookedness with cattle"....The new beef canning establishment at Chicago is killing 100 head of cattle per day, which number will be increased when the larger runs of Texas and Western cattle come forward....Cotton culture in California has been revived after having been dropped in '77. A thousand acres have been planted this season, and Californians are sanguine that cotton will soon rival wheat and wine in the Golden State....Prof. C. V. Riley thinks that the army worm will not stay long in its present quarters; but will move north with the ripening grain.

Late wool market reports are as follows: Buyers in Ohio are offering 42 to 43c., but farmers are not disposed to accept less than 45c. for choice XX. An observer says: We think it would be better to accept less and set new life into trade, for by this action prices could be run up 5c. per pound before the end of June. In New York XX Ohio is quoted at half a dollar, though a few sales of XX have been made at 55c. Ohio, Pennsylvania and West Virginia washed fleece, medium combing, and delaine, were placed at 52@55c. at latest dates. The Lexington (Ky.) Live Stock Record says: "There is clearly a combination of the Eastern wool dealers to hold off and depress prices....

The New Seal

of the World's Dispensary Medical Association of Buffalo, of which Dr. R. V. Pierce is president, consisting of Aesculapius, the Father of Medicine, surmounting the globe, fitly symbolises the world-wide reputation gained by the Family Medicines of Dr. Pierce now manufactured by this incorporated company and sold in all parts of the world. With a mammoth establishment, the World's Dispensary and Invalids' Hotel in Buffalo, and a correspondingly large branch establishment in London, this Association make medicines for the whole world—not only that but they personally examine and treat with special medicines thousands of cases. Among the most celebrated of the proprietary or family medicines are Dr. Pierce's Golden Medical Discovery—the great blood purifier, and Dr. Pierce's Pleasant Purgative Pellets (little pills)—and Dr. Pierce's Compound Extract of Smart-Weed—for bowel affections, colds and painful attacks, as colic, neuralgia, and rheumatism,—Favorite Prescription furnishes relief from female weaknesses, and kindred affections. All sold by druggists.

THE LIBRARY OF UNIVERSAL KNOWLEDGE.—The American Book Exchange continues to push this work with commendable celerity. The ninth volume, with articles from *Lepisma* to *Mullion*, has just appeared, and the tenth is to be ready before the end of June. The types are marshalled at the rate of 50 pages per day, and at that rate the first fifteen volumes, which will include the entire reprint of Chambers's Encyclopædia, may be completed within the next ninety days. This speed does not appear in any way detrimental to the excellence of the mechanical work, which, on the contrary, has been steadily improving since the start. People not already numbered among those who have bought the nearly half million volumes of this work sold since its publication began, will note with interest that during June they may order these fifteen volumes for the pittance of $6.

PATENT METALLIC HEEL STIFFENERS.—By a special act of Congress, approved by Pres. Hayes April 1, 1880, the Commissioner of Patents is directed to correct Letters Patent dated, July 9, 1872, No. 128,813, and erroneously granted to Barsaloux, James and Lyon, for a metallic stiffener for boot and shoe heels, known as Lyon's Patent Metallic Heel Stiffener. The bill provides that when said Letters Patent is corrected, it shall be as good and valid as it would have been had it been issued in such corrected form. The Letters Patent was corrected April 7, 1880, and issued to Mr. Nelson Lyon, Albany, N. Y.

THRASHERMEN know the annoyance and cost attending the use of a horse-power that is continually breaking down. There is a horse power made that is an exception; it is strong, runs light and though over two thousand are in use not a bull wheel has yet been called for. The fact is that the strain is so equally distributed that no breakages occur. This power is the double pinion four-wheel Woodbury, made by J. I. Case, Threshing Machine Co., Racine, Wis., who are making the largest line of steam and horse power threshing machinery of any one in the United States.

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Kidney-Wort not only cures bad cases of piles and all disorders of the kidneys and liver, but is a reliable remedy for a debilitated constitution. It acts on the bowels as a mild cathartic, carrying off the useless and obstructing elements which cause sickness.

Thousands of ladies to-day cherish grateful remembrances of the help derived from the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It positively cures all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

Such names as Dr. O. W. Holmes, Washington Irving, and Ex-President Van Buren, have borne testimony to the efficacy of WHITCOMB,S ASTHMA REMEDY, which is for sale by druggists.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, June 12.

Butter, Cheese and Eggs.

Baltimore.—BUTTER—The receipts are full and the market is tending in buyers' favor, though on choice stock the figures lately current are maintained. We quote New York Creamery at 22@23c, New York State new at 20@21c, Western new at 16@18c for choice and 12@15c for good to prime, and near-by stock at 11@15c ℔ lb, for good to choice CHEESE—The arrivals are fair, but were mostly affected by the hot weather, and are slow of sale. Prices are nominally unchanged, and we quote New York State at 13½c for choice and 12½@13 cents for good to prime, and Western Factory at 12c for choice and 11@11½c for good to prime and 9@10c for fair to good. EGGS—The demand is brisk and the market is firm at 12½@13c per dozen for Western and 13@14c for near-by.

Cincinnati.—BUTTER—There has been some improvement in the tone of the market during the week, for, although the receipts were a little more liberal, packers have taken hold more freely, and have taken the better grades of Dairy and some fine Creamery for putting in the fruit house; they have been the principal buyers of Dairy, paying 10@12c for good to strictly prime. They expected to get prime stock at 10c this season, but finding there was no certainty of that they have gone in pretty liberally at 12c, and for fancy Creamery they have paid 20c. If it was not for this demand prices would be much lower, for the current consumptive demand is largely supplied by the suburban production. Fancy Creamery sells at 19@21c and fair at 17@18c, choice Western Reserve and Dairy at 13@15c, prime Central Ohio 11@12c, medium do. 9@10c and inferior 6@8c ℔ lb. CHEESE—There is no accumulation of stock here, but the current receipts are fully equal to the current demand and the market is easy at 9@9½c ℔ lb for prime to choice factory. Small lots of full-cream cheese sell at 10c. EGGS—The demand has been less active, and as the prices current a week ago induced larger shipments to this market prices declined, and they close dull at 10c per dozen.

Chicago.—BUTTER.—Only a moderate volume of sales was accomplished during the week and the market again ruled weak. A gradual accumulation of stocks is noted, and the pressure to sell is sufficient to keep values unsettled. There were free sellers at the following quotations: creamery, 17@19c; good to choice dairy, 14@16c; packing stock, 10½@11½c; grease, 5@8c. CHEESE remains without much activity, and the tone of the market is by no means as firm as during last week. Prices are fully 4c per lb higher than one year ago, and an early break in the market is looked for the trade generally: Full cream, new, 11@11½; part skim, new, 9@9½; full skim, new, 5@7; low grades, 4@5. EGGS were in fair demand and steady at 9½@10c. per doz.

Chicago.—WOOL—The market for this leading staple continues to rule dull, the feeling weak and unsettled, and price easy and in buyers' favor, though no changes have occurred in the quotations since our last report. Asking rates from store for eastern Iowa, Wisconsin, and Illinois wool range as follows: Tub-washed bright 45@46c ℔ lb; do. dingy and coarse 40@42c; fleece-washed medium 40@45c; do fine 36@40c; do coarse 35@37c; unwashed medium 27@30c; do coarse 20@25c; do fine bright 24@26c; do heavy 17@20c; bucks' fleece 16@18c. Consignments from western Iowa, Nebraska and Kansas sell at about 2c ℔ lb less than this range, and burry and poor conditioned lots at 3@5c less. Colorado wool (unassorted, is quoted at 25@28c ℔ lb for medium to fine; 19@25c for coarse to medium, and black at 21@23c.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, June 12, 1880.

BEANS AND PEAS.—Higher freights for Havana have checked the export demand for beans. The local trade is seasonably dull and the general market shows the tameness of all grades to be had at inside rates for salable lots. Green peas lower; $1.62½ @1.67½ for Wis. bbls. in shipping order. Southern B. E peas quiet at $1 90@2 ℔ 2 bush. bag. Marrow beans, prime, $1.60@1.62½ other, $1 50@1.60; medium, prime $1.35@1.37½; other, $1.20@1.30; pea, $1 45@1.65; white kidney, $1.50@1.70; red kidney, prime $1.45@1.50; other, $1 30@1.40; black, $2.20 Lima, $5.

Receipts of beans for week, 4,900 bush.; exports, 339 pkgs.

BUTTER.—An unusual active export demand, amounting to 32,300 pkgs. has prevented prices from falling off, and with the ruling reasonable figures for the fine class of stock arriving the market closes firm and a shade better on selected State. Shippers have paid inside rates for all grades, their special want being fine. 3,900 of the above export total goes to the Continent, the other to Great Britain. The quantity has never been exceeded but once. Western butter has a good demand, but State is so fine and cheap that the former has not its sometime economical precedence.

Creamery, fine, 20@21c.; good to prime, 19@20c.; fair to good, 18@19c.; sweet cream, fine, 19@20c.; sweet cream, fair to prime, 18@19c.; State, firkins, choice yellow, 18@19c.; fair to prime, 17@18c; pails and hf. tubs, choice, 18@19c.; good to prime, 15@17c.; fair to good, 17@18 ; poor, 13@14c; State, Welsh tubs, prime, 18@19c; fair to good, 17@18c.; poor, 13@14c.; Western imitation creamery, 12@17c; dairy, fresh, extra, 16@17c.; good to prime, 15@16c.; fair to good, 14@15c.; poor to fair, 13@14c.; factory, full grass, fine, 15½c.; good to prime, 14@15c.; fair to good, 13@14c.; poor to fair, 12@13c.

CHEESE.—The export movement has been much larger this week reaching 97,000 boxes. This has been brought about by yielding prices after opening at 12½c., the market finally settled to 12c. with a few "specials," however, reaching 12½c.

Latest sales are 12@12½c for choice full cream; 11½@11¾c. for good and fine; 10¾@11c for fair Ohio factory flat at 10½@10¾c. for good to prime; 9½@10½c. for fair and good lots; 3@6c. for skimmed.

Receipts for week, 99,580 boxes.

Exports for week, 95,160 boxes, Liverwool cable, 67s.; steam to Liverpool, 85s.

COTTON.—There is a liberal business and a firm market. The latest prices are for June, 11.73@11.75c.; July, 11 82c.; August 11.89@11.90c.; September, 11.30@11.32c.; October, 10.90@10.91c.; November, 10 73@10.75c.; December, 10 73@10.75c.; January, 10.82@10.83.

Quotations for spot cotton are based on American standard of classification and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary....	9	9	9
Strict ordinary....	9½	9⅝	9⅝
Good ordinary....	10⅜	10½	10½
Strict good do....	10⅞	11	11
Low middling....	11 7-16	11 9-16	11 9-16
Strict low middling....	11¾	11⅞	11⅞
Middling....	12	12⅛	12⅛
Good middling....	12¼	12⅜	12⅜
Strict good middling....	12⅝	12¾	12¾
Middling Fair....	13¼	13⅜	13⅜
Fair....	13⅞	14	14

STAINED

Good ordinary.......	8⅜	Low middling.	10⅜
Strict good ordinary.	9⅜	Middling.......	11

DRIED FRUITS.—The market has been very quiet and showing no important change.

Latest prices are for N. C. apples, fair to good, at 7@8½c., choice, at 9@9½c.; New York State quarters sliced at 7½@7¾c.; patent evaporated in cases, choice at 14@15c.; good and prime 13½@14c.; evaporated, sliced at 12@13c. Evaporated peeled peaches, good to choice, at 26@28c.; NorthCarolina peeled choice, 16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c., common at 10@12c., unpeeled halves at 7@8c.; do, quarters at 6@6½c. Pitted cherries at 17@18c. Blackberries nominal. Raspberries at 28@30c. Plums at 17@17½c.

EGGS.—Receipts for week, 11,500 bbls.; do. last week, 13,590 do. The market has amassed considerable strength under smaller receipts and a marked steadier demand. Stale and doubtful stock is pretty well out. The best do. have been ice stored, but when they open on a warm day when the losses are heavy. Few N. J. or L. I. arriving.

Near Points, 15@16c.; State and Penn., 14@14½c.; fresh, 13½c., State and Western Canadian 13½c. poor grades 12½@13c.

FLOUR.—There have been liberal offerings and prices unsettled and lower, leading to a fair trade.

Latest prices are at $3.25@3 60 for inferior to very fancy superfine State and Western; $3 85@4 00 for poor to good extra State and low and lines; $4 00@4.25 for good to strictly choice do.; $3.75@4.00 for inferior to good shipping extra Western, and $4 00@4.25 for good to choice shipping extra do. (very choice to fancy lots held higher); inferior to very good white wheat extra, $4.50@5.25; very good to fancy do, at $5.25@6.50; red and amber winter wheat, inferior to choice trade and family, at $4.40@6.00; round hoop Ohio, $4.10@4.65; and trade and family brands of do, at $4.75@6.00; St. Louis at $4.40@5.35 for inferior to good extra; $5.35@6.50 for good to fancy; Minnesota clear, very in-

ferior to fancy, at $3.75@5.75; Minnesota "straight," very poor to very fancy, at $5 10@7.25, and patent inferior to fancy at $5.50@8.25; unsound stock at from $2 25@5 00; city mill extra at $5.00@5.20 for good to choice West Indies; do. for England, $4.15@4.75 for very poor to very choice; do. trade and family extras, $5.10@6.75; do. for South America, $5.90@6.35; No. 2 at $2.25@3.40 for poor to fancy.

Receipts for week: flour, 93,350 bbls.; corn meal, 3,475 bbls.; wheat, 1,883,400 bush.; corn, 1,198,400 bush.; oats, 656 750 bush.; rye, 2,277; malt, 80,970; rice, 250 pkgs.

Exports: Flour, 58,600 bbls.; cornmeal, 2,506 bbls.; wheat, 2,074,900 bush.; corn, 369,600; oats, 3,000 bush; peas, 2,400 bush.; rice, 398 pkgs.

CORN MEAL.—Sales at $2.50@3 for Western, and $3.15 for Brandywine.

FRESH FRUITS.—Quite a variety begins to show Strawberries are in moderate supply New Jersey nearly done shipping and nothing from the South. A good commercial display of large berries is a feature of the year, and but for the unfavorable weather there would have been an immense offering. Long Island is shipping to other points this season. Jucundas, Great American and other fancy seedlings have sold at 20@30c. ₱ qt.

Up-river good to prime ₱ qt. 10@12c.; fair, ₱ qt 8@9c.; good to prime ₱ 8 to qt. cups 3@4c.; Staten Island, ₱ pint 4@5c., hulled, ₱ 100 bask. $1.00@2.25, Jersey, prime ₱ qt. 7@8c.; poor to fair ₱ qt 6@6c.; pints 3@4c; Apples, Norfolk green, ₱ bu. crate $1.25@1.50. Cherries, Jersey sweet, choice ₱ lb. 8@8c.; common 3@5c.; sour, 5@6c. Raspberries Blackcap, Md. and Del. ₱ qt. 8@12c. Whortleberries Jersey ₱ ½ bu. box $2.50@3. Gooseberries Md. ₱ bush $1.50@2. Watermelons Fla. prime, ₱ 100 $10@11. Peaches, Ga., Beatrice ₱ peck $1.00@2. Peanuts are held steady but the advanced prices have checked the demand and there is very little doing. Hickory nuts nominal. Peanuts, Va. hand-picked, ₱ lb. 5½@6c.; extra prime, 5½c.; prime 5c.; shelled, 5½@6c., hickory shellbark, ₱ bush 90c.@$1.

GRAIN.—Wheat has been active, the shipments for the week reaching 2,100,000 bush. Prices have ruled weak; latest sales are of No. 1 white at $1.25¾@1.26; do., June, at $1.24@1.24½c. No. 2 white at $1.23@1.23½; ungraded white at $1.23@1.26; No. 2 red at $1.38@1.28¾; do., June, at $1.21@1.27½; do., July, at $1.15¾@1,16¼; do., August, at $1.11¾@1.12¾; ungraded red at $1.24@1.27½; mixed winter at $1.24@1.28½. No. 2 amber at $1.27; choice Green Bay spring at $1.20; No. 2 Chicago and Milwaukee spring at $1.18@1.19; No. 3 spring at $1.10; ungraded Duluth spring at $1,16½. Corn has been in good demand with prices variable; latest sales are of New York No. 2 at 51¾@51¾c.; do., June, at 50¾@51¾c.; do., July, at 49¾@50c.; New York steamer mixed at 53@54c.; ungraded mixed Western at 46@53c.; No. 3 at 50c.; New York yellow at 56c. delivered; steamer white at 52½c.; low mixed at 52½c. Oats are active and prices closed stronger; latest sales are of No. 1 white at 44@45c.; No. 2 white at 39¾@40c.; No. 3 white at 39c.; New York No. 1 at 42c.; New York No. 2 at 38½@39c.; do., June, at 38½c; No. 3 at 38c.; ungraded white Western at 39@44c.; ungraded mixed Western at 37@40c.; white State at 43@46c.; mixed State at 40@41c.; No. 2 Chicago at 39c.

HAY AND STRAW.—The market shows decided strength, with moderate receipts and a steady, fair trade.

Shipping hay quoted at 75@80c.; retail lots at 80@85c. for medium, and 95@$1,10 for better qualities; clover, 65@70. Straw at $1.15@1 20 for long rye; 60@70c. for short rye, and 55@60c. for oat.

Exports for week, 2,100 bales.

HOPS.—The market shows a steady moderate trade from brewers, and prices well supported. Quotations are for:

	Cents per lb.
New York, fancy	Nominal
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

OIL CAKE.—Western is fairly active and steady at $35 per ton.

POULTRY AND GAME.—Chickens are abundant and lower; heavy arrivals of live tend to nu-erous prices for dressed. Fowls sell briskly when prime. Turkeys depend upon hotel and steamer use and the call is filled.

Turkeys, choice small, on ice, 11@12c.; fair to good, frozen, 8@10c.; do., poor, frozen 4@5c.; Phila., d.-p., 10@12c.; chickens, spring, Phila., large, ₱ lb., 26@28c.; small, 25@26c.; roasting, Phila., dry-picked, 28@29c.; fowls, Phila., yearling, 15@17c.; dry-picked, 14½@14½c.; Jersey, good to prime, 13@14c.; State, 11@13c.; Western, 11@12c.; poor to fair, 7@10c.; ducks, spring, large, ₱ lb., 20@21c.; small, 20@22c.; Phila., dry-picked, 14@15c., squabs, white, ₱ doz., $2.00@2.25, dark, $1.25@1.50.

Live chickens easy with liberal supplies; fowls scarce at the moment, and stiff. Turkeys in coops hardly wanted, prices not paying shipper. Ducks and geese quiet.

Chickens, spring, large, per lb., 22@24c.; do., small, 20@21c. fowls, Jersey, 12@c. Western, 12c. Southern, 11@12c.; roosters, 5@6c., turkeys, mixed, 8@9c; mixed Southern, 6@8c.; ducks, Jersey, N. Y. & Pa., ₱ pair, 55@65c.; Western, 40@50c. Southern, 35@45c.; geese, Jersey, $1.50@1.62, N. Y. & Pa., $1.25@1.37; Western, mixed, $1@1.12; southern, 75c.@$1; pigeons, 25@40c.

There is little game other than wild pigeons offering, and squabs and pigeons in good demand. English snipe, frozen ₱ doz. $2.50 wild pigeons still fed, ₱ doz. $1.50@1.75; flight, $1@1.25; squabs, flight $1@1.25.

PROVISIONS.—Hog products have been fairly active and closed firm at $11.40 for spot and June; $11.40@11.45 for July; 11.45@11.50 for August, and $11 55 for September. Bacon at 7c. for long clear. Tallow at 6@6½ for prime. Stearine at 8½@8¾c. Beef hams at $18@18.50 for new. Lard—Western steam at $7.12½ for spot; $7.10@7.12½ for July; $7.15 for August; $7.17@7 20 for September.

Receipts for week, beef, pkgs., 375; pork, bbls., 5,000; cutmeats, pkgs., 25 0 0; lard pkgs., 20,000.

Exports, beef, pkgs., 2,525, pork, bbls., 3,750; cutmeats, pkgs., 1,511 5,9; lard pkgs, 5,670,850.

SEED.—Clover in light demand and steady at 6¾@7c. for medium Western and 7@8c. for State. Timothy is quiet at $2.60@2.75.

TOBACCO.—Export demand continues small and the home trade moderate. Prices show no decided change. Quotations are for

KENTUCKY LEAF.

	Light.	Heavy.
Common lugs	4 @ 4½	4½@ 5¼
Good lugs	4¾@ 5¼	5½@ 6¼
Low leaf	5½@ 6½	6½@ 7×
Medium leaf	7 @ 7½	8 @ 8½
Good leaf	8 @ 8½	9 @10½
Fine leaf	9 @11	11 @12
Selections	12 @—	12½@14

SEEDLEAF.

	Crop of 1879.
New England Havana seed	18 @25
do. seconds	10 @13
do. fillers	5½@ 7
Penn. assorted lots, fine	18 @22
Ohio assorted lots	7½@10
Wisconsin assorted lots	7 @10
Wisconsin Havana seed	16 @18

VEGETABLES.—Potatoes have had a good active demand for both prime old and new. Prices decidedly better. Green stuff is in good sale. The ravages of the army worm threaten to reduce N. J. and L. I. crops.

Bermuda, new, ₱ bbl $5 50@6; Norfolk, $3@4; Chas. & Sav., Chili red $4.50@5.00; Early Rose $4.40@5; Peerless $4@4.50; Fla., $4@4.75; culls $1.00@1.50. Early Rose, Maine, ₱ dish bbl. $2.50@2.75; State $2.25@2.50; Prolific, Maine, $2.25@2.50; Jackson, Maine, $2@2.25; peachblow, State $2.50@2.75; Snowflake, $2.50@2.75, Peerless, State $2@2.25; sweet potatoes $1.50@$2.50. Tomatoes, Cha's. and Sav., ₱ crate, $1@1.50; Fla., ₱ bu. crate, $1@1.50; cucumbers, Charleston and Savannah, ₱ crate, 40c.@$2; wax beans, Norf., ₱ ½ bbl. crate, $1.50@1.75; string beans, Norf., round, ₱ ½ bbl., $1.75@2; Norf. flat, ₱ ½ bbl. $1.50@1.75; green peas, L. I., per bag, $3@4.25, asparagus O. bay, per doz. bch., $2@2.25. N. X and L. I. ₱ doz $1.25@1.50; turnips Jersey, ₱ 100 bunches, $3@5; beets, Jersey, per 100 bunches, $2@3 radishes, per 100 bunches, 75c.@$1; lettuce, per bbl., 75c.@$1; cabbage, Jersey per 100 $8; Norfolk, ₱ bbl. $1.50@2; squash Nor., yellow ₱ cr. $1.00; white, ₱ cr. 50@75c.; rhubarb L. I. & Jersey ₱ 100 bunches, $3@1.50; onions Bermuda, new, ₱ crate, $2; Maryland yellow, ₱ bbl., $5.

WOOL.—There is a little more doing, but no especial activity. Prices are generally steady. Quotations are for

Ohio, Pennsylvania and West Virginia, XXX and picklock; 48@50c.; XX, 47@50c.; X, 48@49c.; No. 1, 52@55c.; No. 2, 46@49; common, 44@46c.; combing and delaine, 50@55c.

N. Y., Michigan, Indiana and Wisconsin, X and XX, 45@47c.; No. 1, 50@53c.; No. 2 and common, 44@47c.; combing and delaine, 48@53c.

New York, New Hampshire and Vermont, X and XX, 43@45c.; No. 1, 48@51c.; No 2 and common, 43@45c., combing and delaine, 47@52c.

Iowa, Illinois and Western, X and XX, 42@45c.; No 1, 48@50; No. 2 and common, 40@44; combing, 46@50c.

LIVE STOCK MARKETS

NEW YORK, Saturday, June 12, 1880.

BEEVES.—Receipts for week, 12,925 head; do. last week, 15,587 do. The entire week has been an active one and the close shows an advance upon Wednesday's transactions. Export live stock has had a busy week. Light Montana cattle were sold at 8¾@8¾c., to dress 55 lbs.; Colorado and native stillers at 8¾@9¾c., to dress 56 lbs; corn-fed Colorados at 9¼@9¾c., to dress 57 lbs. The balance of the offerings were native corn-fed steers, which were sold at 9c., to dress 56 lbs., to 10¼c., to dress 57 lbs.—latter price for two car loads of choice selected steers for export alive.

MILCH COWS.—There is a fair call for prime cows and $60 has been paid; poor to good quoted at $25@40c.

VEAL CALVES.—There is a good demand, but the market does not seem to need enlarged receipts.

Live calves, Jersey and Bucks Co., choice, 6c¾.; prime, 5½@6c.; State, choice, 6@6¼c.; do. prime, 5¼@6c; fair to good, 4@5c.; poor, 3@4c.; Mt. Holly, fair to choice, 5@6c.; buttermilk, 3@3¾c.

SHEEP AND LAMBS.—Receipts for the week, 32,372 head; do. last week, 32,652 do. Sheep were dull, but prices remain about as during the week. Butchers got pretty well stocked up with lambs yesterday, and had but few wants to-day. The market was therefore slow, and generally ¼c. off. Sales of sheep were at $4@5.85; of Southern and Western lambs at 6¾@7c., and of Jersey do. at 8@8¾c.

SWINE.—Receipts for week, 26,731 head do. last week, 22,177 do. The receipts go direct to city killers and there are no late public rates for Western. A few Va. hogs sold at $4.35. City-dressed easier, 5¼@5¾c., the latter for pigs.

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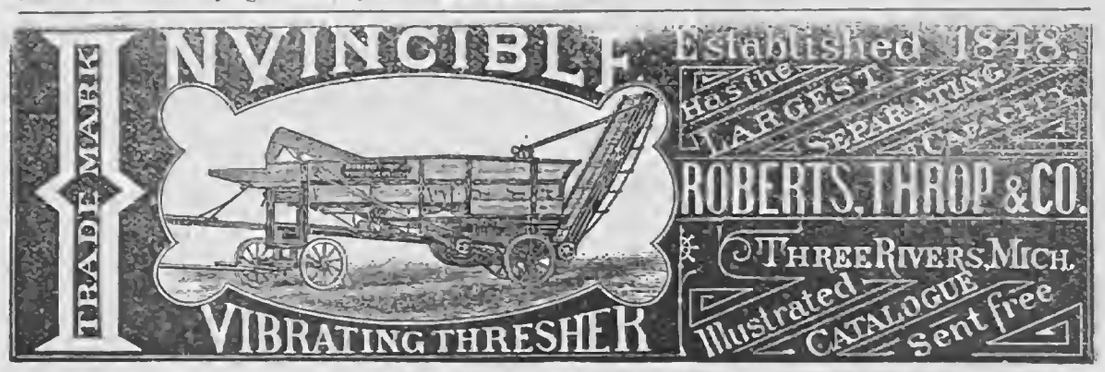

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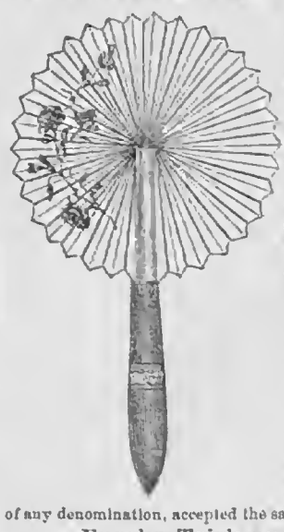

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Reading for the Young.

THE MEADOW LARK.

SWEET, patient watcher on thy lowly nest,
Thy meek head peering o'er the meadow grass:
"All motherhood is in that tender breast"
As near thy secret bower my footsteps pass.

The deep, deep blue of June's delicious sky,
Can tempt thee not to rise and soar away;
Love-taught, thou canst resign without a sigh
Freedom and song upon this summer day.

Unconscious teacher! may we learn from thee
The holy lesson of unselfish love—
That adding patience to our faith, we be
Made meet for the inheritance above.

LAURA S. HAGNER.

THE CHILDREN'S ACRE.

J. E. Mc. C.

EVERY one of the Graham family was a singer, from the oldest boy Albert, down to the baby who sat up in her cradle and hummed "Home, Sweet Home" before she could speak a word. The concerts they used to have around the evening-lamp, when the day's work was done, were better than a great many you pay money to hear. They did not shell corn in the evening at their house. The father even took the pains to make himself a music-stand to hold his singing-book more conveniently.

Now, it is no wonder that such a musical family should take a notion to buy an organ. The children talked and wished a good deal about it, and finally one evening Sophie asked,

"What will you give us, father, towards an organ? Mother could teach us to play, and we will all save up and deny ourselves and earn money until we get it paid for."

Now, their father had thought a good deal about this himself, but had not said anything for fear it would not be done, and he did not wish to make the children uneasy and dissatisfied. He worked hard himself so that he could educate his children well for he felt deeply the force of the truth, that children can grow up but once. But if the children were willing to take hold with a will may be the instrument could be bought.

"But, Sophie, it must all be paid for, cash down in the start. No paying by installments for me. I have been bitten that way a time or two, and have had enough of the business. I suppose you are willing to take the commodity I have the most of, and turn it into cash."

"Oh yes sir," said Albert, his mind running on grain. "We'll turn anything on the farm into money that you will give us towards it."

"Well," said the father with a twinkle of his gray eyes, I will give you an acre of ground."

The children exchanged glances and looked a little caught, but Sophie answered with enthusiasm. "Its a bargain just get the ground ready and I will take my portion and set it out in onions. I have always thought I should like to try my hand at raising something on my own hook."

Sophie was a born farmer's daughter and loved the out-door work of the garden full as well as washing dishes. Indeed, she could not well see why it was not quite as interesting to cultivate rows of fine vegetables, which looked beautiful when growing and "came to something," as it was to drag into the house in the fall and drag out again in the spring great crocks of green things which did not even blossom very often. Any way, you could not convince her that the one kind of work was any less lady-like than the other.

The ground was duly prepared, and the children set to work with a will; even six-year-old Kate had her corner, and there was not a weed to be seen there all summer. Whenever the market wagon went to town there was almost always something to sell from the children's acre, and the little savings-box filled up with small coins. It was rather slow work, but when the last fall crop was taken off they had three-fourths enough money to buy the most coveted instrument. Now mother came down handsomely with her summer savings from the poultry yard, and when all was again counted and the eyes of the happy children feasted on their riches, father said to George: "Take the spotted calf over to Mr. Hall's to-morrow morning. He shall have it, and that will make out your sum. I guess it will do us all more good in that way than in any other."

So it all came about in very a easy, natural way, and nobody felt the poorer. The children had worked hard over their acre, but they had learned a good deal also, and nobody can estimate the worth of such a lesson in thrift and economy and industry. There was a pleasant reminder of their efforts always standing there in the cozy east-room, ready to cheer and brighten the dullest day.

It was not the last of their earnings. They said they had just learned how. Many more comforts and luxuries were added to the house from time to time as the result of their industry. Father and mother never grudged them the means, and encouraged them to the extent of their ability. The additions were commonly made about Christmas time, so that festival always passed off most delightfully, and they felt almost like rich folks when they surveyed their treasures. The Grahams had found out the secret of making a little go the farthest, and getting the greatest amount of comfort out of their resources as they went along.

A CROP OF CORN.

A TRAVELER in one of the New England States recently passing by rather a sterile field planted with corn, observed a white-headed, well tanned freckled-faced boy, leaning thoughtfully over his hoe handle in its midst, with his right, bare foot braced firmly against the calf of the left leg. Stopping his carriage in the road, opposite the boy, he bid him a "good morning," to which he was smilingly responded, and said: "You seem to have rather *small* corn growing here, my lad."

"Wa-a-l, yes," he replied with a long drawl, "that's sartin true, but recollect, mister, it's *dwarf* corn."

"Exactly," says the traveler. "Yet don't you think the stalks are looking extra yellow?"

"Of course," answered the boy, setting down his right foot on the ground from its resting place against his left leg, "for we planted *yaller* corn."

"Pray, now," continued the traveler, "do you expect to get more than *half* a crop from such a poor field, and especially as you do not seem to be working very hard at it with your hoe just now?"

"No, sire," replied the boy with a broad grin, "for we plant it on *shares*, so ye can't expect more than *half* a crop, could ye?"

Here the traveler subsided and drove along.

LETTERS FROM THE COUSINS.

A Letter from Hawaii Nei.

HAWAII NEI has again favored us with a long and welcome letter. The cousins will remember that she wrote us last fall, but until now nothing has been heard from her since. It is pleasing to know that she has not forgotten her RURAL Cousins, and it is to be hoped that we shall hear from her more frequently in the future. Here is her letter:

HONOLULU, May 9th, 1880.

DEAR UNCLE AND COUSINS:—It is some months since last I wrote, and many things, both sad and joyful, have happened during the interval. Before I proceed further, let me thank you, Uncle Mark, for the seeds you so kindly sent me. I was real glad to receive them; I began to fear that you had forgotten me. A few days ago I had prepared a box with some rich earth, and planted in it some of all the seeds, except "Sweet Mignonette" and "Surprise Musk Melon;" the former I planted in a small box, the other in a nice corner of our garden that is fenced off from the chickens. Now I patiently wait for their "up sprouting," and hope they will thrive; will report progress next time.

Let me see; I believe my last letter was printed Nov. 22d. I miss a leaf of that paper and shall be sorry if it contains my letter, for at the end of it is quite a lenghty response from Uncle Mark. The missing sheet was lost during my absence. Aha! Tell you about my trip? Certainly, if Uncle Mark will grant me space for a condensed description. As my father was suffering from ill-health, a sea vogage was proposed. On the 18th of February we left Honolulu, on the bark "Kalakana," for San Francisco. Our passage of seventeen days passed very pleasantly. Very early on the morning of March 7th we sighted Farellones. On the largest of these islands, as perhaps some of you know, is a revolving light which can be seen at a great distance. A tug took us in through the "Golden Gate" to the "Golden City of the West." Here let me state that this was my first visit to your great America. I have been to Germany, but we traveled around Cape Horn. We had a four month's passage going, and were within three days of a six months' passage on our return. How is that for a voyage?

The day of our arrival in San Francisco it blew very hard; that night we had a "norther." Our ship rolled worse than when we were at sea. During our visit we met many friends we had no idea of meeting, and made many new and pleasant acquaintances, who made our three week's stay pass swiftly and pleasantly, with drives through Golden Gate Park, visiting the new conservatory (where I saw many beautiful and rare exotics), and from there to the Cliff House to hear the seals roar, then along the hard sand beach to the "Ocean House," to Woodward's Gardens, etc. In fact we visited all places of note; nor must I omit my drive through East and West Oakland, where I saw many beautiful homes, on to Berkely, and through the adjoining grounds of the Berkely State University. If I was a boy wouldn't I study doubly hard, if I could go to a school where the surroundings are made so pleasant for the scholars. RURAL Cousins of both sexes as well as all readers of the RURAL, let me advise you, one and all, to learn what you can in your youth, and learn it well, so that when you grow older you will not regret misspent days. I sincerely pity children who crave for knowledge and cannot have the opportunity of an education, but much more so do I pity those that have the chance and opportunity *and do not* improve it. Those misspent days never return. Boys and girls, take "upward and onward" for your motto, and act up to it. "Where there's a will, there's a way," you may be assured; then strive to find it. But to return; it was rumored at the "Golden Gate Academy" (in Oakland) that a Hawaiian girl would visit there that day, and I tell you truly, by the stares I received I began to wonder if I was an ogre. Every room we passed a head would bob out, and, for excuse the owner would ask my companion, who attends the academy, a question. As we left I turned and saw two windows, with little else to be seen but handkerchiefs waving. I dare say those young fellows would have stared with eyes opened a little wider, had I but spoken a few sentences in native, as I did in San Francisco one evening. While out for a walk we passed through a store, and in answer to all the clerks, who came forward as we passed their counter, my companion and I would turn to each other, speak native, and pass on. I do not think they understood us. In this manner the days glided by. Our visit over, we returned home on the "Kalakana," feeling very much recruited by our trip, and are again busy at our daily duties.

The fever that has been visiting us for the last six months, has I am glad to say left at last; but oh! It has left many a vacant chair in loved homes and many an aching heart; loved ones have passed to the other shore, where we shall meet them by-and-by, happy thought, consoling balm. One of the first to succumb to the dread fever, was a young and lovely girl, lovely in disposition and love in name; I think hers was one of the saddest deaths Honolulu ever witnessed; the oldest (not only) daughter of the family, beloved by all who knew her and her sweet winning ways. She was my most intimate friend, I having no sisters or brothers, and hers being much younger than herself we were as twin sisters, and shared each other's joys and sorrows. Intimate friends, schoolmates, Sabbath school scholars, and later on teachers, side by side we walked for seven years. Yet God took her from this world. She is free from care and trouble, and we remember her as a well beloved friend, lent to us for a little while, then taken home; her image will go with us through life, the remembrance of her often keep us from wrong doing.

But I fear that I am tiring you, so thanking all for your kindness in listening to me, and Uncle Mark for not looking at the waste baskot, I will bid you good-night with Aloha nui to all.

HAWAII NEI.

P. S. Our crater Mokuaweawea (summit crater or Mouna Loa) on Hawaii is very active; so much so that people at Laihaina Mani can see to read a newspaper at night. How wonderful are God's works! A like brilliant eruption has not happened since 1868. In consequence of the eruption we have rather warm weather. H. N.

DEAR UNLE MARK:—I guess that you think that we have forgotten you in spite of the many reminders we have had in the shape of corn, grape seeds, and also a large package of seed from your Free Seed Distribution. If we do not have good gardens and fine shrubs and flowers it will not be your fault; and here let us thank you for all. But how can you afford to do it? That is a query that we should like to have answered. We are going to have a garden all our own this year, with flowers and vegetables. Our grape seeds are coming up. The corn you sent us the frost cut down, but we have a little left to plant. With love to yourself and all the cousins we close.

CLARENCE and JOHNIE CROOK.

Shiawassee Co., Mich.

DEAR UNCLE MARK:—I take my pen in hand to thank you for the seeds you were kind enough to send me. I got all but one package of vegetable seed which the mice got. We have had a very hard winter. In January the snow was three and a half feet deep. We have but a very small garden this year. I have a bed each of lettuce, radishes and onions. I study reading, spelling, arithmetic and writing. We cannot take the RURAL this year, but papa has found a mine, so if we get rich we will take the RURAL the rest of our lives. Now I must close, for I must feed the chickens. Good bye.

LAURA MCGEE.

King Co., W. T.

The Puzzler.

GEOGRAPHICAL ENIGMA.

26 LETTERS.

25, 17, 4, a river in Russia.
7, 22, 3, 14, a lake in N. Y. State.
21, 11, 25, 3, 8, 18, one of the five great oceans.
25, 12, 2, 23, 2, 16, 20, 9, 7, a river in N. Y. State.
25, 17, 13, 14, 15, a capital of one of the States in the Union.
16, 6, 21, 5, 4, 7, 26, a mountain in Europe.
19, 12, 8, 22, a cape on the eastern coast of the United States.
1, 23, 3, 18, 10, a river in Michigan.
24, 23, 5, 8, 21, a mountain in Europe.
The whole is a familiar quotation.

☞ Answer in two weeks. M. A. N.

GEOGRAPHICAL ANAGRAMS.

1, M I stew in rest; 2, Lando D I new fun; 3, To poor; 4, mad stop; 5, I stab Orn; 6, I'd dram; 7, Y! no, papa: 8, Gnat harm; 9, Was raw; 10, Lot Bon; 11, Tone; 12, Word sin; 13, I spar; 14, No step R; 15, Wreak N; 16, I scar Ill; 17, Do two fice; 18, I saw hat; 19, Kate cut Nn; 20, Vera hired, 21, Nig's dog on car; 22, A tin car ban; 23, Be salt bran; 24 Repeat s, h, m; 25, Kadle scab.

☞ Answer in two weeks. LITTLE ONE.

HIDDEN MEATS.

1. Let me be, Effie.
2. You are a knave, Allen.
3. Philip, Orkney is my home.
4. It went off slam-bang.
5. Put "V" Enis on the canvass.
6. Put smutt on your face.
7. I hate shams.
8. Tobac only lives.
9. Will it bear me, Athon.
10. Is buff a lost "eaker."
11. My health is "middling."

☞ Answer in two weeks. L. O.

NAME PUZZLE.

Place three female names so as to form a fourth.

☞ Answer in two weeks. L. O.

DIAGONAL PUZZLE.

1, A consonant; 2, A French pronoun; 3, A sort of nose; 4, Lazy; 5, a stream of water. Primals and diagonals form two animals. L. O.

☞ Answer in two weeks.

PUZZLER ANSWERS.—May 29.

HALF SQUARE:

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A L M A G R A
L E I P O A
M I D S T
A P S E
G O T
R A
A
```

NAME PUZZLE:—Absalom, Stephen, Alexander. Initials form "Asa."

HIDDEN MINERALS:—1, stone; 2, rock; 3, slate; 4, marble; 5, granite; 6, sand; 7, lava; 8, clay; 9, quartz; 10, hornblende; 11, feldspar; 12, mica; 13, gravel; 14, pebble, 15, spar; 16, adamant; 17, shale; 18, trap; 19, talc.

Various.

BRIEFLETS.

PLANT corn or other fodder crops whenever it is possible to do so—if you don't, you will be in a "fix" next winter. . . . . First sound, ripe cherries at the Rural Farm June 1st. . . . . The political papers are full of a glorious contempt for consistency—as Col. Forney calls it—that they may better serve their country! . . . . . Progress says: "If the agitation of the woman suffrage movement continues, its adversaries may finally be driven into the adoption of the effective and complimentary argument based on the idea that the fair sex already possesses so much power, that if the ladies were allowed to vote they would be irresistable, and that the only chance man has for relieving himself from utter and hopeless subjugation is to retain a monopoly of the elective franchise." . . . . Mr. Fowler remarks, in the Country Gentleman, that the worst neglect in American farming is insufficient preparation of the soil. . . . . Again he says: "If we had no weeds in our hoed crops few farmers would give as much cultivation as is needed. Thus we learn that even weeds are a 'blessing in disguise,' and the old prediction respecting the earth, that thorns and thistles it shall produce for man's sake, is fully verified." . . . . "As to the power of linseed oil to prevent pear blight altogether, if applied in time, I can only state the fact that I have a number of Bartlett and Flemish Beauty trees, about eight years old, to which I have applied the oil each year since they were planted, and they have not as yet shown any blight." This is the experience of a correspondent of the Prairie Farmer. . . . . We find the following rather remarkable statement in the London Farmer: "Ostriches are known to be very voracious. They will snatch a bright button off one's coat or swallow pipe, tobacco, fire, and all, if you approach too near to them whilst smoking. Ostrich breeders have an unlimited stock of stories as to the thieving and digestive faculties of the ostrich. An ostrich that died suddenly at Rome was a fair sample of this kind. It had been long on exhibition, and suffocated itself a day or two ago by thrusting its neck between the bars of its inclosure. A post-mortem examination took place, and there were found in its stomach four large stones, eleven smaller ones, seven nails, a necktie pin, an envelope, thirteen copper coins, fourteen beads, one French franc, two small keys, a piece of handkerchief, a silver medal of the Pope, and the cross of an Italian Order." . . . . "From nurses who know more than the doctor, and who will not carry out his directions, good Lord deliver us."—Ag. Gazette. . . . . Mr. S. M. Pearsall says (Mich. Pom. Soc) that it was many years before he learned how successfully to make an asparagus bed, viz: prepare the soil for 18 inches or two feet in depth and do not cut until the third year. . . . . Select the low lands for celery. Mucky soil is excellent. It is a marsh plant by nature. . . . . So far as at present known, the peach tree disease of yellows is incurable and there seems no doubt it is highly contagious. Wherever it makes its dread appearance the tree should be destroyed, else the entire orchard and neighboring orchards may be considered as doomed. . . . . Grape vines planted this spring will be weakened if more than one shoot be permitted to grow . . . . . We often wonder why Mr. C. M. Hovey, whose horticultural contributions are frequently seen in English periodicals, so rarely writes for home journals. Is it that he is more interested in foreign horticulture than in our own? . . . . . We find the two following items in the N. Y. Herald under the heading of "RELIGIOUS:"

In Michigan social etiquette permits a bride to be married without gloves because that's the way she handles the groom after marriage.

A Wisconsin woman has been married fifty-eight years and has never missed building her own kitchen fire. Her husband is probably the oldest fire-escape on record. . . . . .

Mr. Rowe, of Michigan, says: "No matter how much care we may give the Osage orange hedge, portions will die out in severe winters." . . . . . Mr. Taylor says: "With proper plants in proper hands farm hedges can be made profitable. Men need to study this matter as thoroughly as tree or fruit growing." Mr. Gulley asks: "Are they growing more or better hedges in the Eastern States than fifty years ago, or are they not gradually giving up the business?" . . . . . Now is the time to make the garden profitable. . . . . Sow buckwheat before the 20th for this latitude. . . . . There is probably no better late winter squash than the Hubbard. . . . . A new disease and a new remedy. We see the following advertisement posted up in New Jersey: "A Jersey cure for Jersey chills."

PERSONAL ITEMS.

A farmer living in Midland township, Ohio, was killed by lightning on the 10th. He leaves a large family.

In Todd County, Ky., Silas King was instantly killed and Marion Lindsey so injured that his recovery is doubtful, by lightning on the 8th inst.

A little girl's face was distinctly photographed by lightning upon a window pane in Laurel, Ohio, during a recent thunder storm.

Henry Davis was killed while working in a barn near Brown township, Ohio, on the 10th. The barn was also burned by the lightning stroke.

A farm house belonging to J. L. Fenton, situated at Harristown, Ill., was struck by lightning the other day and three of the inmates were knocked senseless.

While unhitching their team, Ashbel Wells and his son, of Fairview township, Mo., were stunned by lightning on the 11th and one of the horses was instantly killed.

Marion Moseley of Henry County, Georgia lost his total supply of fall pork and bacon by one stroke of lightning. The hogs, ten in number, were under an oak.

A demolished house and the instant death of a Mrs. Martin and her two children, was the work of a lightning stroke at Priceville, Ill., on the 10th inst., at midnight.

Lightning destroyed the house of Job Ennis, a Mennonite, of Winnipeg, Manitoba, on Saturday, June 5, killing Ennis. His wife expired from shock on Sunday.

Lightning struck the barn of Jacob High, near West Jefferson, Ohio killing Henry Davis, who had taken refuge there, and burning the building and its contents.

Lightning cut queer antics at Jasper, Mich., on the 10th inst. It struck the windmill of Nathan Shumway, completely shattered the stone pump, and, following outside, killed two cattle

Edward Sevier, of Murrayville, Illinois, was struck by lightning on Sunday afternoon, June 6th, at Russell's Pond, and instantly killed. His clothes were torn from his body and his shoes thrown a great distance.

The first instance on record of the killing of a mule by lightning occurred at Bard, Iowa, last Friday morning. The bolt struck the barn of J. H. Hartman in the roof at the gable, made a hole four inches in diameter through the hay down nto the stables, instantly killing three horses and a mule. The flash did not set the hay or woodwork on fire.

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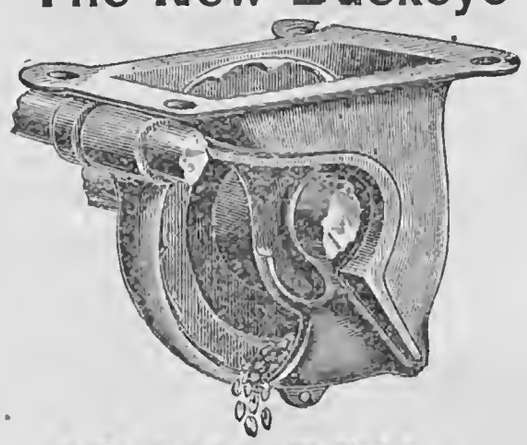

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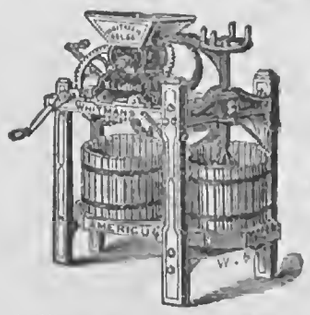

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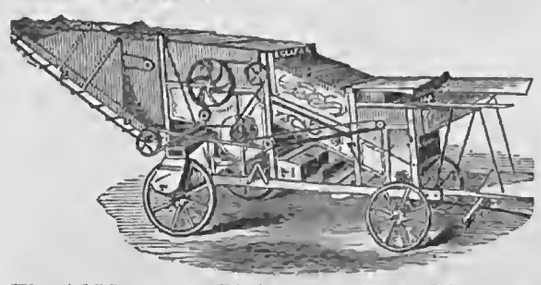

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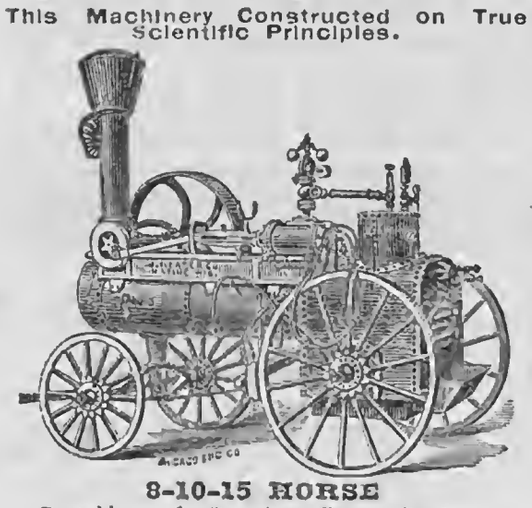

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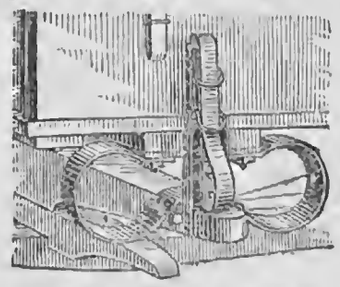

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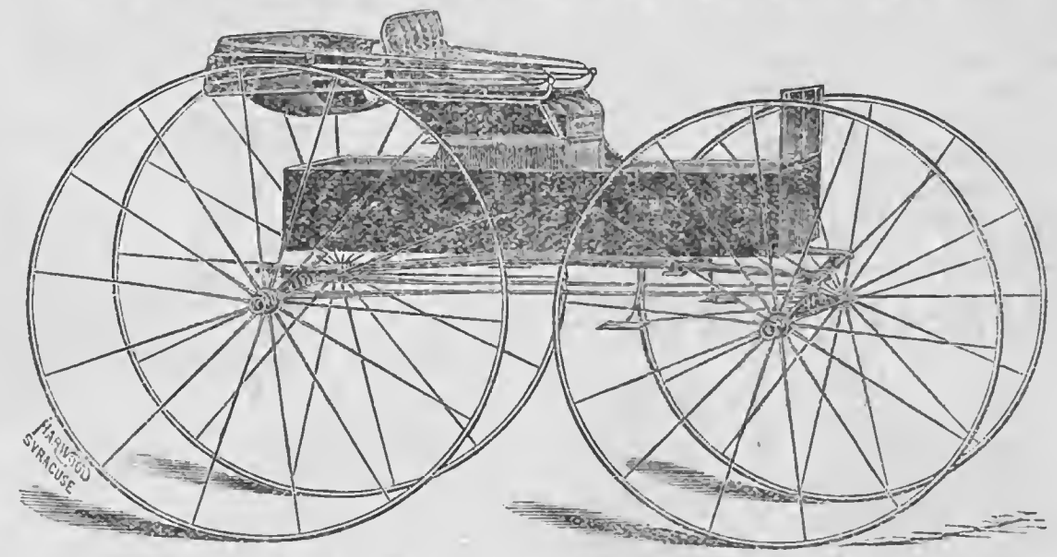

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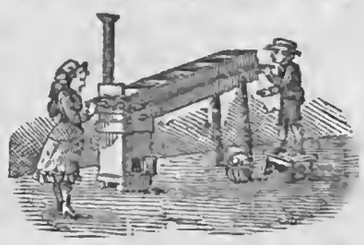

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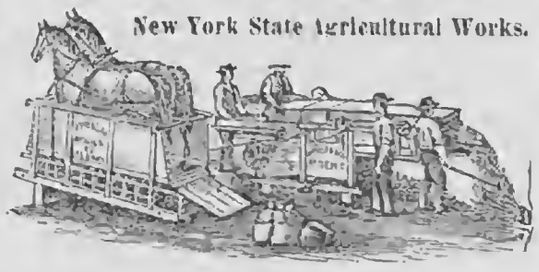

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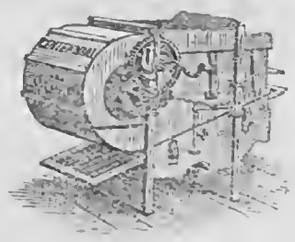

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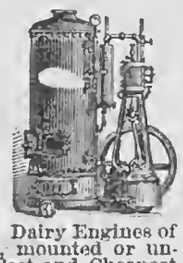

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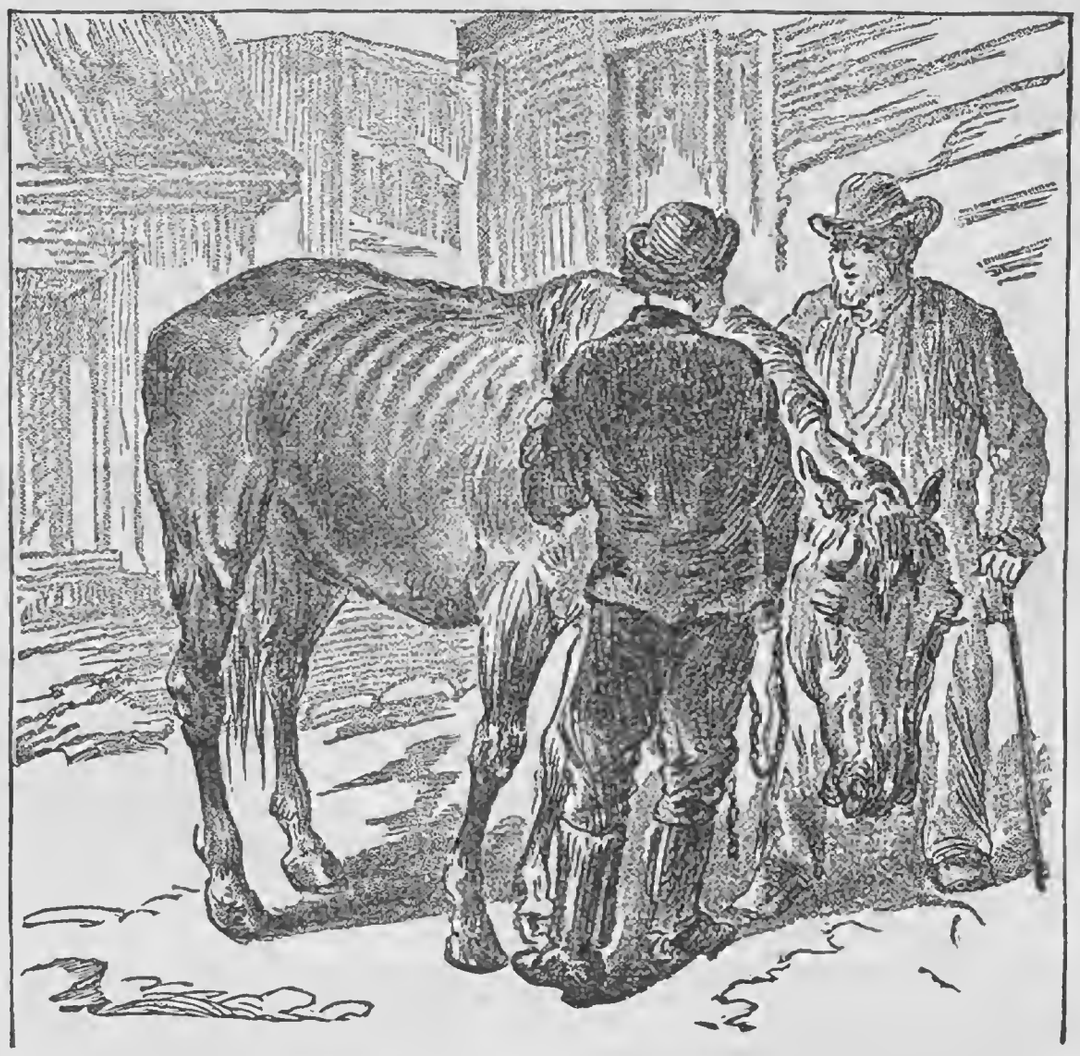

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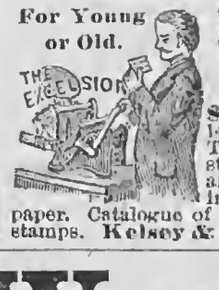

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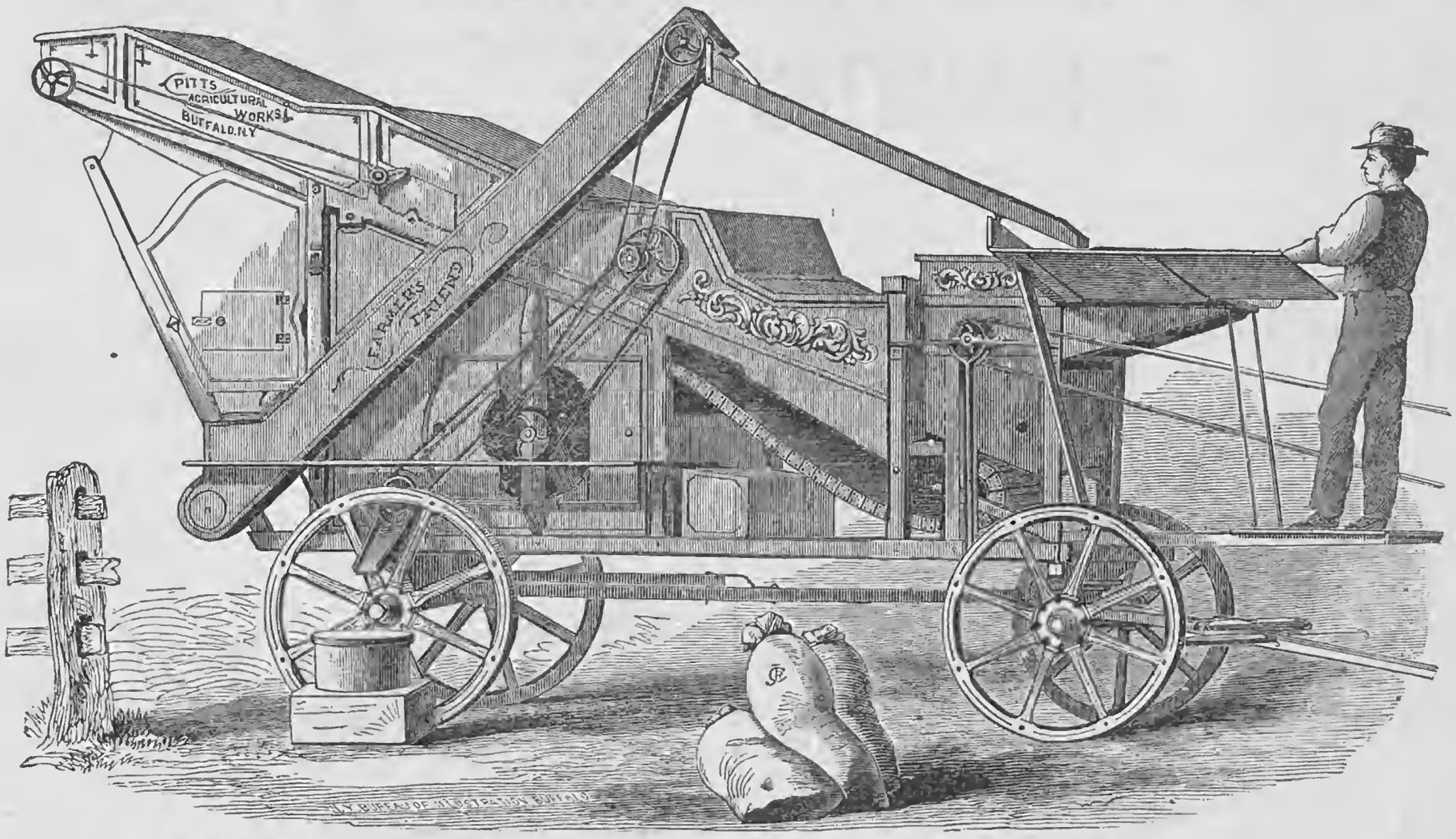

The "Buffalo Pitts Grain Thresher and Cleaner" threshes from the head Wheat, Oats, Barley and Rye, Flax Seed and Timothy Seed, separates the Grain or Seed from the Straw, and Winnows and Sifts from it all Chaff and Foul Stuff, delivering the Grain or Seed IN A CLEAN, MARETABLE CONDITION.

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 26.
WHOLE No. 1587.

NEW YORK, JUNE 26, 1880.

PRICE FIVE CENTS.
$2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Rural Architecture.

A CHEAP GREEN-HOUSE.

PETER B. MEAD

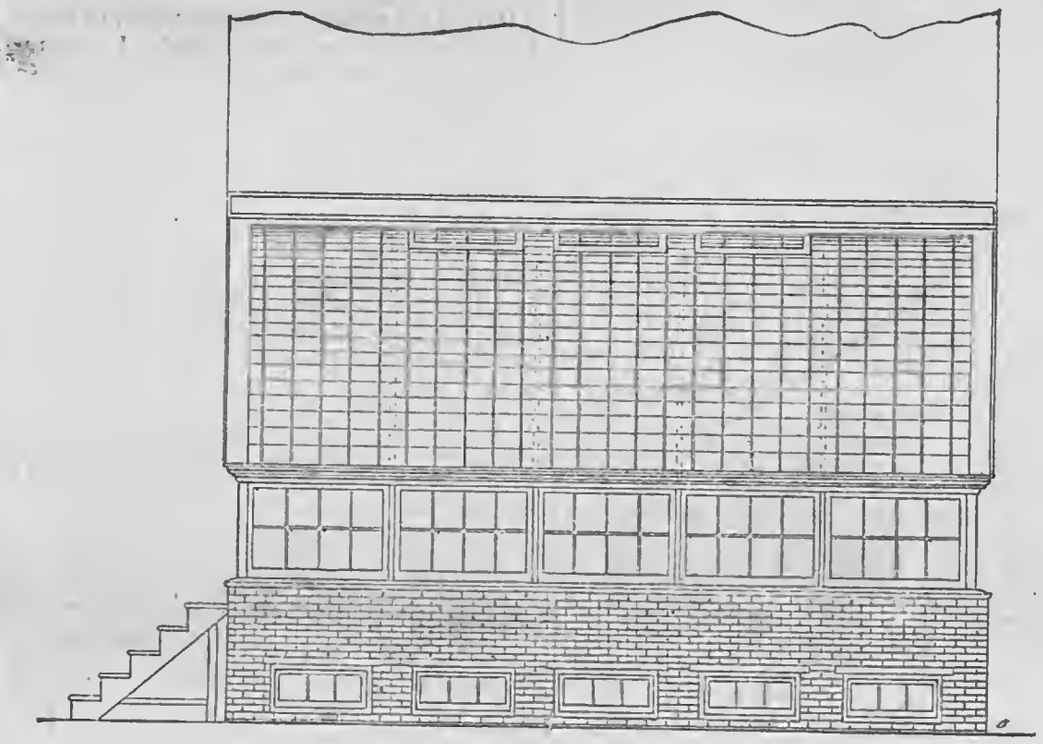
FOR years past, at intervals more or less brief, inquiries have been made, through the horticultural press, for *cheap* green-houses. Evidently the meaning has been, for houses costing very little money, and the inquiries have been answered accordingly. The dominant idea, in both the inquiry and the answer, has been the primary or first cost, ignoring altogether other and more important considerations, without a strict regard to which a truly cheap house cannot be built; and that is beginning to be well understood now, even by those who formerly favored this kind of so-called cheap structure, in which the cost of repairs exceeds the original cost of building. Hence, and happily, they are beginning to disappear, being replaced by something better and really cheaper.

It may be convenient, or even necessary, where one occupies hired or leased land, to put up a sheltering shed of glass and wood for the temporary protection of plants; but pray, do not call them plant houses. Even in such a case, however, much better may be done. I have made plant houses a specialty for more than twenty years, and during all that time have studied to reduce the cost of construction, and have invariably found the path of economy to lie in the direction of good material and good workmanship. Without these, a cheap plant house can no more be built than a good coat can be made out of shoddy. The frame or body being well built, the ultimate cost may be reduced in the treatment of eave and gutter moldings, and the omission of labor-saving apparatus; but in the latter case, only where human labor is very cheap.

I make the above remarks on so-called cheap plant houses to pave the way for the introduction of an example of what I consider a cheap house. This particular style of house is chosen because it meets the wants of a class of amateur plant growers whose claims to consideration have been almost entirely overlooked among us. I have special reference to lady amateurs; but the reference will reach quite as well to many amateurs of the other gender (a growing class, I am happy to say), and to the comparatively few (I am sorry to say) among our clergy who love to devote a portion of their time to the culture of fruits and flowers.

The structure seen in the accompanying illustrations, it will be observed, is attached to and forms a part of the dwelling. It is susceptible of various modifications, as will be explained farther on. In the present case, necessity determined the form of the house, as it will in many other cases. No other could have been adopted without considerably increasing the cost, and this was not to be done. The space now occupied by the ground plan (Fig. 218) was a covered area, built up to the ground surface (o) with a stone wall. This wall was repaired and retained, and in order to place the floor of the green house and that of the dining-room on the same level, an eight-inch brick wall some four feet high, and pierced with windows, was built on the top of the stone wall, which converted the area into a useful room, now used as a laundry and store-room. The shaded spaces in the ground plan denote the position of the mullions. The outlines of the tables (a) and walks (b) are also shown here. The narrow walk at the back was made for convenience in reaching the plants. All the plants in the house (except some hanging baskets) can be easily reached without leaving the floor.

The floor beams (g) and flooring are shown in the section (Fig. 220). The floor is made of narrow yellow pine laid in white lead and oiled. Referring to the ground plan, b is the walk, two and a-half feet wide; a, is the table arrangement, which is flat, and not shelving. In the absence of an earth floor, the want is partly supplied by making the tables three inches deep, and filling in with clean sand, which is kept constantly moist. The edges and uprights are of yellow pine trimmed with black-walnut moldings, which look very neat. The bottom of the table is of spruce, thickly coated with stone paint, and is sound after two years' use. At c is the pump. This is a Blount Universal Force Pump, which draws water from a cistern outside, and discharges it into a good-sized tank under the table. The pump is fitted with a three-way cock, so that water may be drawn from either the cistern or the tank at pleasure: this is a great convenience, and especially beneficial to the plants.

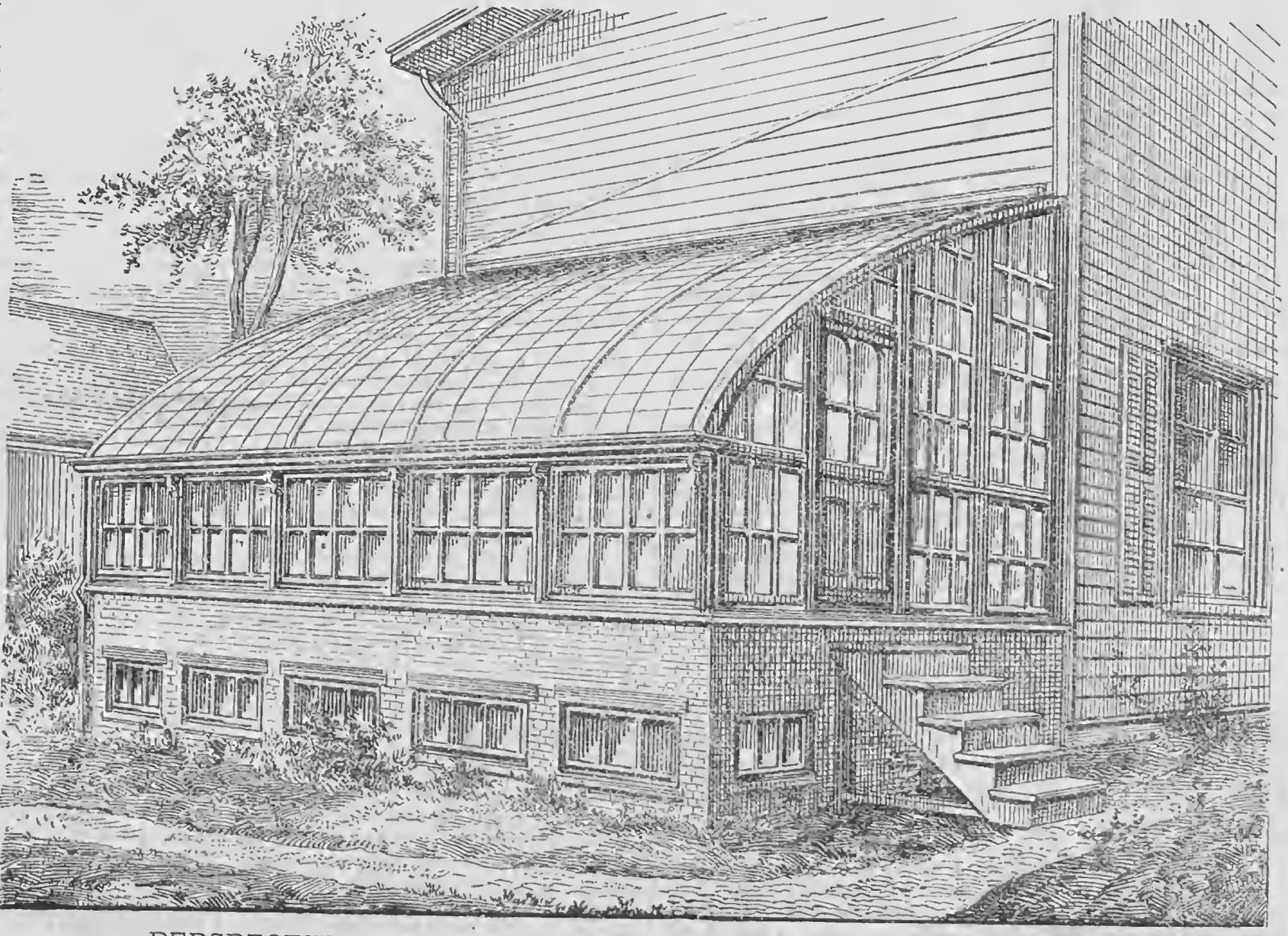


FRONT ELEVATION OF GREEN-HOUSE.—FIG. 216.

The section (Fig. 220) shows the arrangement of the rafters (r), purlins, plate (n), sill, (l), hot water pipes, (i), and the position of the boiler, f, in the laundry room below. This is Weathered's smallest boiler, and is capable of heating a house three or four times the size of this. It is so inclosed with brick-work as to form a hot-air chamber around it, and the hot air is conveyed to the dining-room, which it keeps comfortably warm in the coldest of weather.

The end elevation (Fig. 219) shows the positions and arrangement of the end sashes, door, steps, etc. The front elevation (Fig. 216) shows the arrangement of the front upright sashes, roof, etc. The rafters and mullions are fifty-two and a half inches apart from the centers, to meet the requirements of the glass used, and covered on the top and bottom with half-round molding. The sash bars are one by one and a half inch, and placed ten and a half inches apart from centers. French glass of selected second quality is used throughout the house, and is bedded in Davis's cement, the best glazing material I have ever used. The finishing coat of paint on the inside is white zinc; on the outside it is tinted a soft gray. The eave and gutter moldings, without being heavy, are so formed as to give the house a finished appearance. This may be varied to harmonize with the architecture of the house to which it is attached, and yet it must have an expression of its own: a plant house must always show that it is a plant house, and not a bit of pretentious architecture.

The ventilating sashes in the roof at v, Fig. 220, as well as those on the sides, are fitted with Weathered's improved ventilating apparatus, by which all the sashes are moved at one operation, which saves a great deal of vexatious labor. The material and the workmanship throughout are of the best description. It is an excellent growing house, and is much admired. The house is 23 feet long on the inside, and 13 feet wide, and cost, including the laundry, heating apparatus, and all the labor-saving appliances noted above, about $650: certainly not a large sum for a first-class house with so many conveniences. It was built for Mrs. W. H. Summers, of Mamaroneck, N. Y., a most excellent amateur in the proper sense of the word. She



PERSPECTIVE VIEW OF GREEN-HOUSE.—(Costing $650.)—Fig. 217.

has a choice collection of plants, which she grows well, and claims to receive a large share of pleasure and comfort in ministering to the wants of her charming pets in the winter, without exposing herself at any time to the inclemency of the weather. The world would be brighter and happier if this class of amateurs were greatly multiplied. It is a good field for the RURAL to labor in. Fig. 217, (see first page) is a photographic perspective view of the house, which will enable the reader to form an opinion of its general appearance and effect.

Being limited as to space, I can only add a few suggestive remarks. A house of this kind can be adapted to almost any style of dwelling. If a room should not be wanted below it, the house would be better built upon the natural soil, even if it had to be entered from the dwelling by descending steps. This would also materially lessen the expense. The cost could be increased by hipping the roof, which would add to the effect without injuring the house for its specific purpose. The cost could be lessened by using plainer moldings, and omitting some altogether. So, too, the cost could be much lessened by moving the ventilating sashes separately by hand; but I doubt the wisdom of such economy. In other ways the cost could be increased or lessened to meet the requirements of each case, which an expert would readily point out; and without the advice of an expert nobody should attempt to build a plant house.

Another style of house, detached from the dwelling, and adapted to the wants of amateurs of the sterner sex of moderate means, I propose to describe and illustrate on a future occasion; and perhaps something for men of means who employ gardeners, and do not need to count the cost of every penny spent on a structure which ornaments their grounds, enhances the value of their property, gratifies their pride, and in many instances, I should hope, their æsthetic tastes.

A SCIENTIFIC SUMMER-HOUSE.

"HA! ha! ha!" I hear some one say, "here's a fellow gone daft upon science; let's read him anyway." My summer-house has eight sides, an octagonal pyramid roof, seven seats, a doorway and a center table. It is of ample dimensions for seven friends, and is practically convenient as well as scientifically delicious—if anything can be delicious which one can neither eat nor drink. To prevent the wood-work from rotting in winter, I dispense entirely with hardy vines around it, which greatly injure all such structures. I employ, instead, the "wild cucumber," an annual plant native to Nebraska, with beautiful, serrated, palmate leaves, remarkably clean, totally free from all kinds of worms or insects, of extremely rapid growth, bearing in the latter part of Summer clusters of small white flowers, and later seed vessels as large as a walnut and of the same shape, having a number of curiously-shaped seeds, a little like watermelon seeds. By June the vine covers the whole house with its beautiful foliage which, overlapping, hangs down, very much resembling some styles of fancy-shaped slates on house roofs. Now, my friends, enter and be seated: I will take the seat on the north side—the doorway is on the south.

"I wonder what time of day it is?" some one asks. Well! you will notice that the sun is at the west of the door and shines upon the octagonal table, casting the shadow of one post directly across it, cutting the center at 45 degrees to a north-and-south line. It is therefore afternoon, and just about the middle of it. "Which way is the wind?" asks another. What perfume do you notice? "Why, that's plain enough, it's mignonette. Well, the mignonette bed is just southwest of the summer-house.

If you come here at nine in the morning the shadow of another post (there are just eight in all) would fall upon the table in an opposite direction, and if the wind was northwest we should be perfumed with roses, as the rose-bed is in that direction; heliotrope to the south; four-o'clock to the west; carnation to the north; cleome to the southeast; jassamine to the east, allyssum to the northeast.

"How remarkably cool and pleasant!" says another. Yes, quite so. You see our screen of broad leaves nearly shuts out the heat of the sun, and laying over each other shingle-like, but loosely, entices the air from the surface upward and directly into the interior where we sit, creating a constant draft, passing out through a ventilator in the center of the roof. In this arbor we are never troubled with insects, dead blossoms or horticultural rubbish of any kind. We sit and read, write or meditate as our fancy dictates; we never eat or drink here, hence no flies

Beds of gayly-colored flowers surround the house, which contrast finely with the dark green of the cucumber leaves. The scientific name of this vine is "Echinocystis lobata," that of the house itself, "Octagonalll enjoyyourselfsis"—the first of Greco-Latin origin, the second pure Nebraska vernacular. Now where's the man who laughed at me before he heard my story? S. RUFUS MASON.

Floricultural.

ORCHIDS.

BRIDGE OF ALLAN N. B., May 19, 1880.

I BEG to inclose you a list of the orchids in flower in my father's collection (Alexander Paterson, Fernfield, N. B., with short descriptions of the other interesting plants; also notice of the progress of the fine plant of the Anthurium Scherzerianum (Flamingo plant) copied with illustrations from the London Garden by you in your number for November, 21, 1874. In addition to this there is a notice of my father's plant of the white variety of the Flamingo plant—Anthurium Scherzerianum album Williamsii—purchased by him about five years ago from Mr. B. S. Williams, Paradise Nurseries, London, and said to be the finest variety of it. Yours faithfully,

W. D. PATERSON, L. R. C. P. and L. R. C. S., Edinburgh, Scotland.

Anguloa Clowesii.
Aërides roseum.
" virens.
" suaveolens.
" odoratum.
" Fieldingii has five fine spikes of bloom, two of which are branching and more than four feet across.
Brassia verrucosa.
Cypripedium Dominianum.
" barbatum.
" Hookeræ.
" hirsutissimum.
" Harrisianum.
Chysis Limminghii.
Cymbidium Lowii.
Cattleya Mendelii—a new, rare, white variety.
" Skinnerii superba.
" Mossiæ.
Dendrobium chrysotoxum.
" suavissimum.
" luteolum.
" nobile.
" Bensoniæ.
" Devonianum.
" Falconerii.
Epidendrum curruanum.
" prismatocarpum.
" exaltum.
Lycaste Skinnerii.
Mesospinidium sanguineum.
Masdevallia chimera.
" amabilis.
" Veitchiana.
" Lindeni.
" ignea.
" Harryana cœrulescens.
Oncidium aureum.
" pubes.
" Harrisonianum.
" crispum.
" hastatum.
" obryzatum.
" altissimum.
" flexuosum—a fine, new variety.
Odontoglossum Alexandræ.
" Pescatorei.
" gloriosum.
" Hallii.
" Klobochorum.
" cirrhosum.
" Uro-Skinnerii.
" membranaceum.
" vexillarium—with 15 spikes and
" 111 expanding blooms.
Phalænopsis grandiflora.
" Schilleriana.
" Luddemanniana.
" Parishii.
Vanda suavis (Veitchii var.)
" " (Dublin var.)
" tricolor Pattersonii.
" " (Dalkeith var.)
" " (Kew var.)
" " cœrulescens.
Utricularia montana.

Platycerium grande (the Elk's Horn fern from Queensland)—the two barren fronds measure five and one-half feet across, and the fertile frond droops from the center, presenting a most grotesque and singular form. It is exceedingly rare for this fern to develop its fruiting frond in this country, and this plant is declared to be the finest in Europe.

Platycerium biforme (a form of the Elk's Horn from Borneo), an exceedingly rare and most interesting species.

Mantisia saltatoria—"the Opera Dancer"—a most curious and rare plant belonging to the order Zingiberaceæ (the Ginger order). The bracts, as is common in this order, are brilliantly colored, those of this plant being a delicate lilac from the sides of which spring the flowers, lilac and yellow, and shaped like the figure of a dancing girl. It is called Mantisia from its great likeness to the "Mantis," or Praying Fly of India.

The Flamingo plant, since its illustration in the RURAL NEW-YORKER, has increased to fully double the size it was then, and is now in great beauty, having nearly 100 fully-expanded flowers on it and more to come. A few years after this plant was in the collection, Mr. Thomson, gardener to His Grace the Duke of Buccleuch, at Dalcith Park, had a small piece of it in exchange for another variety. This plant is now at Drumlanrig Gardens, Dumfriesshire, another of His Grace's fine places, the gardener there being Mr. Thomson's brother. This plant is noticed in "The Garden" for this month, May 15, 1880, as follows: "Anthurium Scherzerianum—a splendid specimen of this at Drumlanrig has 60 blooms on it in various stages of development. Those fully open measure quite five inches long and three inches broad. It is the kind known as Dr. Paterson's variety."

Anthurium Scherzerianum album Williamsii (White Flamingo plant) was brought out by Mr. B. S. Williams, Paradise Nurseries, Upper Holloway, London, about five years ago when this plant was purchased, and is said by Mr. Williams to be one of the best plants he knows. It has exactly the habit of the red variety, the spath being a fine ivory-white, with canary-yellow-colored spadix. This and the red are said to be the two finest varieties in cultivation.

Horticultural.

KOHLRABI AS A SUBSTITUTE FOR CABBAGE.

SINCE the ravages of the Cabbage worm have become so severe I have been almost discouraged about trying to grow any cabbages for family use; but I have found in the kohlrabi what I consider a good substitute for it, and I will endeavor in this article to show readers of the RURAL how easily they can grow this desirable vegetable.

During the past two or three years, or since I have been raising the kohlrabi, I have recommended its culture to a great many people and I think I can safely say that one-half of those to whom I have recommended it, did not know what it was or how it grew. If any such read this article, I will say to them, by way of explanation, that it is a vegetable intermediate between the cabbage and turnip, the edible part being the bulb which grows just above the surface of the ground.

Right here I would say a word in regard to cooking it. In the first place it is necessary to be very careful and peel it thickly enough to remove all the woody fiber which sometimes grows to a considerable depth on the surface of the bulb. Then our favorite mode of cooking it is to slice it very thin and boil until tender, which will take anywhere from two to four hours, according to the time of the year and the growth of the bulbs; that which is quickly grown being more tender and requiring less time. The later in the season it is kept the longer boiling it requires; but, at any rate, it must be boiled until quite tender; for else it is not fit to eat. When tender, chop with a knife and season the same as sliced boiled cabbage, and I have never found any one who was fond of the latter who did not think the kohlrabi an excellent substitute for it. It is also very good boiled the same as turnips, having something of the flavor of both the cabbage and turnip.

As to its culture, this is a very simple matter, as it is grown in much the same way as turnips. For early use I commonly sow it in a seed-bed, and transplant to about eighteen inches apart; and for later use, sow it in drills in the garden, and thin the same as for Rutabagas. For winter use it may be sown as late as the latter part of June, or even from the first to the tenth of July, so it is not yet too late to try it for this year, if any one wishes to do so. E. J. B.

Croton, N. Y.

Arboricultural.

EVERY-DAY NOTES.

The Preservation of Freshly-planted Trees and Shrubs during Drought.

ORDINARILY, people exercise the greatest care and solicitude for freshly planted trees and shrubs that have not enjoyed the benefit of rain within a space of less than a week after transplanting, especially if the season be late and the sun hot. The effort put forth is often even great in proportion to the really considerable value of the end desired. It is true that a large quantity of water administered during the cool of the day is highly beneficial to the plant, provided the quantity be sufficient to penetrate to the very tips, or lips, as it were, of the smaller roots. To supply such quantities of water in ordinary practice is almost impossible. The labor required would be arduous in the extreme. This may be readily understood when we consider the fact that really copious waterings seldom penetrate more than a couple of inches. The simplest and shortest methods of preserving the freshly planted shrub or tree employed by horticulture as developed at the present time, consists of a combined system of puddling and mulching. By puddling is meant a thorough encasing of the roots with thick mud by immersing them in an artificial puddle made close-by the spot where the tree or shrub is to be set out. If still farther precautions are desired, and the tree or shrub is of considerable size, water may be poured about the plant in the partially filled hole. Dry earth must be immediately thrown in, and the surface kept stirred from time to time in order to open the pores for the reception of dew and rain. It is important to avoid as much as possible any baking of the ground adjoining the tree. The value of mulching is in such cases great. By applying a covering of short hay, straw, tanbark or dry leaves immediately around the tree, not only is the ground retained in a mellow condition, but a large portion of the moisture is prevented from evaporating. If it be considered desirable to give more water at any time, the mulch can be removed and then replaced when the watering is finished. Whatever water one may choose to give the plant in this way afterwards, will, of course, help, but without puddling and mulching the application of any reasonable amount of water to a bush or tree will be like a drop in the bucket.

Disbudding Rhododendrons.

The value of the principle of obtaining quality at the sacrifice of quantity is well understood as an abstract statement. And, in many cases, even in horticulture, the value of its application is more or less comprehended The present popular methods of cultivating strawberries and grapes, are notable instances of this comprehension, but hardly any one thinks of employing like methods of improving the blooms of hardy, flowering shrubs. Take, for instance, the rhododendron. Every one wants a plant loaded with buds, that is, flowers. One of the greatest charms of the rhododendron in the eyes of most people, is the very fact that the flowers may be enjoyed at once after planting. It is hard, indeed, therefore to persuade people to select rhododendrons without buds, by telling them that the plant will grow much better the first season if it does not have the additional strain of flowering. They feel the sacrifice too great to warrant their waiting a whole year for flowers which might be enjoyed at once, notwithstanding their belief in your assertion, that if it has flowers now, the plant will scarcely bear any the following year. But there is for the truly wise lawn-planter a still more intelligent management of such plants, whereby the blooms will not only be reserved for the second year, but will even then be half taken off by thumb and finger in their partly developed state as buds. By this plan the flowers may be distributed equally and effectively among the green leaves, may be greatly developed in size, and, above all, insured in moderate abundance for another year, whereas ordinarily there would be, the following year, few or no flowers whatever. Thus, by sacrificing quantity of flowers to quality, we gain in every way, gain even where at first we seem to lose; for the larger size and superior beauty of these rhododendron flowers scattered among the rich evergreen leaves are very evident when compared with the mass of solid bloom on the same plant as usually grown. We may, moreover, give the widest scope to this principle of quality *versus* quantity, as just illustrated by the rhododendron, for everywhere, alike in fruit, flower, and foliage, the practice of a strict economy and concentration of choice qualities will develop increasingly valuable results. S. PARSONS, JR.

Field Crops.

DOES BUCKWHEAT DETERIORATE THE SOIL?

THERE has been considerable discussion among farmers in this locality recently on the above question, some maintaining that buckwheat is one of the most injurious crops which can be put on a piece of land, while others claim it to be one of the least exhaustive. I remember in conversation with an uncle of mine, some years since, on this subject, he referred to the fact that it was generally conceded to be the best crop to mellow and subdue a tough piece of land, and he made the remark that in his opinion it subdued it on the same principle on which a pugilist subdued his opponent—by knocking him down, and then beating him until he was conquered; or, in other words, by taking the virtue all out of the soil.

But my own observation and experience do not go to prove this theory correct, and I am inclined to the belief that, at least, it is not more exhaustive to the soil than most other crops. I will give the result of one experiment I have made in growing successive crops of buckwheat on the same piece of land.

In the spring of 1876, I broke up a piece of sod, something over an acre in all, and without any manure sowed it to buckwheat, and harvested from it 20 bushels of grain. The next year from the same field and without any fertilizer, I harvested 28 bushels. The following year, with the same treatment, the same field gave a yield of 32 bushels, and last year I estimated the yield to be about the same as the

year before; but did not measure it separately from the product of another field. I seeded the field down last year, and at this time it promises fair for a good yield of grass.

Judging from this test, and from what I have observed for several years, I am not prepared to accept the theory that this is a very unprofitable crop to raise, on account of being injurious to land. FARMER.

Del. Co., N. Y.

Entomological.

DAMAGES OF THE CLOVER-ROOT BORER AND OF THE CLOVER-SEED MIDGE.

PROFESSOR I. P. ROBERTS.

THE recent surprising and unaccountable failures of clover either to produce hay or seed, have been explained by the presence of two very dangerous insects. On the University Farm we have been obliged to plow up all our clover ground—some eighteen acres—because of its unproductiveness occasioned by the borer. When the injuries which the clover had suffered first became apparent this spring, it was generally supposed that it had been winter-killed; but upon a careful examination of the plant, it appears that the borer injures the crown of the plant which will often still retain life enough in the roots to make a slight start in the Spring, but will then wither down to the ground. The habits of the borer have been ascertained by Prof. Riley to be about as follows:—

During the Summer the insect has been found in all stages, as larva, pupa and adult, and it hibernates in any of these stages, though the adults are generally most numerous at the time of frost In the early Spring months the insects issue from the ground and pair. The female then bores into the crown of the clover plant and there deposits several eggs which hatch out in about one week. At first the young feed in the cavity where they were hatched, but soon burrow down into the roots where they change from the larva to the pupa state.

On the farm the clover of last year's seeding has not been so badly injured as that of older growth, and the experience of the farmers of this county will lead them to plow up all clover after the first year. So far, this would seem to be the only alternative to escape the ravages of the insect. We have discovered the pest at work not only upon the common clover but also upon Lucerne—Medicago sativa—and Black Medick—Medicago lupulina. The injury caused by the Clover-seed midge is of quite another character from that of the borer, and is especially evident at the present time. The clover in both the first and second crop fails to blossom, although the clover-heads are hard, as though full of seed, and have an appearance as though about to blossom. When the separate flowers are opened, they are found to contain the yellow larvæ of the midge. The midge seems to stunt the growth of the plant, thus materially injuring it for hay, which lacks the fine aroma it should possess.

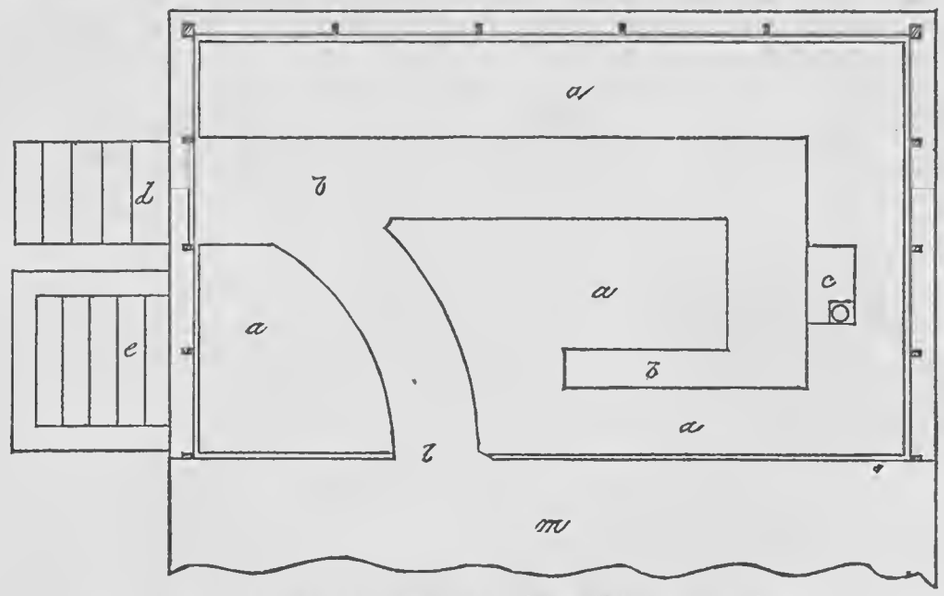
As they also attack the second crop of clover it would appear that they are two-brooded. The insect affects clover just as the Wheat-midge or weevil affects wheat, and the former bids fair to become quite as dangerous as the latter. The habits of the insect are quite similar to those of the Wheat-midge, as ascertained by Prof. Riley. The larvæ, when grown, fall from the clover-heads and hide in the leaves and loose soil where they form a small cocoon in which they assume the pupa state. The flies begin to issue in September and later, and during the following Spring. In this locality no clover seed has been grown for the last three or four years. As yet, there has been no remedy discovered, and it is only to be hoped that their natural enemies will multiply faster than they.

Cornell University.

THE ARMY-WORM AND THE ENTOMOLOGICAL BUREAU.

ON June 13th, Prof. J. Henry Comstock, the Entomologist of the Department of Agriculture addressed a letter to Commissioner Le Duc, in which he gives the result of his investigation of the irruptions of the Army-worm into Kent Co., Del. He states that in every instance the pest appeared first in wheat, but the greatest injury was done to the corn, which, being young and tender, was eaten to the ground wherever it was encountered. He gives a condensed account of the natural history of the worm, which is substantially the same as that briefly outlined in the RURAL of June 12th. The best means of preventing a recurrence of the pest in cultivated fields, he thinks, would be to inspect any low-lying lands in the neighborhood, and if any Army-worms are there discovered to destroy them either by burning over the land, if possible, or by poisoning with arsenic, Paris-green, or London-purple, or by any other means of which the local condition will admit. It would be well to burn over all the low-lands in the vicinity each winter, thus destroying the hibernating insects; for he agrees with Dr. Asa Fitch that such locations are their usual lurking-places.

When they have begun their ravages, the best method of destroying them, he thinks, is by crushing with rollers or by poisoning with arsenic, Paris-green, or London-purple.



PLAN OF GREEN HOUSE.—FIG. 218.—(See first page.)

Either of these substances can be applied rapidly by mixing with water and using a fountain pump or garden syringe. The second line of defense is by means of ditches and pits dug around the infested field or that to be protected. The ditches can be made quite rapidly. First plow a furrow with the "land side" next to the field to be protected, and then with a spade make this side of the furrow vertical, or if the soil be compact enough to admit of it, overhanging. When the ditch is completed, holes should be dug in it from one foot to eighteen inches deep, and from twenty to thirty feet apart. The sides of these holes should also be vertical, or, if possible, overhanging. The worms, unable to climb up the vertical side of the ditch, will crawl along the bottom of it and fall into the holes, where they will soon perish. Where the soil is sandy, so that the ditch cannot be made with a vertical side, it should be dug deeper than in other cases, and the side made as nearly perpendicular as possible, so that when the worms attempt to crawl up, the sand will crumble beneath them and cause them to fall back again.

The Apiarian.

TO WHAT EXTENT SHALL WE INCREASE OUR BEES.

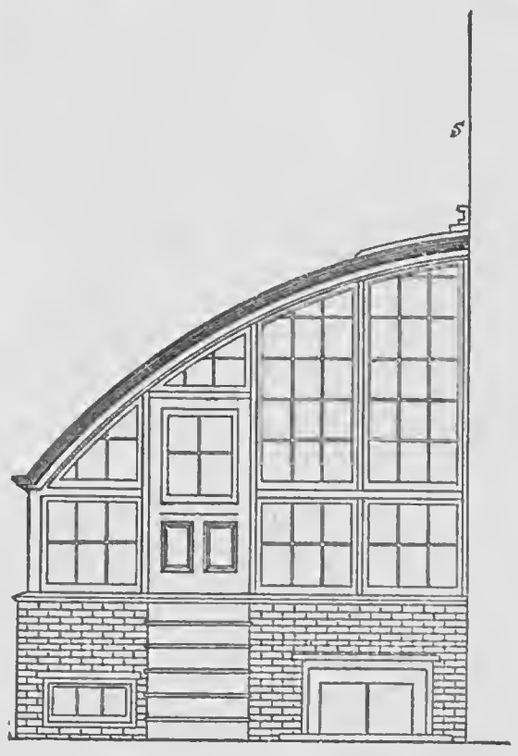
A QUESTION of the greatest importance to most bee-keepers is, how can we secure the largest amount of surplus honey, in the best marketable condition? Can it be best done by a continued increase in colonies, or is there a limit at which the increase becomes unproductive and unprofitable? I believe all authorities admit the possibility of any given district becoming overstocked. When this limit is reached, either from an insufficiency of pasturage or from an indisposition of the bee-keeper to increase his stock from any cause whatever, what is the best system of management to secure the greatest amount of honey, with the least cost? Is there any management reduced to a system, by which we can control and prevent further increase of colonies, and make the whole increase of bees continue to store surplus honey, instead of swarming?

These are questions of much greater importance to most bee-keepers than the one so often discussed as to the best method of increasing the number of colonies; for since the introduction of movable frame hives and the new system of managing bees incident thereto, together with the great fertility of Italian queens, the increase of an apiary to almost any desired extent, in a comparatively short time, is rendered an easy matter. With anything like skillful management, the number of colonies may easily be doubled annually, and may even be tripled or quadrupled. As the increase is in geometrical progression, the number in a few years would become enormous, and overrun all bounds. Say that we already have fifty colonies, and take the lowest ratio, in three years more there would be four hundred; and in three more sixteen hundred; which to most bee-keepers would be an alarming increase. It is true I have made no allowance for mishaps in wintering or otherwise; but I have taken the lowest ratio, and it is well known that the Italian bees, in anything like a favorable season or district, will send out two or three natural swarms, and the first swarm sometimes send out others. Our territory thus becomes overstocked, and instead of our bees gathering large quantities of surplus honey, our pasturage affords only enough to take our strongest colonies through the winter, leaving the weaker ones to be doubled up, or to perish.

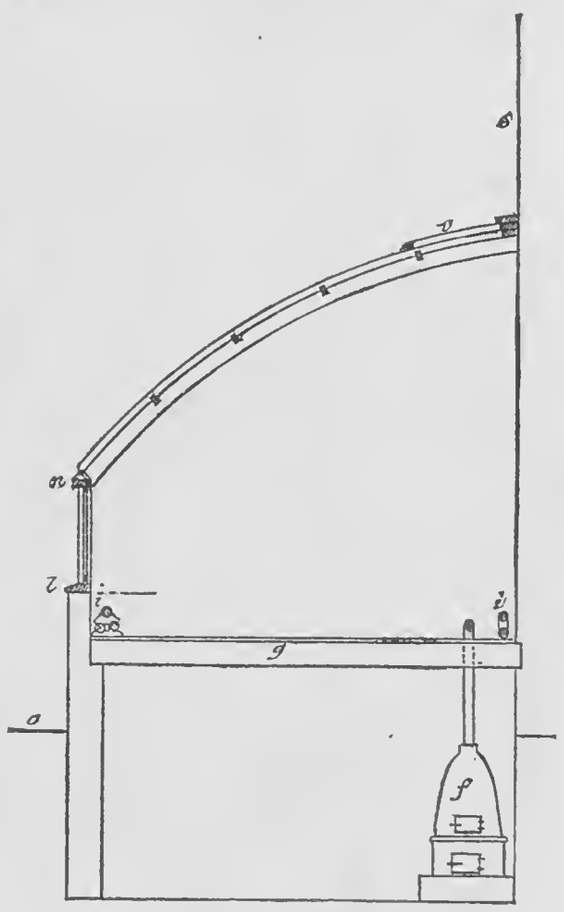
To say nothing of overstocking the territory, there are but comparatively few bee-keepers who make apiculture their only business, to the exclusion of all others. Most of them are farmers or mechanics, who cannot devote their whole time to their bees, or even so much of it as is necessary to attend to forty or fifty colonies, especially at swarming time, which usually occurs at a very busy season of the year. And suppose they succeed in saving all the swarms, after having gone to the expense of procuring hives for them, what are they going to do with them? They already have as many as they can conveniently give the necessary time to for profitable management. There are but few places where the annual increase of an apiary can be sold. There are places, if you required an empty hive to be furnished, where you could scarcely give the swarms away. In consequence, some bee-keepers are compelled to resort to the brimstone pit, to keep the number of their colonies within bounds.

I know some intelligent bee-keepers who practice this, and contend that, under the circumstances, it is the most profitable way they can be disposed of. A few persons can make a large number of colonies profitable, when they are raising Italian queens for sale, and have a demand for them. But there is not one in a thousand of the host of bee-keepers who wish to keep more than from 10 to 50 colonies, to supply their families with the delicious sweet, and furnish some surplus for sale, to assist in paying for the family groceries, and for the purpose of affording recreation for their leisure hours. In order to do this satisfactorily, we want a system of management by which swarming can be controlled and prevented, and the increase of numbers be made to store surplus honey in the most suitable condition for market, instead of storing it in an additional number of hives for the support and wintering of an increased number of colonies. I will hazard a few suggestions in regard to this system:—

First, keep no more bees than your field will support. If you have as many colonies of bees as can be sustained during the working season, and secure sufficient stores for winter, little surplus need be expected. In such case the result would naturally be that a few strong colonies would give some surplus; the medium ones might just squeeze through the winter; and the weak ones starve to death. Under such circumstances, one half the number of colonies would give double the surplus that the whole would do. Second, procure hives, and if possible chaff hives, with surplus room for 150 pounds of honey, or thereabouts. Place in such hives the working force of your common colonies. You may thus secure double or triple the working force in each colony, and secure from the one colony 150 pounds or more of surplus honey. This may be done if your bees swarm, by placing two or three swarms in the new hive. An old maxim among bee-keepers is: "Large hives for surplus; small hives for increase." "LIGURIAN."



END VIEW.—FIG. 219.



(See first page.) SECTION.—FIG. 220.

Farm Topics.

THE OUTSIDE AND THE INSIDE.

THE MISTLETOE'S description in the RURAL of June 5, and the wood-cut on the same page, give a tolerably correct idea of the *outside*, as concerns the Mistletoe, but one quite insufficient as respects the *inside*. Beside being a very odd, if not a strikingly beautiful plant, there are a charm and attractiveness about it to Northern eyes which look upon it for the first time, which it is impossible to describe. As the writer saw it for the first time last year in a journey down south to the Gulf, it was observed in higher latitudes as often on the Honey locust as upon any other tree, though, farther south, it infested nearly all trees, except, as Mr. Ravenel says, the pines. Familiar with the foreign estimates of the Mistletoe as a strongly nitrogenous fodder plant, the writer offered a branch of it to a mule that seized and eat it with as much relish as it would a stalk of green corn, and Col. Stuart, the owner of a large Merino sheep ranche, near Ocean Springs, Miss., who was standing by, said his sheep would follow the wood-cutters and greedily snatch it from the limbs of new-fallen trees. Besides, it is seldom to be met with on any trees below the easy reach of stock or man—and the only branch seen in a ride of many miles, within ten feet of the ground, was on a Honey locust where thorns protected it from stock. Of its value as a fodder plant, M. Isidore Pierre, a distinguished agricultural chemist, says: "I have often heard tell in Normandy that cows are exceedingly fond of the Mistletoe, and that one could readily call them up from considerable distances by showing them a bunch of it. Besides, skillful and experienced dairymen have informed me that the plant improved the quality of milk, by strengthening the animal, and thus they always reserved a certain quantity particularly for such cows as were about to have calves." Acting on this information, M. Pierre made a careful analysis of the plant and found it to contain, in a green state, 93 per cent. of nitrogen, and in a dry state, 25 per cent. And he also found that the branches and leaves contained nearly the same amount of nitrogen, and he drew the conclusion that, whether in a green or dry state, the Mistletoe contains more of this valuable principle than any other fodder plant he knew. In conclusion, he says: "I could name several proprietors in Normandy who annually gather something over 1,200 pounds of Mistletoe from the apple orchards, to the great advantage of the trees and to the equal satisfaction of their milch cows."

These facts may be of value to our Southern friends where there is a great scarcity of fodder, and especially suitable fodder for milch cows at certain seasons of the year, and at the same time lead them to reverse their estimate of the Mistletoe as a robber and a thief having no redeeming trait of character and no saving side.

PIGEON AND POULTRY MANURE.—There is considerable difference of opinion as to the best and most profitable use that can be made of these fertilizers. And as in a multitude of counsellors there is wisdom, and from the whole testimony in the case the truth is to be

made ont, the writer hegs to offer his experienee in this matter. Having previously made experiments on Indian corn, Sweet and Irish potatoes, tomatoes and a variety of other garden vegetables, and getting what was thought to be insufficient results from the amount of fertilizer expe' ded. last year about this time he made a trial of the valne of this sort of fertilizer upon a small piece of rich, old pasture land. The six months' accumulation of the dung of 100 pigeons and that of half as many fowls was spread upon an eighth or tenth of an aere after the grass had been eaten quite close, and no other attention was paid to the experiment further than to suffer the stock to eat off the remaining grass produet of the year, whieh did not seem to have increased. But quite early this spring the Blue-grass sod took an unusually deep color and started before any other part of the field, and a full bite of herbage had started before half a bite could be found on any other spot. As the season advanced, the grass was seen to thicken up at the bottom, and by the first of May a part of the effects of the application of the fertilizer was to he seen rather in the density of the color of the grass and the thickness at the bottom than its rank growth. But the value of the application remains to be told in the statement that stock seek this fertilized patch in preference to any other lot in the pasture and would, if suffered to do so, eat off the grass and leave it as short as upon a shaven lawn, at the same time, while the gates are open to other fields, neglecting good grass standing up to their knees. Evidently in the case of the land of these pastures, which were originally prairie land of the best class and the deepest soil, the fowl and pigeon dung acts as the best of all known foods and fertilizers for the Blue Grass and white clover of which the sod is composed, and it is plain, too, there is that in it which produces a very strong and thick growth of herbage—and that herbage is of the sweetest and most nutritious character. The writer has satisfied himself that the best of all uses for the kinds of fertilizers under notice, is to broadcast them as often as the dovecotes and fowl houses are cleaned out, on meadows and pasture lands, and though the experimenter may have to wait a year before he gets a return for the expenditure, it is sure to be a satisfactory one in the end.

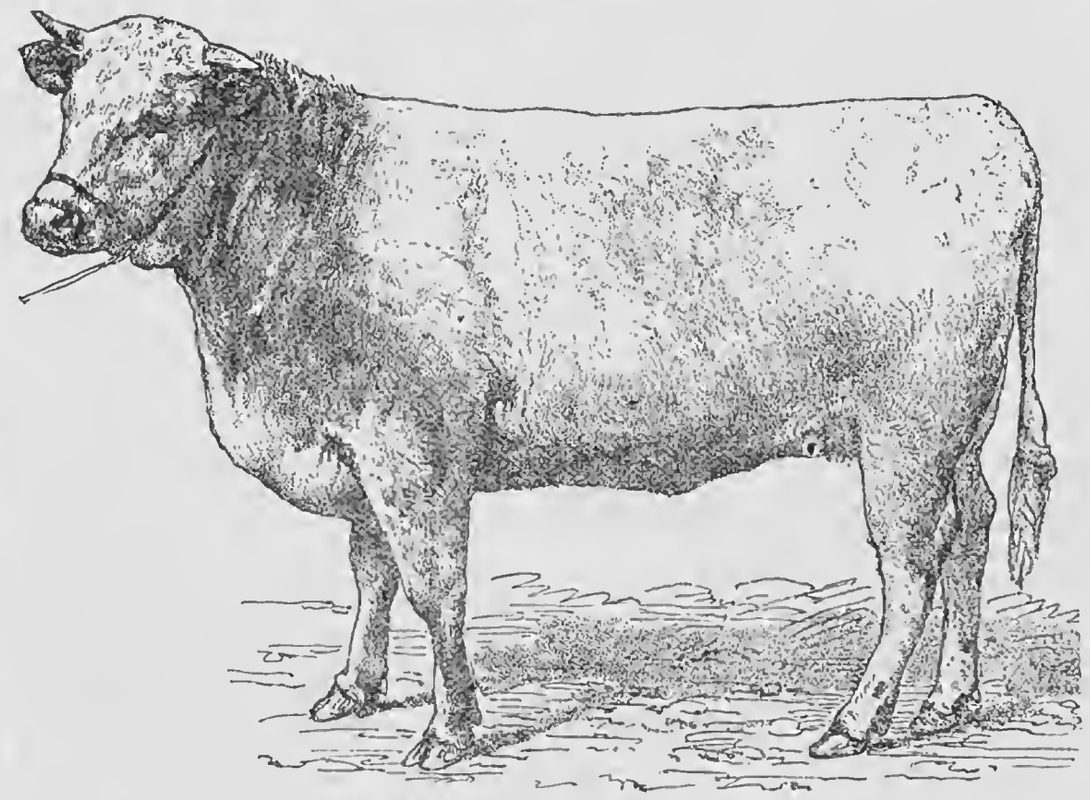
Barbed Wire Fences.—The Rural says "we should be glad to hear from our readers who have tried them, how well, or ill, they are pleased." Quite as much to learn personally the cost of a first-class barbed wire fence, and its value for turning stock, as for any other purpose, the writer, in the summer of 1879, built 40 rods of it, in front of some lots in a town of some importance in central Illinois. The style adopted was copied from that in use on the Illinois Central Railroad, and consisted of five wires, three barbed and two plain, stretched between white-cedar posts 16½ feet apart. Beginning at the surface the wires were respectively 6, 8 8, 10 and 12 inches apart, making the total hight of the fence four inches less than four feet. These are not the distances adopted by the Ill. Cen. R. R., but they are better for the town than the country. On trial of the fence, it was found necessary to substitute barbed for plain wire on the second and fourth strand, to prevent cattle from reaching their heads through the upper space, and small boys crawling through the lower. For a year the fence has answered its purpose admirably, and though cows, horses and other stock have grazed in the streets alongside of it, none have broken through, though two or three have been caught, but not seriously hurt or long held, nor has the wire been broken, though subjected to a great stretch and strain. The cost of the fence was about one dollar per rod, divided as follows; posts (very good ones) 25 cents each; three strands of best galvanized, double strand and barbed steel wire, 45 cents; ten strands common iron wire, 16 cents; braces, staples, labor, etc., 14 cents; total $1.00. Buying materials in large quantities and contracting on an extensive scale, the railroad makes a better fence for 85 cents a rod; and large farmers, building two, three, or four miles, or more, might reduce the cost to nearly the same figures. But experience has already taught one farmer that five wires are not at all necessary, nor four, nor three either, and the thing has been simplified to the extent of stretching two wires, 16 to 18 inches apart, on oak posts standing two rods each from the other, and making that a sufficient fence against all stock and swine. Nor has it been found best to stretch the wires at all taut, the common way of building now being to roll the wire into the wagon, and reel it off and fasten as the team moves along.

Making its first trial of barbed wire some five or six years ago, the Ill. Cen. R. R., has adopted it definitely, and as fast as the old wooden fence gives way it will be replaced by barbed wire, so that in course of the next ten years it will own three or four thousand miles. Most of the other railroads are fencing their lines in the same way, and the time is not far off (at least so it appears) when little other fence (live hedges excepted) will be seen in the prairie and timber-cleared portions of the West.

"In respect to the objection that the fence is a barbarous invention and inflicts unnecessary injury on stock accidentally or willfully attempting to break through, the answer is that stock very quickly get educated up to the point of knowing what it is and avoiding it, and the other answer is that if one has neighbors who indulge in the breeding of breachy stock, or lives among a people against whom one has to protect himself by carrying arms, the right of either is not recognized to dictate what a sufficient fence shall be, or whether the arms of defence shall be a pistol, shot-gun or a club. It is an outrage that in a civilized country a man must defend his lands and crops against his neighbors' unruly cattle; and thanks to the common sense of our earlier and later law-makers, the common and the statute law is against it, though in neither has it been often enforced. The chief arguments in favor of barbed wire fencing are these:

1. It is strong and cheap.
2. It will neither blow down nor burn up.
3. It will last a long time.
4. It is not possible (except by live hedges, which are very costly to make and maintain) to defend our farms in the old way because there is neither material nor space enough to do it.

B. F. J.



SHORT-HORN HEIFER, FUCHSIA.—FIG. 221.

The Herdsman.

AN EARLY IMPORTATION OF DUTCH CATTLE.

T. H. HOSKINS, M. D.

That the Dutch breed of cows (for a time erroneously known in this country as the Holsteins, and more lately designated as Dutch-Frisians) are attracting more and more attention as dairy cattle is quite apparent. The herds are increasing in numbers and in size, and those who handle them seem more than satisfied with their quality for the purpose to which they have been bred. They give immense messes of fairly good milk, and though the humorous Harris Lewis charges them with adulterating their milk with water, this will, no doubt, be regarded as a merit by purchasers of market milk, as the natural adulteration leaves less excuse for the artificial; and if the views of Dr. Sturtevant and Col. Curtis regarding the pernicious nature of Jersey milk as an article of diet, are to be generally accepted, we shall be obliged to look upon the Dutch cows as supplying a great need.

Many suppose that this breed of cattle is of very recent introduction, but they have been well known in the State of Vermont since early in the present century. The Hon. William Jarvis, of Wethersfield, Vt., famous for his connection with the introduction of the Spanish Merino sheep into America, also imported from Holland a bull and five cows, which were kept upon his farm and bred pure, both during his life-time and since. Several herds of this strain are now in existence and are highly valued as dairy beasts, not only for market milk and cheese, but for butter also. I have been quite familiar with one of these herds for the last 14 years, they having been kept in this county. During the long time they have been in New England, they have undergone some modifications, being not now so bulky as recent importations, more quick in their motions and better adapted to upland pastures for that reason. They have lost little in their aptitude for milk secretion, while the quality of the milk for butter making has improved. Mr. C. W. Bellows, of Pepperell, Mass., who possessed a herd purchased directly from the Jarvis farm, wrote of them in 1868 as follows: "They are large enough for all practical purposes, and produce more milk and that of a better quality for butter than any other breed I have kept. The cows weigh from 1 000 to 1 250 pounds, live weight, are very quiet and gentle and hold out through the season, giving a good flow of milk for 10 or 11 months, with proper food. The butter is colored as highly as that produced by the Jerseys, and I think it is finer flavored. The bulls are also quiet and gentle, so much so that I never had to put a ring in the nose to handle them at any age."

The herd of Dutch cattle with which I am most familiar was derived from the Bellows' herd, and first owned by Carlos Pierce, of Stanstead, Quebec, only an hour's ride from my home. It was afterwards purchased by Thomas Baker, of Barton, Vt., whose splendid farm of 600 acres lies but half an hour's ride by rail south. In Mr. Baker's hands for 12 years it averaged from 25 to 50 head of thoroughbreds, kept entirely for butter, which always sold at an extra price in the Boston market. I have seen this herd frequently, and the butter also. It was as good butter as I ever saw or tasted. The herd was remarkably uniform in its yield, a poor cow being rare among them. I have no memorandum of the yield, but it was large. Mr. Baker has recently sold his place and removed to Dakota, and the farm and stock are now owned by a party with whom I have no acquaintance.

For some reason, chiefly, I think, because the owners have not been pushing men, the Dutch cattle of the Jarvis strain have never attained much popularity. Mr. Baker never seemed anxious to sell any of his, but occasionally other farmers had some of them, and they were uniformly liked for milk, for butter, for cheese, for working cattle and for beef. The Jerseys have now got such a hold upon the affections of our butter dairymen that they will rarely hear of any other breed, and it is a mere chance whether the Baker herd will long be kept up. The later importations, being larger and, perhaps, deeper milkers (though the milk is probably proportionally poorer), will doubtless have the preference with the fancy farmers. But the Dutch stock has stood the test of upwards of 60 years' practical use for dairy purposes in Vermont, and stood it well. This is a fact worth noting.

Our Animal Portraits.—The accompanying portrait, reproduced from the Agricultural Gazette (Eng.), represents Mr. Bliss's Short-horn heifer, Fuchsia, winner, the other day, of the first prize in her class at the Oxfordshire Agricultural Show, England. Although only 19 months old she weighed 1,473 lbs., live weight, and is remarkable, too, for her fine bone and powerful muscular arms and thighs. As well shown in the engraving, she is an extremely beautiful animal with an elegant head, set off by handsome, waxy horns; splendid back, ribs and hind-quarters. She is a soft, silvery roan in color, and thoroughly feminine in character. In her is combined the best blood of the Bates' Duchess tribe with that of the Knightley Princesses, her sire being Grand Duke of Geneva 2d, and her dam Princess Royal, by Grand Duke of Lightbourne, the same strains being also combined twice more in her pedigree.

STOCK NOTES.

A fine Stock Farm.—One of the finest stock farms in this section is that of Mr. Thomas Barbour, situated on the Passaic River, near Paterson, N. J., consisting of woods, and springs, and fine pasture lands of over 100 acres, fronting on Dundee Lake, Passaic River, within five minutes of Dundee Lake Station. The country is picturesque and beautiful, with a fine view of the Orange Mountain range, the first to strike the eye of the mariner on reaching the Narrows. The improvements are of the very best character. A fine mansion of ample proportions and elegant exterior is beautifully situated on the crest of a hill, commanding an extended view of the surrounding country, with wide, close-shaven lawns adorned with shrubs, plants, and flowers. Mr. Barbour is a prominent member of the American Jersey Cattle Club and at the late great sale of choice cattle of that breed under the management of Peter C. Kellogg, he made some excellent additions to his herd. As shown in our account of the sale in the Rural for June 5, his purchases amounted in the aggregate to $3 600. The most notable animals among them were Empressa II two years old, one of the Prize-Medal Herd at the N. Y. State Fair, 1879, for which, together with her one-day-old calf, he paid $835 and refused an offer of $1000 just after the sale. For Maple Blossom, a heifer in milk, 27 months old, with her two-days-old calf he paid $580. Her sire, Niobe Duke, 2364, was winner of the first prize at the N. Y. State Fair, 1878. Godiva II, and Timid, both heifers 18 months old and both by Niobe Duke, cost him $325 and $200 respectively; while for Bibi, heifer, 20 months old, he paid $225, and $310 for Sunlight, cow 4½ years old, and $250 for Lady Adelaide of the same age.

The Stallion Morgan Black Hawk.—We see it stated that this horse is still living at Milton, Delaware, 37 years old and a number of his colts near by are over 25 years old. We should like to know as to the truth of this, if any of our readers can inform us. It is not often that a stallion reaches this age, and when he does it is worthy of record.

Twin Colts.—Four thorough-bred mares in the stud of Lord Falmouth, of England, have thrown twins, which is very extraordinary, for it is rare for a mare to do this, although it is frequent with cows.

Dairy Husbandry.

THE DAIRY COW.—No. 1.

HENRY STEWART.

The Value of a Cow.

The cow is our most valuable domestic animal. In its life it supplies us with food, from infancy to old age, and after it has spent a useful life every portion of its carcass is of value for some indispensable purpose. Its flesh, blood, hide, hair, horns, hoofs, entrails, all to the last fragment, are turned to some good use. A cow is generally considered as a business animal, either for raising grazing beeves or for dairy purposes. But it is equally serviceable for the domestic use of a family; and a family that can keep a cow is assured of a considerable portion, and that the most desirable, of its food supplies.

The chief object of this series of articles is to show that the family cow is a most valuable family possession, and to induce the thousands of persons who can keep a cow if they will, to do so, by showing to them the advantage and profit that may be gained by it, as well as to remove the common, but erroneous, idea which prevails, that it is altogether too troublesome and disagreeable a business, by telling in a plain and concise manner how a cow may be procured or raised, fed, cared for and made the most of. As the greater includes the less, so all this information will apply not only to the one cow dairy, but to a small dairy of two or three cows, as well as to larger dairies; for if one can keep a single cow in the best manner, it is reasonable to suppose that we may keep a score or a hundred; and what is good for one is good for many more than one. It is, therefore, hoped that among the interested readers of these articles there may be a large number of dairymen, who may, perhaps, permit the remark that there are some of their number who have got something to learn on this subject as well as those who have never yet kept a cow.

The Value of Milk as Food.

Some time ago it occurred to a person who was engaged in milk dairying that a lady customer suddenly increased her order from two quarts to six, and sometimes seven quarts a day, this milk being supplied *ad libitum* to her children both for food and drink. As the milk cost seven cents a quart, the dairyman suggested that his customer would find it better to keep a cow, and offered to advise her how to care for it if she did. The idea was seized upon; the lady procured a family cow and the dairyman lost his best customer. If the ease of keeping a cow and the value of milk as food were generally known, many other mothers would do likewise, and would do well in doing it, for there is no other kind of food that is so healthful, agreeable and nutritious for infants, children or grown persons as this; and

there is no other that is capable of being prepared in so many and such varied ways. Milk consists of the following substances. Other food articles are given as a basis for comparison:

	New milk.	Skimmed milk.	Cheese.	Lean beef.	Bread.	Oatmeal.	Potato.
Per cent. of nitrogen or flesh-forming matter..	4.1	4.1	28.4	19.3	8.1	12 6	2.1
Fat	3.9	0.7	31.1	3.6	1.6	5.6	0.2
Other fat-forming substances	....	....	....	....	51.4	63.8	18.8
Sugar	5.2	6.1	....	....	....	....	3.2
Mineral matter	0.8	0 8	4.5	5.1	2.3	3.0	0.7
Water	86.0	88.0	36.0	72.0	37.0	15.0	75.0
Market price per pound.	3c.	1c.	15c.	20c.	4c.	3c.	1c.

Milk contains every element required for the growth of the human body in the precise proportions needed for perfect digestion and assimilation, and consequently perfect health.

But it is not in respect to its nutritive qualitie alone and its sole use as a single article of food that it is worthy of regard; its cheapness as compared with other staple articles of food, and the relative cheapness of some of those staple food substances which are most agreeably used with milk, are subjects which may well be studied over in considering the figures given above. For instance one and a-half pound of oatmeal is more than equal to one pound of lean beef, and costs but about one-fifth as much money. If two pounds of milk are added to the oatmeal, the cost is increased to 10½ cents, but considering the value of the fat, these are really worth two pounds of lean beef (free from bone and waste) and cost but a fourth as much. The usual daily ration necessary to keep a hard-working man in steady condition is two pounds of bread and one pound of lean beef, costing 28 cents. But one pound and three-fourths of oatmeal and two pounds of milk daily have been found ample to keep a laboring man, weighing 150 pounds, in steady condition at hard field work, the cost being 11½ cents.

In feeding the family of an average workingman, the cost of the food is most often a question of deep consideration. In the majority of American families the expenditure is scanned and counted with some interest; and where the income is but narrow, and there are children to be fed and brought up so that they may become strong and healthful, the supply of milk is something of more than common importance. The cost of this is, of course, to be considered, but the quality is of still greater moment. To have pure milk not only free from adulteration, but healthful and free from disease-communicating germs derived from diseased cows is of paramount consideration. What one buys no one knows with certainty; but the milk of one's own well-cared for cow is above suspicion; its purity and goodness are unquestioned. These qualities are far above price, even as a matter of economy in a poor family; how much more then in those where every comfort and luxury are at command; so that every family should keep a cow; some because they cannot afford to do without it, and others because of the comforts and luxuries of it.

The Money Value of a Cow.

A good cow, such as a careful person would select, will yield from 12 to 16 quarts of milk daily when fresh, to three or four at the end of 10 months, when about to go dry in preparation for calving again. This will amount to an average of eight to ten quarts a day for 300 days, or 2 500 quarts, at least, in a year. Each quart is worth to a family six cents at the least; that is, the ordinary milk supplied by dealers or farmers, costs at least that price; but this is not equal in value to the milk from a good well-kept family cow. If the owner of such a cow has a surplus of milk, it can be very readily sold for six cents a quart to neighbors who will be glad to have such a chance, so that the income in money from a family cow may be estimated at $150 a year. If butter is made, the 2,500 quarts of milk should yield 250 pounds of butter which is worth 30 cents a pound, or $75, and the skimmed milk, which we see from the above table is deficient only in fat, and is actually better on that account in many cases, especially as a beverage for delicate persons, is worth two cents a quart, or nearly $50; in all $125. It will serve a sufficiently good purpose, however, to take $100, as the gross yearly income from a good cow and as a basis for computing the actual value of the animal where milk can be sold for five or six cents a quart. Elsewhere the relative value will bear an even ratio with the cost, because where milk is worth less, the cost of keeping is less. The object is to show that there is a profit in keeping a cow, and having gained a basis for reaching the income, the next point to consider is the cost of keeping her and the exact profit realized in money, leaving other advantages to speak for themselves. But it ought not to be forgotten that there are cows that will not produce half the above-mentioned quantity of milk, and that will not milk for 10 months out of 12. But there are cows that will do this, and enough of them; and it is the business of those who want such cows to look for them and not be content to take a poor one at a less price; because a poor cow will eat as much as a good cow and will cost as much for lodging and care; so that the profit of keeping a cow will depend altogether upon her character. Nevertheless, there are hundreds of dairymen, who should know better, who keep cows that do not pay for their feed, and, strangely enough, they continue to keep them while knowing this.

Industrial Topics.

HOW AGRICULTURAL MACHINERY IS SOLD.

In buying his agricultural implements and machinery does the average farmer pay due attention to the standing of the various manufacturers of the goods he may want to purchase, and to the reputation these wares have won throughout the country? A pretty wide acquaintance with the agricultural classes in this and other sections compels me to believe that he does not. Years ago, the manufacturers of such goods sold them directly to the consumer, either for cash or on short time, the date of payment seldom exceeding four months from the time of purchase. Then the reputation of the maker and of his wares was the first consideration with the purchaser. To-day the most glibly persuasive agent, and the one who can give the longest time, is the man who makes the largest number of sales, often irrespective of the character of the goods he offers. In this case, the farmer in addition to paying sometimes an excessive price for the article he purchases, has also to pay the following charges:—First, for the agent's time and commission, second, interest on the price of the article during the time given for payment, third, a premium for risks of bad debts; fourth the cost of collection.

By buying for cash, of course, the three last of the above items can be avoided; but often even a more serious loss would be escaped if the intending purchaser would take time to investigate personally the merits of the implement or machine he may stand in need of, instead of being guided in his selection by plausible travelling agents, many of whom, having no local reputation to lose, care only to sell the goods they handle. Not a few of the machines sold by some of these glib-tongued gentry are of such a nature that, however well they may work under the direction of the salesman, and however fine a show they may make for the time, they will not stand the wear and tear of a single season. Moreover, it happens not seldom that when the easily-persuaded buyer wants the "extras" which he will be compelled to buy or give up the machine, he discovers that they cannot be had without incurring the delay and expense of sending for them to a distance, as there is in the neighborhood no regular dealer who keeps them.

Complaints on these and other accounts are loud from time to time throughout the country, but still the business of the loquacious agent of inferior goods flourishes, and his success compels the better class of manufacturers, in self-defense, to send out their agents too all over the country, in order to enable them to hold their trade. Of course, the consumer has, in the end, to pay for these also. The only way I know of by which the farmer can avoid the burthen of these unnecessary charges, is to pay attention to the advertising columns and notices of any good agricultural paper, which accepts advertisements only from the makers of first-class tools and machines, and go directly to the manufacturer or some trustworthy local agent for the goods he there finds recommended, paying cash whenever possible, and obtaining a guarantee that the article bought will do all that is claimed for it. In such a way he will get a prime article at a considerably lower price than he would have to pay for an inferior one purchased in the usual manner. Owing to the present mode of doing business, the various expenses of selling some agricultural machines and collecting their price, are actually, in the aggregate, higher than the original cost of manufacturing them.

The faults of this system can hardly be laid at the doors of the first-rate manufacturers, for these would prefer to dispense with traveling agents, so that there would only remain the manufacturer to build, the general dealer to sell and the consumer to buy, leaving the commission man and the collector out in the cold. The other day I asked one of the largest manufacturers of agricultural machinery why he did not deal directly with the farmers who needed his goods, selling cheaply for cash, and he answered that he would be glad to do so, but in that case, the agents would combine against him, and—although he is making some of the best machines in the country—they would run him out of the market. Is there any remedy for this excess of middlemen?

Adams Co., Ill. W. R. R.

THE USE OF IMPROVED FARM IMPLEMENTS.

It is an exceedingly easy matter to see why the farmer of the West, with his broad acres of smooth land without any obstacles of any kind, is largely benefited by the use of nearly the whole catalogue of farm implements, but for use upon very many of the farms of New England it is an entirely different matter. The difference of conditions renders an entirely different system of farming necessary. In the first place, upon many of the hillside farms there is such a profusion of rocks that the earlier settlers, in order to fence fields for culture, constructed of the smaller holders many small, irregular-shaped inclosures still thickly dotted over with large rocks which require immense labor in their removal. The New England farmer is, as a rule, industrious and hard-working, and is quite likely to wear out under the continual strain of labor necessary to bring his farm into fair working condition. Then with small fields, with here and there a rock protruding from the soil, is it any wonder that, however strong the desire, the tiller of the soil is prevented from the use of such implements as require large fields and smooth surfaces for their successful working. 'Tis true all the spare time of the farmer is spent in preparing limited surfaces for the use of the mowing machine and horse-rake, but it is rare to see a tedder in use, or any of the implements employed in planting corn or potatoes. And, too, the cultivation of the crop must be largely by hand. Is it any wonder then that the farming should be carried on upon a much less extensive scale than at the West, in fact, what might be termed upon a very small scale? And yet the New England farmer has met with fair success. While he has not accumulated his surplus by thousands, he has provided comfortable and pleasant homes, neat in their appearance and surroundings, provided with those little comforts that go to make life a pleasure. And, besides, his family is in the full enjoyment of all religious and educational privileges, railroad and postal communication, with those opportunities for the enjoyment of a variety of scenery, that are entirely wanting in the West, where farm machinery is largely used.

Tolland Co., Conn. W. H. YOEMANS.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN 44 —JUNE 12, 1880.

POLLARD FERTILIZERS: CAUTION.

The readers of the first bulletins of this Station will remember that in August, 1877, analyses were published of two so-called "Improved Fertilizers," purporting to be made by Pollard Bros., then of New Haven.

These fertilizers, a "Composition for Grass" and a "Composition for Vegetables," were sold to some extent in the vicinity of New Haven for $32 per ton. They consisted essentially of dried harbor mud with a little bone dust added and were commercially worth $1 per ton.

In January last the papers announced the discovery by H. M. Pollard, of Providence, R. I., of a new and valuable fertilizer made from night soil, and shortly a sample of "Concentrated Privy Guano" was brought to the Station by a party who gave his name and address as F. C. Cook, 119 Ellsworth Ave, New Haven, and who represented the sample to have been sent him by the manufacturers, Pollard & Cook, of Providence. In February the same person brought another sample which he stated was taken by himself in New Haven from a lot of ten tons which he had purchased for his own use.

These samples were duly analyzed—the first completely, the second partially, and the reports of the analyses were made out in the usual form, signed by me and mailed to F. C. Cook. April 3 the analyses were published in Bulletin 38, and thus the reading farmers of Connecticut were apprised of the fact that the "Concentrated Privy Guano," offered for $65 per ton by Pollard & Cook, of Providence, was not made from night soil but was a mixture of nitrates and phosphates of ammonia, potash and soda, commercially worth about $130 per ton.

The last advices about the Pollard Fertilizers come from Philadelphia, where, according to the letters of an inquiring correspondent, one Dr. H. M. Pollard, representing himself to have been at one time State Chemist to Rhode Island and afterwards to Massachusetts, has been disposing of the right to make a patent fertilizer, the composition of which is attested by analysis over the signature of the writer of this bulletin, giving its value at $127 59 per ton. My correspondent writes that he obtained this information from a party who had agreed to buy the right for a certain section of Pennsylvania for a considerable sum of money, to whom Pollard represented that the fertilizer could be made for $13 56 per ton, and that the right to manufacture it had been sold for Easton, Pa., for $500 and had been negotiated for Allentown and Reading, and for Baltimore.

It would thus appear that H. M. Pollard "discovered" the Concentrated Privy Guano and obtained its analyses from this Station for the purposes of a swindling expedition on which he is now engaged.

FERTILIZER ANALYSES.

418 Castor pomace, from H. J. Baker & Bro., N. Y.; sampled by L. S. Wells, New Britain, from stock of F. Ellsworth, Hartford.

422 Strictly pure ground bone, manufactured by H. J. Baker & Bro., from stock of S. B. Wakeman.

424. Manhattan Blood Guano, from stock of G. H. Staples, Westport.

422 and 424 were sampled by S. B. Wakeman, Sangatuck.

	418	422	424
Nitrogen	4 64	4 39	2 56
Soluble phos. acid	....	....	6 99
Reverted " "	....	....	1 10
Insoluble " "	1 34	23 17	4 19
Potash	53	....	56*
Calculated value per ton	$21 45	$45 21	$33 55
Cost per ton	$20 00	$33 00†	$46 00

* As muriate. † At Saugatuck.

SPECIAL FERTILIZERS.

417. Stockbridge potato fertilizer.
416. Forrester's onion fertilizer.
420. " potato "
421. " corn "
423. " cabbage "
425 " turnip "
426. " oat "

417 was manufactured by W. H. Bowker & Co., sampled by James Nash, from stock of Hubbell & Wakeman, Saugatuck.

416, 420. 421, 423. 425 and 426. were manufactured by H. J. Baker & Bro. 215 Pearl St., N. Y., and sampled by S. B. Wakeman, Saugatuck, from stock for sale by him.

	417	416	420	421	423	425	426
Nitrogen as ammonia	1 40	5 31	4 36	4 67	5 62	6 90	4 78
Nitrogen in organic matter	2 40	2 06	0 40	0 19	....	1 43	1 84
Soluble phosphoric acid	4 67	2 56	81	5 59	5 74	2 85	3 40
Reverted "	53	2 07	4 83	47	52	32	1 56
Insoluble "	66	1 00	2 09	1 01	56	1 09	98
Potash	7 97*	7 25†	11 83†	14 58*	8 18*	9 13†	9 18†
Cost per ton‡	$30 00	$19 00	$51 10	$51 10	$48 62	$54 01	$49 80
Calculated value per ton	$36 70	$24 63	$51 10	$51 10	$51 50	$57 50	$49 80

* As muriate. † As sulphate. ‡ At Saugatuck.

S. W. JOHNSON, Director.

Industrial Implements.

THE PAXTON FORCE-FEED GRAIN DRILL.

This drill, made by the Harrisburg Car Co., of Harrisburg, Pa., has an improvement worthy of special notice. The shovels are made triangular, so as to make a furrow about four inches wide, in which the seed is evenly distributed by a bell or oval-shaped distributor, which is suspended in the lower end of the shovel, thus giving every grain or seed sufficient room to germinate, grow uniformly, and produce more grain to the acre than it will by any other method of sowing. These shovels can be attached to all kinds of grain drills, old and new, and we predict that this Company will have many calls for them to be used on other drills than the Paxton. This drill has a fertilizer and grass-seed attachment, and this is so arranged that it requires only a moment to change it from the rear to the front of the machine.

To increase or diminish the amount of seed to be sown, no change of wheels or gearing is needed, but merely the turning of a thumb-screw, which can be done in a moment.

The hoes or shovels are shifted with a lever or rod by the operator in an instant. During a recent visit to this Company's office, one of our staff examined the workings of this drill, and he is strongly of the opinion that, taking all the advantageous points into consideration, the Paxton has but few equals. For circulars and cut of drill write to the manufacturers.

Miscellaneous.

WHAT OTHERS SAY.

NETTING FOR GRAPES.—A writer in Coleman's Rural World says that his plan in using netting has been to tear off a piece, say 12 inches wide, double it over and sew it on the open side with a sewing machine, and then run a seam across one end. His little girl made 1,600 of these bags and did not complain of the amount of the work. Thus made, they will last three years or more when put away.

His boys, nine and eleven years of age, put them on the bunches and gather them at the top, and tie a cotton string at the top of the bunch. The boys could bag 300 bunches in a morning without feeling overworked. Oftentimes he found it a really fascinating work himself, and first-rate recreation for a June morning. The bags were put on when the grapes were about one-third grown.

The second method is that of inclosing in paper bags. When Mr. Bateham, of Ohio, first suggested this novel plan, he considered it an absurdity. He could not imagine how a bunch of grapes, shut off from sunlight and air, could properly mature with good color and flavor. He resolved to give it a fair trial. One fact is worth a great deal more than many theories; and, starting out with prejudice against Mr. Bateham's plan, after a first trial he must confess himself a convert to it and its advocate.

This year he put on 2,000 paper bags. The results were most satisfactory. The grapes ripened evenly with the best of coloring, fully as early as when not inclosed, and with a flavor equal to any grown without the bags. More than this, the bunches came out of the bags with a splendid bloom and as perfect in every respect as it is possible for a grape to be. The paper bagging prolonged the season for nearly a month. They are very cheap, and are more easily put on than the netting, and the grapes cannot be touched by the birds.

The bag is slipped over the bunch when the grapes are about one-third grown, folded together about the stem, and a pin stuck through the folds. This is all the fastening necessary. Care must be taken, however, to make a small slit in the bottom of the bag, for, unless this is done, when a heavy rain falls half a pint of water will get into the bag, and, standing around the grapes, will injure them, or by its weight tear the bag off. Merely pierce the bottom with the blade of a knife.

THE New England Farmer has much faith in the future of the sugar industry in this country, but trembles for the lazy and shiftless farmers who have invested in the enterprise with high hopes of success, but without a due appreciation of the requirements necessary for securing profitable crops of beet roots.

CROPS AFTER PEAS.—The New York Herald has the following: A Massachusetts farmer says that he has planted the following crops, all with good success, after the early peas have been marketed and the vines pulled: squash, horse-radish, cabbage, all kinds of turnip, sweet corn, tomatoes, spinach, rye for fodder, clover to plow under, corn fodder and string beans. By getting two crops from the land the peas do not cost much, except the cost of the seed, picking and marketing. The second crop is the profitable one, as there is but one coat of manure applied for both crops.

COL. FORNEY says: "Of 257 members returned to the British Parliament 150 are merchants, manufacturers, or connected with commercial pursuits, only 52 are lawyers. There is a growing belief in some quarters that the composition of Congress would be improved by a decrease in the number of lawyers sent to that body, and an increase in the number of business men. The nation could get along very well with less talent for buncombe speech-making if it were supplanted by a greater amount of practical familiarity with our varied interests and industries."

THE London Ag. Gazette has the following: "The vastly increased circulation of cheap daily newspapers, filled with general news, has, we fear, not helped the study of useful agricultural literature, the reading of these papers absorbing much of the time at disposal. We trust, however, that efforts are now being made to instil into our young agriculturist a knowledge of, and love for, agricultural science, which may prove beneficial. We shall thus obtain a larger number of farmers at once practical and scientific, active and watchful on the farm, ready to learn from the experience of the best farmers of this or other countries, and willing to impart any useful information they may be able to give to their brother farmers."

THE DETECTION OF OLEOMARGARINE.—The detection of oleomargarine in butter, when the adulterating material is made, as it can be, in a careful and cleanly manner, is not easy, nor certain, except by methods which only a skilled chemist can execute. Several simple tests have recently been given in the papers, but my own experience with them has shown that they can be relied upon only when the oleomargarine is poorly or carelessly made, or when the butter consists entirely of oleomargarine simply flavored by the small proportion of cream with which it is churned. Of these tests the following has given the best results within my hands: Over a piece of good butter as large as a chestnut, in a wine glass pour about twice its bulk of ether, stir it up until the fat is all dissolved. Let it stand for a few minutes till the undissolved salt has settled to the bottom, pour the clear solution off into a tablespoon and set it aside for an hour or two, or till all the ether has entirely evaporated; perform the same operation with a piece of oleomargarine, and on comparing the two fatty residues, the latter will be found to have a more or less distinct tallowy odor, which may become more apparent if the spoon is held for a moment in the hot steam from the boiling tea-kettle; the residue from good butter has no such odor; but genuine butter may be adulterated with half its weight of oleomargarine, and the adulteration cannot be detected by this test. When genuine butter is heated to a temperature several degrees above the boiling point of water it foams much more than oleomargarine does when treated in a similar manner; I have found that this test enables us to distinguish genuine butter from genuine oleomargarine, but it is no more serviceable than the other for detection of adulteration of the one with the other. No one should place much dependence on either of these tests, without going through with the same operation with genuine butter at the same time, or at least not until thoroughly familiar with the different results given by the two substances under the conditions of the test.

We find the above in the agricultural columns of the New York Tribune, from the pen of Professor G. C. Caldwell.

COL. F. D. CURTIS holds that the cows we have are better than we give them credit for; that proper feed and care will greatly improve the quantity and quality of their product. To allow a cow to fall off in flesh, while giving milk for butter-making, is erroneous in the highest degree, and will be quickly detected by the expert in the butter trade, when the butter product is placed upon the market. The better the cow, the more danger of this error, for the reason that her nature works to milk-forming, and, if her system is not provided with proper nutriment, the result is, first, her fat, and then her lean meat or muscle, are gradually transformed into milk, and the butter from such milk will be deficient in flavor, aroma, texture and color, whatever the season of the year, or however well made. In short, it will be a fair competitor with the oleomargarine or tallow product of the present day.

AVOID all five or ten-minute churns that have an action on the cream, says Mr.. Curtis. Such churns injure the grain of the butter, and will be sure to tell against the butter when it is placed upon the market.

PROFESSOR ARNOLD says: "The assertion is often made, and many people believe, that water washes out the flavor of the butter; but it only cleanses the butter of the buttermilk, sugar and milk acid which may adhere to it, just as clarifying sugar removes from it the foreign matters which modify its true flavor. The flavor of butter consists of fatty matters, which do not combine with water, therefore, cannot be washed away by it. The effect of washing upon the keeping quality of butter depends upon the purity of the water with which the washing is done. If the water contains no foreign matter that will affect the butter, it will keep better for washing the buttermilk out than by kneading it out."

CHEAP REFRIGERATORS.—The Farm and Fireside, of Springfield O. has this to say about these:—Take two wooden boxes, one three inches larger in every way than the other. Line the inside box with zinc. Fill the space surrounding it with dry sawdust, or, better, with fine charcoal. Let the cover to the inside box be covered with a piece of woolen blanket. Let a small piece of pipe pass from the bottom of the inner box down through the bottom of the lower box, so as to allow the water from the melted ice to flow off. This is just as good as many of the patent ice chests at less than one-fourth the cost.

"STATE laws are needed to define the duties and obligations of transportation companies within the jurisdiction of the State, and national laws to regulate inter-State commerce."—The Husbandman.

SPEAKING of Judge Balcolm, a venerable member of the respected Farmers' Club of Elmira, the Husbandman, which gives weekly reports of its valuable proceedings, says: "Venerable in years, rich in experience, the Judge has undiminished interest in agriculture, and for the good service rendered in his profession, is regarded by the Club with warm affection. Although verging on fourscore years, he has the mental elasticity of robust manhood, and as a farmer, is the Nestor of the Chemung Valley. There was another farmer at the meeting more advanced in years, Mr. David Neish of Brecsport, who has nearly completed his eighty-third year, yet on his departure he mounted nimbly from the ground to the seat of a high carriage unaided, and with as much apparent ease as at any period of his life." It is very pleasant to meet and to talk with farmers who, to a good old age, have preserved alike good health, sound minds and an undiminished interest in agriculture.

NEW ABUTILONS.—Mr. B. S. Williams, London, England confidently recommends them as being superior to anything yet sent out, both in color, habit, and profuseness of bloom.

The Abutilon is one of the most useful decorative plants we have, and can be had in flower all the year round; for cutting purposes there is nothing better.

Charmer.—A grand acquisition, with bright rosy crimson flowers of fine shape, dwarf, and profuse.

Crimson Banner.—Habit dwarf, compact, very profuse, deep crimson, of fine form.

Golden Nugget.—Flowers roundish, of fine form and substance, rich orange inside, outside rich orange veined with crimson.

Purity.—Flowers pure white, an improvement on Boule de Neige both as regards size and substance, very profuse.

Purple Emperor.—Large flowers, good substance, rosy purple, distinct and pretty.

Queen of the Yellows.—This variety has very large flowers, of fine form and substance, lemon-yellow, very distinct.

Violet Queen.—Flowers of fine form and substance, of a bright violet color, very distinct, and quite a new color amongst Abutilons.

The above are selected from a large number of seedlings.

NEW CALADIUMS.—The following Caladiums are quite distinct in character to any hitherto offered, and may be considered the origin of a new type. The leaves are generally long and narrow, not so arrow-shaped as the ordinary forms, and having a peculiar grotesque appearance.

Adnescens.—Leaves from 12 to 15 inches long by three to four inches broad, bronzy red veined with crimson, margin pale green, very distinct and fine.

Fulgidum.—The leaves of this variety are from six to nine inches long by four to six inches broad, rather oval in shape, center salmon rose with rich metallic hue with bright veins, broad margin of pale green.

Metallicum.—The leaves of this very distinct variety are from nine to twelve inches long by three to four inches broad, the center rose with a bronzy metallic band on each side, the margin pale green and wavy.

Pulcherrimum.—Leaves from nine to twelve inches long by four to six inches broad, the center transparent white with a broad margin of green, beautifully spotted; very distinct.

THE ONE BEST APPLE.—In Secretary Garfield's late Report of the Michigan State Horticultural Society, the question was asked: "Which is the one best apple?"

President Lyon explained:—If all the apples were stricken from the list save one, what one would we choose to save for Michigan?

Mr. Bitely.—From my present experience in the market and the home—for dessert, cooking and all uses, considering the tree as well as the fruit I should take the Baldwin.

Mr. Selover.—The Baldwin has many points of merit, but I would want a hardier tree and a fruit of better quality, hence would save the Northern Spy.

Judge Lawton.—I would agree with the gentleman in his choice.

Mr. Harrison, Kalamazoo.—I should choose the Wagener, because the tree is smaller and bears earlier in addition to the good qualities of the Spy.

Messrs. Williams, Dorr and Pearsall chose the Baldwin as their favorite.

Mr. Avery, Grand Traverse.—The Wagener will suit more tastes than either of the others mentioned. The Baldwins are in poorer condition, as to health of tree, than almost any other variety in the State.

Mr. Merriman said he was glad the opinion of any man was not final in this matter—even his own—still his choice would be the Wagener.

Mr. Chilson thought he should choose his location and save the old Rhode Island Greening.

Mr. Lyon.—It is desirable to bring out opinions as to first, second, third, and fourth best, which are based upon actual experience. I could not choose the Wagener because of the peculiar tendency to overbear, nor the Baldwin because it lacks hardiness. I rather favor the Northern Spy.

LE CONTE PEAR.—The Southern Farmer's Monthly (Savannah, Ga.) says of this:—So far we have heard no complaint against the justly esteemed LeConte pear, which seems destined under all variations of our climate to maintain its reputation for vigor, fruitfulness, and freedom from blight and insect depredations. The bearing trees promise their usual crop of fruit, and thousands of cuttings put out during the winter are flourishing for the trade.

THE Fruit Recorder has the following:

GOLDEN LAWS OF YE STRAWBERRY.

I.

Strawberries choice wouldst thou procure?
Dig deep and mulch and strew manure.

II.

To make the fruitful vines endure,
Dig deep, and mulch and strew manure.

III.

To make assurance doubly sure,
Dig deep, and mulch and strew manure.

Stern cynic, here is naught to scoff at,
On these three laws hangs all the profit.

THE introduction of white grapes, says a writer in Colman's Rural World, has proven a great blow to grape-loving birds, for I have never yet observed one that was smart enough to discover that a white grape was good for eating.

MR. PIERCE asked if potatoes can be grown a number of years on the same piece without diminution in yield, if well supplied with barn-yard manure. Mr. Laing said that he heard a gentleman say that he had grown potatoes on the same spot, 30 years, and the last crop was the best. Had used barn-yard manure, only. Mr. Ross said that his father planted the same spot in the garden 25 years without diminution of yield and that it had been planted nearly that length of time since, and appears to do as well as ever. Hog-pen manure had been used mainly. The above is taken from the proceedings of the W. New York Farmers' Club, as reported in the American Rural Home

Everywhere.

RURAL SPECIAL REPORTS.

ALA., New Market, Madison Co., June 9.—The wheat crop is now cut and the yield is very poor, owing to rust. Oats are fine and there is a prospect of a good yield. Cotton is growing finely, and a large acreage has been planted. Corn is laid by, of good color. Rain is abundant and the weather cool for this latitude. Grass is luxuriant and pasturage fine. Gardens are prolific in all except cauliflowers which seem rusted. The Telephone peas are fine, some weevil-eaten, did not come up. The flower seeds are growing finely. We had a very mild winter, Sweet potatoes left in the ground last fall in full sprout. Irish potatoes abundant and large. Fruits of all kinds in abundance in season. I find the Sharpless strawberry well adapted to this climate, giving prodigious fruit. Miner's Prolific is nearly equal to it. The Cuthbert raspberry is all that is said of it—a great acquisition. Grapes are in abundance. We have no reason for complaint of the seasons or of fruits, vegetables or field crops, except that our wheat is short, but a larger acreage will make up for this. The health of the country is good. I have planted largely of Blount's corn, which is now laid by. The ground has been sown broadcast with Cow-peas. G. D.

CANADA, Collinville, Lambton Co., June 8.—I planted 110 bug-eaten peas and of them 46 only came up. More might have grown if I hadn't destroyed some while looking if they were germinating. This inspection showed that the insects have eaten some of them. The peas I planted were McLean's Little Gem. Those that grew have been in bloom a week, and have beaten the Telephone. The seeds the RURAL sent me are not growing well, though I had a nice place for them. The Cuthbert raspberry and the willow as well as the mangel and oats are growing, however; but the Cow-peas, planted on June 3rd are not up yet. I have a few hills of Amber sugar-cane that are also growing. I sent to Kansas for a little of the Rice corn and it is thriving, and so is the Dourra which I am testing. We are having lots of rain here now and the ground is very wet. Crops mostly look good. Some of the fall-sown wheat is fine and some poor. There is quite a sprinkling of all the sorts of fruit that grow in this section, but the insects are quite plentiful, and we hope no June frost will visit us to kill things. Potato beetles and grasshoppers are abundant. I was in hopes that these heavy rains would kill the 'hoppers, but they still hop lively. They ate our onions and carrots close to the ground last year, besides injuring the oats very much and doing a good deal of other damage. I have a small piece of Defiance wheat grown from the seed saved from the RURAL'S distribution last year, and it is looking good. A SUBSCRIBER.

CANADA, Listowell, Perth Co., Ont., June 7.—The Defiance wheat looks well and is a good-sized patch this year. The Mold's oats look splendid. I sowed them as thin as I dare and now they look almost too thick. The other seeds are *all* sown in a bed by themselves in the open garden; but so far not many of them are up. I did not put them in until the ground was fit for cucumbers; this being my first year here, the soil is not just what I should like. We have had a very dry Spring, so that the farmers have got in their seed in very good order, and the rain since has brought it on fast, though the rainfall was so heavy as to wash out a good many peas. The fall wheat

has been badly killed out around here many fields having been plowed up and resown to a spring crop. Fruit promises to be abundant, especially strawberries. Gooseberries and currants were a little hurt by the late frost.

A. J. C.

ILLINOIS, Baileyville, Ogle Co., June 12.—The weather the last three weeks has been showery and at times quite wet, with occasional hard wind-storms. On the 4th inst. the wind, which blew from the south and continued for several hours, did considerable damage in this section by blowing down trees, some wind-mills, farm buildings, etc., and blew a large amount of fruit off the trees. Warm and pleasant now. The crops in general are promising, but a large portion of the winter wheat failed and was plowed up this spring and the ground seeded to other crops. That which was sown among corn-stalks last fall did not do so well as what was sown on suitable soil in open fields and put in well with the drill. The troublesome experiment of seeding among the standing corn will not soon be repeated here again, except when farmers have no other spare ground for fall seeding. Corn, potatoes and garden vegetables are doing well. Our Beauty of Hebron potatoes are very promising. Most of the surplus grain has been marketed of late at lower prices than those offered last winter. W. B. D.

KAN., Fontana, Miami Co., June 7.—Frequent rains since May have changed the face of affairs materially in this vicinity. Wheat is far better than many farmers thought it could turn out on account of the drought. Corn is growing well and, indeed, all the spring crops seem to be doing finely. Our gardens are always splendid. My first ripe raspberries I ate on May 30. The weather ruined my strawberries, but my raspberries, I think, can't be beat. J. J.

KY., Owensboro, Daviess Co., June 14.—The past week was the wheat harvest week, though some was cut as early as May 31st, and some remains to be cut. The crop in this neighborhood is good in quantity and very good in quality, so far as I have examined. Oats are low and the crop will be short owing to a dry May. Corn is looking well. The weather is too dry for tobacco; a great deal will be set yet if we have a season; some plants are getting too large. Fruit is a fair crop, except budded fruit, which will be scarce.

J. W. S.

NEBRASKA, Wilsonville, Furnas Co., June 5.—The drought has been very severe in this part of the State this season. There has been no rain since September last to wet the ground more than two inches deep. It is raining some now, as I write, and from appearances there will be a heavy shower. The crops are suffering very much. The rain will be too late to save spring wheat, but will help the corn. Many have not planted yet, the ground being too dry to plow. Fall wheat was mostly killed out last winter, more from dryness than from cold weather. Rye and early-sown fall wheat look very well. Fruit trees are in good condition. Owing to our peculiar, sponge-like soil, only the surface of the ground becomes dry, except in severe drought, and deep-rooted plants seem to be doing just as well as though we had plenty of rain. It is a general remark of new settlers, that they never saw soil which would hold moisture like the soil in Nebraska and Kansas. Land that has been cultivated several years is in much better condition than new land. Many settlers are leaving on account of dry weather, being unable to stay, as there is little or no employment to be had, and the prospect for a good crop is very discouraging. It seems to me Congress ought to grant homesteaders leave of absence for a season instead of making the laws more stringent. It is literally impossible for many homesteaders, on the frontier, to subsist without leaving their lands for a while, often being obliged to go from one to two hundred miles. Corn is worth 40c.; wheat, $1 25; oats, 50c.; rye, 50c.; millet, 60c.; potatoes, $1; butter, 15c.; eggs, 8 to 10c. The oldest settlers in this county have never before known a failure in the winter wheat crop, which generally yields from 20 to 35 bushels per acre. Spring wheat yields from 15 to 30 bushels; corn, 35 to 75; oats, 40 to 60; rye, 20 to 35; barley, from 30 to 45 bushels. There is a heavy immigration coming into the county in spite of dry weather. Nearly all the government land is taken up, and old settlers are selling out to parties who have more money and enterprise.

W. T. B.

NEW JERSEY, Lakewood, Monmouth Co., June 15.—If from the RURAL office you draw a line south 14, and west 44 miles, it will strike Lakewood—a post village and station on the Southern New Jersey railroad, in Brick Township, Orange Co., N. J., until recently known as Bricksburg. Its geographical position may be further defined by stating that it is nine miles west from the Atlantic Ocean and the same distance due north from Tom's River. Here we find a village regularly laid out, containing many attractive residences for about 800 inhabitants. The hotel has accommodations for about 75 guests, and is well patronized by persons suffering from diseases of the throat and lungs, who come here in the hope of obtaining relief, in which hope they are seldom disappointed—and by families seeking a quiet healthful abode.

But I have been most interested in the agricultural resources of the neighborhood. I had long heard of the barren lands of New Jersey, and had desired to visit them, and here they are. Leaving the more fertile sections of Monmouth County, with its red, gravelly soil from which Red Bank has very naturally derived its name, we rapidly approach a different formation, where the surface of the soil is mostly as white as the sand of the sea beach and to all appearance as unproductive. But looking from the sand to that which comes from it, we are surprised to see the luxuriant foliage and strong growth of its productions. Notwithstanding the excessive drought, all crops are looking well, but I am told the product is not likely to be as good as on average years. Strawberries especially have suffered from drought, but the late rains have come in season to help all the other crops. There is something incomprehensible to me in the virtues of the sand. With that of other sections I have been well acquainted, and judging from that, I should expect to find this as barren as I was inclined to believe it from reports; but the facts are otherwise. The sand merely turned with a plow—there is no sod to speak of—gives, with very little care, fair returns for the labor bestowed upon it. I would not be understood as representing that extravagantly, or even what in some sections would be called moderately large crops, can be grown here, but that an industrious, frugal man can readily make a living for himself and his family is beyond question. "Go West" is not the best advice to give those who are seeking homes. There are thousands of immigrants passing through New York every week for the distant West, who could more advantageously stay within a hundred miles of that city. Within a radius of ten miles from Lakewood there is unoccupied fertile land enough to give employment and livelihood to thousands who go further and do worse—land that can be purchased at low prices and on long time, and of which large areas can be readily worked, the product of which, if not so much for its acreage, will find a ready market at much higher prices. The nature of the soil and its favorable location shorten the season when the husbandmen cannot work. Vegetables and small fruits can be raised abundantly, and come to perfection in time to bring high prices in the cities where they will arrive, if not quite so early, fresher and in much better condition than from further south.

There is certainly one drawback to this section—it is not naturally a grass-growing region. This sand although it bears well at first, will require fertilizing. Nature has, to a certain extent, provided for this by deposits of green sand marl which seem excellently well adapted for the purpose, and I have no doubt the luxuriant Cow-pea, when plowed under, will prove as advantageous as in the Southern States. Still the want of good stable manure will be felt, and this will only be had in any quantity when grass is grown, unless the system of ensilage, now being experimented with in New England, shall be successful. I see no good reason, however, why moderate crops of grass should not be grown, particularly in the lower places. I have omitted to say anything of the extensive cranberry bogs in the neighborhood, of which there are many, because these do not seem to be directly connected with the general agricultural features of the country.

My impression is that for a man with small capital this is a good section. It is often said, and probably with truth, that the most money can be made where the land is the best; but to get such land and to work it is often out of the power of the man who has little to begin with. By locating here he has the advantage of good society, churches and schools, all of which many pioneers sadly feel the need of. He is in the midst of the highest civilization, instead of in a rude and uncultured country where his children must grow up in keeping with the surroundings. And not the least consideration is, he is in a locality where he will not be likely to lose time on account of illness, and the doctor's bill for his family will not eat up what he can save by his labor, for there is probably no more healthful location than this in the entire country. L. A. R.

PENN., Milford, Pike Co., June 13.—Reports just received here from the counties of Northampton, Monroe, Pike, and Wayne, Penn.; Sullivan, Delaware and portions of Orange, N. Y., and Sussex, N. J., show that the crops will be far better than was anticipated a few weeks ago. For the past two weeks copious rains have fallen in most of the counties named, and grain of all kinds, and vegetation generally, have taken a sudden leap and are now growing finely. Previous to two weeks ago there had been no rain for several weeks, and grass and grain seemed to remain stationary. Grass stopped growing, and fearing the crop would be almost an entire failure, many farmers in the remote districts of the Pennsylvania counties began selling their cattle. But the change within the past two or three weeks has been very marked. Although the stalks of rye and wheat will be considerably short, the heads are of fair size, well filled, and farmers still hope for a good yield of these staples. The oat crop will be unusually light, and in some places will be hardly worth harvesting. Corn and potatoes are nearly two weeks late. The former, it is thought, will yield nearly the average crop. The yield of potatoes is doubtful, from the fact that the Colorado beetle has made its appearance in the Delaware Valley in great numbers, and is already at work stripping the leaves of potato stalks at an alarming rate. These destroyers first made their appearance in this section four years ago, when the crop was an almost entire failure. Two years later they also did much damage, and it is feared the crop this year will also be greatly injured by these pests. The remedy resorted to by many farmers is Paris-green, while other farmers will not use it. Owing to the long-continued drought, with the exception of apples the fruit and berry crops in this section will be light. Along the upper end of the Delaware Valley the fruit was injured by the frost, and will be very scarce. R. H. M.

PA., New Lebanan, Mercer Co., June 17.—We are blessed with plenty of rain now and everything looks well and promising. The dry weather has hurt the grass crop somewhat and also kept the corn back a good deal. It was planted early enough, but did not come up for so long that it looks small for this time of year. Wheat will be a good average crop, if nothing occurs to injure it in any way. From present appearances, fruit is going to be plentiful. Of small fruits, such as berries, there will be a large amount picked and sold. The farmers of this section are go-ahead people; they take an interest in everything and try to improve and see who can have the best sort of stock, crops, etc. A good many sheep are raised, and brought a good price in the spring. A good many were bought in the expectation that a high price would be paid for wool; but there is not much excitement about wool buying yet; no buyers are out, and it is selling for 35 and 40 cents per pound. Produce prices are as follows: wheat, $1 10 per bushel; corn, 30 cents; oats, 30c.; butter, 12½c. per pound; eggs, 8c. per dozen. J. E. C.

PA., Waynesborough, Franklin Co., June 17.—In a few days some wheat will be cut. It has ripened a week earlier than in other years. It is somewhat straw-broken by flies; also damaged somewhat by the Army worm, which is doing much injury to the growing corn and grass (except clover) in some sections. These worms are greedily devoured by the swine where they can get at them. The potato bugs seem to be more numerous than for a year or two past. The fruit crop has a good prospect.

D. B. M.

RURAL FARM, June 15th.—We have rain at last—though not enough. But the clouds look as if a steady rain were at hand. Timothy and clover between the Army-worm and the drought will not harvest one-eighth of the usual crop. Corn is growing finely. Shumaker and Fultz are the first of our wheats to begin to ripen. Potatoes are growing finely, and we are much less troubled with beetles than in years past. In spite of Army-worm, Rose-bugs and myriads of other insects; in spite of drought, we shall, from present appearances, harvest an average crop of everything but hay.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Phosphoric Acid.

R. M., Steubenville, Ohio, asks what is the precise difference between soluble, reverted, and insoluble phosphoric acid.

ANS.—As clear a definition of these terms as any we have seen, is that given by Prof. S. W. Johnson, of the Connecticut Experiment Station. He says:—

Soluble phosphoric acid implies phosphoric acid or phosphates that are freely soluble in water. It is the characteristic ingredient of superphosphates, in which it is produced by acting on "insoluble" or "reverted" phosphates with oil of vitriol. It is not only readily taken up by plants, but is distributed through the soil by rains. Once well incorporated with soil it shortly becomes reverted phosphoric acid.

Reverted (reduced or precipitated) phosphoric acid, means strictly, phosphoric acid that was once freely soluble in water, but from chemical change has become insoluble in that liquid. It is freely taken up by a strong solution of ammonium citrate, which is therefore used in analysis to determine its quantity, "Reverted phosphoric acid" implies phosphates that are readily assimilated by crops, but have less value than soluble phosphoric acid, because they do not distribute freely by rain.

Insoluble Phosphoric acid implies various phosphates not freely soluble in water or ammonium citrate. In some cases the phosphoric acid is too insoluble to be readily available as plant food. This is true of the South Carolina rock phosphate, of Navassa phosphate, and especially of Canada apatite. The phosphate of raw bones is nearly insoluble in this sense, because of the animal matter of the bone which envelopes it, but when the latter decays in the soil, the phosphate remains in essentially the "reverted" form.

Making Cider from Summer Apples.

T. D., Boise City, Idaho, asks can any cider be made of summer apples, so as to keep during the winter.

ANS.—It can; but only ripe apples should be used, and such varieties as produce cider containing a large percentage of sugar. Such cider when properly fermented and refined, being handled in the cool and even temperature of a good cellar, will keep very well through the next winter. In the Middle States crab apples ripen in August, and make cider of 25 deg to 30 deg. of strength which will keep for years without refining. Generally speaking, it is poor policy to make early apples into cider for winter use; it may be done, but it is only profitable with a few varieties like the crab Harrison, etc. A large share of early apples are imperfect and unripe. The cider contains too much starch and albuminous substances and too little sugar. Fermentation is strong and rapid. The weather being warm makes it still more unmanageable; while later in the season all these conditions are changed. The starch of the apple is changed to sugar by nature's process, enriching the cider. When the weather is cool fermentation is slow and easily managed, and the business which, early in the season, would have proved unsuccessful, becomes, later on, safe and profitable.

Miscellaneous.

L. H. R., Fairfax, Va., asks what is the best remedy for Rose-bugs besides hand-picking.

ANS.—When they infest the bushes in great numbers it is sometimes practiced to shake them off on a sheet and burn them. Again, it is recommended to hang about the plants, open-mouthed bottles half-filled with a mixture of sweetened water and vinegar. Many may also be killed by pouring boiling water on the ground under the bushes, but this must be done on the first appearance of the insect before the wings are formed.

A. J. C., Listowell, Ont., wants to know how to raise pines, Horse-chestnuts, Mountain Ash, etc., when to gather the seed and when to sow it.

ANS.—Gather the seed in late summer, fall or winter; all kinds of tree seeds do not ripen at the same time. Just when they may be gathered can easily be learned by keeping an eye on the sorts it is desired to propagate. Sow in rows as soon in the spring as the ground can be worked.

H. D. E., Palmer, Mass., would like to know how to dry hard soap; he can make it well enough but it shrinks all out of shape when it dries.

ANS.—This is a trouble that has puzzled more than one amateur soap maker. Do not dry it in the sun, but in a shady place, as in an airy garret and the cakes will retain their shape.

E. W. S. Portlandville, N. Y., asks whether it would be safe to remove the roots of an old asparagus bed at this time to another place and whether the moved plants will produce a crop next year.

ANS.—Fall would be better. The roots are strengthened by allowing the foliage to mature. It will produce next year sparingly; but should not be cut.

Inquirer, Sharon Center, N. Y., asks which way should the rows of drilled corn run so as to get most benefit from the sun—north and south or east and west.

ANS.—If planted in drills running east and west, the south side gets more sun than the north side. We should prefer to have the *rows* wide north and south.

D. R. Mc. A., Lynn N. C. sends a rhododendron for name.

ANS.—Rhododendron maximum.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, June 12th.

C. M. thanks.—H. S.—E. B., we shall investigate. Thank you for information.—G. D., New market, the name is indistinct.—S. L.—A. B. A.—L. A. W.—G. A. G. Jr.—M. E. S.—F. H. S.—A. S. S.—F. D. C.—S. W.—M. E. H.—L. R. M'A.—A. C. G.—C. W. H.—B. F. J.—D. C.—R. G. Jr., R. D.—E. J. B., Yes please let us hear from your oftener.—S. F.—E. H. A.—J. R. C.—W. H. C.—C. P.—D. B. M.—C. H. B. M.—J. W.—A. L. P.—S. R. T.—Nellie B.—

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WHAT WILL THE HARVEST BE?

Upon the receipt of this number of the Rural New Yorker, we would be glad if our readers would advise us at once of the condition of the leading crops of their respective districts—wheat, corn, cotton, potatoes, hay, apples, pears, etc., etc. We are now at work upon the What-will-the-Harvest-Be number of this journal, and desire to make it as explicit, trustworthy and valuable as possible to our readers, to whom, in a great measure, we must look for the information sought.

The first brood of grubs from the Potato Beetle is now hatching out. Many of our farmers may not be aware that these larvæ cannot endure the contact of ashes, plaster and the like. If knocked off the leaves many of them fall on the hot soil and perish.

We shall soon begin the publication of strawberry portraits of new varieties. Many of the originals have been kindly furnished by Peter B. Mead, E. P. Roe and J. T. Lovett. The others have been raised at the Rural Grounds the present season. These portraits are true likenesses. We have not selected the largest fruit, as those engaged in the trade are too prone to do, but the average fruit, by which alone a strawberry or any other fruit should be judged.

We have found it quite serviceable to go over grain infested with the Army worm and knock the pests off. The slighest touch dislodges them. A rope, as a clothes line, may be drawn over belts 20 feet in width by men each taking hold of an end. Thus thrown to the ground they begin their travels instead of at once returning to feast upon the grain or stalks about them. If trenches are dug about such fields, vast numbers may be captured and destroyed in this manner.

Within a few years past the problem of increasing the yield of corn by improved methods of cultivation, has been warmly discussed, and, no doubt, with benefit to the farmers of the land. The average farmer will not raise one hundred bushels of shelled corn per acre, but the successful efforts will, at least, induce him to strive to increase his yield. It would be well if a great deal more thought and investigation were given to increasing the yield of potatoes—looking to which we shall have a few words to say in our next "Free Plant and Seed Distribution," which will be announced in the Fair Number of the Rural New-Yorker, soon to be issued.

The Beet Sugar Industry.—The beet sugar industry seems at last to have taken a permanent footing in America. A thriving factory is at work in Maine, another in Delaware, two in California, one is seriously proposed to be built at Oswego, N, Y., and one is to be built in Missiquoi Co., Canada. The State of Delaware offers $3,000 in premiums for the best crop of sugar beets for the encouragement of the culture, and in one year the Agricultural Department distributed 4,764 quarts of sugar beet seed. The general interest taken in this subject may be destined to result in a vast benefit to agriculture. We know that sugar can be profitably made from beets; we know that beets can be grown; all that seems to be needed is to bring farmers and manufacturers into practical business relations with each other.

CRUELTY TO ANIMALS IN TRANSIT.

If it be true that "man's inhumanity to man make countless thousands mourn," it may be held to be small matter for surprise that man should inflict still greater inhumanity upon the *inferior brutes*. Nevertheless the fact of this greater inhumanity and cruelty, beyond expression in its atrocity, ought to be made known that the better instincts of mankind may be awakened in regard to it. Although man has lawful dominion over the beasts of the field and may legitimately use them for his purposes, even to the extent of slaughter, yet cruelty in the exercise of this right is to be reprobated in the severest manner. In general, personal interest is sufficient inducement to prevent injurious treatment of animals, but in the commercial handling of live stock the miserable beasts are put into the hands and charge of persons who have no interest beyond doing their work in the most easy and rapid manner, that their pay may be made as remunerative as possible. Here personal interest operates against the natural sentiment, and that, added to long usage and familiarity with cruel devices for the management of frightened and unruly animals, is the cause of practices most abominable and cruel.

Without going into particulars, one pertinent fact which is made public in a mere business way, may be cited as an illustration. For a long time past pork packers have complained of the damage done to shoulders and hams by the cuts and stabs inflicted upon the hogs by means of brads and spikes used by persons engaged in driving and loading the animals, and tanners have complained in regard to the injuries to hides from similar causes, to say nothing about those from excessively deep and unnecessarily large brands burned into the flesh of cattle. New York packers' losses and complaints have at last become so serious that the attention of railroad agents has been called to the abuses, and their interference to prevent them demanded. The extent of the abuse may be imagined from the statement made, that of one lot of 3,500 hams sold recently by a Chicago packer only 1,400 could be shipped, owing to the damages caused by cuts, stabs and bruises upon them. Three-fifths of these hogs had been so cruelly abused that the hams were unsalable except as damaged ones. If one-half the hogs were injured on the hams, doubtless a large majority of the remainder were ill-used in other ways, and the total misery inflicted upon the whole nine million of hogs packed in 1879, must have been appalling in its enormity. Fortunately the cruelty takes on a final form of a loss of 25 cents per ham, which is sufficient to force the packers to the help of the Humane Societies which are without much credit in the estimation of railroad employes and hog-drivers. The packers' complaints will be listened to, else the loss will fall where it will finally have the effect of stopping the cruel practices. But what an amount of mute and helpless suffering is represented by those 25 cents.

TRIAL OF WHEATS AT THE MISSOURI AGRICULTURAL COLLEGE.

Last year, upon the farm of the Missouri Agricultural College (Columbia), Professor Tracy tried upwards of fifty different kinds of wheat, and his report, we should suppose, would prove of much value to farmers in general, as well as to those of Missouri. Among the varieties tried, we select the following as having yielded the largest quantities of grain per acre:

	1878.	1879.	
Amber	20.16	31.03	Smooth
Arnold's Hybrid	33 23	36.56	"
Clawson	28.07	39.42	"
Delhi	14.42	39.60	"
Dott	31.04	36.40	Bearded
Egyptian		32.19	"
Fultz	15.23	35.90	Smooth
Gold Medal	17.39	34.68	"
Jenning's White	24.96	35.90	Bearded
Michigan Wick	28.32	34.71	"
Muskingum	21.92	32.73	Smooth
Nursery	13.30	38.62	"
Polish		35.20	"
Post	19.49	34.04	Bearded
Red May	27.52	32.46	Smooth
Shumaker	30.56	37.20	"
Silver Chaff	17.82	38.47	"
Treadwell	19.52	52.38	"
White Rogers	38.72	38.74	Bearded
Zimmerman	16.32	32.05	Smooth
Russian No. 3	8.50	35.66	"
Russian No. 12	9.41	37.48	"

Professor Tracy says that the land, a clayey loam sloping to the south, was plowed about September 1st six inches deep. On September 25 it was thoroughly pulverized three inches deep with a revolving harrow, and on September 28 the seed was sown with a drill at the rate of one and one-third bushel per acre. No after cultivation was given to the crop. In August, 1878, a portion of the land was manured with slaughter-house refuse, which was composted with earth in 1876, and was applied at the rate of five two-horse wagon loads to the acre; the remainder of the land was manured with stable manure at the rate of twenty loads to the acre. The wheat was sown so that each variety was grown on land having each kind of manure. The slaughter-house refuse gave the largest straw, but the brightest and the plumpest grain came from the land having the stable manure.

Through the courtesy of Professor Tracy we shall be enabled to give our readers engravings of several of the above wheats which produced the heaviest yields, together with all the information we may be able to glean respecting them.

THE RISE OF SOUTHERN AGRICULTURE.

Among the most assuring and encouraging signs of the return of national prosperity are the rapid strides which Southern agriculture is making. Every one of the Southern States is increasing the area of cultivated crops. The neglected plantations are again being brought under cultivation; the cattle interest is growing in importance; new settlers are taking up land and raising it in value; the lumber business is assuming prodigious proportions in wooded districts. Georgia alone produced 300,000,000 feet of lumber during the past year, worth more than $5,000,000—handsome proceeds from a single industry. The cultivation of vegetables for Northern markets, especially in Florida and Georgia, is developing in a highly gratifying manner. Where a few years ago the exports amounted to a few hundred crates, the shipments may now be numbered by as many car-loads. But perhaps no State is growing in wealth more rapidly than the Lone Star State. Secretary Sherman asserted in a recent public speech that three years ago Texas yielded barely enough revenue to meet current expenses, whereas, without increasing the rate, the surplus for March and April last amounted to $26,000,000, and there is every reason to suppose that the total surplus for the present year in that State will not be less than $100,000,000. The tide of financial prosperity indicated by these figures must enrich the farmers and ranchmen as well as the Treasury and the capitalists.

It is mainly to the heavy immigration into the State and the enormous development of its agricultural resources that these encouraging results must be accredited. Not only has the Lone Star State, ever since the war, been receiving large additions to her population from Europe and the North, but some sections of several of the other Southern States have been nearly depopulated of all their best citizens who have abandoned their worn-out lands and gone to build new homes on the virgin soil of Texas. But although this State has had the advantage of a heavier immigration than any of her sisters, the energy which has been the chief motor in her advancement is not confined within her borders, but in late years has been more or less characteristic of the entire South, especially in the direction of its chief industry—agriculture. The farmers or planters have felt assured that theirs is a paying business, rightly conducted. It is to be hoped that Southern agriculture may continue to grow as it has begun, till all the rich resources of the country shall have been fully developed. Let the several States make suitable provisions for their agricultural colleges. These institutions are proving themselves to be of great value in the North as teachers and champions of agriculture, and there is no reason why they should not be as available in the South. They should not merely be schools in which young men are taught the science of farming, but they should, by experiments and investigation, penetrate into the unknown fields of agricultural research and throw light on the many puzzling questions that now perplex the farmer.

BREVITIES.

There were some remarkably fine Petunias shown at the late exhibition of the N. Y. Hort. Society. The flowers were large and delicately fimbriated.

We are glad to know that Mr. Russell P. Eaton, so long of the New England Farmer, is now editor of the Merrimac Journal, of Franklin Falls, New Hampshire.

We are trying the experiment of raising tomatoes from seeds sown in the open ground. We think that the advantages of raising plants in the house or frame, and transplanting in late May or early June are somewhat overestimated.

The turf of the grounds of the Mineola Fair Association is always green—even in heat and drought such as we have of late experienced. This turf is made up mostly of Danthonia spicata (White Oat grass), a fine, wiry grass, common in dry and half-sterile soils.

June 21. A note from the Rural Farm informs us that rain is sadly needed, but that wheat is looking splendid. Of all our varieties Shumaker is the first to ripen. This is a bald variety. The heads are as large as those of Clawson, though the grain is somewhat smaller. We know nothing as to its quality.

Now is the time to get rid of a large second brood of potato beetles, by destroying the eggs of the first brood. It is of little account to kill the early beetles if the eggs deposited upon the underside of the leaves are left to hatch. Where potatoes are given hard cultivation, the egg masses can be easily removed at the same time, leaf and all, with little extra labor.

The Army-worm is fast disappearing. As in all such excitements, the damage actually done has been greatly exaggerated. One of the silliest recommendations for its destruction by the press has been that of rolling infested grain-fields. This would surely ruin the grain crop, and three-quarters of the worms would escape unharmed.

We are sad to hear of the death of M. Souchet, of France. For the improvement of the Gladiolus, now one of our most beautiful and prized bulbous plants, the world is more indebted to him than to any other person. As we remember, it must have been eleven or twelve years ago that we imported one dozen corms of his then new varieties, for which we paid $24.

The Beurre Clairgeau pear is often spoken of as worthless. The Gardeners' Monthly (April) says of it: "This pear is voted in the United States as not fit for any mouth." Our contributor, Gen. Noble, commenting upon this, says that it is by many considered not only handsome, but in "its season about as good as any." In some soils and situations this is true. We have eaten Clairgeau pears that were buttery, rich, melting. Nevertheless, according to our best pomological authorities, it is, as grown in most places, of poor quality.

A few days ago the President of the Calcutta Chamber of Commerce, addressing a meeting of that body, said that he feared that India, with its ignorant population and crude methods and machinery, could not compete with this country in the production of wheat. From Russia a like opinion reaches us with regard to that country, and for the same reasons. It is not to any superiority of our soil that these two rivals attribute their own poor prospects in the competition, but to the greater intelligence of our farming population, and the greater efficiency of our agricultural implements. It's well to bear this in mind, and to begrudge no effort to increase both.

The ways of the Army worm are not easy to find out. Last week our farm was alive with them, while there were comparatively few in the fields of our neighbors. Now we have comparatively few, while our neighbors' fields are infested. As we write this note, some of our neighbors are picking the worms off of their corn by hand, while others are plowing and digging trenches so as to cut off their retreat or advance into other fields. But really the actual damage thus far wrought, great as it has been, if we may judge from our own observation, has been much exaggerated. It is a rascally ill that brings no good whatever. Our cherries are as abundant this season as ever before. Usually the crop is shared with hundreds of Cat-birds and Robins. This season these friends seem to be feasting upon the Army worms and the cherries, save for the Rosebug, are left to ripen.

Before the incumbency of the present Commissioner of Agriculture it had been, for years, a reproach to the Department that it was merely a seed-store for supplying Congressmen and their friends with choice seeds and plants gratuitously. Gen. Le Duc, breaking through the old-time custom of his Department, distributed the seeds directly to applicants, much to the discontent of not a few members of both Houses of Congress, but especially of those of the House of Representatives. Besides the pleasure of making presents to their friends at the People's expense, these gentlemen had been in the habit of using the government's seeds for electioneering purposes—for the purpose of bribing their constituents to retain them in office. Not unnaturally therefore they resented the innovation in the mode of distributing the largess, and last Thursday it was enacted that the distribution of at least two-thirds of the $80,000 worth of seeds and plants in the gift of the Department of Agriculture must be made through the members of both Houses of Congress, to each of whom a proportionate share was to be assigned. Although we doubt the morality of using these seeds for political purposes, still as our concern is much less with the morality of our legislators than with the interests of our farmers, we shall not be loud in our objections to the recent innovation, if the seeds are distributed in the most efficient manner—placed where they will do the most good, not to the politician, but to the agriculturist.

A telegram from London, of June 14, says that an effort was about to be made to induce the House of Commons to alter the existing regulations regarding the importation of foreign cattle into Great Britain. It will be contended that the condition of the trade neither justifies nor excuses the present restrictions upon it. Moreover, the trustworthiness of the veterinary examinations at the ports of debarkation will be impugned, and a recent case will be cited wherein pleuro-pneumonia was declared to exist among the cattle in Epping Forest, where nine beasts were destroyed, and in which the chief Government Inspector subsequently, after a minute examination of the carcasses, declared that he could find no trace of disease. We heartily wish well to this movement; but we can hardly hope for its success. While it is more than doubtful whether the present restrictions would have been placed upon importations of cattle, under a Liberal Administration, yet, under the circumstances it is hardly likely that the present Liberal Administration will, in this matter, undo the work of its Conservative predecessor. The British farmer is still too much straitened to endure the pressure of competition with unrestricted importations of foreign cattle—or he thinks he is, and the existence among us, here and there in the Atlantic States, of a few scattered cases of pleuro-pneumonia affords him a plausible pretext for exaggerating the risks of contagion to his own herds from free importations of cattle from this side of the Atlantic. For the present, at least, the government is pretty certain to turn a favorable ear to his complaints, and the surest and speediest means by which we can insure unrestricted cattle trade with our trans-Atlantic friends is to extirpate the last traces of pleuro-pneumonia from among our own herds.

Literary Miscellany.

WAITING FOR THE COWS TO COME.

THE farm-house wears a modest mien,
The dormer windows quaint and brown;
And through a tangled web of green
The spring-house roof goes sloping down,
A fragrance on the air sweeps by,
Of new-mown hay, all wet with dew;
And on the barn-roof, thatched with rye,
The pigeons softly light and coo.

The lambs upon the upland play,
The sunset spreads its rose-red glare;
The mountain ranges stretch away
Through dreamy paths of purple air.
Beside the bars, beyond the wood,
Within the mellow twilight gloam,
How oft, a bare-foot boy, I stood,
To wait until the cows came home!

The battle of my life I fought,
Far from the scenes of boyhood's time—
Yet even in my sleep I sought
To clasp a stronger hand than mine!
I heard again the thresher's flail,
And well-remembered sounds of home,
And watched the evening sunlight pale
While waiting for the cows to come.

HOW CLAY WHITTLE'S MANHOOD WAS CROWNED.

M. L. STONE.

ETHEL BRUCE, sat on a low rocker in the recess of the bay windows, apparently in deep thought. A very pretty picture she made, so her brother Hal thought as he passed along the street in company with Clay Whittle. Ivies were creeping above and around her head reaching after the sunlight, while lillies, geraniums, and hyacinths were blooming at her feet.

The gen leman passed on, as also did the hands of the clock, but still Ethel sat in evident study. The room was furnished with cultured taste, and skillful hands kept it looking very luvlling to the family, and their friends. It was library, and sitting room combined. Ethel's parents had always striven to have their home attractive, even if other expenses had to be curtailed very closely.

The mother was an invalid and had been for several weeks, and the willing hands and thoughful heart of mother were sadly missed by the daughter. The rest of the family said "that Ethel took mother's place to them all so well, that for the time they were not great losers," and the mother confined to her room for lack of strength to be elsewhere, rather than from actual pain said "that she was having a rest in mind and body, for Ethel did not neglect anything" and she kept the little mother fresh and dainty, and the room so bright and cheery, that all the family would gather around her in social glee.

Ethel would first notice mother's tired look if they stayed too long, and pleasantly chiding them would drive them off to the sitting room. Clay Whittle used often to come in with Hal to the mother's room, and these little visits were seasons of delight to him. His mother had passed the portals over into the other side. How he missed her room and her counsel, and the time spent over at the Bruces, were choice minutes and great helps to him.

His father was a leading politician, his sister a fashionable woman, while he himself was a law student.

The evening before Clay and Ethel had attended an entertainment together and on passing out from it, she stopped a moment to speak to a friend and Clay was joined by his sister

Clay she asked "why did'nt you bring Eva Drayton this evening."

"I prefer the company I have," he answered.

"Company good enough I dare say, but I like to see a girl with some style in dress. Everything *she* wears is a year old."

"Which of itself is a crime of the first degree in the fashionable world" he answered; joined Ethel and passed on.

So on this the following morning, Ethel was trying to study out some plans for new clothes. Of course she was indignant over the remark, but it was true that all she had, was a year old, but she had felt that they were good enough, until now. She knew too, that all they had to live upon was her father's salary, which might have seemed large to many, but their expenses were correspondingly large, and with mother's sickness and Tom's college bills, or a part of them, somebody had to economize and really deny themselves, and she had felt willing, and even anxious to do her share; but after overhearing the remark of the night before, denying herself had not been so sweet.

She examined the closets to see if there was anything available to be made over, but returned to her low rocker disheartened. Her father came in, and seeing something amiss, asked, "What are your thoughts like, daughter, and what are your wishes? Speak, and if half of the kingdom is desired, it shall be yours!"

"I thought I was queen of the realm, and mistress of all I survey. I desire no more than the home kingdom, with a robe of royal purple."

"Or some other fashionable shade," he said. "Frankly, Ethel, what were you thinking about?"

"I was wondering if there was any surplus money in the family treasury, that I could use for myself," she said.

"I think about forty dollars. Would it help you?"

"Yes, indeed. Just the sum I want."

The father seemed to hesitate. Ethel spoke quickly, "I do not want it, if it is needed elsewhere."

"I'll let you know at tea-time," he said. "Will balance account for the month, and rest assured, you shall have it daughter, if father can spare it," and seated on one knee with her arm twined around his neck, she stroked his manly beard, caressingly.

"We are not rich, Ethel," he said, "but this home is ours, and is a very pleasant, and an attractive one, and I have a family of whom I am both proud and thankful. There is one thing upon which I congratulate myself every week of my life, and it is this—that there are no *unexpected* bills coming in for payment contracted by my family. I know that they never buy without my advice and counsel, *and then order bill sent home.* At the end of the month I come out even, at least. Here is an incident which struck me forcibly, but is only one among the many of my experience. As I passed through the store one day, I saw Mrs Drayton and Eva buying goods. The bill was brought to my desk, copied and 'please remit' added, as is our custom, and placed in an envelope to be handed to parties or mailed. Opportunity for giving it to Mr. Drayton occurred on my way to dinner. He opened it, glanced at the total, and looked very much disturbed."

"Was it large?" asked Ethel.

"Something over an hundred dollars."

"Inside of thirty days will answer?" he asked.

"Yes," I answered and passed on. "The time has expired and no payment yet."

"He is very able to pay it!" exclaimed Ethel.

"Perhaps no more so than your father, Ethel; and several such bills coming in unexpectedly soon seriously embarrass a man who cannot always spare such sums from his business without injury."

At tea-time Mr. Bruce said: "There is just one thing to keep that money from you, and it is Tom's letter just received. He says:

"Father, I have to have ten dollars worth more of books than I have money to cover, and I can not look scarcely decent without a new overcoat. If you remember mine you will agree with me, especially when I tell you it has worn threadbare wondrous fast. Thirty dollars will get one to suit me. Hoping mother is better, and that Ethel and Clay are as friendly as ever, I am as of old, POOR TOM."

"The money is his, father," said Ethel; "and now for mother's tea." As she passed the window she caught a glimpse of Clay and Eva Drayton riding together, and he was driving his sister's span of grays.

"What beauties those horses are," exclaimed Hal; "and now stylish Eva looks. But why are they riding together? Is he taking his sister's advice as soon as this?"

"What do you know about his advisors?" asked Ethel.

"'Little pitchers have big ears,' and the Bruce ears are far too quick for their own good. I stood by the door and heard what she said, and I knew that you heard by the lines around your mouth."

"Well, I cannot have any better to wear, and I am almost glad I cannot, for what I have is good enough," and Ethel entered her mother's room humming a tune.

"I wish I *could* do something," Hal thought; "but my money goes to Tom," and he must not feel that we are sacrificing particulary for him, for he is very sensitive. Mother must not be troubled and father does his best for us all; but Ethel deserves more than she gets, but she looks well in what she has. Confound that Mrs. Stratton anyway!"

"What about the money, Ethel? I'll send Tom enough for his books and you may take the balance," said Mr. Bruce later.

"No, indeed, father! He is away from home and needs it more than I."

"What will you do?" he asked.

"I'll wait until I write my novel," she said, laughing. "Truly, father," she added earnestly, "if I could earn money for my own wants and make it easier for you it would give me great joy."

Hal and his father walked down town that evening and met Eva and Clay. Hal never could keep a secret very well, and he told his father what Mrs. Stratton had said to her brother the evening before.

"I wish I had the money for her," said Mr. Bruce, "but I cannot get it without breaking a rule of ours to which we have always strictly adhered." She says "she will wait until she writes her novel.

"Perhaps it is written," said Hal.

"What do you mean?" asked his father.

"Ethel has a drawer pretty well filled with manuscripts, many of them nicely copied all ready for the press—short stories and longer ones, and bits of poetry, etc."

"Drawer locked?" the father asked.

"No, it is the left hand blind one."

Late that night Mr. Bruce sat up reading his daughter's literary work.

On entering his office next morning the senior member of the firm entrusted him with some important business to go to the city to transact, saying, "It will probably detain you several days." That night he started on his journey and in one side of his valise were a number of Ethel's manuscripts. Her work struck him as remarkably good, but "I am not an unbiased judge," he said of him self.

When his business for the house was well under way, he visited some editorial friends and told his errand.

"Has she ever had anything published?" was asked.

"Not to my knowledge. She was very quiet over her work and told her brother that she feared she never could offer any of her pet pieces for publication, for she felt as if she could not bear a refusal. I am not sure that I am treating her fairly, for she does not dream of these being in my possession."

"I think your daughter has considerable talent In fact some of her pieces are very fine while others we will cut up unmercifully, which will be hard on her feelings, but as good for her as medicine," said the editor after an examination of the manuscript.

He was still to be in the city, and was requested to come in again, which he did, when a check for $100 was handed to him "asking if it would be satisfactory," and also requesting more from the same source.

Business detained Mr. Bruce in the city longer than was anticipated, while the home ones anxiously awaited his return. Mrs. Bruce slowly but surely grew worse and Ethel hovered over her forgetting everything in her anxiety about her.

Clay Whittle made his morning call in the sick room regularly, and just as regularly would ride out with Miss Eva Drayton.

The days came when Mrs Bruce was alarmingly worse, and telegram after telegram was sent to the husband without avail. Hal, Ethel and Clay watched and waited, joined by Tom in their unceasing vigils.

"If only my husband would come!" Mrs. Bruce would say, while the hearts of the others echoed the wish with great earnestness.

Night came on, and Clay said, "If Mr. Bruce is not here at nine o'clock, I will start after him at ten. The wires are cut at a certain point and communication is not to be depended upon," and kneeling at Mrs. Bruce's bedside he said, "I may never see you again my friend on earth: can I not have your blessings ere I go, and consent to my asking Ethel to be my wife. She need not answer now unless she wishes but if she can love me, will you bless us?"

"I know not Ethel's heart, settle it between yourselves my children," and after waiting for Ethel to join them if she would, although she did not, the mother with her hands on the bowed head, pronounced a silent blessing upon him, and an audible amen.

He arose and turned to go, and found Mr. Bruce standing in the doorway.

Days passed and the mother gained strength very slowly. Mr. Bruce gave his daughter the money saying "it was all her own, but nothing more. One evening some company gathered in, and among them Clay and his sister, and they fell to discussing some articles in one of the late monthly periodicals. "I read one" said, Mrs. Stratton, that struck me forcibly. There was so much principle, and heart in it. I'm sure the writer must have a beautiful soul as well as a sensible body. It reminded me very much of my dear mother's ideas of right."

"Was it written by a lady?" asked someone.

"I think so," she answered.

"About such an one as you would choose for me for life's pilgrimage?" asked Clay.

"My ideal for you is not a common one but my dear ambitious brother, I fancy this one is entirely too high for you in your present state."

"Eva is all furs and feathers this winter" said Prof. French. Do not imagine for a moment that while you are illustrious in your profession that she will be a star of greater magnitude in the literary world.

"How about the tableaux you are practicing for, daily? I hear you want them to come off before Lent. There is talk too of Mr. Drayton failing—better hasten them or Eva will not look very angelic or feel so either; I believe she is to personate some such a scene. Some say that much of her father's pecuniary trouble lies in her own and her mother's extravagance."

"Why Prof. French," exclaimed one. "How dare you talk so. Mr. Whittle and Miss Drayton are very intimate, and ride together every day lately.

It takes a long time to prepare for tableaux especially when Mrs. Stratton is commander in chief, but she makes it pleasant, for the grays and coachman are ever ready to serve the young ladies."

"But Eva is afraid of the coachman, and would rather walk than ride with him," said Jennie Miller.

"And the snow is too deep for pedestrians this winter," remarked the professor.

"You are sadly degenerating, Professor French," said Mrs. Stratton. "I'll cease to recommend you as an instructor on the ground of your being a gossip."

"I have often thought that ladies and bachelors are good gossipers—married men never are; but, Clay, I want to congratulate you on being a good horseman. May you hold the reins of law and state as firmly and truly in the future. I understand all about this tableau affair, else I would not have spoken as I have. I have read that article, Mrs. Stratton, and I think it good. It gave me a high opinion of the author. Am sure it never emanated from the brains of a butterfly."

"Read it for us, Professor," said Clay, "if it is not too long."

"Have you read it, Ethel?" asked Professor French.

"No," she answered; "I have not had time or inclination to look at the last number. Mother has taken every moment and absorbed every thought until within a few days, and since then I have slept when I could. Would enjoy hearing you read it," she said.

"You told me once, I believe, that you are not fond of reading, Ethel," said Mrs. Stratton.

She looked up puzzled.

"I think you must have misunderstood Ethel," said Professor French. "She reads a good deal, but not *everything*. She was one of my pupils that adopted a course of reading—"

"And still adheres to it," she answered quietly.

The Professor and Ethel had long been warm friends, and Clay was really afraid sometimes it might prove to be something more. He blessed him in his heart to-night for speaking of the tableaux. He felt that in some way Ethel did not favor him altogether, and it flashed through his mind that perhaps she knew nothing about them as she had been confined closely at home and nothing had been said of them in her presence or of the absence of his brother-in-law, which made it necessary for him to stay at his sister's house, and thus he was subject in many ways to her orders.

Her will was a strong one, and it was often easier to acquiese than to oppose her. He felt sometimes that she had planned the tableaux on purpose to bring him in Eva's company. She was wary enough not to pretend to do so.

But for the reading, Professor French's voice was a wondrous clear one, and words dropping from his lips always sounded musically. A better one could not have been chosen to do an article justice.

Ethel drew an ottoman up to her father's side and sat down. He held one of her hands firmly in his, while the reading progressed. She never dreamed of hearing her own production. When she sat down, the father felt her tremble and saw the lips pale while she listened breathlessly to every word.

Just as it was finished Hal rising said "Please excuse sister. Mother sent me after her sometime ago," and slipping her arm through his, bore her away but not far before she sank fainting at his side. He carried her to her own room and when she revived a little he said, "Praise enough to turn your head, and no one but father and your brother knows you deserve it! Shall I tell them?"

"No indeed not for the world."

"Shall I ask them to excuse you for the rest of the evening. It is most over, and father can attend to them."

"Yes you dear thoughtful brother, I need rest, she answered. She did go down to the parlor again however and heard Prof. French say "that he accused one of his pupils for writing the article whereupon the rest laughed at his conceit.

Clay noticed him watching Ethel, and promised himself that not another day should pass without knowing if Ethel loved him. If she did not, he felt the future would be a weary waste—that his would be a crippled manhood and a one sided life. Ethel was the one thing he needed to make his life a perfect unit and develop his character into what God created him to be.

His morning call was on Ethel and he told her of his whole heart's love, and asked her if she could be his wife.

"Some things are now explained which I did not before understand. Your sister does not like me, but I hope she will when she knows me better, and I am sure my heart's love is yours."

"Thank God" he said kissing her, "My manhood is crowned with the purest and best of His gifts—love, and I can go into life ready for its battle, knowing there is a true heart by the side of mine to strengthen me."

Mr. Bruce joined them and said "Clay do you think wifely duties and literary work will assimilate well enough to make you happy?"

"I am sure that she will do me good and not evil all the days of her life, and that the heart of her husband shall safely trust in her. Was it true that one of Prof French's pupils was the author of that excellent article?"

"Be warned in time" said Mr. Bruce "and with this I bid you God speed and good morning,'" and we will do the same.

ACCORDING to George Francis Train, the late Baron Rothschild had the following maxims framed on his bank walls:

Attend carefully to details of your business!
Be prompt in all things!
Consider well, then decide positively!
Dare to do right! Fear to do wrong!
Endure trials patiently!
Fight life's battle bravely, manfully!
Get not into the society of the vicious!
Hold integrity sacred!
Injure not another's reputation or business!
Join hands only with the virtuous!
Keep your mind from evil thoughts!
Lie not for any consideration!
Make few acquaintances!
Never try to appear what you are not!
Observe good manners!
Pay your debts promptly!
Question not the veracity of a friend!
Respect the counsel of your parents!
Sacrifice money rather than principle!
Use your leisure time for improvement!
Venture not upon the threshold of a wrong!
Watch carefully over your passions!
'X'nd to every one a kindly salutation!
Yield not to discouragement!
Zealously labor for the right!
And success is certain!

THE HUMAN FIGURE.—The proportions of the human figure are six times the length of the feet, whether the form is slender or plump, the rule holds good, any deviation from it is a department from the highest beauty in proportion.

The Greeks make all their statues according to this rule. The face, from the highest point of the forehead, where the hair begins, to the chin is one tenth of the whole stature. The hand, from the wrist to the middle finger is the same. From the top of the chest to the highest point of the forehead, is a seventh. If the face, from the roots of the chin, be divided into three equal parts, the first division determines the place where the eyebrows meet, and the second the nostrils. The hight, from the feet to the top of the head, is the distance from the extremity of the fingers when the arms are extended.

THE VESUVIUS RAILWAY.—Tourists are now able to visit the crater of Vesuvius without the labor of climbing, the railway being complete. The depot is situated at a hight of 810 meters above the Observatory. A restaurant and cafe capable of accommodating 100 people is atached to the depot The angle of inclination of this railroad attains at various points 40°, 50° and 63°. There are two passenger cars, the Vesuvius an Ætna, accommodating 12 perso[illegible]. The tem adopted in the construction of the railway of American invention, and [illegible] prismatic system."

BRIC-A-BRAC.

A GOOD COOK.

Although, dear maid, thy beauty rare
Would tempt a stoic soul to woo thee,
'Tis not alone that thou art fair
That warms my loyal heart unto thee.

The brightness of thine azure eye,
The honeyed sweetness of thy kisses,
At time's command, alas! will fly,
Mute in the sight of other blisses.

But when thy dear eyes dim have grown,
Thy golden locks with silver sprinkled,
When age hath dulled thy voice's tone,
And care that snowy brow hath wrinkled.

Still love for thee my heart shall fill;
The rose smells not less sweet for crumpling,
And age shall find thee able still
To make me steak and kidney dumplings.

INNOCENT SIMPLICITY.

One of the assistants of the Postoffice happened to be standing at one of the delivery windows, when a buxom damsel of about 18 summers, hailing from Berrytown, stepped up and asked if stamps were sold there. Upon being told that they were, she said she wanted to buy $1 worth.

One dollar's worth," repeated the smiling assistant; "of what denomination?"

The damsel showed symptoms of embarrassment, and hesitated to reply. She twirled her shawl fringe nervously, cast her eyes about to see if any one was near, moved a little closer to the window, and finally asked him in a timorous voice:

"Do you hef to write it down?"

"By no means," answered the courteous assistant; "that is not necessary; but I presume you have some preference as to the denomination?"

"Ah—well—yes," replied the stranger, her face turning scarlet, "I hev some. I generally go to the 'Piscopal Methodist myself; but the feller I'm buying the stamps for, he's a Universal Orthodox.—Ithaca Journal.

THE BAKER'S DAUGHTER.

"She walks in beauty like the night
Of cloudless climes and starry skies,"
And lovely though she is to sight,
She is not lovelier than her pies.

The roses of Damascus blow
Their scents to far Arabian sands,
But sweeter is the kneaded dough
That steals the odor of her hands.

Nor sated Turk, nor gouty lord,
Nor pampered prince did e'er partake
Of dainty dish that could afford
Such rapture as her simple cake.

I crave not fame, nor wealth, nor power;
I only wish that I could be
A pound or two of some prime flour,
And she were gently kneading me.
—Andrews' Bazar.

A CORPULENT old lady was at the London Bridge station going down to Sussex. She had a big bag and a small one, and was bustling through the gate to reach the train, when the ticket collector called out, "Ticket, ma'am! Can't pass here till I see your ticket." "I hain't time," she replied. "Can't pass, can't pass!" "I will pass." "Can't ma'am; the rules are very strict." "You will make me lose the train," she shouted. "Plenty of time, ma'am. Train does not go for fifteen minutes yet." She backed down, put down her bags, hustled the contents in a confused mass in search of the ticket without success, and when ten minutes had slipped by she said, "What ticket do you want?" "Your railway ticket, of course," he replied. "Then why didn't you say railway ticket, sir. I had that in my hand. Don't you know there are a hundred different kinds of tickets, sir?"

"Come, wife," said Will, "I pray you devote
Just half a minute to mend this coat,
Which a nail has chanced to rend."
"'Tis ten o'clock," said his drowsy mate:
"I know," said Will, "It is rather late,
But it's never too late too mend."

AN innocent-looking little tot, with a big bundle addressed in a full, round hand to a respectable resident of Tenth Street, San Francisco, plucked a flashy man by the coat-tail a few days ago and asked: "Hi, sir, can you tell me where I can find this man?" The bundle was marked, "Collect bal. on mdse., $1." The flashy man, after surveying the bundle and making a mental estimate of its value, replied: "Why, certainly, that's me; that's my name, sonny. It's meant for me. I live right over there." "But there's a dollar to collect." "To be sure. Here are two halves. Now run back." The flashy man turned the corner, jumped on a car, got out in a secluded quarter and opened the package. It contained a faded old sheep's wool door-mat, wrapped carefully around some hay inclosed in grain sacking, the whole done up with business-like precision in fresh wrapping paper, and tied with the precision of a dry-goods clerk.

A GOOD STORY OF JACKSON.—General Jackson was once visiting a Kentucky town where, among the gentlemen presented to him, was Major Lewis who desired to impress Jackson and his admirers with his own independence. Taking a dignified attitude, he said, "Well, General, I have all my life been voting against you." Jackson courteously bowed to him and said, good humoredly, "Well, Major Lewis, I have all my life been fighting the battles of my country in order that you might enjoy that privilege."

A DULL-LOOKING young man, unaccustomed to traveling, entered the cabin of one of our best steamers, and mistaking a tall mirror for a doorway, thus addressed the reflection, thinking it was a stranger: "Say, mister, when does this boat start?" Not receiving any answer, although he repeated his inquiry two or three times, he yelled out, "Go to thunder, you flat-nosed, shock-headed ool! You don't know anything, anyhow!"

For Women.

CONDUCTED BY MISS RAY CLARK.

PLEASANT WORDS.

NO MATTER how the world may go,
How dark its shadows be,
Or whether June's sweet roses blow
To gladden you and me,
There always is a time of day
Our voices may be heard,
When we can pause beside the way
To say a pleasant word.

The little barefoot girl we meet
The maid whose love was vain,
The legless boy upon the street,
The blind man with his cane.
When they receive the humble mite,
Will feel their bosoms stirred,
If, with the coin of value light,
We pass a pleasant word.

And hearts that now with sorrow ache
Beneath some heavy blow,
Will from the shadows rise and break
The spell of all their woe.
And feel that life hath sunshine new,
And songs as sweet as birds',
If we but be humane and true,
And give them pleasant words.

BYE-LO-LAND.

BABY is going to Bye-lo-land,
Going to see the sights so grand;
Out of the sky the wee stars peep,
Watching to see her fast asleep.
Swing so,
Bye-lo!
Over the hills to Bye-lo-land.

Oh, the bright dreams in Bye-lo-land,
All by the loving angels planned!
Soft little lashes downward close,
Just like the petals of a rose.
Swing so,
Bye-lo!
Prettiest eyes in Bye-lo-land!

Sweet is the way to Bye-lo-land,
Guided by mother's gentle hand.
Little lambs now in the fold,
Little birds nestle from the cold.
Swing so,
Bye-lo!
Baby is safe in Bye-lo-land!

GENTLEMEN FRIENDS.

BY MARGARET B. HARVEY.

AS REGARDS this subject, we find two distinct schools of opinion. Carried to an extreme, one teaches that the desire of gaining the admiration of gentlemen should be the one end and aim of a young lady's existence. The other lifts its hands in holy horror at any but the most casual acquaintance with the opposite sex, and declares that friendship between man and woman is, in the nature of things, impossible.

Extremes, as we have been told over and over again, are to be avoided. But if I were compelled to choose between the two pointed out above, I unhesitatingly aver that I would prefer the first. There is more sense in it, for it recognizes the existence of that holy God-given instinct, which leads to beauty and love and happiness. No matter if it be recognized only in a blind, ignorant way—the recognition is the great fact. The other is a compound of prudery, self-conceit and unutterable coarseness; cavilling at the way our Creator made us. No matter if it be veiled under the semblance of virtue—the evil lurks in it, nevertheless. The former says that men and women were intended to live together as members in one great family, the latter that men and women are bent on each other's destruction, and cannot be trusted together.

Emphatically I say it; I do believe in gentlemen friends. Not lovers, precisely, though I believe in them, too—a friend may develope into a lover. Perhaps the good, old-fashioned, much-abused word *beaux* will do. I believe, then, in beaux, gentlemen with whom a girl can associate as freely as she would with her brothers, but who, being of no kin to her, strange to say, would more readily do her a favor, and who have not the vanity to suppose she is pining away for them.

Any girl who has missed companionship such as this, has missed one of the sweetest pleasures of youth. As well might a bud not blossom, a bird not sing.

Would nine girls out of ten take half the pains and pride that they do now, in their manners, dress, and accomplishments, if they thought no man would ever see them? I trow not. I wouldn't myself.

I know what one class of social reformers will say to all this. They will talk a great deal about "safety," and so forth, in which respect they are scarce one whit ahead of old conservatists, whose cry is "propriety"—and their little advance is in the wrong direction, for it is evident that their thoughts on the subject are not quite so pure. As to "safety," "propriety," and the whole category, I assert just this. Young women of ordinary respectability, who associate with young men of about the same standing, are very much more likely to be pure in mind and heart than those who associate with young women alone. Girls, when they get together, at times, talk of things of which they would never dream, if in the society of gentlemen—and 'tis the same with men.

The conversation of man and women, when together, must necessarily be of matters of interest to both—and so they are gradually led away from thinking of themselves, and of petty, idle, doubtful concerns. Nothing, I believe, like this so effectually puts a restraint upon the tongues of both.

"Flirting." Well, that depends upon what you mean by the word. If you mean conscious seeking for admiration, pretended love making, attracting the notice of strangers in the street, in short, a heartless desire for the mere gratification of vanity: I say, flirting is highly reprehensible. But if you mean an earnest desire to give pleasure a little innocent railing and harmless chatter, a graceful, charming courtesy, flirting is as proper and as healthful as laughing. Let the heart be right, and the outward conduct will, sooner or later, regulate itself.

The world moves. Women do to-day in all guilelessness, what they couldn't have done fifty years ago without laying themselves open to severe criticisms. We may gain just an inkling of the ancient state of affairs, by reading a little book of essays, written by a lady of the old school. In speaking of Mrs. Emma Willard and her physiological researches, the writer states most *naively* that Mrs. Willard hesitated to make her discovery (Circulation by Respiration) public, for fear she could not do so, *without the violation of feminine propriety!* What must be thought of a state of society in which such a sentence could be written? Or rather, in which such a consideration could ever have had weight?

If we believe our grandmothers and old aunts, the time really was when women did think in just the above strain, as a consequence of the false training that they received. In those days it was not considered proper for a lady to go into a gentleman's office, or to write him a letter even on business. Woman's competing with man in the everyday affairs of life has arranged all that, and women are as good as ever they were. In fact, people are beginning to remember that slips from virtue were more common in other days than they are now; and to learn that hedging in women, so far from protecting them, is, in fact, insulting all men by implying that they are scoundrels.

Of this be sure—whatever is not wrong is right. Furthermore, "Evil be to him that evil thinks." A young man and a young woman, who are good and pure in heart and life, can safely be trusted with perfect liberty; a young man and a young woman who are not so, can defy all hindrances.

There are, however, restraints to be respected, in the association of young gentlemen and ladies. But they should not be like prison walls, frowning and horribly suggestive; rather should they be like the light wire fence in the park, invisible until touched.

Keep every man at a certain distance,—not in any manner of aggression, but rather by a negative influence. Your own delicacy ought to be the best guide here; and no one can teach you. Only, be sure that you are sincere, that there is no pretension about you, and it is safe to say that you will get as much respect as you deserve.

Let no man touch you, except when you shake hands. A real gentleman may fasten your cloak in such a way that you will scarcely know it. He may admire an article of dress without examining it. If he wishes to look at a piece of jewelry, take it off and hand it to him. Put on your overshoes yourself. If any young man should forget himself once, say nothing, but draw yourself quietly away, he won't do so the second time. If he does, still say nothing, but leave the room.

In fact, notice nothing annoying. Your very absence of remark will express your displeasure far more effectually than any words. There's always a way of retreat; the door. You won't be troubled very often,—if you are, you will most likely bring it on yourself.

We hear various cautions expressed regarding kissing, embracing, and the like. I can scarce understand why we should. It passes my comprehension how, under ordinary circumstances, and concerning parties who are not lovers, any such counsel should be necessary. If you are fully protected by your own self-respect, no true gentleman will ever advance far enough to think of kissing you.

I have used the term "true gentleman." This brings me to consider who your friends ought to be. Certainly, not anybody and everybody; not any chance acquaintances, picked up here and there. No man ought to have the privilege of visiting at your house, who is not known to be respectable, and who has not been introduced to you in a proper manner by some one in whom you have confidence. If you exercise care in forming acquaintances, you won't have to be very anxious about their behavior afterwards.

Yes, a better day is coming, a day of simplicity, truth and purity, a day held up as one of the ideals towards which the Christian Church is to advance, in which men and women shall dwell together as "brethren and sisters." To those who are worthy, the day has already dawned.

NEW WORK FOR WOMEN.

THE Cincinnati Commercial publishes an interesting interview with a lady dentist of that city, showing the attractions the art of tooth plugging has for the ladies. It says:

For some weeks the passers-by on Seventh Street have observed on the block opposite Shilluto's a sign that reads, "Adelia Riley, Dentist." Drifting in to see Miss Riley one finds a pleasant, graceful young lady, with a story to tell you about the way she became a dentist. Miss Riley is from Hamilton, Ohio, where she first studied her profession under Dr. Howells. After finishing a school course Miss Riley went to her home in Hamilton, and, like Clara Vere de Vere, felt time hang heavy on her hands. There was absolutely nothing for her that was worth doing.

"I think it is the worst thing in the world for a girl to have nothing to do," remarked Miss Riley, "and I began to grow very uneasy over it. The most that I attempted to do was to read novels." And entertaining as this may be the young lady found she could hardly make it a business for life.

One day her father asked her if she would not like to study dentistry. She caught at the idea eagerly.

"I went into it with all manner of enthusiasm," said Miss Riley, "and I think it is beautiful work."

One could not but think of the horrible clamps and instruments of torture, but evidently these had no part in the young ladies visions.

After studying at Hamilton under Dr. Howard, she came to the Ohio Dental College, on College street, and took the course, setting up herself as a professional dentist only last month. The pleasant parlor, with its bay window, its book-case, writing table and easy chairs, is more suggestive of a lady's room than of an office, save for the great dental chair that tells its own story.

"Do you find that you have strength to pull teeth?"

"Yes, if necessary," she replied, "but really it is very seldom that it is necessary. Dental science has discovered so many ways that are better, and we restore the imperfect tooth rather than extract it."

Miss Riley spoke with appreciation of the kindness of experienced dentists who are located in that vicinity to her, and that in any case of indecision or of unusual intricacy she could turn to them for any counsel and aid. Next year Miss Riley intends to enter upon a thorough course; not with a view of relinquishing dentistry as a profession, but of perfecting it. She believes the general state of the system so closely affects all dental operations that an understanding of it is essential to the best success in her chosen profession in which she is an enthusiast.

SAD MEMORIES.

MARGUERITE'S chapter of experience awakened many sad recollections. Her kindness to one she thought so thriftless is a gentle reminder of the words of our great exemplar, "In as much as ye have done it unto one of the least of these, ye have done it unto me." Doubtless the little one will remember it through all coming years, when necessitated to take an active part in life's labor. Perhaps when weary with the burden, sweet memories of childhood will be presented to her, reminding her of this one kind Christian friend who was ever willing and ready to minister to the wants which even her mother's love could not supply, because she was not able to sufficiently comprehend her needs. Bodily wants are not all that is needed in childhood. Many little ones who never knew a tender mother's loving care hunger and long for "only a kind word now and then." They are seemingly starving for kindness. Marguerite was fortunate in having reliable help to leave in charge of her family, many mothers requiring rest are deprived of it from this one cause.

Mothers and children often need a word of encouragement and a helping hand. Is it not best for us to improve every opportunity to relieve?

CONTRIBUTOR.

FASHION NOTES.

SURAH is only a soft twilled silk.

Puffs in the arm holes will be revived.

Jet is more fashionable than ever this season.

All fashionable coiffures are worn low or half low.

All spotted and polka dotted goods will be much worn.

Shoulder kerchiefs of large size will be very fashionable.

A glint of red appears on almost every toilet that is not mourning.

Little elbow capes of lace, chenille and jet make the most stylish summer mantles.

No matter how short the sleeves are, the gloves must be long enough to cover the arm.

Low shoes will be worn a great deal this summer to show the colors and embroideries on stockings.

The puffs on the tight sleeves are said to be more comfortable in warm weather. There ought to be some compensation for their ugliness.

Hooks and eyes, in plain and colored steel have been introduced as substitutes for buttons.

The loops of ribbon used to trim grenadine gowns are of double-faced and watered and satin ribbon, and are sewed perfectly flat on the dress.

The Princess sacque, with a Spanish flounce at the bottom, continues to be the favorite form of dress for little girls.

Gold lace and colored lace is used for millinery purposes, for trimming parasols, fans and rich brocade and velvet dresses.

The Claudent scarf, of the popular shape that is rounded at the throat, is made up this season in the twilled Surah silk in checks or in plain colors.

Instead of woolen breakfast shawls there are now large quantities of India foulard, in bright colors and gay patterns, edged with Languedoc and Raguss laces, put on slightly fulled, not plaited.

Purple and yellow flowers are in vogue. The favorite purple ones are the heliotrope, lilacs, asters and large pansies: while the marigolds, artemisias and soft roses without foliage are the popular yellow ones.

Mantles made of lengthwise plaitings are among the new devices for keeping one warm in July. They are lined and weighted by gimp and jet ornaments, which keep the plaits in place.

Painted wall-flowers, mingled with artificial crape flowers, with garnet beads in place of pistils, and painted aquatic plants and insects, are among the dress decorations seen by Don Juan of the Parisian.

Large hats with irregular, turned-up brims are elaborately trimmed with ostrich plumes, flowers, gold braids and gold ornaments, and used for carriage drives, archery, garden and lawn parties, or on all occasions when dressy toilets are admissible. A pretty idea for a garden hat is to cover a large frame with puffed tulle and trimmed with a wreath of yellow mustard or cowslips. Country hats are of broad beaded leghorn, trimmed with a scarf of tulle, or of coarse straw finished with a wreath of daisies and a bow of black velvet, the brim faced with black velvet. These are useful but heavy.

HINTS.

The latest fashion of engraving initials on a spoon-handle is to half cover it with flowers.

To Clean Straw Hats.—Rub the soiled straw with a cut lemon, and wash off the juice with water. Stiffen with gum water.

To Clean Black Cashmere.—Wash in hot suds with a little borax in the water; rinse in bluing water—very blue—and iron while damp. It will look equal to new.

Sick-headache can often be greatly relieved, and sometimes entirely cured, by the application of a mustard plaster at the base of the neck. The plaster should not be kept on more than a quarter of an hour.

A celebrated physician says: "Babies of six months may have beef tea or mutton broth once a day; at ten or twelve months old, they may have a piece of bread or of rare beefsteak to suck. This with bread and milk, oatmeal porridge, or boiled rice and milk, is the best diet for a baby under two years old."

Industrial Societies.

QUEEN'S COUNTY (L. I.) FAIR.

The Mineola L. I. Fair, to which we paid a flying visit last Thursday (first day), is always well conducted. Object as we may to the consideration which is always given to the speed ring, the course is always in fine condition and the accommodations ample for man and beast. We were glad to see many of our farmers carefully examining the agricultural implements which were displayed by some of our first implement firms. The Spring exhibition of this society, however, makes flowers and fruits its chief attractions. The flowers were tastefully arranged and displayed in pleasing variety. The rage for new Coleus was well shown in the many remarkable seedling strains presented. While we admired them all, the thought occurred as we looked at a fine specimen of Verschateltii that that was at least the peer of any, though hundreds of the oddest markings and colors were shown in the new sorts. The heat and drought of the season cut short the strawberry display, which is usually at this fair a prominent feature. But visitors were all the better enabled to learn what they could not in more favorable springs; viz., which kinds of berries will best withstand both heat and drought. Of over 100 varieties we noticed that Golden Defiance was large and fine; Champion, fair; Sharpless, excellent; Seneca Queen, fair; Miner's Prolific, very good, retaining its bright color; Pioneer, fair; Glossy Cone, fine; Black Defiance, very good; Cumberland Triumph, excellent; Charles Downing, fair only.

But there were four baskets of a bright red, large, handsome berry that all admired more than any other. It was marked "Parry." As the name was new to us we inquired as to its origin of the exhibitor. "I gave the name myself," he replied. "A friend who gave me a few plants five years ago said that they came from Mr. Parry, and so I gave them that name. I have found them the most profitable of any berry I can raise on account of their extreme lateness and their general excellence."

Now, these berries were examined by several experienced and well-known small-fruit growers, and all agreed that they were distinct from any variety they had ever seen. The four baskets easily took the first premium, though among 125 competitors. Mr. Geo. W. Callow, of Jamaica, L. I., is the gentleman who exhibited them. We do not know that he has plants for sale, or that he would sell them if he had. We make these notes in the hopes that the variety will be traced to its origin and its value ascertained for different soils and places. We shall, at least, test it at the Rural Grounds—Mr. Callow having promised to send us a few plants.

We desire to make one other note respecting the Mineola Fair, as a suggestion to fair managers in general. It is that the popularity of the fairs of this association are due not only to good management in general, but in particular to the ample provisions made to supply refreshments in the way of ice-cream, cakes, fruits, ice-water, lemonade, coffee, etc., all served in the tidiest manner, of first-rate quality and at the same, or even a less price than such things are furnished at respectable restaurants.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN THOUGHTS FROM "EVERY-DAY HOUSE."

ANNIE L. JACK.

The hot weather came suddenly upon us, and the thermometer has been up among the nineties. There was no Spring this season, unless it may be a *spring* from Winter into Summer, for we no sooner saw the violets come and go, than the roses were budded. The bright dandelion that generally stays by us for a week, dotting the meadows with its cheery, homely beauty, seemed to suddenly go to seed, and we felt in sympathy with our three-year-old baby who would not be convinced that his yellow pets had passed away, as he threw down the puffy seed balls his wiser sister was industriously blowing, and exclaimed impatiently: "They a'in't dandelions I tell you," and could not understand the change from flower to fruition, thus exemplified. How strange and perversely observant children are with now a trait of character from one parent, then some characteristic of the other, and how often some individuality untraceable to either. So little three-year-old persists in calling all the black or brown chickens "birds," while allowing that the white ones, that resemble their mother in color, are "chickens," and he seems to think they have no right to the same amount of food and respect, till I have sometimes thought he could not be a better judge of color if he had been educated at West Point.

I hope all the Rural readers who are land culturists have a bed of asparagus. It is such a treat after the winter vegetables. There are many ways of cooking it; but even if boiled, just like potatoes, and a little butter added, it is very palatable—if there is not time for more elaborate methods. It is supposed to possess many curative qualities; but physicians assert its chief virtue is in the albumen it contains, and say that even the drunkard's impoverished system may be recruited if the alcohol is withdrawn and raw eggs and asparagus substituted as articles of diet. I think I have remarked before that I do not consider that, as country people, we sufficiently value eggs for table use when we know that, pound for pound, they are more nutritious than beef. A dozen may be considered equivalent to two pounds of beef, as the shell is less in proportion than the bone of beef, while the percentage of water is about the same in each—75 per cent. The white of an egg, weighing 600 grains, is chiefly albumen, and in its chemical properties resembles the fibrine of beef or gluten of grain. The yelk weighs 300 grains, and is composed of one-third albumen and two-thirds oil, resembling meat as food in having fat mixed in with its albumen or fibrine. Simple boiled eggs are the very best diet for children, after milk, and when as cheap as they are at this season of the year, they form quite an important item of domestic economy.

DISH WASHING—INSECTS.

After reading "Marguerite's" letter on the science of dish-washing, the subject started a train of thought to my mind, and still holding the Rural, idly in my lap, I thought, can it be possible that dish washing can be elevated to one of the fine arts; that all the disagreeableness of this task lies in our own imagination? I was just reveling in a delightful dream on the beauties of this cleanly art, when a cry from babyland startled me, and down I came from those airy visions with a dull "thud" to the realities of earth once more, where I found a pair of bright, black eyes looking at me from the crib, as swimming in tears they seemed to reproach me for daring to forget, even for a moment, that I was not of the "earth's, earthy." As soon as peace was restored, I took my pen to give some of the Rural sisters, who may be situated like myself, a sketch of this dish-washing art, under many difficulties. After breakfast, I put away all eatables, and pile up the dishes and then take the young "lord of the manor," and try to persuade him into the land of dreams. About the time I have succeeded and laid him away very gently in his crib, some miserable dog will come by the fence barking for dear life, or some other noise awakes the baby, and after trying in vain to get him asleep again, I feel so chagrined and tired that I could cry.

By this time the dish-water is cold the fire gone out and baby just trying himself to help the work along. By dint of giving him all the tinware to pound and singing to him at the top of my voice, I at last get the dishes washed, but I cannot say that I admire the art followed under such difficulties. I have neither a well nor cistern, and as I have to carry water from my neighbor's—about a furlong from my house—I am as sparing of it as I consistently can be. I never use soap on dishes, as I cannot bear the slippery feeling it gives them.

To free a room of bed-bugs, touch all you can with a feather duster dipped in carbolic acid, remove all clothing and then fumigate the room and bedding with brimstone, which can be done, by putting some hot coals on a pan and throwing on the brimstone. Close up the room tightly and in 24 hours the bugs will have vanished. If you are troubled with ants in the pantry, place fresh tansy leaves around, here and there.

Catarrh Snuff.

Goldenseal, 10 grains; gum myrrh, 6 grains; sulphate zinc 10 grains; blue stone 6 grains. Powder fine and snuff in the nostrils three or four times daily, according to severity of attack. Mrs. W. J. Galpin.

Knitting Yarn, Convenient Boxes and Cake Chests.

I think the New York Mills' knitting cotton would suit Mrs. Mary Wager-Fisher. I have used the unbleached and the white for several years, and have always found it soft, very smooth and as durable as home-prepared. Our merchants now offer it of various colors. I cannot speak of the durability of the colored; but it looks nice. It comes in half-pound bunches, costing 35 cents each, at retail.

When our farm-house was built it was not customary to provide many closets or cupboards, and ours, though roomy, had only one of each. Being bothered for places to keep patterns, I one day thought I might utilize some of the cheese-boxes in the wood-house chamber; and to improve the looks of the first I cut a piece of old ticking three inches deeper than the box, and long enough to go around it, and joining the ends drew a cord through the edges; then, placing it round the box, I tied one under it, the other on the inside. This was merely to protect the cover, which I made in the same way of some firm, smooth cloth. In fact an old camlet cloak furnished that. I then placed a quantity of corn husks on top of the cover with some cotton from an old quilt over them, and a piece of the brown cloth over all, letting it extend to the inside.

By using small tacks I succeeded in securing it, although the wood was thin. For a finish to the edge I cut a strip as deep as the rim, notched the edges, laid it in box plaits and sewed it fast, and, lo! I had a much needed receptacle and a convenient low seat for my chamber. Another I painted of the color of the wood-work of another room, and cushioned the top, covering it with cloth to correspond. I like the last the better, as the cloth on the edge wears out too soon.

A Cake Chest.

I had long used jars, but found them inconvenient because crumbs from one loaf would adhere to another, and if frosted it would surely be crumbled off on the edges. I could find only small chests in the tin shops, and I wanted one large enough to contain a batch of cookies and several loaves of cake; so I took an old boiler to my tinner and had him make a tray with a strong handle at each end. This is placed far enough from the top to admit cakes as thick as I ever bake, and leaves the lower portion just right for two heaping pans of cookies or fried cakes. He added hinges to the cover. I painted it outside and inside except the tray. It cost only eighty cents and is entirely satisfactory.

Oswego Co., N. Y. Faith Ford.

DOMESTIC RECIPES.

Beef-steak Cakes.

One and one-half cup of sugar, one cup of butter, one cup of sweet milk, three eggs, two teaspoonfuls of cream-of-tartar, one teaspoonful of soda, three and one-fourth cups of flour. Divide equally: To one-half add one-half cup of chopped raisins, cinnamon and cloves to taste. This makes four round tins. Put together in alternate layers of dark and light. One egg for icing to put between layers.

Dried Apple Cake.

Soak two cups of dried apples over-night. Chop fine and boil in two cups of molasses until soft. Drain off the molasses, add to it, one cup of butter, two eggs, one cup of sour milk, two teaspoons of saleratus, four cups of flour, spices of all kinds. Add the apples last.

Economical Jelly Cake.

One egg, one cup of sugar, one tablespoon melted butter, one-fourth cup of sweet milk, one teaspoon cream-of-tartar, one teaspoon of saleratus, one and one-half cup of flour.

Surprise Cake.

One egg, one cup of sugar, (rounded), one-half cup of butter, one cup of sweet milk, one teaspoon saleratus, two teaspoons cream-of-tartar, two and a half cups of flour, two teaspoons lemon extract.

Molasses Cake.

Two eggs, one cup of sugar, one cup of molasses, one-half cup of butter, two teaspoons of saleratus, dissolved in one cup of boiling water, spice, three cups flour. Rose Bud.

Flies on Gilt Frames.

After house cleaning this spring I applied onion water to all of my picture frames. This is, I believe, a sure preventive against flies injuring them. Boil three onions in a pint of water; strain and use when cold. It in no way harms the gilding. Mrs. G. L. A.

To Keep Eggs.

I have kept eggs from June to Christmas by greasing each with a little melted lard and packing, small end down, in a barrel of wheat bran. A. L.

Wind Mills.

Halladay Standard.

VICTORIOUS AT
Phila., 1876—Paris, 1878
25 Years in Use.
GUARANTEED SUPERIOR
To any other Windmill Made.
17 SIZES—1 MAN TO 45 HORSE POWE
Adopted by the leading R. R. Co.'s and by the U. S. Govt. at Forts and Garrisons.
$3,500,000 worth now in Use.
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MANUFACTURERS OF THE

Thousands in Use! Runs in a Light Wind.

IRON TURBINE WIND ENGINES
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Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merit. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.
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IMPROVED CALIFORNIA WIND MILL.

Simple, Strong, Durable. Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers. CLARK & CO., Somanauk, Ill.

THE WATERTOWN Wind Mill.
Send for Descriptive Circulars to
H. H. Babcock & Sons.
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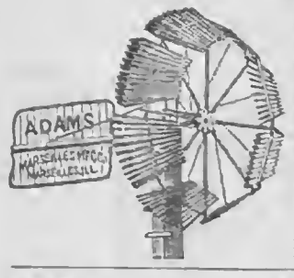
I. X. L. WIND MILL.

For Simplicity, Durability and Power *this mill has no equal.* It runs equally well in light or heavy winds. Ice and sleet do not effect it. Works well under all circumstances; never gets out of order. We warrant all our mills. Circulars and descriptive catalogues sent free on application to the Phelps & Bigelow Wind Mill Co., Kalamazoo, Mich.



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AUTOMATIC
Wind Mill.
New ten-foot diameter of wheel. One-horse power; elegant and durable; made expressly for raising water for farm and house uses. Price $50.00. Any person can set them up.
KEWANEE MF'G CO.
35 Broadway, N. Y.

The request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness.

News of the Week.

MISCELLANEOUS.

Monday, June 21.

In 1874 the Commissioners of Emigration gave the various trunk lines of railroads permission to employ agents in the rotunda at Castle Garden to sell tickets to immigrants. The companies then employed agents in foreign ports to sell tickets to emigrants for their respective lines, and they also sold orders for tickets on the agents at Castle Garden. Under this system the immigrants are taken, to a large extent, out of the hands of the commissioners here, and there have been numerous complaints of overcharging on the part of the foreign agents. Another evil is the fact that a large number of the employes at Castle Garden have been detected in receiving commissions from railroad companies, boarding-housekeepers, etc., for such business as the employes could throw in their way. The commissioners have notified all employes that any one caught receiving commissions in the future would be at once discharged. ....A white woman named Stevens, living a mile from Pine Bluff, Ark., was outraged and afterward murdered the 16th inst. The circumstances led to the arrest of John Crier and one Jackson (negroes) and G. A. Dalton and Robert Connolly (whites). Connolly and Mrs Stevens have been living together ....Samuel J. Tilden has sent a formal letter of withdrawal as a possible Democratic nominee for the Presidency to the New York delegation at Cincinnati. The convention will open to-morrow, Tuesday, the 22d, instead of a week ago, as was erroneously announced in our last........Gen. Buell reports from Fort Wingate that on the 17th he had a council with the head chiefs and many sub chiefs and old men of the Navajo tribe. They acknowledged that some of their young men had been behaving badly, but denied having had a council with the Utes recently. No Indian depredations have been reported from Southern New Mexico lately. Victoria's band is recuperating in Chihuahua........The President contemplates taking a trip to California and Oregon in September........Jacob Vogus, one of the wealthiest farmers of Kokowo, Indiana, was shot by his son James on last Friday and died from the effects of the wound Sunday evening. The shooting took place in a saloon, and those who witnessed the affair pronounce it the most deliberate case of murder imaginable. The trouble arose from a family difficulty. The parricide is the youngest of a large family of boys, and is unmarried. Threats of lynching are freely made........The Czar of Russia has tendered to Mr. Wharton Barker of Philadelphia, the sole right to develop the great iron and coal fields in Southern Russia, bordering on the sea of Azof. American capital is to be used in the project, and a number of capitalists agree to subscribe $8,000,000 to start the undertaking ...Ex-Senator James A. Bayard died on the 16th inst., aged 81 years. He represented Delaware in the Senate of the United States from 1851 to 1864, and resigned in spite of a re-election to a third term...Extensive oil fires and losses are again reported from Penn.....A report from White Ranch, Texas, says that four men were lynched recently at that place for crookedness with cattle.... An eight-year old boy, son of a farmer in Kearney, N. J., had a miraculous escape from death recently. He was drawing water from a well when the rope broke and the bucket fell to the bottom, and he losing his balance followed it. The well is 80 feet deep, had eight feet of water, and is only three feet in diameter at the bottom. Two iron bound buckets were floating in the water and yet the boy did not strike either. Luckily he was seen to fall and as he was none the worse for the bath, he was told to step into a bucket and hold fast to the rope, which he did and was thus drawn up....Another crash in the fog took place 200 miles off Sandy Hook a week ago, the steamer Queen of the National Line, running into the steamer Anchoria. Luckily no lives were lost. The passengers were transferred to the Queen and brought back to New York, which port they had left only a few hours before....A public meeting was recently held at Camden, S. C., to inaugurate means to put a stop to duels, which are becoming so frequent. An anti-duelling association was formed, with Judge Kershew as President. The association propose to prosecute all violations of the law regarding duelling. On the heel of this session, a duel over a political disagreement is expected between Capt. De Pas and Col. Cash. They were arrested for being about to engage in a duel, and gave bonds. Both left town, and it was ascertained that the field was changed to a point near Chesterfield Court-House, in North Carolina, and a meeting will soon take place.

Martial law is enforced in Leadville, Colorado. We have heretofore noticed that the miners in that place were on a strike. This resulted in disorder and crime, and the Governor was obliged to declare martial law with Gen. D. G. Cook in command. The excitement is intense.

AGRICULTURAL NEWS.

DURING the session of Congress that has just ended, the appropriations made for the Department of Agriculture amounted to $253,300. The chief laws passed relating to matters agricultural, were: (1) An act for the relief of settlers on public lands, allowing their rights to relate back to the date of their settlement, the same as if they had settled under the pre-emption laws. (2). An act relating to timber tresspasses committed prior to March 1, 1879, relieving the tresspassers from prosecution upon payment of the price of the timber. (3). An act to amend certain sections of the Revised Statutes concerning mineral lands, allowing agents of non-residents to make the affidavits necessary to obtain patents. (4). An act to provide for the repayment of fees, purchase money and commissions paid on void entries of public lands....A pamphlet entitled "Agriculture in the United States and Russia," just issued in St. Petersburg, concludes that unless all the modern appliances of the grain trade and the improved American methods of agriculture are introduced in Russia, Russian prosperity will be seriously endangered.... A meeting of the N. Y. State Dairymen's Association and Board of Trade was held June 14, at Bagg's hotel, Utica. X. A. Willard was appointed manager of the Association rooms, and authorized to receive the funds from the estate of J. W. Cronkhite, deceased, belonging to the Association. On motion of Mr. Willard, the secretary was empowered to publish 500 copies of a circular containing constitution and Board of Trade rules ...The Roumanian Administration has begun setting out forests of young trees in the Dobrudja, her acquisition from Turkey at the close of the late war. Near Mejidle, 14.000 trees have already been planted....The Duke of Portland has just intimated his intention of returning ten per cent. at the next audit to his agricultural tenantry in Notts and Derbyshire. The Duke has returned twenty per cent. on his Bothal estate in Northumberland, the remission extending over three quarters. The Duke of Bedford's remissions to his tenantry during the last 18 months amount to over $500 000.... During the past 52 years the highest price wool was worth in the New York market was in the years 1866, 1872 and 1873. In these years it reached the high figure of 75 cents per pound. In the same period the lowest point reached was 19 cents.... By a return of agrarian outrages in Ireland down to Jan. 31, the total was 977, of which Connaught claims 544 and Mayo and Galway alone contribute 400. The other provinces average 140. Of the 977, conviction could only be secured in 69, while in the majority of eight hundred and odd cases the offenders were not even made amenable. The convictions in Connaught were less than five per cent.....The imports of live stock into France during the first four months of the present year, though less than those of 1878, are much in excess of the numbers received last year during the same period. They comprise 40,050 cattle, 331,648 sheep, and 35,035 pigs. The imports of horses continually increase; they were for the four months—4,854 in 1878, 7,413 in 1879, and 7,820 this year ... England paid Germany £3,000,000 for potatoes last year.... At the joint sales of Jersey cows and heifers and Short-horns at Nashville, Tenn., seven Jerseys brought from $110 to $180, aggregating $1,020, two Short-horn cows $45 and $80 respectively, and eight bulls a total of $598....Our esteemed contributor, Mr. M. B. Bateham, the eminent horticulturist, has been very ill with congestion of the lungs. At one time his life was despaired of, but he is now convalescent with strong prospects of entire recovery....The comparative exports of cereals from the five principal Atlantic seaports for the last three years have been:

	1877. Bushels.	1878. Bushels.	1879. Bushels.
New York	62,418,317	107 819 041	124,350,932
Philadelphia	14,475,965	29,876,527	32,310,473
Baltimore	25,642,450	39,724,954	55,529,391
Boston	5,974,621	13,941,359	15,774,076
Montreal	16,873,763	22,136,547	21,877,673
Total bushels	124,582,116	212,487,281	249,943,748
Total except New York.	62,163,799	104 678,187	125,591,816

It is estimated that the Texas cattle drive for 1880 will reach nearly 300,000 head, against 265,-000 last year. Of the former number, some 125,000 will not be marketed, but driven to the Powder and Yellowstone districts to winter....The number of cattle killed per year in the United States is 11,825,000, the meats from which amount to 4,-088,300,000 pounds, and their total value when killed for food is $608,200,000.. A company has been organized in New Orleans to establish a jute factory. A good deal of seed will be planted in Louisiana this year....The exports of domestic produce from New York during the past week have been the heaviest on record, amounting to $10,802 000...A dispatch from Indianapolis on the 18th inst. says that the first car-load of new wheat of this season was inspected that day, and sold for $1.05 per bushel. It was shipped from Vincennes........The Mark Lane Express of the 15th says: Both wheat and barley, especially the latter, have improved greatly during the past fortnight. Warmer weather, however, is still wanted. Deliveries of English wheat at the principal towns continue about half of those of the corresponding time last year. Offerings at Mark Lane are also quite unimportant, and trade quiet. Holders, however, despite the improvement in the appearance of the home crop, have not pressed sales. Millers have taken what few lots were suitable for grinding at former prices, but there was no inferior samples. Imports of foreign into London have been moderate. This circumstance, combined with the Continental demand, which has now extended to grain in London warehouses, neutralized the tendency usual at this period of the year to discount the effects of the weather........A whole afternoon of the recent convention at Lansing of the Michigan Sheep-breeders' and Wool-Growers' association was given up to a debate on the question of washing sheep, and the result was an almost unanimous verdict to the effect that the practice is not only useless and barbarous but unprofitable, taking into account the often fatal effect on fine animals thus shocked by being forced into water.....Within a few days we have seen reports of injury to cereals by the Army-worm come from various places in Rhode Island, Conn., N. Y., Pa., West Va., Ohio, Illinois, and Iowa. Probably the pest has put in its hateful appearance elsewhere, also....Here is the latest forecast by Mr. Vennor, the weather prophet under date of Montreal, June 13: "The last six days of June (25th to 30th) will likely be remarkable for intense and oppressive heat, with frequent and severe storms of thunder and lightning. This heated term will probably extend through the first half of July. There will be some cool weather after the 20th. Severe frosts in the neighborhood of the 24th, 25th, and 26th—possibly with flurries of snow in the mountains."....The State of Wisconsin, on the 14th inst., sold at auction some 880 acres of about 25,000 acres of indemnity school lands, secured from the General Government last year, at prices ranging from $1.25 to $1.75 per acre. Many bids are already in for purchase of unsold lands in this category at private sale and it is expected that within the next few weeks a large quantity will be thus disposed of....

Proclamation by the President.

Fault-finding is so seldom indulged in by those who use the medicines manufactured by the World's Dispensary Medical Association, that the President of that corporation, the Hon. R. V. Pierce, M. D., has issued a special request or proclamation to any and all persons, if there be any such, who may have taken or shall hereafter use any of the family medicines now made and sold by the said Association, in all countries of the world, and who have not derived full benefit from said medicines, that if they will write the said Association a description of their maladies, the Faculty of the Dispensary will advise them with respect to the successful treatment of their diseases. Dr. Pierce's Golden Medical Discovery is guaranteed to cure, all humors from the common blotch, pimple or eruption, to the worst scrofula or king's evil, and those virulent poisons that lurk in the system as a sequel or secondary affection resulting from badly-treated or neglected primary diseases. It also cures bronchial, throat and lung diseases. Extract of Smart-Weed cures bowel affections, colds, and all painful, rheumatic and neuralgic affections. Dr. Pierce's Pellets (little sugar-coated pills), are the little giant cathartic. Address, World's Dispensary Medical Association, Buffalo, N. Y., or Great Russell Street Buildings, London, Eng,

A Protective Duty.

The person subject to derangement of the kidneys or liver has a protective duty to perform in purchasing a package of Kidney Wort. It imparts new vitality to the sick body and cures by eliminating obstructive matter.

Burnett's Cologne received the highest award at the Centennial Exhibition. It is filled in elegant bottles, and is for sale by all first-class Grocers and Druggists.

Women that have been bedridden for years have been entirely cured of female weakness by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

The Markets.

SPECIALS FROM ALL CENTERS.
Until Saturday, June 12.

Butter, Cheese and Eggs.

Boston.—BUTTER.—There has been this week quite a number of orders for shipment, and the sales of Vermont and Western butter for export have stiffened up prices, and quotations have advanced from one to two cents a pound. How long this export demand will last no one can tell, but prices abroad are likely to drop any day, and they are at best very uncertain. Northern choice creamery 22@23c. per lb; choice New York dairy; 20@21c; choice Vermont 21@25c; fair to good 16@18c; common 14@15c. Western choice creameries 22@23c; fair to good 19@20c; choice dairy packed 19@20c; choice ladle packed 16@17c; common, 14@16c; CHEESE.—Receipts for the week, 4705 boxes. The receipts are more liberal prices lower. There is very fine cheese sold above 11c, although now and then a fancy lot will bring 11½c. New whole milk 11@12c; new half skims 8@9c; new skims 5@6c; EGGS.—Receipts, 1936 boxes, 101 bbls. The market is firm, and there is a very good demand for fresh stock.

Cincinnati.—BUTTER—There has been a better trade in this line during the week ending to-day, for although the local consumptive demand is mainly supplied from suburban sources there is only enough fine Dairy and Creamery arriving to fill the wants of retailers who have a trade for the best that can be obtained. Packers have bought more freely and have taken some of the better qualities and paid a little better prices, but most of their purchasers are at 10@12c. Fancy Creamery and Dairy have advanced 1c. but the medium grades have not changed much. The average quality is good and there is very little butter arriving, which will not bring as much as 11c Fancy Creamery sells at 21@22c. and fair at 29@18c, choice Western Reserve and Dairy at 14@16c; prime Central Ohio 12@13c medium do. 10@11c. and inferior 6@8c per lb. CHEESE.—The receipts are about equal to the current demand and the market is steady and firm for prime to choice factory at 9@10c per lb. Partly skimmed sell at 8@8½. EGGS the demand is comparatively light, and with an ample supply the market is easy at 9½@10c per dozen for fresh.

Chicago.—BUTTER.—There was during the week a firm market for fine grades, and prices of common and medium qualities also were very well sustained, there being a good demand for nearly all descriptions. Receipts are liberal, but as yet, there is no large accumulation of stock at this point: Creamery, 17@19½c; good to choice dairy, 14@16c; packing stock, 10½@11½c; grease 5@8c CHEESE—In response to lower prices at New York and Liverpool this market was depressed. Buyers continue very conservative, and holders find it difficult to move large lots except at a concession from quoted prices. Full cream, new, 10@10½c; part skim, new, 8@9c; full skim, new, 5@6½c. low grades, 4@5c EGGS—Were steady at 9½@10c per doz., the outside for cases.

Philadelphia.—BUTTER—During the week there was a continued good demand for fine qualities for home use, and arrivals of this description were closely sold up. Medium grades were dull and weak, as shippers were holding off for lower prices, and the quality of the offerings, as a general thing, was not sufficiently attractive for the home trade. We quote creamery extras at 22c.; do. good to choice, 19@21c.; imitation creamery, 12@17c., as to quality; Bradford tubs, extras, 19@20c; York State tubs, extras, 19@21c.; fair to choice, 15@17c.; Western dairy, fancy, 16@17c., little of this kind here; do. fair to good at 11@14c.; factory packed, 11@15c, as to quality—shippers not willing to pay over 12½c. for good; common grades, 8@9c Rolls—Fancy, 14@15c, none here; do fair to prime, 9@12c. Prints—Fancy at 22@25c; do. firsts at 17@20c. do seconds at 10@15c. CHEESE continued weak and unsettled, under a pressure to sell and advices of a decline in other markets. Extremes were hard to reach. We quote New York factory full cream at 11@11½c; do. fair to good, 9½@10½c.; do half skims, 8@8½c; full skims, 4@7c., as to quality. Ohio flats, choice, 9@9½c.; do. fair to good, 8@8½c. EGGS—The market was depressed by freer offerings, particularly of inferior Western, and the general demand lacked snap, but strictly fine fresh stock in good order was in comparatively fair demand, and the best marks of near-by stock held steady at former rates. We quote inferior Western at 12@12½c: fair fresh do at 13c; fine do. do. at 12½c, in a wholesale way, with jobbing sales at 14c, and Pennsylvania, New Jersey, Delaware and other near-by stock at 14½@15c.

Wool.

Boston.—The Commercial List gives voice to the state of the trade, not in New England only, but throughout the country. It says: Prices are gradually settling down and each week for some weeks past has led to a lower basis both here and in the interior. What is considered as a comparatively low price at the close may be looked upon as a high price before another week has passed, as this has been but a repetition of the market for the past ten weeks. The most surprising feature of the trade is the continued indifference of buyers, and as long as this indifference is as decided as it is at present we cannot look for any other state of things than an unsettled market and declining prices. Some of our dealers are carrying large supplies of foreign wool, and they are anxious to see an outlet for that before stocking up with the new clip. Manufacturers still have sufficient wool on hand to keep their machinery running, some of them for some months ahead, and they hesitate to purchase the new clip before their old stocks become more reduced, especially as at present there is no indication of an active fall trade in goods. Speculators are demoralized, as early purchases in the interior have proved quite unprofitable. As soon as buyers can purchase the new clip, and turn it over at even a small profit, they will not hesitate to do so, but this looks to a lower range of prices than even now prevails. A week or two may bring about a different state of things, but there is no indication of such a change at present, as neither manufacturers, dealers, or speculators appear to have any confidence in present values.

In previous years, when the new clip was ready for market, it has been customary for manufacturers, dealers and speculators to compete for it in the interior, and this has been sure to force up prices where they could not be maintained. This year the reverse has been the case, and lower prices from week to week have failed to bring about sufficient confidence for a general movement at all points. In Michigan very little has been done as yet, and 35c. appears to be about as high as buyers are willing to pay. In Ohio and Pennsylvania no movement, and 40c is considered an outside figure for good average lots. In California there is a good demand for Northern Wools at 27@30c, but good Southern Wool is now dull at 20@22½c, and in some instances below 20c ℔ lb has been taken. In Kentucky the clip opened at 43c, and settled down to 31@32c. and now held at 32c and above for desirable lots. The bulk of this clip has already been sold, but this year it has been taken by the combing and delaine mills, while last year it was largely used for clothing purposes. There has also been considerable of the clip of Missouri bought up, recent prices ranging from 31@32½c, and in Georgia the sales have been to some extent, principally at 33@35c per lb. In Maine, unwashed Wools have settled down to 30c per lb.

Chicago.—WOOL was in moderate demand demand. Buyers are still holding back, or taking small lots as they come on the market. The wool market has not changed materially since our last report, and most manufacturers are still inclined to hold off, especially as the slow movement in woolen goods relieves them from any immediate pressure for new supplies. There is very little disposition in any direction to force prices lower than they are at present, but operations will continue to be restricted until the tone of the market becomes more settled. Quotations: good medium tub, 48@46c; coarse or dingy tub, 40@42c; fine unwashed fleece, 20@23c; coarse unwashed fleece, 20@24c.; medium unwashed fleece, 25@28c.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, June 19 1880.

BEANS AND PEAS. The movement for export styles of beans is light; no new important business. Medium extremely quiet. There is now an easy tone to prices as a good many parcels of weather softened stock are being pushed upon the market. No white kidneys in stock; an arrival would bring quotations. Red kidneys steady though nominally low.

Green peas quiet at $1.60@1.65 for Wis. bbls.; and Southern B E peas are lower; quoted $1 70@1 80 ℔ 2 bush. bag. Marrow beans, prime, $1.60.; other, $1 50@1.60, medium, prime $1.32½@1.37; other, $1.20@1.30, pea, $1 45@1.65 white kidney, $1.50@1.75. red kidney prime $1.45@1.50; other, $1.30@1.40; black, $2.20. Lima, $5.

Receipts of beans for week 2,615 bush.; exports, 2,500 pkgs.

BEESWAX.—Small sales have been at 23½@24c. for Western and Southern.

BROOM CORN—Offerings are small and prices steady. Brush and short broom choice, per lb, 7@8c.; do., do. common to good, 5@6½c.; hurl, good to choice, 7@8c; do common to fair, 5½@6½c.; red and crooked at 3@4c.

BUTTER.—The past fortnight has been a most encouraging one, and has tended to the repudiation of the most glowing prophecies of New York ability to handle large supplies of good State butter. Exporters have again dealt heavily and a steady home call has kept prices about up to last week's rates. Some extra creamery of settled mark still quoted 22c., but the shaded rates annexed represent new wholesale business. Western stock does not come forward freely, but there is not so much as fully quoted State that they lack of distant shipments.

Creamery, finest, 21@21½; good to prime 20@20½c.; fair to good, 19@20c.; sweet cream, fine, 20@21; sweet cream fair to prime, 18@20c; firkins, choice yellow, 20c. fair to prime, 18@19c; pails and hf. tubs, choice, 19@20c.; good to prime, 18@19; fair to good, 17@18; poor, 14@16c.; Welsh tubs, prime, 18@19c. fair to good, 17@18c.; poor, 14@16c. Western imitation creamery, 14@17c; dairy, fresh, extra, 16½@17c; good to prime, 15@16c. fair to good, 11@15c.; poor to fair, 10@14c.; factory, full grass, fine, 15½c.; good to prime, 14½@15c.; fair to good, 13½@14½c.; poor to fair, 12@13½c.

CHEESE—The market has had a bad break this week, and closed somewhat unsettled. The decline has been steady from day to day as the indications were of steadily increasing receipts and at the close 10½c, stands as the general sales on choice factories. The reduced prices have sent the stock out freely and the exports reach 100,100 boxes.

Quotations at the close are 10½ for choice; 9¾@10¼c. for good and fine; 9@9½c for fair Ohio factory at 8¾@9½c for good to prime; 8½@9½c. for fair and good lots; 3@6c. for skimmed.

Receipts for week 111,175 boxes.

Exports for week. 98,900 boxes, Liverpool cable 63s.; steam to Liverpool, 35@40s

COTTON.—Export trade has been brisk and speculative dealings full, with prices firm, closing at for June, 11.74@11.75c. July, 11.76c. August, 11.82c., September, 11.20@11.21c.; October, 10.81c.; November, 10.66c.; December, 10.67c.; January, 10.73@10.71.

Quotations for spot cotton bare based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8¾	8⅞	8⅞
Strict ordinary	9⅜	9½	9½
Good ordinary	10 5-16	10 7-16	10 7-16
Strict good do.	10 13-16	10 15-16	10 15-16
Low middling	11 7-16	11 9-16	11 9-16
Strict low middling	11⅞	11⅞	11⅞
Middling	12	12⅛	12⅛
Good middling	12½	12⅝	12⅝
Strict good middling	12¾	12⅞	12⅞
Middling Fair	13⅛	13⅜	13⅜
Fair	13⅞	14	14

STAINED

Good ordinary	8⅝	Low middling	10⅜
Strict good ordinary	9½	Middling	11

DRIED FRUITS.—Trade continues slow and prices unsettled and nominal.

Latest prices are for N. C. apples, fair to good, at 7@8½c.; choice, at 9@9½c.; New York State quarters sliced at 7½@7¾c.; patent evaporated in cases, choice at 14@15c., good and prime 13½@14c.; evaporated, sliced at 12@13c. Evaporated peeled peaches, good to choice, at 26@28c.; North Carolina peeled choice, 16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c., common at 10@12c.; unpeeled halves at 7@8c.; do. quarters at 6½@6¾c. Pitted cherries at 17@18c. Blackberries nominal. Raspberries at 28@30c. Plums at 17@17½c.

EGGS.—Receipts for week, 12,400 bbls.; do. last week, 11,50? do. The market has lost much of its firmness; the strong prices of last week drove away buyers, and during the past few days sellers have been obliged to coax back trade by shading prices.

Near Points, 15@16c.; State and Penn., 13½@14½c.; Western, fresh, 12½@13c.; Canadian, 12½@13c.; poor or ice-house lots, 12@12½c.

FLOUR.—Prices have been easy on large supplies and a more active trade result.

Latest prices are at $3.25@4.25 for inferior to very fancy superfine State and Western; $3.75@4.00 for poor to good extra State, odd lots and lines; $4.00@4.25 for good to choice do.; $3.75@4.00 for inferior to good shipping extra Western, and $4.00@4.25 for good to choice shipping extra do. (very choice to fancy lots held higher); inferior to very good white wheat extra $4.50@5.25, very good to fancy do. at $5.25@6.50; red and amber winter wheat, inferior to choice trade and family, at $4.40@6.00; round hoop Ohio, $4.00@4.50; and trade and family brands of do., at $4.60@6.00; St. Louis at $4.40@5.35 for inferior to good extra; $5.35@6.50 for good to fancy; Minnesota clear, very inferior to fancy, at $3.75@5.75; Minnesota "straight," very poor to very fancy, at $5.10@7.25, and patent inferior to fancy at $5.50@8.25; unsound stock at from $2.25@5.00; city mill extra at $5.60@5.90 for good to choice West Indies; do. for England, $3.85@4.00 for poor to fancy spring wheat, and $3.10@3.50 for winter wheat product; do. trade and family extras $5.00@6.75; do. for South America, $5.90@6.35; No. 2 at $2.25@3.25 for poor to very choice.

Receipts for week: flour, 95,100 bbls; corn meal, 1,760 bbls.; wheat, 1,818,050 bush.; corn, 1,559,650 bush.; oats, 381,100 bush.; rye, 9,000; malt, 131,800; rice, 1,396 pkgs.

Exports: Flour, 73,200 bbls.; corn meal, 4,600 bbls.; wheat, 2,169,800 bush.; corn, 1,34?,?0? ; oats, 4,002 bush.; peas, 5,891 bush.; rice, 2,975 pkgs.

CORN MEAL.—Sales at $2.50@2.75 for yellow Western, and $3.15 for Brandywine.

FRESH FRUITS.—Strawberries are scarce but the enlarged list of other good fruits makes them go round, and keeps prices from advancing. Western N. Y. is sending the best offering of the moment. Early apples in good demand. Melons slow yet. Blackberries and whortleberries sell well; these two items go to market much more largely than in former years. Cherries plenty; they are tender this hot weather and the best have to sell low.

Norfolk green apples ₩ bbl. $1.50@2.50; per ½ bbl. cr. 75c.@$1.25; cherries sweet, choice ₩ lb 6@7c, common 2@4c, sour 4@6c. Strawberries Oswego ₩ qt. 10@12c; Oneida ₩ qt. 8@10c; up-river good to prime ₩ qt. 9@10c, fair ₩ qt 7@8c.; good to prime ₩ 510 qt. cups 2½@3½c.; Huckleberries, hulled, ₩ 100 bask. $2@2.50; L. I. ₩ qt. 6@7c.; eastern ₩ qt 6@8c. Raspberries native up-river ₩ 3 to qt. cup 6@7c; Jy. ₩ pint 7@9c; Brandywine, Md. and Del. 6@7c. Blackcaps Jersey 6@7c, Md. & Del. ₩ qt. 8@10c. Blackberries Wilson, Md. & Del. ₩ qt 15@17c. Whortleberries Jersey ₩ ½ bu. box $2; Md. & Del. 8@10c. Gooseberries Md. ₩ bush. $1.75@2. Currants cherry, ₩ qt. 8@10c; small ₩ lb 5@6. Watermelons, good to prime ₩ 100 $20@45. Fla. prime, do. $35@40. Peaches, Ga., Beatrice ₩ peck $1@1.25. Grapes, Six. Hamburgh ₩ lb $. Peanuts flat and weak. Hickory nuts steady. Peanuts, Va. hand picked, ₩ lb. 5½@6½c.; extra prime, 5c., good to prime 4½@4¾c.; shelled, 6½@6¾c., hickory shelled 5½@6c.; hickory shellbark, ₩ bush. $1.

GRAIN.—Wheat has been active, and fully 2,000,000 bush. have been exported this week, with prices fluctuating and closing easy; latest sales are of No. 1 white at $1.21½@1.22½; do., June, at $1.21½@1.22c.; ungraded white at $1.18@1.21, No. 2 red at $1.25½@1.26, do., June, at $1.25½@1.26¾; do., July, at $1.15@1.16½; do., August, at $1.10½@1.11; No. 3 red at $1.18, ungraded red at $1.18@1.21; mixed winter at $1.20@1.2?½, choice spring at $1.10@1.17; No. 2 Milwaukee spring at $1.15@1.17. Rye quoted at 95@97c. for State. Corn is active on export account and closed for New York No. 2 at 52@53c., do., June, at 52¼@52½c. do., July, at 50½@51c.; New York steamer mixed at 50@51c., ungraded mixed Western at 4?@53c., No. 3 at 50c. New York yellow at 53½c. No. white at 59c. No. 2 white at 57c.; low mixed at 54½c.; round yellow at 60c. Oats are liberal demand and closed firm at for No. 1 white at 41c.; No. 2 white at 39@39½c. No. 2 white at 37@37¾c. New York No. 1 at 39c.; New York No. 2 at 35½@3?c.; do. June, quoted at 33½c bid; do. July, at 33½@34c.; No. 3 at 31½c. ungraded white Western at 3?@41c., ungraded mixed Western at 37½@40c.; white State at 41@43c.; mixed State at 39c., No. 2 Chicago at 35½@39c.

HAY AND STRAW.—There continues a liberal demand and the market is strong.

Shipping hay quoted at 75@80c., retail lots at 80@85c. for medium, and 95c.@$1.10 for prime and fancy qualities; clover, 60@70. Straw at $1.15@1.20 for long rye; 60@70c. for short rye, and 55@65c. for oat.

Exports for week, 3,700 bales.

HOPS.—The market shows decided strength but prices not changed, with a steady call for supplies from brewers. Quotations are for:

	Cents per lb.
New York, fancy	Nominal
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

OIL CAKE.—Western is quoted at $33.50 per ton.

POULTRY AND GAME.—Chickens continue abundant and with easy prices sell freely. Fowls scarce and favor sellers. Coarse turkeys not wanted. Prime specially raised are in good demand for their regular call, steamers and hotels. Spring ducks in good supply.

Turkeys, choice small, on ice, 10@12c.; fair to good, 8@9c., frozen, 5@7c.; Phila., d.-p., 10@12c.; chickens, spring, Phila., large, ₩ lb., 20@22c.; small, 18@20c.; scalded 16@18c., fowls, Phila., yearling, 15@16c.; dry-picked, 1?@14c.. Jersey, good to prime, 12½@13c.; State, good to prime, 11½@12½c.; Western, good to prime, 11@12c., poor to fair, 5@10c.; ducks, spring, large, ₩ lb., 17@18c., small 15@16c.; Phila., dry-picked, 12@13c. squabs, white, ₩ doz., $2.00, dark, $1.00@1.25.

Chickens in coops arrive from all points and prices are low and weak; demand fair. Fowls active and firm with light supplies of dressed. Spring ducks and geese in good demand. Old ones neglected.

Chickens, spring, large, per lb., 18c., small, 15@16c.; fowls, Jersey, 11@12c., Western, 11c. Southern, 10½c.; roosters, old and young, 4½@5c., turkeys, mixed, 9@10c; Southern, 7@9c.; ducks, Jersey, N. Y. & Pa., ₩ pair, 5?@60c.; Western, 40@50c. Southern, 35@45c; geese, Jersey, $1.50@1.62, N. Y. & Pa., $1.25@1.37; Western, mixed, $1@1.12; southern, 75c.@$1; pigeons, 20@40c.

Flight pigeons are in fair demand at quotations when in good order; lots out of condition have sold very low. Stall-fed pigeons light supply and good demand.

English snipe, frozen, ₩ doz., $3.50, wild pigeons, stall-fed, ₩ doz. $1.50@1.75; flight, 75c.

PROVISIONS.—Have been tending higher on increased demands, mess pork closed at $11.75; $12 for spot lots; $11.85@11.90 for June and July, 11.95@12 for August, and $12@12.10 for September. Bacon at 7 1-16c. for long clear and 7¼c. for short clear. Lard—Western steam at $7.20 for spot lots; 7.20@7.22½c. for June and July; $7.27½@7.30 for August. Stearine at 9½c. for choice. Tallow at 6½@6 3-16c. for prime.

Receipts for week, beef, pkgs., 625; pork, bbls., 3,175; cutmeats pkgs., 22,55?; lard pkgs., 13,950.

Exports, beef, pkgs., 2,350; pork bbls., 6,975; cutmeats, lbs., 1,?12,6?0; lard lbs., 5,068,350.

SEED.—Clover is moderately active and prices steady; quoted at 6¾@7c. for Western up to 7½c. for extra choice. Timothy is quiet and nominal.

VEGETABLES.—New Southern potatoes have declined; supplies large and market dull. Norfolk usually breaks the market. Old potatoes hold good prices, but have lost some of their late advance.

Bermuda, new, ₩ bbl. $6; Maryland, $1.50@2.75; Norfolk, new, $1.75@2.75; Chas. & Sav., $2@3.50; culls, $1; Early Rose, Maine, per d.-h. bbl., $1.75; State, $1.12@1.37; Prolific, Maine, $1.50; Jackson, $1.37@1.50; peachblow, State, $1.50@1.75; Snowflake, $1.50@1.75; Peerless, $1.25@1.37. Southern green stuff runs poor and quotations are only for prime, attractive fresh. Tomatoes, Cha's. and Sav., ₩ cr., $1@2; Fla., ₩ bu. cr., $1@2.25; cucumbers, Norf., per bu. box, $1.75@2.25; Chas. and Savannah, ₩ cr., 50c.@$1.25; egg plant Fla., per cr., $3@4; string beans, L. I. ₩ bag, $3.50; wax beans, Norf., ₩ ½ bbl. crate $1@1.50; string beans Norf., round, ₩ ½ bbl., $1.50@1.75; Norf. flat, ₩ ½ bbl., $1.25@1.50; green peas L. I., per bag, $2@2.50; asparagus, Oyster Bay, per doz. bch., $2@2.25 N. J. and L. I. ₩ doz. 75c.@$1.25; turnips, Jersey, ₩ 100 bunches $2.50@4; beets, Jersey, per 100 bunches, $1@2.50; radishes, per 100 bunches, 75c.@$1; lettuce, per bbl., 75c.@$1; cabbage, Jersey per 100, $6@$8; Norfolk, ₩ bbl. 50c.@$1.75; squash Nor. ₩ cr., 75c.@$1; L. I., ₩ basket, $1@1.25; rhubarb, L. I. & Jersey ₩ 100 bunches, $1@1.50; onions Bermuda, new, ₩ crate, $2; Maryland yellow, ₩ bbl., $3.50@4.

TOBACCO.—The export movement has been slack and the home trade moderate, with prices generally unchanged.

KENTUCKY LEAF.	Light.	Heavy.
Common lugs	4 @ 4½	4½@ 5½
Good lugs	4½ @ 5½	5½@ 6½
Low leaf	5½ @ 6½	6½@ 7½
Medium leaf	7 @ 7½	8 @ 8½
Good leaf	8 @ 8½	9 @10½
Fine leaf	9 @11	11 @12
Selections	12 @—	12½@14

SEEDLEAF.	Crop of 1879.
New England Havana seed	18 @25
do. seconds	10 @13
do. fillers	5½@ 7
Penn. assorted lots, fine	18 @22
Ohio assorted lots	7½ @10
Wisconsin assorted lots	7 @10
Wisconsin Havana seed	16 @18

WOOL.—Trade has been very moderate again this week, manufacturers waiting for the effect of larger supplies of Ohio fleeces. Prices are nominally as last week.

Latest sales are of XX Ohio at 52c.; unwashed State at 27@30c.; new lake at 36c.; spring Texas at 21@32c., spring California at 23@30c.; slightly burry fall do.; Oregon at 39c.; domestic carpet noils at 4?c.; scoured Territory and Texas at 70@73c., East India at 40c.; Cape at 32½@34½c., Montevideo at 37@38c.; unwashed Med. at 18@19c.

LIVE STOCK MARKETS

NEW YORK, Saturday June 19, 1880.

BEEVES.—Receipts for week, 14,375 head; do. last week 12,925 do. The market has been quite upset by irregular supplies which by the close turned out heavy, and then the quarters of beef that were in the disabled steamer Anchoria were thrown upon the dressed meat market and helped depress trade. The supply for the past four days has run up to 10,100 head, against 7,125 head for the same time last week. Just how much prices declined to-day is difficult to arrive at, but it is safe to say ¼c. off from the closing rates on Wednesday; some sales were more and some less. The decline is much more noticeable in common and medium cattle than in the best grades. Some rough stock and light steers were sold as low as 8@8½c. to dress 55@56 lb., but most sales were at 9@9¾c., to dress 56 lb., with a few carloads of choice and extra steers at 10@10½c. to dress 56@57 lb.

COWS AND CALVES.—The market is very tame and could almost get along without receipts; the nominal range for such stock as arrives is $25@55; an extra milker would exceed $55, but such stock is wanted at home.

VEAL CALVES.—It has been a slow week and with full summer receipts the market has decidedly favored buyers. Medium but fat calves are most wanted. Heavy Mt. Holleys neglected.

Live calves, Jersey and Bucks Co., choice, 5¾c.; prime, 5@5¼c.; State, choice, 5@5½c.; do. prime, 4¾@5c.; fair to good, 3¾@4½c., poor, 3@3¼c.; Mt. Holly, good to choice, 5@5½c.; buttermilk, 3c.

SHEEP AND LAMBS.—Receipts for the week, 31,870 head; do. last week, 32,372 do. Sheep as a rule were dull all week, but particularly heavy shipping grades which have no demand except at extremely low prices. Lambs were also dull, but yesterday's prices were pretty well maintained. The reported transactions were at 4@5c. for common to prime sheep; about 601 head of fine Ohio wethers were sold for export alive on private terms; judging from the condition of the market the selling price could not have been far from 5½c. Virginia and Kentucky lambs were sold at 5½@7c., and Jersey at 7@8c.

SWINE.—Receipts for week, 25,059 head, do. last week, 28,73? do. No public sale; nominal rate for good corn fed 4½c.; city dressed 5¾@6c.

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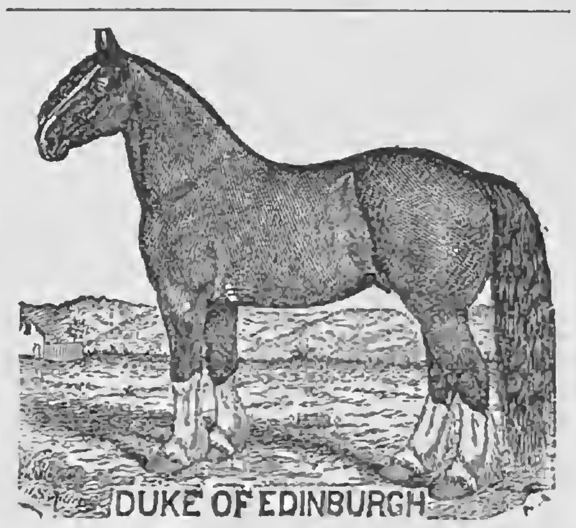

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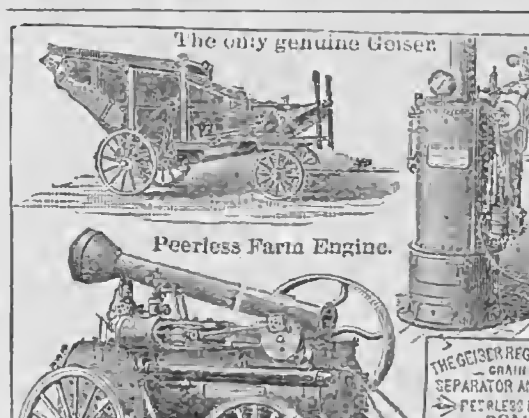

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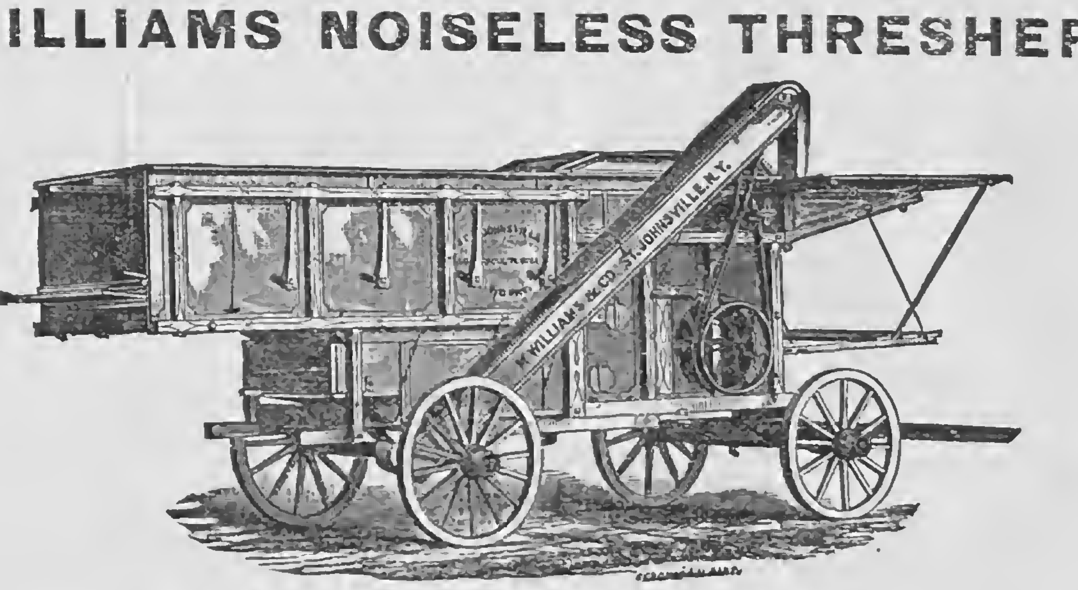

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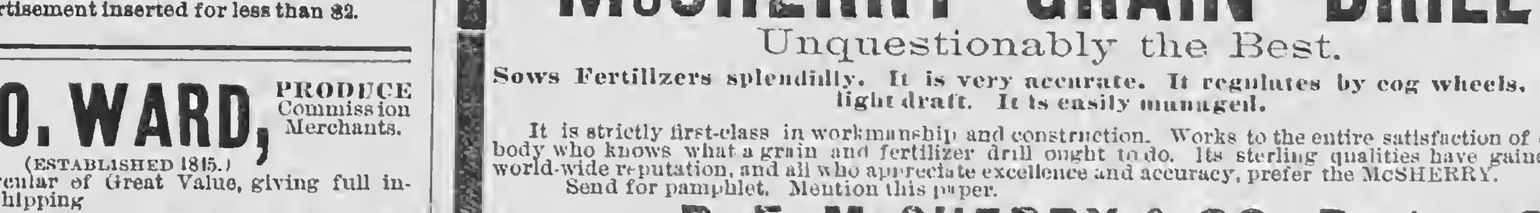

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Reading for the Young.

TALK ON BOTANY.—NO. 3.

Aerial Roots.

In the RURAL of May 29th we had a lesson on roots. You then learned the principal forms and classifications of these organs, how they grow and how they absorb the nourishment for the plant. I shall now briefly call your attention to another class of roots which, from their nature and because they are not as common as those already described, are of but little importance in gardening and agriculture, though no less interesting to botanists; I refer to the *aerial roots*. These roots are so named because they develop in the air, and not in the ground like other roots. They spring from the stem or branches, and may either descend into the ground or remain entirely in the air. Aerial roots are emitted by the stems of the English Ivy, the Poison Ivy, and the Trumpet Creeper, but in these cases the roots serve only as supports to the plants, as they climb up the trunks of other trees. The roots fasten themselves to the bark or to the walls near which the plants may happen to grow, but they absorb no nourishment whatever. Another class of aerial roots is seen in the common field corn. They spring from the stem near the lower joint, and growing obliquely downward, sometimes a distance of five or six inches, they finally enter the ground and do service to the plant like an ordinary root.

In very warm climates, as in Central and South America and East India, this kind of roots are found on a great many plants. One of the most remarkable cases of the kind is found in the Banyan tree, a species of fig tree which grows in the East Indies. The branches of this tree send down long aerial roots, which when they reach the ground grow in thickness like the trunk itself. Being thus supported the branches spread out still farther, other aerial roots are sent down which in turn become new trunks, and it thus continues to spread itself till a single tree has covered more than thirteen acres. A class of plants called *epiphytes*, or *air plants*, also send out aerial roots, but these simply serve to help the plants to cling to the trees. Still another class of roots, is found on parasitic plants. A parasitic plant is one which lives wholly or in part at the expense of some other plant. The Mistletoe, which was illustrated in the RURAL of June 5th, is such a parasite. Its roots penetrate the bark of some other tree, and unite with the wood as firmly as a natural branch. It then absorbs the sap of its victim, and flourishes as though its roots were established in the ground.

With these few remarks we will, for the present, close the discussion of the descending axis of the plant. In the next lesson we will take up the stem, or ascending axis, and study some of the very interesting features of its development.

UNCLE MARK.

REMINISCENCES OF A LITTLE GIRL.

MRS. M. J. GALPIN.

CHAPTER X.

FAREWELL TO ERIN.

Who that has ever taken a farewell of his native heath does not realize with what mingled emotions the "land of his home receedeth from his view." Hope for the future, regret for the past, and sorrow for the parting all commingle together till the mind is one chaos of sorrow and doubt. How many an exile that lands on the shores of America to-day has wept bitter tears as his native land faded in the distance. With a shiver he feels himself strangely alone, as tossed on the mighty waves of the broad Atlantic he speeds away to a foreign shore, there to find among strangers a home and a fireside. There is something grand and sublime in sailing "o'er the waters of the deep, blue sea." Nothing to be seen but the sky and the water day after day; the azure arch above mirrored in the deep below, while the foamy billows chase each other like a band of happy children in their youthful play. It was the lot of Uncle Tom, as it has been of thousands before, to experience these emotions. Bidding a tearful farewell to the friends of their adversity, he and family took the cars (there they are called coaches) and in due time they reached Dublin. Here they were to embark on a ship bound for the United States. They spent a few days in seeing the city and in preparing clothing to last them through the long voyage.

The day of departure came at length, and with saddened, quivering hearts they went on board. The ship on which they took passage was the barque Ashley, a small sailing vessel, which was originally built for Lord Ashley, but was then being used as an emigrant ship. It was the first year of the Irish famine. The United States then, as now, had stretched out a helping hand, and many a poor, homeless, starving wanderer was saved from death by American charity. About two hours after embarkation the signal was given to leave, anchors were taken up, sails unfurled, and the bark stood out to sea with her freight of human lives. All stood on deck to get a last glimpse of the land they might never more behold; all were weeping, for each left some loved one behind whom they never again expected to meet on earth. Twilight at last shrouded the fading shores with its somber mantle and many were forced to go below, as they felt the coming on of seasickness. Nearly all were steerage passengers, as they were too poor to afford pay for any other kind of accommodation. Uncle Tom and family, however and a few others, were cabin passengers.

Perhaps you do not know what a steerage passage is. Well, the cabin was on the first deck, and about the centre of this deck was a large opening that looked like a cellar door-way. This is called the "hatchway." Steps lead down to the second deck, and here were the steerage passengers from one end of the ship to the other. There was a broad alley-way in the middle of the ship, and on each side the beds were fastened, tier after tier, against the sides of the ship, like the shelves in your pantry. In this place they slept, and as a lullaby they listened to the roar and swash of the waves as they beat against the ship. The bottom of the ship contained ballast, baggage, ropes, etc. I hardly think this description will suit the elegant ships that now glide over the ocean almost with the swiftness of the sea-gull, but this is the way the barque Ashley was arranged. She was commanded by Capt. Gray, and nearly all her sailors were from foreign ports. There was a man among the crew from the Philippine Isles, the most useful one on board, as he seemed to be handy at everything and also had remarkable presence of mind.

The Irish are naturally of a buoyant, hopeful disposition, and after their home was hid from view they commenced to make the best of the situation. There were several good singers on board, so with fun and song they whiled away a good many hours. Uncle Tom and wife had splendid voices, and just "as the last glimpse of Erin they saw," they started that dear old song, "The land of my home is flitting, flitting from my view." Another singer treated them to a "Life on the ocean wave," a "Wet sheet and a flowing sea," while one of the fun lovers sang a comic song called, "The Chinaman with his Roman nose."

For three or four days there was smooth sailing. Naught could be seen save the ripples of the billowy tide as they foamed and tossed and sparkled round the sides of the sturdy barque. Nearly all were well of seasickness, so that sociability, fun and enjoyment were the order of the passing days. Our little Therese was soon a favorite with all on board, especially the sailors. They taught her the names of the masts and ropes, and steadied her slipping feet till she could accomplish the feat of walking over the rocking deck.

She explored every nook and corner on board. Though but six years old she could read and write quite well, and would read or sing for the sailors by the hour. Music seemed to be an inborn talent with this little wanderer who had never yet enjoyed the advantages of musical culture. Have you ever noticed that the rougher the occupation of men, and the more their employment takes them away from society, the more they love the presence of little children? Our Therese was queen on that barque. There was always a sailor to watch her, or see her safely o'er some dangerous spot. The captain had a bachelor brother on board, who was taking a sea voyage for his health, and with him Therese was a great favorite. Many a delicacy did she receive that others never shared. The captain showed her the hour glass and explained to her satisfaction all about the sand running out so swiftly. He adjusted his "spy-glass" so she could look out to sea, and in fact she had things brightened with sunshine wherever she went.

When not many days out, they were overtaken by a fearful storm. The evening previous the sun had set in angry-looking, copper-colored clouds, and the sailors predicted a storm, as they had seen "Mother Carey's chickens," and they were sure that a storm would come. About midnight it came, sure enough. The first that Therese realized of it, was her being thrown forcibly from her bed to the floor. The ship creaked and groaned, the sails flapped and tore at their fastenings, the voices of the captain and mate shouting orders could be heard amid the noise of the tempest. The frightened passengers below could be heard saying their prayers, and some bewailed the day they ever left their native soil. At last some of the men made a rush for the upper deck, but the captain gave peremptory orders to fasten down the hatchway and they had to remain below. The storm raged with unabated fury till daylight, then it calmed down, and the ship was once more put to rights, but a sorry thing she looked. Her sails were torn to rags; the "mizzen mast" was gone; the main mast had been struck by lightning and split down about ten feet, and there was a leak in the bottom of the boat.

When the wind subsided, all hands were called to the pumps, and for five hours they never ceased. The passengers had to take hold and help when the sailors were exhausted. The leak was at last stopped, however, the ship was again rigged, and all looked hopefully forward to better days.

During the storm Therese was on the eve of coming to grief. When tumbled out of bed she became frightened and ran out of the cabin. The captain fortunately espied her and had just time to seize her and set her inside the door, when an enormous wave broke over the deck, throwing down the men, and making much damage. You may be assured the emigrants below presented a sorry sight. Knives and forks, boxes, beds, babies, and in fact everything, were swept first one side and then the other. Poets may talk sentimentally on being "rocked in the cradle of the deep," but when it comes to such rough rocking as that, there's no fun in it.

This chapter is already so long that I shall be obliged to close. Another week I shall tell you about a fire at sea. Crossing the ocean now, is not attended with such risks as in those days, but at that time it meant a long and tedious voyage, with all the attendant risks of storm, fire, and perhaps death ere they reached their destination.

HERE is something to scratch your head over. A very curious number is 142,857, which multiplied by 1, 2, 3, 4, 5, or 6 gives the figures in the same order, beginning at a different point, but if multiplied by 7 gives all nines:—

142,857x1=142,857
142,857x2=285,714
142,857x3=428,571
142,857x4=571,428
142,857x5=714,285
142,857x6=857,142
142,857x7=999,999

Multiply 142,857 by 8 and you have 1,142,856. Then add the first figure to the last, and you have 142,857, the original number, with figures exactly the same as at the start.

LETTERS FROM THE COUSINS.

UNCLE MARK:—I have been a reader of the RURAL for two years and have often thought I would like to join the Horticultural Club but have neglected writing for fear there would not be room for me among so many. I take great pleasure in reading the cousins' letters and although I am seventeen, I hope I am not too old to be one of them. I live on a farm and we have a great many fruit trees and strawberries. The strawberry vines are in full bloom and the promise of a large crop of berries is good, so if any of the cousins will come and see me when they are ripe they can have the pleasure of eating all they want. The frost killed a good many of my flowers, so I will not have a great many this year. Why don't more of the cousins write? Peaceable Bob, where are you? Do you think those who write the least are the most peaceable? Maple Leaves write again. I take a great interest in your letters as my brother used to live in Crawfordsville. I am afraid Uncle Mark will say "here is another letter for the waste basket." So I will stop. PANSEY.

Factoryville, Pa.

[I am sure the cousins are glad to receive Pansy as a member of our family.—U. M.]

DEAR UNCLE MARK:—I am ten years old. I went to school almost every day last winter, I have to go two miles and a quarter and go a alone. I am studying spelling, reading, writing, arithmetic and geography. I have to work in the garden evenings after I come from school. Last summer I had to pick strawberries, it was so warm I used to get tired. We had over three bushels from a little patch. My papa raises the Jucunda. The ground is almost rich enough without manure so you see it is not very much work to raise them; we are going to set out a new patch this season. My mamma and I are going to set them after papa prepares the ground. My papa takes the RURAL, and I like to read the letters from the boys and girls and aunts. Will you take me for a nephew? I want to tell the cousins about my cat. He will climb up to the door latch, and put one leg through the handle, then take his other paw, and lift the latch and open the door—how is that for a cat story? This is the first letter I ever composed, myself. Yours, ETHAN E. SABIN.

Benton Co., Iowa.

DEAR UNCLE MARK:—I take quite an interest in reading the letters from the cousins, and would like to join your Horticultural Club. I have a number of different kinds of plants; twenty geraniums in nine different varieties, monthly roses petunias, calceolarias and others. I have some verbenas and salvias in boxes. I like to get them started early for they blossom so long. Grandpapa did not commence to take your paper till this year, so I did not know of your seed distribution in time for it, but I would like to be remembered in the next. One of the cousins was inquiring about pets, I have a pair of twin calves, some kittens, rabbits and a grey squirrel, uncle found in the woods when it was little. We fed it bread and milk, and it was not long before it would turn its wheel nicely; it is very gentle, and will, when out of the cage, get up on my shoulder, and eat out of my hand. I think this will be enough for the present. With love to all the cousins, I remain your niece, BIRDIE.

Greenwich, Conn.

DEAR UNCLE MARK:—I have long thought I would write to you, but have been afraid you would throw my letter in the waste basket. I go to school and study arithmetic, grammar, geography, reading and writing. I would like to join the club with the rest of the cousins. I have some nice house plants; my geraniums look very nice this season. Papa has given me a patch in the garden; he says if I will take care of the seeds from the RURAL, he will get me some more from D. M. Ferry & Co. Papa has taken the RURAL a good many years and I like it ever so much. I guess I will close my letter for it is getting too long. Good-bye. MINNIE LOVE.

Trumbull Co., O.

DEAR UNCLE MARK:—I am a little boy 11 years old and I would like very much to join your Horticultural Club. We take the RURAL and like it very much. When we get it from the office we all try to see who will get it first. I have two calves a year old, and I have a little yoke for them so they draw me on my wagon. We could not have much of a garden last summer, it was so dry that the seeds we got from the RURAL did not do very well, but we will try and do better this summer. I guess I won't write any more or you will be tired of it. I would like to see this printed if you have room. HENRY J. CLARK.

Waushara Co., Wis.

DEAR UNCLE MARK:—I wrote to the RURAL a few years ago, but never saw my letter in print so I will try again. I go to school winter and summer. I study practical and intellectual arithmetic, reading, grammar, history, spelling and writing. We had a very nice teacher this winter. We gave her a surprise party when her school closed, and had a splendid time. We made her a present of of a copy of Tennyson's poems. I would like to join the Horticultural Club. Yours truly,

Wayne Co., N. Y. MARY F. GAGE.

DEAR UNCLE MARK:—I am always interested in the cousins' letters, and have often thought I would write, and join the Horticultural Club. I would like to be enrolled as a member if you will accept me. We have taken the RURAL for a number of years, and it is always a welcome visitor. I am a lover of flowers, of which we have quite a large variety, some from the RURAL. If this is published I will write again.

Truly thine, DELL.

Various.

BRIEFLETS.

ACCORDING to the Western Rural, Heikes's Nurseries, of Dayton, Ohio, are close upon a fraud and we think the Western Rural well-informed in the matter, from inquiries and complaints which we ourselves have received. . . . . Sharpen up the hoes and keep them sharp. . . . . Mr. E. P. Roe says in his new book that the Cuthbert raspberry "has literally made its own way on its own merits." We should think that the RURAL NEW-YORKER has had *something* to do with it. . . . . Bear in mind that reports from Europe generally show that crops, as a rule, are in a highly promising condition. . . . . In talking about "cattle poisoning," it should be borne in mind that it is with animals as with people—what is poisonous to one may not be to another. . . . . Wagener, Keswick Codlin, Maiden's Blush, Early Harvest, Duchess of Oldenburg and Jonathan are mentioned by the Mich. Hort. Society as among the earliest to come into bearing. Wagener heads the list. . . . . Most kinds of strawberries are much weakened by permitting the runners to grow. Unless the old bed is to be given up, cut off (not pull) the runners as soon as they appear. . . . . "The farmer has largely the balance of political power." Christian Union. . . . . It is not yet too late for this latitude to set out Sweet potato plants. Make ridges 18 inches high and set the plants 18 inches apart. Nansemond is the best variety. . . . . Mr. Roe, speaking of the White Grub, compares the perfect insect, the May beetle or the June bug, to the awkward village loafer, quiet by day but active in the evening. "It dislikes honest sunshine, but is attracted by artificial light, at which time it precipitates itself with the same lack of sense and reason that marks the loafer's gravitation towards the lighted groggery." . . . . Scatter the coal ashes over the garden. You will find them beneficial.—Fruit Recorder. . . . . If you would have green corn until frost, continue to plant until July. . . . . We may now sow turnips, buckwheat or cucumbers where the early peas have been gathered. . . . . Pinch back the raspberry and blackberry shoots. . . . . Plow a single furrow and set dwarf celery in this. Bank up in the fall. Tall sorts may be grown in this way with less trouble and with the same results as if set in deep trenches. But at this time, dwarf kinds are more salable in the market and they are generally sweeter and more tender. . . . . Brine is better for washing butter than pure water, says Prof. Arnold. . . . . The latest rage among young ladies is to possess an old-fashioned spinning wheel for a parlor ornament. The desire to possess an old-fashioned wash-board and tub as a kitchen ornament doesn't rage much among young ladies. They are about as handsome as the spinning wheel, but they are not fashionable. —Norristown Herald. . . . . .

When a flea doth bite an elephant
It hurts somewhat, may be,
But the elephant's still the elephant,
And the flea is only flea.
—Steubenville Herald

. . . . . A friend writes us: "Why do you dub me Doctor? Although I did graduate and get a medical diploma, I would as soon be called Col. as Dr. or Prof. It is too cheap a title." Yes, but it is not the application of such titles to good men that makes them cheap. . . . . How would you like to get your bread and butter from a farm this season? What a lucky fellow I was to rent mine! What can be done on a poor farm when you have no rain? Yet by constant cultivation my crops of potatoes, corn, melons and small fruits look as well as ever, while some places I have purposely left untouched are as dead as a door nail. Don't say that stirring the soil in hot, dry weather is useless. [How does the writer dare to imply that we ever said it was! Eds.] It saves the crop, that is sure. What is the use of going to the Rural Farm; it would hurt my feelings too deeply. So don't look for me at present, ... Specimens of wheat from Long Island, showing the ravages of the Army worm, were exhibited on the Produce Exchange yesterday. The stalks were stripped clean of leaves, and of the pods nothing remained but husks.—N. Y. Times. This is the first we ever heard of wheat bearing *pods*. . . . . What many would like to know: Why lawyers, as a body, are so profoundly ignorant of everything except law. And occasionally of law. Why so few lawyers are sent to State Prison. If it isn't a foolish practice to pour spirits down to keep one's spirits up.

CATALOGUES, ETC., RECEIVED.

TWENTY-FIRST ANNUAL REPORT of the Trustees of the Cooper Union for the Advancement of Science and Art. This is an interesting pamphlet of nearly fifty pages, describing briefly the work and progress of the many free schools in the institutions.

PERSONAL ITEMS.

It was ten years ago when Mrs. Nesbet, of Guilford, Ont., was struck by lightning and thrown from the buggy in which she was riding, but she survived to be killed by another stroke during a storm on the 19th.

Two horses attached to a buggy in which were J. E. Haslam, wife, infant and nurse, of Perry Ga., were thrown to the ground by a stroke of lightning on Tuesday, June 8th, but horses and inmates escaped any positive injury.

In Geneva, N. Y., lightning struck a horse in the mouth and passed through his body, killing him instantly. The groom, Edward Burke, who was sitting near by, was made perfectly insane, and ran about crying, "Catch him, catch him."

A drunkard of Nashville, Tenn., while wild with delirium, lately dug a grave and lay down in it and died. His wife, who was frantic at the sight, called loudly upon Heaven to take her also. On her way home she was struck dead by a lightning bolt.

When lightning struck the house of Frank B. Highbee of South Bend, Ind., although no one was injured, it made a total wreck of everything in the building. The stoves were broken, the pipes were burst and battered out of all shape, the bed on which Mrs. Hughs, a cousin, was sleeping, badly splintered, a castor knocked from a table, a cupboard filled with canned fruit burst open and the lids of the cans knocked off, the carpet torn up and shreds of it scattered everywhere; in short, almost everything in the house suffered damage, while the chimney was knocked down, and a big hole knocked in the ceiling of one of the rooms. The sashes of the north windows were broken and fragments found several rods away. Every piece of metal in the house, even to the steel ribs in Mrs. Highbee's corset, was so heavily charged as to be converted into a magnet.

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Gems of English Song. 68 Songs	2.00
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Gems of Strauss. 80 Waltzes, &c	2.00
Cluster of Gems. 43 Pieces	2.00
Home Circle. Vol. I. 170 Pieces	2.00

Also take for the summer THE MUSICAL RECORD which will bring new music every week. $2 per year.

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Do not fail to send for our new Illustrated List of Cider Mills.

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Just What has been Needed!
YOU WANT IT!

A Cider Mill that will grind sixty bushels apples per hour and a Press that will press seventy-five gallons at a pressing; designed for Hand or Power.
Also, our new One-Horse Power Mill. This cannot be beat. A One-Horse Sweep Mill, that will grind sixty to seventy bushel per hour: Power and Mill all combined. You can take it right into your orchards and make your Cider. Do not fail to see it before buying. Manufactured by the
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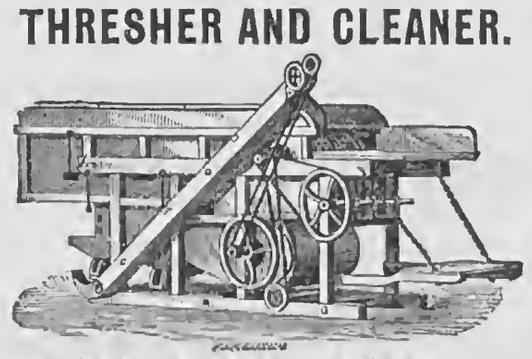

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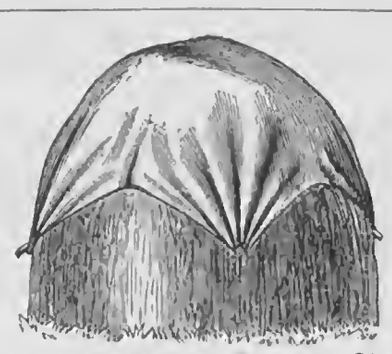

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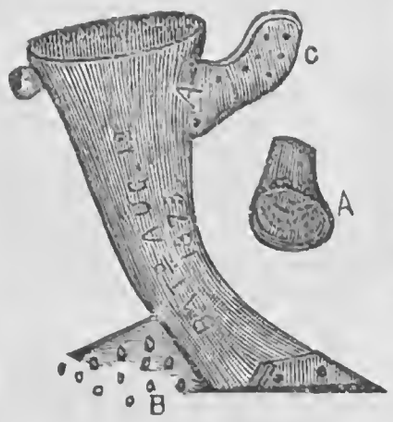

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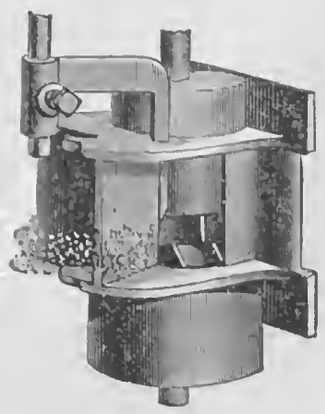

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AN Irishman who had a pig in his possession was observed to adopt the constant practice of filling it to repletion one day and starving it the next. On being asked his reason for doing so, he replied:—Och, sure, and isn't it that I like to have bacon with a strake o' fat and a strake o' lane aqually, one after t'other."

A TEACHER asked a bright little girl: "What country is opposite us on the globe?" "Don't know, sir," was the answer. "Well, now," pursued the teacher. "if I were to bore a hole through the earth, and you were to go in at this end, where would you come out?" "Out of the hole, sir," replied the pupil, with an air of triumph.

HOUSEKEEPER to milkman: "My friend, you put water in your milk." "Oh, no, I don't ma'am." "But I am sure you do." "Oh, no, ma'am." "Now will you say solemnly that you do not put water in your milk?" "Well, ma'am, well, I must say that sometimes I put some water in the can, and put the milk in that, but I never put water in the milk."

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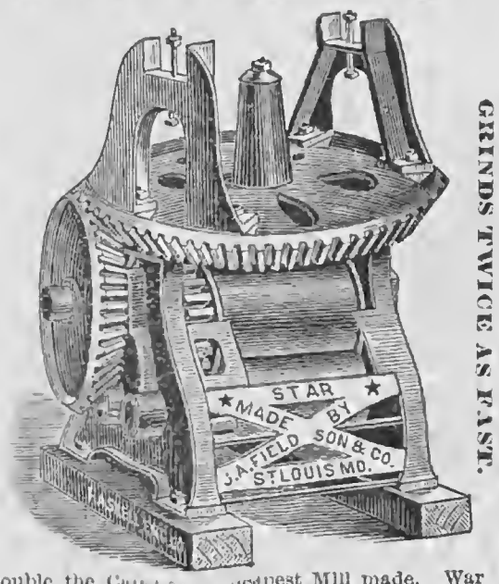

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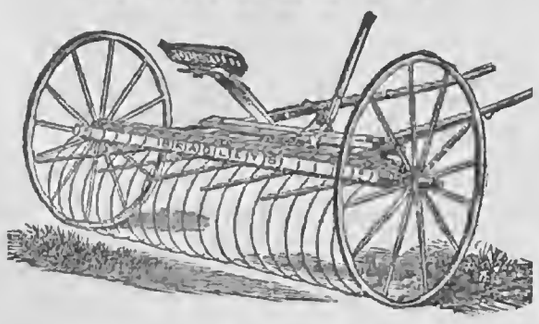

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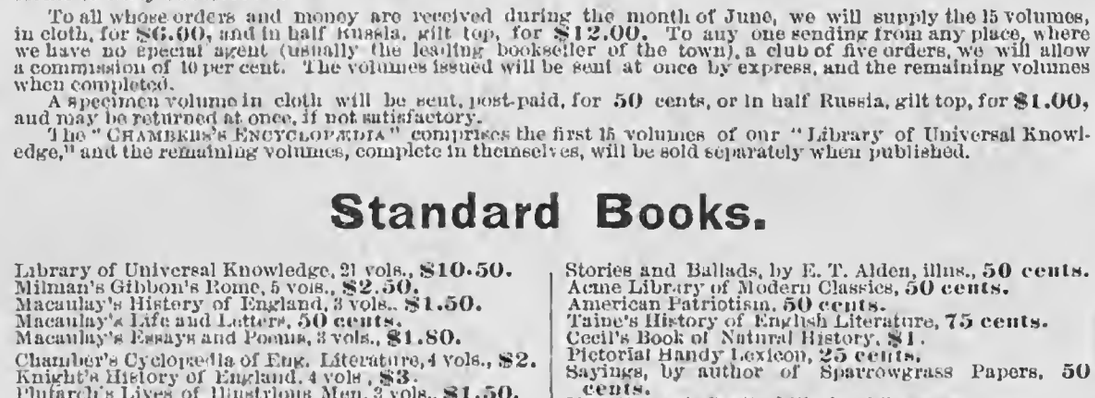

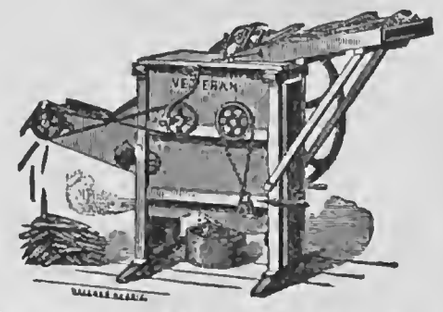

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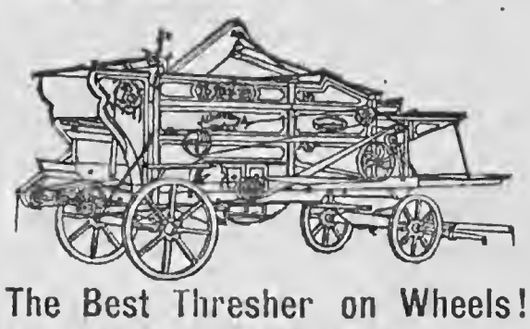

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Vol. XXXIX. No. 27. Whole No. 1588. | NEW YORK, JULY 3, 1880. | Price Five Cents. $2.00 Per Year.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Field Crops.

FORAGE GRASSES.

PROFESSOR W. J. BEAL.

Indian or Wood Grass—Sorghum nutans. These common names are not very satisfactory or in very general use. This is a tall native grass distributed over much of the country east of the Rocky Mountains. The illustration gives a clearer idea of the plant than any description, unless it be for a botanist. The report from which the cut is taken says: "It grows rather sparsely, and forms a thin bed of grass. The stalks are three to four feet (often six or more) high, smooth, hollow, straight, and having at the top a narrow panicle of handsome straw-colored or brownish flowers, which are rather drooping in fruit." According to one report, it constitutes about 16 per cent. of the grasses in dry prairie regions. It forms good feed when young and tender, but becomes dry and woody as it gets older. It flowers in August and September. The late Prof. J. Stanton Gould, of Cornell University, said it was "of no known agricultural use."

In the South there are two other species of Sorghum which are much like the one above-mentioned.

So far in these articles we have noticed three leading grasses of the arid and sandy plains of the United States. These are said to constitute not far from 59 per cent. of the bulk of the feed in these regions. As they are estimated in the East, where we raise grasses which are so much better, they are of little value, but where they are abundant and probably about as good as any of the native grasses, they answer a good purpose.

Crab-grass, Finger-grass—Panicum sanguinale. This is an annual, one to two feet high, bearing four to fifteen spreading, tender spikes to each stalk. It has been introduced from Europe. The plants are spreading and freely take root at the lower joints, making it a plant hard to pull up. In the North it is a common and troublesome weed. In the South it is a valuable grass for hay or pasture which is of excellent quality. It appears on lawns where the soil becomes poor. See cut fig. 223.

THE OUTSIDE AND INSIDE.

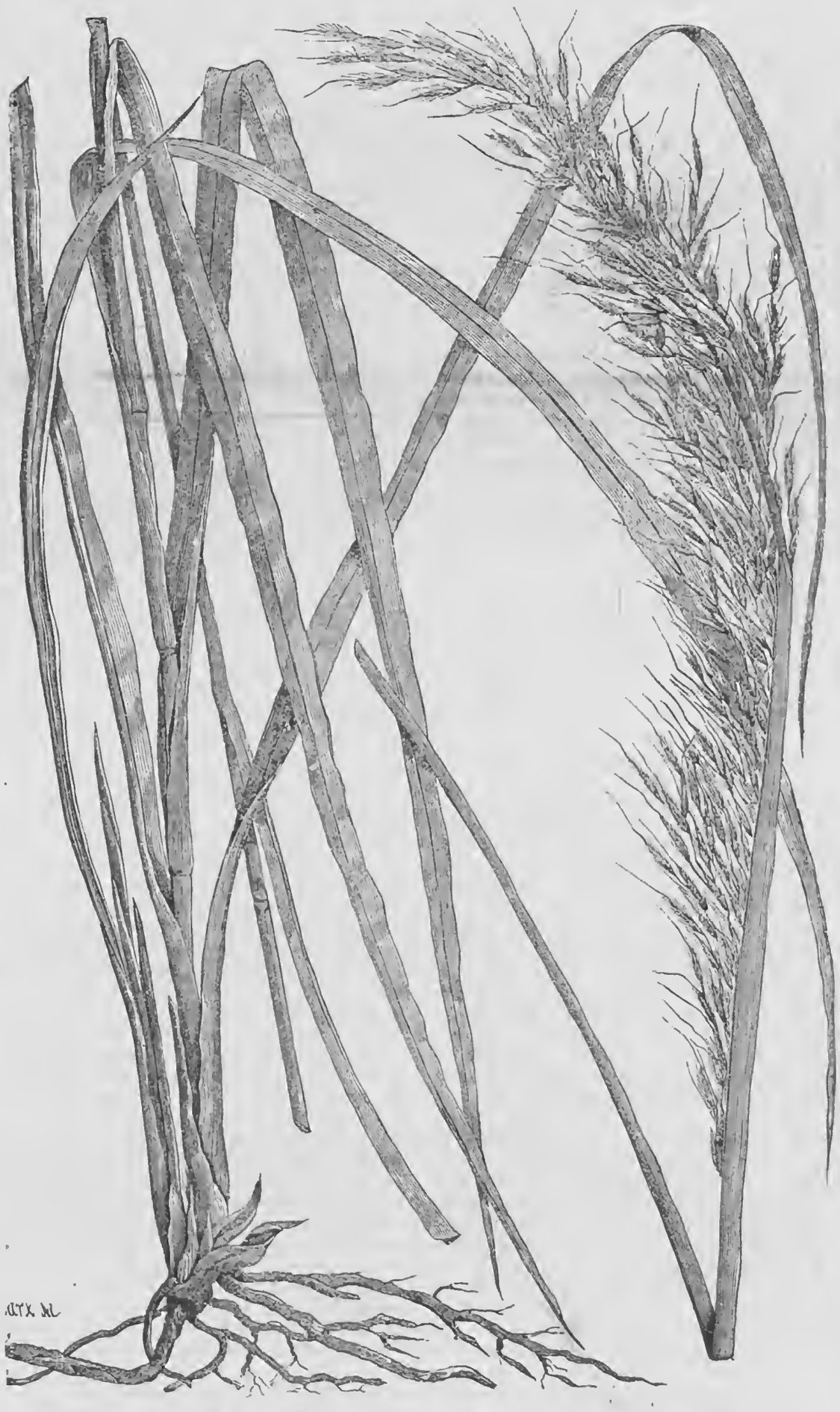
The Illinois Winter Wheat Crop.

No contemporary record of the great agricultural events of the present year would be complete, which did not contain a more or less full account of the winter wheat crop of Illinois for 1880. It is one of the many surprising agricultural phenomena of this age and time, and is a striking example of the very sudden changes which may steal insensibly upon us without one being able more than partially to understand or explain them.

But a brief review of the progress of wheat cultivation for the last few years in Illinois may be necessary in order to more clearly understand the present situation, which is one of quite unusual promise as relates to nearly all the crops, and of extraordinary activity and excitement in respect to the very surprising outcome of the winter wheat crop.

Roughly and generally speaking, Illinois has three distinct and different kinds of soils, consisting of the black prairie soils of the north and center; the yellow and white clays of the south, and the brown soils of the regions intermediate between the two. Except where there are small or large bodies of timber, the brown soils and the yellow and white clays lie south of the parallel of 39° 30′ to 40°, and in this portion of the State it is that by far the largest and best wheat crops are grown. The present crop is now in the course of being harvested. Prior to 1854 it was not known or believed that the post-oak flats and the white and yellow clays of the southern portion of the State were admirable wheat lands, and consequently what little wheat was raised previous to that time, was obtained from cleared timber lands, as in the non-prairie States. But the fact once made known, the prairies were rapidly sold, settled and cultivated, and under the general description of the "winter wheat belt," this portion of the State has enjoyed a great wheat-growing reputation for 25 years.

On the first settlement of the black and brown soils, or so much of them as lies south of the 40°, about 1835, and thereafter to the second great increase of population which followed the construction of the Illinois Central railroad, from 1851 to 1858, and even to 1860, the winter wheat crop on the virgin soils of the prairie was a tolerably sure one, and the acreage of those times came something near to that of Indian corn. After 1860 the winter wheat crop began to fail, and was so gradually and generally abandoned that from 20 to 0 counties in the south central portions of the State went abroad for their bread. But about 1876 another change took place; wheat cultivation became successful in the hands of a few who tried it; there was improvement in 1877, and farther advance in the same direction in 1878, and when the harvest of 1879 came, half the country went more than half crazy over a crop, which on the black and brown soils averaged fully 25 bushels per acre, and more often went above 40 than it fell below 18.



INDIAN OR WOOD GRASS—Sorghum Nutans.—Fig. 222.

The first consequence was an enormously increased acreage in wheat sown in the fall of 1879, some counties within the brown soil limit, Coles, for instance, having enlarged the crop acreage three or four times, and nearly all counties south of the 40° doubling it. But the second and surprising consequence is that under conditions almost wholly different from those of the season of '78–'79, which were thought to be extremely favorable, the crop of '79–'80 approaches in yield and quality that of last year. But there is this fact to be borne in mind and this discrimination to be made—the brown soils have a better crop than the black soils, and there is only a small area of good wheat north of 40°, winter having killed most, and the midge having taken a good portion of the crop north of that line.

Considering that all of Southern Illinois, south of about the 40th parallel of north latitude, is little less than one great wheat field; that the acreage of the crop has been doubled and in some cases increased three, four and five-fold within one year; that the crop is nearly universally good, and in some places very heavy, at least so far as straw is concerned, and considering that the harvest time has burst suddenly upon them in twenty counties and without much regard to latitude; that the mines of Colorado and the delights of Kansas and Nebraska have drawn most of the surplus population away out of the country; that the railroads cannot spare their laborers, for they, too, are getting ready to move the crops; and that the fruit crop absorbs the labor of the women and boys in the towns, one can understand the difficulty the farmers have in getting harvest hands, even though $3.50 to $3, and even $3 50 to $4 are offered for a day's harvest work. The truth is that high wages may induce idlers to work, but can create neither idlers nor workers.

But the self-binders would supply this want if there were self-binders to be had, but they, too, have been taken to the last one, and the manufacturers have two orders on hand for every machine they can possibly deliver. When the self-binders and the Marsh harvesters could not be had, anything and everything capable of doing harvest work has been bought and put to work, and to the extent that throughout the length and breadth of Southern Illinois there are not 25 idle reaping machines capable of doing harvest work. And the work is not confined to the hours between sunrise and sunset, but goes on all night long under the light of the moon and stars, and when these are not sufficient, lanterns and guides with lights supply their place. Nor is Sunday a day of rest, and even the circus sets up its empty tents in deserted towns; the usual group of bronzed-faced idlers is not seen about the railroad stations, and the passenger trains come and go with quarter-filled coaches; for the farmers and their families are at home and in the fields. So far, for the winter wheat belt the weather has been favorable for harvest work and should it continue up to the 4th of July, the great task of securing the wheat crop will have been achieved, though nobody but those who have been witnesses to the noble spectacle, can have an adequate idea of the enormous amount of physical and machine force expended and the wear and tear of mind gone through with.

After the stacking of the wheat will come the thrashing, though most of the grain will be hauled from the shock and thrashed. Then will come the work of sale and delivery; then the warehouses will fill and the freight trains begin to move; then the boom in business from the enormous wheat crop will begin, and all Central and Southern Illinois will fall upon times of business activity and excitement, which will recall the flush times of the war.

Of the causes which have operated to make such a sudden and vast increase in the wheat acreage; of the unseen forces which have produced a wheat crop nearly equally good under conditions so widely different; of the results of so much increased production on the social and economic situation, which will follow; of the rehabilitation of the country already manifested and of many other things not manifested, there is no time to write now—but there may be at some future time.

B. F. J.

Champaign, Ill.

CULTIVATING CORN.

THE culture of corn is a simple process, yet it seems to me there is room for some improvement, or at least for suggestions of improvement, in the method usually followed by our farmers. The work of cultivating corn comes in a busy season, when farm hands are scarce, and various kinds of farm work are urgent; hence there is need of expediting the work as much as practicable. It is, at best, a poor crop to grow for profit on our rich Eastern farms, where land is high, and unless we can produce it cheaply there is an absolute loss. In our grandfathers' time it was customary to employ much hand work in the culture of corn. The work of "hilling" which was then considered absolutely necessary, was all done with the hoe, which made the cultivation of a field of corn very laborious and costly.

Thanks to our inventors, we now have improved implements for cultivating, which make it possible to perform most of the hoeing by horse power. One horse, with a skillful man, will now hoe as much corn in a day as ten men in former years by the use of hand hoes. There is need, however, of exercising considerable care and patience in cultivating corn or potatoes as they should be.

However good the cultivator or horse-hoe may be, it will not do good work unless it is kept in good order. The teeth, or diggers, should be kept sharp and well polished, so that the earth will slip readily. If the teeth are blunt and rusty so that the earth adheres to them, the work cannot be well done, and, besides, it is much more laborious for the horse. Let cultivator teeth be put on the grindstone occasionally and sharpened or polished if need be, and when the cultivator is not in use, let it be protected from the weather, to keep the teeth from becoming rusty.

Considerable skill is required to horse-hoe corn properly and with little labor. It is necessary to run as close to the rows as possible without uprooting the hills, which will leave but little hard work to be done. It will pay farmers to spend a few moments with their laborers in order to teach them how to manage the cultivator so as to do the work effectually. A careless, unskillful workman will sometimes let the cultivator slip along haphazard without accomplishing the desired effect.

G. A. GOFF, JR.

Chemung Co., N. Y.

Pomological.

CONVENTION OF AMERICAN ASSOCIATION OF NURSERYMEN, Etc.

[Rural Special Report.]

THE fifth annual meeting of the American Association of nurserymen, seedsmen, florists and kindred interests, was held in Chicago, June 16th, and lasted three days.

The morning of the first day was consumed in routine business, consisting of the address of welcome by Edgar Saunders, an address by the President, T. S. Hubbard, of Fredonia, N. Y.; the report of the Treasurer, and the appointment of the Committee on Business.

The afternoon session, after hearing the report of the Committees on Business and the appointment of the Committees upon Nomination of Officers and that upon Exhibits, by the President, took up the regular order of business, the first of which was a paper from Peter Henderson, of New York, upon

"Humbugs in Horticulture."

He said that experience with other swindles is no safeguard against swindles of this sort, as the horticultural swindlers often find their best customers among the intelligent lawyers and merchants of our large cities, and the speaker gave as an example the Blue Rose swindlers who sold large quantities of the humbug at high prices in New York City, until having received too much free advertising, they were obliged to leave. Many pretended to have the secrets of success, which they offer at a price to the confiding public. There are no secrets in horticulture, and those who vend such should be let severely alone.

This was followed by a paper from Professor Husmann, of Missouri, upon

Tree Peddlers.

He said that most buyers are ignorant of what they buy, and in many cases of what they want, and take our goods on trust; that on account of the difficulty in detecting frauds, the temptation to deceive is great. Of tree peddlers he formed two classes:—first, the reliable and trustworthy ones, who, he regretted to say, formed the smaller class. They sell only reliable sorts and represent reliable firms. Very much of the progress of horticulture among farmers is due to their labors. The other class are unscrupulous, using fancy pictures, and telling big stories, such as those about a Canadian peach which is perfectly hardy, and which grows in the shape of a poplar; marvelous seedless grapes, tree strawberries, etc. To counteract the influence of these is of first importance, and to this end he urged the diffusing of sound horticultural knowledge among the public. He would employ no agents except reliable men and give certificates to no others, and would use only faithful representations of fruits.

Mr. Manning, of Massachusetts, said that for years he had printed a notice in his catalogues warning all to beware of any one representing his establishment, who could not show an open letter dated within 20 days and written under a printed heading. Mr. Foster, of Iowa, had exposed tree swindlers for a long time, but could not see that any headway was being accomplished. The farmers need enlightenment and education, and he knew of no better way than to publish pertinent matter through the local papers. Mr. Albaugh, of Ohio, had fought this thing for several years. He thought there was no one particular way to reach the case. Swindling is not confined to the nursery business; neither are rusties the easiest victims. They have been "chipped," and to use a popular expression, "are looking a little out." Buyers only trust the man—they don't care for the authority—a good talker is all that is really necessary to persuade them. Each buyer must learn to read character. You can't open their heads and *give* them brains. No association can do any good in this connection in any other way than by enlightening the public. He thought some progress had been made, as more honesty and authority are needed now in traveling agents than ten years ago. He did not think we should condemn all substitution. Sometimes our agents sell sorts that we know will fail in a given locality. In such cases nurserymen do their customers a kindness in giving them some other sort of the same general character, but which will succeed there.

Mr. Moody, of New York, thought we should not forget that we have honest dealers in our ranks. He also thought that nurserymen ought not grow those sorts that are nearly worthless, although there may be a lively demand for them. He denounced the Wild Goose plum as being worthless in New York. Mr. Scott, of Illinois, had eaten the Wild Goose plum and liked it. It is profitable in the West and South. Mr. Bush, of Missouri, advocated that nursery products should be sold more largely through local agents who have a reputation. Mr. Husmann said that in his State local agents were of no account. They seldom devote their whole time to the business and are not the proper instruments to employ in reaching the people. Mr. Plumb, of Wis., offered the following resolution, which was carried:

RESOLVED, That this Association recommends general dissemination of horticultural knowledge as the most important factor in mitigating and remedying the evils complained of in regard to the dissemination of nursery products.

In the evening the society first discussed the subject of rates on railroad freights, from which it seemed that some railroads, especially those west of the Missouri River, would not accept trees or plants for transportation unless the freight were paid in advance, being unwilling to accept guarantees even from thoroughly responsible parties. It was the sense of the meeting that nothing could be done.

Next was read a paper by W. C. Strong upon the subject of

"The Effect of Various Stocks on the Cion and the Future Tree."

The speaker said that there are two methods of propagating, the one by seed, the other by division. From the seed we get variation, and, as many plants are not propagated easily in that way, we bud. The bud preserves its individuality and is affected by the root. The stock imparts constitution to the bud. The Chinese Saud Pear is of luxuriant growth, and it's seedlings ought to be valuable as stocks. The root is also affected by the cion or bud. Plums budded on peach roots are more liable to disease than upon their own roots; but peaches on plum roots are good. The Yellows—which is a fungus growth on the root (?)—does not attack the plum root, and so we escape it.

Mr. Henderson, of N. Y., thought that we had "Graft Hybrids," or amalgamation of stock and graft, and instanced the Abutilon variegata. If it is grafted on the top of a plant, the variegation appears below the graft. Variegation is disease and we inoculate disease. Mr. Powell, of N. Y., said that the stock is affected by the graft, and referred to the crab as a well-known illustration. Mr. Moody thought with Mr. Powell, but did not believe that the fruit was affected by the stock. He had budded the Duchess of Oldenburg on crab seedlings. They commenced to bear the second season and never made good trees. It dwarfed them.

Mr. Albangh, of Ohio, said that peach on plum may be good at the East, but it was not so in the West and Southwest. The peach root with them was not short-lived; it was longer-lived than the plum root. Plum on peach is not undesirable in the Miami Valley. We have no yellows or other trouble with our peaches, except the borer. Mr. Powell said they used nothing but the Canadian wild stock for the peach. It never dies, and peach on that stock stands our climate better, and is not troubled by the borer.

Mr. Waters, of Wis., thought the best stock for peach and plum to be the Miner plum. He knew of trees of this sort in his State that would measure four feet in circumference. It is not hurt by anything, and is propagated by root cuttings. Mr. Weir, of Illinois, had experimented with the seedlings of the Chinese Sand Pear. They grew like the French stocks and were of no more value than they. Mr. Moody would take soft wood plum, and not American seedlings, to grow the peach on, as the seedlings are hard and must dwarf the peach very much. Mr. Weir had found the European plum root to be much more tender than the peach root. Mr. Stark, of Missouri, had tried peach on plum, using the common red plum. He found that early sorts did well, but late ones would not produce well. His largest fruit was grown on trees double-worked. Mr. Stickney, of Wisconsin, thought that dwarfing the peach on plum is just what we want. It matures early, bears early and is hardy.

The subject of careful handling and packing was then taken up. Mr. Budd of Iowa, stated that the European method of packing was better than ours. He had had trees from Northern Europe that were three and four months on the way, and they reached him in perfect condition; whereas frequently he had trees even from Rochester reach him in very poor condition. He thought our nurserymen should be more careful.

The association then discussed

Insects Injurious to Nursery Stock,

and the best methods of destroying them. Mr. Budd had used carbolic acid soap as a wash for trees. It kept off the rabbits, and also the borers from apple trees. Mr. Albaugh had used diluted tobacco water for keeping off and destroying the Black Cherry louse. Peach buds in his section were seriously injured by a bug that eats off the terminal bud when the tree is only 12 or 18 inches high. It is more prevalent on alluvial than any other land. He asked for a remedy. For the black Span-worm which is often troublesome, he knew of no better remedy than hand-picking. Mr. Henderson stated that the English sparrows will eat the last-named pest, and they had cleaned his premises of the Rose-slug. Mr. Manning found the Canker-worm difficult to manage; but by the use of poisons, such as Paris-green, London-purple and arsenic diluted with water, he had finally succeeded. Mr. Foster, of Iowa, had used all three of the above poisons; but preferred London-purple. Mr. Zimmerman, of New York, stated that the way to manage the Canker-worm was to prevent the female —which is wingless—from going up the tree, which she does to lay her eggs. This can be done by bands. He also recommended the use of air-slaked lime for slugs on cherry and pear trees. Mr. Woodward, of New York, reported that Paris-green is the thing for the Codling-moth. The cost is about one cent per tree, and it is effectual. Mr. Manning stated that an ice storm in the spring freed them of the Tent-caterpillar. Mr. Woodward, being called upon to state how Paris-green is used for the Codling-moth, said he threw it by means of a small force pump over and through the tree. He used a tablespoonful to a barrel of water, and applied it before the apples began to droop, while they were erect upon their peduncles.

The second day's session opened with the reports upon

Quantity and Quality of Stock.

Mr. Augustine, of Illinois, reported that old stock looked thin; but of younger trees there was a better supply. Of sour cherries there was a good supply; but of sweet sorts and pear and plum trees and apple seedlings, the stock was light. Stock had all made a fine growth and was in capital condition. Mr. Spaulding, of Illinois, thought there would be but little young stock put on the market this fall; but what there was would be of very fine quality. If anything, stock had made too much growth. Mr. Hill, of Illinois, reported that of small evergreens there seemed to be a short stock. The spring planting was coming along well, but for a year or two the lighter grades would be scarce. Mr. Graves, of Illinois, reported the spring planting of apple seed to have resulted in a partial failure; other stock is doing well; apple trees are especially fine. Mr. Douglas, of Illinois, being absent, Mr. Stickney reported for him, as he had been through the former's grounds recently. Mr. Douglas has a good and large stock on hand. He is making a specialty of the new Rocky Mountain evergreens, many of which promise to be decided acquisitions to our present list.

Mr. Van Lindley, of North Carolina, reported for his State an increased quantity of apples and peaches, of which there would be a surplus. Stock was doing nicely.

Mr. Peters, of Ohio, reported there was in his section a fair supply of apples and a good stock of peaches; of cherries a fair stock, and a large one of apple seedlings and Mahaleb stocks. The old stock of apples has been used up. Mr. Hoover, reported for Dayton, Ohio, the usual supply of apples, there being enough for th demand and a little to spare. Of dwarf and standard pears there was a small stock; but not enough. The supply of peaches is large, but of cherries not so great as heretofore. Small fruits are in abundance. We need grapes, pears and evergreens—we have a good stock of Wild Goose and Weaver plums, and a fair stock of other sorts. The season's growth is excellent. Mr. Weltz, of Ohio, reported the stock of apples to be very good and of cherries sufficient. Of pears there is not enough. Peaches are plentiful and of good quality. Grapes and evergreens are needed, especially Irish Junipers.

Mr. Underwood, of Minnesota, stated there was no great stock in Minnesota. There had been no heavy plantings, and fruit trees had been seriously injured by the past winter. They were obliged to grow iron-clads, and nothing else. The Duchess, Wealthy and Tetofsky were the only apples that stood the winter well. The common crabs they did not care about, the newer sorts being much better. In the nursery all varieties of apple and crab were injured; but in the orchards the same varieties were hardier. The Wealthy is the very best apple they have, and will come into bearing three years after being planted. Next in order of value are the Duchess and Tetofsky. Four-fifths of the Haas were killed to the ground or badly injured. The Walbridge, Pewaukee, Fameuse, Golden Russett, Price's Sweet and Saxton all fared better than the Haas, but all were injured. Of the crabs they found the Orange to be a good one. Whitney's No. 20 is also hardy; but Bethel is not. The Hesper does well.

At this point Mr. Budd, of Iowa, moved that the wives and daughters of members present be made members, without fee, which was unanimously carried. The new President, Mr. Albaugh, of Ohio, was then conducted to the chair, and he expressed his thanks in fitting words for the high honor thrust upon him, which had come unsought by him. He congratulated the association upon its flourishing condition, and predicted for it a glorious future. The reports were then continued upon the

Condition of Stock.

Mr. Stickney, of Wisconsin, stated that for the current year there were sufficient apples, but not quite enough cherries or plums. Of small evergreens there is no surplus. Mr. Plumb, of Wisconsin, said that there were but few nurserymen left in the State. The planting for three years had been light, and stock is becoming scarce.

Mr. Moody, of New York, reported the quality of stock to be fine. That grown by farmers is used up, and apples are all in the hands of the nurserymen. Of cherries, plums, and pears there is a good supply. Mr. Powell, of New York, agreed with Mr. Moody. The surplus stock has all been used up. We have nothing left but clean, thrifty, well-grown stock. Small fruits are in abundance, and the demand for them is great. Mr. Sweet, of New York, reported a fair supply of apples in Dansville; but not so many as last year. Standard pears are abundant, except younger trees. Dwarf pears are not so plentiful as last year. Cherries and plums are about as usual. Mr. Richardson reported for Geneva, N. Y., that the poor stock is all gone, a large acreage having been cleaned off last Spring. Young stock looks fine, but is not in great supply. Standard pears are in fair supply. Cherries are short, and plums in good supply. Mr. Hubbard, of New York, reported the stock of grape-vines to be about as usual, and doing well. Mr. Jones, of New York, reported for his section (Rochester) that there was no surplus. The old stock of apples which was in the hands of farmers is used up, and what there is left is in the hands of nurserymen. Of cherries there is a light stock; of other things only about enough for the usual trade.

Mr. Teas, of Indiana, stated that the nursery business was about run out of his State, but little being grown except small fruits. They did not have enough apples or pears, but they had enough cherries and peaches.

Mr. Waters, of Iowa, reported that they had no pears at all, and but few sweet plums. Old apples are out of the market, and evergreens in light stock. They would have to buy cherries, pears, and plums. Apple seedlings are short this year, a heavy wind-storm having scattered the seed all over the country after being planted. Osage Oranges are in limited supply, and this is in the hands of a few growers.

Mr. Manning reported for Massachusetts a general scarcity of stock, except in ornamentals, which are abundant.

Mr. Wilson, of Michigan, reported a large and fine stock, especially of peaches, which is the largest he had ever known.

Mr. Bush, of Missouri, reported that the small nurserymen had gone out of the business, and the larger ones had curtailed their plantings. Vineyards are looking fine.

Mr. Webber, of Tennessee, reported stock in good condition. A neighbor of his would

have a stock of about a million of apple seedlings. Other stock about as usual.

Dr. J. A. Warder of North Bend, Ohio read an excellent paper on "Propagation as Dependent on the Similar Functions of Seeds and Buds." This was followed by a paper from Isidor Bush, of Bushberg, Mo., upon "The Influence of Phylloxera on American Grape-vines." He stated that the phylloxera had been known for centuries east of the Rocky Mountains, and we have finally developed species of the vine which successfully resist its attacks. The others had been obliged to succumb, and we had the "survival of the fittest." It may aggravate, but it does not produce disease. European investigation proves this. For years the French objected to the introduction of American vines for stocks upon which to graft their varieties, and it is the only hope of their vineyardists, as a European vine once attacked, never recovers; whereas the American vine is totally exempt from the ravages of the pest.

Mr. C. D. Zimmerman of Buffalo, New York, then read a paper upon "Protection of Trees from Sun." He thought this a very important subject as trees were more liable to be injured by the sun than by frost. He thought in trimming our trees we should copy nature which keeps the branches on the trunk of the tree till the top is of sufficient size to afford some shade. This is especially true of the apple if we want long-lived trees. In the discussion that followed Dr. Warder instanced one occasion when a thermometer moved from the shade, where it indicated a temperature below zero, to the sunlight, showed a temperature of 30 deg: such extremes must be followed by bad results. Mr. Galusha, of Ill, had made extensive trips through the orchards of the State and found no healthy apple trees, except those with low heads. Considerable discussion followed, all corroborating the soundness of Mr. Zimmerman's views.

Mr. Stickney related the case of a consignment of trees which were shipped to Switzerland the past season; but which that government refused to admit within its boundaries, fearing by so doing the dreaded phylloxera would be imported. He was asked to present the case to this Association and procure its aid in enabling the purchaser to get his plants admitted by the Swiss government; accordingly he presented the following resolution which after some discussion was passed:—

RESOLVED, that nursery stock of all species, including grape cuttings but excluding rooted vines of the grape, may be imported or exported without any possible danger of transporting phylloxera therewith.

Dr Warder then read a paper upon the Ash, which he regarded as one of our most valuable shade trees. The White Ash is *the* tree; but the Grecu Ash, which resembles it very closely, is very desirable as a street tree, not being of so great a growth. The foliage is handsome and the tree free from disease.

The evening of the last day was devoted to

New Fruits.

Mr. Woodward, of N. Y. stated that the Niagara would probably be introduced in the fall of '81 or the Spring of '82. He was satisfied it was *the* vineyard white grape. All the stock is in vineyards except what is growing this year. If possible there will be no humbuggery. By a simple process every vine will be sent out under seal. It is being tested in Mich. Canada, Vine Valley N. Y., and Mass. Mr. Peffer said the De Soto plum did well in the Northwest, being hardy, prolific and an early bearer. Mr. Moody spoke highly of the Mann apple which was grown largely in Niagara Co., N. Y. and was now being tested in various parts of the country.

After hearing the report of the Committee on Final Resolutions, the meeting then adjourned to meet next year at Dayton, Ohio.

H. T. J.

Farm Topics.

WESTERN FARMING.—VIII.

W. I. CHAMBERLAIN.

Stark County, Ohio.

I THINK I have mentioned this county in these columns as one of the best in the State. Its soil and climate are admirable, and its farmers are shrewd and diligent agriculturists and horticulturists. It lies south of Summit, my own county, south of the lower line of the Western Reserve, and south, therefore, of the droughty region mentioned in my last. It almost always has abundant rains, sometimes almost too abundant just before and during harvest. Just now, for instance, a heavy, sweeping storm would lodge thousands of acres of wheat already so heavy that it can hardly stand up even under a light shower. I said the farmers were shrewd and diligent. Under the first adjective I intended to class agricultural intelligence, research, reading, testing new seeds, varieties, methods and fertilizers. The farmers are chiefly of Dutch or German descent and naturally conservative, but that does not prevent their being thoroughly wide-awake to discover whatever is likely to be of advantage to them as farmers. Of course, they are not all so; I simply mean they are as a body. I was more than ever convinced of this while in attendance last week, by invita-

PANICUM SANGUINALE.—FIG. 223.

tion, at the monthly meeting of the county horticultural society. It was evident from the fine display of fruits of the season, in the clear and prompt reports on the future outlook, and in the essays and speeches.

My ride and drive, too, through the county, going by one route and returning by another, impressed me more than ever with the general excellence of the farmers and farming. I know it is a remarkable wheat year, the fourth in succession, but such wheat I think I never saw—so large an acreage and so immense a stand. I had my eyes open for fifty miles or so through the country, on cars and in carriages, and do not recall a single field that was poor; not one, I think, that would not probably yield twenty bushels per acre. If there are such fields they lie back from the roads and railroads. On the splendid carriage road from Massillon to Canton, a distance of eight miles, I should judge the average yield of all the fields in plain sight would be 30 bushels per acre. That was the opinion of other good judges also. Other crops, too, look fine, though the grass is a little below the average. The fertility of the soil is kept up by the free use of lime, plaster, clover and barnyard manure. Hence the area under the plow can be and is large. The fields, too, are large—not large for Dakota or Arkansas, but for Ohio. They are often purposely divided to facilitate rotation and the pasturage of clover. Still they are large enough to turn a self-binder in.

Take, for example, the fine farm of Hon. Arvine C. Wales, of Massillon, with whom I spent the night and of whose farm I can therefore speak more clearly. In front of his house lies a wheat field of 60 acres in one "chunk," and he has two more, making 130 in all for this year. Next year he will put out considerably more. The sixty-acre field has highway on three sides and a lane on the fourth, and we drove entirely around it behind his thoroughbred mares. The stand of wheat was so magnificent—yes, that is the word—that I could not resist the temptation to get out of the carriage several times and go into the field a few feet to see if it really stood as thick as it seemed to do. It is of the Fultz variety, which seems to yield best on the gravelly loam of Stark county. I could judge better of the yield of Clawson, but should find it at 35 bushels per acre, and Mr. Wales estimated it at the same. I asked him how he got such a stand over the whole field. "Why, I manured the whole field." "How many loads in all?" "Fourteen hundred, the year's make, well rotted, and drawn in August and September." I asked one of his men if manure drawing didn't get to be a trifle monotonous, and he said *it did*. Four weeks' steady pull! It comes chiefly from 2,000 sheep, about 50 hogs, 30 or 40 head of cattle, and 14 horses, and "consumes in its manufacture" the straw and chaff of over 200 acres of wheat, oats, barley, etc., and 50 acres of fodder corn, besides hay and grain, *all of which are saved*.

In winter the sheep are housed in several large, cheap, well-ventilated sheds, and are thoroughly bedded with straw and fed, as are the cattle, almost exclusively on fodder corn. This is sowed with a wheat drill with all the tubes running, cultivated only with the smoothing-harrow, cut with the reaper, cured thoroughly in small, upright shocks, and, after three weeks or so, bound in bundles and put in shocks of thirty or forty bundles, and drawn from the field to the feed cutter as needed in winter. This cutter is run by steam and has an elevator attached, like the "stacker" of a thrashing machine, that carries the chaffed feed and dumps it into either of two immense, tall, steaming tanks or casks. As it passes along this elevator, it is uniformly mixed with meal or middlings sifted on to it from a wedge-shaped bin above, that holds a day's feed and just empties itself in the time it takes to cut the day's feed of fodder corn. One tank is filled and steamed while the other is fed out. Wagons are driven beneath the tanks and filled with almost no labor, and the feed is drawn to the several sheep sheds and cattle stables and fed in racks and mangers adapted to this kind of feed. Mr. Wales believes the fodder thus cured is quite as good as and far cheaper than ensilage put up in silos. It brings the labor of drawing, cutting, etc., at a season when there is little other farm labor, and saves the immense expense of silos for such large quantities. He says the fodder keeps perfectly in the field, and the only drawback is a "soft winter" when the teaming is, of course, heavy. When there is frost or snow there is no trouble.

As I looked over this farm of some 300 or 400 acres, with its grain, fodder corn, sheep, hogs, dairy, city milk trade, and immense annual product of the richest manure made under cover, with all the urine saved by free use of straw and chaff, it struck me that Stark county farming might possibly "pay." I asked Mr. Wales if it did, and he admitted that possibly it might if it were not for five drawbacks:—rats and mice, dogs, repairs, taxes, and hired help! The cutting and steaming of fodder are not very expensive, steam being made with coal-slack at fifty cents per ton, from nearby; for Stark county is rich in mineral (coal) as well as agricultural resources. I asked Mr. Wales if sheep husbandry pays. He said it did, or would only for the dogs. His sworn bill of damages before the county dog commissioners this year was $1,200, and the "dog money" will only pay a small percentage. This dog nuisance is an utter abomination here in Ohio, and is ruining one of our best industries. Dogs seem on the increase, and our laws are defective and insufficient. One fault is obvious:—Some counties keep almost no sheep; but the surplus money from the dollar dog-tax *does not go into a general State fund* to be drawn on by counties where the local fund is entirely insufficient to pay the immense damages to sheep.

It is a serious thing for some men to be driven out of sheep husbandry. During the war, for example, Mr. Wales's hired men were in the army except two who were too old and infirm, and he had little land under cultivation. But his clip one year from over 2,000 sheep brought him over $10,000, and he sold $2,000 worth of sheep, mostly "increase." This is a neat little item of farm receipts! But now his flock is reduced to 1,100 by dogs and other causes, and he has had to fight dogs all Summer. The coal-miners have been on a strike and their half-starved dogs make fearful ravages on the neigboring folds. Mr. Wales has kept a man with a gun in the field with the sheep all night every night for many weeks. But the dogs are starved, and bold, and numerous, and you can't hit them in the dark or scare them off. I don't wonder sheep owners are angry and full of indignation at the damage—yes, almost destruction—of a great industry by the worthless curs of worthless masters. Sheep husbandry is well adapted to supplement extensive grain-raising. It works in much of the straw as feed, and more as bedding. It requires little labor in the busy season, and it furnishes large quantities of the best manure, so much needed for wheat. Indeed, on a farm like the one I am speaking of, the sheep and horses will utilize nearly all the straw, for the latter are fed in winter entirely on oat straw and grain, with no hay till heavy spring work begins.

I returned from my short visit more than ever impressed with two conclusions:—First the Stark county farming is, on the whole, excellent; the tillage being wise, fences good, general appearance tidy and barns immense. Second, dogs are the greatest drawback and the dog problem is a very difficult and serious one.

Farm Economy.

THE TRUTH ABOUT IT.

[THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

DRILLING FERTILIZERS WITH THE SEED.

PERHAPS there is no other question that more often comes up for discussion or consideration than that relating to the use of fertilizers. There are differences of opinion on this question, which I believe occur from a habit of looking at it from different points of view. Now, I think it is a fact that the testimony that may be gathered from those who have practiced artificial fertilizing and the use of manures in the hill or drill, will be in favor of the practice in a very large majority of instances, if not universally; and that, if a difference of opinion exists on the point, the adverse opinion will be held by those who have not carefully considered the points I wish here to present. The truth is that in fertilizing we are simply feeding—that in using artificial fertilizers or manure in the drill or hill, we feed the young and tender plant; and in broadcast manuring we are feeding the growing and vigorous plant; that a young plant, as a young animal, requires the most easily digested food (such as artificial fertilizers), while a vigorously growing one is able to consume and digest coarser matter, as barnyard manure; that a young plant is weak and cannot forage for itself and needs the food to be placed within its reach, otherwise it may perish of starvation because the nutriment which may be plentiful enough a little way off, may be just beyond its reach at the time when it is most required; that a strong, vigorous infancy and youth will supply a constitution which will resist much later hardships, under which a weak plant (or animal) would quickly succumb.

Now, after this explanation, let us follow a seeding placed in a drill with some active fertilizer and another drilled in upon land that has been manured broadcast. In the former case the seeds sprout and the young rootlets—let us suppose them to be potatoes, wheat, corn, or any other crop; it is the same for all—at the instant they emerge from the seed seek food from the soil, and find precisely what they want, which is phosphoric acid chiefly, at this stage; but be this so or otherwise, they have a perfect food within reach, soluble and ready for instant and perfect absorption, digestion and assimilation, because it is in precisely the form required, that is, mineralized and soluble. The roots spread in all directions among the particles

of food, finding the materials from which the substance of the young plant is formed; and this being supplied freely, the plant grows vigorously, and its aerial growth is paralleled by its root growth in the soil. Here is every condition for vigorous and healthy vegetation.

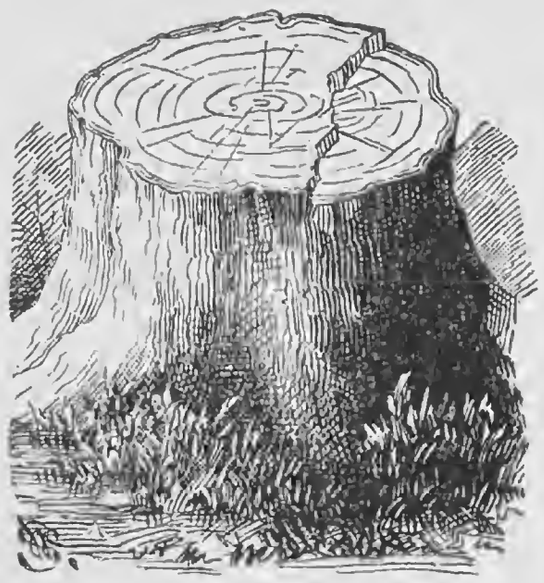
The plant is able to procure its supply to a larger extent than otherwise, even from soil particles, should manure not be present, because the roots have explored the soil in every direction, and for a long distance and are very strong and active. But if manure is in the soil, these roots find it and the rapidity of growth goes on uninterruptedly to the expected end—the harvest, because food is abundant and the plant is strong and able to gather it in abundantly. In the latter case, the manure may have been liberally supplied, let us say, 30 tons per acre. This will give nearly one pound of manure to each square foot of land. But what farmer can put 20 tons of manure on his land so that every foot shall get its equal pound. Not one. Only a few days ago I assisted at the planting of an acre of Hubbard squash on ground that received 40 loads of manure spread broadcast and plowed in, and there were many hills made about which no manure could be seen within several inches. In such a case as this, without fertilizer or manure in the hill the young plant receives no food during its infancy when it needs the most careful feeding; and many plants of a crop will starve and perish before they can reach the food that is beyond their grasp at the moment when it is most required. This seems to be the truth of this matter.

Successful growers of roots, corn, and market vegetables, universally practice drill or hill fertilizing in addition to broadcast manuring, and if one is questioned as to why he does this, he will tell you that he cannot raise profitable crops in any other way. If such exacting crops as these thrive by such a system of feeding, why should not wheat and small grains require the same management? I am sure they do, and would never drill grain of any kind without using a fertilizer attachment to drop some active stimulant to provide food for the first demands of the young plants.

H. S.

GIANT POWDER AND ITS USE ON THE FARM.

The large number of inquiries we have received concerning this blasting material and its

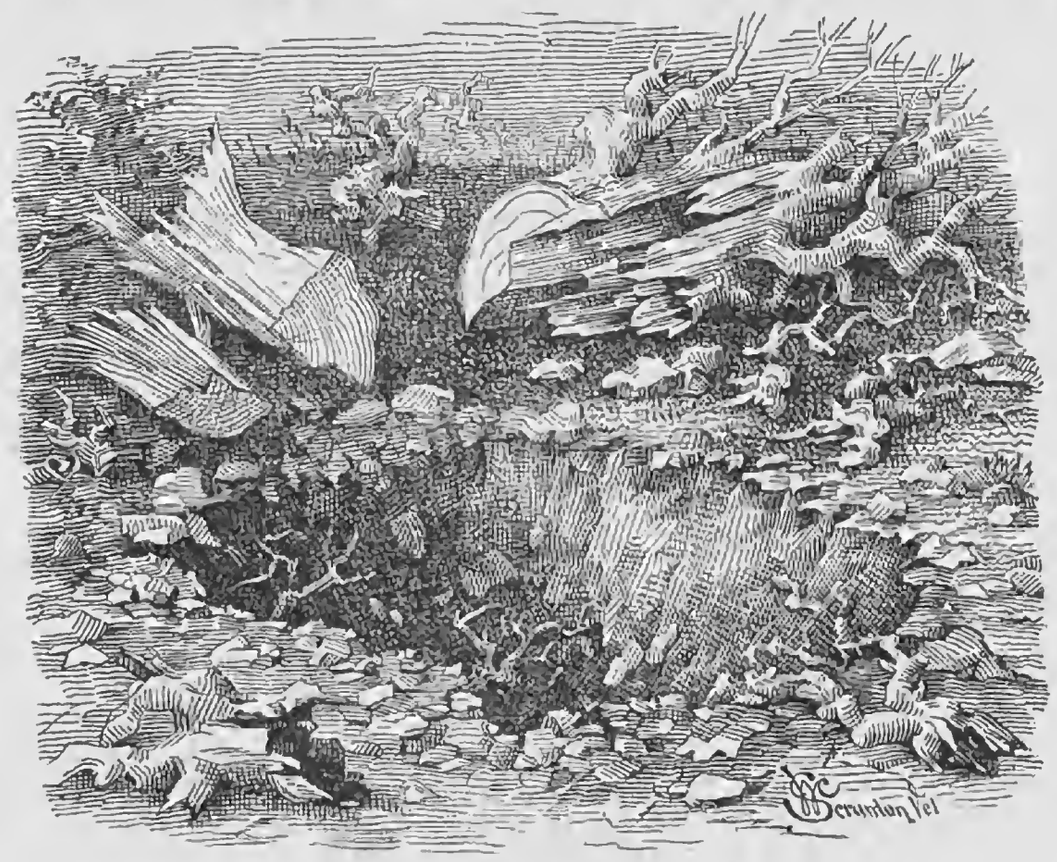


STUMP BEFORE BLASTING.—FIG. 224.

usefulness as an agent on the farm, indicates that its employment is a question of very general interest, and it is the object of this article to throw some light upon the subject and to answer inquiries in a general way, that have already been propounded, and to anticipate those that may be forthcoming.

Giant powder and dynamite are synonymous terms, the former being the name most frequently used in the United States, and the latter in Europe. It consists of a kind of silicious earth saturated with about three times its weight of nitro-glycerine, and in appearance is not unlike damp Graham flour. It is generally recognized as the safest of all violent explosives; but, nevertheless, great care should be exercised in its use, and no person should undertake to blast with it before he is familiar with its properties and knows how to handle it. Being an explosive, it cannot be forwarded by mail or express, and land-owners who may be desirous to clear away stumps and rocks by the use of giant powder, should apply for information to some neighboring agent for the material, or to the manufacturers. There are two kinds of powder in the market, designated as No. 1 and No. 2. No. 1 is employed for heavy work, being the most powerful, and costs $1.00 a pound. No. 2 is less powerful, but quite efficient for the blasting of stumps, etc., and sells for fifty cents per pound. It is put up in cartridges eight inches in length and of any diameter the work may require. The cartridges are exploded by caps made for the purpose, and the cap is ignited by means of a fuse.

The accompanying figures are true illustrations of the power of the explosive and the effectiveness of its work. Figure 224 represents an oak stump, about three feet in diameter, before the blast is inserted, and figure 225 shows its appearance after the explosion. Large bowlders or rocks are also effectively so broken up that the fragments can be removed with ease. An example of this sort of work is shown in figures 226 and 227.



STUMP AFTER BLASTING.—FIG. 225.

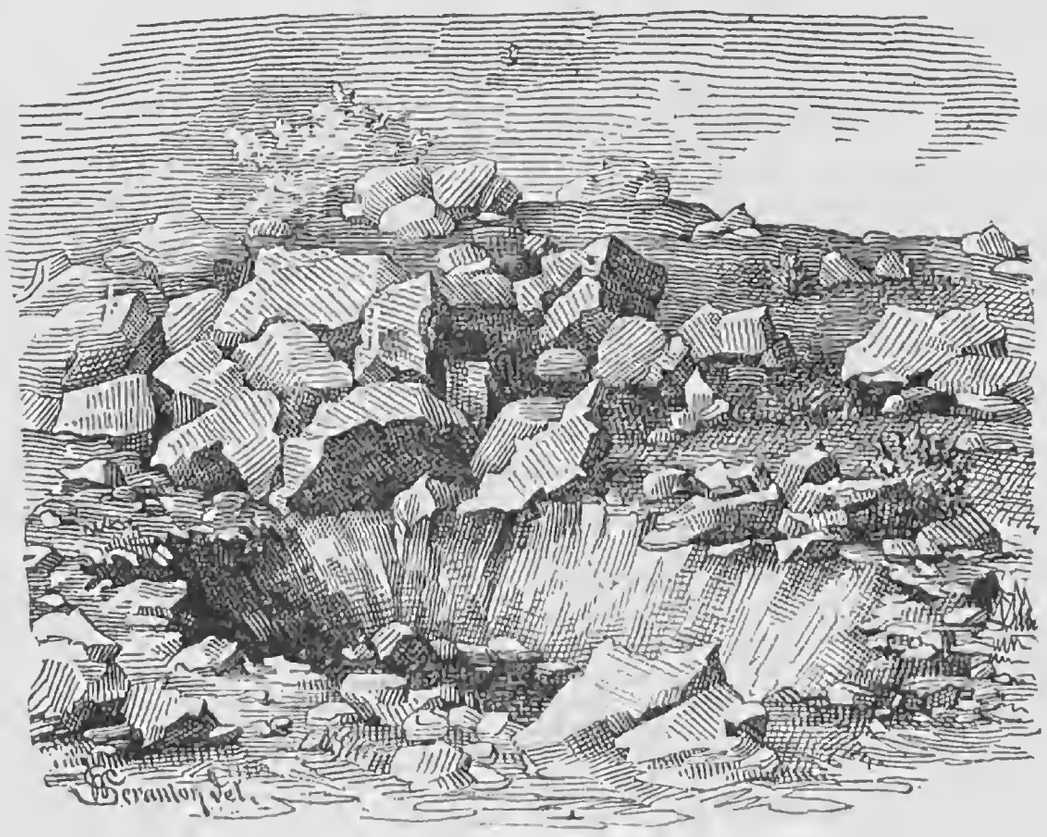
Some years ago we became familiar with a case of this kind in Europe. A farmer owned a field thickly set with large bowlders. The land was valuable but the rocks interfered seriously with its cultivation. The owner decided to blast them and we happened to witness the operation. Holes varying from eight to sixteen inches in depth, according to the size and character of the rocks, were bored, and in each was placed the whole or a part of a dynamite cartridge into which the cap and fuse had been inserted; the holes were then carefully tamped with wet clay, and when a number were thus prepared the operator ignited all the fuses, beginning at one end of the series, so that he was constantly running away from those first fired. The blasting proved a perfect success, and the field was cleared at a nominal cost.

When a stump is to be removed by blasting, it is often most expedient to punch a hole with a crow-bar under it, especially if the soil is firm, and place the charge so that it will take effect near the center of the stump. The prevalent idea that giant powder always strikes downward has no foundation in fact; it strikes in all directions with equal force. In adjusting the charge, whether it be in a stump or a bowlder, take care that the cartridge reaches the bottom of the bore and that it is packed solidly. One end of the fuse is thrust into the cap, and the cap is then inserted in the cartridge.

When cartridge, cap and fuse are thus united and placed in the bore, tamp the charge carefully. Wet clay, brick dust, sand, or even water, are good materials for tamping. Do not use a metallic rammer in packing the tamp, and take the greatest care that the cap is not exploded. The fuse should be long enough to allow the operator to remove to a safe distance before it is burned up. The nitro-glycerine contained in the powder solidifies or freezes at a temperature of about 48° F., and when thus frozen it is unfit for blasting; it should therefore always be kept at a temperature of not less than 50° F. This brings us to mention some necessary precautions

If dynamite should happen to freeze, do not attempt to melt it by heating it in a vessel or by baking it before the fire; when suddenly heated an explosion is almost certain to take place. Place it in a warm room and let it there remain till it becomes pliable. One may put fire to it with a match with impunity and it will burn slowly without exploding, but it is not safe to heat it suddenly when not in direct contact with the fire. Always keep the caps away from the powder when not used; an accidentally exploded cap may prove fatally destructive. Handle the powder carefully; it is exploded by percussion, and a portion thrown or falling against a hard substance is likely to "go off."

Where considerable blasting is to be done in the same neighborhood, it will, no doubt, be expedient for the owners to unite in hiring an expert for the purpose. There is a saving both in time and money when the work is properly conducted.



BOWLDER AFTER BLASTING.—FIG. 227.

THE SO-CALLED PROCESS OF ENSILAGE.

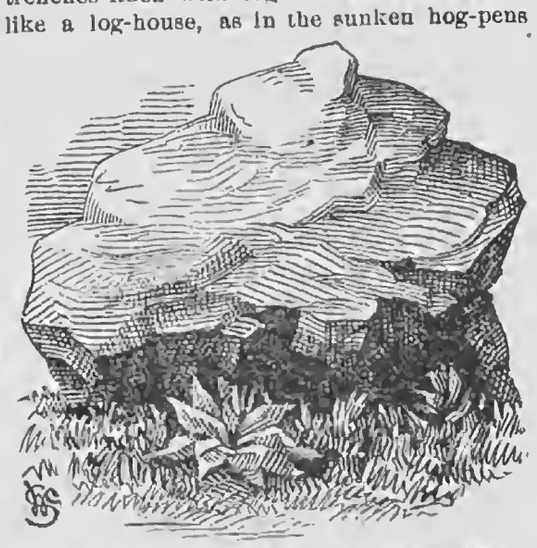
PROFESSOR F. H. STORER.

I would like to add a few words in support of the very sensible protest of Mr. Henry Stewart, in the RURAL of June 19, against a movement now current tending to an undue refinement of the well-known process of souring green crops, which, since its importation from Europe a few years ago, has commonly been called "ensilage" in the American newspapers.

This process of fermentation is extremely valuable in that it enables the farmer to preserve, at small cost, green or wet forage which cannot be cheaply dried. It cannot be too strongly insisted that the chief merit of the process consists in permitting us to save with economy and certainty such fodders as cannot be dried except at the cost of much time and trouble. Naturally enough, the method has been most highly esteemed in countries less favored than our own in respect to climate. Wherever, for example, the weather is habitually so bad that the farmer cannot readily make hay by drying his grass it is a great privilege to be able to preserve the grass by another method. But, in spite of the abundant sunshine of this country, there can be little question that it will be a great gain for American agriculture when the process of souring, as applied to corn fodder, pea vines, Lucerne, clover (on occasion), brewers' grains, apple pomace, sorghum refuse, and the like, comes to be everywhere clearly comprehended and practiced among us. Meanwhile, however, it is of the first importance that the essential simplicity of the process shall be kept clearly in view, and that no man shall be misled by the statements of enthusiasts—much less by buncombe.

It is manifest on the face of the matter that the generality of American farmers cannot encumber themselves with costly appliances in this regard; and that there is no need of their doing so has been abundantly proved. The conditions essential to success in souring green fodder are merely that air and water shall be excluded. The trench must be dug in a place where water cannot soak into it; the fodder must be packed firmly and carefully in the trench, and be kept closely covered with a thick layer of earth. Green fodder thus buried out of contact from the air undergoes a peculiar fermentation, one result of which is the production of a small quantity of compounds of lactic acid and of butyric acid. The product of this fermentation is, in fact, akin to the fermented cabbage called sauer-kraut. But when once the fermentation has run its course, the fodder suffers, practically speaking, no further change, and may be kept for a very long time without hurt if the air be completely excluded.

No doubt the capitalist or large-way farmer may find it convenient to methodize matters, and to make his souring trenches permanent constructions, roofed and cemented in due form according to European patterns; but it should be borne in mind by every one that these expensive luxuries are unnecessary, and that perfectly good results can be obtained by very simple methods. For some parts of the country it will be of interest to determine by trial whether, even for the capitalist, trenches lined with wood may not serve instead of those built in masonry. It is not improbable that trenches lined with logs notched and laid up like a log-house, as in the sunken hog-pens



BOWLDER BEFORE BLASTING.—FIG. 226.

common in some localities, may be found useful and convenient. It would perhaps be well in this case, when packing in the fodder, to ram some earth between the fodder and the logs, and to set posts in the corners, as dead wood, to insure the thorough exclusion of air. It is conceivable that trenches thus lined might, after a while, when the wood has somewhat decayed, harbor molds and other fungi detrimental to the proper souring of the fodder, but this point can only be determined by actual experience, and it could be met, if need were; by ramming a tolerably thick layer of earth between the fodder and the logs.

In view of the fermentation above mentioned, the Germans have applied the name "sauer" fodder to the whole class of substances thus preserved. We Americans would probably have done better to have followed the German usage in this particular rather than that of the French, for the German term conveys a tolerably precise meaning, while the French is indefinite. The French word *silo* really means a pit or trench in which grain or roots are stored, and the word *ensilage* usually means nothing more than the storing of grain or roots in pits, instead of in cellars, as is usual with us. I have before me a book of 340 octavo pages, published in Paris in 1862, which treats exclusively of the "preservation of grain by ensilage" I remember to have seen, myself, some thirty-odd years ago, in the fields of a New Hampshire farmer, "silos" for storing potatoes in this sense, such as he had seen in use by the French in Canada when he visited that country some years earlier. Such "silos" were used for keeping Rutabagas on Long Island in the year 1818. The purpose of the *silo* proper is merely to shield the roots or grain from frost, heat, wet, insects, and the fungi which cause decay; and no extraor-

dinary precautions need to he taken to insure success; whereas in pitting green fodder the arrangements must be such that a peculiar fermentation (and no other) shall occur. The results sought for in the two cases are so unlike that one and the same name cannot properly be applied to both.

It would seem to be more proper for us, anyway, to use the English word pit or trench in place of the French word *silo*, and to speak of the souring of green fodder rather than of its ensilage.

Dairy Husbandry.

A NEW NOMENCLATURE IN BUTTER-MAKING.

RICHARD GOODMAN JR.

In the days when we knew nothing more of cream-raising than was furnished by the small shallow open tin pan of the New England milk-room and the small shallow open crock of the Virginia spring-house, the words "setting" or "raising" were sufficiently comprehensive and accurate. But in these modern days, with their many and varied and fast-increasing methods of obtaining the cream of the milk, it would seem desirable to adopt some expressions more exact and at the same time more general in their application; some expression would seem to be needed, for example, which would apply as well to the obtaining of cream in the old shallow, open pan as by the modern centrifugal separator.

In the same way the word "churning," while it applies to all methods of obtaining the butter by paddle, dash and box churns, does not fairly include the old French fashion, now being revived, of burying cream in canvas bags in the earth and allowing Nature's chemistry to extract the butter. No more does it properly apply to the artificial chemical processes of removing the envelop of the butter globule, which may at no distant day supersede all mechanical methods of obtaining the free butter.

Again, "working butter" was a sufficiently expressive term when the butter-milk was removed by squeezing with the bare hand, or by the application of damp cloths or sponges, or by the spaddle, or the straight bar in the lever butter-worker, or the grooved ridged roller of the crank machines, or even by the direct pressure of the Blanchard power machines, but this expression will hardly cover conveniently the application of centrifugal force to to the removal of the butter-milk—and the "centrifugal drier" is now regularly manufactured for the market.

For these varied, delicate and important processes some simple and exact but comprehensive and elastic expressions are needed. The methods now known and approved have already grown beyond the words we have to describe them in general conversation or scientific discussion; and there is every reason to believe that we have by no means yet reached the limit of investigation and improvement in these fields.

The object, then, is to find some expressions which will closely fit to-day, and which will yet grow with our knowledge of the subject and be accurate and convenient at all times. If we bear in mind now that every process in butter-making deals more or less directly with the *butter-globule*, and has for its ends the aggregation of these globules in as pure and free a state as may be, we shall have a distinct point from which to begin our new nomenclature, and a guide to prevent our wandering from the right path.

The first process in handling milk for butter-making, called "setting," was for the purpose of gathering or collecting these butter-globules into as compact a mass as might be, in order that the churning might be as rapid and the churn as small and light as possible. The next process, "churning," was nothing more than the breaking of the enveloping membranes of the butter-globules, which done, they adhered to each other, or "gathered," of their own accord; and the third process, the "working" was simply the removal of these broken envelopes and what moisture may have accompanied them. In all of these processes the free, pure butter-globule is what we are striving for; and any expressions, to be definite and intelligible and capable of growing with the growth of our knowledge of butter-making, must keep these globules distinctly in view and refer wholly to them. Such expressions as "collecting" for the first process, "liberating" for the second, and "drying," for the third would perhaps answer the purpose.

In the first process the butter-globules are *collected*, or brought together, as much by deep as by shallow, as much by open as by covered setting, as much by heating as by cooling, and this expression would apply with equal exactness to the work of the centrifugal separating machine in all of its forms. In the second process the expression, *liberating*, would apply, not only to the freeing of the globule from its envelop by the mechanical operation of the paddle and box churns in all of their forms, but to the natural and artificial methods of eating off the envelop by acids.

Would not a few simple and exact expressions like the foregoing aid somewhat in the discussion of the varied and important subject of butter-making?

Yokun Farm, Lenox, Mass.

The Herdsman.

NOTES FROM MY BARNYARD.

E. P. POWELL.

My neighbor, Seth, says "There is no place for studying human nature like a barnyard." I suppose he means, if you want to know what kind of a man a farmer is, you should get acquainted with his cattle and sheep and hens. I guess he is right: for these creatures generally behave a good deal like their owners. A sensible man can make every animal talk and reason, and have considerable moral character. If he is impatient or ugly, go to his barnyard to find it out.

The other day I saw a boy of about 16 riding a great bull to water. He came up the street as if he were on a fat pony. It scared me at first, for fear the old fellow would make a lunge at my horse. But the boy and I stopped and had a long talk. The bull looked up into my buggy, and his eye was as "clever" as that of an ox. The boy had not abused him, but taught him by quiet firmness to obey, and the result was a nice pet (?) instead of a dangerous rascal.

Coming home to my farm on a vacation after nearly a year's absence, my "man" said to me, "you will have to sell that pet Ayrshire heifer. She is a terrible creature; we can do nothing with her." At milking time I found they had her with a rope around her horns in between close bars, and then stout pins before and behind her hind legs. One switched off flies while another milked. She made it lively, however, in spite of bars, pins, pegs, ropes and men. It looked like a bad case. Her eyes were full of mischief. The next day I had her led out on the lawn of nice grass for a good meal. The next day she was let loose in the yard, when I took a rope to the gate, held it up and called her to come and let me put it on, promising her a good time on the lawn. It was at least a half hour's work of quiet, persistent waiting and talking. But she was slowly coming to the point of yielding At last she held her head quietly down close in front of me, and not till then did I yield one inch to her. She must submit before she could have the coveted grass. Then I led her out at once and gave her a good time. The result was that in three weeks she could be milked anywhere on the lawn without the least danger.

"As I was saying," says Seth, "a Quaker barnyard is better than preaching." He means that to see the peace and happiness and neatness of a Quaker barnyard convinces him that religion is a good thing—at least for animals. There is no swearing or rough language. The animals know they are sympathized with, and they return the love.

Billy is my Leicester ram, about one year old; a splendid fellow with a handsome, clever face and a great deal of intelligence in his eye. I hired another Billy last fall to do the chores. Billy No. 2 had not been in charge a week before Billy No. 1 met me, as I went into the yard, with a round whack that sent me head over heels among the hens that I was feeding. The rogue caught me on the stoop and spread me out. Watching, I found that Billy No. 2 had been teaching him some of his human accomplishments, and had nearly spoiled him for a pet before I found it out. I have succeeded in curing the sheep and discharging the man.

"Like master like man," may be true says Seth; "but like man like beast must be true." A few years ago I had a quiet, demure chap called George to work for me. He was a little fellow, but he was so good to the animals that I could spare some muscle. I discovered in the course of his first year that he was making a very funny place of my barnyard. It was a sort of school where everything learned to show what it was capable of doing. Hens were up to all sorts of pranks, especially one little black top-knot. This creature would almost talk. Her pride was astonishing. She immediately took her station by my side and walked with me all about the yards, never allowing another hen to approach. One day coming home from a long absence, I could not find Blackie, although she would generally rush to me with a shout. "You'll find her under the old mow," said George, "under the old cutter that lies there, but you cannot get her to come out. She has been there for two weeks, and I feed her there. She lost her feathers and is too proud to show herself." Sure enough, there she was, scolding and fretting "like anybody," and she staid there till her feathers grew. George went quietly around chuckling and laughing with the animals more than talking, and they let him do just as he liked.

"Legs are well enough and so is fat." says Seth, "but it don't stand to reason that they are better than brains." I suppose he means that if we should pay as much attention to developing animal reason as we do to producing flesh and securing speed, we should be quite as successful. Most farmers would hardly care to breed for brains, however. Several years ago, my good old mother had borrowed a little hen to sit on Brahma eggs, as her Brahmas did not seem inclined to sit. Visiting her as usual during the summer, I saw the little black hen training her yellow chicks and evidently bent upon doing her duty. One day I heard her at the back door making a peculiar loud noise, calling us apparently. She was stepping back and forth, to and from the door, her neck stretched and making a speech of a most vigorous sort. This lasted for two or three minutes. Supposing she might be hungry, we fed her, but she ate rapidly and then started at once for her home, about two hundred rods away. She had left her little Brahmas under the pie plant leaves in the garden, and then come to bid us a fair good-bye and hand in her resignation. It certainly was the most eloquent speech I had ever heard

The Swine-Herd.

CARE OF PIGS.

COL. F. D. CURTIS.

Making Cheap and Healthy Pork.

The common practice of confining pigs in close pens during the Summer is unhealthy and unprofitable. It is natural for a pig to be on the ground. Nature designed that a pig should root for its living, and hence it is provided with an organ adapted to this work. Breeding stock should never be confined in close quarters, if a healthy and productive condition is desired. Exercise is essential, and a variety of food, especially for a female with young, is highly beneficial. Pigs for fattening may be closely confined for a limited period; but if kept so for any length of time there will be a loss of appetite or a feverish condition which unfits them for food. Exercise and healthy digestion naturally go together. Every part of the body was made for a purpose, and there should be an opportunity for its development if a perfect condition is expected. With no employment of the muscles, tendons and organs for locomotion, the free use of which would give full exercise to the lungs and produce a healthy circulation of the blood—with all stomach work—how can it be expected that growing animals and those bearing young should be healthy and well developed? When pigs are confined in pens they are usually fed stimulating food, and this helps to make it worse for them. It is the most expensive way of rearing pigs.

We always have the best success with breeding sows when they are allowed to feed on grass. This is the only food they require until the young pigs are a week or two old, when milk, or meal of some sort, may be given to them to increase the flow of milk if they require it. Sows thus managed are never ugly and never destroy their pigs. Why? Because they are in a natural and healthy condition. The grass also increases the flow of milk and is, quite often, sufficient food for a sow while rearing her young. Young pigs soon learn to eat the grass, which is alike natural and healthful for them. We never had a case of scours or thumps among young pigs when running in pasture. The grass serves to counteract the effects of corn, and many pigs on grass can be fed heavily with this food without the injury which it would do them if confined and deprived of grass.

Our experience has convinced us that no farm is complete without a pig pasture. Clover is the best of all the grasses for this purpose, and next to it we prefer Orchard grass, for the reason that it starts up promptly after being eaten off, is the earliest in the Spring and is relished by the pigs. It is not necessary to have a special field for the pig pasture, but they may be allowed to run in any lot if properly inclosed. There should be water in the field and plenty of grass. A patch of sweet corn sowed in drills will be found convenient to supplement a shortened pasture in the late Summer. There should also be another patch of turnips or other roots into which the pigs may be turned for fall feeding. With the three auxiliaries of pasture, sweet corn stalks, and a root patch, the cost of rearing and feeding pigs may be reduced to less than one-half of their expense when they are confined and fed in pens, to say nothing about their better condition for food.

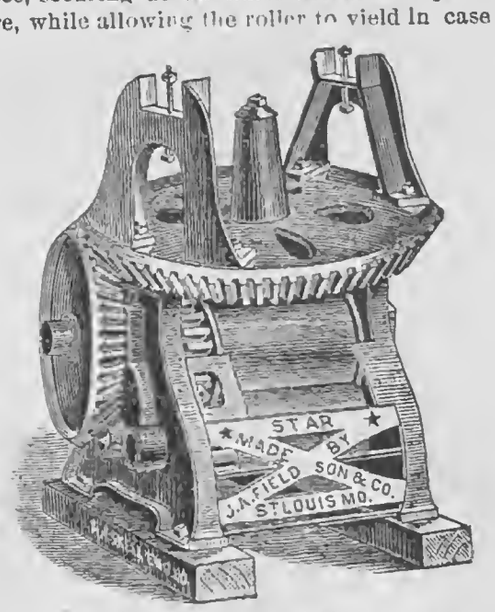
There is a great deal of complaint now-a-days about pork being too fat, and many people who used to eat old-fashioned pork, and relish it, will not eat the modern, improved sort. The main reason for this is because pigs are overfed while young and kept so closely confined that there it no proportionate growth and development of muscle (lean meat) with the fat (oil). My system of growing pigs, while it is more successful in the breeding, does at the same time make a growth of muscle and fat more nearly balanced. To make a perfect pig the feeding and the treatment should be such that the muscles and frame should be produced first, and the fat added on, whereas the practice of confinement and exclusive grass feeding makes the fat first, with scarcely any muscle or bone to support it. Pigs should be kept in a thrifty, growing condition until within a month of the time when they are wanted for slaughter, when they may be fed stronger, but not for a longer time. A big weight is not so good as a healthy pig. Old hogs may be stimulated for a longer time and be made fatter, but these make better food if fattened on such natural feed as clover and roots and topped off with corn.

A strong copper wire in a pig's nose will keep it from digging up the sod. An orchard is a suitable range for pigs, as they will eat all the fallen fruit and thus destroy myriads of worms which would otherwise develop for future damage. If it is impossible for a farmer to let his pigs run out, he ought, for health's sake—and it is good food, too—to give them feedings of grass in the pens. We have kept hogs in this way all Summer on grass alone.

Industrial Implements

THE STAR CANE MILLS.

These excellent mills are made by J. A. Field, Son & Co., St. Louis, Mo., and are winning a wide popularity wherever they have been introduced. They are built unusually strong, and extra-heavy, weighing, it is claimed, about double as much as any other mills of the same capacity. The boxings for the bearings are put in from the outside so that when worn out they can be replaced without taking the mill apart. The bearings of the feed-roller shaft are self adjusting, yet firmly held to their place, securing at all times the utmost pressure, while allowing the roller to yield in case



of over-feeding or the accidental feeding of some uncrushable substance, thus avoiding accidents and accurately adjusting the pressure to the work to be done. Owing to this self-adjustment, in heavy feeding clogging is avoided, and in light feeding, the rollers, closing up tighter, press the cane thoroughly; while in both cases the mill runs easily and steadily. The delivery roller, too, can be adjusted to give any desired pressure, by simply turning a nut, so that the last of the juice can be pressed out of the cane. There are several other excellent features connected with these mills, all of which will be fully explained by circulars which will be promptly furnished on application to the manufacturers.

Russell & Co's large works, at Massillon Ohio, were in great danger of being entirely destroyed by fire, on June 20. Happily, however, by great efforts the fire was confined to the upper stories, inflicting a loss of only about $25.000. As none of the wood and iron working machinery was burnt up, there will be no delay in filling all orders for their well-known portable and traction farm engines, thrashing machines, horse powers, etc.

Veterinary.

DENTISTRY EXTRAORDINARY.

In the agricultural department of a New York weekly paper, of a late issue, under the heading Veterinary Advice, a correspondent, whose steer "chews the cud and then drops it," is advised to examine the animal's teeth, and among other recommendations is the following:—"Diseased cavities in teeth should be cleaned and washed out, scraped, and filled with gutta-percha, previously softened in hot water."

This is the third time within a few years that

the same advice has been given in the Tribune. Prof. Law was the acknowledged author in the former cases, and I presume this last emanated from him. I am amazed that a man so well informed in veterinary practice should blunder as he has done in these cases. He surely has not written from experience. A filling of crude gutta-percha in the grinding surface of a molar tooth of horse or steer, would wear away in a few days, so that it would be of no practical benefit whatever. The material is too soft to be of service in such cases. Being a practicing dentist of many years' experience, I feel justified in speaking quite positively regarding the durability of materials that are used for filling teeth.

There are different forms or preparations of gutta-percha used for filling human teeth; and I have never made use of one that would not withstand the wear of mastication much better than the crude article. But even in this improved form, dentists never make use of it with the expectation that it will serve more than a temporary purpose, except in places where it will be exempt from the attrition of chewing.

In a tooth of the horse or ox or other beast that chews hay and grain, a filling would be subjected to an incomparably more severe service than in a human tooth; and yet in the latter case, the purified and hardened gutta-percha will last but a brief time. Now we can see the absurdity of the advice to fill the tooth of a beast with crude gutta-percha.

Before closing, I will say that dentists constantly make use of a filling material that, I think, would endure for a long time the severe test we are considering. It is amalgam. It is plastic when prepared for introduction into a tooth, and would be as easily put in as gutta-percha. It soon becomes very hard, and in human teeth it never fails on account of its wearing away. If the filling of animals' teeth is practicable, it can only be so by using this material.

Miscellaneous.

KILL OFF THE DOGS.

Every week the papers bring us accounts of valuable cattle lost from madness caused by the bites of rabid dogs. Every year the enormous loss to the sheep industry from worrying dogs startles us by its size, and yet we go on year after year risking life and property and suffering discomforts, if not death, from the fangs and diseases of these hordes of worthless dogs.

They do not protect us from burglars once in a hundred times. If a burglar is determined to enter a dwelling and bolts and bars do not stop him, surely a dog will not. A faithless dog is enticed away; a resolute dog is quickly quieted by a bit of poisoned meat. Nor are they desirable companions for our children; they teach them nothing good and they make them overbearing and cruel. Nor do they protect our farms and buildings to any great extent from vermin; a good steel trap will free a barn from rats and a field from wood-chucks more satisfactorily than a dozen dogs. A "boom" has lately been started in favor of the dog, on the ground that he will thus free the farmer from these indoor and outdoor pests; after long trials and much bitter experience, I say one steel trap against a score of dogs. If dogs are used to drive cattle serious injury may be done to the cows and certain injury will be done to the butter made from the milk of a "dogged" beast.

A dog in his life-time will frighten or bite one's friends or one's children a hundred times for once that he will protect from a determined burglar. A dog by jumping over a roadside fence or barking at a horse on the highway may subject his owner to greater loss of time and money than the good done by all the dogs of a county would amount to. Dogs kept as house dogs on a farm or in a village, are a relic and evidence of barbarism, of a wild and savage state of existence not yet passed away. Where dogs are kept birds are scarce; and birds are now recognized as among the farmers' and villagers' most valuable friends. Without the birds, the worms and bugs and all the insects injurious to vegetation and distressing to human beings would exist in countless swarms, and the toad in gardens is as busy and useful as the bird in the tree or meadow. And against all, toad, bird, sheep, cows, children, friends, does this our wage unceasing warfare. When he is not biting he is barking. And day and night, year in and year out, the useless dog is more or less of a wild beast in our midst; and not seldom he is a source of the deadliest danger. Madness in the dog, and the communication of this terrible disease to human beings, are facts—and terrible facts. Hardly a month passes in this country in which we do not see accounts of the death of a human being in one of its most terrible forms, and where death does not follow the bite of a dog which is rabid, or supposed to be, the agony of apprehension darkens the life of many a happy home.

Now, if we put on one side the loss of our most valuable property, as well as the frequent cases of human death, suffering and sorrow; and on the other side, the few benefits which these semi-wild beasts confer upon the community, shall we hesitate long in deciding on which side the balance lies? R. G., Jr.

Lenox, Mass.

WHAT OTHERS SAY.

Progress has the following: "We have, in America, so firm an opinion that they do everything ever so much better abroad, that the following little incident must be read with surprise. In a Leicester County (England) police court a dairyman was charged with a breach of an Order in Council by allowing persons suffering from scarlet fever to take part in the management of his dairy, which supplied sixty gallons of milk per day to people in Leicester. The inspector found five persons in the defendant's house suffering from the disease. The defendant was fined sixpence (twelve cents), with costs. According to section sixty of the act under which the Order in Council referred to was issued, any person guilty of an offence against the act or the Orders in Council made under it, is liable to a penalty not exceeding twenty pounds (one hundred dollars). The British Medical Journal, referring to this matter, thinks it would be instructive to learn the reasons which induced the magistrates to regard the imposition of a fine of sixpence as a sufficient penalty for so monstrous a disregard of human life and of the most ordinary sanitary precautions."

The Knife and the Yellows.—Judge Lawton asked what precaution should be taken in pruning peach trees so as not to disseminate the yellows.

Prof. Beal thought this a very important matter, inasmuch as a tree might have the yellows enough to impart the disease and still not exhibit any signs of it distinguishable to the eye. He thought an alcohol lamp could be taken along by the pruner, and the blade of the implement be passed through the flame after finishing each tree.

Mr. Tracy said he had used crude carbolic acid for similar purposes with good effect. The liquid could be purchased very cheaply, and a can or pail of it could be carried about the orchard in case of pruning, and between trees the implement could be dipped in the acid.

Mr. Bitely.—Would there be any doubt about this material being effectual in killing any germs of the disease that might adhere to the knife?

Prof. Beal.—I think none at all; and this would be a better choice than the lamp.

Mr. Tracy.—I employed the liquid in a single case of pear blight that was found in my orchard. I cut the diseased limb below the blighted part, and then applied the carbolic acid. I think perhaps it may have had the effect of saving a further dissemination of the disease in the tree. One thing is certain, the odor of that acid was discernible a year afterward, exhibiting the fact that it is not quickly lost.

A question.—Do you consider carbolic acid a remedy for pear blight?

Mr. Tracy.—No; I have no such idea; I have no theory in the matter. The fact is, I used it in this case and the blight did not reappear; it might not have reappeared anyway. Still, if I had another case I should try a similar expedient. The above we take from the Proceedings of the Mich. Pomological Society.

Some Corn.—We find the following in Truth a N. Y. daily paper: "If he who causes two blades of grass to grow where one grew before is a public benefactor, what shall we say of a man who invents a new kind of corn that flourishes like a green bay tree and multiplies itself five-thousand-fold? "Blount's White Prolific" is the name of this wonderful cereal. The seed was all bought up by the Rural New-Yorker last spring and sent out to its subscribers in small packages containing about 100 kernels each, and a prize of $100 in gold was offered for the best yield. The lucky prize winner was a certain Mr. Chamberlin, M. D., hailing from Skaneateles or Medina or some such place up in the Western part of the State. The following extracts from his report may prove interesting to your readers. Says the doctor: "I planted my corn, 100 kernels, May 20th. It was so cold and wet it did not come up till June 10th." This reads queerly to a regularly ordained farmer. Now, up our way corn generally rots if it lies in the ground during two or three weeks of wet weather. We suppose, however, that Chamberlin, M. D., gave each hill a dose of quinine or something of that kind, which preserved the corn through the wet spell and caused it to sprout after twenty-one days. That is the only way we can explain it. The agricultural doctor, in describing the growth of his wonderful corn, says: "It grew beyond anything I ever saw or heard of in the corn line. Day and night it kept growing." Well, we don't see anything strange in that. Corn usually grows night and day when it once gets started. Some people may have imagined it commenced growing at seven in the morning, took an hour's nooning and then knocked off work at six p. m. the same as a day laborer; but this is a mistake. Corn grows twenty-four hours in the day, and the particular kind our friend (the doctor) raised must have grown forty-eight hours a day, at least, to make the wonderful showing it did at harvest time. He says: "I harvested it on October 1, and to tie the stalks I used a step-ladder seven feet high, and then could not reach the top of the stalks within several feet." This sounds rather tall, but then the corn may have been planted on a sidehill, and the doctor may have set his step-ladder at the foot of the hill. That is the only way we can account for his failing to reach the top of the corn while standing on his seven-foot step-ladder. Finally, the doctor reports that from the 100 kernels planted he raised 295 pounds of shelled corn, or at the rate of nearly 200 bushels of shelled corn to the acre. This is something unparalleled in the annals of corn-raising. No wonder the doctor took the prize! A. B.

[A. B. need throw no doubs upon the *hight* of Mr. Chamberlin's corn. Quite a number of those who competed for our premium reported its hight at from 12 to 15 feet. For the rest, the report was duly sworn to.—Eds.]

Emigration.—The London Agricultural Gazette has the following: An American Shorthorn buyer, now in England in order to make purchases, reports that—owing to the demand on space for emigrants on vessels returning to the States—few, if any, cattle can be shipped at reasonable rates. He proposes now to wait until the Autumn when emigration slackens. It is undoubtedly an encouraging fact for English farmers that American breeders should be coming here to buy; yet it is a curious impediment to have to report that these cannot carry away their purchases because English population—*i. e.*, the best customers to English farmers—are also leaving the country wholesale. Beef and beef eaters would alike seem to be bent on crossing the Atlantic.

Fertilizing Value of Sea-weed.—The N. Y. Times says: Sea-weed is of considerable value as a fertilizer, probably more from its indirect action on the soil during its decomposition than from its direct contribution of fertilizing matter. Yet it does add some valuable matter to the soil when plowed in or spread upon grass lands as a top-dressing. Three hundred or 400 loads per acre are often plowed in or spread on grass lands. It contains some nitrogen, and an unusually large proportion of ash, amounting to 16 per cent., consisting of six and one-half per cent. of gypsum, three and one-half per cent. of carbonate of lime, three per cent. of soda salts, and three per cent. of phosphates and silica, with some iodine in combination with the soda. It is considered as worth two-fifths the value of yard manure.

Best Six Roses.—A correspondent of the London Garden says that out of the hundreds of first-class roses in cultivation, it would be a difficult task to name the best six. A good six for garden decoration as standards would be—Victor Verdier, Souvenir de la Malmaison, Aimée Vibert, Cheshunt Hybrid, Gloire de Dijon, and Belle Lyonnaise. For garden decoration as bushes—General Jacqueminot, Anna Alexieff, Glory of Cheshunt, Glory of Waltham, Perfection de Blanches, and Madame Devert. A good six fine show roses, which have been out some years without being superseded by newer introductions are: Jules Margottin, Alfred Colcomb, Charles Lefebvre, John Hopper, Senator Waise, and Maurice Bernardin. A very high-class six exhibition roses—Captain Christy, Marie Baumann, Duke of Edinburgh, Prince Camille de Rohan, Madame Victor Verdier and La France.

"The truth is," remarks the Country Gentleman, "while every farmer knows that clean culture is absolutely essential to success in his common farm crops, many fail to apply the same knowledge to their more expensive orchards."

"Layering of many things, shrubs, half shrubby perennials, etc., should be done before the young wood becomes too hard, if good plants are required the first year," says the Gardeners' Monthly. "Most plants root more quickly by having a notch cut in the layered shoot. Good, rich soil, put just about the layers, is very important. Good soil favors an abundance of roots. One of the greatest mistakes in gardening is the prevalent notion that plants in a poor soil have a greater proportion of roots than in a rich one." They certainly *need* more roots.

Fashion in Flowers.—Mr. Vick writes the following in his magazine for June: "There is fashion in flowers, as in all other things. The wild daisies of our fields are now favorites of fashion, and, when in season, the ladies search for them in the fields about as eagerly as they seek the beautiful trailing arbutus in the early spring, while no flower more frequently decorates the hat and dress. We are glad the lovers of flowers are looking once more to the beautiful flowers of the fields, and hope next Autumn our elegant native asters will not be forgotten. A few years since almost any single flower was discarded, even though the double varieties were far less beautiful. All tubular flowers, like the campanulas and daturas, are really deformities when they become double; and cup-shaped flowers, depending for their beauty upon broad masses of color or delicate markings, are seldom improved. We do not hope to see the pansy or the gladiolus double, for in this form they would lose much of their beauty. The beautiful little cineraria is now to be obtained in a double form, but it is a good flower spoiled, having lost its chaste markings and delicate coloring. A change, however, has taken place in public sentiment, and soon we may rush heedlessly to the other extreme. The cry is now for single hollyhocks and poppies, paonies, and even dahlias, and we know not how long ere the florists will find a demand for single asters and stocks and roses."

Everywhere.

RURAL SPECIAL REPORTS.

Canada, Ilderton, Ont., June 26.—We commenced cutting grass (Orchard) June 8th—is it not remarkably early for this latitude? We had two large loads per acre—and, by the way, this is the sixth year of cutting and the 10th crop; that is, it has been cut twice each season since seeding except one year. I never saw our country look as well, or crops more promising. Cattle are doing well. R. G.

Ill., Virden, Macoupin Co., June 20.—We commenced harvest on the 15th. Wheat is a good average; corn and oats are good. New wheat is engaged at 85c. a bushel. H. G. B.

New Jersey, Camden, Camden Co., June 21.—The Army worm has made its dreaded appearance in this county in great numbers. It has already done a great deal of damage and is sure to do more. Some of the farmers who harvested their hay earlier than usual and stored it away in their barns have been forced to empty them on account of the sickening smell of the worm, as it was found that a large quantity of dead worms were in the hay. It is reported that other crops have suffered serious injury by the worm. W. A. L.

N. C., Tryon Valley, Lynn Co., June 20.—Years ago a very distinguished divine of New York City, having journeyed to the land mentioned in Sacred History, wrote a very interesting book entitled "The Land of the Vine." In Syria the vine holds great prominence in the work of the husbandman. The wonderful adaptation of the soil and climate to the growth of the vine of that country, is an old story.

The mountains of this region are nearly, if not exactly, in the latitude of Mount Lebanon and Damascus and the soil and climate are both in a more remarkable degree fitted for the culture of grapes. The atmosphere in and upon the "belt" is a "dry atmosphere," so much so that in summer there is hardly ever much sign of dew and, of course, where there is little or no dew there will be little or no frost. It will be seen in the agricultural reports of the United States for 1879, that the object in cultivating grapes under glass is to get clear of the moisture in the atmosphere (?). Here Nature has constructed her own hothouse, which answers this purpose without the aid of glass, and the vines that in other lands need a glass covering can here be grown in the open air. All our fruits are progressing well. We have ripe apples in abundance. It is called the May apple and can always be used for eating and cooking by the last of May. Strawberries are not quite done, for some reason their season is prolonged beyond the usual time. Huckleberries and cherries of numerous kinds, and blackberries and raspberries are all ripe and are in luxuriant abundance. The early peaches are coloring very rapidly and we expect them to be fit for use in 10 days. The crop is very abundant only on and around the "Thermal Belt."

Grapes are expected in just 30 days to be fully ripe. Our vineyard is quite full. Here grapes do not fail. They are cultivated somewhat upon the California plan, by cutting back the vines every year. L. R. M'C.

Texas, Waco, Mc Lennan Co., June 12.—The wheat and oats harvest is pretty well over with us, and the yield will be entirely satisfactory, as we had rains in time to make the grain. The corn is considered made, and is the finest crop in this country in many years; in fact, there will be an immense crop of corn raised. The cotton is all that could be wished of it to the present time, and the only hindrance to a a large crop will be worms, of which there is

no sign yet. Cotton is blooming in many fields, and some has many balls already as large as a hulled walnut. There has not been a better season for many years, and farmers have smiling faces and buoyant hearts from the prospects before them. Potatoes and vegetables generally are abundant, the former selling now for 60 cents a bushel. Our people are luxuriating on green corn, and that and potatoes go far towards supplying the places of bread and meat. My Blount's corn is ripe for the table and has made from two to five ears to the stalk, and is nearly as sweet as the sugar corn. This corn matures here as soon as any of the ordinary field corn varieties. Mine was planted on March 17, the same time as most of the other corn, and it is as far advanced as any. This surprises me, from the fact that many of your Northern correspondents objected to it because it was so late, and often would not mature before frost came in the fall. I left two to three stalks to the hill, which proved to be one too many. My Ennobled oats are just coming into head and are three feet high; but as they have tillered so much more than I expected, I think I have sown them too thick and fear the heads will not be so large. They grew so rank that instead of pasturing them with cattle I used a pair of shears and clipped the superabundance of leaves, which had a marked effect. Unfortunately I nearly destroyed my Telephone peas by giving them liquid manure too strong. The leaves have become wrinkled and the stalks withered, and, in fact, I think they are having a struggle between life and death. I saved two or three dozen mangels from destruction by the worms and bugs, and among them I have some fine ones, and I will race your Minnesota correspondent sharply for the premium. I have them now measuring 18 inches in circumference, and they were planted only on April 3. I received a package of seed from the Agricultural Dept. at Washington, labeled Egyptian corn. I planted and cultivated it like sorghum. I left some three or four stalks to the hill with rows three and one-half feet apart, the hills two feet apart in the rows, and some I thinned to two stalks. It is heading now and I am sure the two stalks will make more seed than the others, having much larger heads. It did not sucker at all. The heads turn down; the stalks are so hard and woody that my horses will not eat them even now while green.

A. S. S.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Caked Bag in a Cow.

B. A., South Lowell, Ala., has a cow with its second calf. Before calving she strayed off and wasn't found until the calf was a week or more old. The little thing had used only the two forward teats, and when the cow was found the two others were so badly caked that no milk could be drawn from them. There seems to be an obstruction above the teats and a soreness accompanied by fever, although the animal didn't flinch when the teats were probed with a knitting-needle, and our friend asks the proper treatment and whether the obstruction can be removed by such an instrument as that described in "Querist" in our issue of May 3, '79.

ANS.—This seems a case of mammitis, a disease caused by blows, bruises, lying down on the distended gland and *neglect* in milking newly-calved cows. The whole gland is seldom affected. When the patient is seen early a small cathartic will relieve the constitutional symptons, and warm fomentation in mild cases is generally sufficient. But when the udder is swollen, relieve the animal of the weight by a broad bandage made so as to envelop the whole gland, and fastened over the back, holes being cut in the bandage so that the teats may be got at without removing it. The milk should be drawn frequently either by hand or the milk syphon, and continued friction should be applied over the hardened part; also smear extract of belladonna and apply a hot poultice, renewing frequently. Should suppuration occur, the abscesses should be opened and the pus allowed to escape, dressing the wound with a weak solution of carbolic acid, chloride of zinc or hyposulphate of soda. In some instances the secreting properties of the bag may return after the next calving; but, on the whole, it is better to prepare her for the butcher than keep an unprofitable cow, If the obstruction were lower down, it might be removed by using the instrument referred to—which consists of a small, round tube inclosing either a double-edged knife or four blades at right angles to each other. The tube is pushed up the opening of the teat until it reaches the knot, when the blades are pushed out of the sheath, cutting through the obstacle and re-establishing a connection between the parts, for the passage of the milk. The instrument is sold by Whitman & Burrell, Little Falls, N. Y., or the Dairy Supply Co., this city.

"Grub-in-the-Head" in Sheep.

E. S. A., Great Bend, N. Y., having lately lost some yearling sheep, cut open the heads and found six grubs about an inch long and as thick as a pipe stem in the fore part of the skull, and he asks whether the death of the sheep is due to these insects, and whether there is any remedy for them.

ANS.—This is the so-called "grub-in-the-head," a disease as common among sheep as "bots" in horses; but it is as seldom fatal. Nearly every horse has more or less "bots" in his stomach; almost every ox and cow has them in its back, and nearly every sheep has "bots" in its nasal sinuses. For these grubs are the larvæ of the sheep bot, or gad-fly—œstrus ovis; while the horse bot is œstrus equi, and the cattle bot which produces warbles, or small tumors in the flesh of the back, is the œstrus bovis. It is only when these grubs are present in large numbers that they are troublesome or fatal. In the present instance, it is probable that the deaths were due to some other cause; perhaps to poisonous plants, as the small-leaved laurel, possibly, which is fatal at this season; for six grubs would hardly be sufficient to cause death. The writer has seen them much more numerous and the only effect was to cause a running at the nose. These grubs are produced from eggs laid on the sheep's nostrils by active, buzzing flies similar to horse bot flies—slender, bee-like insects. These pester sheep in August and September, and cause them to hold their noses to the earth and stamp with their feet, or gallop violently about the fields. The only cure is prevention. This is to plow a few furrows in the pasture and the sheep instinctively thrust their noses into the soil, which seems to prevent the young grubs, deposited on the nose, from crawling up the nostrils, for they cannot adhere to the dust, and fall to the ground. It is also well to smear the sheep's noses with common tar mixed with a little glycerine or molasses to keep it soft and sticky, at the proper season, and this either deters the flies or destroys the eggs, which are, like the eggs of flesh flies, deposited in a living state.

Blue Grass.

J. S., Kendallville, Ind., sends some dried specimens of grass and asks whether it is Blue grass, and how does that grass compare with other grasses in nutritive qualities.

ANS.—We think that this *is* Blue grass, but would not be positive from the dried specimen without flowers. It is one of the very best of pasture grasses. We are speaking of Poa pratensis. Poa compressa is the Northern Blue grass. It has a flattened stem and is of a darker-green color. In a suitable soil and climate no grass surpasses Blue grass, especially for pasturage. The following analyses will show its merits as compared with some of the other most common of our grasses:

1ST.—DRIED AT A TEMPERATURE OF 212 DEG.

100 PARTS OF	Flesh-forming principles.	Fatty matters.	Heat-producing principles.	Woody fiber.	Ash.
Blue grass give	10.35	2.63	43.06	38.02	5.94
Timothy	11.36	3.55	53.35	26.46	5.28
Orchard grass	13.53	3.14	44.32	33.70	5.31
Clover	22.55	3.67	44.47	19.75	9.56
White clover	18.76	4.38	40.04	26.53	10.29
Sweet-scented Vernal	10.43	3.41	43.48	36.36	6.36

2D.—AS TAKEN FROM THE FIELD IN BLOSSOM.

WITHOUT DRYING 100 PARTS OF	Water.	Flesh-forming principles.	Fatty matters.	Heat-producing principles.	Woody fiber.
Blue grass give	67.14	3.41	0.86	14.15	12.49
Orchard grass	70.00	4.06	0.94	13.30	10.11
Timothy	57.21	4.86	1.50	22.85	11.33
Red clover	81.01	4.27	0.69	8.45	3.76
White clover	79.71	3.80	0 89	8.14	5.38
Sweet-scented Vernal	80.35	4.06	0.67	8.54	7.15

Epizootic Ophthalmia in Cattle.

M. M. S. Ellsworth, Wis., and F. N. B. Bucklin, Mo.—The first of these inquirers has a two-year-old steer that is gradually becoming blind. The eye first "ran" water, and then a white film grew over it. A heifer of the same age is becoming similarly affected. The second of our friends says that the cattle—mostly milch cows—in that neighborhood are becoming blind. At first the eye becomes watery, and there is a gathering of matter in the corners, which seem painful. After a time the water ceases to flow, or nearly so; the eye looks hollow; a "bunch," the size of a pea, of a reddish or greenish color, gradually forms directly over the pupil, and total blindness follows, and a remedy is asked for in both cases.

ANS.—The trouble in both cases is due to epizootic ophthalmia, which often attacks the herds of a locality, without any apparent cause, except exposure to changeable weather. Place the sick beast in a darkened building and give it a strong cathartic—1 to 1½ pound of Epsom salts, followed by an ounce of nitrate of potassa daily after the purgation. Take of sulphate af atropa eight grains, and distilled water two ounces, and with a small syringe inject a few drops mornings and evenings. The film that spreads over the eye, when the animal becomes convalescent will gradually disappear by absorption, to hasten which a few drops of the following solution may be applied mornings and evenings: Nitrate of silver and sulphate of morphia, each four grains, in two ounces of distilled water.

Cotswold Merino or Merino-Cotswold?

W. P. M., Richland Station, Tenn., asks which makes the best sheep for all purposes—to cross a Merino ram on a Cotswold ewe, or a Cotswold ram on a Merino ewe.

ANS.—One can scarcely say that there is a *best* sheep for all purposes. All the excellencies are rarely, if ever, found combined in any one thing, and in sheep it is very certain that there is no best kind that would be found satisfactory everywhere. Each one of the many kinds has its place, and to find the kind for each place requires not only a general knowledge of the different kinds, but an intimate acquaintance with the place and its peculiarities. Moreover, the purposes for which the flock is designed are to be considered before a judgment could be safely concluded. But if our inquirer means, which makes *the better* sheep of these two, the cross of the Cotswold ram on the Merino or grade Merino ewe is better than the reverse; and for this reason, the design is to improve the smaller Merino, and it is a rule in breeding that the improvement should come from the male, the "top cross" as it is technically designated. The Cotswold is a superior race and the cross is intended to give size, weight, early maturity, and weight and length of fleece to a race that is inferior in these points. Therefore the "Cotswold-Merino," and not the Merino-Cotswold, is the better sheep for general purposes, if not in every case.

Giant Powder Cartridges.

J. W. W., Loose Creek, Mo., and a dozen or two more, ask where they can procure Giant Powder cartridges, how to use them in clearing ground of stumps and bowlders, and their price.

ANS.—An article published elsewhere in this issue is written purposely to answer most of these inquiries. These cartridges are made only by one company in this country, so far as we know—the Atlantic Giant Powder Co., Varney & Doe, Agents, 59 Park Place, N. Y. City. The agents do not supply private parties with the cartridges, mainly on account of the objections to transport the article to a distance in small quantities. They tell us, however, that they will send to each applicant the name of the agent living nearest to him, from whom the cartridges can be obtained. The powder is furnished either loose or in cartridges, in boxes of 25 or 50 pounds each. Cartridges are eight inches long, and any diameter required. Purchasers should designate the kind of powder—whether No. 1 or No. 2, the number of pounds, diameter of cartridges, number of caps, and feet of fuse they may need. The following are the prices of requisites: Powder, No. 1, $1, and No. 2, 50 cents per pound; caps (per box of 100), $2; single-taped water fuse (per 100 feet), 75 cents; nippers, 50 cents. Full instructions as to the methods of using the cartridges are furnished to applicants, in the form of a pamphlet.

Foul-in-the-Foot.

D. C. D., Viola, Ia., asks for a remedy for a disease in his cattle like foot-rot in sheep. Its first symptom was lameness in the hind feet, which, after running a few days, emitted a very disagreeable odor. The hoof soon cracked all round to the cleft which became sore throughout and discharged a watery substance.

ANS.—This is a case of foul-in-the-foot, a disease of horned cattle, consisting of inflammation and suppuration of the interdigital substance, or that between the claws, arising from overgrowth of the hoof causing a strain on the internal structures, or due to the irritation of dirt between the claws or digets, and sometimes from a tuberculous diathesis or unhealthy condition of the parts. As treatment carefully remove all loose horn and thoroughly cleanse by soaking in warm water and hot poultices; then dress daily with pledgets of oakum or tow steeped in a solution of carbolic acid and oil (sweet)—one to forty; or, take chloride of zinc and water—one to thirty. Keep the oakum in place by a bandage. If the disease extends to the joints above, prepare the animal as soon as possible for the butcher. Give laxative food and one-ounce doses of nitrate of potassa daily while under treatment.

Doura.

G. R. P., Somerset Center, Mass., asks whether we have for sale any seed of the Doura which the RURAL has been highly recommending.

ANS.—Yes, we highly recommend a certain kind of Sorghum vulgare, which, so far as we can learn, needs a variety name. We are having several acres of it grown in South Carolina for the RURAL'S next Plant and Seed Distribution. Many of our readers have bought what has been advertised as Doura, supposing it to be the same as that tested at the RURAL FARM. But they are not the same. That to which we have often referred produces an average of seven or eight stalks from a seed. It grows from seven to ten feet high and bears an upright panicle of grain. It may be cut twice in this climate. Cattle are exceedingly fond of it. It takes so firm a hold of the soil that we have never known a plant or stalk to be blown down. We sell absolutely nothing except the RURAL NEW-YORKER.

Spavin.

A Subscriber, Uniontown, Pa., has a valuable horse that is severely crippled in the hind leg, arising, it is supposed, from a blood spavin. He was injured about a year ago, and flinches very much when he trots, and our friend asks whether there is any remedy.

ANS.—From the meager description we are unable to say whether this case is curable or not. If of long standing, treatment would be of no use. If the lameness is recent, try a strong blister on the inside of the hock, and allow a rest of two months at pasture; or, if a veterinary surgeon is within reach, have the leg fired and blistered, and good results may ensue. As the horse is valuable, the services of a competent surgeon should be secured at once.

What is a Quart of Milk?

S. W., River Falls, Wis., asks what is a standard quart of milk—some there claim that it must weigh two and one-half pounds.

ANS.—A quart is a fourth part of a gallon. There are three different gallons in use:—the old standard wine gallon of 231 cubic inches; the imperial gallon of 277¼ cubic inches; and the ale or beer gallon of 282 inches. The first is that by which milk and other liquids are sold. A gallon of pure water at a temperature of 60° weighs 8.338 pounds. Milk has a specific gravity of 1.034 or 34 pounds to the 1,000 more than water. This will give pure milk the weight of 8.675 pounds per gallon, or 2.16 pounds per quart. In general use a quart of milk is taken as weighing 2.21 or 2 1-5 pounds.

Miscellaneous.

S. F., Skohegan, Me., asks why cannot sugar beets be ground with a small, portable mill on the farm, the juice to be then pressed out of the pulp, and evaporated to the consistency of sirup containing all the sugar of the beets together with a considerable amount of foreign matter which it would be the business of the sugar refinery to eliminate in the process of crystalization. If the sirup alone had to be taken to the factory, the cost of transportation wouldn't be one-twentieth of that for transporting the whole beets, while the pulp would be left where it is most wanted—on the farm. Our friend remarks that if such an arrangement were possible, hundreds who never raised a sugar beet would go largely into the business.

ANS.—Beet sugar cannot be made in the rough-and-ready manner described. It requires a careful chemical process to rid the juice of such imparities as would prevent crystalization; and once the sirup should be made and become glucose, it could not be brought back to the condition in which it would form solid cane sugar. It seems a necessity of the business that the beets should be grown near the factory where they are manufactured into the sugar.

N. J. A., Grand Rapids, Mich., sends a specimen of marl and inquires as to its quality.

ANS.—The marl is of good quality, having a large percentage of lime. The exact amount of lime cannot be determined short of an analysis, and we cannot undertake to institute analyses of substances unless the charges for the same are remitted—from two to five dollars according to the nature of the substances.

G. E. N., Afton, N. Y., asks how to get rid of toad flax, which has become a very troublesome weed on his farm.

ANS.—The only way to extirpate it is to keep it down with the cultivator wherever this implement can be used, and to prevent it from going to seed by using the scythe or mower where the cultivator cannot come.

J. O. S., Frenchtown, N. J., sends two specimens of rock and inquires what they are.

ANS.—No. 1 is a specimen of common trap-rock, and No. 2 is a shale. Neither is of any value as a mineral.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, June 26th.

J. T.—M. R. T. D.—J. J. B.—A. B. A.—Ludie—C. R. D.—H. T. J.—G. A. G., Jr.—A. W. P.—J. P. R.—H. S.—S. R. M.—L. W. S.—J. E. M.—J. D. B.—G. G.—A. B. A.—M. H. D.—D. B. M. D. W.—C. H. B. M.—E. C.—S. W. R.—D. S. H. W. C., Jr.—N. O.—J. N. L.—A. a. C.—H. A. B.—G. E. P.—E. E. B. S.—T. H.—B. P. M. S. R.—S. E. H. —. L. W.—J. M.—A. L. J.—?. C.—J. F. T.—J. P.—A. E. B.—G. W. C.—S. T. R.—D. M. C. P.—J. Van V.—B. J. J.—W L. S.—E. W. S.—O. S. B.—H. A. W.—M. P. W.—G. E. N.—A. H. W.—E. M. S.—W. B. Jr.—G. L. S.—S. R. M.—G. W. F.—W. A. W.—D. W. H.—J. A. C.—J. B. C.—S. H. R.—C. L. I.—J. W. W.—T. T. L.—A. R. D.—R. F.—W. R., thanks—J. D. H.—D. P.—A. E. B.—M. P.—J. S. S.—E. B.—J. D. H.—J. A. E.—G. McF.—B. F. J.—J. S.—J. W. M.—W. H. M.—C. H. R.—E. R. B.—E. W. M. C.—A. B. P.—A. J H.—J. W.—W. Y.—E. P. J.

THE
RURAL NEW-YORKER.
PUBLISHED EVERY SATURDAY.

CONDUCTED BY
ELBERT S. CARMAN.

Address THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, JULY 3, 1880.

SUBSCRIBERS of the RURAL NEW-YORKER will greatly oblige us if they will promptly notify us of any irregularity in the receipt of their papers. The many changes rendered necessary by our removal and an unusually large number of complaints make us desirous of rectifying any further derangements at present unknown to us as speedily as possible.

JUMPING AT CONCLUSIONS.—How easy it is to arrive at wrong conclusions. There are two fields of corn near us, both upon sod. Upon one a tablespoonful of bone-phosphate was used in the hill. Upon the other, farm manure. The first is far ahead of the other, and the farmer concludes that the difference is owing to the superiority of the phosphate over the manure. In this season of drought we have had no rain to penetrate three inches below the surface. No doubt the farm manure, which remains in heated masses in the hills, has exerted an injurious effect upon the growing corn, while the tablespoonful of phosphate has exerted no effect of any kind. Had a tablespoonful of plaster or sand been placed in the hill, probably the effect would have been precisely the same. But the farmer has determined to use a tablespoonful of phosphate in the hill for his corn crop hereafter.

A NORTH CAROLINA BONANZA.

AN extraordinary change has occurred in one phase of the agriculture of North Carolina, by which the rejected lands are preferred, and prices have risen from a dollar per acre to thirty and even fifty. The extension of the culture of bright yellow tobacco has been the cause, and the regions affected are the northern counties adjoining the Danville district, in Virginia, and also the Piedmont region farther south and west, including the counties of Alexander, Caldwell, Catawba, Lincoln and Cleveland. The light, gray, sandy soils are peculiarly adapted to this crop. A moderate quantity of phosphates and guano is used to get a quick growth, which the dry weather of the late Summer terminates, and the porous quality of the soil supplies from below sufficient moisture to make the ripening very gradual to a clear lemon color, and the curing without spot or blemish. This tobacco is used for plug wrappers, commands a very high price, and often brings to the grower $500 per acre. It is enriching multitudes, building houses and stimulating unaccustomed improvements and making handsome bank accounts throughout the favored district. It is a rural bonanza for many an industrious poor man, whether white or black, and still yields a golden harvest.

AND DRINK, TOO.

So great are the ravages of the phylloxera in France, that unless some means can be soon devised for arresting the progress of the evil, wine-making there, which has long been one of the chief industries, must necessarily come to an end. Whether this country will be able to supply the deficiency in the wine supply thus created, remains yet to be proved. If any attempt to do so shall be made, we shall not only have to pay even more attention than heretofore to the improvement of our varieties of grapes, but we shall also have to greatly enlarge the area of our vineyards. In ordinary times the vintage of France amounts to between 1,500,000,000 and 2,000,000,000 gallons, worth about $350,000,000.

Since the first appearance of the phylloxera in France, in 1865, it has spread through 14 Departments, entirely ruining the vineyards, and despite the study and experiments of the best scientists, and liberal rewards offered by the government, no remedy has yet been discovered. Already the supply of wine from Madeira, which used annually to export an average of 460,000 gallons, has been cut off by the destruction of the vines by the vine mildew—Oidium Tuckeri—while the same cause has been equally fatal to the vines in the Canary Islands, which every year used to send abroad 6,000,000 of Canary wine, very much like Madeira. In Spain, too, the region which supplies sherry, and in Portugal, that which supplies port, are, it is reported, both suffering from the phylloxera and vine diseases, so that a wine famine seems imminent in the near future. No time should be lost by us in trying earnestly to prepare for such a contingency. Already we are able to supply the population of the Old World with bread and meat; and there is now a fair prospect that we shall soon have an excellent opportunity of supplying them with drink, too.

SMALL FRUIT IN NEW YORK MARKET.

THE strawberry season is gone; only a very few small consignments from the extreme northern counties of New York State will arrive the present week. The average price per quart of this fruit for the past three weeks may be put at about 11 cents, though we are acquainted with growers who realized from 15 to 25 cents per quart, and we even know of a case in which the grower has sold his berries on contract at a dollar a quart. But fancy prices of this character are not often reached, and they can only be obtained for really excellent fruit raised by growers who have gained a good reputation in this specialty. Next to good, fresh berries, the main secret in commanding the highest market price consists in the selection and grading of the fruit. A few small, decayed or otherwise defective berries in a quart of first-class fruit will affect the price disastrously. Growers who exercise care in this particular will soon get the patronage of the best hotels and restaurants where the price is of less consequence than good, attractive fruit.

The raspberry season for this market will be at its hight in a few days. Immense quantities of native or wild berries are expected to arrive this week. A good late berry that can be put upon the market when the glut is over, is likely to prove most profitable.

Cherries have been abundant here the past two weeks, and still more will arrive during the coming week. Good cherries sell quite readily for 10 cents per pound at retail and the price is likely to be a trifle in excess of what the same quality has commanded during the past week. Currants are abundant and cheap, and it is not probable that the price will rise. Upwards of fifty tons of cherry-currants were sold to manufacturers of jellies during the past week, at from three to four cents a pound. A few peaches have arrived here from Delaware but they are sorry-looking specimens of the fruit they purport to be. They are mostly picked from dying trees and are consequently prematurely ripened.

A NEEDED CHANGE IN THE HOMESTEAD LAW.

THE labors of our pioneers in colonization have done a great deal towards reclaiming for agriculture much of the eastern part of what was once known as the Great American Desert. There still remains, however, stretching eastward from the Rocky Mountains, a vast area so destitute of rainfall as to be entirely unfit for farming purposes. On much of the land there is a fair growth of buffalo and other prairie grasses, which fit it to be the great grazing region of the United States, and myriads of cattle and sheep pick up a fair livelihood in Spring and Summer, a poor one in Fall, and a still poorer one in Winter on its boundless acres. Railroads and land agents have so industriously puffed up this region as admirably fit for farming purposes, that a great many immigrants, generally homesteaders, have settled on parts of it, but so severe has been the drought this year and last, that most of these have been reduced to the brink of starvation, over which many of them must have passed had they not been relieved by private and public charity, while hundreds of others have been forced to abandon their homesteads and seek employment farther to the east.

If ever the whole of the American Desert is brought under tillage, it must be at the cost of the livelong labors of at least the first generation of these pioneers. Hardships, of the most grievous kind must be their lot while preparing the way to competence and abundance for their successors. While engaged in this arduous task special encouragement should be afforded them by the Government; but, instead of such consideration, the provisions of the Homestead Law press grievously on many of those who have taken up land under it. If, after having expended upon their claims all their little hoards and some years of anxious labor, a season of drought blasts their crops and hopes and the approach of starvation forces them to seek a temporary livelihood elsewhere, they risk the loss of the land on which have been expended their savings and their toil. In a country so vast as this, no general law can be the best for all sections, and special modifications should be made in the Homestead Law to meet the exceptional conditions of this region.

SEXES IN ASPARAGUS.

The New England Farmer tells how a successful grower of aspargus for market has much improved his plantation. He has rid out the female plants by a gradual process, that of pulling up all stalks that show berries—that is, all females. In this way he gains a double advantage: he retains only male plants, which are the most vigorous, not being exhausted by seed-bearing, and he has no trouble with that commonest and worst weed in an asparagus bed—the volunteer seedling. His theory that the pulling up of the stalks showing berries would change the root they grow from, so that it would cease to yield female blossoms, is, of course, illusive. "The plants that are male are wholly male, and *vice versa*. Some male plants are more vigorous than others, and no doubt the *beau ideal* of a bed would be formed by subdividing the roots of a choice sort, just as we propagate choice varieties of potatoes or rhubarb. But old asparagus roots do not bear such division well. With a start made, and annual division, until a sufficient stock is obtained, this very desirable improvement might be attained."

During the present season we have paid some attention to the sexes of asparagus, and our conclusions are somewhat at variance with one of the above statements. Upon the RURAL FARM, asparagus grows wild, and may be seen in almost every hedge and meadow. As soon as the plants began to bloom we marked upwards of 100, those we supposed to be males with a white tape, the others with black. The males are distinctly males, and are easily determined, even in the bud, by the large anthers and by the fact that the flowers have neither styles nor stigmas, the pistil consisting of an ovary only. But there is no female plant. All plants that are not males are bisexual or hermaphrodite. The flowers of these are very much smaller than those of the males, and the stamens are small and apparently impotent, though only apparently so, for, so far as we could determine, they alone were of service in pollenation and fertilization. In proof of this we may mention two of several observations:—

A single bisexual plant was found in a grass meadow, and there were no males within 200 feet. Almost every flower bore fruit. We also found a bisexual plant near the middle of an oat field of five acres, the only plant in the field. This too fruited abundantly. It appears also that the fruit is set before the flower fairly opens. If our observations are trustworthy, the male asparagus plant has no part in the seminal perpetuation of its kind.

BREVITIES.

THE Army-worm hath disappeared from our neighborhood.

MR G. W. HOFFMAN stated before the Elmira Club that he planted a few seeds of Bermuda grass. Would he kindly inform us where he procured the seed?

THERE are few grasses which are prettier in bloom than Holcus lanatus (Velvet grass), now blooming in meadows. It is a pity it is not as valuable for lawns or for cattle as it is beautiful and tenacious of life.

WE have spoken of the difficulty the Army worm experiences in climbing ascents, if the soil is dry and sandy. Millions of the worms in crossing the sandy roads of Long Island would accumulate in the wheel ruts so that, as we have said, the tires of wheels would often become muddy from adhering masses of their crushed bodies.

A SUBSCRIBER complains that in consequence of an advertisement in the RURAL, he sent some time ago to Goddard & Co., of this city, for the "Revealer," but since then he has neither heard nor received anything from them in return for his money.

The advertisement alluded to was inserted once, for the reason that those who attend to the advertising department were absent the day of going to press. It was then rejected; not that we knew anything against Goddard & Co., but because the advertisement "upon its face" was objectionable. We very much regretted its appearance in our columns.

SOUTH DEVON CATTLE.—Till recently, these have generally been so much coarser and more leggy than the North Devon—which is the true breed—that they have found no favor with purchasers outside of their own district. But latterly the South Devon breeders have resorted to the North Devons to cross on their stock, and this step, together with careful selections, has enabled them to so greatly improve the race, that the best specimens are now considered little, if any, inferior in shorter legs and fine points to the North Devons. They are usually larger in size than the latter, which is an advantage to them as beef producers.

THERE seems to be a prospect of a speedy panic in cheese in this market, and doubtless the depression will soon extend to other points also. From last Tuesday to Saturday prices fell 2¼ cents per pound, and the bottom has not yet been reached. The high prices that ruled early in the season induced makers to overstock the market, and now the hot weather and a rapid decline in the English market have intensified the customary annual depression and brought it on five or six weeks earlier than usual. It would be well for producers to lessen their make for the present, and to hold back their goods until the market becomes steadier and stiffer, otherwise they will inevitably cause a panic by which all will suffer pretty heavily.

SEWAGE OF TOWNS—ITS VALUE.—Professor Church, in a recent lecture before the Farmers' Club at Rochester, England, asserts that this is worth from 15 cents to three dollars per annum for each town inhabitant, its value depending upon the cheapness and facility of applying it to crops, and the value of such crops when harvested. Even at the very low estimate of 15 cents per individual of the United Kingdom, it would amount to about $7,000,000 per annum. If these human excreta could be applied to wheat, the Professor calculates they would grow enough extra over present crops to come to the value, in round numbers, of twenty to eighty millions. An enormous sum this even at the lowest estimate, to annually lose; and yet this waste is still greater in the United States of America than in the United Kingdom of Great Britain and Ireland.

DECREASE OF CATTLE.—It seems to be the opinion of those who have examined this matter pretty thoroughly, that a considerable decrease will be found in the stock of the United States and Territories, after the shipments of this year are over. We are of the opinion that this may be the case in regard to such as are sufficiently well-bred for shipment to foreign markets; but as to inferior stock, we question whether much, if any, deficiency will be found. Yet, in any event, there will unquestionably be a considerable advance in the price of cattle another year, as well as in that of sheep and swine. There are two reasons why this may be so,—the first of which is the greatly increased tide of immigrants to our country this season, who will be consumers instead of producers for a twelvemonth to come; and the second season is, so numerous are the losses sustained in Great Britain and Ireland during the past eighteen months in domestic animals, that their wants for this year, will, doubtless, be larger than the past have been.

LARGE CROPS OF CORN FODDER.—Several correspondents in a late issue of the Country Gentleman, seem to have given from actual weight on small patches of their fields, pretty reliable estimates of the amounts which were grown per acre, previous to the curing of the corn. They state these weights at 28,35,36, and 45 tons, respectively, per acre. The latter was sowed in drills three feet apart, using three bushels of seed per acre, and the season was perfect in every respect for its growth. They do not state what the weather was when the corn was cut, or the time of day it was done. To be fair in such a trial, the weather ought to be sunny two days before, and the stalks not cut till all the morning dew was dried off. Dr. Bailey, of Massachusetts, asserts, that he can grow 75 tons of corn-stalks per acre. If he does, we think he will have to resort to the Cuzco sort, of Peru, which grows there 25 feet high or more, and is three inches in diameter, or so, at the butt. This would be about as eatable and digestible as *cord wood*, unless his method of ensilage can transform it to palatable fodder. He is now cultivating a mammoth ensilage corn, of which he thinks highly. We hope when his crop of this has been gathered and fed to his animals, he will give us not only its yield per acre, but the value of its fodder to his stock in comparison with the smaller sweet corn.

A VIGOROUS effort is now being made by Australia to flood this country with her cheap wools to the ruin of our own sheep husbandry. The Colonial Chambers of Commerce are appealing to the Chambers of Commerce in our chief cities urging them to use their influence for the abolition or at least the reduction of our import duties on foreign wools. The Chambers of Commerce of this city and Boston have already promised their aid and appointed committees to bring the matter before Congress. It is urged that the free admission of this product of the Australian colonies into this country, would largely increase our trade in manufactured goods with them. We indignantly protest against the ruin such a measure would be sure to bring upon one of the most beneficial industries of this country, for the benefit of a class that is already receiving too much national support at the cost of the agricultural community. If a reduction is made in the tariff on wools, it must apply to Buenos Ayres and the rest of the world as well as to the Australian colonies, and in a few years so great would be the impetus given to sheep raising abroad by the large market offered for wool in this country, that our home markets would be overstocked with the product at prices which would defy the competition of our home raised wool. In Buenos Ayres, Banda Oriental and Australia sheep are raised in enormous numbers for their wool alone, and it would be as impossible for our farmers to produce wool as cheaply as it is raised there, as it would be for our iron manufacturers to compete with those of England or Belgium. Our manufacturers, however, are carefully "protected" from such ruinous competion by almost prohibitory duties on foreign iron goods, and why should not our farmers receive a similar "protection?" It is about time that our legislators should be made to realize that this is pre eminently a farming country, one whose prosperity is mainly dependent on agriculture, and whose population is mainly made up of agriculturists, while manufacturers form but a comparative handful, and must be content with a back seat—an honorable one, 'tis true, but a back one.

Literary Miscellany.

THE OTHER SIDE.

"The words are good," I said; "I cannot doubt,"
I took my scissors then to cut them out.
My darling seized my hand. "Take care!" she cried;
"There is a picture on the other side?"

I fell to musing. We are too intent
On gaining that to which our minds are bent:
We choose, then fling the fragments far and wide,
But spoil the picture on the other side.

A prize is offered. Others seek it too;
But on we press, with only self in view.
We gain our point and pause well satisfied:
But, ah! the picture on the other side!

On this, a sound of revelry we hear;
On that, a wail of mourning strikes the ear.
On this, a carriage stands, with groom and bride;
A hearse is waiting on the other side.

We call it trash—we tread it roughly down,
The thing which others might have deemed a crown;
An infant's eye, anointed, sees the gold
Where we, world-blinded, only brass behold.

We pluck a weed and fling it to the breeze;
A flower of fairest hue another sees.
We strike a chord with careless smile and jest,
And break a heart-string in another's breast.

Tread soft and softer still as on you go,
With eyes washed clear in Love's anointing glow;
Life's page well finished, turn it, satisfied,
And lo! heaven's picture on the other side.

RESULT FROM MISTAKE.

CHAPTER I.

It was the eve of St. Valentine, and Kate Seton, the eldest daughter of the great David Seton, was kneeling on the hearthrug in the dining-room in front of a brightly blazing fire.

The winter's day was nearly at an end, and the richly-furnished room was full of flickering shadows. The upleaping flames displayed to great advantage the rounded outlines of her dainty figure, and shining on her chestnut hair, tinted it with a richer gold.

One hand was raised to shield her from the heat; the other held the *carte-de-visite* portrait of a young man, whose face was full of that dark beauty which is girlhood's charm.

"How handsome he is!" she murmured, softly, as her eyes rested fondly on the photograph—"how noble!"

Then, after a pause, she added:

"Does he love me? Does he even care for me? Have I placed a higher value upon his attentions than they justified or he intended? I fear it must be so; for though his glances have seemed eloquent, his tongue has been mute. He has never said a word of love, not one! Yet what a kind expression! Surely he does not look like one who with ardent glances and flattering words, would strive to win a young girl's love only for sport, for wantonness! No—no; I will not think so meanly of him."

She could no longer disguise from herself the fact that, whether for weal or woe, she had bestowed her young affections upon the original of the photograph—Frank Drayton—bestowed them, too, unasked.

Her head sank lower—her heart grew sadder—the firelight lost its brilliance. But Kate remained unconscious of all around her, until a loud double knock at the outer door caused her to spring suddenly to her feet.

"Only the postman!" she exclaimed. "But how he made me start!"

The door opened and a servant entered with a letter.

"For you, miss," he said. "Shall I light the gas?"

"Not at present, thank you; I will ring."

And down on the rug she sank again, and examined the superscription.

"It is from Frank!" she whispered. Her color came and went, and her hand trembled. "How strange that a letter should come from him, and at such a moment! If—? No—no; I am foolish indeed! It is most likely only about the books he promised to lend me."

But when the note lay open before her, she found it no such commonplace communication as she had schooled herself to expect.

The contents ran thus:

"My own dear Kate.

"Pardon me for commencing thus, but any other way seemed too cold, too formal, for my purposes. Although I have never told you so in words, I cannot help thinking that my attentions have been sufficiently marked to lead you to infer that I love you; while, on my part, I have indulged in the hope that you would listen favorably to a declaration of my attachment. More than once I have been on the point of asking you to be my wife, but on each occasion the reflection that my life-long happiness depended upon your reply has kept me silent. I do not hesitate to confess that your rejection of my suit would be a sharp and bitter pang to me, and it is for this reason I now make my proposal to you by letter instead of in person. I feel that I could bear the pain of a refusal better if it came from you in writing than if I heard it from your own lips.

"You perhaps can imagine my suspense; let me ask you, then, to favor me with an early answer. If your reply should be in accordance with my desires, believe me, my constant effort shall be to ensure your happiness, and my highest ambition to become worthy of such a wife as you will be.

"Yours faithfully,

"Frank Drayton."

It would be impossible, in any reasonable space, to give even an idea of the effect which this letter produced in Kate's mind; she could only press his letter to her lips in mute thankfulness and joy.

"I was right," she said, at last. "My heart told me truly. He loves me—he loves me!"

How long she remained in that blissful reverie she never knew. All at once she was brought back to a recollection of where she was by hearing her mother's voice.

"Why, Kate, my child, what are you thinking about? Here all alone in the dark, and not dressed yet! Run up stairs at once, or you will never be in time!"

"Oh! mamma!" she exclaimed, rising and kissing her mother's cheek, "I am so very—very happy."

And by way of manifesting her joy she burst into a flood of tears.

"Kate! Kate!" exclaimed Mrs. Seton, "I don't understand this at all! What does it mean?"

"This letter," answered Kate, who was now smiling through her tears; "Frank Drayton has asked me to become his wife."

"Frank Drayton?"

"Yes—yes, mother! Read for yourself!"

"My own dear Kate," she said, reading the commencement of the letter, "well, really that strikes me as rather a remarkable commencement. I had no idea you were already upon such very friendly terms."

Kate's cheeks became a deeper crimson under her mother's steady gaze.

"Please read the letter," she answered, "you will understand better then."

"I must admit that at the present time there is no accounting for what young people may say or do."

And having thus expressed herself, Mrs. Seton read the letter,

"I suppose," said Kate, presently, "I must write to him, mamma?"

"Of course you must, child! What a question! And it is easy enough to see, as far as you are concerned, that Frank Drayton has no reason to fear the mortification of a refusal."

"And you, mamma?"

"I have no objection to your returning him a favorable reply. Frank Drayton bears an excellent character. He is good-looking, generous, and well connected. It is true he has yet his way to make in the world, and, to use a common expression, you might have looked higher."

"But I love him!" said Kate.

"There is your father?"

"Ah! yes—yes. As you say, my father!"

It was with a little shiver of doubt and dread that Kate pronounced these words; for Mr. Seton was known as a hard, shrewd man of business, one who had no touch of sensibility or sentiment in his composition.

"Don't tremble so, dear child," said Mrs. Seton stroking Kate's hair caressingly. "I do not say your father will withhold his sanction. At the same time you must not forget you will be the sole inheritor of the vast wealth which it has been his life-long occupation to amass, and he may have formed ambitious views regarding his only daughter's future."

"But surely," pleaded Kate, "he would not be so cruel as to sacrifice my happiness!"

"I hope not; but do not distress yourself by anticipating evil. Write to-night to Frank Drayton, and tell him that when he has obtained your father's sanction you will be ready to become his wife."

"Oh! mother, how kind, how good you are!"

"Yet," added Mrs. Seton, after a pause, "I cannot help feeling a good deal surprised at the abruptness of this proposal. I have noticed, of course, that Frank has paid you many little attentions, though it never struck me that they meant more than ordinary civilities—I certainly saw no manifestation of love in any one of them; and above all, I never knew that you were on sufficiently intimate terms to justify him in addressing you in so familiar a manner. It seems very strange indeed to me."

"But not to me, for I love him—and he loves me too, or he would not have written this letter."

"Well, well, darling; do not let any doubts of mine dull the brightness of your joy. Go now to your own room and write your answer or you will be too late for post."

CHAPTER II.

"Mrs. Thursby.—Mrs. Thursby. Confound that old woman, I do believe she grows deafer and deafer every day! Ringing, knocking, and shouting appear to be equally useless. Mrs. Thursby, I say! It's uncommonly convenient to have a deaf landlady on certain occasions, but as a regular thing it's an intolerable nuisance. Mrs. Thursby! how much longer do you intend to keep me waiting for my breakfast? Calling is of no use, that's perfectly clear—so here goes for the bell again!"

And the speaker, marching up to the chimney-piece, began tugging at the bell-pull in a manner that was enough to alarm the whole neighborhood.

"I see you a-ringing, sir," said a shrill voice at this moment, and a thin little old woman appeared on the threshold, carrying in front of her, on a tray, the long-awaited breakfast.

"See me a-ringing, as you call it, and heard me too, I should think."

"No—no, Mr. Drayton; I couldn't hear you. But I see the bell a-shaking, and so I says to myself, 'there's Mr. Drayton in a hurry for his breakfast, and what am I to do? There ain't no one in the house to answer him, and if I leave the fire myself his chop will be spoilt, so' "——

"There—there, Mrs. Thursby, that will do," answered Mark, who was considerably mollified by the tempting appearance of his morning meal and the appetizing odor that pervaded the apartment as soon as the cover was raised. "It's a great pity you are so awfully deaf, for I would back you against anybody as a cook. But where are the letters?"

"Cook fit for your betters!" exclaimed Mrs. Thursby, with a simpering grin. "Lor', no, sir. I'm glad to please you, and——"

"No—no!" screamed Frank, frantically. "I didn't say anything about my betters! I asked for my letters."

"Beg pardon, sir. None come yet. Valentine's Day, you know, sir. Letters is always late on Valentine's Day. The postman he says——"

"Never mind what the postman said. Go down to the door and wait for him, and bring the letters to me the moment they arrive."

"Yes, to be sure, sir. I'll go at once."

"Now, I wonder whether she understood me?" speculated Frank. "I don't believe she can hear a sound, but just watches the movement of my lips, and just guesses at what I say, and that is why she makes such ridiculous mistakes!"

He listened continually for the well-known sound of the postman's knock—paced restlessly to and fro from the window to the fire—and exhibited all those peculiarities displayed by a person who is in a state of great suspense.

"She is sure to write!" he muttered. "What hard luck that this is Valentine's Day! She is sure to write: but what will her answer be? I am afraid, after all, that Kate is nothing but a coquette, and I have more than once suspected that, when she has shown such a decided preference for me, she has only been playing me off against that conceited little jackanapes, Horace Brown. If I thought that was the case, by Jove! Id——"

Frank Drayton did not express his intentions in words, but snatched up the poker, and commenced a vigorous onslaught on the fire.

He was thus engaged when Mrs. Thursby entered with her apron full of letters.

"Lor' a mussy, sir!" she ejaculated, as she poured the missives upon the table, "no wonder at the postman a-grumbling! Did you ever see such a lot? Shall I take away the breakfast things, sir?"

"No—no, not now. You can go."

And he accompanied his words with such a significant and unmistakable gesture, that Mrs. Thursby left the room without uttering another word.

Frank glanced hurriedly over the pile of letters, and quickly discovered the one he sought.

"That is Kate's handwriting!" he exclaimed. "Now for my fate!"

He sank back in his chair as he spoke, and despite the evident effort he made to maintain his composure, his hand trembled as he tore open the envelope.

But no sooner did the first words meet his eye than he started and changed color; while, as he continued to read on, his features assumed an expression of incredulous amazement.

The contents ran thus:

"Dear Old Frank,

"Very many thanks for the books. I do not remember that you promised to lend them to me; but I am much obliged to you all the same, for I was awfully in want of something to read.

"And now for a real bit of news! Prepare your congratulations! Horace has come to the point at last. He proposed to me in due form last night, and of course I have accepted him. I feel very much indebted to you for the assistance you have rendered me in the matter. Indeed, if I had not flirted with you in the barefaced manner I did, there is no knowing how long my diffident lover would have been before he found strength of mind enough to pop the question! But all is well at last. I knew you were love-proof, and that you wouldn't mind it a bit. I hope you will call soon, and then you can offer your congratulations in person.

"Your grateful and affectionate cousin.

"Kate Barton."

"Good Heavens!" he ejaculated, not only are my fears about my cousin's behavior towards me fully confirmed, but by some extraordinary mistake she has received the note I wrote to Kate Seton. And can it be possible that—no, no! it would indeed be to make me the sport of fortune."

He was deathly pale as he made another hasty search among his letters, for the supposition which had now taken possession of his mind affected him deeply.

"Yes, this must be it!" he exclaimed, holding up a letter on the seal of which appeared the initials K. S., "yes, this is it, no doubt. I feared to open the other envelope, but I shrink in dread from opening this, yet it must be done! Better know the worst at once!"

He read as follows:

"Dear Frank:—I have received your letter and it has made me very—very happy. I hope my candor will not displease you, but I write as my heart dictates. My mother knows all, and favors your suit. If you can obtain my father's consent, I am yours.

Kate Seton."

No sooner did Frank finish the perusal of this note, than he sank into his chair with a groan.

"What on earth is to be done?" he asked himself, 'was ever anyone in so perplexing a predicament before! How can such an unfortunate mistake have occurred. Stop!—Let me think! Mrs. Thursby! Yes, that is it! Confound the old woman! it is all her fault! I remember now perfectly! She interrupted me by saying I should be too late for post. Both letters were open before me, and in my haste I must have put them into the wrong envelopes. Even now, however, with the proof staring me in the face, I can scarcely conceive the possibility of my having done such a thing. But being done, how can I act? What course can I take? It is quite clear that Kate Seton has fallen into the mistake that the slight attentions I have paid her were prompted by affection on my part. It is enough to make a fellow vow never to do or say a civil thing to a girl again as long as he lives. And then, she is not at all the style of a girl who would suit me for a wife. No, no; let the matter end how it may, I can never marry Kate Seton! Never, never!"

"And yet, what a sweet, tender letter it is," he continued, after having perused it a second time. "Poor Kate, I pity her! It is very awkward and unfortunate for her of course! Would that she were Cousin Kate! But no, no! I will not think of her again! She is not worthy of another thought! Yet stay! In all this miserable business is there not some small amount of consolation for me? Yes; for so far as regards my declaration to her, I can congratulate myself that it did not reach her hands! That humiliation at least is spared me!

This consideration seemed to bring Frank some little satisfaction, for he smiled grimly.

"As for Kate Seton," he added, a few minutes afterwards, "it is quite clear there is only one mode of action possible. I must write and tell her that the letter she received from me was intended for another. It will be very mortifying for her, poor thing! But how can I help it? I can only express my regret that my carelessness should have produced such unpleasant consequences. Only let me have the good luck to get safely out of this scrape, and I abjure the sex for ever! But now I think of it, there is still another difficulty. If I confess my mistake, the question will naturally arise—for whom was my offer intended? Come what may, Cousin Kate must not know that I have been the slave of her fascinations. I would marry Kate Seton first. And now I come to think of it, why should I not? It would be an easy way out of the whole difficulty. I know her to be amiable, beautiful, and the only child of wealthy parents. She would make a good wife no doubt. Above all, she loves me! That is a fact admitting of no dispute, for I hold the acknowledgement of it in my hand."

As he made this reflection he started up and began to walk rapidly up and down his room. The difficulties of his position grew greater and greater as he dwelt upon them. Yet he was surprised to find how often he recurred to the idea of making Kate Seton his wife. And the more he dwelt upon the project, the less averse did he feel towards it.

"My mind is made up!" he said at length, in a resolute tone, as he paused before the window. "I will go at once to Mr. Seton and ask him to sanction my engagement to his daughter. He may at once refuse to give his consent. If so, why then all is well. I should tell Kate that, without her father's consent, I could not in honor prosecute my suit and I should be free."

It was inconsistent, certainly, and yet Frank was perfectly conscious that this termination of the affair would be by no means agreeable. His pride and self-love would suffer severely in the event of a denial from Mr. Seton.

"But should he return a favorable reply," he continued, "one of two things will happen; I shall either find that I care sufficiently for Miss Seton to marry her; or I shall do something to break off the match.—To be continued.

THE FIEND AND HIS LAWN-MOWER.

"Whirr-r-r-r-r!"
Blast him!
"R-z-z-z-z-z!"
Blast him again!
"Rr-rr-rr-rr-rr!"

Turn over in bed and vow that you will shoot his hens, poison his dog, and leave fish-bones where his cat will find them and choke to death.

Who?

Why, the triple-plated, bomb-proof, iron-coated, and hard-hearted next-door man, who went to bed at sundown for no other purpose than to get up at five o'clock A. M. and gallop his old lawn-mower around.

"Rattle! Whirr! Bang! R-r-r-r!"

Oh! he's there! He simply stopped for a moment to spit on his hands and get ready for a new twist. Just five by the bells, and some fool of a doctor has told him that the morning air is good for him! He knows that he is disturbing every man, woman and child within a block of him, but what does he care?

"Clickety-te-click-click-click-click!"

There he goes! He's got his coat off, his pants in his boot-legs, and he's thinking how nice it must be to live in the country and canter around over the dew-wet sward. Country be hanged! Lawn-mowers and next-door neighbors be hanged! The man who sold him that lawn-mower warranted it to be noiseless. Just remember that when you get to shooting! Noiseless, oh, yes!

"M-m-m-m! Bur-r-r-r-r! Z-z-z-ze!"

The baby wakes up with a howl. Why shouldn't he! Can a baby stand more than a horse? Everybody wakes up. If you think people can sleep on and dream of the gates of heaven while a man is pounding sheet iron with a hammer you have lived in vain.

"G-u-r-r——!"

Good. His old machine has struck a stone. Hope the contact has wrenched off every wheel, twisted every spring out of place, and flung the villian head over heels against the fence! Nobody but a villian would have a lawn to mow in the first place, and nobody but a mutton-head would go sloshing around on an empty stomach in this malarious climate. His health? What is his health compared to the peace of his neighbors? Who cares whether he gets fat and lives on, or if he grows lean and dies! He ought——"

"Clickety-te-click-click-click-click!"

"There he goes, the old machine making more noise than ever! Hit him with a brick! No, don't do it. Such a man as that couldn't appreciate a decent clip on the ear with a missile made by human hands. Draw a bead on him with a shot-gun? Never! Keep your ammunition for owls. Owls have sense enough to stick by the roost until seven o'clock. Argue with him? Not much! You couldn't convince such a man that he ought to be run over by a drove of Texas steers any more than you could make a Turk believe that he ought to pay one hundred cents on the dollar."

"Gurg-g-g-g-g! z-z-z-z! Bang! Rattle-r-r-r-rip!"

Let him alone! There is a Providence, and that Providence sometimes gives a villian rope to play with, just to see him squirm when he is brought up with a sharp turn. That mower may explode it not, the morning air will bring on sore throat, toothache, neuralgia, and chills. May he have them all jump on him at once, and stand by him

like an Indian's memory, and may every neighbor whom he has disturbed by his villianous noise grow fat, and sicek, and rich, and live to beat him for the only office he ever cared for!—Detroit Free Press.

BRIC-A-BRAC.

THE PUZZLED CENSUS TAKER.

"Got any boys?" the Marshal said
To a lady from over the Rhine!
And the lady shook her flaxen head
And civilly answered, "Nein!"

"Got any girls?" the Marshal said
To the lady from over the Rhine;
And again the lady shook her head
And civilly answered, "Nein!"

"But some are dead!" the Marshal said
To the lady from over the Rhine;
And again the lady shook her head
And civilly answered "Nein!"

"Husband of course!" the Marshal said
To the lady from over the Rhine;
And again she shook her flaxen head
And civilly answered, "Nein!"

"The d—l you have!" the Marshal said
To the lady from over the Rhine;
And again she shook her flaxen head
And civilly answered, "Nein!"

"Now what do you mean by shaking your head
And always answering 'Nine?'"
"Ich kann kein Englisch!" civilly said
The lady from over the Rhine.

—JOHN G. SAXE.

YOUNG man, a diamond pin looks real nice and glistens brightly, but when $4 a week supports a man and pin both, one or the other is not genuine.

If you love a girl and want to marry 'er
And lack of pluck is the only barrier,
We would make this mild suggestion:
Shoot yourself or pop the question.
—Keokuk Constitution.

HER mother said the little creature lived on love; but one month after marriage, when the grocery bill came in, he saw that he had made the greatest oversight of his life by not ascertaining what that particular love was for.

WHAT surprised Noah more than aught else was that he received no application for free passes. And what astonished the public after the flood was, that the veteran navigator never tried to get up a complimentary benefit for himself.

A UNIVERSAL BIOGRAPHY.

At ten, a child: at twenty, wild;
At thirty, strong, if ever;
At forty, wise; at fifty, rich;
At sixty, good, or never.—Buffalo Courier.

A COUNTRY school-master began one morning the duties of the day with prayer, as usual, but after prayer he went up and asked a little boy why he hadn't shut his eyes during prayer, when the little boy responded, "We are instructed in the Bible to watch as well as pray."

A QUAKER gentleman riding in a carriage, with a fashionable lady decked with a profusion of jewelry, heard her complain of a cold. Shivering in her lace bonnet and shawl as light as a cobweb, she exclaimed:—"what shall I do to get warm?" "I really don't know," replied the Quaker, solemnly, "unless thee put on another breastpin!"

WHEN clams are cheap and beef am dear,
I lives on clams all frew de year;
Sometimes I gets a big fat coon,
I eats him up afore its noon.
When 'taters rot an' turnips fail,
I'm fo'ced to live on toast an' quail;
When corn goes up an' meal am high,
To live on pastry flour I try.—Detroit Free Press.

A YOUNG man with an extremely powerful voice was in doubt which branch of the art to adopt. He went to Cherubini for advice. "Suppose you sing me a few bars," said the master. The young fellow sang so loud that the walls fairly shook. "Now," said he, "what do you think I am best fitted for?" "Auctioneer," dryly replied Cherubini.—French.

HE came into the sanctum with a large roll of manuscript under his arm, and said very politely: "I have a trifle here about the beautiful sunset yesterday, which was dashed off by a friend of mine, which I would like inserted if you have room." "Plenty of room. Just insert it yourself,' replied the editor, gently pushing the waste-basket toward him.—Galveston News.

ACT one, they meet as in a pleasant dream;
Act two, he 'll treat to soda and ice-cream;
Act three, his cash, alas! is nearly played;
Act four, his girl grows cold, sedate and staid;
Act five, just as his love is ripe and yellow,
His girl is sporting with another fellow.

THE JAPS.

YOUNG Japanese children scarcely ever cry, because great care is taken to keep out of their way every possible cause of irritation. It is probably in consequence of this that the Japs are, as a race, almost exasperatingly good-humored, so that a servant severely scolded will often merely reply by a beaming smile.

MR. TENNYSON once found himself surrounded by a throng of ladies who were more than usually gushing. He availed himself of an opportune pause to remark that he looked upon women as the flowers of the human race. "What a sweetly pretty idea! How poetical!" exclaimed a chorus of silvery voices. "Yes, ladies," continued the laureate, "and the reason I think so is because they never shut up except when they sleep." Poets are now at a discount in that circle of culture.

For Women.

CONDUCTED BY MISS RAY CLARK.

"THEY SAY."

EVA EDGERTON.

Of all the friends in human guise,
That e'er was known to mortal eyes,
That e'er was felt by anguished hearts,
Which quivered 'neath its venomed darts,
None can exceed the cruel sway
Of this monster, with the name, "They Say."

What gender? I really cannot tell,
It answers either sex as well.
Man (not a gentleman, Ah! no)
Woman (no lady stoops so low),
Children, repeating elders gammon;
Therefore I think we'll call it common.

What is its work? look here, look there,
See troubled lives and face of care,
Hours all fraught with bitterness,
Devoid of any loved caress,
See heads bowed low, and lips that pray,—
The fiendish work of that "They Say."

It ferrets out each blotted line,
That all lives trace in course of time,
Exulting that the world may see
Each page in life's hard history;
But passing by with careless tone
The virtues we so strive to own.

The girl with heart as light as air,
Not long can hold her name so fair,
For resting not, till bowed in grief,
She wishes that her life be brief;
Then satisfied, turns but away
To seek another trembling prey.

The hopeful youth and earnest man,
Striving to stand the active van
Of the din of life, how long before
His perjured name is floating o'er
The town, village, public at large,
Cruising round in dishonesty's barge.

"They Say," has many a ruined home,
Many a heartache, many a moan,
Heartless, relentless, it goes its way,
This demon with cruel tongue, "They Say."
But its reign will cease, when the spirit 's free,
"They Say" cannot dwell in the yet to be.

FRIENDLY WORDS.

FROM A. S. W. of Seneca Co., Ohio, "my wife says your paper grows better and better. I suppose you might as well put me down as a life subscriber."

C. C. A., one of our agents, writes that he is in receipt of a Mitchell wagon which we have awarded him as a premium on subscriptions, and it is fully what it is advertised to be.

L. L. C., another of our agents writes in references to the Peerless Wringer received for premium; "we are well pleased with it, (the wringer) and think it is just what we want in the family. Please accept my thanks."

OTHER commendatory letters referring to John Ascott's Daughter, to premiums received and the manner of conducting the various departments, show the appreciation of our readers.

AN OLD SONG.

I HAVE just read, in this month's Scribner, an article entitled, "Life in France," and it is gratifying to know that there is one place under the sun where housekeeping is made easy, and where the frail wife and mother does not keep up a perpetual moan over the aggravating incompetency of servants. Truly, the American housekeeper of moderate means and poor health is an object of pity! If she has the least ambition to make her home and table inviting, she must keep her eyes open, her nerves strung to their highest tension and her mind incessantly busy in order that things may "come up all right."

In this sketch of Florence the writer remarks: "the extent of your housekeeping is to look over the cook's accounts once a week and pay him. You are never obliged to order your dinner, or, in fact, to give it any thought. The utmost labor you will undergo is the eating of it when cooked." How like magic this appears to our wearied senses.

How delightful to pay a reasonable price for a cook who will buy the food and then transform it into a good meal without the superintendence of the mistress. How smoothly the wheels run, for if there is "a screw loose" in the kitchen, the whole domestic machinery becomes a whirling mass of confusion.

No fear, in Florence, of an overworked mother being awakened from her refreshing morning nap by cook's voice, exclaiming: "The eggs is all give out, ma'am," but there in that blest abode of reliable cooks, the housekeeper rests on her oars and glides over such small (?) difficulties with light heart and unruffled temper.

Do not think I am a chronic grumbler, indeed. I've but lately joined the ranks against the present "help system." I am a Southern woman and cannot, of course, understand the system of help in the North, but of this I am sure, it cannot be worse than with us. I have seen white servants in Canada whom I considered treasures.

I have often wished that girls who are without homes and who are willing to work in families would come South; but then, I presume, there is sufficient demand for them at home.

We have become desperate in this part of the country. As the summer advances the colored folks become indolent and "feel like taking a rest," as they express it, and when once this feeling takes possession of them they cannot be hired for love or money.

Now when one is strong and can, in the language of Josiah Allen's wife, put one's "shoulder blades to the wheel," these trials can be easily overcome, but for a feeble housekeeper the prospect is anything but cheerful.

The idea of cooking schools, which is in successful operation North, is one which should win the best wishes of every woman, and if the South would follow this worthy example she would confer a great benefit on her many tired wives and daughters.

Right here, let me remark, that I think there are more homes in the United States made miserable by our inferior system of help than by any loss sustained at the ballot-box, and while I watch with curiosity the movements of the Woman's Suffrage Committee, I say God speed such women as Julia Corson. M. P.

Bradley Co., Tenn.

WORLDLY MATTERS FOR GIRLS.

I AM conscious that in writing these articles I am opposing all the deep-seated prejudices of our grandmothers, but "girls will be girls," and a love of admiration is part of the girl.

Probably there is no beauty so much admired in a young lady as a delicate complexion; therefore her complexion is either her pride or her sorrow, and to those to whom it is a sorrow, I would like to give some hints.

If you use powder (and most young ladies do now) a very slight application of glycerine first will cause the powder to adhere better and prevent injury to the skin, provided it is washed off before retiring; for a more lasting improvement a quilted cotton mask wet in soft water and worn at night, will be found beneficial; this recipe was found in a magazine and I made one for myself, and, after a trial, found that it really prevented the effects of sunburn, besides eradicating those little pests familiarly known as "blackheads;" the mask is not so uncomfortable as one would suppose, after you get used to it.

Never, if it can be prevented, use hard water in washing, it makes the skin hard and rough. I would also recommend the disuse of soap on the face and neck; a copious use of soft water is quite as cleansing and does not cause the face to shine.

Nothing is so distorting to the mouth as fever blisters and although I know of nothing to prevent them, I have found that spirits of camphor will allay the swelling and cause them to heal quickly; it should be applied as soon as the blister appears, and kept wet until the swelling ceases.

As to pimples, a good, healthy diet and plenty of exercise is about all that can be recommended.

Young ladies who work in the garden know what a bother it is to pull on and off a pair of gloves, and they get so soiled in a short time as to be unfit for use. Much more serviceable will be found a pair of old stockings with the feet cut off and a place partitioned off for the thumb; they will protect the arms as well as the hands, and can be washed when dirty. In the next article I will give some practical suggestions about the hair. Miss M. D.

Michigan.

NEEDLEWORK.

I DO declare! how the old fashions all come round again! Now here is the beautiful Kensington stitch, that everybody is admiring—just as true as I am alive, it is just the very satin stitch, that my grandmother learned to work when she was a little girl, and lived in England. She had a great piece of satin embroidery, framed in a gilt frame, and it hung in mother's parlor, ever so many years ago.

It was Pharoh's daughter finding Moses in the bulrushes. She was a year embroidering it, and it was a wonderful piece of work. Now, this Kensington stitch, as the new name for it is called, is just the same thing that we all learned when we were little girls. I worked the bottom of the skirt to a white dress in crewels, in just that stitch; and we made handsome window curtains, and table spreads.

I am real glad it is fashionable again, for one can do so many nice things with it; I do believe I should like to work a white bed spread to give to my grand-daughters, as a keepsake for remembrance in years to come.

I like the idea of working things to make one's home look pleasant and bright; it is ever so much better than to spend one's time wholly upon dress and gewgaws to adorn the person. As like as not, the time may come when people will think more of things that are useful, than those that are entirely for show and ornament.

Needlework is a nice accomplishment, and every girl ought to understand it, in all its forms. If the good old fashions come round again, and people will follow them, hard times will be easier, and there will not be so many failures in business, and losses of property, and discouraged men, and suffering families.

Idleness and extravagance will ruin any nation; while industry and economy will keep up prosperity and peace.

Yes, I believe I will work a bed spread, and leave it as an heirloom in my family, so that my posterity can see their ancestor's skill and industry. GRANDMOTHER.

Among the ancient Poles the bride walked three times round a fire, then sat down and washed her feet. The custom of washing the bridegroom's feet is more frequently referred to. The daughter of a Brahmin is dressed by her father in a festive dress, and washes the bridegroom's feet, the bride's mother pouring out the water for that purpose. In Malabar the bridegroom's feet are washed with milk by a young relation. In some parts of Java the bride, as a sign of her subjection, kneels and washes the feet of the bridegroom when he enters the house.

Husbands, who by their own voluntary acts deprive their wives of every social bond except that of motherhood, need not hold up their hands in holy horror against the consequences that result from their own conduct. If a woman occasionally seeks occupation in the frivolities of fashion from the hideous solitude of her own deserted home, where she is left to drag out a torpid existence amid stewpans and scrubbing-brushes, should she be justly placed in the pillory of public criticism? In justice, all cases have at least two sides.

One of the strategic hits of the Empress Eugenie is thus reported: Having a Spanish relative hanging upon the matrimonial market, the Empress stationed the girl one day in the garden of St. Cloud with a rose in her hand. As the Marshal, afterwards Duke de Malakoff, strolled by, the maiden, according to her instructions, presented the rose to the hero, saying: "Monsieur le Marechal, I would offer you laurels, but you have plucked them all. Will you be content with this rose?" The gratified soldier took the flower, gallantly kissed the hand that offered it, and shortly after surrendered to the lady's charms, and she became his wife.

AGRICULTURE FOR GIRLS.—France has agricultural schools for girls. One of the chief is near Rouen, which is said to have begun with a capital of one franc by a sister of charity and two little discharged prisoner girls, and to be now worth $1.0,000. This establishment has 300 girls from eight to 18. The farm, entirely cultivated by them, is over 400 acres in extent. The staff of teachers consists of 25 sisters. More than one medal of the French Agricultural Society has been awarded to this establishment at Darnetel. and the pupils are in great demand all over Normandy on account of their skill. They go out as stewards, gardeners, farm managers, dairy women and laundresses. Each girl has, on leaving, an outfit and a small sum of money, earned in spare hours. If they want a home they can always return to Darnetel.

HINTS.

ENERGY will do anything that can be done in the world; and no talents, no circumstances, no opportunities, will make a man without it.

Tea leaves used for keeping down the dust when sweeping carpets are apt to stain light colors; salt is the best in the winter and new mown hay in summer.

Straw matting may be cleaned with a large coarse cloth dipped in salt and water and then wiped dry. The salt prevents the straw from turning yellow.

LIFE being short, and the quiet hours of it few we ought to waste none of them in reading valueless books; and valuable books should in a civilized country be within the reach of every one.—*Ruskin.*

For soft corns dip a piece of linen cloth in turpentine and wrap it around the toe on which the corn is situated night and morning. The relief will be immediate and after a few days the corn will disappear.

THE aim of education should be to teach us how to think, rather than what to think; rather to improve our minds, so as to enable us to think for ourselves, than to load the memory with the thoughts of other men.

Lip salves. One gill sweet-oil, one ounce white wax, three-quarters of an ounce spermaceti. Dissolve them over the fire and stir till cool. Another: Oil of sweet almonds, eight ounces; white wax three ounces; spermaceti, three ounces; rhodium, fifty drops, and white sugar candy form an excellent lip salve.

A BOOK.—Except a living man, there is nothing more wonderful than a book; a message to us from the dead—from human souls we never saw, who lived, perhaps, thousands of miles away. And yet these, in those little sheets of paper, speak to us, arouse us, terrify us, teach us, open their hearts to us as brothers.

"IS IT RIGHT"—So long as any person seriously asks this question of himself, in regard to all his acts, the danger of any great departure from the path of rectitude must be small; and we wish that a system of education might make it as common and controlling among our people in after years as now appears to be in youth.

White furs or ermine may be cleaned as follows. Lay the furs on a table and rub them well with bran made moist with warm water; rub until quite dry and afterwards with dry bran. The wet bran should be put on with flannel and the dry with a piece of book muslin. The light furs in addition to the above, should be well rubbed with magnesia or a piece of book muslin after the bran process. Dry flour may be used instead of wet bran. They should be rubbed against the way of the fur.

Washing Colored House Linen. To wash towels with colored borders let them soak in a pailful of cold water containing one teaspoonful of sugar of lead; let them remain ten minutes before washing; to make the colors look clear and bright, use pulverized borax in wash water, very little soap and no soda. To wash red table linen, use tepid water, with a little powdered borax, which serves to set the color; wash the linen separately and quickly, using very little soap; rinse in tepid water, containing a little boiled starch; hang to dry in the shade, and iron when almost dry.

INTRODUCTIONS.—In a few respects, perhaps, is good-breeding more manifest than in the matter of introducing persons to one another, having regard more especially to the method of making, and the time chosen for the introduction; nor is there a point of etiquette of greater importance. Not only is an unstudied ease of manner requisite, but also the exercise of a considerable degree of tact and discretion; for whether the introduction is personal or by letter, ceremonious or offhand, a certain amount of responsibility rests upon the introducer, and this responsibility should not be incurred without some consideration.

Under no circumstances, then, should introductions be made indiscriminately. Indeed, some books have laid down the rule that one should always ascertain beforehand whether it would

be agreeable for persons to be introduced to each other or not; but there are so many cases in which this inquiry is impossible, that such a rule would be more often infringed than followed, hence the necessity of care and judgment—for an undesired introduction, if made, would oblige the one person to whom the introduction was the more unwelcome either to treat the other with disregard, or else to continue a distasteful acquaintance.

If, therefore, the slightest doubt is felt whether a meditated introduction would be agreeable, it is best not to incur the responsibility of making it, but to seek an opportunity of ascertaining from both parties whether an acquaintance is desired.

We are speaking now of ceremonious introductions, which supposes that the persons introduced should recognize each other when meeting else where. But there are formal introductions of a different character, and which must be carefully distinguished.

For instance, persons meeting at a house, when making a morning call, are frequently introduced to each other by the hostess in an off-hand fashion, for the purpose of facilitating conversation, with the understanding that the introduction lasts only for that occasion; and persons having thus accidentally met, are under no obligation to bow or recognize each other when meeting again.

If, when walking in the street with one friend, you meet another, it would be optional either not to introduce them at all or only in a formal manner. But if, in such a case, you meet a lady, and she evinces a desire to stop with you, you may introduce him formally; but this would not entitle him to consider himself one of the lady's acquaintances.

Naturally, when one person has expressed a desire to be introduced to another, you have only the wishes of that other to consult.

It is not, however, usual to ascertain a gentleman's wishes as to whether he desires to be introduced to a lady or not, for in general, society gentleman are supposed to be gallant enough to seek rather than to avoid a lady's acquaintance.

Should a gentleman desire to be introduced to a lady he must seek out some mutual acquaintance, and ask the favor; and the rule is that the introduction should be made, as such a request would lead to the inference that he had some particular object in view.

Near relations may, without any ceremony or hesitation, be introduced to friends casually encountered.

Personal introductions at evening parties are not now in vogue, except in certain houses where a point is made of keeping up old-fashioned customs, instead of conforming to usages of modern times. The rule now is, that on entering the drawing-room, your name is simply announced by the servant, and you greet the host and hostess, and any of your intimate friends. The circumstance of having been invited should be considered a sufficient passport, without a personal introduction, for joining in conversation with others who are present. Of course arguments can be adduced in favor of the old custom of introducing each new comer to every one of the assembled guests; but we never knew any late arrivals who did not feel that the custom would be more agreeable "in the breach than in the observance."

ABOUT WOMEN.

THE first painted costume seen in Paris was made for Sara Bernhardt. It cost $600.

Citizens of Warren, N. C., have erected a monument to Annie Custis Lee, the daughter of General Robert E. Lee, who died while her father was fighting McClellan during the Peninsular campaign.

The women of 1812, owing to the interruption of importations from England during the war, were obliged to pay a dollar a paper for pins, and they were difficult to get at that price.

One of the highest and best-deserved compliments ever paid to our country is embodied in a remark recently made by Jenny Lind. After expressing great thankfulness for the enthusiastic reception she had received here, she added: "Your nation takes the rabble or all other countries and gives them a chance."

Frontier life so often has a more marked effect in developing aggressive and heroic qualities than in making the gentle virtues, that it is not surprising that a hand-to-hand fight, recently occurred between a teacher and her landlady in one of the new mining camps of Colorado, and that the landlady pasted near the door and window which had been battered by her antagonist, the following inscription: "This is the work of hineryet swarts the skule marm."

A Parisian lady is earning a large income in Boston by keeping in good order the fingers and nails of the members of fashionable families. She claims that through her ministrations the hands are rendered soft and white, the fingers improved in shape, and the finger-nails trained and polished to a high degree of brilliancy. Mondays of each week, are reserved for appointments at houses, and Saturdays are devoted to gentlemen, introduced by lady patrons. On the intervening days she receives lady customers at her own residence.

According to report, a woman in Michigan has sued for divorce on the plea of a breach of business contract. The husband had, before marriage, promised to give her forty acres of land if she would marry him, and has since failed to redeem his promise. It is to be feared that the plea will be regarded as insufficient by the stronger sex, and scouted out of court as too dangerous an inroad upon prerogative to be recorded for a precedent, lest many an error, by the same example, might rush into the State.

An extraordinary marriage recently occurred in Odessa. The bridal party assembled in the church with due formality, but the priest unexpectedly refused to perform the service on the ground that the bride-groom was intoxicated. The father of the young man, furiously angry, seized his son, dragged him outside the church, and undertook to sober him by a good flogging. Meanwhile the father of the bride instantly proclaimed her engagement annulled, and invited any eligible candidate for the vacant place to offer himself. Two young suitors promptly presented themselves; the bride and her father, after a few minutes of decision, politely dismissed one while the other took his station before the altar and was married to the insulted bride.

A Canadian village possesses a curiosity in the form of an electrical girl. This damsel, once strong and fleshy, suddenly became strangely ill, lost her flesh, and was confined to bed. Having in health been of a silent disposition, she became in disease subject to occasional conditions of intellectual excitement, in which she talked with great eloquence and fluency, followed by absolute prostration. Without visible cause she recently began to rally, became strong and lively, moving vivaciously around the house, and marking the curious re-establishment of vigor by discharging from her person electric shocks, which can be transmitted to a circle of fifteen or twenty persons. Her hands possess the qualities of a magnet, and any person shaking hands with her is subjected to a violent shock.

Sabbath Reading.

"THE TIME IS SHORT."

BY AUTHOR OF "STEPS HEAVENWARD,"

I SOMETIMES feel the thread of life is slender,
And soon with me the labor will be wrought;
Then grows my heart to other hearts more tender.
The time is short.

A shepherd's tent of reeds and flowers decaying;
That night winds soon will crumble into naught;
So seems my life, for some rude blast decaying.
The time is short.

Up, up, my soul, the long-spent time redeeming:
Sow thou the seeds of better deed and thought:
Light other lamps, while yet thy light is beaming.
The time is short.

Think of the good thou might'st have done, when brightly
The sun to thee life's choicest seasons brought;
Hours lost to God in pleasure passing lightly.
The time is short.

The time is short. Then be thy heart a brother's
To every heart that needs thy help in aught;
Soon thou may'st need the sympathy of others.
The time is short.

If thou hast friends, give them thy best endeavor,
Thy warmest impulse and thy purest thought,
Keeping in mind, in word and action ever,
The time is short.

Where summer winds, aroma laden, hover,
Companions rest, their work for ever wrought;
Soon other graves the moss and fern will cover.
The time is short.

Up, up, my soul, ere yet the shadow falleth;
Some good return in latter seasons wrought:
Forget thyself, when duty angels calleth.
The time is short.

By all the lapses thou hast been forgiven,
By all the lessons prayer to thee hath taught,
To others teach the sympathies of Heaven.
The time is short.

THE wealth of heaven never perishes, never departs, never ceases, never brings with it care, or envy, or blame, destroys not the body, corrupts not the soul, is without ill-will, heaps not up malice; all which things attend on earthly wealth. That honor lifts not men into folly, doth not make them puffed up, never ceases nor is dimmed. Again, the rest and delight of heaven endureth continually; ever being immovable and immortal, one cannot find its end or limit. Nothing which comes to an end is much to be desired; whatever ceases, and to-day is and to-morrow is not, though it be very great, yet it seems little and contemptible. Then let us not cling to fleeting things which slip away and depart, but to those which are enduring and immovable.—*Chrysostom.*

YES, it is one thing to describe nature; that the atheist may do, and this with the precision of a micrometer; but even then he speaks but a little fragment of the truth. It is another and vastly larger thing to interpret nature; that no one can do who does not believe in a purposeful God—that is to say, a Providential Creator.—*George Dana Boardman.*

CHRISTIANITY is the true citizenship of the world; and universal peace, and the free exchange of all lands and tributes of their several peculiar goods and gifts, are possible only as all are grouped around, and united by the cross of a common Redeemer, and the hope of a common heaven.—*William R. Williams.*

REMEMBER you cannot be any better than God has made you, but you may be very much worse. You can always find more reasons for doing as you wish than doing as you ought. And it is this tendency that separates you from truth, purity and goodness.

MICROSCOPIC holiness is the perfection of excellence. If a life will bear examination in every hour of it, it is pure indeed. To live by the day and watch each step, is the true pilgrimage method.

As to being prepared for defeat, I certainly am not. Any man who is prepared for defeat, would be half defeated before he commenced. I hope for success, shall do all in my power to secure it, and trust to God for the rest.—*Admiral Farragut.*

WHEN you are reading a book in a dark room, and come to a difficult part, you take it to a window to get more light. So take you Bible to Christ.—*McCheyne.*

SEVERAL large and influential churches, in various sections of the country, have recently, taken strong action against all kinds of lotteries at church fairs.

"GODLY sorrow is the sorrow of God reproduced in a tender, beautiful soul, by which the creature is brought into closest sympathy with God."—*Anon.*

FROM each cross we are called to bear, if we take from it the cross-piece—which is our will—t' will no longer prove a cross.—*Independent.*

A HOME where Christ abides is a little *remnant of Eden.* The benediction of God falls vertically upon its "blessed inmates."

"No person can be said to pray sincerely, who does not employ all natural means to secure the object."—*Anon.*

As the pebbles are whitened by the beating of the waves, so are our souls purified by the flowing of the grace of God.

GOD never meant this life to be a desert, utterly barren of all that is good and beautiful and refreshing and glad.

"A GOOD Christian is not a grave to bury God's mercies, but a temple, to sing his praises."—*Thos. Watson,* 1657.

FLOWERS are the alphabet of angels whereby they write on hills and fields mysterious truths.

NEVER think that God's delays are God's denials Hold on; hold fast; hold out.

"As a man must be *born,* so he must be *taught* from above."—*Old Divine.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

LOG-CABIN SKETCHES; OR JESSIE SEABRIGHT'S DIARY, NO. 12.

MAY MAPLE.

APRIL 10, 18.—Mrs. Blossom's little girl has just been in to borrow a "few spoonsful of Mrs. Winslow's Soothing Sirup," and when I told her that I never used the article, and therefore did not keep it, she seemed greatly disappointed, and then inquired how I managed to keep our little Alicia so good-natured. Their baby cried almost all the time, and her mother could not get a bit of rest unless she gave the baby its "rations" of Soothing Sirup; then it would sleep all the time. It fairly lived on this baby medicine; and she did not see why I didn't use it. After playing with our frolicsome pet for a few minutes, she started up with a sigh, saying, "Well, I must go back and take care of Ray, though I hate to do it when he cries so much."

Poor little girl! how sorry I felt for her, and how my heart ached for the baby boy; but I was glad that I had never practiced using the vile stuff. "Years and years and years ago," as a wee little six-years-old friend says, I saw in the school-room the evil effects of dosing infants with sleeping potions. Many a mother has herself to thank for her child's dull intellect. She either did not have the patience she needed or was desirous of using the time which baby's nature demanded; so a dose of "paregoric" or Soothing Sirup, containing a large percentage of laudanum, was resorted to, not only daily, but many times a day. A few drops were given at first, but the quantity was increased till a large spoonful was considered none too much.

The heavy eye and dull, thoughtless attitude and stupid blunders of at least one-fourth of the pupils of every district school will show any one the disastrous effects of using Soothing Sirup in its various forms and under its myriad names. Many children are verily robbed of their God-given talents by the injudicious use of opiates, and not a few are sent to untimely graves by the use of Mrs. Winslow's Soothing Sirup alone.

So long as the infant is quiet the mother can go on with her reading, sewing, or whatever takes up her attention until hours pass away unheeded. The child really needs attention in various ways, but it still sleeps until its vitality is nearly exhausted. Day by day the little one grows less active, and evidently weaker, till it cares not for food, and thus it actually pines away, or starves to death before its thoughtless mother's eyes; and then she mourns for the loss of her baby, and perhaps blames the All-Father for robbing her of her jewel.

It seems strange that a people who read so much should use their opportunities for knowledge to so little purpose. Not long ago I asked a young mother how she liked Mrs. R——'s articles on the care of infants. But she had never read them, although I knew her husband was taking the paper which published Mrs. R——'s excellent sketches. She read the stories and recipes every week, but the articles that would have taught her many good things about the care and culture of her little "olive plants" were entirely passed over. Only the light literature pleased her fancy. Not a single thought of how she could best develop the health and strength of her treasures was given the subject.

CAKE-MAKING HINTS.

CREAM the butter before adding the sugar.

Cover cake with a paper cap when *first* put in the oven.

A few drops of water in white of eggs will prevent their whipping to a stiff froth.

When soda and cream-of-tartar are used, sift with flour the same as yeast powder.

If more than two eggs are used beat separately.

To secure tenderness and delicacy, the flour measure should always be rather on the side of scantiness.

Beat fruit jelly to a paste before spreading between layers.

Lard is better to grease cake tins with than table butter. If lard is objectionable, keep on hand a small quantity of unsalted butter.

Hair-dye.

The best and most harmless hair-dye that I know of is made of litharge and lime in equal parts. Mix with water to make a thin paste. Care must be used in applying not to soil the skin, as it is almost indelible. When dry, rub the hair or beard to get out all the powder, and wash thoroughly. It will last for a long time. To make brown use more lime.

W. T. BUTTERFIELD.

DOMESTIC RECIPES.

Nice Fried Liver.

CUT into small strips, put on a platter, pour over boiling water and immediately pour it off. Place a frying-pan on the stove with some beef dripping in it, dredge the liver with cracker dust, season with pepper and salt and put into the pan. Cover and fry slowly until the pieces are well browned. A little chopped onion cooked with the liver is very nice for those who like the flavor.

Boiled Ham.

A small corned—not smoked—ham was boiled on Saturday for Sunday's dinner. When tender, I cut out the bone from one end, peeled off the skin, covered the outside with beaten egg and dusted thickly with fine cracker crumbs. It was put into the oven and there left until the grease from the ham had penetrated the crackers and the entire top was brown and crisp. When served, the platter was garnished with lettuce leaves. This way of preparing ham looks much more inviting than the common way of removing the skin alone without glazing with egg and cracker. E. M.

Egg Omelet.

The yelks must be beaten until thick and creamy, then the milk and seasoning added, and lastly the whites beaten to a stiff froth. Have heated in a skillet a tablespoonful of butter. Pour in the mixture which should at once bubble and flake. To keep from burning slip under a thin, broad knife and raise up the edges every few seconds. When the eggs begin to set, fold over, shake the skillet and turn on to a hot platter. When many eggs are used, divide and make several, sending each to table as soon as done. I. L.

QUESTIONS ANSWERED.

Wholesomeness of Rye Bread?

Is rye bread wholesome? Please give best method of making. SUBSCRIBER.

ANS.—The analysis of rye flour, as given by Prof. Johnson, is as follows: Water, 14.0, organic matter, 84.4; albuminoids, 10.5; carbo-hydrates, 72.5; crude fiber, 1.5; fat, etc., 1.6. That of wheat flour is: water, 12.6; organic matter, 86.7; albuminoids, 11.8; carbo-hydrates, 74.1; crude fiber, 0.7; fat, etc., 1.2 By these analyses it will be seen that wheat is richer in albuminoids and carbo-hydrates than rye, but, nevertheless, rye bread is considered very healthful.

To make: Take one quart of warm water, one teacupful of yeast, and thicken with rye flour. Put in a warm place to rise over-night. In the morning scald—well cook—one pint of Indian meal. When cool, add to the sponge, with salt, a little molasses, a pint of warm water and rye flour to knead *very soft.* Let rise, then put into pans. Again let rise, then bake. The dough should never be molded stiff for rye bread, and, if preferred, the flour may be wholly worked in with an iron spoon instead of the hands.

Raisin Delicate Cake.

Please give the above recipe. MRS. G. L.

ANS.—Two cups of granulated sugar, good half cup of butter, whites of six eggs beaten to a froth, three-fourths of a cup of sweet milk, three cups of flour, one cup of seeded raisins, cut fine, two teaspoonsful of yeast powder, and two teaspoonsful of lemon extract. Cream the butter, then the sugar and butter; stir in the milk, then part of the flour—one cupful should be reserved for the raisins—then the whites, and, lastly, fruit. After adding the flour, whisk in the whites and fruit as quickly as consistent with thorough mixing.

News of the Week.

MISCELLANEOUS NEWS.

Monday, June 28th, 1880.

Reports from the Mississippi state that the river rose very high last week and flooded the surrounding country. A special from McGregor, Iowa, says that the Mississippi River has risen over 20 feet. Travel on all roads is cut off, except west of St. Paul. Saw mills are stopped, and business is at a stand-still. Hundreds of thousands of tons of ice were carried off by the waters. The freshet comes from the Wisconsin River; above that point the river is falling. The stage is now 13 inches below the high-water mark of 1570. Wood dealers have lost 1,000 cords of wood, which tumbled into the water and floated away. Travel north is abandoned, and there are no trains either way....The Wesleyan Chapel, in City-road, London, founded by John Wesley, which was partially destroyed by fire in December last, has been restored, and was reopened the 20th ult....An epidemic of a peculiar character broke out in North Adams, Mass, a week ago. The town has 6,000 inhabitants and of these over 1,000 were suddenly taken sick one evening, all suffering in the same manner from severe pains in the stomach. Toward morning the majority got better and soon all recovered, no case proving fatal. Some relapses have since occurred. The cause of the disorder which was at first very puzzling is now laid to the water..

Two ministers of the Gospel, Rev. John S. Inkip and Rev. John A. Wood, started with their wives from New York on the 26th ult. on an evangelical tour around the world....According to an official statement of the chief civil authority in the District of Lauban, near Breslau, Prussia, recent torrential rains have killed 56 persons and destroyed 105 houses....Swiss papers state that the St. Gothard tunnel is in great danger of falling in. Land-slips continue to threaten the masonry, and the engineers think that the only way to avert the danger is to modify the line traced out for the tunnel....The commanding general of the military division of the Pacific has been ordered to prevent an invasion of Mexico by armed forces and the observance of the neutrality laws....The Government is having great success with the fish-hatching establishment in Washington. This season it has hatched out nearly twenty million shad. Of these nearly fifteen million have been turned into the Potomac....

The colored cadet, Whittaker, at West Point, who a few weeks ago figured so conspicuously in the press of the country while the outrage upon him was being investigated, was at the examination of his class found deficient in philosophy. It may be a consolation to his friends, however, as well as to himself, to know that the questions which he failed to answer satisfactorily were put by "Prof. Michie" and "Capt. Sears," two members of the Faculty who were strongly opposed to him throughout his recent ordeal, and who pronounced him guilty of outraging himself. The questions were: "What do you understand as to the surface of electricity?" and "What is a wave's surface?" Capt. Sears was not satisfied with his answers to these, and when told to explain the principles that govern the Gallilean telescope, on the board, Prof. Michie pronounced his figure wrong, and told him to take his seat. With this the curtain dropped on Cadet Whittaker, and his dreams of military glory were forever doomed to remain unrealized. ....The National Democratic Convention met at Cincinnati on the 22d ult. Judge Hoadley was chosen temporary chairman. Toward evening on the 23d the first ballot was taken, in which Gen. Hancock took the lead. When the Convention again met, on the forenoon of the 24th, the balloting was renewed, and Winfield Scott Hancock, of Pennsylvania, was nominated for President on the fourth ballot, and shortly after W. H. English, of Indiana, received the nomination for Vice-President.

AGRICULTURAL NEWS.

THAT first barrel of of flour from this season's growth, that was sold in this city, on May 7, for $15, for the benefit of the Episcopal church of Americus, Ga., and which was resold in London, England, for $25, to be devoted to the same object, at last came into the hands of the Queen's baker, who has presented a loaf of bread made of it to Her Majesty. At the same time he sent a small loaf thereof to some of his other distinguished customers, with the following circular: "We take the liberty of forwarding to you a small loaf made from flour of this year's crop. Such an early production in the month of May is an unheard of novelty, and almost incredible. Of the many wonders we who have the good fortune to live in the nineteenth century have been the witnesses, we venture to think that to eat bread which is the result of the 1880 harvest in May, 1880, is not one of the least marvelous." That puff is, most likely, the last of it, yet here's a little more:—the seed of the wheat of which it was made was sowed Nov. 24, '79, and the crop cut on April 10, '80, on the farm of John L. Lanemore, Lee Co., Ga., maturing in 4½ mos .....The Duke of Devonshire has obtained the gold medal from the Royal Agricultural Society (Ireland) for his tenants' cottages in the county of Cork, which, according to the judges, combine comfort, accommodation and economy in a remarkable manner, being not only the best but the cheapest in the competition. All the materials used in building them were obtained from the estate, and the cost has been found to be $456.56 each, without offices, or $484.54 with offices....The export of champagne to foreign countries, from France, has greatly increased of late. According to an official return, the champagne stored in the cellars of Rheims amounted on the 1st of last April to 63,540,669 bottles. From the 1st of April, 1879, to the 1st of April, 1880, 17,171,154 bottles were sent out, of which 16,000,000 were for foreign countries—1,750,617 more than in the corresponding period from 1878 to 1879....The unfavorable weather of last summer in Germany and France has, among other causes, contributed to stimulate very considerably the export wine trade of Italy. The consumption of Italian wines abroad, however, was even previously largely on the increase. Thus, while the quantity exported from the Peninsula during the first quarter of 1877 was only 97,095 hectolitres, it rose to 145,866 hectolitres in the same period in 1878, and increased to 201,663 hectoliters in the first three months of 1879. For the corresponding period of 1880 the quantity exported has shot up nearly 150 per cent. further, the returns showing that in that period no less than 491,311 hectolitres of Italian wines were sent abroad, The hectolitre contains 26½ gallons... Augustus Mongredien, a prominent political economist, estimates that the farmers of our great Central and Western States expend annually $1,400,000,000 in manufactured goods. He is writing in favor of Free Trade....Last year Indiana stood first in the yield of wheat per acre—20.3 bushels. The average of all the States was only 13 bushels.

.....Cows are going blind in the neighborhood of Jackson, Tennesee, and no cause can be assigned for so remarkable a disease....The Lexington (Ky.) Record, a trustworthy authority, has figured up that "last year there were 2,710 horse races, occupying in all 478 days. The value of the stakes amounted to $2,600,000. The winner of the Derby made $35,000. The races lasted from February to November. Noblemen were the greatest participants. The Record shows that the trotting time for a mile has been lowered from three minutes in 1820, to 2:12¼, Oct. 25, 1879—St. Julian at San Francisco."....A movement, originated by Sir Andrew Galt and a few enthusiasts, is on foot for a British emigration scheme on a gigantic scale. The idea is a combination of the leading classes to help out with aid from the State emigration to British colonies, for it is noted with alarm that those now seeking elbow room outside the strained and crowded limits of England go to swell the growth and greatness of the United States, instead of aiding to build up the colonies. In 15 years, out of 2,000,000 of people who left the United Kingdom for lands beyond the sea, only a quarter of a million went to Canada, seven out of every eight (1,750,000) going to the United States. ....A convention for the purpose of promoting immigration, especially into the northwest of the State, was held at Sheldon, Ia., on June 22. According to all reports that section is now highly prosperous in all material interests. In many counties large attention is being devoted to dairy products and stock-growing, while the statements, in regard to grain-growing and agricultural interests generally were of a very flattering character. It was shown that there are hundreds of thousands of acres of choice lands still open to settlement which may be had at $3 to $10 an acre, and that the immigration of thrifty settlers to northwestern Iowa was never so large as now....The Mark Lane Express of June 21, the last before we go to press, says: "Rains at the beginning of the week, and subsequent sunshine, materially improved the condition of cereals. Although the wheat plant in some places is reported thin, generally speaking, there are sanguine hopes of a fair average crop. The prospects of barley are also favorable. The supplies of English wheat in both Mark-lane and the Provinces have continued small, and the sales restricted. There has been an occasional decline of 1s. per quarter for inferior descriptions. The demand for the little fine white English wheat which was on offer has doubtless been interfered with the large arrivals of Australian. The imports of foreign into London consisted almost entirely of white from Australia, New Zealand and India. Trade has been less firm. The consumptive requirements of the country during the next two months should be quite sufficient to neutralize the tendency to discount the effects of a good home crop, while the Continent may be relied upon to relieve us of a fair proportion of the shipments from America. Purchases during the past week have been for present requirements. All descriptions of white wheat receded 1s. under the pressure of large supplies. Red has not shared the decline, as the stocks of American and Russian now remaining in London are sufficiently low to warrant holders in showing great firmness. It needs only a slight increase in demand to advance prices 1s. or 2s., as Russia is shipping hardly any, while red Winter American has been bought off the coast for the Continent, and large quantities have also been shipped thither direct. The markets will now, to a great extent, be influenced by the weather, but there does not seem to be much probability of the price of wheat varying greatly from that of the previous harvest. If, however, the present crop prospects upon both hemispheres are realized, the trade will have to deal with an unprecedented surplus of breadstuffs. Arrivals at ports of call have been limited, but prices are drooping. The coast is still bare of maize.... The visible supply of wheat in the United States on June 12 was nearly 18,000,000 bushels, or 4,000,000 more than at the same time last year ...The total value of breadstuffs exported duging eleven months ended May 31, 1880, was $247,595,101, against $183,974,661 last year....A Buffalo paper of last Saturday says: "In round numbers 3,000,000 bushels of grain were shipped to the east by canal during the week now ending, while the amount afloat on the canal is not far from 5,000,000 bushels. ....Fifteen years ago Chicago merchants obtained their supplies of cheese from the East, while now 100,000,000 pounds pass through that city annually for New York. One manufacturer in Western New Pork has over 40 factories, while others in different parts of the country have five to 30 each. ....The Army worm is leaving bare the fields of Stratford, Fairfield, Newton, and about Danbury, Bridgeport, New Haven and Hartford, Conn. One farmer counted 44 worms in the space covered by his hand, and 527 in a square foot, and in some places the ground seems a moving mass of life, muffling the sound of carriage wheels on the road. The worm has eaten bare 100 acres of the Cromwell meadows, a rich tract of land near Middletown....The production of honey is becoming an interest of some importance. It is estimated that there are about 2,000,000 bee-hives in the United States, each yielding on an average about 22 pounds of honey and a revenue of about $8,000,000, and, in addition the industrious bees supply us with 24,000,000 pounds of wax....Dispatches from Constantinople speak of the breaking out of the plague of locusts in Asiatic Turkey and throughout the region of the Caucasus. Intelligence from Kars states that 20,000 men are employed in efforts to destroy these pests, and that the damage already done in the districts from Kars to Astrachan, and from Astrachan to the Black Sea, is enormous. Vast swarms have invaded Southern Russia and the army there has been called out to aid the people in exterminating or checking them. The accounts of their vast numbers are almost incredible ...Owen Buck of Oceanic, Md had a vicious, kicking horse, which he was anxious to sell. While trying to make a bargain with a probable purchaser, he remarked: "That horse is so gentle that my little girl could go up behind him and twist his tail, and he wouldn't raise a roof." The girl overheard this lie, took it for the truth, tried the experiment being left alone with the horse and was killed by a kick.. The annual meeting of the Entomological Club of the American Association for the Advancement of Science, will be held at the Museum of the Boston Society of Natural History, corner of Berkeley and Boylston streets, Boston, commencing at 2 P. M. Tuesday, August 24, 1880. It is proposed to send to every member of the American Association, and to all others who may favor the undersigned with their address for that purpose, a circular announcing the special subjects which will be presented at this meeting of the Club; and therefore all entomologists who desire to read communications at that time are requested to notify one of the undersigned before August 1st. This will ensure a fuller discussion of the topics presented, and, it is hoped, a larger attendance.—Samuel H. Scudder, President, B. Pickmann, Mann, Secretary, both at Cambridge, Mass....In the Landes of the South of France, where pines are reared for turpentine, trees covering a space of 150,000 acres, have been destroyed by the late severe Winter, and representing a cash value of thirty-three million francs ($6,000,000.)

$500 Reward—Catarrh Cured.

Some people would rather be humbugged than to get "value received" for their money. Hence it is that such persons run after this and that pretended cure for catarrh, forgetting that Dr. Sage's Catarrh Remedy is so positive in its effects, that its former proprietor advertised it for years throughout the United States under a positive guarantee, offering $500 reward for an incurable case and was never called upon to pay this reward except in two cases. This remedy has acquired such a fame that a branch office has been established in London, England to supply the foreign demand for it. Sold by druggists at 50 cents.

UNABLE TO BREATHE THROUGH NOSE.

PORTLANDVILLE, Iowa, March 11th, 1879.

DR. R. V. PIERCE, Dear Sir:—Some time ago I bought a Douche, some of your Dr. Sages' Catarrh Remedy and Golden Medical Discovery and commenced to use them. The aches and pains as well as sore throat and catarrh from which I have been for so long a time a sufferer, have entirely left me with their use. I feel like a new man as well as look like one. For four years I was unable to breathe through my nose. From the use of the Catarrh Remedy I can now do so freely. Your medicines I know to be all that they are represented. Long live Dr. Pierce and the gentlemen connected with him. Gratefully yours,

WATSON SMITH.

No More Nitre or Buchu.

After the sufferer from a trouble of the kidneys has been drenched with buchu, nitre and all sorts of diuretics, he or she will find a certain cure in Kidney-Wort. The stomach recovers tone, and evacuations become regular.

Women that have been pronounced incurable by the best physicians in the country, have been completely cured of female weakness by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

The Literary Revolution.

THE climax in cheap book-making has surely been reached in the twelve little books advertised elsewhere by the American Book Exchange, of New York. They are worth getting merely as curiosities, even if they were not each of them intrinsically valuable. A great point to be commended in the "Revolution" publications is that they are all books of high literary character and worthy of universal circulation.

The Premier Shot Gun.

WE wish to call special attention to the advertisement of the Premier Shot Gun. We have personally examined and own one of these guns. It is the handsomest and best single breech-loading shot gun in the market, equal in all particulars to high-priced double guns, and much better than a cheap double barrel. They are exactly as represented in the advertisement in every particular, and are well worth $18 to $20. No sportsman should neglect to purchase one, for at the advertised price they are a rare bargain. The advertisers are one of the best known and most reliable firms in the trade, and manufacture the Premier Gun themselves. They are offered at the wholesale price to reduce a very large stock during the Summer months.

Burnett's Cocoaine has been sold in every civilized country, and the public have rendered the verdict that it is the cheapest and best Hair Dressing in the world.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, June 12.

Butter, Cheese and Eggs.

Boston.—BUTTER.—Trade has been quiet, and receivers have put more or less of their receipts into cool storage, believing that the stock will be wanted later on The St. Albans market is about a cent lower this week; general price from 19@20c. Northern—Choice creamery 21c. ₮ lb; choice New York dairy, 19@20c.; choice Vermont, 19@20c.; fair to good, 16@17c.; common, 13@15c. Western—Choice creameries, 21@22c; fair to good 19c.; choice dairy packed, 17@19c.; choice ladle-packed, 15@16c.; common, 13@16c. Cheese—There is a great decline in prices abroad, as well as at all the interior markets, and 9½c. is about all that it is safe to quote the best factories here, although now and then a fancy factory sells at something more. New whole milk, 9½c.; new half skims, 7@8c.; new skims, 4@6c. EGGS.—Receipts, 3,676 boxes, 67 bbls. There is a pretty firm feeling among holders, but the market is not quite so strong as a week ago. Eastern, 14c. ₮ doz: New York State, 13c.; Canadian, 13c.; P. E. Island, 13c.; Western, 11@12½c.; egg oats, 38@42c.

Chicago—BUTTER.—The market during the week was moderately active and unchanged. Buyers did not seem inclined to order much in advance of current needs, but sales about equaled the day's receipts, and previous prices were well supported. In quality the offerings average better than in former seasons. We quote: Creamery 18@20c; good to choice dairy 14@16c; packing stock 10@11½ grease 5@8c. CHEESE.—The continued decline in Liverpool and in New York keeps the market weak and unsettled, and we note a gradual shading off in favor of buyers. The Liverpool quotation is down to 59s—a decline of 5s within the past week. There were free sellers at the following figures: full cream 9@9½c; part skim 7½@8½c; full skim 5@6c; low grades 4@5. EGGS were steady at the late advance. Fresh are quoted at 11@12c per doz. The receipts are small, and sellers have to guarantee most of the stock.

Cincinnati.—BUTTER.—The receipts since our last weekly review have increased largely, but there has been an enlarged local consumption and prices of the better qualities are fully sustained, and have ruled firm, but at the close there is an easier feeling in view of the tendency to an accumulation of stock in the hands of receivers. Packers have bought liberally at 10@12c, but at the close they are not disposed to pay over 11c, unless it is for something fine. The average quality is better than usual. Fancy Creamery sells at 22c and fair at 20@21c, choice Western Reserve and Dairy at 15@16c; prime Central Ohio 12@13c, medium do. 10@11c and inferior 6@8c. CHEESE—The arrivals have been more liberal and although there is a good consumptive demand, the market is easier at 8½@9c ₮ lb for prime to choice factory. EGGS—With moderate receipts and a good demand for the first few days of the week prices advanced until 14c was touched, but this brought excessive supplies, and yesterday the market broke and today it was weak with free offerings at 11c ₮ dozen and little demand.

WOOL.—Continues quiet though there is more inquiry. Several buyers are here, but they are not quite ready to pay the prices asked. Small orders are filled as usual: Good medium tub 43@46c; coarse or dingy tub 40@42c; fine unwashed fleece 20@23c; medium unwashed fleece 25@28c; medium washed fleece 32@35c; fine and coarse washed fleece 30@33c.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, June 26, 1880.

BEANS AND PEAS.—The market for beans is dull; sales for export, the main stay of the summer trade, exhibit little new business. Receipts are large and arrive at a poor time. Any defect in curing is easily detected in such hot weather as prevails.

Green peas dull at $1.55@1.60 for Wis. bbls. Southern: B. E. quiet at the late decline; quoted $1.55@1.60. Marrow beans, prime, $1.55@1.62½; other, $1.45@1.52½; medium, prime $1.30@1.32; other, $1.20@1.25; pea, $1.45@1.65; white kidney, $1.50@1.55; red kidney, prime, $1.40@1.45; other, $1.30@1.35; black, $2.20@2.25; Lima, Col., $5.

Receipts for week, 6,563 bush.; exports, 1,569 pkgs.

BROOM CORN.—Trade is light and prices unchanged. Brush and short broom, choice, per lb., 7@8c.; do., do.; common to good, 5@6½c.; hurl, good to choice, 7@8c.; do., common to fair, 5½@6½c.; red and crooked at 3@4c.

BUTTER.—The demand is fair for home and export use, but with the bulkier supplies now coming forward especially of creamery, prices are made to favor buyers. Really choice grades are so plenty that under qualities are pushed aside. The weather is muce against handling stock and local buyers prefer to make frequent visits to the market while the supply is an assured one. It is expected that state will fall off in receipts as packing has begun in many sections, but as a rule the market is doing quite as well as at our last.

Creamery, finest, 20@21c.; good to prime, 19@19½c.; fair to good, 18@19c.; sweet cream, fine, 20c.; sweet cream, fair to prime, 18@19c.; firkins, choice yellow, 20@21c.; fair to prime, 15@20c.; pails and hf. tubs, choice, 19@20c.; good to prime, 18@19c.; fair to good, 17@18c.; poor, 14@16c.; Welsh tubs, prime, 18@19c; fair to good, 17@18c.; poor, 14@16c.; Western imitation creamery, 14@17c; dairy, fresh, extra, 15@17c; good to prime, 15@16c.; fair to good, 14@15c.; poor to fair, 13@14c.; factory, full grass, fine, 15c.; good to prime, 13½@14½c.; fair to good, 13@13½c.; poor to fair, 12@13c.

Receipts for week, 40,800 pkgs. Exports 18,000 do.

CHEESE.—This has been a very hard week for receivers. A rapid decline in prices has taken place, and yet to get stocks down to anything like a reasonable accumulation it has been necessary for owners to ship a large quantity. The reason for the indifference of buyers is chiefly found in the steady yielding of prices in Liverpool. At the close the market stands very irregular, and ranges from 8 to 8¾c. for the best stock, with the under grades without a fixed price.

Quotations are for State factory, strictly choice, 8@8½c.; do. good to prime, 7¾@7¾c.; do. fair to good, 6¾@7½c.; do. half skimmed, 5@6c.; Wisconsin factory, fine, 8@8½c.; do. good to prime, 7¼@7¾c.; do. fair to good, 7@7¼c.; Ohio factory, fine, 7¾@8c.; do. good to prime, 6¾@7¼c.; do. flat, fair to good, 6¾@7¼c.; do, poor to fair 5½@6½c.; skimmed, 2@4c.

Receipts for week, 113,725 boxes.

Exports for week, 8,500 boxes, Liverpool cable, 48@50s., which is a decline; steam to Liverpool, 40s.

COTTON.—There has been a moderate degree of activity only and prices barely steady at the close at for June, 11.16@11.57c.; July, 11.57c.; August, 11.60@11.61c.; September, 11.11@11.12c.; October, 10.71c.; November, 10.69@10.69c.; December, 10.59@10.60c.; January, 10.67@10.68.

Quotations for spot cotton bare used on American standard of classification and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8¾	8¾	8¾
Strict ordinary	9	9¼	9¼
Good ordinary	10	10¼	10¼
Strict good do	10¼	10¾	10¾
Low middling	11⅛	11⅜	11⅜
Strict low middling	11⅝	11¾	11¾
Middling	11⅞	12	12
Good middling	12⅜	12½	12½
Strict good middling	12⅝	12¾	12¾
Middling Fair	13⅛	13¼	13¼
Fair	13¾	13⅜	13⅜

STAINED.

Good ordinary	8¾	Low middling	9¾
Strict good ordinary	9	Middling	10 11-16

DRIED FRUITS.—TApples have a moderate trade especially evaporated stock, for which prices are steady; other descriptions are wholly nominal.

Latest prices are for N. C.apples, fair to good, at 6½@7¼c.; choice, at 8@8¾c.; New York State quarters at 7¼@7¾c.; patent evaporated, in cases, choice at 14@14½c.; good and prime 13½@14c.; evaporated, sliced at ——c. Evaporated peeled peaches, good to choice, at 26@28c.; North Carolina peeled choice, 16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c.; common at 10@12c.; unpeeled halves at ——c.; do. quarters at 6@6½c. Pitted cherries at 16@17c. Blackberries nominal. Raspberries at 28c. Plums at 17@17½c.

EGGS.—Receipts for week, 10,125 bbls.; do. last week, 12,375 do. There is scarcely any sale for other than strictly fresh eggs. Grades at all offin quality are neglected and very unsettled in price. Held stock is losing severely as the weather has been decidedly unfavorable. Eggs out of cold storage are losing badly and seldom exceed 11c; many have been returned to their cold quarters.

Near Points, doz. 15@16c.; State and Penn., 13@14c.; Western, fresh, 11¾@12c.; Canadian, 12c.; off grades 11@11¾c.

FLOUR.—Has declined in price in sympathy with wheat, and trade is without much animation.

Latest prices are at $3.15@4 00 for inferior to very fancy superfine State and Western; $3.70@4.00 for poor to very good extra State, odd lots and lines; $4 00 @4.25 for good to fancy do.; $3.75@4.00 for inferior to very good shipping extra Western, and $4@ 4.25 for good to choice shipping extra do, inferior to very good white wheat extras, $4.85@5.25; very good to fancy do. at $5.25@5.50; red and amber winter wheat, inferior to choice trade and family, at $4.40@5 75; round hoop Ohio, $3.90@4 40; and trade and family brands of do. at $4.50@5.75; St. Louis at $4.40@5.35 for inferior to good extra; $5 35@6.50 for good to very choice, and up to $6.90 for very fancy. Minnesota clear, very inferior to fancy, at $3.70@5.75; Minnesota "straight," very poor to very fancy, at $5.10@7.25, and patent inferior to fancy at $5.50@8.00; unsound stock at from $2.25@5 00; city mill extra at $5.40@5.75 for good to choice West Indies; do. for England, $8.75@6.35 for poor to fancy spring wheat, and $5 00@ 5.50 for winter wheat product; do. trade and family extras, $5 00@6.25; do. for South America, $5.75@6.15; No. 2 at $2.25@3.01 for poor to very choice.

Receipts for week: flour, 79,850 bbls.; corn meal, 3,330 bbls.; wheat, 2,085,250 bush.; corn, 2,016,700 bush.; oats, 237 200 bush.; rye, 1,994; malt 87,600; rice, 425 pkgs.

Exports: Flour, 68,550 bbls.; corn meal, 3.595 bbls. wheat, 1 569,500 bush.; corn, 1,7.7,300; oats, 45,250 bush peas, 3,598 bush.; rice, 1,4.0 pkgs.

FRESH FRUITS.—Peaches begin to make quite a display. The weather is severe on berries and dealers have to arrange prices for quick sales. The list is large and shows quick ripening but not generally prime quality. Poor apples cannot be handled.

Md. Astrachan, wine ball per cr 75c.@$1; green per bu. cr., 50@60c.; North green apples ₱ bbl. $1.00@ 2.00; per ½ bbl. cr. 50c.@$1 00; cherries, sweet, choice ₱ lb. 7@8c, harvest 3@5c., sour choice 5@6c.; common 3@5c. Strawberries Oswego ₱ qt. 9@13c. Oneida ₱ qt. 6@10c.; up-river good to prime ₱ qt. 9@11c.; poor to fair, ₱ qt. 6@8c.; good to prime ₱ 3 to qt. cups 2@3c.; Raspberries Red Antwerp up-river per 3-to-qt. cup 7@9c.; native up-river ₱ 3 to qt. cup 3@4c.; Jersey ₱ 3 to qt. cup 3@4c Brandywine, Md. and Del. ₱ pint 6@ 7c. Blackcap, Jersey ₱ pint 4@6c.; Md. & Del. ₱ qt, 8@10c Blackberries Wilson, Md. & Del. ₱ qt. 10@ 13c.; Dorchester, Md. & Del. ₱ qt. 8@10c. Md. wild ₱ qt. 4@5c. Whortleberries Mountain ₱ ½ bu. box $1 75c. Jersey ₱ ½ bu. box $1.50@1 62; Md. & Del. 9@10c, Gooseberries green, good to prime ₱ bush. $1.50. Currants cherry, ₱ qt. 4@6c.; small ₱ 3@5c. Watermelons Ga., good to prime ₱ 100 $20@25, Fla. prime, do. $20@30. Peaches, Md. & Del. choice per cr, $4@5; poor to good ₱ cr. $2@3; Norfolk ₱ cr. $1.50 @2.50; North Carolina prime ₱ bu. cr. $1.50@2; poor to good ₱ cr. $1.50@2.50; Ga., Beatrice ₱ peck 75c.@$1.25. Apricots Md. & Del., ₱ qt. 25@30c. Grapes, Blk. Hamburgh ₱ lb 8, Peanuts very dull and lower. Peanuts, Va. hand-picked, ₱ lb. 5¾@6¼c.; extra prime 4¾ @4¾c.; good to prime 4¼c.; shelled, 5¼@5¾c., hickory shellbark, ₱ bush $1@1.10

GRAIN.—Wheat is freely offered at lower prices through the reports from the West respecting the crops and the same English advices; latest sales are of No. 1 white at $1.14½@1.15¼; do., June, at $1.14¾@1.15c.; do., August, at $1.07½@1 09; ungraded white at $1.10@1.13; No. 2 red at $1.20@1 21½; do., June, at $1.19¾@1.20¼; do., July, at $ .11½@1,12½; do., August, at $1.07¾@1.08¼; do., September, at $1.07¼@1.08; No. 3 red at $1.12; ungraded red at $1.05 @1.15½; mixed winter at $1.14; No 2 Milwaukee spring at $1.03@1 10. Rye is quiet; quoted at 79@81c. Corn is favoring buyers with full offerings and trade fair; latest sales are of New York No. 2 at 50@51c.; do., June, at 49¾@50¼c.; do., July, at 49½@49¾c.; do., Aug., 50¾@50¾; New York steamer mixed at 48@49c.; ungraded mixed Western at 46½@51c.; low mixed at 50c.; No. 1 white at 57@59c.; No. 3 at 48@48c.¾. Oats at lower prices and trade fair; latest sales are of No. 1 white at 30@40c.; No. 2 white at 35@36c. do., July, at 36¼@36¾c.; No. 3 white at 34c.; New York No. 1 at 38c.; New York No. 2 at 35@36½c.; do., July, at 36@36¼c; No. 3 at 33½@34c.; ungraded white Western at 36@45c.; ungraded mixed Western at 35@38c.; white State at 40 @41½c.; mixed State at 36c.; No. 2 Chicago quoted at at 36c.

HAY AND STRAW.—The market rules strong under the moderate receipts and the prolonged drought.

Shipping hay quoted at 75@80c.; retail lots at 85@90c. for medium, and 95@$1,10 for prime and fancy qualities; clover, 65@70. Straw at $1.15@1,20 for long rye; 65@70c. for short rye, and 55@60c. for oat.

Exports for week, 427 bales.

HOPS.—Trade has been of a more moderate character this week, the feeling has not been as firm, although no decided change noted in prices. Quotations are for:

	Cents per lb.
New York, fancy	Nominal
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

POULTRY AND GAME.—With moderate supplies of dressed the demand is good and sellers do not seem disposed to mark up prices. Prime fresh fowls and chickens are doing a shade better.

Turkeys, choice small, on ice, 11@13c.; fair to good, 10@11c.; frozen, ——c.; Phila., d.-p., 13@15c.; chickens, spring, Phila., large, ₱ lb., 25@27c.; small, 21@23c.; scalded, 19@22c.; fowls, Phila., yearling, ice.; dry-picked, 14@15c.; Jersey, good to prime, 13@ 14c.; State, good to prime, 12½@13½c.; Western, good to prime, 12@13c.; poor to fair, 9@11c; ducks, spring, large, ₱ lb., 18@20c.; small, 15@17c.; Phila., old dry-picked, 10@12c.; squabs, white, ₱ doz., $2.25; dark, $1.25

Live poultry is in lighter supply, farm work to some degree keeping back shipments. Prices are generally stronger, but the will not handle very free supplies.

Chickens, spring, large, ₱ lb., 18@19c.; small, 16@17c.; fowls, Jersey, 12@12½c.; Western, 12c.; Southern, 11½ @12c.; roosters, old and young, 4½@5c.; turkeys, mixed, 11@12c.; do. Southern, 10@11c.; ducks, Jersey, N. Y. & Pa., ₱ pair, 50@55c.; Western, 45@55c. Southern, 40@ 45c.; geese, Jersey, $1.50@1.75; N. Y. & Pa., $1.25@1.50; Western, mixed, $1@1.25; Southern, 87c.@$1.12; pigeons, 20@40c

Supplies of game are small and not much wanted, as easy rated spring chickens call a good deal of fancy trade.

English snipe, ₱ doz., $2.50 wild pigeons, stall-fed, ₱ doz. $1.75@2.00; flight, 80c. for small kinds, $1 for fair sized in good order.

PROVISIONS—Hog products have ruled unsettled and trade active, closing at $12 for June delivery; $12@12.05 for July; 12.05@12.10 for August, and $12.10 @12.15 for September. Bacon at 7¾ for long clear and 7¾c. for short clear. Lard—Western steam at $7.14½@7 15 for spot, June and July; $7.17½ for August, $7.20 for September, and $7.31 for October. Stearine at 9¾@10c. Tallow at 6¾@6 3-16c.

Receipts for week, beef, pkgs., 800; pork, bbls. 5,900; cutmeats, pkgs., 30 18; lard pkgs., 25,100.

Exports, beef, pkgs., 4,500; pork, bbls., 4.052; cutmeats, lbs., 8,429,972; lard lbs., 6,783 600.

VEGETABLES.—Exports of potatoes since Jan. 1st, 78,800 bbls.; do., in 1879, 58,800 do. New potatoes declined during the week under very heavy supplies, but at the close show some recovery. Old have declined again, as late high prices brought in a large surplus

Bermuda, new, ₱ bbl. $5.50; Maryland, ₱ bbl., $2 00 @3.00; Norfolk, prime., ₱ bbl. $2.75@3.75; poor to good, per bbl., $1.75@2.50; culls, ₱ bbl., 75@$1; Early Rose, Maine, per d.-h. bbl., $1@1.25; State, 75c.@$1: Prolific, Maine, $1@1.12; Jackson, $1@1.12; peachblow, State, $1@1.25; Snowflake, $1@1.25; Peerless, 75c.@$1. Garden stuff has had a good sale and prices are steady for prime items. The dry weather has shortened our L. I. and N. J. crops. Tomatoes, Cha's. and Sav., ₱ cr., $1.50@2.25: Fla., ₱ bu. cr., $1.50@2.50; Norf., per cr., $1.50@2.50; cucumbers, Norf., ₱ bu. box, $2.50@3; eggs plant, Fla., per cr., $2@3; string beans, L. I. ₱ bag, $3; wax beans, Norf., ₱ ½ bbl. crate, $1.75@2; string beans, Norf., round, ₱ ½ bbl., $1.75 @2; flat, ₱ ½ bbl., $1.50@1.75; green peas, L. I., per bag, $1.50@1.75; asparagus, Oyster Bay, per doz. bch., $1.75@2, L. I. ₱ doz 75c.@$1.25; turnips, Jersey, ₱ 100 bunches $2.50@3.50; Russia, ₱ bbl., $1@1.25; beets, Jersey, per 100 bunches, $1@2; radishes, per 100 bch., 50c.; lettuce, per bbl., $1@1.75; cabbage, Jersey per 100, $6@8; squash, Nor'n, yellow, ₱ bbl., $1@1.25 squash, L. I., ₱ basket, 50@75c.; rhubarb, L. I. & Jersey, ₱ 100 bunches, $2.00; onions Bermuda, new, ₱ cr., $1.50 @2; Maryland, yellow, ₱ bbl., $3.50; cauliflower, ₱ bbl., $2@5.

TOBACCO.—The market is essentially as last week with trade very moderate.

KENTUCKY LEAF.

	Light.	Heavy.
Common lugs	4 @ 4½	4½@ 5¾
Good lugs	4¾@ 5¾	5¾@ 6¾
Low leaf	5¾@ 6¾	6¾@ 7×
Medium leaf	7 @ 7½	8 @ 8½
Good leaf	8 @ 8½	9 @10½
Fine leaf	9 @11	11 @12
Selections	12 @—	12½@14

SEEDLEAF.

	Crop of 1879.
New England Havana seed	18 @25
do. seconds	10 @13
do. fillers	5½@ 7
Penn. assorted lots, fine	18 @22
Ohio assorted lots	7½@10
Wisconsin assorted lots	7 @10
Wisconsin Havana seed	16 @18

WOOL.—There continues indifference on the part of buyers and prices unsettled. Not much trade is expected until the new Ohio fleeces come in extensively.

LIVE STOCK MARKETS

NEW YORK, Saturday, June 26, 1880.

BEEVES.—Receipts for week, 12,053 head; do. last week 14,32[illegible] do. The offering has run small in numbers and the market closes strong with an advance of ½c. on Wednesday's figures. Export sales good. Light and medium cattle sold quickly at ½c. advance, and good to prime steers were generally rated $1 ₱ head higher. Light Cherokee and Texas cattle were sold at 8¼@8¾c., to dress 55 lbs.; rather coarse Colorados at 9¼c., to dress 55 lbs., and $1 each; the range for native corn-fed and distillery-fed steers was from 9c., to dress 56 lbs., to 10¼c. to dress 77 lbs.

COWS AND CALVES.—Short pasture will be apt to send a good many cows this season. Fortunately shipments are not heavy at the moment, for buyers would dictate prices, which are low enough for decent stock The range is $25@40 per head.

VEAL CALVES.—Market dull, few of any sort making outside figures.

Live calves, N. J. and Bucks Co., choice, 5¾@6c.; prime, 5@5¾c.; State, choice, 5¾@5¾c.; do. prime, 4¾@ 5¾c; fair to good, 3¾@4¾c.; poor, 3@3½c.; Mt. Holly, good to choice, 5@6c.; buttermilk, 2½@3c.

SHEEP AND LAMBS.—Receipts for the week, 31,208 head; do. last week, 38 870 do. Very few buyers at the market-place, and trade was very slow and prices rather easier. The reported transactions were at 4 @4¾c. for sheep, 4½@6¾ for poor to choice Southern and Western lambs, and 6¾@7c. for Jersey do.

SWINE.—Receipts for week, 24,708 head; do. last week, 25,069. Stock goes direct to packers; no public quotations for live city dressed; 6@6¾c, for Western; 6¾7c. for State

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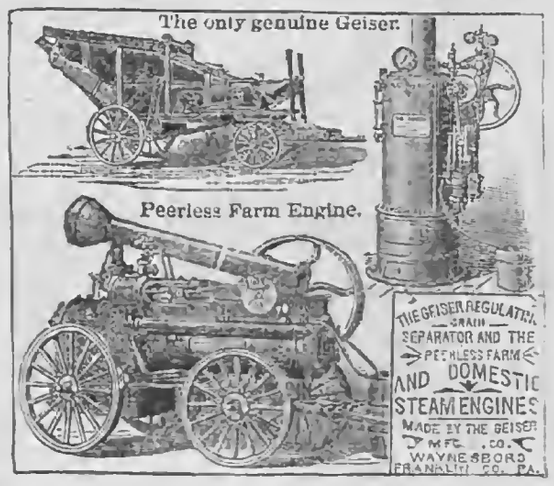

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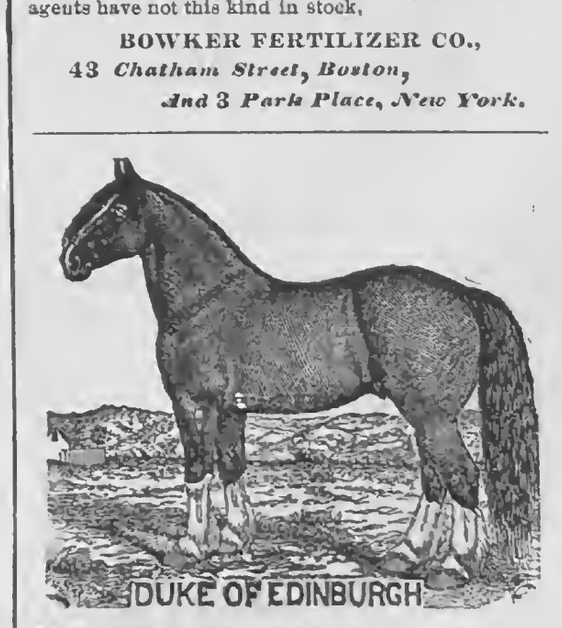

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Reading for the Young.

HOW ELEPHANTS ARE CAUGHT IN CEYLON.

NEARLY every one of the cousins has undoubtedly visited a circus and seen "the elephant" at some time or other, but they may not all know how these giants are caught and tamed, and they may therefore be interested in reading the following account, which is an extract from Chamber's Journal, and tells how elephants are caught in Ceylon.

The kraal was an inclosed place some 200 yards each way. The fence was composed of large trunks of trees sunk into the ground, and of about 16 feet in hight. At one end was the entrance, about 20 yards across. At each gate post were large trunks of trees, supported in an upright position by strong ropes attached to the surrounding trees. When the elephants enter these ropes are cut, and down come the huge trees across the passage, effectually barring all retreat. We encamped in one of a row of huts hastily run up on the leeward side of the kraal, and at some distance from it, as the power of scent is particularly keen in an elephant, and if once a panic is raised they would all rush madly away and be never seen again in that locality. In the immediate vicinity of the kraal, and commanding a good view of the whole proceedings were most extraordinary nests, constructed high up among the branches, and of sufficient dimensions to accommodate most of the party. They were thus made: A number of good stout poles were laid from the branches of one tree to another, some 60 feet from the ground, and carefully made fast; others were then placed across them, and side rallings four feet high were added for security. These last were interwoven with leafy branches, which effectually concealed the occupants; a ladder of long bamboos completed the thing; and thus were constructed veritable crows' nests, admirably adapted for a good view of the proceedings, combined with perfect security. The kraal was a government one, and about 2,000 natives had been employed more than a fortnight in driving the adjacent country; by day they had white wands, and at night torches. The elephant is a timid animal when not provoked or wounded, and the above simple means were amply sufficient to keep the animals from "barking back." On this occasion, by good management, a large body of elephants had been driven slowly into the neighborhood of the kraal. The excitement was getting intense. Every crash of a falling branch, or the chattering of a large monkey common to these woods, made one start and gaze expectantly in the direction of the elephants.

At last, when our patience was well nigh exhausted, a fine herd was seen in the distance, slowly approaching, under the guidance of three or four decoy elephants, who were employing every soothing art to induce the leaders to accompany them to the kraal. Strange to say, the elephant in its captive state seems to take absolute pleasure in decoying its wild congeners into the kraals, and in subsequently aiding in making them captives also. About 40 had entered, when the rear guard were seized with a panic and bolted through the line of beaters. The entrance was thereupon immediately barred, and those that were within made safe. Then came the fun of the thing. A decoy elephant cautiously approached the nearest wild one, its mahout (driver) walking on the off side and timing his movements so as to be always concealed by the fore legs of the animal. With admirable tact, after many attempts, the decoy persuaded the captive to raise one of its hind legs, which was mainly brought about by the former tickling the wild elephant with its trunk, and so causing it to lift its legs. A noose was immediately slipped around it by the adroit attendant, and the other end was made fast to a neighboring tree, after which the poor animal was left to its fate; and its insidious visitors proceeded to another, whom they served in the same manner; and so by degrees all the best animals were secured. The remainder were subsequently shot by the sportsmen who were there.

Almost the entire breaking in of the wild elephant is starvation. When once his spirit is broken he becomes almost as amenable to discipline as one that has been captive all his life. After some days of total abstinence from food and water they are led out to drink between two tame elephants, and if any sign of obstinacy is shown the unhappy beast is beaten most unmercifully by its conductors, who use their trunks in a most punishing manner. In a few days they are set to work, harnessed along side of a steady, tame elephant; and in an incredibly short time they fall into their routine of duty, and perform their work as well as their docile friends.

A SOUTH AMERICAN ANT-EATER

A PHILADELPHIA paper tells about an ant-eater which has recently been added to the zoological gardens of that city. It is one of those curious animals which are never to be found in these latitudes except in menageries. The cousins will learn something of interest about it in the following:

This ant-eater is black in color, and when full-grown measures about eight feet from the tip of the nose to the end of the tail. The head is about a foot long, the body four feet and the tail three feet more. The present one on exhibition is about half-grown, its head being about nine inches and body and tail twenty inches each in length. The body is covered with bushy hair, and its head is similar in many respects to the trunk of an elephant, only differing from it in color and shape, but having the bones of the nose and jaws elongated into a narrow tube, at the end of which is a little opening, given the name of mouth, but devoid of all teeth. The eyes are placed low down. All its legs are clumsy-looking; the fore feet are provided with long, sharp claws, turned in under the foot, so that when the animals walk all the weight is borne on the outer edge of the feet. In South America the ant-eater is found east of the Andes and as far south as Paraguay. When it wants to feed it tears down the ant hills with its long claws, and when the occupants pour out it captures them with the tongue, which is of great length, and is covered with a slimy spittle. Thousands of the insects are eaten at a time in this way. This species of the animal is of a different order from the great ant-eater. One of its habits is to climb trees, which the great ant-eater does not. It is impossible to feed the one at the zoological gardens on its natural food, and as a recourse they give this specimen soft-boiled eggs and beef tea, of which it partakes with evident relish.

FLIES.

MANY mournful pieces have been written about "dead leaves," "dead flowers" and "years gone by"; but I have never yet read one word about departed flies To be sure, flies are not an honored race; indeed, they are quite the contrary, for they come in the spring-time and nearly torment the life out of man and beast throughout the Summer.

It is like a tale of war this fighting with flies; we barricade our doors and windows until the house looks like a fortress, and we prepare feasts of deadly poison for the coming enemy. They come by hundreds and thousands, with troops of ugly drummers, called beetles, and millions of accomplished swordsmen, named mosquitoes. And these Lilliputian swordsmen are as cruel as any Hessian soldier that ever fought in the British army.

They are not content with rioting by sunlight; they must attack us by night also, and that is the worst of it; for fresh reinforcements are ever ready at night-fall to commence their attack. Then stealthily moving with doleful song the light-footed warriors creep through the crevices of a building to wreak their vengeance on its inmates.

It is rather humbling to think that after all our efforts to overcome the enemy, we should be tormented through all the loveliest weather of the season, and when the cheerless days of winter come again one breath of our fearless ally, Jack Frost, should kill them all.

I think that it must have been a literary fly that visited a lady at our house one day last Summer; she was writing a letter, and lighting upon the paper it placed its forefeet on the pen and danced along a whole line as she wrote. There are a few flies around me as I write; if they are literary flies perhaps they know what I have written. I hope they do. COUSIN FRANKIE M. BROOKS.

Madison, Wis.

NATURE'S WAYS.

[A Cousin from Bayonne City, N. J., sends the following poem on the seasons, which she says she is anxious to see in print. She is only thirteen years old, and for one so young the attempt is quite creditable.]

WHEN Spring puts on her mantle green,
Old Winter creeps away:
"The brooks," he says, "have burst their chains,
I can no longer stay."

Then laughs fair Spring a merry laugh,
And starts her fairy work;
Sprouting the seeds of wildwood flow'rs
Wherever they may lurk.

When she is done, bright Summer comes,
And brings her roses red,
And all around upon the air
Their fragrance rare is shed.

Then summer goes and Autumn's here,
Adorned with crimson leaves;
But soon she too must die away,
Bearing her fruits and sheaves.

Once more gray old Winter brings
His short and frosty days,
And thus the earth dies—lives again,
For such are Nature's Ways.

VIRGIE C. MITCHELL.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I sit down to write a few lines to you, almost discouraged because my last letter did not appear with the cousins' letters; but I suppose it was laid aside on account of your removal. We have had plenty of rain so that plants of all kinds are doing well. My phlox, pinks, mignonette and portulacas are up and almost ready to send forth their beautiful flowers. One melon came up and our okras are doing well. I have lots of tomato plants ready to flower, I grow them on purpose to sell, and make lots of of money. I have lots of flowers, I could not name them all. I received some of my flower seeds from England. Does pineapple geraniums ever blossom and how shall I treat one to make it blossom? I am very thankful for the seeds you sent, and shall try to my best with them. Hoping this will not be thrown in the waste basket, I remain your nephew, HENRY WELFARE.

Ingham Co, Mich.

[Pineapple scented geraniums are flowering plants, but the flowers are not very showy. They ought to blossom with the care ordinarily given to house plants.—U. M.]

DEAR UNCLE MARK: I received the seeds you sent me all right. The okra, melons and pinks are up and doing finely. I am watering the plants the way you said in the Hints for the Club. My okra is about two inches high. When is the best time to set out strawberries? Which is to be cut off in pruning raspberries, the young shoots or the old ones? I suppose my last letter found its way to the waste basket for I did not see it in print; if I see this letter in print I may venture to write again. Your nephew,

ROVING DICK.

Besemers Depot, Tompkins Co., N. Y.

[Plant strawberries in August and September if you have good strong plants. They can also be planted in April and May. Pinch off the top of the young raspberry canes now. They will then become stocky and throw out more fruit branches. The old canes should be cut off in the fall; they are of no further use after the leaves have fallen.—U. M.]

The Puzzler.

HIDDEN STORMS.

1. In Donegal elopements are rare.
2. Next August.
3. Show erring Tom the way.
4. I've torn a dolman.
5. The stem pestered me.
6. I saw him whirl windows out.
7. Ashur I can eat.
8. Do have mercy, Cloney.
9. Mrs. Imoon married.
10. So common, so only thrice.
11. Don't pamper a tease.

☞ Answer in two weeks. LITTLE ONE.

TRANSPOSITION.

"Wileary, raderlyl mite deepss goaln,
Houty nad sit pahulpses lowfn;
I vahe driet ot ruffes dan eb gronts
Tub het seisno saw drah ot realn."

☞ Answer in two weeks. L. O.

A SQUARE WORD.

A cape of New Jersey; a city of India; a vegetable.

Answer in two weeks. L.

PUZZLER ANSWERS.—June 19.

GEOGRAPHICAL ANAGRAMS.—1, Westminster; 2, Newfoundland; 3, Oporto; 4, Potsdam; 5, Ratisbon; 6, Madrid; 7, Popayan; 8, Grantham; 9, Warsaw; 10, Bolton; 11, Eton; 12, Windsor; 13, Paris; 14, Preston; 15, Newark; 16, Carlisle; 17, Fleetwood; 18, Washita; 19, Nantucket; 20, Riverhead; 21, Androscoggin; 22, Cantabrian; 23, Barnstable; 24, Petersham; 25, Saddleback.

NAME PUZZLE.—Europa, Victoria, Asenath. Initials form "Eva."

HIDDEN MEATS.—1, Beef; 2, Veal; 3, Pork; 4, Lamb; 5, Venison; 6, Mutton; 7, Ham; 8, Bacon; 9, Bear meat; 10, Buffalo steak; 11, Middling.

DIAGONAL PUZZLE.—

T
A I
P U G
I D L E
R I V E R

Primals form "Tapir;" diagonals form "Tiger."

Various.

BRIEFLETS.

THE Hour has the following: The female suffragists were in full force at the Chicago Convention, endeavoring to present some exceedingly ungrammatical and otherwise incomprehensible resolutions to the attention of the delegates. The resolutions wound up with a clause to the effect that woman should be allowed to vote for "laws to preserve her daughters from those dreadful dangers to which they are becoming more and more exposed through the unbridled and insatiable lust of men." . . . . . The best way for these ladies to "preserve their daughters" would be to stay at home and attend to the proper education of their children and to curb their own and their daughters' "unbridled and insatiable" love of pleasure and fine raiment, which is the main-spring of the danger they are so anxious to legislate about. . . . . We regret to see that Mr. Peter Henderson is again advertising Pearl Millet as "The Great Fodder Plant." . . . . . One farmer near the Rural Farm cut a five-acre field of Timothy and clover and burnt it to destroy the Army worm. Another who had been picking the worms off his corn tells us that he found as many as forty to some hills. . . . . Punch, who, of course, must illustrate English opinion, gives a very clever scrap of conversation in which a young gentleman of fashion asks an elderly lady of fashion for matrimonial advice. The question is of choice between worth and rank, and the lady very acceptably answers: "Beauty fades, and mere goodness is apt to pall, but a title lasts forever, and one never tires of having a duke for a brother-in-law." . . . . . A lady who has resided for years in China says that the misguided girls of that country may be seen occasionally tightening the bandages that cripple their poor, lamed feet, just as a silly American girl may occassionally draw tighter and tighter the laces of her corset. . . . . Mr. Pearsall, speaking of the importance of local fruit shows, says: "Many people can give their experience with an apple in hand or a plate of fruit to handle over, who could say nothing at all empty-handed. Very many of us are like the boy in the spelling class who missed the word because the button was off his coat, that he usually had hold of." . . . . . La Rochfoucauld says: "The greatest miracle of love is that it cures coquetry." . . . . . Again he says: "If one judges of love by the most of its results, it more resembles hate than friendship." . . . . . Balzac says: "Small-pox is the Waterloo of women. After it they really know who loves them." . . . . . Law, as at present practiced among us, is an honor neither to our intelligence nor to our civilization. It is a licensed system of needless and shameless extortion forced upon society and affecting it for evil in every relation of life. . . . . Speaking of the exclusion of Jews from hotels, Mr. Ingersoll thinks if *genuine* Christians were to be generally excluded, all the hotels in the country would still be as crowded as ever! . . . . . "Stockbridge Cow Manure"—Something new, Dr. Bailey? . . . . . Prof. Budd thinks that poles for Lima beans are a disadvantage. He nips off the tips of the vines so that after a while the plants become bushy and loaded with pods. . . . . Whatever opinions may exist in regard to the political course of President Hayes, it must be conceded that a more amiable and unpretending family never occupied the White House than that of the present incumbent of the Presidential chair.—The Hour. . . . . Mr. C. M. Merriman considers it a mistake in orchard planting to set each kind of fruit by itself. He advocates planting different sorts—for instance, first a peach, then a pear, and so on. . . . . Mme. De Stael says: "We understand death for the first time when he puts his hand upon one whom we love. . . . . Mr. Graham, of Grand Rapids, said he had by accident learned a fact concerning the curculio. Having left his coat in the crotch of a plum tree over-night, 300 curculios were taken from under it in the morning. . . . . In South Wales the rings of a tree known to have been 18 years old were 36 in number—or twice as many as the age of the tree. . . . . The London Farmer republishes Peter Henderson's popular article entitled. "The Use of the Feet in Sowing and and Planting." . . . . . A cable dispatch from London to New York in 25 seconds is rapid work. . . . . "Debtors," says Spurgeon, the great London preacher, "can hardly help being liars, for they promise to pay when they know they cannot, and when they have made up a lot of false excuses they promise again, and so they lie as fast as a horse can trot." . . . . A contemporary says that "too little exercise and too much tea ruin the nerves of many a woman." . . . . . We do not think that the average farmer's wife's nerves are ruined in that way. . . . . Easy housekeepers are often unjustly accused of laziness, when the very easiness so condemned springs from a kindly consideration for other people's comfort.

CATALOGUES, ETC., RECEIVED.

THIRTY-NINTH ANNUAL CATALOGUE and Circular of the Maplewood Institute, Pittsfield, Mass.

SUPPLEMENT of the American Standard of Excellence in Poultry. By G. E. Josselyn, Fredonia, N. Y.

TRANSACTIONS of the State Board of Agriculture of Nebraska from Sept., 1876, to Sept., 1879. Daniel H. Wheeler, Secretary, Plattsmouth, Neb.

THE COTTON WORM, by Professor C. V. Riley, Chief of the United States Entomological Commission. In this pamphlet is given a summary of its natural history, an account of its enemies, and the best method of controlling it, with numerous illustrations. Published by the Dep't of Interior, Washington, D. C.

SHEEP HUSBANDRY IN TENNESSEE. By J. B. Killebrew, A. M. Ph. D., Commissioner of Agriculture of Tennessee. This work of 294 pages, 8vo, although prepared avowedly for the farmers of Tennessee, is full of valuable information for sheep owners everywhere, containing, as it does, all the latest information on the subject of which it treats.

CATALOGUE OF ILLINOIS INDUSTRIAL UNIVERSITY FOR 1880.—This institution is situated at Urbana, Champaign Co., Ill. Its object is, as is indicated by its name, to teach the industrial sciences. There are four colleges in the institution: College of Agriculture, College of Engineering, College of Natural Science, College of Literature and Science, besides schools of Art and Military Science.

THE HESSIAN FLY, its ravages, habits, enemies, and means of preventing its increase, by A. S. Packard, Jr., member of the United States Entomological Commission. The ravages of this insect are the dread of the wheat grower, and the information here offered is well calculated to counteract its destructiveness. Published by the Dep't. of the Interior. Washington, D. C.

THE CHINCH-BUG, its history, character, and habits, and the means of destroying it or counteracting its injuries. By Professor Cyrus Thomas, of the United States Entomological Commission. Professor Thomas is one of our best entomologists, and the information he gives in this pamplet of 44 pages about this formidable pest, will be of great value to the farmers in wheat-growing districts. Published by the Dep't. of the Interior Washington, D. C

PERSONAL ITEMS.

General Grant expects to spend the summer in England, visiting his daughter, Mrs. Nellie Grant Sartoris.

General Benjamin F. Butler, having just visited the San Francisco coast, does not believe in the Isthmus canal scheme.

Miss Annie Arthur, a sister of the Vice Presidential nominee, is the teacher of a district school a few miles from Le Sueur, Minn.

President Hayes expects to leave Washington for California about the 1st of July. He will be accompanied by Secretary Thompson, and will make a general tour of the Pacific coast.

Cyrus H. McCormick, the man of reaper fame, recently finished one of the finest houses in Chicago for his private residence. His library was selected partly by Horace Greeley. Mr. McCormick is a very lively man, though 71 years of age, and gives the fondest paternal attention to his two young children, aged about four and six years.

During a heavy thunder shower at Mechanic Falls, Me., the other day, a boy was sitting at the foot of a Balm of Gilead tree which was struck by lightning. The tree was splintered, but the boy was apparently uninjured. Soon after the accident he was seized with nausea, and on a physician removing the little fellow's clothing, there was found upon his stomach and chest an imprint resembling the trunk of the tree, its branches and buds as perfect as could be drawn by the hands of a skilled artist.

"No Words in the English Language," writes a lady in Michigan, who is using the COMPOUND OXYGEN Treatment, "can express the gratitude I feel for the benefit I have received and the hope I have of possessing tolerable health again. It was ten years, January, 1880, since I was taken sick, and the mental agony alone has been indescribable. *I have two little girls who have never seen me walk.* * * I think I shall be able to walk alone after a time. I have been so hungry this summer that I have scarcely been able to wait for meals. * * * Every one remarks upon the improvement in my complexion, and I am putting on flesh rapidly. My bowels, which have been constipated all my life, and terribly so since my sickness, are now better than I have ever known them to be." Our Treatise on Compound Oxygen, its nature and action, and full information for use, sent free. DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

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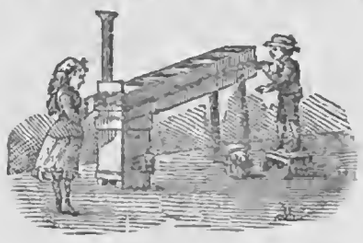

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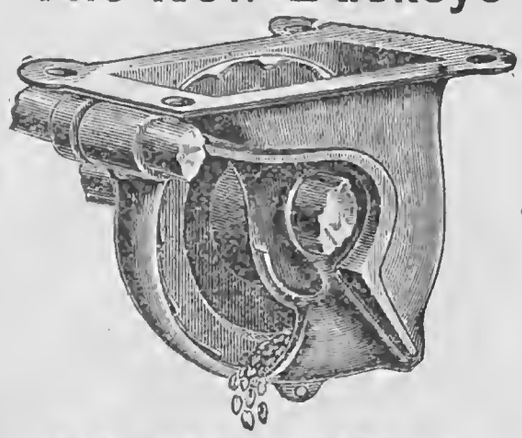

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Combined Grain and Fertilizer
DRILL,
AS IMPROVED FOR 1880.

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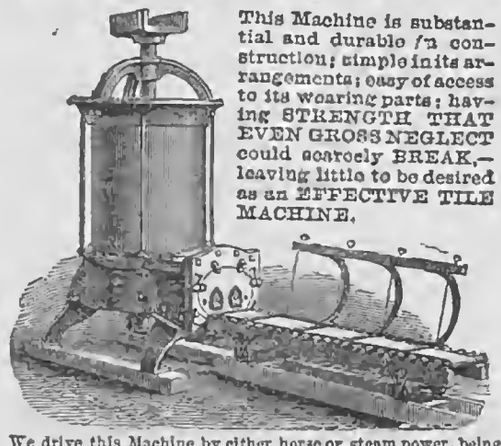

This Machine is substantial and durable in construction; simple in its arrangements; easy of access to its wearing parts; having STRENGTH THAT EVEN GROSS NEGLECT could scarcely BREAK,—leaving little to be desired as an EFFECTIVE TILE MACHINE.

We drive this Machine by either horse or steam power, being well suited to either. Our Tile dies range in size from 3 to 9 ins. in diameter; and in shape we vary them to suit the taste of customers. As a Brick Machine it is also a complete success. It is fully warranted as a Tile or Brick Machine. Send for circular.
CHANDLER & TAYLOR, Indianapolis, Ind.

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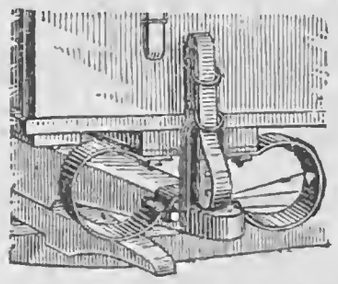
PULLIAM'S PATENT
BOLSTERS SPRINGS for FARM WAGONS.



This valuable device is suited to wagons of any size—made of the best steel and warranted—are attached by four bolts through the bed—can be put on by any person. They remain on the wagon for all uses and work equally well whether with empty or loaded wagon. There is no use for a spring seat—they make a comfortable spring wagon out of a farm wagon—and save largely in wear and tear. We want Agents every where. Send for description and prices, and mention this paper.
SEMPLE & BIRGE MFG. CO., St. Louis, Mo.

NOYES' HAYING TOOLS.
FOR STACKING OUT IN FIELDS OR MOWING AWAY IN BARNS.

Save labor and Money.
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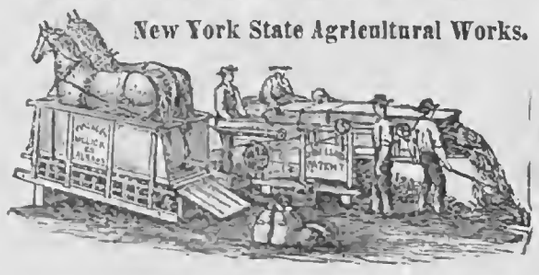

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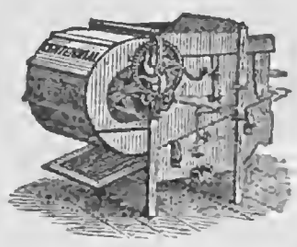

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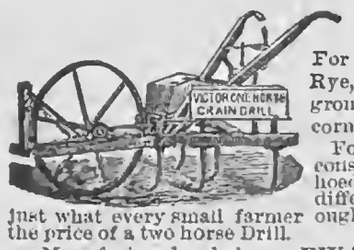

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Makes a perfect bed. No mattress or pillows required. Better than a hammock, as it fits the body as pleasantly, and lies *straight*. Folded or opened instantly. Self-fastening. It is just the thing for hotels, offices, cottages, camp-meetings, sportsmen, etc. Good for the lawn, piazza, or "coolest place in the house." Splendid for invalids or children. Sent on receipt of price, or C. O. D. For **50 cents extra**, with order, I will prepay expressage to any railroad station east of Mississippi River and north of Mason and Dixon's Line. For 75 cts. in Minnesota, Missouri and Iowa.
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TERRIBLE SUFFERING.

Biliousness, Headache, Dyspepsia, Jaundice, Constipation and Piles, or Kidney Complaints, Gravel, Diabetes, or Rheumatic Pains and Aches,

are developed because the blood is poisoned with the humors that should have been expelled naturally.

KIDNEY-WORT

will restore the healthy action and all these destroying evils will be banished; neglect them and you will live but to suffer.
Thousands have been cured. Try it and you will add one more to the number. Take it and health will once more gladden your heart.

Why Suffer longer from the torment of an Aching back? Why bear such distress from Constipation and Piles?

KIDNEY-WORT will cure you. Try a package at once and be satisfied.

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Your Druggist has it, or will get it for you. Insist upon having it. Price, $1.00.
WELLS, RICHARDSON & CO., Proprietors,
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Humorous.

THE evil that men do lives after them. Cows likewise do not give oleomargarine until they are dead.

"I DESS," said a little sis, "if Dod was here now he'd make a lot o' folks. 'Tis awful dusty to-day."

IF a boy should catch hold of your ear, and ask if he had the wrong pig by the ear, would you answer yes or no?

"I AM very much afraid of lightning," said a pretty lady. "And well you may be," replied a despairing lover, "as your heart is made of steel."

"By George!" shouted a traveler, staring at the calendar card hanging up in the depot, "if they haven't got to playing the blamed puzzle on the walls."

"WHEN I was your age," said old Mr. Tret, "I rose with the lark." "I beat you clear out of sight, then," said Tom, wearily and triumphantly, "I've been up all night with him."

MAMMA.—"Look, Cissy, here is the dear doctor coming. What a favorite he is! See, even the little chickens run to meet him!" Cissy—"Yes, ma; and the little ducks cry, "Quack, quack!"

"I WISH I was worth a million of dollars," said a gentlemen. "What good would it do you, for you don't spend your present income?" inquired a friend. "Oh, I could be economical on a large scale."

ABSURD question.—A German lately applied for a situation as sailor on board a vessel lying in the North River. "Have you ever been to sea?" asked the captain. "Does you suppose I comed over from Germany in a balloon?"

"THERE is no rule without an exception, my son." "Oh, isn't there, pa? A man must always be present while he's being shaved." Pa to ma—"My dear, hadn't you better send this child to bed. He's getting too clever."

PEDESTRIAN, who has dropped half a crown in front of "the blind." "Why, you confounded humbug, you're not blind." Beggar—"Not I, sir! If the card says I am, they must have given me the wrong one. I'm deaf and dumb."

IT was a colored preacher who said to his flock: "We have a collection to make this morning, and, for de glory ob heaben, whichever of you stole Mr. Jones's turkeys, don't put anything on the plate." One who was there says, "Every blessed niggah in church came down with the rocks."

A YOUNG man and woman stopped at a country hotel. Their awkward appearance excited the curiosity of one of the family, who commenced a conversation with the female by inquiring how far she had traveled that day. "Traveled!" exclaimed the stranger, somewhat indignantly; "we didn't travel, we rid!"

BUTTER? You remember the story of the guest who was eating more butter than biscuit, while the landlady looked on and fidgeted and hinted until she fairly went into a nervous fit. Finally she said, "Do you know butter is up to sixty-five cents a pound?" The hungry guest reached out and took what there was left. "Well," he drawled, approvingly and reassuringly, "good butter is wuth it."—Hawkeye.

A BOY in the wild West, who for the first time in his life saw a military company out for a drill with fife and drum, gave his mother the following account of the business: "A little man blowed on his squealin' stick, and a big man that stood beside him hammered on his thunder-box; then the boss man pulled out a big, long knife, and shook it at the fellers what was standin' up in a long row, and they all walked off on two legs."

"Did you make the train?" "No," was the reply, "it was made in the car shops." "I mean, did you catch the train?" "Of course not; it's not infectious." "Well, you darned fool, did you arrive at the depot in time?" "No, you blamed idiot, I arrived in an omnibus." "Great Scott!" shrieked the interlocutor, "did you board the cars?" "Jumping Jerusalem!" howled the questioned man, "you know I don't keep a boarding-house."

If About to Travel or Emigrate,

The voyager cannot be provided with a safer remedy and protective medicine than Hostetter's Bitters. Abundant testimony exist to prove that it nullifies hurtful climatic influences and the effects of exposure, that it reconciles the stomach to unaccustomed food and prevents injurious results from impure water. Mariners, tourists, emigrants and miners have all contributed their quota of testimony in its behalf, and its protective influence has been most effectually demonstrated in regions and under conditions where, if not really effective, that fact would long since have been exposed. In no class of disorders have its remedial and preventive properties been more conspicuously shown than in cases of malarial fevers, maladies for which it is the most popular specific in existence, both here and in the tropics, where its reputation is scarcely second to that which it enjoys on this continent. It is, moreover, a most agreeable appetizer and nervine.

PHASES OF TRAMP LIFE.

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2. Westward Ho!

3. Work not Wanted.

4. Fishing for Supper.

5. A Chance for Clean Clothes.

6. A Good use for Dogs—Big Ones!

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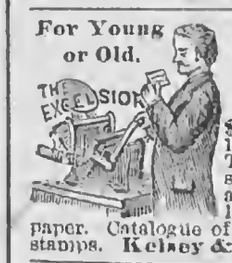

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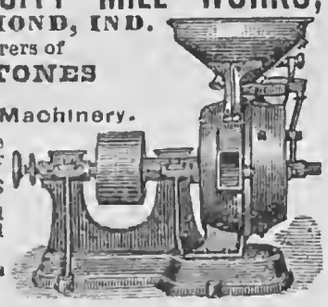

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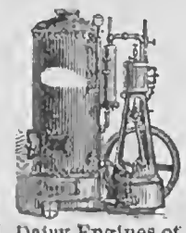

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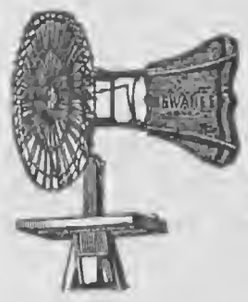

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EASTERN STATES.

Maine.

HALLOWELL, Kennebec Co.—Crops of all kinds are looking well. Wheat is extra; oats and other small grains are looking fine. There are larger amounts of wheat and corn this year in Maine than ever before. Grass is looking fine and will make a heavy crop of hay. The weather has been quite dry, but we have had frequent showers. There are but few sugar beets planted here, but more mangels than usual. Fruit is a failure, except apples, of which there will be a good crop. I have a few hills of Amber sugar cane, but the dry weather has set it back. A. H. L.

PEMBROKE, Washington Co.—It is early yet to tell what the harvest will be here, for the drought of three weeks has injured crops considerably. There was much more wheat sown here than usual; it looks poorly; Lost Nation is the kind. About as much oats were planted as usual, and they look fair; Hogan is the kind. Very little corn is raised here. Southern is raised and cut green for the cows. Not as many potatoes were planted as usual. They look well but bugs are plentiful; the kinds are Early and Late Rose and Prolific. There is no rye and very little barley raised here. I think there was about one-fourth of a pound of sorghum planted. The prospect for apples is good. Cherries are a failure. Apples grow best here. Hay is injured and very short. There is considerable small stuff raised here which was nearly spoiled by the drought, but we have had several showers lately and things begin to revive. E. P.

SEARSPORT, Waldo Co.—Wheat, of which the variety chiefly grown is the Lost Nation, promises a good yield. Corn is not far enough advanced to estimate the crop, but it looks well. Oats and barley promise well. The Excelsior oats is the principal variety. There is one third increase in the acreage of wheat. Other crops are about the same as usual in area, except potatoes, the acreage under which was reduced one-third on account of the Colorado beetles, which are quite plentiful, but no worse than last year. Principal varieties of potatoes are the Early Rose, Prolific, and Jackson. No sorghum is raised in this part of the State. Small fruits are abundant. Apples promise a bountiful crop. A. N. K.

SKOWHEGAN, Somerset Co.—Our season thus far has been very changeable, with extremes of heat and cold. No rain has fallen for about four weeks. Hay will be very light. Wheat oats and barley promise well, but they need rain. The acreage is about as in former years. Corn is backward. Potatoes look well, but the bugs are very troublesome. Sugar cane is not raised in this vicinity. Fruit is promising; the leading varieties of apples are the Greening, Baldwin, Northern Spy and Russets. Pears are not much grown in this locality. Grapes are raised in small quantities. W. B. F.

Massachusetts.

CHELSEA, Suffolk Co.—There is very little grain of any kind raised in this vicinity, except Indian corn of which there was about as much planted as in former seasons, but the drought has hurt it badly, and it is very likely that the crop will be somewhat less than usual. Potatoes have been badly injured by bugs, and in some cases have been almost totally consumed, but where the insects have been removed, the vines are doing well and the crop will be about the same as last year. Sorghum is not cultivated at all here. Apples will be more plentiful than last season, but there will not be so many as in some other bearing years; pears are, or promise to be, rather scarce, although they are expected to do well here as it is so near salt water; peaches will be very small in quantity here as the crop is only a third or a quarter as much as last season; grapes bear considerably more than last year. C. A. B.

DORCHESTER, Suffolk Co.—The dry weather has been very injurious to our strawberry crop. The pear crop will be very small, occasioned by the overbearing of last year. The apple crop will be larger. In regard to the question what are the best varieties of fruit for this section, the following is the list agreed upon, some years since, by the Mass. Agricultural Club, and it is substantially correct at this time, so far as it relates to the pear:

For a collection of six: Bartlett, Seckel, Urbaniste, Merriam, Sheldon, Beurré d'Anjou. If 12 are wanted, add: Brandywine, Doyenné Boussock, Onondaga, Howell, Benrré Bose and Lawrence. If a collection of 18 is desired add: Belle Lucrative, Paradise d'Automne, Marie Louise, Beurré Clairgeau, Vicar of Winkfield. The above list was agreed on for standard trees by the most experienced cultivators without a dissentient vote, and is a good one for to-day. I would like to say, however, that the Duchesse d'Angouleme and Louise Bonne de Jersey on quince roots are very desirable, and that Clapp's Favorite as a standard early pear of large size has no superior in size, beauty or quality, and I may add, for the sake of history, that the Mass. Agricultural Club impressed at first with this idea, offered by their committee $1,200 to Mr. Clapp, if he would dedicate the tree to the name of the President of the Club and have it propagated for distribution. This Mr. Clapp declined; gave it his own name, and its portrait is engraved on his own tombstone in Forest Hill Cemetery—a decision which I most heartily approved of, and I sincerely hope that this beautiful fruit may endure as a blessing to the world until the marble shall have crumbled into dust. In regard to the Beurré d'Anjou I would remark that it gains popularity wherever it is known, succeeding throughout a wide expanse, and is undoubtedly the most valuable late pear of our country, and I may repeat, for the twentieth time, the remark that if I had done nothing else for the cause of pomology during the last 50 years but to introduce this pear, I would be content with the result of my labors in this line of duty. M. P. W.

THREE RIVERS, Hampden Co.—Little or no wheat is grown here. Oats will give an average crop. Corn, potatoes and rye are below the average. The acreage of each is about the same as last year. No sorghum is grown here. Fruit is not so promising as usual for the bearing year. For an early apple the Red Astrachan is much the best; next comes Porter. For Winter use the Baldwin is worth all the others in this section. S. R.

WESTFIELD, Hampden Co.—No wheat or barley is grown here. Corn, potatoes, oats and rye promise to be average crops. No sorghum is grown here yet. Tobacco is our principal crop. The prospect for fruit is fair. Apples, pears and grapes have proved the most successful. Peaches formerly did extremely well; but of late years they have been neglected. Now, however, we are disposed to try them again and a large number of trees were set out this Spring. Of small fruits strawberries take the precedence and this season we have an abundant supply. M. R. VAN D.

WEST NEWBURY, Essex Co.—No wheat is grown in this neighborhood. Corn is about an average both as to yield and amount planted. Potatoes look well where the beetles have been kept off; but they need rain. Hay will fall short one-half, I should think, on account of the drought. Apples, some kinds, look well; on others the blossoms are nearly all blighted; the crop, if nothing happens to it, will be larger than last year. Pears did not blossom this year at all. It is very dry, there have been only two or three light rains for two months or more. If it does not rain soon everything will dry up. H. M.

Rhode Island.

WOONSOCKET, Providence Co.—All farm crops are suffering terribly in this vicinity from drought. Apples set abundantly, but are falling badly; ditto for pears and plums; strawberries and cherries are light; grapes more promising. F. E. S.

Connecticut.

LITCHFIELD, Litchfield Co.—No wheat is raised in this locality. Other grains look promising. Early Canada corn is raised principally. Potatoes, Early Rose. The acreage of all crops is larger than last year. Sorghum is not raised much yet, but it is coming into favor. The prospect for fruit is now favorable. The best kinds of apples are the Roxbury Russet, R. I. Greening, Baldwin and Northern Spy. Of berries a big crop is expected, if the weather is not too dry. F. S. S.

MIDDLE STATES.

New York.

QUEENS Co., Long Island, N. Y.—Wheat is harvested. Our Clawson, from appearances, is among the heaviest yields we have ever had. The wheat crop all over the Island is better than last year. The drought continues. Fodder corn is in many places burnt beyond recovery. Field corn curls badly, but is not yet crippled. Pastures are nearly destroyed. All sorts of vegetables—except cabbages—are suffering. Potatoes will be a very short crop. The vines are wilting, and rain can scarcely prove of much assistance. We must have rain within a week or the corn crop will be seriously injured. Our Ennobled oats (Mold's) growing upon a lowland field are, from the accounts of those who have seen them within a few days, one of the finest oat crops ever raised hereabouts. Oats generally will fall short of half an average crop. RURAL FARM.

BLOOD'S DEPOT, Steuben Co.—There are good prospects of an excellent harvest of wheat and rye, and the prospects for oats and barley are extra good; corn has been injured some by cut worms; potatoes are raised extensively in this neighborhood, and they, too, look well; the beetles have not injured them. The grass crop is very light—not one-half crop. Cows are not doing as well as usual for lack of pasturage. D. W.

DUNDEE, Yates Co.—The acreage of wheat is about 10 per cent. over last year's, and the yield will apparently be 70 to 80 per cent. of a full crop. It is too early to judge of the potato crop. No ravages by the beetles yet. Oats are not headed out yet, but they look healthy. Very little rye is sown, but of barley the acreage is above an average, and the yield promises to be good. No sugar cane is grown here. The fruit prospects are fair. D. S.

ELMIRA, Chemung Co.—The prospect for a bountiful harvest of all grain crops in this locality is very flattering. Potatoes are being more injured by the beetle than last year, and the acreage is somewhat smaller, yet they will be an average crop I think. The acreage of grain crops is about as usual. Clawson wheat is grown most extensively, as it is the popular opinion that it is a heavy yielder. Sorghum is being cultivated on a small scale by many of our farmers. The County Agricultural Society has offered a premium for the best 100-lb. sample of sugar from it. The fruit crop will be abundant, especially apples, which are our principal fruit crop. G. A. G. JR.

HAMILTON, Madison Co.—Winter wheat is chiefly raised in our locality. The Clawson variety is deemed the hardiest, but it was discarded at the last sowing for Treadwell and other kinds which make better flour. The crop promises an average. Corn, potatoes, oats, and barley look well, but it is too early to speak with any assurance of the harvest. Of corn we raise mostly the eight-rowed yellow; of oats, the common white sort; of barley, the two-rowed. No rye is grown hereabouts. The acreage of all the crops is much the same as the usual. No sorghum has been raised except by Mr. R. A. Goodrich, who has planted about ten acres this present season. I judge that the prospect for fruit is rather slim. We had no frost at blossoming time to kill the fruit outright; but we did have a cold, and long-continued, piercing north wind which seemed to starve the life out of the young plums and cherries at setting time. The most successful kind of plum is the Bleeker's Gage; and of cherries, the Early Richmond and English Morello. We have raised some good pears, but we shall have none this year. We don't produce all the fruit we consume. Carloads are brought to Morrisville, Eaton and Hamilton from Orleans Co., N. Y. The black-knot used up the cherry trees of my boyhood, and the blight makes a sorry-looking sight of the pears which have been lately planted. Cherries have borne very well of late years on the few trees people ventured to plant. I believe the greatest hindrance to fruit culture is the *ignorance* and rascality of tree peddlers. E. B. W.

HIMROD'S, Yates Co.—Everything is suffering from want of rain in this section. Last year's clover is all dead, or nearly so. The young clover has dried up, and Timothy ha almost all gone. Barley and oats are heading out, though some is not over eight inches

high. Wheat is drying up and not filling well. Some of the corn looks well, while some is drying in the hill. Pasture fields looks red and burnt up. It rains all round us; but that doesn't do us much good. G. A. B.

HORNELLSVILLE, Steuben Co.—For the town of Hornellsville, and the five or six surrounding towns in Allegany, Steuben and Livingston counties, at the present time the prospects for Winter wheat is much above the average, and for Spring wheat rather below the average. Oats are good, and so are corn and potatoes. Timothy hay and that on old meadows, very light; clover short and ripening early, consequently a poor crop. Apples will probably prove a light crop. Cherries are abundant; pears, light; peaches, where grown, fair. Spring early; weather quite warm; some fine showers in May and June, but on the whole the weather has been rather dry. C. J. P.

ITHACA, Tompkins Co.—Wheat 10 per cent. below last year; 20 per cent. below 1878. Slight increase on acreage—90 per cent. Clawson, balance Fultz. Corn, prospect of an average crop or above, if rain comes soon; at least 10 per cent. increase in acreage. Eastern eight-rowed yellow, mostly. Potatoes, early ones, fine but need rain; later ones looking well; rain within a week will insure an abundant crop. Largely Early Rose, five per cent. increase in acreage. Oats equal to last year. If rain comes soon, will be in excess. Acreage five per cent. less. Variety, White State largely; few Scotch Gray. Quite a tendency to increase acreage of corn at expense of oats. Rye and barley, very little raised. No sorghum. Prospects for fruit good. Apples set abundantly, Codling moth and drought injuring them somewhat, but we shall have a full average crop—20 per cent. more than last year—variety, Tompkins Co. King. Pears, trees nearly all gone, owing to blight; this was formerly a great pear country. Peaches, prospect good. The tendency of Cayuga, our adjoining county on the north, is emphatically toward peaches. Great numbers of trees were set last year and the year before. This year peach-tree setting is pretty nearly a craze. Plums, none grown. Small fruits abundant and cheap. The Black Cap raspberry and Wilson strawberry take the lead. Hay, not much more than half a crop. Clover beetle and clover midge, dronght in May and another one upon us now, are the causes. I. P. R.

JOHNSON'S CREEK, Niagara Co.—Haying is commenced, and there will be two-thirds of the usual crop. Wheat is an extra crop, and will yield from 25 to 30 bushels per acre, Barley and oats are very fine, and bid fair for an average yield. Early potatoes are a full crop. Corn is small and late. Apples are dropping badly from the trees, and it is very uncertain what the crop will be. Peaches promise a heavy crop. Pears do not promise much of a yield. They are injured with blight. G. R.

KINGSTON, Ulster Co.—The Army-worm has made its appearance in myriads along the line of the Wallkill Valley Railroad, destroying every green thing that comes in its path. The farmers are all up in arms, using every method that they can devise to destroy the pest. In the districts in the lower towns through which it has passed the devastation is terrible. Most of the standing grain is, however, ready for the reaper, and that will escape. The vineyards in the lower part of the county, it is thought, will be entirely destroyed, as it leaves every other plant to attack the grape-vine, ranging itself upon the leaves with the regularity of a rank of soldiers, consuming not only the leaves, but the fruit, young wood, and tendrils. Various methods have been adopted by the farmers to stop the ravages of this pest. The commonest, and perhaps the easiest, is to plow a double furrow all around the field where the worm is feeding, fill the furrow with straw, and when they begin their onward march set fire to the straw, and keep it burning until they are all consumed. The other methods adopted to kill them are by crushing them by a heavy iron roller—this, however, will not work on rough ground—and poisoning them by sprinkling a decoction of vining sumac and London-purple, Paris-green, or arsenic over the plants, with a sprinkling pot. The berry crops have for the most part been harvested, and the farmers are turning all their energy toward saving their grapes and tree fruits. The loss among the Ulster vineyards and fruit farms, unless they are checked, will amount to hundreds of thousands of dollars. R. H.

MAMARONECK, Westchester Co.—In the lower part of Westchester county, from Portchester westward, the drought has been disastrous in its effects. Hay will, in many places, be less than half a crop, and poor at that. Grain is thin and light generally. Oats are very poor. Apples at one time promised to be an abundant crop; but the curculio, apple moth, and drought have caused much to drop. There is still, however, a fair proportion left, which a timely rain would convert into a good crop. Pears are not looking well, and the blight has been doing its work for several years. Potatoes look more or less bad, according to soil or treatment. It seems now as if they would ripen early, and average small in size. They look best on low ground. In some places corn looks well; in others, small and yellow. Rain would still do much for this crop. Garden truck has suffered much. Strawberries were generally small, and about half a crop. Raspberries and blackberries have set abundantly, but do not swell kindly, as a rule. Potato beetles about as usual, but more generally killed. Rose beetles very abundant. The Army worm did some mischief north of Rye. The larva of the cabbage or turnip fly has been very destructive in places. The drought has been felt less along the river lines than elsewhere. On the whole, the season is one that will be long remembered for its casualties to the farmer. We shall have something left, however, to be thankful for. P. B. M.

MORAVIA, Cayuga Co.—No rain in three or even four weeks to do any good. Hay not half a crop. Oats looking well for the chance given. Corn in some instances good. Wheat on lowlands remarkably good. Potatoes too forward to make a good crop, owing to the dry weather. Haying fairly commenced. Grass-hoppers are in great abundance. Apple trees in some parts of town are remarkably full; in others, scattering. Of pears a slim crop may be expected. In many parts the grass crumples under one's feet, it being so dry. The farmers are over-stocked with animals. The probabilities are that cattle will be very cheap this fall. G. W. S.

PITCHER, Chenango Co.—The weather here is quite dry, and there are no prospects of rain at present. The hay crop is destined to be light. Corn at present looks well—potatoes also: but the beetles are bound to bother. They have already commenced hatching. Grasshoppers are becoming very plentiful for this season of the year. Unless we have wet weather soon they will doubtless injure our crops very much. L. W. S.

PLATTSBURGH, Clinton Co.—The prospects for crops in this section never were better at this season. Grass is a fair crop, though not heavy, owing to the open Winter and dry Spring. But little wheat for market is grown here, oats, barley and buckwheat being our chief crops, with some rye, which is looking well and of which the usual amount was sown. The Michigan Club is the favorite wheat in this neighborhood. The cut-worm did great damage in the corn, rendering a second planting necessary in some places. It is looking well, however, and about the usual acreage was planted. The eight-rowed yellow and the Dutton twelve-rowed are the kinds chiefly grown. Potatoes are looking well; not so many are planted as last year. The bugs have kept off pretty well so far, although some potatoes here have been attacked. My own have hitherto escaped them altogether, while a few miles from here I have seen a multitude of them at work. No sorghum has been planted here this year—indeed, I have never seen any. Fruits of all kinds will be plentiful. Farmers raise a great many varieties with but little success as shown by profit. About 75 per cent. of the apple trees set out are Fameuse, which outbear and sell better than all others, besides being the hardiest here. Of pears, the Flemish Beauty is grown most, being very hardy and very prolific. Small fruits are grown pretty extensively. Of strawberries, the Charles Downing is the favorite, having taken the place of the Albany Seedling, which is less hardy, winter-killing to some extent. E. W. H.

ROCHESTER, Monroe Co.—The outlook for the wheat harvest is good, the acreage being larger than usual and the crop looking well. It is yet too early to tell how corn will turn out; but about the usual area has been sown to it, and it is coming on finely. The acreage under potatoes is less than last year, but they are making a good growth, and there are few bugs. The area under oats is considerably larger than usual and there is a heavy stand. The space given to barley is proportionately less, and it has not yet headed out. Fruit generally will be full crops except strawberries, which will be short. The Baldwin apple, Bartlett pear, Crawford peach, Doolittle and Franconia raspberries, Wilson and Triomphe de Gand strawberry are the main dependence here for full crops. H. T. J.

ROME, Oneida Co.—In regard to the yield of wheat, rye, barley and potatoes in this section, the prospect is favorable. Corn, oats and potatoes are most largely grown with us. Oats are of unusual growth for the season. Corn also is a good stand and well advanced and looks promising. Potatoes are looking fine. All these crops are better than our average, at the present time, and fully an average acreage has been sown and planted to them. Of wheat but little is grown. Of rye and barley, too, very little is grown in this section. No sorghum is raised here, so far as I know. The potato mostly grown for market is the Early Rose. Many other sorts are grown in smaller quantities and many farmers grow the Snowflake, which is considered the best table potato, and commands the best price in market. Some purchasers for family use pay five to ten cents per bushel extra for that variety and find them the cheapest, on account of their smoothness and superior quality. In fruits, strawberries have been very abundant, the Wilson taking the lead as a market berry. Prices have been as low as seven or eight cents per quart for good berries and less for second-class or berries that have been kept over a day or two in market. Apples, which are our standard fruit, had a profuse bloom, and will, no doubt, give us an abundant crop, but it is too early in the season to predict whether the size and quality will be good or inferior. We hope for the best. Our orchards are mostly grafted fruit, and if the season is favorable for their growth and maturity, we shall most likely have a good crop to harvest this Fall. Grapes promise finely for the season, but few are grown here, though most farmers have a vine or two; there are no extensive vineyards. The crop of grass will be medium according to present appearances. Some farmers are now engaged in haying—the writer is one. We shall push the crop into the barn as fast as convenient, and hope to have all secured by the 15th of July. Then if rain comes we hope to have a second crop to harvest in August. J. T.

SENECA FALLS Seneca Co.—The crops grown here are wheat, barley, oats, corn and potatoes. The acreage of wheat is about the same as last year, but the crop is one-third heavier. Barley and oats will be the same as last year. Potatoes are looking fine as yet and bid fair to be a large crop. Corn is doing well; it is too early yet to tell how it is coming out. There is no sugar cane grown here. The prospects of fruit are good for about a fair crop of apples, plums and peaches. S. W.

SOUTH WESTERLO, Albany Co.—Wheat hereabouts will be very light; it stands thin on the ground. Corn looks very good now, but needs rain. Oats bid fair to be a good crop. Rye will be about half of a crop—there is no barley sown here. Potatoes look well now; but the bugs are coming on in great numbers. We must fight them sharply. The hay crop will be very light—I think not half a crop. Some have commenced to mow. Apples will be an extra-large crop—Baldwin and Greenings do best. Of pears there will be none to speak of. Cherries and plums will be light crops. Of sorghum there is none raised. Bees are doing first-rate. Taking all things together, farmers have no cause for complaint. E. J.

WEST MONROE, Oswego Co.—We have had but very little rain last month. Oats and grass are suffering most for the want of rain. Grass will be about half a crop; oats an average one. Corn and potatoes are looking well. Wheat is good so far; if it fills well the crop will be fair. Apples look very promising. R. P. M.

New Jersey.

ELIZABETH, Union Co.—The acreage of wheat is small in this locality, but the crop promises to be a fair one. Clawson and Fultz are the varieties mostly grown. Rye is good. Corn came up badly, owing to the drought, but it is now looking very well. There is a large acreage of potatoes, mostly Early Rose; they are likely to be a light crop. Oats are little grown. No barley or sorghum is grown here. Strawberries have been a light crop. Cherries are plentiful and good. The pear crop will be light. Apples are falling off the trees in consequence of the drought. In this locality the farms are small. The farmers are mostly engaged in raising milk for the Newark and Elizabeth markets. The pastures are drying up; the hay crop is less than one-half that of ordinary years, consequently farmers are having a hard time of it for so early in the season. N. W. P.

HARBOURTON, Mercer Co.—There is about the usual acreage of wheat, rye, oats and corn. The Early Rose is the most profitable potato for us. No sorghum grown. The prospect is good for peaches and fair for apples. The drought has hurt all of our crops. Hay will not be more than half a crop. Oats is short yet but if the rains come soon it may be a fair crop can be had. Wheat will be about an average yield to the acre. There is not any of the Army worms with us yet, we hear they are only five miles off, however. Here is about the usual number of potato beetles, and Paris-green is the best thing to kill them that I have tried. D. F. D.

MAYWOOD, Bergen Co.—The prospects for wheat are very good. Red Winter wheat is chiefly grown, but it is not an extensive crop in this district. Corn is very good, considering the drought. We have found Blount's Prolific to stand best, but it is not generally grown. Corn is only grown here for home consumption. Potatoes are looking well, but are in great want of rain. The chief variety grown is Early Rose; but potatoes have been grown much less since the advent of the bug. Oats are very little grown. Rye is first-class, but little of it is raised except for home consumption. The Winter kind is chiefly grown; but it is known by no special name. Barley is not grown at all; neither is sorghum. Apples are very good. The chief kind is the Sour Bough. For pears this is a bad year, the chief kinds raised are Bartletts and Belles. Cherries are very good. The chief varieties grown are the red and white Ox-Hearts. Grapes are very good. The kind chiefly raised is the Concord. Melons (musk) are good, considering drought. The favorite variety is that known as the Hackensack. The hay crop is a total failure, owing to extreme dryness. The crops chiefly depended on by the farmers are sweet corn, musk-melons, and Lima beans. The latter is grown very extensively. J. T.

Pennsylvania.

BADEN, Beaver Co.—We have just finished cutting our wheat; it is a good average crop. The dry weather did some damage to the crops in this section, but there have been some good rains of late which have changed the appearance of the crops greatly. The hay crop in general is short about one-half. Oats are good. Corn is looking well, and so are potatoes. Fruit is a good crop, particularly apples. I have planted one acre of Blount's White Prolific corn. It is doing well. It ripened well with me last year, yielding from three to nine ears to a stalk. I planted the cow-peas sent by the RURAL and they are doing very well. I think they will be more of a success than the Pearl Millet which was a failure with me. I planted all my Beauty of Hebron potatoes about the 25th of April and I am now using them. They are of good size now. In fact we used some of them about June 20. My Cuthbert raspberries were killed by the dry spell in May. F. W. S.

CHAMBERSBURG, Franklin Co.—The wheat crop is better than last year. Corn is very promising. Hay is fairly good. Apples, peaches and small fruits are very promising. Pears are a very short crop. Fine rains, good health. No insect plagues of any kind and people satisfied with both Presidential candidates. A. S.

DERRY CHURCH, Dauphin Co.—The wheat harvest promises to be better than it has been for years in all respects; Clawson, Fultz, Mediterranean and Shumaker are generally cultivated. Corn is somewhat backward, but grows finely since the recent rains. Varieties in cultivation, white and yellow Dent principally, occasionally Chester Co. Mammoth and Flint. Oats are still growing and not far enough developed to decide as to crop. The panicles are only here and there seen; the Schurmen and common variety, no other name known are generally cultivated. Rye is not generally cultivated. About one per cent. of the cultivated land is planted to potatoes. Barley and sorghum are not at all cultivated. Corn, oats and wheat are grown in rotation in the order named, and there is an acreage of about 20 per cent. of each. About two per cent. of tobacco has been cultivated the last two or three years. The prospects for apples, pears and grapes, are good, and they have been successfully grown. Not so with peaches. Currants and gooseberries are the principal small fruits. E. E. B. S.

HILL'S GROVE, Sullivan Co. — Wheat half a crop: corn, potatoes, oats, full crops. Rye and barley not grown here. Fultz wheat, Redcob Dent corn, Early Vermont and Early Rose potatoes are the kinds grown here. The acreage under each is about the same as in previous years. I am trying the Minnesota Amber sugar cane for the first time, and mine is the only patch grown here yet. The prospect for plums is good; no peaches or cherries grown. There will be a third of a crop of apples probably. We have abundance of raspberries and blackberries. L. B. S.

LITCHFIELD, Bradford Co.—Fine growing weather. All through May there was a dronght; but since then we have had rains occasionally. Crops are looking well. Grass, however, will be rather light. The fruit prospects are good. My beets are doing nicely. The Beauty of Hebron potatoes are splendid; they blossomed two weeks earlier than the Early Rose planted at the same time. J. M.

MILFORD, Pike Co.—The Army worms have made their appearance here, and are doing much damage to the corn at Rosetown, where they were first discovered yesterday. A few have also been seen in rye-fields. As wheat and rye are about ripe, farmers will begin gathering at once, hoping to get their crops housed before any great damage can be done. Reports from Monroe, Northampton, and other counties bordering on the Pennsylvania shore of the Delaware River say the pests are making their appearance in great numbers, and entire fields of wheat, rye, corn, and grass are being destroyed. The farmers throughout the entire Delaware Valley express much alarm.. M. L. K.

NEW ALEXANDRIA, Westmoreland Co.—The drought during the early part of June checked the growth of all Spring crops. On good ground, however, wheat was not materially hurt. There is an increased acreage under it,

and an unusually good stand. Some of it was damaged by late frosts. Some of it was cut about June 26, at least a week in advance of other years. Late rains have brought forward the oats, potatoes, grass and corn quite rapidly. Although the rain came a trifle late for the grass, yet the crop will nearly double that of last year, which was a poor one. Corn, with a fair amount of rain in July, will do very well. In many fields it is now standing four or five feet high. Oats are now doing well, but will not follow wheat in the usual time of cutting; but this delay will give the farmer more time for his hay and root crops. The latter are hurt by the drought, except where they were planted quite early. Of apples and pears we have fine crops in prospect. Peaches are more than usually abundant, considering the full crop of last year, there being one good peach crop in four or five years. Grapes, unless attacked by some disease, will be very plentiful and cheap, and considering the healthfulness of grapes for all classes, I look upon an abundant crop of this fruit as a god-send to the poorer classes. The Ennobled oats look well and are tillering splendidly. The Golden Ovoid mangels measure three inches in diameter and look well. J. W. P.

NORTH EAST, Erie Co.—The wheat crop is very large and fine. I think I never saw it better in this section of country. From present prospects some pieces will go 40 bushels per acre. The acreage is five per cent. more than common. Oats and barley bid fair for heavy crops. Corn is doing finely, and looks fair. I think the acreage is not so large as in some other years. Potatoes also promise a fine crop, but the bugs are extremely busy. Very little rye is raised in this region. What I have seen is very good. The grape crop seems to be the largest and finest for years. Peaches will be a very fair crop. The apple crop a month ago promised to be a large one, but now the prospect is changed: the curculio has stung them so badly that very many are falling off, and our apple crop will be rather a short one. I felt afraid of this a month ago when I saw this enemy of our apple orchards so thick all around. There were legions of them. I have seen them by the millions hovering around and on the fruit trees. Sorghum, or Northern sugar-cane is not grown here, but it would do well, judging from my own experience. Some years ago I obtained some seed, planted it, and raised some cane, and those who professed to know all about it said it was the finest they had ever seen. It grew large, tall, and very full of juice. The cattle eat it very greedily. The apples that do the best here are the Rhode Island Greening and the Baldwin. H. R. B.

WAYNESBORO, Franklin Co.—The harvest of wheat in this part of the county will be less than last year for various reasons. Wheat is our principal product, and it is said our county produces more than any other in the State. Rye is good. Oats will be rather poor. Potatoes promise well. The principal varieties grown are: of wheat, the Fultz and the bearded varieties; of corn, the common yellow; of potatoes, the Early Rose, Peerless, Farmer's Favorite and Snowflake. The acreage is somewhat of an increase over last year. We are having a good fruit crop. Apples are most successful, and of these we will have a large crop. D. B. M.

WEST GROVE, Chester Co.—Wheat is now being harvested and I believe it is considered to be in this section a full average crop. Weather good. Corn and potatoes are promising well. Oats are probably short. Rye and barley not much raised. We have fully the usual acreage of all the crops named. Sorghum is not much raised here, only an occasional small patch is seen. Fruit is promising well. The season has been very dry, but late rains have partially made amends. A. F. C.

Delaware.

MILFORD, Kent Co.—The wheat crop in this vicinity is excellent; no pests have seriously troubled it, nor has it been seriously damaged by the drought. Corn is looking remarkably well and a fine yield will be gathered. Oats are short and poor, being affected early in the season by the dry weather. The beetle has done but little injury and potatoes promise well. The acreage of wheat has been large, perhaps 20 per cent. more than ever before, and that of corn, oats and potatoes is about as usual. Strawberries this season have been almost a total failure, and raspberries have done fairly well. The prospect for peaches, apples and blackberries is fine; we will have a good yield of peaches and blackberries, and a full crop of apples. In our immediate neighborhood there are 15 fruit evaporators and five canning establishments which will be in operation during the season, so that most of our fruit can be consumed at home, making us quite independent of the city markets. M. H. D.

Maryland.

EASTON, Talbot Co.—The wheat harvest is about finished; it was commenced about the 5th of June. The general average of the crop will be equal to last year's, though the drought in May shortened the yield on thin soils. The acreage of wheat is five per cent. greater than last year; the grain is plump and solid; Fultz and Longberry are the principal varieties. Oats, rye and barley are not grown here. Corn looks well. The sorghum interest has not been revived in this section, though a few are trying the cane this year. Small fruits are plentiful as usual; but our main fruit crop, peaches, will not be more than one-fourth of what it should be, as they continue to fall off badly. H. C. S.

MASSEY'S CROSS ROADS, Kent Co.—The wheat harvest is about over. Fultz has been a favorite variety but owing to weak straw it will be abandoned; Mediterranean, Amber and Blue Chaff will be the leading varieties in the future. Corn looks well. Potatoes are only raised for family use; no oats, rye or barley grown. Sorghum is not raised here. Of peaches the white will give a full crop, and the yellow only half a crop. The yellow peach is preferred by the New York market and canneries. Peaches have been our best paying crop, but we have had several failures of late years. C. H. B. M.

ST. MICHAELS, Talbot Co.—The prospects for wheat and corn are good. Wheat is ready for thrashing, some have shipped their crop. Fultz and California Red are mostly sown here; of corn both yellow and white Dent and Flint are grown. Early Rose, Peerless and Sweet potatoes are grown in abundance. I don't know of any sorghum being grown here. Fruit is abundant. Large quantities of cherries have been shipped this year. All crops compare favorably with other years notwithstanding the early part of the season was very dry. F. R. T.

TRAPPE, Talbot Co.—We shall have about two-thirds of a crop of wheat. The prospects for corn are good; potatoes are medium and oats very light. Barley is not grown here and but very little rye. The varieties of wheat are Longberry, Amber and Fultz; of potatoes, Early Rose, Peachblow and Peerless. The acreage of wheat is one-quarter larger than usual. Sorghum is not grown here. We shall have one-half a crop of peaches and apples, and a large crop of cherries and berries, except strawberries. Of fruits, the peach is here the most successful. W. C. JR.

WILNA, Harford Co.—Wheat is not as well filled as last year, but the acreage is 10 per cent. more; Fultz and red Mediterranean are the principal kinds grown. Corn looks well, but it is too soon to tell what the yield will be; acreage about an average; Mammoth, and Chester Co., are the principal kinds grown. Oats are a short crop. Potatoes are not eaten and seldom grown. No sorghum grown at present. Cherries are a full crop. Other kinds of fruit will yield well. T. M.

Ohio.

BELLEFONTAINE, Logan Co.—Of wheat the acreage is above an average; and the quality is good and the yield promises to be large. Farmers commenced cutting about June 20th. Corn is a little backward, but healthy and strong, and it promises well. About the usual acreage. Of oats, but little is raised, less than usual this year on account of wet weather at sowing time. About the usual acreage of potatoes is planted and they look well, but the Colorado beetle is getting in its work to a considerable extent, and will, no doubt, interfere with the crop. Of rye and barley little, if any, is grown. Strawberries are a large crop and of fine quality. Raspberries give a large yield. Blackberries will be good. Peaches and pears will be quite short. Apples promised a large yield; but they are falling from the trees, and growers estimate the crop at less than half. White wheat is mostly raised, though Clawson has been introduced and yields well, but millers do not like it. J. C.

BELLEVUE, Huron Co.—If the United States turned out proportionately as much Winter wheat as Huron county will this year, there would be no use of raising any more for the next five years. Last Fall a very large breadth was sown to Winter wheat, and now about one-fourth of it is cut, and such another harvest won't be seen, probably, very soon. The barley is very fine and I should judge the most of it would average not far from 30 bushels per acre. It is about two weeks earlier than in former years. Not much will be left out by July 4th. Corn, oats and barley all look fine, and so do potatoes. Grass will be a short crop owing to too much cold rains in the Spring and not enough warmth. Timothy hay will mostly be cut after haying. Harvest hands command, on an average, $2 20 a day and board. No Army worms or grasshoppers to amount to anything in this vicinity. F. B. R.

CADIZ, Harrison Co.—Up to the 10th of June the season was very dry here, and consequently some of the Spring crops will be very short, particularly hay and roots. Wheat and rye are average crops in yield, and about one-fourth more acreage than usual has been sown to them. Fultz is the wheat usually sown, and the barley is light. Corn and potatoes promise fairly. Very little sorghum is sown here. There is an abundant crop of all kinds of fruit. T. C G.

CARDINGTON, Morrow Co.—Wheat average, 29.28 bushel per acre. The usual amount has been sown. Corn will yield 40 bushels. Potatoes furnish a large yield; so do oats. But little rye, and no barley. Fultz wheat; Yellow Dent corn; Early Rose, Peachblow, Snowflake, and Early Ohio potatoes. Sorghum is not generally grown. The opinion is that it doesn't pay. There are a good many peaches and cherries, and an average crop of apples—not a large one. J. N. D.

CHARDON, Geauga Co.—The prospects are that we shall have an abundant supply of all kinds of grain. Rather more grain than common is being raised in this locality this season. The principal varieties of wheat are Fultz, Diehl, Clawson, Treadwell, Michigan White and Mediterranean; corn, yellow Dent; oats, common white. But very little rye or barley is raised. No sorghum. Fruit prospects are good. Of apples, Baldwins and Greenings are the most successful. The hay crop is good. Everybody is cheerful. A. T.

DAYTON, Montgomery Co.—We are now cutting the greatest and best wheat harvest ever ent in this county. Oats, barley, potatoes and corn are all doing well and promise big crops. The acreage of wheat is above the average. But little sorghum is grown here. Good prospects for fruit of all kinds, except a few varieties of apples and pears. Berries are a big crop, N. O.

DELAWARE, Delaware Co.—The prospects for an abundant harvest were never better in this vicinity, nor throughout the State, generally. Wheat is now ready for harvest, and is everywhere looking well, and promising even a larger yield than last year. It is in admirable condition, and the close of the present week will find the most of it in the shock. There is probably a larger acreage, and there will doubtless be a larger yield than ever before in this portion of Central Ohio. The old red Mediterranean, the Fultz, and Clawson, are the principal varieties sown. Rye and barley are not largely grown here. Oats are perhaps not quite in usual quantity, but they are looking well, and promising a good yield. Corn is also looking well and has about the same acreage as last season; probably a little less than in former years, the attention of farmers being more largely diverted to the growing of wheat, which is now the leading agricultural product. Potatoes, I think, are planted in more than average quantity, and at this time are remarkably promising. The old Jersey Peachblow and the Early Rose are probably most largely planted, while the newer kinds—Extra-Early Vermont, Snowflake, Early Ohio, and Ohio Beauty—are also grown in considerable quantities. Sorghum is now but little grown in this vicinity—indeed there is none worth mentioning. The prospects for fruit are generally good. The apple crop will be fair: yield, medium; not excessive, although this is what is called the "bearing" year. Trees are not, generally, overloaded, and this will probably insure a better crop than usual for the next or "non-bearing" year. Pears were injured by late Spring frosts, and are scarce in this vicinity, though in other parts of the State a moderate supply is reported. Strawberries have been very abundant, and the promise for raspberries, blackberries, and other small fruits is equally good. Of the newer varieties of strawberries Cumberland Triumph and Sharpless seem most promising. The Crescent Seedling has also succeeded well in many localities, and is perhaps the best "lazy man's berry," having the character of taking care of itself, and giving fair results of berries medium in size and quality, even under neglect and careless culture. Somewhat similar in character is the Turner raspberry. The Gregg raspberry, for a large, productive, and strong-growing Black-cap, medium-late in ripening, and of fair quality, probably has no superior in its class for a market berry. Peaches promise also an abundant yield in many parts of the State, and the supply will probably be equal to the demand. Cherries and plums will be only in moderate supply. Grapes are also unusually promising; and although it is too early to speak with certainty, it may be said that unless unfavorable weather hereafter should induce mildew and rot, the grape crop will be unusually large and excellent. G. W. C.

GYPSUM, Ottawa Co.—The wheat crop is at least one-third greater than last year. We are just in the midst of harvest—two weeks earlier than I ever remember. The kinds of wheat chiefly grown are Clawson, Fultz, and a kind called Patent Office. Clawson predominates. The acreage is one-third greater, and I think the yield will be fully up to that of last year. Of barley and oats but little is grown, and that little looks well. I do not think there are over 50 acres of sorghum planted in this county. It is rather early to estimate the corn crop as yet, as it is very backward, on account of the dry May. The acreage is, perhaps, one-third less than last year. Potatoes are looking well where the bugs were kept off. About as many were planted as usual. The earlier sorts are nice and large. I have been using them for the last two weeks. The fruit crop promises to be above an average, pears alone excepted. I do not remember having ever seen so few as this year—only about one-twentieth as many as last year. The apples principally raised here are Baldwins, on account of their good shipping qualities. Almost all varieties do well. The peach crop will be an enormous one, if they don't get hurt by severe storms. The hay crop has been very light, owing to dry weather—not over two-thirds of a crop. J. B.

MULBERRY CORNERS, Geauga Co.—The acreage of wheat and corn is greater than usual; that of oats perhaps a little less. Wheat is somewhat affected with rust, but the harvest will be early and an average yield per acre is anticipated. Oats are beginning to head and look well. Corn is somewhat backward. Potatoes are looking fair, and are receiving little injury from the beetle. The hay crop is good and early. H. B.

NORWALK, Huron Co.—The acreage of wheat put in last Fall was the largest ever sown in this country, and the stand never was better. Harvest has commenced. The varieties principally grown here are Fultz, Clawson and Lancaster. Corn and oats will yield about average crops; rye and barley are but little grown; sugar cane has been more extensively planted than for several years. All kinds of fruit are abundant. C. A. M.

TOLEDO, Lucas Co.—This is the greatest original winter wheat market in the world, and all reports are most flattering. The yield will average as high as last year's, and the acreage is 20 per cent. more. No seed has been put into the ground that has failed. Fruits of all kinds are very abundant. Sorghum is not much planted. G. E. P.

WESTERN STATES.

Michigan.

ANN ARBOR, Washtenaw Co.—Of wheat there is a larger acreage than usual; it never looked finer; it stands up well, and will be more than an average crop. Treadwell is most prevalent. Corn is not forward, owing to cold and very wet weather; but recent warm weather is bringing it on. It will be a fair crop. Dent and eight-rowed yellow are generally planted. Potatoes look well, though the Colorado beetles are abundant. There will be full average crops of these and of corn. The Early Rose is most abundant. Of oats, rye, and barley, about the usual amount has been put in, and they look well. Sorghum is but little grown here. The fruit prospects were never better. Apples will be a large crop, and are quite free from the Codling moth. The Baldwin is mostly grown, then the Northern Spy, R. I. Greening, and Golden Russet. Peaches will be a full crop. Your correspondent has 4,000 bearing trees. Early Crawford, Hill's Chili, and Old Mixon Free are the most prevalent. Pears not doing well; strawberries are about half a crop. All other small fruits promise a full crop. J. D. B.

JACKSON, Jackson Co.—Wheat will be harvested early and be a fair crop. Corn is looking pretty well, and potatoes ditto. The latter are not much troubled by the beetle, especially if planted late. Early-sown oats look well and will be an ordinarily good crop. Clawson, Diehl, and Treadwell are our principal varieties of wheat, and Early Rose, Peachblow, Brownell's Beauty, and occasionally some of the newer varieties of potatoes are those mostly grown here. The acreage under tillage is fully up to last year's. No sorghum is grown here, to my knowledge. It has occasionally been tried here, with small success. The fruit crop of all kinds will be large. All apples, pears, cherries, and plums (if cared for) do well, and all hardy peaches. R. T. M'N.

KALAMAZOO, Kalamazoo Co.—All crops look well. The prospect of wheat is fine; the varieties principally raised are Clawson and Fultz, which yield an average of about 30 bushels per acre. Of rye and barley we raise none; sorghum ditto. Oats will be a good average crop of about 65 bushels per acre. Maine oats chiefly sown. Of corn for late planting we generally use small Dent and Hockberry—average yield 65 bushels. The fruit outlook is good. We use a great many varieties of apples; but Northern Spy and Baldwin do especially well. Of peaches good varieties are Hale's Early and Crawford, Snow and Orange. Potatoes look well, but do not yield over 30 bushels per acre, the bugs have so damaged them. The Ennobled oats look splendid; the raspberries are all right; the garden seeds good; but the flowers are a failure—too much rain I think. J. B. O.

LANSING, Ingham Co.—From present prospects in this vicinity wheat will be a fine crop; corn light, on account of too much rain this Spring; potatoes also light for the same reason; oats good. Of rye and barley but little is raised. The favorites are: Clawson wheat, yellow Dent corn, black or white oats of mixed

sorts. There is, however, some white Flint and some yellow Flint corn. A little sorghum is raised—a very little about here. Apples are abundant; so are peaches and pears where there are trees. Small fruits are abundant, though strawberries were light. The red rust is unusually troublesome on blackberries and raspberries. W. J. B.

LEBANON, Clinton Co.—The harvest of wheat will be very light in this locality, it having been badly injured by the Hessian fly. It will not yield more than half a crop. The kind that is mostly sown is Clawson. Corn, oats, and potatoes are looking well, but they are not so forward as usual, owing to a very wet Spring. Of potatoes probably the Early Rose is grown most extensively. Numerous other varieties are grown to some extent. Of corn and oats there are many different sorts grown. It is hard to say which one takes the lead. Rye and barley are not grown to any extent in this locality. The acreage of each is about the same as last year. Sorghum is grown but little here. The prospects for fruit are very flattering, indeed. Almost everything in the shape of a fruit-tree is loaded. Apples, pears, and all kinds of small fruits are raised in abundance. Peaches and plums are not sure crops every year. J. T.

MAPLE RAPIDS, Clinton Co.—Wheat here is about half the usual crop. Potatoes are a good crop. Hay is very fair. Apples are a splendid crop, as are peaches, pears, currants, grapes and all small fruits. Wheat was hurt by the open Winter and the Hessian fly. J. A. M.

PAW PAW, Van Buren Co.—Wheat is very poor and but very little is raised here. Corn is a very good crop and looks promising. Oats are good. Of rye and barley but very little is raised. Sorghum is not raised now to any extent. Small fruits of all kinds are very good. Apples will not be more than half a crop. The trees were loaded with the small fruit, but the hard winds have whipped off at least half. J. R. S.

PONTIAC, Oakland Co. — The acreage of wheat, corn, oats and potatoes in this section is larger than last year, and the yield of each will be much greater; in fact, we shall have an abundant harvest. Clawson wheat largely predominates. Oats are mainly the white sorts. Of corn the yellow and King Philip are the favorites. It is not raised for shipment. Potatoes are mostly Early and Late Rose. Barley and rye are but little grown. Sorghum is not raised. Fruits of all kinds promise large yields. A great many apples are shipped from here. Our principal varieties are Greenings, Spitzenburgh, Baldwins, Steele's Red, Winter and Golden Russets. Oakland county is surpassed by but a few counties in the Union for grain or fruit. S. H. N.

SCHOOLCRAFT, Kalamazoo Co.—Grass one-fourth better than last year and half of it is cut. Wheat has a heavy growth of straw; but I don't think it will yield as well as last year. Barley is not promising. There's a large growth of oats. Corn is a good stand, but weedy on low ground. Potatoes are looking well. The prospect for fruit is good. The weather is warm and wet. G. H. P.

SOUTH HAVEN, Van Buren Co.—Wheat has an increased acreage and is a more than average crop. Constant wet weather has delayed the planting and cultivation of corn, which is backward. Favorable weather in the future may yet afford a fair crop. Potatoes are in a condition similar to that of corn. Oats when sowed early and on dry lands are doing well. Rye and barley are but little grown here. The wheat grown here is mainly Clawson. Of corn, the earlier varieties are of Dent. Sorghum is rarely grown. The prospect for fruit is excellent. The peach, our staple crop, promises better than for several years. Strawberries were somewhat injured by cold, wet weather after setting the fruit. T. T. L.

UTICA, Macomb Co.—The wheat crop is looking fine and promises to exceed our former crops. The kinds sown are mostly the Clawson and some of the red wheats. Rye is looking fine and there is a considerable amount sown hereabouts. Oats will be a small crop owing to the drought we are having. Corn is looking fine, though a great deal was planted late. Potatoes are good and quite extensively grown about here. We are troubled with the potato beetle a great deal. The prospects for the fruit crop are very good. Apples and peaches are large crops. Cherries and all of the smaller fruits are going to be quite plentiful. As to barley and sorghum there is not any raised in this section. J. P. Y.

Indiana.

HARRISBURG, Fayette Co.—Wheat is mostly cut from ten days to two weeks earlier than usual. The quality is good, though it is not as well filled as last year. The acreage was considerably over that of last year and there will be a full average yield. It is mostly of the Fultz and Michigan Amber varieties. Corn is doing tolerably well, but the early harvest and heavy rains have much hindered the usual cultivation. Favorable weather in the future will probably make a fair average crop—about the usual amount is in cultivation. Oats and barley are not extensively sown, but bid fair for a good yield. Sorghum not much cultivated except in small patches for family use. Apples and peaches are not generally abundant; they are in fair supply. Berries, grapes, etc. are plentiful. With favorable weather for securing and maturing crops the prospects are highly favorable for an abundance of all sorts. W. W. S.

INGALLSTON, Marion Co.—The wheat crop is good and will yield heavily. The Fultz variety is mostly used, and it gives better crops than any other variety. Corn is fair. Wet early in the season rusted it a little; now it is too dry. No sorghum is raised here. Wheat will yield 20 to 35 bushels per acre. The fruit prospects are first-rate. Lots of peaches, apples and pears. No barley or rye is raised in this neighborhood. G. J.

LA PORTE, La Porte Co.—In this locality the acreage of wheat is larger than last year, but the yield will be less. Variety, Winter Amber. Corn promises a fair average crop; acreage about the same as last year. Oats a good crop; acreage larger than last year. With regard to rye, barley and sorghum, very little of either is raised. Potatoes promise an average crop, they are injured to some extent by the Colorado beetle. The prospect is good for a large crop of apples, with some peaches and pears. Of apples the Baldwin and King of Tompkins County succeed well. W. S. R.

LIMA, Lagrange Co.—Wheat is better than usual; quality very good. Corn looks well; about the usual acreage. No rye or barley is sown here. Oats are first-rate. Potatoes are doing well—the usual acreage. Very little sorghum is grown. In wheat, Fultz and Egyptian take the lead. Clawson is grown to some extent but it is not so hardy as the others. J. S.

SOUTH BEND, St. Joseph Co.—The wheat crop is very promising in this locality, and will, in all probability, be 10 per cent. larger than last year's, which we considered large. Red and white smooth and bearded of many different names are grown—all Winter wheat. Corn is looking exceedingly well on the high lands. It has been rather wet on the low lands, and especially on the clay soil. The acreage is fully up to that of former years. Potatoes are doing well in some localities; but they are injured somewhat by bugs. Many different varieties are grown. Among the leading ones are the Peachblow and Early Rose. Rye is not raised to a great extent, but what there is looks well. Barley looks well—not a great deal raised. Of sorghum I am of the opinion that there is not as much grown as in former years; the small crop looks well. The apple crop is small; a great deal are dropping off damaged by the curculio. Peach trees are full, and promise a good crop, though this is not a peach country. Cherries are in abundance. J. E. M.

Illinois.

CHICAGO, Cook Co.—From Cleveland, O., to Lansing, Mich and thence to Chicago by L. S. and M. S. R. R. wheat will yield less than 15 bushels per acre. Potatoes, corn and oats are A. No. 1. Rye and barley are not raised much. Clawson largely predominates in Mich. and Fultz in Ind. Winter wheat is not raised at all in this part of Illinois. Spring wheat not much. Wheat is the main crop in Southern and Central Mich., and wheat and corn in Northern Indiana. Flax is raised quite largely near Chicago. I saw but little sorghum on the route I came. Wheat is No. 1 in Ohio. W. I. C.

ELMIRA, Stark Co.—Winter wheat is almost an entire failure. Of Spring wheat but little was sown for fear of chinch bugs. What there is looks well. The varieties sown are the white Russian, Rio and Italian. Of oats more than an average amount was grown, and the crop bids fair for a heavy yield. Of corn, fully the average acreage was planted. I have never seen a better stand of corn than this year. The prospects are favorable for an abundant harvest. Corn is our staple product here. Rye is good—not a large amount sown. Of barley none is sown here. Of sorghum—Early Amber—a little has been planted as an experiment. The prospect for fruit is fair, but the trees were injured somewhat by the May beetles. Ben Davis, Willow Twig and Jennetting are the chief apples grown. Potatoes are good—not injured by the beetles yet. E. R. B.

GALESBURG, Knox Co.—Wheat is nearly a failure. Corn is a splendid crop now. The potato crop is good. Oats and rye are very good. We sow the white sorts. Of barley none was sown. We plant Peachblow and Early Rose potatoes and many other varieties. Many farmers have broken up their meadows and consequently more land than usual is now in cultivation. Hay crop is very light. Sorghum is grown "some"—enough to supply the demand. Small fruits have done very well. Apples are a poor crop this year. O. H.

KANKAKEE, Kankakee Co.—Wheat in this county will not be over half a crop. The Winter wheat is winter-killed badly, and the Spring wheat is not doing well—too much rain. Corn is backward and much of it is in a bad condition in consequence of continued rains. Oats look well and rye will be a fair average crop. Barley, very little raised. Potatoes look well. I had my first mess of the Beauty of Hebron a week ago. The varieties mostly raised are Peachblow, Early Rose and Snowflake. Fruit of all kinds promises a fair crop. Strawberries and the May cherry are just over. Apples, raspberries, blackberries and currants promise good crops. J. M.

Wisconsin.

MADISON, Dane Co.—Our crops are all looking unusually well. We have had a great deal of rain. Corn is a little backward; but it is coming on finely. Corn, oats, wheat, in the order named, are our leading crops. In spite of an open Winter, Winter wheat is looking very well. We shall probably cut two good crops of hay. The above are our most important crops. Rye and barley but sparsely grown. Potatoes, apples and the smaller fruits are unusually promising. But little sorghum is planted here; more attention will soon be paid to it do doubt; there is much talk of "Amber cane." The class of fruits known as "iron-clads" is the only one we trust. W. B.

SHEBOYGAN FALLS, Sheboygan Co.—Winter wheat is better than we expected earlier; acreage three or four times as great as usual. A middling-good crop is expected. Variety, White Russian. Spring wheat is backward, but has a good stand; usual acreage. Nearly all varieties are raised. Corn is up and has a good stand. It has been cultivated once—variety, mostly yellow Flint. Potatoes look well, usual acreage. Early Rose and Snowflake predominate. Oats, rye and barley are looking fine. No sorghum of any account is raised in this county. The prospect for fruit is excellent, especially for apples. There will be a heavy crop of small fruit. Hay will be light, on account of the clover being killed out and lack of rain in May. J. A.

Minnesota.

PLAINVIEW, Wabash Co.—The present prospect for crops is good—seldom better for this time of the year. Our principal varieties of wheat are:—Fife, Brooks'—nearly as good as Fife—and Rio Grande. Of corn we use an early variety of Dent, and four-rowed barley. Of potatoes we plant the Early Rose and Snowflake. I don't know any special name for our oats, but it is a white sort, and weighs from 36 to 40 pounds to the bushel. We grow no rye. The acreage under these crops is about the same as in former years. In this immediate neighborhood there are about 15 acres of sorghum; heretofore none was grown. This climate is not good for apples and but few are raised—none but the hardiest, such as the Duchess of Oldenburgh, Tetofsky, Wealthy, Haas, Rollins's Pippin, Rollins's Russet and Elgin Beauty. The three last are seedlings propagated by Mr. Rollins of this county. We also have several sorts of crabs. Small fruits are good. R. B.

ST. PAUL, Ramsey Co.—Never before, even in this favored region, where the crops have been bountiful for the past five or six years, has the promise been so excellent as it now is. After seeding, the weather was cool and the wheat acquired great strength in its roots. The warm bright weather, and the frequent copious rains of the past two weeks have developed it rapidly and now a stronger, more promising stand never was seen. Unless something unusual should occur, the yield will be largely in excess of that in any previous year. The best judges claim that the average per acre will not fall short of 30 bushels. All other crops, both grain and vegetable, are as good as wheat. In 1879 we had a trifle over 266,000 acres in wheat. There were 173,000 acres broken in that year, and at least 125,000 of that amount are in wheat this season. Thus the acreage in wheat alone is 391,000, insuring, we feel confident, an aggregate yield of nearly 10,000,000 bushels. The entire area under cultivation on the line of the Northern Pacific is 550,000 acres, and this year there will be at least 250,000 acres broken. Scotch Fife wheat is mostly grown, but Lost Nation and Clawson do well. Early Dent corn and other hardy New England varieties do well. Wheat is, of course, the staple, oats being the next crop in extent of cultivation. But little has, as yet, been done outside of these, although some farmers are paying more attention to barley this year as this grain grows to great perfection here, and is eagerly sought. I have known of but one instance of an attempt to grow sorghum, and that was within a few miles of Bismarck—it proved a decided success. In some places fruit has been successfully raised; but the country along the Northern Pacific Railroad is not old enough to have given time for a full experiment. I have seen good apples grown near Moorhead on the Red River, they were of New England varieties, and were large and of extremely fine flavor; crab apples reach high perfection, as do all small fruits and berries. Vegetables are wonderful both in yield and size. M. J. B.

Iowa.

CLARINDA, Page Co.—The wheat harvest will be light, but of good quality. The same will be the case with all small grain. Corn and potatoes are doing finely. Our principal varieties of spring wheat are Doty, Mediterranean and Odessa; of winter wheat, Red May, Odessa and Mediterranean. Corn is of the Dent variety and comprises two-thirds of the acreage under tillage. Sorghum is raised to a small extent, but does well. Prospects for fruit were never better except in orchards that were exposed to the high winds and had small apples blown off. Our most successful apples are:—Ben Davis, Willow Twig, Red June and Summer Queen; grapes, Concord; cherries, Early Richmond. Nearly all small fruits do well. C. O. C.

HAZELTON, Buchanan Co.—Very little of either Winter or Spring wheat is grown here, perhaps not more than three to five acres to a farm. The Hessian fly is very destructive. Some Winter wheat had to be turned under, and corn planted instead. Corn and oats cover a large acreage, and the prospects are good for a large crop. A great deal of flax has been sown, and some sugar-cane, but we lack machinery to work up the latter. Potatoes are good, but they are grown on a rather small scale. Of raspberries, the Doolittle and Mammoth Cluster do well, but the Cuthberts you sent are dead. They started, but went back. All the other seeds sent by the RURAL are doing well. Of apples the Ben Davis, Red Astrachan, Otto, Fameuse, Nodhead, Shaker, Greening, Walbridge, and others do well. The Early Richmond cherry blossomed, but it is a failure. C. H.

OSKALOOSA, Mahaska Co.—We have had but very little rain in this part of Mahaska Co. for one year. Winter wheat is almost a failure. People sowed largely of the Grass variety; it is tender as a winter sort. We have a variety which has been grown for years and which is the best for this location. It is mixed bald and bearded. [Some specimens sent resemble Clawson.—EDS.] Everything in the spring variety is tried more or less. On the whole we have a poor outlook for wheat. Early-planted corn is splendid, I think we shall have heavier crops than usual. Early-planted potatoes are looking well, but we must have more rain to have them mature. Barley and rye are not raised to any extent: our yield will not vary much from that of other years. Grass is not half a crop. We shall have a fair crop of apples and plenty of small fruit—strawberries, raspberries and currants. H. B.

STORY CITY, Story Co.—The prospects for wheat (Spring), oats, flax, corn and potatoes are excellent; in fact, better than for years. Winter wheat was killed out entirely last Winter; but this is not a wheat-growing section, the farmers only wishing to raise enough for home consumption. Corn is an excellent stand in this locality and will soon be "laid by." The appearance of the crop is about 10 per cent. above the average; the acreage is also in excess of previous years. Long-continued and violent winds have blown off a large proportion of the apples, but yet the prospect is flattering for a good crop. The varieties that do the best with me at present, are: Early Harvest, Red Astrachan, Red June, Fameuse and Winesap. Cherries are not of much account this year. The potato beetle is doing no damage in this immediate locality and has not troubled me for two years past. I have used no artificial destroyers. W. A. W.

WATERLOO, Black Hawk Co.—There was quite an acreage of Winter wheat sown in this county, which is an entire failure. Spring wheat promises well, but the acreage sown was one-third less than last year—variety, the Minnesota Fife, and Mammoth Tea. Oats have an increased acreage and are looking unusually well. Corn promises an abundant yield. The number of acres planted is about the same as in '79. The prospect for fruit of all kinds is very flattering. Of sorghum there is not much raised. I planted one acre of Early Amber this Spring, and it is looking well. Rains have been frequent during the season. L. R. O.

Missouri.

BETHANY, Harrison Co.—Wheat here is a very poor crop. Corn and oats are good. Oats will yield 35 bushels per acre; corn, 45 to 50. Sorghum is grown only for molasses for home consumption. Apples are good and plentiful. C. C.

CARTHAGE, Jasper Co.—The wheat in this section is cut and being rapidly put in the stack. It is by far the largest crop, both in in acreage and yield, ever raised in this county. The Mediterranean is grown principally, with some Walker and Fultz. The corn, oats and potato crops are good. But little rye and no barley is raised here. Sorghum does well here, but only a little is raised except for home consumption. W. H. P.

OREGON, Holt Co.—The Fall wheat harvest has commenced. The yield will be an average one and the acreage is very large. Spring wheat looks very good, and under it there is

the largest acreage ever sown. Oats, rye and barley are good. Corn looks very well for this time of the year. Fruits of all kinds are abundant. The apple crop will be very heavy from the present outlook. We have had plenty of rain, and all vegetation is making an extraordinary growth. All in all, the year 1880 has a better outlook than several previous years. Immigration has reached our part of the West, and many are making their future homes with us. Still we have room for more, and to all we say "Come." J. W. M.

ROCKVILLE, Bates Co.—Wheat is rather light on account of the chinch bugs; some of the best pieces will yield 15 bushels per acre. There are several varieties raised. The leading variety now, is the bearded Egyptian. Corn is very promising now, but it is too early to give an estimate as to the yield. The general average is about 40 bushels per acre; all sorts are raised. Oats will be a good crop, several varieties are raised. The general average is from 30 to 40 bushels per acre. Rye and barley are not raised to any extent. Early Rose and Peachblow are the leading varieties of potatoes Early Rose is a good crop; Peachblows will not be dug until November. Sorghum is raised for the home market only; Early Amber is the leading variety this year. The prospect for fruit is good for an abundance of all kinds. I think grapes are the surest fruit crop here. There has been but one failure in them during the last 13 years. J. N. C.

Kansas.

ARVONIA, Osage Co.—Wheat, oats, rye and barley are almost complete failures owing to dry weather. Early potatoes are a light crop; late ones will be a failure if the drought continues. The acreage under corn is four times that under wheat. Not much sorghum is grown here. Apples are one-third of a crop. The dry winds and weather caused them to drop off. Peaches are only a short crop. Grapes, cherries, raspberries and blackberries are good crops. The weather is very dry now, and the corn crop will be a failure if it keeps so for two weeks longer. J. C. B.

EDGERTON, Johnson Co. — Winter wheat throughout the country is good, and most of it is harvested in good shape. It was too far advanced to be injured much by the bugs; the yield per acre will not be up to that of last year, but the acreage is one-third larger, and the quality better. On June 26 we had a good rain, and the outlook for crops is very flattering. Oats are good. There is but little rye, and no barley raised here. A great quantity of flax is grown throughout this county for the seed which generally brings from 90 cents to $1 per bushel. It is looking well and the late rain will make it. The dry weather for two weeks before the late rain hurt the potatoes, but they will do better now. Corn never looked better at this season of the year, and a few more good rains will insure a heavy crop. Strawberries were a little scarce. Raspberries and cherries are plentiful. Blackberries promise well. Peach and apple trees are loaded down with fruit; so are the grape vines. Alexander and Amsden June peaches are getting ripe. Farmers' faces look bright and we are all thankful, contented and happy.

A. B. D.

MANHATTAN, Riley Co.—The prospect for the principal farm crops in this section is about as follows:—Wheat a half crop, say eight to twelve bushels per acre, and the crop is now nearly harvested in fine condition. Corn is very promising—the best stand I ever saw. Potatoes are good, but the area planted is small. Oats and rye will be about half crops. Of barley I know nothing, as none is grown in this locality. The principal variety of wheat grown is the Early Red May, and I should think that fully three-fourths of all the wheat grown in this section is of that sort. A small amount of Fultz, Lancaster, and Blue Stem is also grown. In this section the great staple is corn, and I should say that over one-half of all the cultivated land is given over to this crop. If we save our corn crop we are contented and happy, even though all others fail. The corn crop requires no expensive machinery, and its growth involves no expensive harvest help or thrashers' bills. The prospects for fruit are not the brightest. Apples are a very light crop, and peaches are not much better. Of small fruits, with the single exception of strawberries, there is promise of a remarkable yield, blackberries and raspberries being especially good. Of grapes, chiefly "Concord," the yield will be above an average, but then, grapes are always a full crop here.

E. M. S.

PARSONS, Labette Co.—Winter wheat only is raised here. The crop was injured somewhat by the chinch bugs, but it will be equal to last season's, which was good. Acreage 100 per cent more. Been in shock two weeks. The acreage under corn is the same as last year. Crop very promising and earlier than last year. One-half of the crop is white, and half yellow and mixed. The potato crop promises well. Acreage 100 per cent more than last year. Early Rose and Peachblow are the leading sorts. The oat crop is very short and poor. Acreage larger than ever before. Of rye and barley none is raised here. The acreage under castor beans is the same as last year. Crop early and promising. The Texodusters have been putting in cotton crops and may or may not raise a crop. Strawberries were a big crop. Peach crop is less than an average. Apples this year are the best crop for this locality and promise fairly. Not much interest is taken here in the sorghum boom. I think our people should look into the matter. The season is cool—neither wet nor dry; but drier than usual. The chinch bugs are leaving the wheat fields for the corn; and during their time in the corn fields they have done a good deal of damage. Whether the destruction will prove general I don't know, but some farmers are alarmed. J. B.

PARKERVILLE, Morris Co.—Fall wheat is harvested. Several kinds were sown—Fultz, Clawson, Little May, Big May and Odessa. None will make over half a crop here, but in some parts of the county the wheat is good, and some fields will yield 25 bushels per acre. The causes of the light crop of Fall wheat are hard, dry Winter, dry Spring and chinch bugs. Spring wheat will not be a full crop on account of dry weather and chinch bugs; not a large acreage sown. Oats are about same as Spring wheat. No barley or rye is sown. We have the largest acreage of corn ever planted and it is looking well. If we have rain soon and the remainder of the season is good the corn crop will be immense. A few acres were destroyed by chinch bugs. Early potatoes are not a good crop, but late may make one. Quite a large acreage was planted. Gardens are not in good condition on account of dry weather, and what vegetables there are, are being destroyed by worms, which are a new pest to this section. They are also eating the corn and potatoes to some extent. Sorghum is planted quite extensively, nearly every farmer having enough to make sirup for his own use. It grows with but little care or cultivation, and is not injured by any kind of insects to any extent. Dhoura is planted to some extent. About 50 acres were planted in this county last Spring. The fruit of this locality, with the exception of small fruits, was mostly killed by late frosts in the Spring. Dry weather made the strawberry and raspberry crops short. Wilson's Albany strawberry and the Black Cap raspberries are planted. Those who had Early Richmond cherry trees large enough to bear had cherries this season. The season here so far has been the worst we have had for several years. We have not had rain enough to raise the streams since last November, and no rain at all for more than a month, yet this is not the case with other parts of Kansas, and even in parts of this county heavy rains have fallen.

J. E. R.

Nebraska.

CRETE, Saline Co.—Corn is looking fine—a very large acreage of it this year. Wheat is not very good. The early drought and high winds injured it. Rye is a fair acreage; it looks well. Barley is poor. Oats are fair. Potatoes are fine. Of Amber cane but little is grown; I have an acre that is looking well. My cow-peas are poor. I have some Pearl barley that is looking well. Fruit is not very plentiful in this section. The high winds this Spring injured it very much. Peaches and apples do well here. Corn bids fair for 50 to 75 bushels per acre. Some wheat that is cut will go from 25 to 30 bushels per acre. The weather is warm with frequent showers—splendid for corn. M. B. M.

GRAFTON, Fillmore Co.—Barley oats and rye will be very light crops—from 50 to 75 per cent below the average, owing to drought. From the end of Nov. '79 to the end of May, '80, we had neither rain nor snow enough to wet the ground two inches deep, and not half a dozen storms even of that size. Spring wheat and barley are our main crops of small grain. Corn planted before the rains came up unevenly—one-third of it failing to make its appearance until June. Since then the crop has done well, and we are in hope that July and August will give us an average crop. Potatoes planted in April or about the first of May and cut very small dried up and gave a very uneven stand; yet where the Colorado beetle was fought off, the crop looks fair now. Our acreage under corn, wheat and oats is larger than in any previous years—say one-third more. Sorghum culture is in its infancy here. I made 800 gallons of sirup last year, and most likely there will be another mill in this town this year. I expect we have sown double the amount of cane we put in last year. Our fruit prospect is away in the future—the trees are not yet grown. We are in what our school atlases called The Great American Desert, and this settlement can date back only eight years. Young fruit trees at first died badly; but they have been doing better for the last two years and will, doubtless, be a success yet. Grapes, strawberries are now successfully cultivated, but they need great care. D. A.

HARVARD, Clay Co.—The prospects for harvest in this county are not very flattering, on account of the continued drought. Our first Spring rain having fallen May 13, the wheat crop will be reduced about one-half. Spring wheat is raised almost exclusively here, as the Winters are too open for Winter wheat. The varieties of Spring wheat raised are Sea Island, White Russian, Tea or Mammoth, and Grass. Although White Russian is prefered, the Sea Island variety is the one mostly sown. Barley, oats and rye this year are failures, with few exceptions. The six-rowed barley, common white oats, and white Winter rye are generally sown. Potatoes that have been "doctored" with Paris-green are looking fine. The Early Rose does best here. There is a large area planted to corn this year, most of which looks well. The dry weather having caused the failure of fields of small grain, they have been plowed up and planted to corn. The yellow Dent is generally planted. The average yield is about 60 bushels per acre. Sorghum is not much grown here; but a few farmers are trying the Early Amber cane this year. There is not much fruit raised in this section as yet. Numerous orchards were planted this Spring, but the dry weather finished them. Of small fruit the most successful kinds are the Wilson strawberry, the Mammoth Cluster raspberry, and the Snyder and Kittatinny blackberries.

D. A. K.

OMAHA, Douglas Co.—The wheat crop for this State will result, for 1880, about as follows: Winter wheat, 70,306 acres—400,000 bushels; Spring wheat, 1,256,996 acres—10,000,000 bushels. Corn crop, 1,256,000 acres, producing 42,000,000 bushels. Oats, 200,000 acres, producing 6,000,000 bushels. Flax, 10,642 acres, yielding 85,000 bushels of seed. Potatoes, 20,000 acres, producing 1,362,351 bushels. Rye, 96,000 acres—1,000,000 bushels. Barley, 115,000 acres—500,000 bushels. Cultivated timber, 80,000 acres. This estimate, made with no little care, will be found correct and it covers the State of Nebraska. The sorghum crop will be good, and sufficient molasses will be manufactured to supply one half the consumers in the State. R. R. R.

PURPLE CANE, Dodge Co.—Extremely dry weather up to the last of May has so nearly ruined all small grain, that but little can be said of such crops now. We shall possibly from June rains get half a crop of wheat; potatoes the same. Corn is doing well, but is very backward and weedy. I cannot give the acreage or varieties; nearly every variety is planted. Of sorghum but little is grown for want of mills. No strawberries this year, plenty of raspberries; no tree fruit is grown here. Vegetables will be very scarce. Grass very short, but stock are looking well. We have rains enough now, and often in floods; washouts too common. S. R. M.

Dakota Territory.

SIOUX FALLS, Minnehaha Co.—The wheat is strong, thick and heavy, and occupies an acreage of about 40 per cent. The principal kinds are the Fife and Lost Nation. Oats are heavy, and cover an acreage of 20 per cent. of the land under cultivation. Corn makes a fine stand. The white and yellow Dent are the varieties grown; acreage, 15 per cent. Barley is good; acreage six per cent. An acreage of 15 per cent. is sown with flax, which makes a good stand. Rye, was Winter-killed, and is rather thin. Potatoes are good, but only about one per cent. of the cultivated land is devoted to potatoes and garden vegetables. Sorghum is raised in small quantities. We have to pay too much for fuel to evaporate the juice by, or burn hay. But very little fruit is raised here as yet, and this only of hardy varieties. W. J. C.

Colorado.

FORT COLLINS, Larimer Co.—The wheat crop will be short, owing to lack of rain, high winds, and an open Spring. Oats will be good and so will potatoes, especially in the mountains. Rye is not raised extensively nor is barley. Our principal varieties of wheat are Mexican, Australian, Siberian and Sonora; of oats, black and white; of barley, both kinds four and six-rowed; of potatoes, E. Rose, Noshawack, Beauty of Hebron. Sorghum, this year is being raised in small quantities by 50 or more farmers in the county. Fruit promises fair. A. E. B.

SOUTHERN STATES.

Virginia.

BENNETT'S MILL, Montgomery Co.—Wheat not more than half a crop—Fultz and Mediterranean. Corn is looking well at present and bids fair to be a full crop. Potatoes are good; not many grown in this section. Oats are an average crop, but not matured yet. Rye not good—poor in head, but plenty of straw. No barley is grown in this section. About the same acreage as in former years for all the above. Sorghum is raised on a limited scale; it did very well last season, and looks well at this time. The fruit prospect is good for apples; no peaches this season. M. D. B.

CHULA, Amelia Co.—One good rain, only, in two months. Wheat half a crop; Lancaster and Fultz do best here. Winter oats looking fair, Spring oats are a failure. Barley and rye are not grown here. No sorghum grown. Peaches and apples are entirely killed. Cherries are good, and pears very good; only a few plums are grown. Dewberries are abundant. Corn looks well, it has not suffered from drought as yet. No tobacco planted this year; plants failed owing to frost and the fly. Few Irish potatoes are raised, and they are very poor owing to drought. We are all praying for rain. F. A. W.

FAIRVIEW, Scott Co.—Owing to the drought in the first part of the season we have or will have, short crops, except wheat, which is about a usual crop and on an average quantity of acres. Corn looks very poor for the season. Oats are very short. What rye there is looks well, but rye is not much grown in this vicinity. Barley is not raised at all here. Potatoes have been planted in large plots this year and look pretty well. Hay will not be much over one-third of a crop. A great many meadows are not better than good pasture fields. Sorghum is not grown here. Fruit will be about one half a crop, except pears and plums, of which there will be none. Peaches will be a moderate crop. The apple is our most successful fruit here. There is a fruit-house here that holds about 30,000 barrels, and that makes apples profitable. The Willows are the leading apples here. They sell now for $5.50@6 a barrel. F. S. E.

FINNEYWOOD, Mecklenburgh Co.—We are in the midst of a severe drought so that a great deal of vegetation is entirely scorched up. The tobacco crop is about half planted and what has been set out is constantly dying. The wheat crop is all harvested, and some are thrashing. The yield is poor and the quality inferior. The crop through our section is from 25 to 50 per cent. below last year's. Winter oats sowed last Fall, are a very good crop—over an average. Of oats sown in the Spring large fields are not worth cutting—a good many won't get their seed back. Corn looks very well, and rather over an average crop. Gardens and vegetables generally are very poor. The hay crop is very short and sorry—not over a third or a half a crop. J. L. T.

SILCOTT SPRINGS, Loudoun Co.—Much disappointment is felt in this vicinity in regard to wheat, which, early in the season, promised an abundant yield, but it is now believed that there will not be more than half a crop. Harvest commenced here on the 10th of June, which is about two weeks earlier than usual. The wheat seemed to ripen or rather *dry up*—prematurely. The varieties grown here are Fultz and Lancaster, the latter a red, bearded variety. The Lancaster will make a better yield with us this season than the Fultz—which is very unusual. No wheat is thrashed yet, but it is certain that the average will be low—probably 10 or 12 bushels per acre. It is too early yet to speak with much certainty of the corn. At present the prospect is not at all flattering. In this place a large amount of corn planted on sod land was destroyed by the cut-worm, many farmers (myself among the number) having to furrow out and plant a second time. With seasonable weather through July and August we may have a fair yield, if the season is unfavorable, the crop will be very short. Potatoes are not grown here as a market crop. Oats are filled pretty well, but the straw is very short and will be difficult to gather. The "Mold's Ennobled Oats" sent out by the RURAL were planted in the garden about the 10th of April. I have just examined them and find they have made a fine growth of straw—a little over two feet high. No heads are yet visible. Sorghum and barley are not grown here, and rye, only in very small quantities. The prospect for fruit is very poor in this section. Peaches will not be more than a third of a crop—in many places there will be one at all. Apples of all varieties will, I think, be very scarce. "Wine-sap" is "*the*" winter apple of this locality. Our strawberry and raspberry gardens have done very much towards compensating for the loss of the larger fruits. Our first picking of the "Gregg" raspberry was on June 2; the fruit is considerably larger than that of the Monmouth Cluster; and very firm. I consider this berry first-class. The canes, however, were winter-killed rather more than other varieties. S. T. P.

West Virginia.

BEDINGTON, Berkeley Co.—Wheat in this county will yield an average of about 15 bushels per acre; rye, about the same; oats about 25, and barley 50 bushels. We don't grow many potatoes down here for sale, but they give about 80 bushels per acre. Corn looks short and from present appearances it won't make over 30 bushels. The varieties of wheat raised here are numerous, the chief among them being: Amber, smooth and beardy; Clawson, Fultz, Gipsey, Lancaster Mediterannean, and Zimmermann or Blue Stem. Of corn we grow Yellow Dutton, Chester County Mammoth, and several other kinds of white. Black and white rye are also raised, and white barley Of potatoes we grow Early Rose and Goodrich for early; white Peerless and Peachblow are

the leading sorts for late. With regard to the acreage under the various crops, taking six as the standard for wheat, then there will be four of corn; two of rye; four of oats and one of potatoes. No sorghum is grown here. Apples are scarce in some parts of the county, while other parts have half a crop. Of cherries and peaches, too, there will hardly be more than half a crop. There seems to be little difference about the kind of fruit here; all seem to thrive about the same. H. L.

Kentucky.

MILTON, Trimble Co.—Wheat is now in the shock, and I may safely say that 15 per cent. was lost by the fly, and the crop is not so good by 10 per cent. as we all thought it would be. Corn, oats and potatoes are doing splendidly. Peaches will be half a crop, notwithstanding the frost while they were in bloom. Blackberries will be in overwhelming abundance. S. E. H.

Tennessee.

HUMBOLDT, Gibson Co.—Geographically, we are about the center of West Tennessee. Wheat is very nearly a failure—not one-fourth of a crop. Fortunately, the acreage sown was very small. Oats are sorry; rusted like wheat. Corn and cow-peas now look promising; forward corn is tasseling and shooting; it needs rain, though we have had slight showers. Cotton looks fine; it is fruiting and blossoming earlier than usual; the Fall months will determine the yield with us. Potatoes are good. Clover, Herd's grass, and Orchard grass, millet, etc., are all good. Hay, both in quality and quantity is above the average; it was about all saved during the past few weeks of dry weather. Our gardens furnish in abundance cabbage, "roasting ears," beans, cucumbers, squash, tomatoes, etc., etc. The quality of our fruits is good; we have had strawberries all along from May to the middle of June. Raspberries and blackberries are plentiful. There is nearly half a crop of cherries, peaches and plums. May and Early Harvest apples are now about gone. Red June, High Top, and Astrachan are coming in. There are but few of the late varieties, owing to severe frosts during March and April. If we have rain by the Fourth of July, and the "later rains," we shall be blessed, and our harvest will be plenteous. The health of our country is good, and now we may report our prospects bright. B. F. T.

North Carolina.

BROOKSTON, Warren Co.—"What will the harvest be?" Judging from the present standpoint it will be most excellent. Of wheat the Fultz and a variety known here as "Little Red" are generally grown; all harvested and mostly thrashed. Acreage, 100; yield, 100. Corn never gave better promise at this date than now—variety, a general mixture under the name of "Southern White;" acreage, 100; present prospect, 105; cotton, ditto. Too early to have any idea of the yield of Sweet potatoes. Oats are injured by drought in April—acreage, 100; condition, 50. Taking it all in all the fruit prospect is about an average—very few peaches but more apples and pears than for several years. We shall have our usual full crop of grapes. As yet I hear of no rot or other casualty. All varieties of American origin thrive, though we have yet to find the one that pays as well for shipping as the Ives. Although we had a backward and quite dry spring, vegetation is now far in advance of the same time last year; wheat ripened nearly a week earlier. We have watermelons as large as a half gallon measure. Cotton blooms will be found in many fields at least a week before the regular time of their first appearance—July 4. M. B. P.

FLINTY BRANCH, Mitchell Co.—Wheat is the best for years; one-fourth more acreage has been sown to it than last year or ever before. There is about the same area of corn as of wheat. This, too, is looking very well. We grow common varieties of wheat and corn that have been raised here for years. Rye looks well. Buckwheat is not sown yet. No barley is raised here. No cotton is grown here, as it is too high up in the mountains. Irish potatoes look well. The most common, and that which yields the best, is called Shady. Early Rose is used for garden purposes. The apple crop is the best for years. S. W.

HENDERSON, Granville Co.—Owing to drought Fall wheat will not average over seven bushels per acre. Potatoes, oats, rye and barley are less than half a crop. The acreage under all these is very small—about one to 50 of cotton. Cotton is looking very well and the acreage under it is about 30 per cent. more than last year. Corn, too, is very promising; acreage about the same as last year. Budded peaches are nearly an entire failure owing to our March frosts. Pears are mostly a full crop, especially Bartletts. Grapes are also mostly a full crop; very healthy, having been troubled by no insect enemies. These are the best and surest fruit crop in this section, and next to them come pears, which are generally very good. Peaches, too, do finely when not injured or destroyed by Spring frosts. In some places apples, also, turn out very well this year. English cherries blight a great deal, and raspberries and cherries are worthless, but strawberries do well, although they have failed nearly entirely this season from drought. H. S.

ISLAND FORD, Rutherford Co.—Wheat half a crop; causes of failure, fly and rust. One-fifth less was planted than last year. Corn will be much better than for years, if the season continues good. Three-tenths more planted. Cotton is looking well now. One-third more was planted than last year. Oats are a complete failure—White Winter, Spring, Black, and Rust-proof. One-half less ground was seeded this year than last. Rye, half crop—the black, or common rye of the country. No barley is ever seen here. Potatoes—Irish—only enough for family use; almost a complete failure caused by drought. Two-fifths more Sweet potatoes were planted than usual. Fruit a failure; only a few peaches, apples, pears, or small fruits—injured by late frosts. Apples: House, Sweet Pearmain, Limber Twig and June. Pears—Sugar, Harvest and Belle, and another sweet pear that ripens in November. J. L. MC D.

Georgia.

HERNDON, Burke Co.—Wheat and barley enter very little into the aggregate of our products. Cotton, corn, oats, and potatoes are now suffering intensely from the drought, which has been prevailing for three weeks with intense hot suns and winds that evaporate all moisture. Rains, however, before this month is out, will secure a large yield of these crops. As the wet May and previous Spring months had started a rich crop of weeds and grass, which are now being eradicated, the cultivated crops will be in good condition for rain. An inferior oat crop has been harvested. There was a general destruction of grain crops by rust, with no exception, save where the land was filled with rich plant food and the seed put in last Fall and Winter with the utmost care on finely prepared ground. Occasional exceptions occur in oats, but only with the Mexican bearded, red rust-proof oats—all Northern and Western grain failed here completely. Our seeds do better apparently when acclimated from south to north, more especially the cereals, as in case of the rough Mexican oats and Nicaragua wheat. The same is true of the grapes that withstand our climate and become, as it were, indigenous. The acreage under cotton and corn and oats is about the same as last year, and it is yet too soon to estimate the yield. W. B. J.

MARIETTA, Cobb Co.—Wheat is one-quarter of a crop, oats a failure, except rust-proof, fall-sown oats. Of cotton a large crop has been planted, but owing to a wet May and great scarcity of help much of the crop is late and poorly worked. About five to ten per cent. of it has been abandoned. The prospect for it is not as good by ten per cent. as last year. Upland corn is good. Bottom corn is late; some very poor, and some has been abandoned. Fruit, a light crop, though apples are better than peaches. Wages 75c to $1 per day and dinner with some "blockade" whiskey now and then. Fifty cents per day and dinner has been the best price since the war; everything dates here *since the war*. The negro is getting more and more independent and lazy, and is by nature thievish, with few exceptions, though he takes to books more than the low class of whites. J. I. C.

WARTHEN, Washington Co.—Wheat is one-third of a crop. The prospects for corn are very poor. Unless we have rain soon, it will not make one-third of a crop. Cotton is suffering from lack of rain. Very few potatoes have been set out as yet—too dry. Oats and rye will be half crops. Of fruits we have none; all kinds do well here, but they are neglected for cotton. G. I. H.

Alabama.

TALASSEE, Elmore Co.—The wheat crop in our section is almost an entire failure from rust. The corn crop will also fall short of expectations. As to cotton, it is too early to form anything like a correct idea as to the yield; indications, though, are all quite favorable. W. E. S.

Mississippi.

OKOLONA, Chickasaw Co.—The wheat, rye and barley harvest is very light and the acreage small. Corn and cotton acreage about the same as last year with worse labor to cultivate them. In consequence of the indifferent labor system, and too much dry weather through the latter part of May and all June, neither of the crops can be counted on to give an average yield, without unprecedented seasons, including a late open Fall. Potatoes are very good but a small planting. Fruit promises well so far. Peaches, apples, plums, pears, figs, cherries, etc., are grown successfully in our section. T. J. B.

Louisiana.

CLINTON, East Feliciana Parish.—Of wheat none is grown here. Corn will give from 15 to 20 bushels per acre. Cotton will average one bale—400 pounds—to two acres. Potatoes, Irish, a good crop—say 150 bushels per acre. They will not keep well in this climate. Potatoes, Sweet, 200 bushels per acre. These are the best. Of oats not much is grown. It will yield about 20 bushels per acre. Rye none. Apples, peaches and pears are not good this year. Figs are always good. Plums of all kinds are good and do well—not much variety, however. H. S.

Texas.

DALLAS, Dallas Co.—Wheat a failure. It will average only from six to eight bushels per acre and that of poor quality. Corn has a larger acreage and better prospect than ever before. Cotton ditto—splendid, a week ahead of last year. Potatoes—Early Rose a good crop. Oats, generally very good, large acreage. Rye, good, only a little sowed. Barley very good; small acreage. Of fruits there is very little except Chickasaw and Wild Goose plums and peach trees are doing very well. Apples not so well. Vegetables of every kind very abundant. The Army worms have ruined the wheat. J. R.

DAYTON, Liberty Co.—The prospects for corn, cotton and Sweet potatoes are very fine—they could not be better. We have had an abundance of seasonable rain, just the reverse of last Summer. Wheat and barley are not grown here, and but little oats or rye. In fact, this is not much of a farming or fruit country; it it mostly a stock raising section. Cotton grows better than anything else; it flourishes like a weed. I think there is double the acreage of the staple growing this year, compared with last season. I have gathered my patch of Mold's Ennobled oats and will replant in September or October. The yield was nothing extra, though I am not much of a judge in the matter. The mangels are doing finely. It has been quite cool for about a week; this is something astonishing for Summer in this latitude, and I have had a fire in the sitting-room two or three times. Usually from May until October fires are dispensed with, except in the kitchen stove. Something strange is always turning up in this country, and during my residence of a third of a century here, I do not remember a like occurrence. G. G.

ELGIN, Bastrop Co.—Crop prospects in this county were never known to be better. The corn crop is made, and the yield will be enormous. All of it is now in full roasting ears, some of which are getting hard. The cotton crop bids fair to make a bale per acre, provided the worm does not infest it before September or October. The wheat and oat crops have been the best known for years, wheat making from 20 to 30 bushels per acre, and oats from 75 to 100 bushels. E. E. B.

JEFFERSON, Marion Co.—In this section of our great State we do not grow wheat; but out in the prairies it is grown to perfection. There wheat yields from 20 to 30 bushels per acre; oats, 40 to 50 bushels. We grow oats, barley, rye, and our yield is moderate, and not much of each is raised. This Northeastern Texas is a cotton and corn country. Cotton gives half a bale per acre; corn 20 bushels per acre. This is a fine fruit country; but this year the fruit crop has failed, owing to the hard Winter and late frost. The berry and grape crops, however, are fine this year. We have pine forests, rich iron ore, fine water and good health. J. R. B.

LAWRENCE, Kaufman Co.—Wheat is a fair crop here this season. The acreage is not large, but the grain is good. Corn and oats are both good, and the acreage under each is larger than usual. Cotton is looking well, and under it there is an acreage much larger than ever before in this county. What fruit there is growing here is doing well. Grapes and blackberries are good. Peaches, however, are a short crop. J. R.

LOCKHART, Caldwell Co.—Crops look well but are beginning to suffer from drought. S. R. M.

NECHESVILLE, Anderson Co.—No wheat raised here, and no rye or barley of any account. There is an increased acreage of about 10 per cent. of cotton and the prospects for a full crop have not been so good for 10 years. Potato crop, both of sweet and Irish is good. Fruit crop in this section is almost a total failure this year, owing to the late freeze, though this is one of the best fruit counties in the State. Peaches grow to the greatest perfection. M. S. E.

CANADA.

CHATEAGUAY BASIN, Province of Quebec.—The season is too backward to state what the promise of the harvest is in this locality. Wheat is not extensively grown, and there is no rye; barley and oats forming our staple cereal crops. Potatoes, too, are largely grown and promise well. Farmers here found London-purple successful last season mixed with plaster, the latter being a useful fertilizer, and in this respect having the advantage over coal ashes. Early Rose, Brownell's Beauty, Early Vermont and Chili are the varieties most in favor. Corn looks well. The principal kinds are: Yellow, Pop and Minnesota, the latter being our earliest sweet corn, generally ready for the table the last week of July. Sorghum is not grown at all. The prospects for fruit were never so poor, the winter, owing to its lack of steady severity, constantly freezing and thawing having done great injury not only to fruit, but to trees of certain kinds. The small fruits are badly killed and apples are a total failure—even our favorite and most successful kind, the Fameuse, this season has suffered both in wood and fruit. Wild strawberries are plentiful; but raspberries, both wild and cultivated, had the bearing canes killed. Of grapes our old stand-by, the Concord, has succumbed in many instances, especially old vines that could not be so well covered in the Autumn. Hay needs rain, otherwise it looks fair, and early-sown grain has a promising appearance. A. L. J.

CORNWALLIS, Kings Co., Nova Scotia.—The small quantity of winter wheat sown here is looking very well and is now in full head. Spring wheat is much more cultivated than heretofore, owing to the disappearance of the weevil, and it also has a very favorable appearance. The same may be said of oats, barley and rye. Corn is not much cultivated. Potatoes, one of our principal crops, have been largely planted this year, and, so far as I can judge, are likely to be a good yield. They seldom fail in Nova Scotia. The potato is the leading crop here; next I may mention oats, and wheat. Sorghum is not cultivated with us. I do not see why it would not succeed, as corn in most seasons ripens well and is a good crop; but it is not considered as profitable as potatoes. As regards fruit, it is rather soon to predict what it may be. I never saw the trees make a better appearance, as far as blossoming, but our weather has been rather cold and dry so far. We are now having showers which are reviving all kinds of crops. As far as I can judge at present, our apple crop may be considered an average one. We have but few Canker worms or caterpillars this season. The kinds of apples mostly cultivated and which are considered the most profitable are: Gravenstein, Yellow Bellflower, Ribston Pippin, Baldwin and Nonpareil. Many other sorts are cultivated, however. Pears are being much more largely cultivated than formerly. Cherries and plums are almost a failure this season. C. C. H.

LOWER KINGSLAND, New Brunswick Co.—Crops are beginning to look up, after having been blessed with the rain we had on Sunday last. If the drought had continued much longer I think there would be a failure in most of the crops. Hay is going to be very light. C. E. M.

PETERBOROUGH, Ont.—Fall wheat, with few exceptions, has been winter-killed. Spring wheat, if not injured in any way, will be about an average crop—about 25 bushels per acre. The following are the varieties grown in this district: Fultz, Clawson, Soule and Treadwell; Spring, Club, China or Beardy, and Rio Grande, Scotch, or Fife, Red Chaff, Wild-goose. Of corn not much grown here. Potatoes, judging by present appearances, will be an abundant crop. Ashleaf, Kidney, Imperial and Early and Late Rose are largely grown in this neighborhood. The Colorado beetle is very troublesome. Oats and barley will be abundant crops. Our varieties of oats, are: California, White Tartarian, Black Tartarian, White Scotch and some other varieties with no names. Rye will be an excellent crop. Neither sorghum nor any sort of sugar cane is grown in this district. The fruit prospects are good, though not so good as last year. The Codling moth and the borer are very destructive in this section. Plums are a very precarious crop on account of the curculio. Pears don't fruit well here, though there are a great number of successful growers. Strawberries grow well and are wonderfully productive. The varieties grown in this section are: Bishop's No. 3 Seedling, Triomphe de Gand, Early Scarlet, Walker's Seedling, Boston Pine and Hovey's Seedling. The Wilson, Black Prince, Iowa, Hooker's Seedling, Genesee, Hudson, Crimson Cone and some others, the names of which I don't recollect. The following are the best varieties of apples grown in this district: Winter apples—King of Tompkins County, Roxbury Russet, Northern Spy, Fameuse, Ribston Pippin, Golden Pippin, Pineapple, Yellow Bellflower, Rawle's Genet, American Golden Russet, Red Canada: Summer apples—American Summer Pearmain, Tetofsky, Summer Queen, Red Astrachan; Autumn apples—Beauty of the West, Gravenstein, Duchess of Oldenburg, St. Lawrence, Colvert, Sherwood's Favorite, Fall Pippin, Spice Sweet. Some very fine specimens of the above are grown in this county. There will be a large crop of small fruits. Large crops of Mangel-wurzel and carrots in this section, as well as of turnips and parsnips. To get up this report I took a short run through the country, and found everywhere I went evidence that there is a fair prospect of an abundant harvest of everything. A. C. D.

ST. CATHARINE, Ont.—Wheat in this locality is good. Corn is looking pretty good. Potatoes, good. Oats very good. I don't know of any rye in this neighborhood. Barley is good. Hay is above the average. The kind of wheat sown most is Diehl; the acreage is rather larger than usual. I don't think there is any sorghum grown here. The prospect for apples is only middling. Peaches are very good. Strawberries and raspberries are very fine—the Wilson is always the best, J. B.

LATEST REPORTS.

EASTERN STATES.

Maine.

BOLSTER'S MILLS, Cumberland Co.—The weather has been very warm and dry this year. The wheat is looking well; the variety mostly sown is the Lost Nation. There is more sown every year. The corn is looking well for the time. Rye is but little raised, and I hear of no barley. Oats are looking well and so are potatoes. R. J. P.

BROOKS, Waldo Co.—The crop prospect is at present quite good. The past two weeks have been dry and a rain is much needed. Grass is nearly ready to cut. The promises are for an average yield. Wheat is looking well; the "Lost Nation" is the kind most largely sown. Potatoes are somewhat backward, The Colorado beetles are somewhat numerous and troublesome. Oats are looking well. But little barley or rye is grown; two-rowed barley is sown mostly. Sorghum is not grown at all. Fruit prospects are good and apples will be plentiful. The "Naked Limbed Greening" apple is growing much in favor and importance. Strawberries are but little cultivated. Butter is 12 cents per pound. Cheese factories not operating. J. W. L.

New Hampshire.

ACWORTH, Sullivan Co.—There will be an average harvest. Of wheat we raise the Lost Nation. Rye, barley and oats are of the kind usually sown in New England. Potatoes are Early Rose and Brooks's Seedling. Acreage in this town; wheat 50, rye 8, barley 200, oats 150, corn 200, potatoes 150. Sorghum not grown. Fruit prospects are good. Our chief apples are Baldwin, R. I. Greening, Russet, Porter, King of Tompkins Co., etc. J. S G.

NORTH WOLFBOROUGH, Carroll Co.—There is about the same amount of grain sown in this locality as usual, and it is looking uncommonly well. The kind of wheat which is proving most successful is the Lost Nation. I have a piece of it which I think will produce forty bushels to the acre. There is nearly twice the amount of corn planted as usual, but only about half as many potatoes, owing to the potato bug being so plentiful. The principal kind of potatoes planted are the Early Rose, Prolific and Davis's Seedling. There will not be much fruit in this section, owing, I presume, to the unusually large crop last year. Sorghum is not grown here. G. A. H.

WEST LEBANON, Grafton Co.—It has been very dry in this locality; wheat and oats are suffering in consequence. Corn is looking well; rain would insure an average crop. Potatoes are fair, though well covered with beetles. There is a prospect of an abundant fruit crop. Grass light. H.

Vermont.

CHELSEA, Orange Co.—The harvest prospects for wheat, corn, potatoes, and oats are very fine, indeed. Wheat is only grown on the "hill farms." Lost Nation wheat is grown to some extent. Our corn is mostly an early eight-rowed variety. Of potatoes, the Early Rose is the principal crop; Prolific, Peerless, Early Vermont, etc., come next. We raise no sorghum in this section. The fruit prospects are very good. Our crops rank in regard to acreage as follows—potatoes, corn, oats, wheat, barley, rye. E. G. T.

GEORGIA, Franklin Co.—All our Spring crops may be said to be in a fair condition, though much retarded in their growth by the severe and protracted drought. It is too early yet to say what the outcome will be farther than that we are sure to have a short hay crop. Last year's fruit crop was enormous; this year's promises to run to the other extreme, through their dropping from the effect of the drought. I do not know of any sorghum, except a few little plots grown from curiosity. O. T, B.

NEWPORT, Orleans Co.—The prospect now is for good crops of wheat, corn, potatoes, oats, rye and barley. An average acreage of each has been planted, but of potatoes rather less than in 1879. A few experimental patches only of Northern sugar cane have been planted. The fruit crop is under the average both in small and tree fruits. Currants almost cut off (a rare thing), and strawberries badly winter-killed. Wilson strawberry, Red Dutch currant, Black-Cap raspberries, Duchess of Oldenburg, Wealthy and Scott's Winter apples are the most successful varieties grown here. The grass crop is a full average, and haying is begun in many places. T. H. H.

VERNON, Windham Co.—We are just commencing our haying. The crop will be the lightest for several years, being dwarfed by dry weather in May. Corn is looking well. Winter wheat (what lived through the Spring) is looking well. Spring wheat is good, just heading out. Oats are a heavy growth so far. Rye is fully an average. Potatoes are good, and not damaged by the bug as yet. Apple-trees are hanging full, and the fruit is looking fair. Raspberries are plentiful. E. P. J.

WILLIAMSTOWN, Orange Co.—Wheat is looking well, but not very much is sown here, and that is of the Spring sorts. Corn is planted in a small way. Potatoes are the largest crop and they are looking fine. Some bugs are about. Early Rose is the kind mostly grown. Oats will be a fair crop; more of these are grown than of the other grains. The hay crop will not be as large as usual, owing to the want of rain. Apples a good crop. H. F. E.

Massachusetts.

BROCKTON, Plymouth Co.—Wheat is not cultivated here at all. Corn will be an an average crop—Longfellow and common varieties of yellow. Oats and rye also will be about as usual—common sorts. Potatoes will be quite as good as they usually are—chiefly the Early Rose. Grass was injured by drought in May, yet it promises a fair crop of hay. The fruit prospects are good. There will be an abundant yield of apples, for this is the "bearing" year. The ravages of the Canker worm are becoming more extensive in this section every year. D. M. O. P.

Rhode Island.

ADAMSVILLE, Newport Co.—I know of no wheat having been raised in this section for a great many years. The corn harvest will probably be good, as corn looks well. The Rhode Island White Flint is the only variety grown, except sweet corn; perhaps one-third of all the land is devoted to corn. The potato harvest will be below the average. A larger area was planted to potatoes than usual, but owing to some unknown cause they did not come up well. Pieces planted under the same conditions acted differently: one piece would thrive splendidly, while another would grow so poorly that it had to be plowed up. Early Rose, Late Rose, Early Ohio and Early Vermont are the principal varieties grown; the acreage is about the same as for corn. The oat crop is good; no particular variety is grown. Oats are raised only in connection with grass, when laying down grass lands in the Spring. Very little rye is sown—no particular variety; it promises fairly. Barley promises well; but little is sown—the common two-rowed variety. Perhaps two-thirds of all the arable land in this section is devoted to grass, which will fall a little below the average. Sorghum is not raised here. Fruit will not be half a crop—this is the apple year in this locality. Peaches set first-rate, but are falling off badly, and the Rose bugs are attacking them; with cherries the same is the case. Pears not above an average. Peaches, pears and cherries are but little grown. Peaches are an uncertain crop. Small fruits are not quite an average owing to the dry weather. Apples are the the principal fruit grown; the most successful varieties being the Rhode Island Greening, Baldwin and Talman Sweet. Of the Army worms there are very few in this neighborhood, but they have swept whole fields in the next town. Rose bugs quite troublesome. W. W.

Connecticut.

BRIDGEPORT, Fairfield Co.—Barley and rye will be fair crops. Potatoes look well, but drought may destroy them. It is too early to speak about corn definitely. Rye and oats are the principal Winter grain crops hereabouts. Wheat and barley are sparsely grown. Potatoes are a large crop. But little attention has been given to sorghum. The apple and pear crops are promising, especially the apple. Pears were light of bloom, but they hold on and look well. Almost any kind of either succeeds. W. H. N.

GEORGETOWN, Fairfield Co.—Wheat is looking splendid; but only little is raised in this section. Corn is very small, in consequence of the drought, as we have had but little rain for two months. Hay is very light; old meadows are hardly worth the mowing. Oats and potatoes are suffering for want of rain. The prospect for apples is good, if we have rain soon. Hay is worth $22, and milk two cents per quart. How can farmers live? G. T. O.

MIDDLE HADDAM, Middlesex Co.—Rye is looking very well. Wheat is but little grown. Corn is looking well for the date. Hay will be about two-thirds of a crop. Potatoes too are looking well. Barley not raised. Apples promise a fair crop; peaches a good crop; cherries were all taken by Rose bugs which have been very destructive. No sorghum is raised in this vicinity. Pears will be scarce. Berries are plentiful. A. B. W.

WOODMONT, New Haven Co.—The weather has been very hot and dry; we have had no rain of any account for six weeks. Wheat is not grown extensively in this section, but what there is is looking very fine, and will be harvested before the Fourth of July. Corn is very backward, and unless we have rain it will be a failure. Rye is looking well and will be more than an average crop; it is grown here quite extensively. Oats are looking well, but will have to have rain soon or they will not amount to much. Barley is not grown in this section. Very little sorghum is raised about here. Potatoes are looking well, but will be suffering from drought soon. The hay crop is light, from one-half to three-quarters of a crop. Hay brings $25 per ton in the New Haven market. There are no pears of any account in this section. Apples set well, but are dropping off for want of rain. E. P.

MIDDLE STATES.

New York.

AFTON, Chenango Co.—Wheat will be three-quarters of a crop; Clawson is chiefly grown—acreage about the same as last year. Corn looks far better than at the same time in '79—acreage a quarter more. Dutton is the main sort. Potatoes are an average crop—Rose and Snowflake are the favorites. The beetles have been uncommonly numerous. Oats are more than an average in area and yield—the small white are generally grown. Rye, none; barley, none to speak of. Apples are a large crop, R. I. Greening, Spitzenburgh, Northern Spy and the Pippins. Our best pears are the Bartlett and one called the Belle (Lucrative?.) Owing to the dry weather grain is only half a crop. J. P.

BESEMER'S DEPOT, Tompkins Co.—The weather is now, and has been for several weeks, very dry, but wheat, corn, rye and barley promise good crops. Oats fair. Potatoes are excellent. Only a small amount of rye and barley are sown, but of the other grains quite a large amount. Fultz and Clawson wheat and common white oats and the small field corn are the kinds raised here. Early and Late Rose and the Albany Seedling potatoes are grown extensively. No sorghum. Hay is very light indeed. Fruit prospects are good. Apples only are grown extensively, but a few peaches, plums, pears, cherries, etc., are cultivated, and all bear plentifully this year. J. B.

COBLESKILL, Schoharie Co.—Wheat was somewhat winter-killed, so that it will make only from half to two-thirds of a full crop. Corn is looking and promising well. Potatoes, ditto, ditto. Oats look well and promise fairly. Rye is the same as wheat. Barley is a fair stand; but only very little grown. Probably four times more wheat is grown in this section than was two years ago, and one-fourth more corn and potatoes. No sorghum can be found in this country. Apples are abundant; plums a quarter of a crop. Apples, plums and cherries have been our most successful fruits. The different varieties of strawberries and raspberries thrive well. So do grapes, and some are trying peaches. Of those I have raised some very nice specimens. German prunes are becoming quite popular. J. VAN V. C.

CORNING, Steuben Co.—The wheat crop promises to be a good yield, as do rye and oats. Clawson is the variety of wheat usually grown. Potatoes look splendid—Snowflake, Early Rose and Early Vermont take the lead. Corn looks good also, but not quite so forward as usual at this time. The acreage of the above crops is about as last year, except of oats, which I think is larger. A large share of the farmers are growing from one-eighth of an acre to one acre, and some more, of sorghum. The apple crop promises to be a very good one. Northern Spy, R. I. Greening and Baldwin are our best market apples. F. H. D.

DEPOSIT, Broome Co.—We are having a severe drought. Hay will not be more than one half a crop. Wheat and oats look very well. Corn and potatoes are extra and if we get rains soon they will be good crops. Fruit is falling off in consequence of the dry weather. It is the driest Spring and Summer since 1875. A. J. H.

EAST SHELBY, Orleans Co.—Wheat looks well, and some will be ready to harvest by July 1st. Barley is good. No appearance of Hessian fly yet. Oats as a general thing, look fine. Beans are looking tip-top. Grass is very light. Cherries not many, and of very poor quality; but the prospect is good for a good crop of apples. P. W. C.

FLUVANNA, Chautauqua Co.—Our wheat is chiefly Clawson. It looks well on the whole, and will be a heavier crop than usual. Oats look promising, chiefly Poland, running from 36 to 38 pounds to the bushel. Barley is extremely rank, and of a good color—usually six-rowed. Potatoes are fine, and there are less beetles than usual to trouble them. Of them we grow 100 or so varieties, but principally Early and Late Rose and Snowflake. No rye is raised in this section. The fruit crop is good. Our pears are chiefly Bartlett, Flemish Beauty and Tyson. Grapes are not an average crop. H. A. W.

GALWAY, Saratoga Co.—As a general thing the harvest in this part of the county is good. Winter wheat was never better. A larger area than usual sown. Spring wheat is but little known. Corn is fine. Hay is an average crop. Oats good Rye middling. Fruit an average. Potatoes better than we have seen in several years. Potatoes $1 per barrel; oats, 50c per bushel; corn, 60c; rye, 75c; wheat, $1.50 per bushel hay, $15 per ton. A. H.

GUILFORD, Chenango Co.—The present prospects for the dairy farmer in this locality are anything but flattering. An open winter followed by a dry May and June, has reduced the hay crop about one-fourth. However, there was a large quantity of hay summered over, which will prevent many farmers from sacrificing their dairies. Corn, oats, potatoes, spring wheat and apples promise abundant crops. M. E. M.

LAKE VIEW, Erie Co.—Winter wheat is filling finely (Clawson and Red Chaff). Acreage 25 per cent. more than last year. Spring wheat (not much raised) is looking well. Winter rye is filling well, (not much grown—no Spring). Corn backward (mostly 8-rowed, yellow and white); about same acreage as last year. Potatoes are looking well (Early Rose, Peachblow and Peerless); bugs working, but not so much as last year. Oats and barley are looking fine, (white and black oats, four-rowed barley); acreage, 10 per cent. more. Some Amber cane was raised last year. The sirup was good. No attempt was made at sugar-making—there will be some trials this year. There are only a few pieces of cane; it grows as well as corn. Apples promise well (Baldwin, Greening, Russet, Red Astrachan). Cherries and plums fair crops, but somewhat stung. Pears are uneven—some orchards promising well, in others few or none. Grass crops improved by late rains but not heavy; yield below average. E. W. S.

MEDINA, Orleans Co.—Crops of all kinds in this section never looked better. Of wheat Clawson is our main crop; acreage, 20 per cent. more than last year, and the prospect is favorable for a large yield. Our barley is the four and two-rowed. The acreage under it is half that of wheat. No rye sown in this section. Oats, acreage half that of barley; a large yield is anticipated. Of potatoes Early and Late Rose are the most used. They are looking well, but are covered with bugs; acreage about that of last year. Snow-flake seems to be talked of as the coming potato. The acreage under beans is about that of barley. Kinds sown, Medium Pea, Marrow, and Navy. Drought is pinching them somewhat, but there is a prospect of a fair yield. Corn looks well—large for the time of year. I have two acres of Blount's that seem to do nothing but grow day and night, cold or hot, wet or dry. W. H. C.

NAPLES, Ontario Co.—Wheat, corn, potatoes oats, rye, and barley will all be above an average. No sorghum grown. Fruit will be less than an average. The dry weather in May has spoiled the hay. There will be about one-third of a crop. Grapes, apples, peaches and strawberries are the fruits mostly grown. E. A. H.

PALMYRA, Wayne Co.—Taking 100 as the standard of crops last year, this year's harvest will compare as follows with its predecessors: Wheat acreage 125; yield, 150; potatoes, acreage 100; yield, 100; oats, acreage 100; yield, 100; barley, acreage 100; yield, 125; corn, acreage 100; looks fine; sorghum, none raised. Most of the wheat is Clawson; and of the potatoes, Early Rose and Snowflake, while the oats are the white sort and the barley the two-rowed. Apples set very full but the trees are badly twig-blighted. R. I. Greening, Baldwin and Twenty Ounce generally produce the best here. The King and the Twenty Ounce Pippin are shy bearers. We have had seasonable showers all the season. G. P.

PERRY CENTER, Wyoming Co.—Corn, potatoes and oats are the same as last year, both in acreage and yield; wheat has increased 25 per cent. in acreage and will yield 50 per cent. more than last year. Barley is doing well, mostly two-rowed. Very little rye and no sorghum is raised. Early Rose and Snowflake are our favorite potatoes. Apple trees set very full, but they are now badly twig-blighted. R. I. Greening, Baldwin and Twenty Ounce produce best. We have had reasonable showers all Summer. G. P.

SCHENEVUS, Otsego Co.—Crops in this section are looking good generally, except hay, which will be light. Rye, oats and potatoes are looking well. Corn, fair. Apples will be plentiful. J. F. C.

SCOTIA, Schenectady Co.—We were favored with plenty of rain until about two weeks ago; since then it has been intensely warm and dry. Rye is very fair, except on clay land, and is nearly ripe. Oats are in want of rain very much. Corn is not growing as it ought, for want of rain. The Rose bugs are doing considerable damage to fruit in this section. The potato bugs are quite plentiful now as the young slugs are just beginning to come on. Hay is a light crop, except on low lands, where there has been plenty of moisture. New seeding is looking as well as can be expected for the dry weather we are having. E. E. H.

SOUTH GILBOA, Schoharie Co.—Grass is light. Barley and oats are good. Corn, good. Potatoes, fair—acreage as usual. Wheat and rye are ordinary crops. Mangel-wurzels and sugar beets look well. Apples are sparse and plums a good crop. The ground is dry. Farmers have finished sowing buckwheat. Acreage as usual. J. O. C.

WHITNEY'S POINT, Broome Co.—The season, thus far, has been very dry. Wheat was badly winter-killed, but it is looking well now. Corn, too, is looking well, although small yet; with rain it would grow fast. Potatoes are looking fine, and are, in fact, the most promising crop on the list. The present dry weather is hurting oats, making them look yellow and sickly. Hay, the main crop of this section, will be one-third below the average. Fruits and berries of all kinds promise well. M. B. D.

New Jersey.

MANALAPAN, Monmouth Co.—Owing to the drought corn is very backward. Some fields that were entirely replanted can scarcely make a crop, unless frost comes very late; acreage about as formerly. Potatoes will be small and few, unless we have rain soon; mostly early varieties were planted. Beetles are plentiful; but they have done no particular damage. Clover hay is less than half a crop, and Timothy less than one-third. some fields being scarcely worth cutting. Rye straw is good, but the heads are not well filled. Wheat is short, but well filled, and will make an average crop, more having being sown than usual. Oats are very short, and will, no doubt, be a light crop. Apples are plentiful. Pears and peaches are rather scarce, not many of the latter being raised. These are our main crops. Everything is suffering for rain. W. H. D'B.

Pennsylvania.

CAMBRIDGEBORO, Crawford Co. — Harvest of wheat extra-good; acreage about the average. Kinds grown are Fultz, Lancaster, Mich. White, Red Mediterranean. Lancaster and Fultz are the most successful. Corn is backward owing to drought in May. An average acreage. Common yellow and smaller varieties are grown. Potatoes are good; an average acreage. Varieties Early and Late Rose, Snowflake and Compton's Surprise. Snowflakes are considered No. 1 for Winter and Spring. Oats are good; acreage a little above average; nearly all the white varieties are grown. scarcely any black ones. Rye, scarcely any sown. Barley, none grown. Apples will make a middling crop. Peaches, the same. Pears and cherries were mostly killed by frost. Plums have been destroyed by curculio. Of apples the most successful varieties are Red Astrachan, Seek-No-Further, Rambo, R. I. Greening, Northern Spy, Winesap, etc. No sorghum in this vicinity. G. L.

GRANT, Indiana Co.—This has been for many years a lumbering community, and we are only beginning now to raise enough farm products for home use. Wheat is now ready for harvesting and is called a very good crop—acreage 10 to 15 per cent. larger than last year; principal variety, Fultz. Corn, potatoes, oats and rye are all good. The potato beetle is somewhat troublesome. Acreage somewhat larger than last year. No barley or sorghum is grown here. The fruit crop will be small, as compared with last year. Of apples our most successful varieties are: Northern Spy, Baldwin, Vandervere, Hoopes, Bellflower and Rambo. E. B. C.

LINEVILLE STATION, Crawford Co.—The wheat harvest promises to be exceedingly good—above the average. Corn, oats and potatoes promise to be average crops, if not more. Rye and barley are not raised here to any extent. The varieties of wheat raised are principally Fultz, Clawson and Lancaster, in the order named. The potatoes raised are mostly Early Rose, Peachblow, and Snowflake, and a few Monarchs. The corn is principally Dent or Gourd Seed and eight-rowed yellow. The grass crop is very light. The grasses most extensively grown are Timothy and clover. Farmers are experimenting somewhat in Orchard grass, and it is proving very successful. No sorghum has been raised here yet, but a little is planted. The acreage under each crop is about the same as usual. S. H. R.

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WHAT WILL THE HARVEST BE?

In this issue of the Rural New-Yorker practical farmers from every part of the country declare that, on the whole, the present harvest will be extraordinarily good. Here and there, it is true, shortages or even failures of one crop or another occur, but even in these sections other crops are excellent, while the outlook for the country as a whole is emphatically good for nearly every crop except hay, which nearly everywhere has been rendered very short by the killing of clover last Winter and the severe drought during the past Spring and Summer.

Although Winter wheat was seriously injured or entirely killed by the past open Winter throughout nearly the whole of the broad belt intermediate between the acknowledged Winter and Spring wheat regions, yet the favorable weather in early Summer greatly helped what survived, while much of the land on which the Fall-sown wheat had perished was re-sown to Spring wheat, and on this account among others, an unusually large area, especially in the Northwest, was sown to this sort. Owing to the increased acreage under both Winter and Spring wheats, and the fine condition of both crops as a whole, there is now no doubt but that last year's aggregate product of nearly 450,000,000 bushels will be considerably exceeded this year, while the quality of the grain from present indications will be better.

The largely increased acreage under corn this year, especially in the border States, and its fine condition throughout nearly the whole country, leave no doubt that the enormous aggregate prodnotion of about 1,400,000,000 bushels in '79, will be surpassed in '80. It speaks well for the general prosperity of the country that, according to almost all our reports, this peculiarly American product promises to be an exceptionally fine crop everywhere, even where it failed last year, as in Texas, or where wheat and several other crops are very short this year, as in Western Arkansas, Kansas, and Nebraska. Besides serving as a convenient substitute as human food for the other cereals that are short in our Western and Southwestern frontier settlements, the vast yield of corn will also advantageously supplement our scanty hay crop as food for stock.

The yield of oats this year will be unusually heavy and the acreage considerably larger than last year in the Southern, Western and Pacific States, though there is probably little or no increase in the area under it in the Atlantic and Middle States. According to the statistics of '78, the latest at hand, the total product that year was 413,000,000 bushels, and as the aggregate yield yearly increases, it will probably not fall far short of 450,000,000 this year, to which Illinois, Pennsylvania, New York, Ohio, Iowa, and Wisconsin will be the chief contributors, probably in this order.

Barley is generally reported a good crop wherever grown, and as it is well adapted to all sorts of climate and thrives well on land on which wheat would prove a poor crop, no grain is so widely distributed throughout the world or more generally used. In this country less attention is paid to this cereal than in Europe, yet in '78 the total product was 42,000,000, bushels, of which California contributed 4,350,000, double the amount of the previous year, while in the other large producing States, New York, Wisconsin and Illinois, there was a large decrease in acreage. This year, too, it is most likely that whatever increase in area there may be under this crop will be chiefly in the trans-Mississippi States, though the yield is reported good everywhere.

Of rye there was an aggregate production of 25,842,790 bushels in '78, and this will doubtless be considerably exceeded this year, as both the area and yield are reported large, especially in New England to whose poor soils this crop is well adapted, as it thrives well on light, sandy land on which wheat, or even barley, would fail. Owing to the shortage in hay, it is probable that a large area will be sown to rye for foddering purposes, for which it is excellent both in late Autumn and early Spring. Pennsylvania, New York, Wisconsin, Indiana, and Kansas have each hitherto contributed. in this order, more than double as much as any other State to the aggregate of this crop.

Potatoes throughout nearly the entire country are a fine crop. The acreage in the older-settled States is perhaps hardly so great as last year, but the yield seems to be greater, and it is highly probable that they will prove comparatively one of the most profitable crops this year. It is a trifle early yet, however, to form a decided opinion with regard to the yield, as the Colorado beetles are unusually numerous nearly all over the country, and considerable labor will be needed to realize the present excellent promises of the crop.

Of fruits, apples promise to be far away the most abundant, although, as a rule, there will not be the excess which often occurs in the "bearing" year. The drought seems to be the chief foe of apples this year, as reports from nearly all quarters tell of their dropping off heavily from that cause. Pears are an unusually light crop, and the complaints about a shortage in peaches appear to be at least partly verified this year, except in Michigan, whence reports of the crop are almost unanimously good. Grapes are a fine crop on the whole, and so are small fruits, though the latter seem to have suffered from the dry weather considerably more than the former, particularly in New Jersey.

The hay crop—among the most valuable of all—is very short nearly all over the country, and prices of hay the coming Winter are sure to be high in nearly every section. The shortage is especially great in the Middle States, for although the crop will be considerably below the average in New England and the Northwest, yet reports from both these sections give hopes of a moderate crop, while those from nearly all parts of the Middle States give no such consolation. Unless substitutes or supplements are liberally provided, stock will be sure to suffer and likely to sell low the coming Winter.

In New England but little corn and less wheat is grown, although there is a slight increase in the area under both the present year, and both promise a pretty fair yield. Oats, rye, and barley, all three are good crops, as are potatoes, apples and grapes; while pears, peaches and small fruits generally are reported inferior crops. Potatoes seem to be especially good in Vermont and Maine, and apples in Massachusetts and Connecticut.

Hay excepted, all field crops, are, on the whole, fine in the Empire State. The reports of rye, oats and barley are almost universally favorable, while those of wheat and corn are generally encouraging, although the outlook is darker in a few places than throughout the State generally. Apples will be abundant, peaches a moderate crop, pears a poor one. In New Jersey the late extremely dry spell and that in May seem to have been peculiarly disastrous, as the reports from that State are almost as unfavorable as those from Western Kansas. Wheat and grapes, however, seem to have suffered less than other crops and hay more. Pennsylvania appears blessed with abundant crops of all kinds this year, the reports about wheat, oats, potatoes, apples and grapes being especially favorable and those regarding hay the most discouraging. Of all the States in the Union, Ohio at present seems to be the happiest in her harvest, all field crops, except, of course, hay, being splendid both in quantity and quality. The wheat harvest, however, has been interrupted by heavy rains, which may injure the grain in the shocks and lay that standing. Apples and grapes are good crops, peaches a moderate one, and even pears seem better than in most other States.

In Michigan corn and wheat seem to be an average, avoiding both extremes, while the reports concerning oats, rye and barley are unusually good. Potatoes, too, are reported fine, and the accounts of the hay crop are the most favorable that have reached us. Michigan may well be proud of her fruits. judging by the almost uniformly favorable accounts given elsewhere of her apples, peaches, grapes, small fruits, and even pears. Like most of the Northwestern States, she seems to have escaped, at least partially, the extreme drought that has scorched the rest of the country. Northern Indiana appears to have shared her good fortune in this respect, and the crop reports from nearly all over that State are remarkably favorable, except those about apples and peaches, which seem to be poor crops in several places. Illinois also rejoices in an excellent harvest, present or prospective, reports concerning corn, oats, rye, potatoes, grapes, small fruits and pears being particularly good. In the central and southern part of the State the wheat crop, too, is notably excellent, but in the northern portion a good deal of the Winter sort was winter-killed, and much of the replowed land appears to have been devoted to other crops. From Wisconsin crop reports are good, with few exceptions, while those with regard to oats, rye and barley are uniformly favorable. Corn, wheat and potatoes, too, are promising, while hay is better than in any of the Middle States.

From beyond the Mississippi, Minnesota reports a wheat crop unusually large both in area and yield and of excellent quality. Oats, barley and potatoes, too, are highly promising and corn is a large and fine crop. Iowa follows with a splendid corn crop, good ones of oats, potatoes and fruits, and inferior ones of wheat and hay, the Fall-sown wheat having been mostly winter-killed, while the area under Spring wheat seems to be less than usual. Kansas's splendid promise in the Spring of more than 30,000,000 bushels of wheat has been nullified by the severe drought, which has been especially disastrous along the western portion of the State. The corn crop, however—the main crop for sustenance and stock feed—is at present highly promising, and the comparatively new crops of Rice corn and Castor beans are unanimously reported good. Nebraska appears to be nearly as severe a sufferer as her sister State, Kansas, from the drought, but the outlook for her corn crop also is unusually encouraging, while her potatoes and fruit seem better than her neighbor's. Colorado, New Mexico and the Western Territories do not yet raise sufficient crops even for the support of their sparse population, and this year the whole region has been subject to a drought more severe than any that has visited the more easterly States, with effects proportionately more disastrous.

In the "border" states of the South hay, grain, and fruit crops have been greatly injured by the drought, except corn, which is still very promising. Farther South the acreage under cotton has increased 7.36 per cent., making the total area under it probably 13,612,978 acres. Assuming the crop of last year to have been 5,675,000 bales, from 12,679,962 acres, the acreage of this year would yield 6,085,000 bales; but in view of the labor and insect questions, it is hardly safe to come to a conclusion in the matter at this day. Other crops throughout the South seem to be almost an average, all average yields of grain in that section being considerably below the average of the same crops in other parts of the country.

Cotton-seed Meal.—This ought all to be consumed in our own country, instead of exporting so great a proportion of it, as it is not only a highly nourishing, but a health-keeping food. The oil in it lubricates the bowels of animals, and keeps them in good condition, while the other elements of which it is composed assist in building up the muscles rapidly. But it should be fed sparingly, and mixed with either bran, middlings, oats, or other meal. From a pint to two quarts per day is a fair ration with other food, according to the size of the animal, although at the South, we are informed, they feed it still more abundantly. There they usually feed the seed whole as ginned from the cotton, and after boiling they let their animals eat as much as they please with impunity, almost entirely fattening their swine with it, finishing off with corn two weeks or so before slaughtering.

Teaming at the Cape of Good Hope.—The English General Cunynghame describes some extraordinary teams both of horses and cattle which he encountered during his travels in the Cape Colony. He says: "As we were driving out of the town of Swellendam we met a wagon with a team of ten horses, which a Dutch farmer (his nose surmounted by a huge pair of green goggles) was conducting with perfect ease. This ten-in-hand passed us at a rapid rate. He was assisted by a Hottentot who sat beside him on the box, with a whip resembling a 17-foot salmon rod, which he wielded with the utmost dexterity, touching-up any horse that his master ordered him, exactly on the part that he considered advisable."

And again, when driving inland from Port Elizabeth, "On the road we met at least one hundred and fifty large wagons, each drawn by a 'span' of sixteen pairs of oxen abreast, thirty-two in all, loaded with twenty-two bales of wool. On a rough calculation the value of each load was about £700 (or, say $3,500). Thus we met upwards of $500,000 worth of wool on its way to Port Elizabeth. Most extraordinary sounds proceeded. from the drivers of these wagons."

"At Port Elizabeth we observed the milk-boy (native) going his rounds. His manner of carrying the milk deserves mention. Over his head he wore a sack with a hole for his head, and one for each arm. At both front and rear were seen rows of pockets, in each of which he had placed a bottle of milk,—milk at the Cape being invariably sold by the bottle."

It rarely occurs to country people that trees and shrubs may be successfully transplanted in June—in fact in July or August. All transplanting that is not accomplished in Spring or Fall is left until the next Spring or Fall, as if failure would inevitably attend an intermediate season. No doubt this is true of plants ordered from a distance. But we have many times removed small shrubs and trees from one place to another in our grounds during the Summer months. It is best, however, to preserve all the earth about the roots, that can be preserved, and then to cover the ground for three or four feet about the stem with hay or straw six inches or more in depth. This will preserve the moisture about the roots until growth recommences. Thus we have treated two peach trees transplanted the middle of June. One of them did not even lose its leaves.

Plowing by Lightning.—We notice that M. Feliz of France, at the Bar-le-Duc Agricultural Show, attached his electric machine to a double-furrow plow and turned up the soil of hard, uneven ground, to the depth of seven to eight inches. We hope this was not done at *lightning speed*, if so, it would puzzle the plowman, we fancy, to hold on to the handles. But, perhaps, it was a self-regulator, and knew when to stop and turn of itself. We shall be glad to learn more of this motive power hereafter; but we much doubt of its superseding animal power, at least for the present; so the breeders of strong horses, mules and oxen need not despair of their soon being displaced by *chain lightning*.

The great amount of editorial labor involved in getting up this number of the Rural New-Yorker—which is probably the most complete and trustworthy crop report ever before presented by any journal—together with the Fourth coming upon our day of going to press, has delayed us one day.

BRIEFLETS.

It will be seen that Clawson is the favorite wheat of the country—Fultz next.

We are sad to hear of the dangerous illness of Mr. M. B. Batcham, of Painesville, Ohio.

Mr. M. B. Prince of North Carolina writes us: "I can make a trifle better report on weevil-eaten peas than some of your correspondents. March 24 planted 200 peas or rather shells, 44 germinated and produced fruit."

At the present time, we should select among raspberries, Turner for early; Cuthbert for late; Belle de Fontenay (Henrietta) for size and quality; Caroline (yellow) and New Rochelle (purple) to complete a handsome and excellent little assortment.

It will be seen that our present reports under "What will the Harvest Be" are a corroboration of the probabilities predicted in the crop reports of the Rural New-Yorker of April 10. We cannot look upon these numbers otherwise than as of great value to the farmers and horticulturists of this, and, in fact, of other countries.

The hay crop of Long Island may be fairly estimated by the following: Mr. A. J. Hewlett has 40 acres, and has harvested 20 tons of hay. Mr. George T. Hewlett also has 40 acres, and has harvested 16 tons. The Rural Farm has 12 acres (mostly low-lands) of mowing ground, and has harvested 12 tons. Scarcely less than two tons per acre is the average of these fine lands in ordinary seasons.

Dr. Salmon, who is at present living near Asheville, N. C., writes us: "I see by the Rural you have been at Tryon Mountain. The thermal belt, so-called, is said to exist on all of our mountains at a certain hight; but more has been made of it in the neighborhood of Tryon than elsewhere, though the belt seems to me to be less accessible than in some other localities. Doctor McAboy is very enthusiastic in regard to it, however."

One of the regrets we are constantly feeling is that, in the growing season, we find it impossible to visit the many good friends of the Rural New-Yorker, who urge us to do so. One of these pressing invitations, just received, reads as follows: "You owe us a visit. We want you to pay the debt this week, and see us in the driest time that ever was. You want a respite—a change. So do we. You need not wait to notify us. Come unheralded, any day or hour most suitable. Conveyance from depot 25 cents per head. To depot, lodgings, meals, &c., free, *gratis*. Come quickly. Anything to tempt rain. Bring Mrs. Rural, *too!* Declinations out of order. No proxies! Languidly yours, W.

LATEST CROP REPORTS.

Pennsylvania.

(Continued from page 443.)

NATRONA, Allegheny Co.—The wheat crop here is the best we have had for many years—about the usual number of acres was sown. Some farmers have finished cutting. Wheat ripened about eight days earlier than ever known here. Oats are doing well. Corn and potatoes are doing finely. Plenty of rain. Grass is not more than half a crop—the dry weather in the Spring cut it short. No Army worms; a few Rose bugs and potato beetles. Hay sells for $12 per ton; oats, 40 cents per bushel; wheat, $1.10; corn, 50c.; potatoes 40c.; butter 12c. per pound; eggs 12 cents per doz.; apples and peaches scarce. S. S. F.

NESCOPECK, Luzerne Co.—I live in the west end of Luzerne county along the Susquehanna River. The land is a sandy loam in some places mixed with gravel, and the principal products are wheat, corn, oats, and potatoes. Rye is not a staple crop. No sorghum is raised hereabouts that I know of. No barley is grown. From one-fourth to one-third of the land is sown to wheat each year, and nearly as much to corn. The acreage this year is fully up to the average and the crop prospects are good. The drought has shortened the straw and has injured the crop in some places. Where the soil was sandy it stands well on the ground and the heads are looking well and it is beginning to turn for harvest. I think the wheat will be over an average crop, considering the dry weather we have had. Grass is not half a crop, and will not make half a crop of hay on account of dry weather. Oats will be short. My Ennobled oats are doing nicely. We have had a very dry season so far. The fruit crop is about middling. Apples will be good; but the other fruits are not below an average. S. M.

NEW CASTLE, Lawrence Co.—Wheat is above an average crop both in yield and acreage. Corn is a full average acreage, but is not bidding fair for a good crop. Of potatoes more than an average acreage was planted and they bid fair for a good crop if the farmers fight the bugs hard enough. Oats are an average; but they are short on account of drought. We are having nice showers now that will help them somewhat. Rye and barley are but little grown and of sorghum there is none at all. R. A.

PITTSBURGH, Allegheny Co.—The wheat crop is good, and so is rye; but the Spring grains, oats and barley, will be about an average, with short straw. Hay will be light but perhaps as good as last year. Corn, potatoes and all fall crops promise well. We are now having splendid showers. Sorghum is grown but very little in this part of the country. The acreage of all crops will com- We have had good crops of strawberries, raspp are very favorably with that of previous years. berries and cherries, but the crops of apples, pears and peaches will not be heavy. Apples, pears and cherries succeed here much better than peaches; those are frequently killed by Spring frosts. B. A. E.

WEST AUBURN, Susquehanna Co.—Grass is light; oats are good; potatoes are doing well. Wheat was badly winter-killed, but what is left looks well. Of apples and peaches there are none in the valley and only a few on the hills. A. R. B.

Maryland.

DAVIDSONVILLE, Ann Arundel Co.—Our wheat harvest is just finished. The grain is not nearly equal to the promise which the straw gave. Corn and potatoes look very well, Oats improving. No rye or barley grown. Our wheat is of the Fultz variety. Acreage of all the same as usual. No sorghum. Fruit very scarce, none raised except for home consumption. W.

INGLESIDE, Queen Anne Co.—Our wheat harvest is turning out very good. The rust hurt wheat somewhat, or we would have had an excellent crop. Corn is looking fine, and promises a very fine harvest. Potatoes, oats, and barley are not cultivated to any extent. Rye is very poor this year—very short, and not filled. The acreage of corn and wheat is about the same as in previous years. Fultz wheat is the leading variety. The corn is just a common Flint sort. No care seems to be taken to improve the variety. No sorghum is grown here. Fruit is not so promising this season as usual. There will not be more than half a crop. The early varieties of peaches have proved to be the most fruitful this season, but, as a general thing, the later sorts are the most successful.

C. H. J.

Ohio.

BARLOW, Washington Co.—Wheat is not very good here; but corn promises very well. Oats are getting along finely. Apples, too, are doing well, and peaches are abundant. Cherries and other small fruits are medium crops. T. L. O.

BUCKS, Columbiana Co.—Wheat is good—varieties, Fultz, Baltic, Blue Stem, Clawson, Michigan White, Red Rough-and-Ready; average, 20 bushels per acre. Corn very fair: varieties, Hackberry, Yellow, Gourd Seed; average, 60 bushels. Potatoes are looking very well; the bugs bothering us somewhat; all kinds are raised here; one man had 36 kinds at our county fair; average, 100 bushels. Oats are looking well; varieties, barley oats, yellow and white; average, 35 bushels. Of rye very little is raised. Barley is very light; but little is raised; average yield, 30 bushels per acre.

A. H. A.

CAPTINA, Belmont Co.—Wheat is two-thirds of a crop; Clawson and Fultz are the varieties mostly grown. Potatoes are good. Early Rose and Peachblows are most abundant. Corn is doing well. Sorghum small. The fruit prospect is good. A. T.

CHATHAM CENTRE, Medina Co.—The wheat crop is the best ever known in this part of the country. There is scarcely a poor piece to be seen. Corn is not as good as last year; worms troubled it some. Potatoes are looking fine. Hay is about two-thirds of a crop. There is plenty of fruit of all kinds. We had plenty of rain this spring.

WM. H. M.

CLARKSFIELD, Huron Co.—Wheat is the best crop for many years. Corn is small but healthy, and only wants good weather to make a good crop. Potatoes promise fairly. Oats look well and will be a good crop if we have sufficient rain. Of rye and barley only little is sown here. Our varieties of wheat are: Clawson, Fultz, Lancaster, Gipsey and Mediterranean; of corn, Hackberry, Kentucky white and several other sorts; of potatoes, Early Rose, Late Rose, Peachblow, Snowflake, Early Ohio and Vermont, Peerless and many other sorts; of oats and barley, White Dutch and common white. The acreage under wheat is 50 per cent. greater than our average of the past five years, and 30 per cent more than last year. Oats are about an average; potatoes the same; corn, ditto. Of sorghum very little is grown. For apples the prospect is unusually good. Peaches fair, though but few trees are cultivated. Grapes good. Our varieties of apples are: Baldwin, Tulpehocken (Fallawater), Gate, Seek-No-Further, Talman's Sweet, Russet Sweet, Golden Sweet, Northern Spy and others, all doing well here. But few pears are grown, yet they thrive and bear well. I have some Bartletts that bear every year. A. J. B.

CLYDE, Sandusky Co.—The wheat crop for 1880 is the largest we ever raised here, about 20 per cent. acreage more than last year and very good. Fultz wheat is taking the lead and Clawson next. Wheat is about half harvested. Other crops about an average, looking reasonably well. Potatoes are looking well, but bugs are plentiful, and we have to fight them. Sorghum is not raised very extensively here, though a great many farmers raise from one-quarter to one-half an acre. The statistics are taken by the assessors and will be published. The fruit crop will be good, but fruit trees have more enemies this season than ever before. Caterpillars are very numerous, and there appear to be two kinds of blight. Peach trees are not as healthy as they used to be; our cold winters are too hard on them.

J. L. A.

COLUMBIA, Franklin Co.—Wheat, the staple of the neighborhood, covers 20 per cent of arable land, and the acreage is larger than the average. The yield too is above an average. It is now being harvested in fine condition, and several days earlier than usual. The varieties are: Clawson, Egyptian Silver Chaff, Arnolds's Gold Medal, Golden Straw, Fultz and Velvet Chaff. Corn, average acreage; same per cent as wheat; prospect very good. Oats, rye and barley little grown. Potatoes cover one or two per cent of arable land, and promise a fine crop. Early Rose, Early Vermont and Snowflakes are the leading varieties. This is a poor section for fruit, but the promise is of more than an average crop. Not much sorghum grown. Farmers are watching the experiment of Le Duc and others. Meadows rather light. The whole outlook is for a season of more than average abundance. C. E. T.

FELICITY, Clermont Co.—Splendid growing weather now. Wheat crop only middling, about the same amount was sown as the year previous, but it is not so good. The most common varieties are White Mediterranean and Clawson. Oats are good though not more than half as much was sown as usual. The common white oats are generally used here. Rye is seldom grown except to turn under for the benefit of other crops. Barley not raised. Corn growing finely, which is quite necessary as it was generally planted late. The common yellow and white Dent are the varieties mostly grown as a field crop. Tobacco is the staple crop grown here. Fruit prospects are good, especially peaches. Sorghum is not raised as extensively as formerly. L. J. A.

LEWISVILLE, Monroe Co.—Wheat is nearly all cut, and we think it fully as good as last year, and about a quarter more was sowed. Blue Stem, Fultz, White Lake, White Amber and Michigan Mixture. All sorts are good this year. Corn is better than last year, with about the same acreage. Oats look extra well—about same acreage as last year. We think there will be at least double the number of bushels Potatoes will be at least four times as good as last year although only about the same area was planted. Plenty of rain and very few Colorado beetles. The varieties grown are: Early Rose, Twaddle's, White Peachblows and others. Of rye and barley scarcely any is raised here. Sorghum is grown here only for home consumption. The climate and soil suit it pretty well; but as yet we have no market for it. The apple crop is very good. The following are some of the best bearers and the hardiest:—Early Harvest, Malden's Blush, Baldwin, Roman Beauty, Russet, Fallawater. In fact, this county is very good for apples and pears, but very poor for peaches. We are having a wet summer, so we have a large crop of hay and fine pasture. Farmers are full of life; they talk of holding their wool for 50c. Money is very plentiful now. R. G.

MADISON, Lake Co.—Wheat above the average—Clawson,, Diehl, and Mediterranean. Corn fair—mostly dark yellow Dent. Potatoes very good—Peachblow, Early Rose, Snowflake, Peerless; acreage below an average. Rye, fair what there is of it, but little is sown. Barley, little if any sown. Oats a fair average yield; average acreage. No sugar cane is grown here. Prospects of fruit never better. Apples an immense crop of general selection. Pears a medium crop—Bartlett, Clapp's Favorite, Seckel, Duchesse, Flemish Beauty and others. Peaches a medium crop—Vandyke, Smock, Lord Palmerston, Comet, Crawford's Early and Late Richmond, and Galway, valuable in the order named. Plums, none saved except my own Lombard which are an immense crop. Damson, fair; Reine Claude, medium; Yellow Egg, medium; Washington, no crop. Currants, good crop—Versailles, best. Blackberries, immense — Taylor, best. Raspberries, good crop—Red Herstine best; Black Mammoth Cluster and Gregg. D. L.

NORWALK, Huron Co.—The acreage of wheat last fall was the largest ever sown in this county, and the stand never was better. Harvesting has commenced; the varieties principally grown here are Fultz, Clawson and Lancaster. Corn and oats are about an average. But little rye or barley is grown. The hay crop is light. Sugar cane has been more extensively planted this season than for several years. All kinds of fruit are abundant. C. A. M.

WILLOUGHBY, Lake Co.—A large acreage of wheat and good prospect of a big yield. The best variety is the Lancaster. Other cereals have the usual acreage and never looked more favorable. Variety of oats mostly common white (a few black). Sorghum is not cultivated. Fruit is abundant.

W. J. H.

WESTERN STATES.

Michigan.

BENTON HARBOR, Berrien Co.—Wheat looks well and we shall have over an average crop. Corn is also doing well. Sugar cane is not much grown here. Potatoes make good headway where the bugs have been killed. I tried London-purple and think it is far in advance of Paris-green. Early and Late Rose and Peachblows are mainly raised here. Rye and barley are not raised to any extent in this section. The apple crop will be good; the trees set very full, but the high winds have thinned them. Raspberries, blackberries and grapes will yield well. W. G.

BYRON, Shiawassee Co.—Wheat is looking well; acreage is larger than usual; Clawson is mostly grown, also some Fultz. Corn not looking very well, owing to so much rain; acreage is under the average from the same cause; yellow, eight-rowed, white Flint and different varieties of Dent are grown. Potatoes grown are chiefly Early and Late Rose; acreage less than usual. Oats are looking fair as usual. Rye is not much grown. Barley is looking well but not much is raised. Sugar cane is not grown at all. Prospects of fruit are good. Small fruits extra-good. Cherries in abundance. All kinds of apples, pears, cherries and peaches do well. H. C.

CLAYTON, Lenawee Co.—We have just had a much needed rain and everything is growing finely. We had a very wet Spring making corn and oats somewhat later. Of both there is rather more than the usual acreage. Oats, if nothing happens, will be a very heavy crop, and early-sown will crowd the wheat harvest closely. Of wheat, I should think, there is one-third more than usual. We shall begin to harvest it about July 5 generally, although on sandy land some have already commenced. For potatoes, the prospect is good; probably about enough have been planted for home consumption—Early and Late Rose; a few have the RURAL'S Beauty of Hebron. I raised about a peck from the one small specimen of this potato sent me last year, and this year have a fine patch. A few Peachblows are also raised here. Rye is grown but very little here and barley not at all. Very little sorghum is grown and what there is generally rather poor stuff. The prospects for fruit are very good. Small fruits are abundant and very cheap. Of apples there will probably be a large crop. The most successful kinds are the Winter varieties, the R. I. Greening, Baldwin, Northern Spy and Steele's Red Winter. Peaches look well, everything is loaded that is large enough to bear. The varieties: on sandy soils Clawson wheat is principally raised; on clay and loam soils Lancaster and Egyptian and a bald red wheat called here Patent Office wheat are the favorites. The yield here will be from 15 to 30 bushels per acre. A.L.V.

COLDWATER, Branch Co.—Wheat is an immense crop—20, 35, 40 bushels to the acre. Clawson and Centennial Club are the best sorts. Potatoes will be a large crop—Snowflake, Early Rose, Peachblows. Peaches and apples promise very large crops. The Baldwin, Spy and Wagener are the best bearers. Cherries, currants and small fruits are large crops. Hay is heavy. Oats splendid. No Sorghum of any account. Corn looks fine on high grounds. In Orland, Ind., the weevil is damaging the wheat very badly. W. L. S.

DOWAGIAC, Cass Co.—Wheat has a large growth of straw and a large acreage. Clawson is grown a good deal, but it is not liked for flour. Very little sorghum is sown. The Seneca Chief strawberry is very excellent where properly cared for. Apples are grown here quite extensively, and pears on a small scale, as they are troubled by blight.

W. M. F.

EAST DAYTON, Tuscola Co.—Wheat good; the harvest is six days earlier than usual. Corn better than usual. Oats are the best they have been in a number of years. Of barley, not much is sown in this locality. Clawson wheat is the variety mostly grown here. A large crop of apples is expected. Northern Spy, Baldwin and Canada Red, are the most profitable. More sorghum has been planted than usual this season. L. P.

GRAND RAPIDS, Kent Co.—Some Spring wheat was killed. On heavy land it is three-fifths of a crop; on light land a full crop. Corn is backward on account of wet weather. Potatoes are very promising. Oats and barley fair. Clawson wheat, Yellow Dent corn, Early and Late Rose potatoes, white oats, are the varieties, mostly grown. Comparative acreage, wheat, ten, corn six, potatoes one, oats four. Rye and barley very little. We are just starting the growing of Amber cane this year on a small scale. Apples and peaches will be heavy crops; pears an average one; grape, excellent; cherries, good—just ripening; currants light. Early vegetables were never better and good prices are secured. C. W. G.

GREENVILLE, Montcalm Co.—The wheat crop will be about three-quarters of a crop. Corn, potatoes, oats, rye and barley have the promise now of being full crops; and the acreage under them is about the same as usual, with the exception of wheat of which about one-third more was sown than last year. Sorghum is of no account here. I know of none near Greenville. The apple, peach, pear and plum trees are loaded this year, and promise fairly. All kinds pay well in this section; also small fruits. We have a good market. Hay is of nice quality. C. S.

HASTINGS, Barry Co.—Wheat in the aggregate is about the same as last year. The acreage is much greater, but the average yield much less. Many fields have been plowed up. Corn is uncertain at present. Many fields were not planted because of excessive rains. Oats and potatoes promise well at present. Of barley very little is raised, and of rye scarcely any. Probably half the wheat raised is Clawson. Considerable Fultz may be seen now ripening, a week earlier than any other kind. It will be sown largely this Fall. Fruit of all kinds is exceptionally abundant; trees already bending down. Of apples probably Northen Spy leads all other varieties. None, or very little sorghum is grown here. J. W. S.

ITHACA, Gratiot Co.—Wheat is badly damaged by the Winter and by the fly; though the acreage is larger than usual, there will be less than half a crop. Potatoes are good. Oats look well now but they are late. Corn is thrifty and a large acreage was put in. Rye is not grown here nor is barley. Sorghum is very little planted as yet. Fruit prospects are good for all kinds except currants and gooseberries, which the worms have destroyed. Please give a remedy for them. (Hellebore dusted on the bushes. Eds.) The hay crop is light. Wheat, corn, oats and hay are our staple crops.

R. I. S.

MUSKEGON, Muskegon Co.—In consequence of the abundance of Spring and early Summer rains upon our sandy soil, all crops show remarkable vigor and promise largely. All tree fruits are in abundance and, what rarely happens, this is the second year consecutively of abundance of fruits generally. I have never seen any sorghum here. In wheat, Clawson takes the lead; in potatoes, Early Rose and White Peachblows. Of rye and barley only a little is raised. S. B. P.

NORTH BRANCH, Lapeer Co.—As near as I can judge, wheat in this locality is about an average crop; on high land it is very good, but on low land it suffered very much from winter-killing. Many pieces were plowed up, but what is left is filling extra-well. I think the acreage is greater than usual. The varieties are chiefly Clawson, Fultz, White Rose, California White and Gold Medal Oats are doing well; in acreage about an average. Meadows are good, except clover on low land, which was badly heaved in the winter. Potatoes are doing exceedingly well, but the young beetles have put in their appearance in unusually large numbers during the past few days. Corn is late on account of wet weather at the time of planting; acreage small. We shall have fruit of all kinds in abundance. D. W. C.

THREE RIVERS, St. Joseph Co.—Wheat is good Corn— hard to tell, backward as yet. Potatoes oats, rye and barley are good. Fultz, Clawson Diehl and Mediterranean wheat are our varieties. Potatoes, Early Rose and Peachblows. Oats, white. Sorghum not extensively grown. Mint very extensively grown, one-half crop. Fruit—prospects are good especially for small fruits, not many apples or peaches. R.

Indiana.

CROWN POINT, Lake Co.—The acreage of wheat corn, potatoes and oats is about the same as last year. No barley or rye is grown to any exlent no sorghum is raised here. The fruit prospects are good for apples, pears and grapes D. K. P.

GLENWOOD, Rush Co.—The acreage of wheat is greater than last year; average yield per acre, 25 per cent. less. Corn, potatoes, oats, rye, and barley are average crops. Fultz and Michigan Amber are our chief varieties of wheat. Of corn Dent and Gourd Seed are the most commonly sown. The usual acreage has been given to all small crops, except wheat; that is 10 per cent. larger. Of sorghum very little is grown here. Apples will be half a crop. Pears and grapes are fine. Peaches light. W. R.

LOOGOOTEE, Martin Co.—Wheat is a very large crop—chiefly Fultz and Mediterranean. Corn looks well for the season; but not much is planted. Oats are good but rusted badly. No rye or barley raised here. Fruit of all kinds is abundant.

W. F. JR.

MOOREFIELD, Switzerland Co.—The wheat just cut is a fair crop—about one-fifth more than usua in acreage. The fly ruined some pieces. The Fultz and Swamp and some Egyptian are the kinds raised. Rye is not much cultivated here. Oats are good; the usual acreage was sown. Corn looks well—about the usual acreage. Early potatoes are good. Sugar cane is not much cultivated. Apples are scarce; that is, the winter variety. Peaches are plentiful where they are cultivated. The hay crop is good. Clover is just being cut. We have had a big rain every week or so. J. C.

NORTH WEBSTER, Kosciusko Co.—Wheat, corn and oats are good. Of rye and barley none is raised. Potatoes good. Sorghum, very little is raised. Fruits of all kinds better than average. Fultz and Clawson wheats are favorites. Acreage in wheat is 20 per cent. larger than ever before. The large white oats beat all the rest; acreage 10 per cent. over last year. Of potatoes the Early Rose is best for early and Cherry Red is best for late. T. J. W.

PURDUE UNIVERSITY, Lafayette Co.—The wheat harvest is in full blast. Quantity large; quality excellent. Yield heavier than in '79. Frequent rains make oats promise well. Corn is weedy; but coming forward rapidly. In river bottoms it has been destroyed by flood. Fultz wheat is the leading variety; 90 per cent of it is sown. The acreage of wheat and corn about equal. A small area of sorghum has been grown. Fruit prospects good. Small fruits give an excessive yield—strawberries raspberries, etc. Grapes and apples promise well.

C. L. I.

WINAMAC, Pulaski Co.—Wheat crop excellent, nearly all Fultz wheat. Corn poor; potatoes good; oats fair to good, but not much sown. No barley. Rye good. Acreage of wheat is large.

Corn average. Potatoes large. Sorghum reasonably large. Fruit abundant. L. J. N.

Illinois.

ASHLEY, Washington Co.—The wheat crop is harvested and the yield very good; the acreage is larger by one half than ever before. The varieties mostly sown are Red Sea, Fultz, Orange Red, Amber and Missouri Red. Red Sea and Fultz are the main crop. Corn is looking fine in spite of the late Spring, a fair acreage has been planted. The white varieties have the largest acreage. Oats will be better than last year; an average yield is expected; the acreage is somewhat smaller than in previous years. The variety mostly sown is the common black. Potatoes are good—yield above the average: the early varieties are now all ripe and are about a week later than last year the late kinds are growing fast. The sorts mostly planted are Early and Late Rose, Snowflake, Peerless, Russet and Peachblow. The Early Rose is the standard for early and the Peachblow for late. Rye and barley are not grown to any extent here. Sorghum is grown to a considerable extent; nearly every farmer raised a patch; it is not expected to make sugar in this vicinity this year, only molasses, this being a new and uncertain thing. The kinds mostly grown are the red and white Imphee. The prospects for all kinds of fruits are good except peaches which will be only one-half a crop. M. J. C.

BAILEYVILLE, Ogle Co.—The harvesting has begun here. Clover is light; Timothy a fair crop Rye is good. Winter wheat that escaped winter-killing is mostly good. Spring wheat is promising, but of it the acreage is less than usual. Oats and barley are about an average in condition and acreage. Corn, potatoes, etc., look well, and are growing fast. Fruit is tolerably plentiful. Cut-worms literally destroyed some fields of old clover last Spring, but the Chinch-bugs and Potato beetles have not done much damage this season, and the Army worm has not invaded this section. The weather was stormy and wet the first of June, but fair from the 4th to the 24th. It has since been showery, but seems to have cleared up now, and all are hoping for favorable weather during the harvest. W. B. D.

BALDWIN, Randolph Co.—The wheat harvest is over in this section, and farmers are now busy either stacking their wheat or plowing corn. The wheat crop, I think, is above the average; but it will not quite come up in yield to the crop of last year, although the increased acreage will most likely make the aggregate number of bushels raised nearly the same. Thrashing has commenced, and quite a number of farmers will thrash as early as possible, believing that wheat will be at as fair a price now as it will be for some time to come. Quite a large number of self-binders were sold in this section this season, which fact seems to be generally known among tramps, who are in the habit of coming here to work during harvest. Consequently there was a scarcity of hands; wages varied from $2 to $3 per day in different localities. Such wheat as I have been able to examine is good, well-filled grain, though hardly as fine as last year's. Oats are doing splendidly, they will be ready to harvest about July 8th; there was hardly as large an acreage as last year, the wet, late Spring, preventing sowing. Corn is doing finely, although most of it is very weedy; but most farmers are plowing it as fast as possible. Northeast from us, towards St. Clair county, and in the southeast part of St. Clair, the chinch bugs are damaging it considerably. I saw two fields that were very badly injured by them; and on another field from six to ten rows on the side next to a wheat field, were almost all killed. This pest we have not had for five or six years. Hay will not be as good as usual; in some places the Army worm has stripped it clean. Potatoes are very good. We will have a superabundance of fruit. Cherries were plentiful, but are now all gone. Blackberries are ripening, and all over the country we see the bushes loaded down with fruit. Altogether, this is a very good year, so far, for the farmer. We had a heavy wind storm and hard rain on June 26th that may damage wheat that is still shocked in the field. N. J. S.

BERLIN, Sangamon Co.—We are just in the midst of harvest here, and the wheat is very good. Having been badly winter-killed here last Winter, the yield per acre will not be great, but the larger area sown will more than aggregate the quantity of last year. The kinds of wheat most grown here are the Clawson and Fultz. The climate here not being adapted to Spring wheat, there is not much of it raised. I sowed five bushels of Eldorado Spring wheat last year—costing me $4.25 per bushel—and got 22 bushels from the five bushels sown. I am trying some this year, and think it will not do as well as last year. Corn is very promising and bids fair to make the largest yield we have had for a number of years. Corn and grass have four times the area of all the other crops grown here. Our cattle may be seen mowing a thousand hills—their harvest time lasting about six months. Oats and potatoes are growing sufficiently to supply the demands of the country. Of rye but very little is grown, while of barley there is none. A number of years ago the people about here got the sorghum craze badly, and went into the business deeply—erecting one-horse iron crushers for extracting the juice, and evaporating pans for the purpose of making it into sugar; but the nearest they ever got to that consummation was to make what they called molasses, and, for my life, I never could tell by the taste of it, whether it was sweet or sour. I once visited one of these sorghum mills, and at the time they were crushing cane that was so full of chinch bugs that I had to hold my nose to keep from inhaling the unpleasant odor arising from mashed bugs. The people about here have effectually got over their sorghum craze and will be very loath to embark in the business again. The apple crop is very light; some orchards are almost destitute of fruit. S. H.

BUNKER HILL, Macoupin Co.—We are rejoicing in an unprecedented degree of prosperity—in fact an agricultural boom. The oldest inhabitant retires in disgrace, for he never saw such a crop year, and he was here before the "Winter of the deep snow" (1830). The wheat harvest is well advanced and the yield is uncommonly large and the acreage fully 33 per cent. larger than in any previous year; I have heard of only one field being thrashed, which turned off 30 bushels per acre. Wages for harvest hands, owing to the great demand and scarcity of help, are $2.50 to $3. The oat crop is very good and will be in condition to harvest before the wheat can be stacked. Few were sown because of the great breadth in wheat. Corn is very promising—never better. Potatoes are first-class. Rye is only sown for pasture, but it has produced a fine growth. Barley, none raised. Sorghum receives little attention, being crowded out by the more important crops. Meadows are rather light, owing to dry weather in early spring. Pasture fine. Cattle fat. Fruit of every kind, save apples, in great abundance and of excellent quality, and it would seem that the long-deferred hopes of the granger were about to be realized. This will apply to Macoupin and the six adjoining counties. W. W. H.

CHAMPAIGN, Champaign Co.—No crop far enough along to be safely reported upon, except Winter wheat. That is very good, with an acreage double that of last year—yield per acre between 15 and 20 bushels. Harvest under full blast now. Many varieties are cultivated, Walker, Red Chaff, Mediterranean, Alabama, and the Fultz and Clawson are rapidly coming in. Sorghum still a small crop, though every farmer has a patch to make his own sirup—Amber Cane generally. All fruits are good, but apples bloomed large and the fruit dropped. This on the east side of the State, on west the apple crop is large. B. F. J.

FAIRFIELD, Wayne Co.—Wheat is good, mostly Swamp and Fultz. Oats are a fair crop. Potatoes are fine. Of rye and barley but little is grown. Some sorghum cane is grown here. E. A. R.

HILLSBOROUGH, Montgomery Co.—We have finished cutting wheat. It is good in yield and quality. Oats ditto. Potatoes never looked better; all kinds of fruit are abundant. Farmers in this county have this year bought self-binders, mowers, plows and other agricultural utensils to the value of fully $30,000. G.

HUGO, Douglas Co.—Wheat crop bountiful, mostly of Fultz and Mediterranean, and some Clawson. Help can scarcely be secured to care for the crops. Corn was never so clean and nice. Potatoes very promising now; there are some bugs, they are not numerous, however. Oats moderate. Everybody raises sugar cane here, and the screech of the two-horse iron mills resounds day and night all over the land in the Fall. Fruit will be plentiful. Peach trees are breaking where not cared for. Apples very promising. Cherries plentiful; small fruit in abundance. Ben Davis, Winesap, Genet lead the apple list here; the second named bears youngest of all. Oh, we'll all have lots to eat and plenty of money this Fall if we work and economize. Meadows fine. Need rain on corn and pasture lands. A. C. W.

JOSLYN, Rock Island Co.—The acreage of wheat is large, but the crop is very poor; it will not average ten bushels per acre—mostly "Odessa." Corn is our stand-by, and looks well. Farmers expect 50 bushels per acre. Oats are very good. Rye is grown to quite a considerable extent, and is very good. I know of no barley in this locality. There is but a small acreage of sorghum, and it looks inferior. Small fruits, such as cherries, raspberries (Black Caps), grapes (Concord and Clinton), currants and gooseberries are good. Apples—Red Astrachan, Early June, Monarch, Snow, Bellflower, Romanite, Winesap, Ben Davis, Pearmain, Willow Twig, and many other varieties, are rather too full for the good of the fruit and also of the trees. J. C. A.

ONARGA, Iriquois Co.—This is not a wheat-growing county. Not much oats raised. No barley. Not much rye. Potatoes rotted badly in consequence of the cold, wet Spring. The varieties mostly raised are Early Rose and Peachblows. There is about the usual acreage of each in our locality. Not much sorghum is raised, instead a large quantity of flax is grown. The prospect is fair for an average crop of fruits. Small fruits are raised quite largely in this place. J. B. C.

PEORIA, Peoria Co.—The wheat crop looks well. The acreage sown is at least 30 per cent. more than last year. The farmers are all busily engaged in harvesting their rye. We have ours all in shock, and consider it simply first-class. Corn never looked better. Oats look well. We have had no drought in this locality. My Ennobled oats look well, except that they are lodged somewhat. They are now about three feet 10 inches high, and just showing heads. My Ovoid mangels are doing well, so also are my pentstemons, aquilegia, Iris Lævigata, cow-peas and willows. The apple crop is good. Grapes and small fruits are abundant. Peaches look well wherever there are trees. I have not heard of the Army worm in this section. C. P. S.

ROCK FALLS, Whitesides Co.—Winter wheat is an entire failure. Spring wheat is injured by rust and chinch bugs, and will be one-third of a crop. Rye good. Corn is at present very promising, but is injured some on low lands by wet. Oats good, will average 40 bushels per acre. Barley is fair but not much grown. Potatoes are grown only for home consumption. Taking 100 for standard, corn will average in acreage, 75; wheat, five; barley and rye, five; oats, 15. Sorghum is grown to some extent and is likely to be more so in the future. Early Amber variety most satisfactory. J. W.

ROSCOE, Winnebago Co.—Wheat looks good; only little, however, is grown, but that little is double as much as last year. The corn prospect never was better in the last 10 years. The acreage is the same as last year. Potatoes look well but are buggy, or will be, if not looked after. Only a few small patches were planted. Oats were never better. Rye is a light crop. But little barley is grown. Sorghum is planted mostly for home consumption. It makes a good sirup. The census-taker said he never saw crops of all kinds look better than they do this season. Apples are plentiful; cherries abundant. I have never seen currants more plentiful than this year. Grass is light. The dry weather in the Spring hurt meadow land very much. H. G.

Wisconsin.

AUBURNDALE, Wood Co.—I am on the line of the Wisconsin Central R. R. a new country sparsely settled. Our first settlers located here five years ago; the land is good and a good market is at our doors; that is, the lumbermen buy all that we can raise to sell at fair prices. Our crops looked well until June 14th, when it commenced raining, and such a flood has never been witnessed before in Wisconsin by "the Oldest Inhabitant." In the northern part of the State potatoes that were not above ground were all drowned out; about half of the crops was destroyed, but they will be replanted and have time yet to make a good crop. Hay looks better than in any year since our settlement began; but I understand that hay is very poor in the southern part of the State. We have not got to raising any wheat yet. Oats are doing well, but not much is grown in this vicinity. We do not attempt to raise corn—the season is too short. Of course there are no orchards. As settlers are coming in very fast I hope in a few years to be able to give a fuller report. J. L.

CHILTON, Calumet Co.—To judge from present indications the wheat harvest in this immediate vicinity will be more than an average one. Winter wheat that lived through, will be a splendid crop. Oats and barley are also looking well. Hay is slight and the acreage small. Clover was nearly all winter-killed. Chinch bugs have made their appearance, but no damage has been done yet, and we hope the abundant rains we are now having will destroy young bugs and eggs. Fruit of all kinds grown in this latitude will be more abundant than ever before. O. G. O.

CHIPPEWA FALLS, Chippewa Co.—Early sown grain looks exceedingly fine. I never saw it look better at this time of the year. About two-thirds of the cultivated land is sown to wheat, and the remainder largely to oats. Corn is backward, but of good color. Sorghum is very little grown. Small fruits are exceedingly fine. The Duchess of Oldenburg has proven the most hardy apple. C. E. W.

EAST TROY, Walworth Co.—It has been very wet here most of the time for about four weeks, which delays work very much. We cannot work the corn one-half of the time, so that all of the work is coming together—corn cultivating, haying, and harvesting. Winter wheat looks splendid, and bids fair to be a heavy crop. Spring wheat and oats are good. Corn that has been kept clean is very large. The hay crop will be fair, if we can have good weather soon to make it. Potatoes are looking well. This afternoon we have had a very heavy rain and wind, that knocked down the grain very badly. H. A. T.

FALL CITY, Dunn County.—Winter wheat was badly winter-killed; not much is raised here. There is a large acreage of Spring wheat, and it is very promising. Corn was planted late, but is growing finely, and promises an abundant crop. Hay crop light. Clover is all winter-killed. Potoes very good; plenty of beetles to contend with. The fruit crop is promising. The kinds of apples raised here are Transcendant and Russian Crab. The standard apples are not raised here. Wild fruit, such as plums, grapes, &c., are abundant. There have been some very heavy rains here this season, which have done great damage to the crops on the Chippewa River bottoms. The river was never known to be so high; the lumbering business has been seriously injured. The weather at present is warm, with fine showers. Crops are growing finely. G. W. P.

LOUISVILLE, Dunn Co.—Crops of all kinds are looking very well, and will probably be about an average yield if nothing happens. We are having a dry spell at present which, if it continues, will be hard on small grain. We had a big flood which drowned out several thousand acres of crops on low lands.

MONDOVI, Buffalo Co.—The harvest bids fair to be good. The varieties of wheat are Fife and Odessa; of oats, the common white and a few Norways. Barley (the four-rowed) is looking splendid. Of potatoes we raise the Early Rose and the Snowflake. Of corn, the Dent and Flint. Neither is good, owing to a cold spell about planting time. The acreage of these is about the same as last year. Minnesota Early Amber cane looks well; acreage double that of last year. Our apples are Crabs and a few others, such as the Duchess of Oldenburgh; all are bearing well. Small fruits are as good as usual. R. F.

OCONOMOWOC, Waukesha Co.—Winter wheat is looking very fine; the acreage is large. The white variety stood the Winter best. Spring wheat heavy, acreage small on account of so much Winter wheat being sowed. Oats very heavy; acreage medium. Rye good; acreage small. Barley very good; acreage medium. If we should have a hard storm all grain would be likely to lodge. Corn is small, and on account of rain is very weedy. Sorghum is being planted here for the first time this year. W. O. L.

ORION, Richland Co.—Wheat is ripening fast, but is not more than two-thirds of a crop. Spring wheat is very poor and not much raised. Corn was never better; it is of a dark green color and a good stand. A very large acreage was planted. Potatoes have good prospects for a large crop. Hay is a heavy crop on the uplands. All the Wisconsin River bottom hay is ruined with high water. Fruit crop, except grapes, is light. J. H. F.

RACINE, Racine Co.—If we have good dry cool weather for a while all the grain crops will be large in Wisconsin. There is a large increase of acreage. Everything now looks fine. Potatoes are excellent, with but few bugs; but little sorghum is raised in this State; it is one of the "has beens." The farmers, in this section of the country, feel proud of the prospects. A. P. D.

SALEM, Kenosha Co.—The heavy rains last month have injured the grass on the low land very much. Rye, winter wheat and clover were winter-killed badly. Oats, Spring wheat and flax are heavy. A larger amount of corn and potatoes has been planted than usual; the kinds of potatoes grown most are Early Rose, Brook's Seedling and Shaker Russets. Barley and sugar cane are not raised very much. Cherries and raspberries have ripened early this season. Apples will be a light crop. S. J. C.

WEST SALEM, La Crosse Co.—Wheat—mostly Winter Odessa—early-sowed, good but thin; late-sowed all killed. Spring wheat has a fair prospect at present. Corn is growing finely—mostly yellow and white Dent. Potatoes look well; as many varieties almost as there are farmers: there are, perhaps, more of the Early Ohio and Early Rose than of any other. Oats are thrifty, all white. No rye in our neighborhood. Very little barley, but what there is looks well. More corn and oats than last year; potatoes about the same. Rye and barley are seldom raised. Very little sorghum is planted, no more than enough for home use. No very great prospect for fruit; the ends of the limbs are dying considerably. The Transcendent and wild crab prove most successful. We have had two splendid weeks for haying. M. L. H.

Minnesota.

BLOOMINGTON, Hennepin Co.—The wheat crop looks good; it is just heading. It is stout in straw but will only be an average yield from present appearances. Corn is backward for the season. Oats look splendid; we expect above an average crop. Of rye and barley very little is raised here. Potatoes are good. The variety of wheat chiefly raised is the Scotch Fife. Oats, common white and black. Corn medium yellow Dent. The acreage is about the same as in previous years. Of Minnesota Amber cane very little is raised. The general prospect of fruit is good. The apples that have proven the hardiest are the Siberian Crab Duchess of Oldenburgh, and Wealthy. Only the hardiest kinds will stand this climate. Small fruits of the hardy varieties do well R. L. B.

KASOTA, La Sueur Co.—The present prospect for an abundant harvest of wheat and corn is No. 1—Minnesota Fife wheat and Early Dent corn. The acreage of both is increased from last year. Potatoes will be a light crop—beetles too thick. Northern sugar cane crop in township was, in 1879, 30 acres; in 1880, 48 acres. The acreage of oats has decreased from 1879—fair prospect. The amount of rye and barley raised is very small. The prospect for fruit is *extremely* poor. All kinds of apple trees seem to be dying. R. O. T.

MARSHALL, Lyon Co.—In this part of the State crops are just booming. Barley is pretty well headed out and very fine. Oats are just beginning to head out and promise a large yield. Wheat has not headed any yet, but is about as thick as it can stand on the ground. Corn is somewhat backward, but, in these parts, it never does very much till July and August. We have had plenty of rain, and now are enjoying exceedingly fine growing weather. If we can manage to keep free from hail till after harvest, we shall undoubtedly have an unusually large crop. North of us, along the Minnesota River, a few days ago, there was a severe hail storm, which completely ruined some crops, but did not extend far. C. M. Y.

Iowa.

DES MOINES, Polk Co.—I have been traveling over a portion of this county for the past two weeks and I never saw better prospects for crops of all kinds. Corn is immense; the area is larger than usual. Wheat, oats and barley promise good crops. No chinch bug. Potatoes promise a fine crop. W. S. S.

RUSSELL, Lucas Co.—The Winter wheat was all killed, and of Spring wheat but little is sown, and that is considerably injured by dry weather. Chinch bugs are plentiful, and will injure the yield so that not more than half a crop will be realized. Oats bid fair for a large yield; the acreage is larger by one-half than ever before. Corn never looked better at this time of the season than now; acreage fully up to former years. Grass will be lighter than usual, owing to dry weather in May. Fruit is badly injured by late frosts; about one-fourth of a crop. Potatoes bid fair for a good crop. Weather is too dry for all vegetation. A. S. B.

Kansas.

CLAY CENTER, Clay Co.—Wheat which five weeks ago it was feared would be a total failure on account of the drought, is coming in well. The rains of the latter part of May saved it. There was a larger acreage sown last fall than ever before. It is chiefly May and Fultz, the latter was most injured by the drought. Corn and potatoes bid fair to be good crops, though the former is being damaged in some localities by the chinch bug. White and yellow Dent are the kinds generally grown here. Potatoes our farmers have planted on a larger scale than heretofore. Sorghum is grown to some extent. There are several mills for the manufacture of the sirup in the county. There are not many fruit trees in bearing here, as yet, except peaches and the smaller fruits. Peaches were killed by the Spring frosts, while the latter were injured by the drought. A. E. S.

CLOVERDALE, Chautauqua Co.—Wheat is about one-half a crop. The varieties generally are Red May and Walker. Corn prospects are good where the bugs have not destroyed it. The acreage is larger than last year. Early potatoes are almost a failure. Late ones look fine. Oats and rye are failures. Barley and sugar-cane are not much grown. Peach prospect good; all kinds do well. Of apples only few trees are in bearing. Of grapes Concord is the standard. It has been ex-

tremely dry this Spring. Corn and wheat are the principal crops. B. F. T.

ELLIS, Ellis Co.—Wheat is a failure here, but few pieces will be cut. The variety sown was Red May. Acreage in corn is small—the Army worm is eating it. There have been no potatoes or any vegetables grown here for the last two years on account of drought. The gardens are all burnt up. No rye or barley grown. A few have planted sorghum but it is not planted to any extent yet. There is a large acreage under rice corn. No fruit grown here yet, the country is too new. J. B.

FREDONIA, Wilson Co.—Wheat is mostly in the stack; some that has been thrashed turns out poor. Oats are short. Potatoes are poor. It has been very dry all the season until June 25, when we had a big rain. Then the chinch bugs have been bad; they took the oats the RURAL sent me. There is a pretty good prospect for corn now, although we have mostly a poor stand on account of the dry weather. I. S. L.

FREEDOM, Butler Co.—The crop prospects are good. Wheat is all harvested in a good, dry time and is a fair crop. Fultz takes the lead in yield Gold Drop coming next. Corn looks fine and is commencing to tassel. Some chinch bugs are working in it, but we have had two nice showers which checked them somewhat. I am growing on trial, King Phillip, Chester County Mammoth, Kansas Yellow Dent, Brown's Improved Yellow Dent, White-flower Dent and Blount's White Prolific, besides five kinds of sweet corn. Blount's and Brown's are taking the lead. Oats are a medium crop. My Ennobled oats are splendid. Kinver's Globe mangels are doing wonders. I have one Cuthbert raspberry alive after all the bad luck imaginable. I find this a hard climate in which to germinate small seeds, on account of the abundance of weeds that make their appearance on the approach of the first warm day. There is no market to speak of: butter, 12½ cents; eggs, 12½ cents; wheat, 80 cents; corn, 25 cents; potatoes, $1. All green stuff sells high and is scarce. Peas, $2.50 per bushel; beans, $2 to $2.50; corn, 25 cents per dozen ears. Peaches are ripe, but the crop is small, having been cut off by hard and late frosts. On the whole we can say, "Bully for Kansas!" W. J. B.

LARNED, Pawnee Co.—Our wheat harvest is very short; there will not be over 50,000 bushels of wheat harvested in the county, and this will not average one bushel per acre. Corn is good except where the worm has eaten it up. Rice corn is good and a big acreage planted. No oats or rye. Potatoes look well; bugs are trying to eat them all up. No fruit of any kind; wild plums were killed by late frosts. Over 1,000 acres of sorghum planted (Amber cane), and sugar works will be erected here. Lots of rain in the past two weeks. Lots of people leaving to get work. S. S. D.

MCPHERSON CENTRE, McPherson Co.. The wheat in this county will make a good half crop. The berry is somewhat shriveled. The corn will make an average crop if we get two or three showers at the right time. The potato crop will be light. Hay (prairie hay is what we depend upon) will be short and thin. We have had a very dry season up to this date. C. D. R.

PARSONS, Labette Co.—The days are on the wane The wheat harvest is reaped, and in shock. The weather till this has been propitious but now we are having slow but continuous rains. They are quite desirable for everything but the unstacked wheat. The season in many portions of the West is very similar to that of '69—one of the wettest seasons known; but in that season Kansas produced the greatest number of bushels of wheat, corn and oats per acre of any of the States in the Union—this, by reason of sandy loams and natural drainage. Our season, though dry on the whole, has been cool. The thermometer has not been above 90 deg. and blankets and a comforter are required at night. Corn is coming into tassel and should the present rain end now, and we get two inches more in 25 days, we shall have one of the best corn crops ever raised in spite of the chinch bugs which have been operating in isolated places. Vegetables and fruits are more than an average in quantity and quality. "The Osage Ceded Lands," 50 miles by 30, on which we are located, were first settled in 1867, so that this is almost our first season for the bearing of the apple trees, which promise well for quantity and quality. Grass promises excellently. Some new wheat has been received here and sold at 75c. The crop is good. I have to report a matter of precocity and productiveness on the poultry department of this ranche. The good wife who superintends the department reports that in September last a hen produced a brood of chickens, some of which commenced laying before New-Year's. One of the brood laid 25 consecutive days. Another one hatched chickens and one of these chickens has on June 26, laid the twelfth egg in 12 consecutive days. The brood is of a mixed kind, but docile and healthy. J. B.

Nebraska.

BROWNVILLE, Nemaha Co.—The Spring was unusually dry, and winds have prevailed to an extent before unknown. For these reasons the farmer, as a rule, complains. And yet, "all in all," there is really no good cause for complaint. Take all the crops—all the farm products—and there is more than an average. On account of the dry season referred to, small grain is what we call "short"—about a quarter short as compared with average seasons. Corn could not give a better promise than at date of writing. The acreage of all crops is greater this season than ever before. Sorghum is becoming quite a factor in our agricultural products, and will become more so the more that is known of it, and the more it is experimented with. Apples are good. Many were blown off the trees two weeks ago. No peaches this season worth naming. Small fruits are all excellent. The grape crop will be very large and fine, where the vines have been cared for, and kept in shape. Farmers feed their corn principally, and put it into market in cattle and hogs. This mode of disposing of this product "pays" much better than any other. Railroads, for a time back, have not been able to furnish cars as required to put our products into market, particularly live stock. We have shipped as high as twenty-six car-loads of cattle from this place in one day. R. W. F.

CYCLONE, Polk Co.—Wheat will run from 10 to 20 bushels per acre where it is a good stand. Some few fields will not go over five bushels per acre, and some fields will not be cut. We had no rain until June 5th that did any good. Corn is good, it averages from 40 to 75 bushels per acre. Potatoes are good at present; there are new potatoes on the market, the striped bug did them some harm before the rain. They will average 275 bushels per acre. Oats are almost a failure: many fields will not be cut. When good they will yield from 40 to 90 bushels per acre. Of barley but little is sown—fair to good; 30 to 60 bushels per acre. Rye, short—from 12 to 20 bushels per acre. Of wheat we grow the Hudson River, China Tea, Scotch Fife, Blue Imperial, and Odessa. Of oats the common white and black. Of potatoes, Early Rose, Peachblow, Peerless and Russet. Very little fruit grown here; fruit does well here. Sorghum will not yield largely. Crop prospects are good at present, and people are in good spirits. E. C.

DE SOTO, Washington Co.—Wheat, oats, rye and barley will not make more than half crops this year; but what there is will be of good quality—the grain is well headed and the berry plump. Our corn crop at present is very promising and will be a full crop. Corn in the field stands over five feet high planted on the 22d of April. Corn planted the first and second week of May is from three to four feet high and has a fine dark green color. The potato is a very promising crop. We shall have early potatoes fit for market by the first of July. Sorghum has been cultivated in this county for the past ten years. For the last year the Amber cane is taking the place of other cane seeds. The prospect of the fruit crop this year is not good. We shall have not more than half a crop. The varieties of grain grown here are:—Wheat, White Hamburgh, Odessa, Golden Drop, Scotch Fife, Mammoth, Canada Club, China Tea, Italian. Oats—English white and black, German white oats, Scotch Potato oats. Barley—four-rowed and common. Rye—Winter rye. Potatoes—Early Rose, Snowdrop, Peachblow, Victor, Peerless. Peaches—Dunmore Seedling, Burbank Seedling. Apples—Red Astrachan, Red June, Malden's Blush, Rambo, Rawle's Genet, Winesap, Bon Davis, Willow Twig, Jonathan, Grimo's Golden. T. MCC.

KEENE, Kearney Co.—The wheat crop of Southern Nebraska will not be more than one-third of the crop. Grass-wheat is the principal kind. There are also the Odessa, Lost Nation, White Italian and other sorts too numerous to mention. Corn bids fair to be a full crop; of oats but little is raised here. Barley is very short. Potatoes are looking well. Rye is a failure. Sugar-cane is raised somewhat extensively. There are no bearing fruit trees here yet. A. H. B.

LINCOLN, Lancaster Co.—The harvest of wheat is rather below the average. Rye, oats and barley, very little sown, and that light. Corn is about the average. Potatoes are about an average crop. Acreage of wheat, 10 per cent. below average, and of corn 25 per cent. above. Varieties of wheat, Grass and China Tea; Corn, white and yellow Dent. Sorghum is cultivated to a limited extent. Fruit is not much raised in this vicinity yet. S. B. P.

PAPILLION, Sarpy Co.—This Spring has been the driest for years. Small grains suffered badly, but the late rains have revived them so we shall have the two-thirds of a crop. Not much Winter wheat is grown here. Of Spring wheat the varieties are Golden Drop, Grass and Scotch Club. The acreage of small grains is small; that of corn is larger than usual. Corn looks very promising, although backward. I never saw fruit trees bloom so heavily; but the dry Spring has caused the fruit to fall off. There is enough left, however, for a good crop of apples. There are not many peaches on account of early frosts, nor are there many currants or gooseberries. Almost all kinds of fruit do well here except pears, which are subject to blight. Currants, too, do not bear well. Amber sugar cane is grown with good success for home use. Flax does well, and is grown for the seed only. Farmers are losing many hogs by hog cholera. Fat hogs are almost all sold. Prices: hogs, live $3.40; corn per bushel, 20c.; wheat, 80 to 90c; oats, 25; potatoes, 40; butter, 15c: eggs, 15c. E. E. S.

PLUM CREEK, Dawson Co.—There will be no harvest of small grain in this county, owing to the long-continued drought. I do not know of one single acre that will be cut, nearly all has been plowed and planted to corn; the rest is being pastured; the sort sown was Grass wheat. Corn will be about half a crop, if we have rain from now on. We cannot tell about potatoes yet; but if we get one potato to each bug there will be a big crop. There is considerable talk about Early Amber cane and some small lots have been planted, but there is no mill here to work it. I think this a good locality for fruits, but there has been very little attempt to plant any as yet. Of the plowed ground corn has about 50 per cent.; potatoes, two; barley, 10; wheat, 25; oats, 15. Wheat yields per acre from 20 to 30 bushels in a good season; corn, 75 to 100; rye, 50 to 75; barley, 40 to 50; potatoes, about 200. I have been here but two years and have not got in shape to do much in farming yet, owing to some hurry. W. W.

SEWARD, Seward Co.—The harvest of wheat, corn and potatoes is promising. Oats and barley are failures on account of drought early in the Spring. Where wheat was put in deep it stood the drought and looks well, but where it was not the ground was plowed up and planted with corn, so that the acreage of wheat is small, while that of corn is very large. Of wheat we have the Odessa, Sandal, Sea Island, etc. Corn is highly mixed. Among potatoes we still hold to the Early Rose and Peachblow. Sorghum is not raised to a very great extent; but does well here. In regard to fruit, we shall have little or none this year. This county has had a hard struggle to get orchards to thrive so as to bear fruit. The top grows fast enough, but the sun and hot south winds crack the bark and thus spoil the tree. The Russian and hardy fruits of that kind are mostly called for for growing trees. Snyder blackberries are prolific here. Grapes of all kinds do well; the Concord takes the precedence. P. M. C.

UNADILLA, Otoe Co.—The outlook for a harvest is good in this part of Nebraska. I have never seen corn looking so well. Potatoes are good. Oats are looking fine where they were sown thick enough. Rye is excellent, but, owing to the open and dry Winter, all Fall-sown grain is very thin. Wheat is a failure in some localities, but we shall have enough for home use. Barley is an entire failure. Sugar-cane is grown to some extent for sirup. Of corn there are ten acres to one of other grains. Fruit will not be a large crop, owing to dry and hard winds. A. J. F.

Colorado.

HUSTED, El Paso Co.—Wheat and corn are not grown here; potatoes very seldom. Oats, rye, and barley ditto. Various varieties of each are successfully raised in favorable seasons. No sorghum is raised in this county. Fruit—that is to say, canned fruit—we have in abundance. We have all kinds that are canned in America. J. E. R.

TEXAS CREEK, Fremont Co.—This southern part of Colorado is better adapted to the raising of stock than farming; but very little farming is done, and that only where water can be had for irrigation. Very little fruit is raised; but it does well in some parts where it has been tried. Crops of all kinds promise an average yield where there is water enough to irrigate. Wheat, corn, oats, barley and potatoes are grown here, but there is no rye or sugar cane in this locality. On Texas Creek and its tributaries there are not over 100 acres of wheat and about the same of oats; of barley ten acres, and probably 30 to 40 acres of potatoes. The acreage of hay is three times that of all the grains. H. M. L.

Missouri.

AVILLA, Jasper Co.—Wheat will average 25 bushels per acre; it is well headed and filled out, the grain being fuller and plumper than any I have ever seen. I have 75 acres that will yield 40 bushels per acre, and a neighbor has 1,100 acres from which he expects 23,000 bushels. Corn is tasseled and in fine condition; the crop is so heavy that corn will sell here for 12½ cents per bushel in Fall. Flax is a large crop here and is excellent. Potatoes are fine. All kinds of fruit are splendid, the trees are breaking down under their loads, and the market is overstocked. Oats are as fine as I have ever seen. Vegetable gardens are in prime condition. All sorts of stock are well. A. E. B.

COLUMBIA, Boone Co.—Wheat harvest nearly through. Both yield and acreage nearly 10 per cent. above those of 1879. Fultz, Smooth Mediterranean, Clawson and Zimmerman are the leading varieties. Oats promise an unusually large yield, but the acreage is small. Black Egyptian and Rust-proof are the principal sorts. The corn prospect is fine, but it is too early to predict the yield. Evans, a large, yellow Dent variety, is the leading sort grown here. Potatoes are unusually good; but are grown only for home use. Early Vermont, Early Rose and Beauty of Hebron are the leading sorts. Sorghum is grown very little at present, but the agricultural college, located in this county, expects to erect steam works for sugar making next year. Apples will give a heavy crop; peaches, half a crop; pears, a full one; but there are very few trees. Grapes are very full and healthy. Grapes and apples are our leading fruit crops. S. M. T.

FULTON, Callaway Co. Wheat all harvested and mostly in stack; the crop is good, some fields will make 30 bushels per acre—Fultz is most common. I raised a good crop of Jennings. Oat crop is heavy. Hay crop heavy, the best for several years. Prospects for corn good. Pastures good. Seasonable rains. J. L. S.

GLASSVILLE, Caldwell Co.—Very little wheat grown here. Corn is the principal crop and it never looked better. It will average, about 40 bushels per acre. Potatoes will be a light yield, it is too dry. Of oats, rye and barley there is none; they are a failure this season. Nearly every farmer grows from two to four acres of sorghum. It does well. Peaches do well. I have Amsden and Alexandria ripening in my nursery now. We grow all the leading varieties. Of apples, Missouri Pippin, Ben Davis, and Jannet are the leading varieties for Winter, and Early Harvest, Red June, Golden Sweet, and Red Astrachan for Summer. A. J. D.

SPRINGFIELD, Greene Co.—Greene county has never before had so much wheat to harvest as this time, and it is uniformly good. The weather for harvest was never better—fair and cool. Nor was it ever better utilized. The wheat all ripened so nearly at the same time that all available help was in requisition. Never before have we heard such agricultural music as filled our ears from busy reapers, of almost everybody's make, running like things of life in everybody's fields, and some of them ran all night several times by the clear light of a full moon. Even good Luna smiled upon the harvest. It is over, and now the rain comes just as we need it for our corn, for a full crop of which the prospect is really good. Oats, now nearly mature, are also very good. Pastures have held up finely and are now to be renewed and brightened up by the rains. Fruit is abundant. Amsden peaches are ripe; so are Red June and Prince's Harvest apples and Doyenne d'Ete pears. J. O. T.

SOUTHERN STATES.

Virginia.

DUNNSVILLE, Essex Co.—There is not over half a crop of wheat, but the quality is good. Crop of corn is looking well, but it is late. Fruit crop rather poor. Gardens are very poor, Pasturage lean, clover very short. No hay. Wire grass the only crop that stood the excessive drought. We have had a little rain in June, none in April or May. O. B.

NEW MARKET, Shenandoah Co.—We have had a dry season until the last two weeks. Now it is very seasonable for growing crops. Harvest is over; farmers are thrashing. Wheat is well filled, and turns out well, except in places where the Army worm was at work. The hay crop is not very good, owing to drought. Vegetables are plentiful. Small fruit ditto. Apples, etc. will be enough for home use. Wheat is worth 96c. to $1; corn, 60 to 65c; rye, 60c; oats, 35 to 40c; bacon, 5 to 8c; chickens, 15c each; butter, 12 to 12½c; eggs 10c; potatoes, 50c. We have the best corn growing weather, alternate rain and sunshine, all this week. Farmers are busy and times lively. Early potatoes are an average crop R. I. W.

SWOOPE'S DEPOT, Augusta Co.—Wheat in this section is harvested, and is very inferior to last year's crop, being damaged greatly by late frosts. Fultz seems to have suffered most. Some fields of that sort will not produce over a third of a crop All is more or less shriveled—oats show badly Late rains have brought out grass considerably. Corn promises fairly. S. C. B.

West Virginia.

WEST LIBERTY, Ohio Co.—Wheat never was so good in the memory of the "oldest citizen"—variety principally Fultz; acreage 40 per cent. more than last year. Of rye not much is grown. Barley, acreage small, but yield good. Oats, average in yield and acreage. Corn, acreage 10 per cent. of increase; prospect very fine. Potatoes, prospect good to very good. Meadows, yield not exceeding 75 per cent. Apples, a fine crop; pears nearly a failure; peaches abundant; grapes, the largest crop ever known here; cherries, plums and quinces abundant, and all small fruits plentiful. Of 38 varieties of grapes I prefer Rodgers's No. 9. All sorts of apples do well. Of 18 varieties of pears I prefer Buffum, Vicar of Winkfield and Belle Lucrative for bearing and quality. Sorghum not grown much. M. M. D.

Kentucky.

OWENTON, Owen Co.—Wheat, grain good; yield, 20 per cent. below average. Corn is fine. Potatoes, large yield for early, late not matured. Oats, rye and barley good. Varieties of wheat, Fultz and Blue Stem. Swamp wheat was formely most popular. Early Rose and Peachblow potatoes are esteemed highly. Sorghum is raised only by people not able to buy molasses. Fruit crop not large. J. W. W.

Tennessee.

CHURCH GROVE, Knox Co.—The wheat in this district is on an average with other years. A larger acreage was sown than ever before. Varieties are Bowden, Walker, Fultz, Swamp; the last-named is the surest crop. Corn will be very light on account of the dry weather. Potatoes are a fair crop owing to early rains. Varieties planted are Russet, Early Rose and Snowflake. Oats are very short; drilled oats are best. Of rye a small acreage was sown; yield good. Barley the same. Sorghum is grown for home use alone. Fruit is about one-fourth of a crop owing to late frost. Limber Twigs and Never-fallers are the most successful apples in this section. J. A. C.

CHURCH HILL, Hawkins Co.—Wheat is an average crop; rust and drought have injured it. We do not make more than 15 bushels on our best land. Corn has suffered from the dry weather; on our upland we make 15 to 20 bushels to the acre; on our river bottoms we make 65 to 80; not much attention is given to the potato crop; scarcely any one plants over three bushels—enough for home use. The soil is well adapted to Irish and sweet potatoes. Of late years it has not been profitable to sow oats, particularly Spring oats. Our mild winters cause winter oats to yield better; of the latter kind we frequently make 25 bushels to the acre. As to barley and rye there is little or none raised in the county. Sorghum (Northern sugar-cane) is planted extensively, and yields well; every one has his patch; yet it is only grown for home consumption. I made 53 gallons of sirup from a quarter of an acre last year. The peach crop will be short in East Tennessee in consequence of frost; apples will be an average crop. But little attention is paid to fruit. We are 30 miles from Bristol and 20 from Rogersville, the nearest depot and county seat—altogether too far from market to make farming profitable. Land and property generally are lower than ever before J. G. A.

HOHENWALD, Lewis Co.—Four-fifths of the land in this county are wild lands—poor land, although covered with timber and grass. Wheat is one-third of a crop, hurt very much by rust. Prospect for corn is good for a full average crop. Potatoes, early ones, were hurt somewhat by drought; late ones are not all planted. Oats half a crop, damaged by rust. Of rye and barley none is raised. Sorghum is only raised for home consumption; it does well. Fruit prospects are good. Wild Goose and Chickasaw plums are ripe; so are Early Beatrice peaches, and June and Early Red Margaret apples. No pears are raised in this locality. Wild fruit is in abundance—blackberries, huckleberries and grapes. The most important crop in this county is corn. Peanuts come next; then wheat and cotton about the same; peanuts are the export cash crop. They yield from 40 to 60 bushels per acre, and bring more money into the county than all the rest of the crops. German Millet does well and an increased acreage is being sown this year. The acreage of wheat is less than that of peanuts, but more than last year. Other crops are about the same as usual. A. P. G.

North Carolina.

ASHEVILLE, Buncombe Co.—The wheat harvest will probably be an average one; the acreage was large but much was badly damaged by hail, and, later, by rust. There will be a light crop of peaches and a fair one of apples. Of apples, the Limber Twig has been largely grown for winter, but more attention is now being given to finer fruit, such as Camack's Sweet and Hoover, which succeed equally well. D. E. S.

MOORESVILLE, Iredell Co.—Wheat was an average acreage: but where not fertilized it will not exceed two-thirds of a crop; where it got guano it will be three-fourths of a crop to a full one. Fultz is the leading variety sown and is much the surest crop. The Clawson, Purple Straw, White Baltic and several other varieties are sown, but the Fultz will be almost entirely sown this fall. Corn is an average acreage and promises so far about an average yield. Corn is generally mixed. Gourd Seed and other varieties having been run together for years, there is now no name for the varieties. Cotton, I think, is 20 per cent. over an average acreage and fully two weeks ahead of any previous year since my recollection. Blooms are plentiful and for these the Fourth of July has been considered early. It is large and well worked out. At present it bids fair to be at least 25 per cent over last year's crop. Rye is very little grown here. Oats are not over one-third of a crop. Barley is not grown here. Potatoes—Irish—are an average crop; but they are not grown for market. Sweet potatoes with an average acreage, look well and promise a good crop. Clover on upland is rather short, probably 25 per cent. There is a full crop on lowlands. The fruit crop is short—not more than half a crop of apples and not over one-sixth of a crop of peaches. Small fruits, too, are as short as peaches, except blackberries which are a full and certain crop. All other fruit very uncertain. Fruit here is not raised much for market, but a good deal more attention has been paid to it of late. Late frosts in Spring, however, are very discouraging to the business. S. A. L.

South Carolina.

CHAPPELL'S BRIDGE, Newberry Co.—Wheat all most a total failure from fly, rust and drought. Oats an unusually good average—12 bushels per acre. Barley is damaged badly by rust. Cotton looks well, but small; can't tell the average of it until binned. Corn is suffering from dry weather. Half crop of peaches in some places but with me, none. Apples plentiful. H.

Georgia.

ATLANTA, Fulton Co.—Wheat is all harvested and is about 60 per cent. of a full crop, being reduced by rust. Corn promises a full crop; an average acreage is planted. Cotton promises a full crop; acreage 20 per cent. larger than last year. Potatoes a full crop, what had not been killed by late frosts. Oats a full crop; and acreage 30 per cent larger than last year. Rye but little planted; it is, however, good. Barley, ditto. Fruits are on the whole a failure, killed by late frosts. Strawberries yielded well and continued from April 17th to June 20th. C. D.

Florida.

STARKE, Bradford Co.—No wheat, rye or barley is raised here. I don't think there is much of either raised anywhere in the State. Rust-proof oats are grown here to a small extent, but the crop was almost an entire failure this season. Yellow Dent corn is the variety most raised—not an average crop. The long staple Sea Island cotton is raised altogether here. The prospect is fine for a good crop now, but it is too soon to judge. The cotton worm may come and destroy half of it, as it did last year. Only Sweet potatoes are raised, except a few Irish; in Winter several varieties are planted—white and red West Indian and Providence potatoes, which grow to a great size. There is also a large red potato called Nigger Killer, not very sweet, but dry and mealy like an Irish potato, besides several kinds of yams. There is a good deal of sugar cane and rice, much more of the latter than ever before. The acreage of cotton is about 10 per cent. larger than last year. Peaches, plums, pears, quinces, and figs have been total failures this season. Peaches have always been raised in great quantities, but many of the trees have died during the Spring, and the young trees do not grow, and it is just the same with quinces. Fig trees have not leaved out well, and the fruit that sets does not perfect itself as usual. Many attribute the drawback to the very warm weather last Winter. No strawberries are raised here except for home use. The Charles Downing has proved the best variety for us. We have had fruit from the same vines six months right along. Of course the orange is the most successful fruit raised here, although we can grow many kinds of tropical fruits by giving them a little protection in Winter. The yield of oranges from old trees will be, in this locality, about two-thirds as heavy as last year, but the young trees coming into bearing may bring the number up to the same amount. The quality of the fruit promises to be far better. There are very few lemons and limes in bearing here, but many young trees. We have had very dry weather, much too dry for sugar cane and rice; but on June 25 we had a fine rain, giving farmers a chance to set Sweet potato vines. The young orange trees look remarkably well and are growing very rapidly. J. S.

Alabama.

BIRMINGHAM, Jefferson Co.—The wheat crop is a failure in this part of the South, caused by rust. Cotton looks very well now, and a large area has been planted. Oats were light owing to the rust. Irish potatoes are fine; the Early Rose and Peerless do the best. The fruit crop will be light, the Early Amsden, Alexander, Louise and Beatrice peaches do the best. The Early Amsden has been selling in this market since the first of June at $6.00 per bushel—the prices in Northern cities to which we ship are still higher. The strawberries never fail here and lasted this season for ten weeks. Wilson and Charles Downing are the most profitable, as the plants and fruit stand the sun. The Sharpless does the best of the new varieties. C. H. R.

CITRONELLE, Mobile Co.—No wheat, no cotton and not much corn is grown in this locality. Peerless seems to be the favorite potato; 150 to 200 barrels were shipped from here this season. Bad weather and worms cut the crop down a quarter or a half. No rye; no barley. Oats are grown for home use for forage; no seed is saved. There are a few pears but no peaches at all this season. Our very mild Winter, with occasional cold snaps in March, frequently cut the peach crop short, though never before have I known of a total failure. The Louise and Beatrice for early and Crawford's Late appear to be the most profitable varieties to raise. Land in peaches about 50 to 60 per cent. This is a high, pine wood country much resorted to by invalids for its light, dry, pure atmosphere. J. W. M.

NEW MARKET, Madison Co.—Wheat one-half a crop. Corn will be a full crop, Cotton looks fine. Potatoes, Irish, a full crop; sweet very promising. Rye, oats and barley good. Wheat, Boughton, Early May; cotton, Green Seed; potatoes, Early Rose, Peerless, Bruce Red, London Lady; sweet, Yellow Yam, Southern Queen, Spanish, etc., etc.; oats, Rust-proof, Mold's Ennobled is magnificent though late. Rye, common. No Barley. The acreage of all is much larger than usual. Fruit of all kinds in profusion. Apples, Early May, Juneating, Early Harvest, Shockley, Ben Davis, Penn. Cider, Romanite, Winesap, Limber Twig, Horse, and almost all Southern seedlings. This is the natural home of the peach; all varieties thrive here. Plums all kinds. Strawberries, Miner's Prolific, Sharpless, Wilson's Albany, Monarch, etc, etc. Raspberries, Herstine, Cuthbert, Turner, Mammoth Cluster, Pride-of-the-Hudson, Gregg, etc. Gooseberries, Houghton's Seedling. Grapes, Concord, Delaware, Salom, etc., etc. G. D. N.

YELLOW BLUFF, Wilcox Co.—The prospects for the present harvest are not favorable. Corn will be below the average; cotton about an average; of the former there will be only about 10 bushels per acre; of the latter about 500 pounds in seed to the acre. The oat crop has already been harvested and the yield was above an average. Notwithstanding that rust prevailed to a greator extent than for years, the average saved from all reverses was about 25 bushels per acre. Irish potatoes have proven a good average yield—say about 100 bushels per acre. We are just planting sweet potatoes, and the outlook promises a heavy yield—far above the average, say 200 bushels per acre. The acreage under cotton is largely in excess of some years; that of corn is about the average for five years previous. There are about four acres of cotton to one of corn. Potatoes of all varieties are grown almost solely for home consumption, and the acreage therefore is small. The fruit prospects are very poor; in fact, apples and peaches have failed almost entirely. Figs, pears, grapes, melons and the wild berries that seldom fail promise an abundant yield. The most successful varieties in this locality are of the peach, the seedlings that ripen from 1st July to October; of the apple, the native "Horse," the red and yellow Junes and the Winter Russet; of pears, the standards; dwarfs of all varieties do not succeed here. Buying trees from nurseries, where any material difference of latitude exists, will eventually become a custom of the past. Forest fruits promise a moderate yield. The uniformly warm winter caused many of the fruit trees to "put out" in December, and the heavy frosts during the holidays destroyed nearly all the peaches. W. B. S.

Arkansas.

BEEBE, White Co.—It was very warm for ten weeks until June 26, when we had a fine rain, which still continues. Rye will be a quart to a crop. Wheat did not pay to cut. Oats about half a crop. The late rains will help the corn in some places but not in others. It will not be over half a crop. We shall have to import a good deal. Cotton is looking very well. A great many did not cut their oats. Some say all the rain cannot help their corn. Now I do not know what the farmers are going to do here. The merchants' prices are: third and fourth grade flour, $7 cash, or $9.50 on time; corn meal, per barrel, $3 cash, or $5 on time. The farmers lost all their meat last winter; on account of the warm weather it did not cure—that is, hams and shoulders. A great deal of meat sold here comes from the North. They say this is a good poor man's country. I believe it, for even a man with some means gets so poor he has to stay—cannot get away. I never worked so hard in my life as I have done here, and yet I have mighty little to show for it. It is no place for any kind of stock. I brought good horses, cows, hogs and chickens with me—such horses and hogs! Folks here would pay for them only the same price as for scrub stock. I told them my price and they did not trouble me any more. This is a very good place for fruits for the Northern markets, and when I have said that, and put in a good word for the climate, I have said all the good of it I can honestly say. H. B.

LITTLE ROCK, Pulaski Co.—Cotton is the leading crop here and the prospect is good for a heavy crop; a very large acreage is planted. People are beginning to take considerable interest in fruit-growing. Fruit shipped from here to St. Louis brings a high price, and the home market is good. All kinds of fruit do well here except apples; these I think would thrive if people would select varieties adapted to the country. Strawberries do well and sell at high figures. The Wilson is the leading kind. Cumberland Triumph does well and sells high in the home market, but it is too soft to ship. The Charles Downing stands heat and drought better than any other out of over 50 varieties I have on trial. The Sharpless promises well; it is not fully tested yet. The Crescent Seedling promises very well. Peaches do well and command a good price, both shipped and in the home market; so do apricots and plums, pears, and in fact, all kinds of fruit. Corn looks well. Not much wheat and oats are raised near to Little Rock. W. G.

Mississippi.

TOOMSUBA, Lauderdale Co.—Corn is at least 10 per cent. less in acreage than last year, and will average about 10 bushels per acre of Western white and yellow. Wheat, none. Cotton 10 per cent. more than usual planted, and will average over 300 pounds of seed-cotton per acre. Potatoes, mixed hardy kinds, Red, Yams, Spanish, &c., five per cent. more in acreage; average, 80 bushels per acre. Oats are a perfect failure, except rust-proofs. Mold's "Ennobled" took rust and I saved not one grain. Rye and barley not planted fruit badly winter-blighted, none good, and we shall have small crops, except of plums, which are in abundance, and good. Berries sorry, except blackberries. Grapes badly blighted and rotting. Scuppernong the best. J. D. H.

Louisiana.

MONROE, Ouachita Co.—The corn prospect is good; the best for several years. No wheat, oats, rye or barley sufficient to be accounted a crop, is planted. Irish potatoes are only planted for family use; a splendid crop this year. Sweet potatoes are doing well. So is cotton, the principal crop here. The cotton-worm has appeared in several parts of the parish, and will, probably, injure late cotton. Acreage in cotton about the same as last year. In corn there is a slight increase. Rain needed in some parts of the parish, and too abundant in others. Crops well in hand as to cultivation. G.

Texas.

ROUND ROCK, Williamson Co.—Corn is fine and in roasting ear. Wheat, both Spring and Winter almost a total failure. Oats very good, but blown down and damaged by wet weather, and selling at 20 cents per bushel. Early cotton looks well, but many have late cotton having been compelled to plant the second and some even the third time the former plantings have been destroyed by the worm. The Irish potato crop is good. The Sweet potato crop is expected to be good from prospects. J. F. C.

WACO, McLennon Co.—The wheat is a fair average. Corn will be immense—more raised than ever before. The prospects for cotton are very fine. Oats about half a crop. Of rye none is sown. Potatoes about an average. Barley none sown. As to varieties, Mediterranean for wheat, Early Rose for potatoes and Red oats. The acreage in all is greater than ever before. We shall have an abundance of everything. A. S. S.

Canada.

FERNHILL, Ontario.—Our Spring was very dry and this is making our hay crop very late, and some of it very thin, but we have had plenty of rain since the middle of May, and this has brought it up to about an average crop. Fall wheat is looking extra-good and is very nearly ripe; Clawson looked the best in the first part of the season: but the rust seemed to take a better hold of it than of the rest. Scott wheat looks excellent, with its short straw and bald head. Michigan Premium is doing excellently; it is a beautiful white wheat with long straw and large, bald head; it is later than the Scott which is an extra-early variety. Spring wheat is a complete failure this year. A great many tried a new variety but it proved no better than the rest; luckily there was very little of any kind sown. Oats and barley look well, there was a very small amount of peas sown here this year on account of the bugs. Corn and potatoes look very good and from all appearances they will be very good crops. J. M. W.

PROSPECT HILL, Ont.—In this township we have not had such a prospect of a bountiful harvest for many a year, and in the adjoining townships, Blanshard, Nissoura, London, Lobo, Osborne, McGilvary the outlook is as good, if not better. The principal wheat is Clawson. There are several other varieties, but we depend more on the Clawson than on the others. Oats are an average crop. Clover and Timothy, owing to the timely rain, will be a fair crop. Of peas none are grown in this section except two acres by my neighbor, who got the seed late and, strange to say, not a bug was in them. Apples will be a fair crop, although this is the "off" year. Not many pears are grown in this section. Strawberries are an abundant crop. We had the first berries the first of June and owing to the occasional showers we had, the vines will bear probably until the tenth of July. I sold the first picking for 20 cents per quart, then for 18, 16, 14 cents. Just now they are selling at 12 cents. This will be the lowest price. J. L.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, July 3d.

H.—R. A.—L. P.—W. I. C.—D. A. H.—C. O. C.—A. E B.—A. H. B.—T. L. A.—H. F. E.—R. L. P.—S. C. B.—S. R. M.—E. B. W.—A. E. B.—W. W. T.—W. D. C.—F. B. K.—A. N, K.—J. E. R.—O. W. D.—X. A. W.—A, H. L.—W. H.—A. H. & S.—J. B.—G. G.—F. W. S.—A. R. P.—F. D, C.—D. E. S.—J. S. G.—B. F. T.—C. D. R.—G. D. N.—J. N. M.—A. J. D.—E. A. R.—W. F., Jr.—J. W. B.—H. R. R.—A. H. & Son.—J. H. F.—T. McD.—W. B. D.—M. B. D.—M. J. C.—A. L. V.—C. H. J.—L. D.—W. B. S.—E. B. C.—C. M. Y.—S. B. P.—W. H. D.—J. E. C.—G. A. G., Jr.—J. G. G., M. D.—E. E. S.—E. P.—A. P. G.—P. M. C.—W. G.—H. J. P.—H. B.—"Jot."—M. E, M.—N. S. S.—N. S. S.—N. P. S., no *seeds* inclosed.—A. E. B.—S. P. W.—R. L. B.—C. G. C.—D. L.—G. W. P.—T. M. S.—R. F.—J. C. A.—W. H. M.—I. S. B.—E. C.—J. R.—R. C. T.—H. A. T.—J. H.—N. M, M.—R. G.—J. L. McD.—S. S. F.—J. P. C.—J. N.—A. L. J.—G. Bro.'s.—H. L. N.—J. R. B.—T. J. B.—M. S. E.—W. J. C.—J. A.—S. W.—J. R. S.—M. D. B—L. B. S.—T. C, G.—E. P.—J. C. B.—W. B.—M. B, W.—C. B.—A. H.—G. S. H.—A. T.—[Note.—In consequence of the great number of crop reports received the past week from our subscribers—to whom our best thanks are due—a full list of acknowledgements cannot be presented.—EDS.]—W. E. S.—J. D. H.—Garrett.—G. P.—A. H. A—W. R.—J. L. A.—J. S.—W. H. P.—J. C.—J. T.—J. D.—E. E. H.—A. T.—A. J. M.—D. A. H.—D. A. K.—F. E.—G. R.—W. W.—C. C. H.—J. H.—W. J. B.—J. B.—M. B. P., thanks.—A. C. D.—C. J. P., always happy to hear from you.—H. H.—G. H. C.—E. W. B.—A. B. A.

Various.

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Dr. R. V. Pierce, President of the World's Dispensary Medical Association, is in earnest in selling his medicines under positive guarantees, and if anybody who purchases and uses any of these widely celebrated remedies, does not derive benefit therefrom, the Association would like to hear from that person with description of symptoms and history of case. Organized and incorporated, as the association is, to teach medicine and surgery and for the successful treatment of all chronic diseases and managing annually thousands of cases through our original method of diagnosis without ever seeing the patients, and having also the largest sanitarium in the world for the accommodation of the more complicated cases, and also for surgical cases, the Faculty feel themselves prepared to undertake even the most discouraging cases. They resort to all the best remedial means known to modern medical science — neglecting nothing. Address, World's Dispensary Medical Association, Buffalo, N. Y., or Great Russell Street Buildings, London, Eng.

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Burnetts' Cologne is prepared from the purest and best materials, and is unrivaled in richness and delicacy of perfume.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, July 3, 1880.

Commerce has been largely pushed aside this week. The principal exchanges closed on Friday evening and as the intention to close was announced early many merchants suspended operations to an extent that makes the week almost a blank one. There will be no recovery of activity until several days after the Fourth, and our annexed quotations for commodities depending upon wholesale outlet must be regarded nominal. Fruits and other tender produce will depend upon the chances of catch trade for the time, and if supplies are at all liberal weak prices will rule.

BEANS AND PEAS.—The movement is light in beans for local and export use.

Marrow beans, fair to prime, $1.45@1.57½; medium $1.20@1.35; pea $1.40@1.65; white kidney, $1.50@1.75; red kidney, $1.30@1.45; black or turtle soup $2.20@2.25; Lima, Cal., $5. Peas quiet; green peas $1.55@1.60; Southern: B. E. pea $1.70@1.80 per 2 bu. bag.

BROOM CORN.—The supply is wearing down at former prices. Brush and short broom, choice, per lb., 7@8c.; common to good, 5@6½c., hurl, good to choice, 7@8c.; do., common to fair, 5½@6½c.; red and crooked at 3@4c.

BUTTER.—For strictly fancy butter the market has ruled a shade above annexed rates, but for real wholesale business last week's rates almost cover the current rates. State stock leads all trade and Western factory and dairy are not sold up clean.

Creamery, finest, 20@22c.; good to prime, 19@19½c.; fair to good, 18@19c.; sweet cream, fine, 20c.; sweet cream, fair to prime, 18@19c.; firkins, choice yellow, 20@21c.; fair to prime, 18@20c.; pails and hf. tubs, choice, 19@20c.; good to prime, 18@19c.; fair to good, 17@18c.; poor, 14@16c.; Welsh tubs, prime, 18@19c; fair to good, 17@18c.; poor, 14@16c.; Western imitation creamery, 14@17c; dairy, fresh, extra, 16@17c.; good to prime, 15@16c.; fair to good, 14@15c.; poor to fair, 13@14c.; factory, full grass, fine, 16c.; good to prime, 13½@14½c.; fair to good, 13@13½c.; poor to fair, 12@13c.

Receipts for week, 41,240 pkgs.

BEESWAX.—The home trade only is paying 23@25c.

CHEESE.—The market has not come out of its sick condition to any satisfactory degree. Still, with an improved cable and less reduction on the part of shippers there is a brighter outlook. Liverpool cable, 51s.

Following are nominal quotations for State factory, fancy, 8¾@8c.; do. good to prime, 8@8½c.; do. fair to good, 7@8c.; do. half skimmed, 5½@6½c.; Wisconsin factory, fine, 8¼c., do. good to prime, 7@8¼c.; do. fair to good, 6½@7c.; Ohio factory, fine, 8@8½c.; do. good to prime, 7½@8c.; do. flat, fair to good, 6¾@7¼c.; do, poor to fair, 5½@6½c.

Receipts for week, 70,611 boxes.

COTTON.—There is little speculative demand. For spining purposes the call is fair at following table of rates:

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8 7-16	8 7-16	8 7-16
Strict ordinary	8 15-16	9 1-16	9 1-16
Good ordinary	9 15-16	10 1-16	10 1-16
Strict good do.	10 7-16	10 9-16	10 9-16
Low middling	11 3-16	11 5-16	11 5-16
Strict low middling	11 9-16	11 11-16	11 11-16
Middling	11 13-16	11 15-16	11 15-16
Good middling	12 5 16	12 7-16	12 7-16
Strict good middling	12 9-16	12 11-16	12 11-16
Middling Fair	13 1-16	13 3-16	13 3-16
Fair	13 11-16	13 13-16	13 13-16

STAINED.

Good ordinary	8 1-16	Low middling	8 9-16
Strict good ordinary	8 15-16	Middling	10⅜

DRIED FRUITS.—The market at this season is without special interest, and nominal quotations only can be given.

For North Carolina apples, fair to good, at 6½@7¼c.; choice, at 8@8¼c.; New York State quarters at 7½@7¾c.; patent evaporated, in cases, choice at 14@14½c.; good and prime 13½@14c.; evaporated, sliced at ——c. Evaporated peeled peaches, good to choice, at 26@28c.; North Carolina peeled choice,

16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c.; common at 10@12c.; unpeeled halves at ——c.; do. quarters at 6@6½c. Pitted cherries at 16@17c. Blackberries nominal. Raspberries at 28c. Plums at 17@17½c.

EGGS.—Receipts for week, 8,890 bbls. The market is dull and weak; it does not even show the extra spurt that usually attends Fourth of July week. All stock quoted only to what it will stand.

L. I., N. J. and near by, 14½@15c.; State and Penn., 13½c.; Western, choice, 11½@12c.; Western, fair to good, 11c.; Canada, good to choice, 12@12½c.

FEATHERS.—Geese, prime, 50@55c.; mixed, 35@45c.; hen, ——@——c.; turkey, 2@4c.

FLOUR.—The decline in wheat which has resulted from the good crop reports from all sections west has brought about a decidedly lower range of prices for flour; a larger export trade results.

The quotations are $3.15@4.00 for inferior to very fancy superfine State and Western; $3.70@4.00 for poor to very good extra State, odd lots and lines; $4 00 @4.25 for very good to fancy do.; $3.70@4.00 for inferior to very good shipping extra Western, and $4@ 4.25 for good to fancy shipping extra do.; inferior to very good white wheat extras, $4.35@5.25; very good to very choice do. at $5.25@6.50; red and amber winter wheat, inferior to choice trade and family at $4.40@5 85; round hoop Ohio, $3.90@4 40; and trade and family brands of do. at $4.50@5.75; St. Louis at $4.40@5.35 for inferior to good extra; $5.35@6.50 for good to very choice, and up to $6.00 for very fancy. Minnesota clear, very inferior to fancy, at $3.75@5.75; Minnesota "straight," very poor to very fancy, at $5.10@7.25, and patent inferior to fancy at $5.50@8.00; unsound stock at from $2.25@5 00; city mill extra at $5.40@5.75 for good to choice West Indies; do. for England, $3.75@4.35 for poor to very choice spring wheat, and $5 @5.50 for winter wheat product; do. trade and family extras, $6.00@6.75; do. for South America, $5.75@6.15; No 2 at $2.25@3.00 for poor to very choice. Southern flour held firmly, with only a moderate demand; sales at 600 bbls.; quoted at $5@6 75 for poor to very choice extras. Rye flour is moderately sought after; sales of 350 bbls. $4 50@4.80 for fair to choice superfine State.

CORN MEAL.—In better demand, with prices steady; sales of Brandywine at $3.15, and 200 bbls. yellow Western at 2.50@2.75. Yellow Western quoted at $2.50@2.75; some fancy lots at $3; Brandywine at $3.15. Bag meal quoted at 91c, for ordinary city coarse.

FRESH FRUITS.—Strawberries are almost gone; quality now poor. Other berries have a steady sale but in all fruits it depends upon a well attended market in the morning for steady prices to be quoted. Apples in good demand when of fair size. A better display of peaches is offering.

Strawberries Oswego ₱ qt. 5@8c; Raspberries Red Antwerp cups 6@7c.; up-river, native, cups 3@4c.; Jersey red, pts. 6@9c. Blackcaps pts. 4@5c.; Md. & S. Jersey, ₱ qt. 6@8c. Whortleberries Mountain ₱ bu. $3@4; Jersey ₱ bu$3. Md. ₱qt. 8@10c. Blackberries Wilson, Md. & Del. ₱ qt. 8@10c.; Dorchester, Md. & Del. 6@8c.; Jersey, Wilsons ₱ qt. 10@12c, Currants cherry, ₱ lb 6@8c.; small ₱ lb 4@5c. choice sweet ₱ lb 10@12c., sour ₱ lb 8@10c.; common 5@6c. Gooseberries green, Md. ₱ bush. $1.50. Plums, Mountains Md. ₱ qt. 4@5c. Apples Md. Astrachan, per cr. $1@1.25; Md. green per cr. 50@75c.; North. green ₱ bbl. $2@3: do. ₱ ½ bbl. $1.00@1 50, Peaches, N. C. choice ₱ cr. $3@4: do. poor to fair 75c.@$1; Ga. $3@4; Norfolk 75c.@$1 50; Md. & Del. Beatrice 75c.@$1.50 Apricots ₱ qt. 20@25c. Watermelons Fla. per 100 $10@25; Ga., $15@25; Fla. Hickory nuts per bush. $1@1.10. Peanuts, Va. hand-picked, ₱ lb. 5½@5½c.; extra prime to fancy 4½@4½c.; good to prime 4½c.; shelled, 5½@5½c.

GRAIN.—The arrivals have been the largest ever known in this market of wheat and corn, and extensive operations have resulted in export account. The shipment of corn have been especially heavy and in one day over 500,000 bush. went to the English markets. Prices have been steadily declining throughout as the weather has been favorable for the crops. Sales on the spot, including No. 2 red winter at $1.15@1.15; ungraded do. $1.11@1.14; No. 1 white at $1.12½@1.14½; No. 2 do. $1.11@1.11½; ungraded white at $1.08@1.12, and No. spring $1.07@ 1.08; and for future delivery. No. 2 red winter at $1.14@1.15 early in July $1.11½@1.15 for all July; $1.07 @1.09 for August, and $1.07½@1.08½ for September.; No. 1 white at $1 09½@1.10 for July, and $1.07@1.07½ for September; No. 2 Milwaukee at $1.07 early in July and $1.05 for all July. Indian corn on the spot at 46½@50½c. for Western mixed, including No. 2 at 50@50½c, steamer do. 48½@48½c, and fair Western yellow, and for future delivery including No. 2 mixed at 48½@48½c. for July, and 48½c. for August. Rye unsettled; Western reported sold for August delivery at 76c. Oats on the spot at 32@35½c. for mixed, and 33@40c. for white, including No. 2 graded at 34½@35c. for mixed, and 35@35½c. for white. No. 2 mixed for July 34½@35c.

HAY AND STRAW.—In this section of the State and in New Jersey the hay crop is a hopeless one. If the scarcity proves to be what is feared, it will be a serious event for the trade. Poor hay will not fill New York's demand in hardly any case. Exporters and stables that formerly took rejections find it more profitable to raise their view of quality. This tendency to keep down the offerings of good, to prime beyond a storing degree. On many days during the week the stations and barges have sold out all good stock upon arrival. The market closes very firm for both hay and straw.

Fancy wire-baled J. C. hay $1.05 per 100 lbs.; prime timothy 95c.@$1; medium 85@90c; shipping 70@80c; clover 60@70c.; long rye straw $1.10@1.15; short 70@75c; oat 45@50c.

HOPS.—There is merely a brewers' demand, and the call is light at this part of the season. The quotations are for:

	Cents per lb.
New York, fancy	Nominal
New York, new crop, good and choice	33 @36
New York, new crop, medium	31 @33
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @33
Wisconsin, new crop	27 @35
Yearlings	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast olds (nominal)	5 @10

POULTRY AND GAME.—Dressed poultry is not plenty, and as the demand is sharper for fresh dressed stock than country picked, strong prices rule.

Spring chickens, ₱ lb., 20@22c.; fowls, Pa. and Jersey, 12½@13c.; State, 12½@13c.; Western, 12@12½c.; Southern, 11@12c.; roosters, 5@6c.; turkeys, ₱ lb, 11@ 12c.; ducks, State, Pa. and N. J., ₱ pair, 45@55c.; Southern Pa., ₱ pair, 45@55c.; Western, ₱ pair, 45@55c.; geese, Western, $1.12@1.25; State, Pa. and Jersey, ₱ pair, $1.25@1.50.

There is a good supply of dressed, and prices rather favor buyers even for fine dry-picked.

Turkeys, small, choice, 13@14c.; large, 11@12c.; chickens, Phila., large, 30@32c.; small, 25@28c.; Jersey, 24@25c.; State, 23@25c.; Western, 18@21c.; Pa., dry-picked, 23@25c.; Fowls, Bucks Co. and N. J. prime, 14@15c.; L. I. and N. J., fair to good, 12½@13c.; Phila., dry-picked, prime, 14@15c., State and Western, dry-picked, 13@14c.; sea duck, 12@13c.; fair to good, ₱ lb., 11@12c.; spring ducks, ₱ lb., 18@22c,

Supplies of game are small, English snipe only brought from ice-houses as wanted. There is no call for heavy receipts of any sort, as spring chickens now fill up much of the fancy trade.

Wild pigeons, flights, ₱ doz., 75c.@$1; stall-fed, $1.50@1.75, tame squab, light, ₱ doz. $2@2.25; dark, $1.25@1.50; pigeons, live, ₱ pair, 30@40c.; shot pigeons per doz., $1.12@1.25; frozen English snipe, ₱ doz., $2.50 frog's hind legs, large, ₱ lb, 25@25c.; small, 18@ 20c.

PROVISIONS.—Hog products have been in very good shape this week, as some of the larger speculative operators have got out, and with the legitimate export trade working as an influence, prices have gone to a better basis. Quotations for pork: old mess at $11.75@12; new, $12.00@12.25; 30 lbs. family mess, $13.25; for future delivery sales, Aug., $12.15; seller the year, $11; July quoted at $11.90@$13.25; Sept., $12.15@12.40; Oct., $12.20@12.55 bid and asked. Lard was also stronger, with a moderate trade; prime city, 7.05c; 4.50 tcs. do., Western, 7½@7.15c.; for future delivery, July, 7.10c; Aug., 7.12@7.17½c.; Sept., 7.22@7.25c.; Oct., 7.27½@7.30; seller year quoted 7.10c; refined to the Continent, 7.55c. Bacon was dull and nominally unchanged. Cut meats ruled quiet and unchanged; sales 1,000 pickled shoulders, 5¾c. The stock of pork here and in Brooklyn warehouses is 54 477 bbls.; and in lard 62,630 tcs. Beef and beef hams nominally unchanged.

SEED.—Linseed is dull and nominal. Timothy is quiet. Clover has a small demand; quoted at 7@7¼c. for choice Western; 7¼c. for extra choice do., and 7⅛ @7⅜c. for choice New York State.

TOBACCO.—The following is a late revision of price for domestic.

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4 @ 4½	4½@ 4⅝
Good lugs	4½@ 5	5 @ 5½
Low leaf	5½@ 6	6 @ 6½
Medium leaf	6½@ 7	7 @ 8½
Good leaf	7½@ 8½	9 @10½
Fine leaf	9 @11	11 @12
Selections	12 @—	— @—

SEEDLEAF.	Crop 1878.	Crop 1879.
New England Havana seed	— @—	18 @25
Wrappers, common	13 @15	— @—
Medium	16 @18	— @—
Fine	20 @21½	25 @33
Selections	30 @40	— @—
Seconds	10 @12½	10 @13
Fillers	— @—	5½@ 7
Penn. assorted, low	12 @13	— @ -
Assorted, fair	14 @15	— @—
Assorted, fine	16 @18	18 @22
Wrappers	18 @35	— @—
Fillers	9½@10	— @—
N. Y. ass'tod, com. to medium	10 @11	— @—
Ohio assorted	8½@11½	7½@10
Wrappers	15 @25	— @—
Wisconsin assorted	8 @12	7 @10
Havana seed	15 @20	16 @18
Wrappers	12 @18	— @—

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A moderate business has been done in all styles We quote:

Black work—Common and medium, in bond	12 @15
Good and fine, in bond	16 @18
Bright work—Common and medium, in bond	15 @19
Good and fine, in bond	21 @35

VEGETABLES.—The market is easy for new potatoes; supplies begin to arrive from near points. Old are lower and pressed for sale.

Bermuda, ₱ bbl. $5; Long Island, new, $2@2.50; Norfolk, $1.25@2.25; Maryland, $1.25@2.25; Southern culls, 50@75c.; Early Rose, Maine, per 6-bush. bbl., $1; State, 50@75c.; peachblow, State, $1; Snowflake, $1; Peerless, 50@75c. There is a good demand for fresh garden stuff, but the weather is so warm that distributors will not take large lots and the moderate arrivals fill all present wants. String beans, L. I. ₱ bag, flat, 75@$1.50; cucumbers, Norf., 50@75c. L. I., ₱ 100, $1; green peas, L. I., per bag, $1@2; Tomatoes, Nyrt., $1@1.50; Fla ₱ bush. box, $1@1.50; Cha's. and Sav., $1@1 50 beets Jersey, per 100 bunches, $2@2.50; onions, Bermuda, ₱ crate, $1.50; Md., ₱ bbl., $3.50@ 3.75; cabbage, L. I. and Jersey, ₱ 100; squash, white, L. I., ₱ basket, 40@50c.; white turnips, Jersey, ₱ 100 bunches, $2@3; cauliflower, L. I., ₱ doz, 75c.@$3; eggs plant per cr., $1.50@2; turnips, Russia, ₱ bbl., $1.50@1 75; sweet corn, ₱ 100, $1.

WOOL.—There no is change to note. Few buyers likely to be in market until receipts make a larger stock than is now showing.

LIVE STOCK MARKETS

NEW YORK, Saturday July 3, 1880.

BEEVES.—Butchers' wants were limited this week with the holiday in view, and prices were tame at the close though off 4c. since Wednesday. Good Texan steers sold at 7c., to dress, 55 lbs.; fair to prime native steers, 8¾@9¾c.

COWS AND CALVES.—There have been a few car loads of State sold at 22@50c.; a few extras, $55 per head.

VEAL CALVES.—Demand steady; supplies sufficient to keep prices popular. A few near-point dressed 7@8c.

Live calves, N. J. and Bucks Co., choice, 5¾@6c.; fair to choice, 5¼@6c.; State, prime, ₱ lb, 5¼@5¾c.; do, fair to good, 4½@5c.; fed, 2¾@3½c.; buttermilk, 1⅝ @2⅛c.

SHEEP AND LAMBS.—The tone of the market is firm and as prices are not above buyers' views a good clearing of the pens is to be noted.

Sheep 3½@5c. Southern and Western lambs 4½@ 6¼c.; N. J, 6¾@8½c.

SWINE.—No public sales; city dressed firm, unchanged at 5¾@6¾c.

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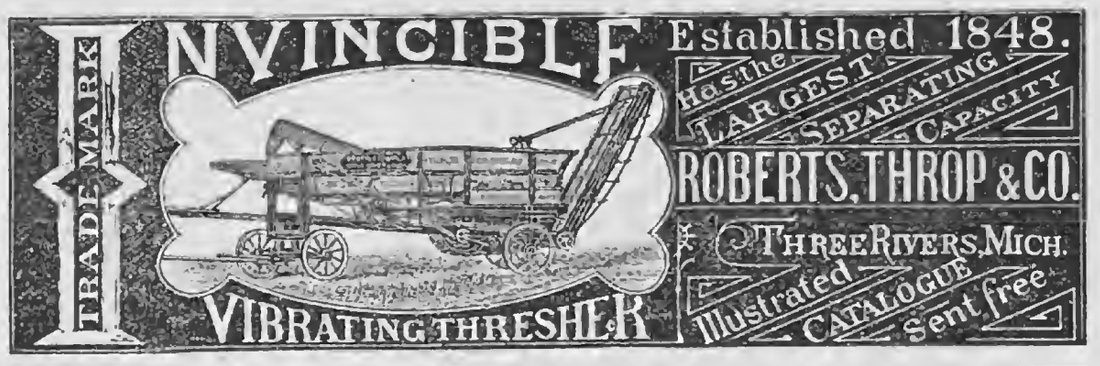

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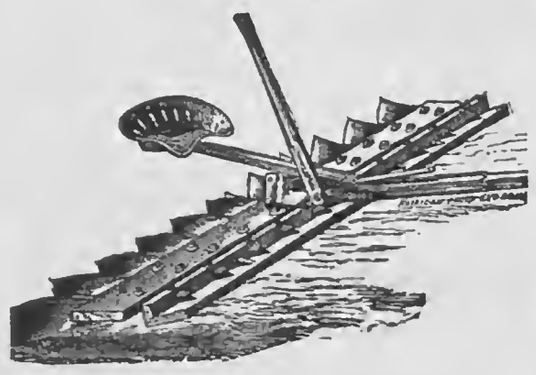

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Literary Miscellany.

THE SONG OF THE SOWER.

THE farmer stood at the open door,
Looked north, and south, and east, and west,
"Good wife, the swallows are back once more,
Back again to their last year's nest.
I'm off to the fields to speed the plow,
The birds are singing on every bough.

"The skies are dreaming of summer blue:
Trees are dreaming of rustling leaves;
And I have a dream—God make it true!—
Of standing corn, and of golden sheaves,
Of meadows green, and of new-made hay,
And reapers singing at dawn of day.

"Call all the boys; we must go a-field,
To speed the plow and cast the seed;
God bless the seed, and make it to yield
Plenty, both man and beast to feed!
God bless the seed, and speed the plow,
For birds are singing on every bough."

Then out with his boys the farmer went,
Into the fields the soft spring morn,
Sowing the seed with a glad content,
Singing, while sowing the good seed-corn,
"God bless the harrow, and bless the plow,
The corn, the wheat, and the barley mow!"

RESULT FROM MISTAKE.

CHAPTER III.

WHEN Frank Drayton once made a decision he was never very long before he acted upon it, and the present instance was no exception to the rule, for in half an hour he was on his way to the office of Messrs. Seton & Co.

His acquaintance with Mr. Seton was only slight; but he knew him by repute as a keen, hard-headed man of business; and the more he pondered over the nature of his errand the more his conviction deepened that he was almost certain to give him a sharp denial.

And most assuredly it would have proved correct, had it not been for the services of an intercessor of whose good offices in his favor he was not aware.

This was no other than Mrs. Seton, who seeing, how her daughter's happiness was involved, had exercised all her persuasive power on Frank's behalf. Her task had not been an easy one, but at length she had been successful in overcoming her husband's opposition.

Contrary, then, to Frank's anticipation Mr. Seton received him with considerable cordiality.

"I have been prepared for this visit, Mr. Drayton," he said, "and I hasten to mention it, because it seems likely to do away with a good deal of explanation. I tell you, frankly, that I had looked forward to an entirely different future for my daughter. But we will say no more about that. My chief aim in life now is to do all I can to secure my daughter's happiness, and to prove to you I am in earnest I have consented to set aside all my plans. The inquiries I have made about you have been thoroughly satisfactory, and therefore I give a full and unconditional consent to your request. Take her," he added, pressing the young man's hand; "she is yours. May you both be happy!"

After this, what was there for Frank to do but to express his thanks and obligations to Mr Seton? Nothing. He got through the awkward task somehow, but in what manner he never had a clear recollection.

"We shall be very much pleased to see you at dinner this evening," said Mr. Seton at parting. "May we expect you?"

Frank could only renew his thanks, and protest that he should be most happy.

"That chance of getting out of my difficulty is at an end," he muttered, as he strode hastily down the street. "How contrarily events turn out! Had I been really in love with Miss Seton, her father would doubtless have been violently opposed to our union. Now, because I wished him to refuse me, he receives me with open arms; and so far from having extricated myself, I have only become entangled more hopelessly! To escape now seems impossible."

That same afternoon Kate Seton, her eyes glowing with happiness, was standing near the drawing-room window waiting for her lover. Poor girl! how little did she dream that her joy had no other beginning, no firmer foundation, than a mistake!

She knew already that her father's objections had been overcome. A future of felicity seemed to lay all before her. And when, later on in the evening Frank pressed her lips with a betrothal kiss, and slipped an engagement-ring upon her finger, she as little guessed the real nature of his feelings. Her intense fondness for him blinded her to the fact that his general bearing towards her was embarrassed and constrained.

"Dear Frank," said Kate, glancing shyly, yet how sweetly, into the face of her betrothed, "how strange it seems that you, having all the world to choose from, should make me the object of your love! You will never know the happiness your letter gave me—never! For—why should I keep the secret from you? I have always loved you, even before you had ever spoken to me; and I could think of no greater earthly bliss than to be your choice—your wife!"

"And do you know," she went on, softly, "I learned to-day that I have been so near to losing you? Mrs. Challon told me when she called that your cousin, Kate Barton, was engaged, and that——"

"What? Why do you pause?" asked Frank, with nervous impatience.

"I do not know whether I ought to tell you; but, after all, what can it matter now? Mrs. Challon is your cousin's most intimate friend, and she told me, in strict confidence you understand, that Miss Barton had had two strings to her bow in other words, two lovers—that she liked them both, and so played one off against the other, with the determination of accepting the one who first made her an offer."

"Indeed!" ejaculated Frank, who, as his companion paused, felt it incumbent upon him to say something.

"You will understand it was Mr. Brown who spoke first, but he was accepted with reluctance; Miss Barton's preference was for the other. Now can you tell who that other was?"

"I?—no—no—why?" stammered Frank.

"Yourself!" laughed Kate, softly; "no other than yourself! Of course I did not tell Mrs. Challon how well I knew it was all a mistake on your cousin's part, and that you had loved me—only me; though I can easily understand that she would prefer you to that odious little fellow, Horace Brown."

Her words and manner showed how implicit was the trust reposed in her lover, and this confidence that she and she only had a place in his affections, touched him to the heart.—To be continued.

CURIOUS FACTS ABOUT MEMORY.

A FRENCH scientist has been studying the faculty of memoy as exhibited by the different races, and its relation to the other mental faculties, as shown in individuals of the same race. His statements are interesting:

The inferior races of mankind, such as negroes, the Chinese, etc., have more memory than those of a high type of civilization.

Primitive races which were unacquainted with the art of writing had a wonderful memory, and were for ages in the habit of handing down, from one generation to another, hymns as voluminous as the Bible.

Prompters and professors of declamation know that women have more memory than men. French women will learn a foreign language quicker than their husbands.

Youths have more memory than adults. It is well developed in children, attains its maximum about the fourteenth or fifteenth year, and then decreases.

Feeble individuals of a lymphatic temperament have more memory than the strong. Students who obtain the prize for memory and recitation chiefly belong to the former class.

Parisian students have also less memory than those who come from the provinces. At the Ecole Normale and other schools the pupils who have the best memory are not the most intelligent.

The memory is more developed among the peasantry than among citizens, and among the clergy than among the laity.

From a physiological point of view, memory is diminished by over-feeding, by physical exercise and by education, in this sense, that the illiterate have potentially more memory than those who know how to read and write.

We remember, moreover, better in the morning than in the evening, in the summer than in the winter, and better in warm than in cold climates.

VARIETIES.

JOSH BILLINGS is sixty-three years old, and has made from his writings 105,000 dollars.

Holmes and Whittier are of the same age. Holmes is seventy, and Whittier is seventy too.

LAMP shades of ground glass should be cleaned with soap or pearlash; these will not injure or discolor them.

There is a Latin term for cod-liver oil, but none for the taste of it. The Latin races were not well up in profanity.

There was Paganini the fiddleist, and here's Campanini the tenor. Rather singular how many ninnies got into the musical ranks.

They who have experienced sorrow are the most capable of appreciating joy; so, those only who have been sick feel the full value of health.

A good man, who has seen much of the world and is not tired of it says: "The grand essentials to happiness in this life are—something to do, something to love, and something to hope for."

Of the discoverers and conquerors of the New World, Columbus died broken-hearted, Roldin and Bobadilla were drowned, Balboa was beheaded, Cortez was dishonored, and Pizarro was murdered.

The Bishop of Peterborough, in a letter to the Church of England Temperance Society, expresses an opinion that there is decidedly less intemperance now amongst all classes than there was fifty years ago.

In the Bermudas numbers of houses are built of rock coral, which have the advantage of being extremely durable as well as permeable by air currents, thus rendering the houses cool and light. "In this country," says the Lowell Courier, "the same object is attained by having the house built by contract, with cobble-stone underpinning."

It is a curious fact that Burns, who was to become one of the most exquisite of song-writers, was totally devoid of any musical gift. In learning church music along with other rustic lads, he and his brother lagged far behind the rest. Robert's voice especially was untunable, and his ear so dull that it was with difficulty he could distinguish one tune from another. This want of musical faculty was also conspicuous in Keble, Heber, and Frederick Robertson, the two first of whom were poets, and the last of whom possessed in an extraordinary degree the power of appreciating poetry.

CANADA is anxious to have a "weather bureau." Stay your hand. Weather bureaus are very unhandy pieces of furniture. They are always out of order. Summer weather is getting into the winter drawer, and spring weather is tumbled about over the edge of its drawer and getting mixed with autumn weather, and every time you pull a knob for snow you strike the rain-valve, a hurricane hits you in the face, or a simoon crawls out and settles in your vest pocket. Better let weather bureaus alone and get along with an almanac and a blue cotton umbrella.—*Exchange.*

For Women.

CONDUCTED BY MISS RAY CLARK.

THE DIGNITY OF HUMAN LIFE.

MARY E. WARD.

BEATING, beating, throbbing, quivering,
Oh, the mystery of life!
Meaning love and meaning hatred,
Meaning peace and meaning strife,

Who has never waked and listened,
In the silent, solemn night,
To the strong and steady heart-beat
With a calm, intense delight?

Ever beating, never pausing
Though the wheels of trade stand still,
Noting neither time nor seasons
Nor obeying human will.

Sometimes 'mid the din and bustle
Of a crowded city street,
Human life seems but an atom
'Neath some monster's rushing feet.

Think we, deafened by the roar
"What is one poor human soul?
Were it lost, a thousand more
Might be brought to make it whole."

Through the day such thoughts may vex us,
But as night creeps slowly on,
Find we that with human footsteps,
So our monster, too, is gone.

All the crash and all the tumult,
Which are accidents of trade,
Ceases when man's weary forehead
Is upon its pillow laid.

Learn we then that life is holy.
That each soul must wear its crown,
That though walking ways most lowly
It were sin to lay it down.

Life in life, and life in death,
Life in Heaven and life on earth,
Differ only by a breath,
And the nature of a birth.

WORLDLY MATTERS FOR GIRLS.

Hair.

WE will suppose by this time that all the young lady readers of the RURAL have the most charming complexions, that it would be impossible with a powerful microscope to find the slightest blemish, and I am sure in a month after reading this article you will have such a quantity of hair that it will take three times the number of hair-pins to keep it in place that it formerly did.

But, without joking, I do know of a few things that, if they do not increase your hair to three times its present amount, will certainly improve it in looks, and in time will increase its growth.

First, washing it, not oftener than once a month, in rain-water, with a tablespoonful of borax added, or, if that is not handy, white Castile soap.

Second, if possible, wear it in a neat braid down the back in the morning. Nothing is so injurious to the hair as wearing it in an unnatural position a great length of time.

Third, cut off the split ends of the hair about once a month. This will increase its growth, as you know the hair grows from the ends.

If your hair is coming out badly, and a speedy remedy is needed, use "London Hair Restorer." It is the only article that I know of that will prevent hair from falling, although there may be thousands of others, but I am certain it will do no harm, and in my case, and those of a number of friends, it worked like a charm. (This is no advertisement.)

The hair was never arranged so simply as it is now. One can dress the hair becomingly, and still be fashionable.

A young lady who was noted among her lady associates for the graceful manner in which her hair was always arranged was asked her secret. Her reply was, "studied carelessness." If you "do" your hair in a French twist, which, by the way, is always pretty, don't twist it so tight as to make it look as if one more twist would leave you hairless. Roll it from left to right, and quite high from the nape of the neck. What short hair remains, if not naturally curly, curl it. It takes very little hair to arrange it in this style.

For round and oval faces, "butter-cup braids" are almost always becoming.

The most graceful way to wear the hair in front is to part it in the middle and wave it. It gives a gentle expression to the face.

In spite of all that has been said against bangs, to some faces they are vastly becoming, and are almost necessary to those having large foreheads.

"Montagues," or spit curls are very pretty if after drying they are combed out, so as to take off the stiff look. MISS M. D.

Michigan.

FASHIONABLE MARRIAGES IN PARIS.

THE prevailing methods of arranging fashionable marriages in Paris, shows that the opportunities for social intercourse between the affianced parties are comparatively numerous. The most essential difference between the French and American system appears to be, that before the young gentleman pays his addresses in any form whatever to the young lady, it must be distinctly understood that matrimonial engagements are seriously contemplated on both sides, and that they will be mutually agreeable to both families interested. After the stage is reached in which the fact is recognized that a marriage will be desirable, a place is fixed at which the prospective husband and wife may have their first meeting, which may be either a friend's house, a concert, a ball, the opera, or one of the theatres. If the opera is selected the young man sits in the orchester and the young girl in front of a box, and between the acts the young man pays a visit and is presented. If he is disposed to ratify the tacit understanding made by his parents, he visits the house of his future wife on the following day and formally demands the young lady's hand. If he is accepted by the parents he begins to pay his court to the young lady, and he is admitted to the house as if he were a member of the family of his prospective bride. It is understood that the day after his acceptation by the family he is to present a ring of a specific pattern. He is also expected to send every day a boquet of flowers to his affianced. Liberal expenditures are made for these presents, as it is the custom to envelop the bouquet with lace or watered ribbon, on which the name of the girl is embroidered. The wedding trousseau of the present period in high life comprises twelve dresses, all made up, with stockings, shoes, sunshades, and hats to match; and the trousseau, together with the linen, is usually worth from four thousand to ten thousand dollars. On all wedding presents the young lady's crest, motto, and monogram figure. On the day of her marriage the only jewels she wears are those given to her by her mother and her husband.

HINTS.

FOR hanging pictures use copper or silver wire. Moths eat out the inside of the cord. Water in which onions have been boiled, rubbed lightly over the frames, will keep insects away from them.

Nephinite is a recently patented colorless substance held in solution for the purpose of treating silk, woolen and cotton fabrics, paper, feathers and other materials, rendering them water repellant and proof against dampness, mildew and moths.

TO WASH SHETLAND SHAWLS.—Make up a thin lather of boiled soap and water; plunge the shawl in this, and gently strip it through the hand. It must never be rubbed or wrung. When clean, rinse through water without any soap, hang it up for about a minute, shake it gently by each side alternately, pin it out on a sheet exactly square, and if the shawl be of a fine texture it should be slightly sewed down the sheet by the top of the fringe to prevent its running up; then go over the whole fringe, drawing each thread separate and laying it straight out. If these directions are carefully attended to the shawls may be washed many times, and each time appear as well as when new. They should never be put into the hands of any but those who are accustomed to wash lace.

News of the Week.

MISCELLANEOUS NEWS.

Monday, July 6th, 1880.

ALMOST before the terrible scenes of the loss of the Narragansett have lost their vividness, we are again called upon to chronicle another steamship disaster. A large steamboat, Seawanhaka, which ran between New York and ports on Long Island, took fire and burned on the afternoon of the 28th ult. The fire originated from an explosion, but nobody seems to know what caused the explosion. A dumb thud was heard, and a shock was felt from stem to stern which was immediately followed by a violent outburst of flames through the smokestack. The boat was instantly headed for the shore, but though she struck ten minutes from the time the explosion occurred the fire spread with such rapidity that about 40 lives were lost, some in the flames, others in the water. There were about 300 persons on board at the time of the disaster. The boat ran ashore in four feet of water, and many tugs, sailing vessels and row boats were close by; under these circumstances it seems strange that so many persons should perish.... A number of counterfeit one-hundred-dollar bills have recently been found to be in circulation. They are said to be so clever imitations of the genuine bills that noted experts have declined to express an opinion as to their being genuine. Not only is the printing well imitated, but the quality and make of the paper is almost identical with that used by the banks on which the bills are forged. The U. S. Secret Service officers are hard at work, and will, no doubt, sooner or later, intercept the criminals. ....Gen. J. B. Weaver, of Iowa, has been nominated by the Greenback party as their candidate for the Presidency....An international rifle match was recently held at Dollymount, Ireland, in which the American team again carried off the honors by making the highest score....Carl Petersen, the celebrated Danish explorer of the Arctic regions, is dead. ....An order of Prince Bismarck is published prohibiting the importation of sausages and pork from the United States. The prohibition does not include hams, sides, and bacon.... Destructive forest fires are again sweeping large tracts of woodland in Monmouth and Ocean Counties, N. J. In the lower section of the counties, miles of cedar forest which escaped the last two fires are ablaze. Around Mechanicsville and Poplar fires of some magnitude are reported to be destroying the cedar and pine forests and causing much alarm among the inhabitants. On Sunday week nearly 300 acres of valuable timber were destroyed near Sellerville, Ocean County.

LATEST NEWS.

Rain all over Long Island and New Jersey ....400 houses damaged and 30 people hurt by a gas explosion in London....A quiet Fourth of July.

PERSONAL ITEMS.

General Hancock is a twin. His twin brother, Hilary Hancock, is a lawyer at Minneapolis, Minnesota.

Henry Ward Beecher's hobby is rugs. The floors of his house are adorned with rugs of every nation, hue and texture.

Aristarchi Bey and Rustem Effendi sailed for Europe last week, the Turkish mission to this country having been abolished.

Secretary Sherman reads until late at night but is always the first man in his office in the morning. He owns a large number of inexpensive horses and drives a great deal. He has always saved his letters and has one of the largest collections in the world. He and his brother, the General, have always been as loving as sweethearts and his letters from the General are in three large volumes. Some of these letters cover forty pages each.

Miscellaneous.

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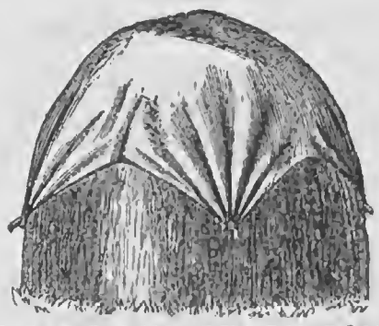

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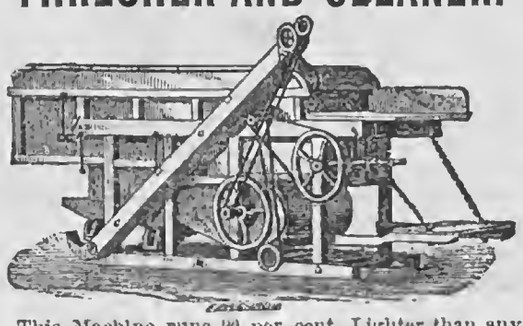

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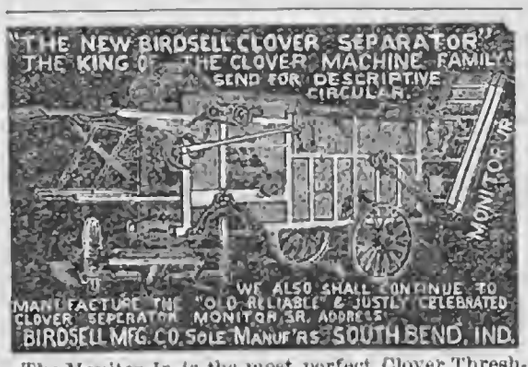

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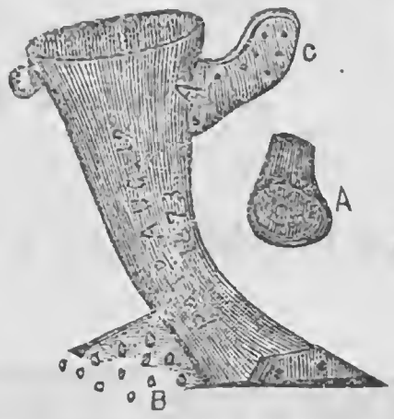

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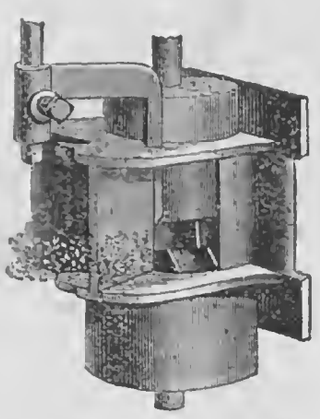

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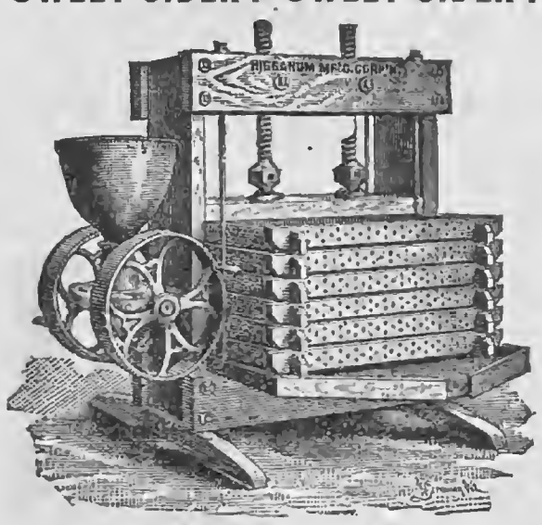

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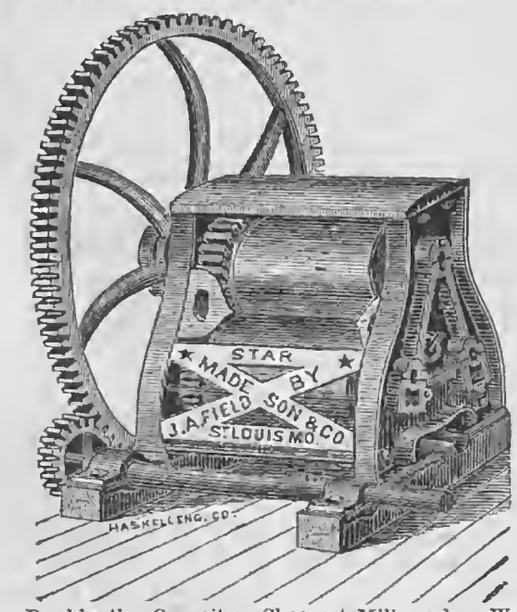

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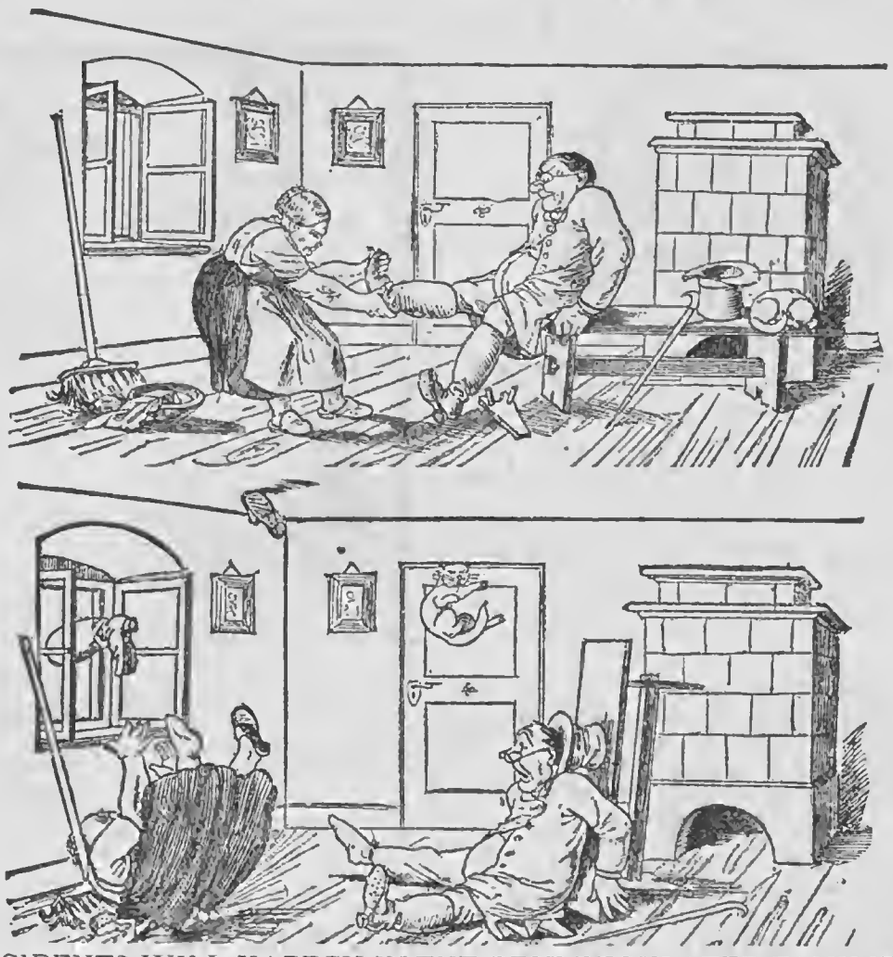

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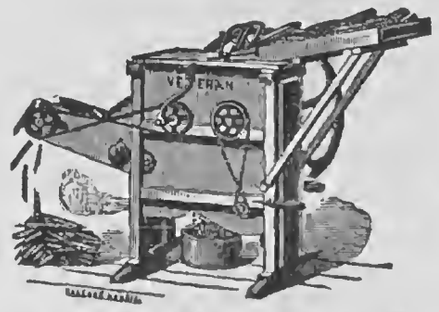

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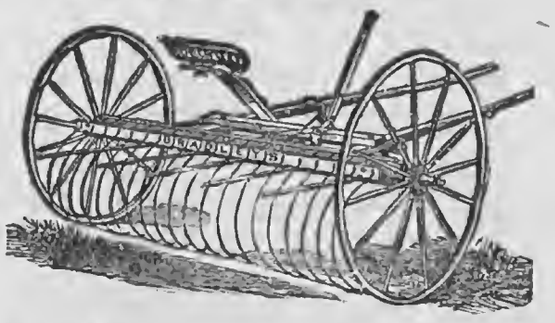

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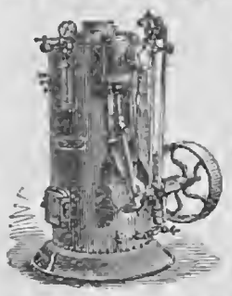

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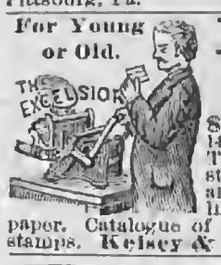

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Floricultural.

THE GREEN ROSE.

IT is an extravagant saying that one may have green roses and black roses and blue roses in a great collection of kinds, but, of course, such a collection does not actually exist. We once knew a lady who bought what purported to be a collection of one hundred distinct kinds of roses. They proved to be, however, one single kind and that Paul Neron, and yet it was positively averred by the salesman that among them were green roses, blue roses and black roses. The fact is, all roses are simply red with very few exceptions which are pure white. Yet there is a green rose, in sober truth, and our illustration exhibits its form, if not its color, with entire truthfulness. It belongs to the division generally known as China roses. In the climate of the Middle States such roses are not hardy, but they flower so freely throughout the Summer and Autumn that they are termed ever-blooming. The flowers are small, pretty and pink and of little consequence when they are in full bloom. They often survive our winters with moderate protection. The green rose is said to be a mere sport of the Pink Daily China rose. Like all China roses, it is entirely double without sign of pistil or stamen. In the case of the green roses, the transformation is more remarkable because the petals are seemingly little green leaves. Yet these petals are true floral leaves, and only illustrate the fact that, setting aside color, there is a wonderfully close relationship between the leaf and petal of a plant.

The green rose seems to be more or less a favorite in the South, where it is hardy, and where specimens of it are exhibited in gardens as great curiosities. One seldom sees it North. It is looked upon as a mere curiosity, a nine days' wonder, now all but lost sight of. Indeed, it is seldom even named in the catalogues of nurserymen either in Europe or America. In some of them it may be found under the name of Viridiflora under the head of China or Bengal Roses—Rosa Indica. As a general rule all such abortions or monstrosities do not please. But the green rose from its oddity is always interesting to those who see it for the first time, and may well be employed where it is desirable to get together a diverse collection of plants. The flowers of certain strains of petunias have green margins, and it is not uncommon that seedlings from them bear flowers that, like the Green Rose, are entirely green.

REMARKS ON CROTONS.

CROTONS may be conveniently divided, according to the shape of the leaf, into narrow-leaved and broad-leaved. Both kinds are exceedingly graceful, and no foliage plant surpasses in beauty a well-grown, richly-colored croton. They are suited for purposes of decoration both in the conservatory and the parlor, and may even be employed as bedding plants and for out-door vases, with proper care. For these reasons they are rapidly and justly growing in favor, and they would soon be found in every collection of plants were it not for the drawback that for perfect development they need a degree of heat and humidity in the atmosphere which cannot be supplied in this climate short of a greenhouse.

As types of narrow-leaved and broad-leaved crotons we present the accompanying illustrations. Prince of Wales, figure 229, is a graceful, richly-colored species of free-branching habit. The leaves are narrow, pendulous, arching, and take a slight twist as they bend downward, and some of them present a complete spiral form, the edges being always beautifully undulating. The color of the leaf, in well-colored plants, is almost entirely pale yellow, margined and mottled with bright carmine, with occasional irregular blotches of light green; the midrib and petiole are bright magenta. Figure 230 is a good representation of Croton Stewartii. It is one of the finest broad-leaved crotons in existence. It is of dwarf habit, and, withal, bushy and vigorous. The leaves are obovate, with short stalks and of a dark olive green, irregularly banded and margined with a rich orange color. The midrib and petioles are a bright magenta which produces a striking contrast with the carmine marking on the remaining portions of the leaf. Both of these plants were introduced by the well-known plant grower, Mr. B. S. Williams, of London, England.

CROTONS.

THERE is no class of foliage plants which display more diversity of form and color in the leaves than the above, and no class to which there have been so many novelties added of late years, if we except the coleus; and although many species or natural hybrids have been introduced from the Tropics, there have been also many hybrids raised in Europe and also in this country; many of which are quite distinct, and if we had not already so many handsome varieties they would be considered very fine. I may mention that a friend of mine has over ninety named kinds, and when well grown into good-sized plants these are all quite distinct; but I may mention that when the plants are small, but few sorts show their full colors, unless the cuttings are selected from well-colored plants. A few hints on the cultivation of these plants may be of service.

In the first place, select nice, clean free-growing plants; if nicely colored it is best, although not essential, for if well treated the plants will soon color. It is necessary to give abundance of heat and moisture with but little shade; the plants will not succeed in a dry, drafty house in hot weather, for which reason it is necessary to shade slightly during summer, and give the foliage a good dash with the hose once or twice each day. I have grown good plants both in peat and also in loam, but I prefer giving moderate shifts as required to shifting from a small pot to a large one at once, and quite a large plant can be grown in a small pot if well attended with water. With free growth insects are not troublesome; but if the plants receive a check from sudden change of temperature they often drop many of the best leaves. Although the plants will live outside during the Summer, they make little growth, and they do not color well, for our Summer is too dry.

The old Angustifolium, when well colored, is like a fountain of gold, and is yet one of the most graceful species, although Johannis, when well grown, is wonderfully fine, and Veitchii, one of the first of the newer sorts, and these caused quite a sensation, are yet among the standard species; and when the kinds with lobed leaves, of which Disraeli is a good type, were distributed it was considered a wonderful advance; but now we have various other shaped and colored leaves named after many of the nobility and statesmen of Europe, queens and princes included. JAS. TAPLIN.

THE GREEN ROSE.—From life.—Fig. 228.

Horticultural.

RURALISMS.

BY HORTICOLA.

IT is often said in behalf of birds by their special friends, that in eating fruit they do so for the sake of the worm. They doubtless get a worm with nearly every cherry they eat; but how is it about the worm when they "go" for the strawberry? Perhaps they think strawberries are good enough without worms. If so, I agree with them. Still, I should be willing to furnish them with all the worms they want if they would spare me a small share of the strawberries, which the charming little wretches have failed to do this season.

This reminds me to inquire for the coming man who is to furnish us with a good contrivance for protecting strawberries from the birds. It should be something light, durable, easily applied, admitting sunlight and air freely, and not too costly to be used by the acre. Wire might answer for the garden, but is too cumbersome for the field. Something like the seine used by the shad fishermen would do, made of fine twine, with small meshes, and boiled in oil when finished. Here is a chance for somebody to make strawberries cheap and plentiful. I have used cheese cloth and mosquito netting, but such thick coverings hurt the flavor of the fruit.

It is not to be doubted that we coddle a good many things under the supposition that they are tender, which prove not to be so. I have said that the Japanese climbing fern passed successfully through the past winter without protection. I have since made another discovery. Last Fall a year ago I lifted some Lilium longiflorum for forcing in Winter. Some bulbs of Oxalis Bowiei fell into one of the pots, and I let them remain, having an abundance of them. The following Spring the lilies, with the ball of earth adhering, were turned into the border to recuperate. I noticed last Summer that the Oxalis was growing. It remained in the border last Winter without protection, and a few days since I noticed that it was growing luxuriantly. I hope it may continue to prove hardy, since it will make a fine border plant.

At Mrs. Palmer's, near Mamaroneck, N. Y., a few days ago, I had the pleasure of going through what is called an old-fashioned garden, where one can go on almost any day in Summer, and cut a "bunch of flowers." Here were the old double red and white herbaceous pæonies, Pæonia tenuifolia (single), tree pæonies, larkspurs, Canterbury bells, foxgloves, June and hybrid roses, and many other good old things, now seldom seen except at some old country home, and all growing and blooming luxuriantly. Are we not making a mistake in neglecting these fine old plants? At some future time we may wish for them in vain.

So far as I can judge at present, the Snyder blackberry promises to become a popular market fruit with growers along the Hudson. I saw it lately at Mr. Roe's, and was surprised at its prolificness. I saw it again at Mr. Force's, and was still more surprised, the plants being older. They were a solid mass of fruit. It has been proved to be hardy everywhere, needing no protection whatever. The fruit is not so large as the Kittatinny, but is earlier, and is ripe and sweet, Mr. Force says, as soon as colored. Of the quality I cannot yet speak personally, but it is represented to be good.

I also saw at Mr. Force's (June 12th) an early raspberry named Burn's Early, the fruit of which was then pretty well colored, while all other kinds were still quite green. Mr. F. has just informed me that he picked ripe fruit on June 11. If the quality should be good enough it would enable the Northern grower to share the market with the early fruit from the South (say from Baltimore), and realize a portion of the early profits; provided, of course, it proved to be a kind not adapted to the South. It is worth looking after.

I am decidedly of opinion that much valuable information might be collected by close observations of the effects of the drought on growing crops, as well as on trees and shrubs, including all the inmates of the garden. An excellent example is that given from the Rural Grounds in regard to the Hemlock, supplemented, perhaps, by a brief statement of the nature of the soil and the exposure. At the close of the season the editor could tabulate these observations and present in a condensed form a good deal of valuable information. The same might be done in regard to hurtful insects.

A recent correspondent of the RURAL has entered a plea for the mole, and perhaps as good a one as can be made; but I think he has failed to comprehend the mole, unless he has him under a subdued character. The mole is an unmitigated nuisance where he abounds in numbers, destroying peas, corn, potatoes, strawberries, the lawn and everything that comes in his way. Of all the pests that trouble the field, the garden and the lawn, there are few that are made up of so much pure "cussedness" as the mole. To employ him to destroy larvæ and worms is to use a remedy worse than the disease. It will take a year or two at least to repair the damage he has already done in my experimental garden. There is this, however, to be said in his favor, that he is a fine example of perseverance.

One lesson of the drought, so to say, is so universal, that it would seem to be almost entirely overlooked, and that is the want of water, strange as it may seem to say so. I hear a great deal about the drought, but very little about the want of water. All, in some form or other, pray earnestly for rain; but very few say anything about the want of water on their farms. Nearly all are looking for water from above without labor, and very few consider how they might get it abundantly from below. If it be true (as it doubtless is) that the Lord helps those who help themselves, it seems plain that we should first go to work and bore wells, build cisterns, and other storage for water, put gutters to our dwellings, barns, &c. (which are by no means common in the country), and then, in a time of need, we might, with some sort of fitness, ask for help from above. The fall of water is nearly always sufficient for our needs if it were properly stored.

I have been much interested in the Japan pears. I recently saw Mr. Force's collection at Newburgh, N. Y., which is perhaps the best in the vicinity of New York. The fruit is not of good quality, but still all that are sent to market sell quickly. They are somewhat astringent, and would no doubt make a good jelly. The tree presents a fine ornamental appearance, and would not be out of place on the lawn. The large, thick, glossy leaves remind one of the Camellia. They may prove to have a value also for grafting other kinds on, and for crossing. They are now grown mostly at the South, but do quite as well here; in fact, the first trees were grown at the North.

In England the electric light is just now being much talked about as an aid to horticulture. From experiments recently made by a scientist it is inferred by some that, with the aid of the electric light, plants may be kept growing during the night quite as well as by sunlight during the day. They will probably be disappointed unless they succeed in changing the nature of plant life. Plants come to a puny end when submitted to forcing of this kind, if long continued. It was demonstrated in New York more than thirty years ago that the growth of plants was increased by the direct application of a current of electricity, and plants are probably constantly more or less influenced by this mysterious agent much in the same way as mankind are. It is no new thing that plants are excited to renewed and continued action at night under the influence of a strong light; and I apprehend that the marked action produced by the electric light is due, not to the fact that it is an electric light, but to the fact that it is a light of great intensity. Any other light as intense would doubtless produce the same results. Under the influence of a strong light I have often kept open during the night flowers that would otherwise have closed in the shades of evening and remained so. It is worth while, however, to continue the experiments, as there may be some peculiar virtue in the electric light not yet apparent; only, thus far, no results have been obtained that have not been yielded by other light in an intense form.

NOTES FROM THE RURAL GROUNDS.

Of the two extremes, drought and too much rain, we prefer the former for these grounds. Though the lawn and flower-plots present a sorrowful sight, shrubs and trees are rarely injured — while grapes, raspberries, blackberries, currants, gooseberries, and all kinds of vegetables are sufficiently protected by careful cultivation.

Raspberries the present season, which is one of exceeding dryness, bear an abundant and luscious crop. Turner is always here, as, indeed, in many parts of the country, one of our best varieties. Hardy, fruitful—the berries are of large size, of a bright-red color and of excellent quality. We have had this berry for years—have written of its superior qualities persistently, and are now glad to find that it is in a fair way to excite the general interest it so highly deserves. Of red raspberries, our friends, as a general thing, can do no better than to plant Turner for early and Cuthbert for late.

Gregg.—The new canes of the Gregg, are wonderfully strong and stocky—the berries which are clustered together are large and delicious. This is our second year with this new Black-cap and we can freely add our testimony to that of many in the West where it originated (Indiana) that it promises to be all that is there claimed for it. We may now acknowledge that our engraving of the Gregg, given in the Rural of March 13, was, indeed, unfair as regards the average size. The branch from which it was drawn was sent to us by a friend and accurately reproduced. It is a truth, moreover, that illustrations, though of the exact size of the originals, appear distinctly smaller in print—a fact for which a too liberal allowance is made by small fruit growers, as shown by the colossal cuts of their catalogues.

We do not wish to intimate that Belle de Fontenay and Henrietta are not identical. We cannot distinguish the one from the other. It is worthy of note, however, that a Henrietta is now ripening fruit upon a large healthy plant, while a Belle de Fontenay, growing within 12 feet of it, was so injured by the past Winter that it will bear no fruit. This, as evidence against their identity, is very slight indeed. The failure of B. de F. may be due to a dozen different causes that do not affect Henrietta.

This raspberry, whether Henrietta or Belle de Fontenay, should find a place in every garden for family use if not for market. The berry is very large and as fragrant of the odor and as rich in the characteristic raspberry flavor as any kind that we know of. It may also be mentioned that it bears a Fall crop of berries which, of course, are borne on the canes of the same season's growth.

The Caroline was sent to us last year by Mr. Carpenter of Rye, N. Y. This is a yellow raspberry and thought to be a cross between Brinckle's Orange and Catawissa. It has, thus far, proved hardy here. It is very prolific, firm, of medium size and first-rate quality. The New Rochelle (also originating with Mr. Carpenter, we believe) is said to be exceptionally hardy. It is also said to be very productive. The berries are purple, acid in flavor and not very firm. Acidity, however, is no detriment to a raspberry. Better that, which may be remedied by the use of a little more sugar, than the insipidity of a Thwack, Brandywine, Highland Hardy, or Philadelphia.

Improved Hollyhocks.—The showiest, almost the prettiest sight we have ever looked upon in these grounds is a double row of Chater's hollyhocks extending nearly across the garden. We do not wonder that the old-fashioned hollyhock fell into disuse years ago. But the comparatively dwarf improved kinds are wreathed with large double flowers that cover from two to three feet of the stems. Every flower is a perfect rosette of petals that are frilled, crimped and crowded together as closely as possible. The colors are pure white, lemon, pearl, lilac, salmon and all shades of pink and red until a vivid crimson is reached. Imagine then the brilliancy of this display and be not surprised if, when seen and known, the despised hollyhock, in its new belongings, will again find a welcome place in every garden.

The growth of Salix pentandra (cuttings of which the Rural has lately distributed among those subscribers who applied) is sometimes discouragingly slow for several years. One tires of waiting, especially as the young plant shows very little of the beauty which characterizes it in later years. We have one specimen at the "Rural Farm" that is now in its third Summer that has not grown two feet. The leaves are small and many of them have turned yellow and fallen from the effects of the drought. Yet, in a hotter and more sandy situation here, older trees thrive to perfection. As we make this note we involuntarily ask Randall (the Rural gardener) pointing to a specimen before us: "Did you ever see a finer tree?" And he replies: "No, I do not think I ever did." Though but five years old from the cutting, it is a thicket of large, glossy leaves that, swaying in the breeze, reflect the sunlight as so many mirrors.

STRAWBERRY NOTES FROM CHEMUNG COUNTY, N. Y.

The strawberry season in this locality is now over, and the crop has been proven to be an abundant one. I offer my opinion on a few varieties which I have tested this season.

The Col. Cheney, which I place at the head of the list as a berry for a near market, continues to give great satisfaction both to producer and retailer. It is a large, showy berry that we can place upon the market at a price which will warrant a ready sale. This is owing to its great productiveness, which has not been surpassed by any variety on our grounds.

The Monarch of the West is a large, showy berry and of excellent flavor, but is not sufficiently productive to make it a first-class market variety. It has valuable qualities, however, the berries holding out in size to the end, and it is firm enough to stand up well, the lack of such firmness being the great fault of the Col. Cheney.

The Cumberland Triumph is a good market berry, being large and moderately productive, yielding with me somewhat better than the Monarch, and, as the berries color up more evenly, I consider it the more desirable of the two for market. In our market (Elmira) flavor has little to do with the sale of strawberries. If the fruit is large, fine in appearance and cheap, that is all that is required to make it sell readily.

The Forest Rose is a good variety, though, like the Wilson, the berries dwindle in size after the first few pickings.

The Star of the West has not proven desirable on first trial, being only moderately productive and the fruit small in size.

I have tested other varieties, but, as they have not proved of value, I will not mention them. The Crescent, as seen on a neighbor's grounds, I pronounce *wonderfully productive* though deficient in size and flavor.

Elmira, N. Y. G. A. G. JR.

Field Crops.

WHEAT NOTES FROM VIRGINIA.

The wheat harvest in this county began on June 10—some two weeks earlier than usual—and ended on the 15th. Looking back to the usual time of seeding in the Fall, and extending our observations up to harvest, it will be noticed that this season has presented some remarkable peculiarities. The Fall was so dry that the grain lay in the ground for weeks before it germinated; much of it sprouted and perished for want of moisture, and at the beginning of Winter the stand was very thin. If the Winter which followed had been an ordinary one, few plants would have remained on the ground by Spring. Fortunately, the Winter was exceedingly mild, the plants tillered finely, and covered the ground. Then from the middle of April till the first week in June, we had a drought which was most severely felt in many parts of the country, burning up the grass and the fields of wheat on the uplands. From the first of June the rains have been abundant. The result has been that while the wheat crop has not equalled the expectations which were entertained of it, yet so far as I have been able to ascertain, it is considerably above an average. Many promising fields have been seriously damaged by the black rust for weeks before harvest, the leaves of nearly all the wheat were yellow with the red rust (Uredo rubigo), and the farmers were praying, in the language of Ovid.

"O blighting rubigo spare the corn plants,
Suffer the crops which have been nourished by the propitious
Stars of heaven, to grow until they become fit for the sickle"

This red rust should not be confounded with the black (Puccinia graminis). Of itself, it does no serious injury, but it may be, and often is, the precursor of that other and more destructive kind. Much injury has also been done in many places by the maggots of the European wheat fly, which I have observed here for the first time this season. The pollen of the grain is frequently eaten up by them, so that the grain never forms at all, or the kernels shrink from the loss of milk abstracted by these maggots. I have found as many as four or five of them within a single glume. Late-blooming varieties of wheat, and such as have square-shaped ears, like Arnold's Gold Medal, are particularly subject to be attacked by them. I have one field of the Gold Medal containing eight acres, which, principally for this reason, will not yield over 25 bushels. On the other hand, I have a field of Fultz of 20 acres which will give an average of 15 bushels per acre. It would now seem that hereafter we shall lie between two fires. If we sow our wheat very early in the fall, it will have to encounter the depredations of the Hessian fly; if late, it must suffer from the fly above noticed. It is worthy of note that the bearded Mediterranean varieties are freer than others from diseases of all kinds, seldom or never taking the rust. They have, in every instance, made the best crops here this year. Besides, the millers say that these red wheats make the best flour.

Another fact which has come under my observation is, that seed wheat which comes from south of the grower will do better than that coming from north of him. Of 15 varieties of wheat distributed by the Department of Agriculture in the last ten years and brought mostly from Michigan, Canada, and Northern Europe, not one, if we leave out the Fultz, which originated in Pennsylvania, has proved a real acquisition here. The wheat grower of New York, for instance, when he wishes to change his seed should procure it from Virginia and the Virginian should bring his from still farther south. Varieties from Northern localities are always later than the old established sorts.

My Experimental Plot.

I notice that in the Rural Special Reports, this is put down as 27 acres, of which one-half an acre was Fultzo-Clawson. I intended to write that the plot contained two acres and a half, of which one and one-fourth acre was Fultzo-Clawson. I find, however on actual measurement that the area is as follows:—Fultzo-Clawson, one acre; German Amber, half an acre; Boughton, half an acre; total two acres. I shall make a report of the manner of planting, yield etc. when the wheat is thrashed.

Dwarf Wheat.

I have for several years entertained the opinion that American varieties of wheat grow entirely too tall to bear cultivation on a highly enriched soil. I am more than confirmed in this opinion by one result of my experiments this year, of which mention will be made in my report. It will, perhaps, be remembered that, though all the grains came up and grew off finely, they became a prey for the rabbits, that kept them bit into the very earth, no other wheat being planted at that time to help divide their attention. I then drove stakes around the plot to keep the rabbits out, but they would squeeze through the cracks. These stakes afterwards became indirectly a worse enemy to the plants than the rabbits which they were intended to keep out, for in the Spring the house sparrows and other birds made perches of them and nearly devoured the whole plot. All but five of the plants were destroyed before Winter. The five survivors, on account of having to repair the damage sustained from the rabbits, bloomed rather late, and for this reason, and because of the wheat fly, the ears either did not fill at all or have only a few shrunken grains. The point about the whole matter, however, is that there were three varieties of wheat among the five plants (there would probably have been eight or ten if the whole twenty had remained), and one of these plants produced 15 ears, not one of which exceeded two feet in hight, although the plot had been heavily manured with chicken manure. The stalks from the other plants grew about four feet high. The stalks of Boughton growing near by and manured in the same way, grew to a hight of five and a half feet.

I have entered into the above particulars, not in the way of a complaint against ill-fortune, but to show the difficulties which are to be encountered when one attempts to get an available quantity of wheat with a start of only a few grains.

The Eldorado wheat, illustrated in the Rural of June 19, is nothing more, I think, than the old Egyptian, which, Johnston says, was known in Germany 240 years ago. When grown in unfavorable soils and climates the branches of the spike are not evolved and it then assumes the appearance of ordinary wheat. The grains are said not to yield so large a proportion of flour as those of any of the other species, and the flour is not very superior to that of the best barley. I believe this wheat has once or twice been distributed by the Department of Agriculture, which is perhaps the way it reached Colorado.

Pulaski Co., Va. Hugh L. Wysor.

VARIETIES OF WHEAT.

PROFESSOR A. E. BLOUNT.

It may be interesting to the farmers who read the Rural, and especially to those who visit the office, to know a little more about and examine a few samples of their own wheats after they have been raised in this great "American Desert." Of the 66 varieties I am now cultivating on these grounds, I send you 32 kinds of spring wheat all the seed from which they came having been obtained from the Middle States. It is very doubtful if some of the most extensive wheat growers in N. Y. can recognize the varieties from that section. This climate and our soil have such a bleaching, renovating effect upon all small grain as well as on the straw that Eastern people visiting our fields cannot identify the sorts with which they have always been acquainted. Every variety does better, yields more, produces whiter grain and that of finer quality than in the Eastern States. For instance, in one season the old Mediterranean has become a shade or two lighter in color, is more plump and makes better flour.

Among these varieties I have made 10 successful hybrids by crossing the Diehl upon the Golden Straw, the Champlain on the Rio Grande, the Australian Club on the Oregon Club, the Lost Nation on the Touzelle, the Russian on the Improved Fife, the Sonora on the Odessa, and others. Several of these are now two and three years old, growing nicely and promising well.

The wheat question is becoming the most important one, not only to the farmer, but to everybody. To be remunerative it must be raised at less cost and with fewer failures. To raise it at less expense is a problem quite easily solved, if farmers would, for one season, study the demands of the plant and feed it at the proper time and with proper food, save and select genuine seed, and cultivate it in conformity with its mode of growth. The farmer, too, must reduce his acreage or increase his force. One man can "put in" a hundred acres of wheat, but he cannot harvest it alone. Should he put in 10 well (scientifically) and as it should be, in nine cases out of ten he will make more than he would on the 100. The cost of preparing the ground, seed sowing, harvesting and marketing, cannot be covered by 10 bushels per acre or by an average of 15 all over the country at the present prices. [The prices of wheat in the season of '78—'79 were on the whole lower than those in '79—80, and averaged lower than even the present prices,

yet the total crop certainly gave a profit to the producers, although the average yield throughout the country was only 13.7 bushels. —EDS.]

To prevent failures, which come every few years—and in some States every year—is a question not so easily solved. They will come like "accidents to the best of families;" but I think very unnecessarily sometimes. Smut, rust and the ravages of insects can all be in a measure prevented, at least in some seasons. Some varieties resist the attacks of almost every enemy, while others are liable to injury by the most harmless. Hybrids, when well acclimated, are generally much stronger and more thrifty than the parent wheats, and should be adopted by farmers in place of the old kinds that have "run out."

State Agricultural College, Fort Collins, Col.

TIMELY NOTES.

HIGH temperature with seasonable rains has hurried vegetation along till we find haying and harvesting crowding closely upon corn cultivation. Fortunately in this respect the wheat acreage is so small in this locality that little hindrance will be felt from that, but Timothy is already shedding its bloom; clover is past its best and oats have been a week in head. The marketing of the old corn crop and the cultivation of the new are claiming so much attention that much grass must stand till over-ripe before it is cut. Timothy intended to be fed to horses is probably equally good if left to ripen; but when mixed with clover and intended for cattle it should be cut at once. The plan commended by Mr. Stewart of putting up hay before entirely dry and leaving it to cure in large 200-pounds cocks, I think a good one, and if the caps cannot be had or are thought too expensive, the tops of the cocks may be secured against blowing off by binding over with pieces of woolen twine 10 or 12 feet long with pins of wood or heavy wire attached to the ends as recommended for caps. Two of these strings laid over the cock at right angles and secured firmly to the ground, will keep the hay in a condition to shed rain, and where hay is cheap would, perhaps, be more economical than covers of cotton cloth.

Much old corn still remains in first hands and considerable will be held over, as the price has dropped to 29cts. Many refused 35cts last winter and have held their crops till the steady decline in price and the excellent prospects for the new crop dispelled all hope of improvement. Owing to the excessive rains in the midst of the planting season the growing crop presents a very uneven appearance, some fields standing waist-high and some only six to twelve inches. The standing of both early and late corn is good, and the weather all that could be desired.

Thus far oats and flax stand up well, though the rain the past week caused flax to lean for a day or two and reveal to view a considerable crop of weeds before unnoticed. Flax is famous for harboring mustard both in plant and seed, as the seed of both ripen at about the same time, and being of about equal size and difficult to separate, growers of flax should spare no pains to obtain clean seed. While on the subject of weeds, I beg to remind farmers that this is the season to look out for cockleburs. Whenever a patch is noticed, stop the cultivator and pull them up by the roots. This is the plan practiced on farms where no cockleburs are permitted to remain, and is little trouble if commenced in time. As Illinois farmers have no Canada thistles, elders or Quack-grass to contend with, they can afford to keep under this one great pest.

The season for cherries and raspberries is about over, and one noticeable fact of the season is, that the market for small fruits has been better somewhat back from railroads and about small towns than in the larger towns and cities. A considerable population of renters and those who have neglected to plant fruit, and the cheap facilities for preserving, make a good home market for all that is grown in many localities. Those who have had a surplus have been able to dispose of them for $1 per bushel for cherries, and six cents per quart for raspberries, the purchaser doing the picking, and there has been no lack of customers. A neighbor who has a cherry orchard of 300 trees has closed out his crop at from $1.25 to $1.50 per bushel, while at Champaign and Chicago they were down to 75 cents. This orchard, during the past three weeks, has been a scene of activity quite novel and interesting. People from all directions for miles around have resorted thither to buy cherries, young and old of both sexes often bringing their lunch baskets and making it a day of frolic and to the proprietor it has been a handsome little harvest. It would be well for other fruit growers too, and also for the raisers of several other horticultural products, to try and create a home market for their goods; for even if the prices got there are no better than those obtained in the towns and cities, delay, risk of loss, or damage of perishable goods, bad debts, etc., are then avoided. "G."

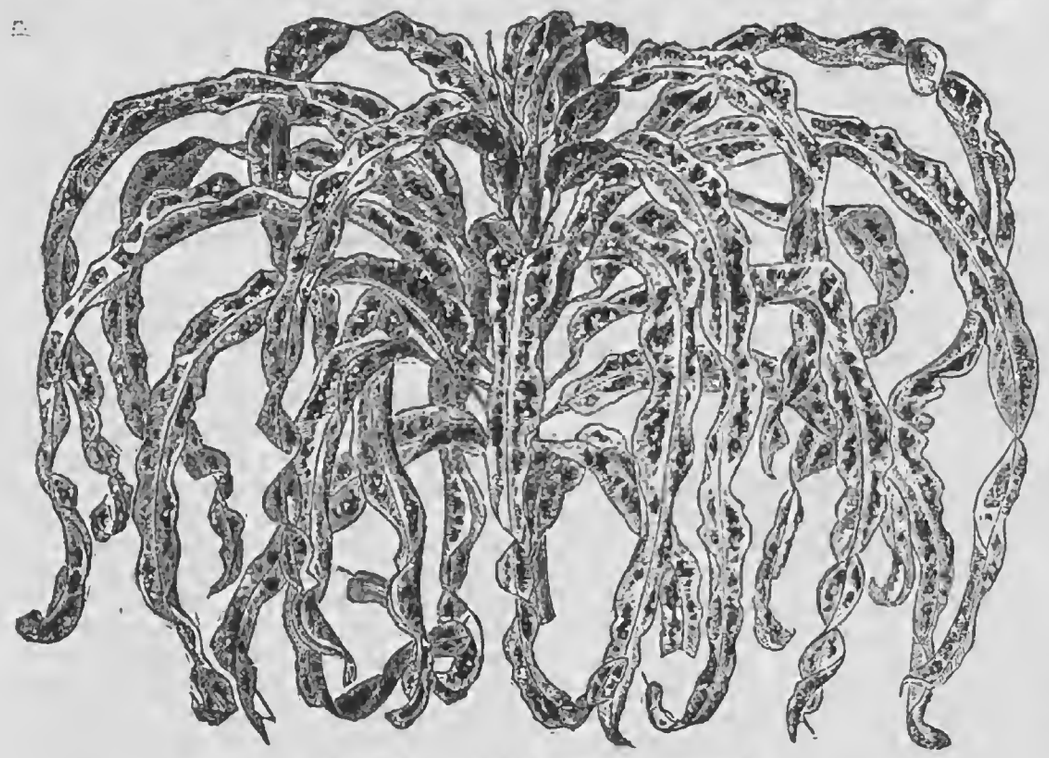
Ludlow, Ill.

Farm Topics.

THE OUTSIDE AND THE INSIDE.

THE editorials and other matter in the RURAL issue of June 26 seem worthy of both commentary and compliment, and, if you will allow it, I will add compliment.

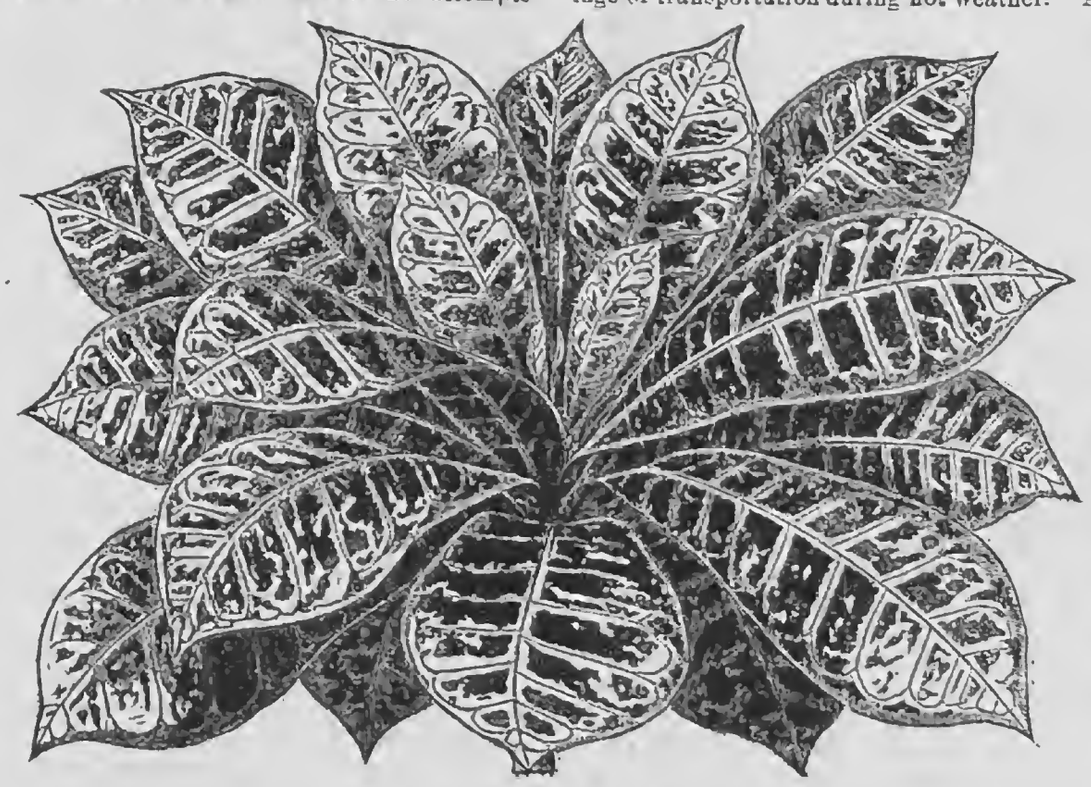
COLORADO BEETLES.—I have had a good deal of experience with this pest, and have been taught by costly experience there is no way of mastering him when he and his progeny appear in force, except by the use of Paris-green, extended some twenty or thirty times in dry



CROTON "PRINCE OF WALES."—FIG. 229.

calcined, or common ground plaster-of-Paris. My practice has been to pay little or no attention to the parent bugs, but to wait till the larvæ appear on the leaves, and then give the vines a thorough dusting with the mixture, using the common instruments for the purpose. Then the second or third day after repeat the process, and that brood is done for. Those who talk about hand-picking, killing the eggs and the like, really know nothing of the scourge when it appears in its worst form. Why, I have seen them appear in such numbers that if twenty persons were set to work to clear an acre, by the time they had gone over the vines, old and young ones enough would be found on them to require the work to be done over again, the same or the succeeding day. But like most insects the Colorado beetle is a lover of heat and drought and revels in the burning rays of an intensely hot mid-summer sun, and I conclude your cool climate of New York and New England will never feel the scourge as we of the West felt it in 1874 and the series of dry years which brought the great droughty year in.

THE ARMY WORM wrought a great destruction to pastures and meadows in Central Illinois two or three years ago, and here and there some 15 years since, did a vast deal of damage to Spring grain. But they appeared so suddenly and in such numbers little or no attempts



CROTON "STEWARTII."—FIG. 230.

were made to destroy them or arrest their course. In the case of pastures and meadows where a heavy roller can be used, if they are discovered in season, the sowing of a barrel, or a barrel and a half of salt to the acre and then giving the surface a thorough going-over with a heavily weighted roller, has been found, if not sufficient to exterminate them, at least enough to reduce their numbers so the crop of herbage would not be wholly lost. Perhaps the greater part of the advantage of such a course of treatment of the Army worm arises from the fact that the salting and the rolling are of value enough to the land and crop to pay the expenses incurred—just as in the case of the dusting of potato vines as above described—the benefit to the soil from the use of plaster is worth more than it costs.

BIG CORN CROPS.—Some years ago, on a very rich soil and under quite favorable circumstances, I made several attempts to grow 100 bushels of dry corn to an acre. But I never came nearer than 90 bushels, and possibly not nearer than 85. But in getting at the outcome I did not content myself, as is usually done, by measuring the product of one, two or three square rods and then multiplying for the whole—but I planted, cultivated and harvested a whole acre, and then when the crop was dry, weighed it. I suppose 100 bushels of corn can be grown on an acre, or even 125; but the season must be very favorable and all the surrounding circumstances fortunate; for five times out of six under average circumstances, the experiments will fail. And in this connection let me ask what is the special good of growing 100 or 125 bushels, over and above the demonstration that that quantity of grain can be grown on that area? Where land is not worth more than $40 to $50 per acre, I think there will be found more profit in growing 50 to 75 bushels of corn to the acre than 100 or 125; because the extra labor, money expenditure and trouble consequent on an attempt to grow these big crops are not made good by the outcome, however large it may be; while crops of 50 or 75 bushels are pretty sure to pay. To my mind the farmer who grows 50 bushels of dry corn to an acre, by the 40 or 80 acres, in average seasons, and 75 in very favorable ones has attained the best point of profitable corn production, and if he attempts to do better than that, he will lose more than he will gain.

THE CRUELTIES OF TRANSPORTATION.—There never was a more opportune word spoken than the RURAL'S appeal for the dumb creatures, our servants and our friends, that are now going through all the horrible sufferings of transportation during hot weather. A ride of some 250 miles during the hot days of the present week, revealed to me the horrible cruelties to which hogs and cattle are yearly subjected on their way to market. It scarcely seems possible that these cruelties can go on much longer without the active interference of laws enacted and enforced by the humane sense of civilized society. On most railroads little or no conveniences have been provided by which cattle and hogs can be cooled and watered in course of transportation, and consequently in weeks of intense heat like those which have occurred this month of June, fat cattle reach Chicago and other markets half dead with thirst and fever; and swine equally thirsty and half suffocated, for those which are alive, and in a partial state of decomposition for those which have died on the way. That these atrocities will and do tell on the public health and remotely on the public morals, there can be no manner of doubt, and if in the near or remote future an avenging Nemesis should appear in the form of some awful epidemic, and devastate cities where these cruelties are practiced in their worst form, who could say the scourge was not applied where the scourge was deserved.

But it is a pleasure to be able to make the fact known that one railroad company in the West is far in advance of all others in providing for the health and comfort of live stock transported over its lines, and that is the Chicago, Burlington & Quincy railroad, a corporation owning and controlling many hundred miles in Illinois, and many more hundreds in Western and Southern States. The management has so arranged and ordered that it is within the power and pleasure of every shipper of stock to stop freight trains at any one of the numerous water tanks provided for the purpose, and there water or deluge the heated live contents of the cars by floods of water taken and conveyed by hose and other appliances attached to the tanks. The first consequence is that the animals reaching the Chicago market on the C. B. & Q. and its connections, arrive in better condition and fetch better prices than from any other line; and the second consequence is the value of the lesson that the humane and enlightened management of a railroad is pretty sure to be sooner or later associated with great financial success, for the stock and bonds of the company under notice, are among the best reputed and highest priced of the stock market lists. It is to be hoped the management of other lines will, as soon as may be, follow the example of the C. B. & Q. and before they are brought to it by the compulsion of statute law enacted and enforced.

AGRICULTURAL COLLEGES.—The faculties of some of these which have been under the domination of literary presidents and doctors of divinity, where the agricultural student has come to feel as the negro is made to feel at West Point, have accepted the criticism of the RURAL as an indication that the farmers of the country are in earnest in demanding a change in management, which will bring these institutions back to the point they departed from some ten years ago. They see, too, that the modern farmer, like him of old, is about to give up the throwing of grass and will begin even to throw stones and without much regard to those who will be hit or hurt in the *melee*. In course of this month there has been a sort of informal and private convention of many of the agricultural professors of the country at one of the centrally situated Western colleges. Just what was done or just what conclusions were arrived at, the writer has no sufficient information of, but it is plain an effort is about to be made by those at present having control, to lift these institutions from the literary insignificance into which they have fallen and make of them, what it was originally intended they should be made, institutions for *practical* and scientific instruction in agriculture and mechanics, and nothing else.

CORRECTION.—My wretched MS., I suppose is responsible for several errors of sufficient importance to require correction, to be found on page 407, issue of June 26, line 28 from the bottom, for "93 per cent." read "93 hundredths of one per cent., or .93" and for "25 per cent." read "2½ per cent., or 2.5." There are several other errors in the paragraph on *wire fencing*, the most of which will, if the piece is carefully read, correct themselves.

Champaign, Ill. B. F. J.

Dairy Husbandry.

HISTORY OF A POOR FARM.—No. 27.

Adjuncts to the Dairy.

"MILK, butter, cheese, pork and poultry, may be called dairy products" I remarked.

"What has pork to do with a dairy," sharply asked my old neighbor. "You are always saying that everything about a dairy should be perfectly clean and that no bad smells or filth should be about where milk is kept. How are you going to keep pigs clean I should like to know and have a pig-pen without bad smells?"

"That can be done too if one wishes," I replied. "There is no necessity to confine pigs in filthy pens. If cows were neglected as much as pigs are, they would be equally filthy. If the stables were not cleaned out twice a day, and the cows scraped and washed and carded, there would not be much to choose between the cow-house and pig-pen. How often do you clean out your pig-pens," I asked.

"Once a year," replied the old man;" I expect the pigs to make manure and the yard

is kept supplied with a load now and then from the cow yard for them to work up with swamp muck and such stuff; that was your idea, and it is a good one."

"I have mine cleaned every morning and fresh litter thrown in, and as the yard gets full it is cleared out and the manure is used in the field for the fodder crops; by doing this I make three times as much manure as you do. The pig-pen is painted white, has glazed windows and no one would know by any bad smell about it, that it was a pig-pen. But this is not the point I wanted to talk about. This is, how should all the wastes of a dairy be best utilized? There is always a lot of skim-milk, washings of cans, pails, and churns, buttermilk, and in my case, waste milk that has been left unsold in addition. In some dairies a good deal of whey is thrown away that might be used. Then there are wastes in feeding, for cows cannot be fed so close as to use up every particle of food, and the refuse should be utilized. Now you have said that it does not pay me to buy corn to make pork; that my pigs cost me 25 cents a pound for the meat; and my eggs 50 cents a dozen, and I know this is a very common opinion, but is not true, and I want to show you that it is not."

"Let us see about it," said Mr. Martin, "that is what I tell Mary, but she just shuts me up with a quotation from some book she has, which makes out that the manure is worth more than the food from which it is made; and that the pork is all profit. That is some of Fred's teaching I expect."

"I do not doubt that Fred is right about that and your daughter too," I replied, "but we won't talk about that now; let us leave that for another time. Let us figure up what a pound of pork costs to a dairyman. No doubt Dr. Jones can give us some help on this question.

"Let us go to the principle of it" said Dr. Jones. "It has been shown unquestionably that 28 grains of carbon per pound of live weight are needed to sustain an animal of 150 pounds in good condition under moderate exertion. A pig of 300 pounds weight when killed, would have an average live weight of 150 pounds from its birth, and therefore 28 grains of carbon a day, with the usual proportion (1 to 5) of nitrogenous food which should accompany this quantity of carbon in perfect food, as corn and milk, will be needed for each pound of weight. That will equal nine ounces of carbon, which I believe is equivalent to one pound six ounces of corn. This will simply maintain the weight. To add one pound of fat and flesh per day to this weight, there would be required two pounds of corn in which there are 3 84 ounces (12 per cent) of flesh-forming substance and 13.12 ounces (41 per cent) of fat-formers. The whole amount of corn required, then, to make a pound of pork seems to be three pounds, six ounces. If corn is purchased at 56 cents a bushel, or one cent a pound, a pound of pork should cost less than 3½ cents."

"A great many experiments in feeding have shown that about one-third of the food is returned in flesh, on the average; so that the Doctor's figures are corroborated by actual facts," remarked Fred.

"Then, if corn only was bought and fed to our pigs, the pork should cost 3½ cents a pound. For 100 to 200-pound pigs, which are the most profitable, I can get seven cents a pound. So that at this rate I have 100 per cent. profit, and the manure is a clear gain."

"But there are the wasted substances—the buttermilk, the skim-milk, the sour milk and the trampled fodder from the cows' feed troughs, all of which save so much corn, what are they worth?" asked Mr. Martin. "Mary's pigs get little else but these. One hundred pounds of corn-meal last her a long time; and why won't it pay to feed the pigs longer and have them weigh 300 pounds?"

"One thing at a time," I replied. "Seven pounds of skimmed milk or buttermilk are estimated to be equivalent in feeding value to one pound of corn. There are 12 pounds of solid matter in 100 of skim-milk, of which four pounds are flesh formers and 7½ pounds are fat formers, chiefly sugar. The mixture of some corn-meal with the skim-milk is an advantage to each; the one helps the nutritive value of the other. But the large proportion of nitrogenous matter in the solid part of milk increases its money value, and I believe this solid part of milk is nearly twice the value of corn for feeding a growing animal—as a young pig—so that I think four pounds of milk will be found equal in feeding value to a pound of corn-meal. At this estimate buttermilk or skim-milk should be worth half a cent a quart. It is often sold at one cent a gallon, for feeding pigs, by dairymen who don't know its value, and is a cheap food at that price. Fred has helped to find out the value of young pork, and can answer your other question."

"In Dr. Miles's experiments at the Michigan Agricultural College, some grade Essex pigs, a good feeding sort, were fed from two weeks old for 203 days or 29 weeks, in which time they gained 141 pounds in weight. At the beginning of the feeding the growth was more rapid than at the end, and Dr. Miles's conclusion was that the best return for food is obtained by liberal feeding in the early stages of growth, when the organs of nutrition are capable of converting the largest amount of material into flesh and fat in a given time."

"And I am sure he is right," said my old neighbor; "the most profitable pigs are Spring pigs fattened in the Fall and sold before the Winter. There is no Winter feeding then, which is a waste of food, for pigs don't grow in the Winter time—at least mine don't."

"Here is our last year's pork account, which shows that pork may be made a profitable product on dairy farms: The keeping of two brood sows and one boar is not included in the pork account, which takes in only the pigs when weaned and their keep up to their sale as pork. The pigs are pure Berkshires. I value a weaned pig at $5, and credit the sows and the boar with the value of the litters at that rate, and they pay a good profit, too, on their keeping, for they produce two litters in the year:

PORK ACCOUNT FOR 1879.

Mar. 7, 7 weaned pigs, estimated value	$35 00	
May 3, 6 " " " "	30 00	
Sept. 8, 3 pigs, 383 pounds pork sold at 7c.		$26 81
Sept. 11, 2 pigs, 371 pounds pork sold at 7c.		25 97
Oct. 12, 1 pig, 182 pounds pork sold at 6½c.		11 83
Oct. 18, 1 pig, 176 pounds pork sold at 7c.		12 32
Dec. 24, 3 pigs, 521 pounds sold at 7c.		36 47
Dec. 31, 3 pigs, 612 pounds pork sold at 7c.		42 84
1,120 lbs. malt sprouts at $12 a ton.	6 73	
2,322 lbs. corn at 1c. a pound	23 22	
864 lbs. bran at ¾c. a pound	7 56	
Balance (value of milk, etc.)	53 74	
	$156 24	$156 24

The average weight is 173 pounds nearly for seven-months pigs (here Mr. Martin smiled), and the money returned for waste milk and the rakings of the cow-barn—waste fodder, etc.—is $53.64. We kept no account of the milk used, and so cannot give the quantity of that."

"We can beat that," remarked Mr. Martin, "Mary shall show you her pork account." and Mr. Martin and Fred nodded to each other, and looked immensely pleased.

THE DAIRY COW.—No. 2.

HENRY STEWART.

What it Costs to Keep a Cow.

FEW persons know or believe how easy it is to keep a cow. One may feed two cows liberally for six months on the grass cut from half an acre, or less, of lawn, and an orchard of an eighth of an acre, with the help of garden waste and two or three quarts of meal daily. One ton of hay with the wastes of the house—as peelings of potatoes, apples and other vegetables—and half a ton of meal and a ton and a half of hay will liberally support a cow through the winter. If one lives on a road the side of which is covered with grass, he may lawfully and properly pasture a cow upon it by tethering her with a chain and an iron pin to be driven into the ground to secure it; or, with rare exceptions, one may procure pasture in the Summer from a neighboring farmer or owner of unimproved land or vacant village lots for a dollar, or two dollars at most, per month. Then one's land may be used for growing fodder for Winter use, and half an acre of good land will produce an abundance for one cow, so that the owner of one or two acres of land in the country or in a country village, may keep a cow at very small cost. The circumstances are so varied that estimates of this cost cannot be made precisely for every case. It may serve, however, to sum up the cost of everything, supposing all the feed to be purchased, and from that one may gather the exact information as to the cost in his own particular case by variations and substitutions. The following figures are taken from the account books of a milk dairy in which all the feed in one Winter was purchased and in the Summer the exact cost of the feed was ascertained with accuracy: Average cost of Winter feeding on hay, corn-fodder and meal in a dairy of 25 cows, 16¼ cents per day; cost of Summer feeding on soiling crops and meal, 12¾ cents per day. This will apply not only to the case of one cow, but also to that of the business dairy in which strict accounts are rarely kept.

To begin to estimate what a cow will cost to keep, the cost of the cow may be considered first. A very good common cow can be procured for $40 where cows are high-priced. An extra-bred cow, with everything handsome about her and fit for any family of high degree even, may be purchased for $75 to $150. When one has begun the business and has a cow, it is not much trouble to keep a calf, and it is often possible to buy a well-bred, handsome heifer calf, to save her from the butcher, for her value in veal. With a little extra care the little creature may be kept and trained as a pet, and fed until of a cow's estate for the sum of $25 or $30 or thereabouts. In this way one may procure a really handsome cow and one that "handsome does" as well as looks, and be gentle and kind and easily handled, at a very small cost. A fair common cow, but with no beauty, except, perhaps, in regard to her usefulness, and in the fullness of old age, may be bought for $25 or even less, and after having been milked out may be sold to a farmer for feeding for $15 or $20. This is a convenient method, as there is no trouble about calves and it is not difficult to "make a trade" when a fresh cow is desirable. It is convenient for the private family and for a milk dairy, as the loss on the wear and tear and exchange of the cow is small.

A cow may be fed for 20 cents a day and "live in clover," and for less if her feeding is somewhat less luxurious. But a cow needs good feeding for profit. The better she is fed, the better she will feed her owner, so that it is best always to be liberal about the feeding under any circumstances. A fair-sized cow will consume 15 pounds of hay and eight pounds of meal daily, or the equivalent of these. The following rations may be considered as equivalent to each other and as sufficient for a cow for 24 hours:

	Cents.
15 pounds of clover hay at $15 a ton	10½
8 pounds of meal at $20 a ton	8
	18½
10 pounds of corn fodder at $5 a ton	2½
½ bushel of mangels at 10c. per bush	5
8 pounds of meal at $20 a ton	8
	15½
10 pounds of marsh hay at $5 a ton	2½
10 pounds of corn fodder at $5 a ton	2½
10 pounds of meal at $20 a ton	10
	15

Allowing something for the cost of stable furniture, salt and other small contingencies, the average daily cost of keeping a cow will be 20 cents. If one grows the feed that is sold to the cow at the prices named above, the grower could thrive and grow rich if he did enough of it. This would be equal to $36 from Nov. 1 to May 1, which is the most costly period of a cow's keeping, and the above prices are rated as those current in the most expensive localities and at the present very expensive period in regard to feed; the figure is therefore a maximum one. The Summer feeding is much less costly, for grass is cheap and green fodder may be grown as cheaply as grass. But if it is considered that the Summer feed may cost so much as $24 even, the whole year's feeding, with everything purchased at the highest prices, will not reach over $60, which is considerably less than the yearly income, and leaves a large dividend to repay the first cost of the cow.

THE TRUTH ABOUT IT.

[THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

HAS OLEOMARGARINE INJURED THE DAIRY INTEREST?

BUTTER makers do not seem to appreciate the injurious effect which the manufacture of oleomargarine and the mixture of it with butter, which goes by the name of butterine, have had upon their business. Because it is not apparent, and their commission merchants do not plainly say to them when they return sales at a reduction of five or ten cents per pound, "This is because of the competition of oleomargarine," they do not seem to realize the facts in the case. Now it is very plain that if there are purchasers for a certain quantity of butter at a certain price, and just so much butter, and no more, is made as will supply these purchasers, the price will remain steady. But let a competitor come with a cheaper article and say to half those purchasers. "I will supply you with this butter at 10 cents a pound less than you have been paying," immediately the other half will claim an equal reduction, if indeed, the butter makers with twice as much goods to dispose of as there is demand for at the old price, do not begin to compete among themselves and reduce their prices with a view to increase the consumption. Then the measure of the reduction is the ability of the dairyman to produce butter at a certain price, and that is the cost or very little more than that. This seems to be plain, and it is "the truth about it." When butter fell last year to the lowest prices for many years, can we suppose that the enormous production of oleomargarine had nothing to do with that? When the market was crowded with goods seeking purchasers, did not the thousands or hundreds of thousands of tubs of bogus butter offered and sold as butter, help the downward course of prices and assist in overstocking the market? Any dairyman who cannot perceive this, must be blind indeed.

"But" says the fancy-butter maker, "it does not hurt me, and my goods are of the highest quality and do not come into competition with the bogus butter, or with low common stuff at all." Let us see if it does not. Take the market rates and consider. There are regular gradations of price from 24 cents for "choice creamery," dropping one cent per pound for each grade down to "very poor" at 10 cents Let it be supposed that the "very poor" only is subjected to the competition with oleomargarine, as the "gilt-edged" butter maker may claim. What then? "Very poor" tumbles down four or five cents a pound because the large consumers of it, hotels, pie bakers-cooks, boarding-houses and ships, would rather take sweet oleomargarine than the rancid, ill-flavored, very poor butter which disgraces its name, and the profession of the dairyman. When "very poor" falls off so many points, "poor" is dragged down with it; with "poor" down comes "ordinary" and that clings to "medium" and this to "prime" and when prime falls off, the buyer of "choice" says "How is this, I cannot give 30 cents for choice when prime is only 22, the usual difference is only two cents. I will give two cents and no more."

The loss of six cents on "choice" then is due clearly to the interference of the substitute which makes the lowest grade unsalable. This seems so clear that one may very well apologize for stating it, but many of the best butter-makers have said, "This is a fight for the poor-butter makers; we are not in it; you may count us out." They are very much mistaken. My own customers are private families who are willing to pay 10 or 15 cents more than the highest grades of butter sell for at the stores. When store butter comes down, these claim a corresponding reduction, and in some cases I am bound to make it. Oleomargarine then takes money out of my pocket; and, if so much more does it take it from the creameries and the best private dairies that go into the open market. Cannot these see that this is "the truth about it."

But I am sorry to say that the hands of some dairymen are not clean in this matter. There is the very best reason to know that a large portion of the "oil" goes to the creameries to be mixed with butter and to be worked in with skimmed milk to make "full milk" and fine cheese. And yet some of these very men will join in the cry against those who openly acknowledge their dealings in oleomargarine, and denounce those persons as mischievous frauds. If I have an adversary, give me one who fights openly and not in concealment or in the guise of a friend; and it is a startling truth that the worst enemies of the honest dairyman in regard to this competition are "those of his own household." H. S.

The Herdsman.

ENGLISH JERSEY HERD BOOK.

THE first volume of the English Jersey Herd Book, edited by John Thornton, has just been published in London. This is an entirely distinct work from the Herd Book published for years past in the Island of Jersey, and it records only Jerseys which are bred in Great Britain and Ireland. This volume contains 973 bulls; cows and heifers are retained for a second volume.

To show how rapidly Channel Island cattle are increasing in England, only one, a bull, was exhibited at the Royal Agricultural show in 1839, while 292 were entered and shown in that of the past year. The advance in prices at auction sales of these has also greatly increased. The one which came off in 1865, averaged only £25, 15s. 4d. per head, while another in 1878, rose to £51, 1s. 9d.

Mr. Thornton in this volume has given a history of Jersey cattle as known in their own Island home, as well as in England. Nothing positive can be told as to their origin, but it is supposed by him to have been in Brittany, on the opposite coast of France, as native cattle resembling them are still found there. Another reason, if he had known it, which might have been adduced to corroborate this, is, that many of the native cattle, among the French inhabitants of Lower Canada, are precisely like ordinary Jerseys. Now many of the ancestors of these people came from Brittany among the earliest settlers in Canada, and unquestionably at this time brought the ancestors of their present cattle with them.

I have seen hundreds of cattle in the mountainous parts of Switzerland, mostly of dark, solid colors, closely resembling Jerseys, except they were larger and somewhat coarser. I was informed that they gave abundance of extra-rich milk. Napoleon III had a considerable herd of these in his dairy near Paris in 1867. The great fault of their shape I observed was a coarse ridge of bone and brawn running from the root of the tail on to the loins, an unsightly excrescence to my eye; otherwise they were rather nice-shaped beasts. A.

Sussex Cattle.

THESE are thought to be a cognate breed with the Devons, but are considerably larger and somewhat coarser, and slower to mature. Yet improvements in these seem to be the order of the day in England, which has at length reached such a point as to demand the getting up of a Herd-Book for their record. The first volume of this was published last year, and they are now at work on the second. Formerly animals of this breed could not be matured till four to five, and even six years old; now they are made ready for the market, weighing just as much at half these ages. This enables

their breeders to turn the capital invested in them, in half the time before consumed, and adds an additional profit in raising them.

We recollect seeing an account in the English papers some years ago of a Sussex breeder who had such a conceited estimation of the superiority of his cattle as to challenge any herd of Short-horns in the Kingdom to be shown against them. The late Earl Spencer immediately accepted the challenge for his own herd; judges were then appointed and the rival animals brought into the ring. Upon careful comparison of the two breeds, side by side, the Short-horns were declared to be much superior, to the great mortification of the Sussex breeder. They have since this been so greatly improved as to be considered now among the best of the second rank of England's beef cattle, and in time may probably take their place among the first.

Arboricultural.

RAINFALL AND FORESTS.

A RECENT article in the RURAL reiterates what has been constantly preached for several years past—namely, that the destruction of forests causes drought. This is constantly stated to be susceptible of proof—and, to use the expression of the present age "scientific proof." Science has the exalted place now-a-days, and proof is no proof unless it is scientific. Why this drought effect of the destruction of forests is so often reiterated I cannot imagine, since no one seems to doubt it. Never have I seen the least contradiction of this philosophy. And this seems strange to me since facts do not favor it in the broad extent of our country. There are two notable facts that afford such clear proof to the contrary, that apparent proofs of the theory drawn from narrow, isolated sections cannot affect them. The first is this: In Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, and Nebraska there is a region, in area, say, 300,000 square miles, that is now and has been while known to the white man, practically treeless, and it is a recent discovery that this vast extent of country is a desert. For, taking this theory that the loss of forests causes drought, and drought, sterility, it follows that we are mistaken in thinking that we live in a fertile plain that groans with millions of bushels of corn and wheat and other productions that cannot thrive without the proper amount of moisture.

What has been the fact in regard to this vast region? It is that, without forests, it has had from time immemorial as large a rainfall, on the average, as those States which are largely covered with forests. Is there any possible way to get around that fact? It will not do to point to droughts that have prevailed from time to time in varying localities. They do not militate against the great truth stated; for they were *local*, and, besides, droughts have prevailed similarly in wooded districts.

The next great fact is, that our rainfall does not come, to any considerable extent, from the evaporation of moisture from the surface of the land, held there by the forests and liberated as needed according to this theory; but from vast masses of vapor projected over us, drawn from the Gulf of Mexico and the Pacific Ocean, and which by natural laws are precipitated on us, regardless of wide prairie or thick forest. These two facts, it seems to me utterly destroy the theory.

How does experience affect the question, looking at it from a local point? In Indiana and Illinois, and perhaps in a larger extent of country, our seasons were dry for several years previous to 1875. Then we had a flood, and for five years past there has been an abundance of rain. In those dry years it was common to cry out about the cutting away of the forests. Have the forests come back, that we lack not for moisture?

Here we are suffering from rain—farmers (this middle of June), in some parts have not been able to get in their corn, and one flood follows another in our bottoms. In the East you have been burnt up. How about the forests—are ours growing and yours lessening so rapidly?

This is only another instance of arguing from hand to mouth, as it were. J. A. F.

Terre Haute, Ind.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN 45.—JUNE 18, 1880.

HORN, FISH, BLOOD.

432. Buffalo horn dust, sold by F. S. Johnson, Plainville, sent by J. W. Hemmingway, Plainville.

433. Quinnipiac Fertilizer Co.'s dry ground fish, sold by J. M. Belden, New Britain, sent by E. F. Blake, New Britain.

391. Dried blood, made by Sperry & Barnes, New Haven, sampled and sent by R. E. Pinney, Suffield.

392. Dried blood and hair, made by Strong, Barnes, Hart & Co., sampled and sent by R. E. Pinney.

439. Dried blood, manufactured by Strong, Barnes, Hart & Co., New Haven, sent by J. J. Webb, Hamden.

	432	433	391	392	439
Nitrogen	14 50	8 14	8 20	8 80	8 25
Phos. Acid	0 15	7 28	6 02	3 55	6 41
Estimated value per ton	$43 71	$42 75	$33 23	$36 63	$41 07
Cost per ton	$30 00	$38 00	$26 00	?	$30 00

BONE.

434. H. J. Baker & Bro.'s strictly pure ground bone, sent by J. J. Webb, Hamden.

440. Ivory saw dust, manufactured by F. S. Johnson, Plainville, sent by J. W. Hemingway, Plainville.

441. Bone sawdust, made by Holyoke Manufacturing Co., Holyoke, Mass., and sold by R. T. Prentiss, Holyoke, sent by J. W. Hemingway, Plainville.

442 and 443. Ground bone, made by Atwood Bros., Watertown, sent by M. S. Baldwin, Naugatuck.

	434	440	441	442	443
Nitrogen	3 94	5 42	3 64	3 76	4 29
Phos. acid	19 56	24 38	26 16	20 02	21 95
Passed holes 1-50 in.	40	94	87	2	27
" " 1-25 in.	29	6	11	11	26
" " 1-12 in.	28		2	20	23
" " 1-6 in.	3			23	14
Coarser than 1-6 in.	1			43	10
	100	100	100	100	100
Estimated value per ton	$39 13	$53 44	$49 24	$33 96	$40 80
Cost per ton	$31 50	$30 30	$35 50	$30 00	$30 00?

442 and 443 are respectively the finer parts of the same ground bone.

The finer bone, 443, is seen to contain more, both of nitrogen (0.5 per cent.) and of phosphoric acid (1.9 per cent.) and partly for that reason and partly for its fineness it has an estimated value nearly $7 greater than the coarser bone, 443.

POTASH SALTS.

428. Sulphate of potash, H. J. Baker & Bro., New York, sent by Mr. P. M. Augur, Middlefield.

438. Muriate of potash, sold by H. J. Baker & Bro., sent by J. J. Webb, Hamden.

	428	438
Potash	47 37	52 18
Sulphate of potash	87 60	
Muriate of potash		83 50
Estimated value per ton	$71 06	$46 96
Cost per ton	$65 00	$40 00

PLASTER.

414. Land plaster, manufactured by E. B. Alvord, Jamesville, N. Y., sold by S. A. Weldon & Son and sent by S. R. Gridley, President of the Farmer's Club, Bristol, Conn.

419. Gypsum or land plaster, Nova Scotia(?) ground and sold by George Abbott, Branchville, Conn., sent by D. H. Van Hoosear, President Farmers' Club, East Wilton, Conn.

431. Plaster, manufacturer unknown, E. N. Pierce, dealer, Plainville, Conn., sent by T. N. Bishop, Plainville.

	414	419	431
Sulphuric acid	35 09	43 64	34 96
Lime	24 56	30 56	24 47
Combined water	15 79	19 63	15 73
Gypsum	75 44	93 83	75 16
Matter insoluble in acid	7 48	3 85	7 81
Carbonate of lime, by difference	17 08		17 03
	100 00	100 00	100 00
Cost per ton	$7 50	$6 00	$7 00

S. W. JOHNSON, Director.

NEW JERSEY AGRICULTURAL EXPERIMENT STATION.—3.

ANALYSES OF LAND PLASTER.

THIS substance has been very extensively used in New Jersey as a fertilizer. It was formerly thought to be almost indispensable for producing a good crop of clover. It is not so much used for that purpose now, though employed to some extent, but is found beneficial in hastening the germination of seeds, in promoting the growth of young corn and potatoes. It is much used on composts for absorbing or decomposing gases and for hastening the decay of coarse manures.

The supply of plaster for this State comes mostly from Central New York or from Nova Scotia. That from New York is commonly of a grayish color, and besides the sulphate of lime and water which are its proper constituents, it contains some carbonate of lime, some carbonate of magnesia, and other impurities. The Nova Scotia plaster is white and usually contains only a small percentage of any impurity.

Pure plaster is composed of—

Lime	32.6 per cent.
Sulphuric acid	46.5 per cent.
Water	20.9 per cent.
	100.0

When the plaster is heated a little above the temperature of boiling water, it gives off the water that was combined with it, and is then known as boiled plaster or plaster of Paris. This is the plaster which sets and becomes stone again when it is thoroughly wet with water, and is used for making plaster casts, cornices, hard-finished walls, etc.

In addition to the chemical names of calcium sulphate and sulphate of lime it is also called gypsum. As a mineral it is known as alabaster and selenite, and when found as it is sometimes without water in it, it is called anhydrite. It is so soft as to be scratched with the finger nail, and it dissolves slightly in cold water, about one pound of it dissolving in 60 gallons of water.

Plaster for farmer's use is to be found in all our markets.

The following samples have been sent to the Station for analysis and they are the kinds most commonly sold.

The comparative value of these samples is calculated very nearly by assuming that pure boiled plaster is worth $10 a ton or a half-cent a pound. This price would make the value of the specimens to be set down in the table.

	(2.)	(3.)	(4.)	(5.)	(25.)
Sulpuric acid	44.64	29.52	45.14	45.08	56.47
Lime	31.24	20.66	31.59	31.56	39.56
Sulphate of lime	75.88	50.18	76.73	76.64	96.03
Water	20.08	13.32	20.33	20.28	00.00
Value per hundred	$0 38	0 25	0 38	0 38	0 48
Value per ton	$7 59	5 02	7 67	7 66	9 60
Selling price	$8 00	7 00	9 00		8 10

(2.) Sent by S. L. Burrough, of Merchantville, from the stock of Fitzgerald & Co., Camden. Its brand is pure Nova Scotia land plaster, and its price $8 per ton.

(3.) Sent by I. W. Nicholson, of Camden. Cayuga Plaster Co., Union Springs, N. Y. Delivered at Haddonfield, by car-load, at $7 a ton.

The analysis accompanying the plaster gave its percentage of pure gypsum as 80.78 per cent.

(4.) Sent by William C. Nicholson, of Haddonfield, Brand, land plaster. From stock of Taylor Bros., Camden. Price, $9 per ton.

(5.) Sent by Hon. E. Burrough, Merchantville. Brand, French's land plaster. From stock of French, Richards & Co., of Philadelphia. Price not given.

(25.) Sent by Samuel L. Burrough, Merchantville. Brand, Nova Scotia land plaster. From stock of W. Fitzgerald. Price $8.10 per ton. Of these specimens, two, four and five are samples of Nova Scotia, 3 is a sample of plaster from central New York, and 25 is a sample of boiled plaster or plaster of Paris. Their values in the table are estimated by considering the sulphate of lime as the only substance desired by the farmer in buying them.

The Cayuga plaster is perhaps worth a little more than this estimate, on account of other substances in it, and the boiled plaster may not be worth so much as estimated on account of its liability to *set* if it should be wet before the time for using it.

The dressing used for an acre is very small, from 100 to 300 pounds. This may be the reason that the poorer plaster gives as good results as the best. But if so the dressing of the latter may well be diminished in amount.

GEO. H. COOK, Director.

Miscellaneous.

WHAT OTHERS SAY.

THE CREDIT SYSTEM.—We find the following in Dr. Hoskins's department of the Vermont Watchman: "The RURAL NEW-YORKER, like the faithful farmers' paper that it is, has for the last two years enforced in a series of able articles the evils of the credit system, and has expressed the desire to see it abolished. A recent writer of the Country Gentleman thus speaks of this Moloch: 'Land-poor, beggared, crushed under the load of a thousand acres, might be written as the epitaph of many a lost home. But time, which cures all ills and corrects all abuses, is freeing the debtor, and at the same time the wheels of business and prosperity, which have been so long clogged. Indebtedness, like a malignant disease, must, if not removed soon, prove fatal.' A striking instance, but only one in a thousand, of ruin thus worked is the case of Thomas Baker, who for the last twenty years has carried on one of the largest, best and most profitable dairy farms in Orleans county, and whose fine herd of Dutch cattle has so often been a feature of our State fairs. In the 'flush times' he could have sold his land, paid his debts and had $15,000, with all his stock, implements and household goods clear. Within a year the whole has passed into the hands of a mortgagee, leaving Mr. Baker with hardly enough to carry him and his family to the wilds of Dakota. Mr. Baker has always been a prudent, hard-working man, and has sold his large product of butter at extra prices. His wife is a model dairy woman. But they had to go down under the weight of a $15,000 mortgage. He now writes from the wilderness his last word to the young farmers of Vermont, 'Don't go in debt for land."

AGRICULTURAL EDUCATION.—What, (asks the London Gardeners' Chronicle) said Mr. Church the other day, at the Congress held at the Royal Agricultural College at Cirencester, on the occasion of a thoughtful address of Professor Tanner? Was he not right when he said that the bulk of British farmers—and the same remark applies, in its way, to British horticulturists—are entirely ignorant of what has been done for their benefit by Messrs. Lawes and Gilbert at Rothamsted? Was he not right when he pointed to the results obtained in sixty-two experimental stations in Germany, fifteen in Austria-Hungary—127 stations in Europe generally, and asked how much our British cultivators had profited by them? What are our horticultural societies about? Is it well that their labors should practically be confined to the establishment and conduct of flower shows? The countries we have named are right, and we are wrong. We are tamely letting them get the better of us, and complaining of bad seasons and hard laws, all the time doing next to nothing to meet the altered circumstances. Scientific training in the Universities for those who are to become possessors of estates or managers of property in the future, chairs and classes of agriculture, botany, physiology, physics, chemistry, geology, entomology—all these are wanted, and should be supplied in our great Universities and elsewhere, with special reference to practical needs and requirements. For the working classes of the board school or the village school should furnish the basis, not only of a common education, but also such a knowledge of the soil, the air, the waters, the plants and the animals as may be made available in the daily routine of the farm or the garden. We cannot too emphatically repeat our conviction, that progress in gardening and farming in the future depends far more on the results to be got from a thorough training in the various branches of natural knowledge, than it does in any readjustment of land laws or lightening of fiscal regulations. These are, as it were, local accidents—limited in their area, restricted in their range, but Nature is universal, the application of a knowledge of her laws to the business of life is limited only by the finite faculties of man.

SOIL EXHAUSTION.—The following is from the pen of Dr. J. B. Lawes to the London Ag. Gazette. It should be carefully read by all farmers. "It is now exactly forty years since we began to exhaust a portion of one of my fields by continuous unmanured wheat crops, it may therefore be interesting to show the evidence we are in a position to bring forward upon the subject of exhaustion as regards the soil at Rothamsted. It would appear probable that the annual decline due to exhaustion may amount to from one-quarter to one-third of a bushel of wheat per acre per annum. If we take the smaller quantity and add to it the ordinary proportion of straw, the result would be equivalent to about 40 pounds of produce; and, as there is but little doubt that the bulk of the organic matter of the crop is obtained from the atmosphere, the amount of matter annually taken from the soil by these 40 pounds of produce (including the nitrogen it contained) would be between two pounds and three pounds. The evidence derived from other experiments in the same field proves that the decline in produce is due to an absence of nitrogen, as also that minerals are in excess, but the actual amount of nitrogen that these 40 pounds of produce would have contained would be less than one-half pound in weight! It will, I am afraid, appear to your agricultural readers something like an absurdity to suppose that one-half pound, more or less, of any substance upon an acre of land, could have an appreciable influence upon a crop. I may observe, however, that this annual decline of 40 pounds of produce, small as it appears to be, amounts in forty years to 10 bushels per acre. Analyses of the soil made at different times show that the nitrogen is declining, and as the free use of minerals in an adjoining experiment does not prevent the decline of the crop, we can come to no other conclusion, than that the gradual decline in the produce is due to the diminishing amount of nitrogen in the soil. As far as the wheat crop is concerned, it would appear that the total amount of produce to be obtained from any soil must depend very much upon the stores of nitrogen already in the land. It is true that the soil obtains a certain amount of ammonia from the rainfall, and it probably condenses more or less from the atmosphere; but, on the other hand, drainage carries away every year more or less nitrogen in the form of nitric acid; and it is evident the atmospheric supply, whatever it may amount to, does not suffice to prevent a decline of the crop; it is therefore also evident that the source, from which the forty crops obtained their supply, must have been the stores of nitrogen already existing in the soil when the experiment commenced; further, it seems most probable that the yield of future crops will depend upon the amount of nitrogen liberated each year from the soil."

FEEDING CALVES.—"Mr. O. S. Bliss," the N. Y. Tribune says, "who has tried all ways of raising calves, prefers uncooked food, and especially a mixture of ground oats and barley, to any other addition to the skim milk. He begins with a small quantity, fed dry, and gradually increases it after a week or two; when the calf is four to six weeks old it is allowed to have all it will eat of this meal, given just after it has taken its milk, with, afterwards, all the pure water it will drink.

MR. GEDDES, according to the Syracuse Journal, using plaster on potatoes on alternate rows, found that the vines where a handful of plaster had been thrown gave double the yield of potatoes and double the size of vines in an unusually dry year.

A WRITER in the London Garden traps field mice by placing bits of cheese in bottles sunk in the soil, rather on the slant, the mouth on the level of the ground.

THE OLEANDER POISONOUS.—It is stated that the oleander "is a deadly poison, and may frequently prove a treacherous fondling if not carefully watched. It is one of our most beautiful window plants when covered with its large rose-like blossoms, but in these blossoms the weapon of death resides." A case is recorded of a child having eaten a few flowers and being poisoned by the same. The Annals of the Peninsular War states that "a number of French soldiers went out foraging near Madrid, returned laden with the fruits of their search. One of the number, with a view of securing some wood to make skewers for the meat, cut a quantity of oleander bows, and, having stripped them of the bark, used the wood in the meat. The result was, that out of twelve who ate of the roast seven died, and the rest were dangerously ill. The poisonous principle is so subtle that its exhalations alone are sufficient to cause serious accidents, and even death, to those who recline or sleep for any time under their influence. It exists equally in every part of the plant, but it is considerably weakened by cultivation."

KNOWLEDGE.—We commend the following remarks of Prof. Wrightson, president of the new English Agricultural College. The question of the ignorant and of the self-sufficient is ever, "Of what use is that?" But, it is very difficult to say what is of use and what is not of use. Knowledge is powerful and knowledge is portable. It dwells with us after we have received it. It fructifies in us and throws its light on subjects with which we may find ourselves brought in contact. Knowledge is suggestive, enabling us to offer explanations of the unknown from the known. Knowledge is the best safeguard against foolish statements and false arguments—the best defense against the wiles of quacks and impostors. Be careful, I say, of the seductive spirit of laziness which prompts you to question the usefulness of any subject. The most learned men never feel that they know enough, and there is something ennobling and fascinating in the clear perception of a new fact in natural science, which amply repays the trouble of acquiring it, even if it went no farther.

As previous numbers of the RURAL NEW-YORKER will show—we fully indorse the following from Colman's Rural World: While we are on shrubs, let us not forget an old favorite of ours, the Hypericum Kalmianum, or Laurel-leaved St. John's Wort. It is a native of our stony hillsides; in bloom from July to September; forms a very dense, round shrub, about two to three feet high; its glossy foliage is fine for bouquet green; its yellow blossoms are very delicate and beautiful and furnish an abundance of honey for the bees for several months. Bee-keepers should not neglect to plant an abundance of it near their bee stands, and it also makes as beautiful and ornamental a hedge as can be found. Its only drawback is that it is a native. It is neither Russian, Japanese, Chinese nor English, but simply a native American, and of course not fashionable or desirable on that account. It is neither far-fetched nor dear-bought, and therefore will not sell among native Americans.

THE WEEPING MOUNTAIN ASH has probably received as much attention as any weeping tree, on account of its distinct habit, says Mr. Wm. C. Barry. A careful examination of its mode of growth cannot fail to excite wonder. If worked two or three feet from the ground and allowed to grow wild, it soon becomes as odd a piece of framework as it is possible to imagine. I have an indistinct recollection of one I saw growing in this manner, and at the time I considered it as great a curiosity as I had ever seen. Grafted six to eight feet high, it becomes a very desirable lawn tree, and in the Autumn, laden with large clusters of bright red fruit, it produces a brilliant effect.

"FANCY FARMING," in the usual sense of the term, says the New York Evening Post, is almost always the sure road to financial ruin. It requires a fat purse to experiment with costly breeds of cattle, sheep and fowls. Much, however, is thus learned, and the more wealth and intelligence that are turned toward the improvement of stock, the better it is for the farming community generally.

PARTISAN VITUPERATION.—"The political campaign just opening," says the Husbandman, "promises to be abusive, slanderous and disgraceful in its treatment of candidates. The blackguardism of politics has become so shameless and reckless in the last few years that it is nothing less than a national disgrace. A candidate for a high office may have had a spotless character up to the moment of his nomination, but that will not shield him from attack. He will be pictured as a monster of vices, and the public will be invited to consider specific charges of wrong in which he has been profiting. His good name will give him no protection among those who revel in political slanders. Is it not possible to reform politics in this respect? Are partisans wholly destitute of honorable consideration for their opponents?" [Yes, as a rule, we think they are.—EDS.] "It is extremely hurtful to the moral sense of the people to be regaled on lies that have the plausibility of truth, and are offered in disparagement of men selected for high official positions."

SELECTING SEED.—Mr. Geddes says: "If farmers would exercise as much care in selecting seed wheat as they do in corn, there would be less running out." "This is a fact," says Prof. Blount in the Country Gentleman, "and I am surprised that more farmers do not see it. In my experiments with corn, I have tenaciously held the fact that the top ear bears the only seed suitable to plant, and as tenaciously do I hold that there is only one head in each stool of wheat perfect enough to keep it from deteriorating. Another reason why wheats run out, is that as long as farmers take their seed from the common granary, so long will it diminish in yield. They may sift it, sling it across the barn floor, and run it through a hundred sieves, and it will still deerease. Not until they exercise the patience and science of hand-picking a bushel or two every year from the top heads of the best stools, and sowing them alone on some choice lot for seed the following year, will they escape the degenerating influences of bad, unremunerative crops. Wheat is so remarkably sensitive that it receives the slightest attention most kindly; and, on the other hand, the presence of any foreign plant (even another kind of wheat), weed, fly, bug or worm, takes from it its life to such a degree that every farmer loses many bushels annually."

ANOTHER INSECTICIDE.—It is by no means labor thrown away, even when there is a doubt of realizing any benefit from a claimed recipe for a good purpose. We can try it, and hold fast if it should prove of service. We have before us (says the Germantown Telegraph) what a German gardener declares is a remedy for destroying the black or green flies, caterpillars, etc. It is simply to take the water in which the stems of the tomato-plant have been boiled, and sprinkle it, when cold, with a syringe, over the plants affected by these or other insects. It not only *kills* the insects, but leaves an odor which prevents others from coming. We may also mention that the juice of the tomato itself will quickly remove all stains from the hands, etc.

Everywhere.

SUPPLEMENTARY CROP REPORTS.

CAL., Santa Rosa, Sonoma Co.—Wheat, average crop. Corn, late planting and poor prospects; Spring cold and wet. Potatoes promise fairly. Oats, rye, and barley, average yields. Varieties of wheat: Oregon Club, Chili, Australian and Smith's Club principally. The acreage in small grain is about 10 per cent. more than in 1879. The comparative acreage, each with the others, in small grain in this county is about 60 per cent. of wheat; barley, 25 per cent.; oats, 10; rye, five. Average yield of wheat in bushels, say 20 per acre. Prospects for fruit, the poorest for seven years. All sorts, except plums, will scarcely yield anything. Best Summer apple, Red Astrachan; best Winter, Newtown Pippin; best pears, Barlett and Winter Nelis; best peaches, Alexander, Crawford's Early, and Smock. Grapes will be an immense yield, promising over 2,000,000 gallons of wine for 1880 in Sonoma county alone. J. B. A.

CAL., San Gabriel, Los Angeles Co.—In this county the harvest will be excellent. Barley is the principal crop; wheat ranks next, the Odessa wheat being the variety usually planted on account of its not rusting. The Early Rose is the variety of potato generally planted. The acreage devoted to small grains is probably one-half more than last year. Sugar cane is not grown. A number in the country, however, are growing the sugar beet for sugar. Fruit prospects are good; we grow almost all kinds here, from oranges and lemons to the Northern fruits. Oranges, lemons, grapes and peaches, are raised in larger quantities than other fruits, though plums, pears, apples, quinces, apricots, nectarines, &c., &c., are all grown here, and bear well. A. P. A.

FLA., Lee Park, Waldo Co.—Cotton in this section of Florida is not a promising crop. The early part of the season was unfavorable, and many farmers plowed it under and fell back upon rice. In a few places—and these are always under negro cultivation—I have seen some good patches of cotton, but it is doubtful whether, even if the remainder of the season be favorable, the yield will reach to more than 70 per cent. of the old average. A slightly increased area has this year been given to sugar, and the cane generally looks well. Oats have been—well, a failure. Seeing the way they were likely to turn out, I early plowed mine under and sowed sorghum for fodder in their place, and I have had no reason to regret the plan. The value of the Early Amber variety as a forage plant is not sufficiently understood. The area of rice is larger this year than last, and will be much further increased next year. It looks well, and farmers are beginning to see that it is their safest and one of their most profitable crops. The absence of machinery for cleaning it has been a drawback, but that is being remedied. This is the "off" year for oranges; but do not, on that account, think that there will be any deficiency in the supply. So much has been done of late in the making of orange groves that new trees are every year coming into bearing, so that, although individual trees may not be as heavily laden as last year, the crop that is destined for Northern markets is probably larger than ever. Bananas are early and good, the warm Winter having spared the plants over a much higher range than usual. Corn promises well. Some fine ears were brought me to-day, pronounced ripe, the first of the season in this neighborhood. Tobacco is being more largely cultivated. Some grown experimentally last year was not distinguishable from the best Havana, and there are now 40 or 50 acres in this immediate vicinity showing as fine a product as can be seen anywhere. Sweet potatoes—the great stand-by of so many in Florida—are as yet in an early stage, but they are growing fast and promise well. Of wheat and hay we have none—I wish we had. I have an experimental plot of Teosinte that is looking so fine as to give me great faith in its value. A. I. E.

IDAHO, Bois City, Ada Co.—This county raises from 150,000 to 200,000 bushels of all sorts of grain. Little or no sorghum is grown here. All fruits grown here will give fine crops this year. But little corn is raised here. R. B. W.

ILL., Volo, Lake Co.—Wheat is rusted; flax is good; corn splendid; potatoes good; very few beetles; hay heavy, except clover, which was winter-killed. Apple trees loaded; small fruit plentiful. Sheep and dairy goods are the leading products of this county. The oat crop very heavy. Mold's Ennobled oats look splendid. The Golden Ovoid mangel is doing well. I had to pull up some to thin them out. The seed was first-rate. I planted the Laurel-leaved willow on high, dry ground, and it is growing first-rate, the sprouts being 20 inches long. The Cuthbert raspberries are growing nice. Abies Siberica came up in the beginning of May. I removed the glass, but did not shade enough; in two days it became very hot and the plants died. T. D.

ILL., Mt. Palatine, Putnam Co.—Wheat nearly a failure. Oats are so far all right. Corn is the leading grain for this part of the country, and is well advanced and doing well. Potatoes are in good condition and doing well; free from bugs. Fruit better than last year. RURAL.

IND., Warsaw, Cosciusko Co.—We are right in the midst of the wheat harvest; the crop is about an average one; the quality will be No. 1, if wet weather does not hurt it. The acreage is 25 per cent. larger than in other years. Corn looks very well for the season. The wet weather has hindered a great many that have clay land from cultivating it as it should have been done, and now that clover haymaking and wheat-cutting have come, they cannot give it the attention it should have. Oats are good. Potatoes are a fine crop, taken at large, but they are not grown very extensively here. Fruits of all kinds are fair crops, with the exception of gooseberries and currants, which the worms have completely destroyed. Our chief varieties of wheat are the red Blue-Stone, Fultz, Wagoner, Buckeye, Lancaster, Clawson—all red but the last. Of oats we grow Excelsior, and the common white. Of potatoes the favorites are the Early Rose, Red Peachblow, Peerless, and Snowflake. Of wheat the red Blue-Stone and Wagoner have proved to be the best, all things considered; of potatoes, the Early Rose and Peachblows; and of oats, the Excelsior; of apples, Rambo, Yellow Bellflower, Seek-No-Further, Vandevere, Ben Davis, Baldwin, Maiden's Blush, White Winter Pearmain, and Neverfail; of cherries, the common red. Sorghum is not grown to as great an extent as it was a few years ago. I do not think that we understand how to handle it to make good sirup. I am trying a small patch this year of Early Amber. It is the first cane that I ever planted, so it is an experiment with me. I am also experimenting with mangel-wurzel and American Rutabagas. This is the first time I have tried to raise roots in the place of grain for stock. Farmers here are prosperous, and our State is improving rapidly. G. A. T.

IND., Auburn, DeKalb Co.—Wheat, good, mostly Lancaster and Fultz. Corn, a very good stand on upland, but small on low land; it is drowned. The oat prospect is good. Grass, an average crop. Potatoes ditto. Of rye and barley, very little is sown, but that is good. Of sorghum too very little is planted. Apples, a light crop. Pears, peaches and small fruits good crops. Acreage under wheat, large; corn, small; oats, average; potatoes, average. W. J. W.

IOWA, Letts, Louisa Co.—Crop prospects are good in this section. Winter wheat will be rather light owing to its freezing out last Winter. Spring wheat is about an average—the acreage, however, is less than common. Rye, good; most of it is in shock. Oats look fine and promise a large yield; the acreage is somewhat greater than for some years past. Corn is looking very well. The month of May was dry and it did not all come up at once, and it looks quite uneven; the acreage is as large as common. The prospect for a crop is as good as in years past. Potatoes look well, the earlier kinds are now fit for use. Almost all kinds of fruit will be plentiful, except late cherries, which were injured by late frosts. All crops on the bottom lands in this part of the State are nearly ruined by high water. There will be an abundance raised on the high lands to fill the place, and yet have a surplus to spare for the Eastern market, with some over for the needy Irishman. The seeds from the RURAL office are almost all growing, and look well. Out of 11 Tellephone peas five were weevil-eaten and did not grow. Those that grew are now ripe and I am pleased with the looks of them. The Cuthberts will bear a few berries this season, so we will see what they are like. WM. M. N.

IOWA, Burlington, Des Moines Co.—We are just in the midst of harvest here. Fall wheat will make a half crop; that is, what was not plowed up in the Spring. There was a good deal of it plowed up and sown to Spring wheat or planted to corn. Spring wheat is pretty good; the Chinch bug hurt it somewhat, but there is not much sown. Oats look splendid and are just beginning to ripen; there is a pretty large acreage. Corn is as good as people could wish it. In this section we have had very nice weather all Summer. Hay will be a very fair crop. Apples are abundant and of good quality. Of peaches we have none worthy of note. Small fruits have been very plentiful. My Ennobled oats are very rank; owing to being sick I did not get them sown until late. Mangels are doing fine. W. P. P.

IOWA, Manchester, Delaware Co.—No wheat raised here this year; oats and potatoes good; corn backward owing to heavy rains, but looking well; rye good, also barley. Our corn is the yellow sort, and white Dent—mostly yellow. Potatoes, Peachblow and Early Rose. More corn is planted than of any other grain; oats next; then rye, barley and wheat; small amount of sorghum. We do not raise more than half the fruit we consume here; what orchards there are will bear well, as this is a good year for fruit in this locality. C. J. B.

IOWA, Prescott, Adams Co.—Wheat promises a fair average yield—acreage about 10 per cent. less than last year. Oats fair to good. Corn is doing well; one or two good rains will give us a fair crop. Most of it is now "laid by." Potatoes, early at least, will not yield to exceed 50 per cent. Our hopes will be in the late planting and rain soon. Grass is very short; we shall be compelled to resort to wild slough grass for a supply. J. S. B.

IOWA, Mason City, Cerro Gordo Co.—Wheat bids fair for a big crop here. Corn is blooming. I have some of the large yellow Dent that is five feet high. Potatoes are doing well. Hay is heavy. If nothing happens to the crops we in Northern Iowa will have plenty of grain to handle this Fall. Fruits of all kinds are light. R. L. L.

KAN., Randolph, Riley Co.—The harvest of wheat, oats and rye will be two-thirds of an average crop. The prospects for corn and potatoes are for good average crops. No barley is sown here. The varieties of wheat are mostly Treadwell and Michigan White. No Spring wheat is sown. Common white oats. Fully seventy-five per cent. of the cultivated land is planted to corn: the rest is about equally divided between wheat, oats, and rye. Of potatoes but very few are planted—Early Rose and Peachblow. Considerable sorghum is being grown in some of the adjoining counties, but none here to speak of. Of fruit there are no peaches or apple orchards that are old enough to bear fruit in this locality, but in the more eastern counties there are good average crops of apples. A severe drought through April and May, with Chinch bugs, greatly injured the small grains. P. B. W.

KANSAS, Garnett, Anderson Co.—The wheat harvest in this vicinity is very good. The western part of our county has been too dry, and the crops are poor. Corn is looking very well. Oats are about an average crop. Potatoes are very good. The varieties of wheat generally raised here are Fultz, Walker and May. Fultz appears to have the preference for a good, hardy wheat, but the Walker is considered very nearly as good. I think the wheat will average about 18 bushels per acre; some fields will go 25 bushels per acre. R. W. G.

KY., Johnson Junction, Davis Co.—The wheat harvest is at least 10 days earlier than common. The varieties grown here are Lancaster, Amber and Fultz; average ten bushels per acre. More acres were sown than usual. There is considerable smut in the Fultz. Rye very good. Oats short. Barley, good. Potatoes, good but few in a hill—Early Rose the favorite. Snowflake, White Peachblow and Peerless are all grown. Potatoes are only grown for home consumption. From present appearance there is a fine prospect for a larger yield of corn than for years; a much larger acreage also than usual. Rye not much grown. Sugar cane, none. The prospects for fruit are slim. Apples are very scarce. Cherries, late are fine, and early scarce. Some peaches, but not an abundance. We have had a fine season for tobacco; a great deal was set out; has been raining every day for more than a week. I am afraid it will injure the wheat in shock. We have a splendid garden. My oats, mangels and peas are fine for the season. I. B. F.

KY., Greenville, Muhlenburgh Co.—The corn crop looks well, considering that we have had a long dry spell, but at this date there is rain to excess. Wheat is being thrashed, and is about half a yield; the rust injured the wheat and also the oat crop. The grass crop is splendid. Peaches and apples are rather scarce; berries of all kinds plentiful. All kinds of vegetables are doing well. The bugs are doing great damage to potatoes. Tobacco half a crop. D. B. S.

KY., Owensboro, Daviess Co.—Rain, rain, rain; meadows and oats down. Wheat in shock and badly stacked, in bad fix. Low land under water. Wheat is not panning out as well as expected. Corn is looking fine. Tobacco, good, bad and indifferent. J. W. S.

ME., Bangor, Penobscot Co.—The crops here will not be average ones in consequence of the drought. Lost Nation wheat, Dutton and Canada corn, and Early Rose potatoes are the varieties; no rye or sorghum. There is an average decrease of each of these. Apples are very fair; the Duchess, Northern Spy, Astrachan, Talman Sweet and Northern Sweet are the most useful varieties. J. P. P.

MASS., Shelburne Falls, Franklin Co.—Corn here yields about 40 bushels per acre; potatoes, 100; oats, 50; rye, 15; no wheat or sugar-cane is grown here. Apples will be a good average crop; Greenings and Baldwins are the most successful. F. A. A.

MICH., Lincoln, Berrien Co.—Wheat is a good, full crop, and is now mostly harvested. Corn—what there is planted—is looking well. On account of wet weather farmers hereabouts did not get in as much corn as they intended. Oats will be a good crop. We have a fine crop of hay, as we have had plenty of rain all through the season. Potatoes, in spite of the beetles, are looking fine. Apple trees blossomed freely, but from some cause the young apples disappeared and the crop will be light. Strawberries were a light crop. Raspberries and blackberries full crops. We are in the midst of raspberry picking which is two weeks ahead of the usual time. Indeed, all of our small fruits, this season, are rushing along to maturity much earlier than usual. What shall we do with the Rose-bug? It is a worse pest this season with us fruit growers than the potato-bug. First he went for our roses; then for the cherries and young grapes, and, lastly, he is at the raspberries in such numbers that sometimes in picking we get more bugs than berries; but I have noticed that for the last few days the pests are disappearing somewhat. M. W.

MINN., Austin, Mower Co.—Crop prospects are not the best—too much rain. Fife, Lost Nation and Walker are our principal varieties of wheat. Some pieces look well, but much of the low-land wheat looks very poor. Barley and oats look well, corn and potatoes are backward—acreage about the same as last year. Sorgbum is a new crop; it did well last year—acreage larger this year. The Duchess of Oldenburgh apple and Siberian crabs are as good as any kinds for this locality and there will be considerable of that kind of fruit. J. A. T.

MISS., Brookhaven, Lincoln Co.—Very little wheat, rye, or barley is ever planted here. Corn crop and cotton very fine thus far. There will be very little fruit. The crop of oats is not good; red oats preferred; black oats are generally ruined by rust. About the same acreage of corn and cotton as last year. Early and late Crawford peaches the best. H. F. J.

MO., Sedalia, Pettis Co.—The general prospects in this part of the country for bountiful crops, are the best for several years. The wheat and oat harvest is just finished. The yield of both per acre will be quite large. The prospects of the corn and potato crops are as fine as if not the finest that were ever seen here. From present appearances the hay harvest will be below the average. Apples, peaches and small fruits of all kinds in great abundance. Since cutting wheat the chinch bugs are doing considerable damage to corn, having destroyed acres in some places. E. R. L.

MONTANA, Tipton, Moniteau Co.—Wheat was harvested two weeks ago. It would have been a splendid crop, but Chinch bugs cut it down considerably in this section. Very few have thrashed it yet, most of the farmers having it stacked to pass through the sweat; but people believe it will fall short about half. Oats were looking fine a short time ago, but Chinch bugs are damaging this crop too. We shall commence next week to cut it. Rye and barley are not raised at all in my neighborhood. The varieties raised almost exclusively in this locality till a few years ago were the Mediterranean, some Early May, a sort called Norman wheat, and some Tappahannock. This year some of my neighbors raised Fultz, and I believe it is doing better than any other kind, being earlier. If the season is favorable this Fall I expect to sow Fultz and Mediterranean. People don't raise many potatoes here, the climate not being very favorable—just enough for home use. The RURAL'S Beauty of Hebron gave us not quite one peck last year; the season wasn't good—too dry. This year we expect to get from the seed saved three or four bushels. They are looking nice. The Ovoid mangel root looks fine, and we hope to make a success of it. Almost any kind of fruit does well in this locality, but grapes do best. The two last years the grape, however, rotted very badly; this season they are not doing so quite so heavily. We had some time ago a very nice prospect for all kinds of fruit, but since then the high winds and terrible storms have hurt them to some considerable extent. D. S.

NEB., Steele City, Jefferson Co.—Corn is the leading crop, and we never had a better prospect for it. White and yellow Dent. Spring wheat—the next in importance—promises much more than an average (say 15 bushels per acre), principally Cherrick. Considerable winter wheat was sown last Fall, and promised first-rate until March, when the dry weather and high winds caused it. But little rye is sown, and that is poor; barley and oats ditto. The bugs are about abundantly enough to take all of our potatoes. Considerable Amber sugar-cane is raised and does well. We have a splendid country for the farmer if he would adapt himself to its conditions. We are too far from market to raise small grain, but we can raise cattle, hogs and sheep, and we can raise corn to feed them. A. M. T.

NEB., Blair, Washington Co.—Winter wheat almost a failure, but little sown. Spring wheat now looks very well, excepting where winds blew off the soil during the drought in Spring—about the usual amount was sown. Corn about a medium stand—early planting on Fall plowing five feet high. Spring plowing, owing to dry weather in May, is much later. Early potatoes good; late ones, not over one-fourth of a crop. Oats good. Hay light. E. S.

NEB., Emrick, Madison Co.—The prospect for all kinds of crops hereabouts are as good as for years, oats excepted. W. G.

NEW JERSEY, Freehold, Monmouth Co.—The wheat crop is all harvested in good condition; quality good; yield a little above an average; area 10 per cent. above an average. Corn is looking well; acreage a little below an average on account of the inability to break the ground. Potatoes, about an average area, are looking well; the early crop was injured by the long drought. Rye not more than half a crop. Oats about half a crop. Barley none grown. Sorghum none grown. Apples about half a crop. The most successful apples are Orange Pippin, Baldwin, Smith's Cider, English Codlin, Pelican, Fallawater, Roman Stem, Orange. Peaches not much grown, will be about half a crop. Blackberries will do well. The Army worm has gone. We have had a nice shower and prospects are a little improved. The hay crop will be about one-third of a crop and of poor quality. J. H. D.

N. Y., Coventry, Chenango Co.—We have been having a severe drought in this section. The last week has brought plenty of rain. Wheat promises a good average. Corn and potatoes are looking well. Hay is very light. This is an important crop with us, as dairying is the main business. Apples promise a large crop. Cherries are injured by the black-knot badly; but few trees are living. Small fruits are not much cultivated. J. D. M.

N. C., Lynn, Polk Co.—The harvest of wheat has been very much cut short by rust and protracted dry weather. It may be set down here and in the upper part of South Carolina as less than half a crop. Spring-sown oats are almost an entire failure; Fall-sowing good. Bearded wheat has done better than the smooth. Wheat will not average five bushels to the acre. Fruit is very fine all along the south side of the mountain in the "Thermal Belt." L. R. M'C.

OHIO, Austinburg, Astabula Co.—There are more acres of wheat in this section than ever before, and the prospects of a large yield never were better—average yield other years 15 to 20 bushels. Fultz and varieties of red wheat are most grown, having proved more reliable than white. A small variety of early red corn is grown in this dairy section, because fine stalks are best eaten by cows and the cob is small, and kernels long. Peachblows and Early Rose are our favorite potatoes. Sorghum is but little grown and that only on the Lake Erie shore and the regions north of us. Fruit of all kinds are abundant. H. R.

O., Burgh Hill, Trumbull Co.—The prospects for crops in this section are very good. Wheat is mostly harvested, and is the best crop known here for years. The varieties most grown are Democrat, Clawson, Jennings, Fultz and Gold Medal, the last of which is being introduced. The average per acre is from 20 to 40 bushels. Corn, oats and potatoes bid fair to be fine crops. Sugar-cane is not raised in this locality. The prospect is good for an abundant crop of fruit. T. F. S.

PA., Tamarac, Crawford Co.—Wheat is above the average crop, 20 per cent. It is well filled, and good generally. Harvesting commenced the 28th of June, the weather being anything but favorable, as it rained every day during the week. It has cleared off now. The wind has changed to the north and it looks favorable for good weather. Considerable hay has been ruined during the wet spell. The drought in May shortened up the hay crop nearly one-half in this section. Clover meadows were the heaviest and nearly all secured in good condition before the wet season set in. Oats will be a fair crop, though injured considerably by dry weather. Corn is small for the time of the year, but most of it is making up for lost time and will be a fair crop. Potatoes are looking well, with plenty of beetles; wherever Paris-green has been used in time they look first-rate—will be a good crop without a doubt. Plenty of fruit of nearly all kinds. The Rose-bugs have injured the fruit considerably; they have been more abundant than ever before; taken all together, the farmer has no reason to complain the present season. C. S. A.

PA., Saltsburg, Indiana Co.—It has been raining more or less for five days, and there is no prospect of its stopping. This is very hard on grain that's in the shock. Most of the wheat is cut and is better than it has been for some years. Oats will be an average crop. Corn never looked better for this time of the year. Potatoes are not very promising. Hay will not be half a crop. Fruit of all kinds will be plentiful. My grapes are rotting very badly and have done so for the last three or four years. It has been a very wet June here. W. S.

PA., Winterburn, Clearfield Co.—We are in the midst of a very wet season, just the extreme of what the Spring has been. Grass, which was thought to be a failure, is now coming on and will be a tolerable crop. Of wheat there are sown many good pieces, and some very poor—a preponderance of the latter, I should say. Oats bid fair to be a good crop; potatoes also are looking well now. H. F. S.

TENN., Richland Station, Summer Co.—Wheat, White Amber principally, half a crop. Corn raised, white, good. Potatoes, Early Rose, good. Oats, Spring, one-third of a crop raised. Rye and barley, Fall varieties, good. Sorghum grown to a considerable extent. Apples, Early Harvest, Maiden's Blush, Horse, Baltimore, Lady's Finger, Poorhouse, Limber Twig, Winesap and Ben Davis—good. Peaches Hales's Early, Early and Late Crawford, Late Heath, one-third of a crop. W. P. M.

TEX., Lavernia, Wilson Co.—The harvest of oats and wheat will be over an average. Of barley and rye there is none. It is too early to tell regarding Sweet potatoes, and this is no Irish potato country, although they keep printing a pack of lies in regard to the success here of Irish potatoes and fruit. This is a fair corn country, and the bulk of the present crops is corn; next comes cotton, which is extra-well now, but cotton is never counted safe until gathered. Peaches, plums, figs and grapes are all the fruits that do well. F. J. S.

VA., Reed Island, Wythe Co.—Wheat, Lancaster and Fultz, 10 bushels per acre—injured by rust. Oats (no name), 15 or 20 bushels per acre—not matured yet. Corn, 25 or 30 bushels per acre—suffering from drought. Potatoes, Early Rose, a medium yield; "small potatoes." Sorghum is not cultivated here by the leading farmers. As these crops are not harvested it is impossible to estimate the exact yield—people differ so in their opinions. There is a good prospect for fruit—late apples. The last two Summers' drought has produced grapes abundantly. Berries are plentiful. Some peaches, and very few plums. Cherries abundant. A fine year for beans; a poor one for cabbage. M. L. S.

VA., Moore's Store, Shenandoah Co.—Wheat in this section was injured by drought—average yield 13 bushels per acre; quality fine, best kind grown, Key's Prolific. The corn crop is promising. Potatoes not half a crop—principal kind, Early Rose. Rye not well filled. Oats are generally short. Barley, very little raised here. Sorghum grown for home use here; most farmers raise about 33 gallons annually. The fruit crop will not be one-half as great as usual. The rose or cherry bug destroyed all bloom of grapes here. D. J. A.

WIS., Reedsburg, Sauk Co.—Most of the winter wheat in this section was winter killed or, more properly, killed late in the Spring by freezing and thawing and cold winds; consequently it will not be an average crop. Spring wheat looked fine until the last few days, but now the leaf shows signs of rust. There was a large acreage sown on account of the killing of the winter wheat. Oats are looking tip-top—will be a heavy crop. Barley is headed and presents a fine appearance—not much sown. Rye, both winter and spring, is exceedingly good; winter rye begins to turn and will soon be ready to harvest. Buckwheat is just sown; cannot state as to the certainty of a crop, but a large yield is expected. The hay crop will generally be light; as the clover roots were injured by the hard winter, yet new seeding and low-land meadows are more than an average crop. On account of the backward Spring and cool weather, corn is not as forward as usual for this season of the year, but it is now growing finely; a large amount has been planted. Potatoes never looked better; the beetle has not done any damage as yet. This section of the country is considered the hop center of Wisconsin; the yards, as a general thing, do not look very flourishing. The grub proves very destructive to the root. No lice as yet. Orchards are looking very good. The apple crop will be light on account of a severe hail storm which occurred about the time the trees were in bloom. Small fruits promise to be a full crop. On the whole the farmer's prospect, so far as crops are concerned, are very flattering—the best outlook for several years. Yet when the harvest is finished, how different it may be from what is anticipated. The farmers of this section are engaged in a mixed husbandry, and let the worst come, they generally hit on some product that is profitable every year. G. F.

WIS., Mondovi, Buffalo Co.—The harvest bids fair to be good. The varieties of wheat are Fife and Odessa; of oats the common white and a few Norways. Barley (the four-rowed) is looking splendid; of potatoes we raise the Early Rose and the Snowflake; of corn the Dent and Flint, neither is good—not very good—owing to a cold spell about planting time; the acreage of these is about the same as last year. Minnesota Early Amber cane looks well; acreage double that of last year; our apples are crabs, and a few others, such as the Dutchess of Oldenburgh; all are bearing well; small fruits are as good as usual R. F

WIS., Lodi, Columbia Co.—The weather has been uncommonly wet since the last of May, consequently all kinds of Spring grain have a large growth and are looking well. Winter wheat was almost a total failure about here. Spring wheat is badly rusted in many places. The Odessa, the Minnesota Red Chaff, Fife, Fultz and Clawson, are the chief sorts grown. Potatoes are doing well—Early Rose, Snowflake, White Peachblow. Of Early Amber sugar cane some was planted last year, but ten times as much this year. The prospect for fruits is first-rate. B. M. S

WIS., West De Pere, Brown Co.—Oats and wheat each occupy about one-third of our cultivated land hereabouts; the other third is divided between potatoes, barley, rye and buckwheat. Of wheat our principal sorts are Rio Grande, Fife and Russian Winter. The prospects are good for fine crops of all the above. Small fruits of nearly all kinds do well; but of apples the Duchess of Oldenburgh, the crabs and other hardy kinds do much the best. Sorghum is not raised here. Hay is rather light. M. A.

WIS., Milton, Rock Co.—As a general thing the crops are looking fine—rather above the average. The dry weather a month ago threatened to damage the small grains and grasses, but they have fully recovered except in a few cases. Corn is looking very well. Tobacco culture is quite an industry in this vicinity and considerably more has been put in this year than heretofore. D. E. S.

(Continued on page 461.)

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, July 10th.

R. L. L.—J. D. M.—M. L. S.—W. S.—C. R. L.—F. A. A.—C. J. B.—H. C.—D. W. P. M.—E. S.—D. B. S.—T. D.—H. A. J.—J. H. M.—F. J. S.—W. J. W.—R. W. G.—W. G.—B. M. S.—W. J. B.—A. M. N.—S. E. H.—D. E. S.—S. O.—T. H. H.—S. C.—M. A.—R. L., thanks.—C. G.—P. B. W.—D. J. A.—G. K.—J. H. D.—J. W. S.—J. A. T.—A. M. U.—L. D.—T. W., Colorado, happy to hear from you.—W. P. P.—G. P. and S.—G. A. T.—C. A. S.—F. E. S.—F. K.—W. M. N.—J. J. T.—F. A. B.—J. G.—M. U. M.—J. E. E.—W. M. N.—J. E. S.—F. E. H.—W. M. C.—R. M.—H. B. D.—W. S. A.—D. S.—M. W.—A. S. S.—H. F. S.—J. P. P.—H. R.—J. B. A.—A P. A.—R. H. C.—W. B. D.—J. G.—W. B. W "Constant Reader."—H. S. W.—J. A. H.—S. F.—C. C. V. H.—P. A. C.—A. B. A.—W. I. C.—L. B. and E. P.—H. S.—S. E. W.—B. A.—G. R.—S. H. D.—R. R.—H. C. C.—H. H.—J. E. M.—F. D. C.—F. H. S.—E. K. B.

THE
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ELBERT S. CARMAN.

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SATURDAY, JULY 17, 1880.

THANKS WHERE THANKS ARE DUE.—The more we study the accounts of the harvest furnished to the RURAL by its host of friends throughout the country, the more strongly are we impressed with their excellence and value. So full and instructive are they that it would be difficult, aye, impossible, to discover any means by which so complete a knowledge could be gained of the agricultural conditions of all parts of this broad land, as can be obtained by a careful perusal of these multitudinous reports, especially if the reader studies a moderately good map of the country at the same time. We hereby thank all our friends who have enabled us to place before the public so valuable and trustworthy a statement of our agricultural condition.

A WASTED FERTILIZER.

IT is a common practice of farmers on the coast—and particularly in New England—to gather all the sea-weed and kelp that are thrown up by the surf or washed in by storm, for fertilizing purposes. This kind of manure they consider worth hauling, often to a considerable distance, although, as gathered, it is largely water and quite bulky. We have often wondered why so much care was taken to secure the sea-weed when a far better fertilizer—dead fish—could be obtained on the same terms with less labor. There are many places on our coast, particularly in the vicinity of fisheries, where dead fish abound, and in some localities in large quantities. All along the Massachusetts coast last fall, thousands of barrels of spoiled herring found their way back into the waters of the Atlantic, a portion of which might have been composted and made into manure upon contiguous farming land with profit. Since the menhaden fishery—for oil manufacture—has assumed such magnitude, the value of fish and fish refuse for manure is too well known to need further comment.

If the menhaden or "pogy" is good for fertilizing, old fishermen hold that herring is even better, and that good results can be obtained by the use of any fish. Coast farmers would do well to make use of this most valuable manure, and when collecting the sea-weed, to gather the fish at the same time. "Chum," or fish refuse, from the oil manufacturies not only costs money, but the expense of transportation must be borne as well. The present neglect to make use of such *free* material is only another example of the wastefulness of American agriculture.

VALUE OF COTTON SEED TO THE SOUTH.

IT is even in the memory of comparatively young men that cotton seed was considered a great nuisance to the Southern planter, and he was sorely puzzled at times how to get rid of it. Finally it occurred to a few that it might be used as a fertilizer. Slowly finding it beneficial to increase the growth of various crops, it was then thought by one here and there that it might be a nutritious food for animals, and especially swine. Being allowed to come to the heaps of seed and eat what they pleased of it, with more or less lint attached, it often proved their death. After this they cleaned the lint from the seed, boiled it, and, feeding a moderate quantity at a time, it was found highly nutritious and a perfectly safe food.

Next came decorticating the seed, grinding and pressing the oil from the meal, which made it still more valuable and economical than the whole seed for the food of all domestic animals. The oil was reserved for refining, and is now used for various other oils, such as the olive, castor, etc. Nor is this all, for the manufacturers of oleomargarine, taking the hint, are now turning out from it what they brand as "gilt-edge" butter! What may be produced from it hereafter may be hard to tell, but we should not be surprised if, in the course of time, the seed of cotton might approach the value of that of flax. When it comes to this, millions of dollars will be added to the sum of Southern exports.

Cotton-seed meal, even when fed to cows in considerable quantity, does not make their butter soft and oily, as linseed meal does, but rather adds to its firmness and richness. It also more rapidly increases a good quality of flesh in fattening beasts, as the albuminous compounds predominate largely in its composition.

PROBABLE DEPRESSION IN PRICES OF OUR CEREALS.

THE reports of the European harvest that have reached us by mail are considerably more favorable than those just received by cable. According to the latter the crops will be much shorter than reported some weeks ago, in northern Germany, Hungary, Gallicia, and in many districts in Russia which have been ravaged by locusts and other insect pests. In the British Isles, however, the outlook is still very bright for abundant crops of almost every sort, and this favorable prospect is shared by France, Spain and most of Italy. Although the trans-Atlantic harvest may, as a whole, not come up to the high expectations felt or published some time back, yet there is little or no doubt that it will be far better than last year's, and therefore that the demands for our cereals abroad will be considerably less than during the past season, unless at a material reduction of prices. Of course, there is just a possibility that severe storms or drought over a vast extent of country on either side of the Atlantic may, even yet, very greatly reduce the supply in Europe or the surplus here; but this possibility is far from a probability.

Looking back at the reports of the very fine prospects for all European crops that have, from time to time, been cabled across the Atlantic during the last few months, and comparing them with those received within the past week, one is apt to suspect that the glowing accounts of other days received some of their brightness from the desire of the Old World to lower the prices of the surplus cereals of the New, by embellishing the prospect of the abundant harvest that must soon generously relieve its own pressing need of foreign supplies. Be this as it may, enormous shipments of grain have lately been made to Europe to anticipate the harvest there and get all possible advantage from present rates. The arrival of these at their destination, together with the advent in market of the early harvest products of home growth, will doubtless still further depress prices, at least temporarily, and this depression is sure to influence figures here also. In view, therefore, of our splendid increase in crops here, and of the probable curtailment of the foreign demand for our surplus cereals, it is almost certain that prices will be unusually low, at any rate for the next few months.

For the probable depression in the prices of wheat, and perhaps of several other farm products, during this period at least, farmers will find some consolation in the thought that their labors have conferred a great blessing on the world at large. Cheapness of food means full stomachs for thousands who are accustomed often to be content with short rations; it means an increase in marriages and consequent happiness—or misery; it means discouragement among our foreign rivals in production, as it will bear more heavily on them than on us on account of the higher prices of their lands; it means consequently a probability of weaker competition on their part in the future; it means a heavier rush towards this land of plenty, of new mouths to be fed and new hands to do work and accumulate national wealth. Of all our enormous crops that which is wasted alone fails to add to the sum of the world's wealth and of man's happiness.

THE BLACK RAT OF OUR ANCESTORS.

As most of our readers are aware, the common brown or Norway rat (mus decumanus of the naturalists) now so generally distributed over the civilized world, is to be classed, as rats go, and comparatively speaking, among modern improvements. It was not until the middle of the last century that this kind of rat was known in Central and Western Europe, and it is said to have been brought to America as recently as the years immediately preceding the Declaration of Independence.

Previous to the advent of the Norway rat a smaller black species (mus rattus of Linnæus) was the common house-rat of Europe and America; but this weaker and more timid animal was everywhere driven out by the new-comer, and appears to have been pretty thoroughly extermined from most localities. The completeness of the destruction of the black rat has always excited the surprise and interest of naturalists. But it has recently come to light that, curiously enough, the black rat still lives and thrives in some special localities in Europe, where colonies or remnants of this species have escaped the general destruction. During the last year reports have been published to the effect that, though extremely rare in England and in most parts of Germany, the black rat is not uncommon to-day in certain elevated valleys in Thuringia and Voigtland, not only in isolated houses in the forests, but even in villages where the Norway rat is found in company with it, though apparently in smaller numbers.

In Italy and the Italian Islands, the black rat is still abundant. Indeed in some of the smaller islands the Norway rat is not found at all; but elsewhere the two species are found side by side. In that country the black rat is not only far from extinction, but appears to be rather more abundant than the larger species. For that matter, the persistence of the black rat in Italy is in harmony with the old habit of the species; for even in the days of its prosperity this kind of rat was known to prefer warm countries. So, too, the survival of the species in the thinly-settled forest districts of Germany is somewhat akin to what has been noticed in this country. In New England, 40 or 50 years ago, naturalists observed that the black rat could still be found occasionally in old, thinly-settled places. Prof. Claypole, of Antioch College, has recently stated that 40 years ago the black rat was the only rat in South-west Ohio. About thirty years ago the brown rat drove him out. Some years later the same thing occurred in Illinois. Prof. Claypole has been told by one of his students living in Minnesota, that neither rat is known in and about the town of St. Cloud, only one ever having been seen there, and that was killed on landing from a steamer.

In view of the German experience, above stated, it seems probable that communities of the black rat may have saved themselves even to the present day in some parts of this country, in similar retreats. As is well known, the black rat came to America with the earlier colonists, and was at one time extremely abundant. Indeed, it spread to such a degree that it was thought to be more abundant here than in the old world. It was subsequently driven away from the settlements, as it had been in Europe, on the arrival of the Norway rat.

BREVITIES.

WE heard an old farmer remark: "Well, I think that young beets are the best vegetable cultivated."

PROFESSOR F. H. STORER will soon begin a series of articles of much value entitled, "A Scientific View of Composts."

ONE of the RURAL artists is at present at work upon a bird's-eye view of the Rural Farm, which will be presented in our fair number to be issued about September 1st.

COL. CURTIS commences next week a series of articles under the title "Observations Among Rural Subscribers." He says "Every one mentioned is a RURAL subscriber, and they are all among the best of farmers."

DURING the month of June the arrivals of cattle at the Chicago market were the largest on record—121,358, against 111,542 in May. The largest run in any one week was 32,127 and the largest rush on any single day was 9,416, on June 25.

IN one of our wheat experiments, Fultz was sown in two ways, viz., six and twelve inches apart. The sheaves indicate that the yield of the former as compared to that of the latter will be as eight to five. There is no perceptible difference in the size of the heads.

ON July 1st the University of Michigan conferred the degree of Ph. D. on Prof. W. J. Beal, of the Agricultural College. He graduated at the University 21 years ago. This honor shows that a good feeling exists between the University and the Agricultural College.

THE acreage under wheat in British India is put down at 18,000,000, against about double that amount in the United States. Importations of grain from that quarter into England have begun to assume large proportions and bid fair to compensate ere long for the decrease of cereal imports from Russia.

THE cattle trade of Texas bids fair this year greatly to exceed that of any previous year. Already considerably upwards of 500,000 head have been driven north from that State, and the latest advices tell us that a great number of herds are now leaving, while a vast number of cattle are being fattened up for the Northern and Eastern markets.

WRITERS sometimes speak of the ease with which the Wistaria is changed from a vine to a standard tree or shrub. Our first experiment in this way was begun five years ago. The little tree is now four feet high, with a head three feet in diameter. It was a beautiful object during its late bloom, but the shoots still require constant watching and pinching back, or they at once adopt the vine habit.

ANTHRAX, black-leg, or inflammatory fever, has become widespread among the herds of cattle in Winnipeg, Canada. Nineteen out of every twenty animals attacked die of the plague. Next to pleuro-pneumonia this is the most fatal disease that has ever attacked cattle on this continent, being extremely infectious and usually fatal in less than thirty hours after the appearance of the first symptoms.

J. J. THOMAS says: "In riding through so prosperous a country as some of the best counties of New York, one may at once select the school-houses by the entirely neglected surroundings and the bleak walls, unshaded by a single tree. In one instance a district school-house was seen in a dilapidated condition, its original cost not amounting to $500, while two brick barns were in view, each evidently costing $5,000 or $6,000. This contrast indicated the relative estimation of the farmers of their horses and their children."

GLORIOUS showers. Corn is looking—well our good readers should see it. Never before at this date have we seen heavier or taller stalks, broader or greener leaves. It is the very model of perfect health and luxuriance. Blount's corn, of which we have about an acre—or perhaps a little less—gained an early start and, though checked a little by the drought, is in no way injured. In fact, we hope the check thus received may end in a better and earlier development of ears at the expense of an inch or so of hight, which would never be missed!

THE average yield of cotton per acre in 1878-9 was 182 pounds, while that of the previous year—'77-8 was 179 pounds. Last season's yield cannot be accurately known until the close of the cotton year—September 1, '80, but from present indications it can scarcely be under 200 pounds per acre. The present crop, it is expected, will be an advance on the last one as much in yield as in acreage, and is now from 10 days to two weeks ahead of the usual condition at this date, except in a narrow strip, running north and south through Alabama, and another small one in Louisiana and Mississippi.

The following "crop" report is "peculiar:"

CAMBRIDGE, Mass.—No wheat, corn, oats, rye, or barley are grown here, and not many potatoes for the market. We occupy ourselves mostly in eating the above-mentioned products, though probably a good many wild oats are sown in the college. The principal varieties of potatoes are the mealy, the watery and the Spring. The achers are most numerous in cucumber season, though the corns cover many feet throughout the year. Canes flourish in the college-yard (about five acres), but there is not much sugar in them. Prospecting for fruit is dangerous, as farmers keep dogs. Strawberries meet with great success, but many of them fall victims to consumption.

B. P. M.

SEVERAL extremely severe rain storms have done much injury to farm crops and belongings in different parts of the country during the past week. Central Iowa, northwestern Illinois, central Kentucky, and parts of Georgia have suffered severely. All over the country the rainfall seems to have been heavy, and while it has in many places hurt cut hay and grain, it has, on the whole, greatly benefited corn and other growing crops, and will, doubtless, add many millions to the aggregate income of American agriculture this year. It is a difficult matter not only to suit people of different occupations with the same sort of weather: but also to suit those of like occupation with the same sort of weather for different crops.

THE SPARROW PEST.—We confess we do not feel very friendly towards the English sparrow. We may not know how much good he does; but we certainly do know that he does a great deal of harm. During the past season flocks of sparrows have frequented our wheat-fields, and the quantity of grain broken down by them has been considerable. They fly upon the head of grain, which at once falls to the ground under their weight, breaking the straw as it falls. As soon as they have eaten the kernels of one head another is broken down in the same way, and this is continued until they have eaten their fill. Their worst depredations were confined to the ripening grain at that stage when it was between milk and dough. As soon as the kernel hardened they quit the grain fields for other pastures.

AGRICULTURAL statistics show that in the last 15 years the production of wheat and barley here has doubled; that of corn, cotton and tobacco more than doubled; potatoes nearly doubled; hay increased more than one-third and oats about 140,000,000 bushels. The vast increase in cereals is mainly due to the rapid development of the Western and Northwestern States. During the present generation the corn center has been transferred from the South to the West, and the wheat center from the Middle States to the Far West. From 1870 to 1878 the production of tobacco increased 100,000,000 pounds, mainly in the South; while Texas and Arkansas have been the chief contributors to the increase of nearly two and a quarter million pounds of cotton in the same time. In the former 157 000,000 were raised in 1870, and 500,000,000 in 1878; in the latter, 111,000,000 pounds in '70, and 318,000,000 in '78.

AN act of the last Congress will be very likely to cause a large increase in the growth of tobacco through the country in small patches. Hitherto all dealers in the weed, however small their aggregate yearly transactions, have had to pay to the National revenue a tax of $25. Hundreds of country-store keepers were therefore prevented from buying or trading for small parcels of tobacco from the neighboring farmers, because their yearly dealings in the article would be too trifling to justify them in taking out a license, for which they must pay the above sum; consequently farmers, thus lacking a convenient market, were discouraged from planting the weed. By the new act, the license fee of the small dealer is reduced from $25 to $5 per annum, and this reduction will, doubtless, induce thousands of store-keepers to deal in a small way in the article, which is pretty sure to lead to a great increase in the cultivation of tobacco in small quantities.

LATEST CROP REPORTS.

(Continued from page 456.)

COLO., Golden, Jefferson Co.—The crops in this county are very poor. The Winter and Spring were too dry for getting in crops or for starting the seed after it was in the ground. Spring wheat is our principal crop and averages about 25 bushels per acre in ordinary years; but this year it will not average 10. The acreage compared with other years is about 75 per cent., but 20 per cent. of that is a total loss by reason of the drought. We depend on irrigation to make the crop after it is up; but when we have to irrigate it up, it's a losing business. The most popular variety of wheat raised here is called "White Siberian." I never heard of it before I came here; but it is an excellent wheat and about all the kind our millers will grind. It is a hard white sort and makes about 42 pounds of flour to the bushel; wheat is all dampened before grinding here. We raise some barley and oats, but the acreage is small this year. Corn is a failure this season; we raise the small varieties. Potatoes are grown extensively in the mountains and in the valleys in some parts of the State, but not in this county. I understand the prospect is favorable for the crop. Some sorghum was raised last year of the Early Amber variety, and succeeded remarkably well, more was planted this year, but the drought "got away" with it. Fruit-growing is in its infancy, but small fruits succeed very well; Doolittle's Improved raspberry is loaded with fruit. Gooseberries do well; and so do strawberries. Grapes do well, but are injured by drought this year.

T. W.

GA., Du Pont, Clinch Co.—No wheat is grown in this county. Oats are not an average crop. Very little barley or rye. Corn 15 bushels per acre. Cotton promises to be above an average yield. Rice fine. Very few kinds of fruit are grown here. Peaches would do well if they were introduced. Scuppernong grapes do finely. Plums, Pears, apricots and oranges, grow well; apples will not do. Strawberries ripen in March. Potatoes and all roots do well.

R. M.

IND., Pleasant Lake, Steuben Co.—Wheat is being harvested now; I think we shall have an average crop, although some kinds have been blighted. We have had very wet weather all the Spring and Summer. There is not so large an acreage of corn and oats as usual, and the continued wet has made the growth uneven. Hay is good; I think it will average one and a half ton to the acre. The wet weather has injured all the potatoes—drowned them out. Of Early Amber cane there has been a good deal planted.

H. B. D.

ILLINOIS, Baileyville, Ogle Co.—The weather has been very wet and unfavorable for haying and harvesting since the 24th ult. We had a heavy rain on 4th inst—but it is fair now. The harvest is progressing rapidly. Some commenced cutting rye and winter wheat before the Fourth. Rye is good; Winter wheat variable—some good and some thin—will average a light yield. Spring wheat is somewhat injured by rust and will not be a large crop. Oats are heavy. Barley, fair if it can be harvested without its spoiling. Corn and potatoes were never better at this time of year. Grass has improved greatly of late; but a considerable amount of hay has been spoiled by the wet weather.

W. B. D.

ILL., Milo, Bureau Co.—Wheat is almost a total failure in this section; but little was sown this year as it is not a sure crop. The prospect for corn is good; this is the principal crop in this locality. Potatoes—Peachblow, Early and Late Rose—prospect good. Oats—mostly white sorts—prospect good. Rye good, but not very much is raised in this section. No barley is grown around here. Sorghum is not cultivated to any great extent of late years. Grain has not been harvested, so I cannot state now large the yield will be. The fruit crop is very abundant this year. Berries of all kinds, except strawberries, are very plentiful. Some peaches are raised, but this fruit is liable to be winter-killed. Grapes are abundant. Apples—Ben Davis, Jonathan, Willow Twig, Snow and Malden's Blush—a large crop.

J. G.

IOWA, Unionville, Appanoos Co.—The changeable Winter and rough Spring entirely killed Fall wheat. Spring wheat is somewhat roasted and will make only half a crop. Oats will be a full crop. Grass very light, not half a crop. Corn promises to be very good; it is clean and the ground well pulverized; we are having showers, too, to keep it a-growing. Small fruits of all kinds are plentiful. Apples are enough to make a good crop of fair size. Potatoes and all hoed crops promise well. We began using new potatoes on June 17th. They are of good size and good in quality. Pastures are short, but the rains we are having now will revive them. Hogs are healthier at present than they have been for several years.

F. K.

KANSAS, Crooked Creek Valley, Clarke Co.—This county is new, but comparatively few settlers having been here previous to 1879. Many of these came from towns and were unused to farming, and especially to prairie farming. As a natural result many have left disgusted; others have gone on a long visit to their "wives' folks," while those who remain are trying to see what this once-called "American Desert" will produce. But little wheat was sown last fall and that little is a total failure. No oats, and no Indian corn worth notice. The few farmers here depend on the Egyptian Rice corn, sugar cane and millet for their chief productions in grain. Up to May 19 it was extremely dry; but plentiful rains, commencing then gave a chance for breaking, plowing and planting. Bugs took the early gardens; not the potato bug alone but a long, black bug very destructive and greedy of every green thing. At present the prospect is that the Rice corn, sugar cane and millet will produce good crops—we hope enough for home consumption. The rains of last week have brought up the second planting of vines and beans which though flourishing nicely to-day may disappear before to-morrow's bug army. The valley is covered with a peculiarly nutritious grass, so that horses and cattle are fat; while the Buffalo grass is rapidly growing green at last, giving good promise of splendid Winter feed for the flocks and herds which find pasturage here. There is no doubt but the hay crop will be sufficient for the wants of the horses and cattle, and if the railroads were nearer, a good deal might be shipped. There are no fruit trees bearing, and but few started, and only here and there fruit vines of any kind.

A. M. N.

KAN., Harlan, Smith Co.—A very unusal drought prevailed in the early part of the season. Since June 12th we have had plenty of rain. Small grains are more nearly a failure than ever before. Corn looks exceedingly fine, and we look for a large crop. Potatoes look well where the bugs are kept off. This is a fine country, and is rapidly settling up.

F. E. H.

KY., Milton, Trimble Co.—Wheat is now sprouting in the shock owing to the frequent rains and warm weather. It is still raining and warm. Not more than five per cent. is thrashed, averaging 12 1-5 bushels per acre. Corn, potatoes and tobacco are "booming." Wheat is worth 87@90c.

S. E. H.

NEB., Rising City, Butler Co.—Wheat will not be more than half a crop at best. We did not have any rain to wet the ground until May 30, and consequently all grain suffered. Corn is looking well; the ground is generally clean. Oats poor; barley ditto; rye very light. Potatoes are backward and did not come well. Our varieties of wheat are: Odessa, Grass Wheat, Blue Imperial, Polish, Peru and White Russian. Odessa is looking much the best this season. The comparative acreage, putting wheat at 100, is: corn, 80; oats, 20; barley, five; rye, five; potatoes, two. Sorghum is not raised to any extent; there is no way of extracting the sirup. It does well when planted. We have but very little fruit as yet; 'hoppers destroyed the trees in '74 and '75, and we are just getting started in fruit trees again.

F. A. B.

NEB., Orleans, Harlan Co.—The rainy season began extremely late. East of the 99th meridian, in Southern Nebraska, crops are good. Between the 99th and 100th wheat is poor; but corn is coming on finely. West of the 100th cattle, sheep and grass are the only crops to depend on this year. The immigration wave rolled in too far and is slightly receding. Abundant rains all over the State at pr esent.

R. H. C.

NEW MEXICO, Cimarron, Colfax Co.—The harvest for New Mexico will not be abundant, as the whole of the year so far has been marked by a drought. No crops are raised except along the streams where water can be taken out in ditches for irrigating purposes; some of the smaller streams have in consequence of the light fall of snow in the mountains, and the general drought, had such a small amount of water that farmers have not been able to irrigate their crops sufficiently, though if the "rainy season" should set in soon, a fair crop might yet be reaped. About the only grains raised worthy of notice are Spring wheat, oats and corn. A small amount of potatoes too are raised in the mountains and valleys of high altitude. Barley seems to do well also in mountains and valleys. Rye and many others of the ordinary Eastern crops are not cultivated here. The acreage under either of these crops is very small. There are in all of the counties of the Territory a few streams with narrow valleys; these little valleys are cultivated about as high as water can be turned into ditches. This county of Colfax is about 8,000 square miles—as large as some States—and I think I can safely say there is not over 2,000 acres in all under tillage. The amount usually under cultivation is about the same as the past few years, wheat being the staple crop. We buy almost all our breadstuffs, horse feed, etc., from the East, mostly from Kansas, some from Missouri, Illinois and other States There are not 10 acres of sorghum in the whole Territory, I think. there might be a few acres along the Rio Grande River, but I think not. There will be some fruit this year, and this must be very small since there are very few orchards. In this county there are scarcely 500 fruit trees, and they are, with few exceptions, very small. It is mostly so, too, in adjoining counties. There is, in this county, a small orchard owned by a German who has a hundred or so of German prunes that have done well for young trees. The drawbacks to fruit raising are, in the mountain districts, a few severe winds that destroy more delicate fruit buds in Spring, and also, occasionally during Summer there are late frosts that kill blossoms. In the counties more to the south, and particularly along the Rio Grande, there are some small orchards and some good-sized vineyards. There no Winter is severe enough to injure fruit; only occasionally a Spring frost does harm. There some vineyards are large enough to manufacture large quantities of mostly wine, which is sold throughout the Territory at from $5 to $8 a barrel. The grape approximates a native variety, though it is claimed to have been brought here in an early day by missionaries of the Catholic Church from Spain or some European country. It is a small but very delicious grape, a little larger than the Delaware, and we think better flavored. It is not grown on a trellis but allowed to grow on a stem, cut back and covered up in Winter, as it is very tender. The varieties of fruit are almost altogether brought from Eastern nurseries, and, as a rule, are very poorly selected for the climate. Some also cultivate very ignorantly in many respects, one especial difficulty being the process of proper irrigation, which seems to be little understood. There is quite a quantity of native fruit trees, such as apples and apricots, the latter being a little small, rancid early apricot, and the former being a little oblong, white sweet apple, almost worthless, the peculiarity being that the seed of this variety always germinates the same worthless variety.

M. W. M.

N. Y., North Hector, Schuyler Co.—We are having a severe drought; everything is drying up. The hay crop is very light, and so will be oats and barley. Corn is rolling up very badly. Potatoes are very small and badly injured by the bugs. Grapes are looking very good; peaches, rather scarce. Pears are looking fine, and so are apples, with a prospect of a full crop.

A. M.

N. C., Greensboro, Guilford Co.—Wheat on well tilled and manured ground is good; but there are many complaints about rust, and I hear it is not thrashing out as well as expected when grown on old fields that have been cropped for years without rest or manure. Fall oats and barley are very good on good ground. Spring oats and hay are rather light on account of dry weather. Corn is rather late, but looks well. Potatoes, both Sweet and Irish, look well, especially the former; so does cotton. Of these three there is an unusual area planted. Apples, pears and peaches are plentiful here, but in some sections there are hardly any. The Ennobled oats are just ripe—they have done well. I shall have a fine lot to sow next Spring. I sowed them too thick; but they stand three feet five inches and are well headed, though they were sown a month too late for this climate. I expect a great yield from them next year. The Telephone pea is ripe; it, too, did well. The mangels are splendid—one measures 12 inches around. The willows have grown finely.

O. K.

NOVA SCOTIA, Cornwallis.—Our season is much later than that of the United States, and it is too soon to judge closely of some of our crops. Grain at the present time is looking well, and with favorable weather will be a good crop. Wheat, oats and buckwheat are the principal grains sown. Lost Nation is the chief wheat grown here. Our winter Wheat is a white variety. What was sown is looking well. Potatoes are our staple crop. In the township there is a large acreage planted, but it is too soon to tell how they will turn out, as they are only now being hoed the first time. I expect to have several bushels of the Beauty of Hebron from the potato the RURAL sent me last year. They are doing finely. Early Rose, Breezee's Prolific and Chili Reds are the principal kinds grown. I do not know of any sorghum being tried here as yet. Our hay crop will be below an average on account of the dry weather. Our fruit prospects are good. Apples are our principal fruit, of which the following are most successful: Fall—Bough, Gravenstein; Winter—Baldwin, R. I. Greening, Roxbury Russet, Nonpareil, Northern Spy, King of Tompkins County.

J. E. E.

NOVA SCOTIA, Belmont St., Colchester Co.—In this northern country we can hardly tell yet what the harvest will be. Wheat looks well, the kinds sown are Lost Nation, Red Fern, Golden Drop, Scotch and White Russian. Potatoes are doing well this dry weather. Hay will be below the average crop, unless we have wet weather this week. Oats, barley and buckwheat are fair. Roots of all kinds look well. Onions grow well here We have only raised small quantities until the last two years; we have grown them to weigh 18 ounces, but they are injured by a small maggot or worm that eats the top off close to the bulb. The oats and mangels of the RURAL'S Seed Distribution are doing splendidly; the melons came up all right but the ants spoiled them.

J. C. R.

OHIO, Mount Pleasant, Jefferson Co.—Harvest commenced in this section more than two weeks ago, probably the earliest known for years. The wheat is all in shock, well filled, and in excellent condition. The acreage exceeds that of last year by at least one-third; but with no better yield. A great many farmers claim from 25 to 30 bushels per acre. Price of old wheat $1.05, with a prospect of some decrease when the new crop goes into market. The hay and clover crops are short, but good in quality. The scarcity is owing to an early drought when stooling, and the price of hay will be as high as last year—$18 to $20—if not more. The corn crop in general looks well, and in fine growing condition, but needs work, which it lacks owing to the early harvest. Oats are short, but are filling well, and bid fair to make a liberal yield if the grasshoppers do not injure them, as they are growing very thick. The season since the opening of Spring, with the exception of a short drought which came quite early, has been a growing one.

G. E. S.

UTAH, Glenwood, Sevier Co.—Crops are below the average in thrift; they have a large acreage. Late frosts damaged almost all kinds of crops. Grasshoppers are doing some injury in this valley and adjoining ones. Old grain is scarce, and sells at 90 cents to $1 25. Beef and mutton stock has not come into market to any extent, though animals seem to have recovered from the hard winter. A great many lambs—at least one-half, died from a cold, snowy, late Spring. Some sheep-raisers lost as many as 500 head each during the Winter. Weather now very hot and dry; no rains. Eggs, 10 cents; good butter, 25 cents, scarce; oleomargarine or swineogreaserine has taken its place in most families.

W. M. C.

WEST VA., Lewisburg, Greenbrier Co.—Wheat, acreage about a third larger than usual—about 40 acres to the square mile; kinds grown—Lancaster, Fultz, Philadelphia Amber and Wick's. Although the acreage is larger, the crop will be but an average. The Lancaster has proven to be the surest and best. The Amber is good, but there has been but little of it grown yet. The Fultz has been giving the largest yield, but not this year. The Wick's is uncertain. Corn, acreage about the same as that of wheat. Oats about the same. Rye, but little grown. Barley, none grown. Potatoes, none grown except for home use. Sorghum, but little grown. The prospects for fruit are fair; very little grown besides apples. All kinds do well as this is a fruit country.

S. O.

WYOMING TER., Lander, Sweetwater Co.—This is not as much of a farming as it is of a stock country; there are not over 1,000 acres under cultivation in the valley. The past was a very cold Spring. The potato crop will be short on account of the seed rotting in the ground. Oats do not look as well as last year at this time. The acreage under wheat is about the same as last year—not large. Wheat has not done very well so far. Corn is not cultivated except in gardens for roasting ears. No barley is grown here. Unless we have an uncommonly favorable Fall some of the crops of grain will get frozen and harvest will extend into October. These crops, therefore, will not be as large as last year; grain ranges from 25 to 80 bushels per acre.

J. J. T.

For Women.

CONDUCTED BY MISS RAY CLARK.

YES OR NO.

You ask to-night my daughter's hand,
As you'd request a toy—
Do you know the weight of your demand
On a mother's heart, my boy?
You say you love her wildly; well,
Will it last to the end of time,
Or will the ring of the wedding bell
Resound its dying chime!

The heart you crave is a holy thing,
So tender, trusting, true;
Can you to her devotion bring
As warm as hers to you?
Will you love her through the changing years
As tenderly as now,
When ills shall pale, or sorrow's tears
Becloud her sunny brow?

When age shall bow her graceful form,
And bleach her jetty hair,
Will you protect her through each storm
And shelter her from care?
When time shall dim her sparkling eye,
And winter furrows show,
Will your love be the last to die?
If not, I answer, No.

Remember that her future life
Would every day be yours;
A loving woman when a wife,
To one whom she adores,
Has no existence of her own
Apart from him she loves;
She lives henceforth for him alone,
And in his orbit moves.

She molds her wishes to his will,
Her ways to his desires;
He leads her by love's willing web
Through life's refining fires;
She walks with him through thorny fields
And o'er life's rugged road,
He is her idol and ideal,
Her guide and household god.

So if your love will live and burn
And bless her future years,
If you will give her in return
The trust her life endears;
If you will guide her destiny,
And shield her from distress,
Will always live adoring her,
Why then, I answer, Yes.

A MOSS PICTURE FRAME.

Most of the directions given for home decoration in the magazines of the present day, profess to have the advantage of cheapness, but I confess I do not find them so.

I therefore give the following directions for a frame that I think suitable for a chromo or something bright.

We have all noticed in our walks through the woods, in the Fall of the year or Winter months, how many shades of green the different patches of moss display. Some a light velvety corn color, others an apple-green, and then again nearer the water's edge we find the rich green patches still more like velvet.

The time to collect it is when the earth is dry; select the most velvet-like varieties you can find, and pull the fibers apart, separating each shade into bundles, just as you would sort colored silks before working a pattern.

Take a flat sheet of thick card-board, and cut an oval piece from the center, leaving a hole the exact size of the picture. Next turn the sheet on the wrong side, lay a glass over the hole and draw a line around it with a pencil, then cut four strips of card-board the length of these lines, and after piercing them with an awl fasten firmly with cords to the frame. Place the glass in the square formed by these strips, and on that lay your picture; if this proves to be a perfect fit, cut a piece of card-board to cover the picture, place it over the back of it, and fix it securely in place by means of small tacks driven into the strips that form the case at the back of the picture.

After seeing that each part of your frame is an exact fit, take two short hair-pins, and pierce the board on the under side some distance from the top with the hair-pins, one on either side of the picture. The heads of the hair-pins should be left sufficiently above the surface to pass a cord through, and the points that pierce the upper side, should be pressed flatly to the face of the board.

The different parts of the frame being fitted and ready for use, you can put them all by, but the large square piece. After looking carefully to be certain that you can begin on the right side, which is indicated by the points of the hair-pins, sew a regular row of the darkest moss around the oval center of your frame; the second row should be the next darkest shade, and so on until the lightest shade comes next the edge that rests against the wall.

In sewing the moss on, care should be taken to let the velvety portion of each row cover the stems of the one above.

When this is finished, fit all the parts of your frame together, and hang where it will catch the evening light. You will have a cheap, and I think, a pretty frame.

EULALIE.

To select the young as teachers for the young is one of the experiments of modern times that has proved eminently successful. The fresh interest and enthusiasm of the instructor infuses itself into the pupils, who feel a reliance upon the sympathy and appreciation of a teacher who still vividly remembers the difficulties of her own schooldays. Frequently the elder teachers, although probably better furnished with patience and experience, have become the slaves of routine, bowed beneath the grievous burden of a weariness of their work.

MRS. HAYES discourages wearing low-neck dresses almost as much as drinking wine.

DESCRIPTION OF CUTS.

No. 231.—BASKET FOR EGGS.

A round card-board box about 22 inches in circumference is used for the foundation; it is lined with moss-green cashmere. The cover for the outside is composed of a band of looped knitting, worked with shaded moss and bright green wool, as follows: Cast on twenty-four stitches, knit the first row.

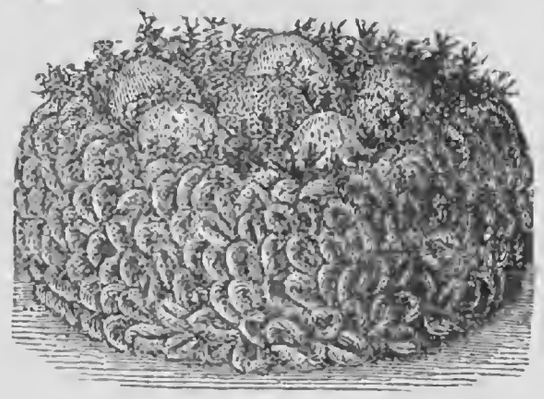

FIG. 231.

2nd Row: Insert the right-hand pin into the first loop of next row, turn the wool three times over the pin and round the forefinger, draw all three loops through in the ordinary way, knit one. Repeat to the end of the row.

3rd Row: Knit plain, taking the three loops of last row as one stitch; the second and third rows are repeated until you have worked 22 inches, when cast off, join round, sew neatly to the outside of the box. The inside of the box must be half filled with wadding before putting in the lining.

For the moss which fills the inside take single Berlin wool of the same shades, cast on twenty stitches, and knit in strips of plain knitting; steam the strips over boiling water, then dry thoroughly, cut off the stitches along one side, and unravel the work to within about three stitches of the other side; sew this mossy fringe in bunches along the sides and at the bottom.

This will form a useful addition to the breakfast-table, as it will keep eggs warm for some time.

No. 234.—PINCUSHION.

Cut an octagon of stout card-board, and cover it with dark olive velvet. Take a round card-board box (a paper-collar box will answer very well), cover it with olive satin, ornamented with a band of cross-stitch embroidery, worked with crimson silk; sew it firmly to the octagon, make a cushion exactly to fit the box, cover it with velvet, cover a small pill-box with velvet and sew it to the centre of the cushion. This serves as a thimble-case. A gold cord is placed at the edge of the cushion and also round the thimble-case.

No. 232.—DRESS FOR LITTLE GIRL FROM FOUR TO FIVE YEARS OF AGE.

The dress is of pink batiste, trimmed with loops of ribbon and lace: cavalier collar and cuffs of embroidered muslin. There are many kinds of material suitable for this tasty, little suit; it will not necessarily require the use of the batiste.

No. 235.—Bonnet of fancy straw, trimmed with cream lace, garnet satin ribbon, deep crimson and tea-roses, and gold dagger.

FIG. 232.

No. 233.—Hat for Little Girl.—The hat is of fawn-colored chip, trimmed with satin ribbon. The milliner's windows reveal this style of hat in different colors and varied trimmings. It is particularly adapted to the young miss, being becoming to almost all faces.

FASHION NOTES.

FOR the comfort of those who regret not to be able to wear in Summer, bodices of a material different from the skirt may rest content; there are yet several combinations which allow of continuing a fashion above all others economical. With black or dark-colored skirts, they may wear a bodice of black figured silk or wool. With skirts of lighter shades, in self-colors, they can put on a bodice of foulard, with a printed or brocaded pattern—especially if they use for the trimmings of the skirt a little of the same material, either as bias-bands or as pleats dividing a flounce at regular distances.

Among the silk tissues suitable to Summer toilets, surah, in all colors, is employed in preference to all others—black surah for elegant underskirts; handsomer and thicker twilled surah for mantles; similar surah, in black or colors, for costumes, in combination with light woolen or with figured materials. A few descriptions of modern toilets, however, will give a better idea of such combinations than any general remarks.

A pretty walking toilet is of heliotrope-colored cashmere. The round skirt is pleated lengthwise, and upon the left side the pleats are commenced from the waist. The tunic, very much looped up upon that side, comes down to the edge of the skirt; the trimming is composed of a scarf of surah to match. Bodice with a basque, forming a peak behind and in front; a scarf of surah very finely pleated finishes the bodice, and appears to join it on to the skirt. The front of the bodice is trimmed with a drapery of surah, which forms a full chemisette pleated at the waist.

Another toilet is of woolen crape of a rosy gray, called "ashes of roses." The skirt, of rose-colored surah, is pleated all the way down in very fine pleats; the tablier, very much draped, is looped up very high at the sides, so as to leave almost all the skirt visible; the bodice with deep basques forms a coat at the back; the front is put on with

FIG. 233.

a waistband; a basque of puffed surah is applied on to the basque at the back; the plain sleeves have at the top small puffings of surah; chemisette of puffed point d'esprit tulle.

Again, a pretty summer toilet for the country is of satin foulard with shaded dots. The skirt is trimmed round the bottom with a deep and very fine fluting, headed with a full-gathered puffing—this trimming is repeated twice: jacket-bodice with a scarf put on about the hips, upon the basque itself, and finished in a large bow over the basque at the back; very tight sleeves.

Lastly, a visiting-toilet is of lichen-colored bengaline. The lower edge of the skirt is trimmed with satin to match; a deep net-work of beads to match ornaments the outline of the skirt; this net-work is headed with a drapery of bengaline, which is joined on to the bodice, made jacket fashion, and with a waistband in front; the neck is trimmed round with a bead fringe, forming a necklace.

One of the prettiest fabrics of the season is called "nun's veiling." It is a very light semi-transparent material, which combines very effectively with brocaded silk or satin.

Thus a very elegant costume is composed of heliotrope-colored nun's veiling and satin of the same color. The front of the skirt is shirred; on each side is a robing formed of four pleats of satin. The bodice, in the shape of a deep jacket, is made of satin with passementerie brandeborgs of the same color; round the neck, a double ruche of point d'esprit tulle coming down into a quilled ruffle down the front of the bodice. Round the bottom of the front part of the skirt there are two narrow flounces of ruche satin.

CARE OF CHILDREN.—The mother of several children says: "I devoted myself to the charge of my nursery; I attended in person to the physical and mental needs of my young children. The work was laborious, but it has repaid me. They are healthy, brave, honest and frank; they are cursed with none of the small vices contracted by intimate intercourse with persons of inferior intelligence; and they are self-sustaining at an early period. Neither pert nor precocious, they ripen early to judgment and common-sense, and I believe that the careful tillage of my own little field has produced a harvest worth the labor."

Mrs. Livermore contends that if mothers would train their girls as housekeepers, at the youthful period when girls would be delighted to learn, they would then take to housekeeping as naturally as ducks take to water. She does not recommend, however, that instruction should be confined mainly to domestic duties, or that marriage should be considered the principal aim of the fair sex but advocates a system of broad and liberal tuition which will fit women for any of the probable contingencies of life, render them self-dependent, and fully develop their varied faculties.

AUTHORS are spoken of as dwelling in attics because so few of them are able to live on their first story.

Literary Miscellany.

RESULT FROM MISTAKE.

CHAPTER III.

(Continued from page 450.)

"But I can't help feeling just a little jealous of her when I think about it," added Kate, naively; "and so, Frank, I want you to make me a promise. You will not refuse, though I know you will call me silly. Do promise!"

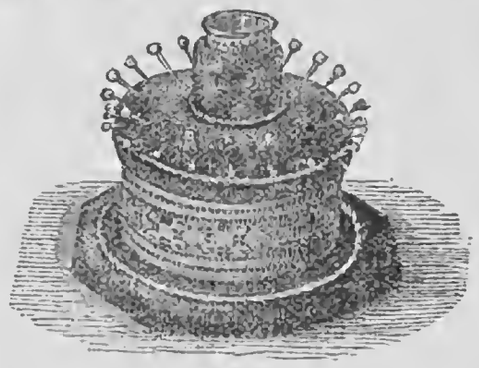

FIG. 234.

"What is it, Kate?"

"You remember, of course, that we have promised to attend Mrs. Abbot's party on Thursday next. Your cousin Kate will be there. Now, I want you to promise me that you will not dance with her—not even once. I feel that I could not bear to see her in your arms!"

For a moment Frank hesitated. But there was no resisting the pleading of his companion.

"It is very arbitrary of you, little one, to wish to shut me out from the society of my charming cousin, and I am not sure that I ought to comply with your request. Still, as you wish it so much, let it be so. I promise."

Poor Kate was delighted with her success. How far she was from suspecting the real motive which had swayed her lover! But the time was coming when she would be rudely awakened from her blissful dream, and when all that had been hidden from her knowledge, would come upon her with relentless force!

CHAPTER IV.

Mrs. Abbott's parties were invariably brilliant and successful, so as a natural consequence they caused no ordinary amount of pleasurable excitement. With the solitary exception of Frank Drayton, all the invited guests were looking forward with the keenest delight to the evening's enjoyment. He, however, was by no means in the mood for taking part in such festivities. During the week just elapsed he had found the task of playing the lover far more irksome than he had imagined it possible for it to be. Kate's perfect faith in him touched him deeply; but at the same time, her many innocent manifestations of affection palled upon him. How forcibly he felt the wisdom of the old Athenian sage, who, when asked what was the most ungracious thing in the world, replied—*unwelcome caresses.*

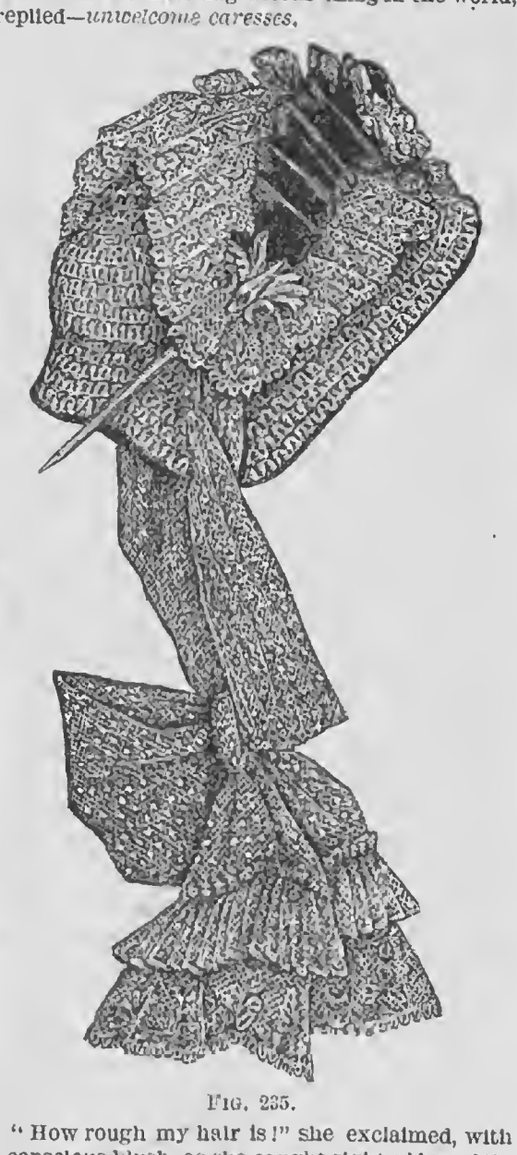

FIG. 235.

"How rough my hair is!" she exclaimed, with a conscious blush, as she caught sight of herself in the mirror hanging in the ante-room at Mrs. Abbott's. "I really cannot present myself in such untidy trim; I must put myself to rights. Wait a moment for me, Frank, I shall be back again directly; and remember you have promised not to dance with Cousin Kate."

And as she spoke she passed into the adjoining dressing-room.

The soft and dreamy strains of a popular waltz came upon Frank's ears. A velvet curtain over a doorway alone divided him from the apartment in which the dancing was going on. With an air of listless curiosity he drew it slightly on one side; as he did so, another hand was laid upon the curtain by someone who was about to quit the ball-room.

The next moment he found himself standing face to face with Cousin Kate.

How supremely lovely she looked! A flush was on her cheeks—a brilliant sparkle in her eyes.

"Why, Frank!" she ejaculated, holding out her hand, "how you startled me! I have not seen you for an age! Naughty boy! why did you not come and offer your congratulations? Is it because Miss Seton has the monopoly of your time?"

Then, without waiting for Frank to make her any reply—which in good truth he was too agitated and confused to do—she went on quickly:

"See; this delightful waltz is nearly over; but we shall have just time for one more turn round the room. Come."

"And before he knew where he was or what had happened, he found that vision of beauty reclining in his arms—her soft touch upon his shoulder her warm breath upon his neck.

Then, with a crash, the music ceased; the waltz was over.

Panting, flushed, and smiling, never, Frank thought, had his beautiful cousin looked so lovely, and at the same time came the agonizing thought that she was lost to him for ever—a double barrier stood between them.

"But was it really too late?" he asked himself. "Was there not time even now to change the current of the future?"

His brain felt dizzy. The image of his betrothed rose up before his mental vision, but he resolutely put her from his thoughts.

"Kate," he said, hurriedly, in tones of suppressed passion, "You were, I think, about to leave the room when I encountered you. Will you accept my escort?"

She placed her hand upon his arm; he felt it flutter as it rested there. Was she, too, thinking of and regretting the irrevocable?

He drew aside the velvet curtain, and they entered the ante-room together. He looked around it quickly, and gave a sigh of relief upon finding the apartment empty.

"For whom was that sigh?" asked Cousin Kate, half in earnest, half in jest.

"For you!" he answered, in a voice hoarse with suppressed vehemence; and then, carried away by the intensity of his passion, he, in a torrent of burning words, poured out the story of his overwhelming love.

In vain she tried to check his speech. His pent-up love had burst its bounds and carried all before it.

"Don't refuse me, Kate," he said, almost choked with emotion, "don't refuse me! Put aside the past! Be mine! be mine!

"Not a word more! Remember I am pledged to another!"

"Frank, are you mad or dreaming? Let me go. If you loved me as you say you do, why did you ask Kate Seton to be your wife?"

"That can be easily explained. It had its origin in a mistake. Yes—I repeat it—a mistake. The offer of marriage which she received was intended for you; but by some mischance—how it can have happened I know not—the letter was placed in the wrong envelope. But I do not love her—I cannot love her. I have tried hard to do so, but the affections will not yield themselves subservient to the will!"

These last sentences fell like the knell of doom upon the ears of poor Kate Seton. On returning from the dressing-room she found to her surprise that Frank was not where she had left him. Feeling pained a little, but far from guessing at the truth, the idea naturally occurred to her to draw aside the curtain and peep into the ball-room.

Then she felt her heart cease its pulsations—a suffocating sensation filled her throat—her life's blood seemed to turn to ice—for, despite his promise, Frank was dancing with his cousin; and worse still, she could read in his whole expression that Frank loved the girl he was then clasping in his arms.

Blinded, heart-broken, Kate groped her way to the dressing-room close by. It was unoccupied, but she knew it not. There was a large arm-chair near the door, and into this she sank, almost, if not quite, insensible. She struggled hard with the awful faintness which oppressed her, for she had now but one desire: to keep out of Frank's way—to get home unperceived.

Of Frank's passionate declaration of love she had heard or comprehended little. But she regained possession of her faculties in time to hear those concluding sentences, which explained how it was she had received the letter which had filled her breast with so much joy.

A scream rose to her lips; but with an effort she subdued it, and summoning all her strength, she left the dressing-room by another door.

Some little time afterwards Frank was informed that Miss Seton, who had been suddenly taken very ill, had gone home, attended by Mrs. Abbott's maid. She had desired her hostess to say nothing about her departure even to Frank Drayton. But Mrs. Abbott had not thought fit to obey her in this particular.

"She has heard all!" was his first thought. "I will follow her at once."

On reaching the residence of Mr. Seton, a servant said, in reply to his inquiries, that Miss Seton was indeed very ill, and could see no one. In the expectation that Mr. Drayton would call, she had left a note for him.

Frank's hand trembled as he broke the seal, for he felt guilty and ashamed.

The letter contained only these words:

"Farewell! All is over between us! Most unwillingly I overheard some of the conversation which passed to-night between you and your cousin Kate. You have used me cruelly; but as I see I am myself in some degree to blame, I forgive you for all you have made me suffer. Here is your ring and the letter which was never intended to reach my hands. You are free! My only aim now will be to forget you—my only hope that I shall never see you again!"

A pang of remorse—or was it some other feeling?—shot through his heart as he read these touch-

ing words. He could not trust himself to speak, but crushing the letter in his hand, left the house without another word.

Twelve months have rolled away, and it is again the eve of St. Valentine. Once more a little figure is crouching before the fire. The bright blaze falls upon her chestnut hair, and tips it with gold, just as it did a year ago. It falls, too, on her sweet face and reveals how much she has suffered in all that dreary time.

The hope expressed in her letter has been fulfilled. In the interval elapsed she has not once seen Frank Drayton. But has she succeeded in forgetting him? Ah! no, and she begins to fear she never will. In her hand is the same photograph, and she gazes on it now through a mist of unshed tears.

"Who would think," she murmured, "that the owner of that face could be so false—so cruel; and yet I am so weak, so fond, so deficient in woman's pride, that I feel I love him still. No—no. What do I say? I must and will forget him!"

And governed by this determination, she tears the photograph in two, and after one last lingering look, flings it into the fire.

The fiery tongues devoured the pieces of cardboard in an instant.

"How wretched I am!" she thought, "and last year I was so very—very happy!"

And with a burst of anguish she buried her face in the soft cushions of her mother's chair.

Absorbed in her grief, she did not notice the noiseless opening of the door, nor the appearance of the servant who stood upon the threshold. He paused irresolutely, and then another figure stood beside him. The new-comer made an imperative gesture for the domestic to withdraw, and the door closed silently, leaving the stranger in the room. It was some time before he moved. He saw the dark figure kneeling by the chair—her stifled sobs came softly upon his ear. At length he advanced. On the thick carpet his footfalls made no sound. He reached her side unnoticed, and then bending forward, touched her with an unsteady hand. She looked up quickly.

"Frank!" she exclaimed, for she recognized his tall figure at a glance. "Frank!"

There was a world of reproach, of surprise, and yet of tenderness, in her tones.

"Kate!" he said, in a voice broken by emotion, "forgive me for intruding upon you thus; but I could keep away no longer. That I am here in opposition to your wishes I am well aware; but I felt the irresistible desire to see—to speak to you once again—must be my excuse. You shrink from me!" he added, in pained accents. "Do not—oh, do not send me from you till you have heard what it is I wish to say."

"I will listen," she said, faintly; "but do not keep me long. I am far from strong and——"

"Kate, dearest," he interrupted in a broken voice, advancing a step nearer to her as he spoke "I have come to-night to entreat you to forgive me for all I have done—for all the anguish I have made you suffer. I have come to tell you that the mad passion—I will not profane it with the name of love—which I had for Cousin Kate no longer has the shadow of an existence. It died out that night—that night when I received this letter and this ring. Those words of yours bidding me farewell revealed to me, like a flash of light, the enormity of my mistake. I knew then that it was love I felt for you, and that the other was an insensate infatuation. Can you guess what my feelings were when I made the discovery? I wrote to you; but every letter came back with the seal unbroken. I tried to see you but was denied admittance. It was not till to-night that I was enabled to gain access to you. Speak to me, Kate—speak to me, or do I plead in vain? If you fear my proffered love is likely to prove transient, dismiss the thought. Twelve months is long enough to test the reality of my affection. In all that time it has never swerved, and through all time to come I give you the assurance that it never will. Speak to me. That you have listened to me so long gives me hope. Will you accept the love I offer you? Will you let the past be as though it had never existed? Will you forgive me? Will you be my wife?"

His tones, words, manner, all proved the sincerity of every word he spoke, and appealed irresistibly to Kate's loving heart. But even if it had not been so, there was a still stronger advocate for him in her own breast. She was, however, too agitated to utter a syllable. At the last words she gave a step forward and sank helpless into his arms. She felt herself pressed tightly in his embrace; she felt kisses showered upon her lips and brow; and the next moment she felt the engagement-ring was once more slipped upon her finger.

"Ahem!" said a voice.

The lovers started, and looked up, surprised to find they were no longer alone.

Frank was the first to recover his self-possession. Keeping Kate prisoner with one hand, he held out the other and exclaimed:

"My dear Mrs. Seton, I am indeed most happy to inform you that the misunderstanding between your daughter and myself no longer exists, and there remains nothing now but for Kate to fix the day when I may have the happiness of making her my bride!"

MAGAZINES FOR JULY.

THE ORIENTAL AND BIBLICAL JOURNAL. CONTENTS:—Influence of the Aboriginal Tribes upon the Aryan Speech of India, by Prof. John Avery; The Latest Cuneiform Discovery, by Prof. A. H. Sayce, D. D., F. R. S.; The Assyro-Babylonian Doctrine of Immortality, by Rev. O. D. Miller; Ostrids of Ancient Egypt, by Prof. T. O. Paine; Human Sacrifices in Ancient Times, by Senor Orosco y Berra; Teutonic Mythology, Prof. R. B. Anderson; The Antiquity of Sacred Writings in the Valley of the Euphrates, by Rev. O. D. Miller; A Cinerary Urn, by Rev. Selah Merrill, D. D.; Mount Tabor, by Rev. S. D. Phelps, D. D.; Editorial Notes; Miscellaneous; Archæology and Ethnology; Art and Architecture; Geographical Explorations; Proceedings of Societies; Index of Articles on Archæology, Anthropology and Ethnology.

CLEOPATRA'S NEEDLES.—The remarkable obelisks which have been known to the world under the sigular cognomen of Cleopatra's needles, and which are now being removed, one to England and the other to the United States, have a much more interesting archæological interest than is generally supposed. They were taken from the celebrated quarries at Syene, and were, like others, constructed in the usual tapering form symbolizing the sun's rays. The material of which they are composed is a rose-colored granite. Pliny states that they were transported to the Nile with the aid of flat-bottomed boats, floating in canals especially prepared for that purpose. It is supposed that they were afterwards erected to their place by making a groove at their base, in which they might turn as a hinge, and then building a mound of earth, which increased in size as the top of the shaft arose, until the monument stood erect. They were originally set up by Thothmes III, one of Egypt's greatest rulers, at Heliopolis, or the City of the Sun, as early as 1,600 B. C. They were transported to Alexandria under Tiberias, and set up in front of Cæsar's temple, where they obtained the name which they bear. The name was given to them because of a tradition that they were removed to Alexandria during the reign of Cleopatra. The obelisk removed to England is 68 feet five inches high, and contains on its two faces hieroglyphs expressive of the titles of Thothmes III; on the other two Ramses II has added his own, illustrating only the pomp and vainglory of these monarchs, but absolutely destitute of historical information. The other obelisk on its way here contains many similar inscriptions, and was erected by the same monarch. The significance to the Bible student which these remarkable monoliths possess, is not so much in their inscriptions or their forms as in the fact that they were probably standing in front of the great temple to the Sun when the Israelites were in Egpyt. They also remind us of the two pillars Jochin and Boaz, which Solomon erected in front of his temple. Such obelisks were always erected in pairs, and were most common and prominent symbols of worship at the east.—Biblical Review.

THE AMERICAN NATURALIST.—CONTENTS.—The use of Agricultural Fertilizers by the American Indians and the Early English Colonists; A Sketch of Comparative Embryology; List of the Birds of the Williamette Valley, Oregon; A Botanist in Southern California; Progress of American Carcinology in 1879; The Structure of the Eye of Trilobites; Recent Literature; General Notes; Zoology; Anthropology; Geology and Palæontology; Geography and Travels; Scientific News; Proceedings of Scientific Societies; Selected Articles in Scientific Serials.

This periodical continues to supply its readers with valuable matter. Many of the articles are calculated to be of interest to persons who are not deeply impressed with scientific research.

We are in receipt of Fashion Magazines as follows:

Domestic Monthly, Butterick's Delineator, Demarest's Monthly, Ehrich's Quarterly.

These, though varied, are all devoted to the particular styles of the season.

VICTOR HUGO'S MARRIAGE.—It was no play-work his student life, rising early and toiling late over prose and verse; poems for prizes, articles for magazines, anything that would "sell," and procure the daily bread. More especially as the youth, still a boy in years (he was scarcely 17), had chosen to engage himself to the daughter of his father's old friend, M. Foucher, who on her side was little more than a child, and could bring him no fortune whatever. The parents protested, Victor persisted, and Mlle. Adele proved faithful, though there seemed at first but small chance of their constancy being rewarded. When he first wished to publish a volume of short poems which had appeared from time to time in one of the periodicals, no publisher could be found to undertake the risk, Abel Hugo, however, generously came forward and paid for its publication; while the bookshops refusing to allow the modest volume so much as a place in their windows, it was exposed for sale through the kindness of a personal friend. The book was entitled "Odes et Poesies Diverses." Fortunately for its author, the first person who happened to buy it was M. Menechat, Reader in Ordinary to Louis XVIII., who brought it under the King's notice. Its success was so rapid as to exhaust the first edition, 1,500 copies, within four months. This, of course, brought him in a certain amount of ready money; not much, one would think, seeing that the publishers reserved to themselves 3 francs out of the 3 francs 50 centimes, which was the price of each volume; still the author's portion served to buy a magnificent cashmere robe for the "*corbeille de noces*," and when, about the same time, he received the first fruits of a pension of 1,000 francs per annum granted him by the King, he felt justified in demanding the hand of Adele, and they were married at St Sulpice in the year 1822, Victor being then 20 and his bride 18 years old.—Temple Bar.

SPECULATOR to old miner in Leadville, handing him a bag of samples, "Gold quartz or carbonates?" The honest miner turned it over in his hand indifferently, took out his knife and picked at it awhile, and then asked: "Got much of it?" "Thousands of tons," answered the other eagerly; "how much do you suppose she'll run?" "Can't tell nothin' without an assay." "But you can guess, can't you? You can guess?" "Oh, yes, anybody kin guess, but a guess is liable to be extravagant. Now, I should say—but mind ye, I may go over the mark—I should s-a-a-y," turning the specimen over again and holding it up to the light—"I should s-a-a-y that if ye can save the gold in this, and catch the silver, and not waste the lead, that it might run about—well, about two dollars to the county."

WHEN M. De Lesseps was getting up his Suez Canal, a gentleman afflicted with Anglophobia called on him and expressed his desire of subscribing for his railroad in the island of Sweden. "It isn't a railroad. It's a canal," said M. De Lesseps. "That makes no difference." "It isn't an island. It's an isthmus." "Put my name down all the same." "But it isn't in Sweden. It's in Suez." "All right. I don't care what or where it is. All I know is, the English don't like it; so I want to help it on." Another enthusiast wrote—"Yield not an inch to perfidious Albion. If necessary, move your isthmus elsewhere. Your shareholders will follow you."

THE MULE PUZZLE.—Draw a circle fifteen feet in diameter, place a mule in the center and walk around him without getting out of the circle.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

AIDS TO DIGESTION.

PROPER kinds of food.
Best methods of cooking.
Variety and change of diet.
Exercise.
Genial state of mind.
Sleep.
Pleasant social surroundings.
Thorough mastication.
Regularity in eating.
Proper intervals between meals.

DON'T FAN FIRE.

IF you should come up stairs some day and see a little smouldering fire just starting in one of your floors, stealing stealthily into the carpet, you would not be very likely to sit down beside it and fan it, much less would you run over to a neighbor's and have her bring the bellows to help blow it up. Not if you were a woman in her right senses. You know quite well what speedy measures you would take to smother or quench it out.

Dear young housekeepers, there are worse fires which start up silently in homes than were ever kindled by Lucifer matches. They begin small. Cross words usually start them, but how the fire spreads when once kindled, if only it gets a little fanning! One sure way to fan the blaze is to run over to a neighbor's and talk your trouble over. Tell just how unreasonable John is, and how little he sympathizes with your trials, and unless your friend is an uncommonly wise woman, you will go home more wretched than you came, and feeling harder than ever toward John. You have gained nothing, but you have furnished food for considerable scandal, for nothing travels faster than the ill news that "so and so don't get along well together." That which was only a transient flash of ill-temper has been blown into a conflagration that is likely to burn up your domestic happiness.

Some one says if there is ever anything for which we are thankful, it is for angry words not spoken. I would add for angry words we did not exhibit before the world. Better keep them locked up in their closet. They will not shock or harrow your sensibilities half so much there.

Only possess your soul in quietness, and the fire will die out. If your inmost consciousness tells you that you have the true and devoted love of your husband you will not be much moved by little things. Tears and life's mutual joys and sorrows will draw all true hearts closer to one another, and the once vexatious things will seem like trifles, as you glance backward over them.

Remember that nothing helps along domestic troubles like talking over them; nothing smothers them like silence. A little patience and self-command and the flash dies down. And, oh! how glad you are that the fair fabric of your home happiness has not been consumed. AUNT LOIS.

NOTE.—"Aunt Lois" is requested to send her address. E. M.

CANE AND GRAPE SUGAR.

PROF. KEDZIE gives us the following valuable bit of domestic information: Cane sugar is two and one-half times as sweet as grape sugar, closely allied to it, and differs so little from it that some persons cannot distinguish it. By cooking, the cane sugar may be changed to grape sugar, and thus lose its sweetening power. Some women put the sugar in with a mass of acid fruit to be cooked, and keep cooking and adding sugar while it keeps on growing sourer, until at last they use two and one-half times as much sugar as they need to secure the desired result. The cane sugar has been changed to grape sugar. Now if the sugar had been added after the fruit was cooked, much less would have been required, and the result would have been far more satisfactory.

FOLDING DOWN SHIRTS, COLLARS, ETC.

WE are in the habit of using corn-starch when folding down our shirts, collars, etc., and think it superior to laundry starch for that purpose. Dissolve a tablespoonful, rounded, —in a quart of water and add as much white sugar as can be taken up between the thumb and first finger. Roll up tightly and let remain several hours before ironing. But to meet with any success with the raw starch, the boiled starch should be of the best quality, properly prepared, and the clothes dried quickly and thoroughly.

DOMESTIC RECIPES.

Warts.

THE expressed juice from the leaves of the common arbor-vitæ will cure warts. Apply each day for three or four weeks.

Meat Cakes.

Take scraps of meat free from bone and gristle and chop fine. Season with salt, pepper, parsley or onion. Take any remnants of dry bread, soak in water until soft, press dry and mix with the meat—about half and half. Add one or two eggs, form into little flat cakes and fry quite crisp. E. A. L.

Green Pea Cakes.

Mash two cups of cooked peas while hot; season with butter, pepper and salt; when cold stir in a beaten egg, a cup of milk and a small cup of sifted flour having a teaspoonful of baking powder mixed with it. Fry as you would griddle cakes. A. L.

The Best Dried Yeast.

One dozen potatoes; three handfuls of hops; five quarts of water. Wash the potatoes clean but do not pare them. Put them on to boil with the hops and water, and boil one and one-half hours. Mash the potatoes well, in with the hops. Put one quart of flour in a crock and pour the mixture boiling-hot through a sieve on the flour. Stir it well, and when milk-warm add one pint of good yeast. When light take two-thirds corn-meal and one-third flour, pour the yeast in, stir it around well, spreading on a table to dry. It never fails, and will keep six months.

Water-Melon Pickle

Take the rinds of a melon; pare the green off very thin and then soak them over night in weak, salt water. In the morning drain and boil in water with a small piece of alum, until tender; then make a sirup of vinegar, sugar, cinnamon bark, cloves, and allspice, and boil a little while in this. Seal while hot. Very nice. MRS. G. MC. F.

To Clean a Toilet Sponge.

Buy five cents' worth of hydrochloric acid and dilute with four or five quarts of water. Put in the sponge, squeezing and working it with the hands until perfectly free from all grease. Afterwards rinse in clear water.

John Boldin's Prize Recipe for Salad.

From six or eight coss (or cabbage) lettuces remove outer and coarse leaves and strip from remaining ones the good part. The pieces should be two and one-half to three inches long and may be broken up, but not cut; then wash them and let them remain about half an hour in water. Rinse in second water, place in napkin and swing till dry. For dressing, take the yelks of two hard-boiled eggs, crush them to paste in bowl, adding one-half tablespoonful French vinegar, three mustard-spoons mustard one salt-spoon salt and beat up well together; then add by degrees, six to eight tablespoons of Lucca or Provence oil, one of vinegar and when thoroughly mixed, a little tarragon finely chopped, a dessert-spoon coarse white pepper, as pepper in powder irritates the palate. When all is well mixed, place the salad in it and turn over and over, thoroughly and patiently, till there remains not one drop of liquid at bottom of bowl. Put the white of the eggs in slices on the top and serve shortly after it is mixed.

Ideal Strawberry Shortcake.

Take one quart of flour; three teaspoonsful baking powder; one pint of milk and one-third cup of shortening (which should be two-thirds butter and one-third lard.) Make the paste as soft as possible for rolling it out. Bake in two layers. When baked, cut off the upper crusts; butter the lower crust of one layer and spread it over with strawberries, which have already been sugared and partly crushed. Upon this place the crust; butter and spread with the berries as before, Another layer of paste, berries and sugar can be used if desired, or make into separate cakes. In the meantime, beat the whites of two eggs to a stiff froth, with a sufficiency of pulverized sugar. Spread this thickly over the top layer of berries; put in the oven and let it bake until the meringue is a delicate brown. Serve with rich sweet cream, or with crushed berries and their juice with sugar. MRS. JOHN E. SWEET.

News of the Week.

MISCELLANEOUS NEWS.

Monday, July 12th, 1880.

An exceedingly interesting experiment is at present taking place at Clarendon Hall, East 13th St., this city. A man named Dr. Tanner is there voluntarily starving himself for the purpose of demonstrating to the world that life is comparatively independent of food, and that he, at least, can live for a much longer period, without partaking of any nourishment whatever, than has hitherto been sanctioned by science. Dr. Tanner hails from Minnesota, and he says he has there at one time fasted forty consecutive days, and he proposes to perform the same feat here. He has already passed through thirteen days of his course of starvation, and he is confident that he can complete the proposed forty days' fast without difficulty. The hall is open to the public and he sleeps and spends his entire time under the public eye. Two doctors of medicine are constantly watching him to make sure that no nourishment of any kind passes to his lips, the watch being changed every six hours. Nobody is permitted to communicate with him without being overheard by his guard, and every article that he needs for comfort undergoes the strictest examination for possibly concealed food, before he is permitted to get it in hands. He spends much of his time in reading, but even a daily newspaper is examined as scrupulously as if it were possible to hide a good-sized ham in its folds.

During the first five days he lost over two pounds of flesh a day, but after that the loss gradually subsided and he is now even gaining perceptibly in weight. At first all visitors to this peculiar exhibition were admitted without charge, but it was soon found necessary to fix upon an entrance fee in order to keep out the numerous loafers by profession who found the hall a very convenient place to spend their time, and now an entrance fee of twenty-five cents is charged. Medical men, according to whose predictions he ought to have died several days ago, are losing faith in their own skill, and many expect him to drop dead at any moment; meanwhile Dr. Tanner continues active, in apparently good health and in full possession of his mental faculties. The interest increases with each passing day, and we shall keep our readers informed upon the subject until the close of the cruel experiment.

About the 22nd ult. Victoria's Apaches attacked Gov. Louis Terrasa's ranch at San Lorenzo, about thirty miles from Chihuahua, killed some men and stole about one hundred horses. They then attacked Ranch De Santa Clara, about sixty miles from Chihuahua, killing some more men and stealing a large number of horses. Gov. Terrasa, with two hundred federal Mexican troops and a large body of volunteers, is in pursuit of the band, the trail leading toward the Sierra Guzman. Gen. Hatch is making active preparations for another campaign upon Victoria's return. Maj. Morrow is ordered to Knight's ranche, and is to scout that section of the territory. Col Buell is ordered to Fort Cummings, and will have a force of nine companies of cavalry and five of infantry, and will scout and guard the frontier from Fort Cummings to the Rio Grande. Detachments are being placed at all exposed points, mining camps and ranches. Two companies of cavalry and five companies of the 13th infantry are now en route to the Navajoe Indian agency, to keep the Navajoes quiet. A force of two companies of cavalry and one of infantry has been stationed at the Mescolvra Indian reservation, and the reservation has been turned over to the military.... The loss caused by the recent breaking of the Sny levee on the Mississippi river, near Quincy, Ill., is placed at $1,000,000. The crevasse at Cincinnati landing is half a mile wide, and there are other breaks. The levee protected a stretch of country 70 miles long and from five to 12 miles wide, and a third of the tract, or fully 200,000 acres of cultivated land, is overflowed.... The census man has struck something interesting away down east in Oldtown, Me. He found and "enumerated" a youth 12 years old, named Joseph H. Fortier. He is the fifth in succession bearing the same name. A further circumstance is that each of the five was the first-born, and all five were born on the first day of April.

Seth Green's attempt to grow salt-water fish in fresh water proves a failure, the shad and alewives put into Lake Ontario dying in such numbers that the stench of their bodies is well-nigh intolerable as they are washed upon the shore. Each fish has a yellow spot with red edges on some part of the body, but it has not been determined whether it is due to a parasite or the freshness of the water....One of the schemes for practical telephoning at long distances has taken shape in the formation at Albany of the Interstate Telephone Company, which is to construct a line from Boston to Washington. The enterprise seems to be in good hands. Ex-Secretary Benjamin H. Bristow is one of the directors, and with him are associated on the board Charles S. Smith, Frederick Kuhne and others....What is called the largest elevator in the world has been finished for the Washington monument. It will carry 10 tons to the hight of 500 feet and, after hoisting the material for finishing the monument will be transformed into a passenger elevator.... St. Louis was so "hopping mad" when the census supervisors retured but 275,090 inhabitants as her quota, that a number of public-spirited citizens subscribed a fund to pay the letter-carriers for finding out just how many had been missed. The carriers have turned in 24,900 names overlooked altogether, and, while this leaves the Mound City 100,000 behind rival Chicago, they conceal their chagrin under a bitter attack on the careless enumerating which skips one name in every 15.... The locomotives used on the railroads of the United States are doing the work of over 29,000,000 horses, while the census of 1870 aggregates horses of all ages at less than 9,000,000....Two thousand eight hundred and ninety-seven vessels, 1,075 steamers and 1,822 sailing vessels, cleared from New York for Europe during 1879 carrying 102,318,568 bushels of grain.....A pretty story comes from Nantasket Beach. Miss Hall, a young lady of Boston, quarreled with her lover one day last week, and to spite him went on a fishing excursion with a party of young folks, the lover being excluded. A little way from the shore the boat capsized, and Miss Hall was dumped into the sea. The young man swam promptly to the rescue, and, though Miss Hall would have been saved anyhow, her lover got the credit of saving her life.... The American Institute of Instruction was in session at Saratoga, N. Y., last week. Wednesday evening Rev. George R. Ellis read the paper prepared by Rev. Dr. Barnas Sears on educational progress in the United States during the last 50 years. During this period the school system of New England has spread over all the Western States and in the last 10 years has made good progress South....Turkey and Greece seem to be preparing for war, Turkey declining to accept the decision of the late German conference. In Greece the enlistment of volunteers, principally Epirotes and Thessalians, is proceeding rapidly. Troops are concentrating on the eastern and western frontiers, in consequence of the concentration of Turkish troops and also to prevent brigand inroads.

AGRICULTURAL NEWS.

THE seventeen-year locusts have appeared in countless numbers in western Pennsylvania and West Virginia, and the air is filled with their peculiar noises. They do but little damage to vegetation, the principal injury being the stinging of the ends of the branches of oaks and chestnuts, which kill the extremities thus punctured..... As many as 15,000 horses and mules are said to be employed at Leadville, Colorado, hauling supplies and doing other work. It is estimated that these animals consume 3,000,000 pounds of grain and hay per annum, or the product of 37,400 acres, being a much greater extent of land than the State sowed last year.....As passed by Congress, the agricultural appropriation bill devotes $7,500 for experiments in the manufacture of sugar from sorghum and cornstalks, and now provides for an additional chemist and proper appliances..... There are now 80,000 head of cattle and 8,000,000 sheep on the hills and plains of California—a respectable increase since 1796, when the Spaniards there began the business of stock breeding..... In 1876, Russia made her first exportation of sugar, but now has half a million of acres under sugar beets, and sends 65,000 tons of sugar, from her 300 factories, across the frontiers.....In Oregon this year the seasons are luke warm and cold. Peach trees as far south as Portland were nearly all killed by the severity of the Winter, and the delicate species of grapes so successful in California, fail entirely in Oregon. Wheat raising and salmon fishing are their productive industries..... A cablegram from London on the 9th says that grain crops have been almost ruined by immense swarms of insects in several parts of Russia, and and that the harvest in many parts of Germany will be considerably poorer than was confidently anticipated a short time ago..... A Pesth dispatch of July 7, says: "The harvest has begun and promises fairly."..... A dispatch from Dublin of the same date, says: "The weather all over Ireland up to the present has been most favorable. It is expected that the potato crop will be enormous. It promises to exceed anything seen in Ireland since the period anterior to the famine of 1847. Root and cereal crops are also luxuriant."..... According to a cablegram of July 8th, the reports from different provinces of the Prussian monarchy on the harvest prospects prove that the alarm which arose after the cold days of May, was in a great measure justified. The corn harvest will be very small in all the northern districts, and it is reckoned that only 50 per cent of the ordinary harvest will be got in. Reports from Russia, Hungary, and Galicia also announce that a great deficit is expected..... In response to a letter of inquiry as to the proper construction of the act passed by the last Congress amending the Internal Revenue laws so as to exempt certain dealers in leaf tobacco from the the $25 license tax, the Commissioner of Internal Revenue on June 18 made the following decision: *First*—In regard to the amount of leaf tobacco branded by such dealers, their sales and consignments cannot exceed 25,000 pounds in any one special tax year. *Second*—This class of dealers can only purchase or receive leaf tobacco in the hand. *Third*—Dealers under this $5 special tax can only sell or [illegible] for sale, or consign for sale on commission, such leaf tobacco as they purchase or receive directly from farmers or planters who have produced the same on land owned, rented or leased by them, or received as rent from tenants, etc. Dealers in leaf tobacco who purchase or receive tobacco from persons other than farmers or planters who produced it themselves, or received it as rent from their tenants who produced it; that is to say, all persons who purchase or receive leaf tobacco which has passed from the possession of the producer, or his landlord, into the possession of other parties, and sell, or offer it for sale, or consign it for sale on commission, are liable to pay the special tax of $25, irrespective of the amount of their sales or shipments in any one special tax year.....There has been a considerable disturbance at St. Paul lately among grain dealers and others about rumors of the prospective failure of the wheat crop in Minnesota. The worst reports came from the southeastern portion of the State, where rust, blight and chinch bugs are said to be ruining the crop. Reports from other parts of the State are less gloomy, but along the St. Paul, Minneapolis and Manitoba railroad it is claimed that it has suffered greatly from excessive rain and hail storms. Telegraphic inquiries made through the State show that these reports are greatly exaggerated. The wheat crop in the southeastern part of the State, on old lands and near the river, has suffered greatly from wet weather and floods. The warm weather following rain has induced rust. Wheat, though not yet dangerously injured, will become so unless checked by cool, drying days this month. On some of the low lands near the river, something like blight appears to have attacked the stalk. Several counties are suffering severely from chinch bugs. As the result of all these causes, it is estimated that the crop in Olmstead, Winona, Wabash, and Houston, all heavy wheat-growing counties, will fall from 20 to 35 per cent. below the average. In the southwestern and central frontier counties the outlook is much better, while the reports of damage in the north and Red River Valley are thought to be without foundation. There the weather has been favorable since the storms ceased, and the prospect for a crop of good quality is excellent. The serious damage is confined to the southeast..... The Mark Lane Express of July 5, in its review of the British grain trade the past week, says: The weather has been fairly seasonable, and crops have made further steady progress, though advices relative to oats are somewhat variable. The supply of English wheat is very small, but difficult to sell, though holders willingly offered concessions of one and sometimes two shillings per quarter. Imports of foreign wheat fair, but not excessive. Though granary stocks are reduced to almost an unprecedented point, yet as long as the arrivals suffice to meet the immediate wants of buyers, they can afford to disregard the present moderate extent of arrivals in the confident anticipation of a future abundance, to which everything seems to point. A large Continental demand has hitherto been the chief influence in favor of sellers; but, as the French harvest is now almost due, Continental needs must shortly cease to affect the situation. In short, the weather, despite some rain, has been too fine for the trade. Wheat declined one shilling to two shillings in the week. Even Russian has fallen, despite the extreme scarcity. Business of all descriptions very limited.

COTTON IN 1880.—The following table of the prospective cotton crop of 1880, is taken from the New York Financial Chronicle

States.	Actual Acreage. 1879.	—Estimated, 1880.— Increase.	Acres, '80.
North Carolina	624,089	8 per cent.	674,016
South Carolina	986,370	11 per cent.	1,095,760
Georgia	1,744,048	10 per cent.	1,918,452
Florida	222,705	3 per cent.	229,396
Alabama	2,122,422	8 per cent.	2,292,216
Mississippi	2,117,101	3 per cent.	2,180,614
Louisiana	1,295,250	4 per cent.	1,336,660
Texas	1,684,631	17 per cent.	1,971,018
Arkansas	1,132,886	16 per cent.	1,314,147
Tennessee	761,460	15 per cent.	875,679
Total	12,679,962	9.51 per ct.	13,885,947

There are three or four other estimates, such as that by the Agricultural Department, and that by the Cotton Exchanges of the South, all of which differ a trifle in the estimate of the yield and area under the crop; but all agree that it will probably be an exceptionally large one.

False Reasoning.

Suppose a machine should fail to perform its work, and the owner, instead of trying to ascertain the cause of failure and remedy it, should conclude to run right along, and argue that as the machine had heretofore come around all right it would soon be so again, if a general and permanent break-down ensued could anybody be blamed but himself? Now, precisely in this way do people act and argue when the "human machine" is out of order. When the liver is "torpid" and bowels constipated every one knows that Dr. Pierce's Pleasant Purgative Pellets afford prompt and permanent relief. Yet some *guess* the "machine" will come around all right, and do nothing. Could any system of false reasoning be more pernicious? Suppose the blood be out of order and there be pimples, ulcers or running sores with scrofulous tumors, swellings and general debility, and those thus affected should refuse to use Dr. Pierce's Golden Medical Discovery, *guessing* that the blood would purify itself, could anybody be blamed but themselves, if a general and permanent break-down of health ensued? No remedy yet known equals the Discovery in curing all scrofulous, throat, bronchial and lung diseases. Sold by druggists.

The Universal Verdict.

The Youths' Companion, one of the most conservative papers published, says of the Robbins's Family Washer and Bleacher:

"This washer is very simple in construction, yet it is the *best* we have ever known. We speak from *experience*, when we say this. It is truly the woman's friend, for with it the hard work of washing almost disappears. Every housekeeper knows that ordinary modes of washing are apt to wear the clothing. With the Robins's Washer there is absolutely no wear at all, even to the most delicate lace fabric. We have known of this washer for several years, but we had no idea that it was such a prize until we were induced to give it a trial, and now with us it has taken its place as a household necessity."

It is manufactured and sold by the BISSELL M'F'G Co., 50 Barclay Street, New York.

THE AMERICAN BOOK EXCHANGE.—This house, which is advertising standard and valuable books so largely, at such marvelously low prices, reports a remarkably lively business for the season of the year, a season when people are not supposed to read much "solid" literature, and booksellers "go fishing" because they have no customers. Not a day passes that they do not receive telegraphic orders. The little three-cent books are going at the rate of nearly 100,000 a week. The "Library of Universal Knowledge" has already reached a sale of nearly half a million volumes.

Kidney-Wort is a remedy which removes foul humors from the blood, and creates healthy action in every organ. Sold by all druggists.

Torpid kidneys and liver lead to gravel, diabetes, constipation, piles and rheumatism. Kidney-Wort is the surest and safest remedy to use.

Write to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for names of ladies that have been restored to perfect health by the use of her VEGETABLE COMPOUND. It is a positive cure for the most stubborn cases of female weakness.

Ex-President Martin Van Buren was made comfortable by the use of Jonas Whitcomb's Asthma Remedy.

The Markets.

SPECIALS FROM ALL CENTERS.

Until Saturday, July 10.

Butter, Cheese and Eggs.

Baltimore.—BUTTER.—The current demand from the trade keeps the stock down to the limit of the daily receipts, and the market is firm at previous figures. We quote New York Creamery at 22@23 cents, New York State new at 18@21 cents, Western new at 15@16 cents for choice, and 12@14 cents for good to prime, and near-by stock at 11@15 cents per lb for good to choice. CHEESE.—The demand has improved, principally for export, and the market has recovered from the late depression. Prices are higher, especially for the better grades. We quote New York State 10@10½ cents for choice and 9@9½ cents for good to prime, and Western Factory at 8@8½ cents for choice, and 7@7½ cents for good to prime, and 5@6 cents for fair to good. EGGS.—The supply is good and the market is quiet but rather more steady. We quote strictly fresh at 11 cents per dozen and 12 cents for near-by. State stock is dull and nominal.

Boston.—BUTTER.—The market is a little stronger than last week, and the fact that prices have improved in New York, and that butter costs more in the interior, has rather stiffened prices of fine grades here. NORTHERN—Choice creamery, 21@23c ₩ lb; choice New York dairy, 20@21; choice Vermont, 21@22c; fair to good, 16@17c; common, 13@15c. WESTERN—Choice creameries, 22@23c ₩ lb; fair to good, 19@20c; choice dairy-packed, 17@19c; choice ladle-packed, 15@16c, common, 13@15c. CHEESE.—The market is somewhat unsettled, and prices have now reached a figure where buyers are afraid to take hold very sharply. The receipts of last week were all cleaned up, and there is hardly an established price to-day. The sharp advance since last week, however, seems to have had its edge taken off, and prices promise to be easier. Fine factory, N. Y. and Vt., 8½@9c ₩ lb; fine factory, Ohio and West, 8@8½c; fair to good, 6@7c; skims, 3@5c. EGGS.—There has been a pretty firm market since Monday, and prices are a little better. Eastern, 13½@14c ₩ doz.; New York State, 13½@14c; Canadian, 13@13½c; P. E. Island, 13@13½c; Western, 11@12½c; egg oats, 38@42c.

Chicago.—BUTTER was in very good demand, and prices were sustained at the following range, Creamery, 19@21c.; good to choice dairy, 14@17c.; packing stock, 10@11½c.; grease, 5@8c. CHEESE.—Stocks at this point and throughout the West are particularly light, and the market is showing a strong upward tendency. Liverpool was quoted at 65s. on yesterday, which is 1s. advance since Saturday last. We quote good to prime full cream cheddars at 8@9c. ₩ lb; prime part skimmed do. at 7@8c.; flat skimmed at 5@6c.; and hard skimmed and sour stock at 3@4c. EGGS were slow at 6½@10c. per doz. The supply continues liberal, and the packages generally have to be repacked after they arrive.

Cincinnati.—BUTTER—Packers buy any apparent surplus, and have paid and are still paying ½@1c. ₩ lb more than last week. The bulk of the sales are at 13@15c., but selections bring 1@2c. more, and packing grades 11@12½c. The quality of much of the Creamery is not first-class, and a large part of the current supply sells at 20@21c., but 22c. is the price for that perfect in flavor and condition. As a whole, the market is stronger than a week ago, and there is no accumulation of stock in receivers' hands. Fancy Creamery sells at 21@22c., and prime at 19@20c.; choice Western Reserve and Dairy at 15@17c; prime Central Ohio at 13@14c., and common at 10@12½c. ₩ lb. CHEESE—There was a further decline since our last weekly review of ½c ₩ lb. with sales of prime to choice factory at 7@7½c. ₩ lb, but an advance in New York has caused prices to rally, and it is held at 7½@8c. ₩ lb at the close. EGGS—Have been in ample supply and have not varied much, but the market closes slow and easy at 9@9½c. per dozen loss off.

Philadelphia.—BUTTER of fine quality continued scarce and in good demand at full and improving prices, and there was enough doing in medium to good grades on home account to prevent accumulations. Hence the whole market was in good shape and favored sellers. There were no choice rolls here. Prints were active and firmer. We quote creamery extras at 23@24c. in lines, and 25c. in a comparatively small way: do. good to choice, 21@22c; imitation creamery, 15@18c., as to quality. Bradford tubs, extras, 21@22c; York State tubs, extras, 21@22c; fair to good, 17@19c; Western dairy fancy, 18@19c—little of this kind here; do fair to good at 12@16c factory packed, 13@15c as to quality; common grades 8@9c; Rolls, 9@12c. Prints, fancy at 20@23c. do. firsts at 25@28c. do seconds at 15@22c. EGGS.—The market held firm under a steady inquiry and continued small supply of choice stock. We quote inferior Western at 10@13c. as to condition; fresh do. at 14c, and Pennsylvania, New Jersey, Delaware and other near-by fresh brands at 15c. CHEESE was firmly held under a fair inquiry and light supplies, but the market has apparently reached the top for the present, and freer receipts and offerings will probably weaken values. We quote New York factory choice at 10c do. fair to good 8@9c; do half skims 7@7½c. Ohio flat fine 8@8½c; do fair to good, 6½@7½c. skims, 3@5c, as to quality.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, July 10, 1880.

BEANS AND PEAS.—The detrimental effect of hot weather upon stock has made prime quality of standard beans very firm. Under grades plenty and weak. Trade moderate throughout. Green peas quiet at $1.60. Prime Northern B. E. higher: $2 per 2 bush. bag. Many parcels begin to show bugs.

Marrow beans, prime, $1.52½@1.55; other, $1.41@1.50; medium, prime $1.32½@1.35; other, $1.25@1.30; pea, $1.45@1.60; white kidney, $1.85@1.85; red kidney, $1.25@1.40; black (or turtle soup), $2.20@2.25; Cal. Lima, $5.00.

Receipts of beans per week, 964 bush.; exports, 311 pkgs.

LEATHER.—Quotations are: for hemlock sole, 22½@23½c. for light; 22½@25c. for middle; 22½@24c. for heavy, and 20½@22c. for good damaged.

BEESWAX.—There is little doing with prices steady; Western and Southern quoted 22½@24c.

BROOM CORN.—Trade is slack and prices steady. Brush and short broom, choice, per lb., 7@8c.; common to good, 5@6½c.; hurl, good to choice, 7@8c.; do., common to fair, 5½@6½c.; red and crooked at 3@4c.

BUTTER.—The market is fairly steady. Fine State creamery is not plenty and holders of perfect lots can obtain a cent more than last week. Western cream

ery goes mainly to exporters. State pails and tubs run irregular in quality and as sellers retain very nearly late prices a good deal of the average local trade has turned to Western. Supplies from nearby dairies are very small owing to shortened pasture, and any surplus milk can find a ready city market in its fluid state. Export trade only fair, 8,100 pkgs. for the week. Receipts, 34,500 do.

Creamery, best State, do., Western, good to prime, fair to good, sweet cream, 19@21½c.; State factory, yellow choice, 21c; fair to prime, 18@20c.; pails and hf. tubs, choice, 20@21c.; good to prime, 19@ 0c.; fair to good, 18@19 .; poor, 15@17c.; Welsh tubs, prime, 19@20c.; other, 15@18c.; Western imitation creamery, 13@17c.; dairy, fresh, 16@17c.; fair to prime, to 14@16c.; poor, 13c.; factory, prime, 15c.; other, 11@14c.

CHEESE.—The market has reacted from the sharp advance of the previous week and closed dull and unsettled, with some little stock to be carried over. Exports for the week are 95,000 boxes.

Quotations are: State factory, fancy, 9c.; do. good to prime, 8¾@8¾c.; do. fair to good, 8@8¼c.; do. half skimmed, 5¾@6c.; Wisconsin factory, fine, at 8¼c.; do. good to prime, 7½@8c.; do. fair to good, 6½@7c.; Ohio factory, fine, 8@8¼c.; do. good to prime, 7@7¼c.; do. flat, fair to good, 6¼@7c.; do. poor to fair 5¾@6¼c.

Receipts for week, 110,800 boxes.
Exports, 84,000 do.
Liverpool cable, 61s.
Steam, 40s.

COTTON.—Has and active trade and prices closed strong. Latest prices are for July, 11.75@11.76c.; August, 11.03@11.03c.; September, 11.16c.; October, 10.56c.; November, 10.30@10.32c.; December, 10.31@10.32c.; January, 10.33@10.70.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8¼	8½	8¼
Strict ordinary	9	9¼	9⅛
Good ordinary	10	10⅛	10⅛
Strict good do.	10⅛	10⅝	10⅝
Low middling	11⅛	11⅜	11⅜
Strict low middling	11⅝	11⅞	11⅞
Middling	11¾	12	12
Good middling	12⅜	12¼	12¼
Strict good middling	12⅝	12⅞	12⅞
Middling Fair	13⅛	13¼	13¼
Fair	13¼	13⅜	13⅜

STAINED.

Good ordinary	8¼	Low middling	9⅝
Strict good ordinary	9	Middling	9 11-16

DRIED FRUITS.—The general trade is slack and prices are nominal. Quotations are for

For North Carolina apples, fair to good, at 6½@7¼c.; choice, at 8@8¾c.; New York State quarters at 7¾@7¾c.; patent evaporated, in cases, choice at 14@14½c.; good and prime 13½@14c.; evaporated, sliced at ——c. Evaporated peeled peaches, good to choice, at 2@2½c.; North Carolina peeled choice 16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c.; common at 10@12c.; unpeeled halves at ——c.; do. quarters at 6@6½c. Pitted cherries at 15@16c. Blackberries nominal. Raspberries at 28c. Plums at 17@17½c.

EGGS.—Receipts for week, 5,327 bbls.; do last week, 7,600 do. Prices have worked up under the continued small receipts. Business is steady and all stock is running down in quantity. Losses very large in count as the season has been exceptionally severe.

Near Points 16@17c.; State and Penn. 14½@15c. Western and Canadian fresh 13½c.; good, or ice house lots 12½@13c.

FLOUR.—The market has been advancing in sympathy with wheat, which has been affected by the unfavorable weather reports.

Latest prices are $3.40@4.15 for inferior to fancy superfine State and Western; $4.15@4.40 for ordinary to very good extra State, odd lots and lines; $4.40@4.75 for very good to fancy do.; $4.15@4.40 for ordinary to very good shipping extra Western, and $4.40@4.75 for good to fancy shipping extra do.; inferior to very good white wheat ——, $5.10@5.65; very good to very choice do. at $5.65@6.75; red and amber winter wheat, inferior to choice trade and family, at $4.90@5.25; round hoop Ohio, $4.35@4.85; and trade and family brands of do. at $4.90@6.25; St. Louis at $5.00@5.75 for inferior to good extra; $5.75@6.75 for good to very choice; Minnesota clear, very inferior to fancy, at $4.25@6.25; Minnesota "straight," very poor to very fancy, at $5.65@7.25, and patent inferior to fancy at $6.00@8.50; unsound stock at from $2.25@5.00; city mill extra at $5.00@6.75 for good to choice West Indies; do. for England, $4.25@4.65 for poor to very choice spring wheat, and $5.15@5.65 for winter wheat product; do. trade and family extras, $5.00@6.75; do. for south America, $5.75@6.00; No. 2 at $2.40@3.45 for poor to very fancy, the latter an extreme.

Receipts for week, flour, bbls. 67,819; corn meal, do. 570, wheat, bush. 1,913,100; corn, do. 1,638,200, oats, do. 197,950; rye, do. 10,000; malt, do. 116,775; rice, pkgs. 1,019.

Exports, flour 83,560 bbls.; corn meal, 2,800 bbls.; wheat 1,696,300 bush.; corn, 1,252,700 bush.; oats, 3,600 bush.; rye —— bush.; malt —— bush.; peas 1,460 bush.; rice 1,200 pkgs.

FRESH FRUITS.—There is now quite an array of orchard and bush produce and prices as a rule are good. Peaches are much of a feature already. Although this is an off year, advices from the main farms indicate a full yield. Operations for canning and preserving are said to be upon a larger scale than ever before. Georgia sends some of the showiest fruit ever seen in this market. The heaviest lots are Hines. The trade wants a better early peach than these. The Beatrice hardly fills the bill. A ventured opinion is that the far South will ultimately supply the growing New York want. Apples are in good demand with better size and quality. Pears not largely wanted; some good Southern specimens here. It is a good year for blackberries. Black caps not popular, when red raspberries are accessible.

Apples Sweet Rough ₱ bbl. $2.25@2.50; Sour $2.25@2.50; Md. Astrachan, per cr. $1@1.50; green 75c.@$1.25; Norfk, green ₱ bbl. $2@2.50; do. ₱ ½ bbl. 75c.@1.25. Peaches, Md. & Del. rivers, choice, ₱ cr. $3@3.50; Hale's & Beatrice, ice ₱ cr. $1@1.50; ₱ basket, 75c.@$1.20; N. C. prime ₱ bu. cr. $2.50@3; do. poor to good ₱ cr. $1@2; Ga. fancy ₱ 3 bu. cr. $2; common, ₱ 3 to bu. cr. $1@1.25. Pears, Clapp's Favorite, Southern, ₱ cr. $4@4.50, Virginia Southern $3.50@4; Manning's Elizabeth, Southern $3.50@4; Jargonelle, Southern, $3@3.50; Harvest, Jersey, ₱ bbl. $2@2.75 cooking, $2@2.50. Plums, Wilding, Md. & Del. ₱ qt. 1@1c.. Beach ₱ qt. 6@8c. Blackberries Lawton Jersey ₱ qt. 2@3c., Wilson, Md. & Del. 8@10c., Dorchester, 6@8c. Raspberries Red Antwerp up-river, 3-to-qt. cups 6@7c.; native up-river, 3@3½c.; Jersey 3@3½c.; Brandywine up-river 4@5c. Md. & Del. ₱ pint 6@7c. Black caps Jersey ₱ pint 3c. Whortleberries Shawangunk Mountain ₱ ½ bu. box $1.25@1.50; Jersey ₱ ½ bu. box $1@1.25; Md. & Del. ₱ qt. 6@8c. Currants cherry, ₱ lb 5@6c.; small ₱ lb 4@5c. black, 5@6c. white 4½@5c. Watermelons N. C. ₱ 100 $15@30; Ga., $25@40. Nutmeg melons, Norfolk ₱ bbl. $3.50@4.50. Hot-house grapes Black Hamburgh ₱ lb. 50@75c.; Sweet Water 25@35c. Peanuts continue quiet and unchanged. No hickory nuts offering; the last sale was at $1.10 for prime quality. Peanuts, Va. hand-picked, ₱ lb. 5½@5¾c.; extra prime 4¾@5c.; good to prime 4¼@4¾c.; shelled, 5½@5¾c.

GRAIN.—Wheat has shown a good deal of excitement and advancing prices through unfavorable crop reports and an active trade.

Latest sales are of No. 1 white at $1.17@1.18; do., July, at $1.15½@1.16; do., August, at $1.09¾@1.10¾; do., September, at $1.08¾@1.08¾; No. 2 white at $1.14½@1.15½; ungraded white at $1.10@1.18; No. 2 red at $1.23½@1.23; do., July, at $1.17@1.19¾; do. August, at $1.11½@1.12¾; do., September, at $1.10¾@1.11¾; ungraded red at $1.12@1.23; mixed Winter at $1.16½@1.18; No. 2 amber at $1.23@1.24; No. 2 Duluth, Milwaukee and hard spring, $1.13@1.14. Rye is firm at 75½@80c. for Western for August delivery. Corn is freely offered and is lower; latest sales are of New York No. 2, regular inspection, at 49@49½c.; do., July, at 48@49¼c.; do., August, at 49@49½c.; New York steamer mixed at 48c.; ungraded mixed Western at 47@50c.; No. 2 white at 53c. Oats are active; latest sales are of No. 1 white at 43c.; No. 2 white at 38¾@39c.; No. 3 white at 35¾c.; New York No. 1 at 36¾c.; New York No. 2 at 35@35½c.; do., July, at 35¾c. bid and 36¾c. asked; do., August, at 33¾c. bid and 33¾c. asked; No. 3 at 34@34½c.; ungraded white Western at 37@42c.; ungraded mixed Western at 35@37c.; white State at 40c.; mixed State at 35@36¾c.; No. 2 Chicago at 36¼c.

HAY AND STRAW.—There is a steady fair call for supplies and prices well maintained.

Shipping hay quoted at 75@80c.; retail lots at 85@90c. for medium, and 95c.@$1.10 for prime and fancy qualities; clover 65@70c. Straw at $1.05@1.10 for long rye, 60@65c. for short rye, and 55@60c. for oats.

Exports for week, 3,275 bales.

HOPS.—There is a slow market and prices unsettled and favoring buyers. Quotations are for

	Cents per lb.
New York, new crop, prime and choice	32 @35
New York, new crop, medium	30 @32
New York, new crop, low to fair	27 @29
Eastern, new crop	27 @35
Wisconsin, new crop	27 @35
Yearling	7 @18
Olds, all growths	4 @10
Pacific Coast, new	30 @35
Pacific Coast, olds (nominal)	5 @10

OIL CAKE.—Western is quoted at $32.50 per ton.

POULTRY AND GAME.—Dressed poultry has a good, steady demand and prices are strong with the present rates of receipts of prime. Western could be spared; it turns out poorly on arrival and is slow of sale.

Turkeys, choice, small, on ice, 12@13c.; fair to good, 10@12c.; Phila., dry-picked, 12@13c.; chickens, Spring, Phila., large, ₱ lb, 23@25c.; small, 22@23c.; scalded, 17@20c.; Fowls, Phila., dry-picked, 16c.; Jersey, good to prime, 14@15c.; State, dry-picked, prime, 14@15c.; State, scalded, prime, 13@14c.; Western, dry-picked, prime, 14c.; scalded, prime, 13c.; poor to fair, 10@12c; ducks, spring, dry-picked, large, 19@20c.; dry-picked, small, 17@18c.; State, scalded, 15@16c.; Phila., old dry-picked, 10@12c.; squabs, white, per doz.; $2@2.25; dark, $1@1.12.

Chickens are plenty and only good sizes show any firmness to prices. Prime fowls have a steady call from city killers. Tennessee poultry is in light supply this season, owing, dealers say, to the State tax upon collectors of coops and other small farm produce.

Chickens, Spring, large, ₱ lb., 18@19c.; small, 17@18c.; fowls, Jersey, 14c.; Western, 13½@14c.; Southern, 13@13½c.; roosters, old and young, 5@7c.; turkeys, mixed, Jersey, 11@12c.; Western, 10@11c.; ducks, N. J., N. Y. and Pa., ₱ pair, 60@70c.; Western, 45@55c.; Southern, 40@45c.; geese, Jersey, $1.50@1.75; N. Y. and Pa., $1.25@1.50; Western, mixed, $1@1.25; Southern, 87c.@$1.12; pigeons, 20@35c.

The market is almost bare of game. Woodcock not openly saleable until Aug. 1st, and shipments of Western are attended with risk. Eng. snipe, frozen, $2.50; stall-fed pigeons, $1.50@1.75; flight, 80c.@$1.

PROVISIONS—Have shown a liberal speculative trading and prices advancing, closing, however, weak. Latest prices are $12.55 for July, $12.20@12.35 for August, $12.50@12.90 for September, $13@13.05 for October, and $11.40 for sellers' option remainder of year. Bacon at 7¼c. for long clear and 7¾c. for short clear. Lard—Western steam at 7.20c. for spot lots, 7.15c. for July, 7.20c. for August and 7.27½c. for September. Stearine at 9¼@9¾c. for Western. Tallow at 6 3-16@6¾c. for prime. Beef—Extra India mess quoted at $17 for city; $10 for extra mess, and $9.50 for plain mess, $10.50@11 for packet, and $— for family mess. Beef hams at $21@21.50 for new.

Receipts for week, beef, 575 pkgs.; pork, 2,550 bbls.; cut meats, 28,100 pkgs.; lard, 19 200 pkgs.

Exports for week, beef, 1,945 pkgs.; pork, 5,900 bbls.; cut meats, 11,428,500 pounds; lard, 4,918,400 pounds.

TOBACCO.—The market has not varied for two or three weeks, with trade ruling very quiet.

VEGETABLES.—Old potatoes are dropped from the list. Some of the best remnants were taken for Havana at cheap prices. New are plenty; Norfolk now seldom compare with L. I. and N. J. The range is $1.50@3 for Va. and Md.; $2.35@3 for L. I. and N. J. Southern culls, 75c.@$1. Corn better. Tomatoes and a higher class of green stuff give the market for garden produce considerable life. Western onions will soon arrive and present rates will then drop. New York tomatoes run poor, hardly wanted.

Green corn, Hackensack, per 100, $1.@1.25; Burlington, 50@75c.; tomatoes, Norfolk, per cr., 75c.@$1.50; Maryland, per crate, $3@3.50; L. I. and Jersey, per bush., $4; cucumbers, L. I., ₱ 100, $1.50; cucumbers, Norf., ₱ bbl., $2@2.75; egg plant, Florida, prime, ₱ doz., $1@1.50; string beans, L. I. ₱ bag, $1.75@2.50; wax beans, L. I., $1.75@2.50; green peas, L. I., $2@2.50; turnips, Jersey, per 100 bunches, $3@4; Russia, ₱ bbl., $1.75; beets Jersey, per 100 bunches, $2.50@3; radishes, red, per 100 bunches, 50@75c.; black, $1.00@1.50; lettuce, ₱ bbl., $2@3; cabbage, Jersey, ₱ 100, $6; squash, Jersey, marrow, per bbl., $2@2.50; L. I., yellow, $2@2.25; L. I., white, $2@2.25; onions, Jersey, $5; Maryland, yellow, $5; Va., yellow, $4@5; carrots, ₱ 100 bunches, $1.50@2.

WOOL.—Trade has been very moderate, and prices have ruled a little unsettled, closing steady. Quotations are for:

Ohio, Pennsylvania and West Virginia washed fleece, XXX and picklock, 48@50c.; X and XX, 44@47c.; No. 1, 48@50c.; No. 2, 44@46; common, 40@42c.

N. Y. State, Michigan, Wisconsin and Indiana washed fleece—X and above, 42@44c.; No. 1, 46@48c.; No. 2, 42@44c.; common, 38@40c.

Illinois, Iowa and Missouri washed fleece, X and above, 40@42c.; No. 1, 44@46; No. 2 and common, 38@42c. Tub washed—superior, 48@50c.; average, 44@46c. Combing wool—Medium, washed, 50@53c.; medium, low, 45@47c.; Canada, 45@47c.; Kentucky, unwashed, 33@36c.

LIVE STOCK MARKETS

NEW YORK, Saturday, July 10, 1880.

BEEVES.—Receipts for week 11,825 head; do last week 15,684 do. Moderate receipts and fine quality have kept up a good movement during the week and though the closing droves did not run so well in quality the supply was quite sold up. Texan grassers sold at 5c., to dress 55 lbs.; Ohio and State grass cattle sold at 8¼@8¾c., to dress 55 lbs. A large portion of the sales were at 8@9¼c. for native steers, to dress 56 lb. Extra cattle sold in a few instances at 10@10¼c., to dress 57 lbs.

SWINE.—Receipts for week, 21,016 head; do last week 24,469 do. Stock still goes to packers; nominal rates $4.50@5 ₱ 100 lbs.; city dressed on change 6¼@6½c.

COWS AND CALVES.—Comparatively few head have arrived this week and prices for extra good milkers are firm. These are quoted $60@65 ₱ head; common to good $25@55, about old figures.

SHEEP AND LAMBS.—Receipts for week, 31,537 head; do last week 34,895 do. There was a fair demand for sheep and the offerings were about closed out at Thursday's prices; the feeling, however, was weak at the close and future prospects are not very flattering. Lambs were sold at about steady prices at Jersey City, but were ½c. lower than last Wednesday at 60th st. Sales of sheep were at 4@5¾c. of Southern and Western lambs at 5¾@6¾c.; of State and Jersey at 6¾@7½c.; and of Canada at $6.20@6.50.

VEAL CALVES.—Supplies seem to be limited and the market is strong for regular N. J. and some well-fed State.

Live calves, N. J. and Bucks Co., choice, 6¾c.; prime 5¾@6¼c.; State choice, 6@6¾c.; State, prime, 5¾@6c.; do., fair to good, 4½@5½c.; poor, 3½@4¼c.; Mt. Holly, good to prime, 5¾@6c.; buttermilk, 2½@3c.

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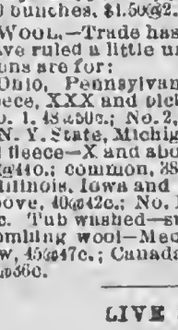

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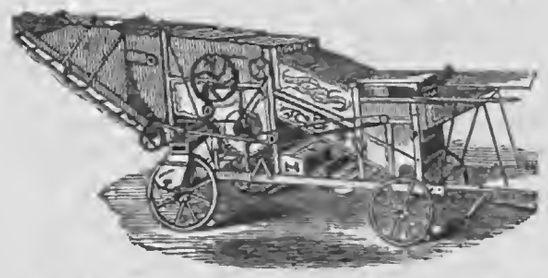

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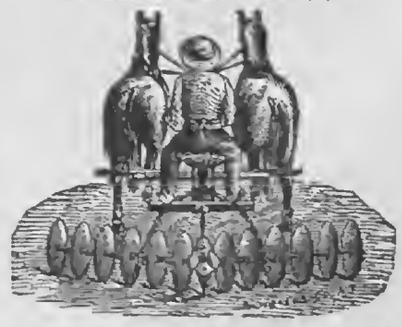

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TALK ON BOTANY.—NO. 4.

UNCLE MARK.

The Stem.

IN the preceding talks we have dwelt exclusively on the root, its forms and its mode of development, we will now advance a step farther and examine the stem of the plant, and try to understand some of the interesting features characteristic of its development. By way of review I will again call your attention to a few of the most prominent points in regard to roots. First, the office of the root is twofold, namely, to fix the plant to the earth or other supporting medium, and also to absorb nourishment for the plant. The absorption of plant food takes place through the little root-hairs, or fibrils, that form on the young and tender rootlets. These fibrils are generally too fine to be seen with the naked eye, but they can be distinctly seen under a lens of moderate magnifying power. They consist of closed cells with very thin walls through which the food is imbibed, and all plant food must therefore be in a liquid state; it cannot enter the plant in solid particles, no matter how small these may be. Remember also the mode of growth of the root. It lengthens by the addition of cell tissue at the tip, so that any portion of it once fixed in the ground is not again pushed out of position by growth.

The stem is the ascending axis of the plant. In a former lesson we learned that the seed-leaves or *cotyledons*, are already formed in the seed, and that when the embryo bursts the seed-coats, and stretches itself into the air and sunlight the cotyledons often become green and partake of the nature of true leaves. Snugly hidden away between this first pair of leaves is a little bud called the *plumule* and it is from this bud that the future stem of the plant is developed.

Unlike the root which only grows at the tip, the little primary stem lengthens throughout its whole length and usually lifts the cotyledons above the surface of the earth. When the growth of this little stem bearing the seed-leaves is completed the plumule begins to grow forming another piece of stem crowned with one or two leaves. When this piece of stem is developed the bud in the joint of the last new leaf starts upward forming another piece of stem and another leaf, and so on as long as the tree continues to grow. As soon as true leaves are formed the young plant has all the organs necessary to growth that are found in a full grown tree. It has roots, leaves and stem, and the power to draw the needful materials for its growth from the soil and air.

Nodes.

The leaves appear at certain regular intervals on the stem called *nodes*. These points where the leaves occur have received the technical name of *nodes*, literally *knots*, because the stem is at these places more or less thickened, hardened or otherwise interrupted in its tissue. This is conspicuously seen in the stalks of corn or all other kinds of grass, in which each joint form a node, or place where the leaf appears. On the twigs of a tree the nodes are also readily seen, even after the leaves have fallen, by the scars that are left; but the woody tissue is not generally much harder than at other points and as the twigs grow and become thickened branches, the scars are obliterated and the nodes disappear. I now wish each of my little readers will take a twig of a maple with leaves in the hand for examination, and also one of an apple tree, or elm, or beech, or willow. You will notice that on the apple twig there is one leaf at each node. When thus arranged the leaves are said to be *alternate* because they alternate with each other in their disposition about the stem. On the maple twig you find two leaves placed opposite each other at each node, the leaves are therefore said to be *opposite*. Still other plants have three or more leaves at a node, and when this is the case the leaves are said to be *whorled*.

Internodes.

The smooth portions or spaces of the stem between the nodes are called *internodes*. You will see that the length or these internodes will determine how thickly the stem is clothed with leaves. If the internodes are very short the leaves will be thickly set, if, on the other hand, they are long there will be comparatively few leaves on the stem.

Phytons.

Now, if you take a knife and cut the twig in pieces just above each leaf, you will get a number of parts that are very much alike each consisting of an internode with a node on its upper end. Each such part, that is, an internode with its node, is called a *phyton*. All herbs, shrubs and trees are really constructed of phytons, one placed on top of another.

But more about this in our next talk.

ORATORICAL SUCCESS.

THE purpose of a great speech is to persuade men. It may be brilliant and eloquent, so much so that men will say of it, "that is oratory," and go about their business. When men act as if they had heard not a word of a speech, it is a failure, even if it is thought worthy of a place among "specimens of eloquence."

"A great speech," said O'Connell, speaking of addresses to a jury, "is a very fine thing; but, after all, the verdict is *the* thing."

Professor Mathews insists that no one would discover the perfect orator, if such there could be, while he was speaking. He tells two anecdotes to illustrate his assertion.

When Chief Justice Parsons, of Massachusetts, was practising at the bar, a farmer, who had often heard him speak, was asked what sort of a pleader he was?

"Oh, he is a good lawyer and an excellent counsellor, but a poor pleader," was the reply.

"But does he not win most of his cases?"

"Yes, but that's because he knows the law, and can argue well; but he's *no orator*.

A hard-headed bank president once congratulated himself, in the presence of Mr. Mathews, on resisting, as foreman of a jury, the oratorical blandishments of Mr. Choate.

"Knowing his skill," said the hard-headed man, "in making white appear black, and black white, I made up my mind at the outset that he should not fool me. He tried all his arts, but it was of no use; I just decided according to the law and evidence."

"Of course," answered Mr. Mathews, "you gave your verdict against Mr. Choate's client?"

"Why, no; we gave a verdict for his client; but then we couldn't help it; he had the law and the evidence on his side."

It never occurred to the bank president or to the farmer that Choate and Parsons were after verdicts, not admiration. And they got them because they sunk the orator *into* the advocate.

"Thou madest people say, 'How well he speaks!'" said Demosthenes to Cicero, in Fenelon's "Dialogue of the Dead," "but I made them say, 'Let us march against Philip!'"

That was true, but it required many passionate appeals from the prince of orators, before the Athenians uttered that cry.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I sit down to try my luck again. My last letter did not appear in print, but I am far from being discouraged. We received the Free Seed Distribution seeds, but not the raspberry. I got all but the oats. I planted all, but none of them came up, except the Golden Ovoid mangel, some of which are nearly three inches thick. Now for the cousins' Free Seed Distribution. The pinks I planted on the first day of May. Sixty-three plants came up. I didn't set them out till the first week in June, and by that time there were only 48 plants. They have not grown much in hight since that time. The portulacas and phlox did not come up very well, only six of the former and ten of the latter. The okra came up well. Out of six seeds five came up; one was a little late, and I scratched into the earth to see if it was sprouting and broke it off. The weather was cold and wet, and two of them rotted off at the ground, and one was hoed off for a weed, so there are only two left. One is ten inches and the other eight inches high, and both have buds. About half of the mignonette came up. It has been blooming for about a week; it is not showy, but very sweet-scented. I gave four of the melon seeds away, and I planted the remainder in four hills. The chickens scratched two of the hills away; I hoed them up again and two plants came up in one of them, but the other was left blank. After thinning out, I have eight fine plants, all in bloom. The way I made the hills is thus: After the ground was pulverized to the depth of about eight inches, I hoed out holes about two feet square and six inches deep. I filled these holes nearly full with manure, then pulled the dirt back, and planted the seed on the top of this.

We are done harvesting here, and most of the wheat is hauled in. I think that Virgil C. Mitchell's poetry is good for one of her age. My letter is long enough, so I will bring it to a close; if I don't that dreaded waste basket will receive it. If I see this letter in print—life and health spared—I will write again. With my love to all the cousins, I say, good-bye. SAMUEL P. SHULL.

Clark Co., Ohio.

DEAR UNCLE MARK:—Being a Canadian, I am, perhaps an intruder on your Horticultural Club. However, I will cross the line and join it. Why, this is equal to scaling the fence of my neighbor's garden and helping myself to vegetables he was at that moment tending. But just when I am about to chide myself for my impertinence, I find that the garden does not belong to my neighbor at all, but to all who wish to take beauties out of it for simply telling their names to the anxious-faced old man by the gate, who smiles on the industrious groups that are elbow deep in gardening for the gratification of seeing him smile on them. Anon he listens for the tap of a child's soft hand that he may admit the little one, and keep the little fingers from becoming entangled in the meshes set for the idle. Dear Uncle Mark loves God and he could not suffer Him to lose one of his tender lambs, if his garden could contain them all. He has a warm hand to press each chubby one that is extended to him. He teaches the young hands to separate the weeds from the flowers. Surely, when Uncle Mark swings his gate open to so many of his own, he will not turn out through it, the stranger who scaled the fence, but give her a hoe and a word of encouragement and allow her to be one of the great many who are beginning to learn that the only way to enjoy life is to be useful. Before my feeble voice rises too high in favor of the design of Uncle Mark in promoting the work of the Horticultural Club, I will bid you all adieu. SHELUMIEL.

[Shelumiel, take your hoe and go to work. Our club may contain one million members. The amount of fruit that each one may gather is only limited by the industry and care with which he or she keeps out the weeds, and tends the useful plants.—U. M.]

DEAR COUSINS:—Hurrah for the country! I am going to the contry pretty soon. And won't I have fun, though? Why don't Frizzle-Top and Madcap Mollie send some letters? Their letters are the only ones that are not sleepy. I cannot keep my letters from getting sleepy to save my life. I must say I am the most unlucky girl in trying to raise flowers I ever heard of. When my seeds came from the RURAL I planted them along with some other seeds I had bought; but not one of them came up. I am sure I don't know why. Well, after I had got tired of waiting for those seeds to grow up, I got some more, and they are coming up now. I have read so much lately that I began to get sick from it, and mamma made me stop for a little while. I am trying to learn a little bit of the French language; but it is rather hard work in hot weather. I think I shall begin to take music lessons in a little while; so you see I will have to study quite hard. I am dreadfully unlucky, and I am continually getting into scrapes. I am very fond of playing tricks; but I do think it is a disagreeable thing to get caught. The other day, in school, when we were out in the large room writing, I gave a girl a pinch, and she fairly jumped up in the air. Well, Miss Burger, my teacher, saw it and brought me out to stand in the middle of the room. The principal saw me and asked what was the matter. When she learned she made me sit on the platform all the afternoon, and I did not enjoy it a bit I can assure you. Well, I guess I must bid you good-bye.

Your sorrowful cousin.

New York. LIZZIE E. BLAIR.

DEAR UNCLE MARK AND RURAL COUSINS:—Will you admit another cousin into your circle? I have been reading your letters a great while, and like them very much. Papa has been taking your paper three years, and think it is splendid. I am going to school now. We have a beautiful farm about three miles from town, and any amount of roses and honeysuckles. We have garden flowers and a few house plants. Am I too late to join the Horticultural Club? I like that story entitled "John Ascott's Daughter." I will try and write you one some time. Will some of the cousins please send a pattern for fancy tatting through the RURAL to me. I can tat real nice. I am crocheting a rug with a flower-pot on it. I think it will look real nice. I am going to can some fruit next week, such as gooseberries, strawberries, etc. I will tell you about our luck in raising poultry this year. We have sixty little chickens, doing finely, but our little goslings, oh, dear! they were so nice and pert; but they all died. The old goose would lead them down to the slough and they would get wet and chill to death. We tried to raise two in the house, but failed. We have five more eggs, and hope to have better luck with them. Grain looks nice out here. I think we will have a fine crop this year. But I must close. If I see this in print I will let you hear from me often.

From your cousin, E. A. C.

Shedds, Linn Co., Oregon.

The Puzzler.

A LITERARY ENIGMA.

63 LETTERS.

24, 18, 6, 10, 58, author of "Lalla Rookh."

30, 61, 19, 48, author of "Abou Ben Hassan."

10, 28, 63, 42, 10, 4, author of "Pleasures of Memory."

14, 40, 32, 62, 21, 54, 23, 5, author of "Sea Dreams."

46, 43, 9, 34, 11, author of "The Talisman."

22, 55, 56, 31, 43, 52, 10, author of "The Good Parson."

1, 44, 26, 60, 17, 6, 10, 62, 16, author of the "Scarlet Letter."

25, 10, 13, 56, 32, 7, author "The Conqueror's Grave."

8, 3, 10, 48, author of "The British Spy."

38, 10, 39, 3, 62, 63, author of "Tales of a Traveler."

50, 24, 47, 10, 29, 6, 19, author of "Representative Men."

26, 37, 38, 48, 11, 3, 58, 10, author of "Snow Bound."

41, 20, 2, 43, 12, 36, 10, author of "Life Thoughts."

7, 15, 28, 24, 56, 59, 35, 40, 10, 57, 2, 21, author o the "Convict Ship."

10, 6, 51, 42, 10, 7, 33, 28, 45, 60, 27, 21, author of "The Curse of Kehama."

49, 47, 41, 52, 10, author of "Happiness."

The whole is a quotation from Shakespeare.

☞ Answer in two weeks. ALICE.

RHOMBOID.

ACROSS:—1, The awn; 2, A portion of land; 3, The tip of the ear; 4, A slattern; 5, Obtained from the maple; 6, Obliterated.

DOWN:—1, A letter; 2, A prefix; 3, Passion; 4, The young of shell-fish; 5, Earth; 6, A short dagger; 7, Pyramidical; 8, A suburb of Constantinople; 9, A word applied to small girls; 10, An abbreviation; 11, A letter. "GUS."

Waterloo, Ind.

Answer in two weeks.

CROSSWORD ENIGMA.

In damper, in hamper, in tamper.
In palgle, but never in box.
In cutter, gutter, in mutter.
In barbet, but never in fox.
In coaster, in boaster, in toaster.
In lemur, but never in rat.
In fester, in pester, in tester.
My whole is a broad brimmed hat.

☞ Answer in two weeks. GUS.

PUZZLER ANSWERS.—July 3.

SQUARE WORD:—

M A Y
A V A
Y A M

HIDDEN STORMS:—1, Gale; 2, Gust; 3, Shower; 4, Tornado; 5, Tempest; 6, Whirlwind; 7, Hurricane; 8, Cyclone; 9, Simoon; 10, Monsoon; 11, Pampera.

"Wearily, drearily, time speeds along,
Youth and its happiness flown.
I have tried to suffer and be strong,
But the lesson was hard to learn."

ANSWER TO GEOGRAPHICAL ENIGMA, JUNE 19th.—Faint heart never won fair lady.

Various.

BRIEFLETS.

The following is old but good advice: Keep the head cool while in the harvest field. A leaf of rhubarb, cabbage, beet, or even corn will greatly assist. Thus sun-strokes may be avolded. . . . . The editor of the Tribune regrets his inability to inform an inquirer why grass colors butter yellow instead of green. . . . . It appears from careful tests made in Germany that an intact skin is one thing to be looked to in the preservation of pears and apples. . . . . J. M. Gregory, president of the Illinois Industrial University, has resigned. . . . . Men who wish to be accredited with superior wisdom and to occupy a high position in the world—to merit and to hold it—must possess superior knowledge. The grand trouble is that pretenders on all occasions are thrusting themselves forward in the hopes of appropriating the harvest they never sowed, cultivated or garnered. . . . . Mr. Roe says, in his new work, p. 94, "The ovule in the ovarium to which the stigma leads represents, at maturity, a seed—the actual fruit of the strawberry." It would have been more accurate (botanically) had he expressed it thus: "The ovule in the ovarium to which the stigma leads, represents at maturity the actual fruit of the strawberry which contains the seed.' . . . . . Mr. J. J. Thomas finds that manure and too rank growth are detrimental to the quality of the Clairgeau pear as he has found it more uniformly good on old and slower-growing trees. . . . . When the buds are plump and the bark may be easily separated from the wood—then is the time to *bud*. . . . . Too little care is given the first season to grape-vines. One shoot is enough. Pinch out all the buds that push in the axils of the leaves. That is, confine the vine strictly to *one* cane. Tie it to the stake or arbor whenever 18 inches of growth have been made. This is more important than it seems. Of two grape-vines, one of which is well supported, the other not—it will be found that the former will make a much stronger growth and fruit perhaps a year earlier. . . . . We shall have some highly important asparagus notes ere long. . . . . And we shall soon clear up the mystery that invests the "WHITE ELEPHANT." . . . . . Beans and cucumbers for pickles—melons for mangoes may still be planted. . . . . It will save time and labor if purslane is *pulled* up as soon as it appears. If hoed the cut pieces will root, that remain in contact with the soil. Then if permitted to bloom and seed, a hundred plants may grow from the seed of a single pod. If with any weeds it pays to destroy them before they appear, it certainly pays with "pussley." . . . . Col. Weld hazards the prediction that before long more eggs will be hatched by kerosene than under hens. . . . . Will somebody please inform us why a young lady who modestly shrinks from sitting on the front stoop with a young man's arm encircling her waist, will whirl around a brilliantly lighted ball-room for hours at a time and let a fellow hug her to his heart's content?—Elmira Sunday News. . . . . The editors of the Nebraska Farmer have built several miles of wire fence the past month and they deem it as good as any post-and-rail fence though it costs but 43 cents per rod—three wires. . . . . .

THE 49TH EXHIBITION OF THE AMERICAN INSTITUTE of this city will open on Sept. 15, and close on Nov. 27, next. The Board of Managers desiring to encourage, so far as in their power lies, a full and complete exhibit of work produced by Amateurs and Apprentices in all branches of Mechanical, Industrial and Decorative Art: it is therefore proposed to admit, without charge, for exhibition and competition, all such works as may be approved and to award premiums to those who may excel in the arts named. Applications for space must be made before September 1st, to the General Superintendent, Room 22, Cooper Union, New York City, stating nature of proposed exhibit, and where it may be seen and examined. The Board of Managers reserve the right to reject any exhibit offered, which in their opinion may not be worthy of a place in the exhibition.

CATALOGUES, ETC., RECEIVED.

THIRTY-NINTH ANNUAL REPORT of the New York State Agricultural Society for the year 1879. This compilation of 130 pages, 8 vo., contains among other matters, a valuable address on Lung Plague or Pleuro pneumonia, by Prof. James Law. Reports on Insects Injurious to Vegetation by J. A. Lintner; Poultry Breeding by Natural and Artificial Means, by our contributor, A. M. Halstead; and About Potatoes, by I. F. Tillinghast. Thomas L. Harrison, Sec'y.

CIRCULAR. American Association for the Advancement of Science. Twenty-ninth meeting, to be held at Boston, Mass., Aug. 1880. Address F. W. Putnam, Sec., Salem, Mass.

PERSONAL ITEMS.

Gen Grant is receiving ovations in New Mexico

General Ord, it is reported, will take a year's furlough and then he retired, General Schofield succeeding him in Texas.

Congressman De La Matyr has been married to a widow at Friendship, N. Y. They were engaged in youth, but quarreled and separated.

Ulysses S. Grant, Jr. will be married to Miss Jennie Flood, a daughter of the San Francisco millionaire, about the middle of next November.

The young duke of Portland, as soon as he came into possession of his property, settled £100,000 on each of his half-brothers and £6,000 a year on his stepmother.

Dr. H. S. Tanner, a Minnesota genius, is demonstrating in this city his ability to remain 40 days absolutely without food, except a very little water. At this writing he has fasted 12 days, being constantly and carefully watched by doctors. He seems lively and hopeful of success.

Gladstone says he was never better in health than now. He certainly never worked harder. He sits through debates night after night and is constantly ready to answer criticism or requests for information. And he is always at work with pen and paper on the Treasury bench. He is in high spirits and looking extremely well.

MR. JOS. H. DENSON, Clerk and Recorder of Sevier County, Arkansas, says in a recent letter: "I have forgotten whether I wrote you concerning *the almost marvelous effect* the Compound Oxygen Treatment had on me. I was suffering from Bronchitis, and had been for three months—had almost despaired of recovery—when I commenced the Treatment. I could feel a marked change on the first night I took it. I had not enjoyed a good night's rest for something over three months; but on the night I first took the Treatment I slept splendidly, and afterwards continued to improve rapidly until I was cured. If you see fit you can use this for the benefit of sufferers." Full information about this new Treatment for Chronic Diseases, sent free by Drs. STARKEY & PALEN, 1109 and 1111 Girard St., Phila., Pa.

Miscellaneous.

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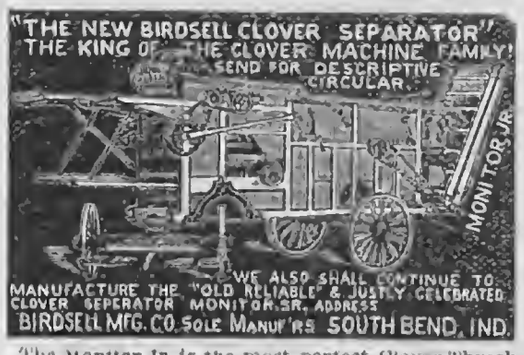

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Miscellaneous.

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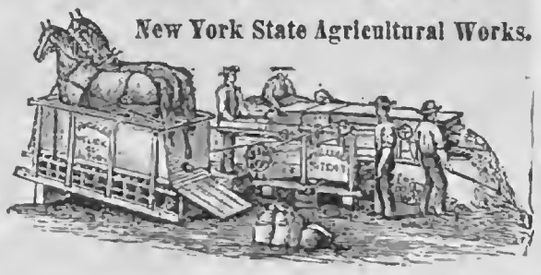

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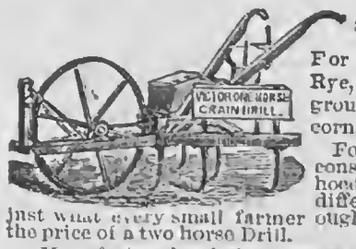

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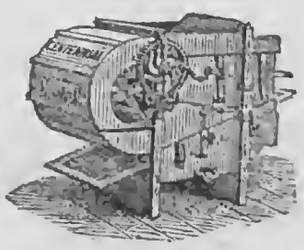

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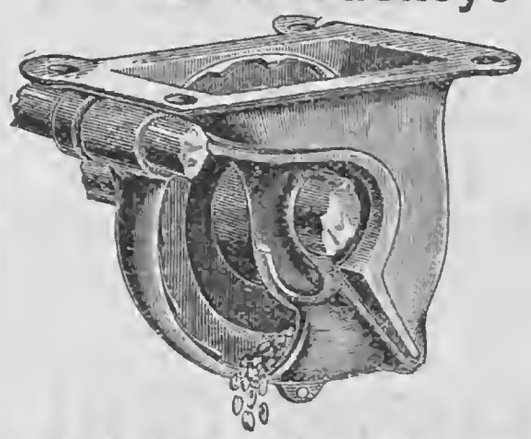

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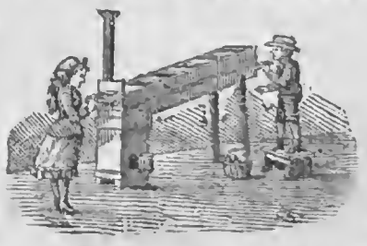

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Humorous.

"Now, tell me candidly, are you guilty?" asked a lawyer of his client. "Why, do you suppose I'd be fool enough to hire you if I was innocent."

SOME predict that the time will come when people can read each others thoughts like a book. It is sad to think that many fly-leaves will be discovered where least expected.

"SIT down!" said a nervous old gentleman to his son, who was making too much noise. "I won't do it," was the impudent answer. "Well, then, stand up. I will be obeyed!"

A REGULAR Turk—Tommy (who has just been operated upon): "I mean to be a dentist when I grow up." Aunt Annie: "Why dear?" Tommy: "To have revenge."—Punch.

"So," said a lady recently to a merchant, "your pretty daughter has married a rich husband?" "Well," slowly replied the father, "I believe she has married a rich man, but I understand he is a very poor husband."

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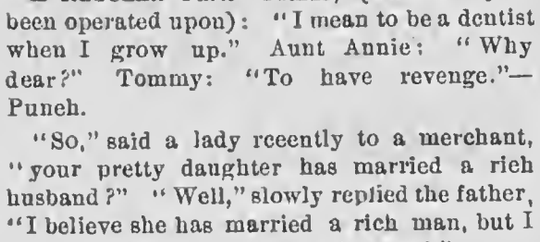
When displayed in the human countenance, and indicates a condition of the liver which, if not altered by timely medication, will assuredly produce most disastrous results. Jaundice, congestion and hepatic abscess are among the consequences to be apprehended from a neglect to reform a bilious habit, and a general derangement of the vital functions is always consequent upon a prolonged attack of liver complaint. The most reliable as well as most popular remedy for biliousness, as well as the maladies which usually accompany it, constipation and dyspepsia, is Hostetter's Stomach Bitters, a botanic medicine of perfect purity and unexceptionable quality. It relieves the bowels when obstructed, gently but effectively, re-establishes digestion, improves the appetite, and tranquilizes and invigorates the nervous system.



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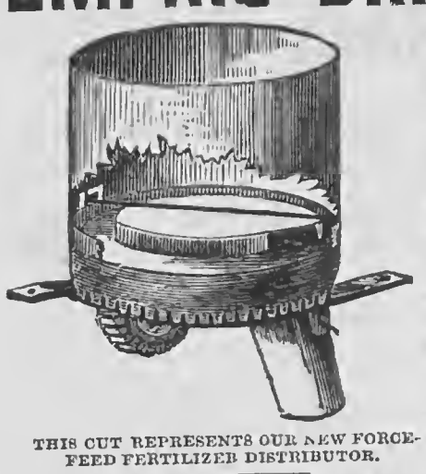

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IMPLICATION.

Young Lady.—"Why, James, you're spoiling that Hedge!"

Gardener.—"Ah! Tummas Lapham he come along this mornin', an' he says to I, says he,—'Why, James, thee beist a spilin' that Hedge!'—'Thee beist a big loiar,' says I, 'Tummas! The more thee do trackle an' eut common Hedges, the better they be!'"

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33D
SEMI-ANNUAL STATEMENT
OF THE
TRAVELERS
INSURANCE CO

Hartford, Conn., July 1, 1880.

Paid-up Cash Capital, - - $600,000.

ASSETS.

Real estate	$846,172 00
Cash on hand and in bank	253,912 58
Loans on bond and mortgage, real estate	1,924,397 87
Interest on loans, accrued but not due	47,712 26
Loans on collateral security	68,900 00
Deferred Life premiums	61,001 35
Premiums due and unreported on Life policies	37,998 94
United States government bonds	280,150 00
State, County and municipal bonds	366,411 00
Railroad stocks and bonds	602,785 00
Bank stocks	663,234 00
Hartford City Gas Light Co., Stock	18,200 00
Total Assets	**$5,171,875 01**

LIABILITIES.

Reserve, four per cent., Life Department	$3,521,535 58
Reserve for re-insurance, Accident Dep't	310,391 82
Claims unadjusted and not due, and all other liabilities	210,096 00
Total Liabilities	**$3,842,023 40**
Surplus as regards Policy-holders	**$1,329,851 61**

Statistics to July 1, 1880.

Whole number Accident Policies written	605,000
Whole number Accident Claims paid	46,890
Total amount Accident Claims paid	$3,690,000
Total claims paid in Life Department	1,525,000

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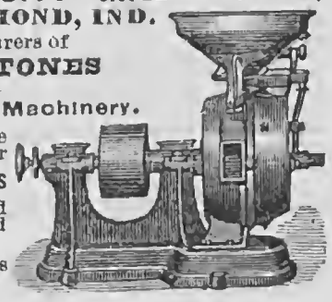

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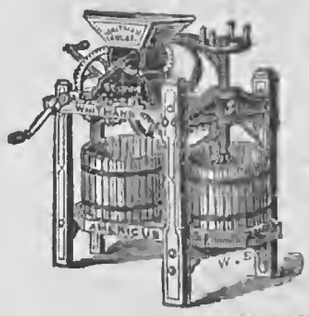

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 30. WHOLE No. 1591. NEW YORK, JULY 24, 1880. PRICE FIVE CENTS. $2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Rural Architecture.

A FIRST-CLASS FARM-HOUSE.

THE architectural illustrations given in this issue, are those of a farm-house recently erected in Grafton, Massachusetts. The design is in a somewhat modified Gothic style. Figure 236, represents the front elevation. As will be seen it consists of three stories, the attic or third floor being lighted with dormer windows. The building is more ornamental than is generally the case with farm-houses. On the first floor are two bay-windows at the front, one on each side of the spacious piazza. This arrangement gives a certain cozy and retired aspect to the entrance, which has a very pleasing effect. The bay-window on the left in the engraving, is reproduced also in the second story, and directly above this in the third story is a finished balcony. This feature prevents the plainness and monotony that are inseparable from bare, straight walls, and gives an uncommonly lively tone to the structure. The roof is finished in a deck and ornamented with finial and iron cresting.

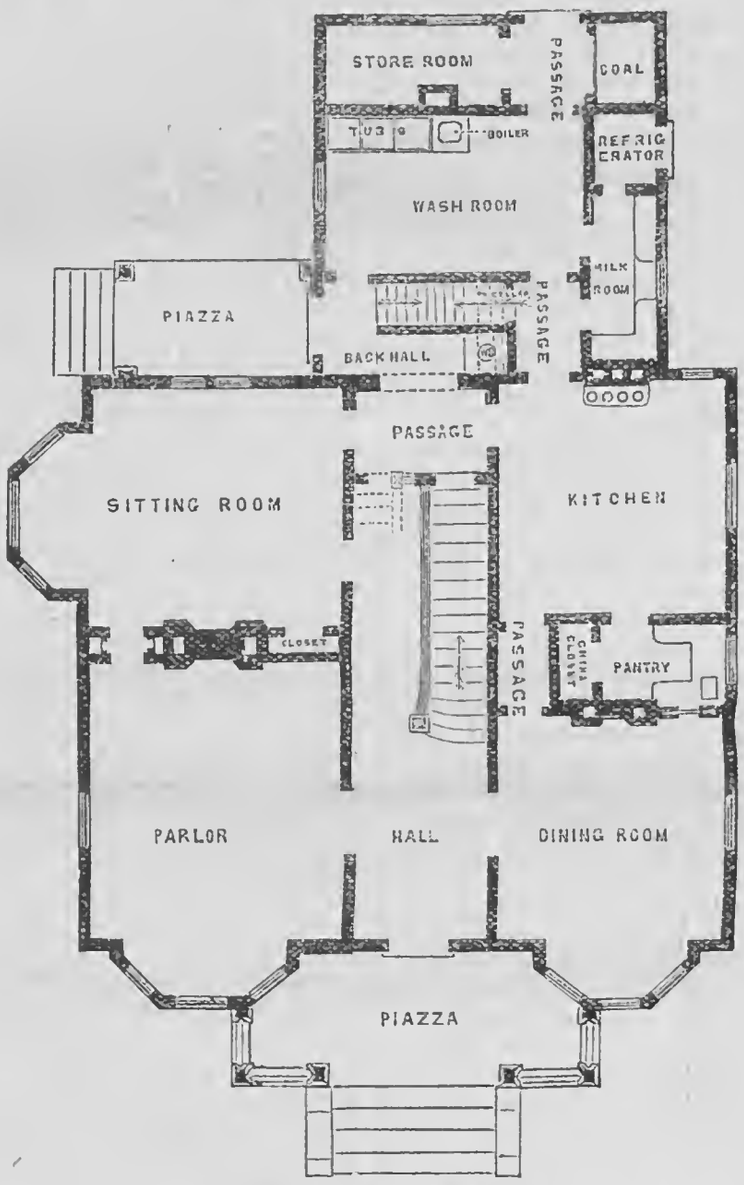
We give the plan of the first floor, figure 237, in connection with the front elevation. From this it will be seen that there is a spacious hall, (9x29 feet) running through the center of the house, giving abundant opportunity for ventilation in warm weather. On either side of this are arranged the four main rooms on this floor, the dining-room and kitchen on the right, separated by a large pantry, and the parlor and sitting-room on the left. The L, or rear wing of the house, is occupied by wash-room, milk-room, store-room and refrigerators, and all the appointments of a well-appointed modern farm-house.

From the plan of this floor a very good idea can be obtained of the arrangement on the second floor, of which no plan is given. There are four chambers, each about 14x14½ feet, respectively over the four rooms below, and each having a spacious closet. The chamber to the left, over the parlor, is somewhat larger than the others, and has a bay-window, as seen in the elevation. It may be called a family chamber, and connected with it, immediately over the front part of the hall below, is a small room, 9x9 feet which may be used as a sewing-room or a childrens' chamber. In the L, which is continued up throught all three stories, are the bath-room and another chamber, 12x16 feet, and back stairs leading from the kitchen floor.

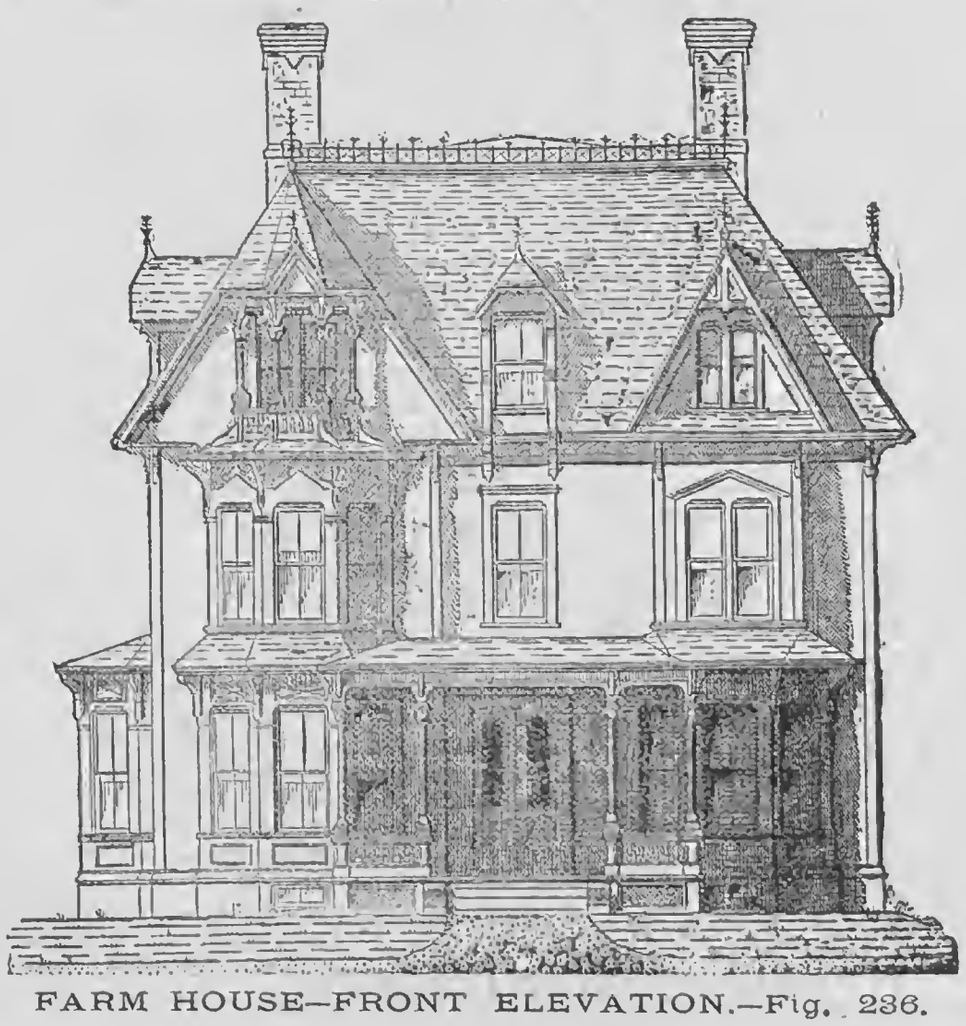
The attic floor is so arranged as to give good hight to the ceilings, and can be cut up into very commodious rooms for servants, guests, or for members of the family.

The structure is estimated to cost from $6,000 to $8,000, according to the degree of finish bestowed upon it. A house so spacious, convenient and ornamental, must, of course, be costly in proportion to its advantages.

This original plan is furnished us by Bicknell and Comstock, 194 Broadway, New York, who will supply any particulars desired beyond those we have given.



PLAN OF FIRST FLOOR.—FIG. 237.



FARM HOUSE—FRONT ELEVATION.—Fig. 236.

Pomological.

WESTERN FARMING.—IX.

W. I. CHAMBERLAIN.

Artificial Fruiting.

IT has long been a question whether the "bearing" year of fruit trees could be changed and controlled, and whether trees late in coming to bearing could be artificially fruited. These are two distinct questions, and it has been supposed that distinct and different means must be employed to secure each result. Late fruiting or prolonged barrenness, especially in apple or pear trees, has usually been the result of over-growth of limb, *i. e.*, too rapid wood-making, and it has long been noticed that anything that checked this growth one year would fruit the tree the next. This occurs when the tree is wounded, when mice or rabbits girdle it, and often when a tree or orchard which has been under cultivation with low hoed crops is seeded to Timothy and the wood-growth greatly checked. But girdling has always been deemed a blow at the life of the tree. Mice and rabbits have been deemed pests, as they are, and the malicious girdling of fruit trees by the hand of man is a penitentiary offence, and has recently, in my own town in Ohio, been visited with the full penalty of the law. Fruiting in the barren year, too, has been secured by the laborious process of bud-picking, but this mode is entirely impracticable in large orchards.

Great was my surprise, therefore, a few days since, in visiting the extensive and splendid nurseries and orchards of J. B. Spaulding & Co., of Springfield, Ill., to find abundant and healthy fruiting produced at will in any tree or hundred trees, or miscellaneous and arbitrary selection of trees of any age—produced, too, without failure in a single instance, without damage to the tree, and in an exceedingly easy and simple way—in fact the very way suggested by the mice.

In connection with their extensive nurseries (of which I cannot now speak, though they are the premium nurseries of Illinois, and in many respects the best in the land) the Messrs. Spaulding & Co. have some 14,000 apple trees set out in orchards, and of various ages. They are set fifteen feet apart each way, the intention being in time to take out every other row, and then every other tree in each alternate row. Hence the life of three-quarters of these trees is of no great value, and Mr. Spaulding has used them freely in his various experiments. He started more than five years ago with the theory that the moderate girdling or disbarking of trees of rampant growth at *the proper time of year* would check the wood-growth, form fruit spurs for next year, and not injure or shorten the life of the tree. The first part of this belief was accepted long since by many pomologists, including Chas. Downing; but the last part, viz: that it would not injure the tree or endanger its life, was entirely, and even indignantly, denied by all. But Mr. Spaulding's experiments have been thorough, numerous, varied, and accurate, and, to his mind, and the minds of all who examine the results, establish beyond doubt or question the great value of his discovery (for such in reality it is) to the Western orchardist. His work is of two kinds, "ringing" and "girdling" or "disbarking." In the case of a tree of moderate growth the "ringing" is practiced; that is, the knife is drawn firmly around the trunk, just below the limbs, cutting the tree clean to the hard wood. This checks the growth moderately, and starts the fruit buds or spurs for *next year's* fruit crop. This work is done in May or June, *while the sap is flowing freely.* If the tree has a rampant growth, as trees on the rich soil of Illinois are apt to have, a ring of bark is removed entirely around the tree to the width of a quarter to half an inch.

I saw several thousand trees, of various ages and sizes, on which one or the other of these methods had been practiced, and in every case with complete success. There was in every case a fine setting of thrifty fruit, well developed, and already ripe in the case of the early varieties, and in no case did the tree seem to be injured. The bark in a few weeks completely closes over the wood from which it has been taken, so as hardly to leave a scar, and the *next year* the tree bears fruit in abundance.

Mr. Spaulding has such confidence in the vitality of the trees that he has removed the bark clear around the tree for a distance even of twelve inches, to see if it would kill the tree. I saw such trees, girdled ten days before, on which a film of new, green bark was rapidly forming already. But, of course, this is simply experiment. All that is needed is a ring from a quarter to half an inch in width, and I saw abundant evidence that girdling to this width, even for several years, does not injure or threaten the life of apple trees, at least where they have thrifty, luxuriant growth. Whether it will do for the slow-growing trees on light soils or on heavy clay soils, I cannot tell. But for the rich soils of Illinois, where the tendency is to over-growth of body and limb and slowness in fruiting, this discovery of Mr. Spaulding seems to me to be a valuable one. There is no patent on it, and I have his full permission to call attention to it.

The reason this girdling does not kill the tree, like that done by mice and rabbits, seems to be because it is done during the time *of most*

vigorous growth, and a film of sap is immediately thrown across the exposed wood of the tree and the new bark begins to form. But mice and rabbits girdle in Winter, and the wood becomes dry before the sap begins to flow, and, of course, the tree dies. The matter seems to me to be worthy of careful attention and experiment by pomologists, under all the varying conditions of soil, climate, variety and environment.

[We have been trying the same experiment, in a modified form, upon Blount's corn, the results of which we shall, of course, present to our readers in due time.—Eds.]

Arboricultural.

TREES THE WANT OF THE GREAT WEST.

PROFESSOR ELBRIDGE GALE.

THE "Great American Desert" is now teeming with a vast population. The sun shines on no more beautiful land. A deeper or richer soil cannot be found. But experience has taught us that this whole region so inappropriately called by our old geographers "The Desert," is subject to extraordinary climatic extremes. Droughts and floods in irregular but certain succession seem, from the experience of 25 years, to be the normal condition of things here. The seamed and gullied uplands everywhere show the foot-prints of past storms and floods. The timber growing wherever it could find protection from the annual fires, gives in the measure of its annual rings of wood growth a wonderful history of climatic extremes, telling of years of famine and years of plenty, for 200 or more years. All this teaches us that as periods of drought and flood have alternated in the past, we should be prepared for a like condition of things in the future.

Our people have sought to ignore the obvious facts in the case. Encouraged by the cry that the plow will soon redeem the treeless plains, thousands have rushed on to the frontier, hoping there to reap the reward of toil in prosperous homes. But to-day they turn their faces towards their old homes, or come to their Eastern neighbors asking bread for themselves and their little ones. The truth is simply this: their crop last year was almost a total failure, and they will reap at best only a scanty harvest this year. Many must have help or suffer. Some will leave their lands; others will try to stay. Their all is at stake. They have come here under the pressure of a theory, extensively advertised, that by their own work they would be able to immediately modify the climatic conditions, and secure a greater regularity of rainfall. A great wrong has been inflicted on these people. As they beg for bread, or move slowly and sadly back to more Eastern homes, at the sacrifice of their all, they appear as the martyrs to a theory as false as it is fatal—that the plow alone will materially change the climatic conditions of the Great West.

The sad experience of 1879 and 1880 so far has taught us that no more dangerous doctrine has ever been promulgated with reference to the great plains. It has proved to thousands a snare and a delusion, and as a consequence they come to their more eastern neighbors asking bread. The theory may be a very nice one, and a very popular one with those who write advertising letters from Eastern cities on the climate of Kansas, but to the frontier settlers it "pans out" no gold. There is no question that the plow must go first, but tree culture must follow. The writer has seen within the past few weeks great fields of corn cut up and almost ruined by the driving winds and shifting sands. He has seen young orchards standing in great sand drifts, hedges half-buried by fine dust from the plowed fields, and many acres of broken prairie left uncultivated because of the manifest disposition of the soil to take to itself wings. This was the work of the plow alone, and each year in the future with like culture the result will be more fatal.

But he saw also alongside of this ruin, and under a very slight protection, vineyards loaded with grapes, peach, apple, cherry trees and various kinds of small fruits growing in great luxuriance. Under the same protection he saw fine fields of wheat, corn and garden vegetables that could hardly be surpassed anywhere. Here there was no drifting soil, while one quarter of a mile away the young trees were standing in banks of drifting sand.

A late writer says "We have heard a great deal said about the power of trees to bring rain, but surely it was not trees that changed the meteorology of Western Kansas." No it was not, nor was it anything else. The sad experiences of both the last and the current year prove past all doubt that the climate of Western Kansas is still just what it has been for a long period past. Our only hope is in securing some slight protection from its wind storms, as the first essential step towards reaping for our soil the advantages of the rainfall.

Horticultural.

RURALISMS.

NEW-YORKERS who think of such things at all are proud of the Central Park, or at least have been; but there is not one of them who is proud of the Central Park Commissioners as commissioners, whatever he may think of them as men. For years past almost every thing connected with the Park has been in a muddle, and during most of the time the meetings of the board have been characterized by a species of wrangling and personal recriminations not at all calculated to raise the board in public esteem.

It grows worse daily instead of better, and in the meantime the Park suffers. Instead of improving it deteriorates. This will continue till the Board of Commissioners is lifted out of the sphere of politics. Almost from the beginning this incubus has clung to the necks of the Commissioners and everybody connected with the work, from the superintendent down to the man who cleans the walks, has been under its influence. It is no wonder that every thing is going to the bad, and that the fault is shifted from one shoulder to another, with nobody to blame. Just now there seems to be a dead-lock, with a very remote prospect of its being broken. As there is no affinity between politics and the adornment and keeping of a park for the pleasure and benefit of the public at large, the sooner the connection is severed the better for the park and the public.

The show of bouquets, ornamental designs, etc., at the late exhibition of the New York Horticultural Society was very meager, on account of the scarcity of flowers, and the few on the table were mostly of that solid, unnatural, and ungraceful style now so common, in which natural effects and fine taste are looked for in vain. It gives me pleasure to notice, however, one or two exceptions, especially the vase of flowers of Mr. Riddle, which was a really commendable piece of work, evincing both judgment and good taste. It is so pleasant to see flowers arranged as nature grows them.

The strawberry show of the New Jersey State Horticultural Society was much the best I have seen this season, though not as good as they usually have. I had the opportunity of comparing and testing the seedlings, three of which were good, and one of decided excellence, which I afterwards learned was raised by Mr. Durand. It was a large, round berry, of good form and bright color, with a decided vinous juice and rich flavor. It was well named Superb. I know nothing of its habit or productiveness. I am told it is not yet for sale. Of the other two, one was named Jersey Queen (very good), and the other was only numbered, but resembled the Bidwell. Another seedling was named Cettywayo; but if that unfortunate gentleman resembles the fruit, I must respectfully decline his acquaintance.

Among the more recently introduced strawberries, I am much pleased with the Bidwell. I have seen it growing in different places widely apart, and in all it was decidedly good. It presented its best appearance, however, at Mr. Roe's, where it seems to be a favorite. Large, well formed, and very productive, with a flavor somewhat like that of a well-ripened Black Tartarian cherry, it promises to become popular. I rather like the Triple Crown, but I fail to perceive the fitness of the name. The Glossy Cone is a berry somewhat talked about. It presents a pretty appearance. I saw it at Mr. Henderson's, Mr. Roe's, Mr. Force's, and several exhibits at the New Jersey show. It is very productive, a goodly portion of the berries, however, being small. At Mr. Henderson's it was good, but at the New Jersey show and at Newburgh the flavor was rather flat.

HORTICOLA.

The Caroline and New Rochelle Raspberries.

MR. CHARLES DOWNING writes us as follows:

"As to the Caroline and New Rochelle raspberries, I know very little about them. I was at E. P. Roe's the other day and saw them for the first time. The Caroline is moderately vigorous in growth and moderately productive. Fruit medium to large, of a deep orange-yellow; flesh rather soft, juicy, sweet and rich.

"New Rochelle, very vigorous and very productive; canes strong and branching. Fruit medium to large, of a dark maroon color; flesh moderately firm, juicy, subacid—good for culinary uses, but not good enough to eat. I found many of the berries with a decayed spot on them, which, if common to them, will be very objectionable; it appeared somewhat like sun-scald.

"The above is what I saw of them at Mr. Roe's, and may not be their general character of other years, and it is, therefore, not to be fully depended upon."

Farm Topics.

THE DISCOUNT OF LATITUDE DISCOUNTED.

IT has been taught and accepted that crops in ripening are governed, in a great measure, by latitude, and that there is scarcely a well-marked exception to this rule. However, this year there have been so many and such varied cases in which crops North have ripened before crops South, and such a simultaneousness in maturity over several degrees of latitude, as to assure us that some unusual forces have been at work, concerning which we have no clear ideas.

Going south from Central Illinois to New Orleans during the last half of March, I noticed, after having reached the southern line of Tennessee, in latitude 35 deg., there was little difference in the measure of development of the fruit buds of the peach over the more than five degrees of latitude between this point and New Orleans. Stopping off at Brookhaven, Miss., a week or ten days later, I observed that the buds of the apple trees and some other fruits and shrubs were still nearly dormant, while some of the native oaks were half out in leaf—strawberries were getting ripe, early potatoes and peas were in blossom, and market gardeners were shipping produce North. At this date, too, and in spite of the advanced stage of indigenous vegetation, little or no plowing had been done for cane and cotton, but the work of clearing up the fields was going on. And lately, to show that I was not deceived by appearances, I find in the Planters' Journal for July a communication from Mr. F M. Brewer of Crystal Springs, Miss., who, referring to his crop of Turner raspberries, says: "They were like the peach this season, late in starting to grow. The same variety of berries was shipped from Southern Illinois to Chicago two days ahead of me." But Crystal Springs is in Miss., about latitude 32 deg., and the Southern Illinois fruit region lies between 37 or 38 deg. Here we have the singular anomaly of fruit ripening two days earlier in the Northern than in the Southern situation, with the distance of nearly 400 miles between the two. Here is an example of "the discount of latitude discounted" of a most significant kind.

Centralia in Marion Co., Ill., is the center of a great wheat and fruit producing country. But its strong point is the strawberry crop, of which 1,000 acres were gathered there this season, and to which additions have been made to increase it to 1,600 acres in 1881. Formerly Centralia strawberries had a monopoly of the Chicago market for a week or ten days, because they made their appearance before the crop of the black soil counties and that from the sandy lands of Michigan, which usually ripen about the same time. But this year the strawberry crop from Centralia, in latitude 38, to Michigan, in latitude 43 deg., seemed to ripen almost at the same hour, and the fruit growers, for a distance of three hundred miles north and south, sent the best of their crops forward at nearly the same time. And so far as concerns the Winter wheat and early potato crops, the same simultaneousness in time of ripening has been remarked.

No doubt a good share of the earliness of Northern crops over Southern ones and the simultaneousness of the epoch of maturity over long distances north or south, are due to the differences in soil of the two or three regions. Thus the compact, light-colored, sandy loams of the South absorb heat slowly; the gray clays of Southern Illinois faster; the black soils faster still; and the yellow sands of the Michigan fruit region fastest of all. And since the growth of plants depends more on the temperature of the earth than on that of the surrounding atmosphere, the soil, owing to its greater absorptive power North than South, matures crops earlier, or at nearly the same time, over great intervening distances.

But these paragraphs have not been written for the single purpose of making the statement of the fact, nor with the intention of ignoring the existence of certain great and unknown cosmic causes which have operated the present year and made it one remarkable alike for unusual rainfall, an excessive quantity of thunder and lightning, high winds, cyclones and tornadoes, and a very extraordinary measure of vigorous vegetation, more or less associated with fungus germs; but rather to suggest to the Southern fruit grower how he may and can get all, or more than all, the advantages of his Southern situation. He must tile-drain his lands, and manure and cultivate in the most thorough manner, and in that way he will be able to bring the temperature of the soil up to that of the surrounding atmosphere, and so ripen his crops according to the measure of his latitude. The fruit business in the South is just in its infancy, but we shall never know what it is capable of becoming until some of the best forms of modern agricultural practice have been applied to the business. The advanced men among the Centralia fruit growers are already aware they must tile-drain their strawberry fields in order to compete with their northern brethren, and it will not be long before tile-drainage will have become the custom of that country and of all countries which hope to make great and abounding crops.

What about the figs? Considering the deliciousness and healthy character of the fruit, the demand there is for canned figs put up after the manner of a well-reputed New Orleans establishment, and considering the fig is perfectly hardy in all that broad belt of country known as the "Piney Woods region," it is at least surprising so small crops are made and we hear so little about them. I suspect the truth to be that though the tree is a hardy one up to 33 degs., even 35 degs., and attains the size of a half-grown apple tree (which as to form and contour, though not as to foliage, it considerably resembles), the difficulty lies in the fact that, in most cases, these trees are barren and as such are regarded as cumberers of the ground. However this may be, I should like to hear from Southern correspondents of the RURAL a relation of the facts in the case. We know that, as commonly reputed, the fig, as a general thing, demands to have a dry, deep and not too rich soil, and in that respect resembles the olive; but we know, further, there are varieties which will stand as much moisture as a duck or a turnip, and will revel in a soil of the greatest depth and richness. Possibly the trouble with the fig in the South is, that the varieties in use and cultivation are not of the right kind, and where those which suit the soil have been selected and propagated the result will be more satisfactory. But hear a foreigner—a French *savant*—on this point: "The fig will live and flourish on all sorts of soil where it is not too wet during winter, but it prefers those which are calcareous, and on these it produces its best fruits, except on those which are schistous or slaty; but on these we often see it suffering from drought. There are varieties which require to be placed where they can get the benefit of irrigation, or at least, where the soil is moist, cool and deep, in order to produce large crops. Such as the *Barnissote*, the *Servantine* and the *Ballone*; and others do well in a deep and cool, but not too moist soil, like the *Mouissane* and the *Verdale*. Finally, some species easily withstand high and dry lands which are not schistous, and here they produce better crops than on richer, deeper, cooler and moister soils, and this is particularly the case with the *Marseillaise* variety."

It strikes me the agricultural rehabilitation of the South will come rather through the cultivation of crops which latitude and climate give it a monopoly of and through industries related to them rather than in competition against Northern agricultural production and Northern manufactures; and, therefore, it is I suggest the extention of fig cultivation as well as that of all other sub-tropical fruits. And in conclusion, to come down to the facts of the case, in what possible way, in what tried or untried crop—the present state of the soil being considered—can the cotton States make as good and sure a return for their labor as in continuing to make cotton the base of their agriculture? B. F. J.

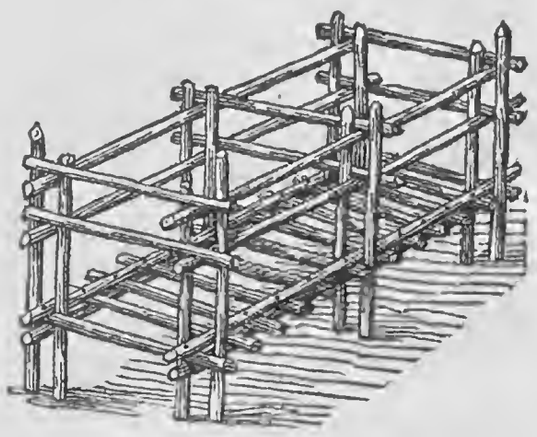
Champaign, Ill.

Farm Economy.

THE USE OF SOILING CROPS.

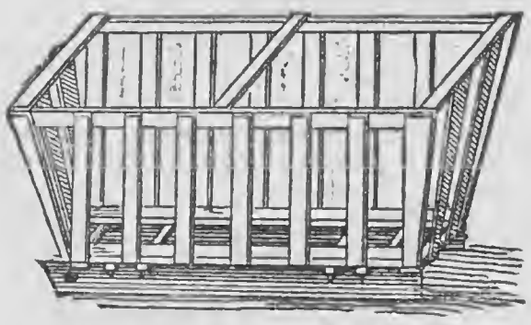
THERE is a great economy in the right spending of what is earned or saved. So one may grow crops for soiling successfully and waste his opportunity in the using of them unless they are fed in a proper manner. When partial soiling is practiced for the purpose of helping out pastures, or with the intention of manuring a poor piece of land by keeping cows and feeding the crops upon it so that the manure may be spread over the surface, two ends are served. But the method is somewhat different from that practiced for complete soiling. In the one case a field that provides some pasture is used for what it is worth and the fodder is cut and carried to the cattle and fed in racks; in the other the cows are kept in yards and stables, the fodder is carried to them, and their quarters are well littered and bedded with absorbants and materials for composts and manure. There is more labor involved in the latter method, but the larger product derived from the cows, through the high feeding; the quiet rest and absence of unnecessary and wasteful exercise; the freedom from troublesome insect pests and the saving of time and waste of material and product in driving the herd back and forth to pasture, all these repay the extra labor liberally and *the food is all paid for by the large quantity of manure made*. Therefore the practice is profitable upon dairy farms, grain farms, and fruit farms; anywhere in fact, except upon such farms as cannot be plowed and must, therefore be devoted, solely or chiefly to pasture. In either case the gain by avoiding the waste and cost of fencing the whole farm into fields is to be considered.

We will follow up the management of a herd of cows managed either by partial or complete soiling. In the former case there is a pasture or stubble field, such as has been referred to. Here the cows are kept through the day and night, being either milked in the field or driven home for that purpose. If there are water and



FEED RACK.—FIG. 238.

shade in the field, the former is the better plan. A few simple racks are provided, such as that shown at figure 238, which is made of rails or round poles put together with carriage bolts and mounted upon two half-round heavier pieces that may serve as runners upon which to move it from place to place in the field, or such as that shown at figure 239, several of which may be set permanently in the field in several places. Or for a few cows a portable sled rack made as shown at figure 240, may be used. This can be loaded in the field and drawn to the pasture with its load, and if two are provided so that an empty one be taken away when the filled one is left, some trouble will be saved. The fodder for morning's use is cut at night. In the morning the field is visited early: the evening's fodder is cut and left to wilt through the day; and the fodder cut the previous evening is drawn to the pasture and given to the cows. The quantity given depends upon the amount of food to be picked up in the pasture. If this amounts to very little 50 or 60 pounds will be required daily for each cow. This weight is easily estimated, if a few bundles are weighed once or twice with a spring balance. No more should be given than is cleanly consumed with evident appetite.



MOVABLE FEED RACK.—FIG. 239.

About five in the afternoon the fodder cut in the morning is picked up and fed, and the morning's feed cut. If rain threatens, sufficient fodder for two or three feedings may be cut and hauled to the pasture, cocked up outside and covered. It is dangerous to feed 30 pounds of wet fodder to a cow at a meal. The excess of water is likely to cause bloat and it will be safest to reduce the ration to one-half, when it cannot be given otherwise than saturated with rain; and to sprinkle a quart of fine ground feed with a handful of salt upon it as a precaution against danger. As one part of the field is covered with manure the racks are moved, and the foddering done upon another part, and once a week the droppings should be broken up with a fork and scattered. For its manureal value, as well as its feeding value, one or two quarts of cotton seed meal can be profitably given to each cow daily. It will have an excellent result in moderating the laxative effect of the succulent fodder, will increase the yield of milk and butter, and will add much to the value of manure. It is safe to estimate that the five cents daily thus spent will be returned thrice over, or once in each of the different ways mentioned. In June, the last of the clover was expended and green oats will be ready for cutting if these have been provided for the stock. If the soiling has not yet begun, early corn fodder is now ready for the first cutting, and the ground should be at once replanted with corn up to the middle of July when Hungarian grass or millet may be sown. For partial soiling sweet corn is the best crop; anyone who thinks differently has either never tried it or has tried it under adverse circumstances. In three years' feeding with sweet corn, and common field corn, the writer has found the former to be more productive of milk, and at least one-fourth more satisfying to the cows. The excess of sugar it contains is nutriment, and 20 pounds of it are quite equal to 25 pounds of field corn fodder.

In complete soiling, the feeding is best done in the stables at seven in the morning and after milking; and at five in the afternoon; a little mess of something may be given after milking in the evening. If the feeding is done in the yards, racks should be provided to prevent waste of the fodder. But experience has shown that the feeding is better to be done in the stables and after milking. The cows stand in quiet expectation during the milking and are not restless and troublesome, as they would be if the feeding had been done before the milking.

BOLTS.

"How many sizes of machine bolts have you, Mr. Hardware dealer?"

"Fifteen."

"You ought to have more. Count out for me five of each size, slim, stout, short and long. Three cents each, etc.; all right."

When I returned to the farm I walked to the meadow to see how the mowing progressed, and found John just started for the house, mower and all.

"I broke one of the main stay bolts, and can't find any to fit. I shall have to get the blacksmith to make another," said John.

"Turn back, man! I wouldn't have that machine lie idle this afternoon for ten dollars. I'll start you in five minutes."

This is one case among hundreds. A bolt or two will splice a wagon tongue or start the silent thrashing machine when a dozen laborers lie idle. CHAS. A. GREEN.

Dairy Husbandry.

COUNTRY LIFE.

Observations Among Rural Subscribers.

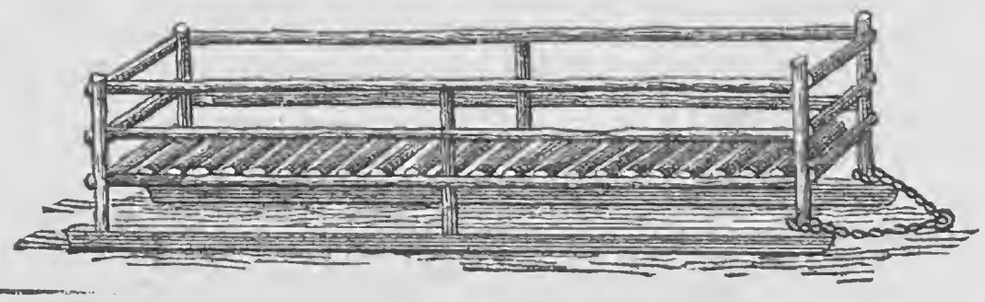
COL. F. D. CURTIS.

HIRAM MOREHOUSE is a successful farmer, and has a great deal of pride in his dairy. With commendable forethought, a number of years ago he obtained the services of a Jersey bull from Kirby Homestead, and raised a number of half-bred Jersey cows. He did not get a sufficient number to meet his wishes, and so made up the balance with the best native cows he could obtain. With the help of the Jersey blood and skillful, careful management of the milk, he produced a quality of butter which was always sought for in the market.

Not satisfied with these results, however, as the hot weather always proved a serious drawback in the raising of the cream and the making of the butter, this Spring he purchased a Moseley Cabinet Creamery, and now with the aid of a small quantity of ice, he makes in "dog-days" just as good butter as in a more favorable part of the year.

The possession of this creamery, with its economical appliances and results, put Mr. Morehouse in a philosophical frame of mind, and he thought he would go a step further and test each cow by herself, as he got a notion that all cows were not alike valuable, and those which gave large messes of milk were not likely to give as rich milk as those which gave less. While this might not always be true, he still thought it reasonable that it might be the case. His experiments revealed the fact that two of his "best cows,"—the two which gave the most milk—furnished the least cream. The one which filled a pail night and morning produced scarcely none at all, which demonstrated the fact that the "best cows" were entirely unsuited for a butter dairy. No doubt these cows would be profitable for cheese making, or where the milk is sold, as quantity, in the latter case, is usually more of an object than quality.

The experiments of Mr. Morehouse in testing the comparative butter value of his cows has opened the eyes of many other butter dairymen as to the fact whether they are not milking their "best cows" and going through all the work and trying to make butter from them, with a decided loss. Under the old system, of setting milk in pans and mixing it together, a cow might be milked all her life without any return for the feed and care bestowed upon her other than the income derived through the swill barrel—certainly a small percentage.



SLED RACK.—FIG. 240.

We once knew a cow which gave a large mess of milk, but could never fatten her own calf. Her owner, we recollect, said that while this was true, when her milk was mixed with the other cows' it made butter.

This is quite a common notion among farmers, that by mixing the milk it all counts and makes butter alike. Not one farmer in a hundred ever takes the trouble to test his cows separately. It is unwise not to do so. We hold that the milk of a cow, which would not make butter when set by itself, is worthless for a butter dairy, and no amount of mixing with other milk will impart to it the butyraceous qualities which it lacks. We would go still further and agree with the American Dairy Cattle Club in their standard, that if a cow will not make a pound of butter a day, she is unprofitable. We are making this Summer twice as much butter as formerly, with the aid of our Cabinet Creamery, in connection with the extra care which the cows received last Spring. A hungry cow cannot give rich milk. It is true that an excellent cow may be thin in flesh, and at the same time have a large flow of good milk; but such a cow must be sufficiently supplied with nutritions food, so that her system is not depleted, or else her milk will be thin and watery. Such a condition is indicated by a staring coat, harsh skin and evidences of weakness, while the opposite shows a soft skin and hair, with a bright eye and a sprightly step. A successful dairyman like Mr. Morehouse never spares feed for his cows.

WHY ALL THE BUTTER GLOBULES DON'T RISE.

T. H. HOSKINS, M. D.

MR. WILLARD, in a recent article in the Country Gentlemen, attributes the non-rising of the minuter globules of cream to their being weighted with an enveloping membrane of "nitrogenous matter." He seems to think there *can* be no other intelligible cause for the prolonged suspension of the lesser globules. And I regret to see that Mr. Goodman adopts without reserve the "membrane" theory in his ingenious article upon a new nomenclature, in the RURAL of July 3. I say I regret it, because Mr. Goodman is one of the advance-guard of students and writers upon dairy topics, and we have a right to demand of them exactitude in matters of fact. No one acquainted with the present state of knowledge in regard to this very difficult point, will say that it is settled affirmatively. Many microscopists of eminence deny the existence of an enveloping membrane upon the globule. They are supported by the authority of leading chemists and physiologists, and while the question remains in this state of suspense, we who can claim only the standing of practical observers ought not to dogmatize. Having studied the matter for 20 years, I am yet not prepared to dogmatize on the other side. I look forward, indeed, with great confidence to the appearance of some conclusive demonstration of what I believe to be the fact—that the butter globule swims free and uncovered in the serum of milk. I see many reasons (some of which I have rehearsed in these columns) why this must be true, and I know of no reasons on the other side except the existence of optical appearances under the microscope, which all experts know to be illusive, and the *a priori* hypothesis that the membrane is ruptured by churning, or removed by the action of the acid of sour milk. As butter is easily and quickly made from sweet cream, and as from sweet cream the best keeping butter in the world is now produced, it would seem that this hypothesis meets with slim support from the practical side.

But what I took up my pencil particularly to mention was that there is quite sufficient cause for the continued suspension of the minuter globules, in the very fact of their minuteness, without need of calling in the idea of their being weighted by a membrane. While the floating power of the larger globules is sufficient easily to overcome that resistance, yet as they decrease in size the floating power diminishes until the superior levity of the smallest of them is almost or quite counterbalanced by the resistance (viscidity) of the medium in which they swim.

A pertinent illustration of this comes pat before me in a glass of water upon my desk. This presents a slightly milky or opalescent appearance, which has existed in my well water for nearly a week, and recurs every month or two. Examination under the microscope reveals the cause of this lack of clearness in very minute flakes of mica, which present themselves quite abundantly in the field of the microscope under a power of 200 diameters. The well is a bored one, curbed with wood, and the water is found in a stratum of quick-sand 34 feet from the surface. I accepted this rather than bore deeper, but at the cost of such milky-looking water occasionally caused, no doubt, by little slides of quick-sand from the sides of the cavity below the end of the tubing. The fine particles once set afloat are kept from sinking by the resistance of the water to their movements. They go *with* whatever currents occur in the water, but their superior weight only slowly prevails to make them move *through* the water and deposit themselves at the bottom of the vessel. And yet mica in mass, or in particles of a size sufficient to be seen by the naked eye, sinks at once in water.

The difference in specific gravity between the cream globules and the serum is not nearly so great as between mica and water, yet it is only the smallest of the milk globules that fail to rise, and the total quantity left in the milk under cold setting properly managed is but a very small percentage of the whole. This fact, so far as it can weigh at all in connection with the matter of an investing membrane, goes against it, because so little is the difference in weight between the serum and the fat of the butter globules that a caseous membrane would probably overweigh a much larger proportion of the globules than experience shows to be actually retained in the milk.

Orleans Co., Vt.

The Home Market for Cheese.

What "A Western Farmer" has to say on this subject in the RURAL for June 12 is excellent advice to dairymen, and is the true method to extend the consumption of this, one of their greatest products. But in order to suit small families, a sufficient number of cheeses should be made, not to exceed a weight of over three to five pounds. Of such sizes they could be consumed after cutting, before drying up or molding. The best shape for them is like that of the common round, flat form. If in balls, or pine-apple shape, the rind is so thick as to make too great a percentage of loss in cutting up for the table. These cheeses should vary from a middling to best quality, so as to be sold at different prices, and the manufacturer's name be stamped upon them, so that the purchasers could be sure of their quality. A fancy shape is not requisite to obtain a good price. Customers would only look to the quality.

My family being small, I am obliged now to purchase two or three pounds of cheese at a time of the grocer, which are cut from a large, common-shaped cheese. If I buy more at a time, and keep it in quite a dry place, before my family can consume the whole the last part becomes so hard as to be uneatable. If put in a damper place, it then gets moldy. Small cheeses could be easily kept till consumed, without danger of getting either too dry and hard, or moldy, as the rind would protect them from both of these for a reasonable length of time. Z.

BLOODY MILK.—Cows coming in are not generally over-fed by dairymen, but as soon as calved, a grave error is often made in the sudden change to a rich food, which in many instances will give rise to some disease of the mammary gland by over-stimulation. Cows with large udders are liable to bruise the gland by lying on stones and setting up inflammation of the part injured—hence bloody milk.

Treatment.—Place the animal in a poor pasture and *feed* on laxative food. Bathe the udder with cold water and give one to one and one-half pound of Epsom salts.

The Herdsman.

POLLED NORFOLK AND SUFFOLK CATTLE.

AT the recent show at Downham, England, it is reported in the Agricultural Gazette, that some of the Norfolk cows exhibited there were as "meaty as the Aberdeens" (Polled Angus), "and as milky as the old Suffolk stock." Our readers will recollect that the Norfolks (red, hornless cattle) have heretofore been bred about this size, and as fine in all their parts as the Devon; and although fair milkers, they did not excel at the pail as much as those of a cognate breed in the neighboring county of Suffolk. The latter are lighter and of not so brilliant a shade of red as the former, nor are they quite so fine in their points. On the other hand, they are larger in bulk and greater milkers. We believe they are now mixing the two breeds somewhat, and are making selections from this cross, which combine the merits of the two. They are also crossing the Norfolk to a moderate extent with medium-sized, compact, red Short-horned bulls from milking families. The produce of these are increased in size considerably—a great desideratum, as the original Norfolk were generally too small for a profitable breeding of the present day. Out of these three crossings we shall expect that an improved polled breed of cows will grow up, excelling in the diary, and when dried off for fattening, laying on flesh quite as rapidly as the Short-horn, and that of as good a quality. It will then become one of the most valuable

breeds of cattle, and well worthy of importatioo.

First-Class English Mutton Sheep.

As sheep of this class are annually becoming of greater consideration to the farmers of the United States, we will give a few notes made upon them at the late exhibition of the Bath and West of Englaod Society. The South Downs are regarded as the most hardy, active and industrious lu getting a good livlog on scanty herbage, and are the best suited for hilly lands. Their mutton and wool are of first quality.

The Hampshire Downs are characterized as a coarser edition of the South Down.

The Shropshire Downs are larger and more prolific, yet require better pasture than the South Down, and are not of so symmetrical a form. Their yield of mutton and wool is greater, but neither is of so good a quality.

Oxfordshire Downs are the largest of the Down tribe; give wool of a longer staple than that of the otuers, and mutton quite equal to the best, save that of the South Downs. They are of fine form, hardy, thrifty and prolific.

CROSSES OF POLLED ANGUS CATTLE on Texan cows are highly spoken of, on accouot of the great hardihood of their progeny, the superior quality of their beef, and the absence of horns which tends to reuder them quiet feeders, besides doing away with all risk of injury to their companions from goring, and making it much easier to ship them without injury over long distances. As yet, only a few bulls of this fine breed have been introduced into the West or Southwest; but it is highly probable that the excellent results produced by such crosses, especially when continued for two or three removes from the common stock, will make the Polled Angus a favorite in all the great cattle raising sections.

Scientific and Useful.

NEW JERSEY AGRICULTURAL EXPERIMENT STATION.—4.

THE commercial fertilizers, so much used by farmers, are estimated in value for their chemical composition, which is ascertained by analysis. The following analyses and estimates have been made from samples sent to the Station by different farmers and dealers in the State. The study of these results may prove to be of much interest to farmers.

GUANOS.—The following analyses show the great variation in the composition and value of some of the natural and artificial fertilizers which were sold under this name.

	17	20	14	7	11	25
Nitrogen as ammonia	5.36	4.53	0.31	1.16	1.17	0.00
" in organic matter	1.73	1.43	2.42	2.57	1.83	3.94
Phosphoric acid, soluble	5.25	1.73	5.95	1.09	(3.23	3.83
" " reverted	2.75	1.44	1.38	1.34		
" " insoluble	8.83	8.03	4.06	4.29	3.33	1.93
Potash	2.27	2.16	.60	2.72	2.27	....
Cost per ton	$55 00	$45 00	$45 00	$40 00	$40 00	$30 00
Estimated value per ton	$37 00	$49 00	$34 65	$29 03	$24 68	$23 81

17. Peruvian Guano No. 1. Sampled from stock of Garretson & Bowne, New Brunswick—fine and dry; a good sample of Peruvian guano.

20. Peruvian guano.—From stock of G. F. Doughton, Moorestown, sent by S. L. Roberts, Hartford, N. J.—Fine, but caked. It was peculiar in containing only three per cent. of moisture, but it contained about 25 per cent. of common salt.

14. Manhattan blood guano. Sampled from stock of Garretson & Bowne, New Brunswick. This artificial guano is uniformly in excellent condition.

7. Marine guano, sent by Wm. S. Taylor, of Burlington, and sold by J. J. Allen's Sons, Philadelphia.

11. Marine guano, sent by G. T. Haines, of Haddenfield, and sold by J. J. Allen's Son's, Philadelphia. Both these samples were in good condition and are manufactured articles.

26. Eastern Island fish guano, sent by Samuel L. Burrough, Merchantville, from the stock of Wilson Fitzgerald & Co., Camden. This sample contains nearly 40 per cent. of sulphate of lime, which possibly was used as a drier.

SUPERPHOSPHATES.—The followiog are analyses of samples which have been sent to the Station for examination.

	22	16	19	8	18	21
Nitrogen in organic matter	1.98	1.61	1.64	1.19	2.11	1.64
Phosphoric acid, soluble	3.97	4.42	5.15	2.27	2.40	2.30
" " reverted	1.73	2.62	0.35	1.57	2.91	1.54
" " insoluble	5.53	2.40	1.95	6.58	1.79	2.78
Potash	3.46	2.37	2.92	2.20	—	....
Cost per ton	$36 00	$40 00	$24 00	$36 00	$35 00	$35 00
Estimated value	$34 00	$27 70	$25 43	$25 34	$22 18	$18 97

22. Phosphate, manufactured by Moro Phillips, Camden; sent by Wm. B. Cooper, Camden; in good conditioo.

16. Star bone phosphate, manufactured by J. E. Tygert & Co., Philadelphia; sampled from stock of Garretson & Bowne, New Brunswick; in good condition.

19. U. S. phosphate, manufactured by Lester Brothers, Newark; sent by John C. Tatum, Woodbury, Gloucester Co.; conditiou good.

8. High grade superphosphate, manufactured by Farmers' Bone and Fertiliziog Co., Philadelphia; sent by S. J. Dubois, Daretown, Salem Co.; in good condition.

18. Salified super-phosphate, manufactnred by N. Y. Sup. Phos. Works; sampled from stock of Garretson & Bowne, New Brunswiek.

21. Twenty-five dollar phosphate, manufactured by Baugh & Son, Philadelphia; sent by Wm. R. Hancock, of Columbus, Bur. Co.; good condltion.

FERTILIZERS, NAMES NOT SIGNIFICANT.—In this group are lucluded several manures, sold under arbitrary names, which have been sent for analysis:

	10	13	23	27
Nitrogen as ammonia	....	0.81	....	....
" inorganic matter	4.83	2.16	1.56	1.99
Phosphoric acid, soluble	5.87	1.79	4.57	3.00
" " reverted	1.82	6.58	3.20	1.28
" " insoluble	1.81	5.98	7.78	1.54
Potash	6 20	3.85	1.56	1.00
Cost per ton	$45 00	$38 00	$26 00	$30 00
Estimated value	$43 44	$40 91	$37 11	$20 83

10. Stockbridge manure for corn, manufactured by Bowker Fert. Co., Boston & New York. Sampled by T. S. Evans, from stock of Garretson & Bowne, New Brunswick.

13. Mapes' complete fertilizer, A., manufactured by Mapes Formula and Peruvian Guano Co., N. Y. Sampled from stock of Elias Runyon's Sons, New Brunswick.

23. Phuine, manufactured by Moro Phillips, Camden; sent by Wm. B. Cooper, Camden.

27. Economical, manufactured by Baugh & Son, Philadelphia; sent by J. G. Whitall, Woodbury, Gloucester Co.

GEO. H. COOK, Director.

New Brunswick, July 3, 1880.

Miscellaneous.

Cuzco Corn.

I AM of opinion that this is the same kind of corn that was sent to me from Peru, about the year 1847, and samples of which I distributed among my friends for trial, from New York as far south as Florida. It had an immense growth of stalk. In New York it shot up 18 or 20 feet high; far south, if I mistake not, 25 to 30 feet high, according to the richness of the land. But in neither locality did it produce a single ripe ear—at the North, in fact, it did not ear at all; while at the South, a few abortive cars were formed, but so high up the stalk that my friends humorously wrote me they had to get a tall ladder to place against the stalks in order to pluck these ears.

A. B. ALLEN.

[As we have already stated, we tried this "Cuzco" corn several years ago. There was no appearance of "sets" when frosts occurred. That this corn should be advertised here in the North as something wonderful and that such advertisements should be permitted to pass without editorial comment, are all there is "wonderful" about it.—Eds.]

WHAT OTHERS SAY.

ADVANTAGE OF BREEDING GOATS.—Mr. A. B. Allen writes as follows in the N. Y. Tribune: There are thousands of acres of poor, stony, hilly and rocky mountain land in the United States, which can never be cultivated to any profit; but if not wanted for the growth of wood and timber, it might be made to yield a fair income, if stocked with a good breed of well-fleeced and large milking goats. The cheese made from such brings an extra-high price, and the milk is very beneficial, daily used, to those who are afflicted with certain complaints. Many persons resort to the mountains of Switzerland every summer for the express purpose of drinking goat's milk drawn fresh from the udder. In addition to the cheese and milk, the fleeces of wool, or, more properly, hair, shorn from a choice breed of goats are of considerable value. During the first four months of this year 4,934,443 pounds of goats' hair were imported into England, valued at £407,797—equivalent to about $2,000,000 of our money. This would be within a fraction of 40 cents per pound, about the average price of good sheeps' wool.

FROM the First Report of the Cornell University Experiment Station (1879-80) we take the following interesting items from the report of Prof. I. P. Roberts:

I.

WHEAT—DIFFERENT FERTILIZERS. 1874-5. Plots one acre in size.

Treatment.	Yield. Pounds
1. 16 tons farmyard manure, moderately well rotted, applied on surface and harrowed in	583.5
2. 100 bushels lime ashes from lime-kiln, applied on surface) cost 15 cents per bushel	561.5
3. 200 pounds Ralston's superphosphate, drilled with wheat	603
4. 200 pounds Woodruff & Chamberlain's superphosphate, drilled with wheat	648.5
5. Nothing	441.5
6. 2000 pounds Phillips's improved superphosphate, drilled with wheat	618.5

The season was poor and the Wioter severe, and many pieces of wheat were plowed up. The soil was clayey: the clover and Timothy sod was plowed in July; the seed (Clawson) was drilled September 8 and 9. Land in fine order. All the plots were sowed to Timothy a few days after the wheat was sowed. The great injury to wheat which occurred in March permitted the Timothy to make a very rank growth, especially on plot No. 1, where farm manures were applied; from this fact the yield of No. 1 was diminished far more than any other. The increased growth of the grass on this plot over the others was very noticeable the next year.

IV.

WHEAT—DIFFERENT METHODS OF SEEDING AND MANURING. 1875-6.—The field and arrangement of plots were the same as in I.

Treatment.	Yield. bu.	lbs.
1. Drilled, 2 bushels, 2 bushels plaster	22	55
2. " 2 " no fertilizer	20	40
3. " 3 " "	18	40
4. " 2 " 200 lbs. superphosphate	23	20
5. " 3 " " "	28	20
6. " 2.25 " " "	21	15
7. " 2 " " "	21	—
8. Broadcast, 2 bushels, " "	18	30
9. Drilled, 1.5 " " "	*28	50
10. " 1 " " "	*25	—

* Protected by fence and snow.

V.

GERMINATING POWER OF OLD WHEAT. 1874.—Two hundred varieties from the museum, which had been five years from England, were sowed and all failed to germinate. These varieties had been kept unthrashed in the museum under the most favorable circumstances.

IX.

WHEAT—SUMMARY OF RESULTS.

DRILLED AND BROADCAST SOWING.

	Drilled. bu.	lbs.	B'dcast. bu.	lbs.
1875	24	56	22	30
1876	21	—	18	30
1877	25	30	24	45
1878	24	24	22	—
Average	23	56¼	21	56¼

THICK AND THIN SEEDING.

	bu.	lbs.
1 year, 8½ bushels	30	50
4 years, 8 "	23	28½
4 " 2 "	20	15
2 " 2¼ and 2½ bushels	18	22½
3 " 3 y'rs 1½ bushels and 1 year 1¾ bush.	15	25
1 " ¾ bushel (protected by fence and snow, hence cannot be fairly compared with others)	25	—

Comparison of all plots phosphated for four years with adjoining plots on which no fertilizers were used.

	bu.	lbs.
Average of all phosphated plots	23	31½
" " adjoining unfertilized plots	22	33

Phosphates do not seem to produce marked results on pine and hemlock lands of drift formation; results upon similar soils in other localities sustain us in this inference from our experiments. On maple and beach lands of a different formation they have produced marked results.

Comparison of all plots plastered for three years with adjoining plots unplastered.

	bu.	lbs.
Plastered, average	24	33½
Not plastered, average	23	41½

Comparison of plots hoed for two years with adjoining plots not hoed.

	bu.	lbs.
Hoed	18	50
Not hoed	23	10

It must be remembered that while the plots were of the same size, there were twice as many drill marks in the plots not hoed as in the hoed, and consequently twice as much seed upon these plots.

V.

OATS.—SUMMARY OF RESULTS.—

AVERAGES OF THICK AND THIN SEEDING FOR FOUR YEARS.

	bu.	lbs.
5 pecks per acre	39	29
7 and 8 pecks per acre	41	25
12 " "	42	20
16 " "	42	31
Two years' average of all plots treated with commercial fertilizers	35	2
Two years' average of unmanured plots	30	4⅘
Broadcast, 2 years	61	16
Drilled, 2 years	58	—
Subsoiled, 2 years	46	19
Not subsoiled, 2 years	48	33

C.

EXPERIMENTS WITH CORN.—All quantities, unless otherwise designated, relate to the acre, and, as to the crop, relate to bushels and pounds of ears, 70 pounds of ears being allowed to the bushel. All plots were separated by one vacant row. All manures, unless otherwise stated, were dropped in the hill and mixed with the soil.

I.

CORN.—DIFFERENT CULTURE, LIMING, SUCKERING 1875.—Plots 1 to 13 inclusive were planted with Eastern, 8-rowed, yellow corn. In 1874 the ground was in corn, without manure, and in 1872 and 1873 in clover and Timothy. The soil was a sandy loam.

Treatment.	Yield lbs. per plot. Sound.	Soft.	Yield. bu.	lbs.
1. Ridge culture	352	55	58	10
2. Deep "	290	19½	44	15
3. Shallow "	324	43½	52	35
4. Continuous culture, 7 times	362	22	54	60
5. Drilled culture, 1 stalk per ft.	365½	18	54	55
6. 5 stalks in a hill	369	29	56	60
7. 4 stalks in a hill	438	44	68	60
8. 3 stalks in a hill	301½	127	61	15
9. 2 stalks in a hill	226	49	45	—
10. Not limed, Eastern variety	335	51	55	10
11. Limed, 200 bushels per acre	433	57	78	40
12. Not suckered	328	50	55	30
13. Suckered twice	306	42	49	50
14. Not limed, Western variety..not fully ripe.	48		55	
15. 200 bu. lime, Western variety	"		77	60

II.

CORN.—DIFFERENT SEEDING, CULTURE AND MANURING. 1876.—The soil was very sandy and gravelly, and suffered from drought. Four stalks were left in each hill, unless otherwise specified; the hills were 3 5 feet apart both ways. The corn was cultivated four times and hoed once.

Treatment.	Yield. bu.	lbs.
1. 5 stalks per hill	41	10
2. 4 " "	42	20
3. 3 " "	42	20
4. 2 " "	34	20
5. 2 spoonfuls plaster to hill applied June 5, corn coming up	29	30
6. Not plastered	36	40
7. Suckered	38	60
8. Not suckered	39	10
9. Seed soaked two hours in hot water and rolled in plaster	41	50
10. Seed from tips of ears	31	20
11. " " butts of ears	29	10
12. " " middle of ears	33	10
13. 500 pounds Ralston's superphosphate	38	20
14. 500 " Peterson & Son's superphosp'te	34	20
15. Nothing	35	30
16. 500 pounds Bradley's superphosphate	37	10
17. Plaster applied June 5	28	40
18. Ashes, 3 spoonfuls per hill, June 5	38	20
19. 5 stalks per hill	38	60
20. 4 " "	34	60
21. 3 " "	32	40
22. 2 " "	29	10
23. 2 spoonfuls plaster, June 5	35	30
24. Not plastered	29	50
25. Seed soaked 13 hours and rolled in plaster	40	40
26. Suckered	28	40
27. Not suckered	38	50
28. Seed from tips of ears	38	20
29. " " butts of ears	40	40
30. 2 spoonfuls ashes, June 5	38	50
31. 2 " plaster and ashes	37	50
32. Peterson & Son's superphosp'te, same as 14	34	30
33. Nothing	34	20
34. Bradley's superphosphate, same as 16	36	40
35. Nothing	33	50
36. Ralston's superphosphate, same as 13	34	60
37. Cayuga plaster, applied in hill, unsoaked seed	33	13
38. Syracuse plaster, applied on hill, June 5	36	—
39. " " in hill, unsoaked	30	60
40. Western corn, no fertilizer	34	60

Many of the preceding plots are duplicates, in order to make allowance for variation in soil.

AVERAGE OF DUPLICATES.

Plots and Treatment.	Yield. bu.	lbs.
Nos. 1 and 19, 5 stalks	40	—
" 2 and 24, 4 "	38	41
" 3 and 21, 3 "	27	30
" 4 and 22, 2 "	31	50
" 5, 23 and 17, plaster on hill	34	23
" 6 and 24, no plaster	33	10
" 7 and 26, suckered	33	50
" 8 and 27, not suckered	36	30
" 9 and 25, seed soaked and rolled in plaster	41	16
" 10 and 23, seed from tips	34	60
" 11 and 29, " " butts	34	60
" 12 " " middle	33	10
" 13 and 36, Ralston's superphosphate	36	40
" 14 and 32, Peterson & Son's superphosp'te	34	20
" 16 and 34, Bradley's superphosphate	36	60
" 18 and 30, ashes	33	40
" 2, 8, 15, 24, 27, 33, 35, nothing	35	33

III.

CORN—STOCKBRIDGE FERTILIZER, 1876.—The soil was clayey. In 1873 the land produced wheat, no manure being used, and in 1874 clover and Timothy, mowed for hay in June and for seed in September; in 1875 it was mowed for hay twice. It was plowed in September, 1875, and replowed May 23, 1876.

A plot numbered 2, of .25 of an acre, received a dressing of 180 pounds of Stockbridge corn manure, said to contain 16 pounds of nitrogen, 19.5 pounds of potash, 7.75 pounds of soluble phosphoric acid, and costing $6 25; it was claimed that this quantity applied to a quarter of an acre would produce 12 5 bushels more than the natural yield. On the two sides of this plot were plots of one-eighth of an acre, numbered 1 and 3, which were unfertilized.

The fertilizer was sowed broadcast after plowing, and harrowed three times before planting. Plot No. 2 contained 1,102 hills, and yielded 1,070.5 pounds of corn in the ear, all of which are good and sound. Plots Nos. 1 and 3 contained the same number of hills, were planted, husked and weighed at the same time as No. 2, and weighed 1071.25 pounds. This also was sound, but not of as good quality nor as highly colored as that of No. 2. The stalks on No. 2 were perceptibly larger than on Nos. 1 and 3, and all through the season had a darker and more luxuriant color.

VIII.

CORN—SUMMARY OF RESULTS.—

Comparison of all plots phosphated, for three years, with adjoining plots on which no fertilizers were used.

	bu.	lbs.
Phosphated, average	42	10
No fertilizer, "	40	55

Comparison of all plots plastered, for three years, with adjoining plots not plastered.

	bu.	lbs.
Plastered, average	45	
Not plastered, average	39	

Comparison of all plots suckered, for three years, with adjoining plots not suckered.

	bu.	lbs.
Suckered, average	46	51
Not suckered, average	47	36

Comparison of plots having various numbers of stalks per hill, for three years.

	bu.	lbs.
2 stalks per hill, average	42	10
3 " " "	52	25
4 " " "	53	3
5 " " "	48	46

Comparison of the average of unfertilized plots which *adjoined* both phosphated and plastered plots with them; and also a comparison of adjoining plastered and phosphated plots.

	bu.	lbs.
No fertilizer	40	1
Phosphated	42	10
Plastered	45	—

There is an immense field for original investigation in horticulture. Some of Mr. Lazenby's experiments seem to us neither original nor well chosen.

His tests with the germination of seeds procured from various seedsmen in this city are quite at variance with those made by the Michigan Agricultural College and reported in these columns two years ago, much to the displeasure of those seedsmen whose seeds were thus shown to be the least valuable. Mr. Lazenby's report as to the value of weevil-eaten peas is as follows:

"Some peas, each of which was affected by the pea-weevil, or in that condition usually termed "buggy," were planted and compared with a similar number of sound ones. Not over 15 per cent. of the affected peas germinated, despite the almost universal belief that "buggy" peas will grow as well as others. Of the sound peas over 90 per cent. made a good growth."

The RURAL has kept the subject prominently before the public for two years and has made for itself almost exhaustive tests. It appears that although perhaps not over 15 per cent. of weevil-eaten peas, selected without regard to size, variety or degree of injury, will germinate, yet much depends in single tests upon those conditions, as well as upon the time of ripening, season of planting, etc.

His experiments to ascertain the relative earliness of different sorts of peas are a confirmation of the RURAL'S tests made three years ago upon a larger scale, except that he ranks the Philadelphia Ex.-Early as good in quality, while we estimated it as the poorest of the 27 varieties tested.

IV.

EXPERIMENTS IN POTATO CULTURE.—I. In this test the potatoes (Early Rose) were planted May 10. The soil, a sandy loam, unmanured, and only moderately fertile. Each plot consisted of a single row 50 feet in length. The rows were four feet apart, and the seed was dropped 18 inches apart in the row. The following is the yield in pounds:

Plot No.	Seed.	Yield large.	Yield sm'l.	Tot. y'ld
1.	Small potatoes used as seed	30	55	85
2.	Medium sized whole potatoes	85	38	123
3.	Same size cut in halves, one piece per hill	93	26	119
4.	Same size cut to two eyes per piece, one piece per hill	84	19	103
5.	Cut as No. 4, two pieces per hill	96	24	120
6.	Seed end of potato planted	86	30	116
7.	Stem end planted	88	25	113
8.	Middle of potato planted	23	41	64
9.	Seed planted two inches deep	76	46	122
10.	Seed planted four inches deep	98	33	131
11.	Cultivated flat	94	31	125
12.	Cultivated in ridges	89	29	118

In plots 9 to 12 the seed used was like that in No. 3. The first to come up were the medium-sized whole potatoes in plot 2; second, the seed end in plot 6. Potatoes less than an average-sized hen's egg were classed as small.

PRESERVATION OF GREEN FODDER.—Having a large amount of refuse cabbage leaves, turnip-tops, etc., when we harvested these crops last Fall, we tried the experiment of manufacturing some "*ensilage*," adopting the process used in the manufacture of "sour hay." It consisted simply of closely packing this succulent refuse matter into a pit dug into the ground, and covering it with a layer of earth about two feet in thickness. This pit was opened last April, and the product was found to be in excellent condition, and was readily, even greedily, eaten by cattle. It had not molded in the least, but was changed into a dark-brown product with a strong, sour odor. We were gratified by the success of the experiment for it showed that by this simple process we could save and turn to good account what would otherwise have been lost.

FEEDING VALUE OF CARROTS.—We have fed our work team liberally with carrots the past season and find the crop to be one of great value for feeding horses. One bushel of carrots and one bushel of oats fed in alternate meals were of equal value to two bushels of oats alone, while they can be grown at much less expense. Horses, like human beings, require a variety of food and thrive best upon a ration that involves a change of diet. Succulent food, in part, will always prove beneficial, and this is best afforded by carrots.

A GOOD WHITEWASH FOR FARM PURPOSES.—We find the following in the Boston Journal of Chemistry: "The following is commended for outside work: Into a water-tight barrel put half a bushel of lime, and slake it with enough boiling water to cover it about five inches deep. When the slaking has been effected, add enough water to give the proper consistency, two pounds of sulphate of zinc, one part of common salt, and half a pound of alum. Various colors may now be introduced. A rich cream tint is obtained by adding about three pounds of yellow ochre. A lead or pearl color is imparted by lampblack, red by Venetian red or red ochre, and blue by sulphate of copper. The wash is to be applied as soon as ready, with a painter's or whitewasher's brush. It is durable as well as inexpensive.

THE CATALPA AS A TIMBER TREE.—Mr. C. M. Hovey says that much has been recently said in regard to the Catalpa as a timber tree, and, as it would appear from very recent information, Professor C. S. Sargent, of the Bussey Institute, has directed attention to it, and spoken highly of its value and urged its cultivation for that purpose. It appears, however, that its importance as a timber tree was known half a century ago, and its culture recommended by one so capable of judging as the late President of the United States, General Harrison, of Tippecanoe fame. In June, 1831, General Harrison delivered an address before the Agricultural Society of the county of Hamilton, Ohio, in which he spoke of the Catalpa as follows: "Our old rail fences, whose dilapidated appearance produces such a disagreeable effect around our farms, are as wasteful and expensive as they are inefficient, and the increasing price of timber and the great quantity which will be required demands speedy improvement, for the country is likely to soon lose the material for their construction. If we could procure posts and rails of the Locust or Mulberry they would last, without doubt, a great many years; but the wood of the Catalpa, a tree of such easy culture and of such rapid growth, furnishes, perhaps, a material much more durable than either of the others. This valuable tree is indigenous in the lower or southern part of Indiana, and grows to a very large size upon the Wabash River and several of its tributaries. Its property of resisting decay has been sufficiently verified in the vicinity of Vincennes, where the soil is saturated with water. One of these trees was cut down on the little stream of the Detha, five miles from Vincennes, before there was any immigration from other States. It was certainly a giant in the year 1785, when a colony of Virginians from the Southern Potomac settled there, and this Catalpa served for a foot-bridge for crossing the river. I have been informed by a worthy man, in whom I place great reliance—Dr. Hirom Dickson—that he has recently seen this tree, and found it but slightly injured from the moisture; and he assures me at the same time that a fence built with posts of the Catalpa which had been set in the ground in 1770 by his father, had been recently taken up and reset on his own farm by his brother, Major André Purcell: it had been found yet perfectly sound, and quite as good for the purpose as those which had been put down to take its place. The Catalpa is a very beautiful ornamental tree, but I do not think it is appreciated or has been employed as a timber tree elsewhere than in the neighborhood of Vincennes. It grows with remarkable vigor upon the farm of my cousin, Mr. Short, where it is increased by seeds; and I believe that in places where timber is scarce and the soil suitable to its growth, it offers very great results, not only for fencing, but for the construction of all kinds of buildings."

JUDGE JONES, writing to the Live Stock Journal, says that the draft horses in Liverpool are of wonderful excellence, are obviously well cared for and bountifully fed. They are all of the English Cart Horse or Scotch Clydesdale breeds, of amazing weight and strength, and trained to the most perfect obedience to the direction of the driver without the use of lines. But the cab and hack horses are a sorry-looking set—thin and unsound, with scarcely an animal to be found that is not lame. He never saw a lot of horses that appeared to be so hard worked and badly cared for. The arrangements there for handling, yarding, and selling stock, are excellent, and dealers in foreign cattle have nothing to complain of but the requirement of compulsory slaughter within the yards; and for this requirement he finds from the general opinion of butchers and dealers, that there is no other reason than the advantage it is supposed to give to the British farmer—a much more important character there, Judge Jones is sorry to confess, than he is in the United States. The opinion seems to be universal among the dealers on that side that our cattle have no disease.

MANY of the growers of buckwheat, says Mr. Hyde in the N. Y. Times, act as though the crop was hardly worth raising, putting it out on poor land, half plowed, and fertilized not at all. The consequence is a small, unprofitable yield. Fourteen and a half bushels were the average per acre in Massachusetts by the last census. Now, while it is true that this grain will grow where other grains would scorn to grow, it is poor policy to plow and go through all the other motions for raising a crop and raise only half a crop. If buckwheat is worth raising, let us raise a decent crop. Forty, fifty, and even seventy bushels are reported by some growers. Buckwheat responds to thorough cultivation and good fertilizing as kindly as does corn, and commands about the same price in market. If 40 bushels can be raised on an acre, it is a penny-wise and pound-foolish policy to raise only 14½.

Industrial Societies,

ANNUAL FAIR LIST.

WE herewith present a list of State and local fairs which will be held this Fall in various parts of the United States. Having been compiled from statements made by the officers of the several organizations, we believe the information here offered to be thoroughly trustworthy. We shall, at an early date, publish a supplementary list of fairs the dates of which we have not yet been able to ascertain. Secretaries of associations, the fairs of which are not given here, will do us a favor by notifying us of the time and place of their respective fairs.

STATE AND INDEPENDENT FAIRS.

Am. Institute, New York City	Sept. 15, Nov. 27
Central Michigan, Lansing	Sept. 27, Oct. 1
Central Ohio, Mechanicsburg	Aug. 24, 27
Cincinnati Indust. Ex.	Sept. 8, Oct. 9
Connecticut, Meriden	Sept. 21, 24
Delaware, Dover	Sept. 27, Oct. 2
Edinburg Union, Edinburg, Ind.	Sept. 21, 25
Ind. Enterprise, E. Enterprise, Ind.	Sept. 14, 17
Fat Stock Show, Chicago	Nov. 15, 20
Illinois, Springfield	Sept 27, Oct. 2
Indiana, Indianapolis	Sept. 27, Oct. 2
International Sheep Show, Philadelphia	Sept. 20, 25
Iowa, Des Moines	Sept. 6, 10
Knightstown Union, Knightst'n, Ind.	Aug. 31, Sept. 3
Maine, Lewiston	Sept. 21, 24
Michigan, Detroit	Sept. 13, 17
Melbourne, Australia	Nov. 1, 6
Miss. Valley Hort. Soc., St. Louis	Sept. 7, 9
Missouri, St. Louis	Oct. 4, 9
Montana, Helena	Sept. 6, 11
Nebraska, Omaha	Sept. 20, 25
New Eng. Ag. Society's Exhibition, Worcester, Mass.	Sept. 6, 9
New Jersey, Waverly	Sept. 20, 27
New York, Albany	Sept. 13, 18
Northern Ohio, Cleveland	Aug 30, Sept. 4
Northern Kentucky, Florence	Aug. 31, Sept. 4
Northeastern Indiana, Waterloo	Oct. 4, 8
Northern Indiana, Ft. Wayne	Sept. 6, 10
Nova Scotia, Kentville	Sept. 27, Oct. 1
Ohio, Columbus	Aug. 30, Sept. 3
Ohio Tri-State, Toledo	Sept. 13, 18
Pennsylvania, Philadelphia	Sept. 6, 18
Southern Ohio, Dayton	Sept. 13, 17
South Eastern Indiana, Aurora	Sept. 7, 11
Texas, Austin	Oct. 19, 23
Vermont, Montpelier	Sept. 14, 17
Virginia, Richmond	Oct. 22, 29
Western Michigan, Grand Rapids	Sept. 20, 25
Wisconsin, Madison	Sept. 6, 10
White River Ag. Soc. (Vt.), Bethel	Sept. 21, 23

COUNTY FAIRS OF OHIO.

Delaware, Delaware	Sept. 23, 24
Richland, Mansfield	Sept. 28, Oct. 1
Stark, Canton	Sept. 28, Oct. 1
Sandusky, Fremont	Sept. 28, Oct. 1
Wood, Weston	Sept. 28, Oct. 1

COUNTY FAIRS OF MICHIGAN.

Berrien, Niles	Sept. 28 Oct. 1
Branch, Coldwater	Sept. 21, 24
Hillsdale, Hillsdale	Sept. 28, Oct. 1
Van Buren, Paw Paw	Oct. 5, 8

COUNTY FAIRS OF NEW YORK.

Cattaraugus, Little Valley	Sept. 14, 16
Cayuga, Auburn	Oct. 5, 8
Chautauqua, Jamestown	Sept. 21, 23
Chemung, Elmira	Sept. 22, 25
Chenango, Norwich	Sept. 8 10
Columbia, Hudson	Sept. 14, 16
Delaware, Delhi	Sept. 28 30
Erie, Hamburg	Sept. 21, 24
Essex, Westport	Sept. 14, 16
Franklin, Malone	Sept 28, 30
Genesee, Batavia	Sept. 21, 23
Herkimer, Ilion	Sept. 14, 16
Jefferson, Watertown	Sept. 21, 23
Montgomery, Fonda	Sept. 21, 23
Ontario, Canandaigua	Sept. 28, 30
Orleans, Albion	Sept. 24, 25
Otsego, Cooperstown	Sept. 27, 29
Queens, Mineola	Sept. 28, 30
Rockland, New City	Sept. 28, 30
St. Lawrence, Canton	Sept. 14, 16
Schenectady, Schenectady	Sept. 21, 23
Schoharie, Schoharie	Sept. 21, 23
Steuben, Bath	Sept 28 Oct. 1
Suffolk, Riverhead	Oct. 5, 7
Sullivan, Monticello	Sept. 29, 30
Tioga, Owego	Sept. 28, 30
Tompkins, Ithaca	Sept. 14, 16
Yates, Penn Yan	Oct. 5, 9

DISTRICT AND COUNTY FAIRS OF IOWA.

Adair, Greenfield	Sept. 1, 3
Alamakee, Waukon	Sept. 21, 23
Appanoose, Centerville	Sept. 9, 11
Audubon, Audubon	Sept. 15, 17
Benton, Vinton	Sept. 13, 17
Black Hawk, Waterloo	Sept. 14, 16
Boone, Ogden	Sept. 19, 18
Bremer, Waverly	Sept. 14, 17
Buchanan, Independence	Sept. 14, 17
Butler, Shell Rock	Sept. 14, 16
Cass, Atlantic	Sept. 21, 24
Cedar, Tipton	Sept. 14, 17
Chickasaw, New Hampton	Sept. 22, 24
Clarke, Osceola	Sept. 21, 23
Clay, Spencer	Sept. 1, 3
Clayton, Garnavillo	Sept. 14, 16
Crawford, Denison	Sept. 15, 17
Dallas, Adel	Aug. 31, Sept. 1, 2
Davis, Bloomfield	Sept. 15, 16
Decatur, Leon	Sept. 14, 18
Delaware, Manchester	Sept. 14, 17
Des Moines, Burlington	Sept. 21, 24
District at Agency City, Agency City	Oct. 5, 8
District at Mechanicsville, Mechanicsville	Sept. 14, 16
District at Mr. Joy, Davenport	Sept. 14, 17
District at West Point, West Point	Sept. 7, 10
Fremont, Hamburg	Sept. 13, 17
Greene, Jefferson	Sept 15, 17
Grundy, Grundy Center	Sept. 22, 24
Guthrie, Guthrie Center	Sept. 13, 15
Hardin, Eldora	Sept 14, 17
Harrison, Mo Valley	Oct. 6, 8
Henry, Mt Pleasant	Sept. 14, 17
Humboldt, Humboldt	Sept. 15, 17
Jackson, Maquoketa	Sept. 8, 11
Jasper, Newton	Sept 28, Oct. 1
Lee, Donnellson	Aug. 31 Sept. 3
Mahaska, Oskaloosa	Aug. 31, Sept. 3
Marion, Knoxville	Aug 24, 27
Marshall, Marshalltown	Aug. 31, Sept. 2
Monona, Onawa City	Sept. 16 18
Monroe, Albia	Sept 14, 17
Montgomery, Red Oak	Aug. 31, Sept. 3
Maple Valley District, Battle Creek	Sept. 14, 17
Osceola, Sibley	Sept, 16, 17
Page, Clarinda	Sept. 7, 11
Powshiek at Brooklyn, Brooklyn	Sept 15, 17
Powshiek Co. Central, Malcom	Aug. 31 Sept. 2
Powshiek Malcom,	Sept. 3, 4
Scott, Davenport	Aug. 30, Sept. 3
Story, Nevada	Sept. 2, 4
Stuart District, Stuart	Sept. 28, 30
Union, Afton	Oct. 6, 8
Union at Strawberry Pt., Strawberry Pt.	Sept. 21, 24
Union at Villisca, Villisca	Sept. 14, 16
Union at West Liberty, West Liberty	Sept. 1, 3
Warren, Indianola	Sept. 28, 30
Winneshiek, Hesper	Sept. 15, 17
Worth, Northwood	Sept. 16, 18

COUNTY FAIRS OF ILLINOIS.

Lake, Waukegan	Sept. 27, 30

COUNTY FAIRS OF NEBRASKA.

Dodge, Fremont	Sept. 14, 17

COUNTY FAIRS OF KENTUCKY.

Simpson, Franklin	Sept. 16, 18

COUNTY FAIRS OF INDIANA.

Allen (Northern Ind.), Ft. Wayne	Sept. 6, 9
Blackford, Hartford City	Sept. 21, 24
Boone, Lebanon	Sept. 6, 10
Bartholomew, Columbus	Aug. 31; Sept. 4
Carroll, Delphi	
Clay, Brazil	Aug. 16, 21
Clinton, Frankfort	Aug. 23, 27
Daviess, Washington	Sept. 28 Oct. 2
Elkhart, Goshen	Sept 28, Oct. 1
Fayette (Eastern Ind.) Connersville	Sept. 7, 10
Franklin, Brookville	Sept. 21, 24
Fulton, Rochester	Sept. 15, 18
Grant, Marion	Sept. 14, 18
Gibson, Princeton	Sept. 20, 24
Greene, Linton	Oct. 4, 8
Harrison, Corydon	Sept. 13 17
Hamilton, Cicero	Aug. 24, 27
Hendricks, Danville	Sept. 14, —
Henry, New Castle	Sept. 21, 24
Howard, Kokomo	Sept 13, 18
Huntington, Huntington	Sept. 15, 18
Jackson, Brownstown	Aug. 23, 27
Jay, Portland	Oct. 5, 8
Jefferson, Madison	Aug. 24, 28
Jennings, North Vernon	
Johnson, Franklin	Sept. 14, 18
Knox, Vincennes	Oct. 11, 16
La Grange, La Grange	Sept. 22, 24
Lake, Crown Point	Sept. 14, 17
Laporte, Laporte	Sept 29, Oct 1
Lawrence, Bedford	Sept. 15, 18
Madison, Anderson	Sept. 7, 10
Miami (Peru Driving Park & Fair), Peru	Sept. 14, 18
Monroe, Bloomington	Sept. 21, 25
Montgomery, Crawfordsville	Sept. 6, 11
Morgan, Martinsville	Oct. 5, 9
Noble, Ligonier	Oct. 6, 9
Orange, Paoli	Sept. 21, 25
Perry, Rome	Oct. 4, 8
Pike, Petersburg	Sept. 6, 10
Porter, Valparaiso	Sept. 29, Oct. 1
Posey, New Harmony	Sept. 14, 17
Pulaski, Winamac	Sept. 21, 24
Putnam, Greencastle	Sept. 6, 12
Randolph, Winchestre	Sept. 15, 18
Ripley, Osgood	Aug. 17, 20
Rush, Rushville	Sept. 14, 17
Shelby, Shelbyville	Sept. 7, 11
Starke, Knox	Oct. 4
Steuben, Angola	Sept. 28, Oct. 1
Tippecanoe, Lafayette	Aug. 30, Sept. 4
Tipton, Tipton	Sept. 21, 24
Vigo, Terra Haute	Sept. 14, 18
Wabash, Wabash	Sept. 7, 10
Warren, West Lebanon	Sept. 6, 11
Warrick, Boonville	Oct. 12, 16
Wells, Bluffton	Sept. 21, 24

DISTRICT FAIRS OF INDIANA.

Bridgeton Union, Bridgeton	Aug. 23, 28
Dunkirk W. Fair Association, Dunkirk	Sept. 7, 10
Fountain, Warren and Vermillion, Covington	Sept. 21, 24
Henry, Madison and Del., Middletown	Aug. 24, 27
Logootee A and M. L'gootee	Sept. 14, 18
Middle Fork Fair, Middle Fork	Sept. 8, 10
Mitchell Dist Ag'l Society, Mitchell	Sept. 29, Oct. 1
New Ross Union Ag'l Ass'n, New Ross	Aug. 16, 21
Prairie Farmers, Francesville	Sept. 14, 17
Russellville Union, Russellville	Aug. 23, 28
Switzerland and Ohio Co. Ag'l Soc., East Enterprise	Sept. 14, 17
Thorntown Union, Thorntown	Sept. 20, 23
Union Ag'l and Mechan'l, Union City	Sept. 28, Oct. 1
Xenia Union, Xenia	Aug. 31, Sept. 3

Everywhere.

RURAL SPECIAL REPORTS.

ALA., South Lowell, Walker Co.—Crops hereabouts are looking fairly well, although corn is a little off color, owing to a protracted season of rain at, or shortly after planting time, followed by a few weeks of very hot and dry weather in May. Cotton looks first-rate, though somewhat late planted. The fruit crop promises well, although peaches were damaged by frosts in April. Strawberries have hung on well, there are yet a few to be found on the vines. The weather is now very hot, though we have just had a cool spell, with some rain. Should we get another season of rain, the crops will be better than for several years past.

B. A.

ARK., Clear Water, White Co.—Frequent and abundant rains are giving an unusually bright out-look for all kinds of farm crops in this section. Wheat and oats, with all the earlier products of the farm and garden, have been harvested and gathered in with a better yield than for many a year. Corn is now setting for ears and has a splendid color. With one or two more rains a heavy yield for this section is assured. Fruit and cotton, however, are the staple products with us, and the prospects for good crops of these are flattering indeed. The estimated net profit of a fruit farm, (mostly Wild Goose plums and peaches) near-by is $15.000. Fruit growers are now busy shipping the earlier varieties of peaches. There is about twenty per cent. more cotton planted than usual, and it looks fully twenty-five per cent. better. So the farmers hereabouts rejoice.

H. C. C.

CAL., Fresno, Fresno Co., July 5th.—The area under wheat in this county is about 100,000 acres; yield about an average crop. Some of it has been damaged by the hot northwest wind. Varieties, Propo, Sonora and White Chili. Of corn very little is grown. Of potatoes scarcely enough are grown for home consumption. Of oats and rye very little is raised. There are under barley 10,000 acres—varieties, Chevalier and bald. Sorghum is as yet an experiment. Fruit, good—varieties, apricots, nectarines, peaches and plums, all the choicest sorts, grapes, all the foreign varieties both for table and wine making. Blackberries, Kittatinny, Wilson's Early and Lawton. Among strawberries, Wilson takes the lead. Raspberries, currants and gooseberries are but an experiment, our climate is probably too hot and dry for the last-named. Figs grow to perfection. Oranges, lemons, limes and olives each and all do well.

S. H. H.

CANADA, Smith's Creek, King's Co., New Brunswick.—In a district here of 30 by 40 miles are about 800 acres of wheat, yielding about 25 bushels per acre; 5,000 acres

of oats, yielding about 35 bushels; 3,000 acres of potatoes yielding about 180 bushels, to the acre. Of corn, rye and barley, not much is grown and not any sorghum. Fruit is not of much account here; the orchards are too young to bear yet. N. M. M.

CANADA, The Ridge, North Hastings, Ont.—Our fall wheat was winter-killed. Spring wheat is yellow in the leaf but growing. Potatoes promise an abundant crop, and to the delight of the farmer, there are very few bugs! Mold's oats are stooling out wonderfully, and the cow-pea is growing with great promise. Two splendid hills of the New Surprise melon. Ovoid mangel growing well. H. T. M.

ILL., Freeport, Stephenson Co., July 9.—The harvest of wheat, rye and barley is good. Farmers are now busily cutting, and they tell me that there has never been a much better show for the farmer than now. Potatoes are mostly the Peachblows and Early Rose—more of the former than of the latter. No sorghum of any account is grown here. Considerable attention is being paid to the culture of tobacco, and with good results. No peaches raised here at all; but the trees hang very full of apples. Apples generally bear well every alternate year, and this is to be a good year. G. B. W.

IOWA, Red Oak, Montgomery Co.—Rye is short in straw, but the yield is good. Wheat, corn, oats, potatoes, etc., all promise a fine harvest. No barley is grown hereabouts. The acreage under each is in the following order: corn, wheat, oats, potatoes. Very little sorghum is grown here. Fruit is a short crop. Season dry. H. S. W.

KAN., Topeka, Shawnee Co., July 7.—The harvesting of the Winter wheat crops in Kansas is about completed and it has generally been saved in good condition. The weather throughout June was favorable; but since July 1st rains have been heavy and frequent all over the State, causing a little injury to those farmers who have been dilatory in stacking, but doing an immense amount of good to our corn crop and grasses of all kinds. Harvest commenced in the southern counties early in June and there the thrashing machine is now at work enabling us to judge more accurately regarding the probable yield of the crop just harvested. The excellent condition of the Winter wheat at the opening of Spring met with a serious check in the heavy freeze about the last week of March and the dry and windy weather in April, and on May 1st the prospects for even a half crop were far from flattering. The wheat commenced heading short, but the timely rains and cool weather in May produced a long head and fine, plump berry, which is thrashing out far in excess of the farmers' expectations. Many who estimated their crops at 6 to 10 bushels per acre are getting double that amount. Many fields that were thoroughly cultivated and seeded in good season will yield from 20 to 30 bushels, while many, again, will yield less than five bushels as the result of late Fall plowing and seeding. From returns obtained from county officials and other reliable sources I find that the Winter wheat acreage of the State will approximate 2,000,000, an increase of nearly 500,000 acres over the year 1879; and that the Spring wheat acreage will approximate 350,000, being a decrease of about 60,000 acres from the previous year, making a total increase of over 400,000 acres in the State. I estimate the total wheat product of the State at 22,000,000 bushels. The eastern part of the State as far west as and including Sedgwick, Harvey, McPherson and Saline counties, will average 12 bushels per acre. The next belt of counties westward, fifty miles wide, will yield five bushels, while those still further westward will not return the seed. The wheat crop of 1879 was 20,550,936 bushels. Corn prospects in Kansas were never finer. Its cultivation is about completed and nearly all has been "laid away." Most of it is tasselled out. It could not be in better shape to take advantage of the heavy rains and hot weather of the past ten days. The acreage last season was 2,995,070, and the product 108,704,927 bushels. The acreage this season will approximate 3,250,000 and with a yield equal to that of last season, which was below the average, the product this season will exceed 125,000,000 bushels. Oats, barley and rye are light crops this season. Flax, potatoes, broom corn, sorghum and Doura or Egyptian corn give promise of excellent crops. The "web-worms" appeared about three weeks ago in some of the extreme southwestern counties and were doing considerable damage to the young corn and tender vegetation, but a heavy rain-storm, about one week ago seems to have completely checked their operations. I have since heard of them in some of the northwestern counties, but whether they are doing serious damage I have not ascertained. Owing to the severe drought in the extreme western counties and the loss of two crops in succession, there is great suffering among the settlers west of the 99th meridian, but the eastern counties, with considerable energy, are organizing relief societies to collect and send supplies to their western brethren to enable them to tide over the present shortage in their crops. Stock of all kinds are in a fine condition. The grazing was never better and the hay crop will be good. H. R. H.

KANSAS, La Cynge, Linn Co.—Wheat—chiefly Walker—is about half a crop; corn promises well. Wheat and corn are damaged by chinch bugs. Potatoes, early, a good crop; late, not many raised. Oats, first-rate. Of rye and barley very little is raised. Of corn we raise Kansas Dent, Ohio Dent, yellow Butcher, and several smaller varieties. Of potatoes, Early Rose is the favorite. Black oats generally are grown. Sorghum is raised to a considerable extent for home use. Of Early Amber and Minnesota Amber they manufacture a first-rate article of molasses here. There is a good prospect for small fruits. Apples, three-fourths of a crop; peaches, half a crop; the trees were nearly all winter-killed. Our standard Winter apples are Jennett, Early June, Harvest Red Streak, and Summer Belleflower. Pears are a failure here, on account of Summer heat. Cattle average about sixteen per cent. over last year; hogs about one-half. M. C. B.

KY., Wilsonville, Spencer Co.—Wheat is turning out very poorly. The finest-looking fields are yielding only from 10 to 20 bushels per acre where from 30 to 45 bushels were expected. All over the State wheat is not an average crop, and there is great complaint of the grain being shriveled. During the last ten days there has been a great deal of rain which will damage our wheat somewhat. More wheat was sown than ever before. Mediterraneau, Amber, Clawson and Fultz are the varieties sown here. There is less than the usual acreage of rye, but here it is good, what there is of it; black rye. Oats are short but the head is good. The weather has been dry until the last two weeks. Barley is about an average crop. Corn from present appearances will be splendid and a large acreage is planted. Potatoes are very fine—chiefly Early Rose. The Beauties of Hebron are splendid; from the one sent by the RURAL last season 30 were planted a week later than the Early Rose, and are now two weeks earlier, I think I will have enough for a splendid patch next year. Very little of the sorghum cane is grown here. Last year I had the first ever seen in our vicinity. It did very well and made splendid sirup which was pronounced the best ever made among us. I have about an acre this year; it looks fine and will come up with my expectation I hope. We have some apples but a great many trees took the blight; the Maiden's Blush had it the worst. Peaches abundant, as are cherries, pears and plums. J. P. P.

MICH., Evart, Osceola Co.—There will be good crops of wheat and corn and also of potatoes and oats where any have been put in. No barley or sorghum is raised here. Clawson is the leading variety of wheat; Peachblow and Early Rose are the favorite potatoes. Of fruit but little is raised yet, for this section has been only lately settled. There is an abundance of wild berries—raspberries, blackberries and cranberries. C. C. V. H.

MINN., Fremont, Winona Co.—The wheat crop in this section will be below the average; we have had two poor crops, and the third not very promising. Oats good. Barley above the average. Corn never looked better for the time of year. Timothy better for hay than seed. Potatoes good; we have not had any beetles to bother us since '78. I don't think that an ounce of Paris-green will be used this season. J. G.

NEB., Ludlow, Adams Co.—As we had no rain for 7½ months, the crops have come up very irregularly. If the grain should fill well, I think there will be from 10 to 12 bushels of wheat per acre in the best places—in others considerably less. There are a few very good pieces of oats, most of it has the appearance of young oats just starting. If the weather should prove good for this, there will be perhaps 25 bushels per acre. Of rye I have seen but one small piece which will be soon cut—some eight or ten acres. There are some fair pieces of barley which I think will make 20 bushels per acre; but much of the barley and oats has been plowed up and planted to corn. The corn bids fair for a full crop: I never saw it look better in any country. Potatoes are looking very good; if the bugs do not take them there will be a large crop. T. T. G.

NEB., Momence, Fillmore Co., July 9.—Crop prospects are good in this locality. Wheat is somewhat thin, owing to the drought in the Spring, but it has large heads. Barley and oats are looking well. Corn is nearly too high to cultivate; it never looked finer. We are having plenty of rain. Potatoes are growing, and are looking well; so are vegetables. Sorghum is not much raised around here. Small fruits do best in this country; trees don't grow well, owing to our high sweeping winds. J. A.

NEW YORK, Corning, Steuben Co.—Farmers have had a fine time this year for setting out their tobacco, on account of so many showers, and it is looking well. I should say that more area is given to the weed this year than last. All crops are growing finely, for they can't help it—showers daily, and often several times a day. Some farmers have commenced haying. Grass on new pieces is good; but on old fields it will be quite light, which shows the advantage to be derived from frequent seeding; and much more seed ought to be sown to the acre than is usually put in. While speaking of hay, I wish to urge farmers to grow more clover; the more I raise, and the more I see of it, the more I am in favor of it. It is surely one of the best crops we can grow. When sowing some peas a while ago, I picked out one hundred weevil-eaten ones, and planted them separately; only ten came up, and but four are making much growth, now. My Mold's Ennobled oats were sown in drills May 3d; they are now over two feet tall and of fine color. Since landowners have been obliged, by law, to cut the weeds by the roadside, quite an improvement in the looks of the highway has been made, and many weeds have already been destroyed. All States ought to have a similar law. This is just such weather as suits weeds, and it requires much labor to keep them subdued; but they should be destroyed by all means before they go to seed, for if not, much more labor will be needed to destroy them next year. By the way, what has become of the "White Elephant?" [Wait a bit.—Eds.] F. H. D.

N. Y., Kirby Homestead, Charlton, Saratoga Co.—The acreage under wheat is nearly double that of last year, and the yield per acre will be double. Clawson the chief variety. Of corn there is an average acreage with prospect of a larger yield than last year. Of oats and barley there is more of the latter with average yield. Prospects for barley better than for oats, and nearly as good as 30 years ago. Of rye there is a large acreage with lighter yield than on average years. Of potatoes there is an average acreage with usual prospects of crop. Early Rose is the chief variety; next Peachblow and Peerless. Of sorghum there are small patches of Northern sugar cane grown as an experiment. Pears are very light, the most successful are Bartlett, Seckel and Sheldon. Apples are dropping badly, not more than two-thirds of a crop; most successful varieties, Greenings and Baldwins. Plums, large crop. F. D. C.

N. Y., Union Springs.—We are in the midst of our wheat harvest which promises to be much better than last year both in yield and quality; the average yield, I should think, will be about 20 bushels per acre. Barley, oats and corn are looking splendid, excepting those growing on the clay soil adjoining the lake, which have suffered very much for the want of rain. The average yield of barley I would place at 30 bushels; and of oats, at 50 bushels per acre. It would be difficult to make any estimate of corn at the present time. The acreage of each is about the same as usual. E. A.

N. C., San Souci, Bertie Co., July 12.—It has been very dry up to about July 1, causing a very short crop of oats and wheat. Late-planted corn and cotton came up badly, causing a poor stand; earlier-planted, however, are growing finely, and are in promising condition. There was plenty of bloom on cotton in the latter part of June, showing it to be several days earlier than usual. Worms have been very troublesome in corn, and replanting has been continual, which gives the crop a very uneven appearance. The prospect now is good for a fair yield of field crops. Gardens suffered badly on account of the long drought. J. C. F.

OHIO, Lancaster, Fairfield Co., July 10.—Corn is doing well; oats not very well—rusted in many places. Wheat is turning out not nearly so good as was thought before cutting. The rust, which was thought to be of little account, has made a good deal of shriveled wheat; and although there is a large crop of straw, there are a great many short heads; so that there will not be as much good wheat as last year. This applies to Pickaway and other adjoining counties, as far as heard from. There will be a good crop of apples and peaches; pears are very scattering. The cherry crop was very good. A variety called Dyehouse, a Morello, introduced from Kentucky about ten years ago, is making a fine record as an unfailing bearer; and notwithstanding its excellent quality, for some reason or other the insects let it alone. Blackberries, all over the hill country east and south of us, are in great abundance. Nothing in stock of any kind. J.

PA., Doe Run, Chester Co.—Wheat was ripe and ready for the reaper nearly two weeks earlier than I ever before knew it. Grass also was ready to cut earlier, and both are on hand at the same time. We in this section mostly get our hay in by the time the wheat is ripe. We have had fine harvest weather; but it is much too dry for corn, oats, and grass. The wheat crop in our county this season is middling fair; the late-sowed is rather light owing to the drought; we had no rain from the 30th of April till the 30th of May to do crops any good. The Army-worm did some damage to the wheat; notwithstanding that there is a small increase of acreage under the crop in this section, there will, I think, be no increase of bushels over either of the two last years. Oats promise to be rather light. The crop has suffered much for want of rain in the last two weeks, and is backward on account of dry weather just after seeding time; the white oats are mostly grown—no increase of acreage. It is now changing color and will be ready to cut soon. Corn is not as forward as usual at this time, it being dry all through May and the cut-worm injured some fields, so that an unusual amount of replanting was necessary. All corn on grounds plowed in the Fall or Winter was much less injured by the cut-worm than that on ground plowed in the Spring near planting time, and the corn seemed to grow better during the dry month of April on the winter-plowed land. In the fifty years I have been farming I never before saw so much difference in the corn in favor of Winter plowing as was manifest all over our section this season—no increase of acreage. But little barley is sown in this section. I have not seen a field of barley for ten years in this part of Pennsylvania. Rye is not much grown and what is raised is mostly for the straw; it looks well and is well-headed this season. The wheat grown in this section is largely of the Fultz variety, which is considered the most productive. Some still sow some Clawson, but the millers condemn it as not producing so much weight of flour to the bushel as other varieties. Red Mediterranean is coming into favor again since the Clawson has become unpopular. Several new kinds are being tried. Potatoes are largely cultivated in this section; the Early Rose has been quite popular for several years back, but does not seem to do nearly so well of late years. If planted late, particularly in dry seasons, they don't come up well, and I see many patches this year that have not come up half thick enough. The Peerless, Chili, Snowflake, and other new varieties that are being tried here, look well for this dry season; but the bugs are very numerous and require constant watching. I think from the present outlook the potato yield will not be good, yet we are now using good-size Rose potatoes that were planted on the third of April last. The acreage of potatoes is on the increase. Not nearly so much sorghum has been grown as there was some years back. There have been some experiments and a good deal of talk on the subject of making sugar from sorghum, Northern sugar cane, common corn, beets, etc. I have some Northern sugar cane and Silesian sugar beets growing, but expect to feed them to the cows. Several others are growing for the same purpose, unless a sugar-making establishment shall be got up in this section, like that near Wilmington, Del. As to fruit, apples promise only a middling crop; peaches are not very heavily cultivated in this section, and they will be a light crop on what trees there are. Cherries a very fine, full crop. Almost all varieties are doing well. Of berries—as raspberries, gooseberries, blackberries, currants, etc—very full crops set, but the worms destroyed a great deal of the gooseberries and currants by eating the leaves of the bushes. Pears are only a middling crop. The Bartlett and Seckel are amongst the best bearers and most popular here. Of apples a great many kinds are grown. The most popular variety at this time is the Smith's Cider, it being the best bearer. After repeated trials of many of the new varieties, farmers and orchardists find many of them poor bearers and are again coming to favor, the old Red Romarin, Gray Romanite, Pennock, etc., as being surer bearers than most of the newer kinds. J. W.

S. C. Aiken, Aiken Co.—After a five weeks drought, at last we have had a glorious set of showers wetting down three or four inches and saving the remains of the corn crop, etc; so now all is fresh, green, and glorious here. The dry time has shriveled up the Concord and other grapes. Peaches won't be anything, worth naming with me—they are *very* scarce indeed here. The "Cusco Corn" is in full tassel; but as yet I have not found an ear—not one. The RURAL Branching Doura is doing well; the dry time has put it back, but it is filling out—tillering out—finely and grows apace and I will try and keep it on that line all Summer. Watermelons have appeared on our street. Vegetables are excessively scarce; all dried up. On my strawberry bed about fully half the vines died out owing to the drought. I had berries for the table to the middle of June. We got more fruit from the Crescent than from all the rest of the bed together. The Sharpless did nothing. The Albany Seedlings came in a good late and brought up the rear well. The blackberry crop is a failure owing to the March frost and the later drought. S. O.

TENN., Dresden, Weakly Co., July 9.—Last Fall was very favorable for putting in a large wheat crop. The Winter being very wet and warm, and there having been but little freezing weather, wheat looked well until Spring. Then the drying winds began to tell on its growth, and it rusted badly. Now the thrashing

season is nearly over, and the yield is not over two bushels per acre. A good many fields are left uncut. The best yield is from land that was in cow-peas turned under, vine and all. Oats and rye rusted, and are short crops, and but little of either has been gathered. Of tobacco only half a crop was planted, and it is very late. Cotton, corn and grass are about an average acreage, and give fair promises of an average yield, if the weather keeps seasonable from this time on. The recent rain has revived the growing crops; gardens were failing until then. Wheat stubble is being prepared for stock. A good many farmers have finished sowing peas, and the land under this crop will, most of it, be sown with Fall wheat. Farmers will have to send to some other section for seed wheat, consequently there may not be as large a crop put in as usual. Three bad crops of wheat have disheartened a good many farmers. The cow-pea crop has excelled it so far as a paying crop; for peas sell readily at one dollar per bushel, and the vine that is left is a good fertilizer, and all other crops do well after peas. Apples, peaches and pears are each about half a crop. All small fruits are abundant. The potato beetle has made its appearance, and is devouring the crop, though the pest is a little too late to seriously injure the tubers, as they are pretty well made. But few are raised here for market, although our county will produce anything that is generally raised for the sustenance of man. We have rich grain and grass land, plenty of timber and water, as this county borders on Kentucky, midway between the Tennessee and Mississippi Rivers. P. A. C.

TEXAS, Cross Plains, Callahan Co.—Owing to dry weather our wheat did not come up until Christmas, and part of it was much injured by rust, the white varieties suffering most. It will yield 12 or 16 bushels per acre. Oats were injured by late frosts. Several pieces of millet were sown this year, and will make a good return. Potatoes were taken by the Colorado beetle. The few who are farming in this part of the county have splendid prospects for corn. As to fruits we have none as yet. I am raising the Early Amber sugar-cane which is now ready to work up; later varieties are looking well. Plenty of rain. F. P.

UTAH, Ogden City, Weber Co.—Wheat, oats, barley, rye, etc., in this county will only be about half a crop. There is also a very poor prospect for corn. Sorghum is not grown as extensively as it was a few years ago. Potatoes and the root crops are the most favorable, such as beets, carrots, etc. The peach and apricot are total failures in some places, but in a few locations a few may be raised. Apples, plums and pears are pretty good. Currants, strawberries and raspberries are very good—better than common. Gooseberries have been partly destroyed by mildew. Lucerne is abundantly grown here; we often cut three crops a year; this is our best fodder plant. The poor condition of the crops is due almost wholly to a late Spring and severe drought; we have only had one slight passing shower of rain in the last two months, making irrigation water very valuable. WM. J. H.

VA., Dunnsville, Essex Co., July 7.—We have had copious rains for ten days past, but we passed through the driest March, April, May and early June known to the oldest people. Gardens and early potatoes are almost entire failures. Wheat very short—not more than half our usual crop. Oats are nothing. Clover the same. Pastures very short, and cattle have to depend on the much-abused wire grass, the only crop that could stand the parching winds and drought. Corn is now looking first-rate, farmers have finished working it, and pastures are beginning to show their usual beauty at this season. Cattle, too, are beginning to improve; though this is not strictly a stock section there is quite a number of sheep, cattle, horses, mules, and hogs raised for market. It is a first-rate sheep country; all who engage in sheep husbandry and pay attention to it, double their capital every year, and some do a great deal better. Sheep cause very little expense here. South Downs seem best adapted to this section. The country is gradually recovering from losses, though there are still complaints of hard times, which, I suppose, are to be heard in other sections perhaps more blessed than this. Wheat sells at $1.05 to $1.10; corn, 60c for home demand; oats, none for sale. "Hands" hire from $10 to $18 per month. Land sells at $2 to $20 per acre, according to location, improvements and natural advantages. There is an abundance of fine streams. Transportation is first-rate, and the country very cheap and healthy. Doctors all complain of hard, dull times. OBSERVER.

W. VA., Kearneysville, Jefferson Co.—Wheat here will make three-quarters of an average crop—Fultz, Long Berry and Lancaster; average per acre 15 to 25 bushels. Corn looks well and has a larger acreage than last year. Potatoes look well, and will make a full crop; they are now worth $1.25 per bushel, in the market. Oats will not make more than the seed. Rye is very good. Plenty of cherries; of peaches but a few; apples a quarter of a crop; grapes a full crop, ditto all small fruits. J. A. H.

WIS., Stephensville, Outagamie Co.—There is not very much winter wheat raised in this locality. What there is, was badly winter-killed. Spring wheat looks fine, and more was sown than usual. The prospect for oats is good. That for barley, extra-good, but not over a quarter as much is sown as last year. A small amount of sorghum has been planted this year as an experiment. The fruit crop will be good. The crabs, Duchess of Oldenburgh, Red Astrachan, and other Russian apples have proven most successful. O. W. A.

WIS., Fort Atkinson, Jefferson Co.—The wheat crop at this time promises to be the best for years. Winter wheat is being cut. Rye a good crop. Barley a heavy crop—better than for ten years. Acreage of small grain one-third more than usual. Sorghum is raised generally, nearly every farmer having from a quarter to a whole acre. There will be an abundance of apples. D. W. C.

WIS, Cadiz, Green Co.—Wheat about half a crop—acreage about one-fourth larger than last year. Potatoes good—one-half more land planted to them than the year before. Oats, good—double the usual acreage. Barley good; area smaller than in '79. But little sorghum; orchards young and not much fruit. A. B.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

N. J. B., Severy, Greenwood Co., Kan., has built a bee house to keep the moths from the bees. It is described as being about 4x6 feet, and so arranged that the bees can occupy the whole space within. The entrance is about three feet from the ground, but still the moths are troublesome. Our correspondent asks for advice.

ANS.—From this meagre description we can scarcely form an idea of the house, but it does not seem to be at all practical. It appears to be one gigantic hive with a floor room of some 24 square feet, and the entrance situated three feet from the ground. Such a structure would rather favor than counteract the instincts of the moth. The relative hight of the entrance is of but little consequence since the moth can fly. There is but one remedy for the bee-moth and this consists in keeping the colonies as populous and vigorous as possible. A strong colony will repel the intruder and remove the larvæ of the moth that may appear on the comb, while a weak one will remain passive to all operations of the bee-moth. There are no moth-proof bee-hives. All hives that pretend to be such are humbugs and our advice is to leave them severely alone. A good movable frame hive, filled with active, buzzing Italian bees, is not greatly in danger of being infested with bee-moths. The apiarist will, of course, remove any occasional larvæ, that may be found on the combs, during the various operations of the hive.

Crossing Corn.

E. D. B., Grundy Centre, Iowa, asks if the White Prolific corn were crossed upon another variety with single ears, what would it make, and would the cross make more than one ear to the stalk.

ANS.—When stockmen breed to a color or quality they expect a cross of about half of each between two pure-bloods. For instance, a pure Short-horn crossed on a pure Jersey will give about a half Jersey and half Short-horn. This grade, or cross, naturally partakes of the qualities of both sire and dam in a greater or less degree, the precise degree depending mainly on the superior prepotency of one parent on the other. This natural law holds good in the vegetable kingdom as well. In crossing a pure variety of corn upon another, the grade, if we may use the term, partakes of the qualities of the grain that furnishes the pollen (male), and also of the qualities of that possessing the silk (female); therefore crossing the White Prolific upon a one-eared variety will increase the number of ears; change the quality of the grain and affect that of the cob and fodder in proportion as one may be stronger and more vigorous than the other.

Bitter Cream.

A. W. K., Searsport, Me., asks for the cause and remedy for bitter cream. All the cows are in fine health and have a good pasture.

ANS.—Bitter cream may be caused by the cow eating bitter weeds, as rag weed, boneset, willow leaves and twigs, etc. Or it may be caused by the cow being injuriously affected by the hot weather, or by impure water. Or it may be caused by a fungus growth in the cream when kept in a cellar that is not well aired or has anything moldy in it. Or the cream may be kept too long, or the churning may be too long continued. If the bitterness is supposed to be from any cause without the cow, a good pinch of saltpeter in each pan of milk may change it If it is within the cow give her half an ounce of saltpeter once a day, for two or three days; this will help to carry off the impurities through the kidneys. Other causes may be removed or prevented.

Miscellaneous.

L. W. S. Pitcher, N. Y., asks how to trim squash vines, and if they will produce better when trimmed; 2, the name of a plant sent us.

ANS.—Theoretically squash vines ought to do better when trimmed than when left to themselves. Pinch the tip of the young plant when it has four leaves. Spread the four branches that are thus produced at equal distances from each other about the plant. Pinch them again when about a foot long, and allow not more than two squashes to set on each branch. By judicious trimming, which can hardly be explained upon paper, seek to direct the nourishment to the fruits instead of to the production of vines, and when the ground is covered, allow no vigorous shoot that has no fruit to expend the strength of the plant. These same directions are also applicable to the care of melons. The number of fruits that can be grown on one plant will, of course, vary with the vigor of the variety. It is by just such care that European gardeners are enabled to produce from five to eight handsome melons under a single hot-bed sash. 2. Leonurus Cardiaca, or the common motherwort.

E. B., no address, asks where Seneca wheat originated, and whether it can be improved up to the standard of a specimen ear sent us, one he picked out of a lot; also, as to Fultz.

ANS.—The Seneca wheat is better known by the name of Clawson, and originated on the farm of Stephen Clawson, hence its name. Last year we planted Clawson (Seneca), one seed about a foot apart each way, and cultivated. The heads and grain were much larger and each plant tillered remarkably. We have raised Clawson for about seven or eight years, and our present crop, in spite of drought and Army-worm, is the best we have ever raised. We drill in 1½ bushel per acre. Neither the grain nor the heads of Fultz are as large as those of Clawson, though more compact. It is no better in quality, though in many parts of the West it yields more than Clawson. We have them growing side by side, though both are so fine that it would be hard to determine before harvest which will yield most.

D. J. A., Moore's Store, Va., says that the rose-bug there destroyed all the bloom of grapes, and asks whether there is any preventive or remedy, or any grapes that bloom earlier than the Concord or Catawba.

ANS.—On a small scale of grape-growing, the bunches may be inclosed in bags of mosquito netting, or other gauze, on the first appearance of the rose-bug, and let them remain till danger from that source is over; but on a large plantation this would, of course, involve too much labor, and would therefore be impractical. The application of whale-oil soap, and other remedies that are disagreeable to the insect, is of questionable advantage. These, as a general thing, do but little good as a preventive against its ravages, and applications that would have effect on so hardened a criminal as the rose-bug might work disaster to the delicate blossoms of the grape, and the remedy thus become worse than the disease. The varities named are among the earliest to blossom.

A. S. S., Waco, Texas asks for information as to the best time and manner to harvest Egyptian corn.

ANS—The time to harvest it is when the seed is in the stiff dough state. As to the most practical manner of doing the work we are not posted; for although we have grown several varieties of sorghum at the Rural Farm they have not been harvested with a view to economize time and labor. Will some of our Kansas friends who have had experience please answer.

L. D. Belmont, Nova Scotia asks, 1, the best way to apply lime to the land; 2, how far apart should tile drains be put in sandy soil; 3, the cheapest place to buy agricultural books in New York.

ANS.—1. Sow it broadcast in the Spring: the most effective amount to apply depends on many considerations but about 40 bushels to the acre are usually deemed sufficient, though in England they often use 300 to 400 bushels per acre. 2, It will depend upon the nature of the subsoil, and upon how near the water stands to the surface. Under ordinary circumstances about 40 feet would be close enough. 3, We know of no difference in price in first-class book stores. Publishers will be able to sell as cheaply as anybody.—The recipe asked for has lately been given twice in Domestic Economy Department.

S. W., Black Mountain, asks whether attaching bells to the legs of turkeys would be likely to prevent cats and foxes from attacking them.

ANS.—Putting small bells on old turkeys might keep off foxes and wild cats. The idea is a good one and worth trying; sleigh bells would do. But the difficulty with a flock of young turkeys would be that they would be hard to take care of unless fenced in till of a good size.

G. A. T., Warsaw, Ind., asks the names and use of a couple of specimen plants sent to us.

ANS.—That bearing flowers is Poa compressa—the Blue grass of the North. The foliage is rather scanty, but it is very valuable, nevertheless, thriving on poor land. It may readily be determined by its deep bluish-green color and compressed (flattened) stems. The other specimens, having no flowers, we cannot determine.

E. H., West Granby, Hartford Co., Conn., sends a plant for name, which he says is a good forage plant It is perennial, and grows in sandy soil.

ANS.—The name of this plant is Desmodium ciliare. It belongs to the Pulse Family, in which are classed so many of our useful cultivated plants, like peas, beans, clover, etc. It may have some value as a forage plant, but it is not cultivated for that purpose.

H. L., Bedington, W. Va., sends a specimen of smooth wheat found in a field of bearded wheat, and asks whether it is a sport.

ANS.—It seems to be the same as the bearded. We have found bearded and smooth from the same root. Beards, however, are often eaten off by insects. Sometimes they decay and drop off. The rubbing of one head against another will sometimes rub the beards off.

J. W. M., Newark, N. J., asks for some remedy against the small black flies and long green maggots, with black and yellow stripes, that throng his grape vines.

ANS.—Would require specimens of the "maggots." Tobacco water will kill the aphides. They prefer the tender tips of growing vines. These may be dipped into the tobacco water.

H. R. R., Atlantic, Iowa., wants to know, 1, when to sow honey locust seeds for a hedge; 2, the best time to sow Hungarian grass.

ANS.—Gather the seed in the Fall as soon as ripe, put it in layers with moist sand in a box and bury the box. Sow the seed early the following Spring. 2. In the Spring; for fall feed it should be sown at once.

A. M., North Hector, N. Y., sends a couple of heads of wheat, of a sort he picked out of lots of Clawson three years ago; last Fall he planted seven bushels of it; it looks fine, and he asks its name.

ANS.—It is nearer to Clawson than any other variety with which we can compare it If the grain and head were mature, we could determine better.

R. J. S., Ithaca Mich., asks for some remedy against the worms that destroyed his currants and gooseberries.

ANS.—Shake and pick them off onto a sheet and destroy them, or dust hellebore on the plants. This material is poisonous, and if used care should be taken that none adheres to the fruit when gathered.

G. E. N. Afton, N. Y., sends a grass for name, and he asks where the Cook evaporator is made.

ANS.—1, The grass is Meadow Fescue—Festuca pratensis. It ripens seed very early and, of course, gives early pasturage. It does well on dry land. 2. The Blymyer M'f'g Co,, Cincinnati, O.

F. K. P., Delevan, Wis., asks for a remedy against the Cabbage worm.

ANS.—We know of nothing better than hot water. This may be put in a watering pot, boiling-hot and sprinkled upon the plants through the rose. Pepper has been recommended.

L. A., Port Claborne, Ont., Canada, asks whether Boyd's Electric Pad is of any use for healing purposes, as claimed for it in numerous advertisements.

ANS.—No; the thing is a downright humbug, as we have already stated here two or three times.

C. A. B., Chelsea, Mass., asks if cow-peas are good for eating green.

ANS.—Some varieties are used for that purpose in the South; but they are not likely to be a popular food for the genus homo where toothsome garden peas and beans are at home.

F. E., Fairview, W. Va., asks which is preferable for sowing wheat—freshly plowed ground, or that which has been plowed some time.

ANS.—We should prefer the former.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, July 17th.

W. C. L. D.—R. J. P.—J. C.—G. H.—I. B. H.—C. M.—J. T.—H. A. T.—G. R.—E. W. B.—E. P.—H. C. T.—G. L. H.—Guss.—F. M. B.—J. A. McK.—H. S.—H S.—W. W. C.—J. A. McM.—R. R.—R. R.—E. C.—E. R. R.—W. S. H.—O. W. A.—F. H. S.—F. P.—E. R. R.—B. & T.—D. W C.—J. A.—R. J. B.—M. C. B.—T. T G.—H. R. H., thanks.—H. T. M.—E. A.—W. J. H.—B. F. J.—R. S.—O. C. A.—A. E. G.—H. A. R.—Fire-fly.

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ANNOUNCEMENT.

The next Fair Edition of the Rural New-Yorker will be issued about September 1st. Instead of 28, as in our last Fair number, it will consist of 40 pages with cover, original engravings and articles written expressly for it by Dr. J. B. Lawes, of Rothamsted, A. B. Allen, William Robinson, founder and editor of the London Garden, Professor F. H. Storer, Peter B. Mead, Gov. R. W. Furnas, Prof. E. W. Stewart, B. F. Johnston, Henry Stewart and by others perhaps whose names we are not at present prepared to announce. It will contain a full account of our next Free Plant and Seed Distribution which we deem of greater value than any previously offered. It will contain our Premium List for 1881 together with other matter which it would be premature further to particularize now. Respectful notice is hereby given to advertisers that we cannot insure the insertion of advertisements in that number unless the copy is received before August 15, or possibly August 10th. We *guarantee* that the edition shall be over 75,000 copies. How much over we are not prepared to state as it will be printed from electrotypes and distributed as needed during several months. The greater part of the edition, after serving our subscribers, will be distributed at the most important of the Fall fairs. Our regular subscribers are freely invited to send for as many copies as they may be willing to distribute among those who are interested in rural affairs. All the friends of the Rural New-Yorker, who are satisfied with the efforts we have made to please and instruct them, are solicited to aid us, through this Fair number, in so extending our circulation that further improvements may be inaugurated and sustained during 1881.

Subscribers of the Rural New-Yorker will greatly oblige us if they will promptly notify us of any irregularity in the receipt of their papers. The many changes rendered necessary by our removal and an unusually large number of complaints make us desirous of rectifying any further derangements at present unknown to us as speedily as possible.

Presidential Candidates. — Again, the farmers do not seem to have made their voices heard in the late selection of candidates for the Presidency or Vice-Presidency. We are sorry that this is so, and that the one overshadowing interest of our country should ever be hidden from sight during the political intrigues that select the men for whom we must vote, or not vote at all. We can mention not less than six contributors to our columns to whom we should give our vote in preference to either of the Generals that have been chosen.

The Silver Dollar.—Attention has often been called to the essential inconvenience of the new silver dollar; and from the comparatively small number that can be kept in circulation it is plain that most people find it too heavy and bulky a coin for daily use. For a forcible presentation of this idea we have met with nothing more emphatic than the remark of a farmer's wife which we chanced to overhear recently. "*Stove-covers*! I call 'em," was her dictum; and the figure lost none of its strength from the contemptuous, strident tone in which it was uttered.

Horticola.—Who is he? We have already had this inquiry and probably, as soon as the force and spirit of his "Ruralisms" become apparent, others would like an answer to the same question. "Horticola" is one of our oldest horticultural editors and one of the few who, having experiment grounds, is enabled to write of things as he sees them. We engage him to write for the Rural New-Yorker and to tell the whole truth, regardless of any individual interests. That he may do so without incurring the personal displeasure of those whose plants or acts he may criticize or condemn; that he may write with the utmost freedom, it is better, perhaps, that his familiar name should at least for the present be withheld.

BETTER RATHER THAN MORE DAIRY PRODUCTS NEEDED.

The immense foreign trade in dairy products, attaining the largest volume ever reached last year, is pretty well sustained the present season. In three years the increase in cheese exports was 45 per cent., while a more than sevenfold advance in shipments of butter was made. The quantities exported were 141,654,473 pounds of cheese and 38,248,016 pounds of butter. In the ten months of the present fiscal year to April 30, these exports are respectively 97,122,753 and 31,144,806 pounds. The average value of the cheese was 8.9 cents per pound and of the butter nearly 17 cents, an improvement of 3½ cents on last year's prices, but still lower than for any former year since 1862. This is an absurd price, indicative of quality quite unworthy of American reputation for skill, being only two-thirds of a cent per pound for milk, and if the expenses of manufacture and freight are considered, it is a little more than a cent per pound for the milk in the hands of the farmer. It is true that a low grade of goods goes to foreign markets as a rule, yet there is a vastly larger quantity of equal worthlessness disposed of at home. The gap between grease and gilt-edged forms the abyss that yawns between loss and profit in dairying.

WHAT SHALL THE BOYS DO?

The very basis of the healthful progress of any nation or country is the practice of some mechanical industry by the majority of the men. A certain proportion may earn a living in commercial pursuits or in the professions, and some may procure a living as saloon-keepers, bar-tenders, loafers and tramps. But very few can be supported in idleness or in vice without laying a weary burden upon the industrious classes. Of late years a serious social danger is threatened by the action of the various trades' unions in refusing to admit boys into shops as apprentices. Some years ago there was a class of apprentices in every large shop or factory, and in time these boys became skillful workmen. Now the supply of such artisans is cut off at the very source, and the consequence must be (and is, for we are all discovering it in the most palpable manner) inferior materials and workmanship in nearly every tool and machine that is purchased. "The farmer pays for all," not only for inferior work of untrained artisans, but for the support of idle boys and the vicious, dangerous men that idle youths must invariably become in time.

Fortunately there is one industry into which every boy will be welcomed. There is scarcely a farmer in the land who is not prepared and ready, nay, eager, to accept the services of an apprentice for such a remuneration as his labor may deserve. Board, clothes and a little spending money he is ready to give, and, in addition, to teach him the practice of his art, which is certainly as intricate as sawing wood or hammering iron. There are no trades' unions on the farm. The farms will receive all the boys that workshops refuse, and the boys will have no cause in the end to regret the ill-nature and selfishness that drove them there.

EUROPEAN CROP REPORTS.

The latest European crop reports by cable indicate that, although the harvest everywhere, except perhaps in Russia, will be considerably better than that of last year, yet the brilliant promises earlier in the season will be realized only in a few places. In the British Isles heavy rain storms have lately been damaging the crops, and the area under wheat is less than usual, mainly on account of the farmers' discouragement at the failure of the crop for the last three or four years, and at the close competition with cheaper grain from this country. In France crops are a fair average; in Germany, the prospect for harvest seems bad in places, but middling-fair on the whole; Russia seems to have the poorest crop outlook of all our transatlantic friends, and will have only half her usual surplus of cereals for export. Austria-Hungary will have good crops; and so will Italy. It is certain that Great Britain will be a heavy importer of foreign grain; and nearly certain that France and Germany will also be considerable purchasers in our cereal markets; while Italy, Spain, Holland and Belgium will most likely also need some of our surplus wheat.

Owing to the high prices for wheat of late and the prospect that they might at any time fall considerably on the expected collapse of the American syndicate, both English and French dealers and millers have been doing only a hand-to-mouth business in that cereal. They were certain prices would not go up, and hopeful they would come down, and accordingly refused to keep any stock on hand. Again, the high figures tempted European holders of grain to sell all they could possibly spare, so that now the unmarketed supply is unusually small. Accordingly on account of the very small amount of last season's wheat in the hands of the producers and dealers, and the constant demand, increased by the late fall in price, prices across the water are now stiffer than a couple of weeks ago, and will, not unlikely, remain so at any rate until the present harvest is fully in the market.

FARMERS TO THE RESCUE!

At this season of rural plenty, when farmers throughout the land are rejoicing over splendid crops nearly everywhere, they should not for a moment permit brother farmers in any section to suffer for the necessaries of life through unavoidable mischances. When in any part of the country the members of other callings are hard-pinched, either through "strikes," slackness of work or for any other cause, their fellows all over the country are accustomed promptly and liberally to come to their relief. Shall farmers be less generous than artisans; or less considerate of the needs of those of their own avocation whom misfortune oppresses? The couple of tiers of counties along the western border of Kansas are newly and very thinly settled; the settlers, as a rule, expended their little all in the first year's expenses trusting to the hoped-for harvest for future support: owing to the drought that scorched that section in Spring, crops have been nearly total failures this year, nor were they much better last season. The people are close to absolute starvation. Owing to the distance apart of the miserable homesteads and the general poverty, neighborly help, either in the form of relief or remunerative work, is impossible. Through 16 counties gaunt, famishing families—helpless children and women and men equally helpless—must depend until next harvest on outside charity for support. The Kansas Aid Society, organized at Topeka, Kansas, appeals to the people of that and other States for help for these hungry pioneers of civilization who have been unwisely tempted to invest everything in the arduous task of reclaiming the "Great American Desert." It is to be hoped that this appeal will meet with a generous response from farmers all over the country.

AGRICULTURAL COLLEGES.

An ill return was made to the Michigan Agricultural College recently. Prof. Kedzie, the professor of Chemistry of that College, has for some time past been making some elaborate tests of the value of certain wheats, chiefly for the purpose of removing an unjust and costly discrimination against Clawson wheat by the Western Millers' Association. The millers were prejudiced against this wheat to the extent of 10 cents a bushel; that is, they charged that to that extent it was inferior to other wheats for making flour. It was never known that they sold the flour for any reduced price, but it was known that when a farmer came to a mill with a load of Clawson wheat he was "docked" precisely 10 cents a bushel off the regular market price. As Clawson wheat yielded well and was a safe and profitable kind to grow, this annoyed the Michigan farmers considerably.

Prof. Kedzie, in their interest took up the matter and by his careful, thorough and laborious work during several months proved to the millers that Clawson wheat was equal to any other, and induced them to withdraw their unfavorable discrimination. Thus he saved 10 cents a bushel on the crop of every Michigan farmer, and this was equal to 10 per cent. of the aggregate product of this wheat, and nearly every field was sown to this kind. If 1,000,000 bushels of this wheat were grown in Michigan, the difference to the farmers of the State was precisely $100,000 every year. But doubtless there were 5,000,000 bushels of this wheat grown in Michigan, and the saving would then be a round $500,000. But Clawson wheat is grown everywhere, and is a favorite kind from Long Island to the muddy Mississippi, so that the saving in the aggregate to American farmers must have been great; in fact, "there's millions in it."

But did the farmers recompense Prof. Kedzie? Did they present him with a testimonial, or even bestow a poor leather medal upon him? No. On the contrary, they rewarded him with conspicuous ingratitude; for when his College requested of the Michigan Legislature, in an humble fashion, as is the wont when appropriations are asked for agricultural purposes, that a small allowance be made to procure needed apparatus for the chemical laboratory to further extend its usefulness the modest sum asked for was refused. And yet the chemical department has saved the farmers this year half a million dollars.

From this plain tale two morals are to be drawn: First, agricultural colleges *are* of some use to the agricultural public; second, it is somehow or other in the nature of things that the most valuable public services are not always the most generously rewarded. If there is anywhere one agricultural college that has deserved generous treatment it is that at Lansing.

BREVITIES.

We call attention to the article by Prof. E. Gale, page 470.

We call the attention of our readers to the article by Mr. W. I. Chamberlain, which seems to us of some importance to pomological interests.

Concerning the Tea Problem, Gen Le Duc writes us, "I can safely write and announce that it is a full success, *quod erat demonstrandum*. Tea made from American-grown leaf, submitted to the best judges in New York and London, passes muster with the highest-priced India teas."

It is now time to set out celery plants for Winter and Spring use. The two systems—trench and surface setting—are variously opposed and commended. We are of opinion that a shallow trench is better than either extreme—a trench say three inches deep. Then plant in the bottom of that the same as if it were the surface. But whatever the plan pursued, the ground should be rich and mellow, and, above all, the plants should not suffer for moisture.

It will be seen by reference to "What Others Say" that the the First Annual Report of the Cornell Experiment Station is one that should be read by all farmers. Not less valuable than the experiments of Prof. I. P. Roberts are those of the Director, Prof. G. C. Caldwell, to which it is our intention to refer as soon as space permits. The report consists of 135 pages, and may be secured by inclosing to the Secretary, W. R. Lazenby, Ithaca, N. Y., 30 cents which barely pay the cost of publication.

Jersey Island Annual Agricultural Show.—This came off the 27th May. A large number of animals were exhibited, but very few purchasers were present. We are surprised to observe that in the reports of this show in the English papers they are confined almost entirely to remarks on a goodly form of the animals and their colors, and not a word is said as to their milk or butter production. We are fast getting over the nonsense about the color of the hair of the Jersey cow on our side of the water, and are beginning to give the highest prizes to such cows only as prove the greatest butter-makers, leaving their color entirely out of consideration. If a fancy color and extra-fine form accompany superior butter production, it makes the animal, of course, the more desirable, and she will bring a higher price on that account; still these have now become only secondary considerations with first-rate breeders.

There is a good deal of agitation in England just now about the restrictions on the importation of cattle from this country, and two members of Parliament have given notice that they will soon call up the subject for discussion in that body. There is considerable doubt about the real nature of the disease which the inspectors have of late detected in some of the animals landed, and called pleuro-pneumonia. Many insist that it is not genuine pleuro-pneumonia, but merely an ailment nearly similar in appearance, which has been engendered by the hardships of the voyage across the Atlantic coupled with the antecedent rough usage to which cattle are generally exposed here during transportation on railroads. In any case, the number of affected cattle that have lately been landed is comparatively small; out of 30,817 head landed from the United States in London during '79, only 38 are reported to have been affected in any way with pleuro-pneumonia.

Who can read the rural journals and yet not feel that improvement is constantly being made in the earliness, or lateness, fruitfulness or quality—one or all—of our fruits and crops in general? And yet when carefully investigated, it is found that the instances of actual advancement are very few. Several years ago we reported from careful tests that the Philadelphia Early was the earliest of green peas. Since then, a number have been introduced that were said to be earlier and yet, according to the recent tests of Cornell University the Philadelphia is still the earliest. How many "earliest" tomatoes have been advertised during the past five years? And yet Hathaway's Excelsior, Canada Victor, Conqueror and Arlington are as early as any. As we have said before, all advances in this direction when they have occurred are at the expense of quality. We hope the day is not distant when the public will look with indifference upon all efforts to introduce fruits or vegetables when the chief merit is "superior earliness."

Literary Miscellany.

THE FARMER FEEDETH ALL.

My lord rides through the palace gate,
My lady sweeps along in state;
The sage thinks long on many a thing,
And the maiden muses on marrying:
The minstrel harpeth merrily,
The sailor plows the foaming sea,
The huntsman kills the good red deer,
And the soldier wars without e'en fear;
But fall to each whate'er befall,
The farmer he must feed them all.

Smith hammereth cherry red the sword,
Priest preacheth pure the Holy Word;
Dame Alice worketh 'broidery well,
Clerk Richard tales of love can tell:
The tap wife sells her foaming beer,
Dan Fisher fisheth in the mere:
And courtiers ruffle, strut and shine,
While pages bring the gascon wine:
But fall to each whate'er befall,
The farmer he must feed them all.

Man builds his castles fair and high,
Wherever river runneth by;
Great cities rise in every land,
Great churches show the builder's hand;
Great arches, monuments and towers,
Fair palaces and pleasing bowers;
Great work is done, best here or there,
And well man worketh everywhere;
But work or rest, whate'er befall,
The farmer he must feed them all.

A ROMANCE.

"Ye should hae telt me that in time, Jamie—
Ye should hae telt me that lang syne, laddie."

The singer's rich contralto had reached thus far, when, by an inadvertent movement, down came the music-book with a loud clatter upon the keys, causing the quiet whist-players, from their remote corner in Mrs. Bland's large drawing-room, to look round in amazement.

"I think, after such an indignified interruption, we will not attempt 'Huntingtower' again; at any rate not this evening," said the fair singer, May Denton, laughingly.

"As you please," said her companion, stooping to recover the fallen music, and placing it again before her. "It is an especial favorite of mine lately," he added, in a low, meaning voice, the earnestness of which brought the color in a sudden rush to her cheeks.

"But you cannot justify Jamie's behavior," said she, lightly, to cover her confusion.

"He wished to try Jeanie's truth, and well she stood the test," he answered. "Is there one that would be true to me, it may be through years of waiting,—to me, with neither St. Johnstone's Bower nor Huntingtower to offer?"

"What is the next piece on your programme, young people?"

The question thus suddenly breaking in upon them came from Mrs. Bland. Unperceived by the pair at the piano, the game had concluded, and the whist-players were dispersing. Although the room was partially lit, it was only twilight, and the lovely evening seemed to draw the party like a magnet to the veranda.

"Let us listen to the cool plash of the waves instead," said Clay Nelson, regaining his composure. "It is the finest music on an evening like this."

Drawing a settee to where May had seated herself, half in and half out of the low window, he placed himself where he could gaze unperceived at the lovely profile, delicate and clear-cut as a sculptor's marble, thrown out to perfection against the darkening blue of the sky. For a short time the only sound that broke the silence was the faint ripple of the sea, and the plash of an oar as a boat slowly glided by.

But presently a woman's voice was heard, loud and harsh even in the distance, and two figures advanced up the long parade, halting opposite the veranda, and drawing May's attention towards them.

"There is that remarkable looking woman again, with the little boy. I wonder if she is under a vow never to wear anything but an immense scarlet shawl over a blue-and-green plaid dress? Did she not resemble a materialized rainbow this morning, Mr. Nelson?" Turning to him for an answer, she found, with momentary surprise, that he had left the room.

"No one seems to know who she is," said Mrs. Bland replying to her question in a general way. "But she is evidently not a lady."

Meanwhile the object of their remarks had moved hastily away, apparently to join some one, though whom May, from her position in the veranda, could not perceive. The evening wore away, and the party were dispersing to their different rooms, when Clay again made his appearance, just in time to hand May's candle to her, and open the door.

"We finish the duet to-morrow, remember," said he, pressing her hand in a lingering "good night!"

Cliff House, the residence of Mrs. Bland, faced a bold line of seacoast, sheltered behind by the towering cliff from which it derived its name, possessing a lawn and tiny grounds on the southern side, it was eminently suited for the purpose for which, ten years ago, it was taken by Mrs. Bland—that of a boarding-house. It seemed to meet all requirements; a carriage-drive reaching to a well-covered portico, a spacious drawing-room opening on a veranda, a large dining-room from which could be obtained a view of the harbor made it available alike for invalids, to young people to whom the "see and be seen" phase of seaside life was by no means objectionable, and gentlemen to whom the shipping afforded a ceaseless topic of conversation over their wine and walnuts.

Great as these advantages were there was however one that yet outbalanced them all, and that was herself, the charming hostess.

Let the season be what it might, visitors few or many, Cliff House was always full. She petted the invalids, arranged pic-nics and lawn-tennis for the young people, listened to the interminable stories of Major Cook, always beginning with "When I was in India," with untiring interest and amiability.

Moreover, she generally had an affair on hand among her guests, the happy termination of which in a wedding was in great measure due to her consummate tact, she being well aware that a character for matrimony told rather for than against the success of her establishment.

However differently society at Cliff House might have employed itself during the day, it always assembled in the large drawing-room in the evening. Whist held silent sway at one end, music and singing at the other. Although the chandeliers were lit the Venetians were frequently left undrawn, allowing all who liked to remain on the veranda, and enjoy the cool breeze of the Autumn evening and the sight of the moonlit sea.

Such was the home to which May Denton and her guardian, Major Cook, had come about twelve months previously, a few weeks before the arrival of Clay Nelson, whose general characteristics had sorely puzzled Mrs. Bland. Handsome and commanding in person, reared apparently in the lap of luxury, brought up to no profession, it was yet evident that he had made aquaintance with poverty. On his arrival he had entered the field of literature—donned "the uniform of foolscap," as he half-satirically, half-bitterly termed it. Perseveringly struggling on, burning much "midnight oil," he hoped in time to win his way as an author.

"Ye should hae telt me that in time, Jamie—
Ye should hae telt me that lang syne, laddie."

So blithely sang May Denton the next morning, as she snatched up her garden-hat for a stroll in the grounds after breakfast.

Gayly she was proceeding, her hat still in her hand, when from a sort of cave in the cliff just above her came a voice that set her pulse bounding.

"It is of no use, Caroline, we go over the same ground again and again; you know what your allowance is, and must not forestall it. Besides, it is quite sufficient."

The words were spoken in a cold, stern tone. The reply came before they were well out of his mouth.

"Sufficient!" she echoed, in a loud, harsh voice, trembling with passion—"sufficient for a wife and child! This is *your* doing; you want me out of the way."

"You need not excite yourself so, Caroline," came the words, colder and sterner than before. "Here is the money, and here."—writing on a leaf of his pocket-book—"something more than your usual allowance for the child, as you say you need it. You know the conditions on which it is given you."

Muttering in what sounded like a foreign tongue she greedily grasped the packet held out to her and flinging her red shawl over her shoulders, turned to go. Her coarse dark beauty fell on May Denton's gaze as she stood perfectly chained to the spot.

She watched the flaming garment fade gradually in the distance, and the tall, straight figure of Clay Nelson recede in an opposite direction, lingering as if waiting for some beloved object he fain would see. How long she remained under the cave she never knew. Too stunned to move, almost to think, she lay on the cool ground like one in a trance.

At length, however, it became necessary for her to return; her absence probably unnoticed at luncheon was not to be thought of from the dinner-table; and feeling that the light of her life was gone, that henceforth she would rather die than live, she slowly moved away. To have loved, and loved like this! Oh! the horror, the shame of it!

To her great relief Clay Nelson's chair at table was vacant, but he joined them soon after in the drawing-room. Making his way at once towards May, he said;

May I ask you to sing my favorite song again, May? Shall it be as a solo or a duet?"

"It shall be neither, Mr. Nelson," said she, in a cold, hard voice, drawing her slight form to its fullest hight; "and I must beg you to remember in future that my Christian name is reserved for my *friends*."

For a moment he gazed thunderstruck, mingled love and surprise struggling on his fine features. Then pride came to his aid, and he turned away with a cold "As you please, Miss Denton."

Heart-sick and weary she sought her room that night with the words of the unfinished song haunting her brain.

"Ye should hae telt me that in time, Jamie—
Ye should hae telt me that lang syne, laddie,
For had I kent o' your fause heart
Ye ne'er had gotten mine, laddie."

. . . . . .

It wanted two days of Clay Nelson's departure from Mrs. Bland's. The morning, hitherto wet and cloudy, had suddenly cleared, and a breeze, that threatened ere nightfall to become a gale, had sprung up.

Luncheon was just over; the ladies had dispersed, but the gentlemen still lingered, watching the huge foam-crested waves.

"That lady must be remarkably fond of boating to brave such a sea as that," observed Major Cook to Captain Brayshaw, an elderly naval officer, and latest arrival.

He made no reply, beyond anxiously scanning the onward career of the tiny bark through his telescope. By its powerful aid he could descry the child who, with the boatman and lady, formed the sole occupants, leaning over the side apparently trying to obtain a piece of seaweed as it floated by,

"Good heavens!" he exclaimed, flinging down his glass. "The boat has upset!"

Clay Nelson, his face white as the handkerchief he held, rushed from the room towards the beach closely followed by the others. Meanwhile the accident had been perceived on all sides; there was an outcry and a rush to the boats, which were put off in all directions, sturdy arms rowing with might and main to reach the three struggling figures that now rose, now disappeared. Once, twice the woman and child were seen to rise, but before help could reach them they sank to rise no more.

Amidst the terror-stricken crowd that thronged the shore stood May Denton. Her face, white and quivering, was turned to where Clay Nelson stood with lips compressed and eyes strained towards the boats.

"Mr. Nelson," she said, in a hoarse whisper, "can you stand thus, with your wife and child drowning, and not try to save them?"

"My wife and child!" I do not understand you, Miss Denton."

"Not understand me! Are you so utterly false? Ah! you do not know that I was a witness of one of your meetings at the cave under the cliff!"

Suddenly through the dark trouble of his face came a gleam almost of joy.

"Then that was the reason of your altered behavior, your caprice and heartlessness as I thought, that in another day would have sent me forth. my faith in woman gone forever! May, my darling, meet me by the cave this evening, and I will explain all."

Pale and trembling, but with a feeling as of a burden being lifted from her shoulders and a weight from her heart, she returned to the house.

"You have heard me speak of Fairfield, May?" said Clay Nelson, as they paced the cliff together some hours after the sad catastrophe.

She bent her head in assent.

"Fairfield Hall is the residence of my uncle, and until the last five or six years mine as well. Brought up as heir-presumptive to the estates, I followed no profession, and never once dreamed of entering the crowded field of literature for ought save my own amusement. About that time my uncle, then on the verge of seventy, went abroad to recruit his failing health, intending to pass the winter in the South or Spain. Judge of my surprise, when he suddenly returned, bringing with him a bride! And such a bride! How or where he met her he never told me. My own idea is that she was a Spanish gipsy. In spite of her beauty it was evident that her origin was of the lowest. A few months sufficed to show that she was totally unfit in every way to reign as mistress in such a place as Fairfield Hall. You have seen her, and can judge in some measure the sort of wife my uncle chose.

"For the boy's sake, the heir to the title, he did not utterly disown her. He engaged a residence for her at the west, which she held under certain conditions, and my uncle deputed me to watch over her and the young heir—not by any means a light task, as, if you overheard our last interview, May, you must have gathered. In another month the boy would have been placed in other hands. Have I anything more to say, or have I explained to your satisfaction, May?

"And I doubted you, Clay! Oh! forgive me."

"Appearances were against me, but the cloud has cleared.

Six months later, and the village of Fairfield is *en fete*. The cause of the festivity is the return of Clay and May Nelson from their honeymoon.

On the spacious terrace of Fairfield Hall, facing the assembled tenantry and villagers in gala attire, stand May and her lover-husband. Close behind them are Major Cook, the bride's guardian, and Mrs. Bland. The latter, fascinating as ever, has lately listened to the gallant Major's stories with such deference that he does not despair of winning the charming widow in the end.

May, though new to her position, is already gaining golden opinions. With her hand on her husband's arm, she smiles and bows in answer to the repeated cheers, and turning her beautiful face towards him, says softly:

"'Saint Johnston's Bower and Hunting-tower.'"

With a look of love he answers:

"'And a' that's mine is thine, lassie.'"

RECENT LITERATURE.

Bullion, Its Production and Use: New York, Bullion Pub. Co., 52 Wall St.

This is a semi-monthly review treating of the subject which the title indicates. A personal review is recommended as the best means of obtaining an accurate knowledge of its contents. We give the introduction which will enable the reader to form an idea of its merits. "The object of this work is to furnish in most convenient form, the most complete and reliable statistics of the production and use of gold and silver, both for ready reference and as a basis for the intelligent consideration of precious metal mining. It will be seen that the contributors to Bullion, from the columns of which this compilation has been made include the highest authority in the world, on the subject." This production has now taken the form of a weekly journal, thereby presenting its subjects in greater freshness.

Ballads and Lyrics. Selected and arranged by Henry Cabot Lodge. Boston, Houghton, Osgood & Co.

We quote from the preface: "This collection is intended for boys and girls between the ages of twelve and eighteen in our public and private schools. The main purpose of the book is educational. It is designed to breed a liking for good poetry, and to suggest more extended reading in the works, both in prose and in verse of the best authors. The Lyrics which have been selected are, as far as possible, the simplest of their kind both in form and in idea. The collection will fully serve its purpose if it tends to develop a taste for good poetry, or if it helps to open to children the splendid and unbounded resources of literature."

MAGAZINES FOR JULY.

HERALD OF HEALTH.—Contents: Common Mind Troubles; How to Feed Infants; Favors—Fulfillment—Our Forefathers—In Health and in Sickness; Strongest Man in the World; New Method of Prolonging Life; Habits of Bancroft the Historian—Degeneration—Food and Man; Record of Hygienic Progress; Cradles; Macaroni and Vermicelli—Pie—Cheap Frying-Pans; How to Live in Summer—Swimming all the Year—An Appreciated Wife Remembering Injuries—Manners; Woman's Conversation—Current Literature; Health Foods.

SWIMMING ALL THE YEAR.—A lady writing to the Providence Journal on the art of swimming, says: "Everywhere in Europe it is becoming the custom for girls to swim as well as boys. At Trouville, Etretat and other places in France, and at Civita Vecchia and other watering places in Italy, I have seen princesses swimming day after day as ably as the swarthiest fishing girls. In this matter of swimming," continued the writer, "the banks of the Serpentine, in Hyde Park, London, upon a warm evening, are an apt illustration or thoughtful indulgence for the boys. At a certain hour in the evening one bank of the Serpentine is crowded with hundreds of boys, eagerly watching for the signal to be given for bathing by the authorities on the opposite bank. They stand with everything stripped off except what decency requires, and at the signal the scanty remnant of raiment drops from each as if by electricity. A mad scamper and plunge, and the water is alive with rollicking boys. At another signal all must retire to give place to another crowd of impatient swimmers. The agents of the Royal Humane Society are at hand to prevent accidents, and the police see that good order is preserved. The Upper Thames, also, is the happiest stream in the world, and the manly forms and magnificent color of young Englishmen attest the benefit of the swimming and boating of the summer season. In London, Brighton and other English cities, and in San Francisco there are fine swimming baths for both sexes, which are open for the greater portion of the year. The water in many of them, both in Brighton and San Francisco, is slightly warmed by steam during the cooler months, so that a good swim may be enjoyed as well during the winter as the summer. The London baths are centrally located, are of one story in hight and prettily designed.—Herald of Health.

ECLECTIC MAGAZINE.—Contents: Steel Engraving—The Frown; The Gospel of Evolution: Morocco and the Moors; The Pinch of Poverty; Henri Murger; De Profundis; An Escape for Life from a Fijian Cyclone; White Wings: a Yachting Romance; From the Cradle; The Grievances of Women; A Plea for Musicians; Recent Science; Cymbeline in a Hindoo Play-House; Daltonism; The Regicides of this Century; An Anecdote of Instinct; Fleuss's Method of Breathing Under Water; Literary Notices; Foreign Literary Notes; Science and Art; Varieties: Winged Words—The Bedroom—Democracy.

GOOD COMPANY—NUMBER TEN.—Ellen W. Olney contributes the leading story in Good Company, Number Ten. Two others are entitled Penance Extraordinary and Interpositions of Providence. Under the guise of a fish story Mrs. L. W. Champney happily hits off in her usual vivacious style various theological isms.

Another contribution tells of "isms" in a place which was once badly given to them, Seneca Falls, including the origin of the Bloomer costume. It seems that Mrs. Bloomer was not the first to wear it, though it took its name from her.

E. S. Gilbert has a most seasonable study of nature, Along the Brook; George M. Towle writes of The Three Emperors; there is an account of an interesting historical collection of wax-works in Westminster Abbey (how many persons, travelers even, knew wax-works were one of the sights of Westminster?); Contributions from Mrs. Edward Ashley Walker and Miss Catharine Carrington; poems by Dora Read Goodale, T. S. Collier and Walter Learned; and the pros and cons as to decorating confederate graves.

An article in the Editor's Table rejoices in the cheap books now so plenty, and expresses the opinion that in the long run they will tend to promote the sale of bound books.

BRIC-A-BRAC.

"Don't you dare to kiss me once,"
She cried with blazing eyes
At John, who felt himself collapsed
To half his usual size.
"I won't," he said, "please pardon me,
And I will be so nice"—
She smiled, and said, "Dear John, I didn't
Say you shouldn't kiss me twice."

"How far is it to Club Creek?" asked a traveler of a Dutch woman. "Only shoost a leetle vays." "Is it four, six, eight or ten miles?" impatiently asked the stranger. "Yas, I dink it is," serenely replied the unmoved gate-keeper.

Take her up tenderly,
Fashioned so slenderly,
Young and so fair;
Handle her carefully,
Talk to her prayerfully—
She's cross as a bear.
—Rochester Herald.

IT IS to be hoped that mosquitoes will use the telephone this year.—New York Herald.

BREATHES there a man with soul so dead
Who never took butter and sugar on his bread
In childhood?
There doth, although the confession comes hard,
'Twas the fellow who choked on oleomargarine lard.
In childhood.

A MUSICIAN, George Sharp, had his name on the door thus: "G. Sharp." A wag of a painter who

knew something of music, early one morning made the following undeniable and significant addition: "Is a flat!"

THERE was a young man in St. Joe.
Who was a perfect oracle, you know,
They gave him no rest,
So he done the next best,
(Emgirated out west)
And now he has learned to go slow.

THAT man is indeed "hard up" who cannot get credit for even good intentions.

A DIFFICULT CONUNDRUM.

"Do you know, my dear Herr Guldenstern, that there is something very mysterious about you? We have been acquainted with one another for twenty-five years, at least, and I have not been able to solve the mystery yet."

"What may that be?"

"My dear Guldenstern, I should like to know who wears your clean shirts?"—German Paper.

THE farmer feeds the bleating u n,
The sailor sails the c e,
The gardner plants the p p, he does,
The printer takes his e e,
The stuner wipes his weeping i i,
The farmer swarms his b b,
The printer dally sets his m m,
The teamster yells his g g,
The lawyer gathers his v v,
When he has tried his k k,
The sheriff's ever on the c c,
The gambler risks his a a.

At a camp-meeting last summer a venerable sister began the hymn;

My soul be on thy guard;
Ten thousand foes arise.

She began too high. "Ten thousand," she screeched, and stopped. "Start her at five thousand!" cried a converted stock-broker present.

MISS KATE.

Miss KATE's a member of the choir,
But often comes in late,
And in the chorus sings so loud
That she's called coruscate.
—Keokuk Gate City.

Not true—Kate's voice is mild and low,
Enchanting as a lyre:
And if of it the truth you'd know,
To church go and in choir.
—Cincinnati Saturday Night.

Pat says, "Be Jaber's I ye are right;
'Tis true whwat ye hev said;
Miss-Katees singing ivery night
I hears about me head."

ANOTHER CHAPTER OF THE BONNET STORY.

A wretch of a husband told his devoted wife that he didn't see any use of her paying thirty dollars for a bonnet when all she had to do was to take her little fancy-work basket, turn it upside down, run some gilt braid through the holes and perch a scarlet poppy and a yellow sunflower on one side. She had her revenge—he didn't dare to show his face at home for several days.—Andrew's Bazar.

GEOGRAPHICAL.

"Now," in a Chili tone she said,
"I will be Frank; 'tis true,
Although you Arab brilliant catch,
I do not Caffre you."

"O, lady, Dane to hear my suit—
This heart is Scot by thee."
"Nay sir. I cannot heed your words
For you Arnaut to me."

"'Tis Welsh," she added, freezingly,
"Since Siam pressed so far,
To Hindoo you no longer here:
And so, good sir, Tartar."

"What Ottoman like me to do?"
Bewailed the stricken man;
"I'll Finnish up my mad career,
And wed the Gallican."

THERE was an embarrassed young man at Bowling Green, Ky., who escorted the preacher's fair daughter to church on Sunday night and arrived late to hear the reverend gentleman read from the Bible as the couple marched up the aisle: "My daughter is greviously tormented with a devil," which verse occurs in an account of a New Testament miracle. The congregation smiled, and it would be hard to tell which felt worse, the preacher, his daughter, or her escort.—Atlantic Constitution.

DISAPPOINTMENT.

The time I've lost in wooing,
In watching and pursuing,
The light that lies
In woman's eyes
Has been my heart's undoing;
Though wisdom oft hath sought me,
I scorned the love she brought me,
My only books
Were woman's looks
And folly is all they've taught me.
—Moore,

The reason for my sighing,
My groaning and my crying?
My love has wilted
And I am jilted;
For a fellow with a mustache,
Who came from old Kentucky
With the name of being lucky;
He's took my girl,
Powder, paint and curl,
And I'll suicide if I'm plucky.

A CLERGYMAN'S wife had impressed upon her little boy the necessity of ejecting the skins of grapes, and a few days afterward she told him the story of Jonah and the whale. "The whale is a very large monster," said the mother, "and he swallowed Jonah." Did he swallow other men, too?" asked the little boy. "Well, I suppose he did," continued the mother, who was somewhat in doubt; and while she was hesitating about the continuation of the story, the boy interrupted, "And, mamma, did he spit the skins out too?"

For Women.

CONDUCTED BY MISS RAY CLARK.

THE BABY'S PICTURE.

"WE must carry our beautiful baby to town
Some day when the weather is fair," we said;
We must dress him up in his prettiest gown,
And wave his hair on the top of his head;
For all his cousins and all his aunts,
And both his grandmothers, proud and dear,
Declare it is shameful, and every way blameful,
To have had no picture of him this year."

He was three months old when we took him before,
And he lay like a lamb on his mamma's lap;
And the darling now has a twelve month more
Of bewildering graces from sock to cap.
Just look at his dear, little laughing face!
At the rose-bud mouth, at the violet eyes!
Why, the photograph-taker, that vanity-shaker,
Will think this time we have brought him a prize!

We carried our child to the town one day,
The skies were soft and the air was cool,
We robed him richly in fine array—
Ribbons and laces, and Swiss and tulle.
He looked like a prince in the artist's chair,
Sitting erect, and brave, and grand,
With his big red apple he scarce could grapple,
Held close in the palm of his dimpled hand.

"He is taking it now." We held our breath!
We furtively peeped from behind the screen!
"What a pose?" we whispered, then, still as death,
Waited—and baby was all serene
Till the critical moment, when, behold,
The sun was catching that lovely look,
Such a terrible roar, it shook the floor!
And that was the picture the swift sun took.

A wrinkled face and close shut eyes,
And a mouth that's opened so very wide,
That our dear little sister, sibyl-wise,
Declares she can see the cry inside.
Aunts and cousins and grandmothers dear,
Haven't got over their anger yet:
But we thought it was funny, and paid our money
For that strange phase of our precious pet.

Ah! children older than baby, think,
Dear little children blithe and sweet,
With your curls of gold, and your cheeks of pink,
And your naughty tempers, sudden and fleet—
What an awful thing it would be for you
If an artist should happen along some day,
And observing the pouting, the frown or the flouting
Should take a picture of you, that way!
[Christian Guardian.

REDEEMING THE TIME.

TEACH yourself, and your daughter after you, to perform all household duties with as great dispatch as consists with perfect thoroughness. Do not give needless time to any piece of work. Never wash and scrub and rub after all dirt is removed from clothes and wood-work, just "to be certain that they are clean." When you know that fact, be satisfied.

There are some women so extra thorough that it becomes (like any virtue taken to excess), a positive vice.

Mrs. R. used to scrub so unceasingly about her kitchen and sheds and steps that they were always in the uncomfortable process of drying, always damp and unwholesome, never white and sunny and neat.

Learn to stop when you are through.

Very elaborate work of any kind is not to great profit, especially in the matter of table fare. When one reads the difficult details of some wonderful article for dessert, which takes hours of skilled labor in the hot kitchen to make it; we wonder at the patience which holds out through it all, but sighs "to what purpose was this waste." Not waste of money, for that is trifling compared to the great waste of woman's life power which was given to her for so much nobler purposes.

My neighbor, Rev. Antoinette Brown Blackwell, well characterizes the sewing machine and cooking stove, as "the modern Moloch to which so many American women are yearly sacrificed."

A greater simplicity in the preparation of our food would save a full day out of every week to many a house-mother, and save many dear ones from the rack of dyspepsia in later years.

"Not one of mother's children," said a lady in middle life to me one day, "but has suffered agonies from dyspepsia; all the result of mother's splendid cooking."

With proper dispatch an ample, wholesome and delicious pudding can be made in five minutes and set in the oven to "cook itself," while an indigestible pie takes a great deal more time and wearying labor, and is not so satisfactory to a hungry person's appetite.

Young household members can be trained up just as you please in this respect, but it is hard to change the customs of those who are "joined to their idols." A hint may be found in this truth for young housekeepers just beginning to form habits for the house.

A wise simplicity in all your doings is for the advantage of all parties. It gives time for rest and for self improvement, and for the exercise of neighborly kindness and charity, and greatly conduces to the health of a family.

Plain fruits and vegetables prepared in a most excellent but simple manner, with suitable variety on succeeding days, are dishes "fit to set before the king." MRS. J. E. McC.

WOMAN'S WORK CONSIDERED.

I BELONG to the much-maligned army of spinsters, but am a reader of the RURAL, and would like a place among the RURAL Sisters.

These ladies need stimulating to a more vigorous use of their pens.

Few are so inexperienced as not to be able to add something to the general information as to the best, easiest, and most expeditious way of getting through housework.

When all is known, and housework made easy, it is no flowery road to travel, as some of us are ready to declare with emphasis.

But what most vexes my righteous soul is the want of appreciation among men of woman's work. The farmer, as a general thing, thinks that he works hard, but considers it a mere matter of moonshine to "run" a house of six or a dozen inmates. Oh! when I see what a plentiful lack of consideration and affectionate goodness many of these dear husbands extend to tired wives and mothers, I rejoice and am exceeding glad to have escaped the matrimonial harness.

Who seconds the motion that some married sister, who knows how, will give these husbands a "drawing over the coals?"

Having no settled abiding place, I have "stayed around," and had a few peeps "behind the scenes." Over-work is the bane of the average farmer's wife—want of recreation.

I have seen the inhumanity of some men to their wives—wives not over-strong too. I have seen a "house-band" with the digestion of an ostrich and strong as a horse snore abed mornings, while the mother who had not even rested the ache out of her body struggles unaided with the breakfast and the last baby.

On Sunday he passes along piously to church and listens from a front pew.

The wife is chief cook, chief nurse, chief everything. If there is a trifling culinary blunder, his reproaches seem to come easily. If the biscuit has not enough soda he is in a towering rage, and looks black if the meal is late or early.

Physicians tell us that women grow weaker physically, but most of my acquaintances are creatures of remarkable endurance. Many a *man*, in their shoes, would succumb body and brain.

Men have machinery to lighten their labor, but nothing has been invented yet to shorten the process of baking bread and pies in the country, or of resting arms aching and tired from an ailing, teething baby.

What wonder that a woman who has only been housekeeper and mother a few years looks like the parent of the fresh and rosy girl she was on the wedding-day!

All men cannot be managed in the same way. In some extreme cases it is proper to wipe weeping eyes, show fight and assert woman's rights, one of which is the privilege of resting when tired nature needs it.

Some women are working themselves under the coffin-lid and do not know it. The husband ought to see that there is sufficient help in the kitchen, or put his own hand to the rolling pin, and let her see that she has something strong and true to lean upon.

If ever I marry won't I manage my husband? He'll not be spoiled by being waited upon either. He shall hang his own hat and pull his own boots, and black them, too. I shall take time to read, rest, visit, and also to bestow some labor upon my outward adorning, and he shall "hold the baby while I'm getting tea." MISS IRENE.

Fairfax Co., Va.

OPPOSITION.

PERMIT me to say a few words in reply to Miss M. D.'s "Worldly matters for girls"; *I* most certainly do oppose somethings in her article of July 3rd and not from "the deep-seated prejudices of our grandmothers, but from my own experience and observation.

Yes, it is true that most young ladies use face-powder now, and to the great injury of the complexion they are trying to improve.

The first essential of a good, healthy, blooming complexion, is to have all the pores of the skin open, and this cannot be had if those minute openings are stopped up with glycerine and powder, or powder alone.

My experience and observation has taught me that powders or washes will invariably brown the skin. Some powders will do so in a short time, while others I have known to be used a year or more and then the skin suddenly become brown or dingy. There is no remedy for it then.

My advice to a young lady who has a good complexion, is never to put anything on her face that will stop up the pores of the skin.

To one who has a poor complexion, I would say—don't make it worse by stopping up the pores.

It is just as necessary to have the pores of the skin open as it is to have the lungs free from tubercles and in a normal condition.

A good hygienic diet is the best and surest remedy for pimples and blackheads, but it is not every one who can obtain that, although the less butter, sugar, cake, etc., that is eaten, the better it is for a person. The next best thing is to wash the face once a day with quite warm water and soap. Let the soap be of a good quality, and rub it well into the skin with a cloth or sponge, and then rinse it off thoroughly.

Bathe the face on getting up in the morning and before retiring at night, with either cool or warm water, though warm water is best at all times for a pimpled face, yet its use once a day is sufficient.

Of all the recipes I have tried this one is the best. The soap, I think, cleanses the pores of impurities, and the water seems to have a soothing, healing effect.

Decidedly cold water (my experience and observation teach me) is *very* injurious to a pimpled face. MRS. W. V. A.

N. Y.

ABOUT WOMEN.

JENNY LIND was recently congratulated by a lady upon the remarkable effect produced upon the public by the charms of her youthful voice. The great singer assumed a look of earnest excitation as she uttered from a full heart: "It was because my voice came from God, and I sang to God."

MISS BECKWITH recently performed the extraordinary feat of swimming for thirty consecutive hours in the whale tank of the Royal Aquarium, at Westminster, London. She was clad in a costume of black silk, trimmed with crimson, and displayed great agility in swimming and waltzing in the water.

THE rigid housekeeper, who rigorously compels everybody into obedience to fixed rules and laws, assures thereby her own ease, while a more genially benevolent woman shrinks with native generosity from constraining others to submit to that orderly arrangement which will directly result to her individual convenience.

As the daughter of a banker of Buffalo was walking along the street of that city, a handsomely dressed gentleman grasped the velvet purse that she held in her hand. The lady maintained her hold, the clasp flew open, the coin and notes fell scattered upon the sidewalk, and the "gentleman" departed rapidly, This is the second time that the lady has had an encounter of the kind. One might be allowed to wonder why she continues to carry so conspicuous a purse in so conspicuous a manner.

QUEEN VICTORIA rises at seven both in winter and in summer. The occupations of each hour of the day are arranged with a due appreciation of the value of time; hence she is able to undertake the heavy task of reading over all papers and documents submitted for her signature, which she never appends without careful perusal of each, beside which she personally enters into a wide correspondence, and, in addition to the hours devoted to official duties and to the hours given to walking, driving, paying and receiving visits, a portion of each day is set apart for reading of a varied character.

PROBABLY the prettiest pair of hands that ever were seen were granted by fate to a Philadelphia Quakeress. This quiet little Friend "spoke in meeting," and cynical observers would wonderingly remark that she frequently drew off the coarse cotton gloves, which poverty compelled without considering that the rough texture was displeasing to the touch of the dainty fingers. An ill turn from fortune's wheel made her husband a hardworking farmer, and the pretty hands most willingly and deftly dug the garden and scoured the pots, still looking like those of Queen Joanna of Naples, "that were only intended to be kissed." Ever intent on good deeds the gentle Quakeress, in a benignant old age, ministered, with her delicate soft touches in works of noblest charity to the criminals condemned by law to linger out their years within prison walls.

A LEGAL decision was recently rendered in New York, on application of Mrs. Anais Haase, directing the authorities of the German Hospital to amend the certificate of the death of her husband Charles Haase, who had died a few weeks previous in that institution under the name of Hector Carlos. The deceased flourished in New York for about fifteen years as the Baron de Maincy, moving in society as a gentleman of rank and elegance, and a successful teacher of the French language. It is now shown that he was a Prussian by brith, and was a hairdresser in Paris, where he was married in 1856. In 1862 he deserted his wife and two children, and established himself as a teacher of languages in London, under the name of H. Charles. Becoming more ambitious he next assumed the finer cognomen of H. C. d'Armet de Fouger, and under this name married a lady, whose money he obtained, and then absconded to New York; rising upon the new horizon as the Baron de Maincy. Meanwhile, the wife whom he had deserted in Paris nearly ten years before had reached New York also, and was supporting herself as a seamstress. She recognized her husband, but made no claim upon him, and removed to Baltimore, where she has continued her labors to this time. A few months ago a legacy was left her in France, and she found herself compelled to refer to her husband in compliance with legal forms. His death under a false name presented an apparently insurmountable obstacle. But it has been removed by the late decision, which indorses this just sentiment: "It should not be tolerated that after death the wrong which the husband inflicted upon his wife during life should be continued."

HINTS.

GLASS should be washed in cold water, which gives it a brighter and cleaner look than when cleansed with warm water.

"NEVER put a particle of soap about your silverware," says the proprietor of an old silver establishment "if you would have it retain its original lustre. When it wants polish take a piece of soft leather and whiting and rub hard."

To clean brushes and sponges use spirits of ammonia and hot water. Wash them well and shake the water out, drying on a coarse towel with the bristles downward. Little or no soap is needed.

MAKE YOUR OWN BAROMETER. A sheet of paper dipped in chloride of cobalt, when the weather is to be dry and pleasant, will become blue. When wet weather approaches it will become pink. The barometer flowers of France are thus manufactured.

ALWAYS cut your flowers with a sharp knife or scissors, and early in the morning or evening. Keep them well sprinkled; if possible add fresh water, and put in a little salt. Set the bouquet at night on the floor of a cool room or cellar.

A TEASPOONFUL or more of powdered borax thrown into the bath tub while bathing will communicate a velvety softness to the water and at the same time invigorate and rest the bather. Persons troubled with nervousness or wakeful nights will find this kind of a bath a great benefit.

IT is a good plan to put new earthenware into cold water and let it heat gradually until it boils; then cool again. Brown earthenware in particular may be toughened in this way. A handful of rye or wheat bran thrown in while it is boiling will preserve the glazing so that it will not be destroyed by acid or salt.

FEATHER pillows can be cleaned and purified without removing the feathers, by taking the pillows, laying them in a bath tub, scrubbing them with a scrubbing-brush dipped in a solution of two tablespoonfuls of ammonia to half a pail of warm water and rinse them thoroughly. Lay them out on the grass to dry, turning them frequently; and at the last pin them to the line for a number of days, and when quite dry beat them with a rod. This is to disentangle and lighten the feathers.

SUGGESTIONS FOR VISITING.—The question as to the amount of clothing to be taken on the occasion of a visit is one to which due consideration should be given before an invitation is accepted, or many annoyances are likely to ensue. On the one hand, while it is best to take a full supply of everything likely to be needful, including an ample stock of linen, yet when one's destination is in the country—at a distance, perhaps, of some miles from the nearest railway station—then the transport of boxes and trunks assumes a serious aspect.

If the friends to whom the visit is to be made habitually receive fashionable people, then it is important to be provided, so that you may preserve the harmony of the entire party; but if the house is one where no particular style is kept up, then it is out of place for visitors to be accompanied by an extensive and expensive wardrobe.

With regard to linen, visitors' washing is almost invariably sent out. The visitor should make out a proper list, to save all trouble and mistakes, and should settle the bill herself when the articles are returned, and not suffer the hostess to defray these expenses, even though she offered to do so; because then the visitor has only herself to consider when the question arises as to what number of articles should be sent.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN THOUGHTS FROM "EVERY-DAY HOUSE."

ANNIE L. JACK.

ALREADY the busy housekeeper feels the responsibility of the next three-quarters of the year upon her shoulders, and must calculate what fruits to secure for the season of frost and snow. With us all kinds are scarce. Of tree fruits, cherry and plum, there are none, while all the small fruits have to be *gleaned* from the bushes. So we begin with strawberries and try to secure a supply before drought shall wither them. I always find the *first fruits* really the best. In making preserves of this fruit we are careful to pick dry, and, when stemmed, to place them on flat dishes overnight, with powdered sugar sprinkled thickly over them. There is a fine syrup in the morning, and the berries do not break up. Raspberries and any other soft fruits are improved by this method. I often think what a blessing it is that during the "heated term" fruit is so plentiful. Dwellers in cities complain that when it reaches them it is often stale and unwholesome, and it should be the business of every fruit grower to see that only fresh, ripe berries go to market. If housewives would also refuse to buy crude vegetables and fruit picked too often in a condition of unripeness that secures firmness for carrying to market those who bring in supplies would soon find it to their advantage to improve the quality of their produce. In preserving, especially, is this needful, for how often has a half-decayed peach spoiled the jar; one or two over-ripe plums caused our choice cans to ferment. But *good, ripe, sound* fruit is at this season of the year a necessity to the system, cooling and correcting impurities of the blood, yielding the phosphates, carbonates and sulphates that are important ingredients in the masonry of the human body.

CANNING FRUIT.

ELINOR BROOKS.

Now that the fruit-canning season has come again, the 'Domestic" columns of the newspapers will be full of directions for the process. And yet, after all that has been, or can be written about it, there are two old adages on which beginners may most safely rely, and they are: "Practice makes perfect," and "Experience is the best teacher." During the first two or three years that I attempted canning our own fruit, I probably lost from 25 to 50 per cent. of all that I put up, and although I took a thousand times the care to have every step of the process exactly right that I now do, the result is now so different that I seldom lose a single can.

Many a time in my despair over the bubbling, bursting cans, I resolved never to attempt it again, and yet when the next basket of beautiful, fresh fruit was brought in, the sight would be so inspiring that I would gather up courage and try again, only to be again disheartened by failure. But, as in nearly every undertaking, perseverance at last conquered; and I can now fill the cans and set them away without the slightest fear of being startled by a pistol-like explosions at some future time. Probably some of the RURAL readers are now having a similar experience and are searching the papers for "help in their time of need;" so great is my sympathy for them in their discouraging and wearisome work that I would gladly lend them all the aid I can.

In the first place be sure that the fruit is fresh-picked and not over-ripe. Strawberries are perhaps the hardest to keep, and if they have been more than 24 hours off of the vines they seldom keep well or are of good flavor. If they have soured in the slightest degree before canning, they will have a disagreeable, acrid flavor, even if they keep without fermenting.

Next, be sure that the fruit is *thoroughly cooked*, so that all the air-cells are broken and the air expelled. Twenty minutes' cooking is not too long for berries and cherries, and the most of pears and peaches will bear from one-half to three-fourths of an hour without coming to pieces. Better let them break to pieces slightly than to run the risk of fermenting, as they will surely do if not well cooked.

Have liquid enough on the fruit. Some fruits, like strawberries, need no water added to them; others need considerable. At one time I had much trouble keeping Black-caps and I am confident now that they were too thick as they were poured into the cans. They should have liquid enough to float in and fill all the little spaces between the fruit. There is no necessity for heating the cans. If they are set on a thickly-folded, wet cloth there is not "the slightest danger of breaking." New cans are more apt to break than those that have been used. Lastly, put the cover on as soon as the can is level-full. Do not heap the fruit up so that when the lid is pressed on the seeds any juice will be trickling over the outside—perhaps gumming the ring so that it will not turn easily. Screw only moderately tight at first, but firmly as soon as cool enough to handle.

It would hardly seem necessary to say that the cans should not be opened until wanted for use, yet a friend told me that one Winter, being surprised at the amount of fermented fruit that was brought on her dining-table, she examined the fruit closet and found that nearly every can had been opened. Upon being questioned her "*curious* hired girl," confessed to having opened them. She "had wanted to see what was in them and didn't know it could do any hurt."

Dried Berries.

For some years I have thought I must can my Black-caps for winter pies, but last year, I had more than I cared to can, and I spread them on earthen plates, set them in the oven until they turned red, then put them out in the sunshine, and in 24 hours they were nearly ready to put away in paper bags. In the Winter, just before wanted for pies, I poured boiling water on them, covered closely and in a few minutes they were swollen ready for use. When baked in pies none of the family could tell the difference between the dried and the canned ones, and it certainly was easier work to dry them.

Will some of the RURAL friends be kind enough to give their experience with Patent Fruit driers? Not large ones but small and cheap, simply for family use.

DOMESTIC RECIPES.

Date Cake.

Two eggs, one-half cup of sugar, one cup of molasses, one cup of sour cream, one teaspoonful of soda, one teaspoonful each of cinnamon, nutmeg and cloves. Stir rather stiff with flour Then add a pinch of salt and one large cup of dates cut fine. Bake in a slow oven.

Tumbler Cake.

One tumbler of white sugar, one tumbler of flour, two tablespoonsful of butter, three teaspoonsful of baking powder, whites of ten eggs, flavor with lemon extract.

Pie Plant Pie.

Line a plate with rich pastry, then add one cupful of pie plant chopped fine, one cup of sugar, one egg well beaten and a small piece of butter. Cover with pastry and bake slowly.

Cream Cake.

Whites of four eggs, one cup of white sugar two teacups of flour, one cup of sour cream, three teaspoonsful of baking powder and a pinch of salt. Flavor with vanilla.

Ripe Tomato Pickle.

One peck of tomatoes, three pounds of sugar, one ounce of cloves, one quart of vinegar, one ounce of cinnamon, one-half ounce of ginger root. Slice the tomatoes, scald the vinegar sugar and spices together, pour over the tomatoes hot. Leave twenty-four hours, then put all over the fire and cook ten minutes, then take out tomatoes, cook down the juice and pour over. MRS. M. ALDRICH.

Genuine Scotch Oatmeal Cakes.

Ingredients: oatmeal, water and salt. Mix very stiff into oblong cakes one-eight inch in thickness and bake on boards before an open fire. By the addition of one or two eggs and substituting milk for the water these oat cakes can be made more appetizing, but this is, of course, a departure from the original recipe.

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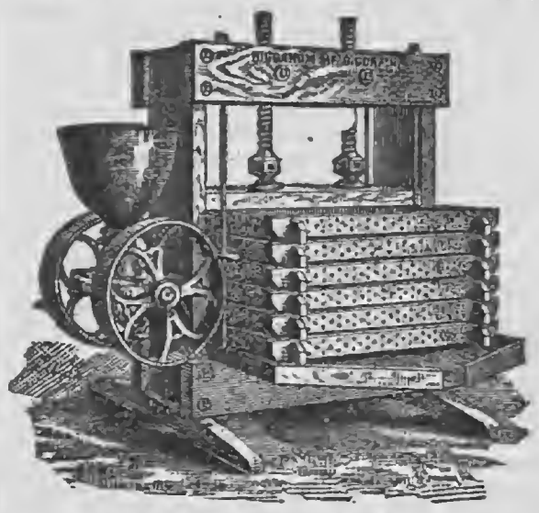

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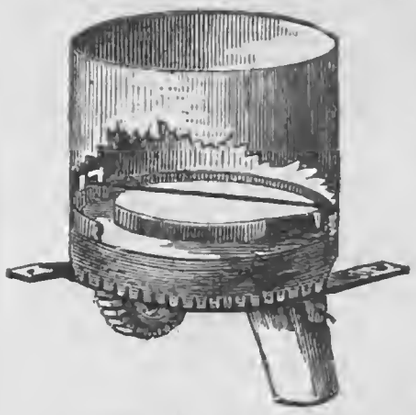

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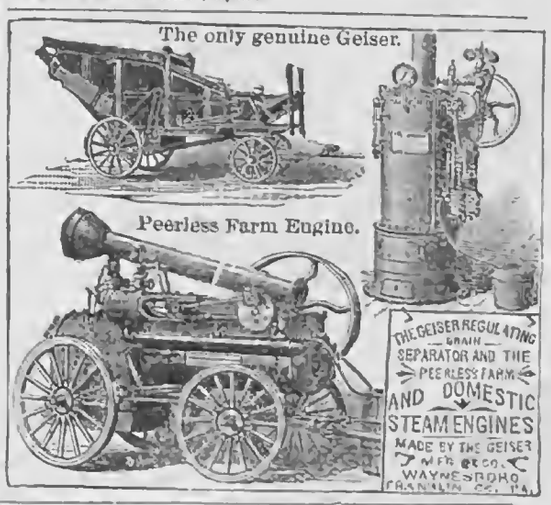

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News of the Week.

MISCELLANEOUS NEWS.

Monday, July 19th, 1880.

Gen. Hartranft, until recently postmaster at Philadelphia, has been appointed Collector of Customs of that port and formally took possession of the Custom-house on the 15th.....The anniversary of the destruction of the Bastile, in the French Revolution, on July 14, 1789, is a national holiday for the French, and the day was celebrated in many places by the French in this country..... Chastine Cox, the negro who murdered Mrs. Dr. Hull in her bed in June last year, was executed in the Tombs' court-yard this city on the 16th..... Statistics relating to emigration from Germany have been recently submitted to the German Parliament. The number of emigrants during the past eight years are given as follows: 1872, 125,650; 1873, 103,638; 1874, 45,113; 1875, 30,773; 1876, 25,368; 1877, 21,964; 1878, 24,217; 1879, 34,327. Important as was the increase marked by last year, as compared with the years immediately preceding, the numbers given for the two years following the Franco-German war has never since been anything like reached. The 33,327 registered for 1870 consisted of 20,106 males and 13,221 females. No less than 21,150 were from Prussia. North America was the goal of 30,808, Brazil of 1,830, and Australia of 274..... ....A freight train was wrecked at Lansingburgh, N. Y., on the 15th. A lot of dynamite in one of the wrecked cars happily did not explode. A number of cars were literally reduced to splinters. The few train hands on board escaped unhurt.....To be a land agent in Ireland is not a very enviable position. According to recent accounts, the peasants are shooting them quite freely whenever they get a chance..... Lynch law seems to be reigning in New Mexico. On three successive nights, July 3, 4 and 5, a mob surrounded the jail at Lincoln, and on the first night killed a prisoner; on the second night they killed the deputy sheriff, who was in disfavor with the outlaws, and on the third night they took out and lynched another prisoner. A division of the regular army might there find something to do besides fighting Indians.....The Chief of the Bureau of Statistics furnishes the following information in regard to immigration into the ports of Baltimore, Boston, Detroit, Port Huron, Key West, New Orleans, New York, Passamaquoddy, Philadelphia and San Francisco: There arrived at the above, named ports during the month of June, 1880, a total of 76,356 passengers, 72,567 of whom were immigrants

England and France advise Greece not to fight the Turks till the latter have a chance to think better of it. It is believed that Turkey will finally accede the territory demanded by the terms at Berlin.....San Francisco's population is 233,066, including 20,549 Chinese .....Railroad building is going on rapidly in Mexico. Over 800 miles of road are completed and in operation, and three important roads are now under construction—one over the Isthmus of Tehuantepec, another from Guaymas to El Paso, and the central from the capital to the city of Leon, a distance of 362 miles... ....The issues of postage stamps, stamped envelopes and postal-cards during the fiscal year ended July 1, foot up $31,952,519, an increase of nearly $3,500,000 over the total of the preceding fiscal year, or 12 2-10 per cent. This percentage is about double the average rate of increase during the previous five years.....Applications for pension arrears reach Washington at the rate of 400 a day, though the time for their reception expired June 30, as the claimants believe that Congress will extend the time for presenting such claims. Over 48,000 applications were filed in June.....

At noon to-day, Dr. Henry S. Tanner, the faster from Minneapolis, whom we mentioned last week, completes the first three weeks of his abstinence from food, and enters upon the fourth in the best of spirits. The doctor is, to all external appearances, in better physical condition than he was at the expiration of the fifteenth day, until which he had been losing in weight pretty steadily, at the average rate of 30 ounces a day. He now drinks water to a moderate extent, and under this diet he even gained one pound in 24 hours, but he lost this increased weight the following day. The blood has been examined and pronounced normal, but upon what grounds is not apparent, for the number of colored corpuscles to the cubic centimetre was not counted, and whether it was 4,000,000 or 400,000 is a point upon which no registry exists. Nor was the ratio of white corpuscles to colored made a subject of inquiry, so far as appears. A representative of the RURAL visited the doctor yesterday. He appears in perfect health, and is still confident that he can perform the feat of fasting 40 days. In conversation with a doctor of the "regular" school, the latter admitted to the RURAL representative that he was totally at a loss how to account for the endurance of the faster. He was confident, however, that no food had passed his lips the last three weeks. Even those who expressed the belief a few days ago, that Dr. Tanner was trying to deceive the public have now abandoned that view and are taking a real interest in the case. His watchers are, if possible, still more vigilant than they were at the beginning, and there is no opportunity to deceive, even if the fasting man were inclined to do so....

An illustration of the peculiar vicissitudes of life has recently come to light. A man named Madison Robinson married a girl named Hattie White in 1854, in Ohio. They lived well together for five years and three sons were born to them. In 1859 Robinson took the gold fever and started for California. For four years his wife received letters from him regularly, they then grew less frequent and finally ceased. Time rolled on and as no tidings came from the absent one he was given up for dead. His wife was wooed by a former lover of her youth and she wedded him 14 years after her first husband had left. They removed to Iowa and settled near Decorah. The long-lost Robinson arrived the other day, after an absence of 21 years, and heard for the first time of his wife's second marriage. He had roamed over a large part of the world, and visited British Columbia, New Zealand and Australia, he returned again to this country became a speculator in Leadville mines, and now has amassed a fortune of $250,000. His wife's second husband has died and he has gone to reclaim her.....

A young man, who said his name was John H. Christiancy, was committed to the Kings County Inebriates' Home, N. Y., on Saturday last, by Justice Bloom, of Brooklyn, under peculiar circumstances. He went to the Justice in the morning, giving his name as above, and said he was a lawyer, and a son of ex-Senator Christiancy, of Michigan, now United States Minister to Peru, showing letters to confirm his statement. Young Christiancy declared that the liking for strong drink had obtained such a mastery over him that he was compelled to ask the Justice to send him to the Inebriates' Home until his taste could be cured. He had not been long in Brooklyn, and was boarding at a lodging-house on Main Street, and was without friends or money. He thought his father would pay his board in the Home if he was told his condition. It was then arranged that one of the court officers should swear out a warrant charging Christiancy, "on information and belief," with being a habitual drunkard, and Justice Bloom then committed him to the Home for six months.

AGRICULTURAL NEWS.

The Supreme Court of Wisconsin has decided that dealing in grain "on margin" is gambling, and that contracts of this kind will not be enforced by the courts....An Indiana farmer says that labor has not been so scarce and high-priced in 65 years, and instances the employment of two women in his harvest fields at $2 a day as proof. ....The State of Mississippi is to have an agricultural college. The institution is located at Columbus, and will be opened during the Fall for the admission of classes. General S. D. Lee has been appointed President, and two of the graduates of the Michigan Agricultural College are engaged as members of the faculty of the new college. Mississippi has, it is said, taken the Michigan college as its model in its course of instruction and in the matter of compulsory labor....The Mark Lane Express, a well-known London commercial newspaper, has passed into the hands of new owners, including several members of Parliament and gentlemen representing important agricultural interests....The famine in Kurdistan is still so terrible that at El-Kosh the Kurds have sold hundreds of young girls at about $10 a head in order to buy food. The British Consuls, the Armenian relief committees, and the American missionaries have been most active, and have done all in their power to alleviate the miseries of the famished population; but the means at their disposal are very insufficient, and there has been hitherto great difficulty in transporting grain from one district to another, partly on account of the deep snow and condition of the roads, and partly on account of the general insecurity....The Mark Lane Express of June 12, in its review of the British grain trade during the past week, says: "Farmers express great anxiety about the weather. Unseasonable weather never fails, at this season, to exercise a hardening influence on the grain trade, and the copious showers of the past fortnight have increased the activity in wheat. Supplies of home-grown were small. Sales were more readily effected at the frequent advance of one shilling per quarter. Farmers now hold so little grain that holders feel justified in declining to sell, except at higher prices. Both English and French stocks of native wheat are practically exhausted. The consumption of both countries has to be met by foreign produce, for which a fair trade was experienced at advancing prices. At the moment the situation is decidedly critical. Stocks have been worked so low by the disinclination of buyers to operate for future delivery that it needs only a week's wet weather to bring about such a state of activity as will materially change present values. There is no abatement in the continental demand. The exports for the past month were nearly 36,000 quarters; during the same time the imports were only 30,000 quarters. Red wheat was held with extreme firmness. The market closed on Friday expectant, if not excited, with stocks at the lowest and prices at the highest. Maize, 3d. to 6d. dearer. Oats in fair request, but unaltered. The feature of the week has unquestionably been the large demand for foreign white wheat, such as Australian and New Zealand, for the North of England and the Continent. Trade closed very strong for these descriptions at an advance of a full shilling since last Monday. Sales of English wheat last week, 15,753 quarters, at 43s. 9d., against 27,727 quarters, at 43s. 4d. for the same period last year. The imports for the week ending July 3 were 939,984 hundred weight of wheat and 195,832 hundred weight of flour."....Judging from full reports to the Tobacco Leaf, the tobacco crop of '80 will be very short, owing chiefly to drought. Reports from Kentucky indicate half a crop; those from Virginia and Tenn. are a little more favorable; while those from Ohio and Ind. promise two-thirds of a crop. In New York, Penn. and Wis. the crop is likely to be fully an average one, and that in New England even better. The tobacco in the seed-leaf districts is in better condition than elsewhere, owing, most likely, to the better preparation of the ground and greater care in transplanting....California expects a surplus of 14,000,000 or 15,000,000 centals of wheat, and Oregon anticipates one of 5,500,000 to 6,000,000.....The Maryland and Delaware railroads, from full inquiry, expect to carry to market 4,000,000 bushels of peaches this season, against 3,480,000 bushels last year—yet the crop has been ruined!!.....Prof. Comstock, of the Agricultural Bureau, thinks that owing to the attention lately attracted to the Army worm, such effective means for its destruction will be devised against its next appearance that it will probably soon disappear from among the farmer's pests. Well, let's hope so.....At the close of the present fiscal year, it is more than likely that the U. S. Entomological Commission composed of Professors Riley, Thomas and Packard, will be discontinued and thenceforth all investigations into insect depredations will be conducted under the supervision of the Dept. of Agriculture. The present commission is about to expend its late appropriation of $20,000 in further investigation of the cotton worm, locust, Hessian fly, chinch bug, etc. .....The following cablegrams give the latest account of the European crop prospects:—Paris, July 15.—The Echo Agricole considers that the harvest prospects in the north, with tolerable weather, are eminently promising; good in the central districts; scarcely up to the mark in the west and east, and well up to the average in the southwest and the district around Paris. The quality in general is decidedly superior to that of the season 1878-9. There are also good prospects of the crops of potatoes, beets and hops. The hay crop is not successful, but there is every chance of a good aftermath. The fruit trees and vineyards do not share the improving aspect, excepting the olive, which promises a good yield. In Holland there is an excellent crop of rye. In Germany, rye, coza and potatoes require more sun. The hay crop is very bad, and the only thing that looks well is wheat. Austria suffers much from wet weather. In Hungary, barley, wheat and rye are very promising, and oats and maize are considerably above average. The Italian harvest is superior both as to quantity and quality. Russia is complaining loudly of a deficiency, partly owing to the presence of myriads of insects.....London, July 16.—A Berlin dispatch says that the government has published, during the last few days, many reports on the harvest expectations in the different provinces, and a resume of all these statements appears in the semi-official report of the Provincial Correspondence, which says it was generally feared that the harvest would be a miserable one, but, after the very favorable weather of June, it is hoped the harvest will exceed former expectations. Reports from different provinces of the monarchy given by the agricultural societies, state that the fear of distress appears to have had no foundation whatever. Grain has certainly suffered very much from frost, and the reports from many provinces are very unfavorable in this respect, but in some of the highly-cultivated districts a good grain harvest may be reckoned on..... A cablegram from St. Petersburgh, Russia, on the 18th of July says:—The *Golos* publishes an article based on the returns sent by the Governors of forty-eight provinces in European Russia showing that the total deficit of the grain as compared with the average crop will amount to 9,761,310 quarters, and says in view of the poor harvest it is considered impossible to export the usual average of 40,000,000 quarters without suffering an insufficiency for home consumption. Another announces that it is not unlikely that Russia will prohibit the export of grain in view of the probability of a short harvest.

Other cable dispatches say that heavy rains have caused great damage to hay and other crops in the Midlands, Warwickshire and Leicestershire, and in other parts of England; that excessive rains have prevailed nearly all over Ireland during the last fortnight, and are beginning to excite serious apprehensions in regard to the harvest, and that in many parts of France the harvest has already begun and gives opportunity of, in some degree, forecasting the prospects. In the south, barley and oats promise well. In the centre, Winter barley is of good quality, but deficient in quantity. Rye looks well, also wheat, which is an average good crop..... The following statement showing the condition of cotton, corn and wheat, was issued by the Department of Agriculture, on July 15. *Cotton.*—The returns to this department show an increase in the condition of cotton since the June report. The condition is reported at an average of 100, being the highest reported for July for several years. Forty-five counties in North Carolina average 101; 19 counties in South Carolina average 99; 70 counties in Georgia average 97; 16 counties in Florida average 92; 31 counties in Alabama average 93; 40 counties in Mississippi average 99; 16 counties in Louisiana average 96; 71 counties in Texas average 111; 33 counties in Arkansas average 104; 23 counties in Tennessee average 103. There are some complaints of drought in North and South Carolina, and of too much rain in Mississippi, Louisiana and Arkansas. Insect injuries are not reported to any extent. *Corn.*—The increase in area planted in corn is one per cent. over that planted last year. The average condition of the crop for the whole country is the highest for many years, and is 100, being seven per cent. more than last year at the same time. There are some complaints of drought in the South Atlantic States, while in the Valley of the Mississippi and those States north of the Ohio river there is complaint of too much rain. The Pacific States report a very high condition. *Wheat.*—The general average of Winter wheat July 1, 1880, was 95, against 91 July 1, 1879. It improved slightly during June. The whole South falls off nearly a fourth, but the the heavy Winter wheat region north of the Ohio river rules high, at 98. The Middle States are three per cent. above the average, and the Pacific four per cent. West of the Mississippi the crop averages 84, against 89 last year. Spring wheat averages 91, the same as in July, 1879. This shows a great decline in June, when the average was 97. The New England States average 99; the Middle States 93. North of the Ohio the average is 96. West of the Mississippi the general average is 90, Minnesota being 101, while Nebraska falls to 62° Iowa stands at 91. On the Pacific coast California reports 96. New Orleans, July 15.—The first bale of new cotton was received from Galveston to-day, classed strict middling, and was sold for 16 cents per pound.

The entire exports of agricultural products of Canada were in 1879 $25,970,887, only $2,890,858 of which represented wheat and its products. The value of butter reported, $2,101,897, almost equalled the the value of wheat; and the value of cheese exported $3,790,300, exceeded that of wheat.....In accordance with call of Gov. Cornell, the first meeting of the Board of Control of the New York Agricultural and Experimental Station was held in the Executive Chamber at Albany, on Tuesday morning, July 14th. The following-named members were present: Gen. N. M. Curtis, of Ogdensburg, President of the New York State Agricultural Society; W. A. Armstrong, of Elmira, Master of the New York State Grange: Dr. A. S. Heath, of New York City, President of the American Institute Farmers' Club; P. Barry, of Rochester, President of the Western New York Horticultural Society. After the meeting was called to order Gov. Cornell was selected temporary Chairman and Gen. Curtis, temporary Secretary. Mr. Daniel Bachelor, a representative of the Central New York Farmers' Club, was invited to a seat during the meeting. The Board of Control divided itself, by lot, into three classes, representing terms of one, two, and three years, as follows: For the first class, who shall hold office until the time fixed for the first annual meeting of the board—James McCann, of the Elmira Farmers' Club, and Samuel Campbell, of the Central New York Farmers' Club; one undrawn. Second Class—Dr. A. S. Heath, of the American Institute Farmers' Club; P. Barry, of the Western New York Horticultural Society, and ——, of the Western New York Farmers' Club. Third Class—Gen. N. M. Curtis, of the New York State Agricultural Society, and W. A. Armstrong, of the New York State Grange: one undrawn. The next meeting will be held at the rooms of the American Institute, No. 22 Cooper Union, New York, July 30th, at noon.

A Busy Life.

The World's Dispensary at Buffalo, N. Y., is a great institution, having its auxiliary Invalid's Hotel, for accommodation of patients, costing its founder nearly half a million of dollars, and its branch in London, England, of similar proportions, where Dr. Pierce's Golden Medical Discovery, Pleasant Purgative Pellets and other remedies are manufactured for the foreign trade, which extends to the East Indies, China and other far distant countries. All this mammoth business has been organized, systemized and built up by Dr. R. V. Pierce, who has associated with himself as a Faculty, under the name of the World's Dispensary Medical Association, a most competent staff of physicians and surgeons who annually treat many thousands of cases of chronic diseases, not by prescribing any set lot of remedies but by using all such specific remedies as have, in a large experience, been found most efficacious. Besides organizing and directing this mammoth business of world-wide proportions, Dr. Pierce has found time to write a work on domestic medicine—entitled "The People's Common Sense Medical Adviser"—1,000 pages, 300 illustrations, selling at $1.50, and and also to serve a term as State Senator and later as member of Congress. Surely he must be competent if he were to take the lecture platform, to discourse upon "the recollections of a busy life."—National Republican.

THE superiority of BURNETT'S FLAVORING EXTRACTS consists in their perfect purity and great strength.

A Railroad Engineer

in the employ of the C. M. & St. Paul R. R., has been grievously affected with diabetes for six years. He took four boxes of Kidney-Wort, and now writes that he is entirely cured. Get a box and try it.

WOMEN that have been given up by their dearest friends as beyond help, have been permanently cured by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It is a positive cure for all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for phamphlets.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, July 17, 1880.

BEANS AND PEAS.—With the belief that buyers will soon have to replenish stocks for export and home use, the market has ruled very firm for best grades of white beans. Poor qualities are dull; few buyers will take the chances of heat-affected parcels, which are likely to further deteriorate. General receipts are moderate, which tends to give holders confidence.

Marrow beans, prime, $1 62½; other, $1.50@1.57½; medium, prime $1.37½@1.40, other, $1.25@1.35; pea, $1.45@1 65. white kidney, $1 70@1.85; red kidney $1.20 @1.40; black (or turtle soup), $2 20@2 25 Lima, Cal., $5.

Receipts of beans for week, 1,815 bush.; exports, 2,551 pkgs.

BEESWAX.—Demand is small and prices are unchanged; sales at 23½@24c. for Western and Southern.

BROOM CORN.—Demand is light and prices unchanged.

Brush and short broom, choice, per lb., 7@8c.; common to good, 5@6½c.; hurl, good to choice, 7@8c; do., common to fair, 5½@6½c.; red and crooked at 3@4c.

BUTTER.—The weather has been so uninterruptedly hot that samples have almost run off the dryer, and few large transactions are to be noted. Faultless State creamery is still scarce and selections are marked higher. Strictly fine half tubs are scarce and are higher in sympathy with creamery, and the additional demand now directed to them. Shippers are not using stock freely nor are they likely to call for the cheaper styles of Western while there is a cold storing of perhaps 80,000 pkgs. which tends to keep the market poised to their views of prices. The independence however, is not all on one side as much of this surplus is of a grade that will sell on its merits with favorable surroundings. And then besides those figures represent a good many small Summer packages. Useful table grades of western are active in the scant supply of state, and prices are steady for upper grades. Prospects are for an immense general crop.

Creamery, finest 23@24c.; good to prime, 22@23c.; fair to good, 21@22c.; sweet cream, 21@23c.. State firkin and yellow 20@23c.; pails and hf. tubs, choice, 21½@22c.; o h-r 19@20c.; Welsh tubs, best 21c; other 18@19c.; Western imitation creamery, 14@18½c.; dairy, fresh, extra 17@18c.; poor to prime, 10@17c.; factory, fine 16c.; other 13@15c.

Receipts for week 38,850 pkgs. Exports 6,153 do.

CHEESE.—The market has had a sharp upward turn this week as the arrivals have been moderate, and the inquiry from exporters steady and good. Shipments are 76,700 boxes and the market closed with the supplies well sold up.

Latest sales are for State factory, fancy, 9½@9¾c.; do. good to prime, 8¾@9c.; do. fair to good, 8@8¾c.; do. half skimmed, 5½@7c.; Wisconsin factory, fine, at 9¼@9⅜c., do. good to prime, 8½@8¾c.; do. fair to good, 7½@8¼c.; Ohio factory, fine, 8¾@9c.; do. good to prime, 8@8¼c.; do. flat, fair to good, 7½@8c.; do. poor to fair 6½@7½c.

Receipts for week, 83,820 boxes.
Exports, 70,550 do.
Liverpool cable, 50s.
Steam, 35@40s.

COTTON.—The market is without much life, and prices closed steady at for July, 11.63@11.65c.; August, 11.57@11.58c.; September, 11.09@11.10c.; October, 10.67c.; November, 10.53@10.55c.; December, 10.54@10.55c.; January, 10.60@10.62.; February, 10.71@10.74.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8⅛	8½	8⅛
Strict ordinary	9	9⅛	9⅛
Good ordinary	10	10⅜	10⅜
Strict good do	10⅝	10⅝	10⅝
Low middling	11⅛	11⅜	11⅜
Strict low middling	11⅜	11⅞	11⅞
Middling	11⅞	12	12
Good middling	12⅜	12⅛	12⅛
Strict good middling	12⅝	12⅞	12⅞
Middling Fair	13⅜	13⅛	13⅛
Fair	13⅞	13⅞	13⅞

STAINED.

Good ordinary	8⅛	Low middling	9⅝
Strict good ordinary	9	Middling	10 11-16

DRIED FRUITS.—The market continues very slow and prices nominally unchanged. Quotations are For North Carolina apples, fair to good, at 6½@7½c.; choice, at 8@8½c.; New York State quarters at 7½@7¾c.; patent evaporated, in cases, choice at 14@14½c.; good and prime 13½@14c.; evaporated, sliced at ——c. Evaporated peeled peaches, good to choice, at 26@28c.; North Carolina peeled choice 16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c.; common at 10@12c.; unpeeled halves at —c.; do. quarters at 6@6½c. Pitted cherries old at 15@16c. Blackberries nominal. Raspberries at 28c. Plums at 17@17½c.

EGGS.—Receipts for week, 8,633 bbls.; do last week, 5,927 do. The market has ruled strong but it is a sensitive one in summer and larger receipts have decreased the firm selling portion of the early part of the week. The dependence is mainly upon prime Western stock. Few near points reach here during the season of vacations.

Near Points 17@17½c. State and Penn. 16@16½c. Western and Canadian fresh 15½c.; stored or second grade 14@15c.

FLOUR.—The crop reports have stimulated trade and tended to higher prices.

Latest prices are $3.40@4.25 for inferior to fancy superfine State and Western: $4.25@4.60 for ordinary to very good extra State, odd lots and lines; $4.50 for very good to fancy do.; $4.25@4.40 for ordinary to very good shipping extra Western, and $4.50@4.75 for good to fancy shipping extra do.; inferior to very good white wheat extras, $5.25@5.75; very good to very choice do. at $5.75@6.75; red and amber winter wheat, inferior to choice trade and family, at $5.00@6.25; round hoop Ohio, $4.45@4.90; and trade and family brands of do. at $5.00@6.85; St. Louis at $5.10@5.85 for inferior to good extra; $5.85@6.75 for good to very choice; Minnesota clear, very inferior to fancy, at $4.25@6.35; Minnesota "straight," very poor to very fancy, at $5.85@7.25, and patent inferior to fancy at $6.00@8.50; unsound stock at from $2.75@5.00; city mill extra at $5.60@5.65 for good to choice West Indies; do. for England, $4.25@4.60 for poor to very choice spring wheat, and $5.10@5.60 for winter wheat product; do. trade and family extras, $6.10@7.00 do. for South America, $5.65@6.00; No. 2 at $2.40@3.50 for poor to very fancy, the latter an extreme.

Receipts for week, flour, bbls. 102,816; corn meal, do. 4,190, wheat, bush. 1,869,900, corn, do. 2,083,250, oats, do. ———; rye, do. 9,064; malt, do. 187,600; rice, pkgs. 300.

Exports, flour 76,504 bbls.; corn meal, 5,900 bbls.; wheat 1,752,877 bush.; corn, 1,392,900 bush.; oats, 4,181 bush.; rye —— bush.; malt —— bush.; peas 1,800 bush.; rice 611 pkgs.

CORN MEAL.—Sales at $3.15 for Brandywine, and $2.80@$2.75 for yellow Western.

FRESH FRUITS.—A heavy apple crop is already showing almost unmanageable installments. Selections only bring the extreme. Sales largely at 50 bbls. bulk to venders. Peaches hold pretty good prices and quality from upper sections is improving. Pears will be only a moderate crop this season; present supply Southern. Currants unusually low; small have been down to 1c; much of the supply softens with the weather. Raspberries running out and generally poor.

Apples, N. J. Astrachan, 75c@$1.50; Sweet Bough, 60c.@$1; Sour, 50c.@$1. Md. Astrachan, ₩ cr., 50@75c.; Md. green, 25@30c. Peaches, Md. & Del., Troth, ₩ cr. $2.50@3; Hale's Early, ₩ cr. $1@3; Hale's, ₩ basket, 75c.@$1.25; N. C. prime, ₩ bu. cr. $2.50@3; poor to good, ₩ cr. $1@2; Ga. fancy, ₩ 3 bu. cr., $1.75; common, ₩ 3 bu. cr. $1@1.25. Pears, Clapp's Favorite, Southern, ₩ cr., $3.50@5; 4; Manning's Elizabeth, Southern $2@2.50; Jargonelle, Southern, $2@2.50; Bell, Southern, ₩ bbl., $3@6; Harvest pears, Jersey, $3@4; cooking pears, $2@3. Plums, Wild goose, Md. & Del., ₩ qt. 10@18c., Beach, 5@7c.; Damson, 10c. Blackberries, Lawton, Jersey, choice, ₩ qt., 8@10c., poor to good, ₩ qt., 5@7c.; Wilson, Md. & Del. ₩ qt., 4@7c. Raspberries, Red Antwerp, up-river, 3-to-qt. cup, 5@8c.; native, up-river, ₩ 3 to qt. cup, 2@3c.; Jersey, ₩ 3 to qt. cup, 2@3c.; Brandywine, up-river, thirds, 5@6c.; Md. & Del. ₩ pint 6@7c. Whortleberries, Shawangunk Mountain, ½ bu. box, 75c.@$1; Jersey, ½ bu. box, 62@87c.; Md. & Del. ₩ qt., 5@7c. Currants, cherry, ₩ qt., 4@7c.; small, red, 2@3½c.; black, 5@6c. Apricots, up-river, prime, ₩ qt., 3@4c.; common, ₩ qt., 18@25c. Watermelons, Norfolk, ₩ 100, $10@18; N. C., $6@20; Ga., unselected, $20@30. Nutmeg melons, Jenny Lind, Jersey, ₩ bbl., $3.50@4; Norfolk, $1.50@2.50; citron, Norfolk, $1.50@2. Hot-house grapes, Black Hamburgh, ₩ lb., 60@75c.; grapes, Sweet Water, ₩ lb., 25@35c. Peanuts very dull; Va. hand-picked, ₩ lb., 5½@5¾c.; extra prime, 4½@5c.; good to prime, 4½c.; shelled, 5½@5¾c.

GRAIN.—Wheat has been very active on account of the unfavorable crop reports from domestic and foreign sources, and prices are higher and strong.

Latest sales are of No. 1 white at $1.18; do., July, at $1.15½@1.15¾; do., August, at $1.08¾@1.09; do., September, at $1.08¾; ungraded white at $1.15@1.16; No. 2 red at $1.10@1.12; do. July, at $1.15¼@1.16½; do. August, at $1.09¾@1.10¾; do., September, at $1.09@1.09¾; No. 3 red at $1.15@1.15¼; ungraded red at $1.05@1.20; No. 2 amber in store at $1.18@1.20; ungraded amber Southern at $1.15; No. 2 Milwaukee and hard spring at $1.12@1.12½; No. 2 Chicago spring at $1.11. Rye at 79@80c. for prime Western for August delivery. Corn has been fluctuating but closed active at an advance; latest sales are of New York No. 2, at 48½@49½c.; do., July, at 49@49½c.; do., August, at 49@49½c.; do., September, 49½@49¾c.; New York steamer mixed at 47@48c.; ungraded mixed Western at 45@50c.; No. 2 white at 52@58c.; New York yellow at 51c. Oats are freely offered and favor buyers; latest sales are of No. 1 white at 40c. bid and 41c. asked; No. 2 white at 34½@35c.; No. 3 white at 33@33½c.; New York No. 1 at 35c.; New York No. 2 at 31½@33c.; do., July, at 35c.; do., August, at 32½c. bid and 33c. asked; No. 3 at 32c.; ungraded white Western at 35@40c.; ungraded mixed Western at 32@35c.; white State at 45c.; No. 2 Chicago at 35c.

HAY AND STRAW.—Prices are well sustained with a good demand.

New hay quoted at 85c.@$1; old hay, shipping at 80@85c.; retail lots at 90c.@$1 for medium, and $1.10@$1.15 for prime and fancy qualities; clover 60@65c. Straw at $1.05@1.10 for long rye; 60@65c. for short rye, and 55@60c. for oats.

Exports for week, 3,400 bales.

LEATHER.—Latest prices are 22@23½c. for light hemlock sole; 22½@25c. for middle do.; 22½@24c. for heavy do.

OIL CAKE.—Western is quoted at $32 per ton.

POULTRY AND GAME.—Supplies of dressed poultry have exceeded the summer wants of trade. Prices easier especially for scalded stock.

Turkeys, choice, small, on ice, 11@12c.; fair to good, 10@11c.; Phila. dry-picked, 11@13c. chickens, Spring, Phila., large, ₩ lb, 22@23c.; small, 20@21c.; State scalded, 17@19c.; Western scalded 16@17c.; Fowls, Phila., dry-picked, 15@16c.; Jersey, dry-picked prime, 14@15c.; scalded 13@14c.; State, dry-picked, prime, 14c.; State, scalded, prime, 13c.; Western, dry-picked, prime, 13@13½c.; scalded, prime, 12@12½c.; poor to fair, 10@11c.; ducks, spring, dry-picked, large, 16@17c.; small, 14@15c.; Spring State, scalded, 13@14c.; Phila., old dry-picked, 10@11c.; squabs, white, per doz. $1.75; dark, $1@1.12.

Live chickens are abundant and easy in price. Fowls in light supply and well supported.

Chickens, Spring, large, ₩ lb., 16@17c; small, 15@16c.; chickens Southern 14c.; fowls, Jersey, 14c.; Western, 13½@14c.; Southern, 13@13½c.; roosters, 6@7c.; turkeys, mixed, Jersey, 10c.; Western, 10c.; ducks N. J., N. Y. and Pa., ₩ pair, 55@70c.; Western, 45@55c.; Southern, 40@45c.; geese, Jersey, $1.50@1.75; N. Y. and Pa., $1.25@1.50; Western, mixed, $1@1.25; Southern, 87c@$1.12; pigeons, 20@35c.

Game has little representation and not much sold. Wild pigeons about the only quotable item; these are at 15c. flight: $1.50 stall-fed.

PROVISIONS.—Hog products have been active and closed strong. Mess pork quoted $13.30@13.35 for July; $13.30@13.35 for August, $13.35@13.45 for September, and $13.40@13.50 for October. Bacon at 7⅛c. for long clear and 7⅜c. for short clear. Lard—Western steam at 7.15c for spot and July deliveries, 7.22½c for August 7.30c. for September, and 7.37½c. for October. Stearine at 9@9½c. for Western. Tallow at 6⅛c. for prime. Beef hams at $22.50@23 for new. Beef—Extra India mess quoted at $16 for city; $10 for extra mess, and $9.50 for plain mess, $10.50@11 for packet, and $— for family mess. new.

Receipts for week, beef, 400 pkgs.; pork, 2,250 bbls.; cut meats 24,150 pkgs.; lard, 13,550 pkgs.

Exports for week, beef 2,350 pkgs.; pork, 3,900 bbls.; cut meats, 9,031,650 pounds; lard, 7,481,9.0 pounds.

SEED.—Clover is quiet at 7@7½c, for Western and 7½@7¾c. for State.

TOBACCO.—Export demand continues slack and generally trade is very moderate. Prices are steady and unchanged.

VEGETABLES.—With abundant supplies of L. I. and N. J. potatoes, Southern are slow of sale. Prices cannot work up suddenly as the market has only a city outlet at this part of the season. N. J. and L. I., new bulk, per bbl., $1.25@1.50; Maryland, $1@1.50; Norfolk, prime, $1@1.25; Norfolk, poor to good, 50@75c. Corn is not fine yet. The demand for egg plant improves every year. Cabbages have declined. L. I. tomatoes sell well considering the price. Norfolks not wanted at any price.

Green corn, Jersey, per 100, 50c.@$1.; tomatoes, Maryland, per crate, $1.75; L. I. and Jersey, per bush. $2@2.25; cucumbers, L. I. ₩ 100, 50@75c.; egg plant, Jersey, ₩ doz., $2; Fla., ₩ bbl., $3@4.50; string beans, L. I. round, ₩ bag, $2.25@2.50; Long Island, flat, per bag, $1.50@1.75; wax beans, L. I., per bag, $1.75@2.00; green peas, L. I., $2.50@3.00, turnips, Jersey, per 100 bunches, $3@4; Jersey, Russia, ₩ bbl., $1@1.25; beets Jersey, per 100 bunches, $2@3; radishes, red, 50@75c.; lettuce, ₩ bbl., $1.50@3; cabbage, Jersey, ₩ 100, $4@6; squash, Jersey, marrow, per bbl, $1@1.25; L. I., yellow, $1; L. I., white, $1; onions, Jersey, yellow, $4; State, yellow, $3.75@4; carrots, ₩ 100 bunches, $1.50@2.

WOOL.—Export demand continues slack and generally trade is very moderate. The market has been quiet this week, and the situation as to prices is unchanged.

LIVE STOCK MARKETS

NEW YORK, Saturday, July 17, 1880.

BEEVES.—Receipts for week 14,616 head; do last week 12,825 do. The offering was easily used and closing sales show an advance of $1 per head and in selected lots of steers ¼c. per lb. Cherokees and Texans were sold at 7½@8c to dress 55 lbs.; Colorado stillers at 8½@9¼c. to dress 56 lbs.; corn-fed Colorados at 8¾@9¼c. to dress 56 lbs.; Ohio dry cows at $3.60 ₩ 100 lbs, and common to fair native steers were sold at 8½@9c, to dress 55@56 lbs., with good to choice at 9½@9¾c. to dress 56 lbs.; few extras at 10c.

COWS AND CALVES.—Some addition to supplies weakened an already slow market. No sales quoted this week above $55 the range is down to $35.

LIVE CALVES.—Small inquiry and free supplies have kept prices weak on all the selling days.

Live calves, N. J. and Bucks Co., choice, 5½c.; prime, 5@5½c.; State choice, 5@5½c.; State, prime, 4½@5c.; do, fair to good, 4@4½c.; poor, 3@4c.; heavy, good to prime, 5@5½c.; buttermilk, 2½@3½c.; grass, 2@3½c.

SHEEP AND LAMBS.—Receipts for week, 35,379 head; do last week 31,537 do. The demand has not been sharp and the market closed dull and heavy without much if any change in prices for the week. Lambs opened very active and stronger, but closed weak at yesterday's prices. Sales of sheep were at 3¾@5c.; of Southern and Western lambs at 4⅝@6½c; of Pennsylvania and State do. 5⅝@6½c, and of Jersey do, 7c.

SWINE.—Receipts for week, 20,579 head; do last week 21,016 do. Stock all to packers; nominal price for live $4.75@5 ₩ 100; city dressed 6 3-16@6½c.

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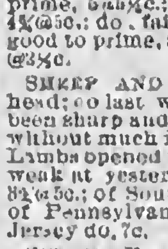

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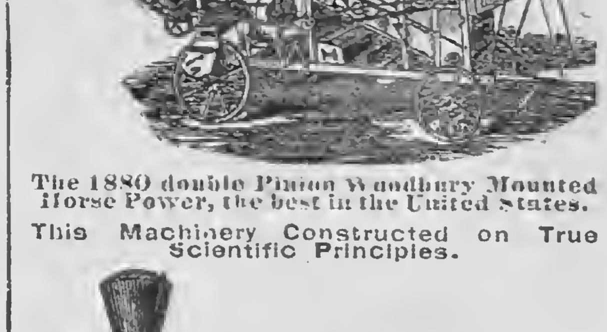

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Reading for the Young.

TO A BREEZE.

FRANKIE M. BROOKS.

Cooling breeze,
Fan my brow;
Kiss the quivering forest trees,
Dance upon the brooklet. Please
Tell me how—
O'er the beauteous summer land,
And the restless summer sea,
And the yellow, yellow sand
Of the ocean's golden strand—
You have come.
Tell me where
You are from.
In the sunny land of Spain
Did you go?
Or amid the hills of France
Did you blow?
'Mid the stately spires of Rome.
'Mid the ancient towers of Greece,
And the temples of the East
Have you been?
Are you home,
Pleasant breeze?
Or still onward will you go
Over other lands to blow?
Scented sweet with orange flowers,
Will you spend your leisure hours
'Mid the leafy blooming bowers
Of the South?
Will you visit lemon groves?
Will you burst the cotton buds
In the sun?
Where we get our rice and cloves
Will you roam?

Sailing breeze,
Come again;
From the regions of the South
Come again.
You are welcome in this clime;
Dainty breeze, at any time,
With your singing and your dancing
You can set the leaves a prancing
On the ground.

Little breeze,
Take advice.
If you join with other winds
On a journey to the North—
To the fields of snow and ice,
To that grim mysterious pole,
With its great frost-bitten feet,
Where the ice-bergs drift and meet,
Where Boreas have full sway
All the night and all the day—
Please pass round another way,
Just to warm your freezing mouth
In the furnace of the "South,"
Ere you breathe on us again.

Now, good-bye.
O'er the beauteous summer land,
And the restless summer sea,
And the yellow, yellow sand
Blow again
Soft and free.
Whisk and whistle at your will
Through the cracks of yonder mill:
Dry the fresh mown fields of hay
Where the withering flowers lay;
Then return,
O'er the prairie and the hill,
O'er the woodland and the plain
To the bounteous West again,
To the butterfly and fern,
And to me.

THE GOLDEN ORIOLE.

I shall probably never again listen to a story of a bird with so much interest and delight as I have often listened to mamma as she repeated over and over again the pretty pranks and funny tricks of her pet oriole, which I never had the good fortune to see.

There are three pets which generally distinguish the home of a pet-loving family, viz: a baby, a bird and a kitten. And what family has not been heard to say that "we have the nicest bird," "the cunningest kitten," or "the sweetest baby that ever you saw in all your life!"

One morning papa found the oriole lying on the cold, wet ground, where it had probably fallen from the nest; he carried it home, for it was too young to fly, and there it received much attention.

My parents were at that time living very quietly, with no one but themselves in their household, no cat and no dog to torment the bird. This quietness, combined with kindness from all hands, tamed the little creature and made it as fearless as when it was in its mother's nest.

As it grew older it was perfectly contented, and would hop about on the floor and follow mamma wherever she went. When it grew older still (old enough to fly) it took flying lessons on the back of a chair; at first it would try time and again to fly from the floor to the round above its head, and with a great deal of labor would alight upon it, but the round being too large for its little feet it would always fall off. At last, after many failures, the persistent little thing succeeded, and then such an ado as it did make! Why, it fairly screamed with delight.

The old birds would come and call it occasionally, but although it would sit on the door-step and watch them, it never paid the least attention to their cries. Mamma never kept it caged, and that was one secret of its being so tame, for whenever she put it with the canary for a little while it would become as cross and excitable as any other bird.

It soon became the great object of wonder and admiration in the neighborhood. When mealtime came and it heard the clatter of knives and forks, it would come flying in from out-of-doors. First it would alight upon the table and pick a green pea or a bit of potato from papa's plate, and then it would fly to his shoulder and eat the morsel. Then again it would go to mamma and get a drink—a spoonful of cream. It would alight upon her hand and take the drop from underneath the spoon, so as not to lose that, and then it would drink the rest of it with great delight. When finished, it would amuse itself upon papa's head in a dozen ways, by pulling his hair and nipping his ears all around and pecking into them.

Yes, indeed, the oriole was very fond of cream, and although the milk-room was the only place master "Birdie" was not allowed to frequent, he (it proved to be a male) once or twice entered the forbidden room, through a small crevice in the window, and then he helped himself to his favorite beverage, by skimming up great mouthfuls of it; and, when mamma made her appearance at the pantry door, he would throw out his head and scold her as much as to say, "You just let me alone now, if you please, madam. I know you have come to take me away." He always came at mamma's call, when within the sound of her voice, no matter where he might be When she would go to the door and say "Birdie!" "Birdie!" he would answer her with a short "Chr-r-r-r!" as much as to say—"I'm coming," which sure enough was true, for in a moment he would dart through the door-way, and right into her face, showing the greatest signs of joy at seeing her.

One day two little girls came to see mamma, and when she told them she had a pet bird, of course, they were very anxious to see it. So she went to the door to call him, and when, as usual, the little pet came rushing in, the children were spell-bound with astonishment. Oh! they "never saw such a darling bird!" and "where in the world did you get it!" and, "oh, how tame he is!" They were delighted beyond measure and tried to call him to them, but he would only come at the sound of mamma's voice. Another time the bird did not come when she called him, but when she said "Birdie!" "Birdie" he answered as usual, but each time fainter and fainter, as much as to say "I do not wish to come, I wish you would let me alone." Finally she saw him cuddled in between a row of half-grown chickens that were perched on a wheel-barrow close-by; he was very comfortable I suppose, and did not want to get out of his good position.

He was very fond of society, and dearly loved the little turkeys and chickens, for he was generally found in their company; sometimes in the coop, sometimes on the top of it, and often on the old hen's back. At first mamma was afraid to let him go with the hens and chickens so much, but they seemed to get along so peaceably together, and the chickens to enjoy his company so well, that security took the place of fear. He loved to play as well as a child, sometimes when mamma was sewing he would rush along and jerk the thread from her needle, and then he would light upon her finger and try to dig her thimble off with his bill. But his principal pleasure consisted in rolling the spools of thread out of her work-basket and tangling them up for her.

It happened one time that mamma locked up the house and went away. She had on a new sun-bonnet which Birdie had never seen her wear before, and when she came back and turned the key, she could hear him making little cooing noises, and a great deal of fluttering, just as he always did when he thought she was coming, but the minute she opened the door and he could see her, all was silence, not a sound was heard. Then she saw him crouched up in one dark corner, in an attitude of the greatest fright with his neck stretched and his wings hugged close to his body. Presently she spoke to him in a quiet, gentle tone, and the instant he recognized her voice, all fear vanished, and he was almost wild with delight; he flew right into her face; then he lit upon a chair; then he whirled around her head again and again, as if he could hardly express his joy.

But, alas, she was soon to lose her little pet. The last time she saw him he ate his breakfast out of her hand, as usual, and then flew out-of-doors. He had kept out-doors a good deal at that time, for an old Newfoundland dog had come out from town with some friends of mamma's that week, and the bird and Trip did not get along well together. After that morning he never came back, and mamma always supposed a hawk had caught him, for she saw one swooping down among the trees about the time she missed him. It was a sore loss to the household, I assure you. Mamma could not give him up for many weeks, but would often go to the door and call him, in the vain hope that he had strayed away and might come back again. He had grown to be such an affectionate little creature that it almost seemed as if some member of the family had left their hearth and home.

I believe that any oriole, if taken when quite young and made much of, can be nearly if not quite as easily tamed as this one; for I have heard that orioles are more susceptible of learning than any other bird.

This is a *perfectly true* story, and "I have told the tale as it has been told to me."

Cousin, Frankie M. Brooks.

LETTERS FROM THE COUSINS.

Dear Uncle Mark:—I have not seen any letters from this county, so I thought I would write. I would like to join the Horticultural Club if you will accept me as a niece. I am 14 years old. My father has taken the Rural New-Yorker two or three years, and he likes it very much. We have a good many flowers. I will give you the names of a few: Roses, Lilies, Pinks, Petunias, Violets, Pansies, Verbenas, Sweet William, Marigolds, Lantana, Honeysuckles, and a number of kinds that my father received from the Rural. We are three sisters and one brother in our family, and one brother is dead. We live 14 miles from Sacramento City on a ranch, and go four miles to school. I have seven studies. My father owns 800 acres of land, and he keeps 2,000 sheep, fifteen horses and other stock besides. Our pets are two Guinea pigs, two cats, two canary birds, one gold fish and two colts. They belong to my baby brother, Johnnie, who is eight years old. If this letter is too long, and not worthy of publication, cast it in the waste basket. This is my first letter. Ettie Plummer.

Sacramento Co., California.

Uncle Mark:—We once again write to you to thank you for the seeds sent us. Our flowers from the seed sent are doing so nicely. The portulaca is blown; we had several colors, but what you sent us is not like ours. The Surprise melon is growing nicely; it has been very dry until two weeks ago. All our seed did well, but the seed you sent papa did not all grow. We told mamma she had taken too much pains with hers. You ought to see her Golden Ovoid mangels, they are so large. The bronze lettuce was splendid this year, as was the Acme tomato. She has no other kind of tomatoes. We all think a great deal of the Rural plants. We are striving hard to have pretty flowers, but there is a kind of insect, or worm, eating some of them in the heart, and they fall off on the ground. What must we do with them? But perhaps this wet weather makes them worse. From your little friends,

Lizzie, Barbara and Eliza Pound.

Spencer Co., Ky.

Dear Uncle Mark:—As you said in the Rural that the names of the cousins who did not report would be dropped, I guess I had better report. I planted some of the corn I received last Summer, but it was too late to make even stalks. The rest I planted this Spring. It is just up. The flower seeds I did not have time to plant. I have planted some beans and potatoes, which are doing finely. Only three of the grape seeds have made their appearance. Peaceable Bob is right, about the young ladies quarreling, and they had better be keeping the chickens out of their flowers than be prowling about graveyards. Jay-hawker.

Johnson Co., Kan.

Dear Uncle Mark:—I am twelve years old. I have been wanting to write you for nearly a year. I seeded nearly 70 acres last Spring, and harrowed it in. I began to work in the garden when I was six and I have made most of the garden for three years. Now, have I done enough to claim a place in the club? If you think so, put me down, if you please, George U. Watson.

Daviess Co., Ill.

Various.

BRIEFLETS.

At the beginning of the present century there were 3,000,000 copies of the Bible in existence; since then 116,000,000 more have been printed. The fact that politicians are, if possible, growing worse and worse is abundant proof they have been injudiciously distributed. . . . . "No," said Le Due, "I do not expect to be re-appointed by the next President. No one will ever appreciate my tea as the present administration has."—Puck. . . . . Many persons who rake through another's character with a fine tooth comb, to discover a fault, could find one with less trouble by going over their own character with a horse-rake.—Whitehall Times. . . . . A simple experiment in pneumatics is one mentioned by Tissandier. Place some burning paper in a quart bottle, full of air. After it has burnt a few seconds, a hard-boiled egg, with the shell off, is placed in the mouth. The egg is pressed inward by the atmosphere (the combustion having caused partial vacuum); it gets more and more elongated, and at length wholly enters the bottle, with a slight detonation. . . . . Ham and other flesh infested with trichinæ have been treated with alcohol and salicylic acid, and upon examination the parasites had entirely disappeared. Hence it is proposed to cure persons thus affected in the same way. . . . . The Boston Journal of Chemistry says that the attempts of oleomargarine manufacturers to convince the public that beef tallow, or "suet," as tallow is usually called by the compounders, is "just as good" as butter, are very absurd. The difference between good butter and the cleanest specimens of the oleomargarine mixture is "heaven-wide." . . . . . Anthurium Scherzerianum Rothschildianum is the graceful and simple name of a new flamingo plant. . . . . The Connecticut Farmer says that Mr. Erastus Bailey, of Little Compton, R. I., has kept 1,000 to 1,200 hens during the past five years, and realized from each an annual profit of $1.15. The question is, if he can do that, why don't he increase his flock to 2,000 or 2,400 and realize double the aggregate amount? . . . . . It is well to cut off the asparagus tops before the seeds ripen. . . . . Mr. Warner says: Nothing shows one who his friends are like prosperity and ripe fruit. I had a good friend in the country whom I almost never visited except in cherry-time. By your fruits you shall know them. . . . . Messrs. Ellwanger & Barry, we are glad to see, regard Cornus florida (our Flowering Dogwood) as one of the best of trees for ornament. They rank it next to the magnolia among flowering trees, and second only to the Scarlet Oak (Quercus coccinea) in brilliant foliage in Autumn. No reference is made, however, to its showy fruit. . . . . Onions should be found in *every* garden. How could the Dutch or those who pattern after them in their cooking, get on without them? In onion is strength; and a garden without it is devoid of sprightliness. . . . . "The onion in its satin wrappings is among the most beautiful of vegetables; and it is the only one that represents the essence of things. It can almost be said to have a soul. You take off coat after coat, and the onion is still there; and when the last one is removed, who dare say that the onion itself is destroyed, though you can weep over its departed spirit! . . . . . Happy is said to be the family which can eat onions together. They are, for the time being, separate from the world and have a harmony of aspiration. . . . . There is a hint here for the reformers. Let them become apostles of the onion; let them eat and preach it to their fellows, and circulate tracts of it in the form of seeds. In the onion is the hope of universal brotherhood. If all men will eat onions at all times, they will come into a universal sympathy. . . . . A teaspoonful of carbolic acid in two gallons of water is said to prove as destructive to the currant worm and rose bug as hellebore. . . . . In France the children attending 30,000 primary schools in the rural districts, receive instruction in the culture of the soil. . . . . Ralph Waldo Emerson keeps two cows and milks them himself. Some of his brightest thoughts have come to him while being kicked half-way across the stable.—Detroit Free Press.

CATALOGUES, ETC., RECEIVED.

Cottage and Villa Architecture is the title of a handsome large folio volume on architecture, published by Bicknell & Comstock, 194 Broadway, New York. The work contains thirty-four designs of wooden and brick buildings in sixty-six finely executed plates. The plates show plans, elevations, sections and details of low-priced, medium-costly and first-class cottages, villas, farm-houses and country-seats. The work is designed to assist persons who wish to build, by laying before them a large variety of plans from which selections can be made, or valuable suggestions given as to the most desirable construction of a dwelling. The plans are drawn to scale, so that experienced mechanics can work from them without further directions from architects. But few printed descriptions are given, because the drawings themselves are so readily understood as to make descriptions superfluous. On the whole, it is a work that cannot fail to prove of value to all who wish to build without the aid of an architect, and the moderate price, $6.00, may save hundreds by the suggestions that may be garnered from the plans.

Strawberry Circular. J. T. Lovett Little Silver, Monmouth., Co New Jersey. This is devoted entirely to strawberries—pot-grown and layer—for the present Summer and Autumn's use. The "Marvin" is made a specialty This new seedling was sent to us by Mr. Marvin two years ago. It fruited once and our impression was so favorable that we commended it to Mr. Lovett who with characteristic promptness, purchased a large number of plants. Unfortunately our own plot of the Marvin was accidentally destroyed: But we are glad to note that its promise with us is likely to be amply fulfilled.

Catalogue of Purdue University, Lafayette, Ind., for 1879-80. The catalogue contains the names of the officers, faculty and students, and gives a complete idea of the several courses of study that may here be pursued. The institution originated under the Act of Congress which donated lands to the several States for the maintenance of agricultural colleges, and its leading object is to teach agriculture and the mechanic arts. The agricultural course, under Prof. C. L. Ingersoll is complete and thorough-going. A model farm of 150 acres is connected with the institution.

Annual catalogue of the American Veterinary College No. 141 West Fifty-fourth St., New York City. This institution has been in existence for sixteen years, and offers a thorough course in every department of veterinary science. A free scholarship is offered to each State Agricultural Society in the country. The applications for these must be made by the societies to the Dean of the Faculty, Professor A. Llautard, on or before the first of September of each year.

Constitution, By-laws, Rules and Regulations, with premium list of the Winnebago County Agricultural Society of Ill; to be held in Rockford, Ill. September 13th to 17th 1880. Some twenty pages of the pamphlet are devoted to the annual report of the secretary of the society.

Catalogue of Lasell Seminary for young women at Auburndale, Mass., for 1879-80. This institution graduated its first class in 1854 and has since maintained an excellent reputation as among the best educational institutions especially designed for young ladies.

List of premiums, Rules and Regulations of the Des Moines County Agricultural Society's Fair, to be held at Burlington, Iowa, Sept. 21, 24, 1880.

E. S. Miller, Wading River, Long Island, N. Y. Price-list of seeds of Native Trees, Shrubs and herbaceous plants for Fall of 1880.

PERSONAL ITEMS.

General Garfield has named the new home he has just finished at Mentor, Ohio, "Lawnfield." He preferred "Rudolphia," after his wife's maiden name, but she objected.

Mrs. Hancock is a regular attendant of the Protestant Episcopal Church. The little church on Governor's Island, which is supported by Trinity Parish, has been attended by Mrs. Hancock durind her residence at that station, and she has in fact contributed to the service by regularly playing the organ for the Sunday gatherings there.

Ex.-Gov. Garcelon, of Maine, the prime mover in the disturbances in that State at the last election, it is reported, is "broken down and despised," that the rebukes of his pastor have driven his family from his church, and that the loss of a lucrative medical practice at Lewiston, Me., has forced him to give up his fine residence and take rooms in an humble tenement.

Miscellaneous.

XX COT (not painted, White Duck) $2.

Makes a perfect bed. No mattress or pillows required. Better than a hammock, as it fits the body as pleasantly, and lies *straight*. Folded or opened instantly. Self-fastening. It is just the thing for hotels, offices, cottages, camp-meetings, sportsmen, etc. Good for the lawn, piazza, or "coolest place in the house." Splendid for invalids or children. Sent on receipt of price, or C. O. D. For **50 cents extra**, with order, I will prepay expressage to any railroad station east of Mississippi River and north of Mason and Dixon's Line. For **75 cts.** in Minnesota, Missouri and Iowa. **HERMON W. LADD, 108 Fulton St., Boston**; 207 Canal St., New York; 165 North Second St., Philadelphia; 94 Market St., Chicago, Ill. **Send for Circulars.**

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Send for Gen. GARFIELD'S Grand March, (40 cents), and HANCOCK'S Campaign March, (40 cents). Fine music and elegant Portraits of the Presidential Candidates.

TEACHERS WILL NOT FAIL to examine, during the summer, the books needed for their winter's work. We mention **The Temple**, ($1), and **The Voice of Worship**, ($1), for Singing Schools and Choirs; and for the latter, **The American Anthem Book**, ($1.25), and **Emerson's Anthem Book**, ($1.25). For High Schools, **The Welcome Chorus**, ($1); for Common Schools, **Song Bells**, (50 cents), nearly ready; for Sunday Schools, **White Robes**, (30 cts.); and for Temperance work, **Temperance Jewels**, (35 cts.) and **Temperance Light**, (12 cts.) All are FIRST-CLASS books. Don't fail to examine.

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C. H. Ditson & Co., 843 Broadway, New York. **J. E. Ditson & Co.** 1228 Chestnut St., Phila.

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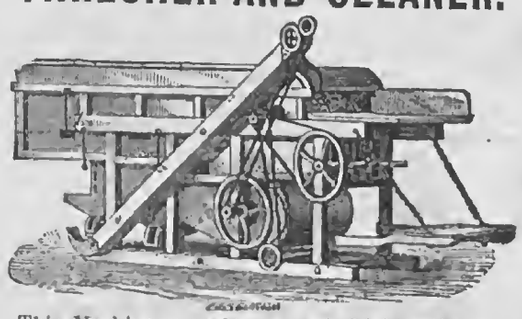

This Machine runs 20 per cent. Lighter than any other Thresher and Cleaner in the market, and does MORE and BETTER work with the same amount of power. The sizes are from a 22-inch cylinder for a One-Horse Railway Power to a 36-inch cylinder for a Six-Horse Lever Power. Write your name, Post-Office, County and State, plain, and address

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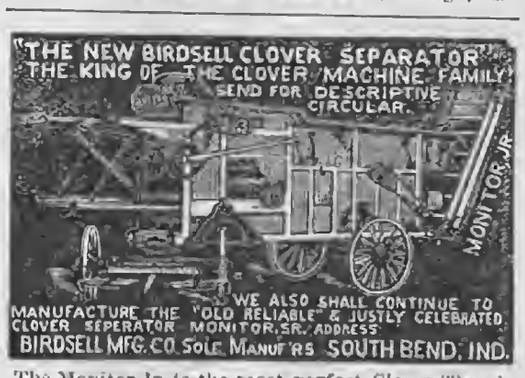

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MINNESOTA CHIEF!

The Best Thresher on Wheels!

It is not a vibrator, neither is it an apron machine, but the best points of both are combined, with new and original features of its own. It is wonderfully simple in its arrangement. It is admirably perfect in its threshing and separating qualities. It saves all the grain, and cleans it ready for market. It runs easily, is constructed durably, is finished beautifully, is the most economical, least expensive, and altogether the most satisfactory machine in the market.

It will handle wet grain as well as dry. In threshing Flax and Timothy it has no equal, threshing and cleaning both as well, and nearly as rapidly, as wheat, and requires no change except the sieves. It has more square feet of separating and cleaning surface than any other machine made, and cannot be overloaded. It is both over and under blast at the same time.

Our clover hulling attachment is a new and very desirable feature. It does the business more rapidly and better than an exclusively clover hulling machine.

Separators of the various sizes fitted for Steam or Horse-Power, as desired.

An Improved Pitts Power, an Improved Woodbury Power, and the Elwurd Equalizing Power, all mounted on four wheels, are manufactured by us, and are not surpassed by any in the market.

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AUTOMATIC FRUIT EVAPORATOR. The Cheapest and best in market. For cut of Evaporator and Descriptive Circulars, address, DODGE & HINCKLEY, Fredonia, N. Y.

Galvanized Cable
FENCE STRAND.

The only Wire Fence that STANDS the TEST of TIME
NO BARBS.
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Fit all drill boots, run level, cut *flat bottom* furrows, cover with *mellow* soil, and instead of *crowding the seed* into narrow rows but *one inch in width*, scatter it 3½, 4, and 5 inches; the plants thus standing *wider* apart, have more ROOM TO STOOL, derive more nourishment from the soil, become more vigorous, and produce better developed average heads.

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Professor C. V. Riley says: London Purple can be more effectually sprinkled or sprayed on to the plant than Paris-green, by virtue of its greater fineness.

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Professor J. L. Budd says: A single application placed every one of the pests on their backs over the ground either dead or in a dying condition, in less than six hours.

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It is strictly first-class in workmanship and construction. Works to the entire satisfaction of every body who knows what a grain and fertilizer drill ought to do. Its sterling qualities have gained it a world-wide reputation, and all who appreciate excellence and accuracy, prefer the McSHERRY.

Send for pamphlet. Mention this paper.

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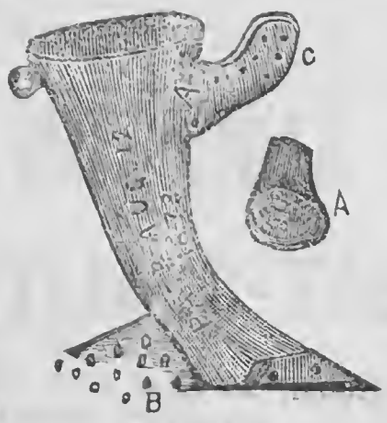

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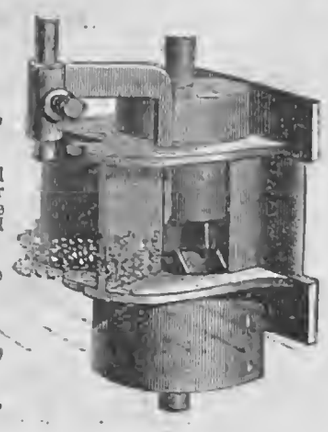
Force Feed Grain Drill.



Best Grain seed and Fertilizer Drill in the market. The cuts show our broadcast shovels set with steel to the middle of the boot, and the force feed attachment.

Highest awards at the Penn. State Fair in 1879. Send for circulars.
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Harrisburg Car Co.,
Harrisburg, Pa.

Humorous.

THERE may be "just as fine fish in the sea as ever were caught," but the trouble is to hook them.—Bloomington Hawkeye.

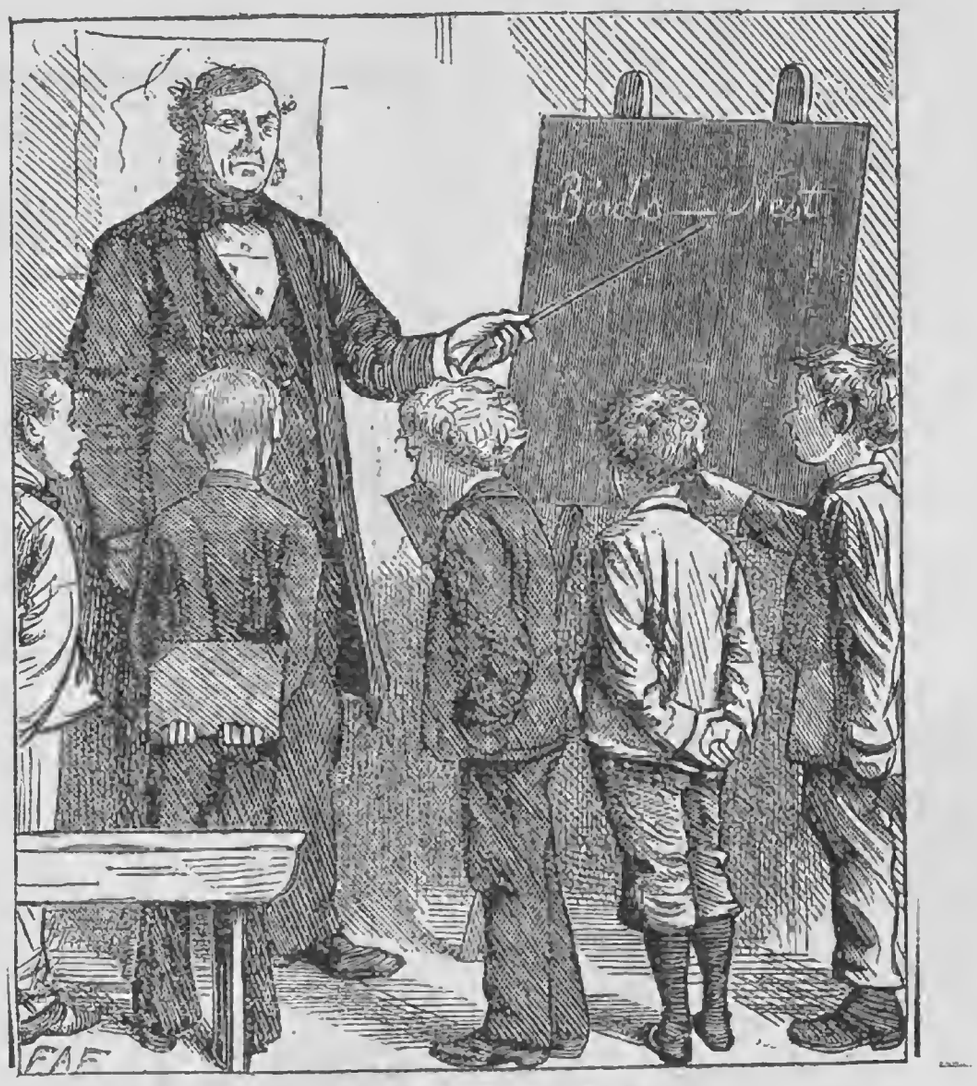
"If I have ever used any unkind words, Hannah," said Mr. Smiley reflectively, "I take them all back." "Yes, I suppose you want to use them over again," was the not very soothing reply.

WHAT was it? I went out into the woods and got it. After I got it I looked for it. The more I looked for it the less I liked it. I brought it home in my hand, because I couldn't find it. A sliver.

WAITER: "Do you wish to be called in the morning, sir?" Guest: "Yes, sir." Waiter: "When will you be called, sir?" Guest: "That depends upon how I feel in the morning. I am very tired now. I'll ring for you when I shall desire to be called."

A Host of Disorderly Symptoms

Follow fast upon irregularity of the bowels. The liver is thrown out of gear, the stomach is hampered by undigested food; flatulence, heartburn, sick headaches and uneasiness in the region of the liver infallibly ensue. But by breaking the partial blockade which produces them, and opening the avenue of discharge with that superlatively fine aperient, Hostetter's Stomach Bitters, a reform of these disorders speedily takes place. Nothing can be more dissimilar from the action of a drenching purgative than that of the benign alterative named. The laxative effect is produced without pain or inconvenience, and the excretory organs are invigorated as well as relieved, which is not the case when they are abruptly coerced into action with a cathartic of inferior efficacy and violent operation. The use of the Bitters will soon be found by any one of constipated habit, to be productive not only of the special result sought, but of general benefit to health.



OFF HIS PERCH.

SCHOOL-MASTER (who has been carefully explaining the use of the "hyphen"):—"Now, boys' here I have written the compound word, bird's-nest. What is the use of this bar in the middle?"
CLEVER BOY.—"Please sir, *for the bird to rooshl on, sir!*"

STRAWBERRIES

Newest and Best Varieties,
INCLUDING
"SHARPLESS"

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A pamphlet telling what varieties to plant and how to plant them, together with all needed information, FREE TO ALL.
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Ladies in the vicinity of, or visiting New York, can receive instructions and find all materials, at the Domestic Building, corner 14th Street and Broadway.

BARBOUR BROTHERS,
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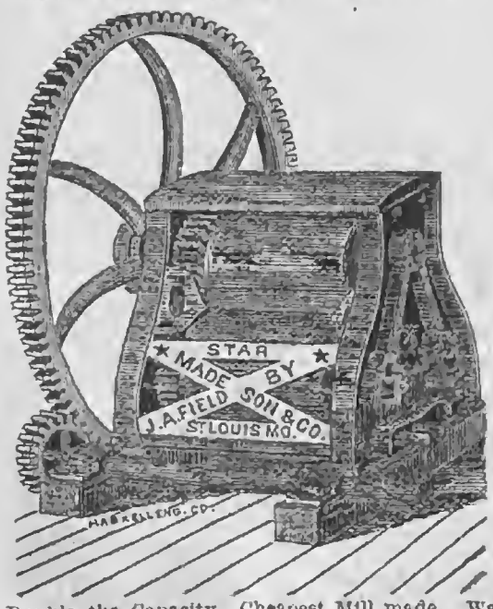
STAR CANE MILL.



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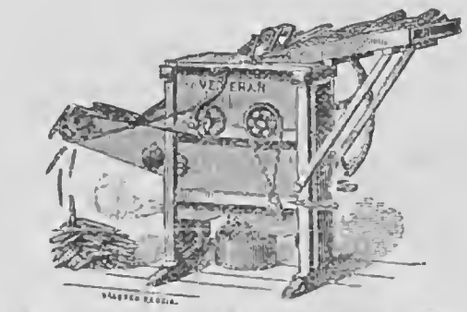

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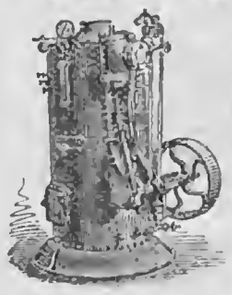

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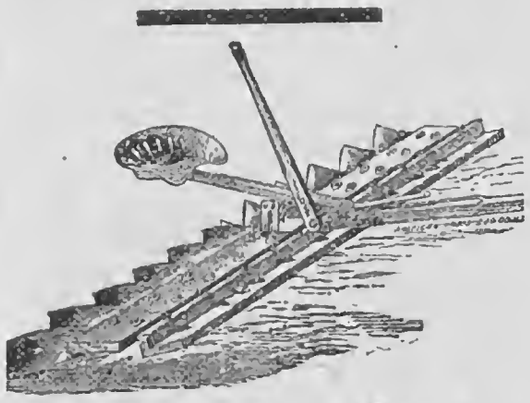

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Dairy Husbandry.

THE DAIRY COW.—No. 3.

HENRY STEWART.

How to Choose a Cow.

SOME persons have a sort of intuitive discrimination in judging of a cow. This is the result of experience as well as of a peculiar indescribable sense of fitness; for the general appearance of a good cow carries with it to the mind a very complete sense of "the fitness of things." The chief points about a cow are the udder and the teats; for the former secretes the milk and the latter convey it to the pail. The udder should, then, be capacious and the teats of convenient and pleasant size, well shaped and well placed for the use of the milker. The most capacious udder is one that has large extent at the junction with the cow's body; it should be broad and extend far back behind, and should be broad and come well forward in the front. It should not hang down and come to a point, but should be squarely formed and of a flattish, spheroid shape on the under part. Herewith is given a portrait from a photograph of my cross-bred Jersey and Ayrshire cow Nellie 2d, which I consider a model cow for the family or for a dairyman; for, as I have said, what is good for one is good for the other; although the family cow may very justly have more beauty than the matter-of-fact, business cow of a dairy. But the points of a good cow by which a judgment in choosing her can be accurately formed are as valuable to the dairyman as to the head of a family. The udder of this cow, which is not yet three years old, is large enough to hold eight quarts of milk at once, and the teats are placed so far apart, and are of such convenient size for the hand and the milk flows from them so freely that the eight quarts of milk can be drawn in six or seven minutes, easily and without any fatigue to the hands or the wrists. The teat should be long enough and large enough to fill the hand completely to make the milking easy.

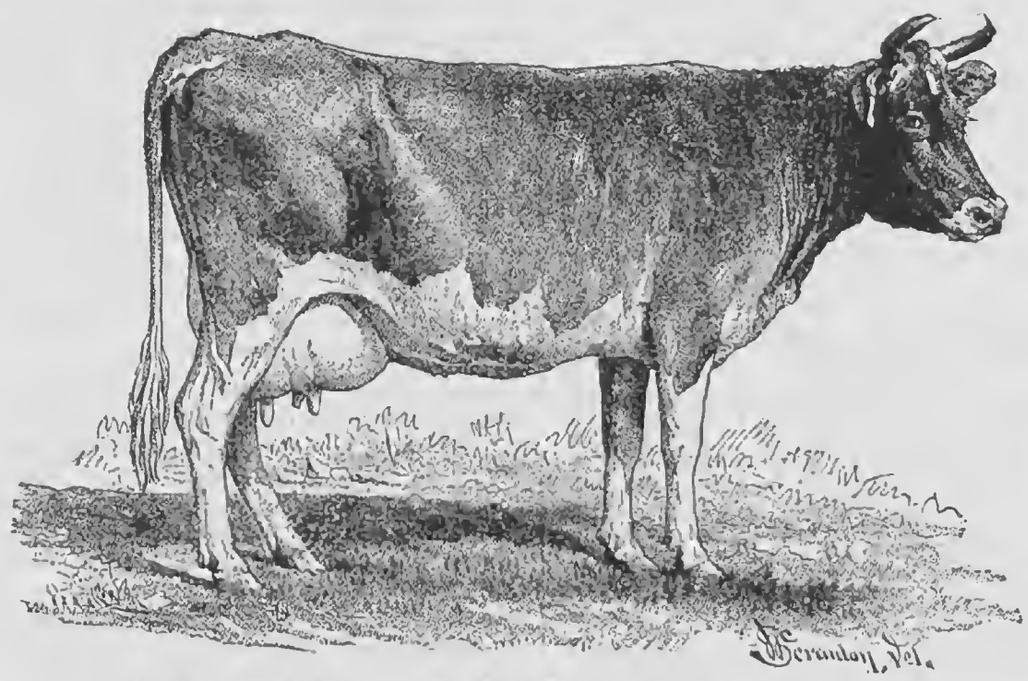
The udder of an animal is supplied with the blood from which the milk is secreted by the branches of the posterior, abdominal or mammary artery, which emerges from the external pudic trunk, one of the most important arteries of the system. The veins which complete the very highly developed circulatory system of the udder pass on to the abdominal subcutaneous vein which is prolonged forward on the wall of the abdomen and has an enormous volume in the cow. This vein is known as "the milk vein," and its volume is one of the common tests by which a good cow is judged. It passes from the front of the udder to near the chest or brisket, where it passes through to join the internal thoracic vein. The importance of the circulatory arrangement of the udder justly entitles the development of the milk vein to be considered as a test of great value in selecting a good cow.

As the blood from which the milk is formed is supplied by the digestive apparatus, the next point to consider is the form and capacity of the abdomen. A capacious stomach is consistent with the habit of a generous feeder, and the development of the abdomen, with the resulting wedge-like form of the body, is the third point of promise in a good cow. At the same time the food consumed should be well digested and thoroughly assimilated, and the other digestive organs should be equally well developed as the stomach, otherwise a paunchy appearance would be given which would indicate a gross feeder rather than a hearty, healthy and profitable one. Therefore the whole form should be well balanced; the chest wide between the ribs behind the shoulders, to give ample room for the lungs and heart, and the back broad and straight. As the whole force of the system should have been educated to expend itself in the production of milk and butter, the carcass should be finely built, the bones fine, the muscular portions—as the legs, head and neck—should be fine and thin and no waste material in bone, flesh and fat should be found in the carcass.

The extremities should be delicately formed, the tail long and thin except at its root, which should be large and strong; the muzzle should be fine; the head long, flat and thin, but broad across the eyes to give room for a large brain, which is the foundation for a highly developed and active nervous system; the horns fine, thin and neatly curved; the eye bright and active, agreeing with the active brain, but calm, quiet and mild in expression, significant of a quiet, contented disposition, and one not readily disturbed or worried. As the secretions of the body all come from the blood, and as a rich, yellow color is desired in the butter, so the skin should be filled with a yellow pigment, and the inside of the ears and the thighs, and other places where the hair is light and the skin plainly visible, should be of a rich orange color; so the scales of ear wax should be of the same color. The hair should be fine, smooth and silky, and, in short, the whole appearance should be satisfying to the eye and consistent one part with another and well balanced.

Some persons lay great stress upon the escutcheon as a distinguishing feature of a good cow. This is the growth of hair upon the rear part of the udder and thighs upward. The hair is reversed in position and grows upward instead of downward, with various curls here and there. Upon the peculiar shape and extent of this varied growth of hair and the position of the curls, the advocates of this test base their opinions of the character of the cow. A well-formed escutcheon, broad, well defined at the edges, with distinct curves on the lower part of the rear of the hams, is supposed to denote a large capacity for milk and a persistent habit of milking up to the next calving. An ill-formed or defective escutcheon is held to denote the reverse. It may be that this test is a good one. I do not believe in it further than this, viz: that a calf with a well-formed escutcheon, inherited with other favorable characteristics from a similarly well marked and good cow, will in all probability inherit the good qualities of its dam, as it inherits all her marks. But if the dam is a poor cow, I don't believe an escutcheon, however perfect it may be, will make a good calf. I have had poor cows, and have seen poor cows, that have had most excellent escutcheons, and have had good cows that have produced calves as good as or better than themselves, that have had no escutcheons worthy of notice except for their inferiority.

The cow Nellie 2d is three years old. Her mother made 14 pounds of butter in a week. With her first calf, Nellie 2d has made 8½ pounds of butter weekly, and after six months' milking and being two months in calf, has not failed the least in her milking. She is solid fawn with light-grey fawn legs; she possesses all the black points of the Jerseys, black nose, tongue, eyes, hoofs and switch; has a remarkably deep yellow colored skin, and if she were pure-bred, with a pedigree as good as herself, might possibly sell to a fancy breeder for $1,000. Her Jersey blood is of the very best, but her lineage is blotted, for she has one-eighth part of pure Ayrshire in her blood, and I think as a family cow she is all the better for that. For a cow for family use, or for profit in the dairy, is none the better although she have a noted pedigree; and is none the worse wanting it if she produces the requisite quantity of milk and cream, is possessed of all the cow virtues, "is gentle and is kind" and sufficiently good-looking to please her owner. But the family cow may be of high or low degree. She may be a scrub of the commonest breeding, homely and modest in her appearance, and may cost but $25, and yet her milk will taste as well and her butter may be as good as that of a more highly bred and handsomer cow for which her more wealthy owners may give $50 or $100. The poor man's cow, however, must be judged by the same tests as the more costly cow and if a would-be owner of a cow has but $25 or $30 to spend for the acquisition, he should be very choice in selecting the best he can get. As to color, a good cow may be of any color. I have had one remarkably good cow that was black and without horns, but in form and figure she was otherwise without a fault and was a model; but usually black cows do not turn out well, neither do white ones. Color depends somewhat on the breed, for color is a distinguishing part of some breeds, and this point will be explained further on. But a cow of no particular breed, and that has a desirable form and other good points, may be chosen as regards color according to the following scale, viz: first, brindle (yellowish-brown ground with black stripes intermingled and gradually shaded down), then yellowish brown; light red and white patched; light red; and darker red last. It is rarely that a dark red, solid-colored cow holds on to her milk for a long time, for she has the general falling of the Devon race from which she inherits her color.



NELLIE 2D.—DRAWN AND ENGRAVED FROM A PHOTOGRAPH.—FIG. 341.

JERSEY MILK AS AN ARTICLE OF DIET.

IF writers would quote and readers would understand the statements in regard to Jersey milk which we made several years since, which Dr. Hoskins, in a recent article in the RURAL, misquotes, there would be no grounds for so much display of rhetoric. We stated that, from the experience in our own family, the milk from our Jersey cows was too rich for babies; they could not digest it. When it was diluted with water there were no bad effects.

This is not arguing "the pernicious nature of Jersey milk as an article of diet." For children other than babies and for grown people, especially for those who rely upon milk as the principal article of food, we would recommend Jersey milk. It is for the delicate stomachs of infants that our warning was intended, when given to them without dilution. This is simply a question of fact, sustained by Dr. Sturtevant and myself. No doubt many others have observed it. We recently sold a Jersey cow giving exceedingly rich milk to a gentleman who lives almost exclusively upon milk, and he found that this milk agrees with him perfectly, as he is not obliged to burden his stomach with a large quantity of fluid in order to obtain a proper amount of substance for physical support.

Jersey milk is emphatically concentrated food, and a small quantity, either as food or in the dairy, goes a good ways.

F. D. CURTIS.

Farm Topics.

COUNTRY LIFE.

Observations Among Rural Subscribers.

COL. F. D. CURTIS.

FREDERIC CURTIS is one of our model farmers. He practices a mixed husbandry and follows the old-fashioned rotation of crops which he believes is the best suited to his farm. He turns over a field of green-sward for corn, which is followed with oats, which, in turn, is re seeded with wheat or rye. He applies manure to the sod, spreading it upon the surface and plowing it in. He always raises an extra-good crop of corn because he cultivates it well in the Spring, which gives it a good start, and then when earing time comes, it has the decaying manure and sod to feed upon, which insures long ears and plenty of them. Mr. Curtis has the merit of fixed ideas, and one of them is, that he has the best kind of corn. He always clinches his argument about his method of raising corn and its superiority by pointing to his corn crib. He says that so long as he can grow such cribs of corn, "what sense would there be in his changing his system, or his seed." This is all true with Mr. Curtis; his soil is warm, a gravelly loam, quick to germinate, and his land strong—natural corn land. With other soil, not so favorable, Mr. Curtis might make changes adapted to circumstances. His corn is a sort of family pet, which he has brought up himself to perfection.

He has made it "thoroughbred" by growing good crops and selecting the best ears. It is at home on his farm and has become adapted by years of continuous culture to the climate and soil. This is the way to make good seed and good crops. Both go together. Hence, Mr. Curtis by holding to his opinion, also holds the key to success. He has the finest crop of wheat hereabouts and this is not the first year that he has excelled. He draws all the manure remaining in his barnyard, however coarse, after the corn has received its share, into the oat field while the oats are growing, and throws it into large piles, where under the influence of the rain and sun it rapidly decays and becomes fitted to spread upon the surface. When the ground is plowed for wheat, it is harrowed in with the seed. Clawson and Michigan White wheat are both grown, the former being relied upon as the surest crop. Mr. Curtis has practiced for several years a departure from his former rule—to wit—sowing his clover as well as Timothy seed with his wheat in the Autumn instead of the Spring.

In this way he escapes the danger of Spring drought, and his clover being earlier, he gets a great deal of pasture from it the succeeding Summer.

Mr. Curtis has an appreciative idea of manure. He believes that it is better for a farmer to purchase stock in the Fall and bring them upon his farm to consume the fodder, even though in the Spring he may not sell them for any more than the purchase price, the manure repaying him both for what the fodder might bring if sold, and the labor of attending the stock. Mr. Curtis, like Mr. Morehouse, has improved his cows by Jersey crosses, and his dairy ranks among the best. He purchased his farm of Esquire Davidson, who had brought it to a high state of culture. Esquire Davidson sold this farm for more than twice as much as he originally paid for it. He wisely invested his surpluses year by year in ditches, convenient buildings and higher cultivation. His farm was his savings bank, which Mr. Curtis bought, paying the principal and a much larger interest than if the money had been invested in the usual way. Esquire Davidson had a yearly showing which afforded him more satisfaction, besides being more sensible, than a few figures in a bank book. Banks might break but the farm was secure.

WESTERN FARMING.—X.

W. I. CHAMBERLAIN.

Illinois and Kansas.

I THINK the first settlers in any new country may safely count on hard times, reverses, trials and discouragements. They come in many and varied forms, but they are almost sure to come. The early settlers of this country—I mean of our own wooded eastern country—expected it and they were not disappointed. Some one less famous for proverbs than Solomon or even "Poor Richard" has said, "Blessed is he that hopeth for nothing, for he shall surely receive it." Now our forefathers expected no ease or luxury at first, and they were not disappointed. With stalwart blows and long and patient labor they cleared the heavy forests and planted their corn among the stumps and roots. The utmost frugality must be practiced, and even then they were sometimes reduced almost to starvation. Years and years of toil were required to rid the fields from stones and stumps and fit them to raise more than a scanty subsistence for their owners.

But when the fertile prairies of Illinois were first opened up to us by the railways, and, earlier still, by the rivers, it was supposed all this was changed. The soil abounded in fertility and the air in moisture. All that was needed was to break up the fertile prairies and begin at once to reap rich harvests. But soon a new evil was discovered. This very fertility of soil and humidity of atmosphere were the sure causes and harbingers of disease and death. Malarial fevers abounded among the early settlers of Illinois. Chills and ague were the scourge of Illinois in early days. Health was ruined and constitutions broken, and thousands of the early settlers gave up their farms at a sacrifice of nearly all they had and returned disheartened and impoverished to their former homes in the Eastern States. But their places were filled by others, and as the country became more thickly settled and the swamps and low lands partially drained, disease diminished and prosperity and wealth increased till now it is one of the largest States in population, and one of the richest, indeed, probably the richest, in all our land in agricultural wealth. But it will not be so healthful as some others, nor so desirable for residence, until the low portions and swampy spots are underdrained so as quickly to remove all standing water after rainfalls and in Spring time. Stagnant water either on or in the soil will always be hostile to health and to fertility. The removal of this stagnant water, too, will tend to diminish the rainfall, now too abundant, or at least to distribute it more evenly through the growing season. I call attention to these facts to show that the settlement of Illinois, fertile and well watered as it was, was by no means an easy task; but, on the other hand, a most disheartening one. Charles Dickens long ago set this forth most vividly in his American Notes, and still more strikingly in his Martin Chuzzlewit, the swampy scene of which is supposed to have been laid in Illinois.

Now in Kansas the conditions were quite different. Here drought and not surplus moisture has prevailed. In most parts of the State, especially the western half, there was not that rank, tall prairie grass that so much abounded in Illinois before its settlement, but instead a low, tough "fuzz grass" that had a most forbidding aspect. Twenty-five years ago, as a friend of mine lately said, the whole State was hardly considered worth a nickel for cultivation, except along the streams. It was doubted whether the soil even had the elements of fertility in it, and it was a part of the Great American Desert. And then, too, the climate was deemed almost hopeless. Kansas was about the "divide" between the trade and the anti-trade winds; the place for winds and not for rains. But certain far-seeing men believed the soil to be naturally fertile, and that the rainfall would steadily increase, for reasons partly given in a former number of this series, as the area of population, tillage and growth of tree and leaf increased enough to bear any reasonable proportion to the area of "desert." The beliefs of such men have proved to be well founded. The crop statistics of eastern Kansas show that soil and climate now unite to make it one of the most fertile spots of earth. The splendid display of Kansas products—cereals, fruits and grasses—at the Centennial nearly four years ago, opened the eyes of the world to the desirableness of Kansas as a home for farmers.

Railway companies united with the general government and the State government of Kansas in offering inducements to immigration. The Kansas Board of Agriculture with its most able Secretary, Alfred Gray, now deceased, became in effect a bureau of immigration. Of course, a strong and even immense tide of population began to set in, all eager to choose the best sites before they should be all taken up. Many of them believed the first crop would pay for cost of its production and pay for the land, too. A large area was thinly covered, or rather long, narrow strips along each line of railway were sparsely settled, and the little patches and strips of corn and other grain bore no appreciable proportion to the immense area of desert plain, trodden hard by thousands of buffaloes for ages. Of course, the rain area was not perceptibly increased immediately, nor the area of "desert" diminished enough to induce any great increase of rainfall. Add now to this the fact that for two years there have been unusually severe and protracted droughts, and it will not be deemed strange that many of the settlers have become discouraged. Some are leaving for their former homes, hardly knowing whether to give up entirely or not.

Wisely, therefore, the State Legislature has passed a law permitting more than a year's absence from claims filed without losing the claim. Wisely, too, the railway companies are furnishing wheat for the fall sowing, taking pay, bushel for bushel, from the coming harvest. These measures will, of course, tend to retain population. Abundant rains have at last come nearly all over the State, and Winter wheat can in all probability be got in and have a good "send-off" for Winter. Those of the new settlers who have means to live it through will do so. Those who are obliged to give up entirely will, of course, be losers; but others will in time come in and take their places, and the State will be as well settled and as fertile through its western half as through its eastern. Indeed the best wheat lands are confessedly in its western half, and it is only a question of time when they shall be taken up and tilled and this part of the State present the same appearance of fertility, thrift and real agricultural prosperity that is now presented by the eastern half. For in spite of the long and unprecedented drought there, lasting from last November till June of this year, the fields show luxuriant and abundant crops. Indeed, the soil of Kansas withstands drought most wonderfully. It is light, deep and porous when properly worked in Spring, and retains moisture marvelously. If there is only moisture enough in Spring to give the corn a good start, it grows and matures even with very slight and infrequent showers.

To one who now rides through the western half of Kansas and the whole of Colorado, for the first time, the prospects of agriculture do not seem promising. But to those who carefully weigh all the historic and meteorological facts developed in the last 25 years in regard to Kansas, the outlook is hopeful for the future.

THE OUTSIDE AND THE INSIDE.

PICKING VS. POISON.—I have been looking over some agricultural journals of the East as I get the chance of reading, to find the acknowledgment from some Eastern grower, that when the Colorado beetle comes in force, it is as useless a task to undertake to subdue him by "picking" as it was for Mrs. Partington to try to sweep out the Atlantic with a broom, and have found it in a recent number of the Country Gentleman, a correspondent of which says, in a late issue, writing from Syracuse, N. Y. "The Colorado pest swarms beyond all former examples. Hills are frequently found having a hundred bugs. Hand picking is of no account, nothing but Paris-green is effectual".

And as a postscript to this piece of testimony to the efficacy of Paris-green, I have been surprised that it was not used to a greater extent than it is, to subdue the Army worm and other insect enemies of the cotton plant. In the upland cotton regions, cotton is mostly planted in comparatively small patches, as potatoes are in the North, and there is no reason why this crop cannot be saved from its numerous enemies as easily, and in the same way, as potatoes. Moreover, I have the impression that where one crop, or generation, or invasion of any insect has been met and overcome or destroyed by the use of substances like Paris-green, there is much less fear of a second serious invasion. At any rate, I find the Colorado beetle ten times less formidable than ten years ago, and I have found that one thorough going over of a field about the middle of June, discourages the bugs in a most encouraging way. But too much cannot be said in condemnation of the drug if used on cabbages and other vegetables cooked in the same or a similar way, and, if need be, its use should be regulated by a stringent law. I say this because several cases of violent and sudden attacks of sickness have come within my knowledge following the eating of early cabbage which I fear had been saved from the Cabbage worm by the use of Paris-green.

THE SCUPPERNONG GRAPE.—There is no reason why, after having furnished our friends across the water, with bread, meat and fruit, we may not, in the early hereafter, add "And drink, too," as per form and spirit of your editorial on page 420. But unfortunately for us of the northern portion of the country, our grape-vines and our vineyards have been attacked with diseases, which if they are not as destructive as the Oidium and the Phylloxera, we have at least not been able to treat successfully, as they have in case of the former with sulphur, and the latter by flooding the vines. From present appearance there can be no great increase in our vineyards, nor profitable production of wine from Northern varieties in northern latitudes, until the problem of grape blight, mildew and rot is better understood, nor until we understand grape growing as well as we do that of the cereals, and can produce both good grapes and pure wine with as much certainty as sweet and sound Indian corn and high-grade flour. However, we are beginning to comprehend that atmospheric conditions and influences and the phenomena of radiation and evaporation have a great deal more to do with successful grape growing than we had reason to suppose—but for further information on this point, I hope you will permit me to refer the reader to so much of Dr. McMurtrie's report as refers to the diseases of the vine, to be found in the Report of the Department of Agriculture for the year 1877, pages 81 to 89.

But if Northern varieties of the grape are subject to blight, mildew and rot, and if those introduced from abroad cannot be grown in the open air, there is at least one hardy native of the South, which, if under ordinary and careless treatment that does not consult the native habits and peculiarities of the vine it occasionally shows these diseases under a mild form, is at least the hardiest of all the grapes we have domesticated. This is the Scuppernong of the South, which is not frost-proof North, nor seen in its best form north of the southern line of Tennessee, in latitude 35 deg. I should not venture to assert on my own authority that the Scuppernong was capable of producing a dry wine of first-rate quality, and equal to the best Northern Catawba of the same kind, but having drank it at the tables of amateurs of undoubted judgment in such matters, both in Central Mississippi and Mobile, I am prepared to accept their conclusions, and especially since I was informed that both specimens were what all really good wine is—the pure juice of the perfectly mature grape, and without enrichment with sugar, dilution with water or reinforcement with spirits. Those who have never seen the Scuppernong in its perfectly mature stage, and therefore associate with it the foxy or vulpine acridity of taste and smell common both to the muscadines and the fox grapes, cannot understand how wine can be made from it, without retaining a repulsive *arriere gout*. But the best wine of this kind shows nothing of that nature and hardly a peculiarity which to average drinkers, would distinguish it from Catawba.

In the matter of the cultivation of the vine, it has a long time since been demonstrated that, in warm climates and in southern latitudes, the heat of the sun accomplished that for growth and development, which, in cold climates and northern latitudes, is effected by strong manuring and high cultivation; and, therefore, on the worn and poor soils of the South we see the native Scuppernong attaining a measure of healthy extension and fruitfulness, which, to Northern eyes and experience, is quite surprising, considering the poverty of the soil and the meagreness of the manurial and fertilizing additions made to it. But in the peculiar manner of the planting and training of the Scuppernong in Southern vineyards and gardens, one is surprised to recognize the facts as stated in the article alluded to above from Dr. McMurtrie, as to the importance of providing against too much evaporation from the leaves of the vine and the soil, and too much and too sudden radiation of heat from the earth's surface. Ordinarily Scuppernong vines are planted from 20 to 30 feet apart each way, and trained to stout stakes having a height above the surface of seven or eight feet. Upon these a horizontal lattice is extended from one stake to the other, so that when the vines have reached their bearing stage they form a green and level mass of herbage, making an arcade from which the rays of the sun are largely excluded. But while the roof of this arcade is sufficiently elevated to admit of the free circulation of the air, so much of the sun's rays are excluded as to prevent rapid evaporation of moisture from the earth's surface during the day-time, while during the night the same mass of herbage acts as a protecting cover and prevents that rapid radiation of heat from the soil which is so detrimental to vine vitality. But this screed is getting too long, and I conclude it in offering the suggestion that if Northern vines and varieties were trained something after the manner of the Scuppernong, they might, in that way, be made to furnish that protection from those atmospheric influences which is found in temporary half-roofs and other artificial means of shelter.

WINE MAKING.—I presume a considerable quantity of wine will be made from the Scuppernong the coming vintage season, for the area of Southern vineyards is now considerable, and is increasing in a most promising fashion; and I should like to have the opportunity to say to Southern wine-makers they must bear in mind that true and good wine is nothing more or less than the pure juice of the fully-matured grape, and that they must avoid any and every form of sophistication with sugar, or water, or alcohol. The first great error of those who do not know the world's judgment as to what constitutes good wine, is that it must be sweet; and the second, that it must be strong in alcohol; and they are apt to think that the must of unripe grapes can be made into good wine if sufficient sugar is added to conceal the acidity and furnish the saving complement of alcohol. There never was a greater error. The acid in the must is not lessened by sugar, though it may be concealed, and the alcohol produced from added sweets has a deleterious effect on the consumer out of all proportion to the same amount eliminated from grape-sugar through natural processes. By all means, then, let those who have Scuppernong vineyards and intend to make wine wait on their grapes until full and perfect maturity is attained, and then adopting the simplest, which are both the oldest and the best processes, make their grapes into wine, and they will have a product which will come as near perfection as their experience will admit of, and one which will rise to a hight in the world's estimation parallel to the rank held by American meats, breadstuffs and fruits in European markets

B. F. J.

Horticultural.

RURALISMS.

FOR a couple of seasons there have been a difference of opinion and some controversy as to the identity of the Champion and Windsor Chief strawberries. At the East the conclusion seems to have been generally reached that they are one and the same. At the West strawberry growers differ, as I learn from the press and private correspondence. Such a veteran grower and observer as Samuel Miller insists that they are distinct, and that we have not got the true Windsor Chief at the East.

To do something toward settling this question I gave them another very careful comparison during the season just past. Learning that Mr. Lovett had the Windsor Chief from "head-quarters," I procured some of the plants, and placed them by the side of the Champion of the same size and age, that they might grow under the same conditions and be handy for close comparison.

Over and over again, and at every stage of growth, I carefully and critically compared the foliage, the flower, the fruit, the yield, and the general habit of the plants; and the conclusion was irresistible that they are identical. The Windsor Chief is said to be a seedling of the Champion. If so, it is an exact reproduction of its parent; and it is singular that both should bear pistillate flowers of the same size and form. My conclusion, of course, is based upon the supposition that I have the true Windsor Chief. Under this view of the case, the Windsor Chief should be withdrawn. Catalogues are already too full.

Is there in reality, as there is in name, a Board of health in New York, and, for that matter, in every city and town in the Union? If so, I would call their attention to the fact, that green, gnarly, worm-eaten apples and pears have already (July 3) appeared in our markets, and the death-rate among children will soon, in consequence, be doubled. I have no words to designate those who send such fruit to market. They are either very thought-

less or very criminal, and in either case the crime of murder lies very close to their doors. I hope no readers of the RURAL are among the number. The duty of all Boards of Health, however, is very plain: they should not only destroy such fruit, but punish severely those who offer it for sale.

As the result of a good deal of observation and some talk with farmers, I am led to the conclusion that the highest state of farming will only be reached through the garden. I have yet to see a farm in a high state of culture where the beginning was not made in the garden. That is where the *a, b, c,* of good farming is to be learned.

I remarked to an old farmer back in the country, whom I had not seen for several years, and whose farm, in the meantime, had improved wonderfully, that his place was so changed I hardly knew it. "Yes," said he, "I've been fixin' up a little. The old woman pestered me to death about the garden, and so I slicked it up a little, and fixed about the house, and it looked so nice I went at the farm fences and the brush, and saved more manure, and kept killing the weeds, and the crops got better, and so I kept going on, and things do look pretty good now. Wife takes a paper, and I take one, and I get time to read it too, and I used to think I hadn't time for anything." And so he ran on, seemingly much pleased with what he had done, and his life and his home without doubt the happier for it. Examples of a like kind may be found all over the country. Papers like the RURAL, therefore, should not lose sight of the garden, with its vegetables, fruits, and flowers.

In some of the leading seed catalogues it is stated that the new Golden Wax bean is eight to ten days earlier than the Black Wax. It struck me that it would be an extraordinary bean that should be ten days earlier than one already noted for its earliness; and I determined to test it carefully. A small plot of ground was prepared, and the soil intermixed so that each kind should be placed under like conditions. The seeds were then put in at precisely the same depth and the same distance apart. The Golden Wax came up one day in advance of the Black Wax, but the latter flowered one day before the Golden Wax, which seemed to equalize things. In the end the Black Wax was fit to pick one day before the Golden Wax. For all useful purposes they may be said to ripen at the same time.

The pod of the Golden Wax is a little longer and broader than the Black Wax, the pod of the latter being round. The color of both is a bright yellow. The Golden Wax, however, has the brighter color when cooked, the reason being that its seeds are nearly white, while those of the Black Wax are black. From the same number of plants, the Black Wax yielded twice the quantity at the first picking, and three times the quantity at the second, and so on to the end, showing the Black Wax to be very much more productive than the Golden. In quality the Golden Wax is perhaps a trifle richer than the Black, but they are both so exceedingly good that this trifling difference may be overlooked. They are of unsurpassed excellence, and a salad of Black Wax beans is a thing not soon forgotten. In small gardens and where only one kind is grown, it should be the Black Wax.

The RURAL for July 10, is a grand number. It would be difficult to overestimate its value to the agricultural and commercial interests of the country. It is a great labor well done. If the Agricultural Department at Washington were only a little more teachable, they might here learn a most valuable lesson. It is another instance of what can be done by intelligent, well-directed private enterprise. I congratulate those who are to be benefited by the labor, as well as those who have so successfully accomplished it.

The RURAL aims to be right always, and is very seldom otherwise; but in "Notes from the Rural Grounds," p. 454, there is a mistake which, in the interest of history, I wish to correct. In the note referred to the reader is left to infer that the Caroline and the New-Rochelle originated with Mr. Carpenter of Rye. You received your Caroline plants from William S. Carpenter of Rye, as I did mine; but the New Rochelle and the Caroline both originated with S. P. Carpenter, of New Rochelle, West Chester Co., N. Y. HORTICOLA.

Remedy for the Rose-Bug on Grape Vines.

THE RURAL, to my inquiry for this, thought the sassafras tree growing near the vines might prove one means of keeping the bugs off. But it is not so in my case, as there are over one hundred young sassafras trees growing within 30 to 200 yards of the grape vines. The bugs attacked these alone. I did not find a single one on cherry, plum, peach, apple, or pear trees, and none on the smaller fruits. I resorted to picking, as I stated, to get rid of the bugs; and after going over the vines three times in the course of a week, it rid me almost entirely of the nuisance. Only a few stray fellows have been seen since, and the grapes are so well grown now that these can do but little harm even if not picked off, but I do not propose to let a single one remain to furnish a new brood hereafter. A. B. ALLEN.

Field Crops.

FORAGE GRASSES.

PROFESSOR W. J. BEAL.

Fowl Meadow Grass or False Red-Top.—Poa serotina.

THE first common name for this grass is so applied, because it was thought to have been brought into Dedham, Mass., by wild fowl. The grass has also been called Duck grass, and Swamp Wire-grass and no doubt by many other names, as every one takes the liberty, and perhaps has a right, to call any grass by any common name he chooses. This is a native grass found mostly on low lands. It flowers about the same time as Timothy. The stems in damp weather branch from the lower joints. The panicle, as will be seen by the cut, is quite long, and slightly drooping when past flower. The cut is two-thirds of the natural size. The spikelets are borne near the ends of the branches. It resembles Poa compressa (Wire grass or Spear grass) in some respects. They flower about the same time, a month after Poa pratensis (June grass). Fowl Meadow grass and Wire grass have dark-green stems which remain green for a long time after the plants have gone to seed. Neither of them spread by root stocks, as is the case with Poa pratensis.

FOWL MEADOW GRASS.—POA SEROTINA—FIG 242.

The stems are very nutritious. Those of Fowl Meadow grass are rather tall and slender and as the top is large and spreading, the grass is quite likely to lodge unless mixed with some others with stouter stems. Owing to the fact that the stems remain green and succulent after flowering, there is not so much need of cutting this grass when in flower as there is of cutting most other grasses at that time. It may be allowed to go to seed before cutting, then thrashed and the straw fed out. In this way it makes a profitable crop, as we get a crop of seeds and a crop of forage. The stems of Orchard grass, June grass or Timothy are of little value to feed after the seeds ripen. The second growth after mowing for hay starts slowly. Like Timothy it is not well adapted for pasture.

On sandy loam, well drained upland, I have seen this grass thrive with Timothy, June grass, Orchard grass, and Red-top. On the extensive marshes near Lansing, Mich., this year it is largely raised on the farm which belonged to the late United States Senator, Zach. Chandler. Where the soil is good, the grass thrives and cuts a good crop of valuable hay—perhaps as good as any other grass would produce. The seeds are small and require more than one year to make strong plants. Pure seeds are not often found in Western markets. They are so difficult to identify that the seedsmen and purchaser are both liable to be misled. This is true of most other grasses, and constitutes one of the many "practical" reasons why farmers should be good botanists.

These papers on grasses, no doubt are "dry," foraging for most readers. I see no way to help it, except to keep talking about the peculiarities of some of the best. It will be some time yet before the average farmer will know that there is much else in the meadow or pasture worth talking about, besides Red clover and Timothy. After a man begins to believe it is for his pecuniary interest to learn about some grasses not familiar to him, he will seek books and papers on the subject.

The Poultry Yard.

GUINEA FOWLS.

ALTHOUGH these birds have been domesticated for very many years, it is singular to notice their peculiar natural waywardness. Every species of domesticated animals shows some peculiar natural traits that domestication has not entirely eradicated. The horse will sometimes dash off at full speed at some imagined danger. The pig, however well fed, will root up a garden or lawn whenever it gets a chance. Poultry will scratch a flower-bed as recklessly as a dunghill. Ducks will ramble along a creek a long way from home, and will even hide and lie quiet when they hear you coming to look for them. Each species of animals seems to be domesticated just up to a certain point, and there stop; their nature will not change beyond that limit. The dog, being endowed with greater intelligence and affection than any other animal, can be admitted to greater familiarity with man than any other; but even he will sometimes break off into his natural weakness for live lambs or other small animals.

Some birds cannot be domesticated at all, others only partially so, as the pheasant, while the Guinea fowl always retains a considerable degree of its natural wildness. Unlike poultry or ducks, it will often change his roosting-place, and frequently shows an unsettled disposition towards night. Some cannot be induced to lay in a house, but ramble off into quiet nooks to hide their eggs; some will do this so effectually that one must watch them very closely to find their nests, as they will not go on the nest while they see you watching them: yet, in its general habits, there is a fearlessness and familiarity that make the Guinea fowl a very amusing pet; some persons have a dislike to their continually repeated note of "come back," or, as some hear it, "buckwheat." For my own part I like to hear it in the farm-yard, its notes are uttered with so much vigor and complacency as to give a cheerful tone to all the surroundings and—what is more singular—it does not appear to annoy other stock. On the other hand, poultry will be on the alert for a note of alarm by the Guineas; it is only a pity they are not as well disposed toward poultry. This is their principal fault — they will harass poultry while feeding or at roosting.

They are gregarious to a great degree, keeping very close together, especially each flock of young ones to the parent bird. Seven that were hatched under a Dominique-Leghorn hen followed her so closely as to almost always surround her, coming quite tamely to the door-step every morning; they stuck to her until they were larger than the hen, and eight months old; the poor hen began to appear tired of her charge, yet so closely was she beset that she could hardly get a chance to have a flirt with Mr. Chanticleer; and while she was hiding in the house to lay they kept guard at and around the door, flying on the roof and otherwise showing uneasiness at her absence. It is generally believed that hawks will not visit a yard to kill chickens where Guinea fowls are kept. That has not been my experience. I never found it so. I have lost quite as many chickens by hawks while I had many Guineas, as I did when I had none, with the same number of chickens in the same yard.

The shells of their eggs are very thick; it is astonishing how the chicks get out of them. When first hatched they are very quick—as lively as partridges—but if reared under a tame hen they become much tamer than when raised by their natural mothers, and they can then be cooped up in wet weather and at nights; but the Guinea mother drags her chicks about through early dews and showers, and often loses them all. When raised by hens they want many changes of food, and all must be good, as turkeys do; but with their natural parent they find much of their food if they have room, for the Guinea hen is a most industrious hunter, and her family are not slow to learn.

There are three distinct varieties as far as color, but nothing more: they are the ordinary pearl, silvery pearl and white, but I know of no difference except that of color. They are late layers, seldom laying before May. The chicks feather and mature quickly, and are fine for the table. HENRY HALES.

HENS EATING EGGS.—Some contend that if egg shells are given to hens it teaches them to eat their eggs. We have made a practice for many years past of feeding all our egg shells to our hens, broken up moderately fine by the hand, and thrown out to them twice or thrice per week. During this time we have never lost an egg by hen eating. In addition to giving our hens the shells, we invariably add any that happen to get broken in picking them up. In them they get the yolk and white, and yet these have not taught them to break a single egg of themselves for the purpose of eating it. In the London Live Stock Journal of June 4th, a correspondent writes that he has followed the practice of giving his egg shells to his hens for 15 years, and not a single one of his flock has been made an egg eater; on the contrary, it was a sure preventive, as the shells gave them all they craved for to assist in forming their eggs.

The Horseman.

REMEDY FOR SHOULDER GALLS.

WHEN team horses that have not had much work during the Winter are taken out and put to plowing in the Spring, it is very difficult to prevent the occurrence of shoulder galls which are often severe enough to disable a team, and always occasion uneasiness to the

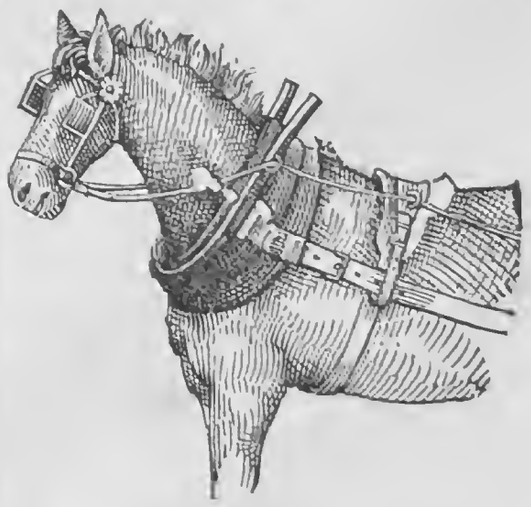


FIG. 243.

animal and prevent his drawing true. I have been troubled in this way every Spring, notwithstanding every pains taken to have well-fitting collars and hames, to wash the shoulders after work and to keep the collars clean and soft. This Spring I have tried a plan that works like a charm, so that galls previously made healed up quickly while the team was at work. This consists of two pieces of smooth calf-skin cut to the form of the collar but larger, and caught by a few stitches on each side, top and bottom, so as to lie smoothly upon the shoulders under the collar. These pieces take all the friction, the collar moving upon the *calf* skin instead of the *horse's* skin, which is relieved from all cause of abrasion.

FIG. 244.

Each piece is cut as in fig. 244: and is fastened into the collar with the flesh side of the leather inside (next the horse). Of course, in cutting from a pattern it must be reversed for the opposite side. It should just come up through the collar so as to show in front, and the free edge should show two inches over the shoulder behind the collar. Figure 243 shows it as applied on the horse.

T. H. H.

The Vineyard.

THE EUMELAN GRAPE.

It occurred to me that the experience of a fruit-grower in the Province of Quebec with regard to this grape, might be of value. The vine came in good order, was planted and treated in the same way as the Concord, and still remains in its place, thick-stemmed, healthy, free from mildew when "Hartfords" beside it are destroyed, and it bears handsome bunches of evenly ripened berries, two weeks before the Concord is eatable. Since fruiting, which was six years ago, it has borne good crops, those of the last three years being particularly heavy. It deserves every good word lavished upon it as regards quality, being so delicate, rich and vinous as to be mistaken for a hot-house grape by those who do not know it well. We have no fault to find with this grape, especially as we tried it the same as the Concord in every respect; but the trouble is, we cannot propagate from it. For years the cuttings had been saved, as are those of our other grapes; the same treatment in every way is given them, and yet we are not successful in raising young vines. This is the only fault we find with the Eumelan, and I write this article in the hope that some one may be able to advise us on that, to us, important subject.

ANNIE L. JACK.

THE EUMELAN GRAPE.—I cannot recommend the Eumelan grape except for its sweetness. It is the sweetest grape which I ever raised and the poorest bearer. For five bearing years my two vines have never borne a cluster, only here and there a bunch of less than half a dozen grapes. We have waited patiently, hoping that when the vines got older they would do better. Last year the little bunches approached the nearest to clusters, and maybe they will continue to grow in size and number until we shall get a reward for our forbearance.

F. D. C.

Pomological.

MINER PLUM.

I SEND you by mail specimens of the Miner plum, which seems to be worthy of some notice. We have only one little tree, with a boll about two and one-half feet high, supporting a symmetrical head some ten feet in diameter, loaded with fruit. The curculio has done his best to cheat us of our share, but these plums come out ahead this year for the third time. Some of them were stung in a dozen places, yet all that ripen are sound and free of worms. As you will notice, the fruit is not exactly No. 1; still it is much to be preferred to nothing. Not only for its fruit is the Miner worthy of cultivation, but for ornament as well. Three times a year (April 1, when crowned with its clusters of white flowers; June 15, when its bright-red, almost scarlet fruit contrasts with the bright-green leaves, and again late in Summer when the foliage has assumed a pleasing tint of purple) it will compare favorably with many shrubs and small trees grown for ornament only. M. B. PRINCE.

Warren Co., N. C.

[The Miner is an improved variety of the Chickasaw plum, of medium size, ovate, juicy, adhering to the stone; excellent for culinary purposes. The plums were received in good order. Thanks.—EDS.]

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN No. 46—JULY 15, 1880.

FERTILIZER ANALYSES.

430. Blood guano, made by Manhattan Fertilizer Co., Black Rock, Conn. Sold by R. I. Holmes, Plainville. Sampled and sent May 19 by J. W. Hemingway.

435. Stockbridge manure for tobacco, made by W. H. Bowker & Co. Sold by J. M. Belden, New Britain.

437. Soluble Pacific guano, made by Pacific Guano Co. Sold by J. M. Belden, New Britain.

455. E. F. Coe's superphosphate, sold, sampled and sent by Buck & Durkee, Willimantic.

456. Russel Coe's superphosphate, sold, sampled and sent by Buck & Durkee, Willimantic.

457. Sulphate of potash, Mapes's Branch, Hartford. Sampled and sent by R. V. Pinney, Suffield.

	430	435	437	455	456	457
Nitrogen organic	2.37	1.49	2.87	2.61	0.84	....
Nitrogen as ammonia	....	4.62	0.41	....	....	....
soluble Phosphoric acid	5.57	5.72	6.93	9.14	2.93	....
Reverted " "	1.53	.37	1.14	.55	1.45	....
Insoluble " "	6.08	.30	2.72	2.06	9.60	....
Potash	0.76	5.62	3.98	....	....	46.87
Chlorine	1.61	5.15	3.75	....	....	....
Sulphate of potash	....	....	....	....	....	93.74
Estimated value per ton	$33 23	$47 04	$40 09	$37 15	$28 53	$70 31
Cost per ton	$45 00	$50 00	$46 00	$38 00	$38 00	$66 66

* Price per 100 pounds x 20.

S. W. JOHNSON, Director.

Miscellaneous.

NOTES FROM MEADOW GLEN FARM.

Summer Management of Sheep.

WE did not turn our sheep out to pasture until the grass was well started, and even then we brought them in at night and fed them grain and hay for at least a week. It would be well if the buyers of wool would be content to throw off less than one-third of the weight of the wool because it is unwashed; then farmers might be less willing to subject their sheep to the worry and fright of washing.

This I consider a risky way of cleansing wool, but if it is necessary a warm day should be selected and care taken not to over-drive the sheep so as to heat them, and they should be handled with care, especially breeding ewes.

When washed, they should be turned on an upland pasture to dry, and I usually allow one week to pass after washing before shearing, to allow the fleece to become yolky. The shearing should be done after all danger of cold and frost is past, and if a storm should come on they should be sheltered from it. The feet of the sheep should be examined, and *if* any signs of foot-rot are seen the diseased part should be cut away and spirits of turpentine applied freely, and in fine-wooled sheep it is often necessary to pare off the hoofs. The lambs should be weaned at the age of three and a half or four months. A good way of doing this is to stable them and feed them cut clover and plenty of water, for then they become tame—a great advantage. The ewes should be put in a dry pasture to dry up their milk, and it might be necessary to draw the milk a few times from the best milkers. After this is done, they should be given the best of pasture to fit them for Winter and mating for another year.

Improvements.

Many farmers are contented to live and leave their farms as they found them, if not in a worse condition. To such I would say:—"Improve your farms; improve your stock by using thoroughbred males; improve the fertility of your soil by using manures, both artificial and home made, and thorough tillage, and improve your fences by renewing the old, tumbled-down things and putting up good ones instead. In some cases it is best to remove the fences altogether and turn several small fields into one, which can be much more conveniently cultivated or mowed. What is more provoking than mowing around fences! Set out trees on your farms, both fruit and ornamental; some one will bless you for it."

This farm contains about 100 acres, and is situated on the south side of the public highway. The buildings are located about in the center east and west. About one quarter of the land, in the southeast corner of the farm, is natural meadow. In the southwest corner is a permanent pasture. When I came into possession of the place the lane leading to the pasture was nearly impassable for man or beast. When I plowed a field or built a wall and found a load of stones, I threw them into the lane, and now it is filled nearly the whole way and makes a permanent road. But the puzzle was where to get the gravel for a covering, as either side was mucky. Now there was a hill on the road near-by, so I conceived the idea of getting the gravel there. Arrangements were made with the road-master; the work has been done at intervals and the road is nearly covered. Over 500 two-horse wagon-loads of culled stones have thus been disposed of instead of being left along the wall or in the way anywhere; the hill, too, has been lowered about two feet, which is a public benefit, while there is now a permanent road leading to the meadow and pasture.

ABEL HOYT.

DRYING AND EVAPORATING FRUIT.

WE have had so many inquiries of late in regard to evaporated fruit—the process, expense and profits of the manufacture—that we are convinced this business, now so imperfectly understood and practiced, will soon, with greater knowledge of its advantage, be recognized as one of the most important industries by fruit growers everywhere. Already its recognition as a legitimate farm industry has made considerable progress and so soon as the fruit-growing public realize the simplicity of the process, the small expense of the necessary appliances and the wide difference between the cost of the evaporated fruit and its actual market value, the business we feel assured will increase very rapidly.

In properly evaporated fruit not only is there no loss in any good quality, but there is an actual development of sugar due to the ripening process, varying from five to twenty-five per cent. The cell structure, flavor and tenderness of the fruit are preserved, and when treated with water, it is easily restored to its former condition, thus solving a problem no less important than the supply of wholesome, nutritious, fresh, ripe fruit—for by this process decay is arrested—for all seasons and all sections.

There are three kinds of fruit driers, two of which are suitable for drying fruit in large quantities, and are usually owned by companies that contract for the surplus product of the neighborhood in which they do business. These machines, however, are unsuitable for small operations as the amount of work to be done would not justify the outlay for motive power to secure the necessary circulation of hot air, and without this they would offer no particular advantage over the old-fashioned drying-house. For a portable machine well fitted for the evaporation of a moderate quantity of fruit we have been very favorably impressed with the merits of the Inclined Flue Pneumatic Evaporator, which has been specially constructed to meet the wants of farmers and orchardists. Various sizes are made with capacities of from five to fifty bushels of fruit per day, and costing from $50 to $200. The cost of fruit evaporated by this device per pound to the producer is claimed to be even less than that of the better grades of sun-dried fruit, when time, labor and quantity are taken into account, and its market value for years has been from 100 to 200 per cent. in favor of the evaporated article. In view of the very promising fruit crops almost everywhere reported, our farming community should investigate this matter closely.

A Novel Bee-house.

On a recent visit to Newburgh I dropped in to see Mr. Clark and his bees, and was greatly pleased with his way of managing the bee business. On the rear of his well-kept grounds is a two-story building used as a tool-shop and bee-house. There is a place for everything. The second story is the bee-house. The hives or boxes are placed close against the sides, which are pierced with holes for the entrance and exit of the bees. They can enter the boxes but not the room. The hives are boxes of his own fashioning, which can be taken away in sections at pleasure. The only thing that looked like an ordinary hive was a box which Mr. Clark uses to drive the bees into while he removes the honey, or secures a queen, or destroys the moth, etc. All this is done in the room. Mr. C. informed me that his bees had not swarmed in five years. But it would take a good many "Jottings" to tell about all the interesting and instructive things I saw in this model bee-house. I saw here, besides, an apple tree grafted with upward of one hundred and thirty varieties of apples, all carefully labeled.

PETER B. MEAD.

WIDE TIRES.—Wide tires are certainly much better than narrow ones, and it seems strange to me why farmers do not demand them and thus cause wagon manufacturers to build their wagon wheels with rims three and a half or four inches wide. Narrow wheels cut up the fields much more than wide ones and, of course, the strain upon the team is much greater. The wheels of ox-carts of the Eastern States are always made with wide tires, and I claim that all farm wagons should have them. What firm will be first to make the change in their wagons from narrow to wide tires.?

F. H. D.

BRIEFLETS.

THUS speaks in an essay (Woman in Horticulture) our respected friend Mr. Samuel B. Parsons: "The true, the well-balanced, the perfect woman is an embodiment of taste and skill and culture, with the addition of those other graces of mind and sentiment and form which influence fathers, husbands and brothers. This influence is potent, and every true man, loving some true woman, delights in nothing so much as the gratification of her wishes." . . . . . Farmer Meehi writes to the London papers under date of July 1st: "In fact, so far the present season is all we could desire and a complete contrast with melancholy 1879. . . . . The Western Rural says that the merits of the Gregg raspberry have never been exaggerated . . . . . A very good method, it seems, for such seedsmen, small-fruit dealers, etc., as are willing to do business in that way, is to "deliver" addresses at horticultural meetings and then, with a request to publish, send copies thereof to the press of the country. The press is very obliging and generally publishes these addresses without charge. . . . . The editorial of the RURAL NEW-YORKER "How to Buy a Horse" is still going the rounds. It has been credited to as many as six different journals. The Independent of last week credits it to the New England Farmer. . . . . The Ohio Farmer says that W. I. Chamberlain carries a solid, practical head on his shoulders, and that his work in the Secretary's office (Ohio State Board of Agriculture) will soon prove it. . . . . Dr. Tanner does not think there is much glory in being considered the fastest man in the world. . . . . Dr. Tanner says that he got so much disgusted that he almost swore that he would never call himself a physician again until he learned something as to the nature of life. He is not satisfied with the system on which our medical education is based. . . . . Again he remarked to a friend: "I have got disgusted with physicians, and particularly with the regular school." If we were not afraid of offending several thousand M. D.'s among our subscribers, we should like to say how much we share Dr. Tanner's feelings. . . . . Mr. Irving D. Cook recommends in the N. Y. Tribune a wet cellar for keeping apples and mentions a forcible test in proof of his recommendations. . . . . Remove suckers from fruit trees. . . . . Pinch out every lateral bud that starts in the axils of the leaves of recently planted grape-vines. One cane alone should be permitted to grow. . . . . La Rochefoucauld said: In love, the old fools are greater fools than the young ones. . . . . Bussy Bohler tells it in a different way: Love like the small-pox, is most dangerous when it comes late. . . . . Beauchene says: Vice alters the countenance of man and quickly destroys the beauty of woman. . . . . If at all, let us have the International Exhibition of 1883 the grandest affair that the world has ever dreamed of. . . . . It is strange that in face of the known fact that there are more cases of real hydrophobia in the Spring—yes, even in Winter—than in Summer, that the regular Summer craze should still run as high as ever. Fits, in 19 cases out of 20, are what give rise to this senseless excitement. . . . . The Miller's committee venture to select the following varieties of wheat as best for milling purposes: Longberry Amber, Lancaster, Indiana Red, Alabama, Orange, Velvet Chaff, Tappahanock and Jennings. They condemn, as they always have, both Clawson and Fultz, the most popular farmers' sorts that are at present known in our country. . . . . W. I. Chamberlain writes us from "On the cars near St. Louis": "I spent a day or two of pleasant travel with B. F. J., of Champaign Co. Ill., who I see is now one of your contributors. . . . . Our respected contemporary, the Evening Post, writes forcibly of the importance of trees in the streets of New York and generally of large cities. "The truth is that all animals, man included, need shade. It should be feasible, too, in towns to promote health, in a direct manner, as well as comfort, by the wise selection and distribution of trees. If this or that species harbors objectionable insects, it can be eschewed; there are plenty to select from without it. The EUCALYPTUS is said to be a safeguard against malaria; and in that case parts of Manhattan which are notoriously infested by malarious disease, might be fringed with this tree to infinite advantage." But our friend, the Evening Post, overlooks an important fact. The first frost would *kill* the EUCALYPTUS. How about the "fringe" then! . . . . . Almanacs would be worth more than three cents apiece if some of the heat of June, July and August was taken off and distributed through the cold months of December, January and February, when it is more needed. These hints are thrown out

gratuitously. We don't suppose they will be acted upon.—Norristown Herald. . . . . New way to "Know all about thyself." Get a Presidential nomination. . . . . Dr. J. A. Lintner has been appointed N. Y. State Entomologist, and the appointment is a good one. . . . . W. I. Chamberlain, our excellent contributor, "without intending to do so," blows the bugle for our contributor, B. F. J., resonantly, in the Country Gentleman. He says "He is regarded by the heavy grain buyers of Chicago as a power—a power, too, honestly, but not unfairly, on the side of the farmer." We do not think Mr. C. could have paid B. F. J. a handsomer compliment.

WHAT OTHERS SAY.

My father purchased an Acme harrow this Spring on the recommendation of the RURAL; it is better than your recommendation said. We lent it to a neighbor to use it on freshly broken Timothy-sod for corn; he says it was worth a dollar an acre to him on his 15 acres. The corn has the best stand in the neighborhood, it being over three feet high on July 1. I think it would be a good machine to use on Western prairie-sod, where the sod is so tough that they have to replow it in the Fall two or three inches deeper than it was "broke" to obtain a soil sufficient to put their crops in. Going over twice with the Acme harrow will pulverize sufficiently for any crop. J. G.
Fremont, Minn.

PROF. SHELDON believes that on almost any land, of whatever kind or quality, it will pay a man to use grain to his cows—that is, the cows will be all the better for a little dry concentrated food along with the bulky succulent grass; they will be the healthier and stronger, and so will give more and richer milk. And the more grain or cake a man uses, within limits, the more cows he may keep, and the richer his land may become year by year. There is, in fact, no better way of improving grass land than by consuming cake upon it. It may be true that nothing is equal to grass of good quality for producing milk; but even of a good thing it is possible to have too much, and a change of food—even a change of pasture—gives, as every intelligent dairy-farmer knows, a fillip which is found in the milk-pail. Try it. Prof. Sheldon says he can recommend it.

AGAIN he says in the Live Stock Journal, from which we quote the above, "I have an Ayrshire cow, a capital milker! Her daily yield of milk is 20 to 24 quarts, and she is increasing in flesh all the time. At the last churning time her 11 days' yield of butter was 22 pounds, an average of two pounds per diem. Pretty good this, as we consider it. But in addition she keeps the family—a small one—in milk and cream. Twice a day she comes to the shed to be milked, and each time receives a couple of pounds or so of decorticated cotton-cake or linseed-cake mixed. The cake costs less than a penny a pound, and as without it she would most probably yield three or four quarts less of milk per day, there would be several pounds less of butter per week, and the cow herself would not be in such good condition."

A REMARKABLE case of animal electricity is given in the current number of the Veterinary Journal. It is reported by Mr. W. Woods, F. R. C. V. S., Wigan, and is as follows:

"On the 21st of February last I was requested to visit a dairyman's cow which had calved the previous night, the owner stating that he did not understand what was the matter with the animal, as every time he touched her a trembling sensation ran up his arm, and he involuntarily twitched it away. He seemed perfectly astounded, and kept impressing it on me that he was not afraid of the cow, but he could not help shaking when he touched her. I visited the cow, and when I placed my hand upon her I received a perfect electrical shock, the animal evidently receiving the same, for as often as she was touched by any one she bellowed, and jumped forward apparently terrified. The pulse and temperature it was perfectly impossible to ascertain. The owner was unable to milk her, as she went almost wild when touched, but was perfectly tranquil when not meddled with, with the exception of a wild look about her eyes. No matter how many times the animal was touched, the same result followed. With great difficulty I administered a strong saline purgative, combined with 15 croton beans, followed in a few hours by a pint of linseed oil, containing 3 ss. chloroform. At night the cow was considerably better, and the following morning I was pleased to find her quite convalescent."

"WE have received a long account of the achievements of 'the Chicken King,' Mr. W. C. Baker, of New Jersey, which we hope to find room for in our next. It is said that Mr. Baker expects to raise 250,000 chickens this year by artificial incubation. He is reported to have spent £16,000 in experiments, and he is now enlarging his yard to accommodate 8,500 laying hens. His gross income is estimated at £16,000 per annum. This is poultry farming indeed." We copy the above from the London Live Stock Journal. We believe that Mr. Baker's success must be better known abroad than at home.

GEN. DIVEN, in the course of his recent address before the Farmer's Club, asks: "Did it ever occur to you, my fellow farmers, that you of all men have the deepest interest in the prosperity of this country, and in the government and laws that are to contribute to such prosperity? This is your country, not only in the sense in which it is the country of every citizen, but it is your country because you own it in *fee simple*, that is, absolute ownership of the soil?

THE editor of the Mark Lane Express thus refers to an article on in-and-in breeding, by Mr. Mathews. He has shown very conclusively the loss of fecundity which has attended the system of in-and-in or "line" breeding, in the case of the Duchess tribe of Short-horns, and pointed out very forcibly that in-and-in breeding, when practised in the later stages of the development of a breed of animals, is essentially a different thing from the close interbreeding which is necessary to form a distinct breed. In the one case the ancestors of the animals are closely related, whereas in the other there is no consanguinity in the material to be operated upon. Mr. Mathews's carefully arranged facts will speak for themselves, and we take them to be a strong confirmation of the opinion so frequently expressed in this column to the effect that the breeding of "fancy" Short-horns has resulted in injury rather than benefit to the stock of the country. Fanciers have bred their Short-horns for pedigrees of theoretical purity; and these they have obtained at the expense of fertility, constitution and corporeal excellence in the animals themselves. The "fancy" has had its day, and the mania has almost died out; fictitious values are very nearly at an end, and the "bottom of the Short-horn humbug" has fairly "dropped out." So much the better. Those who breed Short-horns to sell to farmers will henceforth have to study the improvement of the animals, not merely the concentration of blood; and in a few years' time we hope to see all that is good in the various tribes and families of Short-horns united by "mixing sorts" into one sort—and that sort a good one.

"THERE is another point," said Pres. Hayes in his speech to the Alumni of Yale College, "to which I wish to allude, and yet it is not a point, for it has length and breadth and depth and thickness. There is an old saying, "you may lead a horse to water, but you cannot make him drink." Knowing the character of the American people, and knowing that they desire as their representatives men of the highest moral as well as mental character, I looked about long to find a man who could suitably represent our nation at the court of our great sister nation, England. Again in my emergency I turned to Yale, and found just the man. I reversed the old adage in this case, for I brought the water to the horse, but President Porter wouldn't drink. [Long-continued applause and cheers.] And he was altogether right in refusing to accept the position tendered him. Any administration and any country is more indebted to the man who is engaged in educating the people, than it is to those who are its executive and administrative officers. The executive officer is but the figure-head at best. The government are the men who, figuratively speaking, run the engine and boilers of the government. The head of such an institution as this, where moral and intellectual culture are combined, is the man who forms men who control not only the figure-head but control the nation. I wish here publicly to return thanks to the man who had the judgment to give such an example to the nation. [Applause.] Whether Yale's sons guide or act as figure-heads of the nation, I know they will be an honor to you. Any administration that is a good one, or desires to be a good one, must ever be grateful to such an institution as this." [Long-continued applause.] We take the above from the Inter-Ocean's report.

WE copy the following from the London Live Stock Journal. "Good grass land is a good property. Like the lilies of the field, it may be said to toil not; like Mrs. Stowe's Topsy, it simply "grows" without extraneous help, and throws up a perennial source of food for stock. It is more productive, and, at the same time, less costly than arable land; it is subject to fewer casualities, and requires a smaller amount of direct supervision. One acre of really good grass land will produce 280 pounds of beef or mutton during the course of the Summer, if grazed. If under dairy-cows, it will yield 400 gallons of milk, 168 pounds of butter, or 400 pounds of cheese, as the case may be. If mown, it may be expected to yield in hay and aftermath an equivalent to two tons of prime hay. The produce will be seen, on calculating out the result, to be worth from £10 to £12 per acre, without the outlay necessary to obtain crops of similar value from arable land. Good indeed must tillage land be which will year by year, give such a result. The two cases may appear to have been put very favorably for the grass land, but we feel confident that when we are dealing with really good grass, the profits are larger than can be looked for in the case of any arable land; chiefly because the landlord and tenant are enabled to divide such profits without the intervention of laborers, manure merchants, and implement makers.

"I BELIEVE," Dr. Tanner, the fasting man, said to a friend, "that many persons are buried alive. We have had a couple of instances of mistakes in regard to the presence of death lately. Only a short time ago a child was discovered to be alive while it was lying on a slab in the New York Morgue. Once I wrote a letter to a newspaper on the subject, and afterward a reporter in St. Louis interviewed the person who had charge of the removal of all the bodies in one of the city cemeteries. He learned from this person that there were evidences that in this one cemetery fifty persons had been buried alive. Only the annals of eternity can tell us how many persons have recovered after they have been supposed to be dead. I am opposed to forcing people to eat when they don't want to. I want to show that it is safe to go without food. Once physicians were committed to the doctrine of depletion. They starved patients and let their blood. Now they are at the opposite extreme. If a patient's stomach is not fitted to receive food they force it down. The cry is, 'Give lots of nourishment.' "I believe," he said further, "that a human being can hibernate just as well as a bear. Almost any animal can hibernate. Up in Jo Daviess County in Illinois hogs were forced to hibernate one Winter. The snow fell so fast and so deep that they were buried. In the Spring they came out alive and fat. It is a mistake to suppose that bears are lean when they come out in the Spring. The Indians know better. They think that a bear shot just after he leaves his place of hibernation in the Spring, is a great prize. The truth about this matter is that his fat is of such a nature after his hibernation that it disappears in a few days, owing to some chemical change that I do not understand. I myself have caught opossums late in the Spring in their places of hibernation, and I have found them fat."

OUR contributor, Prof. I. P. Sheldon, thus writes to the London Live Stock Journal:

We are decidedly in favor of legislative action being taken in this country to demand that all artificial butter shall be sold, whether by wholesale or retail, under a designation that is not misleading. There is at present a larger quantity of this nefarious stuff on our markets than the public are aware of, and too many retail customers get hold of it under a fond delusion that they have a bit of butter straight from the dairy. It is, of course, only the retailers who have the chance of palming off this doubtful compound for genuine butter; they, as buyers, are not imposed on by the manufacturers. A great deal of the melted intestinal and other animal fat which is used in the manufacture of butterine is sent over from America to Holland in an unfinished state, and our Dutch friends finish it off for us. To Hamburg, Bremen, and other German ports it is also sent, after which it comes to us having the form of butter. About 3,000,000 lbs. per annum are thus exported from the United States. There are, however, butterine manufactories in our own country, in the neighborhood of London, and Canon Bagot tells us of a large factory in his own neighborhood, in County Kildare. It is a growing industry, this artificial butter making. The profits on it are too good to be easily relinquished. Much of the waste fat which has previously gone for soap making is now turned into butter, and sells for twice or thrice as much a pound, the public swallowing that which was previously used for purposes of outward cleanliness. Yet it is not true that Thames mud is turned into butter—the process would be too expensive.

SOME of this butterine is a clever imitation of the real thing, and in certain cases an expert would be required to detect it. But the greatest danger does not lie in the cleverness of the imitation; the closer the copy, in fact, we may assume the better article the counterfeit will be. The well-made, cleverly-imitated article, is presumably produced from materials to which, in themselves, no exception can be taken; they must, in the first place, be the best of their kind, clean and wholesome, and they are manipulated by clean and thorough processes, and with the most approved machinery and utensils. Butterine of this grade we have now and again seen, and we rather like it for what it is. But there is a great deal of execrable stuff on the market. Not all the fat of animals is healthy food; diseases kill many of them, and others are slaughtered "to save their lives;" in some of them exist parasitic diseases, which are easily transmitted in the process of consumption; and it is asserted that the mode of making butterine is not such as will destroy these parasites, supposing them to exist in the fat of which the butterine is made.

FOR some time past, the American press, and through it the American dairy farmers, have been greatly exercised on account of oleomargarine—artificial butter, or butterine, as it is variously termed—and they have at length lashed themselves into a fury about it. It is ruining the dairy interest, they say, by being sold under no designation and with no brand which declares its real character. Being essentially an artificial and an imitative thing, every device is used to make it counterfeit real butter as closely as possible, and while the law permits the sale of it under any name which the retailer may think fit to employ, it is clear that the public will be the chief sufferers by the swindle, while the dairymen of the country are having their trade sadly curtailed and slandered. Such are a few of the milder ideas prevailing on the other side of the Atlantic with regard to "Brummagen" butter. It is satisfactory to see that bills are being introduced into the State Legislatures to compel the sale of this spurious article under a fitting name—every cask of it being so branded in large letters, and every customer being made aware of what he is buying.

Everywhere.

RURAL SPECIAL REPORTS.

ARK., Greenwood, Sebastian Co.—Farmers are jubilant. The crops are magnificent, finer even than last year. The corn crop is safe. The cotton stand is splendid. Fruit is abundant, and all other crops turn out well. Happy Arkansas! Peace and prosperity reign, and immigration is pouring in at an increased ratio. Verily, Western Arkansas has a glorious future before it. My Blount corn, planted March 30th, is nearly matured and a success. The RURAL seeds thrive well here, especially the Telephone Peas, Mold's Ennobled oats, Golden Ovoid mangels, and the Southern cow-pea. R. R.

CAL., El Dorado, Eldorado Co.—The wheat harvest will be about 70 per cent. of a full crop. North winds have materially decreased the yield; some damage has resulted from other causes, but not to a great extent. The corn harvest can hardly be stated as yet; but a full crop is expected. Oats, rye and barley are giving in most localities full crops. In some sections the crop will be short but not to an extent great enough to reduce the yield as a whole. Sorghum is grown in very limited quantities; in fact, in this section it is being experimented with this season for the first time. In fruit, the apple, pear, cherry and quince will yield full crops; peaches about three-eighths of a crop (curl leaf very bad); plums, about three-quarters of a crop. Small fruits will be full crops and never better fruit grown. This is the best crop of cherries we have had for many years. W. C. L. D.

CAL., Los Angeles, Los Angeles Co.—The harvest in this county will be one of our best for many years: 100,000 acres in wheat will yield 900,000 centals, and will bring in over $1,000,000 new money, establishing the fact that southern California is a wheat-growing country. The last of the orange crop has just been sold, and our ten-year-old orchards yield a *net* profit per acre of $500. Last year's grape crop netted to the raisin maker from three-year-old vines $70 per acre, and from five-year-old vines as high as $140 per acre. Grapes for wine making are giving a net return of $35 to $60 per acre. Our Northern fruit crop looks exceedingly fine and the yield will be good, prices high, and the demand far more than can be possibly delivered in the market. Our climate is as fine as ever and hundreds of invalids from various sections of the world come here and regain their health. G. R.

CAL., San Juan, San Benito Co.—Wheat, corn, oats and barley are much above the average hereabouts. No rye or sorghum. Peaches are scarce; pears below the average; other fruits good. Late apples are the most profitable. Plums are very prolific, but yield too much for our market. Cherries were extra-fine this year. The varieties of wheat are mainly Australian, Sonora and Propo. The remainder of the county will have about one-third less of wheat than expected on account of hot weather. The hay crop is immense. Comparative acreage—wheat, one-half; barley, 3-16; oats, 3-16; corn, 1-16; potatoes, 1-16. Much less land in beans this year than usual.
J. B. H.

CANADA, Ont., Glenmorris, July 8.—Farmers are busy hay-making. The past week has been very wet, and has delayed the haying considerably, so that the Fall wheat will be ready to cut before the hay can be gathered in. Fall wheat will be above an average crop and considerably earlier than usual, some having been cut the last of June. All kinds of Spring crops look well. Fruit will be a fair crop. I am trying a few hills of Blount's Prolific corn, and it is doing finely so far, and also a few

hills of China corn. I planted one peck of the Beauty of Hebron potato for a trial. R. R.

CONN., Greenwich, Fairfield Co., July 12.—Wheat and rye have been harvested in good condition. The former is very good; the kernel is plump, but the head is not extra-long; the acreage is about seven times as large as usual. Rye is very poor in the kernel, but the straw is extra-heavy; the acreage is large. Barley is not raised to any extent. Oats are not a good crop this year; the grain will be very light. Corn never looked better at this season of the year. An old farmer, 79 years old, one who has always lived in this town, says he never saw corn as forward as it is this year, nor has he seen as dry a season as the past Spring since 1824. Potatoes have looked very well all the season, but I hardly think we shall have any crop, unless it may be some pieces planted extra-late. The hay crop with some has been very light indeed; others say they have never had more hay on the same number of acres than they had last year. Hay will go a good way this Winter on account of the quality being so good. Many farmers have made and are making provisions for the deficient hay crop by planting late corn for fodder to be cut and cured, ears and stalks. Hay is at this writing bringing $25 per ton; oats, 45c. per bushel; corn 57c., and corn meal, $21 per ton. Small fruits were in abundance at their season. Blackberries are very promising, but everything is in want of rain. Wells and springs are very low; brooks are all dry and have been for two months. Apples look very well indeed, yet the crop will not be large. Pears are the poorest crop I ever saw in this place. Onions are not raised much here, yet further east, towards Bridgeport, they are a special crop and are drying up and are nearly a failure. We have had some showers of late, but it will take a great quantity of rain to fill the ground with water. Milk is selling for three cents per quart, and butter from 20 to 30 cents per pound. Cows and other stock are very cheap. Some farmers are selling their fat cattle for just what they had offered for them in the Spring per head. The Army worm did very little damage here. S. J. C.

CONN., Danbury, Fairfield Co., July 19th.—Oats a fair crop; straw short. No barley raised. Wheat all harvested; a good crop. Corn looks well; acreage small, about the same as in former years—eight-rowed yellow, mostly. Potatoes, usual acreage; will be light owing to drought and bugs—Early and Late Rose, Beauty of Hebron, and seedlings of different varieties. Cherries a good crop; strawberries, blackberries and raspberries heavy crops, but fruit small owing to dry weather. Hay, hardly half a crop, but heavy and good what there is of it. Of sorghum none is raised. Apples a very good crop, but falling from high wind. R. I. Greening, Northern Spy, Roxbury Russet are the leading varieties. Grapes in abundance. E. W. B.

DAKOTA T'Y., Rockport, Hanson Co.—The crops of wheat, oats and barley grown in this locality promise very well, and will average as well as any I have ever seen grown in Canada, Michigan, or Wisconsin. Potatoes and corn are choice. Amber cane is the only variety planted here, and promises well. Wheat and oats are the principal crops growing in this neighborhood—two-thirds wheat and one-third oats is about the ratio in general. This is the first general harvest gathered in this county; hence we have no fruit, as few settlers were in this section previous to 1878. When the proper time elapses I hope to be able to report on fruits. I am growing 28 acres of wheat, 27 of oats, four of corn, three of barley and three of potatoes on last year's breaking. On new breaking I have 50 acres of seed-corn, nine of beans, three of Amber cane, and one of melons. J. & Mc'M.

DAKOTA, Deadwood, Lawrence Co.—Since May 15, the rains have made the crops look good. A very large acreage of wheat, oats and corn, has been sown; all look well. The same can be said of vegetables of all kinds. Sorghum has been raised here, but while present prices prevail it will not receive much attention, as other crops pay so much better. Fruit is being tried, and from what I can learn, it will be a success. A few people are trying apples, cherries, plums, peaches, pears, blackberries, and strawberries, and grapes, and it is believed that all but apple, peach and pear will do splendidly. Hay this season is going to be light for want of early rains. H. A. R.

FLORIDA, Waldo, Alachan Co.—Wheat is not grown here. Cotton will be a good crop, better than it has been for years; potatoes (sweet) will also be a good crop. Oats this year have been almost a failure. Barley is not grown here. Fruits are not grown to any extent. This year the peaches are a failure; oranges look promising, and there will be a good yield. Tobacco, both Cuba and Connecticut Seed Leaf, is being grown here, and both do well; the same may be said of sugar cane. W. B.

GA., Sheltonville, Forsyth Co.—Wheat in this section is almost an entire failure, owing to the rust and fly; some farmers are not cutting any at all, and what is cut will not average more than one-fifth of a crop. The fall oats rusted badly, and will not do for seed. Rust-proof oats are tolerably good, they were injured very little by rust, and will make the average yield about a half crop. Corn and cotton are looking well now, but it is too soon to make any estimate as to the probable yield, as a drought in July or August would injure the crops so much. Farmers hereabouts are just now finishing laying by, and crops are all in good growing condition. The peach crop is a failure but we shall have about half a crop of apples. E. R. R.

IDAHO, Grangeville, Idaho Co., July 9.—Fall grain was partially winter-killed—late Spring, late grain. Early sown grain looks well; late sown is beginning to suffer for rain. Weather hot and dry. Club wheat is the only variety here. Imperial and Egyptian and some Hopkins oats are grown here, and have the largest acreage; wheat comes next and barley last; this is grown for hog feed. Early Rose, Pink Eyes, Mechanic and one or two other varieties constitute the potato crop, which is very good. No sorghum here. Apples are the only fruit grown here at present, and there is a very good prospect for a crop. This is a new country; few orchards, but any fruit would grow here, except peaches. Timothy is not good this year. A. C.

IDAHO, Squam Creek, Bois Co., July 10.—Wheat will yield from 25 to 30 bushels per acre—not as good as last year owing to its having been too cold and wet in Spring. No corn is grown here except sweet, and that is good. So are potatoes. Oats are a fine crop—40 to 50 bushels per acre. Barley is the main crop here and averages from 40 to 60 bushels to the acre. We raise chiefly Australian wheat; Evergreen sweet corn; Mechanic, Early Rose and Peerless potatoes; small white oats; black and Egyptian rye; six-rowed barley. Sorghum sugar cane does well, but only a little is grown. The prospect for fruit was never better. Several kinds of apples, peaches and plums thrive here. We are plagued by neither borers nor worms. W. S.

IOWA, Dakota, Humboldt Co.—The prospects for big crops were never better than at the present time. Rye is a fair crop and mostly harveated, but the acreage is small. Barley is a good yield, but not much is raised here. Wheat and oats are the grains mostly grown here; the acreage is about one-third more than last year and mostly sowed on last year's breaking. Oats do better on old land; on new land we get the most and best wheat. There is more breaking done this year than for any three years before, which will be mostly put into wheat next Spring. The corn crop looks better than it ever did, so the old settlers tell me—about one-fourth more planted than last year. Potatoes are a good crop, but there is not a large amount planted on account of the bugs, which have been very bad till this year. We do not raise much Timothy and clover here on account of having so much prairie grass for fodder, which is claimed to be better to feed. Fruit is more of an experiment than anything else; but we are getting into it now and hope to be able to raise enough for our own use soon. We shall get the largest yield of wheat that ever was raised in these parts, if it does not get scalded by the sun. The trouble is that after showers the hot sun bakes the grain when it is in the dough. G. L. H.

KANSAS, Meadow Brook, Johnson Co.—We commenced harvesting wheat on the 9th. The yield is a good average; over 20 bushels per acre. May, Fultz, Walker and Clawson are the principal sorts grown here. The May is from eight to ten days earlier than the other varieties, and on rich ground gives the best yield. The other kinds, too, are more liable to be winter-killed. The acreage was 50 per cent. over that of last year. In quality and color wheat is very fine. Corn, where well cultivated, looks very fine; area not as large as last year. Flax is good, and has a large acreage. Oats are fair, but not much grown. Potatoes look fine, what little there is of them. Not enough sorghum is raised for home use; some sugar will be made from it this year. Meadows will not give more than two-thirds of a crop. Fruit of all kinds is plentiful; apples being the best crop I have seen here in 10 years; Early Harvest is now ripe. We had some showers in April; windy and unpleasant weather in May; a dry June, and plenty of heavy rain in July. H. S.

KANSAS, Logan, Phillips Co.—The drought which has been troubling this section has been broken and good rains have lately rejoiced the land. They came too late, however, to save our crops, and quite a large number of settlers have left this place, and those who remain are very destitute and must suffer severely unless helped. A drive of three hours to the southeast, however, would bring one into a region where the crops are fair, so that the drought has here only affected a comparatively narrow belt. We may get some late corn, as some of us are still planting. J. D. S.

KY., Cynthiana, Harrison Co., July 15.—Wheat is pretty well thrashed and secured at this date and is a light yield per acre, averaging about 10 bushels; a greater acreage than ever before was harvested in the Blue-grass region, wheat being our main crop this year. Of rye almost none was harvested; what little was sown was pastured until 1st of June; then plowed and planted with corn. Barley is a fair crop—not much sowed. Corn is a fair average and never looked more promising. It has been much neglected during the heavy wheat harvest and would be sadly injured by a little drought in the latter part of July and August. Potatoes, both sweet and Irish, are very fine. It is questionable which is the more profitable to raise with us, and it is certain that neither, as a crop for profit, is properly appreciated by our people. In our long seasons either may be made one of a double crop. Last year I raised 60 bushels of corn to the acre by drilling it in between my potato rows after they were fairly made. Sweet potatoes may be planted after a crop of barley or even wheat is taken from the ground. The prospect for fruit was never better in Central Kentucky than this year. Apples are a fine crop; they commenced ripening 1st of June. Peaches are about half a crop and commenced ripening at the middle of June and will last until November. Strawberries were an abundant crop; commenced ripening May 4th, and continued until 1st of July. Grapes are an abundant crop and never promised better. They commence ripening here about 25th of July, and hang on the vines until middle of December. We raise both figs and persimmons and a fair crop of almost anything that requires but little work or attention. No tobacco is grown in the Blue-grass region. Kentucky is the finest country in the world for pleasant homes, and the only country where a man can farm successfully on horseback. J. A. M.

LA., New Iberia, July 12.—Of wheat, oats, rye and barley we raise none, and of fruit very little. Sugar-cane and cotton take up all our care and labor. The cane crop was very promising, but has suffered during the last few weeks, and is not laid by in as good order as usual. Cotton is very fine, but every one expects the worm. The corn crop is splendid. A. E. G.

LA., Plaquemine Brulee, St. Landry Parish, July 10.—The crops in general are uncommonly good, corn especially. No fruit is grown here, except peaches and they were killed by frost or cold winds. W. W. C.

MINN. Stewart, Mc. Leod Co.,—The prospects of wheat, oats and barley are very promising. But little rye is raised here. Corn was lately considerably damaged by hail stones measuring seven inches in circumference. The Fife wheat alone is grown here. Our oats are the Norway White and common black. The acreage of wheat increases every year; that of oats and barley is about the same as last year. Sorghum is grown to a large extent, mostly the Early Amber. No fruit to speak of—damaged by hail and heavy rains. Hyslop and Transcendent crabs have proven the most successful. Potatoes will be an average yield. No. 2 wheat is worth 90c; oats, 20 to 30c; eggs, 10c; butter 10 to 15c; wool 18 to 23c. J. C.

MO., Wheatland, Hickory Co.—Wheat harvest over; acreage above an average—say 15 per cent. The yield will be large, probably 25 to 30 per cent. over the average of all years. Many farmers have thrashed, and the yield is from 18 to 25 bushels per acre; quality excellent. Corn never looked better; the acreage is about an average, and the prospect for a yield above an average, is quite flattering. Many fields are tasselling and some in "roasting ears." Potatoes are but little raised here, but what are planted are good—probably as great in quantity and fine in quality as we ever find in Southwestern Missouri. Oats are above an average yield, but late rains have damaged the crop. No rye or barley is raised. The kinds of wheat raised here are: Red Sea, Fultz, May, Walker and Gipsey. Of corn, the large yellow and large white are the principal varieties. Potatoes principally are Early Rose, Buckeye, Russet and Peachblow. The fruit prospect is excellent; peaches, pears, plums, apples, and, in fact, large and small fruits, are loaded. Fruits of all kinds are naturally at home here; failures are scarcely ever known. The principal apples are Janet, Winesap, Ben Davis, Red Astrachan, Rambo, Red June, Early Harvest, Bellflower. E. P.

MONTANA T., Gallatin Valley, Gallatin Co., July 10.—We had a wet, backward Spring. Wheat, oats and barley do well here; wheat yields from 25 to 60 bushels per acre; oats 40 to 100; barley 40 to 75; potatoes from 300 to 600. The valley alone is farmed—a small portion of the Territory. This is no corn country. But little fruit is raised. This is one of the best grazing countries. Mining is the only business in the mountains. We have had a large immigration this year. C. H. W.

NEW JERSEY, Roselle, Union Co.—I send you herewith some specimens of hollyhocks raised from the seed furnished by "Rural Free Seed Distribution." I think they are lovely. I am sorry I did not think to send some before, as I have had larger and handsomer ones than I have now, but a shower of yesterday has injured them. I wish you could see the spikes of the dark purple ones; they are a dense mass of bloom. Considering the drought, I think they have done wonderfully, and I am much pleased. I have had some of the salmon-pink more double than the one I send, and think they are the handsomest hollyhocks I ever saw. I was not very successful with the seed furnished last year. I planted it out-of-doors in May just before the dry, hot spell we had, and then left for a visit East. I had nothing from them, except the hollyhocks. This year I have 12 nice roots of aquilegia and five of double hibiscus. I planted double pentstemons and a part of the iris in boxes in the house, but not a seed came up. The rest I have given to a friend who has a greenhouse; he said he would try and start them for me and then give me roots. Two years ago we had some cuttings from you of a willow—Salix pentandra. Two of them rooted well; one we gave to a neighbor: the other is growing finely, and gives promise of being a beautiful tree. L. A. R.

[The box of hollyhocks was received. They are, indeed, beautiful. One is nearly black, another a dark maroon, two bright red, one white, one a flesh color or pinkish-salmon. The seeds of the hybrid pentstemons and irises are really so valuable that we are disappointed whenever we hear of failure in their germination. They are all of them seeds of last year's growth—we guarantee it—and any failure is owing to too much, too little or to improper care.—EDS.]

N. Y., Nunda, Livingston Co., July 11.—Our crops are good except hay. Wheat was never better. Corn and potatoes promise well, but need rain. J. M.

N. C., Greensboro, Guilford Co.—Wheat is all harvested and is thrashing out not very good on account of rust. Winter oats are good; spring oats very poor. Corn is looking well. But little rye or barley is grown here. Potatoes are good but are only grown for family use. The acreage of wheat is above the average; so is that of Spring oats. The fruit crop is mostly a failure; yet there are some peaches of rather poor quality. Apples are scarce but not good. Pears promise a tolerable crop but not many are grown for market — trees small and not half enough planted. O. C. A.

OHIO, Liberty Center, Henry Co.—The wheat harvest is mostly done, commencing about June 20th, with a larger acreage than ever before, and a good growth; but hot, showery weather caused it to ripen too rapidly to produce the most favorable results. The crop is already being thrashed from the shock. Corn has a mammoth growth, and is very forward, early pieces standing eight to 10 feet high, and in silk. I never saw a better prospect for this crop. Oats are heavy and somewhat lodged by the frequent showers; they grow here too rapidly and large to stand in moist seasons like the present, so that the number of bushels and weight of the grain are reduced. Hay is a fair crop; some heavy fields of Timothy are about half secured. The potato bug commenced its ravages early and in great force, everybody predicting a general destruction of the potato crop; but owing to the frequent rains all Summer (or for other reasons) the pests have disappeared, and the potato growth is very thrifty at present; we are promised an abundant yield. Very little rye or barley is grown in this part of the State. A new kind of sorghum called the Early Amber has taken precedence over other kinds in this neighborhood, and looks splendid, as far as heard from. Sorghum raising is on the increase in this section; some specimens of sugar were produced from sorghum here last season. The apple crop is promising, but will not be over an average crop. R. I. Greening, Baldwin, Tompkins County King and Russet are generally full and fair. The early varieties are falling badly (especially the Sweet Boughs) owing to an insect or worm that bores the fruit to the core. The new shoots of limbs on most orchards have been more or less affected and died to quite a large extent from parasites living on the sap between the outer bark and wood. The pear trees are blighting considerably, we think, from the same cause, and it is feared that the pear crop in this section is destined to become extinct. The common red and black tame cherry produced a large and excellent crop. The cabbage-worm also comes in the catalogue of pests, and all kinds of experiments are tried, and generally with very limited success. One man tells me that, to kill the worms, through his desperation, expecting to kill the cabbage also, he took strong, unleached wood ashes from his stove and literally covered his cabbage with it, using a stove-shovel full to each plant after they had begun to head, throwing the ashes on top, so that the rains and dews would cause the lye to penetrate every crevice between the leaves. To his astonishment his cabbage beat any he had ever before raised, the ashes having effectually destroyed every

worm, and the plant having been largely invigorated by the application. This is a cheap and easy remedy, and I give it second-hand for what it is worth, as I have just tried it myself and also used the same dose on some cucumber vines that are struck with the blight, throwing the ashes to the roots of the vines now in full bearing. This was done about three days ago, and the blight has stopped. I shall give it a thorough trial, and will report again the results. C. C.

OHIO, Camden, Preble Co., July 19.—We are having a fine rain to-day after a dry month which was fine for securing our harvest. Thrashing-machine men tell me that wheat averages about 15 bushels per acre. Hay is light. Oats were injured by rust and did not fill up well. Flax appears good; none thrashed yet; cannot say how it will yield. W. M.

OHIO, Mulberry Corners, Geauga Co.—I received ten cuttings of Salix pentandra; set them March 24 in a rather damp location and a rich soil. To-day seven are over three feet high; two are 15 inches and one is dead. The nine look well; leaves, a rich dark green, and from four to five inches long, shining above, and edges serrate; very handsome. H. B.

OREGON, Tangent, Linn Co.—The prospect for the wheat crop is good, about an average for both Fall and Spring sowing. The varieties for Winter are Golden Chaff, Clawson and White Winter. For Spring sowing we use Club, White Chili and Sonora. Not enough corn is grown to be of any consequence. Of potatoes and oats we have plenty for home use. Rye is not raised here. There is enough barley for local brewers. Sorghum is on trial. Fruit crops are about an average. Apples: Moumouth or Red Cheek Pippin. All plums do well. Cherries and all of the small fruit thrive here. R. T. S.

OREGON, Willsboro, Washington Co., July 10.—Corn, rye, barley are raised here only in small quantities. Wheat will be 25 per cent better than last year. Oats will be over an average. The acreage of wheat, oats and potatoes is 10 per cent. increase over last year, and the prospects for these crops and fruit are excellent. A fine rain is now falling. This is for Washington county. No sorghum. T. W. T.

PA., Hornbrook, Bradford Co., July 13th.—I have just finished the wheat harvest; crop good, but straw so short I could not bind it. Oats an average crop and about ready to harvest here on the river. I planted one acre to Blount's White Prolific corn; it is now six feet tall. Corn is looking well and bids fair for a good crop. About the same amount was planted as last year. Potatoes are looking fine, and promise a good crop. My Beauty of Hebron potatoes are very fine. I am digging them for market now. They are ten days earlier than the Early Rose, planted at the same time and treated in the same way. The cow-peas sent by the RURAL are looking fine; they look more like beans than peas. Grass is a short crop, owing to the dry weather in the latter part of May and first part of June. Pasturage is now good and cows are doing better. Butter is profitable here; buyers are paying 20c. at the present time for good fresh tub. The fruit crop is short, but not a total failure. I shall have apples, peaches, grapes, etc., for my own use. Strawberries are a short crop. The Wilson's Albany takes the lead here. The Black Caps are a good crop. Doolittle takes the lead. Strawberries sold from 10 to 20c. per quart; Black Caps from eight to 12c. per quart. J. T.

PENN., Mt. Jackson, Lawrence Co., July 13.—The weather has been wet for three weeks. We have a good wheat crop. Oats also are fine. Of barley and rye not much is grown. No sorghum is raised here. We do not expect over one-third of a crop of fruit. Of apples the best varieties here are Peck's Pleasant, Northern Spy, R. I. Greening, English Rambo, Russet, Baldwin. R. J. P.

TEXAS, Caldwell, Burleson Co., July 13th.—Wheat is always a small crop here. Only about one in ten sow any; variety, the Nicaragua. There is a little experimenting with other bearded kinds, with poor success, however. Yield about 10 bushels per acre. Crop good this year. Corn is simply magnificent for 30 miles around here—White Shoe-peg, Gourd-seed, Flint, in limited quantities, yellow, ditto. A great deal is grown of a variety of Gourd-seed called Strawberry. The White Shoe-peg and Gourd-seed are the favorites; all produce about equally well. Upland in this county will yield 25 bushels; creek and river bottoms, 75 bushels on the average. Exceptional uplands will yield 40 bushels, and bottoms, 100. Two-fifths of the arable land in the county are in corn. So far our cotton is doing better than it has before in this county in ten years; just enough rain; just enough sun; just enough work, and the plant is perfectly healthy. A little over half of our cultivated land is in cotton. Improved Shnpoch takes the lead, occupying seven-eighths of the land devoted to cotton, Dixon occupies one-sixteenth; the balance is taken up with experimental kinds just being introduced. Picking will commence about July 20th regularly. Cotton is now opening. Nearly everybody has laid by his cotton. Corn was laid by three weeks ago. The yield of cotton will depend on what may turn up in the next two months. The principal foes of the crop are drought and worms. However, but little rain is needed from this on. Too much rain after this, starts top growth and invites the worm. The pest is 40 miles below here now in small numbers. If no accident befalls the crop, experts say the county will average over three-quarters of a bale to the acre. Potatoes, Irish, only just a few are grown for the table use for three or four weeks—Early Rose and Goodrich; both are well liked and yield, I think, at the rate of about 350 bushels per acre. (!) The crop was all made one month ago. We buy all our seed North. Sweet potatoes! Now the children are all attention. We could not do without them. They are food, medicine and sweetmeat all in one. The best is a small, deep-yellow yam weighing half a pound; next the Brazilian yam, one pound in weight; then the Cuba yam, the largest and coarsest of all, weighing three to six pounds—average yield 175 bushels per acre. The Cuba yam is very early. Oats are perfectly at home in this part of Texas; perhaps about one-twentieth of the cultivated land in the county is in oats. The crop is increasing in importance each year. They are sown almost entirely on upland. In this county they were injured a little by chinch bugs this year; otherwise they are very good—average yield, over 60 bushels; it has been in past years as high as 75 bushels; kinds, Red Rust-proof, almost entirely with a few of the little black which have partly failed in some localities. Rye and barley are as well suited to this place as oats; but for some reason there are scarcely 50 acres of each in the county. The prospects for fruit were never worse. The warm spells in Winter followed by sudden "northers," seem to have weakened the vitality of the trees, especially of pears. There is no crop of these or of apples, cherries or quinces, and only a very few peaches, nectarines and cultivated plums. Wild plums are in abundance. All peaches do well in a favorable season, and nearly all the fine kinds are planted in this county and produce large, sweet, and juicy fruit. Figs also do well and bid fair to produce a heavy crop. Some semi-tropical fruits are raised by a very few, but they are merely costly curiosities. Except figs and peaches, all other fruits, so far as I now remember, are costly experiments. D. H. H.

TEXAS, Arcola, Fort Bend Co., July 17.—There are only three crops grown here for market and they are known here as C. C. C., Cotton, Corn and Cane. The corn crop is very fine and will yield fully 60 bushels per acre. The cane is the finest that ever has been raised in this country and will yield fully two hogsheads of sugar per acre. The cotton crop is very fine and at present is fully two weeks in advance of last year; but cotton is a crop that is good to-day and to-morrow ruined. The acreage in these three crops is fully 10 per cent. over that of last year. The Cotton worm has made its appearance generally; but has done no damage yet. We are going to give the London-purple a trial. Potatoes, sweet and Irish, are only raised for home consumption. Of fruit there is none here to speak of. What peaches are here are only trash. F. W. P.

TEXAS, Meguel, Frio Co., July 14.—This country is almost entirely devoted to stock—cattle, sheep and horses in the order named, all of which are doing well. Some corn and cotton have been planted, however, but they promise small returns in this part of western Texas on account of the continued drought. T. J. E.

WASHINGTON TER., Alpowa, Columbia Co., July 11.—Wheat is the principal crop here, and the harvest will be late and light. Oats will be a medium yield and potatoes a full crop. Rye is not cultivated, and corn only sparingly so. Barley does well and yields abundantly. Chili Club is the principal variety of wheat. No sorghum is successfully grown here. Apples, pears, plums, cherries, peaches, apricots, grapes and all the small fruits grow well and produce abundantly. There will be an abundance of fruit this year except peaches, N. A. W.

WASH. T'Y, Seattle, King Co., July 9.—I am just opening up a farm ten miles from town, working like a beaver, early and late, very seldom go to town or have an opportunity to learn just how crops are doing. I hear, however, that wheat, oats, potatoes and barley are doing well. Rye is not grown to any extent here. Sorghum is not raised and but very little corn. Fruits of all kinds are promising better than ever. The following varieties, as near as I can learn, are best here. Apples:—Red Astrachan, Early Harvest, Summer Bellflower, Gravenstein, Twenty Ounce, Yellow Newtown Pippin, Spitzenburgh, Swaar, Blue Pearmain, Westfield Seek-no-Further. Plums:—Peach, Washington, Jefferson, Prune d'Agen. Cherries:—May Duke, Anne, Black Tartarian, Black Republican. Pears:—Early Madeleine Bartlett, Beurré d'Anjou, Clapp's Favorite. Fall pears: Winter Nells. Peaches will not amount to anything this year on account of "curled leaf." E. L. L.

WIS., East Troy, Walworth Co., July 12.—Winter wheat that was sown early is looking splendid; it is thought by many that it will yield from 20 to 35 bushels. Five or six times as much land was sown as usual. The variety mostly raised is White Russian. Not as much spring wheat as usual was sown—Lost Nation. Corn is looking fine, principally Dent. Potatoes are good. Oats are a good crop. Rye fair. Of barley not much is grown here. Sorghum is not much grown in this vicinity. There is a prospect of a good crop of Apples—Red Astrachan, Fall Orange, Fameuse, Willow Twig, Talman's Sweet. H. A. T.

The Querist.

ANSWERS TO CORRESPONDENTS.

The Striped Blister Beetle.

J. R. A., Williamson, N. Y.; F. O. Castleton, N. Y., and many others, too numerous to mention, have sent us specimens of a long, slim, striped insect till our sanctum is littered with small packages and striped bugs confront us whichever way we turn. All want to know the name of this numerous individual with the striped coat, and all complain that he devours potato tops at a rate and with a relish that completely outdoes the Colorado beetle, while at the same time he does not despise mangel-wurzels and other vegetables that happen to be at hand.

ANS.—This insect, which just now is causing so much anxiety, is the Striped Blister beetle, or the Lytta vittata of entomologists. It appears to be very destructive in many parts of the country, especially in New York, and it is also troublesome at the RURAL FARM. It is a Southern species, and it is seldom that it appears in great numbers so far north as is the case this year. The beetle is shown in figure 245. It belongs to the family Meloidæ, many members of which are destructive to vegetation. The female lays her eggs in the ground in July; these soon hatch and the young larvæ are said to feed upon the eggs of grasshoppers. There is but one brood a year. The beetles seem to have a preference for potatoes and tomatoes, but they also feed on mangels, beets, carrots and many other vegetables. Paris-green would kill them, but they are more sensitive than the Colorado beetle, and will submit to a less powerful remedy. A good dusting of plaster or ashes is sufficient to keep them off. It has also been recommended to scatter straw between the rows of potatoes and put fire to it. The quick burning of the straw will not injure the potatoes while the beetles will fly up, get caught in the flames and perish.

FIG. 245.

Buckwheat Culture.

J. W. S., Owensboro, Ky., asks all about buckwheat culture; the kind of land suitable for it, how much to sow per acre, and the probable average yield.

ANS.—Buckwheat completes its growth rapidly, and when grown for the seed it is time enough to sow it in July in the North and in July and August in the South. In your latitude it should be sown at once. It is peculiar in the fact that it will thrive on any kind of soil, though, of course, it does better on a rich soil than upon a poor soil. It is generally sown broadcast, about one bushel of seed per acre. The yield varies very much, about 30 or 35 bushels per acre are considered a fair crop. The seed ripens very unevenly, and if it is not cut it will continue to blossom until killed by frost; the crop should, therefore, be harvested as soon as the first seed is ripe, otherwise it will fall off and be wasted. It is tied and shocked like other grain, and thrashed when dry. Buckwheat has the reputation of being able to subdue the hardest and toughest kind of soil, overrun with weeds and unfit for cultivation. On this account it is often raised for a year or two on wild land before it is attempted to grow anything else upon it. But this redeeming quality is offset by its very exhaustive properties. It exhausts the soil greatly, and crops that are to follow it should, therefore, be liberally manured.

Smut in Wheat.

W. F. N., Burbank, O., asks what is the cause of smut in wheat, and whether it can be prevented.

ANS.—Smut is a fungus scientifically known as Uredo caries, which attacks the grains of wheat, and causes them to enlarge abnormally and form blackened fungoid masses. The preventive consists in killing the spores in the seed wheat, which is done by steeping it in a strong brine, or in a solution of sulphate of copper (blue vitriol). This is best done as follows: Dissolve a pound of this material in a couple of gallons of hot water, pour the solution into a tub and add three or four more gallons of water. Then place a basket in the liquid and turn the wheat slowly into it. Chaff, chess and light imperfect grains of wheat will float on the top and should be skimmed off. Let it soak for twenty minutes or half an hour, then lift the basket and spread the seed on the floor. Here sift some lime or plaster over the seed to dry it and then sow it at once. This process kills the spores, and the crop will, in most instances, be entirely free from smut. It has often been proved by direct experiment that if there is smut in the seed wheat, it reproduces itself in abundance in the crop.

The Onion Fly.

J. C. R., Belmont, Nova Scotia, says that a small maggot or worm eats the tops of onions there, close to the bulbs, and asks for a remedy.

ANS.—This destroyer is the maggot or larva of the onion fly, Anthomyia Ceparum. The fly deposits the eggs upon the leaves of the onion while the plants are still young; the eggs soon hatch and the maggots crawl down between the leaves where they at once commence to absorb the juices, and after a short time the plant turns yellow and ceases to grow. Many remedies have been tried, but none so far have proven of any value. Plants once affected are doomed to destruction. The best thing is to reduce the number of insects by pulling up and burning the sick plants. We have received many complaints of the onion fly this season.

Grape-Rot.

D. S., Tipton, Montana, asks for some remedy or preventive of grape rot.

ANS.—Neither cause nor remedy for this disease has so far been discovered. Like the pear blight and yellows it has baffled all efforts to discover the cause. Those who have given the subject much thought and investigation conclude that it is not a disease inherent in the vine, nor is it due to peculiarities of soil and cultivation, but rather to atmospheric conditions over which the cultivator can have no control. Old, strong-growing vines are most liable to be attacked, and the rot seems generally to start in a season of wet and sultry weather, and is most destructive in places where this state of the atmosphere occurs frequently. This is all that at present is known about the causes of grape rot. There is no known remedy.

Miscellaneous.

S. A. K., asks. 1, do bots ever kill horses by eating through the coating of the stomach; 2. why are not bicycles more generally used for travelling; 3. will pæonies blossom next year if transplanted now.

ANS.—It is the nearly unanimous opinion of veterinarians that bots are comparatively harmless, except when they accumulate in great numbers. A few cases have been noted, however, when owing to a morbid condition of the stomach to which they have been attached, the bots were so incommoded that in order to escape they perforated the walls of the stomach, allowing the fluids to escape into the abdomen, when death was sure to follow. But even in the few cases where a post-mortem examination showed them in this position, some veterinarians deny that the fatal injury to the stomach was wrought by them, maintaining that it was due to other causes. 2 Cost of bicycle, difficulty of learning to ride, and bad roads are doubtless among the chief causes, 3. Yes.

M. E. S., Fulton, N. Y., says:—"Please tell me the name of the contents of a box sent with this."

ANS.—A little box containing a single head of wheat has been received, bearing no decipherable marks of any kind by which we could identify it as coming from M. E. S. The variety is English Square Head.

J. B. H., Johnson's Junction, Ky., sends a flower for name.

ANS.—This seems to be Asclepias tuberosa, familiarly called Pleurisy Root and Butterfly Weed. It is a showy, beautiful flower, is cultivated for ornament in many parts of the world, and would be here if it were not a "weed."

A. C., Chenoa, Ill., sends a specimen of grass which has sprung up thereabouts for the last couple of years; stock don't like it, and it is considered a pest, and the name of it is wanted.

ANS.—It is Squirrel-tail grass—Hordeum jubatum.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, July 24th.

O. C. A.—A. E. G.—H. A. R.—Fire-fly—O. C.—J. H.—H. W. H.—W. J. B.—J. W. B.—S. W. J.—"Ivy."—H. L. W.—S. R. M.—F. H. S.—A. W. C.—"Clinton," box not yet (19th) received—H. G.—W. B.—E. S. S.—W. J. C.—I. H. H.—A. L.—J. M., thanks.—D. H. H.—"Ermengarde."—W. M.—T. W. T.—N. A. W.—G. W. S.—E. W. B.—J. B. W.—A. C.—R. L. S.—T. I. E.—M. L. S.—M. B. H.—Mrs. J. E. McN.—Miss L. D.—August.—A. B. A.—T. M.—R. J. H.—N. O.—T. H. H.—R. P.—G. P.—N. C.—E. W.—H. A. T.—S. O.—J. M. M.—B. F. J.—C. R. D.—A. W.—N. R.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

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THE RURAL NEW-YORKER,
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SATURDAY, JULY 31, 1880.

Last week's Rural New-Yorker, referring to the Fair number to be published about September 1st, guaranteed an issue of "over 75,000 copies"—how much over we were not then prepared to state. We now guarantee that the edition shall be over 100,000.

Pictured Exaggeration. — Nurserymen, seedsmen and florists are now at work upon their Spring catalogues. We venture to offer the advice that they will, in their illustrations of strawberries, raspberries, flowers and vegetables, picture representative specimens and abandon the exaggeration which both deceives the public and wholly misrepresents the originals. At the Rural Farm we have raised wheat, the largest spike of which measures plump seven and one-quarter inches. There were hundreds measuring over six inches. Would it be fair, were we to offer this kind of wheat for sale, to present an engraving of this one head as a type of this variety of wheat? "Well, it is true to life," says the seedsman; "you are entitled to show the plant you intend to introduce at its best. It would be suicidal to picture the smallest head." But the truth lies between. The largest head is true to life certainly, but to individual life. And so of the smallest. The average size is that alone which conveys an impression which does not mislead.

OUR ABUNDANCE.

Statistical tables inform us that the United States, while it contains less than a sixth of the population of Europe, has four-fifths as many swine, a third as many cattle and a fifth as many sheep as are in all of the countries of Europe together. It is noteworthy that domestic animals everywhere decrease in numbers with the increase of human population. In China only so many of the smaller kinds, usually fowls, are kept as are needed to pick up the otherwise irrecoverable wastes. Our immense herds and flocks are the natural concomitant of our abundance of vegetable food beyond the capacity of our population to consume or export. In Europe, though a new country compared with Asia, the people are beginning to see that they cannot afford to transmute eight or ten pounds of nutritive seeds into one pound of flesh having little or no greater nutritive value than an equal weight of the material out of which it was formed. As tillage encroaches upon forage grounds, grasses and other cheap foods for domestic animals decrease in quantity, while grains are worth too much for human food to be fed out for meat. Consequently there is and must be a lessening of animal food corresponding to the decrease of available food for animals.

REMEDY FOR FOUL WATER.

The modern practice of getting the water-supply of cities and towns from ponds has revealed the fact that the waters of most ponds and reservoirs are liable occasionally to take on more or less unpleasant odor and taste due to the growth and decay of large numbers of aquatic plants of kinds so minute that they can only be seen with the microscope. It is uncertain whether water thus polluted is actually unwholesome, but it is essentially disagreeable and unpalatable; and it is still a greater puzzle how to prevent, or even hinder, the accumulation of this annoying vegetation in large bodies of water. Filtration of the water at the house of each individual consumer seems to be the best palliative hitherto devised, for in this way a great deal of the troublesome matter may be removed. Aeration of the water after it has passed through the pipes, or even letting the water stand for some time exposed to the air, is another device of merit. And by boiling the water before use, it is possible to dissipate some of the unpleasant flavor.

Doubtless many wells whose waters are not cold enough and dark enough to prevent the growth of such vegetation are liable to suffer in the same way as the ponds; and it is of interest to note an ingenious device for overcoming the difficulty in a body of water thus limited, which was recently put in use by a German near Hartford, Conn., as reported in the Courant of that city. To cure the foul well he first cleaned it out; he then put in a peck of salt, and, after the well had filled up with water, he again pumped it dry. The operation is manifestly of the same order as the sweetening of butter that "tastes of the firkin" by drenching it with brine. In both cases the solution of salt destroys the microscopic organisms which have caused rancidity.

THE PROPOSED NEW YORK EXPERIMENT STATION.

During the last session of the New York Legislature a bill was passed which provides for the establishment of an Agricultural Experiment Station in the State of New York, and the sum of $20,000 was appropriated for its maintenance. The bill provides that the affairs of the Station shall be governed by a Board of Control, of which six members shall be chosen by the six leading agricultural societies in the State, two members to be elected by the Board, and the Governor of the State and the Director of the Station to be members *ex officio*. The Board held a meeting in Cooper Union, this city, on the 20th inst., mainly to elect the two members required by the bill. A large number of representative farmers throughout the State also attended the meeting, thereby showing their interest in the matter.

At the next meeting of the Board, which will take place on August 4th, in the Executive Chamber at Albany, the question where to locate the Station will be brought up and perhaps settled. This point is of the greatest importance, and no decision should be made until the matter has been thoroughly considered in all its bearings. Two propositions have already been presented: one is to place the Station on Long Island, and the other, to locate it somewhere near Ithaca. If the Rural New-Yorker were selfish enough to consider only its individual preference, we should for many reasons favor Long Island as the site. But in this matter selfish preference should have no voice. It seems to us that in order to offer equal advantages to all farmers of the State, for whose avowed benefit this movement is inaugurated, the Station ought to have a central location.

Ithaca is objected to on the score that experiments of the kind that should take place at the Station are already under way at Cornell University. The same objection may be raised in regard to Long Island. Here is the Rural Farm, where trustworthy experiments with seeds, culture and fertilizers are constantly taking place. But why at Ithaca? The Station would be still nearer the center of the State if located somewhere in the Mohawk Valley, say near Utica. Here it would be about equi-distant from the extremities of the State, and all farmers who desire to visit the grounds, or who send articles for analysis, or who in any other way have intercourse with the Station, would enjoy equal advantages. If the experiment grounds were located on Long Island, farmers in the northern counties would certainly be at a disadvantage in these respects. Farmers, as a class, do not travel much, and a journey of 200 or 300 miles longer than need be, for the purpose of visiting the experiment grounds, is a matter of no little consequence to them. Moreover, the temperature and general aspect of the climate near Utica will be a fair medium of the climate all over the State, and on that account, too, the location is admirably suited for agricultural experiments, the results of which are to be applied to all sections of the State.

It has been suggested that Stations be established at half a dozen places, or at as many places as may be considered practicable, and that one of them be made the headquarters. This idea is excellent, if the funds for their support can be supplied; but if the funds should be lacking to make the work of real value, we are greatly in favor of a single Station well supported, and whose work can be relied upon in every respect.

We hope the Board will consider these points carefully before they make a final move in this matter, which, on behalf of the farmers of the State, has been left in their trust.

FARMS AND FARMERS.

Farmers, like poets, are born, not made. There are thousands who occasionally make rhymes, but never a line of true poetry, and there are thousands who labor on farms all their lives and still are never farmers in the true meaning of the word. It takes but little skill to hoe a row of corn or to dig a hill of potatoes; but when we come to the real, serious, practical business of farming, we shall find it is, from first to last, an avocation that requires as much soundness of judgment and clearness of foresight to insure success as any other trade or profession. It is true that Nature is bountiful in her gifts, and in almost every instance he who expressing his desires by both faith and works receives something; but it is only those who work with the spirit and the understanding also who receive the fullness of her bounty.

There are but few who have not sufficient ability to plow and to sow and to reap; but to know when and how to do these things in order to secure the greatest return, is given to but a very few of the many thousands who engage, either from choice or necessity, in agricultural pursuits. We say from necessity, for it often happens that we find on the same farm that has given employment and livelihood to his father, a man in no way fitted for the business, whose choice and success would have been in some other pursuit, but who as a boy was compelled to stick to the plow only for the reason that somebody must do it, and one son, at least, must remain to take care of the homestead and of father and mother in their old age.

Farming is not the only occupation in which those least fitted for it are employed. The fact that 90 out of every 100 who engage in mercantile affairs sooner or later go to financial ruin, and that the great majority of those who choose law, the ministry or medicine are never able to attain even moderate success, shows how little attention is given to the putting of a boy or a young man in the place for which he is by nature best fitted. This poor lawyer might have made an excellent farmer, while that poor farmer has in him latent power that, if cultivated, would have enabled him to take a high rank at the bar. But we did not set out to write an essay on the right man in the right place.

A successful farmer is one who is naturally a chemist. A farm is a laboratory where chemical changes are constantly going on either with or without the observation and aid of the farmer, and he only is the successful one who can make the forces of nature work for his profit.

There are certain things connected with farming that one not a fool cannot help learning, and a general routine may be followed that, taking one year with another, will result in producing average crops. But the true farmer is he who understandingly—we would say scientifically if the word was not so distasteful to many—departs from this routine and holds converse with nature, making a bargain with the soil, perhaps, that for a certain amount of particular care and fertilization a certain and large crop shall be returned.

It is said that a good chess player is able to give a reason for every move he makes, and a move that is made without an object in view is worse than useless. A commander in a battle field who has not clear and definite ideas of what he wants to do and why, sends his men to inexcusable slaughter.

So the farmer, who does not wisely plan and carefully execute his work, while his labors may not be entirely useless, only attains a partial success.

There is hardly one item of a farmer's business that may be done strictly by rule. Everything must be changed or varied to meet circumstances. That which would be advisable to do with an early Spring is hazardous in a late one. If the field is wet and the soil does not crumble when the furrow turns, let it alone and plow the other more sandy or higher one. This heap of manure, that in a dry time would be just the thing for a certain crop, must go elsewhere. Shall this field be plowed this Fall, or left till Spring? And so on through the thousand questions that are constantly arising. He who is competent, first, to see the necessity of asking them and afterward to decide them, is worthy of the name of farmer; others are laborers. Of the first there are few; of the latter, many.

A farmer should be a student of books as well as of nature, in order that he may profit by the experience of those who have gone before him. Every year people are repeating the failures of those who lived a thousand years ago. The necessity of an education for a farmer is not sufficiently appreciated. Thomas, who is to be a minister, and Richard, who expects to gather fame and riches as a lawyer, must be sent to college, while Harry, who is to work the farm, must be content, as he too often is, with such teaching as the district school affords. This is all wrong, and not until there is a change will farmers take the position in society to which they are entitled. As we sometimes see an eloquent minister or a talented lawyer who has attained his position by virtue of his own unaided intellect, so we sometimes find a thorough, scientifically practical farmer who has sought out in nature's own books, the fields, the knowledge necessary for making his labors successful and his life of use not only to himself but to all around him.

It should not be forgotten by those in others paths of life, that on the labors of the farmer depends their welfare. This is true to a greater extent than is often remembered. Suppose that every agriculturist in the country could, by some means, be changed instantly into a first-class farmer. It would be impossible to compute the wealth that would be added to this country during the next year. And everybody knows that a good year for farmers means prosperity to every branch of trade and commerce.

BREVITIES.

Prof. Thomas writes to us that he finds the larvæ of the Cabbage moth infested this season by a fungus and an insect parasite.

The old Mark Lane Express appears in its issue of July 5th, in a new and, in our opinion, a greatly improved form. This agricultural weekly was first issued in London, England, on the 2nd of January, 1832.

We are in receipt (July 26) of a box of peaches from Dr. McAboy of the Thermal Belt, of which we have several times spoken of late. The peaches were received in bad order owing to imperfect packing. But in size, coloring and quality they are better than any peaches we have seen in this market the present season.

Lilium superbum is now in bloom. Hundreds of these grow in the lowlands of the Rural Farm adding greatly to the beauty of the thickets and woods. This is the Turk's Cap lily which is thought by many botanists to be scarcely distinct from L. Carolinianum and L. Canadense. We have found them within a few days past of a wider range of colors than in seasons heretofore—some being of a pure lemon, others of a bright scarlet, all spotted with dark purple or brown—as well as the ordinary intermediate shades. We have never been successful with this beautiful lily in the garden. After a season or so of diminishing vigor, it has failed entirely.

As will be seen we have begun this week a radical change in the news department of this journal. Instead of the one or two columns that have hitherto been devoted to news, we now devote one entire page. This will enable us to keep our readers thoroughly informed, by presenting an epitome, at least, of the most important occurrences in the world's history from week to week. It may occur to our friends that even one page will scarcely suffice for the presentation of such a history; but deprived of all filling and sensational effect, facts may be stated in a surprisingly brief space. The news will be gathered from every source, and rewritten by two of the Rural editors—all trash will be rejected, and only such news as may in some way profit and instruct our readers will be placed before them.

The high prices that ruled for wheat during the past season, led farmers through the Northwest to sell, as a rule, all they could possibly spare, while the same cause seems to have deterred millers from laying in a heavy supply. Accordingly the latter through almost that entire section appear to be short of "hard," or "Minnesota" Spring wheat, so that it is reported that of the 304,730 bushels of the variety lately in storage in Chicago, 60,000 are to be sent by water to Milwaukee, and 100,000 by rail to points in the interior as far off as Minneapolis. In the absence of a sufficient supply of "hard," it is doubtful whether the mills will decide to take what is known as "soft" Spring wheat, or shut down until the new harvest is in the market. The new wheat in that region will hardly be ready for grinding before about the middle of September; for after it has ripened and been harvested it will require some time until it is dried enough for millers' use.

From a private, but trustworthy source, we are in receipt of the following important particulars regarding wheat:

Illinois, July 21, 1880.—There is a "boom" started in wheat, based on the fact that the crop will be short with us, shorter abroad, and the foreign demand large. For Illinois the quantity will be something more than last year, but the quality will be greatly inferior. The Chicago market opened at 85c., and has already advanced ten cents for No. 2, and may go 10 to 20 cents higher. For the center of the State and for the total country where the oats and wheat both were in the stage of filling and ripening the grain during the heated term from June 20 to 14th of July, the crops will be a partial failure, if not something worse. For a week, however, we have had a cool spell and this will be a godsend for all that portion of the northwestern Spring wheat region, where the wheat is in course of heading out and filling. In a few words, the middle cereal region, north of 40 deg. and up to 43 deg., has lost a large share of its oats and considerable Winter, and most of its Spring wheat. From present appearances the Spring wheat in upper Minnesota, Dakota and Manitoba will be exceptionally good, unless the weather should turn out hot and they get then a couple of weeks of heat and humidity.

Literary Miscellany.

NOT RURAL SIGHTS ALONE.

Not rural sights alone, but rural sounds,
Exhilarate the spirit, and restore
The tone of languid nature. Mighty winds,
That sweep the skirts of some far spreading wood
Of ancient growth, make music not unlike
The dash of ocean on his winding shore,
And lull the spirit while they fill the mind;
Unnumbered branches waving in the blast,
And all their leaves fast fluttering, all at once,
Nor less composure waits upon the roar
Of distant floods, or on the softer voice
Of neighboring fountain, or of rills that slip
Through the cleft rock, and, chiming as they fall
Upon loose pebbles lose themselves at length
In matted grass, that, with a livelier green,
Betray the secret of their silent course.

Nature inanimate employs sweet sounds,
But animated nature sweeter still,
To soothe and satisfy the human ear.
Ten thousand warblers cheer the day, and one
The livelong night; nor these alone, whose notes
Nice-fingered Art must emulate in vain,
But cawing rooks, and kites that swim sublime
In still repeated circles, screaming loud,
The jay, the pie, and e'en the boding owl
That hails the rising moon, have charms for me.
Sounds inharmonious in themselves, and harsh,
Yet heard in scenes where peace forever reigns,
And only there, please highly for their sake.

—William Cowper.

EDWARD BENTLEY'S DECISION.

CHAPTER I.

"She's coming—she's coming at last, I declare!" cried the Rector's sister, waving a note overhead in such a sudden rapture that the Rev. Edward Bentley had to put out one hand to save the cream-jug, and the other to prevent his small pile of letters from being swept on to the floor.

His amused look brought the young lady back to the duties of the breakfast-table, which, as usual, on those lovely June mornings, was set in the bay-window, that the brother and sister might delight their senses with the beauty and perfume of the flower-beds beneath it.

"I beg your pardon, Edward, but I have so longed to get her here ever since you were presented to the living! and there's always been something to prevent it, so that I was just beginning to be afraid she wouldn't come till the Summer was over, and here are half a dozen lines to say that she'll be at Spedham Station this afternoon by the 2:20 train. I am so glad!"

Who was *she?* Mr. Bentley seemed to know intuitively, for he asked no questions, but went on buttering his roll with rather a glum countenance. However, his bright little sister and housekeeper was too much excited to notice his silence.

"I shall put Edith in the room adjoining mine, then we can share the same dressing-closet. I wish I had had the piano tuned; she plays exquisitely, and can master all those tremendous bits of Beethoven you think so beautiful, and out of which I can only hammer discords and noise, as you politely told me the other day. And I intend to take her everywhere——"

But here the Rector rattled his cup and saucer impatiently.

"Some more coffee, please, Em, for I have fifty things to attend to this morning; and I have just been thinking, dear, that as I must go to town sooner or later, and see the lawyers, to make arrangements about the small property our uncle left us, I could not do better than embrace this opportunity."

"What opportunity?" asked Em, with a flush and a frown.

"Why, my dear, you know that I have deferred going because I did not like to leave you alone, and now I shall not have to do so. Your friend Miss Wilton will be here, and I shall have the satisfaction of knowing, not only that you will not miss me, but that you and your guest will be relieved of the constraint of my presence."

"Do I ever find it a restraint?" and the young lady's voice took an aggrieved tone.

"No, no; you are the best of girls, and have thrown yourself into all my plans so energetically, that I devoutly hope no other fellow will find out your perfections and run away with you. But you and Miss Wilton will have so much to say to each other, that of course I should be in the way."

"Why not tell the truth at once, Edward?" his sister demanded, hotly. "You have set yourself against Edith, without knowing anything of her, except from my descriptions; you have made up your mind not to like her, and when, for the first time since we came to the Rectory, she arranges to spend a few days with me, instead of giving her a hospitable welcome, you rush off."

Mr. Bentley was disconcerted by his sister's evident annoyance.

"You forget, Em, that Miss Wilton and I are strangers to each other."

"And you forget how tenderly she nursed me through my long illness at school, when no one else cared to come near me for fear of infection."

"I believe I wrote to the young lady, expressing my gratitude."

"Oh yes, you did and a very stilted letter it was, You had better write another to say that as you have no desire to make her acquaintance you beg to decline the visit she proffers."

Edward Bentley rose from his chair, and began to walk about the room; he did not wish to vex the sister he loved warmly, but he did not feel any desire to make the acquaintance of Edith Wilton. Her very name was odious in his ears; he had heard it till he was ready to declare that female friendships were detestable. There was his sensible, matter-of-fact little sister, who never rushed into extremes, who was so methodical in her habits, and not even romantic enough to appreciate Tennyson, always ready to rave over a mere schoolgirl—for no other reason, that he could discover, than because Edith Wilton was in every respect the opposite of herself.

Emily Bentley had been carefully educated at first under the eye of her mother; and after Mrs. Bentley's death, great care had been observed in the selection of the boarding-school, where she encountered Miss Wilton; whilst the latter had, by her own showing, lived a rambling sort of life. After the death of her parents, she had lived with an uncle and aunt.

The hideous photograph of her friend that Emmie had once shown her brother portrayed such a large-headed, unmeaning-eyed young female, that he hoped for her own sake his sister was right when she said that the photo did not do Miss Wilton justice.

To see such a creature take possession of his good simple-minded Emmie—availing herself of her girlish idolatry even while she ridiculed it, and very possibly making herself conspicuous in the village by her loud dress and manners—was a prospect that made him shudder: yet how could he induce Emmie to see her school-friend as he saw her, or how hint to her that, after a separation of three years her own tastes might have undergone such modifications, that she would feel as much disgusted with their guest as himself?

He glanced at his sister. She was still sitting at the breakfast-table with her head bent over the note—the free, bold calligraphy of which was another fault in the jaundiced eyes of Edward Bentley—and a large tear had just fallen upon it.

He was not proof against this token of distress. After all, what did the eccentricities of Miss Wilton signify, if Em wished to see her again? She was only coming for a few days, and after her departure they might have a hearty laugh together over what would be—or so he predicted—the last chapter of their girlish romance.

He came and laid his fingers on his sister's shoulder.

"After all, Em, dear, I think I'll postpone my trip to town. Shall I go with you to Spedham this afternoon to meet Miss Wilton?"

But for once Emmie would not accept the olive-branch. He had testified a wish to avoid her visitor—let him do so; the loss would be his own, and she was too lond, too proud of Edith, to wish to force her acquaintance upon the brother, whose prejudice she disdained to combat.

"Indeed I will not hear of you changing your plans!" she cried briskly. "After all, you were right; I shall have no time to feel dull if Edith spends the term of your absence with me; and I'm afraid that if you were here I should be tempted to neglect you for her. Go by all means! I must look to your collars and wristbands, so it will not do for me to loiter here. If you go down the village, you might as well ask Mrs. Brown to lend me her basket-chaise. Then I can drive you to Spedham, and dear old Edith back.

With the general inconsistency of human nature, Edward Bentley was not very well pleased to find his sister reconciling herself so quickly to his departure; but he assured himself that he was very glad she was so reasonable, and went away to hurry through a round of parochial calls before luncheon.

Emmie was too much occupied to join him at the meal, or even to exchange another word with him till she ran down stairs, buttoning her gloves as she came—to act as his charioteer. Neither did she mention the name of Edith as they drove along, but chatted cheerfully of the friends he would see, and the books for the school library he would be able to select, etc., till the station was in sight.

"There is one thing I have been forced to neglect through leaving home so suddenly," the young clergyman observed; "and that is carrying to the bank the sum of money I received for the local charities."

"Is it of any consequence?" asked his sister.

"Perhaps not; and yet it would be safer there than in my desk. Tell Myers to look out for Farmer Andrews when he rides by to the market-tomorrow morning, and ask the farmer to carry it to the bank for me. You will find it in a leather bag in the escritoire in my study. Don't forget this, Em. It is trust-money, and I should feel more comfortable if it were in safe-keeping."

She nodded, and threw the reins on the back of the fat, quiet little pony. The train was in, and a girl in a dark serge dress, fitting like a riding-habit to her small, slight figure, and a shady hat perched on wavy hair of chestnut brown, was standing on the platform with her bag, ulster and neat little umbrella, looking around her with rather a forlorn aspect.

Em flew towards the stranger, and her brother more deliberately followed; but the train that was to bear the Rector away was now approaching. There was just time enough for the briefest of introductions—a bow from the gentleman, a smile, sweet but reserved, from the lady—and Edward Bentley had to rush off, marvelling as he went how any photographer could have so caricatured the refined and pensive features of Edith Wilton.

Emmie's apologies for her brother's departure were good-humoredly received.

"It was very kind of Mr. Bentley to leave us to ourselves; he knew we should be brimming over with feminine gossip, and that we could not discuss the scandals of the parish, nor the last fashions, in his hearing. Oh, Em, I envy you: to have a fixed home—not a rambling one within the precincts of a garrison town, but really a home, and a brother with whom you go hand in hand in good works, must be very delightful!"

"To me it is; but you would soon find it irksome. Reading to old people, teaching at the schools, striving to drill the choir, and listening but too often to vexatious and trivial complaints is trying to the temper as well as the strength."

"And so is the life to which I am condemned," answered Edith, with a sigh.

Edith's delicate bloom deepened, but she said no more, and Emmie was silent, too. She guessed, however, that Mrs. Wilton, who was a notorious matchmaker, had been trying to hurry her husband's niece into a marriage repugnant to her feelings; and the sympathizing glance she turned upon Edith, brought into the bright brown eyes tears such as were seldom seen there.

But they were not allowed to fall, and it was with an assumption of gaiety that the guest exclaimed:

"Hurry, Em, for I am longing to see the rectory-house you have painted in such glowing colors. I have not had a day in the country, with leave and license to ramble where I please, since poor papa died, so I give you notice that I mean to make the most of my holiday. Do you bake your own bread and churn your own butter and grow your own strawberries? You do! that's good news, for I'm immensely hungry."

Before the day was over the two girls had explored the rectory from the leads on the roof to the cool, fresh dairy in the basement; had strolled through the village that Edith might make acquaintance with all Em's pet old-women and babies; climbed into the organ-loft at the church, and played over the exquisite bits from Handel and Mendelssohn, from Bach and Pergolesi, that Em loved to hear, though she did not possess her friend's mastery over the instrument; and on their way back to the rectory fallen in with the doctor's half-dozen merry children.

For these frolicsome imps they improvised high tea on the lawn, followed by a dance, which was kept up till the doctor himself appeared, to threaten them, in much displeasure, with pills and potions fifteen to the hour, if they did not all troop off to bed.

The next day was so intensely hot that Em and her friend were obliged to confine themselves to the house and the garden, reading, working, and conversing.

Remembering her brother's injunction, Em bade the gardener Myers look out for Farmer Andrews, about the time the worthy church-warden generally drove by on his way to the market-town, and Myers promised to obey orders with the promptitude that made him a favorite with the Rector, who had only lately taken him into his service.

Edith, who was sitting in the veranda, which just then was overloaded with climbing-roses and passiflora, looked thoughtfully after the man as he walked away.

"Is Myers your only man-servant?" she inquired. "He has been a soldier, hasn't he?" when Em had answered in the affirmative.

"I don't think so," was the reply. "Oh no, I am sure he has not; for he told Edward, at the time we engaged him, that he had always lived with an uncle who is a florist near London."

"I did not see his face," Edith observed, "but somehow his voice and figure seemed familiar; and he walks with a military step. I am sure he has been through his drill at some time or other."

"He may have been in a corps of volunteers," Em suggested. "He is an excellent servant, clean, civil, and active. I am all the more ready to dwell on his good qualities because I do not like him. Why don't I? My dear, it's a veritable case of 'Doctor Fell; the reason why I cannot tell.' Perhaps it's because I have a suspicion that he's not truthful; but as I've never detected him in a regular fib, I suspend my judgment."

The sultry day passed over, and the two girls, busy with some illuminated texts Em was at work upon for the church, did not notice the flight of time, till the neat parlor-maid came in to lay the cloth for the tea-dinner they had decided on having instead of a more formal meal.

"So late! and we have seen nothing of Mr. Andrews! I hope Myers has not neglected to watch for him."

No. Myers, on being questioned, assured his mistress that he had been at work in the front of the house ever since she last saw him, and was positive the farmer had not driven by.

"How very tiresome!" exclaimed Em, a couple of hours afterwards, as she and her friend stood at the open window in the twilight, watching the moon rise over the elm-trees that fringed the meadows. "That little bag of money is beginning to lie heavily on my conscience."

"Why?" asked Edith. "You are not afraid that it will be stolen, are you?"

"Oh, no! robbers are unheard of in this quiet place. But I do not like to feel that any wish Edward has expressed is neglected. He trusts to me so implicitly that I cannot be easy when I know I have not obeyed an injunction he has given me. I ought to have watched for Mr. Andrews myself, or have walked over to his house this morning."

"Is it too late to do so now? How far is it?" her friend inquired.

"A couple of miles by the road, but very little more than one by the river-bank and across the meadows. It would be a lovely walk, only——"

And then, to the surprise of her friend, Em blushed, stammered, and began to pick to pieces the flowers she had just been gathering.

"Over the meadows, and beside the pretty stream you pointed out this morning. Why, it would be delightful! and we should have the moon to light us home!"

"I could send Myers," said Em, half willing, half reluctant.

"And he might fall in the river, and lose the precious bag. No, dear, we ought not to fulfil your trust by deputy, but deliver the money ourselves to Mr.—Andrews did you call him? Why do you hesitate? Do you think the walk will be too much for me? If you did but know how many miles I have tramped with papa in the golden days of yore! I am ready—are you?"

As she spoke, Edith had thrown her gossamer white shawl over her head; and Em, when she had ruined all her roses but one lovely bud, fastened that into her brooch and ran away to get the leather bag from the drawer in the escritoire.

Without apprising the servants of their intention, away they went—Em a little nervous at finding herself in the lonely meadows after dark, but encouraged by the example of her companion, who tripped along fearlessly, and comforted by the knowledge that on their return the moon would have chased away the long shadows that now fell across her path and startled her.

They were noisily welcomed by the farmer and his rosy-cheeked daughters, and more quietly, but not less warmly, by a gentlemanly young man, who put aside his books to greet Em. and was introduced to Edith as Leonard Clinton, the son of an old friend of the family, who was studying farming under Mr. Andrews.

The motive of this late visit was explained, and Em's prudence, in ridding herself of so large a sum of money, commended.

"Your man Myers must be a stupid fellow," said the portly farmer. "He ought to have seen me when I drove by; I'm sure I'm large enough."

Laughing at his own jest, he insisted that his fair visitors should stay to partake of the supper then in preparation. Nor would he admit of their excuses till Miss Bentley had promised that she and Edith would let him drive them on the morrow with his daughters to a flower-show at a village close by.

As they ran laughing away, they found Mr. Clinton, hat in hand, waiting to walk with them over the meadows; and though Em had been very firm in declining Farmer Andrews' escort, her objections to Mr. Clinton's were so faintly offered, that Edith smiled slyly to herself at the incipient romance she detected.

At the gate of the rectory-garden their cavalier shook hands and went his way, but he must have carried Em's rosebud with him, for it was gone when she led Edith into the house, where Myers, brisk and smiling, was just emerging from the kitchen to bolt gates and fasten shutters.—To be continued.

SKETCHES OF GERMAN LIFE.

BERTHA A. WINKLER.

Emigrants.

The emigration fever has reached our village and there is a great commotion. Two canvas-covered wagons, already loaded with the effects of the emigrant party, elicit no end of comment from the bystanders on the probable future of their venturesome neighbors, whose hearts, so lately buoyed with hope of better days in pictured lands of wealth, seemed now to sink within them in that last hour with old friends and familiar scenes.

Though the last nights of the emigrants had been passed beneath the hospitable roof of neighbors in singing, drinking, and toasting, not a trace of their merry revels remained, as they made their customary farewell calls on the magistrate, the schoolmaster, and the pastor.

The parting with the latter started the sobs of the women and children afresh, and even the sturdy peasants grasped the good man's hand again, as they realized that it was indeed only "*auf wiedersehen* in heaven."

Once on the outskirts of the village they mounted the wagons, the driver cracked his whip, and they were driven away amidst the "*lebe wohls*" of those remaining.

It was only after they had gone some distance that the good wishes of the people were manifested in cheers and waving of handkerchiefs.

They were to sail from Bremen, and on the third day my good emigrants made their appearance on the vessel flushed and excited from travel, but otherwise in good cheer.

While the men stood on deck, smoking with the greatest complacence, the women trudged to and fro, carrying huge feather beds and other precious bundles, considered indispensable for German comfort, and which they had been informed could not be had for love nor money in America.

When they were informed that Americans had only blankets for coverlets they clasped their hands, and, in mingled surprise and pity, exclaimed: "Ach! ach! have they then no geese to raise feathers?"

The result was that before evening the whole party had determined not to begin life in the Far West without a flock of geese.

Hundreds of trifling little articles were thus dragged along, under the impression that they could not be obtained anywhere but in the Fatherland.

When the anchor was heaved and the signal given for starting, a motley crowd assembled on deck.

We distinguished Bohemians by their sunburnt oblong faces, their high-necked, Elizabethian ruffs, and their snuff-colored skirts tied around the knees. The peasants in their gay waist-coats and triangle hats. The quiet, good-natured Suab of the Black Forest and his better half, with an immense black bow flapping up and down on her head, like buzzard's wings, as she chased after the little ones playing hide and seek behind the masts.

Then, there were the townspeople of various grades; would-be students who escape the military law, sporting tasseled caps, short jackets, and high dainty buttoned boots; and girls, with nothing but a net for the head covering, casting sheep's eyes at them.

But all were watching more or less intently, the receding shores of the Fatherland. And when, at last, the highland mountain chain seemed about to dip under the sea, parents with one impulse snatched up their little ones exclaiming, as they pointed to the horizon, "See, yonder is Germany, you may never see it again!" Then there was a momentous silence, every heart was full of its own memories and emotions, and every eye was gazing wistfully homeward.

Once out on the open sea the vessel began to rock, and sea-sickness made havoc among the strongest. In less than a minute the deck was cleared, and down in the steerage the people were huddled together like so many dizzy flies; helpless and hopeless, wanting nothing so much as to be left alone. A few of the children and young people crawled on deck again after the first week, but they looked so pale and miserable crouching there in the sunshine, that even the rough and ready sailors withheld their usual broad grin and threw them some dried prunes instead.

Life now was anything but pleasant to the help-

less majority, as day after day they listened to the same dismal groans of the burdened vessel; the creaking of the chains, and the monotonous "Oho! oheo!" of the sailors, tugging at the rigging. Nor was the food calculated to tempt their appetites.

At six in the morning and evening the steward announced "coffee-water." Many in preference to the black, bitter coffee, break their hard-tack into a pan, add a little salt and butter, then have their hot water poured over all, thus making a kind of soup. The noon-day meals are alternately, rice and potatoes, barley and prunes, lentils and dumplings of flour, and pork and beans. The two dishes are always mixed and boiled in an immense kettle into a thin pudding; then it is measured out in suitable quantities for each family. The salt herring, unsavory butter, and hardest of hard-tack, which is distributed once a week, complete the not very tempting bill of fare.

Occasionally, on a moonlight night, the violin and guitar of some of the passengers were coaxed out and then the deck was transformed into a dancing floor, with the girls, the students and even the sailors off duty on the "light fantastic toe." Then, too, the most miserable would venture out on deck and watch the merry circle, or gaze into the moonlight waves and gather fresh hope as the good ship bravely plows the deep, and the friendly captain pauses here and there to point out to them the floating masses of sea-weed and the birds soaring around the mast as sure indication of the nearness of land.

"Land ahoy!" The welcome news from the watchman went from mouth to mouth. In a short time every body had rushed on deck to see nothing after all but more sea-weed and birds. But the captain leveled his glass straight ahead and a satisfactory smile passed over his face as he expressed the result of his observations in a cheerful "Keep looking, good people, keep looking." And they did most perseveringly. The minutes wore into hours, the morning into noon, yet not one had stirred from its point of observation. At last a faint eminence appeared in the distant, wave-skirted horizon; their anxious faces lighted and simultaneously a hundred hats were waved, and the whole assembly burst into the joyous salute "America! vivat America!" The sick, the aged and the little ones were helped up to feast their eyes in silent, tearful joy upon their future home.

The following day there was a general clearing up of one's goods. Straw mattrasses, old blankets, tin pans and kettles were thrown overboard with great satisfaction. The custom house officers next proceeded with their investigation without any difficulty until they came to the feather bundles. No reasoning and gesticulations of the peasant women could induce him to desist from searching them. In plunged the official arm and out flew the feathers, to the dismay and indignation of the owner.

We left our German emigrants at Castle Garden enjoying huge slices of bread and cheese while waiting for the train that is to take them westward, where we know they will, by honest industry, soon create pleasant homes and add to the wealth and strength of the New World.

THE WORLD'S FAIR.

For two years a constant agitation has been kept up in New York for the holding of an International Exhibition in this country in 1883. The dwellers in towns remote have, during this period, heard but little of the labors of the handful of public-spirited men, who have persistently carrried forward the movement to the point it has now reached. Patiently and prudently they have gone on from stage to stage, having the satisfaction at each successive step to witness a decided advance in all the essential elements of success. The holding of an International Exhibition in this country in 1883 is now an assured fact. The initiatory difficulties inseparably connected with a scheme of such magnitude, particularly those in regard to the obtaining of necessary legislation, have all been overcome, and the preliminary arrangements and complete organization of the United States International Exhibition Commission in 1883 are being pushed forward to a speedy completion. A special act of Congress providing for the holding of such exhibition has been obtained; bills have been passed in the New York Legislature granting to the Commissioners who may be appointed powers to acquire such lands, etc., as may be requisite, and the Governors of the several States are rapidly nominating Commissioners to assist the project to a successful termination. The plan of the proposed exposition is on a scale of such magnitude that it completely eclipses everything of the kind in the past, and may probably never be surpassed in the future, and the movement has now entered upon a career of popular recognition and public favor which guarantee the ultimate accomplishment of all its projectors have hoped to realize.

RECENT LITERATURE.

The Undiscovered Country. By WILLIAM D. HOWELLS. 1 vol., 12mo, $1.50. Boston: Houghton, Mifflin & Co.

Mr. Howells ranks among the foremost American novelists. His marvelous faculty for observing, and his rare skill in depicting character and describing scenery; the delicate sympathy with which he treats the persons who figure in his novels; and the exquisite literary art which adorns whatever he touches, supplemented by a noble refinement which pervades his stories, make the admiration and delight of his numerous readers.

"The Undiscovered Country" is, beyond question, the greatest novel Mr. Howells has yet written. It has the graceful and charming qualities of his previous stories, and, in addition, it introduces subjects of profounder interest. The treatment of Spiritualism is masterly and exceedingly engaging; and the description of life among the Shakers, with the incidental statement of their peculiar views is admirable.

The love-making is well represented, with warmth of hearty support and with perfect refinement.

The excellent humor and observation of natural scenes are as marked in this as in other novels by the same author. Popularity and permanent interest may be expected as the author's reward for this production.

Man Proposes. A novel of American Life. 16 mo. Cloth $1. Boston: Lee & Shepard, Publishers.

This is an anonymous novel. Its plot is original and interesting throughout. The characters are well drawn, and the writer shows skill in contrasting them. The general tone is extremely natural; the home and army scenes are portrayed in a light which reflects them clearly.

To be brief, readers can scarcely fail to be pleased with the style in which this story is written.

The Temperance Light. A New Collection of Gospel Temperance Hymns and Sacred Songs. By G. C. Hugg and M. E. Servoss. Boston: Oliver Ditson & Co.

This is a cheap (10ct.) Temperance collection, whose price will at once commend it, as its contents are not at all "cheap," but evidently carefully selected and condensed. There are thirty-two tunes, and the words and music were procured of twenty-seven different writers. It will be seen that two or three dollars will procure quite enough books for an ordinary "reform club."

Thanksgiving and Other Poems. By AGATHA. Price $1.25. New York: G. Putnam's Sons.

The opening poem, "Thanksgiving," is written in a pleasing manner, and the home scenes of a preparation for and a gathering of the family in the country homestead to celebrate Thanksgiving season is depicted in a peculiarly natural way. The other poems are good and well worthy a perusal.

VARIETIES.

CHARITY.—How noiselessly the snow comes down! You may see it, feel it, but never hear it. Such is true charity.

CIVILIZED POULTRY.—Among the announcements of articles offered for exchange in a paper devoted to such transactions there appears the following: "Wanted, a drawing-room suite for two portable fowl-houses on wheels."

MUSIC is an art which strengthens the bonds of civilized society, humanizes and softens the feelings and dispositions of men, produces a refined pleasure in the mind, and tends to raise up in the soul emotions of an exalted nature.—Brougham.

RHINE pebbles mounted in silver, and as brilliant as diamonds, are used for the ornamental darts, arrows, and daggers that are now thrust through the loops and braids of elaborate coiffures. The same showy white stones are also used for belt clasps, small buckles for satin slippers, and for lizard brooches that serve to pin a scarf of lace, or to hold a bouquet on the corsage.

A MAINE man who didn't care two shakes of a lamb's tail about the newspapers rode fourteen miles through a fierce snowstorm to get a copy of a weekly that spoke of him as "a prominent citizen."—Boston Post.

DR. TANNER, the fasting prodigy, is an Englishman by birth, and came to this country when seventeen years old. He is a well-preserved specimen of nervous-sanguine man, with excessively strong will-power. He has iron-gray hair and sharp features, and looks much more like a Yankee than an Englishman.

"HERE, somebody, quick! Where's an editor, anybody, quick!" and catching sight of the porter he went for him, and grabbing him by the collar he hollored: "Say, what natural in animal history—pshaw! What history in natural animal, I mean, at least, what animal in natural history does Chili resemble at present? Give it up? Why, the lammer of Peru, of course!" and with a wild and idiotic laugh he disappeared down the Common street stairs before he could be identified.—N. Y. Graphic.

THE question has recently been discussed with considerable earnestness by several scientists, whether marriage is conducive to longevity and a check upon crime and insanity. One of the latest authorities takes the ground that the statistics heretofore adduced as apparent proof of the beneficial effects of marriage are not trustworthy, and that two of the points most certainly decided are, that youthful marriages, either of women or men, are not conducive to longevity, and, second, that widows and widowers die more rapidly than either single or married persons of corresponding age. It is also said that it is a flagrant error to rush into marriage under the supposition that tendencies to criminality or insanity will be checked by such action.

THE glass of soda and the looking-glass resemble each other. You can see the soda's fizz in the one, and your own phiz in the other.—Boston Transcript.

There is at Brussells a curious case of chronic drowsiness. A man about 45 years of age, apparently in perfect health, has lately been attacked by an irresistible tendency to sleep. As soon as he stops walking or seats himself even to eat he falls into a deep slumber. All the remedies prescribed by the leading Belgian physicians have failed to produce any effect upon him. This is said to be the first case of the kind in Europe, although such cases are by no means rare among the negroes of Guinea, who call them Nelavan.

AN innocent youth from the public school brings his bleeding knuckles to his mother, asking for her sympathy:

"How were they damaged?" asks the lady.

"Oh, only against the other fellow's cheek-bone."

"Poor fellow, how is his cheek-bone?"

The scholar retires in indignation at the glaring absurdities of the female logic.

THE tribunal of the justice of the peace, of Geneva, Switzerland, has given judgment in a case between a servant and a master who gave each day the money for bread. The servant put the money in his pocket and ran up a bill at the baker's; the tribunal decided that the baker had acted imprudently, but that a master is not responsible for the debts contracted in his name, without his knowledge, by a servant. American tradesmen would suffer considerably if the law was so translated here. But who can say it is not just?

CHARLES DICKENS once wrote to Sir John Bennett the letter which has lately been published in the London Daily News: "My Dear Sir—Since my hall-clock was sent to your establishment to be cleaned, it has gone (as, indeed it always has) perfectly well but has struck the hour with great reluctance; and, after enduring internal agonies of a most distressing nature, it has now ceased striking altogether. Though a happy release to the clock, this is not convenient to the household. If you can send down any confidential man with whom the clock can confer, I think it may have something on its works that it would be glad to make a clean breast of.—Faithfully yours, Charles Dickens."

A LITTLE girl has been absent two weeks with her parents at a camp-meeting. On her return home her little playmate, Ella Day, entertained her by showing her her new playthings. At night, little Mary, in saying her prayers, said: "O Lord, bless Ella Day, and make her a good girl, so I can take all her playthings away from her, and she won't want them back again."

BRIC-A-BRAC.

"TELL us not in mournful numbers
Life is but an empty dream"
When milk is seven cents a quart
And raises mighty little cream.

THE mysteries of a baby's toilet were altogether new to a little four-year-old, and he carefully watched the bathing and dressing of his little cousin. When the little powder-box was open, and the fluffy brush was about to be used underneath the baby's chin, he exclaimed: "Oh, aunty, let me see you salt her."

A POSITION in life
At all worth the naming,
If you gain it, 'twill greatly
Depend on your aiming.

"YES," said a fresh girl at a show, "I know my beau goes out between acts, but he's nice and never drinks anything but a cup of coffee, because I can always smell it as plain as day, and I know the smell of coffee from beer or whisky, if I am a little bit green." It is a very happy thing for a young man to have a girl's confidence.

FROM a grave-yard in Conway, Mass.:

"Here lies little Willie
Fair as a lily,
God for him sent,
And we let him went."

A FOND mother wants to learn how her son will "turn out." That's easily done. If he's wanted to go out and weed the garden, he will "turn out" slowly and reluctantly and be two hours dressing. If he's called to see a circus procession go by he'll probably "turn out" quick and hurt himself trying to come down stairs and put a boot on at the same time.—Lowell Sun.

A TENDER young potato bug
Sat swinging on a vine,
And sighed unto a maiden bug:
"I pray you will be mine."

Then softly spake the maiden bug:
"I love you fond and true,
But O, my cruel-hearted Par
Won't let me marry you."

With scorn upon his buggy brow,
With glances cold and keen,
That haughty lover answered her:
"I think your Par-is-green."

A NEW PUZZLE.

A correspondent furnishes the following puzzle: "A sharp youth fresh from school having gone to visit a good-natured uncle, the latter placed on a table fifteen fine oranges and fifteen apples and desired his young friend to take half; he, not liking the apples, was about to take the fifteen oranges: but this monopoly of the best fruit being objected to, the old gentleman told him to range all the fruit in a circle and take away every ninth. The clever fellow ranged them in such a way, that by taking away every ninth, all the apples were left on the table, and the oranges transferred to his pocket."

A CLOTHES-LINE is a harmless thing
When stretched from pole to pole;
Until you step across the yard
And step into a hole.
Then, as you make a forward lunge,
It stops you, so to speak,
And throws you down and jerks you to
The middle of next week.
—Keokuk Gate City.

AN article is going the rounds entitled "What Kissing Really Is." Gentlemen, there's no use in trying to explain what it is, for you can't. Be satisfied that it is and always will be.—Kentucky State Journal.

A YOUNG lady who is studying French, lately wrote to her parents that she was invited to a *dejeuner* the day before, and was going to a *fete champetre* the next day. The professor of the college was surprised to receive a dispatch from the "old man" a day or two after saying: "If you don't keep my daughter away from these menagaries and side shows, I will come down and see what ails her."—Pittsburgh Telegraph.

For Women.

CONDUCTED BY MISS RAY CLARK.

LITTLE FEET.

LITTLE, jolly, human feet,
Caught in gaiters trim and neat,
Tripping lightly o'er the ground,
Just the echo of a sound,
Bearing down the great highway
Little maiden lithe and gay.

Lustrous, beaming, asking eyes,
Catching facts; demurely wise;
Scattering sunbeams everywhere;
Witching, winsome, wondrous pair,
Guiding down the busy street
Little maiden's fairy feet.

What her errand, what her task?
Bold the one who'd lightly ask.
Scarce she breathes it to herself,
Earnest, hasting little elf,
Gliding down the crowded way,
Little maid, with feet of fay.

Wondrous secret! Faithful heart,
Little woman's cunning art,
Not by glance or look or word
Shows she what her heart is stirred;
Stirred her heart, and sent her feet,
Swiftly down the busy street.

Here she enters; we without
Stop to find her secret out.
See! she buys a great wax-doll!
Errands done; yes, that is all,
Clasps, and hastens up the street,
Joyous maid with little feet.

DON'T!

BY MARGARET B. HARVEY.

DON'T get discouraged. This, however, I confess I am saying for other people, because at the present writing I feel very much cast down. I don't think I ever had an article in any periodical printed precisely as I wrote it, but within the last week or so I have noticed, it seems to me, more errors than ever.

I sometimes imagine that whatever I accomplish by my pen is counteracted by the mistakes which lay me open to the suspicion of ignorance and carelessness. Though, as regards the latter, it is a well known fact that in trying to avoid one fault a writer often inadvertently commits another.

For instance, regarding causes of discouragement, in my article on Gentlemen Friends there is a word printed "railing, which I am sure I wrote raillery." Quite a difference.

By the way, a friend criticises this sentence, "Let no man touch you except when you shake hands." She wants to know how about dancing, assisting a lady into a carriage, or, as young folks occasionally do, having a good game of romps.

Why, say I, all right, of course. I only meant to indicate in a general way what girls ought to do, leaving much to their own judgment.

Shall I say over again, Don't be discouraged? Indeed, I shall try not to be.

Don't whitewash the trees and rockeries in your lawn and garden. The white glare of the lime, these hot, sunny days, is something the human eye was not intended to stand. If you must have whitewash, have as little of it as you can; fences and chicken-coops are proper objects for it. Besides, think how unnatural are white trunks and stones, imagine the rugged bark in the woods, and the soft gray of the wild ravine smeared over with a monotonous coat of the blinding mixture.

Don't fill your vases with the dyed grasses, which, I suppose, will soon make their appearance, as they have done annually for several years past.

Who ever saw bright scarlet and cobalt blue and sulphur yellow, growing out in the field in the shape of grass tufts, either in one bunch or in several, so near together as to admit of being tied up in one? There are already many beautiful grasses of the natural colors, why should you want to improve them? You only spoil them when you try.

Don't wear your best silks and kid gloves this time of year. Put them away till Fall, and revel in light calico and lisle-thread. Simple attire is always in good taste for Summer. I saw two little girls—young ladies—only this morning, dressed in elegant white *pique*, trimmed with embroidery. But it was soiled and tumbled-looking, and the fresh ribbons didn't improve it a bit. I couldn't help thinking how much better would have looked plain ten-cent chintz exquisitely done up.

Don't get your children fine ostrich plumes for their hats and thereby deprive them of their excursions on the river. Don't give them sashes so wide, that they can't go to all the picnics.

Adornment of the body should always be next to the last consideration, health and comfort next to the first. And let me add, don't give them so few changes of garments that they can't make mud-pies and paddle in the creeks to their heart's content.

Don't have a handsome bonnet locked away and do without hiring a carriage, for a long ride through the lovely by-ways of your neighborhood, gaining health and happiness and inspiration. Oh, if I could say all I feel.

Don't enrich your wardrobe, so depriving yourself of books and pictures and concerts and pleasure trips, and above all the luxury of giving to others. In short, don't take from the inner to add to the outer person.

Don't misunderstand me. I believe in dress fully. I don't take the ground that adornment is vanity and that a true woman ought to neglect her personal appearance. I believe in judgment, in moderation. I know of a young lady who has half a dozen fancy silk dresses, and not one in its first freshness. If she had an elegant black and perhaps a seal-brown or bottle-green, in place of them all, she could always appear well dressed and have quite a nice little sum besides.

Is not a small spray of French flowers just as handsome as a large one? A short ostrich tip just as genuine as a long plume? A black velvet hat as rich as a white one? Is it not wise to wear thread gloves in Summer, and so better afford to have spotless kids in winter?

You see what I mean This is how young ladies no richer than yourself, but always as nicely dressed, manage to have money for new music, magazines, and singing and painting lessons.

Don't be discouraged. You and I can accomplish something if we try.

The lesson the writer has endeavored to teach ("Don't get discouraged") is a hard one for us to master, when we make the application "reflecting upon the mistake in the article, entitled "Gentleman Friends." Who would think that a few small letters could make so much mischief? As something animate must bear the blame—we shoulder it and beg pardon for the offense. R. C.

HOW CAN WE SAVE WORK?

WILL not some one of the ladies of the RURAL who give so many helpful hints to housekeepers write a treatise on "How to Save Work"? or, if you choose, give a more high-sounding title, as "Economy of Labor" and this, perhaps, is more expressive and appropriate, as economy signifies management, thrift and frugality; but of these three implied meanings it is to the latter that we have special reference.

Frugality, as opposed to wastefulness and extravagance in labor—such an intelligent expenditure of time and strength as shall exclude all unnecessary labor—for example:—the model housekeeper of our neighborhood. You may enter her house at any time of the day or any day of the week, search the house from cellar to garret and you will never find anything in disorder, not one particle of dirt or dust. And yet she does not get the mastery over these foes of the housewife by toiling early and late. The most noticeable part is that there is apparently very little work to be done. She seems to possess the talent of banishing dirt from her domain so that there is seldom any cleaning to do.

Her large and pleasant kitchen is used for dining and cooking purposes. The floor of this room, which is nicely painted, always looks clean enough to be used for a table. It is seldom cleaned (seldom here means once, twice or, perhaps, three times during the year); we know of its going at one time a year without being cleaned, and then did not show the need of it as much as ours did at the end of a week.

Her stove which always wears a first-class polish is blackened once or twice a year and fussed with very little in the interim.

It may be necessary to vouch for the truth of this—we therefore assure you the writer is a person of veracity and relating only facts. This may not seem as wonderful to others, but to us (who are obliged to thoroughly clean our work-room at least once a week and blacken our stove as often) it seems a most astonishing fact worthy of being recorded with the seven wonders.

Just think of the precious hours saved from these two household duties and add a corresponding number saved from sweeping and the care of other rooms, and what is to hinder the ladies of the farm from becoming accomplished in art, music, science, or whatever may be their hearts' desire?

Of course this model housekeeper cannot, herself, tell how she manages, but we have gathered a few points from observation. She never sets a kettle on her stove, that is blackened by smoke, but has a broad, flat iron to rest it on. She never turns meat in a spider when it is frying and spattering grease, but removes it to a work-table near at hand before taking off the cover.

She occasionally takes the dust from her floor by sweeping a second time with a cloth of coarse, rough texture over the broom. She never lays anything down out of place or allows one of her family to do so, and, what we consider most important, she has the masculine portion of her household under unusual subjection.

Their slippers are not merely for ornament but are always worn in the house. They have also learned that door knobs are for use and not for ornament.

We have many times come from this house inspired to go and do likewise, but have as often been compelled to yield to the force of circumstances or perhaps to a lack of knowledge or of talent in this direction.

Will not some of the RURAL sisters who are skilled in the art, reduce it to a science and give us the digest? AUGUST.

Many of our lady friends have given ideas upon this subject from time to time; but it would be gratifying to the above writer and to ourselves if some one would treat it in a more particular manner. "August" has escaped the waste-basket; however, her name and address would be acceptable. R. C.

A JAPANESE MANTEL LAMBREQUIN.

THE narrow mantel was painted black, so the lambrequin was tacked on the edge with small, brass-headed nails.

The materials were 1⅓ yard of yellow opera flannel, one dozen Japanese crepe tidies and bits of scarlet and purple satin, and bright velvets, that a friendly milliner laid aside for me.

The crepes were placed two inches apart on the flannel, one inch from the top and two inches margin at the bottom. The bottom, pinked in fine scollops, was embroidered with black and purple silk, herring-bone stitch, and the crepe tidies button-holed loosely on with scarlet and blue.

The spaces between the crepes were ornamented with velvet and satin designs of butterflies, dragon-flies and pagoda-shaped pieces, cut from patterns obtained from scrap pictures.

The mantel ornaments are two vases painted black, and Japanese pictures decalcomanied on and varnished.

Two Japanese fans in black and gold (with a stiff pasteboard back on which they are fastened) half opened and filled with pressed ferns, dried grasses, &c., make a very pretty basket which is the middle ornament on this very gorgeous and oriental mantel-piece. O. W. D.

FASHIONS.

THE prettiest of dresses for the seaside are the self-colored cretonnes with Madras borders; the waist is a jacket with pleats on each side, from the shoulder down to the edge of the basque. These pleats, which are applied on to the bodice, are of the Madras fabric; the overskirt forms two superposed shawl-points in front, each edged with a Madras border. At the back it is draped and also edged with a similar border; the underskirt cut round, without any train, has a deep kilting round the bottom; this kilting can be put on over coarse muslin to render the whole costume lighter or it can be merely tacked on under the edge of the over-skirt. The sleeves have facings of Madras, pleated at the top.

Dresses of percale or batiste, trimmed with printed borders, are all the rage. The printed borders are either in Madras patterns, or floriated, or in Japanese designs. With dotted fabrics the border is generally one of larger dots in the same colors.

The Madras kerchief is extensively used for trimming washing-dresses, and one kerchief to match is used to trim the hat.

Traveling-cloaks are made of fancy woolen material or light cloth, in the shape of a semi-long, semi-fitting paletot, to which is added an ample cape, coming down a little below the waist. There is a square collar of silk, fancy velvet, or satin, triangular pockets at the sides, just below the waist; large buttons of carved wood or dark pearl.

Among the prettiest of children's toilets for the Summer I may mention a frock of blue-spotted muslin-de-laine. Two hollow pleated flounces entirely cover the short skirt, while the bodice comes down very low, and is divided from the skirt by a blue sash tied in a bow at the side; this bodice opens in front with facings edged with white lace, over a long plastron of puffed white surah, and is finished at the top with a deep collar edged with lace. The sleeves have cuffs of the white surah edged with lace. The flounces of the skirt are also edged with lace. This is for a little girl about six or seven years old.

Another costume for about the same age is of light beige material and fancy-wool brocade in two shades of brown. The frock itself is of the beige material, and trimmed round the bottom with a deep kilting of the same. A drapery of the fancy brocade is arranged across the front, forming paniers at the side, and disappearing at the back under a loose puff, formed of the beige material, just above the kilting. A deep collar and cuff of this same brocade complete the trimming. This model can also be made of plain linen or cambric, combined with figured ditto.

For a girl of fifteen a dress also of the same shape, made of any light fancy woolen material, is trimmed with three rows of close shirrings down the front, and with a deep fluting round the bottom. To mitigate the stiff, straight look of this dress, a second skirt is added, on which is merely a sort of scarf drapery pleated across the front and draped up at the back into a tournure. This can be made either of the same or of some other material. If the latter, the fancy fabric should also be used for the collar, cuffs, and pockets of the dress.

FEMALE EDUCATION.—In the days of Queen Anne the education of women, as we understand the term, was very much neglected. The daughter of a country gentleman was taught the duties of a cook; sometimes, also, if the parents were ambitious that she should shine in after life as an accomplished hostess, she received lessons from a carving-master. The cardinal duty of hospitality, as she heard it inculcated at home, was for the lady to press the guests to repletion; while it was the province of the master of the house to make them drink to excess. This, perhaps, was a fitting education of a young woman who was to become the helpmate of a rude landlord, who regarded a wife as an upper servant, and who thought the company of women an irksome restraint upon the freedom of social intercourse. To a woman of any education and refinement, an English manor-house, during at least the earlier years of the Hanoverian succession, must have been an intolerable home.

CORRESPONDENT'S CORNER.

MISS CLARK:—In a letter of Miss Harvey's upon the subject of drawing, which appeared in the RURAL, June 11, last year, she says that she is able to give the address of a house for the sale of artists' goods, to any who wish it. I would like the address as I wish to purchase some of the patterns for pencil pictures for beginners as recommended by her.

Her interesting and instructive letter inspired me with a desire to learn to draw; but not until the past few months have I found the leisure for such an undertaking. At the risk of being considered a dull pupil by Miss Harvey, I cannot forbear giving a little of my experience and asking a few questions.

I have followed her directions carefully, drawing leaves at first until tiring of that, I have attempted engraving. By selecting the easiest subjects I could find I have done a few things that are quite satisfactory.

But in most engravings the lines are so fine and delicate that it is rather confusing, and I am becoming somewhat discouraged.

I wish also to learn to draw flowers sufficiently well to attempt something in water-colors. Would Miss Harvey recommend drawing from natural flowers or patterns. If flowers, which would she choose first, as earliest for a beginner?

I attempted a daisy, but failed miserably. Any information upon the subject, through the columns of the RURAL will be most thankfully received by a CONSTANT READER.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN THOUGHTS FROM "EVERY-DAY HOUSE."

ANNIE L. JACK.

An Ideal Summer Dinner.

"THE lamb weighs six pounds," said the amateur cook, "so an hour and a half will cook it. Let me see—what vegetables shall we have this very warm day? Mint sauce, of course, green peas—new potatoes. Yes the Beauty of Hebron are fit for the table." We planted a row side by side with the "Roses" and to-day (June 26th,) they are twice the size. Then a dish of cool lettuce, and a summer salad. This part of the programme was not difficult to carry out, an hour and a half doing all the work. For dessert we had strawberries and ice cream, the recipe for the latter I shall give you in part, copied from Marion Harland's Common Sense; we have tried it for years and always pronounce it delicious, while for a dessert to a Summer dinner it is refreshing and not unhealthful. I take the liberty of making it less rich than the recipe, and shall give it as we had it for that summer dinner:—

One quart of new milk, heated almost to boiling: the yelks of four eggs beaten light; two cups of sugar added to them, and the hot milk poured in, beating all the time. Put in the whites, well whipped, return to the fire in an *inner* saucepan set within one of boiling water. Stir till it is as thick as boiled custard, then set aside to cool. When cold beat in a pint of cream to which has been added the flavoring needed, also any coloring you wish. Have ready a quantity of ice cracked in pieces no larger than a pigeon's egg. Use an ordinary, upright freezer, set in a deep pail; pack around it first a layer of ice, then one of rock salt—*common salt will not do*. Take a long ladle before covering up, and beat the custard five minutes. Then pack ice and salt over all, cover with old carpet or any thick old woolen article, and leave for one hour. When you carefully uncover, you will find a thick coating of frozen custard around the sides. This you dislodge, beat again smooth and clear, put on the cover; pour off the brine, and pack again. The advantage of this *custard* ice cream is that it is smooth, fine, not so unhealthful as all cream, and if made at breakfast time, a few minutes during the morning for the extra beating will put it in order for the mid-day dinner. It requires no steady *grind*, and is superior in quality to anything of the kind we have ever made. So we all affirmed when the amateur cook brought out this crowning refreshment of our Summer-day dinner; nor did she seem to have been either tired or over-heated by her successful efforts.

LOG-CABIN SKETCHES; OR JESSIE SEABRIGHT'S DIARY, NO. 12.

MAY MAPLE.

MAY 20, 18.:—Not long ago John and I were invited to meet a company of friends at Mrs. White's. Now, some of the guests were from the "outside" world, and therefore knew but little about the economy necessary to be used in a new country. It so happened that Bertie's best winter suit was getting the worse for Sunday wear; and I had, as yet, been unable to get him anything suitable for Spring and Summer. I was in a dilemma for the first time in regard to his clothes. I might have left him at home, but Mrs. White had said, "Be sure and bring Bertie, for he will enjoy a play with the youngsters who will be here."

Well, if he went he must have something fresh to wear. So I searched over my "effects," but seemingly in vain; there was nothing available to make over, either right or wrong side out. While looking over bundles of all sorts that had been put away for future use, I opened, in a dreamy sort of way, a roll of pound calico, and began looking over the scraps. Was I in fairy land? Surely here was what would answer my purpose admirably: two or three remnants of plain brown, and as much more of a drab or linen color; plenty to make him two little suits—pants, shirt waists and coat; the last to be worn only on cool days. Of course, patterns and shears were soon found, and the little suits commenced.

Two days later, when we were ready to start on our visit, I was sure I need not be ashamed of our little boy's general appearance, though his play-mates were dressed in velvet.

"Where have you been to get linen for Bertie's new suit?" was Mrs. White's inquiry, as soon as we found ourselves alone, after she had expressed her entire satisfaction at the color, fit, etc. I told her all about my little economical plan. She also told me of the pretty compliments the little boy had received for his pretty, stylish suit, and gentlemanly ways. And yet the material for the two suits I had made, did not cost over twenty-eight cents; and they would last him many weeks for every-day wear. Of course, the little pants were lined. Now that I have been obliged to think and act for myself, I wonder that other mothers have not tried the experiment, rather than wait to be able to get cloth worth thirty or forty cents per yard, and meanwhile allow their five or six-years-old boy to go for weeks and, perhaps, months in untidy and uncomfortable rags.

DOMESTIC RECIPES.

Excellent White Cake.

Two cups of granulated sugar beaten to a cream with a scant cup of butter, then add a third of a cup of sweet milk, the whites of eight eggs beaten to a stiff froth, and three and a half teacupsful of sifted flour, with two teaspoonsful of yeast powder mixed with it. Flavor and bake in a moderate oven.

MRS. A. B. C.

Walnut Catsup.

Select young, tender walnuts; prick in several places with a large needle; bruise them with a wooden mallet, and place in a jar with sufficient water to cover them, adding a handful of salt for every 25 walnuts. Let stand two weeks, stirring two or three times a day. Then drain off the liquid into a saucepan; cover the nuts with strong, boiling vinegar; crush to a pulp; strain through a sieve into the liquid in the saucepan, and for every two quarts allow two ounces each of whole black pepper and ginger, and one ounce each of cloves and grated nutmeg, a pinch of cayenne pepper, a shallot minced fine and a half teaspoonful of celery seed. Tie all in a muslin bag and boil with the catsup an hour. When cold bottle and seal the corks.

Excellent Tomato Catsup.

Take a peck of *perfect*, ripe tomatoes; wash clean—they must be absolutely free from fermentation—cut in halves, put into a porcelain-lined kettle and boil until the pulp is dissolved. Strain and press through a colander and then through a fine sieve. Return to the kettle and add one ounce each of salt and mace, one tablespoonful each of black pepper and ground cloves, two of ground mustard, and one of celery seed—the last tied in a fine muslin bag. Boil slowly for four hours, stirring almost constantly the latter part of the time. More salt may be added, if liked, as also a little cayenne. Turn into an earthen dish to cool, and when cold add a pint of strong vinegar. Bottle and seal the corks and keep the bottles inverted in a cool, dark place. MARY B.

Keeping Catsup.

A friend tells us she experienced much difficulty in keeping her catsup from fermenting after bottling, until she tried the experiment of storing it in unused fire-places. She has no trouble now with the corks flying out or bottles bursting.

Eggs for Winter Use.

To two and a half gallons of soft water add two pounds of salt and two ounces of saltpeter. Boil 15 minutes and, when almost cold, stir in four tablespoonsful of quicklime. Let stand two or three days, then pack the eggs, small end down, into a stone jar and cover with the mixture. Keep where it is cool and do not move the jar. MRS. L. E. K,

QUESTIONS ANSWERED.

Grease on Carpets.

I HAVE been unfortunate enough to spill grease upon a Brussels carpet. How shall I remove it? MRS. L. JONES.

ANS.—Cover thickly with *dry* buckwheat flour. In a few hours brush off into a dust-pan and apply another coating of flour. Repeat until all traces of the grease have disappeared.

Washing Woolens.

Please give your method for washing flannels. M. I. W.

ANS.—Make a strong suds with good, hard soap in boiling water; throw in the flannels and let soak until cool enough to handle. Then wash—do not rub on soap—and throw at once into a tub of boiling water which has been slightly blued. Shake up and down with the clothes stick and when cool enough to handle wring out, snap, pull into shape and hang out. Just before they are dry take down, fold tightly and after an hour or so press, pulling into shape as you do so. If the flannels be much soiled, wash through two suds.

News of the Week.

MISCELLANEOUS NEWS.

Monday, July 26th, 1880.

THE Grand Army of the Republic, of Pennsylvania, completed last Friday a week's encampment at Gettysburg, Pa. The citizens of the town received their visitors in the most cordial manner and the encampment was in every way a success.

THOSE FRAUDULENT DIPLOMAS.

The case of Dr. Buchanan of Philadelphia who was recently detected in selling bogus medical diplomas, which we noticed in News at the time, is growing in interest. The list of graduates includes over 1,500 names and embraces the twenty two years from 1858 to 18 0. The amount of fraud which Buchanan has perpetrated is almost incalculable. In the year 1880, although only thirty students were in attendance, his list of graduates for that year figures up 105, and this large figure does not include those diplomas which were antedated—as many more in number. The returns from New Jersey show that for every one in his lists there are seven more that have been antedated, and not in his lists. If the same ratio holds good in every other State, then he has sold over 11,000 diplomas. The number of diplomas credited by him to Europe and Germany is less than twenty. That figure is ridiculously small, in view of the complaints lodged at Washington by our Ministers and consuls abroad. All diplomas of Doctor of Dental Surgery issued by him are bogus. Buchanan's College has not, and never had the power to confer such a degree; nor can it confer the degree of Graduate in Pharmacy. In publishing his reports for the years 1868 and 1869 Buchanan failed to give the States to which the graduates for those years belonged. For all the other years this information has been obtained. But it is not a safe guide in establishing the identity of any particular doctor, because many of them have purposely credited themselves to other States so as to avoid too positive an identification. These fraudulent doctors of medicine, with bogus diplomas, who impose upon an innocent and confiding public, are scattered all over the country and they are even to be found in Europe. To detect a bogus diploma, note the names written thereon and then refer to a list of Buchanan's faculty for the year in which the diploma was issued; if a name of any person who was not a member of the faculty at that time occurs upon it, there are grave reasons for suspicion. Further, any diploma containing the name of John J. Siggins is a fraud. All diplomas bearing the name of David Diller, or of R. A Simpson after 1878 are fraudulent. All diplomas purporting to come from the Livingston University of America is a fraud. All diplomas not having the name of John Buchanan are frauds. Many an eclectic "doctor" may have reason to tremble.

RECORD OF CRIMES.

On the 19th inst. a fearful tragedy occurred at Pittston, Pa. A drunken German shoemaker named Justin Hoffman, returned home from a day's debauch and, as usual, began to abuse his wife. She sat caressing their little child, and tried to soothe him with kind words; but he, on the contrary, became furious and seizing a shot gun, took deliberate aim at her and the child and fired. He then fired a second shot among the children playing out-of-doors, wounding two, one his own the other his neighbor's. The baby was shot through the head and died almost immediately, and his wife was hit in the breast and at last accounts was not expected to live. The murderer was lodged in jail.....Another tragedy took place at Lyons, N. Y., also on the 19th. A farmer named Solomon H. Easterly quarreled with his mother-in-law and ordered her to leave the house. On her refusal to do so, he dealt her a heavy blow on the head with an ax, from which she soon expired. He then attacked his wife with the same murderous instrument and killed her, and next he drowned himself in the Clyde River in two feet of water. He was said to be worth $20,000, was a temperate man and had but recently returned from Florida.

TOO RICH IN SILVER.

The accumulation of coined silver in the Treasury and sub-Treasuries of the United States is so great that it is very hard to find proper storage room for it. By the act of Feb. 28, 1878, the Secretary of the Treasury was directed to coin not less than $2,000,000 worth of silver bullion, nor more than $4,000,000, each month. The vaults of the Government now contain $70,000,000 in silver coin, of which $45,500,000 are in dollars, and the remainder in smaller pieces. The Government also has on hand $5,000,000 worth of silver bullion. This amount of coin takes up a great deal of room. The bulk of the load is carried in San Francisco and New York. Notice has been received from San Francisco that the overcrowded vaults will hold no more. It is impossible to induce the people to hold and use this silver as currency. It returns to the Treasury very soon after it has been paid out, in payment of duties or in exchange for silver certificates, a great many of which are in circulation, and still the work of coining the unpopular money goes steadily on, in compliance with the law, at the rate of $2,324,000 a month. This has been the average for 27 months, the total for these months being nearly $63,000,000 three-quarters of which remain in the Treasury.

The President has appointed the following Postmasters: Ole Selwig, at Wilhnann, Minn.; H. J. Northrup, Saginaw, Mich.; Oscar Eaton, Bryan, Ohio; Miss Sarah L. Christie, Nyack, N. Y..... Harry English, a notorious outlaw, who has for a long time been the terror of northwestern Pennsylvania, has been captured in Michigan. Harry is a lumberman, nearly seven feet high, weighing 250 pounds, though not fleshy, shrewd, courageous, cold-blooded and desperate. He had committed several forgeries in Bradford, Pa. When discovered, and an attempt was made to arrest him, he killed two of the officers and wounded several others. He then escaped to the woods and could not be found until a short time ago he turned up in a lumber camp in northern Michigan, and he was arrested by a detective from Philadelphia who disguised himself as a lumberman and became intimate with English. A reward of $2,200 was offered for his arrest.....George Hunt, a resident of Rye, and Warren Mead of New Rochelle, attempted to cross the railroad in a wagon at Port Chester, N. Y., as an express train was coming at full speed. The wagon was caught by the engine and reduced to kindling wood; the two men were thrown 30 feet from the crossing and instantly killed, and the horses were hurled down a steep embankment and also killed .....Early on the morning of the 22d inst., a sad accident occurred here. The tunnel which is being excavated under the Hudson River caved in, and twenty-one workmen were buried alive. It will yet take about 10 days to build a coffer-dam and make an excavation to the spot where the unfortunate men are supposed to lie.

Dr. Tanner, the starving man at Clarendon Hall, is still alive, and as lively as a cricket. He drinks water, but otherwise is still a teetotaller as far as abstinence from other liquids and food is concerned. At noon to-day he will complete his fourth week and enter upon his fifth. He has spoken but little of late, and he passes a great deal of his time in sleep, a symptom which the doctors regard as favorable. The marvel is, that a man who has fasted four weeks is living at all.

CLEOPATRA'S NEEDLE IN NEW YORK.

The world-renowned and time-honored Alexandrian obelisk, "Cleopatra's Needle," which was purchased by one of our citizens to be erected in New York, has arrived safely in this port. The Alexandrian obelisk is about 3,500 years old, having been set up in Heliopolis by Thothmes III., at least 1,600 years before Christ. It is an entire shaft of granite, covered with hieroglyphics descriptive of the power of Thothmes It weighs 196 tons, and is 69 feet and six inches long. At the top it is five feet 5¾ inches square, and seven feet square at the base. The inscriptions on the apex of the obelisk are much more finely cut than those on the sides. The inscriptions on the side which has for 19 centuries faced the Mediterranean Sea have been partly destroyed, but the other sides are considered to be perfect, and have been deciphered by many scholars, including Champollion and Kircher. The pyramidoid on the first side contains a carving of Thothmes represented as a sphinx seated on a pedestal. In both hands he holds a jar of wine, and the inscription on the pedestal calls him "the powerful bull, crowned on the city of Western Thebes, the Son of the Sun, Tahutimes" (Thothmes). The monarch is represented as making a gift of wine. A lot more of signs and figures which may interest students, but are very monotonous to the general reader, is found upon it. The obelisk will be erected in Central Park.

FOREIGN.

THE British Isles just now are unusually devoid of interesting news. In England the chief matters of parliamentary importance relate to the land question. Government, sometime back, introduced a bill called the "Hares and Rabbits Bill" with a view of giving tenant farmers the right of killing all ground game on their holdings; but the opposition was so vigorous that the measure has been dropped for the present. Another bill supported by the administration, for the relief of Irish tenant farmers who may be unable to pay their rent owing to the prevailing distress, and therefore liable to be evicted by their landlords without compensation for any improvements they may have put on their holdings, is being bitterly opposed by the Irish and English landed interests and it is doubtful whether it will be passed. This morning's cablegrams say that all crops are in such a fine condition in Ireland, that the relief committees organized to distribute help to the destitute, say they will soon close up affairs, as no further aid is needed. Great Britain has not yet got rid of her difficulties in Afghanistan, though since the accession of the Gladstone Ministry, she has been trying hard to get out of the trouble and the country. Lately Abdurrahaim, an uncle of the deposed Yakoob Khan, was named his successor with the consent of the British, who prepared to evacuate the place at once, after securing to themselves a mountainous strip of the country adjoining British India and giving them command of the chief passes and an easy entrance into the land in case of future difficulties, besides affording them Beaconsfield's "scientific frontier" good against any possible future Russian aggression from that quarter. The latest news, however, says that Ayoob Khan, another rival chief, is marching at the head of a formidable rabble to dispute Abdurrahman's title. This will doubtless cause fresh trouble for the British and probably delay their departure.

In France the Government has just given a full amnesty to the banished and imprisoned communists who created such havoc in Paris in 1871. The measure was strongly opposed by the Monarchists and the Bonapartists on the ground that many of the wretches were guilty of crimes for which a life-long imprisonment was a mild punishment, and that their return to France would inaugurate fresh scenes of disturbance and anarchy. Gambetta, however, and his followers were successful in carrying the amnestry, and the first use the returned radicals are making of their pardon is bitterly to assail Gambetta and his adherents as milk-and-water Republicans. The last report says that Gambetta is negotiating with the Bonapartists to form a union of that party with the moderate Republicans to oppose the red republicanism of the amnestied radicals and their rabble adherents. For the rest, crops are above the average of the last three years; the army is better disciplined, more numerous and in everyway more powerful than it has been *ever before*, even in the days the Great Napoleon, and there is little doubt but that even the Germans would find in it a much more formidable antagonists than the paper army of Napoleon the Little proved.

At the same time that the outlawed communists are received with rejoicings by their associates and given aid by the government, the latter has peremptorily banished the Jesuits on account of a nearly forgotten law passed about 1816, and which neither King, Rupublic nor Emperor had ever since thought of enforcing. The same law applies with equal force to nearly all the other religious orders in France, but it is highly doubtful whether the Goverment will dare to enforce it against them for fear of the consequent popular commotion. Meanwhile the Jesuits are receiving much sympathy and help, and many offers of asylum in other countries, and a large batch of them are coming hither.

In Germany Bismarck is taking a holiday and all things are quiet for the present. Crops are poor on the whole—below an average, and a good deal of trouble is expected from the probable drain of gold from the country to pay for foreign cereals, the importation of which will probably be heavy despite the import duties lately placed upon them to the joy of the native farmer but to the discontent of other classes.

In Italy the chief trouble is how to support an enormous army on so slim a revenue as the trade of the country can afford. Of late there has been a growing excitement about the repeal of an odious grist tax imposed a few years ago, and which bore with crushing weight on the lower orders. It has just been repealed to the discontent of the Government who don't see where the necessary revenue is to come from. In Spain the most notable topic now, is the approaching birth of the first child of the young king and queen, the ex-Archduchess of Austria.

In Russia there has lately been little or no trouble from the Nihilists. There is, however, a good prospect that the country will soon be embroiled in war with China; both sides are now making vigorous preparations for the contest. The trouble is about the old Chinese province of Kuldja which Russia held possession of during the internal troubles in China a few years ago. Now China reclaims it, and Russia says she will yield it only after her expenses there have been paid and her native friends guaranteed safety. The Muscovite war against the Turcomans is being pushed by Gen. Skobeloff, who distinguished himself so much at Plevna and elsewhere during the Turko-Russian war. By the way there is a report that he has been captured by the Turcomans and beheaded.

The main subject of interest in Europe, however, is the difficulty between Turkey on one side and Greece and Montenegro on the other. By the treaty of Berlin Turkey had to cede some territory to both of them, and hitherto this has not been done. Montenegro was to have a part of Albania, but the Albanians, one of the most warlike tribes in the world, hate the Montenegrins equally belligerent. Turkey, instead of handing over the territory, merely withdrew her forces and told Montenegro to take it. The Albanians at once flew to arms, and, so, up to to-day much threatening and a little occasional bloodshed have marked the dispute. To Greece the Porte refused to yield even half of the country suggested by the Berlin treaty, and lately a conference of the Powers that signed that treaty was held at Berlin to decide how much territory Turkey should yield to Greece. They ordained that Janina, Larissa and Melzovo with a strip or territory a little less than Greece demanded, but a great deal more than Turkey was willing to yield, should be handed over to Greece. The Porte refuses to do so, however, and both Turkey and Greece are busy preparing for war. Should this break out, no one can tell where it will end, as it is not improbable that it may lead to a general European struggle.

AGRICULTURAL NEWS.

The July report of the Department of Agriculture shows the condition of the tobacco crop as follows: Acreage as compared with last year, in Massachusetts, 98 per cent.; Connecticut, 115; New York, 104; Pennsylvania, 113; Maryland, 60; Virginia, 75; North Carolina, 109; Tennessee, 92; Kentucky, 99; Ohio, 102; Indiana, 89; Illinois, 99; Wisconsin, 104; Missouri, 91. These States raise more than nine-tenths of all the tobacco raised in the country. The States which grow the bulk of the seed leaf tobacco, viz, Connecticut, New York and Pennsylvania, are increasing their product. The condition of the crop for the whole country is slightly below that of last year..... The famous herd of Polled Angus cattle owned by the late Mr. W. McCombie, of Tillyfour, Scotland, some prize groups of which have been illustrated in the RURAL, is advertised for sale by auction on August 26.....On Tuesday, July 20, the Board of Control of the projected New York State Agricultural Experimental Station assembled at the American Institute in this city, in accordance with a resolution passed at their meeting in Albany on the 14th inst. The following is the complete list of the members of the board:—Governor Alonzo B. Cornell, President; General N. Martin Curtis, of Ogdensburg, President of the State Agricultural Society, Secretary; W. A. Armstrong, Master of the State Grange; Patrick Barry of Rochester, President of the State Horticultural Society; James McCann, President of the Elmira Farmer's Club; Samuel Campbell, of Utica, President of the Central New York Farmer's Club; Shelby Reed, of Scottsville, President of the Western New York Farmer's Club, whose headquarters are in Rochester; Robert J. Dodge, President of the American Institute Farmer's Club; Robert J. Swan, of Geneva, and Richard Church, of Belvidere, Alleghany County, both of whom were elected at this meeting, the others having been chosen at Albany, as mentioned here in our last issue. After some discussion on general topics, the meeting was adjourned until August 4th, when the site of the Experiment Station will be decided upon. Some consider that Cornell University, Ithaca, N. Y. is the most suitable place, as the University has already started an Experiment Station of its own: while others maintain that some place on Long Island, not far from this city, would be the most suitable situation. The Director of the Station will be chosen at the same time the site is determined upon.....

Peaches are arriving in New York in sufficient quantities to meet the demand, The chief variety is Hale's Early. They bring readily $1.50 a basket. Of other varieties there will be Troth's Early from lower Delaware and lower Maryland, and some very nice ones from along the Delaware and Dorchester Railroad, and from Laurel, Delaware. The crop, both in Delaware and Maryland, is very large, and the coming week will bring some very heavy shipments by rail. New Jersey will only have a fair crop, but larger than last season's. In the lower end of Cumberland County it will be a total failure. The greater portion of the late fruit comes from the Hudson River towns. The yield this year is large.....Some time back we commented upon a report that was "going the rounds," to the effect that the Earl of Dunmore, had purchased a vast tract in Montana, and intended to stock it with great herds of cattle to be improved by heavy importations of English thoroughbreds. Last week he sailed from this port for home, and before his departure emphatically contradict this sensational rumor .... Russia denies that she intends to forbid the export of cereals, and says the reports of failures of crops are greatly exaggerated.

Value of domestic breadstuffs exported from the United States in June, $28,049,859; June, 1879, $17,210,710; during the 12 months ending June 30, 1880, $277,326,762; same period in 1879, $201,-76,499 .....Reports from Monroe, Mich., state that a severe storm broke over that city on the 18th inst., and destroyed much property. Hail and rain fell in enormous quantities with frightful velocity. Many hailstones were of the size of chestnuts. Gardens, orchards, and fields were destroyed in a few moments. More than 50 acres of choice Catawba, Concord, and Delaware grapes were utterly ruined, entailing a loss of nearly $40,000. The damages to windows and dwellings was also great. The total loss will not fall short of $75,000.....The report of the Veterinary Department of the British Privy Council shows that during the week ending June 26, 42,205 animals were exported from Ireland to Great Britain, including 12,088 cattle; 26,521 sheep; 2,649 swine; 128 horses; 198 goats; 20 asses, and *only one mule*.....During the whole month of June the number of stock shipped from the United States and Canada for Liverpool, England, was as follows: Of cattle, 10,642 were shipped, of which 114 were lost on the passage; of sheep, 9,-435 were shipped and 171 lost; 502 pigs were shipped and 21 lost. The loss in transit was therefore only a fraction over one per cent. in cattle, and a little over one and three-quarters per cent in sheep. There was an increase of 6,185 animals in June compared with the returns for May.....

The potato blight has shown itself in several parts of county Clare, Ireland, and also in several other counties ..... Out of 32,237,958 sheep which the agricultural returns gave as the number of sheep in the United Kingdom last midsummer, rot has destroyed a total of 2,889,000, equal to nine per cent. of the sheep and lambs in the country. To this must be added the deficiency of the present season's lambs and the loss by the death of breeding ewes, so that it is computed that five and a quarter million sheep and lambs have been lost by the pest in one season.....

Half the oleomargarine is made in Holland. Mr. D. Orlobo de Castro, of Amsterdam, is now in this country buying stock for his savory business. He gets material in Chicago, St Louis, Louisville, Cleveland, Detroit, and Buffalo. Material is rather scarce. The consumption of oleomargarine is steadily growing in Holland and other countries where pasturage is poor.....The entire import of wool at the ports of Boston and New York for the six months of the current year were 73,417,786 lbs, an increase of more than 56,000,000 lbs over the corresponding imports for the first six months of 1879.....Australian wool can now be laid down in Boston 44@45c. for average lots, and 47@50 for choice, and has been selling of late at about the cost of importing. The Shipping List says that it appears that present rates in that market are likely to be sustained, the extreme views of holders in the interior are not likely to be realized for some time to come, and that unless some concession is made, considerable of the clip is likely to remain in the hands of the growers....

We learn by a cablegram from London, dated July 22, that the report of Clare Sowell Read and Albert Pell, who were sent by the Royal Agricultural Commission to the United States and Canada to inquire into the state of agriculture, is published. They say that while many of the prevailing conditions are favorable in America in the contest for agricultural supremacy, still drawbacks exist which tell in favor of England. The severe Winters suspend agricultural employment. Drought, injurious insects, and in the prairie country a short supply of water, endanger the crops Western America possesses singular advantages for stock-raisers, while the Middle States afford them excellent pasturage and the Eastern States good markets. The allotment of land, and the termination of free ranges in the West will increase the cost of cattle-raising, but the increased consumption by the growing population will enhance prices. The success and extension of the growth of Blue-grass opens fresh prospects for the grazier, and will in time bring the improved turf under the hoof of thoroughbred stock, or at least of highly-graded cattle.....The Toronto "Globe" publishes the crop reports from over 400 places, every province in the Dominion but British Columbia being represented. The general appearance of the crops is satisfactory Only one crop—Spring wheat—shows any serious

deficiency. The indications are that corn will be 10 per cent. below the average. The crop of apples and other fruits will be above the average. Peaches will be very good. The report from Manitoba and the Northwest shows that the acreage under all kinds of crops has been very much increased, and that a bountiful yield of all kinds of produce may be expected.....The acreage of vines in California is officially rated at about 60,000 acres, and it is thought that from six to eight thousand acres more will be planted to vines this year. If the entire grape crop were made into wine the yield in ordinary years would exceed 25,000,000 gallons. The actual wine product during the past five years has ranged between 4,000,000 and 6,000,000 gallons, the smallest yield falling in 1878. The possible yield in wine is lessened by the large distillation into brandies (about 250,000 gallons a year) the production of sweet wines, the consumption of grapes for table use and export to the Eastern States, and finally by the manufacture of raisins. The wine yield this coming year is expected to be very large, perhaps 10,000,000 gallons..... In Germany a bill has been introduced into the Reichstag giving the government a tobacco monopoly; but although Bismarck strongly favors the project, there is but little chance of its passing—except the Chancellor may once more threaten to resign unless he has his own imperious way .....A leading Liverpool (Eng) grain circulator of July 23, says: "The few days of fine weather, though causing consumers to hold off, do not affect the value of wheat generally, except for some inferior descriptions. Tuesday's quotations are maintained. There was an average attendance at to-day's market, but there was a dull feeling and a very indifferent demand. Red wheat declined 1d. White was in small supply, and realized previous quotations. Flour was in moderate inquiry. Winter wheat and other choice qualities, from their scarcity, ruled strong. Corn was in limited supply, and, with a fair consumptive request, improved 1½d to 2d."..... The average price of farms in this country, according to the report of the Agricultural Department for 1879, increased in that year eight per cent. the increase in the average value of timber land being altogether larger than for cleared lands.....The cereals of the United States census of 1860 were 867,000,000 bushels; the record was 1,239,000,000 in 1870. By the estimates of 10 years the advance has been from 1,450,000,000 in 1868 to 2,302,000,000 in 1879.....Gen. Robert Toombs is one of the best farmers in Georgia. He made this year 350 bushels of white rust-proof wheat on 11 acres of land. He gave 100 bushels, worth $10 a bushel, to the State for distribution among the farmers of Georgia to sow for the next crop.

Alexander the Great

wept because there were no more worlds to conquer, but the proprietors of Dr. Pierce's Family Medicines who have found it necessary to establish a branch of the World's Dispensary at London, England, in order to supply from that great commercial emporium these remedial blessings to foreign countries, where they are largely in demand, do not share the great conqueror's sentiments, as their conquests are of disease and have made happy not only the conqueror but the people who employ them. Dr. Pierce's Golden Medical Discovery cures all blood and skin diseases scrofulous affections, swellings and internal soreness. Dr. Pierce's Pellets are the little giant cathartic; Dr. Pierce's Extract of Smart-Weed, the great remedy for colds and all bowel affections as diarrhœa, dysentery and flux. World's Dispensary Medical Association, proprietors, Buffalo and London.

Kidney-Wort is an unfailing remedy for that tormenting disease piles. It moves the bowels gently and freely, and then removes the cause.

Men of endurance have healthy kidneys and liver. Lame back, constipation and piles are unknown to them. The remedy for these diseases is Kidney-Wort.

WOMEN that have been given up by their dearest friends as beyond help, have been permanently cured by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It is a positive cure for all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for phamphlets.

Gleanings.

Creameries and individual dairymen, if they really wish to make a gilt-edged article of butter, that will sell at the tip-top market, ought to use Higgin's salt. That this is the finest quality of salt for dairy purposes to be had we consider a fact well established.—Farm Journal.

That's what we have been preaching for the past year, and the more experience we have with salt, the more we are convinced of its truth. We don't like the Thurbers, because of their connection with the "oilymargarine" business, but as importers and agents of the Higgin's salt they are public benefactors.—Democrat, Bellefonte, Pa.

There is no doubt about the superiority of Higgin's salt. Both the sweep-stakes prizes at the International Dairy Fair for the "best butter made anywhere" were salted with it, as were also a majority of the other prize lots. When the difference in the cost of using Higgin's English salt and the cheapest American salt is only about one-thirtieth of a cent a pound on butter, and one-sixtieth of a cent a pound on cheese, and it might make fifty times this difference in the value of the product, one would think that butter and cheese makers would not hesitate long in deciding what salt they would use.—American Dairyman.

The delicate structure of the skin renders it sensitive to the slightest obstructions, whether arising from sunburn, dust, or the changing air and wind. **Burnett's Kalliston** is prepared expressly to remove these.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, July 24, 1880.

BEANS AND PEAS.—Business in beans and peas has been very light during the week. Exporters have made little inquiry and home trade wants are now small. Prices are easier for general stock, but prime hand parcels are held above our quotations with confidence. Southern B. E. peas, $2 for prime 2 bush. bags, which are scarce at this season. Green peas steady with sales at $1 60 for Wis. bbls.

Marrow beans, prime, $1.60@1.62½; other, $1.50@1.55; medium, prime, $1.37½@1.40; other, $1.25@1.35; pea, $1.45@1 60; white kidney, $1.70@1.85; red kidney, prime $1.40 other, $1 25@1.35; black (or turtle soup), $2 20@2 25; Lima, Cal., 7@8.

Receipts of beans for week, 1,974 bush.

BEESWAX—Steady at 23c. Receipts of Southern quite large.

BROOM CORN.—Demand is slack and prices nominal.

Brush and short broom, choice, per ℔., 7@8c.; common to good, 5@6½c.; hurl, good to choice, 7@8c; do., common to fair, 5½@6½c.; red and crooked at 3@4c.

BUTTER.—The local demand is fairly active and readily absorbs all of the fine portion of the receipts. The scarcity of choice creamery and extra-quality half-tubs has warranted sellers in asking stiffer and higher figures. Shippers are in market regularly; and though their purchases have not aggregated the wholesale extent that sellers would like, their visits indicate the settled position that American butter has obtained abroad. The liberal export of the week is largely stored Western. Unfortunately, shippers have not access to such large quantities of fine table grades that the previous Summers permitted. Upper grades of any style of State are at present needed for home use; but the scarcity now may tend to promote wholesome competition later when fine dairies are loosened. It can be inferred that State stock will have most of the market held to itself as the West reports a poor year for average quality. With the firmer tone in State all useful Western finds a ready sale.

Creamery, finest State, 26c.; do. Western, 25@25½c; good to prime, 24@24c.; fair to good, 22@23c.; sweet cream, fine, 24@25c.; other, 22@24c.; State, yellow firkins, 20@22c.; prints and hf. tubs, choice, 23@23c.; good to prime, 21@22c.; fair to good, 20@21c.; poor 18c.; Welsh choice, 22c; other, 18@20c.; Western imitation creamery, 18@20c.; dairy, fresh, 20c; good to prime, 18@19c.; poor to good, 14@18c.; factory, best, 18c.; poor to prime, 13½@17c.

Receipts for week, 36,396 pkgs. Exports, 23,281 do.

CHEESE—The demand has been quite brisk this week, and up to 10½c. was made for fancy factories, but at the close there is an easier feeling through larger receipts and the market has eased off to 10c. The exports for the week have been 120,800 boxes.

Quotations: State factory, fancy, 10c.; do. good to prime, 9¼@9½c.; do. fair to good, 8½@9¼c.; do., half skimmed, 6@7½c.; Wisconsin factory, fine, 9½@9¾c.; do. good to prime, 8¾@9¼c.; do. fair to good, 8½@8¾c.; Ohio factory, fine, 9@9¼c.; do. good to prime, 8½@9c.; do. flat, fair to good, 7½@8¼c.; do, poor to fair, 6½@7½c.

Receipts for week, 125,326 boxes.
Exports, 120,380 do.
Liverpool cable, 51s.
Steam, 40@45s.

COTTON.—The market has been quiet and showing slight fluctuation—only; latest prices are for July, 11.34c.; August, 11.27@11.28c.; September, 10.88@10.89c.; October, 10.63@10.64c; November, 10.40 December, 10.40 @10.41c.; January, 10.47@10.46.; February, 10.58@10.61.

Quotations for spot cotton are based on American standard of classification, and all cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8 5-16	8 5-16	8 5-16
Strict ordinary	8 13-16	8 1 -16	8 15-16
Good ordinary	9 15-16	9 15 16	9 15-16
Strict good do	10 5-16	10 7-16	10 7-16
Low middling	11 1-16	11 3-16	11 3-16
Strict low middling	11 7-16	11 9-16	11 9-16
Middling	11 11-16	11 13-16	11 13-16
Good middling	12 3-16	12 5-16	12 5-16
Strict good middling	12 7-16	12 9-16	12 9-16
Middling Fair	12 15-16	13 1-16	13 1-16
Fair	13 9-16	13 11 16	13 11-16

STAINED.

Good ordinary	7 15-16	Low middling	9 7-16
Strict good ordinary	8 13-16	Middling	10⅛

DRIED FRUITS.—The market generally is very quiet and prices altogether nominal. Quotations:

For North Carolina apples, fair to good, at 6½@7½c.; choice, at 8@8¼c.; New York State quarters at 7½@7¾c.; patent evaporated, in cases, choice at 11@11¼c.; good and prime 13½@14c.; evaporated, sliced at ——c. Evaporated peeled peaches, good to choice, at 26@27c.; North Carolina peeled choice, 16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c.; common at 10@12c.; unpeeled halves at ——c.; do. quarters at 6@6½c. Pitted cherries old at 15@16c. Blackberries nominal. Raspberries nominal. Plums at 17@17½c.

EGGS.—Receipts for week, 8,500 bbls.; do last week 8,000 do. Light supplies have kept the market strong, especially as the demand has been more urgent. Near point and Penn. eggs show holding in many instances and prime refinable marks of Western sell about as quickly as any grade. The top rate for New Jersey do not represent lots above basket size.

Near Points, 17½@18c. ₰ doz. State and Penn 17½@17¾c. Western, fresh, 16@16¼c. Canadian, 16@16½c.; poor Western, 15@15½c.

FEED.—Sales are at $16.50@17 for 40 to 60 lbs., and $17@18.50 for 30 lbs.; $23@24 for 100 lbs.; $21@23 for Sharps and $20 for rye feed.

FRESH FRUITS.—There is a better movement in apples, still there are plenty of cheap, slow-selling open heads offering, many of which are freely quoted at 75c. Peaches are improving in quality and trade is brisk with lower prices. Hale are neglected now that Troths and fair Crawfords are here. Very fancy Southern are only used by extra grocers and Broadway stores. Pears are in good variety but thin are not in large lots. Grapes are here in advance of the demand. The weather is severe upon tender fruits and grapes. Berries and currants are frequently at buyers' option.

Apples, strawberry, $1,25@1.75; Summer pippin, $1 50@1.75; Nyack pippin, $1 50@2; red Astrachan, choice, $1.50@2; common, 75c.@$1.25; Sweet Bough, 75c.@$1.50; Sour Bough, $1,00@1.50. Peaches, Jersey, Hale's Early, ₰ basket, 50@75c.; Md. & Del., Crawford, cr., 3@$3.50; Troth, ₰ cr., $1.50@2.25; per bask., $1@1.37; Hale's Early, ₰ cr., $1@1 50; Hale's, ₰ bask., 00c.@$1.12; N. C. prime, ₰ bu. cr., $2 50@3; poor to good, ₰ cr. $1,50@2; Ga. fancy, ₰ 3 to bu. cr., $1.75@2. Pears, Bloodgood, State, ₰ bbl., $5@6; Catherine, $4.50@5. Scooter, $3.50@4; Bull, $2.75@3.25; Bell, $3@5. Southern, $5@5.50; Seckles, per cr., $2.50@2.75; Bartlett, $4@5; Clapp's Favorite, $3.50@4; Manning's Elizabeth, $2,50@3.50; cooking pears, $2@3. Grapes, N. C. Ives, ₰ case of 18 4-pounds boxes, $4 50@4; hot-house B. Hamburg, 50@75c.; Sweet Water, 25@35c. Blackberries, Lawton, Jersey, choice, ₰ quart, 10@12c.; poor to good, ₰ quart, 8@10c. Raspberries, Red Antwerp, 8-to-qt. cup, 5@7c.; Brandywine, thirds, 5@6c. Whortleberries, Shawangunk Mountain, ½ bu. box, $1.25@1.50; Jersey, ₰ ½ bu. box, $1@1..5; Md. & Del. ₰ qt., 8c. Currants, cherry, ₰ qt., 5@7c.; small, 2@3c.; black, 3@5c. Apricots, prime, ₰ qt., 2@25c; common, ₰ qt., 10@15c. Watermelons, Nantucket, ₰ 100, $10@25; N. C., $5@20; S. C., $20@30. Nutmeg melons, Jenny Lind, Jersey, ₰ bbl., $2@2.50; Norfolk, $1.50@2; citron, Norfolk, $1.50@1.75. Peanuts dull and very weak; Va. hand-picked, ₰ ℔., 5¾@5¾c.; extra prime, 4¾@4¾c.; good to prime, 4¾@4¾c.; common, 4c.; shelled, 5¾@5¾c.

FLOUR.—There is a good business, partly for export, and prices strong.

Latest prices are $5.50@4.50 for inferior to very fancy superfine State and Western; 4 25@4.50 for ordinary to very good extra State, odd lots and lines; $4.50 for very good to fancy do.; $4.25@4,50 for ordinary to very good shipping extra Western, and $4.50@4.75 for good to fancy shipping extra do.; inferior to very good white wheat extras, $5.25@5.75; very good to very choice do, at $5.75@6.75; red and amber winter wheat, inferior to choice trade and family, at $5.00@6.25; round hoop Ohio, $4.85@4.90; and trade and family brands of do, at $5.00@6.35; St. Louis at $5.10@5.85 for inferior to good extra; $5.85@6.75 for good to very choice; Minnesota clear, very inferior to fancy, at $4.25@6.50; Minnesota "straight," very poor to very fancy, at $5.85@7.25, and patent inferior to fancy at $6.00@8.50; unsound stock at from $2.25@5 00; city mill extra at $5.60@6.75 for very good to choice for the West Indies; do. for England, $4.25@4.65 for poor to very choice spring wheat, and $5.10@5.50 for winter wheat product; do. trade and family extras, $6.10@7.00; do. for South America, $5.75@6.00; No 2 at $2.40@3.50 for poor to very fancy, the latter an extreme.

Receipts for week, flour, bbls. 91,533; corn meal, do. 4,0.8; wheat, bush. 2,260,318; corn, do. 2,379,500. oats, do. 231.177; rye, do. 32,301; malt, do. 78,790; peas, do. 8,840.

CORN MEAL.—Sales at $2.70@3.75 for yellow Western, and $3.25 for Brandywine.

GRAIN.—There has been a brisk export demand and a fair trade otherwise, with prices higher. The exports for the week have been 1,250,000 bushels wheat, and 1,450,000 bushels corn.

Latest sales of wheat are of No. 1 white at $1 10½@1.1 ½; do., July, at $1.11; do. August, at $1.08½; do., September, at $1.07½@1 08; No. 2 white $1.05; ungraded white at $1.05; No. 2 red at $1 09½@1.10¾; do. July, at $1,09½@1.10½; do. August, at $1.08@1.08½; do., September, at $ .8½@1 08¾; do. Oct $1.19; do. steamer grade at $1.06@1 07¾ No. 3 red at $1.06½@1.06¾; ungraded red mixed at $1 07½; mixed winter at $1.05¾@1.06. No. 2 Milwaukee and hard spring at $1.07@1.09; No. 3 spring at $1. Corn at for New York No. 2, at 47¾@48½c.; do. July, at 47¾@48½c.; do., August, at 48¾@48¾c.; do., September, 48½c; New York steamer mixed at 46½c.; ungraded mixed Western at 45@48½c.; New York yellow at 50c; No. 2 white at 52¾@53¾c.; No 3 at 45½c. Oats at for 1 white at 42@42½c. No. 2 white at 38¾@39½c; No. 3 white at 35¾@36c; New York No 1 at 36½c.; New York No. 2 at 35@36½c.; do., July, quoted at 38c, bid and 36½c. asked; do., August, at 32¾c. bid and 33c. do. September at 32¾@33½c; No. 3 at 35@35½c.; ungraded white Western at 37@43c.; ungraded mixed Western at 32@37c.; 78,000 bush. No. 2 Chicago at 35¾@36½c.

HAY AND STRAW.—The arrivals are fair, but demand good and prices strong.

New hay quoted at 80c@$1.0', as to quality; shipping hay quoted at 85c.; retail lots at 90c.@$1 for medium, and $1.10@1.15 for prime and fancy qualities; clover, 60@65c. Straw at $1@1.05 for long rye, 60@65c. for short rye, and 55@60c. for oats.

HOPS.—There is very little stir to demand with prices unsettled and weak. Quotations are for

	Cents per ℔.
New York, new crop, and choice	31 @34
New York, new crop, medium and good	27 @30
New York, new crop, low to fair	25 @27
Eastern, new crop	— @—
Wisconsin, new crop	— @—
Yearling	7 @15
Olds, all growths	4 @10
Pacific Coast, new	28 @32
Pacific Coast, olds (nominal)	5 @ 8

POULTRY AND GAME.—Receipts of dressed are liberal and as the demand is not of daily steadiness prices are weak for most lots. A few exceptional Penn. and N. J. are firm, but Western might as well be kept out of receipts for a time. Chickens sell best at the close of the week.

Turkeys, choice, small, on ice, 12@13c.; fair to good, 10@11c.; Phila., dry-picked, 14@15c.; chickens, Spring, Phila., large, 20@21c.; Phila, small, 18@19c.; State scalded, 16@17c.; Western scalded 14@16c.; Fowls, Phila., dry-picked, 14@14½c.; Jersey, dry-picked prime, 13@13½c.; scalded 12@12½c.; State, dry-picked, prime, 12@12½c.; State, scalded, 11@12c.; Western, dry-picked, prime, 11@12c.; scalded, 10@11c.; poor to fair, ——; ducks, spring, dry-picked, large, 15@16c.; small, 13@15c; State, scalded, 13@14c.; Phila., old dry-picked, 10@11c.; squabs, white, per doz $1.50@1.75; dark, $1@1.12.

Live chickens continue low; city killers have to compete with large arrivals of dressed. Sale of fowls for Cuba have helped prices for prime. Turkeys higher though only through scarcity.

Chickens, large, ₰ lb., 15c.; small, 15c.; Western & Southern 13@14c.; fowls, Jersey, 12c.; Western, 11@12c.; Southern, 11c.; roosters, 5@6c.; turkeys, mixed, Jersey, 11@12c.; Western, 10@11c.; ducks, N. J., N. Y. and Pa., ₰ pair, 55@75c.; Western 45@50c.; Southern, 40@45c.; geese, Jersey, $1.50@1.75c.; N. Y. & Pa. $1.25@1.50; Western, mixed, $1@1.25; Southern, 87c.@$1.12; pigeons, 20@35c.

A few pigeons comprise the game offering; flight, 75c.@$1, stall fed $1.50@1.75, woodcock not quotable until after Aug. 1.

PROVISIONS—Hog products have been more active and prices advancing.

Mess pork quoted at $14 10 for July; $14.10@14 15 for August, $14.20@14.25 for September, and $14.25@14.30 for October. Bacon at 7½c. for long clear and 7¾c. for short clear. Beef—Extra India mess quoted at $16 for city; $10 for extra mess, and $9 50 for plain mess, $10.50@11 for packet, and $— for family mess. Beef hams at $23.50@23. Lard—Western steam at 7.30c.; for spot lots 7.25@7.27½c. for August deliveries; 7.37½c. for September, and 7.45 for October. Stearine is nominaly for Western. Tallow at 6 7-16c. for prime.

Receipts for week, beef, 480 pkgs.; pork, 2,550 bbls.; cut meats 16,000 pkgs.; lard, 6,800 pkgs.

SEED—Timothy is quiet; quoted at $2.75@2.90. Clover in light demand, quoted at 7@7½c, for Western.

TOBACCO—Prices unchanged.

SEED LEAF.	Crop 1878.	Crop 1879.
New England Havana seed	— @—	14 @25
Wrappers, common	13 @15	— @—
Medium	16 @18	— @—
Fine	20 @ 7½	25 @33
Selections	31 @40	— @—
Seconds	10 @12½	10 @ 3
Fillers	— @—	5½@ 7
Penn. assorted, low	12 @13	— @ -
Assorted, fair	14 @15	— @—
Assorted, fine	16 @18	18 @22
Wrappers	18 @35	— @—
Fillers	9½@10	— @—
N. Y. ass'ted, com. to medium	0 @1	— @—
Ohio assorted	8½@11½	7½@10
Wrappers	15 @.5	— @—
Wisconsin assorted	8 @12	7 @10
Havana seed	15 @20	16 @18
Wrappers	12 @18	— @—

MANUFACTURED TOBACCO.

A moderate business has been done in all styles We quote:

Black work—Common and medium, in bond	12	@15
Good and fine, in bond	16	@18
Bright work—Common and medium, in bond	15	@19
Good and fine, in bond	21	@35

VEGETABLES—Supplies of potatoes are very steady and large for the concentrated use. No Southern stock needed. N. J. & R. I bbl. $1.50@1.75; culls, 50@ As a rule the sale of fresh summer vegetables is better than it used to be in not very remote former times. Toe.: yellow Va, sweets $3 50@4.50. Tomatoes show the dry season and rule high. Corn not attractive. When consumers fancied that cholera and other ills lurked within the leaves of a cabbage or accompanied other items of garden produce.

Green corn, Jersey, per 100, 50@$1.; tomatoes, Maryland, per crate, $1.75@2; L. I. & Jersey, per bush. $2@2.25; Phila per basket 50@90c.; cucumbers, L. I., ₰ 100. 50c.; egg plant, L. I. ₰ bbl. $4.50; Jersey $3.50@4; string beans, L. I. round, ₰ bag, $2@2.50; L. I. flat, per bag, $2@2.25; wax beans, L. I., ₰ bag, $2@2.25; green peas, L. I., $2.50@3.00; lima beans, $3.35@3.50; turnips, Jersey, per 100 bunches, $3@4; Jersey, Russia, ₰ bbl., 75c.@$1; beets, Jersey, per 100 bunches, $2@3; radishes, red, 50@75c.; lettuce, ₰ bbl., $1.50@2.50; cabbage, Jersey, ₰ 100, $3@6; squash, Jersey, marrow, per bbl. 75c.@$1; L. I., yellow, 50@75c.; L. I., white, 50@75c.; onions, Jersey, yellow, $4.25@4.50; State, yellow, $4.25@4.50; carrots, ₰100 bunches, $1.50; okra, per 100 15c.

WOOL.—The market is still very quiet and without new features. Quotations are essentially as last week.

LIVE STOCK MARKETS

NEW YORK, Saturday, July 24, 1880.

BEEVES—Receipts for week 13,007 head; do last week 14,616 do. At Sixtieth Street the trade was slow and dragging, and the sales were a fraction under Wednesday's rates. There was a sharp demand for prime shipping cattle at the Jersey City yards, and previous prices were fully maintained; decent to good butcher's steers were a fraction higher no higher prices were paid, but buyers got a poorer grade of cattle for the same figure they paid on Wednesday. Fair Cherokees and Texans sold readily at ½c. advance from previous rates, the best lots going at 8½c., to dress 55 pounds. The bulk of the business was at 8@8¼c., to dress 55 ℔s., for Texans and Cherokees; 8¼@9½c., to dress 55@56 ℔s., for common to fair native steers; 9½@9¾c. to dress 56@57 ℔s., for good to choice do.; small State bulls sold at 2½c.

COWS AND CALVES.—Receipts are light, but prices are not aided by the fact. Quotations are $30@50 for the style of State arriving, with sales within the range.

VEAL CALVES.—The market has ruled quiet, and to clear up there has been some giving away in prices.

Live calves, N. J. and Bucks Co., choice, 6½c.; prime, 5½@6c.; State choice, 6@6½c.; State, prime, 5¾@6c.; do, fair to good, 5@5¼c.; poor, 3@4c.; heavy, good to prime, 5@5¾c.; buttermilk, 2½@3c.; grass, 2c.

SHEEP AND LAMBS—Receipts for week, 28,206 head; do last week 35,379 do. Heavy shipping sheep were in fair demand and steady; butchers sheep were weak and slightly favored the buyer; lambs opened active and firm, but closed weak and about ½c. off. Sales of sheep were at 4@5c; extra Indiana wethers 144 ℔ average, export alive at 5¾c. of Southern and Western lambs at 5½@7¼c.; of Penn, State and Canada at 6@7¼c., and of Jersey at 7@7½c.

SWINE.—Receipts for week, 22,725 head; do last week 20,579 do. No quotations for live; receipts go to packers. City dressed 5 3-16@5¾c.

TERMS FOR 1880.

THE subscription price of THE RURAL NEW YORKER is

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Great Britain, Ireland, Australia and Germany, per Year, post-paid	$3 04 (12s. 6d)
France, " "	3 04 (16¼f.)
French Colonies, " "	4 08 (20¼f.)

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Reading for the Young.

TALK ON BOTANY.—NO. 5.

UNCLE MARK.

Buds.

In our last talk we spoke of nodes, internodes and phytons. We found that the places where the leaves appear on the stem are called nodes; that the smooth pieces of stem between the nodes are called internodes; that the internode with its node on top, has received the somewhat technical name of phyton, and that all plants thus, in reality, are made up of phytons, one placed above another. There is still something more about the stem of which nothing has been said so far, and from the heading you have already guessed that I mean the buds.

FIG. 246.

FIG. 247.

Of course, you all know what a bud is, you have seen buds many and many a time, and see them every day. In the spring of the year, particularly, do the buds on all trees and shrubs engage our attention. They are "buds of promise" and we anxiously watch them day after day as they gradually swell to larger proportions and at last develop green leaves or flowers. There are

Two Kinds of Buds,

leaf-buds and flower-buds. The leaf-bud always develops into a stem or branch, and the flower-bud gives birth to a flower. A bud, then, may be defined to be an undeveloped stem. "But," I hear some of you say, "a flower is not a stem, hence your definition is not a good one. It does not include flower-buds." I will say to those who make this objection, that botanically, a flower may be considered as corresponding to a stem, the parts of the flower answering to leaves.

In some respects a bud is very similar to a seed. Like the seed, the bud may remain dormant for a period of time, and then under favorable conditions spring into activity. The bud contains a rudimentary stem, which is also the case with the seed. The seed when put in the ground, will develop into a plant, and so also may the buds of many plants be planted, especially if a little wood adheres to them, as with cuttings, or they may be transferred from one tree to another, of which budding is an example. The seed carries with it certain characteristics which will appear in the plant grown from it, as to the character of the fruit, for instance. The bud has also fixed traits which will reappear in the plant developed from it. The parallel might be lengthened, but this is enough to show how very similar a bud and a seed are in their functions. There are, however, also dissimilarities, and conspicuous among these stands that of origin. The seed is the result of a flower. It is formed by the most intricate process and by the most delicate organs of the plant, while the bud is merely an outgrowth of the stem, caused by the accumulation of sap. No plant can form seed without going through the process of flowering and fertilization, while in many plants you can cause buds to appear almost anywhere on the stem, at will. Buds have been classified according to the position they occupy upon the stem. We will first speak of the

Terminal Bud,

This bud is always found at the end of a stem or branch, and in many plants it is much larger than the other buds and therefore very conspicuous. Figure 247 represents a twig of a horse-chestnut after the leaves are fallen, with the terminal bud at the end. Many palms and other plants do not branch at all, but the stem is continually developed from a terminal bud. It has received its name from its position at the terminus or end of the stem. In the axil of the leaf, or the corner formed by the stem and leaf-stalk, and just above the latter, is always found one or more buds. These buds from their position are called

Axillary Buds.

In the twig of the horse-chestnut, figure 247, these axillary buds are also shown just above the scar that marks where the leaf was attached. If more than one bud appears in the axil of a leaf, the extra ones are called

Accessory Buds.

They are often found on the cherry, honeysuckle, maple and others. On the grapevine we very often find a small accessory bud on each side of the true axillary bud. Again, in other plants their position is not so regular, but they may appear above the axil as in figure 246, where l is the leaf-scar, e the proper axillary bud and a, a, large accessory buds.

Bud-Scales.

Some buds are *naked*, that is, they are not protected by a special envelope, and others are provided with scales for their protection, in which case they are called *scaly* buds. Bud-scales are considered to be a modification of the leaves, and their arrangement correspond with that of the leaves. As a further protection, a sticky, resinous substance is sometimes exuded from the bud, as seen in the horse-chestnut. Like the leaves, the bud-scales leave scars on the stem when they fall off in the Spring, and these scars mark the starting point of the new growth, and thus enables the observer to trace the growth back for several years; the maple, poplar, and beech are examples.

More might be said about buds, but this lesson is long enough and I will close.

THE FOURTH OF JULY AS A MOVABLE FEAST.

THERE is nothing certain in this world but uncertainty, that's a sure thing. Ever since I was a boy this great holiday has been erratic and illusionary. In my early days it never came soon enough, and always went off too soon. It came on a Monday, a Tuesday, a Wednesday, a Thursday, and then torpedo like jumped over to Saturday. Then it often comes on Sunday. What a day for the 4th! and what an idea! It also comes on the third of the month, and on the fifth, but that I can account for, it's an endeavor to make up for coming on Sunday. If we add together the third and the fifth, we have eight, which divided by two, gives us two fourths in one year, besides the one on Sunday which makes three-quarters of the 4th of July at once. (For the edification of my young readers I may incidently note that this is an example of metaphysics, a very abstruse branch of the fine arts.)

One quarter of the population of this State of Nebraska, in this year of grace, 1880, celebrated the day on the third, three-quarters celebrated it on the fifth, and the whole population (i. e. all the little boys celebrated it on the 4th. Sunday, which being always a broken day here, was this year nearly ruined, as there was nothing but cracks and crackers to be seen and heard all day (the boys were all hid in the smoke). The latest news received here through the kindness of the RURAL NEW-YORKER, has satisfied our boys that there is a better place than "Home, Sweet Home," as that paper solemnly informs us that in New York, the 4th of July came on the 10th and "stopped the paper," it must have been a "whopper," (I mean the 4th of July *there* was a whopper) or it must have got crossways. Our RURAL came three days after time, and by the application of the aforesaid metaphysics to the subject, we are satisfied that in New York this year, the great and glorious day occurred there on the 3d, 4th, 5th, 7th and 10th, and now all the boys here want to know what the fare to New York is by the fast line, and the price of crackers (and cheese of course). There will certainly be an eruption of our juvenile Goths and Vandals upon your city next year.

Dodge Co., Nebraska. S. RUFUS MASON.

LETTERS FROM THE COUSINS.

Electric Lights, or Lights from Shadow-Land.

DEAR UNCLE MARK:—I am a brother of Will-o-the Wisp, and we all enjoy his letters so much. We are a large family and all "children of light," though not related to the sun and the moon. Our father is Electricity. He is called Thunder and Lightning, because he makes a noise when a cloud rises in the horizon of his domestic peace. Our mother is Phosphora and she sheds a gentle light on all in dark places. I have a sister, Mollusca (who shines upon the face of dark waters), we call her Mollie for short. Another sister, Aurora-Bore-Alice, is like our father, Electricity. My oldest brother, Ignis Fatuus, has a boy who is called Fire Fly. My brother, Jack-a-Lantern, is also a Jack-of-all-trades. Their interest is excited by Will's letters, and I think you will hear from each of them. I think I can account for Will's silence. Here is a letter from his little girl to my mother.

"My own dear Ganma:—We is just got a new baby. One big Injun man lost it an my papa found it, may be. My papa says it is a papoose. I wis its ole squaw mammy wood tum and get it, so mammy cood get time to comb my hair; it looks like a wab's nest and my face is just like I'd took dinner wid de little pigs. My mammy does not love me much now, and I must be very still all de time. My papa is not got time to rite. I love yoo, Ganma, and twied about yoor hurt arm. I made yoo a soft cooshion to sit on when yoo cums from Weginny. My mamma say what must she call de baby; its a little girl wid black hair an eyes, and wid hans and little nose and feets. Good-bye, Ganma. JANNETA."

Will some of the RURAL cousins please suggest a name for the new baby? Will-o-the-Wisp has wandered far, but I hope he has not led any astray by his mysterious light in the swamps of Lopez. I wish to join the Horticultural Club. I have a water-melon patch and work in the garden when I have time. My mother was tying up her grape-vines and fell and broke her arm. It has been nine weeks since, and she has no use of it yet, and cannot attend to her garden. I clerk in my father's store and am trying to learn to do everything. I have been painting some on the house. Men passing say I paint very well. I am the youngest child of this family, and my sister calls me "Baby," but I am fourteen years old and fill the place of a man. Jack can telegraph, engineer, tan leather, clerk, hoe corn and make batter cakes and coffee. He is two years older than I. But this is enough about "our folks." FOX FIRE.

Big Spring Depot, Va.

DEAR UNCLE MARK:—I wish to join the Horticultural Club. Uncle Fox says he is going to join. Aunt Mollie says I like flowers better than any little boy she ever saw. I stay with her now, but my home is at Lafayette. She has so many flowers. I gather seeds and put them in match boxes and write the name on the outside. Aunt Mollie cuts the seed stocks off before the balls burst and lays them on a newspaper. When the balls open she takes the bunch of stocks up in her hand, knocks on them gently and the seed all rattle down clean without any trash in them. She opens envelopes on the end always and saves her paper wrappers, so she has lots of bags to put seed in. I do that way, too. I gather morning-glories every morning and run a stem through them till they look like a lady dressed up with white skirts with blue and pink ruffles and red overskirt. I stick a snow-drop or pea on for a head. Hollyhocks make pretty girls to play "Fourth of July" with. My cousin, "Glow Worn," is here to play with me. We have so much fun with the rabbits. When old "Mollie Cotton Tail" leaves her nest we get out the little sleek fellows and try to feed them, but they start off walking with their two hind legs at once, just like a see-saw. There are six with their eyes just open. There are so many swallows here we call it "Swallow's Home." Glow Worm and I pick up the young birds and feed them. We set them on a twig, get a worm, and make a circle quickly over the bird with the hand, and it opens its mouth and we put in the worm. FIRE FLY.

Reed Island, Va.

DEAR UNCLE MARK:—I have been thinking for some time of writing and thanking you for those nice seeds. They are up and some of them budded to bloom. The okra looks nice; I never raised any before. What has become of all the cousins? It can't be they have forgotten old friends, or have they adopted new *nom de plumes*, so that we may not recognize them? We were quite disappointed in not getting seed of the "Dutchman's pipe." Can they be bought anywhere? The magnolia and iris seed are not up yet. Is there any chance of their putting in an appearance at this late day? (Yes.) I don't think it can be very pleasant living in the city in the Summer. I know I should not like it. But I must stop scribbling, for that waste basket looms up before me, crying "beware"! Wake up, cousins, and let us know that some of you, at least, are alive. Let us overwhelm Uncle Mark with letters until he cries for quarter. Who will be the first to say amen to that?

Sheboygan Co., Wis. COUSIN AMY.

UNCLE MARK:—I have been reading the letters from the boys and girls for some time and I have been thinking about writing, but time was not spared me and it was neglected. Papa has been taking your paper for about five years, and I think it is time to write. I would like to know what has become of Dew Drop and all those fine young ladies. I wish they would write and we would have a fine time again. Well, I will quit for this time. Hoping to see this printed I remain,

Yours respectfully, E. K. AUSTIN.

Vermillion Co., Ill.

The Puzzler.

A SHAKSPEAREAN ENIGMA.

64 LETTERS.

1, 49, 28, 51, 12, 19, a prominent character in "Hamlet."

15, 56, 19, 38, 63, 59, 4, father of Proteus in "Two Gentlemen of Verona."

6, 33, 94, 21, 58, 62, 41, a country justice in "Merry Wives of Windsor."

16, 8, 25, 36, 6, 27, 24, a waiting-maid in "Merchant of Venice."

7, 59, 15, 35, 37, 49, daughter of Babtista in "Taming of the Shrew."

45, 10, 31, 52, 19, 15, 63, 37, 14, mother of Arthur in "King John."

61, 49, 23, 60, 46, 20, 22, 51, a character in "King Henry IV."

39, 49, 11, 3, 24, 44, 34, 53, queen to King Henry in "Henry VI."

9, 13, 30, 3, 40, 63, daughter to Cymbeline in "Cymbeline."

18, 36, 39, 4, 63, 59, 17, 2, 27, King of Peutapolis in "Pericles, Prince of Tyre."

32 is a vowel.

7, 26, 49, 19, 44, 36, 48, 64, niece to Leonato in "Much Ado About Nothing."

42, 10, 50, 62, 9, 5, 44, 35, 58, 27, schoolmaster in "Love's Labor Lost."

54, 43, 21, 45, 31, wife to Menelaus in "Trollus and Cressida."

38, 19, 57, 55, 22, 50 4, a prominent character in "Othello."

9, 51, 29, 15, 63, 37, 47, son to Banquo in "Macbeth."

The whole is a quotation from Shakespeare's "Midsummer Night's Dream." ALICE.

☞ Answer in two weeks.

DIAMOND PUZZLE.

A consonant. A cape of Tunis. A city of France. A thicket. A consonant. Centrals from a city of France.

☞ Answer in two weeks. L. O.

PUZZLER ANSWERS.—July 10.

RHOMBOID:—

```
      A
    A R I S T A
      A R D E N T
        E A R L A P
          T R A P E S
            A C E R I C
              E R A S E D
```

CROSSWORD ENIGMA:—Petatus.

LITERARY ENIGMA:—He is not worthy the honeycomb who shuns the hive because the bees have stung.—SHAKESPEARE.

Sabbath Reading.

THE SOUL'S FAREWELL.

BY LOUISA LORNE.

FAREWELL to thee, frail form of dust!
The day hath come that part we must;
This spirit that hath dwelt with thee
Is weary now and would be free.

A reckless longing now is mine
To seek my Maker's holy shrine;
And yet I grieve to leave thee here,
So cold and lonely on thy bier!

Was it a sigh that shook the breast
Wherein I oft have lain at rest?
Or was it but thy shroud so white
That fluttered in the faint twilight?

Let not these parting words be met
With aught like sighs or still regret;
For, lovely one; 'tis best for thee
This wayward spirit should be free.

Yet, silent form, thou art too bright
To doom to everlasting night;
And still the soul that lit those eyes!
Must hasten far beyond the skies.

And leave thee lone but not unwept—
For I have o'er thee vigil kept,
And soothed thee to a death-like sleep,
So thou shouldst never wake to weep.

And oft at even I'll retrace
My pathway but to kiss thy face
And sing to thee—perchance to pray
Above thy grave, beloved clay.

But now, farewell! The pale moonlight
Gleams forth to aid my upward flight;
And tiny stars in silence rise
To form my path to Paradise.

May, 1880.

THE BEAUTY OF THE DEAD SEA.

THE Dead Sea is generally supposed to be the picture of desolation and death. Travelers however, state that there is a certain strange and melancholy beauty about it which impresses the one who beholds it.

Hodder, in his volume "On Holy Ground," says: "Before us, stretched the long chain of the mountains of Moab, like a huge blue wall, and beneath it lay that great and melancholy marvel, the Dead Sea. It was a view which I had not expected, never having associated the idea of beauty with the Dead Sea, or the wilderness of Judea, but from the hight on which we were, the view was very fine.

We noticed as we descended to the plain what so many travelers have observed and described, resembling an exhalation like a white cloud rising from the sea, in exquisite relief with the dark blue hills of Moab behind it.

At length we reached the plain, and making our way through a strange jungle of curious vegetation, we came to the shore of the lake. Here again I was especially disappointed, and looked in vain for the awful gloom and deathliness I had expected to find. The shore was not strewn with masses of dead and whitened trees, the water looked bewitchingly bright and beautiful, and reflected every minute detail of the surroundings, as in a burnished mirror. But this was the first impression. After an hour or so upon its shore I experienced its awful stillness, and felt the absence of life. I cannot define the solitude of the place. There is something which you can *feel* more than you can see."—Biblical Review.

CHRISTIAN COURTESY.

THE Christian precept, "Be courteous," was not however enjoined by the accomplished Paul. In the language of another, "it fell from the pen of an illiterate man, bred to the roughest of all employments. It was Peter, the inspired fisherman that said; 'Be courteous,' to imitate that the religion which he had learned from the meek and lowly Jesus, was able to soften the keenest, and cool the hottest temper, and even give gentleness to one trained amongst winds and waves."

But the courteous and scholarly Paul, in addressing the "Saints and faithful brethern" of Colosse, exhorts: "Let your speech be alway with grace, seasoned with salt, that ye may know how ye ought to answer every man," which simplified, means, "Be sincerely courteous." And if I mistake not, the apostle James, gives us a beautiful definition of courtesy, in the following words:

"The wisdom that is from above, is first pure, then peaceable, gentle, and easy to be entreated, full of mercy and good fruits, without partiality and without hypocrisy," Jas. 3:17. And Christ himself counsels the burdened in heart, saying: "Take my yoke upon you, for I am meek and lowly in heart," Matt. 11:29. There are many other precepts which inculcate some essentials of this grace, such as gentleness, meekness, love, forbearance, preference of another to self, &c.

The importance of Christian courtesy is therefore indisputable. It cannot be neglected without sin. Christians, especially, are exhorted to "think on whatever is of good report," to "adorn the doctrine of Christ in all things."—The Central Baptist.

CHOOSE THE RIGHT.—The greatest man is he who chooses right with the most invincible resolution; who resists the sorest temptations from within and without; who bears the heaviest burdens cheerfully; who is calmest in storms, and most fearless under menaces and frowns; whose reliance on truth, on virtue, and on heaven, is most unfaltering.

FLOWERS never emit so sweet and strong a fragrance as before a storm. Beauteous soul! when the storm approaches thee, be as fragrant as a sweet-smelling flower.—Richter.

LET us be sure that our delight excludes not the presence of God; we may please ourselves so long as we do not displease him.—Thomas Adams.

PERSONAL ITEMS.

Cardinal Nina, the Papal Secretary of State has resigned.

Burdeste, the Burlington Hawkeye man, has gone to live permanently at Nantucket, Mass.

The attaches of the English Legation who are at Newport have information that Prince Leopold is seriously ill in Canada.

Jennie, daughter of the late John McGraw of Ithaca, N. Y., a girl worth $4,000,000 or $5,000,000, was married to Prof. Willard Fiske of Cornell University last week at Minister White's Berlin residence.

Secretary Evarts's professional income is estimated at from $74,000 to $100,000 a year (it has been as great as $150,000) but he is not, in the New York sense, rich, owing to his liberal mode of living and his large family.

Prince Jerome Napoleon's son Victor, was eighteen years of age on Sunday, and an anti-Jeromist organ of Paris remarks that he is therefore dynastically of age to assume the succession bequeathed to him by the Prince Imperial.

There are said to be no fewer than eighteen members of the Vanderbilt family now staying at Hotel Bristol, Paris, and even the suite of apartments usually reserved for the Prince of Wales has been given up to the American millionaire.

Governor Simpson, of South Carolina, will vacate his office to take that of Chief Justice on August 1. Mr. Jeter president of the Senate, will become Governor. South Carolina will then have had three Governors in less than two years—Hampton, who resigned to go to the Senate, Simpson and Jeter.

Mr. Jos. H. Denson, Clerk and Recorder of Sevier County, Arkansas, says in a recent letter: "I have forgotten whether I wrote you concerning *the almost marvelous effect* the Compound Oxygen Treatment had on me. I was suffering from Bronchitis, and had been for three months—had almost despaired of recovery—when I commenced the Treatment. I could feel a marked change on the first night I took it. I had not enjoyed a good night's rest for something over three months; but on the night I first took the Treatment I slept splendidly, and afterwards continued to improve rapidly until I was cured. If you see fit you can use this for the benefit of sufferers." Full information about this new Treatment for Chronic Diseases, sent free by Drs. Starkey & Palen, 1109 and 1111 Girard St. Phila., Pa.

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POUGHKEEPSIE, N. Y.,
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Miscellaneous.

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KIDNEY DISEASES, LIVER COMPLAINTS, Constipation and Piles.

Dr. R. H. Clark, South Hero, Vt., says, "In cases of Kidney Troubles it has acted like a charm. It has cured many very bad cases of Piles, and has never failed to act efficiently."

Nelson Fairchild, of St. Albans, Vt., says, "It is of priceless value. After sixteen years of great suffering from Piles and Costiveness it completely cured me."

C. S. Hogabon, of Berkshire, says, "One package has done wonders for me in completely curing a severe Liver and Kidney Complaint."

IT HAS WONDERFUL POWER. WHY?

Because it Acts on the LIVER, the BOWELS and the KIDNEYS at the same time.

Because it cleanses the system of the poisonous humors that develope in Kidney and Urinary diseases, Biliousness, Jaundice, Constipation, Piles, or in Rheumatism, Neuralgia and nervous disorders.

KIDNEY-WORT is a dry vegetable compound and can be sent by mail prepaid.

One package will make six qts of medicine.

TRY IT NOW!

☞Buy it at the Druggists. Price, $1.00.

WELLS, RICHARDSON & CO., Proprietors,

12 (Will send post paid.) Burlington, Vt.

WE ADVISE YOU TO INSURE YOUR property in the
AGRICULTURAL INSURANCE CO.
Of Watertown, N. Y.,

The largest Company in the country which insures only farmers' property and residences. Over twenty-six years old.

Capital $200,000 00
Net Surplus, over $235,153 81
Assets, Jan. 1, 1880..$1,137,549 73

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Trees, Seeds, Plants, &c.

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Those wishing plants of the Marvin, please address
MARVIN & FRENCH,
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Cabbage Seed a Specialty.
ALL LEADING VARIETIES WARRANTED TRUE TO NAME AND CROP OF 1880.
Wholesale price lists for dealers, mailed free on application. FRANCIS BRILL, Seed Grower, Mattituck, Long Island, N. Y.

30 Acres **BIG Berries.** 50 varieties of Strawberry Plants, for summer and fall planting. All the choice new and old sorts in pots or layers. Extra stock at fair prices. Catalogues free. G. H & J. H. Hale, So. Glastonbury, Ct.

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Send for Gen. Garfield's Grand March, (40 cents), and Hancock's Campaign March, (40 cents). Fine music and elegant Portraits of the Presidential Candidates.

Teachers will not fail to examine, during the summer, the books needed for their winter's work. We mention **The Temple.** ($1), and **The Voice of Worship,** ($1), for Singing Schools and Choirs; and for the latter, **The American Anthem Book,** ($1.25), and **Emerson's Anthem Book,** ($1.25). For High Schools, **The Welcome Chorus,** ($1); for Common Schools, **Song Bells,** (50 cents), nearly ready; for Sunday Schools, **White Robes,** (30 cts.); and for Temperance work, **Temperance Jewels,** (35 cts.) and **Temperance Light,** (12 cts.) All are first-class books. Don't fail to examine.

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$1000 REWARD

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OSBORN'S SULKY PLOW,

the only Plowing Machine that has proved a perfect success in all kinds of soil. Any kind of plow can be attached. The plowman rides and handles the plow with ease, regulating the depth and width of furrow. The draft for the team is materially less, and the ordinary laborious mode of plowing is reduced to one of comfort and ease. Sulky made for both right and left hand plows. Also, manufacturers of

THE MEADOW KING MOWER,
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Pulverizing and Smoothing HARROW.

Light, Simple, Cheap. Durable and Flexible

Being jointed in the center, is adapted to both smooth and uneven surfaces. Acknowledged the best of the kind, and will pulverize and cover seed better in one operation, than going over twice with others. Made with both Chilled Metal and Cast Steel Discs polished. Send for circular and price list Manufactured by

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Albany, N. Y., for the United States.
By Everett & Small, Boston, Mass., for the N. E. States, and by Budlong & Co., Aurora, Ill., for Ill., Iowa, Wis., Minn., Neb., Kans. and Mo.
"Also, La Dow's Disc Corn Cultivator."

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Or 263 & 265 Wabash Avenue, Chicago, Ill.

LATEST IMPROVED
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FOR ONE, TWO AND THREE HORSES.
MACHINES FOR
Threshing and Cleaning Grain
AND SAWING WOOD.
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Do not fail to Send for Illustrated Circular Before Buying.
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New York State Agricultural Works.

1st Premiums at all Competitive Trials.
Railway, Chain and Lever Horse Powers Threshers and Cleaners, Threshers and Shakers, Clover Hullers, Feed Cutters, Wheel Horse Rakes, Two a Cultivators, Horse, Pitchforks, Shingle Machines, Straw Preserving Rye Threshers, Portable Steam-Engines, Cider and Wine Mills and Presses, Dog and Pony Powers, Etc.
WHEELER & MELICK CO.
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Send stamp for Circular and report of Centennial trial.

The "Centennial" Fanning Mill.

The best mill in the world. It separates Oats, Cockle, and all foul stuff from wheat. Is also a perfect cleaner of Flax, Timothy, Clover and all kinds of seeds. The great improvement over other mills is that it has two shoes. It is especially adapted for warehouse use. Send for Descriptive Circular and Price List. Liberal discount to dealers. Address, S. FREEMAN & SON,
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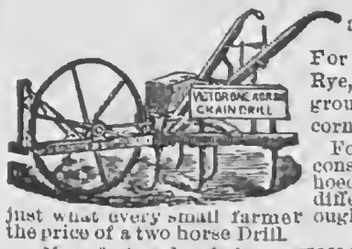
"Victor" one-horse Wheat Drills.



and 5 hoed,)
For Sowing Wheat, Rye, Barley, in fallow ground or in standing corn.
Force feed; simply constructed. The five hoed is adjustable for different widths, and is just what every small farmer ought to have, saving the price of a two horse Drill.
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FENCE STRAND.
The only Wire Fence that Stands the Test of Time
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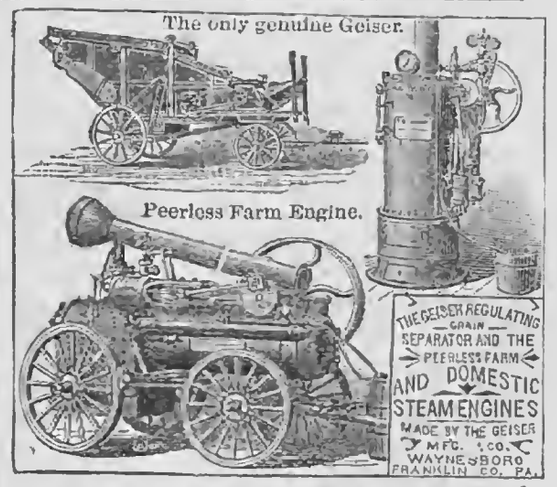
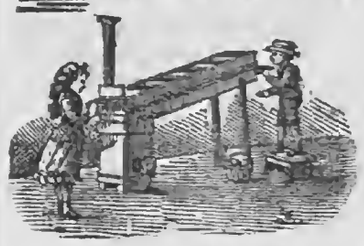
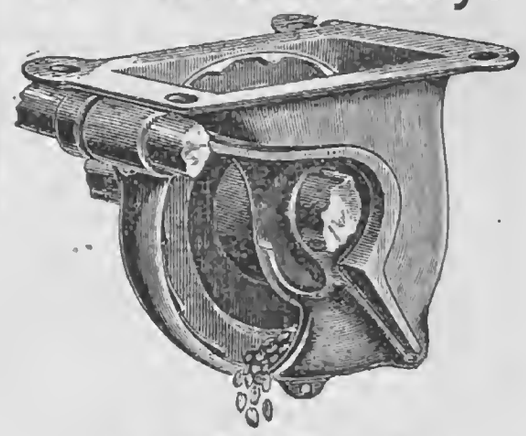


THE AMERICAN FRUIT DRIER.



Cheap!
Practical!
Portable!
Correct Principles, Correctly Applied. Illustrated Catalogue giving much valuable information mailed *free*.
Address, American Fruit Drier Co.,
Chambersburg, Pa., U. S. A.

The New Buckeye



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ALSO
THE NEW BUCKEYE
Combined Grain and Fertilizer
DRILL,
AS IMPROVED FOR 1880.

Over 7,000 of these new Drills were sold and used in the United States last season, and were pronounced by all to be the *most perfect Seeding Machines* in the country. No Grain Drill ever made gave such *universal satisfaction*. It is the best force-feed in the market. Our Fertilizer Sower has a positive force-feed and has no equal in this country. Be sure and send for our new Illustrated circular, giving illustrations and descriptions of the improvements. Address
P. P. MAST & CO.,
Springfield, Ohio.

Fit all drill boots, run level, cut *flat bottom* furrows, cover with *mellow* soil, and instead of *crowding the seed* into narrow rows but *one inch in width*, scatter it 3¼, 4, and 5 inches; the plants thus standing *wider* apart, have more ROOM TO STOOL, derive more nourishment from the soil, become more vigorous, and produce better developed average heads.
Send for Illustrated Circular with Testimonials to
As ye sow, so shall ye reap. J. A. JONES, Wilmington, Del.

THE request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness.

Humorous.

REMINISCENCES OF SUMMER.

I'm sitting on the stile, Mary;
I sob, and smile, and sneeze;
'Twill only be a while, Mary,
I think until I freeze;
The ulster coat I used to wear
Has vanished like a dream;
We ate it up, I do declare,
In chocolate ice-cream.—Burdette.

"I RISE for information," said a member of a legislative body. 'I am very glad to hear it," said a bystander, "no man needs it more."

"KIND words can never die." A man never realizes this fact so fully as when he is sued for breach of promise, and has his love letters printed.

"MERCY!" exclaimed an old lady upon first seeing an engraving of the passage of the Red Sea by the children of Israel, "mercy! what a family the man had!"—Boston Transcript.

HERE is a fair hit at the singers. "Mamma," asked a little girl, "why is it they sing in church, 'We're going home to dine no more,' and then go right home and dine?"—Congregationalist.

"THINK twice before you speak once." That is a good enough rule for some people; but there are folks who can think of so much meaner things to say the second time of trying that we prefer to hear their first inspiration on the subject.

A STRANGER, passing a church-yard and seeing a hearse standing hard-by, inquired who was dead. The sexton informed him. "What complaint?" asked the inquisitive one. Said the old man. "There is no complaint; every body is satisfied."

OLD Mrs Skittleworth doesn't know why people *will* will make counterfeit money. She says she tried to pass a bad half-dollar a dozen times the other day, but nobody would have it, and she thinks it is a waste of time to make such stuff.

AN old lady visiting the Antiquarian Museum in Edinburgh the other day, on inspecting the old weapons very earnestly, and failing to find what she was apparently looking for, asked a visitor if he could tell her whereabouts they kept the Axe of the Apostles.

THIS notice was once fixed upon a church door in Hertfordshire, and read in the church: "This is to give notice that no person is to be *buried* in this churchyard but those *living* in in the parish; and those who *wish to be buried* are desired to apply to me. Ephraim Grubb, Parish Clerk."

AN old lady from New Bedford visited Boston recently for the first time, and, while viewing the attractions of the public garden, was pointed out the bronze statute of Charles Sumner. "Well, I declare," the old lady remarked, "I never knew Sumner was a colored man before."

AN exchange tells of a man who had sixty-five dollars stolen from him, and who soon after received twenty-five dollars with the following note: "I stoled your money. Remorse naws at my conshens, and I send you some of it back. When remorse naws again, I'll send you some more."

"GOODS at half-price," said the sign. "How much is that tea pot?" asked the old lady who had been attracted by the announcement. "Fifty cents, mum." "I guess I'll take it, then," she said, throwing down a quarter. The dealer let her have the teapot, but took in his sign before another customer could come in.—Boston Transcript.

A LITTLE four-year-old girl was having her picture taken. The artist said, "You must keep your mouth shut, my dear, and your eyes open," as the little one showed a decided inclination to open her mouth and close her eyes. But on being instructed, she braced up, and after a few minutes, wonderingly asked:—"Now what shall I do with my nose?"

AN Irishman once saw a clock which showed the Greenwich and Dublin time, and he saw that the Dublin time was twenty minutes behind that of Greenwich, and he asked how that was, and it was explained to him that Dublin being to the west of the first meridian, must have its time later than that of Greenwich. "Then, be the powers!" says Pat, "there's another injustice to onld Ireland!"

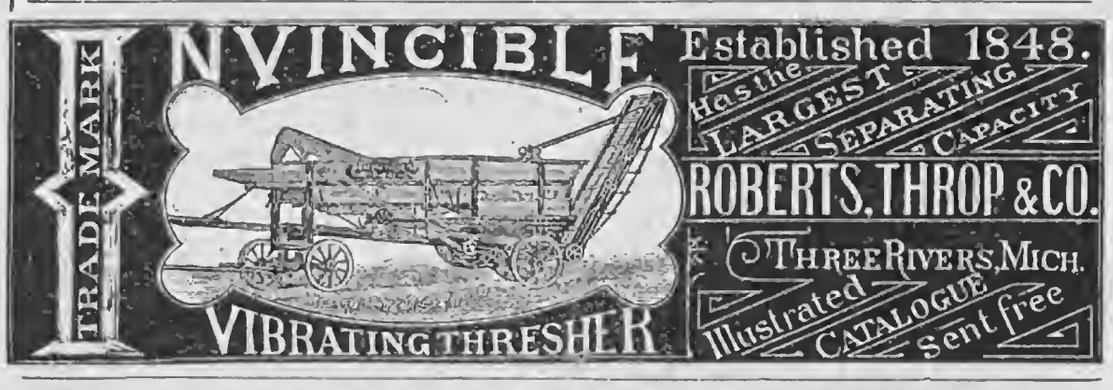
The Great Drawback

Of most remedies is their lack of thoroughness. They do not remove the original cause of the symptoms, although they may temporarily relieve these. The marked superiority of Hostetter's Stomach Bitters to rival medicines advertised or asserted to produce kindred results is exhibited in the decisiveness and permanency of its effects, as contrasted with the instability and fleeting character of theirs. A lack of digestive and assimilative power is attended by many symptoms often erroneously ascribed to other causes, and which it is impossible to relieve with a mere placebo. Radical means are the only effectual ones, nay, more, the use of such as are not so in medication, is usually irrational and productive of more ultimate harm than present good. To quell pain, to allay nervous excitement, to relieve despondency, the rebellious organs must be brought into subjection, and their activity insured by toning and regulating them.

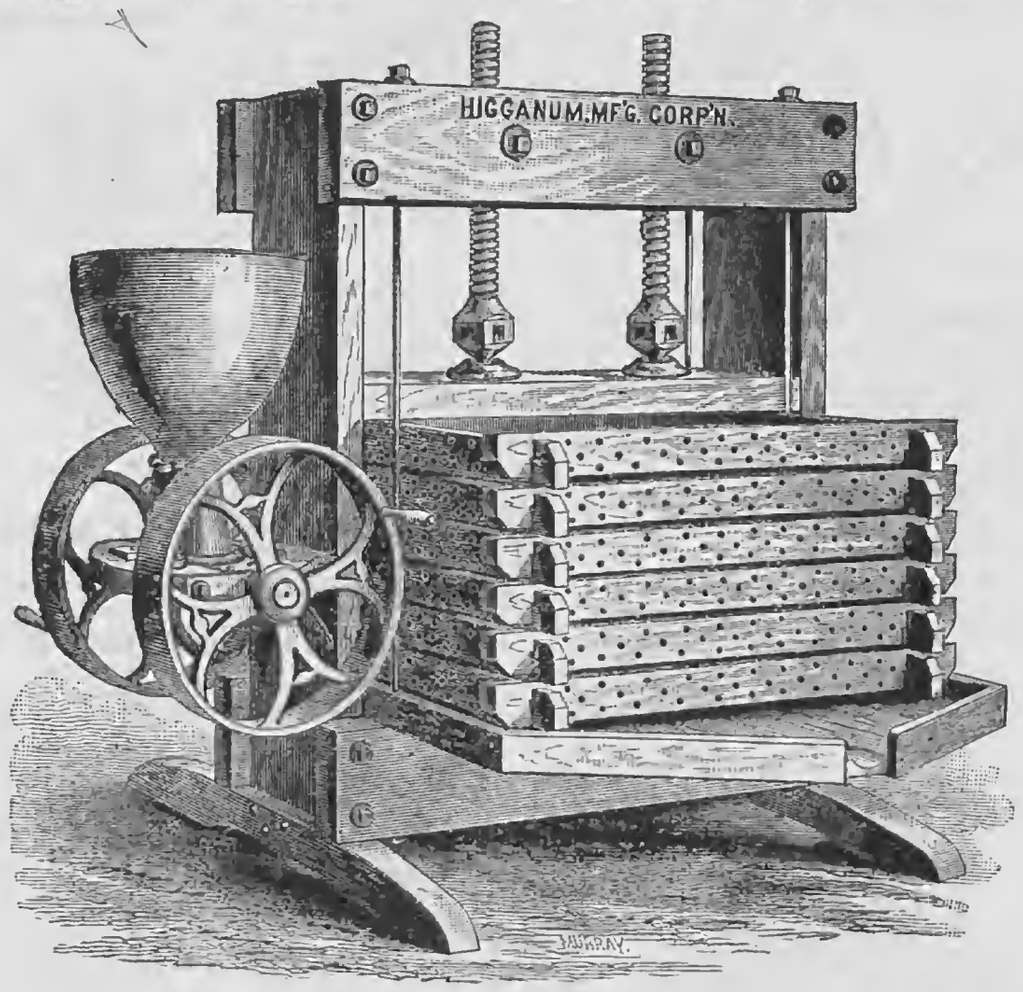
BUSINESS IS BUSINESS.

Minister's Wife—"Oh, Mr. Dossett, we have not seen your assistant, who has such a very nice tenor voice, in the choir lately."

Country Grocer—"No, ma'am; I've parted with him owing to the minister and other gentlemen getting their supplies from stores in the city."



THE FARMERS' FAVORITE CIDER MILL



THE ONLY SUITABLE MILL FOR A FARMER.

Will grind 60 bushels of apples per hour, and press 75 gallons at a pressing. Send for Illustrated circular.

HIGGANUM MANUFACTURING CORPORATION,
(SOLE MANUFACTURERS,)
Higganum, Ct., U. S. A.

☞ Manufacturers of Agricultural Implements of every description.

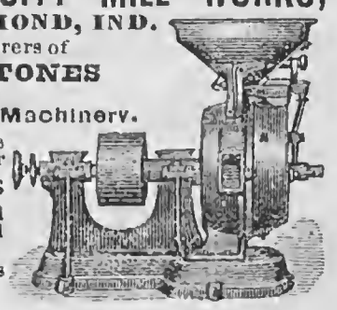
ASK FOR
Wells, Richardson & Co's
PERFECTED BUTTER COLOR
It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.
USE ONLY THIS THE FIRST AND THE BEST

Metallic Shingles.

Make the most durable and ornamental roofs in the world. One-fourth the weight of slate, and will not break from any cause; cannot blow off, and are absolutely tight. Send for descriptive circular and reduced prices to

IRON CLAD MF'G CO.,
22 Cliff St., New York.

RICHMOND CITY MILL WORKS,
RICHMOND, IND.
Manufacturers of
MILL STONES
and
Flouring Mill Machinery.



We manufacture the best French Burr CORN AND FEED MILLS in the country. Send for description and prices.
State you saw this in RURAL N.-Y.

CIDER PRESSES AND GRATERS.
BOOMER & BOSCHERT PRESS CO., Syracuse, N. Y.

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Established 1840.

Patent spark-arresting Farm and Dairy Engines of all sizes, from 2 to 12 horse-power, mounted or unmounted. Warranted to be the Best and Cheapest engines made. Prices from $150 upwards. Send for Illustrated Catalogue "A" which will give you full information and prices to
B. W. PAYNE & SONS,
Box 841, Corning, N. Y.

BIG GIANT CORN MILL.
Every Man His Own Miller.

The only Mill that will grind Corn with Shuck on without extra expense. The only Mill grinding Corn and Cob successfully that will grind Shelled Corn fine enough for family use.
Grinds twice as fast as any other Mill of same size and price. Manufactured by
J. A. FIELD, SON & CO.
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For Young or Old.

Do Your Own Printing!

$3 Press for cards, envelops, etc. 11 other sizes, $8, $14, $25, $44, &c. Type setting easy by printed instructions. Do your own printing and advertising. Money made fast in any place jobbing or running a
Catalogue of Presses, Type, Cards, &c., for 2 s. Kelsey & Co., Mnn'f'rs, Meriden, Conn

AMERICUS CIDER MILL.
WHITMAN'S PATENT.

The best Cider and Wine Mill made. It will make Twenty per cent. more Cider than any other.
Perfectly Adjustable.
Three Sizes.
Geared outside. Large Mills made for two cranks.
Prices as low as any first-class mills.
Circulars giving full description sent free.
Address the manufacturers.
WHITMAN AGRICULTURAL CO.,
Saint Louis, Mo.

Pot Grown Straw Berry Plants.
E. P. ROE Offers one of the largest, finest and most reasonable stocks of pot-grown plants ever grown in this country, combined with a remarkably liberal offer. Also the largest stock in the country of the
CUTHBERT RASPBERRY.
All the other small fruits and Grape vines in great abundance. Catalogue free.
Address' E. P. ROE,
Cornwall-on-Hudson, N. Y.

NOTICE TO AGENTS.

Any respectable person may become our Agent.

Postmasters are requested to act as our Agents.

A Cash Commission of Twenty-Five Cents will be allowed Agents for each yearly subscriber.

One name or a dozen names may be forwarded at any time. Credit is given the Agent for every name sent until canceled by Premium.

Address
THE RURAL NEW-YORKER,
34 Park Row, N. Y

THE RURAL NEW-YORKER

Tenth Year

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XXXIX. No. 32.
WHOLE No. 1593.

NEW YORK, AUG. 7, 1880.

PRICE FIVE CENTS.
$2.00 PER YEAR.

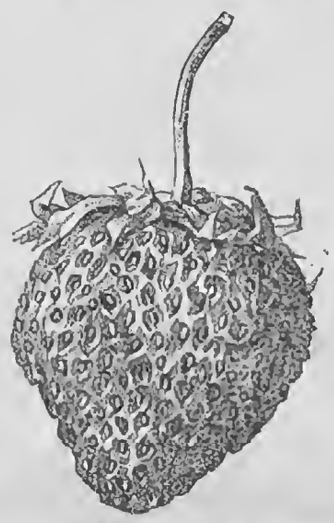
[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Horticultural.

NOTES FROM THE RURAL GROUNDS.

Strawberry Notes.

GEN. SHERMAN.—This was sent to us on trial in April of the present year by Mr. E. P. Roe. The plants have made a healthy growth. The berry is bright red, of medium size and good quality.



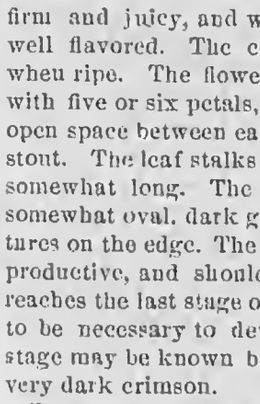
PRIMO—FIG. 248.

WINDSOR CHIEF (J. T. Lovett) is the same as Champion, so that the former name should be rejected. The cut of this, as of the others, is of a medium-size berry. It is obtusely conical, but the larger berries are irregular in shape and somewhat round. The flesh is moderately firm and juicy, and when ripe sprightly and well flavored. The color is a dark crimson when ripe. The flowers are pistillate, small, with five or six petals, but mostly six, with an open space between each. The fruit stalk is stout. The leaf stalks are of medium size, and somewhat long. The leaflets are large and somewhat oval, dark green, with coarse serratures on the edge. The Windsor is exceedingly productive, and should not be picked till it reaches the last stage of ripening, which seems to be necessary to develop its quality. This stage may be known by the berry becoming a very dark crimson.

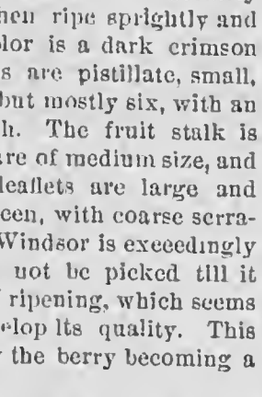
CINDERELLA.—From all we can learn of this berry it varies in different situations, being strong and prolific in some, weakly and unfruitful in others. Ours were ripe June 7th, the past season. The plants are fairly strong, quite prolific and the quality good.

GLENDALE. — Very vigorous plants, large leaves, color bright red, quality sour. Late and prolific.

PRESIDENT LINCOLN.—This has done better with us than ever before. It has ripened through an unusually long season; the quality is excellent, the berry large.



WINDSOR CHIEF. FIG 249.



CINDERELLA. FIG. 250.

SHARPLESS.—We presented engravings of this berry two years ago. This year, more than heretofore, we find the shape more as in fig. 251, a profile of which is also shown. We have praised this berry from the first, and extended tests have proven that the praise was well merited.

Blackberries.

This has been a remarkable season for wild fruit, which has nearly equaled the cultivated sort in size and surpassed them in sweetness. The Taylor bears a berry not quite so large as the Kittatinny, ripening at the same time. But it is sweeter and very prolific.

Honeywell Peach.

Two trees of this were sent to us by the Messrs. Hance, three years ago, to be tested. They bear the present season abundantly, ripening the first fruit July 12. They are small, adhere to the stone, juicy, but nearly tasteless. Of

Raspberries,

CUTHBERT holds out the best, and is still ripening its firm, large, high-flavored berries.

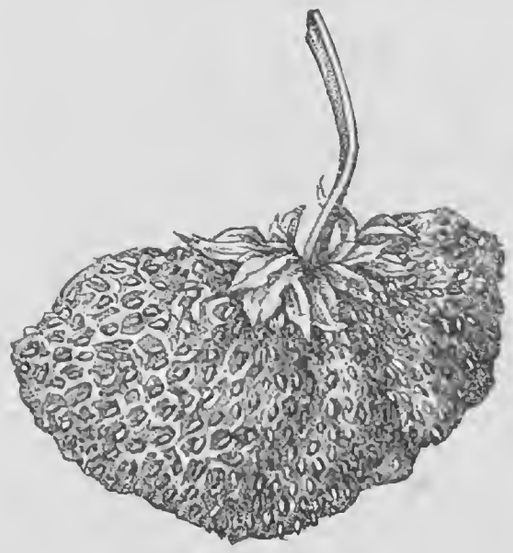
PRIDE OF THE HUDSON has ripened a few berries upon canes of this season's growth, the biennial cane being quite too tender to endure the winter.

STRAWBERRY "PRIMO" (SMITH).

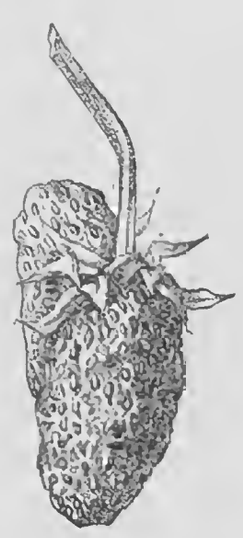
THE new strawberry Primo (Fig. 248.) was raised by Mr. Daniel Smith of Newburgh. As it has not yet been sent out, and is now described for the first time, a somewhat minute description is given, to serve the purpose of future identification. Our plants were received from Mr. Smith last September, and from these our description is taken, beginning with the berry.

The form of Primo is broadly conical, with a small neck, the larger berries becoming enlarged at the base, and more or less ribbed. The seeds are brown, and slightly sunken. The flesh is white, tender, sweet, moderately juicy, with an aromatic flavor like the wild berry. The color is a dark scarlet. So far as one season's trial may be relied on, its quality may be said to be excellent. The first berries were ripe on the 5th of June, or about the time of the Duchess, growing about twelve feet from it.

The flowers are staminate, of medium size with mostly six petals, but sometimes eight, and then overlapping; otherwise simply full. Calyx of medium size. The fruit stalk is stout, and stands well up. The leaf stalks are stout, and rather long. The leaflets are large, nearly round, deeply veined or ribbed, and of a dark green, with moderately large serratures on the edge. The plant is a robust grower.



SHARPLESS—FRONT VIEW.



SIDE VIEW—FIG. 251.

The Primo is both early and late, the first berries ripening with the Duchess and the last with the Sharpless. It has, consequently, a long season; but it must be remembered that the past season has presented many anomalies in the ripening of fruit. It is productive, and the berries are of good size, running, during the past dry season, from four to five inches in circumference, with few small ones. The accompanying portrait is from a berry of average size.

The past season has not been a favorable one for forming an opinion of a strawberry; but, judging from its performance this season, we should not hesitate to place the Primo on the list of very promising new kinds.

STRAWBERRIES.

THE season has been a very poor one for berries, owing to the extremely dry weather. During May less than one inch of rain fell, and during some of the time high and very drying winds prevailed. Plants set in April are established, and are doing well considering the dryness of the soil. We have plants that look well where the ground is so dry that bush beans are drying out, the rows being about three feet apart between the strawberry plants and beans. We generally plant in the Spring, and for garden culture and limited room the plants can be started in the same bed or rows with the onions, as these are ripe before the strawberry plants make much growth. The soil should be deep and very rich to get the best results. I don't think it possible to make land for strawberries too rich with stable manure. I use old manure if convenient, but put on coarse, if I do not have better at hand. I plant in rows about 12 inches between the plants and the rows five feet apart, tending them with hoe and plow if the garden is of sufficient size; if not, then I cultivate with hoe and spade. Always keep a strawberry patch clean, if you expect fruit. "A stitch in time saves nine," says the old proverb, and hoeing in time is the easy way to keep the garden clean. I let the runners grow, keeping them well together so as to cover all the ground with plants. I think they do best when pretty thick. This is the lazy man's way to raise a good supply of berries. Larger berries can be raised by the hill system, yet I do not care to grow them in that way—it is too much work. Cornstalk butts make a good winter covering, and so do evergreen boughs, or any brush that will ward off the wind; rye straw is best, but it costs pretty high at present. Varieties are numerous, and so many are good to best that I should not wish to be compelled to choose one or two sorts to the exclusion of the rest. Those with perfect flowers cause so much less trouble than the rest, that it does not seem to be worth while to raise any others. If we do we must plant every other row with a variety that has perfect flowers.

CRESCENT SEEDLING was the earliest berry that ripened with me this year—a pistillate variety, conical in shape, dark red in color, of medium size, very productive, ripened from May 20th to June 10th. I would not plant this kind, however.

FOREST ROSE colored by May 15th, and ripened about 25th—a good-sized, well-flavored, rather roundish, light-colored berry that birds had a good taste for. They were all ripe by June 1st—plant a good but not strong grower.

DURAND BEAUTY came next; large, conical berries that soften before they color up fairly; quality fair; all ripened within ten days. Fair to look upon, pleasant to the taste, productive; vine thrifty; promising for home use; but of no value for market.

CUMBERLAND TRIUMPH, a large cone-shaped berry, medium season; color, light scarlet, handsome. I have grown this berry at the rate of 130 bushels per acre. Valuable for home use or near market.

GREAT AMERICAN, a large conical berry of medium season; color dark scarlet; vine not very strong. I have grown this, too, at the rate of 130 bushels per acre on a small patch.

BELLE—Perhaps this is the finest berry that I have grown. It is a thrifty grower, productive of large, conical berries, that ripen nearly all at once; color bright scarlet, very solid flesh without core; rather late.

GEN. SHERMAN—FIG. 252

GLENDALE—FIG. 253

SHARPLESS, large berry of all shapes that a strawberry can well take: flavor good; size from medium to largest; productive; not solid enough for long transportation; one of the best for home use or near market.

CENTENNIAL FAVORITE, a light-colored, late berry, of medium to large size, of roundish shape, productive; vine a very good grower; fruit not very solid.

KENTUCKY, a large conical berry, generally having a light tip on the end. The fruit is borne well up from the foliage; tolerably firm, productive. Late, all had gone by June 18th; an old kind that, I think yet, as good as the best.

TRIOMPHE DE GAND, a large, firm berry that every one knows; grows fairly here where the soil is rich, and is productive of high-flavored berries.

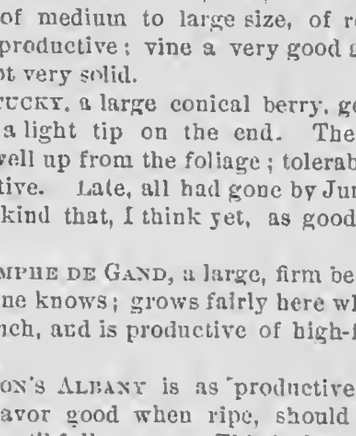
WILSON'S ALBANY is as productive as the best; flavor good when ripe, should not be picked until fully mature. This is the best shipping berry that we have, and good for home use, when allowed to get fully ripe.

CHARLES DOWNING, old and well known; good in every respect.

BOYDEN'S 30, old and well known, and still keeps its place.

MONARCH OF THE WEST, a very nice berry, has appeared to be rather unproductive.

WILDER, quality best, growth poor. I have not petted this perhaps so much as the quality of the fruit would warrant.



SENECA QUEEN—FIG. 254.

There are several old berries that are good, but the above are best with me, so far as I have experimented with them.

Titusville, N. J. IRA J. BLACKWELL.

STRAWBERRIES.

1. GEN. SHERMAN with me a feeble-growing plant, hence not productive. Berry of

large size and handsome. On account of its unproductiveness I have allowed it to run out.

SHARPLESS has sustained its high reputation the past season with one exception. This, however, is an important, hence an unfortunate one, and is that it failed in field culture to be sufficiently productive to make it so profitable as desirable.

GLENDALE—Was the most profitable berry I fruited the past unfavorable season. It stood the severe drought better than most others, yielding bountifully of large, exceedingly fine berries. For shipment to a distant market I esteem it as the most profitable variety that has yet been thoroughly tested.

WINDSOR CHIEF is still Champion — nothing more and nothing less. I have failed under the most profound scrutiny through the blossoming and fruiting season, that I was able to bring to bear upon them, to detect the slightest difference.

CINDERELLA—Last year this was decidedly unproductive, hence I neglected it this year, but it "came out strong under difficulties." The past season it was of vigorous growth although the plants were small, resembling the Jucunda and fairly productive. Berries medium to large, conical, glossy scarlet, very attractive, of superior quality and firm. It is one of the very few, I may say *only* early berry that I have found both firm and of high quality. I shall increase my plantations of it—for should it continue in future as it was the past season, it will be very valuable. I may add that I have seen it in several places throughout the State the past season, and in every instance it has produced the surprisingly good results that it did with me. J. T. LOVETT.

Strawberries.

GEN. SHERMAN.—Plant small and a slow grower. Unproductive. Foliage smooth, dark green. Calyx small, hairy, close. Fruit medium size, round, dark crimson. Flesh moderately firm, pink; flavor fair. Season medium.

SHARPLESS. — Plant very vigorous, and hardy. Has stood the drought well—better than most kinds. Berries all large to the end. I found the fruit more uniform in size this year and with less irregularity in shape. It will be a popular standard sort, having nearly all that is needed, size, beauty and quality.

GLENDALE.—If it always does as well as it has done with us this season, I shall consider it the best *late market* variety we have. I have proved it the finest berry among one hundred varieties. The plant is hardy, vigorous and productive. A strong grower. Leaflets large, strongly creased, dark green. Calyx large, hairy, recurved. Fruit medium to large, conical, slightly necked, dull, dark crimson. Flesh very firm, pink to a paler center, flavor rather acid—to my taste, poor. Season late to very late.

WINDSOR CHIEF.—Said to be a seedling of Champion. I can see no difference in either plant or fruit between them. This is no disparagement, as I regard Champion as one of the very best of our pistillate varieties and immensely productive.

CINDERELLA.—Plant a rampant and rapid grower, unproductive with us. Fruit large, conical, uniform, glossy, bright scarlet. Season medium.

SENECA QUEEN.—A variety that will some day stand in the front rank of standards. Plant a good strong grower with a tendency to form stools. Immensely productive. Fruit large to very large, round, uniform, very dark crimson. Flesh red to pale center, moderately firm; flavor only fair. Season early.

H. G. CORNEY.

The Gregg Raspberry.

THE Gregg raspberry is destined to take a high rank as a market berry among raspberry growers, certain to supersede all other varieties of the Black-cap family. Having had the berry for years, and being fully convinced of its superior merits, I did much to introduce it to the public, therefore take great pride in recording the fact that I am receiving many unsolicited letters from gentlemen in different parts of the country (even from Canada), all praising this raspberry in the highest terms for its many good qualities, some saying that enough had not been said in its praise.

Having acres of them, some in full bearing, many of the readers of the RURAL NEW-YORKER interested in the berry, desire (judging from the many letters I receive) to know how they behaved for me this season. My answer is "Splendidly, in quantity, quality, and the prices for which they were sold." I have about 13 acres of them, about six acres in full bearing, four acres bearing a partial crop, and three acres of new plantation. The entire crop was sold to Wm. Kiefaher and Bro., of this city, they furnishing packages and paying, on an average, five dollars per stand (two bushels), or one dollar per stand in excess of the price given for Mammoth Clusters. The total amount I realized was nearly 2,000 dollars. Be it remembered that this is a great berry region, where prices rule low. Those in full bearing averaged not less than 100 bushels per acre. Kiefaher Bros. told me that they never handled berries that gave such general satisfaction; there was no complaint from any one except that they did not get enough of them.

The Gregg is a strong grower, requiring no tying up to stakes or wire, for support, if pinched back at the proper time (when about two feet high), therefore they can be grown very cheaply. N. OHMER.

Dayton, O.

Improvement in Early Peas.

DEAR RURAL:—Your remarks, in "Brevities," upon improvements in earliness in garden products are in the main unfortunately correct. But while it *may* be true that the Philadelphia is still the earliest of the yellow class of peas (it is not so here), in the class of green wrinkled peas you surely have not forgotten the gain so rapidly made by McLean with his Advancer, and then with his Little Gem; while still more recently Mr. Arnold's American Wonder has easily "spurted" up along side of the earliest of the other class. These are notable and most important gains, for the yellow class which until recently so greatly led in earliness, are vastly inferior in table quality to the green wrinkled peas, of which the excellent but altogether too late Champion of England was so long the type. Let us at least give credit where credit is due.

Albany Co., Vt. T. H HOSKINS, M. D.

[We tested the Wonder the first season it was introduced and picked from it the same day as from Little Gem, from which it does not materially differ as we remember. — EDS.]

RURALISMS.

I SEE in front of some of the seed stores a placard as follows: "Potted strawberry plants put out now will produce a full crop next Spring." The same announcement is made in some circulars. Many of those who make it know better, or, at least, ought to. It is very misleading especially to those who are not "well up" in strawberry culture. There is a certain advantage in the early planting of *good* pot-grown plants; but that is no reason at all for misstatements. Good pot plants, put out in August and September, will usually produce about as much fruit as runners put out in the Spring will produce the following Spring; and that is a considerable gain, as it leaves room for an intermediate crop of another kind. That is the most that can be said of pot-grown plants, and it is a good deal. But no strawberry does its best when a year old. Very few kinds, in fact, give their greatest yield and best fruit till they are two or three years old. To those, however, who follow the matted system it makes but little difference, for they never see a strawberry in its best condition. They have something to learn, if they only knew it. Let me say briefly to the readers of the RURAL, that a *poor* pot-grown plant is worth less than a well-grown runner put out at any time. Get good pot plants if you would get the worth of your money. There are men who grow such, and pack them carefully; and there are others who do not.

I HAVE been about among the grapes lately, and everywhere the prospect for a full crop is very encouraging. As the sale of grapes in New York exceeds perhaps that of any other domestic fruit, the news will be gratifying to everybody. I must add, however, that the grape crop is never assured until the berries begin to color.

I AM pleased to learn that the American Institute will this year open a department for the encouragement of "Amateur Art Work." This is a move in the right direction that should have been made years ago. It is proposed to admit without charge the exhibits of apprentices and amateurs in all branches of mechanical, industrial and decorative art, subject, of course, to the approval of a committee appointed for the purpose. The ground covered will include painting, drawing, fancy work, embroidery, wood carving, sawing, etc. Full particulars may be learned at the Institute, Room 22, Cooper Union, New York.

A correspondent (p. 426), in an interesting letter from Tryon Valley, Lynn Co., N. C., says: "It will be seen in the agricultural reports of the United States for 1879, that the object of cultivating grapes under glass is to get clear of the moisture in the atmosphere." There is a mistake here. If a statement of that kind is made in the reports alluded to, somebody has been trying to make shoes who is not a shoemaker. The shoe is on the wrong foot. It is just the other way. It is the command of heat and moisture under glass which enables us to grow the foreign grape with so much success. I say this as the result of a long experience, and I have never heard of anything different from any grower of grapes under glass. This statement takes me by surprise. I have grown foreign grapes in a dry atmosphere under glass, (and have some so growing now,) but the result has always been unsatisfactory, and a vexation from beginning to end. There is neither pleasure nor profit in it.

I have no doubt, however, that your correspondent can grow the foreign grape in the open air on that famous "Thermal Belt," and make a fine wine. The foreign grape is hardy enough, even in the latitude of New York. The trouble is not hardiness or the want of it, but *mildew*, which has hitherto defeated all attempts to grow the foreign vine in this vicinity in the open air, except here and there a vine in a favored locality, and in such a locality I have seen the Black Hamburgh more than forty years old bearing fair crops of fruit. The vines start well in the Spring, and set their fruit, but just so soon as our dry, hot weather sets in, mildew attacks both foliage and fruit, and that ends it. I would suggest to your correspondent that he try the Black Hamburgh, Esperione, (if he can get it) Riessling, Traminer, and others of that kind; and let him on receipt of the vines, wash both roots and canes with soap-suds.

I have noticed many times the Japan Climbing Fern (Lygodium scandens), twines to both the right and the left. I have just been looking at it, and find two shoots twining in opposite directions on the same string. It looks singular. I think I have seen the same thing in some other twining plant. Have others noticed it?

Last Spring three sets of new coleus were sent out, comprising forty or more so-called different kinds. The greater part of them are of the Multicolor type. There are some that are very pretty, but they are nearly all much too delicate to be of any use out-of-doors, and many of them are of a very changeable character. Many of them, too, are so much alike that it would require a remarkable microscope to discover any difference in them. (Hiawatha and Parroquet, for example,) and it seems almost like a fraud to offer them as different kinds. All the coleus now in cultivation could with advantage be reduced to a dozen kinds or less, and old Verschaffeltii (as the RURAL has more than once intimated) would still be the best of them. HORTICOLA.

JOTTINGS.

"HORTICOLA."—I am glad to welcome Horticola back to the field of horticultural literature in the columns of the RURAL. He wields the pen as gracefully, pleasantly and interestingly as of yore, and with apparent old-time vigor. May he long continue so to do. Knowing as I do that he has keen perception combined with good judgment and a mind of his own, I am assured he will

"Nothing extenuate, or set down ought in malice,"

but cautiously and truthfully speak of things as he finds them, commending nothing except he firmly believes it deserving. A life long horticulturist, a close, careful and extensive observer, his notes cannot fail to be of interest to RURAL readers.

THE BEST CONTRIVANCE TO KEEP BIRDS FROM THE STRAWBERRIES that I have ever found is to hide the berries under the foliage provided by nature. In beds under the "let-'em-run" system, with plenty of foliage, the birds take very few, except on the outer edges. In the hill system the stools should be so close that the foliage meets each way; the birds would then confine their invasions chiefly to the paths; they are rather cautious about getting in out of sight for fear of being surprised.

HORTICOLA'S mention of an old-fashioned garden awakens in me memories that go back to childhood's happy hours, to the garden long since passed away where we took our first lesson in horticulture, where the "pinies," "marigolds," "sweet williams," "johnny jump-ups," and "morning glories" comprised our floral treasures—gone, all gone—and our assistants and companions are scattered far and wide. Ah! who as he contemplates those childhood days does not sigh "and wish he were a child again." Yes, in our thirst for the new, let us not forget to retain a place for a few of the old friends of our infancy.

THE DROUGHT DOES SOME GOOD.—I am inclined to the belief that the drought, severe as it has been, was a benefit in some respects; for instance, our apples, plums, peaches and cherries are much fairer than usual. Of the latter we have had bushels, smooth, fair, and of the best quality. I have not seen a dozen wormy ones this season, from which I infer that the drought in some way has materially lessened our curculio crop. It has been a wonder to me how our cherries and strawberries could develop as well as they did with such a high and dry temperature. Cherries were a daily diet for over a month. K. I. T.

[Anything from the pen of the above writer would be welcome at any time. We wish to say that we welcome at any and all times short, condensed notes (of which the above may be taken as samples as to length) from any of our contributors. The *pith* is what the RURAL wants.—EDS.]

Floricultural.

THE TRUMPET CREEPER—Bignonia or Tecoma radicans.

WE wish to call particular attention to this magnificent shrub, as its blossoms are larger and more gorgeous than any other we know, which is cultivated in our latitude. The one on our lawn has grown up as a shrub, and not as a creeper, the winter killing just as much of the ends of its branches as was necessary to make it a shrub, instead of extending it in long vines.

Our Bignonia is now six feet high, with a circumference around the outer ends of its branches of 17 feet. The petals of the blossoms are three to three and-a-half inches long from the green calyx, forming a cup three to four inches broad on the top. Their color is a resplendent light red on the outside, and bright scarlet, varying to light orange within. We have counted from 400 to 500 flowers on this shrub, the number varying somewhat as the season is wetter or drier. The reader may now judge what a gorgeous display this shrub makes when in full bloom. It is the admiration of every one passing the road fronting our lawn; at the time of its blossoming, inquiries are frequently made of its name and where it can be purchased.

It began to bloom July 11th, 1878, and continued till August 20th. On September 10th a few more blossoms came out and continued till the 17th. July 8th, 1879, it began to bloom and continued nearly as above. This year, 1880, it began to bloom June 26th. We cannot account for the earlier blossoming this year, except from the dry season, and the unusual excessively hot weather of the latter part of May and early in June. We know of no shrub which keeps in flower so long during the season as this Bignonia, or that presents so magnificent a sight.

Field Crops.

NOTES FROM THE RURAL FARM.

RARELY in years past at this season have we had so many days of rain and gloomy skies. The old pastures are green and beautiful in consequence. The long drought and excessively hot weather destroyed both clover and Timothy, and wheat stubbles are again being plowed up and reseeded. Up to this time there has never been a more favorable season for corn than the present. It is very tall and well set. But this remarkable growth has been somewhat at the expense of roots which, in the soft muddy ground, could scarcely hold up the stalks should a brisk wind occur. Our Mold's Ennobled oats gave us a great yield, being raised upon ground that suffered less from the drought than the higher surrounding farm lands. One-twentieth of an acre was measured off from which we shall be able to determine the yield of the entire field with tolerable accuracy. We are now thrashing and weighing our experiment wheat plots—a tedious task—and shall soon be enabled to give our readers whatever there may be in connection with them that is worth their knowing. We may remark, however, that Mold's (English) white and red winter wheats have proven nearly worthless here. The straws are heavy and short—the leaves broad. The heads are large and showy, but the kernels are small and shriveled. We know not what effect the wet weather may have upon our potato experiments. At present the vines are thrifty and green.

Our eleven kinds of the cow-pea have only begun to vine within the past few days. They were planted in drills 12 feet apart, upon sandy land without manure.

Early Minnesota Cane and a new kind of Broom Corn of each of which a half acre was sown were killed by the drought. We received from Mr. J. J. H. Gregory, Marblehead, Mass., the seeds of a new kind of Chinese fodder plant. The seeds germinated freely, but less than a dozen plants have withstood the burning drought. From the same seedsman we received a package of sweet corn said to be the earliest of any known. It was planted May 20, at noon. We picked our first mess on the morning of July 20—61 days. It is very prolific, bearing its ears almost upon the ground. They are of medium size—8-rowed sweet and tender.

Weeds are having their own way and field work is and has been for a week at a standstill. Our oats are still in shocks and we despair of getting it in stacks in a sweet condition.

BEAUTY OF HEBRON POTATO.—This potato proves with me a valuable acquisition. Planted upon the same ground and at the same time as the Early Rose, it was large enough for cooking 10 days sooner than the Rose. The yield is double and the quality at least as good. Thanks to the RURAL for disseminating it.

NELSON RITTER.

Farm Economy.

A SCIENTIFIC VIEW OF COMPOSTS.

PROFESSOR F. H. STORER.

It is a very old maxim that by mixing dung and peat (*i. e.*, swamp mud or marsh mud) in the proportion of one load of the former to two, three, or four loads of the latter, according to the quality of both, and allowing the mixture to ferment, a new and valuable kind of manure will be obtained, different from either of its components and on the whole superior to them.

The truth of this conception admits of no doubt. The merit of the method of procedure has been proved by so many different farmers, in different countries, that the maxim must be accepted as one resting upon a solid basis of fact. It has been largely acted upon in many localities, particularly in Scotland and in some parts of New England where the making of composts was at one time highly approved. There cannot be the least doubt that such composts are admirably well suited for fertilizing a multitude of soils in many localities. The fact of their being useful and convenient manures was proved long ago. The question which interests the farmer to-day is whether he can get in any other way, at less cost, as good a manure as the compost yields him; and upon this point there is great need of precise experiments made to determine whether, at a given farm, composts are not really as economical as they are efficient.

As commonly made, peat composts are to be classed among nitrogenous manures; and it is to be remembered that those nitrogenous fertilizers which are commercial products, to be bought with money, are precisely the hardest to get and the most costly of manures. There is a strong incentive therefore for the farmer to make them himself, if he can do so with economy. It may here be said, in parenthesis, that though nitrogenous food is the kind most commonly predominant in composts it would not be difficult to prepare composts which should contain all the other important elements of plant food beside nitrogen, and there are probably many farmers so situated that they should find their profit in so doing rather than in buying mixed chemical fertilizers such as crowd the markets and darken counsel nowadays.

Many approved methods of making composts have been put upon record in past years. Professor Johnson, for example, refers to many of them in his little book on "Peat and its Uses," and the back volumes of most agricultural newspapers contain numerous recipes. It is not improbable, however, that most of these recipes admit of being improved, in the light of existing knowledge, and it is much to be desired that those farmers who make composts nowadays should strive to improve upon the older practices.

There are several different kinds of chemical changes to be distinguished in the preparation of composts. In the first place there is the hot putrefactive fermentation, by which the condition of the peat or sods or other inert material is greatly changed, and the latent power of the materials to promote fertility is brought out. The character of this change may be illustrated by a reference to the old French method of making a quick manure from bone-meal. The bone-meal was thrown into small heaps, with or without the addition of a little loam, and the heaps were moistened with putrid urine or barn-yard liquor. Fermentation speedily set in and the heaps became hot while the pungent odor of ammonia was freely evolved. Bone-meal thus fermented was found to be a powerful forcing manure, much quicker of action than the unfermented meal. Before the introduction of Peruvian guano, which it is well fitted to replace in many circumstances, the fermented bone was highly esteemed. Now in this case there can be no doubt that the animal matter of the bone suffered fermentation and that ammoniacal and other products were formed such as are approved sources of nitrogenous food for plants. Unfermented bone-meal used by itself, is a manure of less rapid action because its nitrogenous constituents are comparatively speaking inert. They decay rather slowly in the earth and hardly at all if the earth be dry. But by the preliminary fermentation the character of these compounds is so changed that they become a manure of quick action. And so it is when the still more inert nitrogen compounds in peat are fermented. They undergo such changes that an active manure is the result.

With regard to the action of the "ferment," *i. e.*, the dung-liquor, in the case just now in question, it used to be said that matter in a state of decomposition or change is apt to impart this condition to other matters with which it comes in contact. The idea was in some sort based on the familiar fact that by placing burning shavings in contact with cord wood we can carry forward, as it were, the chemical action and bring to pass the combustion of the wood. But it is now known that fermentations such as the foregoing are due to the presence of living organisms. The dung liquor added to the bone-meal was charged with the organisms which cause putrefactive fermentation, just as yeast is charged with organisms proper for the fermentation of dough. So, too, in the compost heap built of peat and dung, the rotting dung is, so to say, the yeast whose inmates ferment the peat. And the dung and peat, together, afford fit feeding ground for the increase and multiplication of the organisms.

It is manifest, in this point of view, that those kinds of dung which ferment most readily will be most efficient as excitants in the compost heap; and it has been found in practice that "hot" manures, like the dung of horses and sheep, urine and night-soil, are particularly well-suited for the purpose. There are some peats so constituted that they will ferment of themselves in warm weather, even in the bog, doubtless from becoming charged with ferment germs deposited from the air. And there are other kinds that would slowly ferment in the same way, after having been weathered, if they were kept properly moist in warm weather. But by adding the active ferment in quantity, in the form of dung or the like, time is gained and an efficient, methodical action insured. In point of fact, few better examples of the hot fermentation can be found than those witnessed in the mixtures of straw or leaves and horse manure which are made by gardeners in the preparation of hot-beds. In this case, the heat generated by the mixture and the mode of its generation are considerations of the first importance; and special care is taken that enough straw or leaves shall be mixed with the dung to insure a regular, long-continued and not too rapid fermentation, with the attendant evolution of heat. Care is taken also not to use the mixtures until the first flush of fermentation has been checked, for the excessive heat generated in the earlier stages would be fatal to most seeds and plants.

Some methodical experiments made by Ulbricht in Germany upon bone-meal are interesting both as illustrating the character of the first fermentation in the compost heap and by enforcing the need of keeping this fermentation under control, in order to avoid too great a waste of the nitrogenous ingredients. Five hundred and sixty pounds of fine bone-meal were moistened with 12 gallons of barn-yard liquor, thoroughly mixed with some 1,100 pounds of "compost earth," and shaken into a heap about eight inches high. The temperature of the interior of the heap was then taken by means of a thermometer, and the increase of temperature was noted from time to time as the fermentation proceeded. In the beginning the temperature of the heap, taken at a depth of four inches, was 63 deg. (F), but in the course of 24 hours it rose to 117 deg., while an abundance of ammonia gas and steam was evolved, and at the end of 48 hours the maximum temperature of 129 degrees was reached. The fermentation then slowly subsided and the heap gradually cooled off. At the close of the third day the thermometer marked 122 deg., and it stood at 118, 113, 95 and 81 deg. at the end of the succeeding days respectively. No odor of ammonia was perceptible after the the seventh day. In the beginning the heap weighed 1713 German pounds and consisted of

Ash ingredients	1,215	lbs.
Water	331.5	"
Dry organic matter	167	"
	1,713.5	"

it contained 23.3 pounds of nitrogen. At the end of the second day when the fermentation had reached its maximum, the heap contained of

Water	159	lbs.
Dry organic matter	158	"
Nitrogen	19.7	"

so that three and a half pounds of the nitrogen of the bone-meal had been lost in the course of 48 hours, that is to say 15.6 per cent. of the original nitrogen. During the subsequent five days the weight of the heap diminished but little, and scarcely any more of the nitrogen was lost.

A subsidiary question of a good deal of interest is whether the dung used to start fermentation in the compost heap does not there decay in a more advantageous manner than it would have decayed in the original dung-heap. There are some reasons for believing that the comparatively speaking moderated and methodizing decay which the dung undergoes in the compost heap may tend to hinder the decomposition and loss of its nitrogenous constituents, which are apt to occur to a considerable extent in the dung-heap proper. The good results of the common practice of throwing peat, loam, straw or even sand into the barn cellar "as absorbents" may really be due in some part to the action of these materials in moderating the decay of the dung and changing the character of the hurtful decompositions to which dung is liable.—To be continued.

Farm Topics.

INFLUENCE OF THE "PRESS" UPON THE FARMER AND HIS "SURROUNDINGS."

RICHARD GOODMAN.

Madame De Stael wrote a treatise entitled "The Influence of Literature upon Society," the object of which was to show the reciprocal influences of literature, religion, manners and laws. A gentleman recently traveling through Massachusetts on horseback, accompanied by his son on a bicycle, noted how much better than a few years ago bread was at the various hostelries, and ascribed the improvement to the Centennial Exhibition at Philadelphia, where the Vienna and other breads created in many a new appetite for cereals, and taught, the hitherto untraveled Yankee woman how much virtue there is in the "staff of life," if made properly. But other influences have been at work for improvement, not only of bread, but of all other matters connected with agriculture and home comforts, and another De Stael might find amusement in tracing to the fountain-heads the divers causes which have put yeast into the whole leaven of rural society, and not only prevented its dropping to a European level, but so elevated it that, as has been remarked by an intelligent English traveler, among the working classes of the United States there are no *common* people. That is, we have here no low grade of agricultural laborers as in Great Britain and generally on the Continent, but as the English girl, on a visit here, said, when rebuked for skating in company with a butcher boy, "she was not certain but he might yet be President of the United States," so there is a feeling at the bottom of all the hopes and aspirations of even the sons of the most moderate farmer and artizan that the highest positions in civil life can be reached by any one whose talents command success, without being handicapped by the accidents of birth or occupation.

Perhaps the three most prominent influences which have tended to the improvement of agriculture and its advance practically and scientifically have been the agricultural newspapers, the town, county and State societies with their annual exhibitions or cattle shows, and the example of the gentlemen of means with tastes for farming, who have in all portions of the country entered as a wedge between the adhesive habits of the plodding farmer, and broken into them, and emancipated him from their control. The agricultural schools and colleges whose influences are just beginning to be felt, hardly made any impression at the start, owing to the prejudices of the old-fashioned tiller of the soil against "book larning," and what he called the "new-fangled notions" of scientific instructors, and it is only now when the young men, more ambitious than their sires, return from these schools, and put in practical operation what they have learnt, and develop the resources of the farm and turn their knowledge into money, that these creations of the general government are estimated at their true value, and we shall yet find them appreciated more and more highly by the whole community agricultural and otherwise.

But it is the continual dropping that wears into even the stone, and conservative as the farmer is, and ever has been, no influence less continuous, progressive and puncturative than the constant preaching of the agricultural papers could have softened his pachydermatous nature, and prepared it for the more irregular activities which have assisted in converting the modern agriculturist into the humane biped he has become, and his farm into its present, comparatively lucrative source of income. I say "humane," for the old-fashioned, non-reading farmer was, and is, inhuman, especially to women and "other cattle" under his control, and he looked with callous indifference upon the slavish existence of the female head of his household, who rose at daylight to get his breakfast, and toiled the live-long day at the wash-tub, the butter making, in the kitchen at the cooking and ironing, and risked her life going to and from the distant privy through the wet grass, and brought the wood from the shed, being lucky if she did not have to split it herself, and the water a dozen times a day from the well, rushing then into the cold and wet from the overheated kitchen.

Those of us who are living in the more enlightened portions of the country think that all these evils have passed away, and wonder that the agricultural papers yet harp upon that string; but there are many farmers and even villagers well-to-do in the world with thoroughbred cows worth hundreds of dollars each and fancy horses, who yet live in their kitchens, sleep all Summer in feather beds, eschew fresh meat and vegetables in proper variety, know and care nothing about the conveniencies of the earth-closet, snuff up the odors of the sink refuse under the buttery window, see their "women" pine away before their eyes, and trust in Providence and that great secret of wealth formulated by Dr. Franklin and so much abused by his countrymen, "When a cent is got, keep it." What an existence for a rational human being do many of these farmers and their families lead day after day, subordinating everything to work and accretion of substance, depriving themselves of all comforts, to say nothing of the luxuries which all are entitled to in the present age, even eating food not for the enjoyment of it, but as a means of existence, and selecting it for its cheapness and not even for its wholesomeness, going the rounds of the daily toil as the horse in the tanner's yard, without much more mental exercise than it, and avoiding all amusements and rational exercises as improper interruptions of of their slavish labor.

This is no fancy picture even of a New England farmer's existence, for one of that class but recently died near me, who labored so from dawn to night that he was unable to lie straight in his bed, and had often to kneel at a chair, not in thanksgiving for blessings vouchsafed, for he wouldn't receive any, but to get a position which relieved the aching of his overworked body. The whole household, and especially the women, had to keep pace with his murderous stride, the cattle deprived of fresh air in ill-ventilated stables were sick and filthy, and the only consolation of these poor-rich people's existence was that their money increased while their enjoyments, if they possessed any, became beautifully less.

It will be time enough for the newspaper sentinels to forbear their constant warnings when the farming men are willing to provide their wives with everything necessary for their comfort and *have them fairly share the earnings of their mutual toil*, when the earth or water-closet replaces the horrible privy, when the refuse of the sink is carried under ground to a distance from the house, when the water is accessible in the kitchen by means of a pump, when the wood is plentiful and dry, and handy to reach, when the food is of a nature to agree with the constitution of women and children who have not as the men the continual antidote of fresh air, when a portion of each day is devoted to some rational relief from work, either in driving, walking or visiting, and the evenings are enlivened by sociable converse, reading or amusements, when the children are not overworked, but afforded all the advantages of education and plenty of play, when the cattle are kept clean and healthy, the hay cut early, the garden looked upon as an important adjunct in the enjoyment and preservation of health, and when, in fine, the farmer looks upon himself and family as deserving of all the reasonable comforts and enjoyments of life as any other human creature, and bestows them upon himself and them.

Lenox, Mass.

COUNTRY LIFE.

COL. F. D. CURTIS.

Observations Among Rural Subscribers.

Maple Avenue is a street a little over a mile in length, running due north and south, lying midway between two parallel roads half a mile apart. The road is bordered by maple trees interspersed with elm, and by the enterprise and benevolence of a former resident, Ammi Dows, now deceased, it was graded the entire length and the road-bed made smooth, hard and permanent with gravel. It is a memento ever reminding us of a generous, public-spirited and noble man, who brought to the homestead of his fathers a fortune made in New York, which he was willing to spend for the benefit of his less fortunate neighbors. This street is a continuous meadow or lawn kept with care.

Haying begins on Maple Avenue with mowing the road. This is the model street of the town and of the county, and every farmer takes the Rural, including the minister, the Rev. C. W. Backus, who now owns the Dows' homestead. Although Maple Avenue is a public highway, the expense of door-yard and garden fences, has been dispensed with in several instances and no inconvenience is experienced. This innovation, besides reducing expenses, has made the residences much more attractive by doing away with the untidy and cramped effects of old fences and dooryards. Mr. Backus has ornamented his farm front with a Honey Locust hedge, and at the same time made in the future a shelter for his orchard. The finest barn in the town is on this place. It combines wagon house and stable all under one roof. The scaffolds and flooring overhead are made of matched stuff, so there can be no litter below. A railroad track on the top is used to elevate the hay aloft and chutes convey it to the points where it is needed for feeding, where it is caught in boxes, which prevents dust and "muss" on the floor. In building his barn Mr. Backus coupled convenience with comfort for his animals and the idea that a barn should be ornamental as well as useful. He thinks that unsightly outbuildings often render a home repulsive which might otherwise be attractive.

Mr. Veeder last year raised the best crop of corn. He did it by thorough tillage. His oats

on the same field this year show the effect of this cultivation and are now ahead of all the others. Esquire Davidson, who now resides on this street, and Mr. Wicks, we suspect, have made an advance this year over their former good farming, taking neighbor Veeder as an example, and have worked their corn most vigorously, with a prospect of not being excelled. These farmers assert that corn will grow much faster while it is being worked, and in dry weather it should be cultivated often, as the more the ground is stirred and the mellower it is, the better it will stand the drought. Esquire Davidson and Mr. Wicks excel in meadows; better Timothy than they have we have not seen. Both of them are cutting this grass while in blossom. They think it makes better hay then, while the stems are soft. By the time the seeds form the stems become woody and lose their virtue, and the crop is made much more exhaustive by the maturing of the seed.

These farmers keep sheep as well as cows and make early lambs the source of profit with their sheep, counting on the wool to cover the cost of keeping. Forty-two cents a pound for their wool is a remunerative price, with from three to four dollars for each lamb. Their flocks are grade South Downs.

Mr. Wicks is working into Jerseys for his dairy, while Esquire Davidson has had faith in them for years. The amount of butter he makes from them is largely in excess of that from the same number of native cows. He once had a notion for grade Short-horns for milkers, but has given it up, as he argues it doesn't pay to keep a big cow for a number of years simply because she is big and will make a hundred or two pounds of beef more than a smaller one, which all of the time will probably make more butter. The difference in one season's keeping will pay for all of the difference in beef, and the extra feed for all the other years is thrown away. Esquire Davidson has been raising and fattening steers for market, but as the Winters are so long he doesn't think they pay as well as sheep or cows.

These farmers think that a stiff sod makes the best foundation for a crop of corn, and a good sod is best made by using plenty of manure with the wheat or rye when the grass seed is put in. It takes root better and doesn't kill out as much. They own improved implements, as by their use they save labor and can make more thorough tillage. Mr. Wicks works his farm of more than 100 acres with one team of horses. He keeps them up the year round, and although it is a little more expensive, by so doing they will do almost as much as two teams running to grass or poorly fed. Esquire Davidson has not forgotten the old notion for oxen, and they make a second team and when fully grown are turned into beef and a younger pair takes their place. In this way their growth is clear gain, which is often equal to double the first cost. These farmers have the independent ideas of their forefathers and raise their own breadstuffs.

Both of them have their own kind of corn which they have grown for years, Esquire Davidson favoring the small 12-rowed Dutton, while Mr. Wicks raises a superior variety of white. A row of apple trees lines the highway in front of a part of Esquire Davidson's farm, which bear excellent fruit. At Kirby Homestead, also on Maple Avenue, roots and stock are special features. Pigs are one of the leading kinds of stock. The surrounding country has been benefited by the stock bred on this old farm. An experiment is going on this season to determine how cheaply pigs can be raised and fattened. The proprietor expects to slaughter 125 pigs, and to grow them mainly on clover and roots, giving the young ones rations of corn three times daily. They are now doing well. He thinks he can make pork for three cents a pound with his system of feeding and management. He insists this is the only way we can compete with the West.

THE OUTSIDE AND THE INSIDE.

RUST IN THE SMALL FRUITS.—For a few years past fruit growers have been as much troubled with rust on some of the small fruits as they have been with blight, mildew and rot on the grape. This year strawberries were attacked worse than usual and earlier, and no small share of the blackberry vines, where the plant had some time stood, has been so far injured as to have had a full set of fruit nearly spoiled. No reference is here had to the *orange rust*, which is a thing by itself, but to a species much less colored and pronounced, but none the less fatal to the perfection of the fruit. Heretofore the Snyder, among blackberries, and the Wilson, among strawberries, have been hardy in every respect, but this year the fruit has been on many patches either wholly lost or greatly deteriorated. But in most cases it has been observed that the worst attacks of this new form of rust (if it is a new one) have appeared on fields which have previously borne two or three large crops—or on and which has been previously considerably cultivated in other crops. Further, on well manured, nicely planted patches, the rust, if it appeared at all, has been quite light and its attacks have not seriously injured the fruit. In fine, it appears that just in proportion as the lands have been exhausted of the mineral constituents of plant food, just in that proportion the rust has been violent and destructive. The inference then is, that fruits, and especially the sour fruits, are very exhaustive crops—that there can be no such thing as success in small fruit growing except by the renewal of the plants and the enriching of the field by mineral manures every third or fourth year; and finally, attacks of rust, in almost any form, are more due to the weakened state of the plant for the want of suitable food, than to any real and inherent noxiousness in the rust germ itself.

In the rearing and care of domestic animals and in the cultivation of plants the aim of the producer should be to furnish his stock healthful and abundant food and equally healthful surroundings, and in that way escape diseases which confine their attacks mostly to the weakly. In a majority of cases where an animal is attacked by a violent form of disease, it dies; but if it lives it has cost more than it is worth to save. But in the case of diseased vegetation of any kind, recovery is still more rare and therefore our efforts should be rather to prevent attacks than to attempt a cure after the attack is made—for such attempts are sure to cost more than they come to. Therefore, when rust, mildew and blight come, if their progress cannot be arrested at once by a timely application of manures or fertilizers, it will be found far more profitable to grub the diseased vegetation up, and replant anew, after supplying the soil with something more than the original complement of manures and fertilizers.

THE FRENCH REPUBLIC AND AGRICULTURAL EDUCATION.—A paragraph is going the rounds of the press affording the interesting intelligence that "the French Government has ordered a course of teaching in agriculture in every primary school in the country." I suppose this action must be accepted as a right and proper thing on the part of the republican government of France. But what shall be said of another, and older, and many think a better and a greater republic, the governing powers of which have suffered a vast system of schools endowed for the express purpose of teaching agriculture, to lapse into the insignificant form of what Goldwin Smith calls "One-horse Universities." If the Republicans of France deserve high praise for that recognition of agriculture, shall it be praise or censure that shall be meeted out to a collection of lawyers and politicians which deny a few thousand dollars to the Agricultural Department and refuse to make its head more than a registering clerk?

AN EXPERIMENT WHICH OUGHT TO BE TRIED.—It is not a little singular that no attempt, so far as reported, has been made to ascertain at how low a cost price cotton could be grown when undertaken under favorable circumstances and on a large scale. The cotton crop of '78 left first hands at something between seven and eight cents, and there was a universal complaint that the crop did not pay and that the cotton country would soon be impoverished, if such prices continued. Fortunately the following year afforded a crop of unusual excellence, of great extent and for which great prices were obtained, the advance in price over the previous year being fully three cents a pound and the increased yield more than a half a million bales. What the outcome of the crop of '80 will be, it is too early to speak of with confidence, but the reasonable chances are that it will be something more than an average one, for which fair prices will be had. But referring to the title at the head of this paragraph, I repeat that it is a singular circumstance that no one has attempted to ascertain at how low figures cotton can be grown, notwithstanding it is the main crop of ten great States, amounts to five or six million bales annually and fetches into this country, outside of that which is consumed at home, something like $250,000,000.

In the case of Indian corn, the great and the leading cereal, the late Mr. M. Sullivant of Illinois, sometime since informed us corn could be grown for ten cents a bushel for the field work up to the epoch of maturity; but almost another ten cents would be absorbed in the husking, cribbing and shelling, making the cost of corn 20 cents per bushel in Illinois where grown on a grand scale. As for wheat, Mr. Dalrymple and others of the Bonanza farmers of the Northwest, have demonstrated that cereal can be grown for something like once and a half the sum named by Mr. Sullivant, or from 30 to 35 cents a bushel, and now it seems to remain for some Southern planter of equal acres, energy and enthusiasm to show us how cotton may be grown for five and perhaps four cents and upwards. And it would appear that the thing can be done, since there is no reason for supposing those vast improvements in methods of culture adopted by Messrs. Sullivant and Dalrymple, and which enabled them to make crops at the cost reported, may not be applied to the cotton crop, and with similar results. And the time is not far off when the thing will be done, for at the late meeting of the Mississippi Valley Cotton Planters' Association, at Vicksburg, measures were taken to hold future fairs at New Orleans, Memphis, Little Rock and Montgomery, for the purpose of showing and comparing the various kinds of cotton-growing implements, with the ulterior intention of so improving them, and inventing others, that the farmers of the South may have the use of a system of machines which will enable them to do for the cotton crop what other machinery has done for the great cereal and some of the commercial crops of the North.

Perhaps there is something like a sufficient reason why the cotton growers of the upland portion of the cotton belt should stick to old methods and continue the use of antiquated tools and clumsy and inefficient machinery—the broken surface of the country, the accidents to which the land is liable, and its partially impoverished state may be the reason and explanation—but for the vast alluvial and level tracts of land in Mississippi, Louisiana, Arkansas and Texas, admirably suited to the cotton plant, there is no more excuse for the continuance of the old methods of cultivation, than for the farmers of the prairie of Illinois to grow corn after early New England methods. What machinery has done for the cereals on the fertile prairie of the West, other improved machinery will do for the cotton crop on the rich alluvial on prairie land of the South and Southwest, and when the time arrives, we may hope to see as great an increase in the sum of the cotton crop, as we have seen since 1870 in the production of the cereals.

Champaign, Ill. B. F. J.

Entomological.

NOTES ON CABBAGE INSECTS.

Though the Rape or European cabbage butterfly first appeared here three years ago, last year it was so abundant all over the State, that there were more of them to be seen than of all other kinds of butterflies, and even by "eternal vigilance" it was well-nigh impossible to raise cabbages without the heads being eaten by the caterpillars so as to be unfit for use. As these increased, the native Southern cabbage butterfly--Pieris Protodice--decreased, till last year it was a rare thing to see one of the latter.

Besides these two cabbage insects, there appeared last Fall another caterpillar, a little smaller than the Rape worm, the larva of a moth—Pionea Rimosalis—that we may call the Pionea worm. These are from one-half to three-quarters of an inch long, gray along the sides with a yellowish stripe along the stigmata or breathing pores. The back of the worm is blackish-gray crossed by transverse white lines of which there are five to each joint. These worms, when they reach their growth, enter the ground to pupate, where they weave for themselves a tough cocoon of silk covered with dirt on the outside. Inside of this the worm undergoes its changes, all but the Fall brood coming out as moths in two weeks. Last year the Rape worms were the most destructive till late in the season, but this year the Pionea worms have been more destructive than the others. In fact, the Rape butterflies are not so numerous as they were last year, while the Protodice are increasing so that one sees more of them just now in the fields than of the Rape. This shows that the parasites of the Rape are increasing, and these are not wholly confined to insects, for in some places the worms are attacked by a fungus disease, I am told, that is killing a great many.

In habits of eating, this Pionea cabbage worm somewhat resembles the Rape in that it not only eats the outward leaves but those forming the head as well, and is fully as bad as, if not worse than, our European importation. There must be three broods of the Pionea worms and possibly four or five, for the following reasons:—On June 10th we had full-grown worms which produced moths by June 25. The eggs from these produced the worms that have just disappeared from the cabbages, full-grown, to pupate. Last year we had worms late till the cabbages froze—and by the way, I do not know of a cabbage worm that will stand more freezing than this. The chrysalids I wintered over produced moths from April 23 to May 8. Moths hatching at that time would probably produce worms that would mature by the time I took them full-grown from the cabbages, June 10. This will give ample time for four broods of the worms from the first of May to the time that the cabbages freeze in October, and I am inclined to think there are that number.

The Protodice worm does but little injury here to cabbages, it feeding more on other plants of the cruciferæ family. I have not seen a cabbage Plusia worm on the cabbage in three years.

No remedy short of Paris-green seems to be of any account and that, of course, is out of the question, for the cabbages on which it might be employed would be unfit for use. Salt, pepper, soot and everything else that in one or two instances have seemed to warrant recommendation have, in nine cases out of ten, failed. I know of a few persons who are raising small patches of cabbages, keeping them from the worms by picking the latter off, and that seems about the only way to get rid of the pest. G. H. FRENCH.

Normal University, Carbondale, Ill.

Industrial Societies.

ANNUAL FAIR LIST.

We herewith present a list of State and local fairs which will be held this Fall in various parts of the United States. Having been compiled for the most part from statements made by the officers of the several organizations, we believe the information here offered to be thoroughly trustworthy. Secretaries of associations, the fairs of which are not given here, will do us a favor by notifying us of the time and place of their respective fairs.

STATE AND INDEPENDENT FAIRS.

Alabama, Montgomery	Nov. 8, 13
Am. Institute, New York City	Sept. 15, Nov. 22
Arkansas, Little Rock	Oct. 18, 23
California, Sacramento	Sept. 20, 25
Canada Central, Guelph	Sept. 21, 22
Central Michigan, Lansing	Sept. 27, Oct. 1
Central Ohio, Mechanicsburg	Aug. 24, 27
Chicago, Chicago	Sept. 8, Oct. 23
Cincinnati Indust. Ex.	Sept. 8, Oct. 9
Connecticut, Meriden	Sept. 21, 24
Delaware, Dover	Sept. 27, Oct. 2
Edinburg Union, Edinburg, Ind.	Sept. 21, 25
E. Enterprise, E. Enterprise, Ind.	Sept. 14, 17
Fat Stock Show, Chicago	Nov. 15, 20
Illinois, Springfield	Sept. 27, Oct. 2
Indiana, Indianapolis	Sept. 27, Oct. 2
International Sheep Show, Philadelphia	Sept. 20, 25
Iowa, Des Moines	Sept. 6, 10
Kansas, Atchison	Sept. 5, 11
Kentucky, Lexington	Aug. 31, Sept. 4
Kentucky, Louisville	Aug. 30, Sept. 4
Knightstown Union, Knightst'n, Ind.	Aug. 31, Sept. 3
Maine, Lewiston	Sept. 21, 24
Massachusetts Horticultural, Boston	Sept. 14, 17
Minn, Ag. & Mech. As., Minneapolis	Sept. 6, 11
Michigan, Detroit	Sept. 13, 17
Melbourne, Australia	Nov. 1, 6 mo.
Miss. Valley Hort. Soc., St. Louis	Sept. 7, 9
Missouri, St. Louis	Oct. 4, 9
Montana, Helena	Sept. 6, 11
National, Washington, D. C.	Oct. 4, 9
Nebraska, Omaha	Sept. 20, 25
New Eng. Ag. Society's Exhibition Worcester, Mass.	Sept. 6, 9
New Jersey, Waverly	Sept. 20, 27
New York, Albany	Sept. 13, 18
Northern Ohio, Cleveland	Aug 30, Sept. 4
Northern Kentucky, Florence	Aug. 31, Sept. 4
Northeastern Indiana, Waterloo	Oct. 4, 8
Northern Indiana, Ft. Wayne	Sept. 6, 10
Nova Scotia, Kentville	Sept. 27, Oct. 1
Ohio, Columbus	Aug. 30, Sept. 3
Ohio Tri-State, Toledo	Sept. 13, 18
Ontario Provincial, Hamilton	Sept. 20, Oct. 4
Pennsylvania, Philadelphia	Sept. 6, 18
Rhode Island, Cranston	Sept. 21, 23
South Carolina, Columbia	Nov. 9, 12
Southern Ohio, Dayton	Sept. 13, 17
South Eastern Indiana, Aurora	Sept. 7, 11
Texas, Austin	Oct. 19, 23
Vermont, Montpelier	Sept. 14, 17
Virginia, Richmond	Oct, 22, 29
Western Michigan, Grand Rapids	Sept. 20, 25
Wisconsin, Madison	Sept. 6, 10
White River Ag. Soc. (Vt), Bethel	Sept. 21, 23

STATE AND DISTRICT FAIRS.

Eastern Mich. Ag'l Soc., Ypsilanti	Sept. 21, 24
North Berrian & Mich. Lake Shore, Benton Harbor	Oct. 5, 8
Toronto (Can.) Exposit'n, Toronto, Ont.	Sept. 6, 18
Western New York	Sept. 29, Oct. 1
Southeastern Mo., Cape Girardeau	Oct. 12, 16
Sabina, Sabina, Ohio	Aug. 23, 27
Farmington, Mo.	Sept. 14, 18
Charleston, Mo.	Sept. 21, 24
Murphysboro, Ills.	Sept. 21, 24
Marion, Ills.	Sept. 28, Oct. 1
Paducah, Ky.	Oct. 5, 9
Chester, Ills.	Oct. 19 22
R. I. Industrial Exhibition and Cattle Show, Cranston	Sept. 21, 23

COUNTY AND LOCAL—NEW YORK.

Allegany, Angelica	Sept. 28, 30
Broome, Whitney's Point	Sept. 7, 10
Cattaraugus, Little Valley	Sept. 14, 16
Cayuga, Auburn	Oct. 5, 6
Chautauqua, Jamestown	Sept. 21, 23
Chemung, Elmira	Sept. 22, 25
Chenango, Norwich	Sept. 8, 10
Columbia, Hudson	Sept. 14, 16
Delaware, Delhi	Sept. 28, 30
Duchess, Washington Hollow	Sept. 21, 24
Erie, Hamburg	Sept. 21, 24
Essex, Westport	Sept. 14, 16
Franklin, Malone	Sept. 28, 30
Genesee, Batavia	Sept. 21, 23
Greene, Cairo	Sept. 22, 23
Hebron Town, West Hebron	Sept. 22, 23
Hemlock Lake	Oct 6, 7
Herkimer, Ilion	Sept. 14, 16
Jefferson, Watertown	Sept. 21, 23
Lewis, Lowville	Sept. 14, 17
Livingston, Geneseo	Sept. 22, 22
Montgomery, Fonda	Sept. 21, 23
Niagara, Lockport	Sept. 24, 25
Ontario, Canandaigua	Sept. 28, 30
Oneida, Rome	Sept. 20, 24
Onondaga, Syracuse	Sept. 21, 24
Orange, Warwick	Sept. 22, 24
Oswego, Mexico	Sept. 7, 9
Orleans, Albion	Sept. 24, 25
Otsego, Cooperstown	Sept. 27, 29
Queens, Mineola	Sept. 28, 30
Rockland, New City	Sept, 28, 30
St. Lawrence, Canton	Sept. 14, 16
Schenectady, Schenectady	Sept. 21, 23
Schuyler, Watkins	Sept. 29, Oct. 1
Schoharie, Schoharie	Sept. 21, 23
Steuben, Bath	Sept 28, Oct. 1
Suffolk, Riverhead	Oct. 5, 7
Sullivan, Monticello	Sept. 29, 30
Tioga, Owego	Sept, 28, 30
Tompkins, Ithaca	Sept. 14, 16
Washington, Sandy Hill	Sept. 7, 10
Wyoming, Warsaw	Sept. 7, 9
Yates, Penn Yan	Oct. 5, 9

COUNTY FAIRS IN OHIO.

Allen, Lima	Sept. 28, Oct. 1
Ashtabula, Jefferson	Sept. 22, 24
Athens, Athens	Oct. 6, 8
Auglaize, Wapakoneta	Oct. 5, 8
Belmont, St. Clairsville	Sept. 15, 17
Brown, Georgetown	Oct. 5, 8
Butler, Hamilton	Oct. 4, 8
Carroll, Carrollton	Oct. 5, 8
Champaign, Urbana	Sept. 7, 10
Clarke, Springfield	Aug. 17, 20
Clermont, Boston	Sept. 7, 10
Clinton, Wilmington	Sept. 7, 10
Columbiana, New Lisbon	Sept. 14, 16
Coshocton, Coshocton	Sept. 21, 25
Cuyahoga, Chagrin Falls	Sept, 22, 24
Darke, Greenville	Sept. 21, 24
Defiance, Defiance	Sept. 27, Oct. 1
Delaware, Delaware	Sept. 23, 24

Erie, Sandusky	Sept. 21, 24
Fairfield, Lancaster	Oct. 13, 19
Fulton, Tedrow	Oct. 6, 8
Gallia, Gallipolis	Sept. 8, 11
Geauga, Burton	Sept. 15, 18
Greene, Xenia	Sept. 14, 16
Hancock, Findlay	Sept. 29, Oct. 2
Hardin, Kenton	Oct. 5, 9
Hocking	Oct. 7, 9
Holmes, Millersburg	Sept. 21, 24
Jefferson, Smithfield	Sept. 22, 24
Knox, Mt. Vernon	Oct. 5, 8
Lake, Painesville	Sept. 22, 24
Lawrence, Ironton	Sept. 14, 17
Licking, Newark	Sept. 28, Oct. 1
Logan, Bellefontaine	Sept. 28, Oct. 1
Lorain, Elyria	Sept. 14, 16
Mahoning, Canfield	Oct. 5, 8
Marion, Marion	Oct. 5, 8
Medina, Medina	Sept. 14, 16
Mercer, Celina	Sept. 15, 18
Miami, Troy	Oct. 5, 8
Morgan, McConnelsville	Sept. 21, 24
Morrow, Mt. Gilead	Sept. 21, 24
Muskingum Zanesville	Sept. 7, 10
Ottawa, Port Clinton	Oct. 6, 8
Perry, New Lexington	Sept. 28, Oct. 1
Pickaway, Circleville	Sept. 28, Oct. 1
Portage, Ravenna	Sept. 2, 24
Preble, Eaton	Sept. 28, Oct. 1
Putnam, Ottawa	Oct. 6, 9
Richland, Mansfield	Sept. 28, Oct. 1
Ross, Chillicothe	Aug. 10, 13
Sandusky, Fremont	Sept. 28, Oct. 1
Seneca, Tiffin	Sept. 28, Oct. 2
Shelby, Sidney	Sept. 28, Oct. 1
Stark, Canton	Sept. 28, Oct. 1
Summit, Akron	Oct. 5, 7
Trumbull, Warren	Sept. 14, 17
Tuscarawas, Canal Dover	Sept. 28, Oct. 1
Union, Marysville	Sept. 28, Oct. 1
Van Wert, Van Wert	Sept. 30, Oct. 2
Warren, Lebanon	Sept. 21, 24
Washington, Marietta	Sept. 29, Oct. 1
Wayne, Wooster	Oct. 6, 8
Wood, Weston	Sept. 28, Oct 1
Wyandot, Upper Sandusky	Oct. 12, 15

MICHIGAN COUNTY FAIRS.

Allegan, Plainwell	Oct. 5, 8
Berrien, Niles	Sept. 28, Oct. 1
Branch, Coldwater	Sept. 21, 24
"ay Co. Ag'l Soc., Bay City	Sept. 28, Oct. 8
Benzie " " Benzonia	Sept. 23, 24
Calhoun " " Marshall	Oct. 4, 7
Cheboygan " Cheboygan	Oct. 4, 5
Genesee " " Flint	Sept. 28, Oct. 1
Grand Traverse Co. Ag'l Soc., Traverse City	Sept 28, Oct. 1
Gratiot Co Ag'l Soc., Ithaca	Sept. 21, 24
Huron " " Bad Axe	Oct. 7, 8
ngham " " Mason	Sept. 22, 24
Jackson " " Jackson	Oct. 4, 8
Kalamazoo " " Kalamazoo	Sept. 28, Oct. 1
Lenawee " " Adrian	Sept. 28, Oct. 1
Livingston " " Howell	Sept. 23, 24
Macomb " " Mt. Clemens	Sept. 29 Oct. 1
Mason " " Ludington	Sept. 21, 23
Macosta " " Big Rapids	Sept. 28, 30
Midland " " Midland	Oct. 6, 8
Newago " " Newago	Sept. 29, Oct. 1
Oakland " " Pontiac	Sept. 28, Oct. 1
Oceana " " Hart	Sept. 28, Oct. 1
Osceola " " Evart	Sept. 28, 30
Sanilac " " Lexington	Sept. 29, 30
Shiawassee " " Owosso	Sept. 21, 23
Tuscola " " Watrousville	Sept. 28, Oct. 1
Washtenaw " " Ann Arbor	Sept . 28, Oct. 1
Wexford " " Sherman	Sept 30, Oct. 2
Union Ag'l Soc., Ovid	Sept. 28, 30
Van Buren, Paw Paw	Oct. 5, 8
Volinia Farmers' Club, Volinia	Oct. 4, 5

COUNTY FAIRS OF INDIANA.

Allen (Northern Ind.), Ft. Wayne	Sept. 6, 9
Blackford, Hartford City	Sept. 21, 24
Boone, Lebanon	Sept. 6, 10
Bartholomew, Columbus	Aug. 31; Sept. 4
Carroll Delphi	
Clay, Brazil	Aug. 16, 21
Clinton, Frankfort	Aug. 23, 27
Daviess, Washington	Sept. 28, Oct. 2
Elkhart, Goshen	Sept 28, Oct. 1
Fayette (Eastern Ind.) Connersville	Sept. 7, 10
Franklin Brookville	Sept. 21, 24
Fulton, Rochester	Sept. 15, 18
Grant, Marion	Sept. 14, 18
Gibson, Princeton	Sept. 20, 24
Greene, Linton	Oct. 1, 8
Harrison, Corydon	Sept. 13 17
Hamilton, Cicero	Aug 24, 27
Hendricks, Danville	Sept. 14, —
Henry, New Castle	Sept. 21, 24
Howard, Kokomo	Sept. 13, 18
Huntington, Huntington	Sept. 15, 18
Jackson, Brownstown	Aug. 23, 27
Jay, Portland	Oct. 5, 8
Jefferson, Madison	Aug. 24, 28
Jennings, North Vernon	
Johnson, Franklin	Sept. 14, 18
Knox, Vincennes	Oct. 11, 16
La Grange, La Grange	Sept. 22, 24
Lake, Crown Point	Sept. 14, 17
Laporte Laporte	Sept. 29, Oct 1
Lawrence, Bedford	Sept. 15, 18
Madison, Anderson	Sept. 7, 10
Miami (Peru Driving Park & Fair), Peru	Sept. 14, 18
Monroe, Bloomington	Sept. 21, 25
Montgomery, Crawfordsville	Sept. 6, 11
Morgan, Martinsville	Oct. 5, 9
Noble, Ligonier	Oct. 6, 9
Orange, Paoli	Sept. 21, 25
Perry, Rome	Oct. 4, 8
Pike, Petersburg	Sept. 6, 10
Porter, Valparaiso	Sept. 29, Oct. 1
Posey, New Harmony	Sept. 14, 17
Pulaski, Winamac	Sept. 21, 24
Putnam, Greencastle	Sept. 6, 12
Randolph, Winchester	Sept. 15, 18
Ripley, Osgood	Aug. 17, 20
Rush, Rushville	Sept. 14, 17
Shelby, Shelbyville	Sept. 7, 11
Starke, Knox	Oct. 4
Steuben, Angola	Sept. 28, Oct. 1
Tippecanoe, Lafayette	Aug. 30, Sept. 4
Tipton, Tipton	Sept. 21, 24
Vigo, Terra Haute	Sept. 14, 18
Wabash, Wabash	Sept. 7, 10
Warren, West Lebanon	Sept. 6, 11
Warrick, Boonville	Oct. 12, 16
Wells, Bluffton	Sept. 21, 24

DISTRICT FAIRS OF INDIANA.

Bridgeton Union, Bridgeton	Aug. 23, 28
Dunkirk W Fair Association, Dunkirk	Sept. 7, 10
Fountain, Warren and Vermillion, Covington	Sept. 21, 24
Henry, Madison and Del., Middletown	Aug. 24, 27
Logootee A and M., Logootee	Sept. 14, 18
Middle Fork Fair, Middle Fork	Sept. 6, 10
Mitchell Dis't Ag'l Society, Mitchell	Sept. 29, Oct. 1
New Ross Union Ag'l Ass'n, New Ross	Aug. 16, 21
Prairie Farmers, Francesville	Sept. 14, 17
Russellville Union, Russellville	Aug. 23, 28
Switzerland and Ohio Co. Ag'l Soc., East Enterprise	Sept. 14 17
Thorntown Union, Thorntown	Sept. 20, 23
Union Ag'l and Mechan'l, Union City	Sept. 28, Oct. 1
Xenia Union, Xenia	Aug. 31, Sept. 3

COUNTY FAIRS IN ILLINOIS.

Adams, Camp Point	Aug. 30, Sept 3
Bo ne, Belvidere	Sept, 7, 10
Brown, Mt. Sterling	Aug. 24, 27
Bureau, Princeton	Sept 13, 16
Carroll, Mt. Carroll	Sept. 28, Oct, 1
Cass, Virginia	Aug. 17, 20
Champaign, Champaign	Sept. 21, 24
Christian, Taylorville	No fair this year
Clark, Marshall	Sept. 22, 24
Clay, Flora	Sept. 28, Oct, 2
Coles, Charleston	Sept 7, 11
Crawford, Robinson	Sept. 28, Oct. 1
Cumberland, Prairie City	Sept. 29, Oct. 2
DeKalb, Sandwich	Sept 14, 17
DeKalb, Sycamore	Sept. 14, 17
DeWitt, Clinton	Aug. 30, Sept. 3
Douglass, Tuscola	Sept. 14, 18
DuPage Wheaton	Sept. 8, 10
Edgar, Paris	Aug. 31, Sept. 3
Edwards, Albion	Sept. 28, Oct. 1
Effingham, Effingham	Aug 17, 20
Fayette Vandalia	Sept. 29, Oct. 1
Ford, Paxton	Aug. 31, Sept. 3
Franklin, Benton	Sept. 22, 25
Fulton, Canton	Oct. 4, 8
Gallatin, Shawneetown	Oct. 5. 8
Greene, Carrollton	Oct. 19, 22
Hamilton, McLeansboro	Sept. 22, 25
Hardin, Elizabethtown	Sept. 22, 26
Henderson, Biggsville	Sept 14, 17
Henry, Cambridge	Aug. 30, Sept, 3
Iroquois, Onarga	Sept. 7, 10
Jackson, Murphysboro	Sept. 21, 24
Jasper, Newtown	Sept. 21, 24
Jefferson, Mt. Vernon	Oct. 12, 15
Jersey, Jerseyville	Oct. 12, 15
Jo Daviess, Galena	Sept 28, Oct. 1
Jo Daviess, Warren	Sept. 14, 17
Kane, Elgin	Sept. 14 17
Kendall, Bristol	Sept. 7, 9
Knox, Knoxville	Sept. 13, 17
Lake, Libertyville	Sept. 23, 25
LaSalle Ottawa	Sept. 6, 10
Lake, Waukegan	Sept. 27, 30
Lawrence, Lawrenceville	Oct. 6, 9
Livingstone, Fairbury	Sept. 8, 10
Logan, Lincoln	Aug. 23, 28
Logan, Atlanta	Sept. 7, 10
Macon, Decatur	Sept. 21, 25
Macoupin, Carlinville	Sept. 7, 10
Marion, Salem	No fair this year
Marion, Centralia	Sept. 21, 24
Marshall, Wenona	Sept. 27, Oct. 1
Mason, Havana	Sept. 7, 10
Massac, Metropolis	Oct. 13, 16
McDonough, Macomb	Aug. 24, 28
McHenry, Woodstock	Sept. 7, 10
McHenry, Marengo	Sept. 14, 17
McLean, Bloomington	Aug. 31, Sept. 3
Menard, Petersburg	Aug. 31, Sept. 3
Mercer, Aledo	Sept. 20, 23
Morgan, Jacksonville	Aug. 23, 27
Moultrie, Sullivan	Sept. 14, 17
Ogle, Oregon	Sept. 21, 24
Ogle, Rochelle	Sept. 6
Perry, Pinckneyville	Oct 5, 8
Piatt, Monticello	Aug. 16, 20
Pike Pittsfield	Sept. 22, 25
Pope, Golconda	Oct. 7, 9
Randolph, Sparta	Sept. 29, Oct. 1
Randolph, Chester	Oct 19, 22
Richland, Olney	Sept. 14, 18
Rock Island, Hillsdale	Sept. 15, 18
Sangamon, Springfield	(State Fair)
Schuyler, Rushville	Sept. 7, 10
Shelby, Shelbyville	Sept. 21, 25
Stark, Toulon	Sept. 21, 24
St. Clair, Belleville	Oct. 12 16
Stephenson, Freeport	No fair this year
Tazewell, Delavan	Sept. 13, 17
Union, Jonesboro	Sept. 14, 18
Vermillion, Catlin	Sept. 7, 10
Vermillion, Danville	Aug. 31, Sept. 4
Vermillion, Hoopeston	Aug. 23, 27
Wabash, Mt. Carmel	Sept. 26, 30
Warren, Monmouth	Sept. 7, 10
White, Carmi	Sept. 7, 11
Whiteside, Sterling	Sept. 14, 17
Whiteside, Morrison	Sept. 7, 10
Whiteside, Albany	Sept. 1, 3
Will, Joliet	Sept. 7, 10
Williamson, Marion	Sept, 28 Oct. 1
Winnebago, Rockford	Sept. 13, 17
Woodford, El Paso	Sept. 14, 18
State Fair, Springfield	Sept. 27 -Oct. 2

DISTRICT AND COUNTY FAIRS OF IOWA.

Adair, Greenfield	Sept. 1, 3
Alamakee, Wankon	Sept. 21, 23
Appanoose, Centerville	Sept. 9, 11
Audubon Audubon	Sept. 15, 17
Benton, Vinton	Sept. 13, 17
Black Hawk, Waterloo	Sept. 14, 16
Boone, Ogden	Sept. 19, 18
Bremer, Waverly	Sept. 14, 17
Buchanan, Independence	Sept, 14, 17
Butler, Shell Rock	Sept, 14, 16
Cass, Atlantic	Sept. 21, 24
Cedar, Tipton	Sept. 14, 17
Chickasaw, New Hampton	Sept. 22, 24
Clarke, Osceola	Sept. 21, 23
Clay Spencer	Sept. 1, 3
Clayton, Garnavillo	Sept. 14, 16
Crawford, Dehison	Sept. 15, 17
Dallas, Adel	Aug. 31, Sept. 1, 2
Davis, Bloomfield	Sept. 15, 16
Decatur, Leon	Sept. 14, 18
Delaware, Manchester	Sept. 14, 17
Des Moines, Burlington	Sept. 21, 24
District at Agency City, Agency City	Oct. 5, 8
District at Mechanicsville, Mechanicsville	Sept. 14, 16
District at Mt. Joy, Davenport	Sept. 14, 17
District at West Point, West Point	Sept. 7, 10
Fremont, Hamburg	Sept. 13, 17
Greene, Jefferson	Sept. 15, 17
Grundy, Grundy Center	Sept. 22, 24
Guthrie, Guthrie Center	Sept. 13, 15
Hardin, Eldora	Sept. 14, 17
Harrison, Mo. Valley	Oct. 6, 8
Henry, Mt. Pleasant	Sept. 14, 17
Humboldt, Humboldt	Sept. 15, 17
Jackson, Maquoketa	Sept. 8, 11
Jasper, Newton	Sept. 28, Oct. 1
Lee, Donnellson	Aug. 31, Sept. 3
Mahaska, Oskaloosa	Aug. 31, Sept, 3
Marion, Knoxville	Aug 24, 27
Marshall, Marshalltown	Aug. 31, Sept. 2
Monona, Onawa City	Sept. 16, 18
Monroe, Albia	Sept 14, 17
Montgomery, Red Oak	Aug. 31, Sept. 3
Maple Valley District, Battle Creek	Sept. 14, 17
Osceola, Sibley	Sept, 16, 17
Page, Clarinda	Sept. 7, 11
Powshiek at Brooklyn, Brooklyn	Sept. 15, 17
Powshiek Co. Central, Malcom	Aug. 31 Sept. 2
Powshiek Malcom	Sept. 3, 4
Scott, Davenport	Aug. 30, Sept. 3
Story, Nevada	Sept. 2, 4
Stuart District, Stuart	Sept. 28, 30
Union, Afton	Oct. 6, 8
Union at Strawberry Pt., Straw'ry Pt.	Sept. 21, 24
Union at Villisca, Villisca	Sept, 14, 16
Union at West Liberty, West Liberty	Sept. 1, 3
Warren, Indianola	Sept. 28, 30
Winneshiek, Hesper	Sept. 15, 17
Worte, Northwood	Sept. 16, 18

COUNTY FAIRS OF NEBRASKA.

Dodge, Fremont	Sept. 14, 17

COUNTY FAIRS OF KENTUCKY.

Simpson, Franklin	Sept. 16, 18

Industrial Implements.

NEW SAFETY STEAM ENGINE.

THIS engine is manufactured by the well and favorably known Wheeler and Melick Co., of Albany, N. Y., with Graham's patent safety coil generator, and is especially adapted for agricultural purposes. Among the numerous advantages claimed for it there is room here to mention only a few. The first essential requirement for all farm engines is safety. In the purchase of engines for agricultural purposes this consideration should always hold the first place. This engine is claimed to be perfectly safe for this reason: It is constructed of one continuous pipe, and the water necessary to run it is only about two quarts per horse power at any one time in the entire length of the coils, the size of the pipe not exceeding the size of feed-pipe to the engine; consequently, if the coils should become ruptured at any point, it would cause only a moderate blowing off of steam, and as the pipe is tested to four or five times the ordinary working pressure, it would be almost an impossibility to even rupture a coil.

THE WHEELER AND MELICK CO'S. NEW SAFETY STEAM ENGINE.—FIG. 255.

The engine is extremely economical of fuel and time, for, owing to the small amount of water required in the generator, steam can be raised to a pressure of 100 pounds per square inch with cold water and ordinary fuel in ten minutes, consequently time and fuel are saved, while the rapid circulation prevents the deposit of scale. Then again, the construction of the engine renders it remarkably durable, light, simple and easy of conveyance from one place to another.

The well-earned reputation of the manufacturers is ample guarantee that the engine is made of the best material and in a thoroughly workmanlike manner. The coils are made of the best lap-welded pipe, and stayed; firebrick lining is above grates; there are a large grate surface; double jacket around coils; hinge-stack, to lower when moving; improved spark arrester; safety-valve as large as pipe in coils; jacket around separator and cylinder; engine an improved upright pattern, with balanced crank; extra long bearings; steel connection-rod and cross-head, with improved brass gibs for taking up the wear; brass stuffing-boxes and followers; iron trucks; easy spring seat; steam whistle; steam and water gauges; large ash-hearth; suction hose, oil cups, wrenches, whiffletrees, etc.

Two kinds are made:—No. 1 is usually rated at from five to eight horse power; weighs 2,500 pounds and costs, at the shop, $650. No. 2 is usually rated at eight to twelve horse power; weighs, complete, about 4000 pounds and costs, at the shop, $850. Full information will be promptly furnished on application at the above address.

The Sandwich Cord Binder.

A member of the RURAL staff writes us from Sandwich, Ill., under date of July 26.

"I saw the working of the Sandwich Manufacturing Company's new Cord Binder (Travis's patent) to-day in a field of oats on the farm of Artemus Miller, Sandwich, Ill. The binder did excellent work, binding the gavels tight and even. It is lighter than the majority of self-binders and as it has shown good work throughout the several tests that its manufacturers have put it through, it will be likely to prove a popular binder. It will be put upon the market next season. This new cord-binder has several new and important features:—it does not elevate the grain as high as most binders and discharges the bundles nearer the ground. It has very little machinery to get out of order; it has a new vibrating butt-evener that is very effective. As simplicity is now sought for in all kinds of agricultural machinery, this should prove a success."

[Full information regarding the above binder will be furnished on application to the Sandwich M'f'g Co., Sandwich, Ill. Eds.]

Miscellaneous.

WHAT OTHERS SAY.

THE London Times says: No crop, is is said, will be an average. The wheat plant is not tall or strong, and the ear is small. The root crops have only just been placed ont of danger. Upon the whole, it is very doubtful whether this year will do anything to make up for the losses of the past.

WE are glad to see that Mr. Hovey is so much the friend of the Baldwin apple that he cannot bear to hear it spoken ot as "utterly worthless." An apple, Mr. Hovey says in the London Chronicle, so well known by Englishmen as the Baldwin, whose exportation to England has increased within a few years from a few hundred barrels to almost as many thousands, would seem to require no additional evidence of its excellence. It is *the* apple of the New England States, and indeed of the whole Northern United States; and, taking it in all its qualities, has more excellences and fewer faults than any other apple in the world. That a variety now approaching a century old still keeps in advance of every other variety that has been produced since its origin, shows what a valuable fruit it is. At one time the Newtown Pippin was the only American apple known in the London market, and though, from its very hard, firm flesh, and long-keeping qualities, it is the best variety for shipping without loss, the greater beauty of the Baldwin, its crisp, tender flesh, and remarkable combination of sweet and acid, are causing it to take the place of the former, which can only be grown in a few favored localities in the Middle States.

Mr. Hovey was therefore quite astonished to see an account in an English journal, copied from an American paper, stating, upon the authority of Mr. Ellwanger, of Rochester, N.Y., that the Baldwin "as a table fruit is utterly worthless," and could not be eaten without "direful results." As Mr. Hovey has not only grown it for 40 years, and eaten it before breakfast and after supper during all this time in preference to any of the 200 varieties he cultivates, and has not yet experienced any "direful results," this statement took him by surprise. If this were true he should deem it his duty to caution the English people to purchase no more of the thousands of barrels which will probably find their way to the London market.

However, strange to say, Manning, Downing and other American pomologists class the Baldwin as "standing at the head of all New England apples, and unquestionably a first-rate fruit in all respects." The latest report of the American Pomological Society (N. Y.) says that it has "stood and still stands pre-eminent as a market fruit," and that it continues to be the "leading apple," and "whatever profit has been made from raising apples is mainly due to this variety." Even in Rochester, New York, at a meeting of the Western Fruit Growers' Association, it was recommended that in an orchard of 1,000 trees at least 700 of that number should be Baldwin.

THE SPARROW in England has few friends. A writer thus expresses himself in the London Farmer: If a tithe of all the maudlin sentiment expended on birds which are only evil and mischievous in the garden were bestowed on the gardeners who are the helpless victims in many places of their sweeping raids and incessant depredations, it would be more humane and—well, infinitely pleasanter for all parties concerned. I have been constantly a lover of birds from my childhood, am never weary of their winning ways and pretty plumage, nor too tired to listen with something akin to rapture to their sweet songs; but the early chatter of sparrows is suggestive to me of a ravenous crew of thieves starting forth in gangs to steal or wreck all that is most crisp and sweet in the garden. Let no one talk or write to me of early birds gathering the worms; the sparrow never eats one, nor a caterpillar, but crisp lettuces, bursting fruit-buds, sweet marrow peas—these they cram themselves with all day long, till they are almost too lazy or fat to flounder or rather fly home to their roosts in the eaves. The mischief they do to thatched cottages is also incalculable. In a word, the sparrow is a nuisance to get rid of.

not a feathered friend to be pitied and fostered, as our writers in big towns and easy chairs, who may or may not have ever seen a sparrow in their lives, and are profoundly ignorant of their depredations, assure us. Cultivators *en masse* exclaim: "Save or deliver us from such friends." "Give me any number of grubs," the same writer continues, "caterpillars, worms, snails, slugs even, but rid me by any and all means of the sparrows, who are thieves and robbers on the most gigantic scale in our gardens and on our farms. The quantity of good vegetables and solid grain they destroy is appalling. The latter is a most vital consideration at a time when of every three loaves eaten two are of foreign growth, and every provincial fruit and vegetable market is crowded with foreign produce, brought to us, if not from China to Peru, yet from all parts of the world; and this while the house-sparrow is reveling and ruining the best of our food."

We have seen grass sown with turnips yield a crop the first year after sowing almost equal to one that had occupied the ground two years before being cut. There is no reason, therefore, that we know of why those who wish to try to get a crop of grass the first year after sowing should not have a crop of turnips at the same time.

Those who have not tried grass and turnips together can do so without any risk as to the labor or experience; and a single experiment may be sufficient to determine the matter. The best crop of turnips we ever saw was sown with grass. [We have lost the "credit" for this.]—Eds.

The query raised *why grass colors butter yellow*, instead of green, is answered by Prof. Arnold in the New York Tribune. He says that chlorophyl, the green coloring matter of plants, is neither digested nor appropriated by milk-giving animals, while the yellow fats which abound in grass, are assimilated without change.

"Viburnum plicatum.—We are glad to see that our repeated commendations of this noble shrub are now being seconded in many different quarters. An American writer who is peculiarly partial to the English press, speaks in the Gardeners' Chronicle as follows: "Among the flowering shrubs the recently introduced Viburnum plicatum holds a prominent place; next to Hydrangea paniculata grandiflora, I deem it one of our greatest acquisitions. The neat and symmetrical habit of growth, its very handsome plaited leaves (indicated by its specific name), and the profusion of its moderate-sized balls of snowy blossoms, which quite cover the plant, render it unusually attractive and beautiful. As single specimens planted in appropriate situations, it is quite as ornamental as a rhododendron or azalea, and if its foliage were evergreen it would be a formidable rival in ornamental plantations."

Seedling Roses are very uncertain, says Mr. Laxton, of England, as to the period of showing their first blooms, some flowering when little more than two inches high, and within two or three months from the seed being sown, and others, although often eventually proving good Perpetual Roses, do not show bloom for several years. I have now seedlings of the current year showing bloom. My crop this season consists of upwards of one thousand seedlings grown on a bed containing about two square yards; most of these are already planted out, and several of them I hope to bud, bloom, and primarily test before winter. In the ordinary course at least one-half will probably disappear before next year from delicacy of constitution. These I shall not regret.

The graft, says C. A. Green, in the New York Tribune, has a remarkable effect on the roots of the stock. In starting apple trees in the nursery, we graft on roots of seedlings, all of which, if unaffected by the graft, would exhibit no especial character; but when we dig these roots, after being affected by the graft for three or four years, we find that those grafted with Red Astrachan, for instance, are very fibrous, branching out near the surface, with few tap roots, while the rows adjoining, or parts of the same row, grafted with the Duchess of Oldenburgh or the Fameuse, are destitute of fibers, possess only three coarse prongs, as a rule, one of which is liable to be a tap root seeking an abode far down in the subsoil. It takes my men twice as long to dig a row of Fameuse or Duchess as a row of Red Astrachan, and when planted the roots of all were of the same character.

The London Live Stock Journal says: At the recent agricultural meeting at Mélun, in the Department du Nord, the most noticeable feature of the show was a splendid collection of Merino sheep, for which class there were no fewer than sixty entries. Our French neighbors appear to be devoting special pains to the development of this breed, which, although a comparative novelty with them, is rapidly becoming a fashionable as well as profitable strain.

Prof. Sheldon says that "It is always so; the reward of the toiling producer is ever less than that of him who merely distributes."

Some years ago, says the Ohio Farmer, D. M. Ferry grew 600 bushels of onions on an acre, for which he was offered $2.50 per bushel, making the snug sum of $1,500 from an acre. A farmer who heard of it, and knew no more about onion-growing than he did of Sanskrit, planted five acres of common corn land in onions, the next season, the seed costing him $100. He didn't grow a bushel of marketable onions. Had he studied up the subject and planted the first season an eighth or fourth of of one acre, he might now be a successful onion-grower, whereas he indulges in profanity at the smell of an onion.

Again referring to the First Annual Report of the Cornell Experiment Station, Professor W. S. Barnard says of the Grape phylloxera that in that vicinity, the adults and eggs were mostly destroyed last fall by two of its enemies, a larval *Syrphus*-fly and a small mite. This pest has confined itself there almost exclusively to the wild vines, but he has found it, in a few instances, on the cultivated vines of the west hill. Foreigners would do well to import and cultivate its natural enemies.

Mr. E. P. Roe says "Within a few years a new variety of strawberry named Windsor Chief has been disseminated and the enormous yield of 17,000 quarts per acre has been claimed for it. It is said to be a seedling of the Champion, fertilized with the Charles Downing variety. If there has been no mistake in this history of its origin, it is a remarkable instance of the reproduction of the traits of one parent only, for in no respect have I been able thus far to see wherein it differs from the Champion.

Mr. J. T. Lovett says that Glendale is the best *late* strawberry yet fully tested either for home use or market, succeeding on all soils and under all systems of culture. Of the Bidwell he says: "This is a very promising variety, being of strong growth and producing a heavy yield of large, conical, crimson, smooth, firm berries of excellent quality." He picked a pint of large, ripe berries from a single plant at one picking.

Points in Bee-keeping.—The following points in bee-keeping are extracted from a prize essay by Mr. J. E. Johnson, of St. George, Utah.

Necessary Qualifications of a Bee-keeper.—To make a proper and successful apiarian one should love and take special interest in the business, and in all that pertains to the successful management of bees, carefully noting the observations, experience and instructions of intelligent and successful bee-keepers; patient in observing and supplying the wants of the colony and assisting it to accomplish the most rapid progress for the increase of bees and honey, and at all needful times to guard them from too great cold, heat, or moisture, from birds, toads, moths and other insects, and generally treating his useful colony with quiet gentleness and considerate care, never disturbing them unnecessarily, or annoying them by quick or boisterous motions, always avoiding timidity, nervousness or fear.

Profits of Bee-keeping. — When this branch of industry is practiced in a careful and intelligent manner there is no ordinary business within the scope of my experience that remunerates as satisfactorily as bee-keeping. "Good luck" is good, intelligent management, and "bad luck" is the reverse. Many a person invests in a swarm of bees, expecting it to make his fortune. He is ignorant of their wants, neglects them, except to rob them of their honey, and perhaps destroy the queen. They dwindle, grow less, moth or robbers attack them, the colony disappears, and the owner curses the business as a bad speculation. With proper care and intelligent management, one year with another, bees will average an increase of 100 per cent. clear of expense. The surplus honey will pay for the hives and care, and with ingenious finessing one may make from two to four and sometimes ten or a dozen colonies from one, it being strong and having a prolific queen.

Besides a fair increase of bees, instances are not rare where 100 and more pounds of surplus honey per hive have been taken in a season from each colony. The business is easy and interesting, and may be performed by women, or even by children who have aptitude and taste for it.

Best form for Apiary.—After trying several plans, I have hit upon the following, which I think is original and most convenient, as economizing ground-room, shelter, and obviating the necessity of manipulating bees in front of any hive; it also saves steps and time. Set two rows of posts seven feet apart and about six feet apart in the rows or they may go further apart, and stand seven feet above the level surface. Fasten to the posts *knees* for the bench, or seat to rest on about 16 inches high. Place stout 12-foot boards 16 inches wide thereon, and nail them down. With bolts or thongs fasten poles at the top of the posts lengthwise, and make a shade of willows, or you may make a lumber roof. Set your hives on the seat, back towards back, and you have between the two rows of hives an avenue four feet wide, where you may pass along, for observation, unmolested, and work both sides behind the hives. This also gives room for a two-foot table. The hives, if painted in different colors, may be set within six inches of each other without detriment. I have nearly 200 colonies in just this style, only the hives are set close together, where the bees work regularly without disorder. After trying this plan for two years I pronounce it a decided improvement upon the old plans.

The best Hive.—None but frame hives should be used, and these should measure at least a cubic foot inside. The frames should have the beveled honey guide and be so shaped that they may be drawn from the top. The hive should have ventilation above and a regulator at the entrance that it may be closed if desired in case of robbing or bad weather.

Transferring from Box Hives.—Pry up the cap of your old hive a little all around, then turn it bottom-up and place your new hive over it, wrapping a cloth around to close any hole where bees might go out. Then with a smoker blow in smoke below and rap the hive a little, and continue this until the bees have generally gone up into the new hive, then place it on the seat, set your old hive on a table, pry off two sides and carefully cut out the combs, one at a time. Lay your frame over that portion containing the brood and cut around inside of the frame with a knife. Remove the pieces, press the frame over the comb, and fasten it around with small wire or waxed twine, and so continue until all you desire, together with all the bees remaining, are transferred to the new hives, which should be set in the places occupied by the old ones.

To Introduce a Queen.—Daub your queen all over with thin honey and place her in the hive; or, what is better, place your queen in a small wire-cloth cage, about two inches square, with plenty of food. Place the cage at the bottom or on top of the frames where the bees may get near her. After two days turn her loose and she will be received and adopted as the mother of the colony.

To rear Queens.—Take the queen away from a strong colony and they will at once make from one to a dozen queen cells. Within 12 or 13 days after the queen has been removed, carefully cut out all but one of the cells, fastening one in each new hive or queenless colony. If the cells are not removed within two weeks, the first queen that hatches out will be accepted and all the others destroyed.

Queenless Colonies.—A colony without a queen grows daily weaker and is always in danger of being destroyed by moths or bee robbers, and even if not thus destroyed the colony will disappear in a few months, having lived its allotted time. It may be known by the slow and sluggish working of the bees, by the crazy manner in which they run around in front of the hive, and the more surely by their having no young brood or eggs. Give such a hive a queen cell, if possible, or give it a frame of eggs, brood and young bees, and change the place of the hive with a strong colony. Make sure you have plenty of young bees, or you will fail at last in getting a queen cell; for remember it is only young bees that are workers of wax.

To Equalize the Strength of Colonies.—Sometimes a colony may have an old or otherwise unprolific queen; may have been troubled by encroachments of moths, or from other causes may be weak, while other colonies in the apiary are strong. You wish them, doubtless, to be of about equal strength, as they should be. Take one good frame of brood from as many strong hives as needful and put in the weak, exchanging empty or poor ones for full if need be, and should this not be considered enough, change places with a strong colony you have not touched recently.

Robbing.—If a thieving attack is made upon a hive by bee robbers, it may be known by there being a profusion of bees flying about in front and near the entrance, going and coming, alighting and leaving, running about excitedly in great numbers and fighting and falling to the ground. Inside, too, it is all excitement. When robbing is discovered the hive should be ventilated and the entrance so closed that a bee cannot enter or go out. Open it just before dark so one bee may pass and close again just before sunrise. When the excitement is so far over that robbers do not return, open the entrance for one to pass at a time, or, what is far better, at once remove the hive attacked to a distance, perhaps away from the apiary; sometimes when the colony is quite strong you need only close the entrance passage so that not more than one bee can pass at a time, and they will protect themselves.

Moth and Worms.—The bee-moth lays its eggs in the combs or elsewhere and then dies. These eggs produce a worm very destructive to the comb and honey by making passages and galleries through the comb, fattening itself on the honey and forming a web that protects it and is very annoying to the bees. When about three-fourths of an inch long and a sixteenth of an inch thick it is full-grown and winds a web or cocoon for itself that hatches out another moth. The best possible remedy for the moth is strong colonies and good, tight hives. A strong colony protects itself from encroachments, but a weak or queenless one often falls a prey. When a hive is attacked, clean out the moth and strengthen your colony, or if too foul with moth clear the hive thoroughly, saving only such combs as you do not suspect of being infested with worms or eggs, give the colony new frames of brood and supplies, and make them strong enough to protect themselves.

Wintering Bees, Feeding, etc.—Bees will winter well in good hives, and protected from the winds, in any settlement in Utah that has been tried. After the honey season has fully closed carefully examine each hive and take those that have no queens and put the bees and such of the supplies as are needed into the hives of the weakest colonies, sprinkling all bees together with sweetened water, scented with peppermint. Strengthen up any colonies that are weak and keep a few full frames safely from the moth, with which to feed any colony that may chance to be short of supplies before flowers bloom. Honey, dissolved sugar and rye flour may be placed on a plate over the frames in the top of the hive. A colony may be stimulated to early and abundant brood by feeding before flowers come.

Good Honey and Pollen Plants are white clover, buckwheat, currant, gooseberry, cucumber, melon, squash, pumpkin, lucerne, Great American bee-plant, bloom of all fruit trees, mignonette, Canterbury bells, sweet clover, corn, and a great variety of wild flowers.

Drones.—One drone for each queen is all that is really needed. All others are a surplus, and only live to make the colony poor in honey. All unnecessary drone brood should be cut out and empty drone comb kept at the sides of the hive and always away from the center, for storing honey. When too great a quantity of drones fills the hive, it should be opened and most of the drones should be destroyed or a drone trap used.

Best Time to Handle Bees.—In midsummer, from early morning until 10 A. M. is the best and most quiet time, when many of the bees are out. They should never be disturbed at night or when the air is damp or chilly, or it is windy.

Foul Brood.—Where the hive is too full it is probably the best plan to drive the bees into a new hive, giving them frames for a healthy colony to start them. Never allow a particle of foul brood about the apiary where bees can reach it, as it is considered a contagious disease. The infection may be carried to a sound hive by bees passing over the combs. An infected hive should not be used until thoroughly disinfected by fumigation with sulphur or boiling water.

Everywhere.

RURAL SPECIAL REPORTS.

Ark., Saratoga, Johnson Co., July 22.—We have here a high, dry, healthy locality. Some of the land is level; other parts are undulating and hilly. It is well adapted to the growth of all kinds of fruit, such as apples, peaches, plums, cherries, quinces, etc. Corn yields here from 20 to 60 bushels per acre; cotton, from 12 to 15 cwts.; Irish potatoes, 150 bushels; sweet potatoes, 100; wheat, 10 to 25; oats from 20 to 75; rye, 15 to 30; barley, 40 to 50, bushels per acre. Walker and Mediterranean are our favorite wheats. We have here some 25 to 30 medicinal springs; good, free, common schools, there being 46 common school districts in the county, and one seminary and college. We have, too, good water power, and for transportation, steamboat navigation and railroads.

J. S.

Cal., Penryn, Placer Co., July 18.—We are located in the foothills, 28 miles from Sacramento and 170 miles from San Francisco on the C. P. R. R. There is nothing raised for sale or shipment in this vicinity but fruit. In the western portion of the county the farmers raise grain. The principal grains raised are wheat and barley and owing to the character of the soil they seldom fail to have a good crop. They raise but very little oats and rye and no corn and but few potatoes—none for market; Early Rose for house consumption. This will apply equally to our locality so far as potatoes

are concerned. We raise and send to the San Francisco and Sacramento markets a general assortment of fruit. First in the season come strawberries. This year the crop has been a short one, owing to the late frosts and unusually late cold rains. The variety principally raised is the Monarch of the West with some of Seth Boyden, Capt. Jack, Triomphe de Gand, and Longworth. The prices have been very fair. The Raspberries come on so close after these that we have no rest. This season we have had an excellent crop and have received good prices for them, ranging from four to 25 cents per basket of eight ounces. We pack 15 baskets in a case. At the latter part of the season, as apricots come in, they occasionally get down to 50 cents per case, but not often. We pay one and a half cent per basket for picking. With regard to blackberries we pay one cent for one-pound baskets, and get for Early Wilson from 12c. to 20c. and sometimes for the earliest 25c. Kittatinny and Lawton usually and (particularly this season) bear good crops and bring from six to 10 cents per pound basket. The crop of apricots is small. Royal and Moorpark are the varieties raised. We have but few peaches this year; the late varieties are almost a total failure. In some localities there is a good crop of Alexander, Downing, Briggs, Red May, Amsden's June, Hale's Early and in fact of all the early and midsummer varieties. Pears and apples are short crops; figs a good one. plums and prunes are short; cherries plentiful and low. All kinds of stone fruit do well, and we have *no disease* or pests. I forgot to say that the only raspberries we raise are Red Antwerps. One of my neighbors told me that the RURAL NEW-YORKER sent him some Cuthberts two years ago, but he did not like them as well as the Antwerps. "And" said he "I have not given them a fair chance." Men often, I find, get a new variety of fruit from a friend, and as it cost them no money, they stick it in some spare corner and perhaps wholly or at least partially neglect it. It does not produce as well as varieties thoroughly cultivated and is pronounced worthless. According to my ideas this is decidedly unjust. On the other hand, we buy new varieties that have been tested by high culture; put them out; give them average field cultivation and they fail to realize our expectations, and at once *they* are pronounced worthless and the originator a gross humbug. This is another case of unfairness. I should have said sooner that the grape crop will be large; the varieties raised principally to ship, are Chasselas, Sweet-water, Black Hamburg, Rose de Peru, White Muscat of Alexandria and Flame-colored Tokay. J. W. B.

CAN., Collinville, Lambton Co., Ont., July 15.—Lately we have had some heavy rain and wind storms that flooded the low lands. The land hereabouts consists of slight ridges and swales with very little fall, while some of the township is swamp. The storm laid a considerable amount of grain flat. Some of the Fall wheat is cut, the straw is slight, but the grain seems good, but late-sown oats and barley are at present drowned. Potatoes are mostly poor. C. M.

CAL., Eagleville, Modoc Co., July 20.—Wheat will average about 25 to 30 bushels per acre: barley, 40; oats, 35; potatoes, seven tons. Corn and sorghum are not grown here to any extent, Apples, apricots, gooseberries and currants are the fruits chiefly grown. The prospects for fruit are tolerably good. S. K.

COL., Alma, Park Co., July 20.—No grain is raised in this part of the State. Mining and stock raising are almost our exclusive industries. H. W. H.

ILL., Cisne, Wayne Co., July 19.—The wheat crop is fine this year; the acreage one-third larger than ever before; the yield is from 8 to 22 bushels per acre. Corn is promising. The chinch bug has troubled but few crops. A small hail storm visited the county a mile south of me and nearly ruined all standing crops; it was accompanied by a general deluge of rain all over the county. The oat crop is small. Very little rye is raised and no barley. The comparative acreage is: four of wheat to seven of corn; five of corn to one of anything else. Sorghum or millet, as it is called here, is only raised for home use. The fruit crop will be good this year. We have no good Winter apples; Ben Davis and Winesap are the most common and successful. The people have been imposed upon shamefully by tree agents and do not really know—not one out of ten of them—what kind of fruit they have. H. A. T.

IND., Orland, Steuben Co., July 23.—Wheat and corn are good, but oats are light. Potatoes would have been a good crop if the bugs could have been kept down. Perhaps they will be one-fourth of a crop. Apples, peaches, pears and grapes are fair crops. O. M. T.

IOWA, Marshallville, Delaware Co., July 23.—Winter wheat is a failure hereabouts; no Spring wheat. Of corn a great deal was planted and the general prospect for it is good. Oats will certainly give a fine yield and a large area has been sown. Potatoes and grass are both good. A considerable amount of sorghum was planted here; but the outlook for it is not very promising. A sugar refinery for making sugar from the cane is being erected in this neighborhood, and a good deal of sorghum was planted for this purpose. I have a mill for making molasses from it, but now we are all in hopes of soon producing our own sugar. We have had rather too much rain since May. Fruits of all sorts are quite plentiful. N. C.

IOWA, Iowa City, Johnson Co., July 20.—In this section there will be a fair average of wheat. The prospect for corn is better than last year at this time and 25 per cent. above an average. Oats are good and will yield 40 to 50 bushels per acre. Rye was somewhat winter-killed, not a full crop. Barley but little grown. Prospect for potatoes good. The kinds of wheat mostly grown are Odessa and Tea; of oats, white German; of potatoes, Early Rose and Peachblow. Sorghum is very little grown, but it does very well. Berries of all kinds do well. The Concord grape is a success. This can hardly be said to be a reliable apple country, though we have a fair crop this year. Early fruits of all kinds have been plentiful. L. R.

IOWA, Sibley, Oceola Co., July 22.—Wheat is rusted considerably. I think it will average only about ten bushels per acre. Some pieces are entirely ruined by the rust. All other grain crops are in fine condition. Not much fruit is grown here yet. My raspberries have done better this year than ever before. It is only nine years since the first settlers came into this county, so there is little chance for tree fruits yet. H. A.

MINN., Howard Lake, Wright Co., July 20.—We are, and have been enjoying the most delightful weather for some ten days, just cool enough to be pleasant, with a few, short, quiet showers interspersed. For four days, up to the closing of the 13th inst, we had intolerably hot weather, the mercury being so high as 100, at six a.m. one day. During this heated period, many fears were entertained by farmers that rust would strike the promising crop of wheat in this region, but it is said there are no fears of that kind since the cool breezes came. And the general opinion is that there has not been in many years, as good a prospect for an extra crop of wheat, as at the present writing. Potatoes, corn and oats, as well as grass are proportionately good. We had in June two weeks of almost constant rain, so that those whose corn was ready to work, had to be as patient and hopeful as they could till the water ran off so they could get in the fields again, and those who had intended to plant more on new ground had to give it up entirely. Corn is sometimes planted here as late as the 10th of June. Early varieties are seldom much frost-bitten before they are ripe. There have been less scourges this year than usual—fewer beetles on potatoes, and even the squash bugs were not as destructive as formerly. There has been some loss of small fruits this season, but there is a fair prospect for apples, and a fine one for grapes, as well as an abundance of wild plums, which are very good when we cannot raise other varieties. The results of the last hard Winter were not as bad as was feared in early Spring, as "standard apples" are being used for cooking purposes; these are from some young trees of our own fruiting from the first blossoming. S. A. M.

MINN., St. Paul, Ramsay Co., July 21.—The weather during the past few days has been cool and clear and could not have been improved on for the maturing crop of wheat. The daily reports from the stations along the St. Paul, Sioux City & Omaha railway indicate a great change for the better in wheat, and the best informed and most reliable observers now estimate an average yield of from 12 to 15 bushels per acre along this particular road. As the plant is rapidly heading the danger of blight or a shriveled berry by reason of a hot sun is growing slight. And if we are to be blessed with good weather in harvest operations Minn. may be relied on for at least 35,000,000 bushels. The Secretary to the State Board of Immigration estimates the yield as high as 45,000,000, but past experience has demonstrated that popular estimates of the wheat crop are at this time of the year too high. All reports agree that oats and flax never looked better. The acreage in flax in Southwestern Minnesota and Northwestern Iowa is double that of any preceding year. Farmers of that region have learned the adage "Never put all of your eggs in one basket," and are yearly more and more getting out of the notion of exclusive wheat growing. The experiment of sowing flax on new breaking is highly satisfactory, and it has been largely done this year with promising results. J. B. C.

MINN., Forest Mills, Goodhue Co., July 21.—Of wheat the average yield in bushels per acre, hereabouts will be 18; of corn, 35; of potatoes, 200; of oats, 50; of barley, 40. No rye is raised here. Fife, Rio Grande, Lost Nation, and White River are our chief varieties of wheat. The acreage of sorghum is increasing every year, and it is now grown by a great many. The fruit prospects are fair. The limbs of a great many trees, however, are partly withered, and no cause has been discovered for the mishap. T. M.

NEB., Silver Creek, Merrick Co., July 19.—Wheat is a poor stand on account of early drought. Corn is very good and a great deal was planted. Potatoes are fine. Oats do.; rye medium. Barley not good. Tea, Odessa and Lost Nation are the principal varieties of wheat. Acreage large. Of sorghum none is planted. Our apples include the various crabs, N. Spy, Winesap, Ben Davis, Maiden's Blush. We grow all small fruits, and in fact any fruit that is semi-hardy. Our peaches do not winter-kill, but the present season killed the fruit. Plums, cherries, and small fruits are good. J. H.

N. J., Montclair, Essex Co., July 20.—The rain is falling splendidly to-day. The announcement in my weather note, of May 29th, of the end of our heated term, was premature. It was only the end of the first session. The second session followed immediately ending on the 5th of this month. June goes on record as the hottest and driest month ever experienced here. It surpassed May in temperature, scoring 106 deg. on the 25th. On the 13th a portending shower accompanied by vivid lightning, heavy thunder and high wind, ended with only enough rain to fairly lay the dust. Promises of showers were frequent during the last half of the month but they only inspired our hopes and passed around. A field of corn near me, planted on June 8, did not come up till after the drought ended, July 5, when we had a fine three hours' gentle rain. Now we are having the promise if not the reality of the other extreme, ample rainfalls occurring at intervals of three or four days. Vegetation of all kinds, weeds not excepted, is "booming." Corn has more than doubled its hight since the 4th, and is looking splendid. The light hay crop has been supplemented by a large breadth of corn fodder which since the rains, has come up and promises well Pastures are again looking green and we hope soon to suspend feeding which we had to resort to. Late potatoes look well. Grain is very short in the straw and head, but generally well filled. With economy and a favorable Fall, we hope to bridge over the loss from drought. E. W.

N. Y., Attica, Wyoming Co., July 22.—Our apple crop last season was excessive in yield, but the fruit proved a miserable failure, owing to premature decay, caused by unequal ripening in our super-heated and abnormal atmosphere. However carefully handled, fruit, whether in piles or in the barrel, rotted rapidly, and the little that was saved hardly paid the cost of handling and marketing. This year the trees show a comparatively small yield; the fruit is of imperfect shape and is fast dropping from the trees. Pastures are fair; the hay crop is considerably less than last year. Dairying pays well. S. F.

VT., Middlebury, Addison Co., July 23.—We have had a very warm and dry Spring and Summer. The thermometer has stood at 100 degrees several days. We have had showers occasionally since the first of July. The hay crop was light, only about one half the usual amount. Fall-sown wheat was killed out very badly last Winter. Clawson is the leading variety here. Not much Spring wheat was sowed. Oats are looking nice and are about ready for harvest. Corn promises to be a good crop, and potatoes a fair one. No sorghum is raised in this vicinity. The small-fruit crop was very light on account of the dry weather. There will not be very many apples, as it is not the "bearing" year. W. M. E.

WASH. T'Y., Lopez Island, San Juan Co., July 17.—Crops look well. Not much wheat is raised on this island; although all grains do well here, except corn which cannot be raised to advantage. Potatoes are the main reliance of new settlers. The yield is from three to fifteen tons per acre. No sorghum is grown here. All fruits except peaches and grapes do better than in Pennsylvania or New York, especially small fruits. R. J. H.

WIS., Darlington, Lafayette Co., July 19.—Corn, oats and flax are very promising. Wheat rye and barley are not as good. The first three are much the most largely grown here; the others come in the order named. Interest in the growth of sugar cane is rapidly spreading, but it is not grown much yet. Fruit prospects here were scarcely ever better than now, but we are mostly confined to apples and small fruits. Of apples, Russet, Northern Spy, Ben Davis, Fameuse, Duchess and Astrachan have proved most satisfactory. W. J. B.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

A Native Silk-worm.

A. M. Van A., Fort Howard, Wis., sends a large worm which he found on a gooseberry bush, and asks for its name.

ANS.—The larva was received alive, though rather starved from its long journey without food. It is the larva of a native silk-moth known as Attacus Ceeropia. It belongs to the family Bombycidæ, and is among the largest of our insects, the larva measuring three inches or more when full-grown, and the moth expanding its wings five and a half to six inches. The larva is a great feeder and is found on apple, cherry, plum, oak and elm trees, and sometimes on currant, gooseberry and barberry bushes, during July and August. At first the young worm is of a deep yellow color, with black warts on the back, but it gradually changes to a clear, light green. On each of the second and third rings are two large, globular, coral-red warts, and on each of the seven following rings are two yellow warts, with a single larger one on the eleventh ring. On each side of the body are two rows of light blue warts, and an additional short row below them along the first five rings. In early September this caterpillar spins a cocoon about three inches long, of strong, yellow-brown silk, and it remains in this form till the following June, when the moth appears, mates and lays its eggs, which again go through the same cycle of changes. If they were numerous they would be quite destructive, but they are happily found in small numbers.

Miscellaneous.

T. S. G., St. Johnsville, N. Y., asks which of the following strawberries are the best: Crescent Seedling, Downing, Great American, Forest Rose, Monarch of the West, and are there any better; 2, which are the best Black-cap raspberries and the best blackberries? His land is a sandy loam and muck on a level bottom in a valley; 3, what new kinds of fruit trees and plants would be likely to do well there?

ANS.—We have during the present year given in our columns very explicit information respecting the kinds inquired about, and engravings and descriptions were presented last year. Our friend is referred, therefore, to back numbers for detailed information. The present issue also contains much information on the subject. Crescent Seedling is prolific. The berry is soft and of poor quality. Charles Downing is excellent in every way. Great American is generally a failure. Forest Rose is large, firm, and of good flavor. Monarch of the West is an old sort, but excellent in every way. There are few of the newer varieties which will equal it in size, quality, productiveness or adaptability to different soils and situations. 2. Gregg is a new and first-rate Black-cap. Try the Snyder and Taylor blackberries. They are productive and hardy. Of the better-known kinds Kittatinny is the best. 3. As to "trees and plants," our inquirer must consult our columns from week to week. Everything new and at all meritorious is placed before the reader, oftentimes with engravings from life.

M. A. H. B., Plymouth Union, Vt., has two tea plants and an orange tree, and he wants to know how to cultivate them and how to cure the tea leaves.

ANS.—Orange trees and tea plants cannot be grown in the North except in a green-house, and then they will have no value otherwise than as curiosities and for ornament. The curing of tea leaves is an intricate process, which requires experience and special apparatus to make it a success, and it would hardly be justifiable to procure these necessities for the crop of two small plants. The culture in the green-house of the two kinds of plants is much the same. Keep them in about 55 deg. to 60 deg. F. in winter and transplant to larger pots in the Spring when needed. Give moderately rich soil, and keep them clean of scales.

S. O., Aiken, S. C., asks what is the best time to sow canary seed?

ANS.—Canary grass yields from 30 to 40 bushels of seed per acre. When it is young cattle eat it, but as it is an annual and not a luxuriant grower, it is not much valued as a fodder crop, but is mainly grown for its seed for bird feed. It should be planted early in Spring in the above section.

O. M. T., Orland Ind., asks how peanuts should be cultivated and raised; his soil is a sandy loam, and he thinks it would be well adapted for their growth.

ANS.—We have answered this query so often of late that we will refer our friend to pages 59, 218 and 490 of the RURAL for 1879, and to page 299 of the current volume.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, July 31st.

J. B. L.—P.—S. W.—J. S.—A. A. W.—H. R. S.—M. A. P.—S. H.—M. E. G.—S. J. V.—W. H. R.—T. H. H.—M. J. G.—H. A.—S. K.—O. M. T.—D. J. A.—R. L B.—A. H. W.—S. A. M.—R. G.—L. S.—G. H. F., thanks.—A. B. A.—T. B. C.—S. F.—"Reader."—W. S.—A. C. M.—E. C. P.—A. E. S.—A. M., thanks.—G. McF.—C. J. P., thanks.—J. W. C.—L. R. McA.—N. J. S.—H. G. H.—H. G. H.—S. B. P., thanks.—W. J. C.—H. D. E.—L. H.—W. S.—C. S. N.—R. S.—A. G.—F. L. T.—R. S.—S. T.—W. H.—H. E. T.—J. P.—R. S. W.—M. S.—J. W.—S. T. H.—James V., thanks.—L. W.—A. L. T.—J. G.—F. E. H.—J. R.—P. S.—W. N. G.—S. L. H.—X. Y.

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ELBERT S. CARMAN.

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FINAL NOTICE.

THE next Fair Edition of the RURAL NEW-YORKER will be issued about September 1st. Instead of 28, as in our last Fair number, it will consist of 40 pages with cover, original engravings and articles written expressly for it by Dr. J. B. Lawes, of Rothamsted, A. B. Allen, William Robinson, founder and editor of the London Garden, Professor F. H. Storer, Peter B. Mead, Gov. R. W. Furnas, Prof. E. W. Stewart, B. F. Johnson, Henry Stewart and by others, perhaps, whose names we are not at present prepared to announce. It will contain a full account of our next Free Plant and Seed Distribution which we deem of greater value than any previously offered. It will contain our Premium List for 1881 together with other matter which it would be premature further to particularize now. Respectful notice is hereby given to advertisers that we cannot insure the insertion of advertisements in that number unless the copy is received before August 15, or possibly August 10th. We *guarantee* that the edition shall be over 100,000 copies. The greater part, after serving our subscribers, will be distributed at the most important of the Fall fairs. Our regular subscribers are freely invited to send for as many copies as they may be willing to distribute among those who are interested in rural affairs. All the friends of the RURAL NEW-YORKER, who are satisfied with the efforts we have made to please and instruct them, are solicited to aid us, through this Fair number, in so extending our circulation that further improvements may be inaugurated and sustained during 1881.

A LETTER which we have just received from Dr. Lawes (Rothamsted) under date July 16, says: "We are suffering very much from wet, and the floods in my part of England are as bad as they were in July, 1875. Unless we have a change shortly our wheat crop will be much injured."

HOW TO APPLY LONDON-PURPLE.—Most persons who have tried London-purple mixed with water and with flour or plaster, prefer the latter. It needs no stirring and is far more quickly applied and evenly distributed. During the present season we have used London-purple in preference to Paris-green, for the reasons that it is just as destructive to the beetles or their grubs, while a given quantity costs less and goes further.

To mix the Purple with flour or plaster, we adopt the following plan: A half-barrel of the plaster (or flour) is mixed at once, being as large a quantity as can be handled conveniently at one time. This is spread about three inches deep upon a tight floor. The Purple is then sprinkled over the entire surface in sufficient quantity and an iron-tooth rake is used to mix them together. The rake readily makes its way through the mass of plaster, on account of the slight resistance it offers, and a thorough admixture is thus effected in a few minutes. As to the quantity of Purple, we use about one quart to a barrel of plaster. If used stronger than this it will kill the leaves. A very good guide as to strength is this: Use London-purple enough to color the plaster a just perceptible tint of lilac. A barrel of plaster thus prepared suffices to dust thoroughly a half-acre of vines when the beetles and grubs are so numerous as to be found upon every leaf.

BAILEY'S MAMMOTH ENSILAGE SEED CORN.

MR. JOHN M. BAILEY'S "Book of Ensilage," which we have just received for notice, has an imprint on the cover and also on the first leaf of a remarkably vigorous corn plant as a specimen of a variety which he is pleased to call "Mammoth Ensilage Seed Corn." He further says that "The Mammoth Ensilage Corn yields from 40 to 75 tons of green fodder per acre," etc., and exhorts the public to send for price lists. The fact is that it is none other than Blount's White Prolific Corn, which the RURAL NEW-YORKER distributed among its subscribers last year, and the engraving in the "Book of Ensilage" is an exact reproduction (except in size) of a stalk of this corn, which was engraved by us and first published in the RURAL of March 8th, 1879. We subsequently permitted a couple of seedsmen to use the engraving, but we should be pleased to know what right the author of "The Book of Ensilage" has to adopt this cut and change the name of the variety from Blount's White Prolific to that of Mammoth Ensilage Seed Corn. As to the value of the system of ensilage, our opinion has already been expressed in the RURAL.

PORTABLE FARM STEAM ENGINES.

As the use of these is constantly increasing for various purposes on the farm, and in barns for cutting up and preparing fodder, the same attention ought to be bestowed in the practical education of the men managing them, as is done on that of those employed on railroads and steamboats. In England employers are very particular as to the qualifications of the drivers of portable farm engines for plowing, etc. Each driver is obliged to certify that no accident has ever happened to the engine or its attendants during a period of not less than 18 months of previous service, and, in addition to this, the engine and driver are inspected by a professional examiner and inspector. It is but a few weeks since we saw a report in the papers of the bursting of the boiler of a farm engine, and the man sent out by its manufacturers to set up and start it, was instantly killed, and several spectators standing about were badly wounded. In years past there have been various accidents from farm engines; but we do not recollect whether any, except the one above, was fatal. An explosion in a barn filled with hay and straw and attached to stables of cattle and horses, would be attended with great loss of property and animals, and perhaps sometimes of human life. Manufacturers should not only thoroughly try their engines and boilers before sending them out, but allow no one to go with them unless of tried competency in their management besides being strictly faithful and perfectly sober in all his habits.

CLEAN CEREAL FOOD.

WHILE ingenuity seems almost to have exhausted itself in devices to secure the entire purification of the grain of wheat before it is ground into fine flour, it is strange that so little care is taken with other grains in the preparation for bread-making. Even wheat designed for "Graham" flour is rarely cleansed as it ought to be, and it is notorious that for this kind of flour the lower grades of wheat are commonly used. When it comes to rye and buckwheat, and especially to corn, we may say that they are, as a rule, ground in their filth, original and acquired, and so come to the table for human food. Wheat must be cleansed to make white flour. This whiteness is a prime element in the price, and therefore of main consequence to the miller. The cleanliness or otherwise of other flours and meals is not so manifest to the eye of the purchaser, and the millers handle them as though it made no difference what is ground up with the grain. This fact is known to many, and prevents them from eating what they would otherwise regard as wholesome and agreeable food. The extent to which this disregard of cleanliness concerning an important class of our food materials is carried, is so great that it is often detected by the taste, and people who are fond of bread made from the coarse meals are given a disgust towards them which endures through life.

It is difficult to designate a remedy for an evil like this, so far as the people of towns and cities are concerned; but farmers carrying their own "grists" to mill can inaugurate the reform by insisting upon the thorough cleansing of all grain before grinding. If they will do this they will establish a standard and secure a general use of the proper apparatus in all custom mills, which will extend in time to merchant mills, and be a wonderful boon to all bread eaters.

A CHANGE NEEDED IN OUR LAND LAWS.

UNDER our present laws the public domain is classified as mineral, coal, timber, and agricultural land. Under the last head is included arid pasturage which at present is worthless, or nearly so, for farming purposes, but well suited for stock ranges. Vast tracts of such land lie west of Kansas and Nebraska, extending through Colorado and New Mexico to the Rocky Mountains. Next to the Texan prairies these plains are the main stock pasturages of the country, and the number of animals raised upon them is rapidly increasing. Through a great deal of this region a more or less bitter strife exists between the stockmen and homesteaders. The former insist that the country is unsuitable for ordinary farm purposes, and that it should be reserved exclusively for pasturage, and should be sold in extensive tracts to cattle raisers, while the latter maintain that the success which has already attended the efforts of our pioneers in reclaiming the "Great American Desert" goes strongly to show that almost the whole region can in time be fitted for farming purposes.

Under the present laws these lands cannot be disposed of to individuals in quantities larger than tracts of 160 acres; nor can they be leased to them. Many of them, however, have appropriated large areas on which they have sunk wells, built fences and constructed various other improvements. Last week one of these firms wrote to the Land Office in Washington urging the importance and necessity of legislation for the purpose of protecting large stock-breeders who, without legal sanction, have taken up extensive tracts on the arid Western plains. On the northern edge of the Staked Plains, in New Mexico, the writers have established a cattle ranch of 100 square miles, or 64,000 acres, around which they have built a fence, besides digging wells and making other improvements on it, and they now urge legislation to confirm them in their squatter sovereignty, complaining that several ranchmen threaten to cut down their fences and let their cattle out, inasmuch as they have no title to the land.

It is not in that section alone, but also in Texas, California, and Oregon, that ill-blood between the large stock raisers and agricultural settlers has caused and is causing a great deal of exasperation and loss to both parties. It seems to us that there is pressing need of some legislation to meet such cases. These cattle kings are in the habit of maintaining their illegal appropriations of the public domain often in the most high-handed and arbitrary manner, and it is only the steady pressure of the constantly increasing number of farming settlers that can check their greed. Even as it is, unless a change is soon made in the homestead laws, the entire region between the hundredth meridian and the Rocky Mountains will eventually be controlled by the great cattle kings. Already, by a round-about way, they have managed to obtain a large share of the best part of it, and more is constantly falling into their hands.

The means to this end are generally as follows: The stock raisers hire—ex-soldiers if possible—with the understanding that they must each homestead a quarter of a section of bottom land along the river front, or land watered by natural springs, and after having obtained their patents therefor sell their homesteads to their employers for a small sum. By the land laws the soldier is allowed to deduct the term of his service from the five years that it is necessary to live on the claim to secure a Government patent, so that frequently the ex-soldier has had to live on the land for only from six to twelve months before he secured his land and deeded it to his employer. This abuse has been repeated by other soldiers, the stock raiser always securing land including living water, so that to-day in some sections of Colorado and New Mexico every river, creek and spring is in the hands of these men. They build wire fences around their possessions, allow no cattle except their own to drink, and thus actually control the adjoining range. While enjoying all the advantages of ownership of thousands of acres, they pay taxes only on the land under fence.

If the Western plains here referred to are neither fit nor can be fitted for general agricultural purposes, the fact should be speedily ascertained beyond cavil, and the land laws should be so altered as to enable stock raisers to purchase or lease the large ranges their business seems to demand to secure the best results. If, on the other hand, the advance of cultivation westward is likely to fit a great part, if not all, of this vast area for agriculture, as it has already done in some parts of the whilom American Desert, then the homestead laws should be promptly altered to prevent the abuse of their privilege by which the best portions of that country are being monopolized by a handful of wealthy stock-owners and speculators. In any case an early change in our land laws seems needed.

BREVITIES.

NELSON RITTER'S report of the Beauty of Hebron (in another column) is a specimen of many we are receiving.

OF our eleven varieties of cow-peas, that known as "Poor Land" has, up to this time, made the best growth. It was also the first to bloom.

WE have just received too late for this issue, a full account of the British Royal Agricultural Society's Great Annual Show, held at Carlisle, England, on July the 12th.

WE should like to have every farmer read the article by Richard Goodman, on page 503. It starts off like a thrice-told tale. Indeed, it is upon a threadbare topic—but the dress is new and striking.

MR. JAMES HOGG informs us that we do not know how best to prepare a musk-melon. Cut it in halves, he says, and after taking out the seeds, spread a little honey over the flesh, and eat with a teaspoon.

IN England it has been found that seven pounds of sulphur mixed with 100 pounds of ground bone and allowed to slightly ferment for a few days before being applied to the soil, will effectually defend the young turnip plants from the attacks of the fly.

IN Spain the Lemon verbena is considered as one of the best tonics and stomachics. It is used in two ways—either made into an infusion or decoction, with hot water and sugar and then drank cold; or five or six leaves are put into a cup of hot tea. It is used as a remedy for flatulence, nervousness, diarrhea and loss of appetite. The flavor is very agreeable.

FROM a valued correspondent in Bradford Co., Florida, we have received a package containing specimens of cow-peas planted the second week in May, and gathered June, 25, and a small bunch of Bermuda grass reported to contain seed. The peas average seven inches in length with an average of 22 seeds. We are afraid the spikes of Bermuda grass do not contain any true seeds.

WHILE noting the merits of the many new strawberries that claim attention, the value of such sorts as Seth Boyden (Boyden's 30) should not be forgotten. The berries are very large sweet and quite firm. Charles Downing, Boyden and Sharpless are among the very best for home use. Pot-grown berries (if *well* grown), planted before September, will produce a fine crop next year."

THUS touchingly writes the Editor of the Mark Lane Express: "The consumers of agricultural produce may be comforted by the good crop promised and to a considerable extent gathered in the United States; but this only adds to the depression of the British farmer. In the households of our homesteads, which look so snug and comfortable, there is deep sadness to day, and many a brave heart is about broken.

"A QUICK and effectual method to destroy plantain and other weed pests on lawns is to cut the plant off at the crown, and drop on the top of the root two or three drops of kerosene oil. The lawn will not be defaced by digging, and the work is at once and completely done; the root dies as surely as if struck by lightning."

IT is the strangest thing that the above or similar advice is going the rounds of the Agricultural press. In wet weather plaintain may be pulled by hand, roots and all, as clean as a whistle, if all the leaves be held in the hand when the pull is made. But at any time this pest may be grupped up with a forked iron of almost any kind so rapidly that nobody would ever dream of adopting the above fussy, silly method.

A NEW YORK CITY contemporary takes a Boston daily paper to task for saying that the Ox-eye daisy is propagated only, by seed. It points out that the daisy is a perennial, and then states that it is *only* by persistent cutting that it can be subdued. It is a perennial plant, certainly; but this method or exterminating the weed is altogether impracticable, as any farmer knows that has had it to subdue. A part of an old pasture field at the RURAL FARM, that was infested with Ox-eye daisy, was plowed last year about the 1st of July, while the daisies were in full bloom. The roots were thus exposed to the hot sun during a dry time, and at once killed, while the forming seeds were buried beneath the furrows. City editors must think that farmers have very little to do when they advise them to "persistently cut back" such weeds as the Ox-eye daisy. The part of the field thus plowed remained bare during the rest of the season, and the entire field was planted to corn this Spring. It is noteworthy that the corn on the part of the field plowed in July and again in the Spring, is at least one foot taller than that on the other portions plowed only in the Spring.

THE Board of Control of the New York State Experiment Station at its meeting on August 4th, will appoint a Director and Chemist for the Station. The value of the institution to the farmers of the State will depend mainly on the character and qualifications of these officers, and it is, therefore, of no small importance that able and trustworthy men should be selected for the positions. They should be men whose work has already made them favorably known to the public. The institution at present, is itself an experiment, and there should not be anything experimental about the qualifications of those upon whose skill, application, and integrity its success depends. As it is intended to make a number of experiments in practical agriculture, we trust that some sagacious, practical agriculturist may be selected as Director, while for the chemical work we are fortunate in having at hand, in Dr. Ledoux, late Director of the North Carolina Experiment Station, a man who has already greatly distinguished himself in that very line. Should the chemical work of the Station be confided to him, we feel assured from careful observations of his labors in North Carolina, that the public will be well and faithfully served, and that a long step will have been taken towards rendering the Experiment Station a success.

For Women.

CONDUCTED BY MISS RAY CLARK.

"JE VOUS AIME."

CHARLES RICHARDS DODGE.

I.

"I LOVE YOU" sighs the roving bee
To the wild, red rose; and daintily
The belted knight bends low and sips
The nectar from her crimson lips,
And laughs that love is so free.

II.

"I love you," sighs the wild red rose
To the sunbeam, as it fondly throws
Her a love-kiss, tender and true;
And it answers, "I love you."

III.

"I love you," sighs a bashful boy
To a blushing maid—so shy and coy—
Yet happy that love is so free.
And the sunbeam and the truant bee
Breathe in his ear those words of joy
The maiden durst not, "I love *thee*."

RECREATION.

VELENA.

AWAY from the heat, the noise and the dust, to cool, quiet and shady retreats, the people of the city are hying. Not alone for pleasure, but the health of many require this change.

The overworked brain and worn-out nerves have lost their tension and they demand a respite, a rec-reation and a re-creation.

All day in close, ill-ventilated rooms, breathing dust from manufacturing tools of iron or brass, or bending over writing desks inhaling air laden with gas and various odors, is it a wonder that heart and lungs cry for a change? In truth, the whole system demands pure air, pure water, pure food and wholesome rest. The monotonous routine of life, whether one of continued activity or dull sluggishness must be broken into, to keep the health of brain and body unimpaired.

Too long a strain, as well as a want of proper exercise, produces flabbiness of the muscles. Too constant use of the mind lessens its strength and weakens the brain; and using it but little, or not at all, produces the same result.

Both too much exercise or too little should equally be avoided. Every body should work both mind and body a certain length of time and then should rest in order to keep both healthy and in tone.

FIG. 256.

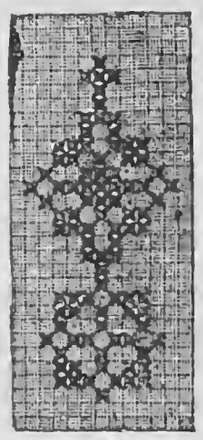

FIG. 257.

For how long a time, or to what extent, depends upon the actual strength of the person. It is not always necessary that there should be an actual cessation of duties, but there should be an avoidance of continued monotonous labor.

An occasional hour or abandoning all work, all care and forgetting all sorrow and pain is conducive to health, to strength and to labor. A change of place and a change of associations are untold helps in many and varied ways.

Even slight changes have their effects; one can hardly be too young, nor can he well be too old not to appreciate a pleasant change even though it be for but a short time.

What these changes must be, to result the most beneficially, depends upon the habits and employments of the different ones.

Those residing in rural districts ought to have rest and recreation, but the air they breathe, the water they drink and the food they consume are comparatively pure. With them noise is an exception. There is no rumbling or clattering of wheels going round over stone pavements; no buzzing and whirring of machinery distracting almost to insanity the tired brain; no thrilling the strained nerves with intense vibrations causing extreme pain. These are unknown and unfelt in quiet, balmy country retreats. The soothing power of sylvan glades, the hushed and fragrant air restore only over-wrought humanity Those to whom it is an every-day and a life-long enjoyment ought occasionally, to taste the hurried, busy and cramped life in the heat and dust of a town, in order to fully appreciate the blessings at their door.

Not that farmers do not feel the heat, dust noise and labor almost incessantly, but they *can* stop off in the "cool and quiet;" while for people in the town there is neither the cool nor the quiet to be had.

They must go from home for it, and it is to urge the making of arrangements for this most beneficial recreation that I agitate the subject. Parents need rest and children require a change.

Do not make expensive preparations nor go to popular and expensive resorts, but find a place and at such prices as you can well afford, and enjoy it a week.

We could all recreate more if we would do it more wisely.

If we would only be healthy and clean and content, we could rusticate with as much pleasure at a dollar a day as some do for five. In fact, many camp out at much less cost and have as good a time as they ever had, providing they do it "wisely and well."

DESCRIPTION OF CUTS.

FIG. 258.—FASHIONABLE FANS.—The larger fan is of feathers, with small flowers introduced; it is mounted on satinwood. The smaller fan shuts into a case; it is intended for out-door use.

FIG. 258.

FIG. 259.—WORK-BASKET.—Any wicker basket may be used for this purpose. It is covered with cashmere and is ornamented with cloth drapery, each section of which is embroidered with a bouquet of roses and lilac, or the bouquet may be made of flowers composed of narrow China ribbon, the leaves being embroidered; a bouquet is also worked in the center of the lid, which is ornamented with a cord and ruche of narrow ribbon; ball-wave fringe finishes the drapes.

FIG. 256.—DRESS SLEEVE.—The sleeve is suitable for a home-dress of cashmere or other material, it is ornamented with a gathered cuff of silk and a bow of ribbon.

FIG. 257. 260 and 261.—BORDERS IN CROSS AND ITALIAN STITCH.—For handkerchiefs, children's washing-dresses, &c. The border may be worked in ingrain cotton or washing floss, in colors to suit the material it is intended to ornament.

MAKING WORK EASIER.

IT is a delightful thing to see a household managed in a methodical manner, when there is no fuss made about it; when the wheels and pulleys that move the well-ordered machine are kept so much out of sight, that nobody is disturbed by them, and kept in fear lest she shall in some way disarrange their working.

There are houses where a kind of State prison system prevails, which is very irksome to all who come within its sphere; but the art that hides art is the perfection of good housekeeping. You see the pleasing results and that is all you know about it.

Household work is carried on with much greater ease where this quiet order is found. No hunting for this, or that, because everything is in its place. No flutter when company comes unexpectedly, because there is no place fit to receive them. The darkened sitting-room is thrown open to the light, and they are ushered in to its cool, inviting atmosphere, and the housekeeper can sit down and entertain them without an uneasy consciousness that the corners are all in confusion.

We all have gifts differing, but there is no one but can improve an original defect in character and training, if she have but the real heart for it.

While children are small, and there are many about a house, it is seldom possible to adjust matters with great regularity; even very orderly women find their souls vexed and harassed unduly from day to day, because of repeated failures.

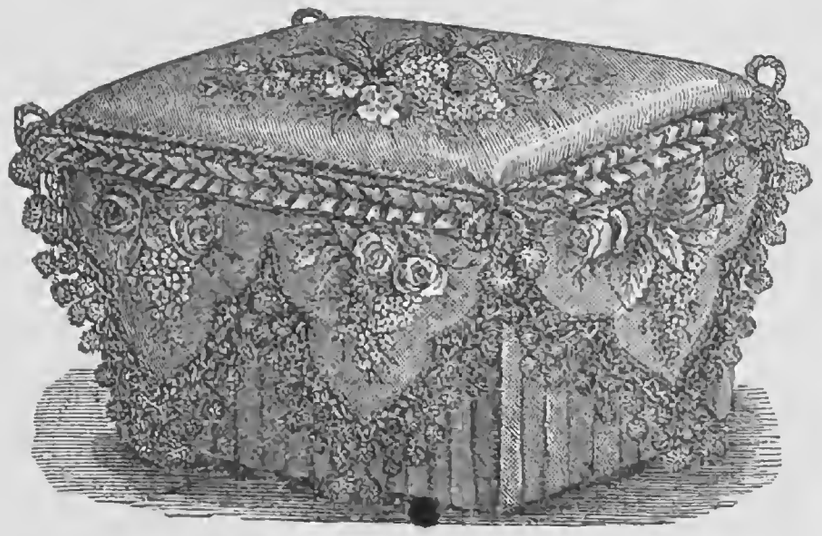

FIG 259.

It is a good thing to strive often and keep steadily before the mind, the necessity of system. It is but little more trouble, in the first place, to hang up a garment, than to throw it over a chair, and it saves a great deal of trouble afterwards. It must be hung up eventually and has, very likely, become rumpled, and needs ironing, or soiled, and needs brushing, caused by the want of care at first. It has also been in the way for hours. How easy to have saved it all!

It seems an odd way but I have known a woman, of over-burdened with work either, who would leave her stockings unassorted and unmended until somebody wanted a pair, and then there was a flurry and hunt for needles and darning cotton, and not a pair of shears or scissors to be found in the whole house. Very likely she would sit down to darn them with a case knife in her lap, with which to cut the thread.

It was the same way all through the house.

I have seen her little girl trotting around with one black and one white kid shoe on; but then her stockings were of different kinds so they matched pretty well.

Attention to little things just as you go along, will save a great deal of time, labor and confusion afterwards.

It will give you courage, too, and that is worth a great deal to a soldier, who has a hard battle to fight. It is inspiring to think "that is well done," even if it is so small a matter as polishing your tea-kettle, and it will give pleasure and courage every time your eye rests on it. EDITH.

HUSBANDS AND WIVES.

M. J. T.

I AM writing to welcome Miss Irene to our Women's Columns. That she brings a vigorous mind and strength to wield the pen cannot be doubted. Nor do I question but that she speaks truly as well as feelingly on the wrongs of some wives she knows and probably loves, still, as an old wife myself, I have no faith in publicly dressing down our husbands.

Unfortunately, there are men, who, having led their wives to the altar, act as though they thought by giving the woman their name they had performed the last act of courtesy to be expected from them, but there is only a small proportion of this class, and even toward them we as Christians must remember to exercise that charity described by St. Paul, "which suffereth long and is kind." Then we must also remember that it is very possible the wife falls below the ideal that her husband formed of her character, just as the same experience is realized by the wife.

One thought has often occurred to me, that the temper of the contracting parties ought to be seriously considered. The old lady who asserted that temper was everything, was nearer the truth than many may suppose. A man of phlegmatic temperament can hardly conceive the pain that his indifferenec will give to a sensitive wife.

It is true that workingmen's wives are too often overworked. In many cases, however, it seems impossible to avoid it, and when weariness comes the temper fails, and we see only the hard side of our lot; but let the weary ones remember the promise: "As thy days, so shall thy strength be." The thought will do good, and the children will soon grow to be a help and comfort. Let us try to teach the young people to be courteous to one another; that will help to make good, thoughtful husbands and wives for the future.

As for Miss Irene, when the right man comes, I feel sure that she will have his supper ready by the time he comes home, so that he will only have to play with baby while she clears it away.

WORLDLY MATTERS FOR GIRLS.

Teeth.

Lately, dentistry has become so perfected that no excuse can be given by anyone for unsightly teeth; no lady or gentleman will neglect them, any more than they would be guilty of appearing in company with uncombed hair.

Make it a rule to have a dentist examine your teeth at least two or three times a year. Have the back ones filled with amalgam and those in front with gold. The amalgam will last just as long but does not look as well as the gold fillings. After they are filled take care of them; use a tooth brush with a—tufted end, convex in shape—this kind of a brush is better than an ordinary one because it can penetrate parts of the teeth that you cannot touch with another kind of brush; clean them twice a day and oftener if possible. Use a powder (recommended by a good dentist) or white castile soap; brush the front ones *lengthwise* and be as particular in cleaning the inside as the outside of the teeth. Once a day run linen or silk floss between them, this is the best preventive known for decay between the teeth.

If you find in spite of all this care that tartar is forming, get some powdered pumice-stone, take a match with the sulphur end bitten off, make the end bushy, wet it, dip it in the powder and rub it across the teeth lengthwise, gently until the tartar disappears.

For a foul breath wash the mouth out with carbolic acid, diluted in water, and lemons eaten occasionally. The latter, however, is not very good for the teeth. Miss M. D.

SCARE-CROWS.

No sort of use in hanging out such looking things, to keep birds out of the cherry trees, or the crows from the corn fields. Birds aren't fools they have sharp eyes, and see through such shams quicker than human beings do. Why I have seen effigies stuck up in the corn-field that would scare a horse, and make a boy jump, and the crows would come and pull the corn, without a sign of fear. I tell you it is not an easy matter to cheat birds; they will not be humbugged by old clothes, or hooped skirts; they are too sensible for that. Now if you want to keep birds from trespassing, just drive up stakes in the corn-field, and tie a string around the necks of some glass junk bottles, and hang them on the top of the stakes or on the limbs of the trees. Birds are shy of bottles, they show a deal of good sense in it too.

There is danger in bottles, and birds keep clear of them. They never go near them, and it is the best use one can put them to. GRANDMOTHER.

FIG. 261.

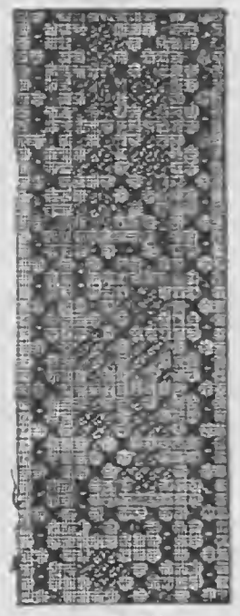

FIG. 260.

DIMPLES TO ORDER.—A New York paper heralds a manufacturer of dimples, who comes from Paris, of course, and whose *modus operandi* is described as follows: "I make a puncture in the skin at the point where the dimple is required that cannot be noticed when it has healed, and with a very delicate instrument I remove a slight portion of the muscle. Then I excite a slight inflammation, which attaches the skin to the subcutaneous hollow I have formed. In a few days the wound—if wound it can be called—has healed, and a charming dimple is the result."

BE TIDY.—"Now, my son," said a kind mother to her little boy, "be tidy, fold up your nightgown *again*: I *must* have it done *neatly*."

That boy has grown up to be a man. A friend said to him one day

"How is it you get through so much work as you do?"

"Method, method," was the reply. "I am now reaping the fruits of my mother's lesson—'Be tidy!'"

TO WASH A MUSLIN DRESS.—Make a good lather, and wash the muslin in *cold* water—never putting it into warm water even to rinse it. If the muslin is green, add a wineglassful of vinegar to the water in which it is rinsed; if lilac, the same quantity of ammonia. For black and white muslins use a small quantity of sugar of lead.

DR. JOHNSON once said in his bluff way, that want of economy was a kind of dishonesty. Certain it is, the improvident man robs himself, and his punishment is sure to be painful if not public.

GOOD temper is like a sunny day, it sheds a brightness over everything; it is the sweetener of toil, and the soother of disquietude.

CORRESPONDENTS' CORNER.

WILL Miss M. D. please tell us where "London Hair Restorer" may be obtained? I have failed to find it at any of the druggists where I reside.

McKean Co., Pa. BELLE W. H.

Literary Miscellany.

LOFTS.

BY PAUL PASTNOR.

Do you remember when we were boys,
And used to sleep so near the sky?
Ah! life was a housetop-hight of joys,
When you and I were country boys
And used to sleep so near the sky!

How sweet and cosy the attic seemed,
When, weary-limbed, we stole to bed,
The drowsy candle sank and streamed,
The starlight through the shingles gleamed,
And all things dim to slumber wed.

Then, as in reverent prayer we knelt,
The figures on the counterpane
How strangely into speech would melt:
They seemed to utter what we felt
In some fantastic, far-off strain.

Oh, what was e'er so warm and soft
As the humble cot we used to seek?
Bright dreams, that gently stirred and oft
The fragrant stillness of the loft,
Did brood us, like a mother's cheek.

The swallows twittered under the eaves,
The old clock struck the solemn hour,
Yet we never woke till the dewy leaves
Sifted the dawn thro' their sparkling sieves
Into the garners of the flowers.

Ah well! all this was long ago,
And mists of time lie thick between.
Already our locks are too white with snow,
And it wouldn't do to sleep, you know,
Where the frosty stars look in!

But somethne, brother, a night will come,
When we shall ascend the flickering stair,
And sleep as sweetly in God's great home,
As though we had only laid us down,
And tucked us in with a quilt of prayer.

EDWARD BENTLEY'S DECISION.

CHAPTER II.

THOUGH slightly fatigued with their walk, neither of the young girls felt inclined to follow the example of the servants and go to rest. Their feet were damp with the dew, and, Em, complaining of being chilly, set light to the fire, which was always laid in readiness, the Rector having a huge dislike to an empty grate after sundown; declaring that even in the dog-days a room looked comfortless without a cheery blaze.

Drawing an Indian screen between their chairs and the door, Edith Wilton and her friend sat with their feet on the fender, talking by fits and starts, till Em fell from musing into slumber.

Edith did not disturb her, for she, too, had fallen into a reverie, and was half sadly contrasting the peaceful life of her schoolfellow with her own.

The few days she proposed spending at the rectory were a blissful respite from the exactions of the querulous, irritable woman, who, while professing to love and treat her as her own child, contrived to try her patience continually, and was now urging her to marry a subaltern in her husband's regiment, whose wealth blinded her to his want of brains.

Major Wilton might have helped his niece, but he had taken it into his head that little Edith would be better off as a wife than under the domination of her aunt; and as he could not understand her scruples, she refrained from teasing him with them.

The lamp having been so badly trimmed that it smoked intolerably, Em had extinguished it as soon as she lit the fire; and when that began to die out the room grew very dark. Myers, peeping in, and finding no light and hearing no sound, concluded that the young ladies had gone up stairs long since, and went his own way in false security.

From a very pleasant dream, in which she was bestowing more rosebuds on Leonard Clinton, Em awoke with a start and a shiver, and gently reproached her companion for not having aroused her sooner. But Edith only laughed; declaring that she was accustomed to late hours, and had been too comfortable herself to care to stir.

Lighting a taper that stood on the mantel-piece, Em now led the way from the room. The hands of the tall clock (not my grandfather's) that stood in the hall, were pointing to the half-hour after midnight, and the measured ticking sounded so ominous in the silence of the night, that, involuntarily the young girls stepped more lightly, and cast awed glances around them.

Em's foot was on the lower stair, when a sharp click like the turning of a key in a lock, made her pause, and whisper the question:

"What was that?"

Edith shook her head; she too had heard something, but could not tell what.

"Are all your servants in bed?" she queried, in the same hushed tones that her friend had employed.

"Oh! yes; we keep such early hours. It is rarely that anyone is up after ten o'clock."

"But your very civil man Myers may have thought it incumbent on him to wait for us. The sound seemed to proceed from this direction," and Edith pointed to the door of the dining-room, beyond which lay Mr. Bentley's study. "Shall I see if anyone is there?"

Em faltered an assent. Her friend had more courage than she had, for if left to herself, instead of standing still, trying to look calm and brave, she would have rushed upstairs and hid herself under the bed-clothes.

Edith's own face paled slightly as, with a turn of the wrist, she opened the door and looked in. No one was in the dining-room, but there was a light in the study. On the wall were thrown the shadows of two heads—Myers' and another's!

Finding that Edith did not stir, Em ventured to step nearer and peep over her shoulder.

There was a subdued hammering, and then the cracking of wood—sounds which might have perplexed the hearers of them if the Rector's sister, on catching sight of the shadows on the wall, had not divined the errand of the men thus reflected upon it.

"There are thieves in the house!" she exclaimed. "They are breaking open Edward's desk."

Edith's first thought was one of thankfulness that the trust-money was no longer there; but Em was too frightened to find similar comfort. Screaming for help, she flew upstairs; but before following her example, her friend, with more presence of mind, took the precaution to close the dining-room door and fasten it, thus placing a barrier, if but a frail one, between their defenceless selves and the burglars.

In the excess of her terror, Em made for the chamber of her brother, forgetting that he was not there to protect her; and once locked in it, neither she nor Edith dared leave it again, although, as the windows were at the back of the house, there was little or no chance of being able to make their position known to any belated person who might happen to pass by.

And now Em sank on the floor, clinging to her companion, and sobbing out a conviction that they should both be murdered. Always timorous and sensitive, she had become quite helpless in the face of this emergency.

"Hush!" said Edith, almost sternly. "Had you not alarmed these men with your screams, we might have escaped from the house and obtained assistance; but I do not think we have anything more to fear. Thieves are generally cowardly, and these may have taken to their heels as soon as they found that they were detected."

But in this she was mistaken. A crash below proved that they had forced their way out of the dining-room, and the muttering of voices was followed by heavy footsteps ascending the stairs.

"They are coming! It is the money they are in quest of!" gasped Em; "and it is here they will seek for it, now they have satisfied themselves that it is not in the escritoire. Oh! Heaven! what shall we do?"

"Parley with them," said Edith. Assure them that they are making a fruitless search. To let them guess how much we dread them is only to encourage such lawless ruffians to greater violence."

"Who is there? she demanded; and Em could not restrain a faint cry when the voice of Myers—civil, obliging Myers—made reply that he must trouble the young ladies to hand over the little sum of money the Rector left in their charge, as he had a better use for it than dividing it amongst old women.

"The money of which you speak is no longer in the house," Edith replied, speaking as firmly as she could, with the arms of the shivering, moaning Em about her neck.

Myers heard this assertion with incredulous laughter.

"He had taken good care," he said, "that no fat farmers carried it off to the bank; and he knew 'miss' hadn't left the house all day. If it was not given up at once——"

He finished his speech with threats that made their blood run cold, and Edith clutched the arm of her half-fainting companion.

"Rouse yourself, Em; if these wretches break in here, only to be disappointed a second time, they will revenge themselves on us. Are there no weapons in the house with which we might defend ourselves?"

Em looked helplessly round as she faltered a reply.

"Edward has a revolver somewhere; he used to amuse himself with shooting at a mark, but——"

Ere she could say more Edith had caught sight of the pistol hanging above the chimney-piece, and taken it down. But it was not loaded, and she would have thrown it away in despair, if she had not descried a cartridge-box nearly hidden amongst the books and pamphlets, with which some hanging shelves were filled.

She had seen her father handle similar weapons too often not to know what to do with this one; but Em, shrinking from her, gasped an entreaty that she would not attempt to use it.

Edith did not answer, for she was listening to Myers, who with fiercer menaces than before was demanding admission. He was terribly in earnest, and the brave girl trembled for her companion more than herself.

"Is there no escape for us?" she cried, moving to the window and looking out, only to see that the hight from the ground forbade any attempt to lower themselves, even if Em could have been persuaded to attempt it. Then her eye fell on a door, and she threw it open, but it did but lead into a bath-room, and she was resigning herself to the struggle with their assailants that now seemed unavoidable, when she perceived a flight of steep ladder-like steps in the farther corner.

"Em! Em!" she cried excitedly, as she dragged her to the spot, "where will these stairs lead us?—to the servant's rooms? Better to be there than here."

But Em wrung her hands, and hung back, crying:

"It's no use; they only lead to a little turret Edward uses as a smoking-room."

Nevertheless, "Up! up!" cried Edith; "they shall not follow us there!" and half carrying her less courageous friend, she contrived to reach this last asylum from Myers' contaminating touch, just as one vigorous shove from his brawny shoulder burst the door off its hinges and gave admission to him and his surly confederate.

It would have tried the temper of the Rev. Edward Bentley if he could have seen his most treasured possessions tossed over by the baffled Myers, who had felt so sure of finding the money in one of his master's drawers, that when compelled to believe that it was not there he was furious.

Still he insisted that it was in the house, that miss and her friend had it about them; and knowing but too well whither they had flown, he rushed towards the steps, bidding his comrade follow.

Edith's heart beat with suffocating rapidity. Em had slid down beside her quite insensible.

But with the courage of desperation she kept her post at the top of the steps, and presenting the revolver at Myers as he began to ascend them, Edith bade him keep back.

Again his derisive laughter drowned her words.

"You're a very clever young lady, Miss Edith. I've known that a long time, for you and I are old acquaintances; and I owe your uncle a grudge for having me drummed out of his regiment. You may put down your popgun. I happen to know that it isn't loaded; and I'm going to have the rings off your pretty white fingers, and the pearls out of your ears, and by George! I don't know whether Ned and I won't steal a kiss or two off your rosy lips."

"Stand back, or I fire!" exclaimed Edith again, for he was now approaching her rapidly; but unheeding the warning, he took a step nearer.

There was a flash—a report—and the wretched man, with a yell of agony, fell backwards, knocking down his companion in guilt, who, seeing the weapon pointed at himself, fled, muttering curses, and was never seen again.

The pistol dropped from Edith's now nerveless hand, and she sank on her knees beside her unconscious friend, afraid to cast another glance towards the writhing, moaning wretch at the foot of the steps. The consequences of her own deed terrified her; and though the shot had been fired in self-defence, her woman's heart quailed as she whispered to herself:

"Will he die?"

Em recovered consciousness; but only to mingle her hysterical cries with the groans of Myers who was entreating help, and declaring that he should bleed to death if he did not receive it. Edith felt her own senses fleeting, when the sound of footsteps in the lower part of the house was followed by the voice of Leonard Clinton, crying, excitedly: "Miss Bentley, where are you?"

Guided by Edith's responses, he soon found his way to where Myers lay. A couple of Farmer Andrews' carters were with him, and the farmer himself was coming as rapidly as his size would permit. One of Em's maids had been roused from sleep by the screams of her young mistress uttered on discovering Myers and his confederate in the study, and, slipping on some clothes, the girl had escaped from the house by a staircase leading to the offices, and flown for help to the farm on which her father and brother were employed.

A broken leg proved to be the worst of Myer's injuries, and that had been received in his fall from the steps, Edith's shot having merely inflicted a flesh-wound in his arm. He was carried off and handed to the village constables, and the young ladies released from their captivity in the turret.

But Em's nerves had received a shock not easily overcome. The Rev. Edward Bentley had scarcely commenced his business, when he received a summons by telegraph that brought him home in haste.

He was met by Edith Wilton who did her best to reassure him; who forgot all she had herself undergone that she might cheer him with hopeful predictions of Em's speedy recovery.

Nor did her generous efforts relax. For several ensuing weeks she was the household fairy who nursed his sister, took Em's place at the organ and in the schools, and quietly, unobtrusively attended to the creature-comforts of the rector.

He was filled with contrition for the injustice he had done her. Was this thoughtful, intelligent girl, so active, yet so noiseless in her movements, the woman from whom he had fled in disgust?

"We shall miss you dreadfully, Miss Wilton," he said one evening, when, having seen her patient so thoroughly recovered that she was her merry self once more, Edith talked seriously of joining her uncle and aunt.

"You will have to accustom yourself to a greater loss than my society," she replied, with a significant glance at Em, who was standing on the lawn listening with blushing, downcast face to Leonard Clinton.

"Yes, I have received a hint that I must prepare myself to part with my dear little sister, and as Clinton is of good family, and has excellent prospects, I cannot refuse my consent."

"I hope they will be very happy," said Edith, softly.

"Thanks for your good wishes; but have you none to spare for me? Miss Wilton—Edith—why should you leave us! Who is there who loves and appreciates you as I do?"

Having broken the ice Edward Bentley pleaded his cause so ardently that Edith was persuaded to listen and confess that she was not insensible to his growing affection.

"But," she added, "I ought to confess that I came here prepared to dislike you. I felt sure, from Em's description, that I should find you a saucy fellow!"

"And I," laughed Edward, "ran away to avoid you; it is delightful to know that we were both in the wrong. Let us exchange mutual forgiveness, and then you shall write to your uncle and tell him how one terrible night has brought us so closely together that we cannot consent to part again!"

And when Em and her lover joined them the letter was written, and the betrothal ring glistening on Edith's finger.

RECENT LITERATURE.

White Hands and White Hearts. Published by the National Temperance Society and Publication House, by Ernest Gilmore. 12mo, 278 pages, price $1.25.

This is a new and exceedingly interesting book, intended particularly for Sunday-school libraries. It is well written and pure in tone. Among other valuable lessons it shows the need of patience and trust by those engaged in temperance work and for the salvation of others. A deep religious spirit pervades the whole volume, making it specially adapted to Sunday-schools and home reading.

MAGAZINES FOR AUGUST.

PHRENOLOGICAL JOURNAL—CONTENTS:—James A. Garfield, Republican Candidate for President of the United States; Portrait; Chester A. Arthur, Republican Candidate for Vice-President of the United States; Portrait; Studies in Comparative Phrenology—Continued: With Illustrations; Anti-Malthus; or, the Colonization of the whole Earth—Its Normal Destiny; Progress of Phrenological Truth; What I Know about Mosquitoes; Charles C. Frost, Shoemaker and Savant; Portrait; St. Augustine, Illustrated; Phrenology Misinterpreted; The Curse of Civilization; Fashionable Gift-Giving; Physiological Antithesis; Wall Paper in Bedrooms; Seeing at Great Distances; Notes in Science and Agriculture; Editorial Items; Answers to Correspondents; Personal; Wisdom; Mirth; Library Notices; Publishers' Department.

THE AMUSEMENTS OF THE CHILDREN OF THE POOR.—In our walks we are much given to visiting the quarters of our great city where live the poorer of the working classes. Their humble vocations and their modes of adapting themselves to the pinch of want offer very interesting subjects for contemplation. The children, always numerous, in such quarters specially command our attention, for they enlist at once our sympathy for their helpless destitution, and set in motion a current of thought regarding the life of toil and sorrow which the future has in store for the most of them who survive the years of childhood.

But in the most squalid neighborhoods the edge of our sadness has been taken off by scenes of hearty, thorough enjoyment on the part of children there. Despite the filth of the street and the dilapidation of the tenement; despite surroundings of vice and associations of crime, groups of little ones are to be seen playing with all the expressions of delight, and all the innocent abandon of children in the elegant and retired neighborhoods of the well-to-do.

A day or two since we passed through a street in one of the worst parts of the city; the sultry weather had apparently driven all the grown people from their close lodgings to the windows and stoops, while the children in all degrees of dress or undress flocked on sidewalk and street. Here and there a group sat upon the curb engaged in playing "Jack-stones" with those odd-looking little metallic castings which are to be found in the petty stores which exist in the vicinage of the public schools. Now and then I encountered a ring of urchins, who, with hands clasped, were singing a merry-go-round with intense earnestness. On a narrow, creaking stoop we descried a wee colored girl arranging some bits of china on a little bench. She was "setting table," and her mother, we presumed, a tidy-looking young woman, was leaning against the door-jamb observing the child's play with an expression of enjoyment.

We could have counted fully one hundred children within the space of three squares, and all earnestly bent on play. There was noise enough; some were shouting in high keys, as children will when earnestly at play, but we saw not one instance of ill-humor or quarrelsome dispute.

Who could entertain so harsh a temper as to look upon the amusement of these poor children with coldness? To us such scenes encourage the thought of better days in store for them. We somehow associate their little happiness with the character of our national institutions, which afford to the lowest and the poorest opportunities for mental development, and point to fortune, honor, and power as attainments for which poor as well as rich may strive.—Phrenological Journal.

HARPER'S MAGAZINE.—Contents: Robert Burns, A Poem. Illustrated; The Happy Hunting-Ground. Illustrated by Maria R. Oakey; Fish and Men in the Maine Island. Illustrated by M. J. Burns; By Paths in the Mountains. Illustrated by Charles Graham; Henry of Navarre before Paris. A Poem: Illustrated, Fredericks; Mr. Tolman. A Story. Illustrated, by F. G. Church; Martin Summer in the Garden of France. Illustrated; The Cruising Canoe. Illustrated; White Wings, A Yachting Romance. Illustrated; Boat Song. A Poem; Washington Square; A Boating Adventure; Mary Anerly; Editor's Easy Chair; Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

NORTH CAROLINA MOUNTAIN VILLAGES—The awful solitude of the forests is scarcely broken by them. Half of their unpainted, weather-beaten houses are always empty, the inmates having apparently died, or gone farther into these sleepy wildernesses and forgotten to come back. The roads leading to them are always over break-neck precipices and in scandalous disrepair, one generation putting off to another the mending of them. There is always a deserted mica mine on a neighboring hight, shining like a fountain of silver gushing from the rock; there is always a stream which "would give a powerful yield of gold, only we folks don't count much on them on certain ways of makin' a livin'."

There are always one or two families of educated, well-bred people. They have but little money, but they feel the need of it less here than anywhere else in the States. They live in roomy wooden houses, the walls, ceilings, and floors frequently made of a purplish fine-grained poplar, which no Persian carpet or tapestry could rival in beauty; they buy no new books, but they have read the old ones until they are live friends; they never saw a Gerome or a Fortuny, but their windows open on dusky valleys, delicate in beauty as a dream, on rushing water-falls, on rainbow veils of mist floating over dizzy hights; they dress in home-spun, and sit on wooden benches, but knowing nothing of fashions or bric-a-brac, their souls sit at ease and are quiet, and they never feel the aching void of an empty pocket. Our travelers were welcomed to many a room where trunks, the spinning-wheel, and the cooking-stove filled one side, and the bed and a portrait of a Revolutionary ancestor the other,

where flat-irons and silver goblets, Shakespeare and the blacking-brushes, amicably keep company on the mantle-shelf, but in which the fine quick wit and the grave courtesy of their hosts would have dwarfed the stateliest surroundings. REBECCA HARDING DAVIS.—Harper's Magazine.

THE MIDSUMMER SCRIBNER opens with a remarkable frontispiece engraving by Cole, from the famous picture of Savonarola, by Fra Bartolommeo. This portrait accompanies The Plain Story of Savonarola's Life, written by the English wife of the Italian Professor Villari. The paper has illustrations of the tragic life and death of Savonarola, by Mr. Van Schaick, the American artist living in Florence. Another brief summary of a large subject is Richard Henry Dana's Sketch of American Diplomacy. It is of peculiar interest, coming from so competent an authority. Madame Adam (Juliette Lamber), editor of La Nouvelle Revue, the new rival of the "Revue des Deux Mondes," answers philosophically — and favorably — the question "Will the French Republic Last?" The most novel and interesting art feature of the Midsummer Scribner is Philip Gilbert Hamerton's study of Mr. Seymour Haden's Etchings. It has been left to an American magazine to first enter upon the literal illustration of Dickens, by employing artists to look up the original scenes of his stories. The first of this series appears in the August Scribner. The Western Man, by Charles Dudley Warner; The Book of Mormon, by Mrs. Ellen E. Dickinson, fortified by sworn and other testimony, of the origin of the Mormon Bible. A comic operetta, The Sweet o' the Year, words by Nellie G. Cone and music by E. C. Phelps; Albert Rhodes, on American girls who marry foreign titles; an amusing paper by Mr. Rideing, illustrated by Mr. Brennan and others, on The Curiosities of Advertising; An illustrated paper, by Principal Grant, on the Present Position and Outlook of Canada, in a series which has attracted much attention; Further installments of Mr. Schuyler's "Peter the Great" and Mr. Cable's "Grandissimes." Dr. Holland discusses, among other things, "The Legitimate Novel." "Uncle Esek's Wisdom" is a new feature in the Bric-a-Brac department.

ST. NICHOLAS.—An interesting feature of this vacation number of the boys' and girls' magazine is the profusely illustrated article, A Happy Thought for Street Children. Besides the installments of the two serials, by Louisa M. Alcott and Noah Brooks—one dealing with sprightly homelife, the other with boys who form a militia company and have a muster and sham fight—there are several complete short stories. Of these, the most notable are: "Marjorie's Peril," illustrated by McCutcheon; The Fox and the Stork, illustrated by Sheppard, a tale of boy-life, by Susan Coolidge; Why the Black Cat Winked, illustrated by Brennan, and the Coral Castle, a funny narrative, with six comic pictures by Hopkins. There is, also, an illustrated installment of "The Major's Big-Talk Stories," relating anecdotes concerning two curious animals—the Bye-Bye and the Howis Dattorht.

Placer and Gulch Mining for Gold are graphically described by Ernest Ingersoll and illustrated by J. Harrison Mills, and a bright account is given of the Darning-Needle, or dragon-fly.

The pages of large-type reading-matter set apart for very little folk, and the departments of "Jack in the Pulpit," "Letter-Box" and "Riddle-Box," are made attractive with stories, anecdotes, &c. Scattered here and there are many poems, single pictures, and jingles, which fill up eighty pages in a way to make even the rainiest holiday delightful to the children.

APPLETONS' JOURNAL.—Contents:—Edge-Tools (in Two Parts—Part First) by Annie Bothwell; Health at Home—Part third, by B. W. Richardson, M. D; Some Thoughts on Shelley, by Stopford A. Brooke; The Influence of Art in Daily Life, by J. Beavington Atkinson; German Dialect Poets, by W. W. Crane; Michael and I, by Julian Sturgis; The Historical Characters of the Spanish Stage; Landscape Painting, by Sir Robert P. Collier; The Cook's Oracle; Goldwin Smith's Cowper; Swinburne's Songs of the Springtides; Captain Ortis's Booty; A Ballad; by A. Mary F. Robinson; Briefs on Recent Novels; The Undiscovered Country; Odd, or Even? Uncle Jack's Executors; A Stranded Ship; Mrs Beauchamp Brown; Mademoiselle de Mersac; Second Thoughts; Mary Anerley; Reata; What's in a Name? The Duke's Children; The Virginia Bohemians. Editor's Table; Thought Extirpation Process; Literature as Drudgery; Modern Poet as Verse-Makers; Sir Robert P. Collier on Landscape-Painting; Signing Magazine Articles. The present number is a good Summer edition. Its articles instruct, interest and amuse. It is well calculated for the wants of travelers, who, with few exceptions, select one or more of the popular monthlies for entertainment.

ECLECTIC MAGAZINE.—Contents:—Steel Engraving—Portrait of Mr. Gladstone; Fiction—Fair and Foul; On the Method of Zadig: Retrospective Prophecy as a Function of Science; Suicide; Fishing and Fishing Literature; Captain Ortis's Booty: A Ballad; A Princess of the Seventeenth Century; Cabinet-making; White Wings, A Yachting Romance; Harman Blennerhassett; Some Thoughts on Shelley; Her Last Letter; Geology and History; The Days of the Week; Cliff Roses; The Pinch of Wealth; William Ewart Gladstone (with Portrait); Literary Notices; Foreign Literary Notes; Science and Art; Varieties.

IN the early stages of his ministry the celebrated Dr. Strong, of Hartford, preached some time in a neighboring village. One day a committee called upon him to settle with him for his services, and, after stammering a while, signified to him that his further services were not desired. "What does this mean gentlemen?" asked the doctor. "Why," replied the spokesman, with some hesitation, "the people have got the impression that you are inclined to universal salvation." "Gentlemen," answered the doctor, "I never have preached that doctrine; but, if I ever should, I promise to make the people of this town an exception.—*Hartford Post.*

"ABSTEMIOUSLY" and "facetiously" are the only two words in which the vowels follow one another in alphabetical order.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE KITCHEN CLUB TALK—"WASHING."

ANNIE L. JACK.

IT is a week since the Kitchen Club met at "Every-Day House" to discuss the all-important subject of *washing*, which was suggested to us by the elaborate fifty-dollar machine we had examined at the residence of Mrs. Horatio Hupperton, at our last meeting. There was no doubt it did its work well, was a saving of time and labor, but not every one among our members felt able to afford the money it cost or the space it occupied, all not having a separate laundry room. So we agreed to discuss the subject from our different standpoints. Miss McGreggor did not believe in washing-soda, which was sure to make the clothes yellow. She advised a mixture of two pounds of soap dissolved in five gallons of hot water, three tablespoonsful of liquid ammonia, and one of turpentine. This, well beaten together, and the clothes left in for three hours (being previously soaked over-night in cold water) will save time, wear and rubbing. She told us that her first movement on washing mornings was to take the clothes from the water in which they were soaked, and put them into this preparation; the tub is covered, and by the time breakfast is over they are ready for their boil and final washing.

Mrs. Chapman believed in the old-fashioned wash-board and plenty of clean, soft water. She found, however, a wringer of great service and a saving to the strain on the wrists besides doing the work more thoroughly than it could be done by hand. The minister's pale little wife, with a half-repressed sigh, wished there were better inventions for ironing starched clothes, and a young Miss who was said to be engaged to one of the students of a well-known theological college, covered herself with confusion and glory by remarking that she "did not see why ministers should have any law that compelled them to wear white neckties more than other men," at which some of the wiser ones smiled.

We had been sitting in the maple avenue all the time and at this point the amateur laundry-maid came forward and invited us in to the kitchen to see the operation of washing performed by our new machine. It is called the Robbin's Washer and only weighs five pounds, is eight inches long, five wide and one and three-fourths deep. It was placed in position in a flat-bottomed boiler and soon commenced to throw out from the discharge-pipe a stream of water over the clothes at the rate of eight gallons a minute. We put in a quarter of a pound of soap and a piece of borax the size of a hazel-nut. The clothes boiled twenty minutes and several of the members, after they were taken out, tried how easily the finishing process was gone through of washing out and turning. Then with the aid of a wringer the rinsing is made easy. My "washer" has proved very valuable this season, and saved us many a weary rubbing, proving a veritable good fairy. It pleased the members to see the process, and yet so grasping is woman's nature for something more, that we parted after tea echoing the minister's little wife's wish for "something to iron starched clothes."

KEEPING CANNED FRUIT.

I HAVE just opened an overlooked can of peaches which was not less than six years old, and the fruit was perfect. Is there any limit to the keeping of properly canned fruit? And as regards keeping in tin, is there any proof whatever that acid fruits in air-tight cans ever act upon the metal? I took particular notice in regard to this point, and found that there was not the slightest evidence to the taste, in these peaches, of the presence of any metallic salts, nor was there the least corrosion of the inside of the can, either of the tin or the solder. And yet I see it frequently stated that "acid fruit will not be healthful if preserved in tin." As applied to air-tight tins, I believe this to be an error. T. H. HOSKINS, M.D.

DOMESTIC RECIPES.

Canned Peaches.

Make a sirup of six pints of water and seven pounds of sugar. Do not boil down; merely dissolve the sugar. Peel and halve the fruit—I prefer the late, yellow peach—fill glass cans, cover with the cooled sirup, lay on the tops but do not tighten, set into a boiler of cold water, bring to the boiling point, note the time and boil 20 minutes. Remove and make air-tight.

Tomato Catsup.

Wash and *wipe* (this to prevent the addition of any liquid) one bushel of just ripe tomatoes, cut into pieces and put over the fire to heat. When cooked sufficiently to strain put through a fine sieve. Allow two ounces each of whole black pepper, cloves and allspice—then tie in a thin muslin bag—add one ounce each of ground mace and cinnamon, a teaspoonful of cayenne pepper and a cupful and a half of salt, stirring the ground spice into the tomatoes. Boil until reduced a little more than one-third. I cannot specify the time required to boil down, because it varies with the quality of the tomatoes. When cold, bottle and tie down the corks. MRS. E. SNEDEKER.

Japan Quince Fruit.

It is said that the fruit of the flowering Japan quince—Cydonia Japonica—readily produces a firm jelly of fine flavor, and that baked or stewed by itself it is very palatable and is also useful to flavor other cooked fruits. We have for many years gathered this fruit laying it away in our chest-of-drawers for the sake of its pleasant, aromatic odor, but this is the first we have learned of its being used for culinary purposes.

Making Cotton Fabrics Fireproof.

Dr. Kedzie states that cotton clothing could be prevented from burning with a blaze by the use of borax in starching. A teaspoonful to each pint of made starch is the quantity to be used. It was shown by experiments that the most inflammable of cotton goods, when treated with borax-starch could not be made to burn with a blaze. This is a simple experiment and one that any laundress can try for herself and prove whether the starching of all cotton clothing in this preparation would not be likely to save life and suffering by its use.

QUESTIONS ANSWERED.

Coloring Pickles and Sweets Green.

Is there any harmless substance that will color pickles, ice-cream, etc., green?

MRS. J. J.

ANS.—The following green coloring extract is said to be destitute of any poisoning properties: Dissolve five grains of saffron in one-fourth ounce of distilled water, and in another dish dissolve four grains indigo carmine in one-half ounce distilled water. After mixing thoroughly let stand 24 hours, then put together, and the result will be a green solution capable of coloring four or five pounds of sugar.

To Restore Old Tea-Trays.

Our trays have become sadly worn. What can we do with them? M. L.

ANS.—Wash them thoroughly with soap, water and a little pumice-stone. Wipe and dry before the fire. Procure good copal varnish, mix, with it some bronze powder and apply with a brush. Put the trays into an oven at a heat of 212 deg. to 300 deg. until the varnish is dry. Two coats will make them look very like new.

The Literary Revolution.

What Is It? It is a method of placing literature, of the best class only, within reach of every one. Books are reduced in price to but a fraction of their cost heretofore. July is supposed to be the Dull Month of the year. Booksellers close shop and go fishing, because book buyers are supposed to have done likewise. The Literary Revolution has made the past July one of the busiest months of the year for dealers handling our books, because the people believe in it. Letters have come to us like a flood; telegrams from dealers have come like the day before Christmas, calling for more books, and quickly. Our bindery is now taxed for the production of 4000 volumes a day, not counting pamphlets, and we are taking immediate steps to double its capacity, to keep up with orders. All Revolutions seek volunteers, and it has been the policy of The Literary Revolution from the start to give special reward to early volunteers in its support. It offers special terms to all whose orders, with cash, are received during August, as follows;

July Victories.

August Opportunities.

Chambers's Encyclopædia.

A verbatim reprint of the last English edition, in 15 beautiful volumes, clear nonpareil type, handsomely bound in cloth for $7.50; the same printed on finer, heavier paper, wide margins, and bound in half Russia, gilt top, price $15.00. The first eleven volumes are ready for delivery. Volume 14 will be ready Aug. 15. The remaining volumes will be completed by October.

AN AMAZING OFFER.

To all whose orders and money are received during the month of August, we will supply the 15 volumes, in cloth, for $6.50, and in half Russia, gilt top, for $13.00. The volumes issued will be sent at once by express, and the remaining volumes when completed.

A specimen volume in cloth will be sent, postpaid, for 50 cents, or in half Russia, gilt top, for $1.00, and may be returned at once, if not satisfactory.

The "CHAMBERS'S ENCYCLOPÆDIA" comprises the first 15 volumes of our "Library of Universal Knowledge," and the remaining volumes, complete in themselves, will be sold separately when published.

Curiosities. To illustrate and demonstrate the superior literary and typographical character of our books, notwithstanding prices are low beyond comparison with the cheapest books ever before published, we publish twelve books in pamphlet form and send postpaid as follows. As mere curiosities they are worth obtaining by every one, even if they were not intrinsically valuable. As might be expected, they are selling by the million. All the following are unabridged, and none of them are in type smaller than brevier. Nearly all of them have heretofore been published by other houses at from $1.00 to $1.25 each. Macaulay's "Life of Frederick the Great," Carlyle's "Life of Robert Burns," Thos. Hughes' "Manliness of Christ," John Stuart Mills' "Chapters on Socialism," Mary Queen of Scot's Life, by Lamartine; "Leaves from the Diary of an Old Lawyer"—short, thrilling, laughable, pathetic stories—each complete, price three cents. "The Light of Asia," by Edwin Arnold; "Baron Munchausen's Travels and Surprising Adventures;" "Vicar of Wakefield," by Oliver Goldsmith; "Stories and Ballads for Young Folk," illustrated, by Ellen Tracy Alden, each five cents. Closing the list is Bunyan's "Pilgrim's Progress," price six cents; and "Private Theatricals" (humorous stories, not plays), by author of "Sparrowgrass Papers," price, two cents.

Books, 3 Cents.

Books, 5 Cents.

6 Cents—2 Cents.

Notwithstanding the amazingly low prices of these pamphlets, they pay us a good profit. The Literary Revolution does not humbug people by pretense of philanthropy. People who have sense enough to appreciate good books are generally honest enough to be willing to pay for them, and they can afford to pay when prices are low as the Revolution makes them. In this connection it is proper to mention a few facts. Some millionaire publishers have been adding to our fame and multiplying our friends by calling us pirates. They pay (when they please) foreign authors a copyright. One of them charged you $1.00 for Hughes' "Manliness of Christ"—we sell it to you for 3 cents. How much of the 97 cents difference did Hughes get, do you think? Another published Geikie's "Life of Christ" for $8.00—our price is 50 cents. How much did Dr. Geikie get of the $7.50 difference? His letter to us says "nothing." Scribner's Monthly attacked us recently, calling us Cheap John Publishers. The same electrotypers and printers that do their work are working also for us, and you want no books more beautiful than are some of ours. The great Methodist Book Concern has refused us space even in the advertising columns of its several Christian Advocates. Why? Our books are so cheap they contrast with and injure the sale of theirs. We reduced Smith's "Bible Dictionary" from $3.00 to 50 cents; Kitto's "Cyclopædia of Biblical Literature" from $10.00 to $2.00; and Young's "Analytical Concordance to the Bible," "the Webster Unabridged" of religious literature, the greatest work of the kind which the century has produced, from $15.00 to $2.00. The people may pronounce the verdict who is guilty of wrong-doing—we, or the millionaire publishers

Stop Thief!

Who Is He?

General Grant. General Grant once said that the best way to get rid of a bad law is to enforce it. If the want of an international copyright is a wrong to foreign authors, American publishers are to blame that there is none, and could influence the passing of such a law quickly if they chose to do so. We believe that the author of a book is as much entitled to absolute property in it the world over as is the author of any other product of the hand or brain. We vote for a law to give him such ownership, and The Literary Revolution more than all other influences is forcing the consent of millionaire publishers to the passing of such a law. But there is plenty of humbug in the talk of high prices being the necessary result of copyright. Five cents copyright on a book would give an author $5,000 on a book that would sell 100,000 copies; and a book intended for the masses that will not sell 100,000 if put at a reasonable price does not deserve to be published at all. And the really standard books that the masses want ought to sell and will sell a million copies each easily when The Literary Revolution has achieved its final victories and made the masses readers of good books. And a million books, paying copyright of even one cent each would give an author $10,000, which is more than ten times what the average successful author now gets. But Bunyan, Goldsmith, Milton and Virgil are no longer wanting copyright, and Macaulay, Carlyle, Gibbon, De Foe, Plutarch and Æsop ceased to receive it long before the days of The Literary Revolution. We do pay five to fifteen cents copyright on several of our books to American authors who have the right to it, and we are paying regular salaries, many thousand dollars a year, to writers in our service.

Standard Books.

Library of Universal Knowledge, 21 vols., $10.50.
Milman's Gibbon's Rome, 3 vols., $2.50.
Macaulay's History of England, 3 vols., $1.50.
Macaulay's Life and Letters, 50 cents.
Macaulay's Essays and Poems, 3 vols., $1.50.
Chambers's Cyclopædia of Eng. Literature, 4 vols, $2.
Knight's History of England, 4 vols., $3.
Plutarch's Lives of Illustrious Men, 3 vols., $1.50.
Geikie's Life and Words of Christ, 50 cents.
Young's Bible Concordance, 311,000 references (preparing), $3.
Acme Library of Biography, 2 vols., each, 50 cents.
Book of Fables, Æsop, etc., illus., 50 cents.
Milton's Complete Poetical Works, 50 cents.
Shakespeare's Complete Works, 75 cents.
Works of Dante, translated by Cary, 40 cents.
Works of Virgil, translated by Dryden, 40 cents.
The Koran of Mohammed, by Sale, 35 cents.
Adventures of Don Quixote, illus., 50 cents.
Arabian Nights, illus., 50 cents.
Bunyan's Pilgrim's Progress, illus., 50 cents.
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Sayings, by author of Sparrowgrass Papers, 50 cents.
Mrs. Hemans' Poetical Works, 50 cents.
Kitto's Cyclopædia of Bib. Literature, 2 vols., $2.
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News of the Week.

HOME NEWS.

ELECTIONS IN 1880.

All the States will elect Presidential Electors on Tuesday, Nov. 2. All the Territories will elect delegates to Congress on the same day. All Representatives in Congress to be elected by the several States will be chosen on Tuesday, November 2, except the following: Indiana will elect her State officers and Representatives in Congress, on Tuesday, Oct. 12. Maine will elect Governor, Representatives in Congress and the members of the Legislature, on Sept. 13. Ohio will elect minor State officers and Representatives in Congress, on Tuesday, Oct 12. Vermont will elect State officers Representatives in Congress and members of the Legislature, Sept. 7.

Most of the State officers and members of the Legislatures will also be elected on Nov. 2. United States Senators will be elected this coming Winter by the Legislatures of Alabama, California, Connecticut, Delaware, Florida, Georgia, Indiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Jersey, New York, Pennsylvania, Tennesee, Vermont, West Virginia and Wisconsin.

THE POLITICAL NEWS.

There is considerable activity in political circles on all sides. The National Democratic committee has established headquarters in New York city and has begun the campaign by sending out documents bearing on the Presidential question. The Finance Committee is composed of an unusual number of solid men, not only in influence, but in monetary matters as well. In Philadelphia the opposing forces have pooled their issues and the city and county committees have, for the present at least, sunk their differences and have rolled up their sleeves for Hancock. The Republican committees of Pittsburgh have formed a combination and will work together for Garfield. War to the knife has been declared in Philadelphia between McManes and Cameron, and there will be a desperate struggle. There have been a number of Congressional nominations made in the last few days, among them the following: C. E. Hooker, Dem., Fifth Mississippi District; Isaac L. Morrison, Rep., Twelfth Illinois; W. P. Canaday, Rep., Third North Carolina; Emanuel Schultz, Rep., Fourth Ohio; W. R. Meyers, Dem., Ninth Indiana; John C. Blair Hoge, Dem., Second West Virginia. There is a serious Republican split in the Cleveland district. Congressman Townsend has been renominated, but a large majority bolted in the interest of Ex-Mayor Rose. The Ohio Democracy held a convention the other day, ratified the national ticket and adopted the platform. The Missouri Democrats have nominated Crittenden for Governor and the following ticket: Attorney General, D. H. McIntyre; Register of Deeds, Robert A. McCullough; Railroad Commissioner, George C. Pratt; Presidential Electors-at-Large, Colonel J. D. L. Morrison and N. Phillips. General Weaver, the Greenback candiate for President, is very busy. He arrived at Washington on the 29th from Alabama, where he had made 14 speeches in 14 days. He says the Independent ticket will be elected by 4,000 majority if there is a fair count..... The Democratic nomination of State officers in West Virginia is as follows: For Governor, Jacob L. Jackson; Auditor, Joseph S. Miller; Treasurer, Thomas O'Brien; Judge of the Supreme Court, Thomas Green; Attorney-General, C. C. Watts; Superintendent of Schools, P. L. Butcher; Presidential Electors, E. W. Wilson and E. G. Cracraft. The Ohio State Greenback Convention met at Columbus the 28 ult. and was called to order by Robert Schielling. H. Kellogg, of Toledo, was made permanent Chairman, and J. H. J. Clarkson, Secretary. The national platform adopted at Chicago was accepted as the State platform, with two or three minor resolutions. The following is the ticket nominated: Secretary of State—Charles A. Lloyd, of Seneca; Supreme Court Judge—D. W. C. Louden, of Brown County; Clerk of Supreme Court—Charles Bowsall, of Columbiana; member of Board of Public Works—Amos Roberts, of Knox County; School Commissioner—R. B. Smart, of Ross County; Presidential Electors at Large—H. Kellogg, of Lucas, and L. T. Faster, of Mahoning.

POSTAL SERVICE DEFICIENCY.

The report prepared by Auditor McGraw of the receipts and expenditures of the Post Office Department for the quarter ending March 31, 1880, was issued the 28th ult. It shows an excess of expenditures over receipts for the quarter amounting to $336,553.36. The receipts for the quarter for the sales of postage stamps, newspaper wrappers, and postal cards amounted to $8,476,072.23; from other sources, $373,759.86; total receipts, $8,849,832.09. The total expenditures for the quarter amounted to $9,186,386.45. The following are some of the principal items of expenditure for the quarter: Inland Mail Transportation—Railroads, $2,067,510.-93; star routes, $1,711,581.59; steamboats, $194,845.-24. This quarterly report, and the two others previously prepared, for the quarters ending Sept. 30 and Dec 31, 1879, show the total deficiency for the first nine months of the fiscal year, ending June 1880, to be $2,199,642.97. Post Office Department officers estimate the deficiency for the present fiscal year at $2,600,000, and if it is kept within this amount it will be less than for any previous year since 1867. That year it amounted to $3,938,457, and last year, (ending June 30, 1879,) it amounted to $3,407,919.

A SPANISH BULL-FIGHT IN NEW YORK.

The metropolis of this Western World was startled some time ago by the blood-curdling announcement of some Spaniards that they proposed to make an exhibition of a genuine Spanish bull fight here in the city. At first the story was discredited, but the Spaniards proved to be in earnest (in their efforts to make money), and arrangements were made for the exhibition. The show came off last Saturday, to the satisfaction of all non-participants and to the regret of something over 3,000 spectators who had purchased tickets at $1.50 each. An arena was constructed at 116th street and 6th Avenue. It was a circular inclosure about 100 feet in diameter surrounded by a fence six feet high. Outside this was an alley about five feet wide, then another higher fence and outside this seats for the audience. It was announced that bulls would be imported from Spain, as none fierce enough could be found in this country, but this idea was given up and when all was ready the parties purchased a dozen peaceable Texan steers at the New York stock-yards. The fighters were six in number, and dressed in tight-fitting garments having all the colors of the rainbow and two or three others that the rainbow never dreamed of, each having also a loose cloak with which to irritate the animals. At the appointed time a steer was led into the inclosure. He made a dive for one of the fighters, and he in turn made for the fence and jumped into the alley where he was safe. This proved to be their method of fighting. They would worry the animal by shaking their cloaks before his eyes and then run and jump the fence, and sneak up behind and paste a rosette to his body and then run. They never had more than one steer on the arena at the time and several of them were too lazy and conservative to take any notice of the Spaniards. After a while the thing became monotonous and the people left. The prevailing opinion was that the Spaniards were excellent fence jumpers but decidedly poor fighters.

CONDITION OF DR. TANNER.

The starving man in Clarendon Hall this city is still alive, but he is in a greatly enfeebled condition. To-day he completes his fifth week, but there is a likelihood, which almost merges into certainty, that he cannot continue the ordeal through the five remaining days of his proposed fast. For some time past, he has, contrary to the advice of his medical watchers, insisted on drinking mineral water instead of spring water, and this is supposed to have increased his feebleness. He now vomits very frequently, and almost invariably after drinking, emitting the water he drinks, and mucus tinged with bile. He is becomingmore irritable and sensitive to noise. He now often omits his accustomed morning drives, preferring to lie quietly on his cot, and when he arouses himself, his walk is feeble and staggering. In short, his iron constitution is gradually but surely giving way under the tremendous strain to which it is being subjected. The physicians attending him have more than once been seriously alarmed at his symptoms, and precautions are taken for instant restoration, should he give way. The nausea and vomiting are expected to increase rather than be relieved until the end of the fast, and then there is danger the stomach will be so enfeebled that it can hold no food, and a second and forced fast be thus inaugurated. But still his will is firm. He does not yet propose to give up the feat.

MISCELLANEOUS.

A venerable old man of Kingston, Wis., named Uriah Utley, 76 years of age, was shot and killed by his son Frank, 28 years old on the 29th. It is probable the father was shot while sitting in a chair.....Severe hail storms, which did a great deal of damage visited Norfolk, Va., and Wakeham, Mass., on the 29th ult. A large water-spout was seen for half an hour in Onset Bay..... Inquiries are now being held by the authorities concerning the accident which happened to the steam-boat Narragansett that was run down in Long Island Sound by the Stonington, and also in the case of the Seawanhaka which took fire in the East River. About a hundred persons lost their lives on the two occasions. It is to be hoped that, if carelessness was the cause, the guilty ones will be brought to justice.....An experiment which, in point of interest, cannot be easily surpassed, took place recently in England. It was the trial of a combination of balloons by which it is proposed to explore the arctic regions. Since all attempts to reach the North Pole by land and water have proven futile, it is now proposed to sail through the one remaining element, the air. Three baloons were coupled together supporting four cars, which will be heated artificially and which contain the travelers. Three baloons are used in order to be safe in case an accident should happen to any one of them. The experiment was pronounced satisfactory, and Commander Cheyne, who originated the idea, will forthwith carry it into practice.

An accident occurred on the night of the 22d ult. on the Detroit River. Father Biyenburg, of the Church of the Holy Trinty, of Detroit, had taken his altar boys on an excursion to Monroe, Michigan, in the steam yacht Mamie. On the their return, while coming up the Detroit river, about 10 o'clock on Thursday night, at a point just below Grosse Island light-house, the yacht was met by the steamer Garland, of Detroit, having on board the Moulders' Union and a large party of friends, and a collision took place, the Garland literally running the steam yacht down and almost running over her. There were twenty-four persons on board the Mamie, and of these seventeen lost their lives. The yacht sank almost instantly. The collision was the result of carelessness. The moon was shining very brightly and to all appearances there was no excuse whatever for the accident.....The Mormons celebrated at Salt Lake, Utah, Saturday week, the anniversary of their first entrance into the valley 33 years ago. There was a big procession, with representations of agriculture, horticulture, the trades, manufactures, and various industries, including mining, which 11 years ago was proscribed among the Saints, and ceremonies in the tabernacle.....A Fargo (Dak.) woman has turned up who claims to be Mrs. Tanner, but she left the doctor to get three square meals a day. She says his theory that people eat too much became a troublesome mania, and when he undertook to bring her down to air and water she got a divorce.....The largest botanical depot in the world is said to be at Statesville, N. C., where the firm which controls it has now in stock 1700 varieties of roots, herbs, barks, seeds, flowers and mosses and all sorts of plants for herbariums, in quantities of from 60 to 35,000 pounds of each kind. They pay the collectors, who are mainly Cherokees, either in cash or goods, and last year disposed in this way of $40,000 worth of merchandise, shipping 1,800,000 pounds of roots and "yarbs".....Partial returns of the local indebtedness of the country from 19 States, nearly all in the North, give an aggregate of $764,206,299. Robert P. Porter, the special investigator of the subject, states that the local indebtedness of the remaining States will probably not exceed $100,000,000. The aggregate State debts, which were $352,866,000 in 1870, are now $266,638,-000, a reduction of one-third. At present Mr. Porter does not think that local indebtedness has been greatly increased since 1870 .....Gen. Grant has been elected president of the New Mexico San Pedro and Canon del Agua mining company holding 36,000 acres of copper and gold-bearing land 30 miles south of Sante Fe, and within 10 miles of the Atchison, Topeka and Sante Fe road. The capital is $10,000,000, and Gen. Grant has seen the property and accepts the position. His election to the presidency has carried its stock up from $2 to $8 a share in Boston and New York.....The Wisconsin University is a very unfortunate institution. A few years ago President Chadbourne of Williams was led into resigning by the incompatibility between him and the Regents, and it is said by local correspondents that President Bascom, his successor, has been nearly driven to the same point. He has addressed an open letter to Gov. Smith requesting him not to appoint politicians on the Board of Regents, and saying pretty plainly that those now on the Board hurt the interests of the college. The Milwaukee Sentinel says Wisconsin can better afford to lose every politician who lives off its tax-payers than one useful and honest man such as President Bascom. .....Milwaukee is to have a romantic wedding in September, when F. G. Tibbets, a millionaire bachelor of Philadelphia, 70 years old, takes to wife Widow Martin, who controls $2,000,000 worth of property in Milwaukee. J. B. Martin requested on his death-bed that his widow marry Tibbets, who was her first love when both were too poor to marry..... ..The Ute Commissioners have begun anew their councils with the Indians at Los Pinos Col., to arrange for their transplanting on new reservations, and hope to finish up before cold weather.

FOREIGN.

The dispute over Turkey's cession of territory to Montenegro and Greece is still the most exciting topic of European interest. The Sultan appears to be about to come to an amicable arrangement with the former, by ceding to it Duligno, instead of the strip of Albanian mountain formerly insisted upon, but which was bravely defended by the Albanians who refused to be handed over. The Porte does not seem to be so complaisant with Greece, however, and still refuses to carry out the *recommendations* of the Berlin Conference, even when backed up by threats of hostile measures. Turkey has about 35,000 troops on the Greek frontier and could easily whip Greece's 22,000; but it is very unlikely that Europe would look on without interfering in such an unequal struggle, and it is the knowledge of this that emboldens Greece. Should war break out in that quarter Servia and Bulgaria will at once take a hand, and so probably will Eastern Roumelia which is anxious to obtain complete freedom from the Porte. Meanwhile the Sultan does nothing in the way of effecting the promised reforms in Asia Minor and in European Turkey; and if the Powers could only agree as to his successor at Constantinople, the turbaned infidel would be straightway kicked across the Hellespont, or driven, fiercely fighting, into it. The quarrel between Russia and China seems in a fair way to a friendly adjustment. A Chinese ambassador, the Marquis Tseng, has been received at St. Petersburg, and it is said he has full powers to settle the matter. The Czar, too, has sent a plenipotentiary to Pekin. Both sides are still preparing for war, however, but with less urgency.

The Compensation for Disturbances bill passed the British House of Commons last Tuesday by a vote of 303 to 237—a considerably smaller majority than the Government expected. Its object is to afford compensation for all improvements to small Irish farmers who may be evicted from their homes through their inability to pay rent on account of the distress which has lately been so severe in the west of the kingdom. The bill has yet to pass the House of Lords, and as that body is strongly Conservative and that party is opposed to the measure, it is sure to be defeated there unless the lords are afraid to risk the popular commotion such a defeat would be sure to arouse. In case the bill is thrown out by the Upper House an agitation is already threatened, whose object would be to do away with the hereditary legislators, and instead of the House of Lords, elect a Senate as in this country.....The Hares and Rabbits bill also has been taken up in the House of Commons and passed its second reading—that is, been voted on a second time, all bills having to be voted on three times before they go to Her Majesty for signature. .....The "Herald" Irish Relief Committee has disbanded, after having distributed about $340,000. Other relief committees will soon disband also, as the "famine" is about over,.....The Irish land agitation is reviving. The crops are reported excellent all over the island, grain and roots being especially good—over an average.

Last week we venturned the opinion that the hostile advance of Ayoob Khan toward Candahar in Afghanistan would delay the evacuation of the country by the British. On Tuesday a cablegram confirmed this opinion by telling us that a brigade of British troops under General Burrow had been annihilated by Ayoob Khan's forces near Candahar, and that the remainder of the British troops in that section had retreated into the citadel of that city. Later tolegrams confirm the defeat, but lessen its severity. Nearly half Burrow's forces seem to be missing, but the rest, chiefly in straggling parties, have been making their way into the city during the past week. The British force was made up mainly of sepoys, or native Indian troops, with English officers, together with about 700 or 8 0 Europeans. While marching to the support of a friendly Afghan chief who was about to oppose Ayoob Khan, most of the Afghan soldiers rebelled and joined the Khan, who, thus aided, fell suddenly upon his foes and after a sharp struggle utterly routed them. This was in Northern Afghanistan. At Cabool in the south the lately proclaimed Ameer, Abdurrahman, has had a friendly interview with the British representative, and no outbreak has as *yet* occurred. For the sake of keeping up their *prestige* among their Hindoo subjects especially and in the eyes of the world at large, the English must once more face the hostile Afghans and fight until these are utterly vanquished. This will take time for the Afghans are as brave as they are treachorous. Reinforcements are being hurried forward from India and from England.

In France the elections to the Councils General hitherto show that in 62 cases the Republicans have been successful and the Conservatives in sixteen. It was feared that the amnesty to the Communists and the contemporaneous expulsion of the Jesuits accompanied with threats of a like fate for the other religious orders would arouse public alarm, to the loss of the Republicans, but this has not as yet occurred. A general election will be held next Summer, and it is expected that Gambetta will then be declared President instead of Grevy. At present, France seems determined to remain at peace while vigorously preparing for war.

The ex-Empress Eugenie has returned to England after her pilgrimage to the scene of her son's death. The Zulus who killed him say he fought "like a lion," when brought to bay, and died only after receiving a score of wounds from the encirling savages some of whom he wounded with weapons wrested from their own hands..... Ole Bull, the violinist is once more sick unto death.....The Canton of Schwyz, Switzerland has restored capital punishment, making the fourth canton that has restored the death penalty.....Mr. Gladstone was prostrated last Friday with a congestive chill of the left lung. No immediate danger.

In Mexico Gen. Gonzales has lately been elected President of the Republic to succeed the present incumbent, Gen. Diaz. The latter absolutely refused to be a candidate for re-election, though there is little doubt but that he would have been successful, had he been in the field. He has proved by far the ablest statesman and soldier Mexico has produced of late, and the new administration will be greatly strengthened by his having a seat in the Cabinet as Minister of War. There was only one attempt made to assassinate Gonzales after his election, and only two or three chiefs issued rebellious pronunciamentos and levied contributions on merchants and others—an extraordinarily quiet election for Mexico.

AGRICULTURAL NEWS.

FROM March 1 to July 28 the number of hogs packed, according to the best attainable information, has been 3,296,791 against 2,241,661 in '79. From Nov. 1 to July 29, by the same calculation, the number of hogs packed was 10,247,000, against 9,721,000 last year.....Our meat exports since last Nov. 1 are put down at 680,000,000 pounds, against 610,425,000 pounds in the same period in '79.....A Mr. Jackson, who has over 35,000 tea plants on his farm, near Savannah, Ga., recently sent to the Commissioner of Agriculture a tin box containing several samples of the tea raised on his farm. The Commissioner subsequently brought the samples to this city and went incognito to one of the largest tea establishments here, representing that he had some to sell. An expert was called in to examine the tea and he pronounced it India tea, worth 50 cents per pound. Commissioner Le Duc then had difficulty in convincing the expert that the tea was grown in this country, and could be produced for one-third the price named.....The Mark Lane Express, of July 26, says that the harvest in England would probably commence within a week, and would be general in three weeks. The wheat plant still stood well, despite the recent storms, but there was some increase in blight. A good deal of barley was laid by the storms, but where it escaped this, it was the most promising of crops. Oats in Ireland and Scotland were exceedingly good. Markets during the past week had been almost stationary, the trade being completely dominated by the harvest prospects of this and other countries. These were far from being uniformly promising, but taken altogether, they were sufficiently favorable to prevent an improvement, which ordinary circumstances of supply and demand should otherwise have induced. The quantity of wheat on passage was nearly 2,000,090 quarters. The deliveries of English wheat and barley were rather under the average for that time of the year, and prices were unusually low. English oats commanded good prices, which caused deliveries considerably above July averages. Imports into the United Kingdom for the week ending July 17, 816,698 hundredweights of wheat, and 118,947 hundred-weights of flour.

Cablegrams from England July 31 say that very heavy wind and rain storms on the preceding day had done an immense amount of damage to the wheat crop, especially in the Southern parts of the country. Much of it is reported to have been entirely ruined, as well as a great deal of hay, and a great extent of pasture land along the rivers has been flooded.....A hail-storm passed over the vicinity of Stevens' Point, Wis., on Monday evening, covering the ground to the depth of several inches with hail-stones of great size, killing fowls, thousands of prairie chickens, and sheep. Shingles were torn from several roofs, and more than a hundred farms were entirely cleared of hay and grain. The hop-yards were stripped,

and the forests left as bare as in Winter. Three hail-stones weighed one pound. The storm covered a strip four miles wide and ten miles long. Every green thing was swept before it, and not a bushel of grain can be saved. The damage is estimated at $75,000.....Reports from more than 100 in places Michigan, telegraphed here on July 31, show that the continuous rains the past few weeks have inflicted less injury than was feared. Wheat was harvested in good order, despite the somewhat unfavorable circumstances, and the quality of the crop in one-half the places reported is fair to very good, and in one half the remainder injured slightly, but it is thought not seriously. The total crop is believed to be much larger than in 1879, which was the largest crop ever harvested. The product is estimated at 35,000,000 bushels. The reports as to hay and oats are excellent, and the same is true of all the Spring crops..... A telegram from St. Paul, Minn., on July 31, says that nearly complete returns have been made to the office of the Commissioner of Statistics, of the acreage of the wheat in the State this year, and its yield and average of last year. Last year's acreage was 2,769,289 acres, and the yield 33,451,435 bushels, some counties being estimated. This year the acreage is 2,959,683 acres, some counties being estimated. This is an increase of 190,000 acres. The returns show a heavy falling off in the old-settled counties, where the wheat crops have been failures for several years, while some of the frontier counties have more than doubled in the acreage. This shifting of production tends to raise the average. Estimates from nearly all the counties, and opinions from competent farmers justify the belief that the average yield per acre this year will be from 10 to 12 bushels in the southern part of the State, and from 16 to 20 in the western counties and the Red River Valley. It is thought the average yield will not fall below 15 bushels, which will make an aggregate yield of over 44,000,000 bushels. This, of course, is subject to accidents of harvest and errors of too sanguine reporters..... "The first bale of this season's crop of hops was sold on Thursday by S. & F. Uhlman, in the Produce Exchange, to M. Eckstein, of Staten Island. The hops were grown by W. Hathaway, of Oriskany Falls, Oneida County, N. Y., and sold for 50 cents per pound. The Messrs Uhlman say that, judging from present reports, the coming hop crop in this State and throughout the country will exceed that of last year 25 per cent., the crop then being about 120,000 bales. It is too early to speak with certainty of the crop abroad, but present indications are of a fair yield. A new parasite has attacked the vines in some districts, and this may affect the general yield. The first bale of last year's crop was not received in this City until Aug. 10.

He Still Lives.

Some years ago Dr. R. V. Pierce, of the World's Dispensary and Invalids' Hotel, of Buffalo, N. Y., and London, was sent for to examine a terrible disease of the knee-joint, resulting in ulceration and extensive sloughing of the bone and tissues. The man's life had been despaired of by the previous attendants. Amputation at the thigh was promptly decided upon and skillfully performed by Dr. Pierce, and as after treatment to purify the blood and prevent a recurrence of the malady the doctor's Golden Medical Discovery was freely prescribed. The man's system was thoroughly purified and strengthened, he rapidly gained his health, the stump healing nicely, and he is to-day a happy man. The case was among the first in which this wonderful blood purifier was tested. It has since manifested its wonderful power over the worst scrofulous and other blood diseases. Taken for a time it so purifies and strengthens the system as to strongly fortify it against the encroachments of disease. Sold by druggists.

HON. R. V. PIERCE:—DEAR SIR—I would say that I have sold your medicines for seven years. The Golden Medical Discovery is the best cough remedy I have ever used and in every case where I have recommended it, it has cured. I have used it in my family for my children. It cures their colds and coughs in a day or two. My wife has used it several times when down sick. It invariably gives immediate relief. Its sale increases daily.

J. B. KESTER, Druggist.

Middleville, Mich., Feb. 15, '79.

LYDIA E. PINKHAM'S VEGETABLE COMPOUND has done thousands of women more good than the medicines of many doctors. It is a positive cure for all female complaints. Send to Mrs. Lydia E. Pinkham. Sold by all druggists.

Refined and educated women will sometimes suffer in silence for years from kidney disease, or constipation or piles, which could be easily cured by a package of Kidney-Wort.

If you are almost worn out don't give up, but take Kidney-Wort and it will give you new life.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, July 31, 1880.

BEANS AND PEAS.—The bean market is quiet and the moderate receipts more than fill current export or local wants. A strong export demand is not looked for as sales are largely ahead of last year's to date. True, many have gone to new outlets this year, but sellers do not expect large Cuban orders in the place of what has gone to West Indian points. Red kidneys are a shade firmer. Green fairly quotable at $1.60@1.65 for Wisconsin. Southern B. E steady for perfect at $2 ₩ 2 bush. bag.

Marrow beans, prime, $1.57½@1.60, other, $1.45@1.55; medium, prime, $1.40; other, $1.2½@1.35; pea, $1.45@1.60; white kidney, $1.70@1.85; red kidney, prime, $1.40@1.45; other, $1.2½@1.35; black (or turtle soup), $2.20@2.25; Cal. Lima, $2.

BEESWAX.—Trade is in small lots, and 24½@25c. quoted for Western and Southern.

Exports since Jan. 1st, 53,478 lbs.: same time last year 32,300 lbs.

BUTTER.—The strong position into which fine and upper grades of State have moved has now a favorable influence upon good under grades. Creamery State has to take its chances with low grade Western. The volume of business is seasonably good for home and foreign use; buyers for the latter purpose are competing to some extent for best high priced stock. This is a good feature for a product that must henceforward take an outlet abroad for its arrived surplus. It is predicted that the English trade in American butter must steadily enlarge as the fine quality of our stock is yearly growing in attractiveness, while the cost of placing it in the British markets is likely to be decidedly in consumers' favor compared with much home raised and the important Danish deliveries. Exports of butter from Jan 1 to date, 16,000,000 lbs. or about 3,000,000 less than last year.

Creamery, finest 26@27c.; good to prime, 24@25c.; fair to good, 23@24c.; sweet cream, 23@26c.; State, firkins, yellow 20@23c.; pails and hf. tubs, choice, 23@24c., good to prime, 21@23c.; poor to good, 16@21c.; Welsh tubs choice, 22@23c; poor to good, 15@21c.; Western imitation creamery, 16@22c.; dairy, fresh, 21@22c.; good to prime, 18@20c.; poor to good, 14@16c.; factory, fine prime 18@19c.; other parcels 14@17c.

Receipts for week, 39,194 pkgs. Exports, 13,000 do.

CHEESE.—The exports for the week reach 24,800 boxes. The demand has been quite active, The larger receipts at one time caused weakness, but by the close marked firmness is noted.

Quotations: State factory, fancy, 10½@10½c.; do. good to prime, 9½@9¾c.; do. fair to good, 8½@9½c.; do. half skimmed, @7½c.; Wisconsin factory, fine, 9½@9¾c.; do. good to prime, 8½@9½c.; do. fair to good, 8½@8½c.; Ohio factory, fine, @9½c.; do. good to prime, 8½@9c.; do. flat, fair to good, 7½@8½c.; do, poor to fair, 6½@7½c.

Receipts for week, 102,009 boxes.
Exports, 87,000 do.
Liverpool cable, 52s.
Steam, 37s, 6d.@45s.

COTTON.—The market has been active, closing at for July, 11.41@11.45c.; August, 11.49c.; September, 10.30@10.91c.; October, 10.60c.; November, 10.43@10.49; December, 10.48@10.50c.; January, 10.56@10.58.; February, 10.68@10.70.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8 3-16	8 3-16	8 3-16
Strict ordinary	8 11-16	8 13-16	8 13-16
Good ordinary	9 11-16	9 13-16	9 13-16
Strict good do.	10 5-16	10 5-16	10 5-16
Low middling	10 15-16	11 1-16	11 1-16
Strict low middling	11 7-16	11 7-16	11 7-16
Middling	11 9-16	11 11-16	11 11-16
Good middling	12 1-16	12 3-16	12 4-16
Strict good middling	12 5-16	12 7-16	12 7-16
Middling Fair	12 13-16	12 15-16	12 15-16
Fair	13 7-16	13 9-16	13 9-16

STAINED.

Good ordinary	7 13-16	Low middling	9 5-16
Strict good ordinary	8 11-16	Middling	10¾

DRIED FRUITS.—New pitted cherries and blackberries have been wanted and the former have realized an advance. Apples and peaches are slow.

North Carolina apples, fair to good, at 6½@7½c.; choice, at 8@8½c.; New York State quarters at 7½@7¾c.; patent evaporated, in cases, choice at 14@14½c.; good and prime 13½@14c.; evaporated, sliced at ——c. Evaporated peeled peaches, good to choice, at 26@28c.; North Carolina peeled choice, at 16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c.; common at 10@12c.; unpeeled halves at ——c.; do. quarters at 6@6½c. Pitted cherries at 17c. asked for old, and sales at 15@16c. for new. Blackberries nominal. Raspberries at 26@27c. for new. Prime at 17@17½c.

EGGS.—Receipts for week, 9,380 bbls.; do last week, 8,500 do. The demand is steady but light, and when there have been extra arrivals of a few hundred bbls. above the wants of the trade, prices have fluctuated against the seller. Fruit and vegetables have a weakening effect upon the egg market at this season. The late revision of prices is not named with confidence. Prime Western now lead the trade in quality merit.

Near Points, 17@18c. ₩ doz.; State and Penn. 16@17c.; Western, fresh, 16@17c.. Canadian, do. 16c.; poor marks and held lots, 15@15½c.

FLOUR.—Demand has been quite brisk and prices have been very strong since receipts are moderate.

Latest prices are $3.60@4.50 for inferior to very fancy superfine State and Western; 4.25@4.50 for ordinary to very good extra State, odd lots and lines; $4.50@4.65 for very good to fancy do.; $4.20@4.50 for ordinary to very good shipping extra Western, and $4.50@4.75 for good to fancy shipping extra do.; interior to very good white wheat extras, $5.25@5.75; very good to very choice do. at $5.75@6.75; red and amber winter wheat, inferior to choice grade and family, at $5.00@6.25; round hoop Ohio, $4.50@5.00; and trade and family brands of do. at $5.10@5.50; St. Louis at $5.15@5.85 for inferior to good extra, $5.85@6.75 for good to very choice; Minnesota clear, very inferior to fancy, at $4.20@6.00; Minnesota "straight," very poor to fancy, at $5.85@7.50, and patent inferior to very fancy at $6.00@8.75; unsound stock at from $2.25@5.00; city mill extra at $5.00@5.75 for very good to choice for the West Indies; do. for England, $4.25@4.60 for poor to very choice spring wheat, and $5.00@5.50 for winter wheat product; do. trade and family extras, $6.00@7.25; do. for South America, $5.75@6.00; No. 2 at $2.40@3.50 for poor to very choice.

Receipts for week, flour, bbls. 35,550; corn meal, do. 5,835; wheat, bush. 25,300,300, corn, do. 1,814,900, oats, do. 177,35; rye, do. 1,110, peas, do. 105,000; beans, do. 900; rice, pkgs. 1,000.

Exports for week, flour 105,935 bbls.; corn meal, 4,051 bbls.; wheat, 1,476,300 bush.; corn, 1,500,900 bush.; oats, 5,100 bush.; peas, 500 bush.; beans, 579 bush.; rice 1,750 pkgs.

FRESH FRUITS.—Supplies of nearly every item have arrived faster than they could be used and left over stock has been largely at buyers' option. Apples are the greatest drug. Southern Bartletts not running fine; stock now plenty; enough to be quoted by the bbl. but sales are slow. Grapes anticipate a demand. A small arrival of 400 boxes California Bartlett pears, Washington and Purple Duyenne plums quoted at $3@4.50 ₩ box. Blackberries have run out their season.

Apples, strawberry, ₩ bbl. $1.; Summer Pippin, 75c.@$1; Orange 75c.@$1; Nyack 75c.@$1; Red Astrachan, choice, $1; Sweet Bough, 75c.@$1; Sour 75c.@$1; Bough, common, 50@60c. Peaches, Jersey, ₩ basket, 40@$1; Md. & Del., Crawford, ₩ cr. $1.50@2; Troth, ₩ cr., 75c.@$1; per bask., 50c.@$1; Early York ₩ cr., $1.25@1.75. Pears, Bartlett, State, ₩ bbl., $5@7; Clapp's Favorite, State, $5@6; Bloodgood, $3@4; Catherine, $3@4. Scooter, $1@3.50; Bull, State, $2@3; Sugar Top, $2@3; Bell, State, $4@4.50; Bartlett, Southern choice $2@2.50; poor $1.25@1.75; Clapp's Favorite, $2.50; cooking pears, ₩ bbl. $2@2.50. Plums Egg, State, ₩ bbl. $4@5; Damson, Southern ₩ qt. 8@10c. Grapes, Delaware, Va., case of 18 lb boxes, 5@7; Concord, South'n, $2.5@4; Hartford, Southern, $3@4; Ives, South'n, $3@4. Ives and Hartford, Sth'n ₩ lb, 6@7c.; Concord 6@8c.; Delaware 10@12c. Blackberries, Lawton, Jersey, ₩ quart, 8@10c., Jersey, ₩ quart 5c. Whortleberries, Mountain, ½ bu. box, 75@85c. Jersey, ₩ ½ bu. box, 50@65c.; Md. & Del. ₩ qt.; 4@6c. Apricots, up-river, prime, ₩ qt., 20@25c., common, ₩ qt., 10@15c. Nutmeg Melons, Jenny Lind, Jersey, ₩ bbl., $1.75@2.25; citron, Jersey, $1.50@2. Watermelons, Baltimore, ₩ 100, $15@20; Nanticoke, $10@18, Norfolk, $5@10. Peanuts, unchanged and dull.

GRAIN.—Wheat has been active but variable as to price, closing firm. Exports for the week have been 1,600,000 bush.

Latest prices are for No. 1 white at $1.09@1.10; do., July, at $1.09½; do., August, at $1.08; do., September, at $1.08; No. 2 whites at $1.04@1.04½; ungraded white at $1.07@1.09; No. 2 red at $1.08½@1.09; do. July, at $1.08½@1.09; do. August, at $1.08½@1.09; do., September, at $1.08½@1.09½; do. October, at $1.09½@1.09½; do. steamer grade at $1.05; No. 3 red at $1.04½@1.05; do., steamer grade, at $1.01@1.02, ungraded red at 92c.@$1.06, mixed winter at $1.04½@1.05; No. 2 Milwaukee and hard spring at $1.09@1.10. Rye is firm at 85c. for No. 2 Western for August delivery. Corn has been active, closing at for New York No. 2, at 47½@47¾c.; do. July, at 47½@47¾c.; do., August, at 47¾c.; do., September, 48½@48¾c.; ungraded mixed Western at 41@47¾c.; New York No. 2 white at 53½c.; New York yellow at 53c. Oats are in liberal demand and higher; latest sales are of No. 2 white at 39@40c; No. 3 white at 35@36½c; New York No. 1 at 38c.; New York No. 2 at 38@38½c.; No. 3 at 35c.; ungraded white Western at 38@39c.; ungraded mixed Western at 36@38c.; No. 2 Chicago at 38½c.

HAY AND STRAW.—Demand is active and prices well sustained.

New hay quoted at 80c@$1.05, as to quality; shipping hay quoted at 85c.; retail lots at 90c.@$1 for medium, and $1.10@$1.15 for prime and fancy qualities; clover, 60@65c. Straw at $1@1.05 for long rye, 60@65c. for short rye, and 55@60c. for oats.

Exports for week, 3,900 bales; since Jan 1, 75,780 do.; do. last year, 42,300 do. Cheap supplies at present are from Canada.

HOPS.—The market shows a dull unsettled and weak feeling. Quotations are for

	Cents per lb.
New York, new crop, and choice	31 @34
New York, new crop, medium and good	27 @30
New York, new crop, low to fair	25 @27
Eastern, new crop	— @—
Wisconsin, new crop	— @—
Yearling	7 @15
Olds, all growths	4 @10
Pacific Coast, new	28 @32
Pacific Coast, olds (nominal)	5 @ 8

OIL CAKE.—Western is quoted $31@31.50.

POULTRY AND GAME.—Dressed chickens continue to arrive freely and best near points are lower. The weather has been more favorable for shipments and with the offerings turning out better the market has ruled quite steady for fowls and chickens. Turkeys have only a special hotel and steamer call.

Turkeys, choice, small, ice-packed, 13@14c.; fair to good, 11@12c.; Phila., dry-picked, 12@14c.; chickens, Phila., large, 2@2½c.; small, 18@19c.; State, scalded, 16@17c.; Western, scalded, 14@16c.; Fowls, Phila., dry-picked, 14@15c.; Jersey, dry-picked, prime, 13@15c.; scalded, 12½@13c.; State, dry-picked, prime, 13c.; scalded, prime, 12c.; Western, dry-picked, prime, 12@12½c.; scalded, prime, 12c.; poor to fair, 10@11c.; ducks, spring, dry-picked, large, 15@16c.; small, 13@15c; Spring, State, scalded, 12@14c.; Phila., old dry-picked, 10@11c.; squabs, white, per doz. $1.75@2; dark, $1@1.25.

As before, the free receipts of dressed tone down rates for chickens in coops. Fowls are quiet and much increase of supply would break prices.

Chickens, large, ₩ lb., 16c.; small, 15c.; Western & Southern 13@14c.; fowls, Jersey, 12c.; Western, 11@12c.; Southern, 11c.; roosters, 4@6c.; turkeys, mixed, Jersey, 11@12c.; Western, 10@12c.; ducks, N. J., N. Y. and Pa., ₩ pair, 55@75c.; Western 45@55c.; Southern, 40@45c.; geese, Jersey, $1.50@1.75c.; N. Y. & Pa. $1.25@1.50; Western, mixed, $1@1.25; Southern, 87c.@$1.12; pigeons, 20@35c.

Woodcock expected to open at 75@80c. ₩ pair. A few stall-fed pigeons quoted at $1.50@2.

PROVISIONS—Hog products have been active and advancing.

Mess pork quoted at $14.25 for July; $14.25@14.30 for August, $14.25@14.30 for September, and $14.30@14.35 for October, and $12 bid and $12.05 asked for sellers' option. Bacon at 7¾@7¾c. for long clear and 8¼c. for short clear. Lard at 7.65@7.67½ for Western steam on the spot. Beef—Extra India mess quoted at $16.50 for city; $10 for extra mess, and $9.50 for plain mess, $10.50@11 for packet, and $11.50@12 for family mess. Beef hams at $22.50@23. Tallow at 6¾@6 7-16c. for prime.

Receipts for week, beef, 830 pkgs.; pork, 1,950 bbls.; cut meats, 23,403 pkgs.; lard, 16,000 pkgs.

Exports, beef, 2,556 pkgs.; pork, 5,518 bbls.; cut-meats 12,977,229 lbs.; lard, 8,361,475 lbs.

TOBACCO.—The business is entirely in small lots on home trade account, with prices without change.

SEEDLEAF.	Crop 1878.	Crop 1879.
New England Havana seed	— @—	18 @25
Wrappers, common	13 @15	— @—
Medium	16 @18	— @—
Fine	20 @ 7½	25 @33
Selections	30 @40	— @—
Seconds	10 @12½	10 @13
Fillers	— @—	5½@ 7
Penn. assorted, low	12 @13	— @—
Assorted, fair	14 @15	— @—
Assorted, fine	16 @18	18 @22
Wrappers	18 @35	— @—
Fillers	9½@10	— @—
N. Y. ass'ted, com. to medium	10 @1	— @—
Ohio assorted	8½@11½	7½@10
Wrappers	15 @25	— @—
Wisconsin assorted	8 @12	7 @10
Havana seed	15 @20	16 @18
Wrappers	12 @18	— @—

KENTUCKY LEAF.	Light.	Heavy
Common lugs	4 @ 4½	4½@ 4¾
Good lugs	4½@ 5	5 @ 5½
Low leaf	5½@ 6	6 @ 6½
Medium leaf	6¾@ 7	7 @ 8½
Good leaf	7½@ 8½	9 @ 10½
Fine leaf	9 @11	11 @12
Selections	12 @—	— @—

MANUFACTURED TOBACCO.

A moderate business has been done in all styles We quote:

Black work—Common and medium, in bond	12	@15
Good and fine, in bond	16	@18
Bright work—Common and medium, in bond	15	@19
Good and fine, in bond	21	@35

VEGETABLES.—Potatoes arrive liberally and $1.50@1.75 per bbl. in a full range for best. L. I. and N. J. regardless of brand; culls, 50@75c. Sweet potatoes, $2.50@3.50 for Va. yellow. The want of good corn is felt this year. Cabbages doing better. Egg plants lower. Tomatoes not attractively cheap as yet. Small pickling cucumbers quoted at $1.75 ₩ 1,000.

Green corn, Jersey, per 100, 75c.@$1.25; tomatoes, L. I. & Jersey, per bush., 75c.@$1; cucumbers, ₩ 1,000, $4@5; egg plant, $3@4; string beans, round, ₩ bag, $1@1.50; string beans flat, $1; wax beans, $1@1.25; green peas, $1@2; lima beans, $2.35@2.75, turnips, Jersey, per 100 bunches, $3@4; Jersey, Russia, ₩ bbl., 75c.@$1; beets, Jersey, per 100 bunches, $2@3, radishes, red, 50@75c.; lettuce, ₩ bbl., $1@2; cabbage, Jersey, ₩ 100, $4@6; squash, Jersey, marrow, per bbl. 75c.@$1; L. I., yellow, 50@75c., L. I., white, 50c.; onions, State, yellow, $5@5.50; Western, $5@5.50; carrots, ₩ 100 bunches, $1.50@2.50; okra, per 100, 15c.

WOOL.—The market remains in a dull condition on account of the moderate movement in goods. Prices are held very steady.

LIVE STOCK MARKETS.

NEW YORK, Saturday, July 31, 1880.

BEEVES.—Receipts for week 13,856 head; do last week, 15,007 do. With just a fair supply of stock offering and a moderate home demand, the market at 10th st. was a trifle better than on Wednesday. Still it was hard to establish an actual advance and sellers quote a firm feeling with prices slightly in their favor. The large call for prime shipping cattle helped the market at Jersey City. Good and choice steers were readily sold at a small advance from rates on Wednesday; common native grass cattle were too plenty and declined nearly ½c. ₩ lb. But of Texas and Cherokee there were over 600 head on sale, and buyers could only be induced to take them by making very liberal concessions—in most instances a strong ½c., and in some cases ½c. Good Cherokees brought 8½c. to dress 55 lbs., but more than three-fourths of the Texans and Colorados were sold from 7c. to 8½c. to dress 55 lbs. and the sales include some fat cattle. The cool weather made a ready sale for good stillers, and 9½c. less 5c. per head was obtained for 5 car loads. A few really common Ohio grass steers were sold as low as 8c., to dress 55 lbs., but 8¼@8½c. to dress 55@57 lbs. was the general range for native steers. About 400 head were sold at 10@10½c.

MILCH COWS.—The range of prices keeps low but is quite equal to the common average of stock lately sent in. There is no snap to the market; most sales are at $30 to $50 per head, and the latter rated cows must have good dairying points. A few specials bring $55@60.

VEAL CALVES.—Trade fair and running upon best fed stock.

Live calves, N. J. and Bucks Co., choice, 6½c.; prime, 5½@6c.; State choice, 6@6½c.; prime, 5½@6c.; fair to good, 5@5½c.; poor, 3@4c.; heavy, good to prime, 5@6c., buttermilk, 2½@3c.; grass, 3@3½c.

SHEEP AND LAMBS.—Receipts for week, 34,552 head; do. last week, 28,204 do. Sheep were extremely dull and generally quoted 8c. off. Lambs opened about steady, but grew weak very rapidly and closed nearly ½c lower than the current rates of yesterday. The supply of both sheep and lambs was entirely too large for a Friday's market, and a good many car loads will be carried over. Sheep sold from 3½c. to 5½c. for poor to choice; Southern and Western lambs at 5½@6½c.; State, Pennsylvania and Jersey do. at $6.50@7.40 per 100 lbs., the latter price for a single deck load of choice lambs, 72 lbs. average, from Chester County, Penn.

SWINE.—Receipts for the week, 17,830 head; do last week 22,725 do. The small receipts are direct to packers. Nominal rates, $4.90@5.12 ₩ 100 lbs., the latter price for light State. City dressed quoted at 6½@7c., heavy to pigs.

TERMS FOR 1880.

THE subscription price of THE RURAL NEW YORKER is

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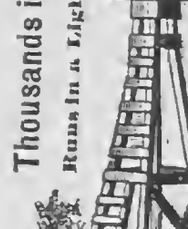
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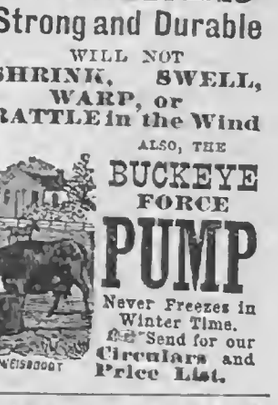
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REMINISCENCES OF A LITTLE GIRL.

MRS. M. J. GALPIN.

CHAP. XI.

A FIRE AT SEA.

ONE lovely day when the ship was making good time, and all on board seemed to partake of the freshness and beauty of sea and sky, suddenly there arose a long column of flame from the roof of the cook-house, and simultaneously burst forth that terrible cry of Fire! Fire! from every throat. Dismay and terror were depicted on every countenance to think of perishing far from home on the mighty deep, as death, either by fire or drowning, seemed inevitable to all. But the "Manilla man," of whom I have already spoken, rose equal to the emergency. Seizing the burning material he heaved it overboard, while giving his orders to the excited crowd, who seemed thereby panic stricken. The fire originated from some clothes which the women had hung on a line to dry, right across the flue of the cook-house, where they took fire and were the cause of the mischief. By the united efforts of passengers and crew the fire was at last subdued, but the cook-house and part of the rigging were completely demolished. After a few days, when the carpenter had all things "shipshape" once more, there came a fearful storm, which raged with unabated fury for 24 hours. The passengers had about concluded that the "shores of America they ne'er would see," but a guiding hand willed it otherwise, for about daybreak on the second morning the wind lulled, and in a few hours naught could be seen save sunshine, and the foamy breakers chasing each other in wanton play. But the ship, how she looked! Battered and torn, with masts and sails down, and another leak had sprung in the hull which required incessant pumping all day, until the carpenter succeeded in closing the fissure.

About a week after the storm two large sharks could be seen following the ship, to the utter consternation of the sailors, who say that they never leave till some one on board dies and is thrown overboard. In this case they were right, for there were two children on board sick at the time, and after a few days' illness they both died. The heart-broken mothers pleaded to have their remains kept till land was reached, but that was an impossibility, as they were in mid-ocean with no ice on board. The burial service was read at sundown on the day they died, and then the little bodies closely sewed up in stout sacks, were placed on an inclined board and gently slided off into the fathomless ocean. A wail of dismay arose from the hearts of the parents who thus saw their precious loved ones disappear forever. The knowledge that the sharks were following in the wake of the ship had been kept from the bereaved ones; but strange to relate, the morning after the burial the sharks had disappeared, and were never seen again during the voyage.

All through these varying scenes the little Therese was filled with wonder and awe; but she at length became so familiar with the roar of the ocean that its surges never disturbed her rest. When about three or four weeks out on their voyage, they came in sight of some of the islands of the archipelago, and while passing the island of Montserrat, Uncle Tom made a crayon drawing of it, which is still in his family as an heirloom. He also sketched the Bridgewater, the only vessel that had passed them during the whole trip. Drawing was a natural talent with Uncle Tom, and if in early life he had devoted his time and energy that way, he might to-day, if living, have rivaled our best artists. Sometime after passing those islands the ship was "becalmed," that is she floated idly on the water with not a breath to stir her canvas. The sea looked like glass and not a cloud could be discerned in the azure dome above them for days at a time. The heat became oppressive, and to give the lower deck passengers pure air, the captain had a large flue made out of canvas; this was let down through the hatchway, so that a current of air would be put in circulation from below.

It was while gazing down this hatchway and wondering at the big "cotton chimney" that our heroine met with her first mishap of the voyage. If it had not been for an overruling Providence that guards our every action it might have been fatal. While looking down very intently through the opening, she lost her balance and fell on the door of the lower hatchway that led to the bottom of the ship, where they kept the ballast. Half of this lower trap-door was open, and if she had fallen six inches nearer to the edge she would have gone down among the ropes and stones, and been dashed to pieces. Great was the consternation over this mishap to the ship's favorite. O'Hara, the first mate, carried her up to the cabin in his arms, and Uncle Tom was almost powerless from the shock, as he thought his darling was surely killed by the fall. But little ones will sometimes bear severe knocks, and in a few hours Therese was all right, save for some ugly looking bruises. After many days of idle, weary, drifting and waiting, a breeze at last sprung up, and with renewed hope and vigor they once more sped away to that "land of promise" which seemed so far away to their longing eye. One day when the ship was making good headway, the little Therese, who was sitting on the gunwale of the boat, lost her white sunbonnet, and as it danced away over the crest of the billows, she involuntarily arose to go after it. The captain was near by, and seeing her intention, he seized her or she would have fallen overboard.

There was a fascination for her in looking down into the deep, blue-green water and watching the fishes as they dashed to and fro in their play. And once while thus gazing down, a large "grampus" rose close to the ship's side with a tremendous snort that startled her so much that she was ever after somewhat afraid to sit there alone.

The day passed slowly by with little variation. But at length flocks of sea-gulls became visible, which the sailors averred was a sure indication that land would soon appear. Their surmises proved correct; for in a few days, tufts of grass and pieces of floating wood swept by to the intense delight of the passengers, who were in hopes that this long journey would soon be ended. The ship was most thoroughly washed inside and out, painted and put in good repair. A steam-tug was sent out from New Orleans to tow them up the Balize, and just seven weeks after they left their native land they reached the hospitable shores of free America. They had escaped shipwreck by storms three times, and were freed from destruction by fire. Taking all things into consideration, they had ample cause for thankfulness and rejoicing in thus safely reaching their destined haven.

There is but little shipping in these days at New Orleans, La., but then it was a port almost as much used as New York. All along the wharfs of the "Crescent City" the sails could be seen fluttering in the breeze, while now such an appearance would be the cause of much wonder.

I have at last crossed "the deep, blue sea" with my heroine, and in my next I will tell you her story, as the years rolled by and she developed into a noble woman.

Marshall Co., Kan.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—Perhaps I do not clearly understand your regulations for admitting members to the Horticultural Club. When first organized my impression was that only the *very* "young people" were invited to enter. Recently, however, I have thought even the "hoary head" might be found in the band of nephews and nieces. Is this correct? If so, then, since I enjoy as to age the "happy medium" between these extremes, perhaps you will favor my application for membership. Am I "eligible" in other respects, you may wish to know? If a deep-rooted love for flowers, which daily grows upon me, a persevering hand-to-hand conflict with the many odds one encounters in their cultivation can make me "eligible," then I am sure to be numbered with you. My yard would, no doubt, be considered by many of the cousins too small for much enterprise, but therein are many lovely plants. My little cottage home is embowered in vines (of my own planting, the past five years,) and surrounded by verdure and bloom. Most of the year the parterres and hedges are brightened by the flowers of a great many plants. I think that by taking an interest in the matter each of us might help Uncle Mark materially in his admirable plan of beautifying the world. Yours truly, MRS. VIRGINIA S. HALLER.

Smyth Co., Va.

[You are in every way eligible to membership.—U. M.]

DEAR UNCLE MARK:—The seeds so kindly sent us, by you came all right, for which accept our sincere thanks, our little boy was very much delighted to receive them. He laid off his plot of ground into a small garden and planted many kinds of vegetables in it. For a boundary line he planted a row of pop corn nearly all round, and in the center he has a flower bed. He is very proud of his garden. Will you please tell me whether it is necessary to cut the (cotton) string which I used to tie the graft to the stock in splice grafting, after the graft is united to the stock? (It is). I put on 345 grafts this Spring, of apricots, plums, prunes, apples, cherries, pears and grapes, and thanks for your instructions on the subject; I have splice and bark-grafted, nearly all of them. Some few large stocks I cleft-grafted. I also set 365 grape cuttings this Spring and last Fall. All are doing well. The dear old RURAL is certainly an educator in many ways. I would not miss it for double its cost. Respectfully yours. MRS. P. S. WISE.

Shenandoah Co., Va.

DEAR UNCLE MARK AND RURAL COUSINS:—I take my pen in hand to ask you if you will receive me as one of the cousins. If it is not too late, and I hope not, please put my name on the list. My father has taken the good old RURAL for a long time and we could not do without it if the cost of it were $3.00 a year. I have a better flower garden this Summer than last year. I planted lots of my seeds in boxes so as to have them early. Well, I must not make my letter any longer this time, if I do Uncle Mark will say, "What a letter for the first," and it will be sent into that great waste basket over in the corner. If Uncle Mark accepts me as one of the cousins, I will, in my next, write you about my plants and pets. Your niece and well-wisher, VIOLET.

Worcester Co., Mass.

DEAR UNCLE MARK AND RURAL COUSINS:—I have long wished to acknowledge the receipt of the Cuthbert Raspberry plants sent me by the RURAL. I see you have members in the Horticultural Club out of their teens and perhaps I am not too old being 22 years. If you will accept me I will be pleased and thankful. I am a great lover of flowers. Perhaps some of the cousins have never been so fortunate as to see the graceful animal, the deer. Yesterday two fawns came close to our house; they were very pretty, but a neighbor killed them. You may hear from me again; meantime good-bye. AUNT PAICENE.

Etna Mills, California.

DEAR UNCLE MARK:—I thought I would write a letter as all the other little girls are writing. I live on a farm in Kansas (mamma and my brothers and sisters and I). We have a large orchard and the trees are so nice and shady, that I have a nice cool place for my play house in the Summer. I have three dolls and lots of chickens and a little dog; his name is Ned. I make a flower garden every Spring, but my flower seeds don't come up as I want them to, and the flowers are not very pretty either; so I wish you would send me some of your prettiest flower seeds you have and oblige

Douglas Co., Kansas. ROSY ASHBY.

DEAR UNCLE MARK:—I have wanted to join your club for some time. My brother takes your paper and we all think it is splendid. I live on a farm, and would be glad to get any kind of either vegetable or flower seed. I like the RURAL very much, especially the articles on sheep raising, as I am trying to raise some. I have two motherless lambs now, don't you think that is a good start? I wish some of the cousins would write to me, I would be glad to correspond with any of them. I think it would be good practice for us to write to each other. Your affectionate niece,

Russellville, Franklin Co., Ala. ALMA ALLEN.

DEAR UNCLE AND COUSINS:—I received the seeds that you sent all right, and send many thanks for them. Our flower garden looks very pretty. The roses and other flowers are in bloom. I do not go to school now, but expect soon to have to go about a mile and a half distant. We have eight kinds of grape vines—the Concord, Isabella, Telegraph, Martha, Wilder and several other kinds. I must close now for fear my letter will be too long. So good-bye, with love to all the cousins. Your affectionate niece, LILLIE S. BABCOCK.

Norfolk Co., Va.

DEAR UNCLE MARK AND COUSINS:—It has been a long time since I have written to you. Last Summer I did not have very good success with my flowers. I received the flower seeds that you sent me and they are doing well. I received my book entitled "Donald's Schooldays," which was instructive as well as interesting. I have a darling little baby brother and sister which I spend the most of my time with. I will not make my letter too long this time. Wishing you all good-bye, I remain your niece, CARRIE B. WHEELER.

Yates Co., N. Y.

UNCLE MARK:—I live in San Francisco, but I am now visiting a friend of my father's Mrs. Winslow by name. She lives in Port Townsend W. T. Mrs. Winslow takes the RURAL and we all like it very much. I came from San Francisco all alone in a ship. There were no ladies on board, nor passengers either. The people say I am very brave to come alone. I was sea-sick seven or eight days. We were 16 days coming here. I am nine years old. GAIL HACKLEY.

Port Townsend, W. T.

DEAR UNCLE MARK:—Please may I join your Horticultural Club? I am eleven years old. We live on a farm one mile from Roanoke. I love to work with flowers. I have two brothers and one sister: Archie, Mabel and Walter. Archie and I go to school three-quarters of a mile from here. We like to read the cousins' letters. I hope you will not drop this into your waste-basket.

Huntington Co., Ind. LILLIAN E. HUFFMAN.

DEAR UNCLE MARK AND COUSINS:—I should like to join the Horticultural Club if there is space for my name. We have six sheep and had thirteen lambs, but one of them died. I have two brothers, James and Elbert. I am eleven years of age and go to school at Frankfort. If this does not find its way into the basket I will write again.

Yours truly, IDA M. HUNTLEY.

Herkimer Co., N. Y.

Sabbath Reading.

ARTLESS SIMPLICITY.—A lady visited New York city, and saw on the sidewalk a ragged, cold and hungry little girl, gazing wistfully at some cakes in a shop window. She stopped, and taking the little one by the hand led her into the store. Though she was aware that bread would be better for the cold child than cake, yet, desiring to gratify the shivering and forlorn one, she bought and gave her the cake she wanted. She then took her to another place, where she procured her a shawl and other articles of comfort. The grateful little creature looked the benevolent lady full in the face, and with artless simplicity asked: "Are you God's wife?" Did the most eloquent speaker ever employ words to better advantage?

THE richness of religious thought and sentiment may be inferred from the immenseness of its literature. If you will cast your thought over the area covered by letters, you will find that a large part of the area is covered by the arguments and experiences and reveries of religion. All along from the times of far-off Egypt to our own period, this single sentiment has said more than has been uttered by the sentiment of ambition or of love.

ABOUT a year before his death some one sent William Cullen Bryant a picture of apple blossoms. In acknowledging it he wrote: "They do not exactly suit the last day's of life's December, but they agree charmingly with that new springtime of existence, my entrance to which cannot be far off, and where I hope to find the orchards of Paradise in full blossom."

IF there be any true religion in us, it is much more likely to be discovered and drawn into actual exercise by an exhibition of the glory and grace of Christ than by searching for it in the rubbish of our past feelings. To discover the small grains of steel mixed among a quantity of dust, it were much better to make use of a magnet, than a microscope.—*Andrew Fuller.*

HAS it never occurred to us, when surrounded by sorrows, that they may be sent to us only for our instruction—as we darken the cages of birds when we wish to teach them to sing?—*Richter.*

Various.

BRIEFLETS.

IF kept clean, says the London Garden, asphalte is undoubtedly the best pavement yet discovered for crowded streets. . . . . "Justicia" who writes the interesting Leaflets in the above magazine, speaking of the great thirst of the public for variety, says that in the case of melons one may see "new" kinds brought out year after year without the slightest improvement in merit or the slightest difference from the old kinds which have been known for ages. Thus somebody raises an extra-fine specimen owing to favorable conditions of season, and immediately assumes that it is a new variety and gives it a new name. A certain number of seed houses must try it to know what it may be worth and a certain number of people order it for trial, and the result is that a small stock can be got rid of. . . . . Real progress is possible and desirable in many ways, but the christening of a melon with a new name because it happens to be a fine specimen has nothing to do with progress and is, in fact, a dishonorable practice. . . . . One individual from Jersey City writes Dr. Tanner advising him to use the water supplied to the inhabitants of that city, because it contains a large amount of meat in the shape of insects, snails and worms. . . . . While drinking some water, Dr. Tanner asked one of his watchers to take a drink with him. The proffer was declined and the Doctor then asked him if he had sworn off? . . . . . E. P. Roe sends us the following telegram: "Come see Snyder Blackberry. It is wonderful—also Cuthbert Raspberry." . . . . . Boston is making an effort, through its newspapers, to induce the school authorities to have the children of the public schools taught to swim.

CATALOGUES, ETC., RECEIVED.

THE BOOK OF ENSILAGE, or the New Dispensation for Farmers, by John M. Bailey; published by the author, Billerica, Mass.; price $2. This is a handsomely gotten up volume of 200 pages, neatly printed and bound in cloth. In it the author gives his experience with ensilage during the past year, and according to the book it has been an extraordinary success, and Mr. Bailey does not hesitate to advise his fellow farmers in the strongest terms to embark in this "new dispensation." We are of the opinion that the author attaches altogether too much importance to the system of ensilage. He paints it in very seductive colors and makes some extravagant statements, which we would be pleased to see carried out in practice. He thus states that two cows can be kept the year round in excellent condition on the ensilage grown on half an acre; that mutton can be raised for nothing if wool costs 30 cents a pound, etc. Mr. Bailey may be sincere in his statements, but we think they will certainly mislead those who unconditionally put their trust therein. Our reasons for this may be found in previous numbers of the RURAL NEW-YORKER. We describe the contents of the last half of the book in the author's own words. "I have added a short description of the herds and flocks of the 'Winning Farm' and 'Virginia Stock Farm,' together with more or less concerning the different breeds. I confess that my object is not *altogether* a benevolent desire to benefit others solely, but is partly for the purpose of advertising my horses, cattle, sheep and swine."

REPORT OF INDIANA STATE BOARD OF AGRICULTURE for the year 1879.—This is a fine volume of 560 pages bound in cloth, but printed in rather small type. It contains a report of the proceedings of the Board of Agriculture, a list of premiums awarded at the last State Fair, some able essays by professors of Purdue University and others, and also reports of the proceedings of district and county societies, with doings of several associations in the State. The appendix contains a sketch of the Indiana Pioneer Association, with the names, ages and number of years in the State, of some 240 members, all being among the first settlers of the State. The book contains much valuable information in regard to Indiana.

PAMPHLET. "Manual Labor at the Michigan Agricultural College." Spoken at Manchester and Romeo Institutes. By Pres. T. C. Abbott. President Abbot is the best possible authority on the labor system, as it has been practiced for many years at the institution of which he is the head. He has been a keen observer of the physical, intellectual and moral results of manual labor upon student life, and in this lecture he has given the question a brief and impartial examination, from which only one conclusion can be drawn, and that is that manual labor, in agricultural colleges, is both practicable and necessary to fit the student for his work in after life.

PERSONAL ITEMS.

L. M. Kallock, Charles De Young's murderer, was arraigned for the crime at San Francisco Saturday. A motion to set aside the indictment will be argued in a few days.

Among the ancestors of M. Challemel-Lecour the French Ambassador to England, were two fraudulent bankrupts and a forger. He has had, on that account, no little trouble in obtaining recognition of his talents and public services.

During the debate on the Reform bill in 1850 Mr. Gladstone pointed to six men who, all entering the Parliament young, succeeded in becoming leaders of the House. Mr. Pelham entered at 22, Mr. Pitt at 21, Mr. Canning at 22, and the first Sir R. Peel at 21. Gladstone himself entered at 21.

The queen of Siam and the king's favorite child were drowned on the night of June 1, a picnic boat on which they were sailing being run down by a steam launch. Nearly all her attendants also perished. The bodies have been recovered and Bangkok, the capital, is plunged into mourning. The king is nearly distracted with grief.

The last election in Ireland was a poor candidate's triumph. In Sligo Mr. Sexton, a journalist defeated Mr. King-Harmon, Lord-Lieutenant of the county, an immense land-holder. In Roscommon the O'Connor Don, though of ancient Irish stock, holding large estates, and supported by the Roman Catholic clergy, was defeated by Mr. O'Kelly, another journalist.

M. Jules Ferry, the French Minister who introduced the bill for the expulsion of the Jesuits from France, is the direct descendant of a man who, 120 years ago, established several houses of the same order in that country. M. Ferry's ancestor having lost his wife, joined the order of the Jesuits, and after studying at the Jesuits' college at Rome, was ordained a priest. He returned to France one of the most ardent followers of St. Ignatius. His name was also Jules. The present Minister is the great-grandson of the son that this reverend father had had before he embraced the monastic career.

A Turkish journal, commenting on the elevation of Mr. Gladstone to the Premiership, asserts that he was a Bulgarian, "His father was a pig dealer in the Valley of Kustendje," says this veracious chronicler, "and young Gladstone ran away at the age of sixteen to Servia, and was then with another pig dealer, sent to London to sell pigs. He stole the proceeds, changed his name from Trogadelr to Gladstone, and became a British subject. Fortune favored him until he became Prime Minister. Gladstone has no virtues." The Turks don't love Gladstone very much; but the writer of that biographical sketch must have read a good deal about American Presidential candidates in our political papers about election time to be able to concoct such a "life."

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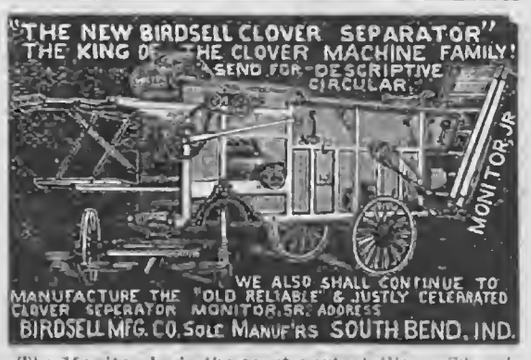

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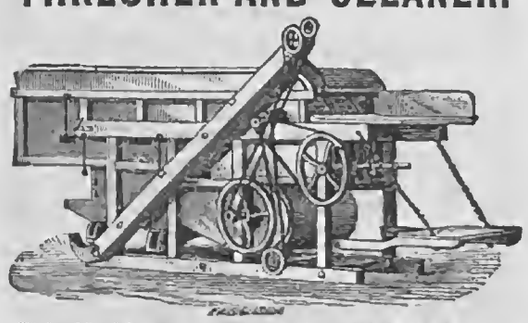

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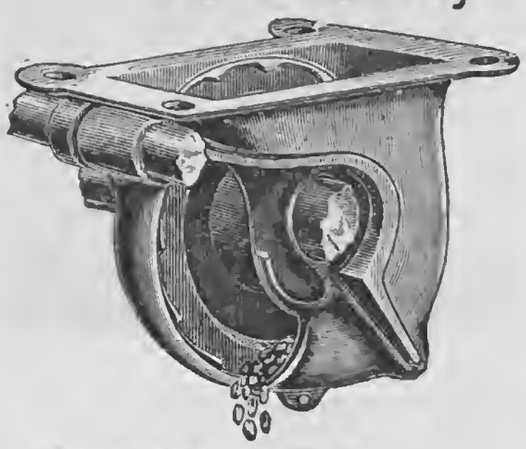

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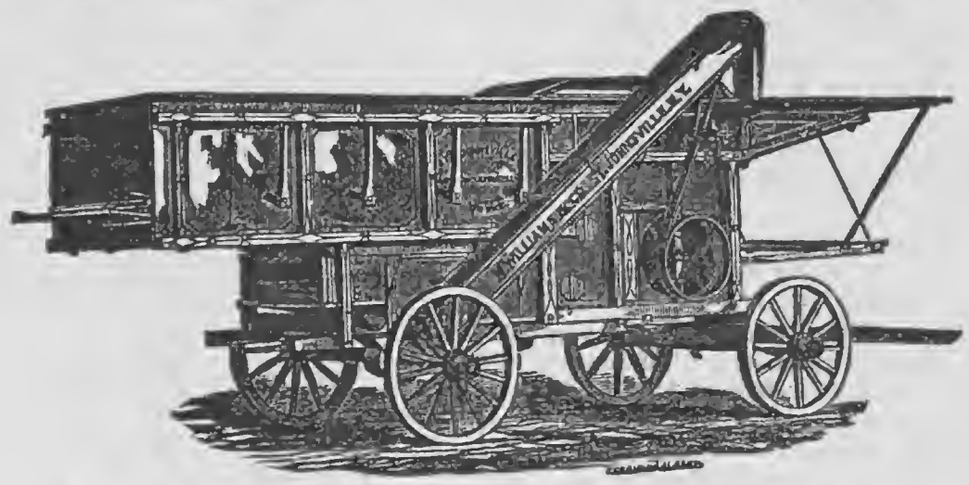

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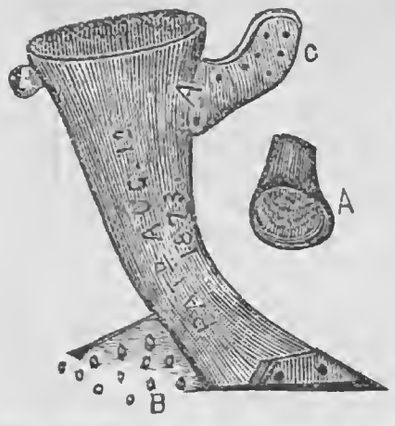

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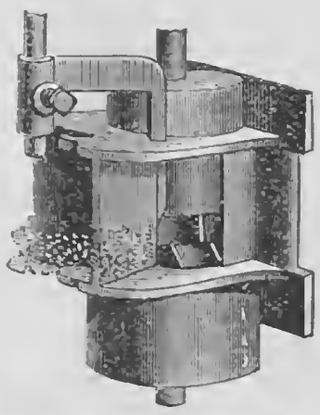

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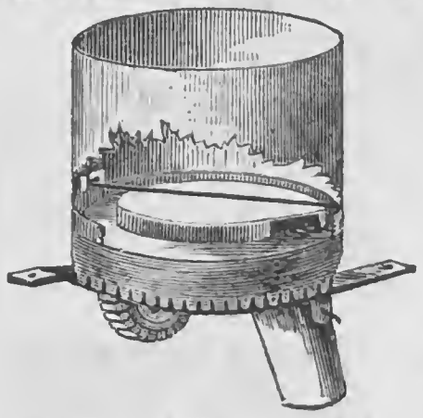

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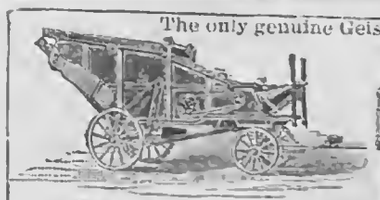

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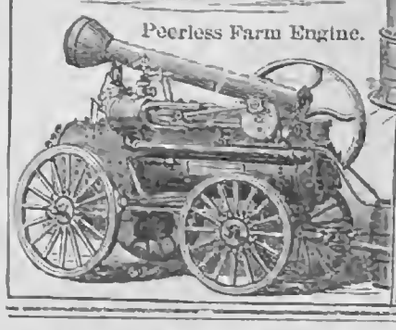

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Fit all drill boots, run level, cut *flat bottom* furrows, cover with *mellow* soil, and instead of *crowding the seed* into narrow rows but one inch in width, scatter it 3¼, 4, and 5 inches; the plants thus standing *wider* apart, have more ROOM TO STOOL, derive more nourishment from the soil, become more vigorous, and produce better developed average heads.
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A CRUEL husband calls his wife "green fruit," because she never agrees with him.

IT will take a pretty heavy frost to kill this speech crop that is coming on now.—Corry Press.

"How sad!" exclaimed one blade of a pair of scissors to the other; "how sad! We only meet to sever!"

"YOU never saw my hands as dirty as that," said a petulant mother to her little girl. "No, but your ma did," was the reply.

THE compositor who set up "pimpled chops" for "dimpled checks" didn't look a bit natural in death.—Modern Argo.

"CAN tough fowl be made tender?" asks a housewife. Certainly; in many boarding-houses the boarders find the landlady tenders tough fowl.

"TOM," said a girl to her sweetheart, "you have been paying your distresses to me long enough. It is time you made known your contentions, so as not to keep me in expense any longer."

"How came you to fail in your examination?" asked the tutor. "I thought I crammed you thoroughly." "Well, you see," replied the student, "the fact was you crammed me so tight I couldn't get it out."

AN old Highland clergyman, who had received several calls to parishes, asked his servant where he should go, the servant said: "Go where there is most sin, sir." The preacher concluded that was good advice, and went where there was most money.

"How do you pronounce s-t-i-n-g-y?" Professor Stearns asked the young gentleman nearest the foot of the class. And a smart bad boy stood up and said it depended a good deal whether the word applied to a man or a bee. Go to the head young fellow.

A LITTLE fellow, turning over the leaves of a scrap book, came across the well known picture of chickens just out of their shells. He examined the picture carefully, and then, with a grave, sagacious look, slowly remarked, "They came out 'cos they was afraid of being cooked."

"ARE animals color-blind?" asks a scientific journal. Well, our opinion is, if that querist were to put on a red shirt and undertake to go across a lot containing a bull, he could most satisfactorily answer that question without submitting it to the press.—Waterloo Observer.

A DROLL fellow fished a rich old gentleman out of a mill-pond and refused the offer of twenty-five cents from the rescued miser. "Oh, that's too much!" exclaimed he; "tain't worth it!" and he handed back twenty-one cents, saying calmly, as he pocketed four cents, "that's about right."

GOING home from church, she remarked to her husband: "Did you notice that bald-headed man in front of us, and how young he looked? I never saw any one so young before with a bald head." Then he shut her up by replying: "My dear, I was bald-headed before I was a year old."

"LOOK heah, squire, dars a niggah in Galveston what's been sassin' me; supposing I jes maul de life outen him?" The lawyer replied: "You would be apt to get your neck stretched." "Now, boss, you is jokin. What do white folks care for one niggah moah or less now de census is done tuck!"

A DARKEY who was stooping to wash his hands in a creek, didn't notice the peculiar actions of a goat just behind him; so, when he scrambled out of the water and was asked how it happened, he answered: "I dunno 'zactly; but 'peared as if de shore kinder h'isted and frowed me."—American Punch.

How beautiful is night! How silently she tiptoes across the meadows of yonder peaceful vale. I hear, in fancy, the soft rustle of her shadowy garments as they trail above the—blank, blank, the blankety cats! There they go again! When a fellow does feel a little touch of sentiment, there's always something to startle him back to the stern realities of life.—Kokomo Tribune.

A Kind of Torpor

Sometimes afflicts the kindneys and bladder which, if prompt measures are not taken to overcome it, seriously jeopardizes their health, and often proves the forerunner of irremedial disorders. The diuretic properties of Hostetter's Bitters, which stimulate these organs without irritating them, peculiarly qualify it to avert all danger to be apprehended from the condition described. It encourages secretions when deficient, and aids the discharging functions by invigorating the urinary organs. While the stimulants of commerce exert an effect somewhat akin to the Bitters upon the kidneys and bladder, their fiery properties, being modified by medicinal ingredients, have a tendency to unduly excite, but the potent and salutary vegetable extracts with which the stimulative property of this medicine is combined, constitute it a safe as well as an effective preparation. As a general invigorative and alterative, also, it possesses very great popularity.

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Our village grocer (great Floriculturist).—"Most extr'or'nary thing, sir. Last year I had some bacon in my shop that went bad durin' that hot weather, and I buried it in my garden. You'll hardly believe it, but all my Asters this season came up streaky!"

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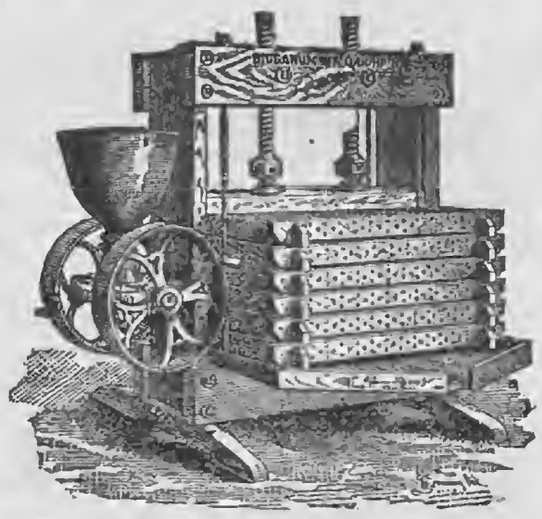

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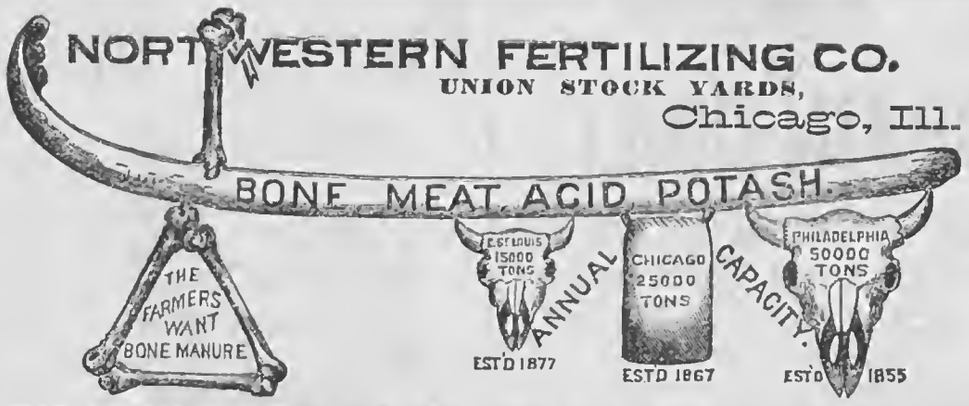

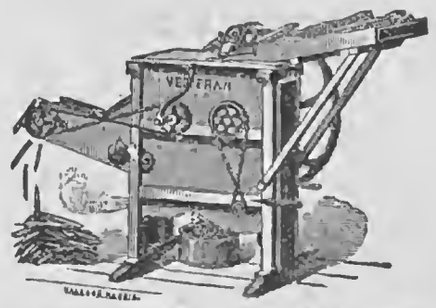

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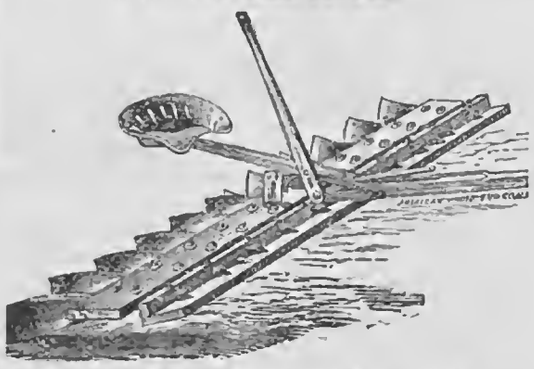

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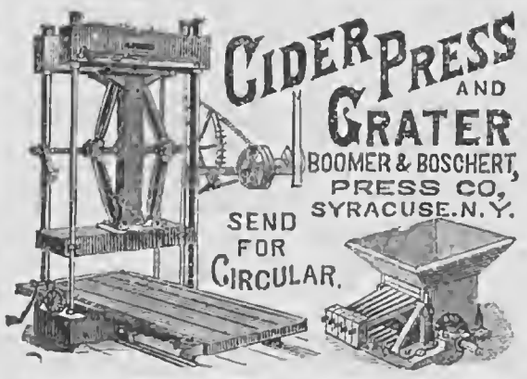

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Biographical.

THEODATUS TIMOTHY LYON.

Theodatus Timothy Lyon, the subject of this sketch, was born at Lima, Livingston County, New York, on January 23rd., 1813. His father was Timothy Lyon, for whom he was named. The family emigrated from Connecticut to Western Massachusetts, and in the early settlement of the "Genesee County" removed and settled in Lima.

His mother, Mary, was the daughter of Jonah Davis, a farmer, who early emigrated to Lima from Delaware County, New York. His father owned and carried on a farm, but devoted his attention mostly to architecture and millwrighting. From the age of about twelve years, T. T. Lyon's Summers were spent partly at farming and partly at mechanical work, he having developed a considerable liking for machinery. Aside from such employment his time was spent in a district school up to the Spring of 1828, at which date his school privileges were brought to a close by removal with his father to the then remote and wild Territory of Michigan, where this family settled at Plymouth about twenty miles northwest of Detroit. About the year 1826 or 1827, on visiting the grown-up orchard of a neighbor, he found the owner in the tops of his apple trees employed in inserting buds in the smaller branches. On returning home he procured and sharpened a case-knife and proceeded to cut buds from a favorite apple tree, and insert them in the limbs of other trees in the farm orchard, thus taking his first lesson in practical pomology.

During his first year's residence in Michigan, he was employed in "tending" a small country store established and conducted by his father at Plymouth. His employment was afterward for a time diversified by carrying the mail, on horseback, the route extending from Tecumseh, in Lenawee county, to Maumee, then a part of Michigan, but now belonging to Ohio, on the one hand, and Pontiac, in Oakland county, on the other; with a weekly trip to Monroe, in Monroe county, at that time but little more than a French village. In obedience to the earnest desire of his parents, in the Spring of 1836, he gave up his long-cherished purpose of pursuing a course of study, and returned to Michigan from a visit to his old home in Lima, N. Y., resuming the business of selling goods and teaching school, and finally turning his attention to farming and manufacturing lumber, occasionally filling the position of township clerk and school inspector.

On December 6th, 1838 he was married to Miss Marilla Gregory, daughter of Mr. William S. Gregory, long a prominent farmer in Plymouth. In 1842 he spent a year at the Wayne county poor-house, in charge of the establishment as keeper and farmer. In 1844 he commenced a small nursery at Plymouth, mainly with the purpose to grow a supply of trees for his own planting, as he had, in compliance with the wishes of friends, abandoned the idea of going further West to carve out a new home in the wilderness. He collected the varieties for the nursery from surrounding orchards, accepting the names by which they were commonly known. He soon learned the fact that in so doing he had, in many cases, incorrect and local names; this started him upon the process of correction and identification.

Such a work is likely to grow upon a person, and, in the case of Mr. Lyon, this proved not to be an exception to the rule. He soon saw the need of a broader knowledge, and amid the toil and care of business he entered upon the study of the limited pomology of thirty years ago. A series of articles in a Western paper prepared by him, describing the apples known and valued in Plymouth and vicinity, attracted the attention of Mr. Charles Downing, of Newburgh, N. Y., and brought about an acquaintance between the two persons. From Mr. Downing's trial grounds at Newburgh, he was enabled to obtain numerous varieties of new and comparatively untested fruits and, having a decided *penchant* that way, and his recently planted orchards being in the right condition for the purpose, he indulged extensively in the testing of novelties as a matter of personal and public satisfaction but with little, if any, regard to profit. The valuable test orchards at Plymouth are the outcome of these experiments.

From 1861 to 1865, under a Republican county administration, he held the position of member and Secretary of the Board of Superintendents of the Poor of Wayne county, and was continued one year as Secretary by the succeeding Board of Democratic County Auditors.

THEODATUS TIMOTHY LYON.—Fig. 262.

On June 17th, 1864, the Detroit and Howell Railroad Company was organized and Mr. Lyon was elected President. This was followed April 13th, 1867, by the organization of the Howell and Lansing Railroad Company, and, as both were parts of the same line, Mr. Lyon was elected President of this also. This position he held till, in 1870, and 1871, the roads were turned over to an Association of Boston men. As a consequence of his connection with the railroads, his attention was diverted from the subject of pomology, and the care of his orchards was mostly delegated to other hands. This arrangement was hastened by the failure of his wife's health, together with the final sickness and death of her parents.

On the completion and opening of the Detroit and Lansing Railroad and its consolidation with the line from Lansing to Ionia, Mr. Lyon's connection with it ceased, leaving him without special employment, but on account of the continued feeble health of his wife he was disinclined to return to the farm.

At this juncture strong inducements were offered him to remove to Western Michigan, and resume his former pursuits, which he did in 1874, becoming connected with the Michigan Lake Shore Nursery Association as its President. This enterprize was inaugurated at an inauspicious time; and, as a consequence of the subsequent shrinkage of values, together with the failure of a large number of the subscribers to the capital stock to fulfil their engagements, it has been thought best to dissolve the corporate organization.

In December 1876, Mr. Lyon was elected President of the Michigan State Pomological Society, to which position he has been annually re-elected up to the present time. He was also for two years a member of the Executive Committee of the Michigan State Agricultural Society, and at three different times the delegate of that Society to the sessions of the American Pomological Society.

These, and various minor positions of similar character, together with the supplying occasional matter for the press have entailed upon him a voluminous correspondence, drawing largely upon his time and energies, but with little direct advantage to himself. Mr. Lyon is a walking cyclopedia of the nomenclature of fruits, and can identify all the leading varieties of Western fruits at a glance, and Michigan is greatly indebted to him for his long and persistent labors of love in this direction. J. C. H.

Farm Economy.

A SCIENTIFIC VIEW OF COMPOSTS.

PROFESSOR F. H. STORER.

In case the fermentation of a compost heap becomes so active that there is danger of losing fertilizing materials, it may sometimes be well to turn over the heap, with addition of new portions of peat or some other inactive material; and, on the other hand, by forking over compost heaps after the first fermentation has run its course, so that air may be admitted and the materials be thoroughly mixed, the fermentation may be renewed and carried much further towards completion than would otherwise have been the case. But, in spite of the well-known fact that composts gain very decidedly by the process of forking both as to the chemical activity and the mechanical condition of the product, it seems to be questionable whether much forking is justifiable from the economic point of view. Repeated forking may be proper enough when the compost is to be used for horticultural purposes, and the object is merely to provide the best possible food for some fastidious plant; but for the general uses of a farm it would seem to be better not to refine the compost too much, but to rest content with bringing it to a fairly good condition. In this sense the establishment of new heaps and the procuring of ample supplies of material for their construction, would seem properly to take precedence of the system of frequent forking which was formerly in repute. It is to be hoped that the methods which have occasionally been proposed of stirring compost heaps with plows, harrows and road scrapers may be so systematized and improved that they shall meet all reasonable requirements, and that the method of forking by hand may be reduced to the lowest possible limits. It might even be possible to devise some simple method of forking by horse power which would supersede the manual operation.

Composts prepared in the manner above suggested have several good qualities which are peculiar to them as a class. As compared with barn-yard manure they are convenient of application, whether to plowed land or to grass, and they are easily incorporated with the soil. One good way of looking at a finished compost is as loam highly charged with fertilizing ingredients, *i. e.*, as a "saturated earth," fit to be strewn directly in the hills and furrows in which seeds or plants are to be placed. A good compost is both *strong* to promote growth and *mild* in that it will not hurt seeds or young plants. On the other hand, when comparing composts with the commercial fertilizers, we have to inquire, in the first place, what the nitrogenized constituents have cost in either case, and there seems small room for doubt that, in very many instances, all things considered, the compost-nitrogen which has been made, as it were, at the farm will be found much cheaper than that bought in the form of a chemical manure. Furthermore, the water-holding power of the compost must be considered, since in droughty seasons, and particularly on light land, it may be a point of no small importance. It may, indeed, happen in some cases that the position of a man's farm as regards moisture may of itself determine whether it is best for him to use commercial fertilizers or composts. It is manifest that many a bottom-land abundantly supplied with moisture might be as grateful for the application of commercial fertilizers as many of the light upland gravelly and sandy soils of New England have been found to be for composts. It is tolerably plain, at all events, that in situations liable to drought composts are, in general, better fitted than most commercial fertilizers for promoting that peculiar moist mellowness of the soil which is an esteemed

condition of fertility. They act, too, as a mulch in some sort, and keep the soil from "binding." It is to be remembered, withal that besides its power of holding water, the presence of mere humus may be advantageous in other ways in some situations.

There is yet another highly important item to be mentioned in respect to composts, namely, that when kept for some little time in heaps, or mixed with the soil in which crops are growing, or spread upon grass land, they become true "niter-beds" in which saltpeter and other nitrates are formed from the nitrogen of the peat which in its natural state and but for the composting would, with some rare exceptions, have had little if any value in this sense. The discovery a few years ago that nitrification is, in its turn, a peculiar kind of fermentation, due to the presence of living organisms, has thrown a flood of light upon the action of organic manures in general, and of composts in particular, and has shown very clearly why old composts were formerly so much esteemed. In the days when the use of active nitrogenous manures like guano, nitrate of soda and sulphate of ammonia, was unknown in agriculture and horticulture some of the effects now obtained by means of these chemicals were got by the use of compost so thoroughly rotted that it was really a weak saltpeter earth. The old custom of frequently forking over the heaps was justified by the end in view, and it is a point still to be determined whether the heaps had not better be made of different sizes at the two stages of putrefaction. For the nitrification stage more ready access of air may be needed than would suffice for the earlier fermentation. Since a fair supply of moisture is needed at both stages, it is well to establish compost heaps in places where the materials will not dry off too rapidly. Moisture and warmth are essential conditions of nitrification, as well as an abundance of air.

Nowadays it is probably more rational not to keep compost long, but to use it as soon as the early or putrifactive fermentation has been carried far enough to thoroughly "cure" the peat and disorganize the materials so that they shall be, mechanically speaking, fit for use. The subsequent nitric fermentation will then go on in the fields, after the compost has been applied to the soil. By proceeding in this way the peat may be made to supply to the crops the best kind of nitrogenous food gradually and continuously throughout the growing season. Since warmth is known to be favorable to nitrification, it will be of interest to inquire whether composts had not better be applied by preference to hot weather crops, such as Indian corn, for example. It is known already, for that matter, that corn does prosper upon, and readily put to use, the nitrogenous food that is supplied by good humus. An old compost heap that has been well cared for must be filled with the organisms which cause nitrification, in the same way that the poudrette formerly made outside Paris and other cities was filled with them. It is but a few years since the reproach was made, as against the chemist, that a small quantity of poudrette placed in a hill of corn made the crop show a color and vigor of growth which no chemical analysis of the material had accounted for. But the seeming mystery has lately been made plain, and we now have every reason to believe that the chief merit of the poudrette depended upon the living things within it, which caused the nitrification of the humus of the soil, and so fed the crop.

The merit of composts for top-dressing grass lands is another point to be kept in view when contrasting them with commercial fertilizers. There are probably many situations where it will profit the farmer to use compost upon his hay-fields, although the application of commercial fertilizers is, economically speaking, quite inadmissible. There are several reasons, besides the comparative cheapness of the compost, why this fact should be true. The compost covers the ground sufficiently to smother moss, and its particles fall into the spaces between the grass plants in such wise that they do good considered as mere earth. It has often been noticed that many grass fields, and particularly those which are mossy, do profit considerably by applications of mere dirt, such as road-dust or the like. But the earth of a well-prepared compost is true humus, and as such is specially well fitted for the use now in question. The significance of the earthy compost considered as a mulch, has already been alluded to, and so has the slow but continuous nitrification of the compost earth which is most advantageous for the grass. In the case of composts prepared with lime or marl, a specially beneficial action is often noticed, due to the correction of a certain acidity in the land which hinders the growth of the better kinds of grasses and favors the introduction of inferior vegetation.

One important circumstance which has been lately noticed should be kept in view when considering the nitrification of composts, viz.: that the nitrifying ferment needs a large quantity of carbonaceous food in order that it may prosper. (See page 172 of the RURAL, for March 13.) Here probably is one of the reasons why peat and humus in general are so well suited for making composts. From this point of view it may be seen that even those kinds of peat which are not particularly rich in nitrogen may still be fairly useful in compost making, when the heap is to be carried to the nitrification stage, or so used that nitrification may result from its use in the fields. The use of sawdust for composting may be considered under this head, and there are some facts of experience which justify us in so considering it. Excellent results have been obtained in Germany by composting bone-meal with sawdust and allowing the moistened mixture to ferment before applying it to the land; and comparative field experiments have shown not only that the bone-meal thus composted gave better crops than the plain meal, but that the compost could justly be regarded as a cheap source of nitrogenous food. It may be said, it is true, that the sawdust acts beneficially in the first hot fermentation—either to procure or to mitigate it—and that the carbonic acid which results from the oxidation of the sawdust works to dissolve the bone earth: but there is room for believing that the sawdust is useful also in the nitrification stage. The question is well worth studying whether sawdust and peats poor in nitrogen may not perhaps be as well suited as the richer peats for composting with bone-meal and with highly nitrogenous matters, such as fish, flesh, and slaughter-house refuse. It is not impossible that when thrown directly into the barnyard, *i. e.*, when "used as absorbents," the carbonaceous character of the materials may be as important as the proportion of nitrogen contained in them. In this view of the matter the esteem in which sawdust is held as bedding for milch cows may depend, in some part, upon the character of the resulting manure, and not alone upon the cleanliness of the animals bedded with it, as has sometimes been supposed.—[To be continued.

MANUFACTURE OF PHOSPHATES.

T. H. HOSKINS, M. D.

THE great hindrance to a general and much more extensive use of manufactured fertilizers is unquestionably their high cost compared with the return. So long as Eastern farmers are compelled to compete with the unmanured products of the Western virgin soils, they must have cheap fertilizers if they are to use them at a profit. We may be assured that they neither will nor can long use artificial plant food upon their crops at a loss or without profit. And yet the manufacturer, too, must make a living profit. How can these two interests be reconciled? Being obliged, in my own farming operations, to depend mainly upon purchased fertilizers, I have studied the subject with a lively interest for a dozen years or more. I have experimented much in the making of fertilizers, and have visited some of the largest manufacturing establishments, and conversed freely with the proprietors on this matter. I got very little satisfaction out of the study and inquiry, but settled down to the use of pure ground bone, mixed with three or four times its bulk of unleached hardwood ashes, made pretty wet in tight casks or boxes for a month before using. More lately, dissatisfied with the high cost and uncertain purity of ground raw bone, I have resorted to the use of fine bone-ash, made on my own premises, and mixed with dry ashes, using sulphate of ammonia in the mixture or separately as the nitrogenous element. I am satisfied that for myself either of these methods is cheaper than the purchase of commercial fertilizers, whether superphosphates or formula manures. But I do not like the "bother" of this home manufacture, and would gladly pay a reasonable price to have the work done for me by those who make a specialty of the business.

There is one point connected with the manufacture of fertilizers in which I think a great mistake has been made. I refer to the relative values attached, in analyses and estimates, to the different forms of phosphatic material. Thus, in the report of the Connecticut Experiment Station for 1878, page 19, we have the following table of "Trade Values":

	Cents per pound.
Phosphoric acid soluble in water	12½
" " "reverted" and in Peruvian guano	9
" " insoluble in fine bone and fish guano	7
" " in fine medium bone	6
" " in coarse medium bone	5½
" " in coarse bone, bone ash and bone black	5
" in fine ground rock phosphate	3½

Practical experience has taught me that no such difference in agricultural value exists between these different sources of phosphoric acid as is here set down. I regard the phosphoric acid of reverted superphosphate as in no degree less effective upon crops than the phosphates so manufactured as to be soluble in water. Ground bone, after being treated with ashes as above alluded to, is also equally effective with the soluble superphosphate, used with an equal quantity of ashes on the crop. This opinion is the result of many careful experiments, varied in method, and upon various crops, for a series of years. Bone ash, finely ground, is also nearly as effective as soluble phosphate, and I should not estimate its value (rating the soluble form at 12½ cents for its phosphoric acid) below 9 cents for the phosphoric acid it contains. The South Carolina phosphate I have not experimented with; but I see no reason why it should not, when very finely ground, be pretty nearly equal to bone ash.

The objection made to the less soluble phosphates is that they are not so uniformly distributed through the soil, and are not so immediately available as plant food. The difference in cost, as above estimated, is, however, much greater than the difference in value on this account, while there is serious objection to the very soluble form of the fertilizer in the fact that its acidity makes it injurious to the plant in its early stages of growth, while on light soils such extreme solubility renders the phosphoric acid liable to be carried too deeply into the soil. But there are other weighty considerations. In very high culture, and especially where there is constant succession of tillage crops only, immediately available plant food in liberal quantity is required. But when we come to look at the needs of the average farmer of the Eastern States, whose objective point is almost uniformly grass, and whose tillage crops are preparatory and subordinate to the grass crop, we see that extreme solubility in a fertilizer is objectionable.

I take up, for instance, a piece of mowing or pasture on which the grass has ceased to give a profit, and put it through a rotation, say of corn, potatoes, and wheat, seeding it again to grass with the last crop. The decaying sod, with a moderate application of an ammoniated superphosphate in the hill, will usually give a pretty good crop of corn. If the soil is light and the sod very thin, a dressing of ashes may be needed. Next year I plant the field to potatoes, using a liberal quantity of a "potato fertilizer" containing a good allowance of soluble phosphoric acid and German potash salts, with some nitrogenous material. Next year I seed to grass with wheat, using a "wheat fertilizer" composed of a soluble phosphate and a liberal supply of nitrogenous material, with a little salt and potash. I have a good crop of wheat, but what have I left in the ground for the succeeding years of grass from which I mainly expect to derive my profit? Almost nothing. The land is not bettered at all by the three years' course of tillage. It gets a fresh *seeding*, and may, for one or two years, give me more grass than when it was broken up, but that is the end of it.

Now, going by the Connecticut "Table of Values," let me apply an equal *cost* of phosphoric acid in fine ground bone, bone ash, or South Carolina phosphate, together with the same amounts of potash and nitrogen, to my corn, potatoes, and wheat. These three crops, according to my own experience, will be equally good, and the grass will be more than four times better. On a light soil I should steal 25 per cent. from the cost of the phosphatic material and spend it for ashes or potash salts. Under this treatment we shall apply more than double the quantity of phosphoric acid to the field, one-half of which would be taken by the tillage crops and the rest be left for the grass, while the expense would be the same.

Farm Topics.

WESTERN FARMING.—XI.

W. I. CHAMBERLAIN.

Colorado Agriculture.

SOME enthusiastic Colorado professor of agriculture wrote lately, if I remember, to one of our Eastern agricultural papers that if Eastern farmers could see the wheat grown in Colorado by irrigation, they would never want to raise wheat in any other way. Such, at least, was the impression left on my mind. There have been reports, too, of 70 bushels or more of wheat per acre raised by irrigation. And Colorado farmers, more enthusiastic than reverent, have declared that with a good irrigating ditch they were not particularly dependent on the Almighty for good crops. Apparently the Lord heard the remark, for there was neither rain nor snow in a large part of Colorado from last August till late in May of this year. The result was that the ground was too dry to sprout the seeds in Spring, and when farmers and even gardeners tried to sprout and bring them up artificially, they wholly or partially failed. The newly plowed ground, when flooded from the irrigating ditches, became too wet, and then, from its strong alkaline nature, baked in the sun and crusted over, so that even the robuster kinds of seeds partially failed, and the more tender kinds failed entirely. A friend of mine in Denver, for example, lost all the labor on five acres of onions, because the tender seeds could not be made to come up by irrigation, even by the most patient and skillful labor. I visited many farms and market gardens near Denver, Colorado Springs, Pueblo, Canon City, Fort Collins and Greeley, and cannot report enthusiastically on Colorado agriculture and horticulture. It is, of course, an unfavorable year, for the fact is farmers need, and till this year have usually had, enough moisture in the soil in Spring to bring the crops well above ground before artificial irrigation is begun. This they now frankly admit; and I heard a man (more noted for his shrewdness and good sense than for any abnormal development of the bump of reverence) remark: "If the Almighty would treat us only half-way decently in the Winter and Spring, so as to get the crops above ground, we would be much obliged, and get along through the Summer alone!"

But, after all, irrigation is a slow and expensive mode of raising crops, and the soils of Colorado are not rich except in alkaline matter. They are the newest soils in our land, and hardly half-decomposed from the primitive rock, as your own eyes show you everywhere you go here. There is little rain and little natural growth and, of course, little vegetable mold. And to attempt to put Colorado in comparison agriculturally with the rich and abundantly-watered plains and prairies of Illinois, Iowa and Eastern Kansas and Nebraska, is obviously unjust. The wonder is that *any crops at all* can be raised on this soil and with this climate. There is a census enumerator out West who some years ago had both arms shot away, the stump being then amputated near the shoulders. He learned to write by holding the pencil between his teeth, and took the census well, though not so rapidly as some who had both hands. But it was a wonder he could do it *at all*. Just so, Colorado agriculture seems to me to be robbed of both its arms—the rainfall and the vegetable mold formed by ages of growth and decomposition; and to attempt to make Colorado surpass Illinois in agriculture is claiming far too much.

Then, too, the area of possible agriculture in Colorado is small. The total area of the State is 66,000,000 acres, and of this vast area only 4,000,000 acres, or *one-fifteenth part*, are such as to render agriculture at all possible on it. A part of this consists of mountain valleys naturally watered; but the most of it should be irrigated from mountain streams; and the latter are only sufficient for the area named. Then, too, the Rocky Mountain locusts, or grasshoppers, make their ravaging descent about once in two years on the average, so that perhaps it is not strange that only 200,000 acres, or *one-three-hundredth part* of the area of Colorado is now under actual tillage. I do not include the vast areas on which the stunted Buffalo grass grows almost without moisture, and which are grazed by great herds of cattle. But those Colorado steers are lank and bony so far as I saw them, and do not compare favorably with the well-fed cattle of fertile Illinois. Some large cattle figures are given, however. For example, a certain Denver lady whose name I cannot recall (though I remember to have heard her called the princess of Colorado graziers) is said to have sold last year $170,000 worth of cattle and still maintained, by increase and growth, the size of her herd. If she did, she must have a great many thousands of steers, and graze a great many tens of thousands of acres of land. My informant said her ranches were all irrigated.

High local prices favor agriculture and horticulture proper. Raspberries and blackberries were from 40 to 60 cents per quart and new potatoes eight cents per pound and other vegetables in proportion. Even hay, grain and other heavy products of agriculture are exceedingly high. This is partly due to the great influx of mining population to Leadville and the Gunnison and other mining regions, and partly to the heavy rates charged by the railways for long, local west-bound freights. Whether these high freights are for the present necessary or wise I do not feel called on to offer an opinion. They are, however, like the tariff to manufactures in a new country, the very life of young agriculture. But I venture the prediction that in time a wholesome competition will bring down the rates of railway freights, and, of course, agricultural products will pour in from the richer plains and better watered climates, and Colorado agriculture and horticulture will then be chiefly confined to the production of articles not easily transported either on account of their bulk, difficulty in handling, or their perishable nature.

But, considering the great obstacles to be overcome, the progress made in agriculture in Colorado is exceedingly creditable, and if she could be cut off from communication from the gentile world as long as Utah was, her agriculture by irrigation would doubtless arrive at the same stage of advancement. But such isolation in this age is neither possible nor wise.

Denver, Colorado.

Arboricultural.

ARALIAS.

WILLIAM FALCONER.

ARALIAS grow wild in Europe, North America, Japan, Eastern and Southern Asia and the South Sea Islands. They consist of trees, shrubs and herbaceous plants, and are valuable, some on account of their ornamental character and others because of their economic use. Our native aralias, as the Ginseng, Dwarf ginseng, common Wild sarsaparilla and Spikenard, are common in rich woodlands; the Bristly sarsaparilla prefers rocky places, and the Angelica tree or Hercules Club is found along our Southern river banks.

The Angelica tree is grown in gardens for its sub-tropical appearance and its immense compoundly-panieled umbels of white flowers. A. Chinensis, from Northern China, and A. cordata, from Japan, closely resemble the Angelica tree and are cultivated for the same end. In European sub-tropical gardens they are extensively used, the Angelica tree the most so.

The Spikenard, on account of its ornamental appearance when laden with fruit, sometimes gets a footing in our gardens; but it is not worthy the place. A. papyrifera, the Rice-Paper Plant indigenous to the swampy forests of Formosa, is also highly favored for sub-tropical work, and although not hardy in the North, it winters well in a frame, pit or cellar. The stems may be all winter-killed, but so long as the fleshy roots keep plump and fresh, so long can a numerous stock be raised. Little pieces of the roots, as in the case of bouvardias, produce goodly-sized plants in one season.

A. Japonica, has large, deep-green, glossy leaves, is a common plant in cool greenhouses, a pretty ornament in the Summer garden, and a second-quality window plant. It is not hardy here. It is hardly choice enough for a small plant collection.

Among the economic uses of the aralias, the famous Chinese rice paper, made from the pith of A. papyrifera is conspicuous. My neighbor, Dr. Henry P. Thayer, at his extensive laboratories at Cambridgeport, manufactures a fluid extract from the American sarsaparilla (A. nudicanlis) that is gently stimulative and alterative; one from the bark of the root of the Dwarf Elder (A. hispida), of diuretic and alterative propensities; and another from the root of the Spikenard (A. racemosa), that is aromatic and alterative and which is used in pulmonary diseases.

But the most beautiful kinds come from afar—India and the South Sea Islands. Many of these aralias, as Veitchii, Guilfoylei, elegantissima, maculata, armata and the like, are valuable and highly decorative greenhouse plants seldom met with outside of our choicest collections of tropical exotics. They are mostly shrubby and always prettiest in a young state—say when two to five years old. But what are we to do with such costly plants after they grow up leggy and bare and in a measure lose their comeliness? Cut them back and use the branchlets as cuttings and cions for grafting. Those who propagate the finer, hard-wooded aralias sometimes experience difficulty and delay in attaining this object; hence the finer sorts will always be expensive.

In habit and leaf form these exotic aralias vary more than do the wildlings of our own woods; A. filicifolia, for instance, has ample, fern-like leaves; reticulata, strap-shaped; elegantissima, digitate with slender, thread-like leaflets, and so on. The color of the leaves also differs materially in the different species. Some are deep-green; others olive-green, bronze, spotted and blotched, or maybe margined with white or whitish yellow.

Aralia monstrosa, the subject of the annexed illustration, is one of the handsomest of the genus. It is a "new" plant, recently introduced from the South Sea Islands and is now being disseminated by Mr. B. S. Williams, of London, England. Mr. W's description of the plant is; "leaves pendant, primate, having three to seven oblong elliptic leaflets deeply and irregularly serrated. The leaflets are broadly margined with creamy white, the surface blotched with gray." He quotes the price of each plant at one guinea—about $5.25. But I assure you a plant as vigorous as that represented in the illustration, and as well furnished, and in first-rate condition in every way, cannot be sold at a profit in New York to-day for twice, and I question if it can for thrice, that amount.

I will take this opportunity of again reminding RURAL readers that it is their duty to encourage home enterprise. Why is it that an Englishman can buy a plant in London for $5, that will cost an American $10 in New York? Simply because the American prefers to patronize a foreign market and pay high prices together with duties and other expenses, and accept risks as well, rather than to deal with the nurseryman who lives in his own city. True, our nurserymen do not keep many of the more expensive "new" plants, because they are not justified in doing so. But by your patronage impress upon our nurserymen that you will buy your plants at home rather than abroad, and you will find men and capital, too, at home that will penetrate the uttermost ends of the earth to procure "new," choice and unheard-of exotics to supply your wants. Then you may expect to purchase plants at first cost, without the burden of trans-Atlantic expenses, customs, and other items that swell your bill some one-third or half the price of the plants. Besides, we will banish the life-risk of the plants—the greatest barrier of all.

Pomological.

SIMONS'S RED APPLE.

SIZE, medium to large. Form, oblate, tapering to the apex; sides unequal. Flesh, medium fine, pale yellow or yellowish-white, tender, moderately juicy, nearly sweet or mildly subacid, with a pleasant aromatic flavor. Core, rather open. Seeds, light brown and of medium size, pointed. Calyx open, in a deep basin. Stem short and small, set in a very deep, open cavity. Color, crimson, dark on the sunny side, but lighter in the shade, with somewhat obscure but darker stripes throughout, and clear, deep russet around the stem and calyx, and russety specks covering the whole surface. Quality, "very good." Ripens in Georgia the last of August and beginning of September.

It is said to produce regular crops. It is a wilding, having been found growing in the woods in Macon County, Georgia.

Our Early Peaches.

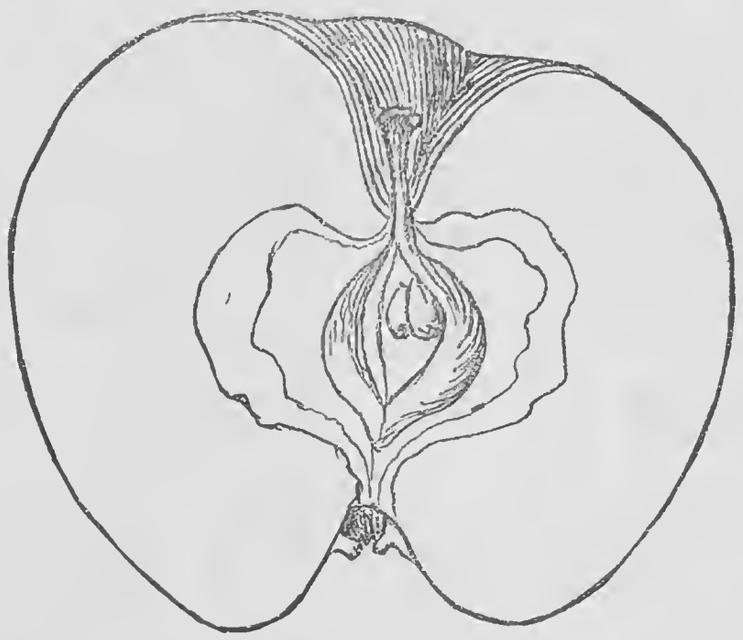
The Amsden and Alexander peaches began to ripen July 18, and were followed closely by the Beatrice, Louise and Rivers. Amsden appeared a trifle larger and better than Alexander; both are very productive and sold at Rochester for $1.25 per basket of 12 quarts at first; but the price declined subsequently. Beatrice was nearly as large as the above, more highly colored, and of better quality, but sold at the same price. It did not rot at all, while the others did somewhat. Louise came a few days after Alexander; it is about the same size, but of better quality. Rivers is a light cream color much the largest of the above, but not very productive. In quality it did not meet my expectations. The red cheek spoken of in the catalogues was wholly absent.

I have the Schumaker peach, said to be four weeks earlier than the Alexander, but it is not in bearing. The leaf is very bright and healthy. I state this fact on account of the hint, thrown out from a certain quarter, that these very early varieties produce fruit prematurely simply for the reason that they are attacked by the yellows. I have escaped this trouble entirely. It does not do much injury on our strong loamy soil. CHAS. A. GREEN.

Monroe Co.

The Early Sweet Water Peach.

LATELY on some of the fruit stands about the city could be seen quite a quantity of this old-time favorite, early peach. Many years ago this variety was considered the best of the very early peaches in this neighborhood, ripening about the first week in August. It was largely supplanted by Hale's Early, on account of its color, the Sweet Water being pale white and Hale's Early a deep red. Everybody planted the latter, and everybody wished it had never come into existence, for more money has been lost by it than was ever made by it. If a wet day, or even a good shower comes when the fruit is ripening, it immediately commences to rot, and the larger part of the crop is lost. In Delaware whole orchards of it have been grubbed up and used as firewood. This only shows the folly of abandoning well-tried, standard fruits for the untried novelties continually coming up. Great caution should be used in such cases, and a few experimental trees planted and tried before planting large orchards of them. JAMES HOGG.



SIMMONS'S RED.—FIG. 263.

Small Pears and Apples.

It is a prevalent idea among fruit growers that for marketing purposes large pears and apples are the most salable. However this may be with late Autumn and Winter fruit, it is not really so with the Summer and early Autumn varieties. During the Summer and early Autumn the markets are supplied with berries, plums and peaches, grapes and melons which people largely use and only need pears and apples to make up a larger variety of table fruit The large hotels at the watering places and in our large cities have to supply their tables with everything in season, and require a large variety of fruit. A guest at one of these hotels will take a peach, or a plum, or a few grapes, or a slice of melon, and may wish a pear or an apple. If either of these is large, he simply cuts out a quarter and leaves the rest. This, of course, is a loss to the hotel proprietors, as it has to go down to the servants' room. We have heard them complain of this, and say that Bartlett pears were the most costly fruit they had on their tables on this account, and that Seckel pears at the same price per bushel were far cheaper in the end. Fruit for hotel use should be bright-colored; that is to say, yellow or red-cheeked pears or apples are more desirable than green or russet fruit, as they look better on the table. For such use the eye as well as the palate must be taken into consideration.

ARALIA MONSTROSA.—FIG. 264.

Marseillaise Figs.

I can corroborate what B. F. J. quotes from a French *savant*, on this fruit in the RURAL of July 24. I was at Marseilles in the summer of 1867, but as the soil around it is generally very barren, I do not recollect seeing fig trees growing in its immediate vicinity, though they probably may to some extent in gardens.

At Avignon, 50 miles or so up the Rhone, north of Marseilles, I plucked figs of fair quality from trees growing in quite a dry soil. I did not observe the character of this soil particularly, but it is my impression now that it was a light gravelly loam, and naturally rather poor. How much it had been fertilized artificially I cannot say.

No doubt by a proper choice of varieties, the growing of figs could be greatly extended in the United States; and this is a thing well worthy of more attention than has yet been given to it by our horticulturists. The best sorts are delicious, the poorest are little better than a green cucumber—that is, to my taste. Others, however, may differ with me as to this, for the old adage says: *De gustibus non est disputandum;* which is equivalent to the English "There is no disputing of tastes."

A. B. A.

The Vineyard.

NEW GRAPES AND OTHER FRUITS.

S. B. PECK.

THAT there have been great improvements made in fruits and vegetables during the past 50 years will be admitted by everyone who has paid any attention to the subject. Some of these improvements have been made by hybridization, a method requiring more science and care than most farmers and horticulturists possess; but many of them have occurred by natural cross-fertilization or evolution, requiring no more science than any farmer, man or boy, possesses.

The Concord grape, after deducting from its many superior qualities its lack of true vinous flavor and its too thin skin for keeping and rough handling, stands to-day, after many years' experiment, nearly, if not quite, at the head of American grapes. This, as I understand, was obtained by careful selection from the product of the seeds of native wild grapes. The Iona, standing nearly at the head of the list for flavor and for wine, is simply the second generation from the Catawba, and obtained by merely a selection from the products of the seeds of selected specimens.

On page 190 of the Report of the Mich. State Pom. Society for 1879, is an account by T. T. Lyon, President of said Society, of his reception from G. W. Fulkerson, of Ovid, Clinton county, of eight varieties of seedling grapes, selections from the products of the seeds of a single bunch of the Wilder—Rogers's hybrid No. 4; and Mr. Lyon says of them: "We were greatly surprised, not so much on account of the quality of the fruit, some of which we thought as good as, possibly even better than, the parent; but more especially from the circumstance that so many varieties of such high average quality should spring from a single bunch of any variety."

The writer of this article has been in the habit for the past few years (after lamenting that he did not begin 30 years earlier) of selecting, from the seedlings springing up in his garden, any vines that have shown marked peculiarities, and giving them cultivation; and though their products have always, so far as fully fruited, been worthless, there is one fruiting for the first time this year that shows remarkable progress in one direction, it has sixty clusters of blossoms on its ten feet of a single cane, most of them shouldered or forked. What will be the color or quality of the fruit is not yet shown, but its fecundity is certainly remarkable. I have two others not yet fruited that are remarkable in their nearly round, very dark-green leaves and dark-colored, hard, wiry canes. I speak of these, not so much as showing marks of improvement, but as interesting features in natural products, and as an encouragement to young people of both sexes, who have anything to do with the cultivation of the soil. Fortunes have been made by the production of new varieties of plants by the most simple processes open to all, and I promise with much confidence that fortunes are still in store for the persevering in horticultural experiments. Let not ninety-nine or nine hundred failures to one success discourage you. Select seeds from the best fruits; plant them in profusion; select the most promising plants and give them the best culture, in the best soil, and if, on fruiting, their product show any improvement, plant again from this improved product.

What I have said of grapes by the way o

encouragement to experimenters may, with equal propriety, be said of small fruits generally, and of peaches and plums, as well as of many vegetables.

The student of nature will find much to admire and to stimulate his curiosity in the natural productions of the peach from miscellaneous pits. Although a few varieties are almost sure to produce their kind, the majority will be a departure, each showing perhaps only a single feature from which to guess its parentage. A notorious idiosyncracy of this fruit is, that it will occasionally produce fruit with a smooth skin, the nectarine, from the regular peach pits. Nothing in horticulture is more curious and inexplicable, unless it be the sweet-and-sour apple, the actual existence of which can no longer be doubted, though proof is lamentably lacking that it has ever been produced, as has been claimed, by the union of two half buds that somebody once effected, but who, when and where, seems never to have been known.

Judging from the large amount of new varieties of the strawberry and raspberry that are yearly heralded, and their peculiar excellence lauded, I conclude that there is in these fruits a chance for the careful experimenter to obtain notoriety, if not a fortune, in the production of a new variety of strawberry that shall excell in all other respects the Wilson, a thing which I claim has not yet been accomplished.

Horticultural.

RURALISMS.

I HAD a talk with the editor of the RURAL a few days since about strawberries, during which he made the point that the word staminate, as often applied to strawberries, is wrong, and I agree with him. Years ago we had a long and lively war of words about pistillate and staminate strawberries, which did much good, though some of its lessons have been forgotten. Since then the words "perfect flower" have found a place in some catalogues very often, however, interchangeably with staminate, but more from force of habit than want of knowledge, I sometimes fall into this way myself. Why not begin now all round to use the proper words? Since I sometimes meet parties, even among strawberry growers, who do not know the difference between a pistillate and a perfect strawberry flower, a little explanation will not be out of place. For want of such knowledge strawberry beds have been made that proved to be quite barren. Naturally and botanically, the flower of the strawberry is perfect, having both stamens and pistils in the same flower. In cultivation we have varieties that bear imperfect flowers called pistillate because of the absence of stamens, and these kinds need the presence of perfect-flowered kinds to fertilize them; otherwise they will not bear fruit. A staminate flower is one that bears only stamens, and is consequently barren. Inasmuch as there is now no staminate variety in cultivation, the word should be dropped altogether, not only in print, but in conversation; a thing which some of us will find it hard to do. The pistillate varieties being marked with a P. in parenthesis, as is now done in some catalogues, it may be taken for granted that all others bear perfect flowers.

It may be of interest to note that the sexual character of the strawberry flower is sometimes modified in a marked degree by the weather. I have a number of times noticed in the Spring, when the weather is changeable and cold, that in some kinds the first flowers that open are destitute of stamens, and might easily be taken for pistillates. During the last Spring this was the case with even such kinds as Sharpless, Great American, Lincoln, and Duchess. These flowers produced no fruit. I say they were destitute of stamens; but the microscope revealed these organs in a rudimentary form, but there was no pollen. This will account for some early flowers not setting, and others producing very imperfect fruit. These cases must not be confounded with those where the stamens have been destroyed by frost. In the latter case the stamens turn black.

Nothing surprised me more during the past terrible drought than the wonderful display of wild roses. It seems to me that I have never seen it equaled. Week after week, fully exposed to the scorching sun, they lifted their harming pink flowers above the dry and brown grasses of the meadows, redeeming them, as it were, from the appearance of utter desolation. Not here and there a flower, but great masses of them, as if consulting together how they should restore the green carpet which so well befits their own modest beauty. And not only in the meadows, but along the roadside, and in many places even in the railroad cuts, masses of them bloomed profusely. Beautiful wild roses everywhere. Did it ever occur to the rose fancier that our wild rose would be an excellent subject to work with?

On page 492, the editor gives some pointed and deserved criticisms on "Pictured Exaggeration," which had also occurred to myself. These criticisms will receive additional point when it is known that some of the parties who indulge in these exaggerations ridicule without stint (and justly) the miserable French frauds who visit us almost every winter with crude drawings, representing gooseberries as big as goose eggs, pears of the size of marrow squashes, apples that emulate the dimensions of field pumpkins, bloated strawberries that grow on trees, and so on through a long list, with flowers to match or even excel them; and the truth compels me to say that hundreds are deceived by them. If so, how much more likely are they to be deceived by drawings executed in the most artistic manner? We want not only the size of the pictures reduced, but also the length and number of the adjectives in the descriptions that accompany them. I am convinced that both buyer and seller would be benefited by the change. HORTICOLA.

Sheep Husbandry.

SHEEP AND WOOL.

A. B. ALLEN.

BOTH of these are paying so well now, it is gratifying to observe the increased attention our farmers are giving to the improvement of the first for mutton, and of the second for the various requirements of the manufacturer, and especially in the finer grades.

The past year's clip of wool is estimated at 230,000,000 lbs, and yet it has not been found sufficient to supply our factories, and an additional 50,000,000 lbs have been imported for this purpose. Supposing our sheep averaged three and a half pounds of wool per head, it would require rather over 14,000,000 more of them to supply what we are now importing. But before these could be added to our flocks the rapid increase of population would give us many more persons to be fed and clothed than now. Meanwhile woolen fabrics will be rapidly on the increase in variety and quantity, so that it may be doubted whether our flocks could be brought up to meet all this within 20 years, however strenuous might be the exertions of sheep breeders to accomplish it.

The number of sheep now in the United States is estimated at 40,000,000. If these could be doubled, or even raised to 100,000,000 by the year 1,900, would they be too many to supply our wants? By that time our woolen fabrics will be so improved, that, as in the case of cotton fabrics, we may become large exporters, and if so, we shall then want a considerably larger proportion of wool to our population than is now required. We are also becoming greater consumers of mutton than formerly, and smaller eaters of pork; and this with the exportation of fat live sheep and their dressed carcasses, will also more than keep pace with their breeding.

An increased production of the finer qualities of wool is deserving of greater attention on the part of flock-masters among us. The Australians are proving themselves highly enterprising in this respect. From their recently improved combing wool, the French manufacturers fabricate those fine cashmeres and challis, which they readily sell as fast as made, at extravagant prices. From the Silesian and Eclectoral wools grown in various parts of Europe, shawls are manufactured in France and Austria, worth from $150 to $200 each. I presume this wool is of the same quality as, and no finer or more suitable for the above purpose than, that grown from the Silesian flocks kept for years past by Mr. Chamberlain of New York, Mr. Croskey of Ohio, and Mr. Cockerell of Tennessee. When I visited the late Mr. Chamberlain at his farm at Red Hook, on the Hudson River, some 25 years ago, he informed me that his Silesians were as hardy as Vermont Merinos, and they appeared to be so, and always subsequently when I have seen them. Messrs Croskey and Cockerell say the same of their flocks; and as they are thrifty animals of good size, and grow large fleeces, I can see no objection to the rapid increase of such among us, but very much in favor of it. There is no danger of a superabundance of this kind of wool being produced in America; and if it were ever to be the case, our European market is always ready to take it at a high price.

A World's Fair of sheep and wool is to come off at Philadelphia next September. We may expect great good from this, if the live animals and the fleeces of the best sorts of sheep are exhibited there from different quarters of the globe. It will then be well worth attending; and I hope as many of our flock masters as possible will make it a point to do so, and contribute liberally of their products. A comparison of such with others is the best method they can possibly adopt to ascertain what will be best for them to breed hereafter for the two purposes of wool and mutton.

Dairy Husbandry.

THE DAIRY COW.—No. 4.

HENRY STEWART.

How to Feed a Cow. 1.

THE best cow that could be selected will fail of satisfying her owner unless she is well fed. This term "well fed" should include not only a sufficiency of food but a selection of the best kinds. The choice of foods for cows is now so large that one must be troubled by the redundancy rather than by any difficulty in procuring the best food; and yet it may be necessary to be able to distinguish between the different kinds of food so as to arrive at a decision as regards the cost of feeding; for some of these foods cost much less than others in proportion to their feeding value. Grass and hay are the standard food of cows. A good cow will do her best upon the best of pasture; this being of mixed grasses, of which Kentucky Blue grass or common June grass forms the greater proportion. In estimating the theoretical values of foods the best quality of mixed meadow hay is taken as the standard and is rated as par, or 100, in the comparative lists frequently published. The following table of the theoretical comparative feeding values of the substances mentioned in an air-dry condition may be studied with advantage. The table gives the amounts of nutritious elements contained in each substance, with the crude fiber which is also nutritious to a small extent.

Feeding Stuffs.	Albuminoids.	Crude Fiber.	Carbo-hydrates.	Fat.
Coarse wheat bran	12.9	8.1	59.1	3.5
Wheat middlings	11.4	4.8	66.8	2.9
Rye Bran	12 6	2.5	67.0	2.2
Buckwheat bran	17.1	14.7	46.4	4.4
Pea-meal	23.7	4.5	54.5	3.5
Palm-nut cake	16.9	17.4	41.0	10 0
Corn starch meal	3.6	3.4	18.8	2.0
Brewers' grains	5.9	3.9	13.2	1.5
Malt sprouts	25.9	9.3	45.5	1.1
Linseed cake	32.4	7.3	31.5	11.6
Cotton-seed-meal	41.5	3.1	24.4	18.0
Hay.				
Timothy, headed out	8.4	28.9	44.4	1.7
Timothy, in full blossom	6.2	29.1	46.6	1.7
Timothy, nearly ripe	5.5	31.0	45.7	1.7
Red clover, before blossom	12.2	23.8	41.1	1.5
Red clover, full blossom	11.6	23.8	41.7	2.0
Red clover, out of blossom	11.3	25.6	41.0	1.6
Red clover, nearly ripe	8.9	27.2	24.0	2.0
Hungarian, headed out	10.7	28.9	34.8	2.0
Grains.				
Barley feed	12.7	7.0	63.5	3.2
Oats, white	11.5	12.2	57.8	5.1
Oats, mixed	8.0	12.9	48.0	4.7
Corn, (Eastern)	10.0	1.7	69.3	4.9
Corn, sweet	11.4	3.8	64.3	7.7
Corn, (Western) yellow	8.9	2.0	70.8	4.1
Corn, (Southern) white	9.7	1.8	70.4	4.1
Rye	11.0	3.5	67.4	2.0
Millet	12.7	9.5	57.5	3.3
Peas	22.4	6.4	52.5	2.0
Straw.				
Winter wheat	3.0	40.0	36.9	1.3
Winter rye	3.0	44.0	33.3	1.3
Barley	3.5	40.0	36 3	1.4
Oats	4.0	38.5	36.2	2.0
Fodder vetch	7.5	42.0	29.0	1.0
Pea straw	6.5	38.0	34.0	1.0
Bean straw	10.2	34.0	34.2	1.0
Seed-clover straw	9.4	42.0	25.0	2.0
Corn stalks	3.0	40.8	36.7	1.0
Corn cobs	1.4	37.2	42.6	1.4
Salt marsh hay	7.3	32.1	40.8	2.9
Rush salt grass	4.6	32.8	44.2	1.7
Coarse salt grass	5.3	30.6	38.3	2.4
Fresh marsh hay	9.6	32.8	39.3	2.1

But an article of food is practically valuable only to the extent to which it is digestible and of the above mentioned nutritive elements not all are capable of digestion. The actual digestible nutriments are given below, together with the relative money value and the comparative value, taking the best clover hay at one dollar per 100 pounds.

	Digestible nutriments.			Money Value.	
	Albuminoids.	Carbo-hydrates.	Fat.	Dollars per 100 pounds.	Compared with Meadow hay.
Wheat bran	10.0	48.5	3.1	1.01	1.58
Wheat middlings	8.9	54.8	2.6	1.00	1.56
Rye bran	10.6	50.0	2.3	1.00	1.56
Buckwheat bran	13.5	42.4	3.2	1.15	1.79
Pea meal	20.9	45.4	2.8	1.53	2.38
Palm-nut meal	16.1	55.4	9.5	1.61	2.51
Corn starch meal	3.2	19.3	1.8	0.39	0.60
Brewers' grains	4.8	11.2	1.2	0.36	0.56
Malt-sprouts	20.8	43.7	0.9	1.33	2.08
Linseed-cake	27.6	27.0	10.4	1.89	2.98
Cotton-seed meal	35.2	17.6	16.2	2.30	3.60
Timothy, headed	4.4	43.6	0.8	0.62	0.97
Timothy, full blossom	3.1	39.9	0.5	0.52	0.81
Timothy, ripe	2.7	40.2	0.5	0.50	0.78
Red clover, before blossom	6.7	35.8	0.8	0.67	1.05
Red clover, full blossom	5.9	38.5	0.9	0.64	1.00
Red clover, out of blossom	5.7	38.8	0.7	0.63	0.98
Red clover, ripe	4.0	39.2	0.9	0.56	0.87
Hungarian	6.0	38.3	0.7	0.64	1.00
Barley, feed	10.1	57.1	3.1	1.06	1.64
Oats, white	8.7	43.3	4.0	0.94	1.47
Oats, mixed	6.0	44.3	3.7	0.82	1.28
Corn, Eastern	8.4	65.8	3.7	1.09	1.67
Corn, sweet	9.6	61.8	5.9	1.19	1.86
Corn, Western	7.5	67.3	3.1	1.04	1.62
Corn, Southern	8.2	66.8	3.1	1.09	1.67
Rye	9.9	65.4	1.6	1.08	1.68
Millet	9.5	45.0	2.6	0.93	1.45
Peas	20.2	64.4	1.7	1.48	2.25
Wheat straw	0.8	35.4	0.4	0.37	0 57
Rye straw	0.8	36.5	0.4	0.35	0.55
Barley straw	1.3	40.6	0.5	0.44	0.68
Oat straw	1.4	40.1	0.6	0.45	0.69
Fodder-vetch	3.4	31.9	0.5	0.46	0.71
Pea-straw	2.9	33.4	0.5	0.44	0.69
Bean-straw	5.0	25.2	0.5	0.55	0.86
Seed-clover straw	4.2	28.5	1.0	0.49	0.76
Corn stalks	1.1	37.0	0.3	0.39	0.61
Corn cobs	0.6	41.7	0.4	0.41	0.64
Salt-marsh hay	3.7	38.7	0.9	0.54	0.84
Rush-salt grass	2.2	40.5	0.5	0.48	0.75
Coarse salt grass	2.5	30.3	0.7	0.47	0.74
Fresh-marsh hay	4.8	38.4	0.6	0.58	0.90

These tables, however, are only approximately correct, as will be obvious to one who is experienced in feeding cows; for instance, corn cobs are set down as being more valuable than corn stalks, and yet no one can be made to believe that as regards the actual feeding value of these two substances. Again, the condition of the substances exerts a large effect upon their nutritive value; for the best grown and cured stalks of the smaller and sweeter kinds of corn and the soft cobs of the green ears of sweet corn, are of far greater value than the stout stalks and dry, woody cobs of the Western and Southern Dent corn. The figures in the table are to be taken as a sort of guide-post, which points the way; and as by shutting the eyes one might miss his way when near his journey's end, although he had passed by many guide-posts on the road, so one who reads this table must, nevertheless, try for himself how near in practice its figures may come, and, after all, turn this way or that when he finds it necessary, to reach the ends he has in view. In several years' practice during which I have used more or less of all these feeding substances in producing milk and butter, I am inclined to agree very closely with the figures given in the last column, with the exception perhaps of the coarse fodders last mentioned. And yet upon one occasion, at least, in feeding fresh marsh hay to some cows, I found it to increase the milk considerably as compared with good Timothy hay; but the hay was grass and not sedges and chiefly that known as Blue-joint (Calamagrostis Canadensis) which is one of the most valued wild grasses of the Western States.

These values, then, being given, it only remains to choose from the list such as will be found the most convenient to grow, easy to procure or econonomical to purchase, and to combine them so as to make them the most effective in use. The practice of feeding is one of the most difficult in the business of dairying, and the enthusiastic owner of a newly acquired family cow may well be appalled at the view of all the figures above given, which are sufficient to stagger the majority of experienced dairymen. A few practical rules for feeding, then, may be given with the precise rations advisable to suit cows of different sizes and for the production of butter or of milk, not forgetting the effect of the different foods on the quality of the products; for this is of importance.

Industrial Societies.

EUROPEAN CORRESPONDENCE.

The Royal Agricultural Show at Carlisle.

CARLISLE, Cumberland, July 19, 1880.

"QUEEN'S weather" is a phrase indicative of fine, sunshiny days, and owes its origin to the excellent weather that has for years been common on occasions of public *fetes* or displays in which Her Majesty has taken part. "Royal Agricultural Society weather," or simply "Royal" weather, is soon likely to have a significance the reverse of this, if the shows of the "Royal" are held a few times more amid such a pluvial down-pour and such a sea of mud as have rendered this and the last exhibition at Kilburn a discomfort to the visitors, as well as a source of disease to some of the stock and of loss to the Society. By this time, however, the Royal should be accustomed to a debit balance at the close of its shows. Of the forty previous exhibitions money was lost by thirty-one, amounting in all to the sum of £73,093, equal to $353,770, while nine only left a credit balance aggregating £27,067, or $134,004, so that from its first show in 1839 down to this, the Society has been out of pocket by its exhibitions the net sum of £222,766, to which must be added a loss of at least $5,000 on account of the show just closed here. Although, doubtless, a balance on the right side of the account would be pleasant enough to the members at the close of their annual exhibitions, money-making is not at all the object of these shows, but rather the encouragement of all sorts of improvements in stock and agricultural utensils and products of all kinds. Accordingly the shows are held each year in a different part of the country, so that the farmers of all sections may in turn be stimulated and encouraged by the choice products brought together for their edification in their own neighborhood, and the awards of money and honor that crown success in every department.

Throughout England there are every year many county and district agricultural fairs, some of them of national importance, such, for instance, as the Bath and West of England show; but the agricultural show *par excellence* is that of the Royal Agricultural Society. What the Derby is to other races, this, wherever held, is to other shows, and the winner of a premium here partakes of the high honor that distinguishes the winner of "the blue ribbon of the turf" at Epsom. It is this consideration that attracts to these annual exhibitions the best of everything agricultural in the country, and often from abroad, that draws from all quarters visitors interested in agricultural affairs, and that renders an account of each show a matter of yearly interest to the farmers not of the British Isles alone, but of all progressive and especially of all English-

speaking countries, for, after all, there is no incentive to national amity and good-will so strong and lasting as an identity of language.

This old "border" town, which, in the days of English and Scotch warfare stood many a siege, was this year selected by the Society for its forty-first annual exhibition, which opened on Monday, July 12. From the first day to the last the weather was simply execrable—as bad as last year at Kilburn. Just as then, the misery started by dripping and pouring clouds overhead, was completed by deep, ubiquitous mud under foot—yes, and over foot. Planks had to be laid here, too, along the chief walks to enable visitors to get about with even a semblance of comfort. The northern folks are a sturdier race, however, than the Cocknies, and care less for rain and mud, so that, in spite of all discomforts, about 100,000 paying visitors inspected the exhibits during the week. This number is from twenty to sixty thousand less than that of the visitors to the four last shows of the Society; but these were held in much more thickly populated districts, and the weather was much more favorable at all except last year at Kilburn, and then of the 120,284 visitors, 67,000 were admitted during five additional days through which the show was extended; so that, in view of the wretched weather and the location of the exhibition, this fair was a success so far as visitors were concerned.

It was a success, too, in the number and excellence of the exhibits. Omitting last year's show at Kilburn, a suburb of London, for which special efforts were made on account of its Metropolitan character, the numbers of cattle shown here were fully an average as compared with the exhibits of the past seven years. Short-horns, of course, were far more numerous than any other breed. This is the case at all the local and national shows in England. Here there were just four times as many of them as of their rivals in beef—the Herefords; about nine times as many as of their rivals in milk—the Ayrshires; and more than three times as many as of the Jerseys. The multitude of this breed at every show is both a cause and an effect of their paramount popularity. The many prizes they win, owing to their intrinsic merits and their great numbers add to their reputation; which, in turn, increases the number of medium-quality Short-horns raised and of choice ones exhibited. The number of entries of all classes of each breed was as follows: Short-horns, 146; Polled Angus, 48; Jersey, 42; Polled Galloway, 38; Hereford, 37; Devons, 24; Polled Norfolk and Suffolk, 20; Sussex, 18; Long-horn, 18; Ayrshire, 15. In most cases all the entries were not filled; for instance, out of 146 entries of Short-horns, 133 only were exhibited; and out of 37 Hereford entries, only 33 were shown.

Horses.

The horse, the noblest animal on the farm and its motive power, comes first in the catalogues and in the admiration of the general public, and of horses the agricultural horse very properly takes precedence in an agricultural exhibition. Of this kind there were 279 entries, of which 107 were stallions of all kinds, 123 mares and fillies and 50 mares, colts, and geldings competing for special premiums. Agricultural, or cart, horses are here divided into three principal classes—Shire horses, Suffolks and Clydesdales, each of which breeds has its special admirers, and is also excellently adapted to certain conditions. The short-legged, active and hardy Clydesdale is well suited to a rough, uneven country and a severe climate; and hence is a favorite among the Canadians on your side of the water; the ponderous Shire-bred is justly a favorite on level country roads and city streets; while the short, thickset, clean-legged Suffolk will prove more satisfactory than either in a clayey country where the adhesive mud would soon clog and weigh down the tufted legs of his rivals.

Here as in nearly every department in these exhibitions, it is noticeable that some exhibitors take the lion's share of the premiums in certain classes year after year and at county, district and "Royal" show after show. They are always wealthy and generally titled men who, for honor or profit, pay special attention to the breeding and purchase of the best of their kind in one or more particular lines of farm animals. Having ample means to secure the best of the best breeds and the most skillful help to manage their stock, they have so great an advantage over ordinary, well-to-do stock-owners, that the latter are seldom willing to incur the trouble and outlay necessary to prepare an animal for exhibition, for it takes a couple of years of careful handling to fit, say, a Short-horn for the show, and even should it win a premium, the chief reward would lie in the reputation thereby gained for the owner's herd.

A visitor to the different fairs, too, will be sure, year after year, to see the same prize-winners at all the principal shows, the veterans at the head of each class occasionally changing places with each other, according to slight changes in their respective conditions, or, more commonly, according to the whims or prejudices of the judges; but in nearly all cases shutting out from the premium list all not belonging to their artistocratic clique. These usually begin by appearing at the different exhibitions in the youngest class, advancing each successive year to an older one, until they have become "adult," after which they appear until age or death puts an end to their victorious careers. Of course, there are many advantages in such a practice, especially to the owners of the successful animals, but it strikes me forcibly there are some disadvantages, especially in a little country like this, within whose narrow borders the necessarily frequent sight of the same prize animals must become a trifle monotonous and uninstructive to the visitor. It adds to the evil, too, that the animals are never weighed; so that the eye aided by the memory is the only judge of any changes in their conditions from one exhibition to another.

As an illustration of the above remarks the Earl of Ellesmere, of Worsley Hall, near Manchester, took all but one of the first premiums for Shire horses, besides three second and one third premium in the same department. In pigs also he carried off four first and three second premiums for the large White breed, three first and one second for the Small White breed and three first for other breeds. His Short-horn, Attractive Lord, too, was considered by many a better beast than the first and second adult prize-winners, but had to be content with the third premium. On the whole, the display of these horses was excellent, that of Shire horses being the largest and finest and that of Clydesdales being the least excellent. The premiums for horses agggregated $10,285. —To be continued.

Entomological.

OUR ENEMIES, THE INSECTS, AND THEIR CONTROL.—No. I.

It is becoming more apparent each year that agriculture is seriously threatened by the great increase of its insect enemies. The States and general government appoint and set on foot costly inquiries. All the ingenuity of man is exhausted in mechanical inventions and poisonous destructives, yet it is but too apparent that, notwithstanding all our efforts, noxious insects are on the increase, and the present methods of destroying them by hand-picking and mechanical means, as well as by vegetable or mineral poisons, are alike inadequate. Our feathered friends, the birds have been so reduced in numbers that Nature's balance of power is also destroyed, and a like condition is found with reference to beneficial insects. There are no statistics sufficiently full and accurate to enable us satisfactorily to estimate the amount of injury done to our crops by these pests every year. It clearly may be counted by millions for New York State alone. The sums to be added for the nation at large, and for all the other nations of the world are simply beyond computation.

This is the condition in ordinary years; in exceptional ones as when Caloptenus spretus, the hateful locusts, or Blissus leucopterus, the chinch-bug, prevails, the calamity becomes painful to contemplate. People of all nations, civilized and savage, at present and in past ages have felt and been forced to suffer hunger and starvation from calamities caused by insects. The common farmer and the scientific agriculturist have alike studied the problem without finding adequate relief, but at length it is thought there is a glimpse of hope.

The word entophytes is employed to denote those parasitic plants which grow in or upon living insects and animals. The term is not confined to a particular class, some entophytes being algæ, others fungi; they belong to the lower sections of the orders of Cryptogamia. Many of them are common to both plants and animals. It is through the use of the spores of these parasitic plants found naturally or germinated artificially, and employed as infectious or poisous to insects that relief may finally come to our imperiled agriculture.

This subject has been so little investigated that scarcely any definite and precise information is attainable, and what inquiry has been made, has mainly been confined to scientific men for scientific purposes. The subject needs, in part, to be taken out of the hands of scientists as a purely learned inquiry, and to be popularized or, as much as possible, divested of its technicalites and taken up by agriculturists for practical and economic advancement. Ever since Pasteur studied the silk-worm diseases of southern Europe, and proved that the disease was caused by Botrytis bassiana, an entophyte (or mold), sporadic in its origin, it has been dimly apparent that here was possibly a factor that, if rightly employed, might solve the problem of controlling insect ravages. This silk-worm disease has never been subdued, and the utmost precautionary or sanitary measures have still to be maintained throughout the silk districts of France and Italy. Healthy, uncontaminated eggs from California and Japan have to be annually imported at great expense, in order to maintain the present status. The parasite appears, and on microscopic examination, can be even seen in the eggs laid by the affected insects.

Herein is where hope is apparent for agriculture. If the parents can be poisoned so that they cannot lay sound, healthy eggs, and if the poison continue effective through the larva and pupa stages, and is again developed in the mature insect, finally causing death and entailing such conditions upon all descendants, the ultimate solving of the whole problem may, perhaps, be confined to finding out, first, the parasites that are destructive to each particular group of insects; second, the means of obtaining or of artificially propagating the spores, and, third, their proper employment in the work of destruction.

The spores of the common yeast plant, and a number of others have been employed for this purpose with some apparent success, and a number of other varieties have been suggested; but it will, doubtless, be found that a single one or a single class will not answer for all insects, and that inquiry must be made among the various classes and orders of Cryptogamia, for those appropriate to different insects. Insects of different classes and orders have often been observed to become the prey of fungi, but the subject is too voluminous to be entered upon here. It will be sufficient, at this time, to state that insects are often destroyed in large quantities in some mysterious manner by natural causes, and the probabilities are that entophytes in some of their occult or unstudied forms, are usually the means or cause of destruction. D. S. Marvin.

The Poultry Yard.

ARTIFICIAL INCUBATION.

HENRY HALES.

Sometime ago, I promised the Rural readers that I would give some attention practically to hatching by artificial incubation, and report my experience through your columns. In keeping this promise I lay myself open to criticism by those whose experiences have been different from my own. As this subject is now receiving much attention, those who report a great success are likely to be applauded as sharp, clever men. Now, I do not claim this, and, dull as I may be, I will give you the honest result of my observations. I started by examining the merits of many different machines, all claiming to be perfect, and selected the one that appeared to have all the requisites and little or no complicated arrangements, and which was sold at a reasonable price. I hear some one say I bought too cheap a machine. Well, I found one that was brought out last Spring for $25. I procured it early in March. I thought the cellar under the house, being light and dry, would be a good place for it, and I have often heard such a place mentioned as being a good one for an incubator. In this I was much disappointed. I found the temperature too much disturbed by the violent changes of the weather outside at that time of year; later in the season it would be better. The temperature of my machine was too irregular; the cellar was subject to a change of from 15 to 20 degrees in a few hours, so my first batch of one hundred eggs was nearly all spoiled. I believe it imperative during such seasons to have an incubator in a place where at least a little of the effect of fire is felt, to moderate the severity of such changes. I did not wait more than five or six days before I learned how my eggs were going on, for with an egg-tester one can see plainly by that time which are good.

As soon as I found my mistake I shifted the machine to a second-story landing, where the temperature was about as even as could be desired. Another batch of eggs was deposited and this time most of them started right. The thermometer kept very regular and everything looked prosperous. In about two weeks many eggs became rotten; they appeared to dry up too much in the shell, as the air bubble got much too large. This could hardly come from too dry an atmosphere, as a large pan of wet sand was kept constantly under the egg-drawer, the bottom of which was of drugget. I thought, perhaps a very light sprinkle of hay for the eggs to lie on might be better, but did not find it so after a trial. The temperature of the egg drawer was kept at about 100 degrees. I sometimes sprinkled the eggs with tepid water, yet they wasted away too much in the shell. The result was that a few weakly chicks and ducks hatched, but many more could not break the walls of their little prisons.

In assisting the little creatures to freedom, I found the shells of the hatching chicks in a condition entirely different from that of an egg hatching under a hen; that from the incubator was as hard as a newly-laid egg, while that from under a hen was quite soft and easily broken, having a rotten appearance, as it yielded quite easily to the pressure of the young chick. I think much more has to be learned in this direction, as so many chicks are not able to get out of their shells in incubators. It has been generally supposed that this occurred because the chicks are weak; is it not that the shells are strong? Perhaps the natural perspiration of the hen rots the shell to such an extent that it may be easily broken by the delicate chick. I tried slightly greasing the shells of some with lard when I put them into the incubator, but I did not find that this gave any help.

I tried a third batch of eggs with no better result. My eggs were all from my own yards, of eight varieties of fowls and two of ducks. Precisely the same kind of eggs hatched well, at the same time, under hens. What confirms my theory about hard shells is that I found that the eggs of Plymouth Rocks, which have harder shells for their size than the eggs of most other fowls, were hatched more tardily than those of White Leghorns and other thinner-shelled eggs.

I have made inquiries of others who tried incubators this Spring, and find opinions vary very much concerning them; many were more successful; some were successful with one batch and afterwards failed; others had no better luck than myself. Altogether, I did not consider my experiment a success. I did better with the poor old biddy, and with all her faults I love her still. [We should be pleased also to publish the experiences of other readers with incubators.—Eds.]

Industrial Implements.

Messrs. J. A. Field, Son & Co., of St. Louis, Missouri, have made a valuable improvement in their Star three-roll cane mill. The scraper in all this style of mills has heretofore collected more or less of the finer portions of the crushed stalks which have to stay there over night—or until the mill is used again. This matter, if the weather is warm or murky, ferments, and many a batch of sirup, the first in the morning, has been spoiled by this, when the maker has not known the cause of it. The improvement consists of a simple arrangement by which the scraper can be removed and the mill washed out in two minutes perfectly clean.

Miscellaneous.

London-purple.—A correspondent writes us:—"By the way, I have just make a trial with London-purple on my potatoes. I am sorry I had so much faith in it; my neighbors have proceeded with more caution. I mixed one ounce of the purple with three gallons of water, and sprinkled about half of my patch. The only effect that I could see was that it killed all the potatoes that I put it on, and all the inconvenience it gave the bugs was that they had to foot it to the other potatoes, and there was not a bug that even walked lame. The merchant wishes to find somebody that wants a house painted purple." [We have used London-purple on several acres of beetle-infested potatoes with results entirely satisfactory, and have received equally favorable accounts from other quarters.—Eds.

Certain Death to the Potato Beetle. —A Canadian genius hailing from lively Toronto, sends us the following very effective though perhaps a trifle slow mode of exterminating the Doryphera decem-lineata:—"Take two blocks of wood, two inches square; pick up the bug and lay it on block No. 1; lay block No. 2 on block No. 1, so that the bug rests between the two; then sharply press the blocks together, and that bug will never trouble potato vine more. Repeat the operation with other bugs until the potato patch has been thoroughly rid of the pests." The remedy is certainly more effective than a number of those we have seen recommended, and almost as practicable.

WHAT OTHERS SAY.

We find the following in the London Mark Lane Express: "A certain agricultural institution—it would be cruel to mention its name—has recently added another feather to its already weighty plume. A short time ago one of the members of the staff, finding there were certain plants absent from the botanic garden, sent a long list of plants to one of the leading botanic gardens in this country, and asked for specimens on the ground that they could not be obtained in the neighborhood, nor yet from the nurserymen and florists. In this list of plants occurred, amongst others: 1, Secale cereale; 2, Triticum repens; 3, Phalaris Canariensis. The people at the botanic garden are immensely tickled at this, inasmuch as No. 1 is the common rye of which any farmer would have given the professor a few grains; No. 2 is the troublesome Couch-grass, which the farmers have had in far too great a quantity during the past Spring; and No. 3 is the Canary grass which may be easily grown from the canary seed with which we feed our feathered pets."

FRENCH PRIZE ROSES.—L'Illustration Horticole has the following: The Journal of Roses, published in France and devoted exclusively to roses, has had the happy idea of organizing a sort of plebiscite to obtain opinions as to the best roses. Eighty-five lists were sent in, and from these was made out the following list of fifty having the most votes:

La France	79
Baronne Adolph de Rothschild	76
Paul Neron	76
Gloire de Dijon	72
Souvenir de la Malmaison	72
Jules Margottin	70
Marechal Niel	70
Baronne Prevost	67
Gen. Jacqueminot	52
Captain Christy	50
Belle Lyonnaise	47
Eugene Appert	47
Louis Van Houtte	47
Anna de Diesbach	47
Aimee Vibert	44
Souvenir de la Reine d'Angleterre	43
Charles Margottin	42
La Reine	42
Victor Verdier	42
Charles Lefevre	41
Comtesse d'Oxford	39
Madame Boll	39
Gloire de Ducher	36
Madame Falcot	36
John Hopper	35
Madame Lacharme	34
Cecile de Chabrillant	33
Louise Odier	33
Marquise de Castellane	33
Celine Forestier	32
Elizabeth Vigneron	32
Boule de Neige	31
Madame Victor Verdier	30
Therese Level	30
Geant de Battailles	29
Rose du Roi	29
Triomphe de L'Exposition	28
Elise Boelle	27
Lord Raglan	27
Camille Bernardin	26
Duchesse de Cambaceres	26
Lamarque	26
Marie Van Houtte	25
M. Boncenne	25
Ophirie	25
Alfred Colomb	24
Empereur du Maroc	23
Jean Pernet	23
Madame Scipion Cochet	22
Chromatella	22

The figures show the number of votes given to each.

THE CRANBERRY.—Here is an interesting little item from the American Garden, respecting the cranberry: It is most profitably cultivated on low, moist, level lands, where drainage as well as overflowing can be applied, as circumstances may require. Yet, like many other plants, it may be grown successfully under conditions very different from those in which it is found in its wild state. Any loamy, naturally moist garden soil will grow cranberries. The plants are set out and cultivated exactly like strawberries, until the vines have covered the entire ground, when no other care is necessary than to pull out the tall weeds. An occasional light dressing of fine swamp muck or sawdust is very beneficial and keeps the ground moist. A small beginning in cranberry culture may even be made in a flower pot. Plants grown in this way are not only highly ornamental, the fruit hanging on the vines until the blossoms appear for the next crop, but also astonishingly productive.

THE editor of the Cultivator and Country Gentleman has visited the grounds of E. P. Roe He says, in the course of his remarks respecting his visit, that Mr. Roe plants his trial grounds with all the varieties in ordinary cultivation as well as the new aspirants for public favor.— — — The new red raspberry, the Cuthbert, is evidently the best on his grounds, taking vigor of growth, hardiness of plant and yield of fruit into consideration. It apparently is as good on rocky, slaty soils as on the deeper alluvium of the valleys. The canes are strong, foliage dark, profuse and healthy, and the fruit grows in large bunches, ripening well together on the same bunch, but as some canes are always later in ripening than others, the season is sufficiently prolonged. The fruit is of good quality, not so fine as Brinckle's Orange or similar tender sorts, but still good enough for the general taste. The fruit grows larger than most other sorts, on a hot, dry soil, but, of course, is much larger, and the crop is larger on rich, deep soils. It proves, even on the north side of a cold, high, rocky mountain (where Mr. Roe's farm lies), exceedingly hardy, never winter-killing in any exposure. Its vigor of growth is such that it can be distinguished at a distance from Brandywine, Herstine and other vigorous sorts. The berry is sufficiently firm to endure carriage well. The new sort called Queen of the Market seems to be identical with the Cuthbert.

Mr. BENSON tells the N. Y. Tribune that in September, 1878, he put a small trout in his well, which is 26 feet deep and covered at the top with plank so that but little light could gain admittance. Late in the Autumn of the year he cleaned the well and found his troutship apparently enjoying good health and fully a third larger than when he was put in. A short time ago, after the lapse of nearly two years he cleaned the well again and, contrary to his expectations, the trout was there and grown to quite respectable dimensions. Had not the water been exceptionally pure he would no doubt have perished in a short time.

GAS COAL-TAR INSTEAD OF PARIS-GREEN.—A correspondent in the Western Rural makes the following statement: "We are using successfully in this locality gas coal-tar, and find it more simple, safer and cheaper than Paris-green. It is prepared as follows: Put four or five gallons of gas coal tar in a barrel; fill up half full with water, and stir well, so the water will become impregnated with the tar; after the tar has separated from the water sprinkle the latter on your potatoes, cucumbers, rose bushes, cabbages, etc. Care must be taken that the water is not too strong. This has been tried by a gentleman in this city for four consecutive years, and he cares nothing for the insects so far as his garden goes. For the worms that infest fruit trees, a smoke from the burning tar is a "dead-sure" remedy; every worm or insect will immediately drop from the tree, choked and lifeless, and no injury whatever will be had to the foliage, as by sulphur."

RAISING POTATOES.—From the Elmira Farmers' Club as reported in the Husbandman, we take the following:—

J. R. Conklin.—We do not raise as big crops of potatoes as in former years, but I think none of us knows why. I plant the stem ends because the seed ends give too many sprouts.

D. T. Billings.—Will they give any more than the whole potato, and will a whole potato give more than a piece—say one-quarter?

J. R. Conklin.—I think it will, but of that I am not sure. It seems safe to assume that the more eyes there are in the hill the more sprouts will grow.

G. S. McCann.—I have planted whole potatoes, large and small, and pieces cut to halves, quarters and smaller, even to single eyes. As a rule the best and largest yield will be had when the largest, smoothest and best potatoes are planted whole. This will not hold good every year, but it will in average seasons. Last year, some rows in my potato field planted with large whole potatoes had so much larger tops than other rows alongside planted with cut seed, that the difference could be seen a long distance away, and the crop was as much better as the appearance of the tops.

President McCann.—Why plant large, whole potatoes if they send up no more shoots?

G. S. McCann.—Because they furnish support for the shoots until they have become vigorous and strong.

W. A. Ward.—A piece with two or more eyes may give as many, and as strong shoots, as a whole potato; but the piece will probably not prove as safe a dependence in ordinary planting from year to year. If I were going to settle upon a safe rule for field planting I should select fair, smooth potatoes of good table size, and would put one whole potato in each hill. There can be no safer way, although the requirement for seed would be greater, perhaps, than where cut pieces are used.

CABBAGE TEST-PAPER.—A useful test-paper may be made by boiling a pound of the leaves of red cabbage in one pint of water for some time, and then straining the blue liquor through muslin. Evaporate to about half its bulk; place layers of white blotting-paper in the liquid, and then hang them up to dry. Acids change the blue color of the paper to red, and alkalies turn it green. This is a very good substitute for litmus paper.—Journal of Chemistry.

APIARIANS, it appears from the London Farmer, are so numerous in Paris as to become a nuisance to their co-citizens. One inhabitant alone in the 19th Arrondissement keeps from 800 to 900 hives; and there are great numbers to be found in the 13th Arrondissement, near the goods station at Ivry. Valuable as are the bees to their owners, they do a great deal of damage in various directions. At the Say sugar refinery, for instance, it is calculated that the damage amounts to 25,000 francs a year; for a whole jarful of sirup will be completely emptied in less than a couple of hours, and two or three bushels of bees are taken or destroyed within the day. The workmen, who are obliged to follow their occupation bare to the waist, suffer terribly from these little pests, and frequently get badly stung. The busy bee improves the shining hour to the serious disadvantage of many peacefully employed Parisians.

Everywhere.

RURAL SPECIAL REPORTS.

GA., Washington, Wilks Co., July 31.—Our wheat and oat crops have been thrashed out. Oats have turned out well—that is, the red rust-proof variety. All other sorts rusted and their yield is poor. Wheat, too, has given a very poor yield. The corn and cotton crops now need rain. Upland corn has been damaged badly by drought. Cotton is good where it has been well and properly cultivated. The fruit crop is almost a failure in this section—what the late frosts left has been damaged by insects. About all our garden crops have been ruined by dry weather. J. C. D.

ILLINOIS, Baldwin, Randolph Co., Aug. 1.—In all low or improperly drained lands, the wheat was badly winter-killed. It also failed to tiller out as much as it did the year before, and the general opinion was that the crop would fall short considerably from that of the previous year, and so it looked until harvest. Up to then we had a rather wet Spring, and after wheat was harvested we had a week of heavy showers which damaged the crop considerably in the field before it was stacked. Still, as the thrashing proceeds, the crop is turning out well, and, putting in the increased acreage, will nearly, if not quite, equal last year's remarkable crop. With oats the prospects at the time of wheat harvest were splendid; they were thick on the ground, high enough and headed out first-rate; but for some reason they failed to fill and the yield will fall far short of what was expected. The continued showers had made corn grow and tassel out well; but two weeks of hot, dry weather have dried it up, until now, unless we have rain very soon, there will not be half a crop. Even with rain now it must be damaged considerably. We are never certain what the crop will be until it is gathered in the granary; a few days of unusual wet or dry weather may cause a loss of nearly half a crop. Sometimes, early-sown wheat is the best, and perhaps next year the late-sown will be ahead. N. J. S.

IND., Columbia City, Whitely Co., July 31.—Wheat is two-thirds of a crop; oats a full crop; rye and barley are not much raised. Fultz wheat is the main variety. Sorghum is not much grown. Corn is light owing to so much cold weather. Potatoes are not very good. Fruit is about half a crop. Early cherries are plentiful but there are not many late ones. W. S.

IOWA., Vail, Crawford Co., July 31.—The weather is delightful. Farmers are busy harvesting their grain. Wheat will average about 15 bushels per acre and is of good quality. Oats, a fair crop. Garden vegetables are abundant. Fruit a fair crop, but owing to the newness of our country, fruit is not as plentiful as it will be in a short time. Corn looking well, and an excellent yield is anticipated. M. E. G.

KANSAS, Burlington, Coffey Co., July 26.—Fall-sown wheat is a good crop and harvested in fine condition. There were in this county 8,078 acres of the Fultz, Walker, Cottingham, Little May and Odessa. The Fultz takes the lead and so far has given good satisfaction in all parts of the county. The Walker has its admirers also, who claim that it is ahead of the Fultz. The Little May appears to be running out and the Odessa has not come in yet to any great extent. Estimated average for the county, 23 bushels per acre. Of Spring wheat there were 69 acres; it is not a paying crop. Of barley there were only 10 acres; it does not succeed here. Rye does well here and is sown chiefly for late Fall and early Spring pasture for cattle, and after being thus eaten down it yields from 15 to 25 bushels per acre. There were 420 acres sown. Oats is good, taking the county through; but the absence of rain in some parts of the county in the early part of May caused them to be light there; but they are extra-good in those parts more favored with early rains. Again, some farmers did not get their oats in early enough, and in those cases there is a slight falling off. Oats to do well here, must be got in early—very early—not later than February if it can be done. There were 4,083 acres sown: estimated average yield, 35 bushels per acre. Corn is the king crop this year, and from present appearances it seems likely to outdo all previous yields. There are 42,120 acres planted, and the estimated average yield is 60 bushels per acre. The principal varieties grown here are the large and small Dent, and a striped or Calico corn, an extra-large kind, yielding enormously on the bottoms. It is known pretty much by the name of Bloody Butcher. Of buckwheat there were 79 acres in the county. It is not reliable, our Falls being a little too dry to make a paying crop. Still, some people plant it every year for home use, and they have always got some. Of potatoes there are 774 acres and they promise a crop far better than any raised here for years. The principal varieties are the Red and White Peachblow and the Snowflake for Winter; and the Early Rose, Early Vermont and Snowflake for early. Sweet potatoes look well; there are 41 acres under them and they do well. Sorghum, too, thrives here, but it is cultivated only for home use. The Minnesota Early Amber is the leading variety. There are 287 acres in this season. Of apples there will be over half a crop, and the following sorts do well and are esteemed about in the order named: For Summer:—Red June, Sweet Bough, White June, and American Summer Pearmain. For Fall:—Fall Pippin, Rambo, Striped Sweet Pippin, Fall Wine, Maiden's Blush, White Bellflower, Fulton Strawberry, and Grimes's Golden Pippin. For Winter:—Rawle's Jeniton, Missouri Pippin, Winesap, Ben Davis, White Winter Pearmain, Milam, Limber Twig, Stark, Smith's Cider, McAfee's Nonsuch, Sweet Romanite and Golden Russet. There are a great many others that do well in most seasons; but the above-named have given general satisfaction in all situations. There are also some good apples that have given the best satisfaction, but the owners do not know their names, nor does any one around here. The trees are hardy and very productive of fruit of good size and quality. This year they are well laden with fruit, and a great point in their favor is that the fruit does not drop till fully ripe. Pears are not successful in all parts, though in some locations they do well and the owners would not part with them on any account. Most of the leading varieties are being tested in nearly all parts of the county, but as yet not much can be said about them further than that some of them have winter-killed already, mostly on the bottoms; yet in other parts, especially on the uplands, they are growing finely. Of cherries, the Early Richmond is the only one worth cultivating; this does well. The only plums worth planting are the Wild-Goose, Sand and some native wild plums. The Damson does well in places, but, as a rule, the curculio gets away with them too much to make them profitable for general cultivation. Of grapes there will be a very full crop; the vines are fairly loaded down with fruit: many kinds do well here; but the following prove reliable:—Concord, Dracut-Amber, Martha, Delaware and Hartford Prolific. Peaches are only partially successful. Many were winter-killed last Winter. There will be over half a crop this season. The seedlings appear to do the best. Hale's Early and Crawford's Early do well also. Gooseberries were a full crop, they do pretty well and bear in abundance, but the fruit is rather small. Houghton's Seedling is the principal variety. Currants are not successful here. Some are being tried on the north sides of houses and tight fences, but with what success has not yet been determined. Strawberries are not to be relied on. Some seasons they do well; but, as a rule, the season is too dry to make them a paying crop. Blackberries and dewberries do finely and this season there will be extra-full crops. The Kittatinny is the principal kind cultivated. Raspberries do well in some parts; but are liable to be winter-killed. A. G.

MICH., Watson, Allegan County, July 26.—From about the 12th of May to the 4th of July, we had such incessant rains that the streams were all full, and land so soft, especially clay or loam, that we could make but little headway with farm work. Since the 4th, we have had splendid weather for haying and harvest, and it has been well improved. Wheat at this date has been all secured; and the hum of the thrashing machine is heard in every direction. Where thrashing has been done, the yield was good, both in quality and quantity. The Clawson is the most popular variety, as it will flourish on all soils. I had a piece of about thirteen acres on a loamy soil which had been lately cleared, and could be only imperfectly drained, on which during the late rainy weather the water stood around the roots the greater part of the time, and it came out all right. The harvesters had to wear rubber boots while cutting it; and when it was stacked the ground was so soft that one-fourth of a load was all the team could draw. It was cut during the week ending July 10th and stacked during the week ending July 17th. Now the same ground is as dry as any one could wish, and we feel a little as the Englishman did after such a protracted wet spell, when one day the sun came out and he laughingly remarked, that "God was going to smile on us once more." Haying is very nearly done, and all cut since the Fourth has been put up in good order. Some of that cut in June will be worthless. Potatoes on upland will be good; they are worth now 50c. a bushel in market. The Colorado beetle has troubled them this year but little. I attribute it to the protracted wet weather, I think the eggs need sun to hatch them. There has been and is now an abundance of all kinds of fruit, and it has been very healthy. New wheat started at 80c. per bushel. If this pleasant weather continues, corn where the land was not so low that it was drowned out in May and June, will be a good crop. As a consequence of the wet weather most of the pieces are grassy, but a week or two of thorough cultivation now will remedy that. Butter is extremely low—only from seven to ten cents per pound, and the yield thus far very moderate, for during the wet weather there was but little substance in the grass, although its growth was large, so that we predict a better market this Fall. Cheese factories are also running, but that product is also low, so that the furore for keeping cows has abated from what it was four or five years ago. H. D. E.

MICH., Big Rapids, Mecosta Co., July 27.—Wheat on heavy soils was badly winter-killed, and on lighter soils, where in the Spring it promised to be a heavy crop, at harvest time it proved to be very deficient. The crop, however, will be an average one. The weather for the past two weeks has been unfavorable—rain every day, with the exception of the 23d and 24th, during which days the greater part of the crop was secured, though I fear some of it was put up in bad condition. Hay, oats,

rye, and potatoes are good. Very little barley is grown here. This is comparatively a new country, especially for cultivated fruits; but wherever there are orchards old enough to bear they are heavily loaded. I have an orchard of about 500 trees—apples, pears, plums, and cherries—and nearly all are loaded with fruit. Wild fruits, such as blackberries, raspberries, and whortleberries, are in great abundance. W. C.

Mo., Springfield, Greene Co., Aug. 1.—For some weeks just ended Greene Co. has had it warm and dry. Our farmers worked right on thrashing, haying, etc.; but were getting a little apprehensive for the corn crop. All is right now, however; it has rained finely and still rains with a fair prospect of more. Already the land is pretty thoroughly wet, making a sure thing of a good corn crop. Farmers are now happily furnished a good season for turning over the land for wheat, sowing grass, turnip seed, etc. It is a good time, too, for setting new strawberry beds. We shall now have fine pasture till Winter. Sheep, cattle and other stock are quite healthy here. Large numbers of cattle have died recently in Jasper and Boston counties, 60 to 75 miles west of us, their deaths being due, it is said, to "Texas fever." It is said 400 head died on one farm. The disease, like "hog cholera," is unmanageable and incomprehensible. JOT.

N. C., Park Hill, Burke Co., July 31.—The Ennobled oats are conceded by all who have seen them to be superior to any in this section. The harvest is about over. Fall wheat will yield from 25 to 35 bushels per acre—Clawson and Scott being the principal varieties sown. Hay is an average crop. Oats are rather above an average. Of peas none are sown on account of the bug. Roots good. Fruit much scarcer than last year. R. J. K.

N. Y., Hornellsville, Steuben Co., July 28.—At present the prospects for us in this and ten or twelve or more surrounding towns, in Steuben, Alleghany and Livingston counties, are not quite so encouraging as at my last report about June 24, and some modifications are necessary. Since that time we have had but slight showers and are now suffering I think from the worst drought in the growing season for many years. Winter wheat has been good and was gathered in fine condition. Hay is nearly all in, and is of good quality and in fine condition, but light. Spring wheat is very light, hardly an average piece is to be seen. Barley is fair to good. Oats are a fair crop—straw short, but heading out well and beginning to turn while a few early fields are cut. Potatoes must be a light crop; early ones are now being dug for market being probably the largest we shall have. Corn is suffering badly from the dry weather; the leaves are rolling up in the day time and there is not dew enough to cause them to unroll during the night. Fodder corn could not make a growth. Hungarian grass, when sowed to eke out a scanty hay crop, utterly refuses to come forth, and buckwheat when it has started commences to blossom when only three or four inches high. Apples are dropping to a great extent and this will materially lessen the expected crop. Meadows, when cut, have mostly turned brown; pastures are drying up badly and it is reported in many instances dairymen are feeding hay. Water grist-mills are much troubled, for the "sound of the grinding is low" and we are passing through a first-class drought with streams, wells, springs, and cisterns in perfect sympathy. For many days we have been looking to the south and west for the "winds likely to bring rain," but so far see nothing but billowy clouds like huge dry sponges rolling over our heads after all their moisture has been squeezed out over the prairies of the West. Even the moon has gone back on us—one hundred miles east she has given her votaries a firmer faith than ever in her influence, and to those one or two hundred miles in our rear she has, according to her "signs and changes," proved to be a true prophetess, but to us, alas! only a gay deceiver. But somebody, I think it is the pitiless Daily Tribune, says, "It has been part of the farmer's nature to grumble and to predict ruin to himself ever since the days of Cain, *who was the first of them all.*" Now, as a farmer, I don't want to hit back, but we have it on good authority that the Devil had a good deal to do with the first pair of farmers in the Garden of Eden and that he has kept it up ever since, and if he was the means of bringing more upon poor Cain and his descendants than they could well bear without grumbling, the reproof surely should not come from a printing-office, where of all places, we know he is perfectly at home and a not unimportant adjunct. But let that go—as farmers we will not be ruined this year. Wheat is good; hay, oats and barley, fair; fruits enough and some to spare; plenty of everything to eat; plenty of work for those who wish to work at good wages; good prices for all that a farmer can raise, and this brings money to pay his work hands, with a general contented feeling among laboring classes; still why may not a farmer speak of facts and not be termed a grumbler, when he fodders his cows in July, drives them half a mile to water, with a poor prospect of buckwheat and Johnny cakes of his own raising, and is pretty certain of having to eat small potatoes for the rest of the year! C. J. P.

N. Y., Madison Co., July 30.—We had a severe drought here in May and June, so the hay crop will be 50 per cent short. Spring grain is looking well. Corn is looking fine; if nothing happens to it there will be a large yield. We shall need all the coarse fodder to keep our dairies through the Winter. Potatoes are going to be a large yield, if they don't rot. Apples promise a fine crop. Some Winter wheat is raised here, and it is all harvested: very nice but not a very heavy yield. The great pests here now are the grasshoppers; they are eating almost as much as our cattle and are stripping our oats and buckwheat clean. My Ennobled oats are looking fine and my cow-peas are growing very nicely. The beet seeds from the RURAL all came up nicely and they are growing very fast. The tops are enormous, so I think there must be some bottoms. I sowed some Pearl millet on the 10th of June and it all came up. Now it is two feet high, and I have counted as many as 20 stalks in one stool. I think it will do well with me this year. I tried Early Amber sugar cane and it looks fine; it is three feet high and keeps up with my corn. I planted some of Blount's corn again this year, and it is looking well; I think I can get it acclimated to this section. I prefer it to the Western corn for fodder. I think it is as good as evergreen sweet corn. My cattle ate it last Fall all up clean and the stalks were as large as my arm and 14 feet long. S. J. V. C.

N. Y., Paris, Oneida Co.—On the whole the season has been favorable for vegetation, and crops are generally looking very well, with the exception of hay, already gathered, which has turned out about half the usual yield per acre, except in a few favored localities; but with a good growth of straw and plenty of sowed corn, and economy in the use of fodder, we expect to carry stock through the Winter without any great difficulty. L. R.

OHIO, Bristol, Trumbull Co., July 31.—The season here was pretty dry through the latter part of May and the fore part of June, but since then it has been very wet. Wheat was a good crop, with but few exceptions, but wet weather has damaged it considerably. Some of it is sprouting in the shock. Corn is looking very well but it has been too wet to allow us to work it properly. Oats, too, look fine in places, but in others they have been badly lodged by the wind and rain. More wheat was raised in this township the past season than in any previous one—Democrat the leading variety. Fultz, however, is grown by some and promises well. J. S. B.

OHIO, Ashley, Delaware Co., July 30.—Harvesting is mostly over and thrashing is going on lively. Wheat is not turning out as good as last year. Oats are a poor crop on account of rust. Corn is very uneven; but looks well, considering the backward Spring. No barley or rye is raised here, and very little flax. Apples are about half a crop; hay half a crop—too cold and wet in the Spring. We have plenty of rain and pasture is doing well. Wool has mostly gone to market; and the highest price was 40c. V. M.

OHIO, Roscoe, Coshocton Co., July 30.—Wheat is not quite as good as last year, but is a good crop. Until the last few days it was very dry, but the wet weather since makes corn look promising. Oats in some places are good, and at others, are not fit to cut on account of the rust. Early potatoes are good. We have plenty of apples and peaches on high ground; but a late frost killed nearly all on low grounds. Grape vines are loaded with fruit. C. MC'C.

WIS., Spafford, La Fayettte Co., July 31.—Wheat, less than half a crop (harvested). Oats, good; very good; never better. Corn promises an abundant harvest. Of barley and rye but little is raised; the latter, however, is good—what there is of it. Cow-peas or beans are growing well, but are not yet in bloom. The man-root, as now growing, is closely allied to the cow-pea; in fact, I can see no difference. Mold's Ennobled oats are growing finely, but are only just heading out, other oats being now ripe. I think they will be quite an acquisition, as by sowing the early sorts, in part, and Mold's Ennobled, the harvesting will not be so driving, as Mold's will still be green when the others are ripe enough to cut. W. S.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Blind Staggers in Sheep.

J. W. L., Smith's Grove, Ky., asks, 1, what causes blind staggers in sheep; 2, what will cure the disease; will the offspring of either ewes or bucks that have had the blind staggers, do to breed from.

ANS.—1, Sturdy or staggers in sheep is a species of vertigo, induced by the Cœnurus cerebralis, which is the larva form of the tape-worm called the "Tænia cœnurus." The victims of this disease are generally under one year old, as sheep above two years old are rarely affected. Dogs become infested with tape-worm in consequence of the introduction into their digestive organs of the larva forms of parasites which exist in the brain of sheep, given to them or placed within their reach as a part of their food. Wherever the infested dog wanders and passes excrement *per anum*, there he distributes the ova, which are taken up by the grazing sheep and passed into the circulation, where by virtue of some selective capacity they seem to locate in the brain of their host. Prevention is better than cure; keep diseased meat away from the dogs, or if these are already infested with tape-worms give a vermifuge to expel the parasite (areca nut) before allowing them to run on sheep pastures. The areca nut is administered as follows: Previously, one scruple of jalap, for a dog of 20 to 30 pounds in weight, should be administered, and a brisk action of the bowels set up. This may also be procured by giving the dog a quantity of butter or any of the common purgatives. Immediately afterwards half an ounce of the powder of areca nut is to be given in pills or in some acceptable food. Some locks of tangled wool dipped in grease or melted fat are given at the same to be swallowed. The worm is killed or paralyzed by the areca nut, is entangled in the wool, and all together are expelled by the purge. The mass should be immediately burned or buried at a perfectly safe depth in the ground. Applied to every dog at intervals of three months, this treatment will free them from tape-worms, and prevent danger of the sheep becoming infested with them. As to the treatment of affected sheep, it consists in an operation by which the skull is pierced and the bladder punctured, when the water in it escapes and is absorbed, leaving the worm to perish. The pressure and irritation upon the skull cause some absorption of its substance, and a soft spot is caused over the bladder. This may easily be felt by a pressure of the finger. A curved awl may then be inserted through the skull and the bladder pierced; or by means of a tubular saw (or trephine), a round piece of bone is cut out of the skull, a flap of the skin first being laid back, and the bone being lifted, the bladder is laid bare and removed. The skin is relaid and held in place by a stitch or plaster, and the wound heals. No other remedy than these is safe or certain, and these frequently fail. But permanent cure is rare, and knowing this the farmer consults his own interest by sending the animal to the butcher as soon as the disease is confirmed.

Causes and Remedy for Cloasma.

H. R. S., Cincinnati, O., asks for a remedy for cloasma, and the cause of it.

ANS.—Cloasma is a skin affection, marked by broad, irregular blotches of a yellow or yellowish-brown color, occurring most frequently on the front of the neck, breast, abdomen and groin. The forehead, eyelids, cheeks and upper lip are sometimes affected, which then take a dark-brown color. In woman, in addition to the causes that produce it in man, it is also often associated with disorders peculiar to the sex. In males it frequently appears after protracted malarial diseases. Long-continued action in the sun's rays, especially in a moist atmosphere; many cutaneous affections, as well as those generating a bad habit of the blood, and disorders due to vicious practices, also cause a pigmentary deposit. In many cases sulphur applied externally in any form will speedily remove the discoloration, and should an ordinary application fail, its use in the bath or fumigation is likely to prove more efficacious. The removal of the pigment is nearly always readily accomplished by any means that cause a superficial inflammation of the skin and the desquamation of the epidermis. Cover the affected part of the skin with a piece of linen accurately fitted, and keep it moist for three hours with corrosive sublimate (five grains to an ounce of water); keep the edge of the cloth constantly dried, otherwise the solution will collect and destroy too deeply. A safer remedy, however, in ordinary hands can be found in repeated applications of iodine or iodized glycerine.

Information Wanted.

R. L. B., Lenoir, N. C., says: "I am engaged in manufacturing sirup from sorghum cane and during the season have an immense pile of crushed cane on hand. I have noticed that cattle are very fond of it when partially dried and when partially decayed. Now if it can be preserved in pits like green corn fodder and the hard shell softened by the gentle fermentations of the silo it will be a bonanza to the sirup-makers. Will some one in your paper give his experience with it. The best of mills leave 25 per cent. of saccharine matter in the crushed stalks, and this I think must be valuable if it can be utilized in the silo."

Miscellaneous.

W. H. E., East Setauket, N. Y., asks, 1, is there any kind of rye that is likely to be more profitable for Long Island farmers than that cultivated there for the last 50 years; 2, He planted the RURAL's Beauty of Hebron by itself last year, on May 15, and got three pecks of nice potatoes; this year he planted all his seed on the same day alongside of the Early Rose; the latter are dried up, but the Beauties look as green as if they might grow for the next 60 days, and he asks whether the seed sent was the Late Rose or Hebron.

ANS.—1. We do not know of any. Rye is one of the cereals that need the attention that wheat is now receiving. 2. Unless by mistake, only the Beauty of Hebron was sent to our subscribers.

M. R., Hull, Mass., asks, 1, at what time in the Fall can forest trees be transplanted in safety; and, 2, if the roots are protected with straw or seaweed, will they be safe from winter-killing; 3, if a tree is exposed only a few days in transport, is it necessary to bind up the roots in sacks and moss.

ANS.—1, Any time after the fall of the leaf; 2, there is no danger that native forest trees will winter-kill whether protected or not, but, of course, they must be in the ground; 3, it will depend to some extent upon the weather and the exposure to which the roots are subjected; the roots of transported trees should never be allowed to dry out, and any measure that will prevent this will answer.

J. M., Nunda, N. Y., has a mare that was kicked on the leg just below the gambrel joint last winter and the leg is enlarged from the fetlock to the gambrel. She is not lame; but the appearance of the leg hurts her looks and value. If he blisters it, should he blister the whole leg to the gambrel or only the ankle where it is largest. The animal has had an enlargement of the ankle for two years due to a hurt when a colt. She is fleshy, handsome and high-spirited.

ANS.—Treatment, we fear, in a case of such old standing would be useless torture to the beast, and of no benefit to the owner.

A. L. S., Cleveland, Ohio, asks certain information regarding the Acme harrow advertisement in our columns.

ANS.—Yes, we do recommend the Acme Pulverizing harrow, and we know whereof we speak. If set *right*, it *needs* the weight of a man to do its best work. Certainly it is easier for the man to ride than to follow the implement on foot. Timothy and clover failed on our Clawson wheat-field in consequence of the Spring drought. After plowing the field with a Syracuse Chilled plow, the Acme was used to prepare the land for again seeding to Timothy and clover. It performed its work in every way satisfactorily.

Mr. John Williams of Gallatin, Mo., writes us "Inclosed I send you a new seedling peach which came from seed in 1875, fruited first in 1878, and now stands very full and some of its ripe fruit was gathered on July 21. This tree has not been cultivated at all and its fruit is fully as large as that of the Amsden that grows in the same condition beside it. Amsden, however, ripened this season July 1. Is it worthy of a name and propagation?

ANS.—This peach is of medium size, brightly colored, sweet, juicy and quite worthy of a name.

M. A. P., Sterling Station, N. Y., asks, 1, which is the better for seed—last year's wheat or this year's; 2, which is the better variety, Clawson or Lancaster.

ANS.—1. Good wheat one year old, is just as good for seed as good wheat of the current season. Which is the better will depend on the quality of each. 2, Lancaster makes the better flour, and pleases the millers more; Clawson yields the larger crop and generally pleases the farmer more.

A. N. K. Searsport, Me., asks, 1, what is the best time to set out raspberries; 2, what are the best varieties for that place; 3, how should the soil be prepared and what kind of manure is best.

ANS.—We should prefer Fall here. Spring would be better for your climate. 2. Turner and Cuthbert for raspberries. Would recommend you to try Snyder and Taylor for Blackberries. 3. Just as you would prepare for any other crop. Barnyard manure is best.

L. T., Kings Co., L. I.—The plant is Cleome spinosa. It is very showy, but somewhat coarse for the flower border.

The Querist is a regular department of the RURAL NEW-YORKER, and we do not think that any persons whose questions we answer are thereby placed under any obligations whatever.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, August 7th.

J. F. A.—G. G.—W. V.—K.—G. W. P.—Clara.—J. L. E.—L. A. R.—Jot.—J. H. C., thanks.—J. G. D.—C. McC.—W. J. C.—M. M. P.—H. W. H.—S. M. S.—J. D.—S. N. B.—J. H.—C. A. G.—E. H. G.—R. J. K.—V. M.—M.—O. S. B.—M. E. B.—E. N. K.—S. R. M., will try to give you the desired information,—J. P. S.—H. M. S.—M. E. A.—R. M. T.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

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SATURDAY, AUG. 14, 1880.

A PUBLIC LOSS AND PRIVATE GRIEF.—With sincere regret, in which we know all lovers of horticulture will join, we have to announce the death of our friend and contributor, M. B. Bateham, of Painesville, Ohio. He died August 5th. We shall furnish an excellent portrait and sketch of his life probably next week.

A MISSTATEMENT CORRECTED. — We have seen circulars sent to certain seedsmen from Mr. Mold, of England—him of "Ennobled" grain notoriety, setting forth that our "Minister of Agriculture" reports great success with his (Mold's) red and white winter wheats in this country. Gen. Le Duc informs us that, except in California, this grain has not proven a success, and that Mr. Mold's statement is unauthorized.

THE FLAX-SEED CROP.—From the present outlook this year's flax-seed crop will be the biggest ever known. Iowa, Illinois, and Kansas have raised extraordinarily large crops. At the outset, however, there has arisen a serious difficulty in transporting the product to market. Owing to the great loss in transit, due to its extremely slippery nature, the railroad companies are refusing to carry the seed in bulk unless shipped in cars made unusually tight for that special purpose, and there are no cars of that sort. Country buyers are writing for bags to commission men in Chicago and other large centers in the West, but it is said there are not bags enough there to move half the crop.

THE YELLOW SCUM ON MILK.—A lady friend has just related to us an incident which is too good to be lost. It illustrates what some New-Yorkers know about milk, and may amuse our readers. The friend owns a handsome country-seat on Long Island, and keeps fine Alderney cows, which, as almost anybody knows, yield very rich milk. The place adjoining hers was hired by a New York family for the season, and they begged her to furnish them with milk, which she consented to do. In a few days, however, her man brought her word that the newcomers had concluded not to take any more milk from her cows. They said they didn't like the "yellow scum" they found on it every morning!

UNCERTAINTY AS TO THE PARENTAGE OF SEEDLING POTATOES.—Of over sixty varieties of potatoes (more or less—we have not counted them) we have thus far failed to find pollen upon one of the flowers which have bloomed up to this time. One object in planting so many kinds was that we might make crosses, and thus be enabled to raise cross-bred seedlings another year. Hundreds of new seedlings are now presented every year, with both parents given as a matter of fact, and "hybrid" seeds are sold in packets for—considering the labor and time involved in producing them—a very low price. We are beginning to believe that the parentage of many of our new potatoes and the hybridizing of these "hybrid" seeds, are merely guessed at or are altogether fictitious. Of course, "seed balls" do form and in such cases there must be pollen. But to find this pollen and to apply it so that a cross is *known* to have taken place is a task that very few have either time or patience to accomplish.

A LESSON FROM THE CIRCUS.—We don't highly approve of circuses, yet we have no doubt there may be "good in everything" if we know how to get it out. Last year a "Grand Combination" exhibited in a field which lies sloping to the west, opposite the window where we now write. That field was mown two weeks ago, and those two weeks have been weeks of drought and heat. The whole field is dry and brown, except four parallelograms at equal distances, each about 25 by 40 feet, which are of a vivid green. These spots are where the horse-tents of the circus stood for about twelve hours. What a marvelous illustration they are to our mind of the value of manure as a protection against the effects of drought. The top-dressing given by the 100 horses that stood under those tents for a short half day made all this difference between a total arrest of growth under a July sun and a close and thrifty aftermath. If the drought continues, these patches may be all the living grass left in that field next year.

PRICES OF HOPS.—Hop-growers should not be too ready this season to dispose of their product except at good figures. At this time last year there were in the country about 60,000 bales of old hops; to-day the most reliable information says that there is not a quarter of that amount in all hands, while many trustworthy persons maintain that there are not over 5,000 bales in the hands of dealers all over the United States—less than half the average monthly consumption—while brewers, on the whole, have but a small surplus to fall back upon should prices of new hops be high. In this State the first of the new crop, "Palmer Seedlings," will probably be marketed from the middle to the end of this month, and will hardly be more than 150 bales. The "Humphrey," the next, will, most likely, be ready to pick during the last week in August, and now promises a yield of from 700 to 800 bales, most of which will be probably exported, as usual; so that by the time the regular crop comes into market the supply of old and early will be very small. The consumption of beer the past year has been greater than ever before in a like period, and is rapidly increasing. The most trustworthy advices from abroad declare that the growing crops will be below rather than above an average, so that while the demand will, almost certainly, be greater than heretofore, the stock on hand is unusually low and the foreign supply is hardly enough for home consumption. It would seem, therefore, that growers are in a position to fix the prices during the early part of the season, provided they do not lend a credulous ear to agents paid to buy hops at the lowest possible figure.

"STAMINATE" STRAWBERRIES.

IF "pistillate," as applied to strawberries, means that the variety possesses but one set of generative organs, why ought not "staminate" to mean that the variety possesses the other set and that only? But the latter word is often used in the place of "perfect," which is just as far from staminate as it is from pistillate. That is to say, a "perfect" flower is possessed of both sets of generative organs, viz., both stamens and pistils. We hope that our small-fruit authorities will eschew the use of the word staminate *in toto* as meaning perfect bisexual or hermaphrodite flowers. We have no use for it at all.

Dr. Gray defines pistillate or female flowers as those in which the pistils are present and the stamens absent; and a staminate or male, as one in which the stamens are present and the pistils absent. Why, then, when we have bisexual or perfect, either of which is just exactly the word needed, should we use staminate, which is well established by the best authorities as having a signification the reverse of that which it is desired to convey.

To show that many of our writers upon small fruits use the words "perfect" and "staminate" interchangeably, we quote from Mr. Roe's new and elaborate work, page 93:

"When both stamens and pistils are found in the same blossom, it is called a *perfect* flower or *staminate*.

BLOUNT'S CORN AT THE RURAL FARM.

WE measured our Blount's Corn Aug. 7, and found the average hight to be fully eleven feet. The highest is twelve feet and the lowest ten. But uniformity in the hight is one of the remarkable features of this remarkable variety of corn. All of our visitors who have seen it say that it is the finest field of corn they have ever seen, and the yield at present promises to be over 100 bushels of shelled corn per acre. The average number of ears per stalk is not less than three, while many bear six and seven, a few eight, and several nine. The ears will be small, certainly, especially the lower ones of those stalks bearing a great number. But, small as they are, we find that there are generally as many as forty-five kernels in a row, while the rows run from ten to fourteen. There has been no "fancy" cultivation or fussing with this acre of corn. No barn-yard manure and only about 350 pounds of concentrated corn fertilizer was used, which was applied at three different times—once before the corn was planted; then when it was three inches high, and last when one and a-half foot high. Should the yield fulfill its present promise, we shall give the particulars of its cultivation hereafter.

It will be remembered that we raised on one-quarter of an acre, last year, at the rate of 72 bushels of shelled corn per acre. But this was under unfavorable circumstances, the chief of which was the stinging frost of June 10. This year *everything* has been favorable, and one acre or more (the exact measurement has not yet been taken) is being raised, so that there will be no "at the rate of" about it. The yield, whether great or small, will be a fair index of what Blount's white Prolific Corn will do on Long Island.

RESTRICTIONS ON AMERICAN CATTLE IMPORTATION.

IN England, on August 5, Mr. Arthur Arnold, Liberal Member of Parliament for Salford, offered in the House of Commons a resolution that in the opinion of the House the regulations regarding the landing of fat stock from the United States restrict the supply and increase the cost of food, and in view of the freedom from disease of the cattle-producing States of America, the House deems it desirable that the government should consider the restrictions with a view to their modification or removal. The first part of this resolution closely follows one offered in 1878, for which twenty-four members of the present government voted, so that it certainly has considerable support now in the administration.

From the first we have strongly protested against the restrictions placed on the importation of cattle from this country into the United Kingdom, on the plea on which those restrictions were founded, while earnestly urging the removal of even a pretext for such restrictions by the entire suppression of pleuro-pneumonia among our herds.

Investigation conclusively proves that, even after the hardships of a long voyage and of an antecedent long journey by rail, American cattle are landed in England in a state more healthy on the average than that of the cattle of the United Kingdom. Last year 76,117 head were imported from the United States, of which only 137 were affected with pleuro-pneumonia, even according to the statements of the examiners at the ports of landing, and considerable doubt has been thrown on the correctness of their diagnosis. Of this vast number 68,000 were conveyed in vessels in which no disease was found. The expense to which the United Kingdom was put by these obnoxious restrictions was double the cost of suppressing the most virulent outbreak of the plague among native herds some years ago, the former amounting to sixteen million pounds sterling, and the latter to only eight millions.

In reply to the resolution, Earl Spencer, Lord President of the Council by whose orders the restrictions were imposed, dwelt strongly, as the chief cause for their unmodified retention, on the law regulating the transport of cattle in the interior of this country, stating that he had been informed that it was illegal to stop the free importation of cattle from one State to another within the Union.

As a matter of fact, the importation of cattle from New Jersey into this State was some weeks ago rigidly prohibited by Gen. Patrick, who has been commissioned by the Governor to suppress pleuro-pneumonia among the herds of New York State, and the legality of the prohibition, which was due to the prevalence of the plague in some sections of New Jersey, we have never heard called in question. As this condition of our laws was assigned as the principal cause for not making any distinction between ports of shipment in the United States, we trust that the practical proof to the contrary thus offered by the authorities of this State, will lead at least to the speedy exemption from the restrictions, of cattle shipped from sections and ports entirely free from the plague.

BREVITIES.

WE learn from Aiken, S. C., that the RURAL Branching sorghum, in spite of excessively dry weather, is making fine growth. From the same source we learn that the "Cuzco" corn has now some "half a dozen nubbins of ears."

WE learn that Mr. Dunham sent his brother out to France last June for fifty Percheron stallions, but his trade has since been so encouraging that he has bought ninety-eight, all of which he expects to arrive in the steamer Greece, now due in New York.

As a good specimen of the care and industry bestowed on their reports by many—very many—of our friends, we would refer our readers to the "Everywhere" from Burlington, Coffey Co., Kansas. To an intending emigrant, such a full account of the products of that section must be useful; to others, at least interesting.

WITHOUT the slightest disposition to write an "alarmist" article, says the Mark Lane Express of latest date, we must reluctantly come to the conclusion that the harvest of 1880 cannot now be the means of saving any considerable proportion of sinking farmers from the ruin which threatens them. We sadly fear agricultural depression has not reached its lowest points.

THIS from the letter of a friend just received: "'Horticola' has pulled my latch string, and he told me such a 'whopper' about your corn which he saw last week at the Rural Farm (12 or 14 feet high and six to ten ears to a stalk!) that I—I—I— felt ashamed of our *tall corn* and consoled myself with the idea that there was room enough on the stalks for all the ears that were inclined to grow. If you have such stalks you had better exhibit a few at the various fairs."

IT is usual among gardeners to save the seeds of the first tomato that ripens, no matter how small or ill-shaped. It is better to wait a few days and select seeds from the largest, firmest specimens and those which ripen fully about the stem. We want tomatoes that will keep longer than any now cultivated. To this end, it would be well to save as many as could be spared and, exposing all in the same manner, select seeds only from those which remain firm and sound the longest.

WE have occasionally referred to a dwarf catalpa under the name C. Kæmpferi. It is a very distinct-looking shrub, the large leaves, of a bright, cheery-green color, growing so thickly as to completly conceal all branches. The form which this bush takes reminds one of a small balloon completely covered with foliage. Well, it appears that instead of calling it C. Kæmpferi, it is probable that it is a dwarf variety of the American Catalpa, C. biguonioides.

IN many lowlands and low-lying woods, thousands of racemes of a pretty white flower may now be seen. It is the Clethra alnifolia—a name which generically and specifically tells of a resemblance to the alder. But it is in the leaf not in the flower. Though found, for the most part, in swamps, it grows vigorously in dry uplands. It belongs to the Heath tribe of plants. Mention is made of the Clethra at this time, so that our readers may have their attention called to the shrub while in bloom, which may induce them to find a place for it in their gardens at a suitable time for transplanting in the Fall.

AMONG the friends well known to agriculture or horticulture, who have the present season visited the Rural Farm, we may mention Samuel B. Parsons, Gen Le Duc, Henry Stewart, Mason C. Weld, F. W. Bruggerhof (Thorburn & Co.,) W. H. Gleason (R. H. Allen & Co.) Samuel Parsons Jr, and Peter B. Mead. The interest they manifested in our tests and the growing crops, and the pleasure which they seemed to derive from examining them were very gratifying to the folks of the Rural Farm.

THE MEAT CANNING BUSINESS is growing to vast proportions in this country, especially in Chicago, which now has in operation more canning factories than the whole of the rest of the country. Prices at the factory are 20 cents a pound for cooked beef and 25 cents a pound for cooked and pressed tongues, the canned goods, of course, consisting entirely of good, nourishing food. This kind of food should be used in many more households than it is at present. In country places where the butcher's cart is seldom seen, what greater convenience can there be than that which enables the housewife at a moment's notice to place on the table the best of beef, tongue, ham, bacon, chicken or turkey.

FROM the best data at present attainable this year's wheat crop will amount to about 290,000,000 bushels, and over and above the amount required for seed and home consumption, we shall have a surplus of about 180,000,000 bushels for export. If our wheat production is to be kept up at anything like its present magnitude it seems not unlikely that we must be willing, at least at the outset, to sell at prices which will force many of our foreign competitors to withdraw from an unprofitable branch of industry. From the latest European advices, however, it seems that the crops across the water, especially in England, are so poor that we shall find a much better foreign demand than we had reason to expect some time back.

IT has been generally supposed that to bury the body of an animal that had died of anthrax, or black-leg, was an effective mode of preventing contagion from the carcass. In a paper read by M. Pasteur, the celebrated scientist, before the Academy of Sciences, Paris, on July 13, it was shown how the common earth-worm may be the means of propagating the disease under such circumstances. When putrefaction advances the parasites that generate the malady are destroyed, but some infected blood and other liquid matter escape into the earth surrounding the body producing germs that may remain inactive for years, but which contain life capable of producing anthrax whenever the opportunity presents itself. Often the germs appear at the surface of the ground over the body of the animal, and Pasteur says they seem to get there through the agency of earth-worms that carry them in their alimentary canals. When the dust of this earth brought up by the worms dries, it is blown upon the plants eaten by the animals which thus become affected. Germs of other diseases, it is thought, may be conveyed in like manner.

Literary Miscellany.

FOUR-LEAFED CLOVER.

Long, long ago I read of one who sought
So far and wide, in many climes and ways,
For four-leaved clover: but he sought in vain,
And went home empty after many days.

Weary at last, he sat by his own door,
And there, right at his feet, the treasure found.
It was so near he had not thought to look
So near at hand and on such homely ground.

And so we often overlook what lie
Right at our feet, and call them common things.
The bird of brilliant plumage and no song
I count less lovely than the bird that sings.

"But O, we are blind. "Had I that gift,"
We say, "were this good or that talent mine,
How would I use it? What good would I do?
Poor blind mortals! how we "seek a sign!"

Each one of us has for its earnest use
Some talent given, five or two or one;
It is no small thing if we use it well,
No small thing if we miss the words, "Well done."

And many blessings come as falls the dew—
Unheard, unseen—and we perceive it not,
So many a battle's fought and victory won,
Where, calm and silent, no man knows the spot.

The four-leafed clover grows right at our feet,
The good is here that we so long have sought.
Let us be watchful lest the clover grow
So low and humble that we know it not.

LILY DAVIS.

CHAPTER I.

"Which is the prettier of the two? Why, the little dark one, of course. Who is she, by-the way?"

"Haven't the slightest idea; only saw them yesterday. Don't admire your taste, though, Hammond.

"As you like; in my opinion the dark one is the prettiest girl I have yet seen in Ryde; and I lay you twenty to one that I know her before the week is out."

"Not at all improbable," returned Rutherford, adjusting his tie. "When you do know her, introduce me to the sister—should think they are sisters, they dress alike."

"Y-yas; rathah neat get up—those blue jerseys," broke in a third speaker, who had just dropped his eyeglass after a long stare in the direction of the sisters. "What do you say to cutting wound by the band and having anothah look? We should meet them."

"Better stay where you are; tney will come back," said Hammond, drily.

"To look at you, I suppose? I declare you are getting insufferable," returned Rutherford, good-humoredly. "Can't imagine what the girls see in you to admire."

The two young men turned off together down the pier. A glance would tell you what they were. Young subs, from their heads to their shining boots. Square shoulders; irreproachably-fitting coats, faultless trousers, straight collars, light ties, hats the sixteenth-part of an inch on one side, an erect carriage, with the faintest suspicion of swagger, just enough in their own estimation, to raise them above the common herd, and prove undeniably to outsiders that they were officers and gentlemen. Good-looking fellows they were undoubtedly, and frank, good-hearted fellows also, despite their youthful vanity, which was harmless and very amusing.

The worst of the three companions was the man they left leaning against the pier-rail, Arthur Hammond. Older, taller, and broader than either of the other two, a magnificent figure six feet two inches in hight, a manner half-frank, half-cynical, with a dash of carelessness in it that possessed an extraordinary charm for most people who knew him, and a face that had a certain dark beauty of its own, but which a coarse mouth prevented from being strictly handsome.

"I like that little thing," he soliloquized. "I wonder who knows her? I must get introduced; it will be something to do, and things have been frightfully slow for the last fortnight."

Just then the sisters in question came slowly in sight, and bowed to a young man, ensconsed in one of the covered seats, as they passed.

"They know Brimley," pursued Hammond to himself. "That will do; he isn't in our set, but I will get him to do the formal and drop him afterwards; probably they are not in our set either, but it doesn't matter."

The wearers of the blue jerseys—Mabel and Lily Davis—paused at the pier-head, and looked over the sea and down at the boats rocking lightly beneath them.

"Here comes the Southsea steamer," said Mabel, looking where the crowded packet-boat was noisily beating her way through the calm blue water. "Shall we go and see her come in?"

"More vanity and vexation of spirit!" sighed Lily, comically. In flat contradiction to her name, she was the brunette. "No: I don't want to see the landing; there are sure to be the usual number of nice people we would like to know and can't, I am sick of it, Mab; we are the best-dressed girls on the pier, and you are the prettiest, and yet we don't know a soul worth speaking to."

"Don't fret yourself about it now, Lily. Let us be thankful that we are here together for an hour."

"Certainly it is a treat, Mab," said the other, with a look at her sister that had a world of love in it. "I would give anything to know those Carruthers girls, but I expect they would never know us; and yet people *do* get into a nice set who are no better than we are. How do they manage it, Mab?"

"They are richer than we are, that is the secret," returned Mabel, turning her delicate profile away from the sunlight. "Money covers multitude of sins. If we had twenty thousand pounds a-year, people would forget that we were ever connected with a livery-stable."

A little vindictive sparkle came into Lily's soft eyes.

"Marry Brimley, and you will have money enough: I'm sure he worships you."

"I hate Brimley!"

"Be quiet," said her sister, quickly. "He is coming this way; and I declare, he has one of the officers with him. What an extraordinary thing! I didn't know he knew any of them."

Little Brimley came up blushing. He was a genuine little fellow, despite his lack of polish, and his adoration of Lily was unfeigned and sincere.

"How d'ye do, Miss Davis—a beautiful afternoon, is it not?—Let me introducc my friend Mr. Hammond."

Hammond raised his hat gracefully to the sisters.

"Are you not too far from the music to enjoy it? Shall we stroll nearer?" he said, his well-bred voice sounding pleasantly in their ears; and in another minute Lily found herself walking by his side, while little Brimley followed abstractedly with Mabel, contenting himself with the back view of Lily's graceful figure, and envying Hammond from the bottom of his heart.

There was the usual light, mutual cross-examination that takes place when two people first become acquainted with each other.

"Were you at the concert last night, Miss Davis?"

"Yes; odd I didn't see you. Where did you sit?"

"In the second row of seats."

"Ah! I was farther back. You were near the Carruthers, then? Nice girls—do you know them?"

"No; we don't know any one here," coldly.

"Then I consider myself fortunate in being the first to make your acquaintance," gallantly.

After this the conversation became more interesting. Hammond never lost an opportunity of conquest, and the present prize was attractive enough to warrant some trouble in the winning of it. It was not what he said that fascinated his victims, but the winning intonation of his voice, and the softness of the glance that accompanied the most ordinary sentence—a glance more full of subtle flattery than a string of conventional compliments, and which few women could resist. In a very short time, without actually saying so, he had inferred that Lily was the fairest specimen of girlhood in the country, that her appearance in Ryde had suddenly awakened in him an interest he had never felt before; that he had vowed he would move heaven and earth for an introduction; and that now he had obtained it he would absolutely *languish* for their next meeting.

At the same time he was mentally taking notes of her in his own fashion.

'Simple little thing! Not in society, but would like to be. Is she powdered or not? Can hardly tell."

As for Lily she was happy. In her opinion she had the handsomest man on the pier, as her cavalier was certainly the tallest; more than all, he was a gentleman, and this was his greatest charm for her. She was not so foolish as to believe implicitly all his words implied, but she knew she was pretty, and it was very pleasant to think that he had been struck with her, and preferred her society to that of the many girls he bowed to as they passed them in the stream of promenaders.

The sun stooped lower towards the sea. The music stopped. The people began to disperse.

"Six, Lily, and we promised to be in at half-past; we must go back," said Mabel.

"We go the same way, I believe?" said Hammond.

And they went the same way, and he parted from her at the door, with a lingering pressure of the hand and a low "I may hope to see you to-morrow, may I not?"

Lily went in with flushed cheeks.

"He is so delightful," she said to Mabel. "So unlike the usual men we meet; and he really seems anxious to know us."

His attentions flattered Lily and pleased her; but at the same time there was a little drop of bitterness in her cup.

His sisters were in Ryde, and he did not introduce her to them.

If Mrs. Davis had been a sensible woman, she would not have allowed her daughters to receive any attention from a man whose mother and sisters did not consider them their equals; but she was weak and good-natured, and rather encouraged than thwarted the intimacy, and so the mischief went on.

The six weeks drifted by.

"Only one more evening, and then we go back to the old dull routine, Mab? How I shall hate it: how I shall hate the people we meet after this little oasis in the desert."

Mabel's only answer was to kiss her, and stroke the pretty dark head that had dropped upon her shoulder.

"We shall come here again next Summer; mamma said so to-day; but I almost hope you won't see Mr. Hammond any more, childie."

"Why?"

"I don't know—I don't believe in him somehow or other. He is very irresistible; but don't lose your heart to him. I am sure he is an utter flirt."

"I am sure of it, too, but let me be happy, now, Mab."

There was witchery in the music that night, a glamor in the lamplight and starlight, a dreamy melody in the low wash of the glistening waters against the wooden landing-stairs. It was a night whose influences swept the strings of love and sorrow, and set them singing in many a heart.

"Don't go in yet," said Hammond, as they left the pier together.

"I must," said Lily, feebly.

"Why should you? your mother and sister are far behind, and they have Brimley with them. Just one more stroll by the rock-walk. It is our last evening, Lily."

Lily looked doubtfully back towards her mother, and wistfully in the direction of the rock-walk.

"Do come," he pleaded. "I have so much that I must tell you. Your people know you are with me. Don't be cruel, and refuse me a last walk; think how wretched I shall be when you are gone."

Would he really be wretched? Her heart throbbed with delight; and he had so much to tell her. Who knew what it would be?

"Well, for half an hour—no more."

The rock-walk was almost deserted. They sat down on a sheltered seat, just large enough for two.

"What time do you start?"

"Mid-day, I think."

"How the time has flown?"

"Time generally goes quickly at the sea."

"Don't talk in that matter-of-fact tone; turn round. I want to see your face," he said, bending his head to hers.

"I'm sure my profile will do as well, it's better than my full face," she answered, mischievously.

"Lily, you shan't teaze me on our last evening. Remember I may never see you again."

The laughter went out of her face in a moment.

"We shall come back here next Summer," she said, with a little wistful glance at him that said so much more than her words.

"And I may be at the other side of the world; there is a rumor of our being ordered out next year."

This was a reserve shot of Hammond's that always told.

"Ordered to India?" she said, and was it the word India, or a colder breeze from the sea, that made her shiver involuntarily?

"Lily, you will write to me, won't you?"

"I haven't got your address."

"I will give it to you, and I know yours. By-the-by, do they read your letters at home?"

"Sometimes. I expect mamma would wonder why you wrote, and want to see."

"Humph! Well, look here, I shall find an excuse to write to you easily enough. I shall write an ordinary epistle, and slip it in a private sheet for yourself, and you need only show one. Do you understand, pet?"

Mr. Arthur Hammond had entered into this honorable arrangement with at least four other young ladies at Ryde and Southsea, though, to their credit be it known, that each girl fondly believed herself to be his only correspondent.

"But won't you—won't you tell mamma?" she said, hesitatingly, playing with the links in his cuff.

"What! tell her that I love you, with my present prospects? She would box my ears for me. No, little woman; no one must know of it but you and I; and after all, darling, it concerns no one else. You don't love any one more than me, do you?"

Ah! the look of perfect heart-surrender she gave him from her lovely eyes! It should have aroused him to a sense of the sorrow he was dealing her. It should have sent him on his knees at her feet to beg for her forgiveness. But he had played the game too often to be troubled by such trifles."

"We must go back! I am sure we have been longer than half an hour. I shall get scolded! Oh, do come!"

"You don't think I am going to let you go like like this?"

What foreboding was it that made her hesitate? Had he not told her he loved her? Did she not consider herself engaged to him now?

"No one has kissed me before," she murmured, hiding her face.

"All the more reason why I should!" And laughing, he held her hands fast and, stooping down, took away the first freshness and purity from the sweetest lips that he had ever kissed.

Poor, foolish little Lily, had she only known how bitterly she would regret those kissses! They seemed a sacred seal and sign of love to her; they were merely a minutes amusement to him.

They strolled slowly homewards after that, and parted at the dark, open doorway of the house where the Davises were staying. He took her face in both his hands.

"I shall want a letter every week. Good-bye, darling, good-bye!"

As she sprang up the stairs, flushed and glowing with his warm kisses on her lips, she met Brimley on the wide, lamp-lit landing. His face was very pale, but she did not notice it; she only noticed that he looked short and very plain after the splendid specimen of manhood she had just left,

"One minute, Miss Davis, I implore you! Give me a minute's time to speak to you!"

She halted impatiently; she was eager to pour the story into Mabel's ears.

"I am dreadfully tired, Mr. Brimley!"

"I know. I feel I am a brute to keep you, but I must speak." He grasped the banisters in his nervousness. "I have been telling your mother to-night what you must have guessed long ago, and she has given her consent——"

"To what?" gasped Lily.

"Oh—oh! Lily—Miss Davis—I know I am a rough, unpolished fellow, and can't flatter you and make low speeches, but I love you—upon my honor I love you more than I love my life! Heaven only knows what I have suffered this last fortnight, Lily! Won't you say a kind word to me Lily!

He caught her hands, but she wrenched them away.

"Don't; you frighten me, Mr. Brimley! I—I don't love you—I never could! I am very sorry. Good night."

She turned and fled up to her room and shut the door. Brimley was an honest, worthy little fellow, the son of a rich tradesman, and the liberal allowance he received from his father equalled the incomes of half a dozen of the subalterns of the 200th Regiment. He was in love for the first time in his life—steadily and truly; and he would have made Lily a happy wife, so far as love and devotion can make a woman happy.

"I know what has done it," he muttered to himself. If that officer had not come in the way she would have loved me!"

Meanwhile Mr. Arthur Hammond sauntered contentedly home to his quarters.—[To be continued.

MAGAZINES FOR AUGUST.

The Herald of Health.—Contents: Common Mind Troubles; Feminine Athletics; The Wisdom of Trust; Humorous Paragraphs; A Presidential Candidate; What shall we do with our Daughters? Record of Hygienic Progress; Good Habits Taught in the Sunday-school; Courage; Darwin's Reply to a Vegetarian; Diphtheria from bad Water; Soda and Saleratus; Garments for Little Girls in Warm Weather; Bread and Disease; Light Unleavened Cakes; To Cure Fits of Sneezing; The Era of Pads; Sanitary Errors; Honors to Woman; To Test Milk for Water; Women's Headaches; Mouth Disinfectant; The Treatment of Sprains; Current Literature; Health Foods.

What Shall We do with our Daughters?—The question at the head of this article is going the rounds of the newspapers, and receiving all sorts of answers, according to the opinions of the various writers who discuss its merits. It does not seem a very difficult question to answer.

Let us give our daughters a scientific education. It is just as useful for them as for our sons. Then they would cease to read so many novels, which only excite that part of their nature already too well developed. The knowledge of various sciences would remove from woman's life a very grave danger; that of sentimentalism. Novel reading develops the sentimental, the emotional sides of their natures. A study of the sciences would develop the more cool, self-reliant womanly character.

Much more might be said. We will only add, so far as possible fit them for those duties of life which are almost sure to come to them after they become mature. Thus will they become more charming as daughters, more useful as women, more happy as mothers.

The American Naturalist—Contents:—The Fabrication of Aino Cloth; English Birds compared with American; On the Age of the Laramie Formation as indicated by its Vegetable Remains; Notes on the Flowering of Saxifraga Sarmentosa; Destruction of Obnoxious Insects by means of Fungoid Growths; Recent Literature; General Notes; Botany; Zoology, Anthropology, Geology and Palæontology, Microscopy; Scientific News; Selected Articles in Scientific Serials.

This number maintains its usual standard. The articles are treated in an entertaining manner, while they are filled with the power of enlightenment obtained from scientific research. Readers must be educated to a point of appreciation for deep literature to enjoy the contents of its pages, and for such it is intended.

Good Company, Number Eleven, opens with Notes of Travel, by Charles Dudley Warner, at the end of which he throws the charm of his style about an account of the immense Chicago stock-yards in a way to delight the new Porkopolis.

An idea of the prevailing Southern diet and the obstacles to introducing improved methods in cooking is given in an account of personal experience by Mrs. Helen Campbell.

Those familiar with the attractive grace of E. S. Gilbert's nature-studies will not need to be told that his "Midsummer" is adapted to the season and entertaining. Seasonable, too, is Dora Read Goodale's vividly descriptive poem "A Summer-night Storm," and another gracefully descriptive bit of verse, "Sunshine." Mrs. Celeste M. A. Winslow's verses, "Border-lands," have decided merit.

Octave Thanet has the "Romance of a Medicine Bottle," and there is a full allowance of stories by Ellen W. Olney, L. K. Black, Mabel S. Emery and David Ker; also contributions from B. F. DeCosta, Mrs. Edward Ashley Walker and J. B. T. Marsh; and several shorter sketches.

BRIC-A-BRAC.

"The census infamy" is what it is called now by the jealous citizens of St. Louis who have heard that Chicago has the larger population.

An Omaha bride was married barefoot because her husband's family went that way, and she didn't want to seem proud.

Doctor—"You must drink claret to build up your system." Patient—"Oh, don't ask me to do that, doctor. I am a wine merchant; I know how it's made."

Old "Speckle" rose from off her nest
And cackled with much vigor,
As if to say, "That egg's my best,
No hen can lay a bigger."
While Johnnie, standing near the gate,
In mute contempt was gazing,
As if he could not tolerate
The fuss the hen was raising.
His protest took her down a peg—
He raised his voice to say it—
"You fink you're smart—Dod made zat egg—
You toodn't help but lay it!"

A clergyman in Pittsburg lately married a lady with whom he received the substantial dowry of ten thousand dollars and a fair prospect for more. Soon afterward, while occupying the pulpit, he gave out a hymn, read the first four stanzas and was reading the fifth—

Forever let my grateful heart
His boundless grace adore—

when he hesitated and exclaimed: "Ahem! The choir will omit the fifth verse," and sat down.

The congregation, attracted by his apparent confusion, read the remaining lines—

Which gives ten thousand blessings now
And bids me hope for more.

THEN AND NOW.

'Twas in the gloaming,
By the fair Wyoming,
That I left my darling many years ago,
And memory tender,
Brings her back in splendor
With her cheeks of roses and brow of snow.

But where in thunder,
Is she now, I wonder?
Oh, my soul be quiet, and my sad heart hush:
Under the umbreller
Of another feller—
Ah, I think I see her paddling through the slush.
—Deadwood Pioneer.

SCOLDING.

A LITTLE girl, not six years of age, screamed out to her little brother, who was playing in the mud:

"Bob, you good-for-nothing scamp, come right into the house this minute, or I will beat you till the skin comes off."

"Why, Angelina, Angelina dear, what do you mean? where did you learn such talk!" exclaimed the mortified mother who stood talking with a friend.

Angelina's childish reply was a good commentary upon this manner of speaking to children;

"Why mother, you see we are playing, and he's my little boy, and I am scolding him just as you did me this morning; that's all."

SMALL THINGS.

The smallest crust may serve a human life;
The smallest act may lead to human strife;
The smallest touch may cause the body pain;
The smallest spark may fire a field of grain;
The simplest deed may tell the truly brave;
The smallest skill may serve a life to save;
The smallest drop the thirsty may relieve;
The slightest look may make a heart to grieve,
Naught is so much but that it may contain
The rose of pleasure or the thorn of pain.

A GOOD CHARACTER FROM HIS LAST PLACE.

In Galveston, as elsewhere in Texas, when a prisoner has no money to employ counsel, the judge appoints a young lawyer to defend the doomed man, very much as the pauper patients in a hospital are turned over to the young doctor to learn the professsion on. Not long since quite a young lawyer was appointed to defend a man for burglary. The young lawyer, after consulting with his unfortunate client, said:

"May it please your Honor, I want this case continued until I can procure the attendance of material witnesses."

"What do you expect to prove?" asked the court.

"I expect to prove that my unfortunate client is a quiet, sober and industrious man."

"By whom do you expect to prove that?"

"By the officers of the penitentiary, where he has spent the last five years."

PLANTING HIMSELF TO GROW.

Dear, little bright-eyed Willie,
Always so full of glee,
Always so very mischievous,
The pride of our home is he.

One bright Summer day we found him
Close by the garden wall,
Standing so grave and dignified
Beside a sunflower tall.

His tiny feet he had covered
With the moist and cooling sand;
The stalk of the great tall sunflower
He grasped with his chubby hand.

When he saw us standing near him,
Gazing so wonderingly
At his babyship he greeted us
With a merry shout of glee.

We asked our darling what pleased him
He replied with a face aglow.
"Mamma, I'm going to be a man;
I've planted myself to grow."

WHY HE GOT A RECEIPT.

The following story is told of a crafty lawyer, subtle as a fox, who lived in Halifax:

An Indian of the Miami tribe, named Simon, owed him some money. The lawyer had waited long. His patience at last gave out, and he threatened the Indian with lawsuit, process and executions. The poor red man got scared and brought the money to his creditor. The Indian waited, expecting the lawyer would write a receipt.

"What are you waiting for?" asked the lawyer.

"Receipt," said the Indian.

"A receipt?" said the lawyer, "a receipt—what do you know about a receipt? Can you understand the nature of a receipt? Tell me the use of one and I will give it to you."

The Indian looked at him a moment, and then replied:

"S'pose maybe me die; me go to heben; me find the gate locked; me see the 'Postel Peter; he say, 'Simon, what you want?' Me say, 'Want to get in.' He say, 'You pay Mr. J——dat money?' What me do? Me hab no receipt. Hab to hunt all ober the other place to find you."

He got a receipt.

TOO MUCH FAITH.—Traveling on one of our railroads, a little four-years-old lump of boy humanity kept his father and mother in a state of chronic fidgets by continually thrusting his head out of the window to explore the outer world. All remonstrance and threats were unavailing. Finally a bright idea struck the father.

"Fred, Fred," he said, "keep your head in or the wind will blow your hat off!" And in order to frighten his hopeful he slyly slipped the hat off the little one's head and concealed it. As soon as this had been done the child began crying and could not be appeased. Finally "pater familias" told him to look in an opposite direction and he would whistle the hat back again—all of which was very neatly done, and the happy parents settled back in their seats and began to converse very pleasantly, thinking they had cured little Freddie But not so, for in a short time he seemed to brighten up, and away he sent his hat through the car window, shouting, as it disappeared:

"Papa, whistle again."—Patriot.

HISTORICAL SNATCHES.

NOTES and bills first stamped, 1782.

Use of quicksilver, discovered in refining silver ore, 1540.

Pens for writing were first made from quills in 635.

Paper money first used in America, 1740.

Signals at sea first devised by James II., 1665.

Tulips first brought into England, 1578.

Thread first made at Paisley, in Scotland, in 1722.

Mortars for bombs first made in England, 1543.

Microscopes first used in 1621; the double ones, 1624; solar microscopes invented, 1740.

Letters were invented by Memnon, the Egyptian, 1822 B. C.

Earthen vessels were first made by the Romans, 715 B. C.; the first made in Italy in 1710; the present improved kind originated in 1763.

Insurance policies were first used in Florence in 1523; first society established at Hanover, 1530; that at Paris, 1740.

For Women.

CONDUCTED BY MISS RAY CLARK.

ROSEBUDS.

In the merry month of roses, around the wanton vine,
Her slender, rose-tipped fingers in careless grace entwine.
As the silver moon is fading before the radiant show
Of the gorgeous golden sunrise which sets the heavens aglow,
The maiden's dainty fingers, as in eager quest they fly,
Weave meshes round the tender heart of him who stands close by,
Gazing with all his ardent soul on her he loves so well,
Enchanted and enraptured by the sweet, resistless spell.
As glorious as the morning is the charm that binds them there,
Where diamond dewdrops glisten in the incense-laden air,
For on golden wings the phantoms which they eagerly pursue
Will fade away as sunbeams drink the beauty-giving dew;
For in the sunrise of their lives the youth and maiden stand,
Intent upon one purpose with eager heart and hand—
Picking rosebuds.

MY GOOD FOR NOTHING.

What are you good for, my brave little man?
Answer that question for me, if you can;
You, with your fingers as white as a nun;
You, with your ringlets as bright as the sun!
All the day long with your busy contriving,
Into all mischief and fun you are diving;
See if your wise little noddle can tell
What you are good for. Now, ponder it well!

Over the carpet the dear little feet
Came with a patter to climb on my seat,
Two merry eyes full of frolic and glee,
Under their lashes looked up into me;
Two little hands pressing soft on my face,
Drew me down close in a loving embrace;
Two rosy lips gave the answer so true:
"Good to love you, mamma; good to love you."

A GREAT NEED.

I WAS riding, a while ago, over a suburban road, along which were pleasure-grounds, etc., apparently much resorted to by the people of the city. I was struck by the large number of public houses and the various attractions used to secure the patronage of the traveler or pleasure seeker, and I could easily imagine—as the hot sun blazed down in a relentless glare that shriveled the leaves and dried up the dew-drops, and the dusty highway stretched out a long, white, dreary level—how very enticing to a poor, heated, tired mortal some of those wayside inns must be.

Cool, shady piazza, with glimpses through open doors of pleasant vistas beyond; woodbine and climbing roses, in gracefully festooned masses and the sign-boards painted in every device that could lure the fancy and charm the imaginative youth. Alas, that the road to ruin should have so inviting an entrance! For, charming and beautiful as the exterior may be, the same drink is sold that ruins soul and body in these palaces as in the lowest groggery. Of the two places above mentioned, the former are immeasurably the more harmful, for many a boy and man who would on no consideration patronize a "saloon" will unhesitatingly enter one of these resorts, and, like modern Esaus, swayed by the influences which *will* work so powerfully on human nature, sell their birthright—an honorable, useful life, vigor of health and intellect—for what is infinitely worse than a mess of pottage. Humanity is weak, and extremely liable to be influenced in an unguarded moment; moreover, weariness, hunger and thirst are weaknesses that must hold us all in more or less bondage while we are in these tabernacles, so let us have places of wayside entertainment for man and beast, and plenty of them, but let them *not* be of such a character as shall transform man into beast; let the white banner of Temperance rise over them all, and let its spotless folds float triumphantly in a breeze that shall bear upon it no fumes of alcohol.

The Woman's Temperance Union is doing a grand work. Cannot the other temperance organizations, of which there are now so many, lend a helping hand? There should be more suburban temperance hotels.

Now, somebody will say they could not be supported. I think they can, provided they try as hard as their opponents to secure support and patronage; the harmlessness of the dove is a very good and indispensable qualification for this work, but a little of the wisdom of the serpent would not come amiss; now, for instance, since so much depends upon outside attractions, especially in extremely hot, or excessively cold, or stormy weather, why not take a hint from the enemies of the cause? Have they irresistibly attractive signs? Let us have the signs of our temperance houses tenfold more so. Let us have, for the heated term, pictured icebergs and fountains, whose falling spray shall almost cheat the sunbeams; let us have (blushing and glowing) upon our sign-boards, fruits and flowers that shall tempt the very birds and bees; golden glaciers of ice-cream, and foaming glasses of soda. Honeysuckle, lvies, and climbing roses, how willingly will they lend *us* their aid to make our inn a place of delight for the lover of the beautiful! So, with all these, with rooms cool and airy in Summer, and cozily warm in Winter—for the cold winds and snow-storms will come, and we must be prepared for them also with glowing fires, and the various comforts which warm and cheer, and leave no sting behind.

I think success should and would smile upon our efforts.

Now, if some good temperance reformers, with the requisite energy and executive ability, would take hold of this work with a will, there would be a grand and visible advance of the temperance reformation. There is, by far, too much talk, and too little, real hand-to-hand work; those who cannot lecture, and organize societies, need not feel that they are therefore to be excused; there is a work for every one; let us each do our part, earnestly, faithfully, prayerfully, "for God, and home, and native land." ERMENGARDE.

New York.

OPEN LETTER.

DEAR MISS CLARK:—Will you kindly allow me, through the columns of the RURAL, to reply to several ladies at once, who have written to me publicly as well as privately? Much as I would desire it, time and energy would fail me were I to attempt to answer every one personally.

First, the lady in Alabama, whom I have neglected shamefully. She sent me some Florida moss and two beautiful pods (or what is the right name?) of cotton in its natural state. I was delighted with the gift, it seemed so thoughtful of her to send to a Northern woman specimens of Southern products, very seldom seen in this region. I really intended to write and thank her, but I blush to say that I never did so. Still, if she knew how much I had to do, I am sure she would excuse me. This lady, by the way, gave me the first kind, encouraging words that I ever received from RURAL readers. I shall always keep and appreciate her beautiful letter. If she would like to tell me of her success in drawing, I should be glad to know.

Next, the lady who asked for a specimen of my needle-work. I have not forgotten her, but I have done so little lately that I have had nothing suitable to send. In a short time I am going to do, as the children say, "piles" of embroidery—and then, I will remember my neglected correspondent.

Now the lady who asked for a catalogue of engravings. I was able to obtain a list of heliotypes but, so far, I have learned nothing of any particular catalogue of steel plates. I could write out one, if I took time enough, consisting of pictures familiar to me, but I think our friend would find more satisfaction in writing to Earle & Co., No. 816 Chestnut St., Phila. They will give her all the information she needs upon the subject of engravings, photographs, oil paintings, decorated articles of all kinds, as well as every variety of picture-frames.

Lastly, the lady who writes in the RURAL for July 31. I think I know exactly how she feels, and venture to say that she is making encouraging progress, otherwise she could scarcely have come to the difficulties indicated by her letter.

As to the lines in engravings being fine and delicate, I would say, it is not necessary to copy *every* line in a picture, though for a beginner this is the safest way, unless the design be *too* complicated. Aim for the *general effect*, keep the proportion of objects, reproduce light for light, and shade for shade.

Patterns and natural flowers are both useful. Patterns have the advantage of keeping their shape and position, while natural flowers change faster than one can copy them. But don't depend upon the former to the exclusion of the latter. In fact, discard the former altogether, as soon as you can safely depend upon the latter. Constant Reader was exceedingly unfortunate in her selection of a daisy, as, next to a rose, it is about the most difficult flower known to an artist. Buttercups, pansies, hollyhocks, and, indeed, almost any single flowers, are much better for not only an amateur, but an experienced draughtsman. She might, however, in ordering flower patterns, ask particularly for one containing a daisy—*then*, after copying it, she would better understand how to draw one from nature. But, after all, drawing can only be learned by practice—it cannot really be taught. MARGARET B. HARVEY.

YOUR FUTURE HOME.

IT used to be the custom of thrifty New England girls, and those in other sections, to begin very early to accumulate stock toward the "setting out" in that new home all expected some time to have.

It was a common topic of conversation among mothers; they compared notes with maternal pride concerning the number of bed-quilts little Jane had pieced, and the stockings Eliza had knit.

Just as early as it could be done, the six little silver teaspoons were bought and marked, and lucky indeed was the little girl to whom grandma handed down her best feather-bed and all its belongings.

I have heard my father tell of an old lady who said she would not think much of a girl who would consider her outfit complete without a pillow-case full of stockings of her own knitting. If that was the law now about a wedding outfit I think the country would fill up with old maids.

Manners and customs change with the times, but it is still true that young girls begin very early to lay the foundations of their future homes. It depends more upon what a woman is than upon what she has whether her home will be one of prosperity and happiness or the reverse. The habits and temper which the little girl adopts are very sure to follow her on through life; they are parts of her "setting out."

Better than rosy quilts of most intricate devices is a sweet disposition in the housekeeper. No treasures of silver or embroidered tapestry can make a home delightful where this is absent. If sharp words ring through the halls and echo from room to room one may well sigh for "a corner of a housetop alone."

I do not know of one thing besides intemperance that can make a home more thoroughly wretched than a scolding house-mother. It is an easy habit to take up; there is enough to try the patience and provoke the hasty speech almost every day. There is but one way of safety. The iron hand of self-restraint must be brought to bear upon the spirit, and the earlier it is commenced the easier the task.

People sometimes change greatly in mature years, but it is very seldom.

Think of it, girls, seriously while you are at home under father's roof, and ask yourselves this question: "Do I want to be known as a scolding woman when I grow up and have a home of my own?" Cultivate loving, gentle speech among your brothers and sisters. Keep back the hasty words; learn to forgive, and return soft answers to hard speeches.

It will never give you a moment's pain to do so, but will save you many bitters tears, and make you a blessing to others.

With this rare jewel you have in your hand an Alladin's lamp that can make beautiful the plainest rooms in your future dwelling. Without it you would be poor in a queen's palace. J. E. M.

WORLDLY MATTERS FOR GIRLS.

Color.

THIS article is mainly to assist in the selection of the ribbons and bits of color with which a girl loves to brighten up the more sober groundwork of her dress.

The fundamental rules of color are, blue and pink for blondes, red and yellow for brunettes; but there are exceptions to the rules, for instance blondes of the "strawberry" type should never wear pink, but they are not necessarily confined to blue. The new shades of heliotrope are becoming to nearly all, and green to most light complexioned people, pale green (never use a pronounced shade of this color) is particularly adapted to persons having a little color, it brings out a slight flush. Those having a great deal of color can wear pink, it has an opposite effect, and tones down the complexion.

There are, of course, other colors to choose from and I think that nothing is more suitable than black velvet, it makes the richest contrast to light hair and complexion, that can be found.

Brunettes with clear olive complexions can wear pink and blue, also deep orange and pale lavender. Corn color and dark cardinal are suitable for the darkest brunettes, pale cream is also a very desirable shade for this type.

For those who are neither extreme (and they are the majority) there is a great latitude of choice, but care should be taken especially in the use of pink, it generally gives a yellowish cast to a skin which would otherwise be clear.

Try a color before purchasing, by holding it against the face, and avoid those which seem to deaden the eyes and hair. MISS M. D.

THINGS TO BE THANKFUL FOR.

"Oh!" exclaimed a lady, who had just been conducted through a public building where the old, infirm, deformed and helpless inmates were supported by public charity; "if people could ever learn from others' experience how it would cure the discontent of many grumblers, to go through a place like this, I should think they would come out thanking God for the power of supporting themselves by hard work, and for the privilege of giving to the support of those, so much worse off than themselves." Should not a mother especially be grateful for the gift of sound, healthy children, perfect in the possession of their mental and bodily faculties?

Although the care of them is often wearisome, acting as a constant strain, both of the body and mind, yet how much more comfort there is in such labor of love, than in that where tender pity is the strongest feeling called into exercise. At the sight of such little deformed ones, we feel that we hardly realize our every-day blessings, and are not sufficiently grateful for them. B. C. D.

FOR MISS IRENE.

DEAR RURAL,—Permit me to say a few words in reply to Miss Irene of Fairfax Co., Va. I most certainly agree with her in her article on "Woman's Work;" she deserves credit for the vigorous use of her pen for general information to her RURAL sisters. I am a reader of the RURAL and ask that she will please not think that all of the farmers are the kind she speaks of. Delaware has some of the best farmers in the United States and they are not the kind Miss Irene speaks of.

She had better come to Delaware before she enters the matrimonial state. The Delaware women are not working themselves under the coffin-lid.

Delaware. DR. A. E. S.

WOMEN IN RELIGION.

E. L. T.

IN the New York Sunday Sun of July 4th appears a letter from a Michigan lady of atheistic opinions, in which the writer tries to prove that the higher education of women causes them to reject not only the traditions of the Church, but Christianity itself, and that their emancipation from its "bondage" is of advantage to them intellectually.

She thinks the way of the Church is to treat women as fools or children, over whom it can establish an intellectual domain to which men (accustomed to more freedom) refuse to submit.

She thinks higher education is teaching women that "it is to the unscientific doctrine of the church concerning their inferiority and natural depravity that they are indebted for their inferior position," and she believes that women should take the higher mathematics as a substitute for Christianity.

Think of that, sisters, substitute for the doctrine of "Peace on earth, good will to men," differential calculus, and for universal brotherhood and equality, geometry and surveying!

It is true, the Church formerly imposed great restrictions on women, but was it not an outgrowth of paganism?

After the Reformation—which was an endeavor to produce a purer form of Christianity—the condition of women was greatly improved. It is true, many modern, learned women have rejected part of the Scripture traditions, but to me that seems from lack of faith, and wish to look upon divine events from an entirely materialistic standpoint.

If women would only look upon scientific matters in a scientific light and spiritual matters in a spiritual light, they would not confuse their science with their theology.

FASHIONS.

Chemisettes are again in fashion.

Low shoes are worn a great deal to show the colors and embroideries on stockings.

Little girls wear their hair loose and flowing down the back, not braided or curled.

Rich and substantial fabrics are necessary when plain and untrimmed suits are preferred.

The new gold threads introduced into laces and embroideries are not tarnished by washing.

The favorite colors for figured lawn dresses are heliotrope, pale blue, pale rose and old gold.

Fancy ornaments, such as gold pins, daggers and arrows, are worn in the hair for evening.

When imitation pearl beads are used for embroideries they should be very fine to look real.

New lisle-thread gloves are in all the new shades of almond, drab, biscuit, gray and wood colors.

Black, white, and cream-tinted Surah silks are all used as linings, as well as the brighter colors.

Fashionable stockings are embroidered in rosebuds, forget-me-nots, buttercups and polka dots.

Almost every fashionable toilet has some hint of the rage for the bright and clever notions of the Japanese.

Foulard handkerchiefs are trimmed with Breton and Languedoc laces, and made into bows, jabots and fichus.

Japanese white straw hats are trimmed with white lilacs and bows of white satin ribbon for children's wear.

Quantities of gold lace, gold net, gold braids, galloons and cords are seen on summer bonnets and dressy hats.

Turbans, Fanchons, Derbies, Japanese Fayal and rough-and-ready, broad-brimmed hats are equally fashionable.

The strings of small bonnets are more frequently tied in a bow in the back over the chignon than under the chin in front.

When a floral tablier is worn the coiffure and corsage bouquet flowers must correspond with those sown on the tablier.

Yellow lace is much used for trimming dresses and jackets. It is sometimes worked with colored threads to match the dress.

Carnation stalk is a new tint of green that only blonds can wear, and is intended to console them for not being able to dress in yellow.

Breton lace is used in preference to Languedoc for trimming evening toilets of mull, crape, and even silk, its close and delicate patterns being more admired than the rambling designs of the Languedoc.

Shirring is more used than at any previous season for the front of dress skirts, but is now shirred horizontally, in wide clusters, instead of lengthwise, as it was formerly.

A pretty new style of cap is composed of a cream or colored silk handkerchief, edged with a dark fancy band, arranged with the points to the front, back and sides, mounted on a wire band, the center being puffed to form the crown. The hair must be worn a little high with it to render it becoming.

ABOUT WOMEN.

Two Japanese young ladies from Vassar College attract much attention at Saratoga.

THE Empress Eugenie has passed a night on the spot where her son was slain, and supported the trial better than could have been expected.

MISS FRANCES COLENZO, daughter of the Bishop, has written a book on the Zulus, and presents Cetywayo as a peace-loving and magnanimous ruler.

MISS SIDNEY PAUL GILL, the author of "I Want to be an Angel," has died at Newark, N. J., at the age of sixty years. She was born at Birmingham, England.

THE Princess Louise, wife of Lord Lorne, Governor-General of Canada, has adorned with her own hands the panels of a white door in her boudoir, by painting thereon the branch of an apple tree in leaf and fruit, so artistically that it is said the apples "are ripe and rosy enough to cause a second fall."

A NEW songstress has appeared in London. Theatrically she is known as Mademoiselle Nevada, or the Nightingale of the Sagebrush. This successful singer is Miss Emma Corriane Wixom, of Austin, Nevada, who after some tuition at home has been trained to additional excellence in Vienna, where she has appeared in opera.

THE Mrs. Wodehouse who was married at the British Embassy a few day ago to the Marquis of Anglesea, will be recalled as Miss King, of Georgia, who, ten years ago, was prominent in fashionable society in Washington during the season. In 1872 she married the Hon. Henry Wodehouse, brother of the Earl of Kimberly, who died in 1873. She is a perfect type of a Southern beauty.

A MIDDLE-AGED American woman is rejoicing that it has at last been settled by both the eclectic and historic societies of that Western State that the world generally may be permitted in the future to say Ar-kan-saw! A quarter of a century ago all Western men pronounced the word broadly, with a heavy emphasis on the last syllable, making it sound "very much Indian," and there seems to be no good reason for mincing the vigorous and resonant name after the broken accents of the French travelers, who, with the inherent self-sufficiency of their nation, first assume a sovereign right to mispronounce any word, and then spell the mispronounced syllables according to the dictates of their own fancy.

HINTS.

A SPOONFUL of stewed tomatoes in the gravy of either roasted or fried meats is an advantage.

LEMONS.—To keep lemons fresh, place them in a jar filled with water, to be renewed every day or two.

HOUSEKEEPERS may be glad to know that a tablespoonful of ammonia in one gallon of warm water will restore the color of carpets.

TO REMOVE grease from wall paper, lay several folds of blotting paper on the spot and hold a hot iron near it until the grease is absorbed.

PUT one or two red peppers, or a few pieces of charcoal, into a pot where ham, cabbage, etc., is boiling, and the house will not be filled with the offensive odor.

THOSE who object to tea-leaves for sweeping the carpets can use freshly-cut grass instead. It answers the same purpose for preventing dust, and gives the carpet a fresh, bright look.

SICK-HEADACHE can often be greatly relieved, and sometimes entirely cured by the application of a mustard plaster at the base of the neck. The plaster should not be kept on more than a quarter of an hour.

IF you want good starch, mix it with cold water; add boiling water until it thickens, then add a dessert-spoonful of sugar and a small piece of butter. This makes a stiff and glossy finish equal to that of the laundry.

FOR a damp closet or cupboard, which is liable to cause mildew, place in it a saucer full of quick-lime, and it will not only absorb all apparent dampness, but sweeten and disinfect the place. Renew the lime once a fortnight or as often as it becomes slaked.

A GOOD way to keep cut flowers fresh is to lay them in wet cloths. Take them out of the vases at night, sprinkle with cold water, and wrap them with cloth made very wet. The weight of the cloth will not crush the most delicate flowers, while it keeps out the air and prevents their falling to pieces or opening further.

ICED TEA is a nice as well as a fashionable drink for Summer meals, but it is not so generally understood that the best iced tea is not steeped in hot water. Just try "steeping" it for a few hours in cold water, using a little more tea than for the hot beverage, and having it strong enough to be weakened with ice water when it is served. The flavor and effect are much better than by the hot-water method. And, by the way, the same plan is coming to be more recognized as the best for the preparation of the herb teas used for medical purposes, especially such as throughwort (boneset) and others, which, steeped in hot water, produces an unpleasant and undesirable nausea. This effect is obviated by steeping in cold water, and the tea can be made much stronger, and used to better advantage.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

HOW TO LIVE IN SUMMER.

WE have received a pamphlet of 30 pages, called "How to Live in Summer," by Mrs. Amelia Lewis, former editress of the National Food and Fuel Reformer, London, England. It is published by the American News Company, of New York, price 10 cents. From it we extract the following: The operation we call roasting meat should never be carried on in hot ovens without covering. All boiling operations should be carried on by a steaming process. The broiling process has no reasonable basis; by it the meat is never thoroughly done, and when it is done it is burnt up and it has lost its finest juices.—Bacon is not the best dish for Summer breakfasts.—No boiling up of old coffee will ever make anything like a good cup.—Tea should be placed in a heated pot (silver, china or granite ironware), some warm water just sprinkled over it and after standing three or four minutes, the boiling water be poured on.—Many diseases that follow on Summer and are the curse of our Autumns are entirely brought about by carelessness in living.—Soups are by no means to be despised in Summer, but they must be *fresh soups*.—That evil stockpot of which ladies and cooks are so fond, is an article which should never be allowed in a kitchen where health is studied.—Fish of all kinds is an excellent food for Summer.—Fish pies covered with suet crust make a good meal. Suet crust is lighter than lard crust, but the suet must be chopped very fine and the crust be made of warm water.—Fish cooking should be encouraged in every way. Ladies and cooks should never think that they have come to the end of their inventive power when they have boiled or fried fish.—Roast beef should come seldom on the table in Summer.—There is no doubt that clear, fresh soups, made overnight, thickened with a little rice and sago, and warmed up the next morning, might give to many a delicate constitution more vigor for the day than either tea, coffee or milk, for the latter is not easily digestible for all adults.

For the workman there is not a more nourishing dish than

Brown Onion Stew.

Take some fine chopped suet and melt in a saucepan, add a good many onions cut right across, and partially brown them, sprinkle a little flour over them and stir well, adding warm water to make gravy. Put in pepper and salt, and whatever pieces of meat, cut in strips, with a little kidney or liver, you require, or brown these also with the onions; let simmer about ten minutes or so, and then place carefully well-peeled potatoes on the top. This stew must gently simmer till done and not be stirred about, so that the potatoes come out whole. A few spoonsful of catchup to be added some minutes before serving. It is light of digestion and very nourishing for Summer.

Steak Pudding.

This is also a digestible, nourishing dish for work-people. Make crust of fine-chopped suet, flour and warm water; place round basin; cut pieces of steak, with some liver or kidney in strips, and put in with some fine-chopped onion, pepper, salt and a little mace; moisten with some warm water and close up with crust. If you have no steamer; place a trivet in the bottom of the saucepan and put basin on it, so that the steam from the boiling water below cooks the pudding. When well done, which you will know by the knife coming clear from the crust, take out, place on a dish, broadside down, and open top a little. Put in a small piece of butter and a couple of spoonsful of catchup, and a beautiful gravy will run out round the dish.

Steamed Lemon Pudding

suits Summer weather. Crumb stale bread, add one or two spoonsful of fine flour, put to it very fine chopped beef suet, brown sugar, the juice of two or three lemons, well strained, and the finely chopped peel of one or two, also a few pounded sweet almonds, if desired. Beat up the yelks of three or four eggs well, and the whites of two, with white sugar; when the dry substances have been well mixed add the eggs and a little warm milk. Mix well and place in a buttered shape for steaming. If there is no steamer, place it on a trivet in saucepan. When done pour over it sweet white sauce with vanilla flavoring.

A few sponge cakes, first soaked in milk or some sherry wine, with jelly or jam put over them, and a nicely boiled custard poured over it, make a refreshing pudding. Plain, light suet puddings, with fruit, and steamed, are to be recommended; also stewed fruits of all kinds; fritters with different flavors, particularly the orange; light open tarts, with fruit on top, but *not* covered by crust; omelettes with fruit, and all sweet dishes that recommend themselves to our good sense as easily digestible, nourishing and not overheating.

HOUSEHOLD HELPS.

Farmerine.

KEEP your temper, though the situation be trying.

A nice way to cook new potatoes in the skin is to steam them instead of boiling. Put them in a steamer over a pot of boiling water; it takes longer than to boil, but they are always mealy.

Commence to grate a nutmeg at the stem end.

Learn something new every day.

Put salt in the water in which eggs are poached.

A pretty house plant is a lemon tree, easily grown from seed, and some of the leaves can be used for flavoring. A few tied in a cloth and dropped in apples (for sance) while cooking impart a pleasant flavor.

Be cheerful; it is good for yourself as well as others.

Sixteen large tablespoonsful are one pint.

Use aqua ammonia for the stings of bees.

Now is the time for gathering ferns to press, oats, many kinds of grasses, and "treasures of the wild-wood," all of which are useful for decorating our homes when chilly Winter comes.

Forty drops are equal to one spoonful, and four teaspoonsful are equal to one tablespoonful.

Occasionally do some pretty piece of fancy-work.

Dipper gourds make excellent things to keep salt in for kitchen use. Cut a hole in the side large enough to admit the hand and to remove the seed; also cut a small hole in the handle to hang up by.

Strain meat fryings through a thin cloth; keep in a cool place, and you have a cheap shortening for "every-day" pastry.

Keep a blank book with a thick cover in the kitchen, and copy any bits of information that may likely be of use at some time. Be sure and write in a large, clear hand.

Take a day and your family into the "heart of the wild-wood," and picnic in the old-time way, and you may be sure the day cannot be counted *lost*.

Peeling Peaches with Lye.

I have used lye for removing skins from peaches for canning or drying purposes, and think it better than peeling with a knife. It is not only a quicker process but a better one, leaving the fruit perfectly smooth, and especially nice for preserving whole. Fill an iron kettle with water; place over the fire; put in a piece of concentrated lye and let it dissolve until strong enough to cut the skins—you can tell of its strength by dropping in two or three peaches—then take out and put in your fruit. Home-made lye is as good as concentrated, but not having any ashes, I bought the concentrated article.. The fruit must not remain in longer than is necessary to cut the skins. A wire basket is the best thing I have found for dipping them in and taking out. Plunge at once into a tub of cold water, rinse thoroughly, and wipe the skins off with a cloth.

MRS. M. L. K.

QUESTIONS ANSWERED.

Tapioca Pudding.

N. asks for directions for making the above.

ANS.—Wash a cupful of tapioca and let soak several hours in a pint of milk; then add another pint of milk, the beaten yelks of four eggs, a cup of sugar, half a cup of butter, cinnamon, nutmeg or the grated rind of a lemon, a little salt, and, last, the beaten whites. Pour into a buttered dish and bake from three-fourths of an hour to an hour.

We have found

Tapioca Farina

a very nice dish. The farina tapioca comes quite finely ground. Stir a teacupful or a little more of this into a quart of boiling milk and boil gently until it thickens. Eaten with a flavored sweetened cream.

Cucumbers in Brine.

Oliver Jenness asks for the best way to keep cucumbers for pickling when one does not care to put them into vinegar at once.

ANS.—Cut off the cucumbers, leaving a short piece of the stem on, carefully placing them in a basket without bruising, wash in cold water and lay in a cask two or three inches deep; cover with salt—the coarse quality—and repeat until all are in. It will be necessary to throw in a little water with the first layer, afterward the salt and liquid from the cucumbers will make sufficient brine. Spread a cloth over them; have fitted a board that will go inside of the cask, keeping all the cucumbers under, and place a heavy stone on top. When fresh cucumbers are to be added, remove the board and cloth, washing off from them and the sides of the cask every particle of white scum. Any of the top ones that seem soft throw away. Put in the fresh cucumbers layer by layer, with salt between, as at first. When the cask is almost full strew over salt, cover perfectly with cloth and replace board and weight. The cucumbers must every one be kept under the liquid. Look after them, washing off, from time to time, the scum that covers cloth, board and weight. To insure success the cucumbers should not be bruised, and they should be put into the cask soon after gathering. When wanted for use, take out as many as you wish, replacing the cloth, board and weight. Put the cucumbers into a vessel that is large enough to hold two or three times as much water as there are pickles. Cover with cold water, let stand three or four days, or until fresh enough, changing the water each day. Then cover with hot, spiced vinegar.

Fruit Cans.

J. Welfou will find a responsible wholesale dealer by applying to Geo. F. Bassett & Co., 49 Barclay Street, New York.

Felon Cure—A Correction.

The receipe given in the RURAL of June 19th, page 399, should read hard soap, salt and turpentine instead of lard, etc. I think the lard would neutralize the effects of the turpentine.

MRS. W. C. GIFFERD.

News of the Week.

HOME NEWS.

MAX BURCKHARDT, editor and proprietor of the Humorist, a German weekly published in San Francisco, committed suicide recently by taking morphine. The cause of the act is unknown. He was a native of Berlin, and about 50 years of age. .....S. W. Hoffman, ex-Auditor of Cincinnati, Ohio, was arrested on the 1st inst., on the affidavit of Julius Dexter, of the Sinking Fund Commission, charging Hoffman with the misappropriation of two Cincinnati bonds of 1,000 each while City Auditor. Bail was fixed at $5,000.....On the 1st inst., a large balloon that was used for short aerial excursions at Youngstown, Ohio, broke loose from its moorings and went skyward with a man and woman in its basket. The balloon rose to a great hight, then drifted in a northeasterly direction and disappeared from view.....Railway enterprises to the number of 287, and covering a contemplated mileage of over 20,000 miles, have been reported to our notice during the past six months, as either in process of construction or projected, in 33 States and Territories. Certainly these figures are very encouraging to all whose business is in any way connected with railway building or operation, as they show the great activity in the business.....The very latest expedient for getting rid of the Chinese in California is to tax the six companies out of existence..... Visitors at Niagara Falls find hackmen, hotel proprietors, and shop-keepers at that place as aggressive this year as usual; for some reason there are but few visitors, however. Nobody has gone over the Falls yet this year, but several persons have toppled over precipices by accident or otherwise. It is a popular place for suicides..... The Rev. Mr. Adams, of Dunkirk, N. Y., has been suspended from the Presbyterian Church for heresy. His offence consisted in that he announced in a sermon that he could not believe in eternal punishment.....The Public Printer having refused to allow the employes under him pay for the Fourth of July, a committee of printers paid a visit to First Controller Lawrence, of the Treasury, to get a decision from him regarding the legality of the withholding of pay for public holidays. Judge Lawrence informed the committee that he was not at that time ready to make a final decision, but would hold the case under advisement. The Judge decided the 3d inst. that the employes are entitled to receive pay for public holidays. This decision is of interest, as it may be taken as a precedent for similar cases....

UTES SIGNING THE TREATY.

A special dispatch from Los Pinos, under date of August 2d, says: "Indians were struggling into the Commissioners' quarters all day yesterday to sign the treaty. The chiefs having signed the agreement, the others were fearful that unless their names were forwarded to Washington they would receive no part of the $60,000 which the Commission is authorized to pay out as soon as arrangements for the removal of the Utes are perfected, which will probably be some time next Fall. The Commissioners will probably leave here about the 4th inst. for the South Ute agency, except Col. Meacham, who will remain at Los Pinos to take the census. The removal of the Utes is only a question of time, and the Commissioners are hurrying matters as fast as possible. A year from this Fall will probably see the reservation open to settlement."

The new iron bridge across the Red River, on the St. Louis, Iron Mountain and Southern Railway, is completed, and trains will now cross. Its length is 788 feet between the abutments. There is a draw span 300 feet in length, a fixed span of 312 feet, and two fixed spans of 88 feet each. The bridge is a first-class one in every respect.

THE ALABAMA ELECTION.

The election held in Alabama on the 2d inst., was for a full ticket of State and county officers. An immense vote was brought out. As in a great many Democratic counties there were no nominations, each candidate brought votes to the Democratic State ticket. The Republicans had no ticket in the field, and supported the Greenback ticket, though there was no regular organization throughout the State. The vote for that ticket will be very small. The returns so far received show large gains for the Democrats in the counties of the Congressional district now represented by Mr. Lowe. Mr. Lowe's district is the Eighth, and consists of the counties of Colbert, Franklin, Jackson, Lauderdale, Lawrence, Limestone, Madison, and Morgan. The Democratic majority will not be less than 30,000, and returns indicate a larger majority than that if the same ratio is kept up by the other counties. Returns from Mobile county show a clean sweep for the Democrats against the Republicans and Greenbackers. The lowest candidate on the Democratic ticket will have 1,000 majority. Special dispatches say that Tuscaloosa, Perry, Dallas, Bullock, Macon, and Montgomery counties have gone heavily Democratic. The returns from Madison, Limestone, and Morgan Counties are also highly favorable to the Democratic ticket.

The election in Utah resulted in the liberals carrying a part of their ticket in two counties..... Out of 18 judicial districts in Kentucky, the democrats have just carried 15.....The opinion generally prevalent that the South would lose some eight to ten Congressmen by the new apportionment resulting from the new census, does not seem to be borne out by the preliminary returns. A part of the present representation may be transferred from the eastern to the western of the southern States, as will a portion of the eastern northern States to the western.

The female popula ion figures prominently in the census returns of Colorado, the youngest in the sisterhood of States, and ranges all the way from more than a third, in a comparatively aged town like Denver, to 3794 among Leadville's 15,183 people and 686 to the 4674 in the newer mining town, Silver Cliff.....One great trouble with Edison's electric light has been to get an engine that would run the dynamo-electric machine fast and steady enough. The Southwark iron foundry at Philadelphia is now trying to see what it can do, and proposes to turn out a 100 horse-power engine that will make 600 revolutions to the minute.....The most disastrous fire which has visited Buffalo, N. Y., for some years broke out in Dewitt's planing-mill last week and swept over an area a quarter of a mile long and about 500 feet broad; loss $225,000, insurance $185,000.....The census office says that the total population of the United States will be a little over 49,000,000. The official count will be needed to determine whether Ohio or Illinois is the third state of the Union in population..... .....Fifteen disguised white men went to the house of Joe Thompson, a colored man, 20 miles from Atlanta, Ga, last week, dragged him out, beat him and his wife fearfully, fatally shot his son, and killed his daughter. There is great indignation throughout the county, and a citizens' meeting at Jonesboro denounced the killing and offered $500 reward for the murderers. The State authorities are also determined that the murders shall be properly avenged. Gov. Colquitt and the Gate City Guards of Atlanta have taken the seven prisoners arrested from Jonesboro to Atlanta for safe keeping, and other arrests are expected to follow. John Gray, the leader of the gang had recently been prosecuted by Thompson, and been convicted of assault and battery..... Information comes from Texas that what is known as the Grand Army of Occupation organization, whose object is the invasion of Mexico under General Dalrymple, is assuming considerable proportions. Three hundred men are enrolled in Austin and vicinity, and the first regiment of Texas cavalry, of which Col. Armstrong, of Austin, is commanding officer, has 300 members and recruiting is going on. General F. W. James, who is general of Texas militia, has been given command of the department, embracing Texas, New Mexico, Arizona and California. He has appointed his staff, and consultations have been held, but the results have not yet transpired. The movement is attracting a good deal of attention, and the belief is expressed that if the government does not interfere serious trouble will result..... At Tyro, in Davidson county, Va., a few nights ago, Uriah Phelps ejected some negroes from his store. Anticipating further difficulty, he secured the services of O. W. Chick, a young man addicted to sleep-walking. The men watched in the store half the night and then fell asleep. Subsequently Chick got up and cut off Phelps' head with an ax. Chick was arrested. He claimed he knew nothing of the deed till some time after it was committed. Chick's habit of sleep-walking and the friendly relations of the two men turn public opinion in his favor..... ...The earnings of the Chicago and Northwestern Railroad for July show an increase of $390,000.....The Illinois Secretary of State has licensed the Metropolitan Elevated Railway of Chicago. It has a capital of $5,000,000..... On the 6th inst. the Italian wife murderer, Balbo, paid the penalty of the crime with his life. Strenuous efforts had been made to induce Governor Cornell to commute the sentence, but he declared that he was unable to justify himself in any interference with the execution of the law. Balbo was hanged in the Tombs, New York city, early in the day... ....Secretary Evarts has been notified that an American missionary named Harris has been murdered by the Turks near Constantinople. The government promises reparation. The slayers of Dr. Parsons and his two servants, murdered near Ismid the other day, have been arrested. They are nomad Turks, and have confessed.....

THE NOTORIOUS BENDER FAMILY.

Two tramps, an old man and woman, supposed to be the notorious John Bender and wife, who committed the wholesale murders on the Bender farm in Labette county, Kansas, in 1872 and 1873, were arrested at Fremont, Nebraska, on the 29th ult., since which time an effort has been made to prove the character of the parties, and has resulted in the general belief that the notorious outlaws are at last in custody. They call themselves McGregor and have been living among the Sioux Indians for a year or more. The woman is six feet in hight and very stout, weighing over 200 pounds. Bender is also a man of very large frame. Reporters and officials have succeeded in getting very complete confessions from the two that they are the identical Benders concerned in the various murders, and they were on the 7th instant taken to Kansas by the Sheriff and assistants. It was reported that young John and Kate Bender were somewhere in the neighborhood of Omaha, but they have not been found.

Elizabeth Monahan, of Seabright, N. J., died on the 7th, from the effects of a druggist's mistake in putting up a solution of morphine instead of Epsom salts.....The completion of the Washington monument at Washington was began on the 7th.

The annual rate of mortality, according to the most recent weekly returns, in Calcutta was 18; Bombay, 31; Madras, 31; Paris, 26. Geneva, 21; Brussels, 24; Amsterdam, 20; Rotterdam, 24; the Hague, 15; Copenhagen, 25; Stockholm, 24; Christiania, 19; St. Petersburg, 48; Berlin, 38; Hamburg, 23; Dresden, 18; Breslau, 31; Munich, 33; Vienna, 27; Buda-Pesth, 41; Venice, 24; Alexandria, 40; New York, 24; Brooklyn, 17; Philadelphia, 17; and Baltimore, 28. Small-pox caused 48, measles, 39, and typhoid fever 20 deaths in Paris. .....Bradford, Penn., July 28.—Dr. A. G. Hopkins was to-night held for trial on the charge of involuntary manslaughter in carlessly prescribing morphia—instead of calomel—from the effects of which Mr. A. McCarroll, his patient, died on Saturday... ....Danville, Va., July 28.—In Patrick County, last Friday, Pink De Hart met Amos Woolvine on horseback, with Mrs. Hart behind him. An altercation ensued between the men, ending by De Hart shooting Woolvine with a revolver through the forehead and neck, killing him instantly. De Hart then went to Patrick Courthouse and surrendered himself. He suspected that improper relations existed between his wife and Woolvine.

FOREIGN.

The dispute between Turkey and Greece and Montenegro remains in *statu quo*, with the probability growing stronger that Montenegro will be placated by the cession of Duligno, instead of a part of Albania, which it would be hard to hand over in the teeth of its brave inhabitants, and still harder to retain. The Powers seem to "weaken" a trifle on their demand of territory to be ceded to Greece. The fact is that while they are anxious that their wishes should be obeyed, neither of them is willing to begin hostilities to enforce obedience, as no one knows where the war would end, once begun. Moreover, the illness of Mr. Gladstone, which has been severe though nearly over, has somewhat retarded measures, for he is the greatest philohellenist in Europe. Then again, the trouble out in Afghanistan, menacing the security of the British Empire of India, makes Englishmen regard the interests of Greece, just now, as mere trifles. It is not unlikely, therefore, that Greece will, for the present, have to rest content with a good deal less than she wants of her neighbor's property, in the belief that when the "sick man" dies, she will get a proportionately larger slice of his land than she might otherwise obtain....In South America the war between Chili and Peru still drags its slow and cruel length along. In Lima there is an ugly report that some Peruvians entered Mosquequa, where the victorious Chilians had left their wounded in care of the natives, and murdered every one of them. It is also said the Chilians have sent a force to wreak a terrible vengeance. In Callao Bay a Chilian transport has been sunk by a Peruvian torpedo with a loss of about 150 men out of less than 200.....

In England, just as predicted here last week, the Compensation for Disturbances bill has been overwhelmingly defeated in the House of Lords, quite a large number of Liberal lords having opposed its passage as vigorously as the whole body of the Conservatives. In Ireland, where now the relaxing grip of the landlord is again thus tightened on the tenant, the discontent is loud and deep. The Government has already sent 1,000 troops from England into the most discontented districts, and more are held in readiness for embarkation, should any disturbances break out. Most likely an agitation will be started in favor of the abolition of the House of Lords, but it will be generations before that will take place. The late disaster in Afghanistan absorbs public attention just now, and re-inforcements are being pushed forward as rapidly as possible, 1,000 troops having already left Southampton for the scene of war. Gen. Stewart has left Cabool with his forces to relieve Candahar which is beset by Ayoob Khan, who has taken several small places on the British line of retreat or of succor. There is a good chance that a great deal more of the Afghans will join the victorious standard, but of course, almost like *our* Indian wars, the triumph of the white man is a mere question of time.

Sir Bartle Frere to whose mismanagement as Governor of England's South African dependencies the Zulu war and other troubles in that section have been widely attributed, has been recalled. The Conservatives and the Queen herself were strongly opposed to this step, but public opinion demanded it, and the government has been obliged to yield.....Gladstone's sickness has caused a great deal of anxiety throughout the world during the week, but he is now declared out of danger.....Servia and Bulgaria are reported to have formed an offensive and defensive treaty, in view of probable trouble between Turkey and her neighbors..... It is now stated positively, after having been as positively contradicted, that the Baroness Burdett-Coutts, the greatest living heiress and philanthropist, is about to marry Mr. Ashmead Bartlett, an American by birth, who has acted as her secretary and almoner for some years. By becoming his wife the Baroness will lose a large portion of her income—to the extent, it is said, of $500,000 a year, in accordance with the will of the Duchess of St. Albans, who left her a vast property on condition that if she married an alien or naturalized citizen, her interest in the Coutts Bank and other properties should cease. The Baroness is 66; Mr. Ashmead not yet 29.....In Italy the Clericals have gained great victories at the municipal elections at Florence and Rome, having returned 12 candidates out of 14 vacancies.....Russia is to have new flotillas of revenue cutters in the Baltic and Mediterranean, to be under the Minister of Finance in peace, but to belong to the Navy in war time.

In France the victory of the Republicans at the late election for Councils-General which, in turn, elect senators, has proved much greater than was expected from last week's advices—they have elected more than three times as many as their opponents combined. This gives a certainty of their success at the general elections next Summer. In Germany the unusually large tide of emigration to this country is causing no small uneasiness, as much of the bone and sinew of the country and, above all, of the "food for powder" is thereby lost. Bismarck is in temporary retirement for his health's sake, and all things are therefore quiet and uninteresting.

AGRICULTURAL NEWS.

Reese Owen, a Pittsburgh pork packer, has failed. Liabilities, $160,000.....The railroads are doing an enormous business in moving grain eastward. Yesterday week 1,500 car-loads of grain passed Poughkeepsie, N. Y., which is an unprecedented number for any one day.....The land question in California is summed up by a California paper in this way: There are about 100,000,000 acres of land in California. A little less than half of this area is unsurveyed, or about 45,000,000 acres. There is not much exceeding 4,000,000 acres under cultivation, although something more than 6,000,000 acres are inclosed with fences. There are 5,000,000 or 6,000,000 acres of land, more or less, which can be bought for from $1.25 per acre up to $7.....A shrewd farm hand bought for $160 the big meteor which fell in Emmet County, Iowa, last year, and was laughed at by his comrades for what they conceived to be his idiocy. He has now sold it to the British Museum for $6,500.....A miller at Poplar Bluff, Mo., was noted for never fulfilling a promise. No grist was ever ready on time. The other day an exasperated customer, who had come twenty miles to meet with the usual disappointment, fell upon him with a knife and killed him..... A Parliamentary return, just issued, of cases of eviction which have come under the knowledge of the constabulary in Ireland shows that during 1877, 406 families were evicted; in 1878, 834 families; and in 1879 there were 1,098. During the current year, up to June 20, there have been 1,063 families evicted. The aim of Mr. Forster's bill was to prevent further extermination. Hence landlords' opposition.....The tenants of an estate in Leinster have combined not to pay rent, but to postpone payment. On the landlord remonstrating with one of them, and pointing out the unpleasantness of their probable future relations, the man replied: "Well, yer know I can't pay yez the rent, but if you're anyways short, I'll lend you it. ..... The Russian newspapers report that much mischief is being done to the crops in southern Russia by locusts and other insect pests. In the district of Rasachs 5,000 men were daily employed in the work of extirpation. On the railway from Tiflis to Poti the locusts lay so thick on the line that the trains were obstructed. The steppes of the Don have been swept bare of all vegetation, as if a fire had passed over the land. Fourteen companies of soldiers are employed in the Odessa district in destroying these insect plagues. The mischief is not confined to the south; swarms of locusts have been observed also in the northern governments. A huge swarm passed by Moscow in the middle of June at an elevation of from 70 to 100 feet.....Sweet corn is canned in Circleville, O., at the rate of 750,000 cans per acre, at an establishment which has been several years in successoperation. They grow their own corn, sometimes planting 500 acres. Boston is their usual market. .....The French Ministry of Commerce has, for the first time published the statistics of the imports of cattle and pigs into France. The return applies to the first four months of 1880, and shows that 87,000 head of cattle, 575,000 sheep and 95,000 pigs were imported. Of these, only 131 oxen, 1,345 sheep, and 26 pigs were brought from America, the principal importer of oxen being Italy.

Baron J. J. Van den Wyngaert, President of the German Millers' Association, is visiting this country, at the request of the German government, to inspect the various wheat-growing regions and the methods of milling. He praises Minnesota and northern Dakota as the best wheat-growing States. He says that great injury is done to farmers of that section by grain merchants and elevator men, inasmuch as their choice wheat comes to European dealers so mixed with inferior grades that it is much depreciated, and Russian wheat not nearly so good, has to be used to give proper strength to the flour.....Thrashers in Indiana state the wheat in that State is light this season. Several experiments show that a hundred bushels of the growth of this year weigh only as much as ninety-two bushels raised last year. The light weight is evidently due to the hot weather in June which hastened the growth of the grain too rapidly..... ....The North American Beekeepers' society will hold its annual session at Cincinnati, Ohio, on Wednesday, Thursday and Friday, September 29, 30 and Oct. 1, 1880, commencing at 10 A. M..... In Canada the Grand Trunk authorities have received their annual report of the state of the crops from 159 places on the line of the railroad, from the State of Maine, in the East, to Detroit, in the West. The report states that Fall wheat was partly winter-killed in some sections between Toronto and Port Hope; from Toronto to Sarnia it is very good, and promises a yield of twenty-five to forty bushels to the acre. Spring wheat in many places is badly injured by rust, and, to all appearances, will fall considerably below an average. Peas and corn are generally looking well, and promise a large yield. Barley and oats are progressing satisfactorily. Hay is considered above an average crop. Clover-seed was partly winter-killed. Flax is excellent, and hops are everywhere looking well.....The stocks of pork at Chicago and New York on August 1 aggregated 197,666 barrels, against 223,181 at same date last year—a decrease of 25,515 barrels.....The stocks of lard in New York and Chicago on August 1 amounted to 174,525 tierces, against 259,045 at same date in 1879—a decrease of 84,520 tierces.....The stock of flour in Chicago August 1 is reported at 26,325 barrels, against 38,461 on July 1 and 16,200 on August 1, 1879.

LYDIA E. PINKHAM'S VEGETABLE COMPOUND has done thousands of women more good than the medicines of many doctors. It is a positive cure for all female complaints. Send to Mrs. Lydia E. Pinkham. Sold by all druggists.

Life and health are preserved by carefully aiding nature whenever it shows lack of ability to carry on its work. For torpid liver, bowels or kidneys, no other remedy equals Kidney-Wort.

Kidney-Wort radically cures biliousness, piles and all nervous diseases.

Dr. Pierce's Golden Medical Discovery, cures every kind of humor, from the worst scrofula to the common pimple or eruption.

Four to six bottles cure salt-rheum or tetter.

One to five bottles cure the worst kind of pimples on the face.

Two to four bottles clear the system of boils, carbuncles, and sores.

Four to six bottels cure the worst kind of erysipelas.

Three to six bottles cure blotches among the hair.

Six to ten bottles cure running at the ears.

Five to eight bottles cure corrupt or running ulcers.

Eight to twelve cure the worst scrofula.

Sold by druggists, and in half-dozen and dozen lots at great discount.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Aug 7, 1880.

BEANS AND PEAS.—Marrow beans have had some good export call which has left the market firm. Prime mediums are not plenty and prices are working upwards. Of pea or white kidney there is little stock. Red have advanced 5c., small orders filling. Green peas quiet at $1.65@1.70. Stock still arriving. B. E. peas as before, $2, when carefully selected, ₱ 2 bush. bag.

Marrow beans, prime, $1.62½@1.65, other, $1.50@1 60; medium, prime, $1.42; other, $1.30@1.73; pea, $1.45@1.65; white kidney, $1.70@1.85; red kidney, prime, $1.50; other, $1.30@1.45; black (or turtle soup), $2, and dull and easier; Cal, Lima, $5.

Receipts of beans for week, 1,208 bush.; exports, 781 pkgs.

BEESWAX.—Small sales at 25@25½c. for Western and Southern.

BROOM CORN.—Trade is light on account of small stock.

Brush and short broom, choice, per ℔., 7@8c.; do., do., common to good, 5@6½c.; hurl, good to choice, 7@8c.; do., common to fair, 5½@6½c.; red and crooked at 3@4c.

BUTTER.—In a wholesale way the market for best creamery is off, but special selected parcels may be quoted up to last week's figures. There is a better offering of table grade State, much of which equals in quality first-class grocers' wants, and the fact deprives creamery of much of its former strength. Oleomargarine begins to conflict with common styles of stock. The unroad is not as yet serious. Western butter holds its own in price, as supplies are not heavy. Exporters are not in treaty for much new business at the moment. The amount taken represents earlier purchases.

Creamery, finest State, 26c.; finest Western, 25c.; good to prime, 23@24c.; fair to good, 22@23c.; sweet cream, fine, 21@25c.; fair to prime, 23@24c.; State, firkins, choice yellow, 22c.; fair to prime, 20@21c.; State, pails and h'f. tubs, choice, 23c.; good to prime, 21@22c.; fair to good, 20@21c; tubs, poor, 16@18c.; Welsh tubs, choice, 22c; good to prime, 20@21c.; fair to good, 19@20c.; Western imitation creamery, 16@22c.; dairy, frish, extra, 20@22c.; good to prime, 18@20c.; fair to good, 17@18c.; poor to fair, 14@17c.; factory, Iowa, June, fine, 18@18½c.; good to prime, 16@16½c.; fair to good, 15@16c.; poor to fair, 14@15c.

Comparative receipts and exports for the past four years:

	Recets. pkgs.	Exp'ts, firkins.
June 1, 1880, to Aug 1, 1880...	345,795	85,603
June 1, 1879, to Aug. 1, 1879...	342,557	63,452
June 1, 1878, to Aug. 1, 1878...	379 640	60,811
June 1, 1877, to Aug. 1, 1877...	241,077	44,585

CHEESE.—The market has been feverish and excited this week and has made a sharp advance. The receipts have been moderate, which has indicated the firm holding of countrymen, and the advices from the other side have been encouraging to shippers who have been anxious to obtain supplies, and by the strong competition have placed in cases extreme values on certain special lots. Up to 12c. has been made, but 11¾c. generally represents the market.

Quotations are: State factory, fancy, at 11¾c.; do. good to prime, 11@11¼c.; do. fair to good, 9¾@10¾c.; do. half skimmed, 7½@8½c.; Wisconsin factory, fine, 10¾@11¼c., do. good to prime, 10¼@10½c.; do. fair to good, 9@10c.; Ohio factory, fine, 10¾@11¼c.; do. good to prime, 9¾@10¼c.; do. flat, fair to good, 8¾@9¾c.; do, poor to fair 7½@8¾c.

Comparative receipts and exports past four years:

	Rec'ts. bxs.	Exp'ts, lbs.
June 1, '80, to Aug. 1, '80.....	915,916	48,880,992
June 1, '79, to Aug. 1, '79.....	873,847	46,559,144
June 1, '78, to Aug. 1, '78....	1,061,802	49,262,316
June 1, '77, to Aug. 1, '77....	812,252	39,554,798

Receipts for week, 80,138 boxes.
Exports, 84,720 do.
Liverpool cable, 57@58s.
Steam, Great Britain, 50s.

COTTON.—Trading has been very moderate the past week, and prices showing slight changes only. Latest prices are for August, 11.39@11.40c.; September, 10.57@10.58c.; October, 10.57@10.58c.; November, 10 46@10 47c.; December, 10.47@10.48c.; January, 10.57@10.58.; February, 10.69@10.71c.; March, 10.84@10.85.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary.....	8 3-16	8 3-16	8 3-16
Strict ordinary.....	8 11-16	8 13-16	8 13-16
Good ordinary.....	9 11-16	9 13-16	9 13-16
Strict good do.....	10 3-16	10 5-16	10 5-16
Low middling.....	10 15-16	11 1-16	11 1-16
Strict low middling.....	11 5-16	11 7-16	11 7-16
Middling.....	11 9-16	11 11 16	11 11-16
Good middling.....	12 1-16	12 3-16	12 3-16
Strict good middling.....	12 5-16	12 7-16	12 7-16
Middling Fair.....	12 13-16	12 15-16	12 15-16
Fair.....	13 7-16	13 9 16	13 9-16

STAINED.

Good ordinary.....	7 13-16	Low middling..	9 5-16
Strict good ordinary.	8 11-16	Middling.....	10¾

DRIED FRUITS.—The small receipts of new cherries and blackberries are easily marketed at firm prices. Apples are wanted.

North Carolina apples, fair to good, at 6½@7½c.; choice, at 8@8½c.; New York State quarters at 7¾@7½c.; patent evaporated, in cases, choice at 14@14½c.; good and prime 13¾@14c.; evaporated, sliced at ——c. Evaporated peeled peaches, good to choice, at 26@28c.; North Carolina peeled choice, at 16@17c.; Georgia prime at 15@16c.; fair to good at 13@14c.; common at 10@12c.; unpeeled halves at ——c.; do. quarters at 6@6½c. Pitted cherries at 18c, bid for new. Blackberries 6½c' Raspberries at 25@26c. for new. Plums at 17@17½c.

EGGS.—Receipts for week, 8,400 bbls.; do last week, 9,380 do. Buyers largely withdrew when prices worked up during the past fortnight and there has been a marked decline. Trade has revived at the new and lower figures.

Near Points, 15@16c. ₱ doz.; State and Penn. 14@14½c.; Western and Canadian, 13c.; off grade lots 12@12½c.

FLOUR.—Offerings have been larger and buyers have had rather the advantage. trade has been fair. Latest prices are $3.50@4.35, for inferior to very good superfine State and Western; $4.00@4.25 for ordinary to very good extra State, odd lots and lines; $4.25@4 50 for very good to fancy do.; $4.00@4.25 for ordinary to very good shipping extra Western, and $4.25@4.50 for good to fancy shipping extra do.; inferior to very good white wheat extras, $4.20@5.00; very good to choice do. at $5.00@6.25; (very choice to fancy do. held at higher figures;) red and amber winter wheat, inferior to every choice trade and family, at $4.60@6.25; round hoop Ohio, $4.25@4.75; and trade and family brands of do. at $4.85@6.25; St. Louis at $4.90@5.65 for inferior to good extra; $5.65@6.25 for good to choice (fancy brands held higher); Minnesota clear, inferior to every choice at $4@6.25; Minnesota "straight," very poor to fancy, at $5.75@7.50, (very fancy at $7.75)' and patent inferior to very fancy at $5.85@8.75; unsound stock at from $2.25@5.00; city mill extra at $5.60@5.75 for very good to choice for the West Indies; do. for England, $4.70@4.80 for poor to very choice spring wheat, and $4.85@5.35 for winter wheat product; do. trade and family extras, $5.85@7.00; do. for South America, $5.65@6.00; No. 2 at $2.50@3.35 for poor to choice.

Receipts for week, flour, bbls. 122,275; corn meal, do. 3,152; wheat, bush. 1,782,050; corn, do. 2,083,950; oats, do. 181,300; rye, do. 2,253; malt, do. 27,050; peas, do. ——; rice, pkgs. 267.

Exports for week, flour 63,250 bbls.; corn meal, 4,300 bbls.; wheat, 1,721,250 bush.; corn, 1,685,280 bush.; oats, 8,901 bush.; peas, 11,510 bush.; beans, —- bush.; rice 742 pkgs.

FRESH FRUITS.—Prime apples are salable but no variety is high. It does not pay to send very common windfalls early. Peaches are in large supply, but prime are not abundant. Evaporators are using up much of the choice large fruit that used to find an outlet here. Pears are lower, many of them are of a grade that has to be sold quickly. Plums are in stock. Grapes lower.

Apples, strawberry, ₱ bbl. 75c.@$1.75; Summer Pippin, 75c.@$1.25; Orange 75c.@$1.25; Nyack 75c.@$1.25; Red Astrachan, choice, $1.25@1.50; common, 75c.@$1; Sweet Bough, 75c.@$1; Sour 75c@$1; Bough, common, 50@60c. Peaches, Jersey, ₱ basket, 25@30c. Md. & Del., Crawford, extra ₱ bask. $1@1.25; plain, ₱ bask, 50@75c. Old Mixon ₱ cr. $1@1.25; prime, ₱ bask. 70@80c.; plain 30@40c.; Early York ₱ cr., 75c.@$1; ₱ bask., 30@50c; Up-river do, 20@75c. Pears, Bartlett, State, ₱ bbl. $5@6; d'mon, $3@4; Clapp's Favorite, State, $5@6; Bloodgood, State, $3@3.50; Catharine, State $3@3.50; Scooter, State, $2.50@3.50; Bull, State, $2@2.50; Sugar Top, State $1.50@2.00; Bell, State $3.50@4; Bartlett, Southern, choice ₱ cr. $2; poor, $1.25@1.50 Seckle $5@6; Bartlett, Jersey, $1@1.50; Cooking pears ₱ bbl. $2@2.50. Plums Egg, State, ₱ bbl. $5@5.50; Green Gage, State, $5@5 50; Lombard State, $4@4.50; Blue common, $3.50@4; Damson, Southern, ₱ qt. 5@6c. Grapes, Delaware, Va., case of 18 3-℔ boxes, $5; Concord, $2.50@3.50; Hartford, $2@2.50; Ives, South'n, $2.25@2.75; Ives and Hartford, ₱ ℔. 4@6c.; Concord Sth'n 5@7c.; Delaware Southern, 8@10c. Whortleberries, Shawangunk Mountain, ⅛ bu. box, $1; Jersey, ⅛ bu. box, 75c.@$1. Nutmeg melons, Jenny Lind, Jersey, ₱ bbl., $1.25@2; citron, Jersey, extra, ₱ bbl. $1.50@2; fair to good, ₱ bbl. $1@1.50. Watermelons, Jersey Black Spanish ₱ 100 $12@16; Alagothy $12@20. Nanticoke, $6@8. Norfolk, $3@8. California Bartlett pears selling fairly at $5@1.00, and plums at $3.50@4 per box. Hot house products, grapes, Black Hamburgh, per ℔, 50@65c. Sweet Water, 20@30. Nuts. Peanuts in light out of town demand; local demand flat. Prices weaker. Peanuts Va. hand-picked, ₱ ℔ 5½@5½c.; extra prime, 4½@4¾c.; good to prime, 4@4¼c.; common, 3½c.; shelled, 5@5½c.

GRAIN.—Wheat has been active and prices fluctuating, closing weak. Exports for the week, 1,800,000 bush.

Latest sales are for No. 1 white at $1.10@1.11; do., August, at $1.09; do., September, at $1.08¾; do., steamer grade, at $1.05@1.07¾; No. 2 white at $1.05¾; ungraded white at $1.05@1.08; No. 1 red at $1.10¾@1.10¾; No. 2 red at $1.08¾@1.09; do. August, at $1.08¾@1.09; do., September, at $1.08¾@1.09¾; do. October, at $1.03@1.00¾; do, steamer grade at $1.05¾@1.06; No. 3 red at $1.05¾@1.06; do., steamer grade, at $1.01@1.01¾; ungraded red at 96c.@$1.07; mixed winter at $1.05¾@1.05¾. Corn is active and closed at for New York No. 2, at 47¾@48c.; do., August, at 47¾@48c.; do., September, 49¾c.; New York steamer mixed at 47¾c.; ungraded mixed Western at 45@48½c.; No. 2 white at 54¾@55c.; exports for the week, 1,600,000 bush. Oats are in good demand; sales of No. 1 white at 45½c.; No. 2 white at 44@44½c; No. 3 white at 40½c.; New York No. 1 at 40c.; New York No. 2 at 40c.; do., August, at 31c.; do., September, at 35¾; do., October, at 34½c.; No. 3 at 38c.; ungraded white Western at 40@46c.; ungraded mixed Western at 30½@41c.; white State at 43@45c.; No. 2 Chicago quoted at 40c.

HAY AND STRAW.—Trade is active and prices strong.

New hay quoted at 80c.@$1.05, as to quality; old shipping hay quoted at 80@85c.; retail lots at 90c.@$1 for medium, and $1.10@$1.15 for prime and fancy qualities; clover, 60@65c. Straw at $1@1.05 for long rye, 60@65c. for short rye, and 55@60c. for oat.

Exports for week, 2,514 bales.

HOPS.—Prices have been reduced with trade very dull. notations are for

	Cents per ℔.
New York, new crop, and choice.....	30 @31
New York, new crop, medium and good.....	26 @26
New York, new crop, low to fair.....	— @—
Eastern, new crop.....	— @—
Wisconsin, new crop.....	— @—
Yearling	7 @15
Olds, all growths.....	8 @10
Pacific Coast, new.....	27 @31
Pacific Coast, olds (nominal).....	6 @ 8

OIL CAKE.—Western is quoted $30.50.

POULTRY AND GAME.—In dressed the market is low for everything but small prime turkeys: of these there is enough for current wants. Fowls and chickens very plenty beside the additions furnished by city killers now that fruits are abundant.

Turkeys, choice, small, on ice, 14@15c.; fair to good, 12@13c.; Phila., dry-picked, 13@15c.; chickens, Phila., large, 18@2c.; small, 16@17c.; State, scalded, 14@15c.; Western, scalded, 13@14c.; Fowls, Phila., dry-picked, 13@14c.; Jersey, dry-picked, prime, 12½@13c.; scalded, 12@12½c.; State, dry-picked, prime, 12½@13c.; scalded, prime, 11@12c.; Western, dry-picked, prime, 12@12½c.; scalded, prime, 11c.; poor to fair, 9@10c.; ducks, spring, dry-picked, large, 14@15c.; small, 12@13c.; Spring, State, scalded, 12@13c.; Phila., old dry-picked, 12@13c.; squabs, white, per doz $1.75; dark, $1.

Live poultry is bringing good rates considering the large, steady offering.

Chickens, Jersey, ₱ lb., 13@14c.; Western & Southern, 11@12c.; fowls, Jersey, 12c.; Western, 11@12c.; Southern, 10½@11c.; roosters old and young, 5@6c.; turkeys, mixed, Jersey, 12@13c.; Western, 10@12c.; ducks, N. J., N. Y. and Pa., ₱ pair, 55@75c.; Western 45@55c.; Southern, 40@45c.; geese, Jersey, $1.50@1.75c.; N. Y. & Pa. $1.25@1.50; Western, mixed, $1@1.25; Southern, 87c.@$1.12; pigeons, 20@35c.

Woodcock in fair demand at 85@90c. ₱ pair. Stall-fed pigeons, $1.25@1.75 ₱ doz. Grass plover, $2@3.50 ₱ doz Small birds, 15@20c., which doesn't pay for the killing.

PROVISIONS—Hog products have been less active but held firm.

Mess pork quoted at $14@14.05 for August, $14@14.05 for September, and $14.10@14.15 for October. Bacon at 7½c. for long clear and 8 ¼c. for short clear Beef—Extra India mess quoted at $16.50 for city; $10 for extra mess, and $9.50 for plain mess, $10.50@11 for packet, and $11.50@12 for family mess. Beef hams $22.50@23; Lard Western steam at 7.60 for spot; 7.60 for Aug. and Sept.; 7.65 for Oct., and 7.60 for Nov. Tallow at 6¼@6¾ for prime. Stearine at 8½c. for choice.

Receipts for week, beef, 375 pkgs.; pork, 3,050 bbls.; cut meats, 31,600 pkgs.; lard, 14,050 pkgs.

Exports, beef, 2,425 pkgs.; pork, 3,800 bbls.; cut-meats 7,930,534 ℔s.; lard, 6,142,900 ℔s.

SEED.—Clover is in demand; quoted at 7¾@8¾c. Timothy is quiet at $2.90@3.

TOBACCO—Export trade is moderate and the home demand fair, with prices unchanged.

SEEDLEAF.	Crop 1878.	Crop 1879.
New England Havana seed....	— @—	18 @25
Wrappers, common.....	13 @15	— @—
Medium.....	16 @18	— @—
Fine.....	20 @.7¼	25 @33
Selections	30 @40	— @—
Seconds.....	10 @12½	10 @13
Fillers	— @—	5½@ 7
Penn. assorted, low.....	12 @13	— @—
Assorted, fair.....	14 @15	— @—
Assorted, fine.....	16 @18	18 @22
Wrappers	18 @35	— @—
Fillers	9½@10	— @—
N. Y. ass'ted, com. to medium	10 @11	— @—
Ohio assorted.....	8½@11¾	7½@10
Wrappers.....	15 @25	— @—
Wisconsin assorted.....	8 @12	7 @10
Havana seed.....	15 @20	16 @18
Wrappers.....	12 @18	— @—

KENTUCKY LEAF.	Light.	Heavy
Common lugs.....	4 @ 4¾	4½@ 4¾
Good lugs.....	4½@ 5	5 @ 5½
Low leaf.....	5½@ 6	6 @ 6½
Medium leaf.....	6¾@ 7	7 @ 8½
Good leaf.....	7½@ 8½	9 @10¾
Fine leaf.....	9 @11	11 @12
Selections.....	12 @—	— @—

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Good and fine, in bond.....	16	@18
Bright work—Common and medium, in bond	15	@19
Good and fine, in bond.....	21	@35

VEGETABLES.—A couple of rainy days cut down supplies of potatoes and for the moment, assisted by a Cuban demand, the market is better. L. I. & N. J. $1@2: culls, 50@87c. Sweet potatoes $2@3. Onions are easier: green stuff generally showing easier Summer prices.

Green corn, Jersey, per 100, 50c.@$1; tomatoes, L. I. & Jersey, per bush., 75c.@$1; cucumber pickles, ₱ 1.000, $1.25@1.50; egg plant, L. I. ₱ bbl. $2@3; string beans, L. I. ₱ bag 50c.; green peas, $1@2; lima beans, potato, $2.25@2.50; flat, $1.75@2; turnips, Jersey, per 100 bunches, $3@4; Jersey, Russia, ₱ bbl., 75c.@$1; beets, Jersey, per 100 bunches, $2@2 50; cabbage, J'y ₱ 100, $5@8; squash, Jersey, marrow, per bbl. 50@75c; L. I., yellow, 50@62c.. L. I., white, 50c.; onions, State, yellow, $4@4 50; Western, $4@4.50; carrots, ₱ 100 bunches, $1.50@2.50; okra, per 100, 15c.

WOOL.—Trade has been very quiet this week, but prices steadily held; Ohio, Penn. and West Virginia fleeces quoted at 47@48c. for XXX and picklock; 45@47c. for XX; 45@47c. for X; 43@46c. for No. 1; 42@44c. for No. 2. Michigan, Indiana and Wisconsin at 40@42c. for X and XX; 45@48c. for No. 1; 38@43c. for No. 2 and common. N. Y., New Hampshire and Vermont at 37@40c. for X and XX; 43@46c. for No. 1; 36@41c. for No. 2 and common, and 47@49c. for combing and delaine.

LIVE STOCK MARKETS

NEW YORK, Saturday, Aug. 7, 1880.

BEEVES.—Receipts for week 14,331 head; do last week, 13,868 do. Heavy failures among butchers took the spirit out of the market. Drovers begin to discriminate between the cash purchaser and one who buys on 15 or 21 days' time more closely than has been the case for over two years; and the financial condition of all the buyers will be keenly studied. Butchers who expect to pay for their cattle took some advantage of the situation, and sellers were forced to lower prices a trifle from the current rates on last Wednesday. Sales, however, were very irregular, and the general tone of the market especially at the close was turning in buyers' favor. Texas cattle were mainly sold at 6¾@7¼c. to dress 55 ℔.; common to fair native steers at 8@8¾c. to dress 55@56℔, good to choice do at 9@9¾c. to dress 56℔, and a few extra at 10c.

COWS AND CALVES.—There is only a peddling sort of a market. Very common quoted at $25@30; then $35@45; is quoted for good milkers and if a dealer stretches a price up to $50 or 55 for really prime it is looked upon as a banner sale.

VEAL CALVES.—Demand good with moderate supply; prices firm

Live calves, N. J. and Bucks Co., choice, 6¾@7c.; prime, 6¾@6¾c.; State choice, 6¾@6¾c.; prime, 6@6¾c.; fair to good, 5½@6c.; poor, 3½@4½c.; heavy, good to prime, 5½@6½c.; buttermilk, 2½@3c.; grass, 2@2½c.

SHEEP AND LAMBS.—Receipts for week, 36,047 head; do last week 31,552 do. The week has been an extremely dull one, and at the close there seemed to be a chance of much giving away in prices. Sales at 3¾@5¾c. for sheep and 5@6c. for lambs, with a few New Jersey at 6½@7½c.

SWINE.—Receipts for the week, 25,564 head; do last week, 18,831 do. Live steady at 5@5¾c. City dressed 6¾@6¾c. heavy to pigs.

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Who Is He?

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Reading for the Young.

DAISY'S STAR.

BY SARAH HALE THOMPSON.

EARLY one morning I peeped out, just to see about the weather. O, how cold it was for me, a poor little shivering star; but I had no nose which Jack Frost could bite off, so I did not complain. Besides, as I am always looking out for pretty things to tell my little friends, it is very easy to forget my troubles, and especially when I know that many children would have tears in their eyes if I should neglect them.

All of a sudden something beautiful came out of a great white cloud. O, how glad I was, for then I had something for my little ones; something nice, too, for it was such a tiny, nice, wee white thing; I had to watch it very closely to see it at all.

"Dear me," I thought, "it will surely get lost, it is all alone;" and I made up my mind to keep my eye on it.

Now if you would like to know what it was, I will tell you rightaway, for I am sure you cannot guess. It was the sweetest little star I ever saw. Not blue, or red, or yellow, but soft and white like snow; and it was a snow-flake shaped like a little perfect star.

It whirled round and round a little and then went down very slowly; I just wondered what would become of it. Where do you think it went? Why, right on the hand of the loveliest little bit of a girl you ever saw.

She had on velvet mittens, and her name was Daisy Vane.

Presently her blue eyes fell on the little thing resting on her mitten. They grew large with wonder at the strange sight, for never before in her life had she seen a snow-flake shaped like a star, and this is what she called to her mother, all out of breath with delight: "Oh, mamma, mamma, come quickly, and see the dear little star that has come to me out of the sky!"

Mamma came quickly, but she was too late, for Daisy's treasure had vanished in a moment, and the little face she lifted, instead of being all smiles was streaming with tears.

Mamma took Daisy's hand and looked sorrowfully at her little girl. She was thinking she was once a little girl herself, and how hard it used to be to bear troubles then. "Will my darling tell me why she so longed to keep the lovely star?" she said.

"O, mamma," weeps Daisy, "I would have strung it on my necklace and told all my little friends that God had sent me a baby star all for myself."

Mrs. Vane smiled on her pet, and said, "Would Daisy be happy if God should send her something that she would like as much, and perhaps better, than a star on a simple necklace?"

"O, mamma, what could I love better than a beautiful pearl-white star? No, no, I do not think there is anything in the world I would love more than that, besides, none of the girls ever had anything like it. But what is it, mamma? Do, please, dear mamma, tell me," Daisy asked, her face looking very eager.

Mrs. Vane drew her daughter tenderly to her, and winding her arms about her, said lovingly:

"Will not my darling wait patiently till God sees fit to bestow the blessing?"

Daisy is doubtful at first, but when she sees the beautiful expression on her mother's face she is sure it is a good thing to be patient, for she says, as she kisses her:

"Yes, mamma, I will try," and then she runs to tell her little companions.

Every night before she closed her eyes in sleep she would turn her sweet face to the stars and think of her lost one and pray for another; then she would wonder and wonder about her mamma's promise, and fall asleep wondering.

But it was not many nights. One bright morning as Daisy lay dozing, dreaming, thinking, thinking, all at once Aunt Nellie stood at her bedside, with her face all smiles and happiness. Daisy looked at her with her drowsy eyes, and tried to think she was a big angel. Aunt Nellie looked full of secrets and said:

"I know a little girl who would hurry very fast if she knew of the beautiful present God had sent her."

"Oh, Aunty!"—she is wide-awake now, and tosses back her golden curls—"Oh, Aunty, has my present come at last? And is it a necklace, set with a lovely pearl star?"

"No, Daisy; you must wait till you are nicely dressed, and then you shall see, for you cannot guess if you were to try ever and ever so long."

Daisy never dressed so quickly in all her life. Her other aunt and her papa met her at the door.

"Come, my darling," says papa, "your dear mamma has something for you; step lightly," and he takes her trembling hand with joyous excitement. She rushes to her mother and half smothers her with kisses, and then looks around with bright eyes and eager, flushed face, for her promised present. She clasps her hands and says:

"Oh, mamma, show me my present, for I cannot wait another minute."

"Grandma has it, my pet."

Grandma sits by the fire, and seems to be wrapping up her lame arm. Daisy thinks so, but it is something else that moves. Daisy's heart gives a big leap, and she runs back, buries her face in her mother's bosom, and cries a long time for very joy; for what do you think she saw in a flannel nest? Not a necklace—not a star—not a snow-flake—oh, no! but a baby, a little tiny bit of a real baby, lying fast asleep in grandma's lap. Daisy thought she had never felt happiness before. She runs back to her grandma and kneels down to see if she has not been dreaming. Grandma cautiously and tenderly lays something in her hand. It is a baby's hand, a little mite of a thing that made Daisy think of a snow-flake.

"Oh, grandma, let me kiss it." Then she presses her red lips to the soft little mouth, cheeks and eyes, and then hands and feet, over and over again, till everybody laughs.

"Are you satisfied?" says mamma.

"Oh, mamma, has it no name? Then, papa, we will call it Star Baby, shan't we? And I shall so love it, because it came in place of the beautiful snowstar."

Her mamma laughed gently, and said she thought she would love it much better than a snow baby. Grandma thought so, too; so it was called Baby Star, and it is the first star baby I ever saw.

HOW BIRDS FLY.

You will find, if you carefully examine a bird's wing, that all the bones and muscles are placed along the front edge, which is thus made very stiff and strong. The quill feathers are fastened in such a way that they point backward, so that the hind edge of the wing is not stiff like the front edge, but is flexible and bends at the least touch. As the air is not a solid, but a gas, it has a tendency to slide out from under the wing when this is driven downward, and of course it will do this at the point where it can escape most easily. Since the front edge of the wing is stiff and strong, it retains its hollow shape, and prevents the air from sliding out in this direction, but the pressure of the air is enough to bend up the thin, flexible ends of the feathers at the hinder border of the wing, so the air makes its escape there, and slides out backward. The weight of the bird is all the time pulling it down toward the earth; so at the same time the air slides out upward and backward past the bent edge of the wing, the wing itself, and with the bird, slides forward and downward off from the confined air. It is really its weight which causes it to do this, so that the statement that a bird flies by its own weight is strictly true.

This is true, also, of insects and bats. They all have wings with stiff front edges and flexible hind edges which bend and allow the air to pass out, so that flying is nothing but sliding down a hill made of air. A bird rises by flapping its wings, and it flies by falling back toward the earth and sliding forward at the same time. At the end of each stroke of its wings it has raised itself enough to make up for the distance it has fallen since the last stroke, and accordingly it stays at the same hight and moves forward in a straight line.

If you watch the flight of those birds which flap their wings slowly, such as the woodpecker, you can see them rise and fall, and will have no trouble in seeing that their path is not really a straight line, but is made up of curves; although most birds flap their wings so rapidly that they have no time to fall through a space great enough to be seen. Birds also make use of the wind to aid them in flight, and by holding their wings inclined like a kite, so that the wind shall slide out under them, they can sail great distances without flapping their wings at all. They are supported, as a paper kite is, by the wind, which is continually pushing against their wings, and sliding out backward and downward, thus lifting or holding up the bird, and at the same time driving it forward.

The birds are not compelled to face the wind while they are sailing, but by changing the position of the wings a little they can go in whatever direction they wish, much as a boy changes his direction in skating by leaning a little to one side or the other. Some birds are very skillful at this kind of sailing, and can even remain stationary in the air for some minutes when there is a strong wind; and they do this without flapping their wings at all. It is a difficult thing to do, and no birds except the most skillful flyers can manage it. Some hawks can do it, and gulls and terns may often be seen practicing it when a gale of wind is blowing, and they seem to take great delight in their power of flight.

CONSTANCY.

ONE of the most remarkable instances of feminine fortitude and Christian constancy ever found in human history, is that of Perpetua, who suffered under the persecution of the Roman Emperor, Severus, at Carthage, in Africa, about the year 206, A. D.

Perpetua was a young widow of 22 years, wealthy, and of noble connections. Her infant, who was born after her husband's death, was her companion in her troubles.

She was arrested for doing divine honors to Christ and not to the spirit of the Roman Emperor.

Her father, who was a heathen, urged her to renounce her faith. She asked him whether an urn, which stood near, could be called by any other than its proper name. He replied "No." "Neither," said she, "can I call myself other than what I am—a Christian." After spending many days in prison, with her infant, during which time she was blessed and comforted with the most cheering and heavenly visions every time she fell asleep, her heathen friends asked her if she would not at last recant before the dreaded trial and execution.

She declared that as for her sentence of death, God would carry her through that trial, and as for the prison, she said, "The prison all at once became like a palace to me, and I would rather have been there than anywhere else."

It was, no doubt, this expression which the Rev. John Newton, the converted slave-dealer, had in mind when he wrote in that familiar hymn:

"When blessed with a sense of His love,
A palace a toy would appear;
And prisons would palaces prove,
If Jesus should dwell with me there."

Perpetua, with her faithful companions and her infant, were condemned to the amphitheatre. The male victims were exposed to lions, bears and leopards; the women were tossed by a furious bull.

Perpetua appeared as if in a trance, insensible to the pain. On recovering her consciousness she asked when she would be dispatched by the gladiator, for those who survived the wild beasts were subjected to the sword of the gladiator. The youth who was appointed to dispatch Perpetua was so overcome by her calmness that he bungled at his work, whereupon the resolute martyr guided his sword to a mortal part.

It was such lives and spectacles as these which gave power and vigor to the Christian church at Carthage.

And it is such events as these early martyrdoms which caused the historian, Gibbon, to wonder at the mysterious power which was lodged in the early Christians' breasts, as he himself has recorded these instances in his famous work, "The Decline and Fall of the Roman Empire."

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I am ten years old and this is my first attempt at writing for a paper. My father is a farmer. We keep nine cows and I have a pet sheep. We have seven Toulouse geese which make a great noise sometimes, and attract a great deal of attention as there are no other geese in our neighborhood. I go to school and have a mile to go. I have no brother or sister so the way seems long. My father planted the potatoes you sent him and raised 20 pounds. I thought I would write so that I might get some flower seeds and have flowers like the rest of the RURAL cousins.

Broome Co., N. Y. ANNA S. KNAPP.

DEAR UNCLE MARK:—I am a little girl twelve years old. I live in the country. I go to school and my teacher's name is J. A. Lewis. My mother takes the RURAL NEW-YORKER and I like it very much. Yours truly, AGNES T. O'CONNOR,

Wabaunsee Co., Kan.

The Puzzler.

NUMERICAL ENIGMA.

17 LETTERS.

My 1, 3, 5, is a fish.
My 8, 10, 11, 1, 2, is a fish.
My 9, 2, 16, 4, 4, 12, is a fish.
My 9, 6, 7, 16, 9, is a fish.
My 9, 10, 4, 1, 2, is a fish.
My 13, 16, 5, 13, 14, 15, 4, is a fish.
My 17, 9, 16, 11, 13, 10, 7, 4, is a fish.
My whole is a class of fish. S. P. S.

☞ Answer in two weeks.

HALF SQUARE.

1. A genus of intestinal worms. 2. The innermost of the small bones of the ear. 3. A mark used in writing and printing. 4. The crest of an ancient helmet. 5. To prepare. 6. The third person, singular. 7. A letter. GUS.

☞ Answer in two weeks.

A DROP LETTER PUZZLE.

B-n-t-i-e-n-o-r-w-c-n-e-t-. Fill the blanks and find a verse of Scripture. L. O.

☞ Answer in two weeks.

PUZZLER ANSWERS.—July 31.

SHAKESPEAREAN ENIGMA.—
"He goes before me, and still dares me on—
When I come when he calls, then he is gone."

DIAMOND PUZZLE.—

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      R
    B O N
  R O U E N
    F E N
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Rouen.

Various.

BRIEFLETS.

DR. HEXAMER says: "In watering plants in the open ground, it is far better to apply three cans of water every third than one can every day. . . . . Stuartia pentagyna is one of the most beautiful, hardy shrubs and, though found in the Alleghanies of Southern Virginia, is rarely seen in our gardens. Readers who have shrubs to select this Fall, or rather next Spring, are advised to make a note of this. It belongs to the Camellia family, and bears large, cream-colored flowers. . . . . Cinerarias, calceolarias and primulas, if started from seed now, will make a fine display during Winter. . . . We are deeply obliged to our readers for the lively interest they are manifesting in the Fair Number of the RURAL NEW-YORKER. It sometimes seems to us that the RURAL has stronger friends, and more of them than any other paper of "its size and age" published anywhere. . . . . It seems that a portion of Mr. Orange Judd's notes (those taken last season while traveling in the West,) "unaccountably disappeared from his traveling bag." Why anybody should have stolen those notes, if there was anything else in the "traveling bag"—or if there was not—*is* unaccountable — that is a fact! . . . . . There have been established in London by a Drinking-fountain Co. 438 water-places in the streets. . . . . .

"Happy the man who tills the field,
Content with rustic labor;
Earth does to him her fullness yield,
Hap what may to his neighbor.
Well days, sound nights, O can there be
A life more rational and free?"

We see mention of Stoll's Monarch rhubarb, an English variety, the weight of some of the leaves and stalks of which is about seven pounds. . . . . The best Summer resort for a Spitz dog is a watering place. The dog should be placed about four feet under water.—[Norristown Herald. . . . . To completely blindfold a vicious horse is the simple stratagem of a correspondent of the London Live Stock Journal for rendering him as quiet as a lamb. The most obstreperous may then be shod without difficulty. . . . . The agricultural editor of one of the daily-weeklies—the New York Sun—asks his subscribers to give their experience as to London-purple, as he seems to entertain doubts as to its efficacy. A few cents' worth of the Purple and the loan of a neighbor's potato-patch would enable him to settle his doubts, without troubling his subscribers. *Then* he could tell them as to its efficacy, which would seem to be a part of an agricultural editor's duties. . . . . The Garden (London,) says that the "roses of the future are the roses on their own roots." What a world of tedious labor, then, has been thrown away on rose propagation. . . . . Our readers, or those of them who received and planted the Vilmorin Golden mangel, will find that they are as sweet, juicy and tender as a sugar beet, if cooked in the usual way. . . . . "The average woman's waist measures thirty inches; the average length of a man's arm is thirty inches. How admirable are thy works, O Nature!" The author of the above is not known. . . . . "The Hour" of July 24th, gives a colored cartoon of the young proprietor of the Herald. . . . . A late London Punch has the following:

AT THE CATTLE SHOW.

Young Farmer.—"Are you fond of beasts, Miss Gusherton?"

Miss Gusherton.—"Oh, really, Mr. Pawker, if you mean that as a declaration, you must speak to mamma." . . . . . Col. F. D. Curtis says, in the New York Tribune, "Less pig-pen and more pig-pasture." . . . . We have never known any raspberry to be so overwhelmed with praise as the Cuthbert is at the present time. We only hope this praise is not being lavished too freely. We find the following in the catalogue of E. P. Roe just received:—Now regarded by careful and experienced horticulturists as the best raspberry in existence for general cultivation. I have it in a specimen bed with twenty-five other kinds, and under precisely the same treatment it has surpassed all others. "It is better than all the others by long odds."—Dr. Farley. "I regard it as the best raspberry for general cultivation."—Charles Downing. "It is regarded as the best raspberry in existence."—Dr. Hexamer. . . . . We like to give credit where credit is due. Mr. J. T. Lovett was the first to call our attention to the superiority of this raspberry over others—and it was in this way that we were induced to place it in our Plant and Seed Distribution, which—it will not be denied—has precipitated, it not created, its present popularity. . . . . A contemporary whose name need not be mentioned, says that "some farmers are testing the value of cultivating wheat and their results are almost uniformly in favor of the practice." The contrary is the fact, if we may judge from our own tests for two years and those of others—Prof. Roberts, for instance, of Cornell University. . . . . One of our market gardeners informs us that black pepper will rid cabbages of worms just as effectually as hot water and is more easily applied. . . . . At present, the Mark Lane Express observes, there is no class of people in the land so badly situated in respect of education for their children as farmers are. . . . . Prof. Stewart thinks the cow-pea is a more valuable food for ensilaging than green corn. The amount of vines which these plants make—or some kinds of them—at the RURAL FARM, is surprising. . . . . The White Egg turnip. This is a new sort of quick-growing turnip of an egg shape and white skin, as its name suggests. A friend who raised it last year speaks of it in very high terms of praise. He says it is tender and sweet. It should be sown about the middle of the month. . . . . From our own experience, we confidently recommend all farmers—at least, those whose soil is a sandy loam—to use a roller after grain sowing.

Remedies.

I have found the following remedies effective:—

REMEDY FOR THE CURRANT WORM.—Dissolve one pound of coperas in a pail of water and sprinkle the bushes with the same. This has proved a certain remedy with me.

REMEDY FOR THE CABBAGE WORM.—Give the cabbages a thorough sprinkling with lime water.

CURE FOR SCOURS IN CALVES.—Break a new-laid egg in their milk and stir it up with the milk and let them drink it. It is a sure cure; I never knew it to fail. So simple a remedy ought to be widely circulated. W. S.

CATALOGUES, ETC., RECEIVED.

E. P. ROE, Cornwall-on-Hudson, N. Y., Summer and Fall Catalogue of pot-grown Strawberries; also, a list of the names and prices of such small fruits and grape-vines as he offers.

PERSONAL ITEMS.

The Duke of Wellington's plate has been estimated to be worth $1,500,000.

Gen. Hancock has a very pleasant suburban home, thirty miles by railroad from St. Louis. The house is spacious and is surrounded by ample grounds which command a view of the Mississippi,

Now it is a Yankee, Mr. Samuel Bromley, of Mystic River, in the State of Connecticut, who announces his ability to live for ten hours with his nose and mouth hermetically sealed. Where is this thing to stop?

Dr. Germaine has for three years been blind, yet he continues to practise acceptably at Westfield, Mass. His wife accompanies him on his calls, describes to him the visible symptoms of his patients and assists him in other ways so well that he has lost none of his business.

Prince Victor, the eldest son of Prince Napoleon, has just attained his eighteenth year, and with it his majority, according to the custom of his house. He is still studying at the Lycee Charlemagne, and next year will probably present himself for admission to St. Cyr, the famous military school of France. The Prince is described as studious and intelligent. He is tall and of strong build, and partial to field sports, at which he is an adept.

Hope for Consumptives at Last.

From the official record, we learn that over sixty thousand persons die annually in the United States from pulmonary consumption. In each of these cases there was a first or incipient stage of the disease, when all the life-forces and organic structures were not unimpaired by its encroachments. If at this time an agent had been found which could give to the system a higher degree of vitality, and so enable it to resist the deadly assault this perilous crisis would have been safely passed. And not this one only. In every subsequent assault of the enemy, especially where there existed some hereditary taint, a prompt resort to the same re-vitalizing agent would have given a like relief and immunity. Now it is confidently claimed, and the claim is substantiated by the result of over twelve years' experience of its use, that just such an agent has been discovered in COMPOUND OXYGEN, the use of which is rapidly extending. If you wish to learn all about this new treatment, address DRS. STARKEY & PALEN, Philadelphia, Pa., and they will promptly mail you their Treatise on Compound Oxygen.

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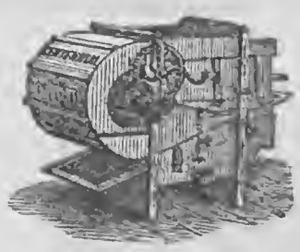

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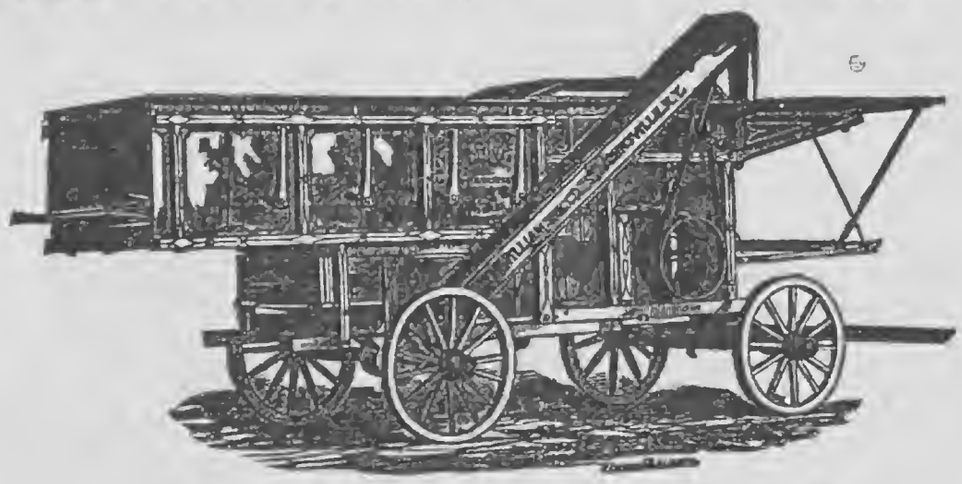

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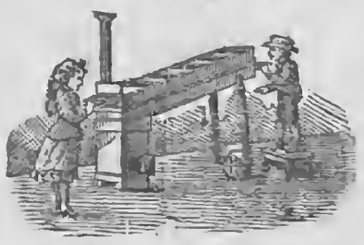

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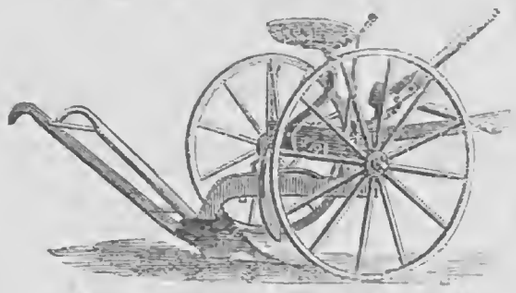

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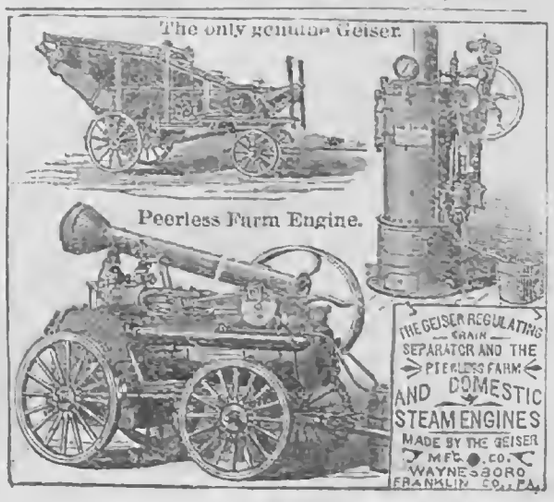

Humorous.

A SALEM youth calls his lady love "oleomargarine," because he hasn't any other but her.

BRIDGET—"And how shall I cut the poic, mum?" Lady of the house—"Cut it into quarters." Bridget—"And how minny quarters wud I cut it into, mum?"

"MY! what a steep hill! And see those ten or eleven wretches packed in one wagon that the poor staggering horse can hardly draw." "Wretches? Them are all Christians, mum, going to camp-meeting."

"SHON," said a Dutchman, "you may say what you please 'pout pad neighbors; I have had te vorst neighbors as never vas. Mine pigs and mine hens come home mit dere cars split, and todder day two of them come home missing!"

"I SUPPOSE," said a punning lady to a sailor whom she saw holding the rudder of a boat, as she was sauntering on the seashore, "I suppose that your favorite tree is the 'elm.'" "Yes, madam," he responded, "and I see that your favorite is the beach."

You may say what you please about it, but there is luck in horse-shoes. A woman nailed one up against a woodshed a month ago, and last week the husband eloped with the hired girl. The man had not earned a cent for more than two years.—B. Dadd.

ROBINSON (after a long whist bout at the club)—"It is awfully late, Brown. What will you say to your wife?" Brown (in a whisper)—"Oh, I shan't say much, you know. 'Good morning, dear,' or something of that sort. She'll say the rest."—Exchange.

A PEDAGOGUE told one of his scholars, a son of the Emerald Isle, to spell *hostility*. "H-o-r-s-e, horse," commenced Pat. "Not *horse*-tility," said the teacher; "but *hoss*—tility." "Sure," replied Pat, "an' didn't ye tell me, only the other day, not to say *hoss?* Faith! its *wan* thing wid ye one day, and another the nixt."

A GENERAL, sitting in front of a hotel in time of war, heard a newsboy crying his papers, "all about the battle." The general bought a paper, but could not find the account of the engagement. Turning to the newsboy, he said: "I do not see any battle." "No," said the boy, "you never will if you sit here!"

"I ONLY want to show you one thing more, Professor, I have invented a short method of boring mountains which I think will prove very valuable," "My dear sir," burst forth the wearied listener, "if you would only invent a short method of boring individuals you would indeed confer a lasting benefit upon the race."

"How came these holes in your elbows?" said a widowed mother to her only son. "Oh, mother, I hid behind the sofa when Colonel Gobler was saying to Maria that he'd take her even if you had to be thrown in; and he didn't know I was there; and so I held my tongue and laughed in my sleeves till I burst 'em."—Little's Living Age.

A WEALTHY upstart goes to a sales stable to buy a pair of carriage horses. "Here are a sample of fine English-bred mares," says the proprietor. "English-bred! They will not do." "Why?" "My coachman is a Frenchman," "Well!" "If they were raised in England they couldn't understand a word he said."

AN exchange says: "A Boston artist painted an orange peel on the sidewalk so naturally that six fat men slipped down on it." We would like the artist to call this way and paint blocks of ice on our sidewalks about the present time, just for the purpose of ascertaining how many degrees cooler the imagination would make it.—Washington Star.

"DON'T get out of anybody's way," advised Henry Ward Beecher. But, Mr. Beecher, when you recognize your landlord only half a block away, and it is three days past rent day, and there are two cross streets, an alley and three four-story stair-ways with rear exits winking at you from the near side of the street—are we—is a man, that is, to go straight ahead and collide with the landlord? Oh, nonsense! what kind of talk is that to give a debt-laden people, with money at 9 per cent., and your Summer clothes not paid for?

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Old Lady (mentally).—"Good gracious! What dreadful creatures! So young, too!" [Looks for the communicating cord!

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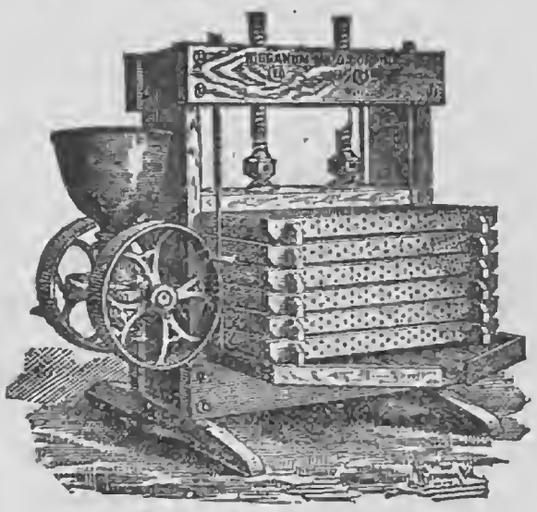

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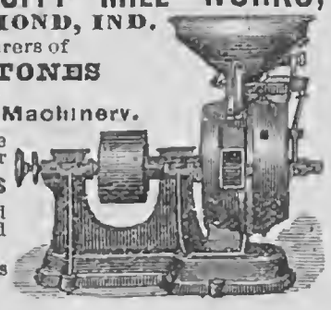

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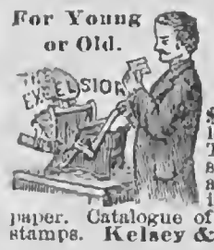

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Landscape Gardening.

LANDSCAPE GARDENING.

S. B. PECK.

This term, as I understand it, applies to the planting and tending of ornamental or pleasure grounds, and relates to the grounds about dwellings, public edifices, parks and cemeteries. The manner in which they should be laid out and planted depends much on their size, shape and surroundings, and no one can well make one plan entirely suitable for any two pieces of ground: therefore all special directions for grounds in general are liable, if followed, to produce effects in bad taste.

It is a principle generally assented to, that "curved lines are more beautiful than straight ones." There is also another principle, not perhaps so generally assented to, but of equal force, that "the beauty of a thing depends on its perfect adaptation to its use." In the arrangement of walks and drives these two principles are often confused, and the latter is ignored or sacrificed to the insane idea of adopting the former in cases entirely incongruous. Thus, a public building situated in the center of a large inclosed plat and used only for public offices, has entrances from the surrounding streets at each of its four corners, from which walks to the front and rear entrances are made in the shape of a crescent, thus increasing the distance from 10 to 15 per cent. In case of a fire, the firemen would surely cut across this arc to reach the burning building. Equally inappropriate would be grounds devoted exclusively to ornament and pleasure, like public parks, laid out in squares and parallelograms. Triangles might be in good taste, but rarely, and should be small, and there should plainly appear a reason for that particular shape at that particular place.

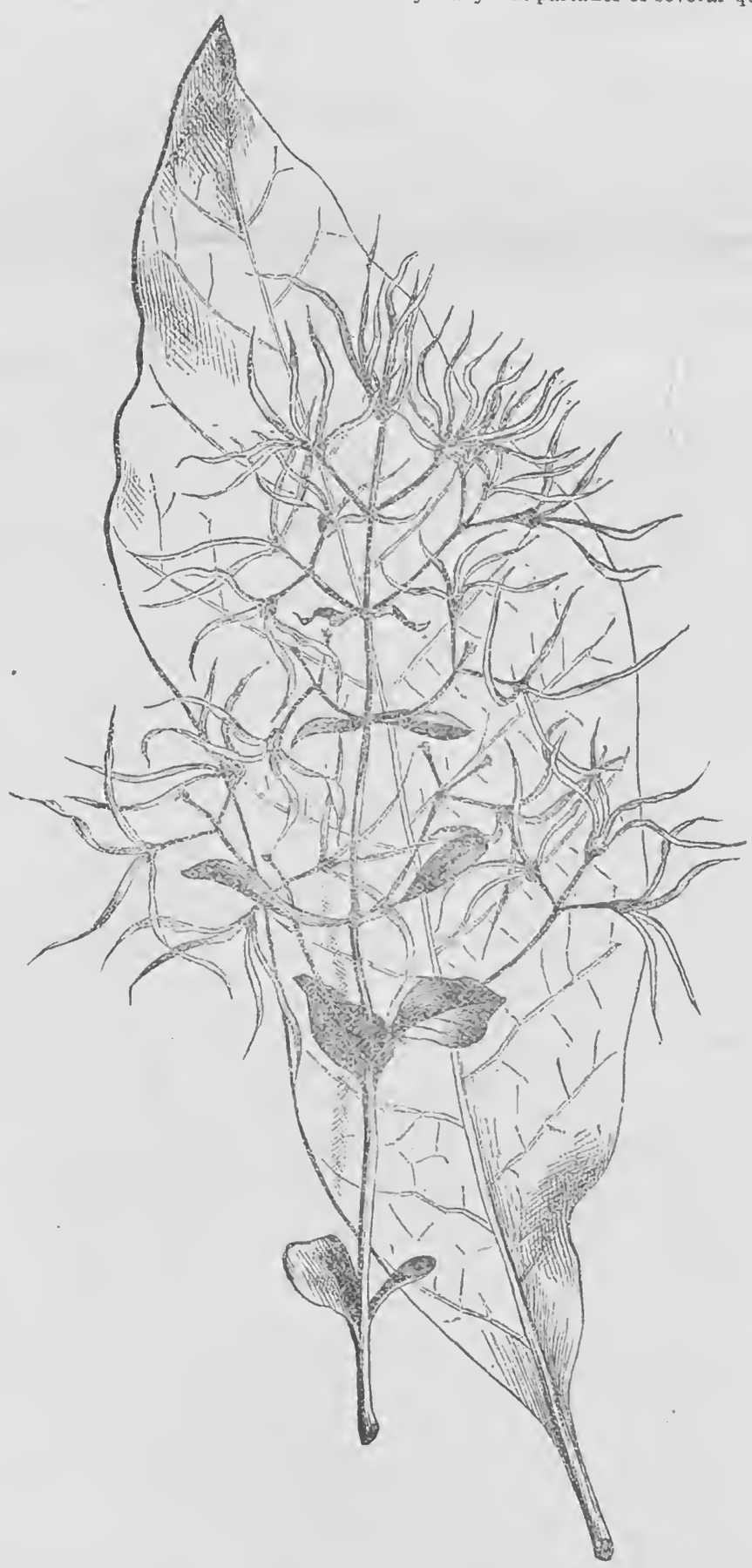
A walk from the street entrance to the front door of the house should be in a direct line, but branching from that walks are in good taste curving around the angles of the house to the side or back door.

In public or private parks and cemeteries the case is different. There curved walks and drives are indispensable to good taste. Let us look at the rationale of the thing. It is a waste of time to prolong the distance to a public office or to one's home, and it is not natural for business men to loiter by the way, therefore curved walks in such places are not well adapted to their uses, but if one's private grounds are sufficiently large to admit of a portion of them being devoted to ornamental trees, shrubbery and flowers, that portion is certainly beautified by walks in curved lines. People visit ornamental parks for purposes of pleasure and for their enjoyment of the beautiful in nature and art, but most especially for the former purpose. They visit cemeteries for the purpose of paying tribute to the memory of their departed dead. They go, in short, to *spend* time, to indulge their tastes. Curved walks there not only increase the distance and prolong the enjoyment, but if the objects to be viewed are arranged in proper order there is at every step a change of view, giving time to examine and individualize each tree, shrub, flower, fountain, bust or statue.

There is perhaps no one thing that shows a lack of taste more generally than the selection and arrangement of trees for ornament and shade. An almost universal error consists in having too many, a too studied regularity in their arrangement and too little variety. When planted in the street they must of necessity be in rows, and any deviation from a straight line there is a deformity, but a change of variety and of natural form gives to each an individuality and increases the pleasure of the beholder. Straight rows of one variety are only beautiful in the distance as one object, while a diversity of form and foliage multiplies the pleasure of a close inspection.

I am often pained at the efforts to distort nature in the pruning and training of ornamental trees and shrubs. Nature has her own form for every plant, and though you may increase the fruitfulness of a tree or vine by your edged-tool manipulations, as merely a thing of beauty you cannot improve upon nature's plans. Such is my own opinion of pruning and training for ornament. You may shear off the ends of the limbs of a spruce or fir, and make it look as though it had been turned in a lathe, the thick wall of its sides covering up its branches, but it will always be too sharp at the top, and I would prefer that it should stand behind the house as a specimen of what can be done in the way of outraging nature. Such a tree is to one of nature's make what a wax doll is to a real baby. It is true that accidents may happen in vegetation as well as in other matters. If a tree is near a building or too near other trees, it is liable to be misshapen, and its faults may often be corrected by pruning. A branch may be broken, the wind may sway the top or a rampant shoot may start up; in these cases we can assist nature with the pruning knife. In passing a fine spruce tree to-day, with the leader broken off, I was reminded of an item of my own experience some 25 years ago, when I had such a tree that grew two or three years with a flat top of four or five branches of equal size. I fastened one of these branches in an upright position, and in two years it was larger than all the rest, and it soon made a thrifty tree of most perfect symmetry.

Sheboygan Co., Mich.



THE WHITE FRINGE.—Chionanthus Virginica.—Fig. 265.

Arboricultural.

THE WHITE FRINGE TREE.
(Chionanthus Virginica.)

This excellent shrub is considered a tree by many. It partakes of several qualities one or another of which pertains to shrubs or trees, as the case may be. Twenty years old and planted singly where it has room to develop, it becomes as much a tree as the ash, to which, indeed, it is related. Grouped in masses with other shrubs or with plants of its own kind it assumes the habit of a bush. Singly also it looks a bush during its earlier days, being of slow growth and given to rounded forms. Related to the tree-like ash, on the one side, it is quite as nearly allied, on the other, to the shrub-like lilacs, forsythias and privets.

The White Fringe, though not exactly rare, is thoroughly choice in every way. There is not a quality about it from the crown of its head to the sole of its foot that is not rich or very good. The bark of the trunk or stem is smooth and light-colored and the leaves good-sized and shining—quite as interesting as those of the lilac, which is saying a good deal. Even the twigs group themselves in picturesque fashion. But the "crown of its head" bears its richest endowment after all. Its flowers are indeed unique. There is nothing at all like them in the great variety of inflorescence displayed by a large list of lawn plants. They make up wreaths, and clouds, and piles of lace, snow-white and dazzling. Plucked from the bush they are nothing; crowning the bush they are exquisite.

We recall a specimen that stands on the border of a walk near a picturesque bit of rockwork, with green turf and great Norway Spruces in the background. It would be impossible to describe the charming effect this crown of white fringe produces in such a setting. Looking down the vista and beyond, one could almost fancy for a moment that he saw a mass of cirrous clouds floating near the earth. It is worthy of the most distinguished position, not too near the house or other prominent objects, but out on the farther side of a bay of greensward near a background of contrasting dark evergreens.

Plants of the Chionanthus are readily raised from seed, but are very slow in growing to any size. Perhaps the best plan is to graft wood of the Chionanthus Virginica, or White Fringe, on the common ash. What do you think of a strong, straight stem of ash crowned by a great mass of White Fringe flowers. The very vigor of the stock as well as the effect of grafting will throw the buds of the graft quickly into flower and tend to sustain a healthy, rapid growth thereafter.

The habit of the White Fringe is so regular and rounded that it scarcely ever needs pruning, unless some part of it happens to break or become diseased. If you must prune, prune in Winter or early Spring. The Chionanthus is a plant that likes good soil and repays good feeding by extra growth and beauty; but, forced to occupy spots of moderate fertility and even bleakness, it will do quite as well as most other deciduous shrubs.

There are few shrubs that appear well in so many different places. But the slow growth of the White Fringe while young and its ultimate magnitude with age, fit it alike for the small dooryard or extended lawn, while its unique and beautiful foliage as well as flowers make it distinguished in the choicest assemblage of trees and shrubs. We give a portrait of leaf and inflorescence from a specimen growing in the Rural Grounds.

Horticultural.

RURALISMS.

Mr. Bateham, in a back number, speaks of the importance of paper bags for the protection of grapes, and I quite agree with him. There is a question as to which is best for this purpose—paper or mosquito netting, and I rather incline to bags of mosquito netting. There are those who think the bags are a protection against the rot; but this is a very debatable question. There is no question, however, that they are a complete protection against insects. I allude to the subject in answer to inquiries I have seen made, and to say that formerly I used a very light, almost

transparent paper, very tough, thoroughly weather-proof, and liked it very much. Bags made of it will last several years. It was prepared for a different purpose by a new process by a compay in New York, is cheap, and much the best paper I have used for making bags for the grape.

It has often been asked if bees injure fruits, and the answer has generally been, in substance, not if the fruit is sound. My own opinion has been, that if the fruit be ripe, it matters little to the bees and "yellow jackets" whether it be sound or not. The exception, however, has usually been made in favor of the honey bee, and I wish there were reasonable ground for it. A few days since I was in a peach orchard, where peaches, bees, hornets, yellow jackets, etc., were quite plentiful, and I watched the operations of the honey bee very patiently. I saw one alight on an unripe peach, pass all over it, and leave it. I saw this several times repeated. Again, I saw a bee alight on a peach, pass over and around it, and finally stop and begin feeding. When a small puncture had been made I pulled the peach off, and found it to be ripe on the side where the puncture had been made, but there was not the least sign of decay anywhere to be seen. This was repeated sufficiently often to establish it as a fact. It may be that the honey bee prefers bruised and rotten fruit, but it cannot be denied that it is not averse to peaches and grapes that are sound and ripe. I think Mr. Williams could tell us something about this. He is known to have given much attention to the subject.

Times change, and often opinions with them. A well-known horticulturist says, in one of his catalogues (1880), that "he believes he is the first to offer the native grape-vine grown in pots." Knowing how such an announcement had been received in the past, I have been a little curious to see how it would be received in the present, and have waited accordingly. It seems to be generally and silently received as a good way to grow the native vine, and I am of that way of thinking myself. More than twenty years ago, however, when Dr. Grant thought that the best way, and grew nearly all of his immense stock in pots, he was almost savagely abused for it from all quarters of the country. I gather from this that opinions have changed with the times. It may be some comfort to the Doctor, in his helpless old age, to know that vines may now be grown in pots without eliciting undeserved abuse.

Lightning sometimes plays curious freaks. I was at Mr. Williams's nurseries a few days since. A severe thunder shower passed over the place, during which a bolt struck a row of grape-vines about twenty yards from the house. The bolt descended on the end post of the trellis, and broke into numerous little balls, which took to the wires, and ran the whole length of the trellis, several hundred feet long. The post first struck was badly splintered; the second, some fifty feet distant, was split, and the others seemed to have escaped uninjured. The performance on the wires was singular enough. They were cut off smoothly at the first part, and at intervals pieces about a foot long were cut clean out and dropped to the ground. In some places the wire was cut only half through. This was the condition of things for perhaps a hundred feet, and the vines for that distance had mostly fallen to the ground. The fluid passed along the rest of the wires without cutting them. Many of the leaves were burnt to a crisp, and the bunches of grapes along the line of the electric fluid looked as if they had been scalded. It may be that electricity has something to do with what is called "scald" in the grape. The trellises on either side did not seem to have been disturbed, though they were not closely examined. I requested Mr. Williams to note the results, and he will probably be heard from in good time. Much as I have been among vineyards, this experience was an entirely new thing to me. Has any reader of the RURAL met with a similar case? I should hope that this particular application of electricity to horticulture is not to become common.

I noticed at Mr. Williams's that the Champion was the first to color among his collection of grapes, and the Ives next, with but little difference between them. I expected to find the Brighton as early, but was disappointed. Perhaps it thinks itself too good for such company, and could hardly be blamed if it did. Lady Washington was among the absent ones.

JUST now (August 6th) a peddler is canvassing the suburban districts around New York (and perhaps other places) for the sale of lily bulbs. He has badly executed pictures of impossible lilies, which, he says, have just been discovered in California "at a great expense," and have never before been offered for sale. He is quite safe in saying that lilies like those in his picture have never been offered for sale. Fortunately, there are only three of them, and for these he only asks the modest sum of three dollars and a half, but is willing to take two rather than lose a customer. In one place he sold six dollars' worth and in another ten. I have just said to a friend in his hearing: "The pictures are absurdities and the whole thing looks like a fraud. You had better let the man alone." And this she did; and this is what all the readers of the RURAL should do who may be waited upon by this man or his associates, for there are generally several of them.

THE effects of the drought on our forest trees have now become very plain. In almost every direction I see dead and dying trees that look as if they had been burned over with fire. Even the Coniferæ have not escaped, and, singularly enough, the pines have suffered more than the spruces. Lawn trees in some places have suffered greatly, especially transplanted evergreens. Of the latter put out last Spring more than half are dead, or so much injured as to be worthless. Transplanted retinosporas, so far as I have seen, have suffered least of all, a circumstance very much in favor of these graceful and beautiful evergreens.

[They *are* graceful and beautiful, and no reader of the RURAL should select evergreens for his grounds without looking over specimens of the many species and varieties of the retinosporas now to be found in all good nurseries.—EDS.]

A WRITER in a cotemporary says that insects are not troublesome to window plants at this season of the year (July and August). His experience has been singular as well as happy, or he has some magic remedy to keep them down. Window plants at this season of the year are like all other plants in regard to insects and enjoy no immunity from the pests at any time. It is better that those who grow window plants should know this, as they might not otherwise give that attention to their plants which they at all times need. The successful culture of window plants involves an almost daily contest with the "bugs."

HORTICOLA.

JOTTINGS.

BELIEVING, as I do, in calling things by their right names, I must take exception to the word *staminate*, as applied to the flower of the Primo strawberry. I claim there are three kinds or classes of strawberry blossoms, viz.: staminate, those with male organs only; pistillate, those with female organs only; and hermaphrodite, those having both stamens and pistils—in other words, both sexual organs.

The first are barren or unfruitful of themselves and are only useful in fertilizing the flowers of the second class, while the third class which I call *perfect*—an easier and more expressive word—are not only capable of fertilizing their own flowers, but the pistillates also render the first class unnecessary. Hence, for all practical purposes we have no need of any but the pistillate and perfect-flowering varieties, the latter being most desirable, and the merest tyro in strawberry growing should know that pistillate flowering varieties should only be planted in connection with, or in close proximity to, some perfect-flowering variety to secure satisfactory results. I may not have stated the case with botanical precision, but I hope I have done so sufficiently plainly to be understood.

I LIKE the way "Horticola" "goes for" the potted plants. There is a good deal of humbug about them. If left too long in the pots, so as to fill them with roots and become pot-bound, the ball should be broken up and the roots straightened out when set, otherwise they are far inferior to good layers. If one has plants of his own growth near the new bed, he has no need of potted plants. If our berry-basket makers would give us a narrow, three-splint basket, just sufficient to hold the earth about the roots to be set out with the plants, they would be far preferable to pots. Here is a chance for a new "boom." The box boom of two or three years ago failed, because the boxes were too small and not deep enough, and instead of rooting the plants in the boxes, for which there was no room, they were in some cases I know of dug up and set in the boxes for shipment, with many of the roots outside.

How prone we are to forgetfulness! The well-eared cut of corn embellishing the cover of the "Book of Ensilage," by Dr. Bailey, struck me as familiar. I thought it a reproduction of the "Judson Branching" *humbug* of a few years ago, till on reference I found to the contrary. Still I could not divest my mind of the idea that I had seen it before, and wondered how so prolific a variety could have been originated and brought to such perfection, at "Winning Farm," so quickly and quietly; but thanks to the good RURAL this week for solving the mystery. I have been much interested in the ensilage question, and as I hurriedly glanced over the pages of this book, I was and am still puzzled to know what was the *chief* object of the book, and which most to admire, the handsome frontispiece of the author, the ensilage matter, or the method employed to give the "Winning Farm" stock a first-class advertisement. I was most interested in the ensilage matter, however, and I have been thinking how baling the ensilage, either whole or cut, would answer before putting it in the silos, with care to pack closely and leave no vacant places—would it succeed, and what would be the advantages or disadvantages? Who will answer?

THE war with weeds waxes warm this dull weather. In May and June the elements were in our favor, and if it was hot and dry it was a pleasure to kill weeds. Since July 4th it has been harder work, with less pleasure attending it. They are more persistent; if hoed or pulled up to-day, a shower to-morrow will enable them to look up and laugh at you. Excessive and persistent vigilance is now essential to their destruction. The importance of taking them as soon as they appear above ground, or a little before, is every day apparent, and if taken in time, the labor is as one to ten if neglected. A few days' delay gives them the advantage, and you are at their mercy.

KIT.

Farm Topics.

WESTERN FARMING.—XII.

W. I. CHAMBERLAIN.

Bonanza Farming.

EVERYBODY has heard of the Dalrymple wheat fields in Dakota, or of the Dalrymple-Grandin Estates, or of the Cass-Dalrymple or the Cass-Cheeney farm. And there is an impression that they (or it) are somewhere along the Northern Pacific Road, or have something to do with the "Jay Cooke fiasco." But there are so many names that people's minds are like the Scotchman's "a' a muddle." There is considerable Dalrymple in it all, but just how much, no one seems to know.

I was very glad, therefore, of a chance, yesterday, to visit the farm, see the wheat fields miles in extent, examine the machinery used, and have a full conversation with Mr. Dalrymple himself, who very courteously answered my many questions, and gave me a systematic outline of the whole business. I will try to give, as exactly and with as little varnish or enthusiasm as possible, the facts and figures I gained from him.

The entire estate is properly known as the "Dalrymple Farm," and is a partnership affair. Originally, as I understand it, (though I did not think to ask Mr. Dalrymple about this point), the Messrs Grandin and Cass and Cheeney, non-residents, furnished most of the cash capital necessary for the purchase and outfit, and Mr. Dalrymple furnished his presence on the ground, and the brain capital necessary for the personal oversight and general management of so large a farming enterprise. The total of land owned is 75,000 acres. The total now in wheat is 25,000 acres. For convenience of management and division of profits, the immense farm is separated into divisions known as the "Grandin Farm," "Cass Farm," and the "Cheeney Farm," etc., respectively named for the non-resident partners. In each of these Mr. Dalrymple is half-owner, and sole-owner of the "Alton Farm." The Grandin Farm is several miles north of Fargo on the Red River of the North. The others are west of Fargo on the line of the Northern Pacific Railroad. Each of these large farms has a separate superintendent and book-keeper, and all supplies for each farm are drawn on a regular system of requisition like that used in the army. The expense accounts are all itemized or classified, and each item entered under its appropriate heading. Thus there are separate columns for "breaking" the turf, for "backsetting" it, for seed and seeding, for harvesting and thrashing, for board of hands, etc.

Thus it may readily be seen what is the total cost of a given crop per acre or per thousand acres, and what is the exact cost of each item that enters into the account. Thus, too, as soon as thrashing and measuring are done and the account footed, it is known what is the exact cost per bushel on board the cars. This exactness in accounts is essential in managing so immense a farm. Wouldn't it be a nice thing on some of our smaller farms at the East? Many "small" farmers keep their accounts on the plan of the river-man who took a raft of lumber down to New Orleans. "Look a'here, boss" said he "I had jes' fifteen dollars when I started and here's my pile now," (showing a handful of quarters) "that's how I kep' my 'counts, and that's how much I made," Farmers who have kept their accounts on that system of double entry sometimes find "how much they have made" when the sheriff sells them out.

Each of the large "farms" is divided into subdivisions of about 2,000 acres each, and placed under a division foreman, and he, in turn, has several gang foremen, or riding bosses, under him. Thus all the men, bosses, foremen and superintendents of the whole 75,000 acres, are under Mr. Dalrymple himself, who is general-manager as well as more than half-owner of the whole.

The cost of opening and stocking one of these large grain farms, including buildings, household goods for superintendent and work hands, and teams and machinery, is about $10 per acre, or $20,000 for each large division. This does not include breaking, and there is no fencing. Small farmers are apt not to provide for this expense, essential in starting a farm, and to cripple themselves more or less in consequence. The buildings consist of a house, barns and sheds for stock and implements, and a large yard or corral surrounded by a tight, high board fence for the stock to sun in, in winter time. The stock, machinery and hands used for working the 25,000 acres now in wheat, are as follows:—500 head of horses and mules are owned and 200 are hired, and in harvest and thrashing 800 men are employed, including teamsters. Only cows enough are kept to furnish necessary milk for use. The machinery used is as follows:—about 175 of John Deere's gang plows, or one for each four horses; 500 pairs of Scotch harrows, and half as many Buckeye seeders, or one of the latter for each 200, and one of the former for each 100 acres; also 155 self-binders, of the Wood and the McCormick make. Twenty-six steamers do the work of thrashing, most of them using the Buffalo Pitts separator, nine of the engines being Ames's straw-burners. These use straw for fuel, and have a self-feeding arrangement. They prove to be a success and are a great saving where fuel is scarce and the straw is deemed of no account and is burned on the field at any rate. The harvest takes about 12 or 14 days and the thrashing is begun as soon as the harvest has been in progress five days, that is, long enough to have that first cut dry enough for thrashing; and continues about 24 days. The self-binders are run in "gangs" around immense fields of a mile square or so, a dozen or twenty being run one after another, the latter number being deemed about the limit of successful work in gangs. Each gang of self-binders has a mechanic, and a gang foreman or riding boss, and men enough to shock the wheat as fast as it is bound. In case any machine gets out of repair, it pulls out into the open space for repairs and the other machines pass on, and the mechanic, with supplies close at hand, promptly makes repairs. There is usually at harvest time an expert from each of the manufacturing houses (Wood and McCormick), and any serious difficulty with any machine is submitted to him.

As I have said, after the harvest has been in progress five days, the thrashers begin. The wheat is not stacked at all, but thrashed from the shock, the usual dry weather of harvest in this region favoring this. Each thrasher turns out about 900 bushels of wheat per day, the straw being short and dry, heads well filled, and the days long. Thus the 26 steamers would turn out over 23,000 bushels of wheat per day, or enough to load 60 freight cars and make two pretty long freight trains per day, the two with their engines stretching a third of a mile. Thus the 24 days' thrashing would give us about eight miles of freight trains full of wheat. Or, to figure it in bushels, 23,000 for 24 days give us over 500,000 bushels. Or, in still another way, 25,000 acres, at 20 bushels per acre, give 500,000 bushels. That was the yield per acre last year, and Mr. Dalrymple says it will be, if anything, a little better this year. To get at the magnitude of this crop turned out by the brain power and systematic energy of a single man, we need only remember that the combined wheat crop of Ohio and Illinois for 1879 was 80,000,000 bushels, and that both the acreage and the yield per acre were exceptionally large that year, especially in Illinois. And yet 160 such farms as this that is managed by a single brain, would produce as much wheat as these two great States, the largest in population and about the largest in wheat production, of all the great Western or Middle-western States.

But it will be noticed that of this vast estate of 75,000 acres, only one-third, or 25,000 acres, are now in wheat. Since the first experiment was made, some eight years ago, which proved that this land was remarkably adapted to producing large crops of the best wheat, the system has been to "break and backset" 5,000 acres each year, and the next year sow it to wheat and add it to the previous wheat area. Thus, last year there were 20,000 acres in wheat; this year there are 25,000, and next year there will be 30,000, and so on. At that rate it will be ten years before the last acre of prairie turf is turned.

The season's work on this great farm is somewhat as follows:—Harrowing and seeding to wheat begin almost before the frost is out of the ground, usually before the middle of April, and last for two or three weeks. The ground has all been "backset," that is, plowed the previous fall. Then comes the breaking of prairie turf, which continues till nearly harvest. Next follows haying for a few days, to

furnish about a thousand tons of hay, more or less, for the teams. Then come harvest and thrashing when all is rush, and, last of all, is the "backsetting," or stubble plowing for next year's crop. The turf first plowed in early Spring, becomes so far rotted that it is as far as possible backset before harvest, and by Spring it is rotted enough to be worked with a harrow and raise good wheat. Instead of the plow, after the first breaking, some are using a remarkable machine of new principle and new invention, which does the work of cutting the tough turf to pieces, it is claimed, better and faster than either plow, harrow or cultivator. It is called the Chicago screw harrow, and is, in effect, two huge, short, horizontal augers, which worm their way into the turf or soil horizontally and cut and turn a succession of fine furrows or slices. It is a gigantic hashing machine, and is worked by four, or even six horses, and on our Western prairies seems likely almost to work a revolution in agriculture. I have examined with great care its construction and its workings in many parts of the great West, and must speak more fully of it at some future time, as well as of some other implements and machines peculiar to that section. This machine, however, is not in use on Mr. Dalrymple's farm, but on Mr. Steele's and several others near Bismarck.

Such, in brief, are some of the facts in regard to the Dalrymple farm, probably the largest of any in the world, whose minute details are under the management of a single brain. I have given them unvarnished and without enthusiasm. A hundred questions suggest themselves. Can this thing continue? Will so huge an estate hang together, or will the genius of our free institutions and our lack of entail laws soon dissolve it? Do the climate and the character of soil along the Northern Pacific favor large in distinction or opposition to small farms? Are there many large farms here? Do the large farms and farmers have a tendency or a desire to crowd out the smaller ones? Is there land and room enough for all, or have the best land and the most desirable locations all been taken? What can farmers do in these high latitudes in Winter? Can they live there at all? Can they raise Timothy, or clover, or garden vegetables, or fruit, or keep stock profitably? Are freights ruinously high? How many and what railroads give access to these wonderful Dakota wheat lands?

These and other questions I may try to answer in future in these columns.

COUNTRY LIFE.

Observations Among Rural Subscribers.

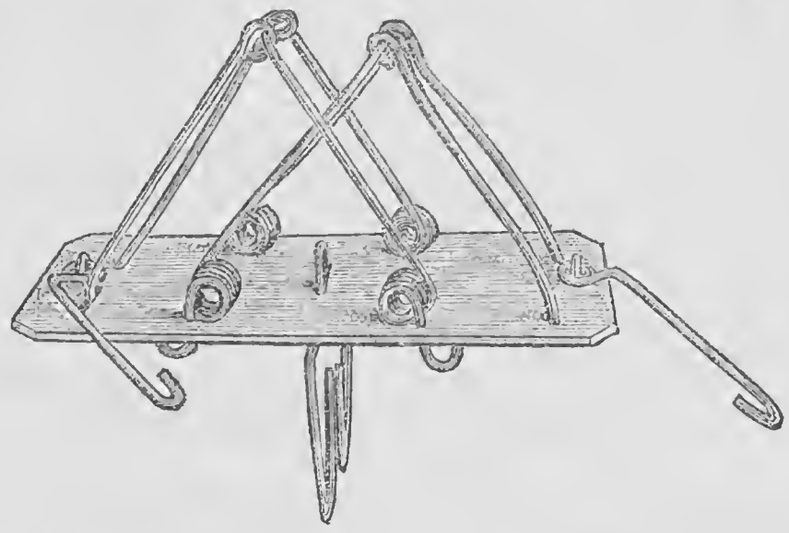
COL. F. D. CURTIS.

THOROUGHNESS is the foundation of success with John F. Bell, who inherited the characteristic from Scotch ancestors. With this idea as a governing principle, the farm of Mr. Bell has been underdrained and made fertile. The making of manure has been a leading aim, and such stock have been kept on the farm as would produce this result, and at the same time afford the largest profit. A number of cows are kept, carefully selected for their actual worth in the dairy. The making of butter has been reduced to such a system that a perfect uniformity in quality has been established. The excellence of Mr. Bell's butter enables him to sell it to one grocer in the city of Albany, who purchases it for some of his most particular customers, who are willing to pay liberally for a good article without regard to the current market rates. This special demand enables Mr. Bell to contract his butter at one price the year round. It is delivered at regular intervals, and the cows are fed and managed so that the yield is steadily maintained.

Mr. Bell does not hesitate to supplement the supply of food by purchasing more, if by reason of drought or other causes there is any lack. He does not believe that it pays to winter cows and then stint them in Summer. Under the above wise management, Mr. Bell's dairy affords a profitable income.

This is not all; plenty of manure lays a foundation for another source of income. A good crop of corn is kept over to furnish the means for fattening a number of pigs, which are well started by skim-milk. A choice flock of coarse-wool ewes also furnish an additional income. The lambs come so early and are so well fed that it is a common thing for Mr. Bell to get from $1 to $1.50 each for his lambs more than do his neighbors. His ewes being large and strong, often yield double their number of lambs. Clover hay is the basis for sheep feed, which puts the mothers in almost as good condition as grass, and also furnishes healthful and nourishing food for the lambs. The clover is cut while it is in blossom and carefully cured, so that the leaves do not drop off. Clover hay, Mr. Bell thinks, is indispensable for early lambs, and almost indispensable for good farming. He thinks that its importance in the rotation of crops is also overlooked, and as a renovator to the soil.

On a farm so thoroughly tilled and so productive as Mr. Bell's, there necessarily will be a large amount of straw and other coarse feed. Instead of selling this at a low price, or feeding it to young cattle, which would require a large range for pasturing in the Summer, Mr. Bell, like others of his neighbors, has been in the habit for years of wintering horses and



MOLE TRAP.—FIG. 266.

mules used on the canal. The average price paid is $1.00 per week, which is equal to $8.00 per ton for hay, if they should be fed exclusively on it. The usual practice with these animals, which are mostly mules, is to give them hay in the stable in the mornings, and then turn them into a yard during the day, where there are racks in which they are fed straw and corn-stalks, which they readily consume.

At night they are again fed in the stables either hay or straw. Under this system, Mr. Bell disposes of his coarse feed, supplimented with a little grain, if necessary, and converts it into manure, which is available for any crop. This system of wintering stock allows him to have more meadows and land for cultivation than he otherwise would, and fills his barns, which in turn feed the fields, thus not allowing any depletion of the soil.

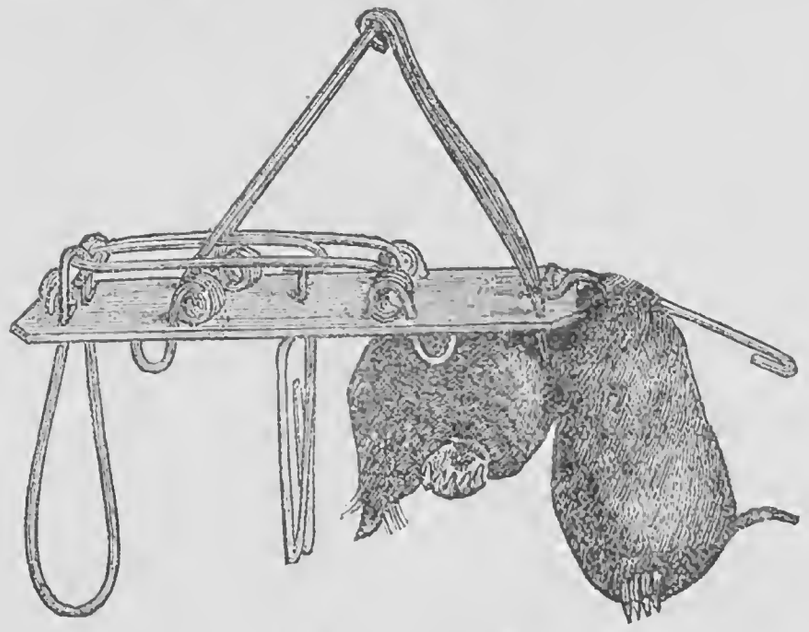
Another Mole Trap.

What seems to be a simple, inexpensive and effectual machine for catching moles is shown in the accompanying illustrations which we take from a late number of the London Live Stock Journal. It explains itself. Appearances in mole-traps, as we have found to our cost, are *very* deceptive and reliance can be placed upon actual test alone.

Farm Economy.

THE WESTERN AND SOUTHERN MANIA FOR BUYING IMPLEMENTS, ETC., ETC.

ATTENTION has been repeatedly drawn to, and mention made of, the extraordinary mania for buying agricultural implements and machinery and similar articles of many kinds now prevailing in the West and South, and especially in that portion of the South not far from the Mississippi River. But this frantic desire for the possession of that kind of property is chiefly confined to farmers, as a matter of course, but the sale of cheap carriages and furniture to all sorts of people, shows the mania is not wholly confined to these. It is estimated that the total value of the Winter wheat crop in the southern half of Illinois, for the present year, has been fully absorbed in the purchase of agricultural implements, tools and machinery, including wagons and carriages, within the last three or four months. While the main sales have been of tools related to the wheat and small grain crops, such as self-binders, self-rakers, thrashing machines, grain-drills and the like, the call for steam engines, improved plows, patent harrows, heavy and light wagons, cheap and fancy single and double buggies, stylish farm wagons, etc., etc., has been such that dealers and manufacturers have had more than they could do to supply the demand. Indeed, it has been demonstrated that, could all the orders for reaping machinery have been filled in season, from a quarter to a half a million dollars' worth more would have been sold in Illinois. And while a small part of these purchases only have been made for cash, one-half of them have been by parties for whom they are a good investment, leaving for the other half a burden which, in the light of present circumstances, seems to have been unnecessarily assumed. And to such an extent does this feeling prevail among dealers and manufacturers, that they are free in their expression that half the farmers of the country seem bent on ruining themselves in the purchase of what they do not really need.



MOLE TRAP.—FIG. 267.

At first thought it is difficult to give a sufficient reason for the existence of such a state of affairs and it is not till one has looked over the ground pretty thoroughly that he can satisfy himself. But in reviewing the agricultural history of the State since the war, one can find many causes which have operated to bring about the present condition of things. During the war and for a year or two thereafter there were great profits in farming, and every farmer who went into trade and bought land, or goods, or stock, and sold again, made much money. These first successes stimulated larger ventures and these were made, and in making them they came to be made public, and everybody who could borrow a dollar or buy on credit, invested to that extent.

Then came the crash of '73 and found two-thirds, if not more, of the farming community deeply in debt, and a half of those hoplessly so. Then followed a series of crop failures, and it became a struggle for all to keep their heads above water, and a desperate one for many, for what little surplus there was went to pay accumulated interest and to satisfy mortgages and trust deeds. But many went down, abandoned their farms, went West to start again and grow up with the country there. And the extent of this forced exodus is well shown by the returns of this census, which report little or no gain in proportion in many counties between 1870 and 1880. But the crops grew better than in 1876, especially the winter wheat crop, which had been practically abandoned for nearly twenty years. A tolerably good one of this cereal was made in 1877, and in 1878 came the phenomenal crop of this century, and the full blaze of agricultural prosperity burst upon the West in the abundant yields and fair prices along the whole agricultural line.

The profits of this year were used, as far as might be necessary, to pay off old debts, whether of arrears of interest or contracts for land due; but a large share was reserved for new purchases in the line of clothing, furniture, and everything of personal need and necessity, which five or six years of bad crops and hard times had prevented folks from keeping up to the average wants of life and living. Hence the remarkable start and continued stir of business, beginning at this time last year, and hence the business "boom" which invaded the entire country, until the profits made on the crops had been spent. There had been great and abounding crops for which fair prices were obtainable; the farmers received the money and spent it liberally, and the dullest even were made to see that the prosperity of nations depends on a prosperous agriculture.

Now we come down to the events of this year. Notwithstanding the unfavorable character of the Winter, they got abroad that not only had the Winter crop area been largely increased (which was true), but the yield would surely be equal (which was false) to last year's. Remembering the difficulties of harvesting last year, the difficulty of obtaining hands, and the losses to the crops in consequence of delay in doing harvest work, and with the hope and expectation of small grain crops equal to the previous year's, common consent seems to have been given to the idea that the only safe course would be to meet these wants by increased machinery. Those who really needed such assistance and were able to obtain it, started and made these orders first, and then the whole country-side followed their example, and the result is as we see, a very mania for crop producing, as there was for stock and land during, and for some time after, the flush times of the war. Should fair prices continue to be received for the Winter wheat crop of this year, which in the Winter wheat requires something above an average, but not at all equal to that of last year, and should the corn crop come out as well as promised, the burden of debt imposed upon farmers will be partially thrown off this year and one or two equally good crops to follow will relieve them of it altogether, and the country be no worse for the apparently foolish investments.

The business men and the small manufacturers having had their "boom" last year, and the machinery and agricultural implement makers having had theirs, then, it is interesting to consider who will get their turn next, or in what direction the money, the proceeds and profits of crops, will be invested, should the Winter wheat crop of '80-'81, turn out to be a good one, and other crops and prices equally good. To one acquainted with the country the answer is easy, or apparently so. The next form of popular expenditure will take (the need and desire for more land and more tools having been satisfied) the direction of building and the repairs of dwelling houses and farm structures, and improvements of many kinds, some of which will tend to the æsthetic side. The old idea that having money, the farmer should hoard it or put it out at interest, and in that way suck the life-blood of his fellows, has been to a certain extent abandoned and left to the Jews, the bankers and men of that class, the new idea being that if a man has money he should spend it in his surroundings, and spend freely that which he has honestly and laboriously earned. This is the temper and the spirit which have made such surprising changes in Illinois within the last few years, and this, if continued, will make it in the course of time that which, considering all its advantages, it was originally intended to be, the garden of the country, in respect to a profitable agriculture in the heart of the modern world, and in respect to many other things.

B. F. J.

Champaign, Ill.

CORN SUGAR.

THE following brief statement of fact in regard to a subject which is now attracting a large share of attention, will perhaps interest some of the readers of the RURAL and correct some mistakes.

In 1876 I published a condensed account of experiments which I had made that year in manufacturing sugar from the juice of Indian corn stems, adopting a new line of research. I had previously exhibited at the Centennial Exhibition, a few days only before its close, specimens of the sugar so made. These results, as then published, were to the effect that under favorable circumstances from 1,500 to 2,000 pounds of sugar per acre of ground planted, could thus be obtained from the juice of common field corn; that the sugar so made was true cane sugar; that it existed in the plant juice in peculiar combination and in large quantity from the time the corn passed the flowering stage until the stalks and the ears were ripe, and that the largest yield was when the ears were but partially mature. These statements were reiterated by me at the St. Louis and Elmira Sugar Conventions of 1878, and in various periodicals. Tests the most thorough and conclusive, made with scientific precision by the Department of Agriculture at Washington, in the use of the process which bears my name, confirmed in every particular the statements which I had made as to the entire practicability of producing sugar cheaply from the juice of Indian corn. The fact that a *double crop*, consisting of 1,000 pounds of prime sugar and 69 bushels of ripe shelled Dent corn to the acre, was obtained by Prof. Collier, the chemist of the Department of Agriculture, ought to open the eyes of our

Western people to an interest to which they have heretofore been blind. But these investigations have by no means ended here. In the fall of 1877 I established the fact that sorghum cane of every variety known to us in Pennsylvania yielded its sugar with invariable certainty when treated according to the method by which it was obtained from corn stems. These results the chemist at Washington has also fully confirmed, and the same were obtained by practical men last year in different sections of the country. Accurate estimates have been made showing that the entire cost of growing the corn or cane and producing the sugar in this way does not exceed 2½ cents per pound of sugar.

These statements are either true or false. The time is now close at hand when they can be either disproved or more fully verified. If they are true, they have a significance to which I can give no adequate expression.

F. L. STEWART.

Dairy Husbandry.

THE DAIRY COW—NO. 5.

HENRY STEWART.

How to Feed a Cow.—II.

THE character of the food has much to do with the quality and the quantity of the milk and the butter made from it; although this has been disputed, but never I believe by one who has long been engaged in feeding cows for profit. For it is very certain that certain feeding stuffs have different effects on the product of the cows. Wheat bran and middlings, and rye bran have the effect of producing a dense, rich milk of a yellowish color, and a butter of a deep yellow color, solid, waxy texture, and good flavor. Corn meal has a similar effect and for general use there is no better concentrated food than a mixture of bran or middlings and corn meal in equal parts. Buckwheat bran will increase the flow of milk, but it will be thin and white and the butter will be very white, soft and greasy in texture and disagreeable in flavor. Good butter cannot be made from buckwheat bran, although it is a profitable food for a milk dairy where quantity is more considered than quality. Brewers' grains, corn-starch meal (the waste from glucose factories) and linseed-cake meal have a similar effect. They are for the milk dairy but not for the butter maker or the family cow. Pea meal is rarely to be procured, but when it is, it makes an excellent mixture with wheat bran or middlings in place of corn meal, but it is to be fed cautiously on account of its nitrogenous or heating character. Palm-nut-cake meal is a rich food and has doubled the amount of cream in a careful test made with it, but it does not give a rich color or flavor to the butter, although it is not objectionable if its price were reasonable; but its cost is higher than that of cotton-seed meal. Cotton-seed-cake meal is the best of all concentrated foods mentioned. It has an agreeable flavor when free from husk; it gives a high color to the butter, produces more of it than any other food in proportion to quantity and cost, and is safe and healthful. Its effect is somewhat constipating, and on this account, it is better when fed with malt sprouts which have an effect entirely different. Malt sprouts are very dry and swell enormously when steeped; so that they cannot be fed safely unless in small quantity, or soaked and given wet. But when thus prepared and given with cotton-seed meal and wheat bran in equal parts, the mixture has made the best food I have ever used, either for milk or butter.

For profit, it may be accepted as beyond question, that the more food a cow can be induced to eat, up to a point where the product is no longer increased in proportion, and as long as the cow is kept in good health and vigor, the better it is for the cow's owner. For if a cow gives, when fed on hay alone, four quarts of milk a day and this can be increased to eight quarts by four pounds of bran and corn meal, or to 12 quarts, by eight pounds of the extra feed, and each additional pound of feed after this does not increase the product, then the eight pounds of feed is the maximum quantity that the cow can use productively, and there the feeding should stop. It is not safe to force a cow by high feeding to the very verge of her possible production, as the digestive powers are then taxed to the utmost, and the system is on the utmost tension, when an accident, such as a sudden shower on a hot day, may change the current of the circulation and bring on a serious or fatal attack of fever. It is by such excessive forcing that so many productive milkers are subjected to inflammatory diseases, as garget, milk fever and abortion. It may be different in such a case as when large-framed cows, in a milk dairy, are fed highly with a view to force as much milk as possible, and when the milk falls below a profitable point, the animal is fattened for the butcher. In some milk dairies the daily rations of grain food amount to half a bushel of brewers' grains and one peck of corn meal, with hay or pasture *ad libitum*. But in milk dairies cows are not permanently kept, but are coming and going continually, being changed as soon as the milk falls below the cost of feed.

The general rule in feeding cows is that 27 pounds of dry food are required for 1,000 pounds in weight, and that three-fourths or two-thirds of this should be bulky food, such as hay. This estimate is based on the nutritive value of hay, in which the ratios of albuminoids or flesh-forming substances, and of carbo-hydrates, or fat-forming and respiration-sustaining substances, are equivalent to 1 of the former to 6 of the latter. Of these 27 pounds of dry substance, 2½ pounds of the albuminoids, and 15 pounds of the carbo-hydrates, with half a pound of fat, must be capable of complete digestion.

As the flesh of an animal contains precisely the same elements as pure milk, and as milk is of itself sufficient to support a growing animal and to supply every requirement of its vital function, so the food that will perfectly sustain an animal in health and vigor, is precisely adapted to the production of milk; and those kinds of food which will fatten an animal, will produce fat in the milk. So that we have a very simple guide to the choice of food for cows. In my own practice in feeding cows, I have found the above estimates not sufficiently liberal, and that 15 pounds of the best clover hay, with eight pounds of concentrated food, which is considerably more nutritious than hay, are required for adequate and *safe* feeding for an 800-pound cow. I say *safe*, because a cow will eat more than this, but it will be a dangerous experiment to feed more to a cow than she will consume with good appetite, and healthfully. I would not feed a cow on a high-pressure system, or advise any other person to do it. In many years' feeding of cows, I have never had one case of sickness, never lost a calf, never had more than an easily managed case of garget, inflamed udder, or bloody or thick milk; I attribute this to *moderate and regular feeding*, and watchful care to prevent accident and trouble.

My normal ration is 15 pounds of hay, or 20 pounds of cured corn fodder, and eight pounds of concentrated food. This may be varied as follows, one ration being nearly equivalent to another, so far as regards milk and butter production:

TABLE OF DAILY RATIONS FOR A COW OF 800 POUNDS.

	1	2	3	4	5	6	7
Hay	15	..	..	10	6	10	..
Corn fodder, dry	..	20	..	..	15	..	60 (green.)
Marsh hay	..	..	10	..	..	..	..
Mangels, or sugar beets	..	..	40	..	..	30	..
Brewers' grains	..	..	..	30	..	..	..
Malt sprouts	..	..	..	..	4	..	..
Corn meal	4	..	..	6	..	2	4
Bran, or middlings	4	6	2	..	..	2	4
Cotton-seed meal	..	2	4	..	4	2	..
Total, pounds	23	28	56	46	29	46	68

I have found the best manner of feeding hay is to cut it into chaff, wet it, and mix the meal with it. One bushel-basket of cut hay, thus prepared, pressed down and heaped, makes one ration.

Roots are cut into slices, and either given by themselves or sprinkled with a portion of the meal. Green grass, oats, rye or corn fodder are fed whole, and the meal given dry, or mixed with a small portion of green fodder, wetted, to secure the mastication of the meal. The cutting of the fodder, dry or green, (excepting grass or clover), is equivalent to a saving of one-fourth, so that it becomes a question whether it is better to save the fodder or pay for the labor of cutting it. In general, labor is cheaper than fodder: for if one man at a dollar a day can cut the feed for forty cows, that is equal to 2½ cents a cow per day; and this is the value of 3 pounds of hay at $15 a ton. But one man can cut hay or corn-stalks for 40 cows in four hours, and one man or boy can prepare the food for one cow in six minutes, so that it is cheaper to cut the hay and mix the meal with it than to feed it long and give the meal by itself.

The Poultry Yard.

POULTRY RAISING.

I SET my hens in a quiet place—when many fowls are in one house they make too much disturbance. Fowls naturally hide their nests; they must be made to feel assured they will be left alone to hatch. The larger breeds can be easily moved at night to comfortable quarters where food and water must be at hand. They must be confined a couple of days to become accustomed to their new home. Let nothing disturb them. All movements of their keeper must be slow and gentle. If a hen's confidence is obtained she will be submissive. The large breeds are clumsy and careless; they step on the chickens; of this there is more danger the first few days than during the whole year. I have some common fowls to hatch my very choice eggs. I raise Light Brahmas chiefly.

My practice is to take the chickens away as soon as hatched and keep them in a warm place till all are out. I use a box in my poultry house, four feet square and one foot high without any cover, for two weeks. I use no coops at all. At the end of two weeks I let the hen go as she pleases with her happy family. I watch that she gets all her family in the homestead at night. I use an old crockery crate for my feeding place. Laths or slats driven into the ground three or four inches apart will do as well. I feed ground corn and oats mixed and slightly moistened. The only danger with it is that it sours in a few hours. I prefer this feed to any other, as it is cheap and various in its nutriment. I find that fowls eat less if food is before them all the time—a gill of corn or its equivalent a day is a full ration for the largest fowl. The same principle applies to chickens. When I have to be away all day I leave inside of the crate all the cracked corn the chickens will eat. When they are large enough I keep cracked corn, whole corn, buckwheat screenings and a variety before them all the time. Clear, cold water, renewed daily, should be on hand at all times.

For farmers I recommend Plymouth Rocks—they are hardy and fair layers. The Light Brahmas are the best city fowls. They will not fly over a two-foot fence; they will not disturb your neighbors; they are good foragers; with a large range they will feed themselves during the Summer and Fall. Their chief danger lies in getting too fat. They, as are all Asiatics, are good Winter layers. The eggs of all Asiatics must be set very early in the Spring—not later than March or April. They require the whole season to grow in. If set late the chicks are smaller. The Cochins are less active in their habits and have a propensity to sit. The Black Cochin is the best of the Cochins for general use. The Leghorns and Hamburghs are great layers of small eggs—they lay the best in warm weather. I prefer a variety, say, of Light Brahmas, Leghorns and Hamburghs so as to get eggs the year round. I keep only one kind of cock so as to keep one kind pure.

JAS. H. CAMPBELL.

Lucas Co., Ohio.

Entomological.

OUR ENEMIES, THE INSECTS, AND THEIR CONTROL.—NO. 2

PERHAPS no man of Mr. Pasteur's ability has followed him in his study of molds as causes of disease. Here and there it has engaged the attention of learned men, however. Dr. Bain, a Prussian naturalist, has carried it forward; a few Americans are becoming interested in it; but, if, as surmised and now seems probable, the subject has its practical bearings, it should also be taken up by practical agriculturists. They are not only the most deeply interested, but quite capable of engaging in it, and making more extended experiments to determine its supposed usefulness. The experiments and observations of the writer were confined to the latter portion of the last season, because his attention was called to it too late to make earlier and fuller tests; but in those made there seemed promise sufficient, at least, to merit fuller experiments the present season, and more will be determined when the infected insects come out of the ground next Spring. Among entophytes the yeast plant, perhaps, merits earliest attention, because it is known to be promising in its action as an insecticide, and easily obtained in any desired quantity. The yeast should simply be diluted with water and sprinkled upon the foliage of plants frequented by insects. Beer and any other ferments that suggest themselves should also be experimented with. It may be that calf's rennet, will serve a good purpose. It is, without doubt, of the nature of a ferment; but scientists are not agreed concerning it, some claiming it to be similar to the spores of cryptogamous plants; while some think it of a chemical and others, of an animal nature.

But, doubtless, the spores that can be obtained the most easily and used the most successfully are those that nature herself employs for this object, such as the fly fungus, and allied forms of this and other classes. The dead insects killed by these and other entophytes should be collected, powdered and preserved in years when epidemics prevail—as they often do among insects—for use as insecticides. It will not be difficult to obtain a considerable quantity. Here are the sources of the infection, and the harvest time to secure our poisons. One great fact to be observed in this connection is, that nature seldom commences these assaults upon insect life, until too late in the season for our purpose. It should be man's business to supplement nature's shortcomings here, and be ready with his sporadic infections to assault the smaller numbers of the first broods that hatch in Spring. The object aimed at is not, as is usually supposed, to kill directly, but to poison and infect the parents in such manner that they can lay none but diseased eggs that will again cause the disease to spread among the matured insects.

To illustrate the subject, take, for instance Caloptenus spretus, the locust: one man armed with the sporadic poison could go into Montana, or wherever else the native or original breeding grounds of these locusts may be found, and by infecting the first broods of Spring, so control these insects that they will never increase in sufficient quantities to be able, or rather forced, to migrate to fertile regions to obtain food and scourge mankind. A few trained men could thus control more than an army after the locusts are allowed to increase and migrate. The economy of such method must be apparent to all minds. Of course, it will be understood that the method is probably only applicable to such insects as devour the foliage of plants and consume the spores as they have been scattered upon the foliage; such insects as the chinch-bugs that live by puncturing, and sucking the juices, might not be reached, still the spores are so minute that this is not certain; but by testing, it might be determined that enough could be infected to finally accomplish the desired object.

Even if these methods should fail in these instances, the advantages would not be greatly lessened, for the classes of puncturing insects are small, in comparison to those consuming the foliage or whole substances of plants. As to the diseases of insects above referred to, the topic has been little studied, and there is not much definite information to be gleaned from books, but it has often been observed that insects are very liable to be destroyed or rendered unhealthy from the lodgement and development of parasitic plants upon their bodies. In many instances they have been observed to die by the million from unknown diseases, the dead bodies molding, but it is not always clear that vegetable parasites were the cause of death. What we should take advantage of is the death of myriads of insects under conditions like those when human beings perish of cholera and yellow fever epidemics. We must then collect their bodies and retain and use the spores therefrom as poisons again to produce similar conditions. Little pains are needed to carry the infection of cholera and yellow fever to distant places by means of clothing or affected persons; indeed, the difficulty is to prevent the infection from spreading. The virus may be preserved from season to season, and the diseases caused again and again at will. This is somewhat the condition of things proposed to be artificially used against our insect enemies, let the cause be entophytes or whatever else it may. If we can generate and repeat the disease at will, then scientists may go on disputing as to the causes. Then we could be only intellectually interested, for we would already have the practical application of the facts. But, after all, it may finally be discovered that the diseases are climatic and non-infectious.

D. S. MARVIN.

Industrial Societies.

THE ROYAL AGRICULTURAL SHOW AT CARLISLE, AND BRITISH FARMING.

PROFESSOR J. P. SHELDON.

FOR some time before the date of the Royal Society's show the weather had been broken; the prospects of the show were consequently not very bright, and the result unfortunately bore out the prospects. Two years in succession the Society has been almost drowned out of its own show yard. The Kilburn show of last year became a by-word for rain and mud, and I should be sorry to look upon its like again. But the Carlisle show-yard would have been quite as much a quagmire as the Kilburn one but for this—it was on an alluvial soil instead of on the London clay. My opinion about the London clay is this: it is the stickiest on the face of the earth. Lucky it was that the Carlisle show-yard was on dry land, or it would soon have become impassable, for the situation was a low one; but as matters stood it became very dirty by the end of the second day, at which time I had had quite enough of it. The weather at the Kilburn show caused the Society a loss of about $60,000, and though the people of Cumberland are not so much afraid as those of Middlesex of being dissolved by rain it can hardly be otherwise than that the Carlisle show should be a financial loss to the Society. A few more disasters of this kind will cripple the Society, unless other means are resorted to for filling its exchequer.

In all other respects than those which had to do with the rain, the show was a success. The animal classes as a rule were well filled both in the matter of quantity and quality. The Short-horns as usual were present in numbers, showing on the whole no falling off in quality as compared with former years. I have seen individual animals in greater numbers and of higher merit, perhaps, at some of the Royal shows, but on the whole the Short-horns at

Carlisle were a highly creditable lot. There were also many excellent Herefords, Longhorns, Devons, etc., but, strange to say, there were none of the famous West Highlanders—the best beef-making breed of cattle the world has yet seen, so far, that is, as quality of beef goes. The two other Scotch breeds, the Ayrshires and the Polled cattle, were, however, well represented. In my opinion the polled cattle made the best show of any of the different breeds, so far as evenness, quality, and general intrinsic merit are concerned. These cattle, especially the Norfolk branch of the family—the red-polled Norfolks and Suffolks, as they are generally called—are rising into popularity at a rapid rate. I consider they ought to, for they have many excellent qualities, not the least of which is the negative one of hornlessness. Being excellent beef-makers, and having no horns, these cattle would suit your shipping trade to this country better, perhaps, than any other kind.

The sheep classes were quite equal to those of former shows, and the different Down breeds were very well represented, specially the South and the Shropshire Downs. The last named are rapidly coming to be the most valuable breed of sheep in these islands, and the white-faced, long-wooled breeds — the Leicesters, Cotswolds, Lincolns, etc.—are doomed to become less thought of than they have hitherto been. It is the question of quality of mutton which is bringing about the change in public opinion in respect of the different breeds of sheep. Wool, you see, can easily be grown in distant countries, and the sheep stock of the world is increasing in numbers, so that we no longer in England can look on the production of wool as a specialty in which we excel. Wool, in fact, like wheat, has ceased to be a leading mainstay in British farming. We cannot afford to go in heavily on either of them at present and prospective prices. Hence it follows with regard to wool, that we are compelled to attach more importance than we formerly did to the question of quality of mutton. Now it happens that long wool and inferior mutton go together, while the short-wooled breeds produce mutton of superior quality. The Leicester mutton is much too fat, the Lincoln too coarse, while the Cotswold is too commonplace in quality and repulsive in flavor ever again too find much favor in the estimation of the English public. Hence it follows that the Down tribes of sheep are rising rapidly in the scale of merit; and as the Shropshires are large sheep, very fertile, and highly practical in all respects, they are rising fastest of all.

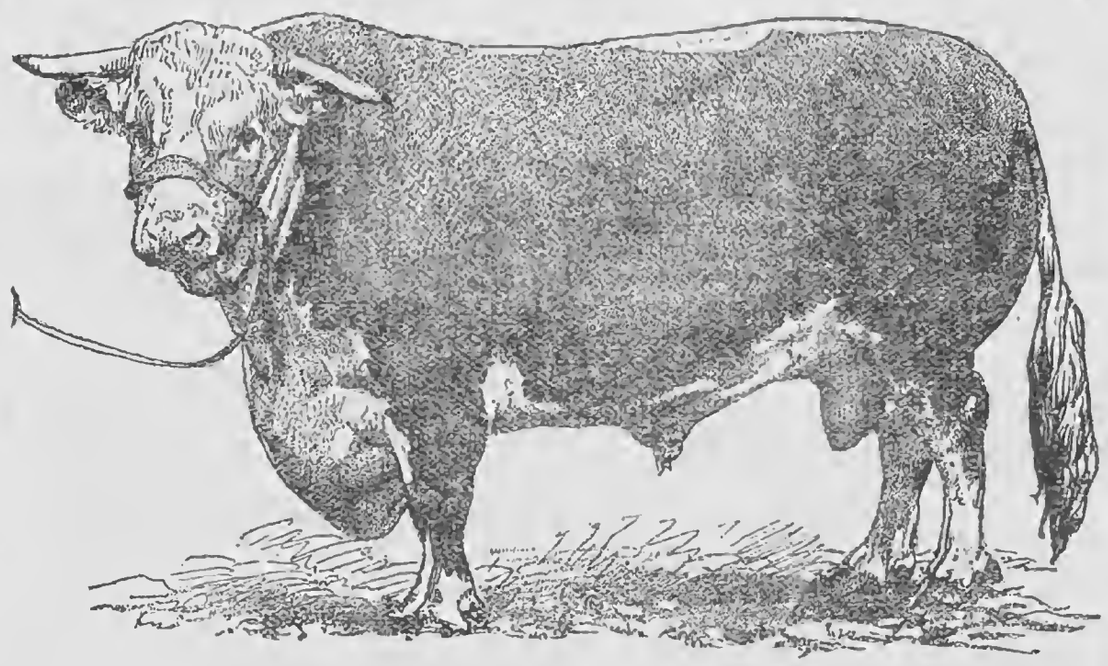
The prospects this year of profit to English farmers are very poor indeed. It is now certain that we shall have a season only a degree or two less disastrous than that of last year. A great deal of hay has been spoilt, and some of it carried bodily away, by the floods of rain which have been so common of late. Mr. Mechi tells us that on heavy land the roots of winter wheat are rotting in the ground, and though the crops, as a rule, are bulky it is probable that the quality will be inferior. All the mischief is owing to want of sun and warmth, of brightness and dryness of air, and to the huge downpours of rain. Cows are milking badly, and the yield of cheese will be one-fourth or one-third below the average. Prices of cheese, it is true, are pretty high, but they cannot make up for the shortness of the make. In fact, if English cheese-making is to pay in the future, we must have present prices maintained, in conjunction with good average yields. Another thing is certain: we cannot afford to grow wheat at 4s, 6d a bushel, unless we can average more than 30 bushels an acre. Nor, indeed, can we grow wool at 1s a pound, or beef at 7d, or cheese at 6d, or butter at 1s, if we are to pay our way and live—unless, indeed, we have productive seasons of a very different order from the last two or three.

But, after all, it is a great thing for our general population that food is cheap; farmers, of course, are suffering, but the poor are fed; landowners are in sore straits in many cases, but those who own no land are neither slaves nor paupers for that reason. Despite the things I have been discussing, it is probable our farmers on the average would be as prosperous as yours are, if only the seasons did not fight against them, and we must hope for and expect a change for the better so far as the seasons are concerned. Our farmers have this advantage to balance high rents and taxes and bad seasons viz., they sell in the dearest and buy in the cheapest markets in the world; that is, their produce makes the highest possible time's price, while they buy their implements and general manufactured goods at very reasonable rates. All this we owe to Free Trade, for our people are not taxed, as yours are, in order to bolster up the manufacturing classes; we do not make them pay 30 or 40 per cent. too much for what they have to buy, in order that our own producers shall reap the advantage of a monopoly. We believe in fair play and no favor, with justice to all classes alike, and we know this system will win in the end. It is odd to me that your farmers do not demand fair play from the government.

Sheen, Ashbourne, Eng., July 27.

THE ROYAL AGRICULTURAL SHOW AT CARLISLE.—(Continued.)

At "Royal" shows riding horses always make a fine show in fine weather, but the wet

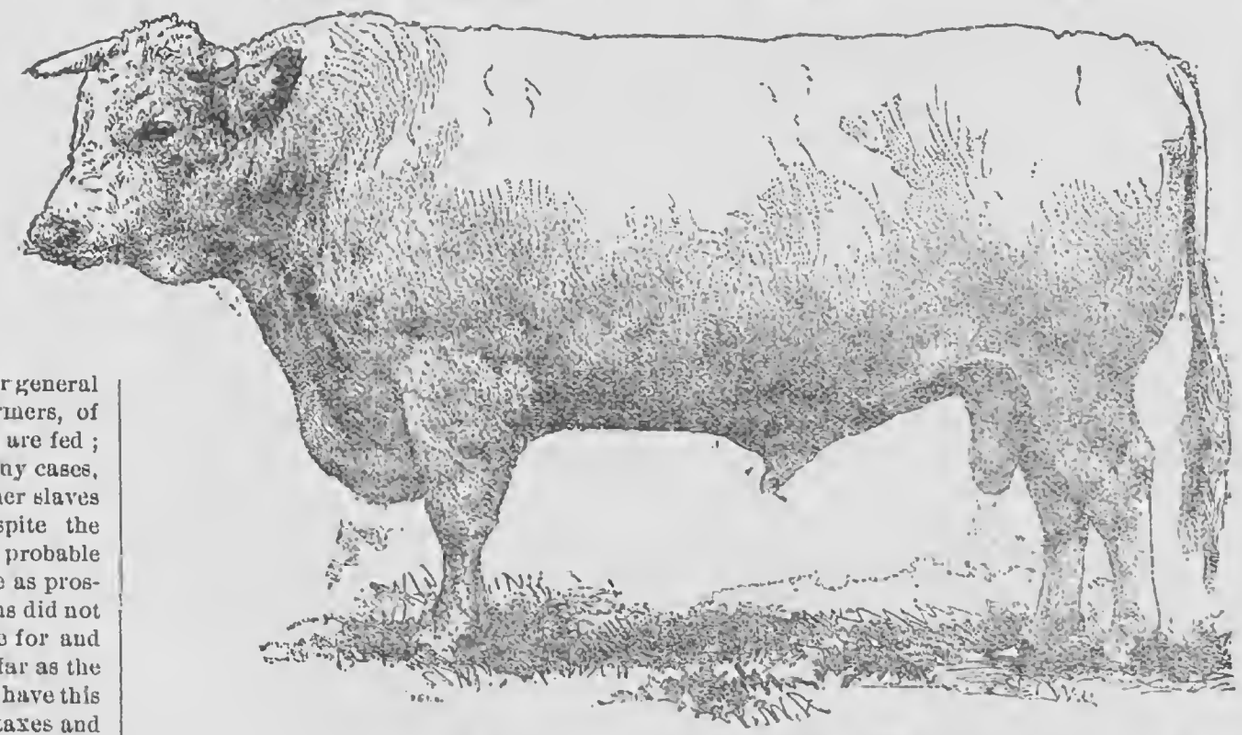


HEREFORD BULL GRATEFUL, WINNER OF FIRST PREMIUM AT CARLISLE.—FIG. 258.

at this prevented a good display in the ring, where their points and beauty are best exhibited. Thoroughbred stallions suitable for breeding coach horses; mares of the same classes; ponies and heavy-weight hacks, male and female, made up a number of different classes each of which had a host of admirers.

Short-horns made a display fine enough to delight their host of friends. In the class of bulls above three years old, the first premium, not a little to the surprise of old fair-goers, for once slipped by the veterans Vice-Admiral and Rear-Admiral, first and second prize bulls at the Kilburn show, and fell to a lot of a comparative outsider, the Duke of Howl John, which also won the premium offered for the best bull at the show. He is a six-year-old, white beast, with fine top, excellent quarters, great length, strong middle, and of beautiful symmetry, his only blemish being his somewhat rough shoulders. He is the property of Mr. John Vickers, of Crook, about a dozen miles westward from the old city of Durham. Although a comparative stranger to the general public, he had already won about thirty prizes and cups, principally at local shows, and will certainly be heard of in national exhibitions in future. For cows in calf or in milk and above three years old, Mr. Hutchinson's Grateful took the first prize, while in yearling heifers, Lord Fitzhardinge's Wild Eyes 15th took the first honors from 32 competitors. [Both of these have been pictured in the RURAL NEW-YORKER; the first last Summer, and the second last Spring.—EDS.]

Herefords, though comparatively small in number were of excellent quality and headed by the famous "adult" bulls Grateful and Thoughtful, which were also the chiefs of the breed at Kilburn. Grateful, after having been defeated by his opponent at the last three



SHORT-HORN BULL, DUKE OF HOWL JOHN, FIRST PREMIUM WINNER AT CARLYLE.—FIG. 269.

shows at which they were exhibited together, has won a signal triumph here. In this country, while the high appreciation of Short-horns is universal, that of Herefords is merely local, being confined mainly to the county from which they derive their name and the neighborhood. They mature early, however, make prime beef, laid on heavily on the best parts, and thriving best on grass, they should be excellently adapted for raising on your Western plains cross-bred, or "grade" animals, which made a better show here than their near relatives and neighbors, the Jerseys. There was also a fine show of polled cattle, belonging to the various hornless breeds, which are certainly advancing in public favor Ayrshires were few in number and not specially distinguished for quality, while the other breeds shown possessed little or no interest for trans-Atlantic readers.

W. L. H.

Various.

HUMBUGS AND DUPES.

I CORDIALLY indorse the RURAL'S sentiments regarding pictorial exaggerations, page 492, and yet the cause of these exaggerations rests in a great measure with buyers. One can hardly induce the average man to buy a new variety of fruit, grain, etc, unless its merits are rather overrated. In fact, I am inclined to think that the majority of mankind rather enjoy being deceived. Persons often say to me, "We think of engaging in fruit culture; do you think we could do so with profit?"

If I answer truthfully that with experience, persevering industry, good judgment in marketing, etc., etc., he will probably make fair (not large) profits, he will walk away as if he disdained all such counsel, saying plainly by his looks, or at least by his actions, "That man is little better than a fool." But tell men of this kind that fruit-growing is nearly all profit, that apples will pay six to eight hundred dollars and grapes yield seven or eight tons per acre, and strawberries eight to ten thousand quarts, etc., etc., and they march off highly elated, and will report that their informant is a man of wisdom and experience.

When we inform people that the grape vines they are talking of buying will, with good care and culture, produce a light crop the third year and a full one the fourth or fifth, we have probably lost that sale; but tell them that these vines will bear next year, that three or four vines will supply their family, and how quickly they buy!

I hardly know whether or not it is morally wrong to unseal the eyes of these self-blinded people. Those oily-tongued agents that perambulate the country selling humbug fruits at swindling prices, are doing some good. Men who buy of them would not be likely to purchase a good variety of fruit at a fair price of an honest dealer. "If there were no fools in the world, knaves could not live." Many a successful fruit grower has had his interest first awakened by some of these exaggerations, pictorial or otherwise. The beginning was a fraud, the ending a success.

In connection with this subject I quote the words of Butler:

"Learned men often greedily pursue
Things that are rather wonderful than true;
And, in their nicest speculations, choose
To make their own discoveries strange news,
A natural mystery rather a gazette
Of rarities stupendous and far-fet;
Believe no truths are worthy to be known
That are not strongly vast and overgrown.

Onondaga Co., N. Y. NELSON RITTER.

PREVENTING SHOULDER-GALLS.—One of the best preventives of this is to keep the collar on the horse, after bringing him into the stable, till the sweat is perfectly dried off. Look to it also once a week, to see if no sticky lumps are formed on its inside, and if there are any wash them off with hot soap-suds, then rub the collar with neat's-foot oil. It is essential to look to this at least once a week, and always keep it clean and soft. It is better to keep all the harness on a horse, if quite sweaty when brought into his stable, till his hair is perfectly dried. The remedy for galls given in the RURAL of July 31, is, no doubt, a good one; but horses when first taken out to work in the Spring, not having had the collar on them much during Winter, ought not to be used over two hours the first day or three hours the second, their work being gradually increased as the skin and flesh harden on the shoulders. The flesh of the body also becomes soft after lying still some time, and requires gradual seasoning, or what is technically called "bringing into condition." It is thus that trotting and race horses are trained to perform their great feats with rare injury to them. A. B. A.

AN EXTRA-EARLY NEW SEEDLING PEACH.—Mr. W. H. Fredenburgh, of Kingston, N. Y. sends us a peach taken from a four-year-old seedling tree growing in his garden and from which he gathered ripe peaches on July 20. He calls it the Fredenburgh Seedling and claims that it is five weeks earlier than any peach grown in that neighborhood.

The peach was much decayed. We judge from the sound portion that it is a free-stone, very juicy—very sweet.

Everywhere.

CONNECTICUT NOTES.

CONN., Bloomfield, Hartford Co., Aug. 3.—A rainy day affords an opportunity for sending the RURAL a few lines from this quiet country farming town—a pleasure I have had for several successive years. To us denizens of the city whose vacation from the busy routine of daily life seldom exceeds a few days, the hours spent in-doors when one can stay out, seem like time lost. So, except when absolutely compelled to seek shelter from the rain, I can usually be found in field or forest, or taking my ease in a hammock swung under the kindly shadow of convenient apple trees, where, interested in the pages of some easily read book, or quietly dozing, I enjoy a rest more serviceable, so far as regards the restoration of expended vigor, and the accumulation of vital force, than I can conceive possible elsewhere. I feel a sympathy for those who, having no old country home and loving friends to welcome them, spend their vacations amid the hurry and bustle of fashionable resorts by the sea or in the mountain, or undergo the unpleasantness of the ordinary country boarding-house warfare, where the chief object seems to be to get the greatest amount of money for the least outlay for provisions or service. The rain now so gently falling is very acceptable; for, although this section has not suffered so severely from the drought as many others, there has not been a superabundance of moisture since early Spring. Potatoes that were planted early, or in soil naturally moist, promise a fair crop, but those set at about the usual time or later, give promise of but a poor return. The hay crop, now mostly gathered, was good both as regards quantity and quality; but there has been little show for a second crop either to gather as aftermath or rowen, or to feed off for Fall pasturage. Continued rains may make a rapid growth, however, for which there is yet time.

There seems to be considerable difference of opinion as to the best method of treating grass lands of moderate quality. Where there sufficient fertility to give two good crops, they are gathered, but where the first crop is only moderately large, some claim if the second be cut, the grass will not grow sufficiently thereafter to properly protect the roots in the Winter and keep them from killing if snow does not lie on them constantly. Others think meadow

pasturing in the Fall quite necessary as well as a profitable way to use the second growth. It seems to me the more profitable way is to have no more meadow than can be kept sufficiently rich to furnish two good crops. The less acres one tills to produce the same result, the more profit he usually receives. Many men Grow poor on large farms, while their neighbors on smaller ones constantly, if slowly, accumulate fortunes.

Tobacco continues to be the crop depended upon by the farmers here to bring them ready money. It is looking well at present, but it is a hazardous crop at best, and from the time the seed-beds are planted until the crop is sold and the money therefor collected, it is always in danger of damage or destruction. A Mutual Insurance Company, intended to protect growers from loss by hail-storms, was incorporated by the Legislature last Winter, and is now in working order. The grower pays for every hundred dollars' insurance two dollars and a half, and becomes liable for an assessment not exceeding five dollars more. If his crop is damaged by hail the Company agrees to pay him the amount of the damage as appraised. The whole amount planted in the township will not vary much from that of previous years; but there is not so much of the Spanish as last year, that variety not selling for as much more than the Seed Leaf as was expected, while the weight per acre is considerably less. Said a gentleman in my hearing to one of the largest and most successful tobacco growers in the vicinity: "How do you manage with less manure and less labor than your neighbors seem to use, to get crops equal to, if not larger and better than theirs?" "I do it by *cultivation*," was the reply. "I always plow and hoe a little while before it seems absolutely necessary, and I find it puts me ahead and keeps me ahead." There are other crops beside tobacco in which cultivation can be made to stand instead of manure and labor, to advantage.

Apples are abundant and good. Pears are scarce. Peaches are becoming year by year more plentiful. It is yet an unsolved question why, during the past forty years, there have been times when peaches were abundant here for a while, then for ten or fifteen years it has seemed impossible to raise them except in a few peculiarly favorable situations, after which trees would again grow vigorously and bear prolific crops of fine fruit. There is no doubt that for the next ten years peaches will be plentiful in this neighborhood. Butternuts, hickory-nuts and chestnuts are indigenous to the neighborhood, and I have often wondered why no more attention is given to having a few trees close at hand. A tree or two of each, if no more, could be planted on every farm, giving enough for home supply and probably some for market. They are readily raised from seed, or can be easily transplanted from forests. The hickory is most difficult to move in consequence of its long tap-root with few fibers; but if this root be cut off in early Spring, a foot or more below ground, the depth depending on the size of the tree, fibers will start and six months or a year thereafter, it can be transplanted with as much certainty of life as trees from nurseries. It is also a matter of surprise to city people that there are so few small fruits—strawberries, raspberries, grapes, etc.—cultivated, when they require so little labor and attention. I asked the reason, and was informed that the principal obstacle in the way, not of their culture, but of their successful gathering by proper hands, is boys, and that when there are four churches, each having a Sunday school, within rifle-shot of where I write, there must be something wrong somewhere. L. A. R.

RURAL SPECIAL REPORTS.

KY., Forks of Elkhorn, Franklin Co., Aug. 6.—The harvest now is just about over. Barley, rye, wheat and oats are all splendid crops. Hay is hardly an average. Corn will be excellent; but there was less put in than usual. We had a fine rain a couple of days ago, which was most gladly received, as we had a very hot, dry spell. L. M. B.

MICHIGAN, Eastport, Antrim Co., Aug. 7.—Fall grain was never better, on an average, since the country was first settled. Spring crops are not all harvested yet; those that were got in early will be an average; but late-sown will be an entire failure. The extremely wet weather we had the first of June injured Spring crops, and the continuous wet caused late-sown Spring wheat to rust. Such violent wind and rain storms as we have had have never been seen in this section by the oldest settlers; but while these have damaged some crops, they have been the means of producing the largest hay crop we ever have had. Berries and fruits of all kinds are abundant. Young orchards that never bore before are groaning under their loads of fruit, so that it was necessary to thin out in order to save the trees from breaking down. It is very dry here at this present time; if we do not have rain soon late potatoes will suffer very much. There is not a great deal of corn raised here; what there is looks well, but is not as forward as it was last year at this time. The potato beetle does not seem to be as plentiful as in years past. M. M. P.

MICH., Memphis, Macomb Co., August 5.—We have had a fine growing season—rather wet for some grounds. Crops are all good except barley. It is a "catching" time for harvest, but wheat has been secured without much injury and is now being thrashed, and farmers are busy in the oat harvest when the weather will admit. Apples are so abundant that they are rotting on the ground. We don't want any more orchards for market. The Mold's oats are splendid. So are the cow-peas; they are now filling, and if they get ripe I shall be pleased with them. The Golden Ovoid mangels are fine, some of them, I think, would measure eight or nine inches through the center. The little Hebron potato the RURAL sent me last year produced about a peck. I planted them this Spring and they are doing the best of any of the several varieties I am growing. The Blount's corn is towering high; but I fear our seasons are not long enough for it. B. S.

MICHIGAN, Three Rivers, St. Joseph Co., Aug. 6.—Wheat is a good crop. Hay was heavy. Potatoes are doing well, where the bugs have left any; where they were vigorously fought, there's a fine crop. Corn is very good, but needs rain. Peppermint also, which is grown considerably here, is in good condition. S. M. S.

OHIO, Winfield, Tuscarawas Co., Aug. 6.—We have had a very favorable season. There is an immense crop of wheat, and an average one of hay. Oats were damaged somewhat by rust. Corn is exceedingly promising, and for pasturing and dairying a better season has not been enjoyed here for years. W. M. K. K.

TEXAS, Dayton, Liberty Co., August 6.—Our crops are very fine. No sign of the cotton worm yet, though if rainy weather is a sure token, he will be along after a while. However, thanks to the RURAL, I am ready for him at any moment, and off he must march to the music of Paris-green and a two quart, perforated tin cup. G. G.

UTAH, Richfield, Sevier Co., Aug. 7—As far as prospects go, there will be about 20 bushels of wheat to the acre here. Corn has always hitherto been a failure. Oats will average 30 bushels per acre; potatoes, about 75 bushels; barley, 40 bushels. Our main crops are wheat and oats. There are in this county about 1,000 acres of wheat and 1,500 of oats, and some 500 of potatoes, corn and barley. Sugar-cane is as yet a failure, but the Early Amber may prove a success; it has just been introduced. Some 200 acres of Lucerne are raised here. It cuts a heavy crop three times a season. This is the first year in which apples have been a success. They generally blossom in April and freeze off in May or June; but this year Spring came very late, and hence we have a good crop. Pears do well, but are but little raised; peaches and apricots froze down last Winter—some trees clear to the root. Currants of all kinds are raised extensively, and are a very heavy crop. Gooseberries are almost an entire failure and have been for several years. All kinds of vegetables grow excellently; yet beans, melons, etc., will freeze off occasionally. Our crops have but one live enemy yet here—the grasshopper. One kind, a little yellow native, has done considerable damage this year; the common traveling locust has not been here yet. J. C. H.

WISCONSIN, Fall City, Dunn Co., August 7.—Haying is done in this vicinity; grass was good on clay soil, not so good on sandy prairies. At present we are in the midst of the wheat and oat harvest. The former is good on new land generally, but was hurt somewhat by hot weather and chinch bugs; while on old land some is not worth cutting. Wheat is an uncertain crop in this part of Wisconsin and farmers will have to depend on something else to get a living, unless the seasons become more favorable for raising wheat. Oats are a good crop—will average 40 or 50 bushels per acre. Corn is very promising and if we have no early frosts will be a good crop. There is a large acreage under it in this county. We have a fine growing season here; rains come just when needed. My Mold's oats are doing well. I drilled them in a row six rods long, but find they would have planted another of the same length. They tiller out so much I think a bushel of seed would sow one acre. I measured a stalk to-day and it was four feet nine and a half inches in hight, head included. They are a great curiosity to my neighbors who look at them. I have several Kinver's mangels that are 17 inches in circumference and growing finely. The cow-peas are doing well, but I am afraid they will not ripen in this climate. We need more laborers here, as help is scarce and wages $2 per day for harvesting. Plenty of work at lumbering in winter time for good men. G. W. P.

WIS., Eagle, Waukesha Co., Aug. 4.—Crops are good, corn never was better. Mine is good for 100 bushels of ears to the acre. Fall wheat is splendid; a large acreage was sown. Apples are a fair crop; no peaches; few pears; a considerable amount of sorghum is grown here; a new mill has been set up within a few miles of us. The Early Amber cane is being experimented with this year. C. D. W.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

A Backwoods Lime-kiln, etc.

S. H., South Oshawa, Ont., Can., asks: 1, how to build a lime-kiln in the backwoods—it must be very simple; 2, how many feet must there be on each side of a piece of ground measuring six acres; 3, what grass or creeper would cover rocks in a pasture; if fit for cattle, so much the better; 4, will Lucerne do well in that latitude; 5, how much Timothy seed should be sow with rye the coming Fall—the rye to be for grain and the Timothy to remain for a hay crop; 6, is Clawson the best kind of wheat he can sow on new land, and what sort of wheat is American Spring wheat, and will it do for Winter sowing; 7, Having a log-house, and his wife being desirous of obtaining a vine that will run up and cover it, our friend asks what kind of vine would be the best.

ANS.—1. When a farmer has a supply of limestone which he wishes to burn for his own use, the simplest way is to make a pit something like those in which charcoal is burned. This is made by laying down a floor of small logs or split timber in a hollow place. A layer of broken limestones is thrown on this floor, the blocks being arranged as at Fig. 270, so as to form flues by which the pit is set on fire and

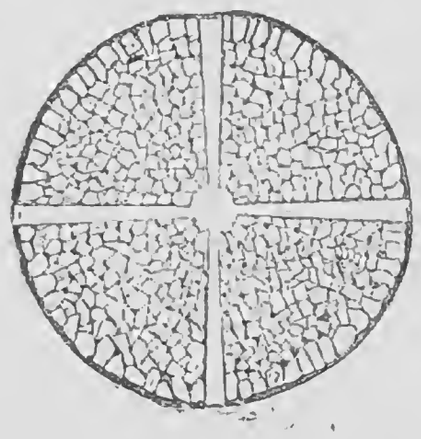


FIG. 270.

ventilated during the burning. The pit is built up of alternate layers of wood or small coal and broken limestone, a sort of chimney having been left in the center. The outside is laid up with care in a conical shape, and plastered over with clay mud. Fire is then applied to the flues, which, like the chimney, should be filled with light wood. The fire should be kept burning slowly by plastering all the cracks that may appear in the wall as the mass settles, or by thrusting into them sods or pieces of limestone and covering these with wet clay. Once the fire is well started, the flues should be filled with fresh wood, packing it in as far as possible, and then closing the mouths with stone or clay. In 72 hours the burn will be complete, and when the whole mass is red-hot, it may be left to burn without further attention, except to punch it well together and fill up any openings by which fresh air could enter to cool the pit too soon. The unburned pieces of stone outside may be kept for another burning and the perfect lime be taken out for use. To use it, it should be thrown in heaps of two or three bushels and exposed to the weather, or to one or two showers of rain, by which it will be slaked, falling to a dry powder, when it should be spread at once upon the land. One ton of good limestone will yield a little over half a ton of burned lime, and in slaking one bushel of lime, weighing 80 pounds, will absorb 26 pounds of water and swell to more than twice its bulk. 2. One acre has 43,560 square feet; six acres contain 261,360 feet. The side of a square having this area is 511.233 feet, or 511 feet three inches and a very small fraction. Thus a field 511 feet three inches each way will contain six acres. 3, We think of nothing better for your climate than Triticum repens, Quack, Quitch, Quick or Couch grass. 4. We have known it to do well in Southern Ontario. 5. About one peck. 6. Clawson is productive and very hardy. We know of none better for new land. There is a large number of varieties of American Spring wheat. Some of them, when sown in the Fall, in more Southern latitudes, do pretty well. 7. Akebia quinata would probably stand your climate. Aristolochia Sipho (Pipe-vine) is also very hardy and appopriate for your purpose.

Queries About Cheese Making.

E. H. A., White River, Col., asks: 1, how much rennet is required for 100 pounds of milk in cheese making; 2, to what temperature should the milk be brought when the rennet is applied; 3, how long should the curd stand before being put in the press; 4, how should the rennet be prepared; 5, how much salt is required for the curd of 100 pounds of milk.

ANS.—1 and 2. The usual allowance is half a pint of infusion of the rennet for 100 gallons (880 pounds) of milk. Another measure is to take a piece of the dry rennet, 2x4 or 3x3 inches in size, and steep it in a pint of salt water for 12 hours in a warm place. This is for 100 gallons of milk. An accurate measurement is 600 grains of the dry rennet steeped in 24 ounces of water at a temperature of 70 degrees for 24 hours for 100 gallons (880 pounds of milk) heated to 90 degrees. In the Cheddar system the milk is heated to 100 degrees. 3. The time during which the curd is kept in the vat depends altogether upon whether the cheese is made on the sweet-curd or acid-curd system. Very little acid is developed in an hour and a quarter with two turnings and exposure to the air in a heap, and the curd may safely remain for this time, or even longer, but this depends very much upon the weather. The curd should stand only until it is distinctly sour, and not longer, when it should be put to press. 4. Rennet is made by drying the stomach of a sucking calf, after well rubbing it with salt. The stomach should not be washed, but only emptied of its contents, and is stronger if the calf has not been fed for some hours before it is killed. 5. Two pounds of salt are used for 100 pounds of curd; 100 pounds of milk make 10 pounds of cheese; 100 pounds of milk would require one tablespoonful of the infusion above mentioned.

Miscellaneous.

J. F. A., Saline, Mich., asks whether raising clover for seed exhausts the soil, and if so, whether it does so as much as wheat.

ANS.—Nothing can be taken from the soil that grows upon it without impoverishing it according to the amount that is taken. Clover seed is no exception. The advantage of clover is that the roots extend to a considerable depth in the soil and nutrient matter previously unavailable is brought nearer the surface. The roots also improve its mechanical condition. To raise wheat is more exhaustive than to raise clover seed. The difference between removing equal amounts of wheat and clover seed would be the difference in their constituents for which see analyses in previous numbers.

A. H. G., Auburn, N. Y., wishing to make conversational connection between two houses 100 rods apart, asks what has been our experience of the telephone made by Prof. Brooks, of Phelps, Ontario Co., N. Y., which was highly spoken of in the RURAL last Spring.

ANS.—We value it as a sort of plaything. Ours needs so much attention that we have abandoned it for any serviceable use; but others have praised it in high terms. We would advise you to write to Prof. Brooks, whose word we are far from having any reason to distrust. It is not right that negligence on our part should be permitted to prejudice the sale of the said telephone.

P. S. W., Newmarket, Va., asks whether there is any machine for harvesting corn.

ANS.—There have been several attempts to perfect a machine for harvesting corn, but none has as yet been successful. The inventor of such a machine will not only confer an enormous benefit on his race, but will make a vast fortune for himself. "There's millions in it" every way it is considered.

W. K., Franklin, N. J., asks would it be good policy to plow in a coat of yard manure and then apply 30 or 40 bushels of lime per acre as a top-dressing where he intends to sow rye and seed down this Fall, or is there a better time or way to apply the lime.

ANS.—We do not know of a better time or way.

A. E. W., River Falls, Wis., sends plants for name.

ANS.—No. 1 is Elymus Canadensis—Var. glaucifolia—Lyme grass—Wild rye. No. 2. Bromus ciliatus—Ciliated Broom-grass. It is worthless. 3. Hordeum jubatum—Squirrel-tail grass.

D. C. asks for the name and price of the best work on breeding fish, especially speckled trout.

ANS.—Roosevelt & Green's Fish Hatching and Fish Catching, $1 50. The American News Co., Chambers Street, New York.

S. A. L., Clyde, N. Y.—Box of Hulless Barley received. We have the same. What advantage has it?

COMMUNICATIONS RECEIVED FOR THE WEEK END: G SATURDAY, August 14th.

C. E. G.—A. H. & S., all right.—B. F. T.—T. H. H.—S. W. H.—N. R., thanks—T. T. L.—E. L. T.—D. W. C.—C. & S.—D. S. M.—J. R. J.—J. W. W.—J. H.—A. S. S.—B. M. S.—S. O.—C. J. P.—A. D.—W. H. K.—E. R. W.—B. J. H.—J. L. E.—J. F. W.—Aunt Em.—A B. A.—A. L. J.—M. J. G., thanks. E. K. B.—N. R.—T. H. H.—A. H. G.—F. L. S.—J. T., thanks.—E. H. S.—S. B. P.—B. S.—A. B. A.—S. O. grape-vin rec'd.—J. C. G.—S. J. M.—E. A. D.—R. P.—J. B.—J. S.—R. G.—M. E. McC.—R. W. F—L. R. S.—E. W. S.—J. B. L.—A. L. J.—T. R. H.

Miscellaneous.

WHAT OTHERS SAY.

UNDERTAKING TOO MUCH.—From the columns of the Gardener's Monthly for August we make the following notes:—Over and over again, as we travel through the country, are we impressed with the fault of over-large places. Many gardens are laid out in the flush of some temporary business success, and they become sources of great annoyance in the great expenses of subsequent maintenance. Even the richest seem to undertake too much. We should lay it down as a rule that in all suggestions for the improvement of grounds, the subsequent cost of keeping in order should be studied well. This is the rock whereon so many strike. Walks and roads are particularly expensive to maintain, and should never be made without there is an evident necessity for them. Shady grass walks, with masses of flowering shrubs on each side, and kept mown a few times a year, are as pleasurable parts of a pleasure ground as can well be provided, yet we very seldom see them employed.

ROSES.—All Mr. Henderson's pot roses were in fine health and vigor when I saw them. The show of buds which presented themselves would have done credit to many a bed of established plants. He finds the most sale for Niphetos, Safrano, Isabella Sprunt, Bon Silene, Cordelia Cook, Douglass and Perle des Jardins. The latter rose is now taking the place of M. Niel in some establishments, it being a free and continuous bloomer when properly grown, and the flowers are nearly as large as, and higher in color than, the well-known "Niel."

CARNATIONS.—Mr. Wm. Bennett, Flatbush, L. I. grows carnations, the best, I think, I have ever seen. He grows Peerless largely, and King of the Crimsons, the freest flowering and best dark-colored carnation I have met with. Miss Jolliffe he has in large quantity; it is a delicate shade of pink. "Snow-white"—a kind sent out a short time ago by Mr. Peter Henderson—is proving itself to be a wonderful free bloomer, and the flowers are pure white. It is a decided acquisition. I have heard complaints that it does not possess sufficient vigor, but under Mr. Bennett's treatment it is certainly hard to beat. His treatment is to keep them quite cool at night, and to give them plenty of air on every favorable opportunity in the day time.

TREATMENT.—I am satisfied that the cool treatment is the proper one for carnations, and if all the growers around New York or elsewhere would adopt this mode of growing them, instead of a rose-forcing temperature, they would not have them in such a deplorable state as they were last Winter.

LARGE MARECHAL NIEL ROSE.—Mr. Pearson, an English florist, cut from one plant last year 2,000 flowers. Prooably some of our large rose growers could beat this. We should like to know.

STANDARD PEARS AS THEY OUGHT TO BE.—It is a fact well known that about nine-tenths of the standard pear trees planted in the West are grown in New York and Pennsylvania. These trees are grown according to their best judgment, judgments rendered by their ancestors in the fatherland generations ago, and have been passed from father to son and neighbor to neighbor, until it now would be considered sacrilege to depart from them. Our objection is to the hight of the top and the size of the tree. A No. 1 standard pear tree, as sent out by these nurserymen, is six to eight feet high, three to five years old and branched about five feet from the ground. Now, Mr. Editor, if I was called upon to tell what sort of tree is most worthless in every State west of Ohio, I would hardly change the above description. A No. 1 standard pear for the West should be three to five feet high, two to three years old and branched one to two feet from the ground. The tops must come down as we go west, and for central and western Kansas six inches to a foot is high enough.

ARTIFICIAL WATER IN GARDENS.—Whenever we have heard people deride Colorado because they have to depend on irrigation for most of the water for their growing crops, we have thought that it would not be bad for Eastern growers to have at command artificial conveniencies. Strawberry growers East would have found a wind-mill for a water pump a paying investment for strawberry beds the past May. They were nearly ruined by the May drought. Those who could have commanded a Colorado ditch would have made a fortune.

CURE FOR THE TOBACCO HABIT.—Dr. Millard, in the Med. and Surg. Reporter, calls attention to the value of "pine-apple," as it is called—a fungus that grows upon pine trees—as a cure for the tobacco habit. He has used it and prescribed it frequently, and has seen no case in which it failed to eradicate the craving for tobacco. It is not unpleasantly bitter. It is used as a moderate chewer uses tobacco.

SCIENTIFIC ARROGANCE.—A somewhat labored and diffuse article on "Scientific Arrogance" in a late Pall Mall Gazette comes to the following very sensible conclusion:—"It would appear that scientific arrogance, in so far as it has any reality, is but the obverse of popular ignorance. Let the ignorance be dispelled, and the mystery bred of it will vanish. Let some rudiments of exact knowledge, some grounding in the methods of scientific reasoning, and some notions of the nature and ends of scientific work, be made part of our general scheme of instruction, and scientific dogmatism will be impossible. Let the mind be trained betimes to walk modestly and warily, as all true leaders of knowledge have walked, by the light of diligent and patient inquiry, and the specter of scientific arrogance will disappear."

CLEANLINESS IN BUTTER MAKING.—From the letters on Dairying by Dr. De Kleuze as published in the London Gazette, we take the following:—The most perfect cleanliness is indispensable in buttermaking, as every fault in this respect revenges itself by deteriorating the quality and especially the durability of the produce. If the milk dishes, cream vessels, and churns are only rinsed out with water, that is not sufficient. Especially if these utensils are made of wood, the greatest care is necessary, as particles of butter and casein are absorbed by the pores in the wood, sour there, and infect cream or butter when they are brought in contact with them. To avoid this we have a very good substance, the solution of caustic soda, which may be had in every chemist's shop at a small expense. This solution is employed by mixing about a wineglassful with two or three quarts of water and rinsing the vessels in question thoroughly, letting the solution stand in them for a few minutes if possible. Churns are very easily cleaned by pouring some of the solution into them, closing them, and letting it act during a quarter of an hour, frequently moving the churn to insure all its parts being well washed. In general, it may be stated that if all the vessels employed in a dairy are rinsed out, first with cold and then with hot water immediately after their use, the application of caustic soda need not be repeated more than once or twice every fortnight. After employing it a good rinsing of water must take place, otherwise the milk might taste soapy, especially if some of the soda has remained and got mixed with the milk.

LONDON-PURPLE.—"Last summer we tested a comparatively new arsenical poison called London-purple, and the results were extremely gratifying. This poison is a residuum obtained in the manufacture of certain aniline dyes and utilized by the addition of lime and carbonaceous matter, thoroughly dried, and finely pulverized. We compared it with Paris-green last year as an exterminator of the potato beetle, and it seems to present the following advantages: it is cheaper, stronger, more finely divided, and possesses greater adhesiveness." The above is from the Report of W. R. Lazenby of Cornell University.

ROADSIDE CARE.—There is another place from which farmers should exterminate weeds, and this is the roadside, says Mr. Hyde in the N. Y. Times. We care not how nicely a farmer cultivates his fields, we call him a sloven if he neglects the roadside, and allows it to become a perfect swamp of thistles, mulleins, golden rod, or any other weed. How is he to prevent his farm from being stocked with all manner of vile stuff if he permits the roadside to be a nursery for its propagation. Does he not know that seeds make to themselves wings and fly away? If he has not æsthetic culture enough to consider roadside weeds a deformity to his premises, self-interest and a due regard to his neighbors' rights should induce him to allow no weeds to go to seed on land over which he has jurisdiction

ANOTHER of the August farm duties is to fill the barn-yard and pig-pens with muck or some other absorbent to save and increase the supply of manure.

AGAIN Mr. Hyde remarks: Farmers need a little relaxation as well as other folks, and can afford to take the recreation if they only thought so. We would not advise the average farmer to spend much time at Saratoga, Newport, or any other of the fashionable watering-places. It is well enough to look upon these resorts of fashion for a day or two, just to see the folly of the display; but there are other modes of recreation which sensible farmers, and sensible men of all classes, will prefer. One great want of the farmer is to get away from the little circle in which he acts and thinks, and mingle more with men.

PURE WATER FOR THE DAIRY.—The importance of having pure water for the dairy, as well as for animals to drink, is not sufficiently apprehended. Prof. Sheldon says, in the London Live Stock Journal: Not only is the blood of animals who drink impure water liable to be poisoned by the bacteria which such water frequently contains, but these putrefactive germs will impregnate both butter and milk if permitted to come into contact with them. The boiling water which should always be used in washing dairy utensils will destroy the bacteria; yet, as butter cannot be washed in boiling water, it is in the first degree important that the cold water it is washed in should be pure. The water is intended to purify the butter, not the butter the water.

DR. C. W. EARLE has been examining the validity of the claim made in Chicago for cinchona as a specific for the cure of inebriety. The result of Dr. Earle's investigation, says the New York Medical Record, is that the cinchona treatment made more drunkards in the past year than any one liquor saloon.

A WRITER in the British Medical Journal declares that glycerine in half teaspoonful doses is a simple and effective emetic for children.—Druggists' Circular.

HOG CHOLERA.—A correspondent of the Chemical Gazette (Ohio) gives the following cure: He has made this disease a study, and finds by careful experiments that the following mixture comes nearest reaching the disease. As an excellent condition powder for hogs, and as a preventive and cure for hog cholera it can hardly be surpassed. Yet the remedy that will cure in one section of the country may be only a palliative in another. There it rarely fails to eradicate the dread disease, and is by some considered a specific. The formula is the subjoined:

Jamaica ginger	4 drachms.
Sulphate of soda	1 ounce.
Chloride of sodium	4 ounces.
Sulphide of antimony	4 "
Licorice root	4 "
Flaxseed meal	4 "
Black mustard	4 "
Resin	4 "
Nitrate of potassa	4 "
Capsicum	1 ounce.
Sulphate of iron	2 ounces.

Powder each substance separately, and mix them all thoroughly by passing through a fine sieve. The dose is from one to three tablespoonfuls, two or three times a day, mixed with soft food.

HERE AND THERE.—An intelligent Englishman who recently visited this country reports that he was deeply impressed with the sense of ownership, in the nation at large, which seemed to pervade all classes of our citizens. He had been accustomed in England to the prevalence of the feeling among the mass of her people that they neither owned nor controlled that country, while in the United States the opposite sentiment prevailed to a surprising extent. In meeting here workmen whom he had formerly known in England, he was astonished at the readiness with which they had adopted the habit of regarding officials as public servants instead of churlish masters.—Progress.

LARGE STRAWBERRIES.—Some strawberries shown at the Brighton Show the other day, by Mr. Rutland, created quite a sensation, being admitted to be the largest ever seen. Some idea of what they were may be gleaned from the fact that eight weighed one pound, one ounce. One measured three and three-quarters inches across it and several three and one-half inches; they were not only large, but a very abundant crop, and have been the admiration of all who have seen them. So much for deep cultivation. Very little rain has fallen at Goodwood this season compared with many parts of the country, and not one drop of water have they had but what has fallen from the clouds. The above we find in "*Gardening*," England. As we remember, the largest berry as above is not quite so large as the specimen of President Lincoln given in our last Fair Number.

THE London Agricultural Gazette of latest date says:—Our little enemies, the sparrows, must be watched and prevented from depleneshing our corn fields. We shall probably have one of the finest potato crops on record. The wet came at the right time, and if, as is probable, we are favored with a fine time during the next two months, we shall not suffer from the blight. The quality and the size of tubers now being dug are exceptionally fine, and indicate a large crop. We never remember to have seen potato fields and gardens looking more luxuriant than they do at present. Mangel is almost an universal failure.

BEER IN THE HARVEST FIELD.—It will be borne in mind that English farmers have a custom of giving their laborers daily rations of beer. We are glad to see the following from the same journal:—"The question of beer once more obtrudes itself. We have discontinued its use and substituted money payment. The testimony of Sir William Thompson, Sir William Gull, and Dr. Richardson, against even the moderate use of alcohol must be considered as conclusive. It appears that alcohol neither increases the strength, the mental activity, nor the bodily warmth. The only excuse for its use is that it is nice and we like it. That it does us any good is denied on the highest authority, and that it does immense harm is known to every one." We say, confound beer and all spirituous liquors at all times and upon all possible occasions!

BRIEFLETS.

CHARLES DICKENS has said: "That portion of the occupation of a farmer which pays best for cultivation is the little piece that lies within the ring fence of his own skull."....."William Parry, the keen observer, discovered the worth of the Cuthbert, and gave it the name of the 'Queen of the Market.'" So remarks Mr. Green in the Rural Home. But Mr. Parry says they are not the same. .....It must now be admitted that Gen. Le Duc has brought the Department of Agriculture to a condition of usefulness far beyond anything attained by his predecessors. So says the Husbandman. It is very generally admitted among candid men. But we should like to see those journals that hastened to call him "fool," "knave," or both, admit that they were hasty, if not wrong. Is there no sense of justice or candor to constrain those journals to make such an admission? If not—shame upon them!.....Farmers, prepare your fields for wheat—the sooner the better—and prepare them well .....Mr. Elliott, so he says in the American Entomologist, is convinced that a judicious use of pyrethrum (insect powder) would save an immense amount of loss. He has seen it used in large mills, and it brought out roaches in quantities which astonished the millers. A friend of his who cannot sleep if a mosquito is within a mile of him, says he has only to put a little powder on some burning paper in his room and there is "perfect peace."....Progress thus translates a French anecdote:

Guibollord has been a father just five minutes. His servant entered with a letter in his hand.

"What is that?"

"A letter."

"For whom?"

"For you."

"How is it addressed?"

"To M. Guibollard."

"How do you know, sir, that it is not for my son?"

.....It is easy enough to exterminate Purslane if pulled up early in June before it seeds. At this season it pays to pull up the large spreading plants for the pigs.....We have seen how long a man may live without food. The next question is how ong he can live without food and water.....Mr. Ohmer, like the Man-on-the-Hudson, is distributing his favors liberally.....Mr. C. L. Allen brings to the RURAL office a spike of seedling gladiolus, the blossoms of which are as nearly a solid white as any we have seen. Many pure white gladioli have been announced from time to time, but all are more or less tinged in some part with various colors.....It would seem from the accident to the vineyard of Mr. Williams that a lightning-rod on a house is no protection 60 feet away from it on the ground. The fact is that lightning gets on the rampage sometimes and can't tell a lightning-rod from a hole in the ground..... A woman cannot become a successful lawyer. She is too fond of giving her opinion without pay. —Oil City Derrick.....If it can be proved that a man can fast for forty days, it ought to kill the oily margarine trade. If he can go that long without food he can afford good butter when he does eat.—Phila. Kronikle-Herald.....The handsome and fashionable seaside resort called Long Beach is just opposite the RURAL Farm. Our readers from every part of the country while visiting Long Beach may, if they will take the trouble, count the number of ears to a stalk on Blount's corn by the aid of a good glass. But we also extend a cordial invitation to them to sail across the bay and pay the Farm a visit....."To whip or not to whip" in the schools is a London agitation. Progress. The question might well be agitated here, in our country schools especially..... The variegated Euonymus radicans is a handsome little hardy evergreen shrub that our readers should not neglect.....Mr. Meehan says in the August Monthly that he has not heard of any trials with standard gooseberries;—that it was hoped that we might thus have the foreign varieties in our gardens in all their luscious English perfection. By standard gooseberries is meant those worked upon the Missouri currant. We have tried them for the past four years. They are worked on straight stems four to five feet high. But both leaves and fruit so mildew that we have never yet secured a ripe berry.....But currants grafted upon these tall stems are very fruitful and while in fruit decidedly ornamental. A bush of currants growing upon a naked, slender stem five feet high is——well, to use an entirely original expression—a thing of beauty.....A German lady says:—"Beware of the one black sheep that is almost certain to steal in among any large flock of girls." This item properly belongs under our Sheep Husbandry department..... The Druggists' Circular gives an instance of poisoning by Poke-root—Phytolacca decandra.....Large beds of Sweet Williams, as the London Garden remarks, are really grand. Those who know only of the old kinds of this plant, will be pleased with the newer strains.....We are always gratified to see our friends at the RURAL office and often regret that our time does not permit us to give them the attention we desire to do. Of all days in the week, we are the least engaged on Wednesday and could consequently enjoy their calls upon that day with less interruption than upon any of the others .....Have many of our readers cultivated the improved strains of Chinese Pinks; of Picotees and Carnations? They are among the most pleasing and interesting of our border or house plants and among the most valuable for both Summer and Winter bouquets..... Our respected friend, Mr. Warner, knowing that a melon is ripe when it comes off the stem easily, soliloquizes thus:—"You can tell when people are ripe by their willingness to let go. *Richness* and ripeness are not exactly the same. The rich are apt to hang to the stem with tenacity. I have nothing against the rich. If I were virtuous, I should like to be rich. But we cannot have *everything*, as the man said when he was down with small-pox and cholera and the yellow-fever came into the neighborhood.".....Mr. Charles Darwin is still hale and hearty, though seventy years of age. We have not heard from him lately, but it may be presumed that he is not idle. Let us hope he has work in hand that when published will again set the world to thinking and investigating as have his researches in years past..... .

CATALOGUES, ETC., RECEIVED.

PURDY'S Small Fruit Instructor. A book of 64 pages, well filled with plain and ample instructions. In fact this little book, the price of which is but 25 cents, contains all needed information respecting the topics of which it treats and is just as valuable in the hands of the average small-fruit grower as other works which cost four times as much. A. M. Purdy, Palmyra, N. Y., is the author and publisher.

AGRICULTURAL, Botanical and Chemical Results of Experiments on the Mixed Herbage of Permanent Meadow, conducted for more than 20 years in succession on the same land. By J. B. Lawes, L. L. D., F. R. S., F. C. S., and J. H. Gilbert, Ph. D., F. R. S., F. C. S.

Also Memoranda of the origin, plan and Results of the Field and other Experiments conducted on the Farm and in the Laboratory of John Bennet Lawes, at Rothamsted. These important works will be referred to more at length in future numbers.

QUARTERLY REPORT of the Kansas State Board of Agriculture for quarter ending June 30, 1880. J. K. Hudson, Secretary. Topeka, Kansas. An important feature of the Report is the article on sorghum growing.

NINTH REPORT of the State Entomologist on the noxious and beneficent insects of Illinois, containing the Fourth Annual Report, by Cyrus Thomas, State Entomologist.

EIGHTH ANNUAL REPORT of the Wisconsin Dairymen's Association, compiled by D. W. Curtis, Secretary.

THIRTY-EIGHTH ANNUAL CATALOGUE of the Missouri University at Columbia, Mo.

$25 in Doctor's visits, will do you less good than one bottle of Hop Bitters.

THE
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Conducted by
ELBERT S. CARMAN.

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ONE of our neighbors raises his tomatoes in the family asparagus bed. The plants soon cover the ground, subduing the weeds, and yet they do not noticeably retard the growth of the asparagus. The vines and green or half-ripened fruit are killed by the first frosts, affording a mulch through the Winter and some fertilizing material in the Spring.

IN reply to questions which we always receive at this season of the year or a little later, let us say, transplant fruit or ornamental trees as soon in the Fall as the leaves begin to drop or change in color. This is sufficient evidence that the leaves are no longer of any service to the plant and the sooner it is then removed the better, for it will have a longer time to become well fixed in its new quarters before severe frosts occur. Spring is without doubt the best time to transplant evergreens.

WHY DO THE SLEEPERS OF BUILDINGS ROT RAPIDLY?—There are two reasons for this: The first is, because the stone or brick under-pinning is not made sufficiently high to keep them well clear of the ground; and the second is, when a continuous wall is laid all around for the sleepers to rest upon, the mason does not leave openings enough in it on the four sides for a good circulation of air underneath the floor. If this is done, and they are properly placed, sleepers will last nearly as long as the beams of the building overhead.

THE RURAL NEW-YORKER has intimated that prizes would be awarded to those who raise the heaviest mangolds from Vilmorin's Golden Mangold, the seeds of which were sent to applicants for our last distribution. We now request that all who have raised extra-heavy roots from this seed will give us the weights of three of the heaviest. The leaves are to be cut off even with the tops of the mangolds, and not included in the weight. Those who take the prizes may be called upon to send the specimens to this office by express—at our expense, of course.

THE PIG THE MOST HONORED OF ALL ANIMALS.—Are our readers aware that it is all the fashion at present in France—which of course will be soon followed everywhere else—for ladies to wear a jeweled sucking-pig on an armlet, a neck-chain, or a shawl-pin and other ornaments? To call a Frenchman a hog was formerly considered the greatest possible insult to him. If we now call him a pig, we suppose he will consider it one of the greatest of compliments. No doubt if our largest swine merchants at the West were to emigrate to France, they would get ennobled there, and be made princes, dukes, marquises, counts, etc., the rank being conferred according to the number of swine each one annually handled. Well, after all, we prefer to see a jeweled pig gracing a lady's arm or neck, than a snake with fiery ruby eyes, and sparkling forked tongue.

THE GREAT CHICAGO WHEAT CORNER has just been closed out with a loss, it is said, of several million dollars to its organizers and participants. It will be remembered that this was inaugurated about a year ago, James R. Keene and Jesse Hoyt being the originators. Their chief associates were Perry H. Smith, George L. Dunlap and Nathan Corwin, of Chicago, and Z. G. Simmons and Judge Howe, of Kenosha. Keene had a half interest in the syndicate, Hoyt a quarter, and the others another quarter between them. The end in this city assumed entire direction of the deal. Angus Smith, of Milwaukee, though not one of the clique, made an agreement with them to be guided in his operations by their directions, in the expectation of thereby reaping a rich harvest. At one time they had on hand, or subject to their control 16,000,000 bushels of wheat. They proposed to close out the deal in May; but the condition of the market then caused them to defer doing so until June, and meanwhile they decided by renewed purchases to force up prices, just before unloading. For a week or two it looked as if they might succeed, but the persistently low prices across the Atlantic soon made things look gloomy, and Hazleton, Hoyt's partner in this city, began to sell right and left, and so tumbled down prices still lower. Now almost all the stock of wheat has been sold and shipped and the Chicago gamblers are heavily mulcted; Smith, of Milwaukee, is out from a quarter to half a million dollars, and the losses of Keene and Hoyt can only be guessed at, those of the former being estimated at all the way from one to two million dollars.

THE VALUE OF WATER.

AN extraordinary exhibition, as all our readers well know, has recently been made in the City of New York. A person has undergone a complete fast from food for 40 days and has succeeded in passing through this severe ordeal without any serious damage, further than a loss of weight amounting to nearly one pound per day. Whether it has any importance in a physiological sense or as an aid to medical science need not here be discussed. One thing in connection with the trial is unquestionably instructive. This is the absolute necessity of water and that absolutely pure, which has been proved by it. A few days' abstinence from water brought the fasting man to the verge of death. The use of the impure city water immediately after this abstinence caused a dangerous nausea and feverish symptoms. The loss of weight during this abstinence was excessive and alarming. After nine days it was clear that without water the man would soon succumb. With the use of pure water, procured from a spring, all the disagreeable symptoms disappeared and a notable gain in weight was made during the next few days. The fast then progressed to completion, and at the end of the 40 days the faster took frequent meals of milk, beefsteak, watermelons, peaches and apples with impunity. The lesson that concerns us is this: pure water is an absolute nutriment and sustains the body for a time even in the absence of solid food. How seldom is this fact considered by farmers; and more especially that part of it which relates to the purity of the water used. This lesson is applicable not only to ourselves, but to our domestic animals. It is certain that we are too neglectful in regard to the water supply for our live stock. The majority of farms are deficient in this regard, and if water is scarce it occasions less concern than if fodder is in short supply. But water is of more importance than the fodder, and the greatest care should be taken that the supply of this indispensable nutriment should not only be ample but excellent.

THE GROWTH OF THE WEST.

THE marvelous progress of the great West is made apparent by the growth of the great State of Illinois. This State has been the fourth in population in the Union for some time, and there is a chance that the present census may prove it to be the third in rank as to the number of its inhabitants. But in agricultural products it claims to stand first, and its claim deserves respectful recognition. The State covers 50,000 square miles of land which in point of fertility is not surpassed perhaps anywhere in the world. The crops there grown include every agricultural product from cotton, through all the grains, to grass and its products of the dairy, and beef, mutton and pork, not forgetting fruits and vegetables in every variety. Its people are enterprising and its farmers skillful and energetic, as may be shown by the fact that 100 tile factories are employed in furnishing the tile to lay 10,000 miles of drains every year in the lowlands hitherto either uncultivated or only half worked.

The profitableness of this enterprising farming is illustrated by the fact that the first crop taken after draining repays the whole cost of the improvement. Twenty-five years ago Illinois was a new State. Last year its crops amounted to 306 million bushels of corn; 45 million bushels of wheat; 2½ million tons of hay; 54 million bushels of oats; 2,700,000 hogs; and a vast number of fat beeves, together with a large quantity of dairy products. The corn crop was one-fifth and the wheat crop one-tenth of the total product of the whole country. In these crops Illinois surpassed every other State. The value of the Illinois corn crop for the past six years equaled 470 millions of dollars, which is but seven million dollars less than all the gold and silver produced in the United States and Territories in the same period. What has been effected in Illinois, is being done in many other States of the West; and what will be done in the next 25 years will undoubtedly surpass all that has been done in any previous quarter of a century.

If we look for a solution of the question which naturally arises, why should the great West advance so rapidly in population and wealth, while some parts of the East are losing population and going back to a condition of almost primitive solitude and wildness, we must attribute it, first, to the opening of the country by one of the most complete railroad systems in the world; for Illinois has a greater mileage of rails than any other State, and some other comparatively new States are not much behind her; then the wonderful fertility of the soil, and, last but not least, the not less fertility of the people in energy, industry and enterprise. Truly the West is a remarkable country, and the Western people are as remarkable as their country.

A PROSPECTIVE CHANGE IN EUROPEAN AGRICULTURE.

THE vast development of agriculture in the West and Northwest has already wrought a great change in the farming of New England, and must inevitably in the near future have even a greater effect upon that of the British Isles, and, indeed, of western Europe generally. Our Eastern farmers, driven to a great extent by Western competition to abandon the production of grain, have wisely taken to the cultivation of vegetables, fruits, dairy products, etc., which cannot so conveniently be brought from the cheap West, and for which there is a profitable market in our large Eastern cities. The productive capacity of this country is far greater than its consumptive capacity, and is being developed very much more quickly, in spite of the extraordinarily rapid increase of our population

Owing to the unexhausted condition of the soil, the nearly universal use of the best labor-saving devices, the absence of rent charges, and the comparative moderation of taxation, the net cost of producing grain crops in the great West, even with the present transportation charges, defies the competition of the farmers of the United Kingdom under the prevailing agricultural conditions there. But here the rapid development of our railroad system, the keen competition between the various lines, and the greater economy in running expenses, are all the time slowly but steadily reducing freight charges. Last year nearly 4,000 miles were added to the railroad milcage of the country, and it is estimated that 6,000 miles will be built this year, and every mile constructed tends to cheapen grain at the seaboard. In 1869 the average charge on a ton of merchandise from Chicago to the tide-water was $24; now it is only $8, and the charges on grain and meat are considerably less. West of Chicago freight charges are still very disproportionately high, and in all that vast region there is broad margin for reduction, which must soon take place through the development of the country, the force of increased competition, the influence of public opinion, and if necessary, the power of legislation.

With a reduction of transportation charges through this productive section will come a still greater reduction of prices here at the seaboard, and consequently beyond the Atlantic. Moreover, improvements in the construction of ships, and greater economy in the generation of motive power, must soon materially lessen the expenses of ocean voyages, and consequently the charges on ocean freight. The amount of coals used by ocean steamers every twenty-four hours now, is considerably less than one-quarter of the quantity employed to generate the same power a quarter of a century ago, and economy in this direction and improvements in the models of freight-carrying vessels are progressive.

In view, then, of the rapid increase of the production over the consumption of grain crops in this country, of the steady decrease in the expense of transporting our surplus to foreign markets, and of the conditions under which foreign farmers must at present compete with us, it seems certain that a revolution must soon occur, first, in the agricultural conditions of the United Kingdom, and, perhaps, afterwards, *longo intervallo*, in those of our Continental customers and competitors. The chief features of the new state of things will be the ownership of the land by the tillers thereof, and the substitution of other crops for those of grain.

BREVITIES.

THE stickiest thing on the face of the earth, Prof. Sheldon tells us is London clay.

THANKS to a friend for beautiful specimens of Australian and Defiance wheat. The donor would oblige us by giving name and address.

A FARMER friend writes us: "The great objection that farmers have to agricultural papers is that they use terms they cannot understand."

DR. HOSKINS writes us: "I have grown American Wonder and Little Gem side by side for three years and find the former one week earlier with not half the growth of vine of the latter."

IN "Horticola's" notes of this week, it will be observed that the lightning struck the vine trellis within twenty yards of the dwelling. Mr. Williams tells us that the dwelling was "covered with lightning rods."

THE pear, Rousselet Stuttgart, is small, of greenish skin with a brown cheek. It ripens in mid-August in this climate. It is juicy, aromatic and sweet. Were it not that it sometimes rots at the core we should prize it among our very best Summer pears.

WE should like to hear from any of our Western contributors who have made comparative tests how much seed-wheat they would advise drilling in to the acre, and how much if sown broadcast. We ourselves have settled upon from one and a-half to one and three-quarters bushel for the former as being the quantity best adapted to our soil.

A COUPLE of typographical slips in our last issue need correction:—on page 520 £ instead of $ before 222,766 quintupled the aggregate losses of the Royal Agricultural Society by its 40 previous exhibitions. Again, on page 524, this year's total wheat crop is put down at 290,000,000 instead of 400,000,000. In both cases the context showed the slip, however.

A VALUED regular contributor writes us as follows; "I think I am the only one of your writers who keeps within the bounds in respect to length. It is easy to write long articles, but not to write so as to say everything in half the usual space. I suppose that is the reason why folks spread out." We propose, even at some sacrifice, to shorten our regular correspondence.

IN the way of fruit, one of the showiest objects at the RURAL GROUNDS at this time is the Alexander apple upon the French Paradise stock. The tree is not over five feet high and bears eight apples of the largest size. They are streaked with bright red and seem, in size, out of all proportion to the diminutive tree. Unfortunately the Alexander's beauty is its best trait. Still beauty in apples, as in human beings, covers a multitude of sins.

THE United States are fast coming to supply the world with oil. The yield of flax seed is the largest ever produced, while the yield of cotton seed oil for the present "cotton year," ending September 1st, is believed to be fully 200,000 barrels, the larger part of which has been, or will be, exported. This is not the whole product of the crop of the cotton seed, or even a tenth part of it, as the growers have not yet had their attention directed to it. The supply of castor oil is also steadily increasing from the Southwest and the crop is a profitable one.

FRESH BUTTER AT A LOW PRICE.—The best qualities of this are selling at so low a price just now, we would suggest to the producers of it whether it would not be better to salt it down in jars or firkins for Winter, than to daily force so much of it on the market. The probability is that from November on, it will rise rapidly in value, and from mid-Winter till January command 50 per cent. more in the market than it is now selling at. We speak only of such butter as is well made and sure to keep sweet, for what is likely to become frowy or rancid during Winter, had better be sold now at any price to be obtained.

TOO late to prevent its publication in the RURAL, we learn that Mr. F. L. Stewart, is sending to other journals copies of his article on Corn Sugar which appears elsewhere in this issue. There are a few men in the country who resort to such methods of obtaining free advertising by leading each paper to which they may send their incubration to believe that the article was written especially for its columns. A man of this kind may succeed once in palming off his wares on the most wide-awake editor, but he will hardly do so a second time. This method of advertising ought, we respectfully submit, to be discouraged by the agricultural press. It is not fair to those who advertise in the regular way, and pay their bills. These remarks may not apply to Mr. F. L. Stewart except in the present instance.

A FRIEND writes us: "I am now growing seedlings of coleus, gladioli and geraniums." He could not have selected three kinds of plants for seedling cultivation which are more interesting. Seedling geraniums (that is, pelargoniums properly) will prove the least compensatory. There is a *chance* of obtaining flowers equal to, or better than, any known. But the chance is *very* slight. Ninety-nine out of every hundred will prove inferior to those in the market. We have spent more time over crossing pelargoniums than any other class of plants whatever and, if we throw what we learnt out of the question, have nothing to show as the results. Seedling gladioli are often beautifully marked and will generally more than repay the trouble of raising them. As a rule, corms from seed bloom the third year. The new and beautiful strains of seedling coleus show that there is in their cultivation a good deal to hope for.

Literary Miscellany.

LOVE IN DEATH.

CORA L. NOURSE.

It was so fair, so green a Spring—
A day so filled with life and light,
I never dreamed that it could bring
The Autumn and the starless night.

I did not dream that golden morn,
With dew and song, and blossoms sweet
Could lose the fragrance of the dawn
In weary noontide's dust and heat,

I never dreamed the sultry noon
With tempest tokens darkly fraught—
I dreaded not the fell simoon
'Till all its direful task was wrought.

It came—that fearful blast of death;
It swept o'er all my garden's pride,
And in its burning, baleful breath,
All that life yields of beauty, died!

The blossoms withered into dust;
The bending skies grow cold and gray;
I murmured not, God still is just
I wait; I suffer; I obey.

LILY DAVIS.

(Continued from page 525.)

CHAPTER II.

"Hope deferred maketh the heart sick!" Lily had heard the proverb before. She was beginning to realize it now. Winter had passed; it was mid-April, and Hammond's letters were few and far between. Certainly he had an excellent string of excuses to offer when he did write, and he had sent her his photograph taken in uniform, which reposed in a private drawer; but still, though the letters were affectionate, they were unsatisfactory, inasmuch as he never alluded to any engagement between them, or hinted remotely at any public announcement of the same.

"I must wait, I suppose, and trust him," said Lily to herself; "but, oh, dear, it is hard not to see him—not to have seen him once all through these dreary months. This seat is unsteady; I shall make an undignified descent to the floor if I am not careful."

She was perched upon a high chair before a large easel in the Antique Room in the School of Art at the South Kensington Museum—a quaint, pretty little figure, in her large apron tied with green ribbons.

The curtains at the doorway swayed aside, and Mabel came through.

"Won't you come down to lunch? The bell has gone ten minutes."

Lily sprang down, and the sisters went off arm-in-arm."

The fine luncheon-room was crowded as they entered. By a stroke of luck they managed to secure a small table for two in a corner.

"What a number of coats!" said Lily, across her roll and butter. "It must be the first day of an examination; they look like cadets."

The military examinations for Woolwich and Sandhurst were frequently held at the Museum, much to the disgust of the masculine students, who on those days found themselves thrown considerably in the shade.

Two or three young men who had been sitting at a table near, with their backs towards the sisters, rose just then. One called for the account of the waiter; the second disputed the right of paying; the third seeing an uncommon face in the recess by the heavy doors, favored Lily with a deliberate and somewhat insolent stare.

Lily started, almost visibly.

"What is it?" said Mable, surprised at seeing her flush violently and then pale.

"Don't turn your head just this minute: he is looking this way," answered Lily, excitedly, in a low voice; but look, Mabel—did you ever see such an extraordinary likeness?"

Mabel had no need to ask to whom. He was a younger edition of Arthur Hammond, slighter and a shade fairer, but there were the same dark eyes, the same unmistakable mouth.

The door swung open.

"Come, youngster; you are due again at half-past one," said a voice that sent the blood tingling from Lily's face down to her toes and finger-tips.

It was Arthur Hammond himself.

He passed their table without seeing them, and laid his hand on his brother's shoulder.

"There's an awfully pretty girl behind you," she heard the young one say under his breath.

Hammond turned.

"Miss Davis! Upon my word! this is delightful. I had no idea you would be here."

Mr. Hammond spoke the truth for once. He would have carefully avoided the luncheon-room had he known whom he would meet. He sat down beside them while they finished their lunch, talking, thought Lily, as only he could talk. The brother and his companions had vanished back to their duty.

"Where do you go now?" he asked, when they rose.

"Back to the schools," said Mabel.

"Can I come too, or are gentlemen not admitted?"

"Not admitted" frowned Lilly, with mock severity. "But wait—yes, you might come to-day. It is Monday, Mabel," she added, suddenly seized with a wild desire to parade this big, good-looking officer by her side through the ranks of girlish eyes that she knew must watch them with envy.

They went through the schools. Hammond had nothing to do, and was nothing loth to be admired. It was the most triumphant moment poor little Lily had ever known. There was only one drawback—she had not the right to answer proudly to the question "Who is he?" "I am engaged to him."

But that right would be hers some day—of course it would; until then she could wait happily.

"Don't send me away alone, Lily," he said pleadingly, as they stood in the broad corridor, after making a tour of the rooms.

"Have you been over the Museum?"

"No, I'm dying to see it, and I should lose myself to a dead certainty if I went by myself. Come along, I can only stay an hour longer."

Only one hour more to be in his glorious presence, and she had hungered for the sight of him through seven months!

They went into the Museum.

"I wonder you know your way about here," he said, "with all these multitudinous stairs and doors and galleries. I am glad I have seen it, though. I shall picture your sweet little head glancing round these cases and disappearing through that archway."

They were in the Persian court, looking at the ferns. It was quiet as a dream. Not a footstep, not a voice broke the silence. Even the old attendant must have retired for a nap, and the ever-watchful policeman was conspicuous by his absence.

"You haven't forgotten me yet, then," she said, softly.

His answer was to stoop and kiss her.

"Forgotten you Lily. I shall fine you twenty for daring to suggest such a heresy."

And he took the twenty as coolly as if he had an honorable right to them.

"Have you been in London long?" she said, after a pause.

"No, I was obliged to run up to try and pull Theo through. He is a lazy young rascal. I came up on Wednesday."

"Four days ago, and you haven't been to see me! You will come before you go, won't you?"

She regretted her speech the next instant. There rose up before her a vision of their house, and their street, and "Davis's Livery-stables," in large letters over the archway leading to the coach-yard. But she need not have troubled. Mr. Hammond had not the faintest intention of going near the house.

"I am sorry, but I am afraid I shan't be able to manage it this time, my leave is so short,"—it was a clear fortnight—"and I have business matters I must attend to. Hard lines on me, isn't it? But how lucky I was to see you now, pet! I ought to be off," he added, looking at his watch. "I promised to meet a fellow in Piccadilly at four, and I have to get up here again to dine. Princes' Gate—not far from the Museum, is it?"

"Princes' Gate!" Lily looked up at him and sighed. "Yes; it is quite close. Who are your friends?" she said, wistfully.

"The Raynors. Young Raynor is in our regiment—rather a chum of mine."

"Is the father Sir Arthur Raynor, and are there two daughters?"

"Yes; why?"

"Oh! because they are at the schools—the girls, I mean—lovely girls!"

She remembered seeing a coroneted carriage waiting for them, and she had asked their names. Her information did not seem welcome to her auditor. He was rather more intimately acquainted with the youngest Miss Raynor than Lily guessed.

"They might turn up any minute—which would be frightfully awkward. Good-bye, Lily," he said aloud; "I must go—which is the way out? Down there?—thanks. Good-bye, little woman—take care of yourself."

His manner was abrupt, almost harsh.

"When shall I see you again?" she said, following him to the turnstile.

"Next Summer, I expect. Good-bye;" and he raised his hat and was gone.

She went back to the schools, and had a good cry in the cloak-room, with her face hidden in Mabel's jacket. She hardly knew why she cried. It was mingled love and longing and sorrowful regret that she was not one of the Raynor girls, who would move about their brilliant rooms that night smiling sweetly at him.

"But he loves *me*," she thought. "He kissed me, and called me 'darling' over and over again; and it will come all right in the end."

May and June passed; July came; London was hot, dusty and insufferable. They were going down to Ryde in August. In Hammond's last letter he had spoken of seeing her soon; as she entered the dining-room, rosy from reading it, Mrs. Davis met her.

"There's something in the paper will interest you, Lily, about that long-legged 'Ammond's regiment. I thought you might like to read it; not that I ever cared for 'im myself—he was a deal too tall for me."

Lily took the paper mechanically.

"The troopship 'Euphrates' is under orders to proceed to India early in September with the 200th Regiment, now stationed at Southsea. She will also carry drafts form Aldershot for the 5th Fusiliers and 4th Dragoons, now in India."

She read it twice—three times. The announcement was plain, clear, matter-of-fact. She had read similar ones before, with no more interest than she would feel in reading an advertisement column. Now her heart stood still and the room reeled round her.

Mrs. Davis had gone out; Mabel was working at the table. She pushed the paper across to her.

"He never mentioned it in his letter," she said, in a voice that made Mable drop her work to the floor and come round to her side.

"It may be contradicted to-morrow, dearie; don't fret yourself."

"But I must see him! Mab, Mab, I must see him before he goes!"

"So you will, my sweet; there is more than a month yet,"

They got down to Ryde at last. It was gay, fresh and smiling as before; surely the place of all others in which to be happy, and yet Lily was not happy.

She had not seen Hammond yet, and the time was growing so terribly short—a little more than a week to the day of sailing.

"Why does he not come?" the girl wondered. "He must have so much to say to me!"

Three days of suspense brought on a nervous headache, and she remained indoors. There were four days left now, and then he would be gone. In the afternoon Mabel came in, saying that she had seen him. She had met him by chance in the Arcade, and he had promised to look in and say "Good-bye," either to-morrow or the day after. She did not add that Mr. Hammond was playing escort to two charming girls, nor that his manner was constrained, and her own frigidly cold. Truth to tell, Mabel had begun to hate him heartily, but for Lily's sake she did not say so.

"How foolish I was to doubt him; I knew he would come—the dear fellow! I daresay he has a thousand things to worry him just now; but I am perfectly happy, Mab. Don't look like Patience on a monument—kiss me at once. How will you like to send me off to India some day?" She laughed the lightest, happiest laughter, leaning back in her chair, and clasping her hands behind her head.

By a tacit understanding Mabel took Mrs. Davis away for the next two afternoons. Lily waited alone. He did not come on the following day, though she started at every footstep outside, and a ring at the bell sent the blood tingling and throbbing tumultuously through her veins, leaving her quite faint and unsteady when the shock had passed.

The next afternoon was glorious, warm, and still. Everyone was out of doors; a dreamy quietude reigned over the house. She had put on a soft white dress, and was standing before the glass in the sitting-room, fastening a rose at her neck. A very lovely picture the lodging-house glass with its green paper gave back; a brown sweet head, small mouth, dark delicious eyes, and cheeks in which the loveliest color went and came, as she turned to catch the sound of a voice that was asking for some one at the entrance-door. It was only a visitor for the people up-stairs. She dropped on to the chintz sofa and tried to read.

"Four o'clock; he is very late. I wonder what keeps him?"

A game of billiards at the Royal Yacht Club was keeping Mr. Hammond; but it was over now, and he was coming—very leisurely, it is true, but he was coming. He was at the door now—in the room!

"Arthur!"

She sprang up, trembling with joy from head to foot, and blushing like a rosy cloud. He sat down by her on the sofa.

"Well, little sweetheart, we must say good-bye at last."

"I thought you were never coming," she murmured.

"Thought I could leave England without another look at you, did you? But I have been hard pressed for time," and he passed on to indifferent subjects, talking of recruits, baggage, berths, and winds and tides. It might be interesting to him, but it was not what she wanted to hear.

"Have you nothing else to say to me?" she asked, softly, half shyly, as he paused.

He got up and leaned against the mantel-piece. He looked very graceful in that attitude. She rose too.

"I'm afraid there isn't much more to be said," he answered lightly. "It's an awful shame I can't marry you, Lily,; you would just suit me, upon my honor. I like you better than any girl I know, but the fates are against us, little woman; I shall have to marry an heiress. I thought you knew it all along. I've only five shillings a day, and I can't live on that; but I'll give you half-a-crown, if its any use to you—it's my last coin." He held it out to her, half comically, as he spoke.

Poor child! The cruel, crushing blow fell without mercy; yet she bore it. She did not fall, or cry, or swoon, or utter one word either of grief of passionate reproach. She was simply stunned. Her very lips grew white, and her heart grew cold, cold, cold within her! Hammond felt relieved; he had rather dreaded a scene.

"It was pleasant while it lasted, Lily; but the jolliest days come to an end, you know; don't take it to heart, pet. I couldn't help myself; you have such a distracting face. Look up and give me a smile before I go. You will like some one ten times better than you like me in a month."

She shivered. The impulse was to fall on the floor, but her woman's pride conquered, and she stood still.

"I hope you will be happy, and marry some one you love?" she said, in a steady voice.

"I hope so, Lily. Think of me after I'm gone, and write to me sometimes."

"No," she said with a quick, sharp pant. Would he not go? The strain was almost more than she could bear.

He opened his eyes with a surprised air.

"You won't write to me? I didn't expect this, Lily; but if you won't, very well. Good-bye, give me one kiss for the sake of auld lang syne."

He stooped his head to hers; by instinct she put him back.

"Not now," she said; and, unscrupulous as he was, he did not dare to take it. He took his hat and went to the door, but turned and looked back before he went out.

She had sunk on the sofa, leaning back against the cushions. She was perfectly quiet, only she was looking at him.

An uneasy feeling of remorse came over him; he came across the room again, and took her hands.

"I'm awfully sorry if I've hurt you, Lily. Say you forgive me."

"I forgive you," she answered, under her breath. Heaven only knew how dear he was to her even at that moment. Then he went, and she walked steadily to the window and watched the last glimpse of his soldierly figure recede out of sight. Then she fell forward, face downwards on the floor.

* * * * * * *

Out on the blue sweep of waters the great troopship "Euphrates" was steaming slowly by. The guns saluted her from the forts. Her yards were manned; her decks were crowded with soldiers; flags were flying at her mast-head.

"Leave the Portsmouth side; come and have a last look at the dear little Island, Hammond,' said Rutherford, with an honest tremble in his voice which he struggled to master.

The two brother officers looked where the beautiful Isle of Wight lay like a glowing emerald in the sea.

"That infernal tune! why do they always play it when we leave?" said Hammond, as "The Girl I Left Behind Me" floated out from the band.

"Because each man is thinking of the one he has left, I expect," returned Rutherford. He was thinking of one very tenderly and lovingly, and wondering how long it would be before he saw her fair face again; for, until he did see it, no other face in all the world would have any charm for him. "I beg your pardon, though, *one* doesn't apply to you! How many have you left lamenting, seven?"

"About that," nodded Hammond, reflectively. "And precious glad I am to be off, I can tell you! Nothing short of India would have cleared me!"

Rutherford whistled.

"I don't like it, old fellow," he said, gravely, "I believe you have done more mischief than you think with that little Davis girl. I saw her yesterday at the window, and—well, I wouldn't like to be in your shoes!"

"What do you mean?" retorted the other, with virtuous indignation. "Confound it, one would think you thought me a villain! I haven't hurt the girl. It was only a flirtation."

Only a flirtation! So let it end. So has it ended too often in the history of life and love. Two players playing a game. The stakes, on one side a woman's heart; on the other, nothing! The result, an unruffled life for the one; silent sorrow and heartache for the other. Arthur Hammond going out in the falling sunlight, heart-whole and careless, to the gay brilliancy of Indian life, to novelty, to adventure—perhaps to glory; Lilly lying white and unconscious as the "Euphrates" sinks below the horizon line.

VARIETIES.

I AM sure what a man doeth he thinketh; not so always what he speaketh.—Bishop Hall.

THE little baby elephant is very cunning and knowing. A pleasant study for naturalists.

A MAN froze to death on the hottest day this Summer at Carroll, Iowa. He got into a refrigerator while drunk, and was locked in.

THE Russians keep fish perfectly sweet for a long time in the hottest of weather by dipping them in beeswax, which forms an air-tight covering for them.

WE should be healthier if we admitted more sunlight to our homes, as everything requires sunshine to prosper.

WHAT are called good manners are good for nothing if they are not based on sincerity.

IN Mexico they eat salt with their oranges, both because they prefer the last so seasoned, and because they are considered to be more wholesome with salt.

THE reading-room of the British Museum contains three miles of bookcases, eight feet high. The dome whence the electric light irradiates the vast room is, next to that of the Pantheon at Rome, the largest extant.

FRIENDSHIP.—Give me the friend who has the same love for me always, who is ready to "speak up" for me in the midst of enemies, and repeat what he considers my virtues as an offset to the failings they may rehearse, and who will hold fast to his faith in my truth and goodness in spite of defamation. Such friends may be scarce, but when found are priceless treasures.

HUMBOLDT states that the Chinese had magnetic carriages with which to guide themselves across the great plains of Tartary one thousand years before the Christian era, on the principle of the compass.

To be always intending to live a new life but never to find time to set about it, is as if a man should put off eating, and drinking, and sleeping, from one day and night to another, till he is starved and destroyed.—Tillotson.

THAT acknowledgment of weakness which we make in imploring to be relieved from hunger and from temptation is surely wisely put in our daily prayer. Think of it you who are rich, and take heed how you turn a beggar away.—Thackeray.

WORDS are nothing to paint a mother's love, a mother's consolations. A baby's smile contains the divinest essence of all earthly solacement; a child's love soothes without weakening; it demands so much that in blessing it one is blessed by it unawares.—Ellen W. Olney.

THE work of building the Washington monument has been resumed, after a stoppage of twenty-five years, in the presence of the President and Mrs. Hayes, members of the Monumental society and other persons. The entire party was taken to the top of the monument in the elevator.

THE views from the windows and balconies of the Catskill Mountain House are of great extent and varied beauty, taking in several States. The Hudson River, 3,000 feet below, looks like a brook. Sunrise from the Mountain House is a sight long to be remembered.

WOMEN would perhaps find it profitable if they would never trust their first impressions or intuitions. An Ohio woman dreamed that she saw her husband in the act of kissing the pretty wife of the next-door neighbor, and she awoke and struck him across the face and broke his nose. Acting impulsively gets a great many people into trouble.

A STORY is going the rounds of a worthy German farmer of Berks county, who had a shrewish wife. After many bickerings she recently announced her

intention to desert his mansion and never return. News of the occurrence reaching the neighbors, one of them called to condole with the deserted farmer, and said, "Hans, I pity you." "My boy," replied the honest Dutchman, as he disturbedly knocked out the ashes of his pipe, "you vas right. She has shust come back."

CAST A LINE FOR YOURSELF.—A young man stood listlessly watching some anglers on a bridge. He was poor and dejected. At last, approaching a basket filled with wholesome-looking fish, he sighed.

"If I now had these, I would be happy. I could sell them at a fair price, and buy me food and lodgings."

"I will give you just as many and just as good fish," said the owner, who chanced to overhear his words, "if you will do me a trifling favor."

"And what is that?" asked the other.

"Only to tend the line till I come back; I wish to go on a short errand."

The proposal was gladly accepted. The old man was gone so long that the young man began to get impatient. Meanwhile the fish snapped greedily at the baited hook, and the young man lost all his depression in the excitement of pulling them in, and when the owner returned, he had caught a large number. Counting out from them as many as were in the basket, and presenting them to the young man, the old fisherman said:

"I fulfill my promise from the fish you have caught, to teach you when you see others earning what you need, to waste no time in foolish wishing, but cast a line for yourself."

MAGAZINES FOR AUGUST.

THE ATLANTIC MONTHLY.—CONTENTS: The Stillwater Tragedy, XVIII.-XXII.; Sicilian Hospitality; Kintu; The Surgeon at the Field Hospital; Mr. Hunt's Teaching; Pepacton, A Summer Voyage; The Archbishop and Gil Blas; Sylvia's Suitors, a Little Episode; Among the Pueblos; Edward Mills and George Benton, a tale; Alien Sin; The Preceptor of Moses; An Englishwoman in the New England Hill Country; The Reed Immortal; Taurus Centaurus; The Republicans and their Candidate; Some Amusing Books of Travel; Professor Fisher's discussions; Henry Armitt Brown; Natural Science and Religion; Italian Poetry; The Contributors' Club.

A SICILIAN PALACE, by Luigi Monti.—The house we were in was one of those baronial palaces built in the fifteenth century, when many of the feudal nobility left the turreted castles on their estates, and established themselves in the cities, where they enjoyed the first honors. It had descended by inheritance to our host, and to all appearance it had never been altered from its original construction and furnishing, except in a very few articles of furniture which replaced those that had decayed. It was a square building of about seventy feet front, built of solid blocks of porous yellow stone that had become brown by age.

It had a small square in front, with a number of low, crumbling, miserable old houses, leaning one against the other, and a few poor shops in the basement: an old apothecary displayed in his window a variety of very old Sicilian majolica pots with salves of all sorts, and there was a small cafe, with a blue and white awning over the door, and two or three small tables and chairs outside under it. These houses, in days gone by, had sheltered the retainers of the feudal lord; but now they were rented, and occupied by a very common class of the population. This contrast of a superb palace surrounded by poor tenements is most peculiar and characteristic of Italian towns, especially the small ones, and those out of the way of modern influence, reminding one of the times when they were built,—times of caste and privileges; of immense wealth among the few at the expense of the poverty and degradation of the many; of a proud feudatory lord, exacting and enjoying the fruits of the labor of thousands of vassals, over whom he held sway as sovereign master.

The front entrance formed an archway which led to an interior court-yard, in the center of which stood a very old granite fountain, with wide basins for horses to drink out of. By hereditary custom it was also used as a public dispenser of water to all the poor of the neighborhood, whose ragged children were constantly coming in and out to fill their earthern jars. The whole basement of the palace opening into this interior court-yard, which in feudal times received the armed retainers and their horses, the granaries and kitchens, was now turned into stables and carriage-houses, the washing and cleaning of which was done in the court-yard itself, near the fountain, making it a scene of bustle and dirt, rather unpleasant to one not used to it.

On the right of the archway of the entrance was a marble staircase leading to the family apartments, or *quarto nobile*. In the hall were several doors leading to them, the rooms being all on the same floor, opening one into the other. Our bedchamber was of a very peculiar construction; it was divided in two by an alcove in the middle, having on each side a paneled door leading into two dressing-rooms, both the alcove and dressing-rooms opening into the back of the chamber, which had a space as large as the front, with two windows looking out into the court-yard, and containing wardrobes and chests of drawers. The front part had two balconies over the square, and was quaintly furnished with old rococo furniture very much worn; the floor was paved with glazed tiles and had no carpet, except an Oriental rug here and there. The rooms were furnished in the style of the sixteenth century; they were high studded, with fresco paintings of mythological subjects, now almost faded by age and dampness; high paneled doors of white and gold—the white turned to a dusty gray, and the gold to a dark yellow; there were old portraits of knights and magistrates, ancestors of our host, and an air of antiquity about everything that was charming to see.—Atlantic Monthly.

DEMOREST'S MAGAZINE; Butterick's Delineator and Domestic Monthly for August are at hand. They are presented in their usual form but contain new matter. The fashions are displayed with taste and the literary department is filled with articles of interest.

There are many hints to be gotten from these well conducted journals.

BRIC-A-BRAC.

A SELECTION from Dr. Tanner's correspondents:

My dear Doctor Tanner:
If you fast in this manner
And live without hash
Our business will smash.
With tears in my eyes,
That you live upon air—
I ask is this fair?

Suppose every guest
Should just do his best
To accomplish your feat
And ask nothing to eat?
I'm sure they wouldn't pay,
For each one would say
"My last week is paid,
And board bills are played."

But if you'll die in season
They'll come back to reason,
And then they will take
All the hash I can make.
Therefore, my dear friend,
Bring this fast to an end,
And prevent the grief deeper
Of—

A BOARDING-HOUSE KEEPER.

A FARMER'S wife, in speaking of the smartness, aptness and intelligence of her son, a lad six years old, to a lady acquaintance, said: "He can read fluently in any part of the Bible, repeat the whole catechism, and weed onions as well as his father." "Yes, mother," added the young hopeful, "and yesterday I licked Ned Rawson, throwed the cat into the well and stole old Hinckley's gimlet."

DOWN by the river side they met,
Sweet Romeo and Juliet,
Her hand in his he placed and said
"Sweet Juliet, I would thee wed."
"Indeed?" she queried, "Ah! let's go;
Get in this boat. Oh! Row me, oh!"
—Joaquin Miller.

Two grammarians wrangling, one contending that it was only proper to say, "My wages is high," while the other noisily insisted that the correct thing was, "My wages are high." Finally they stopped a day laborer, and submitted the question to him. "Which do you say, 'Your wages is high,' or 'Your wages are high?'" "Oh, off wid your nonsense," he said, resuming his pick, "yer naythur ov ye right; me wages is low, bad luck to 'em."

WHEN asked what town he hailed from
His reply to Peter shall be:
"I starved to death in Gotham,
And my name is Dr. T."—G. W. Childs.

POSTMASTER JAMES received a letter from Norwich, Conn., on which was the following address: "Mr. Colton, 'the tooth Puller,' somewhere in the Cooper Institute Building better known as the 'Gas Man.' Will the genial Col. James see that he gets this. New York City."

APPLE DUMPLINGS from the pot,
Just a dozen, steaming hot;
And the old man, convalescent, says the grace;
Then he takes them, one by one,
Eats eleven, while his son
Sees them disappear with horror on his face.

When the sick man takes the last,
Speaks the little boy, aghast,
"Pa, I haven't had one dumpling—nor has ma."
"What!" the old man cried, amazed,
While he dropped his knife and gazed,
"Would you take the last one from your poor,
sick pa?"—Petroleum World.

FLY TIME—When you hear her father's heavy cane thumping along the hall.

I'LL tell you a story that's not in Tom Moore:
Young love likes to knock at a pretty girl's door.
So he called upon Lucy—'twas just ten o'clock—
Like a spruce single man, with a smart double knock.

Now, a handmaid, whatever her fingers be at,
Will run like a puss when she hears a rat tat;
So Lucy ran up, and in two seconds more
Had questioned the stranger and answered the door.

The meeting was bliss, but the parting was woe;
For the moment will come when such comers must go;
So she kissed him and whispered—poor, innocent thing—
"The next time you come, love, pray come with a ring!"
—Tom Hood.

A VENERABLE lady of a celebrated physician, one day casting her eye out of the window, observed her husband in the funeral procession of one of his patients, at which she exclaimed: "I do wish my husband would keep away from such processions—it appears too much like a tailor carrying home his work."

As Dr. Tanner has received the business cards of most of the undertakers in town, so a young lady about to be married receives an indefinite number of curious circulars. One of these, recently sent by a dentist, is delightfully suggestive: "Having heard the happy news of your approaching marriage, I have the pleasure of offering you my services in setting your teeth in complete order, as per annexed schedule of prices. This operation, which is useful in all ordinary events of life, is indispensable under the present circumstances. The first impressions of married life are ineffaceable and their consequences of the greatest gravity. I therefore cannot too strongly advise you to have your teeth thoroughly cleaned by a skillful and conscientious practitioner."

For Women.

CONDUCTED BY MISS RAY CLARK.

THE SOFT "NO."

YOUNG Kitty sat knitting. "My darling," I said
"I've had a most beautiful dream!
Shall I tell it?" She gave a slight shake of the head,
And answered: "I'm turning the seam!"

I reached for the mesh, speckled soft like a pink,
That she held in her fingers so small,
But she answered: "I can't leave my work—only think
I'm knitting a sock for a doll."

"Don't tease me so, Kitty, my dear little one—
You are dying to hear—I'll be bound!"
"Just wait," she said, smiling as bright as the sun,
"Just wait till I've knitted a round."

I waited impatient, and then I drew near,
And pushing the curls from her brow,
I said: "Are you ready my Kitty, my dear?"
She answered: "I'm narrowing now!"

Still nearer I drew—put my arm round her waist—
And breaking of silence the seal,
Repeated: "Dear Kitty! why, what is your haste!
She answered: "I'm setting the heel!"

I smiled, and I frowned—I looked up at the clock—
At the coals 'neath the forestick aglow,
And then at dear Kitty—she held up the sock,
Saying: "Would you put white in the toe?"

"You *shall* hear me, Kitty, you dearest of girls,
And then, if you will, you may scoff!"
She shook loose the hand I laid on her curls,
As she said: "I'm just binding off!"

"I dreamed of a cottage embowered with trees,
And under the bluest of skies—"
She checked me with: "Sit farther off if you please,
My needles will get in your eyes."

"I dreamed you were there, like a rose at my door
And that love, Kitty, *love*, made us rich!"
"I told you to sit farther off once before!"
She answered: "I'm dropping a stitch!"

She knitted the last, and had broken the thread
When I cried: "Am I only a friend?
Or may I be lover?" She quietly said:
"Pray wait till I've fastened the end!"

"Will you marry me?" Here the worst came to the worst,
There was nothing to do but to go;
For I learned at the last, what I might have known first,
It was all her soft way to say "No!"

A LETTER TO LOVERS.

PERHAPS never before in your life did the horizon of your future look so bright as now when glorious anticipations pierce the dawn of a new life and everything is viewed in the rose-hues of the morning.

You don't care to think of the mid-day heat, the clouds, the tempests, and the evening shades; and perhaps it is just as well to let that distant part of your future remain in the back ground, for I never had much sympathy for people who go after trouble.

But, prudence, that happy medium between thoughtless abandon of cares and the nervous watching and nursing of them, is, I fear, too little exercised in matters matrimonial. To consider your first appearance in society synonymous with falling in love and getting married, or to get acquainted with your ideal in some romantic way and consider yourself fated instead of asking yourself whether you are suited, are just such mistakes as young, careless lovers are likely to commit. In both cases marriage is a lottery. You draw your ticket of chance eagerly, hopefully, but without thought, and consequently find it very often a blank of disappointment.

Our counsel is not against love at first sight, but against the delusions of a short-lived fancy. Let your hearts at all times decide your choice, but first be quite sure that that heart is right. That it is not misled with beautiful visions of magnificent drawing-rooms, servants and carriages. That it is not deluded with the ideal fleeting fancy of love in a cottage.

This may read well enough in stories, but your life is too earnest to let your imagination carry you away from its stern realities. The luxury of wealth will never compensate you for the loss of happiness. The dreams of your fancy will never satisfy the gnawings of hunger. And above all, a shallow, imagined love will never endure the test of time and adversity.

"They are a splendid couple." How well that sounds as, on your bridal day, you catch that whispered remark from some admiring friend. But do they know and (unless your choice has been made with proper deliberation) do you know that the "match" will be as mutually agreeable as "splendid?" Have devoted lovers never proved selfish, indifferent husbands? and fascinating girls never changed into careless wives? Or do you think that because it is you and not some one else such experience would be spared you? There's many a palace holds a wealth of unhappiness; and many a rose-embowered cottage full of discontent. Yet their inmates had just such thoughts, and many after you will flatter themselves into the same delusion. Before marriage you look through the rose-colored spectacles of your imagination and find everything very beautiful. After marriage you see only through smoked glasses and all has changed into commonplace drab. But when you learn to look at it with bared eyes, without your imagination or your prejudice to color it brighter or darker than it really is, then you may safely estimate your lot in life.

Half the disappointments in married life are caused by the hasty, thoughtless union of ill-matched, half-suited couples and the disagreements accruing therefrom.

It would be well, therefore, if, during the progress of courtship, instead of idle talk and senseless flattery, you would diligently study each others character by exchanging ideas and opinions, in order that when you are husband and wife you may be so well acquainted with each others tastes and bent of mind that no disagreement can possibly come between you to mar that first happiness which should last through life.

In contemplating marriage make sure of three things.: first, that you are really in love; second, that you thoroughly understand each other; third, make up your mind that you will not only live with, but *for* each other.

Thus, with mutual devotion, kindly forbearance with faults and a confidence in each other which no meddling gossip can shake, you have every prospect of a happy, prosperous and harmonious life.

BERTHA A. WINKLER.

RULES FOR VISITING.

As a general rule, never invite yourself to stay with any one; do not take such a liberty even with a near relation. Many persons have a habit of making unexpected appearances; they should remember that intrusions of this kind are sure to be more or less resented, and they run the risk of making themselves unwelcome guests. Others in an off-hand manner announce their intention of paying a visit, thereby causing a considerable amount of embarrassment; for though the host may not be averse to the self-invited guest's society, yet the liberty taken may cause great inconvenience.

Be not less particular that you do not take a stranger, or an uninvited person, with you when you pay a visit—unless, of course, you are specially requested to do so. If it should happen that you receive an invitation at a time when you have a friend staying with you, write by return mail declining the invitation, giving the presence of your friend as the reason for your doing so. It is then the province of the giver of the invitation to write and extend the invitation to your friend also. Then you may accept; but do not take the initiative yourself and say you would be glad to come if you could bring So-and-so with you; as your host may be so circumstanced that to say "yes" or "no" would be equally disagreeable.

A considerate visitor will be careful not to keep his host and hostess up to a later hour than that at which they habitually retire. Thoughtless persons frequently occasion much vexation and inconvenience in this way.

In many houses there is a tacit signal that bed-time has arrived by the appearance of a tray with wine, soda-water, biscuits, etc. After partaking of this light refreshment, candlesticks are handed round among the ladies, who then retire to their own apartments. Gentleman leave the drawing room at the same time; and for them it is permissable to adjourn to the smoking-room for a short time before retiring for the night—this of course, is quite optional, and does not entail the presence of the host.

When staying at a friend's house, a visitor should never take a book from the library to his own room without requesting permission to borrow it. Many people place the highest value on their literary possessions. When a book is lent, care should be taken that it sustains not the slightest damage, either within or without.

No guest should be continually dependent upon her host for entertainment, but should throw her self upon her own resources, and endeavor to amuse herself as much as possible, and should remember, that however welcome she may be, her presence is not *always* wanted.

From breakfast to luncheon, as a usual thing, visitors should not expect any attention from host or hostess. Both require some time in order to make necessary arrangements; many matters may require the supervision of the hostess, while the host avails himself of this period to occupy himself with his personal concerns. The visitor, too, finds this a convenient time for writing, taking a stroll, reading, etc., in fact, do anything in reason, except look for any attentions from her entertainers during this portion of the day.

ANOTHER ANSWER.

IN the RURAL of July 24th, "Miss Irene," asks: "Who seconds the motion that some married sister, who knows how, will give these husbands a 'drawing over the coals?'" And, I think it quite proper, perhaps, that a married sister should do the experimental cremating, if any such thing is on the tapis; but first let us stop to consider the sort of "work" we have in hand before we "seal the contract."

There is a certain class of readers who raise a great "hue and cry" about the poor abused farmers' wives, but, be sure, it is never the farmers wife who does the complaining; rather some vinegared spinster, whose chief claim to public attention is a sharp pen and a shrill voice. It is seldom the strong, healthy, helpful soul that grumbles. The army of faultfinders is usually composed of those whose lives have been dwarfed and soured by circumstance, or, more truly, being narrow, life and outward circumstance meet them on that plane and return like for like.

Life generally is to each of us just what our own individuality can reach out and claim. The atmosphere about us is what we make it from our inner selves, and we see the world through rosy mists, or "jaundiced eyes," just as our own optics chance to be constituted. But this is not singeing the toes of the poor offending husbands as we swing them too and fro over our bed of coals, and when we come to think just how badly the poor fellows would feel, we believe we will decline the office in favor of some better executioner.

As for the matter of bad farmer husbands I don't really know that they are any better, or any worse than the wives! Of course, there are coarse men, those regardless of the welfare of their wives or children, or in fact of anything but their own selfish ego, and there are also women very little better. But there is no use to cry out about the brutality of mankind. That never made over any man; no harangues from a woman ever cured a man of any coarseness! If we would labor to elevate mankind, we must begin at the root of the

tree; no after pruning can ever make a Bartlett pear of a thorn seedling.

Better we should let the grown husbands pretty much alone, if they be selfish, they will assuredly be selfish, still; if kind and good they owe their dispositions to something more than their own endeavors, and woman can better employ her time and thoughts, her voice and pen, in teaching the mothers of unborn millions, the one true way of making kind and considerate husbands or wives for some future time.

Many farmers' wives work hard, it is true, so do the wives of all men who are not financially above the need of manual labor.

I have lived on a farm, I have also lived in cities, both great and small, and I know that few women of limited means are as happy, live as easily and pleasantly, as the wives of farmers. Through the large, roomy houses, with all the living rooms on the first floor, floats the sweet Summer breezes, ladened with the scent of new-mown hay, or spiced from the long orchard reaches, and the red cheeked babies, revel in pure air, fresh fruit, and cool, pure milk, unmixed with chalk or water. All places have disadvantages, as well as advantages, but we sometimes waste uncalled for pity.

MAUDE MERIDITH.

OUR GIRLS AND BOYS.

MISS CLARK:—I have recently chanced to hear the remark made that the present training of boys and girls was one of the crowning evils of modern times. That neither were brought up to much of anything but fashionable idleness, with some smattering of the "accomplishments," but little of the downright drilling to the pursuits of every-day life.

The remark was further made that parents were bringing them up in an atmosphere above severe labor, while the cultivation necessary to fit them for easier pursuits was not yet practicable.

But while this may be a very prevalent belief, may I not ask what is being done to advance that cultivation? Is it wrong for parents and children to struggle for that cultivation?

Because a portion fail in accomplishing it, shall every boy and girl be doomed to drudgery until the millennium brings the grand time?

I would not entirely relieve the son or daughter from the parent's daily duties, but if in connection therewith, the daughter may have music, and an opportunity to develop what ever taste she may have for the little creations in art, or for any original composition, or a knowledge of botany, floriculture, and of making her own dresses and bonnets, may she not be advancing a step with no evil effects upon her womanly character?

The common schools do not teach the boy much of practical workmanship, and if in addition to his daily task he has tools and instruction in their use, and is given a broader knowledge of intellectual affairs, so far as the study of natural history and the physical sciences, as well as an acquaintance with business, may he not be advancing a step from the past?

Should the children be kept from attempting to advance for fear that they may turn to easier pursuits? H. H.

GIRLS' MANNERS.

IF our little girs greet their brothers and sisters and perhaps even their parents boisterously; if, instead of "Good morning," they cry, "Halloo, papa! Hallo mamma!" and call to playmates in the streets in the same rough manner, who will be surprised if this style follows them as they grow up and appear as young ladies? Referring to this unladylike manner and mode of address, a gentleman writes that, passing two pretty, well-dressed, stylish-looking young ladies in the public streets, he was surprised to hear one greet the other with, "Halloo, Sid!" and the other respond "Halloo, Tude!" to her friend's greeting, and he remarks: "It was just what two lounging young men might have said, or stable boys, for that matter. It might not have been so much out of the way for the latter, but I confess it sounded very odd and offensive in what I supposed to be two well-bred young ladies—as much so as if I had heard two beautiful, gay and rose-colored birds begin to swear. It was so unnatural, so out of place. It may be 'the style' for young girls or ladies to greet each other with a 'Halloo!' but I can't like it or get used to it." These things may seem but a trifle, but they make all the difference between nice things and very common things.—Christian Union.

HINTS.

A SWEET temper is to the household what sunshine is to trees and flowers.

THE young lady who can peel a potato in five seconds is as useful as the young woman who speaks five languages is ornamental.

NEW PAINT.—Newly painted rooms are very unpleasant for many days, but if a handful of hay be strewn on the floor upon which is sprinkled a little chloride of lime, after a couple of hours the offensive smell will have entirely disappeared.

VARNISHED FURNITURE.—This may be finished off so as to look equal to the best French polished wood, in the following manner:—Take two ounces of tripoli, powdered; put it into an earthen pot, with just enough water to cover it; then take a piece of white flannel, lay it over a piece of cork or rubber, and proceed to polish the varnish, always wetting it with the tripoli and water. It will be known when the process is finished, by wiping a part of the work with a sponge, and observing whether there is a fair, even gloss. When this is the case, take a bit of mutton suet and fine flour, and clean the work. The above process is suitable to other varnished surfaces.

RICE GLUE.—Mix together rice-flour and cold water to a thick paste, pressing out all the lumps with a spoon, and making it very smooth. Then dilute it with a little more water (altogether you may allow a gill of water to a tablespoonful of rice-flour) and boil it slowly as long as you would boil starch, stirring it frequently. When done, set it to cool. Use it for pasting fine paper, and for any little ornmental articles made of pasteboard. It is a very nice and durable cement. The water in which rice has been boiled for the table will afford a cement for slight purposes.

HOW TO COVER THE SICK.—Never use anything but light blankets to cover the sick. The heavy, impervious counterpane is bad, for the reason that it keeps the exhalations from the pores of the sick person, while the blanket allows them to pass through. Weak persons are invariably distressed by a great weight of bed-clothes, which often prevents their getting any sound sleep whatever.

TO FRESHEN A BLACK LACE BARBE.—In a half teacupful hot water put one teaspoonful of the magical mixture; brush the dust from the lace and place on a clean towel; dip a small sponge in the water and squeeze partly dry, and then gently and slowly sponge both sides of the barbe without getting it very wet; fold in the towel about 20 minutes, and then place between thin, tissue-like brown paper; put it on a woolen blanket and press with a half cold iron; or you may press between the leaves of very large books and place heavy weights on them.

TO REMOVE DANDRUFF.—This is a natural secretion, but becomes a cutaneous complaint by neglect. Take an ounce of powdered borax, a piece of unslacked lime the size of a chestnut, and a tablespoonful of spirits of ammonia; put them into a quart bottle and fill it up with boiled or pump water. After twelve hours apply this wash to the scalp. Ladies can apply it best with a fine sponge. Rinse with tepid water. After a few applications the scales will disappear, the hair become soft and brilliant, and young hair will be seen to start out. Dandruff should be cured gradually, so as not to produce sick headache or dizziness by its sudden suppression.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

BREAD MAKING.

ELINOR BROOKS.

VETERAN housekeepers are weary of so often seeing directions for bread-making, sometimes forgetting that there are new recruits constantly enlisting in our ranks to whom the subject is most interesting

An old friend tells me that in her newly married days she shed more tears over her failures in bread-making than over all her other housekeeping troubles together. During a late visit to her she gave some discouraged young housekeepers a laughable history of her trials in that line.

After becoming ashamed of her frequent failures she had sometimes slyly hidden away the solid loaves—once in the deep grass of the meadow where soon after with a mowing machine the hired man cut through a moldy mass and at first thought he had made a valuable discovery of a new species of mushroom. She knew very well that it would not require many such blunders to stamp "Jack's wife" as a shiftless, extravagant "piece" in the eyes of her critical new relatives; so the next time, after hours of anxious waiting and watching for the stubborn loaves to rise, she resolved to hide them where they never would be found again, and after the men were all safely off to their work she fed the heavy unbaked mass to a couple of fine pigs which were her husband's especial pride just then. When night came, at the time the pigs were usually squealing for their supper she was frightened to find they were nowhere in sight, and her guilty conscience instantly suggested the fear that the sour dough had swollen and killed them, perhaps ruptured their stomachs. Her husband, tired with a hard day's work, never noticed their absence and was soon asleep, but her anxiety was too great to allow sleep, and at midnight it became so unendurable that she stole away from the side of the unconscious sleeper and searched the pasture over in the moonlight, but could find no trace of the missing pets. Imagining Jack's consternation and grief when he should find their bloated remains she became thouroughly alarmed, and, hastening to the house, roused him and confessed her dreadful secret, imploring him to go out and find them and see if there could not be something done for them before it was too late. His shouts of laughter on hearing her story startled the whole household from their slumbers and so reassured the anxious woman that she lay down and slept in peace. The pigs were found next day *safe in mischief* in a neighbor's potatoes.

After all of auntie's trials and failures she is a noted bread maker, and is especially famous for good yeast-cakes, with which she supplies many of her neighbors, who much prefer them to any *store yeast cakes* that can be found. She only makes them twice in the year as they keep perfectly good for six months and more. As good yeast is the first and most important element of good bread, we are all trying to learn her secret, and this is the way she tells us to make

Good Yeast Cakes.

At night make a sponge of flour, a pint of warm water and two yeast cakes that you are certain are sweet and good. In the morning boil for one-half hour two quarts of loose hops in water enough to cover them; then strain out the hops and into the scalding liquid stir all the corn-meal that it will wet up. When the meal is luke-warm mix in the bowl of light sponge and let it stand from one to two hours to rise. When light, pinch off little pats, shape them into cakes and lay them on the molding board to rise again. When light, set the board in an open window or other airy place, and turn the cakes quite frequently for two or three days, until they are thoroughly dry; then pack away in paper bags.

For Bread.

At night make a sponge with a yeast cake and two quarts of fresh milk that has been scalded and partly cooled. In the morning (early if possible) stiffen the sponge with flour, stirring it in at first with a spoon, then using the hands, kneading in flour until the dough no longer sticks to the fingers, and then kneading with as little additional flour as possible for twenty minutes. Set to rise again, then knead again just as long as you can afford the time. The longer it is kneaded the more tender and fine-grained the bread will be. After the second kneading place it in the baking-tins and let it rise until it nearly doubles in size; then bake from forty minutes to one hour according to the size of the loaves.

Salt Yeast Bread.

Many housekeepers who really prefer salt-rising bread seldom make it on account of the extra care they think it needs, saying that "one has to keep a fire all day for that kind of bread." But that is a great mistake. It can be easily managed so that it can be baked in the forenoon. Late in the evening a half pint of warm water, a salt-spoonful each of soda and salt should be stirred into a thick batter with canaille or coarse flour—which always ferments sooner than fine flour. Cover the dish containing the yeast with a saucer or small plate, then set it in a kettle of warm water and cover the kettle closely so as to confine the steam. When one has a reservoir attached to the stove it is a good plan to set the dish of yeast in it. In the morning there will be no apparent change in the yeast, but after stirring in a little warm water and more flour, and reheating the water in which it stands, it will soon show signs of fermentation, and in about two hours will be ready for sponging. The sponge should be made with milk and should stand about an hour; then it may be molded for the pans, being careful not to add too much flour as it easily absorbs enough to make it too stiff. Unlike hop yeast bread, it requires but very little kneading (the less the better), and therefore this is an easier method of making bread for women who are not strong.

NURSING CHILDREN.

I DON'T believe in the way mothers take care of their children now-a-days. Lots of little creatures die just because they are dosed and doctored to death. I suppose parents love their children as well now as they did when I was young. But seemingly, more are sick and die now than then, and I do believe it is all mismanagement that makes the difference. This feeding children upon pie and cake is a grave mistake. If they happen to have the stomach-ache or colic, a doctor is sent for and more serious illness follows. Mothers ought to know what should be given to their children both for food and medicine. If they would only study the *comfort* of the little ones they would save much suffering. I will give a few simple remedies for every-day use.

Croup.

Take a soft flannel cloth, a quarter of a yard long and a finger wide; spread a thin coating of lard over it, and sprinkle yellow snuff over the entire surface. Lay it over the chest, the lard and snuff next the skin. Spread another flannel over it. This will loosen the tightness, and give relief. Grown-up people, as well as little folks will find it an excellent remedy for tightness or congestion of the lungs.

Burdock Leaves.

For a sudden attack of pleurisy, nothing will give relief more speedily than burdock leaves applied to the seat of pain. If green, boil them, and steep in vinegar and apply hot; if dried leaves are used, remove the stems and steep in vinegar till soft and hot. Have enough prepared to change as they grow cold. A few minutes' application will remove the pain. Some hot ginger tea should be drank to allay the internal heat.

For Worms.

When children have symptoms of worms, sage tea will generally give relief. A drop or two of spirits of turpentine rubbed across the stomach will prevent their rising in the throat.

GRANDMOTHER.

DOMESTIC RECIPES.

Dried Beans for Winter Use.

Pick when tender; wash and string them: then throw them into boiling water and let them boil up. Skim out and dry them as even as possible. When wanted for use, throw them into boiling water and cook until tender, seasoning in the usual manner. One teacupful of the dried beans will be sufficient for a family of five.

Brine for Cucumber Pickles.

Three large wooden pails of water; four quarts of salt; three-fourths of a pound of alum; one half pound of cracked black pepper. Boil the ingredients in a part of the water and skim off all that rises to the surface. Wash and scald the cucumbers, leaving them in the water in which they have been scalded, until perfectly cool. Mix the remaining water with the other ingredients and pour over the cucumbers. When you wish to use them, you have only to take them out of the brine and pour boiling water over them, letting them remain until the water becomes cool, then throw them into spiced vinegar if you like, and they will be ready for eating in a day or so.

Making Vermicelli.

One quart of flour; one level teaspoonful of salt; two eggs, and a very little water. Mix and divide into five equal parts; then roll out very thin and spread upon a clean napkin to dry, but do not allow them to become brittle by overdrying. Prepare this about three hours before meal time, and about one hour before you wish to use it, take the partially dried sheets of dough and lay them upon the kneeding board, flouring well the upper side of the sheets. Then roll them from you so as to form a flat roll about one and a-half inch wide. Take a short, thin knife and cut very fine across the roll; after you have cut them all in this manner, take them up carefully and shake them apart, leaving them to dry again, until about five minutes before you wish to serve the dish. Have ready any good soup stock, boiling-hot; throw in the Vermicelli; cook five minutes, stirring constantly. This quantity of Vermicelli is sufficient for a large kettle of soup.

Layer Cake.

One cup of butter; two cups of white sugar; one cup of sour milk, four eggs, one teaspoonful of saleratus, three cups of flour. Take one half of the butter and put into it two tablespoonsful of molasses, one teaspoonful of cloves, cinnamon and allspice, one nutmeg and one cup of chopped raisins. Bake in jelly tins, using the dark part for three of them, while the light part will only require two tins.

MRS. E. H. SARGENT.

To Clean a Sponge.

The quickest and cheapest method for cleansing a sponge, is to wash it (squeeze and knead) in strong salt water. MRS. W. V. A.

Corn Fritters.

Grate corn from the cob until you have one quart, add two teacups of sweet milk, two beaten eggs, one teaspoonful of soft butter, one teacupful of flour, having a teaspoonful of yeast powder mixed with it. Season with pepper and salt and fry upon a griddle like batter cakes.

Corn Pudding.

Take the grated corn of a dozen large ears, add a quart of milk, three beaten eggs, two tablespoonsful of melted butter, a tablespoonful of sugar and a small teaspoonful of salt. The eggs should be beaten separately and the whites stirred in the last. Pour into a baking dish, cover and bake an hour. Remove the cover and brown before serving.

Peach Figs.

Remove the skins, halve, take out stones and to eight pounds of the fruit allow three pounds of brown sugar. Put over a slow fire—do not add water—and cook until the sugar penetrates and they have a clear appearance. Take out, spread on plates and dry in the sun. Save the sirup and sprinkle on a little while drying. Pack in boxes in layers with a little powdered sugar between. MARY B.

Ripe Tomato Pickles.

Do not scald, pare with a sharp knife. Put into a jar and pour over hot, spiced vinegar. Cover over with paper dipped in flour paste.

L. D.

NOTE FROM MRS. B.—I am afraid I shall not be able to write again for some time, as this month we expect to commence building a new house, and I shall be very busy. I think you will be gratified to learn that we are following the house plan given in RURAL of May 22d, (except that we have modified it somewhat to suit our taste and means.) I search the RURAL anxiously for any hints there may be on building. Would be very glad to have the "sisters" give any improvements or convenience they may know of for pantry, kitchen, or, indeed, for any part of the house, as I am a novice in house-building, and am exceedingly anxious not to make any serious mistakes in the construction of the home wherein I now hope my future life will be spent.

Hop Bitters gives good digestion, active liver, good circulation and buoyant spirits.

News of the Week.

HOME NEWS.

MONDAY, August 16, 1880.

Mr. Dudley Field, son of David Dudley Field of New York, died suddenly of heart disease on the 10th.....J. W. Hornninger, a juryman at Richmond, Va., refused to serve because there was a negro upon the jury, and was fined $2 50 and 10 days imprisonment.....The Fourth annual convention of the National Liberal League will be held at Chicago on the 17th of September..... Godfried Allentz, a German gardner living near Indianapolis, Ind., fastened himself in a room of his house and set fire to it burning himself to death.....New Orleans is making extensive preparations for celebrating the recent opening of direct railway communication with Texas..... A new line of railway is arranged for from Matamoras to Monterey in Mexico to connect with the Texas roads .....Extensive preparations are in progress for new lines of roads on the west bank of the Hudson river.....Mrs. Anna Maria Sutterl of Trenton, N. J., committed suicide in a fit of melancholy on the 12th.....Alphonso Klock, aged 19, has been held for murder in the first degree for shooting Moses C. Holden of Herkimer, N. Y., on the 8th.....The buildings belonging to Charles D. Wise of Washingtonville, N. Y., were burned on the 11th, and his son aged 13 years has been arrested charged with the crime.....Roger Russell of Layfayette, Mich., shot his son-in-law, John Munan on the 11th inst.....Walter Hawk, a miner, was killed on the 12th inst., by falling down a shaft at Wilkesbarre, Pa..... Indian depredations are reported at Quitman, Texas.....The Bankers' Convention at Saratoga is exhaustively considering questions pertaining to the finances of the country, and it seems to be the prevailing opinion of that body that the Silver Coinage act must be repealed, and the silver dollars remelted into bullion in order to be disposed of..... ...There has been a net increase of 2,134 in the number of new post-offices established in the United States during the year ending June 30,.....A tunnel under the St. Lawrence is decided upon.....Alfred Ward was drowned while fishing at Red Bank, N. J., on the 11th inst. .....James McDonald was instantly killed by the falling of an arch at Boston on the 12th inst. .....Mary Haggerty, Daniel Bagley and Julius Mair, were drowned at Neversink, N. J., on the 9th inst.....Mrs. Charles Wells of Woodtown, Pike county, N. Y., met and killed a rattlesnake on the 10th, measuring five feet in length..... The corrected census returns of St. Louis make the population 333,577..... ..The fastest time on record was made at the Rochester Driving Park on the 12th inst, when St. Julien and Maud S. both made the mile in 2.11¾.....The population of Massachusetts is found to be 1,783,812, an increase of 19 per cent over 1870..... A consolidation of the Texas Pacific with several other roads in the Southwest is under consideration.....$250,000 worth of property was destroyed by the burning of oil boats at Greenpoint, L. I., on the 10th inst...

SEVERE RAILROAD ACCIDENTS.

The breaking of an axle of a tender two cars of the New York and New Jersey Railroad were on the 12th, thrown from the track down an embankment 30 feet in hight, and seventeen passengers more or less injured. The accident happened near Spring Valley, Rockland County, just after passng a sharp curve. The ladies' car was turned entirely over, and it seemed almost a miracle that none were killed.....A collision occurred on the West Jersey Railroad at May's Landing on the 11th, from the failure of the air-brakes to work, by which fifteen persons were killed and over fifty wounded.

The eldest daughter of Hon. N. P. Banks was married to Rev. Paul Sterling, at Waltham, Mass., on the 12th.....Trouble has broken out between the whites and negroes in some parts of Southern Indiana, supposed to be of a political nature.... ....A daughter of Maturin Livingston, of New York, was married at Newport, on the 12th, to George Bentinck, son of Mr. Cavendish Bentinck, Member of Parliament for Whitehaven, England

POLITICAL.

The State Credit Democrats of Tennessee in convention on the 12th, nominated Judge Wright for Governor. The low tax convention met on the 12th, and nominated Hon. S. F. Wilson for Governor..... .The Texas Democratic State Convention met at Dallas on the 12th, and nominated candidates for Judge and Attorney-General.

MORE INDIAN TROUBLES.

Dispatches from New Mexico report some serious fighting with the Indians in that Territory. Gen. Grierson reports that while guarding the passes east of Van Horn's Well, and scouting toward the Rio Grande to prevent the Indians passing eastward toward the settlements, the latter escaped, slipping through and going north on the evening of the 4th inst. Gen. Grierson got his force in readiness and moved to the northwest, keeping a range of mountains between him and the Indians, thus concealing his movements. He left the camp, south of Van Horn's, at 3 o'clock on the morning of the 5th, and arrived at Rattlesnake Springs at 12 o'clock the same night, marching 65 miles in 21 hours. Arriving there, he found himself in advance of the Indians. At 2 o'clock on the afternoon of the 6th the Indians were observed moving toward the Springs. The troops fired by volley, creating great contusion and a general scattering among the Indians. From a high mountain the Indians perceived the smallness of the force opposed to them, and advanced to the attack, trying to work their way to water. After firing a volley they fled to the mountains. At 4 P.M. the supply train, supported by Capt. Gilman and a company of the Twenty-fourth Infantry, appeared about eight miles southeast, coming around a point of the mountains. The Indians sent out a party to attack it, but were again repulsed, and retreated to the main force. At this time a party of Indians was seen coming down the canon between the troops, with the intention of attacking the train and getting to the water. They were also driven back. The Indians retreated to the Corissa Mountains, pursued by the troops. Gen. Grierson says it is impossible to tell the loss of the Indians, owing to the nature of the country. Many were shot from their horses. Capt. Nolan's command is now watching the canon, and Capt. Carpenter, with his force, has gone to Sulphur Springs and Water Holes, about twenty miles from Rattlesnake Springs, these being the only ones where the Indians can obtain sufficient water. The soldiers suffered no casualties. Capt. Liverman, with a company of the Eighth Cavalry, is now on his way to join Grierson.

A courier from Capt. Kennedy brings the report to Grierson that a detachment of troops had an engagement while following the Indian trail into a canon north of Bowen Springs, in Guadeloupe Mountains. The troops lost one killed and nine horses shot. The loss of the Indians is unknown. Capt. Kennedy at once moved out to attack these Indians. Col. Vielle, with 200 Mexican troops, is now opposite Fort Quitman, watching for a band of 50 or 75 Indians, who are supposed to have left the main band of Victorio. This is the same band that attacked the coach on the 9th, compelling it to return to Fort Quitman, and wounded one passenger.

WASHINGTON, Aug. 10.—Adjt.-Gen. Drum is in receipt of telegrams from Eagle Springs stating that, from further investigation and observation, and the large trail made by Indians going to and returning from Rock Ridge, where the fight occurred July 30, there is no doubt that Victorio and at least 100 of his effective force were engaged with the United States troops on the day mentioned, and that they were much more seriously handled than was at first reported. Their present camp is opposite Del Alamo, in the mountains in Mexico, adjoining the river. Col. Vielle, who is moving down the river, has been informed of this. The last reports received from scouts state that the river has risen since the Indians crossed back into Mexico, and it is now only passable with great difficulty, being higher than at any time before this season.

FINDING BURIED MONEY.

A large number of old coins were found by some boys at Mahanoy City, Pa., on the 10th, which calls up the particulars of a murder at that place in 1810. Some of the coins date back 200 years. An old resident of the place gives this version of the story: "In the year 1810, when the country for miles around here was a vast wilderness, and contained only one house, a country inn stood at a point which is now the central part of the town. A Jewish person named Foulhover was in the habit of going on horseback with his wares from Reading to Sunbury. On a particular day he stopped at the inn in question. A hunter from New Jersey, named Bailey, was also stopping at the house. When the peddler alighted, Bailey carried in his saddle-bags for him. While doing this he heard the jingle of money, and, as the bag was heavy, he came to the conclusion that there was considerable gold and silver in it. A desire for this money at once preyed upon his mind, and a murderous spirit seized his heart. He accordingly proceeded up the mountain, and lay in ambush for the approach of the peddler. When Foulhover was passing where he lay concealed, he drew his rifle upon him and shot him through the heart. The horse he rode, strange to say, stood perfectly still, and Bailey approached and rifled the saddle-bags. Taking all the gold and silver therefrom, he carried the bags, with the smaller coin, to the point where the contents were recently found by the boys, and deposited them in the earth. Bailey then went to Reichstorion, the proprietor. Seeing his hands and clothes besprinkled with blood he asked him the cause. He replied that he had shot a deer. He then left the inn and was not heard of for some time. Persons going along the road found the body of the peddler and it was interred by the roadside. A small mound marks the spot to this day, and people from adjoining places never pass the place without referring to the fate the peddler met. Bailey was traced to New Jersey by the authorities and arrested. He was taken to Reading, lodged in jail, and tried for the crime. The circumstantial evidence was strongly against him, and he was found guilty and subsequently hanged. Before his death he made a confession in which he stated where he buried the saddle-bags, but the exact spot could never be found.

THE CAUSE OF STEAMBOAT DISASTERS.

The Assistant U. S. District Attorney has been assisting in the finding of the Grand Jury in the recent steamboat disasters, and on the 10th they brought in a sweeping presentment against owners and inspectors of steamboats. Indictments were found against Austin Jayne and Andrew Craft, United States Inspectors of Vessels, Hulls &c.; John K. Matthews and Alexander Cauldwell, Inspectors of Steam Boilers; Charles P. Smith, Captain; Edgar Weeks, Engineer, and Benjamin C. Kirk, S. L. M. Barlow, Stephen Tabor, James Udall, Edward Morgan, Silas Mott, and Stephen H. Townsend, owners and Directors of the steamboat Seawanhaka, each of whom is charged with manslaughter. Upon motion of District Attorney Fiero, bench warrants were ordered to issue for the arrest of the indicted parties.....A despatch from Oswego, Kansas, says that the supposed Benders had an examination at that place on the 10th, and were discharged.....A Frenchman named Anthony Amadee Bigot, murdered the wife of Victor Renaut at 141 Thompson Street, New York, on the 11th instant. After cutting her throat he drew the razor across his own inflicting probable fatal wounds.....Mr. James H. Baggett, a cotton broker of New York, was drowned by the capsizing of a boat on Lake Mahopac, on the 11th inst.

FOREIGN.

In England agitation over the rejection of the Compensation for Disturbances Bill by the House of Lords still continues. In Ireland several public meetings have been held on the subject, at which very violent language has been used. Agrarian outrages are again becoming common. A couple of land agents have been shot at during the week; a crown solicitor and his two sons were waylaid and shot, one of the sons being severely wounded, while threatening letters have become everyday matters. Meanwhile, the relief organizations have closed operations, although a good deal of distress still prevails, especially in the west of the island where fever attributed to the famine has become epidemic. Fenianism, it is said, is again becoming active throughout the island, chiefly through the agency of Irish-Americans. A masked party in a couple of boats boarded a Swedish vessel at Queenstown and carried off several cases of rifles she had among her cargo. On the whole, the prospect in the "Gem of the Sea" is by no means of an amicable sort....Gladstone is in fair health again.....Lilian Adelaide Neilson, the actress who traveled widely through this country, died in Paris yesterday ....Mr. Arthur Arnold's Parliamentary motion for some modification of the rules regulating the importation of cattle from this country, was rejected by a vote of 194 to 20. The government opposed it.....The old baroness, Burdett-Coutts, despite the remonstances of the Queen and Lord Beaconsfield, is going to marry young Ashmead in a couple of days.

In France the Republican triumph at the late election for Councils-General, has been so overwhelming that it is certain that the Senate will be decidedly republican next year for the first time since the establishment of the present body. Gambetta says that France must be permitted to resume the advanced rank that belongs to her in the world, and regain the provinces violently torn from her. In view of the extreme care with which all allusions to the loss of Alsace and Lorraine have been avoided for years by public officials, this declaration that France expects to recover them is significant—at any rate, of restored faith in the army. In Germany another meeting of the Emperors William and Francis Joseph is the main topic of interest in view of the temporary retirement of Bismarck..... The Spanish paper and cablegrams are chiefly occupied with news and speculations about the approaching birth of an heir to the throne.....Russia denies that she has 45,000 men ready for instant action on the borders of Roumania. Turkey still keeps "putting off" the evil day of settling with her Christian neighbors. Nothing definite has been done regarding the settlement of the "Eastern Question" during the week.

In Afghanistan Ayoob Khan is within three miles of Candahar, in which some 3,500 British troops are entrenched, with ample supplies to stand a siege. There is little chance of the Khan's success should he be foolish or bold enough to attack the place. He is reported to have suffered seriously in the late battle. It is also said that he is secretly in alliance with Abdurrahman Khan, lately proclaimed Ameer at Cabool, while it is strongly suspected that both are more or less puppets moved by Russia. Gen. Stewart is hastening with the forces from Cabool to the relief of Candahar, and other troops are being rapidly pushed to the same place from England, the Cape of Good Hope, and India.

AGRICULTURAL NEWS.

A destructive enemy of the wheat plant has done much damage in Canada especially in the Province of Ontario. It is a small fly or insect that stings the stem, and deposits an egg in the orifice. It seems to rival the Hessian fly, and is particularly injurious to Spring wheat.....At the recent session of the Pennsylvania Legislature a law was passed to encourage tree planting along highways. Elms are to be not less than seventy feet apart; other forest trees not less than fifty feet, and locust trees thirty feet apart. The owner of property on which such trees are planted has his road tax reduced at the rate of $1 for each four trees so planted. The trees must be living one year after planting, and be well protected from animals. Injury to such trees is punishable by fine.....The latest swindle for use in rural districts is the "butter contract" game. A couple of nicely dressed, gentlemanly appearing fellows, drive up to a farmer's house with a fine turnout, and engage all his butter for the season at a big price. The farmer signs a contract to let the merchants have all his butter for a year, and in due course the "contract" comes back in the shape of a note held by a third party, which the farmer has to pay.....About 1,000 farmers held a picnic at the grounds of the Massachusetts Agricultural College, at Amherst, the other day. Aside from hay the principal crops this year are: Oats, 22 acres; corn and rye, 12 acres each; potatoes, 4½ acres; sugar beets, three acres. Lack of funds and unwillingness to incur debt, curtail crops and other operations.....From returns made to the Agricultural Department in April the Commissioner has compiled statistics which show that the average value per acre of cleared lands in Ohio is $47.53, and that these lands are only exceeded in value by those of Massachusetts, New York, and New Jersey, which are respectively $85, $58.48 and $82.42. In the average value per acre of timber lands, Ohio stands second only to New Jersey and Massachusetts, the figures being New Jersey $56.82: Massachusetts, $43.25; Ohio, $41.87. Both descriptions of lands in Ohio show an average increase in value over the preceding year of 08.5 per cent.....Vermont takes the lead in the production of maple sugar, producing from 8,000,000 to 10,000,000 pounds annually. New York comes next, producing one-third less. Ohio comes third, and produces about half as much as New York. The States of Illinois, Indiana, New Hampshire, Michigan and Wisconsin produce annually about 1,000,000 lbs. each. The aggregate product of 1879 is estimated at 17,000 tons. The production of maple sirup annually is stated at 1,000,000 gallons, in which Ohio takes the lead .....Reports from tobacco growers all through the Connecticut valley are that the crop is in unusually fine condition, and a Hartford dealer estimates that, while the acreage is no greater than last year, the yield in the State will be from one-quarter to one-third larger. Cutting is in progress already on some East Hartford farms and in several other places in the valley.....In 1840 there were nearly half a million sheep in Connecticut, a State admirably adapted to growing mutton-sheep. In 1870 there were less than 84,000. At the present time in many towns there is not a single one. The extermination of sheep by dogs, not lack of profit in the business, is the reason why sheep are no longer raised. One butchering firm in New Haven killed in 1878 over 12,000 sheep and lambs, of which not over 100 were raised in Connecticut; most of them came from Canada..... Mr. F. A. Simpson of Pleasant Hill, Cass County, Mo., has just completed a selection from the herds of leading Hereford breeders, consisting of thirty-three cows, one bull and nine calves—all pure bred Herefords. They are to be shipped in the steamer Dominion, which will sail for Quebec on Thursday, whence they will be forwarded to Missouri.

We are now sending Indian corn to England at one cent a pound, and shipping large quantities to Hamburgh and Bremen for distillery purposes. .....Canada is alarmed at the rapid destruction of its hemlock forests, which annually supply 120,000 cords of bark for home consumption and 106,374 cords, valued at $360,259, for export. The Montreal Board of Trade calculate that 1,250,000 trees are cut to supply this demand, and that 15 years of the same destruction will wipe out their extensive hemlock forests. The bark brings as low as 54 a cord, and in the hope of checking the outside demand with a higher price, efforts will be made at the next session of Parliament to induce the government to impose an export duty of $2 per cord on all bark leaving Canada.....Oliver Dalrymple, the bonanza wheat raiser, says that the yield will be 2½ bushels per acre more than ever before. Harvest with him is just now at its hight..... Potato beetles took entire possession of a church at Sandoval, Ill., on a recent Sunday evening. Windows, doors, and seats were swarming with them. Ladies screamed, and the service came to a sudden end.....The Duke of Portland has had a site prepared on one of his English estates for a beaver village for a number of beavers imported from Canada.....The hop-growers of Central New York have just held their annual picnic on the shores of Oneida Lake and calculate that this year's crop will reach 125,000 bales and sell at 30 cents a pound at least. Last year's crop of 110,000 bales sold for 15 cents only half of the average price for the last ten years. New York growers, however, estimate their crop a third below last year's, but the English hop-yards were reported in poor condition. It fairly mirrors what nine out of every ten of the hop growers said to each other, to say that the growers feel that this year, with no back stock in the hands of brewers, they do not intend to give the profits of their crops to speculators, or to sell at low prices. None talked of prices below 30 cents, and not a few were confident that "two pounds for a dollar" would be realized in the market of 1880.....Our correspondent, Prof. J. P. Sheldon, has been specially engaged by the Canadian Government to investigate the advantages of the Dominion as a home for British and other immigants, with a view to inducing a heavy immigration to that section. The Professor is to visit the Red River region of Canada, Manitoba, and all of Upper Canada during his intended tour..... Out in Grundy County, Ill., a small grub like the white grub often found in barn-yards is severely damaging the corn fields. To look at the corn from the road it looks as though it was greatly in need of rain—drying up; but on on pulling up the stalk forty or fifty of these grubs will be found among the roots, and most of the roots destroyed. They seem to be more plentiful on high lands..... California vineyards are creeping up the hillsides. The grape and raisin crops of the State, it is estimated, will exceed those of last year by about 40 per cent... ....Mr. Dunham's fine selection of 97 Percheron horses arrived safely at this port during yesterday week, and were landed on the 11th. Although somewhat at a disadvantage after their long voyage, they made a splendid show, and attracted a world of admiration as they passed through the streets to the stables in which they were temporarily housed.....The crop of corn everywhere will be heavier than for a long time.....One hill in Lincoln County, Miss., yielded fifty-four large-sized potatoes. .....At Manasses, Va., one oat seed produced stalks which yielded more than 1,000 perfect grains.....A fast peach train, direct from the orchards of Delaware and Maryland, runs into Boston early every morning.... ...Within a radius of ten miles of Madison, Ind., there are 250,000 peach trees, from which will be gathered and shipped this season 150,000 bushels of peaches. Felton, Minn., reports the heaviest grain crops since 1880, and an enormous hay crop. The harvesting is under full headway, and harvest hands are scarce at $3 a day.....A stalk of sugar-cane raised on Gen. Edgerton's place, Kasson, Minn., measured nine feet ten inches high and three and three-fourths inches in diameter a foot above the ground..... A Royalton, N. Y., farmer had just loaded his wheat in the harvest field when he knocked the ashes from his pipe. They saved the team, but the wagon and wheat were burned.....The 13-year-old daughter of a Washington Township, Mo., farmer plowed, harrowed, and sowed twenty-four acres of wheat, unassisted, from which 402 bushels of wheat were thrashed.

"New-Fangled Notions"

may not work injury to people when they relate to matters of little consequence, but when entertained as to what we shall take when afflicted with serious disease, they may lead to dear expe-

rience. Don't therefore trifle with diseases of the blood manifested by eruptions, blotches, scrofulous and other swellings and grave symptoms, but take that well tested and efficacious remedy, Dr. Pierce's Golden Medical Discovery—the greatest blood-purifier of the age. If the bowels are very costive use also Dr. Pierce's Pellets (little sugar-coated pills.)

CURES FEVER AND AGUE.

DR. PIERCE, Buffalo, N. Y.:—DEAR SIR—I write this to inform you that my child, one year old, has been permanently cured of the fever and ague in a week's time, by the use of but half a bottle of your Golden Medical Discovery. My wife a long sufferer from liver complaint and biliousness, by the use of the Discovery and Pellets has been entirely relieved. The Discovery has never disappointed us for coughs and colds. Yours truly,

Pleasant Valley, Ill. JAMES STRICKELL.

Purify the blood by cleansing the system of foul humors, and by giving strength to the liver, kidneys and bowels to perform their regular functions. Kidney-Wort will do it.

Eminent physicians are prescribing Kidney-Wort for the worst cases of kidney complaints, constipation and piles.

Write to MRS. LYDIA E. PINKHAM, No. 233 Western Avenue, Lynn, Mass., for pamphlets relative to the curative properties of her VEGETABLE COMPOUND in all female complaints. For sale by all druggists.

For Neuralgia, Pains and Aches in the Back, Kidneys or Limbs,—Hop Bitters.

Premature Loss of the Hair, which is so common now-a-days, may be entirely prevented by the use of BURNETT'S COCOAINE. It has been used in thousands of cases where the hair was coming out in handfuls, and has never failed to arrest its decay and to promote a healthy and vigorous growth. It is at the same time unrivalled as a dressing for the hair. A single application will render it soft and glossy for several days.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Aug 14, 1880.

BEANS AND PEAS.—There has been an unusual good sale for beans: exporters and local buyers have taken stock fast enough to make a strong range of prices for all grades. Black beans may be excepted, out the demand for them is purely special. Green peas are quiet at $1.65@1.70 for Wisconsin. Southern B. E. peas hardly quotable.

Marrow beans, prime, $1.65; other, $1.55@1 62; medium, prime $1.45; other, $1.35@1.42½; pea, $1.45@1.65; white kidney, $1.70@1.85; red kidney, prime, $1.55; other, $1.40@1.50; black (or turtle soup), $2; Cal. Lima, $5.

BEESWAX.—Is at better prices and demand fair; Western and Southern quoted at 25@25½c.

BUTTER.—The market for creamery is weak. Best retailers are turning attention to fine half-tubs, obtaining, they think, better average quality; certain it is there are few long lines of creams are worth the extreme right through. Western creamery is hard to move: exporters have taken a few parcels but have dictated a favorable price; say 22@24c. The bulk of export trade has run in undergrade Western. At one period of the week matters looked as if there would be gradual and steady breaking off in quotations; light receipts, however, afford some rescue, and the market closes fairly firm at about last figures.

Creamery, finest, 23@26c.; good to prime, 28@24c.; fair to good, 24@23c.; sweet cream, best, 21@23c.; fair to prime, 23@24c.; State tubs, 20@23c.; pails and half tubs, choice, 24@23½c.; good to prime, 22@22½c.; poor to good, 15@22c; Welsh tubs, choice, 22c.; other, 19@21c.; Western imitation creamery, 16@22c.; dairy, fresh, best, 20@21c; poor to good, 14@20c.; factory, fine June, 18@19c.; good market grades, 16@17c.; poor to good, 14@16c.

Receipts for week, 31,575 pkgs.; exports for week, exports for week, 10,650 pkgs.

BROOM CORN.—Demand is slack and prices unchanged.

Brush and short broom, choice, per ℔., 7@8c.; do., do., common to good, 5@6½c.; hurl, good to choice, 7@8c.; do., common to fair, 5½@6½c.; red and crooked at 3@4c.

CHEESE.—The buoyancy noted in our last report extended to the dealings of the early part of this week, and sales were made at 12@12½c., but later on shippers became more indifferent and it was impossible to get them to go on except at concessions and prices after yielding slightly, finally settled down to 11½c. closing, however, very irregular and some parties claiming that they are getting the best factories as low as 11½c.

Quotations are: State factory, fancy, at 11½c.; do. good to prime, 10½@11c.; do. fair to good, 10@10½c.; do. half skimmed, 8@9½c.; Wisconsin factory, fine, 11@11½c.; do. good to prime, 10½@10¾c.; do. fair to good, 9½@10¼c.; Ohio factory, fine, 11@11¼c.; do. good to prime, 10@11c.; do. flat, fair to good, 9@10c.; do, poor to fair 8@8¾c.

Receipts for week, 153,281 boxes.
Exports, 75,000 do.
Liverpool cable, 58@59s.
Steam, Liverpool, 45@50s.

COTTON.—Trade is very moderate and prices vary slightly. Latest prices are for August, 11.47@11.48c.; September, 10.95@10.96c.; October, 10.61@10.62c.; November, 10.51@10.52c.; December, 10.51@10.52c.; January, 10.61@10.63c.; February, 10.75@10.77c.; March, 10.89@10.91.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8 3-16	8 3-16	8 3-16
Strict ordinary	8 11-16	8 13-16	8 13-16
Good ordinary	9 11-16	9 13-16	9 13-16
Strict good do	10 3-16	10 5-16	10 5-16
Low middling	10 15-16	11 1-16	11 1-16
Strict low middling	11 5-16	11 7-16	11 7-16
Middling	11 9-16	11 11-16	11 11-16
Good middling	12 1-16	12 3-16	12 3-16
Strict good middling	12 5-16	12 7-16	12 7-16
Middling Fair	12 13-16	12 15-16	13 1-16
Fair	13 7-16	13 9-16	13 9-16

STAINED.

Good ordinary	7 13-16	Low middling	9 5-16
Strict good ordinary	8 11-16	Middling	10¾

DRIED FRUITS.—The market has been more freely supplied with new fruits; the demand has been very fair for blackberries, cherries and raspberries and prices well sustained.

Apples—Evaporated choice, ring cut, 13½c.; evaporated, fair to prime, ring cut, 12@14c. State, 1879, fine cut, 6@7c.; State, 1879, quarters 6@6½c.; Western, 1878, 3½@5c. Peaches—North Carolina, good to prime, 12@14c.; Georgia peeled, fair to prime, 11@13c; Georgia, peeled, poor to fair, 6@10c. Plums—State 1879, black 16@17c. Blackberries—1880, prime 6½@6¾c. Cherries—Southern, 1880, 17½c, Raspberries—1880, prime, 26c.

EGGS.—Receipts for week, 6,700 bbls.; do last week, 8,900. do. There have been but one or two days of activity during the week and as these occurred at the latter part, they have not arrested prices much. Receipts are smaller, but we are in a season when large supplies are not coveted.

N. J. & L. I., 15@16c. ₰ doz.; State and Penn. 14½@15c.; Western and Canadian, fresh 13½c.; off grade lots 12@13c.

FLOUR.—Offerings are liberal of new Winter wheat grades, for which prices are steadily declining. Old Spring wheat stock holds to firm prices.

Latest sales are at $3.40@4.15. for inferior to very fancy superfine State and Western; $4.00@4.25 for ordinary to very good extra State, odd lots and lines; $4.25@4.40 for very good to fancy do.; $4.00@4.25 for ordinary to very good shipping extra Western, and $4.25@4.40 for good to fancy shipping extra do.; inferior to very good white wheat extras, $4.30@4.50; very good to choice do. at $5.50@6.00; (very choice to fancy do. held at higher figures;) red and amber winter wheat, inferior to very choice trade and family, at $4.50@5.00; round hoop Ohio, $4.25@4.75; and trade and family brands of do, at $4.85@6.25; St. Louis at $4.75@5.50 for inferior to good extra; $5.70@6.00 for good to choice (very choice to fancy brands held higher); Minnesota clear, inferior to very choice at $4@6.25; Minnesota "straight," very poor to fancy, at $5.75@7.50, and patent inferior to very fancy at $6.00@8.50; unsound stock at from $2.25@5.00; city mill extra at $5.50@5.65 for very good to choice for the West Indies; do. for England, $4.40@4.50 for poor to very choice spring wheat, and $4.65@5.25 for winter wheat product; do. trade and family extras, $5.75@7.00; do. for South America, $5.60@5.90; No. 2 at $2.25@3.35 for poor to choice.

Receipts for week, flour, bbls. 135,873; corn meal, do. 3,675; wheat, bush. 1,122,500; corn, do. 1,834,400, oats, do. 100,300; rye, do. 18,755; malt, do. 28,300; peas, do. ——; beans, 1,788; rice, pkgs. 716.

Exports for week, flour 87,860 bbls.; corn meal, 6,100 bbls.; wheat, 1,985,400 bush.; corn, 786,200 bush.; oats, 1,080 bush.; peas, 2,270 bush.; beans, 1,376 bush.; rice 1,073 pkgs.

CORN MEAL.—Is selling at $2.50@2.75 for yellow Western and $3.20@3.25 for Brandywine.

FRESH FRUITS.—Apples have again overstocked the market and very few sorts make the extreme. A feature of the season is the exportation of 600 bbls. Summer apples; sweet and sour bough, 50c.@$1; strawberries, 75c.@$1.25; Gravenstien, $1@1 37; Porter, 75c.@$1.25; Ortugo and Nyack pippins, 50c.@$1.25. Peaches ruled irregular in price, especially as as there is no shipping outlet for large supplies on Saturday.

Closing wholesale prices, N. J., not good as yet, 25@75c. ₰ basket; Del., Crawford, prime, $1@1.25; Mixons and Stumps, 50@75c.; common but useful, 30@50c.; Up-river, 50@75c. Pears are bringing good prices with a full supply and poor weather for holding; Bartlett, State, choice, ₰ bbl., $5@5.50; under qual., $2.50@3; Southern Bartletts, $1@1.75 per crate; Sickles, $1@1.75; Clapp's Fav., per bbl., $4.50@5; cooking, $1.75@2. Cal. pears and plums, express from Chicago, $3@4 per case. Plums are slow, as they arrive too early for a family demand; Egg, ₰ bbl., $3.50@4; Green Gage, $4@4 50; Lombard, $2.50@2.75; common green, $3@4; blue, $2@2.50, all State stock. Grapes are in large supply and begin to sell, as prices are becoming attractive; cases of Delaware, 50 lbs, $4.00@5; Marthas, $4@4.50; Concord, $2.00@2.50; Ives and Hartford, $1.75@2; loose grapes, 2@4c. Up-River vineyards will now ship. Whortleberries out of demand; all quoted 37@40c. per half bush.; Nutmeg melons, Hackensack, $1.75@2.50; common Keyport, 50c.@$1.25. Watermelons, good to choice, $15@22 per 100; under grades, $5@12. Hot house Black Hamburgh, grapes, 30@35c.; Sweet Water, 20@30c. The market for peanuts is perfectly silent; prices entirely nominal, Va. hand-picked, 5@5½c.; extra prime, 4½@4¾c.; good to prime, 4@4½c.; common, 3½c.; shelled, 5@5½c.

GRAIN.—Wheat has been active and fluctuating, closing weak under freer supplies. Exports for the week have been 1,680,000 bush.

Latest sales are of No. 1 white at $1.10@1.11; do., August, at $1.09@1.09¾; do., September, at $1.07¾@1.08; do., October; at $1.07¾@1.07¾; No. 2 white at $1.06@1.07; ungraded white at $1.05@1.07; No. 1 red at $1.11½; No. 2 red at $1.07¾@1.08; do. Aug., at $1.07½@1.08½; do., Sept., at $1.07¾@1.08½; do. Oct., at $1.08¾@1.09; do. steamer grade at $1.06½; No. 3 red at $1.06@1.06½; do., steamer grade, at $1.00½@1.00¾; ungraded red at 98c.@$1.12; mixed winter at $1.06@1.06½; No. 2 Milwaukee and Chicago at $1.05@1.07. Rye is quiet at 83@85c. for No. 2 Western. Corn is fairly active and closed strong: shipments for the week have been 980,000 bushels; latest prices are for New York No. 2, at 49@49½c.; do., August, at 49@49¼c.; do., September, at 49½@50¾c.; do. October, at 51@51¾c.; ungraded mixed Western at 47@49¾c.; No. 2 white at 55c.; steamer white at 52c. Oats are active and firm; latest sales are of No. 1 white at 46@47c.; New York No. 2 white at 45@45½c; No. 3 white at 41@42½c.; New York No. 1 at 43c.; New York No. 2 at 43½@43c.; do., August, at 35½c.; do., September, at 34¾; do., October, at 34¼c. bid; No. 3 at 40c.; ungraded white Western at 41@41¾c.; ungraded mixed Western at 40@42c.; No. 2 Chicago at 43c

HAY AND STRAW.—The business has been good and prices well sustained.

Shipping hay quoted at 80@85c.; medium to prime do., 90c.@$1; salt hay at 65@70c.; clover do. at 70@80c. Straw at 90c.@$1 for long rye; 55@65c. for short rye; and 55@60c. for oat.

Exports of hay for week, 1,078 bales.

HOPS.—There is a dull market, scarcely a disposition to buy even small lots, and prices are weak and altogether nominal. Quotations are for

	Cents per ℔.
New Yorks, choice	28 @30
New Yorks, fair to medium	25 @27
Eastern	23 @25
Wisconsin	23 @15
Yearlings	7 @14
Olds, all growths	5 @ 8
Pacific Coast, new	25 @28
Pacific Coast, olds (nominal)	5 @ 8

OIL CAKE.—Westernis quoted at $30 50 ₰ ton.

POULTRY AND GAME.—Dressed chickens are unusually low. Coops are down to 10@12c. for live and shippers of dressed have to be governed more or less by city killers. Fowls have sold well. Turkeys have little inquiry. Young ducks are in fair demand.

Turkeys, small, ice-packed 14@15c.; fair to good, 12@13c.; Phila., dry-picked, 13@14c.; chickens, Phila., large, 16@18c.; small, 14@15c.; State and Western, 12@13c.; Fowls, Phila., dry-picked, 13@14c.; Jersey, 12@13c.; Western, 9@10c., the lower rate for scalded.

Supplies of live are liberal and include a good many poor Western and Southern.

Chickens, Jersey, ₰ lb., 11@12c.; Western 10c.; Southern, 10c.; fowls, New Jersey, 11c.; Western, 10@11c.; Southern, 10c.; roosters, 7@6c.; ducks, near points ₰ pair, 55@75c.; Western 40@50c.; Southern, 40@45c.; geese, near points $1.50@1.75; Western, $1 12@1.25; Southern, $1@$1.12; pigeons, 20@30c.

Woodcock are in fair demand at 87@90c.; English snipe $2. Stuffed Western pigeons, $1.50@1.75. Grass plover, $3, large Yellow legged snipe $2; small 75c.

PROVISIONS.—Hog products have been active and closed much higher, due largely to the speculation here and at the West.

Mess pork closed at $15.70 for early deliveries. Bacon at 8¾c. for long clear and 9c. for short clear. Lard—Western steam at 8c. for spot lots; $ 02½@8.05c. for Oct.; and 7.90c. for Nov. Stearine at 8¾@9c. for choice. Tallow at 6¾@6¾c. for prime.

Receipts for week, beef, 55 pkgs.; pork, 2,200 bbls.; cut meats, 25,700 pkgs.; lard, 14,900 pkgs.

Exports for week, beef, 2,100 pkgs.; pork, 3,675 bbls.; cutmeats 9,857,000 lbs.; lard, 4,122,620 lbs.

SEED.—Clover is quiet; quoted at 7¾@8c. Timothy is slow and nominally $2.75@2.90.

TOBACCO.—Export trade is moderately active and there is a fair home demand. Prices are firm. Quotations are for

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4 @ 4¾	4¾@ 4¾
Good lugs	4¾@ 5	5 @ 5¾
Low leaf	5¾@ 6	6 @ 6¾
Medium leaf	6¾@ 7	7 @ 8¾
Good leaf	7¾@ 8¾	9 @10¾
Fine leaf	9 @11	11 @12
Selections	12 @—	— @—

SEEDLEAF.	Crop 1878.	Crop 1879.
New England Havana seed	—@—	18 @25
Wrappers, common	13 @15	—@—
Medium	16 @18	—@—
Fine	20 @23½	25 @35
Selections	30 @40	27½@45
Seconds	—@—	10½@13
Fillers	—@—	5½@ 7
Penn. assorted, low	12 @13	10 @12
Assorted, fair	14 @15	13 @16
Assorted, fine	16 @18	18 @22
Wrappers	18 @35	—@—
Fillers	10 @12	6 @ 7
N. Y. ass'ted, com. to medium	10 @11	—@—
Ohio assorted	8½@13½	7½@10
Wrappers	15 @25	15 @25
Wisconsin assorted	8 @12	7 @10
Havana seed	15 @20	16 @18
Wrappers	12 @18	—@—

VEGETABLES.—Exports of potatoes for week, 2,600 bbls. The market for potatoes has ruled very strong, but at the close the area of supplies has widened and an easy market is looked for. N. J. and L. I., $1.50@2; State, $1.75; culls, 50@75c. Sweet potatoes are of excellent quality this season. They should be shipped unwashed; quoted, $2.50@2.75. Corn is firmer, 75c.@$1.25 ₰ 100. Tomatoes now arrive heavily and are down to 10@25c. ₰ bush. Onions have declined. Cucumbers, per 100, 75c.@$1.; do., pickles, ₰ 1,000, $3@4. Egg plant, per bbl., $1@1.50. String beans, per bag, 50c.; Green peas, $1@1.25.; turnips, 100 bunches, $3@4; per bbl., 50@75c.; beets, 100 bunches, $2@3; bullnose peppers, 50@75c.; cabbage, per 100, $5@8; squash, marrow, per bbl., 50@75c.; other, 50c.; Onions, State, red and yellow, $3@3.50; carrots, per 100 bunches, $1@1.50; okra, per 100, 15c.

WOOL.—Trade continues very slack, but holders show no disposition to make concessions. Quotations are for

Ohio, Penn., and W. Va. XXX and picklock, 47@48c XX, 45@47c.; X, 45@47c.; No. 1 48@50c.; No. 2 42@44c.; common 38@42c.; combing and delaine 47@53c.

Mich, Indiana and Wis. X and XX 40@42c.; No. 1 45@48c.; No. 2 and common 28@43c.; combing and delaine 45@50c.

N. Y., N. H., and Vt. X and XX 37@40c.; No. 1 43@46c.; No. 2 and common 36@41c.; combing and delaine 43@49c.

Iowa, Illinois and Western X and XX 36@38c.; No 1 42@44c.; No. 2 and common 35@40c.; combing 40@47c

LIVE STOCK MARKETS

NEW YORK, Saturday, Aug. 14, 1880.

BEEVES.—Receipts for the week 11,105 head; do. last week 14,331 do. Light receipts had no effect in stimulating a demand; in fact, the attendance of butchers was very small even for a Summer market day. Good to prime steers were a trifle higher than on Wednesday. Cherokees and Texans were mainly sold at 6¾@7¾c., to dress 55 lbs; fair grade, corn-fed Texans 7¾@8c. Native steers ranged at 7¾@10c., 55@57 lbs. dress respectively. A good proportion of the sale sales rated at 8¼@9@9¾c.

COWS AND CALVES.—The ranges that have been current for a number of weeks cover all recent transactions. When $55 is obtained the cow must have valuable points that would make it worth equally as much in the country. Trashy to fair stock $25@32; good $40@50.

SHEEP AND LAMBS.—Receipts for week, 27,783 head; do. last week 35,047 do. Market dull for all at low figures. Sheep 3¾@5c; lambs 3¾@6c.

SWINE.—Receipts for the week, 23,476 head; do last week 25,504 do. Market quoted firm 5¾@5¾c.; city dressed heavy to pigs 6¾@6¾c.

VEAL CALVES.—Prime veals have had a fair sale, but there has been an abundance of buttermilk and grass calves that have kept general prices weak.

Live calves, N. J. and Rocks Co., choice, 5@6¼c.; do. prime, 5¾@5¾c.; State prime to choice, 5¾@6c.; poor to good, 3½@5¼c.; heavy 5@6c.; buttermilk, 1¾@2¼c.; grass, 1½@1¾c.

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Stop Thief!

Who Is He?

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Reading for the Young.

THE OWL.

THE great white owl looks wondrous wise
In his throne on the old oak tree,
With his long hooked nose and his glassy eyes,
The old solemnity!

But, ah! my children, 'tis all pretense,
He's dozing all the while;
That judge-like air of wit and sense,
Is worn but to beguile.

Then look at the man behind the wig,
And trust not outward seeming:
For the pompous owl that looks so big,
Is a dunce who is idly dreaming.

Buckners Station, Ky. LAURA S. HAGNER.

THE WHIP-POOR-WILL.

"Whip-poor-will!"
"Whip-poor-will!"
Why dost thou
Whip poor Will?

I suppose most of the little readers of the RURAL out among the fields and woodlands have heard the low, sad voice of the whip-poor-will, but many of you have never seen the quiet little fellow as he flits about in the early dusk, and from hillside and orchard bough calls softly "whip-poor-will, whip-poor-will," and heard the mammas say to the crying little folks, "Hark, the birdies are scolding the naughty little babies!"

The ornithologist, Wilson, has named him Caprimulgus vociferus. Is not that a pretty long name for so small a bird?

He wears a modest little coat, a sort of mixture of black, brown and rust color, in fine streaks and sprinkles. One long stripe of black marks the grey of the top of the head, while the sides of the head are of a soft-brick color, with a semi-circle of white around the throat. Around the bird-face is a row of bristles, whiskers we call them for fun, longer than the bill, while the beak is a mottled white and brown. A veritable little Quaker, with never a trill or quaver, never a frolicsome note in all his little song.

The whip-poor-will fancies a home in the lowland near a stream, and for a nest he makes a slight excavation upon the surface of the dry ground somewhere in cool, woody places, usually close by some sheltering rock or hidden by a mossy log, and there, about the 1st of June, as far north as 43 deg. north latitude, you may discover two blueish-white eggs, thickly mottled with dark olive.

By and by, when the little ones are large enough to run, they dart in and out like tiny brown chickens or partridges, taking care of themselves as chickens do, and at the first approach of danger hiding themselves under any leaf or twig, and are very hard to discover, because of their quiet color.

There are many people who do not like to hear the whip-poor-will's call, and think he sings only of sorrow, but the little voice, though sad, sounds almost human, and we number among our list of little feathered friends the whip-poor-will.

MAUDE MEREDITH.

HINTS TO THE YOUNG FOLKS.

UNCLE MARK.

AN exact knowledge of the nature and habits of insects and animals, of the growth and nature of plants and flowers, is one of the most desirable branches of knowledge, not only to the young people of the country, but of the cities.

The young of the cities have less opportunity for the observation and study of objects of natural history, but from being removed from them they seem more alive to that study. In the cities the young have the parks and gardens, but have less opportunity to study and handle the objects, for there are careful warnings not to pick any leaf or flowers, and also to "Keep off the grass."

In the country there are no such restrictions, and we can conceive of no more interesting pastime than the strolls in the pastures, by the roadside or in the groves in pursuit of, or in the examination of such particular objects of natural history as may be determined upon.

The great numbers of wild flowers, many of them often considered by the farmer as weeds and pests, are some of them of great interest and beauty. Who will give names and descriptions of those found in their localities? Who has ever caught and described a katy-did? Who of our young people have carefully studied the habits of the birds in their localities? Be sure to examine closely and carefully, and be exact in descriptions.

A PET WOODCOCK.

CHAT.

MR. JOHN MORRIS, of Jefferson Market in New York city, has a tame woodcock which is quite a natural curiosity in his way.

The woodcock, whose name is Dick, was caught in a store in the city to where he had by some unaccountable means wandered from his native fields, about a month ago. His owner provided Dick with an airy cage and some dry weeds for a nest, and a box of moist earth with worms mixed in the dirt, and has succeeded in making him quite tame.

The box of earth is some six inches by ten, and Mr. Morris mixes in it nearly a pint of worms a day, and while doing so Dick pushes against his hands, crying quite earnestly because he cannot get at them direct.

When the worms are covered in the dirt and some moss placed over them, Dick is allowed to dig for them, which he does very industriously, thrusting his bill through the moss, catches a worm and brings it to the surface, bites it and then swallows it.

Dick evidently thinks well of his captivity, for he amuses himself rocking the box and surprising any careless worm which shows itself with a comical expression of satisfaction.

Mr. Morris proposes to give Dick a large, airy cage and a good, solid box to play and dig in.

LETTERS FROM THE COUSINS.

The Brown Thrush.

UNCLE MARK: I would like to ask you a few questions in regard to the name of two kinds of birds. One is a bird about as large as a robin, and yellowish brown above, and white and brown speeks beneath. It has a rather short tail and flies slowly like a young bird just beginning to fly with quick vibrations of the wings. It builds its nest on the low limb of a tree, of grass leaves, &c., nest about like a robin. The eggs are blue (light) about as bulky as a robin's egg, but more rounding and the large end slightly flattened. The other bird is a trifle smaller than the common "Phœbe," of the same color, it has a crest on the back of its head which points backward. The beak is black and around the upper part of its neck it is of a reddish hue. It is lighter below than above and has a medium-sized tail. It has, I think, no song but occasionally a chirp. The markings of the male are a little brighter than that of the female. The nest is built of wool and twigs on a limb about ten feet high, and is as large as a cocoanut; the eggs are five in number, and quite long and white, with black speeks both outside and just under the shell. Please print the answer in the RURAL or write me, a description of the Brown Thrasher and its egg. J. L. S.

Rhinebeck, N. Y.

[The first bird mentioned by you, corresponds to the Wood Thrush, (Turdus Mustelinus); the nest and eggs pretty accurately described; excepting that the color would rather be termed deep blue, with a slight greenish tinge. The second mentioned, resembles the Wood Pawee (Contopus virens) it has no song, but frequently calls pee-we, in a low plaintive voice. The nest, as you describe, is not as it is generally found of this bird, moss and lichens usually form part of the outside materials; but as this family of fly-catchers is a numerous one, it will be worth studying further.

The Brown Thrasher, (Harporhynchus rufus) is one of the best, if not the best song bird of this continent; few birds of the old world equals his melodious voice, which is soft, loud and in some individuals very varied, both in compass and pitch; in his song he is quite unlike the Wood Thrush, which has a set song with all the species.

The Brown Thrush (or thrasher, as sometimes called) arrives in the neighborhood of New York in the early or middle part of April. He is first seen, or heard, scratching over the dead leaves of a wood in search of food; next he is seen on the top of a tree or high bush, pouring out his unrivalled notes, which justly claim for him the title of nightingale of North America. Not being an imitator, as the mocking bird, he gives no discordant sounds; all his music is of a rich character. He is not shy, but will come very close to dwellings to feed or sing; but in building his nest he retires to a secluded spot, builds it low in a bush or on the ground, often near low ground or the edge of a wood. The nest is strongly but not very evenly built of dry grass, roots or twigs, lined with soft grass.

This bird, being very docile and confiding, his color can be often seen distinctly; back reddish brown, breast and under part whitish, with rows of brown spots on breast; his bill is long and a little hooked at the point; his crown flat; tail long, color brown. When singing, his head is slightly raised, tail hangs almost perpendicular; his whole being appears to be excited in the earnestness of his performance. Its eggs are rather over an inch in length, four or five in number, whitish, sometimes inclined to greenish ground color, with spots covering much of the ground color, of a reddish brown.

He leaves very early, for a bird that arrives so early in Spring from the South as he does, commencing his Southern migration in September before the foliage is falling, which protects him from the gunner; being so tame, and larger than a Robin, he would be a tempting object to the boys who show no mercy to the poor birds. He does not Winter so far South as many of our birds; lives mainly on insects, doing much good in their destruction. He will take a few berries from the garden, but in general he is quite modest in his sphere, considering the good he has done towards raising them, by destroying the insects, rendering us delightful and charming vocal performances during his rests from such labor. U. M.]

DEAR UNCLE MARK.—It has been a long time since I was admitted as a member of the Club, but I have never reported, so I will try now. I received the seeds and thank you very much for them. I sowed the China Pink seed in a box, in March, and transplanted them to the garden when large enough. They grew nicely, and are in blossom now and are very large and double. I sowed the Phlox and Mignonette in the garden. The Phlox has grown nicely. It is in blossom now and is very pretty, while the mignonette seems as if it would smother itself growing so fast. I had six seeds of Okra, five of them came up and have done well, some of the pods are six or seven inches long. We had some for dinner one day, but did not like it very well. We have had a great deal of fun at "Gumbo's" expense. It seems to me that it should not be called "dwarf" because it has grown so fast, and each plant is so large.

I had enough of the muskmelon seed for four hills. I put some well-rotted manure from the pig-pen in each hill, but two hills have not grown very well though I don't know why. The melons did surprise me, they grew so fast. I counted six large ones to-day, besides several smaller ones. The Cuthbert raspberries are growing nicely. They have had quite a number of berries on.

I planted the Iris, Aquilegia and Pentstemon seed in boxes. A good many of the Iris seeds grow and I transplanted them to the garden. They are about four or five inches high now. Only three or four Pentstomons came up and four Aquilegias. Only one seed of hibiscus came up, and it does not grow very well, can it be kept through the winter? The Magnolias have not germinated at all. One seed of the Ipomaea is growing, and the golden mangels are doing well.

I have a good many flowers in the garden, though I have not had much time to attend to them this Summer. I have a good many gladioli, but they are all nearly alike; some of the spikes were five feet four inches high, but the wind blew them down last week.

I am raising gladiolus bulbs from seed this Summer, but they do not grow very well. I have two seedling geraniums which have leaves that are almost white, with very little green in them. The seed was from a scarlet geranium, and they are in the same bed with them. Why should they be white?

We sent for some strawberry plants last Spring, Miner's Prolific, Charles Downing, and Sharpless. They are all doing well. We have had plenty of rain, and crops are very good.

I wish I could send you a bunch of flowers from my garden. I am studying botany this Summer and like it first-rate. I have Gray's First Lessons and Field Book.

Can you tell me how to keep snapdragon plants through the winter? I have tried a good many times, but never succeeded.

I am afraid this letter is too long, if it is, please say so, and I will try to do better next time.

Ever yours, PUSSY WILLOW.

Monticello, Ia.

[The root of the Hibiscus is hardy and perennial, but, if the herbaceous species, will die down and must have its rest. Other species may be lifted and potted. The snapdragon may be lifted, cut down and potted for indoor plants during the Winter. Your geranium may be from a cross with some other variety, now showing itself, but we cannot account for these variations. Some consider it a disease.—U. M.]

DEAR UNCLE MARK: I thought I would write to you and tell you how my flowers are prospering. My Sweet Mignonette is in bloom and has been for the past two or three weeks. I guess every seed of it grew. The Portulaca did not come up at all; but the Phlox came up and are now in bloom. The Double Chinese Pinks are not very good. Uncle Mark, is there such a thing as getting the soil too rich? If there is, I believe I got too rich soil for my Pinks. I got it at the woods. I guess I've told you about that trip to the woods I do not think I will try another very soon. My muskmelons, I came near forgetting. Only five stalks came up, out of the twelve seeds planted but what did grow are very fine. There are melons on them that are half grown. I have'nt many plants as yet, but have some hopes of getting more soon. I have a large Wax-plant that is in bloom and two kinds of Geraniums. They are the nicest plants I have. Uncle Mark if you ever come to Stryker we will be glad to have you call on us. MARTIN.

Stryker, Ohio.

P. S. Bring some of our nieces and nephews along with you.

[It is not usual to get the soil too rich. Leaf mold is a good kind of soil, but usually it is not rich enough to grow the healthiest flowers.

U. M.

UNCLE MARK:—Some time has passed by since I wrote you last, but I have not forgotten you, and when I see the handsome flowers in blossom from the seeds you sent they remind me of my duty to write again, and thank you for them. Most all of the seeds came up, both of the flower and vegetable seeds. The okra, phlox, magnolia, iris and grape seeds have not come up, but have been watched with great care. My garden is looking very finely—flowers in abundance and weeds a scarce article. My pansy bed is a beauty indeed; for I have a great variety. My house plants, look well, too, healthy and strong. I have a large begonia that came from a single leaf. I started it in water and when rooted put it in earth, and now it has 20 leaves. I must tell you about a large Normandy horse, four years old, that father has. He had him weighed a few days since and his weight was 1,600 pounds. He broke through the scales when driven on to them, and it frightened him almost to death, but he had no serious injuries, father says. No more for this time, else I will realize the result. Your niece, ALICE.

DEAR RURAL COUSINS:—It is now Summer, and the country is all activity. Although exceedingly warm, the harvesters are busy and of good cheer, as the harvest, it is said, never was better. A good harvest and peace is all a nation can wish for. But in prosperity we must not forget the Lord's harvest, nor should we ever fail to ask for the help which our loving Saviour offers, that we may have strength to do our duty in the field or life, and that we may be one in the harvest of the Lord. Fearing I have intruded on the good nature of ye editors, I will close by stating that Ivy would be pleased very much to get a letter from the Two Sisters, Lizzie B. and O. M., even though ever so little. Please excuse your loving cousin, IVY.

Libertyville, Ulster Co., N. Y.

DEAR UNCLE MARK:—I am ten years old, and I go to school. I have a mile to go. My grandpa takes the RURAL, and I like to read the letters from the cousins very much, and would like to become one of them. I am very fond of flowers, of which we have quite a number. Some of the seeds from the RURAL office are growing nicely. I like to go out in the fields and woods gathering wild flowers and listen to the singing of the birds, and in the Fall we have a nice time gathering nuts. I have been watering my flowers for six weeks, and I am almost discouraged. I have been looking for rain, but it does not come. IDA.

Mountain View, N. Y.

Sabbath Reading.

IN HARVEST DAY.

THRO' Farmer Gale's wide fields I passed
Just yester eve;
My week of holiday was spent,
And idly on the stile I leant,
Taking my leave

Of all the fair and smiling plain,
Wood, vale and hill,
And all the homely household band,
(The warm grasp of each kindly hand
Bides with me still);

And I was sad. The stricken grain
Around me lay;
I could but think of silent glade—
Of buds and blossoms lowly laid
The harvest day.

"And this is all!" I sadly said,
"These withered leaves—
This gathered grain! Spring's hours of bliss
And Summer's glory turn to this—
Some yellow sheaves!"

Then Farmer Gale—that good old man,
So simply wise—
Who overheard, and quickly turned,
Said, while a spark of anger burned
In his gray eyes:

"Lad, thou art town-bred, knowing naught
Whereof thou pratest!
For, be the flower as fair as May,
The fruit it yields in harvest day
Is still the greatest!

"And thou—thy spring shall quickly pass
Fast falls the leaves
From life's frail tree. In harvest day
See that before thy Lord thou lay
Some yellow sheaves."

He went his way; I mine; and now
I hear the flow
Of busy life in crowded street—
Of eager voices, hurrying feet,
To come and go.

Yet e'en while flashing factory looms
My hands engage,
I see that far-off upland plain—
Its long, low rows of gathered grain,
Its rustic sage,

And hear them say: "Let pleasures fair,
And passions vain,
And youthful follies, fade and die;
But all good deeds, pure thoughts and high,
Like golden grain,

"Be gathered still." Blest harvest store,
That only grows
In hearts besprinkled with the blood
That evermore—a sacred flood—
From Calvary flows!

Lord, when Thou callest, when this world
My spirit leaves,
Then to Thy feet, oh, let me come,
Bringing, in joyful harvest-home,
Some yellow sheaves!

—Sunday Magazine.

THE NEW LIFE.

VERY impressive is it, in reading the story of our Lord's last words with his disciples, to notice how earnestly and repeatedly He strove to impress upon them the "whither" of his going. The mere fact absorbed them; He was seeking to teach them the meaning and purpose and results of the fact. In those last chapters of St. John we have our Lord's own interpretation of his ascension: "I go to my Father." This takes away what would otherwise have been the irreparable loss of His withdrawal. He has not, then, passed away into an unknown realm, distinct from human interests. Between Him and these whom His love had bound so closely to Himself, there is no void of strange, unimaginable existence. "I go to my Father. The grave will not hold Me; stand not gazing down into its dark depths. I go to my Father. The abysses of space will not receive me into their far-off vagueness. Think not that beyond the midnight stars I dwell. But let this be your consciousness: with the Father—your Father, as well as Mine—I live; therefore how close to you. With God—my God and your God—therefore, through me you will draw near to Him." On the Resurrection-morning, the assurance was repeated. The first message uttered to the disciples from his glorified lips was, "I ascend unto my Father."

We may think, first, of the aspect of our Lords ascension in relation to Himself. He bids us do so, as he bade those twelve, deep as is the mystery of ineffable joy unto which his words lead. For it is the joy of the eternal Son—a joy inconceivable by man. Yet has He Himself drawn aside the veil that hides it. Unspeakably tender is His appeal: "If ye loved me, ye would rejoice, because I go unto the Father: for my Father is greater than I." You would rejoice in my joy, even while believing it were your loss.

MAKE A BEGINNING.—Remember in all things that, if you do not begin, you will never come to an end. The first weed pulled up in the garden, the first seed in the ground, the first shilling put in the savings bank, and the first mile traveled on a journey, are all important things; they make a beginning, and thereby a hope, a promise, a pledge, an assurance, that you are in earnest in what you have undertaken. How many a poor, idle hesitating outcast is now creeping and crawling on his way through the world who might have held up his head and prospered, if, instead of putting off his resolutions of industry and amendment, he had only made a beginning.

WHEN we fight more against ourselves and less against God, we shall cease fighting against one another.

CHRIST is not valued at all, unless he is valued above all.—St. Augustine.

PERSONAL ITEMS.

Joseph Molody, of Independence, Mo., was murdered by Lewis Hiltz, and Hiltz was acquitted on the ground of insanity; but he was recently struck dead by sunstroke, on the same day of the month, at the same hour of the day, and on the very spot where he committed the deed.

Jack Ince had just fitted up his saloon at Arkana, Texas, with a black-walnut bar. Tom Daly a desperado, took a drink at the new counter and began to carve his initials with a bowie knife on its polished surface. Ince protested without avail, and then commanded Daly to stop. "I'm going to cut this bar or you, I don't care which," was the retort. "You won't do either," said Ince, and shot the bully dead.

It is feared that the death of John G. Saxe's wife will have a fatal effect on the poet. He has been bedridden for some time, and was devotedly attached to her, having, in several of his works, drawn his best woman, both as to loveliness of person and beauty of moral character, so plainly after his wife that friends always recognized the portrait. Miss Saxe, the only living daughter, is also an invalid, and could not attend her mother's funeral.

Drowsiness, biliousness pains and aches, and ague, Hop Bitters always cures.

Educational.

VASSAR COLLEGE,
POUGHKEEPSIE, N. Y.,
For the Liberal Education of Women.
Examinations for entrance Sept. 15. Catalogues sent on application to W. L. DEAN, Registrar.

Miscellaneous.

20 New Styles Chromo Cards, 10 cts. Best ever sold. Stamps taken. J. B. HUSTED, Nassau, N.Y.

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CAKE AND BAKING PAN.
WILL SELL ON SIGHT TO EVERY HOUSEKEEPER.
The success of our agents proves it to be the best selling article in the market. One agent made $120 in 2 weeks, another $95 in 10 days, another $11 in 1 days. Boxing and Freight Free to Agents. Send for circulars to nearest address. SHEPARD & CO.,
Cincinnati, O., or St. Louis, Mo.

KIDNEY-WORT
The Only Medicine
That Acts at the Same Time on
The Liver, the Bowels and the Kidneys.
These great organs are the natural cleansers of the system. If they work well, health will be perfect; if they become clogged, dreadful diseases are sure to follow with
TERRIBLE SUFFERING.
Biliousness, Headache, Dyspepsia, Jaundice, Constipation and Piles, or Kidney Complaints, Gravel, Diabetes, or Rheumatic Pains and Aches,
are developed because the blood is poisoned with the humors that should have been expelled naturally.
KIDNEY-WORT
will restore the healthy action and all these destroying evils will be banished; neglect them and you will live but to suffer.
Thousands have been cured. Try it and you will add one more to the number. Take it and health will once more gladden your heart.
Why Suffer longer from the torment of an Aching back? Why bear such distress from Constipation and Piles?
KIDNEY-WORT will cure you. Try a package at once and be satisfied.
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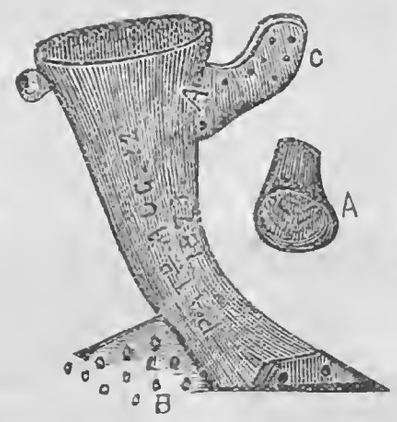

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Highest awards at the Penn. State Fair in 1879. Send for circulars.
Address,
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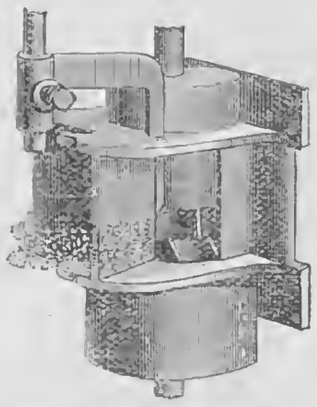

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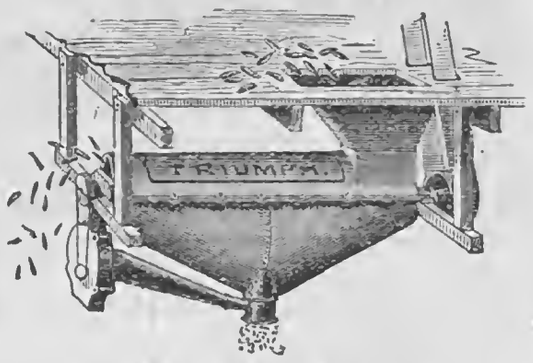

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For illustrated circulars, price list, or territorial rights, address
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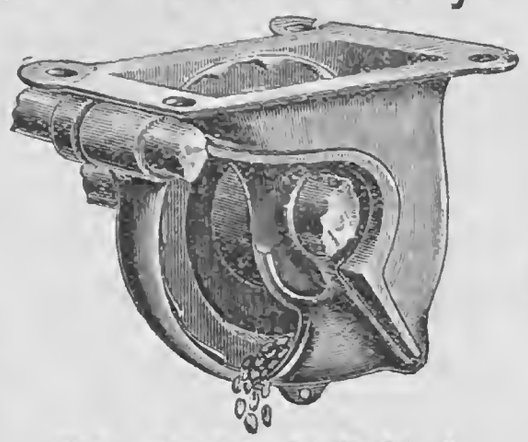
The New Buckeye



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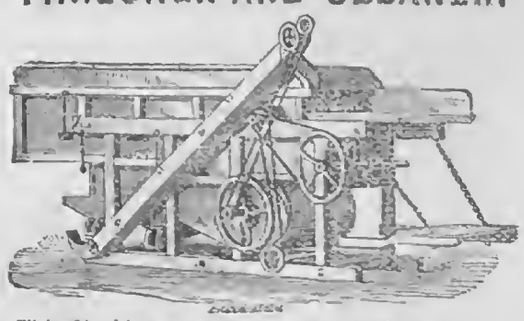

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"I HAVE a love-letter," said the servant-girl to her mistress. "Will ye rade it to me? And here is some cotton wud ye stuff in yer ears whoile ye rade it?"

THE papers are making a great ado over the discovery of a mica bed. Mrs. Malony sends us word that she discovers a Mike abed every morning when the boy ought to be up splitting wood.

YOU may have seen a young man on one side of a gate and a maiden on the other. Why they talk so long is because there is a great deal to be said on both sides.

A YOUNG man sent twenty-five cents to a New York firm for the purpose of learning "how to get along without a blotter in writing," and received this reply, "Write with a lead pencil."—Rochester Democrat.

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A YOUNG German was once pressing his suit, and in the midst of his ardor questioned the object of his choice as to her possible financial future. "I have heard" he said "that your good father owns two large estates in Silesia." "Yes," was the naive reply, "and he owns two more in Pommerania." The suitor hesitated a moment as though to catch his breath, and then falling on his knees and looking the young lady imploringly in the face cried out, "and can you my darling, doubt my affection under such circumstances?"

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Fair but considerate customer.—"Pray sit down. You look so tired. I've been riding all the afternoon in a carriage, and don't require a chair."

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Rifles, Shot Guns, Revolvers, sent c. o. d. for examination
Breech-Loading Shot Guns, $20 to $200. Double Shot Guns, to $150. Single Guns, $3 to $20. Rifles and Cartridges, $8 to $75. Revolvers, $1 to $25. Send stamp for Price List. GREAT WESTERN GUN WORKS, Pittsburg, Pa.

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all styles, Gold, Silver and Nickel, $6.00 to $150 Chains, etc., sent C. O. D., to be examined. Write for Catalogue to Standard American Watch Co., Pittsburg, Pa

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ALSO COMMON GROUND LAYERS.
A pamphlet telling what varieties to plant and how to plant them, together with all needed information, FREE TO ALL.
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Compact, substantial, economical and easily managed.
Guaranteed to work well and give full power claimed.
Engine and boiler complete, including governor, feed-pump, drive-pulley, etc., etc. at the low price of

3	Horse power	$240
4½	" "	280
6½	" "	370

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Or, 110 Liberty St., New York City.

ESTABLISHED 1864.

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C. GILBERT'S
STARCHES
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STOVER AUTOMATIC WIND ENGINE

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Any respectable person may become our Agent.
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One name or a dozen names may be forwarded at any time. Credit is given the Agent for every name sent until canceled by Premium.
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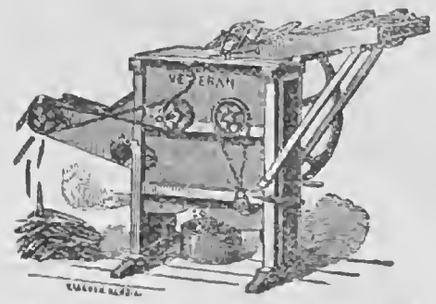

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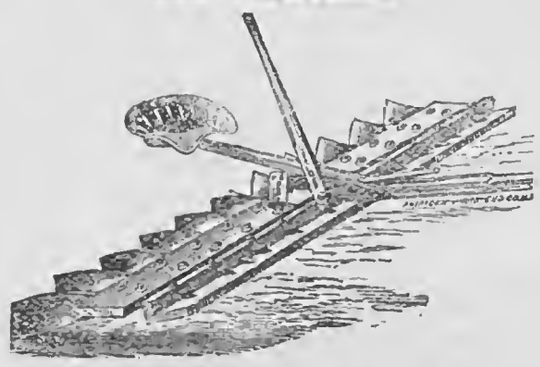
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IT IS THE
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Whether the grain is to be drilled or broadcasted. Highly recommended by the editors of this Paper. See numbers Feb. 14, page 105, and March 27, page 201.
Agents wanted. Send for Circulars.
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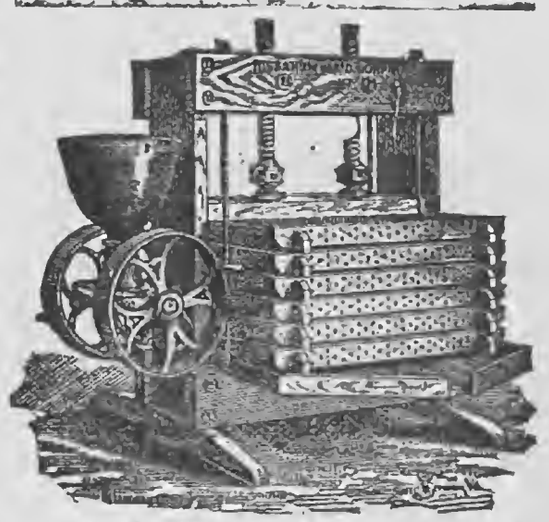
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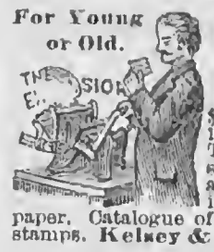
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THE RURAL NEW-YORKER

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Biographical.

M. B. BATEHAM.

M. B. BATEHAM died, after a lingering illness, at his home in Painesville, Ohio, August 5th, 1880. Long, quite intimately associated together for the advancement of agriculture in our adopted State, the elder is now left to lament the departure of his younger yoke-fellow.

Born among the fruitful gardens of smiling Kent, England, on September 13, 1813, with garden associations and surroundings, it was but natural that when his father migrated to the valley of the Genesee in 1825, and established a market garden at Rochester, New York, the younger Bateham, then 12 years of age, should become imbued with a taste for horticulture that has been the guiding impulse of his life-work. His frequent visits to Rochester in later years, since it has become so famous a horticultural center, must have been very gratifying to our friend, who would there see the abundant fruitage of the good seed he himself had helped to sow in the earlier half of this century.

From the garden the transition was easy and natural to the seed-store, and so we find him established as a seedsman in 1833. His qualifications as a writer were soon called into requisition, and for five years he was editor of the old Genesee Farmer, for a long time the leading agricultural paper, even while the fertile valley was recognized as the Great West, a term which has been widely separated from the Genesee in these later years by the westward march of empire.

Mr. Batcham's tastes naturally brought him into contact with such men as Ellwanger & Barry, and he spent some time in their extensive nurseries, which afforded him a fine opportunity of becoming familiarly acquainted with fruits and encouraged his love for pomology. After an extensive Western tour, chiefly on horseback, and partly undertaken in pursuit of health, Mr. Bateham settled in Columbus in 1845, and has ever since been a citizen of Ohio. There, in the first year of his residence, he established the Ohio Cultivator, one of the first agricultural papers printed in the State. In it he found a good medium for imparting much valuable information, and a means of communication with others interested in rural affairs. His articles on insects and grasses were among the first papers upon those topics that were spread before the farmers of Ohio. In its pages he called upon the fruit-growers and nurserymen to assemble in convention and compare notes and fruits, and from this beginning in 1847 has grown up the State Horticultural Society of to-day—a fitting monument to the memory of its originator. From its early organization Mr. Bateham has been its untiring secretary, always declining proffers of what some might consider the higher post of honor as presiding officer. To DO was his choice, and so he preferred to wield the pen to the gavel. Indeed it is the mightier implement of the two, and in his hands it was fully and faithfully employed in the diffusion of valuable information among his fellow-men.

In 1846 the Ohio State Board of Agriculture was organized, and at the first annual meeting, held December 9, 1846, Mr. Bateham was one of those duly elected to serve as a member. At this meeting we find him advocating and urging the establishment of a department of agriculture by the general government at Washington, D. C.

At the annual meeting, held December 6, 1848, our friend, then secretary, was again elected for two years and again chosen Secretary of the Board.

In 1855 the Ohio Cultivator was sold and became the Ohio Farmer. This relieved Mr. Bateham from a heavy burden, and left him free to pursue his horticultural bent. The little nursery which had already been the means of disseminating quantities of choice fruits and plants was largely increased in size and usefulness by the establishment of the Columbus Nurseries, with which Mr. Bateham continued to be connected until he sold his interest in 1864, when he removed to the pleasant little city of Painesville, where he established a happy home and fruit garden. Before leaving Columbus he had planted very extensive orchards, the first venture of the kind in the State, embracing many thousands of fruit trees of different sorts.

It has been especially as a writer on horticultural and agricultural topics that Mr. Bateham has left his mark in Ohio, and this will be more and more fully realized as the years roll by. At his funeral, Mr. Chamberlain, Secretary of the Board of Agriculture, truly said:—"Not an orchard or a grain-field in Ohio but has felt the influence of his labors for the improvement in varieties cultivated, and for improvement in the modes of culture."

As Secretary of the Ohio Horticultural Society, which was like his own offspring, he was a most untiring officer, ever watchful of its interests, and ever willing, as a member of the *ad-interim* committee, to visit other associations of like character in our own and distant States. Whatever he learnt from such visits—from consultation with others as well as from personal observation—he shared at once with the public at large by means of his ready pen and the liberal space always accorded his articles in the agricultural press. So

M. B. BATEHAM.—Fig. 271.

ardent was his desire of benefiting others by his study that during the sickness which has just terminated fatally several contributions from him were published in the RURAL and other papers.

In the family, in the church and in the community about him, our friend always endeavored to discharge every duty faithfully, and he leaves behind him a record of love, devotion and uprightness that is entirely praiseworthy.

His labors for others have now closed; he has gone from the cares of his earthly pilgrimage to the regions of bliss, promised and prepared, as we are assured by our Savior, for those that love and serve Him. May our end be like his, peaceful and happy! W.

Farm Economy.

A SCIENTIFIC VIEW OF COMPOSTS.

PROFESSOR F. H. STORER.

ALL that has been said of dung and urine as the ferment, and of peat or sods as the "body" in compost making will apply as well to a great variety of other organic matters. Fish, flesh, blood, offal, guano, night-soil, the dung of birds all act promptly and powerfully as ferments; while straw, leaves, twigs and bushes mown in pastures, weeds, potato-vines, loam, pond mud, ditch scrapings and a variety of other matters are readily fermentable. Fish, flesh, blood and the like are really more powerful ferments than dung. There is, however, one objection to these substances, which applies more particularly to blood, viz.: that the compost resulting from its use has an extremely offensive odor which, while it annoys the workmen not a little, adds nothing to the fertilizing power of the material. Weeds have the merit of containing very considerable quantities of potash, phosphoric acid and lime, as well as nitrogen; and they would be particularly good for compost making were it not for the seeds they carry. The common notion that weed seeds are destroyed in the process of composting with dung is practically an error, though based on conceptions which are in some part true. But this point belongs properly to another place in the discussion.

Even oil-cake will serve very well to excite the fermentation of compost. To this end cotton seed has been largely used in our Southern States, as rape-cake has been to a certain extent in Europe. Manifestly those kinds of oil-cake which are unfit for fodder, such as the cake from the castor-oil bean and the physic nut, may be appropriately composted. An interesting case of the use of rape-cake is reported by a Swedish chemist. A law of the land forbids the selling or removing of straw from certain estates belonging to the crown, although more straw is habitually produced on these estates than can be used as fodder and litter. In order to decompose the remainder quickly an experiment was tried, as follows: the straw was thrown into heaps six or eight feet high and was then wet with water in which pulverized rape-cake had been soaked and stirred. The moistened straw was covered with a layer of earth four or five inches thick and left to ferment for a month. It was then forked over and again moistened. After the second fermentation, the compost was ready to be hauled out and applied to the land. One cwt. of rape-cake was used for every ten loads of straw, and two months and a half were found to be sufficient for the whole process.

Besides composts prepared with dung, or some other organic substance used as the ferment, there is another very important class of composts which are made with alkalies, such as wood-ashes, potashes, lime, soda-ash, or mixtures of lime and salt. The alkali not only disorganizes the peat and brings about a first fermentation, similar to that induced by dung, but in the case of lime, at least, it doubtless plays an important part in promoting the subsequent nitric fermentation, both in the heaps and in the field. The alkalies have one special advantage in compost making in that they can corrode and disintegrate many rough and intractable organic matters and reduce them to a condition in which they are fit to undergo decay. Hence it happens that alkali-composts are fitly prepared with crude peat, as it comes from the bog, with twigs chips, corn-stalks, coarse sods, garden rubbish, tan-bark and similar refractory materials.

The alkalies are useful also in correcting the sourness of crude peat, and by destroying the vitality of the seeds of weeds, the eggs of insects and the spores of fungi. The corrosive power of the caustic alkalies is too well known to need description. As relates to the material used for composts, it would appear that the alkalies unite chemically by preference with some of the constituents of the organic matter (such as peat or straw, for example), and in so doing disorganize the materials and destroy their coherence. But the matter thus crumbled, or made ready to crumble, is from the mere fact of its mechanical condition, peculiarly prone to decay, and there are reasons for believing that the presence of the alkali does also promote fermentation in the chemical sense. Dr. Angus Smith noticed long ago that if a soil is very alkaline and moist the conversion of the organic matter into ammonium compounds is very rapid. He put some soil not very rich in nitrogen into this condition by means of a little ammonia, so as to make it alkaline, and the consequence was the rapid occurrence of a very intense putrefactive fermentation, not in any way differing, as far as could be perceived, from that of ordinary putrefaction of animal and vegetable matter.

Excellent composts are still made, and they were formerly made more frequently than they are now, from wood-ashes and peat and from lime and peat; in many instances the lime was replaced with advantage by a mixture of lime and salt. Sometimes soda-ash was used and there is good reason to believe that, in default of wood-ashes, potashes would be found to be the most convenient of all the alkalies. Dr. Dana in his "Muck Manual," a book which had much influence in its day, specially commended the mixture of lime and salt and it has been largely used in many localities both North and South. It was urged a few years ago that salt should be admitted free of duty in order to encourage the growth of cotton.

Practical experience has shown very clearly that the mixture of lime and salt is better than lime by itself; that is to say, it exerts a more powerful alkaline action than lime alone and is a more efficient agent for disorganizing the crude peat. But it long remained a puzzle how this could be, for when solutions of lime-water and salt are mixed it is not found that

the presence of the salt increases in any way the alkalinity of the lime. The mystery was finally solved by the researches of Prof. Graham, of London, as has been explained by Prof. Johnson, in "Peat and its Uses." Thanks to the unequal rates at which the several chemical substances diffuse in presence of the porous peat, there is in the compost heap a reaction between the salt and the lime so that some caustic soda and carbonate of soda are really formed there. But these powerful and readily soluble soda compounds at once act upon the organic matter and corrode it more quickly than mere lime could do. There is an objection to the use of salt that the sodium compounds are not useful as plant food; and from this point of view it would perhaps be well to use a mixture of the German muriate of potash and lime for composting, instead of lime and salt. But there is another way of looking at the matter which is probably the best way; for, since the lime and salt mixture is simply despicable when considered chemically as a means of making caustic soda, it seems plain that if we wish to use caustic soda for making composts we had better buy it in the shops. But since caustic potash is distinctly better for compost making than caustic soda, inasmuch as potash is just as strong an alkali as soda and a true plant food into the bargain, the real moral of the use of lime and salt would seem to be that potashes and wood ashes are excellent materials for making composts and should be procured for this purpose.

There are some particular instances in which the use of alkalies in compost making is decidedly preferable to the use of dung. The composting of garden rubbish is a case in point. From the raking of garden beds and and walks great masses of rubbish are collected every year, consisting of sods, weeds, straw, leaves, lumps of loam, clods of manure and many other things which are commonly burned to the utter destruction of all the nitrogen which the matters contain. No doubt it is better in many cases to burn this rubbish rather than to have it thrown into the hog-pen or the barnyard, in view of all the weed seeds, insects and fungi which such matters harbor; and in general the burning of garden rubbish would be clearly justified if there were no other way of dealing with it. But in fact it might readily be treated with alkalies in such a way that all risk of injury from the seeds could be obviated while the organic matter would be converted into excellent manure. If such rubbish were once thoroughly moistened with dilute potash lye and thrown into tolerably large heaps, in a not too dry place, it would change to the condition of garden mold at the cost of little if any further manipulation. The same remark applies to weeds in general, and to the sweepings of hay-lofts. A thorough soaking in weak solution of potashes, or a generous admixture of fresh wood ashes and the subsequent moistening of the heap, would undoubtedly do the weed seeds such harm that they could never recover from it. When, as in this case, compost making is to be regarded as a device for cleaning the land, as well as for fertilizing it, some part of the cost of making the compost must, of course, be credited to the destruction of weeds. Another striking instance where alkali composts are in order is seen in the case of the Eel-grass (Zostera marina) which grows abundantly upon muddy bottoms in salt and brackish waters. This Eel-grass is a singularly indestructible kind of organic matter. It decays with extreme slowness in the barnyard or the hog-pen or when buried in the earth. But it may easily be decomposed by composting with quick-lime or any other strong alkali, and it is well worthy of such treatment since it contains one and one-third per cent. of nitrogen, one per cent. of potash and a quarter of a per cent. of phosphoric acid, besides lime and magnesia.

It may well be true that alkali-composts, such as have been described above, would be benefited if, after some months of decay and putrefaction, they were moistened with barnyard liquor, sewage, or night-soil for the purpose of introducing a supply of the peculiar ferment which causes nitrification and which is known to be present in decaying sewage, etc. Years ago when niter-beds were maintained in Europe for the purpose of making saltpeter, it was found best, when a new bed was established, to mix with it some earth from an old bed. We now believe that the old earth contained the ferment necessary for the process of nitrification, and it is plain that the compost maker may readily avail himself of this resource. In general, it may be well to purposely introduce the nitric ferment in this way to all compost heaps as soon as they have passed through the first hot fermentation or as soon as the original crude peat or other organic matter has become changed to the condition of true humus or vegetable mold. To this end it may perhaps be advisable to keep some old special heaps as reservoirs of the nitric ferment, for the express purpose of charging or "seeding" the newer heaps. By mixing some of the earth taken from these old heaps with the newer ones, the latter could be nitrified at will.

It is not impossible, indeed, that peat which has been well weathered by simple exposure to frost and air may be already fit for the nitric fermentation and that there is really no need of exciting in such peat the preliminary putrid fermentation. This is another point that deserves to be carefully studied. In this view of the matter, it may be asked, in cases where dung and weathered peat are composted, whether the chief use of the dung may not, after all, be to introduce the nitric ferment. At all events, the notion serves to enforce the fact that there are two distinct conceptions to be grasped by the compost maker:—I. He has to provide for the conversion of crude organic matters to mild humus, whether by the chemical action of alkalies or by hot fermentation, or by both; and II: he has to watch over the nitrification of the mild humus by the nitric ferment. If, perchance, the mere weathering of peat will do away with the need of taking the first step, that would be a decided gain in many cases; and the gain will be still greater if, as seems well-nigh certain, the second step can be taken methodically and intelligently. It may be asked also, in a somewhat different sense, whether it may not sometimes be advantageous to incorporate stable manure with alkali-composts tolerably soon after the establishment of the heap; that is to say after the alkali has been allowed sufficient time for its specific action. In this case the dung might perhaps help to cure the peat as well as to introduce the nitrifying germs. On the other hand, marl, leached ashes, or old mortar may be added with advantage to dung composts and to those made with potashes or soda-ash, for the sake of encouraging the growth of the nitric ferment.

Experiments, some of which were reported in the RURAL of March 13, have shown that the presence of carbonate of lime has a very favorable influence upon the prosperity of the nitric ferment, and it is well-known that the lime carbonate was considered to be an essential adjunct to the porous earth of the "saltpeter plantations" of former days. So, too, it has often been noticed that nitrates are especially apt to be formed in limestone caves and upon damp walls that are plastered with lime. It is doubtless by their influence at the nitrification stage that marl and leached ashes and the other forms of lime carbonate have approved themselves useful in compost making. Carbonate of lime can correct acidity it is true, and it would serve as well as any other alkali for treating those peats, occasionally met with, that are poisoned with sulphate of iron; but it has little power to corrode organic matter by mere force of alkalinity and should not be used for decomposing rough, crude materials such as are readily reduced by means of quick-lime or wood ashes. It is true that certain well-known experiments by Schulze have shown that vegetable mold kept moist and warm and exposed to the air, decomposes much more rapidly when mixed with carbonate of lime than when kept free from such admixture, but in the light of existing knowledge it appears that the observed rapid decomposition of the humus in presence of the lime carbonate was probably due to the activity of the nitric ferment and not to chemical corrosion.

One very effective method of making compost, and particularly of charging the compost with nitrates was described many years ago by Lorain. The idea is to maintain at a convenient distance from the kitchen sink, heaps of peat or other matters, including rubbish from the house and yard, and to lead to these heaps through a pipe or gutter all the suds and slop water of the house. Each of the heaps may be moistened in its turn by shifting a movable pipe, or a single heap may be built up gradually by throwing peat or loam upon it at intervals. It is plain that considerable quantities of excellent manure could be made in this way, and that the process might be made unobjectionable by taking care to throw earth upon the heaps often enough to avoid putrid emanations and offensive odors. If it were necessary, a trench or depression might be dug in which to place the heaps, in order that the slop water may flow freely to them. The method is akin to a plan sometimes adopted in Europe of establishing compost heaps at a point lower than the barn-yard so that the urine and dung liquor may occasionally be made to flow upon the heaps, to prevent them from becoming dry and to charge them with the nitric ferment. In this case, as in the other, care should be taken to run a furrow around the heaps to lead away any excess of rain water.

One reason why the reputation of peat composts has suffered in recent years is that, as commonly made, they are rather one-sided or "special" manures, not competent to compete with mixtures which contain all the elements of plant food. Peat compost prepared with dung, urine, fish, or flesh, is really little more than a nitrogenous fertilizer which, on most lands, would need to be supplemented with phosphatic and potassic manures, or perhaps even with lime, in order that the best powers of the compost may be felt, and that profitable crops may be grown by means of it. Composts prepared with potash compounds, or with lime, do, of course, contain, respectively, an abundance of potassic and calcareous plant food, but there is still a great deficiency of phosphates. This want may readily be made good by strewing spent bone-black from the sugar refineries, or even finely ground phosphate-rock, among the layers of dung and peat at the time when the compost heap is built. Thanks to the chemical action in the heap and to the carbonic acid which is freely generated there, enough of the phosphate will be corroded to make it useful as manure, at absolutely no expense to the farmer other than the first cost of the bone black and the trouble of strewing it on the peat. Several experiments in composting ground phosphate rock in this way have been made in Germany with good results.

It is not to be supposed that the phosphates thus composted are in any sense so quick of action as the phosphoric acid in superphosphate of lime or as that in bone meal, but the composted phosphate is undoubtedly well-suited for application to many grass lands and for other purposes where quick action is not required, and it is to be remembered that it costs comparatively little. A given amount of money expended in this way will fertilize with phosphoric acid a much larger area of land than could possibly be done by buying superphosphate or the like. There are times and places where the composted phosphate may be more fitly used than the more costly phosphatic manures, and it is the business of the farmer to recognize this truth and to govern his proceedings accordingly. It may be said in general that the composted phosphate will probably be found better for poor land and for fields incapable of repaying the application of more costly manure. It can hardly be of much use in high-farming, so called, but may nevertheless have real merit for promoting the growth of moderately good crops that are to be grown at very little cost, after the common American fashion. Like bone-meal, composted phosphate will doubtless be found not to do so good service upon dry land as upon that which is duly moist.

Another point to be mentioned in favor of composts is the power of making them far from home, for fertilizing outlying fields where peat or mud from marshes or ditches is obtainable. In this case the cost of transporting dung may be avoided by using either fish-scrap, the dried meat dust from slaughter-houses, potashes, wood ashes, or lime as the fermenting agent, care being taken to establish the heap in not too dry a position. A somewhat analogous device, formerly practiced in Massachusetts, was to haul a quantity of swamp mud in the Autumn or early Winter upon the fields where corn was to be grown next year and to haul out upon these fields next Spring from the barn-yard enough manure to ferment the peat. As soon as the weather permitted, the peat and dung were mixed, fermentation soon set in and the compost was ready for use at the time of corn planting.

Farm Topics.

COUNTRY LIFE.

Observations Among Rural Subscribers.

COL. F. D. CURTIS.

THE Curtis Homestead, now owned by L. D. Sherwood, is another example of the prudence and forethought of my father, who provided for the future by planting orchards to take the place of the old ones beginning to decay, and who increased his capital stock by investing his annual surpluses in the improvement of the farm. By this system of sound financial management he increased the value of the farm from $40 per acre, the purchase price, to $65, at which rate it was sold to Mr. Sherwood twenty years ago.

The farm embraces two varieties of soil—warm, gravelly loam, which gives crops an early start in the Spring, and a more compact and colder clay loam, which is natural for grass, and, being retentive of moisture, supplies fresh pasture in the drier portions of the Summer and is always sure to yield large crops of hay. The double character of the farm enables Mr. Sherwood to follow both grain raising and stock growing with profit, hence he unites these two branches of husbandry. His heavy soil is kept in permanent pastures and meadows, an arrangement which enables him by feeding the products to stock to make a large amount of manure. He has found that by liberal top-dressing he can maintain a meadow for a term of years, which would otherwise run out. He strengthens his meadows and adds to their permanence by allowing a growth of aftermath in the Autumn, which protects the roots so that there is less freezing and thawing and consequently less loss. The pastures are replenished yearly by the droppings of the animals, and by allowing the grass to start up before Winter the same beneficial results are obtained as with the aftermath in the meadows. In the rotation of the grain crops clover is an important factor, it being especially suited to the portions of the farm which are more specially utilized in grain raising. Clover starts early in the season on these lands and consequently can be cut in mid-summer, leaving the balance of the season for a second growth, which, with the liberal manuring Mr. Sherwood gives his fields, makes a large growth and supplies late feed in the Autumn, while the meadows and pastures are clothing themselves with their Winter protection.

Like other farmers who have been trained in the old school, Mr. Sherwood has no specialties unless it is his corn field. The gravelly soil is natural to corn, and the owner of these choice lands knows just how to manipulate them for the production of a large crop. In his rotation of crops he has a clover field every year to be turned over for corn. He plows his manure under, not because this is always the best way, but because he was brought up to do so and because he invariably has good crops under this system.

There is sound philosophy embodied in it. He plows his corn ground in the Spring, turning under the clover roots and vegetable matter on the surface, which, together with the manure, form an active stimulant by the processes of decay, and at the same time, owing to the variety of vegetation and salts contained in them, the clover stems, leaves and roots, and the manure brought from the barnyard, create a permanent food for the growing corn. Mixing a variety of manure is an excellent idea, as it insures active decomposition and is certain to supply the needful wants of the plants.

Chemists may talk very wisely about regular prescriptions and doses for plants (a kind of vegetable doctoring), but Mr. Sherwood, with his practical sagacity in combining his manures, intrusting to the instinct of the corn to make its own selections (doctoring itself), if he does not beat science, raises most satisfactory crops. Like other farmers who calculate closely as to profits, Mr. Sherwood keeps a flock of well selected sheep, from which he sells wool and lambs. A small dairy furnishes a surplus of butter, the milk being used to promote the growth of pigs. He has enlarged the old rule of "a pig to a cow," by obtaining Victoria stock, which are remarkably easy keepers; and by adding to the milk a little ground feed, and allowing it to ferment slightly, it is more easily digested and wholesome. He can thus double the number of pigs allowed by the old rule, and thereby add to the profits

My father made a serious mistake when he started his young orchard. While Mr. Sherwood feels grateful for his orchard, which produces hundreds of barrels of apples, he regrets that there is such a large variety, many of which are unmarketable, and, of course, of little value. The truth is, father was a good-natured man and wanted to please everybody, and so he grafted into his orchard everybody's "best apple." Among other sorts was a seedless kind, fair to look upon, but so tough and dry that it has no merit except as an exception to the law of nature which provides for its own propagation. Mr. Sherwood believes in care and painstaking. His farm and grounds everywhere show evidences of this characteristic. He has removed fences between fields, thus doing away with needless expense and making the land more convenient for tillage. In winter his hens receive special care and are watered daily with warm water, and given a variety of feed, including coal ashes, which Mr. Sherwood has discovered they are very fond of, picking out the charred bits. The hens have a warm place to roost in. The result of this attention is that the owner sells more eggs than any of his neighbors.

THE TRUTH ABOUT IT.

[THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

FILTH IN THE FLOUR BARREL.

HENRY STEWART.

THE RURAL'S remarks upon "CLEAN CEREAL FOOD" in the issue of August 7th, are very pertinent and timely. There need to be some sharp things said on this subject. The miller, however, is by no means the man to bear the blame. It was once my fortune to own a farm with a grist mill attached, at which a large amount of custom work was done for the neighboring farmers. Some merchant work was also done for large lumbering establishments and tanneries within a circle of 10 to 20 miles, and much grain was purchased for this purpose. Milling was a new business to me and the experience very soon gave me a new idea of the remarkable carelessness of the farmers and the loss to which they subjected themselves thereby. It also showed in a most astonishing manner what an amount of dis-

agreeable filth people consume in their bread, cakes, pies, and puddings; and, moreover, what risks are run, and what mischief results from this cause. Certainly, as a rule, we are not sufficiently careful in regard to the cleanliness of our food or of our drink.

Many years ago the filth in which men lived was appalling, and the consequences were fearful. Plagues, pests, and epidemic diseases of many kinds, some now happily unknown except historically, ravaged whole countries and continents, destroying victims by thousands; and we now know that the cause of these destructive diseases was simply filth. But filth still claims its victims, and now since it is known that the most virulent diseases which infect the human race originate from parasitic organisms that enter the blood from without, it is of the utmost importance to use only pure, clean food — water being included in this term.

Now the truth about this matter is, that domestic vermin foul our staple food to an extent that would be alarming, were it widely known. This truth first dawned upon me when in a flour mill in St. Louis, at the time when St. Louis flour was considered the best in the country. There the hoppers which fed the stones were filled with wheat of which certainly one or two per cent. was the excreta of rats and mice. A similar thing occurred in a mill in a large town near Philadelphia, and I have seen the same occurrence in a very large flour mill in Brooklyn. In my own mill, the great majority of grists brought in by farmers were so fouled, and some were so badly mixed with this filth that I refused to receive them on the ground that the portion taken for toll would be too much depreciated in value to pay for the work. It is impossible to screen out the whole of this foul matter, and this must be obvious when it is considered that the interstices of the screens through which a grain of plump wheat will pass, will permit anything else of the same shape and size or of less size to pass through them.

It is well known that these vermin are infested with the worst parasites; and that these go from them into other animals, as cats, dogs, and pigs, and from these into sheep and oxen, and from these into human beings. It is thus that trichinæ and tape-worms are carried from these filthy creatures into our food animals.

The excretæ of animals infested with parasites are charged with the eggs of these creatures, and it is in this way that most parasitic diseases are communicated from one animal, or class of animals, to another. It may be very well believed that the universal presence of mice and rats in barns, granaries, elevators and mills is a most serious danger to public health, and that we take into our stomachs, and thence into our blood, in many unsuspected cases, the germs of virulent diseases. That these are not more frequent is not so much due to the circumstance that the causes are not present, but that it is only when these causes affect such systems as are enfeebled or debilitated by some previous circumstances that they produce their usually fatal results.

Leaving, however, out of the question all sanitary considerations, it is enough to consider it in regard to the mere cleanliness of our staple food. This is a sufficiently disagreeable view to take of it, and one which, when seriously entertained, should have the effect of causing a war of extermination against these vermin, pestiferous in every sense of the term, for truly they are not only pests in themselves, but they carry pests wherever they go, and reveling in filth, they befoul everything they come in contact with. It is within the truth to declare that 90 barns, granaries and corncribs out of every 100, are infested with these vermin; and that the grain taken from them can be detected by any moderately sensitive nostril, even if it is not fouled conspicuously to the sight. The bolts of the mills *may* gather some of the filth, but it is only the coarse matter that is thus stopped in transit to our stomachs. Alas! the moralist may say, "How hard it is to be godly!" the sanitarian may say, with equal truth, "How difficult it is to be clean!"

Horticultural.

SIZE OF THE GREGG RASPBERRY. THE SNYDER BLACKBERRY.

Readers will recall our cut of the Gregg raspberry as it was sent to us by a friend. During the past season the Gregg has fruited at the Rural Grounds, and we were obliged to admit that our engraving represented the fruit as smaller than it usually grows under fairly favorable conditions. A few weeks ago Mr. Roe brought specimens to the office, of which our illustration shows the average size.

Rural: "It does not grow so large with us."

Mr. Roe: "Nor does it with me. These are exceptionally large berries growing upon shoots of the present season. On an average the fruit is but little larger than that of Mammoth Cluster, and I doubt if it will yield more in a season."

In the course of the day Mr. P. B. Mead called. "Ah!" he exclaimed, "those are the largest Greggs I have seen." Later, Mr. Kingsbury, of the Indiana Farmer called.

"Those are the largest Greggs I have seen," he said.

Still later, Dr. Hexamer called. "What is it?" he asked. "Gregg," we replied. "Ah, indeed, I have never before seen them so large."

THE GREGG RASPBERRY.—FROM LIFE.—FIG. 272.

Reader, the illustration of an unusually large Gregg is before you. Compare this with our first illustration, page 165. You may rely upon it the average size of the Gregg raspberry lies just about midway between.

Mr. Roe brought with him a branch of the Snyder Blackberry which was heavily laden with berries. The Snyder is very hardy, from all accounts, as well as prolific, but we do not see any reason why anybody should give up the Kittatinny in its favor. The berries are much smaller and we cannot agree with those who pronounce them of superior quality —that is, sweeter, for sweetness in the blackberry is the most that constitutes quality.

The Windsor Chief Strawberry.

Mr. Lovett, in speaking of Windsor Chief Strawberry (p. 502), indulges in the remark that it "is still Champion—nothing more and nothing less." If he means that *the two are entirely similar*, I have only to question the fitness of the language employed. If, however, he means that they are not only similar, but *identical*—or, in other words, that the alleged parent is really doing duty as offspring—I cannot avoid a feeling that he ought to sustain such charge by some fact or facts beyond the circumstance of even entire similarity. The apparent reproduction of a variety, in both plant and fruit, is certainly an exceedingly rare circumstance, still I see no warrant for assuming its impossibility. My motive for this reference to the matter lies in the fact that it seems to me important that the nomenclature of pomology should be guarded with great jealousy, and hence, if the Windsor Chief is in fact a reproduction, and in no sense an improvement, the true course would be to eradicate the plant from our grounds and the name from our lists—not to treat it as a synonym. T. T. L.

RURALISMS.

I am a connoisseur in salads, and place the tomato among the best of them. The Acme is the best of all tomatoes for this purpose. It may be cut into either thick slices or cubes, and should be put into a colander to drain. The dressing should be a little stiff and creamy. A plain dressing may be made of mustard, oil, salt, and a very little vinegar; but this cannot be made creamy. There are comparatively few who know what a delicious dish a tomato salad is, and I expect to be thanked for telling the others.

The larger kinds of peaches are now (Aug. 12) beginning to arrive in New York in great quantities. Prices, however, are somewhat high for the better kinds; but they will soon be cheaper, and there promises to be enough for all. I never heard of a ripe peach hurting anybody. It was the first thing Dr. Tanner ate at the close of his wonderful fast, and started him off flesh-making at the rate of five and a half pounds a day. Eastern peach trains, made up of about thirty cars each, now leave New York two or three times a day, and even Maine is thus abundantly supplied. When I was a boy peaches were so plentiful in Westchester county that the pigs were turned into the orchards to eat them; not little Amsdens or Alexanders, but great, luscious peaches nearly as large as Newtown Pippins. The trees were then raised from pits, and lived to a healthy old age, free from the yellows. I think the best peaches or the healthiest trees are now raised in that way at the West.

For a window-box for Summer use there is nothing, to my mind, that equals the single petunia. Window-boxes, I am glad to see, are becoming quite common in our large cities, and are a pleasing relief to brick walls and cobble-stones. In some of the finest streets the boxes are of Minton tile and other expensive ware, while in other streets I find wooden boxes, tin boxes, firkins, tomato cans, and what not; but the single petunia, whether on Fifth Avenue or the Bowery, in Minton tile or tomato cans, is the queen of window-box flowers. The Germans seem to take great pride in adorning their windows with flowers, and sometimes have boxes extending the whole front of the house. Others train morning-glories from the second story to the eaves. They look charming. Petunias and morning-glories alone would give a charm to the very humblest of homes.

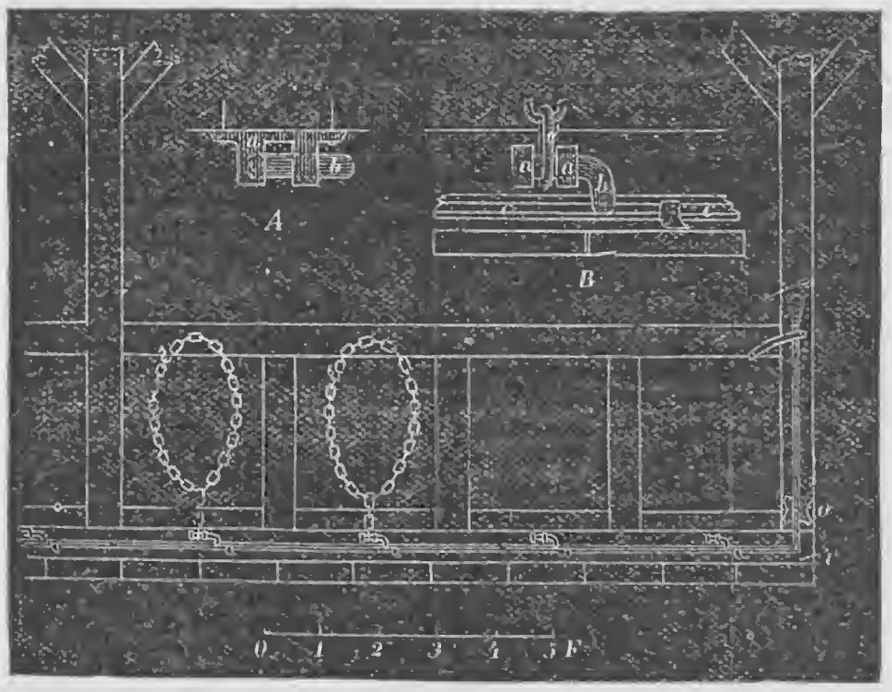
I see that some of the daily papers are again planting the Eucalyptus globulus in and around New York city, not, perhaps, being satisfied with former efforts. Tree planting is healthy exercise, and if planting the Eucalyptus amuses them, why, let them go on; but when they have succeeded in making one survive our Winters, will they please let the public know it? In the meantime I would suggest, in a fraternal spirit, that they occasionally read some of our horticultural papers. It will do them no harm, and may do them some good.

When the potato beetle first appeared here, the question arose whether there were two broods in one season, which was speedily settled in favor of two. The question is now as to three. I must go on the record for three. They are now (August 12th) laying eggs for the third time. I have given up to them a couple of plants for the purpose of studying their habits and experimenting with the various kinds of "cures," taking good care to limit the number of beetles. It is astounding to think what their numbers would be if means were not taken to kill them.

[There has been no time the present season when we could not find eggs upon our potato vines.—Eds.]

WINTER GARDENING.

Select a sunny situation convenient to the kitchen, and lay off a square of 120 feet. Haul on to this 10 loads of manure, leaf mold and sand, which turn under with a big plow, and pick off the stones. Surround this with a fence. Set stout posts six feet long, at intervals of seven feet. To these nail, with spikes, rails 4x2 inches thick and 15 feet long, the ends meeting on every other post, one at the top, the other one foot from the bottom where a plank one foot wide and one inch thick is nailed to an offset on the post, to make it level with the paling whose lower end touches it. The strips for palings are 16 feet long, four inches wide and ½ inch thick. Saw each in halves straight across; saw these halves in two, slanting three inches. Thus from one strip you get four palings with one end straight, the other sharp, and no waste but the sawdust.



DANISH PLAN FOR FIRE ESCAPE.—FIG. 273.

First nail on two palings (one temporarily) whose equal hight is ascertained by sighting, 14 feet apart, or the length of a strip of plank too stiff to sag which must be tacked, as a guide, to the tops of the two palings; then by a plumb and line, fill up this space with palings two inches apart, and even with the guide plank at the top, also touching the base plank at the bottom and so on. The gate must be made upon the same plan, and hung to large square posts at the middle of the front line of fence. From this gate a walk four feet wide divides the garden in halves. Another, the same width, crosses it at right angles in the center.

Cut off a border three feet wide, against the fence, by a walk the same width, running entirely around the garden. Subdivide the two front quarters by paths crossing each other at right angles. This will make eight beds 26 feet square, and two original quarters, in the rear, 52 feet square, and a long border separated by permanent walks. Define the walks, by narrow plank kept in place by pegs, till a set of border plants is obtained — perennial flowers or pot-herbs. At the end of the main walk, against the fence facing south, make a pit or hot-bed for forcing early plants.

A summer-house of octagon shape may cover the intersection of the main walks. Set a post on each side of the four walks radiating from the center, at such distance from the center that every side of the octagon will be equal. Lattice the four sides, cutting the corners of the beds, leaving those over the walks open. Finish with a steep roof and spire. Against each latticed side plant a grape-vine. If Isabella, train inside; if Delaware, Concord or Clinton, train outside. On the inside of the lattice, have four boxes, four feet long and high enough for seats, with lids and locks, for storing garden requisites.

Between the fence posts set dwarf fruit trees; between these currant, raspberry or gooseberry bushes, and one row of strawberry plants in the border, entirely around the garden, save where the hot-bed and asparagus bed have been reserved.

Plant your onions now. Spade up and level one of the smaller beds. Lay it off with a heavy rake having teeth one foot apart, by dragging it across the bed, setting the first tooth in the last row each time it is moved. Check it; then drop a large and a small onion alternately at the intersection of the rows; plant them, and cover with leaves or litter from the hen-house, with enough sweepings or ashes thrown on to prevent the trash from blowing off. Treat the strawberry border the same way, and your winter gardening is done. In the early Spring you will give your onions a top-dressing of ashes mixed in the hen-house. Get your pea-sticks and tools ready for Spring. M. L. S.

The Herdsman.

FIRE ESCAPE IN THE COW STABLES.

In Europe where a large number of cows are often stabled in one building—sometimes several hundred—it is not an unfrequent occurrence to hear that nearly all these poor creatures have perished in case of fire, mainly because in the way they are ordinarily fastened they cannot be let loose rapidly enough. We now and then hear of similar incidents in dairy districts of this country, and, indeed, as the country grows older they are becoming more and more frequent.

The accompanying illustration which we reprodnce from a Danish paper, represents an ingenious, though simple, device by which a whole row of cattle can be loosened in a moment and driven out should an outbreak of fire require it.

The cattle are supposed to be tied by chains or leather straps, which are fastened near the foot-piece running along the front of the stalls. For every-day use the chains are opened by the ordinary method of unhooking them, but the device is so planned that in an emergency the chains are unhooked at their fastenings and remain around the necks of the animals. It consists of a movable iron bar of any convenient length, laid longitudinally at the head of the stalls. At the center of each stall this bar has a bolt fastened, which works into a forked eye, securing a link of the chain and thus fastening it. When the bar is moved back in the direction, C, by the lever at the end, which turns around the point, P, all the bolts pass out of the forks and the animals are at liberty. The arrangement is shown more in detail at A and B; A being a view of the bolt from above, and B a side view of the fastening; a, a, show the fork, b, the bolt, c, c, the bar and d, a link of the chain.

This arrangement is not expensive, and it strikes us as being very desirable and practical in barns where twenty or more head of cattle are fastened. Some such precaution seems more particularly to be needed in barns built of wood, for in these when filled with hay and straw fire spreads with great rapidity.

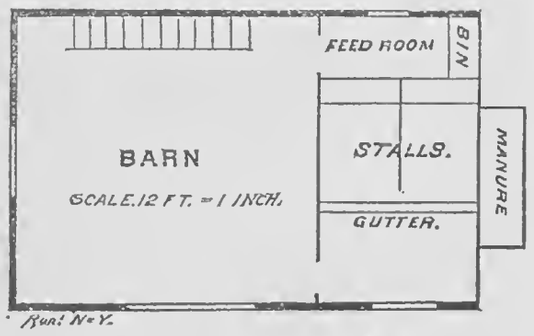
Dairy Husbandry.

THE DAIRY COW—NO. 6.

HENRY STEWART.

How to Lodge a Family Cow.

THE proper lodging of a cow, that is the character of the stable and its arrangements, is worthy of serious consideration. Upon it depend the economy in labor and expense of feeding, convenience, cleanliness, the comfort and health of the cow and the saving of manure—the latter being by no means the least of all these: for by good management the owner of one cow and a garden may be able to regain in the value of manure at least one half of the cost of the feed. I have done this myself and know that it can be done anywhere and everywhere. The stable may be located conveniently near the house if desired, because a well-kept stable will never be disagreeable in any way to the most fastidious housekeeper. Therefore I would have the stable for a family cow near the house, and not a hundred feet distant. It may be made to include a wood-house, a store-room, a dairy room and a garden tool house. It shou'd be located upon rising ground, or so that water flows every way from it. The water from the roof should flow into a cistern, which will supply all the water needed.



COW STABLE.—FIG. 274.

The stable should have an upper loft for hay and a store-room below for feed. The plan here given will be found convenient and may be used for a cow stable only or for the wood-shed and other purposes. A building 24x16 feet and 16 feet high will be roomy and convenient. The cow stalls should be three and a-half feet wide and 12 feet long in all. It is well to have two stalls; the extra one may be wanted, if not for a cow for some other purpose. To preserve cleanliness the floor should slope backwards a trifle, to a shallow ditch placed four and a half to five feet from the inside edge of the feed trough, in which ditch the droppings may fall. This will leave room behind for a broad passage from which a door leads into the barn. The manure gutter should drain into a manure tank outside. This is best made with a brick wall and covered with a tight trap-door to keep out flies in the Summer time. For this purpose, too, some powdered copperas may be liberally sprinkled over the manure and in the gutter. This will absorb all the smell and destroy the larvæ of house and dung flies which would otherwise gather by thousands in the manure. The feed trough should be two feet from the floor to the top, 16 inches wide, 12 inches deep which is sufficient to hold a full mess of cut grass or corn fodder. In front of the feed trough is a partition four feet high, and in this a falling door is made across the whole front of the stall on a line with the top of the feed trough, by hanging one of the boards upon hinges and securing it by a cord, so that it can fall only to an angle of 45 degrees and so make a slide by which to put the feed into the troughs. The feed passage will be three feet wide and in front of the stall or stalls. It should be provided with a neat, covered, feed bin at the end.

The remainder of the building may be used for various purposes, for a carriage house if a horse is kept, or for wood, coal, storage, etc., etc. A stairway may be made in one corner leading to the upper floor, and the pump and cistern may be conveniently placed under it. Where only one cow is kept, a very cheap shed with no upper floor will be sufficient and $40 will be amply sufficient to lodge a family cow with every comfort and convenience. The floor should be of cement or brick, or of hard-rammed clay. Wood is the least desirable floor. A cement floor is the best, and if well made, it is vermin-proof. It should be made of one part of Rosendale cement and three parts clean sand, mixed dry and then with water into a thin mortar and then with seven parts of coarse gravel. This should be laid three inches deep and have a top coat of half an inch of the clear mortar for a finish. A washing with a few pails of water occasionally will clean off such a floor and keep it sweet. The safest manner of fastening for a cow is with a broad leather strap around the neck, with a ring in it, and a short rope fastened to an auger-hole near the top of the front of the trough, having a snap hook attached to the free end. The rope need only be 18 inches long or sufficient to permit the cow to lie down without the possibility of getting her foot over the fastening.

The utensils required for the stable are a smallest-size copper strip or other fodder cutter costing $7; a scythe, a corn knife, a box in which to mix the feed; a water pail; a card and brush; a shovel and a hoe for the manure, a stiff broom and a wooden hay fork. The card and brush are indispensable, and should be used upon a family cow for two or three minutes before milking, twice a day. Any owner of a cow, who is considerate of her comfort, could not neglect to card and brush her after having once discovered the gratification she experiences from the service, and I have found no other way so effective to induce a wilful cow to let down her milk, when she holds it up for a newly arrived calf, as to give her a gentle and thorough carding and brushing, especially about those parts which her serviceable tongue cannot reach. While enjoying the brushing she forgets her troubles and gives her milk readily.

The Poultry Yard.

ARTIFICIAL CHICKEN HATCHING.

L. S. HARDIN.

In a late issue the RURAL published an interesting article from the pen of Mr. Henry Hales, on the subject of artificial incubation. There were a freshness and courage about the article that pleased me—it is so hard to find a writer who dares to tell the disagreeable truths about farm machinery of any kind. For months I have been trying to find out the bottom facts about incubators with the intention of buying one if I approved of it; but all I could see was unlimited praise. Chicken papers devoted to the business occasionally allowed dark hints of artificially hatched chickens failing to reach maturity. This was absolutely all I could learn against the plan. Yet it did not seem to grow in popularity as it should, if only one-half the claims of incubator makers were true. There is evidently a dark spot somewhere, and we will never find it until some man with the courage of Mr. Hales tries the best machines, and tells the whole truth about them

To approximate this result in as great a measure as the time and circumstances would permit, after reading his article, I took train for Coney Island where the managers of a new hatcher have two large-sized machines in full operation. The house is a simple one-story frame, with large doors and windows, leaving the machines with scarcely any protection against the rapid changes of temperature peculiar to a sand island in the ocean where it is as hot as tophet in mid-day and very cold at evening. Each machine holds 1,500 eggs or 3 000 eggs in all, hatching at the rate of 100 chicks a day. The machines having glass sides, realize the claims of the handbills in these words, "The full process of hatching, from the first pip of the egg until the chick emerges in triumph from the shell is all exposed to full view."

Remembering Mr. Hales's failure in that the chicks did not get out of the shell readily, I marked this point particularly. Something like a dozen eggs were pipped when I first arrived, and the chicks from about one-half of these got out of the shell before I left, in something like two hours. The others had made fair progress. I did not note any failure on the part of the chicks to make some progress in this time toward freeing themselves from the shell. Those that had dried off before I left were as strong as any chicks of their age I had ever seen, and my experience in this line is pretty extensive with the old hen.

The next stage—chicks under twenty-four hours old—I watched and criticised with close attention, for here could be seen any inherent weakness due to the "bringing up," as we say of children; but of the "bringing out" as we should say of these chicks. The managers use small glass cases, such as are used in making aquariums, to put the young chicks in. Here they nestle together and have the appearance of a fine brood that have just lost their mother, but are not conscious of their misfortune. Sleepy the little things certainly were until somebody rapped on the glass with a pencil, when each little head was wide-awake, and the little things scrambled over one another to get to that side of the glass—this, too, before they were old enough to care to eat. In fact, they were the liveliest lot of little chicks I had ever seen.

These hatchers had been in operation only about nine weeks, so that the oldest chicks in the artificial mother were under two months of age; but the largest were well grown and apparently as well feathered and as active as chicks of that age ever are. I bought some and took them home, and the above was the universal verdict of my neighbors. All the chicks in the "mother" were in fine condition and very active. I noticed but one out of several hundred, that was out of sorts. There was no appearance of languor or weakness that I was so much on my guard to detect, since reading Mr. Hales's article. He says:

"In assisting the little creatures to freedom, I found the shells of the hatching chicks in a condition entirely different from that of an egg hatching under a hen; that from the incubator was as hard as a newly-laid egg, while that from under a hen was quite soft and easily broken, having a rotten appearance, as it yielded quite easily to the pressure of the young chick."

To test this we took from the drawers an egg just pipped and with a pencil point broke pieces from the shell. They were very brittle, resembling very closely the rotten shell of an egg hatched under a hen.

Was not the great cause of Mr. Hales's want of success the cheapness of his machine—not that high price alone adds to the efficiency of machinery, but we all know that the art of hatching chickens artificially has not reached that point of perfection where the greatest skill can be omitted to secure success. The want of perfect uniformity of temperature may not kill the chick in the egg while rendering it so weak that it cannot break the shell. Imperfect supply of moisture may cause the egg to dry up too much or rot from excess of moisture. These points are so vital that none but the best of machinery will meet their requirements and only the best of skill, coupled with long and patient experience, will supply their omission. I wish Mr. Hales would trade that cheap machine off for one of the most approved patterns, and give us his experience with it; for it is the other side that we are now most anxious to learn about.

THE DORKING BREED OF FOWLS.

NOTWITHSTANDING all attempts at rivalry for the past half century, especially with the large Asiatics, the Dorking still maintains its ascendancy among the fowls of England. We may attribute this to its possessing the same superiority of qualities among its kinds, as Short horns have among cattle, and because it is the best for general purposes. Fowls of this breed are of a size sufficiently large to suit the most fastidious for the table; their flesh is superior to that of any other breed except the Game fowl; the hens lay fairly, and are steady sitters and good nurses; while their chickens are hardy, grow rapidly, and mature early Lastly they are fine-looking, of noble presence, and excel all other breeds for crossing.

The nearest approach to a Dorking is the Houdan; but I have not found the chickens so hardy or easily raised; and the top-knot is objectionable as it occasionally blinds them. Both these breeds excel in giving plenty of meat on the breast and other parts of the body where most desirable. They are not made up mostly of rump and legs.

I wish the fifth toe could be bred off, as it is a mere ugly excrescence. A Dorking occasionally comes without it, and such are fully equal in size and all other qualities to the best of the five-toed. If these could be kept and bred from to the exclusion of others, the ugly fifth toe might be got rid of almost entirely in a few generations. A.

Pomological.

THE ARTIFICIAL PRODUCTION OF FRUIT BY GIRDLING.

Mr. W. I. CHAMBERLAIN gives in the RURAL NEW-YORKER of July 24 an interesting account of the *girdling* method of inducing apple trees to fruit readily as practised by Mr. J. B. Spaulding, Illinois. But he suggests a pertinent reflection when he queries what would be the effect of thus girdling trees on sandy or stiff clay land. While I agree that the girdling progress is to be heartily recommended under certain conditions, I feel, with Mr. Chamberlain, that such radical treatment should be carefully studied as to its ultimate effect under various conditions. The process, I must confess, suggests too much the "panacea" idea. It apparently applies one method to a host of individuals just as our public school system is supposed to turn out perfect scholars by the application of like methods of education to each and every child. There is, however, a system of girdling or checking the sap which is, I believe, closely related to that described by Mr. Chamberlain, but at the same time more logical. The French have practised it for at least fifty years and perhaps in modified forms for ages, while the Switzer can show you apple orchards that have been similarly treated and fruited for generations. I cannot give a name to the operation, but it consists simply of long or short incisions made in the bark above any given leaf to make the growth woody, and to produce fruit-bearing wood below. By varying the length and depth of the incisions and applying them on any branch or even twig, the movement of the sap can be checked and guided at will. Early and abundant fruitfulness comes by this method at least as well as by any other. Besides, it is more scientific. Its girdles or, more properly, incisions, are long or short, few or many, as the case may be, and applied at just the best points instead of being limited to a strict line around the trunk of the tree, which may or may not do violence to its health and longevity. Unfortunately we do not value the longevity of a tree properly, in this country, but simply want immediate and immense results; hence, perhaps, the special charm of Mr. Spaulding's girdling method. Soil, climate, character of growth each year and conditions of the bark must be considered under this system more carefully perhaps than under any other. The balance of force is so completely upset by such a system of girdling that good management is necessary to continue steadily healthful action, if, indeed, ultimate unhealthy conditions can be really prevented.

I believe it should be evident that while the girdling process produces early and continued crops under certain conditions of soil and climate, the incision process is the more truly scientific, because it is not violent, but adjusts itself in skillful hands to every reasonable environment. Mr Spaulding's work is founded on sound natural laws and works well in his case, but the value of the incision process has been proved by long years of successful practice in many countries. S. PARSONS, JR.

WATERLOO PEACH.

THE multitude of new, very early peaches, which have been, for the last few years, claiming the attention of fanciers of this fruit, has forced upon planters the necessity of caution, in the selection of the varieties to be planted. The Alexander and the Amsden were eagerly caught up, and are already making their mark in the markets. But when, with the advent of the Saunders, Wilder and Downing, we began to hear rumors of others, some of them claiming to be still earlier than these, the conviction began to force itself upon us, that it was best to wait and see what would be the outcome of all this. Under this state of affairs, when the first notices of the Waterloo fell upon the public ear, they were little heeded, notwithstanding the authority that the reputation of Ellwanger & Barry may be assumed to carry with it; but when its actual performances had come to warrant the indorsement of such high and conservative authority as Chas. Downing, the Horticultural Editor of the Country Gentleman, and others, the proof of its worth became in some sense irresistible, and as a consequence this peach seems to be coming to the front more prominently, perhaps, than any other of the new, very early sorts. It is yet too soon for me to have fruited this peach, which I understand to have originated quite recently near Rochester, N. Y., It is said to have the general qualities of the class to which it belongs; all of which are semi-clings, with the general qualities of Hale's Early; which is, with much apparent reason, supposed to be the parent of the race. Its season, in the latitude of its nativity, may be set down as about the third week in July; or about a week in advance of Alexander and Amsden. After making all reasonable allowance for the overestimation of novelties, I have the impression that the Waterloo will, very probably, take a prominent place as an amateur, and possibly even as a market peach. T. T. LYON.

The Japan Quince.

Allow me to add to your commendation of the fruit of Cydonia Japonica in the RURAL of August 7, that it is not only very palatable when cooked, either separately or to add flavor to other fruits, but that it cooks *very quickly*, and that it does not even require to be pared, since the skin breaks down in cooking as readily as the flesh. In fact, to my apprehension, it is in all respects as desirable for this purpose as our common quince, with the single exception of its lack of productiveness. In this particular there seems to be a remarkable difference between varieties, and even between plants of the same variety—a circumstance that may warrant the hope that its productiveness may be improved by reproduction with this object in view, very possibly without in any respect diminishing its attractiveness as an ornamental plant. I regard this as a promising field for experiment, and the more so because this plant is so eminently hardy, and so entirely free from the various casualties to which our common quince is so generally subject. T. T. L.

The Vineyard.

Specimen Grapes.

WE have received from Mr. John Burr, of Leavenworth, Kansas, some specimen bunches of fine grapes. Of them he says: "No. 1 is a small bunch of a very early grape; it was ripe July 20; but is now so shriveled as to be nearly worthless, except as showing exceptional earliness. No. 2 is not quite ripe.

These are seedlings of the Delaware, and this is their second year of fruiting. No. 3 is from an uncommonly vigorous vine—its second fruit crop. No. 4 is white, very sweet and delicate—the second fruit crop. Next season the bunches will be double the size, as the vine is strong and vigorous. No. 5, white, is from a two-year-old vine, its first fruit. It is not quite ripe. To give you nearly their relative time of ripening, I give the time each of them began to show color as follows: No 1 on July 2; Early Victor, July 7; Moore's Early, July 21; No. 3, July 22; and Concord, July 26.

We cannot in Kansas grow any of the choice hybrids or tender varieties as they universally mildew, blight, rot and winter-kill to such an extent that they are worthless in open ground culture. I do get a few bunches occasionally from Catawba, Iona, Delaware, Salem, etc., with the greatest care and protection. My experience for the last dozen years has been with seeds from the most hardy varieties calculated to succeed anywhere without mildew or blight."

REMARKS.—Early Victor shows fine qualities. Compact bunch, strong skin. Better than Concord for table and no doubt an excellent sort for wine, as Mr. Burr intimates.

No. 1, as stated, was too shriveled to enable us to judge as to its quality. We should say it is a very sweet grape. No. 2 also seems of a rich flavor. It is hard to believe that No's 1 and 2 are Delaware seedlings. They bear no resemblance at all to their parent. No. 4 (white) is sweet and delicious. The grapes, judging from bunches sent, are variable in size. It is hard to form any judgment that is worth anything from single specimens. The Early Victor, judging from what we see, will prove a valuable acquisition. All were received in good order.

Field Crops.

ABOUT SEEDLING POTATOES.

IT is incorrect to talk about hybrid seedling (so-called) Irish potatoes. All of our cultivated potatoes belong to one class—Solanum tuberosum. A new seedling is a new variety only. From some cause they seem to have become barren of seed balls; I think for the reason suggested in the editorial of July 14—want of pollen. I have been baffled in the same way. Garnet Chili and Brownell's Beauty are most apt to carry pollen. Occasionally a season comes when other varieties carry it. Ordinarily the flowers abort for want of it. I once had a seedling that ran to seed balls instead of tubers. If the wild potato from Colorado—Solanum Fendleri—could be used, a true hybrid would result. All my efforts in this direction in this climate are failures, usually for the same reason on account of which you failed. But there are others. I can furnish the seed of this potato for this purpose. Another climate might result more favorably. The tubers are not quite as large as hickory-nuts. The flavor and quality are good. The Pueblo Indians are very fond of them. They do not seem to be affected with Peronospora infestans—the fungus that causes potato rot. I fear any attempt to improve the size of the tubers by cultivation is likewise a failure; the plant does not seem to respond to improved conditions; still, further time may solve the problem favorably. D. S. MARVIN.

[We have always contended that the word "hybrid" ought not to be applied to crosses between varieties of the same species. But what we can't understand is that all new kinds are introduced to the public as being crosses between this, that and the other, when from 70 different kinds which we are now growing, we have not yet succeeded in procuring a grain of pollen. Again, we cannot understand how packets of "hybridized" seeds can be sold for 25 or 50 cents each by seedsmen.—EDS.]

Scientific and Useful.

LIGHTNING RODS.

IN the reply to W. S. on this subject, you say that it is a disputed question, "whether the discharge of lightning is conducted away on the surface, or through the body of the rod," and also "use no insulators." If the Editor who wrote the reply will study the principles of the "Leyden jar" and the "Insulated stool," as used in connection with the electrical machine, he will find that the capacity of the Leyden jar is in exact proportion to the surface covered by the tin foil *inside and outside*, and that insulation* is the only method known which will confine the electric fluid within any desired limits.

These two points comprise the main principles of lightning rods. There is no doubt that a conducting tube is much better than a conducting rod, as it has more surface, and that without insulation the electricity is very liable to be diverted from the conductor by any metallic body near its course, as nails, spikes, clamps or spouting, or by any *wet* surface, water being a natural conductor.

The popular idea is that lightning always comes down a rod, while the fact is that it as often goes up from the supercharged earth to a negative cloud. Electricity constantly seeks an equilibrium; when a cloud or the earth is overcharged it is said to be positive; if undercharged, it is negative, and a thunder storm merely restores the equilibrium, which lasts only until the friction of a cloud through the denser atmosphere creates an excess and then it unloads, often at the expense of any ill protected terrestrial object, or into a negative cloud, there being always a mutual attraction between positive and negative bodies. A tube of the same outside diameter as a rod has nearly twice its conducting capacity, because the inner surface is also effective.

Copper is the best conductor of electricity; it does not rust, requires no paint, is stiff in tube shape, and is only objectionable when cost is an object. In 1856 I put upon a building in Philadelphia six copper tubes six inches in diameter, arranged both as water and lightning conductors; the structure has never been struck by lightning.

Lightning will pass quietly and harmlessly down a rod which has a sharp point, but if the point is blunt an explosion takes place producing thunder and damage. Rods in time, after having received many charges of electricity, become melted at the point and thus blunted, and are then liable, with a heavy charge, to destroy the building, and in that condition are more dangerous than no rod, as they really attract the charge to the building.

One hour's time spent with an electrical machine, having Leyden jars, insulated stools, thunder house, connecting chains, discharging rods, electrometers, etc., will teach a thinking man more than half the books ever written on the subject, because every writer, with scarcely an exception, has a hobby of his own based upon theory and not upon experience. Sixty years ago my father was the only manufacturer in this country of philosophical instruments for colleges, and from the age of ten years I have been familiar with electricity practically.

I will conclude by giving the essential points in a safe lightning rod. First, a platina point, because it resists corrosion and intense heat better than any other metal; second, a copper tube, because copper is the best conductor and a tube gives the most surface; third, glass insulators, because glass is the best non-conductor; fourth, a termination in water or moist soil, because water is the best disseminator; and, finally, a straight, plain, perpendicular surface, to allow the lightning to pass off instantly, as every bend, twist or curve is only an impediment, liable to divert the fluid from the rod to the building.

Let it be clearly understood that a lightning rod attracts thunder clouds to a building which the building itself would not attract, and the necessity of a good and sufficient conductor is plain enough. A rod is a powerful attractor at all times, and if it is not a perfectly safe conductor take it down as soon as possible. S. RUFUS MASON.

Dodge Co., Neb.

* Note the care used to perfectly insulate telegragh wires.

REMARKS.—So little has yet been ascertained with regard to the nature and mode of action of atmospheric electricity that there is a good deal of room for differences of opinion on many points connected with it, and, in fact, we find wide variance in the views of the most noted electricians. While Sir W. S. Harris, perhaps the best authority on lightning rods, agrees with our friend, Mr. Mason, that extent of surface, rather than quantity of metal in the conductor, is the measure of its power, many other electricians hold the contrary opinion, so that among such conflicting views of those who have made electricity a special study, with all the advantages obtainable from the appliances mentioned by our friend, it is hardly safe as yet to dogmatize on the subject. For ourselves, after considerable study of the matter, we are decidedly of the same opinion as Mr. Mason, although we deemed it right to state, in the article referred to, that there are still doubts about the point on the part of those whose thorough acquaintance with the study entitles their opinions to respectful consideration.

The insulation of the rod from the building we hold, as stated, to be objectionable. Sir W. S. Harris, says:—"The practice is not only useless, but disadvantageous, and is manifestly inconsistent with the principles on which conductors are applied." Dr. Franklin says: "The rod may be fastened to wall, chimney, etc., with staples of iron. The lightning will not leave the rod to pass into the wall through the staples. It would rather, if it were in the wall, pass out into the rod to get more readily by that conductor to the earth." As to the insulation of telegraph wires, our friend seems to forget the vast difference between the tension of Voltaic electricity and frictional electricity, lightning being of the nature of the latter. It is a matter of frequent observation that whenever lightning strikes the telegraph wire, it jumps from the wire to the posts, frequently tearing a number of them to pieces, a fact that seems to be conclusive on this point.

The idea that lighting rods attract lightning or thunder clouds to the building to which they are attached, is opposed to the opinion of leading electricians and to probability. It is hardly likely that an agent which moves with such terrible celerity and force can be deflected from its course by a small piece of metal in the form of a conductor. With most of the other remarks made by our friend we agree.

NEW-JERSEY AGRICULTURAL EXPERIMENT STATION.

V.

THE following analyses of ground bone have been made from samples that are now in our markets, August, 1880:

	15.	29.	31.	34.	38.	41.	43.
Nitrogen in organic matter.....	2.45	3.29	.98	2.80	3.94	3.37	.74
Total phosphoric acid.....	19.10	26.25	9.55	12.45	23.84	25 50	31.34
Estimated value.....	$23.30	42.94	15.59*	24.86*	40.00	44.84	42.25
Market price.....	$38.00	38.00	32.00	32.00	36.00	44.00	28.00

* These samples are sold under the name of bone dust, and as such they have been analyzed and their values estimated. They really contain soluble phosphoric acid—31 having two per cent., and 34, 1½ per cent. of that substance. This variation from ground bone should be published in the manufacturer's statements of composition. When used in the computation of values, it brings their estimated values one or two dollars a ton higher than given in our table. Both these fertilizers have been widely sold, and largely and satisfactorily used.

It is probable that the manufacturers have put a little acid sulphate of soda in the ground bone to keep it from heating in the barrels or bags; and this has rendered the bone soluble, and makes it quicker in its action.

15. Crescent Bone, made by Lister Brothers, Newark. From stock of Elias Runyon & Sons, New Brunswick. Sample was taken by the Station, and it was in good condition.

29. Pure Ground Bone Fine, manufactured by Mapes' Formula and Peruvian Guano Co., 158 Front St., N. Y. From stock of A. Vermeule & Son, New Brunswick. It was sampled by the Station. In good condition.

31. Allentown Bone Manure, manufactured by the Allentown Manufacturing Co., Allentown, Pa. From stock of C. M. Norton, Hightstown. In good condition. Sampled by Geo. B. McChesney.

34. Celebrated Ground Brone, manufactured by Lister Brothers. Newark. From stock of C. M. Norton, Hightstown. In good condition. Sampled by Geo. B. McChesney.

38. Pure Ground Bone, manufactured by E. Wahl, Philadelphia. From stock of W. Fitzgerald & Co., Camden. Sampled and sent by S. L. Burrough, Merchantville. In good condition.

41. Pure Bone Sawings, made by H. Preston & Sons, Greenpoint, L. I. From stock of G. F. Doughton, Moorestown. Sampled and sent by John S. Collins, Moorestown. Condition very good.

43. Fine Bone Dust, manufactured at Peter Cooper's Glue Factory, 17 Burling Slip, N. Y. Sampled and sent by John Wilson, Middlebush.

Various.

FACTS AND OPINIONS.

DON'T kill that toad, my boy; like he looks an idle tramp, but is in reality attending closely to business and earns his board and clothes as honestly as you, and doesn't disturb the melon patches either.

Somebody claims to have produced a thrifty plant from a blackberry seed found in the stomach of a man buried one hundred years. I have seen Canada Thistles spring up thickly, without delay, in muck hoisted from the bottom of a bed ten feet deep. Let us not say farewell to the seeds of foul weeds that we plow under; we will soon see them again in another form.

Cyrus Dicks labored harder than any farmer in town all day blustering about the farm, all night borrowing money to carry himself through the next day. He began to shingle his house, and built a cumbersome scaffold on all sides, which was standing five years afterwards, with bunches of shingles unopened, and the roof still leaking. Gates were purchased, but never hung. Cattle browsed in the grain fields. Barn doors hung on one hinge. Forlorn children skulked about the apology for a home. The patient wife had long since been buried. When a man discovers that he lacks brains he had better give up farming. Cyrus might have succeeded in a grocery or a factory, as President of an insurance company, or a member of Congress.

Monroe Co., N. Y. CHARLES. A. GREEN.

The Black Rat of our Ancestors.

Seeing the article on this subject in the RURAL NEW-YORKER of July 14, it may perhaps be of some interest to your readers to know that this animal still exists in my house and premises. How he has escaped the almost universal fate which has overtaken his brethren I cannot say. He receives no protection from me, but is killed in common with the other rats. I am told that the number of brown rats killed greatly exceeds the number of black rats. Occasionally one has been caught alive to furnish a specimen for a naturalist. My house is very old, having been built in the reign of Edward IV., and it is evident that in the recesses of this rambling old place the black rat has managed to hold his own against the modern intruder. I have been told that a few are to be found in one of the old breweries in Loudon, but, with these exceptions, as far as I know, the rat of our ancestors has ceased to exist in this country.

Rothamsted, St. Albans, Eng. J. B. LAWES.

Everywhere.

RURAL SPECIAL REPORTS.

CANADA, Ilderton, Ont., Aug. 10.—The weather being favorable the harvest will be finished this week, and as considerable grain has been thrashed, we are in a position to form some estimate of the result of the season of 1880 from an agricultural stand-point for this section of the Province. Fall wheat is yielding remarkably well—from 25 to 40 bushels per acre. The average will be 30 bushels or over. The varieties mostly grown are the Clawson and Scott—the latter is generally preferred, it being a very good millers' wheat as well as hardy and prolific, the only objection to it being the fault of shedding easily in harvesting if left until ripe. A large acreage will probably be sown this Fall. Of barley a smaller breadth was sown than usual and the continued rains at the time it was coming through the ground seemed to give such a check to the growth that the plant looked yellow and stunted and never fairly recovered. Taking the small acreage and light crop in connection with the dark and stained color of most samples it is fair to predict a good price for the best malting offerings. Oats are very heavy and badly lodged and twisted. I never remember seeing such long heavy straw, but I doubt whether the yield will be proportionate. The Australian or White Mane seems to be the favorite variety. Spring wheat is a complete failure. This last season will have about finished the growth of this grain in Western Ontario. Why our farmers would persist for the last three or four years in attempting to grow this crop only shows how hard it is to move the agriculturist out of a beaten track. It is doubtful if Spring wheat for the last three years has, on an average, yielded seven bushels per acre. Of peas all that can be said is "Ichabod"—scarcely any sown. The bug has been so bad that our county councils are petitioning the Legislature to prohibit the growth of this legume for two or three years. Formerly it was one of our most profitable crops, not alone for its feeding properties, but more as being such an excellent preparatory crop for Fall wheat. The hay crop was large though much was spoiled by the continued rains at the time of cutting. This moisture helped the pastures considerably, though not the cattle grazing thereon. As a rule, steers (of which large numbers are grazed in this vicinity) have done badly and so have lambs; they are large enough but poor. The butchers inform me they have scarcely seen a fat lamb this season; sheep can endure any amount of cold, but can't thrive when their fleeces are saturated with wet. Roots are larger and better at this time of year than I ever knew, where the weeds have been kept down and thinning done at the proper season; but it has been a hard fight; the rains of the Spring and early Summer were

just what the weeds delighted in and the growth they made in a few weeks, where neglected, was sufficient to smother out any cultivated crop. As a whole the season of 1880 will be remembered as affording us crops above an average and as a season of encouragement to the farmer. R. G.

CANADA, Fernhill, Ont., August 6.—Except a few patches of oats everything has been harvested. Never was the harvest here got through in so short a time. Wheat is turning out extra-good in this and the other adjoining townships. A great deal of Winter wheat will be sown here this Fall. Wheat and stock-raising seem to pay best. There isn't much corn raised here, and no sorghum is grown. We raise only a small quantity of carrots or mangels, and not many beans. Peas are a good crop. Our seed is good, as we are careful not to use buggy peas. Summer-fallowing is practiced here with good results. We obtain better crops after it and it cleans the ground of all kinds of weeds; yet one of my neighbors never made a bit of summer-fallow in his life, still he always has good crops. This is the third year in which steam thrashing has been practiced in this part of the world—nearly all the old horse-powers have been thrown aside. J. M. W.

ILL., Ludlow, Champaign Co., Aug. 13.—The first half of July was notable for high temperature. On the 10th there was a heavy rain, which is the last of any account up to the present time. Since the middle of the month the temperature has averaged low for the time of year, with cool breezes and cool nights, fine for harvest work. Hay was saved in good condition and yielded about one ton per acre of good quality, and in this locality it is mostly of clear Timothy; a good deal has been saved for seed. Oats had lodged somewhat; the yield will measure well but will weigh light. Flaxseed was good, yielding from eight to 12 bushels of seed per acre. Thrashing is being rapidly finished. The self-propelling steam engine is the favorite power for thrashing. It is getting very dry for corn, and without rain soon late corn must be a light crop. Early corn would have been very good with timely rains, and will still make a fair crop; it is beginning to harden. Early potatoes are very good; late ones have been injured by dry weather and the blister beetle. No Colorado beetles have made their appearance this year here. Corn is worth 28 cents; oats, 18 cents; potatoes, 30 to 35 cents; apples, 45 cents; hogs, $4 50 to $4.75. There is a good demand for young cattle; calves four months old are worth $15 per head. Butter is selling at 12 to 15 cents per pound; chickens, $2.00 per doz. "G."

ILL., Naples, Scott Co., Aug. 9.—The weather here is very dry—no rain since July 2. The corn crop looked well up to the middle of July, but the dry and hot weather has about burned it up. The wheat crop this year in bushels is the largest ever grown, but the quality is not so good as last year. E. M.

ILL., Champaign, Champaign Co., Aug. 15.—We have a severe drought and need rain badly, which I hope we will get soon, and I think we shall, because it has showered south and showers usually work north, that is this way. B. F. J.

MICH, North Branch, Lapeer Co., Aug. 11.—The wheat crop is being rapidly thrashed out in this county. Steam thrashers are in operation in every direction, which do the work fast and well. One in eleven hours thrashed fifty acres of wheat with big straw, which yielded 917 bushels. It is not yielding as well as it was thought it would do before harvest, The weather was very rainy during the whole of the wheat harvest, therefore much of it was wasted in handling. Then again, some fields grew badly. I think there will be as much wheat in the county as there was last year. The number of acres harvested in 1879 was 40,420 which averaged 18 37 bushels per acre. According to the supervisor's returns there were 46,200 acres to harvest this year, but the average yield will undoubtedly be lower. Oats are heavy but badly rusted. Corn is doing well now. Potatoes are rotting in some localities. Fruits of nearly all kinds are very plentiful. Wild blackberries are so abundant that they are being sold at two cents per quart. In regard to fruit, this is surely a very favorable season for those on new farms, who have not yet had sufficient time to grow it. D. W. C.

MICH., Cleon, Manistee Co., August 9.—Crops of all kinds are good here—so good that I hear some asking, "What shall we do with the surplus?" They think there will be no sale for much of it at any price. Both Winter and Spring wheats are raised here; Winter generally does the best. It is now harvested and many have thrashed. It will average 15 bushels to the acre. Clawson and Diehl for Winter and Canada Club and Golden Drop for Spring are mostly raised. We had much rain in July, and considerable damage was done to hay and a few fields of wheat sprouted, because, having too much to do for the amount of help to be had, the wheat could not be cut at the proper time and in a proper manner. Wild berries of nearly all kinds are very plentiful this and nearly every year. Young orchards are coming into bearing. Apples, plums, cherries and the hardy kinds of grapes do well. Peach trees in the neighborhood bore well last season and this. J. S. G.

MICH., Ovid, Clinton Co.—Crops are looking well here. We have had plenty of rain this Summer. Fruits will be plentiful; but wheat is much poorer than was expected before the yield was tested by thrashing. M. A. S.

N. Y., Pitcher, Chenango Co., Aug. 16.—Take the season through, we have had dry weather, except a little while in July, when the weather was "catching." Prospects for Fall crops are not as promising as they were some weeks ago. If this community ever suffered more in one season with swarms of grasshoppers than they have this Summer, I have failed to find any old settler that could tell when. It seems almost impossible to shade the picture enough. The hay crop is reduced about one half, and although there was a heavy growth of oats, and prospects were never better than a few weeks ago, still the plague of grasshoppers has cut off a large percentage, a great many pieces being cut green which never will be thrashed. Many pieces of corn were cut as soon as the ears had fairly commenced growing. Fruit trees in many places have been stripped of their leaves, and hard Winter apples have been partly eaten. Many farmers in this valley are buying corn from Syracuse, by the car load, and are feeding cows now. Potatoes bid fair to be a fair crop, though but few are dug as yet. Apple trees are loaded to the fullest extent—the largest crop, I think, I ever saw. There is but very little wheat grown in this section. Farmers are selling good young dairy cows from $10 to $15 each. Butter crop will be very much reduced in quantity in this section. L. W. S.

N. Y., Royalton, Niagara Co., Aug. 11.—Wheat, oats and barley are good. Corn and potatoes are growing finely. There will be a good many apples, pears, plums, grapes and peaches in this county. Blackberries, strawberries and raspberries were very good and plentiful in their season. There were also cherries of several varieties; in fact, there is seldom any lack of fruit here, as this is a noted fruit county. The Beauty of Hebron is a first-rate potato, but not much earlier than Early Rose with us. Mold's Ennobled Oats yielded splendidly, but rusted badly. They and the cow-peas (which are growing luxuriantly and full of blossom and pods) were sown in the garden, and manured with rotted barn-yard manure and phosphate. The mangels are flourishing. None of the flower seeds germinated, excepting the aquileglas, which are growing nicely. A. S. B.

OHIO, Pitchville, Huron Co., Aug. 9.—We practice mixed husbandry here. Crops of all kinds are good; wheat good; oats fair; corn very good; potatoes good; stock of all kinds look well, and there is plenty of feed for even a long, cold winter. H. C. M.

TEXAS, Waco, McLennan Co., Aug. 6.—Cotton picking has commenced to a limited extent, but it will not become general for ten days or two weeks. During the latter part of July and up to the present we have had a superabundance of rain, and many fears were expressed that cotton worms would be the result, but the fears seem to have subsided with the rapid maturing of the cotton and continued absence of worms. This seems to have been the most remarkably seasonable year in Texas for a long time, and if no severe casualties occur to the crops from now forward, there will not be forces enough within the State to gather and save what has been made. I see it stated in some of the State papers that many counties are already preparing to send to Kansas and elsewhere for hands to pick the cotton. The corn crop is matured and ready for housing, and it is simply immense. A. S. S.

WASH. TER., Walla-Walla, Walla-Walla Co., August 5th.—This season has been dry and crops of all kinds are light. Grass-hoppers have been here for the first time, and they have done some damage in places—principally to gardens. White Club Wheat is grown here by everybody, and is sown any time. Fall-sowed wheat, with a good season, will produce 40 to 50 bushels per acre; Spring-sowed, 20 to 30 bushels. Last year we exported about 50,000 tons; this year we shall probably have not more than half that amount. Oats and barley yield well; but are only raised for home consumption. We have no use for rye. Corn does not do well. Potatoes and all vegetables do finely; usually we have a large surplus. Sorghum is not raised to any extent though it will grow very well. Fruits of all kinds do well. All the favorites of the Northern States are grown here—only there are no worms or diseases to hurt fruit here. The Winters are generally warm so that a severe frost will injure fruit here more than in colder climates, and this is the only trouble we have with fruit. J. F. W.

WISCONSIN, Bellefontaine, Columbia Co., August 9th.—Crops hereabouts are fair. Wheat is not quite an average. Oats are heavy. Early Amber Cane is grown quite extensively, and forms an important item in our farm products. Hay is short of an average crop. All roots and vegetables are good. H. F. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Velvet Grass as Fodder.

B. J. A., Cornwallis, Oregon, referring to that one of our "Brevities" in issue of July 3, which says:—"There are few grasses which are prettier in bloom than Holcus lanatus (Velvet Grass); it is a pity it is not as valuable for lawns or for cattle as it is beautiful and tenacious of life," inquires why Velvet Grass is not valuable for cattle.

ANS.—Comparing Holcus lanatus (Soft Meadow or Velvet Grass) with Timothy and Orchard Grass, we have:

	Albuminoids.	Fatty Matter.	Heating-Starch, &c.	Woody Fiber.
Holcus	11.52	3.56	39.25	39.30
Timothy	11.35	3.55	53.35	26.45
Orchard Grass	13.53	3.14	44.32	33.70

Stock are not particularly fond of it. It is too coarse and rampant for lawns, soon taking possession of the soil.

Hay Sheds.

J. M., Richmond, Ind., intending to put from 100 to 200 acres under Timothy for hay for market, asks what would be the best sort of sheds for preserving it, and the best kind of presses.

ANS.—For 100 to 200 acres of Timothy for hay the sheds should have a capacity for 400 or 500 tons, which would require about 400,000 cubic feet. A shed 100 feet long, 25 feet wide, and 20 feet high would hold about 70 tons of new hay, and it would be most convenient to build these in different parts of the farm: for instance, one on each 40 acres. It would be easier to take the hay press to the hay than to bring the loose hay to the sheds. There are several kinds of hay presses made, but those which bind with wire and use no sticks are to be preferred. The sheds may be made as follows: Posts of sufficient size and strength are planted in the ground, or mortised into blocks sunk into the ground; plates and cross-beams are fitted to the posts to support the roof. To prevent the side thrust against the posts of a large mass of hay as it settles, it would be best to support the roof upon truss beams which would hold the plates from being pressed out. A suitable form of truss may be made of plank 2x6, as shown in the drawing below. The beam is made of two pieces bolted together, so that it is four inches thick; or it

BARN TRUSS.—FIG. 275.

may be made of shorter pieces spliced and fastened with iron bolts, if long strips of 25 or 27 feet could not be procured. The whole is put together with bolts, and a strap of iron is bolted to both post plate and roof truss to hold the whole together and prevent spreading. The roof may be made of boards nailed to laths laid upon girths from one rafter to another, and if the boards are quite dry when used, the joints will need no covering, as the water will run down the edges and off from the eaves, and not pass through the close joints. Sheds of this kind may be made of any desired length, and may be added to at any time at either end by putting up more posts and roof. There is a sheet-iron roof which is much lighter and greatly more durable than boards which can be procured, and this is absolutely water-proof. No walls are required, and it is obvious that the wider the eaves the more hay the roof will cover. The truss is stiffened and strengthened by the three struts shown, and a few spikes may be used in addition to the bolts, to fasten the timbers together. Braces of plank (2x6) may be used to connect the trusses which rest over the posts to the latter, to make the shed stiffer when it is empty, and when exposed to the force of the winds. The cost of such hay sheds will be paid in a few years by the saving of hay that would be damaged if it were stacked.

Strawberries from Seeds.

V. R. H., Rylersville, N. Y., says:—"One year ago I saved some seed and sowed it in the nicest place in my garden, but no plants came up. I sowed the seed as I would onion seed, only that I did not cover it so deeply. The past Spring I thought surely I would hit the mark by sowing the seed in my hot-bed in drills, the same as tomatoes, etc., but I got no plants. Not discouraged yet, on the first of July I sowed more seed in two tin pans. I leveled the top smooth and sprinkled my seed on and covered it with a piece of old factory, did not put any dirt on the seed and kept it partly in the shade and watered well by pouring water on the cloth. The result I have so long looked for came at last. I have perhaps 500 or 1,000 plants, with leaves about the size of an old three-cent silver piece. So much for perseverance." And our friend asks how to treat the plants until Spring.

ANS.—Set them out in the open ground at once. Some will bear next year—all the year after. You should note those which grow feebly, those which sun-scald, those which bear pistils only. The first and second class may be cast out as not adapted to your location. The others, of course, would not fruit unless in close proximity to kinds bearing perfect flowers that bloom at the same time.

Blue Stem Wheat.

M. D. B., Bennett's Mill, Va, asks whether there is a variety of wheat called Blue Stem; if so, whether it is a Winter or Spring sort, and where it can be purchased for seed.

ANS.—Yes, there is a variety of wheat called Blue Stem, as might have been seen from its name occurring often in our crop reports. It is known by many different local names, such as Purple Straw, Flint, New York Flint, Durst, Gennessee, etc. It is a Winter wheat, with white chaff and smooth head. The straw is tall, but stands well. Near the head it is blue, hence the name. The grain is short, but plump, with very thin skin. The flour is of the very best quality, and the wheat always commands a good price. It is late, however, and, like all late wheats, liable to rust. It originated in Virginia, was thence taken to Pennsylvania, and again propagated throughout the South, frequently under the name of Pennsylvania Blue Stem. Any large seedsman in Richmond, Washington, or Baltimore should be able to supply seed.

Queries about Peach Trees.

O. S. B., Burdett, N. Y., asks, 1, are seedling peach trees hardier and better bearers than budded trees; 2, which are the hardiest and most profitable of the budded sorts; 3, what causes the leaves of some kinds of trees to curl up badly, and what is the remedy; 4, the leaves of some of his peaches turn yellow one year, and next year the trees usually die, and he inquires whether this disease is "the yellows."

ANS.—1, Not necessarily. 2, See separate answer next week. 3, It is thought to be a small, internal fungus. The remedy is a strong growth induced by good soil and cultivation. 4, Yes, the disease is very contagious and sooner or later the second tree would show the same disease.

Miscellaneous.

B. F. T., Cloverdale, Kan., being greatly troubled with asthma, and noticing in the RURAL the advertisement of Drs. Starkey and Palen asks whether we think the compound oxygen treatment they recommend, worthy of a trial.

ANS.—In our Southern trip last Spring we met three persons at Aiken, S. C., who were using the above remedy for weak lungs. They spoke of it as having benefited them. We should not care to advise in such matters. We believe the gentlemen to be entirely respectable. The writer of this has had at odd times asthma (or emphyzema, which is nearly the same) for years. He has taken all sorts of medicines and received attendance from not less than six doctors—all without any permanent benefit. He has experienced *relief* by the use of one remedy only, viz: a powder the smoke of which is inhaled after the powder is ignited. It is sold by many druggists under the name of Himrod's Asthma Remedy. We do not know Himrod, or that any such person exists. It is a downright "quack medicine," but we have more than once blessed it, when, during paroxysms of hard breathing, this has afforded relief in five minutes, in consideration of which we freely give Himrod, whoever he may be, this bit of *free* advertising,

L. R., Paris, N. Y. No. 3 is Clehorium Intybus. No. 5, is probably a Pyrethrum—not worthy of cultivation. No. 7 is Panicum sanguinale, common Crab or Finger Grass.

No. Hibiscus Moscheutos needs no protection. This is herbaceous. H. Syriacus is sometimes harmed. But we have never known it to be killed by winter. We have no experience with the other Hibiscus mentioned. Iris Lævigata is hardy. Glad you have succeeded in raising plants. It is a charming flower at its worst. There is no telling when the magnolia seeds may germinate—possibly a year hence. We regret having placed them in our Distribution. The Ipomœa leptophylla seeds should germinate in less than a month.

O. S. B., Schuyler, Co., N. Y., asks which are the hardiest and most prolific varieties of peaches for that section.

ANS.—For Southern central New York, to give a succession running through the usual peach season, we would recommend Mountain Rose, Early Crawford, Foster, Richmond, Old Mixon Free, Jacques' Rareripe, Stump the World, Late Crawford (on heavy soils), Hill's Chilli, and Smock Free. We assume that they are to be planted for market. If for home use our selection would be quite different.

H. E. B., Auburn, N. Y., has an apple graft one year old, that bore seven large apples this season. The graft is about 18 inches long, and our friend asks whether it is likely the bearing of fruit so early will injure the graft. Three other grafts of the same age bore three apples each.

ANS.—So much weight is liable to break the clon where it joins the stock. Probably they will bear sparsely for several years to come.

J. T. H., Tabo, Mo., asks, 1. the best and cheapest way of preventing ants from troubling flowers and plants; 2 the best and cheapest manure for flowers and house plants.

ANS —1. Flooding their holes with lime or carbolic water. 2. The liquid manure from the barn-yard so diluted that it is hardly colored.

R. M. T., Philippi, W. Va., asks whether lightning rods are of any real utility in preventing a house from being struck by lightning.

ANS.—See Mr. Rufus Mason's article on lightning rods elsewhere in this issue, and the remarks thereon.

J. L. E., Fulton, Mo., having a large artificial pond between his house and barn, asks what kind of plants would give it the most ornamental appearance.

ANS.—Something would depend upon the elevation of the banks of the pond above the water. Alders, the Laurifolia Willow (Salix pentandra), Rose of Sharon (Hibiscus Syriacus), Clethra alnifolia, most of the maples, liquidambar, Amorpha fruticosa and Lewisii, Ligustrum ovalifolium (California Privet), Yucca filamentosa, Azalea viscosa and nudiflora, High Blueberry and Black Huckleberry, elder, Iron-weed, Boneset, Aralia spinosa, Snow-drop Tree, Hibiscus militaris, dog-woods. There are hundreds of herbaceous plants suited to such a place, as Closed Blue Gentian, dog-tooth Violet, Lilium superbum, that would greatly add to the interest of such plantations. Such lake-bands are, indeed, the most suitable for "wild gardens." Among evergreens, we may mention the American arbor-vitæ, hemlock, cypress, Norway Spruce, and even Scotch and Austrian Pines. We have had such pines growing beside our own lake. They flourish admirably though suited also to the highest, sandiest locations.

J. W. S., Owensboro Ky., says that timber being scarce in that section, farmers are investigating the merits of barbed wire fence, and he asks what is our experience with that sort of fence; is it economical, and whether we know of any animals being seriously injured by its use.

ANS.—We have had no personal experience with wire fences; but a good deal has been said about them in the RURAL by those who have used them. We know of no cases in which an animal was crippled by contact with such fences; though we do know a few cases in which animals were hurt.

E. P. R., Reading Pa., and several others ask whether the American Book Exchange of this city is reliable.

ANS —So far as we now the firm is quite trustworthy and is filling all orders as rapidly as possible. Their sales, however, we are told, are so heavy that occasionally a slight delay is inevitable in sending the works ordered; but we are assured that the orders will be filled in due time.

I. W. C., Big Rapids Mich., asks what would be the price of a hand-power cider press.

ANS.—The Higganum M'f'g Co., Higganum, Conn., sell good presses of the sort for from $15 to $25.

M. F. McC., Darlington, Pa., sends plant for name.

ANS.—Ensienia albida. It belongs to the Milkweed Family.

COMMUNICATIONS received for the week ending Saturday, August 21.

J. W. S.—M. D.—C. C. Van H., thanks.—C. C. J. S. McC.—W. E. M.—A. M.—L. W. S.—G. E. M.—K. F. D.—F. H. D.—I. A. M.—A. S. B.—G. C. C.—C. L. C.—H. T. H.—J. S. G.—R. L.—A. M. G.—B F. J.—G. T.—E. W.—J. G. A.—D. H. H.—M. P. A.—J. E. S.—H. R.—W. L.—J. A. S.—J. J.—A. J. S. L. M. S.—M. H.—R. T. H.—K.—S. H. T.—A. B. A. T. H. M.—S. R.—A. B. A.—T. H. M.—S. R.—K. L. H.—T. O. M.—W. S. H.—H. R—T. W. L.—Mr. H. S.—J. B.—W. H. N.—A. I. E.—J. H. P.—A. L. J.—J. M. H.—H. D.—H. L. W.—R. A. W.—W. S.

Miscellaneous.

WHAT OTHERS SAY.

SORGHUM SUGAR-MAKING.

THE Elmira Farmers' Club discussed sugar-making at their last meeting and we make extracts from the most important part of the proceedings as reported in the Husbandman:

Mr. McKeel of Cayuga. At what stage of growth do you cut corn stalks to get the best results in sugar?

C. J. Reynolds. When the ears are nearly matured. Before they are dead-ripe and the stalks dry, of course, but when the grain is fully formed and so far advanced that it will ripen on the severed stalk.

Mr. McKeel. I suppose the right time to cut sweet corn, is when the ears are ripe enough to pluck for drying?

C. J. Reynolds. Yes, although the exact condition can be ascertained only by experiment. We shall know better about it when we are more familiar with all branches of the work. The time to cut Amber Cane is when the seed is black—when it is in the dough state. That is as near as we can now indicate the time when the juice will work into the greatest amount of sugar.

N. L. Higgins. Have you made any sugar?

C. J. Reynolds. Yes, the crude raw sugar—not in large quantities, but enough to show that only skill is required to get the sugar out of the juice. I had a barrel of molasses boiled down to nearly twelve pounds set away in my cellar, and there are now several inches of sugar at the bottom.

Ezra Loomis, of Bradford Co., Pa., Can you use anything more than the stalks—the leaves or tops?

C. J. Reynolds. Only the clean stalks are available. We shall try coarse alum this year to aid crystallization. Mr. Stewart's process was a great gain no doubt, but he has changed it somewhat I understand in the hope of making improvement. He uses now a solid compound more easily managed than his liquid preparation.

N. L. Higgins. Has alum been used for this purpose; and if so, to what extent?

C. J. Reynolds. It has been used at the West, but I do not know how much. Those who have used it say it leaves the sirup in better condition for crystallization, and that is a material gain if true.

N. L. Higgins. In your experience has the stripping of the leaves from the stalk been attended by any other advantage than reducing the amount of coarse material passed between the rollers?

C. J. Reynolds. Certainly; they are worthless for sugar-making, and would injure the products. The way to strip them is to pass along the rows and strike the leaves off with a light lath, making quick downward strokes. The tops can be separated best at the time of loading on the wagon. This should be done with a sharp knife to make the work easy. They should be cut six or eight inches below the seed. There is another precaution to be observed in the work. If the stalks can not be worked within forty-eight hours after they are cut they should be inverted, for standing on the top ends the tendency to oxidization of the juice in the butts is lessened. In cutting I would be careful to sever the stalks a few inches above ground.

Mr. McKeel. Why not cut at the ground and get the whole?

C. J. Reynolds. There is more earthy matter in the lower portions of the stalks, and this gives a hurtful flavor to the juice. For this reason the lower joint should be left as worthless. So with the tops, they are not worth working, for there is not only less juice in the stalks near the tops, but the juice is not so good as in the body below.

Samuel Hall. Is the refuse after passing the crusher good for anything as cattle food?

C. J. Reynolds. I think not. We have never had stock that would eat it. The leaves are excellent as fodder, and they make up an important item to the credit of the crop. I am speaking now of Amber Cane. It is possible that crushed corn-stalks might be eaten by cattle, but as I have had no observation in the case, I cannot say whether they have value or not. Now is a good time to remove the suckers, a very important matter, for after suckering the stalks grow stronger and work up with more profit.

Ezra Loomis. You think it necessary that the stalks should be worked within forty-eight hours of the cutting?

C. J. Reynolds. Yes, by all means, if possible.

President McCann. Has the seed of Amber Cane any value for feeding to cattle?

C. J. Reynolds. Yes, it makes good food when ground.

Mr. Goddard, of Bradford Co, Pa. How much good syrup do you expect to get from a ton of stripped cane?

C. J. Reynolds. Forty, or forty-five gallons of sirup weighing eleven pounds.

Mr. Goddard. What is the estimated cost of manufacturing after the machinery is on hand?

C. J. Reynolds. That question I cannot answer for I have not advanced so far in the business as to gather up details of information embracing the cost as applied to such quantities as should be worked to give profit. A cord of good, hard, dry wood will reduce two hundred and fifty gallons of juice to dense sirup.

Ezra Loomis. You would run the evaporating pans night and day, I suppose, when there is enough cane to keep them employed.

C. J. Reynolds. Yes. The pans we have will reduce about four hundred gallons of juice in a day and night, making, say, eighty gallons of molasses.

STEAM CULTIVATION.—We have made mighty strides in steam cultivation since the first Carlisle meeting of 1855, says the London Chronicle, but we think it is a happy coincidence that the second Carlisle show has made of steam cultivation almost as prominent a feature as was bestowed on the former occasion. In fact, we have taken a new departure, and on the silver medal by the Society being presented to Messrs. M'Laren for their improved Darby digger, we have the promise of tilling being conducted more in future on the principle of Mr. Hoskyns. He pointed out that the mole, by the action of its claws and the fine mold left behind, affords an example for the imitation of the steam cultivator. Mr. Darby, of Chelmsford, a few years since, went out of the usual track in devising a steam digger, which works more according to this principle than any other of the steam cultivators previously devised.

To whatever extent the Darby digger may be improved, we think Mr. Bailey Denton a little too sanguine in hinting at the bare possibility of British farmers being enabled through its aid to get over their difficulties, and compete successfully with the occupiers of virgin soils on the other side of the Atlantic. We cannot forget that in whatever degree this or any other improved appliance of a mechanical nature may enable us in England to decrease the cost of production, the same appliances are open for adoption to foreign and colonial agriculturists, who, in addition, have unbounded, resources in free, untaxed land.

SILK-WORM RAISING IN PENNSYLVANIA.—The Philadelphia Press, as we learn by the Prairie Farmer, is authority for the statement that about 60,000 silk-worms are at work on the farm of Frank Graff, in Birmingham, Delaware county, Pa. The worms are in charge of a young lady living at Mr. Graff's. When the eggs are hatched the creatures are as fine as a hair, and have to be lifted around with a camel's hair brush. But they are voracious feeders, and it is no light task to keep them supplied with mulberry leaves. Their growth is very rapid, in six weeks' time reaching their full size, nearly three inches. When the whole herd is engaged in feeding, the noise made by them is like rain falling on a roof. While feeding the worm is of a light green color and as soft as velvet to the touch. Along the body are nine small breathing holes. The insects have strong, serrated jaws which soon make their way through a leaf. The silk while in the worm is a gum which is exuded in two strands. These unite and form one thread of silk. The worm in starting its cocoon first makes an outer covering of floss silk. Within this they spin the silk, bending the head and body up and down and crossing to every side, entirely surrounding the body as a protection against wind and cold. The intention of the insect is to make a covering for itself, and it has little thought of the tens of thousands of gayly dressed women for whom it is weaving rich and durable attire. The cocoon made, the worm passes into a chrysalis state and comes forth a moth fly to lay eggs and die. If the silk grower wants the eggs he allows the insect to go through all these stages, but if he wants the silk, he chokes the worm while in the chrysalis state, for if it is allowed to eat its way out the thread of the silk is broken and valueless. The chrysalis is killed by heating it over a fire, or throwing it into boiling water.

A CORRESPONDENT of the Mark Lane Express (London) makes comments upon our last crop number, from which we take the following:

"A special number of the RURAL NEW-YORKER, filled with crop reports, came into my hands the other day. It gives, to begin with, nearly a column of headings, generally of the most startlingly sanguine description. 'Wheat a splendid crop, the largest ever produced! Ohio, Indiana, Minnesota, Illinois, New York foremost. Kansas disappointed. Corn (maize) an immense crop, the heaviest ever raised. Oats, a fine crop everywhere. Barley probably 50,000,000 bushels. Rye, good everywhere;' and so on. The reports themselves do not seem to me fully to bear out these 'booming' announcements."

As "startling" as were the headings, we think that results are showing that they were in the main quite to be trusted, and as for the reports not bearing out the "headings," we know that our critic is mistaken, inasmuch as all the reports were thoroughly analyzed under the three different headings of "good," "middling," "bad," and the result honestly summarized in our headings and editorial.

I AM more and more convinced, as my years increase, says Mr. Mechi, of England, that my war against excess of fences and trees is a just one, and still greatly needed, and, in fact, indispensably needful now we have, as agriculturists, to compete with every foreign source of food supply.

THE BIG HORSE.—Our trans-Atlantic cousins are nothing if not great in everything, says the London Live stock Journal. But there is no denying the fact that the perception of the modern Yankee is keen, and that he possesses the perseverance necessary for experimenting upon a "notion." He talks "tall," and loves to do "tall" things; and the love of praise is as great with him as of the "almighty dollar." The American breeder has improved on the Short-horn, the Hereford, the Ayrshire, the Jersey and the Holstein breeds of cattle, not to mention his efforts in the ovine and porcine families. But he has conceived a new idea, and there is no doubt it (his latest creation in the equine species) "licks creation"—if true. The Norman-Percheron is in great favor in the States, but the stock-breeders' love is divided. Some prefer the Clydesdale for draft and agricultural work; but a new horse has turned up which puts all other dray-horses out of court. The big thing this time is a big cart-horse, standing 20 hands one inch high (or 81 inches), and is said to weigh about 3,500 pounds. It is said he was bred in Ohio from native stock, and is well proportioned and healthy, English horse-breeders must therefore look to their laurels, or the Yankees will be getting as high prices for their draft-horses as they do for their Short-horns.

"Now, with regard to Alsike Clover," says a writer in the Germantown Telegraph, "I can say that I have as fine a stand as I ever saw on upland now in bloom, and my bees are on it by thousands gathering the rich nectar so abundantly furnished them in this, one of Nature's richest honey-plants. And now, while I am writing, my Italian bees, as well as my neighbors' bees of the native or black race, are working on the Alsike Clover by thousands, and storing honey of the richest quality quite rapidly."

A QUEER DECISION.—Judge Biddle, of the Philadelphia courts, has decided that a retail dealer who sells oleomargarine need not deliver a label with it stating that the compound is oleomargarine, adding that the intention of the Legislature in using the words "stamped, marked or labeled," in the act regulating the sale of oleomargarine, was only to affect wholesale dealers.

CATALPA.—The seeds came from the Department of Agriculture at Washington. Since writing his report Prof. Beal says the trees have twice borne fruit and prove to be the hardy species or variety. Since they came up and have made their present growth they have passed through two of the severest Winters, when the mercury went 32 and 33 degrees below zero. They were once killed back a little, but at present they seem healthy.

[Young trees of this Catalpa (speciosa) have stood 15 degrees below zero at the Rural Grounds without any harm.—EDS.]

EARLY AND LATE SOWING OF WHEAT.—The farm manager of the Ohio State University writes to the Ohio Practical Farmer as follows: "In the wheat crop of '79 we commenced a series of experiments designed to ascertain the proper time for sowing wheat in this neighborhood. Five sowings were made on bottom land, one each on the 9th, 16th, 23d and 30th of September and 7th of October, in plats two rods wide by 40 long, containing one-half acre each. The variety of wheat used was Clawson, and it was sown at the rate of six pecks per acre. The result was as follows:

That sown Sept. 9 yielded	33 2-10 bush. per acre
That sown Sept. 16 yielded	30 5-10 " "
That sown Sept. 24 yielded	38 4-10 " "
That sown Sept 30 yielded	32 7-10 " "
That sown Oct. 7 yielded	26 2-10 " "

The first two sowings were perceptibly injured by the fly. These experiments were continued in the crop of 1880, by making ten sowings on the same dates as those of 1879. The variety of wheat used was Silver Chaff, sown at the same rate per acre as before. The result was as follows:

That sown Sept. 9 yielded	32½ bush. per acre
That sown Sept. 16 yielded	33 " "
That sown Sept. 23 yielded	33½ " "
That sown Sept. 30 yielded	29½ " "
That sown Oct. 7 yielded	26½ " "

In this we found no indication of the fly.

HORSE TROTS AND AGRICULTURAL FAIRS.—Mr. Alexander Hyde has the following to say on this topic: We hear farmers sometimes complaining of our agricultural fairs, and refusing to attend them because they are managed by horse jockeys and have degenerated into agricultural horse-trots. There are some societies of which this complaint is too true, but there are others whose fairs are conducted by farmers, and the horse is given a just proportion of premiums on his merits as a horse, and not solely on his trotting powers. We dislike the betting, drinking and other concomitants of the race-course as much as any one, but if this evil has crept into any society it is the duty of farmers to attend the annual meetings and root it out. If they will turn out in force at these meetings, they will find themselves in the majority and can regulate things to their mind. If the experience of the past is any criterion by which we can judge of the future, a pure racing association cannot long be sustained. We have known a good many race-courses started, some of them in opposition to cattle shows and farmers, fairs, but we have never known one to flourish long. The fast men know that in order to succeed they must graft the racing on an agricultural fair, so as to give it character, just as a circus is attached to a menagerie. It is for the farmers themselves to say whether their fairs shall be run down by racing and pool-selling. Majorities rule, and there can be no question that if the farmers' are united and rally to the annual elections of the societies, as they do to the political elections, they will find themselves managers, not subordinates. In any event, it is not worth while to succumb without trial, and give up an institution to jockies which properly belongs to farmers.

BRIEFLETS.

MAJOR FREAS says:—"A number of dwarf pear trees now in full bearing and in good health, growing in his grounds, were planted in 1847, when they were not less than three years old. The dwarf Tyson is his best pear except the Seckel..... W. F. Brown, it appears, has also tried Mr. Gregory's Marblehead Sweet-corn. He tells the Ohio Farmer that it proved to be "the earliest of all, being ready for the table in nine weeks from planting." Our report was 61 days.....We have had more potato beetles this season than ever before..... In all of Prof. Beal's experiments with root-pruning corn, wheat, etc., the results were a diminished yield—while the plants were checked in growth..... Prof. Husman, in the Rural World, in a reply to Mr. J. J. Thomas who is opposed to the use of wine in any form or quantity, says: "We have no right to forbid its moderate use to those who feel themselves refreshed and invigorated by an occasional glass." But it always invigorates and refreshes for the time. That is its dangerous quality. It is that which, as soon as the effects of one glass pass away, induces people to drink a second and a third. It is that, in short, which leads those to drunkenness who cannot control their appetites. ..... It is about time to bud peach trees. Have you any sound, young peach trees about your homes that bear poor fruit? A little trouble now may change the poor fruit to the best that grows in your neighborhood. .....The Minnesota State Fair to be held at Minneapolis, September 6, offers over $3,000 to be divided among Jerseys, Holsteins, Herefords and Short-horns. Between Percherons and Clydesdales, over $1,000 will be distributed in premiums.....A correspondent of the London Gazette says that he sowed this Spring two beds of onions, each eight yards long by one wide. On this ground, immediately before sowing, he dug in at least 15 cwt. of unmixed poultry manure (as much as a strong mule could draw), and the onions now are looking magnificent. As this is over 200 tons to the acre, it is an exceptional dressing, and he owns he is himself surprised to find it did not kill the onions..... We learn from many of our Missouri correspondents that fruit of all kinds is thus early a glut in the market.....The political situation as described by an enlightened press: Hancock—is no better than he should be. Garfield—is a good deal worse than he ought to be. English—is several degrees removed from what he might be. Arthur—is where he ought not to be. The latest ticket out, and one which, although cavlare to the general, bids fair to become quite as popular as any other in the Presidential field is:—For President—General Indifference. For Vice-President—General Apathy.- Puck.....It is remarkable how smart a woman is discovered to be after her husband has been nominated for President.—Cincinnati Sat. Night ....The growers of pot-grown strawberry plants now present their announcements in our advertising columns ..... Mr. Munro, of Georgia, fattens his pigs on sweet potatoes.....A Maine fancier has a three-legged hen that can scratch her head and a flower bed at the same instant... ....Mr. Hovey, of Boston, tells the Gardeners' Chronicle, of England, of "the very great beauty" of his golden-leaved variety of Magnolia acuminata, some of the leaves being conspicuously yellow. It is more showy than any golden-leaved tree he knows of. It is an accidental seedling of the Cucumber Tree now about 10 feet high—vigorous and beautiful.....

CATALOGUES, ETC., RECEIVED.

ILLUSTRATED Catalogue of the Columbia Bicycle, manufactured by the Pope M'f'g Co., 87 Summer Street, Boston, Mass. It will be forwarded to our readers who forward a three cent stamp.

Balmy sleep, good digestion, rich blood, elastic step and cheerfulness in Hop Bitters.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

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THE RURAL NEW-YORKER,
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"THEY DUG THEIR GRAVES WITH THEIR TEETH."—This was long ago the declaration of an eminent physician in regard to the majority of those who die prematurely. Every observing physician of the present time is aware that there is a vast amount of disease which is the direct result of over-eating. Part of this over-eating, perhaps a large part, is pure gluttony; but there is a still larger proportion which is due to bad cooking. When our food is in great part indigestible, the unsatisfied craving for nutriment tends constantly to cause over-eating. The great bulk of the food thus taken into the stomach affords no support to the system. But it is not harmless. It cannot be digested, but it finds in the moisture, movement and warmth of the intestines all the conditions of rapid putrefaction, and this putrefaction, constantly going on within the body in contact with actively absorbent surfaces, is a most fertile cause of ill-health. Women who wish their husbands and children to live long and enjoy life should train themselves well in the science and art of cookery.

HOW TO INTEREST THE BOYS.

IT has been a subject of frequent discussion, how to interest the young folks in agriculture. Doubtless much of the importance given to this subject has been gratuitous and undeserved, for the natural succession of the young men to the farms and labors of their retiring fathers, does not seem to go by default, excepting in those places where there is nothing to be gained by the hardest labor but the hardest kind of a living from worn-out and infertile fields. From such farms the young men naturally enough escape to the fertile West, but upon those where fair industry returns a bountiful reward and every comfort surrounds the homestead, there the young men remain and continue the work which has been begun by their fathers. But there is a method of making farm life attractive to boys, and of interesting them so much in rural affairs, as to draw them to the farm again in mature life, it may be after years of absence while engaged in prosperous business in cities. Such a method has been put in practice by that exemplary institution known as the Elmira Farmers' Club. This club has offered prizes for the best plot of corn planted and tended wholly by boys under 16 years of age. The competition thus entered into by a large number of farmers' boys, has created unusual enthusiasm and may prove to be the turning point in forming the courses of their future lives. When boys of 16 attend a farmers' club as the most interested of visitors, it may be safe to set it down that those boys will be farmers, and probably good, solid, enterprising and successful ones. It is an example for the widest imitation. Boys become such men as they are made by the circumstances into which they are brought. It would be a fortunate thing for farmers, if there were more such exemplary farmers' clubs as that of Elmira.

AGRICULTURAL DISTRESS IN IRELAND.

THE effects of the recent distress among the tenant farmers in Ireland promise, or threaten, to reach much further than could have been expected. The result may be a radical change in the method of government in England at an earlier date than could have been thought possible before the late trouble fell upon that land of troubles, Ireland. A temporary relief from utter ruin through the enforced claims of the land-owners for rents due by impoverished and starving tenants, and from the danger of legal eviction from their homes, has miscarried by the rejection of a measure for that purpose in the House of Lords. The Lords are the chief land-owners, and they have selfishly claimed their rents, their "pound of flesh," as it may really have been in many cases, without abatement from the ruined tenants. In cases of non-payment the tenants are turned out of their poor cabins, and left homeless as well as penniless upon the world.

Happily we in free America have no adequate conception of the dismay and utter ruin which an eviction for non-payment of rent brings to the tenant and his helpless family. Mothers and children turned out of doors have perished by the wayside while the father has been vainly looking for shelter, and none but that of the grave has been found. Such occurrences, by no means infrequent, have created the bitterest feeling, not only in Ireland, but in England, and the effect will surely hasten the time when the inevitable destruction of a hereditary and aristocratic form of government will be accomplished. Every popular reform has been fought out by the people in the teeth of violent opposition by the House of Lords, and the revolutionary question "Of what good are the Lords, anyhow," has been heard in England before now; while now it has given place to threats of the destruction of this hereditary form of government which is antagonistic to popular reforms and popular interests.

FLYING ANTS.

THESE are a great nuisance in a house, but we do not know that they infest buildings except finished in a particular manner and standing on a sandy or light gravelly soil.

A few years ago the writer put up a cottage on sandy ground sloping to the south. The basement was a kitchen and cellar, open on this side, but walled up against the bank on the north, and partly on the east and west sides. Sleepers were laid on the ground for a floor, the space between them cemented, and then the whole boarded over with matched inch pine stuff. We did this to prevent mice or rats from getting into the rooms.

The second year after the cottage was built flying ants bred in great numbers, early in July, between the floor boards and cement, and as they could escape in no other manner into the open air, they eat their way up through the boards, and swarmed thickly over the whole kitchen, and so continued for nearly a month. We endured this for three Summers, thinking their breeding there only temporary; but finding it was to be continuous, we took out the board flooring, the sleepers between the cement, and the cement itself. We then cemented the space anew, let it dry well, laid new sleepers on this, and boarded over with new boards. This allowed plenty of room for future ants to escape from under the board floor, and we have not been troubled with them since. We cannot say whether they continue to breed there, as we do not see them now, but presume they do.

At the same time we erected the cottage we put up a barn near-by, also on a sandy soil. The underpinning of this is two feet high, which raises the floor that much with the thickness of the sleepers above the ground. Ants sometimes appear here, but, as there is plenty of room for them to escape into the open air, they only remain a few minutes on the floor, and then entirely disappear, flying off.

Twenty-six years ago we erected a large building for manufacturing purposes. The basement floor of this was laid precisely as the first was for our cottage, except that we used two-inch oak plank for the flooring, instead of inch pine boards, but the ground on which this stands has a mixture of clay in it, and either for this reason or some other, ants have never appeared there.

THE CHICAGO CORNER IN PORK.

FOR the last two or three weeks there has been a good deal of excitement in the Chicago pork market, the transactions in which greatly influence those in other cities also, the Western metropolis being far away the greatest hog-packing point in the world. The prices of mess pork, the supply of which is necessarily limited, have been steadily advancing there of late, not a little to the satisfaction of the farmers in the tributary territory, but much to the disgust of a number of dealers who had sold the commodity "short." The policy of an operator of this sort is to sell a product of which he has none on hand, to be delivered at a specified date at a fixed price, the transaction being based on the expectation that in the meanwhile he will be able to buy the goods at a lower price than that at which he has agreed to deliver them. It will, therefore, be readily seen that in the produce market the interests of the man who sells short, or of the "bear," are always inimical to those of the producer, inasmuch as the former's success depends on depression of prices, and that of the latter on their appreciation. The farmer's sympathy is, therefore, pretty certain to be on the side of the "bull" in all transactions of this sort.

Probably the largest "short" operator in the Chicago pork market is Asa Dow, who, some time back, sold 15,000 barrels of mess pork "short," at about $10 per barrel, and as the market advanced above this figure, he has been increasing his margins to meet the difference between the ruling rate and that at which he had bargained to deliver the pork. Early in the week pork reached the highest price of the season—$16.95 for September pork—and on Thursday Dow, acting doubtless in accord with other operators in the same plight, refused to "put up" any more margin, on the ground that the quoted price of pork was fictitious, the advance being due to the manipulations of a clique who had formed a "corner" in that commodity. It is estimated that there are not more than 150,000 barrels of pork in the Chicago market, while it seems probable that 400,000 barrels were sold "short," and as the prices at other centers have gone up in sympathy with those at Chicago, the "bears" are likely to be nipped severely, especially as the supply of mess pork is comparatively limited at other points, and the manipulations of the "corner" have most likely been extended to other centers also.

The chief engineers of the corner are Armour & Co., the largest pork packers in the country, and so extensive, it is said, is their control of the mess pork in the market that they can run up the prices almost indefinitely, and thus force the "bears" to pay them and the other members of the syndicate an exorbitant difference between the prices at which they sold "short" and those ruling at the time of settlement; for in such cases the goods sold are seldom delivered, the difference between the ruling price and that for which the goods were sold being generally paid instead. It would greatly help the bears if they were permitted to fill their contracts with summer-packed pork, but the keeping qualities of that are generally so unreliable that it is not considered "regular," and a proposition to make it so last Monday was voted down by a large majority of the Board.

Of course, transactions of this sort are of the same nature as gambling, and the losers never deserve and seldom receive much sympathy. Objectionable on this account as are such dealings in railway and other stocks, they are still more reprehensible in food, for in the latter case thousands in this and other lands suffer from the unscrupulous greed of these speculators. The reported losses of Mr. Keene and his associates on account of their late corner in wheat, will probably prevent others from entering upon so hopelessly large an undertaking as to obtain control of our vast wheat crop; and the lesson the "bears" are now getting in the pork market may have somewhat of the same salutary effect.

BREVITIES.

IT seems that the black rat of our ancestors still lives in the mansion of Dr. Lawes of Rothamsted England. See his note.

OUR engraving of Mr. M. B. Batcham is an excellent portrait. It was drawn from a card-photograph kindly furnished by Mrs. Batcham at our request.

MR. H. STEWART tells us of a cucumber which he has raised 30 inches long. The variety is that known as Gen. Grant. He says that in addition to this remarkable length of the fruit, the vines are very prolific. This is probably owing to a very favorable season. Our own experience with these long cucumbers has been that they are not worth cultivation.

MR. C. C. GEORGESON, a graduate of the Michigan Agricultural College, and for the past two years one of the editorial staff of the RURAL NEW-YORKER, has been elected to fill the chair of Professor of Agriculture in the Agricultural and Mechanical College at College Station, Texas. Only the friendliest relations existed between Mr. Georgeson and his associates of the RURAL Office, so that it is with all sincerity that we wish him a full measure of success in his new field of labor.

A WELL-KNOWN writer and nurseryman and a true friend to horticultural progress, writes us a letter from which we take the following note: "I note your editorial complimentary to F. L. Stewart, in last issue. But what did you think of Ohmer's article on the Gregg Raspberry in RURAL, Country Gentleman and Tribune all at the same time? This sort of thing has become such a fashion of late that I hesitate about writing anything for the press, for sometimes it is impossible to do so without commending something and laying myself liable to be charged with attempting to serve personal interests, a desire to avoid which is ever uppermost in my mind. I am glad to see you and Horticola are settling down to the facts on the *staminate* question, and regret my Jotting could not have appeared at the same time. It would not look so much like 'following suit.'"

THE gold wave which flowed in upon us to such an unprecedented extent last year, is again approaching a flood. Gold is pouring in upon us from foreign countries this year, although not to so large an amount as during 1879. With a large balance of exports over imports; with abundance in our barns and granaries and with gold coming from abroad and an enormous production from our mines, it certainly does seem as though the condition of the country should be satisfactory to the most exacting citizen.

A NOTED entomologist, referring to Mr. Marvin's articles on "Our Insect Enemies," in the last two issues of the RURAL, writes us:—"The subject is one of much importance and one in reference to which scientists differ widely, perhaps on account of the fact that so little is known about it. The articles may be useful in calling attention to the topic and in bringing out the observed facts and opinions of others. The idea of one man inoculating the locusts with "yeast poison" reminds me of the old lady's attempt to keep back the ocean with a mop. If the Missouri ran only yeast it would not suffice for that purpose. The propagation of fungi in insects depends very largely on climatic conditions."

LOSS OF LARGE FULL-GROWN ANIMALS.—It is astonishing that people will continue to ship those across the ocean, after the repeated losses for years past in transportation. Out of eleven highly valuable Clydesdale horses recently shipped at Scotland for the United States, four were lost on the voyage. This is only one specimen of dozens of similar losses that have taken place this year, and more particularly among the fat cattle shipped for England. As these are not so well stalled on board ships as horses, the percentage of loss is greater among them; so great sometimes as to be more than the profits realized on the animals surviving, after being sold in the English market. Is there no humanity left in the hearts of shippers for the poor, dumb animals?

NOW that our foreign grain trade has become so enormous and promises to maintain its present proportions, it becomes a very serious problem how the ocean carriage of grain can be made safer than it is. More grain-laden ships are lost than any other kind, and this seems to be unavoidable while grain is carried in bulk. The shifting of a cargo during a storm throws a vessel on her beam ends; a leak causes the grain to swell, which bursts the ship, and no art of the shipowner can stow a cargo of grain so as to hold down the enormous weight when the ship rolls and pitches in a heavy sea. For the four years past, the recorded losses of grain ships has been 32, with 250 lives, and 1,500,000 bushels of grain. Here is an opening for inventive genius to provide a secure method of loading such ships.

RED BERKSHIRE SWINE.—The National Live Stock Journal says that a Mr. Miller of Iowa, has a large herd of these, and realized in July for a lot of 60 head, sold in Chicago, ten cents per 100 pounds higher price than was obtained for any other fat swine on the same day. The lot averaged, at one year old, 365 pounds each. We should like to know what authority Mr. Miller has for calling his swine "Red Berkshires;" for none purely red were ever bred in that district of England to our knowledge; but the original Berkshires were a red ground, well spotted with black. Are not these Miller swine simply "Jersey Reds;" such as have abounded a long time in the State of New Jersey, and are now spreading elsewhere? These are marked like the original Berkshires, are of larger size, coarse in the bone, with great flop ears. They are a thrifty, hardy race, and attain heavy weights at an early age, but do not fully mature till two to two and a half years old.

"THE system of ensilage has but one enemy to fear, and that one is the scientific agricultural writer, who knows nothing by practice concerning it, but who sees a great revolution in agricultural methods impending, and who wants to hang on to the car of progress, so that when the result is achieved he may claim credit for advocating a new system, which his crude, impractical and theoretical advice only seemed to delay and endanger." Thus writes Mr. John M. Bailey, in the columns of a respected contemporary, in opposition to a correspondent who ventures to oppose some of his statements. The "system of ensilage has one" other "enemy to fear," we opine. It is the statements of a man, who, riding upon the ensilage hobby, introduces to the public Blount's White Prolific Corn as a new variety of his own, charging three times the amount per bushel for which it can be purchased in the market, and appropriating the RURAL NEW-YORKER'S engraving as his own picture of this new variety, to which without any right whatsoever he gives the name of Mammoth Ensilage Seed Corn! This reckless appropriation of the variety of corn to produce which cost Prof. Blount no little labor and care, to say nothing of the equally flagrant use of our engraving as his own, is apt to beget in the public mind grave doubts of anything the offender may say with regard to ensilage. *Falsus in uno falsus in omnibus* is a pretty correct old adage.

WE publish the following, with much pleasure: "I am sorry to learn that by inclosing in a letter to you a brief statement or two in regard to corn sugar, you have so far mistaken my purpose and motive as to suppose that I intended to give your readers simply a rehash of matter which had appeared first or simultaneously in other papers. You do me a great wrong. It is true, indeed, that the very brief statement which you published did appear in three or four newspapers about the same time—and that it came from me; but it was intended to correct a tissue of misrepresentations and mistakes which were being industriously circulated to the disparagement of the Department of Agriculture. I deemed it a fitting introduction to the series of original articles, which in good faith I proposed to furnish you for publication solely in your paper, and which in like spirit, I doubt not, you wrote me your desire to accept. The statement bore upon its face the evidence of being a copy, but perhaps I did not say so—and thus blunderingly exposed myself to your criticism. Your remark in the column of "Brevities" is just and wholesome in its application to a certain scalawag method of advertising occasionally prevalent, and to those who practice it, but do me the credit of believing that those remarks do not apply to me either in the "present" or any other "instance."

F. L. STEWART.

Literary Miscellany.

BOOKS.

THEY came into my dwelling, one by one,
Each a most welcome, and an honored guest,
I never was so sad they could not cheer,
So weary they did not bring me rest.

They bear grand names, these quiet friends of mine,
And yet they scorn no lowly household nest;
They care but for appreciation, love,
To him who gives them these they give their best.

The evening comes, my daily task is done,
From household cares my hands at last are free;
The children in their bed, the father gone
To battle with the world for them and me.

Then turn I to my guests, and lo! they wait
For me with smiling faces, words of cheer
To make the burdens of the day seem light;
The dear ones I have served seem yet more dear.

They sing grand songs, they paint me pictures fair;
Tell of heroic deeds, by land and sea;
Of lofty castles whose now crumbling walls
Were once the pride of ancient chivalry.

Perhaps Sir Walter's magic mirror shows
Some gallant knight contending for a prize,
With all the fire and force of one who knows
His efforts watched by bright, approving eyes.

Perhaps a sadder scene—that plumed head
Upon some fatal field is lying now;
No mimic warefare this, in which he dies,
No "queen of beauty" crowns him victor now.

I leave the "Wizzard of the North" awhile,
Here is another guest that I like well:
Let others criticise, I love the hand
That wrote so tenderly of "Little Nell."

Her beauty, and her worth, we knew by heart;
And of her weary pilgrimage below,
While the same hand that made her seem so sweet
Drew us to pity poor "know nothink" Joe.

There is another, yes, I like him too
With his half-kindly, half sarcastic air,
He introduced me to "Pendennis" once,
And took me for a stroll through "Vanity Fair."

Recalling to my mind another "Fair,"
Bunyan describes its vain, delusive gleam,
That brave old pilgrim who, long years ago,
Reached the "Celestial City" of his dream.

The hand that gave us "In Memoriam,"
And he who wrote of sweet "Evangeline,"
Seem clasped fraternally, although I know
They dwell in different lands, the sea between.

Others I see, the witty and the wise,
Who, even in childhood days, were my delight.
They have not lost their charm; but it grows late,
And I must bid my pleasant friends "good night."

WINNIE'S FORTUNE.

"MAMMA, Mr. Harcort has really come."

"Has he? How do you know?"

"I met him just now in the High Street; he is so brown, and—oh, dear! I've forgotten to get that wool for Maud; I must run back at once, or it will be too dark;" and away scampered madcap fourteen-year-old Hettie.

No sooner was the door closed behind her than Mrs. Maitland fell into a fit of musing, and the work on which her busy fingers had been employed lay unheeded in her lap.

She was the mother of a large family with three marriageable daughters. Like all mothers she was anxious to see her girls comfortably settled, and here was the chance of a most suitable match for one of them.

David Harcort was a young man of irreproachable prospects. At five years of age he had succeeded to the family estates. They were heavily encumbered, it is true; but by judicious management during the long minority of the young heir, every claim had been paid off, and a goodly sum in ready money had accumulated as well.

His visits to Westford had hitherto been but short-flying ones, lately, however, a rumor had gained ground that he was coming to take up his abode permanently at The Grange, and as the house had been undergoing considerable alterations, the report appeared to be not without foundation.

Consequently, Mrs. Maitland pondered and planned. David Harcort would certainly make a most desirable son-in-law, therefore Mrs. Maitland considered herself justified in trying all means in her power to gain him for such a relative. And if he did not succumb to the belle-like charms, the *petite* figure, the pink-and-white complexion, the rosy, pouting lips of fair-haired Lina, surely—surely he must lay down his arms before the dark eyes and queenly grace of stately Maud.

Major Maitland should call upon him soon, too. Yes, that must be the first step, and then? why she had better fulfil a long-standing promise and give a party. Both the girls were young enough and fresh enough to look well by daylight, but still it was the best way of getting on friendly terms; and besides there were several society debts to pay off.

Here the good lady's planning came to a full stop.

"I will consult Winnie," she remarked to herself; and even as she was saying it the door opened and Winnie entered.

Winnie was plain; there was no denying it. She was not attractive beyond a pair of earnest gray eyes, and an abundance of soft brown hair. Not being ornamental, it had been taken for granted that she must be useful, and therefore from her earliest years upwards she had been accustomed to exercise her fingers and thoughts for the benefit of those about her.

Very speedily Mrs. Maitland unfolded her projects, that is to say, she informed Winnie of her party-giving intentions, and casually mentioned that when papa called on Mr. Harcort, if he approved of him, he might be invited to the proposed festivity.

Whether Winnie's shrewd common-sense enlightened her as to her mother's harmless little scheme it is impossible to say, but she entered with pleasant alacrity into all the arrangements for the unusual gaiety.

After comparison of dates and possible engagements, it was settled that the 10th of January would be the most convenient night for which to issue invitations.

"And now as to your dresses," said Mrs. Maitland. "It is a long time since you have had new ones, so we really must manage the expense."

"Let me see," mused Winnie, "pale blue suits Lina better than any other color. Suppose, mamma, she had a pale blue crepe; and Maud always looks well in amber and black. She might have black net, with amber trimmings."

"Yes, that would do nicely; we will see what they think. But you want a fresh one, too."

"No, indeed I don't. I shall iron out my grenadine—it is only crumpled, not torn—and do it up with bows of coral-pink ribbon."

Mrs. Maitland gave utterance to a few feeble protests, but her objections were soon overruled.

Somehow, Winnie not sharing her sisters' dower of beauty, her attire had never seemed of such grave importance as theirs.

Major Maitland, instructed by his wife, paid a visit to The Grange, and brought back a glowing account of its young master. An invitation was accordingly dispatched, and promptly accepted.

The day of the ball came. Lina's blonde tresses had been in paper till the eventful dressing hour, and Maud had been closeted with the dressmaker all the morning. Winnie flitted hither and thither, ornamenting the rooms with flowers, constructing cunning little arrangements in the way of muslin drapery, setting out the supper-table, and keeping a general supervision over servants, children and confectioners' men.

"Winnie, child, come and put my cap straight," called out Mrs. Maitland over the banisters, as Winnie, grimy and disheveled, hastened up-stairs to put herself into company order.

"For goodness sake, Winnie, come and tell me if my hair does," frantically exclaimed Lina, appearing at her bedroom door.

"And then I want you to fasten my tie-backs, Winnie, there's a pet," cried Maud from within, for she and Lina shared the same apartment.

Having performed these and various other little duties required of her, Winnie hastened off to array herself in her own finery.

The rooms were already well filled when *the* guest *par excellence* of the evening arrived.

He was greeted with a beaming smile by his hostess, and after the interchange of a few polite remarks, she led him to where Maud was holding mimic court.

"Mr. Harcort—my eldest daughter, Maud—Mr. Harcort."

David bowed low, and hoped that Miss Maitland's engagements would allow him the honor of a dance with her.

The next was a quadrille, and this Maud graciously accorded him.

They were at the last figure when he suddenly addressed his companion:

"I am most lamentably ignorant of the names even of my neighbors in Westford. Will you tell me who that young lady is, seated on the opposite side of the room?"

"Which one do you mean? There are several sitting there."

"The one in pink and white, talking to an old lady in black satin."

"Oh! that is my sister; my second sister, Winnie."

"Indeed. May I ask for an introduction presently."

"Certainly."

"Winnie, Mr. Harcort wishes to be introduced to you."

Winnie was listening with praiseworthy patience to old Mrs. Armstrong's rambling account of her last attack of rheumatics. She flushed a little as she turned and encountered the intent scrutiny of a handsome pair of hazel eyes.

One of Strauss's divine waltzes sounded an irresistible invitation to all lovers of the Terpsichorean art, and Maud's partner came to claim her.

"Are you engaged? Can I have the pleasure?" said David to Winnie.

"No—yes," she answered, laughing, and took his arm.

At that moment a servant approached and whispered to her that she was wanted in the kitchen department immediately.

"Will you excuse me, please?" she asked, withdrawing her hand.

"Really it is too cruel to desert me so soon," he returned, in an aggrieved tone.

"I am sorry; if—if you mind——"

"*If* I mind!" he rejoined, tragically. "You add insult to injury, Miss Winnifred."

Poor Winnie's cheeks burned most uncomfortably, as she flew down-stairs to rectify some domestic misadventure.

When Mrs. Maitlands aching head was laid on her pillow it was with the satisfactory reflection that Mr. Harcort had been most attentive to Maud and Lina, though which had particularly struck him it was hard to say, as he had appeared equally agreeable to both. David sent his carriage back unoccupied, preferring his legs to any other mode of locomotion.

"No, she's not exactly pretty," he soliloquised thoughtfully, puffing at his cigar, as he walked along the frost-bound road; "but she's ten times better than pretty. The other two are thoroughgoing beauties, but there is something wonderfully captivating about her. How bewitching she looked, too, when she blushed. Well, I'll wait a month, I won't do anything rash before, and then—and then——"

Two days later Mrs. Maitland and her two eldest daughters were at work in the drawing-room, when Mr. Harcort was announced. Mrs. Maitland gave him a most cordial welcome, and the young ladies' smiles were sweet and ready. Yet David did not seem quite satisfied. He watched the door anxiously, and listened eagerly to every footfall that crossed the hall outside.

"Miss Winnifred is well, I hope?" he said, presently.

"Oh! yes; she is out in the town now."

Shortly afterwards he took his leave, resisting the many pressing inducements to stay and partake of afternoon tea.

He advanced as a plea for his refusal a business appointment with his steward. But the importance of this interview apparently diminished when he got out into the street, for he sauntered slowly along, carefully scanning every passer-by of the gentle sex.

At sight of an approaching figure in a fur-trimmed paletot and brown felt hat, his pace quickened.

"I am fortunate," he said, lifting his hat. "I have just left your house."

"Have you," observed Winnie, her color unaccountably deepening.

"I hope you were not very tired after your exertions the other night," he said, turning to keep at her side.

"Me tired? Oh! no," she answered, in surprise, as though fatigue were a sensation unknown to her.

The red-brick house, with the old-fashioned bow-window, was reached all too quickly, and with a close clasp of the hand David wished her good-bye.

"Save me!" he muttered, stalking briskly away, "I'm afraid I shan't last out the month. I was sorely tempted to say something then. I suppose it's a judgment on me for making fun of love at first sight. Well, if knowing the feeling is my punishment, I've had my deserts at any rate."

"Please Miss Winnie, you're wanted in the drawing-room."

It was the tenth of February, a chill, drizzling day, and Winnie was giving one of the children a music lesson on the battered old piano in the school-room.

As she entered the drawing-room a gentleman moved from the window and advanced towards her.

"Ah! Mr. Harcort, how do you do? You—I—Jane told me I was wanted," faltered Winnie; in some confusion.

"And Jane spoke truly, you are wanted."

"Am I? Who wants me?"

David did not answer at once. It is a trying moment when a man is about to put the happiness of his life to the test—to lose all or gain all.

Winnie watched him slightly surprised. His manner was rather peculiar she thought, for no faint glimmer of the truth had yet dawned on her.

"Have you not the least idea who wants you?"

Her astonishment increased. She retreated towards the door.

"Yes, mamma I expect; I—I will go and see."

He caught her hands quickly to detain her.

"Winnie my darling, it is I who want you. Oh! don't send me away with my life hopeless my love unsatisfied."

She lifted her eyes to his. She saw the love-light shining in them, and her own dropped lower and lower, while a great wave of crimson surged up into cheeks and brow and neck. There was just one ineffectual struggle for freedom, then her glowing face was hidden on a strong man's shoulder, and a low voice was whispering sweet secrets in her ear.

* * * * * * *

"Mamma, I have some news for you."

Mrs. Maitland's interest was immediately aroused.

"Well, dear, what is it?"

"Young Harcort is here; he has been speaking to me."

"Yes?"

"About what do you suppose?"

"About one of the girls, of course, though really I don't know which. He has not been long making up his mind certainly; we have only known him a month."

"Which one do you imagine it is?"

"I have fancied that he inclined to Maud, and she is the eldest, so it is only right she should be married first."

"No, it is not Maud."

"Not! Well, Lina will make a charming little matron. Dear child, I must go to her at once."

"Stay a moment, Ellen. You are not right yet; it is neither Maud nor Lina."

"Neither Maud nor Lina? What—what—Why, Robert, you don't, you can't mean that—that it is Winnie?"

"Yes, it is Winnie."

Mrs. Maitland sat speechless with amazement. Her two handsome daughters passed over, and plain, unattractive Winnie chosen. It was incredible, almost beyond the bounds of belief.

"I always knew," said the major, after a few minutes' pause, "that Winnie was a dear, affectionate girl, and that if she hadn't good features, she had a good sound heart, and I always expected some day some one would find it out, and want to take her from us, but like you, my dear, I never thought *that* would be till the other two were married. I am afraid we have been underrating her."

Mrs. Maitland made no reply; she could not rally her senses quite yet.

"I deferred giving him a positive consent till I had spoken to you, though I told him I thought you would approve. You do, do you not?

"Yes; oh! yes," answered his wife, with the calmness of a great surprise still upon her.

"Then I will go and relieve the poor fellow's suspense; he is waiting in the study."

Mrs. Maitland sat trying to recover her scattered senses, when the door was noiselessly opened and a slender, gray-clad figure stole softly in. A penitent, beseeching face was laid on her shoulder.

"Mother, are you very much disappointed?"

"My dear child, I am very glad that David Harcot has chosen you. He will make a good husband—true, upright and faithful; and no man could desire, no man could have, a better wife than my little Winnie, though I do not know what we shall do without you, or how we shall be able to spare you. Kiss me, darling, and then we will go down and ask him to stay to dinner."

AGENTS.

VELENA.

"Of Them There is no Lack."

IT had been my hope that with the coming of "dog days" there would be a stopping off of agents who go hawking through the country with wares of little or no value, for sale.

Wares your better judgment tells you you do not want but which are set forth in such glowing terms that you wonder how you have done without them. Even in the face of previous bitter experience one is often induced to buy and frequently after having seen a mere sample.

A short time since two men purporting to come from Chicago were offering fancy toilet soap at half price. Being victimized to the extent of one box, that now is shriveled to a hard, dry, salty, distorted mass, when an agent comes along wanting to sell a superior article at a low figure, I have only to think of my "box of soap" and occasionally exhibit it. Some are inclined to argue the case but the sight of that soap has had such an effect upon me that arguing is of no use. However I am inclined to think that that one purchase was a saving investment. This much it has at least proved to me, that men do not hire fine establishments and dress in fine clothes and ride about the country to sell better goods at lower prices than can be had of residing merchants, druggists or grocerymen. Reason teaches that the articles must be paid for or stolen, the establishment costs and the fine clothes do not grow spontaneously, and the men are not going to squander their time or waste their talent for nothing. What they want is your money; they are not interested in you; it is their own dear self in whom all their interest centers; and that interest consists in getting all the loose change into their own pockets. They have not the slightest idea of giving you value received for your money.

Recently an elegantly dressed lady representing a charitable institution had for sale some jewelry claiming to sell it at a great sacrifice for the benefit of this Institute; and so sweetly, so smoothly could she address one that many sensible people were ogled into buying. The gold turned out brass and the people, too late, found they had been swindled. Had they taken the facts into consideration they would have known there was something wrong. Goods cannot be sold below cost without a loss unless they are of a class that can be easily adulterated.

The fact is if we do not care to be imposed upon we must not allow ourselves to be flattered into buying, especially what we do not want, merely because it is cheap.

We must be "wise as serpents and harmless as doves," with agents, peddlers or whatever name they may be called.

When younger than now it used to make me uneasy to listen to these apparently wholesome truths told by the genteel traveler and know I had not means to help relieve suffering humanity; and I fear too many have similar feelings. For how often the honest hardworking woman feels herself grow contemptibly small before an oily-tongued vender of useless wares because she cannot for "sweet charities sake" (as he represents it,) buy a half dollars worth. Did we but know the truth of his story with what different feelings would he go away from our door.

And anon this traveler has labor-saving machines, or perchance is soliciting subscriptions for a valuable work now in the publishers hands. His whole story is summed up in your behalf; for your good; solely for your interest according to his way of putting it. Now why is it that he, a stranger, takes such deep interest in you. He whom you never saw before and probably will never see again. Simply because he wants the money in your pocket put into his own.

It is easy to tell another what they ought to have done; one can even think for himself afterward; but it is quite another thing to know at the moment what to do or what to say when sentences full, round and glowing are overwhelming you. We are simply overpowered and upon the impulse of the moment allow goods to be sold to us, or subscribe if orders are being solicited and afterward bitterly rue the day and the hour that found us so weak.

Strong men as well as weak women are also victimised, and is there no way in which we can combine to abolish, to annihilate this daily growing nuisance, if not really evil?

NANKEEN.

OF all the cotton produced in China, the most remarkable, as well as the most beautiful, is that used in the fabrication of the calico known in Europe under the name of nankin or nankeen. It has been long a matter of debate whether the texture called nankeen was manufactured from a raw material, having, previous to any manipulation, the yellowish hue which distinguishes it, or whether it owed its peculiar shade to a light dye.

M. Van Braam, who was at the head of the commercial mission sent out by Holland to Pekin in 1794, had been instructed by the European merchants to request that the nankeen destined for their different markets might for the future be dyed a deeper color than they had been for some time past; and he had an opportunity during his stay of ascertaining that the color of these textures was natural to the raw material, and not subject to fade.

Sir George Staunton, one of Lord Macartney's embassy, found, on going through the province of Kiangnan, that the cotton it produces is naturally of the yellow color, which it retains after spinning and weaving. He also says that when the nankin cotton is transplanted to another province it degenerates and becomes white.

We saw, in the environs of Shanghai, cotton trees with yellow down growing in close neighborhood with white cotton-trees, the latter, however, being much the most numerous. There were some, also, producing a down of an intermediate shade, but it appears that the yellow cotton prevails most on the banks of the Yang-tse-klang, in the environs of Nankin, and on the borders of the great canal. Its color is attributed by many to the oxide of iron contained in the soil where it grows, and this would explain its being subject, when transplanted, to degenerate and produce white cotton.

Ilocos, one of the provinces of the Philippine Isles, has likewise a reddish cotton named coyote, a still deeper color than that of Klang-nan; and the plant, like that of China, deteriorates when expatriated, and produces a white down but, on being restored to its native soil, is again covered with red cotton.

From every opportunity of comparing, on the spot, the color of the calico of Nankin and of Ilocos with that of the raw material, we were compelled to draw the same conclusion that it was natural, and to admit, as a certain and indubitable fact, the pre-existence of this shade in the thread employed by the weaver.

The cottons of Hayti, of Caraccas, of many parts of India, and especially of Purneah and Orissa, as also the cottons of Egypt, present a hue which closely resembles that of the Nankin cottons, and which would probably remain in the unbleached manufactured article.

BOREL AND COURVOISIER WATCHES.

Among the finest watches of Swiss manufacture are the "Borel and Courvoisier," which have been made by the firm whose name they bear since the year 1850, and during all the space of time which has elapsed since that date, have been proved to be most excellent and perfect-working time-pieces The first medal awarded to a foreign watch manufacturer was given to these watches at the Great World's Fair, held in the city of London in 1862. They also received the highest awards at the Centennial Exposition in 1876, and that of Paris in 1878. The decision of the judges at the Centennial Exposition signed by their chairman, Judge J. C. Watson, was as follows:

"The undersigned having examined the product herein described, respectfully recommends the same to the United States Centennial Commission for Award, for the following reasons, viz.: The excellence of workmanship in the manufacture of watches and pocket chronometers, of which five were accompanied by the transcript of the records of their trial at the Observatory at Neuchatel, officially verified, showing that their adjustments are good." Signed: J. C. Watson.

The award given them by the Paris Exposition was the highest given—the gold medal. The superiority of the Swiss watch-makers in the work they turn out has been acknowledged by nearly all of the Sovereigns of Europe. They have made watches for the crowned heads of France, Germany, Austria, Prussia, England, Italy, etc., and in fact supplied the world with the works of their genius, and in their turn these same monarchs have at times, by the conferring of honors and princely gifts, shown their appreciation of the talent, enterprise and industry of the hardy, free-born Swiss artisan. At the Paris Exposition, one of Switzerland's sons, Louis Andeman, was decorated with the Grand Cross of the Legion of Honor. These things show how unjust is the attack made upon the product of these same workmen, who on the contrary should receive the praise and justice due their manufacturers.

All Americans, however, are not so prejudiced, and the majority do not indorse such a senseless attack upon goods which, of their kind, are without a superior. Writing from Athol, Mass., under date of February 20th, 1880, Mr. D. J. Wandell, for example, in a letter to Messrs. Quinche & Krugler, No. 17 Maiden Lane, this city, agents for Borel & Courvoisier watches, in speaking of these latter, says: "A people (the Swiss) so exquisite in nature and capacity, and the very pioneers of the finest styles of mechanism, do not deserve to be run out of the market quite yet, and indeed cannot well be dispossessed of their ancient and well-earned fame for reliable and finely finished time-pieces. Even the gold and silver of their cases are better than those of the American manufacture. The machine method of Americans does well, and they can produce good time-keepers, but I have a Waltham ($75) watch, and a Swiss ($50) watch, the latter is far preferable to the former. The Waltham regulator put to its utmost of slow has gained right along 2 minutes per day. The foreign watch is true to the slightest variation and runs steadily on time."

Mr. Pearce Rogers, of Wine Hill, Morris County, N. J., writes: "I tender you my hearty gratitude for the excellent time-keeper with which you supplied me. After a trial in severe heat and cold, I am satisfied that the watches of Borel and Courvoisier are all that you claim for them, and in my own chronometer the variations from the regularity of the heavenly bodies has been so slight as to be not worth mentioning."

These two are but samples of hundreds of letters of similar import from all parts of the country addressed to Messrs. Quinche & Krugler, indorsing the Borel & Courvoisier watches. For years we have used these watches largely in our premium lists, and do not remember to have ever received a complaint of their "working" from any one of the hundreds who have obtained them through us, while we have received very many praises of their excellence stronger than even either of the above.

To be happy, the passions must be cheerful and gay, not gloomy and melancholy. Hope and joy, are real riches. Fear and sorrow real poverty.

BRIC-A-BRAC.

HAVE YOU?

Have you ever helped the drunkard
To become a sober man?
If you have not, from this moment
Do for him what e'er you can,
He's your brother—though so fallen—
And his "keeper" you should be;
Talking, coaxing, helping, loving,
Is the work for you and me.

EXAGGERATIONS.

A family while at the breakfast-table one morning pledged to observe the strictest veracity for that day. A member of the family tells the "consequences."

As a first-fruit of the resolve, we asked the one who suggested it:

"What made you so late at breakfast this morning?"

She hesitated, began with, "Because I couldn't"—and then, true to her compact, said, "The truth is, I was lazy and didn't hurry, or I might have been down long ago.

Presently another one remarked that she had been very cold, adding, I never was so cold in all my life."

An inquiring look caused the last speaker to modify this statement instantly with, "Oh, I don't mean that! Of course I've been much colder many times, and I don't think it was so cold, after all."

A third remark to the effect that "Miss So-and-so was the homeliest girl in the city," was recalled as soon as made, the speaker being compelled to own that Miss So-and-so was only rather plain instead of excessively homely.

So it went on throughout the day, causing much merriment, which was good naturedly accepted by the subjects, and giving rise to constant corrections in the interest of truth.

One thing became more and more surprising, however, to each one of us, and that was the amount of cutting down which our most careless statements demanded under the new rule.

LIFE.

"We live but one life here," he said;
"The soul needs love, the body bread."
So to the needy and the poor
He gave, nor turned one from the door
That asked admittance to his heart.
Each, with a blessing, did depart.
This man will find, when death arrives,
He's lived a part of many lives.

WANTED TO SEE THE EDITOR.

A man on the cars was offered a newspaper. He took it, looked at the heading, and then threw it aside with disgust, and remarked:

"I don't want news from that paper."

"I supposed everybody read it in these parts," I answered. "Has it been pitching into you?"

"Pitching into me? Great Cæsar! I should think it had. But you just let me meet the editor of that paper."

"You never make anything by striking an editor," I said; "better grin and bear it."

"Yes, that's all right for you to say; but just let me meet that man! I'll show him how to run a newspaper."

"What did he do?"

"Do! He did a deal. Here's how it is: I often go up to Springfield in the evening and come home on the first train in the morning. Well, one night I met an old crony, and we went to the music hall and the theatre. When we came out we met some friends. Of course I could not get right out, so I treated; in fact, we were having a pretty good time, when some fellows came in and tried to raise a row. In less than no time the police were in and had us. The next morning I was hauled before the court and fined $7.40. I did not care much, because I gave a false name, and I knew my wife couldn't find it out; but the very next morning I'll be eternally confused if that paper didn't have it all in, and my name, too."

"Did your wife see it?"

"I should say she did."

"Did she make a fuss?"

"Fuss! Godfrey Elihu! Are you married?"—Rural World.

Sum up at night what thou hast done by day,
And in the morning what thou hast to do.
Dress and undress thy soul; mark the decay
And growth of it. If, with thy watch, that too
Be down, then wind up both. Since thou shalt be
Most surely judged, make thine accounts agree.
—George Herbert.

A very grand head is Gambetta's. The lines are ample, and express power at its ease. About the temples and over the eyes the development of the forehead is abnormal. Gambetta's superiority is not of a kind to awake jealousy. It is very manifest, but it is so unalloyed with egotism, and it is so softened by good-fellowship that a man of talent, who feels small in the presence of the great tribune, does not, for that, feel humiliated. Gambetta enjoys companionship more than "society," as "society" is understood in our time. He likes clever women if they are unaffected, and he does not believe a woman's conversation can charm a man of intellect unless it is the outcome of much study, observation, and long-sustained mental efforts. The professional beauty would be nothing to him unless her loveliness were lighted up by wit.

"If we know when friends around us
Closely press to say "Good bye,"
Which among the lips that kiss us,
First beneath the flowers should lie,
While like rain upon their faces
Fell our bitter, blinding tears,
Tender words of love eternal
We would whisper in their ears."

Life's evening will take its character from the day which has preceded it; and if we would close our career in religious hope, we must prepare for it by continuous religious habit.

For Women.

CONDUCTED BY MISS RAY CLARK.

OVER THE LEFT.

EDGERTON.

"Well, Jane, it really does appear
That everything goes wrong?
I've pulled and tugged at that old brute,
For I can't tell how long,
And now I've got to grind the knives,
Whatever else betide,
And toddle over to the branch
And lift the old beast's hide."

"It's just too bad! and I can't see
Why we should have such luck—
The only decent cow we had
Fast in a mud-hole stuck!
It's true the crossing needed work,
Was sorely out of fix,
I'll go to-morrow, if I live,
And patch it up with sticks.

"If this were all, I might not growl,
But bad luck ever comes
Not singly, but in pairs, you know,
As do the "wild-goose" plums.
And neighbor Jones who just passed by,
Leaves word with Agnes Thorne,
That wayside stock are ravaging
That bottom field of corn.

"I told our boys a month ago
Just how this thing would be:
But that is all the good it did,
They pay no heed to me!
To-morrow, if I live, I'll go
And mend that broken fence,
But this, for all our wasted corn
Will poorly recompense.

"But worse than all our other luck,
And hardest yet to bear,
Is that misfortune of last night,
The loss of our best mare—
Our trustful friend throughout the year
In every time of need,
The ever-faithful one to work
And willing for her feed.

"I'd like to see the sneaking thief
Who rode that beast away,
Hung high and dry to some stout limb
Hard by the public way!
Let him a warning be to tramps
Who prowl our country o'er
On evil purposes intent,
And beg from door to door.

I'll go to-morrow, if I live,
Down to the hardware store
And buy a good stout bar and chain
And lock the stable door—
It might have been as well, perhaps,
Had this been done before,
Since now the horse is stole, and gone
What need to lock the door?

"It does seem, Jane, that we are blessed
With every kind of luck!
Our crops destroyed, our horses stole,
Our cattle in the muck!
And I don't seem to understand
Why such should be the case;
I've lived an honest upright life
And no man fear to face."

"Come, David, now I'd not repine,
What is to be, will be,
The fates work out their own true ends,
Despite of you and me;
We'll change this luck, I'll warrant you,
Before we're ten day's older,
By looking at the next new moon
Over the other shoulder."

A WOMAN'S WANTS.

Mrs. A.—ran in just now to ask if I could give her a few hints with regard to fall dresses. May and Lulu are going to a select school this fall, and their wardrobe needs replenishing.

Said she, "let us look over your papers and magazines. Mr. A. thinks he can only afford the local weekly paper, and I go out in public so little, that I do not know what is or is not fashionable. When I try to dress the girls, I have no idea what to buy or how to make it up, and the consequence is I pay twice as much as I need to for material, get it made in some odd fashion that we never like, and so at an extra cost, we manage to look as outlandish as possible."

"I know just how it is," I said, "and we who take one of the fashion magazines, and several other papers with the local paper, are but a little better off." But, gathering up a package of papers I sat down.

"Here are the fashion cuts, let us look at these first," I suggested "Party dress, pink satin with overdress of lace" "pshaw! Let's look farther, "dinner dress—black satin and brocade front of shirred satin—&c., &c."

We tossed the magazines one side and taking up the Rural I turned to that sure of some practicable suggestions. "Brocaded foulard," "Surah in all colors," "Heliotrope-colored cashmere," woolen crape, ashes of roses," well! we laid down the Rural, also, for what *foulard*, or *surah*, or *crape* were we did not know, could not buy them at our country stores anyway.

So I put aside all the papers, set my wits to work, and with our own ideas we planned an outfit as circumstances required and means allowed, but it led me to wonder if papers could not give each week a few hints serviceable to us farmers' wives; as to kinds of material, colors—giving an explanation of the color not simply the name which is usually in French, and conveys no meaning to us; the kind of lace or other trimmings used, cost etc., etc.

Also hints as to making up lawns, ginghams, etc., all and any idea which a farmer's family could find practicable.

The lists of short fashion notes are the most practicable, usually, if they describe the more inexpensive materials, which come within moderate means.

I think people of wealth and fashion seldom refer to papers or magazines for fashions, but depend more upon their dressmakers, who follow latest *Paris* fashions. Farmer's Wife.

[We are glad to know of the wants of our friends, and shall endeavor to profit by the above suggestions and supply the needs of those in moderate circumstances, and have not the opportunity of visiting neighboring cities. By way of explanation of former fashion reports; the presumption was that ladies would wish to be informed of the latest and fashionable goods and styles, and also their proper names. Descriptions of the simpler materials have at times been given.

"Brocaded foulard" is a figured silk, soft and thin.

"Surah" is a soft twilled silk.

"Heliotrope-colored cashmere" is a woolen material, the color of the beautiful flower that adorns most of the rural gardens.

"Crape" is a thinnish material having a curled appearance.

"Ashes of roses" is a peculiar shade, having the appearance of a combination of pink and brown] R. C.

REST AWHILE.

I never knew many lazy women in any walk of life. Sometimes a young girl will be lazy, but she usually gets over it with added years. Most women go to the limit of their ability, and then see enough beyond which they seriously believe they ought to do, which would take another woman's full time. A morbid conscience will set these sins of omission in such order before a woman's mind sometimes that life is robbed of all its sunshine. Or a censorious neighbor will so goad on the lagging energies that the whole machine at last must come to a final crash.

Many a young wife and mother owes her death to the sharp tongue of some iron-clad woman among her kindred.

Any jury who understood the case would bring in a verdict of "murder in the first degree." All who have helped to "hunt down," so to speak, a feeble woman of their acquaintance, calling her "lazy and inefficient," and pitying her family because of it, can have the happy consciousness that they have done their share in placing her in her coffin, or sending her to an insane retreat. "Man's inhumanity to man" cannot begin to equal "woman's inhumanity to woman" very often, especially in communities where "work" is the enthroned deity.

When the industrious woman feels these "lazy fits," as she calls them, coming on, when the pulse beats low and the step loses its elasticity, when she doesn't even "care much" what Mrs. Blank says about her housekeeping—she may know it is nature's warning signal bell, telling of "breakers ahead." Her choice must be between a little rest now, or total wreck by-and-by.

"Come apart and rest a while," were the loving words of One who "knoweth our frame" to His tired followers. He says the same now to many a toiling Martha.

Perhaps a *day* cannot be spared, but why should you so grudge an hour for an afternoon nap which you may so greatly need, or a half-hour for a book or paper you would so much enjoy.

There are women to whom it would come almost like a new revelation to know that it was "right" to stop in the midst of the busy day and listen with rapture to the oriole's song in the plum tree, or drink in the beauty and fragrance of a bed of pansies, or watch musingly the dripping rain drops among the foliage of the maple by the window. They put back the sweet thoughts that come like strains of music to the soul, and turn again to their cumbering cares, with the unspoken thought that "time is too precious to be thus wasted."

Yet, who bids us "consider the lilies?" Are not there sweet whispers to our soul to win us to a better portion, that will not perish like the labor of our hands?

Let us learn to redeem the time from much that is really useless, and give it to wholesome rest and pleasing recreation, if we would have our days long in the land and spent in health and happiness.

Lois.

CHARACTER.

Character is the estimation or worth in which one is held; or simply the sum of our actions, words and deeds. Therefore, forming our character should be the first and most essential art that we study. Although *perfection* has never been attained, it may like other arts be so thoroughly studied that the eye of man cannot rightly detect but few imperfections.

In the choice of our friends we, in some measure, form our character, for we are likely to be influenced by the character of those whom we choose for our friends. The person who possesses a true and noble character has won many victories; has many pleasures and advantages that one of a bad and unfriendly character never realizes or enjoys.

By strangers our character can be read in our countenances, especially by those who study that art, because there is not a thought, word or deed that does not leave its autograph on the human countenance.

It has been truly said that "what we do not do is more often a better index of character than what we do." Who of us will acknowledge that we could not possibly have formed a better character. Maud.

POWER OF ASSOCIATION.

How strong is the power of association! especially that of our earlier years.

I have often noticed many families in the West who continue to subscribe for the local paper published at the place where they resided in their young days. Nearly every county in the western part of the State of New York is thus represented.

A lady said to me the other day, as I remarked her having the newspaper from her native town, in a distant Eastern State, "Yes, I have been here

over twenty-five years and nearly all I knew there are dead or have removed to other places, but I love the old familiar names even, and should miss the paper as I should the face of a friend, if I did not have its weekly visits! It seems to bring back to my memory the solemn, old and beautiful maple woods, and the early Spring beauties; the adder-tongues and other flowers that grew in their shade.

I fancy myself a child again hunting for ground nuts, gold thread or beech nuts, or assisting in keeping up fires to help my father and brothers make maple sugar. It seems like a dream of heaven when such recollections crowd on my mind, and they do, when in an hour of leisure I sit down to scan the columns of the same old paper that was so familiar to my eyes in my father's house.

I hope that when my children leave their home they will be able to take with them such pleasant recollections, for it is pleasant and profitable to have the storehouse of memory filled with such images, they go with us to the end of life and help to keep us from becoming too wordly and selfish."

As I looked at the sweet and placid face of my friend I thought that such had been the power of association with her. E. C. D.

WHAT I KNOW ABOUT HUSBANDS.

M. J. T. rather espouses the cause of the husband. She is a true woman, I'm sure, a cheerful, earnest, intelligent christian woman, and she has been observant in this work-a-day world and seen how, in our day and generation, men are more selfish and thoughtless than ever before, women weaker, more harassed, and she need not be amazed if a sweeter old maid than myself feels uncharitably.

The truth is that the majority of men, as husbands, are failures. What an angel a man is before marriage, how crabbed and censorious after!

This carelessness is more perceptible among laboring men than others. Is there anything in tilling of mother earth that makes a man rough? There is something in it that gives him good health, and this very constant good health seems sometimes to make him unfeeling. How sad! It is the principle reason I did not marry some twen—some years ago. The world will doubtless lose other shining examples of what the married state *should* be unless these men can be brought to a realizing sense of their sins of omission.

If there are any discontented spinsters among the "RURAL" readers, let them look about and see how many husbands can sew on a button when the baby is crying; how few "knots" will bear the stress and strain of all matrimonial weathers, and a few other *items*, and they will be contented enough to be a perfect aggravation to ordinary people.

And the vexations of housekeeping!
Children with a thousand wants!
Sleepless nights and anxious days!
Husband cross as sin!
Whole life a struggle with dirt!
And one nervous little woman to wrestle with it all.

Ah! some of these husbands deserve——deserve to be in hearing of an old maid's voice, at its crucifying pitch, once a week! MISS IRENE.

THE "DON'T" SUBJECT.

I HAVE just been reading Miss Harvey's "Don'ts," and while I heartily endorse them all, I wish she had added one or two more. One suggested by a conversation overheard at an impromptu "farmers' pic-nic," I cannot refrain from sending you. "There comes Mrs. Mann, dressed up in black cashmere!" "You don't say—cashmere—to wear in the woods? Pretty extravagant, I think." Extravagant! I smiled to myself, for Mrs. Mann had told me she couldn't afford to wear any other than this three-year-old cashmere to "rough it" in, for, with delicate health and all the work of her household to do, prints "exquisitely done up," were altogether too choice for her, unless for the afternoon visit, or the home dress-up, where they would not be apt to get mussed quickly. But to come back to the pic-nic; nine of the fifteen women in sight had on cheap (?) dresses of cotton and wool in fancy goods, more or less mussed, and all made and trimmed elaborately; the wearers thereof priding themselves on their economy; why, that cashmere cost as much as three like theirs.—Did it? Count the cost and see. How much were the trimmings and the making, and how long will yours last? Think it all over, and you will find the cashmere is the cheapest. Here comes in my Don't, don't buy imitations in dress goods, looking just "like silk" and so cheap, for their beauty will have departed by the time they leave the dressmaker's hands, and one or two rides to church and a few drops of dew will make them just fit for pic-nics.

MILLY BIRD.

FASHIONS.

POLONAISE continue in favor. This style of wearing apparel undergoes slight alterations in the cut and trimming from time to time, but there is no prospect at present of its abandonment, and ladies who are obliged to economize will find it to their advantage to utilize material in this form; a change of looping or other slight alteration will remodel it. Skirts of different material are worn, so a pretty and useful suit may be constructed of two partly-worn dresses, if wished. The taste of the persons will dictate the combination. If possible, the contrasting colors should be such as will blend well.

Short skirts still hold sway, thereby revealing the sense of the ladies in their adoption and continuance.

Large hats of black straw are to be one of the leading styles for Fall.

The navy blue flannel suits which have been so popular during the Summer will continue to be worn. The material is inexpensive, some of it costing but fifty cents a yard for one and one-half yard width. It can be utilized for almost any time of the year.

Lace around the neck is generally arranged to fall downward over the dress. It is often pleated or gathered in the form of a deep collar, several rows being made.

In colors, old gold and cardinal retain their prominence. They are worn by those of advanced age, as well as the youthful.

Some of the celluloid bracelets in red and black are very pretty. The tortoise-shell are handsome, and the wearer of any of these displays better taste than those who adorn themselves with the cheap gilt. If *gold* can be afforded it is well to wear it, but better something else than the imitation.

FORFEITS FOR FUN.

A LIST of amusing forfeits, which will make the company laugh and not offend the person called upon to pay them, are herewith given:

1. Put a newspaper upon the floor in such a way that two persons can stand on it and not be able to touch each other with their hands. By putting the paper in the door-way, one-half inside and the other half outside the room, and closing the door over it, the two persons can easily stand upon it and still be beyond each other's reach.

2. To go out of the room with two legs and come in with six. Not difficult if one thinks to bring a chair along on the return.

3. To act the dumb servant. The person who has forfeit to pay must act out the answers to the questions put by the master of ceremonies. "How do you make bread?" "How do you eat soup?" &c. This forfeit will cause much merriment if proper questions are put.

4. Put one hand where the other can not touch it. One can get out of this difficulty by putting one hand on the elbow of the other arm.

5. Place a pencil on the floor so that one can not jump over it. May be done by putting it close to the wall of the room.

6. Put a question that no one can answer with a "no." This is not hard if one thinks to ask "What does y-e-s spell?"

7. Push a chair through a finger-ring. This forfeit is made by putting the ring on the finger and pushing the chair—any other object will do as well—with the finger.

8. Put yourself through a keyhole. This was a great puzzle to us for awhile, but when the word "yourself" was written upon paper and pushed through the hole it was all clear.—Cincinnati Weekly.

ABUNDANT HAIR.

JAPANESE women are very proud of their hair, which is black and luxuriant. They cultivate and arrange it with great care by brushing their tresses back from the forehead and gathering them in a plaited topknot, covered with flowers, spangles, and hairpins of gold, silver, and tortoise-shell. Rich and poor are alike proud of their *coiffure*, and the hull-woman in rags devotes the same attention to her hair as any great lady. To preserve the elaborate structure from being disturbed, women during sleep rest their necks on a padded fork. There is no difference between single and married women in wearing their hair, as in China; and their respective social status is indicated by the position of the bow in which the waist-scarf is tied, girls wearing it at the back, matrons in front. The latter likewise shave their eyebrows, and dye their teeth black. Girls use rouge freely, and sometimes gild their lips. They are all fond of smoking, and wear their embroidered tobacco pouches as belt ornaments.

ABOUT WOMEN.

"IT is not nice," says a correspondent, "to see a lady take the cup from the water-cooler in a railroad car and let her dog drink out of it." The correspondent is right; it is not nice, except for the dog.

A YOUNG American lady (Miss Perkins, of New York) has taken the black veil in the Dominican Convento the Rue Laugier, Paris. The ceremony took place, according to established usages, behind a double grating.

LADIES will be gratified to hear that there is a vast improvement in the style of bath-houses this Summer at Cape May and Atlantic City.

AT the commencement of the University of California, where both sexes are educated, the highest honors were borne off by two young ladies.

FRANCES E. BURNETT, author of "That Lass o' Lowrie's" and "Louisiana," is described as a sweet fascinating woman and a most delightful companion. She speaks of her stories in a way that is very refreshing.

MRS. N. K. ALLEN, of Iowa, a lady of leisure and means, has received the appointment as notary public and pension agent, in order to give her services to poor women who cannot afford to pay for such work. She has written bills, collected claims, and aided her sister women in many ways.

MISS MARY E. MASON, daughter of Hon. Silas Mason, and granddaughter of Rev. Hosea Ballou, died at Readsborough, Vt., recently. She was a lovely girl of twenty. She had but a short time prior to her death returned from Boston, where she had been taking violin lessons. She was one of the most accomplished players on the violin in that State.

FOLLOWING are the official rules for the mourning for the imperial family of Russia for the Empress: The Czar and all the Grand Dukes will appear in full mourning for six months, according to military law. The Grand Duchesses will wear during the first quarter a *robe montante* of flannel, with long cuffs buttoned to the wrist, collar and weepers of batiste. Trains of black flannel; crape bonnet, with head band lined in black taffetas two veils, one short, the other long, and covering the whole robe; gloves, fan and black *chaussures*. Not until the fourth quarter is silk permissible, and *coiffures* will then be white, with colored ribbons and colored gloves.

ADELAIDE NEILSON died in Paris on Sunday, Aug. 16. Her decease was sudden and is generally attributed to heart disease, but by some this is doubted. The death of this favorite actress will be universally regretted.

THE Troy Times has heard of a judge of much experience who says "he has never had a breach of promise case before him in which the mother of the girl did not know more about it than her daughter."

MRS. JULIAN HAWTHORNE, now residing in London, mentions the increased attention given to the decoration of the outside of London houses. They are now painted chocolate, and Indian red, and this must greatly relieve the dinginess of the streets in the English metropolis.

MRS. SARAH THOMPSON and her two daughters who have created so much talk by their peculiar actions in Albany, upon their return to New York proceeded to the St. Nicholas Hotel, and were assigned a room on the second floor. When the attendant appeared in the ladies' parlor to show them to the room the women broke into piercing screams and refused to leave the apartment. They were quieted after a while, but with much difficulty were removed to Bellevue Hospital for treatment, as they are evidently insane. Later intelligence is, that the mother and one daughter are improving—but, little hope is entertained for the other's recovery.

OUR VISITOR.

WE have been favored with a visit from our contributor, Margaret B. Harvey.

As personal descriptions often convey erroneous impressions, it will not be attempted in this case. Her interest in the "RURAL" ladies, is unabated, so our readers may expect still to be profited and entertained by her productions. R. C.

You will not be sorry for hearing before judging, for thinking before speaking; for holding an angry tongue; for stopping the ear to a tale-bearer; for disbelieving most of the ill-reports; for being kind to the distressed; for being patient towards everybody; for doing good to all men; for asking pardon for all wrongs; for speaking evil of no one; for being courteous to all.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ABOUT HOME DECORATIONS.

MAY MAPLE.

As a nation, we are noted for extremes, and the present generation—the feminine part of it at least—are seeing to what an extreme they can carry the art of decoration in their homes. Something more than a quarter of a century ago somebody made the discovery that it was the bare walls and poorly furnished rooms that caused so much dissatisfaction among the half-grown children, and made them so desirous of leaving the hearthstone for a life in some far-away city, and so for the last decade the great cry has been, "Make your homes attractive, and thus keep your children with you." Of course, those who had abundant means could adorn their homes with many luxuries. But still discontent lurks in every corner. Those who have limited purses are just as anxious to make their homes attractive; so they toil day and night to add a few shillings to the purse, or else work at unseasonable hours to make ornaments for parlor and sitting-room, till they become so nervous and irritable that a loud laugh or merry chatter among the younger fry brings down the severest reprimand from lips that might have been wreathed in smiles had it not been for the hurried embroidery of some fancy motto, the forming of some "air castle," or the painting of some bit of pottery. The more humble the home the harder must the mother toil to make it as attractive as her neighbor's; and yet with all this extra labor and self-sacrifice, the children turn with longing eyes to other places for amusement. And why is it? Are the children ungrateful and so unreasonable in their demands that neither luxuries, artistic displays nor self-sacrifice can satisfy them? I trow not. In fact, I believe it takes but very few of the "cultured" wants to satisfy the growing mind.

I have in happy remembrance a home of the long ago that was always full of happy, contented children. In additon to the original family of eight or ten young scions, there were always two or three nieces or nephews, children of some dead brother or sister, to be cared for by Uncle Alec or Aunt Ruth. Now, the old homestead was very plainly furnished; there were no hours spent in painful decorations. To be sure, the walls of the best room, which was also the family sitting-room, were hung with the portraits of a few of the prominent men of our country, and a home-made yarn carpet covered the floor. But in this home, where there was a houseful of boys and girls, no anxiety was ever expressed about leaving the old roof-tree, where *father* and *mother*, not papa and mamma, presided. In all the world there was no place so dear to those sons and daughters, nieces and nephews, as where they knew they would always be greeted with a smile, a kind word or a caress from that indulgent father and loving, sympathizing mother.

Even when the older ones married, there was no desire to go far away to "settle down." "We must live where we can run in and sit by the old fire-place," was the expression of each member of that affectionate group. The recipe in that family for "making home attractive" was, to *love* one another, and make the life an every-day demonstration of that love. The girls had no secrets from mother, and the boys were always sure of a father's sympathy and wise counsel; the household was ruled by love.

Love made home attractive; not elegant furnishings or beautiful paintings, or yet expensive musical instruments; not fancy mottoes that had taken weeks of almost stolen time to embroider, not scoured floors nor polished walls, but simply loving sympathy with each child's natural development, desires or ambitions, directing as much as possible the forces into the right channel, that there might be some assurances of success in whatever was undertaken when the child reached maturity. Make home attractive, your surroundings handsome, without becoming cross; but remember, if the father and mother are as attractive as they may be, the expense of keeping the children at home contented and happy, will not be burdensome.

DOMESTIC RECIPES.

Accepted.

If any of your subscribers want a reliable recipe for coloring butter and for preserving eggs I will give it in the columns of the RURAL NEW-YORKER, if it is asked for. Having retired from the butter and egg business I have no further use for *secrets* in that line. J. B.

Yes, we shall be pleased to have it.

Pickling Berries.

Heat the amount of vinegar required, sweeten, then turn in the berries, let heat through, then turn into a jar and set in a cool place. Simple, but I think they are much better than to spoil the berry flavor with spices. One lady of my acquaintance, in canning berries, never heats her cans. Setting them on a marble, she pours the scalding fruit into them, and says she never breaks a can that way, as the cans heat gradually from the bottom.

Lemon Pie.

There are many good ways of making the above, but I know of none that quite comes up to the following: Two eggs, juice and grated outside of one lemon, one cup sugar, one cup boiling water. Save the white of one egg for frosting. Beat eggs, lemon, sugar, and a tablespoonful of flour together, turn on this mixture the hot water, boil in dish of water; bake crust separate.

Fruit Pie.

A simple thing to speak of, but if all ladies have their pies "run out" as I have, they will not think a remedy so simple after all. For raspberry, blackberry, juicy green apple, etc. Spread the under crust with butter, then sprinkle thickly with sugar, then flour; put the flour under the berries, then sprinkle with sugar again, and bake slowly. By this means one can have the goodness of the pie *in* the pie, instead of the oven. AUNT EM.

QUESTIONS ANSWERED.

Piccalilly.

Aunt Em asks for a recipe for the above.

ANS.—Fifty small cucumbers, one large white cabbage, half a peck of green tomatoes, two quarts of small string beans, one dozen pieces of celery, three green peppers, four red peppers—seed taken out—two heads of cauliflower. Chop all quite fine and soak over night in strong salt and water. In the morning wash well, drain thoroughly and pour over hot vinegar, spiced with cloves, cinnamon and allspice. A teacupful of grated horseradish may be added to the mixture if liked. In 24 hours turn off the vinegar, scald, skim and return to the pickles. Repeat three or four times if left like common pickles, or seal air-tight while hot at the second scalding. Pure cider vinegar should be used and the vegetables must be fresh.

Martynia Pickles.

E. A. Douglass asks how and what variety of martynias to use for pickles.

ANS.—The variety proboscidea is used. Treat in the same manner as you would cucumbers. The young pods should be gathered when about half grown, while tender and succulent. If left until the flesh has hardened they are worthless.

Glass or Stone for Pickles.

Mrs. G. McF. asks the ladies to give their experience in keeping pickles in glass or stone. Which is best?

No Costiveness, Diarrhœa or any Bowel complaints where Hop Bitters are used.

News of the Week.

HOME NEWS.

MONDAY, August 23, 1880.

The reception to Gen. Grant, at Denver, on the 17th, concluded with a banquet at the Glenarm Hotel at which about 200 guests were present. Gen. Grant spoke for some time and with great interest throughout. He expressed the greatest surprise at the progress of Denver, and magnified its future and that of the State .....At Pueblo, Col., on Tuesday, Henry Orr, a railroad employe, engaged in driving piles, fell against the point of a crowbar, which passed through his body, killing him instantly.....The notorious Dr. John Buchanan, who for several years has been engaged in the manufacture and sale of bogus medical diplomas, in Philadelphia jumped overboard from a ferry-boat on the 17th, and was drowned ... .. A special from Santa Fe says: "The hostile Apaches, after crossing the Rio Grande, marched sixty miles into the interior and took their stand in the Sierra Candelaria Mountains, there they now are..... Secretary Evarts has issued to the several Powers having jurisdiction of ports likely to be infected by yellow fever or cholera a formal invitation to attend an international sanitary conference at Washington, January 1, 1881..... The government has given notice that the rules for the inspection of steamboats will be rigidly enforced hereafter.....Papers on the industrial growth of the country and specie payments were read before the bankers' convention at Saratoga Thursday. A resolution was also adopted asking Congress to stop the coinage of from two to four millions of silver monthly.....Horace B. Valle, while intoxicated, went into the saloon of Edward Troinaine, in East St. Louis, on Sunday night, got into a quarrel with Troinaine, and was shot three times by the latter and killed.....Sitting Bull is reported at the Poplar River Agency, near Fort Buford in Dakota Territory, and as making threats of hostilities in case he and his braves do not get provisions. Some apprehension of trouble exists. .....A passenger train was wrecked by the sinking of the trestle work on the East Tennessee, Virginia and Georgia Railroad, near Knoxville, on the 19th inst..... There is a growing discussion of the question as to whether the census of the Southern States has been correctly taken. The increase is believed to be too large to be legitimate.

A sensation has been created at Santa Fe, N. M. by the announcement of a rich mining strike in the Mexican village of Las Placitas, about thirty miles distant. The village is built of adobe huts and corrals, and the foundations or the houses are of rock. A prospector, Jesse Marbin, detected mineral in this rock, pounded it up and hammered some of it, getting a rich result in gold. He located the streets in town whence this gold rock was taken, and had assays made with the result of $4,600 in gold to the ton.....Miss Tillie Mateer, aged 18 years, was walking with a gentleman near Mount Joy, Pa., on the 18th, when a spark from the latter's cigar set fire to her dress and she became alarmed and started to run. A gentleman who was driving toward her jumped out of his carriage and wrapped a blanket around her, but she was so badly burned that she died shortly after.....Later details of the fire at Eureka, Nev., show that about 300 buildings were burned, including many business establishments. A space equal to 50 acres in the heart of the town was swept over, leaving only half a dozen buildings. The loss is estimated at $750,000, with $150,000 insurance.....Freeman F. Gross shot and killed Mike Fleming, at 103 Ewing street, Chicago, on Tuesday evening. Gross was attracted to Fleming's house by cries of distress, and found Fleming in the act of striking his wife with a chair. On Gross' appearance Fleming turned on him, and with an uplifted chair chased him from the house and along an alley. Gross, being hard pressed, turned and fired two shots at him with fatal effect. .....Carter was shot and killed in Porter's saloon, at Nashville, Tenn., on the 19th, by John Holcomb. Carter, who four months ago killed Holcomb's brother, was drunk, and had been searching for Holcomb, whom he threatened to kill. He was overheard by Holcomb to say he would send him to hell as he had sent his brother. Holcomb thereupon leveled a double-barreled shot-gun and fired a fatal shot, making sure of his work by firing two pistol balls into Carter's body, though the gunshot killed him.....S. B. Alexander was arrested at Waco, Texas, on the 18th, by officer Joe Ballard. Being released, Alexander went in search of Ballard, and a difficulty ensued in which Ballard was fatally wounded.

Two bold Canadians have published in the Welland (Ont.) Telegraph, a proposition to go through the whirlpool rapids of the Niagara river, from the Falls to Lake Ontario, for $1,000, using an open Hudson Bay canoe. The famous Maid of the Mist is the only boat that was ever known to pass the rapids .....The event of the season at the Greenbrier Springs was a grand leap year dress ball given by the ladies on Friday night and a sham battle on Saturday morning by a portion of the First Virginia Regiment, in camp near the Springs. ....."Medical Lake" is the name of a resort near Spokane Falls, Washington Territory, which is being visited this season by Pacific coast people. The lake is nearly round, being a mile and a half long and over a mile wide, and is sheltered on all sides by immense forests of pine and fir. The water is clear, of a dark color and so buoyant that it will sustain the weight of a man without any exertions whatever. There is no animal life in the lake except a species of jelly-fish. Ordinary trout or any other kind of fish die immediately upon being placed in the water.....Postmaster General Key arrived at the Greenbrier Springs on Saturday night. General G. T. Beauregard, of Louisiana, arrived also. Among other notable visitors there are General B. T. Johnson, of Baltimore; Governor Mathews, of West Virginia; Judge T. C. Manning, of Louisiana, and General Garey, of South Carolina. The Springs are unusually crowded, as is also the entire circle of summer resorts in the mountains.....John Kelleher, residing at Oakland, Cal., with his wife and neighbor, Mrs. King, indulged in a drunken carouse on Sunday night, in the course of which the house was set on fire. Two of Kelleher's children (Eugene and Annie, aged two and five respectively) were burned to cinders. James, aged four years, was burned fatally, and Mrs. Kelleher will probably die from her injuries. Mrs. King was badly scorched and Kelleher slightly hurt..... At midnight on Sunday John Karin, a saloon keeper on the Abbott road, near Buffalo, N. Y., was fatally stabbed by Martin Flanigan, a boarder, who, while drunk, arose from his bed room and stabbed him with a common jackknife, in the presence of his wife and child. Karin died in a short time.....The preparations for the celebration of the centennial anniversary of the capture of Major Andre, which is to take place at Tarrytown, N. Y., on the 23d of next month, are being vigorously pushed forward by the committee having the matter in charge.

THE BENDER FAMILY.

The Benders are now believed to have been lynched at the time of the discovery of their last murder in 1873. One who witnessed the lynching says that the notorious Bender family, four in number, were captured soon after the discovery of the murder of Col. York's brother. He says the four were stood up in a row, facing nine riflemen, and were told their fate, that Kate was pluck to the last, and called upon her captors to "shoot and be d——d," and that the four bodies were buried at the corner of the counties of Labette, Wilson, Neosho and Montgomery

BURNING OF A FLOURING MILL.

The Yaeger flouring mill the largest and costliest establishment of the kind in St. Louis having thirty run of burrs was burned on the night of the 18th. The mill was in operation, and the fire is said to have caught from over-heated machinery. The mill was built about three years ago at a cost of $200,000, since when some $50,000 of improvements have been added. It was insured for $285,000 in from eighty to ninety companies, mostly Eastern and foreign. The loss on the mill, machinery and contents is estimated at $400,000. There were about forty thousand bushels of wheat in the mill. Twenty-eight box cars on the tracks in the rear of the mill belonging to various companies were burned. Some of them were loaded with grain. William Weinbermer, one of the millers, was in the upper part of the mill when it took fire, and, being unable to escape by the stairway, leaped from the fourth story window and was fatally wounded. The destruction of surrounding property and individual losses will make an aggregate loss by fire and water of fully $500,000.

POLITICAL.

Ex-Governor James E. English of New Haven was nominated for Governor of Connecticut by the Democratic Convention at New Haven on the 18th.....Frederick A. Potts of Hunterdon was nominated for Governor of New Jersey by the Republican Convention at Trenton on the 18th. ..... The Democrats of the Seventh Kentucky district have renominated Hon. J. C. Blackburn for Congress.... ...The Indiana democratic central committee opened the campaign on Saturday with 200 speakers in the various cities and towns in the State.....While all the little organs in both parties are modestly telling just how the elections are going a man like Senator Bayard has the assurance to say that it is too early yet to predict with certainty.....Hiram Warner, Chief Justice of the Supreme Court of Georgia, has resigned his position.....Landers, the Democratic candidate for Governor of Indiana, has accepted the Republican candidate's challenge for a joint debate. The exact time for "the collision of intellects" has not yet been arranged.

The Prohibitionists expect to have electoral tickets in about twenty of the States.....Governor Cornell thinks, or at least he says he thinks, that Garfield will carry New York.....United States District Attorney Woodford, of New York, is among the stumpers in Maine.....Ex-Secretary Bristow refuses to say anything about McDonald's revelations concerning Grant and the St. Louis whisky ring.....Ex-United States Senator Norwood has consented to run for governor of Georgia in opposition to Governor Colquitt, who received the indorsement of the late gubernatorial convention..... A Republican landlord, in Berlin, Vermont, has twice torn down the Hancock and English flag of his Democratic tenant and the case is going into court.

THE INTERNATIONAL EXHIBITION.

The first session of the United States Commission appointed under the act of Congress to carry out the plans for an International Exhibition to be held in New York in 1883, have met and made a preliminary organization and subscription books are immediately to be opened for the first million dollars necessary to begin the work of preparation. Joe Starkey, of Davenport, N. Y., a fisherman, while carelessly handling a pistol, discharged it and killed his wife. He has become insane..... .. George Milligan fell from a load of wheat near Burlington, Iowa, on Friday and was impaled on a stake. He died a few hours afterward.....A bite on the ball of the thumb by a kitten with which he was playing killed E. L. Bradley, of San Jose, Cal.. -....Charles Fegley, 11 years old, of Maxatawny Township, Pa., was thrown in front of a reaper and cut to pieces.....Charlie Conners, a boy of nine years, of Bangor, Me., ran a rusty nail into his foot and died of lockjaw on Friday.....William Wright, a farmer at Ballston Spa, was so gored by a bull on Thursday that it is thought he cannot recover.....A son of Galen Bray, of Worthington, Ind., stepped on a piece of glass, cutting his heel so severely that he bled to death before the flow could be stopped....

A sting of a bee on his neck is said to have caused the death of George Russell of Blackhawk County, Iowa, by producing paralysis of the heart. .....K. E. Parkhurst, the young lawyer who killed Miss Fannie Howell in the Nichols House in Bath, Steuben County, N. Y., on the afternoon of August 14, and then killed himself, was declared to have been insane by a Coroner's jury, Aug. 21st, on the testimony of Dr. Dolson and other physicians of the town.....A man in Louisa County, Iowa, who died quietly in his bed last week, escaped death narrowly many times during his career. Once he was stabbed in the stomach and given up by the physicians. At another time he fell into a well sixty feet deep; again, he was gored by a bull until life was apparently extinct, and more recently a loaded wagon passed over his head, cutting off one ear.

FOREIGN.

In England the Hares and Rabits Bill, the effect of which, if passed, would relieve tenants from the losses caused them by these animals, has been advanced a stage; but although the government seems determined to push it, yet the season is so far advanced, that it is thought to be hardly likely to pass at this session of Parliament. Organizations are being formed, chiefly in the large towns, for the purpose of public agitation with a view to the suppression of the House of Lords and the substitution therefor of an elective Senate. Mr. Gladstone is still weak, though he attends to some business. Born in 1809, he has already reached the three score and ten years assigned to man, and no contemporary in public life in any country has worked harder, so that it seems he should now either take a rest or retire to the quiet labors of the House of Lords.

In Ireland the land and Fenian agitation is still kept up vigorously. Tenants refuse to pay rent, and threaten terrible things if evicted, sometimes carrying their threats into action. There is a great deal of secret drilling of men with a view to an ultimate rebellion; active emissaries, chiefly from this country, are busy exciting the peasantry; and arms are being smuggled into all parts of the country. While biding their time to go to war with England, faction fights are waged, if anything, more bitterly than usual, those between Catholics and Orangemen being by far the fiercest. So threatening has of late been the aspect of affairs that, besides the addition of new troops to those stationed on the island, Mr. Foster, Chief Secretary for Ireland, has lately made a hurried visit to it to investigate what further steps may be needed to prevent or suppress an outbreak. For the present no new powers will be sought by the government, but the existing laws will be rigorously enforced. Crops are fine and the weather splendid.

A reinforcement of 1,150 men left England for Afghanistan last Saturday. The troops besieged in Candahar have sustained several assaults from the Heratees, or forces of Ayoob Khan; and by the latest cablegram they have just made a vigorous sortie, inflicting heavy losses on the besiegers. The Khan is not only raising works against the city, but entrenching his own position with the intention of giving battle to the troops on their way to raise the seige. These are pushing forward steadily under Gen. Stewart from Cabul and under other commanders through the various passes from India. The new Ameer is still on friendly terms with the English, who for the present must suppress their doubts of his fidelity.

In France Minister de Freycinet, chief of the Cabinet, last Thursday made a notable speech at Montauban. In it he declared that the late elections for the Councils-General had so firmly established the Republic, that the laws against the religious orders would not be enforced except in so far as the Jesuits are concerned. Disregarding impolitic counsels he declares that the Republic is ready to accept all sincere adhesions, however tardily made. "France," he goes on to say, "has determined not to be dragged into war. At the same time she has no intention of abstaining from taking part in affairs of international moment." The radicals are displeased at the moderation of the speech, deeming a more violent policy better; the Monarchists and Imperialists don't like it because it lessens their hopes of seeing their favorites on the throne; but moderate men are highly pleased by it..... Religious pilgrimages are still popular. Eight thousand pilgrims left Paris on 19th for Lourdes.

In Russia Nihilism is for the present at any rate put down, and Prince Louis Melikoff who, sometime back, was entrusted with supreme power for its suppression, has been appointed Minister of the Interior instead of virtual Dictator. He accomplished his object mainly by appealing to the chiefs of the organization personally. Many of them have been taken into government service either at home as spies and petty officials, or abroad in the same capacity. Most of the Nihilist chiefs were poor, and being now provided for, they don't feel ready to risk their bread and butter. Those who have nothing to lose are the readiest revolutionists.....The difficulty between Russia and China seems in a fair way toward amicable adjustment.

The problem of Turkey's relations with her neighbors is still in the same condition as it has been for some weeks. The Porte still procrastinates with Montenego and refuses to make the required concessions to Greece. Servia, to be ready for any emergency, has just ordered 100,000 rifles of the newest American pattern, to be delivered before the end of this year. This little State has now an army of 25,000 regular troops, and 215,000 militia. Should war break out Servia, Bulgaria and Roumania, trans and cis-Balkan, will probably unite to get each the largest possible slice of Turkey. Just now, however, there is no immediate prospect of the outbreak of hostilities, although all the southeastern part of Europe is in a warlike condition.

All your own fault if you remain sick or out of health, when you can get Hop Bitters.

AGRICULTURAL NEWS.

THE most disheartening accounts of the condition of crops come from Silesia, Posen and East and West Prussia. Extremely heavy rains have caused the rivers to rise unusually high, sweeping away gathered crops, fences, stock, bridges and frequently, houses besides drowning many persons. Railroad embankments are swept away, villages flooded, and vast tracts of farm land converted into swamps and quagmires. Throughout nearly all those broad regions the harvest has been almost entirely destroyed, wheat being entirely ruined, so that the official estimates of the German harvest lately noticed here will have to greatly lowered. Government aid has been earnestly invoked in behalf of the suffering poor, and the usual military reviews and other operations will not take place this year.....Wet weather is once more threatening to ruin the British harvest and has already greatly injured it..... The taxes levied directly on the soil in Italy amount to $40,000,000, being at the rate of $1.60 for every acre of cultivated land. The land is so heavily mortgaged that the sum total of these incumbrances amounts to $2,250,000,000. No wonder poor farmers and agricultural laborers are flocking thence to this country.... ...Russia has added to her duties on importations of foreign meat and live stock, making them prohibitive so far as we are concerned.....The Agricultural Department puts the number of our hogs this year at 35,034,100; last year the report gave us 34,100,200; and 52,262,500 in 1878.....Last year the price of wheat in Great Britain advanced steadily, almost week by week, from the first week in January to the first in November, after which there was a gradual decline.....France is to have a show of fat cattle, living and dead poultry, etc., next year, at Paris, from the 14th to the 23rd of February. In this show pigs will be divided into three classes—French breeds, pure and crossed between themselves: foreign breeds, pure and crossed between themselves; animals proceeding from crosses between French and foreign breeds .....Wool has been so cheap in England that the Duke of Richmond could get no buyers at Chichester for the fleeces of his famous flock of South Downs which generally command high prices and ready sales.....Despite their poor outlook English farmers are taking heart from the fact that between January and June this year only 676 failures have occurred among them, while last year between the same dates there were 1,431 failures recorded.....At the Lexington, Ky., fair August 6 the Central Ky., Sheep Breeding Company sold of Southdowns, 15 ewes and three rams at $226, and of Cotswolds, 76 head at $12.70; average for 95 head, $15.53; $51 seem to have been the highest price paid for a single buck—a Cotswold.....On Tuesday last, the 17th, the Agricultural Department furnished the following summary of the condition of crops. Potatoes.—The New England and Middle States report a high average crop. The Gulf States and three States in the Mississippi Valley report an average above that of last year. The States north of the Ohio River have a promising crop. West of the Mississippi both Kansas and Nebraska report a low average. Buckwheat—New York and Pennsylvania show a decline of two per cent. in the acreage sown. Minnesota and Nebraska report an increase in acreage and the other States show an acreage nearly the same as in 1879. Hay and pasturage—the Summer has not been favorable for the hay crop. In the States bordering on the Ohio River the average is higher than last year. West of the Mississippi the average is low and on the Pacific Slope it is very high ..... Wise county, Tex., last year grew two bales of cotton, worth $40 per bale, to each inhabitant. .....H. M. Caldwell, a North Carolina horticulturist, grows stoneless peaches by grafting upon plum trees .....Nova Scotian exporters of cattle to England are proposing to build a steamer especially for the purpose of carrying cattle. By this means they hope to avoid a large part of the heavy expenses now attending the business.

Of late years there has been a steady falling off in the number of English cattle and sheep. In 1875 the number of English cattle was 6,012,024, while in 1879 it only reached 5,856,356; in 1875 the number of sheep was 29,167,433, which had fallen off more than a million last year. Nor was this decrease owing wholly to the importation of American cattle on the hoof, since the total import of cattle and sheep from all quarters, including Ireland, was in 1879, 2,986,251, while in 1878 it reached 3,043,090. In the last year English native cattle and sheep had fallen off nearly 1,500,000..... The American Consul at Geneva says that American beef and live stock have penetrated as far as that region, and the value of choice cattle raised in large numbers in Switzerland for the Paris and French markets has been sensibly diminished by the importations from America..... From a tabular statement of the number of domestic animals of the State of Iowa, compiled in the office of Hon. R. R. Sherman, auditor of State, we take the following figures: Total number of cattle in state, 1,745,149 head; value, $18,445,957. Total number of horses, 649,797; value, $20,247,884. Total number of sheep, 356,846; value, $423,886. Total number of hogs, 2,466,985; value, $4,652,601. Total mules, 43,160; value, $1,527,353.....Commissioner Le Duc will make a personal examination of the results of artesian well boring for agricultural purposes, ordered to be made on the Western Plains.....Of the 37,000,000 people in France, 18,968,000 are engaged in agriculture, or a trifle over one-half, according to a late report of the Minister of Agriculture and Commerce. There are 10,000,000 land-owners, and 6,000,000 tenants, while 2,000,000 are classed as market gardeners, vine-culturist, etc.....Just a week ago, on August 16, a heavy white frost visited most parts of Delaware and Dutchess counties, N. Y., and the Catskill Mountains, doing considerable damage to cucumbers, tomatoes and late garden truck, as well as to corn and buckwheat, the latter of which is usually a large crop in Delaware county .....The

National Fair Association to be held at Washington, D. C. October 5-16, promises to be of more than usual interest. A new revised premium list is now ready, and will be furnished upon application to Root McCeney, Assistant-Secretary, Washington, D. C.....

The following, among other subjects, are suggested for the consideration of the convention to be held in Philadelphia on Sept. 22 to promote the sheep and wool industry: Advancement of the general interests of the wool-grower; prompt and systematic collection and distribution by the Agr'l. Dep't. of information concerning the supply of flock products and the demand for them; relative to advantages of our sheep-breeding States and the breeds best adapted to them; methods of shearing and handling sheep, and of packing and grading wool for the market; increasing the production of the mountain lands of the Atlantic States by the systematic extension of sheep husbandry; benefits resulting from the introduction of pure blood into our native flocks; breeds capable of yielding from a given acreage the most profitable returns in mutton and wool taken jointly; management of sheep in Summer and Winter—of lambs most profitably for market; recent inventions in wool manufacture and their relative importance; recent discoveries and inventions in the production of dyes and the art of dyeing—their relative importance; grades of wool which the country must produce in order fully to supply the demands of her looms, and how best to produce them..... Germany produced last year 410,000 tons of beet sugar; Hungary, 385,000 tons; France, 270,000; Russia, 225,000, and Belgium, 85,000.

Burnett's Flavoring Extracts. — *The superiority of these extracts consists in their perfect purity and great strength.* They are warranted free from the poisonous oils and acids which enter into the composition of many of the factitious fruit flavors now in the market.

Have you found the key to perfect health and strength? It is Kidney-Wort, the only remedy that overcomes at once the inaction of the kidneys and bowels.

Do not give up,—hundreds that have suffered for years from Kidney diseases have been cured by Kidney-Wort.

Twenty Years a Sufferer.

DR. R. V. PIERCE:—DEAR SIR—Twenty years ago I was shipwrecked on the Atlantic Ocean, and the cold and exposure caused a large abscess to form on each leg, which kept continually discharging. After spending hundreds of dollars, with no benefit, I was persuaded to try your Golden Medical Discovery, and now, in less than three months after taking the first bottle, I am thankful to say I am completely cured, and for the first time in ten years can put my left heel to the ground. I am, sir, yours respectfully,
87 Jefferson St., Buffalo, N. Y. WILLIAM RYDER.

Write to MRS. LYDIA E. PINKHAM, No. 233 Western Avenue, Lynn, Mass., for pamphlets relative to the curative properties of her VEGETABLE COMPOUND in all female complaints. For sale by all druggists.

Use Hop Bitters once and you will use no other medicine. Test it.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Aug 21, 1880.

BEANS AND PEAS.—The market for beans is strong not so much on account of the volume of sales as of the good control of stocks. Black beans are without a bid. Green peas are seeking a market from the West at $1.65. Some holders still ask $1.70 for prime.

Marrow beans, prime, $1.67½@1.70; other, $1.55@1.65; medium, prime $1.45@1.47½; other, $1.35@1.42½; pea, $1.30@1.70; white kidney, $1.70@1.90; red kidney, prime, $1.55; fair to good, $1.40@1.50; Lima, Cal., $5.

BUTTER.—There is only enough local trade to regulate prices and extreme rates are not named for round commercial parcels. Receipts are light, but that there is not a good quantity made and making but farmers have laid too much stress upon the strong figures of a several weeks ago, and they have made a brief mistake in holding for a rise. The New York market is running differently from other Summers. One feature of disadvantage is a large loss of Eastern demand. The early low prices sent a good many cash New England buyers into the dairy sections, and many invoices which used to offset dull Summer days by a commission or moderate profit, are now shipped right through to populous points eastward. Exporters are taking a fair share of the Western and some of the stored stock; and to some extent these transactions have stiffened quotations for good useful under grades. A notable point of the season is the absence of very common butter, nothing is poor enough to go below 11½c. For extra selections of State the market is better, but there is no prospective advance for lines of State or Western.

Creamery, finest, 25@27c.; good to prime, 23½@24½c.; fair to good, 22@24½c.; sweet cream, fair to prime, 23@25c.; State firkins, 21@24cc.; pails and half tubs, best, 24@25c.; fair to prime, 21@23½c.; poor, 17@19c.; Welsh tubs, extra, 22@23c.; other, 18@20c. Western imitation creamery, 17@21c.; dairy, fresh, 20@21c; fair to prime, 17½@19c.; poor to fair 16@17½c. factory best 19@20c.; fair to good 16@17c.; poor, 14½@15½c.

Receipts for week, 29,560 pkgs.; exports for week 15,05 pkgs.

COTTON—Rules stronger and more active. Latest prices are for August, 11.33@11.39c.; September, 11.33@11.34c.; October, 10.83@10.31c.; November, 10.70@10.71c.; December, 10.71@10.72c.; January, 10.83@10.84c.; February, 10.96@10.98c.; March, 11.09@11.11.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8¾	8¾	8¾
Strict ordinary	9⅜	9⅜	9⅜
Good ordinary	10⅜	10⅜	10⅜
Strict good do	10⅝	10⅝	10⅝
Low middling	11 3-16	11 5-16	11 5-16
Strict low middling	11¼	11¼	11¼
Middling	11⅜	11⅜	11⅜
Good middling	12⅛	12⅜	12⅜
Strict good middling	12⅝	12⅝	12⅝
Middling Fair	13	13⅛	13⅛
Fair	13⅜	13⅜	13⅜
STAINED.			
Good ordinary	8¼	Low middling	9¼
Strict good ordinary	9	Middling	10⅜

CHEESE.—The market has been unsettled but on the whole tending to a little stronger basis, with increasing export demand toward the close. Shipments have been 58,840 boxes. The bulk of the sales have been at 11½@11¾c. for fancy, closing at 12c.

Quotations are: State factory, fancy, at 12c.; do. good and prime, 10½@11c.; do. fair to good, 9¼@10½c.; do. h'f skimmed, 8@9c.; Wisconsin factory, fine, 11@11¼c.; do. good to prime, 10¼@10¾c.; do. fair to good, 9¼@10¼c.; Ohio factory, fine, 10¾@11¾c.; do. good to prime, 9¼@10¼c.; do. flat, fair to good, 8½@9¼c.; do. poor to fair 7½@8½c.

Receipts for week, 60,183 boxes.
Exports, 67,000 do.
Liverpool cable, 59s 6d.
Steam, Liverpool, 40@45s.

DRIED FRUITS.—The new fruits come in slowly the demand is quick and prices are doing better. The offerings thus far are almost entirely of blackberries, cherries and raspberries. Apples would receive considerable attention. Quotations are for

Apples—Evaporated choice, ring cut, 13½c.; evaporated, fair to prime, ring cut, 12@13c. State, 1879, fine cut, 6@7c.; State, 1879, quarters 6@6½c. Western, 1878, 3½@5c. Peaches—North Carolina, good to prime, 12@14c.; Georgia peeled, fair to prime, 11@13c; Georgia, peeled, poor to fair, 6@10c. Plums—State 1879, black 15@17c. Blackberries—1880, prime 6¾@7c. Cherries—Southern, 1880, 13c. Raspberries—1880, prime, 26½c.

Exports for week, 230 bbls. dried apples.

EGGS.—Receipts for week, 5,915 bbls.; do last week 6,200 do. Light receipts of fresh have run up prices, and a favorable feature of the week's business is the fair cleaning out of stored stock. Good supplies are looked for next week, but the market is in a better shape than before to hold them if they arrive in good order.

Near points 13c.; State and Pa. 18@18½c.; Western and Canadian fresh 17@17½c.; under grades 16@16½c.

FEED.—Sales of 40 to 60 lbs at $15@15.00; 80 lbs. at $16@17; 100 lbs. at $18.50@20.50; sharps at $21@22.50.

FLOUR.—The arrivals have been larger and there have been free sellers with prices lower and easy. Exports for the week have been 11,300 bbls, and 69,700 sacks.

Latest prices are $3.30@4.00. for inferior to very choice superfine State and Western; $3.90@4.15 for poor to good extra State and Western, odd lots and lines; $4.15@4.35 for very good to choice do.; inferior to good white wheat extras, $4.65@5.35; good to choice do. at $5.35@5.85; (very choice to fancy do. held at higher figures;) red and amber winter wheat inferior to choice trade and family, at $4.10@5.10; round hoop Ohio, $4.15@4.65; and trade and family brands of do. at $4.70@6.00; St. Louis at $4.60@5.45 for inferior to good extra; $5.35@5.85 for good to choice (very choice to fancy brands hold higher); Minnesota clear, inferior to fancy at $4@6.25; Minnesota "straight," poor to fancy, at $5.75@7.50, and patent inferior to very fancy at $5.75@6.50; unsound stock at from $2.25@4.85; city mill extra at $5.50@5.85 for good to very choice for the West Indies; do. for England, $4.00@4.40 for poor to choice spring wheat, and $4.60@5.00 for winter wheat product; do. trade and family extras, $5.50@6.75; do. for South America, $5.60@5.90; No. 2 at $2.35@3.00 for poor to choice.

Receipts for week, flour, bbls. 137,156; corn meal, do. 3,200; wheat, bush. 1,371,670; corn, do. 1,514 400 oats, do. 224,900; rye, do. 14,200; malt, do. 55,100; beans, do., 2,125; rice, pkgs. 400.

Exports for week, flour 59,600 bbls.; corn meal, 3,400 bbls.; wheat, 2,115,250 bush.; corn, 1,297,675 bush.; oats, 1,550 bush.; beans, 975 bush.; peas, 550 bush.; rice 545 pkgs.

FRESH FRUITS.—Export apples, 12,850 bbls. This is an unusual quantity of tender Summer stock to send abroad, but the market has been so low that shippers could hardly miss coming out whole if any of the shippings stood the voyage at least decently. A good many cheap sorts remain, but showy varieties give the market a better price-tone, especially for retail use.

Sweet bough, $1@1.50; Orange and Nyack pippins, 75c.@$1; Alexander and Coxsackie, $1.25@1.50. 2ll oz., Malden's blush, Gravenstien and Strawberry, $1@1.25. Demand running high for colored stock. Peaches bring only fair prices; extra N. J., 75c.@$1.75; poor, 35@60c.; Del., extra Crawford, 90c.@1.12; stumps, extra, 75@80c. Bartlett pears are variable in quality at this season and the range for bbls is wide; some selected of even hardness have sold at 4@3. Stock lots quoted: Bartletts, choice, $6.50@7; other, $3@5.00; Buff and Sugar Top, $1.50@2; sour Bell, $2.25@2.50; Southern Bartletts have up steady sale, crate, $1@1.75; cooking pears, $1.75@2 per bbl.; California fruit as before. Plums show a good offering; varieties are in early; sales are good, notwithstanding receipts anticipate the present demand. The full list quoted Quackenbush, $@@7 ₱ bbl.; Bradshaw, $5.50@6.50; Reine Claude, $4.50@5; egg, $5@5.50; green Gage, $4 50@5; Lombard, $3.50@4; blue Gage, $5.50@6.00; purple egg, $5@5.50; Bullet, $2@2.50. Grapes in good demand: Delewares, cases, 50 lbs, $5@6; up-river, bulk, 2@3c.; Concords, cases, 50 lbs., $2@3; Concords, in bulk, 3@4c.; Hartford, 3@3½c.; cases, $2@2.50. Whortleberries, 75c. ₱ ½ bush. Nutmeg melons, Buckensack, $1@1.75; Keyport, 35c.@$1. Watermelons, extra, $18@20 per 100; other, $5@12. Hothouse grapes, Black Hamburgh, 25@60c. ₱ lb.; Sweet Water, 20@30c. Peanuts lower, dull and weak; handpicked Va., 5@5¼c.; extra prime, 4½c.; good to prime, 3¾@4c.; common, 3@3½c.; shelled, 5@5½c.

CORN MEAL.—Sales at $3.20@3.25 for Brandywine and $2.50@2.75 for Western.

GRAIN.—Wheat has been active at variable prices, closing firm. Exports for the week have been 2,100,000 bush.

Latest prices are for No. 1 white at $1.07½@1.08; do., August, at $1.07¾@1.08¼; do., September, at $1.07@1.07½; do., October, at $1.07¼; do. steamer grade, at $1.03¾; No. 2 white at $1.05; ungraded white at $1.01@1.08¾; No. 1 red at $1.10@1.10¾; No. 2 red at $1.07½@1.08; do. August, at $1.07½@1.08; do., September, at $1.07¾@1.08; do. October, at 1.08¾@1.09; do. steamer grade at $1.05¾; No. 3 red at $1.03@1.05¾; do., steamer grade, at $1.01¾; No. 4 red, at $1.01; ungraded red at 85c.@$1.08; mixed winter at $1.05@1.05¾; No. 2 Chicago and Milwaukee spring at $1.03@1.05. Rye is in demand; quoted at 85c for No. 2 Western. Corn is active and fair; shipments for the week, 1,200,000 bush.; latest prices are for New York No. 2, at 50¾@50¾c.; do., August, at 50¾@50¾c.; do., September, at 51¾@51¾c.; do. for October, at 52¾@53¼c.; ungraded mixed Western at 50@50½c.; No. 2 white at 55c. bid. Oats are strong and active; sales of No. 1 white at 45c.; New York No. 3 white at 45@47c.; No. 3 white at 41@42c.; New York No. 2 at 40@41c.; do., August, at 36c. bid and 37½c. asked; do., September, at 35½c. bid and 36c. asked; do., October, at 33½c. bid and 36½c. asked; No. 3 at 37@38c.; ungraded White Western, 40@43½c.; ungraded mixed Western at 38@41c.; white State at 46@47c.; No. 2 Chicago at 41c.

HAY AND STRAW.—There is a very good call for supplies and prices quite firm although the receipts increase.

Shipping hay quoted at 80@85c.; medium to prime do., 90c.@$1; salt hay at 65@70c.; clover do. at 70@80c. Straw at 85@90c. for long rye; 55@65c. for short rye; and 55@60c. for oat.

Exports of hay for week, 1,475 bales.

HOPS.—Export demand has been fair, and the shipments for the week have been 1,300 bales. The increased business has been brought about by lower prices. Quotations are for

	Cents per ℔.
New Yorks, choice	26 @27
New Yorks, fair to medium	24 @25
Yearlings	7 @14
Olds, all growths	4 @ 8
Pacific Coast, new	23 @25
Pacific Coast, olds (nominal)	5 @ 8

LEATHER.—Quotations are for hemlock sole, 22@23½c. for light; 23½@25c. for middle; 22½@24c. for heavy; 20½@22c. for good damaged.

OIL CAKE.—Western is quoted at $30 ₱ ton.

POULTRY AND GAME.—Several cool days started a demand and the market has ruled stronger. Chickens and fowls have advanced 1c. Ice-packing must not be omitted.

Turkeys, choice light ice-packed ₱ lb. 14@15½c.; fair to good, 12@13c.; Phila., dry-picked, 14@16c. chickens, Phila., large, 19c.; small, 16@18c.; State scalded, 15@16c.; Western, 12@14½c.; Fowls, Phila., dry-picked, 14@15c.; Jersey, 14c.; do. scalded 13@13½c; Western, prime 12@13c.; other, 10@11c.; Ducks spring 13@16c.; scalded 13@14c.; mixed 11@12c.; squabs white ₱ doz., $1.75; dark, $1.25

Live fowls and chickens have arrived lightly and have had a quick sale at higher prices. With coops well cleared out the market closes strong.

Chickens, Jersey, ₱ lb., 13@14½c; Western 12c.; Southern, 11@12c.; fowls, Jersey, 12@12½c.; Western, 11@12c.; Southern, 11@11½c.; roosters, 5@6c.; turkeys 12@13c.; ducks, clear points ₱ pair, 55@75c.; Western 40@50c.; Southern, 40@45c.; geese, New Jersey $1.50@1.75; New York and Pa. $1.25@1.50; Western, $1 12@1.25; Southern, $1@$1.12; pigeons, 20@35c.

The new kinds of game sell readily.

Woodcock, 90c.@$1; prime English snipe $2@2.25; Grass plover, $3@3 25; wild pigeons, stuffed, the only sort now inquired for $1.50@1.62.

PROVISIONS—Hog products have been active and advancing sharply under the situation of affairs at Chicago, where a leading house has control of the bulk of the stocks. The "shorts" covering have advanced the excitement, and the market leaves off very feverish.

Mess pork closed at $15.80 bid and $15.85 asked for for August and September delivery, and $15.90 bid and $15.95 asked for October delivery. Bacon at 8¾@9c. for long clear and 9¼@9¾c. for short clear. Beef hams at $21.50. Beef—Extra India mess quoted at $15.50 for city; $10 for extra mess and $9.50 for plain mess; $10.50@11 for packet, and $11.50@12 for family mess. Tallow at 6¾c. for prime. Stearine at 9@9¼c. for choice.

Receipts for week, beef, 500 pkgs.; pork, 2,700 bbls.; cut meats, 28,500 pkgs.; lard, 14,600 pkgs.

Exports for week, beef, 1,720 pkgs.; pork, 3,100 bbls.; cutmeats 9,596,310 lbs.; lard, 3,656,550 lbs.

SEED.—Clover is firm; quoted at 8¼@8¾c. for prime. Timothy is quiet at $2-75@2.90.

TOBACCO.—The market has been moderately active only and without important change. Quotations are for

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4 @ 4½	4½@ 4¾
Good lugs	4¾@ 5	5 @ 5½
Low leaf	5½@ 6	6 @ 6½
Medium leaf	6½@ 7	7 @ 8½
Good leaf	7½@ 8½	9 @10½
Fine leaf	9 @11	11 @12
Selections	12 @—	— @—

SEEDLEAF.	Crop 1878.	Crop 1879.
New England Havana seed	— @—	18 @25
Wrappers, common	13 @15	— @—
Medium	16 @18	— @—
Fine	20 @25	25 @35
Selections	30 @40	27½@45
Seconds	— @—	10½@13
Fillers	— @—	5½@ 7
Penn. assorted, low	12 @13	10 @12
Assorted, fair	14 @15	13 @16
Assorted, fine	16 @18	18 @22
Wrappers	18 @35	— @—
Fillers	10 @12	6 @ 7
N. Y. ass'ted, com. to medium	10 @11	— @—
Ohio assorted	8¾@13¾	7½@10
Wrappers	15 @25	15 @25
Wisconsin assorted	8 @12	7 @10
Havana seed	15 @20	16 @18
Wrappers	12 @18	— @—

VEGETABLES.—Exports of potatoes for week, 6,725 bbls. The demand is good- but supplies are so general that prices favor the buyer. Easy rates, however, start a good Cuban demand and keep down surplus. Early rose, prime, $1.50@1.75; fair, $1.25. Maine and N. J. Peerless, $1@1 50, Sweet potatoes, Del. River, $2.75@3.25; Va., $2.25@2.50. Green Corn active when prime. Onions dull; recent high prices have brought in a good many Western, which are quoted. Tomatoes have had a good run during the week for canning purposes, the price being favorable. Cucumbers, per 1,000, $3@4; pickles. ₱ 1,000, $1.25; egg plant, per bbl., $1@1.50; string beans, per bag, 35@50c.; Lima beans, ₱ bag, $1.25@1.50; potato do. $1.75; turnips, 100 bunches, $3@4; turnips per bbl., 50c. @$1; beets, 100 bunches, $1.50@2; bull nose peppers, per bag, $1.50; cabbage, $5@8; red do., $6@9; squash, marrow, 5@@75c.; Onions, yellow, $2.75@3.25; red, $2.75@3; Western, $2.50@2.75; carrots, ₱ 100 bunches, $1,50@2; okra, per 100, 15c.

WOOL.—Trade has been very slack again this week and prices have ruled rather easy for other than medium grades. Quotations are for

Ohio, Penn., and Va. XXX and picklock, 48@50c XX, 45@47c.; X, 44@46c.; No. 1 47@49c.; No. 2 43@45c.; common 40@42c.; combing 44@50c.

N. Y. Mich, Indiana and Wis. X and XX 40@43c.; No. 1 46@48c.; No. 2 42@44c; common 38@40c.; combing 44@48c.

Iowa, Vt., and Ill. X and XX 38@40c.; No. 1 43@46c.; No. 2 40@43c.; combing 42@46c.

Mo., Ky. and Tenn., washed fleece 42@46c.; unwashed fleece 30@36c.; unwashed combing 30@37c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Aug. 21, 1880.

BEEVES.—Receipts for the week 13,164 head; do. last week, 11,405 do. The week has been unfavorable for business, and at the close few wholesale purchases were made. Poor Southern and then grass stock sold at 6½@7½c. dress 55 lbs.; fair to prime native steers ranged at 7½c. to dress 55lb. to 10½c. to dress 57 lbs. Quality of stock remarkably fine for Summer. About 100 head of prime heavy steers went to near-by watering place hotels. Wednesday's rates were supported for first class cattle, but low grades were all attended with concessions.

COWS AND CALVES.—There is no variation from the usual dullness of August here, and prices range $25@55. with no drove lots touching $50 and upwards. A cheap Fall for cows is oeared, as receipts are likely to be heavy owing to moderate wintering crops.

VEAL CALVES.—Supplies have been moderate and extra selected milk fed have made 7c; wholesale lots at yards and West Washington market; quoted:

Live calves, N.J. and Bucks Co., choice, 6@6¾c., State fair to choice, 5½@6½c.; poor, 4@5c.; Mt. Holly, 5@6½c., 250 lb. down; buttermilk, 3½@4½c.; grass 2c.

SHEEP AND LAMBS.—Receipts for week, 29,947 head; do. last week 27,783do. There has been a fair demand for sheep and a quiet movement for lambs; fair to prime sheep 3½@5½c.; extra wethers 5½c.; lambs ranged $4.25@6.10.

SWINE.—Receipts for the week, 19 027 head; do last week, 23,476 do.; fair to prime live Western, $5.30@5 65 ₱ 100; a few state $5.60 do.; city dressed heavy to pigs 6⅞@7¼c.

TERMS FOR 1880.

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" " Six Months 1 10
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Reading for the Young.

GREETING TO THE ROBIN.

GOOD MORNING, little robin!
I heard you sweetly sing,
Before I rose this morning—
You're early on the wing.

Oh say, where are you going,
With straws held in your beak?
I know a nest you're building,
I wish that you could speak.

I'd like to get acquainted,
Sweet robin now with you.
But robin would not listen,
And quick away she flew.

—SOPHIA C. GARRETT.

THE HERMIT THRUSH.

AWAY in the quiet country places, when the farmer boy's chores are done, and he has bathed his rosy face and brushed his hair at the little glass by the kitchen window, and with his straw hat for a fan, sits on the broad stone step through the short hours of twilight, from the forest away on the hillside comes to him the clear song of our American nightingale, the Hermit Thrush (called by Nuttall Turdus Solitarius). Could I only give you a few measures from its warbling song, you would instantly recognize my little favorite, for it is an inhabitant of every part of the United States, and as good authority as Nuttall says its song is scarcely less beautiful than that of its English cousin, the nightingale.

Just as the sun is setting, seat youself near some shady grove or forest, and you will be sure to hear the most wierd, witching of all bird songs. But he is a very shy, quiet fellow, and one seldom sees him unless carefully on the lookout. I have heard his song ringing from hill to hill away in the depths of mountain forests, but could never find the minstrel, until walking one day in Central Park, a friend pointed him out to me as he walked quietly about intent on his own dinner.

From its solitary habits this bird has been given the name of Hermit Thrush, never going in companies, but walking its quiet ways alone.

The thrush is about the size of the common robin, though rather more slim, and of the form of the cat-bird, all three belonging to the same family, and of similar characteristics. Color above, plain, deep olive-brown; upper part of the breast and throat, cream color; the dusky brown penciliated spots carried over the breast and under the wings, where the sides are pale olive; tail short and emarginate; short, black bill, and black, wise eyes, that give you an honest, inquiring look, and then seem to forget your presence altogether.

The thrush, like the cat-bird, builds her nest in trees or shrubs near the ground. It is composed of dry grasses, sticks, and leaves, but is rather more compactly built, and is neatly lined with fine grasses, in which we find from four to six light-blue eggs, sprinkled with blotches toward the larger end, and very like the robin's eggs, that almost every boy and girl has peeped over into Sir Robin's mud house and counted over and over again, until some day four little yellow mouths were opened, and the blue eggs had disappeared.

I don't think I will tell you what the thrush eats for his dinner, only that his dessert consists of berries and cherries with the ripest hearts, or grapes of the softest purple. He is a dainty fellow when he comes to consider dessert, and does not fancy half-ripe fruits. Perhaps, being a singer, he fears to injure the tone of his sweet, clear voice.

MAUDE MEREDITH.

MESSINA QUAIL.

THE Messina Quail, a new bird to America is being imported by Sportsmen and turned loose in several localities. The following is a description of it:

"In size it is about one-half as large as the European partridge (Perdix cinerea) and three-fifths as large as our "quail"—partridge—(Orlyx virginianus:) is very compactly built, with great speed in running and a powerful and long-continued flight, enabling it to cross large bodies of water in its migration. The bill is longer and more slender than is our Ortyx virginianus. The color is brown, striped with reddish-yellow on the upper parts of the body; the head is darker than the back, the throat reddish-brown, and the region of the crop reddish-yellow. A pale yellowish line passes from the base of the upper mandible over the eye and down the sides of the neck across the throat, where it is banded by two narrow dark-brown lines. The blackish-brown primary quills are spotted with reddish-yellow in such a manner as to form stripes. The first quill has also a narrow yellow border. The reddish-yellow tail feathers have white shafts, and are spotted with black at their edges. The length is 7½ inches, and expanse of wing 13 inches. The tail is 1¾ inches long. This is the male. In the female all these colors are comparatively indistinct. The bird is very hardy. These have been three months in the packing crates, and none have been lost. All seem to be in a vigorous condition. As a food bird it is excellent, and in Europe esteemed a great delicacy. It lays well before the dog, and gives fine sport for the sportsman, and he who kills them on the wing must be quick and true. The species is very prolific, and, under favorable conditions, it is expected they will become one of the bird features of this locality. The nest is made on the ground, like the partridge, and fourteen or fifteen white eggs are deposited.

ROSE CUTTINGS.

THOSE of our young readers who wish to increase heir stock of roses can do so by transplanting the suckers when the rose is on its own stock, but if not, or the suckers are not abundant, the simplest plan is to propagate by cuttings. The cuttings should be taken in Autumn and should be about six inches long and of the season's growth. The lower end should be cut square close to a bud and set thickly together, two-thirds their length in sand in a light, dry cellar during the Winter.

They should be planted out as early as practicable in the Spring in a light, sandy loam, with one bud and one-third the length of the cutting above ground. The earth should be packed closely about them, and if the weather is dry they should be carefully watered in the evening.

For the more delicate varieties the cuttings should be placed in pots in a cellar, and early in Spring the pots should be placed in a house with a moderate temperature and sprinkled every morning with tepid water and shaded from the sun until rooted.

THE BABY PLANT.

A PORTLAND, Oregon, paper says that one of the strangest and most interesting flowering plants ever brought to this country is on exhibition at Mr. Shanahan's Madison street store. It is said to be indigenous to Japan. Its technical term has not been ascertained, but it is known, and appropriately so, as the "Baby Plant." It is of the genus lilly, somethimes attaining a hight of four feet, and blossoms semi-annually. The one of which we write is, however, not more than twelve inches in hight, with leaves about six inches long and two inches wide. The flower is star-shaped, having five petals of a handsome brown and yellow color. The calyx encircles and protects a tiny little figure that bears an exact resemblance to a nude baby, its little arms and legs outstretched, and the eyes distinctly marked. Hovering over this diminutive form is a small canopy, angel-shaped, having extended wings and peering closely into the face of the infant. The plant was examined by large crowds yesterday and people who have a penchant for floriculture will find this an interesting study.

[Our correspondent has our thanks for sending us this item. U. M.]

AN EAGLE THAT RIDES DOGS.

SOME three months ago, while hunting in the mountains east of Twelve-Mile House, Mr. Buffington of San Jose, Cal., captured a young American eagle when it was but a few weeks old. He has his pet confined in the back yard of his shop, and the many and curious monkey shines indulged in by the mountain bird are amusing. Measuring now some eight feet from tip to tip and weighing 40 pounds, with talons three inches in length, there is but small chance for any dogs in the neighborhood. For as sure as the dog makes his appearance the eagle spreads his wings, and, with a loud scream, lights on the back of the terror-stricken animal. The dog, without further notice, darts through the side-gate and into the street, with the eagle attached to his back. Down street he goes at a break-neck speed. At a distance of about two blocks the eagle bids the dog an affectionate adieu and quietly returns as though nothing had happened. The same experiment is gone through with whenever the dog appears. It does not seem necessary to remark that dogs of any description are seldom seen in that part of the town, and the same dog seldom more than once. It would be a blessing to our city if we had one such bird on each block. It would save our pound-master much unnecessary trouble.

A TAME PARTRIDGE.

IT has generally been supposed that partridges could not, or not easily be tamed, but a correspondent reports that: "Visitors to Coldbrook Springs in Massachusetts are shown a curiosity, about one mile from the hotel, in the shape of a tame partridge. A young man escorts the guests to a little opening where some lumber has been piled. Taking a stick he raps upon the boards; once, twice, several times he emphatically disturbs the stillness of the adjacent woods. In response a fine fat partridge walks forth from the underbrush. The guide feeds him with berries, catches him, caresses him, and then allows him to follow for a short distance. This, indeed, is a rare bird. He has kept thus familiar with man for two years. Caught at first when young by a slip-noose, and somewhat familiarized with human beings, he now holds his home in the woods and loves to come out when the teams are at work, lighting now on the horses and then on the wagons."

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I will write and tell you of my successes and failures in growing the seeds you so kindly sent me, for which I thank you. None of the portulacca seed germinated, and this is the only total failure, although the phlox were a partial one. I have five little plants which are just beginning to blossom, though they were sown early in the Spring. I think the reason of their being so late was leaving them so long in the seed bed, for as soon as they were transplanted to the open ground they grew rapidly.

The mignonette was sown in the open ground and grows and blossoms luxuriantly. The China Pinks were sown in a box and placed in a sunny window until they were large enough to transplant to the flower bed, where they are growing nicely and are full of buds and blossoms, which are of rich colors and velvety appearance.

The melons are doing nicely, and I hope soon to test their quality. From the six okra seeds I have five flourishing plants which have an abundance of seed pods. We cooked some, but none of the family seem to like them. Will some of the cousins or Emily Maple please give their receipt for cooking okra?

The double hollyhocks sent by the RURAL last year are doing nicely. The flowers are pure white and very pretty. We have 30 different varieties of flowers this Summer. Among those which are doing the best are gerantums, Perennial Cypress, mignonette, pansies, portulacas, petunias, pinks, etc. At what time should cuttings of roses be planted? Again, thanking you for the seeds, I am yours truly. NELL.

Niagara Co.

[We give recipe for okra soup in household column. See also article on rose cuttings below.—U. M.]

DEAR UNCLE MARK: The seeds you sent me have given me much pleasure. My muskmelons are doing nicely. I have four plants of okra. The pods are getting quite large. I have not picked any of them, as I wished them for seed for another year. I have a bed of peanuts growing; also a raddish bed. My pinks are very handsome. The coxcomb is growing very thrifty, but has no blossoms on it yet. Phlox, mignonette, portulaca and gladiolus are in full bloom. I take all the care of my flowers and vegetables out of school hours, and I would be pleased to have you see them. I will close with my best wishes to you.

Lewis Co., N. Y. FREDDIE H. LOUDES.

DEAR UNCLE MARK:—I am a boy 13 years of age. I never wrote to you before. Pa takes the RURAL and I like it real well. I can hardly wait from one mail till another till it comes. I would like to join the Horticultural Club. We have a great many flowers this year; we have Dahlias, Dianthus, Double red pink, Spotted Balsams, Gladiolus, Portulucas, Asters, both dwarf and tall, Pansies and many other varieties. It takes some labor to grow flowers, but they pay it back in their beauty. I would like to exchange Aster seed for Verbena seed, or dwarf Dahlia bulbs, next Fall. Your affectionate nephew, ROBERT PERRY.

Dunn Co., Wis.

DEAR UNCLE MARK:—I am a little girl five years old. I like to read the cousins' letters very well. I want to join the Horticultural Club. We have a great many flowers this Summer. I help mamma to weed them. I love Balsams and Dianthus and Dahlias best. Your little niece, GERTIE PERRY.

Dunn Co., Wis.

[The youngest member of our club.] U. M.

The Puzzler.

LITERARY ENIGMA.—(53 letters.)

Wreck of the fallen world, 8, 18, 43, 23, 33, 4.

So twilight deepened round us, 1, 39, 13, 30. 21, 19, 3, 52.

Ah, 'twere a lot too blest forever in thy colored shades to stray, 36, 4, 53, 6, 27, 38.

For as the whole round earth is every way bound by gold chains about the feet of God, 8, 15, 11, 35, 37, 28, 22, 20.

I come, I come, ye have called me long, 2, 5, 16, 25, 51, 20.

Christian faith is like a cathedral with divinely pictured windows, 2, 26, 49, 8, 2, 33, 4, 27, 47.

The organ heaved its surges to and fro, 12, 33, 34, 50, 12, 12.

To gaze in eyes that here were lovelit only, 31, 30, 40, 46, 10, 42, 11.

It is so sweet to live my little life to-day, 14, 29, 10, 36, 48, 12, 12.

The night has a thousand eyes, 36, 22, 9, 4, 32, 19, 12, 12, 33, 11.

Blessed are they also who expect nothing for they shall not be disappointed, 28, 41, 45, 17, 30.

None but the brave deserve the fair, 24, 4, 43, 24, 3, 11.

The whole is a selection from Longfellow.

☞Answer in two weeks. MARY E. BIXBY.

HIDDEN CRIMES.

1. How big Amy has become.
2. I live in Carson City.
3. To avoid sin Fanti, cider should not be drank.
4. How my heart does throb, Beryl.
5. Mat R. I cl ed it away.
6. In Pittsburgh laryngitis exists.
7. It was a lemur Derwent shot.
8. I hear a man's laugh, Terry.
9. I gather grapes for wine.
10. I wonder if Katie idealizes.
11. In the forge rye straw took fire.
12. I saw Beinas, Saul, Tan, D. Batt, Ery and Tom.
13. You act singular, Ceny.
14. The ft. meant foot.
15. Let them bezzle. Mental work is not easy.

☞ Answer in two weeks. L. O.

DIAMOND PUZZLE.

1, A letter; 2, to cheat; 3, a kind of light stuff of which the warp is silk and the woof is wool; 4, the kidney-bean; 5, a city of Arabia; 6, a river of Peru; 7, a letter. GUS.

☞Answer in two weeks.

PUZZLER ANSWERS.—Aug. 14.

NUMERICAL ENIGMA.—Chondropterygeous.

HALF SQUARE:—

A S C A R I S
S T A P E S
C A R E T
A P E X
R E T
I S
S

DROP LETTER PUZZLE.—Be not wise in your own conceit.

Sabbath Reading.

THE LOOM OF LIFE.

ALL day, all night, I can hear the jar,
Of the loom of life, and near and far
It thrills with its deep and muffled sound,
As tireless the wheels go always round.

Busily, ceaselessly goes the loom,
In the light of day and the midnight's gloom:
And the wheels are turning early and late,
And the woof is wound in the warp of fate.

Click, click!—there's a thread of love woven in;
Click, click!—another of wrong and sin;
What a checkered thing this life will be
When we see it unrolled in eternity!

When shall this wonderful web be done?
In a thousand years, perhaps, or one,
Or to-morrow! Who knoweth? Not you nor I;
But the wheels turn on and the shuttles fly.

Ah, sad-eyed weavers, the years are slow,
But each one is nearer the end, I know;
And soon the last thread shall be woven in—
God grant it be love instead of sin.

Are we spinners of good in this life-web—say?
Do we furnish the weaver a thread each day?
It were better then, O, my friends, to spin
A beautiful thread than a thread of sin.

PRAYER.

"To say my prayers is not to pray
Unless I mean the words I say;
Unless I think to whom I speak,
And with my heart His favor seek.

"In prayer we speak to God above,
We seek the blessed Saviour's love;
We ask for pardon for our sin,
And grace to keep us pure within.

"But oh, if I am found to smile,
Or play, or look about awhile,
Or think vain thoughts, the Lord will see,
And how can he be pleased with me?

"Then, let me, when I try to pray,
Not only mind the words I say,
But let me strive, with earnest care,
To have my heart go with my prayer."

CONSCIENCE.

CONSCIENCE is sometimes regarded and spoken of as a separate and distinct principle in the mind, placed there to warn us when we do wrong, and to approve what is right. Hence it is called God's vicegerent, an inward monitor, and various other names expressing its use and its claims. This view of conscience, it must be remembered, is only a figure of speech, neither telling us what conscience really is, nor how it operates, nor giving help to enable us to employ those means which may enable conscience to act most correctly and usefully.

The truth is that conscience is not a distinct principle, or something separate from the mind, but is nothing more than the mind or understanding itself acting in a particular manner, just as judgment is really the mind judging, memory is the mind remembering, perception is the mind perceiving. So conscience is really the mind acting in a particular manner, passing judgment on the actions or affections of the individual himself, according to some received standard of right and wrong; and to the mind so in action the name of conscience is applied.

Another mistaken option about conscience, it is necessary to notice. Sometimes it is spoken of as a law of action, itself pointing out what is right as distinguished from that which is wrong. But conscience is not a law. It is more like a judge. And as a judge does not make law, but only declares or expounds what is law, so does conscience, having already an outward standard of right and wrong to go by, compare a man's own action with it, and pronounce a decision of right or wrong, according to their agreement with or contrariety to the same.

Now the importance of these corrections or cautions will be evident. Every one is prone to plead conscience when wishing to defend some line of conduct. But this plea is valid only when conscience is really brought into exercise, and when the standard by which conscience makes its judgment is on the side of truth, justice and right.

OUT OF THE GARDEN.—There is a beautiful garden in which God places every child that crosses the boundaries of life and enters this world. It is the Garden of Innocence. It is like the Eden of Adam and Eve. A tree of the knowledge of good and evil is in it. The fruit of the tree of life grows there. Satan has found his way into it, too. No angel is there to drive the child out. God does not forbid it there. But there is one door out of this garden. It is the door of sin. And out from this garden of innocence, through this door of sin, into the realm of guilt, the children are passing, one by one. They find this door without guidance; for it is wide, and always open. They cross its threshold without compulsion. What a mercy it is that the canopy of Christ's atonement hangs over all this outer realm of guilt into which our dear children are straying with heedless feet! What a joy it is that on the thorniest road and in the darkest ravine the Good Shepard is going to and fro, "to seek and to save that which was lost!—Evangelical Messenger.

DEATH is not the cruel monster that we deem him. He is one of God's brightest angels, sent from heaven to bring home some loved one of earth. So bright are his robes that their glare would blind us were they not covered with a sable mantle.

WE should act with as much energy as those who expect every thing from themselves, and we should pray with as much earnestness as those who expect every thing from God.

PERSONAL ITEMS.

Among the recent arrivals at Chicago is a son of General Sheridan——a new one.

Dr. T. De Witt Talmage tells the Salt Lake Tribune that "guns alone can uproot the vile weed Mormonism."

Ex-Minister Robert C. Schenck is reported to be dangerously ill in Vermont with Bright's disease. He is seventy-one years old.

Senator Bruce, of Mississippi, is reported to be the possessor of two large plantations in his State, and has a fortune also of $200,000.

President Hayes is receiving many invitations from agricultural fair associations, and his secretary says that he is seriously inclined to accept all of them.

At McKinney, Texas, a colored woman named Sukey Hunt, reported to be 140 years old, was buried Sunday. She was the mother of nineteen children She was sensible to the last.

August Denu was sentenced to six months' imprisonment in Baltimore for drunkenness, on the complaint of his mother. Before his term was over she died and left him by will $10,000.

Senator Conkling has been a hard man to secure at agricultural fairs in his own State, but he has just accepted an invitation to appear with Gen. Grant at the Wisconsin State fair in September.

Jenny Lind, who left the stage in 1860, is still hale and hearty. As Madame Otto Goldsmith she is a worthy-looking and somewhat stout lady, with white hair. She will be 58 years old in October.

Two daughters of Gen Banks will soon cross the Atlantic—one as the bride of a young clergyman, who goes to a mission in China, while the other is bound for Paris, where she will study for the stage.

The Earl of Hardwicke, Master of the Buckhounds under the Beaconsfield Administration, is bankrupt. Last month even his deer and pheasants were sold at his seat, Wimpole, Cambridgeshire, 200 head of the former bringing 200 guineas.

Ex-Gov. Herschell V. Johnson of Georgia, died a week ago, having been U. S. Senator, Governor of Ga., candidate for the vice-presidency on the Douglas ticket, an opposer of Secession at first and afterwards a supporter of it, a Confederate Senator and a judge on the State bench.

Hancock, Hooker and Burnside are said to have been the handsomest men on horseback who fought on the Federal side in Virginia. McClellan rode too large a horse. Custer and Farnsworth were splendid horsemen. Grant rode well, but was not graceful. Meade was not a good rider.

Daniel O'Neil was arrested in Chicago on a charge of murder. He was not considered guilty, and had good reason to expect a speedy release; but his reason gave way under the excitement, and he constantly imagines that he hears the hammers on the scaffold which is being erected for his hanging.

"Dr." John Buchanan of Philadelphia, the bogus medical diploma dispenser, who was indicted for fraud and using the mails for illegitimate purposes, has drowned himself. Some suppose that in this too he is a fraud; and that he got some good swimmer to personate him in jumping from a ferry boat on the Delaware between Philadelphia and Camden.

It was so common for Freeman to whip his wife at Memphis, that the neighbors paid little attention to the bruises which she constantly bore. She never complained of them and was seemingly resigned. But a few day ago a pistol shot was heard in her house, and her husband was found with a bullet in his head. "I concluded that I'd stood it long enough," she said, "and, Lordy sakes; wasn't he surprised when I hauled out my pistol and popped at him;"

Lilian Adelaide Neilson, the celebrated actress who died suddenly in Paris, was about 35 years old. She was originally a bar-maid in England, attracted the marked attention of a wealthy gentleman who paid for her education for the stage. There's a flattering account of her birth in Spain, put out after she became well known, but really where she was born and her exact age are not known. She is supposed to have died worth half a million of dollars, for which there will, most likely, be a bitter legal wrangle between her first husband, Mr. Lee, and her last one, Mr. Compton, as the English laws will hardly recognize the divorce she got from the former in this city.

What a Clergyman Says About the Vitalizing Power of Compound Oxygen.

A clergyman, Rev. W. P. Illnes of Waynesboro, Miss., writing to the New Orleans Christian Advocate, says, referring to an advertisement of Compound Oxygen in that paper: "Please allow me a few words of commendation. My wife being in feeble health, and having been so for many years, I persuaded her to use it, which she did. She began very soon to improve in strength and continued to improve, and passed through the unusually hot summer of 1878 and the fall, attending to all her domestic duties with more strength and less fatigue than she had done for ten years preceding; then during the winter nursed the sick day and night, with more than usual loss of sleep and exposure and effort, and all without breaking down, *which she could not have done at any period during ten years past up to that time.* In order to have some experimental knowledge of the effect of this Treatment, I used it several times myself. In all my life I never used anything that produced such a pleasant, healthful naturalness of condition. Gave a glow of youthful buoyancy by increasing the vital forces of mind and body. *It gave a compass and power to my voice that it never had before.*" Drs. Starkey & Palen, of Nos. 1109 and 1111 Girard Street, Philadelphia, Pa., send their Treatise on Compound Oxygen free to all who write for it.

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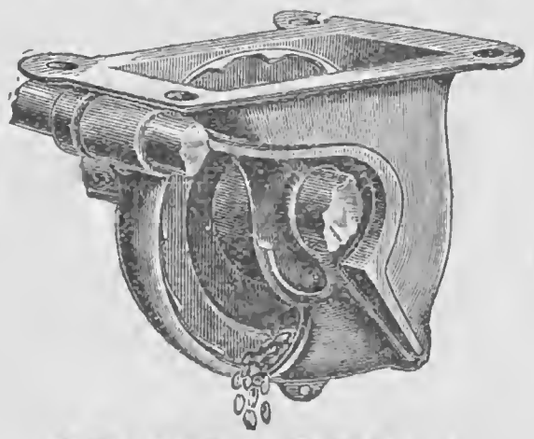

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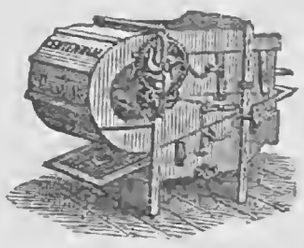

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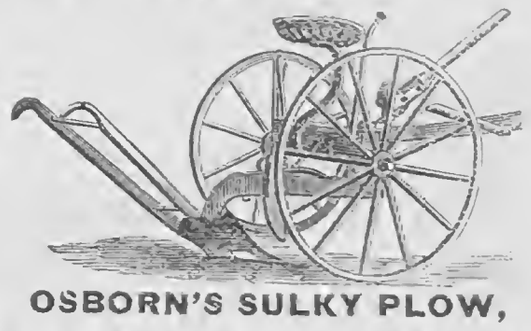

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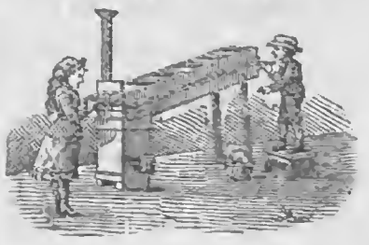

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Surpasses all others in quantity and quality of butter made. It secures matured and ripened cream, which makes butter of the best texture, flavor, and of unequaled keeping quality. It excludes flies, dust and odors; is constantly at the correct temperature (55° to 60°); has room for the cream and butter, and saves three-fourths the labor. It can be used with either ice or water, and both summer and winter.
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"ONLY twenty?" "Yes," she explained. "George made me promise when we were married that I would never change. I was twenty then, and I mean to keep my promise."

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A SCHOOL mistress, while taking down the names and ages of her pupils, and of their parents, at the beginning of the term, asked one little fellow, "What's your father's name?" "Oh, you needn't take down his name, he's too old to go to school to a woman" was the innocent reply.

A LITTLE Oil City girl observed her mother measuring cloth by holding it up to her nose with one hand and reaching out to arm's length with the other. She assumed a thoughtful aspect, and after cogitating a moment, asked: "How can you measure cloth that way? Can you smell a yard?"

"YES; I am to be married, my dear friend. The young lady is pretty and very clever, yet she cannot play the piano-forte, that is her only failing." "Why, I should call that a blessing. It is certainly no fault!" "Hear me through. She cannot play the piano-forte and yet she always insists on playing."

"How did you like the new minister?" asked a lady of a little girl, when she returned from church—"O, he is splendid! I like him ever so much better than I did Mr. Edwards."—"Why?" asked her mother, amused at the little one's earnestness.—"Well," said the child, trying to think of a good reason, "he has a better complexion!"

LEVER, the novelist, noticing that the hand of a woman who was bringing him some tea at a small country hotel shook tremulously, kindly said to her: "I am sorry to see, Biddy, that you have a weakness in your hand." "Oh, your honor," she replied, with a glance of indescribable humor, "the weakness is not in me hand, but inside the tay-pot."

"WHEN I was once in danger from a tiger," said an old East India veteran, "I tried sitting down and staring at him, as I had no weapons." "How did it work?" asked a bystander. "Perfectly; the tiger didn't even offer to touch me." "Strange! How did you account for it?" "Well, sometimes I've thought it was because I sat down on a high branch of a very tall tree."

"THIS is a nice time of night for you to be coming in," said a mother to her daughter, who returned from a walk at 10 o'clock. "When I was like you," continued she, "my mother would not allow me out later than 7 o'clock." "Oh, you had a nice kind of a mother," murmured the girl. "I had, you saucy girl," said the mother, "a nicer mother than ever you had."

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Is infused into a debilitated system by the sovereign vitalizer and tonic, Hostetter's Stomach Bitters. Digestion and assimilation, functions, the interruption or feeble performance of which materially impair vitality, are regulated and encouraged by the Bitters, and the mental despondency which usually affects the dyspeptic and nervous invalids, gives place to cheerfulness when this genial invigorant and corrective is used. It enables the stomach to perform its duties, insures complete nutrition and banishes every symptom of dyspepsia. The restoration of a regular habit of body is another and more important result of taking it. It quiets as well as invigorates the nervous system, promotes appetite and sound repose, and may be relied upon for purity as well as effectiveness. Moreover it has no peer as a remedy for, and preventive of fever and ague and bilious remittents.

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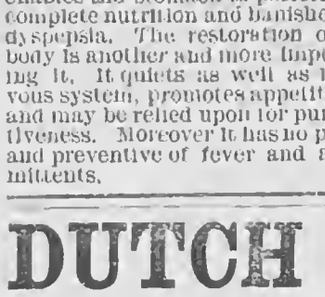

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Younger ditto (not tired); wants to go further):—"Come on, it's fine enough now; you needn't be frightened of lightning, it won't touch you. You're not particularly attractive."

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What Is It? It is a method of placing literature, of the best class only, within reach of every one. Books are reduced in price to but a fraction of their cost heretofore. July is supposed to be the Dull Month of the year, Booksellers close shop and go fishing, because book buyers are supposed to have done likewise. The Literary Revolution has made the past July one of the busiest months of the year for dealers handling our books, because the people believe in it. Letters have come to us like a flood; telegrams from dealers have come like the day before Christmas, calling for more books, and quickly. Our bindery is now taxed for the production of 4000 volumes a day, not counting pamphlets, and we are taking immediate steps to double its capacity, to keep up with orders. All Revolutions seek volunteers, and it has been the policy of The Literary Revolution from the start to give special reward to early volunteers in its support. It offers special terms to all whose orders, with cash, are received during August, as follows:

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A verbatim reprint of the last English edition, in 15 beautiful volumes, clear nonpareil type, handsomely bound in cloth for $7.50; the same printed on finer, heavier paper, wide margins, and bound in half Russia, gilt top, price $15.00. The first eleven volumes are ready for delivery. Volume 12 will be ready Aug. 15. The remaining volumes will be completed by October.

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Notwithstanding the amazingly low prices of these pamphlets, they pay us a good profit. The Literary Revolution does not humbug people by pretense of philanthropy. People who have sense enough to appreciate good books are generally honest enough to be willing to pay for them, and they can afford to pay when prices are low as the Revolution makes them. In this connection it is proper to mention a few facts.

Stop Thief! Some millionaire publishers have been adding to our fame and multiplying our friends by calling us pirates. They pay (when they please!) foreign authors a copyright. One of them charged you $1.00 for Hughes' "Manliness of Christ"—we sell it to you for 3 cents. How much of the 97 cents difference did Hughes get, do you think? Another published Geikie's "Life of Christ" for $3.00—our price is 50 cents. How much did Dr. Geikie get of the $2.50 difference? His letter to us says "nothing." Scribner's Monthly attacked us recently, calling us Cheap John Publishers. The same electrotypers and printers that do their work are working also for us, and you want no books more beautiful than are some of ours. The great Methodist Book Concern has refused us space even in the advertising columns of its several Christian Advocates. Why? Our books are so cheap they contrast with and injure the sale of theirs. We reduced Smith's "Bible Dictionary" from $3.00 to 50 cents; Kitto's "Cyclopædia of Biblical Literature" from $10.00 to $2.00; and Young's "Analytical Concordance to the Bible," "the Webster Unabridged" of religious literature, the greatest work of the kind which the century has produced, from $15.00 to $2.00. The people may pronounce the verdict who is guilty of wrong-doing—we, or the millionaire publishers.

Who Is He?

General Grant. General Grant once said that the best way to get rid of a bad law is to enforce it. If the want of an international copyright is a wrong to foreign authors, American publishers are to blame that there is none, and could influence the passing of such a law quickly if they chose to do so. We believe that the author of a book is as much entitled to absolute property in it the world over as is the author of any other product of the hand or brain. We vote for a law to give him such ownership, and The Literary Revolution more than all other influences is forcing the consent of millionaire publishers to the passing of such a law. But there is plenty of humbug in the talk of high prices being the necessary result of copyright. Five cents copyright on a book would give an author $5,000 on a book that would sell 100,000 copies; and a book intended for the masses that will not sell 100,000 if put at a reasonable price does not deserve to be published at all. And the really standard books that the masses want ought to sell and will sell a million copies each easily when The Literary Revolution has achieved its final victories and made the masses readers of good books. And a million books, paying copyright of even one cent each would give an author $10,000, which is more than ten times what the average successful author now gets. But Bunyan, Goldsmith, Milton and Virgil are no longer wanting copyright, and Macaulay, Carlyle, Gibbon, De Foe, Plutarch and Æsop ceased to receive it long before the days of The Literary Revolution. We do pay five to fifteen cents copyright on several of our books to American authors who have the right to it, and we are paying regular salaries, many thousand dollars a year, to writers in our service.

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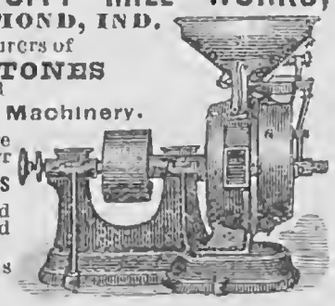

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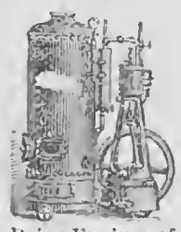

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Every Man His Own Miller.

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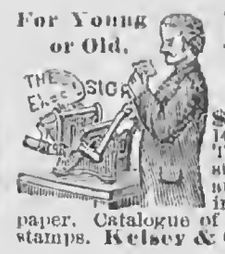
Bicycle riding is an accomplishment easily acquired, and is rapidly becoming the most popular of out-door sports, as a health restorative it is invaluable, bringing into action every muscle of the body, strengthening the lungs, and invigorating the wearied brain. The practicability of the machine is generally conceded throughout the country, and the thousands of bicycles in daily use are constantly increasing in number. Send 3c. stamp for catalogue, with price list and full information. THE POPE M'F'G CO.,
88 Summer Street, Boston, Mass.

For Young or Old.



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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 36. WHOLE No. 1597. | NEW YORK, SEPT. 4, 1880. | PRICE FIVE CENTS. $2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Horticultural.

MUSHROOM CULTURE IN THE CAVES AT PARIS.

BUT little progress has yet been made in the culture of mushrooms in the United States, the demand being limited, in part from a want of knowledge of the edible value of mushrooms, and in part from their high price. Mushrooms are grown in the vicinity of New York by a few private families and a few market gardeners who supply them direct to the leading hotels, restaurants and club houses, but the greater proportion of those consumed in the United States are imported from France in sealed tins.

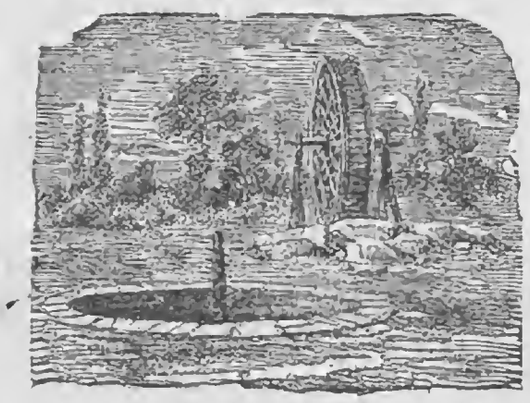
In the cultivation in the United States the first object is to obtain some convenient place of equable temperature, light being unnecessary, where the beds may be placed and the work carried on. In choosing such a place a dry, clean cellar may be used or part of a shed, if in Summer on the north side, if in Winter, where it can be kept warmed, the object being to preserve the temperature and inclose the beds from the sudden changes of temperature. Perhaps the best plan of all is to construct a place under ground as nearly resembling a cave as possible, the moisture and temperature of caves being found to answer the nearest the requirements of their cultivation. In the preparation of the manure great care and study are required that there be not too much or too little heat. When ready, the beds are made in rows some 20 to 24 inches high and wide, and covered with sifted earth. The spawn is then placed in them.

The spawn used in the United States is that obtained at the seed stores, in the shape of bricks. The bricks are broken into pieces the size of hickory nuts, and placed in holes made by a dibble, some six inches apart each way. In three or four weeks the spawn will have covered the bed, and in a few weeks the mushrooms will be large enough to pick, and the beds will last from four to six months. The industry is one in which there is a promising return for the outlay in its development in the United States.

Much the greater part of the mushroom product which goes to supply the markets of the world comes from abandoned portions of the stone and plaster quarries under the suburbs of Paris, and at other places in France. In the department of the Seine alone, in which Paris is situated, are some 3,000 stone quarries, the abandoned parts of which are used by some 350 growers, producing, on an estimate, 25 tons of mushrooms daily, or to the value of $2,000,000 per annum.

The cultivation of the mushroom in these caves, is an interesting example of what may be accomplished where skill and industry are given to the work, although the natural resources for its prosecution are of the most meager character. These caves are from 25 to 150 feet below the surface and are entered through pit holes by climbing down a ladder made by thrusting rounds through a pole fixed upright, as shown in our illustration, fig. 276. Our illustrations we have reproduced from Mr. Robinson's excellent work entitled the 'Parks and Gardens of Paris," published by McMillian & Co., of London, England.

At the bottom of these pits or entrances the passages radiate in different directions to the caves. At convenient points piles of manure and siftings from the *débris* of the stone cuttings are piled and undergo preparation for the beds. When in proper condition, the beds—some 20 inches in depth—are placed in rows all over the bottom of the cave, with just a narrow passage between to facilitate the work of gathering. Figure 277, shows the appearance of one of the most extensive caves, with rows of beds and the dots of mushrooms. New beds are continually in preparation to take the place of the exhausted ones, and the cropping goes on uninterruptedly.

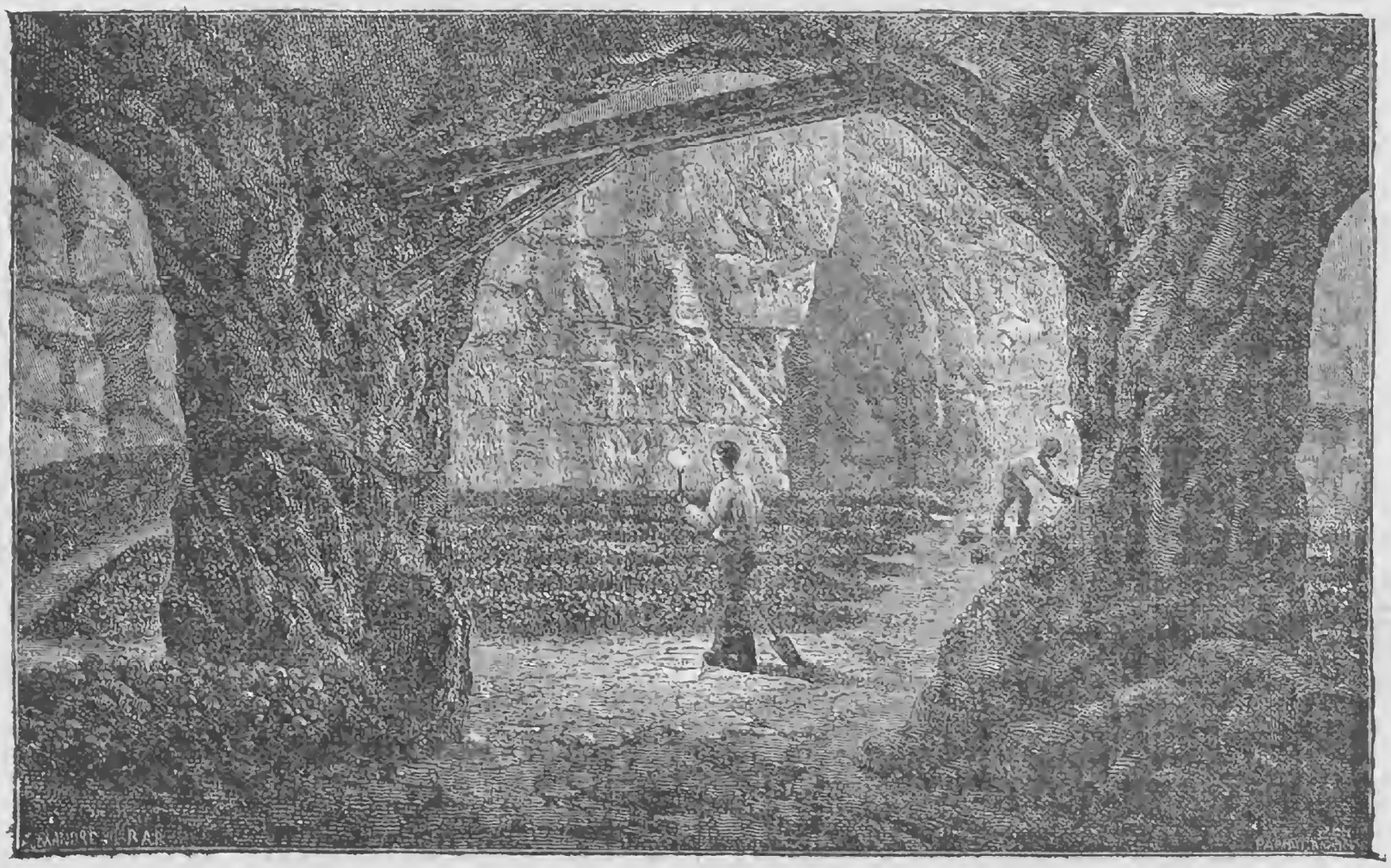


ENTRANCE TO CAVES.—FIG. 276.

The general practice in obtaining spawn is to use so much of an entire fresh bed when it just begins to show the growth, as is necessary each day, which gives a product several days earlier than when the dry dormant spawn is used. The shafts or openings to the surface are made numerous enough to give perfect ventilation both for the health of the mushroom and of the workmen. Strong drafts and sudden changes of temperature are guarded against by trap-doors.

The mushrooms are gathered daily at a very early hour in the morning, when the mushrooms large enough for use are seized and given a slight twist to clear them from contact with any others not fully grown, and removed with the roots entire, the holes being filled with earth. The beds continue to bear from 40 to 60 days, those in the high-roofed caves bearing longest. After some years of continuous use the mushroom grows tired of the cave and a kind of disease called "*La Molle*" makes its appearance, when the cave is entirely cleaned and left a year or two to recover its normal condition. Four kinds of mushrooms are grown: 1, the small white with cap from ¾ inch to 1 5-8 inch in diameter and stem two inches long; 2, the large white three inches in diameter, with short stem; 3, the cream-colored stem two inches long and cap two inches to 2¾ inches in diameter; 4, the gray, the cap sometimes measuring as much as 13 inches in diameter.

The price of mushrooms averages about $12.50 per hundred weight, and they are mostly handled by agents. Large amounts are preserved by drying, desiccating, grating to powder, bottling in oil and in tins. Figure 279 represents the appearance of mushrooms as ready for market.



VIEW IN MUSHROOM CAVES.—Fig. 277.

THE EDIBLE MUSHROOM.—(Agaricus campestris.)

PETER B. MEAD.

IN calling the Agaricus campestris the edible mushroom it is not meant that there are not other edible kinds, for there are several, and some even more esteemed than this by connoisseurs. My object, however, is not to discuss species, but to give a few simple directions for growing the kind almost exclusively known among us as the edible mushroom.

There is supposed to be much mystery associated with the cultivation of the mushroom; but it becomes quite a simple affair when understood. As in everything else, success will be more certain and greater where the proper conditions and materials are at command and properly used. I prefer droppings from horses that are kept chiefly on short feed, but others may be used where these cannot be had. Collect the droppings daily until you have enough for the size of your bed, which may be three or four feet wide and as long as you please. The straw should be shaken out and the droppings kept under cover or in some way protected from rain. Do not put them in a large heap till you get enough for your bed, when they should be well mixed together and put in a heap to ferment. If they should have become quite dry, moisten them very lightly with warm water. The larger the heap the sooner fermentation will begin.

As soon as the heap has become warm (which may be learned by thrusting a stick into it), turn it over with a fork, mixing the parts well together. Repeat the turning every three or four days until the mass becomes homogeneous, or alike all the way through, when it is ready for the bed. The rank heat must be got rid of, which will be in two or three weeks, or even more, according to the weather.

In the Summer and early Fall the bed may be made out-of-doors under a shed or in a hot-bed frame, or in almost any place where it may be protected from rains, if only by a temporary shed or loose boards. In the Winter it may be made in a dry cellar, or under a table in the greenhouse, or even on the table. Determine the size of your bed and then spread the droppings three or four inches thick and beat them down firmly with the fork or spade. Repeat the layers and the beating till the bed is from one and a half to two feet high, and even less will do in experienced hands. The object is to have the bed equally firm throughout. In the open air in the Fall the bed need not be more than twelve or fifteen inches high. Let the bed remain for a couple of days. If the heat is then from 65° to 75°, the bed may be spawned. If more than this you must wait, or reduce the heat by opening holes in the bed.

Be sure that your spawn is good. English and American spawn is usually in bricks, while the French is generally in straw. All are good. Break the spawn into pieces about the size of hickory nuts and insert the pieces from an inch and a half to two inches deep, and five or six inches apart. Next cover the bed with about two inches of good loamy soil, and on the top of this put from six to twelve inches of clean straw or hay. Under a greenhouse table an inch or so of covering will do, or even none at all; and where the hot water pipes are contiguous to the bed I simply make it up of loam and thoroughly decayed manure.

It is usually three or four weeks before the mushrooms appear, and sometimes longer. If the bed should become prematurely dormant, its activity may generally be renewed by the application of pretty warm water through the rose of a watering pot. It should be watered in this way, in fact, as often as it becomes dry, or it will cease to bear. The mushrooms are best in their button state.

It may not be out of place to add that the edible mushroom may be best known by its rose-colored gills. All others, and especially all that have an offensive odor, should be avoided. For the best method of cooking I refer the reader to Emily Maple who has charge of the domestic department of the RURAL. I prefer them stewed. They are used broiled, stewed, in soups, etc.

I have given my own method, but some mix loam with the manure,

and a comparatively recent Freuch practice consists in the liberal use of cow manure and making the beds shallow. Mushrooms may also be grown in pots, but I cannot tell how ust now for I have already exceeded my limits.

MUSHROOMS.

A LATE English writer on gardening, when giving directions for the cultivation of this vegetable, prefaces them with these remarks: "The nature of the mushroom is like that of all fungi, viz., more or less good and pure in proportion to the nature of the soil in which it grows; thus, the pure Agaricus campestris (pure mushroom) becomes poisonous when grown near hedgerows, rotten wood, etc.; therefore every precaution should be taken, both in preparing the spawn and also the material used for the beds."

This is a point which I have never met with before, and if the statement is correct, it may explain some of the mysterious cases of poisoning from eating mushrooms, which we occasionally hear of, but which are generally attributed to the admixture of some poisonous fungi. Really poisonous fungi are not likely, however, to lose their deleterious qualities by cultivation. There is nothing improbable in wholesome fungi being made injurious by the soil or situation in which they are grown, as we have analogous cases in other vegetables; celery and the parsnip, for instance, which are very unwholesome, if not poisonous, in their wild state, especially when growing in wet places. JAMES HOGG.

RURALISMS.

THERE is nothing in bloom in the hardy herbaceous border just now (August 20) that surpasses the white Day Lily (Funkia subcordata or Japonica). It has been in bloom a couple of weeks, and will continue several more. Its pure white, bell-shaped flowers, filling the air with their delicious fragrance, win the praise of all who see them. Besides, the plant itself is a beautiful object and would deserve a place in the garden if it never bore a flower. It is an example of rare beauty of form combined with purity of color and grateful fragrance. If you would see it in its best estate, do not divide it, but let it increase and spread in its own way. It is a lovely plant for the cemetery, needing but little or no care when once established.

A CLERICAL friend very kindly sent me a box of new kinds of strawberries for trial. The last thing I took out of the box, strangely enough, was a bundle of *Shirts*. My own certainly are not so good as when they were new, and I ought to feel thankful for the considerate thoughtfulness of my friend. On looking at the things closely, however, I was struck with their striking resemblance to strawberry plants. Thinking my sight might be somewhat at fault, I concluded to put them in the ground to see what they would come to. So we are to grow shirts in the garden hereafter. Well, let us hope that if they do not prove to be appropriate for the back, they will at least be juice-dishes for the mouth.

POOR Mr. Bailey!

IN nearly all our seed catalogues I see "French Lawn Seed," "Central Park Lawn Seed," or some other park lawn seed. I should be exceedingly pleased if the proprietors of these catalogues would change all this, and give us some American lawn seed. They can do it with the utmost propriety, and with great advantage to their customers. We have a native grass, naturally enough, which, for lawn purposes, is worth all the foreign grasses together. I know what I am talking about. I have made hundreds of acres of lawn, and long ago discovered that the Kentucky Blue Grass (Poa pratensis) is the grass *par excellence* for American lawns. You may sow what you please, but in a few years you will have this grass, and not much else. It is better, therefore, to have it from the beginning. With perhaps the exception of Timothy, it is, for the dairy farm not less than the lawn, the most valuable grass we have, and in particular it gives to butter its chief beauty and excellence. Now, will you not give us some American lawn seed? You may add to it, if you please, the Rhode Island Bent Grass (Agrostis canina) and a trifle of white clover. It looks so absurd to go abroad for something while we have much better at home.

AN objection has been made to that fine shrub, the Hydrangea paniculata grandiflora, that its heavy flower heads break off by their own weight, or are borne to the ground. Grow the plant as a standard not less than five or six feet high, and this objection loses its force. There is a wonderful degree of elasticity in the plant. A couple of weeks since my standard plant was bent clean over by a very heavy rain and wind storm, the stalk forming an arch. It was straightened up again after the storm without having received the least damage. The flower heads, by their gradually increasing weight by degrees curve the branches, which gives the plant the appearance of a graceful, pendulous dwarf tree.

HORTICOLA.

PASSAGES IN MUSHROOM CAVE.—FIG. 278.

Electrical Effects.

If at or near periods of intense electrical disturbance of the atmosphere pear blight and kindred diseases common to vegetable growth make their appearance and develop in their most malignant and destructive ways, and if at such times some not well understood form of electricity attaches itself to the trunks and limbs of trees and vegetation generally, one can see how it is that a coating of linseed-oil or whitewash applied to such exposed vegetable surface might prevent attacks of disease like pear blight, provided pear blight arises from some such cause. Prof. Thomas and other entomologists of reputation, agree that the so-called "twig" and pear blight now so extensively prevailing in the West, is not in either case the work of insects, and they seem willing to admit that unusual electrical conditions may be the cause. W. F. J.

Field Crops.

MY EXPERIMENTAL PLOT OF WHEAT.

HUGH L. WYSOR.

IN making the experiment of which the details are given below, my object has been to ascertain the following things: whether the thin seeding of wheat and the after cultivation of it have any influence in increasing its yield beyond that of broadcasting or drilling in the common way; what results are to be looked for from the application of common salt; whether there is any great difference in the time of ripening of wheat sown at different times in the same location.

The experiment was conducted with three kinds of wheat, not, however, with a view to ascertain their comparative yield, for they received too different a treatment to admit of that. The plot, as before noticed in the RURAL, consisted of two acres, lying in one body, of the same general character—a light sand—and capable of producing without manure 75 bushels of corn per acre. One acre was given to my own cross-bred wheat—Fultzo-Clawson; one-half acre to German Amber, a wheat distributed by the Department of Agriculture, and one-half acre to Boughton.

The plot of Fultzo-Clawson was divided into two pieces of three-quarters and one-quarter of an acre respectively. After the ground had been turned two weeks before planting four bushels of salt were sown broadcast on the rough ground of the three-quarter piece. On the 18th of Sept. the ground was harrowed, laid off into narrow drills ten inches apart with a marker, and both pieces planted by hand at the rate of one bushel per acre, the smaller receiving no manure of any kind. The wheat was then covered by the roller. The larger piece was cut June 16th perfectly ripe, the straw being of a golden yellow color and the yield 21 bushels of good wheat. The smaller piece was harvested June 21st; wheat fair but the straw not perfect; yield four bushels. I conclude from this that an application of five bushels of salt per acre will prove at least a partial preventive of mildew, will hasten the ripening of the grain nearly one week, and will increase the yield from five to ten bushels per acre.

The half acre of German Amber was planted on the 15th of October alongside the plot above mentioned. It was planted after the same method as that, except that no salt or other manure was used and twelve quarts of seed were sown by means of a small drill. No signs of the Hessian fly appeared in this plot in the Spring, though the one sown nearly a month earlier was considerably injured by this pest. This piece having rusted badly, was cut, still green, on the 15th of June, and yielded 14 bushels of tolerably good wheat.

Plot three—half an acre of Boughton—was heavily manured with stable manure, and sown by hand at the rate of one peck per acre, in scores six inches wide with intervals of 12 inches between the rows. One-half of the plot was planted Oct. 22, and the other half a week later. After the wheat came up, it was again manured, row by row, with chicken manure. Two-thirds of it was thoroughly hoed twice—once in April and once in May—the other third being left without any cultivation. I could observe no difference whatever between that which was hoed and that which was not, nor was there any difference in the time of ripening of the two parts sown at an interval of one week. The whole was cut June 10th, a week earlier than number one, which was sown over a month sooner. The yield was 16 bushels of second-rate wheat. Such a vast mass of straw as this crop exhibited was probably never grown in this country. The stalks were 5½ feet in hight, and stood like a solid block. Farmers will have some idea of the quantity of straw when I tell them that 72 dozens of sheaves were harvested. The plot was unquestionably over-manured, and ran to straw in consequence.

Although last year I expressed an opinion favorable to it, I am now compelled reluctantly to confess that the cultivation of wheat is time and labor thrown away. As to thin seeding, one peck to the acre will be sufficient, provided the land is in a sufficiently high state of cultivation, and the sowing is done after the method of plot three. Making the scores, however, was with me a tedious and laborious process, as I had no implement for that purpose. I made them by stretching a rope across the plot and drawing broad hoes along the the line. The covering was done with a hand rake.

The seed wheats came from the Agricultural Department. It appears to me that the Department has been unfortunate in its selection of the persons from whom it has purchased wheat the distribution. The German Amber, mentioned in this report, had several kinds of bearded wheat in it, besides some little barley and rye. It was also, when received, not entirely free from cockle. The Silver Chaff, received two years before, was badly mixed with at least eight kinds of wheat. The Gold Dust (1877) was worse still. I have just now received four quarts of White Australian on the sacks of which is a printed slip stating that this wheat was almost entirely free from rust in years when the Clawson and other kinds were nearly ruined. One has no need to wait for another harvest to see whether this statement is true. Looking into the sacks one would think that if it did not have the rust, it had something as bad or worse, for the grains are shriveled, many of them sprouted and weather-beaten, while among them are some little cockle, the seeds of the wild onion or garlic—a great pest in the fields of tidewater Virginia and North Carolina—and a few grains of smut. Farmers who are simply raising wheat for market cannot avoid getting their grain mixed, for many kinds are carried about in the thrashing machinery from one stack-yard to another. But persons who are offering new wheats at high prices can certainly afford to keep them pure and clean. I do not wish to be understood as saying anything in disparagement of the department, for I presume it does the best it can.

Pulaski Co., Va.

MR. GREGORY'S EARLY SWEET CORN.

IF the Minnesota Corn had been planted at the same time as the above variety at the RURAL FARM, I think it would have matured as soon. I am about one degree of latitude south of the Farm, and can therefore plant a little sooner. In order to get along in time with the Spring work, I usually plant my earliest corn during the third week of April, taking the risk of a May frost, which rarely injures it. This does not come up so soon by a week as that planted later in the season, when the ground is warmer, for the first stages of its growth are slower. I picked a good mess July 6th. This was probably 75 to 77 days after planting. I did not take account of that planted the 20th of May, as your Mr. Gregory's was, producing a mess in 61 days; but, I have no doubt the ears of my Minnesota were forward enough for a mess in 63 to 65 days. I will time my pickings another year from the planting through April and May.

I prefer the Minnesota to any early sweet sort I have yet tried, because the stalks grow about five feet high. It is an abundant producer, and the ears are larger and have larger kernels on them, than any other of the earliest kinds. I do not like the dwarf sorts, the stalks of which scarcely grow above three feet high. The ears of such are so small as to be scarcely worth cooking; and if they come a few days earlier than Minnesota, Concord and some others, this does not compensate me for their diminutive size, although it may those who are more ambitious than I to pick an extra early mess. A. B. A.

BLOUNT'S CORN, MOLD'S ENNOBLED OATS, COW-PEAS, THE CUTHERT RASPBERRY, Etc.

JONATHAN TALCOT.

IN regard to Blount's Prolific White Corn, I can only say that it does not seem to suit my farm, or the cultivation I gave it, or it may be that the latitude is wrong for its greatest perfection. First, it will not get ripe, and for a fodder corn the stalks are too large and the leaves too scarce to be of any especial value. I notice some of your correspondents say that it grew 14 feet high, and their cattle ate the stalks all clean, although they were as large as a man's arm. That may be true; but my cattle will not do it, but perhaps I have not got the right kind of cattle, yet I can't afford to change them now. At least I think I had better plant a different kind of corn for the animals I now have, than to get those that will eat Blount's corn as it grows with me, and mine did not grow 14 feet high, but the stalks were more than half wasted for the want of cattle that would eat them clean. I did not blame my animals, however, but intend to give them corn that they will eat in future, and I think a kind that will be better for them also.

The cow-pea is another forage plant that does not fit my soil and cultivation. The few I have are 15 to 18 inches high, just blossoming, while the corn on the same soil and under the same cultivation is from six to ten feet in hight, well eared. One hill of corn taking up no more room than one of cow-peas, will produce ten times the weight of fodder, I think, thus making a decided difference in favor of the corn as a fodder plant.

Mold's Ennobled Oats—"Well, what of them?" I fancy I hear some one say. Well, I can't say much in their favor, for I think they are only the Norway Oats that had such a widespread circulation a few years since. The color of the oats, their growth and lateness, all indicate their origin, and I must say I can see nothing but the Norway Oats in growth, form of panicle, etc. Others, no doubt, will differ with me in my opinion. Well, we must agree to differ, then, and let the matter rest till one or the other party is convinced of error.

From the Cuthbert Raspberry I did expect something valuable, as it was so highly praised, and when the plants came they seemed so well packed that I was pleased with their outside appearance. The label also read well, saying that they had been grown by a certain nurseryman and put up expressly for the RURAL NEW-YORKER'S free distribution. What could be more pleasant than such a package under the circumstances? But, alas! all my high expectations vanished on opening the package; one plant was without roots, simply a piece of top six inches long, the other without any bud or sprout to grow at all, so the best I could do was done in hopes to induce a growth for the rootless stalks if possible, and to induce a bud to start in the other; but with all the care I could give them, they both failed and my expectations were blasted for this season.

So far I have not been successful either in forage plants, or the raspberry, but with corn as a fodder plant, I have a very fine growth of a few acres. The Early Minnesota Sweet Corn is now fit to cut for the animals, well cared and of good growth. Moore's Early Concord will follow with Evergreen for the latest cutting. The Evergreen is now 10 feet high, and a thick heavy growth much larger than I had anticipated on the plot of ground on which it was planted. I will give my manner of cultivation.

The soil is sandy gravel, naturally warm, and of moderate fertility; in fact, not rich enough to produce satisfactory crops without manure, which I did not have in sufficient supply to feel sure of a full crop. Consequently I purchased a little superphosphate to give the corn the benefit of its effects (if any) in its earliest growth. As the crop of field corn was planted, having a little manure yet in the cattle yard, we scraped together what we could and spread it on the plot to be planted to sweet corn for green fodder. The piece had wheat grown on it the year before, the ground having been plowed in the Fall and replowed in the Spring before applying the yard manure, also after the manure was applied. The reason why I plowed so many times was that a part of the piece had an abundance of Quack-Grass on it, and I wished to destroy that, if possible. Everything was now ready to plant corn on the 25th of May, the plot having been harrowed and marked. We then put about a tablespoonful of the superphosphate at each crossing of the marks, covering it slightly with mellow soil, and planted the corn on the places thus prepared.

The cow-peas and Mold's Ennobled Oats also occupied hills thus prepared in a row by themselves in that portion of the field planted to Early Minnesota Sweet Corn; so they have had as good care and cultivation as the corn. The corn was cultivated frequently till too large to allow the use of a horse and cultivator, no hoeing being done at all. It should have been hoed once, I think, but other labors prevented

this, especially the cutting of our early hay crop.

The result—the Minnesota Sweet Corn was fit for table about the 1st of August and was the largest crop of forage corn ever grown on the farm, of that variety; and the feed is now very opportune to feed to any animals, from fattening hogs to dairy cows and working horses. All like it and it does them good to eat it, as it increases the growth of the young stock, also the milk from the cows, and puts flesh on the fattening animals, and for the crop of 1881 it increases the manure pile in the cattle-yard, making labor, and increasing the products of the farm at the same time. For the calves we cut the green corn ears, and stalks, so that nothing is wasted. For the older animals it is simply put into their mangers and all is eaten without waste. For horses it is also cut in the hay cutter before being fed, and if any is left—which is not often the case—the refuse is taken from their mangers and fed to the cattle and all is thus eaten up clean.

We cut our corn soon after dinner and put it in the managers for all animals, except the hogs and horses. The hogs have theirs thrown into their yard; the horses get their feed at night; the cows and other animals feed on the corn fodder in the afternoon, and thus partially avoid the flies, as these do not annoy them as much in the stable as in the field, as we close the doors of the stable when the cows are put up. They go into the field at night and in the forenoon to graze what they will before and after their feed of corn.

[It is right that we should remark that Mr. Mold does not claim that his oats or wheats are *new* varieties, but old varieties "ennobled," to use his word. The Ennobled Oats are the Black Tartarian, as has several times been stated in these columns. Eds.]

POTATOES IN THE SHADE—PLASTER—POTATO-BALLS.

No doubt potato bugs avoid vines growing in the shade, and thus if the mature insects are very hardy, the larvæ are quite susceptible to cold. This fact may be used as a means to destroy them. If just previous to a cold rain storm or a change which lowers the temperature from ten to fifteen degrees, the larvæ are brushed from the vines they will become so chilled and benumbed that they will lie there and perish. And this suggests that if large potato fields were gone over with a roller before or during cool weather the result would be to destroy a great many bugs and with no injury, if not with positive benefit, to the crop.

It has been suggested that Paris-green not only does no injury to potato vines, but seems to revive and lighten their color. This improvement is probably due to the presence of the plaster in which the poison is extended, and is a good reason why it should be chosen in preference to dry ashes, lime or flour.

In my experience with potatoes I have found the popular varieties, like the Early and Late Rose, the Peachblow and the Early Ohio, exceedingly shy bearers of seed balls. Indeed I don't know that I ever saw one of these on the Early or Late Rose in a course of fifteen years' cultivation. But this year I procured a few pounds of a new potato, Wilder's Seedling, I think, planted them in ground very heavily fertilized with a half-and-half of wood and coal ashes, and the production of seed balls is something surprising—two or three quarts to 40 hills. What is the explanation? Is it in the variety or the fertilizers used? The vine growth has been large, and from the bursting of the hills, I conclude the yield will be handsome. B. F. J.

Arboricultural.

WIND SHELTERS.

GEN. WM. H. NOBLE, BRIDGEPORT, CONN.

I welcome earnest opinions. I like the mood that holds them by a firm though easy leash. There is no divine right of thought, no infallible council. The faith it might set up to-day would be upset to-morrow. Truths and methods upheld by sound logic and trial, stand; whims backed by flimsy props go down with the first push of sense.

The mighty changes in our century in thought and methods are the outcome of a mental temper which favors neither the old nor the new but for the logic and tests behind them. They owe nothing to guess or cavil. Showy veneers or shammy novelty have no place in the work. No opinion gains a lasting foothold unbacked by sound logic. None but those who study up the records of trial and opinion ought in any line to start a new departure. None but such should sit in the philosopher's chair and essay to tear down or build anew the ideas of man.

I say these things in view of the RURAL's lately-quoted doubts of a writer about the good of shelter to the garden or the orchard. I wonder that the RURAL did not demur against such a rash opinion, backed by such thin, disjointed logic. I hope either the writer's doubts or mode of putting them will gain but a lean following.

This is the argument set to his credit:

PROPOSITION. — Close, overhanging shade and smothering belts of hedge and vegetation around the house shut out the healthy currents of air. The dryness of the breeze, thus barred leaves dampness to beset its borders, inviting mildew, miasm, fungoid growths and insect pests. The brooding shade and closeness make the cellar dank and unwholesome; the closets distil vile smells and viler vermin; every corner riots in uncleanliness.

CONCLUSION.—Just so, where you shut out the currents of air from the garden and orchard by belts of verdure, you invite to fruit and flower like harm. The inside stillness, stirred only by the sifted breeze, breeds hurt to leaf and limb. Insects swarm, fungoids and noxious dampness beset its growth and fruitage. In short, the way to a healthy garden and orchard is over an open field, where nothing stays the sweep of the Summer breeze or the frosty grasp of the wintry wind.

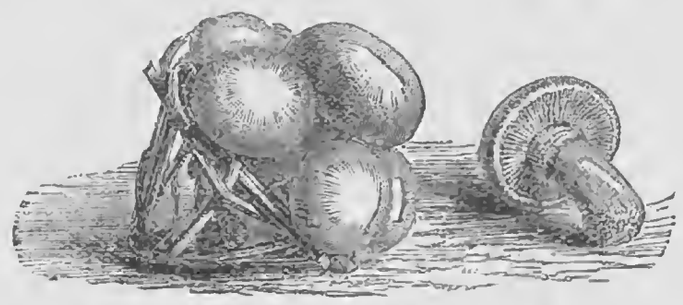
This is the frail logic backed by which this writer asks us to uproot an old belief which study and trial tell us stands on hard-pan.

But if shelter and belts of dense growth hurt the garden this writer does not prove it by showing how they smother and befoul the home. The hedge may hurt in a different way. The dampness, the unaired closeness of the dwelling may be just what the garden likes. If a hedge hurts vegetable, flower, or fruit, the harm may come from causes very unlike dampness or shutting out the currents of the air. Because a thing is bad to have in the house it does not follow that it may not be the best possible for the garden. In fact, to each it does pretty much so happen.

HOW EXPOSURE HURTS AND SHELTER HELPS.—I know and yearly feel the good of shelter to the garden and the orchard. Ten miles of unbroken wintry winds sweep down upon my place from the high hills. Along the rift of a valley they pour dry and frosty. Lots of plants and shrubs rejoice and bloom not three hundred feet to the leeward which come to grief on my premises. A belt of trees and fence and houses sift and temper and bar out the frosty currents which strike me so savagely.

THE GOOD OF WIND SIFTS AND BREAKS.—In Summer or Winter anything that checks the wind blast helps the growth and yield of vegetation. No vine, plant, or tree but joys to have stayed the whirl and thrash of leaf and limb. It is not the northern blast—stiff, dry, and frosty—that alone hurts. The full sweep of the early or midsummer breeze singes like a fire blaze the young growth of leaf and shoot. The snap and whip of the wind blasts and blackens the tender foliage and unripened wood. This hurts and dwarfs both the tree and the maturing fruit. The growth of the stock and the swell and lusciousness of the fruitage feed through the leaves on that full flow and alchemy of the sap which sunshine and shower provide. When the leaves are maimed and stripped, when the dry wind drinks deep the moisture of the soil, that work stops.

What does the above author find common to the home and things rooted to the soil? Nature does not admit the likeness. The home longs to the other. What likeness has the being or purpose of the dwelling to that of the garden? What is akin in the life and growth of vegetable and man. A regimen good for one might work disease and death to the other. What cures the ills of the dweller and his home might kill the fruit-tree and the



MUSHROOMS, READY FOR MARKET.—FIG. 279.

potato. The house is a shelter and defense against the rough and raging moods of the air and climate. To the garden we welcome pretty much every phase and belonging unlike that courted in the household.

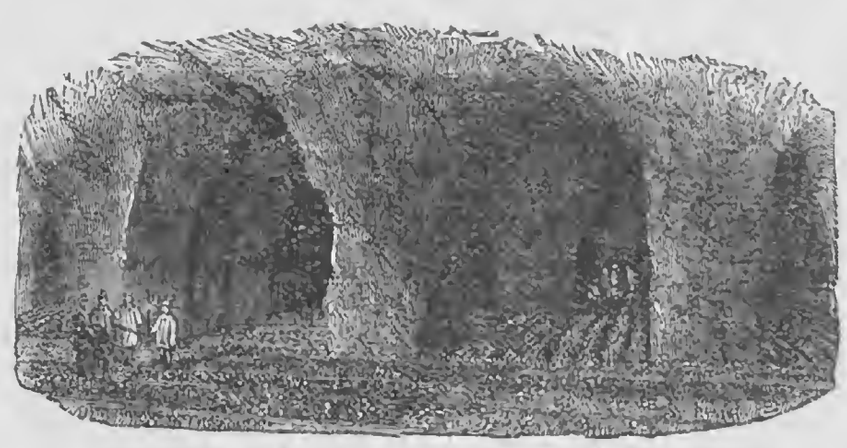
SHELTER HELPS AND SAVES THE FRUIT.—Then, all the way from the blossoms to full ripeness, the whirl and twitch of the limbs in high winds, strew the ground with half-grown fruits and bruised ripeness. The stillness and steady warmth of a belt-girt fruit garden, stay this waste and sorrow. This shelter rewards all cost and care by the better wood-growths, and better fruits. In such a choice spot you can have those that outside are stolen by frosts and wind.

SOME HURTS TO THE HOME HELP THE GARDEN.—The dampness which harms within the house is a joy to the garden. The rootlets drink in the wet with joy, and send it through the currents of the sap, to feed substance to leaf, wood and fruit. There is such a thing as too much wet inside or outside of the hedged garden, but good soil is not likely to keep more than is good for it. The surplus finds its way down to the lower water-levels and drains to rill and rivulet, to take its round again in nature's wondrous movements. The fault of the climate is, not too much wet, but that the soil too soon parts with its moisture.

SHELTER MAKES THE GARDEN COSY AND PLEASANT.—When outside your sheltered garden all is shake and shiver, and the breeze or chill air currents beat against your wall and curse their lookout; within its sunny nooks, stillness prevails; no wrench and twist of limb, or trunk, disturbs. The little feeding rootlets are not torn and worn off by the swaying of the tree. The steady warmth inside your barrier sends you down a full degree of latitude in early growth and maturity. Give me shelter for vegetables, flowers and fruit, against the hasty, frosty moods, and footsteps of the air! It may be had by hedge, or tree belt, or in some still and sunny glade or valley walled in by hills. Fear not dampness or mildew, or fungoid growth, or insect pests, merely because the wind is stayed in its wild work.

It matters little wherewith you make your shelter. The best is, I think, a valley defended by hills, against the rush of winds. The quickest shelter for small areas, and, when well made, the best, is a high, tight board fence. This should be held up by stout posts, fastened by iron pins on to stone bases. Fruit trees may be made to pay good interest on cost of such by trailing grapes on galvanized wire held out some foot or so from its face. Its face southward on the garden will ripen grapes that you can never get a crop from in open grounds, and so of other things that need long and high heat to ripen.

Not a small comfort in a sheltered garden is the quiet warmth of its sunny corners. In such there is a sense of defiance and comfort. The scream and roar of the shut-out wind, fall on your ear like the pouring rain on some sheltering roof. In Fall and Early Spring, and



VIEW IN A MUSHROOM CAVE.—FIG. 280.

and things rooted to the soil have not enough in common to warrant his logic and advice. Trees and flowers live under laws unlike those befitting the dwelling. They have their being and best estate in unlike footings and environment. It is, therefore, not very good logic or doctrine that counts on like needs or ails, or like cures or preventives for both. There is hardly a feature or quality of the one that be-

even in bleak, dry days of Winter, there is joy in a sunbath in its quiet nooks. There we stop to rest and chat, in the round which every lover of the garden makes again and again among his trees and shrubs. One never tires of such review, there is no sameness in this dress parade of his favorites. Each round offers some new feature of interest, or presents some new subject for his care. Thus your shelter overpays its cost in increased product and home zest.

The Catalpa.

I am at a loss to understand the puffing given to the Catalpa in latitudes where there are half-a-dozen other native trees superior to it, measured by the shade they afford, their beauty as a tree, and the value of their timber. Among these are the Osage Orange and the Blue Ash for hard woods, and the lime or basswood and the cottonwood for the soft-wood trees. As for lasting qualities, there is nothing superior to the Osage Orange, whether small or large, in the ground or out of it; and the timber of the Blue Ash has almost every excellence—strength, size, durability, elasticity, hardness, and toughness. Besides, like the Osage Orange, it grows readily when transplanted, acquiring that merit from its numerous fibrous roots which the Osage Orange does from its soft ones, which considerably resemble a carrot in color and consistency.

B. F. J.

Pomological.

SOUTHERN FIGS.

IN answer to B. F. J., in RURAL of July 24, I may state that during a long residence in Texas, I have never seen a barren fig tree. The chief difficulty in the way of utilizing this fruit, except for home use, is that in moist weather they sour very quickly. Last evening I picked a small basketful, and after we had eaten as many as we wanted, I had to throw the remainder away this morning, owing to their sourness. Another objection to their larger cultivation here is, that they grow so easily and are so plentiful that they are considered of no value.

About a quarter of a mile from where I live, are a number of trees that were planted fifty years ago and all the time they have been exposed to all the cattle and horses running wild on the prairie, so it can at once be seen that they are long-lived, for they bear fruit every year. The owner of the place is still living; but he now resides out West, having left this country when Santa Anna was driving all before him, until Sam Houston stopped his career at San Jacinto.

The trees I grow—latitude 30 deg.—are the Violet, a large fig, and a small yellow one. I do not know their botanical names, but they are good enough for any one. Some cuttings that I put out last Winter, are two feet high and have fruit on them now. They seem to grow like a weed, and chickens and hogs are remarkably fond of the fruit. My trees, about 20, are eighteen years old, have never had any disease, and produce all the time up to frost. They seem to grow well in any soil, either in sandy or clay land, in the woods, or on the prairie, in dry weather or in wet. They stand head and shoulders above all the lazy men's fruit, that I ever read of, as they require no working, manuring or trimming.

I do not know that I can say any more in their favor, unless it is, that I never saw any one that was not fond of them—children more especially. As one offset to the above, I may state that I have planted three orchards of peach trees during the last twenty years, and always made a failure. To-day I have not a peach tree, unless those I planted last Fall.

As the years roll along, I become still more strongly impressed that the bulk of the fruit business will remain in the North. A few down South, possessed of rare energy and executive ability, will succeed, but the bulk of us will be driven to the wall. Cotton will always be our main dependence. No spot in America can compete with us in that. Early Amber Sugar-cane can be raised in Minnesota, but the North must take a back seat when it comes to cotton picking. And though it is not a very paying crop under our present system of labor, I begin to take heart under the cheering articles of your intelligent correspondent, W. I. Chamberlain, on Western Farming.

Our present old-fogy system of going four times in a row, must be superseded by a riding cultivator going once, and doing the work equally well. I am afraid I am too old for this myself, but my boys must be taught to do it, as well as to use that big harrow that crosses *three* corn rows at one swoop. G. G.

Dayton, Liberty Co., Texas.

FRUIT NOTES.

WE have suffered in this vicinity nearly the whole Summer long from a severe drought. The strawberry harvest was injured considerably, especially on thin, dry soils. Raspberries and blackberries were quite reduced in size, many of the latter shriveling upon bushes which were mulched for any ordinary season.

Among varieties of strawberries, I was much pleased this season with the Duncan, Prouty's Seedling, Monarch, Cumberland Triumph, Sharpless, Miner's Prolific, and Glendale. The Sharpless did best with me where fully expos-

ed to the sun, and the Monarch where somewhat shaded. The Sharpiess ranked first in health and vigor and size of single berrles, but second in quality and quantity of fruit. Miner's Prolific, on my grounds which are principally a sandy loam with light clay subsoil equals it in everything except vigor and excels it in quantity and especially in quality of fruit. The Crescent Seedling gave very fine returns where grown in narrow matted rows, on semi-heavy, deep and very rich soil. With me, Miner's Prolific has given excellent returns under all kinds of fair treatment. The Glendale is only second to the Sharpless in vigor of plant, in health and prolificness, and has fruit of good quality, and excellent staying qualities as to length of bearing season.

Bartlett pears were ready for picking by Aug. 10th. Souvenir du Congres on the 16th.

Among grapes, the Champion, Hartford, Israella, Adirondack and Moore's Early are ripe except an occasional cluster. They have ripened quite unevenly, and the season has rather intensified the unpleasant qualities of some of them. Among grape novelties set on my ground this season, the Bacchus at this writing has excelled all in growth of wood; the Prentiss ranks second; Jacob Rommel's Elvira seedling, Faith, third; Pocklington, Vergennes and Don Juan, and several of Rommel's Taylor seedlings, fourth on a scale of 10. The Lady Washington, Eldorado, Highland, Jefferson, Advance, Imperial, Wyoming, Florence, Concord, Muscat Concord, Chasselas, Centennial, Sharon, Noah, Duchess, Poughkeepsie, Linden, Lexington, Eugenia, Augusta, Belinda, and Antoinette are especially healthy for such a season. I am fruiting the last two of the above list, and will report in detail at a later time. The Brighton vines, with me, have been slow growers the first season, but vigorous in growth after that. Their foliage this season, is very fair, but it has been injured somewhat on young plants, as has also that of the Duchess, and of a few other varieties by the rose chafer.

Livingston, Co., N. Y. R. A. WATERBURY.

The Peach Crop of Illinois and Missouri

is reported as very large in quantity, but poor in quality, few of the best specimens even being free from worms. From present indications, peach-growing, already in its decay in the old States named, will have to be remitted to the newer portions of the far Southwest, as, for example, to Northwestern Arkansas, which is said to possess a soil and climate admirably suited to the peach and the grape.

Conversing with an intelligent lady from Louisiana recently, she said no small part of the failures in orange, fig, tea, and olive growing was due to the frequent attempts made to force their growth beyond the natural climatic limit assigned to each, for above 30° or 31° fruitfulness and healthy development could not be counted upon. B. F. J.

The Vineyard.

TRAINING AND PRUNING GRAPES.

S. B. PECK.

I find many beautiful illustrations of various methods of performing the above operations, but I have never seen any one of them carried out to the perfection shown in the plates. In fact, I have rarely seen any one plan, as they appear in the books, attempted and persisted in for any length of time, except that recommended by Strong—a flat trellis about two and a half feet high and about as wide, allowing the vines to run over and hang down the sides as they please. This plan has with me worked very well, but it takes more work than some others with the hoe, and less can be done with the cultivator. For this, I set posts eight feet apart; saw them square at the top before setting, and set by a line, lay 2x6 inch blocks across the top, and fasten them with spikes; then nail 16-foot strips on the ends of these blocks; then nail, as may be needed, a half length of lath across.

I see that there is some controversy about the distance apart at which grape-vines should be planted, and I know two growers who, having planted in rows eight feet apart, the vines eight feet apart in the row, have eventually dug up every other vine in the row, and claim to have thereby increased the yield of fruit. That the increased yield should be the result of this process, if the vines are trained by the ordinary hap-hazard method, I can easily believe, without admitting any benefit from the increased room for the roots or vines.

The natural tendency of the vine is to keep increasing its length from year to year, bearing its fruit further and further from the stock, leaving at the base bare wood, constantly increasing in length. All pruning has for its main object the keeping of the vine within the prescribed bounds, and the occupying of the trellis with bearing instead of bare wood. Is it not possible that the thwarting of nature in this matter is one of the causes of rot and mildew so prevalent in places? I do not assert this as a fact, but I could give my reasons for believing it to be so.

To avoid this necessity for short pruning to prevent bare wood, I have hit upon the following plan, which I intend to put in practice at the next Fall pruning with my three-year-old Concords and other rank-growing sorts. We will suppose a trellis of four bars or wires and two main canes. Tie these two canes to the lower bar 12 to 14 inches apart, then fasten the upper end of each to the third bar at an angle that just allows them to reach that point, both running parallel with each other in the same direction to form the angle, the acuteness of which will depend on the length of the canes. Allow these main canes to increase in length from year to year, two or more feet, giving them a more acute angle as their length increases; prune to short spurs; their length depending on your experience and judgment. By this process you will see that the bearing wood of one vine overlaps the bare wood of its neighbor, occupying all the trellis, and year by year approaching nearer a horizontal position.

I am aware that this plan is open to criticism, and that there may be found objections that I have not forseen: but objections may be made to all the plans I have ever seen, and the most forcible objection is, that to carry them out needs more care and close attention than one man in a hundred has the patience to give them. I shall follow the same plan with my flat trellises—train all the canes one way, the way the prevailing wind blows as nearly as may be, and let the fruit-bearing part overlap the barren part, thus giving Nature more of her own way.

I propose now to give some of the observations that have led me to this plan. The first specimen of grape pruning and training that I ever saw was attended to year after year by an old man, who had been much in foreign countries and who pruned close to a single cane trained horizontally some four feet high, giving it all the length that his limited area could afford. The varieties were Isabella and Catawba, his latitude Western New York, and his success satisfactory to him. In sight from where I now sit, I have a single old Concord vine trained on a trellis 12 feet long and eight feet high. In the Fall-pruning the bearing wood is brought to any point where there is the most room for it, up, down or horizontally. The trellis abuts upon a fence, and some five years since I trained a rampant shoot upon the fence, giving it all its length. It has been annually pruned to spurs of three to four buds, has always borne a monstrous crop, and has now about nine feet bare at its base; while 18 feet are loaded with fruit, and there is an extension of six feet, the growth of this year—33 feet in all.

I have other grape-vines bearing fruit 25 or more feet from their bases. They are on trellises six feet high and eight feet apart, with long canes thrown across them, and trained on crossbars six to eight feet apart. The best fruit has always been overhead, but now, after five years' bearing, there is little on the side trellises, which is not the case with the vine first mentioned, no part of it being shaded.

Sheboygan, Mich.

Dairy Husbandry.

FALL-PACKED BUTTER.

HENRY STEWART.

THE harvest of the "farm dairyman" is just at that time when the Summer creameries curtail operations. Then the market is relieved of a pressure, prices stiffen up and inquiries become more active for choice butter. Then is the time for the private dairyman to push his goods forward. "Dairies" are then wanted, and if the quality of the butter is right, the prices are just as "right." The aim of every butter maker should be to become independent of market prices, and to produce such a quality of goods as shall sell at special rates and shall also secure a constant purchaser. To do this he must make a choice article, of course; but it is far more important that his butter should be packed to keep.

Some years ago I packed a 50-pound pail of butter in June, and put it away for a year. When it was opened I thought the butter as good as, if not better than, the newly packed, and it was sold as new-packed without question. Some years before that I examined some tubs that were packed by an Ohio dairyman 10 months previously, and the quality was so excellent that the memory of that butter remains as a bright, indelible spot upon my mind.

In these instances it was the packing that not only preserved the butter, but improved the flavor and deepened the color. From those Ohio tubs I learned a lesson, for I could see the points in the packing, and gained a wrinkle for my own future use. Now, for the credit of that Ohio dairyman, who was and still is a farmer of Cuyahoga county, in that choice region known as the Western Reserve, I will describe how his butter was packed, and merely say that my own method later used, was similar to his, with the exception that I used the "Westcott return butter pail," holding 50 pounds, while he used new white-oak firkins of 100 pounds each.

The butter was well made and salted to keep, with the usual proportion of one ounce of salt to the pound. The tub was not all packed at once, and in opening it, the contents were found to be in layers, with distinct strata of what had been salt, but was then briny moisture between them. The firkin was new and sweet; it had been well soaked in brine before the butter was packed. Each layer of butter was packed solidly, with no holes in it and no open seams around the outside against the staves. As each layer was packed it was covered with brine, until another was ready, when the brine was poured off for a new packing, a little salt was scattered over the surface of the last layer and upon the sides of the firkin. Three packings filled the tub in six days. When the tub was filled a piece of fine white muslin soaked in brine was spread upon the top (a similar piece was placed at the bottom previously), salt was sprinkled upon that and the head was pressed in with a lever: then the hoops were driven down, and this tight packing made the butter as solid as it could possibly be made. The tubs were kept in a spring-house, the hoops were tightened occasionally, and when the tubs were shipped, the hoops were again driven down and nailed with tin tacks, which did not go through the staves and stain the butter as iron nails do. The butter was made in September. The 10 tubs which I examined were shipped to the backwoods in Northern Michigan, in May, and were not opened until after midsummer, and the last was not all used until September, and this butter brought joy to our lonely camp.

Afterwards I found the maker, a Mr. W——, from his brand on the butter, who told me his story. The secret of this success is easily seen. Mr. W—— made good butter, packed it in perfectly clean, air-tight packages in such a manner that they were kept air-tight, and so the good butter was well preserved. What is to hinder any other farmer from doing the same? If Mr. W——, who was then, and is doubtless now, a reader and a friend of the RURAL NEW-YORKER, should see these lines, I am glad to assure him that the occurrence referred to helped very much to make a dairyman of me, and that I do not think I ever made butter equal to that lot of his, for it was the best I have tasted, to the last pound.

Farm Topics.

CO-OPERATION AMONG FARMERS.

WE are apt to suppose that what is natural is about right. Now, it seems to be natural that there should be a flow of population from country to city, and that the increasing population of cities should stay there. But there seems to be something wrong about this. City life is so wearying and exciting that it burns out the energy, life and vigor of the inhabitants, that must be renewed by constant influx of people from the country. Imagine New York, for instance, with an embargo against immigration for fifty years, what would be its condition at the end of that time? There are too many people in our large cities. This is evident by the amount of poverty and destitution among certain classes. There are thousands of acres of land within a hundred miles of New York that need the labor of the starving populace of that city. These acres offer homes and subsistence in return for labor. The trouble is that our people are not satisfied with these. They want palaces and luxury. Country people hear of the fortunes that are occasionally made in cities and impelled by that gambling spirit that seems to be almost inherent in humanity, rush off with hopes as high as their knowledge of the world is deficient expecting to strike a bonanza and get rich in four or five years. So broad acres are left untilled for want of tillers, and others are only half worked, at an expense of labor and capital which, if confined to smaller space, would better repay the investment.

My thoughts, while here, have been called to the need or advantage of co-operation among neighboring farmers, that could, I think, be readily had through the medium of farmers' clubs. For instance, two progressive farmers have determined to build silos and try the experiment of making ensilage from maize. Now, this may or may not prove successful. If it should, they have taken a risk which benefits the whole neighborhood. If it proves a failure, the whole loss falls upon these two enterprising individuals. Now, why ought there not be a contribution from all interested, including all farmers in the vicinity, to furnish the funds necessary to try this experiment. These funds the treasury of a farmers' club should supply, as a loan, to be returned only in case the experiment proved no loss. Through such an organization also should other experiments be made, such as testing new varieties of fruits, grains and vegetables. If farmers in different parts of the township would cultivate the same kinds of seed on different soils and in different situations, their reports at the end of the season would be of great value to others. Why should the time and labor of 50 be spent in making experiments when those of five would be just as conclusive.

In this connection, I would again call attention to a matter to which I have before called attention in the RURAL—that is, the importance of establishing a museum of natural history in every township. Every town should have a Town Hall. Against the walls of some room in the building should be cases in which to place specimens of insects, birds, vegetables, plants, wood, fruits, in fact, of every thing of suitable size found in the township. To prepare these may seem at first thought to be great labor; but it would not all be done at once, and when persons become interested in doing it, the collection would grow rapidly. With an active farmers' club to give incentive to such a beginning, and make it a duty for such as are chosen to perform it at first, the work would go on rapidly, and in a few months a collection would be made the value of which, for educational purposes, can hardly be overestimated. L. A. ROBERTS.

NOTES FROM MEADOW GLEN FARM.

A SYSTEM of mixed husbandry is carried on on this farm. Hay is the principal crop; 75 or 80 tons are cut annually. A sod field is plowed for corn, which is followed by oats and wheat in rotation. Several acres in orchards give a good supply of apples and pears, which are sorted, barreled and sold to special customers. The land has a gentle slope to the south and east, while the northern and western portions are dry upland, and the remainder natural meadow and pasture. The upland is a clay loam, the meadow a mucky soil.

A herd of grade Jersey and Ayrshire cows is kept and the milk made into butter and sold to special customers in Saratoga. A flock of Meadow Glen Downs, with a few South-Down sheep are kept for mutton and wool. Berkshire swine are raised for home use, with a few of the best for sale. Several broods of pure-bred poultry are also kept for home use, also for sale. None but thoroughbred males are kept or used, and the best of young animals of all kinds are raised for use and for sale. Large heaps of manure are made and applied to the corn-field, and large heaps are also drawn out, to become well rotted for wheat in the Fall. Phosphate of lime is the principal artificial manure. The seed is often changed and obtained from a distance, as I think a change of seed increases the vigor of the grain. A fine row of maple trees along the road, set out many years ago, make a fine shady drive through Meadow Glen Avenue. In laying stone walls we bank up with dirt on each side to make it more firm. Young fruit trees are being set out from year to year for improvement.

WHEAT ACCOUNT FOR 1880.

DR.	
Plowing land	$9 00
Harrowing	4 00
Drilling in seed	2 00
Seed	12 00
Phosphate	10 00
Harvesting	10 00
Thrashing	15 00
Interest on land	27 00
	$89 00
CR.	
140 bushels of wheat, $1.25 per bushel	$175 00
Straw (estimated)	25 00
	$200 00
Deduct expenses	89 00
Net profits	$111 00

This from 4½ acres; the soil being a clay loam. Yard manure was well harrowed in at the rate of 10 loads per acre, and the phosphate was applied in the drill at the rate of 100 pounds per acre, the wheat was very plump and nice and of the Diehl variety. The yield, it will be seen, was a trifle over 31 bushels per acre. A. H.

The Apiarian.

THE QUEEN BEE.

THIS most important member of the busy commonwealth has been appropriately called the mother bee. Laying all the eggs in the hive she is truly the parent of the entire population — drones as well as workers. The ancients, indeed, having an imperfect knowledge of the internal economy of these communities, misnamed her *king*, conceiving it to be the office of so distinguished a personage, to regulate and govern the masses. This erroneous notion has perpetuated itself in various countries, even to our day; and we not infrequently meet with beekeepers who receive it with implicit faith. Yet, whatever be the special opinion of some, the large majority of intelligent apiarians concur in assigning to her

the character she can justly claim—that of being the common mother of the family. So long as she is present in the hive, all the eggs found therein are laid by her. The truth of this may readily be ascertained by introducing an Italian queen among common bees. All the young subsequently hatched from her eggs, both workers and drones, will wear the livery of the foreign race; and the old stock will gradually disappear, none of their own "kith and kin" being thenceforward produced.

It is thus rendered certain that all the eggs originate with the queen. But as the cells in which the drones are bred differ in breadth and diameter from those which cradle the workers, and drones are besides reared at certain seasons only, the queen must evidently possess the ability to distinguish between the two kinds of cells, and to lay male or female eggs at pleasure, according to the needs of the colony. That she has this ability is an undeniable fact, however difficult it may be to account for or explain it. The function of the queen is simply to lay eggs, and thus keep the colony populous; and this she does with an energy that is fairly startling. It is nothing uncommon for a good queen to lay 3,000 eggs in 24 hours. We may confidently assume that a vigorous queen may annually lay from 150,000 to 300,000 eggs, or at least 1,000,000 in the four years that constitute the average duration of a queen's life.

A queen is developed from an egg in 17 days in a preconstructed cell, but will issue from what is called a post-constructed cell, sometimes as early as the eleventh or twelfth day. Queen cells are usually built on the edge of the comb, or around an opening in it, which is necessitated from their size and form, as usually the combs are too close together to permit their location elsewhere. These cells extend either vertically or diagonally downward, are composed of wax mixed with pollen, and in size and form much resemble a peanut. The eggs must be placed in these cells, either by the queen or workers. Some apiarists think that the queen never places an egg in a queen cell, but I have no doubt of the fact, though I never witnessed the act. I have frequently seen eggs in these cells, and, without exception, in the exact position in which the queen always places her eggs in the other cells. I know that when royal cells are to be torn down, and inchoate queens destroyed, the workers aid the queen in this destruction. I have also seen queens pass by unguarded queen cells, and yet respect them. I have also seen several young queens dwelling amicably together in the same hive.

The queen is larger around the body than the worker, but not as large as the drone. Her body is longer than that of either, gradually tapering to a point. She has a sting, but uses it only upon meeting a rival in royalty. The queen usually leaves the hive only when accompanying a swarm, and when a few days old, to meet the drones, for the purpose of becoming fertile. Once becoming such, she is so *for life*. The old poetical notion that the queen is the revered and admired sovereign of the colony, whose pathway is ever lined by obsequious courtiers, whose person is ever the recipient of loving caresses, and whose will is law in this bee-hive kingdom, controlling all the activities inside the hive, and leading the colony whithersoever they may go, is unquestionably mere fiction. In the hive, as in the world, individuals are valued for what they are worth. The queen, as the most important individual, is regarded with solicitude, and her removal or loss noted with consternation, as the welfare of the colony is threatened; yet, let the queen become useless, and she is dispatched with the same absence of emotion that characterizes the destruction of the drones when they have become supernumeraries. It is very doubtful if emotion or sentimentality is ever a moving force among the lower animals.

There are probably certain natural principles that govern in the economy of the hive, and aught that conspires against or tends to intercept the action of these principles, becomes an enemy to the bees. All are interested, and doubtless more united than is generally believed, in a desire to promote the free action of these principles. No doubt the principle of antagonism among the various bees has been overrated. Even the drones, when they are being killed off in the Autumn, make but a sickly show of defense, as much as to say: "The welfare of the colony demands that such worthless vagrants should be exterminated; so mote it be; go ahead." It is most probable that what tends most for the prosperity of the colony is well understood by all, and without doubt there is harmonious action among all the denizens of the hive, to foster that which will advance the general welfare, or make war on whatever may tend to interfere with it. If the course of any of the bees seems wavering and inconsistent, we may rest assured that circumstances have changed, and that, could we perceive the bearing of all the surrounding conditions, all would appear consistent and harmonious. LIGURIAN.

Floricultural.

Petunias in Vases.

I often hear women speak of petunias as poor flowers for cutting purposes, and my own experience is quite the reverse. I regard them as among the best. To fully appreciate them, they should be arranged in flat dishes in which twigs from evergreens, or small-leaved deciduous shrubbery have first been placed, and form a support for the petunias. When this has been done and the dish has been filled with water, cut the petunias and stick them around in the green stuff as quickly as possible, so that they do not wilt. A large, shallow plate can be made to have quite a decorative purpose for the table arranged in this way. Considerable skill can be displayed in the arrangement, too, if one cares for that, by placing the blossoms in rows, making each row of the same color or variety. A petunia bed at night and at morning is the most deliciously scented thing that I know of; and the only thing about one that is not absolutely delightful, is that it cannot be taken up at will and set in the midst of the dining table for a centerpiece. You, who have morning-glories, pick at night the opening buds and arrange them as described for petunias. Put the dish on the breakfast table. Next morning you will find that the glories of the morning preside at your meal. MARY WAGER-FISHER.

Bryn Mawr, Pa.

Give Plants Plenty of Room.

In the cultivation of flowers, I find that most people do not give them room enough in which to grow to perfection, and hence they do not feel satisfied with the seed, and will often condemn the source whence it comes, as the flower is not as nice as the catalogue cut represented it to be, while the fault is wholly, or in great part, on their own side, in not giving room enough to the plants. Now, at the present time, I have in my garden several plants from seed sown last Spring, as nice as the cuts in any catalogue show them to be, and a plant of the Shell Flower far excels the cut in the catalogue of the nurseryman from whom the seed was obtained. When planted out in good soil, I find that Phlox Drummondii will spread its branches so as to cover a space 18 inches across, and most annuals will be much more beautiful if given plenty of room; therefore, do not try to crowd too much into a given space—better have less in number, and have them nicer. F. H. D.

Corning, N. Y.

Miscellaneous.

JOTTINGS.

SALT MARSH HAY.—The tables given by Mr. Stewart, in his article on the Dairy Cow, page 520, showing the relative value of feeding stuffs, are interesting, and if we could regard them *even* "as approximately correct," as stated, they become more so. Beside the difference in corn cobs and corn stalks noted I have been interested in the high value given to salt hay, exceeding even that of corn cobs and stalks, as well as Timothy hay, ripe and in full bloom, all the straws except bean, and nearly equal to ripe clover. Again, the amount of fat accorded it exceeds that in all the straws and hays, peas and rye. This will hardly be accepted as correct or approximately so, by the practical masses, as it is completely at variance with the oft-repeated and quite general belief that a pound of fat never came off the salt madows in the shape of salt hay. Anyone at all familiar with this product knows that it differs very materially in quality. Bright, clean, fine salt hay is considered best for horses, and black grass, got in early and in good order, best for cattle, and both are regarded by old farmers hereabouts as about equal in money to half the price of fresh hay.

HOEING.—"It requires but a little skill to hoe a row of corn, etc." The above, from a recent editorial in the RURAL, will be accepted as true according to the value each individual places on the merit and thoroughness of the hoeing and the object sought. The term "to hoe" covers a wide range of soil manipulations, and the operation is one of the most important of all the small labors in the garden, and if but "little skill is required to hoe a hill of corn," in my experience that little is more than one in ten ordinary laboring men possesses. If hoeing corn consists merely in hauling the earth to, and making a mound up *around*, the stalks to shed off the rain, then I yield the point at once; and where the cultivator has been freely and properly used, the area about a hill of corn, for the skillful exercise of the hoe is, I confess, very limited, and in many cases is regarded as not existing. Aside from the destruction of weeds, hoeing corn, as I use the term, embraces breaking the crust, loosening and pulverizing the soil close in and about the stalks and roots of the young plants for the free passage of warmth, air and moisture, and leaving the ground nearly level.

In the finer and more varied operations of the garden or field culture of small fruits, the hoe plays a more important part, and in strawberry culture especially it is the most important of all implements used, and requires more *skill* to use it expertly than many people are aware of. In all my long experience I have never found a hand who, after years of trial and repeated showing, could or would hoe a row of strawberries so nearly like one of my own—which he was to imitate—but that I could tell at a glance which was his. From this I conclude that skill and imitation—the former being the successful application of the latter—are qualities seldom found or successfully developed in such material as we have to rely on for help on the farm or in the garden. In other words, competent and skillful hoers are like angels' visits—few and far between.

OBSCURE WRITING.—The most successful teacher is the one who can the most readily impart his ideas to his pupils. The best writers are those who can express their ideas so plainly and clearly as to enable the most undisciplined mind to comprehend them, and the beauty of all writing is its perspicuity; and yet how often do we find an attempted description of an implement or method so obscure as to baffle our best efforts to understand the writer's meaning. For instance, in the last number of a neat and sprightly contemporary, hailing from the city of Brotherly Love, the editor in an article on the fall planting of strawberries, among other things, describes in this wise a machine for cutting off the runners.

"A circular knife fastened to a 10-inch, wooden wheel made of one-half-inch plank. Let the knife project two inches from the wheel. This knife may be made in segments of steel or heavy sheet-iron ground sharp. At the end of the five-foot handle bolt a bent bar of ¼x1½-inch iron so that the ends project 10 inches. Two inches from the ends of this bar punch holes for the axle of the wheel to run in; put washers on each side of the wheel to make it run true. It is now ready for use. Push the wheel before you with sufficient pressure to cut the runners. You can run as close to the plants as you please, and if the plants are set in rows both ways every runner can be cut off."

Is not half an inch rather thin for a plank? Almost any one with any gumption could rig up a machine that would answer the purpose, but I have been wondering how many readers could build one from the above blind description and have it accord with the writer's ideas. Descriptions of simple contrivances like the above, though perfectly plain to the writer are often of no use to others, simply because of their ambiguity and lack of clearness. A simple illustration is often most effectual in conveying ideas and should be used where the importance of the matter will justify. Other portions of the above-quoted article are stolen verbatim from other sources without a word of credit, and appear as original with the writer. When one engages in plagiarism of this kind it would look a little better and more creditable to change the clothing of the ideas sufficiently to give at least the *semblance* of originality. KIT.

THE BUFFALO HONEST FERTILIZERS.

EVERY year the use of commercial fertilizers is rapidly increasing throughout the country, except in those newly-settled districts in which the exuberant fertility of the virgin soil has not yet been sensibly impaired by repeated croppings. Hundreds of thousands of dollars are annually spent by the farmers of this and neighboring States on these sources of fertility, and it is much to be feared that no small proportion of the outlay brings no inadequate return in the shape of increased crops, owing partly to the unskilled mode in which they are used, partly to the unsuitableness of the fertilizer employed either to the soil or crop to which it is applied, but mainly, perhaps, to the inferior quality of the fertilizer.

It is chiefly to protect the agricultural community against adulterations in such fertilizers that Experiment Stations have been established by the Legislatures of this and other States, and the experience gained in these amply demonstrates the necessity for some means of the kind for protecting our farmers against fraud in the sale of such commodities. There is no doubt that when the New York Experiment Station is in working order there will be a weeding out of some of the brands of fertilizers now on the market in this State, and a considerable improvement in others, as the constant liability to detection and exposure of any adulteration or other fraud in their composition must force the makers to fair dealing.

There are some fertilizer manufacturers, however, whose goods have always been so honestly put up that the establishment of the Station will have no effect in causing them to change their mode of action, while it must greatly benefit them by spreading abroad the knowledge of the excellence of their wares, and by driving from the field unworthy and dishonest competitors.

Among these L. L. Crocker, manufacturer of the Buffalo Honest Fertilizers, stands in the front rank. We have used these fertilizers on the RURAL FARM, where they proved quite satisfactory. We also know of many who have used them more extensively than ourselves, and for a number of years, who speak very highly of them, and some of whom now use no other commercial fertilizers.

The Ammoniated Bone Sperphosphate has for its basis bone, blood, meat and potash, and therefore is a complete fertilizer, being rich in nitrogen, phosphoric acid, and potash. It is well adapted for grain, roots, grass and garden crops, and at Mr. Crocker's office in Buffalo we have seen a goodly number of testimonials as to its efficacy from farmers in different parts of this and the neighboring States, speaking in the warmest terms of its excellent effects on corn, wheat, oats, barley, rye, buckwheat, grass, tobacco, hops, fruit trees, etc.

From the nature of the ingredients the effects of these fertilizers on the soil are more lasting than those of ordinary bone or mineral superphosphates, and their value is otherwise enhanced by the care bestowed on their manufacture and the pure quality of the sulphuric acid used in making the superphosphate. One of the RURAL staff has carefully examined the process of manufacture, the crude materials, and the manufactured goods, and speaks strongly of the skill and honesty that distinguish everything connected with the business.

We would advise all our readers who can conveniently get their fertilizers from Buffalo to investigate the merits of the Buffalo Honest Fertilizers before investing their money in such goods indiscriminately. Full information will be promptly furnished by Mr. Crocker, together with the names and addresses of a large number of farmers who can speak highly of the excellent effects produced on various crops and soils by the application of different quantities of these fertilizers. An inferior article loses in reputation by investigation and trial; a good one gains thereby, hence the high esteem in which these fertilizers are held by those acquainted with their merits.

To Keep Eggs Fresh.

Take them daily from the nest and pack, *small end down*, in any clean and sweet non-conducting material, like fine sand, sifted coal or wood ashes, and set away in any cool and dry place where the temperature will not rise above 75°, or, better, 65° or 60°. Where these conditions are to be attained, preservation in lime-water or salt is wholly unnecessary, because of the extra trouble and expense, and because limed eggs are at best flashy, if not worthless things, and finally, because the air being excluded in the low temperature maintained, eggs will keep sweet and sound for months. B. F. J.

FACTS AND OPINIONS.

I keep my dried berries, etc., in strong paper bags, tied firmly, and stored in a dry, dark place. I stand the bags on the end that is tied. Unless great care is exercised the insects will find an entrance.

A Rochester grape grower brings to market the earliest Concords and the largest clusters, and secures about double price. His secret is girdling the vines. Last season, I visited a vineyard near Lake Ontario, that had been girdled for years, yet the vines were extremely vigorous and healthy; they were bearing a heavy burden of fruit, and the clusters and berries were marvelous in size and of excellent quality.

Wild strawberries invariably possess vigor and hardiness, else they could not exist in old meadows and stumpy clearings. It is interesting to plant them in the garden and watch the results. Those I planted last Fall have sent out a mass of runners. The plants resemble the Crescent Seedling closely. I have found wild strawberries as glossy and beautiful as costly gems, and of exquisite quality. Among them we need not look for monsters in size. We are, in fact, getting over the craze for big strawberries.

Artists often seat the milk-maid on the left side of the cow, make the wood choppers left-handed, and construct impossible rail fences in their illustrations. These slips we can overlook, but when they attempt to make a team draw a load of hay without any wagon tongue, as was done recently in a popular journal, we must indulge in a mild protest.

One hundred pounds of old woolen rags, properly prepared, will fertilize an acre of land, but I shall continue to litter the pig-pens with care, and save the last remnant from the barn-yards. G. A. GREEN.

CATALOGUES, ETC., RECEIVED.

BAIRD & TUTTLE, Bloomington, Ill. Catalogue of 100 pages of fruit and ornamental trees, shrubs, roses, bulbs, herbaceous and garden plants. There is a good deal of originality about this catalogue, and some of the

illustrations, especially the leaves of the Japan Maples, are true to life.

SAMUEL KINSEY, Kinsey's Station, near Dayton, Ohio. Wholesale price-list of fruits, etc.

T. S. HUBBARD, Fredonia, N. Y. Wholesale price-list of grape-vines, fruit trees, etc. Also circular with colored plate of the Prentiss Grape, with testimonials from many of our first pomologists as to its value.

LIST of Premiums and Rules and Regulations of the Ninth Annual Exhibition to be held at Rochester, N. Y., on the grounds of the Rochester Driving Park Association, Sept. 28 to Oct. 1 inclusive. H. A. Kingsley, Secretary, 118 East Main Street, Rochester.

PETER HENDERSON & Co., 35 Cortlandt Street, New York, Circular of Pot-grown Strawberry plants. Also pot-grown grape-vines. A colored plate accompanies this circular showing that Mr. Henderson has changed his views somewhat as to what varieties make up "the cream of the strawberries." He now names Glossy Cone, Sharpless, Juennda, Harvey Davis, Seth Boyden, Pres. Lincoln, Black Giant, and Monarch of the West. The pictures are handsome, but far from portraits.

DR. RYDER'S American Fruit Drier or Pneumatic Evaporator. New Principles of Fruit Evaporation by the American Drier Company, Chambersburg, Pa. Those interested in this subject should send for this treatise of 24 pages, which is fully illustrated. The sum of $225 is offered for the best exhibits of fruit dried by their evaporators.

BRIEFLETS.

PROF. BURRILL (Illinois University) has inoculated sound pear trees with the bark of stems that were blighted. In this way the disease has been conveyed, the same as yellows in the peach may be conveyed by pruning a healthy tree with a knife that has been used upon one having the yellows. . . . . Prof. Budd, of Iowa, mentions Oldenburgh, Alexander, and Constantine (Russian apples) as among profitable market sorts. . . . . Mr. Potter calls liquid manure "the wine of the barnyard." . . . . . Some women were evidently "born to blush unseen," at least they were never seen to blush.—Cincinnati Sat. Night . . . . . It will soon be time for the papers to announce that they give themselves away . . . . . , A farmer 70 years of age remarked to the writer, while plowing under an oat stubble rank with weeds, using a Syracuse chilled plow to do the work: "I would not take $50 for it if I could not get another". . . . Bicycle races are to be a grand feature at all of the forthcoming fairs . . . . It is time to prepare the ground for new asparagus beds . . . . The Nation refers to farmers as simple-minded but sagacious men . . . . . Gov. Furnas pronounces the Prentiss, as to quality, the finest hardy white grape he has ever tasted . . . . . Readers are requested to note how well or how ill our summary of "What shall the Harvest be," coincides with the facts which are now appearing. They will the better know another year how much confidence to place in our Special Crop reports. . . . . Many of our farmers who were visited by the Army worms last season fear that they will reappear next season in still greater numbers. But there is room to doubt that such fears are well grounded. Their sudden disappearance is more easily explained than their sudden appearance. They have many enemies among birds and parasites which, during seasons when the worm is abundant, seem to give themselves up to their destruction. . . . . It seems that there never has been so large a demand in St. Louis as at present for cider mills. . . . . The Cultivator, commenting upon our remarks as to the Turner and Cuthbert Raspberries and the Snyder Blackberry, says of the latter, there is no other to approach it for hardiness, and it is profusely productive. The size of the berry is the only drawback. . . . . Mr. S. Miller of Missouri, tells the Rural World that the new Black-cap, Hoosier Mammoth, is larger than the Gregg and of fine quality as well as more productive. . . . . A friendly contributor suggests that it would be a good idea to publish a comic paper with an Agricultural Department. . . . . "I never see," says Mr. Robinson of the London Garden, "half enough of pinks, carnations or picotees in gardens." The same thought has often occurred to the writer of these notes. We do not think of any other plant that is, in all respects, more satisfactory. . . . . There are few yellow flowers that at this time would make a better show in garden borders than those of lettuce. The variety with crimson or bronze leaves would add attractive foliage also. . . . . If you have any real greatness you won't go far before the world will find it out. Small men insist that they are great, while great men can afford to keep still. The Talmud says that "all kinds of wood burn silently except thorns, which crackle and call out, 'We, too, are wood.'" . . . . . "Emerson says his orchard has paid him better than his literary works."—Scribner. . . . . The Western Rural says that it does not believe there is a genuine case of pleuro-pneumonia in this country, and if there is any way to muzzle the scribblers who are writing about something that they know nothing of, the man who can suggest it will be a public benefactor." . . . . . The surpassing advantages which our "first-class Summer resorts" present as the best teachers of "decorous dissimulation" is pretty well understood by those who frequent them. . . . . Soft soap is recommended as a cure for ivy poisoning. . . . . Under the title "Impressions of America," we find in the Hour the following remark: "American women seem to have only one necessary thought when they see a new man: 'How much is he worth?' Such thoughts deform and harden the most handsome faces." . . . . . The Ohio Farmer offers this bit of advice to those who attend agricultural fairs: "Do not hang around the race track all the time, and then blame the Board for encouraging horse racing." . . . . . It is to be hoped that those who attend fairs this season will resolve beforehand not to find fault with the awards of prizes. Judges are not paid for their services, and, as a rule, they award prizes, according to the merits of exhibits as they seem to them. There is, no doubt, favoritism sometimes. But it is the exception. . . . . .

WHAT OTHERS SAY.

THE Prairie Farmer remarks that it has often been said—and is worth repeating because it is an important fact—that our Fall fairs have been of great benefit to the cause of agriculture. They are really institutions of practical information—schools for the farmer and his family, where object lessons meet the eye on every hand which may be, and are, turned to good account. Contact with others, a comparison of results in the production of crops, or stock, and other things on the farm, or in the dairy, in the orchard or in the vineyard, cannot fail to be of advantage to an intelligent observer.

A WRITER in the same journal gives his testimony as to the clover field being the farmers' national bank, whence he can draw—if he has deposited liberally—without fear of "protest." He has corn that is a foot taller than he can reach with his cane, in which a horse would be hid at two rods' distance, on land where five years ago his son said the corn did not pay for cultivation. Cause, a good clover and Timothy sod turned under last Fall. We can get this sod on any of our prairie soil. Of course a little manure will help it along, and when we have a good sod, who does not know we can raise anything we choose.

ROLLERS.—Mr. Geddes spoke of the economy of buying sections of old steam boilers for farm rollers, which can easily be fitted with skeleton heads, and can be bought cheap and answer the purpose. Mr. Geddes related his experience in rolling wheat on certain soils containing clay, where Fall rolling causes the formation of scale that eventually kills the wheat. On sandy or light soils Fall rolling is generally advisable. A roller is a dangerous tool in inexperienced hands. He gives the following rules: Roll soil that you wish to compact, but if not, let it alone; never roll in wet weather. Clay soils may be rolled in the Spring but not in the Fall.—Syracuse Journal.

MR. Charles A. Green, our valued correspondent at Clifton, N. Y., writes to the N. Y. Tribune of a factory in which sour cider is stored in a tall tower and made into vinegar during its twenty-four hours' passage to the ground floor.

CLEMATIS LANUGINOSA.—Notwithstanding the many fine varieties of clematis that have been raised and distributed during the past few years, the species above named is quite unrivaled for the great beauty and substance of its magnificent flowers, the color of which is of a rich delicate azure blue, and the size as large as or larger than that of any variety extant. It is one of those real good things discovered and sent home by the late Mr. Fortune, who found it growing on the hills of Che-kiang.—London Gardener's Chronicle.

"VULGAR ERRORS."—Under this head the Gardener's Chronicle has the following: "It is odd and not a little disappointing to see how people go on harping on old exploded prejudices. The recent committee of the House of Commons on the potato disease affords an example. The committee is reported to have upheld the exploded fallacy that varities die out. Properly fixed and properly cared for, they do not die out. The old Ashtop Kidney is as vigorous now as ever under proper cultivation, but it has been displaced by Myatt's Prolific and other sorts."

COLORADO'S GOOD LUCK.—We take the following from an editorial in the N. Y. Sun:—"The so-called Colorado potato beetle has probably done more to advertise and make Colorado known as a Territory and State than almost anything else, her silver mines, perhaps, excepted. The common name of the insect has called the attention of not only the people of the Eastern States, but those of all European countries, to the region whence the pest came, and from looking up its location on the map it is but natural that a person should seek further information in books and periodicals, all of which has been a standing advertisement for Colorado, and has helped to bring her what may be termed good luck. A million of dollars expended in advertising would not have kept the country so constantly before the people as the Colorado potato beetle and what has been written about it by entomologists and correspondents of the agricultural press." Under the circumstances, we should think Colorado could afford to pay the other States for some of the damage which the potato beetle every season perpetrates.

"UP to the time I was 40 years old I put forth all my efforts to increase my income. Since that time I have been equally careful to decrease my expenses." It strikes us there is much of wisdom in this plan, and that a careful examination will reveal the fact that it is excess of expense rather than want of income which keeps farmers poor. Waldo, of the Ohio Farmer, suggests, then, as a fruitful theme for correspondents, "How can we lessen the expense of farming?"

MR. BATEHAM.—W. I. Chamberlain, Secretary of the State Board of Agriculture, was invited to speak at the funeral of the deceased. This he did in a very earnest and sympathetic manner, remarking truly that, "not an orchard or grain field in Ohio but has felt the influence of his labors for the improvement in varieties cultivated and in modes of culture." He was always a constant attendant at all the important meetings of the State relating to agriculture and horticulture, and his face and voice will be sadly missed in the future.

WE have a fine white mulberry tree in the lawn that bears a bountiful crop every year. To my eye the tree is a most pleasing one—very symmetrical, graceful, and of great delicacy of form, but strong and vigorous. It reminds me in appearance of a gentle and well-bred lady, and I always like to look at it at all seasons of the year. Why do not people, especially farmers, make it a point in their tree-planting, to include one or two of the mulberry tribe? The fruit ripens early, at a time when fresh fruits are scarce, and although very sweet, the berry is liked by most persons, especially when eaten from the tree.—Mary Wager-Fisher in N. Y. Tribune.

NEW JERSEY CRANBERRIES.—Prof. Cook says: New Jersey produces about one half the cranberries grown in the United States. The yield last year was 75,000 bushels, but there are now indications of a failure in the crop in some quarters. The fruit scalds. We are at work to discover the cause.

EXPERIMENT STATIONS.—Dr. Ledoux, speaking of the New York Experiment Station, remarked at the late meeting of the Board of Control that he felt embarrassed to speak of his own labors. The State of North Carolina has the most economical legislature—it has even taken away the Governor's servant, so that his Excellency had to provide from his small salary, a person to light his fire, but it did not refuse to grant an appropriation for the Experiment Station. He had no doubt that it saved to the State $250,000 a year. Formerly there were 108 brands of fertilizers in North Carolina. They have been examined according to law, and one was found that contained 80 per cent. of sand. Others were so poor that they were condemned in Georgia, and then reshipped to North Carolina. He was satisfied that since the official investigation, fertilizers are cheaper in North Carolina than they were before the tax was imposed; that they are better on the average, and as cheap as elsewhere. His experience is that on some soils great benefits are derived by their use, while on other soils no perceptible advantages are derived. He was desirous that the New York Experiment Station should succeed. If these stations are multiplied throughout the States it will be impossible to estimate the advantages derived.

Dr. F. M. Hexamer remarked that science and practice combined are the only way to get knowledge. Experiment stations will be of vast benefit to our farmers. He was glad to be present and witness the enthusiasm of the members.

The Chairman asked Mr. O. B. Potter to tell about his experiments with ensilage.

He replied that he had tried it thoroughly and was satisfied that it will be of immense benefit to our farmers. He cut up clover, green rye, green oats, millet, sorghum and corn stalks, in fact everything of a green nature fit for fodder. These he cut up in pieces, about one inch long, which were put up into silos, or vaults, built for this purpose—these undergo a certain fermentation. When these silos are opened and fed to his stock, they eat it with avidity. New York has made an appropriation for experiments; if these are properly carried out it will be of great benefit to our farmers, not only in this State, but in the whole country.

GAMBLING AT FAIRS.—Mr. Slossom expresses himself as follows in the Western Rural: "The State fairs can stand up under a heavier load of wickedness than county fairs, because their back is stiff, by reason of patronage from all parts of the State. Looking at the programme of our next State fair, we see there are seventeen hundred dollars devoted to the heels of fast horses, and all the demoralizing influences of these performances are thrown in to lead astray our sons instead of teaching them lessons of usefulness in their calling. The managers make pretence of great morality, and take great pains to exclude common gamblers from the grounds, but when you come to the speed of horses gambling is rampant, but it is on the speed of that noble animal, the horse, instead of on the dice board.

CAMP MEETINGS.—Doubtless much of the reproach which has been cast upon the morality of camp meetings is undeserved, remarks the Hour. A comparatively small number of offenders are able to bring any assembly with which they are associated into disrepute. The world is always eager to detect flaws in characters or institutions that make professions of godliness. It is, in fact, the assumption of superior fervor and piety by the leaders of these assemblages which has tended to excite distrust of their methods and results. The emotional appeals which are the staple of camp-meeting exhortations are apt to be deficient in common sense. They inflame the feelings, but do not convince the reason. Their influence is, therefore, not only likely to be transitory in its effect, but tends to foster an illiberality that shuts the door of innocent amusements. This religious asceticism is responsible for a good deal of the dissipation which has of late years made camp meetings fall into disrepute among many truly devout people. Such dissipation is the not unnatural reaction from a too rigid formalism.

SPEAKING of the Ohio State Fair, Secretary Chamberlain remarks in the Ohio Farmer: The railways intend to give the same exceedingly liberal excursion rates to our State Fair, and to run special trains for the fuller accommodation of the public. The attractions at the fair, too, are even greater than last year, and with favoring skies we hope for the same immense throngs of visitors, and the same remarkable financial success we had a year ago. Every dollar of surplus will be faithfully used in promoting the best agricultural interests of our State.

Everywhere.

RURAL SPECIAL REPORTS.

CANADA, Mount Irwin, Ontario Aug 20.—Fall wheat is a total failure in this township of Galway, but Spring wheat is a fair crop. Oats are splendid. My Mold's Oats are ready for cutting, they have beat anything I have seen. They are about five feet high. Peas are a good crop and so is barley. Hay was rather light on account of the clover all being killed out. Potatoes were badly nipped on the night of Sunday the 15th when we had a frost unusually hard for this season. I am afraid the later sorts will not be of much use; but Early Rose are nearly ripe and are very good both in quantity and quality. J. B.

CONN., Bloomfield, Hartford Co., Aug. 21.—I wrote the RURAL before, my letter appearing in the issue of Aug. 3, that the apple crop hereabouts was very large this year. The trees are overburdened, and while I have been writing a large branch of one close by, no longer able to sustain the weight of its fruit, has fallen with a crash. I cut a twig from a seedling tree standing by the road-side a few days ago, which had, on five inches of stem, nine apples. Another had set and commenced to grow, but being cramped for room, gave it up. The tobacco crop is now being gathered and is in good condition, being large and of fine quality. In a piece near-by leaves measuring over 40 inches in length are plentiful, as are also those from 20 to 24 inches wide. If the extreme length were with the widest leaves there would be some monstrous in size, but such is not the case. The amount of weight of plant that will grow in so short a time from a minute tobacco seed is wonderful. I believe it is conceded that more weight is made here by tobacco than by any other crop in the same time, and the growers are not ready to accept the theory that the plant takes no part of its sustenance through its leaves. I have been made glad by observing that birds are more numerous here than in former years. It is to be hoped that farmers will finally be led to believe that birds do them more good than harm, and will aid in their protection. L. A. R.

IDAHO, Genesee, Nez Perces Co., Aug., 18.—Our soil is new and fertile and the cultivated acreage is being increased largely. Owing to the grasshopper and the extreme heat, with hot winds, our crops have been damaged, causing almost a total failure in some localities; but in this place we are more favored. Wheat, flax for seed, barley and oats grow abundantly here, but will all fall short of an average this year. Corn is but little produced outside of the garden. Sorghum has not been tested. The potato and many other vegetables are abundant. The Ovoid Mangel and Ennobled Oats succeed here. The cow-pea is a failure. Small fruits, such as currants, gooseberries, blackberries, raspberries and strawberries do well. Larger varieties have not been fairly tested yet. G. R.

IOWA, McGregor, Clayton Co., August 20—My place is on River Hill, 300 to 400 feet above the level of the Mississippi, opposite the mouth of the Wisconsin River. The land is rich—not as rich as some and not as poor as some, but pretty good. Now I know this to be so, because the potato patch, just along side of the wheat patch, produces the biggest crops of grass and weeds I ever saw in my life. Why, they grew so fast and got so big at last, that I couldn't plow them out. When I left the battle was still raging, and the potatoes crying for quarter. A late despatch from the battle field states that Major-Gen. Foxtail had gained a complete victory; the last intelligence states that a small brigade of General Potato's forces had escaped and were strongly intrenched. I hope they will hold out. Well, it is not much use to go back and tell what kind of a Spring or Winter we had five or six months ago. Suffice it to say we have had as fine a season as any one could desire, and it is my opinion that the crops are unusually fine, though I have not been round through the country to make observations, except once—on the 10th of June, when I had the pleasure of a ride out to the county seat, 20 miles across as good a farming country probably as any in the State. At that time growing crops of all kinds over the prairie were a splendid sight. However, as a wheat buyer said to me, "We can only tell what the wheat crop will be when we get it in the half bushel." We have had splendid weather for harvesting. Farmers are not yet through stacking, though a great majority are. One of my neighbors had 20 acres in Lost Nation, wheat—good heavy wheat it is. This kind fails, I believe, in a good many localities, from some cause or other. Thrashing has not commenced in this neighborhood yet, but will, I suppose, in a few days. There is a heavy crop of apples in this section wherever the trees are in bearing. Wild blackberries are selling at 10c. per quart. The crop of strawberries was light owing to neglect, which is probably the true reason of failure in a great many other things. J. R. J.

IOWA, Le Mars, Plymouth Co., August 20.—The grasshopper pest destroyed nearly all the small grain in several of the counties of Northwestern Iowa last year, and farmers, as a rule, sowed less this year. This Spring opened very dry and windy, blowing the small grain in many fields entirely out of the ground, so that much of it had to be planted to corn. A few pieces of wheat, sowed on last year's breaking, are excellent, yielding from 20 to 30 bushels of No. 1 wheat; in fact, the wheat is generally good—what there is of it. The few hot days in the fore part of July, blighted a small percentage of the wheat and made the oats light in weight. There was very little barley sowed here—yield rather light. Considerable flax was raised, and it will yield from six to twelve bushels of seed per acre. But little sorghum was planted; much of it has been sadly neglected and it will be a light crop. Corn in this part of Iowa is above an average crop. It bids fair now to yield from forty to sixty bushels. The small package of Mold's Ennobled Oats received from the RURAL last Spring, I drilled in on a piece 4x5 feet in my garden. The hot weather made them very light—I have got only about one pound. I think they would do well here in a season favorable for small grain.

W. B. M.

IOWA, Wolfdale, Woodbury Co.—Wheat here will yield from 15 to 30 bushels per acre; oats from 25 to 50. Corn is still "booming," but wants rain badly. Wells and creeks are drying up fast. Grass is good on low lands.

H. T.

KANSAS, Parsons, Labette Co., August 16.—We have the finest crops ever known in Eastern Kansas. Grass, fruits, roots, grain, and castor beans are all good. Corn is a better crop than ever known. Upland and lowland have both done excellently. So far neither floods nor storms have done any damage. The husks on the early planted corn are white. Our Texodusters have succeeded in raising a good crop of cotton, yet it will prove injurious to them and the country if they, from this instance, repeat the attempt, as experience here is adverse to success. If they have more skill in the business they may do better than their predecessors. But the summer season is too short. Our neighbors in Northern Texas are jubilant over their corn and cotton. Both crops are splendid. We shall supply them with considerable wheat; but hardly any corn. The Rocky Mountain locusts have been so few this season that they have excited no comment. Yet they have not failed to put in an appearance. A week or two ago, while the wind was in the northwest, I shaded my eyes and looked as near the sun as I could, about midday (this being the best time to observe), and saw the little white specks floating in the wind away up hundreds of feet. They seemed like small flecks of snow. I think we are never free from them, and it is only under circumstances favorable to their propagation in the mountains that our great affliction from them comes. Our farmers have made an astonishing increase in capital. There is not an unimproved quarter-section from here to the county seat, a distance of 20 miles, and were you to see some of the localities on the line, their houses, barns, fences, osage hedges, orchards, avenues of trees, and fields of corn and wheat, you would have an extended conception of American agriculture. Wheat is coming in to market. The quality is not quite equal to that of last year's crop, nor is the yield; but the increased acreage will give an aggregate of one half more. Vegetables and fruit are very plentiful. Cabbages, three cents; apples, 50c.; peaches, 50c. to $1.50 per bushel: melons two to five cents each, fine and good: potatoes, 40c. per bushel; prairie hay, $2.50 per ton, delivered to consumers; oats, 15c. per bushel; corn, 20c.; wheat, 60 to 75c.; flour, $3 per 100 pounds; butter, 10c.; eggs, 8c,; coal, $2 50 per ton. J. B.

MO., Pleasant Mount, Miller Co., Aug. 29.—The weather has been exceedingly dry for the past six weeks, and has damaged corn very badly, so much so that in dry, sandy, or rocky soil it will not yield ten bushels to the acre. The ground is very dry—too dry to plow for wheat. Stock of all kinds are suffering for water, as the continued drought has dried up all the small creeks, and in many cases stock have to be driven two or three miles to be watered. Wheat is yielding well. Although this is not really a wheat country, yet enough is raised for home consumption. The extensive range here makes stock the principal dependence of the farmers; hence we see more cows, meadows, and pastures than we see in Southern Illinois. Wheat is worth 75c; corn, 30c; oats, 25c; young hogs that will do to push along and fatten for market this Winter, are selling at $3. per 100 pounds. N. J. S.

N. Y., Little York, Cortland Co., Aug. 19.—Farmers are in low spirits in this section, on account of the grasshoppers, which have destroyed fully one half of their Spring crops, including grass. Potatoes were an exception and they look fair at present. D. W. C.

NORTH CAROLINA, Brookston, Warren Co., Aug. 23.—After a dry April, May and June came frequent showers with an excess of rain in early August. Crops that were clean when the rains came are wonderfully fine. Such corn and cotton I never saw here before. Tobacco has been injured by too much wet—drowned in some places. That early-planted which had the top leaves well grown when the rains came is hard to beat. Fodder pulling began last week. Of four varieties of corn, Blount's is earliest, and gives most fodder. Turnips are getting a fine start. Cow-peas are making an extraordinary growth of vines. Grapes are nearly all gone, and I believe at quite satisfactory prices. M. B. P.

OHIO, Van Wert, Van Wert Co., Aug. 20.—So far as the products of the farm in this section are concerned, we are well pleased. The yield of wheat will average 20 bushels per acre. Oats are light; potatoes good; corn is very promising for a heavy crop. Fruit is about half a crop. Farmers are well supplied with reapers, mowers and labor-saving agricultural machinery, and now considerable attention is being given to underdraining with clay tile.

E. R. W.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Experiment Needed.

S. W. H., Hempstead, L. I., says that his farm comprises 175 acres of tillable land. It is mostly black "plain" soil capable of yielding, in the present condition, half a ton of hay per acre, in an ordinary year. He wishes to grow hay on the whole of it, and asks whether it would be well to plow 90 acres of mellow ground next Spring, sow on it corn broadcast, using a quarter of a ton of special corn manure per acre, plow the growth under about July 1, and resow corn in drills four feet wide, and seed with rye; would this plan be as enriching to the soil as though he sowed the corn broadcast and proceeded as before using a "flat" of barn-yard manure, costing $35, besides the expense of hauling it three miles.

ANS.—This is a case in which no risks should be run and in which it would be better to wait a year, rather than make a mistake; for no one can say positively what can be done in this case, although in other analogous cases certain results may have been reached. A safe plan would be to try 10 acres, half in one way and half in another: say five acres dressed with 600 pounds of the best (but be sure it is the best), complete manure at a cost of $10 per acre and planted to corn—sorghum might be still better as giving a heavier growth—not plowing it in until August, when the stalks will be seven feet high. The seed should be planted in rows three feet apart, and about an inch apart in the row; which will give 30 tons to plow in. The other five acres may be manured in the ordinary manner, as suggested, which with the hauling will cost over $10 per acre, and be sown in the same way as the other plot. About the middle of August, the corn may be rolled down the way the ground is to be plowed, and covered with a deep furrow, with a chain on the plow beam to draw the corn into the furrow. This will put the corn under the soil. The ground should then be rolled to compact the surface, and afterwards worked shallow with a cultivator to get a seed-bed. It may then be sown to rye and Timothy. Whichever way is seen to be the best may then be followed with the remainder of the land, with better surety of success than now. If the plan fails, the rye should be cut for straw, and will pay a good profit on the cost. The plan may then be modified in some way which will be better discovered then than now. Success would be more likely if the land was treated to 25 or 30 bushels of lime when seeded to rye. If the plan succeeds, as it should do, and probably would, the land should give fair crops of hay with the help of moderate fertilizing occasionally.

Draining a Flat.

A. M., Bay City, Mich., is engaged in reclaiming a large tract of land in the Saginaw marshes by diking and pumping the water from the dredge ditch. There is but a slight fall to the dredge ditch into which the small ditches lead. The surface between these latter is so flat that the water from heavy rains remains and injures the crop. He wishes to get the whole area under Timothy without the expense of tile-draining. The soil is rich, from one to two feet deep; then comes plaster clay or marl. Having heard of the "mole" plow, which leaves a hole in the ground for drainage, after it has been drawn under the surface, he asks whether its use on his land would be effective under the above conditions.

ANS.—This is a case in which the land should be plowed in "twice gathered" ridges. This is done by first laying out "lands" 44 feet wide in the following manner:—First open a furrow in the center of the "land." Then plow this shut with a deep furrow on each side, throwing the earth as high as possible. Then plow on each side to this, making up the ridge 44 feet wide. Plow the whole this way. Then harrow along the ridges and when the ground has settled, begin again in the center of each land and throw up a back furrow again and plow to it on each side; but as the outside of the lands are reached the furrows should be made flatter so as to slope down to the hollows gradually. Then harrow over and over again until the ridges are made even and smooth with the tops two feet higher than the centers of the open furrows. These may be cleaned out with a double-mold-board plow and a round-pointed shovel, so as to make good channels for the water, and have them deeper at the lower end. The ditches may be made so wide and of such a gradual slope, that a mower may be driven across them without difficulty. If at any future time it is desirable to lay tile drains, the work is half done, and the ditches may be dug in these open furrows, mostly with a plow. But for grass these surface drains will doubtless be better than tile drains. If the land is ever tile-drained, it may be left as it is or plowed back again in "single gathered" ridges, which will bring it nearly to a level again or make only slight depressions over the drains, which will be useful. The mole plow is only a make-shift, and very unsatisfactory for such a use as this.

Roses at an English House.

M. W.-F., Bryn Mawr, Pa., says:—In a late number of Lippincott's Magazine—August, I think—Rose Kingsley, the daughter of the late Canon Kingsley, in writing of an English home, tells of a yellow briar rose that is said to have been brought from Damascus, a hundred years ago. She says it is very hardy, as are all of its numerous progeny; that it is sweet-scented beyond the telling, and very beautiful. It remains in bloom for three weeks. She herself was in the habit every year, when these roses were in bloom at Eversley Rectory, of putting in every room a plate of them, with a border of ferns and large black velvety pansies dotted among the roses. These plates of ferns, yellow roses and dark pansies have often danced before my eyes since reading about them, and if ever a woman was "crazy" for a new bonnet, I am "that daft" for that kind of a yellow rose. I have a yellow rose, but it is not particularly fragrant, and its growth is stunted rather than otherwise. It is a briar rose, too; but I can't imagine it bearing its thousands of blossoms like that one at the English house. Can you tell me if that rose has been introduced into this country, and under what name?

ANS.—It is Eglantina lutea, yellow, an immense bloomer, the best of all the yellow roses. It is sweet-scented, but not so sweet-scented as that our correspondent describes. Loudon calls it a native of Germany and the South of France. It cannot be a regular Damask Rose, for roses of that kind are neither briar nor yellow.

Miscellaneous.

E. W. K., Glens Falls, N. Y., asks whether a farmer can make a living in Southwestern Iowa, on a farm of 40 or 50 acres, without raising hogs and cattle for market. He has been told that no farmers live in Iowa without raising cattle and hogs for sale.

ANS.—There is nothing we know of in the soil, climate or location of Southwestern Iowa which would prevent a man on 40 or 50 acres from making a living, as well as in Illinois or any other State in the West. In fact, not one farmer in twenty begins with any more stock than that of his team—a pair of horses—a cow or two and as many pigs and a few fowls. Wheat and flax are his best crops, because they are easiest and quickest made; then follows corn, and with corn, oats, potatoes, vegetables, etc., etc. Finally, when he has got "well heeled," as the phrase goes, as a grain farmer, he then naturally drifts into stock.

L. D. G., Stedman, N. Y., says that a tree agent has been selling what he claimed to be Russian apples in that section, and he asks, 1, whether any Russian apples are raised in this country, and if so, whether they are good; 2, are there any blight-proof pears.

ANS.—There are many Russian apples cultivated in this country, and some of them are of first value. To many of these the RURAL NEW-YORKER has given special attention dur the past 18 months. The best of them are sold by nurserymen at the usual price. 2, Not that we know of. Some kinds are more liable to blight than others. Kieffer's Hybrid is said by some to be "blight-proof," but we know of instances in which it has blighted.

J. W. L., Smith's Grove, Ky., asks which is the cheaper—wheat bran at 10 cents per bushel or corn at 50 cents.

ANS.—We suppose our friend means for stock feeding purposes; if so, a reference to the table of the relative value of feeding stuffs, under the heading "The Dairy Cow," on page 520, of our issue of August 14 will show him that while 100 pounds of wheat bran are worth $1.58 100 pounds of Southern corn are worth only $1.67. It will readily be seen, therefore, that at the above prices the wheat bran is the cheaper.

E. C. P., Newport, Oregon, asks, 1, where can he obtain seeds of the Irish Juniper—none of the catalogues mentions them; 2, how should juniper seeds be treated.

ANS.—1. The so-called Irish Juniper is merely a variety of the common Juniper and does not come true from seeds. 2, Sow the seeds in mellow, sandy loam. Keep it moist, though never wet. Shade with lath covers, the laths nailed two inches apart. The seeds may be sown in the Fall. If in the Spring they should be placed in sand in boxes and buried over winter.

J. G. A., Baltimore, Md., says that the Laurel-leaved Willow he received from the RURAL is growing nicely and has three shoots, and he asks whether it would be better to cut off two shoots and let the third grow, or to trim all three back.

ANS.—Just as you prefer—it is purely a matter of taste. The tree will bear cutting back to any extent. We prefer to have them branch low. A long, naked stem impairs the beauty of this handsome little tree.

H. L. K., Republican City, Neb., asks 1, how to treat a Chinese Primrose, whose leaves die so that there are only two or three leaves on a dead-looking stalk, and a heliotrope that does not blossom.

ANS.—Too much water and imperfect drainage are probably the trouble. Were you to tell us of the treatment you have given, we could advise you more definitely.

That furred tongue, bad tasting mouth and miserable feeling, says you need Hop Bitters.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, AUGUST 28.

S. F.—A. B. A.—"Jot."—W. I. C.—W. S. T.—G. E. N.—C. S. L.—T. J. H.—W. M. C.—T. H. H.—S. R. M.—S. S. S.—H. H. S—H. S.—C. V. R.—B. F. J.—Note. The accumulation of MSS. for our Fair No., interrupts the timely publication of regular contributions—S. T. P.—B. & E. R.—A. M. A.—N. R.—H. L. J.—W. D. H.—G. S.—C. H. E.—L. R.—A. C.—R. S. W.—J. B.—T. G.—H. S.—H. P.—W. B. M.—N. J. H.—H. & C. J.—S. B. P., thanks.—C. T.—H. L. K.—L. A. R.—J. T.—D. E. S.—P. S. W.—L. C. R—A. J. B.—J. W. L. H. L. J.—C. A. M.—F. M. S.—S K.—J. G.—A. S.—H. J. S.—G. H.

THE
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Conducted by
ELBERT S. CARMAN.

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We have made several statements against Dr. John M. Bailey, of Bellerica, Mass., of a very grave nature. If true, he is a man unworthy of trust. If there is even a possibility that we may be wrong, Dr. Bailey should have the benefit of the doubt. We therefore invite him to controvert our statements if he can, and ask our readers meantime to suspend their judgment. A marked copy of this will be sent to Dr. Bailey.

PERCHERONS FOR SMALL FARMS.—The West appears to be taking all the Percheron horses. But it seems to us that they are just what the 10 to 50-acre farmers of the East want for a horse of all work. A one-horse team is sufficient on a small farm, if the right kind of a horse is chosen—heavy, yet active; docile, yet spirited; a good walker, yet able to trot at a brisk gait; strong, well broken, willing and safe. It is easy to make just such horses of the Percherons. In fact they are all that, but the breaking, by nature. Such a single horse on a small farm is better for nearly every purpose than a pair of light horses. On a truck farm he fills the bill in every particular, except for running the horse-hoe in narrow rows; and if a second beast is needed for that use, a small mule, well trained, is better than any horse. We think a lively demand for Percherons will spring up among the small farmers. Let Percheron breeders keep this in mind in training them.

SAVE YOURSELVES WHILE YOU MAY.—The duty of getting out of debt and keeping out of debt which the RURAL has pressed upon its readers has, we have reason to believe, been acknowledged and acted upon by many of them. But still the farmers are to be counted by the hundred thousand whose financial management is exactly of the sort of the "Western river character" quoted by Mr. Chamberlain in his "Western Farming." The returns of farming have, in most parts of the country, been exceptionally large the present season. Three extra seasons have followed one another and enriched the country, though by no means always the farmer. It is more than likely that we may now have a similar succession of poor or moderate crops. Take time by the forelock, therefore, O, indebted farmer! "Agree with thine enemy quickly whilst thou art in the way with him." Every creditor appears like an enemy to the debtor who cannot pay. Buy nothing you do not need—absolutely need—while a debt remains that may trouble you if next year's crop should prove a failure. So may fearful disasters be averted, the home protected, and comfort in old age be secured. Settle up.

A FORCIBLE COMPLIMENT.

One of our friends sowed side by side a quantity of seeds of both the Early Minnesota Amber Cane, and what we call the Rural Branching Sorghum. Some time ago he reported te us that the Amber Cane was beating the Branching Sorghum all to pieces; that it averaged twice as many stalks to a seed; that it was more leafy; that it would continue to grow in a remarkable manner after being cut back; that, in short, it was not only a far better fodder plant than the Branching Sorghum, but the best fodder plant he had yet tried. We were much perplexed and a little mortified that our favorite sorghum should thus be so totally eclipsed, especially as the report came from one whose judgment and accuracy were not to be questioned. In due time the Amber Cane began to show its flower panicles, when it was at once evident that the labels of the one had been given to the other and that what he took for granted was the Early Amber was in fact the Rural Branching Sorghum.

A HAY DRIER.

A machine for drying hay has been used to some extent in England this season, and in that extra-wet climate is found to answer a good purpose. It consists of two parts, both running with wheels for the purpose of taking it on to the meadows with facility.

The first machine is a frame about 30 feet long and 12 feet wide, supporting a sheet-iron reciprocating trough, along which the grass is slowly pressed as cut, and dried by hot air. This is supplied from a furnace on another machine, the fan of which for the hot air is driven by an ordinary portable farm engine. Although still imperfect, the machine has worked quite satisfactorily. It dries about an acre of heavy grass per hour, and the extra labor required for this over ordinary sun-drying is only that of two men. In "catching" weather it would be cheaper to use the machine than to undertake to dry the grass without it.

Where the rain has destroyed so much grass after cutting, by mold and rot, the two past seasons, as in England, and, in fact, as it does this more or less every year, a hay-drier becomes an important harvesting machine there, and at times might be found very useful for us here. We recommend the matter to the attention of our mechanics. We do not think it would require so much ingenuity on their part to get up a hay-drier as to make a grain reaper and binder, although it would be something more expensive.

THE DROUGHT AND THE CORN CROP.

For some weeks back an extremely severe drought has been doing very serious damage to the corn crop in many parts of the West and Northwest. Indiana, Illinois, especially the southern districts, Wisconsin and Kansas have suffered most severely. Last year these four States produced 675,800,000 bushels of corn, and early in July, at the time of our crop reports, the prospect was unusually favorable for a still heavier crop this year. The stand then was remarkably fine while there was a large increase of acreage in Missouri and especially in Kansas. Good judges in various parts of these States now estimate that the drought will there cause a reduction of fully 30 per cent., or about 200,000,000 bushels. In Ohio, Michigan, Iowa, Kentucky and Tennessee, which last year yielded 432,000,000 bushels, showers have from time to time averted the injury to the crop, which has been constantly threatened, and it is now probable that in these States last season's aggregate yield will be obtained. The total corn crop in all the States in '79 amounted to 1,544,899,000 bushels, and deducting from this the aggregate yield of the above-named States, the entire crop of the remainder of the Union was only 437,099,000 bushels. It is hardly likely that this amount will be materially augmented this year, especially as the increase of acreage has been mainly in the Western States where the crop has been seriously injured, or checked enough to prevent an increased yield. It is likely, therefore, that the aggregate corn crop of '80, despite the early promise of an immense yield, will turn out somewhat less than that of '79, and already the rise in price of corn, both here and in Europe, portends that contingency. In the West, too, the prospect of a short crop of this indispensable cereal is already forcing on the market lean hogs and leaner cattle. The shortage in our hay crop will be all the more severely felt in the presence of a deficiency in corn, which, if abundant, would have proved a cheap and handy supplement or substitute.

HINTS TO DAIRYMEN.

THE most enterprising and successful dairymen carry on what is known as Winter dairying. Every one cannot make butter in Winter, and the majority of dairymen are compelled to do their business in the Summer season. But no one is obliged to sell his product as soon as it is made, unless it is so made that immediate sale is necessary to preserve it from deterioration. If butter is well made and well packed it may be kept for six months with perfect safety, and some experts are convinced that the best-made butter ripens and improves in flavor by keeping, because the particular essential oils which give the aroma to good butter become slowly developed when the latter is perfectly well packed and preserved from the atmosphere.

Manufacturers of goods rarely or never crowd their products on the market as soon as they are ready for sale. They watch the markets, and the selling of their goods is one of the most important parts of their business. Their profits depend in a great measure on selling at the right time and holding off at the wrong time. It should be so with the dairyman. But he cannot hold off unless his butter is so well made and packed that it may be kept over for weeks or months without injury. Our readers may find frequent suggestions in our columns from capable correspondents who are experts in dairying, and who are in no way adverse to giving the fullest instructions to other dairymen; and these suggestions will be found of much use to those who desire to avail themselves of every advantage that may help to make their business more profitable.

It is timely just now to call the attention of dairymen to the frequent practical articles on dairying which appear in our columns and which are specially applicable to the subject under consideration. Last winter we published a series of articles written by a Winter butter maker which might now be read with benefit in reference to Fall packing. Fall-trade butter, from the fresh growth of grass which is now beginning to spring, as the cool, dewy nights and seasonable showers occur, is of as choice a quality as any. The success of the dairy business depends upon excellence of product and sales made when the highest prices are current. Doubtless the mere suggestion of these points will draw mature consideration to them from our interested readers.

WHICH IS THE BEST?

THE extreme differences of opinion which exist in regard to important questions, of all kinds, are very remarkable. As regards agriculture and horticulture and the practical operations connected with these, these differences are as wide as in any other questions. One asks which is the best method, the best kind or variety of seed, of plant, root, animal or implement, and one says this and another that; and to ask such a question brings out a mass of contradictory opinion, which is disheartening to one who seeks for information with the hope of profiting by it. There is abundance of opinion but scarcity of evidence in regard to most of the questions which come up for solution. A farmers' club spends two hours discussing some matter in dispute, and at the end the men separate, each having the same opinions which he had before. One asks for information and he gets a mass of conflicting statements of what has been heard or perhaps may have been done under widely differing circumstances and which are therefore perfectly uncertain and useless as specific evidence. Or one writes to his favorite paper and propounds some problem, and he is either answered in a careful or cautious way that "it is probable so and so may be thus and thus," or some kind correspondents give their contradictory views in a way that is tantalizing and bewildering.

Truly facts are very scarce, because few seem to take pains to definitely fix the preliminaries of any observation or accurately count, measure or weigh the results. You ask a farmer for some fact in regard to some interesting occurrence, such as a fine yield of wheat, or how he made his premium butter, and he can rarely say how many acres there are in the field, how much seed or manure he had used, how much the crop cost per bushel, and if it was profitable or not; or how much milk was set for a pound of butter, or tell anything in regard to it with certainty.

It is too much to expect unanimity, even in regard to so simple a matter as the best kind of wheat or the best dairy cow. In truth, there is no one thing that is best under all circumstances for any use; but there are conditions and circumstances which are typical of a large number of cases, in which the similarity of requirements is such as to bring all of them within a certain rule, and yet for want of exact knowledge, there is no precise information to guide an inquirer in regard to anything. We might here pertinently remark that this applies very forcibly to the proposed Experiment Station in the State of New York, or indeed to any other. There is no one place that is the best to carry on a set of experiments. There should, in fact, in any one State, be duplicate or triplicate sets of experiments made on differing soils and in differing localities. Experiments repeated strictly in the western, central and eastern parts of any State under different circumstances would be far more vauable and useful than would one only made in one locality.

BREVITIES.

FARMERS—now is your time to be happy, if ever. Wear smiling faces at the fair and let everybody see that you are in fact, as you ought to be, the most contented class of people on the earth.

WE are glad to learn through English journals that further and very decided improvements have been made in Sweet Williams, always to our view one of the prettiest of our garden herbaceous ornaments.

WE learn that C. A. Dana last Fall spent about three thousand dollars in the construction of a cave for the cultivation of mushrooms. He has employed a professional mushroom grower to take charge of it and naturally anticipates, it may be supposed, after so liberal a provision, that the results will prove compensatory.

MEMBERS of the American Association for the Advancement of Science now in session at Boston, have taken the initiatory steps for the establishment of a Scientific Agricultural Association of scientific men. Prof. W. J. Beale, of Mich., was elected President, and Dr. E. Lewis Sturtevant, Secretary. The meetings will be at the same time and place as those of the American Association of Science.

A WELL-KNOWN seedsman of this country—we may be pardoned for omitting his name—sent seeds of "A new Chinese Fodder Plant" to the Rural Farm. Much interested in all new plants of this character, we planted and labeled them with unusual care. From germination until the formation of seed heads, the grass bore a familiar look which is now identified as that of an old friend—Panicum miliaceum millet.

THE annual importation of some $25,000,000 in flax and flax goods would naturally lead to the inquiry as to what is being done in this country to supply that demand at home. The crop of flaxseed increases each year, and so does the importation of flax. Is there no profitable medium place in flax growing where the seed and the fiber may both be made a more profitable business than seed-growing alone?

THE Governor of this State has informed the Board of Control of the New York Experiment Station that the appropriation of $20,000 will not be available until May next, and a committee has been appointed to examine affairs and recommend what should be done. No Chemist or Director has been appointed. The Board of Control will keep the management and employ such chemist and others under their charge as may be necessary.

THE remarkable statement that the receipts from customs for the year ending June 30, 1880, are $50,000,000 greater than for the year ending June 30, 1879, leads to the consideration of the fact that the United States must have sent away to the value of $200,000,000 more for the purchase of foreign goods than during the previous year. This should stimulate capital and labor to discover these needs and to enter new ventures in an effort to supply this demand.

FLORIDA is an illustration of what can be done to aid the prosperity of a State where a systematic effort is made for that purpose. Soon after the close of the war special effort was made to advertise the advantages of soil, climate and products of that State, and the result is an increase of 60 per cent. in the population in ten years. There is no State or locality in the Union but what has some interest or advantage for some purpose, and a carefully prepared description of such advantages will be sure to bring its returns.

AT the late meeting of the American Association for the Advancement of Science at Boston an organization of agricultural chemists was perfected. Dr. C. A. Goessmann was elected president, and Dr. A. Ledoux, secretary, Drs. Jonson, Atwater, Caldwell, Shepherd and another were appointed a committee to revise by experiment and otherwise the methods now employed in America and Europe in the analysis of commercial fertilizers, the report to be published and probably to form a standard for American chemists in these analyses.

EARLY in the season, our most promising field of wheat was Silver Chaff. A heavy crop of clover aftermath was plowed under. Three loads of hog manure were spread upon the plot (half an acre) and 100 pounds of lime superphosphate drilled in with the seed (Sep. 20) three-quarters of a bushel being used. It was harrowed twice and after the seed was sown, rolled. Up to the time that the Army Worm appeared, we had never seen a handsomer piece of wheat. This was one of our plots—as already noted—nearly destroyed by this pest. The yield could not have been over five or six bushels.

FROM our own experience we advise farmers to sow wheat for this latitude about Sep. 15. It has been shown by many experiments that drilling in the seed will produce a heavier yield than broadcasting. Drill in not over one and a-half bushel per acre and bone flour at the rate of 250 lbs per acre. Roll the field only when the surface soil is dry, whether it be sandy or clayey. A *thorough* preparation of the soil is—more than the amount of seed sown per acre—that which determines the yield. We should be gratified if those of our readers who have raised unusually large crops of wheat would write us as to their experience in the above particulars.

SALE OF OXFORD DOWN RAMS.—Mr. John Treadwell, of Wichendon, England, had a sale of 50 of them on the 4th of August. Notwithstanding the low state of the sheep interest in all breeds at present throughout Great Britain, these Oxford Down rams brought mostly a high price—$100 to $200 each of our money. The first 20 out of the 50, averaged nearly $90 each. We observe that Mr. Cooper, of Coopersburg, Penn., purchased two or three rams at 20 and 32 guineas—($150 and $160). We have no doubt this will be a good thing for him, as Oxford Downs are destined to become as popular soon in America, as they now are in England. It will unquestionably be one of the best and most profitable sorts of sheep for us to breed for exportation.

Literary Miscellany.

GOOD-BYE, SWEET DAY.

GOOD-BYE, sweet day, good-bye!
I have so loved thee, but I cannot hold thee;
Departing like a dream, the shadows fold thee:
Slowly thy perfect beauty fades away;
Good-bye, sweet day!

Good-bye, sweet day, good-bye!
Dear were thy golden hours of tranquil splendor,
Sadly thou yieldest to the evening tender,
Who wert so fair from thy first morning ray!
Good-bye, sweet day!

Good-bye, sweet day, good-bye! [glances.
Thy glow and charm, thy smiles and tones and
Vanish at last, and solemn night advances.
Ah! couldst thou yet a little longer stay!
Good-bye, sweet day!

Good-bye, sweet day, good-bye!
All thy rich gifts my grateful heart remembers,
The while I watch thy sunset's smoldering embers
Die in the west beneath the twilight gray
Good-bye, sweet day!

A NARROW ESCAPE.

"THERE, that'll do now, Miss Gertie, dear, you look just lovely."

Poor old nurse, according to her, I was always lovely. Whether arrayed in silks or cottons, ball-dress or morning-gown, her verdict respecting me remained the same.

As I surveyed myself in the glass I felt a conscious blush rising to my face, I wanted to look my very best to night, and I knew that my white dress and pearl ornaments became me well.

"Give me a kiss, nursie," I cried, "and then go and get ready while I show myself to papa. How do I do, papa?" I demanded, bursting upon him in all the splendor of my attire.

"Eh, my little girl," he said, looking up from the book he was reading, "are you going now?"

"Yes; I promised to be the first arrival, you know; and, please, I want your candid opinion on my appearance. Nurse thinks I look lovely."

"I am afraid nurse is a partial critic," he returned with a fond smile. "You look very nice indeed, darling. You are growing wonderfully like your mother."

I knew that this was the highest praise he could give me, and forgetful alike of my dignity and my extensive train, I ran to him and clasped my arms round his neck.

"You dear old papa! You're sure you don't mind my leaving you—quite sure? And you won't feel lonely without me, will you?"

"No, my child—no.

As I drove along with nurse in her prim black bonnet seated opposite to me, my heart beat high with nervous anticipation. I was going to my first party; for though I was eighteen, papa and I had lived such retired lives that till lately I had known nothing of the gaieties usual to girls of my age. Six months previously, however, the Mortons, some old friends of my father's had settled in the neighborhood, and at their house I had begun to appear in society. Already on the strength of a few musical evenings and a garden-party or two, I felt myself quite a dissipated person.

When we reached Holme Lodge, the large, comfortable, old country mansion was ablaze with light, and from the open door streamed an inviting flood of warmth and brilliance.

In the hall I was seized upon by Loule and Lottie Morton, the twin sisters.

"Come upstairs to our room," cried Lottie; "we shall have time for a chat before the people arrive."

The sitting-room, specially appropriated to the girls' use, was a pretty, cosy apartment. A splendid wood fire was burning on the tiled hearth, and near by a little table was set forth with a dainty repast of coffee and delicious cakes.

After we had examined and commented on each other's costumes, Loule began filling our cups just as a young lady entered the room.

She was a friend staying on a visit—Isabella Saloni by name, and by birth half Italian and half English.

She looked remarkably well, in a dress of heavy saffron-tinted brocade, and necklace, ear-rings, and bracelets of dull gold, and as I gazed at her I comprehended how rarely lovely she was.

I was engaged to Rupert Morton for the first waltz; but we had only taken a couple of turns round the room when he whispered:

"Do you particularly wish to finish this dance? If not, will you come into the conservatory? It is cool and pleasant there."

I was about to make some laughing rejoinder, but a look in his gray eyes stopped me, and I merely bowed assent.

"Gertrude," he said, softly, as we stood by a marble basin wherein a tiny fountain sent up a sparkling cascade of silvery drops, "do you guess why I asked you to come here?"

I glanced up at him saucily.

"Certainly, because it is so cool and pleasant."

"Ah! that was only the pretext, the excuse. Surely you can guess my real reason, darling. You know I love you, do you not?

I strove to cover my burning cheeks with my hands; but he gently removed them, and held them in his own as he bent his head to the level of my downcast eyes.

"Have you not a word to say to me? Can you not give me one word of hope?"

I could not at first speak, but he read his answer in my silence.

"Rupert," I murmured presently, raising my head from its resting place on his shoulder, "do you know I—I thought—I—I was afraid that you liked Miss Saloni."

"You were indeed mistaken. No man could help admiring her; but believe me, beyond admiration I have never given her a thought."

The rest of the evening sped swiftly by. If I had been happy before, I was ten times happier now. I danced every dance, and at supper Rupert contrived to secure a secluded corner, where he detained me so long that I mortally offended one partner who sought me high and low in vain.

I was to remain at Holme Lodge, and go home the next day, nurse having brought everything requisite for my stay, and placed ready before she returned.

Having exchanged my ball-dress for a comfortable dressing-gown, and my satin shoes for fur-lined slippers, I sat by the fire in my bed-room, dreaming bright dreams, and weaving fairy fancies. I loved and was beloved. Was not that the hight of human bliss? Could any other joy compare with it? Truly is it written:

> "There's nothing half so sweet in life,
> As love's young dream,"

It was long ere I got into bed, but once there I fell into a deep slumber, and neither memories of the past nor plans for the future disturbed it.

Suddenly I awoke—awoke with a full sure consciousness of the presence of some one or something terrible in the room. Who or what it was I could not tell, and I dared not attempt to find out. I lay with my face turned to the wall, every limb stiff and still, and the blood in my veins curdling with fear.

At last an icy finger touched me; and, as though under some mesmeric influence, I slowly moved my head.

The fire had died out, but a night-lamp was dimly burning, and by its light I saw—I saw a loosely-robed figure, with a cloud of raven hair falling almost to its knees; luridly glowing eyes, set in a deathly pallid face: and in one upraised hand a gleaming stiletto—jewelled handled and finely pointed.

I could utter no cry; I could make no movement. I remained spellbound and dumb, my eyeballs staring and my lips blanching, knowing that I was at the mercy of a mad woman, and recognizing in that mad woman Isabella Saloni.

Again she touched me; and, though I shuddered, I could not draw away.

"You sleep soundly, she said, "but you have awaked at last. The sleep of death is the soundest of all sleeps, for there is no awakening from it! And so he told you he loved you—you, not me! What do you know of love? What does he know of love? It is I who love—I—I—I!" and her voice rose shrill and high. "I am going to kill you!" she continued, after a moment's pause. "He cannot love you then. He will forget you, and it will be my turn."

But the spell was broken. With a piercing, echoing cry for help, I flung aside the bed-clothing and sprang on to the floor.

There came a sharp, fierce blow, an agonizing pain, and then darkness, oblivion.

It was twilight when I came to my senses. The curtains were drawn, and a bright fire crackled cheerfully in the grate.

Vaguely wondering as to what had happened, I attempted to sit up, but the only effect of the exertion was a low moan of anguish.

A gentle voice addressed me soothingly, and Mrs. Morton leaned over me, and, slipping her arm under the pillow, lifted me up, and gave me some cooling beverage to drink. I fell asleep directly, and when I awoke again gray day's light was creeping in at the window, and nurse was sitting by my side.

"Thank Heaven!" she ejaculated, fervently, as I feebly raised my hand. "Ah! but you're better now, my lamb."

"Have I been ill?" I whispered.

"A little, dearie," she answered, tenderly stroking my hair.

"But—but what was it? Why am I not at home?"

"Hush! my pretty. You mustn't talk any more now. Lie still, and another time you shall hear all about it."

Ah, me! What weary days, what weary weeks, those were that I had to lie still. Waking and sleeping, I was haunted by half-delirious visions of that dreadful night. I could not bear to be left alone for even a few minutes. A flitting shadow in the corner, a fold of drapery, would nearly send me into hysterics.

At last when the birds were blythely carolling a welcome to the Spring, and trees and hedgerows were bursting into leaf, I was carried from my bed to a sofa in the adjoining room, and from that time recovery was more rapid.

Harvest was just over when Rupert and I were quietly married at the village church. The Winter following we spent abroad. Papa joining us at Nice in October, and accompanying us on the remainder of our travels.

Isabella Saloni is in a private asylum near London. Insanity, it appeared on inquiry, was hereditary in her family, though the fact had always been kept as secret as possible. Poor, poor girl! I only think of her now with intense pity and compassion.

THE LEANING TOWER OF PISA.

THE city of Pisa in Tuscany is one of the most interesting places in Central Italy. The city is built on the Arno, which divides it into two nearly equal parts. The cathedral is a very handsome structure, and with its attendant buildings the Baptistry, and the Campo Santo, or cemetery, afford examples of some of the finest specimens of early Gothic architecture. But most remarkable of all, perhaps, is the belfry of the cathedral, or, as it is better known, the Leaning Tower of Pisa. It is to the existence of the structure named that the city of Pisa chiefly owes its fame, and the leaning tower was originally placed in the category of the "Seven Wonders of the World," and reaches an elevation of about 150 feet. This singular structure stands in an enclosed square along with the principal cathedral of Pisa, and within a few feet of that building, as a belfry, for which it was originally erected. At the period in which the cathedral was built, viz., the year 1150, it was customary to erect the belfries apart from churches. Of this peculiarity of early ecclesiastical architecture there are many instances to be found on the continent of Europe, especially in Italy. But the tower to which we call attention, irrespective of its being, in connection with the cathedral, a noble specimen of mediæval architecture, has always rendered the town of Pisa famous from the peculiarity of its inclining at an angle which, to a stranger passing under it, would seem to threaten its instant fall. Indeed, there is considerable difference of opinion amongst scientific observers as to whether the structure depends for its stability on the well-known law of gravity having been complied with in its erection, or upon the great tenacity of its materials.

It is described as "consisting of eight circular stories, of white marble, ornamented with rows of columns and gradually narrowing in width from top to bottom.

But if opinions are divided as to the cause of the stability of the structure, still more are they divided as to the cause of its inclination from the vertical line. Some attribute this inclination to the subsidence of the foundation, or a sinking of the earth upon which it rests; while others contend that the tower was built expressly with its present inclination as a specimen of the skill of the architect by whom the structure was designed. Upon this question we cannot venture to more than hazard a conjecture; for our part we should be more inclined to adopt the latter hypothesis were the instances of such designs on the part of mediæval architects more numerous than they are. But, in view of the comparative variety of such constructions, it seems to us to be traveling out of one's way to attempt to account for so singularly an apparent violation of the laws of physics, as that presented by the leaning tower of Pisa, upon the assumption of a set purpose on the part of the architect. We must, however, in candor, admit that the balance of opinion is rather against our view than otherwise.

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A scientific observer, remarks that the name of "this Leaning Tower" does not convey a true notion of the form of the building. It is, he remarks in fact, a "twisted" tower, there being an irregular curvature in the building, But he conjectures that this "twist" was due to the subsidence of the foundation during the erection, and an attempt on the part of the architect to "right" the building as the work proceeded.

In conclusion it may interest some of our readers to learn that "it was from the summit of this celebrated leaning tower of Pisa that Galileo made, in the seventeenth century, a series of observations, from which he deduced the principles of the gravitation of the earth."—Sidney Journal.

VENTILATION.

SUMMER heat, outdoor life, and open windows are natural ventilators, and need no hints and no comment.

Close-shut windows, artificially-heated rooms, winter cold, these are the conditions under which ventilation is neglected, being too often a penalty rather than a desideratum.

"Bad Ventilation v. Draughts" gives in three words the popular information on the subject. The question to decide is—which is the less objectionable of the two evils? and it is decided simply upon the grounds of personal idiosyncrasy and personal taste.

How should it be otherwise? One man suffers from continual twinges of rheumatism? Can any deprivation of this intangible oxygen be to him so obnoxious as a draft of cold air laden with rheumatic pains? That man's neighbor is a robust sportsman who considers all aches and pains with the half-contemptuous scepticism commonly bestowed by ignorance upon the unknown. Can any pain be worse, he asks, than the living death of a stuffy room? It is known as a scientific fact, that persons in a depressed state of health bear deprivation from oxygen far better than the strong and vigorous, and that old people seem quite at ease in a room that to their grandchildren is insupportably hot and close.

Drafts are not ventilation, though, under popular guidance, ventilation generally ends in drafts. There is nothing incompatible between a close room and a current of air. Bad ventilation is an oscillation between the two. A fast-closed room, with no apparatus for the inlet or outlet of air, was, some years back, a very common form of class-room for children. Towards the end of a couple of hours the children's wits deserted them, and the teacher's temper followed; the room was hot and close, though its inhabitants were flushed and chilly; then came half an hour's recreation, and for that half hour, whether in the presence or absence of the children, all doors and windows were flung open wide, and the room was falsely said to be "ventilated," ready for another two hours' suffocation in the afternoon. Whatever this may be, it is not ventilation.

Popular theories of ventilation are based upon a misapprehension that "hot air ascends." But, to make use of a common illustration, it does so only in the same way that water in a pail ascends if a lump of lead be dropped into it. The lead, being heavier than the water, gravitates towards the surface of the earth, or the bottom of the pail, and displaces its own bulk of water. Just so the force of gravitation draws the cold air of a room down to the floor and keeps it there, the results being a draft on the floor, though the room may be close, and cold feet, though the atmosphere may be overheated.

To make an aperture near the ceiling where the hot air should escape, and to make another near the floor where cold air should enter, was not so very long ago the received method of ventilating a room. "Should escape" expresses well the fact. Air, cold or hot, has laws of its own, and obstinately refuses to follow the course of arrows, that guide it so easily (on paper, at least) through all manner of ingenious ventilators. The next step was to make two apertures near the ceiling—one for exit, one for inlet. It was a step in advance. Both commonly served as inlet ventilators, spite of their labels. In this way plenty of fresh air entered the room, though in a sufficiently unpleasant manner. Air behaves much as water would do in a like situation. Given a hole in the wall, and outside a volume of water under pressure, one would look for a water-spout striking on the head of any person who happened to be sitting beneath. We do not look for an air-spout, and, when it comes, we are surprised at the down draught from the ventilator.

An open window is the simplest of all ventilators. It almost invariably serves for inlet, be it said, whether it be opened at top or bottom. Incapable of subdivision, how shall the current be directed upwards? Open the window at the bottom (a sash window understood), and fit into the frame a piece of wood about six inches wide. Then shut the window down on the wood. Air enters between the upper and lower sash, and the current is directed upwards by the frame of the lower sash that projects over the upper. Or you can procure a board about 18 inches deep, fitting close to the wall at the bottom of the window, sloping forwards into the room. A triangular piece of wood fits in at the sides, and a sort of shaft is made, behind which the window can be opened without fear of draught. It is rather unsightly for a dwelling room, but may be serviceable on a landing or staircase. Again, you can open the window at the top, and nail over the opening a piece of perforated zinc some inches deep. That is a contrivance for subdividing the current, and it materially diminishes the draught. Its advantages are that the zinc is inexpensive and a fixture, so that it cannot get out of order. The plan may wisely be tried in those modest households where the sleeping rooms are constantly overcrowded.

Sometimes, especially in the country, a brick may be removed from the wall, and piece of wood sloping forward—a frame, in fact, similar to that described for the window—may be neatly concealed by a picture or engraving. A wooden lid shuts the shafts. A contrivance for ventilation, only visible on rare occasions, is to cut in the lower part of the frame of a sash window three or four oblong holes, two or three inches long and as wide as the window frame permits. They can be closed at will if a small piece of tin be fitted as a cover to each. Nothing but bitter cold will make this small opening unbearable. This or any other opening can be filled with cotton wool. The wool must be lightly pulled, and renewed occasionally. A question of practical import is often asked, How can one know when the air of a room is too impure to breathe? The answer is simple. Common observation shows that all our senses were given for some practical end, and it would be hard to believe that the sense of smell is intended only for a mild pleasure, as when we smell a rose or a bunch of violets. Fortunately, no such belief is required of us. No chemical experiment can detect the impurity of air more certainly or more exactly than it is detected by the olfactory nerves, though of course this sense, like any other, can be cultivated or neglected. Come straight out of the fresh air into the room you wish to test, and you will not fail to discover the fact if ventilation be needed. There is no place for doubt—the room smells close, or it does not. Scientific men could not alter the fact or suggest for a close room any other remedy than a supply of fresh air.

MAGAZINES FOR SEPTEMBER.

THE ATLANTIC MONTHLY.—Contents: The Stillwater Tragedy, XXIII.—XXVIII.; Twoscore and Ten; Sir Walter Scott; Political Responsibility of the Individual; The Perpetuity of Song; Au Serieux; Unaware; Intimate Life of a Noble German Family, Part I.; Women in Organizations; Each Side the Bridge—A Dutch Painting; Reminiscences of Washington—VI.; Mrs. McWilliams and the Lightning; West Wind; Oxford and Cambridge; Progress of the Presidential Canvass; Such Stuff as Dreams are Made of; Music; Recent American Fiction; Goldwin Smith's Cowper; Mr. White's Books; The Contributors' Club.

THE GENIUS OF SCOTT.—In novel-writing there are many things he has done well which other men have done better, but no one maker of fiction has combined so many rare qualities as he. There are always plenty of men cleverer than he, but he has no rival in a sort of majestic abundance of power. In fact, his prose is epic. For that sort of composition there is no need of precise and superfluous detail; what is required is a sort of grandeur and massive strength, such as Scott alone has possessed in modern times. The form that he chose, in accordance with the taste of the day—for to sit down to compose an epic poem would have been like sacrificing a bull to Jupiter—is one that other dexterous craftsmen have worked in a more intricate fashion; so that his novels bear the same relation to modern stories that one of Nelson's 72-gun frigates bears to a mastless, steel-clad ram. Hence it is that some people are inclined to look upon him as old-fashioned; but there are certain things that never go out of fashion, even if they undergo seasons of neglect, or even if they are weighed down by acknowledged deficiencies. It is easy to learn that the Middle Ages were something very different from what Scott thought them to be, and that there is inexactness in his accounts of the crusades and the crusaders, but it will be a long time before the completest collection of details will bring before us those remote times with anything like the vividness of Scott's portrayal. The siege of Troy was doubtless something very unlike Homer's account of it, but what Hector and Helen and Achilles have done for Homer, Scott's characters will do to keep his fame fresh when all the

stucco and paste of his ornamentation have fallen away.

Scott, it must be remembered, does not belong to readers of English alone. He and Byron are the only English writers of this century—and Shakespeare is the only other—whose fame has spread over the whole of Europe, and Scott's influence over his contemporaries is really beyond estimation.

The invention of English writers has gone back to its customary channels, those of domestic incident and inartistic detail, but readers still possess the faculty of imagination, and those who care more for the free air of romance than for narrow precision still return to him as the last purely imaginative writer of English fiction.—Thomas Sergeant Perry in September Atlantic.

HARPER'S MAGAZINE:—Contents: The American Graces; Fish and Men in the Maine Islands; The Family of George III; By-paths in the Mountains; The Seven Sleepers' Paradise beside the Loire; Amid the Grasses. A Poem; Squatter-life in New York; Motherhood. A Poem; White Wings. A Yachting Romance; Amandar. A Story; Washington Square. A Novel; The Red-horse Tavern; A Midsummer-night's Adventure. Indian and Negro; Editors's Easy Chair; Editor's Literary Record; Editors' Historical Record; Political Intelligence; Disasters; Obituary.

A MUCH-WRITTEN-ABOUT ROYAL FAMILY.—Thackeray, in his well-known lectures, has brought before us as in panoramic procession the courts of the four Georges. "Burney," whom he quotes in describing the household of the third George, has much to tell us of its members. A more highly favored observer of the same royal family was the aged Mrs. Delany, who, while living with the Duchess of Portland at Bulstrode, had frequent opportunities of intercourse with the King and Queen, and whose home during the latter years of her life was at Windsor, where she had been established by royal invitation. Through these sources—Mrs. Delany's recollections being supplemented by those of later generations in her own family—are we principally enabled to look into this royal interior. Here we learn something of the home life of George III., the good husband and father, the unwise King, who was as a thorn in the side of our forefathers, his transatlantic subjects, until they worked out their own deliverance. Of Queen Charlotte we hear much. Miss Burney, as we know, held the drearily honorable post of Keeper of the Queen's Robes; and Macaulay, in his essay on Madame D'Arblay, dwells indignantly on the hardships of her position. In truth, the "sweet Queen," so considerate for her venerable friend Mrs Delany, was very much the *belle dame sans merci* with her dependents. Queen Charlotte preserved her royal graciousness of manner, however, and appeared regally unconscious of the sacrifices she required from her ladies. The case was somewhat the same with his Majesty and the equerries; and the wearied attendants compared miseries and condoled with one another over their treadmill existence.

But the chiefest victim, the authoress of Evelina, who is a very lamb for patience and amiability, is meanwhile taking her unconscious revenge. Did they not know there was "a chiel amang them takin' notes?" She keeps a diary; she flies to its pages as a relief from unhappiness and *ennui;* and though too loyal and Toryish to breath a word of direct reproach, the simple narrative of facts is all that is needed. But Miss Burney's reverence for royalty makes her eager to excuse and explain away the Queen's selfishness, and her attitude of adoration toward the whole family is truly edifying.—K. M. Rowland, in Harper's Magazine for September.

SCRIBNER'S.—This number contains four or more contributions to history; all, are in a readable and popular vein. "Eighteen Years Alone," the first account, in permament form, of an Indian woman who lived alone on one of the Santa Barbara Islands from 1835 to 1853." The loss of the Oneida," a description of the collision between this vessel and the English steam-ship Bombay. Lieutenant T. A. Lyons, U. S. N., the author of the article,—which is the first correct and popular history of the disaster,—was in the vicinity at the time of the accident, and assisted in the official investigation at Yokohama." "Thomas Paine and the French Revolution," by Hon. E. B. Washburne, our late Minister to France. "Over the Balkans with Gourko" is an account of General Gourko's campaign during the late Russo-Turkish war, from Plevna over the Balkans to Constantinople, by Lieutenant Francis V. Green, U. S. A., who was sent abroad by the United States Government as military *attache* to the American Embassy at St. Petersburg. Eugene Schuyler continues his great historical serial, "Peter the Great." Somewhat of an historical nature also is the life of "Jean Francois Millet—Peasant and Painter," by Alfred Sensier, with an introduction by R. W. G., and reproductions of his most noted works.

ST. NICHOLAS is a thorough sea-side and out-of-doors number.

Miss Alcott's serial, "Jack and Jill," takes its young people through fun and mishap beside the sea, and Mr. Noah Brooks's continued story, "The Fairport Nine," describes a night attack by the "White Bears" upon the camp of the "Fairports."

Of the complete short stories, "A Day off Barnegat," illustrated by W. L. Sheppard, narrates how cedar-logs are mined out of sunken marshes; "Rell's Runaway," illustrated by E. B. Bensell; "How Tom Cole Carried out his Plan," paraphrases an incident in the life of William Morris Hunt; "The Lesson of Walnut Creek," with two pictures, shows the advantage of girls knowing how to swim; "The New Engineer of the Valley Railroad," illustrated by H. Faber, gives an account of a rash monkey's exploit on an unattended locomotive; and "The Naughtiest Day of my Life," with two pictures by Robert Lewis, is the first half of a characteristic story by H. H.

Mr. Norton's fully illustrated article about "Small Boats: How to Rig and Sail Them," and Mr. Barnard's "Talk about the Bicycle," with its nine pictures, are of interest to boys.

There are also in this number a description of the "Girls' Swimming-Bath," with several pictures, by Miss C. A. Northam: "Chased by a Hoop-Snake," one of "The Major's Big-talk Stories," with a funny illustration by Miss S. A. Rankin; several comical pictures, a number of poems, a Young Contributor's story ("The Bicycle Boys"), two pages of large type and pictures for very little readers, and the usual departments, "Jack-in-the-Pulpit," "Letter-Box," and Riddle-Box."

LIPPINCOTT'S MAGAZINE.—Contents: Ekoniah Scrub, Among Florida Lakes, Illustrated; Canoeing on the High Mississippi, Part II., Illustrated; Adam and Eve, a novel; A Villeggiatura in Asisi; Horse-Racing in France, Part I., Illustrated; Mrs. Pinckney's Governess; The Home of the Gentians; Newport a Hundred Years Ago; Studies in the Slums, Diet and Its Doings; Delectatio Piscatoria, The Upper Kennebec; The Ruin of Me (told by a Young Married Man); Short Studies in the Picturesque; Our Monthly Gossip —; Literature of the Day.

NEWPORT A HUNDRED YEARS AGO.—There is a magnetism in places which has as strong and subtle a potency as that which belongs to certain persons. Newport, Rhode Island, is not an inapt example of the class of which I speak. The wonderful mildness of the air, coupled with its exhilarating qualities; the fertility of the soil, which throws tropical vegetation over the stern realism of crag and precipice; the mixture of the wildest features of Nature with its softest and most intoxicating influences—all these anomalies, unexplained even by the proximity of the itself inexplicable Gulf Stream, combine to form a perfect and most desirable whole. Nor is this description over-colored or the off-shot of the latter-day caprice that has made of the place a fashionable resort. The very name of the State suggests that of a classic island famed for its atmosphere; and as Verrazano, writing in 1524, compares Block Island to Rhodes, it is possible that hence arose its title. Neal in 1717, and the Abbe Robin in 1771, both speak of Newport as the Paradise of New England, and endorse its Indian appellation, Aquidneck, or the Isle of Peace. Berkeley, dean of Derry, who came here in 1729 full of zealous but utopian plans of proselytism, writes of it that "the climate is warmer than Italy, and far preferable to Bermuda" (his original destination). Indeed, it is to the good man's enthusiasm for Newport that we owe his burst of poetical prophecy, "Westward the course of empire takes its way."—FRANCES PIERREPONT NORTH, in Lippincott's for September.

VARIETIES.

THE FARMER FOR THE FAIR.—A husbandman.

GOOD nature is more amiable than beauty and more agreeable than wit.

THE habit of being always employed is a great safeguard through life, as well as essential to the culture of every true virtue.

THERE is a Gaelic proverb: "If the best man's faults were written on his forehead, it would make him pull his hat over his eyes."

HE who is false to present duty breaks a thread in the loom, and will see the defect when the weaving of lifetime is unrolled.

IT is said if you sit down when assailed by a ferocious dog the beast will not touch you. But the judicious man will select as high a seat as possible—at the top of a tall tree, for example.

POLITENESS.—The fountain of true politeness is a good and generous heart. It consists less in exterior manners than in the spirit developed in conducting the true intercourse of society.

ERSKINE puzzled the wits of his acquaintance by inscribing on a tea-chest the words: "*Tu doves.*" It was some time before they found out the wit of this literal translation,—"Thou teachest."

WASTE NO TIME.—Time lost can never be regained. After allowing yourself proper time to rest, don't live an hour of your life without doing exactly what is to be done in it, and going straight through with it from beginning to end.

THE small stones which fill up the crevices have almost as much to do with the making the fair and firm wall as the great rocks: so the right and wise use of spare moments contributes not a little to the building up, in good proportion with strength, a man's mind.

WHEN you are traveling always take some stranger into your confidence, tell him how much money you have with you, where you keep it, and what you are going to do with it. If he doesn't relieve you of what you possess you'll have the satisfaction of knowing that you have at last met an honest man.

AN eccentric Englishman lately went to the top of Mount Blanc for the purpose of building a fire where none had ever been kindled. He succeeded in doing so, and on getting back to the inn at the foot of the mountain recorded his triumph in English upon the hotel register. It was achievements like this that originally made the Englishman the laughing-stock in French comedy that he is today.

WHAT YOU DO, DO WELL.—If a thing is worth doing at all, it is worth while to do it well. Yet the world is full of work badly done and half done. It is always bad policy to do work in a poor, half-hearted, and slovenly fashion. Good and honest work will always be of the greatest service, both to the serving and the served. The worker will ever find it to his best interest to work conscientiously and carefully, and to do his very best.

NOTHING gives more mental and bodily vigor than sound rest when properly obtained. Sleep is our great replenisher, and if we neglect to take it regularly in childhood, the result will be all the worse for us when we grow up. If we go to bed early, we ripen; if we sit up late, we decay; and sooner or later we contract a disease called insomnia, or sleeplessness, allowing it to be permanently fixed upon us, and then we begin to decay, even in youth. Late hours are shadows from the grave.

WORTHY OF IMITATION.—When Philip Henry, the father of the commentator, sought the hand of the only daughter of Mrs. Mathew in marriage, an objection was made by her father, who admitted that he was a gentleman, scholar, and an excellent preacher, but he was a stranger, "and that they did not even know where he came from." "True," said the daughter, who had well weighed the excellent qualities and graces of the stranger, "but I know where he is going, and I would like to go with him;" and they walked life's pilgrimage together.

EFFECTS OF PERFUME ON HEALTH.—An Italian professor has made some very agreeable medical researches, resulting in the discovery that vegetable perfumes exercise a positively healthful influence on the atmosphere, converting its oxygen into ozone, and thus increasing its oxidizing influences. The essences found to develop the largest quantity of ozone are those of the cherry, laurel, clover, lavender, mint, juniper, fennel, and bergamot; those that give it in smaller quantities are anise, nutmeg, and thyme. The flowers of the narcissus, hyacinth, mignonette, heliotrope, and lily-of-the-valley develop ozone in closed vessels. Flowers destitute of perfume do not develop it, and those which have slight perfume develop it only in small quantities. Reasoning from these facts, the professor recommended the cultivation of flowers in marshy districts, and in all places infested with animal emanations, on account of the powerful oxidizing influences of ozone. The inhabitants of such regions should, he says, surround their houses with beds of the most odorous flowers.

MIRTH.—There is a large class of people who deem the business of life far too weighty and momentous to be made light of; who would leave merriment to children and laughter to idiots; and who hold that a joke would be as much out of place on their lips as on a gravestone or in a ledger. Surely it cannot be requisite to a man's being in earnest that he should wear a perpetual frown. Is there less of sincerity in nature during her gambols in Spring than during the stiffness and harshness of her wintry gloom? And is it, then, altogether impossible to take up one's abode with truth, and to let all sweet, homely feelings grow about it and cluster around it, and to smile upon it as a kind father or mother, and to sport with it, and hold light and merry talk with it, as with a loved brother or sister; and to fondle it, and play with it, as with a child? No otherwise did Socrates and Plato commune with truth; no otherwise Cervantes and Shakespeare.

SOCIETY has been aptly compared to a heap of embers, which, when separated, soon languish, darken, and expire; but if placed together glow with a ruddy and intense heat—a just emblem of the strength, happiness, and the security derived from the union of mankind. The savage, who never knew the blessings of combination, and he who quits society from apathy or misanthropic spleen, are like the separated embers—dark, dead, useless; they neither give nor receive heat, they neither love nor are beloved. To what acts of heroism and virtue, in every age and nation, has not the impetus of affection given rise! To what gloomy misery, despair, and even suicide, has not the desertion of society led! How often in the busy haunts of men are all our noblest and gentlest virtues called forth! And how, in the bosom of a recluse, do all the soft emotions languish and grow faint!

STATISTICS ABOUT WRITING.—A rapid penman can write thirty words in a minute. To do this he must draw his pen through the space of a rod sixteen and a-half feet. In forty minutes his pen travels a furlong. We make, on an average, sixteen curves or turns of the pen in writing each word. Writing thirty words in a minute, we must make 480 to each minute; in an hour, 28,800; in a day of only five hours, 144,000; in a year of 300 days, 43,200,000. The man who made 1,000,000 strokes with his pen in a month was not at all remarkable. Many men, newspaper writers, for instance, make 4,000,000. Here we have, in the aggregate, a mark of 300 miles long to be traced on paper by such a writer in a year. In making each letter of the ordinary alphabet we must make from three to seven turns of the pen, or an average of three and a-half to four.

The Dumas family has always been remarkable for strength and address. One night at the play Gen. Dumas, the grandfather of Dumas the younger, flung a man out of the stage box on to the stage. Dumas the elder was a man of Herculean strength, and Dumas the younger excels in all games of strength and skill. He is a master juggler, and he can put a frame of knives round a human head leaning against a board, with the most consummate surety of hand. George Sand was a brilliant pupil of Dumas the younger, and in her later years she used to amuse herself for days in this perilous pastime.

THE Rev. Dr. Howard, chaplain to the mother of George III., Rector of St. George's, Southwark, was always in arrears with his tradesman, and was often perplexed to keep them in good temper. He one day took for his text, "Have patience, and I will pay you all." After dilating for some time on the virtue of patience, he said: "And now I am come to the second part of my discourse, which is 'And I will pay you all,' but that I shall defer to a future opportunity."

BRIC-A-BRAC.

THE WATERMELON.

COME to the mortal as he sits
Upon a dry goods box and sips
The nectar from thy juicy lips—
Come to the youngster as he flits
Across the high and peaked fence
And moves with ecstasy intense
Thy charms from off the native vine.
And thou art terrible!
O August born monstrosity!
Incarnate colicosity!
Beneath thy emerald bosom glow,
Like glittering bubbles in the wine,
The lurid fires of deadly woe,
And from thy fascinations grow
The pain, the cramp, the pang, the throe—
And all we fear, or dream, or know,
Of agony is thine.

SOME one has charged Tennyson with plagiarism. We have long suspected the p. laureate has been remodeling the fugitive poems of the Sweet Singer of Michigan:

SUMMER-TIME will come again,
With its softly blowing zephyrs.
Lowing kine are in the fields;
Some are cows and some are heifers.
—Tennyson.

THE PET NAME.

There was an old farmer of Squarm
Who called his wife nothing but Marm,
She said, "It sounds queer,
But if you like it, dear,
I like it; so where is the harm?"

BY adding one vowel to the following twenty-eight letters, they make two lines in verse. They were written over the ten commandments in the Church of Alwelck, in Wales, and remained a whole century before the true sense was found out—

P R S V R Y P R F C T M N
V R K P T H S P R C P T S T N.

THE QUESTIONER ANSWERED.

"Are you an Odd Fellow?"—"No, sir; I have been married more than a week." "I mean, do you belong to the Order of Odd Fellows?" "No; I belong to the order of married men." "Mercy, how dull! Are you a mason?" "No; I'm a carpenter." "Worse and worse! Are you a Son of Temperance?" "No; I am the son of Mr. John Gosling."

A LONDON lady, on her way to Bond street, was accosted by a middle-aged, well-dressed man, who, after some conversation, requested the lady to come and dine with him at a cafe which he named. She at once consented, when he instantly hailed a cab, opened the door, himself, and requested the lady to step in. She made some excuse, and requested him to get into the cab first. On his doing so she shut the door on him, and called out to the driver: "Drive this gentleman to a police station as quickly as possible."

Now that Rowell has walked and Tanner has starved, the next contest will be between two fashionable young ladies who will test their strength by seeing which can wear her spring hat the longest.

THE poet who composed the highly classical ode:

"When I was young and had no sense
I bought a fiddle for 13 pence,"

died in the poor-house. Had he written it:

"When I was young, and had no guardian
I invested my cash on an old accordeon."

a grateful public would have risen up as one man and presented him with a brass medal.

A PREACHER at a Sunday-school excursion described heaven as an eternity of picnics—and several young men members of his congregation, who lugged baskets weighing nearly a ton each, and climbed high trees to put up swings, have left church.—Norristown Herald.

A FORTUNE-TELLER was arrested in Paris, and carried before the tribunal of correctional police. "You know how to read fortunes," said a man of great wit, but rather fond of a joke for a magistrate. "I do, sir," replied the sorcerer. "In this case," said the president, "you know the judgment we intend to pronounce?" "Certainly." "What will happen to you?" "Nothing!" "You are sure of that?" "Yes; you will acquit me." "Acquit you?" "There is no doubt about it." "Why?" "Because, sir, if it had been your intention to condemn me, you would not have added irony to misfortune." The president, disconcerted, turned to his brother judges, and the sorcerer was discharged.

A PASSER-BY puts his head in at the window of a shop where an honest cobbler is working, never thinking of evil, and says, cheerily:

"Well, my friend, how many thieves are there in this street without counting you?"

"What!" yells the cobbler, without counting me?"

"Well, then," says his impurturbable questioner, "how many are there counting you?"

A FLOCK of girls is called a bevy; a bevy of wolves a pack; a pack of thieves a gang; a gang of angels a host; a host of porpoises a shoal; a shoal of buffaloes a heard; a herd of children a troop; a troop of partridges a covey; a covey of beauties a galaxy; a galaxy of ruffians a horde; a horde of ruffians a heap; a heap of oxen a drove; of blackguards a mob; a mob of whales a school; a school of worshipers a congregation; a congregation of engineers a corps; a corps of robbers a band; a band of locusts a swarm, and a swarm of people is called a crowd.

The vigor of youth given to the aged and infirm by using Hop Bitters. Try it.

For Women.

CONDUCTED BY MISS RAY CLARK.

A MYSTERY.

MARY C. BARTLETT.

PHIL by mother's bed was sitting,
Playing nurse, while Bess was flitting
Shyly, slyly, in and out,
Hiding now, with saucy pout,
Sparkling eyes, and sunny hair,
Deep in Grandma's apron, where,
'Mid soft folds of dainty wrapping,
Lay the baby—napping, napping.
Then, with merry laughter, springing,
Through the room her sweet voice ringing,
As she chattered, gayly scorning
Philie's anxious look and warning.

"Can't I wake her, Grandma, never?
S'posin' she should sleep forever!
And do tell me, Grandma, dear,
How the baby came down here.
Did she walk, or did she ride?
Did she run, or did she slide?
Did she jump, or did she fly
Like a birdie from the sky?
Tell me, Grandma, tell me true:
Did you see her comin' froo?"

All important then rose Philie:
"Nonsense, Bessie! Don't be silly.
I can tell you all about it.
Bridget says—and I don't doubt it—
That the baby came from heaven,
At exactly half-past 'leven
Thursday night. The angels brought her
To the door, and Grandpa caught her
In his arms and held her tight.
While she kissed them all good-night.
Grandpa guessed what they were bringing,
'Cause he heard the angels singing."

Softly Bessie's blue eyes glistened,
Growing larger as she listened,
Nothing doubting. Sure 'twas meet
Heaven should send a boon so sweet.
Yes, she knew the angels brought her;
But if she had only caught her,
If she had only had a sight
Of those shining garments white,
Just a glimpse. Oh! well she knew
She'd have kept the angels too.
How she wished she'd heard them singing.

But just then there came a ringing
At the door. Quick Philie started,
Cheeks aglow and lips half parted;
While, with golden tresses flying,
Followed Bessie, wildly crying:
"Hurry, Philie! Hurry, brother!
P'r'aps the angels brought another."

FASHIONS.

BUFF and dark red plain calicoes are used for plaiting on the bottom of cambric dresses.

Many house corsages are worn open at the throat, in either pompadour or heart shape.

Buttons in the form of large hooks and eyes in glittering steel are used for dresses, or are worn singly for fastening the collar at the throat, the cuffs at the wrists.

A boa of orange blossoms encircling the neck and extending to the left side of the belt, is a new ornament for a bridal costume.

The woven initials in red cotton on a fine cambric tape, can be had for ten cents a dozen. They are much in favor for marking underwear.

The large Louis XIII. collar of cambric now worn, is trimmed with a deep border of embroidery or old lace, and deep cuffs to match, which are laid over the dress sleeves.

Wreaths of flowers are worn round the throat, and also on the edge of square-cut dresses. Those round the neck, which are made full like a ruche are used in the daytime for dressy occasions. The lace stands up round the throat above the collarette of flowers.

Some pretty black lace jackets have lately been introduced, with hoods lined with cream satin, on which are embroidered or painted a flower, bud and leaves. These look well over dark as well as over light Summer dresses. The Spanish mantilla has also reappeared. It is so arranged that the upper part looks like a hood. It is caught up at the arms with bows of satin ribbon.

Bonnet shapes are now sold composed entirely of flowers, to which the purchaser has only to add a small scrap of lace or material for the crown and strings, to make the headdress complete. Those in tea roses are very pretty. They are the close-fitting French shape, both fashionable and becoming.

The rush or Zulu hats are this year adorned with a wreath of dried grass and grain, with a few poppies. They are very inexpensive, and look pretty. Coarse straw, and a new kind called Porcupine hats, are also trimmed with grasses.

Jerseys are much worn, especially in thin dark blue merino and white, with very light skirts and scarves of spotted or plain foulard and satinette. I have seen young girls' dresses of white jerseys, light blue flannel skirts, scarves, toques, and capes of striped blue and white flannel, with loops of ribbon. These are used as traveling dresses also. Other serge dresses have narrow blue and white striped serge applied as kiltings, and as a plaited flounce round the bodice, which is cut in points. Braiding on plain colored serge is arranged in close rows down the front, and horizontally across the tunic, the braid being very narrow.

Some of the prettiest seaside dresses are made of "duster" cambric, in pink or blue, trimmed with cream-colored lace, and are worn with large shady hats of the same material, trimmed with lace and one tuft of flowers. Turkey red twill is much patronized, and white dresses are looped over underskirts of it, made with plaited flounces, as well as trimmed with it.

A costume of red twill and white cambric was made with a deep jacket bodice of red twill, with pockets, cuffs, deep collar, and revers of coarse cream lace, a cambric skirt prettily made, with a narrow plaiting of red, a bonnet of red, with coarse lace turning over the brim, and also arranged as a fan in front, and red hose.

The handkerchief dresses are now reproduced in woolen material, the stuff being printed in squares in such mixtures as violet and black, old gold and green, red and black, red and blue. They are made up in the same way as the cotton handkerchief dresses.

People exert their own taste so much now that costumes vary considerably, and all sorts of old-fashioned colors, materials, and styles of make are now seen.

HOME-DRESS FOR LITTLE GIRL FROM EIGHT TO TEN YEARS OF AGE.—FIG. 281.

The dress illustrated is of gray checked material trimmed with kiltings of the same and blue porcelain buttons. Many other shades may be used, either singly or combined with equally as good an effect. Partly worn material may be utilized, making a pretty costume with but little expense.

FOREIGN TERMS.

THE following glossary is given for the benefit of many who are not familiar with the peculiar names of fashions and materials:

Bayaleuse, or Sweeper—The plaiting of lace and muslin or silk set on the inner edge of the train of handsome dresses.

Beige—The color of unbleached wool.

Boarette (from refuse)—A rough surfaced fabric, either cotton, wool, or silk, with irregular threads of color interspersed therein, as though the material were woven of odds and ends.

Bouffante—Puffed out.

Bouillon—A puffing set on as trimming.

Cutrass—A close-fitting basque; long on the hips and fitting the figure like a glove all round.

Corsage—The dress waist.

Coulisse—Shirred.

Carrick Capes—Small capes, or large collars, like those on a coachman's coat.

Demi train—A short train, *i. e.*, in length from a few inches to half a yard.

Faille (pronounced *Faye*)—A soft, thick silk.

Fichu—A small cape, usually of lace or tulle, worn over the dress.

Fraise—A standing ruffle worn in the neck.

Gilet—Vest.

Jabot—An arrangement of lace and loops of ribbon, either or both, down the front of the dress.

PERSONAL APPEARANCE.

A CELEBRATED author has politely said, "No woman is ugly, though one may be less favored than another." There is some consolation for the "less favored" in knowing that good taste in dress, and the harmless appliances of the toilet can in a great measure compensate for want of personal beauty. We desire, however, to warn our readers not to attempt to produce by artificial means those graces which nature has denied them. They will derive no real advantage in making dark hair golden, in preparations to render the eyes lustrous, in artificial bloom for the cheeks, nor in the abundant use of powder; all these artifices have a rather ghastly effect in the light of day, and should be left to the stage. It is a part of the profession of the actress to understand and avail herself of all such cosmetics as art places at her disposal; but this does not in any way excuse young ladies for having resource to them. The best means to preserve the charms of youth are abundant use of the bath; quiet, regular living, plain, wholesome diet; early hours; a proper amount of exercise in the fresh air, and sufficient useful occupation both for the mind and body.

HINTS.

THE PAPER LAMP SHADES so fashionable just now can be made very easily. Fold a sheet of tissue paper in the center forming a half square; then fold again into a quarter square, then into an eighth; continue folding in this way as long as possible, always folding from the center. Holding the thick part firmly in one hand draw it through the other till the paper is thoroughly creased; then partly unfold and draw it through the hand from the center to the outer edge. When it has become well creased cut enough from the center to allow of its slipping over the lamp shade.

CORRESPONDENTS' CORNER.

IN answer to the young lady's inquiry as to where she can obtain London Hair Restorer. I saw it advertised. My bottle was a present. A druggist will procure it if applied to.

MISS M. D.

EUGENIE, it is said, intends to leave Chiselhurst, and take with her the remains of the prince imperial.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

TAPIOCA.

ELINOR BROOKS.

WHEN we first began to entertain our neighbors as guests in our rural home, I was often surprised to find them unfamiliar with tapioca as an article of food; in fact, some of them had never even heard the name. I have sometimes wondered whether such was the case generally throughout the country; if so, it is to be regretted, for it is an iguorance of a most palatable and nutritious food, quite as valuable and as cheap as rice, and when cooked somewhat resembling it in its starchy nature, yet having enough difference to make an agreeable change. It is easily prepared as food, and to its other good qualities adds that of keeping well. This we have thoroughly tested, as at one time our "gen'rous pervider" purchased so large a quantity that three years afterwards there was still a remnant which was as sweet and nice in every way as it had been when first placed in the store-room.

Cassava, from which tapioca is prepared, is as standard an article of food in South America as wheat, corn and potatoes are in the United States. I quote from Scribner's Monthly for July 1877 a description of the manner in which it is prepared for use.

"The cassava, also called mandioca, roots which are shaped something like dahlia roots only larger, are thrown into pools of stagnant water and left there until fermentation takes place, which is usually in about two days. The tough outer skin is then easily scraped off and the roots are grated on a board covered with sheet copper full of nail-holes. After this the grated mass is placed in a long tube (woven of palm-fiber) and this is pressed until a whey-like liquid flows from it. The starch which settles from this liquid is the tapioca of commerce; while the coarse white meal which is left in the basket-work tube, is, after sifting, made into the "staff of life" by the South American housewife. It is described by many travelers as exceedingly nutritious bread and if dried for a few hours in the sun soon after it is baked, it becomes hard and crisp, has a sweet, nutty flavor and will keep for months."

[Mrs. Brooks's recipes for cooking tapioca will be given next week.] E. M.

DOMESTIC RECIPES.

Squash Pie.

To a pint of boiled, mashed and strained squash, add two cups of sweet milk, a cup of white sugar, four beaten eggs, half a teaspoonful each of ground cinnamon and ginger, and a pinch of salt. Beat thoroughly and bake in tins lined with a good paste.

Tomato Salad.

Pare with a sharp knife—do not scald—and cut into thin slices. Put into a salad-dish and pour over a mixture made of two tablespoonsful of good oil, mixed with a teaspoonful of sugar, half a teaspoonful of made mustard, salt and pepper, after which whip in, a little at a time, five tablespoonsful of vinegar.

MRS M. G.

Clam Soup.

Open 50 medium-sized clams, cut off the hard parts and put the soft pieces where it is cool. Strain the liquor and put it with the hard bits over the fire. Add a quart of hot water, one teaspoonful each of minced onions and parsley and two blades of mace. *Simmer*, not boil, three-quarters of an hour. Put two cups of milk into another dish to heat, then stir in a tablespoonful of flour, rubbed smooth in two tablespoonsful of butter. Set the dish in hot water until the soup is ready. At the end of the three-quarters of an hour, strain the clam-broth, leaving out the hard parts. Now put in the soft parts, let come to the boiling point, and that is all; season with pepper, turn into the tureen, add the hot milk and butter and serve. Butter crackers and slices of lemon may be passed with this soup.

Crab Soup.

Two pounds of any kind of fresh, lean meat, chopped fine. Pour over two quarts of water, boil slowly until reduced one-half, strain, let cool and skim and season with pepper and salt. Return to the fire adding a cupful of hot, soft-boiled rice. Simmer a few minutes, then strain, pressing the rice through the sieve. Set over the fire and add the meat of four large, boiled crabs, cut into bits. Simmer 10 minutes longer and turn into a tureen with a pint of boiling milk thickened with a spoonful of flour rubbed to a paste in two spoonsful of butter. Stir up and serve. Crackers and lemon may be passed with it the same as with clam soup.

LONG ISLAND.

Tomato Soup, Without Meat.

Put a spoonful or more of nice pork drippings into the soup-pot over the fire, when hot throw in a sliced onion and when the pieces are of a brownish hue add 15 medium-sized ripe tomatoes, peeled and sliced. Stir until well heated through, then add a quart of boiling water and a tablespoonful of chopped parsley. Cook slowly half an hour, strain, pressing through the tomatoes. Return to the pot, season with pepper and salt, a teaspoonful of sugar, two tablespoonsful of butter rolled in a spoonful of flour and a teacupful of hot boiled rice. Cook slowly 10 minutes longer and pour out.

Tomato Soup, With Meat.

Skim and strain a gallon of stock made from fresh meat, skim and slice a dozen large, ripe tomatoes, put through a sieve and add to the stock. Boil half an hour. Mix smooth a spoonful of flour, a little butter, be careful not to have it lumpy, season with pepper, salt and a teaspoonful of sugar. Simmer 10 minutes and it is ready to serve.

MRS. JANE JONES.

QUESTIONS ANSWERED.

Pickling Cucumbers for Sale.

A. J. Staunton, Mich., asks how to put up cucumbers for pickles for the wholesale trade.

ANS.—The cucumbers should be sorted into even sizes, placed upon trays of wood, sprinkled with salt, and left to drain for six hours. They are then put into barrels or hogsheads with saturated brine; that is, brine that will not take up any more salt. If the color is desired to be kept green plenty of vine leaves may be laid in layers among the pickles. Stored in this manner they may be kept until sold, when they may be disposed of either in barrels or in bottles and packed in fresh brine, or in vinegar. When put up in vinegar for sale, the cucumbers are steeped in water and freshened for 12 hours; then drained dry, and packed either in barrels, bottles or jars, with some spice, as ginger, red peppers, mace, and allspice, scattered among them; and then covered with pure cider vinegar; or other vinegar that is free from sulphuric acid, which soon makes them soft. When put up in jars or bottles, carrots are cut into ornamental slices, and placed among the pickles, with some small red peppers against the glass. The salt turns the cucumbers brown; the color may be restored by mixing the cucumbers with grape-vine leaves and scalding them with hot brine. But purchasers are generally sensible enough to be satisfied with the natural color.

Okra Soup.

WE are requested to give directions for the above. We append recipes for both plain okra and okra and tomato soup.

No. 1.—A pound of "round" steak cut into dice, two tablespoonsful of good drippings and a sliced onion. Fry all together in the soup-pot until well browned. Then add four quarts of cold water and simmer two hours; to this add a quart of sliced okra, a spoonful of parsley, and simmer two hours longer. Season with pepper and salt, strain and serve.

No. 2.—Take a good beef-bone with a pound or more of meat on it, place in a kettle on back of the stove, adding four or five quarts of cold water. Cover tightly and simmer three or four hours. Remove the fat, add a minced onion, a tablespoonful of minced parsley, three quarts of sliced okra and a quart of peeled and sliced tomatoes. Season and cook slowly two or three hours longer. Strain and serve. The tomatoes may be omitted in this last recipe and a third more okra substituted.

We know Hop Bitters are above and beyond all as a nutritious tonic and curative.

News of the Week.

HOME NEWS.

MONDAY, Aug. 30.

A furious storm of thunder, lightning, hail and rain passed across the country from Pennsylvania to the Atlantic Ocean on the 25th, doing considerable damage on its way .....The conductor of a freight train on the Pan Handle Road put off a party or tramps near Piqua, Ohio, on the 26th, who were stealing a ride, when one of them fired at the train and struck a brakeman named John Kelly in the eye. The wound will probably prove fatal. The tramps escaped, but are being pursued. .....It is officially announced that the Army of the Cumberland will hold its reunion at Toledo, Ohio, September 22 and 23.....Great damage has been done to the growing crops in the township of Buckland, Bellechasse county, Quebec, by hail storms, the settlers in many instances having lost their entire crops.....The rain of the 24th extended over a large area of country in Illinois, and its effect on the corn crop will doubtless be most favorable, as the stalks were drying up very fast in some localities.....Eight hundred and thirty hostile Sioux Indians have surrendered to Colonel Miles at Fort Keogh, Montana, and one thousand more are on their way to his camp, desirous of doing likewise.....A reduction is to be made in the rate of postage on newspapers mailed to foreign countries belonging to the Universal Postal Union on and after October..... A fearful storm prevailed along the Texas coast on the 12th and 13th instant, and it is reported that the city of Brownsville has been nearly destroyed and many lives lost. The latest news of the late storm on the lower coast of Texas and in Mexico disclose that it was one of the most destructive that has visited that region for years. Hundreds of houses were either completely demolished or unroofed in Matamoras. At Brownsville many buildings were ruined, and at Point Isabel and Brazos quite a number of vessels were wrecked and several lives lost. The total damage to property is estimated at upward of $1,000,000..... There is a call for a Mississippi Valley Convention to be held at New Orleans, October 12th, to consider the improvement of the commerce and navigation of the river. This call originates with the central committee appointed at the convention at New Orleans in 1876. The question is one of great interest to the Mississippi valley, and the proceedings of the convention will be watched with interest.....The Pennsylvania railroad is making very great efforts to straighten and lessen the grades, and otherwise improve the condition of that great trunk line. The passenger traffic has increased to the amount of $1,000,000 over 1879.

In a difficulty on the 25th at Leesville, Texas, twenty miles from Gonzales, the three Littlefield brothers—William, Philpp and Houston were killed.....Matt and Bill Potter, Roll Dublin and Jim Wilkins pleaded guilty at Austin, Texas of robbing the mails, and have been sentenced to ten years' imprisonment.....The eighth annual convention of the North American St George's Union opened at Ottawa, Ont. Delegates from Canada and the United States are in attendance ..... Five buildings occupied as saloons, concert halls, shooting galleries, restaurants, etc., near the Bay District race track, at San Francisco, were burned on the 26th. Loss, $30,000 partially insured.....Officer B. F. Vaughan was shot on the 23rd by Buck Rockwell, a notorious confidence man, at Arlington, Ky., on the Chicago, St Louis and New Orleans Railroad. Rockwell made his escape.....A collision occurred between two passenger trains on the joint track of the Rio Grande and South Park Railroad on the 25th, near Leadville, but no one was hurt.....John Law died at Madison, Ind., on the 26th from the effects of the shot wound inflicted by Stucker, who found Law in criminal intimacy with Mrs. Stucker..... The funeral of Isaac H. Brown, sexton of Grace church New York, attracted a large attendance. The Masonic fraternity was largely represented. ....Abram Davidson, 28 years old, of Stuyvesant, N. Y. brakeman on the Hudson River Railroad, while riding on the top of a freight car came in contact with a bridge at Spuyten Duyvel, and was instantly killed.....The first bale of the new crop of North Carolina cotton was sold at New York by auction at 13 cents per pound. It grades strict low middling to middling, and it is about ten days earlier than the first bale of last year from North Carolina.

Henry Wade, a farmer living near Chillicothe, O., had a fight with a party of nine tramps in consequence of their depredations upon one of his fields, and shot several of them. One, who was wounded in the thigh, gave the name of Frank Cooper, of Philadelphia.....Warrants were issued at Richmond, Va., for the arrest of Dr George B. Johnston, son of United States Senator Johnston, and Captain John S. Wise, son of the late Governor Wise, upon the charge of being about to engage in a duel. Johnston was arrested and gave $2,000 bail for his appearance at the Police Court, but Captain Wise was not found. The trouble arose from Wise being blackballed about a year ago on applying for admission to the Westmoreland Club, a high-toned social organization.....Hon. Horace Maynard has gone to Washington to enter upon his duties as Postmaster General.....Assistant Secretary of State Hay has sufficiently recovered from his recent illness to be able to perform his duties as Acting Secretary of State.....For the week ended on Friday the 27th, there were forty deaths from yellow fever and four from smallpox at Havana. Ten persons have died from the contagion of glanders... ....James Thorp, a workman in the Missouri Pacific Railroad machine shop at Kansas City, Mo., shot and killed Alfred Terry, in an altercation. Thorp was arrested.

The steamer Marine City, of Detroit, was burned to the water's edge, near Sturgeon Point, Mich., on the 29th. It is supposed that five passengers were drowned.....Ouray, the noted Indian chief, died at the Ute Agency, on the 28th. .....The flour mill of William B. Thomas & Co., the hollow-ware foundry of Stuart & Peterson and several buildings adjoining, in Philadelphia, were burned on the 27th ult., entailing a property loss of over $200,000.....The New Jersey Greenbackers have nominated General Thomas B. Hoxie for Governor... ....The Iowa Republicans have renominated J. A. P. Hall for Secretary of State.... ....The population of Charleston, S. C., has increased two and one-fifth per cent. during the past ten years .....The Hon. Horace Maynard was sworn into office as Postmaster-General on the 26th inst.....A terrific thunder-storm passed over Bridgeport, Conn., the lightning striking a number of buildings in the city and its immediate vicinity.....Horace Jarvis was killed on a farm near Haysville, Ohio, on the 26th ult., upon a thrashing machine while it was in motion..... Assistant Surgeon O'Connor reports to the Marine Hospital Bureau that the Board of Health, at Evansville, Ind., has declared typho-malarial and typhoid fevers epidemic in that city.

Gen. A. J. Myer, Chief Signal Officer of the United States, and long known as "Old Probabilities," died at Buffalo, N. Y., on the 24th. Gen. Myer was born at Newburg, N. Y., Sept. 20, 1828. The cause of his death was what is known as Bright's disease, with an affection of the heart, from which the General has long been a sufferer. .....The discovery of the fact that Jacob Zechler, of Albay, in Berks County, Pa., has for 27 years kept his insane brother Benjamin chained in a house has created quite a sensation in that vicinity.....The deaf mutes of America held in Cincinnati on the 25th their first convention. There was a fair attendance from all parts of the United States and Canada. Robert McGregor, of Cincinnati, was elected President .....Richard O. Adams, the defaulting postmaster of Deadwood, D. T., who was to have been sentenced, escaped from the custody of the Marshal, and a large reward has been offered for his capture..... John Elliott, 25 years of age, while playing baseball at St. John, N. B., was struck in the neck by the ball and instantly killed.'.....The tannery of Norbert Germain, of Quebec, together with the contents and valuable machinery, was burned on the 25th. The loss is $20,000.....Mr. Thomas Hughes, author of "School Days at Rugby" and "Tom Brown at Oxford," and chairman of an association of gentlemen, English and American capitalists, for the purpose of developing the table lands of East Tennessee, has just arrived in New York with several of those interested with him, and will proceed at once to inaugurate a colony upon a tract of between 300,000 and 400,000 acres of land which has been purchased for this purpose. It is proposed to enter into a general business of agriculture, mining, and manufacturing, for which the territory is adapted.....A fire destroyed the paper warehouse of Averill, Russell & Carpenter, on Lower Third Street, St. Paul, Minn., occupying two buildings, and the wholesale grocery of P. H. Kelly & Co., adjoining. The fire spread with great rapidity, and it is feared that one man was killed by the falling walls of Kelly's house. The store of Beaupre, Allan & Keogh, next door, was saved with difficulty after a loss of $10,000, which is covered by insurance. The loss on the building occupied by Averill, Russell & Carpenter is $45,000; insured for $12,000. The loss on the Kelly building was $60,000; insured for $20,000. The loss of P. H. Kelly & Co. is estimated at $400,000; insured for about $300,000. The loss of Averill, Russell & Carpenter on stock is $125,000; insured for about $77,000.

Three children of Antoine McCarty were thrown from a wagon at Memphis, Tenn., on the 26th, by the horse becoming frightened and running away while they were playing in the vehicle. One child was unhurt, another only stunned and the third was killed.....A waterspout burst along the line of the Cleveland, Mount Vernon and Columbus Railroad on the 27th, flooding the track to the depth of five feet in some places and delaying trains.

About 260 mechanics and blacksmiths in the employ of the Chicago, Milwaukee and St. Paul Railroad struck for a 5 per cent. advance in wages. ..... It is reported from Austin, Minn., that Judge Page was shot in his house on the night of the 25th and killed by an unknown assassin. He has for years been the principal mover in a great political, social and religious feud that has agitated Southern Minnesota.....Complete census returns show the population of Wisconsin to be 1,315,464, an increase of 206,794 since 1870.

Senator Hill, of Georgia, is said to be suffering from a cancerous tumor on his tongue, that threatens to terminate his career as a public speaker if not to end his life, there being doubts as to the permanent removal of the tumor.

FOREIGN.

More than the Eastern embroglio, more than the war in Afghanistan, the troubles in Ireland now excite public attention in England. Troubles in Ireland, 'tis true, are chronic, but they are daily becoming more acute and dangerous. The short crops last year rendered thousands of tenants unable to pay their rents, and the landlords are taking advantage of this misfortune to get rid of small cottagers whom many of them have for a long time regarded as nuisances on their property. Many of these tenants had only from half a dozen to a dozen acres of land, so that labor-saving machinery could not be used by them; they were constantly behindhand a trifle; and each of them, if pressed, became a bitter personal enemy of the landlord, hence the desire of the latter to clear their estates of this class of petty farmers. Evictions are constantly taking place, some quietly, while in other cases the constabulary have to be called in, and when this is the case, the assembled peasantry usually have a "shindy" with their blue-coated foes. Such a fight took place the other day at an eviction near Dungannon, when the police, assailed with clubs, stones and pistol shots, fired on the mob at first with buckshot and then with ball—result, some 38 known to be more or less severely wounded and one killed. Meanwhile, Fenianism is growing; and serious trouble is threatened in the near future. The harvest is splendid throughout the whole island, and the resulting prosperity may have a soothing effects. The country is by no means poor now. In a late petition presented to the House of Commons by the Irish bankers, they say that they hold about thirty-one millions sterling on deposit, equivalent to about two and a half times the valuation of Ireland, or, by a rough calculation two years' rental.

In England the event of the week has been an attempt on the part of the Irish Home Rulers to block legislation in the House of Commons unless the government consented that the Irish constabulary—now a semi-military organization—should be ordered not to assist in making evictions of delinquent tenants. The matter came to a head when the Supply bill for the pay of the constabulary got before the House. The Home Rulers, by making long speeches simply for the sake of passing time, and dilatory motions, forced the House to make a session of 17 hours, and even then a compromise had to be made with them, it being agreed to defer taking the vote until the following day. Tactics of this sort will doubtless be frequently employed by them in future, as they have been sometimes in the past. Mr. Gladstone is taking a voyage around England for the benefit of his health.

On the Continent there is little of general interest to tell of this week. In France Gambetta and his followers bitterly denounce De Freycinet's late declaration that repressive measures would henceforth be confined to the Jesuit order, leaving the other religious orders in peace. They declare that all the orders must be treated alike and expelled. As this is a family quarrel among the Republicans, Imperialists and Monarchists rejoice, and it is not unlikely that De Freycinet will either have to "eat humble pie" or lose the premiership. In Russia Nihilists appear to be a thing of the past; congratulations on the matter are general. Turkey still persists in doing nothing towards solving the Eastern problem. The Powers have sent to the Porte an identical note courteously but firmly insisting that the cession of territory to Greece and Montenego demanded by the late Conference at Berlin, must be made at once. England, France, Germany, Austria and Russia are preparing to make a joint naval demonstration in Turkish waters in support of their demands. A large fleet made up of mighty iron-clads from each of these Powers is to visit the Turkish coast and perhaps Constantinople—but what will be the practical good of the show no one seems to know.

At the present time Canada is attracting a great deal of interest, not only among English, but also among French capitalists. The formation of the Credit Foncier in Paris, with a capital of $25,000,000, to be invested in Quebec in real estate is only second in importance to the sale of the Canada Pacific Railway in Great Britain. Another company, with a capital of two millions, has been organized also in Paris, under the title of L'Union Sucriere du Canada, to carry on the manufacture of beet root sugar. Quebec, Berthier and St. Johns, in the above Provence have been selected as sites for factories. They have already guaranteed each for twelve years for 1,000 acres of beets annually. Factories are also to be built in other districts and arrangements are being made to obtain 1,000 acres of beets at Varennes. About $120,000 will be expended on each factory.

[Washington Critic.]

Saved by Oil.

Mrs. Susanna Asmus, No. 11 Bartlett street, Baltimore, Md., had for twenty-two years been a sufferer from sores and pains in her limbs. She tried many remedies without any favorable results. Happening to hear of St. Jacobs Oil, she concluded at last to try it. The result was wonderful. The sore healed, the pains vanished, and she is now well again.

AGRICULTURAL NEWS.

THE Mark Lane Express, of the 23rd, in its review of the British grain trade for the past week, says: "It is rather too soon to make a definite statement in regard to the quality of the new wheat crop, but the majority of the samples exhibited during the past week were decidedly fine, and sold readily at 44@50s. a quarter. The supplies of last year's growth are quite insignificant. A reduction of a shilling to two shillings failed to attract buyers. The demand for foreign was unusually light. The bulk of arrivals have been warehoused. The tendency of prices is downward, though transactions are so limited as to scarcely warrant recording any actual change of quotations. American mixed maize readily commanded 23 shillings ex-ship, but any attempts to advance this quotation was strenuously resisted. Sales of English wheat for the week were 11,845 quarters at 43s. 9d.....A supplement to the same number exhibits 433 reports from agricultural districts. They show that wheat is below the average, barley above, oats and beans a little above and peas a little below. The result of the second hay harvest will probably make up for the deficiency of the first cut. Turnips are as much over the average as mangel-wurzels are below. Potatoes are expected to be an unusually heavy crop. Two hundred and forty-eight reports say more or less disease has appeared; 32 say there is no disease, while in 50 disease is not mentioned. The supplement classifies reports received as follows:

Crop Reports.	Over Average.	Average.	Under Average.
Wheat	34	185	115
Barley	96	202	302
Oats	97	187	43
Beans	63	126	41
Peas	46	124	70

Wheat is considerably affected with blight and mildew. A few returns declare the general state of the crops to be as bad as it was last year; but for the country at large, the prospects, though not as bright as some sanguine writers have reported, are much better than they were at this time last year. The quality of wheat and rye is generally good.....The French harvest will be above the average. The Belgium and Holland harvest is well nigh finished, with excellent results. Rye crop in Saxony, Pomerania, Brandenburg and Holstein about average, but in Bavaria, Franconia and Suabia the rye crop is magnificent. Wheat throughout Germany fairly good, though there is considerable rust and mildew. Accounts from Austria, Hungary, Spain and Italy are uniformly good.....James Caird, an eminent agricultural authority, writes that the agricultural returns from Great Britain and Ireland show, as compared with 1879, a slight increase in the acreage of wheat, a decrease of 7½ per cent. in barley, an increase of five per cent. in oats and scarcely any change in potatoes. The quality and yield of wheat will be so greatly superior that if the present splendid harvest weather continues a fornight longer, "we may reckon on a crop of 3,000,000 to 4,000,000 quarters, or nearly two months' consumption better than in 1879. Potatoes promise most favorably. The dry, clear weather will, it may be reasonably supposed, go far to check the further progress of disease. Grass and green crops, except mangold, are abundant. The first hay crop was light and much damaged by rain, but it will be largely supplemented by a heavy late crop. Cattle are deficient to the extent of 90,000 head and sheep nearly 2,000,000, or 5½ per cent., in consequence of the rot resulting from the excessive wet last season.".....Two artesian wells are about to be sunk in the far West, according to the act of Congress passed at its last session, the object of the experiment being to see whether land now valueless cannot be thus reclaimed to agricultural purposes. The headquarters of the Commissioner that has the matter in charge will be at Denver.....

The Rev. S. S. Bartlett and Mr. J. A. Scharer of Norton County, Kansas are in St. Louis soliciting aid for the starving and destitute in the northern part of the State, in the counties of Norton, Jewell, Washington, Smith, Decatur, Rollins, part of Phillips, Graham, Trigo, Ellis, and others, all located in the northern part of Kansas. The lowest estimate places the number of people who are suffering at 25,000. The cause of the affliction is a drought. Their last year's crops were only limited. Last Fall they sowed wheat, but it died. There was no snow to give any moisture, and no rains, and this crop perished. Spring wheat was sown, but that failed also, on account of the severe drought. Corn was next planted, but another plague appeared—the green worm—not the Army-worm, but similar in appearance. While it destroyed some fields entirely, it only ate up the stalks of the others, and these last revived, and there were hopes that some of it might still be gathered in: but the people were once more disappointed. The chintz bug followed the green worm and completed the destruction of the latter. And now the crops are completely destroyed, and want and hunger are staring these twenty-five thousand people in the face. The potato crop is also ruined. Many of the settlers there came from Missouri and Iowa. Up to about six weeks ago it was thought the suffering would not be so general. Gov. St. John declared the State would be able to take care of its destitute, but these calculations were erroneous, and since that time Gov. St. John has advised all the people in the drought-visited district to leave Kansas if possible.....

Agricultural Commissioner Le Duc has recently been selecting sites for tea farms in Georgia, and has returned to Washington, leaving an assistant to complete the work. He thinks that he will have no difficulty, as the problem of tea culture at the South, or at least in Georgia, has been already solved .....Lynn, Mass has a pear tree that is covered on one side with ripening fruit, while the opposite side is covered with blossoms, ...California has as many acres under wheat, 3,227,000, as Great Britain, and produces half as many bushels, 56,000,000.....Cucumbers are coming to the pickle factory at Nunda, McHenry Co., Ill., at the rate of five thousand bushels a day. .....Army worms made their appearance in swarms in the northern parts of Indianapolis, the the other day.....Some months back the RURAL noticed the departure of Mr. D. A. Jones across the Atlantic in search of Cyprian trees. He returned a few days ago with 200 swarms procured by him in Cypress and the Holy Land at a cost, *it is said*, of about $100 for each swarm .. ...

The agricultural implement dealers of Minneapolis state that their sales this year have been unprecedented, and all dealers allege that their stocks have been absorbed clean as a whistle ..... Our contributor Prof. J. P. Sheldon, of England, and other delegates of the British tenant farmers, arrived at Quebec a week ago. They visit Manitoba to report on the suitability of that country for agricultural immigration.....

The Acting Secretary of the Treasury has declined to grant the request of certain importers of cattle who asked that the quarantine required for cattle coming from infected ports might be established at some inland city instead of at New York. The importers wished to ship the cattle on arrival at New York to the West and establish a quarantine at Buffalo. The Treasury Department decided that would be an evasion of the regulation and would defeat the very purpose for which it was established.....It is estimated that the tobacco crop of the five counties of York, Lancaster, Berks, Chester and Bucks, Pa., will be worth $6,000,000 this year, and the value of the crop in the entire State between $8,000,000 and $10,000,000.....Information has been received by some members of the Produce Exchange here that Asa Dows, one of the largest operators on the Chicago Board of Trade, and who recently refused to respond to a call for more margins on pork, which he had sold "short,"

has suspended. He is said to have lost a quarter of a million in pork.....

England imported during the first part of the present year 7,213,935 pounds of goats' hair, valued at £635,887 (over $3,000,000), being an increase over the same period of the preceding year of 4,477,131 pounds.....At Mount Sterling, Kentucky, an auction sale of Short-horn cattle came off lately. Sixty-five head of cattle were sold at an average of $233 per head.....The National Exchange Bank of Auburn, N. Y., has brought suit against several farmers of Suffolk county for the payment of notes for sums ranging from $100 to $200. The farmers claim that they never made the notes, and have retained District Attorney Petty to look after their interests. The farmers say that last Spring they were waited upon by a man who represented himself as the agent of a fertilizing company, and they contracted with him for fertilizers to the amounts of the different notes. They were not to pay until they had a chance to test the quality of the fertilizer, and if it was not what it was represented to be they were not to pay anything. They signed what the agent said were contracts, but which turn out to have been notes. They say they never received the fertilizers.....

From the most reliable reports the Canadian crop of potatoes in nearly all the principal sections of Quebec will be unusually large, and at present it looks as though a season of low prices was ahead. In Ontario the crop is also turning out satisfactorily in many sections. The quality of Early Rose and Chili grown in the vicinity of Toronto is remarkably fine and the yield large.....The Hungarian wheat crop is exceptionally good, giving a surplus of about 30,000,000 for export.....

The Greatest in the World.

Without a question, Buffalo, New York, can boast of the largest and most complete private Sanitarium in the world. The Invalid's Hotel was founded by Dr. R. V. Pierce, who has represented his district as State Senator and in Congress, and is known throughout the United States as the originator of Dr. Pierce's Family Medicines, and who has also become widely celebrated in the treatment of chronic diseases. The erection of this mammoth home for invalids was made necessary by the large number of afflicted who flocked to Buffalo from all parts of the United States to consult Dr. Pierce and the eminent medical gentlemen associated with him as the faculty of this celebrated institution. The establishment is said to have cost nearly a half million dollars, and is furnished with every appliance and facility for the care of chronic ailments. A correspondingly large branch institution is located in London, England. The whole concern is owned and operated by the World's Dispensary Medical Association, of which the original Dr. Pierce is President—his brother, an uncle, and other eminent medical gentlemen taking part in the treatment of cases. In treating cases they are not all confined to the narrow limits of prescribing the justly celebrated remedies. Dr. Pierce's Golden Medical Discovery, Pleasant Purgative Pellets, or any set remedies, however good, but have resort to the whole range of the *Materia Medica*, as well as to Turkish and other baths, Swedish movements and other approved remedies and methods of cure.

Parents, do not use vile drugs or nostrums in your families, but use pure Hop Bitters.

The first thing to do in the Spring is to clean house. For internal cleansing and renovating, no other medicine is equal to Kidney-wort.

Don't keep taking drastic pills—they do more harm than good. Kidney-Wort cures constipation.

Health, hope and happiness are restored by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It is a positive cure for all those diseases from which women suffer so much. Send to Mrs. Lydia E. Pinkham, No. 233 Wetern Avenue, Lynn, Mass., for pamphlets. For sale by all druggists.

Burnett's Cocoaine promotes the growth of the Hair, and renders it dark and glossy. The COCOAINE holds, in a liquid form, a large proportion of deodorized COCOANUT OIL, prepared expressly for this purpose. No other compound possesses the peculiar properties which so exactly suit the various conditions of the human hair.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Aug 28, 1880.

BEANS AND PEAS.—The demand for beans has lulled again and there are sellers at inside rates for mediums and marrows. Other sorts fairly firm for choice. The bulk of red kidneys is weak as stock is liberal considering the approach to new crop. Peas generally quiet. Nominal rate for green Wisconsin, $1.60@1.65.

Marrow beans, prime, $1.63½@1.70; other, $1.50@1 60; medium, prime $1.45@1.47½; other, $1.35@1.40; pea, $1.50@1.70; white kidney, $1.70@1.85; red kidney, prime, $1.50; other, $1 35@1.45.

BROOM CORN.—Demand is moderate and prices unchanged.

Brush and short broom, choice, ₩ lb., 6@6½c.; do., do., common to good, 5@5½c.; hurl, good to choice, 6@6½c.; do., common to fair, 5@6c.; red and crooked at 3@4c.

BEESWAX.—A moderate amount of business and a steady market, with 24½@25c. quoted for Western and Southern.

Exports for week 3,519 lbs; since Jan. 1, 57,000 lbs; do. in '79, 41,050.

BUTTER.—The demand has been quite steady and prices have worked up a point or so, and the market closes with a wholesome tone of firmness. Contributing to the latter phase is a pretty solid export call. In this way a good deal of Western creamery has been moved at 25c., a good rate for wholesale business. A few marks of Western creamery now quote up to selected State. As before the average quality of State butter is good and this gives confidence to all classes of buyers. Western dairy and factory is turning out so satisfactorily and the under grades are rather pressed for sale. Fine Iowa June factory finds a ready place at 20c., and as a rule the range for Western is not so conflicting as is frequent during hot seasons. The weather has been severe upon the exhibition stock, but cool nights now help to restore the appearance of goods that have to be sold from the tryer.

Creamery, finest, 25½@27c.; good to prime, 25@26c.; fair to good, 24@24c.; sweet cream, 23@25c.; State firkins, 21@24c.; pails and half tubs, best, 24@25c.; fair to prime, 21@24c.; poor, 17@19c.; Welsh tubs, choice, 22@23c.; other, 19@21c.; Western imitation creamery, 17@22c.; dairy, fresh, 21@22c.; prime 20c.; poor to good, 16@19c.; factory, Iowa June 19½@20c.; fair to prime, 16@17c.; poor, 15c.

Receipts for week, 32,976 pkgs.; exports for week 13,825 pkgs.

CHEESE.—The market has been in very good shape most of the week, advancing to 13c. for best factories under moderate receipts, a good demand and the firmness displayed in the country. At the extreme close the arrivals were much larger and the feeling less firm; 13c. is still held for the best factories and sales made at that price, but there is an unwillingness to pay over 12¾c. The following are the quotations:

State factory, fancy, at 13c.; do. good and prime, 12@12½c.; do. fair to good, 11@12c.; do. half skimmed, 9½@10½c.; Wisconsin factory, fine, 12½@12¾c.; do. good to prime, 11½@12½c.; do. fair to good, 10¾@11¾c.; Ohio factory, fine, 11½@12¾c.; do. good to prime, 11@11½c.; do. flat, fair to good, 9¾@10¾c.; do. poor to fair, 8½@9¾c.

Receipts for week, 85,350 boxes.

Exports, 70,350 do.

Liverpool cable, 54s.

Steam, Liverpool, 45s.

COTTON.—The market has been variable and active, closing steady at for August, 12.09@12.10c.; September, 11.25@11.26c.; October, 10.70c.; November, 10.56@10.57c.; December, 10.56@10.58c.; January, 10.67@10.68c.; February, 10.81@10.82c.; March, 10 94@10.96c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8¾	8¾	8¾
Strict ordinary	9¾	9¾	9¾
Good ordinary	10¾	10¾	10¾
Strict good do	10¾	10¾	10¾
Low middling	11 7-16	11 9-16	11 9-16
Strict low middling	11¾	11⅞	11⅞
Middling	12	12⅛	12⅛
Good middling	12⅛	12⅜	12⅜
Strict good middling	12¾	12⅝	12⅝
Middling Fair	13¼	13⅜	13⅜
Fair	13⅝	14	14

STAINED.

Good ordinary	8⅝	Low middling	10
Strict good ordinary	9¼	Middling	10⅜

DRIED FRUITS.—Small fruits have been advancing under a good fall demand and moderate receipts. Apples are steady and in fair request. Quotations are for

Apples—Old State at 5¾@6½c, new Tennessee at 3½@4c.; new Virginia at 4@5c.; fancy sliced North Carolina at 6@7c.; evaporated, ring cut, at 8½@9½c. Old peeled peaches at 5@11c. Blackberries at 7¾@7¾c. Raspberries at 26@26½c. Pitted cherries at 18¾@19c. Whortleberries at 10@11c.

Exports of apples for week, 590 bbls.

EGGS.—Receipts for week, 7,000 bbls.; do last week, 5,915 do. The market has had an irregular run, owing to hot, damaging weather. Previous high prices fell to 15½@16c. early in the week, but rates have since recovered. Supplies are light, few good lots in store and reasonably cool weather will be apt to steady quotations. Receivers report a good many losses during the genuine August weather that has prevailed.

Near points, 18½@19c.; State and Pa. 17½@18c.; Western and Canadian fresh 16½@17c.; off grades, 15½@16c.

FLOUR.—There has been a liberal business and prices steady.

Quotations are $3.30@4.00. for inferior to very choice superfine State and Western; $3 75@4 00 for poor to good extra State and Western, odd lots and lines; $4.00@4 25 for very good to choice do.; inferior to good white wheat extras, $4.50@5.25; good to choice do at $5.25@5.75; (very choice to fancy do. at $5.85@6.25,) red and amber winter wheat inferior to choice trade and family at $4.35@5.75; round hoop Ohio, $4 00@4.60; and trade and family brands of do. at $4.60@4.85; St. Louis at $4.50@5.25 for inferior to good extra; $5 20@5.85 for good to choice (and $5.90@6.25 for very choice to fancy brands); Minnesota clear, inferior to fancy at $3.85@6.25; Minnesota "straight," poor to fancy, at $5 75@7.25, and patent inferior to very fancy at $5.75@8.50; unsound stock at from $2 25@4 35; city mill extra at $5.30@5.50 for good to very choice for the West Indies; do. for England, $3.85@4.35 for poor to choice spring wheat, and $4.35@4.85 for winter wheat product; do. trade and family extras, $5.50@6.75; do. for South America, $5.50@5.75; No. 2 at $2.25@3.00 for poor to fancy.

Receipts for week, flour, bbls. 177,680, corn meal, do. 4,800; wheat, bush. 2,324,500; corn, do. 1,960,000, oats, do. 372,050; rye, do. 131,312; malt, do. 6,175; beans, do., 1,760; rice, pkgs, 916.

Exports for week, flour 69,600 bbls.; corn meal, 4,025 bbls.; wheat, 1,523,900 bush.; corn, 1,013,600 bush.; oats, 20,900 bush.; beans, 400 bush.; peas, 1,425 bush.; rice 1,310 pkgs.

CORN MEAL.—Sales at $3.20@3.25 for Brandywine, and $2.50@2.75 for yellow Western.

FRESH FRUITS.—Exports of apples for week, 4,314 bbls. Good hard stock has sold well for export; for other purposes the market is over supplied and easy rates prevail.

Fall pippins, $1@1.25; Alexander, $1.25@1.50; Coxsackie, $1.25@1.50; Maiden's blush, $1@1.50; Twenty oz., $1@1.50; Gravenstein, $1.25@1.50; Orange pippins, 50@75c.; Nyack pippins, 75c.@$1.25. Peaches are high for general trade but receipts have worked off well. N. J. extra, $1.25; plain to prime, 50c.@$1; Del. extra, $1.25@1 75; fair to prime, 60c.@$1; calls, 30@40c.; Upriver, 75c.@$1.25. It has been a rough week for pears and plums. Some lots sunk so badly that they would not make freight expenses. Bartlett pears, per bbl., choice, $5@5.50; common, $3@4; P. Beauty, $2 50@3; Duchess, $2.50@3.50; sour Bell, $2; cooking, $1.50@2; Quackenbush plums, per bbl., $5@5.50; Reine Claude, $4@5; Damson $3; egg, $4@5; green Gage, $3 50@5; Lombard, $1.50@2.50; blue Gage $3@3.50; purple egg, $3@4.50; Boston blue, $2@3; Bullet, $1.50@1.75. Grapes in good demand but very low, especially for loose; 50 lb. cases, Delawares, $4; do. Concords, $1.50@2.25; bulk and basket Delawares, 7@10c.; bulk Concords, 1½@3c. Hot-house grapes not wanted. Nutmeg melons, Hackensack, $1@1.25; Keyport, 25@75c. Watermelons, choice, large, per 100, $15@18; other, $7@12. Peanuts continue slow; hand-picked Va., 5@5½c.; extra prime, 4@4½c.; good to prime, 3½@4c.; common, 3@3½c.; shelled, 5@5½c.

GRAIN.—Wheat has been active and fluctuating in price. The Exports for the week have been 1,700,000 bush.

Latest prices are for No. 1 white at $1.08@1.08¼; do., August, at $1.08@1.08¼; do., September, at $1.07@1.07¼; do., October; at $1.07⅛@1.07¼; No. 2 white at $1.05¼@1.06; ungraded white at $1.01@1.09; No. 1 red at $1.10; No. 2 red at $1.08@1.08¼; do. August, at $1.07¼@1.08¼; do., September, at $1.07⅛@1.08; do., October, at 1.03¾@1.08¼; do. November, at $1.03@1.09⅛; do. steamer grade at 1.05¼@1.06; No. 3 red at $1.05¼@1.05¼; do., steamer grade, at $1.00¼@1.01; ungraded red at 95c.@$1.11; mixed winter at $1.05¼@1 06; No. 2 Chicago and Milwaukee spring at $1.01@1.05. Rye at 88c. for No. 2 Western for August delivery. Corn is active; the shipments for the week are 850,000; bush.; prices closed weak; latest sales are of New York No. 2, at 51¾@51¾c.; do., August, at 51¼@51½c.; do., September, at 51¾@51¾c.; do. October, at 52¾@52¾c.; do., November, at 53¼@53½c.; ungraded mixed Western at 50¾@51½c.; round yellow at 53c. bid and 55c. asked. Oats are offered freely at lower prices; sales of No. 1 white at 41c.; New York No. 2 white at 37½@38c.; No. 3 white at 35½@36c.; New York No. 1, 38c.; No. 2 at 37@37½c.; do., August, at 36½c.; do., September, at 31½c. bid and 35½c. asked; do., October, at 33c.; No. 3 at 35@35½c.; ungraded White Western at 37@40c.; ungraded mixed Western at 35@38c.; white State at 38@40c.; No. 2 Chicago at 38c.

HOPS.—New arrive more freely and are placed in small lots at 25 to 30c. Generally trade is dull. Quotations are for

	Cents per lb.
New Yorks, choice	25 @27
New Yorks, fair to medium	23 @24
Yearlings	7 @14
Olds, all growths	4 @ 8
Pacific Coast, new	23 @25
Pacific Coast, olds (nominal)	5 @ 8

HAY AND STRAW.—Demand is liberal and prices well sustained.

Shipping hay quoted at 75@80c.; medium to prime do., 90c.@$1.10; salt hay at 65@70c.; clover do. at 70@80c. Straw at 85@90c. for long rye; 55@65c. for short rye; and 65@70c. for oat.

Exports of hay for week, 3,550 bales. Since Jan. 1st, 32,400 do.; in '79, 51,300 do.

LEATHER.—Quotations are for light hemlock sole at at 22@23½; middle do. at 23½@25; heavy do. 22½@24.

OIL CAKE.—Western quoted at $29@29.50.

POULTRY AND GAME.—Dressed poultry is selling with unusual snap for this part of the year, but heavy receipts would swamp our wants. Chickens sell very profitably comparing rates for live. All shipments must be ice-packed.

Turkeys, prime small., 15c.; fair to good, 12@14c.; dry-picked, 14@16c. chickens, Phila., large, 17@18c.; small, 16@17c.; State and Western, scalded, 13@15c.; Fowls, Phila., dry-picked, 14@15c.; State and Jersey, 13@14½c.; scalded fowls 12@13c; Ducks small to large dry-picked 15@16c.; scalded 12½@13½c.; W. mixed 11@12c.; squabs white ₩ doz., $1.75; dark, $1@1.25.

There is a good demand for fowls and chicks chiefly for near points. Southern and Western are too thin to bring high prices. Ducks dull at the moment. Geese are active, many selling ahead for the Jewish holidays of Sept. 6 and 7.

Chickens, Jersey, ₩ lb., 13@13½c.; Western 10@11c.; Southern, 10@11c.; fowls, Jersey, 12c.; Western, 11c.; Southern, 10c.; roosters, 5@6c.; turkeys N. J. 12½@13c.; Western 11½@12c.; ducks, near by 55@75c.; other 35@45c.; geese, New Jersey $1.50@1.75; New York and Pa. $1.25@1.50; Western, $1 12@1.25; Southern, $1@1.13; pigeons, 20@35c.

Woodcock scarce and higher. No items of fine game are plenty enough to permit popular prices.

Woodcock, ₩ pair $1; English snipe $2@2.25; Grass plover, $2 50@3; stuffed pigeons, $1@1.25; small birds do not pay for catching, reed birds 20c.; blackbirds, 10c.

PROVISIONS—Have been less active and tending lower

Mess pork quoted at $15.65 bid and $15.75 asked for August; $15.70 bid and $15.80 asked for September; $15.75 bid and $15.80 asked for October. Bacon at 8¾@8¾c. for long clear. Beef hams at $20.50. Beef at for extra India mess $16.50 for city; $10 for extra mess, and $9 50 for plain mess; $10.50@11 for packet, and $11.50@12 for family mess. Lard at 8.15 for spot lots of Western steam; 8.10 for Sept. delivery; 8.17½@8.20 for October delivery. Stearine at 9c. for choice Western. Tallow at 6¾@6.7-16c. for prime.

Receipts for week, beef, 600 pkgs.; pork, 3,300 bbls.; cut meats, 10,425 pkgs.; lard, 12,746 pkgs.

Exports for week, beef, 1,825 pkgs.; pork, 3,250 bbls.; cutmeats 6,519,570 lbs.; lard, 3,163,200 lbs.

SEED.—Clover is strong; prime to choice quoted 8¼@8¾c. Flaxseed quoted at $1.32. Timothy is quoted at $2.50.

TOBACCO.—Export demand is fair and the home trade good with prices generally as last week.

VEGETABLES.—Exports of potatoes for week, 5,560 bbls. Potatoes are active but too abundant for dealers to mark up rates. In fact with choice rose selling at $1 50; other goods may be called weak.

Early rose, L. I. $1@1 50; N. J. $1@1 37; State $1.25@1.50; Peerless, $1@1.25; culls 50@60c. Sweet potatoes plenty and favor buyers. Del. River, $2.25@2.75; Va., $1.75@$2. Green Corn is of better quality and in good supply. Tomatoes show a large advance; the first crop nearly used up. Onions weaker. Green corn ₩ 100 50@75c.; tomatoes ₩ bush. 50@75c.; cucumbers pickles, per 1,000 $1@1 50; egg plant, per bbl., 50@75c.; string beans, per bag, 35@50c.; green peas $1.50@2; Lima beans, $1.50@2; flat do. 75c.@$1; turnips, 100 bunches, $2.50@3; Russia turnips ₩ bbl, 50@75c; beets, 100 bunches, $1.50@2; bullnose peppers, ₩ bag, 50@60c.; cabbage, ₩ 100 $5@7; red do., $6@8; squash, marrow, ₩ bbl. 50@75c.; onions, red, $2@2.25; carrots, ₩ 100 bunches, $1.50@2; okra, per 100, 15c.

WOOL.—The business has been slow again this week, and generally the position essentially unchanged,

LIVE STOCK MARKETS

NEW YORK, Saturday, Aug. 28, 1880.

BEEVES.—Receipts for the week 13,127 head; do. last week, 13,164 do. A good style of trade has attended the market all the week. Fine quality, however, has induced considerable trade. The pick of the market was held and shipped by exporters. Texas cattle quoted 6¾@6¾c., to dress 65 lbs.; Colorados, 7c.; poor to fair natives, 7@8¾c., to dress 55@56 lbs.; good to strictly choice, 9@10¾c., to dress 55@57 lbs. A good many small State bulls were in market, selling slowly at 1¾@2¾c., live weight. Nearly 1,000 head of cattle sold at the close at 10@10¼c.

COWS AND CALVES.—It is almost a chance trade for cows and no revival is expected until cooler months are here. The grade of supplies now offering are of low order, the range for recent sales being $25@45, with now and then an extra milker at $50@55.

SHEEP AND LAMBS.—Receipts for week, 35 634 head; do. last week 29,947 do. Heavy general supplies have made easy prices. Fair qualities sheep 3½@4¾c; good to prime 5@5¾c. poor to prime lambs 3¾@5¾c.; a few choice 5¾@6c.

SWINE.—Receipts for the week, 26,225 head; do last week, 19 027 do. Western hogs quoted steady at $5.25@5.50 ₩ 100 lbs; State hogs have sold after holding at $5.45 ₩ 100 lbs. Market slow for lots outside of packers' supplies. City dressed quoted 7@7¾c.

VEAL CALVES.—The demand has ruled fair with noted prices strong for prime milk fed; common grades in buyers' favor.

Live calves, N. J. and Bucks Co., choice, 6@6½c., State fair to choice, 5@6½c.; poor, 3½@4½c.; Mt. Holly, heavy to light 5@6½c., buttermilk, 2@2¾c.; grassers 1¾@2c.

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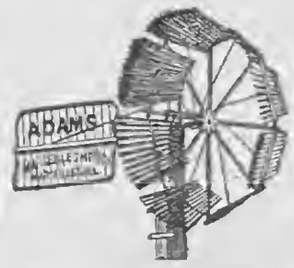

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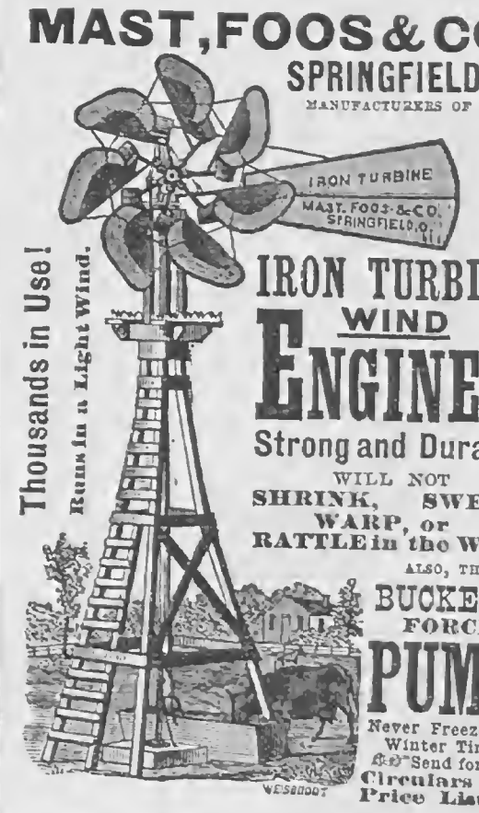

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Reading for the Young.

A DIALOGUE FOR SCHOOL BOYS.

TOMMY.

If things were fixed to suit me
I'll tell you what I'd wish:
That all the boys had naught to do
But only play and fish.

LOUIS.

Oh, that would be so jolly,
I'd go right to the creek;
I think I'd ride on horseback,
I like to go so quick.

GEORGE.

I'll help to form the party,
We'll find a nice large tree,
And in the shade we'll stay and fish
As happy as can be.

CHARLEY.

And I will join you, too, boys,
To catch the bass and pike;
For baiting hooks, and watching "bites"
Is just the fun I like.

WILLIE.

I mean to take along a book,
To read, not idly wait
For fish, to nibble at my hook
And carry off the bait.

JOHN.

Boys, I believe we'd like it best
To work, and then to fish.
To seek to spend our lives at play,
Is not the wisest wish.

—SOPHIA C. GARRETT.

THE DRAGON FLY.

Here, here I watch them come—
The wild bee with his drum;
The tilting dragon fly with azure wing
The painted moths; and lo!
With his sharp, wiry bow.
The elbowed grasshopper with sudden spring
Setting the thickets brown in wild commotion.

This much abused "bird" which sometimes flies in at the open windows and frightens the young folks, is not a dangerous fellow by any means. His great name "The Devil's Darning Needle" is the worst thing about him, for he won't hurt you. You may take him in your hands and examine him as closely as you please, but don't hurt him.

A writer in the Worcester Spy gives an interesting sketch of the Dragon Fly. One of the most beautiful and beneficial insects of the Summer season, and one whose services are least appreciated by the agriculturist, is the common dragon fly. There are many varieties, comprising an extensive and beautiful group of large-sized insects, rivaling our butterflies in gracefulness of form and brilliancy of coloring, while they excel them in rapidity of flight. Various popular names have been given them in different countries. The French call them 'Demoiselles,' the Germans 'Gauze Flies,' and 'Virgins of the Water,' while among the English they are known as 'Dragon Flies,' 'Horse Stingers,' and 'Devil's Darning Needles.' The first of the English names is very appropriate to the character of the fly, for among other insects, it fully earns its title of 'Dragon.' It is not a 'horse stinger,' however, can neither bite, sting nor poison, and as a 'devil's darning needle' does not sew up the mouths of those children who are given to romancing. They are perfectly harmless to man, and can be handled without danger.

The dragon fly belongs to the order "Neuroptera" and the family "Libellulidæ." They have six legs and four wings. In average specimens the body attains the length of an inch and a half or two inches. They are almost universally dressed in the gayest colors. The body is variously banded with rich shades of blue, green and yellow, and the wings give off the most beautiful iridescent and metallic reflections. The substance of the wings is a delicate network, covered by a thin, transparent membrane, combining great strength with lightness, which enables it to fly and dart upon its prey with the greatest rapidity. The long tail, or "needle," undoubtedly acts as a rudder to steady its flight. The large head is provided with two enormous compound eyes, composed of many thousand facets, and their great power of vision is still further increased by three simple eyes, or ocelli, on the upper portion of the head. The mouth is quite a formidable structure. The upper lip is broad and conceals powerful toothed mandibles, and there are other organs of the mouth armed with strong teeth, which enable it to rend and masticate its food.

The natural term of life of the dragon fly is about one year. Most of its existence is passed in the water in the condition of larva or pupa, and it inhabits the air only three or four weeks. In the water he appears like a large water bug or worm, with large eyes and six legs, and lives on the bottom of ponds, where he catches small fish or any similar thing for his food.

When about to complete its final transformation the pupa climbs up some suitable place near the water, attaches itself firmly to some object, and in a short time the skin opens along the back, and from the rent there soon appears the perfect dragon fly, which, after drying its moist wings, trusts its untried pinions with the fullest confidence to the new element, in which it lives but a few short summer days.

Tennyson beautifully describes these changes in the "Two Voices":

"To-day I saw the dragon fly
Come from the wells where he did lie.
An inner impulse rent the veil
Of his old husk; from head to tail
Came out clear plates of sapphire mail.
He dried his wings; like gauze they grew;
Through crofts and pastures wet with dew
A living flash of light he flew."

During its existence of three or four weeks above the water its whole life is a continued good to man. It hawks over pools and fields and through gardens, decimating swamps of mosquitoes, flies, gnats, and other baneful insects. Their rapid flight and enormous range of vision enable them to capture these insects with ease. They destroy multitudes of moths and millers whose larvæ are injurious to vegetation, while they do not injure any product of the agriculturist themselves. A few of them shut into a house would soon rid it of flies, bugs and mosquitoes. They are perfectly harmless, and can be handled with impunity, and are an interesting subject for study, as there still remains much to be learned of their natural history. The dragon fly is widely distributed over all parts of the globe, but few, however, exceed in size and beauty those of our own country.

LIONESS AND RATS.

An old lioness recently died at the Dublin Zoological gardens, and a correspondent in referring to the occurrence, says that the closing weeks of her useful life were marked by a touching incident worthy of being recorded. The large cats, or carnivores, when in health, have no objection to the presence of rats in their cages. On the contrary, they rather welcome them as a relief to the monotony of existence, which constitutes the chief trial of a wild animal in confinement. Thus, it is a common sight to see half a dozen rats gnawing the bones off which the lions have dined, while the satisfied carnivores look on contentedly, giving the poor rats an occasional look with their sleepy eyes. In illness the case is different, for the ungrateful rats begin to nibble the toes of the lord of the forest before his death, and add considerably to his discomfort. To save our lioness from this annoyance, we placed in her cage a fine little rat and tan-terrier, who was at first received with a surly growl, but when the first rat appeared, and the lioness saw the little terrier toss him in the air, catching him with professional skill across the loins with a snap as he came down, she began to understand what the terrier was for; she coaxed him to her side, folded her paw around him, and each night the terrier slept at the breast of the lioness, enfolded with her paws, and watching that his natural enemies did not disturb the natural rest of his mistress. The rats had a bad time during those six weeks.

A SCHOOL BOY'S VACATION.

A Cambridge boy, after a week's absence in the country, wrote to his mother: "I got here all right and I forgot to write before; it is a very nice place to have fun. A feller and I went out in a boat and the boat tipped over and a man got me out and I was so full of water I didn't know nothin' for a good long while. The other boy has got to be buried after they find him. His mother come from Chelsea and she cries all the time. A hoss kicked me over and I have got to have some money to pay a doctor for fixing my head. We are going to set an old barn on fire to-night and I should smile if we don't have bully fun. I lost my watch and am very sorry. I shall bring home some mud turkles and I shall bring home a tame woodchuck if I can get 'em in my trunk."

A LITTLE BOY'S COMPOSITION.

One day our dog Towser was a lyin' in the sun a trine to sleep, but the flies was that bad he couldn't cos he had to catch 'em, and bimeby a bee lit on his head and was workin' about like the dog was his'n. Towser he held his head still, and when the bee was close to his nose, Towser winked at me like he sed, you see what this buffer is doin'; he thinks I am a lily of the valley which isn't opened yet, but you just wait till I blossom, and he opened his mouth very slow so as not to friten the bee, and the bee went into Towser's mouth. Then Towser shet his eyes and his mouth too, and began to make a peaceful smile wen the bee stung him, and you never see a lily of the valley ack so in your life.

A FASTING CHICKEN.

Some one says that any chicken can do what Dr. Tanner did and to prove it tells the following story: An Albanian in Albany missed a fine young chicken from his poultry-yard a month ago, as his wife was having some refuse taken out of the yard, an old bucket, which had not been in use for some time, was overturned. Underneath the bucket was the young fowl. It had been caught in the trap, and been without food and water over twenty-four days. The chicken looked emaciated, and seemed depressed in spirits. Pulse normal, temperature normal, sphygmographic tracings weak and irregular, muscular pressure undetermined. The feathered faster was given feed in judicious quantities, and has already recovered its general sprightliness.

LETTERS FROM THE COUSINS.

Dear Uncle Mark:—I don't quite understand what your "Horticultural Club" is, and I wonder what all the "cousins" mean when they talk about seed. I am a little stranger you see, but I like to read the "letters from the cousins" and I think I would like to become a member and write too. I wonder if most of the other girls and boys do not live out among the green fields, where the birds sing and the dear little brooks bubble along over the pretty stones, and how clear and bright the pebbles do look when in the water, so much nicer than they do after they are dry. I suppose these country cousins have lots of interesting things which we in the city cannot have. I suppose they have a big shepherd dog, whose name is Prince, and a great maltese cat that they call Snip, and lots of funny ducks and chickens; that is what cousin Genie has out on the farm, but we don't have them in the city. I could tell you lots of stories of little children that live in cities and don't have such nice times. Don't have any papa and mamma and not even a nice tumbler of milk at bed time. I could tell you of long rides in the cars and how we went out to sea—a little way—and the hand-organ man that had the cute monkey dressed like a soldier, and if Uncle Mark will send me some seeds I will plant them in my "sky garden," and tell you all about them, and where the garden is. And the little, little beggar girl that slept in a box all one cold Winter night. Now I guess I will stop. I think I will wait and see if there is room for me. I am only ten years old, just ten yesterday, but I would like to tell you how mamma and I make plants grow. I think if your seeds do not come up that the soil or temperature was not right. Georgia G. Smith.

Dear Uncle Mark:—I guess you will think that we have forgotten to thank you for the seeds that you sent us, but we have not. We sowed the pinks and portulacas in a box. They are all in blossom now. The pinks are just splendid, 35 varieties; the most of them are double, but the portulacas are all single. The rest of the seed we did not sow. We have not many flowers this year. We have 11 geraniums. Our grape seeds are not up yet. Every seed of the melons came up and are very nice; we picked two yesterday, they were splendid. We have got a little baby sister and her name is Faith. She is just as cunning as she can be. She is two months old tomorrow; when may she join the club? Good-bye. Your affectionate nieces,

Bertha and Ettie Robbins.

Oswego Co., N. Y.

[We add the name of your little sister to the club. She is the youngest member. U. M.]

Dear Uncle Mark:—I take my pen to report what success Clara and I have with the seeds you so kindly sent us. Ma planted the phlox, and pinks, and okra seeds in the house in boxes, and we now have fourteen plants of phlox in blossom, and a nice bed of pinks all budded, and there is one in blossom, and I wish to know if they will remain out all Winter without harm. Our musk-melons grow nicely and now have quite large fruit on the vines, but I cannot tell how good they are for none have yet got ripe so that I could have a taste. We will try and do better with our beds next year, and hope we may have better luck so we can give a better report next Fall. We hope you will not forget us in your next seed distribution. Thankfully yours, H. & C. Jones.

Steuben Co., N. Y.

[These plants are hardy. They may, however, be covered with mulch at the beginning of cold weather. U. M.]

Dear Uncle Mark:—As I had nothing better to do, I thought I would write and tell you of my success with my seeds. I had very bad luck with them, I can assure you. Only the okra, mignonette, portulaca, pinks, phlox, and musk melons came up. Father sowed the oats, but they are only about a foot and a half high. He did not sow the peas, as they will not ripen here. I agree with Alma Allen in thinking that it would be nice for the cousins to correspond with each other. But I must close, or this will go into the waste-basket. Your niece, Fanny Horne.

Wolfe Island, Ontario.

Dear Uncle Mark:—I am a little girl eleven years old. I live in Dakota. My father takes the Rural, and I like it real well. I like to read the letters, and I want to join your society. I mean to have a garden next year, and will you please remember me when you send your seeds? I have never raised many flowers, but I am going to try next year. Hattie Stone.

Dakota.

Dear Uncle Mark:—My flowers have come up well and are growing nicely, and we like them very much. We have a great many flowers. The musk-melon vines have quite large melons on them. The pinks and portulacas and Sweet Mignonettes are nice. I have saved some seed from the portulaca. K. F. Dodge.

Lewis Co., N. Y.

Sabbath Reading.

THE UPWARD FLIGHT.

Are we almost there?
Have we scaled the hight!
Are those the home lights which gleam afar?
Have we bade farewell to the shadowy night,
And entered the realm of the morning star?

Faint to my ear comes the sound of earth,
Her wail of anguish and wild despair;
The hollow ring of her hollow mirth
Are lost in the depths of this upper air.

And now a breath, like the breath of morn,
A light, a radiance, spreads around,
And forms of that mystic radiance born,
Seem floating hither with glory crowned.

O angel! lend thy sheltering wing—
I see the portals of light unrolled.
With songs of welcome their arches ring—
The ransomed are safe in the heavenly fold.

Laura S. Hagner.

OUR SAVIOUR.

Throughout the Bible run two great lines of thought, the one leading up to the sufferings of Christ, the other to the glory that should follow. The one series speaks of a mysterious pain and anguish, beyond human thought to fathom; the other points to a glory of kingship, a jubilance of triumph also surpassing all that man has conceived. The two lines sometimes run parallel, sometimes cross each other, and in the prophecies of Isaiah both converge to a point. The "Man of sorrows and acquainted with grief," is yet "the King in his beauty." To that Divine poem of contradictions the first chapter of the Epistle to the Hebrews is the key, telling of one who, "when he had by himself purged our sins, sat down on the right hand of the Majesty on high," "whose throne is for ever and ever." The one great hope of existence is, that the Lord who died is Ruler and Worker. He in whom all things subsist is the centre of the Universe; his Cross is the explanation of all its secrets The ascension meant this; hence the importance attached to it in apostolic teaching, or rather to that glorification of the risen Christ of which it was the sign. The epistles to the Ephesians and the Colossians are one grand amplification of this theme.

Our Lord's appearances after the resurrection had assured the disciples of the reality of his glorified life. The intercourse was sufficient to bridge what would otherwise have been an impassable gulf between their remembrance of his earthly life and their thought of him at the Father's right hand. The cross, the grave, had but left upon him the marks of a love deeper than death. So the cloud which received him out of their sight did not hide him from their consciousness. Fain would they, as we, have looked behind that cloud, following the track of his glory, until the portals of heaven opened in answer to the triumphant cry, "Lift up your heads, O ye gates, and be ye lifted up, ye everlasting doors, and the King of Glory shall come in." But it is an angel's voice that recalls to earth, and in thought we gather rather with that little band who, in the upper chamber, continued with one accord in prayer and supplication, and there were endued with power from on high.

Pentecost is the true interpretation of the Saviour's ascension. The Spirit was now given, because Jesus was now glorified. Yet was it but an earnest of blessing—the feast of first-fruits; the feast of ingathering is yet to be. The ascension proclaimed, emphatically, every barrier between God and man is swept away, Freely can his life now be imparted. Even Calvary had the Lord endured, rather than that we should be cut off from that life. The Cross is the measure of his longing to bless. Through all, over all, that opposed would his love find its way to us. Yet we seek him doubtfully, yet we trust him tremblingly.

Why should we remain sorrowful, when we have but to ask and receive that our joy may be full? When he has cast down every obstacle, shall we erect others? It is possible that our unbelief may thwart the purposes of the love that even the cross could not baffle.

"He has received gifts for men," gifts without reserve. God never gives by halves. Is it a scanty, measured life that gladdens us in spring? Can we tread five steps on an April day without finding that we have not faculties sufficient to take in even the dimmed and narrowed glory that comes to us as we pass along the streets? Through some rift in the stony gloom we catch a ray of the beauty, a glimpse of the freshness, a breath of the fragrance, a note of the songs, and we feel as if even that were enough to last us for evermore. But more easily might we count the leaf-buds, or number the sunbeams, than measure the infinitude of gifts the ascended Saviour waits to pour out upon us.

Once more, Christ's ascension is not only *for* us; it is ours. We may know a present daily ascension with him, which is to us the pledge of love.

If life be a battle, how mad must he be who fails to arm himself for the contest! If life be a storm, how infatuated is he who sleeps while his bark is driven among unknown waters! If life be a pilgrimage, how unwise is he who strays from the right road, nor seeks to return till the twilight shadows gather around his pathway!

The characters of Christians differ. It is the peculiarity of the life of the Saviour to impart different gifts, and a different selection of gifts to different believers, so that while all have a family likeness to the Master, yet they are not "like to like," but "like in difference."—Rev. Charles Butcher, D. D.

There is no portion of our time that is our time, and the rest God's; there is no portion of money that is our money, and the rest God's money. It is all His; He made it all, gives it all, and He has simply trusted it to us for His service. A servant has two purses, the master's and his own; but we have only one.—Monod.

Where science speaks of improvement, Christianity speaks of renovation; where science speaks of development, Christianity speaks of sanctification; where science speaks of progress, Christianity speaks of perfection.—J. O. Thompson.

Earthly glory soon vanishes; earthly possessions pass away—a few years and all are gone. But the promises of God remain unto us until the end of all things; heaven rests on eternity. It may be ours if we seek it aright.

You may depend upon it that enthusiasm is a liberal education for a Christian; I mean nothing makes a man so quick-sighted and intelligent in the service of God as enthusiasm—Spurgeon.

Every year of our lives we grow more convinced that it is the wisest and best to fix our attention on the beautiful and the good, and dwell as little as possible on the evil and the false.

Do you believe in God? Dare you not trust yourself like a child to Him? What is your belief worth if it has not taught you that blessed central truth of all—that He is your Father?

God is immortal; goodness is immortal and therefore his servants shall not perish; they shall shine as stars forevor and ever.

He who is not affectionate to God's creatures and to his own children, God will not be affectionate to him.—Mohammed.

PERSONAL ITEMS.

Liszt says his pen is tired, and that he will compose no more.

It is said that it cost the New York Herald $1,600 to watch Tanner.

The Prince of Wales' life is insured for $200,000. His annual premium on this sum is $4,000.

The Earl of Eldon, grandson of the penurious Chancellor, has just built a church at a cost of $200,000.

"Adirondack" Murray has returned from Europe and is forming a company for the export of butter.

The New York Sun suggests that Mr. George W. Childs' new house at Bryn Mawr be named "Obituaria."

The Empress of Austria is a good fencer. She ought to go out West where there are lots of fencing to be done.

Cardinal Nina, the Papal Secretary of State, has had an attack of fever and probably will have to court repose and retirement for some time.

Notwithstanding his impoverished treasury the Sultan gave Lady Layard a diamond worth $35,000 on her departure from Constantinople.

General Grant told a Denver reporter the other day that he has not accepted the presidency of the mining company recently offered to him.

Prince Roland Bonaparte, who is now the poorest of his race, being, in fact, almost penniless, after he marries the young heiress of Monaco will become the richest Bonaparte of all.

While moving a log recently, Milo Parsons, of Northville, Conn., found himself suddenly covered from head to foot with hornets. Want of space forbids the publication of his remarks.

Lady Burdett-Coutts is described as being rather large and having white hair and a slightly florid complexion. It is confidently denied and stoutly affirmed that she is going to be married.

Joe Jefferson, the actor, who has been passing a part of his vacation in Burlington, Vt., has purchased a herd of twelve Short-horn cattle to improve the stock on his farm at New Iberia, La.

[Jackson, (Mich.) Daily Patriot]

We learn from Mess. Moore & Humphrey, that St. Jacobs Oil is regarded as the very best selling liniment ever sold, and is giving the highest satisfaction. It has affected many good cures.

Miscellaneous.

$25,000 Premiums.

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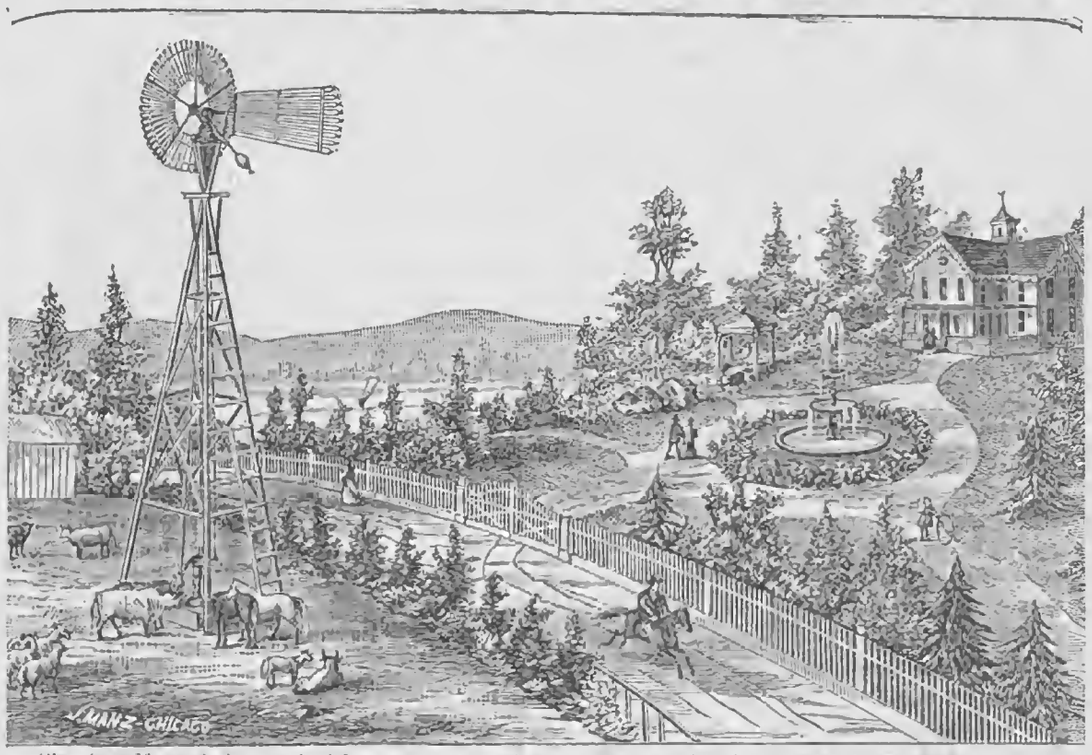

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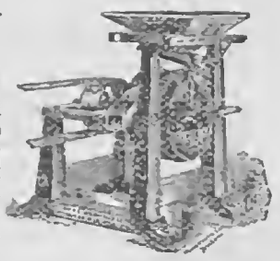

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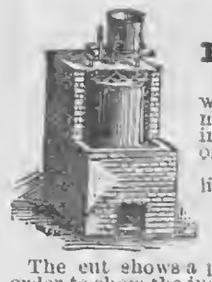

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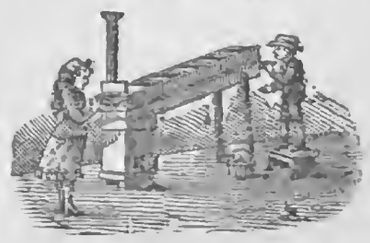

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IF you find it impossible to raise grass in your yard just lay it out in beds and plant garden seed. Grass will come up then.

THIS is the season of the year when the average tourist is reported as returning home "as brown as a berry." By the bye, what kind of a berry is it that's brown?

"Och, said a love sick Hibernian, what a recreation it is to be dying of love! It sets the heart aching so delicately there's no taking a wink of slape for the pleasure of the pain."

No woman, however nervous, has a right to wake up her husband from a sound sleep to tell him, on inquiring what's the matter, "Nothing, only I wanted to know if you were awake."

THE negro's definition of bigotry is as good and as inclusive as that of Webster's Dictionary. "A bigot!" said he, "why he is a man who knows too much for one and not quite enough for two."

"WILL you have some strawberries?" asked a lady of a guest. "Yes, madam; I eat strawberries with enthusiasm" "Do tell! We haven't anything but cream and sugar for them this evening."

A FASHION paper states that French heels are not worn as much as they were last season. The French are a peculiar people. But when it comes to cutting their heels off for fashion's sake, it's simply awful.

NOT long ago a new railway was opened in the Highlands. A Highlander named Donald heard of it, and bought a ticket for the first excursion. The train was about half the distance to the next station when a collision took place, and poor Donald was thrown unceremoniously into a park. After recovering his sense he made the best of his way home, when the neighbors asked him how he liked his drive. "Oh," replied Donald, "she liked it fine, but they had an awfu' quick way in puttin' me oot."

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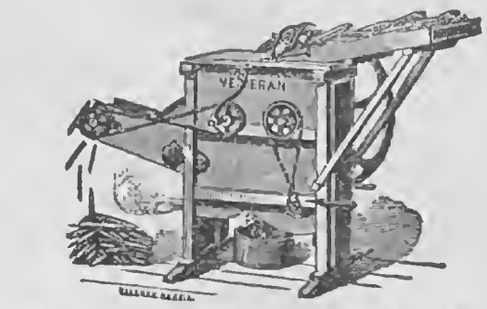

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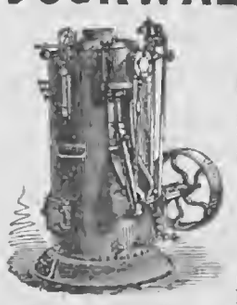

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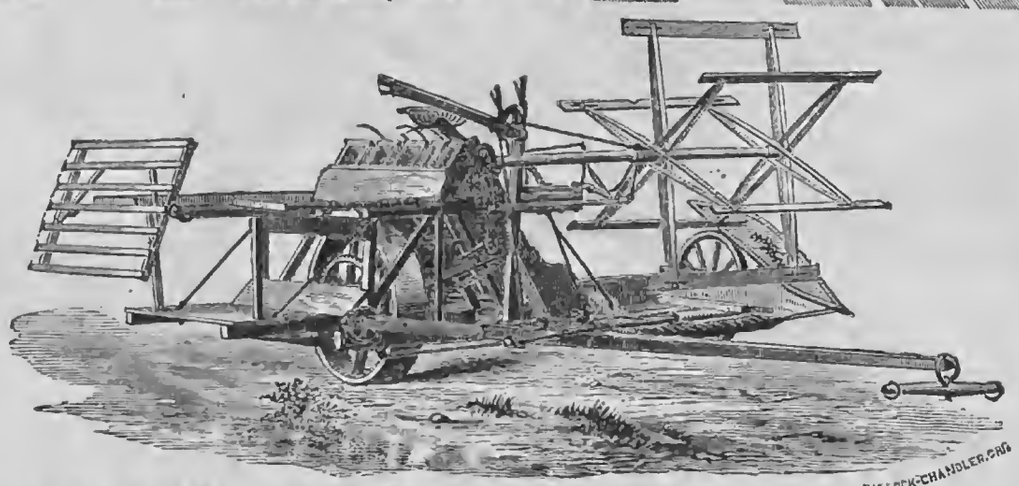

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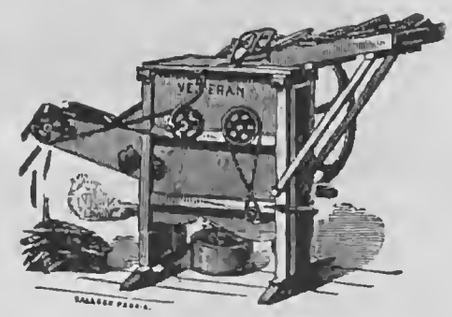

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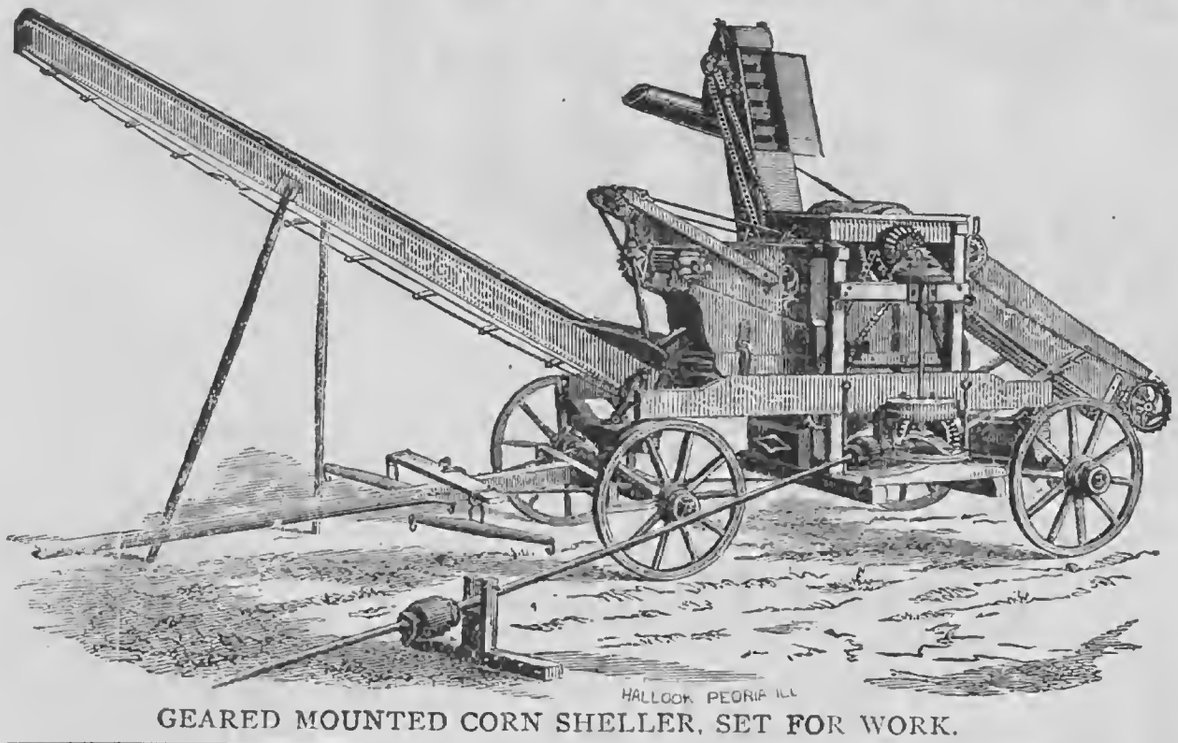

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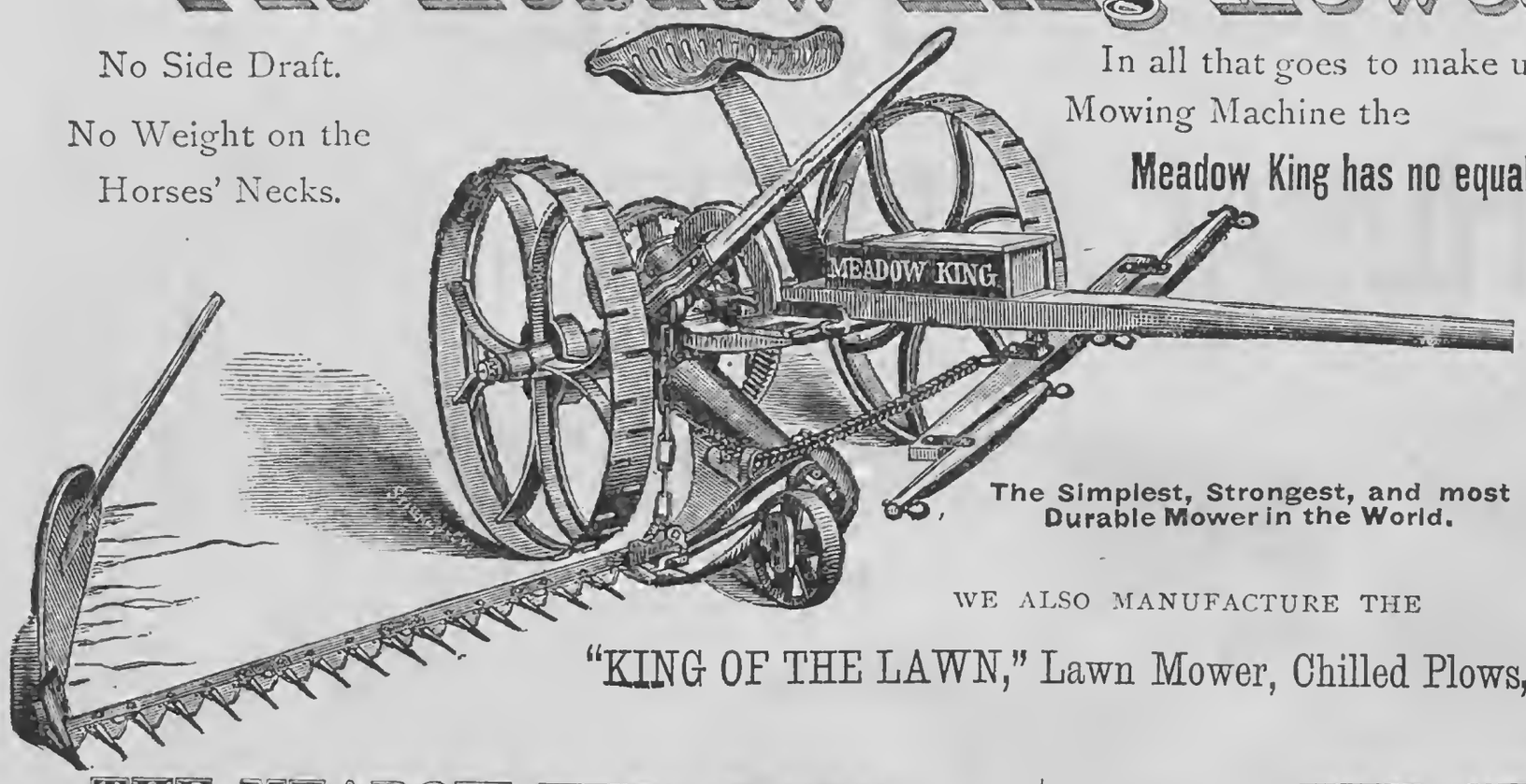

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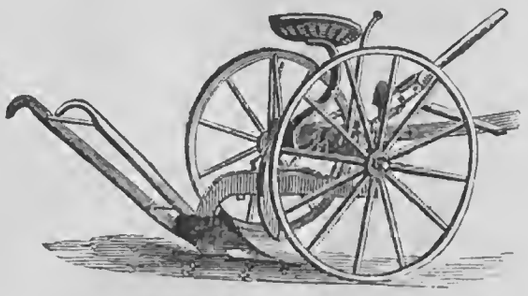

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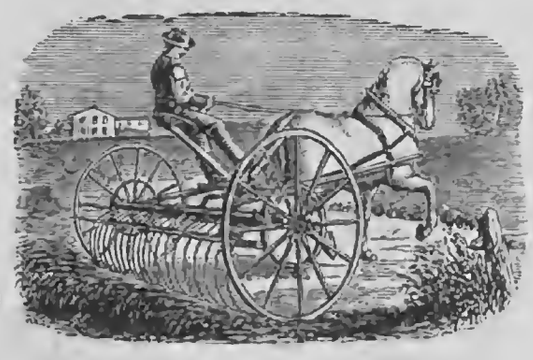

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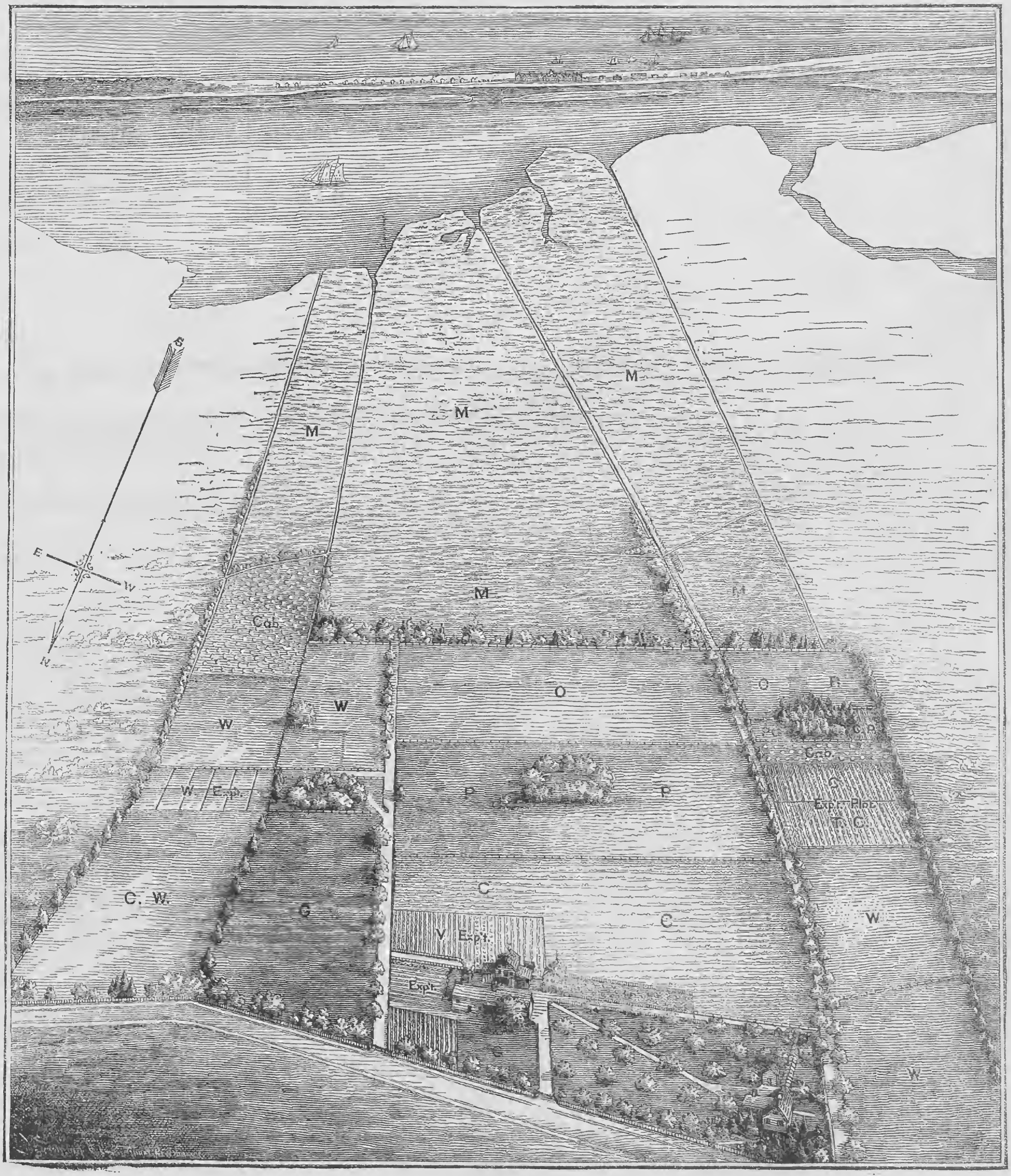

BIRD'S EYE VIEW OF THE EXPERIMENT FARM OF THE RURAL NEW-YORKER.—80 ACRES.

Farm Topics.

THE RURAL NEW-YORKER FARM.

PETER B. MEAD.

A VISIT to the RURAL NEW-YORKER Farm during mid-summer proved to be a source of much pleasure and profit, and impressed me strongly with its great value to the whole agricultural community. Inasmuch as this farm is devoted chiefly to the interests of the readers of the RURAL, I have thought that a brief allusion to what is being done there would interest them.

The farm, consisting of about 80 acres, is located at Rockaway, L. I., directly opposite the new mammoth hotel on Long Beach, as may be seen by the first-page sketch. The soil is a light, sandy loam, easy to work. The farm is divided by substantial fences into lots of convenient size, all of which open into lanes on either side, and these again connect with a road leading to the farm buildings, which are centrally and conveniently located. These buildings are roomy and substantial, and arranged with reference to economy in time and labor. A well-furnished work-shop prevents much idleness on rainy days, and saves many a step to the village.

I was not disappointed in seeing a great variety of farm implements. These are about as important factors in experimental farming as seeds or manures. Naturally, some of these had been tried, found wanting, and laid aside. A slight improvement in others would double their value.

The dwelling may be seen on the right hand of the picture. It is covered with a hospitable roof, and the spirit of content dwells within, with an added charm from the hostess, who seems to possess naturally the gift inherited by her little daughter, who entertained me in the most delightful manner, which the reader will the better understand when he is told that I am quite deaf. The house fronts on the public road, and is surrounded by evergreen and deciduous trees and flowering shrubs, with a few beds of flowers that give life and expression to the lawn. In the house plot are the principal fruits grown on the place, such as apples, pears, peaches, grapes, etc. all of which are here neglected as the Experimental Grounds for fruits are located 40 miles distant in New Jersey.

A few words next in explanation of the letters in the engraving. W. denotes the wheat lots; C. corn lots; P, pasture lots. In the middle of this lot is a circular cluster of large trees surrounding a pool of water, where the cattle find both shelter and drink. V. Exp't is a plot devoted to the trial of various kinds of vegetables, especially new kinds as they appear. W. Exp't is a plot where experiments in wheat were made. P. O., on the right, is the experimental lot for potatoes, adjoining which is the oat lot where an immense yield of Mold's Ennobled oats is in shock. South of the potato lot are eleven kinds of cow-peas under trial, as well as many varieties of sorghum, beans, melons, etc. Expt. on the left of the farm buildings is a lot for various experimental purposes, such as growing corn and sorghum for soiling, etc. Finally, the M's may mean either meadows or mosquitoes, or both, and there seemed to be quite as much of one as the other, if not more How they did bite! and yet the Editor who accompanied me bore their attacks with the meekness of a lamb. There is nothing like getting used to a thing. As a pleasant offset to the mosquitoes, a portion of the meadows was gay with wild flowers, conspicuous among which were great masses of Lilium superbum, grandly colored.

One of the most prominent features of the farm is the testing of wheat, of which a great many kinds are grown, and in which important improvements have been made. For example, from shriveled grains of Spring Defiance, sown two successive seasons in the Fall, we have the Rural New-Yorker Winter Defiance, the largest heads of which I found to measure seven inches and a quarter in length, the average being five inches and a half. Results almost as remarkable have been produced with other kinds. Experiments in wheat growing include not only the comparison of kinds and their improvement, but the comparative value of manures, drilling and sowing broadcast, and, in short, everything that is necessary to be known to form an intelligent opinion of the value of kinds, manures and culture. The value of these experiments to the wheat grower is very great indeed.

Another important feature is the testing of varieties of corn; and it is well that so much space, time, and labor should be given to the staple products of the farm. The growing crop of corn at the RURAL FARM is something remarkable. I have been on many committees to examine corn in the field, and have grown some pretty good crops myself, but I have never seen anything to equal the crop of Blount's Prolific at the RURAL FARM; and this, too, after an almost unprecedented drought. It was sown in drills, and the stalks are about fifteen inches apart. I was much pleased to see that flat culture has been adopted here. It helps wonderfully to carry a crop through a severe drought. The field was as flat as the top of a table, every stalk erect and no weeds to be seen. I found some of the stalks to be already eleven feet high, with a still further growth to be made. Many of the stalks had from seven to nine ears, and very few less than four. Where some of the stalks have tillered, I think that fifteen and more ears will be got from a single grain of corn. The reader who has time can calculate how many-fold the yield will be. A good deal of enthusiasm would have been quite pardonable in that field of corn, and it has been rather difficult for me to write soberly about it.

Much attention is also given to potatoes, more than sixty kinds being on trial, many of them not having yet been offered for sale. There are several varieties of sweet potatoes under trial. Sorghum has also received much attention. From a single seed from a variety named Rural Branching Sorghum I counted eighteen stalks.

There are other plots set apart for experiments with millets, roots, cabbage, pumpkins, melons, beans, and other things important to the farmer and the gardener, and to which I can only make this brief allusion. A careful record is kept of each crop and experiment, and the results, I presume, will be laid before the reader in due time.

An effort is now being made to establish an "Experimental Station" for the State of New York. Here at the RURAL FARM we have one already established by private enterprise, which is a model of its kind, and might be appropriately recognized by the State as a substation, though I imagine that the Editor will prefer to go on unhampered in his own way. The testing of the chief farm crops of the country, the comparative value of manures and artificial fertilizers, the trial of improved and labor-saving farm implements, the importance of thorough and clean culture, the rotation of crops, and other matters pertaining to successful and profitable farming, all receive that thoughtful care which is necessary to obtain reliable and useful results. All this, be it remembered, is done for the benefit of the readers of the RURAL NEW-YORKER, though its benefits are by no means confined to them. Its influence may already be seen in the neighboring farms, and will in time become widely extended. In view of what is being done here, I cannot help wishing that both the FARM and the RURAL may receive the continued appreciation and support they so well deserve from all engaged in rural pursuits.

Explanation of the Engraving of the Rural's Farm.

W. W. W.—Wheats. C. W.—Clawson Wheat. G.—Grass. V. Exp't.—Vegetable Experiments. Exp't.—Rural Branching Sorghum and other fodder plants. W. Exp't.—Plots of different kinds of wheat treated variously. Cab.—Centennial Yellow Flint Corn. M. M. M.—Salt Meadows. O.—Mold's Ennobled Oats. C. C.—Chester Co. Mammoth Corn. R.—Rye. P. O.—Potatoes, 70 different varieties. C. P.—Cow-peas, 11 different varieties. C. Exp't. Plot T. C.—Blount's Corn. Corn experiments in general. Sweet Potatoes, Cabbages, Fodder Plants, Melons, Cuzco Corn, Tomatoes, New Plants under test. P. P.—Pasture.

AMERICAN AGRICULTURE.

EX GOV. ROB'T. W. FURNAS OF NEBRASKA.

PROFESSOR Johnson, in one of his admirable lectures on the application of chemistry and geology to agriculture, speaking of the importance of agriculture, in substance says: "On it a thousand million of people are dependent for their very sustenance; in its prosecution nine-tenths of the fixed capital of all civilized nations is embarked; on it two hundred millions expend their daily toil." To which add another agricultural axiom, that: "the grand aim of the tiller of the soil should be, to obtain the largest possible yield, with the least possible expenditure of human toil." These enunciations comprehended, we have proper conceptions of the importance of agriculture to the whole world, as well as of the importance of the employment of skilled, scientific labor, manipulation and management. A prevalent idea has been—and is yet, to some extent—that the individual possessed of sufficient physical, or animal force and power to plow and hoe, can make a good farmer. The horse and ox, however, are more abundantly endowed with these qualifications naturally, than man; yet are mere machines and worthless in reality, without the brain guidance of the more intelligent beings.

I am of those who maintain that more men reach a medium of this world's goods, comforts and enjoyments on the farm, under even existing adverse circumstances and surroundings, than in any other occupation. There is, nevertheless, a lack of corresponding remuneration, accumulation, and consequent enlightenment, as compared with other vocations, for which there is cause. So long as the patrons and matrons of husbandry insist on giving their brightest sons to the professions, and the dullest to agriculture, just so long will there be "shortage" in the respects named. The less informed will continue the prey of the better informed.

Farmers complain that they are not proportionately and justly represented in the law-making departments of government machinery. True: and simply because of their deficiency in the requisite qualification, growing largely out of the policy of assigning the boys of lower mental caliber to agricultural pursuits. The remedy for this lies to some extent in education, by which labor will be honored, and in the adornment of farms and farm houses, by which they will be rendered more attractive and desirable.

There is not, however, so much real cause for complaint now as in times gone by. To-day American agriculture stands higher than ever before; our products are in greater demand; more of our bread and meat, the great standard life foods, go to feed the Old World. Our surplus increases. The balance of trade is in our favor; our precious metal products have been, and are still, greatly on the increase. In the shape of purchasing medium, or power, for years past, until recently, they have gone abroad; now, with an advancement in agriculture and consequent increased surplus, they come home, and to stay. General prosperity reigns supreme. Surely the outlook for American farmers is bright.

WHAT AGRICULTURE HAS DONE AND WHAT IMPROVED AGRICULTURE MAY DO.

B. F. JOHNSON.

DULY sensible that a prosperous agriculture and abounding crops had been mainly instrumental in making specie resumption possible, in 1879 one of the leading New York city dailies made the naive confession, in summing up the surprising results of the year, that for the first time in the history of the country had just and proper credit been given to the farmer for his part of the work of the sustentation of the public credit," and for the first time had the acknowledgment been made that the rehabilitation of the country was largely due to a prosperous agriculture. So much having been already confessed to have been done in the past, we may look forward to the future and prefigure its possibilities in the agricultural line.

In the first place, it is pretty evident the keenest and sharpest among business, if not among thinking men, are being drawn to the vast importance of the subject of agricultural progress and development, and that the profoundest intellects of our time are about to take that interest in the great calling which distinguished the earlier and later fathers of the Republic—Washington and Jefferson and their contemporaries; Clay, Webster and Cass and theirs. And it is a curious and an interesting fact that those among men remarkable for their intellectual ability and profound insight and to whom the world gives the highest positions, have been not only the firm friends but the enthusiastic supporters of agriculture, and have given the best efforts of their minds in that direction. Such and so minded was Julius Cæsar, of antiquity; such, Bacon of the later Middle Ages, and such the first Napoleon and Webster of our own time. If we do not care to name those among the living who are truly great and who show that greatness by their devotion to agricultural progress, it is because few men are great in the estimation of their contemporaries—time only affording that perspective by which we are able to make our just and accurate judgment of men.

But if the best interests and professional intellects are giving their attention to the importance of agricultural progress, the scientists, in the second place, are no less active and devoted, and from present appearances we seem to be likely to have reproduced here the scientific experiments in the same or a similar line which abroad have done so much to relieve farmers of the thousand and one uncertainties which surround the calling and degrade the profession of farming. To be sure, the agricultural colleges have mostly failed in their missions, but this is because they fell (for the want of abler and better) into the hands of pedagogues who are the hereditary enemies of agriculture and have been so since Aristotle, the first great pedagogue, declared his scorn of all labor, and Seneca, the great teacher of morals, repeated and emphasized that scorn. The creation of a few such experimental stations as that of Connecticut and the success of the New York scheme will soon bring the agricultural colleges to the sense of their obligations to the public; but better than that, they will provide competent professors and teachers, of whom there has been a nearly sufficient lack to account for the failures of the agricultural schools.

But in the third place, no small part of the industrial capital of the country, reinforced and assisted by its mechanical and inventive genius, is at present engaged in perfecting and inventing agricultural implements and machinery of which the riding plow, the self-binder, the disk and screw harrows are the latest results, to be followed by the corn husker, cotton picker, and many no less important inventions, which, added to the progress already made, will advance practical agriculture abreast with the improved manufacturing industries and the higher arts.

Already has agriculture made the resumption of specie payments possible; already has it brought the United States up to the first rank among nations; and having achieved these distinctions in the past, it is sooner or later likely to become as fashionable as it has always been an honorable profession. Should such a change take place, the rush of young men to the cities would be in a measure prevented, the professions would soon be less crowded, the number of the predaceous classes would be lessened, our morals would be improved, our politics purified, and instead of political swindlers and one-horse lawyers, the Government of the country would be in the hands of its thinkers and workers, the farmers, mechanics and business men of the country.

Champaign Co., Ill.

Dairy Husbandry.

FLAVORING MILK.

PROFESSOR E. W. STEWART.

A FEW years ago dairymen thought their business limited to a very narrow belt, diversified by hill and valley, where only the finest grasses flourished in perfection, and the water ran in clear streams or bubbled from pure springs; that nature had forbidden to the broad, level, stretching prairies of the West the production of the finest butter and cheese.

But this vision of exclusive privilege soon passed away under skillful management, and excellent butter is now produced from the Atlantic to the Pacific. It was soon found that skill, and not a "dairy belt," must determine the quality of the product. Milk is extremely sensitive to the flavors of foods, but so, likewise, is the flesh of cattle fed for beef. Where beef of the best quality is produced, there skill is equal to the production of the finest butter.

The study of foods and their peculiar flavors is certainly important to the dairyman. This study would show him that he may easily control the flavor of the milk he produces through the foods he furnishes to his cows. It is true that different cows give milk of slightly different flavors from the same food, because one cow selects or appropriates more of certain qualities than another, but these individual differences do not materially change the quality of the butter product.

A distinguished French agriculturist, M. Monclar, has lately proposed to give any desired flavor to the flesh of cattle, sheep, pigs and poultry, by different combinations of food. He mentions hares killed in a wormwood field, larks shot after eating cabbage, and eggs laid by hens that had eaten of diseased silkworms, as having a nauseating flavor; while ducks fed upon sprigs of juniper had a delicious flavor. He fed rabbits with the waste of aniseed mixed with barley and bran, and others with food flavored with the essence of thyme. In both of these cases he found a distinct and agreeable change in the flavor; and he comes to the conclusion, from various experiments, that cattle and other animals may be given such flavors of flesh as the skillful feeder may desire. This may be pushing the point to an extreme, but all dairymen are familiar with the fact that milk takes readily a flavor from turnips, leeks, onions, cabbage, etc. These flavors are more marked and distinct than those of common foods, but every food gives its own peculiar flavor. It has been found that so good a food as red clover, when fed alone, gives milk an inferior flavor to that given by white clover, and especially by a mixture of grasses. As each food has its own peculiar flavor, it is evident that a large variety of grasses in a pasture will give a milk of a higher flavor than one seeded with only two, say clover and Timothy, as is most frequently the case. The aromatic herbs among the grasses cropped by the Swiss cows upon the mountains produce a highly flavored milk greatly relished by travelers.

These instances conclusively prove that the flavor of milk may be under the control of the dairyman, for he may select his own flavoring foods. If he is about to lay down pastures, he may not only increase the production of food upon a given area, but greatly improve the flavor of his milk by seeding with a variety of grasses, and selecting some especially for flavor. Yet some of the best foods for milk

are also equally good for flavor. Alsike clover (Trifolium hybridum) produces a large yield of food and gives a fine flavor to the milk.

Mr. Chamberlain, of Maine, whose experience with this clover has been of many years' duration, says it bears cropping by cattle well, proving its adaptability to pasturage. He also pronounces it the best honey plant known. This would prove its quality for flavor in milk, as the best honey plants are found to give an agreeable flavor to milk—white clover standing very high both for the production of honey and milk. These two clovers are so important in a perfect dairy pasture that they should not be omitted where the soil is suitable.

A flavoring plant not much grown in this country, but well worthy of trial upon light soils, is the melilot—the yellow (Melilotus officinalis) and white (Melilotus alba), the former sometimes called French Clover, and the latter Sweet Clover. The stems have very numerous branches, and, when thrifty, grow from two to four feet high. It is woody when it reaches the blossom, and should, therefore, be cut before blossoming. It becomes very fragrant in drying. A species of this plant is used in Switzerland to give the peculiar flavor of Schabzieger cheese (called here Sapsago cheese). When quite young, cattle are fond of a small portion of it mixed with other grasses. It might easily be dried and a small proportion mixed with other fodders in winter to give flavor. Its nutritive value is nearly the same as that of red clover.

Sweet-scented Vernal Grass is valuable as a flavoring plant, although not well relished as a single food. There is not space to mention many of the highly flavored plants, but dairymen will have no practical difficulty in finding plenty of them to give an agreeable flavor to milk when they shall make an effort.

In winter feeding, the dairyman is often obliged to feed some straw, cured corn fodder and the like, which are quite negative as regards flavor. These foods must, of course, be fed with some kind of grain, bran, or some other concentrated food if milk is to be produced profitably, and with this grain food may be mingled some flavoring materials, such as Fenugreek seed, which is used in the composition of condimental cattle foods. Fenugreek means Greek hay, and was used by the Greeks as fodder. There is probably no difficulty in raising this plant in this country. Aniseed, carroway-seed, coriander seed, ginger, tumeric-root, are all used for flavoring such condimental foods and condition powders, sold usually at six prices to those who do not examine foods for themselves. A small amount of these flavoring materials mixed with corn meal or wheat middlings, may be kept on hand to be mixed in small quantities with other grain food as used. We pay a good deal of attention to flavors in the preparation of human food, and it would undoubtedly pay us well to give more attention to flavoring the foods for the production of milk.

SMALL CHEESES FOR HOME USE.

THERE is no necessity to say anything in favor of small cheeses for domestic use. The housewife "who looketh well to the ways of her household" will at once appreciate the value of a choice and uncommon—"'tis true, 'tis pity, and pity 'tis 'tis true," that it should be an uncommon—manner of using a few quarts of milk to advantage. The difficulty lies in not knowing how to work the milk up into toothsome cheeses which may be eaten fresh at any meal, or even "between times," when one "pieces out" the cravings of a vigorous farm appetite. To make a short story of the *modus operandi* let us begin with

THE RENNET.

This is made of the empty stomach of a sucking calf, salted and dried upon a bent twig in any airy place (Fig. 283). The rennet is at its

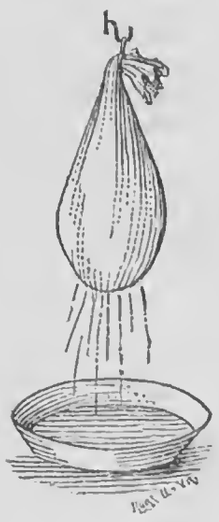

FIG. 284.

FIG. 283

best when 18 months old. A stock of these should be kept in every farm-house; or, the stomach, fresh or dry, may be put into a quart of salt water and left for three weeks, when the liquid is ready for use. Of this liquid rennet one tablespoonful is enough for 40 quarts of milk, and one teaspoonful for 12 or 13 quarts. Too much rennet will make the curd hard; and as this kind of cheese should be soft, rennet should be used sparingly. About four quarts of milk will make a pound of cheese.

THE CHEESES

should be used fresh and before it has cooled. If it has cooled it should be warmed up to 90 degrees. The curd of 12 or 15 quarts may be made in a large tin pan. The rennet is stirred in the milk and the milk is left in a warm place for an hour when the curd is set. A convenient method of setting the curd is to lay a square of fine muslin in the pan, securing the ends on the edge and pouring the milk into the muslin; when the curd is set, the corners and edges of this are drawn together and tied and the whole lifted out and hung up to drain. (Fig. 284.) As soon as the whey is drained off the curd is put into

THE MOLDS.

These are made of thin veneers of some sweet wood, as maple or beech, or of tin. They may be round, of any shape to suit the taste, and without bottom or top, about three inches by two and one and one-half deep, or larger if desired. Mats made of clean rye or wheat

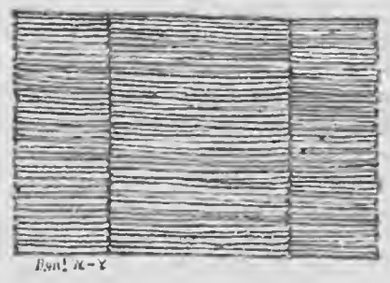

FIG. 285.

straw sewn together (Fig. 285) are used to rest the molds upon while the cheese is making, and the mats are placed upon a towel which absorbs the moisture. The molds and their contents are turned daily for three days, and, if desired, are sprinkled with salt at each turning.

THE MILK

are ready for eating fresh in three days; or, they may be taken to an airy dairy house or cellar and kept for curing for six weeks or two months, being turned every day and laid upon a layer of sweet straw upon a lattice shelf (Fig. 286). The curing process may be so man-

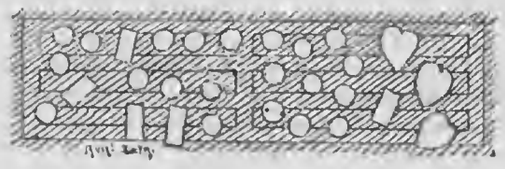

FIG. 286.

aged as to give a great variety of flavors to the cheese. If mold gathers upon them it is scraped off occasionally. Clothes dipped in vinegar may be wrapped around the cheeses, or these may be covered with pulverized sweet herbs. Much ingenuity may be exercised in this way to vary the character of the cheese, and doubtless in time some discoveries may be made through which one may hit upon a desirable market product that will furnish a profitable industry for the family. This is an undeveloped possibility with us. In other countries millions of cheeses of this kind, but in great variety, are made and sold yearly and some persons have made in past years a wide reputation which has descended with its comfortable profits to their children. This is an uncultivated field the culture of which is open to farmers' wives and daughters of enterprising mind.

CREAM CHEESE.

A delicious morsel for tea or dessert is a fresh cream cheese. This is made of the thick cream which rises on shallow pans, and which can be taken off almost in a solid piece. No rennet is used. This thick cream is either put at once into the molds lined with fine muslin, or is hung up to drain as with the curd previously described, for 24 hours. It then becomes semi-solid and is put into the molds and covered with a follower which is pressed down by a light weight for two or three days, when it should be eaten at once. Either no salt is added, or the cheese is lightly sprinkled once a day when it is turned by reversing the mold. This cheese may be eaten with bread, biscuits, crackers, or as an adjunct to apple pie or fruit. Cheese and apple pie go very well together, and "pippins and cheese" was a standard dessert dish in the time of Shakspeare, in whose works it is referred to. The cheese of those days, however, was a genuine delicacy and had not suffered the disgrace of the evil communications and corruptions of oleomargarine. But at least home-made cheese may be free from guile and be eaten without fear or reproach. It is much to be desired that farmers should make more use of their many opportunities for increasing the comfort and well-being of their households, both by raising for domestic use a wider range of products, especially in the garden, and by utilizing for the same purpose more of the commodities now raised by them chiefly for market.

Horticultural.

IMPROVED ASPARAGUS CULTURE.

WILLIAM ROBINSON,
EDITOR AND FOUNDER OF THE LONDON GARDEN.

THANKS for your letter. As to the Asparagus regarding which you have kindly written to ask my opinion there is little to be said but a good deal to be done.

In this country we have always gone on the wrong principle, as regards planting asparagus—putting 10, frequently more, plants on the space of ground that should be occupied by one, and compensating for this folly by putting as much manure as can possibly be spared under the plant. To such an absurd extent was this carried on that it was not an uncommon thing in large places to place from three to six feet of thoroughly manured soil under the beds; the result was that it was the rarest thing in the world to see a good dish of asparagus, even in the best places. Another consequence of the system was it was so costly that it could only be carried out on a very small scale, and thus in the majority of gardens with us, not one-quarter the area is occupied with asparagus which the importance of that vegetable calls for.

The question of kind is altogether of less consequence than the question of culture, which, however, is simple enough. Here we have only one kind, the common kind—and pretend to have no more. At Argenteuil they claim to have three distinct kinds, the early and the late, and also an intermediate kind. The Dutch also have their sort which, certainly, as they grow it, is most excellent, judging from samples I have this year had sent me by Messrs Van Eeden of Haarlem.

As yet, no experiments of the slightest importance have been carried out in this country to determine the differences, if there be much or any, between the various kinds, both French and American. Such a trial would not be difficult, and it is my intention to make it, when I can do it under favorable conditions. Far before the question of kinds, however, is for us that of the proper supply of our tables and markets with good asparagus. Every year larger supplies are coming from France, and there was scarcely a day this year when, for one bundle of English asparagus to be found in Covent Garden, one could not find there 400 of French growth!

In France the culture is spreading very rapidly from the old center, Argenteuil. Large supplies now come to us from Dijon, and places much further south, and also from Versailles. Earlier, a good deal comes, some from Spain. You can imagine how well it "eats" after traveling that enormous distance. No doubt we are a little "later" than the north of France, but I am not speaking of early supplies so much as of those that come in at about the same time as our own.

English asparagus, when well grown, is cultivated on such a costly system, and also on such dear land that a much higher price is asked for it than for the French. The supplies in private gardens are so wretchedly grown generally that they are no aid at all to the market supply, and when any does chance to come it is used as "sprue" in soup-making. The old idea of sticking the plants close together in beds is so firmly rooted that it will be difficult to get it out of the public mind. Only last week I saw in a calendar of operations written by a practical gardener, instructions that the plants should be put a foot apart in the line! However, I have no doubt by continually agitating the question we shall get the right way carried out some day, and then, when people see a few good plantations made after the rational manner, they will all follow suit.

The plan which I seek to make known everywhere is that of planting well chosen yearling roots at a distance of about three and a half feet each way, and when the soil is of fairly good character, such as most of our garden land is, not making any special preparation at all in planting, but simply opening a shallow trench (eight inches deep) and putting the plants on tiny mounds at the bottom of it. The distance seems wasteful to our growers but it is really not so, because a light crop can be taken off between the lines, until the roots and stools fill the ground. Any necessary manure may be given when the plants get strong and begin to need it.

Next year begins a series of competition for prizes which I offered for the encouragement of this simple mode of planting in the hope that our own people may some day supply our own tables and markets. These prizes will be given for a number of years, and each year be held in a different center, so that attention may be called as much as possible to the right mode of culture and to its results. In these enterprising days I shall expect to see some American asparagus sent to our markets. So far as I can judge by preserved specimens, you have a good idea of growing it in your market gardens. If some specimens could be sent over to one of our exhibitions, it would be very interesting. You, I believe, cultivate it with the plow. We have not come to that yet, though the demand in our markets should encourage asparagus culture on a large scale. About Paris in certain districts they begin to grow it in that way, but not at Argenteuil, the old home of asparagus culture, and where all the finest specimens are yet grown. It must not be supposed from the preceding statements that the culture in our gardens is equally singular in other respects. Asparagus is the only vegetable that is absurdly and systematically maltreated with us, and this results from the perpetuation of the wrong system in books for many generations past.

INFLUENCE OF THE STOCK ON THE GRAFT.

PROFESSOR THOMAS MEEHAN.

I OFTEN see in the RURAL items that interest me very much. Its pages have had much to say lately of the influence of the stock on the graft, and apple roots in the nursery rows are referred to. It is true each variety—or at least many varieties of apples have different looking roots, according to the variety grafted on the stock. But I have never been able to see that this bore on the question of change of character in fruit by grafting, which is the great point involved in this controversy. The form and character of all roots are more or less influenced by the amount of food they receive, and the food of plants in a great measure depends on the foliage. A tree with a given amount of foliage and, say, a hundred square feet of leaves, will have different roots from one with the same amount of roots and two hundred square feet of foliage. A variety of apple, therefore, with limited leaf surface will turn out in the nursery rows different looking roots from varieties which have different conditions. In other words, the difference is the result of nutritive advantages, and not of any constitutional changes as we understand by hybridization through grafting. There is evidence, I think, which sustains the view that graft hybrids do occur in nature, but I do not think the varying roots in nursery rows is one of these evidences.

I am glad to know that the RURAL NEW-YORKER is prospering. It deserves success.

RURALISMS.

THIS being the season of fairs and horticultural exhibitions, I wish to say a few words about some bad practices that obtain at many of them. The hall or tent is supposed to be cleared for the judges, but you seldom see anything of the kind. It is too often the case that some of the competitors hang around the judges, listening to the discussions, and even volunteering advice when their own articles are reached. This is all wrong and should disqualify any one guilty of the practice. I have been annoyed almost beyond endurance in this way. Modesty would suggest that competitors should at least retire to some remote part of the hall when it is not convenient to go out of it altogether. No wrong may be meant, but it looks bad, and is annoying to the judges.

I HAVE a word, too, for the managers of fairs and exhibitions. There is always a rule in the premium list that exhibitors must have their articles on the table by a certain hour ready for the judges. The judges are requested to meet at that hour, and often come fifty or a hundred miles, taking an early start to be on time. Do they find the exhibits ready for inspection? Not very often. On the contrary, they are frequently kept waiting three and four hours, and must then peform their duties in a hurried, imperfect, and very unsatisfactory manner—unsatisfactory, sometimes, to all concerned. This should not be so, and would not be so if the officers and committees performed their duties in any thing like a faithful manner. But what can be expected when most of the officers shirk their duties, and leave all the labor and burden of the day to one or two alone, with some volunteer help at last from a few who compassionate their worn and wearied looks? Unless the rules are strictly enforced, exhibitors will come at last to understand that they can enter almost when they please, no matter at what inconvenience to others; and unless officers and committees perform their duties, nothing will be arranged in time, no matter how promptly sent in. This condition of things is much too common and calls for reform.

MY Japan lilies (*Lilium speciosum*) are now in the hight of their bloom, and they are very beautiful. These are the lilies for the masses, being hardy, easy to grow, profuse in bloom, and presenting a charming variety of color. It is commonly recommended to lift the bulbs and divide them about every three years. This I consider a mistake, at least for the amateur. Plant them about four inches deep in well prepared ground, give them plenty of room to in-

crease, and let them alone as long as they continue to do well. They are grand when in masses.

THE hyacinth is perhaps the most popular of winter-blooming bulbs and deserves all that is said of it. I cannot, in this column, go into the details of description and culture, but I am moved to present a list of hyacinths for amateurs who grow bulbs in rooms in the winter. I have tried, in both rooms and greenhouse, nearly everything that has appeared in the catalogues during the last thirty years, and this is the result for room culture. The varieties are almost numberless, but some do much better in rooms than others. The list could be increased in number, but with little or no gain to the growers. For the greenhouse, I should modify the list and increase the number to select from. Shades of blue: L'Amie du Cœur, Orondatus, Baron Tuyll, Porcelain Scepter, Envoyé, Blocksbergen, Prince von Saxe Weimar, Charles Dickens, King of the Netherlands. Shades of red: Bouquet Tendre, Dibbitz Sabalskonski (what a pity that such a beautiful flower should have such a horrid name!), Lord Wellington, Madame Zoutman, Grootvorst, Acteur. White and rosy white: Grand Vainqueur, Miss Kitty, Grandeur à Merville, Triumph Blandini. Yellow: Heroine (single), King of Holland, Rhinoceros, La Pluie d'Or.

There is a little bulb that has given me so much pleasure for three or four years past, both indoors and out, that I must bring it to the notice of the readers of the RURAL. I mean Tritelcia uniflora. It is an alliaceous plant It seems to be very little known, and the bulb catalogue of the Messrs. Thorburn & Co. is the only one in which I have seen it. It is very likely, however, to be in that of the Messrs. Woolson. The flower is star-shaped, nearly an inch in diameter, white, with a grayish-blue stripe in each petal, and is pleasantly fragrant, though the foliage is not. Though only one flower appears at the same time from a stem, there is a long succession of flowers. The plant itself is pretty, the long, narrow leaves being gracefully curved. It is one of the best bulbs for room culture I have ever grown, and forces well in the greenhouse. The more one sees of it the better he likes it. There should be not less than half a dozen bulbs in a four-inch pot. It is perfectly hardy, continues long in bloom, and is fine in masses in the open air. It should be planted early in the border, as it makes its leaf growth in the Fall. It is one of those pretty, modest little flowers so apt to be overlooked.

There seem to be very few who grow the Plumbago Larpentæ. It must be because they do not know that it gives us, during late Summer and Fall, masses of handsome, dark-blue flowers, and is in all respects a desirable border plant, or, for that matter, a good bedding plant for late blooming. It should not be often disturbed, as it is not at its best till well established. It is an old plant, and at one time was much admired.

There are very few who have grown Lilium auratum in the open border who have not complained of want of success. The trouble is that the bulbs gradually dwindle away until there is nothing left. It has been suggested that home-grown bulbs would do better; but there will be few of these while bulbs can be imported so cheaply. In my first attempts to grow the Auratum I met with the drawback so generally complained of. I then began experimenting, and used up a good many bulbs before reaching satisfactory results. I tried all kinds of exposures and a variety of soils. As the result I found that soil is more important than exposure. The soil that has given me the best result is a light sandy loam, with a free admixture of leaf mold (not muck). In this the bulbs (planted about five inches deep) have maintained and increased their size, giving me stout stalks and plenty of large flowers, even up to twelve and fourteen inches in diameter. This may be a useful hint to others,

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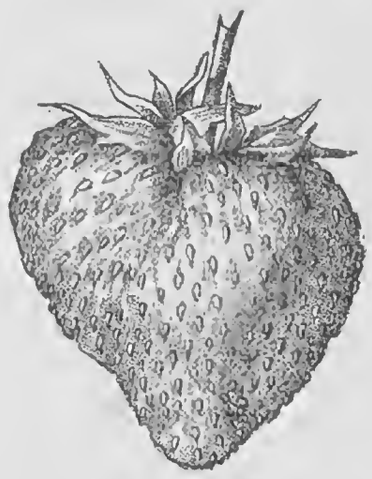
A good hardy herbaceous plant, which has been in bloom nearly all Summer, and will continue till frost, is the double white Lychnis. This is not as common as it should be. It pleases me best when allowed to grow on the ground without support. It takes up more room in this way, but is less trouble, and the effect is much finer. I have it both ways.

HORTICOLA.

STRAWBERRIES.

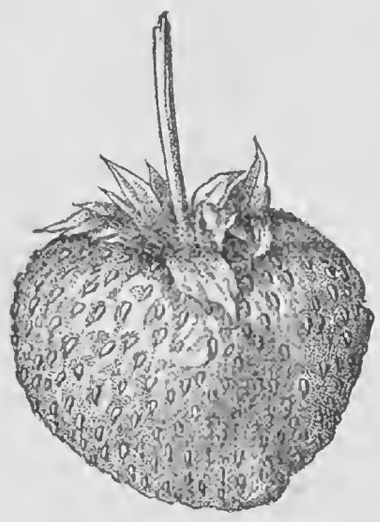
THE MARVIN.—We have already referred to the Marvin as entitled to rank among the more promising of the newer strawberries. Mr. J. T. Lovett, at our request, gives his opinion of it as follows:

Plant of the style of Jucunda, but of stronger and more vigorous growth with larger, enduring foliage, and prolific. Berries very large, approaching those of the Sharpless, uniform, bright crimson, smooth, glossy with prominent bright yellow seeds, rendering it peculiarly showy and firm. Flavor good to very good. It is so extremely late that the first berries ripened June 9, at a time when most other varieties were nearly gone—and it continued in fruit until the 25th. It is a most promising variety both for home use or market, and so far as one can determine from a single year's fruiting, it excels all others by far as a very late berry.



MARVIN NO. 1.—FIG. 287.

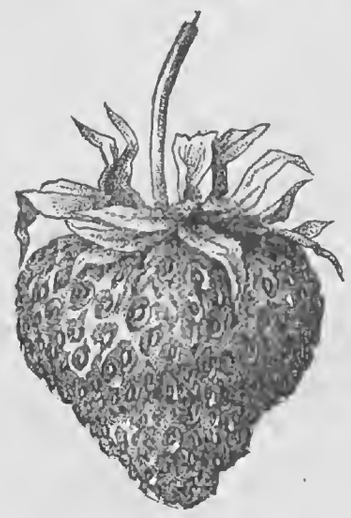
Mr. Roe says, regarding the Marvin, that it is very highly praised, and thought by some to be the coming berry. The plants he set out last Spring bore some large, late, and very firm berries of good flavor. Pres. Lyon, whose opinion respecting fruits of any kind is always entitled to respect, says that "it is a highly promising, very large, late variety." It is said to be a cross between the Wilson and Jucunda Our engravings, which are portraits from life, show the form and size of *average* berries.



MARVIN NO. 2.—FIG. 288.

LONGFELLOW.—Plants of this new variety were received from Mr. E. Williams last Spring. We do not feel justified in pronouncing any emphatic opinion of its value from the test of a first season's growth and production. The plants have made a strong growth of tall, healthy foliage. Berries average larger than our portrait, with prominent necks. The quality is very good and the season medium.

LONGFELLOW. FIG. 289.



BIDWELL NO. 1.—FIG. 290.

BIDWELL.—This is another new kind of Strawberry of fine promise. It has, however, up to this time been tested but by a few and its merits cannot be spoken of without reserve. The plant is a strong grower with foliage, like the Sharpless, large and healthy, forming thickset stools of unusual productiveness. The berries are large, conical and regular both in form and size, of a bright red color and excellent quality. Its season is between medium and late.

BIDWELL NO. 2.—FIG. 291.

Farm Economy.

WHY ARTIFICIAL MANURES FOR POTATOES DO NOT PAY.

DR. J. B. LAWES, OF ROTHAMSTED, ENG.

IN the RURAL of April 10th you ask, why I do not think that it will pay to use artificial manures for potatoes, as well as for other root or cereal crops. It is somewhat difficult fully to explain my reasons for such an opinion without occupying more space than can be spared for the purpose. I will, however, make a few observations with regard to the subject of the question you put to me, which possibly may be interesting to your readers.

I conceive that the selling price of the ordinary farm crops in the States is not dependent upon the cost of manure, ordinary or artificial, and that a farmer who was asked to put down the items of cost in growing a crop of corn, or wheat, would confine himself to the labor employed in various forms, and the price of the seed. If this be the case, the profitable use of any manure must depend upon its capability of producing an increase of crop exceeding in value the cost of the manure required to produce such increase. I will confine my remarks to artificial manures alone, which may be divided into two classes:—first complete manures; by this I understand manures furnishing all the soil elements of plant food in sufficient quantities to grow the crop: second, partial manures which furnish one or more of the ingredients that may be deficient in the soil, and thus enable the plant to make use of those which are in excess.

A complete manure which increased a crop of corn from 30 to 60 bushels per acre, or a crop of potatoes from 200 to 400 bushels, ought to leave the land no poorer in the more important constituents of plant food, than it would be supposing the smaller crop had been grown without manure.

An experiment with a complete manure has been under trial at Rothamsted, where, for ten years, the soil ingredients contained in one ton of hay have been applied every year to one acre of permanent pasture.

The following are the quantities:

Sulphate of Potash	76 lbs.
Sulphate of Magnesia	35 "
Superphosphate of Lime	52 "
Silicate of Soda	100 "
Sulphate of Ammonia	82 "
Muriate of Ammonia	32 "

The average produce of hay obtained by this application has been 32¼ cwts; while during the same period of ten years, the permanently unmanured land yielded annually 20 cwts of hay per acre. The increase of crop therefore obtained by the application of the manure only amounted to 12¼ cwts; and, as the cost of the manure may be roughly estimated at 12 dollars, it would exceed the value of the increase obtained. From a commercial point of view there are, then, two forcible reasons, why the result of applying artificial manures to hay, is less effective than their application to cereal crops: first, the hay crop relatively sells at a lower price than the cereals: second, it removes more of the constituents of the soil. The same may be said of potatoes, and, to a certain extent, of root crops in general, but with a distinction which I will now explain.

In England artifical manures are not largely used for potatoes, because (as in the case of the hay) they would be too expensive, inasmuch as the tubers are carried off the land. They are largely used for turnips, mangels, etc., but not as a complete manure, nor with the intention of selling the products off the land. The usual practice is to consume them for feeding purposes, and thus they find their way back to enrich the soil.

If complete manures are to be used profitably in the States at the present time, they must be applied to those crops which command the highest price in proportion to the soil constituents which they contain. For equal money value corn or wheat would remove a much smaller quantity of the soil constituents than either hay or roots. My reasons for saying that one crop may be profitably grown with artificial manures, while another cannot be so grown, are based upon the above-named considerations, and I am rather disposed to think that advocates of complete manures base their ideas on a somewhat erroneous view of the true function of artificial manures; inasmuch as they do not take into account the present low prices of agricultural products, which in many cases will not admit of artificial manures being used with profit. Soils in general contain some of the important ingredients of plant food in greater abundance than they do others. The successful use of plaster to the clover crop in the States; of sulphate of ammonia to the sugar cane in the West Indies; of nitrate of soda to cereal crops in general in England, and of phosphate to root crops, all indicate that soils contain an excess of one food, and a deficiency of another.

One important fact may be learned from the experiments upon hay, to which I have referred above, namely, that the manure ingredients placed upon the land are not all recovered in the produce. This, too, is not an isolated fact but one confirmed by the whole of the Rothamsted experiments, and is due to two very different causes; first, the insolubility of the compound which is formed with the soil by certain manure ingredients; second, the very soluble nature of other manure ingredients, which results in their loss by drainage. These two causes combined make the distinction between the amount of ingredients which chemists find in any individual crop, and the amount which experiments or practical agriculture have shown must necessarily be applied in order to grow that crop.

SINKING WELLS ON GRAND ISLAND IN THE NIAGARA RIVER

WE have received an interesting account of the manner in which this is done from a resident there, by which, in most cases, a never-failing supply of pure water is obtained. This island contains 17,300 acres and has nowhere on it an elevation of over 50 feet above the Niagara River. It is destitute of springs or permanent running streams, and those not dwelling close along side of the river are dependent entirely on cistern and well water for household purposes and watering their domestic animals.

Grand Island, and in fact the whole neighboring region, is underlaid by a thick bed of hard limestone rock, reaching from 25 to 70 feet below the surface of the ground, which is generally a good clay loam. Between this clay and next to the rock, is a stratum of sand and gravel one to two feet thick, which on being perforated, yields the water sought for in any desired quantity. The wells are bored with a 14-inch augur, stone socket pipes eight or nine inches in diameter, are put down this boring to the bottom, and iron water pipe and pump then inserted within the stone pipe.

The cost of sinking a well and inserting the stone pipe complete, is $1.25 per foot. The iron pipe and pump to be added are an additional charge of $15 to $30, according to the depth of the well and the kind of pump used. Our informant tells us he has sunk five wells for the accommodation of his household, dairy and domestic animals, of which he has large herds, at an average cost of $100 each, and he would not be without them now, even if they were to cost him four times this amount (which would be $2,000) to replace them.

The water in the wells rises to within 15 to 20 feet of the surface of the ground. Where this water comes from is a mystery, as no highlands are near Grand Island, and the river water cannot percolate through the dense body of clay lying above the rocks. Sometimes, however, water has not been found at the rock surface, and drilling more or less feet into it has been necessary here; but very seldom has water finally failed in finding passage through the seams of this rock.

Several wind-mills have been set up on Grand Island for pumping water and other purposes, thus lessening the labor of the farmers considerably. A 10 to 12-foot wheel is large enough to pump water for 100 head of cattle. The price of such a mill is from $100 to $150, and the cost of erecting the upright timber frame to hold one is from $15 to $30, according to th finish put on it. The timbers should be very strong and well bolted together and the supporting post on which they stand be of durable wood and sunk five to six feet into the ground. The frame should be painted as well as the mill, thus adding both durability and ornament to the structure, and also giving it a more picturesque appearance.

There are many different models of wind-mills advertised in this and other agricultural papers, some of which are of decided excellence while others are only tolerably good. We advise all who wish to establish them on their farms to examine the workmanship and operation closely before purchasing, and not to credit more than half of what the numerous agents scattered about the country tell of their virtues. A good wind-mill saves fully $100 per annum in manual labor, where any considerable number of animals are kept, as it may not only be used for pumping water, but also for cutting corn-stalks, straw and hay for stock feed, sawing wood, turning grindstone and various other purposes.

Here is an excellent example for landholders to follow in various other parts of the United States, and particularly on the broad lands of the West, where they are so destitute of springs and running streams. We are glad, however, to say that wind-mills have now come into much use there, and we hope wells will rapidly follow wherever needed. How often have we seen in our travels there horses and cattle of great value wading knee-deep through a wide rim of filthy mud surrounding a pond of foul surface water collected in shallow ravines and hollows to quench their burning thirst, is such

a thing could possibly be done from a liquid of this fetid, unhealthy quality. No wonder that we hear of murrain and other fatal diseases abounding in such localities, from which our domestic animals would be generally exempt if they had pure water to drink freely, and as often during the day as required by them.

WHAT MACHINERY HAS DONE FOR AGRICULTURE.

HENRY STEWART.

In visiting the fairs the observant person will be attracted by the usual brilliant display of agricultural machinery. It may be very well worth while, as he views these exhibits, to give a passing thought to the benefits which agriculture has derived from the genius and the labors of the mechanician. We may go back in thought to the time when the spade, the hoe, the sickle and the flail comprised the farmer's store of machinery and when the plow was the rudest contrivance, hardly worthy to be called a tool. Then every man tilled the soil or engaged in pastoral pursuits because it was all one man could do to provide himself and his dependents with food. Then each man was forced to clothe himself and be his own mechanic for this simple reason. He labored long and with infinite pains, and the ancient sentence that man should earn his bread by the sweat of his brow, came home to him with unmitigated force.

In course of time improved and effective tools so lightened the labors of the agriculturist, and so increased his products, that the opportunity to make a division of labor arrived, because there was food to spare for the mechanic. And so this condition of things became more and more firmly established until it changed the whole social and political aspect of human affairs. And now what do we see? The use of the most effective agricultural machinery and the mechanical facilities for transporting these, now so cheapen products, that the whole social fabric of the oldest civilized nation of the world is threatened with revolution and reconstruction; and it is the reaper, the self-binder, the steam thrashing machine, the locomotive, the steel rail and the steamship, that have in their combined effect, brought dismay and dread to every man in Europe who lives on the fruits of the labors of his fellow men, the land-owners who live upon rents. The true "landlord" is now, not the owner of an English estate, but the farmer who commands an army of farmers, with brigades of plows, reapers and other machinery upon the plains of Western America. He makes laws for countries thousands of miles away, and his products rule the world's markets. The genius of agriculture to-day is the mechanic; the soul of agriculture is the inventor. One farmer can now, with the help of machinery, feed a hundred men with greater ease than at one time he could feed himself alone. The farmer supports the railroads, for stocks rise and fall with the good or indifferent reports of what the harvest shall be. He supports lines of steamers with his wonderful freights of breadstuffs, provisions, meats, cattle and sheep. He maintains the millions of artisans who clothe and shelter him and who provide for every one of his wants outside of the field.

The mechanical power of the age is like a series of concentric and eccentric circles of which the farmer stands out in the principal center. These all revolve with and about agriculture, and the same force sets all in motion. It is the farmer's duty now to make the most of his opportunities. He should be the foremost man of the age. His influence should be felt everywhere. It is felt everywhere, for the wealthiest merchants and capitalists and the most active politicians all ask themselves how far the farmers can be depended upon, before they make a movement in their special pursuits. But the farmer should feel this himself. It is one thing to have power and another thing to be cognizant of the possession. Let the farmers consider now their position, and as they take a view of it let them consider what they owe to the power and influence of machinery.

In conclusion, one most conspicuous example of the results pointed out may be noted. A few years ago Minnesota Spring wheat was graded very low in the grain markets and brought a low price. Unfortunately for the Western farmers this grade of Spring wheat was the only one they could produce. A "New Process" in milling was introduced. Elaborate machinery was invented to perfect the process. The best wheat by this process was the grade known as "Minnesota Spring," theretofore despised and rejected—literally "rejected," in fact, in the markets. Afterwards this grade became sought by millers, and the value advanced to a point equal to, and sometimes more than, that of the previously much sought Winter wheats. If Minnesota farmers produce forty millions bushels of wheat annually, this advanced value, due to the new process, puts several million dollars yearly into their pockets; and what a vast amount of comfort and happiness may be secured by the right use of so much money. Here we have but one instance only of the vast concatenation of circumstances, which points the moral here alluded to.

Veterinary.

THE DUTY OF BREEDERS IN REGARD TO TUBERCULOSIS.

D. E. SALMON, D. V. M.

It is scarcely necessary for me to tell the intelligent readers of the RURAL that tuberculosis and consumption are names applied to the same disease, and that this is one of the most destructive plagues to which the human race is subject.

In 1870, according to the vital statistics then taken, the annual deaths from this disease in the United States alone amounted to the enormous number of 69,000, or one in seven of the total deaths. The Mutual Life Insurance Company of New York has found that over 19 per cent. of its total losses are caused by tuberculosis, while a recent estimate in France places the deaths from consumption as one in every five.

In the four great nations of Europe—England, France, Germany and Russia—the annual deaths from this disease amount to 870,000; and, taking the world over, it is estimated that three millions of people are yearly victims of tuberculosis. When, now, we consider that with our increased population not much less than 100,000 people are annually swept away by this terrible disease in our own country, we are prepared to appreciate the value of any discoveries which throw light on its origin and the means of preventing it.

It has long been known that cattle are exceedingly subject to this plague, and that milch cows in particular are affected to a most extraordinary extent. Cruzel, in France, a dozen years ago estimated that one-half of the milch cows became consumptive. Adam, of Augsberg, by careful inspection, found that 52 out of every 1,000 animals over one year old brought to the slaughter-houses were thus affected. During my inspection of the cows of New York City and vicinity, as one of Gen. Patrick's staff, I found stables in which from one-third to five-sixths of all the cows had the plainest symptoms of consumption. In one stable, which I particularize as an extreme case, I found, by the most careful examination of the lungs of every animal, that 24 out of 30 were thus affected, and one was in a very advanced condition; and yet the milk from these cows was daily sold to be consumed by infants and invalids, as well as by the more robust classes that make up the population of a great city. More than this, when such cows are affected to a degree that makes them no longer profitable as milk producers, they are killed and then placed upon the market and sold as meat.

Now, what is the connection between these facts? May consumption be communicated through milk or meat? What momentous questions are these!

Yes, tuberculosis is a transmissible disease, and experiments of the last decade, now too numerous and plain to be questioned, demonstrate not only that the disease may be inoculated by using the tuberculous deposit, but that it may be communicated by way of the digestive organs, and that the milk, the blood, and the juice of those muscles which are used as steaks and roasts, contain the infectious principle. Stables, even, may be contaminated, and placing a healthy cow in a stall that has been occupied by a tuberculous subject is sufficient to communicate the affection.

Now, since milk is generally not heated at all before use; since oleomargarine may even contain small particles of tubercle; since the half-cooked steaks and roasts, of which many are so fond, are not subjected to a temperature sufficient to destroy disease germs, it is plain that not one of us can hope to escape taking the germs of tuberculosis into his system, and if we escape infection it is only because our organism is endowed with a vital force sufficient to resist them, while those poor unfortunates who have not this power of resistance, who, in other words, have inherited the so-called predisposition to the disease, must inevitably succumb to it. And the fact that one in every five or six of us does die in this way—that 100,000 people annually fall victims in this country alone—shows how very many are thus unfortunate.

It is evident that the time is at hand when we must think of a remedy for this terrible destruction of life and property, and it is plainly the duty of breeders to take one of the first steps. Cattle affected with tuberculosis should be destroyed. No man of principle can keep a cow that may be the means of conveying to his customers an incurable disease; much less will he place the meat of such an animal upon the market to be sold for food, or even breed from such animals to raise a new generation of tuberculous subjects. Stables in which diseased animals have been must be thoroughly disinfected, as in the case of other contagious diseases.

When society comes to realize that a disease incomparably more destructive than yellow fever, or small pox, or cholera is daily measured and weighed out and distributed in all of our cities with the milk and meat bought to support life, it will demand a rigorous control of milk stables and slaughter-houses; and this will inevitably entail an expense of millions upon millions of dollars if indemnity is allowed for animals destroyed. Hence it is probable that no such indemnity will ever be allowed. How much better for breeders to commence now and weed out such animals, as it is their duty to do, and thus obviate the necessity for State interference.

Finally, allow me, even though it may seem over-officious in the eyes of some, to add a word of warning to the breeders of the beautiful animals known as Jerseys. All of the inspectors observed that a larger proportion of these animals were affected with tuberculosis than of any other breeds. This was certainly my own experience to a most noticeable extent. In fact, very many of the wealthy inhabitants of the fashionable avenues of New York, who keep a five-hundred-dollar Jersey cow to supply their families with *pure* milk, have animals whose lungs are infiltrated with tuberculous deposits, and the lymphatic glands of various parts of the body enlarged to two or three times their normal size as the result of this disease. No one admires the good qualities and beautiful appearance of these cattle more than the writer, but here is a trouble so widespread that I would certainly be accused of exaggeration if I were more particular in regard to its extent; but so great is this imperfection that it must greatly affect the popularity of the breed at no distant day, if breeders do not adopt the most stringent policy in regard to it.

But whenever attention is called to such facts as I have just recounted, our old conservative journals raise their voices in horror against such "alarmist" views. The food we buy, they say, is much purer and better than most people imagine—probably better than such sinful creatures deserve. In other words, it is the alarmists that need censure rather than those who place such obviously destructive food upon the markets. Why, one of our leading journals absolutely refused to publish an article which I wrote eight years ago, giving an account of recent European experiments proving consumption a contagious disease, and communicable through meat and milk.

"Please don't worry us about these things," such old fogies cry; "let us continue to enjoy our half-cooked steaks from tuberculous cows; let us drink and feed our children upon the milk of similarly diseased animals, and then die if we must as our fathers and grandfathers have died before us; but don't trouble us about such disagreeable things. The fact is, you are an alarmist, and my paper says that alarmists are not to be tolerated."

And so, although there is not a minute in the day or night but that, somewhere in our country, there are sorrowing friends gathered around the death-bed of some unfortunate consumptive, since every five minutes chronicles the death of such a victim, still absolutely nothing is done to check the extension of the malady even when one of its most prolific sources is unveiled before us.

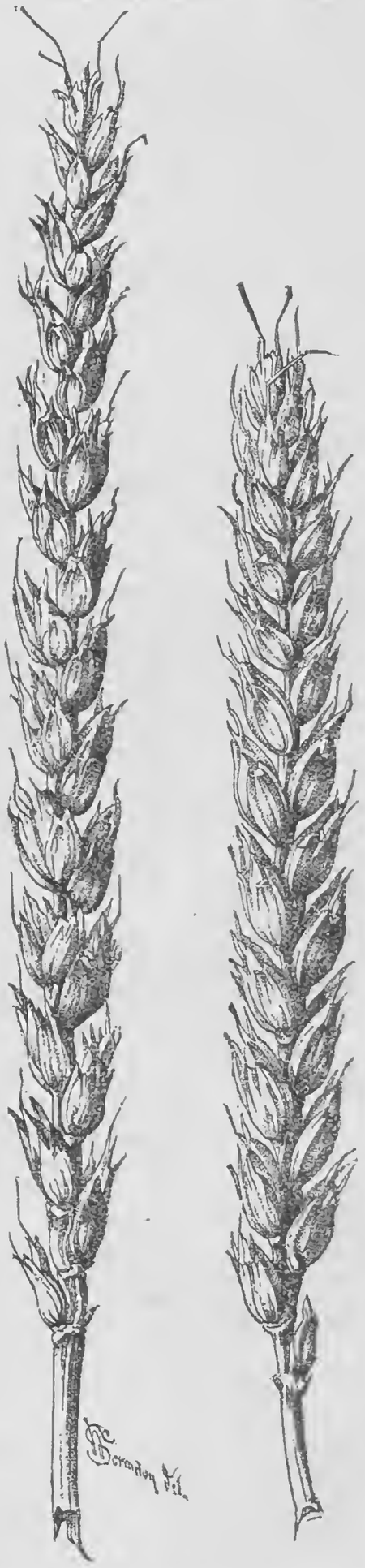
Field Crops.

NOTES FROM THE RURAL FARM.

Clawson Wheat not what it Seems.

We were among the first to raise Clawson wheat, and we have since unquestioningly preferred it to any other variety until a trial of 25 different kinds the past season has not only shaken our faith in its superior yield, but has determined us to abandon its cultivation in favor of several other kinds. Farmers, we desire to impress upon you the importance of wheat tests upon your own farms. If, as in our own case, such trials demonstrate that certain varieties will yield from 10 to 25 per cent. more grain than those you have been raising, and which you have blindly taken for granted were the best of all adapted to your soils, surely the expense and trouble of such tests upon small plots would amply be returned to you in future years.

Clawson bears a large, showy head; the kernel is large and plump. But those who have accurately measured the yield per acre have found that it has always been *less* than their estimate from the *appearance* of the field. This, at least, has been our own experience and that of those with whom we have conversed upon the subject. To illustrate this we have been at the pains of making the following comparison: Four average heads (as nearly as could be judged by the sight) were selected of both Clawson and Fultz. The spikes of Clawson measured 3¼ inches in length averaging eight spikelets on a side or 16 in the head. There were in the four heads 150 kernels, weighing precisely 106 grains. The Fultz also measured 3½ inches in length, averaging 16 spikelets. There were in the four heads 180 kernels, weighing 113 grains. Whereas, therefore, the single kernel of Clawson weighs heavier than the single kernel of Fultz, the 150 kernels of Clawson weigh seven grains less than the 180 kernels of Fultz. And yet anybody to look at the two fields of grain would estimate the Clawson as promising the heavier yield. The reason is this; first, the spikelets of Clawson are loose and spreading, giving the head a large, heavy look. The spikelets of Fultz are not loose or spreading. They "hug" the rachis giving the head of wheat a narrow, light appearance. And, second, whereas in the Clawson there are more spikelets with two kernels than with three; in Fultz there are more spikelets with three than with two—and occasionally there are four.



DEFIANCE WHEAT FROM SHRIVELED.—FIG. 292. FROM SOUND SEED. FIG. 293.

Again Fultzo-Clawson (a hybrid between the two produced by our contributor Mr. Hugh L. Wysor) was among the *showiest* of all our wheats when ripe. The heads averaged 3½ inches, with an average of 15 spikelets. Four average heads (as with Fultz and Clawson) produced 119 kernels, weighing only 97 grains. There were never more than two kernels in a spikelet. Four average heads of Lost Nation raised as a Winter wheat, produced 167 kernels weighing 101 grains. This seed again sown in the Fall would be very likely to increase in weight. The heads are far less showy than those of Clawson. Our plot of Shumaker was injured by the drought, being to the east of the barn-yard fence upon a dry, sandy soil. Yet four average heads (16 spikelets to a head) produced 160 kernels, weighing 99 grains. Even such small heads as Diehl that, to look at, would not seem to yield half as much as Clawson, would be found by the

above method of computation to yield three-quarters as much. Four heads contained 138 kernels weighing 75 grains. We need not pursue this further now; suffice it to say that it is our belief that either Shumaker, Fultz, or Lost Nation (sown in the Fall) would out-yield the favorite Clawson on this farm, and to the list we may be able to add several others when they are thrashed and weighed.

Singular results from a Wheat Experiment.

As our readers are aware, three years ago we tested various kinds of Spring wheats, among them Defiance and Champlain. Though the straw was heavy and the heads large, daily showers and intervals of a scorching sun while the grain was in the milk, so shriveled the kernels that at harvest they proved to be mere shreds. It is generally thought that shriveling does not impair the value of wheat for seed. To ascertain the degree to which the kernels might be shriveled and yet germinate, we sowed these shreds in the following Fall on a half acre. They germinated freely and the yield, though light, was far greater than was anticipated, because the plot had not received any manure for this crop, and but little for several preceding crops.

DEFIANCE FRUIT STALKS. See Fig's. 292 and 293.

The several bushels saved were, the next year, without any special object in view, again sowed on this half-acre field with a light spread of leached ashes only, and it was not sowed until Nov. 10. We beg the reader to bear these items in mind, since the results were quite unaccountable to us and to all who saw them.

The seeding was thin and the stand of wheat light; but *such* wheat we have never before seen anywhere. The straw was *very* heavy and thousands of heads measured six inches; hundreds, seven, and the largest head we could find, seven and three-eighths inches. The entire character of the grain seems to have been changed. It ripened not until ten days after Champlain and Defiance, which were sown in adjoining plots, also in the Fall, and the kernels were of a much darker color. The shorter of the two heads illustrated, is the *largest* we could find among the Defiance wheat which was sown Sept 18th on a well-fertilized plot, the seed of which was procured from the introducer, Mr. B. K. Bliss. The longer head is but an average of those of which we are speaking, viz., from the shriveled seed sown *two* years successively as a Winter wheat. The other two engravings show the spike or fruit stems (rachis) of each.

Taking four average heads of the Defiance from Mr. Bliss's seed (sown as a Winter wheat last Fall, 1879, for the first), we find 160 kernels weighing just 87 grains. They averaged 17 spikelets to a head. Four heads from the shriveled seed sown *two* years, in the Fall, averaged 22 spikelets, with 244 kernels weighing 148 grains. Why seeds from a Spring wheat so shriveled as to form mere shreds sown on poor land late in the season two years successively in the Fall, should have undergone a change so remarkable, we leave others to explain. The results of our next year's test with these large heads, we shall anticipate with some curiosity, in which we can not doubt our readers will share.

THE RURAL BRANCHING SORGHUM.

In reply to the RURAL's inquiry relative to the "RURAL Branching Sorghum," I would say that I first heard of it some two years ago (1878) and of its wonderful productiveness and growth, and on investigating the matter I found it was, indeed, an interesting addition to fodder-producing plants, that promises to excel all. In 1879 I had it growing on my own grounds, and although under great disadvantages, in addition to a drough so long and severe that my Blount's Prolific corn dried up and died within a few feet of it, yet it seemed to suffer but very little and tillered out wonderfully, each root producing from four to a dozen branches, growing strongly and sturdily from six to 10 feet high, capped with heavy heads of seeds. Now I am growing it extensively, and although it was planted a month later than it should have been, yet it is doing splendidly, and showing forth its wonderful productiveness. Although we are now suffering from want of rain, having had an excessively dry Summer, yet this field of sorghum looks as fresh and bright and is growing as rapidly as if enjoying daily showers.

It branches from the root, throwing out from four to a dozen strong branches from three-fourths to an inch in diameter, and pushing upwards with wonderful power and strength. If cut off it starts again with renewed strength and more heads and stalks, so that there is no telling what amount of fodder could be made from a single acre. It starts from the seed, slowly and feebly, seemingly to make root and get a strong foothold; then it needs hot weather, and on my ground it is doing the best on the sandy land. For the South, compared with other fodder-producing plants, it is, in my view, worth fully double as much as any other kind that has come under my notice. It needs a long, hot season to perfect its seed, which, when ripe, is valuable for chickens or stock—all eat it greedily. Stock of all kinds are very fond of the Branching Sorghum, either in a green state or dried, for it is rich in nutritious qualities. It is, indeed, a valuable addition to our fodder-plants, and on good soil an acre of it will give all that a dozen head of stock could eat for all the Summer, and even then they would not use it fast enough to keep it down. It must not be confounded with what is generally sold for Doura or "Donra Corn," being a far different article, and *ten-fold* more productive. S. OTT.

Aiken Co., S. C.

THE RURAL BRANCHING SORGHUM. — We have received the following from Mr. Henry Stewart whose testimony will readily be taken without any grain of allowance:

ED. RURAL:—"You will be interested to know that I have to-day cut one foot in length precisely of a row of "RURAL Branching Sorghum," having 12 stalks which were eight feet seven inches high, not spreading out the leaves which drooped over at least a foot, and the stalks weighed just nine pounds. This is equal to more than 65 tons per acre. Amber Sugar Cane, now in full blossom, weighed six pounds for a similar quantity. Sweet corn one hill (three feet apart) weighed, with eight ears, (four stalks) 16 pounds—stalks 10 feet long and very stout. How is this for the Sorghum? The seed was planted May 21. Each root has an average of six shoots. Where it had been cut about six weeks ago it is five feet high with about 16 branches to the root. It is growing about three inches a day now. The cows eat it both leaf and stalk, and leave not a fragment. What a crop for fodder! The stalks were not picked at all but were an average lot.

THE RURAL BRANCHING SORGHUM.—I cannot say too much in praise of the RURAL Sorghum in this climate as a soiling plant. We have been growing it for the past four years and consider it much preferable to anything we have ever tried. We have cut it three times in one season, and two of the crops were heavy. I have counted as many as 15 good stalks from one stump or root on sandy, thin land, not highly manured. It takes about the whole season for it to mature its seed in this latitude. Its capacity for standing the drought is being fairly tested this Summer. The corn crop is almost a failure, and yet the sorghum is suffering very little.

Aiken Co., S. C. I. H. SATTERTHWAIT.

Pomological.

OBJECTIONABLE FRUIT PREMIUMS.

WHY will our agricultural societies persist in offering the principal premiums for the "largest number of varieties" of the different kinds of fruit? The tendency is already towards too many kinds, and to offer premiums in encouragement of this already existing evil is a great mistake. Where one has too many varieties it is very annoying to keep them separate, as to do so requires more room for storing, etc., and adds greatly to the labor and expense of marketing. Better our crops were of a few leading varieties than to be bothered with twenty bushels of this, ten bushels of that, five bushels of the other, and so on.

Besides, giving premiums to the largest number of varieties encourages a few unscrupulous persons to procure their fruit of other growers and exhibit it as their own. In this county about one-third of the amount given in premiums is offered in this objectionable manner, and the consequence is a sort of "scrub race" to see who will drive the furthest and pick up the most. Fruit-growers who are in the main honest are effectually ruled out. Can our agricultural societies afford to award premiums that in effect encourage rascality?

There is but one argument in favor of this practice—it makes it easy for the judges to decide who is entitled to premiums. Any one who can count is competent for this. If it is considered absolutely necessary to give a premium for the "largest collections" of apples, pears, etc., the amount so offered should be reduced. Let the man who tries to grow fruit of the finest quality have a chance also.

Onondaga Co., N. Y. NELSON RITTER.

OUR WILD GOOSE PLUM.

E. WILLIAMS.

A FEW years ago when this plum mania was at its hight, I procured and planted a tree so as to be able to judge knowingly of its merits. This season it has borne fruit of which the accompanying outline is an exact representation, in size, of an average specimen.

The color at maturity is red, sprinkled with minute white dots and covered with a delicate bloom, making it a beautiful and attractive fruit. Flesh, mild, sub-acid, better for cooking than dessert, and apparently nearly, or quite, free from rot. Its habit, if such it is, of fruiting singly instead of in clusters, as is usual with our improved varieties, is an advantage in this respect. The tree is a strong, vigorous grower and the fruit in its different stages of coloring—yellow, pink and scarlet—scattered

OUTLINE OF WILD GOOSE PLUM.—FIG. 295.

among the foliage of the tree, makes a pleasing and attractive sight. Further trial will determine its productiveness. It is not curculio-proof as was claimed. I question if we have any variety that is, though there are doubtless a number of the so-called Wild Goose varieties. Will the time ever come, "when the truth, the whole truth"—or a little less—"and nothing but the truth," will be employed in stating the merits of new fruits, etc? All of these wild or native species have been called iron-clad and curculio-proof, to a greater or less extent, notably Bassett's American, yet I saw a specimen of this on the RURAL GROUNDS last year that was almost literally covered with the crescent marks of the "little turk."

It would be interesting to note and compare the *promises* with the actual performances of the various horticultural novelties introduced for the last 15 or 20 years, and see what proportion of them have been verified. The chapter would be a long one, and I imagine a few of the more sensitive (?) actors would, like the politicians, rather not have the record consulted. Do not this untruthfulness and the extravagant use of adjectives in this connection lower the standard and retard the healthful growth of horticultural progress? This custom is not confined to horticulture and agriculture but pervades all other similar avenues of trade. Are misrepresentation and exaggeration necessary to success? I know it is often said that the American people have been humbugged so long as to have become used to it and rather expect and like it, but would not the plain truth and simple facts pay as well in the long run? The young and inexperienced may be credulous enough to believe these overdrawn claims, but older ones who have had their "eye teeth cut," are very apt to make a liberal allowance, and it is certainly wisdom to do so.

I SAW at Mr. Williams's a home-made tin label with the name scratched or pricked on it with a brad-awl. A slightly diagonal cut at each end makes a pair of ears for attaching the label to the wire of a trellis, a small stake, or a plant. All that is needed are a pair of shears, a brad-awl, and some old tin, to make a durable label. The tin oxydizes when scratched, and the mark will last as long as the tin itself. This is a plain but very good domestic label. A label "boom" is greatly needed. The present wooden label, written on with a common lead pencil, as used by nurserymen and florists, is an unmitigated nuisance, and has been productive of untold profanity. P. B. M.

Scientific and Useful.

THE VALUATION OF "REVERTED" PHOSPHORIC ACID.

PROFESSOR F. H. STORER.

AMONG the offences against sense and good morals which the selling of chemical fertilizers has introduced, there are few more gratuitously obnoxious than the custom which persists among dealers and analysts of allowing a much higher price or "valuation" for reverted phosphate—sometimes classed as "available phosphate"—than it is really worth. It is true enough that this compound (the di-phosphate of lime, or dicalcic phosphate, of chemists) has considerable fertilizing power, and that when applied to the right kinds of crops and soils it may be capable of doing capital service. But it is also true that it can be made in any quantity at extremely low cost, and if there were any call for it, it could be put upon the market in a state of practical purity at singularly low figures.

Processes for preparing both the diphosphate of lime and the precipitated tri-phosphate (bone-phosphate) also were invented some years since by our countryman Campbell Morfit, who very ingeniously sought to utilize in this way both the waste muriatic acid of European chemical works and rock phosphates of such low grade that they were unfit for making superphosphate directly. The cost of manufacturing these pure precipitated products was extremely low and they could doubtless be imported into this country at very reasonable rates. But, in the lack of any demand for them on the part of farmers, they have hitherto usually been converted by their makers into superphosphates of high grade, or they have been sold to the regular makers of superphosphates for this purpose. If, therefore, a farmer really wishes to buy "reverted phosphate" he will do well to apply to head-quarters and inquire the price. He may rest assured that it will be lower than the current "valuation" of the analysts.

There is, moreover, another way of looking at the matter, less direct, indeed, though it may seem easier to some persons. Namely, why shouldn't the farmers who want reverted phosphoric acid make it, or have it made for them, out of materials already in the markets? Even in this way, reverted phosphate could be got at a considerably lower price than the ordinary valuation. In one of the recent market reports of the RURAL NEW-YORKER the price of plain superphosphate made from bone-black, and containing 15 to 17 per cent. of soluble phosphoric acid, is quoted at $30 to $35 the ton. For the sake of round numbers, let us say 16 per cent. and $32. At the same time the price of bone-ash, containing 70 per cent. of bone-phosphate of lime was $24. That is to say, seventy pounds of actual bone-phosphate could be got for $1.20, or the pound for about one cent and a quarter. But by mixing bone-ash with superphosphate of lime in the proper chemical proportions, that is to say by adding 155 pounds of actual tricalcic phosphate for every 117 pounds of the soluble monocalcic phosphate, there will be formed some 272 pounds of the reverted, or dicalcic, phosphate; no account being taken, of course, in this calculation of the impurities or non-essential matters which accompany the phosphates.

At the prices above cited, 155 pounds of real bone-phosphate would cost $1.94, and 117 pounds of the monocalcic phosphate would cost $7 02. So that, taking no account of the labor of mixing, the 272 pure pounds of product would come to $8 96. But there would be no more than 142 pounds of phosphoric acid in the product. Hence the value of one pound of reverted phosphoric acid obtained in this way would be 6⅓ cents; or, making a liberal allowance for labor, say 6½ cents.

Instead of the bone-ash in this operation, either spent bone-black or ground rock phosphate might be used as the source of bone phosphate. If bone-black were taken the cost of the bone-phosphate would be a little greater, and if the rock-phosphate were used the cost would be a little less than the above citation. I have purposely chosen bone-ash for the calculation as representing a medium price.

To the buyers of fertilizers there is no need to insist that 6½ cents per pound are a decidedly lower figure than is commonly "allowed" for reverted phosphoric acid in statements of analysts. It would be a gain, of course, if whatever is excessive in the "allowance" could be lopped off. But the chief point to be considered, after all, is that we need to break through a vicious tradition which tolerates improperly made or shop-worn superphosphates and allows far too liberally for their imperfections. The plain fact of the matter is that true superphosphate of lime ought not to contain a noticeable quantity of reverted phosphoric acid, anyway. When a farmer buys superphosphate of lime let that article be genuine. On the other hand, in case he ever wishes for reverted phosphate, let him buy that substance, as such—or let him make it if need be. If it should ever happen that a mixture of the two is wanted, assuredly the farmer is perfectly competent to mix the harmless powders for himself. As bearing upon the suggestion that reverted phosphoric acid may be got when wanted by mixing a superphosphate with bone-ash or bone-black, it is well enough to recall the fact that it is a very old practice of European farmers to mix superphosphate and bone-meal, as a manure for turnips on certain soils.

Entomological.

A NEW WHEAT ENEMY.

PROFESSOR CYRUS THOMAS.

THE wheat throughout this section has been more or less injured by a new enemy so far as this region is concerned. It is a minute reddish-yellow worm or maggot which lives inside of the stalk, near to and usually just above the joint, from one to three at a joint. As a general rule, they select the lower portion of the stalk, but not immediately at the ground.

As there is seldom, if ever, any swelling or other unusual appearance of the stalk at the points infested, there is nothing to indicate their presence except the slightly unhealthy condition of the upper portion of the stalk and a tendency of the heads to curve downward. The maggots reside in the pith or central portion of the stalk, are about one-eighth of an inch long, and of a pale, reddish-yellow color; the two little hooklets at the anterior end being triangular and reddish-brown.

I was enabled to rear but a single specimen to the perfect state. Unfortunately it completed its transformation while I was absent from home, and was lost before my return. My assistant succeeded in obtaining a description sufficient to satisfy me that it is a species of Chlorops—a dipterous insect belonging to the great family Muscidæ.

Although specifically distinct, yet it is closely related to the Ribbon-footed Corn-fly (Chlorops tæniopus) of England; but the latter causes a very distinct swelling of the stalk, which has not been observed in reference to our species. The difference in the method of operating and wing characters indicates pretty clearly that it is not the American Meromyza (Meromyza Americana). From the description taken by Mr. Marten, it appears to differ from the species of Chlorops described by Dr. Fitch.

The only remedy I have to suggest is burning the stubble soon after the wheat is cut, as the worms do not appear to undergo their transformations until after the wheat is cut, and as they most usually reside in the portion of the stalk below the point at which it is usually cut.

I add here Mr. Marten's description of the perfect insect, in his own words:

Eyes dark-green, glabrous, horizontal diameter greater than vertical. Ocelligerous tubercle, black ocelli 3, forming a small triangle.

Front yellow, projecting, a row of black bristles on each side, and a row from the inner angle of each eye to the center of front, forming a triangle inclosing the ocelli.

Antennæ yellow, 3-jointed; second joint twice as long as first; third joint large, oval, with a stout curved bristle. Palpi small, yellow, covered with minute black hairs; proboscis geniculate, each joint about twice as long as palpi; cheeks yellow. The snout projects below to an acute angle, from the tip of which the proboscis extends, yellow. Clypens distinct; thorax yellow, with three longitudinal dark-brownish stripes, the outer ones curving slightly towards the scutellum; scutellum yellow, with a longitudinal dark strip. Plura and pectus light yellow; halteres yellow; abdomen yellow, with a dorsal dark stripe having a narrow dark line on each side extending over the first, second, and third segments; hinder margin of third segment yellow. Fourth segment has a large quadrate dark spot; fifth segment yellow; legs yellow; hind pair of femora swollen; legs covered with black and yellow hairs; wing transparent; the vein extending to the apex very faint, as is the small cross vein above it. Length not taken, but about one-eighth of an inch.

I may also add that the Melon Aphis (Aphis cucurbiti) has been very abundant and destructive in this region on the Musk and Cantaloup melon vines. It infests the under-side of the leaves of melon and cucumber vines. I have found that sprinkling with powdered lime, if properly done, is an effectual remedy; but the leaves must be turned and the lime sprinkled on the plant lice, otherwise it does no good.

Carbondale, Ill.

Educational.

ARE AGRICULTURAL COLLEGES OF ANY USE TO THE AGRICULTURAL COMMUNITY?

PROFESSOR G. C. CALDWELL.

THIS very important question could be answered on better evidence than we now possess, if the farmers might be persuaded to give them for a few years a full and fair trial; but the indifference of those for whose particular benefit these colleges were established is notorious. Let them be organized on the most liberal basis possible and manned with teachers who are masters of their respective professions, and every desired facility be offered for special education in all the branches pertaining to agriculture, and yet their lecture rooms and laboratories are but sparingly occupied by young men who come from the farm and intend to go back there. There seems only to be a lavish waste of money, which might have been more usefully expended if given to the poor. Where does the fault lie but with the farmers themselves if these colleges fail to do all their intended work, when the mass of them are satisfied to have their sons, or as many of them as they can keep at home, follow in the old ruts of practice which they themselves have followed and deepened, and, of course, as they very correctly reason, no special education is necessary for such a life.

I hold that in simple justice to the farmer boy he should have as good a chance as the one who goes to the college to get what he can there to help him to attain success in some other field. If a young man feels assured that to choose farming for his calling will not practically debar him from getting a liberal and useful education adapted to his calling, he will be less likely to choose something else; and while with business ability and a taste for farming he will, it is true, make a good farmer anyhow; yet he cannot but make a more honorable and successful career if he first spends three or four years mingling with other young men, engaged in like manner in the study of those branches of science which are intimately connected with his life's work. A writer in an English agricultural paper not long since, speaking of the strengthening appreciation of the value of an education in that country, said, very aptly, "It is now believed that energy, common sense and intelligence will everywhere outrun energy, common sense and ignorance, and that technical and scientific education will confer on those who enter any profession immense superiority over those who have it not."

In a recent report of a committee of the French National Assembly on a project for the establishment of a new agricultural college, the agricultural superiority of Germany over France, in spite of inferior natural advantages, is very fully exposed, and it is attributed to the better development of agricultural education in that country, and the more common and intelligent application of scientific rules in agricultural practice; and it is stated in this report that there are in all Germany 184 agricultural colleges, besides a great number of schools of lower grades reaching clear down to the primary instruction, and that Germany spends on agricultural education seven times as large a proportion of her income as does France. Yet the French Government this year appropriated 1,875,000 francs, or $360,000, for agricultural education, of which nearly $150,000 were for the running expenses of her three agricultural colleges and the National Agricultural Institute, at Paris, over and above their receipts

Germany has a better system of primary and higher education than we have, taking the country through, and yet she finds it profitable to add to it all this system of special instruction in agriculture and branches relating to it. The agricultural conditions that prevail in the older and more thickly settled parts of this country are very similar to those that prevail in that country, and whatever is found to be essential to the highest agricultural success in the one case, is likely to hold good for the other. If agricultural colleges and experiment stations are there found, after an experience of many years, to be so useful as to deserve and receive such liberal and hearty support both from the Government and the people, then, to say the least, they deserve fair trial here to the extent, if nothing further, of the like hearty support of the people.

Let this matter take up some of your thoughts as you compare notes with your brother farmers at your fairs, and see if, given like business ability, the most successful men among you are not your best educated men, remembering, however, that the man who raises the biggest pumpkins or the heaviest crop of corn or potatoes is not necessarily the most successful farmer. To compare notes justly you must go to his home and look at his surroundings there—his fields, his barns and his house and his bank account, as well as his crops. Taking all these things into consideration I venture to say, without fear of contradiction, that the man who is found to have the happiest family, the most children who are contented at home, the most pleasant house and convenient barns, the most serviceable stock, and the best looking farm with all its belongings, will be found to be the best educated member of your agricultural community. And if this is so, ask yourself whether is is not your duty to fit out your son who wishes to follow your own most honorable calling with all that is in your power to give him, that you may help him to gain a like enviable distinction.

Cornell University.

The Horseman.

THE PERCHERON-NORMAN HORSE.

A. B. ALLEN.

FOR heavy farm and road work, the city dray and truck, no horses ever imported into America, have equaled the larger class of this distinguished race; while those of medium size are equally admirable for the express wagon, the omnibus, and tram rail-road.

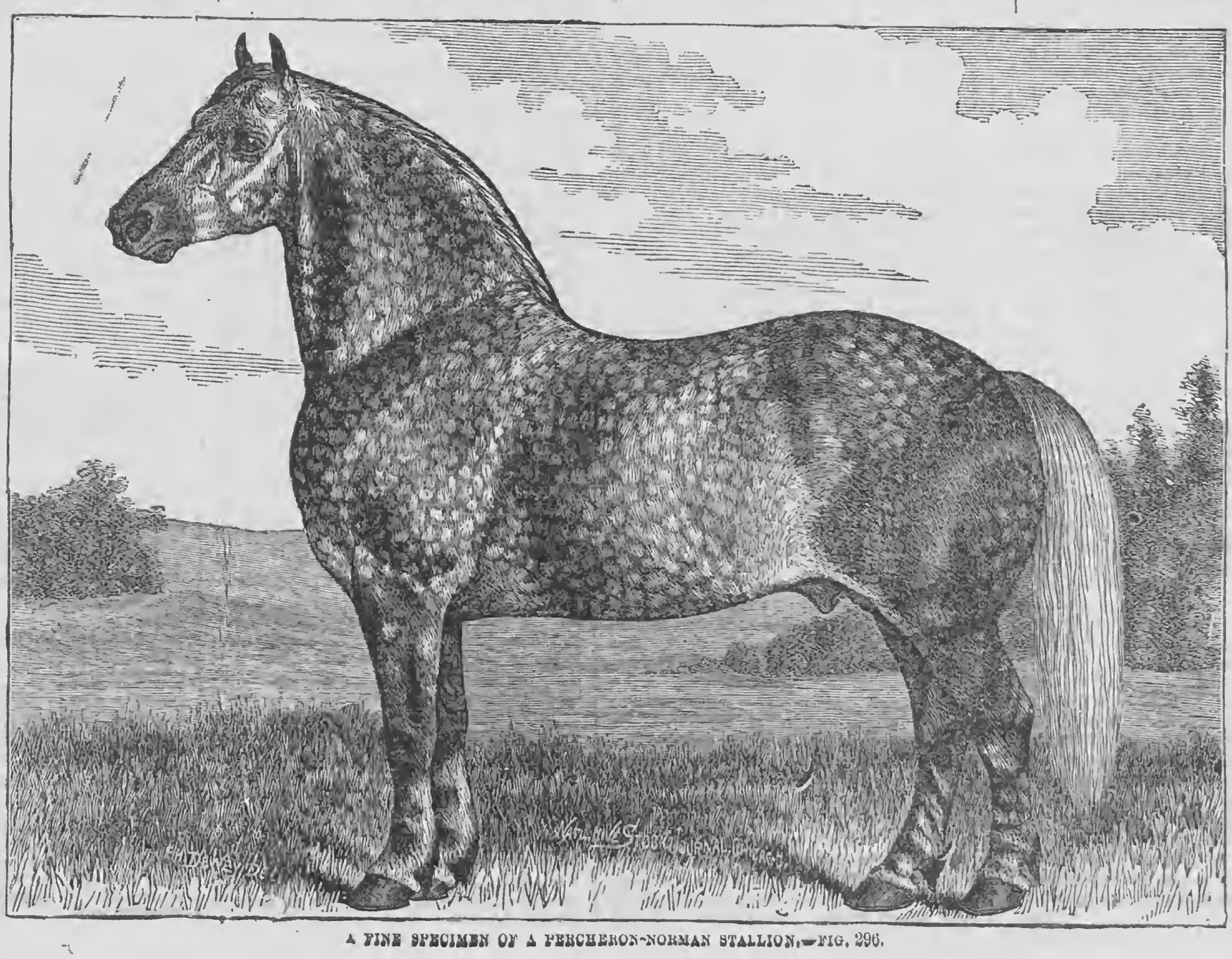
There is a reason for this great superiority over other large breeds, as tradition affirms it originated early in the eighth century, by a cross, on the large native Percheron and Norman mares, of the high-bred, powerful Barb stallions, captured in great numbers from the Moors then invading France. This improvement thus judiciously begun, has been continued down to the present day, by selections for breeding purposes of the best of their progeny, and by taking fresh crosses, now and then, from stout Arabian war horses—cognates of the Barb—brought home from Palestine on the return of the French crusaders. Another thing which has also contributed to the superiority of this class of horses, is, that the climate and soil of Normandy, and more particularly of the Department of La Perche, are admirably adapted for the production of choice stock.

Mr. Harris, of New Jersey, was the first person within my knowledge to import horses of this breed. Traveling in France in the year 1859, and observing the superior qualities of the large, powerful farm and road horses in the Departments of Perche and Normandy, he determined on an importation of one stallion and two mares. These being greatly liked in his native State, and seen by several horse breeders in Pennsylvania, Maryland, and Ohio, they followed Mr. Harris's good example by the importation of a few each. From the last State, they spread into Illinois and Indiana, where, being found so much superior to all other large farm stock, a quick demand at extra prices sprang up for colts bred from the males out of the common mares of the country, and rapid importations from France soon followed. Mr. Dunham, of Illinois, has been by far the largest importer, having brought over from France upwards of three hundred horses within the past few years. The Percheron and Norman grades are now spreading rapidly over the country, from Canada on the north, to Virginia on the south; and from the Eastern States, to those of the farthest West.

These horses stand from 15 to 18 hands high, and weigh from 1,300 to 1,800 pounds. Their superiority over other large European breeds, consists in their ivory-like bones; firm, tough muscles; handsome, powerfully knit, blocky forms; extra-strong joints and limbs; and clear, tough hoofs, well set up at the heels. This last good point enables them to endure stony roads and city pavements better than most of the other larger class of horses. Added to the above, even those of the biggest size are very active, with a fast walk, and reasonably quick trot. They are of great endurance, high spirit, and indomitable courage; yet gentle and docile of disposition, little predisposed to diseases of any kind, and especially those of the legs and feet, to which other larger breeds are so liable.

Of the economy of the use of an extra powerful horse, all will be convinced when they see that one of these can do the work of two of the common kind, and a pair that of four. This saves considerably in stable room, feed, harness, shoeing, and wages, of grooms and drivers, and makes them much more handy as a single team on the farm, and in the crowded streets of the city. If a single horse—as it is well known these can—will turn as deep a furrow and draw as large a load as a pair of smaller ones, it is certainly much more convenient and economical to use such.

The first volume of the Percheron-Norman Stud Book, edited by Mr. J. H. Sanders, was published at Chicago in 1878. This is a handsome work of 212 pages, illustrated with numerous portraits. It was got up for the purpose of recording the pedigrees of all full-bred horses of this class, thus to prevent the public from being imposed upon by unprincipled dealers, by substituting grades for pure-bred. I understand that a second volume of this work is in preparation, and will soon be issued from the press. Half and three-fourths-bred Percheron and Norman horses not only fetch an extra-high price for home use, but also for exportation. The demand much exceeds the supply and is likely to do so for years to come. They are undoubtedly the most profitable stock the farmer can raise, as colts got by these stallions out of good, common mares, are large and strong enough at two years old to be put to light work on the farm. By the time they are four to five years old, and ready for sale for harder work, they will have earned the cost of their production, and whatever price is then obtained for them will be a clear gain to the breeder. Is there anything more promising or profitable than this in the business of stock-raising?



A FINE SPECIMEN OF A PERCHERON-NORMAN STALLION.—FIG. 296.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

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OUR CLUB OFFERS FOR 1880-81.

THE RURAL NEW-YORKER has never heretofore published a list of other journals with which it clubs. We have, however, for 1880–81, for the benefit of many of our readers, been at great pains to procure the lowest cash rates of the journals mentioned below, so that any of them with the RURAL NEW-YORKER may be subscribed for at very much less rates than the two separately.

The Inter-Ocean and RURAL NEW-YORKER			$2.75
Detroit Free Press	"	"	3.50
Weekly World	"	"	2.75
Globe-Democrat	"	"	2.75
Pioneer-Press	"	"	2.75
Evening Post (Weekly)	"	"	3.20

Any person ordering for one year the RURAL NEW-YORKER and any one of the above Weeklies will receive the Plant and Seed Distribution without application and without charge for postage.

AMONG our potato experiments, one series was conducted to ascertain how far it is best to place the eyes in the hill. We shall give the details in a few weeks. We may now state simply that single eyes placed *six inches* apart produced the best yield.

WHICH is better for transplanting, Spring or Fall? Our answer would be, Spring north of this latitude; Fall, south of it. This has reference to deciduous, fruit and ornamental trees and shrubs. We prefer early Spring to any other season of the year for evergreens.

THERE is a small fortune and a great reputation in store for the ingenious individual who will furnish a cheap, safe and efficient remedy for the European Cabbage-worm. There have been hundreds claimed, but few are of any value, and most are nearly worthless.

AMONG rural pleasures, what is more gratifying and satisfactory than digging potatoes where they turn out smooth, round and large, at the rate of 300 to 350 bushels per acre—provided one has not too many to dig? It is something akin to the gratification of husking corn which yields 75 bushels per acre, or cutting wheat which will make 30 or 35 bushels.

WE have seen complaints made that where bone flour or superphosphate has been used in the hill—in the hill alone—for corn, though the young plants showed unusual vigor, the subsequent growth has proven very unsatisfactory and, in some cases, the crop has nearly failed. Is there anything unaccountable about this? If not, when will farmers learn that neither phosphates nor any other fertilizers in the hill can exert more than a temporary influence? The young rootlets are fed and the young plants thrive. But as the roots extend, there is nothing for them to feed upon, and the old plants languish.

IT has been stated by some of our agricultural papers that one objection to the Southern cow-pea for the North is that the season is too short to admit of their ripening seeds. This is one of those errors that occur from perfunctory experiments. The variety of cow-pea called "Poor Land" ripened seeds at the Rural Farm in large quantities by August 12th. This variety is, indeed, one of the best for Northern fields. The seeds germinate freely and produce an immense amount of vine, which completely covers the earth for a space of not less than six feet. Those who have tried the mixed kinds which we distributed last season, and who would pronounce them a failure are advised to try the "Poor Land." It can be supplied by Southern dealers, and perhaps by Northern ones as well.

THOSE who may feel apprehensions concerning the fate of next year's Winter wheat crop in the West, on account of the severe and protracted drought, may dismiss their fears. Though increasing the labor of preparing the soil in a considerable measure, a Summer and Fall drought is one of the best natural preparations for a full crop the succeeding year. This fact old wheat growers know and recognize in their dealings with the crop, and the result will be a considerable increase of acreage. Thus the accounts tell us that no such crops of wheat have been produced in Macoupin County, Ill, as in '78 and '80, and the same is true of the brown clays of that whole section—a section where a severe Summer and Fall drought prevailed both in '78 and '79, and is in course of being repeated in 1880. Now, so far as Winter wheat is concerned, whatever may be said of the Spring crop, a severe drought is not likely to diminish, but rather increase the acreage; and if the labor of putting in is small, the outcome is pretty sure to be large in proportion.

ORCHARD GRASS AND CLOVER.

A CORRESPONDENT who has a large dairy in the Western part of New York, writes us that he finds Orchard Grass and clover so superior to other grasses for early Summer soiling his cows, that he is going to greatly extend the growth of them by sowings next Spring. He adds that when these grasses are cut early for hay, he much prefers them for Winter fodder for his dairy stock, as he has his cows to calve mostly in August and September, so as to make the greater amount of his butter during Winter. It costs less to make it then than in Summer, and it brings a higher price, thus yielding him a double profit.

In the latitude of 40 deg., and perhaps a little higher, Orchard Grass may be sown as late as the fore-part of September. We sowed it then last year, and got an excellent stand before heavy frost set in, and a large yield from it the past Summer.

OUR PRESENT PROSPERITY.

WHEN an ancient people were released from slavery and established in freedom, it is related that they regretted the time "when they sat by the flesh pots and did eat bread to the full." In like manner there are some persons to-day that are not satisfied with their present condition of prosperity, and look back with regret to the time when, in the flush of a ruinous expenditure of borrowed capital, every man made money, became rich, and dwelt in air castles of the greatest magnificence. The present is an unusual, and in fact, an unexampled season of prosperity, and should be wisely considered and used. We have leaped suddenly from a position of distress to one of comfort and opulence. We have plenty to sell to eager buyers at good prices, and the habits of economy created in our distress have not yet been destroyed by our present easy circumstances.

Let us take warning. "In the day of prosperity be joyful, and in the day of adversity consider." We have had time for consideration in the past, and our time of rejoicing is at hand; but to forget the past and to mourn over the departure of a period of inflation which brought upon us our time of distress is folly and shows that some persons, at least, have not rightly taken to heart the lessons which they have learned. We are in a good, sound, prosperous condition, and we have every promise of a continuance of it, if we still practice the economy, prudence and industry which have brought us to this condition.

TRY IT. HOW TO INCREASE THE YIELD OF CORN.

As a rule among our farmer acquaintances, fair, plump, large ears of corn are selected for seed without any regard to the number growing on a stalk. From our own experiments we deem this a mistake. It is better to save the largest, fairest ears than those which are imperfect or collected indiscriminately. But such selection is just as liable to encourage a lesser as a greater yield in the future crops. Corn is very susceptible to change from selection, as we may know from the scores of distinctly marked varieties known. If we would increase our yield, we must select seed from the most prolific plants. This, which is true of all plants, is especially so of the corn plant. If, further, an isolated plot, as far removed as possible from other corn, were planted yearly for seed and the tassels as soon as they appear were destroyed on both those which were sterile and the least prolific, we doubt not the farmer would, in a very few years, be amply compensated for his pains. In this case, seed would be saved which had on both sides the most prolific parentage. We attribute our immense yield of Blount's Corn at the RURAL'S Farm, in a great measure, to our very careful selection of the seed. There can be little doubt that such selection will in a few years increase the yield of *any* variety of corn. On the other hand, if only the largest, handsomest ears are selected, regardless of the number of ears borne on a given stalk, simply what may be considered the normal yield of the variety will be continued from year to year.

THE DEVELOPMENT OF THE SOUTH.

As we all know, at one time cotton was called King, when it was by far our most valuable crop, and brought more gold into the country than any other. But the recent enormous development of the northwestern country has given only a second place to cotton in our list of exports. Thus, while in 1879 the export of cotton was $182,068,841, that of wheat and flour amounted to $191,136,240, and other agricultural products reached to nearly $200,000,000 more. So that wheat has taken the first position among our soil products, and the great northwestern fields occupy the attention of European countries as their future bread producers.

Still the Southern States doubtless have a wonderful future before them. The product of cotton is rapidly increasing, and during the last 15 years has exceeded that of the 15 years preceding them by 9,600,000 bales, valued at $600,000,000. In addition to this, the value of the cotton seed, now mostly wasted, amounts to an enormous sum, for the 3,000,000 tons yearly produced are equivalent to 90,000,000 gallons of oil; 1,300,000 tons of oil-cake, and 1,500,000 of hulls, which are of value as a fertilizer. The sugar production, too, must doubtless soon increase to a very great extent, for it is enormously profitable. A Louisiana planter made, from 3,287 acres of land last year, a product which sold for $565,000, an average of $175 per acre. Yet the whole crop of that State reached but $19,000,000, while our importations from Cuba amount to more than $80,000,000 yearly. The South wants men and money, and the North has these to spare.

THE HERDWICK SHEEP.

THE London Agricultural Gazette of a late date gives a particular account of this peculiar breed of sheep, ranging the mountains of West Cumberland lying between the Derwent and the Dudden Rivers. Their pasture extends 1,800 feet high above the sea, and is so cold, bleak, and poor that these sheep alone can sustain themselves there. Not even the black-faced mountain sheep, which are next in hardiness to these of all in Great Britain, can do it.

The tradition of their origin is that some 40 of them escaped from a Spanish vessel stranded many years ago on the Cumberland coast. These took to the high hills, and bred and supported themselves so well there that pure flocks of them have been kept up by the owners of the land ever since. They are of small size, finely formed, and wear horns. The lambs come black in color, but as they grow up change to mixed white and black. The ewes do not breed till three years old, and seldom drop twins. Fat wethers attain a weight, when four years old, of 90 to 100 pounds, and shear an average fleece of indifferent wool of three pounds or so. Their mutton is of excellent quality. Draft ewes which are not wanted for the purpose of keeping up a pure flock are bred to Leicester or South Down tups, and the lambs of this cross are taken onto good lowland pastures, where they grow rapidly, fatten kindly, and attain a considerably larger size than those of the pure breed.

We presume no flockmaster would continue to keep so small and slow-maturing sheep as the Hardwicks, were it not that no others are sufficiently hardy to live and thrive on the miserable, scanty herbage and in the cold, wet, bleak climate of the Cumberland mountains. It was at the foot of these that the poets Wordsworth and Southey dwelt, and immortalized the scenery in their admirable verse.

BREVITIES.

READERS are requested to keep this number for reference.

WHETHER we learn little or much at the fair, much depends upon whether we go there to see or to be seen.

THE RURAL NEW-YORKER wants agents EVERYWHERE. The work, we think, will be found easy, and an examination of our premium list will show it to be very profitable.

OUR readers will agree with us that they have never (or rarely ever) seen a higher class of advertisements than are collected together in this Fair Number of the RURAL NEW-YORKER.

THERE are two sorts of agricultural fairs. One is to benefit the farmer. The other is to get his money. The worst of it is that farmers themselves don't put themselves out to discriminate between them.

THE new Turban Tomato has a turban to be sure. In other respects it is much the same as any other tomato. Why this little top-knot should entitle it to a place among larger and smoother sorts is not very apparent. Our first fruit ripened August 10th.

There is nothing more important to successful sweet-potato cultivation than preventing the vines from taking root. This is fully understood in the South, but we find it is often neglected in the North. Just as soon as the vines take root, most of the nourishment beyond goes to the new roots instead of to the tubers forming in the hill.

WE beg that our readers may not mix up the Rural Branching Doura with other Douras, Brown and White Egyptian Corns, China Corn, Rice Corn and the like. We have tried them, and though their grain may be valuable for poultry, etc., they "send up" but one stalk and are not to be recommended as fodder plants.

AMONG the fifty kinds of grapes which we have under trial, "Lady" was the first to ripen its fruit. We pulled plump, ripe bunches of this excellent white grape, August 13 h. Owing to its soft skin and liability to crack, it can never prove of much value for distant markets; but for home use it should be cultivated in every collection.

"GOLDEN-LEAVED" shrubs and trees are much written about. But, as a matter of fact there are few worthy of the name. We have the Golden Oak, Golden Spiræa, Golden Catalpa. In early Spring their leaves are of a beautiful yellow—but this changes to green as soon as the leaves attain their mature size. We know of but one hardy plant that can fairly be called "golden" and that is the Golden Elder. Its leaves are golden throughout the entire season.

THE disputed question as to whether glass insulators or insulators of any kind are necessary in order to give lightning rods their greatest protective power, is one that common-sense ought to be able to settle. We employ lightning rods because they are better conductors of electricity than the materials of which our dwellings are built. It is plain, therefore, that insulators are of no use whatever. The wiser plan would be to *connect* all iron parts of a building *with* the rod.

PRESIDENT T. T. LYON advocates a rule at fairs, rigidly enforced, forbidding any person handling the fruit on exhibition except by authority or permission. The rule should be printed and posted up where all could not help but see it. One or two severe examples made of transgressors would soon cause it to be respected. Fruit men themselves are the worst to manage. Even they should be prevented from handling their own fruit after it is once in place.

IT will be remembered that the Editor of the Germantown Telegraph and the Editor of this journal had a little controversy as to the exact value of weevil-eaten peas. A wager of a large amount was made and accepted and a fair trial made by the Editor of the Telegraph, which determined the question in the latter's favor. Upon receipt of the wager Maj. Freas, the venerable Editor, replies:

"Many thanks for the $500,000. Of course, I expected nothing. I will use it in remembrance."

OF all the wheats we tested last season, "Fultzo-Clawson bore the largest, heaviest kernel, though it did not yield as much as many others. We often distrust the reputed parentage of so-called "hybrid" plants. We are satisfied that the parentage of many new sorts of potatoes is merely guessed at, owing, as we said before, to the extreme difficulty of procuring pollen from the anthers of the flowers. But the Fultzo-Clawson shows a marked likeness to both parents. We hope under continued cultivation it may prove as prolific as the kernels are heavy.

EXPERIMENTS, though they usually require a deal of care and time, sometimes result in great benefit to the farmers who conduct them. For years past we have deemed Clawson wheat the most productive variety we could raise at the Rural Farm. The past season we have raised 25 different varieties of wheat, each upon a plot one-fortieth of an acre in area. Among them we believe there are no less than three kinds which will yield more heavily and make a better quality of flour than Clawson. (The matter is referred to elsewhere.) It is a question whether this discovery will not more than pay us for the cost of the experiments.

A SEVERE struggle is likely to occur in Congress during the next session between the brewers and malsters on the question of the import duties on Canadian and other foreign malt. The tax now is 20 per cent. *ad valorem*, and last Spring the malsters urged that it should be raised to 25 cents per bushel. Their earnest work had nearly secured the passage of the bill, when the brewers were aroused and started a vigorous opposition, on account of which final action was deferred until next session of Congress. About 50 000 000 bushels of malt are now used in this country, and of this large amount it is said only 500 000 bushels are imported. As between these conflicting interests we have no care in the matter, but the question is one that has some bearing on the price of home-raised barley, and therefore we cannot allow it to pass without calling public attention to it.

The Free Plant
AND
Seed Distribution
OF THE
RURAL NEW-YORKER
FOR 1880–81.

THE RURAL NEW-YORKER has introduced or disseminated among the farmers and horticulturists of our country among many different kinds of Seeds and Plants the following which are now widely, and for the most part favorably known:

The Cuthbert Raspberry,
Blount's White Prolific Corn,
The Beauty of Hebron Potato,
Mold's Ennobled Oats,
Defiance (Spring) Wheat—Champlain (Spring) Wheat—Clawson (Winter) Wheat,
THE ACME AND GOLDEN RURAL TOMATO,

ARGENTEUIL ASPARAGUS.

"There was scarcely a day this year when, for one bundle of English Asparagus to be found in Covent Garden, one could not find four hundred bunches of Argenteuil"
[See article of Mr. William Robinson, Editor of the London Garden.]

A New Era in Asparagus Culture.

Giant Dutch Purple Asparagus.

WASHINGTON OATS.
Large Panicles—Heavy Weight.

TO THE LADIES.

The Choicest Strains of Chinese Pinks, Carnations and Picotees.

Including "Eastern Queen" and "Crimson Belle" which were sold last season by our first seedsmen at 50 cents each per packet of a few seeds.

NOTES FROM THE RURAL GROUNDS.

FOR the information of the many into whose hands the present number of the RURAL NEW-YORKER may fall, and who may see it for the first time during the past three years, or since it has been under its present management, it may be well to state that the Experiment Grounds owned by this journal and worked, in so far as this is possible, in the interests of its subscribers, consist of eighty-two acres. Eighty acres situated in Queens Co., L. I., comprise the farm where all new agricultural seeds of special promise are tested. Thus, during the present season we have tested 35 varieties of wheat; 70 of potatoes; 11 of cow-peas; 10 of corn; 6 of oats; 6 of fodder plants, etc., etc. Two acres and a fraction, situated in Bergen Co., New Jersey, are devoted to experiments with all sorts of hardy ornamental trees and shrubs, small fruits, grapes, etc., etc. Since we have neither plants nor seeds to SELL, since, indeed, we have no other interests to subserve save those of our readers, our reports of the results of our tests are fully accepted as trustworthy, and the true value of hundreds of new and high-priced seeds and plants is made known. When, by such tests, we find that a given plant is more valuable than others of its kind which have been generally cultivated, we, at once if practicable, place it in our next Distribution, and send it without charge to all of our readers who apply. These distributions are

ABSOLUTELY FREE.

It is true we seek thereby to extend the influence of our journal; but our FIRST aim is to benefit the agricultural and horticultural interests of our country, and we beg to state that the means of the RURAL NEW-YORKER are such that the cost of our Distribution is not permitted to stand in the way of an introduction of varieties that either cannot be procured elsewhere, or, if they can, only at a high price.

POSTAGE.

As our readers well know, we have heretofore borne a part of even the postal expenses of the seeds and plants we have sent out. We might have been excused, perhaps, had we required that our subscribers should bear this cost themselves. But these offerings *are not premiums*, and we desire to *hold the right to continue or to discontinue them as we may determine.* The postal cost of our next Distribution, as nearly as we can at present estimate it, will be not less than 12 CENTS. We shall divide this amount with our subscribers—charging them six cents and paying the rest ourselves, the trustworthy firm that will control it, that the price will be ONE DOLLAR (or more) PER POUND.

One of these potatoes of MEDIUM size will be forwarded to each one of our subscribers who apply, *packed in saw-dust* in a PASTE BOARD BOX. *The cost of this item alone in our Distribution—box, packing, labor, potato and postage—will exceed* $1200.

THE RURAL BRANCHING SORGHUM.

We began testing this the same season that Pearl (Cat-tail) millet was grown at the RURAL Grounds. But so great was the fuss made over that plant, that the merits of the other were overlooked. We should have placed it in our Free Distribution last year but for the reason that the seed in sufficient quantity was not to be procured.

We quote the following from the RURAL of Dec. 27, 1879:

"This" (RURAL Branching Sorghum), "as we believe from the test of a single season, will prove of great value as a fodder plant. The plants *averaged eight* stalks from a single seed under very ordinary cultivation. The leaves are broad and long. The average hight of the stalks, Sept. 20, was nine feet. July 20 one row which was then four feet high, was cut five inches above ground. Each stalk continued to grow, and the average hight was six feet Oct. 1st when all was cut.

"Cattle and horses, fowls and pigs relish this even better than corn stalks and leaves, and eat the stalks entire, which are perceptibly sweeter than those of corn. While corn was prostrated by high winds which occurred twice during the growing season, every stalk of this remained as upright as ever. (See RURAL of above date for engraving of panicle and a section of leaf.)"

RURAL BRANCHING SORGHUM.

We beg that our readers will not confuse this variety with other so-called Douras, Egyptian Corns, China Corn, etc.; which have for years past been talked of and highly commended in some quarters. They are of little value as fodder plants, however, bearing but one stalk from a seed and generally a drooping panicle. It should be remembered that Sorghum vulgare, of which the RURAL Sorghum, as well as the others mentioned, are varieties, breaks, under cultivation, into as many varieties as Indian corn, and just as in corn, such varieties may be grouped by some striking peculiarity. The great points of *this* variety are:

1 Its suckering or branching proclivity.
2. The firm hold it takes upon the soil.

SALIX PENTANDRA,
Moluccella Lævis,
HYBRID PENTSTEMONS,
IRIS LÆVIGATA—GOLDEN OVOID MANGEL—RURAL HYBRID RICINUS, ETC., ETC.

A Remarkable and Valuable List for the Coming Year!

THE WHITE ELEPHANT.

We believe it will prove the best Potato Known

THE LARGEST SIZE!
THE BEST QUALITY!—and give
THE GREATEST YIELD!

The Rural Branching Sorghum!

A new variety of Sorghum vulgare that produces an average of seven stalks from a seed, and may be cut twice in this climate. Testimonials that it will prove of

Great Value as a Fodder Plant.

Tested at the RURAL Grounds and RURAL Farm; in the South and in the West.

THE WHITE ELEPHANT POTATO,

the first of our present announcement, was produced from a seed ball of the GARNET CHILI, fertilized with pollen from the WHITE PEACH-BLOW. Without hesitation we join those who will next season offer this potato for sale, in saying that it combines the best qualities of its parents; viz, amazing productiveness, excellence of quality and flavor, and keeping qualities unsurpassed by any other variety. Notwithstanding their great size, the tubers are ALWAYS SOLID. They grow closely together in the hill, ripening with the Late Rose. Last season the originator planted one bushel (sixty pounds) of the White Elephant on one-eighth of an acre of ordinary soil, and therefrom harvested FIFTY SEVEN BUSHELS! Our own report of the yield at the Rural Farm, as well as reports from many different parts of the country whither seed has been sent for trial, will be presented in these columns later. From our present knowledge, we believe the White Elephant will prove itself to be

☞ OF THE LARGEST SIZE
☞ OF THE BEST QUALITY—and
☞ ONE OF THE GREATEST YIELDERS

known.

When offered for sale, we are informed by

3. Its abundance of leaves.
4. The sweetness of the stalks.
5. Its continued growth after being cut.
6. Its power to resist drought.

We have tried this Branching Sorghum both at the RURAL Farm and RURAL Grounds for two seasons, with such success that we cannot think otherwise than that it is destined to take a high and permanent rank among the forage plants of our country. Its suckering habit is remarkable. The plant from which our engraving was made had 12 distinct stalks. We have, however, counted upon a single plant as many as 19, specimens of which may now be seen at the RURAL Farm. The engraving is reduced to one-quarter of the natural size, as it then (July 1st) appeared.

THE ARGENTEUIL AND GIANT DUTCH PURPLE ASPARAGUS.

It is strange that, in this country at least, no extended, careful experiments have been made to produce new and superior varieties of asparagus, the choicest vegetable, perhaps, that grows. We do not know that our efforts in this direction will be attended with any success. Perhaps there is but one kind, and that all variations are due to climate, culture, or both. Be this as it may, we have forwarded our orders for a sufficient quantity of both the Argenteuil (the French kind) and the Giant Dutch Purple, to supply all of our readers who may apply, with enough seed to plant a goodly-sized plot. Both of the above varieties are in appearance very distinct from ours, the one being of a silvery, the other of a purple color. Whether they will reproduce themselves from the seed remains to be seen. We doubt not that our subscribers will heartily join us in the test. We ask them to read the article of Mr. Robinson, which will be found in the Fair Number of the RURAL NEW-YORKER.

Picotees, Carnations, Chinese Dianthus.

(Dianthus Chinensis and Caryophyllus.)

It has been a difficult matter—almost vexatiously so—in the selection of our FLOWER seeds, for the RURAL's distributions, to hit upon those which were of the first value and yet free to germinate in the amateur's hands. Many of our subscribers have from time to time written us that their *flower seeds* failed; while all the others succeeded well—as if the fault were with the SEEDS! But we must unqualifiedly insist that this is simply impossible, as the multitudinous and trustworthy reports in these columns of those with whom *all the kinds* we have sent out have germinated, will fully attest. Different seeds to germinate require different conditions and treatment, in the absence of which, they must as surely perish as if they had been thrown into the fire. In the present instance, however, we have accepted the happy suggestion of a friend, and imported kinds which, while they make the most beautiful of plants, whether for out or in-door culture, will germinate and grow as readily as the seeds of the cucumber or beet. These seeds, the best of their kinds, have been added to our present distribution, then, for the benefit of all, but more especially for the benefit of those who have either failed or found it difficult to succeed with other flower seeds which exact more experienced culture. We have selected, therefore, a careful assortment of the Chinese pinks; of carnations and picotees. Among them will be found the following kinds, which are probably as beautiful and effective as any plants of their class in cultivation. No others are more fragrant; none better suited for cut flowers; none more captivating for house culture:—First (in one packet mixed) we shall send:

Dianthus Chinensis Heddewigii,
" " albus fl. pl.
" " striatus,
" " "Eastern Queen," and
" " "Crimson Belle" tested here (Rural Grounds) last year.
Dianthus Chinensis imperialis.
" " laciniatus.

In a second package, the following kinds will be found.

CARNATIONS. Seeds raised from choicest varieties—scarlet, white, yellow.
PICOTEES. Seeds saved from double flowers.

We hope the above, in a different way, may in the end prove as popular with our readers as the Chater strain of hollyhock, which we sent out several years ago and which are now so highly and justly esteemed.

For a number of years we have here cultivated the Chinese pinks. They bloom the first season if started early and during most years will stand the climate and make a fine display the second year. A covering of fine manure is, however, desirable.

WASHINGTON OATS

were received in Washington Co., N. Y., three years since from Illinois, where they were found growing in a wheat field that was sown with wheat imported from Germany. The introducer says he has tried nearly all the new varieties of oats and considers this by far the best yet introduced, yielding one-third more than the common oat. The grain is very handsome and heavy, weighing about 42 pounds to the bushel. The straw is very stiff and heavy. On rich soil where most varieties are liable to lodge, the introducer says that these always stand until fully ripe. This quality is of great value, as any cultivator will readily see. Now we do not pretend to know anything about these new oats from our own experience, not having tried them. But the specimen sheaf sent to the RURAL office is by far the finest sample of oats we have ever seen. The straw is heavy and five feet in hight, with a remarkably large number of oats in a panicle. Had we not been thus forcibly struck with the seeming value of this new variety, we should not, two years successively, have placed oats in our Distribution. The specimen sheaf may be seen at the RURAL office.

PLEASE NOTE.

Only yearly subscribers are entitled to apply for this Distribution.

Two three-cent stamps *must be* inclosed in the letter of application or we cannot agree to fill the order. Our object in bearing half of the expense is, as heretofore, to prevent the possibility of a suspicion that we receive in *any form* the slightest compensation for our labor or for the heavy cost of the undertaking. As stated elsewhere, however, we have made such arrangements with the Chicago Inter-Ocean, Detroit Free Press, N. Y. World, St. Louis Globe-Democrat, St. Paul Pioneer Press, Weekly Cincinnati Gazette, Elmira Advertiser, New York Evening Post, and several others, as will be seen, that those who order those journals *with* the RURAL NEW-YORKER will receive the seeds WITHOUT application and without the postage, that being included in the CLUB PRICE, to simplify matters.

Each letter of application will be NUMBERED when received, and the seeds and plants will be sent in that order.

It will save us trouble, and it will save our subscribers trouble and expense if they will make their application for the seeds and plants in the same letter in which they renew their subscriptions. We would also thank them merely to say, "SEND SEEDS." Those two words will convey all the instructions we need.

All questions appertaining thereto should be written on *separate slips of paper*, otherwise there is a chance of their being entirely overlooked, or, at least, of not being promptly answered.

Finally, in order to provide against the possibility of mistakes, disappointment or any dissatisfaction, we agree to duplicate all orders that from any cause may have failed to reach their destination at the close of the Distribution, which will be the latter part of next Spring. The most careful details of instruction as to the treatment of the seeds, will be given in future numbers of the RURAL NEW-YORKER.

THE White Elephant potato — the Rural Branching Sorghum—the Argenteuil and Dutch Asparagus — the Chinese Dianthus, Picotees and Carnations in great variety and of the the choicest kinds—the Washington Oats make up, as will be seen, our Plant and Seed Distribution of the present offering. All are new to this country except the Dianthus, and among them will be found several new strains. All of our readers who apply must give them careful tests, in which case we feel confident that their reports will prove them to be—as many others of the RURAL's seeds and plants have been—the most valuable of their kinds in cultivation. So may it prove—for this is the chief—almost the only object we have in their costly distribution.

IT will be useless for any persons to apply for our seeds or plants unless they are yearly subscribers. The reasonableness of this restriction will appear without further remark. We might be willing, or even desirous, to supply our seeds to all who read our announcement; indeed we would be glad to do so since there is no more effectual way of promoting the interests which the RURAL has at heart. But this is obviously impossible. Hence we strictly limit our distributions to subscribers.

We desire to make it plain, also, that our seed and plant distributions are in no sense *premiums*. As it is optional with us whether we offer them or not, it is our privilege to state when the distributions shall begin and when they shall be discontinued, so long as we liberally fulfill every obligation to which we commit ourselves.

WE presume there are few readers who will not find something to interest them in our new premium list. It will offer valuable presents to all who send us subscribers, whether two, a dozen or a hundred. We have made these presents more valuable than ever before, desiring to reward those who increase the RURAL's influence as liberally as we can afford so to do.

THE RURAL NEW-YORKER began its existence in 1850. Age without its infirmities; age with its experience and with the enthusiasm of youth are what we modestly claim for it now.

SEVEN subscriptions ($2 each, our only price) will entitle the sender to one copy of the RURAL NEW-YORKER for one year.

THE

Rural New-Yorker.

A Representative American Farm, Garden and Home Journal conducted to meet the wants of the times.

For the Thinking, Progressive Farmer and Horticulturist.
For the Suburban and Country Home.
For the North, South, East and West.
Bright, Sparkling, Conscientious, Impressive, Original.

THE BEST WRITERS OF AMERICA AND ENGLAND.

Praises and Congratulations from all Quarters.

T. H. HOSKINS, M. D., Editor of the *Vermont Watchman* says:
"The *Rural* is emphatically a live paper, and a live *farmer's* paper, too, in all the term implies,—which to us includes a great deal that is given the cold shoulder by most agricultural journals. The *Rural* seemed good enough a year ago, but it is fifty per cent. better this year. We have not heretofore praised the *Rural* as we felt it to deserve, because of our own relations with it as a contributor. Now we have said what we think, and if anybody desires to attribute it to any but an honest motive to do justice to the best agricultural and domestic paper in the world, why, let him."

Mr. A. B. ALLEN, the founder of the American Agriculturist says: "I think you are publishing the smartest paper in the country, and also the most suitable, useful and interesting to the rural population."

Five hundred engravings yearly of all kinds of fruits, farm and garden helps, the choicest of our trees and shrubs; of farm animals and rural buildings. Everything for the Country Home.

DR. E. LEWIS STURTEVANT, says: "*The Rural New-Yorker has the best list of contributors of any paper of its class in the country and is doing a noble work.*"

PROFESSOR W. J. BEAL, of the Michigan Agricultural College: "*The Rural New-Yorker is now the best paper.*"

PROFESSOR E. M. SHELTON, of the Kansas Agricultural College: *The Rural New-Yorker has more influence and is more quoted than all the rest put together.*"

PRES. T. T. LYON: "*The Rural is the best paper I see.*"

IT WILL HELP YOU TO MAKE MONEY AND TO SPEND IT JUDICIOUSLY.

"I cannot afford to do without it," is the comment of hundreds of our subscribers.

B. PICKMAN MANN, of Cambridge: "*For years I have taken the leading agricultural journals and they all seem tame when compared with the Rural New-Yorker.*"

SUBSCRIBE FOR IT AS A MEASURE OF ECONOMY.

SUBSCRIBE NOW!! A $4.00 PAPER FOR $2.00 PER ANNUM. NO CLUB PRICES.

It will interest and instruct every member of the household, and it is the earnest desire of the management that it shall in every way prove worthy of the unqualified trust and respect of its readers.

"*The Rural New-Yorker is not afraid to tell the* TRUTH *in the interests of Agriculture and Horticulture, no matter whose individual toes it treads upon.*"

PETER B. MEAD, Ed. *Horticulturist.*

"*The crop specials of the Rural New-Yorker are invaluable to the country.*"

JAMES M. THORBURN & Co.

All novelties are tested at our Experiment Grounds, and reported upon impartially.

Every family that owns or hires a square rod of ground needs the *Rural New-Yorker*, and will be repaid ten-fold by its trustworthy advice. Such is essentially the testimony of thousands throughout the country.

The *Rural New-Yorker* is conscientious, alive, practical. It is acknowledged by leading men to be

THE FIRST AMERICAN AUTHORITY IN ITS SPECIAL FIELDS OF INQUIRY.

For the Country, Village and City; for everybody that loves his home and desires so to elevate agriculture and horticulture that they shall be recognized as the noblest pursuits of men; for the market gardener, the florist and nurseryman, the fruit grower, the small fruit culturist; for the largest farms, the smallest flower plots; for the herdsman, the dairyman, the apiarian, the scientist, everywhere. No sectional prejudices.

FARM AND HORTICULTURAL GROUNDS OF 82 ACRES WORKED IN THE INTERESTS OF SUBSCRIBERS.

The Free Plant and Seed Distributions have been worth more to Subscribers than the subscription price of the Paper.

It will aid you to make and to save money. It will tell you what new varieties of seeds and plants to select without regard to advertising interests.

Special Departments devoted to the News of the Week, to Women, Domestic Economy, to Religious Matters, Fashions.

Trustworthy MARKET REPORTS FROM ALL CENTERS a specialty.

THE COMPLETE NATIONAL FAMILY JOURNAL.

Address, THE RURAL NEW-YORKER, 34 Park Row, New York.

1881.

PREMIUM LIST

OF THE

RURAL NEW-YORKER

The Most Popular Rural Journal in America.

The only paper that Owns and Operates an Experiment Farm and Horticultural Grounds in the interest of its Subscribers.

31st year of its age---4th year of its present Management

Valuable Premiums offered to all who assist in increasing its Circulation for 1880-81.

THE MOST LIBERAL PREMIUM LIST YET OFFERED.

All Readers and Agents are Solicited to examine it carefully.

GENERAL INSTRUCTIONS.

Any respectable person may act as agent.

Send subscriptions as fast as taken (with exact amount, viz., $2.00), and if seeds and plants are wanted by subscriber, send six cents additional *for postage on seeds*, or the subscriber himself may apply for plants and seeds.

Old and new subscribers count in clubs, and they may be sent from different post-offices.

Specimen Copies and Posters supplied FREE on application, for Canvassing purposes.

All premiums are sent at the expense of the agent, unless otherwise noted.

As a rule, we prefer to send articles by express (we consider it safer), but any mailable article will be sent by mail, with or without registry. If the latter, it is at the agent's risk. If the former, the registry fee must accompany the order.

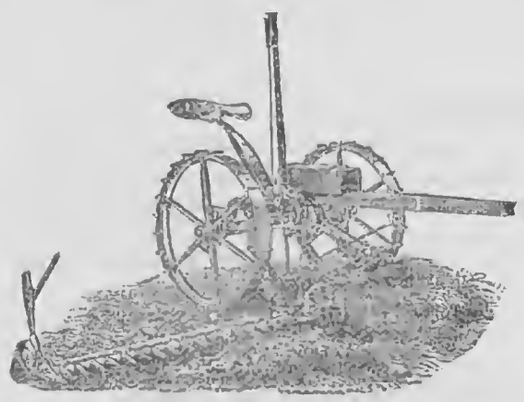
Send money by postal money order, express, check or draft on New York, always payable to the order of THE RURAL NEW-YORKER. If inconvenient to do this, send by registered letter. Every postmaster is *compelled* to register letters. As a rule, money sent by letter without registry reaches us duly. But money so sent is at the risk of the sender.

OUR ONLY TERMS.—Yearly subscription postpaid (52 weeks), $2.00; half-yearly (26 weeks), $1.10. Payments invariably with the subscription. This Premium List holds good until July 1st, 1881.

PREMIUMS.

No. 1—Walter A. Wood's Mower.

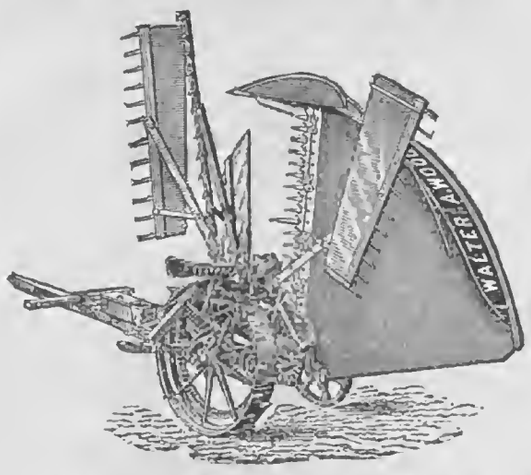
In this machine, simplicity in construction, lightness in weight, symmetry in form and elegance in finish, are combined with strength, durability and efficient working qualities. Needless machinery traps are avoided. It is less complicated, easier to repair, and less liable to get out of order than any other



mower. The one represented by the above illustration has a 4 ft. 8 in. cut, and is fully warranted. The manufacturers of this machine have received a great many medals of honor, both in this and foreign countries and all are well deserved and honestly won. Price of the above mower $85. Given for a club of 100 subscribers at $2 each.

No. 2—Walter A. Wood's Junior Sweep-Rake Reaper.

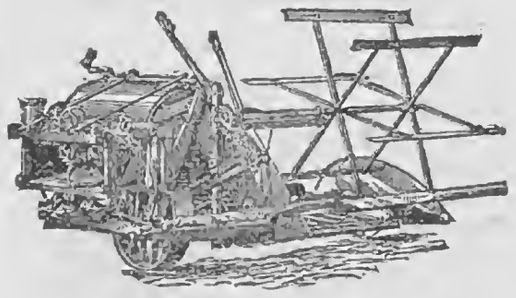
This machine was brought out in Europe in 1872, and in this country in 1875. Since its introduction its success has been rapid and uninterrupted, its sales in that period having reached a very large number, both here and abroad. The steady increase in sales from year to year, and the victory it has won in field contests, demonstrate its merits beyond any encomiums of ours. Taught by practical experience in the field, the manufacturers have strengthened this machine from year to year—the most important improvements having been



made in 1878, by adding the fifth rake, and the automatic device for completely controlling the rakes. There are many valuable points of excellence about this machine, which space at this time will not permit us to mention; but we confidently believe that whoever is fortunate enough to secure one of these machines will feel entirely satisfied with it. We give the Junior with 5 ft. cut; price, $125 for 150 subscribers, at $2 each.

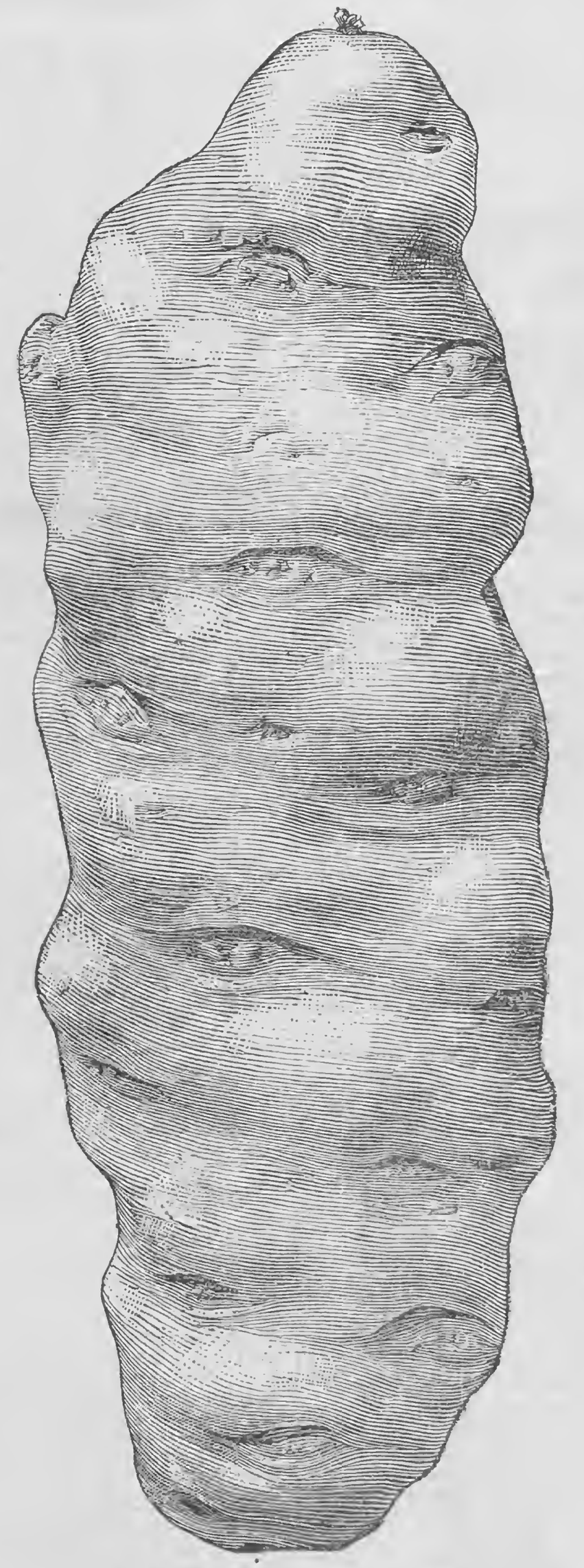
No. 3.—Walter A. Wood's Automatic Twine Self-Binding Harvester.

This machine is put upon the market for 1880 to meet a growing demand for a self-binder that uses twine as a material for binding, instead of wire. It has been thoroughly tested on different kinds of grain and has proven itself a machine with superior qualities as a harvesting and binding machine; and the manufacturers, confident of their superior merits and the de-



mand already for them, have taxed the capacity of their large manufactory in meeting the demand. 4,000 of these machines are already in successful operation and the sales are still increasing. It certainly would seem that *perfection* was finally reached in this harvester, and in offering it to our friends we feel fully confident that whoever may secure this premium will be fully and entirely satisfied with the prize. Price $300. Given for 300 subscribers.

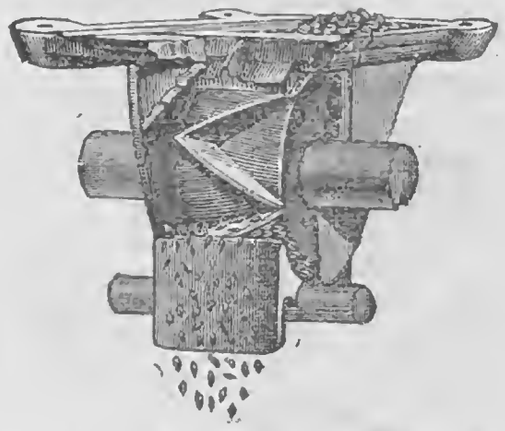
The above machines (Nos. 1, 2 and 3) are supplied to us by the Walter A. Wood Mower and Reaper Co., Hoosick Falls, N. Y., a firm established in 1853, and to-day one of the largest manufacturers in this country. They have steadily increased in business every year since they started, and have made and sold over 350,000 machines during the past quarter of a century. This fact is sufficient guaranty that we are using nothing but the best machines in the market for our premium list.



THE WHITE ELEPHANT POTATO FROM LIFE.—FIG. 305.

No. 4.—Farmers' Friend and Fertilizer Drill.

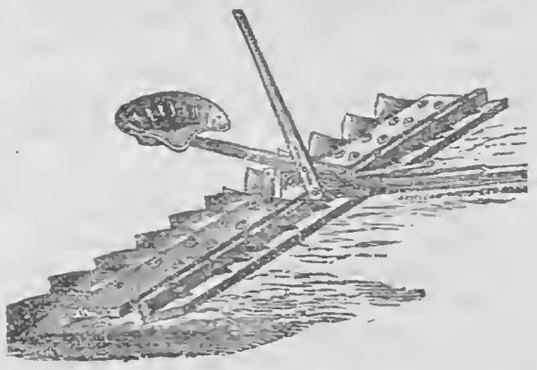
Made by the Farmers' Friend Manufacturing Co., Dayton, O. For 12 years this drill has been before the public, and its essential features remain to-day as when it was introduced. The manufacturers, after years of careful study, put this drill upon the market, and so nearly perfect was it that the principles of its construction first adopted have been adhered to. The illustration shows the seed-cup and its force-feed principle, which, with the patent



cone gearing, enables one to sow any kind of grain in any condition, with perfect regularity. We offer one of these excellent drills, COMPLETE; that is, a nine-hoe, eight-inch drill, with spring hoes, fertilizer and grass-seed attachments, rear hoe-shifter, and land-measurer, for 140 subscribers. Price $115.

No. 5.—Acme Harrow.

Manufactured by Nash & Brother, 22 College Place, New York, and Harrisburg, Pa. This excellent implement, the invention of a man who is himself a practical farmer as well as mechanic, who had previously invented the revolving disk or wheel harrow, seems destined to win a wide popularity. Its sale during the present season has grown rapidly, and testi-



monials, unsolicited, come from every source, highly commending it and praising the workings of this implement.

It is one that combines a clod-crusher, leveler and harrow all in one. It is invaluable for all purposes where a harrow is needed, and is particularly adapted to *hard, inverted sod*, and to ground which has become packed and baked after plowing, as well as to leveling rough land. We have tried one of them on the Rural Farm, and can fully indorse all the manufacturers claim for it. Price $22. Given for a club of 40 subscribers, at $2.

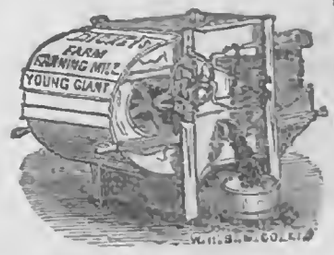
No. 6.—Noyes' Hay Carrier.

Our farmer friends, we are sure, will be delighted with the offer here made. This carrier

has stood the test of many years and has given entire satisfaction. It has been exhibited at a great many fairs and has received many first premiums. It can be used for unloading either within or without the barn, and for removing hay from, as well as putting it into, the barn. It can be used equally as well for stacking in the open field, with a very little expense for the stacking frame. A very useful and practical machine. Price $10. Given for a club of 20 subscribers at $2 each. Made by the U. S. Wind Engine and Pump Co., Batavia, Ill.

No. 7.—Dickey Fanning Mill.

We could hardly have chosen a more useful or practical premium than the one here offered.

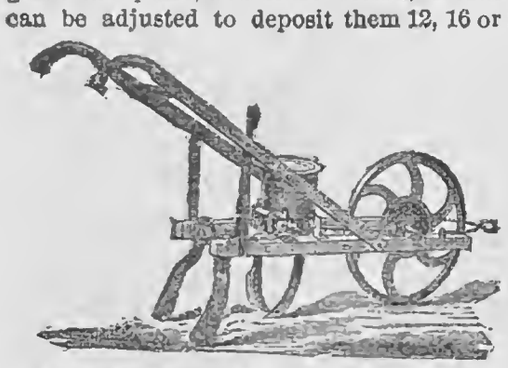


This mill is noted for its simplicity of make, great capacity for separating and cleaning grain, ease of operation and management, its grading and saving qualities, and great durability. In separating oats, wheat, barley, or other grains it has no superior, doing the work both rapidly and

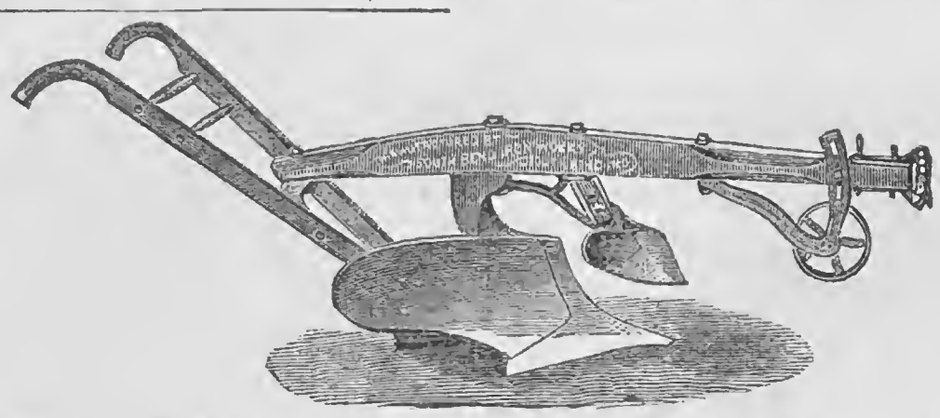
well. We give a No. 1 Farm Fan, sieves 24 inches wide, Price $35, for a club of 60 subscribers. Made by A. P. Dickey, Racine, Wis.

No. 8.—Hoosier Corn Drill.

Of the merits of this drill we can safely speak, having used one on the Rural Experiment Farm during the past season, and we are convinced that no corn-grower can afford to be without at least *one* good corn drill. The drill here shown drops with regularity one grain in a place, and is so arranged that it can be adjusted to deposit them 12, 16 or 20



inches apart, to suit the requirements of various kinds of soils. It also at the same operation does the covering uniformly in depth, and its covering shares can be adjusted to cover deep or shallow. There is economy in its use, from the fact that no thinning is necessary and no replanting either, in case good seed is sown. Price $15. Given for a club of 20 subscribers. Hoosier Drill Co., Richmond, Ind.

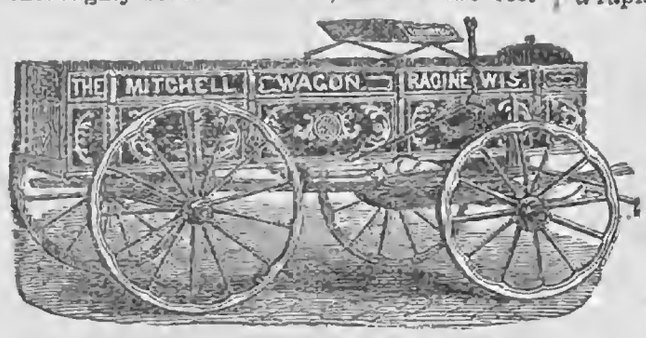


No. 9.—Oliver Chilled Plow,

made by the Oliver Chilled Plow Works, South Bend, Ind. For a general-purpose plow we know of none better adapted to the farmers' use than the plow here offered. It is fully warranted by the above firm, whose reliability is unquestioned. There are now more than half a million of these plows in use and the sales this year will aggregate 85,000. We give Nos. 40 or E1, full-rigged; price $16, for a club of only 32 subscribers, at $2 each.

No. 10.—The Mitchell Farm Wagon.

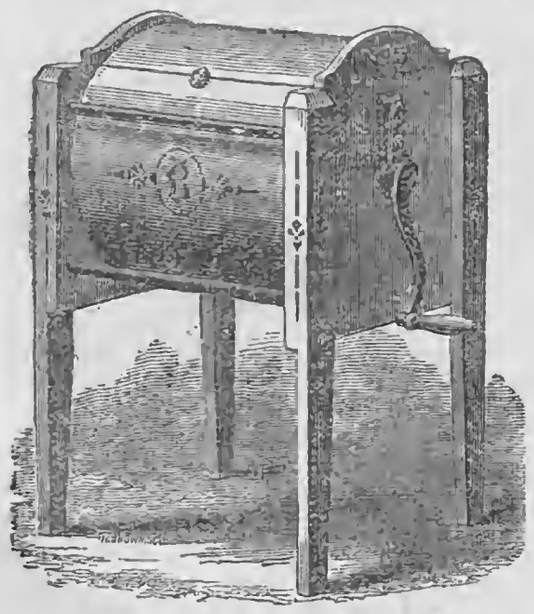
In offering this wagon again this year we hope to please as many of our friends as we did last year. It is certainly a prize worth having, and general satisfaction is expressed by all who have used them. It is made of thoroughly seasoned timber, and of the best



iron and steel. The one we offer has a 3¼x10 inch skein and 1½x9-16 and ⅝ inch tire. It is supplied with steel spring seat, Hurlburt patent brake, top-box, whiffletrees, evener, neck yoke and stay chains; in fact, everything in readiness for service. The price has advanced this year to $110, but we present it for a club of 100 subscribers at $2 each. Made by Mitchell, Lewis & Co., Racine, Wis.

No. 11.—The Blanchard Churn.

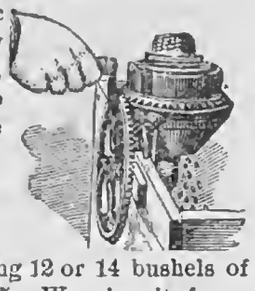
We take great pleasure in offering this churn to our friends. It is classed among the leading



churns of this country, and the manufacturers are among the most reliable. The father and sons have been engaged in making churns for over 50 years, and during that time have become familiar with all the essential points necessary for the construction of a churn such as will meet with the indorsement of the public. This they have accomplished in the new Blanchard, and all who secure a present so useful and reliable as this, cannot help but be delighted with it. We offer *two* sizes. No. 3 (two gallons) for a club of 10, and No. 5 (eight gallons) for a club of 14. Price $6 and $8. Made by Porter Blanchard's Sons, Concord, N. H.

No. 12.—The Right-Speedy Corn-Sheller.

We here offer, at an extremely low rate, a very handy and useful corn-sheller, made by Curtis Goddard, of Alliance, Ohio. It is a new, compact, and effective sheller. It is strongly constructed of metal, and is easily attached to the grain receptacle, be it a barrel, box, or tub, with screws, or by inserting a wedge. Can be used by a man or boy,



and is capable of shelling 12 or 14 bushels of ears per hour. Price $5. We give it for a club of eight subscribers at $2.

No. 13.—The Weed Sewing Machine.

We have used this valuable household article as a premium so many years that it is not necessary for us to dwell upon its superior merits. It is noiseless in its operation, light in running and simple in construction. Of the many machines we have given to our friends as premiums, we have yet to hear of a single complaint. We give the Cabinet style, price $80, for a club of only 50 subscribers at $2. Made by the Weed Sewing Machine Co., Hartford, Conn.

No. 14, 15, 16.—Columbia Bicycle.

Here you have it: a premium that will create a *furore!* Nothing equals it for rapidity and ease of travel. The Bicycle is a peculiar vehicle. Approaches to it had long ago been made in pedimotive and manumotive carriages, and especially in two-wheeled velocipedes. The Bicycle proper has superseded all of them, and stands to-day without a rival as a rapid and easy mode of travel. No horse can compare with it for endurance; no other pastime is half so fascinating, and the exercise is recommended by the medical profession as being the most conducive to health. People have traveled over a common turnpike-road a distance of 100 miles in seven hours, and 1,400 miles in six days.

We offer three styles of this popular vehicle, *all* of which are *fully warranted* by the *Pope Manufacturing Co., Boston, Mass.*

No. 14 is styled the "Special Columbia," half bright, and painted in two colors, the prices range from $117.50 to $132.50, according to size; and we furnish any size desired for 320 subscribers.

No. 15 is styled the "Standard Columbia," half bright, and painted in two colors, prices from $80 to $100, and any size furnished for 240 subscribers.

No. 16 is styled the "Ordinary Columbia," prices from $60 to $75, and we furnish any size desired for 188 subscribers.

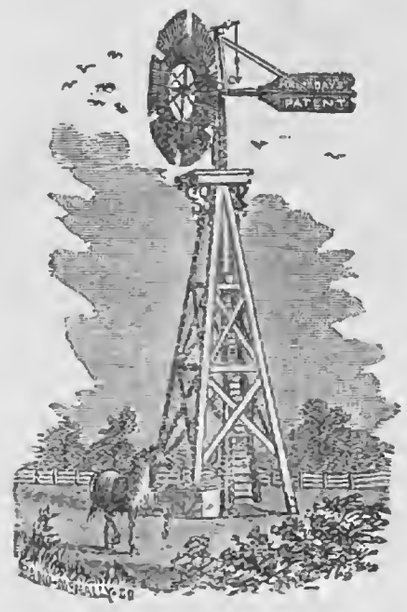
No. 17.—La Dow's Disc Harrow, No. 5,

steel disc; manufactured by The Wheeler & Melick Co., Albany, N. Y. This wheel Harrow is

one of the best and most suitable helps that a farmer can have on his place. We have one of them in use at the Rural Farm, and would not part with it for twice its cost. We offer the above style for a club of 84. Price $35.

No. 18.—Halliday Standard Wind Mill.

Made by the U. S. Wind Engine & Pump Co., Batavia, Ill. The growing popularity and

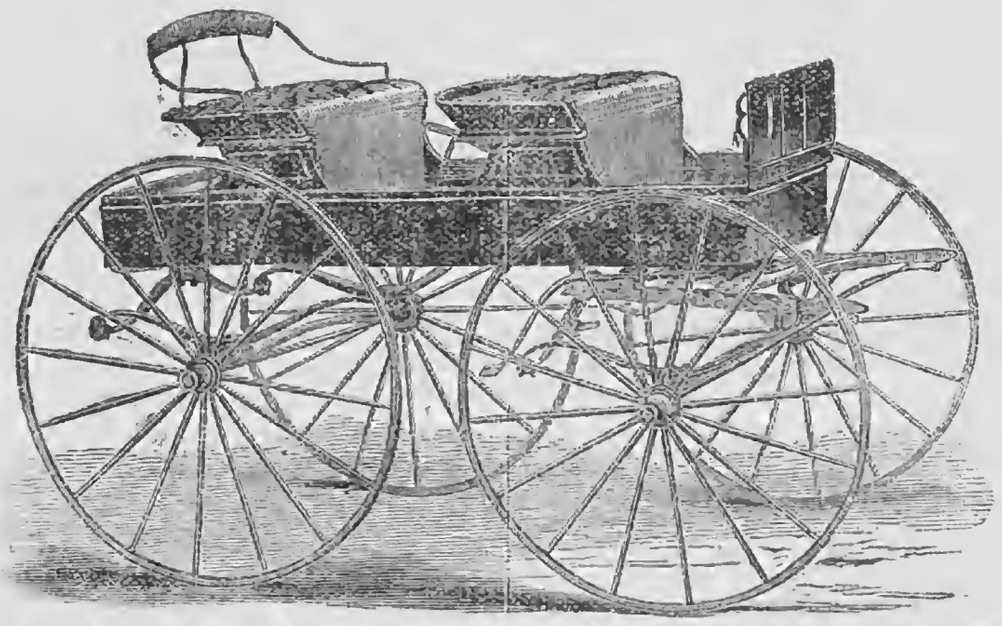


usefulness of wind mills, especially among stock breeders, and their being comparatively inexpensive, with no extra outlay for running them, induce us to offer these mills as premiums. We have chosen the Halliday Standard on account of its many points of excellence and we believe that whoever is fortunate enough to secure one of these premiums will be fully satisfied. We give No. 2, 10 ft. diameter, weight 450 pounds; price $100, for a club of 180 subscribers.

No. 19.—The Philadelphia Broadcast Seed Sower

is made by Benson, Maule & Co., Philadelphia, Pa., and has made for itself a fine record. Its chief merits are an exceptionally large

seed-reservoir, perfect and wide-spread cast, and non-liability to get out of order. The range of its usefulness is noteworthy, it being capable of sowing the largest and smallest seeds. A gauge-plate, handily placed, makes the change instantly for different seeds and quantities. The price is $6, and we give it for a club of 12 subscribers.



No. 20. Mitchell Platform Spring Wagon, with round corner body, seven feet three inches long, nine inches deep, drop end gate. Patent wheels three feet eight inches, and four feet two inches high. Complete, with pole whiffletrees and neck-yoke, two seats with enameled duck cushions, lazy back on back seat. Steps on each side. In order to please a number of our agents who last year made several inquiries about this kind of a wagon, we have arranged with Mitchell, Lewis & Co., Racine, Wisconsin, to supply us with a limited number. Every wagon fully warranted. Price $120. Given for 120 subscribers.

No. 21.—Charter Oak Swivel Plow.

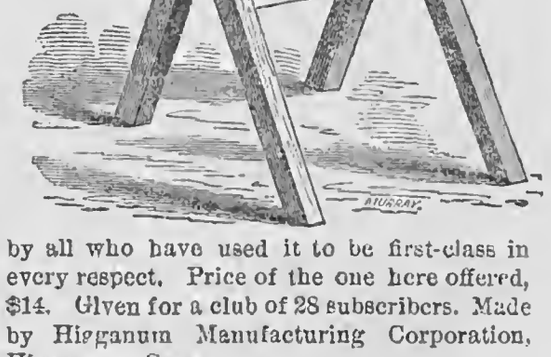
This is one of the best side-hill plows we know of, and will prove a serviceable gift to any one requiring a plow of this kind. It is made by the Higganum Manuf. Corporation, Higganum, Conn. The two-horse plow costs $15, and we give it for a club of 20 subscribers.

No. 22.—Novelty Printing Press.

For a small office, a job office, or a manufacturing establishment, this press is particularly adapted. A young man who is energetic enough to raise a club, can secure this premium which will prove of great value. It can be easily operated, and the profits accruing from job work will very soon pay for it. The regular retail price is $50. We give it for a club of 40 subscribers at $2 each.

No. 23.—Bradley's Self-Dumping Hay Rake.

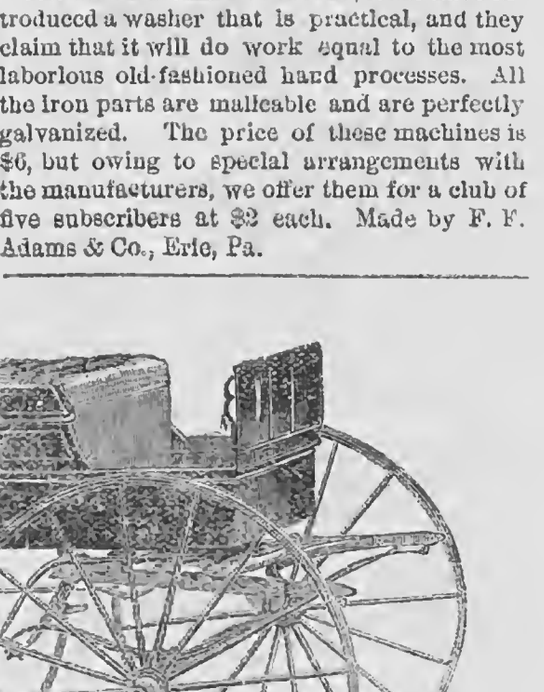
This rake made by Bradley & Co., Syracuse, N. Y., received a grand medal of honor at the



Centennial Exposition. It has many points of excellence, is made of the best material, and fully guaranteed. Price $38. Given for a club of 70 subscribers at $2.

No. 24.—Clark's Root Cutter, No. 2.

Among stock raisers, this is a very popular and valuable implement. It cuts all kinds of roots in shape for feeding, and is pronounced



by all who have used it to be first-class in every respect. Price of the one here offered, $14. Given for a club of 28 subscribers. Made by Higganum Manufacturing Corporation, Higganum, Conn.

No. 25.—The Keystone Washer.

The manufacturers of the Keystone have introduced a washer that is practical, and they claim that it will do work equal to the most laborious old-fashioned hand processes. All the iron parts are malleable and are perfectly galvanized. The price of these machines is $6, but owing to special arrangements with the manufacturers, we offer them for a club of five subscribers at $2 each. Made by F. F. Adams & Co., Erie, Pa.

No. 26. Improved Big Giant Feed Mill,

manufactured by J. A. Field, Son & Co., St. Louis, Mo. This mill is especially adapted for grinding all kinds of grain for home and farm use. It grinds corn and cob together or any

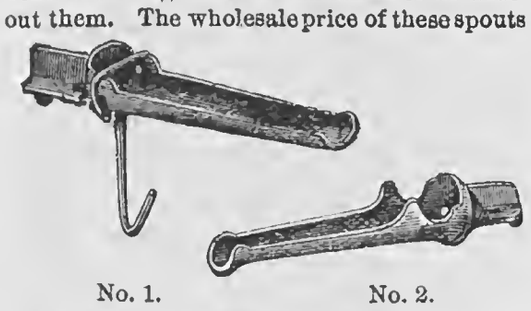
kind of feed coarse or fine. We can recommend this mill highly. No farmer who is engaged in stock raising to any extent should be without a mill of this kind. Price $60. Given for 90 subscribers, at $2 each.

No. 27.—The Planet, Jr., Garden Drill, No. 2.

This drill has a 13-inch wheel and a 7-inch roller. It has a self-cleaning opening plow adjustable in depth by a thumb-nut, and a marker for rows up to 20 inches. It has a capacity of 2½ quarts. The discharge openings all adjust to the same size at once, and admit of the most minute alteration, instead of restricting the operator to a series of holes, none of which may be the size wanted. The covering is done in the most perfect manner by the rims of the carrying wheels upon which the dirt is first thrown by the plow, and from which, as the wheels revolve, it is continually returned exactly on top of the seed with regularity and certainty. S. L. Allen & Co., manufacturers, Philadelphia, Pa. Price $12.00. Given for a club of 24 subscribers.

No. 28.—Post's Eureka Sap Spouts—made by C. C. Post, Burlington, Vt.

These sap spouts are surpassed by no others, and give the utmost satisfaction. They are made from the best quality of iron, and are galvanized. They do not rust or corrode, and will last for generations. They do not injure the tree, and are more quickly adjusted than any others. No sugar maker can afford to do without them. The wholesale price of these spouts



No. 1. No. 2.

is $4.50 per hundred (see cuts No. 1. and 2). It will be observed that No. 1. has a hook for the support of the buckets and No 2. is designed for buckets that have ears to them, which slip over the end of the spout, and are firmly held by the grooves, in the spout. We give 100 of either style of these spouts for a club of 14 subscribers at $2.00 each.

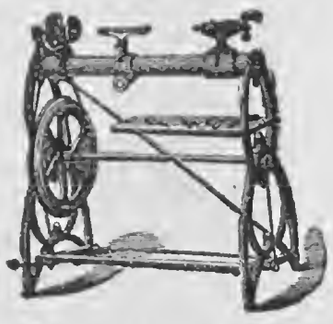
No. 29.—Little Detective Scale.

No. 30.—Union or Family Scale.

These scales are manufactured expressly for us by the Chicago Scale Co., Chicago, Ill. As a measure of economy nothing will pay better than a good, reliable scale. Every farmer should know the weight of his produce before he sells it, and also what he buys. By special arrangements with the above company we are enabled to make a very generous offer on these scales—an offer which will, we think, put them within the reach of every one. Price of No. 29 is $3. and we offer it for eight subscribers. Price of No. 30 is $14. and is given for a club of 20 subscribers.

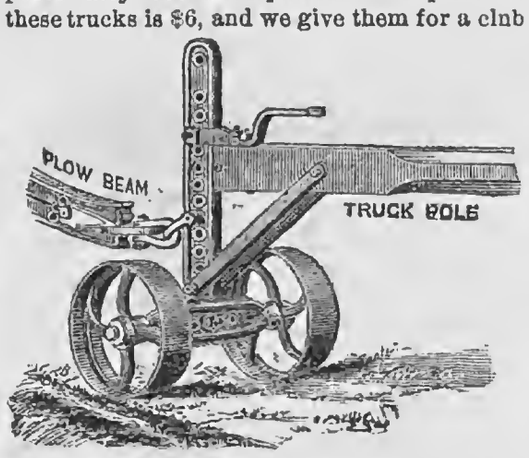
No. 31—Marsh Cylinder Foot Lathe.

This is the most perfect combined machine we have ever seen, and is made in the most finished and workmanlike manner. Its great merit lies in its capacity for doing so many different kinds of work. With this lathe a farmer is in a measure independent of the machinist, and the boys may acquire a familiarity with working in metals and wood, that will be of service to them in any station of life. Price, $52.50. Given for a club of 50 subscribers. Made by The Battle Creek Machine Co., Battle Creek, Mich.



No. 32—Harris's Farm Truck.

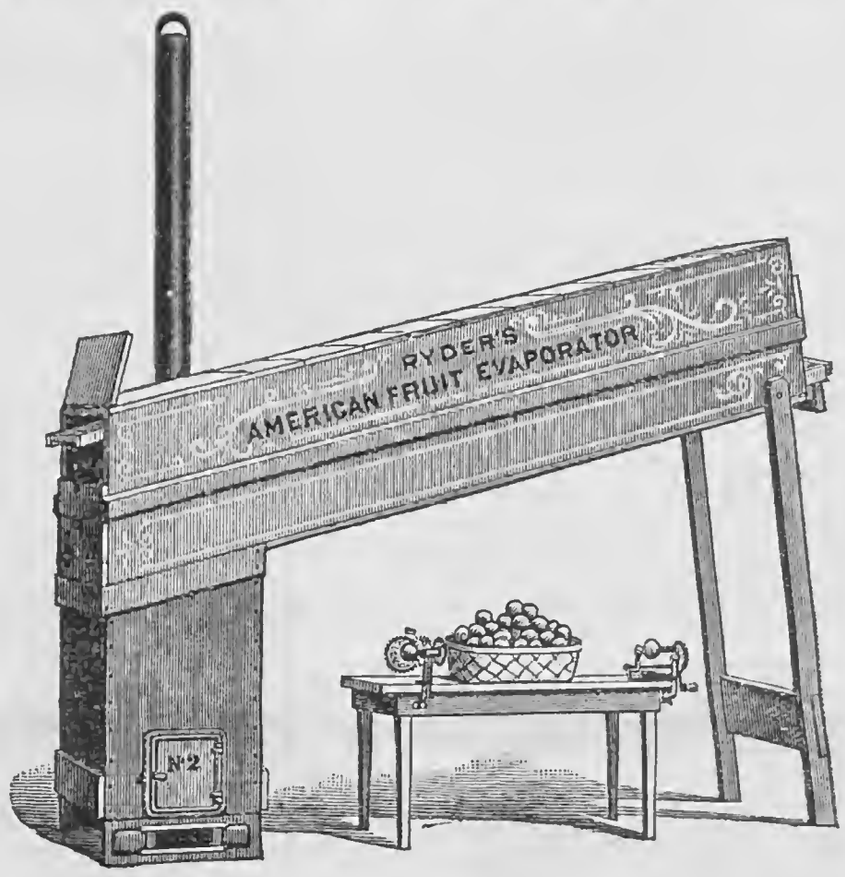
Every farmer who values economy of labor will appreciate the above premium. These trucks have been tested on our Experiment Farm, and for practical and convenient purposes they are unsurpassed. The price of these trucks is $6, and we give them for a club



of 12 subscribers, at $2 each. Made by Saxton & Amidon, Buffalo, N. Y.

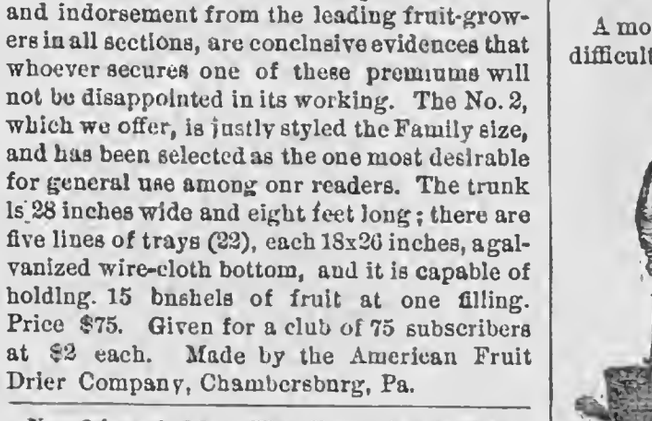
No. 33.—Ryder's American Fruit Drier, or Pneumatic Evaporator.

During the past year our readers from all sections of the country have besieged us with inquiries about Fruit Driers. So numerous have they become, and so popular is the idea of drying fruit by pneumatic processes, that we have decided to use them for one of our premiums. In selecting the above drier we have made choice of one which, from personal inspection, we know to be all that is claimed for it. Its triumphs and first premiums at agricultural societies, its competitive record and indorsement from the leading fruit-growers in all sections, are conclusive evidences that whoever secures one of these premiums will not be disappointed in its working. The No. 2, which we offer, is justly styled the Family size, and has been selected as the one most desirable for general use among our readers. The trunk is 28 inches wide and eight feet long; there are five lines of trays (22), each 18x26 inches, a galvanized wire-cloth bottom, and it is capable of holding. 15 bushels of fruit at one filling. Price $75. Given for a club of 75 subscribers at $2 each. Made by the American Fruit Drier Company, Chambersburg, Pa.



Nos. 34, and 35.—The Pennsylvania Lawn Mower, Manufactured by Lloyd, Supplee & Walton, Philadelphia, Pa.

We offer two sizes. No. 34 has a 14-inch cutter, and an eight-inch wheel. Easily operated by a lady, as the weight is only 36 pounds; Price $20, and we give it for a club of 48 subscribers, at $2. No. 35 has a 16-inch cutter, weighs 38 pounds. Price $22. Given for a club



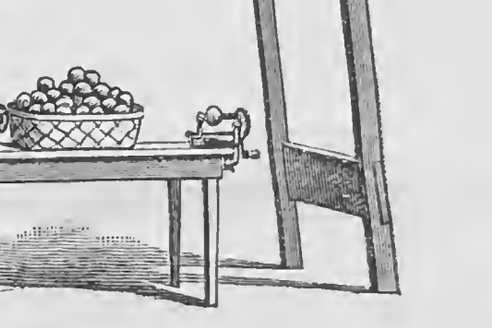
of 53 subscribers. These mowers run very easy, cut longer grass, have no springs to get out of order, and are very durable. Report of Pennsylvania State Agricultural Society says, "it will, we believe, do the work better with less labor than any other mower." The popularity of these machines, and the well-known reliability of the manufacturers, will, doubtless, be sufficient guarantees of their merits, and make them a very popular premium, and one our friends will be much pleased with.

No. 36.—The Kelsey Printing Press.

We know of nothing that will please the young people more than this premium, and we place it within the reach of every one. The bed-plate is 3x5 inches, admitting anything as small as one line of type or as large as a postal card. Metal "rules," inking roller, two boxes of ink, one of lye, etc., go with each press. Price $10. Given for a club of 6 subscribers at $2. Made by Kelsey & Co., Meriden, Conn.

No. 37.—Matthews' Seed Drill.

This is one of the best known garden drills. It will open a furrow, drop seed accurately the desired depth, cover it, lightly roll it, and while performing these operations mark the next row. It sows with an evenness and



rapidity impossible for the most skillful hands to do. It will sow all the varieties of beet, carrot, onion, turnip, parsnip, sage, spinach, sorghum, peas, beans, &c. The drill is complete in all its arrangements, and very durable. Twenty-eight subscribers, at $2.00 each, will obtain one of these drills. Made by Everett & Small, Boston, Mass.

No. 38.—The Aquapult.

A more useful machine than this it would be difficult to find. It can be used as a fire engine,

portable force pump, sprinkler, window washer, bug destroyer, etc. The method of using it is shown by the illustration. It will throw water forcibly against a 3nd-story window or on roofs that do not exceed that hight. It will pay for itself in one season, if used only for sprinkling the garden and lawn, and every one that has not one of these useful machines should set to work at once and secure enough subscribers to entitle him to one. Price $9. Given for a club of 10 subscribers at $3 each. Made by W. & B. Douglas, Middletown, Conn.

No. 39—A Set (2) of the Rural Telephones.

These telephones are made for us by Prof. W. R. Brooks, of Phelps, N. Y. They are considered reliable, durable and perfect instruments for conveying the human voice over lines varying from 50 to 5,000 feet. We give two sizes. A set (two telephones) of size A. will be given for a club of five subscribers. A set of size B. for a club of eight subscribers. Use size A. for short distances and size B. for long distances.

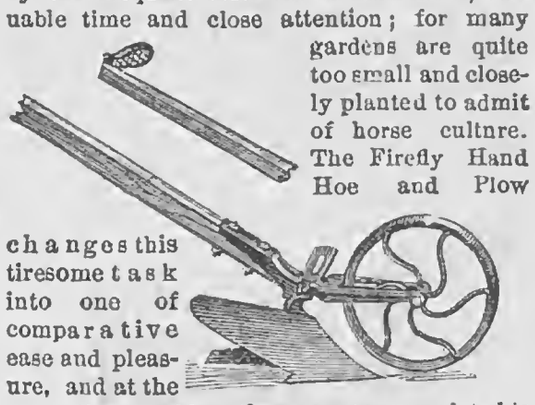
No. 40.—The Winger Oscillating Farm Mill.

This small grist mill is an attachment for windmills. Where one possesses a windmill or horse power this can be used to great advantage. The smaller ones can be run by hand and are extremely economical. It is

claimed to have improvements, such as having the grinding wheel in the center, making four instead of two grinding surfaces. The wheel and case are chilled cast-iron. It can be taken apart without trouble. Its price is $20, and it is made by the Stover Wind Engine Co., Freeport, Ill. Given for a club of 32 subscribers.

No. 41.—Allen's Firefly Hand Hoe.

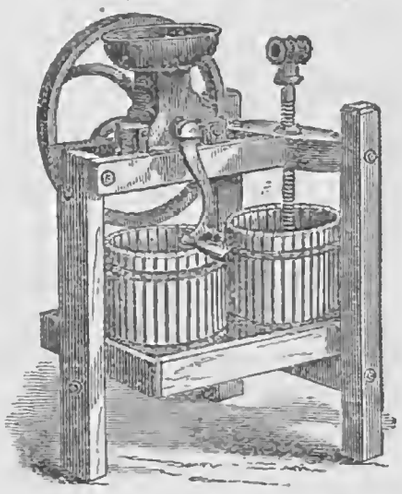
A garden that is well kept, is kept so only by the frequent bestowal of hard labor, valuable time and close attention; for many gardens are quite too small and closely planted to admit of horse culture. The Firefly Hand Hoe and Plow



changes this tiresome task into one of comparative ease and pleasure, and at the same time enables the user to complete his work far better and in one-sixth of the usual time. The furrows for beans, corn, peas and potatoes can be opened by it, and afterwards covered neatly. Price $4.00. Given for a club of seven. S. L. Allen & Co., Philadelphia, Pa.

No. 42.—Farmer's Favorite Cider Mill, No. 1.

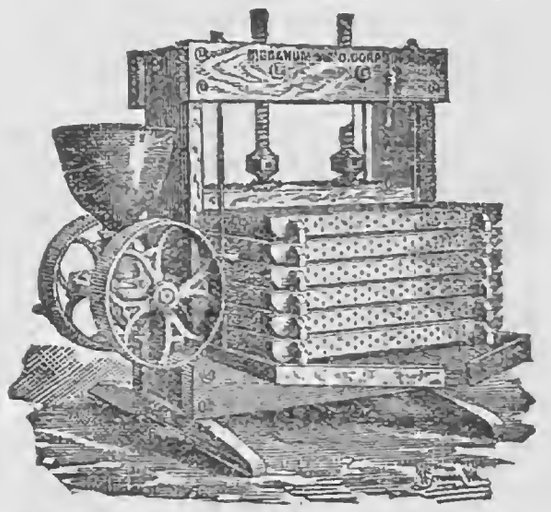
The cut represents the *family mill*, which has now been on the market for five years past, and is pronounced to be the best, simplest and most perfect mill built. The grinding apparatus is so made that it does not slice and cut the fruit, and leave it in hard lumps,



but thoroughly crushes and grates it, so that every cell is broken and a fine pomace produced. Can be taken apart in two minutes, and thoroughly cleaned and replaced without any trouble, and is capable of grinding ten bushels of apples per hour. Price $22. Given for a club of 44 subscribers. Manufactured by Higganum Manufacturing Corporation, Higganum, Conn.

No 43.—Farmer's Favorite Mill and Press Combined,

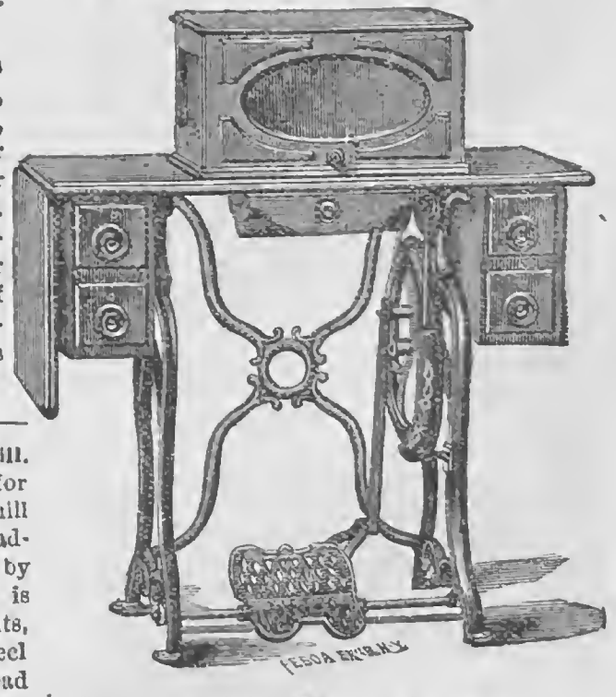
made by the same manufacturers, and designed to be run by hand or power, as per



above cut; will be given for a club of 125 subscribers. Price $75. Made by Higganum Manufacturing Corporation, Higganum, Conn.

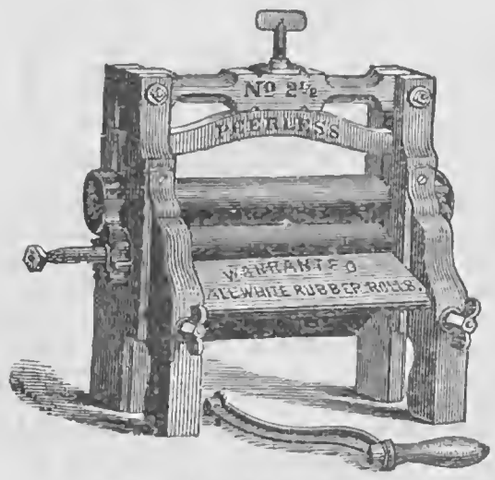
No. 44.—The Victor Sewing Machine.

The style here shown is the same machine



that once sold for $55. Having purchased a quantity of them, we purpose to put them at a price within the reach of every family who are in need of this valuable household

article. Ladies especially will be greatly interested in this extremely low offer, many of whom can secure enough subscribers among their immediate friends to secure a lock-stitch, shuttle sewing machine. We will send it to any person who will furnish us with 20 subscribers, at $2. The retail price now is $37.50. This is equivalent to our paying $1.87½ for each subscription, and can only be offered at this very low rate from the fact of our having purchased a quantity of them at one time. Made by the Victor Sewing Machine Co., Middletown, Conn.



No. 45.—The Peerless Clothes Wringer.

Who can afford to do without a clothes wringer, when one can be obtained so easily? Any competent person, male or female, can secure one of these labor-saving machines by one day's canvassing for the RURAL NEW-YORKER. We have selected size No. 2, believing it to be best adapted to general family use. Its finish is perfect; it has a strong frame, white rubber rolls, metal journals, patent crank and tub fastenings, and everything to make it a first-class wringer in every respect. It is made and sold by the Pecriess Wringer Co., of Cincinnati, and costs $8. We give it for a club of six subscribers, at $2 each.

A Family Premium,

No. 46.—Charter Oak Stove has an Oven 19 x 20 inches, with full set of trimmings as follows, 1 Wash Boiler, 1 Coffee Boiler, 1 Steamer and Cover, 1 Pot Cover, 1 Iron or Tin Tea Kettle, 1 set (4) Bake Pans, 1 Joint Pipe, 1 Pot, 1 Kettle, 2 Skillets or Spiders, 1 Iron Heater, 2 Cake Griddles. Packed and delivered free of charge on board any steamboat, or at any depot in St. Louis. The above stove can be used with either Hard or Soft Coal. When a stove is preferred to be used with wood only, a corresponding size will be sent trimmed as above. An illustrated circular giving full description of these celebrated stoves will be sent to any one who applies to the manufacturers Made by the Excelsior Man'f. Co., St. Louis, Mo. Price $35. Given for 44 subscribers.

No. 47.—Hand Drill, No. 4.

A drill stock eight inches in length, and weighing eight ounces. It is made of iron with rosewood handle, and brass chuck for holding the drill points. This chuck is made on a new plan and it centers and holds the drill perfectly. With each drill stock we send a box containing six superior drill points of various sizes. A more serviceable tool for the farm or workshop could not be given. Price of stock and drills 50 cents. We send it for a club of two subscribers at $2 each.

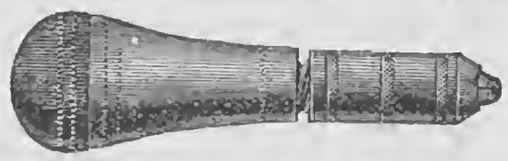
HAND DRILL. NEW ROGERS SAW.

No. 48.—The New Rogers Saw

This saw, with all the improvements that ingenuity can suggest, is without doubt one of the most complete and best saws made for the price asked. The entire framework is made of iron, painted and japanned black, and ornamented with red and gilt stripes. The arbors, etc., are made of steel, and are all carefully gauged and fitted to their bearings. The arms and pitmans are of the best selected *ash*. All parts made to interchange. In fact it is made throughout to *last* and to give entire satisfaction. We have used many of them for premiums, and they have given universal satisfaction. Price $4. Given for a club of 10 subscribers.

No. 49.—Patent Adjustable Tool Holder.

These tool holders have stood the test of many years, and are fully warranted. The handles are hollow with twenty cast-steel tools,



hard maple handle, with lignumvitæ leap, and adjustable steel chuck. Will hold anything from a cambric needle to 8-inch mill file. Price $1. Given for a club of 3 subscribers.

No. 50.—Family Grind-Stone.

So far as we know this is the first foot-power machine that is fully adapted to the wants of families for household work, or of mechanics for grinding small tools. The stone is of the best quality, and runs perfectly true. The emery wheel is the same size as the stone, and double-coated on the side and rim with best Wellington Mills emery, and can be taken off when not in use. For grinding carving-knives and all light tools and for polishing cutlery this machine is perfect. Price, including box, $4. Given for a club of eight subscribers. Premiums 65—71 are made and supplied to us by the Miller's Falls Co., 74 Chambers St., N. Y.

No. 51. Palace Organ.

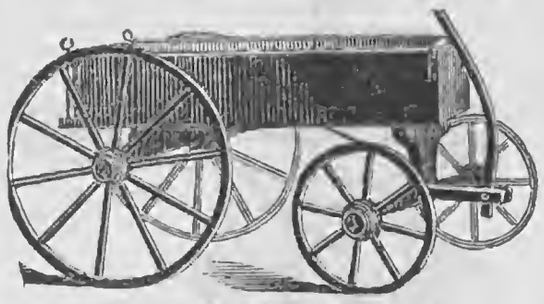
The Loring & Blake Organ Co., Worcester, Mass, supply us with this organ. In selecting a suitable instrument of this class to offer as a present, we were guided by the advice of musical friends, and the style we give is thought to be exactly suited to the requirements of the country home. The cut below shows the style of the case which is comparatively plain in appearance, which is a positive advantage

from a musical point of view, as the light, resonant case secures a peculiarly sympathetic quality of tone that is the perfection of accompaniment for solo singing. This organ is furnished with three sets of reeds—one of twenty-eight notes and two of thirty-three notes each. The power is sufficient to fill any ordinary room completely and it will lead a fair-sized chorus without difficulty. The five stops—diapason, melodia, vox celeste, tremelo, and forte, with the patent knee swell, produce a fine combination of musical effects. Price $180. Given for a club of 150 subscribers at $2.00 each.

No. 52—The Tally-Ho Perambulator with a Valise Top.

The above cut represents the style of carriage here offered. It is well made, handsomely finished, and durable in all its parts The attractive feature is the valise top which

is constructed in such a manner that it can be moved backward and forward, thereby shielding the child from the sun's rays without obstructing the air; or it may be opened and as if by magic, curtains are revealed ready to be drawn down for protection from cold or dampness. This is a vast improvement upon the old style of perambulators and should be received with exceeding joy. Ladies could not better employ their time than in soliciting the needed number of subscriptions to obtain it. Price $10. Given for a club of 24 subscribers.



No. 53.—Boys' Express Wagon.

This is constructed with iron axles and heavy welded tire wheels. It is 16x33 inch body, has good-sized wheels and the front ones turn under the box; is well made throughout which of course, combines strength. The possession of one of these satisfies many a boy's ambition. It is a toy which is both useful and amusing. Price $5. Given for a club of 12 subscribers.

No. 54.—Velocipede. This is suitable for boys from the ages of 6 to 9. Its front wheel is 22 inches and has an iron hub; the wheels are oval tired and the handles tipped. It is upholstered with a finely-stitched leather saddle, with wood parts painted and ornamented. Exert yourself to obtain the needed number of subscriptions and make some child happy in its possession. Price $6. Given for 14 subscribers.

No. 55.—Bicycle. This is an excellent gift to the young readers of the RURAL. Beauty and strength have both been considered and

combined in its construction. It has a 36-inch front wheel; is a suitable size for boys or young men from 13 to 18 years. What boy would not canvass the country for subscriptions when such a prize is awaiting the fruits of his labor? Price $15. Given for a club of 36 subscribers.

All these premiums from number 52—55 inclusive are from the well-known establishment of C. W. F. Dare, No. 47 Cortlandt St., New York. There have been no pains spared to make them perfect and they are fully warranted.

No. 56.—ONE DOZEN CELLULOID-HANDLE TABLE KNIVES. Price $10.25. For a Club of 18.

No. 57.—ONE DOZEN CELLULOID-HANDLE DESSERT KNIVES. Price $9.25. For a Club of 17.

No. 58.—ONE DOZEN HARD RUBBER-HANDLE TABLE KNIVES. Price $8.75. For a Club of 14.

No. 59.—ONE DOZEN HARD RUBBER HANDLE DESSERT KNIVES. Price $8.25. For a Club of 13.

No. 60.—ONE CARVER, FORK AND STEEL CELLULOID-HANDLES AND PATENT REST. For a Club of 11.

No. 61.—ONE CARVER, FORK AND STEEL, HARD RUBBER-HANDLES AND PATENT REST. For a Club of 8.

No. 62.—Child's Set in Case, consisting of knife, fork and spoon—all heavily plated and very handsome. Price $3. Given for a club of six.

No. 63.—Same as above on card instead of case, and with a lighter plating. Price $1.50. Will be given for a club of three subscribers.

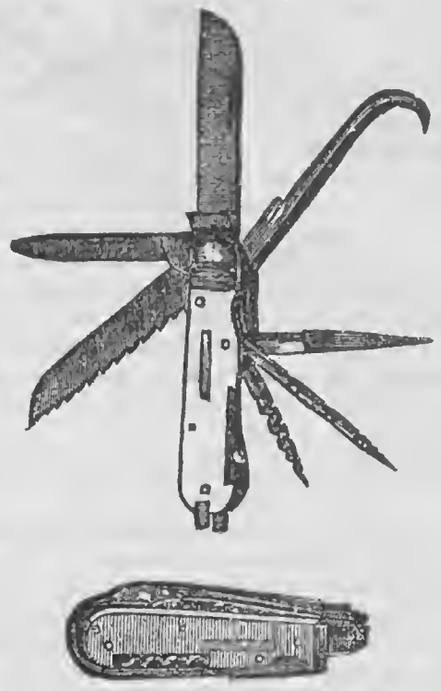
No. 64.—A very nice nut-pick. Price 75c. Given for two subscribers at $2 each.

All of this very excellent cutlery (including No. 65) has been selected for us by the Meriden Cutlery Co., and represents the cream of their manufacture in this particular class of goods. Their reputation is not confined to this country alone, and the articles are perfect in every respect. The Celluloid is a substance that resembles, and is an improvement upon ivory, as it does not turn yellow with age, and is nearly indestructible.

The Hard Rubber makes an excellent handle, as it is impervious to heat, and will bear the hardest usage, with the least appearance of wear.

No. 65.—Multum-in-Parvo Pocket-Knife.

Nothing in the way of knives combines as many conveniences as the one shown in the illustration. Open, it is a magazine of tools; shut, it is as compact and as neat in appearance as could be desired. As its name suggests, it is much in little. The engraving shows the parts of the knife, except the very effective screw-driver hidden by the opened large blade. The Saw is double-toothed, and will cut an inch board, saw off a good-sized stick, cut a notch, etc. The Hook is used to lift a stove-cover, pry open sundry things, clean a horse's



hoof, etc. The Punch makes holes in harness, wood, etc., which can be enlarged by its sharp corners. The Gimlet and Corkscrew are convenient, of course. The Tweezers and long Pointer, or Brad-awl, drawn from the end of the handle, often come into use. The back of the Hook makes a good Hammer for tacks, and small pounding. The inside of the Hook forms a small Nut-cracker. All inclosed in a compact white handle, the whole weighing only two ounces. Given for a club of 8.

No. 66.—One Dozen Silver-plated Medium Forks. [Price $10.] For a club of 16.

No. 67.—One Dozen Silver-Plated Table Spoons. [Price $10.] For a club of 16.

No. 68.—One Dozen Silver-Plated Tea Spoons. [Price $6.] For a club of 8.

No. 69.—Silver-Plated Fruit Knife. For a club of 5.

The forks and spoons offered above are especially commendable for beauty of design, (the style illustrated, named the "Niagara," is one of the most recent patterns), and the thorough and *honest* manner in which they are made. Electro-plating, like charity, can be made to cloak any amount of fraud, and it is only in the *reputation* of the manufacturer that the purchaser has any guarrantee that the article is as represented.

The process of electro-plating with silver is quite simple. The articles to be coated with the film are placed in a "bath," which is composed of double cynadide of silver and potassium, held in a wooden vat. The articles are hung by copper wires from brass rods, and then the connection is made with the battery, and after about an hour the process is completed. Almost any kind of metal may be thus coated; hence it may be seen that the worth of the goods depends entirely on the honesty of their maker. We have always been extremely careful to select our silver-ware premiums from those only whose reputation is unblemished, and we have had our reward in the satisfaction expressed by our friends.

No article of this character receives such constant hard usage as forks and spoons, therefore it is of the first importance that the metal *underneath* the silver coating should be thoroughly adapted to its use. These articles are from the well-known house of Hall, Elton & Co., Wallingford, Conn., whose forty years of experience are a substantial guarrantee of manufacturing the quality of the premiums above offered.

No. 70.—Silver-Plated Service of six pieces, comprising Tea, Coffee and Hot-Water Urns, Cream Pitcher, Sugar and Slop Bowls. Price $48. For a club of 48.

No. 71.—Tete-a-Tete Service of four pieces. Price $23. For a club of 23.

No. 72.—Ice-Pitcher Price $14. For a club of 13.

No. 73.—Cake Basket. Price $9. For a club of 5.

No. 74.—Pickle Castor. Price $5. For a club of 5.

No. 75.—Butter Dish. Price $6. For a club of 6.

No. 76.—A Set (2) of Flower Vases. Price $8. For a club of 8.

No. 77—Drinking Cup. Price $4. For a club of 5.

No. 78.—A half-dozen Napkin Rings. Price $4. For a club of 5.

This silver plated ware is also from the factories of Hall, Elton & Co. [See Nos. 66 to 78.] The designs are unique and strikingly handsome — the tete-a-tete set notably so. The pickle castor contains two fine cut-glass cruets (large) and a pickle fork. The stand is very ornate. The flower vases are painted on a tinted porcelain surface. The subjects are artistically treated and the effect is imposing. In short, the entire selection is one of the finest we have ever offered as premiums, and the articles are given for very small clubs in proportion to the value of the premiums. As serviceable presents nothing can be nicer than this ware.

No. 79.—Gentleman's Stem-Winding Gold Hunting case Watch.

No. 80—Same watch as above, with key winding attachment.

No. 81.—Lady's Gold Hunting-Case, Stem-Winder.

No. 82.—Same as above, with key winding attachment

These watches are of the celebrated Borel & Courvoisier make and are supplied direct to us by their agents in New York, Messrs. Quinche and Krugler. We cannot speak too highly of these watches, as they are among the best imported. We have used them for years as premiums and have received many congratulatory letters concerning them. They are full-jeweled, highly finished, and are inclosed in splendidly engraved gold hunting-cases. They were awarded the highest honors at the Centennial for extreme accuracy and perfect workmanship.

No. 79 costs in New York $150 and we give it for 150 subscribers.

No. 80 costs $100, and we give it for 100 subscribers.

No. 81. costs $90, and is given for a club of 90 subscribers.

No. 82 cost $75, and is given for a club of 75.

No. 83.—Silver Hunting-Case Watches.

The works of these watches are made expressly for us by the Hampden Watch Co. of Springfield, Mass., whose reputation for

making accurate time-keepers is thoroughly established. The works are set in coin silver cases, of our own selection. Price $23, given for 25 subscribers at $2 each.

No. 84.—The Monitor Clock.

At last we have secured the *gem* of all clocks. There is but one that is good enough to be related to it, and we have captured that also. [See No. 85 "The Traveler."] Our illustration is about a quarter of the size of the clock. The Monitor is an accurate time-piece, and an alarm and a daily calendar in addition. The *white* dial is 3¾ in. in diameter; the clock is wound, set and regulated at the back, and the admirable "movement" is inclosed in a seamless copper case, that is stamped out and heavily nickel-plated. The elegance of the design speaks for itself. A club of 7 secures the "Monitor."

No. 85.—The Traveler.

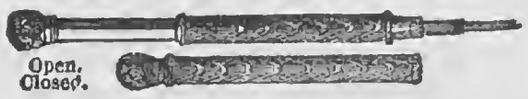
This is a new and elegantly designed clock, with nickel front and back, and the sides of glass, which shows the inside workings of the clock. It has an alarm, and is nicely fitted in a paste-board box. It can be carried in a satchel, when traveling, with no danger of disarrangement. It is also a very nice clock for the house. We present it for a club of 10 subscribers.

The above premiums, Nos. 84 and 85, are made and supplied to us by the Waterbury Clock Company, New York, and the RURAL is the sole paper that can use them as premiums.

No. 86.—Revolving Magic Pencil.

Price $1.50, and given for a club of three subscribers.

No. 87.—Telescopic Pencil.

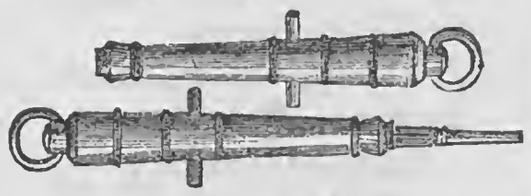


Heavy Rolled plate. Price $5.50. Given for 10 subscribers.

No. 88.—Magic Charm, with Pencil.

Price $1.25. Given for a club of three subscribers.

No. 89.—Cannon Charm for Watch-chains.



Contains Pencil. Price $1.25. A club of three subscribers will obtain one.

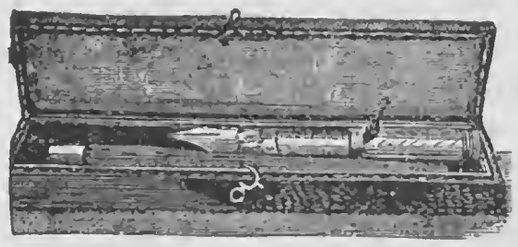
No. 90.—Telescopic Pen and Pencil.

Ebony and gold. Very fine. Price $2 50. Given for a club of five subscribers.

No. 91.—Gold Plate Magic Screw and Pencil.

A very handsome and useful charm. Price $1,25. Given for a club of three subscribers.

No. 92.—Slide Desk, Gold Pen, Ebony and Gold Holder,



With pen to suit the receiver. Price $2.50. Given for a club of five subscribers.

Nos. 86—92 are supplied to us by Messrs. Ludden & Dow, 193 Broadway, New York.

Albums.

For a holiday gift, or for one's own home, nothing is more desirable than a nice album. In making our selection, we have arranged with Messrs. Koch, Sons & Co., No. 156 William St., New York, to furnish us with these goods. This is an old and well established house whose immense variety has enabled us to get handsome and yet low-priced goods, from the very latest patterns and designs; and any one herein offered cannot fail to please. We offer five varieties.

No. 93 is one of the handsomest albums made. Calf-bound with an elegant design of Forget-me-not, on cover; embroidered satin, *scented*, round wire clasp; holds 20 cabinets, and 80 cards, size 8½x10¾. Price $20. Given for a club of 28 subscribers at $2 each.

No. 94 is also bound in calf, with a design of roses on outside, embroidered in satin, *scented*, round wire clasp, and holds 20 cabs. and 40 cards, size 7x9. Price $12. Given for a club of 18 subscribers at $2 each.

No. 95 Turkey Morocco, embossed gilt or silver, round wire clasp, holds 96 cards, two patterns, size 6½x8¾. Price $8. Given for a club of 11 subscribers at $2 each.

No. 96. Imperial ebony, Japanese design, fancy border, round wire clasp, 48 pictures. Size 5¼x6¼. Price $5.00. Given for a club of eight subscribers at $2 each.

No. 100. No. 99. No. 97.

No. 97.—Gent's Double Curb Chain.

Rolled plate; solid gold tips. Price $8. Given for a club of 16 subscribers.

No. 98.—Same as 97,

only lighter in weight. Price $6.50. Given for a club of 12 subscribers.

No. 99.—Lady's Gold Guard.

Rolled plate front, slide and tip. Price $10. Given for a club of 22 subscribers.

No. 100.—Lady's Guard.

Same as above, only heavier. Price $16. Given for a club of 34 subscribers.

No. 101—Is an Elegant Cameo Ring,

suitable for lady or gentleman. Price $5. Given for a club of 10 subscribers, at $3 each.

No. 102—Cameo and Pearl Ring

Latest design, very handsome. Price $6, given for a club of 12 subscribers.

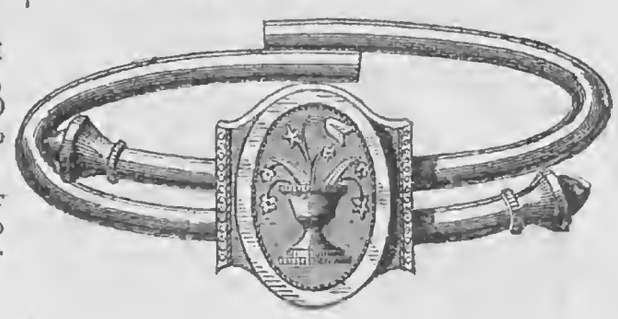
No. 103.—Gent's Intaglio Seal Ring,

an entirely new and beautiful design. Price $12. Given for 24 subscribers.

No. 104.—Lady's Ring.

Two full pearls and ruby. Price $15. Given for a club of 30 subscribers.

No. 105—A Pair of Bangle Adjustable Bracelets.



New and novel. Price $15. Given for a club of 30 subscribers.

No. 106.—Enameled Bracelets,

Price $8. Given for a club of 16 subscribers.

In the selection of this class of goods we have been particularly careful, and have only chosen those articles that are new and useful. For a holiday present nothing is more beautiful than *good* jewelry, and our friends will find nothing here offered that is not true to the description given, and hence need have no hesitancy in making their selections. The stock is from Henry C. Haskell, 13 John Street, New York.

When ordering rings, send a ring of wire of the size required, or a piece of cardboard with a hole cut in it the size of finger, will do. The cuts show the styles, and the prices here given are the retail prices in New York, and Nos. 101—104 are sent free of postage.

No. 107.—Webster's Unabridged Dictionary,

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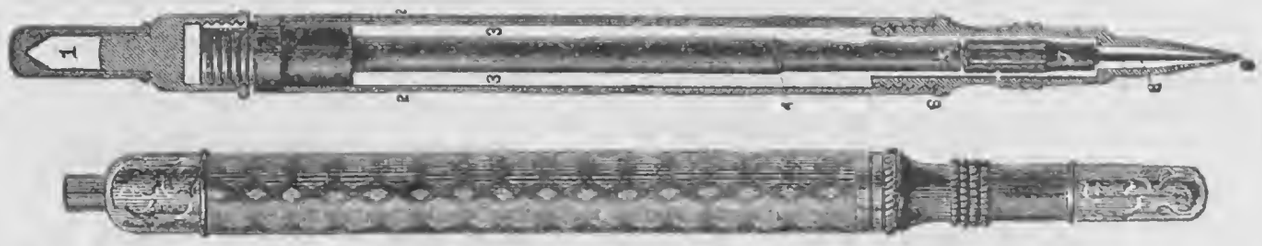

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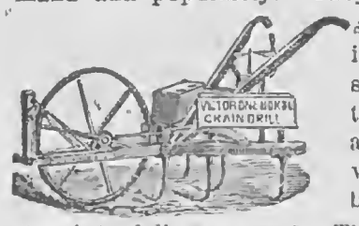

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Literary Miscellany.

TO THE FAIR.

ANNIE L. JACK.

WHY, where are you going to now,
With William, and Robert, and Jim,
With wife and baby all dressed in their best
And old Dobbin in holiday trim?

You never need ask, neighbor Plod,
You surely must be well aware
That this is the farmer's gala day,
We are off to the county fair.

To the fair! Well, some folks can play
While others are forced to work;
I have some late oats to harvest yet
And cannot afford to shirk.

True, your life *is* hard, neighbor Plod,
Since the boys have all gone away;
Had Tom stayed at home when the oats were sown,
They'd have *been in* the barn to-day.

'Tis a pity for boys and girls
When the city's alluring din,
Can charm them away from the dear old home
For the gold they are hoping to win.

There's health, peace, and wealth, on the farm,
And with ours no life can compare;
But young folks and old need holiday whiles
So you see we are off—to the fair.

INMATES OF LESTER HALL.

CHAPTER I.

"BARTON, have you seen Miss Cecil?"

"Yes ma'am."

"Where is she?"

"Somewhere between this and the village, ma'am. She came into the stable half an hour ago to have the mare saddled, and off she went. Took the fence like a bird, Miss Mattie!" the speaker went on, excitedly. "My word, but she is one to ride, is Miss Cecil!"

And the old servant returned to his gardening with a shake of his head, muttering to himself as he trimmed the bed of geraniums on which he was employed, the gleam of excitement dying out of his kindly old eyes.

"Is she alone, Barton, or is my brother with her?" said Miss Lester, shading her eyes from the sunshine, as she stood on the broad stone steps leading up to the heavily-studded hall-door of Lester Hall, a mansion which at one time had been one of the finest, but which now was fast falling into ruin for want of means to repair the inroads of time.

"Miss Cecil is alone, ma'am," answered Barton, raising his head again and touching his old straw hat respectfully. He had been in the family since his childhood, had known the last head in his days of prosperity and reckless prodigality, and he had not merely a proper but an exaggerated idea of what was due to them. "The young master has gone away over the meadows afoot."

FIG. 297.

Miss Lester's beautiful face clouded slightly as she turned into the house again, leaving the bright sunshine and sweet fresh air, and going into the shade and gloom of the grand old entrance-hall, which was the favorite sitting-room of the present representative of the Lester family—a family which had passed its zenith of prosperty over a century ago, and had been going steadily down hill ever since, until "ruined" was the only term which could correctly be applied to it.

Lester Hall was now half in ruins, a mass of crumbling stone, ivy-covered and moss-grown, with quaint round towers dating back to the Saxon period of our history, and oriel windows and quaint peaks of the Elizabethan style of architecture. Birds had built their nests in the chimneys; ivy and holly were mingling in the cleft of the walls; over the great hall-door the family coat-of-arms and motto, carved in stone, were still legible through the leaves of the Virginia-creeper which clustered over it in the greatest profusion. The terraces were moss-grown and uneven, the lawns rough and unecared for.

"One pair of hands could not do everything," poor Barton said ruefully, sometimes, when he surveyed the neglected flower-gardens and parterres.

Still, notwithstanding all its dilapidation, there was a grandeur, a nobility, a picturesque solemnity about Lester Hall, which would have been irresistible to the antiquary or the poet.

Within, the same still calm was distinctly felt. It seemed to a few who entered that lofty, vaulted hall, with its black oak carvings and stained windows, the "dim, religious light," as if no mean thought could assail one within its walls—as if those who lived there must be pure and lofty and stainless. And yet, alas! the annals of the Lesters proved to the contrary, especially the last three or four of the race, who had been reckless and dissipated, wasting their revenues in riotous living, and leaving the estate more and more impoverished at each decease.

It had been thus in a very great degree with the late Reginald Lester, who had tried every imaginable device for spending the few thousands left him by his father. He had gambled, betted and kept race-horses, and married a woman without a shilling, which last was, perhaps, the only worthy action of his whole career, for Martha Daton was good and beautiful; and although she died three or four years before her husband, she had managed to inculcate into her

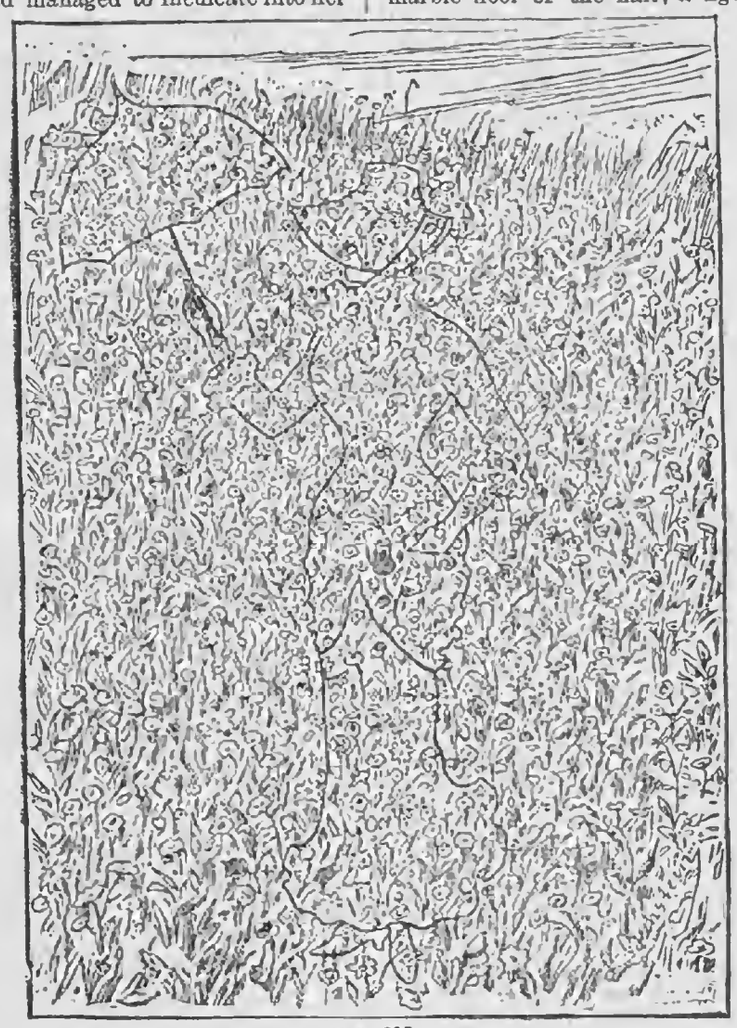

FIG. 298.

children, more especially into the two little girls, whose education was her sole charge, high and noble principles for their future conduct, principles of unswerving truth and persistence in the path of duty, which had been quite omitted by her nobly-born predecessors.

Reginald Lester's death left his children—one boy, Reginald, or Rex, as he was generally called, and two girls, Martha and Cecil—not only fatherless, but well-nigh penniless; for three hundred a-year will not go far in supporting an old family name. But they had no rent to pay, and the household had dwindled down to old Barton and his daughter Fanny, who were steadfast in their attachment to the family, and clung to their diminished fortunes.

The young people lived quietly and within their means, for Martha Lester was at the head of the finances, and she had inherited from her mother a wholesome horror of difficulties, while all that it was possible to dispose of, or sell, or mortgage had been sacrificed already, so that, when the position was faced at Reginald Lester's death, his children knew that it behoved them to be careful.

Unfortunately, Rex Lester had been brought up to no profession, and had not sufficient energy to strike out a path for himself, so that he had nothing to do but idle about the estate, doing a little farming, perhaps, now and then, and keeping the larder well supplied with game during the shooting season.

It was anything but an unhappy life, that led by these young people, although, as I have said, a quiet one. Rex had his gun and his horse; Mattie had her housekeeping and her music. She was an admirable musician and possessed a superb soprano voice; while Cecil had no greater ambition than to sit her horse as well as Rex did, and to be as happy as the day was long. She was the youngest, and at the time my story opens was just fifteen; Mattie was three years older, and Rex was approaching his twenty-first birthday.

A very beautiful but rather delicate-looking girl was Mattie Lester; and as she re-entered the solemn shadowy hall, and passed behind the carved screen which partitioned off a portion of its vast space into a sitting-room, she looked a "fitting divinity for such a temple."

She was about the medium hight, slim and straight, with a wonderful mass of pale golden hair twisted in heavy coils round her head; her features were perfectly regular—her large blue eyes, full of tenderness and sweetness, matching the sweet, tender mouth, about which there was something pathetic and sad, caused in all probability by the loneliness and seclusion of the life she had led.

Her dress, simple in the extreme—almost poor, perhaps—was dainty, and neat, and tasteful, and suited her to perfection; and the soft folds of pale blue linen swept after her with as much grace and dignity as satin or velvet would have done on a less graceful person.

When she entered the sitting-room, Mattie sighed a little, and stood for a moment resting her hand upon the table, lost in thought: then shaking off whatever painful feeling oppressed her, she sat down, drew a large work-basket towards her, and began the homely and prosaic occupation of darning stockings. But however homely, however prosaic her occupation may have been, she made a pretty picture as she sat there, and one which would have delighted an artist.

The heavily-carved oaken chair made a fitting background for her delicate loveliness; the graceful head with its crown of golden braids bent over her work, the slender white hands, the small feet crossed on the stool before her, the large wicker-basket full of needlework. You and I have seen many similar pictures of "interiors" gentle reader, but we never saw a fairer one than the one I have attempted to describe.

Half an hour slipped by without Mattie Lester's solitude being disturbed; the bright slender needle slid steadily through the well-worn socks and stockings, pair after pair was placed on the table, and the pile in the basket was perceptibly decreasing, and an hour had gone by, when there came the sound of a light, quick footstep on the marble floor of the hall; a figure bright with youth and happiness appeared at the door of the carved screen, and Mattie lifted her face with a smile to greet her sister.

"Well, Cecil, and where have you been?" she said, "Over hedges and ditches again as usual?"

"Not exactly. I have been into the village, Mattie."

There was not the slightest resemblance between the two sisters, although, even at fifteen, Cecil's beauty bid fair to equal her sister's. There was nothing pathetic—nothing Madonna-like in the young girl; she seemed full of life, and health, and animation. Her complexion was rich and glowing; her eyes, large, brilliant, and in color of a dark hazel, were shaded by long dark lashes, many shades darker than her chestnut hair; her mouth was beautifully shaped, but the lips had a proud expression, set and resolute. She wore a riding habit of coarse dark blue serge, and a riding-cap to match of home manufacture sat lightly on her clustering hair; and as she came within the screen, she was tapping the skirt of her riding-habit lightly with the slender whip she held.—[To be continued.

For Women.

CONDUCTED BY MISS RAY CLARK.

MY LADY AND I.

WHAT has my lady that I have not?
Wealth and station and power,
A mansion that over-shadows my cot
As a great tree shadows a flower.

Splendid coaches and high-bred steeds,
Statues and paintings rare;
Whatever she wishes, or craves or needs,
She has but to speak—it is there.

Busts and vases from foreign lands,
All that is bought with gold,
Comes at the wave of my lady's hands,
Like a touch of the lamp of old.

Royal jewels and webs of lace,
Like cunningest works of frost,
She pleases her fancy and suits her taste,
With never a thought of cost.

But what have I that she has not?
Oh! what she cannot buy—
Love to brighten my lowly lot,
Love, and a love-lit eye.

Some one who comes when the night falls down,
And brings back glee and mirth,
Who shuts in the home, and shuts out the town,
And sits with me by the hearth.

Some one who lightens the labor load,
Who makes misfortune vain,
And the loveliest baby that ever crowed
And tapped on the window-pane.

Ah! my lady of royal mien,
You may ride in your carriage fine,
But I am prouder, for I am queen,
Crowned by a love divine.

EXPLANATORY NOTE.

In this, our special number, we have been obliged to encroach upon the room usually devoted to the Literary and Woman's departments to satisfy the demand for space for other pressing matter. Fashions, &c., excluded. R. C.

DESCRIPTION OF CUTS.

FIG. 298.—SHADOW LADY.

The prevailing style of dress for ladies, presents them as floriated pictures from "the crown of their heads to the soles of their feet" almost, literally speaking. The flowers scarcely rival them in picturesqueness. When a lady is walking through a field filled with blossoms it is with difficulty that the eye is able to make the distinction. Where is her shadow in the picture?

FIG. 300.—WATCH STAND EMBROIDERY.

FIG. 301.—DETAIL OF WATCH STAND.

This trifle for a bazar is made ornamental by the addition of embroidery. The stand is of black wood and the embroidery is worked on black velvet in three shades of gold silk. The above detail gives a clear idea of the needle-work portion of its construction.

FIG. 299.—DOILY FOR CAKE OR BREAD-BASKETS.

The doily is of art canvas, and measures ten inches square; it is divided into four squares by an insertion of drawn threads. The squares are ornamented with a design worked in cross-stitch, with marking filoselle of one or two colors. The doily is edged with torchon lace.

FIG. 297.—FICHU.

The fichu here represented is of pale mauve foulard, dotted with violet and edged with lace. It is not necessary to follow the above color and material; any soft silk or lace entire may be used in the making of this popular adornment.

A FINE CHILD.

How He Has Been Reared.

I DINED not long ago with a physician's family and as I was an unexpected guest, the dinner was what was regularly served on Tuesdays, boiled corn beef and cabbage, and potatoes, with relishes, tea and dessert. The dinner was served at half past six o'clock and the four children around the dinner table were between the ages of three and ten years. They dined on precisely what their elders did and there was no protest from anybody against their eating whatever they wished. After their dinner was well swallowed they were put one by one into a bath, rinsed off, rubbed off and put to bed. What their dreams were, or how many times they rolled over and cried and moaned during the night that followed is not a matter of record. Perhaps they slept like so many "tops" and were none the worse for their fare. Indeed, unless they were children of such extraordinary stomach power, we should require a census for the decrease of the population for where one child is reared from birth in an intelligent manner, there are fifty that are not. If parents would only act as intelligently as they know, there would be less cause for complaint.

It is questionable if any woman, unless she has been especially educated for the work, is fit in judgment and discretion to be the best sort of a mother before she is twenty-eight or thirty years

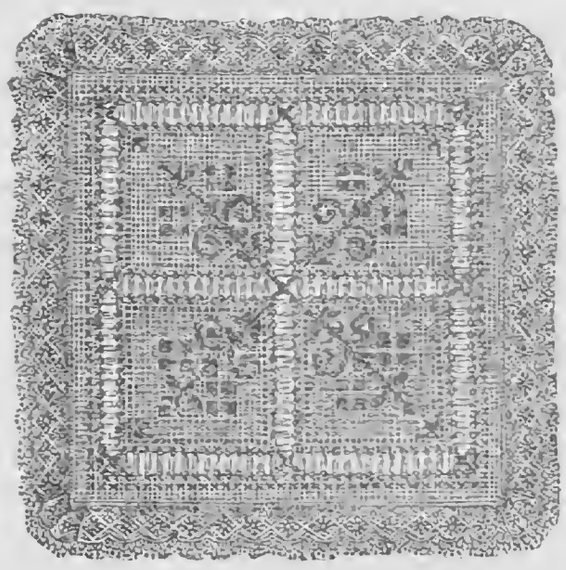

FIG. 299.

of age. Intelligence, and the courage of one's opinions are worth more than experience in the "long run" and "experience" is often well mixed with silly notions and harmful potions as well. The healthiest and happiest child I know, as well as being an extremely beautiful one, is at the time of this writing a little more than three years of age, and as his training has been of an unusual character, I think it worth while to tell the story of the little fellow's three years of life. To begin with, the mother is delicate, the father by no means robust. To them, the birth of a child meant a very serious and earnest matter, and how to give it the best possible hold upon life was made a matter of supreme importance, and, to use an old aphorism, the child "was sent to school before it was born." Regular habits, a select but nutritious diet, and a great deal of out-of-door work dowered the boy with a splendid body, a great bright-eyed, rosy child, who has yet to learn the meaning of suffering.

I have heard the mother say in the matter of dress, that she asked nobody's advice or direction, and wholly followed the guidance of her own judgment. "I tried to put myself in the little fellow's place" and think what would be pleasant or burdensome to me if I were small and helpless." So for the first five or six months (the child was born in the spring time) he wore frocks that merely covered his feet, and his body was never on any occasion burdened with long or cumbersome skirts. He never has had "company" frocks nor a "sash." His clothes, of good material, have ever been of the simplest description, comfort and cleanliness being the two things considered. He wore soft-soled shoes, made by his mother until he was a year old. Since then, his shoes have been generally made to order, and of course without heels. He began to walk when ten months old, and has always been distinguished for his sure footedness, using his feet with great freedom and surety. Before he was a week old, he began to drink from a cup. When he was four months old, his mother began to give

him cow's milk to drink, diluting it with water to about one-third. The quantity of milk was gradually increased until he was six months old when he drank cow's milk undiluted and at eight months he drank no other. He never knew what it was to be "weaned," and he never took his milk from a bottle, his mother regarding a "bottle" as an abomination and entailing a great deal of work. In matter of diet this little fellow's *chief* food has always been milk. In addition to this he has eaten plentifully of fruit—not a day having passed since he had four teeth, that he has not had it in some shape, fresh or cooked. Vegetables of every description that he has liked, simply cooked, he has been allowed to eat freely. Oat-meal mush with milk or cream and a dish of fruit usually constitutes his breakfast. For supper he has bread and milk. If he is constipated, he eats a dish of whole wheat, that has been boiled until soft, which speedily corrects the difficulty. He has a bath every morning, and he has his teeth brushed. He wears shaker flannel chemises the year round of a light quality in the summer time. He seldom wears a hat at any season, rarely a wrap of any description even in winter time, except in riding, and is remarkably free from colds. The absence of hat and coat from his toilette is one of his "freaks"—he detests both.

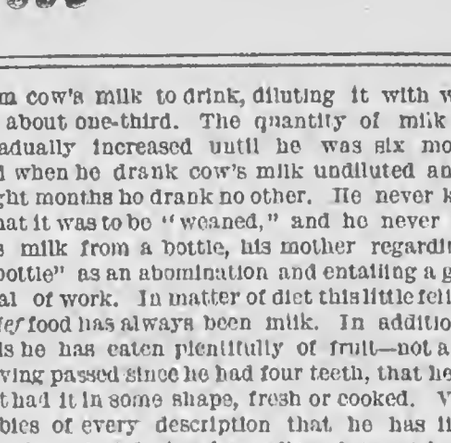

FIG. 800.

Now for the negative part of his diet. He has not been allowed to eat meat, eggs, cake or pastry, fine crackers, raisins, cheese, candy, the skins or seeds of fruit, hot bread, or to "taste" of tea or coffee. Each and all of these articles are absolutely forbidden. He is allowed a small quantity of sugar on berries and oat meal, and he has occasionally, within the last year, eaten of butter. He prefers cream to butter and is allowed all he wants of this as also of good soups. He is taught that he can have meat when he gets his "meat teeth."

When in New York a short time ago, I was telling Dr. James R. Leaming, a very distinguished physician of that city, the method adopted in the training of this child, and he said, "All right, and my advice to his mother is that she withhold meat from his diet until he cuts his meat teeth, which will not be until he is about eight years old." Dr. Leaming then told me in what a high ratio the death rate has been reduced in a Children's Hospital of which he had charge, since meat has been crossed off the list of food for the little ones.

Among other things that the child has *not* had, have been "pokes" and "joltings" from the relations and other people. His mother never allowed him to be tickled and tossed, "boozy-boozled" or kissed on the mouth. "I should not like such things," she argued, and she would not have her child imposed upon. But in his playing he has the greatest freedom. He is well shod for all sorts of weather, has abundant sleep, makes mud pies and molds various things from mud to his heart's content. He constructs most of his own playthings, and learns by heart all the pictures in "Wide Awake" and "St Nicholas." When either of his parents go from home, he expects but one thing upon their return, and that is a kiss, which he counts upon with great glee.

FIG. 801.

Now for the results of this sort of training. The boy has never had a sick day, and with the exception of a cold, never a dull or unwell day. No sleepless nights, no trouble with teething, no fretting, no colic, no headaches, no worms, or troubles of any sort. Never did a child so grow and thrive: his hair full of sunshine, his face a garden of lilies and roses, his eyes bright as stars, his body the perfection of symmetry and strength, his countenance the picture of happiness. It would be difficult to find a match for him outside of England, where the physical development of children is the finest in the world. As might naturally be expected, the mental development of the boy keeps pace with the physical—a masterful little fellow, the leader in play, the captain of mischievous expeditions, very discreet in judgment, strong-willed and persevering, and the most delightful little companion imaginable; when he goes to bed laughing and chattering, nobody feels "relieved," unless it be a "relief" to miss the best, brightest and most radiant thing in the household.

Now, why cannot every child be like unto this one? especially every country child, and it is a wrong to children, that they should struggle up to man and womanhood in a city. It does not seem as if parents realize the immense advantage it is to a human being to have a perfectly healthy body. Money and finery of apparel are not of the least consequence in comparison with it. No man or woman needs to be rich, or learned to rear a child in the way the little hero of this sketch has been reared. I never see a child eating candy and nuts, cakes and confections; undergoing undue excitement, at night; fretful, cross and unhappy, without a feeling of pity at its misfortune. I feel at once that its mother lacks the very first element of fitness to be a mother—conscientious sense of her duty, or a lack of firmness to do it.

Health, happiness and usefulness are largely synonymous—remember that.

MARY WAGER-FISHER.

HOME USE OF FAIRS.

VELENA.

It is a well established fact that whatever has a refining tendency is well worthy of consideration; and also that whatever tends to developing our practical natures is equally worthy of consideration.

Men, women and children grow weary of anything monotonous unless interspersed with something quite different, something interesting, pleasing or profitable.

Work of one kind is more distasteful than work of several kinds. A girl washing dishes soon grows to disliking it, but vary her work and she will do double the amount with better grace and better health. Teach her how to handle a needle deftly in doing fancy work nicely, and the chances are she will do the mending of her every-day clothing well. Make it a point never to allow anything to be done carelessly and then left; if it is only half done have it done over again immediately and well done.

Some persons may scruple against permitting young girls to idle away their time doing fancy work, but, if the girl will have to earn her own living as she grows older, there is no way in which she can make a better one than by doing "art embroidery," providing she does it well enough. If poorly done, there would be no sale and consequently no living.

Crocheting brings a good price, too.

If she is embroidering for home use, it has its beneficial results. A neat piece of work is a credit to any room and creditable to anybody.

Odds and ends of bright colors appliqued on a solid ground cost but little and made in a bracket lamb equin, are an adornment to any room.

I have been where a whole household was pleased and proud of "our girl's work," and I am sure the girl grew to be a better woman through that just pride imbued by her family.

There may be those who have a natural taste for doing such things, but with this taste there wants to go some knowledge; there must be some insight of what is being done by others and the manner in which it is done; and to those residing on farms distant from cities the *Fair* is the great school for them. There is exhibited a variety of work, done in various ways and with varied material, for a great many uses.

Not a hurried glance but a *good look* has many times enabled me to make both useful and ornamental articles, and they in their turn have suggested others of taste and value. These also have been duly taken to the Fair the next year, and the probabilities are that some one else has copied them, while the premium awarded more than paid me for the trouble taken to make the exhibit.

It being quite the thing now to *knit* edgings of different widths in white and color for trimmings, we shall look to see new patterns at our Fair, we hope also to see some of the new "ribbon work" there.

If we all take an interest in our Fair and each one contributes something, it will be surprising to find what an array one small town can make. What a good feeling is engendered looking over the various products raised by our neighbors, or the articles made by our neighbors' wives. Do we not feel as though our associations were better and our advantages greater; in fact, do we not know they are in a *thriving town?*

What better place is there to display the worth of the land, the dairy and the household than at a Fair? Do not the horses, the cattle, the grains and the fruits tell all about the man? While the butter, the canned fruit, the bread, the cake, the knitting, the sewing and the crocheting, the penciling and painting, tell equally well about the woman?

Nothing is really lost, if industry reigns, it speaks for itself, if idleness is prevalent, it makes its presence known.

Any one may well be proud of a *good* Fair. To make it such, the subject needs a good deal of agitation; neighbor must talk with neighbor, and each and every one do all in their power toward contributing to its usefulness. Strive to raise a general interest in it throughout the neighborhood, for it is the great advertiser of your own, your neighbor's and your town's value.

Do not let it run to "racing" wholly, but make it a place of learning, a place of sociality and enjoyment, a place that will have a good effect "all the year." And, further, make it a point to go to the Fair and have all the family go. Then do not hurry from one object to another, but what you do see, look at until you have it fixed in memory, then take another article or object in the same way. Different ones of the same family may have different objects of interest and each, having carefully noted certain things, can talk them over intelligently at home.

Old people naturally see things quite differently from young eyes, and it is often well for the two to look at the same object together. Points will be noticed and comparisons made that often tend to developing new ideas—ideas of practical value in coming days and such as can easily be carried out to considerable advantage.

A DARNING BASKET.

MATERIALS, a discarded peach basket, a black or old gold-colored skirt braid 1¼ yards black and old gold cretonne, one quarter of a yard of pale-blue Silesia.

The basket I covered was a peach basket with wide splints, sloping abruptly from the top to a narrow bottom. They can be bought now for five cents.

Measure on the outside from the top to the center of the bottom, and around the top fold the cretonne and bind the fold with the braid. Mark the side of the cretonne that is to go inside the basket into as many spaces as there are members in the family whose hose need weekly embroidering, and stitch the blue Silesia upon it in pockets, making a small box-plait at the bottom for the fullness. Embroider the initial of the owner on each pocket and bind with black braid.

The pockets are set two inches from the top of the basket. Sew the cretonne together; run a shir in both the lining and the outside cover; slip it over the basket, draw it tightly and tie it. If the crotonne is genuine it will wash without fading. The cover can be taken off very easily.

O. W. DAY.

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WIND MILL,
For railroad and city water works, IRRIGATING AND FARMING PURPOSES. Solid wheels, multiplying ball governor, perfectly self-regulating. Every one of our mills is fully warranted. Send for illustrated circular to

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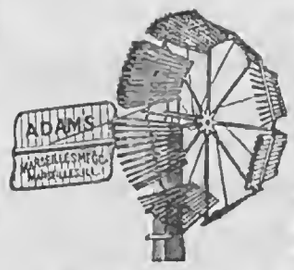
I. X. L. WIND MILL.
For Simplicity, Durability and Power *this mill has no equal.* It runs equally well in light or heavy winds. Ice and sleet do not effect it. Works well under all circumstances; never gets out of order. We warrant all our mills. Circulars and descriptive catalogues sent free on application to the Phelps & Bigelow Wind Mill Co., Kalamazoo, Mich.



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Works in a lighter breeze than any other. Governs itself perfectly. Its operation can not be interfered with by ice or sleet storms. Well made, Strong, Durable. Illustrated circulars of all our goods sent free. Address MARSEILLES M'F'G. CO., Marseilles, La Salle Co., Ill. Send for Catalogue "C."

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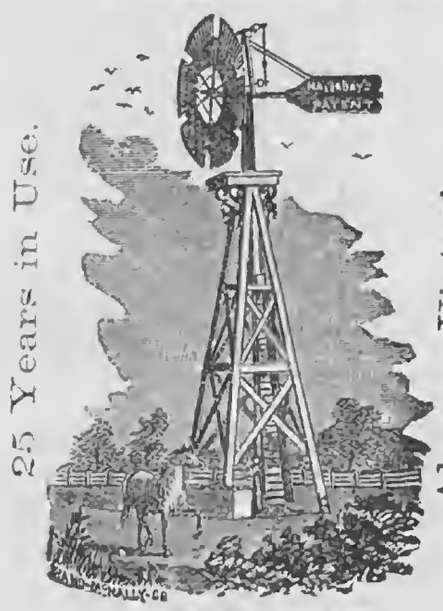

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TO ANY WIND WILL MADE.
17 Sizes—One Man to 45 Horse Power.
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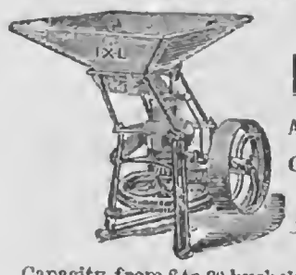

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We manufacture the old reliable, well known solid WHEEL STOVER WIND MILL and O. E WINGER'S IMPROVED DOUBLE-FACED GRINDER, which is operated by pumping wind mills, a novel and perfect rapid grinding mill for grinding all kinds of grain. It is designed also to be operated by any kind of power, with belt, tumbling-shaft, or by one or two horses with a sweep attached thereto. Agents wanted.
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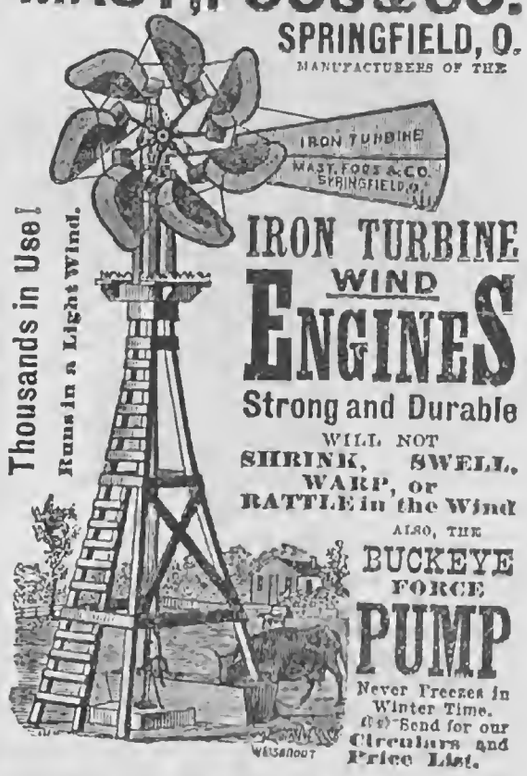

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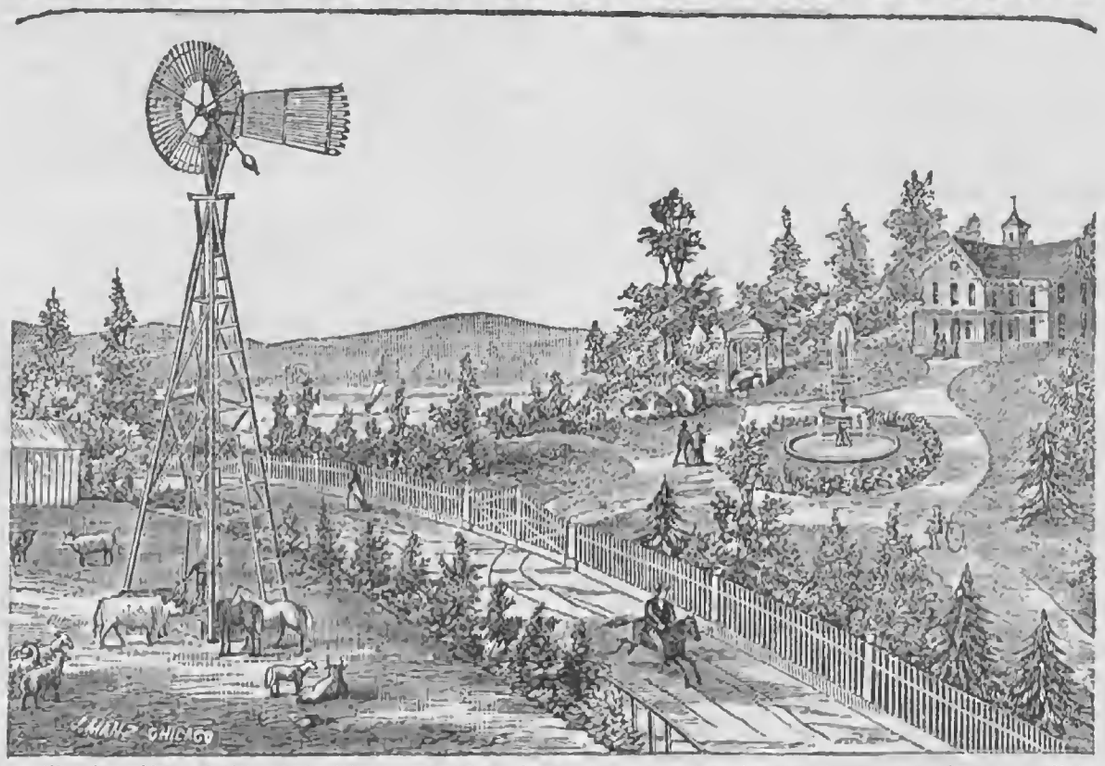
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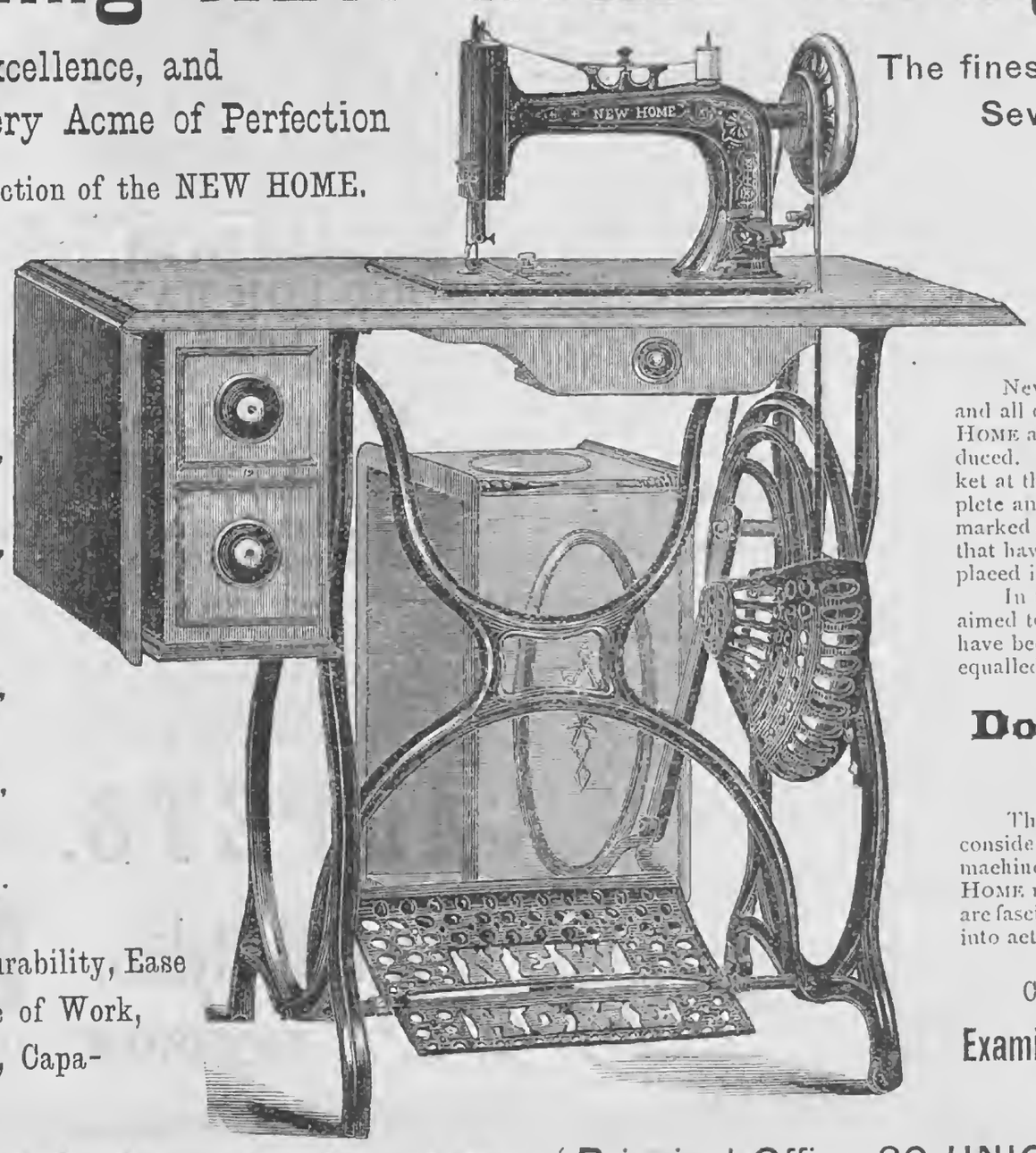

The finest and most perfect piece of Sewing Mechanism ever invented.

IT COMBINES THE GOOD POINTS OF ALL OTHER MACHINES WITH NONE OF THEIR DEFECTS.

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Self-Setting Needle,
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Casters in Stand.

New and valuable improvements have been added, and all complications avoided, thus placing the NEW HOME at the head of all Sewing Machines hitherto produced. There are many machines of merit in the market at the present time, but none can be found so complete and perfect in every detail. None possess the marked advantages, superior worth or stalwart excellence that have rendered the NEW HOME so famous, and placed it far in *advance of all its competitors*.

In the construction of the NEW HOME, we have aimed to reduce friction to the minimum. Our efforts have been successful, and the result is a machine unequalled for *lightness of running*, and which

Does not Fatigue the Operator.

This is a very important point for the purchaser to consider, as it is a well-known fact that heavy running machines are extremely injurious to health. The NEW HOME requires so little effort to operate, and its results are fascinating to such a degree, that labor is transformed into actual pleasure by its use.

Noted for Extreme Simplicity, Durability, Ease of Management, Wide Range of Work, First-Class Workmanship, Capacity and Speed.

Comparison with other Machines Invited.

Examine it Before Purchasing any Other.

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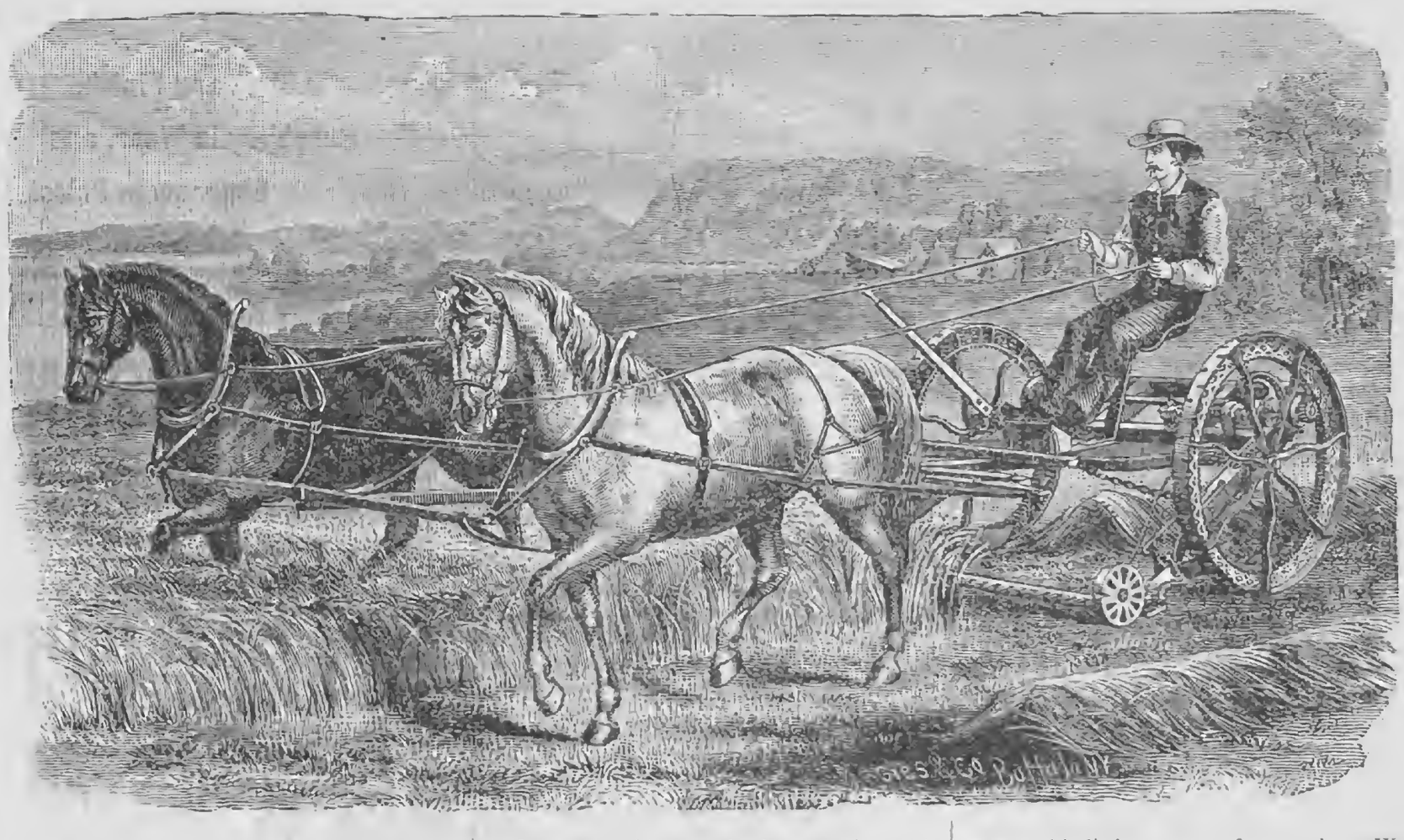
WILBER'S
DIRECT DRAFT

Eureka Mower.

Six Feet Cut.



The Best Mower in the World.

The most remarkable occurrence that has ever taken place in this vicinity, and no doubt in the State, was the cutting of 13 acres of grass on Monday last, by W. F. Ely, of Columbia, from 7 o'clock a. m. to 12:20 p. m. of the same day, and at 6 p. m. the hay was in the barn. The grass was cut with an Eureka Mower, which leaves the grass standing, and with his carrier it was taken to the barn. We think that this feat is worthy of publishing.

From the Morris County Chronicle of July 2, published at Morristown, N. J.

"In reply to your inquiry as to the Eureka I have this to say: after trying what I believe to be the best self-raking reaper (the Johnston Harvester) I found my 6 feet Eureka Mower very much superior, in that it left the Barley spread over the ground perfectly loose, so that the sun and air could act upon it. Neither the horse's hoofs nor the wheels of the machine packing it to the ground, permitting it to dry in a few hours, besides cutting it much cleaner than any appliance that I have ever tried."

GEO. W. HOFFMAN.

From the Husbandman, Elmira, N. Y., March 10, 1880.

The Eureka was the lightest draft of all that were tried.

JOHN COLEMAN,
Chn. of Judges on Group XXIII, Centennial Com.

I never want to take a side-cut machine into my orchard again. I have not found the place where I do not like the Eureka better than any side-cut machine I ever saw. It gives the most absolute satisfaction.

W. I. CHAMBERLAIN,
Hudson, Ohio.

It is certainly the king of mowers and I would not exchange for any side-cut machine in the world, and *I have used the best of them.*

GEO. K. SMITH,
Monroe, N. Y.

I opposed the Eureka as long as it was honest to do so. Now I would rather pay a reasonable price for the Eureka Mower than use any side-cut machine furnished me for nothing.

E. C. SPENCER,
Wysox, Pa.

It cuts a wider swath, draws easier, and leaves the grass in better condition to cure and rake than any side-cut machine I ever saw.

T. R. NOONAN,
Addison, Vt.

We have used on our farm Ball-Ohio, Buckeye, Champion, Climax, Clipper and Hubbard Mowers, and have used the Eureka *ten years*, and say the Eureka is the best mower.

E. W. CHAMBERLAIN,
Sullivan, Ashland County, Ohio.

After using the Ketchum, the Wood, and the Buckeye, I have settled down on the Eureka Mower as superior to any side-cut machine I ever used or saw in use.

HARRIS LEWIS,
President New York State Dairymen's Association.

We have used the Eureka Mower to cut about 150 acres yearly during the past *eight years*, with little expense for repairs. We consider it in all respects the best mower in use.

J. O. WALKER, G. M. ADAMS,
Ferrisburg, Vt.

We have owned the Eureka Mower six years, and have used it in all kinds of grass. We have never yet found a place where it did not do good work, nor have we ever had a mower that would equal it.

D. E. FENN & SONS,
Talmadge, Ohio.

I have used a mowing machine for twenty years and consider the *Eureka* the best.

SAM'L. C. COLT,
Hartford, Conn.

I have used a five feet cutter-bar Eureka Mower the past five years, and like it so well that I have purchased a six feet cutter-bar, believing that a six feet machine will work easier for driver and horses than any four feet side-d raft mower now made.

I. GIBNEY, Tarrytown, N. Y.

For Illustrated Circulars address

EUREKA MOWER CO., Towanda, Pa., U. S. A.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

A SUGGESTION.

To those of our housekeeping friends who attend the fairs and are interested in the prize bread, butter, canned fruits and the like there exhibited, we would suggest that they find out from exhibitors, if possible, the various methods employed by them, which lead to such happy results. It is to be regretted that all who exhibit such articles are not required to furnish minute particulars as to how they are made or prepared, so that all might use such information for their future benefit.

EXHIBITION WEEK.

ANNIE L. JACK.

I HOPE the mothers and fathers of our RURAL young people are prepared to take their children to the fair. It is a part of education that should not be neglected, and opens their eyes to comparisons, while exciting a spirit of emulation. "We have as good as that at home," I heard a young lad say one fair day when examining the fruit, and the next year his name was on the list of prize-winners. So it is in many things, and I have often observed that the children seemed brighter and better for their journey, besides feeling that they were of some importance in the world when they are allowed the trip with older people who may hitherto have enjoyed the privilege. Let the boys have some poultry or animal to show; the girls, some flower or fruit they can watch the season through, and then exhibit as the result of their care. Even if they do not win a prize (and *all* cannot), the trial will not be lost, but incite them to further attempts. If one shows a talent for housekeeping, let her exhibit canned fruit or a loaf of bread of her own making; and if the boys have any mechanical skill or genius in any direction, let it be encouraged and made the most of. The contact with others, the varied display, the diversity of arrangement and method of exhibiting will not be lost to their young, observing eyes; and if father and mother instruct them in the survey they will be amply repaid by the keen, eager scrutiny that will be given. By all means take the children to the fair.

The "Fair" Lunch Basket.

We thought it better to provide a lunch, as the hotels were likely to be crowded, and the "gudeman" and the boys thoroughly appreciated the idea. So a pan of rolls was made with one pint of milk, two eggs, three tablespoonfuls of yeast, two of butter, a little salt, and flour enough to make a soft dough. The milk was warmed and the eggs and salt added, the former, of course, well beaten, and the butter rubbed into the flour as for paste. Three or four hours in warm weather are long enough for it to rise, and when made into small rolls they were tempting enough with good butter. Bnt between some of the cut rolls we put slices of cold chicken, and in others, for variety, grated cheese, rubbed in with hard-boiled eggs seasoned with pepper and salt and spread on the bread. This is a change from simple bread and cheese, and is sure to be appreciated. A few early apples, a flask of tea, and a piece each of good home-made gingerbread gave our fair-goers a feeling of independence, and insured wholesome food, to which they added, by purchase, some milk, and came home satisfied with the contents of their "fair" lnnch basket.

OUR OVER-WORKED HOUSEWIVES.

MAY MAPLE.

THE Spring work is done, the harvest is past. The hurry and worry of months are over, and the over-weary wives and danghters sit down "of an afternoon" with a sigh of relief and a glad thought that at last there is a little time for rest. The generality of farmers' wives should have less cooking, less dishwashing and fewer beds to make than did the matrons of 25 years ago. Mowing machines, horse rakes, and reapers make short work of disposing of hay and grain, and, of course, fewer men are required to do the same amount of work. Then, why should farmers' wives have reason for so much complaint about the kitchen work, during the Summer months. Let me give a few of the reasons:

In not a few localities we find a strife among the housewives, as to who shall carry off the palm for the best cookery. And so, day after day, we find the farmer's table overloaded with cakes, pies and puddings in endless variety, that, judging from RURAL recipes alone, require hours of hard labor to manufacture.

Our farmers' wives are growing more and more ambitious; they are anxious to emulate their city sisters in dress, house furnishing, and general surroundings. To do this is often out of the question when the woman's purse is to be supplied from the surplus fund, raised from the farm. So they take upon their shoulders various other so-called duties, and to their already multifarious cares, they add the business of poultry raising, and in the Spring make calculations on raising from 50 to 200 chickens, and a drove of turkeys, geese and ducks for the holiday market. With the proceeds they hope to buy new silk gowns, cloaks, hats, boots and gloves *ad infinitum*.

The Summer is past and what reward have ye? Because one or two strong, energetic women in your vicinity can succeed in carrying on all their household affairs and raise famous vegetables and poultry, besides canning fruit by the hundreds of gallons, and thus fill their purses with shining coin, is it necessary for all the rest to follow in the same path? It is certainly this over-ambitiousness that is wearing out so many of our country women, and entailing so much misery and invalidism upon our farmers' wives.

Plain dress and plain fare do not satisfy us as they did our mothers and grandmothers. If they did, we should have no call to pity the farmers' wives of the present day who are blest with so many labor-saving machines, indoors and out.

NOTES IN THE KITCHEN.

MARY WAGER-FISHER.

IN canning fruit, a tin funnel with a mouth that fits in that of the jar, is a great convenience and prevents the fruit from being spilled.

Tart, juicy Fall apples make good jelly. I find it advantageous to boil the juice of fruit in jelly making to quite a consistency before adding the sugar. Lay over the top of all jellies a round of white paper dipped in brandy. If mold appears, it takes its seat on the top of the paper.

To have good dried sweet corn, cut the corn from the freshly husked cob, scraping it well, so that the milk of the kernels is secured. Put the corn into earthen or tin dishes, and set in a hot oven—hot enough to scald the milk in the corn. Then dry it as quickly as possible without burning. Finish off by heating it hot; then put it in strong paper bags, tie, label and put away in the preserve closet. When you wish to cook it, put a cupful to soak in sweet milk for two or three hours before cooking. The principal thing in drying corn successfully is to have the milk in it heated so thoroughly, and the drying done so expeditiously, that it does not become soured in the process. It can readily be dried within a day or two.

COOKING TAPIOCA.

ELINOR BROOKS.

A DESSERT which never fails of meeting general approval in our family is

TAPIOCA CREAM.

One pint of rich milk, two eggs, two tablespoonfuls of sugar, lemon extract one teaspoon scant full. Soak two tablespoonfuls of tapioca over-night in water enough to cover. (It is better soaked over-night, but I have often used it after soaking only two or three hours, keeping it slightly warm.) Scald the milk by setting it into boiling water; then put in the tapioca and let it boil a few minutes, or until it rises to the top in little grains; then add the yelks of the eggs and sugar beaten together. Beat the whites to a stiff froth and lay on the top; let it scald through; then with only one or two whisks with a spoon stir together very slightly; pour out into molds and set away in a cool place—on ice if you have it. To be eaten cold without sauce. To satisfy the demands on it I usually have to double or treble this recipe.

I have tried using rice in this way, but the grains are so much heavier that it is not so nice.

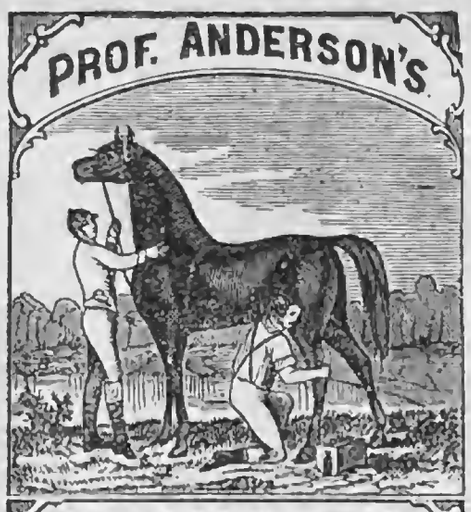
TAPIOCA PUDDING.

Dissolve one teacupful of tapioca at night in one quart of water; next morning pare and core six tart apples; stew them until tender in an earthen pudding dish; add sugar and lemon to the tapioca; pour it over the apples and bake until the whole becomes a jelly. To be eaten cold with cream and sugar.

A Word to Our Readers.

When you read of a remedy that will cure all diseases, beware of it; but when you read of a pure vegetable compound which claims to cure only certain parts of the body, and furnishes high proof that it does this, you can safely try it and with the assurance that it will help you. This is just what Warner's Safe Kidney and Liver Cure does. It cures all troubles of the lower portion of the body and none others. It will not help the tooth-ache, ear-ache or consumption, but it will put your body in a vigorous and healthy state where you can enjoy life and appreciate its good things. Try it.

GOOD FOR MAN AND BEAST.



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Inflammation of all kinds. Diphtheria, Wounds, Bruises, Burns, Sprains, Rheumatism, Sore Throat, Swelling of the Glands, Inflammation of the Eyes, Broken Breast, Frost Bites, Chilblains, Piles, Bee Stings and all sores.

GOOD FOR BEAST.

Fresh Wounds, Galls, Sprains, Bruises, Cracked Heel, Ring Bone, Poll Evil, Wind Galls, Spavins, Sweeney, Founder, Lameness, Sand Cracks, Scratches or Grease, Mange, Horse Distempers, etc., etc.

Cures Garget, Sore Teats and Bags and all Sores and Swellings in Cows & Oxen.

For more extended remarks and for a large number of testimonials voluntarily sent to us by the persons whose signatures are attached, we refer you to our Circular Pamphlet around each bottle.

We would say to Livery Stable Keepers, make it a point never to be without this great remedy. It is a cheap, efficient and SURE medicine. With this "Dermador," there is no such word as "FAIL." It never blisters, but cools. Price 25 and 50 cents. Sold by all druggists. D. RANSOM, SON & CO., Buffalo, N. Y.

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New Fall Styles.

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ARE NOW OPENING LARGE LINES OF NEW DESIGNS AND STYLES IN CARPETINGS RECEIVED FROM

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WHICH WILL BE FOUND TO COMBINE TO AN UNUSUAL EXTENT

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Economy in Prices.

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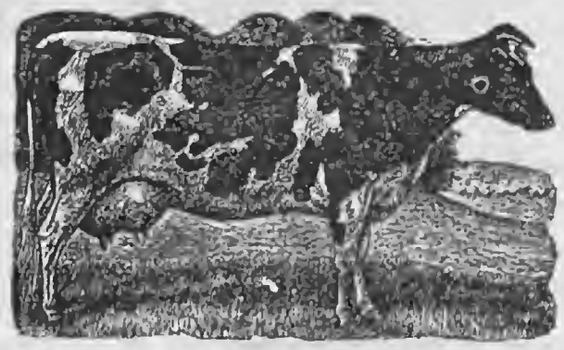

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A few choice birds to spare from prize-winning strains for $3 to $10 per trio. Also one pair fine Rouen Ducks. Price $5.

W. C. BACON, Potsdam, St. Lawrence Co., N. Y.

BRIC-A-BRAC.

I THANK the Lord that there is one thing in this world that money kant buy, and that iz the wag uv a dog's tail.—Josh Billings.

A CYNICAL exchange remarks that "lies go by telegraph, while the truth comes in by mail three hours late."

"ALCOHOL will clean silver." Yes, alcohol well stuck to, will clean all the silver you have—out of your pocket.

A CORRESPONDENT wishes to know if the "Lay on MacDuff" was one of Shakspeare's earlier poems.

"BEAUTIFUL lives have grown up from the darkest places, as pure white lilies full of fragrance have blossomed on slimy, stagnant waters."

NEVER tell a girl you love her
'Till you think her pa is willin';
Never tell a man he's honest,
When you think he is a villain;
Never think you are so funny
That your wit will live forever;
Never use that old expression,
Weak and weary: "Hardly ever."
—Oliver Wendell Holmes.

No, Cleopatra's needle was not imported for any of the sewing schools of New York. It was simply sent with an eye to holding the thread of a story.

THE flowing reporter who wrote, with reference to a well known belle: "Her dainty feet were incased in shoes that might be taken for fairy boots," tied his wardrobe up in a handkerchief and left for parts unknown when it appeared the next morning: "Her dirty feet were incased in shoes that might be taken for ferry-boats."

2 lovers sat beneath the shade,
And 1 un2 the other said:
"How 14 8 that you be?
Have smiled upon this suit of mine;
If 5 a heart, it palps for you—
Thy voice is mus melody—
'Tis 7 to be thy loved 1, 2—
Say, 0y nymph, wilt marry me?"
Then lisped she soft: "Why 13ly!"

"Yes," observed a friend the other evening, "she certainly is very highly cultivated, she is very stylish, plays well, sings well, talks well, dances well, and rides well, and succeeds admirably in private theatricals. In fact," he added, "she is just one of the kind of girls you'd like one of your friends to marry." "Then you wouldn't care to marry her?" "By no means, my dear fellow. What I am looking for is a real nice girl."

TRANSPOSITION.

Be pleased my worthy friend, to name
A word of letters five,
Without the aid of which, I guess,
We none of us should thrive;
Transpose the same, and then you'll see
I'm black, and brown, and gray,
And I am brushed and duly cut
By thousands every day.

IF a man have love in his heart, he may talk in broken language, but it will be eloquence to those who listen.

If a man is determined to do the best he can, whether he drives a cart, conducts a business of a million dollars, or preaches the gospel, he cannot fail.

Frivolity under whatever form it appears, takes from attention its strength, from thought its originality, from feeling its earnestness.

I'VE searched my Worcester through and through,
I've hunted in my Webster, too,
Apart and both together;
Yet I can't find why men should speak
Of broiling days, which last a week,
As a long spell of weather.

Those books, as far as I can see,
In spelling weather do agree
Quite well with one another;
And though I've sought, and am not blind,
The only spells that I can find
Are whether, wether, weather.

HANNEMANN, the founder of the homœopathic school, was one day consulted by a wealthy English lord. The doctor listened patiently to the statement which the patient made to him. He took a small phial, opened it, and held it under his lordship's nose. "Smell! Well, you are cured." The lord asked in surprise, "How much do I owe you?" "A thousand francs," was the reply. The lord immediately pulled out a banknote, and held it under the doctor's nose. "Smell! Well, you are paid."

THE FRIVOLOUS GIRL.

HER eyes were bright and merry,
She danced in the mazy whirl;
She took the world in its sunshine,
For she was a frivolous girl.

She dressed like a royal princess,
She wore her hair in a curl;
The gossips said: "What a pity
That she's such a frivolous girl."
—Steubenville Herald.

TWENTY YEARS LATER.

She's a wife, mother, a woman,
Grand, noble, and pure as a pearl,
While the gossips say, "Would you think it,
Of only a frivolous girl."

A MAN lost a bag of potatoes off his wagon as he came into the city one morning, and as he did not become aware of his loss till he reached the market, he felt that it was useless to search for it. He felt the loss very keenly till suddenly realizing that there was a bright side to it. Then his face put on a smile, and he chuckled: "Come to think of it, it was one of those two-bushel bags which didn't have but a bushel and a half in, and the finder will get swindled out of half a bushel at least!"

A WISE LANDLORD.

ONE night, a judge, a military officer, and a minister, all applied for lodging at an inn where there was but one spare bed, and the landlord was called upon to decide which had the best claim of the three.

"I have laid fifteen years in the garrison at B.," said the officer.

"I have sat as judge twenty years in R.," said the judge.

"With your leave, gentlemen, I have stood in the ministry twenty-five years at N.," said the minister.

"That settles the dispute," said the landlord. "You, Mr. Captain have *lain* fifteen years—you, Mr. Judge, have *sat* twenty years—but the aged pastor has *stood* five and twenty years, so he certainly has the best right to the bed."—Charleston Mercury.

A CHILD'S IDEA OF THE SEA.

A Family going north from Raleigh recently, took the boat at Norfolk after dark. Next morning the little girl awoke and scrambled up to the window and looking out on the broad Atlantic exclaimed, "Oh mamma, do get up here and see, the front yard is full of water."—Raleigh (N. C.) News.

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GET your VINES and BERRY PLANTS of
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Catalogues free.

Apple Trees, 6 to 8 feet, 3 years old, strong, $70.00 per 1,000. Cherry, E. Richmond, 4 to 6 feet, 3 years, $75.00 per 1,000. Pear, Plum and Cherry seedlings. Grafts of all kinds put up to order at low rates. Write for prices to E. P. CLARK, Dansville, N. Y.

Rogers' State Peach, "Wheatland,"
$1 per 100 buds by mail. Wager Peach and others, 50c. per 100. Treatise on Small Fruit Culture free.
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E. P. ROE has the largest and cheapest stock in the country of this celebrated Raspberry. Also all the new and standard Raspberries, Strawberries, Grape Vines and other small fruits. Plants first-class. Prices reasonable. Most liberal offers are made in Fall catalogue, which is sent free. Address E. P. ROE, Cornwall-on-Hudson, N. Y.

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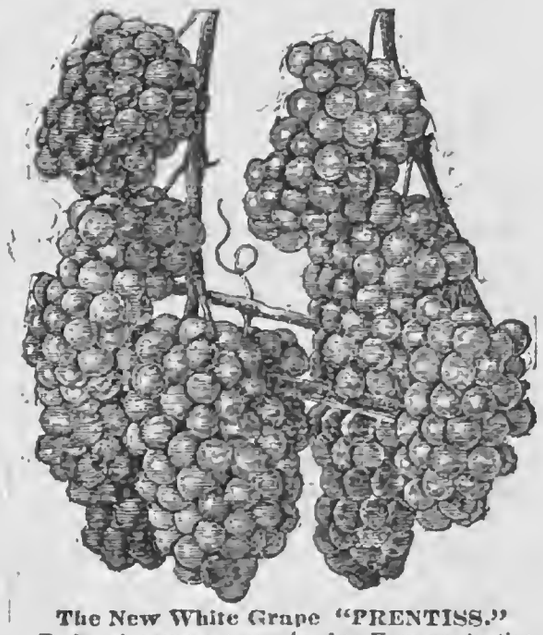
To Nurserymen and all Others
30,000 one-year-old peach trees, 3 to 5 ft. This New Seedling, originated by T. Davidson, has fruited three years successfully 25 days earlier than Hale on same soil in same row. It is the earliest peach known. Large (some samples measured 3 inches in diameter), high-colored, quality excellent, freestone, hangs well on tree, keeps well (have kept them 5 days after picking); tree a strong, rapid grower. Will sell the entire stock with the exclusive right of propagation. Address
T. DAVIDSON, Painesville, Lake Co., Ohio.



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H. C. H., Rockville, Conn., asks, 1, what it would cost to start an ordinary cheese factory; 2, about how much do cheese manufacturers pay for milk in different localities, and, 3, how much cheese can be made from one gallon of milk.

ANSWER BY PROFESSOR L. B. ARNOLD.

1. The cost of cheese factories varies widely according to cost of material used for building and the elaborateness of finish and size of factory. A structure large enough for the milk of 500 cows costs, as they are generally built, about $2,000. To build a manufacturing room and curing house in separate buildings, as they should be, will, at the average prices of material and labor in the country, cost about $3,500. They are sometimes built for less, and then again they sometimes cost $5,000. 2, The price cheese manufacturers pay for milk is generally regulated by the price of cheese. Milk is almost always bought by the pound at factories, and as 10 pounds of milk, on an average, make one pound of cheese, the price paid for 10 pounds of milk is that of a pound of cheese, less the cost of making and marketing, which is generally reckoned at two cents a pound 3. The weight of a wine gallon of milk (231 cubic inches) having, at 60°, a specific gravity of 1032, is 8 6 pounds. The amount of cheese which a gallon may be expected to average may be estimated from the above data.

W. H, Watkins, N. Y., asks, what State in the South is best adapted to sheep husbandry, and what part of that State.

ANS.—East Tennessee and Georgia offer great opportunities for keeping sheep. Nashville is the point in Tennessee by which the Cumberland table-land, the region referred to, may be reached. In Georgia the piney woods region not far from Atlanta is a favorable locality. A person looking for a location should visit the places mentioned and correspond with J. B. Killibrew, Commissioner of Agriculture, Nashville, Tenn., or Dr. Janes, Commissioner of Agriculture, Atlanta, Georgia. Lands in these places can be procured cheaper than in the West.

C. C. Damascus, Pa, asks how many different patent beehives are there.

ANS.—There have been numerous patents granted on hives—probably over 300—since the patent of Mr. Langstroth on the movable frame expired. Patented features in beehives have been looked lightly upon by the practical apiarists, hence all that is of any practical value in the hive line at the present time is free property for any one to use.

N. B. Many questions and answers are unavoidably held over.

[Cincinnati Irish Citizen.]

Mr. Thomas Lewis, 62 Butler Street, informs us that for seven years he was afflicted with that dreadful malady, Sciatica, and being induced to try St Jacobs Oil, found almost immediate relief therefrom, and is now perfectly cured.

JOHN S. CARTER,
Successor to
G. B. WEEKS,
Manufacturer of and Dealer in all kinds of
APPARATUS & SUPPLIES
FOR
Cheese and Butter Factories,
Creameries and Dairies,
28 & 30 James St., Syracuse, N.Y.
SEND FOR CIRCULAR.

CHEESE MAKERS' SUPPLIES
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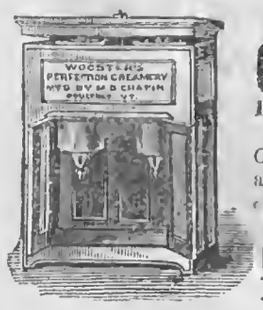
For the best goods and lowest prices, address
CHARLES MILLAR & SON,
Utica, N. Y.



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Perfect in Principle and in Operation.
Can be used with LESS ICE and LABOR than any other creamery now in the market.
For Circulars address
M. D. CHAPIN,
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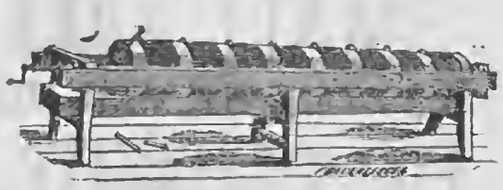
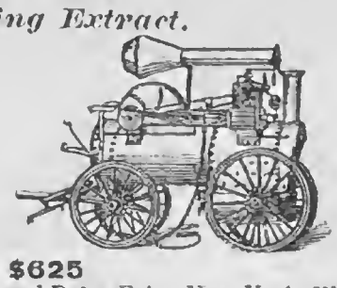
Anti-Huffing and Anti-Mottling Extract.





HIGHEST PREMIUMS, $625
for Butter and Cheese Apparatus, three successive years International Dairy Fairs, New York, Western Cheese Fair, Chicago, for *improved apparatus* exhibited. Information given, pertaining to making Prize Butter, and getting greatest amount of butter from given quantity of milk.
Danish Butter Preserving Extract, Price 50c. per Gallon. Preparation for keeping Skimmed Milk Cheese from Huffing, when Buttermilk is put back into the Milk, Price 75c. per Gallon.
Send for Circulars on *Creamery* and *Cheese Apparatus*, and *Refrigerator Vat*, for raising Cream. *Cheese-Box Material* furnished complete, ready to put together.
WHITMAN & BURRELL, Little Falls, N. Y., U. S. A.

HANSEN'S DANISH LIQUID
BUTTER COLOR
Has taken *TWENTY FIRST PRIZES*, including *Three Gold Medals* at World's Fairs.
It is prepared in vegetable oil, and is *used to color the finest butter* made in the world. *Does not color the buttermilk*, but makes the butter beautiful and *greatly enhances its value. No alkali* is used. The famous Elgin (Ill.) butter is colored with it. One dozen sample bottles, with directions for making finest butter, will be sent free to any druggist or dealer ordering same. Also CHR. HANSEN'S DANISH
LIQUID CHEESE COLOR AND LIQUID EXTRACT OF RENNET.
WHITMAN & BURRELL, Little Falls, N. Y., Wholesale agents for the United States and Canada.

MOSELEY'S CABINET CREAMERY. STODDARD CHURN.

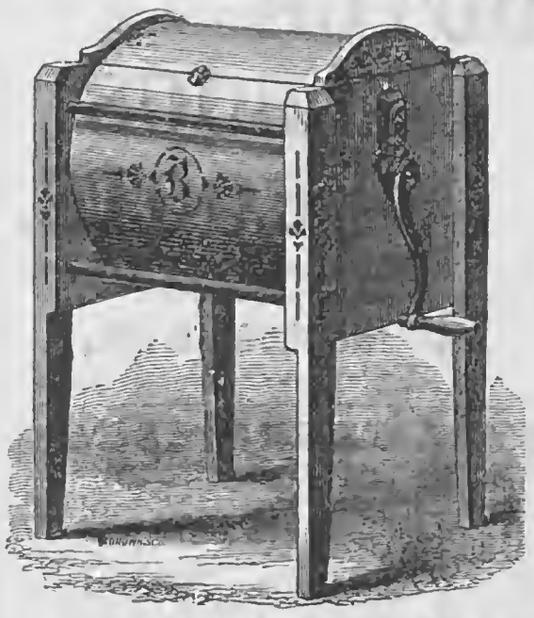
Manufactured by
MOSELEY & STODDARD, Poultney, Vt.
HIGHEST AWARD
AT
New England Fair, September 2-5.
Vermont State Fair, 9-11.
New York State Fair, 8-12, 1879.
SILVER MEDALS
Were Awarded at New England & Vermont State Fairs.
AWARDED A
SPECIAL PRIZE OF
$50
At the INTERNATIONAL DAIRY FAIR in December last.

THE BEST CHURN EVER INVENTED.
500 SOLD IN FOUR MONTH
Also Manufacturers of a full line of Cheese Factory and Butter Making Apparatus. Send for Circulars and Price Lists.

$250.00 CHALLENGE $250.00
We offer above to any color that will excel
Mrs. B. Smith's Butter Color.
What we claim for our BUTTER COLOR is: 1, it has no taste or smell, and is as harmless as water. 2, it is liquid, is easy to handle, and is mixed in the cream before churning. 3, produces a color resembling golden June grass butter. 4, it is the only article that will color the butter and not the buttermilk. 5, it gathers all the butter materials, and increases the weight more than enough to pay for the color used. 6, the color of the butter *never* changes. In short, it is decidedly the best article for the purpose ever offered for sale. For sale by your druggist or country store. Manufactured and for sale by
MRS. B. SMITH,
533 Chestnut St., Philadelphia, Pa., U.S.A.
Dairymen's receipts free. (P. O. Box 1954.)

ASK FOR
Wells, Richardson & Co's
PERFECTED BUTTER COLOR
It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.
USE ONLY THIS THE FIRST AND THE BEST

GET THE BEST
THE BLANCHARD CHURN
SOLD EVERYWHERE.
We shall continue to make and furnish the square top and the IMPROVED round top, as may be desired.



Our churns received the HIGHEST PREMIUM at the International Dairy Fair in New York City in 1879, in competition with all the leading churns in the market.
Nine sizes made, churning from one to one hundred gallons. Warranted to be exactly as represented.
Send to any dealer in REALLY first-class Farm and Dairy implements for a descriptive circular of
"The New Blanchard Churn,"
or to the Sole Manufacturers,
Porter Blanchard's Sons,
Concord, N. H.

Housekeepers Attention!

The Improved Union Churn. The best and most perfect butter maker in the market; never fails to give the best of satisfaction, makes butter easy and quick; no trouble to keep clean. Also the **Globe Wash Board.** Over 600,000 of them sold during 1879. Buy it and try it, you will find it saves you from sore hands and torn clothes; the Globe in the cheapest and best washboard sold. Send for circulars giving full information, to
Union M'f'g Co., Toledo, Ohio. U. S. A.
Liberal terms to dealers

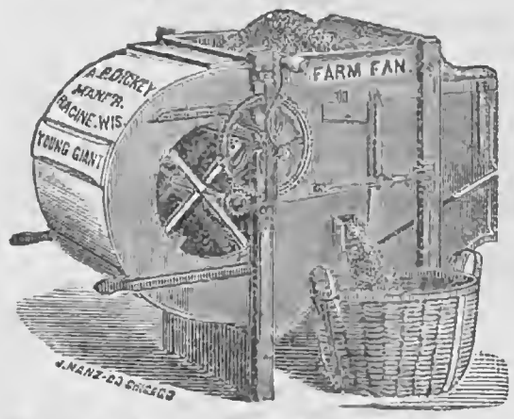
RECTANGULAR AND SQUARE
BOX CHURNS.

Cheapest and best. No inside fixtures, and *always reliable.* Six sizes of each kind made. Three sizes of the Lever Butter Worker made. Best material used and every Churn and Butter Worker *warranted* exactly as represented. One Churn at wholesale where we have no Agent. *Send Postal for Circulars.*
CORNISH & CURTIS,
Fort Atkinson, Wis.

THE NATURAL BUTTER COLOR
Was awarded the diploma of highest merit at the International Dairy Fair, New York, by the Committee of Judges, also at the St. Louis and Illinois State Fairs. It is the cheapest and best in the market. Cheese color by the gallon. For sale by dealers. Manufactured by R. S. WHITE & CO., Fort Atkinson, Wis. Write for circulars and price list.
Mention THE RURAL NEW-YORKER.

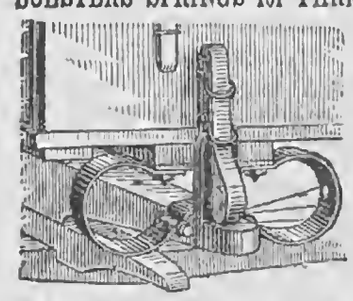
BADGER STATE
Butter Color.
Received the only honorable mention granted to any Butter Color at the International Dairy Fair of 1879. If not for sale by your dealer, send for circular &c. to the manufacturer, E. SHELDON, Fort Atkinson, Wis.

VICTORIOUS!
HIGHEST AND BEST AWARD
And Grand Medal of Honor.
Economy, Durability and Rapidity combined with perfect work,
Are Distinguishing Features of the celebrated
Giant Farm and Warehouse Fans,
MADE BY
A. P. DICKEY,
RACINE, WIS.
Having all latest improvements, they are fully equal to every demand; cleaning all kinds of Grain, Peas, Beans, Castor Beans, Corn and Small Seed. They grade wheat perfectly by once handling. Separate Oats from Wheat, Barley and Rye. They have very perfect arrangements for cleaning Timothy, Clover, Flax Seed, Orchard Grass, and all other Small Seeds. They Chaff perfectly, and combine every qualification required to do the best work in the shortest time.



Warehouse, as well as Farm Mills, are largely constructed, both kinds requiring nine sizes to accommodate the demand, and giving a capacity of from 50 to 500 bushels per hour, according to size of mill.
They are shipped, boxed for ocean transportation, and "set up" or "knocked down" for forwarding inland, as requested; and in all cases put free on board Cars or Steamer. Orders filled same day as received.
Mills shipped "knocked down" go for half the freight charged as when forwarded "set up." Oleographs and circulars supplied on application. Prices will be quoted *low* and on liberal terms. Correspondence solicited.

SOMETHING NEW
PULLIAM'S PATENT
BOLSTERS SPRINGS for FARM WAGONS.



This valuable device is suited to wagons of any size—made of the best steel and warranted—are attached by four bolts through the bed—can be put on by any person. They remain on the wagon for all uses and work equally well whether with empty or loaded wagon. There is no use for a spring seat—they make a comfortable spring wagon out of a a farm wagon—and save largely in wear and tear. We want Agents every where. Send for description and prices, and mention this paper.
TEMPLE & BIRGE MFG. CO., St. Louis, Mo.

HULL
VAPOR COOK STOVE.

No more over-heated rooms.
No more sweltering Range fires.
Light, Handy, Durable, Cheap.
FOR COOKING & BAKING, WASHING & IRONING,
these stoves have no equal. The saving in fuel alone is an item every housekeeper ought to consider.
IT COSTS ONE CENT
per hour for each Burner. No smoke! No odor! No dirt! No fires to build! No ashes to remove! No fuel to carry!
ECONOMY
In Time, Labor and Money. This stove is not an experiment, as is proved by the use of over 40,000 during the
LAST SEVEN YEARS
throughout the U. S. More durable than any cook stove. Used with PERFECT SAFETY.
Send for full descriptive circular, with prices. Liberal discount to the trade.
HULL VAPOR STOVE CO.,
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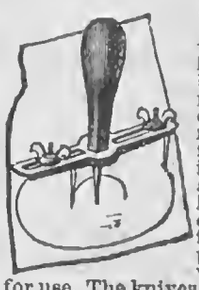
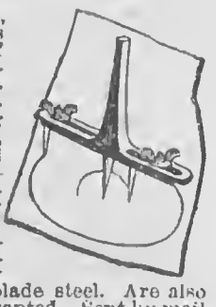
ECONOMY WASHER CUTTER.





(Pat. July 15, 1879.) Cuts washers of leather or rubber for carriages, wagons, mowing machines, etc., from ½ to 4 inches in diameter, entirely finished by one turn of the hand Simple, strong, always ready for use. The knives are of saw-blade steel. Are also made for brace. State which is wanted. Sent by mail prepaid to any address, on receipt of 50 cents. Liberal discount to agents.
WILLARD BROS. & BARTLEY, Cleveland, Ohio.

HOME NEWS.

The custom-house at Nashville, Tenn., though ready to receive the roof, has had no wood whatever used in its construction .. ....The extremely low water in the lake at Geneva, N.Y., has brought to light two mineral springs containing sulphur and iron. One of the springs is very cold, and the water is excellent for drinking.....Judge Burton, of Iowa, granted an injunction against the Missouri, Iowa and Nebraska Railroad Company issuing any more bonds for the extension of their road. This will block the extension of the line until January 1, 1881, as in any event the injunction cannot be removed before that time..... Mrs. Laura de Force Gordon, the first woman lawyer who ever addressed a jury in California, defended, a week ago, a man charged with killing another man. Mrs. Gordon appeared in a black silk dress, and her only ornament was a rose at her throat. Her appearance caused a sensation which she endeavored to ignore, and she was several times applauded, to the disgust of the court. Her client was acquitted on a technical point..... A boy appeared on the street at Shreveport, La., the other day having a basket which contained over two dozen alligator eggs, which he found in a nest on Cross lake, and which he was retailing at ten cents each. Several of the eggs were broken, when it was discovered they all contained embryo alligators, which led some of the purchasers to bury their eggs in mud and sand, as it is the fashion of that animal, with the hope of hatching out a brood of alligators.

A party of thirty-five men from South Boston have settled in Wheeler county, Nebraska, and named their village Boston. They have purchased 7,000 acres of good timber and village land, and are reported to be well established. Their wives and families will join them this Fall..... Women are rapidly taking high places in the practice of medicine. Dr. Alice Bennett is in full charge of the women's department in the Eastern Pennsylvania hospital; Dr. Mary Cleaves is superintendent of the women's department of the Harrisburg asylum; Dr. Jennie McCowan is assistant physician in the Mount Pleasant (Iowa) hospital; Dr. Julia Carey, assistant physician of the Danvers (Massachusetts) hospital; Dr Eliza Phelps is at the new Iowa asylum; Dr. Helen Bissell, at Kalamazoo, Mich.; and Dr. Emma Randall, at Pontiac, Mich.....There is an immense spring on the West Dolores, about six miles from Rico, Col., just across from the head of Horse Gulch, and near the base of Calico Peak, that has an ebb and flow that is quite singular. The basin is about twenty-five feet in diameter, and in the morning is always full of water, but in the evening it is perfectly dry and empty. The water is cold and apparently of good quality, and the basin gradually fills to overflowing when it as slowly recedes, effervescing violently all the time. The discovery was made by a prospector who passed it in the morning when full (the basin was full, we mean), and on returning at night it was empty. He watched it with the result mentioned above.....Captain Eads has been making a tour of inspection through the valley of the Upper Sacramento and its tributaries so as to be able to give the authorities of Sacramento the benefit of his advice on the subject of flood-water *debris* and levees.

It is evident that a large portion of our city people suffer from diseases of the liver, bowels, or kidneys. Kidney-Wort is nature's remedy for them all.

Those that have used Kidney-Wort agree that it is the best remedy known for the kidneys and liver.

Read of, procure and use Hop Bitters, and you will be strong, healthy and happy.

Health, hope and happiness are restored by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It is a positive cure for all those diseases from which women suffer so much. Send to Mrs. Lydia E. Pinkham, No. 233 Wetern Avenue, Lynn, Mass., for pamphlets. For sale by all druggists.

Burnett's Flavoring Extracts.—There is no subject which should more engross attention than the purity of the preparations which are used in flavoring the various compounds prepared for the human stomach. BURNETT'S EXTRACTS are prepared from fruits of the best quality, and are highly concentrated. The "Fifth Avenue," "Continental," "Grand Pacific," and other leading Hotels use and endorse BURNETT'S EXTRACTS.

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FULL DESCRIPTION OF THE WONDERFUL

Wheat Garden of the World,

Located in Minnesota and Dakota on the line of the

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A handsome Illustrated paper giving facts about lands, the soil, the climate, the prices, etc., in the English, German, Norwegian and Swedish languages, with maps of the country. Sent FREE to any address on application to

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Land Commissioner,

NORTHERN PACIFIC RAILROAD,

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GENESEE VALLEY FARMS FOR SALE. Some of the finest residences in the Valley, near R. R. Inquire soon of JOHN SHELDON, upon the premises, at Moscow, Livingston Co., N. Y.

UNIMPEACHABLE TESTIMONY.

In Which Three-fifths of the People are Interested.

Genuineness, Reliability, Responsibility.

No Matter What Other Plan has Failed, This has Stood the Test of Time.

For Dr. Sykes has a Record of Ten Years, and that Record Stands Unparalleled.

Read What the People Say of

"DR. SYKES' SURE CURE FOR CATARRH."

C. P. TEMPLE, Coulterville, Pa., June 7, 1877, says: "I have used four packages of your remedy, and believe it is the only medicine in the market that is just what it is recommended to be—'A Sure Cure.'"

W. VILDA, Wilbur, Saline Co., Neb., April 9, '77, says: "'Your 'Sure Cure' is all you claim for it."

E. A. CHILDS, Wrightstown, Wis., Dec. 23, 1879, says: "I thank the Lord I saw your advertisement. I was badly off with Catarrh, that had been dropping down on my lungs about a year. Your 'Sure Cure' arrested its course in about three days; it has far exceeded my expectation. I recommend it to all who are suffering with Catarrh or Lung Complaints. You can use this as a testimonial, for I can say your 'Sure Cure' is rightly named, if a person only follows the directions.

MR. A. BURTON, 230 West Huron St., Chicago, May 17, '77, reported the cure of his son, a young man, by six bottles; he bought six for himself and I received information by one of his neighbors, who also became a patient, that they had cured the father also.

W. G. JEAN, Portland, Oregon, Feb. 10, 1879, reports a complete cure for Catarrh of twelve years, and says: "There is nothing on this coast the equal of your Catarrh Remedy. Before I used your 'Sure Cure' my nerves were so shattered I could not write any." His letter now shows a bold, even, steady hand.

THOS. HOME, Richmond, Utah Ter., Jan. 22, 1880, says: "My brother who was cured by your 'Sure Cure' sends his best regards, and is thankful that such a man as you lives upon earth. He says he thinks that such men are inspired by the Almighty as instruments in His hands in doing good to suffering humanity."

ALPHEUS ENGEL, Metamora, Ill.: "The three bottles of your 'Sure Cure' have done me more good than all the doctors and other medicine I ever tried, and I feel like a new man. I have a brother that used one bottle, and it helped him so much that he thinks he is cured."

MRS. E. C. BRAINERD, Spring Green, Wis., "I have used the bottle of 'Sure Cure,' and am thankful to report favorably. My lungs feel stronger and do not pain me so much. The discharges from my head are not so bad, and my limbs are not so badly swollen. I was so weak I could hardly get about, but am getting stronger every day, and I have great faith, with God's blessing, in a cure. I like your Insufflator very much."

MRS. M. A. BAIRD, Junction, Va., after using but one Package of "Sure Cure" and ordering more, Oct., 25, 1879, says: "The 'Package' I have used did me a great amount of good. My head felt very badly from such a roaring that I could scarcely hear any ordinary conversation, but it is now so much better that I seldom need ask to be told again."

REV. R. S. MARTIN, Crown Point, formerly of Hebron, Ind., Feb. 6th, '80, says: "Your 'Sure Cure' is the best remedy I have ever found for Catarrh, and quite a number of persons have used it with success on my recommendation."

REV. A. W. JEWETT of Joliet, Ill., Jan. 24, 1880, made the following verbal report: "Although I now find that I have used it very imperfectly, I never tried anything before that did anywhere near the good your 'Sure Cure' has done."

L. E. MITCHELL, Juniata, Adams Co., Neb., Feb. 24, 1880.—"I write to thank you for the wonderful cure you have wrought on my wife by your unequaled medicines. The case was so severe that I am not capable to describe it, and we cannot find words to express our gratitude, for we know you have saved her from a terrible death that must have come soon, if we had not providentially heard of you. In July, 1878 her throat and mouth were attacked with a terrible sore, and a large bone came out and left a hole as large as a silver dollar in the roof of her mouth, through into her nose; it then ate very fast clear up through her nose—or so nearly through the doctor lanced it, and more than once, but could not afterwards heal it. Her pain and sufferings were awful—no sleep or rest; nothing but misery and the sore fast spreading. We employed doctor after doctor, but none of them could give but temporary relief, and some of them seemed to make it eat away faster by the burning medicines they used. They called it a cancer, and, finally, after it had eaten more than half of her nose off, the doctor who had attended her for about a year called a council of physicians, and they decided it to be a cancer, and said the treatment she was taking was all right, and that all had been done that could be done. They said the eating could not be stopped, and it would certainly kill her in less than three months, and there was no cure for her; so we accepted it as the will of God that she must die.

Her desire to see her father, brother, and other relations in Jackson, Mich., before she died, was so great that I bid her 'good-by' never expecting to see her again, and she sat out on her sad journey. Before reaching Chicago a kind-hearted minister, the Rev. M. L. Vorheis, of Burlington, Iowa, on the same train, learned the particulars of her case, and insisted upon it that Dr. Sykes, of Chicago, could cure her, and that she must stop and see you; he also told her of a wonderful cure wrought by you on a Mrs. Henry Avery, of Burlington, Iowa, of a cancer in the throat. As it was too late in the evening on her arrival to see you and she had not time in the morning before the first train, she hurried on and then wrote you from Jackson. Your answer was prompt, but not at all encouraging; but after reading some of your cures of what you call 'Cancerous Catarrh,' she and her brother started at once to see you. I wish you would describe how she was when you first saw her. But I want to tell the world that in a little over ten weeks from the time my wife left home I went to meet her at the depot, and she had changed so much in her looks, that I passed right by her, and did not recognise her till I heard her happy voice. Her nose was all healed up, and she looked so well and happy, and she weighed 25 pounds heavier than when she left home. All our neighbors looked upon her wonderful cure as a miracle; she is now a stout and healthy woman, and is doing the work of our large family, a well and happy woman. We cannot express our feelings towards Dr. Sykes as we would like: we are overjoyed, and can only say, "God bless you, Dr. Sykes."

I saw Mrs. (Nancy) Mitchell on the 9th of October, 1879; her brother, A. S. Wing, of Jackson, Mich., was with her, and can vouch for the description I will here endeavor to give. First, when the cloths were removed from her face, she was an awful sight to behold. Her nose was entirely eaten off from the ridge in line with the eyebrows down on the right side to the eye, and to the cheek in a circular form, coming out within half an inch of the end of the nose; the flesh and bones were all gone on that side; and were eaten down fully one-third of her nose on the other side. Her cheeks and eyes were badly swollen and inflamed, lancinating pains all through the sore, and severe pains all through the head. The nostrils were equally as raw as the external sore, and the quantity of matter discharged was estimated at about half a teacupful daily, the cavity was open clear through into her mouth. She had but little appetite, and said she had not had a good night's sleep in over a year. I saw her every day for two weeks, treated the sore with a mucilaginous preparation, then with what I call a cancer powder, used an ointment, the 'Sure Cure' and 'Specific Blood Medicine.' During these two weeks Mrs. Mitchell boarded with Mrs. L. Andrews, at 221 West Lake Street, and she can also vouch for the case and cure. I never saw a sore heal so rapidly as this, or a patient gain faster; in two weeks she returned again to her father and brother in Michigan, taking medicines with her, where she stayed eight weeks, the nose healing up sound within that time. She returned to Chicago Saturday, December 20, put a notice in Sunday's Tribune and Times of the 21st, announcing her cure and asking interested people to call and see her at my office from 2 till 4 p. m., Monday, (and about thirty called), and she started for her Nebraska home next day, saying she was the happiest woman on earth.

The Rev. W. J. Chaplin, of Dowagiac, Mich., happened to ride in the seat with her to Chicago, and gives me the privilege of referring to him in proof of the cure. Prof. Henry Olin, of Bennett Medical College, office corner of Madison and State Streets, saw her that Monday morning, and speaks of the cure as one of the greatest he ever saw. I have Mrs. Mitchell's photo in my office, taken on that Monday after her cure, and notwithstanding she is badly scarred, the deformity was not so great as a person would naturally suppose. Let me also add that previous to coming to me her treatment had all been of the cauterizing type, carbolic acid being about the mildest of any, and she was using this daily until the blood would gush from the gaping sore. Nearly all of this kind of cases I get have also been treated by this barbarous mode. Will not my fellow physicians learn a lesson from these cases and let their patients live?

The above are but samples of what the remedies have accomplished. Price of the "Sure Cure" and "Insufflator," all complete, is only **$1.50**. Book of full information, ten cents, well worth a dollar. Name the Rural New-Yorker in writing, and address

DR. C. R. SYKES,

169 Madison St., Chicago, Ill.

Rupture

DR. J. A. SHERMAN—AND THE ONLY DR. SHERMAN known to the public for the past 35 years or more for his successful method of treating Rupture without the annoyance and injury trusses inflict, may now be consulted weekly at the New York and Boston offices. Dr. Sherman is the discoverer of the only known cure for Rupture by local external treatment.

No man is safe who has a Rupture, no matter how insignificant he may consider it, for every man who has died from it, once flattered himself that it was but a trifling ailment; and every man who now suffers from it and the injury of trusses, to such an extent that life has no enjoyments, once regarded it as unworthy special attention. It is not a stand-still affliction; it is steadily progressive, even unto death, and he is wise who takes the necessary steps to be relieved of it before the day of suffering and gloom comes upon him.

Patients from abroad can receive treatment and leave for home same day. During treatment any kind of active exercise or labor can be performed without interfering with the treatment, and with safety from the dangers of strangulated Rupture. **HIS BOOK ON RUPTURE** gives the most reliable proofs from distinguished professional gentlemen, clergymen, and merchants of his successful practice and popularity therefrom throughout this country and the West Indies. The afflicted should read it and inform themselves.

It is illustrated with photographic likenesses of extremely bad cases before and after cure, and mailed to those who send ten cents. In consequence of the great demand for Dr. Sherman's personal services, he will, till further notice, divide his time between New York and Boston offices as follows: Saturday, Monday and Tuesday he may be consulted at his New-York office, and Wednesday, Thursday and Friday at his Boston office each week. Remember, in writing or calling, the address is

DR. J. A. SHERMAN,

251 Broadway, New York, and 43 Milk St., Boston, Mass.

THE DEAF HEAR

THROUGH THE TEETH,

PERFECTLY, all Ordinary Conversation, Lectures, Concerts, etc., by a wonderful New Scientific Invention, THE DENTAPHONE. For remarkable public tests on the **Deaf**—also on the **Deaf and Dumb**—see *New York Herald*, Sept. 29th; *New York Christian Advocate*, Nov. 20th, etc. **Small Size**—can be carried in the pocket. The Deaf should send for FREE Illustrated Descriptive Pamphlet to the

American Dentaphone Co., 168 W. 4th St., Cincinnati, O.

DAY'S Kidney PAD

A CURE for the most prevalent and fatal diseases that afflict mankind **FOUND AT LAST.**

Internal medicines never did nor never can cure **KIDNEY DISEASE. STOP IT NOW:** apply Day's Kidney Pad **AT ONCE**, and be cured of all affections of the **Kidneys, Bladder and Urinary Organs.** It is the only treatment that will cure **NERVOUS AND PHYSICAL DEBILITY**, and that distressing complaint, **"BACK ACHE."** It will annually save many times its cost in medicines and plasters, which at best give but temporary relief. Sold by Druggists or sent by mail on receipt of price, $2. Our book, "How a Life Was Saved," giving a history of this new discovery and a large record of most remarkable cures, sent free. Write for it.

DAY KIDNEY PAD CO., Toledo, O.

AGENTS WANTED

To Sell the Favorite

CAKE AND BAKING PAN.

WILL SELL ON SIGHT TO EVERY HOUSEKEEPER.

The success of our agents proves it to be the best selling article in the market. One agent made **$120** in **2** weeks, another **$95** in **10** days, another **$41** in **4** days. **Boxing and Freight Free to Agents.** Send for circulars to nearest address. **SHEPARD & CO.,**

Cincinnati, O., or St. Louis, Mo.

HOPE FOR THE DEAF

Garmore's Artificial Ear Drums

PERFECTLY RESTORE THE HEARING and perform the work of the **Natural Drum.** Always in position, **but invisible to others.** All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular.

Address **JOHN GARMORE & CO.,**

S. W. Corner 5th & Race Sts., Cincinnati, O.

KIDNEY-WORT

The Only Medicine

That Acts at the Same Time on

The Liver, the Bowels and the Kidneys.

These great organs are the natural cleansers of the system. If they work well, health will be perfect; if they become clogged, dreadful diseases are sure to follow with

TERRIBLE SUFFERING.

Biliousness, Headache, Dyspepsia, Jaundice, Constipation and Piles, or Kidney Complaints, Gravel, Diabetes, or Rheumatic Pains and Aches,

are developed because the blood is poisoned with the humors that should have been expelled naturally.

KIDNEY-WORT

will restore the healthy action and all these destroying evils will be banished; neglect them and you will live but to suffer.

Thousands have been cured. Try it and you will add one more to the number. Take it and health will once more gladden your heart.

Why Suffer longer from the torment of an Aching back? Why bear such distress from Constipation and Piles?

KIDNEY-WORT will cure you. Try a package at once and be satisfied.

It is a dry vegetable compound and

One Package makes six quarts of Medicine.

Your Druggist has it, or will get it for you. Insist upon having it. Price, $1.00.

WELLS, RICHARDSON & CO., Proprietors.

10 (Will send post paid.) Burlington, Vt.

NOYES' HAYING TOOLS.

FOR STACKING OUT IN FIELDS OR MOWING AWAY IN BARNS.

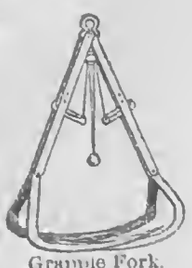
Anti-friction Hay Carrier.

Save labor and Money.

Are simple, durable and cost but little.

No trouble in getting over high beams, or to the end of deep bays.

Hundreds are in use.



Grapple Fork.

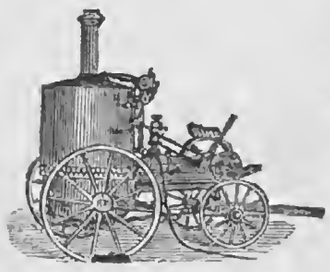
Wood Pulleys, Floor Hooks, etc.

Send for circular and designs for tracking barns to

U. S. WIND ENGINE & PUMP CO.,

Batavia, Kane Co., Ill.

The Westinghouse
THRESHING MACHINES,
Engines and Horse Powers.



Grain Threshers, unequalled in capacity for separating and cleaning.

Combined Grain and Clover Threshers, fully equal to regular grain machines on grain, and a genuine **Clover Huller** in addition.

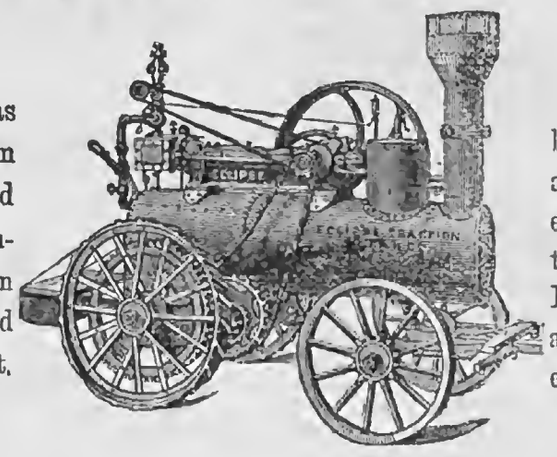
Engines, positively the most desirable for Lightness, Economy, Power and Safety. Boiler has horizontal tubes, and is therefore free from the objectionable features of vertical boilers.

HORSE POWERS, both Lever and Endless Chain. All sizes. Send for catalogue Address.

G. WESTINGHOUSE & Co.,
Schenectady, N., Y., U. S. A.

THE ECLIPSE ENGINES
FARM, PORTABLE, STATIONARY AND TRACTION.

The "Eclipse" was our new design Farm Engine in 1874, and since, many useful improvements have been made, making it second to none in the market.



The "Eclipse" has been awarded medals and premiums where exhibited, including the Centennial of 1876 Its popularity as far as introduced is not excelled.

ECLIPSE TRACTION ENGINE.

Persons in want of

ENGINES, PORTABLE CIRCULAR SAW-MILLS, ETC.,

should not omit writing to us for prices, terms, catalogues, etc. Address

FRICK & CO.,
Waynesboro, Franklin Co., Pa., U.S.A.

THE
MOLINE PLOW CO.,
Moline, Ill.

BIG AND PAYING CROPS

reward the use of the superior implements manufactured by the Moline Plow Co.

Share and mold-board made of the finest quality of hardened cast steel, which insures perfect scouring in any soil.

The Moline Sulky

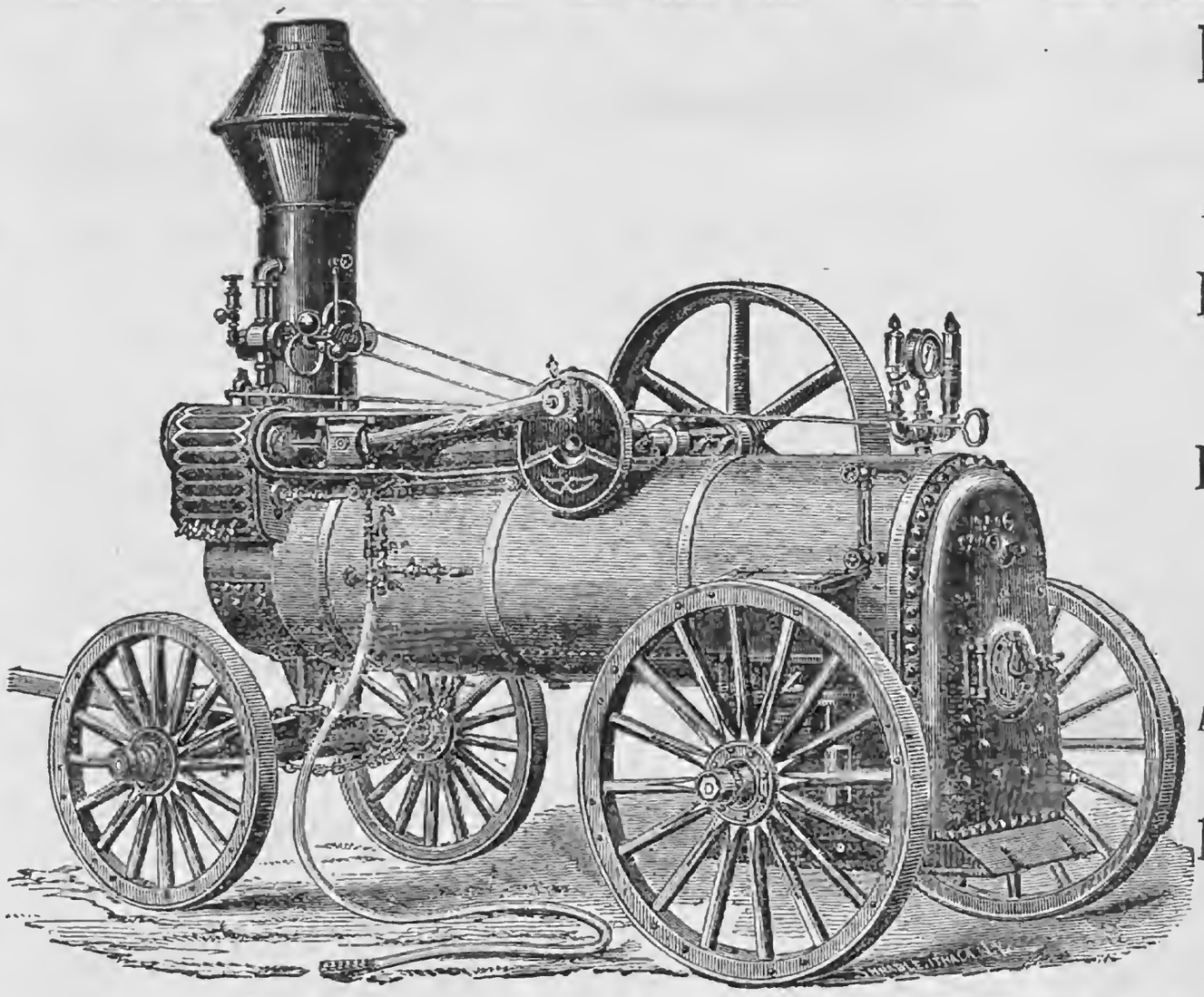
is the popular favorite wherever it has been introduced and has distanced all competitors in its practical working qualities.

Wanted----Names of 100,000 Practical Farmers!

Send us your address and the names of a few reliable farmers and we will forward you by mail a handsome Chromo showing the MOLINE AT WORK, and enter your name for a copy of our 1881 Diary and Pocket Compendium. Address

MOLINE PLOW CO.,
Moline, Ill., U. S. A.

REYNOLDS & LANG,



Iron Founders and Machinists,

AND MANUFACTURERS OF

Portable
AND
Stationary
Engines
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Boilers,

MILL GEARING,

AGRICULTURAL IMPLEMENTS, &c.

17 & 19 East Green St.

ITHACA, N. Y.

Send for Circulars.

THE VICTOR
Double Huller
Clover Machine

Is the *only kind* that has ever hulled **100** bushels of seed in one day from damp and wet straw. Send for Descriptive Circular and Price List, which contains many letters confirming this.

Hagerstown Agricultural Implement Mfg. Co.
State where you saw Advertisement. **Hagerstown, Md.**

Farmers' Report on Clover Hullers

LAGRANGE, Lagrange Co., Ind., May 27, 1880.

Report of a Joint Committee appointed by the Agricultural Societies of St. Joseph County, Michigan, and LaGrange County, Indiana, to test the relative merits of the VICTOR CLOVER HULLER, OF HAGERSTOWN, MARYLAND, and of the BIRDSALL MONITOR, JUNIOR, CLOVER HULLER, OF SOUTH BEND, INDIANA:

WHEREAS, at the St. Joseph County, Michigan, Fair, held at Centreville, on the 21st day of May, 1880, an agreement was entered into by the representatives of the different machines to have a trial of their merits at the LaGrange County Fair, on Thursday, May 27, a Joint Committee was formed, consisting of five from each of the two counties, and held such trial this day.

The Committee, in pursuance of the agreement, secured two two-horse loads of clover, which had been stacked two winters, and brought them on the grounds, and determined that each machine should thresh one load, and then each RE-THRESH the straw which had been run through the other machine according to agreement.

At the conclusion of the trial the Committee repaired to Agricultural Hall, and, after due deliberation, unanimously decided in favor of the **Victor for rapidity and excellence of work in all respects.**

The Birdsell, from 1,339 pounds straw, threshed 37 pounds seed mixed with a larger quantity of chaff; the Victor, from 1,310 pounds straw, threshed 48¾ pounds seed mixed with a less quantity of chaff. The time occupied in threshing by the Victor was eight minutes less than that occupied by the Birdsell. From the straw of the Victor the Birdsell machine re-threshed two pounds seed; from the straw of the Birdsell the Victor re-threshed eight pounds of seed. The time occupied by the Victor in this re-threshing was seven minutes less than that occupied by the Birdsell.

These machines were both run by a Russell engine, from Massilon, Ohio, in charge of John F. Fallon; used essentially the same amount of power.

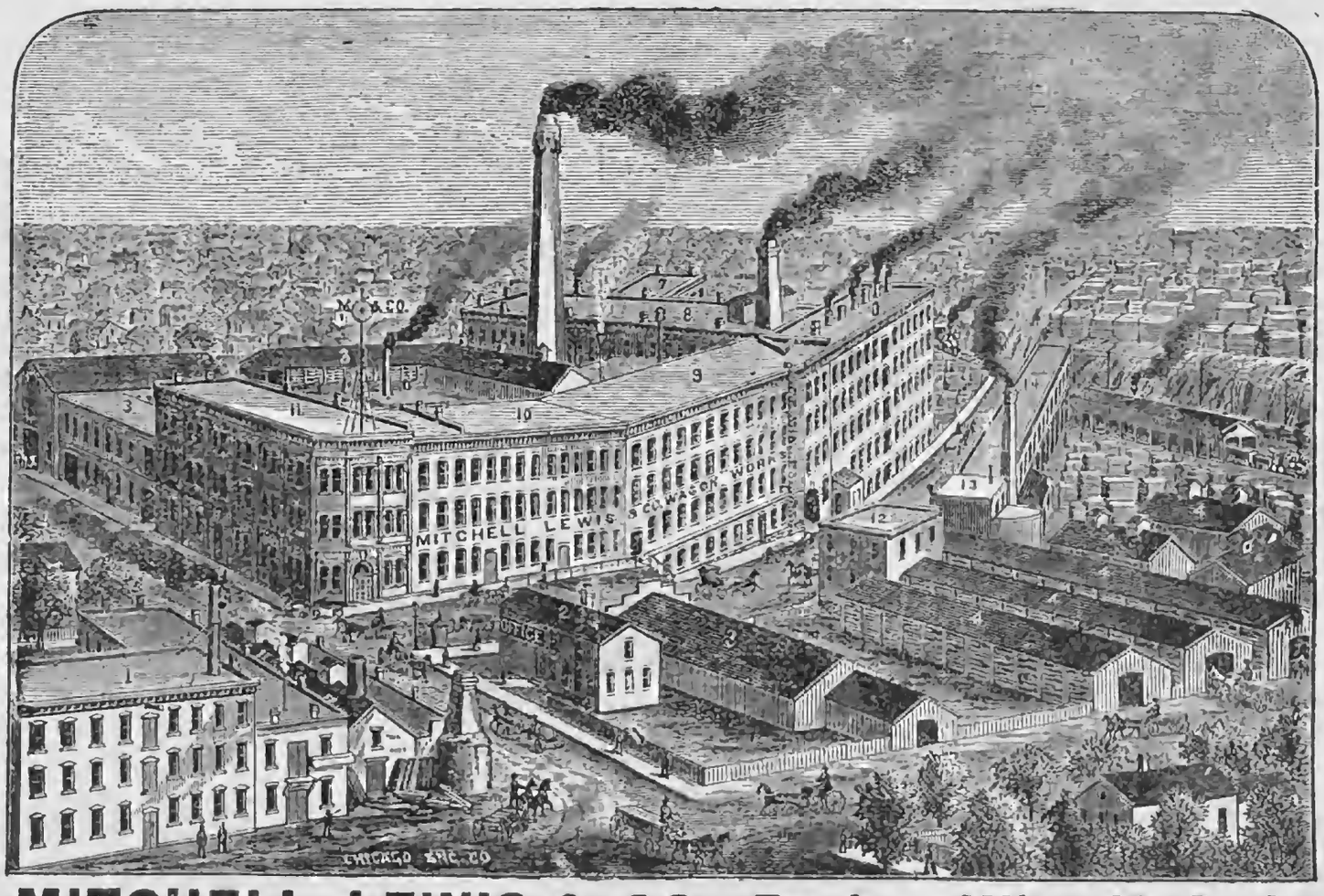
Signed by Committee,
E. SIXBY, Chairman, Lagrange, Ind.
J. H. GARDNER, Sec'y, Centreville, Mich.
JAMES RICHARDS, Centreville, Mich.
MORDEN SABIN, Centreville, Mich.
SAMUEL FRANKISH, Centreville, Mich.
CHARLES FRANKISH, Centreville, Mich.
L. M. WOODWORTH, LaGrange, Indiana.
JAMES CLUGSTON, LeGrange, Indiana.
ARAD LAMPMAN, LaGrange, Indiana.
J. E. HOUK, LaGrange, Indiana.

Circulars of the **Victor** sent postage prepaid on application.

HAGERSTOWN AGL. IMP. MFG. CO.,
Hagerstown, Md., U. S. A

AGAIN IN FULL OPERATION.

Established 1832. Partial y burned . an. 9, 1880



New Works completed March 8th, 1880.

MITCHELL, LEWIS & CO., Racine, Wis. U. S. A.

Farm and Freight Wagons, Platform three and four spring Wagons,

Open and Top Buggies, Ladies Phaetons, Doctors' Phaetons, Sewing Machine Wagons. The best and most thoroughly seasoned stock. Fifty years' Experience, Competent Workmen, Improved Machinery, Mechanical Principles, combine in the manufacture of the **Mitchell Wagon.**

No. 1, Carriage Department; No. 2, Office; No. 3, Store Rooms for finished parts; No. 4, Drying Sheds; No. 5, Shipping Yard; No. 6, Lumber Yards; No. 7, Iron House; No. 8, Blacksmith Shop in basement, Store and Paint Rooms above; No. 9, Machine Rooms and Wood Shops; No. 10, Paint Shop; No. 11, Repository; No. 12, Rooms for re-packing and boxing Spring Wagons; No. 13, Fire Pump and Steam Supply Furnaces; No. 14, Assorted Stock.

Illustrated Price List furnished on application.

BRIEFLETS.

Of the early grapes, Moore's Early, Talman or Early Champion, Hartford Prolific, Telegraph or Christine, and Ives, J. T. Lovett writes us that he regards Moore's Early as the best for market, and Telegraph as the best table grape for home use. Moore's Early is the earliest of all by a few days, very like Concord in every respect—fully equaling it in size of bunch and berry, fine appearance and quality. It cracks also about as badly. Telegraph is still better in quality, but has a skin so thin that it will not bear shipment so well and is a few days later than Moore's Early. . . . . We wish it were the law that every railroad company in the country were compelled to lay a double track. Most of the collisions which occur are caused by the misunderstanding and confusion which are almost unavoidable where single tracks alone exist and a heavy business is carried on. . . . . We were speaking some time ago of a cucumber grown by Mr. Stewart 30 inches in length. A cucumber was exhibited at a recent English show measuring 39 inches in length and 12½ in circumference, weighing 10½ pounds.

"WHAT will cure or relieve catarrh?" is a question which has been frequently asked us, and which we have answered to the best of our knowledge in these pages. In this connection we desire to call particular attention to the advertisement, in this issue, of Dr. Sykes's Sure Cure for Catarrh. Besides the numerous indorsements of its merits specified in the advertisement, we have it from thoroughly trustworthy private sources that it is working some wonderful cures of this disagreeable, persistent and dangerous ailment; so that we strongly advise all whose happiness is marred by it, to give this cure a trial.

FOUTZ'S
HORSE AND CATTLE POWDERS

Will cure or prevent Disease.

NO HORSE will die of COLIC, BOTS or LUNG FEVER, if Foutz's Powders are used in time.

Foutz's Powders will cure and prevent HOG CHOLERA

Foutz's Powders will prevent GAPES IN FOWLS.

Foutz's Powders will increase the quantity of milk and cream twenty per cent., and make the butter firm and sweet.

Foutz's Powders will cure or prevent almost EVERY DISEASE to which Horses and Cattle are subject.

FOUTZ'S POWDERS WILL GIVE SATISFACTION.

Sold everywhere.

DAVID E. FOUTZ, Proprietor,
BALTIMORE, MD.

As an experiment, and to influence future subscriptions, we offer to send the

TRIBUNE AND FARMER
EVERY WEEK FOR
3 MONTHS
ON TRIAL
FREE

A large weekly paper, absolutely free for three months, to any one who will send us their address, together with twelve one-cent stamps, to pay postage on twelve consecutive numbers of the **TRIBUNE AND FARMER**, issued every Saturday. Send us ten names upon above terms, and we will send you a copy three months, free of postage, for your trouble.

Regular Price, $1.00 Per Year.

THOMAS MEEHAN, Agricultural Editor.

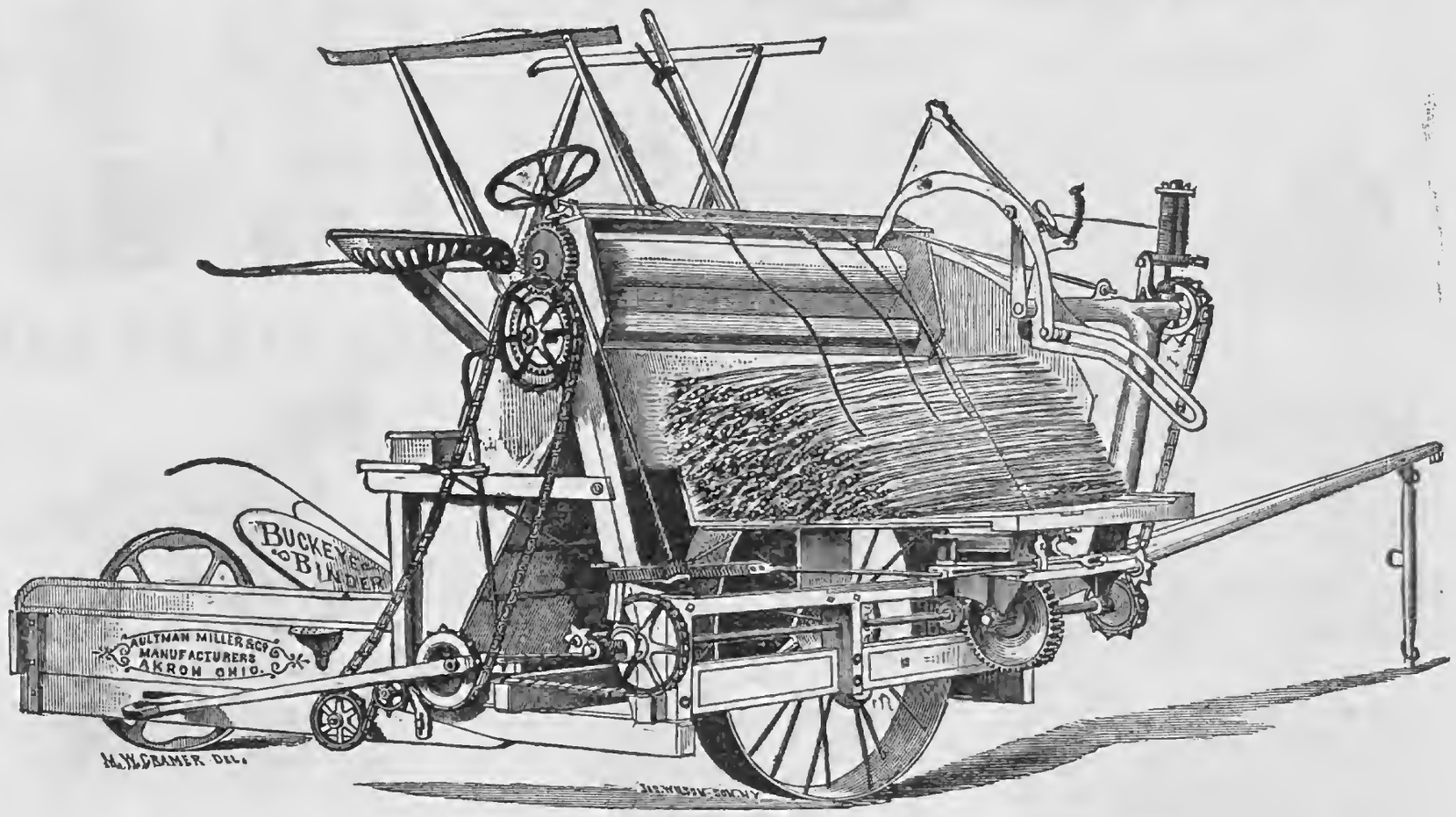
The Best of American Humorists

MOSE SKINNER is a regular contributor to the TRIBUNE AND FARMER, and his letters are to be found only in these columns.

Contains each week FOUR SPLENDID STORIES Complete, Detective Sketches, Exposes City Sharpers. No Continued Sensational Matter admitted to our Columns. Full of Short Anecdotes, Ladies' Department, Youths' Column—All the News, and positively the **Very Best** Agricultural Department to be found in any weekly in the United States.

Address, **Tribune and Farmer,** Philadelphia, Pa. Mention this paper.

Buckeye Self-Binding Harvester.



THE BUCKEYE BINDER WAS AWARDED THE FIRST PRIZE GRAND GOLD MEDAL, AT BUCHAREST, ROUMANIA, JULY 19th, 1880.

THE FIRST PRIZE AND GRAND GOLD MEDAL Offered by the Agricultural Society of France, awarded to the Buckeye at Society's Field Trial at Rambouillet, near Paris, June 22, 1879.

THE FIRST PRIZE AND GRAND GOLD MEDAL Offered by the Agricultural Society of Spain, awarded to the Buckeye, at the Society's Field Trial at Madrid, Spain, 8th to 13th of July, 1879.

FIRST PRIZE AND DIPLOMA OF HONOR, Awarded to the Buckeye at Sable d'Olonne, France, July 13th, 1879.

FIRST PRIZE AND SILVER MEDAL, Awarded to the Buckeye at Laincourt, France, July 20th, 1879.

The McCormick Binder was a competitor in all the above-named Trials, and the Osborne and Wood Binders at most of them.

The BUCKEYE is, so far as we know, the only Binder which has the simple crank movement for the needle, allowing a stationary arm of cast-iron, tubular in form, to be brought close to the work to be done, giving a perfectly rigid support to the needle itself, and securing for it greater steadiness of motion than is possible in any other form.

The driver, without leaving his seat, can instantly move the binding apparatus forward or back, to suit long or short straw. Bundles are delivered regularly at intervals of nine or eleven feet, or the size of the gavel may be regulated as desired by the driver, by means of a foot lever, and large or small bundles are bound without any change of the adjustment.

When properly adjusted, the Buckeye will bind its bundles as tight as can be desired, the limit being not the capacity of the machine, but the strength of the wire.

The objections to wire as a material for binding are without any foundation in fact. All wire bands can be removed from the straw by means of the shears we furnish with the Buckeye. Even if they do get into the threshing machine, they do not injure it, nor is there any danger of injury to cattle. Neither do millers and wheat buyers pay less for wheat bound with wire, as every particle of wire can be removed through the use of magnets. These points have been thoroughly discussed, and not one of the objections against the use of wire has yet been sustained.

All our Reaping Machines, Table-Rakes, Droppers, Harvesters and Self-Binders, are provided with reels of the most approved pattern, which can be adjusted to the desired height by the driver while the machine is in motion. The operation of the adjustable reel on the Binder will be found extremely satisfactory in the field, as a wide range of movement up and down and forward and back has been provided.

WE ALSO BUILD THE CELEBRATED

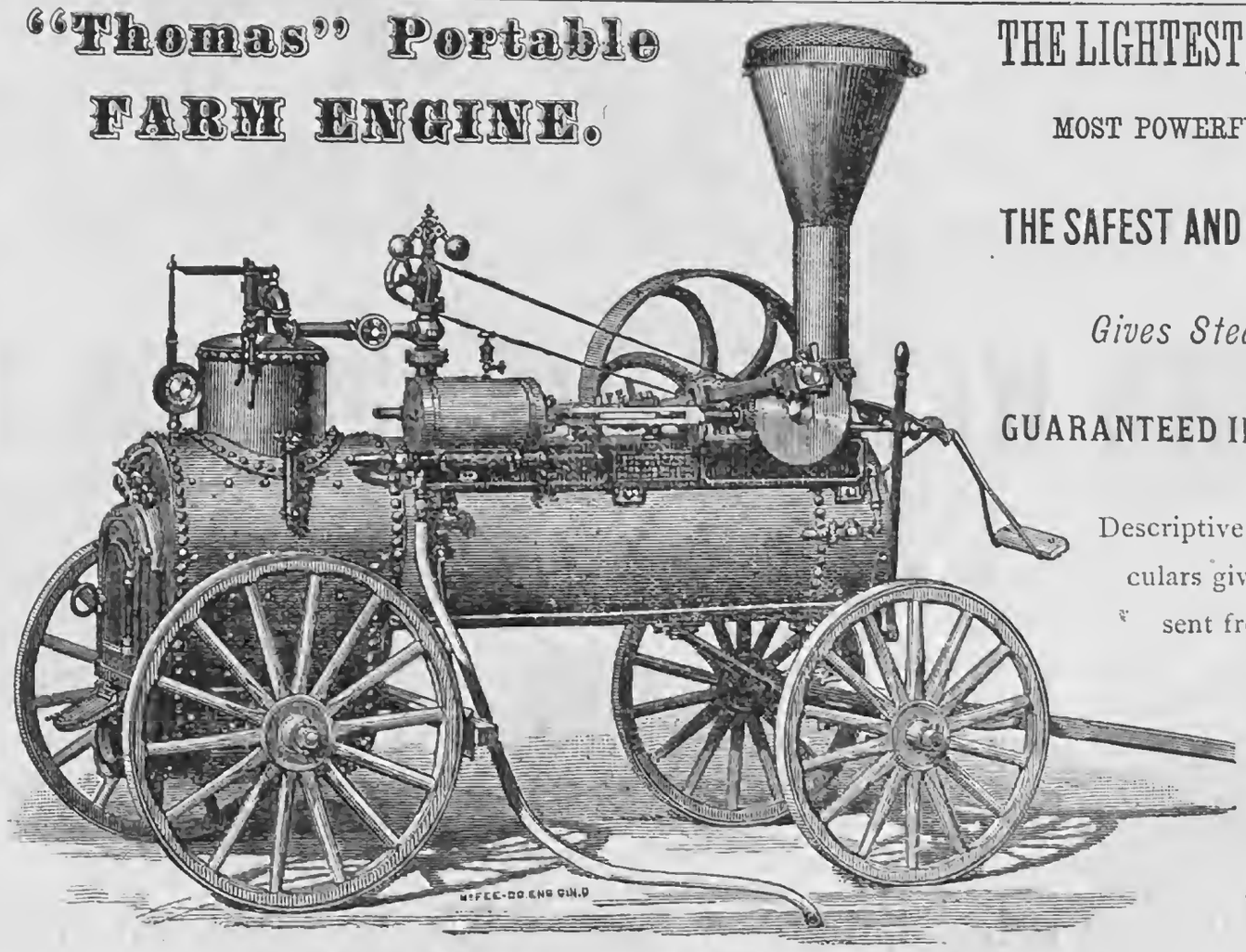
BUCKEYE MOWER, BUCKEYE DROPPER AND BUCKEYE TABLE-RAKE.

For Price Lists and Descriptive Circulars, address,

C. AULTMAN & CO., Canton, Ohio, or
AULTMAN, MILLER & CO., Akron, Ohio, U.S.A.

In writing for Price List please say where you saw this Advertisement.

"Thomas" Portable FARM ENGINE.



THE LIGHTEST, BEST BUILT AND

MOST POWERFUL ENGINE MADE.

THE SAFEST AND MOST ECONOMICAL,

Gives Steadiest Power,

GUARANTEED IN EVERY RESPECT.

Descriptive and Illustrated Circulars giving full information, sent free on application.

We also make the

Celebrated "Thomas"

SULKY HAY RAKE.

Address: **J. H. THOMAS & SONS, Springfield, Ohio, U. S. A.**

Mill Manufactory

Established 1851.

ORIST MILLS,

Or FRENCH BUHR STONE

Portable Mills for Farmers, Saw Mills, etc.; 16 sizes; over 5,000 in use. Price from $80 up. Complete Mill and Sheller, $95. A boy can grind and keep in order. Adapted to any kind of suitable power. Complete Flouring and Corn Mills.

NORDYKE & MARMON CO., Indianapolis, Ind.

Improved Baldwin's

American Fodder Cutter.

Easiest running, fastest Cutting Machine in the market. **Improved safety Fly Wheels for Power Cutters.** *Feeding capacity exceeds that of any other Cutter in the market.* Send for illustrated circular.

C. PIERPONT & Co., Mfgs. New Haven, Conn.

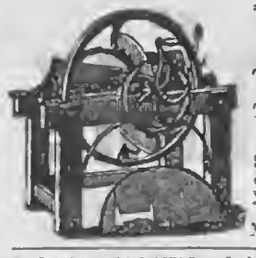
THE HAWKEYE FEED STEAMER.

The best feed cooker in the world. Powerful, durable, easily managed and the cheapest steamer in use. Every farmer should have one.

For illustrated circulars, price list, or territorial rights, address

J. H. MERRILL, Plattsmouth, Neb.

The cut shows a portion of the front removed in order to show the inside of the steamer.



THE BELLE CITY FEED CUTTER,

The Best Feed Cutter in the World.

THE ONE THAT RUNS LIGHT ENOUGH FOR WIND-POWER.

Send for circular, references, &c. Name this paper when you write.

DAVID LAWTON, Manufacturer, Racine, Wis.

BOIL YOUR CORN

and potatoes, and save half the cost of pork and your pigs from the cholera with

THE PROFIT

Farmers' Boiler,

Send for Circular to

D. R. SPERRY & CO.,

Manufacturers of Caldrons, Sugar Kettles, Hollow Ware, etc.

Batavia, Ill., U. S. A.

Monarch Corn & Cob Mill.

With Cast-Cast Steel Grinders.

The most perfect mill yet invented. *Warranted* to grind faster, run lighter, and wear four times as long as any other.

☞ **Farmers, be not deceived.**

Satisfaction guaranteed. Many thousands in use, giving perfect satisfaction where others fail.

Cider Mills, Feed Cutters, and Corn Shellers, all sizes. Low prices. Send for Circulars.

WHITMAN AGRICULTURAL CO., St. Louis, Mo.

RICHMOND CITY MILL WORKS,

RICHMOND, IND.

Manufacturers of

MILL STONES

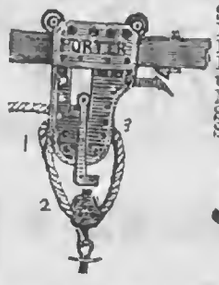
and

Flouring Mill Machinery.

We manufacture the best French Burr **CORN AND FEED MILLS** in the country. Send for description and prices.

State you saw this in RURAL N.-Y.

Porter's Wood Track Hay Carrier



Saves Money, Time and Labor. No barn complete without one. Light, strong and durable. Double draft. Positive lock and unlock. Awarded FIRST PREMIUMS at the Illinois Fair and St. Louis Exposition, 1879. Send for Circulars.

J. E. Porter,

Ottawa, Ill., U. S. A.

MILLS FOR FLOUR AND CORN.

MANUFACTORY

ESTABLISHED 1851.

OVER 2000 IN USE.

MILLS FOR FARMERS.

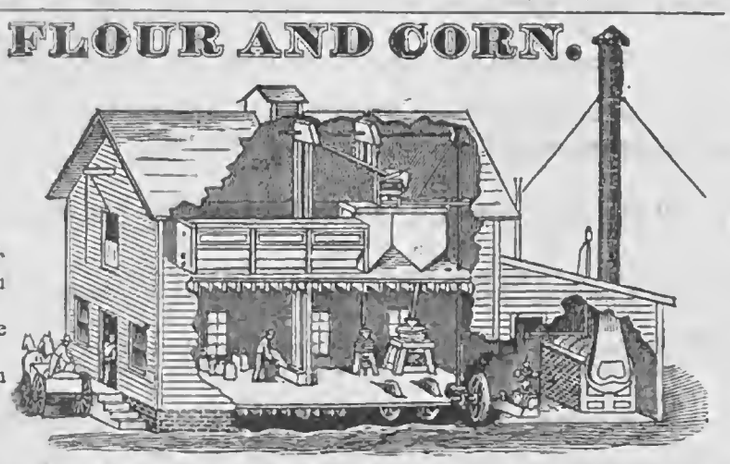
French burr stone, $80 and upwards.

A Boy can grind and keep in order.

Adapted to any kind of suitable power.

Complete Flouring and Corn Mills, ALL SIZES.

Send for pamphlet.



NORDYKE & MARMON CO., Indianapolis, Ind., U.S.A.

THE

BELCHER & TAYLOR AGRICULTURAL TOOL COMPANY,

Chicopee Falls,

MASS., U.S.A.

Over *45,000* of this kind Sold and in use.

Self-Sharpener. Price, $10 to $80

LION CUTTER, With changeable cut. Best power cutter made, runs light by hand and HAS AN IMMENSE SALE.

The Largest Manufacturers of

HAY, STRAW, CORNSTALK AND SHUCK CUTTERS

In the World, also Sole Manufacturers of the

S. R. NYE, BAY STATE RAKE, BULLARD'S HAY TEDDER, ETC.

Best Assortment, Best Workmanship

OF AGRICULTURAL IMPLEMENTS

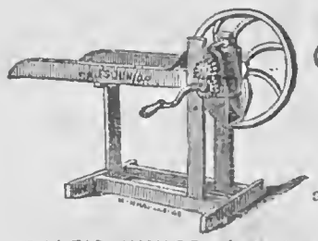
Of Every Description.

LIBERAL DISCOUNTS TO THE TRADE.

For further particulars, with prices and terms, address:

JAMES E. TAYLOR, Sec.,

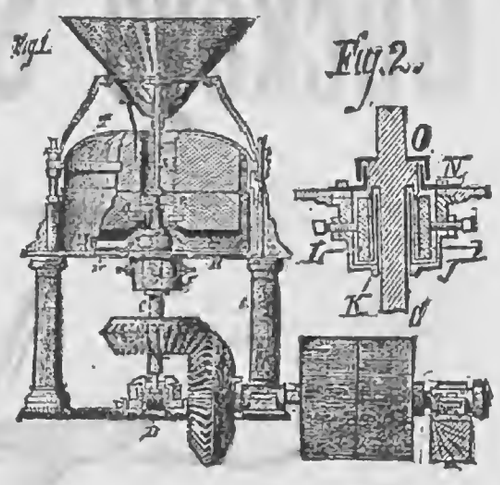
Chicopee Falls, Mass., U.S.A.



GALE'S JUNIOR. Latest Improved Copper Strip Cutter.

GALE'S LEVER. The Most Substantial Cheap Cutter made.

MUNSON'S PORTABLE MILLS.



Wheat Flouring and Corn Grinding

PORTABLE MILLS.

CENTENNIAL AWARDS.

International Exhibition, Phila., 1876.
" " Santiago, Chili, 1875
Millers' International, Cincinnati, O., 1880.

Best in the World!

Every Mill Warranted. Every Mill fully Inspected, and Every Mill Placed on its Merits.

In Grinding Wheat, Corn, Regrinding Middlings, and in Buckwheat Flouring—We Challenge Competition.

MUNSON BROS., Utica, N. Y., U.S.A.

BIG GIANT CORN & COB MILL

Improved with Sifter Attachment.

EVERY MAN HIS OWN MILLER.

A Home Grist Mill Complete.

This Mill has an Automatic Sieve of any degree of fineness required, and will grind and bolt or sift the meal ready for use, making about seven-eighths of the product a beautiful, fine grade of family meal, equal to that made on a burr stone; the other one-eighth is about what you would give for toll, and is ground into good feed; if desired it can be run through the mill again and so be reduced to meal.

The sieve can be quickly removed, and the mill used for crushing corn and cob, or small grain.

We put this Sifting Attachment only on our Improved Mills.

No. 2 Mill, capacity, 2 to 3 bushels per hour, $60.
" 3 " " 2½ to 4 " " " 75.

STAR CANE MILLS.

These Mills are very strong and extra heavy, weighing over two hundred pounds more than mills of similar capacity.

The rolls are so made as to adapt themselves perfectly to the work to be done.

IT IS THE CHEAPEST AND BEST MILL IN THE MARKET.

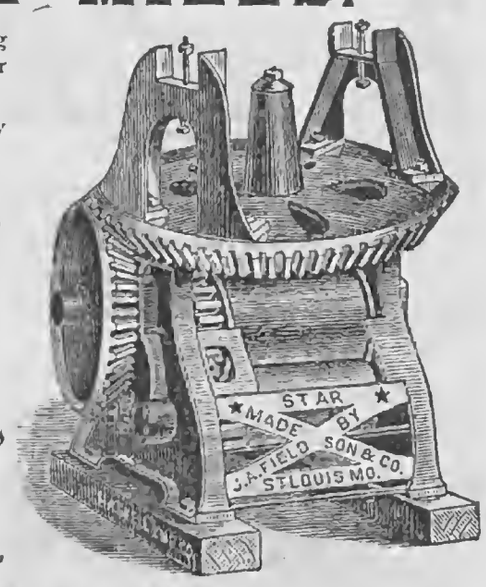
Warranted in Every Respect.

Send for Illustrated Circulars, giving full description of our

BIG GIANT CORN AND COB MILL,

AND STAR CANE MILLS

To the Sole Manufacturers,

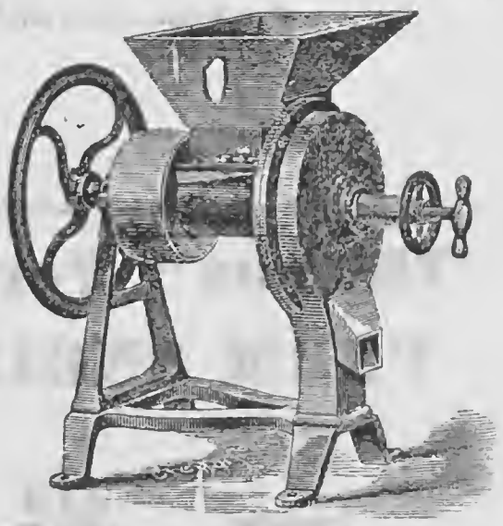


J. A. FIELD & CO.,

Successors to J. A. FIELD, SON & CO.,

922 N. Second Street, St. Louis, Mo., U. S. A.

THE VICTORY CORN MILL.



The Only Mill that is a Complete success in Grinding

CORN AND COB TOGETHER.

WE DEFY COMPETITION

IN THIS KIND OF GRINDING.

It also grinds Shelled Corn and all other kinds of grain, coarse or fine, as desired.

Capacity, 10 to 20 Bushels per hour.

Self-Sharpening Plates and Warranted in every respect.

Send for Circular. Address,

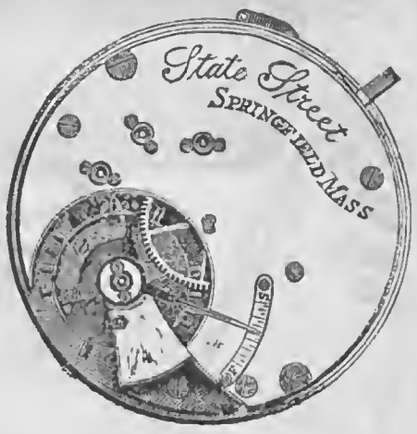
THOMAS ROBERTS,

Springfield, Ohio, U. S. A.

HAMPDEN WATCHES-THE SUPERIOR TIME PIECES.

E. W. BOND.

Beautifully finished, accurately adjusted, nickel movement, 17 Fine Ruby Jewels, 16 Size, Stem-Winding, solid Gold Settings, ¾ Plate



RAILWAY.

Specially adapted to Railroad and all other uses where accurate time and adjustment are necessary. 18 Size, Full Plate, Nickel, beautifully finished, Gold Settings and Gold Trimmed.

STATE STREET.

¾ Plate, Nickel, 16 Size movement, Quick Train, Gold Settings.

Factories and General Office, Springfield, Mass., U.S.A.

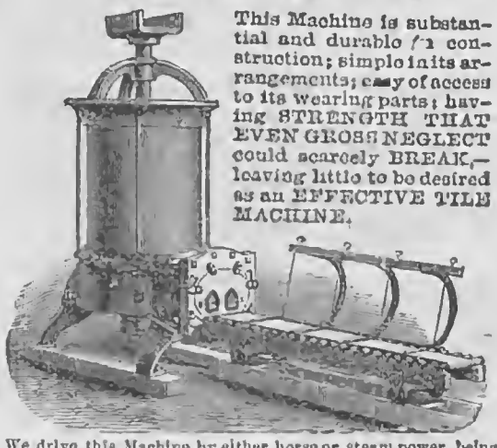
New York Office, 12 Maiden Lane.

BRIEFLETS.

A question which might be profitably discussed by our farmers' clubs and societies is: "How to elevate the character of our agricultural fairs so as to attract the young—so as to instruct both the old and the young in all that pertains to the farm, garden and orchard."..... The first thought of secretaries and directors is "How to make them pay?" Gambling, side-shows, and all sorts of clap-traps disguised under specious names which attract the thoughtless, are therefore tolerated—even encouraged.....But the impolicy of this course is rapidly becoming apparent. Respectable families hesitate either to permit their sons and daughters to attend the fair or to go themselves. .....The aim of the agricultural fair *must be* changed. Exhibitions of the highest merit must be striven for The general plan and scope of our Centennial Exhibition must be imitated, and again, as in times of old, the intelligent farmer and citizen will lend his full countenance and support.....As Mr. James Vick well expresses it: "It is well to improve our fowls and sheep and horses, and plows and harrows and wagons, but there is no improvement so much needed, none so important to the welfare and glory of our country, as the improvement of boys and girls and men and women. And, no matter what a society may do for the improvement of animals and implements and grain, if it depraves the people it is a curse and not a blessing."....As we understand it, the prime object of fairs is to teach those who visit them. We do not understand that the prime object of fairs is to advertise exhibitors. There is evidently a misunderstanding between the two classes. .....It is a point often disputed whether the tops of asparagus should be cut before or not until after the seed has ripened. Mr. J. T. Lovett writes us that it is positively to the detriment of asparagus to cut down the tops before they have performed their entire mission and thoroughly ripened, and this he has learned by experience.... Mr. A. B. Allen thinks our cut of Vidocq one of the best and most perfect specimens of a true Percheron ever engraved.....It will be observed that some parts of the Rural Farm on our first page are marked M., M., M. Mr. Mead, who kindly favors us in this number with the impressions of his visit to the farm itself, asked if those letters in the engraving stood for mosquitoes?..... In consideration of the universal need of general-utility horses, is it too much to ask our agricultural societies to offer higher prizes for them and lower prizes for the race-horse, with which, as such, the farmer has little or nothing to do?.....Alexander Hyde says that the isolated life which the farmer leads tends to make him a man of one idea, and it will do him good if, after he has given one day to the exhibition of stock and crops at the fair, he gives another to the exhibit which the men and women make of themselves.....There is no way by which we can so well forget ourselves and the little botherations incident to life, as by mingling with others and seeing and hearing their trials.....As our own pumpkins seem the largest till we see some larger, so our cares and vexations are wont to loom up in a magnified form till we learn how much larger afflictions others are suffering..... Intelligent observation at the fairs will induce all enterprising farmers to endeavor to work out improvements upon their own farms.....Authorities at fairs have no business to hold such positions unless in the face of much provocation to become peevish, they can command a polite manner and take pains to answer explicitly a thousand trivial questions put to them by visitors.

Oh, why will you let that invalid friend suffer, that Hop Bitters will so certainly cure.

Eureka Drain Tile Machine



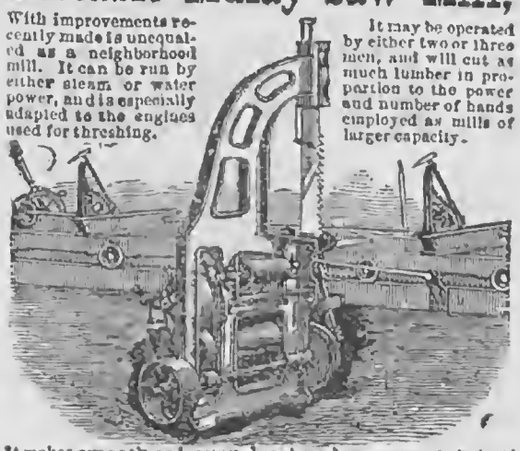
This Machine is substantial and durable in construction; simple in its arrangements; easy of access to its wearing parts; having STRENGTH THAT EVEN GROSS NEGLECT could scarcely BREAK,—leaving little to be desired as an EFFECTIVE TILE MACHINE.

We drive this Machine by either horse or steam power, being well suited to either. Our Tile dies range in size from 3 to 9 ins. in diameter; and in shape we vary them to suit the taste of customers. As a Brick Machine it is also a complete success. It is fully warranted as a Tile or Brick Machine. Send for circular.
CHANDLER & TAYLOR, Indianapolis, Ind.

Portable Mulay Saw Mill,

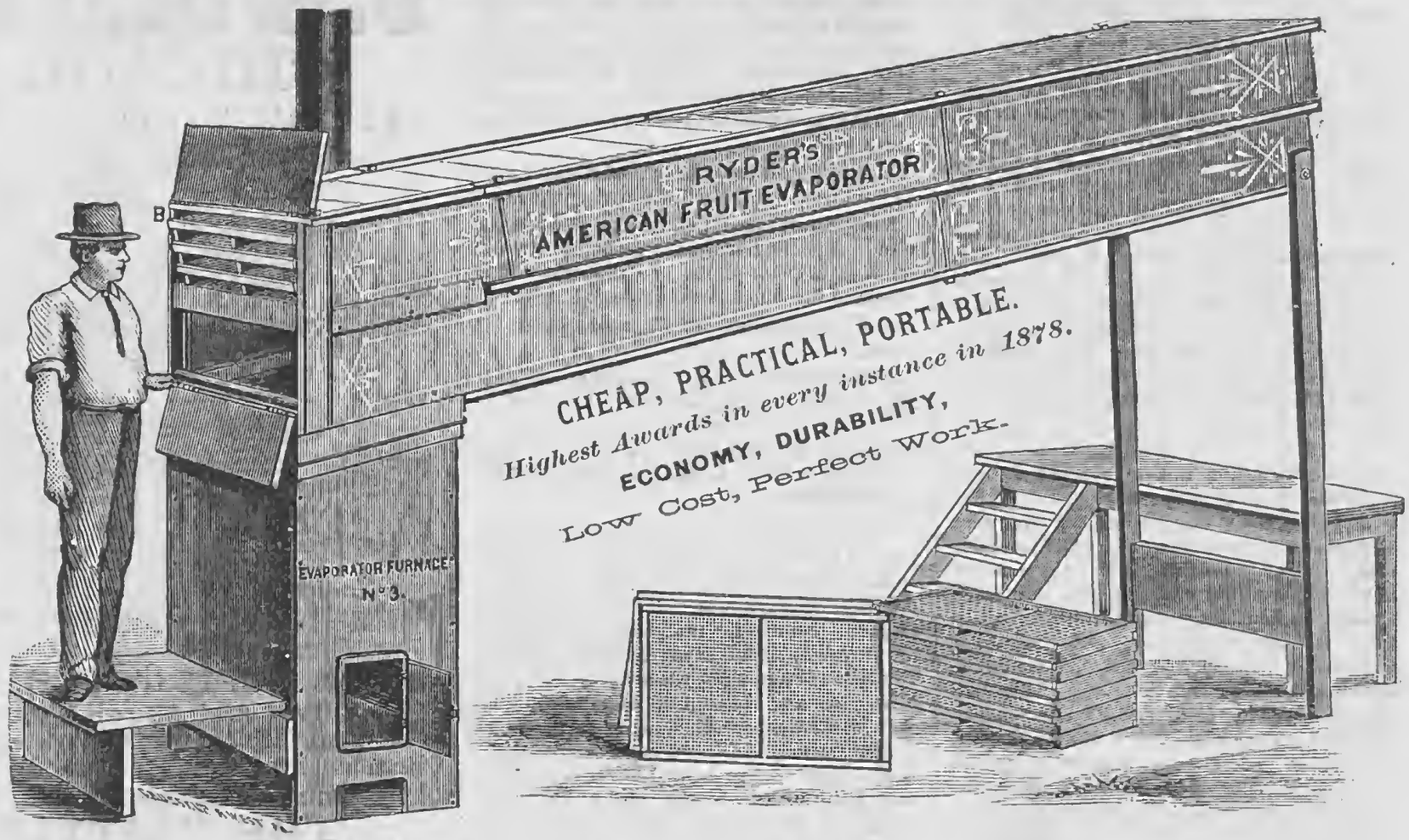
With improvements recently made is unequaled as a neighborhood mill. It can be run by either steam or water power, and is especially adapted to the engines used for threshing.

It may be operated by either two or three men, and will cut as much lumber in proportion to the power and number of hands employed as mills of larger capacity.



It makes smooth and even lumber, leaves no stub shot and will cut any sized log up to four feet in diameter. It may be transported from one locality to another and re-erected ready for sawing in from two to three days, and can be made profitable in localities where there is not sufficient timber to justify the erection of a large mill. Send for descriptive circular, price, etc., to CHANDLER & TAYLOR, Indianapolis, Ind.

The American Fruit Drier.



CORRECT PRINCIPLES, CORRECTLY APPLIED.

Its product in color, flavor and selling qualities unexcelled. Original and radically new in fruit evaporation.

Some of the merits of the AMERICAN, and advantages secured by its patrons:

1st. We enumerate among other claims of the American Evaporator, certain advantages secured by purchasers, in addition to its acknowleged structural superiority. They have in our Fruit-Selling Department a comprehensive co-operative agency with mutual interests, in the sale of their product. Thorough uniformity of quality, value, package, trade mark and label, secured by our confidential circular to purchasers, and carefully selected selling agents.

2d. That all our Evaporated Fruit is made by our patrons, and in securing best possible prices for them, we best advertise our evaporator, maintain the established reputation and price of its product, at small cost. We do not desire to make any considerable profit on your labor.

3d. It is the only original Inclined-Flue Evaporator, thoroughly protected by letters patent, and the only one which can guarantee protection and safety in its use against costly litigation, royalties and damages. See notice in catalogue of our claims.

4th. With it the individual farmer and orchardist can cheaply convert his surplus fruit into evaporated stock, equal in appearance and market value to that produced by the most thoroughly equipped and expensive commercial evaporator.

5th. No farm implement will pay its cost so quickly, or so many times in a season; always ready, the daily wasting fruit suggesting its use and reminding us "It is not what we make, but what we save that accumulates wealth."

6th. Owing to the universal practice of sun and oven drying of fruit, the market for that kind is overstocked and it does not pay, while choice evaporated fruits always command good prices.

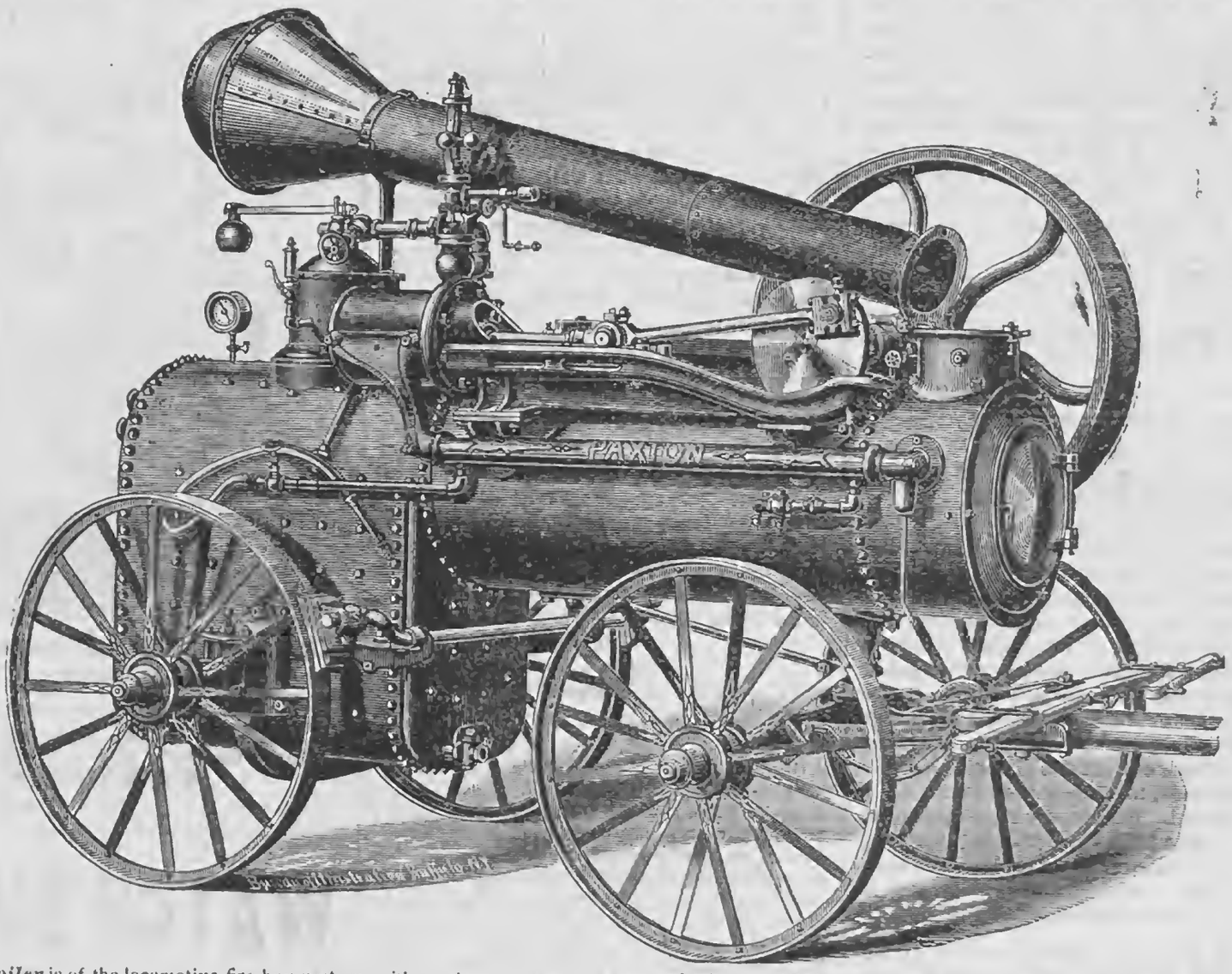
7th. Strong currents of Dry Hot Air, automatically created, pass so rapidly through the *Inclined Flues*, precluding the possibility of discoloration, and account for the fancy work it does.

8th. Each tray (or group) first receives the direct and greatest heat. 2d. Each subsequent tray (or group) takes its place, and puts former one out of danger. 3d. It is almost impossible to burn the fruit in continuous working.

9th. Its evaporating capacity per tray surface and for its cost is unequaled. 2d. It will produce a handsomer, brighter-colored and a more valuable product than any other portable evaporator. Illustrated Catalogue free.

AMERICAN DRIER CO., Chambersburg, Pa., U.S.A.

PAXTON PORTABLE ENGINE



The Boiler is of the locomotive-fire-box pattern, with continuous water space around ash pan. We invert the back head of fire box and dispense with the cast-iron back, making that part of boiler available heating surface, and suffer less radiation of heat, an advantage in point of economy as well as to the engineer. The boiler is made of best American plate, well braced and of ample capacity.

The Engine is attached to one side of boiler, with fly-wheel opposite, which makes centre of gravity in a line central with boiler, also reducing hight of machine, making it less top-heavy and bringing it within reach of the operator.

The Connecting Rod is of finished steel with brass boxes of the finest metal that can be produced. ***The Cylinder*** is steam jacketed.

The Crank Shaft is made of steel, also all connecting pins are made of steel, hardened and ground on centres by a special machine. Piston rod and valve rod are also made of steel.

The Pump is attached to boiler on opposite side of engine, and is operated by a separate eccentric, and has a hand attachment to fill boiler by hand when not fired up. The boiler and engine ride on springs forward and back, relieving it from injurious strains in transportation. ***The Wheels*** are of iron and imperishable. With a superior ***spark arrester*** in connection with water space around fire box, we obviate every possibility for the escape of fire—fire doors, ash pit, and smoke box doors are perfectly tight. We also place a ***fusible safety plug*** in crown sheet of fire box. In fact it has been our design to secure the desired result in the most direct and simple manner that an extended experience could suggest as being consistent with economy of fuel and stability of parts, sparing no efforts to make it complete in all its appointments, at the same time avoiding all complex "novelties," (so-called improvements,) features which are not essential to its economic action, but liable to wear and derangement—the great source of annoyance to the inexperienced engineer. ***For Circulars address***

FOUNDRY AND MACHINERY DEPARTMENT,
HARRISBURG CAR MANUFACTURING CO., Harrisburg, Pa., U.S.A.

☞Also manufacturers of the celebrated ***Paxton Drill,*** with or without broadcast shovels, ***Phosphate Corn Planters,*** Streiwig's patent, etc., etc.

Miscellaneous.

BRIEFLETS.

O. JUDD "has been appointed an Indian commissioner." This was a surprise to "O. J." He accepts it, however, believing that it presents a much wider and more congenial field of usefulness than he has heretofore occupied. . . . . "'Tis the last rose of Summer," is what the sun said when he got up on the thirty-first of August.—Boston Courier. . . . . After suitable soil, we do not believe there is anything that better insures the health of fruit trees; that more effectually prevents blight, borers, yellows, etc., than washing them twice or thrice from April till October with a mixture of lime, potash, hellebore, aloes, salt, carbolic acid, etc. Lime and any one or all of the others may be used. . . . . Mr. Page of London thinks that Cos Lettuce is the only kind fit to be eaten. . . . . Extremes Meet.—A young girl and her lover were accustomed to meet on an unfrequented half-mile, circular race-course. When questioned as to the reason for choosing this particular locality, she blushingly replied, "Oh, sometimes we are interrupted; and then John walks off in one direction and I in the other, and meet on the opposite side. . . . . There are many reasons why it is well to raise peaches from pits. The seedlings will usually bear in three years. There is a very good chance of the seedlings coming true to seed. They are very easily raised. As soon as the pits are saved, they should be buried. Then in the Spring plant the pits where the trees are to grow and fruit. . . . . Because General Hancock doesn't sit on a dry-goods box in front of corner groceries and tell the neighbors how to save the nation, some country editors speak of him contemptuously as "no statesman."—Cincinnati Saturday Night. . . . . Clara Louise Kellogg has declared for Hancock.

"When music, heavenly maid, was young,
Ere yet in early Greece she sung."

Oh, Clara Louise! Oh! Where are now the hopes we cherished? Thou has learned to love another. Ah, false one, vote for Garfield and Arthur.—N. Y. Commercial Advertiser. . .

Mr. A. B. Crandell remarks: The sentiment against horse-racing at agricultural fairs is gaining strength year after year, as the immediate harm and evil tendencies of the system are more clearly seen. It is a rare instance now to find any farmers' journal defending it, but nearly all unite in saying that unless these exhibitions can be maintained without help of the fast element, 'and all that that implies,' they had better be abandoned." . . . . . Readers, begin thus early to form your plans for another year. Study how you may improve your crops by a change of seed—by selecting new kinds, or varieties different from those you have been sowing. Pray do not jump at the conclusion that your kind of corn or wheat or oats is the best that can be obtained. We have often thought so and found ourselves, by experiments, vastly mistaken. Prepare for future work, and to make that work more profitable to you and to your family with the same expenditure of time and labor.

ANSWERS TO CORRESPONDENTS.

Oak Tan Bark Ashes as a Fertilizer.

J. W. H., Williamsport, Pa., asks whether the ashes of oak tan bark would be a good fertilizer to drill in with wheat; and, if so, what quantity can be used per acre.

ANS.—The potash contained in fresh unleached ashes is caustic and there is no more destructive substance to tender vegetables, or, in fact, to any organic matter, such as a young sprout from a seed, than caustic potash. Although the strength of the potash in this respect depends upon its freshness, yet unleached ashes are at any time dangerous to use near the seed. It would therefore be safe to spread the ashes, any quantity up to 50 bushels per acre, broadcast, and then drill the seed, or, if sown broadcast, to harrow both in together. This would mix the ashes with the soil so as to render them innoxious. The only safe fertilizers to be drilled with the seed are fine bone dust and the best grades of superphosphate that are free from free sulphuric acid.

E. I. H. Easter Pa., referring to the RURAL experiments with seeds, asks which are the best and most productive varieties of wheat, corn and potatoes. He has just thrashed wheat that yielded 40¼ bushels per acre.

ANS.—We should like to know the variety of wheat which yielded you 40¼ bushels per acre. The results of our wheat experiments are in part described in this week's RURAL. Fultz and Clawson are generally recognized as our most productive kinds. We shall this Fall sow over 100 kinds on trial, while we shall depend chiefly on Fultz and Shumaker, for our main crop. The results of our experiments are given in full in these columns from time to time. We shall report our potato tests in a few weeks. Blount's corn promises the best yield we have ever had. In fact, it *seems* to be the greatest yield we have any knowledge of under ordinary cultivation. This also we shall report as soon as the yield can be measured. Chester Co., Mammoth has also done well; but the ears are so heavy and carried so high that many stalks break in two under their heavy load.

T. T. S., Tylersville, Conn., asks where seed of the Eucalyptus globulus can be obtained.

ANS.—Thorburn & Co., of this city sell the seeds. But the Eucalyptus globulus will not stand 25 deg. above zero, so that they could not stand the climate of the above latitude.

S. K., Coopertown, N. Y., sends plant for name.

ANS.—This is Plantago lanceolata—the English Plantain or Rib-grass.

CHANGE IN FEEDING SWINE AT THE WEST—HOG CHOLERA AND OTHER DISEASES.

IT has been too much the practice heretofore at the West to keep swine in large numbers in small, filthy, muddy fields or yards, destitute of pure water and fed exclusively on corn. No wonder that hog cholera should be prevalent under such circumstances, and thousands die annually in consequence of them. Now, we are rejoiced to observe a great change is rapidly taking place in the treatment of swine. They are given ample grass pastures and clover fields for range in Summer, and partially fed on wheat bran, middlings, or oatmeal well thinned with pure water and slightly salted, together with a small quantity of flaxseed or oil-meal, and an occasional dose of sulphur. By this method swine grow rapidly, are kept generally healthy, and are well prepared, when cool weather begins, to be fattened on corn for the Winter market. Earlier maturity and a greater growth and weight of flesh are obtained by this changed method of feeding and ample range, and the pork and bacon are found of a superior quality.

We have no doubt that trichina, measles, quinsy, lung fever, and all other diseases to which swine are now subject, may be generally avoided by a judicious method of feeding the pig from its birth till fully fattened for slaughter. A. B. A.

TERMS NOT UNDERSTOOD.

A farmer friend writes us: "The great objection that farmers have to agricultural papers is that they use terms they cannot understand."—Rural Brevities.

The farmer is right. It is a great fault in agricultural writers who have received a liberal education constantly to use technical terms without explanation. This has been one of my greatest troubles as an agricultural editor. I have often solicited a contribution from some able writer on a special subject and received a paper well adapted for reading before a scientific society, but which might as well have been written in Greek, so far as the farmers with a common school or even an English high school education are concerned. This blunder was the rock upon which the otherwise admirable Scientific Farmer split and sank. In preparing such contributions for the printer I have made it a duty to place after each "hard word," its meaning in parenthesis. I have always done this in my own writing when compelled to use a technical term, and have frequently been thanked for it by my readers. I suggest it to other writers as calculated to make their writing more useful and popular and for its educative effect. A reader even of very limited educational training who sees the meaning thus following the "hard word," soon associates the two together in his mind, and is so far led out of darkness into the light.

T. H. HOSKINS, M. D.

COMMUNICATIONS RECEIVED FOR THE WEEK.

P. H.—B. F. J.—L. E. R.—J. B.—A. W.—A. T.—D. C. C.—L. A. R.—W. V.—A. B. A.—R. A. G.—J. H. H.—O. W. D.—E. G.—P. C. C.—J. K.—A. S.—H. G. C.—H. T. M.—"Carrick."—J. F.—H. R. P.—B. S.—R. W. M., thanks for plants.—S. F. B.—G. H. & J. H. H., fruit received in good order—thanks.—J. H. G., plants received.—G. A. B., it is the editor's business to attend to that,—thanks.—W. J.—J. T. L.—E. S.—J. W. L., we will send as requested.—M. S. W.—H. E. E. R.—G. M. D.—E. J. H.—W. H. W.—E. S. S.—D. J. A.—E. M. C.—W. M.—M. B.—H. H.—J. D. V. P.—H. B.—H. C. F.—M. E. P.

FREE TO ALL!

Wishing to introduce our great Literary and Family Journal, **The Fireside at Home** (a mammoth 8-page, 40-column *Illustrated* paper, size of *N. Y. Ledger*, devoted to Literature, Useful Knowledge, Amusement, and everything to delight and instruct the whole family) into thousands of new homes where it is not already taken, we will send it **Free for Three Months** to all who send **Ten Cents** (in silver or postage stamps) to pay postage and help pay the cost of this advertisement. The regular price is $1.00 per year, but we are willing to give the paper away for three months and lose its cost in order to introduce it to new readers. By taking advantage of this offer you will secure all the brilliant holiday issues and enlarged numbers soon to be published, and an amount of valuable and attractive reading matter for the approaching **Long Winter Evenings**, which could be secured in no other way for four times the amount. **Send at once**, and if you can conscientiously say, after your subscription has expired, that you have not received double the value of the ten cents—yes, and more—we will make you a present of a $1.00 bill. Address:

J. M. LUPTON, Publisher, 27 Park Place, New York.

U. S. Standard Scales

CHICAGO SCALE CO.,

147, 149 & 151 S. Jefferson St., Chicago, Ill.

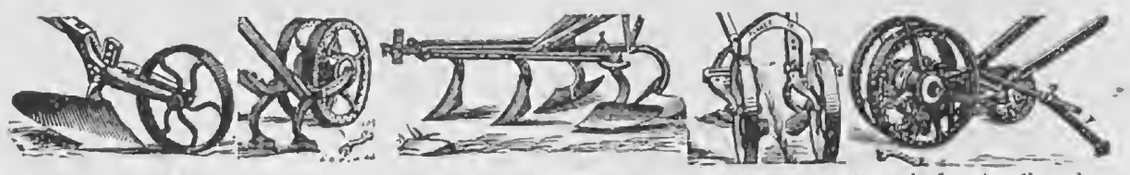
2 Ton Scale (Platform 6x12) **$40; 3 Ton** (7x13) **$50;**
4 Ton (8x14) **$60; 5 Ton** (8x14) **$75; 6 Ton** (8x16) **$90;**
6 Ton (8x20) **$100; 6 Ton** (8x22) **$110**; all other sizes in proportion.
Beam Box, Brass Beam, Iron Levers, Steel Bearings, and full directions for setting up.
Platform and Counter Scales, Trucks, Money Drawers, &c., &c.

THE "LITTLE DETECTIVE,"

Weighs from 1-4 oz. to 25 lbs., price $3.00, a perfect Scale for Offices, Families and Stores, sold by Dealers everywhere.

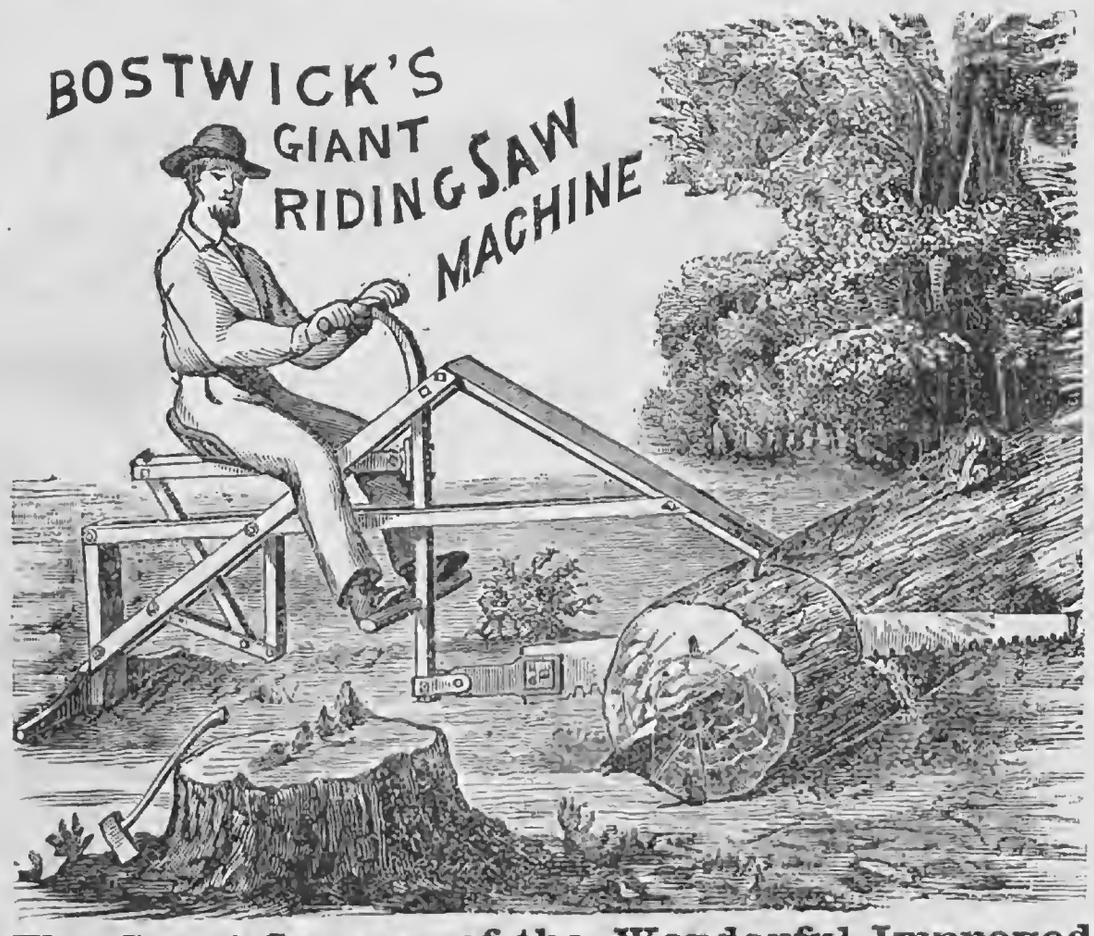
☞ Prices of all kinds of Scales from ONE-THIRD to ONE-HALF LOWER than other Companies, and Quality EQUAL to the BEST. For FULL PRICE LIST, address

CHICAGO SCALE CO., Chicago, Ill.



THE PLANET JR., GOODS. Our Illustrated Catalogue is free to all, and every farmer and every one with a vegetable garden should send for it and be convinced, once for all, that our implements are practicable all-day tools, not built for the rich, but especially to benefit the hard-worked tillers of the soil.

S. L. ALLEN & Co., Manuf'rs Agl. Tools, 229 Market St., Phila., Pa,



The Great Success of the Wonderful Improved Labor-Saving, Giant-Riding Saw Machine

is fully demonstrated by the large number in use and the present demand for them. It saws logs of any size. **One man can saw more logs or cord wood in one day and easier than two men can the old way.** It will saw a **two-foot log in three minutes. Every Farmer needs one.** Township Agents wanted. Send for Illustrated Circular and Terms. Address

FARMERS' MANUFACTURING CO.,
178 Elm St., Cincinnati, Ohio.

WATCH BUYERS, ATTENTION

The celebrated Borel and Courvoisier Watches were awarded the first prize in London in '62, grand prize at Paris in '67, first prize at Centennial in Philadelphia, and lastly gold medal at Paris in '78. These watches have stood the test for the past 20 years, and pronounced by best judges equal to any made. They all have Nickel Movements, Tempered and Hardened Breguet Hair Springs. Is chronised for railroad use in Key and Stem Winders, with all modern improvements in the art of watch making. Large numbers are in use on the principal railroads in the country. As a guarantee that they are what we claim for them, we refer by permission to the dealers named below who have sold them for years:

A. W. Brant, Fairport, N. Y.
Joseph Moulton, Worcester, Mass.
G. W. Fairchild, Bridgeport, Conn.
George Embrey, Morrow, Ohio.
E. B. Booth & Son, Rochester, N. Y.
T. & E. Dickinson, Buffalo, N. Y.
Julius Walker, Buffalo, N. Y.
A. M. Edwards, Buffalo, N. Y.
T. V. Dickinson, Buffalo, N. Y.
O. B. Rudd, Illion, N. Y.
W. S. Taylor, Utica, N. Y.
A. Lawtensiager, Albany, N. Y.
Wm. L. Hoskins, Owego, N. Y.
E. G. Blake, Farmington, Me.
J. J. Luther, Providence, R. I.
J. B. Cayron, New Milford, Conn.
S. Silverthaud & Son, New Haven, Ct.
Hyde & Bettys, Auburn, N. Y.
J. A. Clark, Batavia, N. Y.
H. G. Hudson & Co., Amesbury, Mass.
G. Hills, Canandaigua, N. Y.
H. J. Howe & Co., Syracuse, N. Y.
LeGrand S. Strange, Amsterdam, N. Y.
Wm. H. Lyon, Newburgh, N. Y.
Wm. Kirk, West Winsted, Conn.

QUINCHE & KRUGLER,
17 MAIDEN LANE, N. Y., Wholesale Agents for the United States.

BUY THE WILLIAMS THRESHER.

FIVE SIZES OF THRESHERS AND CLEANERS

ADAPTED TO RAILWAY, SWEEP AND STEAM POWER,

Also Combined Clover Rubbers and Grain Threshers that Fan the Chaff Before Rubbing it. With a Capacity for a 10 Horse Engine.

THE EASIEST RUNNING LARGE THRESHER in the MARKET.

Has the least number of belts of any machine that can rightfully claim efficiency.

All Working Parts

thoroughly guarded against undue friction or wear.

The Most Complete

in the counterbalance of all vibrating parts

Of any Thresher Made

on the vibrating principle. No time wasting, hooking down, or bracing required to set it ready for use.

It runs with as little trouble or noise as a good sewing machine.

It is first-class in its make-up, works to the satisfaction of everybody who knows what a machine ought to do. Is fully warranted, and sold as low in price as any first-class machine can be afforded. Illustrated circulars and all necessary information furnished free.

All Warranted to Prove
THAT
The Best is The Cheapest
AND THE
"WILLIAMS"
FILLS THE BILL.

Address M. WILLIAMS, St. Johnsville, N. Y., U.S.A.

FILLEY'S CHARTER OAK RANGE!

In Beauty of

DESIGN,

Excellence of

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Sabbath Reading.

A SABBATH HYMN.

SWEET day of rest! the very sound is healing—
 A hush amid the conflict and the strife;
The calm of heaven is softly round us stealing,
 We hear the whispers of a holier life.

Earth's misty veil that hangs so closely round us
 Is gently lifted this one day in seven;
And pressing cares which in their net have bound us
 Retire, and leave us transient gleams of heaven.

This day on which the Saviour rose to glory
 Has left a shining radiance on its track;
Again we hear with joy "the old, old story;"
 Our childhood's faith on wings of light comes back.

Oh, wherefore, wherefore should we lose the blessing,
 When morn restores the round of earthly care?
Happy the souls who all in Christ possessing,
 Breathe, e'en below, heaven's pure celestial air.

And we, amidst the daily path of duty,
 May keep the oil still burning in our breast;
So shall the toilsome path grow bright with beauty,
 And every day shall be a day of rest.—M. E. B.

POWER OF PRAYER.

GOD wants us to be so like himself that he never gives us a power for ourselves without granting us likewise the capability to use it for others. How different had been our case, had he made us each an isolated being, independent of all others. Priests are we unto our God. The Son of Man is the Great High Priest, the World's Intercessor. But under him is every redeemed child of man exalted to the holy office of intercessor. This world is indeed a world of woe and sin, but have we ever tried to imagine what it would be without the prayers that day and night rise from it to God's Throne? On the Sunday sometimes we realize the blessedness of the great assemblies gathered together all over the earth, pouring out like praises and like prayers. Were our inner eye clear, not on Sundays only but every day we should see bands of holy men and women united in secret supplication for the world perishing around them. Then should we understand how weakness is made strong, how cold lips are touched as with a coal from God's altar, and speak words of life. We know sorrowful hearts, can we comfort them? We know anxious, burdened lives, can we help them? "No," we are ready to say:

But, blessed be God, the help we cannot bring we can gain. Why should love's pleading be so powerful in the Saviour's ear, do we ask? Because he is himself the pleader, because with each hour of his eternal life is linked his own intercession. Reverently yet confidently may we feel it.

THE poet Longfellow tells of "Sandalphon, the angel of prayer," how

 He gathers the prayers as he stands,
And they change into flowers in his hands,
 Into garlands of purple and red,
And through the great city immortal
 Is wafted the fragrance they shed."

The picture is but a reflection of John's vision at Patmos where the angel offers to the Lamb on the golden altar the vials odorous with "the prayers of the saints." Are we praying "evening, morning, and at noon," praying "seven times a day;" or, indeed, "without ceasing?" Then are we swelling the volume of that perfume which Jesus daily delights to receive.—Church Union.

I CANNOT but believe that there is what I can best term emotional recognition, on the part of the Eternal Father, of good or evil in his children; that, if there be joy in heaven over the penitent sinner, He, chief of all, feels that joy that you or I give to or withhold from the Supreme Being conscious satisfaction and gladness by our purity and sanctity of spirit and conduct, or by false, impure and unworthy lives. Oh, did we thus feel our son ship and bear about in our hearts our birth bonds, could there be more potent motive in the pursuit of good and avoidance of evil?—*Andrew J. Peabody.*

THERE is a way of doing good in the world, on a small scale, which is scarcely appreciated. A man who educates one child faithfully may effect a work of greater benevolence than one who has won the name of a philanthropist. The love concentrated on a family may produce greater fruits than that which embraces the world. Its action is more intense and invisible, but its results may go abroad and leaven the whole mass of a community.

GOD'S agency does not exclude nor supersede our instrumentality. He gives the increase, but Paul must plant and Apollo water. He furnishes the wind, but we are to spread the sails. He gives, but we gather. Prayers and diligence, dependence and activity, harmonize in the Scripture, and are only inconsistent in the crudeness of ignorant and foolish men.—*Wm. Jay.*

GRATITUDE.—God has given us a great many blessings—more than we can count. Yet how natural it is for us to think of those things we have not, rather than of those things we have. This is wrong. We wish we were rich; we wish we were even as well off as somebody else; we wish, and wish, and wish, if not in words at least in thought, unmindful that this is deep ingratitude to God.

BE KIND TO ALL.—Speak kindly to all—to menials and dependents. Never slight or neglect the humblest individual. Remember he is of as much importance to himself as you are to yourself, or as is the greatest man in the world. You have no right to hurt the feelings of any person.

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1 Baby Mine.
4 Ella Ree.
5 The Old Cabin Home.
6 The Little Ones at Home.
7 Old Black Joe.
12 See That My Grave's Kept Green.
13 Grandfather's Clock.
15 Where was Moses when the Light Went Out?
23 Old Folks at Home—Swanee Ribber.
24 Sweet By and By.
26 Whoa, Emma.
28 You'll Remember Me.
31 I Dreamt I Dwelt in Marble Halls.
33 When You and I were Young, Maggie.
34 Cottage by the Sea.
35 We Parted by the River Side.
36 When I Saw Sweet Nellie Home.
43 I Cannot Call Her Mother.
46 Take this Letter to My Mother.
49 A Model Love Letter—Comic.
50 Female Stratagem—Comic.
51 How to Kiss a Lady.
53 Wife's Commandments—Comic.
55 Husband's Commandments—Comic.
56 Little Old Log Cabin in the Lane.
58 Marching Through Georgia.
60 Widow in the Cottage by the Sea.
65 The Minstrel Boy.
70 Take Back the Heart.
72 The Faded Coat of Blue.
74 Slavery Days.
75 Der Mule Shtood on the Shteamboat Deck—Recitation.
77 My Old Kentucky Home, Good Night.
79 Thou Art so Near and Yet so Far.
80 The Sword of Bunker Hill.
82 The Gray Hairs of My Mother.
84 I'll be all Smiles To-Night, Love.
86 Listen to the Mocking Bird.
88 Her Bright Smile Haunts Me Still.
94 Sunday Night, When the Parlor's Full.
96 The Gypsy's Warning.
98 Swinging in the Lane.
103 'Tis but a Little Faded Flower.
104 The Girl I Left Behind Me.
105 Little Buttercup.
107 Carry Me Back to Old Virginny.
109 Kitty Wells.
110 Billy's Appeal to His Ma.
112 The Old Man's Drunk Again.
116 I Am Waiting, Essie, Dear.
118 Slight Hints—Comic.
119 Take Me Back to Home and Mother.
120 Come, Sit by My Side, Little Darling.
121 Kiss Me, Mother, Kiss Your Darling.
122 A Flower from Mother's Grave.
124 The Old Log Cabin on the Hill.
126 The Skids are Out To-Day.
130 Coming Thro' the Rye.
132 The Babies on Our Block.
134 The Skidmore Fancy Ball.
136 The Hallway Door.
137 Darling Beside of the Lea.
138 The Kiss Behind the Door.
139 I'll Remember You, Love, in My Prayers.
141 Old Wooden Rocker.
142 Speak, Only Speak.
143 Dancing Around with Charlie.
146 You May Look, but You Mustn't Touch.
147 My Daughter Julia.
150 There's Always a Seat in the Parlor for You.
152 I've no Mother Now, I'm Weeping for You.
154 Nearer, My God, to Thee.
158 Massa's in de Cold, Cold Ground.
159 Say a Kind Word When You Can.
160 Cure for Scandal—Comic.
162 Strangers Yet.
163 I Cannot Sing the Old Songs.
167 Waiting, My Darling, for Thee.
170 I'm Lonely Since My Mother Died.
172 Tenting on the Old Camp Ground.
174 Flirtation of the Whip—Comic.
175 The Slave's Dream.
176 Don't You Go, Tommy, Don't Go.
180 Willie, We Have Missed You.
182 Over the Hills to the Poor House.
185 Don't be Angry with Me, Darling.
188 The Old Village School on the Green.
191 Flirtation of the Fan—Comic.
194 Why Did She Leave Him?
196 Thou Hast Learned to Love Another.
203 There's None Like a Mother, If Ever so Poor.
204 You Were False, but I'll Forgive You.
208 Old Log Cabin in the Dell.
209 Whisper Softly, Mother's Dying.
211 Will You Love Me When I'm Old?
216 Come Into the Garden, Maud.
218 Where There's a Will There's a Way.
220 Annie Laurie.
222 Sherman's March to the Sea.
223 Lamentation of James Rodgers.
224 Come, Birdie, Come.
225 Now I Lay Me Down to Sleep.
226 Ever of Thee.
228 Love Among the Roses.
230 Der Deitcher Gal.
232 Old Arm Chair (as sung by Ned Barry).
239 The Sailor's Grave.
242 Farmer's Daughters; or, Chickens in the Garden.
243 Oh! Dem Golden Slippers.
246 Poor, but a Gentleman Still.
249 Nobody's Darling but Mine.
251 Put My Little Shoes Away.
253 Darling Nellie Gray.
255 Little Brown Jug.
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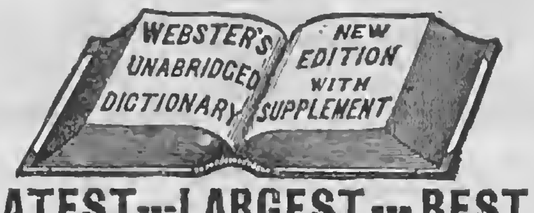

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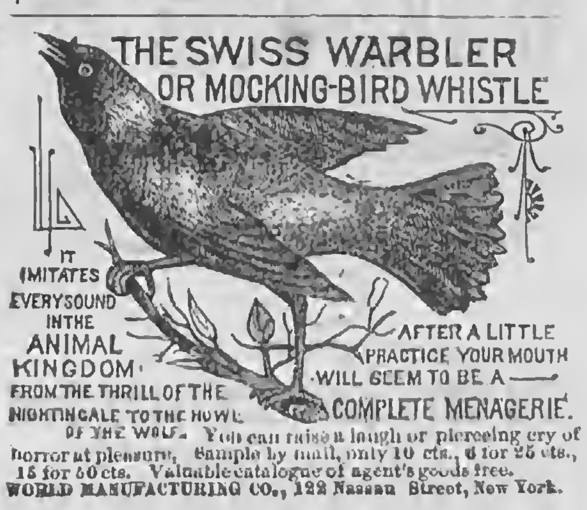

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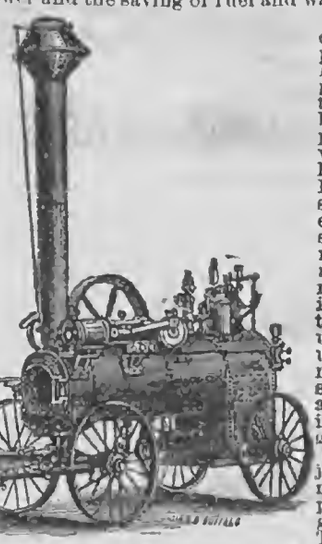

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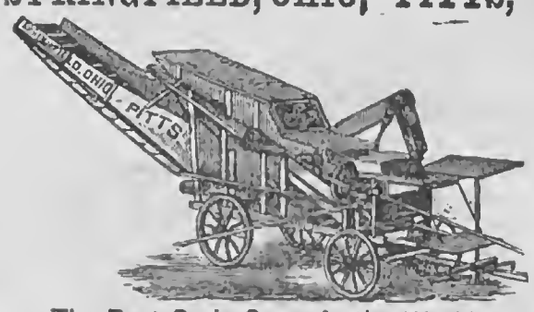

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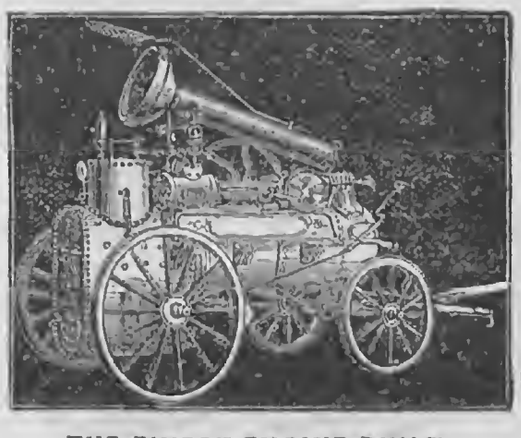

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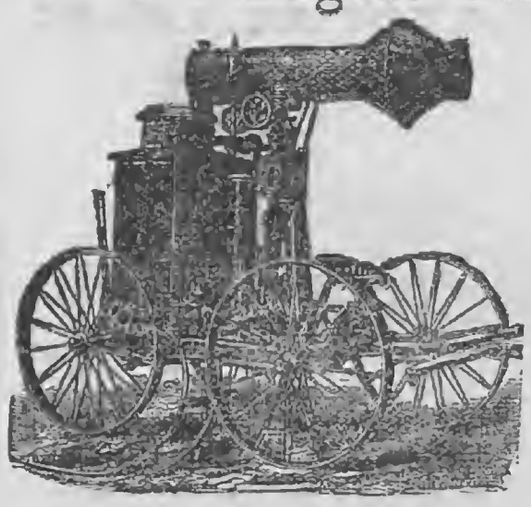

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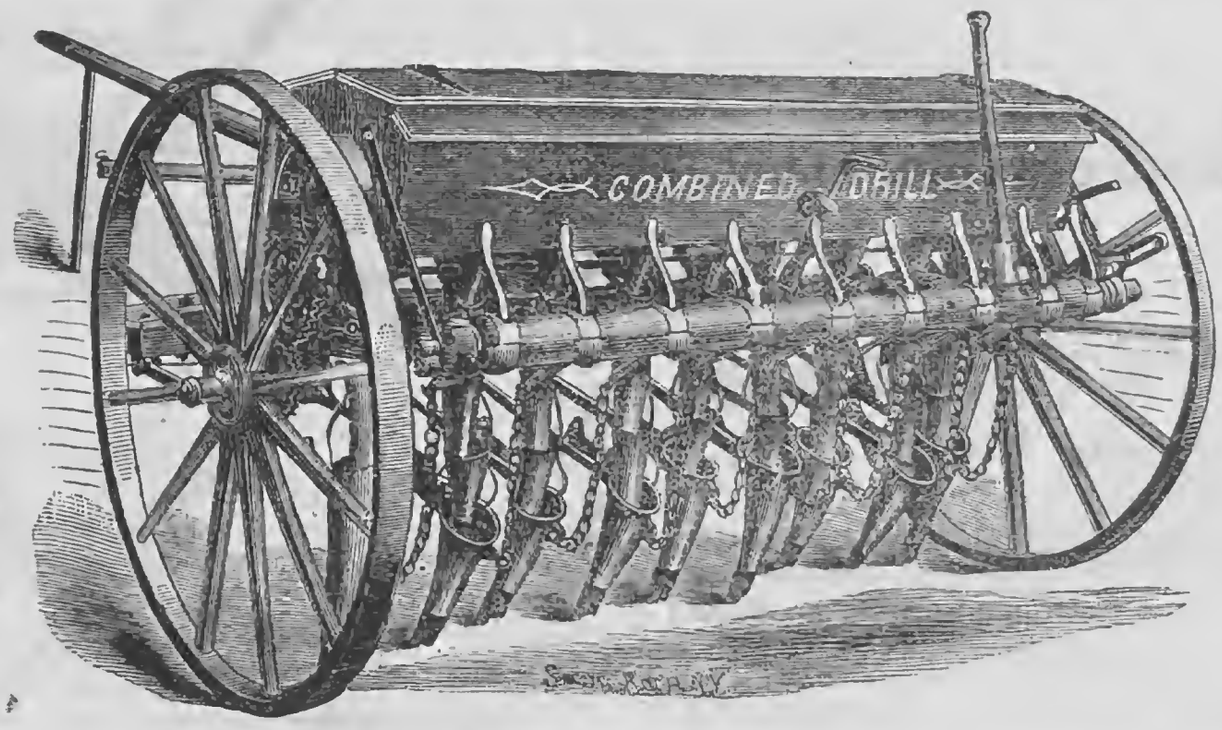

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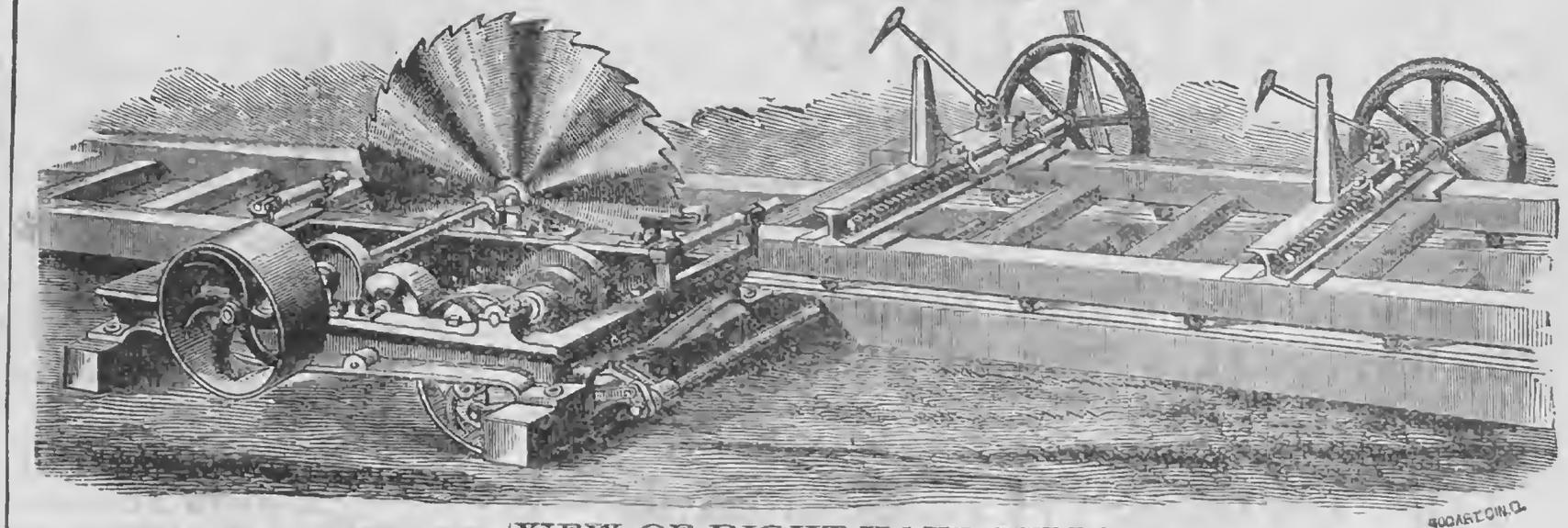

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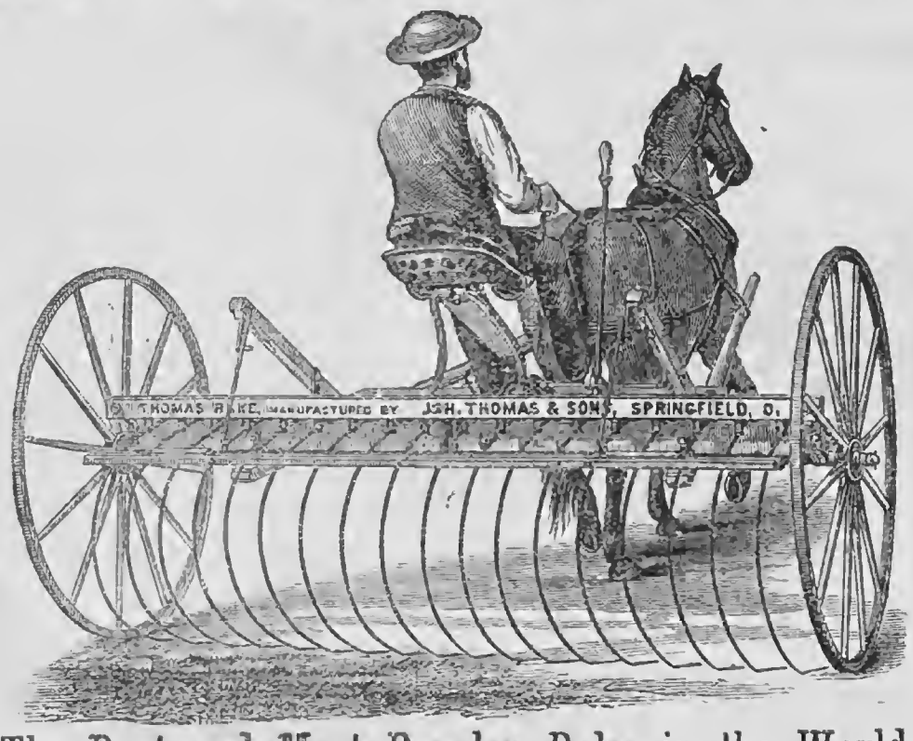


The Best and Most Popular Rake in the World.

For Sale by Agents generally; but if no agent is near you, send for Circulars, which will be mailed Free on application. Also, the celebrated Thomas Portable Engine. Address

J. H. THOMAS & SONS,
Springfield, Ohio, U. S. A.

Coates' Coil and "Independent Tooth, Lock Lever"

HAY AND GRAIN RAKE.

75,000
Now in Use.

Patented Aug., 1857; Jan., 1875; June, 1875, and Nov., 1876. Twenty Steel Teeth. No complicated ratchet wheels, friction bands, nor other horse machinery needed to operate it. Slight touch of the lever and driver's weight dumps it. Best self-dump in market. A small boy rakes easily 20 acres per day with the Coates' Lock Lever Send for Circulars.
A. W. COATES & CO., Alliance, Ohio.

General Agencies.—DELBE, MANSUR & Co., St. Louis, Mo., and Kansas City, Mo. R. W. COATES & Co., Bloomington, Ill. J. T. WEST & Co., Louisville, Ky. JOHN J. MCGAVOCK, Nashville, Tenn. H. B. FREER, Detroit, Mich. NASH BROS., 23 College Place, N. Y., and Harrisburgh, Pa.

THE SOUTH BEND CHILLED PLOW.

STRAIGHT LANDSIDE.

STEADY RUNNING.

The Latest Improved and Best Chilled Plow in the World!
Lightest Draft, Best Work, Easiest Adjusted and Strongest.

Farmers should consult their interest and not buy a plow until they have tried the **genuine** South Bend Chilled Plow with our name on the beam. Ask your dealer for it, and if he has not the agency, write for circulars to

SOUTH BEND CHILLED PLOW CO., Manufacturers, South Bend, Ind., U. S. A.

BRANCHES: Columbus, Ohio. Indianapolis, Ind. Harrisburg, Pa. Nashville, Tenn.

SWINDLING FARMERS.

Many fortunes are made swindling farmers by false weight. Every farmer should buy and sell on a JONES SCALE and own it himself.

Five Ton Wagon Scales, $60,

FOR HAY, COAL, STOCK OR SEED COTTON.

ALL IRON AND STEEL.
BRASS BEAM.
FREIGHT PAID BY US.
NO MONEY ASKED TILL SUITED.
ALL SIZES OF SCALES EQUALLY LOW.

THE JONES SCALE is the BEST and CHEAPEST.

FOR FREE BOOK ADDRESS

JONES OF BINGHAMTON,

Binghamton, N. Y.

WATERTOWN

PLATFORM SPRING WAGON.

THE NE PLUS ULTRA.

EVERY WAGON IS FULLY WARRANTED.

This is the best, handsomest, lightest and strongest wagon of its kind in the market. Every Farmer and Dairyman should have one.

WATERLOO, N. Y., May 15, 1880.

WATERTOWN SPRING WAGON CO.

Gents:—I hereby certify that all the Wheels you have purchased of me the past year were **ALL A No. 1 RIVETED WHEELS.**

Yours respectfully, WM. B. CLARK.

FORT WAYNE, Ind., May 5, 1880.

WATERTOWN SPRING WAGON CO., WATERTOWN, N. Y.

Gentlemen:—"This is to certify that all the Wheels you are purchasing of us, and also the Two Thousand Sets we have furnished you during past season, are an "*A*" **GRADE**, Screwed Rims, and made with utmost care."

Yours respectfully, N. G. OLDS & SONS.

Agents Wanted. Correspondence Solicited.

Address **WATERTOWN SPRING WAGON CO.,**
Watertown, N. Y.

WHOLESALE AGENCIES.

ERIE CITY CARRIAGE WORKS, Erie, Pa. TRUMBULL, REYNOLDS & ALLEN, Kansas City, Mo.
DALTON BROS., St. Louis, Mo. QUINBY & HALLOWELL, St. Paul, Minn.

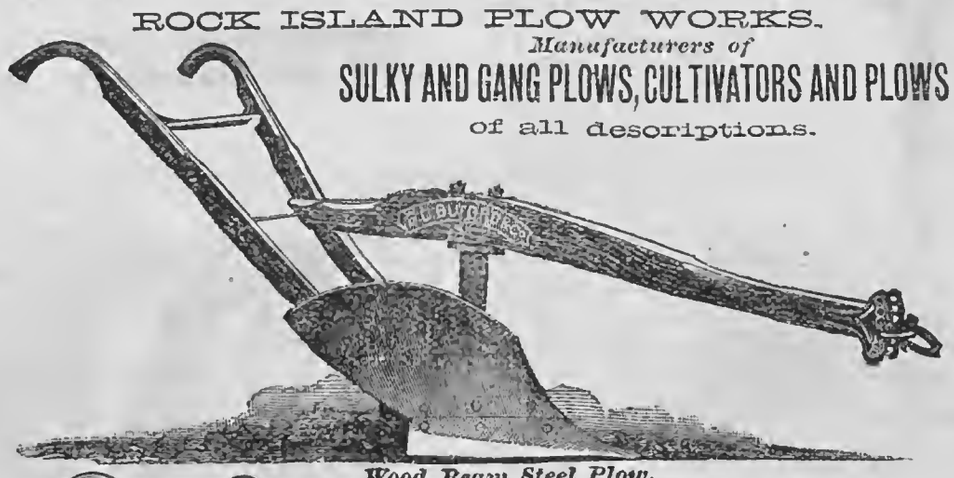
B. D. BUFORD & CO.'S

ROCK ISLAND PLOW WORKS.

Manufacturers of

SULKY AND GANG PLOWS, CULTIVATORS AND PLOWS

of all descriptions.



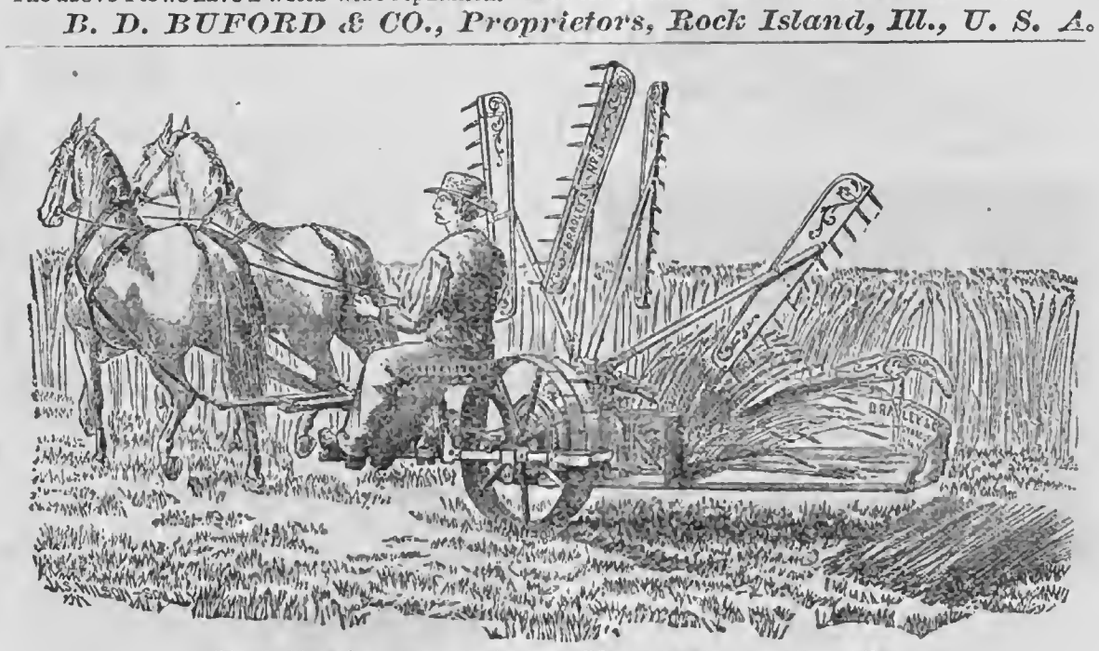
Wood Beam Steel Plow.

THE BEST CHILLED PLOW MADE.

Buford's Chilled Iron Plow.

The above Plows have a world-wide reputation. Send for illustrated circular to the manufacturers.

B. D. BUFORD & CO., Proprietors, Rock Island, Ill., U. S. A.



Bradley's American Harvester, No. 3.

BRADLEY'S REAPERS MOWERS & HAY RAKES.

SEND FOR ILLUSTRATED CIRCULARS

BRADLEY & COMPANY,

(Established 1832.) **Syracuse, N. Y., U. S. A.**

AGRICULTURAL NEWS.

The farm fences of the United States are estimated to cost $1,350,000,000, and require $250,000,000 to keep them in order. Besides the direct cost of fences, the land which they occupy and render worthless is an important consideration..... Private telegrams on Sept. 1 reported the Liverpool provision market higher; tierce beef $2 50 advance in ten days.....Chicago telegraphs that hogs are "grassy," and not yielding the usual percentage of lard.....Fresh beef exports in July were liberal, reaching 7,935,000 pounds, against 3,759,000 in 1879.....Wheat exports for the month of July were 17,575,000 bushels, or 5,000,000 more than in the same month last year. Flour exports were 617,864 barrels, a gain of 238,966 over same time last year.....Corn exports in July were 13,657,000 bushels, or 6,600,000 more than in the same month in 1879.....The largest cotton seed oil mill in the United States is being erected in Little Rock, Ark. The building is 300 feet by 80. The machinery will be run by a 350 horse power Allis-Corliss engine. There will be twelve stands of presses, with four presses in each stand, having a capacity of using 300 tons of cotton seed per day. The works will employ, when completed, 650 men in the various departments..... The South has heavier crops than it can handle and is laying its hands upon all the surplus labor it can scare up. The lower Mississippi valley, where the exodus has depleted the plantation cabins, is particularly straightened. Several hundred laborers are on their way from southern Europe and, as an agent has failed to get many to return from Kansas, quite a number have been secured from about Louisville. This has scared the republicans, who see in it a democratic plot to draw negro voters out of southern Indiana ..... The draining has recently been taken up with great industry by the Western States, its benefits to agriculture having been established. The drains are laid at an average depth of 33 inches, and the cost of digging is about 15 to 20 cents per yard, equal to $25 to $30 per acre, according to width of drains apart, but the increased yield of the crops sometimes reaches 100 per cent. In Ohio, Indiana, Michigan, Illinois, Wisconsin and Iowa, there are now 1140 tile factories, instead of 400 in 1870, and last year these turned out 175,000,000 tiles, equal to 65,000 miles of drain, at a cost $2,812,500..... Florida fruit-growers are beginning to cultivate the lemon with care, and with such good results that it is believed the State will soon furnish almost as many lemons to the trade as she now does oranges.

News from Jefferson, Texas, dated April 26, says: The cotton crop of Texas looks as though it would be cut short by bowl worms, that have appeared in vast numbers. The northern counties have been seriously injured by them, and the counties of east Texas generally have suffered severely. There were heavy rains in July, and the weed is large. There will be a heavy top crop. With a late frost and a long, dry Fall there will be far more cotton raised than anticipated.....The barley crop of Canada is estimated at from 9,000,000 to 10,000,000 bushels, which, after allowing about 2,000,000 bushels for home requirements, will leave a surplus of 7,000,000 to 8,000,000 bushels. .....At a meeting of the Executive Committee appointed by the trustees of the Pennsylvania State College, held August 28, Willis P. Hazard, Esq., of West Chester, Pa., was elected a member of the Advisory Committee of the Eastern Experimental Farm. His special duty will be to devise some means by which said farm shall be stocked with such breeds of cows, etc., as in his judgment will give valuable information to the farmers of Eastern Pennsylvania ..... The company in Florida that has been experimenting with palmetto for making paper has met with such gratifying success that it will erect about twenty paper-mills in the State, where palmetto trees grow in abundance and where the transportation facilities are good.....The Montreal Journal of Commerce reports that over one-half the cheese factories in Canada have contracted for the season's make at about 12½c.; sales have been made there during the week at from 11½c. to 12½c., according to quality, and for prime quality 13c. are asked in some quarters.....Official statistics telegraphed hither on Sept. 2, just published show that in the first six months of the present year only 1,736 oxen, 1,859 sheep and 625 pigs were imported from the United States by France.....

HOME NEWS.

The Chicago, Burlington and Quincy Railroad has completed its steel railroad bridge over the Missouri river below Plattsmouth, Neb., the object being to have a crossing independent of the toll bridge at Omaha..... There is something marvelous in the reduction of the public debt since the war. Over $800,000,000 has been paid off in the last fifteen years, or an average of over $50,000,000 a year, including five years of almost unprecedented business depression.....Professor Spencer F. Baird of the Smithsonian Institute in Washington has labored there for thirty years. His chief work has been in classifying fish and birds. He is fifty-seven years old. He employs two or three stenographers for his correspondence. On his journeys he walks, refusing the aid of a horse. He never goes to a theatre or concert or even to a lecture, because he wishes to go to bed early.....A Mississippi writer says that when a capitalist or banker can make two per cent. a month on money loaned to a planter he will not invest it in cotton mills.

FOREIGN.

Russia has never taken a reliable census, but a St. Petersburg paper has figured out government statistics to show a population of 64,681,000 in European Russia, with an excess of 781,000 births over the number of deaths.....Affairs between Russia and China are not so threatening as a week ago, and it is now believed that diplomacy will suffice in place of the war that has seemed so imminent. .....It is thought at Constantinople that the sultan would yield at once if he thought force was likely to be used by the European Powers, but the conviction is gaining ground that a harmless naval demonstration will be all that is attempted. The Turkish treasury is also a little fuller now, the sheep tax having turned in considerable for the past three months, and now the tithes are relied upon. It is thought that the porte will settle the Montenegrin difficulty, but will not yield on the Greek frontier ..... Empress Eugenie leaves England this Fall to reside permanently at her chateau in Switzerland. She will remove the remains of her husband and son to the oratory of the chateau. She is reported to possess an income of over $200,000, of which she does not spend a sixth.

Exhaustion from Brain Work.

Few of our business or professional men reach the age of forty-five without brain and nervous exhaustion—often to an extent that forces them to relax effort, or abandon work for a time, if not altogether. An occasional use of that vitalizing agent, now so widely known as "Compound Oxygen," would give nature power to restore these wasted forces in a large number of cases. Rev. D. D. Reed, of South Amboy, who was greatly run down by over-work, and consequent waste of nervous energy, after being restored to health through the use of this agent, gives it this voluntary and strong endorsement: "After a most thorough and continued trial of its worth as a remedial and restorative agent, I pronounce its value to be above that of gold and silver. I *freely and voluntarily* commend it to all brain workers as THE BEST thing they can use to secure a restoration of exhausted energies." DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa., send their Treatise on "Compound Oxygen" *free* to all who write for it. It contains a record of many remarkable cures.

TERMS for 1880–81 yearly subscription price:

Postage prepaid.....$2.00
Six months..... 1 10

The above terms are invariable. The reduction from $2.50 to $2.00 makes the RURAL NEW-YORKER the cheapest paper of its class in the world. We have therefore no club price. The price is the same to all, whether a single copy or one hundred copies be ordered. Any of our friends who are willing to act as agents, will find our terms fully stated on third page of our premium list, which will be sent free to all applicants. Agents will be supplied with canvassing outfits on application. Our advertising rates will be found below.

GENERAL ADVERTISING RATES OF THE RURAL NEW-YORKER.

Inside (Agate space)..... 40c. per line.
" 13th page..... 50 "
Outside or last page..... 60 "

Discount on 4 insertions, 5 per ct.; 8 ins., 10 per ct.; 13 ins., 15 per ct.; 26 ins., 20 per ct; 52 ins., 25 per ct.

☞ No advertisement inserted for less than $2.

To Cider Makers.

The celebrated **Jersey Apple Grinder** and **Champion Cider Press**, constitute the essential outfit of every first class cider mill. Any neighborhood where cider is made without the aid of these improved machines is a good locality for an enterprising man to start a new cider mill. For illustrated circulars, address

ROBT. BUTTERWORTH,
Trenton, N. J. Sole Manufacturer

The largest Stump Machine Works IN THE WORLD.

The Chamberlin Screw Stump Machine after 13 years' test, has proved its superiority over all others by its great exhibition of strength and durability, combined with cheapness and ease in pulling all classes of stumps. We now furnish Machines with wrought iron screws when desired. Also build small machines for pulling small with wrought screw stumps, snags, etc. We manufacture 11

different sizes. For reduced prices, etc., address
THE CHAMBERLIN M'F'G Co., Olean, N. Y.

MATTHEWS' SEED DRILL

The standard of America

Admitted by leading Seedsmen and Market Gardeners everywhere to be the most perfect and reliable Drill in use. Send for circular. Manufactured only by

EVERETT & SMALL, Boston, Mass.

For Washing Windows, Carriages, etc. Protects Buildings from Fire, and Trees Vines, etc., from Insects, Potato Bugs and Canker Worms No Dwelling, Country Home or Factory should be without the Fountain Pump. Send for large Illustrated Circular.

J. A. WHITMAN,
Patentee and Manufacturer, Providence, R. I., U. S. A.

For Young or Old.

Do Your Own Printing!

$3 Press for cards, envelops, etc. 14 other sizes, $8, $14, $25, $44, &c. Type setting easy by printed instructions. Do your own printing and advertising. Money made fast in any place jobbing or running a paper. Catalogue of Presses, Type, Cards, &c., for 2 stamps. Kelsey & Co., Man'f'rs, Meriden, Conn.

VICTOR THREE AND FIVE HOED ONE HORSE DRILLS.

MANUFACTURED BY

EWALD OVER,

Indianapolis, Ind., U. S. A.

The demand for the VICTOR ONE HORSE DRILL is increasing at a wonderful rate. They are used for sowing *Wheat* into and between *Standing Corn* in the fall, as well as for sowing *Wheat, Rye, Oats, Barley, Rice, Peas, etc.*, into *fallow ground*. Next season (1881) they will be provided with a *Fertilizer Attachment*, and no farmer can afford to be without one. Send for Circulars.

THE VICTOR
THREE HOED DRILL

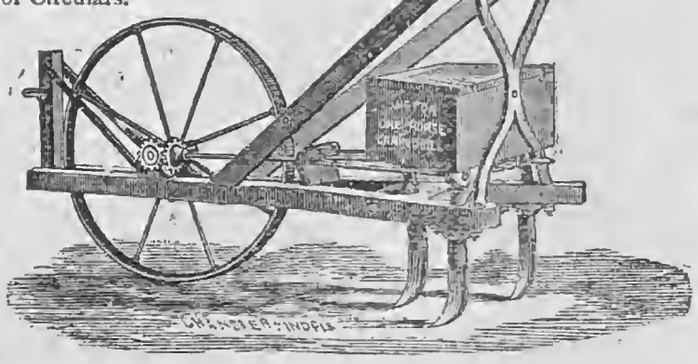
is used for the same purpose as the five hoed, but is better adapted for

Hilly and Rough Ground.

It weighs only 85 pounds, the teeth are 7½ inches from center to center. By removing the front tooth you have a

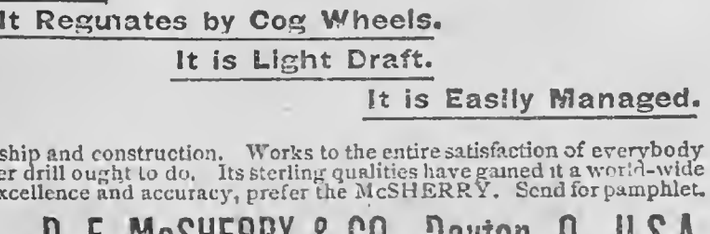
TWO HOED DRILL.

Both THREE and FIVE HOED DRILLS can readily be packed for export.



THE VICTOR
FIVE HOED DRILL,

the lightest one horse drill of the kind in the world, weighing only 125 pounds. It is strong, simple in construction, of light draft. It can be expanded and contracted for five different widths, varying from 8½ to 6¾ inches from center to center of tooth. It has a splendid FORCE FEED, and sows more than half as much as a TWO HORSE drill. For sowing *Rice* the intermediate teeth are removed, making it a three hoed drill sowing Rice in drills 13½ to 17 inches apart.



McSHERRY GRAIN DRILL.

UNQUESTIONABLY THE BEST.

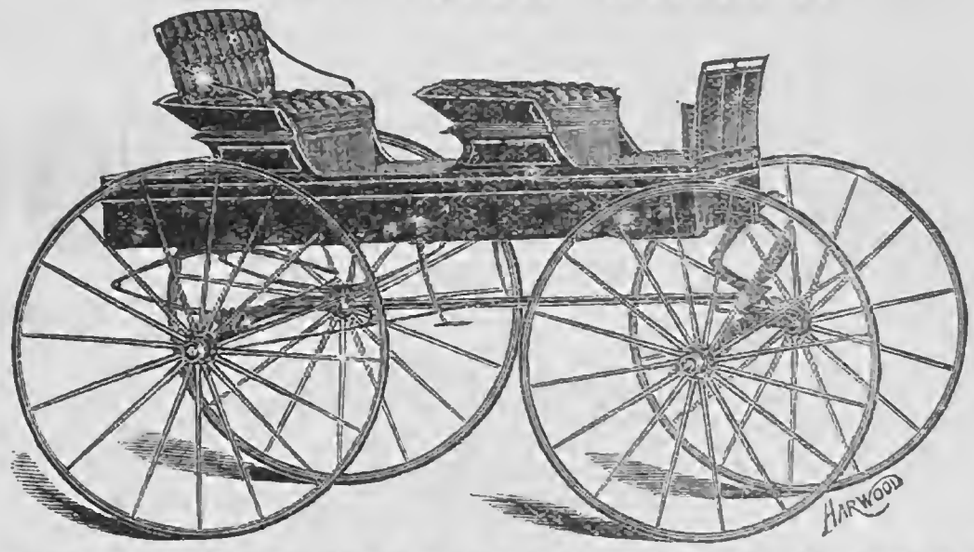
Sows Fertilizers Splendidly.
It Is Very Accurate.
It Regulates by Cog Wheels.
It is Light Draft.
It is Easily Managed.

It is strictly first-class in workmanship and construction. Works to the entire satisfaction of everybody who knows what a grain and fertilizer drill ought to do. Its sterling qualities have gained it a world-wide reputation, and all who appreciate excellence and accuracy, prefer the McSHERRY. Send for pamphlet.

Mention this paper.

D. E. McSHERRY & CO., Dayton, O., U.S.A.

SHORT AND SMITH



THREE-SPRING WAGONS.

OPEN AND TOP BUGGIES,

All work first-class, finely finished and fully warranted.

Send for Price List and Circulars.

SHORT & SMITH,
175 Clinton St., Syracuse, N. Y.

PENNSYLVANIA LAWN MOWER.

Surpassing all Others and Pronounced the Best.

1880

It is the lightest, runs more easily, cuts longer grass, is more durable, requires less repairs, cuts grass more smoothly, is less liable to obstruction, and is of more handsome appearance than any other Mower upon the market. Pennsylvania State Agricultural Society says: "It will, we believe, wear longer, do the work better with less labor, than any other Mower. One of the peculiarities is that it cuts higher grass than any other Mower."

It is pronounced by competent judges the best Lawn Mower the world ever produced.

Every Mower warranted. Address

Lloyd, Supplee & Walton,
Philadelphia, Pa.

Eagle Machine Works,

Bucyrus, Ohio.

Headquarters for Tiffany's latest and best

BRICK AND TILE MACHINE,

RATCHET CIDER PRESS AND OTHER SCREWS, PORTABLE AND STATIONARY ENGINES.

☞ Send for Catalogue.

AMERICUS CIDER MILL.

WHITMAN'S PATENT.

The best Cider and Wine Mill made. It will make Twenty per cent. more Cider than any other.

Perfectly Adjustable.

Three Sizes.

Geared outside. Large [illegible] made for two cranks.

Prices as low as for any first-class mills.

Circulars giving full description sent free.

Address the manufacturers.

WHITMAN AGRICULTURAL CO.,
Saint Louis, Mo.

INCREASE the yield; SAVE time and money, by using

THE PHILADELPHIA
Broadcast Seed Sower,

For Sowing all Grain and Grass Seeds, also Fertilizers.

No. 1, price $30, sows 12 to 15 acres per hour. No. 2, (see cut,) price $6, from 4 to 6 acres, at the same time sowing *better and far more evenly than by hand or any other method.* Send for circular and testimonials. Agents Wanted.

Benson, Maule & Co., Mfrs.
223 Church St., Phila, Pa.

News of the Week.

HOME NEWS.

An extensive suit at law, involving $10,000,000 is undergoing litigation, at San Francisco. Squire P. Dewey has filed a voluminous complaint in the superior court against the millionaires John W. Mackay, James G. Fair, James C. Flood and James W. Coleman, executors of William C. O'Brien, the Pacific Lumber and Flume Company, the Nevada Bank, the Pacific Refinery and Bullion Exchange and the California Mining Company, demanding an accounting to the California Mining Company and its stockholders for alleged wrongs, frauds and breaches of trust, and, on such accounting, to repay to said company, for the use of its stockholders, all profits and property belonging to the company, obtained by the defendants by means of the transactions set forth in the complaint.... ....It is expected that the earnings of the Pennsylvania Railroad this fiscal year will reach $40,000,000, and that the actual net earnings will be at the rate of more than 20 per cent. on the capital stock.....Captain Bell reports that one of Lieutenant Gresham's parties, under Sergeant Dawint of Company F, Seventh Cavalry, overtook a party of hostiles recently, killed two, wounded several and captured six ponies and mules Gresham's orders were to scout, with small detachments, the country south of Lake station, and between the Little Missouri and Powder Rivers. Major Merrill has not yet returned from the Yellowstone.

The arrivals of immigrants at Castle Garden for the month of August, numbered 25,300. This aggregate exceeds by 4,000 the figures for the same month in any year for a quarter of a century. The figures for this month will be also, it is thought, unprecedentedly heavy, especially in the matter of immigration from the German ports, no less than eight Hamburgh steamers being due during September, all with large steerage lists. The arrivals on Sept, 1, numbered 1,248 by three steamers, the Herder, from Bremen, with 730; the Canada, from Havre, with 316, and the State of Indiana, from Glasgow, with 202.....It is announced that, as a measure of retaliation and self-protection, the Chicago, Burlington and Quincy Railroad will immediately commence the construction of a branch line from Peoria, Ill., to Toledo, Ohio, about 360 miles. This enterprise, the managers assert, is made necessary by the aggressive policy pursued by the Wabash interest in the territory once controlled by the Burlington company, and promises to result in vigorous competition. For the greater part of the distance the route will be located parallel with and very near to the Wabash, striking such important centers as Logansport, Lafayette, Fort Wayne and Defiance.

A New Jersey farmer heard a strange noise among his hens one night seventeen years ago, and he fired a shotgun from his bedroom window. The other day he received $500 from an unknown man, stating that having his legs filled with bird shot had made an honest man of him, and now as he was about to die, he desired to reward the shooter.....A shocking accident occured on the Lowell and Lawrence Railroad, by which five young men lost their lives. There had been a Caledonian picnic at Hackett's pond and five young men named Shinick, Meagher, Ryan, Mack and Nolan, all of Lowell, attended. In the evening, when the time for returning home arrived, they climbed on top of a passenger car, and there, quietly sitting and talking, awaited the train's approach to Lowell, not dreaming of any possible danger, except of detection by the conductor or train hands. Shortly after nine o'clock the train passed Mace's crossing, three miles from Lowell, near which is a low stone bridge. When the train passed under this bridge the young men came violently in contact with the stonework and were swept from the top of the car, all of them being instantaneously killed.

No Cure No Pay.

Dr. Pierce's Family Medicines are guaranteed to cure, for particulars see wrappers and pamphlets. They are reliable and have not sprung into popularity in a week or month and gone out of favor as rapidly, but being sustained by merit, have won a world-wide reputation, necessitating a branch in London, to supply foreign countries, while the home sales are enormous throughout the United States. Golden Medical Discovery purifies and enriches the blood, preventing fevers, and curing all skin and scrofulous affections, stimulating the liver to action, relieving biliousness, and curing consumption, which is scrofula of the lungs. If the bowels are costive take Pierce's Pellets (little pills). Both sold by druggists.

CHICAGO, Ill., May 5th, 1879.

WORLD'S DISPENSARY MEDICAL ASSOCIATION:

Gentlemen—For years I have been a great sufferer. My trouble first started with terrible ague chills and constipations. These left me in 1878 with a racking cough and frequent bleedings from the lungs. Since this time I have been continually doctoring, consulting physicians without number. From them I received no benefit or encouragement. The most noted physicians of our city who last visited me expressed their opinions in the brief but hopeless words, "Take good care of yourself the few days you have to live, we cannot help you." I grew steadily worse under their treatment. One day, through reading your Memorandum Book, I learned of the Golden Medical Discovery. With but little hope of relief, I purchased a bottle and took it. To my surprise and satisfaction it did me more good that all the drugs I had taken the year around. I am now steadily using it with benefit and recommend it to all to be just what it is advertised. Sincerely yours,

JAMES P. McGRATH,
50 Wight Street.

THE MAPES COMPLETE MANURES.

Prepared expressly for use on light and heavy soils for growing WHEAT, GRASS, POTATOES TOBACCO, HOPS, SUGAR CANE, FRUITS, VEGETABLES, etc.

These highly concentrated Manures are now used by thousands of farmers in all the Seaboard and Middle States, as well as in South America and the West Indies.

They are **not stimulants**, but **COMPLETE MANURES**, the same as Stable Manure, and their continued use results in **permanent improvement** of the land.

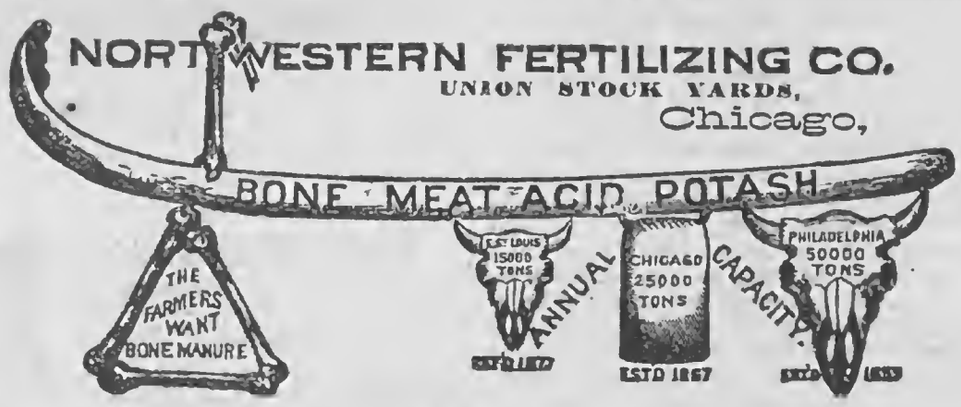
Growers in Ohio and other Middle States find them **more economical**, even after paying railroad freights, than purchased stable manures or local fertilizers.

All Fertilizers, Peruvian Guano, Potash Salts, and Chemicals sold on **guaranteed chemical analysis.** Send postal for pamphlet. Correspondence solicited.

THE MAPES FORMULA AND PERUVIAN GUANO CO.,

158 FRONT STREET, NEW YORK.

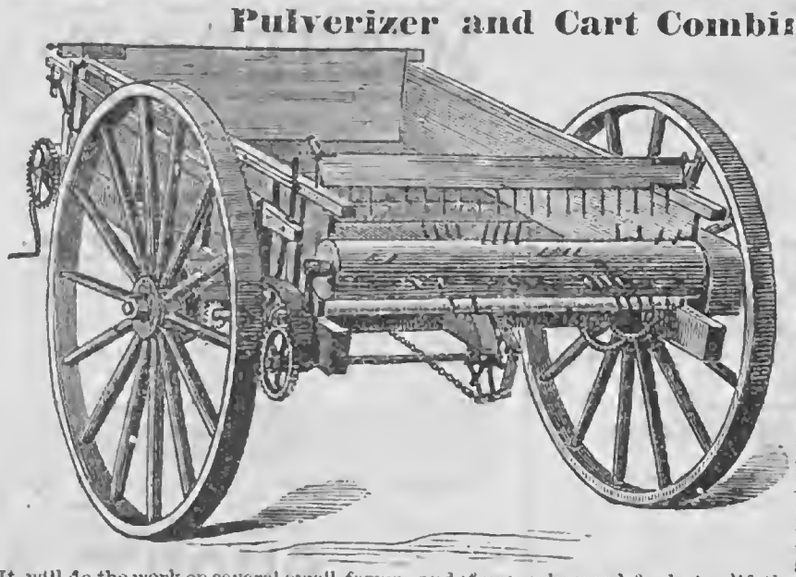
P. VAN ZANDT LANE, *President.* CHARLES V. MAPES, *Vice Pres't and Gen'l Manager.* EDW. V. Z. LANE, *Treasurer.*



Our BONE MANURES stand without a rival for Wheat and Grass. Every Bag guaranteed. They are dry, and drill with regularity. ☞ *Send for Circulars.*

KEMP'S MANURE SPREADER

Pulverizer and Cart Combined.



A new agricultural implement. A machine cart which is drawn behind the forward wheels of any farm wagon, the purpose of which is to pulverize and equally distribute manure, making it more valuable for plant food, and to save time and labor. It will spread all kinds of manure found on the farm, and in one-tenth the time done by hand. But here is not where the chief merits of the machine lie. We have testimonials from over one hundred good practical farmers who are using the machine that say we increase the manure at least 25 per cent. by reason of extra fineness and equal distribution, as we do not leave a single square inch without manure. The time it takes to unload is less than two minutes without manual labor. It is regulated to spread different amounts, so that the farmer may know with accuracy just the amount he is using per acre. It will do the work on several small farms, and if properly cared for last a lifetime. Agents wanted in every town to introduce and sell this machine. Manufactured by the Kemp & Burpee Mfg. Co., owners and Manufacturers for all the States outside of the New England, and by the Richardson Manufacturing Co., Worcester, Mass., for the N. E. States. Send for Circulars and Price List.

KEMP & BURPEE MFG. CO.,
Syracuse, N. Y.

$1000, REWARD

For any Washing Machine that will Wash Cleaner, Quicker, with Less Labor and Wear and Tear of Clothes than the

ROBBINS FAMILY WASHER AND BLEACHER, Pat'd Oct. 3, '71.

THE ORIGINAL AND ONLY PERFECT SELF-OPERATING WASHER IN THE WORLD.

No rubbing required. No more yellow clothes or hard work on washing day. It will wash anything from a lace curtain to a horse blanket, and cannot get out of order.

Good Agents wanted, both male and Female, to whom Liberal Inducements are Offered. Agents can make from $10 to $100 per week,

THE ART OF CLEANSING FABRICS

Is yet but imperfectly understood by thousands of good housekeepers. The numerous devices of friction rollers, pounders, squeezers, washers, agitators, steam wash-boilers, etc., have all failed in one or more of the three essential points, namely: The saving of labor, wear and tear of clothes, or in imperfectly extracting the dirt and discoloration; all of which are accomplished by the ROBBINS FAMILY WASHER AND BLEACHER.

WHAT IS IT REMOVE THE DIRT?

You may ask washer-women and housekeepers, and your answer from nine out of ten will be, "Plenty of elbow-grease," or in other words, laborious rubbing upon the wash-board. And such is the case, for you first rub soap upon the cloth, and then you have to *rub it in* to make the dirt soluble; but does that remove it? No; to do that you must dip it in the water and rub repeatedly to *force water* through the fabric, again and again. That is what removes dirt after having been softened by the chemical action of the soap.

The way in which this could be most economically accomplished has been developed in the FAMILY WASHER AND BLEACHER, which embodies all the above points.

Mechanical devices take the entire time of a person during the whole wash, and will not remove streaks from clothes.

It is harder to operate them than to use the common wash-board. They are constantly getting out of order, and wear out in a short time. With all *such devices*, as well as the *rubbing-board* there is *great friction* and consequent *unnecessary wear* and *tear* of clothing. With the Washer and Bleacher there is *no friction* or *wear* of the fabric whatever; and washing, baking and housework are contemporaneous operations—the firedoing the washing and baking, while the housewife does her housework. As stated, *water force* is what removes dirt from the fibre of the cloth.

A large body of water is required to hold in solution a comparatively small quantity of dirt.

THE PRINCIPLE OF THE WASHER AND BLEACHER

embodies all the essential points. First, we have the desired heat which expands the fabric and causes it to discharge the dirt. Second, we obtain a powerful suction beneath the clothes, which produces a rapid *downward current* or *water force*, through and through them, thereby removing the dirt. Third, we use a *large body of water*, which holds the dirt in solution. Fourth, we use but a small quantity of soap. Fifth, the washing is done by water and *not by steam*. This process cannot injure fabrics. It cleanses thoroughly, *rinses the clothes* being all that is required to complete the operation.

THE PHILOSOPHY OF THE WASHER AND BLEACHER IS THIS:

We have fibs. of metal, which attains a much greater degree of heat than the water surrounding it, consequently the water *underneath* the Washer becomes hotter and more expansive than in any other part of the boiler, and is thereby thrown to the surface through the tube; thus tending to produce a vacuum underneath the Washer at the bottom of the boiler, into which the water is rapidly drawn.

As it passes along the channels of the Washer, the curved and contracted throats of which prevent its flowing backward, it becomes hotter and hotter, consequently more expansive and more forcible until thrown to the surface, thus producing a powerful suction beneath the clothes *through which* the water *must pass* in a rapid *downward current* thereby obtaining a *water force* which cannot be obtained by any other method known in cleansing fabrics. Thus, we get a combination. FIRST, WE HAVE THE DESIRED HEAT. SECOND, PERFECT CHEMICAL ACTION OF THE SOAP. THIRD, FORCE OF WATER—ALL OF WHICH ARE REQUIRED TO THOROUGHLY CLEANSE AND PURIFY ANY FABRIC.

THE IMPROVED WASHER,

has a perfect-fitting pipe, and is a combination of metals which does not become sticky or dirty. It comes out of the boiler as bright as new.

THE CAPACITY OF THE WASHER AND BLEACHER.

There are two sizes: No. 1, the family size; No. 2, suitable for small hotels, restaurants and barber-shops, boarding-houses, etc.

The Washer is composed of metal and cannot get out of order.

The family size weighs about 5 lbs., and is only 8 inches long by 5 inches wide, and 13 in. deep.

The discharge pipe is 13 inches high over that, and is 1½ inch in diameter. It throws water in a solid, unbroken stream, at the rate of 6 to 8 gallons per minute. It will work in any flat bottom boiler. It takes only 3 or 4 ounces of soap in 10 or 12 gallons of water, and will wash bed or table linen, a boiler full in 10 or 15 minutes, wearing apparel in from 10 to 30 minutes, and will remove streaks without rubbing; requires no previous preparation of the clothes, such as soaking over night. Take the clothes dry, and when the Washer gets *thoroughly at work*, fill the boiler as full as it will hold by gently pressing them down with a stick. Use no chemicals, only good soap and soft water. If the water is hard, it may be softened by a small piece of borax, which is harmless.

FOR LACE CURTAINS this Washer is *invaluable*. It can cleanse them as no other process can, and without the slightest danger of injury.

No. 2, or small hotel size, is 8½ in. long, 7¾ in. wide, 13 in. deep, and weighs about 8 lbs. It will work in a flat-bottom boiler, holding 15 to 25 gallons, and wash of average pieces from 1,500 to 2,000 per day; or it may be used in any smaller boiler that has a flat bottom large enough for it to rest upon.

For hospitals this Washer is pronounced by the medical faculty invaluable, being the most *powerful disinfector* known; leaving the fabrics pure as when new. By bleachers and chemists it is said to be the most powerful method of removing dirt and vegetable matter from fabrics ever known.

THE INDUCEMENTS WE OFFER,

We want a Local Agent in every town in the United States. We *know* from experience that reliable, energetic men can make money selling the Washer and Bleacher in any community.

We want first-class men as GENERAL AGENTS; men capable of managing one or more counties.

To such we give a duly executed Certificate of Agency,

We furnish descriptive circulars for distribution among families. Also large posters for advertising in public places. Printed directions for using are sent with each Washer.

The retail price of No. 1 WASHER, in New York, is $3.50; No. 2 WASHER, $5.00; No. 1, $24.00 per dozen; No. 2, $36.00 per dozen.

SAMPLE, OR SINGLE WASHER.

WE SEND SINGLE OR SAMPLE No. 1 WASHERS, PREPAID, TO YOUR NEAREST RAILWAY EXPRESS OFFICE, in any part of the United States east of the Mississippi and Missouri Rivers, Kansas, Nebraska, Arkansas, Louisiana and Texas, for $3.50.

SPECIAL NOTICE.

As to the reliability of this Company, we refer you to the MERCANTILE NATIONAL BANK of this city, or to any Express Company in New York. Also to the Publishers of the following named well known leading Journals, viz.:—New York *American Agriculturist*, Weekly *Sun*, Weekly *Times*, Weekly *Tribune*, Weekly *Witness*, Weekly *World*, *Christian Advocate*, *Christian at Work*; Boston—*Youth's Companion*, *American Cultivator*; Chicago *Inter-Ocean*, Cincinnati *Gazette*, Springfield *Farm and Fireside*, St. Louis *Journal of Agriculture*, Detroit *Free Press*, all of whom have frequently editorially endorsed *us* as well as our *Washer*.

From the *Rural New-Yorker*, May 8, 1880:—"Lately we had special reasons for thoroughly testing the character of the Robbins Washer and Bleacher. The test has been fully made for upwards of a month in the family at the Rural Farm, and has demonstrated the great merits of this machine. As in the case of hundreds of others, the first impression of the mistress of the house was that the old time use of "Elbow grease" was essential to the thorough cleansing of the soiled clothing; but repeated trials of this device have convinced her that this belief was due merely to immemorial usage, and had no real foundation in fact; for on every occasion in which it was used, this Washer did everything that is claimed for it in an entirely satisfactory manner. We can, therefore, unhesitatingly recommend it to all our readers who may be in need of a first-rate Washer and Bleacher."

From the N. Y. Weekly *Tribune*, May 19, 1880:—"Washers Again.—We have several inquiries concerning the Robbins Washer and Bleacher. It does exactly what is claimed for it, and is cheap at ten times its cost."

In ordering, write plainly your name, post-office, county and State. Also the name of the express office to which you wish the Washer forwarded.

CASH MUST ACCOMPANY ALL ORDERS.

Remit by Post-office Order or registered Letter. We insure the safe delivery of all Washers ordered as above. Money may also be sent by draft on New York.

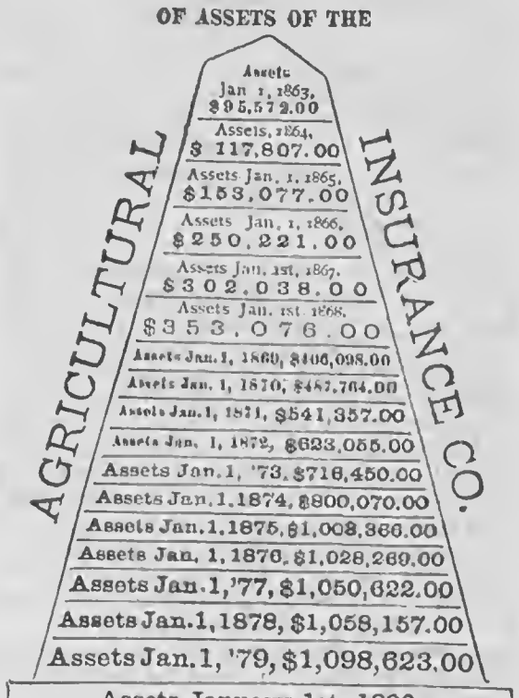
Send for sample and secure A BUSINESS THAT WILL PAY YOU WELL.

When you order or write, mention this paper. Address

BISSELL MANUFACTURING CO.

50 BARCLAY ST., NEW YORK, U. S. A.

PYRAMID
OF ASSETS OF THE



Assets January 1st, 1880,
$1,137,549.00

Capital, $200,000. Net Surplus, $235,153.81.

THE ATTENTION of owners of Farm Property and Residences is invited to the above Pyramid, showing the uniform and sure growth, during the last seventeen of its 27 years of existence, of a fire insurance company whose charter limits its business to their class of property—the **Agricultural Insurance Company**, of Watertown, N. Y. The figures represent the amount set apart at the dates given for the PROTECTION OF POLICY HOLDERS.

Twenty-seven years of patient toil has made this the strongest and largest Company doing an exclusive Dwelling Business in the United States, if not in the world. It now issues 45,000 policies a year. No other like Company can show such growth and increase.

The history of this Company proves that a LARGE business, well scattered, managed with prudence, *can be done with a very small profit from each risk*, and afford perfect security, which will grow stronger every year.

While nine-tenths of the "Mutual" fire insurance companies, and many of the Stock companies, have failed on account of reckless or extravagant management, or doing too small a business, the OLD AGRICULTURAL, by economy, energy and prudence, has every year added a substantial amount to its Assets, for the indemnity of its patrons, and it now occupies a position in the confidence of the public second to no other Company.

From year to year it spreads the base of its Pyramid and gains strength.

EXTRACT FROM CHARTER.—"*Article 2.* This Company is formed for the purpose of insuring Farmers' Dwellings, Private Residences, Barns and Outbuildings, with their contents, and other property not more hazardous," and is strictly confined to this class of property.

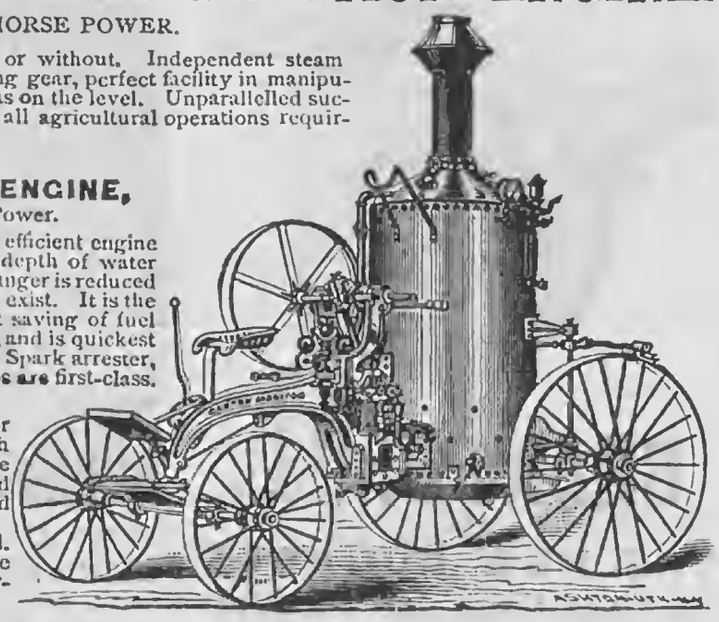
JNO. A. HERMAN, President.
ISAAC MUNSON, Secretary.

C. PATTERSON, 50 Liberty St., N. Y., General Agent Eastern New York, Connecticut, New Jersey and Eastern Pennsylvania. D. A. CLARK, Baltimore, State Agent Maryland and Southern Pennsylvania. GEO. D. PLEASANTS & SON, Richmond State Agents Virginia and North Carolina. A. H. DANNOW, Chicago, Ill., General Manager Western Department.

CANTON MONITOR TRACTION ENGINE.

10, 12 AND 16 HORSE POWER.

Self-steering with hub motion, or without. Independent steam pump, jack-in-the-box compensating gear, perfect facility in manipulation. Entire safety on hill sides as on the level. Unparallelled success as a road engine. Adapted to all agricultural operations requiring power.



CANTON MONITOR ENGINE,

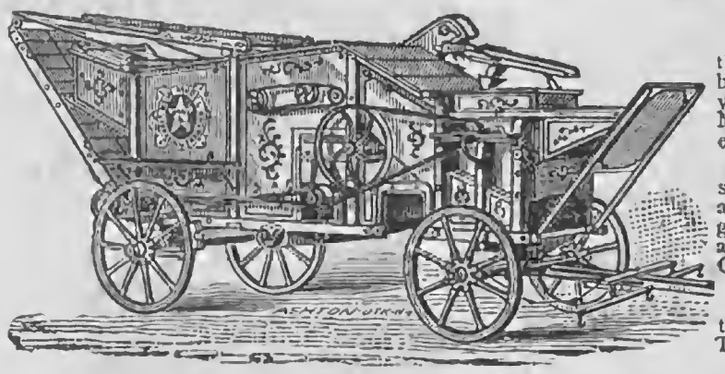
6, 8, 10, 12 and 16 Horse Power.

The most convenient, simple and efficient engine made. Being upright, with great depth of water on crown, sheet and fusible plug, danger is reduced to a minimum, if any can be said to exist. It is the easiest to fire and raise steam, most saving of fuel and water, light weight, light draft, and is quickest set for work, needing no leveling. Spark arrester, safety "pop" valve, and all fixtures are first-class. Every engine is carefully tested.

The record of the MONITOR for SAFETY is unexampled. Although our production is now up in the thousands, no life has been lost and no serious accident has occurred with our engine.

All the working parts are steel. As we use the best material the market affords, the engine is as durable as an engine can be made.

MILLER'S NEW MODEL VIBRATING THRESHER.



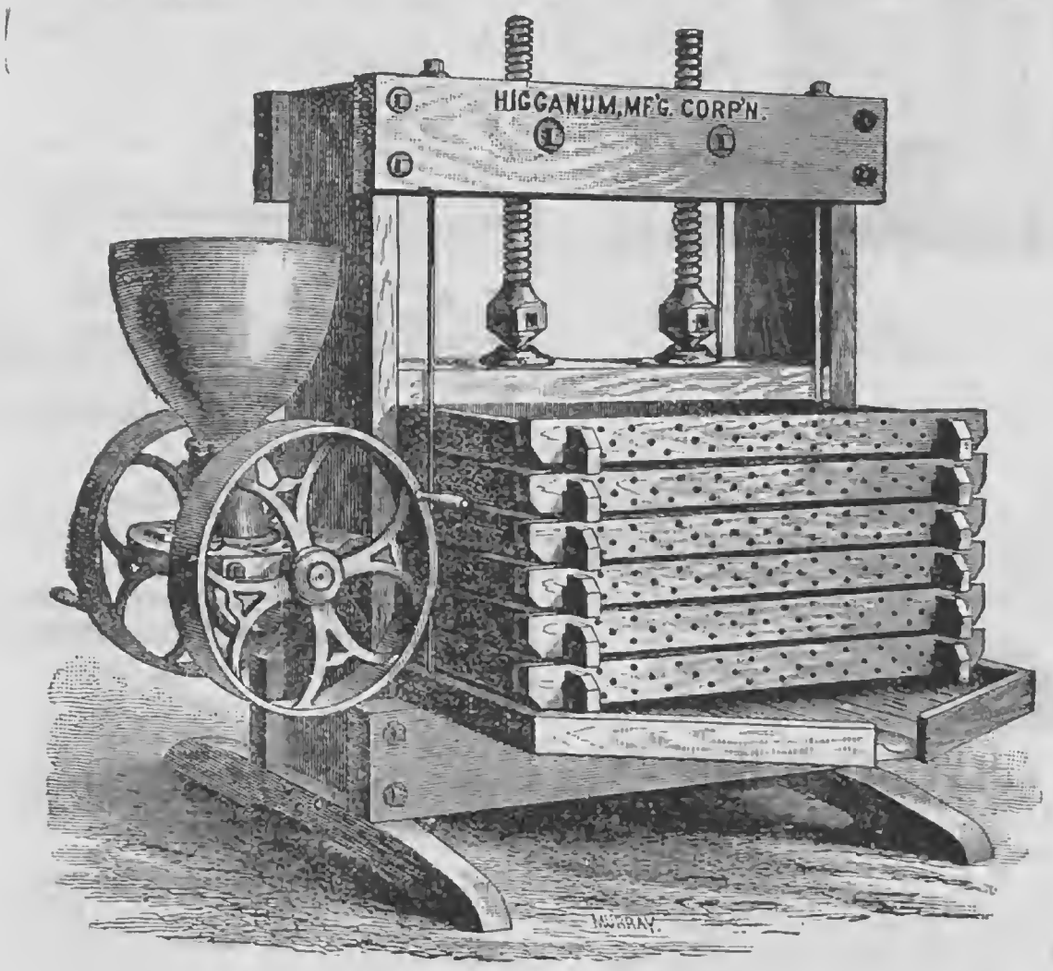
A combination entirely new to the threshing public, never having been thoroughly tested until last year. The success of the NEW MODEL this year, 1880, has been extraordinary.

Experienced threshers are enthusiastic in its praise, and with one accord give it the first place as a grain saver and cleaner. It has also given perfect satisfaction in Clover and Flax.

For descriptive circulars, address the manufacturers of the MONITOR and NEW MODEL.

C. AULTMAN & CO., Canton, Ohio, U. S. A.

THE FARMERS' FAVORITE CIDER MILL



THE ONLY SUITABLE MILL FOR A FARMER.

Will grind 60 bushels of apples per hour, and press 75 gallons at a pressing. Send for Illustrated circular.

ALSO,

CLARK'S

IMPROVED ROOT CUTTER.

IMPROVED FOR SEASON OF 1880.

This Cutter has never had an equal. Do not fail to examine it.

We are making three sizes, No. 1, 2 and 3.

C. COLLINGSWORTH'S

NEW RAKES.

THE TWO BEST RAKES IN THE MARKET,

The Monitor & Quaker Improved,

both SELF-DUMP. A child 6 year's old can operate them.

Send for Illustrated Circular.

HIGGANUM MANUFACTURING CORPORATION,

(SOLE MANUFACTURERS,)

Higganum, Ct., U. S. A.

☞ Manufacturers of Agricultural Implements of every description.

"THE STUDEBAKER."

The Studebaker Bros.

Employ 900 Men,

AND MAKE THE BEST

FARM, FREIGHT & PLANTATION WAGONS IN THE WORLD.

Also, Light, Open and Top Buggies, Carriages, Landaulets,

And Business, Express and Platform Spring Wagons, in fact everything on Wheels.

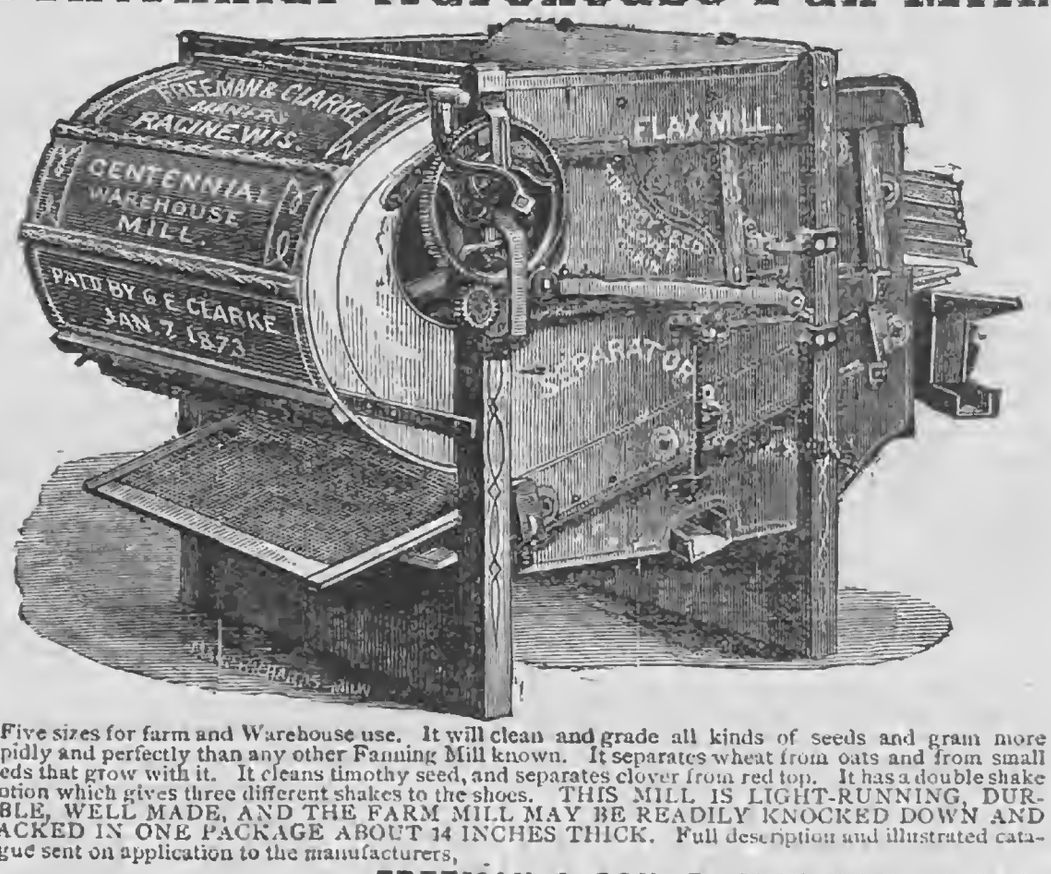
FOR STANDARD QUALITY, SUPERIORITY OF FINISH, ELEGANCE OF DESIGN, LIGHTNESS OF DRAFT, DURABILITY, AND ALL THE PARTICULARS THAT GO TO MAKE UP A PERFECT VEHICLE, THE WORK OF THIS FIRM STANDS UNRIVALLED.

Send for Illustrated Catalogue and Price List, and mention where you saw this advertisement.

OFFICE & FACTORIES: South Bend, Ind. REPOSITORIES: 151 & 153 Wabash Ave., Chicago; St. Joseph, Mo.; Salt Lake City and Sacramento, Cal.

STUDEBAKER BROS. MFG. CO.

Centennial Warehouse Fan Mill.



Five sizes for farm and Warehouse use. It will clean and grade all kinds of seeds and grain more rapidly and perfectly than any other Fanning Mill known. It separates wheat from oats and from small seeds that grow with it. It cleans timothy seed, and separates clover from red top. It has a double shake motion which gives three different shakes to the shoes. THIS MILL IS LIGHT-RUNNING, DURABLE, WELL MADE, AND THE FARM MILL MAY BE READILY KNOCKED DOWN AND PACKED IN ONE PACKAGE ABOUT 14 INCHES THICK. Full description and illustrated catalogue sent on application to the manufacturers,

FREEMAN & SON, RACINE, WIS., U. S. A.

HARRIS FARM TRUCK,

To be used in front of the Plow, Harrow, Cultivator, Shovel Plow, Road Scraper, Horse Fork

It saves from 12 to 20 per cent. of draft, and saves its cost in help to team every year.

The cheapest, most simple and practical farm implement in the world.

Hon. P. T. BARNUM writes:

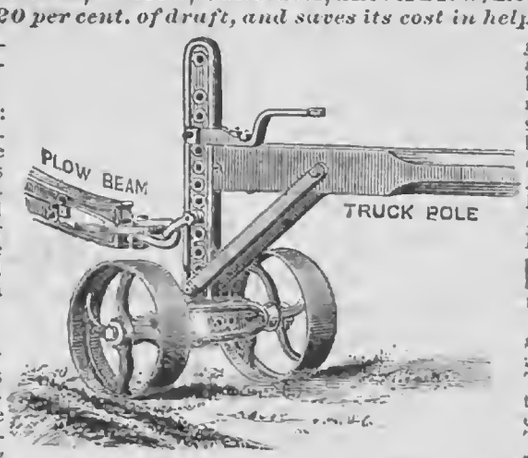
Bridgeport, Conn.

My Dear Sir: I enclose check for Farm Truck; it is the most valuable implement I have seen lately, and I would not part with it for five times its cost. The piece of land being plowed could not be plowed with horses without it.

Yours truly,

P. T. BARNUM.

It is no experiment, as *several thousand* have already been sold, and we have to hear of *a single instance where they have been given a fair trial by an intelligent farmer*, that they have not received his hearty approval and given entire satisfaction. It is endorsed by the *Rural New-Yorker*, *Country Gentleman*, Prof. Arnold, Hon. Harris Lewis, Hon. James Geddes, Flint Blanchard, Esq., Pres. W. N. Y. D. A., and many other prominent farmers who have given it a practical test in the field.



AGENTS WANTED in *every town* in the United States, and exclusive control of Territory will be guaranteed. Where no agency is established we will ship the Truck, *freight prepaid*, on receipt of Price, $6.00.

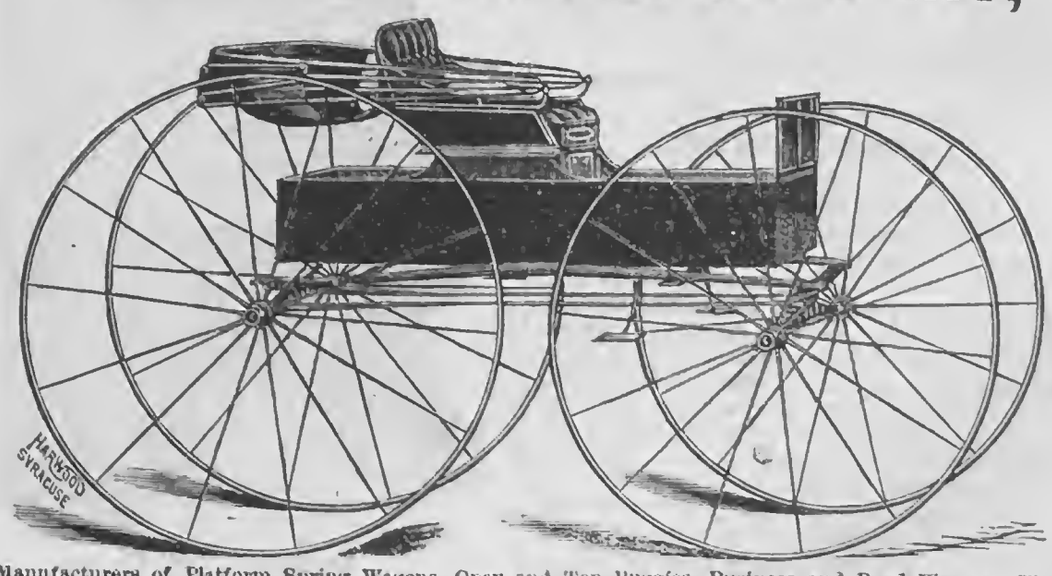
EVERY TRUCK WARRANTED TO WORK AS REPRESENTED.

SAXTON & AMIDON,

Sole Proprietors and Manufacturers,

BUFFALO, N. Y., U. S. A.

CORTLAND WAGON COMPANY,



Manufacturers of Platform Spring Wagons, Open and Top Buggies, Business and Road Wagons. These Wagons and Buggies are perfectly adapted to meet the requirements of all classes of *Business Men*, but the Platform Spring Wagons are especially designed for the use of *Farmers* and *Dairymen*. All work is fully warranted in every respect.

A finely Illustrated and Descriptive Catalogue and Price List furnished free upon application. Address

CORTLAND WAGON CO.,

Cortland, N. Y.

Or 263 & 265 Wabash Avenue, Chicago, Ill.

MRS. WARREN'S HELPER.

"I DON'T know that I ever should have gotten through my Fall sewing so well if it had not been for the help I had from poor Mrs. Duane across the way," said Mrs. Warren to her friend.

"I did not know that she ever went out sewing. I don't see how she can and keep those four children so tidy."

"Oh, she did not set a stitch for me, but she helped me greatly, all the same."

"Did other work for you while you sewed, I suppose,"

"You would never guess the puzzle, so I will tell you. It was just looking at her as she sat by that morning-glory-shaded window, stitching away at her childrens' clothes with such a swift needle, every minute that she could catch from her housework. I knew her resources were very small; that she was obliged to piece up and make over and hand down to the very limit of possibilities, yet she did it with such cheerfulness, always singing at her work if she was not chatting with her children; it made me ashamed of my fretfulness.

I was dreading to commence these pretty plaids for the girls because I could not quite decide upon the patterns, and then it would be such a trouble this hot weather.

That thrifty, busy little housekeeper made me ashamed; every time I looked at her it was an inspiration.

I cut out the dresses and put the sewing machine at work on them; then if I felt my zeal lagging I would make an errand across the street to see Mrs. Duane work a few minutes.

One morning I happened in on a "stocking day," as she called it. She had a collection of old stockings of various sorts and sizes, which she was cutting down and piecing out with new heels and toes until they were about as good as new for the Fall campaign.

I asked leave to add to her collection and the offer was thankfully accepted. I took over an apron full, which she asserted would keep the hildren well supplied all Winter. I had no idea there was so much 'goodness' in old stockings. I always came home with energies brightened and wits sharpened, so that my work seemed very easy and pleasant. One day I told her how much good I was getting from her example of steady industry and the little woman just dropped her work in her lap and covered her face with her hands, laughing and blushing. The idea of having an influence was very odd to her.

But that was just the help that carried me through the Fall sewing, and I believe in giving 'honor to whom honor is due.'" LOIS.

MATRIMONIAL ADVICE.

Now girls, I want to say one word about getting married. The reason so many unhappy marriages are made, is just because young people do not stop to take a sober second thought upon the matter; but rush on without once considering what the poet calls, "the eternal fitness of things."

Getting married ought not to be the great object of a girl's existence. I often think, when I see young folks so anxious to get married, that if they could look into the future and see what trials, sorrows and troubles were ahead, they would shrink back and not have courage to take vows that are to last till death annuls them.

This getting married is a serious piece of business, any way it can be fixed. Because a young man drives a fast horse, dresses well, and is an agreeable escort, it is no sign that he will make a kind, considerate and loving husband. You want to study him, try him, test his temper, and take time to do it in.

Don't marry in a hurry—you will have time enough to repent, if you do. Never marry for beauty or show. Do not marry a man who is very fond of fast horses; they do not make very nice husbands. I never see such a man but I think, "I pity the girl who marries you." It is a great venture to trust such a man; so girls, look out!

Again, do not marry a man who has a taste for strong drink of any kind. As you value your life's happiness and comfort, let such a man alone; better die than be tied for life to such a person; yes, it is a living death, and you are putting your neck into a heavy yoke.

Never marry a man who cannot govern his temper. He is not safe, either at home or in public, and he will keep you in tormenting fear all your life; and lastly girls, do not marry a man till you have known him a whole year, at the least; and made him a study for six months; and do not be afraid of being an old maid! Better keep single than be an unhappy wife.

GRANDMOTHER.

EMBROIDERY ON NET.

THE best Brussels net should be used for this purpose; the embroideries suitable and generally used are flowers in silks, worked much in the same manner as crewel embroidery; darning in silk, and combining some of the embroidery stitches with it. Trimming for ball dresses, a coverlet worked on stripes, with alternate ones of satin between would be salable articles in this work. With regard to the small articles about which inquiries have been made, I would suggest the following: Foot warmers can be made of cashmere, either lined with common fur or quilted. They are made of a half circle, and are just large enough for the feet to be slipped in. The material should be powdered with small flowers in crewel embroidery before making up. Satin can be applied to the frames for visiting cards and almanacs, embroidered with silk and gold cord, and then placed over an oval or square of card-board, slightly padded beneath. Penwipers in the form of a teapot cosy can be made of any small shreds. Squares of satin make nice lace cases slightly wadded, the satin painted and edged, with cord and lace beyond; the two pieces of satin forming a pocket, so that the lace can be slipped in. Strips of satin, sewn together, make purses about a quarter of a yard long, very good for holding sewing silks; also tiny parasols for penwipers. A jockey cap is a good idea for a pincushion made of scraps. Toilet tidies, so often described, can be covered with net. Purses made of net and filled with sugar plums having sugar rings sell well to children. Stamp cases can be made out of odd scraps, and if those artistically inclined will paint upon them flowers or floral initials they will double their value.—Artiste.

HINTS.

AMMONIA.—This is very useful. It cleans gentlemen's coat-collars and felt hats nicely. Dilute with water one-half, use a cloth same color, rub well, using several clean cloths if very much soiled. A few drops in a bath water, especially if hard water, is refreshing and purifying. It cleans glassware, silverware, windows, paints, and bottles beautifully and easily. It takes up the grease spots from the floors. It is good for a stimulant to house-plants; one teaspoonful to one gallon of water once a week. Put a few drops in a basin of water, wash your hair-brushes in it, and see what it is good for. It is good for catarrhal cold, and stings of insects. Inhale for colds, and apply to affected part in stings.

LAUNDRY HINTS.—Black silk stockings are apt to fade unless washed with care. Take a quarter of a pound of soft soap, the same quantity of run honey, and a large wineglassful of gin; mix these until dissolved in a quart or three pints of warm salt water. Wash the stockings well in this and rinse them in two waters (rain water is best), squeeze them in a towel, smooth them out and lay them on a sheet to dry in some airy place, but not in the sun. Smooth them with a cool iron on the wrong side. If carefully and quickly done in this way, black silk stockings will retain their color. Black merino stockings should be washed twice in a lather of milk-warm water, no soap rubbed on them. Rinse in cold water with salt in it; dry them quickly in the open air, if possible, and when half-dry, mangle them.

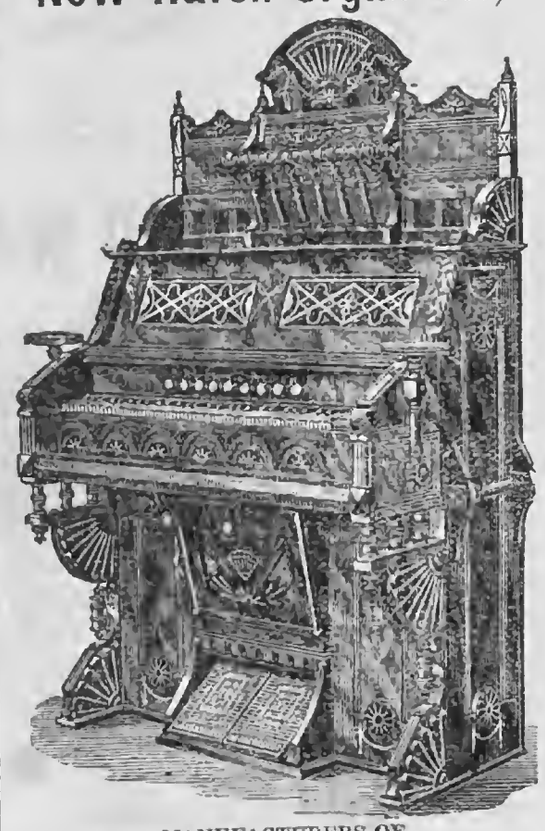
KEROSENE STAINS UPON A FLOOR.—A correspondent writes from Pilot Mound, Minn., that the breaking of a kerosene lamp has caused a "frightful spot" upon the floor, and wishes to know how it can be removed. Good kerosene has a boiling point of 380 degrees, considerably above the melting point of lard—hence in order to drive it completely from any fabric, from paper, or from wood, it must be heated high enough to form a vapor, when, if pure, it may be completely removed. Heat may be applied to the floor by using flat-irons sufficiently hot, first placing a piece of paper over the spot. It may be that after the oil is driven from the surface by heat, the stain will reappear; some of the oil remaining in the wood will be brought to the surface by capillary attraction. In such a case it will be necessary to repeat the operation as often as the stain appears.

COLUMBIA BICYCLE.

Bicycle riding is unsurpassed as a method of traveling, whether for speed, sport or the renewal of good health. No horse can compare with the Bicycle for endurance; no other pastime is half so fascinating, and the exercise is recommended by the medical profession as being the most conducive to health. Apple-yard rode 100 miles over a common turnpike road in 7 hours, and Waller has accomplished 1,400 miles in 6 days. Send 3-cent stamp for 24-page catalogue containing price lists and full information.

The Pope Mfg. Co.,
76 Summer St., Boston,
Mass., U. S. A.

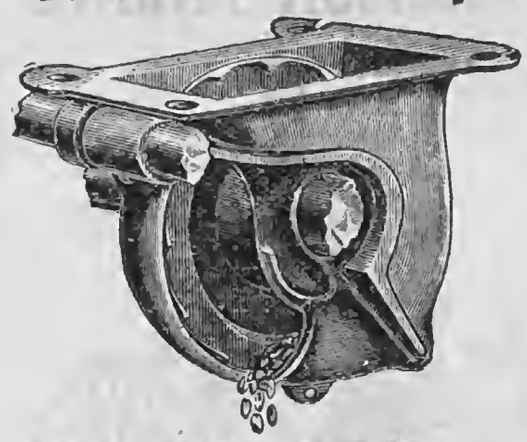
NeW Haven Organ Co.,



MANUFACTURERS OF
Cabinet Parlor Organs.
Quality the best. Prices the lowest. Send for Illustrated Catalogue "A." Address
New Haven Organ Co.,
NEW HAVEN CONN, U. S. A.

52 Gold, Crystal Lace, Perfumed & Chromo Cards name in Gold and Jet, 10c.
CLINTON & BRO., Clintonville, Ct.

The New Buckeye



GRAIN DRILL,
ALSO
THE NEW BUCKEYE
Combined Grain and Fertilizer
DRILL,
AS IMPROVED FOR 1880.

Over 7,000 of these new Drills were sold and used in the United States last season, and were pronounced by all to be the *most perfect Seeding Machines* in the country. No Grain Drill ever made gave such *universal satisfaction*. It is the best force-feed in the market. Our Fertilizer Sower has a positive force-feed and has no equal in this country. Be sure and send for our new Illustrated circular, giving illustrations and descriptions of the improvements. Address
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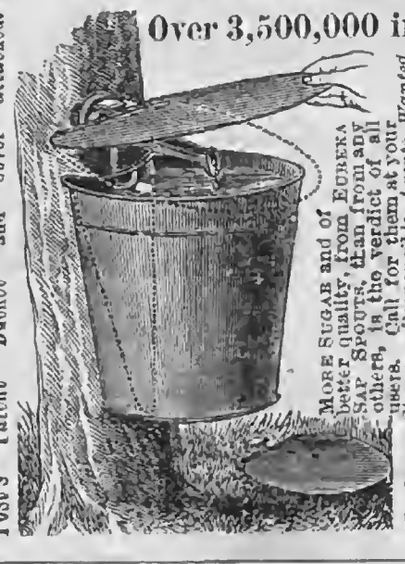
Over 3,500,000 in Use.



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More Sugar and of better quality, from Eureka Sap Spouts, than from any others, in the verdict of all users. Call for them at your Hardware Stores. *Responsible Agents Wanted.* Samples, Circulars and terms sent, postpaid, on receipt of 20 cents. Address
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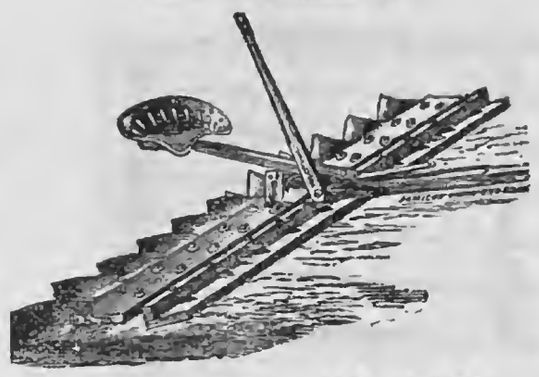

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IT IS THE
Best Tool in the World for preparing Land for Winter Grain,
whether the grain is to be drilled or broadcasted. Highly recommended by the editors of this Paper. See numbers Feb. 14, page 105, and March 27, page 201.
Agents wanted. Send for Circulars.
NASH BROS., Sole Manufacturers,
Harrisburg, Pa., and 22 College Place, N. Y.

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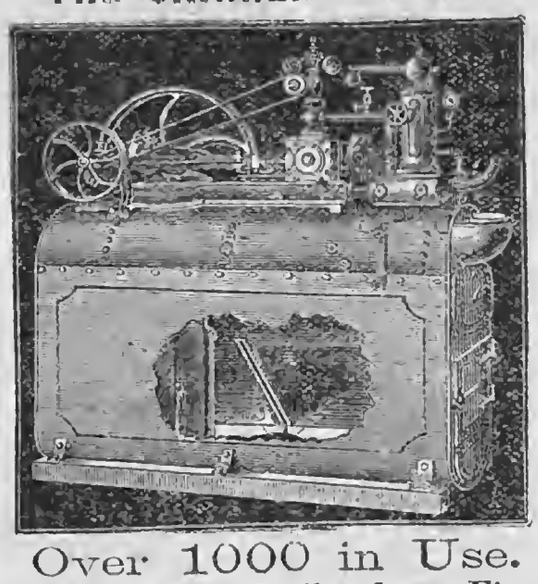

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LATEST IMPROVED
HORSE-POWERS.

FOR ONE, TWO AND THREE HORSES.
MACHINES FOR
Threshing and Cleaning Grain
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Patented, Manufactured and Sold by
A. W. GRAY'S SONS,
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☞ Will produce more income than many farms do.
Do not fail to Send for Illustrated Circular Before Buying.
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UNION CORN HUSKER
Does three men's work. No cold or sore fingers. Can be used with or without gloves or mittens. Awarded six premium. One sample, 25c.; two for 45c., five for $1.
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108 South 8th St., Philadelphia, Pa.
Catalogue FREE. Agents wanted.

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Awarded a MEDAL and DIPLOMA OF HONOR at the International Exposition
HEEBNER'S IMPROVED
Level Tread Railway Horse Power and Speed Regulator, Circular and Drag Saws.

We challenge the world to produce a Power Thresher and Cleaner that will do as much work with less labor for the horse than our Patent Level Tread Power and Giant Thresher and Cleaner will do. Send for Illustrated Circular.
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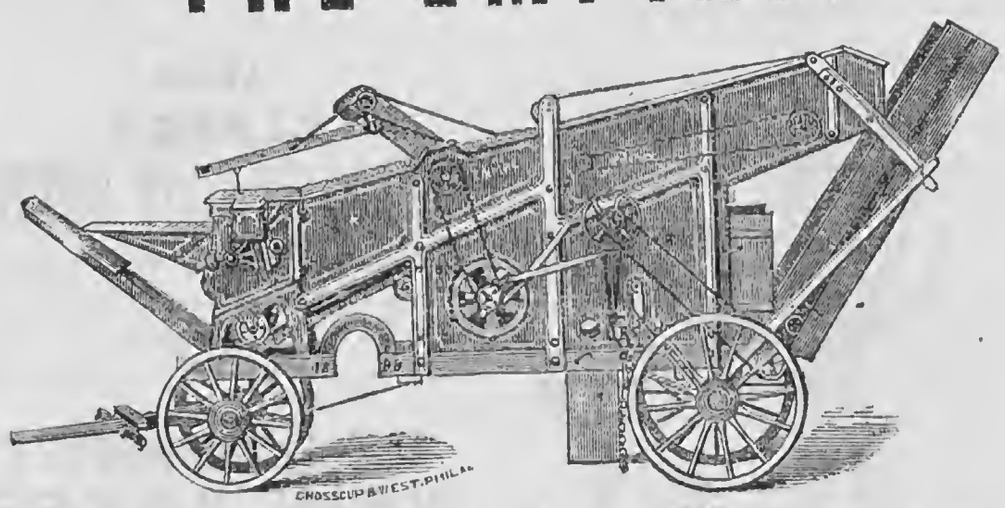
THE EMPIRE.



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AND MACHINE COMPANY.
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Made in five sizes, and for Steam or Horse-power. AWARDED THE HIGHEST PREMIUM BY THE NATIONAL FAIR ASSOCIATION, Washington, D. C., 1879, in competition with all the leading machines of the United States.
It justly claims to be the Best Thresher, the Most Rapid Separator; the Most Thorough Cleaner; the Easiest Handled; the Best Built; the Most Durable, and the Cheapest Repaired.
These are no unmeaning words that may be undeservedly said about any machine, but they are facts that have been demonstrated many times, both in the Field and on the Fair Grounds. We invite investigation.
Write for Circulars and Price List before purchasing.

PERSONAL ITEMS.

Tennyson attained his seventy-first birthday on August 6.

Ex-Governor Paul O. Hebert has just died at New-Orleans.

U. S. Grant, Jr., as a speculator is said to have made a fortune for himself and added to his father's little pile.

Bishop Elder of Cincinnati, has declared that no banged or frizzled hair will be allowed among the women of his congregation.

Julian Hawthorne, the novelist, at present residing in England, has accepted a consulate in Japan, offered him by the government of the United States.

Gen. Grant never voted but once at a Presidential election. That was for Buchanan in 1856. He states that he has absolutely declined to accept the offer of the presidency of that Boston mining company.

The ex-King and Queen of Naples are living at Houlgate. Their ex-majesties are in very reduced circumstances, for when they were in power they forgot Bismarck's maxim, *beati possedentes*, and so they occupy a modest suite of rooms in a hotel, where they live like ordinary mortals.

The Viceroys of England in India have rarely lived long. The Earl of Mayo perished at Port Blair under the blow of an Afghan convict; Lord Lawrence, who preceded him, died prematurely through his Eastern labors; Lord Elgin died upon the Indian hills, and Lords Canning and Dalhousie barely reached the shores of England to pass away.

Milton Carter, of Columbia, Tenn., went about threatening to kill John Holcombe on sight John heard of it and armed himself. The two men met in a saloon, and Holcombe, without waiting for his enemy to begin the attack, emptied a double-barreled shot-gun and two chambers of a revolver. Milton, who killed a brother of Holcombe four months ago, died without a struggle.

"General Washington is a tall, well-made man," said a writer in 1798, "rather large-boned, and has a tolerably genteel address. His features are manly and bold, his eyes of a bluish cast and very lively; his hair a deep brown, his face rather long and marked with the small-pox; his complexion sunburnt and without much color, and his countenance sensible, composed and thoughtful: there is a remarkable air of dignity about him, with a striking degree of gracefulness; candor, sincerity, affability and simplicity seem to be the striking features of his character."

[Kansas City Times.]

Mr. William Hadeler at the Marathon Hotel, Wausau, after extreme suffering with rheumatism, without any benefit from physicians or various preparations, was cured by St. Jacobs Oil.—Wis. Exchange.

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TRADE MARK.

THE GREAT

GERMAN REMEDY.

FOR

RHEUMATISM,

Neuralgia, Sciatica, Lumbago,

Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,

Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages.

SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

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AGENTS WANTED EVERYWHERE to sell the best **Family Knitting Machine** ever introduced. Will knit a pair of stockings, with **HEEL and TOE complete**, in 20 minutes. It will also knit a great variety of fancy-work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co.**, 409 Washington St., Boston, Mass.

OSGOOD'S PATENT

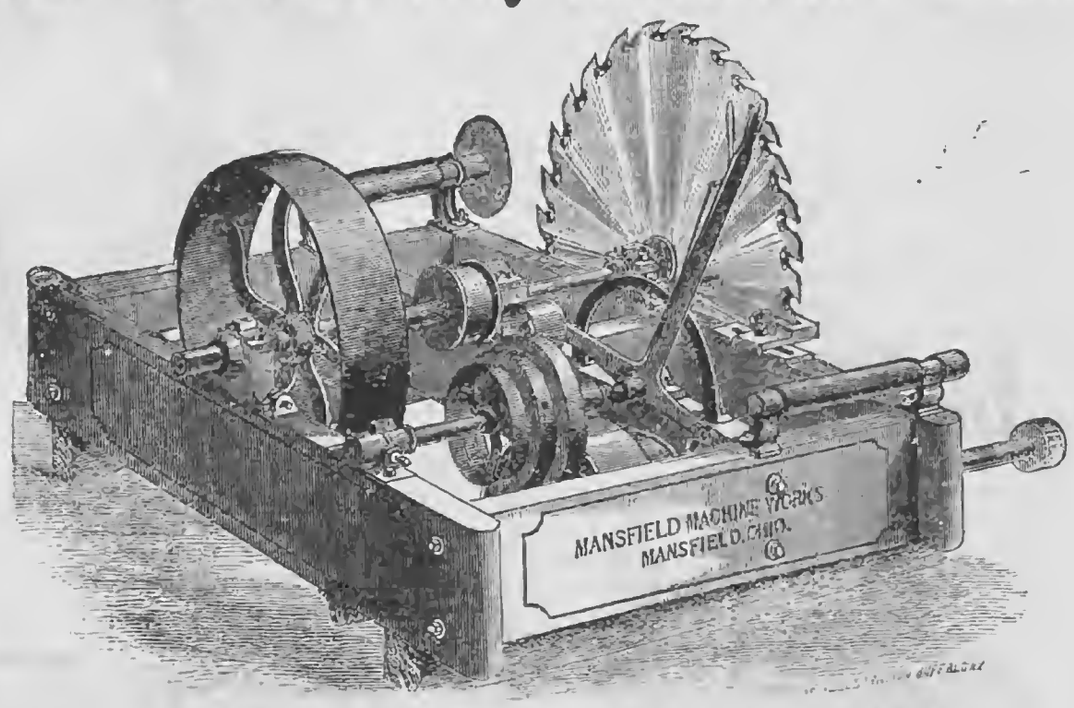
5 TON SCALES.

Special Price, $25

Brass Beam and Poise. Iron Attachments, with *Steel Sockets and Pivots.* Adjusted and sealed to U. S. S Weights. Fully warranted. To be paid for when *proved correct and satisfactory to you. This offer is* **SPECIAL**, and only to introduce it in new localities. No orders will be accepted at this price where the scales are introduced, or where we have local agents. References and Illustrated Circulars furnished on application to the sole manufacturers.

OSGOOD & CO.,
Binghamton, N. Y., U. S. A.

The Mansfield Pony Circular Saw-Mill.



Expressly designed for Farm Engines. Capacity 3,000 to 6,000 Feet of Lumber per day.

After many years' experience in the manufacture and sale of Saw-Mill Machinery, and from the numerous unsolicited testimonials we have received in favor of our PONY CIRCULAR SAW-MILLS, we offer them to our customers, believing them to be *the best that can be found.* They will cut more lumber, and do it better, than any other mill of their weight or price, and at the same time are less apt to get out of repair. ***These Mills are Capable of Earning their Price in from 5 to 8 Weeks.*** Our Mills are equipped complete [no charge for extras], and each Mill will saw lumber 34 feet long. Saw Mandrel, Feed Shafts and Head Block Shafts made from Patent Cold-Rolled Iron, with three long bearings on Main Mandrel. Each Mill furnished with Independent and Simultaneous Lever Setting Head Block, Planer Saw with 500 Extra Teeth, Noiseless Friction Feed, Boxing arranged to give Saw lead, Seasoned Oak Ways with Wrought-Iron Track. ***Send for Illustrated Circular giving full description of Pony Saw-Mill and also of our large Single and Double Circular Saw-Mills, different sizes, capacity from 10,000 to 40,000 feet of lumber per day.***

MANSFIELD MACHINE WORKS, Mansfield, Ohio, U.S.A.

The Literary Revolution.

In January, 1879, **The Literary Revolution** was inaugurated by the publication of one small volume. In September, 1880, its list, published and in preparation, comprises over 120 volumes of standard books. It gives employment to about 500 hands, is actually delivering to purchasers over three tons of books a day, or over 1,000 tons a year, and is so far from able to fill all orders that additional buildings have just been leased, machinery purchased, and other steps necessary taken to double the present product within the next sixty days. To meet the popular demand for the coming twelve months at least 2,000,000 and probably 3,000,000 volumes will be required. The almost wonderful success which the Revolution has achieved is doubtless to merit. II. What is worth reading is worth preserv- ples, which are: I. Publish only books of real Work on the basis of the present cost of making ing—all books are neatly and strongly bound. III. years ago. IV. Books have commonly been con- books, which is very much less than it was a few sidered luxuries; in a free republic they ought to be considered necessities, and the masses will buy good books by the million if prices are placed within reach. V. To make $1.00 and a friend is better than to make $5.00 only, and 1000 books sold at a profit of $1.00 each gives a profit of only $1,000, while 1,000,000 books sold at a profit of one cent each gives a profit of $10,000; and it is more pleasure as well as more profit to sell the million. The most important publication thus far undertaken—indeed the most important work ever published in this country—a work that every intelligent person wants in his library, is the Library of Universal Knowledge. It is a verbatim reprint of the last London edition of Chambers's Encyclopædia, with copious additions by American editors, about 15,000 topics being added to the original work. It will contain, complete, about 10 per cent more than Appleton's and 20 per cent more than Johnson's Cyclopædia, though costing but a fraction of the price of either. The publication of a large type edition of the Library of Universal Knowledge is just begun, vol. 1. being issued September 1. Two or more volumes will be issued each month till the whole is completed in 15 vols. octavo of nearly 1,000 pages each. The price of the large type edition in cloth binding is $1.00 per volume; bound in half Russia, gilt top, price $1.50 per volume. According to our usual custom, special reduction in price is made to early purchasers, and during the month of **September only** orders for volumes I., II., or III., either or all, will be received at the nominal price of 65 cents per volume for the cloth, 95 cents per volume for the half Russia, gilt top. As a portion of the Library of Universal Knowledge, the Chambers's Encyclopædia is also published separately, complete in 15 volumes of clear nonpareil type, and sold, bound in cloth, for the nominal price of $7.50, or in half Russia, gilt top, for $15.00. In this style 12 vols. have already been issued, vol. 13 will be ready September 10, and Vols. 14 and 15 a few days thereafter. On this also special terms are given to early purchasers, the price being to those whose orders are received during September $6.75 for the set complete in cloth, $13.50 for the half Russia gilt top. The volumes already issued will be sent at once by express, and the remainder when completed in October. The Revolution is always undertaking new enterprises and accomplishing new victories. During September in Religion we expect to complete Young's "Analytical Concordance to the Bible," the great "Webster Unabridged" of religious literature, and a 50 cent edition of of Smith's Bible Dictionary. In Biography, two volumes added to our Acme Library of Biography contain 10 vols. selected from the famous English Men of Letters series, at little more than one-tenth the cost heretofore. In Poetry we shall soon have the Iliad and the Odyssey of Homer, translated by Pope, and a large type edition of Shakespeare. In History a cheap edition of the celebrated Froissart's Chronicles, with over 120 illustrations. In Fiction, Scott's "Ivanhoe" and Bulwer's "Last Days of Pompeii." In Juvenile, "Karl in Queerland," profusely illustrated. The cost of making books diminishes in large degree as their number is multiplied. Many of our books are selling in so much larger quantities than we anticipated that we find it in our power to considerably reduce their prices, and we do it with a great deal of pleasure. Among those so reduced are the histories of Macaulay and Gibbon, Taine, Rollin, Josephus, Modern Classics, Milton, Virgil, Dante, Koran, Bunyan, Crusoe, and several others.

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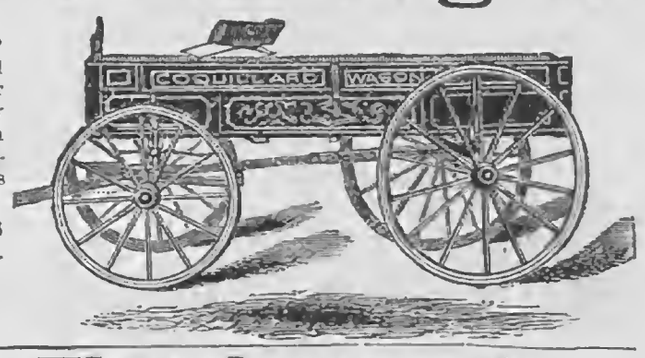

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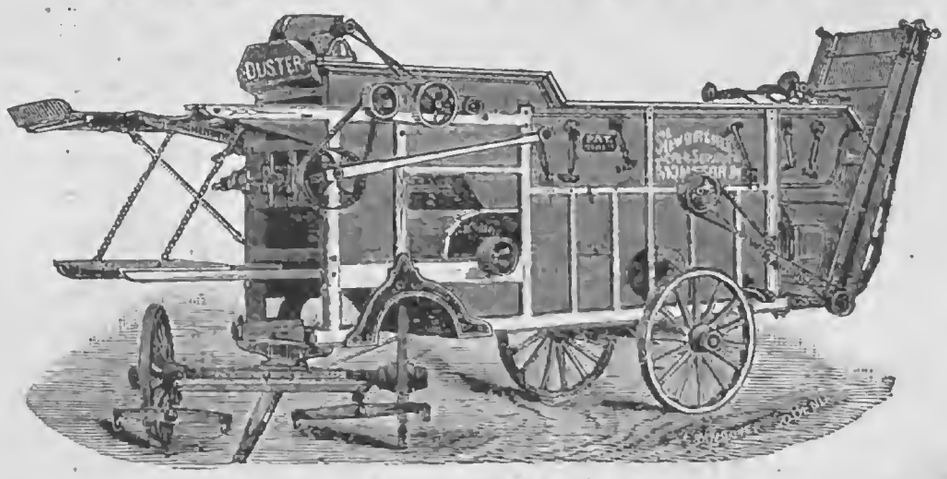

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Humorous.

THE man who was blown up in a steamboat explosion requested that he be buried near the chap who blew out the gas, and that a hand be engraven on his tombstone, with the forefinger pointing toward the victim of gas, and the following beautiful lines beneath: "Steam fixed my fate—Gas Fixtures."

"How long will it be before you get this work done?" said a lady to an apprentice, who was painting her house. "Well, I don't know, mar'm," said he; "the boss has just gone to look for another job; if he gets it, I'll be done to-morrow, but if he don't, I'm afraid it will take me all next week."

A GENTLEMAN the other day saw his little daughter dipping her doll-baby's dress into a tin cup, and inquired "What are you doing, my daughter?" "I'm coloring my doll's dress red." "What with?"—"With beer!" "What put such a foolish notion into your head, my child? You can't color red with beer." "Yes, I can, pa; because ma said it was beer that colored your nose so red!"

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HEART-WHOLE.

WIFE:—"My Dear, where did the loving little thing get her heart?"
HUSBAND:—"I am at a loss to know surely, unless from you, I have mine, still!"

THE

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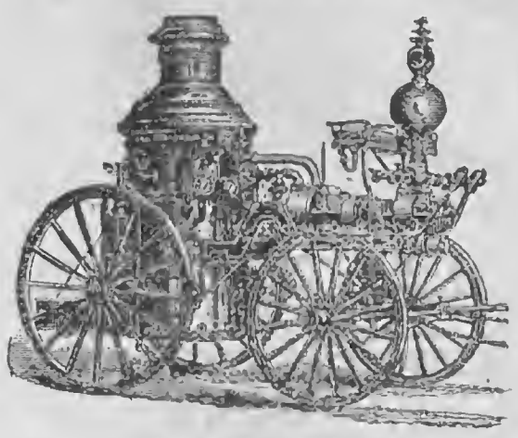

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To the Readers of the Rural New-Yorker:

It is well known that hot weather brings sickness and that the greatest care is necessary to prevent disorders even on the part of those most healthy. What there is in the heat that should cause disease cannot certainly be known, but cholera, dysentery, debility, lassitude, vertigo and many other sudden and dangerous maladies come every season and cause great suffering and thousands of deaths. Few people go through the Summer without unpleasant symptoms. The mouth becomes dry and parched, the tongue furred with white, the pulse irregular, the head feverish, the body cramped and the limbs swollen and tired. Ladies especially, with their natural delicacy and tendency to female troubles, find the hot weather almost unbearable, while little children are dying every day from exhaustion and because Parents neglect precaution and care. A prominent and well-known physician of New York asserts as his positive belief that more than three-fourths of all so-called Summer complaints arise from disordered secretions, and that these secretionary organs, which, by being out of order, cause so much trouble are the kidneys and liver. The brain controls the life, but the lower part of the body rules the health.

There is one, and only one known vegetable that will absolutely regulate and control the Kidneys and Liver at all times and thus prevent the many dangers of the Summer. That vegetable (a West India leaf) is used as the basis of Warner's Safe Kidney and Liver Cure. It is pure, pleasant to the taste and absolutely certain in its results. It keeps those who intelligently use it in perfect health, and cures those whose secretions are deranged. For all urinary complaints of either sex it is infallible. For all bilious troubles it is certain. For the hot season it is invaluable and every person of care and intelligence should not fail to keep Warner's Safe Kidney and Liver Cure near at hand, and use it upon the approach of the slightest symptoms. It may save your life or that of some dear friend; it will certainly prevent much suffering. It is for sale by druggists in all parts of the world; be careful and take no other. "A word to the wise is sufficient."

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Make the most durable and ornamental roofs in the world. One-fourth the weight of slate, and will not break from any cause; cannot blow off, and are absolutely tight. Send for descriptive circular and reduced prices to
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Trotting Races October 5, 6, 7, 8 and 9. Purses, $8,000. Entries close at 11:00 p. m. September 21, 1880.
International Tournament, Military Prizes, Incubator-hatching Chickens, Bicycle Races, Grand Cavalcade of animals on the track.
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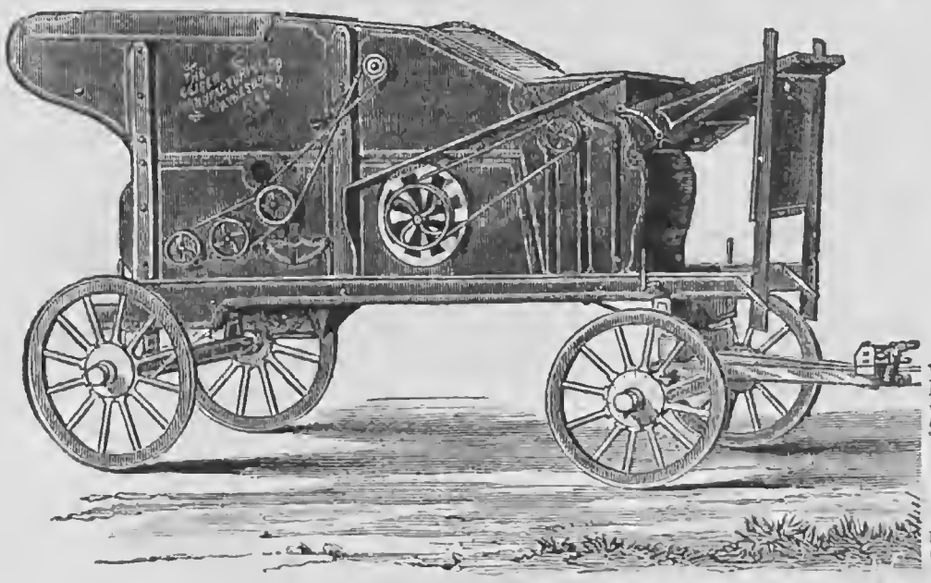

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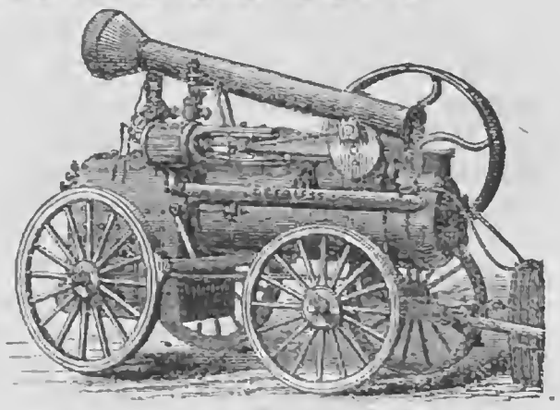

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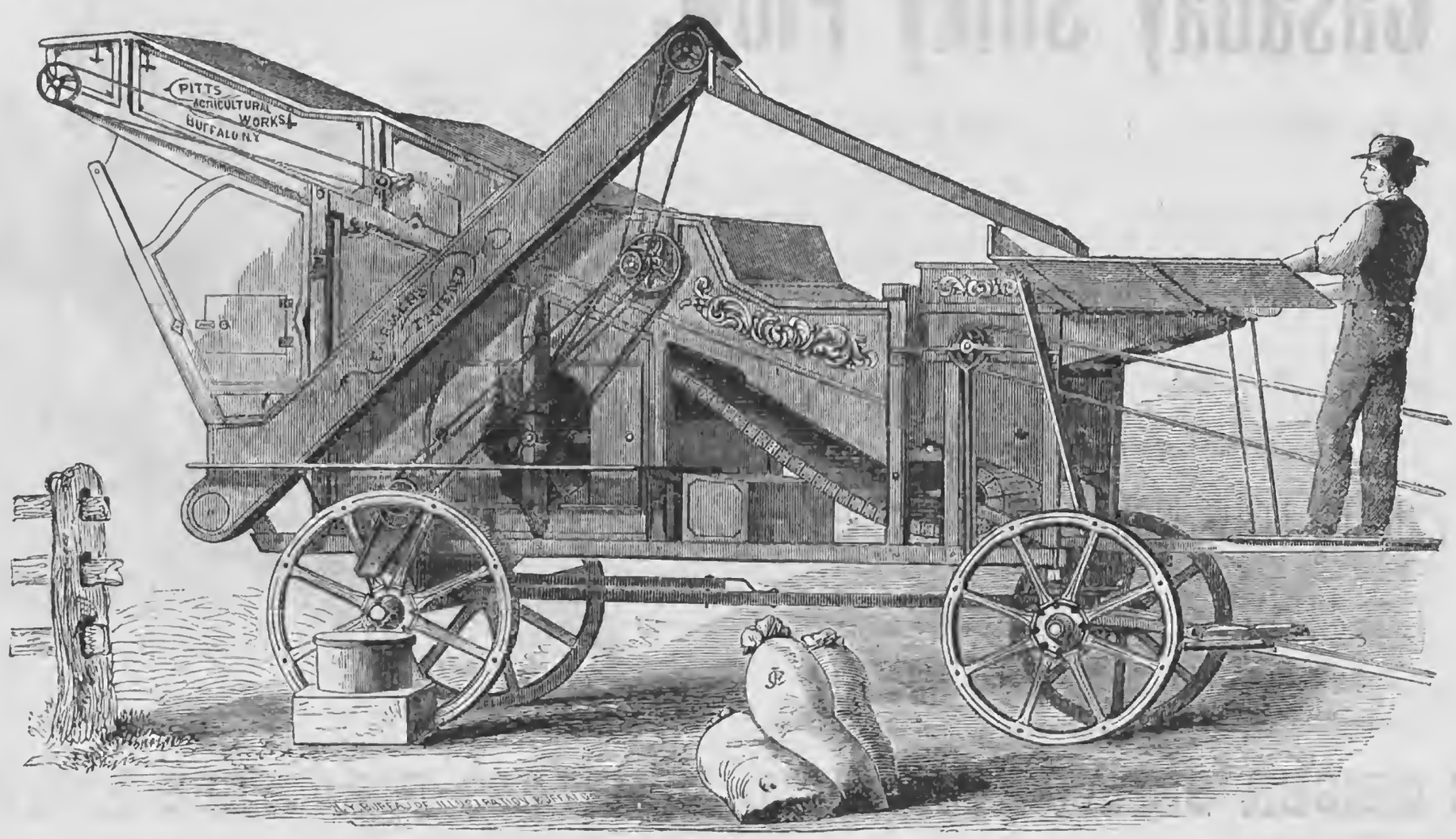

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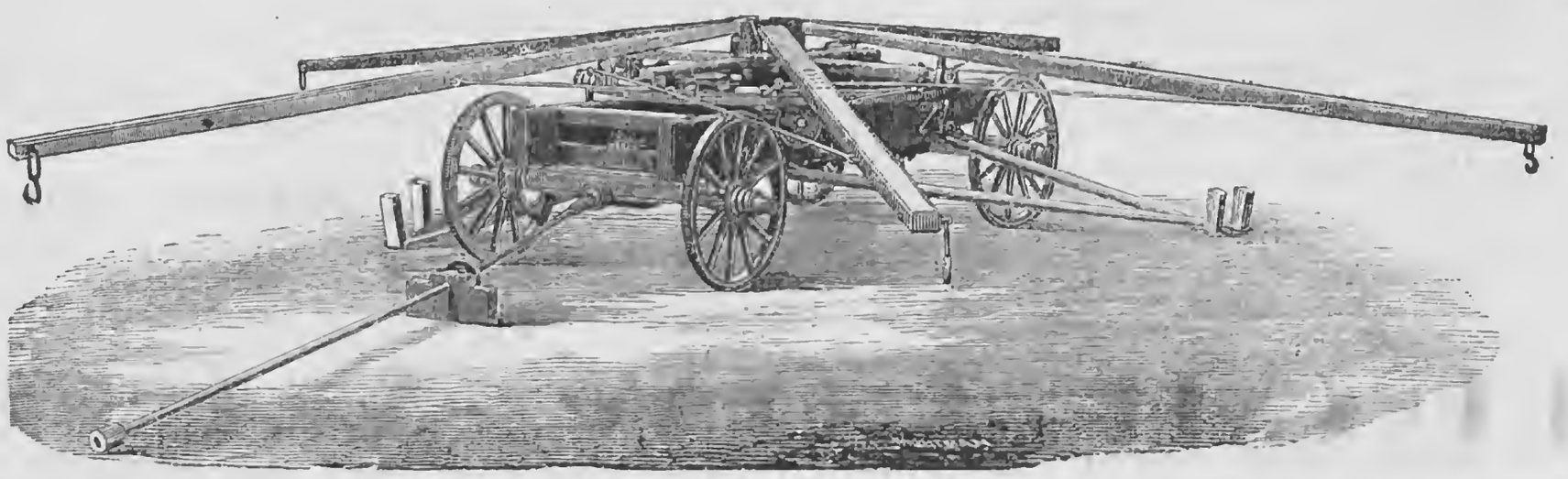

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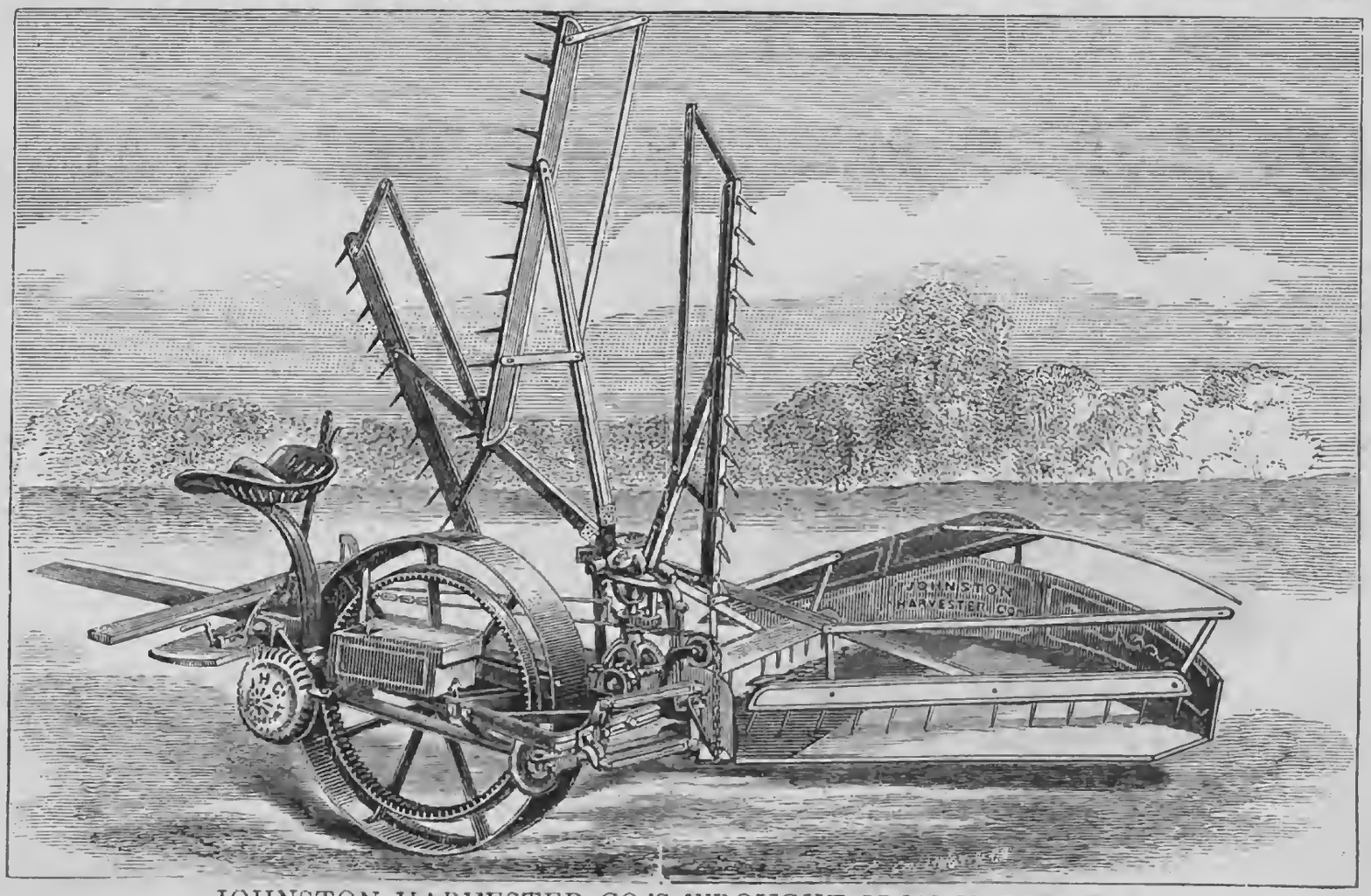

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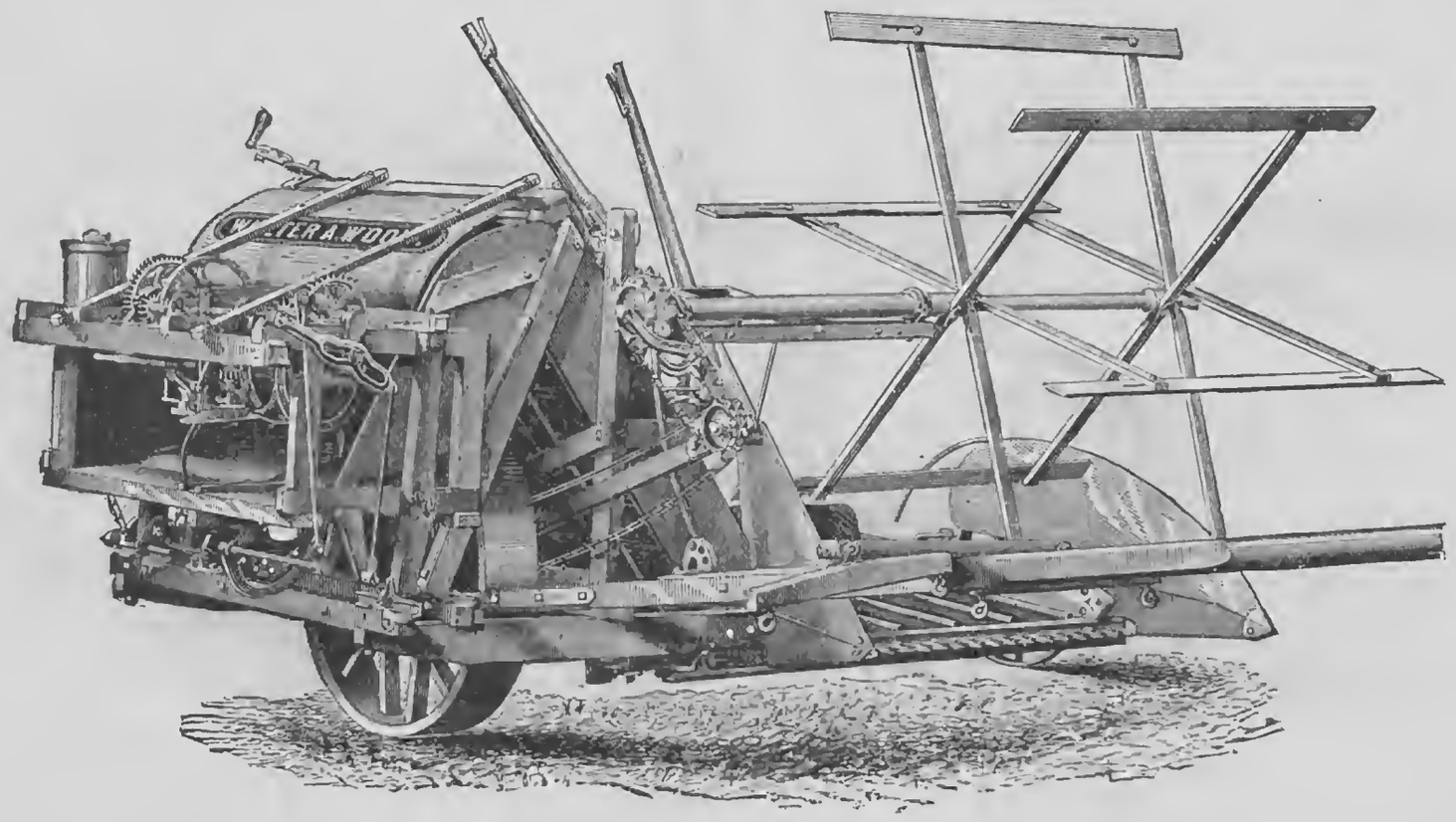

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THE RURAL NEW-YORKER

Ralph Evans, Jr.

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XXXIX. No. 38.
WHOLE No. 1599.

NEW YORK, SEPT. 18, 1880.

PRICE FIVE CENTS.
$2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

FAY'S PROLIFIC CURRANT.—Fig. 302.

Horticultural.

CURRANTS.

It is something to rejoice over that this fruit is now beginning to enlist that interest which it has always been entitled to, but which it has never yet received. It is well known that the majority of farmers do not give their currant bushes any care whatever. They will bear any amount of neglect, and so they are neglected unqualifiedly. Usually, in spite of weeds and hungry soil, in spite of currant worms, and the decay of old stems that instead of being annually cut, are thus left to effect their own pruning, the bushes will yield a crop every season, and so the farmer contents himself with receiving something for nothing, and the profit and advantages of care and culture, and of a consequent quadrupled yield of fruit of larger size and better quality, are not considered. It is strange that those plants, no matter whether for the farm or the garden, which may be depended upon to yield more or less from year to year, are just those which many of us habitually neglect, while much of our time and care is given to less worthy, though more exacting crops, that get due attention because they cannot be raised without it. Thus—so to say—we neglect, we snub those whose services have been well tried and are assured, to lavish our favors upon fickle, squeamish strangers that will turn upon us with half a provocation.

There are in general cultivation, the Red and White Dutch; the White Grape and the Cherry or Versaillaise. We have among us a lot of horticultural politicians that at society meetings, and in fact upon every occasion that presents itself, waste a great deal of time over old, worn-out topics for no other purpose, it would seem, than that of making themselves conspicuous. One of these worthless topics is whether the Cherry and Versaillaise are or are not one and the same variety. The discussion, as has been shown, might continue till doomsday, and yet each would continue to hold his own opinion. At least, we have never known anybody to change his opinion from listening to such harangues. We beg of these omnipresent backs, instead of frittering away the valuable time of horticultural assemblies, to spend more time in their gardens testing new fruits, and thus prepare themselves to attend such gatherings with some information that will interest or instruct somebody.

There are many other named varieties besides those mentioned above, with which, however, we have naught to do at this time. Our most profitable kinds are the Cherry and Old Red Dutch. Given the same amount of care and culture, our own experience is that the latter is to be preferred, for the reason that it is better in quality, more productive and nearly as large. Under high culture, therefore, it is nearly the equal of the Cherry in all respects, surpassing it in some; while under neglect it is in all respects its superior.

For several years past we have heard of persons who were experimenting with seedling currants—some of them said to be crosses, some self-seedlings—and that a number of them were evidently far ahead of any of the well-known kinds. Not, however, until six weeks ago have we seen any specimens that seemed to justify such assertions. At about that time Mr. Geo. S. Josselyn, of Fredonia, N. Y., sent to the RURAL office a box three feet long, snugly filled with branches and fruit of a new variety of red currant, that has been named "Fay's Prolific," of one branch of which our engraving upon the first page is an almost exact reproduction. As will be seen, it is hardly possible for currants to be more thickly clustered, while in quality they were equal to any we have ever tasted, and in size fully as large. The drawing was made at once, but a pressure of other matter has prevented us from placing it before the reader until the present time. We quote from Mr. Josselyn's letters:

"I hope you received the specimen of currant, and that it will meet with your approval. I should be glad to know your views on the subject, as I am heavily interested in it financially. The crop is simply wonderful—bushes pulled to the ground with the weight of the fruit. We are getting extra prices for the fruit, and I do not see how it can fail to be a success."

"Mr. Lincoln Fay, of Portland, Chautauqua County, N. Y., is the originator. Mr. Fay is an enthusiastic fruit grower, and during the past 30 years has continually experimented with seedling currants, this seedling, being the only one of many thousands retained. 'Fay's Prolific,' is as large as the Cherry Currant, of rather better flavor, and *four to five times as prolific* as the Cherry. The fruit has sold in Buffalo markets during the past season for 15 cents per quart when no other variety was bringing more than 10 cents. To use the words of those who vended them at these places, they were the 'wonder of the market' This seedling is supposed to be from Cherry and Victoria Currants. It has never been offered for sale, but was originated nearly 15 years ago, and for the past eight years Mr. Fay has cultivated it alongside of all other popular varieties for market, and he is now abandoning all other sorts and using 'Fay's Prolific' in their place. These facts are well known by numerous fruit-growers and fanciers in this vicinity who have also beheld for several seasons the bushes loaded with fruit so that the branches were necessarily tied up to stakes. Plants will be offered for sale during the Fall or Winter of 1880. Sales of the plant are under my exclusive control."

We forwarded a proof of our engraving of Fay's Prolific to Mr. Josselyn, to which he replied as follows:

"Your cut is magnificent. I shall not grumble at whatever you may say. The currant is not a new thing. It has been fruited eight years, and I could furnish a hundred affidavits from nurserymen and others engaged in small fruit culture, which would place the plant beyond anything I have claimed. One of our best men of this class said to me on Saturday 'No amount of printer's ink can advertise your currant as it would be could you bring those interested, and let them see the acres in bearing.' This is precisely the case. I appreciate your position, and have such an opinion of the RURAL and those connected with it that I would not ask or wish you to do or write anything not entirely consistent with the facts in the case."

In conclusion, we beg to state that we never permit our advertising interests to influence us to the smallest extent one way or the other when an expression of opinion is called for regarding the value of any new fruit or plant whatsoever. In truth, we are only too glad to aid in the dissemination of new improved varieties, while, on the other hand, we freely take the liberty of condemning those which from our own tests we have found wanting.

NOTES FROM THE RURAL GROUNDS.

New Grapes.

The canes (two) of Lady Washington have this year made a growth of ten feet. The vine bears one small bunch, the berries of which began to ripen August 25. We have two vines of Eldorado growing within 100 yards of each other. One of them set fruit freely, which, as heretofore, rotted, the berries falling off one by one until not one was left. The other bears three bunches, every berry of which is sound. They are as sweet as honey, with a firm, though not thick skin. Instances of this kind show how easily one can do injustice to a new fruit under trial. Judging by one of these vines, we should pronounce the Eldorado a failure in these grounds, while by the other we should form a favorable judgment. Evidently a longer trial is needed here before we can either say that this grape is or is not adapted to the soil and situation.

The Secretary, as usual, bloomed and set heavily, and, as usual, the bunches up to the time of ripening were long and well filled. But the berries vary from medium to very small, some of them rotted; while those that remained ripened with so little uniformity that there was not one perfect bunch in all. Newburgh bore three bunches which began to ripen August 25. The leaves are rather small, though the canes are strong. The bunches are long, like those of Secretary, but the berries variable in size. Quassaic we have had for four years. The leaves burn and the canes grow feebly. It has not yet fruited. Highland, that we have in previous years reported upon unfavorably, is this year bearing splendidly. The bunches are large, heavily shouldered, and the berries plump and sound. At this time they have barely begun to change color, so that it may be feared that the season here is not long enough for them to ripen fully.

In the Spring of 1878, Mr. Miner sent us half-a-dozen of what he believed his best seedlings saved from thousands which he had raised from the Concord. From what he himself said of these grapes, as well as from the specimen bunches he brought with him to the office for us to taste, we have been hopeful that some of them would prove for general use a good step in advance of anything at present cultivated. Three of them fruit this season, and one of these (Victoria) is so praiseworthy in all essential respects that the hope above expressed is strengthened into belief. The vine is strong and healthy, the leaves large, resembling those of the Concord. It bears 15 large bunches of white grapes—all of them compact and free from the least blemish. The berries are as large as those of Concord, globular in form, with thin but firm skin, covered with white bloom, and of a sweet though sprightly flavor. It ripens with the Concord. This grape was illustrated in the RURAL NEW-YORKER, September 30, 1876, from a specimen bunch sent us by Mr. Miner. It is so accurate an engraving of our average bunches that a drawing of one of them would be little more than a reproduction of that. Salem, Martha, Goethe, and Wilder (Rogers's) are bearing abundant crops this season of their large, showy berries. They are not of the first quality certainly—but, really, we must say that, "taken all in all," their merits are singularly set aside for a consideration of the claims of the many newer kinds, most of which will be found less satisfactory to the grape growers in general. Such at least is our own experience.

Peaches.

JARRELL'S LATE WHITE was sent to us by the Messrs. Hance, of Red Bank, New Jersey, four years ago. It bears this season heavily. The peaches are extra-large—the flesh is white, fine-grained, juicy and excellent. It is a free-stone, and ripens from the 25th of August to the middle of September. This originated with C. E. Jarrell, Hillsboro, Md., and is, so far as we can discover, a fine variety in every way.

LEATHERBURY'S LATE.—This, from the same nurseryman, is of rather small size, red skin, mottled, and covered with a heavy down, orange-colored flesh, nearly free-stone, and not very juicy. It is heavily laden with fruit, which ripens this year about September 15.

TUCKAHOE LATE.—Medium size, red and yellow skin and flesh. It is of fair quality, juicy and productive.

SLEEPER'S DWARF.—This is, indeed, a Lilliputian variety. Our tree has been well cultivated for four years. It is very thrifty and handsome. It is about four feet high, and may be considered an ornamental shrub. It has borne no fruit.

HANCE'S WEEPING PEACH.—This is worked upon a stock six feet high, and the branches grow directly downwards, almost hugging the stem. Its weeping habit is all that there is to be said about it.

Plums.

BASSETT'S CURCULIO PROOF PLUM "AMERICANA" bears this year a heavy crop. Some of the branches are fairly wreathed with these little plums, though hundreds have fallen to the ground from curculio injuries. Whether it has been because there are fewer curculios this season, or more fruit of all kinds to divide their attention, certain it is that the plum trees of the neighboring country have borne and ripened their fruit better than for many years past, so that no more in this than in other seasons can the Americana's claim to being curculio-proof be granted. Even if otherwise, this plum is so small and harsh that we should regard it as scarcely worth cultivating even for culinary purposes.

NEWMAN.—The flesh of this plum is perhaps no better than that of the Americana, and the tree is not in these grounds very prolific. If tough skin and hard flesh afford any protection against the curculio, this should be well protected. The fruit resembles at this time a handsome crab apple, being splashed with bright red upon a waxy-yellow ground. As they ripen the entire surface becomes crimson.

LANGSDON, is in quality, size, appearance and time of ripening (September), so nearly like the Newman that we need at this time make no additional notes regarding it. Both are, no doubt, varieties of the Myrobolan.

Lady Elgin Crab.

Among the best varieties of crabs of which we have any knowledge is this. It is of large size, beautiful appearance, being of a fair, light-yellow skin, with a bright, carmine cheek. The flesh is firm and juicy and entirely free of the astringency of the crabs in general. It is very prolific, the fruit hanging in clusters of from three to six. The tree is regular and shapely in its growth and it is really one of those handsome and fruitful little things that both attract the eye and engage the affection.

Tomatoes.

For the purpose of comparative tests, we have as usual cultivated every kind of tomatoes this season, which has been much talked of or advertised. Nearly all of them, except the Turban, seem to be selections from the Acme, from which they differ so unessentially that there is little to be said about them. The characteristics of the tomato, like those of corn, seem to be so communicated to the seed that careful selections will generally perpetuate them in a greater or less degree, while two or three years serve to establish new varieties, which will come quite true to seed unless cultivated in too close proximity to other kinds. Variation in color, however, often occurs and we have this season Acme tomatoes some of which are partly, others of which are entirely, of a golden color. These come from the seeds of a tomato of last year, which, as we have already mentioned, was half red and half golden. As the summary of our season's tests with tomatoes, we have to report that the Acme from our selection of seeds is much improved in size and in productiveness over last year and that, in our estimation, it is still, by all odds, the best tomato.

Potato Beetles have never before given us the annoyance of this season. As if a new brood hatched out weekly, persistent applications of poison have failed to subdue them. Now that the potato vines are dead they have attacked the tomatoes—not the vines, but the fruit—some of which are literally covered by these irrepressible, disgusting, voracious vagabonds, whose feast, no longer seasoned with London-purple or Paris-green, is, no doubt, one of unalloyed satisfaction.

Grape Vines and Potatoes.

Last Fall a plot of sod ground (20x20 feet) was dug out to the depth of 18 inches. The sod was strewn over the bottom—the earth, which consisted of sand and gravel, carted away. A layer of long barn-yard manure was spread over the sod three inches deep, and muck from a meadow occasionally overflowed by salt water was used to fill in the rest, being stamped down as the work progressed. Red-cedar rustic arbors were then built, and six young grape vines were planted—two to each arbor. Two of them were seedlings of our own. One of these has made a growth of six feet, the growth confined to a single cane—the other, also confined to a single cane, has grown 10 feet. Concord—the third—has two canes, one of which is 12 feet long, the other eight. Brighton—the fourth—has two canes, each of which is 10 feet long. Moore's Early—the fifth—one cane—has made a growth of 11 feet. Woodward No. 1—the sixth—confined to one cane, has made a growth of 18 feet. All are in good health and, as will be seen, have made an unusually fine growth, except our two seedlings which will probably prove to be comparatively feeble-growing kinds. Now, in this same plot, we planted very carefully, a row of potatoes cut to single eyes, June 1st, sowing in the drill half a pound of potato chemical fertilizer. The variety, though not yet offered for sale, is one which we know to be remarkably productive. Every piece sprouted, though very slow in doing so; grew to the hight of one or two inches and then gradually dwindled away and died. We are left to infer that the soil and manure upon which the grape vines flourished so finely were not well adapted to the needs of potatoes.

POT-GROWN GRAPE-VINES.

In the RURAL NEW YORKER of Aug. 24th, allusion is made to our saying that we were the first to offer the native grape-vines in pots, and in the reference to Dr. Grant having grown them 20 years ago, the impression is left that it was done by him before it was done by us. It is now over 30 years since I first began business in Jersey City, and I think there are yet men living who bought Isabella and Catawba pot-grown grape-vines from me as early as 1850, and from that date I have ever continued to grow them in that manner, believing it to be not only the most rapid, but by far the quickest method to obtain fruiting plants, and were I to grow a hundred acres in this latitude, I would adopt no other method.

The reason why so much dissatisfaction was given by those Dr. Grant and his co-laborers grew in this manner, was that they propagated from the young, green shoots of the vine in the Summer season, which, of course, quickly enfeebled the constitution of all weak sorts; the Delaware in particular was so weakened that it took years to get it up to its normal condition. Our method is the usual one—to grow from single eyes, put into the propagating bed, (under glass in April); in a month they are rooted and twice shifting gives a plant six feet high by October; which when planted out the succeeding season, will make a growth, at 18 months from time of propagation, equal to that made by one twice that age, if not pot-grown, for the reason that no check is given to the roots in removal; every fiber being intact when pot-grown.

The "Cream" of the Strawberries.

In your issue of Sept. 4, you do us the favor to allude to our circular giving colored illustrations of what we consider the "cream" of the strawberries, and seem to wonder at my having changed my views of what is the "cream." Don't you think, Mr. Editor, that the cream of strawberries or any other fruit should continue to get richer? If not, why should we be deluged with a hundred claimants every season as "improvements"? Our practice is to grow all that we have reason to believe are good, and in our annual tests, select each year an assortment of six or eight which in our opinion (we do not claim it to be infallible) are the "cream" of the lot. We maintain that our colored plate of those named this season, represents as good portraits of the originals as art can well make them, your opinion to the contrary notwithstanding. PETER HENDERSON.

CHAMPION AND WINDSOR CHIEF STRAWBERRIES.

By the RURAL of August 28th, I observe our mutual friend, Mr. T. T. Lyon, takes exception to my remarks concerning the identity of Champion and the so-called Windsor Chief Strawberries. He says: "If he means that they are not only similar but *identical*, or, in other words, that the alleged parent is really doing duty as offspring, I cannot avoid a feeling that he ought to sustain such charge by fact or facts beyond the circumstance of even entire similarity." It is now admitted by various close observers of repute that there does not exist a shade of difference in any particular whatsoever between the two varieties. It is known the Champion is a pistillate or imperfect-flowered variety, and to produce fruit or seeds, *it must be fertilized by some other variety*—hence any progeny from it must be a *cross* between it and some other variety. Did any one ever hear of a cross being entirely like one parent in every respect? Is such a thing possible? This is but circumstantial evidence,

It is true, yet many are they who have been condemned to death on such evidence. Could there be evidence of the kind stronger or more conclusive?

Some of the "charges" that have been *fired* at the writer respecting the Windsor Chief, have *sounded* so humorous, that a brief reference to them may not be amiss. When I first published its strikingly close resemblance to the Champion, I soon heard a report fired by a "Big Gun" in New York State. In purport it was this: "He has not the *true* Windsor Chief!" At any rate I received my plants direct from the grounds of Mr. Gardiner, the professed originator. Shortly another came from a different quarter. That was: "He has a small lot of Windsor and a big lot of Champion plants, and he wants to make the Windsors sell his stock of Champions"!!! The truth was just the reverse, for from the high encomiums bestowed upon the Windsor, I took it for granted it must be something of great merit, and in consequence planted it largely, while it so happened I planted but few of the Champion. I had, therefore, in reality at least four plants of the former to one of the latter.

But these and many like statements clearly showed me there were others who had invested largely in the Windsor also. The only difference was they were more liberal (?) than I, and instead of being willing to pocket their loss, they wished to *share* it with others. It may be well to add that these remarks are not intended to reflect in any way upon our Western friend, who is far above such littleness.

J. T. LOVETT.

Farm Topics.

WESTERN FARMING.—XIII.

W. I. CHAMBERLAIN.

Bonanza Farming.

THE thing that most impressed me in the Dakota wheat farming described in No. 12 of this series, in the RURAL of August 21, was that no fertilizing matter is returned to the soil. It would seem to be only a question of time, therefore, how long that style of farming can last. On these immense farms, as at present managed, it seems well-nigh impossible to make any return. I talked freely with several of the large farmers along the Northern Pacific Road, including Mr. Dalrymple, and they all seem to feel not only as I have last said above, but also that the final exhaustion of the soil is inevitable, and that it is only a question of time how soon the point will be reached when this style of farming shall cease to be profitable. Whenever that point is reached, these large estates will probably be divided up and sold to "small farmers" who will begin a system of mixed farming with a view to making returns to the land for the heavy drafts annually made on it.

I think it is Dr. O. W. Holmes who tells of the first time he had funds in bank, and a check-book at his elbow. All went glibly enough till one day a check came back indorsed by the cashier or teller, "NO FUNDS." He uses the illustration in a literary way to show that he who constantly writes for the press without constant reading, study, thought, growth, will in time, surely run dry, or, as he expressed it, "have to *get the pump to help the cow.*" But the truth so tersely put by him, is just as true in agriculture as in literature, banking or dairying. Nature has made vast deposits of fertility in our great Western plains and prairies. But it has taken her scores of centuries to do it. Shall we be thieves enough to exhaust it in a single score of years? Shall we be so unjust to posterity? Shall we draw out the whole deposit, until nature shall refuse to honor our drafts and return them to us indorsed, "no funds?"

I know this is the strong temptation in the West. Repeatedly while I was traveling in Illinois recently, farmers said to me, "How is it that you Eastern writers are all the time talking about manure?" And I always answered from my firm belief, "You'll begin to write and talk about it too before long." Last week in a Western agricultural paper an Illinois man almost deplores the fact that he has got to draw out 100 loads of manure before he can put in his Winter wheat! I wanted to comfort him by telling him that on the writer's little farm of 130 acres, we have just finished applying over 400 loads of *home-made manure* to our Winter wheat ground. On this manure question at the West I am sure we shall soon see "a change come o'er the spirit of their dream." Even in immensely fertile Illinois, where on millions of acres Nature has deposited black, rich earth to the depth of *three feet* before you reach the clay, even there I notice that on the best farms the corn is fed on the place to cattle and hogs, and that clover and Timothy follow corn and other grain in suitable and wise rotation. And these farms are best *because* the fertility has thus been wisely retained and developed in the soil. But where corn has followed corn for a series of years and been *sold off of the place*, the productiveness has greatly diminished. Ohio, with originally not so rich and deep a soil, has been through the same experience, and been forced to enter on a recuperative system of agriculture, and to-day our crops, especially our wheat, among our best farmers, are far better than they were twenty years ago. Last year there came up to the State Board of Agriculture well attested yields of over 40 bushels of wheat per acre from nearly every county in the State. Ohio is yearly increasing her fertility.

Now, what is the lesson of all this for the Dakota wheat farmers? Successive crops of wheat exhaust the land even more rapidly than corn, and not even all-fertile Illinois, with soil and climate especially adapted for corn, can stand corn forever. How, then, shall Dakota stand wheat after wheat forever? It goes glibly now. Why shouldn't the farmers make money? They have fallen heirs to an almost priceless heritage of fertility. They are drawing funds from banks that it has taken many, many ages to deposit there. They are taking a rich heritage and apparently not caring whether they leave a rich one to their successors or descendants. They are repeating the old blunder that has followed the march of population from New England westward, viz: to suck the life from the virgin soil and then hasten on to newer lands beyond. Northern Illinois and Iowa have already almost ceased to produce wheat profitably, and Wisconsin and Minnesota are fast coming to the same fate apparently. And if Dakota is bound to follow the same ruinous policy, and raise wheat after wheat indefinitely, burn the straw in piles, raise no grass and keep no stock, why then we might almost say the sooner the chinch bugs come and force a change of agriculture, the better it will be.

But will grass and clover and vegetables grow, and cattle thrive, and men live in Winter in such a climate as Northern Dakota? Or must men own large farms and go in Spring with troops of men and teams, and skim the earth of another crop of wheat each year, and retire to warmer climes in early November? Is that cold climate likely to be settled up with thrifty and contented farmers, like Ohio or New York? On the whole I think yes, but must say why at another time.

Field Crops.

WHEAT CULTURE AND EXPERIMENTS.

PROFESSOR I. P. ROBERTS.

THOROUGH preparation of the soil and liberal application of fertilizers during the last few years by the few advanced farmers, are having a marked influence in the New England and the Middle States. In this immediate locality these pine and hemlock lands thirty years ago were considered poor or second-rate wheat soils; to-day it is not uncommon for entire fields to yield thirty, forty and even fifty bushels per acre. This is not due solely to the use of phosphates, for some of the largest yields have been obtained on lands treated to a light dressing of farm manures or on clover leas without extra fertilizers. Better preparation of the soil by improved implements of culture and better knowledge of the requirements and habits of the plant have been the largest factors in the good work. An average wheat soil has locked up, more or less securely, plant food sufficient for from 100 to 200 crops of 25 bushels per acre. The science of wheat culture consists in tickling this soil with the plow and cultivator until the myriad months that have swallowed up the fertility of ages are set wide agape, while the grain filches from their stony teeth the golden setting.

Fifth Continuous Crop Without Fertilizers.

So thoroughly persuaded have I been for years that *early* plowing and *thorough* surface culture were the true preparation for Winter wheat that in 1874 I began a series of experiments in order to gain more accurate knowledge. The land selected was a stiff, poor clay, which had produced an inferior crop of oats in 1873, and which had been in Blue Grass for at least three years previously. The land was thoroughly summer-fallowed in 1874. On a portion of this land no fertilizers of any kind have been used up to the present time. The land was summer-fallowed again in 1879.

	bu lbs.
Season poor, 1875	7.54
Season fair, 1876	18.27
Season superior, 1877	31.42
Season fair, 1878	31.51
Season fair, 1880	31.00

This series of experiments will now be discontinued, the object being not to exhaust the soil but to determine the effect of superior culture practically applied to poor clay soils. The summer-fallows of '74 and '79 consisted of three plowings, the last one about the first of August. After that date the harrow, roller and cultivator were freely used. The other years the land was plowed but *once*, usually the day after the grain was cut, the wheat being drawn off and shocked on adjoining ground. It was then left for about two weeks; after that the harrow, roller and cultivator were frequently used.

Experiment in Wheat Culture, 1879-1880.

Land clayey; summer-fallowed in 1879. The four preceding years the land had produced annually a fair crop of wheat. All plots, except 13 to 22 inclusive, in the four years had received no fertilizers. The preparation of the soil was similar to that described above.

No.	Yield per acre. bu. lbs.
1. 250 pounds Dead-Sure phosphate	30.00
2. Nothing	31.00
3. 200 pounds sulphate of ammonia	24.30
4. Nothing	35.40
5. 540 pounds D. S. phosphate	42.40
6. Nothing	33.00
7. 300 pounds sulphate of ammonia	32.50
8. Nothing	43.20
9. 180 pounds D. S. phosphate and 100 pounds sulphate of ammonia	44.40
10. 260 pounds D. S. phosphate and 200 pounds sulphate of ammonia	42.00
11. 14 loads manure—about five cords	45.16⅔
12. Nothing	37.30
13. Nothing, 1¼ bush. seed	37.50
14. Nothing, ¾ bush. seed	35.20
15. Nothing, 3 bush. seed	33.05
16. Nothing, 1⅛ bush. seed	25.55
17. 720 pounds plaster	33.00
18. Nothing	34.05
19. 50 bush. lime	27.00
20. Nothing	35.20
21. 720 pounds salt	36.35
22. Nothing	33.15
23. Every alternate drill vacant, 1 bush. seed, hoed twice	19.15
24. Broadcast	20.10
25. 360 pounds D. S. phosphate	38.30
26. 200 pounds sulphate of ammonia	28.40
27. 540 pounds plaster	23.25
28. 180 pounds D. S. phosphate and 100 pounds sulphate ammonia and 270 pounds plaster.	33.55
30. Nothing	29.45

The liability to errors in field experiments is so great from the variation of soils, depredations of insects, etc., that one year's results can very seldom be implicitly relied upon; but the average of several years of duplicated plots should reveal some reliable facts. Without trying to explain some of the seeming anomalies in the above table, I will leave the reader to gather from it such hints as he may, and proceed to give the average of the results of the experiments for the last five years.

Summary of Results.

Thick and thin seeding for five years:

	bu. lbs.
3 bush. per acre	25.19 4-5
2 bush. per acre	23.43
3 years, 1½ bush. per acre; 2 years, 1¾ bush.	23.46⅔

Comparison of all phosphated plots with a like number of adjoining unfertilized ones for one year (1880):

	bu. lbs.
Phosphated	38.36⅔
Unfertilized	34.28⅔

Comparison as above for five years:

	bu. lbs.
Phosphated	26.32⅔
Unfertilized	24.56

Comparison of all sulphate of ammoniated plots with a like number of unfertilized ones for two years:

	bu. lbs.
Sulphate of ammonia	23.44 2-7
Unfertilized	31.46¾

It is quite evident that sulphate of ammonia used in such liberal quantities as above, produces straw at the expense of grain.

Comparison of plastered with unplastered plots for four years:

	bu. lbs.
Plastered	25.34
Unplastered	26.59⅔

Comparison of hoed with unhoed plots for three years. The hoed plots contained the same amount of ground, but only half as many drills, and therefore half the amount of seed.

	bu. lbs.
Hoed	18.58⅓
Unhoed	25.10

Comparison of salted with unsalted plots for two years:

	bu. lbs.
Salted	28.30
Unsalted	25.47⅓

Comparison for two years:

	bu. lbs.
Limed	24.32⅓
Unlimed	26.12⅓

I judge from the above and from the unsatisfactory results from the use of phosphates that there is an abundance, and possibly a superabundance, of lime already in the soil. Our land is of drift formation; the timber upon it is pine and hemlock, interspersed with chestnut, oak and hickory.

Comparison for two years:

	bu. lbs.
Manured, 14 loads—about five cords	35.27⅓
Unmanured	35.50

Drill and broadcast seeding for five years:

	bu. lbs.
Drilled	25.48
Broadcast	23.23
Gain in drilling per acre	2.25

The peculiarity of this experiment is that for the five years during which it has been conducted, the drilled plots have given a nearly uniform yearly increase of two bushels over the broadcast sowing. A few of the results given above I am aware are of *local* value only; but most of them will, I trust, be of use in at least most of the State. After 20 years' experience and observation in wheat culture my advice to the young wheat raiser, in brief, would be as follows:

First—Manufacture and apply an abundance of farm manure; do not let it make itself, but attend to it as carefully as you would to the curing of cheese. If too dry, wet it; if too wet, dry it; if too hot, cool it; or if too cool, heat it, and do not let it leach, bleach or evaporate.

Plow early and, unless for special purposes, but once; usually plow *deeply*; you can hardly roll, harrow and cultivate too frequently.

Apply fertilizers on or near the surface and thoroughly mix them with the soil. Do not sow too early (but from 5th to 15th of September) and spend the time in unlocking plan-food by mechanical methods. Approximate as nearly as possible to the conditions represented in Fig. 1.

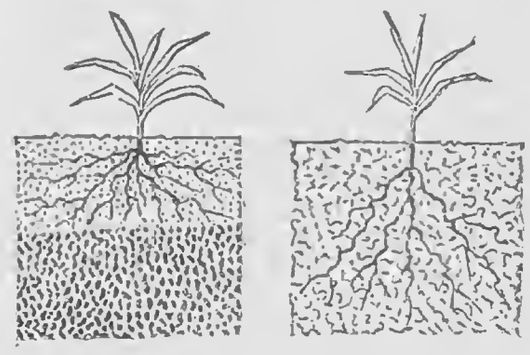


FIG. 1. FIG. 2.

FIG. 303.

Alternate freezing and thawing would certainly destroy the plant by breaking the roots if the conditions were as represented in Fig. 2; but if, as in Fig 1, little or no harm would be sustained, as the roots would rise and fall with the ground.

Use a drill; run it north and south; roll the ground before the drill, but never after except in the following Spring.

Do not try to raise two crops at the same time on the same ground, as it has never been an entire success. Therefore if you want wheat, sow wheat; if cheat, cheat. If you desire *good* grain, *sow good*, one and three-fourths to two bushels per acre, according to the size of kernel and tendency to tiller.

Cornell University.

Industrial Societies.

THE OHIO STATE FAIR.

[Rural Special Report.]

THE thirty-first annual Ohio State Fair was held in the city of Columbus from August 30 to Sept. 3rd inclusive. It was a success in every sense of the word. As an exhibit it has probably never had an equal in Ohio, and few superiors in any State. The total number of entries of animals and articles actually placed on exhibition was 5 300, and they varied in individual value from a few dimes each up to four or five thousand dollars, very many running above a thousand each both in live stock and machinery.

Under the last two heads the exhibits were especially fine. Of cattle there were 400 entries against 175 last year. Some of the finest herds of cattle in the land were represented, as well as some of the best of other stock, entries having been made not only from every part of Ohio, but also from N. Y., Pa., West Va., Ky., Ind., Ill., Michigan and Canada. The breeds represented, in cattle, were Shorthorns, Devons, Jerseys, Holsteins, Angus, Herefords and Galloways, and in other stock, all the leading varieties. The show of Shorthorns was magnificent, and the competition for prizes was very strong, but the awards were, I think, on the whole, just and satisfactory. The show of Jerseys was also fine, as this beautiful deer-like breed is rapidly gaining in favor, especially among amateurs or well-to-do villagers who are partial to cream and nice home-made butter for family use. The show of horses, sheep and swine was also excellent, as well as the display of farm products, textile fabrics, manufactured articles of all kinds, and of fruits and flowers and fine art exhibits.

But the show of agricultural machinery and implements seemed to surpass all. For example, there were 25 large, portable engines, entered for premiums and to propel other machinery on exhibition. All kinds of machinery were worked by them, from a portable sawmill, in actual operation, down to a thrashing machine, self-binder, or reaper, or mower. Several of these engines were of the locomotive or traction kind, and a parade of half a dozen of these self-propelling, living, moving monsters through the grounds, when the time for awarding premiums came, was a most interesting feature. The limit of velocity seems to be about six miles per hour, but they go up hill and down with ease, and draw the water tank and thrashing machine in the rear.

The machinery in Power Hall was run by a fine 75-horse-power engine furnished at a reasonable price by Lord, Bowler & Co. It was itself entered for a premium and took the first, a silver medal. It ran some pretty heavy machinery; for example, several tile and brick-making machines which were kept constantly in operation, using the same clay over and over again to show the crowd how the thing was done. It takes considerable power to grind the clay and run through a stream of ten or twelve-inch tiles. So far as I noticed, nearly all the machinery and implements were more or less *agricultural*, the furthest removed,

perhaps, being the middlings purifiers and portable saw-mills. The machinery was thoroughly and carefully examined by thousands of farmers. I do not think it true that our State fairs are degenerating into mere horse-races and places of cheap amusement. It certainly was not true of the one of which I am writing. For example, each *class* of stock—horses, cattle, sheep and swine—divided according to breed, age and sex, was led in its turn in to the show ring, to be examined, *standing side by side*, for the award of premiums. This is the usual custom at large fairs. The fact I call attention to is that a large crowd constantly surrounded these rings and examined these fine animals with care, and the point I wish to make is that the educational effect of such shows is by no means small. The incitement, too, to each farmer to breed better stock is great. On the last day of the fair, too, there was a grand parade of all premium stock on the race track in front of the grand stand, and it was a fine show and was witnessed by thousands of people.

Races at fairs are objected to by many people on moral grounds. The view of a majority of the Ohio State Board of Agriculture, however, seems to be that the breeding of improved roadsters is a legitimate branch of agriculture, and that the fairest test of speed and endurance is the race. Also that if pool-selling and jockeying are excluded, and no unfairness on the part of the judges is practiced, and the different races occupy only a part of each afternoon, there is no real ground of objection. That there was absolute fairness this year at least in intention on the part of the judges and of the "member in charge," all seem ready to admit.

Financially the fair was a success. The combined surplus fund of 1879 and 1880 amounts to nearly $12 000, and will be used by the Board in promoting the interests of Ohio agriculture according to their best judgment.

W. I. C.

Sheep Husbandry.

SHEEP ON THE BLACK SOIL OF ILLINOIS.

B. F. JOHNSON.

A SHEEP breeder and farmer of some experience and reputation, having been requested to state the advantages and disadvantages of sheep breeding on the black-soil prairies of Illinois, and in what is known as the corn and cattle counties of that State, replied briefly in substance as follows:

Of the breeds handled about one-fourth are Merinos and their grades, one-eight mutton breeds and theirs, and one-half the common stock of the country. Within ten years, however, the English or mutton breeds and their grades have increased and the small breeds and natives have diminished.

Of the Merinos, about one-quarter are full bloods, with about the same proportion each of those more than half bloods, more than fourth bloods and less than fourth bloods. Of other breeds there are kept the pure Lincolnshires, Cotswolds, South-Downs and small Spanish Merinos. The live weights of each of these breeds are about as follows: Merinos, 30 pounds at 6 months, 80 lbs. at 12 months, and 90 lbs. full grown. Long-wools, 75 lbs. at 6 months, 110 lbs. at 12 months, and 150 lbs. full-grown. Middle-wools 60 lbs. at 6 months, 100 lbs. at 12 months, and 125 lbs. full-grown. The average weight of the unwashed fleeces for the fine-wools is five pounds, long-wools seven pounds, and middle-wools eight pounds.

The pasturage is nearly all inclosed and very few sheep are running at large; the pasturage being nearly as follows:—one-half permanent meadow or pasture land, one-quarter stubble, one-eighth Fall-feeding meadow, and one-eight wood land. The average permanent pasture is thought to be able to carry five hundred pounds of live sheep to the acre—the principal herbages being Blue Grass, Timothy and white clover, valuable in the order in which they are named. The average grazing or pasturage season is eight months and the feeding season four. Sheep are put on pasture April 1st, and turned off the last of November. Beyond the herbage of the permanent pasture, stock sheep get no supplementary rations between April and December, but for fattening purposes shelled corn is best.

Winter pasturage consists of Blue Grass and Timothy—the former being much the preferable for sheep. If Blue Grass and Timothy pastures or meadows are inclosed after the first of July and stock kept off till the first of December, and sheep are then turned on, stock sheep will go safely through a moderate winter, if allowed access to hay during storms and snowfalls of considerable depth. The average Summer charge for pasturing sheep is 15c. per month per head—and the cost of pasturage for the eight months of Summer is estimated at $1 20, and the keep for the four months of Winter at 60c. Of the grain fed sheep during Winter, three-fourths are corn and one-fourth oats; of the fodder one-half Timothy hay, one-eighth red clover, one-quarter corn fodder, one-eighth straw and a trifle perhaps of Hungarian. In the average Winter feeding of stock sheep, the consumption is estimated to be one and one-half bushel of corn, costing 40c., half a bushel of oats costing 10c., and hay and fodder costing 10c. more; total, as above, 60c. Very little linseed and no cotton seed meal is fed. In carrying sheep through the Winter, if the weather is dry and fine, the more grass and open air the better, and neither grain nor fodder is wanted. Where there is plenty of grass and stacks of hay or fodder to go to, the feeding of corn or grain of any kind is thought to be of no benefit to stock sheep. In bad weather, however, a supplementary ration of corn or oats is nearly absolutely necessary to keep the animals in good heart. As extra feed for ewes in lamb, there is nothing equal to well cured corn fodder.

When kept for wool the ewes are suffered to live to the average of about five years—the wethers one to two. For mutton, ewes are kept four years and wethers one to two. Sheep are generally neither yarded nor herded, but shade is nearly always provided for them against mid-summer heat. Herders are paid from $15 to $18 per month. Sheds are not provided for more than half the flocks, and these are built of poles covered with straw, or poles, boards and straw combined. The proportion of an average flock is about two-thirds ewes, and the average lambs for a hundred sheep are, for fine-wools 75, long-wools 75, middle-wools, 90, and natives 100. The lambs are mostly dropped between first of April and the first of June, but the earlier is the preferable, or near the first of March under the climate of Central Illinois. The average mortality of young lambs from exposure is about 20 in the 100, and five in the 100 from accidents. Of the surviving lambs, one-half go to the butcher as lambs. The weight of grass-fed lambs at four months is 60 pounds, and the average price is $4 each. The raising of early Spring lambs is occasionally made a specialty, and in that case, it is preferable to have them dropped in February. When ewes are bought, it is usually between August and October, and when disposed of for slaughter, they are sold in December. If one is desirous of starting a flock, there are sheep enough and of good quality enough to be found in the State, without the necessity of going abroad for them. Latterly in the selection of males for improving flocks, the Lincolnshire and the Cotswold are most in fashion.

The average weight of sheep killed for mutton is not far from 100 pounds, but when the large breeds are fed for slaughter, the average weight is fully 130 pounds. There is not much special feeding for mutton, but where engaged in, it is commenced about the first of December, and continued two or three months, the average gain being not far from 20 pounds, at the cost of not far from three bushels of corn, and fodder to match. The average price of sheep for fattening is not far from $3 for the hundred pounds, and the average fat sheep sells for about 4½cts. a pound, live weight. Nothing in the black soil and in the latitude of Illinois suits sheep so well as dry weather, both in the Summer and Winter seasons, and (*cela va sans dire*) in the Fall and Spring months too. Shelter is not generally provided and for the fine and middle-wools it does not seem to be so much necessary, but more so for the long-wools, though all breeds and all flocks would pay better were more care taken in providing shelter, especially against sleet and rain in the cold weather. Lincolnshires Cotswoods and South-Downs are considered the best mutton sheep, each breeder having his favorites, but the Lincolnshires do make the greatest weights in the shortest time.

The usual date of shearing is about the 20th of May and the average cost not far from 7c. for each sheep sheared. Twice shearing is never practiced, and the Fall fleece is unknown; Only about one-fourth are washed before shearing, and this is mostly done in streams, though a few use tubs. The usual lapse of time between washing and shearing is about one week, the average washed fleece weighing four, and the unwashed six pounds. The advantages of washing seem to be that when rightly managed, it is a healthy experience for sheep; but in the matter of the sale of wool, it makes no difference—a deduction of a third being made in price or weight of unwashed wool. Fleeces are usually done up inside-out and tied separately with twine—neatly tied fleeces selling from eight to ten per cent. more than those which are loosely and clumsily put up. The total wool crop is usualy sold at the farm, the demand being such there is no occasion to ship aboard on commission or consignment. The average proportion of wool to live weight in different breeds is found to be nearly as follows:

	Live weight. lbs.	Fleece weight. lbs.
Full blood Merino rams	175	13
Full blood Merino ewes	75	5
Half blood Merino rams	135	10
Half blood Merino ewes	75	6
Native ewes	60	4
Cotswold ewes	80	7
South Down ewes	80	7

The difference between the weights of fleeces often amounts to 25 per cent. between one year and another, and occasionally the high difference of 50 per cent. is noticeable, between one year remarkable for dry and fine weather all through, and another year equally remarkable in the opposite direction. Fleeces are always lightest after wet and cold Winters and heaviest after a long, dry Summer has been succeeded by a Winter equally dry, but in which there has been no weather of a very intense character. The tendencies in breeding in Illinois now seem to be in the direction of substituting the mutton for the small fine-wool breeds. Within ten years the average fleece has increased from 3½ to six pounds, and if wool has lost in fineness of fiber, it has gained more in yolkiness of fleece. Besides, the average carcass has increased from 60 to 100 pounds; there has been a corresponding gain in compactness and roundness of form, the constitutional vigor of the animal has very much improved, and the average sheep of Central Illinois has been changed from an insignificant, little, bare-bellied, and bare-legged creature, weighing 50 to 60 pounds, to full and half-bloods averaging from 100 to 120 pounds. The development of the wrinkles or folds on Merino sheep is encouraged only by those purists who consider these marks as characteristic of the breed. One way or the other, breeding them on or off appears to have no effect on the health or constitution of the individual or flock.

The crosses preferred for the improvement of Mexican flocks are the French Merinos; for natives the Cotswolds; for grades, the Lincolnshire. In selecting sires for cross-bred flocks, the local preference is for Merino ewes and Lincolnshire rams; for native ewes, Cotswolds; for Mexican ewes, French Merinos. In the matter of crossing the different breeds, the best results have been found when Lincolnshire bucks have been bred to the South Down ewes, and Cotswold bucks to French Merino ewes.

In respect to the introduction of sheep into this portion of Central Illinois, the farmer and breeder who is responsible for these statements says, about 1850 large flocks of Spanish Merinos were shipped into this County (Champaign) from Pennsylvania. They ran out the native sheep or at least fully supplied what demand there was for them. They were small and bare-bellied, weighing between 50 and 60 pounds, and were badly diseased with the scab. About ten years ago the South Downs and the Cotswolds were shipped in, and the Lincolnshires subsequently, from Canada. The bucks of these breeds being crossed with the first importation, almost all signs of it have disappeared. As for disease there is little or no scab at the present time; when it existed tobacco water was thought to be a perfect remedy. And there is neither foot rot nor liver rot enough to call for antidotes or remedies for either. Indeed, sheep are very healthy, there being neither grub in-the-head, nor abortion, nor *rabies*, nor madness from the bites of mad dogs, or other wild animals. In conclusion, the advantages for sheep raising in the corn or cattle counties of Illinois are at this time so great, that with capital sufficient for starting the business, a thorough knowledge of it from first to last, and a proper exercise of that knowledge, any reasonable investment would be pretty sure of returning from 33 to 50 per cent. per annum, so long as present rates of wool and mutton were maintained.

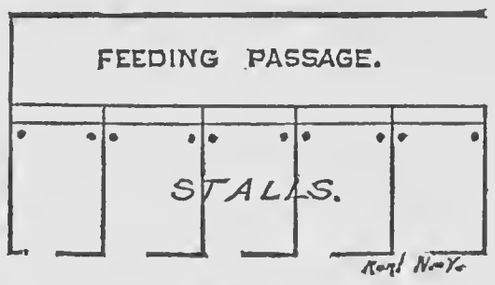
Dairy Husbandry.

THE DAIRY COW—NO. 7.

HENRY STEWART.

How to Lodge Dairy Cows.

COMFORT, cleanliness and quiet are important factors in that result for which the dairyman works—a pailful of milk; and these may be secured without sacrificing cheapness. A herd of cows may be lodged in the best manner, at a cost of $10 per head; that is, a most comfortable and convenient shed for 15 cows may be put up complete for $150. Elaborate building are all very well for the farmer who has no need to work for a living; but the business dairyman must look carefully to his investment lest he may have no profits to care for.



COW STABLE.—FIG. 304.

After many years' experience with all kinds of cow stables, I consider separate stalls for the cows ranged in a long, narrow, low shed, to possess the most advantages. It is difficult to have every desirable feature in one thing; but in such sheds as I am about to describe, one has economy, convenience in every way, absolute safety (which is a very great point), room, warmth and every other attribute of comfort for the cow. The shed which I consider the best can be built for $1 50 a running foot and 100 feet will give 15 cows a separate, roomy, loose stall for each, in which the occupant cannot be injured by horns, robbed of her food, or trodden upon and damaged in the udder or teats, and can be left at night with absolute certainty of safety. Even from fire there is the greatest possible safety, for as the cows may be left unfastened at night, each may be turned out by merely opening the door. A stall 6½ x 8 will be large enough for any cow, and 15 stalls will require 100 feet in length and 14 feet in width. A plan of a range of sheds is here given. The size is as above stated and the plan is drawn to scale of 16 feet to one inch. In front of the cows is a wide feed passage through which a light-wheeled feed truck may be taken and the fodder distributed very easily and conveniently from a feed-room where it is prepared.

The shed may be attached to a barn from which the fodder may be brought already prepared, or the end stall may be used for a feed room. In this case it will be found very convenient to have a cistern supplied by the rain water from the roof, and a pump, under one end of the shed. The stalls are divided from the feed passage by a partition six feet high, or, which is better, to the roof; a hanging door in front of each stall serves to introduce the food into the feed troughs, and, if the partition is made to the roofs, slide doors as large as half the space, should be provided for ventilation and for other obvious purposes. The rear of the shed should face the north, and should have a row of hanging shutters along the whole space to be opened in the summer time, if the cows are kept up at night.

The sheds should be built upon high ground to give ample drainage and as the production of manure is of great importance, it will be found of the greatest value to keep the stalls abundantly littered and cleared out only when necessary for cleanliness. The manure may be left three or four days at any rate, if plenty of short litter or absorbents is provided. The partitions between the stalls are double-boarded for safety, and five feet high. A post or long iron staple will be required in each stall at each corner, as marked by the round dots. To these are attached steel rings and short chains to go round the necks, or to hook on to rings in leather neck straps. It is best always to secure a cow when she is milked and it may be found desirable sometimes to put two cows in a stall, when this arrangement will be found useful.

Where room is not sufficient to give cows more than 3½ feet of floor room, stanchions will be found the best method of fastening. When cows are kept for profit one cannot well be too fussy about their ideas of comfort. A cow's idea of luxury and comfort is to be able to steal from her neighbor, to tyrannize over her, to punch her whenever she can, and to keep her in terror. I have found no manner of fastening so comfortable for the owner and the milker, so safe for the cows, and so comfortable for the weaklings and quiet animals as stanchions. I don't approve of cows licking themselves clean. I do that with the card and brush, and that they cannot do this is the greatest objection made to stanchions. From a desire to be as kind and humane to my cows as possible, I have tried all sorts of fastenings, but as I have concluded hereafter to consider myself first and the cows second, whenever I change my methods of fastening, I will use stanchions, or the loose stalls which I have found very convenient for my own purposes.

I do not intend to, nor can I in the space at my disposal, do more than give general principles for the lodging of dairy cows. There are a few indispensable points to consider in selecting any plan. These, or the most important of them, are economy of labor; economy of feed; ease of management; safety to the animals; comfort, first for the owner, and then for the cows; healthfulness, provided for by good ventilation, cleanliness, and sufficient room; and last, but by no means least, the making and saving of manure; and with all these cheapness and durability of construction and material are not to be lost sight of.

Farm Economy.

EVAPORATING APPLES.

The apple crop in this vicinity is the largest for many years. Picked and well sorted fruit sells for thirty cents per bushel. In consequence of this low price, many growers are turning their attention to evaporators. Evaporated fruit is very fine, and sells readily at good prices. But right here I wish to drop a word of caution to those persons who are contemplating purchasing driers.

A small evaporator that will evaporate five to ten bushels of apples per day, is too expen-

slve, takes too much time and fuel, and is altogether too slow to pay.

One that will evaporate 40 to 100 bushels per day costs comparatively less, can be run more economically as regards fuel and labor, and consequently pays best. After a series of careful experiments, I have come to the conclusion that only the larger ones will prove satisfactory.

As we find men will "exaggerate" in order to sell their goods, we should be cautious how we accept all the statements of people who have evaporators to sell. I have small circulars from manufacturers who state that one bushel of apples will produce six to seven pounds of dried fruit. This estimate is one-third too high. Such apples as are generally used for drying will only turn out about four pounds per bushel. Forty years ago the rule was "five bushels of green apples will make one of dried," and later experience proves the old rule to be not far wrong.

Two years ago I dried 50 bushels of ten different varieties, that were unfit for market, being under-sized, one-sided, bruised, etc., and the result was 220 pounds as sold in January. I had tried this before and have since, with just about the same result. Any one testing this for himself will (unless he has evaporators to sell) find that four pounds per bushel is the safest estimate when calculating the probable profits of investing in evaporators. The difference between four and six bushels will seriously affect the profits.

Of course, if we use first-class apples (which are hardly ever dried), the yield will be somewhat larger, but in no case will it exceed four and one-half to five pounds per bushel. If this is a fact, as I claim it is, it were better to know it before making any investments in drying apparatus. NELSON RITTER.

Onondaga Co., N. Y.

Scientific and Useful.

THE TRUTH ABOUT IT.

[THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

"FREAKS" OF LIGHTNING.

YOUR recent account of the curious effect of a stroke of lightning upon the premises of Mr. Williams, of Montclair, N. J., exhibits, curiously enough, several of the so-called "freaks" which are very usually noticed in the erratic behavior of lightning. But electricity, of which lightning is but the visible effect, never performs freaks. Its conduct is exemplary in respect of its reasonableness. It does everything upon compulsion and by the force of the most infallible laws. The most surprising conduct of the lightning in this case was that it did not strike the house, and that it struck a low grape arbor, of which it shattered a post and cut the wire into short lengths. Now all this is seen to be most methodical and business-like when the reasons for it are understood; and it is of great interest that these should be understood, because then persons may know what to expect in a thunderstorm, and knowing the character of this powerful and, in most cases, mysterious fluid, they may pass through a storm without the usual feeling of apprehension or even horror, with which many persons are painfully affected.

Now, the truth of this matter is as follows:—Benjamin Franklin was the first discoverer of the identity of lightning with electricity, and therefore proved that the laws which govern electricity, as we can produce it in electrical machines, are precisely the same as those which govern the infinitely more intense electricity of nature. The truth is, the earth is a vast electrical machine, in all respects, excepting as to its incalculable power, similar to the toys which amuse boys and instruct men. The first great law of electricity is that, like all other fluids, it seeks a level or an equilibrium; not of gravity or surface, as in water, but of intensity. The next is that when the equilibrium is disturbed by an excessive production in one place, this excess flows to the place where the accumulation is deficient. Usually it flows silently and imperceptibly, without attracting notice, excepting to the scientific observer, with his sensitive electrometers or electricity measurers or gauges. This current flows through mediums which are naturally able to conduct it, and these are known as conductors, and some substances are good conductors, as copper, iron, and water, while others are bad, as glass, dry wood, air, etc. If the conductor is equal in capacity in every part, just as a canal might be for water, the current flows easily, but if portions of it do not conduct as well as others, just as if a canal were narrow in places, the stream is impeded, and an overflow or break occurs in these places; for the last law which need be mentioned here is that when electricity meets with a resisting medium it produces a quantity of heat proportionate with its intensity. Thus, when a cloud charged with electricity passes over a portion of the earth's surface where the equilibrium needs to be restored, a current is at once established. If the conducting medium cannot take it off fast enough, a sudden discharge is made, and this being through an unfavorable medium, great heat is produced and becomes visible as in lightning. It is not necessary here to refer to positive and negative electricity; these terms are used only to express the want of an equilibrium above noted.

Now, let us go to Mr. Williams's place and explain those freaks. The house was provided with lightning rods, and these do not carry off a stroke of lightning; they have not capacity enough for that, but they conduct the electricity in a quiet, continuous stream from the moist air to the ground, and the house is not struck. To do this is the only use and value of lightning rods. But the trellis post being dry wood was not a conductor, and being in the way of the forcible current, was struck by it, and the heat caused by the resistance produced such sudden expansion or explosion of the fibers or of the air contained between them as to rend them apart and tear the post to pieces. Then the current took the wires, which are good conductors, and the fluid passed through them. But no wire is perfectly even in structure, and faults in the material in making wire are repeated over and over again in the course of its length. When the fluid came to the parts where the conducting power was weak, the resistance caused heat, and this heat melted, and by its enormous power probably vaporized, the iron precisely at those spots, and so caused the wire to drop into pieces. H. STEWART.

LIGHTNING FREAKS.

IN the issue of the RURAL for Aug. 21, "Horticola" tells of "curious freaks" of lightning, and asks for a similar case, if known. I have met with a case so similar that I will state it.

In the Summer of 1878, about the last of August, we had here a heavy rain, accompanied with unusual thunder and lightning. The latter "struck" in more different places upon an area a mile in diameter than I ever knew of. An Osage Orange hedge, a mile and a half long, inclosing my orchard, was struck in several places widely apart. At such places the leaves were burnt to a crisp for a length varying from five to twelve feet. A privet hedge, making the first year's growth, had about 12 feet of one end burnt in the same manner. The west end, which was burnt, abutted upon a board fence running north and south, and the hedge was eight feet from, and ran parallel with, vineyard rows trained to wire on tall cedar posts, yet nothing showed any effects of the lightning except the hedge, which looked as if a sheet of flame had been spread upon it. My house has two stove flues coming out from the roof near together. One had a lightning rod attached to it. This one was, it would seem, lifted away from the roof, dropped to the ground, and the rod lifted from its fastenings and thrown back across the roof. No further damage was done to the house. At the same moment a door shutter was torn to pieces at the grafting house, about 40 yards away, and the pieces scattered in the yard, but no other mark of the "stroke" was left upon the house. About 50 feet from this door there was a shrubbery nursery in which several feet of one row of young shrubs were burned like the hedges already noticed. The effect upon the hedges and the shrubbery was only a loss of foliage; the plants lived, sent out new leaves and went on growing. In all this electric shower no person was hurt. JOT.

Greene Co., Mo.

Miscellaneous.

SHIPMENT OF FRESH MEAT ABROAD.

THIS is one of the most commendable enterprises of the present day and ought to be adopted exclusively in preference to the transportation of live animals, as it is not only the safest, but in the long run the most profitable. There are two methods of doing this, one of which is to slaughter the animals at the port where they are to be shipped, and stow the carcasses in refrigerated compartments of the vessel in which the meat is to be transported; and the other is to can the meat as near to the places where the cattle are bred as possible. This latter is the more economical, as the horns and hides of the cattle, the pelts of the sheep, and the bristles of the swine are then kept at home, where they are indispensable for various manufacturing purposes; while the offal of all can thus be saved and carried back to the soil to enrich it and thus prevent its being deteriorated in cultivation.

The transportation of animals on the ocean is accompanied with great cruelty and loss. Many who are engaged in it shamelessly disregard the former, and only care for the latter, as this lessens their profits, their feelings being only touched through their pockets. During the past year upwards of 310,000 cattle, sheep and swine were shipped from the United States and Canada to Great Britain, of which 14 024 were thrown overboard on the voyage, 1,249 were landed dead, and 455 were so much injured that they had to be killed immediately after landing. This is a terrible loss, it being about one-twentieth of the whole number. Where are the officials of the Societies for the Prevention of Cruelty to Animals, that they do not put a stop to this inhuman business? They have benignly regulated the transportation of animals on the land; why, then, should they not do the same on the water on both sides of the Atlantic? If they will not perform their duty in this respect, the municipal officers of the ports where the animals are shipped, and again where they are landed, ought to attend to it; and in case of inhumanity in the transportation, the confiscation of the animals would be none too severe a punishment to their owners. But in rough weather, which is always to be expected to a greater or less degree on every voyage, it is impossible to prevent suffering, so that the most humane and profitable way is to cease entirely from shipping live animals across the ocean for slaughter.

A FINE PLUM.—A specimen of the plum illustrated and described in full in our issue of October 4, 1879, has been sent us by G. H. and J. H. Hale, South Glastonbury, Conn. As then remarked, this plum seems to be a distinct variety, as it has not yet been identified with any other known sort. The branch is 18 inches long, and bears three plums 6¼x6¾ inches in circumference. Large, obovate; color reddish-purple with light-blue bloom. Stalk three-quarters of an inch long. Rather deep, narrow cavity. Flesh of an olive-brown color; stone nearly free. Very juicy—sweet and acid agreeably combined. An excellent plum.

A "LADIES' Grain and Provision Exchange" has just been established in Chicago, where ladies can speculate, apart from coarse men, in agricultural products. How is it we never hear of *Gentlemen's* Associations? The nearest approach to this kind of thing we know of is the "Gentlemen's Sons' Association" of this city, the existence of which is occasionally brought to public notice by the compulsory appearance of some of its members in our police courts.

CATALOGUES, ETC., RECEIVED.

CATALOGUE of the State Agricultural College of Kansas at Manhattan.

THE Autumn exhibition of the N. Y. Hort., Society will be held at Metropolitan Concert Hall, corner Broadway and 41st Street, on Wednesday, Thursday and Friday Sept., 22nd, 23rd, and 24th. Address, James Y. Murkland, Recording Secretary, 12 Cortlandt Street, N. Y.

HUBBARD'S RIGHT-HAND RECORD AND NEWSPAPER DIRECTORY, is the title of a complete list of leading newspapers all over the world with such information and directions as will enable advertisers to make some estimate of the direction to give their patronage. The book is neatly printed, the facts conveniently arranged, and it contains very much in small space. H. P. Hubbard, Advertising Agent, New Haven, Conn., is the compiler and publisher.

BRIEFLETS.

THERE has been a fatal duel in South Carolina. Isn't it bad enough to have railroad and steamboat catastrophes, without such distressing carelessness in duels?—Boston Post. . . . . The Husbandman says: "Farmers have such vital interest in purifying government and equalizing its burdens, that they cannot afford to be led by men who have no regard for their welfare." Very, very true. . . . . It is true that Clapp's Favorite is quite worthless if permitted to ripen upon the tree. But the same may be said of many others. . . . . *First-rate, cheap* things tempt purchasers. Hence the supply creates the demand. . . . . It is in this way that what were considered as dainties for which there was but a limited demand have become necessities for which there is always a brisk demand. . . . . Celery growers should bear in mind that nothing is gained by earthing up too soon. The growth is retarded. . . . . Mr. U. E. Thorne, the untiring farm Superintendent of the Ohio State University (Columbus), speaks a good word, in Farm and Fireside, for the Velvet Chaff wheat. It is extremely early in ripening; the straw is stiff and the head heavily bearded. The grain is of medium size but very plump and heavy—of a dark amber color and a peculiarly hairy brown chaff which gives the variety its name. It yields about the same in most places where it has been tried—as heavily as Clawson or Fultz. . . . . Mr. Thorne has never known Velvet Chaff to be affected by smut. Its flouring qualities are among the best. . . . . We have tried, side by side, grape-vines set out in the Fall and Spring. The former have made the more vigorous growth. . . Asparagus beds, as we have before noted, had better be prepared now. Our readers might during October prepare their plots for our Argenteuil and Dutch Asparagus seed. Make the soil deep and mellow. Then cover with farm manure to be spaded under in the Spring. . . . . We have labored very hard indeed to present our friends with an acceptable list for our next Distribution. If it fail to please them, we shall justify ourselves in feeling sadly disappointed. . . . . Which is the best variety of wheat? Nobody can answer that question. There is probably a larger quantity of Fultz and Clawson raised than of all other winter kinds together. But this does not prove they will yield most on any farm where they have not been tried. We advise our farmers to try small quantities of different kinds. Measure off a few plots 33 feet square, which is 1-40 of an acre. Sow broadcast or use a hand drill. This will aid you to answer the above question. . . . . All sorts of hardy vines and ornamental shrubs may advantageously be planted this Fall. A slight covering or mulch of straw or long manure will prove no detriment. . . . . .

WHAT OTHERS SAY.

EARLY OHIO POTATO.—"This is the earliest of all the American Rose type of potatoes, has of all the shortest haulm, resembles Beauty of Hebron in color of skin, but is rounder and turns out a much more even table sample. I strongly recommend this kind because I find it in table quality quite superior to all other Americans; indeed even now when boiled it becomes as floury as a Regent and quite as good. Its short top admits of its being grown in rows at 24 inches apart, and on a warm border it will, I am sure, beat all the Ashleaf Kidneys in earliness. It is not a new American kind, but has only recently been introduced into commerce here." We find the above in Gardening Illustrated, London, England.

WE find the following in the London Farmer. Always to take from the soil, never to give to the soil even the rest of nature, makes the most fertile land weak. American farming has taken the best out of the wheat soils of half a continent. What wonder that we are flooded with American grain? But when little new land shall remain to be opened up, and the average yield per acre on old land shall show a steady diminution, what wonder then if the United States should find their agricultural export pre-eminence to be slipping away from them?

AGAIN—TROTTING AT FAIRS.—A correspondent of the Maine Farmer says: "You may as well offer a premium for the best barrel of whiskey which is made of the grain that a farmer raises as for the fastest trotting horse. In point of fact, whisky and a technically 'fast horse' are equally useless and pernicious. So also of apples. Because farmers raise apples, and they are properly products upon which premiums may be paid, it does not follow that the making of good cider to be used as a beverage, and apple brandy should be encouraged by agricultural societies. The truth is, this horse trotting at fairs is simply gambling and betting, disguised under the thin veil of testing and trying the speed of horses of no earthly use to any one except those engaged in it, and an idle class which always assemble on any exciting public occasion. The thoughtful and serious farmers who would like to make the cattle show and fair an occasion to exhibit their good work, farm products and domestic manufactures, inspect that shown by others, compare notes with each other and learn something new and valuable, care nothing, as a rule, about fast horses any more than a sober merchant does about some monstrosity which an idle showman brings along and offers for sale or exhibition. The trotting for a purse of $50 is only gambling for that purse, and among the crowd of people are those always there who are betting their $5, $10 and $50 that this or that horse will win the race."

[If the agricultural press with one voice would persistently condemn this evil practice—evil in all its tendencies—trotting at "agricultural fairs" would soon become a thing of the past.—EDS.]

WORMS IN HORSES. To destroy pin worms in horses, give an injection of salt and water two or three days in succession, then administer a ball consisting of half an ounce of aloes and one drachm of calomel.—N. Y. Herald.

AS THE POTATO plant is propagated by its tuber, after the manner of a bud, or cutting, the effort made by the plant to produce its flowers and seeds must be a waste of power, which detracts from the desired crop—the tubers. We (Mark Lane Express) know an instance in which a six-acre field of potatoes was tested to show the truth of this postulate; three rows had the blossoms cut off and three rows were left intact, alternately all over

the field, and the produce of the rows which had been deprived of the flowers showed a very marked increase over that of the rows which had not been so treated.

MR. HALL is, according to the same journal, fully entitled to the distinction of being the largest dairy farmer in the United Kingdom, cultivating as he does over 2,000 acres as a dairy farm, and keeping seven hundred cows, a number which he hopes to increase to 1000. It is, however, more as a purveyor of milk than as a farmer that his success has been noteworthy.

THE profits derivable from farming are too small to admit of any lavish expenditure, and however energetic and spirited the management may be, if economy be not studied, the chief end of good farming—profit—will not be realized.

SUFFICIENT FARM HELP.—"Now if we start out in the Spring to till a farm of a certain number of acres without sufficient help, then a part of the necessary work must be left undone or the work only partially accomplished. Then is when the farmer has too much to do and gets behind with his work; neglect disturbs method and all things are soon out of balance. Many farmers say they cannot afford to hire much help. It is as necessary to have sufficient help to carry on a farm successfully as it is to have any help. If help can not be had, then let some other farmer have a part of the farm to work, for the extra amount of land which cannot be properly tilled is so much land lying idle." Thus writes a correspondent of the Husbandman. He then goes on to state his own method:—"I will give the method which I have followed for years, and I cannot say that I have had too much to do, and at no time have been behind with my work. The first thing I do is to provide the best tools for all kinds of work and sufficient team power to use them. I employ the best help I can get, as I have learned that skilled labor is the cheapest. Hiring cheap help to save a few dollars does not pay, loss in damage to teams and tools more than offsetting any saving so made. It takes but a few hours for an inexperienced or a careless hand to do much damage. It is my method to keep as much help as the farm requires. I am well aware that many farmers will say, as has been said before, that they cannot afford to hire so much; but all I have to say to such is, start next Spring with more help and till your land as it should be tilled, and put the farm in proper shape, and when the year comes round figure up the difference, and see if money has been lost."

CULTURE OF THE SOIL IN PUBLIC SCHOOL YARDS.—We are glad to find an excellent article upon this subject in the agricultural columns of the New York Tribune, the Editor of which is ever foremost in advocating any good cause:

The enormous growth of our population, and the little unoccupied area left for further free expansion should suggest the serious thought, whether we ought not to require—as other nations are doing by legislative enactment—that every teacher should pass an examination in the principles of soil and plant culture, and that practical lessons in these principles should be given in every primary school. It is a consideration that concerns everybody: and one that eminently deserves forethought and timely action, because years must pass before it can be carried into full effect. During these years all our really good soil will be occupied, and millions of our acres reduced by a thoughtless or ignorant management to a lower and lower state of production; while our forests, which require a century for recovery, will have been wholly despoiled.

Lately a yard was seen, not very large, where about 400 children daily play—in a railroad town with its full proportion of "street Arabs"—yet there have been for years growing in it a great variety of plants, vines, and trees, with a handsome flower bed gracing the front, all as safe as in any private grounds; the leaves unbruised and dense enough—in the case of one vine supported only by a stake, giving shelter to a bird's nest within the reach of all hands above ten or twelve, yet so secure that the young were safely hatched. No rules exist for the preservation of these plants, but there is an offer of a reward of $50, posted up for the conviction of the spoiler of a tree, outside on the streetway. No teacher betrays personal anxiety, but a feeling of pride and possession is gently instilled, and every plant in the yard becomes dear to each pupil. They are often subjects of pleasing and instructive talk and object lessons.

For lessons in soils, etc., it is a first requisite that our normal schools prepare teachers on the subject. There is as yet no good text book upon it in our educational lists. That the teachers must first be taught is the conclusion arrived at by the devoted Secretary of the Michigan Horticultural Society, Mr. Charles W. Garfield, who sent out circulars of inquiry last year as to the planting and conservation of school yards. There were many responses, but nothing practical or suggestive from teachers. Twenty pages of the Pomological Report of the society (1879) are devoted to an abstract of the replies. They are worth reading, and will no doubt prompt some practical action.

PARMESAN CHEESE.—In a paper written by Dr. Prato, in the *Annali del Agricultura*, the process of making this cheese is given as follows:—"The cows are milked by women and girls at evening, and the milk carried in wooden or tin pails to the cheese-room, a sort of shed inclosed with walls on two or three sides, and having in the center a furnace with its copper. The milk is measured, strained through a cloth, and placed in flat, shallow dishes ranged round the walls of the cheese-room. There is another delivery of milk in the morning, which is measured in the same way. When all the cream has been removed the milk is placed in the copper and raised to a temperature of 81 deg. Fah., which is considered best. The fire is then drawn, and rennet added. Natural rennet from the calf is always used. It is stirred in and left for an hour. Next the curds are reduced to a state of even and uniform comminution with the aid of a long stick provided with projecting points and a brush-like end of wire. This operation having been carefully performed, a small quantity of whey is added, and good saffron, in the proportion of half a drachm per twenty gallons of milk, is well stirred into the mass. The fire is again set going, the contents of the copper being now maintained at 113 deg. Fah., and kept well stirred until it is known by the feel that the cooking has proceeded far enough, when the copper is lifted out, and the contents are allowed to cool, so that the caseine may be precipitated. To facilitate the process a little cold skim-milk is added, and at the end of a quarter of an hour precipitation is complete. The curds accumulate in the middle, and are removed with a cloth. The cheese is lifted out in a cloth, and pressed under a thick wooden plate weighed with a heavy stone. When the whey is well squeezed out, the linen cloth is replaced by a hair cloth, fresh weights are added, and the cheese trimmed round from time to time. After this it is carried to the salting-room, where it is covered with salt. Here it remains three weeks, being constantly turned over and salted on each side in turn during that period. Lastly, it is carried to the drying-room, well scraped and brushed, and the surface oiled. The whey from the cheese is made into *ricotta*, which is eaten, either salted or baked, by the peasants instead of cheese. It is heated to a temperature of 176 deg., stirring constantly. A little fresh milk or butter-milk, or, if the milk be not sour enough, a little sour milk is sometimes added.

Everywhere.

NOTES FROM FLORIDA.

PEOPLE say this has been the warmest Summer known here for a great many years, the thermometer ranging from 88 deg. to 100 deg. most of the time. With the exception of three cool days and nights about the middle of this month, it has been one intense heat. We had a great deal of rainfall through July, but it came in showers, accompanied much of the time by terrific thunder and lightning, the atmosphere being so completely charged with electricity that I would often feel it in my hands and arms as sensibly as though I were holding a sponge connected with an electric battery. During one storm three pine trees were struck within sight of our house. After every shower it would seem as though the sun came out hotter than ever. We have had less cool breezes than usual and the only wonder is that everything is not completely burned up, and, in truth, everything that is not suited to just such weather has met that fate.

The orange trees like it, and have made a wonderful growth during the Summer. In this locality the fruit is not rusty and has not split and dropped off as much as usual. The Bermuda Grass on our lawn is fresh and green. Our Charles Downing Strawberries are in fine condition. I set young plants in rows two feet apart last March, sowed cow-peas between the rows to shade them, gathered a good crop of peas, and at the commencement of the rainy weather in July, cut off the vines and had the roots spaded in, the vines being too heavy to turn under during July. An immense crop of Crab Grass came up which I pulled up by hand three weeks ago, and had a liberal top-dressing of fine manure put on. Since then, until yesterday, we have had but one rain to wet the ground. You would be astonished to see how fast the runners are growing, the plants will soon cover the ground and unless we have frost severe enough to kill the blossoms, I shall have my table supplied with fresh strawberries from Christmas on through the Winter, or Spring, I should say, we do not call it Winter here after the first of January.

Planters are all busy picking cotton; it promises now to be unusually fine. No cotton worm has yet appeared in this county. If the crop escapes these pests, planters expect to make a heavy crop of cotton. Sugar cane and rice are also remarkably good. Early planted rice is about ready to cut, late planted is just beginning to head. There is said to be an immense crop of sweet potatoes put in in this section, the early ones sent to market, are very large. We feed our cows, pigs, dogs and cats on sweet potatoes. Many people feed them to their horses instead of grain. The darkeys will live on them, often eating them raw, and we often see white children eating them like apples; Florida cooks make pies, puddings, pones and bread of them. If the crop of sweet potatoes should ever be a failure here, I think there would be a famine.

It rained yesterday all day, the wind blowing furiously. This A. M. the wind has abated and it does not rain, but is cloudy and very warm with a prospect of showers. If it keeps on raining it will hurt cotton badly. It has rained all day only five days during this year, and this is the first high wind we have had, except little blows during thunder showers that would only last a few minutes.

Bradford Co., MRS. I. SUMNER

RURAL SPECIAL REPORTS.

ARK., Beebe, White Co., Aug. 30.—Cotton picking has now begun and the first bale was sold at 14 cents per pound and got $13 as a premium. A St. Louis cotton merchant, who has lately been traveling through the Lone Star State, says that the cotton worm working in the boll, is doing a great deal of damage there. Around here rust has struck the cotton and is injuring it very much, and the dry weather is also making all the top squares fall off badly. We can count only on the lower bolls for a crop. The prospect of a large crop put us all in fine spirits, but we can hardly count on that now. Late corn is very good; early corn was injured by the dry weather. It is now so dry that we cannot do any plowing, the ground is so hard. Eggs, 10c. per dozen; corn, 75c. per bushel; oats, none for sale; millet, $10 to $12 per ton. H. B.

CANADA, London, Ont., Aug. 31.—Fall wheat is now in and much of it is thrashed; the berry is good and the yield from 30 bushels upward as high as 50 to the acre. Spring wheat is very little grown here. Barley is light and colored. Oats are much rusted and light, having been beaten down by the storms. Of peas not many were planted on account of the bugs. More corn has been grown than in any previous year, and it is looking well. Potatoes are blighted, but there are not many bugs. Mangolds, turnips, carrots, etc., are looking well. The hay crop was very good—as much as five tons to the acre were taken from some fields. The aftermath is very fresh and green, making a good growth. Farmers are increasing and improving their live stock very much. There are some fine herds of "thorough-breds" in this county. R. S. W.

CANADA, Cornwall, Ont., Aug. 31.—The grain crop in this part of the country is very good and the weather is very favorable for harvesting. Hay is thin owing to the dry weather, and will be from three to four dollars a ton higher than last season. Potatoes will be small and few in a hill for the same reason, though they looked very promising in the Spring. I do not think the potato bug was so bad as last Spring. Mangolds and other roots that are not full-grown have suffered considerably from the drought, but the rain a few days ago helped them a good deal. W. S. T.

CANADA, Ontario, Oxford Co., Aug. 30.—Fall wheat good, yielding from 25 to 35 bushels per acre. Spring wheat will be a failure. Oats and barley good. Apples very plentiful. Grapes good but rotting badly on the vines. Potatoes a good crop, but in some places rotting badly. Beauty of Hebron, St. Patrick and Bliss's Triumph have given the very best of satisfaction where they have been tested, yielding better than the Early Rose. W. V.

CANADA, St. George, Ont. Aug. 30.—Fruit and grain come fully up to expectations. Wheat averages 25 bushels per acre; barley, 30; oats, 45 bushels. Of peas not many are grown this year on account of bugs. Corn has been planted instead. Apples are abundant. Peaches are an average crop. Pears scarce. A. C.

CONN., South Glastonbury, Hartford Co., Aug 31.—Tobacco, the leading crop here in the Valley, is about all harvested, and without exception is the *very best*, in every respect that has ever been grown here, and farmers are all happy in the anticipation of good prices. There is an abundant second crop of grass, and many are mowing, one man reporting that he had 2,200 pounds from one acre; 356 bushels of Beauty of Hebron potatoes from one acre on this farm this season, speak well for the Beauty. G. H. & J. H. H.

ILL., Ludlow, Champaign Co., Sept. 1.—Our dry weather ended about the 26th ult. Light local showers and sprinkles came first, increasing in frequency and extent till in this locality about 2½ inches of water have fallen. In some neighboring localities the rains were still heavier. The weather is warm and close, with prospect of more rain. The pastures are rapidly growing green again, the grass starting up with the freshness of early Spring. Late corn will be much benefited, as this warm weather is rapidly swelling out the ears which though short, will, if frosts do not come too soon, be sound and solid. Much early corn had dried up before the rain, and some of it is badly shrunken, while the earliest is filled out pretty well. The ground is in fine condition for plowing, and this work is being rapidly pushed. Many farmers are trying a little patch of wheat; many more would do so but for the fact that chinch bugs so common in wheat are apt, when the wheat is harvested, to move into adjoining corn-fields and injure the corn enough to take off all the profit on the wheat. It is therefore thought advisable to sow wheat only where a strip of grass or flax may lie between it and neighboring corn-fields. Peaches and grapes are ripe and abundant. The price of corn has advanced to 31 cents and of butter to 18 to 25 cents. "G."

ILL., Union Grove, Whiteside Co., Aug. 31.—In July, 1879, the lightning struck a large cottonwood tree in my garden. Near the tree was a row of grapevines, the posts eight feet apart, with a fence wire on top of the posts. The lightning left the tree and followed the wire several rods each way from the tree. The vines soon looked as if they had been frosted and the fruit wilted. In the Fall I cut the vines off near the ground, but they were dead and did not sprout up. Every post was badly shattered. The blight has made sad havoc with young fruit trees this season. The tops of very many of the most thrifty ones are dead. The pear trees in particular are thus affected. The wheat crop in this section was nearly a failure; the Winter wheat died and the Spring sown was destroyed by chinch bugs and blight. Corn, late potatoes and pastures are now suffering from lack of rain. A. M. A.

ILL., Champaign, Champaign Co., Sept. 1.—The heat here has been terrific, and is still so—at seven o'clock last night the mercury in a large open house, in the second story, standing above 90 deg.; though there had been no fire since before noon. At seven this morning it was 80 deg., though at this writing, eight a. m., there are signs of a cooler change. Prices for agricultural products are well maintained; briefly there is a short crop in the West—due to drought since the 15th of July. B. F. J.

IND., Roanoke, Huntington Co., Sept. 3.—Crops are fair to good here. Wheat sells at 90 cents; flax, $1.10. Potatoes and corn are good on uplands, but poor on bottoms. The fruit crop is large, but inferior in quality. A large acreage of wheat will be sown here this Fall. Farm lands for sale are very scarce. A. C. H.

IA., Green Mountain, Marshall Co.—It has not been a very good season for root crops in this locality, it being too dry in the fore-part of the season. Small grain crops are very good, wheat averaging about 15 bushels of uniformly good quality—that is, Spring wheat; no Winter wheat is raised here. Oats average about 40 bushels per acre and flax from eight to 15 bush. Potatoes, late varieties, are about half a crop; early varieties good. Hay, a fair crop. Fruit abundant. A. T.

KAN., Edgerton, Johnson Co., Aug. 30.—Our drought here is at an end; we are having rain almost night and day; the ground is thoroughly soaked; ponds are filled up, and all the creeks are running—no lack of stock water now; grain is being injured in the stack particularly flax, some of which is still lying as it was cut in the fields. Where such is the case it will be nearly ruined. Corn and potatoes were greatly injured by the drought, but the present rains will benefit the late corn and potatoes, while they will also fit the soil for plowing and seeding. The largest breadth of wheat will be sown in this county this Fall that was ever known. Many varieties are grown, but Fultz and Frame take the lead, the Frame being earlier has the preference. Both are hardy and yield well. The Odessa, or Grass Wheat, a new Russian variety, is a very promising late kind, but it is not extensively introduced; it is hardy, with a stiff straw which stands well up, and it will stand drought and chinch bugs, I believe, better than any other sort raised here. Our fruit crop never was so large—thousands of bushels of apples and peaches, must go to waste in this county. The best of each are worth only twenty-five cents per bushel; grapes are selling at one and one-half to two cents per pound. A. B. D.

KAN., Parsons, Labette Co., Aug. 31—I hasten to correct the statement made in my last as to the character of the corn crop of Southeastern Kansas. I was altogether too fast in stating that the corn crop was safe and unprecedentedly large. There hardly seems a sufficient reason for the change. It seemed

as if we had had moisture enough to carry the crop triumphantly through. Some ascribe the falling off to drought and others to the chinch bugs; the latter cover the corn stalks. I am inclined to think the shortage is not because we have not had rain enough during the season to make the crop, but because our rains have not entered the ground fifteen inches for two years, and thus, while we have had rains enough to make a crop ordinarily, the subsoil has been too dry to afford sustenance to the plant during a moderately dry time. The corn is, on the table lands, chaffy; on the bottom lands, pretty good. The crop will be three-fourths of a full crop. J. B.

MAINE, Brooks, Waldo Co., August 30.—Drought of great severity prevails. Water is very scarce and feed drying up. Hay was better than the average. Grain was not quite up to an average. Corn is looking excellent. Potatoes are very promising. The beetles, however, have been very troublesome. Only persistent picking or poisoning has saved the crop. Fruit will be a fair crop. Dairy interests are not extending. There will be immense crops in our new settlements and in Aroostook County. Sheep are extensively kept; flocks of 100 and upward are common. Maine offers great inducements for sheep farming, with its cheap lands and healthful climate, good water and grand grass soil. The State fair will be held at Lewiston, Sept. 21-24, with a favorable outlook. Hay is $12 to $15 per ton; beef, 4 to 5c.; lambs, $3; eggs, 15c; butter, 15 to 17c.; pork, 5 to 7c.; corn, 58 to 65c.; wheat, $1 to $1.25; beans, $2; peas, $1; cheese, 10 to 12c. J. W. L.

MICH., Montgomery, Hillsdale Co., Aug. 31.—Wheat did not come up to our expectations on account of the hot weather just before harvest. Corn will not be over two-thirds of a crop. Oats were very light. Apples are an extra-fine crop. C. H. E.

NEB., Iowa Ridge, Saunders Co., Aug. 30.—The harvest is over with us, and thrashing machines can be seen around at work. Corn is looking quite good, but a great portion of it is very late on account of dry weather. Everything has suffered from want of rain; but during the past week it has done nothing but pour. It has improved the looks of the gardens and will help the corn. We have a great curiosity in the shape of a green snake cucumber. When measured three days ago it was five feet long and 7¾ inches in diameter and still growing. It is coiled up like a snake and startles a person when he first sees it. L. E. R.

NEB., Momence, Fillmore Co., August 31.—We have had splendid harvest weather. It was somewhat too dry for three weeks, so that we feared the corn would not make a full crop; but now we are having plenty of rain every other day. Wheat turned out lighter than was expected, owing to the great number of green heads among it. Plowing is easy work now. By the way, that man who didn't succeed in killing the potato beetles with London-purple must have got some badly adulterated stuff. The use of it didn't kill our potato vines, but one application exterminated all the potato beetles. J. O.

NOVA SCOTIA, Petite Riviere, Lunenburg Co., Sept. 2.—Owing to long-continued drought the hay crop in all the western counties of this province is only about half the usual quantity. Spring wheat is pretty good—the weevil is in some. Winter wheat is not sown here. A considerable quantity of rye is sown here on burnt land; it looked well standing; but the kernels are small. Barley is the grain mostly depended on here and will be a full average crop. Of potatoes, a great quantity of good ones is grown in this county. They are yielding well this year—no rot as yet; no beetles up to this time, but I dare say they will soon find us out, as they are in other parts of the province. Of corn only a very small quantity is grown here. There is not much fruit of any kind except apples, of which there will be an average crop, but not as large as last season. A few persons are trying to raise grapes and I hear that they succeed very well. Very little is done in the way of raising tame fruit. We have plenty of wild strawberries, raspberries, blackberries, cranberries and many others—which can be had for the picking, or from two to ten cents per quart. The Army worm was here for a short time but did very little damage. It was too late in the season when it commenced work. About a week ago we had a great rain and everything looks much revived by it. L. W. D.

PA., Hosensack, Lehigh Co., Aug. 30.—We have a very dry spell at present. Late corn will not yield half a crop if we do not get rain. Wheat was a medium crop; so was corn. Oats were rather light and short in straw on account of the drought. Potatoes are not as good as last year. Hay was a good yield, and the second crop in meadows is fine. H. E. E. R.

UTAH, Glenwood, Sevier Co., Aug. 20.—Wheat harvest is in full blast, and machines are busy everywhere, even the "Armstrong Self Rake" (cradle and hand rake) is competing for the honors of the field. Some Fall wheat that appeared poor this Spring, has been thrashed out and gave about 28 bushels per acre. The Spring wheat is very well headed and will turn out well. Oats are about the same. Barley is not raised here to any extent, though I was told that brewers in Salt Lake City import most of their barley. Several years ago a large quantity of two-rowed barley was shipped from the north of this Territory to Chicago for brewing, and was said to be the best found in the United States. Corn is doing well, and the season has been, so far, very favorable, and free from frost. Potatoes are setting well. Flour came up as high as $4 per hundredweight in July, but the new crop will soon put it down to $2, or even $1.50, it is feared. Apples are abundant in the older settlements, and there are some peaches, grapes, and plums. Eggs, 12½ cts.; Spring chickens, 20cts.; butter, 20cts.; beef, on foot, four to five cts.; mutton, five to six cts. Freighters realize about double these prices at the mines, distant 150 to 200 miles. The mines produce a good amount of silver and gold; but the bulk of it is shipped out of the Territory, and I believe the potato fields bring *us* more real wealth. W. M. C.

WASH. TER., Cedar Creek, Whitman Co., Aug. 23.—The Beauty of Hebron potatoes I received from the RURAL are the finest, best and earliest tubers we have. The Cuthbert raspberries are dead. I don't think the oats you sent are as good as the oats we have, but shall try them again next year. The beets are fine—the best I have seen. J. LA D

WIS., Louisville, Dunn Co., Aug. 30.—Grain was all more or less injured by drought. The harvest is all done, and stacking nearly so, and thrashing has commenced, but the best yield does not exceed, for wheat, 14 bushels per acre; oats about 50 bushels; but some yields are as low as four or five for wheat and 10 for oats. Wheat the county through will average about 10 and oats about 35—not more. Corn has been injured 25 per cent. from what its appearance indicated a month ago. Potatoes are a short crop also, on account of drought. New grass seedings are nearly all a failure, as also will be the clover seed crop. Help is plentiful, through harvest hands work at $2. Self-binders save the demand for help, besides doing the work better. Apples are a good crop of crabs—about all we raise here. Amber Cane is but little raised—only enough for an experiment, there being no mill near here to work it up. F. M. S.

WIS., West Salem, Lacrosse Co., Sept. 1.—We had splendid weather for harvesting. Wheat, both Winter and Spring, is a light crop—thrashers say from four to ten bushels per acre. Early oats are good; late, poor. Corn is good and so are potatoes and Amber Cane. Cane mills are just commencing work. Apples, grapes and most small fruits are good. The cabbage worms are destroying the cabbage. Clover seed is blighted; farmers are cutting the clover for hay. H. A.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Poll Evil.

S. T. P., Silcott's Springs, Va., has a valuable mare affected with poll evil which has been running for six or seven months, and he asks for a remedy.

ANS.—Poll evil is due to blows or bruises caused by the horse suddenly lifting its head and striking it either against a part of the manger, a beam or the ceiling of a low-roofed stable, or the lintel of the door. Straining against the bridle or halter, rubbing the poll against the divisions of the stalls or other object, blows from an angry and brutal driver, and the irritation caused by forcing a small collar on a large horse, are all fruitful causes of the malady. The evil may exist some time before any of the ordinary symptoms become manifest. These consist of a painful swelling, hot and tender, about the nape, generally inclined to one side, marked by a sense of fluctuation under pressure of the fingers of each hand. This fluctuation is the more noticeable the nearer the seat of the disease may be to the surface. The size of the tumor, too, is an indication of the locality of the center of the ailment; the more deep-seated it is, the smaller usually is the swelling. One should not wait for the tumor to break of itself, but so soon as the matter can be distinctly felt, an opening should be made at the lowest point in the tumor, so that all the matter may run out as fast as it forms. The opening should be made large enough to allow free passage to the discharge. Poultices may be used to promote the discharge, or a paste made of sugar, soap, and powdered blood-root, equal parts, rubbed together in a mortar, spread on a cotton cloth and kept on the tumor by means of a bandage. In recent cases the establishment of the dependent opening will alone suffice to effect a cure. In cases of long standing, however, where fistulas have been formed, the passages become cartilage-like, and will not close together rapidly. In such cases a stimulus must be applied to the interior, either in the shape of a seton tape passed through from end to end and left there—and this is the safer plan, or by means of chemical injections, such as chloride of zinc—one drachm mixed with a pint of water and carefully injected into every part of the sinuses or pipes, twice or thrice a week. It is always safest and wisest to obtain the services of a good veterinarian to perform operations of this kind.

Warts in Horses.

C. O. D., West Liberty, W. Va., asks for a remedy for warts on a horse. They have been on the animal for five years—mostly on the inside of the leg.

ANS.—There are several ways of removing these unsightly excrescences. One way is by first picking off the rough outer surface, so as to make them bleed, and then rubbing in with a stiff brush some yellow ointment—to be had at the druggist's—wetted with a little water. This will cause considerable inflammation, and in a few days the wart will drop off, leaving a healthy sore which soon heals. Sometimes the whole wart does not come off on the first application, in which case a second must be made. Of course, where there are many warts, all should not be operated upon at the same time, for humanity's sake. Another way is; arm a common suture needle with a double ligature, each made of three threads of saddler's twine; pass the needle through the center of the wart close to the skin, tie each part separately with a surgeon's knot, as tightly as possible; cut the ends off close to the knot, and in a short time the whole will drop off. This for a wart with a broad base; one with a small base may generally be removed by tying a single ligature round the base. If the sore does not heal soon, moisten it occasionally with tincture of aloes and myrrh; and if it shows a tendency to ulcerate, sprinkle it with powdered charcoal and blood-root in equal parts. This is a slow and painful process, however, and perhaps the best and least painful way is by the use of the knife. Take a sharp-pointed knife and run the blade through the wart or several in succession, with an upward motion, the edge being turned away from the skin. Remove the interior of the wart and occasionally touch the part with a solution of chloride of zinc—one grain to an ounce of water. When the wart is of a cartilaginous kind, cut it off at the base, and stop the bleeding with tincture of muriate of iron, tincture of mastic, or other styptic. Warts may also be removed by the application of butter of antimony, or, stronger, by nitrate of silver or lunar caustic; or, stronger still, sulphuric acid, made into a paste with powdered sulphur, and applied by means of a flat piece of wood.

The Brooks' Telephone.

A. H. G., Auburn, N. Y., in RURAL of Aug. 21, asked about our opinion of the Brooks' Telephoue, which we gave in accordance with our personal experience with one of them. Professor Brooks writes to us in this connection.

"I am very much surprised at the slighting way in which you refer to my telephone in "RURAL" of August 21, and it certainly does me a great injustice. The telephones you based your remarks upon were some of the first *small* instruments I made, and are not to be compared with the much larger instruments greatly improved in every way, that I have advertised and sold for the past nine months, and which are giving the highest satisfaction. The wire, too, that I now make and recommend is much larger and of copper, and requires very little attention when once properly put up. Not one word of complaint has reached me from those using my instruments as now made and sold.

[We were not aware that the telephone sent to us was not the same as that advertised, and, therefore, hasten to make the correction.—Eds.]

Miscellaneous.

G. E. S., West Townshend, Vt., asks which is the best, cheapest and most easily understood work on diseases of cattle.

ANS.—Among the many works published on this subject we cannot undertake to decide which answers best to the above conditions. It is very doubtful whether any work is the best in all these requirements. Law's Farmers' Veterinary Adviser, price $3, is perhaps the best book for a farmer on diseases of stock generally. Clatter's Cattle Doctor, by Armitage, is as good a work on diseases of cattle as any we know of—price $6. The first can be got directly from Dr. Law, Cornell University, Ithaca, N. Y.; the second from the publishers, Scribner's Sons & Co., N. Y. City. We have answered similar questions frequently within the year.

M. A. P., Sterling Station, N. Y., has a meadow overgrown with weeds having tall stalks crowned by a tuft of yellow flowers, and asks whether they are Golden Rods, and how to kill them—will shallow plowing this Fall do so?

ANS.—It may be the common mullein, Verbascum Thapsus. This seeds bountifully and should be pulled up while young. Plowing will kill the present plants. It may be one of the Golden Rods. The same may be said of this. Our friend should send flowers.

Westchester, Westchester Co., N. Y., says that he saw frost there on Aug. 16, 17 and 28, and asks whether we have heard of any other frosts in that neighborhood this season.

ANS.—Not in that exact vicinity; but in "Agricultural News" of Aug 28, under heading of Aug. 23, the RURAL says:—"Just a week ago, on August 16, a heavy white frost visited most parts of Delaware and Dutchess counties N. Y. and the Catskill Mountains;" we might also, it seems, have added Westchester Co.

E. S. S., Eagle Harbor, N. Y., asks, 1, is it necessary to remove the soil from the inside of a cold grapery in renovating the ground, or can it be kept in good condition, and if so, how; 2, he got a number of Cuthbert Raspberries, well packed and in good condition, yet out of 150 planted only 30 grew, and he asks the probable cause of the failure.

ANS.—1, Yes, by forking in well rotted manure. 2. If the Cuthberts were received in good order we can offer no explanation of the failure. Possibly they were planted too late.

E. W. K., Glen's Falls, N. Y., sends three apples for name, and sketches of them lest the fruit should arrive in a condition too decayed for identification.

ANS.—The apples were received in good order, so far as packing was concerned, but they were so decayed that we could not identify them; neither could we do so by the cuts, in view of the immense number of varieties, between many of which the differences are too slight to be shown by a rough outline.

D. C. C., Manton, Mich., says a man has been traveling through that section selling apple trees, who claims that the trees will bear the second year after having been set out, and every year thereafter. He also says that for 50 cents he will sell a six-year-old root with a three-year-old budded top, and our inquirer asks whether the man is telling the precise truth.

ANS.—No, by no means. The fellow's statements are absurd.

V. V., Oxford, Ont., Canada, asks, 1, the best remedy for mildew on grape vines under glass; 2, the best varieties of peaches for home use; 3, the latest date at which the weight of mangels from the RURAL'S Free Seed Distribution must be sent in to compete for premium.

ANS.—1. Sulphur. 2 Early York, George the Fourth, Grosse Mignonne, Old Mixon Free, Red Cheek Melocoton, Royal George. 3. Any time before severe frosts.

A. J. B., Clarksfield, Ohio, has 122 mangels from his paper of seed, and as some of them are very fine, he wishes to compete for the premium and asks whether it is necessary to weigh them immediately. They are growing finely now.

ANS.—Certainly not; wait until they are ready to be harvested.

J. D., Lowell, Mich., writes, under date of August 12, that he has sent on a basket of seedling peaches for the RURAL office, and asks our opinion of them.

ANS.—Those peaches have not been received here.

D. B., Grundy Center, Ia., asks who make corn huskers.

ANS.—C. H. Mallison, Phillips' Spiral Husker, a good power husker, Hudson, N. Y.; Jacob Van Zandt, Schenectady, N. Y., also makes a good husker.

H. R. P., North East, Pa., asks what is the best time to shorten the branches of pear, peach, apple trees, etc., so that they will put forth fruit spurs for another crop.

ANS.—Early Spring is our choice.

E. M. C., New Lisbon, O., asks whether it would be advisable to use quick lime on land this Fall after the wheat sown on it is up.

ANS.—No.

J. W. B., Union City, Pa., asks when the mangels sent out by the RURAL must be pulled to compete for premium.

ANS.—Not until frost.

J. J., Fontana, Kansas, asks whether the Eucalyptus globulus will stand Kansas winters.

ANS.—We do not think so.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, SEPT. 11.

E. W.—A. H. M.—T. H. H.—T. D. B.—H. R. R—M. Y.—W. B. D.—M. E. A.—A. M. L.—F. H. S.—A. B. A.—U. H.—S. P., Jr.—N. S.—G. H. B.—L. S. H.—F. E. A.—S. H. R.—M. E. H.—J. H.—J. M. L.—E. W. R.—"Violet."—W. G. L.—R. A. G.—T. H, H.—O. W. D.—P. C, C.—J. K.—A. S.—H. G. C.—H. T. M.—"Camick."—J. L. D.—L. A.—E., E V.—J. O.—A L. J.—S. C. G—S. B P.—L. W. D.—A. W. G.—A. N. B.—J. S.—R. L.—J. W. L.

Clergymen, Lawyers, Editors, Bankers and Ladies need Hop Bitters daily, for nerve force.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY SEPT. 18, 1880.

The Rural New-Yorker has never up to this time exhibited any of the products of its farm at the fairs, for the reason that such exhibitions require an amount of time and labor that we could not spare. We shall make the present season an exception, however, at the pressing request of several friends. The Queen's County Agricultural Society will hold its annual fair at its grounds at Mineola on the 28th, 29th, and 30th inst. As these grounds are but a few miles distant from the Rural's Farm, we have decided to make an exhibit of our Branching Sorghum, Blount's Corn, seedling potatoes and of several different kinds of wheats. This fair is always ably managed and attended by thousands of people. We hope that any of our Western, Northern or Southern readers who may be visiting New York at that time, will be pleased to spend a few hours at the Mineola Fair. Persons may leave New York and return by railroad at almost any time they may desire.

FULTZ WHEAT. THIN SEEDING.

We may now report the results of our experiments with Fultz wheat. One plot, 33x33 feet, was sown in drills 12 inches apart—seeds dropped two inches apart. Bone superphosphate was sown at the rate of 500 pounds to the acre. It was cultivated once in November. The yield was 38 pounds, or at the rate of 25 1-3 bushels to the acre. A second plot of the same size was sown in drills six inches apart, and no fertilizer of any kind was used. The yield was 37¾ pounds, or at the rate of 25⅛ bushels per acre, The unfertilized plot showed that it was inferior to the other, as is evident from the fact that, being sown only half the distance apart, the yield was nearly the same. Had the plot been fertilized, it is fair to suppose that the yield would have been greater. Thus our tests for three years in succession have shown that the cultivation of wheat and thin seeding do not pay.

The straw of Fultz is not so heavy as that of Clawson, but it stands up quite as well.

GRAPES AT THE STANDS.

The fruit stands of New York City may often prove profitable instructors to fruit growers. During the past ten days we have noticed among grapes that some of Rogers's Seedlings have been offered in larger quantities than ever before. They are extremely showy if not of the first quality and have sold readily at from 10 cents per pound for black—such as Wilder—to 20 cents for white—such as Goethe. Rebecca (white) is now selling in immense quantities at form 15 to 25 cents the pound. This, owing to its firm skin and compact bunches, is at present our best market white grape, and it is to be regretted that it thrives over so restricted a part of the country. Delaware, the cream of grapes, brings at the stands 10 cents, while Concords—and they were never larger or of better quality—bring five. We always associate the Delaware grape and the Seckel pear. Each is the prince of its kind.

Grapes, grapes everywhere; and it is a pleasure to see that many of the poorer classes of people who in past years have rarely indulged in these luxuries, eat them freely now. Thus with increased supply come lower prices and an increased demand.

A MYSTERIOUS BEETLE VISITATION.

What the Rocky Mountains are at intervals to our Western States as breeding places of countless locust swarms, the Black Sea is yearly to the Southern provinces of Russia as the mysterious source of innumerable myriads of harvest beetles. It is now 15 years since the waves of that inland sea washed on the Russian shores thick swathes of the eggs of the pest, and every year since then the visitation has been repeated. Whence they come nobody seems to know. The eggs are first seen floating on the waves and as soon as they get stranded the larvæ come forth, and soon swarm after swarm of beetles pass over the Crimean valleys into the interior, ravaging the rich grain fields and lessening or annihilating the scanty earnings of the peasants. Machines of all sorts have been used against them in vain, which was to be expected in view of the calculation that a single ordinary field near Kharkoff contained last Spring 350,000,000 insects.

A late Kharkoff paper contains a long continuation of a list, published every week, of the amount of beetles collected by the peasants for doing which the local authorities grant small subsidies. From this we learn that two tons were gathered during the previous week in the commune of Veselandskij; five tons at Vasilievsky; seven tons at the German colonies of Eigenfeld; ten tons at Belozersk, while the inhabitants of Prishilsk were particularly active, or the beetles were there especially numerous, inasmuch as fifteen tons were harvested. Indeed this beetle harvest is said to be nearly the only harvest gathered in that section this year. There is a report that a fly that preys upon the pests has lately made its appearance there, and on the labors of this friend the peasants' hopes are now centered, in the absence of birds from the Russian steppes.

A PROSPECTIVE IMPROVEMENT IN PLANTING COTTON SEED.

Gen Le Duc thinks a valuable discovery has been made by Prof, T. Taylor the microscopist of the Department of Agriculture in relation to the planting of cotton. While investigating the situation of the oil cells in Indian corn, he was led to experiment on the resistance offered by seeds to agents generally considered destructive of organic life, cotton seed being used in the experiment. To remove the list from the seed he employed concentrated sulphuric acid, which removed it entirely without apparently affecting the outer brown shell. Mr. Saunders, the horticulturist of the Department, planted some of the seed thus treated and afterwards washed, and, lo! it sent up plantlets five days earlier than seed in the natural state. To learn whether this was due to the soaking it had received, some of it was kept dry for some months, and then planted along with seed of the same crop unprepared; and the result was the same. To prepare the seed, it is placed in an earthenware or glass vessel and ordinary sulphuric acid is poured over it until it is entirely covered. It is then stirred until all the lint is removed from the seed. The acid is next poured off to be used for the same purpose again, and the seed is washed until all traces of acidity disappear, when it is dried.

The Department of Agriculture is about to prepare a large quantity of cotton seed in this way, and distribute it among planters for experiment next season. Should experience in the field confirm the results of these experiments in the garden, the advantages to the South will be very considerable. Besides the benefit of five or six days' advance in the growth and maturity of cotton, by which early frosts can often be forestalled, seed thus cleaned can be sown with any planter used for corn or other clean seed, securing greater regularity in growth and facilitating cultivation. Hitherto cotton seed has had to be sown by hand, as it could not be used in any planter owing to the adherent list preventing its uniform deposition.

THIN-SEEDING OF WHEAT.

As readers of the Rural New-Yorker, know we have for three years past experimented to ascertain the amount of seed wheat that should be sown to produce the greatest yield. Our *cultivation* of wheat has twice proven a comparative failure, so that we are obliged to condemn this method which is now being advocated by a number of agricultural journals. Thin seeding without cultivation has also proven unprofitable with us, and we shall not the present season drill in less than a bushel and three quarters per acre. Touching this question, Mr. C. E. Thorne, the farm manager of the Ohio State University, writes to the Husbandman as follows:

"The heresy of thin seeding first made its appearance in England, if I mistake not, many years ago; and it is upon the rich, garden soils of that country, where crops of 50 and 60 bushels per acre are as common as those of 30 and 40 bushels here, that we should look for the success of such seeding, if it has any merit. Hear, then, what J. B. Lawes says in the "Fair Number" of the Rural New-Yorker, for 1879, (page 576.) 'No one here cultivates wheat, nor has thin seeding ever made much way. At the present moment the great bulk of the wheat grown in this country is drilled in rows about five inches apart, and the seed used is about two bushels per acre. It stands to reason that if one plant of wheat has possession of one or two square feet of soil, its power of growth must be increased; but except upon garden soil, or upon farms in exceedingly high condition of cultivation, I feel sure that thin seeding will never be successful.'

In further confirmation of my faith I would refer to the field experiments of Prof. I. P. Roberts of Cornell University, who obtained increasing crops until three bushels of seed were reached. It will be noticed that our crops diminish after passing two bushels. I suspect the explanation of this to be that Prof. Roberts's wheat was sown on very thin land, while ours was sown on a rich bottom, capable of producing 25 to 40 bushels of wheat or 50 to 80 bushels of corn for an indefinite period, and without manure."

A full report of Prof. Roberts's experiments are given in this issue of the Rural New-Yorker.

RELIEF FOR BRITISH AGRICULTURE.

The Hares and Rabbits bill, after a bitter opposition of outspoken antagonism and insidious amendment in the House of Commons, has at length become a law in England, not a little to the relief of British agriculture. It was feared that after its passage through the lower House, the House of Lords would either extend to it the same harsh treatment given some weeks ago to the Compensation for Disturbances bill, or else destroy its vital principles by cunning amendments. The Peers, however, unwilling to weaken their influence among the agricultural classes, and conscious that the English farmer is a more formidable adversary than the Irish peasant, and that their former action had aroused against them a public sentiment it might be perilous to inflame by a fresh display of aristocratic disregard of the general weal, suffered the bill to pass without opposition in their own House, after having used their best efforts to defeat it in the House of Commons by means of the votes of their numerous sons, relatives, connections, dependents, toadies and friends who hold seats in that body.

The declared object of the bill is the better protection of occupiers of land against damage to their crops by ground game—a term applied to hares and rabbits. The general definition of "game" also includes pheasants, partridges, grouse, heathcocks or moorcocks, blackcocks, woodcocks, snipes, quails, landrails or corn-crakes and bustards, against whose ravages the bill still leaves the farmer without protection. In other respects, too, the relief afforded by it is limited, as it only bestows on the tenant the inalienable right to kill ground game on his own farm by himself or his agents concurrently with his landlord, but does not compensate him for the incursions of the pests from neighboring preserves, nor does it check their increase on adjacent land. How rapid this increase may be can be inferred from the calculation that in four years a single pair of rabbits may, if unmolested, become the progenitors of 1,250,000. Knowing well the dominant influence of the landlords, the framers of the bill wisely incorporated in it the provision that every agreement, condition, or arrangement purporting to convey away the rights conferred by it, should be void. It would have been a mockery to have given the tenant any option in this matter, for many of the landlords would then certainly have given him none.

On reading over even sparse extracts from the mass of evidence given, seven years ago, before the Committee of the House of Commons on whose report the bill is based, with regard to the oppressive character of the British game laws, it is not easy to understand how such persistent grumblers as the English farmers could have tolerated the evil so long, unless on the supposition that the discontent that should have been utilized in action was frittered away in futile words and heartburnings. It was then shown that in some instances ground game destroyed as much as half the crops, and were in nearly all cases a grievous loss and nuisance; that the preservation of game kept large tracts, aggregating millions of acres, out of cultivation; that could the pests be kept within reasonable bounds, 40,000 more sheep could be maintained in the country; that the 10,000 tons of ground game annually brought to market represented a clear loss of $20,000,000; that for the last few years 10,000 convictions annually took place under the cruel provisions of the game laws.

The severity of these laws may be inferred from that which enacts that any person convicted of killing a rabbit, a woodcock, or any other sort of game, even on uninclosed land or the public highway, from the end of the first hour after sunset to the beginning of the first hour before sunrise, shall be punishable, for the first offence, by three months' imprisonment with hard labor, at the expiration of which he must find sureties for his not so offending again. For a second offence the penalty is six months' imprisonment with hard labor, and an additional twelve months in default of sureties; while for a third offence of killing a hare or rabbit the monstrous wretch is punishable by two years' imprisonment or seven years' penal servitude. In nearly all cases the committing magistrate is the next landlord who happens to be a justice of the peace; perhaps the very man on or near whose territory the heinous crime was committed, and who is pretty sure to be righteously wrathful at the criminal's atrocious rascality. Moreover, any constable has power to stop and search, by day or night, in any highway, street or public place, any person whom he may suspect of coming from any land where he may have been in search of game; and also to stop and search any vehicle in which he may suspect that game may be carried.

These laws are still in full force, except with regard to hares and rabbits; but the day cannot be far distant when the last vestige of such feudal legislation shall be swept from the statute books, whose pages such mediæval enactments besmirch in this nineteenth century.

BREVITIES.

We learn that at this season of the year the old stock of peas is sold to coffee houses to mix with their coffee.

We have received from West Virginia a crate of beautiful plums, and should be glad to know to whom we are indebted for the same.

Friend farmers—prepare your land for wheat better than you have ever prepared it before. Harrow, harrow, harrow. If the soil is sandy, roll after sowing or drilling in. If at all inclined to be clayey, roll before sowing. See if the results of this careful preparation do not more than repay its cost.

In the few thousands first printed of our Fair Number for the current year, on page 583, the subheads, "Milk" and "Cheese," in the article "Small Cheeses for Home Use," were inadvertently made to interchange places, after the "proof" had been read. The slip was corrected as soon as detected, and those of our readers who may have received the copies first taken from the press, can from the context easily make the necessary transfer of subheads.

The National Fair Association gives $8,000 not $11,300, in purses for trotters at the annual fair to be held in Washington from October 5 to 16. St. Julien the reigning "King of the Turf," will try to beat his best record of 2 11¼, for a purse of $2,500, on October 8. Our readers can have no doubt of the strength of our objections to trotting at agricultural fairs; but if the evil must be endured, it is certainly more satisfactory that a "King" rather than an ordinary brute should be the culprit.

Strange that in a country so densely populated as China vast tracts of good land should remain uncultivated; yet the Governor of the Province of Che-Kiang lately proclaimed that, though seventeen years have elapsed since the Taiping civil war ravaged the country, large areas have since remained untilled. In three named departments 1,600,000 acres are idle, and in three others 6,000,000 acres. Some of the land is poor, but at least 5,500,000 uncultivated acres are rich and fertile. Surely here is a big opening at home for every Mongolian in this country.

Mr. Charles Downing writes from Newburgh, N. Y., "Plums have been very abundant here and fine." That is the report from many localities where, owing to the curculio, the crop is generally light or a failure. Mr. Downing also writes: "Unless it rains soon, vegetation will be dried up. All kinds of fruit is ripening very early—even apples will soon have to be gathered if the drought continues, or else they will shrivel on the trees, as there is apparently no moisture in the ground to the depth of four feet. The late peaches will be small and poor."

During the eight first months of this year the aggregate rainfall has been several inches less in this section than the average for the corresponding months of the past 41 years. According to Prof. Daniel Draper, of the meteorological service in Central Park, this city, the rainfall gradually increased from 1835, when his record began, until 1869, since which time it has shown a tendency to decrease. He has little faith in the theory that forest denudation affects the amount of rainfall; but he has a theory of his own to the effect that there are cycles in rainfall as there are in sun-spots and other astronomical and terrestrial phenomena, and a cycle of rainfall he estimates at 60 years, and according to his calculations we may expect a gradually decreasing rainfall for several years to come.

Literary Miscellany.

WHITE CLOVER.

The distant hills the long day through
Have fainted in a haze of blue;
The sun has been a burning fire,
The day has been a warm desire,
But all desire is over;
The lights are fading from the west,
The night has brought a dreamy rest,
And deep in yonder wood is heard
The sudden singing of a bird,
While here an evening wind has stirred
A slope set thick with clover.

The fields have lost their lingering light,
The path is dusky through the night—
The clover is too sweet to lose
Her fragrance with the gathering dews,
The skies are warm above her;
The cricket pipes his song again,
The cows are waiting in the lane,
The shadows fall adown the hill,
And silent is the poor whip-poor-will,
But through the summer twilight still
You smell the milk-white clover.

The glory of the day has ceased,
The moon has risen in the east,
The distant hills, the meadow near
Are bathed in moonlight soft and clear,
That veils the landscape over,
And born of rare and strange perfume,
Pure as the clover's odorous bloom,
Dear hopes that are but half confessed,
Dim thoughts and longings fill the breast,
Till lost again in deeper rest
Among the blossomed clover.

INMATES OF LESTER HALL.

CHAPTER I.

(Continued from page 597.)

"RUBY went charmingly," she said in a moment, perching herself on the table and glancing at her sister with a very tender light in the starry hazel eyes. "I think, if Rex will let me, I shall be able to hunt this season. By-the-bye, I have a letter for Rex. Where is he?"

"A letter? What an unheard-of event!" said Mattie with a little laugh. "It is not a bill, I hope, Cecil?"

"Oh! no; certainly not a bill," said Cecil, decidedly. "Superfine paper, and a stately crest. Mattie, I believe it is from Uncle Henry; judging from the post-mark, see," and she tossed the letter into her sister's lap, "there it is."

Miss Lester examined it with a faint flush of expectation coloring her fair face.

"Yes, it is from Uncle Henry," she said. "I wonder what it can be about?"

"He does not often favor us," said Cecil, rather disdainfully. "He is too rich and too grand, I suppose, now that he is ever so many times millionaire. Oh, dear! how nice it must be to be very rich. If one could only be so honestly!"

"I never heard anything against Uncle Henry," said Mattie, quickly. "Some people do make fortunes in these days without being dishonorable. Uncle Henry is very much respected in the city, I know."

"How do you know?" asked Cecil, with a little laugh.

"I have seen how he is spoken of in the papers, and I have heard of his very great goodness to the poor," said Mattie, as she contemplated the letter with its legible, business-like address.

"I don't think he has been very good to us," said Cecil, with a pout.

"We did not want anything from him," said Mattie, hurriedly. "Mamma used to tell of his goodness and care of her when they were children. I am sure he would love you, Cis, you are so much like her!"

"I wonder what he is writing to Rex about?" mused Cecil, as she came down from her perch on the table and stood looking down at her sister, who was leaning back in her chair with a moved expression on the fair face.

"Yes, I wonder too," said Mattie. "I hope, oh! how I hope, Cecil, that it is to offer him some employment.

"Mattie!" exclaimed Cecil, her hazel eyes opening wide with horror at the suggestion. "Some employment for Rex!"

"Yes. Why not?" said Mattie more earnestly than she generally spoke, with her color deepening, and her eyes brightening with excitement. "Is there anything disgraceful in work, Cecil? I would give anything in the world to save Rex from the purposeless, idle life he leads now."

"Why, Mattie," said her sister, laughing, "I never saw you so excited. Have you been reading Dr. Watts lately, that you wax eloquent on 'idle hands' and 'mischief?' But, Mattie," and the girl's bright face shadowed over and grew momentarily grave, "I never thought you would like Rex to be a clerk."

Mattie winced.

"I see no harm in any employment that is honest," she said, sturdily. "Why should not Rex make a fortune as Uncle Henry has done. He began with nothing, and now he is enormously rich."

"I detest an upstart," said Cecil.

"I believe if we could know Uncle Henry we should love him even as our mother did," said Mattie.

"Perhaps so," said Cecil, dubiously.

"Remember our dear mother, Cecil," said Mattie, gravely. "Your remarks reflect upon her, you know."

"I beg your pardon, Mattie," Cecil said, penitently. "Forgive me, and I will not offend again."

"I know you spoke thoughtlessly. You are too young yet to know how bad it is for a young man not to have any occupation. Oh, Cecil, if I could get Rex something to take him away from these surroundings."

"Well, perhaps Uncle Henry's letter may give him an opportunity," said Cecil, lifting first one of her sister's hands and then the other to her lips with almost loverlike devotion. "Rex is so——"

"Who is taking my name in vain?" said a gay voice at this juncture, and looking up quickly, Cecil saw her brother standing at the entrance of the room, looking down with a smile at the pretty group his entrance disturbed, for Cecil sprang up to meet him with a gay speech of welcome.

CHAPTER II.

THE LETTER.

Reginald Lester was a tall, slender young man, with delicate, regular features, like his sister Mattie's and hazel eyes like Cecil's, but softer and lacking their brilliance. He was well-built, and moved gracefully; had much of Mattie's manner and some of the languid grace and nonchalance which had characterized his father; but the proud resolve of his younger sister, and the sweet, steadfast gravity of the elder, were equally wanted in his face. His expression was discontented, although his face was naturally sunshiny and serene and his voice gay; but the disadvantages of his surroundings had had far more effect on Rex Lester than on his sisters. He had imbibed from his father's an exaggerated notion of his own importance. He chafed greatly against the anomalies of his social position. Of high family and without fortune, of good position without means to support it adequately, and with tastes and aspirations which he could not gratify, it was no wonder that very often Rex Lester was moody and dissatisfied and tempted to forget his annoyances in any means of excitement obtainable in the little village of Lester.

It was not such bad fun after all presiding over the meetings held at the "Huntsman's Rest"—the only decent inn in the whole village; for the fox-hunting young farmers who met there had a great respect for the family at the Hall and for Rex himself, because—although highborn gentleman as he was, he was poorer than any there—he sat his horse better than any of them, and was always in at the death. Rex enjoyed himself there, although Mattie, waiting up for him into the small hours of the night, often prayed him with tears to give up the "Huntsman's Rest" and the companions who were beneath him.

Then, too, it was not unpleasant during the hot lazy, languid summer evenings, to saunter down by the millstream and have a chat with pretty rosy-cheeked Annie Hyde, the miller's daughter, who blushed a deeper rose when he appeared, and who was so pleased and flattered at his laughing compliments and gay speeches. There was no real harm in Rex Lester, but he was thoughtless, careless, indifferent, and discontented; he was young too, idle, and fond of pleasure, and such amusement as was in his reach he would not lose.

"Who is taking my name in vain?" said Rex, lounging in, and throwing himself down in the most luxurious chair. "What has little Dame Burden to say about me?"

"Little Dame Burden" was one of the many pet names which Cecil had given to her sister, to whom both were devotedly attached, and one which the young housekeeper liked better than any other.

"It was not little Dame Burden who mentioned your name. It was I," said Cecil, laughing. "Here is a letter for you, which I got from old Job, whom I met on my way home, and who was delighted to be saved a trail up the hill."

"A letter for me!" said Reginald. "Hand it over, Miss Cis, and let us see what it is about!"

"We think it is from Uncle Henry," said Mattie. "And we are all impatience to hear its contents. Open it, please, Rex."

"Little Dame Burden, impatient and curious, miracles are not over then?" said Rex with a laugh, as he broke the elaborate seal which closed the envelope, drew out the letter, and began to read.

It was a tolerably lengthy epistle, covering the four sides of a sheet, and written in the legible, business-like caligraphy in which it had been addressed; rather more cramped, perhaps, but still perfectly clear and distinct. Reginald Lester read it through rapidly, then he turned over the sheet and perused it again, this time more slowly, and with a darkening brow and flushing cheek.

His sisters watched him eagerly; then, as he flung the letter on the table with a muttered exclamation of "Confound his impudence!" Cecil burst into a fit of laughing which rang gayly through the hall.

"Good gracious! What has offended your mightiness?" she said.

"Hush, Cecil," said her sister, gently. "What is it, Rex? May I read the letter?"

"Of course you may! I never heard such insolence!" said Rex, haughtily. "Wants me to go into his office!"

"Who does?" laughed Cecil. "Uncle Henry? Does he really? I wish he would take me!"

"You are only a child, you know nothing about it," said Rex, contemptuously.

"Well!" said Rex, emphatically, as Mattie concluded her perusal and laid the letter thoughtfully on the table. "Don't you think Mr. Vicar's proposal a most insolent one, Mattie?"

"Insolent!" said Mattie, warmly, the color rushing into her fair face. "I see nothing but what is extremely kind and generous in Uncle Henry's letter."

"Kind and generous!" repeated Rex. "A clerkship in his counting-house!"

"But, dear Rex," said Mattie, gently still, and very earnestly, "it is not a clerkship he offers you—although even if it were it would be both a kind and generous offer—but he says that if you will go to him and learn your business, you will be to him as a son. Think, dear, what such an offer means—wealth, power and influence! Is it not better than idling away your life here? Oh, Rex, do consider seriously before you reject such a proposal! I cannot tell you how happy it will make me if you accept, because I know how much happier you will feel. Uncle Henry is so respected and looked up to. It is not as if his wealth had been made in a questionable manner; you know it is not so; you know that he is most scrupulously honest and honorable."

"Doubtless!" said Rex; "but, my dear Mattie, no Lester was ever perched on a counting-house stool yet."

"Oh, Rex!" said Mattie, reproachfully, while Cecil's laugh rang out again clear as silver.

"Rex," how absurd you are!" she said.

"Am I? perhaps so; but I am only keeping to the rules of my order," he said, rather grandiloquently; and Cecil's sweet, mocking laugh rang out again.

"'My order!'" she repeated. "What order is that?"

"Hush, Cecil, dear!" said Mattie, with an entreating glance. "Rex is, I hope, a gentleman—not from any accident of birth, but because he is true, honest, and faithful! Uncle Henry is a gentleman, too,—a noble, upright gentleman—for the same, the only true reasons."

"But Mattie, do you really mean that you wish me to accept this offer?" said Rex, incredulously.

"I do, indeed!" said Mattie, bravely. "If I had dared I would have asked Uncle Henry to make you just such an offer."

"Good little Dame Burden!" said Cecil, as her sister disappeared behind the oaken screen, "How kind she is! Rex, you must do this, if only to please her."

"But, Cis, and Reginald put his arm round his young sister, and drew her to him," would you like to see your brother a clerk?"

"Nonsense, Rex, you would not be a clerk," said Cecil. Uncle Henry would only give you the position his son would occupy if he had one. He was so fond of mamma, you know, and he would be sure to like you so much. Besides," she went on, meditatively, "it would be so unutterably jolly! Mattie is not here to be shocked at my adjective—to be able to go to the theatres, and see all the sights! Oh, do take Uncle Henry's offer, Rex, darling, and go. You will soon get rich, and then you can send for Mattie and me!"

"You selfish girl!" he said, laughing. "Is that why you want me to accept? Well, it sounds rather tempting, when one comes to think of it! I wonder what sort of a fellow Uncle Henry is?"

"I am sure he must be very nice!" said Cecil, eagerly. "He is so much thought of by every one. I know you are going to say 'yes,' Rex; and in a few years I shall be talking of my brother, Reginald Lester, the Merchant prince!"

"'How pleasant it is to have money!'" said Reginald, laughing, as he repeated the quotation after her, "We have not much of its pleasantness, have we? But we will, Cecil, if Uncle Henry gives me a chance. After all, we are his nearest relatives, and he has a right to do something for us! Shall I write to him at once and accept?"

"Do, there's a dear brother," said Cecil, coaxingly. "Dame Burden will be so delighted, and Uncle will be pleased to think that you answered him by return of post. See here, Rex, if you like to write at once I will ride over to the village and post the letter before eight."

"You are taking my breath away, Cecil, you are so energetic," said Reginald, smiling, as she brought him pens and ink and paper, and pushed a chair up to the table.

"Energetic," said Cecil, laughing, "of course I am energetic. There, sit down and write, and mind that you are civil.

Reginald threw himself into a chair, tossed about the paper and pens for a minute or two, muttered something about it being a great bore, but finally made an attempt, tore it up, then wrote off another note, which, when it was finished, he handed to his sister for inspection.

Cecil read it with an air of extraordinary gravity, handed it back to her brother to be sealed and directed, then replaced the little riding-cap which she had removed on her entrance, and took up her whip.

"Mattie is safely installed in the kitchen," she said, gaily; "I shall be back in time for tea, and our sister will be so delighted to hear that you have done so!"

"All right. Here you are, Cis; and look here, my child, ride Ruby quietly, and don't jump anything," said her brother. "I cannot have you talked of as a little wild hoyden."

Cecil laughed.

"Cannot you, indeed? Since when? Since you have had a chance of being a merchant prince?" she said, saucily.

"You shall have a finer horse than Ruby, when I am a rich man, Cecil. Meanwhile make haste, or Mattie will have finished the muffins; and if you are not ready when they are, she will be dreadfully disappointed."

Off flew Cecil, leaving her brother to ruminate over the change in his prospects, and to conjure up all kinds of dreams of wealth and pleasure from his connection with his rich uncle. Cecil ran lightly round to the back premises, saddled Ruby herself, sprang lightly into the saddle, and cantered away down the drive on to the high road. It was a straight line to the village by the road, and generally Cecil preferred finding her way to the village by fields and lanes. On this day, however, she went straight and swift, keeping Ruby at a quick trot, in order to reach the post-office before the departure of the evening mail.

"I'm not too late, am I, Mrs. Pritchard?" she said, greeting the old postmistress with a smile.

"No, Miss Cecil, quite ten minutes to spare, I hope you're quite well, ma'am and Miss Lester, and the squire also."

"All quite well, thank you, Mrs. Pritchard," said Cecil, with a smiling nod. "No, thank you, I won't get down, as I must be back at the Hall in time for tea. Good afternoon."

"Good afternoon, Miss Cecil," said the postmistress, with a curtsey; and having posted her letter, Cecil turned Ruby's head homewards and went her way, feeling that she had put Reginald's fate into her uncle's hands, and that she and Mattie had given him up for good and aye.

Cecil's heart sank a little as she pondered over the change. They had been so happy together at Lester Hall, and Rex had been such a dear, good brother to her, and they had suited each other so capitally—how could she do without him? True, Mattie had been anxious sometimes; she had thought that Reginald was too idle and purposeless; that his visits to the Mill had been too frequent, and she had wished openly that he did not go so often to the "Huntsman's Rest;" but it had been so dull at Lester for Rex, it was only natural that he should amuse himself a little. Cecil was too young to guess at the danger of such amusements as flirtations with pretty Annie Hyde, and evenings spent at the "Huntsman's Rest." She supposed it was all right, as her faith in her brother was perfect. Rex was in her eyes all that was true and noble.

"How she would miss him," she thought, mournfully, as she turned into the drive, "and how much Uncle Henry would love him when he knew how good and nice he was!"

"You have been out riding again, Cecil," said Mattie, coming out to the great stone steps as she rode up.

"Yes," said Cecil, soberly.

"Where have you been, dear?" said her sister glancing at the grave little face in surprise.

"To the post-office."

"To the post! What for?"

"To post a letter from Rex to Uncle Henry," said Cecil, slowly as she dismounted, and stood for a moment with the bridle over her arm.

"A refusal?" said Mattie, eagerly.

"No—an acceptance."

CHAPTER III.

DEPARTURE.

Mr. Henry Daton, the great city magnate, was evidently a man of prompt and decisive action. The day following that on which he had received Rex Lester's letter came another letter to Lester Hall, fixing the day for his nephew's arrival in the city, and enclosing a check for fifty pounds for traveling expenses.

This last circumstance told considerably in his favor, for Rex had passed the intervening twenty-four hours in a state of uncertainty and depression, not knowing whether he was most vexed or pleased at the decision he had made. The idea of constant occupation was anything but pleasing to Rex, especially occupation which would keep him indoors all day; and he had not really the faintest conception of a business life, and could only picture it to himself as long hours passed perched up on a stool before a desk with interminable rows of figures in a huge column which he had to add up. But Mr. Daton's cordial letter and enclosure seemed to place things in another light.

"Uncle Henry seems to be very liberal," Mattie said. "Rex, I do so hope you will get on well together, and that if he should prove at all crotchety, you will give in to his wishes. You know how lonely he is, and how much trouble he has seen in the death of his wife and only son. You will try and make it up to him as far as you can, will you not?"

"Of course—of course," said Rex, a trifle indifferently.

"You need not worry yourself, Mattie. I have no doubt that we shall get on perfectly."

"I hope so," Mattie answered, cheerfully; and although she went about her domestic duties as carefully as of old, her heart was a little heavy at the thought of the separation from her brother, although she rejoiced that a field of active employment was open to him.

The days fled swiftly by in the excitement of Reginald Lester's preparations for departure. Not that there was really very much to prepare, for of course the city tailors would be better able to supply him with what was necessary in the way of clothes, and Uncle Henry had hinted as much in his second letter.

But Rex had a good many farewells to make, and his sisters clung to him with increased affection. He felt the parting from his sisters and his home more than he had thought to do.

"It is strange that Uncle Henry should not have said anything about us," said Cecil to her sister. "I mean about going to see Rex."

"We must wait to see how Rex gets on," said Mattie. "I dare say he will give him a week's holiday sometimes to come to see us, Cecil. I do hope all will go right!"

"Of course it will go right!" said Cecil, carelessly. "What makes you anxious about Rex now, when you wished so much that he should go?"

"I don't know, but sometimes I feel as if something terrible will come of this!" said Mattie, rather despondently.

"Nonsense, Mattie! you are overworking yourself, and feel nervous!" said Cecil, cheerily. "Put on your habit, and have a canter on Ruby; it will do you good."

Mattie laughed as she turned away. Cecil's universal panacea was a canter on Ruby; but before the laugh had died away the anxious, sorrowful expression came back to her face. Rex was so impressible and easily led, she could not help feeling anxious about him; but if she could have had a glimmer of the future—she would have bitten out her tongue rather than have added one word to induce him to accept Uncle Henry's offer; and she would with more satisfaction have followed him to his grave than have helped him with his preparations for his voyage.

The days slipped steadily and swiftly on until the day fixed for his departure came. It was well known in the village that the young squire was going away to be with his uncle, of whose wealth and magnificence the good people of Lester spoke with bated breath; and he would be the heir, in all probability, people said, and Lester Hall would once more resume its old splendor. They were sorry to lose the young squire, who was very popular with them; he had none of the pride of his an-

cestors, but then he was differently placed; perhaps, had he been as rich as they, he would have been equally haughty. As it was, they regretted his departure. Mrs. Hyde rather congratulated herself that the young squire could no longer come "loafing" about their premises, making Annie idle and "above her work."

Rex was to start by the mid-day express, so that his last meal with his sisters was breakfast. I was an unusually merry one, for each vied with the other as to who should be the most animated and say the wittiest things. It was but a false gaiety, but it prevented the real sadness which possessed them from appearing on the surface.

The first break in any family must of necessity occasion sadness, and these three young people had been all in all to each other for a long time now, and both sisters' hearts were heavy at the thought of their brother's departure. Reginald himself was elated and excited, and it was only when, in taking leave of Mattie, she broke down in a passion of tears on his shoulder, that his lip quivered and his voice faltered.

"Don't break down, Mattie, he said, tenderly. I will do my best, dear little Dame Burden, believe me I will!"

"Yes, yes!" said Mattie, with a sob. "And you will keep straight, dear Rex!—you will let us be proud of you, Cecil and I, will you not?"

"Keep straight! why of course I will, you anxious little sister! What harm can I get into in Uncle Henry's warehouse?"

"None, I hope, and you will write to us regularly, Rex?"

"Yes, certainly, he answered, soothingly. Don't fret, Mattie; Cecil, be a good girl, and don't let little Dame Burden mope, and mind that you are a good correspondent."

So Reginald went away, leaving his sisters very lonely and disconsolate, although Cecil fulfilled her brother's parting injunction, and did her best to console her sister. She was to all outward appearance quite indifferent herself; but old Barton could have told Mattie, who rather wondered, and began to fear that Cecil was a little heartless, that he had found her in the stables with her arms round Black Prince's neck, sobbing as if her heart were fit to break, while the horse, who seemed to understand that he had lost his master, was turning his eyes upon her in dumb sympathy, to show that he shared her grief.

Cecil was too proud to bear pity, and she did her best to shake off all outward signs of depression; but she felt Reginald's departure keenly.

In a few days came a letter from the absent brother, written in the highest spirits, and painting everything rose-color.

Uncle Henry had received him in the kindest manner, had given him a suite of rooms in his house at South Kensington—a house which was more like a palace than any ordinary residence—had told him that he was to look upon him as his father, for that he was quite prepared to accept him as a son.

"Uncle Henry is a splendid old boy," wrote Rex, enthusiastically. "He is very handsome, tall and portly, with thick white hair. His manner is perfect; kind and genial.

He is going to allow me three hundred pounds a year as a beginning, but he told me openly and frankly, that if we got on together, he would treat me as he would have treated his son had he lived. So, little Dame Burden, you need have no apprehensions for my future."

Several months passed away quietly and uneventfully at Lester, enlivened by frequent letters from Rex, always written in the highest spirits, speaking warmly of Uncle Henry's kindness and generosity, and by sundry presents from both uncle and brother. There came one day a piano for Mattie, and piles of new music, but when she wrote to thank her uncle he took no notice of the letter and Rex wrote that he did not like to be thanked.

In like manner came a perfect riding-habit and a new saddle with all kinds of improvements, for Cecil, and Rex kept both girls well supplied with books and periodicals, so that that winter passed away very pleasantly. At Christmas Rex came to see them, looking very handsome and exceedingly well-dressed with a languor in his manner at which Cecil laughed, but which she admired nevertheless. He went back to town earlier than they had expected, for the country bored him a little, although he was too good natured to show it.

The next summer he came again, but stayed a shorter time still, and after that he came no more; and although his letters were frequent, they were short and hurried, and always pleaded excess of work as an excuse for longer epistles.

And thus three years passed away, quietly, purely, blamelessly, to the two girls in their desolate old home, and not unhappily; but for Reginald Lester, in that great city, full of temptation to sin and excess, how did the months pass?

We shall see.—To be continued.

BRIC-A-BRAC.

MUTUALLY IMAGINATIVE.

"GOOD-MORNIN', Miss Katie," said young Mickie Fee:
"Good mornin', again: it's yourself shure I see,
Lookin' bloomin' as iver." But Kate turned away
As she said, "Mister Mickie, I wish you good-day.
You're a heartless desaver—now don't spake a word!
Pretty tales about you and that Norah I've heard.
You know you danced with her the day of the fair,
And praised her gray eyes and very red hair,
You called her an angel; quite in love with her fell:
And at night when you parted, you kissed her as well!"
Then young Mickey gave a sly wink as he said,
"I desaved her, my darlin'—this way turn your head—
Yes, faith, I desaved her; my darlin', it's true;
For I shut both my eyes, Kate, and fancied 'twas you!
Yes, that's what I did;
Katie, it's true;
I shut both my eyes,
And fancied 'twas you!"

"Well, I've no time to stay, so good-bye, Mickie Fee,
You may desave her, but you don't desave me;
I'm not to be blarneyed. Mick, a word in your ear;
You had better be off, for my dad's comin' here."
"Oh, your dad's comin' is he? That's not him I see
Now bobbin' behind that owld blackthorn tree?
For it's Paddy Mahon!" "Oh," said Kate, with a sneer,
"You've got your eyes open at last, Mickie dear.
And shure you are right; 'tis my own darlin' Pat,
So take my advice, Mick, and get out of that;
For he's comin' to coort me. Now listen, my lad:
When that boy kisses me, O won't you be glad?
For when his lips meet mine, why, what will I do?
But shut both my eyes, Mick, and fancy it's you.
That's what I'll do
Mickie, it's true;
Shut both my eyes,
And fancy it's you."

DISAPPOINTED.

THERE is nothing like presence of mind after all. One dark, rainy night, old Dr. Botts, who lives on Van Ness avenue, San Francisco, was trudging homeward, when he discovered that he was being dogged by a burly ruffian, evidently intent on robbery. They were in a lonely part of the town, and the man was just at his heels, when the doctor buttoned his coat up to his chin, suddenly turned back, and said to his pursuer:

"Please, sir, give me a dime to buy something to eat. I don't want to get whisky, indeed I don't; haven't had anything to eat in two days."

"Great Scott!" exclaimed the footpad, re-pocketing his slungshot with profound disgust, "to think here I've been piping off a pauper for over a mile."

And he walked off swearing at his luck.

LINES TO A HEN.

FARE thee well, and if forever,
Still forever fare thee well;
Since 'tis clear I can't digest thee,
'Gainst thee I must needs rebel.

Now that breast is bared before me,
Which so long on eggs hath sate,
That you've worn off all the feathers,
And 'tis bald as any pate.

Could that breast by thee worn barren,
Under heavy weights be put,
It would show a stout resistance,
Of a ton to the square foot,

Oh, 'tis hard to tear asunder
Fond attachments of the heart!
But with a strong yoke of oxen
I could not pull thee apart.

There are words of deep emotion,
That most any thing subdue;
But there's no language so tender
That, old hen, will soften you.
—Weekly Gate City.

YESTERDAY AND TO-DAY.

"HOLE on dar," said a colored man, hailing an acquaintance. "Does yer cross de street ebery time yer sees me ter keep frum payin' dat bill?"

"No, I doesn't."

"What fur, den?"

"Ter keep from bein' axed fur hit."

"Mr. Napoleon," said the creditor, "I lent yer $10 three weeks ago. Yer promised an' promised ter pay me. De udder day you say dat 'pon yer word an honor as a gen'leman yer'd pay me ter day. Now, what's yer got ter say?"

"I al'ers zerves my honor. Yer's getting yer lack of flosofy and my honor mixed."

"How's dat?"

"Doan yer know dat de oder day all de time in town was changed? Da foun' dat de time was wrong an' dey sent off an got what da calls a transit apperatus. Since den all de watches an' clocks hab been overhauled. Hit hab been foun dat our time is gis one day too fast."

"Dat's got nuthin' ter do wid my money."

"Course it hab. I promised ter pay yer ter day. The overhaulin' ob der time shows dat dis ain't ter day."

"How does yer make dat?"

"Why dis is ter-morrow. Doan yer see! Let me tell yer, if yer goes roun' dis town showin' such ignunce ob flosofy de people will laugh at yer."

"When is yer going ter pay me?"

"Jes ez soon ez we kin git the time straightened up. Da's workin' on it now. Jes take my advice, fur et de people onst gits it inter dar heads dat a man is a fool, ten years ob knowledge won't change it.—Little Rock (Ark) Gazette.

HOW TO ASK AND HAVE.

"Oh, 'tis time I should talk to your mother,
Sweet Mary," says I;
"Oh, don't talk to my mother," says Mary,
Beginning to cry;
"For my mother says men are deceivers,
And never, I know, will consent;
She says girls in a hurry who marry
At leisure repent."

"Then, suppose I would talk to your father,
Sweet Mary," says I;
"Oh, don't talk to my father," says Mary,
Beginning to cry;
"For my father, he loves me so dearly,
He'll never consent I should go—
If you talk to my father," says Mary,
He'll surely say 'No!'"

"Then how shall I get you, my jewel?
Sweet Mary," says I;
"If your father and mother's so cruel,
Most surely I'll die!"
"Oh, never say die, dear," says Mary;
"A way to save you, I see,
Since my parents are both so contrary—
You'd better ask *me*." —Samuel Lover.

FINE COOKING.

THE dissatisfied boarders at Mrs. O'Rourke's house on Howard street were very much astonished the other day at beholding that amiable landlady bring in a leg of mutton in which were stuck a number of peacock feathers, supplemented by a dazzling array of gilt pasteboard stars.

"Begorra, we'll have no more grumbling about plain cooking in the house. Look at that, now! Can they bate that at the Poodle Dog, wid all their parley voo fixings? Ye'll foind I kin be as Frinch as the bist uv them, d'ye moind that!"

ODE TO A FISH WORM.

UNLUCKY creature! When the cruel hook
Impales thee, ere I plunge thee in the brook,
Thou canst not by an agonizing yell,
The fearful tortures thou endurest tell.
Thou canst not, by thy countenance, express
Thy awful suffering and dire distress.
'Tis only in thy power to twist and squirm,
But I can tell what that dost mean, O worm!
And shall I all this pain inflict on thee?
No; I'll show mercy.—Ha! What do I see
In yonder pool so deep? It is a trout!
A big three-pounder! I must have him out!
For what are you to such a prize, O worm?
Thy hour has come! Get on that hook! Don't squirm!
Ha! You resist me? 'Twill avail thee naught.
That trout still waits for thee. It must be caught—
Oh, drat! I've dropped the worm, and too, by swum,
That cussed hook I've baited with my thumb!
Confound the thing! I've lost that worm, and more,
The trout made off the minute that I swore.

THE ENGLISH SPARROWS.

"So when in bed at morn I lie,
And twist and turn, and vainly try
To get an extra forty winks,
'Tis then, O sparrow! that methinks,
While listening to your chattering song—
More tuneful than a Chinese gong—
I'd like to stroke your downy coat,
And put my hand upon your throat,
And wring your neck—though ne'er were heard
Again your song, dear sparrow bird."
—Boston Transcript.

OH, wad some power the giftie gie us,
To treat the musquito as the musquito treats us,
It would frae manifold sufferings free us,
And give our nails a chance to grow.
—Sandie Stone.

THE EYE OPENER.

The United States Washing Machine, made by Lyman & Co., 104 and 106 John Street, this City, and largely advertised throughout the country by means of circulars and postal cards, is a worthless humbug for all practical purposes. We are constantly receiving inquiries about this thing and trust this notice will be sufficient for at least a month or two.....N. S. Mayes & Co., Sweetwater, Tenn., are again flooding the country with circulars advertising a recipe for making sorghum sugar; Normandy White Corn, Mammoth Spring Wheat, Peach Tomato, etc., etc. In answer to an inquiry, a trustworthy gentleman in that town writes us that no such circulars are distributed in that section, and that the whole advertisement is, *of course*, a humbug.....With the sale of harvest products, swindlers are already sending out advertisements, especially through the West and South, offering glorious chances for realizing fortunes for a small sum entrusted to their care. The alluring schemes are generally based on the same principles as the "put," "call" and "straddle" swindles exposed here at length last Spring except that grain and cotton, and sometimes pork or other products are substituted for railroad and other stock. Of course, any sensible man will have nothing whatever to do with such knaves, however plausible their schemes and the presentation thereof.....An electric lamp for $1, is a Chicago humbug in that the handsome advertisement that sets forth its brilliant merits leads the reader to believe the lamp will be complete on its arrival; whereas it's the glass and stand alone that are sold—and the buyer too. With these is sent another circular offering ready-made electric batteries, or the materials for making them, for an additional sum, the clumsy lamp being perfectly useless without the electric apparatus. The whole thing is a fraud, and "The Scientific Toy and General Novelty Co., who make it, a rascally concern.....Boyd's Electric battery was exposed here as a humbug several times in the Spring and early Summer, yet folks persist in sending us additional inquiries about the thing. Two other humbugs of the same nature are Dr. Rhodes' Electric Transfusing Battery, and "Professor" Cauldwell's Magnetic Galvanic Battery. These bear so strong a resemblance to the Boyd humbug that one would be justified in believing them identical, the *names* of batteries and advertisers alone having been changed. At any rate they all three belong to the same disreputable family.

IDLERS, TO THE FIELDS!

THE professions are full. "There is always room at the top," but in them there is no vacant place which the man of ordinary gifts may hope to fill. Lawyers without briefs, clergymen without congregations, physicians without living patients—certainly we have enough and to spare of these in every city and village.

"Living by one's wits," which has been to many a pleasant and profitable business in times past, is not now an inviting one. Money is too scarce, people are too suspicious, too cautious, too calculating. We want no more merchants. Every village has two where there should be but one, and our cities swarm with bankrupt traders and starving clerks.

It used to be said that "he who has a trade is safe." He was, once, it is true; but everybody knows he is not now. A large percentage of the men now out of employment are skilled artisans, who, through long years of experience have become good carpenters and masons and millwrights and shop hands. They are idle now, not because they are not good workmen or because there is not work to be done, but because machinery is doing the work they used to do.

Statistician tells us there are in use in this country alone 100,000 planing machines, which, when in operation, do the work of 10,000,000 carpenters shoving laboriously the old-fashioned implement for making shavings; in other words, that one of these machines will turn out just as much finished work per diem as 400 men, skilled in that particular form of industry. The same authorities inform us that the number of sewing machines in the country is about 4,000,000, capable of performing the work of 100,000,000 sewing-girls, operating with needle and thread by hand; that a single boot and shoe factory in Massachusetts averages the production of 6,000 pairs of pedal coverings daily throughout the year; that when running full, the 1,300,000 cotton spindles of Fall River manufacture more yarn in one day than 6,000,000 persons could do in the same time, the latter operating with the old-time spinning wheel.

To issue 100,000 copies of a newspaper daily, using the appliances of fifty years ago, would require the making up of 180 "forms," and the services of 7,000 compositors and 1,000 pressmen, inkers, etc. All this makes clothing and houses and reading and other necessaries of life cheap, but it has reduced the demand for skilled mechanical labor to a mere fraction of what it would have been had "the human machine" been left to do the world's work alone.

And now the population of the earth, or of our country at least, must shape its labors to meet the changed condition of things. The young man who stands upon the threshold of active life querying what he shall do, finds, as we have said, the professions full, the stores and exchanges swarming with bankrupts, and the way to the factories and shops crowded with idlers who only want an opportunity to work.

But the fields are not full. If our counters are filled with goods for which there is no demand and our cities are full of houses for which there are no tenants there is no glut of food in any of our markets, and for all which labor can coax from the earth, for everything which the intelligent worker can gather from the soil there is a call. There is one calling which is not full. New Hampshire, which passes for an agricultural State, produces but three-fourths of the food she consumes, and leaves thousands of acres of her soil to grow up to bushes or to return less than half the crops they should. And while doing this, merchants stay behind their counters until the sheriff locks the door, mechanics stand about the street corners and complain because they can get no work, and young men grow into chronic loafers because they can't "find an opening." And what is true of our State is true of others. Isn't it about time there was a new departure, a turning from the factory to the field, from complaining and suffering idleness to cheerful, earnest, food producing work on the farm?—Mirror.

For Women.

CONDUCTED BY MISS RAY CLARK.

VIOLETS.

VIOLETS! violets! bring me blue violets!
Violets wild as my own mountain air;
Bring them from shadow-nook,
Down by the meadow brook,
Some for my bosom and some for my hair.

Violets! violets! bring me blue violets!
Violets wet with the sweet shining dew;
Low where the zephyrs pass,
Gay o'er the growing grass,
Lift they their faces, love, waiting for you.

Violets! violets! bring me blue violets!
Violets fresh from the shadowy woods!
Life holds them slenderly,
Gather them tenderly;
I would have no other gems if I could.

Violets! violets! bring me blue violets!
Violets bright from the far-forest gloom;
She of the golden hair
Sought for them everywhere,
Only to garland herself for the tomb.

So they are dear to me, timid, wild violets!
Dearer than diamonds the costliest are;
Bring them with tender hand
Up from the shadow-land,
Some for my bosom, and some for my hair.

A PEEP INTO MY LIBRARY.

IT is not about books nor authors but about "house millinery" that I would discourse, and if you will but "step into my parlor" gentle reader I will engage to show you a few artistic oddities in the way of decoration.

To begin with, the windows are my especial delight and I have indulged in no end of self glorification over them.

I was sorely puzzled at first as to whether I could possibly get along without window drapery of some sort, and I had nearly decided in favor of linen curtains with antique lace, insertions and borderings, when I was tempted to try my hand at "home-made" stained glass.

I invested in some sheets of patented silk paper printed with brilliant oil-colors—which comes for the purpose—and pasted them on the window glass. I had selected small designs in which crimson and yellow predominates. The effect is exquisite and very closely resembles that of costly colored glass. I have neither blinds, shades, nor curtains and yet the room is never unpleasantly light.

Near the window stands a small table over which is thrown a table *scarf*. This is a half yard wide and a yard and a quarter long, made of old-gold satteen with a band of plush at each end embroidered in English crewels. On the table is a Marguerite banner-screen made of old-gold, satin-finished stuff and represents Marguerite straying beneath the forest trees, picking the petals from her daisy, while the softly blended lights of green and gold fall around her slender form.

The mantel lambrequin is made to match the table scarf, as to materials and colors. In this, the satteen has the story of Cinderella worked in outline in panels with the plush between.

I have a book-case of course but for that I am indebted to the cabinet maker. Not so, however

with the curtain for the open book shelves. This is of crimson brocaded silk. The hem is finished with a facing of butter-cup, yellow silk, from which spring tufts of conventional buttercups embroidered in floselle.

My scrap basket trimming is made of linen momie cloth with a drawing outlined on it, and finished with narrow velvet fringe and small balls. A bracket which is ornamented with quilted blue silk, crimson velvet and a fringe of blue crimson and old-gold, holds a small engraving "From an Unknown Shore" which represents a lovely baby afloat on a shell.

Another bracket has an "ace of clubs" which is made by grouping three brilliant little open Japanese fans stem to stem. For the rest there is nothing strikingly original about the room, except possibly the cover of a large table which stands in the center. It is of crimson cloth edged with heavy bullion fringe of the same shade. Around the border is inserted a broad band of crimson plush closely worked with an arabesque of gold colored silk. In any of the foregoing decorations linen and cloth and crewels may be effectively exhibited for the richer and more expensive materials I have employed.

To some it may appear that by confining the hanging to one of two colors, viz: old-gold crimson, the effect is monotonous. This not at all to be desired result, is obviated by the brilliant and varied hues of the embroideries. In another letter I may have something to say of decorations for napery and for infants' bed spreads.

ART AMATEUR.

SMALL CONVENIENCES.

"I MUST give up getting a new parlor carpet again this year," said Phebe, rather discontentedly; "I did hope to see my way clear to pay for it this Fall, but it seems as far off as ever."

"Well," said cousin Abby, philosophically, "just think how much hard work it will save you; it's dreadful hard work making up a carpet."

"I'd be willing to undertake it for the satisfaction afterward."

"I know," said Abby, consolingly, "that it is a real, solid comfort to put down a new carpet, but, still, child, you can get a good deal of satisfaction out of much smaller possessions. Just give me a quarter to invest for you to-day when I go into the village, and see if I don't bring back what will in the long run give you as much comfort as a new carpet."

Phebe was amused and a little curious to see what Abby would bring, so she handed out the quarter of a dollar, with a laugh, and told her she expected to be made rich on the proceeds of that sum.

Abby had been helping around the house for a week and saw what a dearth there was of small conveniences She walked at once to the "five cent counter," a wonderful institution which has sprung up like magic all over the land within the past two years. She remembered the handleless shovel at Phebe's house and laid out a new article of that description the first thing. She thought of her scorched fingers trying to toast bread that morning, and a toasting-fork was added. "When Phebe has mashed potatoes once with this wire potato-masher, and sees how light and nice it makes them, she will never pound them into a salve again with that old rolling-pin or wooden masher." Then the long handled skimmer was just what was wanted to dish up their big boiled dinners. Dishing-up had always been such a difficult business with only a saucer and fork to manage it with. A great iron spoon finished out the quarter of a dollar; but there were so many useful articles still to be had that were so much needed that cousin Abby laid down another quarter and selected five more.

They had a good deal of fun over the purchases, and when they were all hung up in handy places Phebe said she felt as if she had just had a tin wedding. Everything came in use almost every day and meal. "I don't know how I got along without them so long," she used to say wonderingly; "I guess you are right about them and the carpet, Abby. I can do without that, but I don't see how I could without these things."

It is these "littles" that count more than one supposes in the wear and tear of life. Everything that makes labor lighter is worth having.

MRS. J. E. McC.

THE CHILDREN OF THIS GENERATION.

ANNIE L. JACK.

IT was my lot the other night, to sit for an hour listening to the glowing picture drawn by a city young man of the wealth, prosperity and pleasures of a city life. He talked of his thousands and his tens of thousands, and filled his audience with little less than awe as he rolled out the sentences that told when he lost $15,000, and how soon he re-made $25,000 in another authorized speculation.

The country youth who toils early and late with faithful diligence to help his father who is "not so strong as he used to be"—was filled with a restless desire to have his quiet surroundings, and try *his* chances in the busy life of the city. The harm of such exaggerated talk is immense in the instance I have cited, as in many others, and it is only when too late that he may in some future day

"Close his eyes to his garish rooms,
To dream of meadows and clover blooms."

This is no fancy picture; the fact, stubborn and real, is often enacted as in the home I have mentioned. Young men and boys with grand ideas of what may be, do not take into consideration the free, independent life they lead, the country pleasures they enjoy, which become luxuries often in the city, the pure air and purer food, the wealth of field and river and tree, the priceless boon of health, that no city person can so well enjoy, with many hours of leisure untrammeled by conventionality or sham. But the glamor of the golden calf is upon him. Home, health, mother and a thousand associations fade and are as nothing if he becomes infected with the disease of money getting, and allows the glowing accounts of city dwellers to bias his mind.

The young man from the city leads a charmed life, the cut of his coat is in the latest style, so is the ring on his lily hand. He will show you a blister if he takes an oar or a spade for five minutes, expressing lofty disdain of "the country," converses freely on business that involves thousands. All these things are enough to unsettle a well-balanced youth, who, while well read, and conversant with the latest news, and neither awkward nor a boor, yet feels that he is being left behind in the race for wealth, the one object in life that appears to have any charm for the children of this generation.

WORLDLY MATTERS FOR GIRLS.

Entertaining.

"LET'S pretend" we live in the country; it is Winter; we are going to have a small company and we want them to have a particularly nice time, because we have been out frequently this Winter and haven't enjoyed ourselves for various reasons.

In the first place, let us have plenty of light, everything will be so much more cheerful and everybody will be in so much better spirits than if the room is in semi-darkness; then we will try and be as bright and cheery as the room. We must be sure to invite Tom C., because he is so jolly and witty, and Miss M, because she sings and plays, and as long as she is moderate in both she will be an acquisition. We will invite three or four couples beside.

We will have our refreshments early, so if there is any stiffness in the company it will certainly pass away.

If any of the party care for Euchre or Whist we will have the cards handy; then, if the rest of the company become tired of music and conversation, let's propose French charades—a little of that; then Twenty Questions—What's my thought like? Crambo, Borrow and Return, and anything else we can think of, and if they don't have a good time it will be their own fault.

Watermelon, archery parties, and picnics are just the thing now. Invite your city friends, if you have any, and in the Winter, if they play fair, they will return the compliment and give you a taste of city life.

MISS M. D.

ABOUT WOMEN.

ELIZABETH STUART PHELPS has a summer cottage of her own on Cape Ann. She is said to be annoyed by the staring of visitors who are anxious to see a live authoress.

THE lesson enforces itself. Let every young lady heed it. Miss Tellie Mateer walked with a gentleman at Mount Jersey, Pa., on Sunday, and was burned to death by a spark of his cigar.

MISS ELIZA JANE CATE was recently elected a corresponding member of the New Hampshire Historical Society—the first woman who ever received that honor. Miss Cate is a magazine writer.

QUEEN VICTORIA is so pleased with Col. Chester's book on the "Westminster Abbey Registers" that she has given him, in acknowledgment, a copy of Martin's "Life of the Prince Consort," with an autograph inscription in each volume.

MRS. JENNIE M'GRAW FISKE, the wealthy bride of Professor Willard Fiske of Cornell University, is building an elaborate new house at Ithaca. It is to be of the Medina white and Ohio sandstone, and will cost between two and three hundred thousand dollars.

ATLANTIC CITY is interested in a musical prodigy, Miss Bella Spencer Wiel, ten years old, who, in an admirable manner, plays from memory the entire score of "Il Trovatore," as arranged by Gottschalk. The young lady was taught her knowledge of the art at the Convent of the Visitation, Georgetown, D. C.

MRS. BROWN, the mother of "Artemus Ward," is mentioned by the Boston *Journal* as a bright and busy old lady of seventy years, and now living at Waterford, Me., where her son is buried. She has a great love for gardening. Her pride and affection are pleasantly shown when visitors come to look at the house where "Artemus" was born.

MRS. MARY CLEMMER is the guest, for a week, of Mrs. Dahlgren, at her beautiful Summer home on South Mountain. The feeble health of Mrs. Clemmer's father, who makes his home with her, precludes the idea of her leaving Washington for an extended sojourn, but her handsome house on Capital Hill is at all seasons airy and attractive.

HINTS.

TO CLEANSE THE TEETH.—A good way to cleanse the teeth is to dip the brush in water, rub it over genuine white Castile soap, then dip in prepared chalk. A lady says: "I have been complimented upon the whiteness of my teeth, which were originally anything but white. I have used the soap constantly for two or three years, and the chalk for the last year. There is no danger of scratching the teeth, as the chalk is prepared, but with a good stiff brush and the soap it is as effectual as soap and sand on a floor."

WASHING THE FACE.—Few people would think that there are several wrong ways of washing the face and but one right Dr. Wilson's directions are: "Fill your basin about two-thirds full with fresh water; dip your face in the water, and then your hands. Soap the hands well, and pass the soaped hands with gentle friction over the whole face. Having performed this part of the operation thoroughly, dip the face in the water a second time, and rinse it completely. You may add very much to the luxury of the latter part of the operation by having a second basin ready with fresh water to perform a final rinse."

BORAX.—Lady readers who have not tested the magic properties of borax have been losing a great help and comfort. If once used you will never be without a bottle on your toilet table. It removes stains and dirt from the hands better than soap, and at the same time softens and smoothes the skin. It is splendid for washing the hair, and will, without injury, cleanse brushes and combs in a few moments. For washing purposes it saves both soap and labor. It will extract the dirt from articles of delicate texture without rubbing, it being only necessary to put the articles to soak with a solution of borax over night, and need only to be rinsed in the morning. Two tablespoonfuls of pulverized borax dissolved in a quart of water, to which water enough is added to cover a pair of blankets, will cleanse them beautifully. It also saves great labor in washing paint. It is said to drive away ants and roaches, if sprinkled on the shelves of safes and pantries.

Ladies, do you want to be strong, healthy and beautiful? Then use Hop bitters.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN THOUGHTS FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

THE Summer of 1880 is among the things of the past and Autumn is upon us. Once more we settle down for the long Winter evenings and the busy mother begins to think of fingers and toes that must be covered from the frost, of garments that must be re-made, turned and enlarged or cut down for the younger members of the family. So life is one continued preparation—always looking forward, if our aim is right, for a brighter future, the only guiding star to our wearied souls. The future! thank God we do not know its dark side! We see only the brightness, and hope for the best. Meanwhile we must be up and doing. A slight tingle of frost, the comments of the children on stiffening grass at sunrise, the delight with which they bring in the first thin crystal cake of ice, all serve to remind us of duties to be done. The pickles must be made up, the last preserves packed away, and then every spare moment is spent in the work I have mentioned. In a family of girls it is only a duty to teach them to cut and fit garments for the younger ones. No matter if they do spoil a bit of cloth now and then, or make a garment that is not exact in fit, they will do better next time, and it is only practice that makes perfect. "I would give all my Latin and Philosophy" I have heard a lady say, "if I could cut and make my children's garments." I am not one to advocate close application to the needle, especially in neighborhoods where some poorer neighbor may be benefited by the work given; but "knowledge is power" in this as in every other department, and there is nothing in which economy is better seen in domestic affairs than in the sewing of the inmates. I always feel more like this kind of work in Autumn. There is a quiet, settled air about everything and neither oppressive heat, nor piercing cold to influence one. While on this subject, I would say that no mother should ignore the use of flannel in all possible garments for children in cool weather, a necessity that is not always felt, but should be in this variable climate. Warm, bright, woolen garments are a saving every way, but in nothing more than in the health of those who wear them.

SUGGESTIONS ON HOUSE-BUILDING.

THE good "RURAL" came to-day and in it I see Mrs. B. is going to build a new house, and asks for suggestions. If possible, have a closet opening off from every bed-room and one off from the living-room. Let the closet doors swing outward into the room; have a shelf put up in the closet over the door as long as you can have it and wide enough to hold your band-boxes, etc. In arranging your bedrooms have one large enough to hold two beds; this is especially convenient in case of sickness, or where there are small children in a family. One of the beds might be a three-quarter size. I have two such in my family, and they are very convenient. Calculate so as to have plenty of room to stand up your beds, so that a window or even part of one will not be against the bed. A window throwing light directly into the eyes of the sleeper is undesirable. If you cook and eat in separate rooms, have a china closet built in the wall between the two rooms, with doors on both sides, so that you can set the table without carrying dishes from another room. If you eat in the kitchen, have a cupboard built in your pantry with tight doors to keep dishes in. For eatables a movable cupboard with wire-netting sides and doors is best. Calculate spaces for your larger pieces of furniture, so they will not come against windows—have a place for the baby's crib out of the way of drafts or strong light. Have the organ stand well away from the stove, and, if possible, against an inside partition wall, your writing table and book-case where the light will fall over the left shoulder of the writer, and your lounge or sofa where the little ones can play on it and be warm in the Winter. Try to have everything arranged so as to save steps, and have the house pleasant inside. Wishing Mrs. B. success and pleasure in her enterprize, I am,

Respectfully, MRS. H. H. SWEET.

LIGHT REFRESHMENTS FOR EVENING PARTIES IN THE COUNTRY.

Saratoga Punch (strictly temperance). Grate the rind of three and squeeze the juice of six lemons; add water the same as for ordinary lemonade, sweeten to taste; then add six eggs, yelks and whites beaten separately, and serve. This makes a delicately frothy drink, which everybody appreciates. *Pop Corn Balls.* Have ready a six-quart panful of nicely popped corn; boil one pint of New Orleans molasses, one-half cup of sugar, and a tablespoonful of butter, until it hardens when dropped in cold water; then stir in the popped corn and with buttered hands work into balls, and put away to cool. *Saratoga Cake.—White part.* One-half cupful of butter; one and one-half cupfuls of white coffee sugar; one-half cupful of sweet milk; two cupfuls of flour; the whites of three eggs beaten to a froth; a heaping teaspoonful of baking powder; flavor with lemons; bake in two round tins. *Fruit part,* a quarter of a cupful of butter, one cup brown sugar, quarter cup sweet milk, one cupful of flour, one-half cupful each of raisins and currants, chopped fine, two even teaspoonfuls of baking powder, the yelks of three eggs Bake in one round tin. Make icing with the whites of four eggs, sugar and lemon flavoring. Place on cake dish—in the following manner—first, a layer of white, cover with icing; then the layer of fruit cake, cover also with icing; then the other layer of white, cover with the rest of your icing. A bunch of flowers placed on the cake makes a pretty finish.

MISS M. D.

DOMESTIC RECIPES.

Mushrooms.

TO BROIL.—Peel and wipe with flannel those that are large and fresh, cutting the stems close. Dip into melted butter, season with pepper and salt, cover and let stand from thirty minutes to an hour. Then broil on a fine gridiron over a clear fire; butter again and serve at once. If you please, squeeze over them a few drops of lemon juice.

TO STEW.—Take small ones, of uniform size, rub clean and white with a wet flannel, and cut off the stalks. Put into a porcelain saucepan, just cover with cold water, salt, bring to a boil, then stew gently 15 minutes. Pour off a part of the water, stir in a half tablespoonful of flour rubbed smooth in a tablespoonful of butter, boil a minute or two, add three tablespoonfuls of sweet cream, draw to the back of the stove, stir a minute or so, then serve.

TO BAKE.—Wipe and rub clean, cutting off nearly all of the stalk. Arrange, tops-down, on an earthen pie-dish, season with pepper and salt, drop a bit of butter upon each, and bake in a moderate oven for about thirty minutes. Baste several times with butter and water, that they may not be dry. Serve with drawn butter, to which has been added the juice of a lemon.

TO STUFF.—Skin or rub clean ten large mushrooms and cut off the stalks. Dress, then chop fine eight large mushrooms and one eschalot. Put two small spoonfuls of butter in a frying-pan, let it become hot, then in it brown the chopped eschalot and mushroom. Season with pepper and salt, and stuff the centers of the 10 peeled mushrooms with this mixture. Place on a baking dish, sprinkle fine bread-crumbs over all, and bake half an hour in not too hot an oven. Baste with a little melted butter and water. Good with lemon juice.

TO PICKLE.—Use button mushrooms, clean with flannel, cut off stalks, throw into salted hot water, and boil *gently* 10 minutes, drain, turn into a clean cloth and cover with another. Put into bottles, with a blade or two of mace and a dash of Cayenne, and cover with white vinegar. Seal tightly.

CATSUP.—Put alternate layers of salt and cleaned mushrooms in an earthenware dish, using one-fourth pound of salt to each two quarts of mushrooms. After six hours break into small bits and set where it is cool for three days, stirring twice a day. At the expiration of the time strain the juice and to each quart add one-half ounce each of ground allspice and ginger, a half teaspoonful of mace, and a teaspoonful of Cayenne pepper. Put into an earthen jar, set into a kettle of boiling water and boil five hours. Take out, pour into a porcelain kettle and boil gently half an hour longer. Let it stand in a cool place 24 hours to settle. Pour off the clear liquor into small bottles, cork and seal tightly.

The greatest appetizer, stomach, blood and liver regulator on earth—Hop Bitters.

News of the Week.

HOME NEWS.

MONDAY, Sept. 13, 1880.

THE steamer Vera Cruz, plying between New York and Vera Cruz, Mexico, was overtaken by a terrible gale off St. Augustine, Florida, on the 28th ult. and went down, and all but 11 of the 82 persons on board were lost. The vessel was supposed to be perfectly safe and capable of weathering the severest gales, but there are reports of neglect to perfectly trim the ship in loading the cargo..... The Illinois Central Railroad has paid $36,563,344 in dividends and reduced its funded debt to $10,300,000 in 20 years.....In a patent suit instituted by the Washburn and Moen M'f'g Co. against Haish, with regard to barbed wire fence, it has just been decided in favor of the W. & M. M'f'g Co, that, 1, A person has no right to mark his goods with any words or terms indicating that they are manufactured under a patent which he does not own and has no right to use. 2, A defendant, having so marked his goods, will not be allowed to defend himself by denying the validity of such patent.... John Shenk, a well-known farmer in Conestoga township, Pa., committed suicide by hanging on the 7th.....Martin Hagens and John Reesman, of Altoona, Pa., were run over by cars, near Petersburgh, on the 5th and killed.....Albert Griswold, a prominent citizen of Pike County, Pa., was killed by the cars at Rowland on the 7th.

The Palisades Hotel at Oakland, Cal., was burned on the 8th. Loss, $50,000.....Mrs. Harvey Holmes, of Monticello, N. Y., drowned her child on the 7th, while laboring under temporary insanity.....The boiler of a mill on Lowenburg's place, at Lake Concord, Miss., exploded on the 9th, killing William Poole and scalding four negroes.....Captain Alexander M. Hamilton, who committed suicide by shooting at Harrisonburg, Va., on the 9th, was a brother-in-law of Cyrus McCormick, of Chicago.....R. Q. Adams, the defaulting ex-Postmaster of Deadwood, D. T., who recently escaped from custody after conviction of embezzlement, has been captured at Fort Sully.....The hurricane of the 29th and 30th ults. was very destructive in the Bermudas, incalculable quantities of fruit being destroyed, in addition to much damage done to buildings and vessel property.

There was a heavy storm at Petersburg, Va., on the 8th. The custom house was struck by lightning and several persons were stunned. The Galt Street Presbyterian church was damaged. A number of employes of the Western Union Office were stunned. A bookkeeper in a bank was knocked from his seat, and his pen was melted by lightning. A number of trees were uprooted. The roads in the adjacent counties were washed out. The wires between Petersburg and Richmond were prostrated.... ...Dr. Thomas E. Williams, a promising young physician of Texas, was run over by a railroad train at Meridan, Miss., on the 6th, and instantly killed.....On Sunday night Homer Richards, formerly Captain of the Leadville (Col.) police force, fatally shot Edward Jones as the result of an old quarrel.....Fire destroyed Simpson's knitting factory at Toronto, Ont., on the 5th .....Calvin Warren was killed by Bruce Green in a fight on at Lakeman, Mo., on the 6th .....The annual session of the American Social Science Association opened at Saratoga on the 6th.

The American Gynecological association began a three days' session in Cincinnati on the 6th..... Two short line railways will soon connect the twin cities of St. Paul and Minneapolis with double steel tracks and half-hourly trains, which are expected to cover the ten miles in fifteen, ten or even seven minutes.....Eight prisoners confined in the Clinton county, Ia., jail, during the absence of the jailor, overpowered and gagged the turnkey and escaped. They carried off the turnkey's revolver and pocketbook.....Colored men were drawn on the grand and petit juries at Louisville, Ky., on the 6th for the first time.....A whirlwind at Richmond, Va., on the 5th, did great damage, and another storm prevailed there on the 8th.....The Free Thinkers' National Convention has just closed a five days' sessionat Hornellsville, N. Y. The average attendance was about 1,000. Nearly every Northern State was represented, and some of the Southern States and Canada. The principal speakers were Colonel Robert G. Ingersoll, Hon. Elizur Wright, George Cheyney, Parker Pillsbury, Amelia Colby, J. H. Burnham, Thaddeus B. Fakeman, C. Fanny Allen and Lucy N. Coleman. It was considered the largest and most important convention of the kind ever held in this country.

POLITICAL.

Arkansas held a State election on the 7th, electing the democratic State ticket and defeated the proposed constitutional amendment.....The State election was held in Vermont on the 4th and gave an increased republican majority for the State ticket.....

THE WORLD'S FAIR.

The subscription books for raising the first one million dollars necessary to the perfection of the organization of the world's fair exhibition at New York city in 1883, will be opened at the Farmer's Loan and Trust Company in New York city on September 15th. Already enough has been ascertained to show that the amount will be easily obtained. In the selection of a site there has been a very earnest discussion of the advantages and disadvantages of locations to be had, and there seems to be but little further to be said upon that subject, there being one or two points of acknowledged advantage over all others, and the general conclusion seems to be that the site will be on the shore and perfectly accessible by both railroads and river craft of all kinds, probably at Port Morris.

The bogus medical diploma manufacturer, Dr. Buchanan, has been arrested and was on the 12th safely lodged in jail at Philadelphia.....Though the population of Ohio has not yet been made known, it has been estimated, from the partial returns published, that it will reach about 3,200,000. .....The growth of Illinois since the admission of the State in 1818 has been marvelous. The first railroad which brought into the State either passengers or freight was after 1850, or less than thirty years ago, and during these thirty years the population has increased from 860,000 to more than 3,000,000.

The Post Office department has received telegraphic advices from Gainesville, Fla., stating that a severe storm swept over the central portion of Florida on the 1st and 2d instant. Post roads were flooded, bridges washed away, and mail communication seriously interrupted between Ocala and Tampa, on the west coast of Florida..... ....Leadville bullion shipments this year, to September 1, aggregate $10,165,000. For the month of August, $1,296,352... ....The telephone has only been invented five years. Yet its owners can afford to hold a convention at Niagara Falls. .....Unofficial estimates of the census of 1880 show a population of about 50,000,000 for the United States, an increase of 11,700,000 since 1870 or about 30 per cent.

FOREIGN.

In Ireland the anti-landlord and anti-House-of-Lords agitation is still active. Mass meetings of the peasantry are being held in different parts of the country, at which violent speeches are constantly inflaming the public mind. Outrages in the shape of attacks and threats against resident landlords and still more against the agents of absentees are matters of weekly, yea, of daily or rather nightly occurrence. Those who take the farms of evicted tenants are ostracised by the neighbors, threatened with a dire fate and frequently flogged or otherwise maltreated, while their stock are often killed or maimed, and their crops injured. The excellence of the harvest seems to have very little effect upon the popular passions, though harvest work just now, by giving employment to the people, lessens the number of public meetings.

In Turkey there has just been another change of ministry—but these are so common that they excite little interest. Kadri Pasha, who last June succeeded Said Pasha as Prime Minister, has been replaced by his predecessor and all the Cabinet has been renewed. The new ministry is considered intellectually inferior to the old, and it owes its origin to mere court favor. The Powers have delayed that naval demonstration in Turkish waters to give the Porte an opportunity to surrender Dulcigno to Montenegro. Then the cession of territory to Greece will be the main topic of dispute, after which England is likely to insist on internal reforms in Asia Minor and Europe.

In France the agitation about the religious societies still continues. The Societies have signed an agreement to confine themselves strictly to religious matters and not to speak against the present government, but the extreme Republicans insist on their expulsion and advocate the abolition of the concordat with the pope. In Germany the great annual military manœuvers which are to take place near Berlin absorb public attention in the Fatherland and excite great notice elsewhere. They will be of unusual importance. Cologne cathedral is just about to be completed, the foundation having been laid more than 600 years ago. There was a tradition that it never would be finished. Its cost is $10,000,000. The Emperor and all the court will attend the celebration of its completion. What is German news with Bismarck's name left out? Well, Bismarck is taking a holiday. In Spain the birth of a young princess has disappointed millions who hoped for a prince. In the absence of such in future this baby may in time be queen of Spain, if she survives and revolution doesn't exclude her.....Forest or brush fires are doing an immense amount of damage in the province of Montreal, Canada.

In England the Hares and Rabbits bill has been passed by both Houses of Parliament, and must afford considerable relief to farmers. It allows them to kill ground game on their own land at certain seasons of the year and hours of the 24. It is thought that it is only the first step towards the final abolition of the game laws. Strikes are again commencing among miners and cotton spinners. In order to maintain her supremacy in foreign markets it is absolutely necessary that Great Britain should undersell other nations, as the reputation she used to have for better goods, is fast disappearing owing the wide adulteration of manufactures now practised. To sell cheaply, it is necessary to make cheaply and this can only be done by lessening the wages of the workmen; for, of course, lessening the profits of the employers must not be thought of—unless under necessity and then only for as short a time as possible. There was a terrible mine explosion at Sheaham colliery in the north of England, in which 130 lives were lost, by an explosion of foul gas in the pit which afterwards took fire in several places, while upwards of 200 men were working below. Fifty-nine were saved and the rest fright fully mutilated and killed along with some 300 horses used to haul coals down in the pit galleries. Lady Burdett-Coutts is still unmarried and has been made sick by the prosecution to which she has been subjected.

.....The German authorities are purchasing largely in England for cavalry mounts: at the great horse fair of Horncastle over 1,200 were bought, ... The British arms have been overwhelmingly triumphant in Afghanistan. Ayoob Khan has been utterly routed by Gen. Roberts after his splendid march from Cabool, during which it was prophesied he would be hampered and delayed, if not defeated, by guerrilla bands of Afghans. He marched rapidly, however, and easily beat off all assailants. A couple of days after his arrival at Candahar he attacked the Khan, who had withdrawn to a strong position near the city. The British outflanked him, however, and after a couple of hours' fierce struggle drove his army pell-mell, captured all his cannon, and slew vast numbers of his fleeing followers who were pursued for 20 miles by the English cavalry. Ayoob himself fled early in the contest with a handful of men, and started for Herat whence a couple of months ago he hopefully started. According to this morning's cablegrams his former adherents there have revolted, and he will meet with either a very cool or an exceedingly hot reception. The trouble now is what to do with Afghanistan—abandon it entirely or hold on to a part of it?

[Chicago Tribune.]

Mr. Ira Brown, the enterprising real estate man states that he could and would say a good word for the St. Jacobs Oil, which had cured him of a severe attack of inflammatory rheumatism that all other treatments had failed even to allay.

AGRICULTURAL NEWS.

At Exeter, England, a young farmer has just been sent to jail for a month for shooting a rabbit on a farm of his own occupation, while a man brought before the same bench for brutally ill-treating his wife was fined five shillings.....Practical plowing by electricity is now practiced on a beet-growing farm in Des Maine, France.....The vintage of the Rhine is said to be only eighty per cent. of the usual yield..... Two American vessels loaded with grain have arrived at Reval, Russia..... The French agricultural authorities estimate that the French harvest will be a good average; those of Roumelia, Upper and Lower Bavaria, 25 per cent.; Podolia and Suabia, 20 per cent.; South Italy and Wurtemburg, 15 per cent.; Bessarabia, 10 per cent.; Hungary, Poland and Belgium, 5 per cent. above the average. The harvests of Prussia, the Palatinate, Baden, Switzerland, Denmark, Sweden, Norway, Central Italy, Holland, South Russia, Servia, and Egypt will be up to the averages, and those of Austria and Mecklenburg 5 per cent. below; Great Britain, Ireland and Saxony, 10 per cent.; Courland, 20 per cent.; Gothland, 25 per cent., and Central Russia 40 per cent. below the average.....The August rainfall in England was under an inch, against eight and five inches respectively in the two preceding years..... The Irish correspondent of the London Times writes: "The potato crop is simply magnificent. What few men can recollect seeing is now seen on all hands—fields beginning to wither naturally, without a sign of disease. This is chiefly owing to the change of seed, the 'Champions' being planted on all hands from east to west, and fully bearing out the good things spoken of them. The price of oats and cattle has doubled since last year, that of pigs more than doubled. Oats are a good crop, and turnips and mangolds never looked better."..... A dispatch from Cairo says the cotton crop of Egypt is about 15 days late and it is estimated to be 22,500,000 pounds less than last year. This is equivalent to 56,250 bales of 400 pounds each, which is an insignificant amount in the world's supply.....The London Standard's correspondent at St. Petersburg telegrapns that competent authorities say that the Russian harvest is the worst since the famine of 1873; but it does not follow that Russia will have no grain to export. The latest reports from Odessa, which is the main exporting center, are to the effect that the crops were pretty good in that section of the country. .....The London Gardener says the fruit crop in England is a failure, especially apples, except the cooking sorts .....The Wartha has followed the grim example set her by the Odor, the Elbe, and other German rivers, which, overflowing their banks, have wrought destruction over an immense extent of country. The damage inflicted by floods in Upper Silesia is terrible..... Canada's surplus of oats is estimated at 7,500,000 bushels.....Dr. Law of Cornell University, has found Texas fever among a herd of cattle at Oswego, N. Y. Ten cows had died before the 6th inst. .....It is believed that the tobacco crop of Pennsylvania will reach the enormous value of $8,000,000 the present year. Lancaster and York are the two leading tobacco growing counties ....The wool clip of California this year is estimated at 35,000,000 pounds, being a heavier yield and far more profitable than that of any previous year.....The seven colonies of the Australian group now hold about 70,000,000 sheep.....The crop of cranberries in Wisconsin is reported to be only fair, owing to the high waters prevalent during a good share of the season. The crop for the State is estimated at about 30,000 barrels..... Pennsylvania has expended thus far nearly $4,500 in suppressing pleuro-pneumonia, of which sum $2,365 were paid for killing 150 animals infected with the disease. Over six thousand examinations were made, and the special agent is said to have traveled nearly 11,000 miles in the performance of his calling. Maryland has been considered the principal source of infection, but as the State has now in operation a law for the suppression of the disease similar to that in force in Pennsylvania, it is believed that its spread in that State will be effectually prevented .... The receipts of grain at Montreal since January 1 to Sept. 1, by rail and canal, amounted to 13,245,000 bushels, a gain of over 20 per cent. compared with the corresponding period last year. The shipments were 14,394,000, against 9,661,000 for the same time in 1879.....Among the fish of the United States the cod comes first in money value, the salmon second, the mackerel third, and then the menhaden. In weight the last stands highest. Its chief use is for the manufacture of oil and fertilizers.....The Crow Indians about Keogh, Montana Territory, in recent interviews with Secretary Schurz, have expressed a desire to go on a Reservation, take to farming and become permanently settled.. ....Vennor says he already foresees "very early and severe cold."..... Experiments in raising sugar-beets are being made in Hartford Co., Md., where the soil is said to be excellently adapted to raise beets of the highest sugar-productive quality. The nearest factory, however, is at Wilmington, Del., and an effort is being made to start one at Havre de Grace.....The silk works at Patterson, N. J., have orders for all the goods they can turn out. So have the mills of Mr. Ilschner, at Kinderton, Philadelphia, Pa., and Mr. Huber's at Germantown. Large new silk works are being erected at Hawley, Wayne Co., Pa.....A late Inman steamer took to Liverpool 1,200 barrels of apples. The export of fruit is unusually large this year.... The amount of ground game *sold* in England seven years ago was estimated, from testimony taken before the Committee of the House of Commons, to be about 10,000 tons. The other day during the debate on the Hares and Rabbits bill, it was said that 40,000 tons of those animals were annually killed as game.... ...The late storm which destroyed the steamship Vera Cruz is reported to have injured the orange crop of Florida about $1,250,000. Besides destroying or greatly injuring the trees in many groves, it swept off the fruit over a large area.

THE WABASH RAILROAD ENTERS CHICAGO AT LAST.

THE Supreme Court of Illinois, on Sept. 6, decided the long-contested case of E. M. Dunbar against the Chicago and Western Indiana Railroad, reversing the decision of the lower court, and dismissing the case. Dunbar has been the representative of a number of competing railroads hostile to the entrance of the above road into the city, and the road considers this decison a final disposition of the litigation, and will immediately begin to extend its tracks to Van Buren Street. The Wabash Road has the right of running its trains over these tracks into Chicago, so that this popular railroad has now added another link to its length, which enables it to do a great deal of business connected with the fairs this Fall. It can now carry goods and passengers either to the Illinois, Indiana and St. Louis fair from Chicago, Quincy, Toledo, any of the above cities, and all points along its trunk line. This road is very favorably known for its fast time, fine cars and excellent freight facilities, and will doubtless be largely patronized by those who have goods to send to the fairs or are going thither in person. The offices of the Wabash railroad in this city are at 277 Broadway where full information can be obtained.

Forgetfulness of People.

We would not, by enticing headings and other devices lead you into reading of the virtues possessed by Pierce's Celebrated Medicines were it not that we are aware of the forgetfulness of people, and that must be our excuse, dear reader, for again telling you that Dr. Pierce's Golden Medical Discovery is without an equal as a blood-purifier. It cures all humors from the common blotch, pimples, or eruption, to the worst scrofula, fever sore or ulcer. Dr. Pierce's Pellets are a pleasant and efficient cathartic. Sold by druggists.

ST. CLOUD HOUSE, Chicago, Ill., Jan. 20, '80.

HON. R. V. PIERCE, M. D.:—Dear Doctor—I have been using your Golden Medical Discovery and Pellets for liver complaint and general debility. It is impossible to express the gratitude I feel. It is simply wonderful the effect your medicines have had upon me. I am in every way a thousand per cent. better. I am, yours gratefully,

J. C. DAVIDSON.

THE best biographies in the English Men of Letters, series—a veritable treasure-house of biography—which a recent writer describes as "contemporary men of letters on their predecessors"—are added to the Acme Library of Standard Biography, published by the American Book Exchange, New York. Ten lives are issued in two volumes, price forty cents each; at which rate each biography costs eight cents, instead of 75 cents, as heretofore. The lives selected for re-issue are Dean Church's Chaucer, Prof. Ward's Spencer, Dr. Pattison's Milton, Goldwin Smith's Cowper, Prof. Dowden's Southey, Mr. William Minto's Defoe, Leslie Stephen's Dr. Johnson, William Black's Goldsmith, R. H. Hutton's Scott and Anthony Trollope's Thackeray.

Interest in the standard favorites of fiction is by no mean diminished by the multitude of new stories that are called for in this novel-reading age. The American Book Exchange, of New York, has just issued new editions, in long primer type, and in duodecimo form, of these standard and instructive novels, Scott's Ivanhoe and Bulwer Lytton's Last Days of Pompeii. Their reappearance in such a cheap and handsome edition (50 cents each) is a good indication of the healthy literary tastes of the great army of readers who look to the American Book Exchange for literary supplies.

Winter Butter.

Let a farmer divide his white Winter butter into two lots, while yet in the form of cream, and for one make use of Perfected Butter Color, made by Wells, Richardson & Co., Burlington, Vt., while the other goes to market without color, and he will discover on what course his interest depends. This color gives the fine, rich, golden yellow of first-quality June butter, and is not tinged with the dull red tint, objected to in most butter colors.

Thousands of ladies have found sudden relief from all their woes by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND, the great remedy for diseases peculiar to females. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets. Sold by all druggists.

Hop Bitters has restored to sobriety and health perfect wrecks from intemperance.

Burnett's Cologne received the highest award at the Centennial Exhibition. It is filled in elegant bottles—glass and cork stoppered, and basket covered—and is for sale by all first-class Grocers and Druggists.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Sept. 11, 1880.

BEANS AND PEAS.—There is a fair demand for white beans, but under free supplies prices are more or less limber. Old crop lots are being hastened forward so that new may not shade them later on. Old, however, always hold a trade until good curing is assured. It is thought the new crop will turn out well though a portion of the season has been dry for growth. A few new mediums have shown, but commercial parcels are not looked for until the end of the month. Red beans are dull and pressed for sale. Green peas quiet at $1.50@1.60 for old and new Wisconsin, the latter a jobbing rate for new.

BEESWAX.—There is little doing, and the market is unsettled; quoted at 23 to 24½c. for Western and Southern.

BUTTER.—The Fall opens most favorably for butter. Stocks are small, receipts are manageable and good qualities will now arrive in lines that will accommodate all classes of trade. Steady shipments are deemed advisable so that no outlet may be killed. The crop of late years has been certain to warrant holding supplies away from positive distributing points. At the moment fine butter is not plenty and prices have advanced. Still there is a good supply of useful grades that sell down to popular rates. The wants of the week begin to enlarge with the return of excursionists. A few State dairies are selling and an early quotation may be looked for. Western butter is running poor as an average. Many of the fine lines that used to reach New York are now absorbed at points between the West and here.

Creamery, best State, 30c.; Western, 29c.; good to prime, 26@28c.; fair to good, 25@26c.; sweet cream, 25@28c.; State firkins, 24@27c.; pails and half tubs, choice, 27@28c., fair to prime, 25@26c.; poor, 20@23c.; Welsh tubs, best, 26@27c.; other, 20@24c.; Western imitation creamery, 18@23c.; dairy, fine fresh, 22@23c.; fair to prime, 19@22c.; factory, fine June, 20@21c.; fair to prime, 17@19c.; poor, 15@16½c.

Receipts for week, 33,564 pkgs.; last week, 36,875 pkgs.; exports, 16,000 pkgs.

BROOM CORN.—Prices at present are wholly nominal.

Brush and short broom, choice, ℔ ℔., 6@6½c.; do., do., common to good, 5@5½c.; hurl, good to choice, 6@6½c.; do., common to fair, 5@6c.; red and crooked at 3@4c.

CHEESE.—The market has been without much life this week, and the feeling weak. The cable advices have been tame and exporters have been very indifferent, consequently supplies have accumulated. Shipments for the week, 41,800 boxes. Quotations are for

State factory, fancy, at 12¼@12¾c.; do. good to prime, 12@12½c.; do. fair to good, 11@12c.; do. half skimmed, 8½@10½c.; Wisconsin factory, fine, 12¼@12½c., do. good to prime, 11½@12¼c.; do. fair to good, 10@11½c.; Ohio factory, fine, 11¾@12¼c.; do. good to prime, 11@11½c.; do. fair, fair to good, 10@10½c.; do. poor to fair 9@10c.

Receipts for week, 40,312 boxes; do. last week, 106,550

Exports, 33,482 do.

Liverpool cable, 63s.

Steam, Liverpool, 40s.@47s. 6d.

COTTON—Has been in good demand, but closed easy. Latest prices are September, 11.19@11.20c.; October, 10.75c., November, 10.65@10.66c.; December, 10.66@10.67c.; January, 10.76@10.77c.; February, 10.89@10.90c.; March, 11.03@11.04c.; April: 11.17@11.18.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8 15-16	8 15-16	8 15-16
Strict ordinary	9 7-16	9 9-16	9 9-16
Good ordinary	10 5-16	10 7-16	10 7-16
Strict good do	10 11-16	11 13-16	10 13-16
Low middling	11 3-16	11 5-16	11 5-16
Strict low middling	11 7-16	11 9-16	11 9-16
Middling	11 11-16	11 13-16	11 13-16
Good middling	12 1-16	12 3-16	12 3-16
Strict good middling	13 5-16	12 7-16	12 7-16
Middling Fair	12 13-16	12 15-16	12 15-16
Fair	13 7-16	13 9-16	13 9-16

STAINED.

Good ordinary	8⅝	Low middling	10
Strict good ordinary	9⅜	Middling	10½

DRIED FRUITS.—The small fruits are received very moderately and there is sufficient demand for them to give a strong range of prices. Apples move out slowly.

Apples—Old State at 5½@6½c., new Tennessee at 3½@4c.; new Virginia at 4@5c.; fancy sliced North Carolina at 6@7c.; evaporated, ring cut, at 8½@9½c. Old peeled peaches at 8@11c. Blackberries at 7½@8c. Raspberries at 25@26c. Pitted cherries at 19@20c. Whortleberries at 11c. New Georgia peeled peaches at 16@17c.; new North Carolina peeled peaches at 18@20c. new unpeeled peaches, quarters at 7½c. new unpeeled peaches, halves at 8c.

Exports for week, 986 pkgs. of apples.

EGGS.—Receipts for week, 7,727 bbls.; do last week, 7,300 do. Good prices have brought in free receipts from near-r points than the West. Quality continues variable. Canada run best. Market closes strong, with a steady demand.

Near points, @20c.; State and Pa. 18¾@19½c. Western and Canadian fresh, 18@18½c.; off grades, 17½c.

FEED—Sales at $15@16 for 40 to 60 ℔s; $16@17 for 80 ℔s; $19@21 for 100 ℔s.

FLOUR.—The offerings have been liberal and prices have tended lower, but closed firmer with the stronger tendency of wheat.

Latest prices are: $3.25@4.00 for inferior to very fancy superfine state and Western; $3.75@4.00 for poor to choice extra State and Western, odd lots and lines; $4.00@4.15 for choice to fancy do.; very inferior to good white wheat, trade and family extras, $4.50@5.25; good to choice do. at $5.25@5.75; (very choice to fancy do. at $5.85@6.25.) red and amber winter wheat inferior to choice trade and family, at $4.25@5.65; round hoop Ohio, $4.00@4.50; and trade and family brands of do. at $4.60@5.75; St. Louis at $4.50@5.25 for inferior to good extra; $5.25@5.85 for good to choice (and $5.90@6.25 for very choice to fancy brands): Minnesota clear, inferior to fancy at $3.85@6.25; Minnesota "straight," poor to fancy, at $5.75@7.25, and patent inferior to very fancy at $5.75@8.25; unsound stock at from $3.25@4.85; city mill extra at $5.00@5.25 for fair to very choice for the West Indies; do. for England, $3.80@4.15 for poor to choice spring wheat, and $4.35@5.00 for winter wheat product; do. trade and family extras, $5.25@6.50; do. for South America, $5.25@5.50; No. 2 at $2.25@3.50 for poor to very fancy.

Receipts for week, flour, bbls. 111,450; corn meal, do. 2,855; wheat, bush. 1,592,355; corn, do. 1,384,100. oats, do. 207,350; rye, do. 16,250; malt, do. 87,500; beans, do., 4,200; rice, pkgs. 800.

Exports for week, flour 88,481 bbls.; corn meal, 4,481 bbls.; wheat, 1,280,350 bush.; corn, 1,127,300 bush.; oats, 3,000 bush.; peas, 2,700 bush.; beans, 1,900 pkgs.; rice 1,300 pkgs.

CORN MEAL.—Sales at $3.20@3.25 for Brandywine, and $2.50@2.75 for yellow Western.

FRESH FRUITS.—Apples are plenty, and a good export demand only holds them at the low prices. About 25,000 bbls. have gone abroad in the past fortnight. Red fruit meets best sale to all buyers. Peaches are in good supply for the date. White Heath run small this year. State orchards make a good addition to the offering and make very paying prices. Plums are scarce, and future sales will make up some of the losses that were suffered when buyers were away and hot weather ruined stock. Pears are in large variety: Bartletts rather scarce, B. Bosc, B. Clairgeau, and B. d'Anjou, $4.50@6 as to quality. Grapes are of fine quality and cheap at quotations Watermelons have been pretty well culled out. Quinces and Cranberries are new items for the week. Not much call for the latter while apples are so cheap. Crop of cranberries reported full, though there may be some falling off in the N. Y. bogs.

Apples—Fall pippins, per bbl., 50c.@1.00; Alexander, $1.25@1.75; Detroit Red, $1.25@1.50; Maiden's Blush, $1@1.50; Twenty Oz., $1@1.50; Gravenstein, $1.25@1.75; King, $1.25@1.50 Pears—Bartletts, fancy, per bbl., $5.50@9; prime, $7@8; other, $5.50@6; Seckels, choice, $7@8; other, $5@6; Flemish Beauty and Duchess de A., $3@4; Louise bon de J., $3.50@4; Howell, $3@3.50; Sour Bell, $2@2.50 Cooking, $1.50@2. Quinces, per bbl., $6.50@7. Grapes—Delawares, cases of 50 ℔s., $2.50@3; bulk, per ℔., 5@8c.; Concords, cases of 50 lbs., $1.25@1.50; bulk, per ℔. 2½@3c. Peaches—N. J. extra, per basket, $2; prime, $1.00@1.50; other, 50@80c.; Up river extra, $2@2.50; prime, $1.50@1.75; other, $1.00@1.25; Delaware Smocks, 75c.@$1.75; White Heath, 60c.@$1.50, a few yellow at $2. Plums—German prune, per bbl., $9@10; Quackenbush, 8@9c.; Reine Claude, $5@5.50; Damson, $4@5; Boston blue, $3.50@4.50; Copper, 6@7c. Watermelons, large, per 100, $20@25; fair, $15; small, $8@10. Nutmeg melons—Hackensack, per bbl., $1.25@1.75; Peanuts—The demand is small, and prices are again weaker. Va. hand-picked, per lb 4¾@5c.; extra prime, 4c.; good to prime, 3½@3¾c.; shelled, 4@5½c. Cranberries—Cape Cod, per bbl., $6@7.50; N. J. boxes, $1.50@$2.

GRAIN.—Wheat has been fluctuating, ruling lower but closing firm on an increased export demand. Shipments for the week, 1,200,000 bush.

Latest prices are for No. 1 white at $1.04¾@1.05; do. September at $1.04@1.04¾; do. October; at $1.05¾@1.06¾; do. November at $1.07@1.07¾; do. steamer grade at $1.00¾@1.02 No. 2 white at $1.00¾@1.01; No. 3 white at 98@99c.; ungraded white at 96¾c.@$1.03¾; mixed Winter at $1.03; No. 2 red at $1.05@1.08¾; do. September, at $1.05¾@1.06; do., October, at 1.07¾@1.08; do. November, at $1.08¾@1.09; No. 3 red at $1.03@1.03¾; ungraded red at 97¾c.@$1.01¾; very choice hard Spring at $1.06; No. 2 Chicago and Milwaukee spring at $1.02@1.05. Rye is scarce and quoted 95c. for No. 2 Western. Corn has been active but closed weak under full receipts; latest sales are for New York No. 2, at 51c.; do., September, at 50¾@51c.; do. October, at 52@52¾c.; do., November, at 53¾@53¾c.; New York steamer mixed at 51c. for car lots; New York No. 3 at 51c.; ungraded mixed Western at 50¾@51½c. Exports for the week 1,400,000 bush. Oats have been active and higher but closed weak; latest prices are for No. 1 white at 41c.; New York No. 2 white at 42@43c.; No. 3 white at 41@41½c.; New York No. 1, 43c.; No. 2 at 42¾@43c.; do., September quoted at 38c. bid; do., October, at 38@38¾c.; do., November quoted at 38¾c. bid; No. 3 at 40½@41c.; ungraded White Western at 42@45c.; ungraded mixed Western at 40@43c.; white State at 43½c.; No. 2 Chicago at 43c.

HAY AND STRAW.—Demand is active and prices well sustained. Quotations are for

Shipping hay quoted at 75@80c.; medium to prime do., 90c.@$1; salt hay at 65@70c.; clover do. at 70@80c. Straw at 85@90c. for long rye; 55@65c. for short rye; and 55@60c. for oat.

Exports for week 1350 bales.

HONEY.—It is rather early to speak of this product, still arrivals have begun perhaps 400 cases for the week, and the figures named are only nominal.

White clover single comb 18@19c.; larger boxes 16@17c.; Buckwheat 12@14c.; extracted range 9@12c.

HOPS.—The demand is slack pending freer supplies of new. Prices are held steady. Quotations are for

	Cents per ℔.	
New Yorks, crop 1880, choice	33	@35
New Yorks, crop 1880, medium	29	@31
New Yorks, crop 1880, low to fair	25	@27
Eastern, crop 1880	25	@30
Wisconsin, crop 1880	25	@30
Yearlings, crop 1879, choice	23	@26
Olds, all growths	4	@14
Pacific Coast, new		none.
Pacific Coast, olds (nominal)		nominal.

OIL CAKE.—Western is quoted $29@29.50.

POULTRY AND GAME.—Dressed poultry starts off with a vim that belongs to a colder season. Prices are firm now, but with possible free supplies a sudden reaction may occur. Shippers at this season should wait for advices from responsible consignees.

Turkeys, choice, ℔ ℔., 14c.; fair to good, 12@13c.; Phila., dry-picked, 14@16c. Chickens, do., 18@19c.; State scalded, 13@14c.; Western, scalded, 13@14c. Fowls, Phila., dry-picked, 15@16c.; N. J. d.-p., 15@16c.; State, d.-p., 14@15c.; State, scalded, 13@14c; Western, scalded, 13@14c.; poor to fair, 10@12c. Ducks, Spring d.-p., 13@16c.; State scalded, 13@14c.; Western mixed, 12@13c. Squabs, white, ℔ doz., $2.25; dark, $1.25@1.50.

Live poultry is active with a continued call for Jewish festivities. This demand is for best stock that will readily fatten. Southern and Western ducks are small. Southern fowls are slow of sale owing to small size.

Chickens, N. J., 13@14c; Western 11@12c.; Southern, 11@12c. Fowls, N. J., 14c.; Western, 13@14c.; Southern, 11@12c. Roosters, 8@9c.; turkeys, near points, 12@13c.; Western, 11@12c.; ducks, choice, ℔ pair, 65@87c.; other, 40@60c; geese, fancy, $1.50@2; other, $1.00@1.25; pigeons, 20@30c.

A good assortment of game is offering, but cooler weather is required to make stock trustworthy and create a regular demand. All good birds are firm.

Partridge, prime, ℔ pair, $1.25@1.50; soft, 50@87c.; grouse, $1.25; woodcock, $1.12@1.25; English snipe, ℔ doz., $2; Sand snipe, 40c.; grass plover, $3; wild pigeons stall-fed, $1.75@2

PROVISIONS.—Hog products have been fairly active and firm.

Mess pork quoted at $15.60@15.70 for Sept. and Oct., and $15.70@15.75 for sellers option remainder of the year. Bacon at 8.85c. for long clear, and 9⅜c. for short clear. Lard—Western steam at 8.32½@8.35c. for spot lots; 8.30c. for Oct; 8.27½ for November delivery. Stearine at 8¾ for choice Western. Tallow at 6⅜ for prime. Beef hams at $18. Beef—extra India mess quoted at $18@20 for city; $10 for extra mess, and $9.50 for plain mess; $10.50@11 for packet, and $11.50@12 for family mess.

Receipts for week, beef, 860 pkgs.; pork, 1,250 bbls.; cut meats 28,530 pkgs.; lard, 5,501 pkgs.

Exports for week, beef, 2,475 pkgs.; pork, 3,975 bbls.; cutmeats 13,532,193 ℔s.; lard, 5,056,321 ℔s.

SEED.—Clover is firm at 8¼@8¾c. Timothy is quiet at $2.35. Flaxseed has sold at $1.36.

TOBACCO.—Trade has been very good both on export and home account, and prices have ruled steady. Quotations are

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4 @ 4½	4½@ 5
Good lugs	4½@ 5	5¼@ 5¾
Low leaf	5½@ 6	6 @ 6½
Medium leaf	6½@ 7½	7½@ 8½
Good leaf	8 @ 8½	9 @10½
Fine leaf	9 @11	11 @12
Selections	12 @15	12 @15

SEEDLEAF.	Crop 1878.	Crop 1879.
New England Havana seed	— @—	13 @25
Wrappers, common	13 @15	— @—
Medium	16 @18	— @—
Fine	20 @ 7½	25 @35
Selections	30 @40	37½@45
Seconds	— @—	10½@13
Fillers	— @—	5½@ 7
Pono, asserted, low	12 @13	10 @12
Assorted, fair	14 @15	13 @18
Assorted, fine	16 @18	18 @22
Wrappers	18 @35	— @—
Fillers	10 @12	6 @ 7
N. Y. ass'ted, com. to medium	10 @11	— @—
Ohio assorted	8½@13½	7½@10
Wrappers	15 @25	15 @25
Wisconsin assorted	8 @12	7 @10
Havana seed	15 @20	16 @18
Wrappers	12 @18	— @—

VEGETABLES.—Exports of potatoes for week, 6,800 bbls. The N. Y. C. R. R. will not receive potatoes in bulk this Fall. The market is steady and prices are well supported for an early Fall season. L. I. early rose, $1.50@1.75 ℔ bbl.; State do., $1.37@1.62; peerless, $1@1.12; the latter are largely included in the exports at present. Sweet potatoes are firmer. The recent storm has kept back Va. schooners. Del. River, $3; Va., $2.00@2.75. Avoid washing sweets in packing for market shipments. Cabbage is low. Other items of garden truck bring fair rates.

Green corn, ℔ 100, 75@90c.; tomatoes, ℔ bush., 25@40c.; cucumber pickles, per 1,000 $1.25@1.50; egg plant, per bbl., 75c.@$1; string beans, per bag, 30@50c.; green peas $1.50@2.50; Lima beans, potatoe $1@1.25; flat do. 75c.; shelled, $3. turnips, L. I. 100 bunches, 75c.; Russia turnips ℔ bbl. 75c.@$1; beets, 100 bunches, $1.50; bullnose peppers, ℔ bag, 75c.; cabbage, flat Dutch, ℔ 100 $3@6; red do., $4@6; squash, ℔ bbl. 50@75c.; onions, white, $3. yellow, $2.50@2.75; red, $2.50; carrots, ℔ 100 bunches, $1.50; pumpkins, ℔ 100 $3@6; okra, per 100, 15c.

WOOL.—Quotations are essentially as last week. Demand is moderate, manufacturers apparently carrying fair stocks.

LIVE STOCK MARKETS

NEW YORK, Saturday, Aug. 11, 1880.

BEEVES.—Receipts for the week 13,461 head; do. last week, 13,214 do. Receipts have exceeded the expectations of sellers. The opening sales were strong at Wednesday's figures, but prices broke ¼c. before sellers could close out. The ruling rates were Texans and Colorados, 8@9c., to dress 55@56 lbs.; common to fair native steers, 8½@9¼c.; same, good to choice, 9¾@10¼c., to dress 56@57 ℔s. Exporters took 525 head. Irregular trains impeded trade, to some extent.

COWS AND CALVES.—September brings out some additional local demand; and as receipts are light prices are firmer; good milch cows quite steady at the close. Poor to fair quoted $30@40 per head; good to prime, $45@55 do.

SWINE.—Receipts for week, 21,429 head; do. last week, 23,477 do. Good corn State, 5¼@5½. Western, same; Grassers dull and not wanted at 4@4¼c. City dressed hogs, 6¾@7c.; grass, 6½@6¾c.

SHEEP AND LAMBS.—Receipts for week, 30,802 head; do last week, 35,440 do. With moderate supplies the market was quick and showed something better in prices over early sales. Sheep quoted 4@5¼c. with a few picked wethers $5.65 ℔ 100; lambs 4½@6¼c.

VEAL CALVES.—A couple of stormy days kept back near points and the market is temporarily high. The scarcity of primes has given more sale to State and grassers.

Live calves, N. J. and Bucks Co., fed 6¾@7½c., State choice, 7c.; fair to prime 5½@6¾c.; poor, 4@5c.; Mt Holly, 180 to 240 ℔s., 6½@7c.; do., 250 to 350 ℔s., 6@6¼c.; buttermilk, 2½@3c.; grassers 2¼@2¾c.

Entered at the Post-office at New York City, N. Y., as second-class mail matter.

GENERAL ADVERTISING RATES OF THE RURAL NEW-YORKER.

Inside (Agate space)........40c. per line.
" 13th page........50 "
Outside or last page........60 "
Discount on 4 insertions, 5 per ct.; 8 ins., 10 per ct.; 13 ins., 15 per ct.; 36 ins., 20 per ct; 52 ins., 25 per ct.
☞ No advertisement inserted for less than $2.

FARM IMPLEMENTS & SEEDS
Call on or write to R. H. ALLEN & CO., New York, for whatever you want of the above. Address 189 & 191 Water St.

WROUGHT IRON FIELD & GARDEN ROLLERS.
I manufacture a full assortment of these articles of wrought boiler iron. On exhibition at Pennsylvania State Agricultural Fair, F to 10. For Sale by JAMES C. HAND & CO., Market Street; or by ARAD BURROWS, JR., No. 1,403 South Front Street, Philadelphia.

HARRIS FARM TRUCK, to be used in front of harrow, Plow, Cultivator, Road Scraper, etc. The Farmers' best friend. See advertisement in Fair Edition. Send for circular to SAXTON & AMIDON, Buffalo, N. Y.

NEW MUSIC BOOKS

The Anthem Harp.
($1.25.) By DR. W. O. PERKINS.
A new book intended as a successor for "Perkins' Anthem Book," published some years since and which was a decided success. The new book contains music perfectly within the reach of common choirs, and is destined to have a great sale.

DITSON & CO. also call attention to their three books for SINGING CLASSES; recently published, already very popular, and worthy of universal adoption.

The Temple.
($1.00.) By DR. W. O. PERKINS.

The Voice of Worship.
($1.00.) By. L. O. EMERSON.

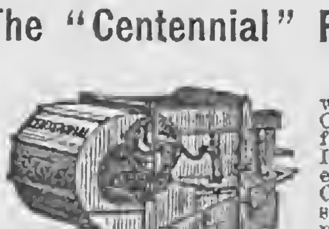
Johnson's Method for Singing Classes.
(60 cents.) By A. N. JOHNSON.

The Temple contains an excellent Singing School Course, and a large number of Glees, Songs, Sacred Tunes and Anthems for practice and for use in classes. L. O. Emerson's Voice of Worship has exactly the same end in view as the other, but has a different method, and entirely different music. Johnson's Method is for those who wish a low-priced book; is admirably simple and clear, has plenty of music, and has a thorough course in Note Reading.
☞ Any book mailed for retail price.
OLIVER DITSON & CO., Boston.
C. H. Ditson & Co., 843 Broadway, New York. J. E. Ditson & Co. 1228 Chestnut St., Phil'a.

CATARRH
Bronchitis, Asthma & CONSUMPTION
Cured at home by INHALENE
A Compound of Carbolated OIL OF TAR
And Balsams, which is converted into vapor, and taken direct to the disease, where it heals as quickly as the best liniment heals an ordinary sore. J. Price Miller, M. D., Physician-in-Charge. Send for Circulars. Address Home Medicine Co., S. W. cor. 10th & Arch Sts., Philadelphia, Pa.

E. & O. WARD, PRODUCE Commission Merchants.
(ESTABLISHED 1845.)
Send for Circular of Great Value, giving full instructions for shipping
POULTRY, GAME, BUTTER and PRODUCE
No. 279 Washington St., N. Y.
Ref., Irving National Bank, New York City

The Monitor Jr. is the most perfect Clover Thresher, Separator, Huller and Cleaner in the world. The Threshing and Hulling Cylinders run under-shot. They also continue to manufacture the old "Monitor," with *Threshing* and *Hulling* Cylinders running *over-shot*. Send for price list, terms, and descriptive catalogue. Address as above, and say you saw this in the RURAL NEW-YORKER.

The "Centennial" Fanning Mill.

The best mill in the world. It separates Oats, Cockle, and all foul stuff from wheat. Is also a perfect cleaner of Flax, Timothy, Clover and all kinds of seeds. The great improvement over other mills is that it has two shoes. It is especially adapted for warehouse use. Send for Descriptive Circular and Price List. Liberal discount to dealers. Address, S. FREEMAN & SON, Racine, Wis.

Halladay Standard.

VICTORIOUS AT Phila., 1876—Paris, 1878
25 Years in Use.
GUARANTEED SUPERIOR To any other Windmill Made.
17 SIZES—1 MAN TO 45 HORSE POWER
Adopted by the leading R. R. Co.'s and by the U. S. Govt. at Forts and Garrisons.
$3,500,000 worth now in Use.
Send for Catalogue "B" and Price List.
U. S. WIND ENG. & PUMP CO., Batavia, Ill.

IMPROVED CALIFORNIA WIND MILL.

Simple, Strong, Durable, Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers, CLARK & CO., SOMANAUK, ILL.

Adams Wind Mill

Works in a lighter breeze than any other. Governs itself perfectly. Its operation can not be interfered with by ice or sleet storms. Well made, Strong, Durable. Illustrated circulars of all our goods sent free. Address MARSEILLES M'F'G. CO., Marseilles, La Salle Co., Ill. Send for Catalogue "C."

CHALLENGE WIND MILLS

Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merits. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.
CHALLENGE MILL CO., Batavia, Ill.

STOVER AUTOMATIC WIND ENGINE

Simple, self-regulating, and with our experienced men, we contract to force water from spring or well to any point. Write, stating the nature of work you want done, to
B. S. WILLIAMS & Co.
22 College Place, New York. Kalamazoo, Mich.

Reading for the Young.

IN MY GARDEN.

My garden is all planted o'er,
The borders have been freshly dug,
The green shoots are a pleasure for
The slug.

The fruit is forming on the stalk,
But woe is me! No care avails
When on my pear-trees proudly walk
The snails.

The mignonette and fragrant pea
Throw in the air their tender germs,
But wriggling round their roots I see
The worms.

My cherished rose-tree! Horror! That's
A sight that saddens sorry eyes;
Covered its leaves with tiny gnats
And flies.

Of slug and snail and worm and gnats
In vain I am a ruthless killer,
Still there's that horrid cat, cat, cat-
Erpillar!

THE MARTIN.

MAUDE MEREDITH.

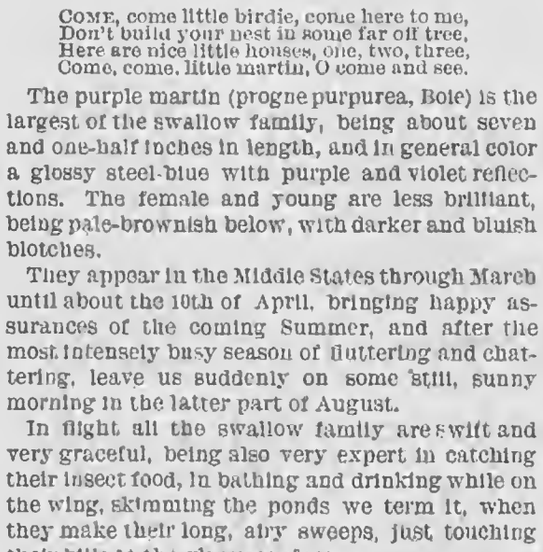
COME, come little birdie, come here to me,
Don't build your nest in some far off tree,
Here are nice little houses, one, two, three,
Come, come, little martin, O come and see.

The purple martin (progne purpurea, Boie) is the largest of the swallow family, being about seven and one-half inches in length, and in general color a glossy steel-blue with purple and violet reflections. The female and young are less brilliant, being pale-brownish below, with darker and bluish blotches.

They appear in the Middle States through March until about the 10th of April, bringing happy assurances of the coming Summer, and after the most intensely busy season of fluttering and chattering, leave us suddenly on some still, sunny morning in the latter part of August.

In flight all the swallow family are swift and very graceful, being also very expert in catching their insect food, in bathing and drinking while on the wing, skimming the ponds we term it, when they make their long, airy sweeps, just touching their bills to the glassy surface.

These little fellows, though so harmless and friendly, are yet no cowards, as many a feathered enemy has found to their discomfort, for they attack crows and hawks, which from their superior flight they are enabled to drive away, and are thus valuable guardians of the poultry-yard. Cats and dogs, in fact any marauders of the farm yards, are sure of a rather warm reception if the martin first holds possession. For this reason, and from their friendly social nature, they are great favorites, and are provided with little elevated houses, or less pretentious boxes, near by dwellings, and



PURPLE MARTIN.—FIG. 305.

their company assiduously cultivated by man. They become much attached to their Summer homes, and return to the same place year after year, and when the little folks with rosy cheeks and sparkling eyes rush in crying, "Oh, the martins have come! the martins have come!" how even we, children of an older growth, grow happy and unconsciously date our Summer from that time. Though sometimes a cold storm will send the little birds shivering into their houses, and prove true the old adage "It takes more than one swallow to make a Summer."

In absence of houses, the martins build in any crevice or hole in a tree. The nest is made of leaves, twigs and grasses, feathers and other soft linings, and usually contains from four to six pure white eggs. Two broods are generally reared in a season and many families will live in perfect harmony in one little tenement. Their food consists of flies, wasps and beetles, though by some instinct hard to determine, they seldom touch a honey-bee.

The swallow family is composed of quite a number of cousins closely resembling each other, but differing in their nesting habits. 1, the barn or eaves swallow, building in barns or under the eaves of old houses or barns, its house made solely of mud and plastered to the timbers. 2, the house or chimney swallow, building its nest of loose twigs in any unoccupied chimney, and the Sand Martin, or Bank Swallow, who drives his circular shafts into the sides of the rocky banks, or any dry, sandy river shore. I will tell you all the peculiarities of these interesting birds at some other time, but now that the busy days of Summer are over in the bird kingdom, and almost over for the busy little boys on the farms, let me suggest that all our RURAL boys who have never made martin houses, use some of the long Winter evenings that are coming by and by, to make at least a couple of houses ready for another Spring. Almost any box will do, an empty starch-box or any of small size, and here a boy can display his taste and ingenuity. A roof can be easily made of two bits of board, the little arch or door carefully cut in one or both ends, and all painted with imitation windows or porches, in any color or shade that fancy or a bit of paint left in the paint-pot when the painter has finished may suggest. The box should be fastened in a tree or some upright post will do as support to fasten the birdhouse upon, but a straight fine pole or little tree is better, peeled of its bark, and after nailing the house to the smaller end, set the larger end firmly in the ground, for the houses must not be endangered by Summer storms and wind. Plant woodbine or grape vines—any tall-growing vine that will twine about it, wreathing the support in greenness, while at the top Mr. and Mrs. Martin go in and out of their fairy house, but infinitely more free from intrusion than was Mr. and Mrs. Giant at the top of "Jack's" famous "bean."

"When the swallows homeward fly,
When the roses scattered lie,
When from neither hill nor vale
Chaunts the merry nightingale,"

then we fully realize how much pleasure the little feathered songsters added to our Summer days.

THE WATER-PUPPY.

THIS is not a water dog, there are several things which are given the name of water dog. A sailor is often so called from his sea going habits, but he is more often called a sea-dog. A small floating cloud supposed to indicate rain is called a water-dog, not the two bright luminous spots sometimes seen in the morning on either side of the sun, those are called sun-dogs. The Shark is also called sea-dog from its fierce nature—but sharks are also called sea-kittens, sea-foxes, &c.

The seal is also called a sea-dog from its barking like a dog, but it is also called a sea-bear, sea-lion, &c. A water dog is also a species of the common dog which is useful to hunters and loves the water. The water-puppy is also sometimes called a water-dog but its proper name is water-puppy. It has not heretofore been very fully described nor have its habits been very well known. It is supposed to be a very poisonous inhabitant of the water and most people would fight shy of it.

At the meeting of the Natural History Department of the Association for the advancement of Science at Boston, Dr. P. R. Hoy, of Racine, Wis., gave a very minute description of the water-puppy, its structure, habits and manner of life. He said that Physiologically it is a fish, with legs instead of fins. It inhabits the large rivers and lakes of the north, and is especially numerous in Lake Michigan. It seeks deep water and swims with much velocity. It takes the baited hook, and dire is the consternation of the boy who hooks the poisonous fish with legs. In life the water-puppy is a beautiful object, with its long, scarlet, plumose gills waving continually. When confined in an insufficient quantity of water, it will rise to the surface, take a mouthful of air, and bubble it out through the gill openings, thus getting mechanically a supply of oxygen, precisely as do certain fishes in like circumstances. Dr. Hoy then gave a more particular account of its structural peculiarities, and some interesting experiments of his own on points which distinguish the menobranc from the fish race generally and from other amphibians, but we are unable to obtain his complete account until the publication of the proceedings of the association.

THE BOBOLINK'S NEST.

DEAR UNCLE MARK:—I am a city girl staying with Uncle Nathan on the farm this Summer. One day we all went away on the hill after raspberries. There was Auntie Min and mamma and Gene and Jo and I. We rode up on the great hay-wagon, and Uncle Sidney said the load up to the meadow was a great deal nicer than the one down to the barn would be. He gave us a drink of water out of Jo's little tin cup from the nice cold spring, and when we came to the meadow fence, then he helped us off the wagon and we hurried away to the raspberry bushes. Some of the bushes grew very high and swung the round, red berries just out of reach, above our heads; but there were berries enough lower down, so we could fill our pails. Then we sat down on soft mossy knolls and strung berries on long stems of herdsgrass until our fingers grew as red with stains as the berries themselves.

At last auntie and mamma came along with their great pails full of berries and sat down by us to rest when mamma put her hands behind her head and laid down on the moss "To watch the slow, white clouds in June's blue sky," she said. Wasn't she funny, for it was the middle of July. By-and-bye she said "It rains! A drop just fell on my nose," and we all laughed, and did not think it rained at all, but in a few minutes whole armies of big drops came after us, until we started and ran as fast as we could out of the pasture through a wheat field and into the meadows toward shelter.

I was hurrying so fast and trying to keep my berries from spilling when what do you think? Out of the long grass flew a little brown bird, and there we found a bobolink's nest with three speckled eggs in it. Mamma said in all her life she never saw one before.

There is a little round place dug in the smooth ground, and the nest, so nice and round and smooth, fixed in. Mamma says if you like my stories I may tell you all the pretty things I have seen this Summer on uncle's farm.

Iowa. GEORGIA G. SMITH.

A FUNNY CAT.

In a basement news room in Nassau street, N. Y., the keeper has a large fat black cat, apparently some seven or eight years old, which shows not a little power of reasoning. The writer stepped down into the room one day, and stood talking with the proprietor, but without taking any notice of the cat for some time, although it came rubbing up against him, and finally to attract his attention jumped upon the counter before him, and rubbed against his hands. The writer neglected to pet the animal, and after he was done his conversation turned to the steps to go out, as he did so the cat leaped from the counter with almost lighting quickness, caught the departing visitor, by the leg, and imprinted its claws deeply and sharply into the flesh, and darted away to the further extremity of the store to a hiding place, all so quickly that the writer had hardly time to comprehend what was going on. The owner of the shop said that the cat seemed to think that it was as much entitled to notice as anybody, and took that way of showing its displeasure when not noticed.

LETTERS FROM THE COUSINS.

DEAR UNCLE AND COUSINS:—I am almost ashamed to write as I have had such a failure this summer in my garden work. The phloxes and petunias came up nicely but were cut off before the time for transplanting came. The okra was forgotten. The pinks grew nicely until ready to blossom when the chickens nipped the buds. The mignonette is growing finely. Among mamma's flowers, the asters, gladioli, pansies and geraniums are blossoming nicely. It has been so terribly hot that the earth has been parched until lately, when we were blessed with rain. I am going to sow pansy seed in a few days for plants early in the Spring. I am very sorry I have so poor a report to make, but I think I shall have something in my next which will prove that I am not an entirely idle member of the Club.

Yours sincerely, MINNIE S. WHITE.
Erie Co., N. Y.

DEAR UNCLE MARK AND RURAL COUSINS:—This is my first attempt to write to Uncle Mark. Our RURAL seeds did not grow very nicely. There were no more than half of them came up. This is the first year Pa has taken the RURAL we all like it very much. We have got lots of peaches. I wish Uncle Mark and all of the RURAL cousins could be with me and help eat them. We think some of them will go to waste. Those that are ripe now are the early Crawfords. I hope if Uncle Mark has any seeds for the cousins next spring he will remember me with the rest of them. Pa's oats that were sent with the RURAL grew so tall that one night the wind blew them down. Our Cow peas and Golden Mangels are very nice. I am 12 years old. BERTHA M. HALE.
Kent Co., Michigan.

The Puzzler.

HIDDEN BUILDINGS

1. Why, Kate, your dress is all mildewed.
2. When I had put on my cap I told him I was ready.
3. Beware of the bar, Nathaniel.
4. Three cheers to reach the train in time.
5. "I shan't, you wicked girl," she said.

☞ Answer in two weeks.

A DROP LETTER PUZZLE.

A.. I. .o. .o..'..a. ..i..e..

Fill with consonants and form an old and well-known saying. LITTLE ONE.

☞ Answer in two weeks.

CROSSWORD ENIGMA.

My first is in plantain, but not in quince.
My second is in cantaloupe, but not in mince.
My third is in muskmelon, but not in pumpkin.
My fourth is in winter-green, but not in raisin.
My fifth is in mango, but not in cassava.
My sixth is in apricot, but not in guava.
My seventh is in sapadilla, but not in dewberry.
My eighth is in damson, but not in strawberry.
My ninth is in persimmon, but not in papaw.
My tenth is in bread-fruit, but not in haw.
My eleventh is in nannieberry, but not in banana.
My whole is a delicious fruit. LITTLE ONE.

☞ Answer in two weeks.

TENNYSONIAN ENIGMA.

31 LETTERS.

"To their 17, 4, 21, 2, 19 under the hill."
"To love once and 10, 30, 23, 13, 21, 6, 11."
"The bounds of 29, 11, 6, 6, 15, 9, 24 wider yet."
"Two little 1, 28, 14, 26, 7 that meet."
"He turned and 5, 12, 7, 7, 31, 15 her where she stood."
"And 20, 8, 13, 26 loved the queen."
"Sainted Juliet, dearest 19, 25, 3, 27."
"A legend of good 16, 18, 3, 22, 19."

The whole is a line from Elaine which contains much truth. MARY E. BIXBY.

A DIAMOND PUZZLE.

1, A letter; 2, a bud; 3, a carniverous animal; 4, origination; 5, intervening; 6, a knot of hair; 7, a letter. GUS.

☞ Answer in two weeks.

PUZZLER ANSWERS.—Aug. 28.

DIAMOND PUZZLE:—

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      H
    B A M
  B O R E L
H A R I C O T
  M E C C A
    L O A
      T
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LITERARY ENIGMA:—Where Autumn, like a faint old man, sits down by the wayside a-weary.

HIDDEN CRIMES:—1, bigamy; 2, arson; 3, infanticide; 4, robbery; 5, matricide; 6, burglary; 7, murder; 8, manslaughter; 9, rape; 10, fratricide; 11, forgery; 12, assault and battery; 13, larceny; 14, theft; 15, embezzlement.

Sabbath Reading.

PASSING AWAY.

PASSING away, so whispers the wind,
As it treads in its trackless course;
And passing away, doth the bright rill say,
As it leaps from its crystal source.
All passing away on the stream of time,
To oblivion's vale in a far-off clime.
Matter and man, we make no delay,
To eternity's gulf we are passing away.

Passing away, mark the wrinkled brow,
And the head with the silvery hair,
And the furrowed cheeks, how they plainly speak
That they're leaving a world of care.
Yes, passing away, even beauty's flower,
Is fading fast 'neath the spoiler's power,
And fair and frail, to their bed of clay,
Adown in the tomb are passing away.

Passing away, shrieks the ocean wave,
As it breaks on the beaten shore;
And the tortured tide is left to chide
The cliffs with a hollow roar.
Aye, passing away, both from castle and cot,
The places which know us will soon know us not;
Whether peasant or prince nature's last debt to pay
At the fiat of God we are passing away.

Passing away, even Time himself,
Bends under his load of years,
His limbs are frail and his cheeks grow pale
With the furrows of sorrowing tears.
With his broken scythe, with a silent tread,
He is passing on to the home of the dead;
With a bending form and with locks grown gray
Even Time himself is passing away.

Passing away, how swiftly they go!
Those scenes of our youth once dear;
Those friends we loved are by death removed,
And the world waketh strange and drear!
And the hopes of our youth, see, they all depart,
And the chords of love round the human heart;
E'en the soul groweth tired of its cot of clay,
And the essence immortal would fain pass away.

Passing away, all but God's bright throne,
And his servants, home above,
And His grace divine and the boundless mine
Of His eternal love.
And His will to save, through a Saviour's blood,
The child of faith who hath washed in the flood;
Even earth to its frame-work doth all decay,
But God and His love will ne'er pass away.

HOLD ON, HOLD IN, HOLD OUT.

HOLD on, my heart in thy believing;
The steadfast only win the crown;
He who, when stormy winds are heaving,
Parts with his anchor, shall go down.
But he whom Jesus holds through all
Shall stand, though heaven and earth shall fall.

Hold in thy murmurs, heaven arraigning;
The patient see God's loving face;
Who bear their burdens uncomplaining,
'Tis they that win the Father's grace.
He wounds himself who braves the rod,
And sets himself to fight with God.

Hold out! there comes an end to sorrow;
Hope from the dust shall conquering rise.
The storm foretells a sunnier morrow:
The cross points on to paradise.
The Father reigneth: cease all doubt;
Hold on, my heart, hold in, hold out.

"SEE," said Luther one evening when money to supply his wants was scarce, "see, that little bird has chosen its shelter, and is about to go to sleep in tranquility. It has no disquiet, neither does it wonder where it shall rest to-morrow night, but it sits in peace on its slender branch, leaving God to provide for it."

There were strange soul-depths, restless, vast, and broad,
Unfathomed as the sea.
An infinite craving for some infinite stilling;
But now thy perfect love is infinite filling.
Lord Jesus Christ, my Lord, my God,
Thou, Thou art enough for me!
—Frances Ridley Havergal.

GOD'S LOVE.—God so loveth us that He would make all things channels to us and messengers of His love. Do for His sake deeds of love, and He will give thee His love. Still thyself, thy own cares, thy own thoughts for Him, and He will give thee Himself. Ask for Himself, and he will take thee into Himself. Truly, a secret, hidden thing is the love of God, known only to them who seek it, and to them also secret, for what man can have of it here is how slight a foretaste of that endless ocean of His love!—Zion's Herald.

GRIEF should be
Like joy,—majestic, equable, sedate,
Confirming, cleansing, raising, making free,
Strong to consume small troubles, to command
Great thoughts, grave thoughts, thoughts lasting to the end.—Aubrey de Vere.

OUR hope is not hung on such an untwisted thread as "I imagine so," or "it is likely;" but the strong cable of our fastened anchor is the promise and oath of Him who is eternal verity. Our salvation is fastened with God's own hand and Christ's own strength to the stronghold of God's unchanging nature and truthfulness.

"WHAT is eternity?" was a question once asked at the Deaf and Dumb Institution at Paris, and this beautiful and striking answer was given by one of the pupils: "The lifetime of the Almighty."

THE good are better made by ill,
As odors crushed are sweeter still.

MEN will never know us by our faith, for that is within us; they know us by our works which are visible to them.

WORK to-day, for you know not how much you will be hindered to-morrow.

PERSONAL ITEMS.

"How under heavens am I to get along now?" was the regretful remark of shiftless Hank Munroe of Lebanon, Mo., after he had, in a moment of anger, killed the wife who had long supported him.

General Torbert, lost on the Vera Cruz, leaves a widow, but no children. His estates near Milford, Del., are valued at $200,000. He is reported to have acted bravely and cheerfully during the last hours before the wreck.

Miss Flora Sharon, daughter of Senator Sharon, is betrothed to Sir Thomas Hesketh, a wealthy Englishman, who, in the course of a tour round the world in his steam yacht, has been making a stop at San Francisco.

Professor Alexander Graham Bell has received the Volta prize of the French Academy of $10,000 for the invention of the telephone, as "the best application of electricity." He values the prize chiefly, he says, as settling the question of the real inventor.

Mr. Gladstone is going to Madeira, and a sea voyage will, it is thought, thoroughly restore him. He is said to be at present troubled about the will of his late sister, Helen Gladstone. It has mysteriously disappeared, and her executors have offered a reward of $500 for its discovery.

Henry Labouchere, editor and proprietor of the London Times, who has lately become a prominent advocate of farmers' rights in Parliament, is described as a scholar of extensive and well-digested reading, a traveled linguist, a diplomatist of nearly twenty years' training, a shrewd financier, a brilliant conversationalist, a ready, incisive public speaker, a man of wit, a man of sense, and a man of business.

It has been suggested that Mr. Gladstone ought to succeed the late Lord Stratford de Redclyffe as Knight of the Garter, although the honor is rarely conferred upon a commoner. Admiral Montague, whose ship brought Charles II. back to England, was created a Knight of the Garter before he received the Earldom of Sandwich, as was Monk, at the same time, before he was known as Duke of Albemarle. According to Pepys, the only commoner on whom the honor had been conferred previously was George Villiers, first Duke of Buckingham, who was enrolled when only a plain knight, in 1616. But Sir Robert Walpole received a garter in 1725; and one was offered to the younger Pitt by George III., and on his declining it, given to his brother, Lord Chatham.

[Chicago Inter-Ocean.]

Perils of the Deep.

The world-renowned swimmer, Captain Paul Boynton, in an interview with a newspaper correspondent at the seashore, related the following incidents in his experience:

Reporter.—Captain Boynton, you must have seen a large part of the world?"

Captain Boynton.—"Yes sir, by the aid of my Rubber Life Saving Dress, I have traveled over 10,000 miles on the rivers of America and Europe; have also been presented to the crowned heads of England, France, Germany, Austria, Belgium, Italy, Holland, Spain and Portugal, and have in my possession forty-two medals and decorations; I have three times received the order of knighthood, and been elected honorary member of committees, clubs, orders and societies."

Reporter.—"Were your various trips accompanied by much danger?"

Capt. Boynton.—That depends upon what you may call dangerous. During my trip down the river Tagus in Spain, I had to "Shoot" one hundred and two waterfalls, the highest being about eighty-five feet, and innumerable rapids. Crossing the Straits of Messina, I had three ribs broken in a fight with sharks; and coming down the Somane, a river in France, I received a charge of shot from an excited and startled huntsman. Although all this was not very pleasant, and might be termed dangerous, I fear nothing more on my trip than intense cold; for, as long as my limbs are free and easy, and not cramped or benumbed, I am all right. Of late I carry a stock of St. Jacobs Oil in my little boat,—(the captain calls it "Baby Mine," and has stored therein signal rockets, thermometer, compass, provisions, etc.)—and I have had but little trouble. Before starting out I rub myself thoroughly with the article, and its action on the muscles is wonderful. From constant exposure I am somewhat subject to rheumatic pains, and nothing would ever benefit me, until I got hold of this Great German Remedy. Why, on my travels I have met people who had been suffering with rheumatism for years; by my advice they tried the Oil, and it cured them. I would sooner do without food for days than without this remedy for one hour. In fact I would not attempt a trip without it."

The Captain became very enthusiastic on the subject of St. Jacobs Oil and we left him citing instances of the curative qualities of the Great German Remedy to a party around him.

Miscellaneous.

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New Publications.

The Literary Revolution.

In January, 1879, **The Literary Revolution** was inaugurated by the publication of one small volume. In September, 1880, its list, published and in preparation, comprises over 120 volumes of standard books. It gives employment to about 500 hands, is actually delivering to purchasers over three tons of books a day, or over 1,000 tons a year, and is so far from able to fill all orders that additional buildings have just been leased, machinery purchased, and other steps necessary taken to double the present product within the next sixty days. To meet the popular demand for the coming twelve months at least 2,000,000 and probably 3,000,000 volumes will be required. The almost wonderful success which the Revolution has achieved is doubtless to be attributed to its leading principles, which are: I. Publish only books of real merit. II. What is worth reading is worth preserving—all books are neatly and strongly bound. III. Work on the basis of the present cost of making books, which is very much less than it was a few years ago. IV. Books have commonly been considered luxuries; in a free republic they ought to be considered necessities, and the masses will buy good books by the million if prices are placed within reach. V. To make $1.00 and a friend is better than to make $5.00 only, and 1000 books sold at a profit of $1.00 each gives a profit of only $1,000, while 1,000,000 books sold at a profit of one cent each gives a profit of $10,000, and it is more pleasure as well as more profit to sell the million. The most important publication thus far undertaken—indeed the most important work ever published in this country—a work that every intelligent person wants in his library, is the **Library of Universal Knowledge.** It is a verbatim reprint of the last London edition of Chambers's Encyclopædia, with copious additions by American editors, about 15,000 topics being added to the original work. It will contain, complete, about 10 per cent more than Appleton's and 20 per cent more than Johnson's Cyclopædia, though costing but a fraction of the price of either. The publication of a large type edition of the Library of Universal Knowledge is just begun, vol. I. being issued September 1. Two or more volumes will be issued each month till the whole is completed in 15 vols. octavo of nearly 1,000 pages each. The price of the large type edition in cloth binding is $1.00 per volume; bound in half Russia, gilt top, price $1.50 per volume. According to our usual custom, special reduction in price is made to early purchasers, and during the month of September only orders for volumes I., II., or III., either or all, will be received at the nominal price of 65 cents per volume for the cloth, 95 cents per volume for the half Russia, gilt top. As a portion of the Library of Universal Knowledge, the Chambers's Encyclopædia is also published separately, complete in 15 volumes of clear nonpareil type, and sold, bound in cloth, for the nominal price of $7.50, or in half Russia, gilt top, for $15.00. Of this style 12 vols. have already been issued, vol. 13 will be ready September 10, and Vols. 14 and 15 a few days thereafter. On this also special terms are given to early purchasers, the price being to those whose orders are received during September $6.75 for the set complete in cloth, $13.50 for the half Russia gilt top. The volumes already issued will be sent at once by express, and the remainder when completed in October. The Revolution is always undertaking new enterprises and accomplishing new victories. During September in Religion we expect to complete Young's "Analytical Concordance to the Bible," the great "Webster Unabridged" edition of of Smith's Bible Dictionary. In Biography, two volumes added to our Acme Library of Biography contain 10 vols. selected from the famous English Men of Letters series, at little more than one tenth the cost heretofore. In Poetry we shall soon have the Iliad and the Odyssey of Homer, translated by Pope, and a large type edition of Shakespeare. In History a cheap edition of the celebrated Froissart's Chronicles, with over 120 illustrations. In Fiction, Scott's "Ivanhoe" and Bulwer's "Last Days of Pompeii." In Juvenile, "Karl in Queerland," profusely illustrated. The cost of making books diminishes in large degree as their number is multiplied. Many of our books are selling in so much larger quantities than we anticipated that we find it in our power to considerably reduce their prices, and we do it with a great deal of pleasure. Among those so reduced are the histories of Macaulay and Gibbon, Taine, Rollin, Josephus, Modern Classics, Milton, Virgil, Dante, Koran, Bunyan, Crusoe, and several others.

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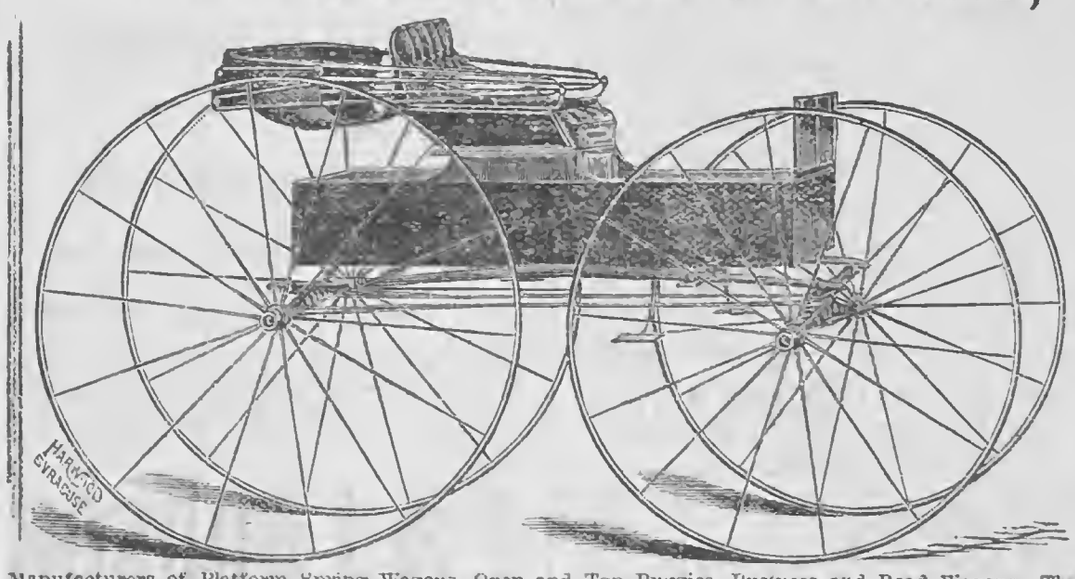

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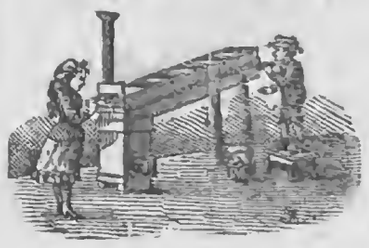

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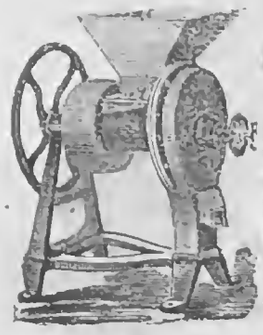

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"ARE you asleep, dearest?" "Yes, mamma, and the doctor particularly said that I needn't be waked up to take my medicine." (*snores.*) —Punch.

A YOUNG man boasted that he had a well-stored mind: whereupon a young lady murmured: "What a pity we can't find out where he stored it?"

THE pastor of a church is reported to have prayed the other Sunday for the absent members who were "prostrate on beds of sickness and chairs of wellness."

THE Emperor of China has 400,000,000 subjects, and not one of them is named John Smith, but as every third man of them is called Hop Sing it is just as bad.

SOME wicked Yankee says that he has invented a new telegraph. He proposes to place a line of women fifty steps apart, and commit the news to the first as a very profound secret.

DIVISION OF LABOR.—Aunt Mary: "Well, Tommy, shall I carry your bat and stumps for you?" Tommy—"No, aunty, tanks! *Me* tarry bat and 'tumps. 'Oo tarry *me*!"—Punch.

"Is that the second bell?" inquired a gentleman of a colored porter.—"No sah," answered the porter; "dat am de second ringin' ov de fust bell. We hab but one bell in dis establishmum."

LITTLE Johnny went fishing without consulting his parents. Next morning a neighbor's boy met him and asked: "Did you catch anything, yesterday?" "Not till I got home," was the rather sad response.

SITTING Bull's son consented to have his photograph taken if he might be permitted to hold his revolver ready to shoot the artist if the camera should go off, and the photographer took the chances and got a fine cabinet picture of the frightened brave.

"Hi! where did you get them trousers?" asked an Irishman of a man who happened to be passing with a pair of remarkably short trousers on. "I got them where they grew," was the indignant reply. "Then, by my conscience," said Pat, "you've pulled them a year too soon!"

"I CAN'T tell for the life of me," said an old farmer at the White Mountains to a party of city visitors, the other day, "what you fellers see up here to draw ye. For my part, these old-fired hills have been the worst thing we've had to contend with. Still, it's all right if ye like it; we're glad to see ye; only it's mighty funny."

SUNDAY AT THE SEASIDE.

Sis.—"Aren't you coming to church with us this morning, Herbert?"

Herbert.—"No, an excursion train is just in, so I shall stroll about on the beach and look at the breakers—the Sabbath breakers, I mean?"

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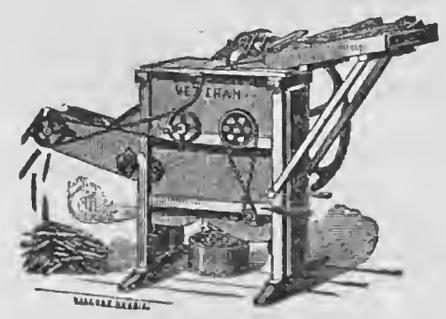

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THE RURAL NEW-YORKER

Ralph Evans

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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Dairy Husbandry.

JERSEY QUEEN OF BARNET, Vt.

T. H. HOSKINS, M. D.

The Fairbanks family, of St. Johnsbury, Vermont, famous the world over as scale makers, are also farmers. The "arms" of Vermont represent a pine tree, three sheaves of wheat and a cow. The pine trees vanished from her hills long ago. Wheat, which was once her staple crop, has ceased to be so; but the cow remains. Vermont is essentially a dairy State, and especially a butter State. The abundant sweet grasses of her hills, and the equally abundant cool springs, as well as the accessibility of the best markets for good butter in the rich cities of southern New England, all combine to turn the industry of Vermont farmers into that channel. It ought to be added that the character of Vermont farmers' wives, their intelligence and their industrious, careful habits, give the State an advantage in a business where such qualities tell in the quality and marketable value of the product. Almost every family in Vermont keeps cows. Many of her village people, manufacturers, merchants and professional men, own farms and run dairies. Such millionaire citizens as the Fairbankses and President Smith of the Central Vermont Railroad are no exception. The former run some 500 acres and the latter over 1,000 acres, the marketable product in both cases being mainly butter. Most of our lawyers who seek for political preferment at the hands of the people run dairy farms as a make-weight in popular favor, and to "head off" any practical farmer who may aspire, on that ground, to the suffrages of the people. In short, butter is the "boss" interest among the Green Mountains.

Naturally, the peculiar merit of the Jersey breed of cattle, its capacity for the production of choice butter, early attracted the notice of Vermonters, and men of means began to purchase and farm herds of these cattle as much as 20 years ago. The Fairbankses, having abundant wealth and business houses located both in England and France, began to collect a choice herd among the first, and the Fairbanks' Jerseys have long been held in high repute, especially in the upper Connecticut Valley. The Caledonia County farmers (largely of Scotch ancestry, but Yankees of the Yankees in all the best Yankee characteristics, nevertheless,) have availed themselves of the advantage offered in the existence of this herd amongst them, and the cattle of that region (and to a less extent of all northeastern Vermont) nearly all have a strong tincture of Jersey blood. Many herds of pure-bred cows, numbering from five to thirty, exist and form centers in the several towns for the dissemination of grade stock round about. As a consequence this part of the State is favorably known to all buyers of gilt-edged butter in Boston and elsewhere. Much attention is paid to putting up butter in fancy packages, one of which, the "Kenerson Butter Package," the invention of James R. Kenerson, of Peacham, Vermont, was illustrated and described in the RURAL some 18 months ago.

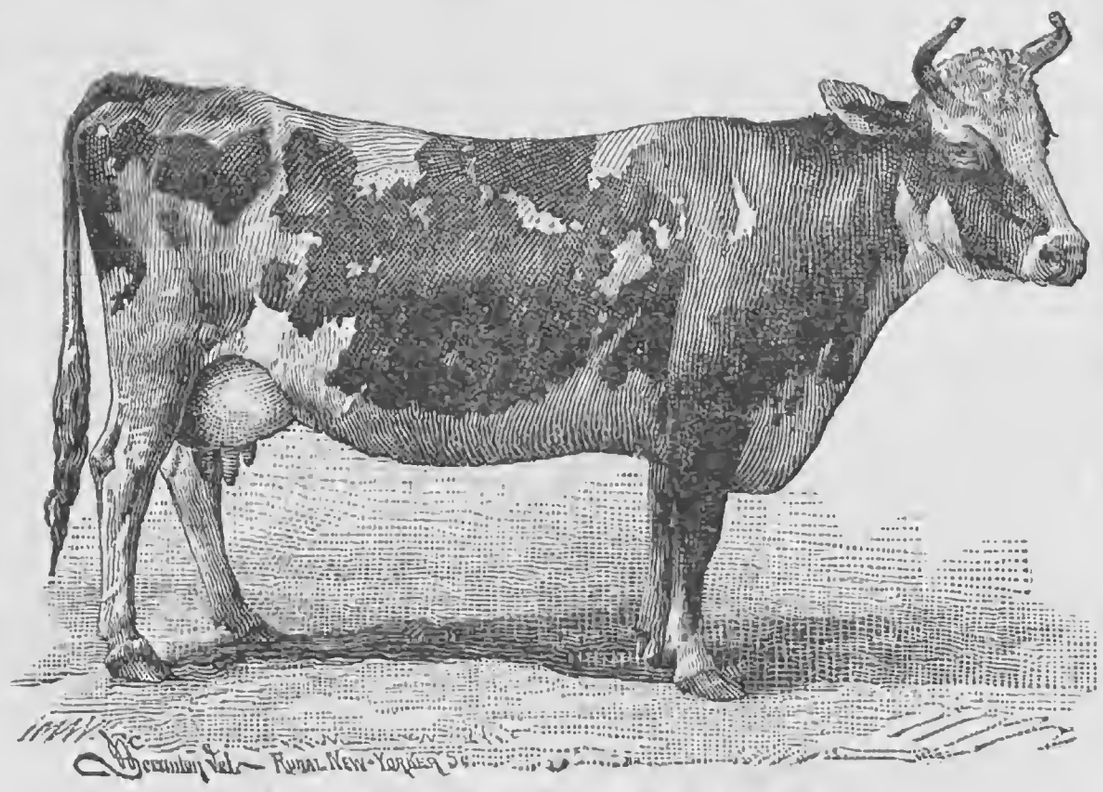
This Mr. Kenerson has a brother, Josiah S. Kenerson, of Barnet, who, though not the owner of a farm, is a great fancier of Jersey cattle. He has accumulated between 50 and 60 of them, which he has deposited singly, or by twos and threes, among the good farmers of his neighborhood. Whenever he sees a cow to his liking he buys her, and in this way he became possessed of the famous Jersey Queen, whose portrait from a photograph, graces the present issue of the RURAL. She is of the "Fairbanks stock," having been dropped on the Fairbanks farm January 2, 1874. She was sold, while a heifer, to Asa Hoyt, of Peacham. Her first calf (a heifer) was dropped June 26, 1876, her second and third (both bulls) in 1877 and 1879. While in Mr. Hoyt's possession she revealed remarkable qualities as a butter maker. From March 15, 1879 to the same date in 1880, according to the sworn testimony of her owner, Jersey Queen produced 676 pounds of butter. During the same time 468 quarts of her unskimmed milk were otherwise disposed of. The tests made from time to time showed that from six to seven quarts of her milk made a pound of butter.

This would place her entire butter yield for the year at 748 pounds, a product which fully entitles her to the title of "Jersey Queen," and also reveals the fact that an American (and mainly Vermont) lineage of nearly or quite 20 years has in no wise deteriorated the dairy quality of these Jersey cattle. As a fact the Vermont Jerseys in careful hands have increased in size, beauty and productiveness over their imported ancestry, and no better cows or bulls of this breed exist on the island of Jersey to-day than can be found in many herds owned in Vermont, descended from some of the earliest importations. These Jerseys, by their merits alone, fairly tested alongside of the Devons, the Short-horns, the Ayrshires and the Dutch (all of which are well known among Vermont dairymen), have so taken the lead that almost no demand now exists here for any other stock for the butter dairy. This fact has been repeatedly, and will be again, attested at the fair of our own State Agricultural Society, and at every local fair throughout the State. I make this statement without being in any way interested, but as an observer who has had as wide opportunities for observation as any resident of the State during the past 12 years; having attended in that time no less than 100 fairs, and visited many more than that number of our best dairy farms.

Last April Mr. Hoyt sold Jersey Queen to Mr. Kenerson, who placed her with S. K. Hazelton, of Barnet. During the week ending April 15, (her 13th month as a farrow cow) she gave 60 quarts of milk and made 12 pounds of butter. In her 15th month, ending June 15, she made 13 pounds, being then at pasture. She is now due to calve in February, 1881. Jersey Queen has never been fed over five pounds of grain daily, a mixture of meal and bran, and while at pasture she has had nothing but the grass.

I am and have long been personally acquainted with Mr. Kenerson and other parties above named, and am entirely satisfied of the correctness of the statements made in relation to the yield of butter as above given. I procured the photograph from which the engraving given herewith was made from Mr. Kenerson personally and sent it to the RURAL with this brief notice of the best butter cow in the world. I have had the best opportunities to know about this stock, having been for several years the editor of the Vermont Farmer while it was published at St. Johnsbury.

Orleans Co., Vt.



JERSEY QUEEN OF BARNET.—Fig. 306.

THE DAIRY COW—NO. 8.

HENRY STEWART.

How to Milk a Cow.

In milking the profit for all the labor and cost is secured. Cows are kept for producing milk, and a very important part of this business depends upon the milker. Good cows are spoiled by poor milkers. I have turned over to a hired man a cow that I had milked steadily and satisfactorily, and the milk has fallen off one-half in less than two weeks. The production of fifteen cows in my stable at one time decreased from an average of 336 pounds a day for the previous week to 340 pounds daily the next week, the reason being the employment of a poor, careless milker for one week only. He was a rough, brutal young man who abused the cows. The milk never fully came up again that season. The feed and feeder were the same. To save 50 cents a day by employing a boy in place of a valuable man, $2.70 a day were lost, the milk being sold at six cents a quart.

This is not at all an infrequent occurrence in dairies, and the reason of it may be easily explained. The cow is a nervous animal, and nervous excitement has always a serious effect upon the circulation. As the milk is secreted from the blood, anything that interferes with the circulation of the blood, interferes with the secretion of the milk. Besides, the udder is a most delicate organ, made up of sensitive membranes and exquisitely fine secretory glands, of which 300 placed side by side measure only one inch. These are made up of a number of round cells gathered together, and each cell is the end of a minute blood vessel, and the beginning of as minute a milk duct. Now, in drawing the milk, if it is not done gently, the fine structure of the udder is very easily irritated; if it is not done quickly and completely, the condition of these extremely delicate glands and ducts is affected more or less, and as they are very numerous a very small disturbance in each will have a very large aggregate result. So that a bad milker will soon dry up a good cow, and a good milker will be able not only to get all the milk the cow can make, but will be apt to help the cow to make more, by exercising the natural aptitude of the milk organs.

The process of milking is as follows: The milk secreted by the glands gradually fills the ducts from the smallest to the largest, the latter being situated at the lower part of the udder and having for their outlets the teats. The duct of the teat, when filled, has considerable capacity. When the teat is gently squeezed from the top to the bottom, the contents are forced out in a stream, and when the pressure is relieved the duct is instantly filled again, not only by the force of gravity, but also by the pressure of the distended membranes of the udder and by the atmospheric pressure as well, because when the teat is emptied and released from the squeezing of the milker's hand, the elastic tube takes its original form, and an air vacuum is formed in the passage, or would be, if the milk were kept back; this, however, rushes in and fills the space. The pressure should be from top to bottom of the teat, and should be made without dragging on it. To pull down the teat, as in stripping, so-called, between the fingers, is to be avoided. The teat should be taken in the hand from the top and squeezed with a firm, even motion. One may force the milk in a contrary direction, and from the teat to the udder by bad milking, and many cows are injured by this faulty action in careless or ignorant milkers. When the udder is completely filled, the pressure of the distended membrane is very great. Sometimes this pressure overcomes the elasticity of the annular or ring-like membrane which closes the opening of the teat, and the cow leaks milk.

If it were not for this outlet the cow would suffer; because when the distension of the udder is at a maximum, the pressure then affects the ultimate gland cells which are highly nervous, and causes pain; it further affects the circulatory apparatus, and causes engorgement; the blood in these fine vessels cannot then unload its burden of milk, and this is returned into the circulation, with the effect to load the blood with abnormal, and therefore diseased matter. From this it will be readily seen that some cows should be relieved of their milk more than once in twelve hours, and that once in eight hours would be better and safer, and would be more productive of milk; and further, it will be seen how much mischief may result from leaving in the udder a portion of the milk not drawn off, or of drawing it in an improper manner. The udder should be completely emptied of milk at each milking. The cow should not be disturbed during milking, and no person but the milker should be present.

The best time for milking is either immediately before or after feeding. To milk while feeding is troublesome and annoying. No singing or droning should be permitted, but to speak to the cow in a gentle, petting manner will not be objectionable. Constant watch should be kept against any movement of the cow's leg or foot which might upset the pail, and if such should happen accidentally, the cow should not be punished for it. Milking should be made a business; there should be no fuss, no noise; it should be done quietly and quickly. If a cow is vicious, she should be punished. A cut with a raw-hide, kept purposely, will be the most effective, and if but one blow is given, the cow will be disciplined and not enraged, as by repeated brutal beatings for revenge. I don't think there was ever a cow that was not improved by reasonable discipline in this way. Punishment for cause only, and that prompt, sharp, decisive and summary, is always needed some time or other, especially with some young cows, but a cow should never be *beaten* and NEVER kicked, or struck about the head or face.

Sometimes it is necessary to draw the milk artificially; this is done by means of a silver

tube, Fig. inserted into the udder. The tube is shown its exact size. It is oiled and carefully inserted in the teat, and in case of garget or wounded udder or teat, it is left in con-

MILKING TUBE.—FIG. 307.

tinually, so that the milk runs off as it is secreted. The slide regulates the depth to which the tube is inserted. But these tubes should only be used when thus required. They cannot safely be used for regular milking as a substitute for the hand. Efforts to introduce them for that purpose have been costly failures.

SHEBOYGAN CO., WIS., DAIRYING.

PROFESSOR G. E. MORROW.

Wisconsin dairy products have taken very high rank in the last few years. The quantity made, more especially of cheese, has rapidly increased, but not more rapidly than has been the improvement in reputation of these products. Not only have Wisconsin butter and cheese taken prizes at dairy fairs open to competition from all parts of the country, but the more decisive test of prices in the open markets shows that no State produces better cheese. This is owing to good natural facilities, good manufacture and to a more rigid adherence to the practice of making only full-cream cheese than has been customary in any other State in which equal quantities are made.

Sheboygan County, on the shore of Lake Michigan, from 40 to 60 miles north of Milwaukee, is one of the best dairy regions of the State. I have not accurate statistics at hand; but I believe there are between 80 and 90 cheese factories in the county—some of them receiving milk from adjoining counties. The cheese product last year was between 4,000,000 and 5 000,000 pounds. The number of milch cows owned last year was 18,129. The Winters are long and cold, but grass and grains grow very rapidly in Spring and the pastures are often more fresh and green in the Autumn than are those lying much further south. The soil varies from a sandy loam to heavy clay. Generally the surface is rolling and there are several good-sized streams and many small, clear, running brooks. Underdrainage would be of advantage in many places and a little has already been done in this work, although there are no tile factories in the county. Wheat has been a prominent crop in the county. This year it is almost a failure. Corn—mainly of the flint varieties—and oats do well. The meadows are mainly of Timothy and clover. The older pastures are mainly of Blue Grass—Poa pratensis—here called June Grass.

As a class, the cows are of "native" or common stock, of medium size. A fair number of full-blood and grade Ayrshires are to be found, and recently a few Holstein bulls have been brought to the county. While the Ayrshires have given good satisfaction to some of the owners, they have not become common. Hon. A. D. De Land is breeding his Ayrshire cows to a Holstein bull, using an Ayrshire bull on his common cows.

In a visit to this county this month, I found little that is remarkable in the management. I heard of no great yields of milk. As a rule, high feeding is not practiced. The majority of the cows have no other food during the best of the Summer except what they get in the pastures. The factories are generally comparatively small; I was informed that the one at Plymouth is now the largest in the State, receiving the milk of about 800 cows. A number of the factories are owned and managed by dairy farmers, who either make or superintend the making of the cheese, high-priced cheesemakers being the exception. The manufacturers receive from $1.25 to $1.50 per 100 pounds for making the cheese. Mr. De Land receives one-sixth of the selling price, guaranteeing a pound of cheese for ten pounds of milk.

Most of the cheese is Cheddar-shaped, averaging about 60 pounds. Some factories are making "flats" of about 35 pounds, and a few of the small "Young America" style. The latter are sold for one cent and the "flats" for one-half cent per pound above the price of the Cheddars. In an unusual degree, as it seems to me, there is uniformity of product and of price. The cheese is made firm and close-textured, and is now almost invariably sold as soon as fit for shipment; weekly sales of all cheese two weeks old are a common rule.

There is a successful Dairy Board of Trade, which has done much for the interest in the county. I was present at its well attended weekly reunion on August 6th. There were 1,800 boxes offered, and sales made at 11@11½c. for Cheddars. This price was fully as high as the New York quotations. It is worthy of note that this is probably the highest price at which July-made cheese has ever been sold in the country on a gold basis. The low prices of a part of last year were discouraging to some of the farmers, but they are now making as large profits as at any former time. This, with the failure of wheat this year, will tend to increase the attention to dairying.

The Hon. Hiram Smith, a well known dairyman, who has been President of the State and Northwestern Associations, and a successful competitor at many dairy fairs, is one of the comparatively few butter makers of the county. He has a herd of over 50 cows. He uses the Cooley creamers and Rectangular churn, and is selling his butter for the Summer months, to one of the leading Milwaukee hotels, at 25 cents per pound. Last year he sold 214 pounds of butter per cow. While this is not one of the "great yields," it represented a total yield of over $60 per cow. I found Mr. Smith's cows on good pasture, and receiving, twice a day, a feed of green clover, also of ground feed—bran and shorts. In a few days it was expected to give them green corn. Much is thought of this crop. Mr. Smith is practicing cutting it earlier each year, as he does with his meadows, and he now makes an absolute prohibition of pasturing the meadows. He has no difficulty in keeping a cow on rather less than four acres.

This county is one of the many illustrations of the good results from intelligent, persistent attention to dairying. There are obvious evidences of prosperity on the part of most farmers, and I much doubt if any grain-growing or even meat-growing counties have advanced more rapidly than has this.

I am now in Brown Co., in which but little attention has, as yet, been given to dairying. My friend, J. M. Smith, the well known market gardener, has a full-blood Ayrshire cow from the milk of which 371 pounds of butter were made in one year, the cow running on the commons, but having good feed in addition.

Green Bay, Wis., Aug. 14.

Goats for Churning.

Those persons who have tried them say that goats are the best of all animals for this purpose. Being natural climbers, the up-hill movement on the power used for driving the churn, does not tire them as it does other animals; in fact, they rather like the work as being special fun for them. Fewer or more goats can be put on to the tread power to operate it as a less or greater churning may require. As goats will subsist on coarser herbage than any other grazing animal, they are doubtless the most economical of all to use for churning; and those who have dairies of only a moderate size cannot do better than to use them for this purpose. If, in addition, they select them from milking breeds, they will be well repaid for their keep from this alone. Goat-milk cheese is a delicious article when properly made, and commands a high price in the European markets, being considered there a great luxury. Goats make handsome teams to draw children's wagons and sleighs, and are much sought after for this work. It will thus be seen that the goat can be utilized both profitably and pleasantly for quite a variety of purposes.

Sheep Husbandry.

SHEEP NOTES.

Green Fodder Crops would provide just now a most acceptable food for a flock of sheep. Every deterioration in the quality of the food may be found in the fiber of the wool. Every pinching of the sheep's belly reduces the strength of the wool fibers immediately, and if the want of nutritious food is long continued, this weakening of the fiber becomes a most conspicuous sign of it. The care of the flock owner should be to provide a succession of green food for use when pastures become dry and hard. An acre or two of rape or tares on which to turn the flock would be most valuable now.

An Importation of Fine Sheep has been made by Mr. T. S. Cooper, of Pa., for exhibition at the international wool and sheep show at Philadelphia. These sheep are Oxfords and South-Downs. The Oxfords are the pick of the famous flocks of Mr. Treadwell and Mr. Street, and Lord Walsingham's South-Downs have been drawn upon for the remainder of Mr. Cooper's purchases. Although we are interested to see these show sheep so beautifully formed and gotten up, yet at the same time we regret to think that these *model* sheep will go the way of many former ones, and pass away without helping very much to make us independent of continuous importations. When will American breeders of these sheep be able to walk alone, as the Merino men, the Cotswold men and the Short-horn and Jersey men now do, and improve upon the imported stock? We have been importing South-Downs these many years, and if we are still to continue to import, it argues that South-Downs are no sheep for us. But we know better.

Stubble Shearing Sheep is one of the tricks of the exhibitor at fairs, made "the same with intent to deceive" the unwary observer and may-be purchaser, with appearances of full shoulders, square rumps, and fat buttocks. The fraud is forbidden, but if the judges are not well posted, the tricks of some breeders would deceive the very elect. So, too, the newly washed wool is artfully dressed with glycerine and yellow-ocher—as indeed we have seen fancy cows dressed, and have proved it by the application of the tongue to the skin, for a judge must not be too nice in such matters—and this dressing gives a soft feeling of the wool to the hand, and a luster and color to the eye, which are very taking. But let judges examine the fleece where the sheep appears too square and filled out, and compare the wool with that of other parts, and apply the tongue to the wool to detect the sweetness of the dressing, and bring all such tricksters to confusion.

The Sheep Business in the West is literally "booming." At a recent sale in Kentucky sheep that were offered at $10 a head at home without being sold, brought $46; which shows that they were not without honor except among their neighbors. It further shows that if a public sale may be a good place to purchase, it is a good place often to sell. But when unwashed wool in Kentucky realizes 35 to 36 cents a pound, it is only right that a sheep should be thought to be something. For its value, there is no farm product that can be carried one or two thousand miles so cheaply and so safely as wool. A ton of wool is worth $750 at 35 cents a pound, or $500 at 25 cents. A ton of wheat is worth about $33 and of corn about $16. The freight is about the same for each, and is thus 25 times more for wheat and nearly 50 times for corn than for wool. This is worth considering, and shows how much better it is to turn corn into wool than to sell it.

The American Merino is attacked in the house of its friends, for Mr. Stephen Powers in one of his very readable "Experience Papers" in the Ohio Farmer "pitches into" this defenceless animal and calls it names. He says it is inferior to the French Merino; and indeed it is if Mr. Powers's figures are true, for he declares this sheep will dress 185 pounds on a carcass of 200 pounds. Well, our best American Merino is a pretty fair mutton sheep and has dressed 120 pounds, which is a fair dressed weigh tfor a 200-pound sheep; but it must be confessed with all its excellencies, that it cannot do impossibilities. And it would seem that the feat ascribed to the French Merino is rather too good, anyhow; for 15 pounds of offal in a 200-pound sheep would hardly provide intestines enough to make one set of fiddle strings. Mr. Powers had better revise these figures.

The International Exhibition of sheep and wool, to be held at Philadelphia on and after September 20th, is a noteworthy occasion for those interested in sheep. There will be seen the best sheep from Europe in competition with our own. For not only are very liberal premiums in money offered, but the honorary distinction of successful competition there will be an attractive inducement. At this time when the sheep and wool interests are prospering in an unusual degree, those persons engaged in these pursuits and those looking to them as desirable occupations, will naturally be drawn to such an exhibition with more than ordinary eagerness. For there they will not only meet the leading men engaged in these industries, but they will have an opportunity to examine the various breeds of sheep; the different varieties of wool; the numerous kinds of manufactures of which wool is the staple material, and generally to gain such an insight into these and other points as will give them a vast fund of practical information which will be of the greatest use to them. The sum of $2,200 is appropriated for premiums for Merinos; $100 for first, $50 for second and $25 for third premiums are offered in the first classes of each breed of sheep, and there are from six to ten classes. Two hundred dollars are offered for a sweepstake premium for the best two rams and ten ewes over one year, we suppose, in each breed; $100 for first for fat sheep, and $50 for first for wool in each kind. The exhibition is to be held at the main Centennial Exhibition building, in Fairmount Park, Philadelphia, under the auspices of the Pennsylvania State Agricultural Society. It is an opportunity which seldom occurs and should by no means be missed.

EWES FOR BREEDING EARLY LAMBS.

The production of such as are suitable for this purpose, is unquestionably one of the most profitable things in which Western farmers can engage, as they are sought for in large numbers in the Eastern States, during the months of August and September to raise early lambs for the following Spring market. Such ewes are cheaply and easily bred from grade Merino, or any common stock, if put to a Cotswold ram, as on account of his greater size and fatness, he imparts these qualities in a superior degree, even to his half-bred offspring. These, when taken to the Eastern States and crossed there by South-Down rams, produce an excellent sort of early lamb, which if well fed with its dam, is ready for market in May and June, and then brings an extra-high price. Lambs which weigh from 30 to 40 pounds at three to four months of age, usually fetch from seven to ten dollars each. At this price it is very profitable raising them, as the mother's fleece shorn in the Spring, more than pays for the expense of wintering her and the service of the ram.

The Swine-Herd.

SHALL WE GROW PIGS WHICH ARE NOT MARKETABLE?

COL. F. D. CURTIS.

A radical change in the breeding of pigs is necessary. We say necessary, if the consumption of pork is to be increased. As pigs are now bred and fattened people will not eat pork except in limited quantities.

In a former article on this subject we stated that fully one-quarter less pork was consumed now in proportion to the inhabitants than formerly. Recent careful inquiries among dealers, and farmers also, have satisfied us that not more than half as much pork is used as an article of diet as when pigs were so bred as to be better adapted for food. The line of improvement for many years has followed fashion or fancy, which has demanded short noses and fat cheeks. Constant breeding in this direction has also shortened the bodies and thickened the sides, so that the modern pig has become not much less than a stuffed, rounded mass of plumpness, or animate fat. Such food is not digestible, and hence is unpalatable, even though fashion may mark it perfect in the form of a pig, and prizes be given to it by judges educated in the fancy school.

Sarcasm has pointed for years to a pig with a natural nose and a long body as a monstrosity which should not be tolerated in thoroughbred society. In the face of public opinion we must pronounce the monstrosities to be of the other sort. A pig made up of less than 25 per cent. of bone and muscle—lean meat—and the balance of lard is not food very desirable. Just about these proportions are found in most pigs. Farmers have experienced so much difficulty in selling this kind of *meat* that but few pigs are now kept where formerly large numbers were grown, and this profitable home market has necessarily been done away with.

Heavy hogs used to command the highest prices, but now in the interior country they can hardly be sold at all. Butchers who cut up and sell fresh meat, require light and thin pigs so that they can get a larger proportion of lean meat, and they complain universally about the improved, chunky pigs having too much fat. The old-fashioned, heavy hog had a long body and its natural adjunct—a long nose, as the two go together. Long noses and long bodies; short, fatty heads and short, fatty bodies are relative characteristics. Why should farmers let these fancy notions stand between them and their own interests, and why should farmers persist in producing a kind of meat that is unsuited to human stomachs?

Old breeds of hogs which possessed the characteristics of long bodies and plenty of lean meat, have had these characteristics bred out of them by continuous crosses upon the finer breeds which fancy called perfect, but about whose only virtue is that they are "easy to keep."

The pigs of the latter kind could be very much changed in their characteristics if they were made to exercise or roam about in an open field or roomy yard while growing, which would have the effect to develop bone and muscle. This will never be the case when pigs are kept closely confined. A pig is naturally, if plenty of food is given to it, an indolent animal. The approved idea and practice in growing pigs are to keep them as quiet as possible so that no food may be thrown away by exercise. It does not take a philosopher to know that pigs thus cramped and confined will have morbid appetites and eat nearly all the time. They soon get into a feverish condition which continues until butchering time, and often breaks them down before, when they are speedily slaughtered. Such pigs can scarcely walk, as their joints are inflamed, the bones weak and the tissues diseased—but they are fat.

We insist that pigs reared and fattened in close pens are not fit for human food, and yet this is the common way in which these animals are made into food. Economy may argue that there will be less consumption of food on account of quiet, as an offset against healthiness, but we are inclined to attach more importance to the latter than to the former, since in the long run health is evidently more important and also more profitable; as pigs

reared under a system which gives them plenty of exercise, which will produce bone and muscle and lengthier bodies, will better meet the requirements of the market and more ready and extensive sale.

We might add that this change of system will furnish a purer air, which of itself would be reason enough for urging a reform in the fattening of pigs. A pen reeking with filth and the vapors which inevitably arise therefrom, and which must be inhaled by the pigs, certainly cannot be conducive to health. Lungs thus constantly filled with impurity cannot purify the blood. In order to insure rapid growth and fatten pigs they are usually given food in a concentrated form, which has the effect to promote fever.

Practically, perhaps, pigs cannot always be fattened out of pens; but they can be fed food less concentrated so as to promote a healthier condition; and, practically, breeds may be selected of less chunky character, in which lean meat and fat are both combined. Either of these reforms can easily be reached and will result in improving the quality of pig meat.

The Herdsman.

GREAT SALE OF THE TILLYFOUR HERD.

This came off in Scotland on the 26th ult. The cattle were of the black polled breed called Angus, and sometimes, though not so properly, Aberdeen. The herd was bred by the late Mr. William McCombie, of Tillyfour, and has long been the most famous of its kind. Animals from it, illustrated in the Rural of February 15, 1879, received the champion prize as the best group of cattle exhibited at the great show at Paris in 1878, and they have been equally successful at the shows for years past in Great Britain, whether for breeding purposes or as fat cattle.

About 1,500 persons were present at this sale, most of whom came for the express purpose of buying. Seventy head were offered, 28 of which were cows and three-year-old heifers; 13 two-year-old heifers; 15 heifer calves; and 14 bulls from calves to two-year-olds. The prices obtained were from 11 to 270 guineas ($55, to $1,350.) The cow sold for this sum is called the Pride of Aberdeen 9th, and it is considerably the highest price ever paid for a polled cow of any breed. The sale was spirited, and the prices realized far exceeded expectation.

We are greatly disappointed to find that no American buyers were present at this sale, as the few black polled cattle which have been taken on to our great Western plains for breeding purposes, have been very successful there, and their half-bred stock from miserable, lean, long-horned native cows, have generally come of good form, and without horns. Steers of this cross bring an extra-high price in the Western markets, and are sought for with avidity, and the only fault found is, that they cannot get anything like as many as they want of them.

The Canadian Government had an agent present at the Tillyfour sale, but he did not bid high enough, it is reported, to obtain anything—the more is the pity.

Short-horn Cattle for Beef and Milk.—In a review of all the different breeds of cattle in Great Britain and the Channel Islands, by the Agricultural Gazette, it estimates the number of cows and heifers there at 2,250,000. The particular merits of each of these breeds—which are 20 in number or more—are fairly estimated as to beef and milk. Some excel in the former yet are deficient in the latter, and *vice versa;* but the Gazette emphatically adds that "It is the great merit of the Short-horn that it *holds the foremost rank in both of these classes.* The exceptional aptitude of the Short-horn cow to lay on flesh whenever, whether by accident or age, she has become no longer adapted for the dairy, is a very great addition in the eyes of the dairy farmer to her merit as a mere milk producer." In consequence of this, Short-horn cattle, which early in this century only occupied a few of the narrow districts of England, have now spread over the whole island, where moderately good pastures abound; also into the south of Scotland, and in Ireland. All the British colonies possess them, from Canada on the northwest, to distant Australia in the southeast.

American breeders have always had the good sense to take the same views on this question as the English; but in the Western States they have hitherto paid more attention to the meat than the dairy qualities of their Short-horns. In this point, however, a decided change is going on with many breeders, and to show what this is, Mr. L. F. Allen, in his circular for the next volume (the twentieth) of the American Short-horn Herd Book, has asked for accounts, whenever possible to be sent to him for publication, of the weekly, monthly and annual yields of milk and butter obtained from single cows, or a whole herd.

Field Crops.

WHEAT.

It certainly is of great importance to farmers to know the "bottom" facts of raising good crops of wheat—good in quality and in quantity. If my experiments this season will be of any value to the many readers of the Rural, they may have them so far as the results have yet been ascertained:—In 34 rows 100 feet long and about one and two feet apart, on a plot of ground six rods long by three wide, I sowed 34 varieties of Spring wheat—one ounce only in each row. Half an ounce of each kind I wet with sulphate of copper; the other half I sowed dry; three of the 34 smutted wet and dry; 11 smutted dry but not wet, and 20 did not smut at all.

I cut low with a sickle and weighed the straw which came to 210 pounds—grain 202½ pounds; all without any fertilizer and on poor soil. The largest yield produced was 10 pounds of Rio Grande from one ounce sowed, or 160 from one. The smallest yield was Sonora—56 from one.

So far as thick and thin sowing go, the result is in favor of the latter. In four rows 720 feet long I sowed one pound of seed, and in five rows of the same length, right beside the other, I sowed nine pounds of the same seed. The four rows yielded the most. Of the 70 varieties I now have on exhibtion—all of which I raised on these grounds—the most prolific and attractive are the Rio Grande, Australian, Black Centennial, Clawson. Of my hybrids Nos. 10, 13, 16, 18, 19 and 21—18 is by far the finest of any; No. 10 is next. These results are the croppings of quite poor soil without a shovelful of manure or a pound of any commercial fertilizer.

My hybrids are not yet named. When they become fixed in color, etc., I shall give them a name. A. E. Blount.

How Much Wheat Seed to the Acre?

In a late Rural a Virginia contributor said that one and a half to one and three-quarters bushel of wheat seed to the acre is the right quantity. On this head I will give my experience for three years:—In '77 I sowed one peck in rows 18 inches apart, and cultivated in the Spring—result, 35 bushels. The average crop of the neighborhood was about ten bushels per acre. In '78 I used 40 pounds of seed on two and one-third acres, and got 70 bushels. It was a good wheat year, the average yield on my neighbors' land being from 15 to 25 bushels per acre. In '79 I sowed 100 pounds of seed on five acres in rows 12 inches apart, and harvested 18 bushels per acre. This was a poor wheat season, the average yield in the neighborhood being from five to ten bushels per acre. I shall sow the last-named amount again this Fall. If our Virginia friend will again try the peck of seed with the product of which he was not content, on land less heavily manured, he may be better satisfied. If farmers would experiment more, they would learn more, to their profit. W. H.

Daviess Co., Ky.

Good Crops.

In a late issue of the Rural those who have raised unusually fine crops are invited to tell how it was done. I raised 222 bushels of very fine red wheat from seven acres, or at the rate of 31½ bushels per acre—and this after the Army worm, millions of them, had passed through the field and trimmed off all the leaves, as well as the beards and a great many of the short heads. This crop was raised on ground that had been planted to potatoes the previous year. The wheat was drilled in—about 1½ bushel per acre—from September 20 to 30. No fertilizer was used for the wheat except what had been applied in the Spring for the potatoes—home-made manure, horse dung from the city stables and some fish and fish scrap. Last year I dug from 3¾ acres—some of the land this year under wheat—1,200 bushels of Burbank's Seedling potatoes. This year I have about 14 acres under the crop, and my Beauty of Hebron is yielding from 250 to 300 bushels per acre—the handsomest tubers I ever saw. Burbank's Seedlings will, I think, do about as well. S. L. T.

Orient, L. I., N. Y.

[We are always thankful for such communications as the above. Eds.]

The Vineyard.

ELECTRICITY APPLIED TO GRAPE CULTURE.

Horticola, in the the Rural of August 21, expresses the wish that I should tell of the effects upon the grapes of the lightning that struck one of my grape trellises. It was July 27th; a member of the family happened to be sitting, face to the window, overlooking the trellis and saw the ball of fire strike the post and, scattering, play along the wires. There were four wires on the trellis which runs east and west, the ground rising about four feet in a hundred. The two upper wires were burnt off at the post; the two lower ones about six to seven feet from it; from one at least a piece a few inches long was taken out clean, and afterwards found on the ground.

The next morning the wires were mended and the vines readjusted, when, in company with "Horticola," we made observations and found no difficulty in tracing the course of the electric current by the burnt, scorched leaves and withered stems along nearly the whole length of the row. The Salem, the second vine from the post where the lower wires were cut in two, had the fruit really burnt. In a few days the effects began to be more plainly visible the whole length of the row, the berries of the Worden, at the extreme end, dropping at the slightest touch. Every few days a change was noticeable. Up to that time the vines had been well cared for, tied up and pinched in. The foliage was as heavy, thick and vigorous as I ever saw, without the least evidence of mildew anywhere visible. I certainly was very hopeful of some fine grapes, if not proud of the vines. This morning I have made some measurements and notes which will convey a tolerably clear idea of the present situation:—The stricken post stands seven feet high sixty-five feet from the northwest corner of the house down which runs one of the five seven-sixteenths-inch square rods that protect it.

The Salem vine next the post has made a strong growth; some mildew and rot present.

10 feet distant—The fruit of the Salem that was scorched, has dried up; foliage almost gone; wood well ripened; some mildew.

15 feet.—Merrimac, foliage and fruit on lower wires somewhat injured; on top wires the fruit is of fine size and color, and ripe.

20 feet.—Merrimac, fruit and vine below badly injured; fully half of the canes are dead.

25 feet.—Agawam, fruit and foliage on lower wires badly injured; fruit ripening unevenly; a little mildew on lower leaves.

30 feet.—Agawam, ditto, ditto, ditto.

35 feet.—Lindley, slightly injured; a little mildew on bottom and top leaves.

40 feet.—Agawam, fruit and foliage below more or less injured.

45 feet.—Wilder, below fruit, pink; foliage gone; above fruit, black and clusters large.

50 feet.—Goethe, foliage gone below; some rot, and some bunches gone; some mildew.

55 feet.—Goethe, lower clusters and some canes injured; mildew and rot.

60 feet.—Senasqua, part of vine killed; fruit and foliage ditto.

65 feet.—Senasqua, vine nearly killed; fruit shriveled; foliage gone.

70 feet.—Croton, vine dead, not fruiting.

75 feet.—ditto, ditto, ditto.

80 feet.—Martha, foliage injured below; mildew as abundant as on any.

85. Martha, vine, fruit and foliage badly injured; will probably die.

90 feet.—Ives, foliage below injured; canes ditto; top foliage good.

95 feet.—Ives, fruit and foliage on top injured; of two clusters hanging side by side on the same cane almost touching each other, one is killed and the other unharmed.

100 feet.—Cornucopia, vine apparently dying; foliage drying up; canes have made a strong growth.

105 feet.—Brighton, foliage and fruit injured; most of the bunches dried up.

110 feet.—Elvira, foliage almost all dead and gone; clusters all shriveled. This was the most heavily loaded vine on the trellis, having probably 10 pounds of fruit, and did not show any evidence of serious damage for perhaps two weeks.

115 feet.—Black Eagle, foliage and canes injured; fruit dried up.

120 feet.—Black Defiance, foliage and fruit all gone.

125 feet.—Cambridge, foliage and cane injured; vine vigorous; wood ripening; some mildew.

130 feet.—Moore's Early, vine and foliage destroyed.

135 feet.—Moore's Early, foliage injured.

140 feet.—Canada, fruit and foliage destroyed.

145 feet.—Canada, foliage destroyed and only two or three clusters remaining.

150 feet.—Champion, no apparent injury.

155 feet.—Champion, two or three canes killed.

160 feet.—Worden, fruit injured and most of it dropped within a week or two; foliage, with the exception of two or three canes, uninjured.

165 feet.—Worden, fruit injured; vine and foliage apparently unharmed.

I conclude that these vines are paralyzed and consequently less able to resist the attack of mildew, from the fact that the adjoining row in which are Lady, Martha, Brighton, Duchess, several of Rogers's Hybrids, etc., is as free from it at this date as any one can desire. But there are other points on which my convictions are not fixed. Did the lightning rods protect the house? Are they any protection anyway; or did the four trellis wires—which combined, would amount to about one-fourth the size of a single rod—contain more attractive capacity? Are we to conclude from this experience that wire should not be used for trellises? These are questions on which doubtless there is, and will be, different opinions; but in regard to the benefits of electricity in horticulture, I think we will all agree that the application, if made in this way, should be in much smaller homœopathic doses. What say the scientific readers of the Rural?

Montclair, N. J., Sept., 8. E. Williams.

Floricultural.

HYBRID FLOWERING PLANTS.

I noticed in the Rural of August 21st, under the head of "Brevities," that we were told that while the coleus, gladioli, and geraniums (pelargoniums) are among the most interesting plants for seedling cultivation, seedling pelargoniums are "the least compensatory," and that "ninety-nine out of one hundred will prove inferior to those in the market."

Now permit me to say such has not been my experience, at least to the extent indicated. I have of late experimented somewhat in that direction with more satisfactory results. I have now in my grounds five different specimens of pelargoniums selected from seedlings originated by myself, either of which is, in my judgment, equal, if not superior, to a majority of those usually offered in the market, and surely I have never had 500 seedlings to select from, and perhaps not to exceed a tithe of that number. True, a large majority of the seedlings are rejected as unworthy; but when I find one that is satisfactory in some distinctive feature or marking, I feel impelled to exclaim "Eureka!" and feel amply repaid for all my painstaking. To me there is a peculiar satisfaction in exhibiting such plants to others, and there is an additional satisfaction when I present a plant or a cutting to a lady friend or visitor, to be able to inform her that the kind was originated by *myself.* Call it a feeling of *pride,* if you choose, but I cannot restrain it, neither do I seek to, for I feel, in some degree, compensated by it for all my troubles and repeated failures.

One of the advantages the cultivation of seedling pelargoniums has over that of the gladioli is, that you ascertain the results so much sooner—sometimes the first season, and certainly the second—whereas with the gladioli I have always been obliged to wait till at least the third year to witness their bloom, which, to an elderly person, is a somewhat serious consideration. I have, however, some of the gladioli thus grown, which, in the estimation of good judges, are fully equal to some advertised by the florists, with high-sounding names at from one to four dollars per bulb.

The coleus will show its peculiar color and character, at the latest, within a few months after the germination of the seeds, and by those who are impatient of delay, and who are desirous to witness the results of their experiments at an early day, the coleus would probably be preferred for their purpose. But to one who has neither the necessary time nor patience to enable him to attend properly to the matter of cultivating seedling plants, experiments in that direction to any considerable extent could not be recommended. Still, I believe that something of the kind may be done by anyone who has even a small plat of ground for a flower garden. For instance, if instead of buying his verbena plants of some traveling plant peddler, or at some greenhouse, he will be careful to select seeds from the most desirable plants in bloom, sow the seeds carefully early the next Spring in boxes in the house, keep them in a suitable temperature till they germinate, prick them out into thumb pots as soon as they will answer, and set them rather thickly in the flower bed as early as the season will warrant, he will get stronger and more satisfactory plants than if he had taken them at once from the greenhouse without a previous process of hardening. True, they may not bloom quite as early, but they will usually be found to be stronger plants and more abundant bloomers through all the later portion of the season. This, at least, has been my experience.

The reason for planting them rather thickly is, that if any undesirable plants should be found among them, they may be removed without leaving a vacancy, and they can be properly thinned after showing their bloom, and only the most desirable retained. The same rule will apply to most seedlings. But with any seeds the tyro must understand that success can only be attained by care and patience and perseverance. Experience will soon be gained, which is often of more value than the most labored instructions.

Clinton.

[We should have said that "ninety-nine out of every hundred will prove inferior to the *best* of those offered in the market." For the rest, we heartily agree with our respected contributor.—Ed.]

Industrial Societies.

NEW YORK STATE FAIR.

(Special Correspondence.)

THE Fortieth Annual Meeting of the New York State Agricultural Society opened Monday morning, Sept. 13, under rather unfavorable circumstances. The sky at early morning was over-cast with heavy clouds, and at 11 A. M. a heavy rain set in which lasted far into the night, and up to the present writing (Wednesday) the sun has not been seen, and showers, cold and drizzling rains, mud and dreary dismal weather have been the order of the day. The committees have been very much hindered in their work, and it was late on Tuesday before any arrangements were perfected that tended to make any show toward a settled condition of affairs. General Superintendent Bowen, who has filled the position he now occupies for the past fifteen years, has been very busy locating exhibitors and giving directions satisfactorily and with his usual skill. And while this is true of one of the committees it is equally true of all others. The several departments are all in competent hands, and with a few exceptions, the exhibitors are all satisfied with every thing except the weather.

In point of exhibits this fair, taken as a whole, has a fuller display in all classes than any heretofore held. The flower and fruit class is the only one that looks deficient. Four years ago when the fair was held in Rochester, this department was well represented, and the exhibits were very fine, but we have not seen so full and varied a collection at any of the fairs since. A stroll among the cattle exhibitors shows as fine and varied an exhibit of thorough-bred cattle as was ever brought together. In this particular class no better or more valuable animals have ever been shown in this State. The exhibits show 85 head of Short-horns, 71 Devons, 29 Herefords, 91 Ayrshires, 56 Holsteins, 84 Jerseys and 25 Guernseys. The representatives of each one of these breeds are the finest stock, and come from the herds of our largest and best importers. The show of swine is not so large as last year; only 130 entries have been made, and these are principally Essexes, Berkshires, Cheshires, Yorkshires, Poland-Chinas. Doubtless many of the breeders of swine and sheep are waiting to make their exhibits at the International Show in Philadelphia next week. Sure it is that the show here in these two classes is hardly an average one.

The horse department presents some very fine entries, and the list comprises some of the best horses in the country. The Clydesdales and Percherons are particularly fine and noticeable, and are from the stables of our largest importers. We are glad to see so many of our farmer friends interested in draft horses, and those who have exhibited such fine specimens will doubtless receive many benefits from it aside from the coveted premiums in which all cannot share.

The poultry hall is very nicely arranged; the ground is covered daily with clean, nice shavings which present a cleanly and attractive appearance. Some very fine birds are shown. The entries comprise Light and Dark Brahmas, Buff Cochins, Partridge and Grouse Cochins, White and Black Cochins, Dorkings, Dominiques, Plymouth Rocks, Hamburghs, Spanish, Leghorns, Houdans, Bantams, etc. Taken altogether, the show of birds is a very commendable one.

On Thursday and Friday sunshine—all the more welcome after the preceding three days of gloom and rain—gladdened the exhibitors and officers and shortened their long faces with broad smiles, which grew more beaming and hilarious as the public kept pouring in from all directions. The attendance on these two days was exceedingly encouraging to the officers of the fair. The gate receipts hardly fell short of $17,000, which will prevent the Society from suffering loss by the exhibition. On Thursday the receipts exceeded those on any single day at any fair held under the auspices of the Association since its inauguration, a moderate estimate placing the number of visitors on the grounds at 25,000.

The agricultural implement manufacturers are nearly all represented and the variety and perfection of their goods are an important feature of the exhibition. It is not a little surprising to note the many advances that have been made during the past ten years among this class of manufacturers. The old-time drudgery of farm work is almost entirely done away with, and implements of all kinds take the place of manual labor. Here are machines for preparing the soil, for sowing the grain, for cutting and binding it; horse forks for handling it, and machines for thrashing and bagging it. Here, too, are corn planters to plant the corn, cultivators for hoeing it, and huskers and shellers to prepare it for the market; besides potato-diggers, manure-spreaders, bean-pullers, brick and tile machines, etc., etc,

We give below a brief description of some of the most useful and practical machines on exhibition at this fair.

WE notice first a fine display of Wm. Anson Wood's harvesting machines, consisting of two reapers and four mowers finished in a most artistic and tasteful manner. Of these machines their new inclosed-gear mower and No. 3 sweep-rake reaper attracted large crowds of people who interest themselves in this class of machines. This mower possesses many new and valuable improvements, worthy of notice, The new tilting device for tilting the points of the guards, excels in simplicity, and proves a valuable addition to the machine. By a very simple and easily operated device the guards can be thrown downward, so that in badly lodged grass, the bar catches it all up, and avoids clogging or running over and leaving the grass uncut. The eccentric for throwing in and out of gear is a very ingenious device patented by Mr. Wood, which avoids all lost motion in stopping and starting the machine in the grass—a very important factor in the working of any machine The pitman-protector and connection are of a very strong and simple design; the pitman is made with compensating heads, so that it cannot bind, and it also has a patent protector, so that it cannot bend or break if it should come in contact with any impediment. The device for raising and lowering the cutting-bar enables the operator to raise or lower either end as he may elect, and the bar can be folded for transportation without detaching any parts. As the name implies, it is an *inclosed gear*, the gearing is perfectly protected preventing the possibility of dirt and dust working in, and its operation is almost noiseless.

The No. 3 reaper is a new departure from the ordinary machines of this class, and among the new improvements in it we noticed the device for raising and lowering the platform, and tilting the same from the seat of the driver, by simply turning a crank in front of the seat. The driver can also set the platform and raker in any desired position instantaneously, without leaving his seat. This device enables the operator to deliver a perfect gavel even when reaping in lodged or tangled grain. In passing through gate-ways, the seat of the driver is turned over toward the machine, which lessens the width about three feet, and prevents the necessity of folding up the table, which is attended with labor and inconvenience. The weight of this machine is only 750 pounds. It is simple and compact in its construction, and has merits that will make it a leading machine for both our eastern hills and western prairies. During the past season, the company made and sold over 400 of these reapers, with most satisfactory results, and have orders booked for nearly 1,000 for 1881.

The company also advise us that owing to the large and increasing demand for their machines in the West as well as East, not being able to secure a suitable site in Albany for the extension of their factories it has become necessary to change the location of the works; and as the star of Empire westward moves, they will move their manufacturing works to Youngstown, Ohio, where they are now building large factories, with a capacity of turning out 20,000 machines annually With greater facilities for obtaining iron and other material for their machines, they will be prepared to supply all their trade promptly in the future—a satisfaction not enjoyed by them during their trade for 1879-'80.

They will also keep an office and storehouse in Albany, N. Y., from which their Eastern trade will be supplied with machines. They will, in their new works at Youngstown endeavor to please their patrons, and to manufacture machines, equal, if not superior to the standard of excellence for which they have been so justly celebrated.

MR. W. J. VAN PATTEN, of the firm of Wells, Richardson & Co., Burlington, Vt., exhibits the Ferguson Bureau Creamery, the sales of which, during the past year, have been very large, and in every instance entire satisfaction has been given. Among the many points of excellence claimed by the manufacturers, may be mentioned its adaptability to all conditions of temperature. In good weather, in June and October, when the best butter is made by the old way, a uniform temperature of about 60 deg. is the rule. In this way nature guides us to this point, as the one which gives the best results in cream raising. If the cows are well fed and cared for, the outside influences will have but little effect on the butter, if the milk and cream are kept at this temperature. This the Ferguson Bureau Creamery does, and hence both in Winter and Summer the results are the same, from the fact that the temperature of 60 deg. can be constantly maintained, with scarcely any trouble or expense. No dairyman should fail to carefully study and thoroughly understand the principles which govern the thorough separation of cream, as the value of his products is almost entirely dependent upon application of these principles in his business. That a uniform temperature of 58 deg. to 62 deg. is essential in making good butter, is conceded by dairyman, and the apparatus which will produce and retain this temperature, is one in which all butter makers should interest themselves. By the use of a Bureau, such as the one above mentioned, the desired results are readily obtained. All the requirements have been met by the cold-air process, which is used in Summer, and by the use of the heater the same temperature can be produced in Winter, and thus the Bureau is completely adapted for use during the entire season. Complete separation of cream is another important feature; and by no other method, can so large a quantity of butter be obtained. During the prevalence of thunder storms the milk is kept sweet until every particle of cream is raised, and an increase of from 10 to 20 per cent is the result. The use of the heater in cold weather gives the same results, for the milk is constantly kept at the same temperature.

KEMP'S MANURE SPREADER was exhibited by the Kemp & Burpee Manufacturing Co., Syracuse, N. Y.. This machine spreads all kinds of manure, coarse or fine, wet or dry, and is adjustable to spread from ten to forty loads to the acre. The manure is torn in fine particles which flow in a continuous stream from the end of the cart. The bottom is an endless apron which passes the manure to the rear, where it is torn asunder and scattered in a fine shower by a revolving cylinder set with spikes, which extends across the width of the cart. The coarsest, toughest and roughest manures are all mastered by it. It is a comparatively new device, this being only its second exhibition in this State. It was shown in full operation on the grounds, spreading at first a lot of fine manure from the canal-boats, which it did in the best shape. Its second trial was with a lot of fresh manure from the stables on the grounds. This was about nine-tenths straw and one-tenth manure. It was simply a test to see if the machine would work in manure not well rotted, and it was acknowledged by all who witnessed the experiment that the work was done far better than was expected. In fact, in *all* of the tests made it proved itself to be all that the manufacturers claim for it. Some of the leading agriculturists in the country are using it to their entire satisfaction.

MR. J. H. DE MOTT, Flemington, N. J. exhibited the Paxton Drill made by the Harrisburg Car Co., Harrisburg Pa. The working of this drill met with very many commendations. It is furnished with Shreiner's Patent Broad Cast Shovel, which involves principles long known, but never before practically illustrated. The shovel is made triangle-shaped so as to make a furrow about four inches wide, in which the seed is evenly distributed by a bell or oval-shaped distributor, which is suspended in the lower end of the shovel. An experience of five years with these shovels has practically demonstrated that they will do all the manufacturers claim for them. The feed attachment is positive and at the same time an even distributor, thus preventing all bunching of either grain or fertilizer. It also has a grass-seed attachment which is so arranged that it can be changed from rear to front in a moment's time. Moreover, the device for increasing or diminishing the amount of seed desired to be sown, requires no change of wheels or gearing—merely turning a thumb-screw does the work in a moment.

THE EMPIRE DRILL CO., of Shortsville, N. Y., exhibited their Empire Grain Drills with fertilizer and grass-seed attachments, sectional sheet-iron conductors, etc. This drill has a positive force-feed, the grain being under the control of the feed from the moment it enters the cup until it is discharged into the conducting tubes. It is accurate and reliable. The quantity is regulated by change gear wheels. Its force-feed fertilizer attachment has proved a great success. The manufacturers claim that they can save fifteen per cent. of the fertilizer used, by distributing the phosphates evenly over the surface and accurately as to quantity. The grass-seeder is constructed on the same principle as the grain-feed, presenting the same advantages. It is attached in front of the hoes, so that the seed is distributed evenly over the surface. The demand for the Empire during the past season has been very large, so much so that to-day the company are over 500 drills behind their orders. No better commendation than this is necessary.

MESSRS. SHORT & SMITH, Syracuse, N. Y., had on exhibition a full line of their three-spring wagons. These wagons are made of the best selected stock, and for style and durability they have already established a first-class reputation. The manufacturers spare no efforts to make their wares as good as fine material and workmanship can render them. They have overcome the only objection that has ever been made to the three-spring wagon—that of its being too high—by hanging the body on loops, which brings it sufficiently low for all practical purposes. The prices of these wagons are low, and the company made a number of good sales during the fair. They report that they have done a fine business during the past season, and that the prospects for the coming year are more than favorable.

THE EUREKA MOWER CO, of Towanda, Pa., exhibited Wilber's Direct Draft Eureka Mower. This mower has met with a great success during the past season. Its ease of draft, rapidity in cutting, and its leaving the cut grass standing light and loose, untrampled by the horses, allowing it to cure quickly ready for the mow, commend it to all. The company are rapidly extending their business all over the country. Their machines are all made of the best material and in the most substantial manner. The Eureka is very simple in construction, having no bevel gears or other complicated and expensive features. To show its ease of draft and the amount of work that a farmer can do with a six-foot machine, they have a report from a farmer in Morris county, N. J., who cut thirteen acres of grass with this machine inside of six hours.

THE WHEELER & MELICK CO., of Albany, N. Y., made the largest display on the grounds. Their exhibit consisted of a full line of their horse-powers, thrashers, harrows, rakes, etc. Their new safety steam generator and engine was shown in full operation, and attracted a great deal of attention. The one shown was a six-horse power, running one of their 34-inch cylinder thrashers. They claim for this engine great economy in fuel, and absolute safety from explosion. They also show the new La Dow's sulky and down spring-tooth harrows, brought out by them during the past season. These harrows have met with great success. Farmers present who had used them recommended them highly. They are adjustable to all kinds of soil.

MR. M. D. CHAPIN, of Poultney, Vt., exhibits the Wooster Creamer, which is a model of neatness and usefulness. The many favorable notices from those who are using these creamers prove their efficiency. They are made of good material in a workmanlike manner, and are guaranteed to raise the cream between the milkings, if the directions are followed. It is generally conceded that by the use of a good creamer the products of a dairy can be increased fully one-third each season; hence, as a matter of economy, they should come into general use. Mr. Chapin was the recipient of the first premium on print butter, made from one of his creamers, an honor which he was justly entitled to.

MR. P. C. LEWIS, of Catskill, N. Y., the inventor of Lewis's Potato Bug Exterminator, has on exhibition an instrument which is destined to become very popular and extensively used. It consists of a combination force-pump, which can be used for several distinct purposes, with only a moment's work in changing. With a short hose attached, it is a garden syringe; a slight change and you have a regular force-pump; another change and it becomes a very effectual sprinkler. This is carried over the top of the vines to be sprinkled, and a light tap on the handle with the hand discharges from 3,000 to 5 000 fine drops on each hill. By its judicious use a pint of the mixture will cover 30 or 40 hills.

THE VERMONT FARM MACHINE CO'S exhibit of dairy goods is fully up to their usual standard of excellence and shows a disposition on their part to keep even with this age of improvement by introducing new features in Cooley Creamers, whereby the labor of handling is reduced to a minimum and all the advantages of submerging, running off milk, etc., are attained. Their Elevator Creamers and Cooley Jr., are especially worthy of notice. The Davis Swing Churn, also one of their manufactures, is simple, easy of operation and is having an extensive sale. They also show the Eureka Butter Worker and their Sugar Evaporator.

NASH & BRO., 22 College Place, New York, exhibit their Acme Harrow, which came into general use in 1879, and is meeting with immense sales. In a single day, during their Fall trade, the orders of the firm numbered 103, coming from leading farmers in all sections of the country. As a pulverizer, clod-crusher and leveler, the Acme proves a success. It is made entirely of steel, wrought iron and wood, and for durability it is claimed by the manufacturer to be unexcelled.

HUGHSON'S WAGON CO., of Syracuse, N. Y. exhibit a full line of their wagons consisting of side springs, side bars, elliptic-top and no-top buggies. They also exhibit, as they claim, the only factory phaeton made in the State and the cheapest top skeleton-wagon—only $50. Their work is all fully warranted. They are large manufacturers exclusively for the jobbing trade, and ship their wagons all over the world

MR. W. E. LINCOLN, of Warren, Mass., exhibited a Creamery which bears his name, and which separates the cream from the milk very rapidly and successfully. The experiment was made at the request of X. A. Willard and other judges, and showed the following results: Milk was set in water at 56 deg. without ice, and showed a perfect separation of cream inside of three hours. This was considered the standard of deep setting.

MESSRS. JOHNSON, GERE & TRUMAN, of Owego, N. Y., exhibited their Champion grain drills with fertilizer, grain-seeder, hoe-shifter and corn-planting attachments. There were three different sizes, showing off to the best advantage the workings of the several important and valuable attachments. General Agent Stiles sold all of his goods on the grounds, and took a number of large orders.

BRADLEY & CO., of Syracuse, N. Y, made a handsome exhibit of their American Harvesters, Changeable Speed Mowers and Self-Dump Rakes. This company have done a fine business during the past season, and are several hundred machines behind their orders, although they have run their works to their fullest capacity.

THE WASHBURN AND MORN MANUFACTURING CO., of Worcester, Mass., had on exhibition a machine for making their steel barb fencing, which was a center of attraction during the fair. This machine barbs the wire, twists it and reels it up ready for shipping, at the rate of about 15,000 feet per day. In their factory, which has grown from a small industry to the largest of its kind in the world, they are producing 130 tons of wire per day, about 30 tons of which are manufactured into patent steel barb fencing. It is obvious to the most ordinary intelligence that what was needed to follow the discovery of a great and universal desideratum like barb fencing, was the invention of machinery for its rapid and cheap production, so as to place the benefits of the first discovery within the reach of all. Without such machinery steel barbed fencing would certainly have been an impossibility as a farm staple, on account of its cost. It has actually been made the cheapest effective fencing in existence, because automatic mechanism for its manufacture was perfected and put into use in Washburn & Moen's works, andprotected by their patents. In the manufacture of steel barb fencing, this company are associated with J. L. Ellwood & Co., of De Kalb, Ill., as owners of the patents controlling the manufacture of steel barb fencing. They also have on exhibition the Brinkerhoff patent metallic fencing, which is made from flattened steel wire, the barbs of which are of a tapering form or wedge-shaped, and are attached to the fencing at right angles with it, the taper running longitudinally with the fencing, so that it is impossible for these barbs to hook into or tear the flesh of animals, if they should come in contact with them. The average tested strength of this fencing is 2,200 pounds. This great strength is due to the fencing being made of a fine quality of highly carbonized steel. It also has the desirable feature of being galvanized after the barbs are attached to it. This is a new and very important point in barbed fencing, as it prevents it from rusting or corroding. This fencing was awarded the certificate of highest merit at the New York State Fair, Sept. 15, 1880.

S. M. CHILDS & CO., of Utica, N. Y., made a very handsome display or agricultural implements, embracing, however, but a small portion of the goods of which they are general agents and manufacturers. Their exhibition included the Tiger Self-Dump Hay Rake, Oliver Chilled Plows, Farmer's Favorite Grain Drills, one and two-horse cultivators, Iron Turbine Wind Engines, Barbed wire fence, &c. The Tiger Self-Dump Rake has been in actual use for the past five seasons, and has by its merits attained its present enviable reputation. The Oliver Chilled Plows are too well known to our readers to need an extended notice. They have secured a first-class reputation in this section, as can be attested by the constantly increasing sales. The Farmer's Favorite Grain Drill, manufactured by Bickford & Huffman, was also at this exhibit, represented by Mr. S. N. Gallup, of Macedon, N. Y. This drill has had an immense sale during the past season, and the makers' factory has been taxed to its fullest capacity, and then they could not fill their orders. The Farmer's Favorite has been long and favorably known to our readers, and its constantly increasing sales show that its manufacturers keep it up in the foremost rank. It has a double force-feed distributor, adapting it perfectly to sowing and planting all kinds of grain perfectly and uniformly. The Bonanza Grass-Seeder attachment positively distributes all kinds of grass seeds, large, small or mixed, and can be placed either on the front or rear of the drill tubes. The fertilizer attachment is accurate and complete, and was awarded the only premium in this class at the Centennial Exhibition. It was also awarded the two first premiums at the recent exhibition of the Pennsylvania State Agricultural Society at Philadelphia. The Turbine Wind Engine is a very popular machine, and is fast coming into general use. Several sales were made on the grounds. Messrs. Childs & Co. have done a large and successful business during the past season, and are making extensive arrangements to add largely to it the coming year.

G. WESTINGHOUSE & CO., Schenectady, N. Y., exhibit their improved thrashing engine connected with and operating their grain thrashing machine. This is now the fourth season with this engine, and it has made many friends in different sections of the country by reason of its lightness, capacity and economical use of fuel. This thrashing machine is so well known as to scarcely need mention, but it is safe to say that no pains have been spared to keep it fully up to the times in the way of improvement. Messrs. Westinghouse & Co. also exhibited their new 10-horse traction engine, and it presents quite a number of features which are novel in this class of engines. An important point in it is the method of communicating the motion to the traction part. Instead of rigid gear or chain connections, power is given by a belt from the fly-wheel, and this belt is controlled by a tightening pulley. The engine can thereby be started at any point, slowly, if desired, be stopped instantly, and is relieved of the effects of contact with obstructions in the track of the wheels. There is also a very simple and effective reversing gear, which is under control of the engineer, whereby the engine may be moved either backward or forward. This engine seems perfectly adapted to the uses for which traction or road engines are in demand. The entire weight of this engine, with water, is about 6,000 pounds, or from 2,000 to 3,000 pounds less than the average traction engine.

MR. O. H. P. CORNELL, proprietor of the Albany Agricultural Works, Albany, N. Y., made a very handsome display of tools and implements from the factory. The first exhibit was the La Dow Reversible Disc-Harrow. This harrow has many points of excellence which are worthy of special notice. The manner of reversing the discs is very simple, and is done in a moment's time, thus throwing the earth either in or out, as desired. They are made of steel, and in construction are simple, easily managed, and perform their work to the entire satisfaction of all who have used them. The firm also exhibited a cultivator for hoeing and cultivating corn and potatoes, which is made upon the same principles. We also noticed the new La Dow Ellipse rake, which was put upon the market during the past season. This rake has an automatic dump, which is entirely under the control of the driver, and is so easily managed that a boy or girl can use it, as the power necessary to dump does not exceed one-half pound, the horse completing the operation. The teeth are set in a balance head which revolves when in the act of dumping, thus relieving the operator from the weight of the hay and cleaning the rake perfectly. The operation of these implements attracted much attention, and they worked to the entire satisfaction of all who saw them. They also exhibited the A. B. C. Thrasher and Cleaner and Emory railway horse-power, and also the old and reliable Albany corn-planter.

THE VICTOR MOWER CO., of Niverville, Columbia Co., N. Y. had on exhibition the Improved Victor Mower of their manufacture. This company have the exclusive use of Krum's Improved Friction Rachet that catches and drives at every thirty-second of an inch. The knives start the instant the machine moves ahead, so that all clogging, no matter how badly the grass may be lodged, is impossible. This rachet is so constructed that any movement of the drive wheels, no matter how slight, will move the knives from center to center, thus absolutely preventing any loss of motion. The frame of the Victor is of wood, and the machine is well made throughout, and thoroughly tested before leaving the factory. It can be started in the heaviest grass without backing up, as both wheels act together in starting. The rachet is perfectly noiseless in its operation, a feature not possessed by any other machine. These machines attracted many visitors during the fair.

THE GALE CHILLED PLOW, manufactured at Albion, Mich., was exhibited by Wilbeck & Cunningham, local agents, of Schenectady, N. Y. Their exhibit consisted of about 25 plows of various sizes, ranging from a small one-horse plow up to large plows for three horses, and embracing two styles of wood beam and two styles of iron beam plows. The Gale plows are equipped with their peculiar standard jointer and coulter, rendering them entirely independent of any adjustment of the beam, and they are proof against all clogging in plowing under clover, weeds, coarse manure, etc. Prominent in their collection is the celebrated wrought-iron Adjustable Rod Beam Plow, that carried off the honors at the Paris Exposition in 1878. They also show a new cast-beam plow and a new wood-beam plow, No. 27, lately added to their list, and an improved wrought-iron jointer arm, with adjustable head and other improvements, keeping pace with the progress of the age.

MR. MINARD HARDER, of Cobleskill, N. Y., exhibited his Fearless Horse-power and Thrasher and Cleaner, which have become so justly popular and widely known. Mr. Harder, who has had over 20 years' experience in the manufacture of railway or tread-power machines, makes this kind of work a specialty. The fact of his having received the two last gold medals given by the New York State Agricultural Society on horse-powers and thrashers, and the further fact, known to the world, that the Fearless was the only machine that received an award on both horse-power and thrasher and cleaner at the Centennial Exhibition, render any description of the excellent work performed by this machine on the Fair ground unnecessary, except to say that on this, as on former occasions, the Fearless was the only machine in practical operation thrashing grain. Its best recommendation is to show its work.

MR. WILLIAMS, St. Johnsville, N. Y., displayed thrashers and horse-powers. On Friday of last week this company did not have a machine in their shops; they had completely sold out and were far behind in their orders; but by Tuesday morning they had a 34-inch cylinder noiseless thrasher, together with a two-horse power ready and put on the cars for this fair. It reached here in time for a showing. Mr. Williams has met with great success with his eight and twelve-horse steam-power thrashers, and also his four-horse railway powers, and has just completed a five-story addition to his works, giving him 16,000 more feet of flooring. His business has increased very rapidly, but with his greatly increased facilities he expects next year to be able to fill all orders.

MR. ROSA, of the firm of Brown & Rosa, Wellsville, N. Y., had on exhibition their new standard milk can. This can is simple in construction and operation, practical, durable and cheap. The advantages claimed by the manufacturers for it are numerous. It combines the advantages of deep setting and rapid cooling, which raises the cream in 12 to 24 hours, with either running or ice water, and it economizes water or ice as well as labor. Satisfaction is guaranteed by the manufacturers.

THE "NIAGARA" GRAPE CO., of Lockport, N. Y., make a large and really fine show of Niagara grapes. Our readers will recollect we were the first to illustrate and give a description of this fine new white grape. The attractive appearance and good quality of the fruit shown, make us hopeful that the white grape for the million has in this been found at last.

MESSRS A. W. GRAY'S SONS, Middletown Springs, Vt., had on exhibition their latest improved patent horse powers, for one, two or three horses. These machines have been in use a number of years, and for good and reliable work they rank among the foremost. They are manufactured of the best materials and in the most durable manner. Their convenience for moving commends them to parties who desire to go about from place to place thrashing and sawing wood with both drag and circular saws.

WALTER A WOOD, M. & R. M. CO., of Hoosick Falls, N. Y., made a fine exhibit of their Automatic Binder. Their machines were in full operation, and the work done by them was fully up to their standard of excellence.

MR. HENRY IVES, of Batavia, N. Y., exhibited a new and very useful implement for hoeing corn, and also a combination shovel plow, which attracted considerable attention.

P. K. DEDERICK had a full line of hay presses in operation; also exhibits of portable engines and other implements from his manufactory.

E. C. RICHARDSON, of Poultney, Vt., interested a great many dairymen with his Surprise Churn.

BELCHER & TAYLOR, Chicopee Falls, Mass., exhibited the S. R. Rye Improved Rake, and also their Fodder cutters which are becoming so extensively used. G. B. B.

THE NEW ENGLAND FAIR.

(Rural Special Report.)

THE Seventeenth Annual Fair of the New England Agricultural Society opened on the 7th inst., at Worcester, Mass., and closed on the 11th, having been continued one day longer than at first announced, in order to carry out the full programme, which was interrupted by a heavy rain and wind storm during nearly the whole of the 10th. Financially and otherwise the exhibition was a decided success, the receipts fully equaling those of last year, which left a balance of $5,000 in favor of the New England and Worcester County Agricultural Societies, under whose joint auspices both fairs were held.

Fine as were the exhibits in all departments, the display of live stock seemed to attract unusual attention, and certainly fully deserved all the consideration it received. It is very doubtful whether so fine an exhibition of choice specimens of the chief breeds of farm stock has ever before been witnessed in New England; certainly the writer has never seen so many fine animals at any of the numerous fairs he has there attended. Of cattle there were, in all, 741 head, a large majority of which were pure-breds, many of them very fine specimens of their respective breeds.

THE JERSEYS in number seemed to surpass all other classes, and judging from the constant crowds about their stalls, and the frequent praises of them, they certainly seemed to be the favorites. In their appearance, however, there was less to attract admiration here than at almost any other fair at which I have seen them. Little or no attention seemed to have been bestowed on "slicking them up" for exhibition, but the adage "handsome is as handsome does" expressed the public sentiment in their regard. The principal exhibitors in this class were, O. B. Hadwen, of Worcester, Mass., with 17 head; W. H. Hopkins, of Providence, R. I., with 12 head; and S. C. Colt, of Farmingham, Conn., with 15 head.

THE AYRSHIRES, also, made a fine display, one exhibitor, B. J. Stone, of Westborough, Mass., showing 27 head. Herbert Merriam, of Weston, also had 10 very fine animals, and S. M. & D. Wells, of Weathersfield, Conn., 13, one of which had a milk record of 61 pounds per day. There were several other exhibitors, too, and the entire class bespoke the high opinion entertained of this breed among New England farmers.

HEREFORDS made a finer show here than at any Eastern fair at which I have seen them, and deservedly attracted a great deal of attention. Burleigh & Bodwell, of Hallowell, Me., showed 35 head, and J. B. Hawes, of South Vassalboro, 14 head. All the specimens were fat, sleek, and in fine condition in every way, and if more care were bestowed on presenting the merits of this breed in a proper manner at our agricultural fairs, it seems not improbable that they would soon become powerful rivals of the Short-horns, especially in those sections in which milk and its products are of slight importance in comparison with beef.

SHORT-HORNS were less numerous and in poorer condition than they are usually seen at such exhibitions. There were only 47 of them, none of which would win admiration for its beauty as a beef animal, though some were highly spoken of as milkers. I looked for specimens of some of the Vermont deep-milking herds, but saw none.

HOLSTEINS were well represented by W. A. Russell's head of 28 from North Andover, Mass., and a couple of other exhibits. In the Russell herd the imported, 11-year-old cow, Lady Clifeden, had a record of an average milk yield of 49 pounds for 311 days; or 16,274 pounds for 372 days, the highest yield in one day being 78½ pounds. With the Holsteins were the Swiss, which in this section have a good reputation as dairy cows. They have thick necks, broad hips, and the calves and heifers were extremely handsome. D. C. Aldrich, of Auburn, and J. A. Bancroft, of Worcester, were the chief exhibitors.

THE GUERNSEYS — two from Herbert Merriam, Weston, and the herd of Col. A. Warren, Pomfret, Conn.,—were separated from the Jerseys and put in a class by themselves. They were considerably larger and in much better condition apparently than their relatives.

DEVONS made an unusually large and fine display, the chief exhibitors being Harvey Dodge, of Wilkinsonville, with 16 head, and W. Eames, of Worcester, with 14 head. The steers of this breed make excellent draft animals, the cows are fair milkers, and both are nearly as hardy as Ayrshires, and, like them, they seem well adapted to New England hills and rugged pastures.

OF GRADES there was a large exhibit, those of Hereford, Devon, Swiss, Holstein, and Ayrshire descent being especially fine. The display of fat cattle was poor.

HORSES were more admired in the speed ring, where trotting for purses took place daily, than in the show-yard, where the display was meagre.

OF SHEEP there were 132 fine animals in 37 entries, chiefly South-Downs, Oxford Downs, Shropshires and Merinos. The Shropshires seem to be gaining rapidly in public favor here as well as in England, and they certainly are a fine breed, judging by the specimens here exhibited by Burleigh & Bodwell, Fairfield Centre, Me. I certainly expected a finer display in this department, but most of the great Vermont breeders put in no appearance. Moreover the International Sheep Exhibition, to open on the 20th at Philadelphia, must be attracting the finest specimens of every prominent herd in the country.

SWINE made a fair show, nine exhibitors contributing 61 animals, mostly Berkshires, Poland-Chinas, and Suffolks.

POULTRY made a fair but noisy show, numbering 150 coops, contributed by 33 exhibitors. All the chief breeds were represented, Plymouth Rocks, Light Brahmas, Buff Cochins and Bantams being the most noticeable.

OF AGRICULTURAL IMPLEMENTS there was a large and fine display, chiefly of goods made by New England manufacturers.

OF FLOWERS, vegetables, fruits, bees, household utensils and domestic manufactures, there were as fine displays as are usually seen at such exhibitions, all attracting deserved attention from crowds of visitors. L. H. W.

Miscellaneous.

STUDIES AT AGRICULTURAL COLLEGES.

A FRIEND from Louisville, Wisconsin, writes us:—I should like to see some articles in the RURAL in regard to the State Agricultural Schools. Do they not do more harm to farmers than they do benefit to farmers' sons? I know several young men in this section who have attended such an institution, but not with the intention of becoming farmers, but in order to prepare themselves to hang out shingles as lawyers, with a superabundance of whom the country is already afflicted. I think that a State Agricultural School should confine its teachings to subjects which will tend directly to make its pupils good farmers. Medical colleges do not include in their curriculum topics which have nothing on earth to do with their specialty, however excellent they may be as parts of a liberal education. Theological seminaries keep to their specialties, without thinking it necessary to teach a smattering of all knowledge; and why should not agricultural colleges "stick" to their own special business, instead of turning the minds of the students away from the very pursuit their fathers would wish them to follow, by offering them opportunities of pursuing other avocations more alluring mainly because requiring less labor? I would like to see farm boys better educated; but I hate to see the "makings" of a good farmer become a poor lawyer, the transformation having been unwisely encouraged or brought about by an agricultural college. It seems to me that agriculture—not law or medicine or any other profession—should have the benefit of the public lands donated to agriculture by the general government. Almost everything I see published on this subject is from the pens of professors at some of these institutions, and the half-apologetic tone of their remarks when referring to the conduct

of agricultural colleges, shows pretty plainly that they themselves—or at any rate the best of them—are not quite satisfied with the present condition of things there. They seem to be constantly on the defensive, without any visible assailant; always excusing, without any accuser; setting up men of straw, to knock them down easily—all of which is likely to beget in the public mind more than a suspicion that "there is something rotten," or at any rate not quite right, in the management of our agricultural schools and colleges."

BRIEFLETS.

It is time to make preparations for Spring bulbs. Hyacinths should be planted a foot apart and six inches deep. Tulips about the same distance apart and four inches deep. The soil should be deep and mellow. A mixture of ordinary garden loam, muck and sand—enriched with old manure—is excellent. The little sprightly crocus should not be forgotten. Purchase heavy, solid bulbs. . . . . "I have often noticed that where people are too poor to keep a dog, they generally keep two, and let them pick up their living where they can find it"—says C. R. D., in the N. Y. Tribune. "This is particularly noticeable in sections of our country where the colored brother predominates, there being sometimes a dog for every male member of the family, boy and man." . . . . . The Crown Imperial may be interspersed among the Spring bulbs—so, indeed, may the showy narcissus, but a bed of hyacinths and tulips is so pretty in themselves, that we prefer to have the narcissus and Crown Imperial separated from them. Last Fall we planted crocuses here and there beneath the sod of the sloping banks of the lake. The effect was beautiful. The blossoms pass away before it is necessary to cut the grass. . . . . Rev. John Earle long ago wrote: "For botany has this great practical advantage over all other sciences as a means of universal culture, that the materials of it are the most generally accessible of any scientific materials in the world. Within the ordinary walking circuit of every habitation, unless it be in the heart of a great city, are to be found data for the whole study of botany. . . . . Ellwanger and Barry of Rochester, N. Y., have tested many of the new peaches which have been advertised as earlier than the Amsden, and they find that Waterloo is as good and early as any of them. . . . . Prof. Sheldon's "Dairy Farming" speaks of a new antiseptic which will do away with common salt in preserving butter. It is called Glacialine. It is tasteless, odorless and perfectly harmless. Prof. Sheldon has tested it to his satisfaction. No doubt it will soon be offered for sale in this country. . . . . The farmers need the immense quantities of fertilizers which cities produce and city people cry out for more cleanliness. Thus we have the supply and the demand. How unfortunate it is that the two classes cannot more profitably utilize this relationship. . . . . T. Z. Bullock of Delaware Co., Pa., has a hen now in her twentieth year. She has not laid an egg in ten years. . . . . The London Garden in a late number says: "It is to be hoped that American raisers, unlike ourselves, will not worry themselves and others by sending out many things, such as the tomato and melon, in which no real improvement and little change is visible." The writer of the above note cannot have seen our Acme. There has not been, it seems to us, for many a year, a more marked improvement in any fruit than is shown in this and the several varieties that have sprung from the seed, all of which, as they do not differ materially from the parent, are not entitled to distinct names. . . . . Mr. John B. Moore of Concord, Mass., sends us by mail a bunch of his Moore's Early Grape. It is the first we have ever eaten, our own vines not yet having borne. In quality we prefer this to the Concord. It bears a close resemblance to Concord in appearance and, being earlier, is well worthy of general trial. . . . . A friend makes the remark that he thinks Prof. A. E. Blount as much a benefactor to mankind as the originator of the Early Rose Potato. We think so too. . . . . Mr S. D. Fisher, of Illinois, reports from Fultz wheat a yield of 43¾ bushels per acre. It was drilled in at the rate of but 1¼ bushel per acre. Fultz is, as he says, a very hardy variety, and the straw is strong and not liable to rust.

WHAT OTHERS SAY.

Dwarf Pears.—Mr. J. J. Thomas, Horticultural Editor of the Country Gentleman, has been visiting some of the fruit farms about Batavia, N. Y. We commend his remarks to the consideration of Mr. Quinn, that unrelenting enemy of dwarf pears. In the town of Oakfield he found several well managed and profitable orchards of dwarf pears. Lorin Rathbun has a ten-acre pear orchard, chiefly of the Duchesse, the trees being sixteen years old. They are set twelve feet apart, and the outer branches nearly touch each other. A few years since this orchard bore 1,205 barrels of fine pears, or over a barrel on an average for each tree. They were sold at $5 a barrel, giving $6,000 for the crop, or $600 per acre for the entire orchard. This was his most profitable return, although in other years it has done well. The best paying crop on a small area several years since was from an older orchard of a little less than the fourth of an acre, which produced 19 barrels, and which sold for $18 per barrel, making the sum of $340, or at the rate of $1,360 per acre. In the same neighborhood Julius Reed has a fine 400-acre farm, with some excellent orchards. From one-third of an acre of dwarf pear trees—all Duchesse, set 22 years—he has sold the fruit in the different years since bearing commenced for $2,340. Mr. Read has a fine apple orchard, from 20 to 24 years old. The trees were planted 24 feet apart, with the intention of thinning them when the tops began to touch each other.

Fruit Farms in Western N. Y.—Mr. Eli Taylor of the town of Elba, occupies 420 acres of good farm land, and he has an admirable dwarf pear orchard of two and three-fourths acres. The net profits of the pear trees have, on an average of years, been equal to the net profits of all the farm besides, and in some years have exceeded those of the farm. There are over 1,000 trees, 15 years old, planted 10 feet apart, and their average product has for several years averaged about $1,000 a year. Mr. Taylor now plants his trees 12½ feet apart. He manures them moderately every year, and cultivates the ground. The trees are about 10 feet high, are all Duchesse, and were bending under their heavy crops. He furnished the following statement of his receipts for the past nine years, which shows the continuous profits: The trees were set in 1865, and in the year 1871 they bore

21 barrels which sold at $10 per barrel, or for			$210
In 1872, 175 barrels sold	at	$5.50	962
1873, 230 "	"	5.50	1,265
1874, 210 "	"	6.00	1,260
1875, 330 "	"	5.50	1,815
1876, (no crop).			
1877, 460 barrels	"	4.00	1,840
1878, (no crop).			
1879, 160 barrels	"	4.50	720
			$8,072

1880, crop not yet gathered, but Mr. T. expects 400 barrels.

The experience of orchardists through this region of country (around Batavia, N. Y.,) gives the strongest preference to the Baldwin among apples for profit, and to the Duchesse among pears. The large size of this pear makes it profitable in market, and its hardiness and resistance to the blight add greatly to its value. Where pear orchards were planted many years ago of different leading varieties, it is common to find that all have disappeared by disease or feebleness except the Duchesse; and fine orchards of this sort, covering several acres, with scarcely a vacancy, the trees from 10 to 20 years in bearing, show its general reliability. A single variety, however, ripening nearly at a fixed period, can never give a full supply for the market through an entire season, and experiments should not be relinquished to obtain a succession, at least through Autumn and Winter, of equally reliable sorts.

The Soiling Cattle Question.—Major Freas would like to know what progress the principle of soiling cattle is really making in this country. The question has now been before the people for many years. Our agricultural papers have teemed with editorials recommending it, and correspondents have from time to time given glowing accounts of the advantages to be derived from its general adoption. In fact, we have even seen figures from those who have tried it, showing that nothing in the whole range of farming operations had been so very profitable as the practice of feeding cattle—or soiling them, as it is called—over the old plan of allowing them to roam at will over the pasture-fields. That this is a wasteful way there is no doubt. The cattle tread down a good deal; their manure spoils much more; they are exposed to heat and drought and plagued by flies; they tread the land down hard and solid, which is unfavorable to vigorous vegetation; but worst of all is the heavy outlay in fencing required. Then the manure they make is scattered about, dried up by the winds and mostly wasted, while, when the cattle are fed in a yard, the manure-pile which follows is by no means to be despised; indeed, it is the best bank account a farmer can have.

With the many advantages which can thus be shown, and which are unanswerable, why is not soiling more popular? The Major suspects it is the labor question over again. An extra hand has to be employed to cut and feed cattle so treated, and it is likely that the farmer who cannot at times get hired help at any price, will not be powerfully captivated with figures which he cannot realize, however correct they may be. He has of necessity to get along as best he may, with no help or little help, letting go the chances to make larger profits, which he could do if he could get men to work for him at moderate wages.

The labor question is indeed the great question of the times. It is worse now than it was before the era of improved machinery. Most people could manage to find profitable work for a man or two all the year round; now the temptation to do without manual labor, except at seed-time and harvest, is great. If this is not the secret why soiling has failed to become generally popular, the Major would like to know what it is.

Patent Flour.—The American Miller gives in a few words the gist of how this is manufactured: The best flour used to be made of Winter wheat. Spring wheat yielded either much less in quantity, or else so much of the bran got into the flour in its manufacture that its color was intolerably dark. The wheat would be ground and then bolted. In the refuse—the bran and middlings—would be included a large proportion of the weight of the Spring wheat, and this would sell more particularly for food for horses. Now the best of flour, and the most expensive, is made of this very refuse of the old-fashioned process. It all came out of the discovery of a way to draw out the bran. Under the new process the wheat is ground about as before. The first result is an ordinary flour sold for exportation. Then the remainder is taken and put upon great horizontal sieves, and while agitation is going on there, an ingenious system of draught is rushing up through, and carries off the bran. What is left are the glutinous portions of the wheat, the most nutritious and most productive, and out of these, purified now by the drawing off of the bran, we get our new-process flour. The result of the discovery of the process has been to make the poor Spring wheat of Minnesota and upper Wisconsin the most valuable kind of grain.

Mr. James Vick thinks, and we fully agree with him, that fine specimens of vegetables or fruit grown in any way that is impracticable for a general crop ought not to be allowed in competition at our fairs and shows. The great value of a fine exhibition of garden or field products depends upon its demonstration of the worth of the method, or methods, employed in producing it. This fact should always be kept in mind by examining committees, and when any entries are made of articles grown under conditions not available in general cultivation, they should be ruled out of competition.

A writer in the Ohio Farmer says that he is not an old wheat raiser, but has not lived these last few years to no purpose, and thinks he has struck the key note of success in raising wheat, in a thorough fitting of the soil before sowing the seed, and he is convinced that a poor piece of land, dragged, rolled and then refitted until the ground is as mellow as an "ash heap," will produce a better yield of wheat than a rich piece of land poorly plowed, half dragged, and the seed scattered among the lumps and clods, and a portion of it without covering or any chance to germinate and obtain a hold.

Swindlers at Fairs. An editorial in the same excellent farm journal speaks of the number of professional swindlers who attend the fairs, whose sole business is to rob unsuspecting people of their money. They travel from one fair to another, the entire season, and wherever they can gain admittance to the grounds with their devices, they are sure to reap a rich harvest. This is evident from the large license fees they offer for the privilege, varying from $50 to $2,000, according to the nature of the device they operate with. One of the "Wheel of Fortune" men, last year, told the the writer of this that he paid $1,500 for the privilege of three days at a certain fair and then cleared $1,500! And this is only a small per cent. of the money lost by the persons who patronize the wheel. The fortune wheel is only one of a thousand ingenious and deceptive devices used to entrap the unwary, every one of which is an outrageous fraud. We beg our readers, now, at the outset of the fair season, to frown down this swindling and robbery, in every way possible. Don't go near them, and keep all others away over whom you have any influence.

Perhaps the heaviest returns ever obtained in this country from a single sheep were secured last year by Daniel Smith, of Hinsdale, N. H., says the Germantown Telegraph. He raised from a Shropshire ewe three lambs, which he sold for $18, and the wool of the ewe for $1.50, making the total income from one sheep $19.50.

To Call Sheep.—"Our friend, C. B. Eaton," says Colman's Rural World, "who prefers to live on the cheap hills of the Mississippi River, with enough rich bottom lands adjoining, rather than go to Texas or New Mexico to raise sheep, has taught his flock to come by blowing a horn. His 400-acre pasture is every part of it within easy hearing of his conk shell. The sheep will lift their heads at the first toot and come on the full run so see what is wanted of them. They expect and always get salt or corn for their obedience at the call. It saves many a long tramp."

Harvest potatoes always in cool, clear, weather and when the soil is dry, that the potatoes may come out clean. Whether unearthed by hoe, patent digger or plow, give the outside moisture time to evaporate previous to storing. Moisture is favorable to heating, which in turn induces decay; hence it is necessary to have the potatoes thoroughly dry, especially when a considerable quantity is to be put away in bulk.—Farm and Fireside.

September Management of Bees.—This is, in our opinion, the best time in all the year to introduce Italian queens, or to change queens in any hive where the bees are not in all respects what you wish, or if the queen is not prolific. Even if you have good Italian stock, it pays to get an imported queen or a queen from a new strain from a reliable source.

Remove honey boxes as soon as filled, or small frames from boxes. When removing them it is useless to put on an empty box now as you would do earlier in the year, as bees seldom begin in a new one. But remove a partially filled box to the place from which you took the full one, as the bees that have been engaged in sealing that one over will go on with the same work in another.

As soon as frost comes (the very next morning if possible) remove all boxes, for in a short time the bees will begin to take honey from them.—Bee Keepers' Magazine.

(Continued on page 647.)

Everywhere.

RURAL SPECIAL REPORTS.

Fla., Ocala, Marion Co., Sept. 5.—Sunday morning, 29th, ult., opened with one of the most severe and violent cyclones or tornadoes ever seen in this portion of Florida, at least. I have never before witnessed anything to compare with it. It was awful, fearful. It blew a perfect tornado all day and night until Monday evening, when it began to relax. At times the storm seemed to shake the very earth, bringing down the unripe oranges in showers, so that they covered the ground, and battering the trees to pieces. So terribly violent was the wind that every shade tree in town—oak, hickory and sycamore—are prostrated, giving the place a forlorn and wrecked appearance. The orange crop of the whole State must have suffered greatly, and been entirely ruined in many sections. Cotton, too, has been whipped to destruction, and the bolls are scattered everywhere. There are sad reports, too, of shipwrecks and loss of life along the coast. W. H.

Illinois, Baileyville, Ogle Co., Sept., 10th.—"What will the harvest be?" might now be supplemented with "What has the harvest been?" Haying began here about the 15th or 20th of June; but as the weather was showery and at times quite wet until after the Fourth of July, a large amount of hay was damaged; and as most of the old clover was killed or eaten by cut-worms in the early part of the season, the hay crop throughout this section was light and the quality poor. The late crop has proven better than the early; and as straw is plentiful and corn-fodder will be abundant (if the farmers will save it), there will be no scarcity of "rough" feed for stock the coming Winter. The winter wheat and rye harvest began the 2nd. and 3rd. of July, and was followed by the barley, Spring wheat and oat harvest, which continued until about the 5th of August, by which time all, or nearly all, had been put in stack. As a large portion of the Winter wheat failed last Winter, and was plowed up in the Spring, and a considerable amount of what escaped winter-killing proved thin and weedy, the Winter wheat yield throughout this region is light, yet it averages better per acre than the Spring wheat. The latter was injured by the hot humid weather and chinch bugs at the time it was maturing, and is not over half an average crop. Some fields were not worth harvesting; others were tolerably good. The rye was generally a good crop—it seldom fails here. Barley, an average yield, but badly stained. Oats are light in weight, but measure out well. Thrashing began here about the 5th ult., or as soon as the harvest closed, and the machines were all busy for some two weeks, when wet weather set in and no thrashing has been done since. The weather has been extremely warm and wet the past two weeks. This wet spell was preceded by a drought of a few weeks' duration, so the rain was needed and has done much general good to the Fall crops and the pastures and by putting the ground in fine condition for plowing; but it has also done some harm, mildewing the grain in stack, etc. The loss to the farmers from their grain growing that was not securely stacked or in barns, will be severely felt. Those were fortunate who got their grain thrashed before the wet weather set in. From what was thrashed we learn that the yield varies greatly. Winter wheat yields from 10 to 30 bushels per acre—will probably average about 13 or 14 bushels.

That which was drilled in on good, well drained ground proved better than what was sown broadcast or among the corn. Spring wheat is not averaging over seven or eight bushels per acre. Rye yields 20 to 30 bushels per acre; barley 25 to 30 bushels; oats 35 to 60 bushels per acre—will average abont 40 or 45 bushels, I think. But it is difficult yet to estimate correctly the general yield of the various crops. Corn is very promising in this locality, but south of this it has suffered severely from drought. It is now nearly out of danger from frost. Our early potatoes have not turned out as well as was anticipated. The Beauty of Hebron has proved better than the Early Rose planted side by side at the same time and cultivated alike. We think the late potatoes (Peachblows) will do well, but cannot tell yet. Garden vegetables and small fruits have been very plentiful, and apples are abundant and cheap. All things considered, notwithstanding the partial failure of some crops, this has been a bountiful season so far and the farmers have prospered in general. W. B. D.

MINN., Tracy, Lyons Co., Sept. 8.—Crops are good here, especially flax, of which there is a good deal raised. Some have thrashed and report a yield of 10 to 20 bushels per acre. Several farmers have from 150 to over 200 acres of flax. A company from Philadelphia has located here, and is putting in machinery to work up the fiber. They own land here and have raised considerable flax this year. D. P.

N. Y., Tonawanda, Erie Co., Sept. 12.—The Beauty of Hebron potatoes proves to be ahead of the Early Rose here. The tubers are larger and the yield 100 per cent. more, planted side by side. I agree with what Colonel Curtis says in a late RURAL in regard to his neighbor's practice of spreading raw manure on sod and plowing it under. It may not agree with the theories of those who profess to farm scientifically, but practically it answers an excellent purpose, as the abundance of the crops shows plainly at harvest time. I clean my barnyard every Spring and Fall; consequently the manure is all raw; but I think my average is probably as good as that of some who use concentrated manure and have cellars and compost, at much expense. My average wheat yield for eight acres of sod, put in after mowing, as above, was 32 bushels per acre of Red Mediterranean, and on eight acres of new land, black soil mixed with clay, the average was 30 bushels of Clawson. I hold that high-bred stock and fancy strains of animals and composting manure to drag in with the grain, and a great many other fancy notions held forth by writers, will not pay a practical farmer to follow. I work the land at the right time and well; give it plenty of stable manure and clover, and I find ample returns from the soil, as a consequence. C. F. R.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Feeding Pigs.

H. T. M., no address, says: "I remember reading a few months ago of an enthusiast who laid himself out for fattening hogs at a cent a day. His plan was to mix corn meal and salt in water, until it fermented. May I ask if this is the best way to prepare a substitute for whey; if so, must it be hot water or cold, and must the liquor be banged up, or prepared in an open barrel. Cut hay and meal steamed, I suppose, is the most economical food for Winter. Help your readers to the knowledge of fattening the poor man's pig."

ANS.—We do not recall the statement to which H. T. M. refers, but corn meal wet up with water and a pinch of salt (no more than the pig needs) would be considerably better than whey for the poor man's or any other man's pig. Whey is mostly milk sugar before fermentation turns it into lactic acid, and has not sufficient muscle-forming matter to grow the muscular system of the young pig. Whey is only fit to be given to lean, grown hogs that need only to be filled up with fat, which the milk sugar is well adapted to do; but much of the whey fed from cheese factories has undergone so much fermentation as to be nearly worthless for pig feeding, unless mixed with linseed meal, decorticated cotton-seed meal, wheat bran, oats, or other food rich in muscle-forming matter. As to keeping a pig upon one cent per day, it must be a very small one, or kept upon a very small ration—and in either case the result would also be small, and perhaps discouraging. We cannot encourage the readers of the RURAL ever to expect anything but a square, honest return for the food given to the pig or any other animal. It is always so much for so much, not "something for nothing." If in the West corn be purchased for 28 cents per bushel, this would give two pounds for one cent, but two pounds of corn are only sufficient food for a pig that weighs 25 to 30 pounds; and, for such a young pig, corn alone is not a proper diet. It does not contain a sufficient proportion of nitrogen to grow the muscular system. The pig is a grass-eating animal, and young clover and corn meal will go well together, because the clover is more nitrogenous than the corn meal; but half bran and corn is better. So the cheapest food in Summer is grass, corn and bran, as these will keep the pig healthy and give it a rapid growth. Grass cut and fed in the pen will answer every purpose. For Winter feeding, a little linseed meal (one-fourth to one-half pound) per day, and the balance in corn meal or bran is as cheap as anything. A little fermentation will improve it, but it should not get much sour. After using the slops of the kitchen, a little of these other foods will fatten the pig rapidly. The pig utilizes its food better than any other one of our domestic animals; but there should be no half-way in his feeding; let him have a full diet.

Mange in Swine.

W. H. M., Warren, Ohio, asks for a remedy for mange in swine.

ANS.—Mange in the lower animals is of the same nature as itch in human beings, and in all cases is due to the irritation and ulceration caused by the burrowings of minute insects, all of which pretty closely resemble each other, though they are known by different names according to the animals they may infest. The disease is contagious, always requiring for its development the passage of the mites or their eggs from diseased to healthy animals. This transfer may take place by the sound animal coming in contact either with an ailing one of the same kind, or with some object on which the mites or their eggs have found a resting place. Any animal may accidentally be the carrier of contagion from diseased to healthy subjects—for instance, a dog can carry the disease from one hog to another—but it is essential for the development of the disease that the insect should be proper to the animal, so that a mange insect of swine cannot produce mange in a dog; this can be done only by the mange insect of another dog. In swine the disease usually shows itself first on the thin skin under the arm-pits and thighs and on the inside of the fore-legs. Small, red blotches or pimples appear at first, and these spread as the insects multiply and burrow under the skin. The only way to rid any animal of the mange is to kill the mites that cause it and their eggs. This can be done only by application of the remedy to the parts affected. It may be well to give sulphur and other cooling medicines in the food, but the insect and its eggs must be killed by local applications. The body should first be covered with soft soap and thoroughly washed with warm water and well brushed; a good wash is made of one part of caustic potash to fifty parts of water; or one part of creosote to forty parts of water, well mixed; or a decoction of tobacco in the ratio of one to twenty-five. Carbolic acid, diluted, is also an effective wash. Several poisonous applications are also sometimes used in severe cases, but we do not recommend such dangerous remedies. A day or two after the thorough application of either of the above washes, the body should be again well cleansed either with the same wash or with potash lye. All the surroundings of the affected animals, too, should be thoroughly cleansed, such as the sty, rubbing places, etc., at least twice, at intervals of a couple of days, so as to kill the mites that might in the interval hatch out. For this purpose, a covering of lime or chloride of lime or a good rubbing with petroleum will generally prove effective. It would be well, however, not to put any sound hogs into the pen of a diseased one for a month or two after it had been disinfected. Most of the above will also apply to mange in other domesticated animals.

Remedy for Collar Galls.

J. O., Momence, Neb., asks what is a good wash for sores on a horse's shoulder.

ANS.—In order to prescribe properly, we ought to have a more particular description of the sores—whether they are running ones, have been of long standing, etc. If they are mere collar galls, they are easily and quickly cured by first washing them out clean very gently with warm soap-suds: let them dry and then apply a thin smearing of white lead. This usually dries up galls in three or four days. If during this time it is necessary to use the horse, put a breast collar on, and do not work him hard, and only part of the day. We have often cured galls by applying neat's-foot oil to them two or three times per day, or as often as it dries. We presume sweet oil or whale oil would do pretty well, but kerosene would be too harsh. Keep flies away from the sores, and anything else likely to irritate them. To prevent galls, take the horse with his collar on him to a saddler and let him see that it fits properly. Then keep it clean of lumps and dirt, and lightly oiled inside every week or two with neat's-foot oil. If the inside leather of a collar is kept soft and pliable, and it is of the right size, and fits snugly to the shoulder, it scarcely ever galls the horse.

Remedy for Ticks on Sheep.

H. B., Cobbleskill, N. Y., asks for a remedy for ticks on sheep.

ANS.—The way to get rid of this pest is to dip the sheep in some liquid which kills the insects. Of the various preparations used for this purpose Crysilic Sheep Dip is as good as any. A safe and very effective one can also be made of tobacco and sulphur in the proportions of four ounces of the former and one of the latter to a gallon of water. The water is brought to a boiling heat, and the tobacco, either coarse cheap leaf or stems, which are equally good, is steeped (but not boiled) in it until the strength is exhausted. The sulphur is then stirred in the liquid. When it has become reduced in temperature to 120 degrees, it is ready for use. The sheep are entirely immersed in the liquid so that the wool is completely saturated. The dipped animals should be kept in a yard until the wool no longer drips, lest the pasture should be fouled, and the sheep sickened by the tobacco juice. After ten days the dipping is repeated to destroy any newly hatched mites.

Cow and Sheep Manure, etc.

G. E. N., Afton, N. Y., asks, 1, whether Guenon's work on the escutcheon in cows is illustrated; 2, will a ton of hay give manure of the same value for crops, if fed to sheep as it would if fed to cows; 3, what is the best breed of sheep for that section.

ANS.—1. Yes. 2. As cows produce milk, it is readily understood why they should abstract more of the nutritions qualities of their food than sheep which only supply the waste caused by the exercise of the vital functions. Hence the manure from cows fed on hay alone (or grass) is very poor; while that from sheep is much richer in fertilizing elements. Practically, we should estimate sheep manure to be worth nearly twice as much as cow manure. 3. What is the best, depends upon the use the sheep are put to. If for mutton and wool, the best would be native grade ewes crossed by Cotswold or Hampshire-Down rams. If your pasture is light South-Down would make a better cross for your locality.

Arbor-Vitæ from Cuttings.

W. J., West Salem, Wis., asks how to propagate arbor-vitæ from cuttings.

ANS.—Flower-pots well provided with drainage and filled with sand will answer. Make the cuttings five inches long. Remove the lower leaves and a part of the upper ones. Insert these two inches deep in the sand. Place the pots in a temperature above 40 deg., and shade them from hot sun. They will strike before Spring. Arbor-vitæ cuttings may be placed in mellow soil out-of-doors. If protected and looked to occasionally they will form roots.

Miscellaneous.

T. D. B., Greenville, Ky., asks, 1, for the cause and a remedy for the rotting of Acme tomatoes on the vines; 2, will it pay to give three dollars per cord for tobacco stems; 3, would it be cheaper to get superphosphate of lime or guano for vegetables, or stable manure at $2 per two-horse load, the commercial fertilizers having to come by express. Having been told that most seedsmen sell their best specimens of melons, tomatoes, etc., and save only the refuse sorts for seed, he asks, 4, whether we can name a seed grower who sells seed got from the finest specimens only, 5, which is the better plan, after hauling forest leaves—to spread them on the ground and turn them under or to compost them with a little manure or other fermentable matter?

ANS.—1. If tomato vines are planted too closely together, the first to ripen are apt to rot because they receive too much moisture and too little sun. But we have had many complaints as to the rotting of the Acme, and it may be owing to an infirmity in this kind. 2. That depends upon the purpose for which you need them. Not for manure assuredly. 3. We should prefer at that price the manure, if of good quality and procurable near home, so that cartage would be inexpensive. 4. It is to the interest of all seedsmen who value their good name to procure the best of seeds and we believe that that is the rule. 5. It would be best to compost the leaves or even to place them in a pile to rot rather than to spread upon the land and turn them under.

A. W., Southhold, N. Y., says that his daughter budded some cherry and peach trees last season according to the directions given in the RURAL, but only one peach grew. The buds of the cherry trees didn't start at all; some of the peach buds started, but afterwards all died with one exception, and he asks the reason why; also, 2. how tall will the Amorpha fruticosa grow—is it a tree or shrub.

ANS.—1. The failure in budding is probably due to the fact that the work was not done at the right time. Remember the bark must part freely from the wood, else the inserted bud will generally fail. For the rest, the bud must be cut clean and inserted at once or kept moist until it is inserted. The bark must be bound firmly over the inserted bud, so as to exclude the air and insure contact. Strong, well-ripened buds should be secured, and after insertion they should be shaded from hot sunshine during the day. 2. We have an Amorpha fruticosa (False Indigo) six years old that is seven feet high. It never grows beyond the bounds of what may be called a tall shrub.

F. W. G., Fulton, N. Y., sends two specimens of potatoes, one marked with a colored; the other, with a white string. The former is from the Beauty of Hebron seed sent out by the RURAL, and it yields better than the other, which has been sold as the Beauty by a prominent seedsman. Both are good; but he wants to know which is the genuine Beauty. He has raised, this year, 20 bushels of that sort, and says they yield better than the Early Rose Snowflake or Early Vermont.

ANS.—We have just dug an experiment plot of one-fortieth of an acre of Beauty of Hebron potatoes, and we have carefully compared the two specimens sent with them. The difference in these two specimens is simply in the color of the skin. One is white, the usual color of the Hebron; the other is pinkish. The potatoes of two hills of our plot present just this pinkish appearance. All the others are like the specimen tied with a *white* string. We say that they are the same potato.

G. H. B., Reedsville, Pa., asks, 1, where can he get seed of Walker wheat, and 2, what other varieties would be likely to do well in central Pennsylvania besides Fultz and Clawson.

ANS.—Walker wheat is extensively grown in East Tennessee and also in some other sections, as may be seen by reports in our issue of July 10. It is a smooth-head, medium, quite early winter wheat, yields fairly and is suitable for a rich soil. Some say it is red, others amber. It may be there are two varieties of the same name. We do not know where seed can be had. 2. Lancaster, Mediterranean and Dehl are reported to do well in that section, and it might be advisable to try Muskingnm, Shumaker or Silver Chaff which we can speak well of from personal experience.

A. N. B., Carlisle, Pa., asks for a fuller report of our crop of Blount's White Prolific Corn, and whether we would sell him a bushel of seed.

ANS.—We shall give a full report as soon as harvested. The ears average medium size—larger than last year. We are satisfied that this Blount's Corn can be much improved by careful selection of seed; that is to say, more ears can be raised per stalk, it will ripen earlier, the shanks can be shortened, it can be induced to grow not so tall, and to bear its ears not so high upon the stalks. If we should succeed in materially improving it in the above respects, we shall again place it in our Distribution. We do not sell anything except the RURAL.

C. C. G. Lockport, Ill., sends for name, 1, a leaf of an ivy-shaped twiner; 2, a doubly serrate, acuminate leaf from a wild shrub or young tree; 3, a flower that came from Dakota.

ANS.—1. We cannot name plants from the leaf alone as a rule. This may be Menispermum Canadense, the Moonseed Vine. 2. You must send us a fruit, or flower, or both. 3. This seems to be Cleome rosea. The order is Capparidaceæ—not Cruciferæ.

G. J. T., Coxsackie, N. Y., asks who makes the best apparatus for drying fruit, and the price.

ANS.—The American Drier Company, Chambersburgh, Pa., make as good a fruit evaporator as any we know. Different sizes have different prices. Write for full information which will be promptly furnished.

E. W. K., Glens Falls, N. Y., sends flower and vine for name.

ANS.—The flower is Gentiana Andrewsii, a very pretty flower commonly called the Closed Blue Gentian. The vine is the Moonseed Vine—Menispermum Canadense.

W. S. F., Reedsville, N. C., asks how far north will Pearl Millet seed ripen.

ANS.—Three years ago it ripened at the RURAL Grounds, about latitude 40.43. As a rule it will not ripen so far North.

J. A. Van T., Webster, Ia., sends an apple for name.

ANS.—The specimen is so bruised and discolored that we are unable to say what it is. At a guess we would say that it is Lowell, but we cannot be certain.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, SEPT. 18.

G. H.—G. C.—F. D.—I. L. D.—L. D.—E. E. W.—D. P.—C. S.—M. W.—J. B. P.—L. J. P.—R. M. P.—R. V. A.—T. R. W.—C. P.—N. B.—G. I. T. A. A. H.—M. B. H.—W. B. A.—O. W. F.—M. E. W.—S. M. McL.—S. A. L.—S. J. D.—O. B. S.—W. B. R.—M. A. P.—W. L. Y.—E. G., thanks.—C. E. S., many thanks.—P. D. G.—W. J. C.—C. J. R.—F. L. T.—R. S.—J. T. H.—S. R. W.—T. N.—R. W. A.—S. T. H.—N. W., thanks.—S. C.—R. N. F.—W. L. H.—W. B.—C. E. A.—M. L. S.—M. J. H.—L. B.

Don't use stimulants, but nature's real brain nerve food—Hop Bitters.

THE
Rural New-Yorker,
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Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY SEPT. 25, 1880.

A POTATO EXPERIMENT.

AT the suggestion of Mr. D. S. Marvin we planted a row of potatoes last Fall on November 12. A potato of medium size, of a very productive new variety which is not yet introduced, was cut in 18 pieces (single eyes) which were placed one foot apart in a drill six inches deep. One pound of potato fertilizer, mixed with soil, was strewn over them, and the drill filled in and leveled. Over this a mulch of coarse salt hay and Red Cedar boughs was placed as a winter protection. Every piece grew, and the vines were large and healthy. The row was dug September 6, and the yield weighed just 18 pounds, being variable in size, and in shape by no means symmetrical.

NOTICE.

BEGINNING as soon as the White Elephant Potato is harvested, we shall send them to our subscribers as they apply, the weather (temperature) permitting. The seed distribution will not begin until the latter part of the year. Subscribers may apply whenever they choose, of course. It would, however, save them some trouble and a trifle of expense if they would apply for the seeds in the letter renewing their subscriptions. They will be forwarded as early and surely in the one case as in the other. We request our good readers not to stick their stamps to letters, and to make application for seeds on a separate slip of paper, being careful to give full address, written as plainly as possible. We request also, as a matter of fairness to us, that those who cannot give our seeds a careful, *pains-taking trial* will spare us by not applying for them.

NEW CROPS AND NEW INDUSTRIES.

In a new country, where the people are not yet masters of all the branches of industry which bring wealth and employment, new industries are continually suggesting themselves, many of which may easily be adopted and established. In flax growing the fiber has, as yet, but little value, and there are no linen manufactories in the United States. The silk worm is also not yet acclimated here. The great source of profit in beet, sorghum and corn sugar is but just beginning to be known. The alpaca wool and Angora hair product are yet small in America, as are the jute and ramie products. The cultivation of tea and coffee and many other semi-tropical products have a great future. Add to these the thousand of little industries which each locality may have for using up raw materials and working them to the highest values, and but a small part of the possible production of the country yet exists.

THE WORLD'S FAIR AT NEW YORK.

THE selection of a site for the World's Fair, at New York, in 1883, has been referred to a select committee, chosen from members of the executive committee, and they are visiting all the localities under consideration for the purpose of examining into the advantages and disadvantages connected therewith, and will report to the executive committee in a short time.

The absence, in Europe, of several prominent persons who wish to be among the subscribers to the first $1,000,000, and the great interest taken in the political campaign, have suggested the postponement of the time of opening the subscription books to the 10th of November, when it is expected that the full amount will be at once put down. The increasing interest in the project is shown daily by the many letters of inquiry and suggestions received by the Secretary, and the numbers of applications for space for exhibits, and the directors are confident that this will prove the largest and most successful exhibition ever yet held in any country.

BOOKS OF REFERENCE—PROPER INDEX.

TIME is money, and to the editor often more than money—life. When he picks up a book to refer to some point he knows to be discussed in it, yet finds no reference to it in the index, with what weariness he opens and searches through a treatise to find what a proper index would have referred him to in a moment. Perhaps the greatest sin committed by compilers of books is the utter neglect to give any analytical reference to the points discussed. The want of a proper index renders many of our books of reference of little value.

If we examine the voluminous reports of the State agricultural societies—most of them are without an alphabetical index, without any analysis of their contents. Take the 32 volumes of the Transactions of the New York State Agricultural Society—a work that would have for the student and editor great value, if it had analytical indexes to the contents—and a half-day may be lost in searching for the discussion of a point.

The Legislature of New York should be asked to appropriate a sum sufficient to compensate a thorough agricultural scholar for making a complete analytical index for the 32 volumes, and thus render them of some permanent value. Let us ask the gentlemanly and accomplished Corresponding Secretary of this Society if he cannot afford to give us a proper index to the future volumes?

THE RURAL BRANCHING SORGHUM.

THERE is nothing among the seeds of our next Distribution regarding which we have greater expectations than the Rural Branching Sorghum. We cannot think otherwise. Our plants which have not been cut, are marvels of luxuriance, eight feet in hight—bearing wide, long leaves, and more of them than upon Indian corn. The plants cut August 5, are now four feet high and may now be cut again. *New* forage plants are dangerous things to commend. We have not forgotten Prickly Comfrey, Pearl Millet and several kinds of Doura, Egyptian Corn, etc., which, lauded to the skies within the past few years, are now rejected as of less value than corn. We do not know its origin any further than that our friend, Mr. Satterthwaite, of S. C., procured a few seeds from Florida some years ago and has raised it upon his farm in preference to corn, millet or any other fodder plant. It will appear to our readers that we have much to lose and nothing to gain by unduly praising our Branching Sorghum. By another season it will have been distributed over the entire country, and thousands before the close of another year will have tested it and can judge whether our praise is merited or not.

We have learned by three trials that there is but one way to sow this sorghum so that its growth and yield shall be satisfactory. We shall speak of this way later and trust that, whether it meets the approval or disapproval of our farmers, they will, as a matter of justice to us, follow it to the letter.

SOUTHERN PROGRESS.

THE indications of a rapid recovery and growing prosperity of the Southern States is at this time too apparent to be denied. With the beginning of the business year, September 1st, the papers in the larger cities are publishing comparative statements of trade, and from these there is every indication of a rapidly growing prosperity.

As we go down the coast the extending fields of early vegetables and fruits show that there is profit and employment in the cultivation. Inland there is an increase of the number of acres of land in cultivation, and there are more machinery in use, better tillage and more attention to manures. Little manufactories and home repair and machine shops are rapidly increasing, while oil mills, foundries and cotton and woolen mills are becoming institutions of very many States. The commerce of the coast cities is largely ahead of that of last year, and a feeling of confidence prevails with a much greater apparent spirit of enterprise among old settlers and newcomers.

In the Mississippi Valley the same increasing prosperity is still more noticeable. The commerce of New Orleans is one-half greater than the previous year, and the Mississippi River is not only the Father of Waters, but is becoming the mother of an immense inland commerce.

In nothing is this prosperity more apparent than in the increase in the number of little and great industries which so much cooperate in using the raw material and in supplying home requirements, without the necessity of long transportation between the markets and sources of production. These are among the greatest auxiliaries to the farmer's prosperity.

THE PRESERVATION OF FORESTS.

At the meeting of the American Association for the Advancement of Science, lately held in Boston, the Committee on Forestry submitted the draft of a memorial to the Governors of the various States calling their attention to the necessity of preserving and cultivating forests to supply our future demands for timber. Eight recommendations looking to this end are made in the memorial. Laws should be passed in the different States protecting trees planted along the highway and encouraging the setting out of such plantations by proportionate deductions from highway taxes. The increased value of land due to the planting of trees thereon should be exempt from taxation until some profit may be obtained from the plantations. Money should be appropriated to enable horticultural and agricultural societies to give premiums for tree planting, both for the largest areas set out and the best management.

Prizes are recommended for the best essays and reports upon practical forest culture. Encouragement should be given to all educational institutions in introducing practical instruction in forestry. The distribution of seeds and plants among the agricultural community is advocated, so are the establishment and maintenance by the State of model plantations under the care of men trained to the profession of forestry; and the appointment of a commission of forestry under State authority, of the same nature as the commission on fisheries now established in some of the States; and, last but most important, the need of more stringent laws for the prevention of forest fires is urged. Great as is the yearly destruction of our forests to supply timber for building purposes, for domestic manufactures, for fences and railroad ties, for fuel and for exportation; yet in some years the waste caused by forest fires greatly exceeds the amount of timber cut for use or destroyed to meet a real or supposed necessity, as in cases where thousands of acres of trees are annually burnt or girdled to make clearings.

THE GRAIN FIELDS OF THE NORTHWEST

THE extraordinary product of wheat upon the vast plains of the Northwest, surprises even Americans, who are rarely excited by any possible development of their own country; but it astounds and dismays Europeans, who see in it a ruinous competition which their farmers' cannot resist. When the Northern Pacific Railroad was proposed, it was only through the sanguine and speculative spirit rife in the flush paper-money times of 10 years ago, that the public went to its support with a somewhat reckless and blind faith in the judgment of its projector. But that great speculator builded better than he knew, and by a great stroke of unexpected good fortune it has been found that the territory opened by that road covers the most fertile and extensive wheat fields in the world. These fields at present, though only penetrating upon a narrow border, are producing one-tenth of the whole wheat crop of the United States. The great success of wheat culture in this territory has given a surprising impetus to the construction of railroads. No less than six railroads are penetrating this wheat district and as these advance a vast brigade of farmers flank them on either side and even precede them in a wide front. In the newly organized counties on these lines of road there are already 516,354 acres under wheat cultivation, and further west, in the great valley of the Red River, 208,032 acres are already occupied. In addition to these, 1,696,896 acres of land were entered by occupiers in 1879 and are being prepared for wheat; and as these lands need but the plow, the whole of this area, and possibly as much more, will be under cultivation within another year.

The system of culture upon these farms is one that reduces the cost of the product to a minimum. Farming is done under a system of discipline like that of an army. A brigade of plows advances in an unbroken front and traverses a field miles in length. Drills follow and hundreds of acres are seeded in a day. At the harvest self-binders advance "*en echelon*," or one slightly behind the other, making no turn until they have traversed miles, when they wheel with military precision, and, without stop, lay down in sheaves 500 acres of wheat a day upon one farm. The harvest of one farm requires 35 cars a day to carry it to market. Not only is wheat produced in this manner at the least possible cost, but each acre of this fertile land produces as much as two to four acres of land upon the majority of Eastern farms. With such competition comes a serious question, not only to European farmers, but to our own farmers in the East—what will be the result to them of this new dispensation?

BREVITIES.

WE are pleased to know that our Mold's Ennobled oats took the first premium at the State Fair.

FURTHER special reports of the fairs, and of the N. Y. State fair in particular, are crowded out of this number. They will appear next week.

THE production of wine at Egg Harbor City, N. J., last year, as stated at a recent meeting of the N. J. State Board of Agriculture, was 200,000 gallons. The principal grapes grown are Concord, Clinton, Taylor, Martha and Delaware.

THIS year's stock of seeds of the hybrid pentstemons which we sent last year to our subscribers, has been disposed of to London seedsmen at a very high price. In the letters received from our friends little mention has been made of their success with these pentstemons, perhaps because they have not yet bloomed.

PROFESSOR BLOUNT writes us: "I wish you could slip into my room and see a "*show*." Everybody, both men and *women*, stand aghast at seeing so many kinds of wheat—nearly 70 bunches hanging by the roots, all labeled and no two alike. Every one of them is far finer than the (Eastern) seed from which it was raised."

IT is reported that the British steamer Thanemore, Captain Sibthorp, which sailed from Baltimore August 29, for Liverpool, lost 225 head of fine fat cattle on the passage. When will such shocking murders of poor beasts cease, for it is nothing less than this. Our Government ought to put a stop to it as soon as Congress next assembles, for individuals never will. The hope of gain and a recklessness of results will spur them on to the end of time in their heartless, unmerciful shipments.

THE representatives of the RURAL NEW-YORKER hereby extend their sincere thanks to Superintendent Bowen, Secretary Harrison, executive officers, James Geddes and his assistants in the Agricultural Implement Department of the New York State Fair, as well as to Mr. Owen of the Cattle Department, and to all officers of the Association for the kindly interest shown in their behalf, and for the many courtesies which they have so often received at the hands of these officials.

THE Irish potato crop, we are assured, is extraordinarily good. The yield is exceptionally large and rot unusually scarce. There is no doubt that this satisfactory condition is mainly due to the introduction of many new varieties of seed from this country and Great Britain. The old sorts were not only "running out" from the same causes that produce that effect here, but they seem to have become especially liable to rot, a liability from which the recent introductions appear to be at present in great part exempt.

THE English Agricultural Gazette, in describing the market gardens of Bedfordshire says that in the district of Potten the soil is such a powerful absorbent of all kinds of coarse manure, that a standing fable is told there of a man once plowing in a field, who, for some fault or other, laid the boy who was driving the team, down in one of the furrows, and plowed him in. Upon his being searched for the next day, nothing could be found of him but his jack-knife and the buttons of his coat. The fate of this boy would have been quite different had Peruvian guano been first sprinkled in the furrows; for according to a veracious Connecticut legend when this was once done the boy by the next morning had grown tall enough out of the ground to cap the highest trees in the surrounding neighborhood.

ON the first of this month one-fourth of the grist tax was abolished in Italy, and the remainder of this grievous burden upon the lower classes will disappear on Jan. 1st, 1884. It was levied for some years upon the grinding of all grain, and so high-priced were flour and bread in consequence that the "common" people had to subsist largely on poor corn meal porridge. A loathsome disease somewhat like leprosy very prevalent among the lower classes is attributed to this diet. The abolition of this odious tax was stubbornly resisted by the aristocracy, as it brought in a heavy revenue from the sufferings of the people, and thus enabled Italy to maintain a position as a military power among European nations. To keep up this position in future some more equitable mode of taxation must be devised than that which made starvation and disease epidemic among the people.

TIME FOR SOWING WHEAT AND RYE.—The best time for this generally, is from the 10th to the 25th of September, in latitude of 40 to 43 deg. Later sowings answer farther south, even to the last of November, according to the latitude. It is best to sow as early as convenient, so that the plants may get well rooted before frosts sets in, and then they are not so likely to winter-kill, or heave out during the freezing and thawing of March weather. If by early sowing, or an unusually mild and prolonged Autumn, the grain gets up too rank, it may be fed off by sheep or calves; but be careful not to let them do this except when the ground is dry and firm, otherwise they will poach it badly and injure the crop. Rye and wheat, are now sown much more extensively than they used to be, and especially by dairy men, for Spring soiling. We know nothing in the way of cultivated crops that comes forward as early as these, or that can replace them for the purpose of soiling during the month of May and early in June.

Literary Miscellany.

BY THE STREAM.

SWEET tangled banks, where ox-eyed daisies grow,
And scarlet poppies gleam;
Sweet changing lights, that ever come and go
Upon the quiet stream!

Once more I see the flush of splendid wings,
As dragon-flies flit by;
Once more for me the small sedge-warbler sings
Beneath a sapphire sky.

Once more I feel the simple fresh content
I found in stream and soil,
When golden Summers slowly came and went
And mine was their spoil.

I find amid the honeysuckle flowers,
And shy forget-me-not,
Old boyish memories of lonely hours
Passed in this silent spot.

Oh, God of nature, how thy kindness keeps
Some changeless things on earth!
And he who roams far off, and toils and weeps,
Comes home to learn their worth.

Gay visions vanish, worldly schemes may fail,
Hope proves an idle dream,
But still the blossoms flourish, red and pale,
Beneath my native stream.

—Sunday Magazine.

INMATES OF LESTER HALL.

CHAPTER IV.

(Continued from page 630.)

IN THE COUNTING-HOUSE.

"Is Mr. Lester in his office, Mr. Jason?"

"No, sir. Mr. Lester has not yet arrived."

"When he comes, request him to come to me at once."

So saying, and without waiting for the clerk's "yes, sir," Mr. Daton passed on into his own office, a handsomely fitted-up room, with a rich Turkey carpet, elbow-chairs, a writing-table with all kinds of elaborate arrangements, and a capacious waste-paper basket.

It was nearly eleven o'clock on a gray March morning in the third year of Rex Lester's residence in London. It was Monday morning, a busy morning with most people; the clerk's in Mr. Daton's large establishment had been busily at work since nine o'clock, and several letters and telegrams were awaiting the head of the firm, piled upon the desk. Glancing at the little heap as he entered, Mr. Daton passed on to the mantelpiece, and stood there for a minute or two lost in thought; and judging from the expression of his face, the subject of his meditation was anything but a pleasant one.

Things had prospered with him; hard work, perseverance, and indomitable energy, had raised his fortune to its present hight, and in the mercantile world no name ranked higher, no credit was more deservedly good than his. In his private life he had seen great trouble: he had married a young and beautiful woman to whom he had been engaged some years; they had passed together twelve bright cloudless months, at the end of which she had borne him a son, who survived his birth twenty-four hours, and the young mother had never gotten over the shock. She lingered a few days and then died with her hand in her husband's and her head upon his breast, smiling into his eyes, and whispering with her last dying breath of her love for him and of the happiness of their married life.

Henry Daton did not marry again, and people said that he had never recovered the great double loss he had sustained, and that he had been graver and colder in manner from that day; but he said nothing about it, never touched upon his loss, but devoted himself to his business with increased activity. Some thought him cold and indifferent, and said that he had no heart, no thought, save amassing wealth and becoming rich; but these people did not know that in a secret drawer of his writing-table there was a long curl cut from a dying head, and a little tiny bit of soft yellow hair which the young mother's feeble fingers had cut from her baby's head ere it was laid in the little satin-lined coffin. What would those good people have said if they could have known that the bit of tissue paper in which these were folded held what was dearer to the merchant than his wealth and power!

"Not come yet," muttered he to himself, as he turned away from the mantelpiece with a gesture of extreme annoyance. "After all I said to him last week. It is too much!"

He crossed over to his writing-table, and seating himself, began to open his letters with a preoccupied manner, and it evidently required some effort to bring his mind to bear upon his business. But in a few moments he shook off his preoccupation and, having finished his correspondence, he took up each letter one after the other, wrote a few words on each, the substance of the reply to be written by the clerk, and placing them in heaps of five or six letters separately, he touched an electric bell, which was answered almost immediately by Mr. Jason, the head clerk, who had been in Mr. Daton's employment for many years.

"Distribute these, if you please," said the merchant, handing him some letters. "Has there been any message from Carter and Andersen."

"No, sir; but a clerk from Julian and Sons' has been here this morning about that invoice; the mistake was theirs."

"Ah! I thought so. Mr. Lester has not come yet, I suppose?" continued Mr. Daton, with an assumption of carelessness, as he turned to his desk again.

"No, sir."

"Very well. That will do. By the way, Mr. Jason," arresting the man's steps as he turned to the door, "when Mrs. Briant comes to-day tell her that she is to have an annuity; that she can send her eldest son here to-morrow. See what you can do with him,"

"Yes, sir; thank you sir," said Mr. Jason, with a glance of respectful admiration at his employer; and as he left the room he thought how few merchants, however wealthy and influential, took the trouble to look after the widows of their deceased under-clerks and provided for their wants.

Left alone, Mr. Daton wrote one or two letters, glanced occasionally at the clock, and he had just taken from one of the drawers of his writing-table a small account book, which he was examining with an expression of annoyance, when there came a knock at the door.

Mr. Daton lifted his head abruptly, closed the book, but did not replace it, and said:

"Come in."

Upon this the door opened and admitted Reginald Lester, who came into the room with an air of easy nonchalance, and wished his uncle "good morning."

The three years which had elapsed had made a considerable alteration in Reginald Lester; the handsome, fresh-colored youth had grown into a man, tall and slender, pale and worn-looking. He was handsome still, but in a very different style; his face was thin and pale; the hazel eyes, so like Cecil's, were dim and weary, as if with late vigils into the night; the mouth was almost hidden by a long, silken, fair moustache, evidently an object of great care. He was dressed in the hight of the fashion, and wore delicately-tinted kid gloves, which he was leisurely removing as he entered the room: he had a camellia in his button-hole and a superb diamond ring on the little finger of his slender, white right hand. He was a very different Rex Lester from the one whom we met at Lester Hall three years ago, and the alteration in him was one which could not have pleased those who were really interested in him.

"Good morning, Uncle Henry, I am a little late, I believe," said Rex, in a languid tone.

"Good morning—a little late?—yes; it is on the stroke of two," said his uncle, coldly.

"Is it possible? I'm awfully sorry; but I came straight here, sir," said Reginald, looking a little ashamed.

"You keep late hours," said Mr. Daton, in the same cold tone of voice; while Rex, still a little silent and ashamed, went over to the fire and stooped to warm his hands.

"Where did you spend your evening?" said his uncle, abruptly, after a pause.

"I dined with Carew and some other fellows.,"

"The old story," said Mr. Vicars, suddenly rising and pushing aside his papers impatiently. "I saw you, and I wondered how you, Reginald Lester, could find pleasure in such society."

"All young men do, sir," said Rex, rather sullenly.

"Young men who are idlers and thrown upon their own resources, which amount to nothing, perhaps. Not young men like you who work, or ought to work, for their daily bread."

Reginald's pale face flushed and his eyes flashed; for a moment he seemed about to speak, but he refrained, and in a moment Mr. Daton continued.

"This is not the first time that I have had occasion to find fault with your conduct," he said: "but my remonstrances do not seem to have had much effect. Your conduct has been for many months extremely displeasing to me. You have neglected your business—you have entirely disregarded my wishes. You have been extravagant, careless, dissipated, and have associated with those whose companionship is neither beneficial nor desirable. I have excused you more than once on the grounds of your inexperience and of the greatness of such temptations as those into which you have fallen to some natures; but surely such pleasures must begin to pall upon you now! I believe those of your race have always been more liable to them than many others; but I had hoped much from the influence of your mother's memory and of your sister's goodness. I had hoped much, but my hopes have fallen to the ground."

His voice was mournful as he concluded, and Reginald stammered some words of apology and regret.

"Cards, dice, horses, and bad company, these are the rocks on which you strike, even as your ancestors did. You care nothing for high and noble aims—for goodness, purity and truth; such words are words only in the ears of the youth of the day, the things they express have no real existence. Have you no higher desires than to be an empty-headed gambler, a dissipated young fellow? Looking back at the records of the past four months, it would seem so in very truth."

"You are bitter, sir!" said Reginald, in a low, sullen tone. "I am not worse than most men of my day and generation."

"Not worse? No; I pray Heaven you are not half so bad as many! But is your life a worthy one—answer me that, if you please?" said Mr. Daton, rising from his seat and confronting his nephew sternly.

"You do not make allowances, sir, said Reginald.

"Allowances for what?" said his uncle, sharply. "For your youth, perhaps? I have been young myself. For your position? Its novelty is over; you must have gotten accustomed to it now. Oh! I have been lenient—you cannot say otherwise! See!" He turned to the table, and took up the book he had been examining—"I have been looking over this book, and I find that I have paid heavy debts for you in the last eleven months, and though the sum may not seem excessive to you, it represents by no means the whole amount of your expenditure. You will remember that although I was desirous of finding a son in you, I gave you no hint as to the future disposition of my property. Had my son lived I would not have behaved to him more liberally than I have behaved to you, but I would have forgiven him less!"

His voice shook a little as he concluded. Reginald's face cleared slightly; but he looked remorseful and ashamed.

"To what does it all lead?" said Mr. Daton, in a moment. "To what can it lead, Rex? To ruin! You must break from these companions; you must give up the society of those who are leading you astray. It will require but one effort—a strong one, perhaps, but you are man enough to make that, surely! Make it, and I will forgive the past folly and extravagance!"

"I will try—upon my honor I will try, sir!" said Reginald, with a sudden outburst of earnestness and compunction.

"I hope so," said his uncle, all the sternness gone from his face and manner. How could he be stern when Rex looked at him with those hazel eyes, so like those of his dead sister, the lad's mother, whom he had loved so dearly! "I will believe you, Rex; and as a first step on the new road," he added with a slight smile, "we must clear off all outstanding debts, and start with a clean bill of health!"

"You are very good, Uncle Henry," said Reginald, confusedly.

The color flashed out into his face for a moment and he turned again to the fire, bending over it with a shiver and a sharp, hacking cough, which called up an expression of anxiety on his uncle's face as it was bent over his check-book.

"You have not gotten rid of your cough, lad," he said, as he dipped his pen in the ink.

"No; I have had no chance!" was the careless answer. "The weather is against it."

"But you must be careful. Here you are, lad. And Rex," continued Mr. Daton, impressively, "I want one promise from you."

"What is that, sir?" said Reginald, as he took the check, which his uncle handed him.

"That you give up gambling," said the merchant, sternly.

Reginald hesitated a moment.

"If you wish it, sir—yes!" he said, quietly.

"Very well, I trust you, Rex. Now you can go, as I am busy. There is some work for you on your table, and see that those debts are paid, remember!"

"Yes; thank you, sir!" said Reginald, as he left the room, and went to the office appropriated to young Mr. Lester, who was looked upon by most people, including himself, as Mr. Daton's heir, and treated with consideration accordingly.

Reginald's office was a much smaller room than that occupied by his uncle, but it was equally comfortable, and much more ornate in style. A blazing fire burnt on the hearth, and a cushioned arm-chair was drawn up beside it, into which Rex sank in an attitude of careless, easy comfort, and sat there for some time with the check still held between his fingers, and an expression of absorbed interest and meditation on his face.

Looking back, he saw that he had given his uncle a promise he was not at all likely to keep. How could he? Every man in his set played more or less high; it was impossible for him not to do so. And if he had lost a good deal lately, the run of luck would turn, and he would win. Uncle Henry could not expect him to keep that promise; still, if it pleased the old fellow, said Rex to himself, carelessly, he would let him imagine that he had given it up.

Reginald's sense of honor was apparently blunted, or he would not have found it so easy to excuse himself for breaking his word.—To be continued.

NEW ZEALAND.

LIFE in New Zealand naturally divides itself into different modes—as, indeed, is the case in other parts of the world; and it is spoken of as a whole, these distinctions force one into a more detailed consideration of the subject. Few things can be more unlike than life in the country and life in the town—or, again, than life on a station and life on a farm; and these differ widely from the lives of diggers and miners and those of lonely shepherds and lumberers. Like revolving circles, which touch but never mingle, those different existences cross and recross each other; so that it is impossible to give a fair account of our colonial life without touching, more or less, on all of them.

In New Zealand the inhabitants are neither enormously rich, none abjectly poor. The necessaries and most of the luxuries of life are common to all who are moderately industrious and prudent. The luxuries and æsthetic pleasures of wealth—art, science, literature, the charms of elegant leisure and of really good society—are unattainable by any. Life is reduced to simpler elements than would be possible under an older, wealthier, and more elaborate civilization. Yet this simplicity, which is to many minds the greatest charm of a colonial life, is leaving us year by year. As the land is opened out, and the population becomes larger and more settled, new wants arise, and the luxuries of former years are the necessaries of these.

Probably the first thing which strikes a traveler on visiting our towns—and here I speak chiefly of Dunedin, Christchurch, and Wellington, the great commercial centres—is their resemblance to the smaller cities at home, the centres of provincial industry; but after a long residence, and under a closer scrutiny, it is the difference which impresses itself most forcibly; and as time goes on, and one's knowledge of the place increases, this difference becomes more and more apparent, and the first fancied resemblance fades entirely away. We miss the old time-honored buildings, with perhaps a cathedral or abbey church dominating all, below it a quaint town hall or market place, and streets of warm red-brick houses, where generations of men have been born, lived, died, not without impressing their personality on the brick and timber, the rooms and staircases—houses that were homes where the heart-strings clung even round the shabby old furniture for the sake of the "had been" which made every nook and corner sacred. Memories of this kind find no place in our antipodean cities. Here all is new or hopelessly squalid and so shabby that the greatest lover of antiquities would condemn it on the instant. Many of the Dunedin firms have erected splendid warehouses which would reflect no discredit on the banks of the Thames or the Mersey; but the streets of ordinary shops and dwelling-houses, built chiefly or entirely of wood, and seldom more than half finished, may indeed be dwelling-places, but can never be homes. Another feature of our town life is the restlessness of the population. Rarely do you find a family occupying the same house for several years in succession. Business men change their offices as they would change their gloves. This restlessness and love of change is a notable feature of colonial society. Onward, not upward, is the universal cry. Make money—honestly if you can, but anyhow make it, and a natural outcome of all this is a contempt for things poor and old.

A society where nothing is venerated for the tender memories of those who are gone, loved because they loved it, prized because they prized it; a society where we do not honor our parents irrespective of their individual merits, where we laugh to scorn the apostolic injunction, "Fear God, honor the King," is not a satisfactory state of society, as all will acknowledge who have ever experienced anything better. Of the boys and girls growing up in our midst it is not too much to say that they are mere savages in regard to what you call culture, and to those polished graces of mind and manner which are the outcome of high civilization. Shall I say that they also escape many of its attendant weaknesses; that they are stronger in mind and body, more robust, more energetic, more self-reliant? In justice I must admit it, and add that their helpfulness, industry and fertility of resource are worthy of all praise. Still they shine more conspicuously in the kitchen and in the farmyard than in the drawing-room. A liberty which approaches to license prevails in their social relations, and makes one bitterly regret the absence of self-control, based on self-respect, which forms so important a part of the old home training.

Town life and the society of towns naturally intermingle. In the country, of society properly so called, there is none. We may have neighbors, half a dozen families within a radius of ten miles, or perhaps half the number at double the distance. However that may be, we must take them as we find them, and make the best of them. We must "be to their faults a little blind, and to their virtues ever kind," if we would escape becoming hermits on our farm or station. Our country neighbors we cannot criticise; we take them as they are, and are thankful to them for breaking the drear monotony of our lives. But in towns it is otherwise; there you may to a certain extent choose your own surroundings, and there the peculiar defects of colonial society are most glaringly visible.

The squatters and managers have in general an easy time of it, no undue pressure being exerted on mind or body. As a rule, they have very little to do, though, of course, there are busy seasons when head and hand are fully engaged, either in actual work, or in overseeing the work of others. On some stations, where a large amount of stock is kept, the cattle are occasionally mustered, either for sale, or to take the tally, and brand the young beasts. Few things in the world can be more delightful than a rapid ride after stock in the fresh, bright morning air, which braces the nerves and muscles to their highest tension and sends the blood tingling through every vein. Sheep mustering is by no means so exciting. Sheep are stupid animals, and almost as obstinate as the traditional Irish pig. Merinos are fleet-footed, and, if they choose to scatter, would be very difficult indeed to handle. Fortunately they are gregarious, and keep together in herds or mobs, and so they are easily worked by means of dogs. With the shearing itself the masters and the regular station hands have nothing to do. It is under the control of professional shearers, who go from station to station, beginning at the north and working steadily southward. These men are paid per hundred for sheep they shear.

On the whole few things are more enjoyable than station life at its best—the free pure air, the out-door life, so much of which is spent on horseback, the freedom from conventional restraints, and above all the absence of small cares and worries which beset the business man and the farmer. True, for the run holder as for others, there are bad times, when the sheep are diseased and wool is low, but these evils are wholesale and fatal in their effects, and call for extreme powers of endurance, and for extreme remedies; but we all know and acknowledge that it is the small troubles, the petty daily cares which take the pleasure out of life, and reduce it to mere existence.

I do not think that ladies generally care much for station life. There is little to occupy and amuse them, save the mere drudgery of house work, feeding fowls and pigs, rearing chickens and ducklings, making butter, &c., no opportunity for social intercourse. Society, as I before said, is out of the question—people are too scattered, and too busy. Sometimes, in the summer, an excursion of a few days to a neighboring station or the nearest city, may be planned and carried into effect; but these expeditions are few and far between, and unless ladies possess many resources and accomplishments—being able to play and sing, sketch in pencil or water-color, ride, drive, and climb—and above all, unless they have a true love for the country, they must find this life exceedingly dull.

All along the seaboard, in the neighborhood of railways and near towns, the land is becoming far too valuable to permit of its remaining in an unproductive state; it is worth money, and must be made to yield money. In the back districts, where the land is less fertile and less accessible, a few large runs are still intact, and will probably remain so for many years; but they yield only a moderate percentage on the money invested in them, and station life, in its best and brightest aspect, must soon become a thing of the past.

CORRESPONDENT.

MAGAZINES FOR SEPTEMBER.

THE AMERICAN NATURALIST—CONTENTS:—The Siphonophoros. (1.—The Anatomy and Development of Agalma.) Destruction of Obnoxious Insects by means of Fungoid Growths; List of the Birds of the Willamette Valley, Oregon; Do Flying Fish Fly? Editors' Table; Recent Literature; General Notes; Botany; Zoology; Anthropology; Geology and Paleontology; Geography and Travels; Microscopy; Scientific News.

"MIMICRY" IN SNAKES.—In the Naturalist for September, the question is asked, "Does the fox-snake 'mimic' the rattlesnake?" This recalls an experience of mine that occurred several years ago, when collecting plants in the vicinity of Panola, Miss. A snake of an unknown kind running along in the low grass was pursued to some rail that lay in a loose pile on the ground where it had fled for safety. By means of a stick of sufficient length, after finding it, I held it fast to the side of a rail, when I was surprised and startled by a buzzing sound from its tail. The first thought was that I had a rattlesnake, but a glance at the tail and the color of the skin at once disproved this. Feeling safe from being bitten, the hold was kept, and the phenomenon observed. The tail, vertically flattened either naturally or for the occasion, was thrown into rapid vibrations from side to side. The snake was very angry at being held, and I thought this its mode of showing its spite. The sound seemed hardly as acute as that made by the rattlesnake, but may have been somewhat modified on account of the beating of the tail against a rail, as it did from its position. It was, however, a close enough imitation to cause one, on hearing it, to get out of the way of harm. My description of the way of producing the sound would be in almost exactly the same terms as those used by Mr. King, though, if I remember rightly, it was more continuous, still it was not without interruptions. On loosing my hold to get a better chance to kill the snake, being uninjured it glided rapidly away, and escaped among the grass and bushes, and, as I was not in search of that kind of specimens, no further pursuit was made. I did not know the species, but from its slender form, dark color, and rapid running, should think it a Coluber, or one nearly allied to that genus. Its length was about five feet.—*E. F. Hill, in American Naturalist for September.*

PHRENOLOGICAL JOURNAL.—CONTENTS: Winfield Scott Hancock, Democratic Candidate for President of the United States. Portrait; Wm. H. English, Democratic Candidate for Vice-President. Portrait; Studies in Comparative Phrenology. Temperal bone in the Carnivora. Rodents and Birds: A Press Excursion; Hallucinations; Edgar A Poe, the man and his poetry, Portrait; Notes on the Psychology and Pathology of the Brain; The Coquita Palm; the Story of a Pedlar; The Relation of Food to Morals; Apoplexy; One Phase of Evolution; Notes in Science and Agriculture; Editorial Items; Answers to Correspondents; What They Say; Personal—Library Notices—Publishers' Department.

DISCOVERY OF GIANT REMAINS IN OHIO.—A correspondent of the Cincinnati Enquirer, in describing the mound in which the gigantic skeletons lately found in Muskingum County, Ohio, were deposited, says it was about 64 feet long and 35 feet wide, top measurement, and gently sloped down to the hill where it was situated. A number of stumps of trees were found on the slope, standing in two rows, and on the top of the mound were an oak and a hickory stump, all of which bore marks of great age. All the skeletons were found on a level with the hill, and about eight feet from the top of the mound. In one grave there were two skeletons—one male and one female. The female face was looking downward, the male being immediately over, with the face looking upward. The male skeleton measured nine feet in length, and the female eight feet. In another grave were also found two skeletons—male and female—with the female face looking upward and the male face looking downward. The male frame was nine feet four inches in length, and the female eight feet. In another grave was found a female skeleton, which was incased in a clay coffin, holding in her arms the frail skeleton of a child three feet and a half long, by the side of which was an image, which, upon being exposed to the atmosphere, crumbled rapidly. Seven others were found in single graves, and lying on their sides. The smallest of the seven was nine feet in length, and the largest ten. One single circumstance connected with this discovery was the fact that not a single tooth was found in either mouth, except in the one incased in the clay coffin.

On the south end of the mound was erected a stone altar, four feet and a half wide and 12 feet long, built on an earthen foundation nearly four feet high, having in the middle two large flagstones, upon which sacrifices were undoubtedly made, for upon them were found charred bones, cinders and ashes. This was covered by about three feet of earth. This excavation was made under the direction of the Muskingum County Historical Society, and the things alluded to in this letter, or dispatch, can be verified by a number of witnesses who were present and watched the work as it progressed. It was pursued with great interest and diligence, there being the strongest incentive to prosecute the investigation, for such remarkable developments in mound-opening are very rare, and are therefore fascinating in the extreme. Their future labors were also rewarded with additional developments, which, if they do not throw additional light upon this giant race of people that once inhabited this country, will at least stimulate research.

What is now a profound mystery, the result of this excavation may in time become the key to unlock still further mysteries that centuries ago were commonplace affairs, is a stone that was found resting against the head of the clay coffin above described. It is an irregular-shaped red sandstone, weighing about 18 pounds, being strongly impregnated with oxide of iron, and bearing upon one side two lines of hieroglyphics.—*Phrenological Journal for September.*

ECLECTIC MAGAZINE.—Contents:—Steel Engraving, Portrait of George Grote the Historian; Henry David Thoreau; His character and opinions, By R. L. Stevenson; Edgar Allan Poe. By William Minto; A Learned Lady of the Sixteenth Century, by M. Creighton; On Ants, By Ellice Hopkins; A Fable in the Manner of Mr. Gay. By Austin Dobson; A Stranger in America. By George Jacob Holyoake; Story-Telling. By James Payn; The Decline of the German University System. By A. T. S. Goodrick; A New Poet. By G. A. Simcox; The Romance of Chinese Social Life; In Town; White Wings; A Yachting Romance. By William Black. Chapters XXXVII to XL; The Migration of Popular Stories. By Sir George W. Cox; Lola Montes; The Northern Shepherd. By Gilfried Hartley.; The Future of Asiatic Turkey; A Woman's Wisdom; George Grote (with a Portrait). By the Editor; Literary Notices; Foreign Literary Notes; Science and Art; Varieties.

JOURNAL OF MICROSCOPY—CONTENTS:—Argulus Stizostethii, N. S.; The Microscope and Its Parts; Chase's Mounting Forceps; The Size of the Blood-Corpuscles; Preparations of Crystals for the Polariscope. Correspondence—Two of Mr. Adolph Schultze's Contributions to Microscopy Reviewed; Concerning Scientific Journals. Volume I. Out of Print; Postage Stamps; New Societies; Held Over; Omission. Our Book Table—The American Naturalist; Illustrations of the Nests and Eggs of the Birds of Ohio: The Raindrop. Transactions of Societies—Rochester Microscopical Society; Microscopical Society of Camden, N. J.; Wellesley College Microscopical Society; Microscopy and Medicine; Lancaster (Pa.) Microscopical Society; The New Jersey State Microscopical Society. Questions and Answers; Exchanges.

For Women.

CONDUCTED BY MISS RAY CLARK.

ARE ALL THE CHILDREN IN?

The darkness falls, the wind is high,
Dense black clouds fill the western sky,
The storm will soon begin;
The thunders roar, the lightnings flash,
I hear the great round rain drops dash—
Are all the children in?

They're coming softly to my side;
Their forms within my arms they hide—
No other arms are sure;
The storm may rage with fury wild,
With trusting faith each little child,
With mother feels secure.

But future days are drawing near—
They'll go from this warm shelter here,
Out in the world's wild din;
The rain will fall, the fierce winds blow,
I'll sit alone and long to know,
Are all the children in?

Will they have shelter then secure,
Where hearts are waiting strong and sure,
And love is true when tried?
Or, will they find a broken reed,
When strength of heart they so much need
To help them brave the tide?

He knows it all; His will is best,
To shield them now, and yield them rest,
In His most righteous hand;
Sometimes souls he loves are riven
By tempests wild, and thus are driven
Nearer the better land.

If He should call us on before
The children go, on that blessed shore,
Afar from care and sin,
I know that I shall watch and wait
Till He the Keeper of the Gate,
Let all the children in.

HOUSE-BUILDING—FAIRS.

IN answer to Mrs. B's. request for hints about house-building I send our experience.

We commenced at the beginning, for when we took possession of our farm, there was but one building upon it—a good barn.

Upon inspection a slight eminence at just the right distance from road and barn was found and chosen for our house site; then many a long Winter evening was pleasantly spent in drawing plans and making calculations for the building of our future home.

The family purse isn't a heavy one, and we were obliged to "look well before we leaped" for come what would we were resolved that no "mortgage" should be included in our plans. What we wanted was a house just large enough to *use*, no shut up rooms to be furnished for moths and spiders to abide in, but all to be airy and pleasant in Summer, and capable of being economically warmed in Winter. A good stone foundation and dry cellar were essential—and a bay window for plants—by some considered a luxury, we called also a necessity; and who can get along without a bath-room, neither did we forget a good, large pantry, and a closet for old clothes, boots and so on, near the back door for the greater convenience of the "men folks". Just here some one suggested that we should'nt have much money for our outward "adorning" if we had all these extra's, but we replied, Virginia creepers and bitter-sweet grow all along the by-way and we could get them to cover all we lacked in brackets, moldings, etc.

As we planned so we builded and the result is not a pretty house, neither is it the stereotyped "house with a wing" or "square house with a cupola," so common in our part of the country, but it is an odd-looking, but cozy cottage with its piazzas, even now, over-run by woodbine and clematis, bitter-sweet and trumpet-vine.

Our partitions are so placed that *even* breadths of carpet fit the rooms, thus obviating the difficulties of carpet laying.

In short, much thought and "contrivance" were expended on "our house," and we are well content, may Mrs. B. be equally as well suited.

May I ask a few questions about Fairs? What are Fairs for? are they for the promotion and encouragement of home industry? if so, why do the "Committee look at the *name* of the *exhibitor* before deciding as to the merits of the *exhibited*?

Why is it that foreign work purchased by one exhibitor competes with articles made by another exhibitor?

Why are not the rules forbidding re-exhibition of articles in certain classes, enforced?

Why are towns people generally selected as committee on domestic manufactures?

MILLY BIRD.

DON'T DO IT.

I READ an article of Miss Irene's in this department asking some married lady to give the men "Hail Columbia" because women were so overworked and broken down before their time. Now I'll do no such thing, for the simple reason that I think in the generality of cases it is woman's own fault, and at the risk of bringing all the "RURAL" sisters on my head, I must say that I think such is the fact.

Now in the name of "common sense" is it not just as easy to tell a husband in plain English that you didn't marry for a "slave" as it is to drudge along taking every additional burden without complaining, till at last the "straw" comes "that breaks the camel's back," and you are neatly folded away in the lap of Earth, while wife number two manages the aforesaid husband far better than you ever did, for the simple reason that she asserts "her rights," and maintains them too?

I tell you, ladies, I have never seen a man that liked a worn down, humble creature, who hardly dared say her soul was her own. Of course, when he wishes to be waited on, she comes "handy," but when he wants "society" he seeks it in some "club," or other questionable manner; whereas, if the wife had saved her health and strength, she might be his equal "physically" as well as his superior morally. There are very few men who are naturally unkind to women, but when girls marry, they become ambitious to do all they can, and take on every added burden, till nature staggers beneath the load. Had they stopped when they could not safely go further and demanded help, there is little doubt but that they would have received it.

What is the use of raking and scraping continually to amass wealth, and then lie down and die for some one else to enjoy it? That plan is altogether foreign to my ideas.

I love to be clean and as nice as anyone. Yet "don't you forget," I never intend to test my physical strength to such a degree that my life will be shortened by the exertion. If a woman don't take care of number one, no one else will do it for her. I've heard men lamenting over the days of their dear grandmothers and great grandmothers, when the women were all good, and plied the distaff and spinning wheel, and all such antediluvian curiosities, and then I wished in my heart that those same "croakers" were compelled to farm it as their dear old ancestors had done when they cut their wheat with a "grass hook," and ground their corn between heavy stones.

How would they like to do without their manifold "farm machinery," that lightens their burdens so much in this 19th century, but you see man is naturally a selfish being and needs to be told once in a while that women have "rights" just as well as he has.

I have often watched our farmers as they come to town on Saturday and see their wives, who, nearly all of them look jaded and worn out, while the burly farmer laughs and talks and looks hearty, and drives home with a $50 or $75 reaper or mower to make his work light while his wife is afraid to spend $5 without his lordships permission, but goes all over town lugging an overgrown baby to see where she can get calico the cheapest, while he lays back in some store, smoking and talking politics or debating whether Garfield or Hancock will win the day.

I tell you ladies the reform lies within ourselves, let us do our duty humbly, bravely, but when endurance ceases to be a virtue-rise up and assert your rights and my word for it, your husband will but respect and love you the more, when he sees that he married a "woman" and not a "slave." By way of digression, now that the season for tomatoes is here, I would tell the ladies that if they will take the large green ones and slice them thin like apples, roll them in corn meal and fry them in butter to a "golden brown" like fritters they will find them the most palatable dish they have ever eaten. MRS. M. J. G.

FEMININE ADORNMENTS.

WHAT inconsistent creatures we are. Most of our sex have the greatest abhorrence of creeping things, such as lizards, spiders, snakes and other abominations, and yet when fashion decrees that these repulsive reptiles shall be worn as articles of jewelry, we are the first to adopt the "new thing." Accordingly we have serpents of every material, gold, silver, coral and jet, twining their folds on our wrists; the same disagreeable creatures, as well as lizards, imitated in brass and other metals acting as brooches and clasps in our bonnets and hats; flies, beetles and other insects are worn as ear-ring, lockets and ornaments. Some ladies prefer to have their jewelry suggestive of feminine occupations. Hence we see a lady, evidently wishful to be taken for a housemaid, adorned with brooms hanging from her ears, and, for fastening her collar, buckets, grid-irons and dust pans are used for ornamental purposes. It bespeaks little artistic taste on the part of the ladies who adopt these useful but unlovely articles as adornments. Sure there are beautiful forms enough in nature—in leaves, flowers and grasses—which can be successfully imitated by the jeweler's art; and are more appropriate to grace the forms of women than the fashionable articles above mentioned.

A TIDY ROOM.—Do you ever observe that a tidy room is invariably a cheerful one? It is cheering to come into one's breakfast room and find it spotlessly tidy; but still more certainly will cheerfulness come if tidiness is the result of our own exertion; and so we counsel you, friend, if you are ever disheartened, vexed or worried about something that has gone wrong with you in the world, to have resort to the great refuge of tidiness. Don't sit brooding and bothering. Go to work and make everything tidy about you and you cannot fail to recover your cheerfulness.

TO RESTORE FADED UPHOLSTERY.—The following directions were given recently to a correspondent of the London Furniture Gazette; Beat the dust out of them thoroughly, and afterwards brush them; then apply to them a strong lather of Castile soap by means of a hard brush; wash the lather off with clear water, and afterward wash them them with alum water. When dry, the colors will be restored to their original freshness. When the colors have faded beyond recovery, they may be touched with a pencil dipped in water colors of a suitable shade, mixed with gum water.

IT must be that the ladies (God bless them!) are growing intelligent, for the shoe dealers say that the demand for lower heels and broader toes, is increasing. They have at last found out that high heels, narrow toes, corns and aching feet go together, and the way to avoid the two latter is to dispense with the two former, regardless of so-called "style."—Springfield Union.

FASHIONS.

PARASOL handles have been things of art this Summer, finished with knobs of painted porcelain, set with cats' eyes, lapis lazuli, coral and other semi-precious stones, and carved into heads, animals, and birds or insects of various kinds.

Walking skirts and the fashion of filling up the interior of the lower part of the dress skirts with a foundation plaiting has done away with the uncleanly extravagance of long-trained, white skirts. White skirts are hardly made now more than walking length, and are popularly finished with two or three ruffles tucked on the edge, and sometimes finished with needlework or lace.

With gray, brown and bronze dresses, and with all neutral shades, a deep red is the favorite color for trimmings; with dark blues and reddish browns and purples, old gold is the favorite shade. When the skirt is trimmed with flounces of the same material the fluting is put on just under the lower flounce upon the skirt itself.

A new caprice for trimming evening dresses of India mull is to press the brightest colored sea mosses until they are thoroughly dry, then arranging them upon the skirts, bertha and sleeves to resemble a vine, giving the effect of the most delicate hand-painting or embroidery. Small tufts of wood-moss, lichens, ground pine and small fern leaves are also used.

All gloves are less expensive than for many years. Cotton gloves come as elaborately made in open-work and silk stitching as the Lisle thread and are frequently imposed upon the ignorant by careless salesmen.

Lisle thread gloves are much more elastic, thinner, and when placed beside the cotton the difference is discernible. They are embroidered and plain, some of them are open-worked nearly to the elbow; others have elastic bands at the wrist.

The small bonnet is a favorite with many, but not a few prefer the larger style, which is trimmed now, not only outside, but inside also, with flowers. Strings are very wide, and often trimmed with lace.

It is difficult to say which will be the winner in the end; at present the most opposite shapes are patronized by fashion, and the one thing required of a bonnet is that it be becoming.

The bouquet, the place of which is constantly being changed, is, we understand, to be worn lower than ever—below the waist in front. But we doubt whether this innovation, in questionable taste, will ever be generally accepted. For the coiffure, one or two flowers—mostly roses or carnations—are fastened just behind the left ear.

Wrappings for the autumn and winter will be of various shapes, but there seems to me to be nothing new in this branch of fashion. There will be simultaneously worn large and long mantles, short jackets, very large visites, others very short, tight-fitting coats with extremely long basques, and numerous hoods. Every kind of garment that can accomodate itself to a hood will have one. As a transition from the light wraps of summer to those of autumn, the long or square India cashmere shawl is more and more generally adopted.

As a change from the casaquin and basque bodice, we now see a number of dresses made with a bodice which is a modification of the blouse. There is a plaid shoulder-piece or yoke; the full bodice is fastened on to this yoke in close shirrings in the middle of both the front and back. In front all the fullness is closely gathered in at the waist and confined under a round belt below which the bodice is continued into a plain basque. At the back the shirred middle piece, which is let in between the side seams, is continued over the skirt, and looped up into a limp puff, which terminates into a plaited lappel. The front part is trimmed with a scarf drapery, which is arranged below the basque, and the skirt is trimmed round the bottom with either one deep kilting or several rows of fluting. This can be done in any sort of fancy material, or in washing fabrics. If the latter, thread-lace edgings are very fashionable.

WHAT OTHERS SAY.

(Continued from page 642.)

The Report Furnished to the English Parliament by the Commissioners, Messrs. Read and Pell.

From the speeches delivered at various times by Messrs. Read and Pell touching their agricultural investigations while visiting this country, we have quoted all that could prove of especial interest to our readers. Much of this Report is merely a repetition of those speeches, and we now select from it only such portions as have not been referred to before:

"Few English farmers have any idea of the hard and constant work which falls to the lot of even well-to-do farmers in America. Save in the harvest, certainly no agricultural laborer in England expends anything like the same time and strength in his day's work.

MACHINERY.—The readiness with which the tillers of the soil take to machinery in America would surprise some of the farmers in the Old Country. The skill and ease with which they are worked say something for the manufacturer, but still more for the intelligence of the farmer. In America the presence of labor-saving machinery upon even a small farm is an absolute necessity. There is the further inducement to obtain implements of all kinds by buying them on long loans and by paying for them by installments, which sometimes tempts a farmer to buy more machinery than he can afford. The machines used upon the farms are well constructed and exceedingly light and handy. When one hears of the perishable nature of the American implements, it would appear that the chief fault rests with the farmer rather than the maker. We should say that good machinery and improved implements are much more common on American than English farms. The tools are certainly lighter, better shaped and better made.

EXHAUSTION OF THE SOIL.—Whenever the natural fertility of the virgin soil is exhausted, or indeed seriously impaired, and recuperative crops have to be introduced to repair the damage, then no doubt the expenses of growing wheat in the western prairies and the great river basins of America will be increased. That this exhaustion must come one day with continuous wheat growing, followed by burning the straw, is quite certain. But it cannot come immediately. The accumulated vegetable deposits of centuries, and the untold number of grass crops that burn or rot upon the prairies, are not to be exhausted in a few years. When wheat shows signs of flagging, the simple alternative of a crop of Indian corn seems sufficient to restore its fertility. And in northern latitudes, where maize cannot be grown, one year's clover plowed in suffices for another round of wheat crops. But the impoverished condition of some of the Eastern States, and the necessity of manuring and rotating the crops in others, plainly indicate that the fertility of the virgin soil, however great, is not inexhaustable.

THE CORN CROP.—Next in importance to the wheat crop, if indeed it does not claim first rank, comes corn. Slowly, but surely, it is thrusting the cultivation of the noble grain northward, and while wheat may be said to be now cultivated to the best advantage in the valleys of the Missouri, Mississippi and Ohio, with their affluents north of latitude 35 degrees, corn will be found as a main crop from the Gulf of Mexico to the shores of the great lakes, and extending from Texas and Kansas in the west to New Jersey, Carolina and Florida in the east. The cost of growing an acre in Iowa is given at about $5.50, and the cost per bushel, taking the yield at 40 bushels, at 13.825 cents. Another estimate gives the cost at $5.20—this is in Missouri, also on prairie land. Maize as a rotation crop answers the same end as root crops in England. The land is rested, cleaned and enriched by its introduction. There is no crop in which so little hazard is incurred as in this. With wheat the uncertainty is great; out of eighteen crops in Ohio six only were full crops, some were utterly destroyed by drought, but during the same period corn never failed, and the average yield was 35 bushels. The variations of price have been as marked as with other commodities, ranging within the last 10 years from 15 cents and 20 cents a bushel up to 50 cents, the average for the United States being 42 cents from 1871 to 1878. The yield, of course, varies with the quality of the land from 20 bushels up to 60 bushels an acre, the average from 1863 to 1878 being 26¾ bushels. In the river bottoms 60 bushels are exceeded. While the profit which the farmer derives in England by the growth of roots is an indirect one, and is estimated by taking into consideration the value of the manure which is left from their consumption by sheep or cattle, in America the profit is a direct one. Corn bought at 25 cents a bushel brings back 30 cents when given to hogs, if the latter sell even at as low a price as three cents a pound live weight. The annual growth of corn has of late years enormously increased. In 1868 there were nearly 35,000,000 acres planted, and in 1878, 51,500,000, but the money value per acre has been steadily declining. This increased abundance and cheapness have made it the object of a considerable and growing export trade, so much so that probably over six per cent. of the crop finds its way abroad.

BARLEY.—We saw and heard but little of the cultivation of barley. The few samples which we had an opportunity of examining on the farms of the United States were almost universally of a poor character, the grain being lean, irregular and parched. It is, however, remarkable that the Canadian barley finds its way into the United States in the face of a duty of 15 cents per bushel, and goes into consumption there in considerable quantities in the form of malt. The natural weight of the Canadian barley is lower than that of the Californian by several pounds per bushel. The growth of oats appears to be steadily increasing. In 1874 the acreage was nearly 11,000,000. In 1878 it exceeded 13,000,000.

POTATOES.—The acreage devoted to the growth of potatoes does not materially increase: it was 1,333,333 in 1874, and in 1878 it had only reached 1,750,000. The State of New York furnishes one-fifth of the whole area. The quality, except in the Southwestern States, was universally good. The average yield is not very large, being estimated at 88 bushels per acre, 60 pounds to the bushel.

AMERICAN OXEN.—Any one who has seen the splendid American oxen which are imported into this country, and the massive quarters of prime beef which find their way across the Atlantic, might be somewhat surprised and disappointed at the comparatively few really well-bred cattle that are to be found in the United States. There are, no doubt, in Kentucky and the surrounding States, thousands of beautiful, robust, pure-bred Shorthorns. But in the Eastern States the cattle are mostly ordinary dairy stock, descended from the common breeds of the early settlers, with only here and there a herd of really good cattle. In the South and West the Texan and other similar breeds predominate, the originals being no doubt imported from Spain. It is only the primest bullocks that are exported dead or alive to great Britain. The market here will not answer for any but the best beef, as the expenses of transit are almost as heavy upon an inferior as upon a really good beast.

Of the enormous crops of maize raised in the Middle States of America the quantity exported has never exceeded seven per cent. The rest must be consumed within the Union; a large portion of it close to the spot where it grew. By converting his maize into beef and pork the American farmer expects to receive double the value he could command for this corn. The manure from the stock so fed is esteemed of no value, and is generally regarded as a nuisance. The way of regarding it is altogether different from that of the English farmer, who, when he uses grain or other artificial food for his grazing animals, has invariably to look for a large portion of his return in the improved value of the manure thus produced.

FRESH MEAT TRANSPORTATION.—The admirable manner in which the transit of fresh meat is managed in America and on board the steamships now insures with almost perfect certainty its arrival in prime condition on these shores. All this seems to point to a greater development of the dead meat trade, and until some more stringent methods are enforced for the eradication of pleura-pneumonia in the United States, the unrestricted imports of live cattle into the interior of these islands cannot for the present be resumed with any safety. The American government seems now quite alive to the necessity of stamping out pleura-pneumonia and other contagious diseases. The fact that these disorders only exist in the Eastern States, and principally among the dairy stock of the great cities, proves pretty clearly that they are imported and are not of American origin. Nowhere in the Middle or Western do we find any traces of pleura-pneumonia, foot-and-mouth, and such-like contagious diseases. Whenever America can show a clean bill of cattle health, and live imports are again introduced, a considerable trade in store stock will probably be developed. The cost of transit of great numbers or store cattle need not be so heavy as it is now. More of such stock could go in the railroad trucks and in the ships' holds than is now allotted to fat animals.

HOGS AND BACON.—The pig in America has a happy time of it. He roams everywhere at pleasure; he is monarch of all he surveys. His freedom may be purchased at the expense of shelter, for covered pens are exceedingly rare, but the pig seems a much more hardy animal in the New World than in the Old. He makes the most of his advantages, and at a comparatively early age comes to a considerable weight. The average live weight of a pig killed in Winter is stated to be 280 pounds, in Summer it is 240 pounds. Twenty per cent. reduction from the live weight is supposed to give the average weight of the dead carcass. Nowhere can such grand herds of swine be seen as in the maize States of the Union. Save in the Indian Territory you may see a thousand pigs without finding a really bad one, and there can be no doubt that the swine stock of America is generally superior to that of England. The Berkshire is the most common breed; they come to early maturity, and have a large amount of lean meat in proportion to the fat. The other most popular breed is the Poland-China. These pigs fatten very readily and come to an enormous weight, but the pork is not equal in quality to that of the improved Berkshires. The rapidity with which hogs are slaughtered and dressed in the great curing houses of America is well known. All that need be said here is that the pig is seized by the hind leg, hauled aloft, stuck, bled to death, scalded, scraped, disemboweled, beheaded, halved and run into the chilled chamber in 10 to 15 minutes. The pig in America is not without some drawbacks. It is exposed to various diseases, the most fatal being hog cholera, or what is now termed in England swine fever. No cure is known for it, and no substantial reason has yet been assigned for its origin. It is highly contagious, and occasionally clears off all the pigs in the district. Its ravages in some regions are so extensive that farmers are compelled to give up keeping pigs for a time. The great danger which must result to our home stock from importing live pigs from any country where this fatal disease is so prevalent confirms the necessity of making the recent orders prohibiting such importations, for a time at least, permanent. The infinitesimal proportion of live pigs to the pork we receive from the other side of the Atlantic renders the prohibition of no consequence to the consumers of this country.

POULTRY.—Not much can be said in praise of the poultry of the United States, with the exception of the turkeys, which are generally good, and are raised without much difficulty. They do not, however, appear to reach the great weight of our English birds, being of a slighter form, approaching that of the wild stock. If it may be said of the Texan cattle that they are all "legs and horns," the American fowl may be described as all "legs and elbows," and when plucked presents, with its bright yellow skin, a most uninviting appearance. They are, too, restless and sprawling, and if food were not abundant and cheap, would for the table be unremunerative. They are, however, in request for a change from the perpetual repetition of tenderloin and fillet of beef, and the prices paid are somewhat high.

CONCLUSIONS.—The view we took of the agricultural affairs in the United States was of necessity a broad and general one, and only in some special matters were we able to go into particulars. We came to the conclusion, however, that, after all, America is no paradise; that in the contest for agricultural supremacy, while fresh unexhausted soil, a level surface and the absence of stones are highly favorable for the profitable use of modern machinery and the manufacture of grain by a scouring course of cropping, still drawbacks exist which tell in favor of the Old Country. They may be stated in a few words. Severe Winters, putting a stop to agricultural employment, dangerous droughts, injurious insects, and in the prairie land (in the absence of lakes) a short supply of good water. With regard to cattle, for the present the American stockman in the West is possessed of singular advantages; land for nothing, and abundance of it; in the East good markets for dairy and other produce, and in the Middle States excellent pastures of Blue Grass (*Poa pratensis*). The growth of this plant too is extending far beyond its old home of Kentucky, and is now being established to the west of the Missouri. Its success in this district opens fresh prospects to the grazer, who will in time bring the improved turf under the hoof of thoroughbred stock, or at least, of highly graded cattle. The Western country, however, is poorly watered for the better class of stock, which suffer if left short of this supply, and the struggle for water rights for native cattle, which suffer less from drought, threatens ere long to become a serious difficulty; the allotment of land and the termination of free range will tend to make cattle raising more costly, though, on the other hand, the increased consumption of the population as it advances toward the Western plains will enhance prices. We have referred to the important part the railroad fills in developing agricultural wealth in the United States. No effort is spared on the part of the people to thrust this right arm of civilization as far as it can be made to reach; with them it is not population first and the railroad to follow, but the latter first as a means to the former. With an intelligence quick to design and a spirit eager and daring to carry out these enterprises it is difficult to account for a dullness of apprehension which tolerates the continuance of a tariff so hurtful to foreign trade and domestic economy as in some measure to render the position of the English agriculturist more advantageous than that of the American.

CLARE SEWELL. READ.
ALBERT PELL.

Hop Bitters cures by removing the cause of sickness and restoring vitality.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

KEEPING SWEET POTATOES.

MARY BEAL MCLOUTH.

IF G. H. T., of Mass. does not wish to keep sweet potatoes on a very large scale, perhaps *our* plan would be practicable. In our former home we had a closet in the chamber, which was nearly surrounded by other rooms, and chanced to be over a stove in which there was a fire every day. We cut a hole through the floor, and put in a small tin thimble. This let the hot air up and kept the room sufficiently warm, and could be closed if *too* warm. The potatoes were dried thoroughly, then packed in a barrel or box with very dry sand—sand and potatoes alternately, barely letting the latter touch each other. Cover with sand, and after they have stood two weeks, finish with an old quilt or carpet to keep them from the air. They will wither after a while, so as not to be good for eating, but will keep until time to be put out in a hot-bed.

Rice.

Put three tablespoonfuls of rice in a baking-dish, fill it with milk and set in the oven where you are keeping a slow fire. If done at breakfast-time or an hour later, it will finish cooking nicely by the time your dinner is ready, if you do not need to make a great heat for that purpose. If meat is roasting, an hour and a half will cook the rice. It is a very palatable dish; you get all the richness of the milk, and can hardly persuade a novice that there are no eggs in your pudding.

Our children are fond of boiled rice, and we generally contrive to have some in Summer on washing days, using the water in which it is just boiled, strained and blued, as starch for all light calico dresses and linen aprons. It answers the purpose well. ANNIE L. JACK.

HOUSEHOLD HINTS.

Soft Crust.

I SHOULD like to add a few words to that interesting article on bread making in the RURAL of Aug. 31st. It is only to tell young housekeepers what to do with their bread after it is baked. How to have my bread crust soft and tender was a problem that puzzled me much in my first years of housekeeping, and it was not solved until after three or four years of trial. Lay one end of your bread cloth down smoothly, and as you take your loaves out of the oven, put them on the cloth in the same position in which they stood in the tins; then spread the other end of the cloth over them, and over that turn each tin over its own loaf. When you make your bread into loaves, do not have your tins more than two-thirds full, or else the tins will not fit over the loaves nicely after they are done.

Rye Bread.

Some one inquired about making rye bread. I sponge mine at night exactly as I do my wheat bread. In the morning, when it is light, I stir in rye flour until it is quite thick (do not knead it at all); put it in tins, and when it is light bake. Rye does not need as much yeast as wheat; if you get in too much, after it is cold the top crust will separate from the rest of the loaf.

Dried Crab Apples.

To those who live in that part of the West where apples are scarce, I would say, if you have crab apples dry them; they need no peeling, and for mince or dried fruit pies they are the best apples that can be used; they need no cider or anything of the kind.

Feather Cake.

One egg, one cup of sugar, one tablespoonful of butter, three-fourths of a cup of sour milk; one-half teaspoonful of saleratus, two cups of flour.

Gingerbread.

One cup sirup, two tablespoonfuls melted butter, one teaspoonful ginger; mix thoroughly together; one teaspoonful saleratus in one cup of boiling water; let it cool a few moments, then put all together, and stir in lightly three cups of flour.

Cookies.

One cup sugar, one cup sirup, three-fourth cup butter, one cup of sour milk, one large teaspoonful saleratus, some ginger and flour enough to roll out. Cut in squares.

Jelly not Hardening.

Can some one tell me what to do with my currant jelly? After resting in a sunny window for two or three days, it was nicely jellied. I set it on an upper pantry shelf, where I think it must have been too warm, for after several days, when I came to look at it, in tipping the glass I found a portion of it was in liquid form. Shall I boil it again? If anyone has had a similar experience, will she please respond at once, if she has a remedy.

Will some one tell me *just how* to make a good jelly cake to roll? I don't succeed in making it as nice as some I have eaten.

MRS. I. C. C.

DOMESTIC RECIPES.

Roast Oysters.

OPEN, leaving the oysters upon the lower shells, place in a large dripping-pan and set on the upper grate in a quick oven for 10 minutes. Take out, season with butter, pepper and salt and serve upon the shells.

Broiled Oysters.

Select large ones, wipe dry and broil upon a fine wire gridiron. By dredging with flour before broiling, a crust is formed which is liked by many. Sprinkle with salt and pepper, and drop a bit of butter upon each.

Oyster Soup.

One quart of *solid* oysters free from grit. Pour into a sauce-pan two quarts of boiling water; cream a large tablespoonful of flour with a half teacupful of butter, thicken the boiling water with the paste, season with pepper, boil up, add the oysters and cook until the edges curl. Have heated a teacupful of sweet cream or as rich milk as you can get, turn into the tureen, pour in the oysters and serve.

Oyster Pates.

A quart of solid oysters minced fine; a coffee-cupful of rich, new milk, seasoned with a tablespoonful of butter, pepper and salt to taste and thickened with a teaspoonful of corn-starch; some shapes of puff pastry baked in small tins. When the milk has boiled and thickened, add the minced oysters and simmer five minutes. Fill the shells with this mixture, set into the oven for two minutes and send to the table at once. MARY B.

Favre Beans.

Boil some white beans until quite dry and tender. Into a four quart baking dish put an inch layer of the beans, seasoned with pepper and salt, strew over minced bits of salt pork, cover with a layer of raw oysters, sprinkle with powdered cracker crumbs and bits of butter and cover with another layer of beans, thus alternating until the dish is almost full. The beans should make the last layer. Pour over a pint, or more if the beans were very dry, of oyster liquor, cover and bake half an hour, removing the cover toward the last that the top may brown. MAJOR.

News of the Week

HOME NEWS.

MONDAY, Sept. 20, 1880.

AN explosion occnrred on the 17th in a small wooden building occupied by the Union Metallic Cartridge Company at Brideport, Conn., as a fulminating building, and situated some distance west of their main factory. At the time of the explosion five persons were at work in the building, and all are supposed to have been killed, as none of them has been seen since, and four bodies have been found.....A cage with ten men started from the bottom of the shaft in the Imperial Mine at Virginia City, on the 17th and had been drawn up some 300 feet when the cable broke and the cage with the men was precipitated to the bottom and nine of them were killed The other was dangerously hurt .....At Guthrie, Ky., on the 15th, 200 men met and discussed the question whether they should visit Springfield and lynch the remaining negroes connected with the La Prade murder, but they afterward dispersed. The six prisoners were taken to Nashville the same night by the Sheriff of Robertson County and placed in jail for safe keeping, by order of Governor Marks

On the night of the 15th a mob of several hundred men and boys made an attack upon the Rink, a fine large, building, at Milwaukee, and razed it to the ground. The police did not interfere, and it was carted off piecemeal. The city has had trouble in getting the lessee to surrender his lease in order that an exhibition building might be built on the ground, which is owned by the city .....The trial of Virgil and Houston Gully at De Kalb, Miss , for the killing of Gilmer in connection with the Chisholm murder on the 16th resulted in a verdict of not guilty ..... The Board of Architects considering the practicability of erecting a new Congressional Library, or extending the quarters now occupied in the Capitol, have reported in favor of a separate building.... ....The bark Erinagh, from Port de Paix Hayti, was towed into New York on the 16th with yellow fever. Two men died from the disease on the passage.

Niagara has been thrown into a state of unusual excitement by a child-stealing case. It seems that a man named Sagar, who some years ago purchased a wife and two children from a citizen of Montreal for $1,600, after adding a third child to his family, grew tired of the woman he had bought and cleared out with the servant girl. The other day, taking a notion to possess his own child, he came to Niagara and carried it off, being followed to the other side of the line by the woman who had passed as Mrs. Sagar. However, she failed to find the child.

A man named Abram Clarke, engaged with a thrashing machine on the farm of Mr. Heist, of Pelham township, Canada, by some means got his hand entangled in the machinery, and in a moment the arm was literally torn from him. ..... Mr. James S. Mack, of Guelph, Canada, while driving through Mount Forest, Canada, accidentally ran over a child. The little fellow was almost unhurt, but Mr. Mack made inquiries about him and on learning that the poor child had neither father nor mother, he at once adopted him and brought him along. .....Ald. J. C. Wilson and Dr. R. A. Alloway, of Montreal, ran the rapids in a small-boat under the guidance of two Indians. When in the boiling waters and face to face with the peculiar dangers which surrounded them, they were greatly annoyed by myriads of flies, whose bite was quite as tormenting as that of the mosquito . . . . . Charles Carter was fatally injured on the 7th, in the chrysollie mine near Leadville, Col., by a premature discharge of giant powder, and William Brennan was badly mangled by an explosion of giant powder in the Laplatte mine .....Threatening weather is driving fishing and coasting vessels into the harbor of Gloucester, Mass , nineteen vessels bringing in 5,000 barrels of mackerel, and four others from the Banks of Newfoundland bringing in 211,000 pounds of codfish and 114,000 pounds of halibut.... ....Alexander Lebairn was the stage driver who was killed on the evening of the 6th, 16 miles from Fort Cummings, New Mexico. The two passengers killed were Isaac Roberts of New York, and E S. Madden, of Fort Bowie. The pursuing troops overtook the Indians on the afternoon of the 7th and had a short fight, in which one soldier and two Indian scouts were killed and two soldiers seriously wounded. The Indian casualties are not known.

The internal-revenue office has completed its analysis of the internal revenue for the last fiscal year, showing the sources whence it came. Illinois heads the list of States in respect of the amount of revenue paid to the Government, her total being in round numbers, $23,000,000, $19,500,000 of which were from spirits. Ohio comes next with a total of $18,000,000, of which $12,000,000 were from spirits and $3 000,000 for tobacco products. New York paid $16,000,000, of which $3,000,000 was for spirits, $7,700,000 for tobacco, and $4,300,000 for fermented liquors. The latter amount is four times greater than that reported from any other State in the same article. Virginia paid $5,700,000, all but $400,000 being for tobacco. Kentucky paid $8,800,000, all but $2,000,000 being upon spirits. Indiana paid $6,000,000, $5,500,000 being for spirits.

Cook county jail at Chicago incloses twenty murderers awaiting trial.....A diamond drill being run by the Lake Superior company at Ishpeming, Mich., has reached 415 feet in depth, and is passing through a bed of banded jasper.....Terrible ravages of small-pox are reported among the Canadian Indians of the Upper Gatineau district. .....The work on the Hudson River Tunnel, in which the corpses of twenty workmen are entombed, has reached such a state of progress that hopes are entertained of the dead bodies being recovered during the ensuing week..... Isaac Woodruff jumped from a bridge into thirty-five feet of water at Hadley, Mass., on the 5th and was drowned.....The boiler of a portable saw mill exploded on the 6th, near Vinton, Gallia county Ohio, killing Samuel Davis and James Donnelly.....At East Saginaw, Mich. Daniel Parkhurst was roasted to death at Johnson's lime kiln. He was pushing a stone that had formed a crust over the mouth of the kiln, when it gave way suddenly and carried him down, wedging him from the hips down. He was burned to death in ten minutes. His body was completelybaked....

Chicago is just now the scene of quite a sensational railroad war, the facts of which briefly stated, are, that the Western Indiana road had secured an injunction against the city interfering with the track laying, which was served on Mayor Harrison. When the track layers commenced work the police ordered them to desist, and, upon their refusal to do so, the mob was instigated to his work by the police. The railroad laborers were stoned by the mob, some receiving severe injuries. A fruitless call was made by the railroad men upon the Governor for the aid of the military, so the work was suspended, and on the 16th, Mayor Harrison and other officials were arrested upon an attachment for contempt of court .... ..Reports from the principal business centers of the country indicate an exceedingly favorable outlook for the fall trade in all departments.... ...A little boy five years old, the son of Charles Lymons, while picking acorns in the woods near Riverdale, Ont., was killed and partially eaten by a bear before assistance reached him..... ..For some months prospectors and prominent capitalists have been quietly prospecting on Battle mountain, in the Eagle river mining districts, thirty miles northwest of Leadville. Developments have shown such an amount of mineral in that locality that a road and telegraph are being pushed forward from Leadville, and miners and capitalists are now going to the new camp in large numbers. Carbonate ores promise, from the regularity of their veins, to yield an immediate and handsome addition to the silver production of the State. Smelters have been already started .....Sho imports at New York during August were the largest ever landed there in a single month, reaching $48,924 000, against $35,166,000 during August 1879. The exports for August reached $39,849,000, being over $5,000,000 more than during August, 1879..... Fourteen more survivors from the wreck of the steamship City of Vera Cruz are known to have been landed at Titusville, Florida.... .... Joseph Tapson, formerly secretary of the Metropolitan Railway Company's Provident Savings Bank of London, England, was arrested in Philadelphia on Saturday night on the charge of appropriating at different times during the past four or five years sums of money belonging to depositors of that institution, to the extent of$5,000.

Deputy United States Marshal Kyle has arrived at Fort Smith, Dak., with nine prisoners from Oklahoma, among them two Seminoles charged with murdering two white men, Bateman and Davis, in Chickasaw county, 200 miles west, in November, 1878. There were six full-blooded Seminoles engaged in the murder. Bateman was shot off his horse, and Davis met the same fate six miles from where Bateman was killed. The murderers have had no rest from the marshals since that moment. One, Billy Bowlegs, a son of the famous Florida Seminole war chief, shot himself through the heart, another was killed in a feud, and but two of the six are left. They live in a full-blooded Seminole settlement and the officers will soon have them The murderers found only $13 on the victims, which they divided.....Chief Big Road and 200 Sioux Indians, members of Sitting Bull's force, surrendered to the commanding officer at Fort Keogh, on the 8th inst. The remainder of Sitting Bull's forces are expected to surrender soon.....The Southern Pacific track has been going down at the rate of over 12,000 feet per day, and on one day no less than 12,800 feet, or 2 42-100 miles, were laid. It is intended to build the 200 miles intervening, August 24, between the end of track and El Paso in about 100 working days, or by Christmas. The rate at which this great line is being pushed across the desert is one of the wonders of the age.

There are said to be 10,000 buffaloes between the end of the Northern Pacific track and Deadwood. D. T, The Indians have driven them within the limits of civilization.....The Post-office department has ordered mail service on the recently completed railroad between Battle Mountain, Nev., a point on the line of the Central Pacific Railroad to Austin Mo., a distance of about 100 miles due south from Battle Mountain..... New Orleans received from foreign ports during the year ending September 1, 1880, 29,127,767 pounds of steel rails.....A large gang of men broke ground for the new Cape Cod ship canal, at Sandwich on the 15th.....Samuel Brannan, of California, who holds a large claim against the Mexican Government for moneys loaned and services rendered Juarez during the Maximilian invasion, will receive in settlement of his claim large tracts of wild land in the States of Sonora and Chihuhua, which he proposes to settle with American colonists.....A fire on Sunday morning destroyed a small house at Minneapolis, occupied by a cripple named Purdy and his wife, and both were burned to death.

[Chillicothe, (Ohio) Ross County Register.]

A Lady in the Matter.

That "woman's wit is often superior to man's wisdom," was convincingly proved in a circumstance that occurred in this city recently. It appears that Mr. Ludwig Schwarzler, a widely known grocer on Station Road, suffered with a very painful rheumatic headache to such a degree, that he was obliged to seek the aid of a physician. All medicines he used were of no avail. This induced Mrs. Schwarzler to buy St. Jacobs Oil. She procured a bottle for her husband With the second application he found relief. The pain left him, and he is as well as ever again. A remedy acting as promptly as this certainly deserves universal patronage.

FOREIGN.

The great question in Europe now is the Eastern problem—will there be war to force a settlement between Turkey on one side and Montenegro and Greece on the other? At present the outlook is decidedly belligerent. The treaty of Berlin which formally decided upon the results of the late Turko-Russian war, *recommended* the Porte to cede some of its territory to Montenegro and some to Greece without specifying precisely the territory to be ceded. Since then Turkey has done nothing definite in the matter, and a few months ago representatives of the Powers who signed the treaty of Berlin—Austria, Great Britain, France, Germany, Italy and Russia—met at the Prussian capital and specified the country Turkey was expected to cede, but again they failed to mention any penalty for the Sultan's refusal to comply with their decision. Turkey still procrastinated on the grounds that it would endanger the throne of the Sultan should he consent to hand over to Christians a section peopled by Mahommedans, and these formed a large proportion of the inhabitants of the territory to be ceded. Moreover, wherever the Christians had come into possession of land in which Mahommedans dwelt, after the late war, they had massacred or bitterly persecuted the latter, and it was too much to expect the head of the "Faithful" to hand more of them over to such Christian treatment. Then again, it couldn't be done without the use of force, and the Porte had no money to spend for that purpose. Montenegro's claim had to be settled first, and finally it was agreed that the cession of Dulcigno, a small port on the Adriatic, belonging to the province of Albania, together with a strip of the surrounding country, would be accepted by Montenegro as a full settlement of its demands. At first the Porte seemed willing to agree, but the Albanians, most of whom are Mahommedans, indignantly refused to allow a part of their territory to be given to their old foes, the Christian Montenegrins. The Turks have now withdrawn their troops from the town and tell the Montenegrins to take it; but 8,000 Albanians have garrisoned the place and defy their enemies to do so; and the latter are hardly powerful enough to capture the town. Meanwhile a large fleet, made up of some of the most powerful war vessels of the great Powers, has appeared before the place for the purpose of commencing that demonstration in Turkish waters which it is hoped will bring the Porte to "hear reason." The fleet could have shelled the town at once, but have deferred doing so until the Christians have had time to leave it. The Christian subjects of the Sultan, wherever numerous, threaten to rebel once the first shot is fired, and the Mahommedans mutter that, war once begun, they will massacre the Christians everywhere; so that just now the "Eastern Question" is once more likely to disturb the peace of Europe. War, no matter on how small a scale, once begun, it would be impossible, in the present armed condition of Europe, to predict when, where, or how it would end.

Land agitation and agrarian outrages still continue in Ireland. Parliament having adjourned and the gentlemen whose actions make "news," having gone hunting or on holiday trips, there is no English news of importance or general interest. In France, M. de Freycenet, head of the Cabinet, has resigned, owing to a disagrement between himself and M. Constans, Minister of Public Worship. Freycenet wishes the religious orders to be left in peace on their promising not to oppose the Republic; Constans, backed up by Gambetta and the extreme Republicans, wishes to force their expulsion Jesuit-fashion. Jules Ferry has been commissioned by President Grevy to form a new Cabinet. Stormy times ahead in France, most likely.

In Germany—Bismarck is still rusticating so there's little of interest being said or done. In Spain folks are mildly "fussing" over that new royal baby girl. In Italy, the trouble is, with a limited revenue, even from heavy taxation, to keep up a powerful army. In Afghanistan all is peace-like, and therefore furnishes no news. In South America, there's some squabbling between the State Government of Buenos Ayres and the General Government, on the Atlantic side, and on that of the Pacific one report makes Peru and Bolivia about to form a union,and another says that Chili has accepted the president of the United States as arbitrator between it and its enemies, Bolivia and Peru, while a third maintains the European ambassadors at Lima forbid the Chilians to attack that city, lest they should injure the property of European subjects there.

In a British peerage list appear 498 names, of which five date from the thirteenth century, five from the fourteenth, 11 from the fifteenth, 20 from the sixteenth, 67 from the seventeenth, 119 from the eighteenth, and 274 from the nineteenth..... ....Russia has 650,000 hereditary nobles and 380,000 whose titles expire with them.....While the population of the United Kingdom has increased since 1865 from 29,861,908 to 34,606,043, that of Ireland has decreased by more than a quarter of a million, and the number of marriages has decreased by 6,000. While pauperism has decreased in England and Wales from 971,000 to 837,000, and in Scotland from 121,000 to 97,000, the returns for Ireland show an increase from 68,000 to 100,000.... ....The railway from St. Petersburg to Simpheropol was watched night and day by 9,000 peasants and 40,000 troops during the Emperor's recent journey in Livadia.....Ten thousand English miners are annually injured by accidents, and 850 of these die. In Prussia the mortality is much higher, a life being sacrificed for every 70,451 tons of coal raised, while in England the proportion is only one in every 89,419.....The French revenue for 1880 is over $75,000,000 above the estimates.

A Gain of Eight Pounds in Forty-Five Days.

"About forty-five days ago," writes a gentleman from Mississippi, "I began the Oxygen Treatment, and as regards the effects of it, with a grateful heart I can say *that it has proved wonderfully efficacious; even surpassing my most sanguine expectations.* My lungs have been much developed, breathing capacity increased, and the cough, which was at times hard and laborous, has almost passed away. My general health has much improved—feel more life like and energetic, *having gained eight pounds in forty-five days.*" Our Treatise on "Compound Oxygen," which tells all about this remarkable remedy, is sent *free.* Address DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

AGRICULTURAL NEWS.

Statistics from Washington indicate that Louisiana has the largest average yield in value per acre of all the States, namely, $17.78; Arkansas comes next, $16.68; Texas next, $16.20, and Mississippi, $11.47.....The amount of butter now made in Iowa creameries is estimated at 50,000,000 pounds per annum.....The yield of this year's sugar crop in Cuba has been about 545,400 tons, against 630,000 tons last year.....In Southern Illinois apples are 10 cents a bushel, and do not find ready sale even at that price. Farmers cannot afford to pick them, and are turning hogs loose in their orchards .....The hay crop was deficient in the Atlantic States except in Maine and New Hampshire. In the States bordering on the Ohio River the average is higher than last year. West of the Mississippi River the average is low, on the Pacific Slope it is very high.....The United States Government has altogether spent $23,000,000 in surveying the public lands.....Texas is even now the "Empire State" in wool growth, both vegetable and animal. For 1880 the cotton crop is estimated at one million bales, while the sheep wool clip is the largest ever attained in the State.....The Government has disposed of over 8,000,000 acres of public lands during the last fiscal year.....A company has been formed for the manufacture and sale of rights to sell an invention of an Albany doctor for preserving provisions or bodies by means of water only.....The agricultural department reports the condition of crops as follows: The September estimate of this year gives a condition of 90 against 92 last year. This does not take into consideration the increase acreage. Potatoes show a decline within a month of eight per cent. The average is four per cent. less than last year. New York and Pennsylvania, which raise two-thirds of the whole crop, report an average of 93 against 98 last year.

THE Iowa State Fair to be held at Des Moines offers $16,296 in premiums.....In this State the crop of Humphrey hops has been nearly all picked during the week, the work having been rushed through from fear of mildew and lice. Mold has seriously injured hops in East and Mid Kent, England, and the crop, it is called, will be considerably short. Mold and the red spider have also damaged the crop on the European continent. But then it is more or less damaged everywhere every year. These two pests are threatening much damage hops in this State, and growers will probably harvest their hops earlier than usual to escape injury from them wholly or in part..... This year there is a decrease of 40,609 acres in the extent of land under cultivation in Ireland ..... One phase of Irish distress has been put on the stage in London, under the title of "Eviction."—*Dramatis personæ*: brutal landlord, myrmidons of the law, old peasant, stalwart son, lovely daughter, his Reverence, Jewish bailiff ..... Messrs. Reed and Pell, the Parliamentary Commissioners sent here to investigate American agriculture, have just published their report in which they are enthusiastic about agriculture in this country, especially in the West..... The Toledo, Delphos and Burlington Railroad Company has closed contracts for the extension of its road 250 miles, from Kokomo, Ind, to St. Louis.

As specimens of Irish land troubles here are some annals for a fortnight in August (1.) Twenty sheep at Ballyherne were clipped and their ears cut off. (2.) On Sunday a notice was found posted on thechapel gates, Clonegh, threatening death to any one taking farms from which another tenant had been evicted (3.) On Monday Mr. Mullingar was shot in the head (4,) On Sunday a heavy charge of No. 6. shot was discharged into Mr. Lysaght's room. (5). At Special Sessions, in Cork County, several farmers were brought up for assaulting Capt. Warren. (6.) Tuesday night's Dublin Gazette contains an offer of £200 reward for information respecting those who maliciously wounded bullocks, the property of Mr. Joyce, (Galway.) The list is by no means complete, and helps to explain how it is that property is now selling at 13 year's rental in Ireland against 25 to 30 in England. The victims in these cases bear thoroughly Irish names. Mullingar, Lysaght, and Joyce are "racy of the soil".....The trade in live cattle between this country and Europe, has increased to a remarkable extent. It is superseding that in dressed meats. The shipments last season were 105,327 head, and thus far this year 118,000 head. The amount of the trade in money is from $32,000,000 to $35,000,000 a year for the entire trade of the country. New York, Boston, Philadelphia, Baltimore, Portland and Montreal are ports of shipment ...Grain is being sent from Indiana to St Louis for export and the rates from St. Louis to Liverpool by way of New Orleans, are about the same as by rail from St. Louis to this city .....The Cook County, Illinois, Farmers' Alliance issues a call for a farmers' convention at Chicago on the 14th of October in the interest of cheaper freight rates. The Alliance hopes to secure the end in view through legislative enactment, to be brought about by the action of the proposed convention.

St. Julien, the "King of the Trotting Turf," wears forward shoes weighing eleven ounces and hind shoes weighing four ounces. He uses no toe-weights. In no race for the past eleven months has he made a single break, and as he has a

record of 2:11¼, which he is liable to beat, we think he may be pronounced the ideal American trotter.....In the Southern States the price of labor ranges from $12.25 to $7.32 per month. The average cost of subsisting a laborer in 1880 is $7.17 a month, against $7.14 in 1876.....A stalwart woman got employment in male attire as a farm hand at Hutchinson, Ill., but the farmer discharged her on learning her sex. She has brought a suit to recover wages for the whole contract....

"Made New Again."

R. V. PIERCE, M. D.:—I have used your Golden Medical Discovery and Pleasant Purgative Pellets, for the last three months and find myself—(what shall I say,) "*made new again,*" are the only words that express it. I was reduced to a skeleton, could not walk across the floor without fainting, could keep nothing in the shape of food on my stomach. Myself and friends had given up all hope, my immediate death seemed certain. I can never be too thankful to those who recommended your medicines, for I now live (to the surprise of every body) and am able to do my own work. I desire to make this statement in order that those suffering may not despair until they have given your remedies a trial. Yours resp'y, MRS. WM. RYCKMAN.
St. Catharines, Ont.

Facts for Dairymen.

It should be borne in mind by practical dairymen, that the Perfected Butter Color of Wells, Richardson & Co., Burlington, Vt., is the best obtainable in the world. It is absolutely pure and harmless, free from odor or flavor, cannot spoil in any weather, is in liquid form and ready for instant use, costs but little, and is of a uniform standard as to strength and intensity of hue. Use no other.

Thousands of ladies have found sudden relief from all their woes by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND, the great remedy for diseases peculiar to females. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets. Sold by all druggists.

You can save Doctor bills and keep your family always well with Hop Bitters.

Millions of bottles of BURNETT'S COCOAINE have been sold during the last twenty years, in every civilized country, and the public have rendered the verdict that it is the cheapest and best Hair Dressing in the world.

The Markets.

SPECIALS FROM THE CHIEF CENTERS.
Until Saturday, Sept. 18.

Boston, Mass.—WOOL.—The market shows a decidedly better feeling than for a long time. Ohio X, XX, XXX, and No. 1 at 33½@43c; Michigan X and No. 1 at 35@41c; New York X and medium, 35@42c; combing and delaine, 44@52c; Texas fine and medium, 25@31c; Territory, 25@30c; Missouri, 34½c; unwashed and unmerchantable fleeces, 23@30c; Spring California, 25@31c; Fall do. 12½@25½c; super and X pulled, 35@45c; scoured, 40@50c; tub-washed, 46c.

CORN, yellow 57½c; do, extra yellow, 58c; high mixed, 57c; No. 2 mixed, 56@56½; steamer, 54½c. OATS, extra white ₩ bu. 46@49c; do, No. 1 white, new, 44½@45c; do, No. 2 do. 42½@43c. BUTTER, Northern—choice creamery, 29@31c ₩ lb; choice New York dairy, 27@28c; choice Vermont, 27@29c; fair to good, 23@25c; common, 18@20c. Western—choice creameries, 29@31c; fair to good, 26@28c; choice dairy-packed, 23@25c; choice ladle-packed, 20@23c; common, 17@20c. CHEESE.—Fine factory, N. Y. and Vt., 13c ₩ lb; fine factory, Ohio and West, 12½c; fair to good, 11 @ 12c; skims, 7@8c. EGGS—Eastern, 18@18½c ₩ doz; New York State, 18@18½c; Canadian, 18c; P. E. Island, 17½@18c; Western, 15@16½c; egg oats, 36c.

Chicago.—WHEAT active, firm and higher; No 2 Red Winter, 93½@94c; No. 2 Chicago Spring 93½c cash; 93½c. October; 92½c. November; No. 3 do., 83@83½c; Rejected, 65@70c. Corn fairly active and a shade higher at 40½c, cash; 40½c. October; 41½c., November. OATS strong and higher at 30½c@30½c cash; 30½c. September; 29½@29½c. October; 29½c November. RYE easy at 84½c. Barley easy at 74c. PORK—Options higher and cash lower at $17 50@17 75 cash; $17 75, September; $17-65@17 70, October; $13 bid, November. Lard steady at $7 82½ cash; $7 85@$7 87½. BUTTER Choice to fancy creamery 25@26c. per lb; fair to good do 22@24c; fine to fancy dairy 21@22c; good to choice do 18@20c, medium to fair do. In shipping lots 16@17c.; good to choice ladle packed 17@19¢; fair to good packing stock 14@17c; grease butter 8@10c. CHEESE. Fine cheddar creams firm at 13@13½c per lb for August makes to 12@12½c. for good to best July stock while the heated or damaged lots were bringing 11c@11½c; flat shapes were quoted from 11c for good fair stock to 12c for fine, while the poorer lots are being worked off at 9@10c, as to condition CIDER of slow sale. Fresh juice is quotable at $1-25@1.50 per half barrel. SEEDS: Clover $4.90 for prime. Timothy $2 20@3 25 for good to high prime. Flax was better at $1 22 for cash or a basis of pure to selling at $1 21 for October delivery. WOOL the asking rates from store Iowa, Wisconsin, and Illinois wool range as follows Tub-washed bright 46@48c per lb; do. dingy and coarse at 41@43c; fleece washed medium 40@42c; do, fine 36@38c; do, coarse 33@36c; unwashed medium 28@32c; do, coarse 30@25c; do, fine bright 25@26c; do, heavy 18@24c; bucks' fleeces 16@18c. Consignments from western Iowa, Nebraska, and Kansas sell about 2c. per lb less than this range, and burry and poor conditioned at 3@5c. less. Colorado wool (unassorted) is quoted at 25@28c per pound for medium to fine; 19@25c for coarse to medium, and black at 21@23c.

Cincinnati.—WHEAT,—No. 1 Winter red and white sells at $1, No. 2 do, at 96@98c. and prime mixed by sample at 65@96c. on track and in sacks on landing. Good to prime Amber sells at 93@95c, and choice ranges up to 97c. Inferior ranges down to 82c. During the week there has been an advance of from 3c. to 5c mainly owing to the demand by country millers. CORN—Yellow is scarce and nominal. White sells at 45@46c. Ear Corn is in light supply, and sells at 47@48c. on track, but the demand for it is only moderate. OATS—No. 2 white 34½@35c. No. 2 mixed 33@34c., and rejected at 32c. on track. Small lots from store sell at a little above these figures. RYE—In good demand and has advanced 4@5c. with sales of No. 2 at 93c. in elevator, but the demand is only moderate at this price. BARLEY—No. 2 Fall sells at 92c., and some choice has sold as high as $1, but the bulk of the sales are by sample at 75@85c. Inferior ranges down to 67c. No. 2 Spring sells at 85@88c., and some choice at 95c., but inferior ranges down to 63c. BUTTER—Fancy Creamery sells at 32c., and prime at 30@31c., choice Dairy at 25@26, choice Western Reserve at 23@25c., prime to choice Central Ohio at 20@22c., and common at 15@18c. ₩ lb. CHEESE—Prime to choice factory at 12½@13½c. ₩ lb., mild cheese bringing $13@13½c.

St. Louis.—WHEAT—No. 2 Red Fall, 92¾@92¾c, cash; 92¾c., September; 93c@93¾c. October; 94¾@95½c, November; 96@96½. December; 92¾@92¾c., all the year; No. 3 do., 87@88¾c.; No. 4 do., 84@85c. CORN—38¾@38¾c, cash; 38½@38½c., October; 37¾@38c, December. OATS stronger at 28¾c, cash; 28½c. October; 28¾c., November. RYE strong at 85c, bid BARLEY—medium to prime, 80@90c.; choice to fancy, 92½c@$1. BUTTER—Creamery—held over stock dull at 22c., choice fresh 27@28c. Dairy—Selections 24@25c. good to choice 18@22c., low to fair medium. 11@16c, common 12@13, country (poor) 10@12c., sweet yellow 14@18—top for single pkgs. WOOL—Tub-washed—choice at 41@42½c, No. 2 medium at 38@40c., dingy and low, 35@37c.; lamb at 33@35c.; unwashed—choice mixed combing, 27@28c, coarse do, 23@25c, choice medium, 25@26c., low do., 22@23c., light fine merino 21@22c., heavy fine merino, 15@17c. Burry, black, cotted, etc, from 5 to 15c. ₩ lb less. Southern burry sells at 12½@13c. GRASS SEEDS—Timothy firm and ready sale at $2.20@2.25. Nothing done in other seeds—Clover sold last at $4.92½@$5.

Robust and blooming health in Hop Bitters, and no family can afford to be without them.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Sept. 18 1880.

BEANS AND PEAS.—Old marrow beans have a steady demand. New medium have sold at $1 60; white kidney and pea almost nominal; red kidney very dull and tending lower. Green peas neglected at $1 50@1.60 the latter for new; bugs hurt the sale of old. Southern B. E. peas open $2.75@3 ₩ 2-bu bag. Marrow beans, prime, $1.65@1.67; other, $1.50@1.60; mediums, prime, $1.45@1.47; other, $1.35@1.40; pea, $1.50@1.65; white kidney, $1.70@1.80; red kidney, prime, $1.45, other, $1.30@1.40.

BEESWAX.—Demand is slack while offerings are full and prices easy; quoted 23@24½c. for Western and Southern.
Exports for week, 900 lbs.

BUTTER.—There has been a steady, sharp call for butter, particularly for upper grades of State and a good advance has attended it. Prices for fine are beyond export limit, though for that matter there has been little to spare from local wants. It is estimated that about 70,000 of New York's population are away during vacation season; as these have largely returned and belong to best consumers, the increased call is made apparent. A contemporary pleasantly remarks:—"At this part of the season dealers are always more or less puzzled in trying to suit the fastidious taste of high-priced consumers. Many of the latter have only just returned from rural points where their daily table supplies have been fresh, rich and rosy, and until their taste for what they call 'farmers' butter' wears off retailers will be kept busy in searching for the standard." A few rolls of State dairies quoted 27@28c. Western of fine quality is scarce, but all useful invoices sympathize with the strong quotations of State. Small dairies will soon be wanted for the single package trade.
Creamery, fine State, 31@33c.; fine Western, 30@31c.; all good to prime, 28@29c.; fair to good, 27@28c.; poor to fair, 25@27c. sweet cream, 27@30c.; State dairies, 24@27½c; pails and half tubs, choice, 28c.; good to prime, 26@27c.; poor to fair, 22@25c.; Welsh tubs, choice 27@28c.; other, 22@25c.; Western imitation creamery, 18@24c.; dairy, fresh, 23@24c; other, 16@22c.; factory, fine June, 20c.; present make, 16½@18c poor, 15c.
An official attempt is promised; to prevent the exclusion of oleomargarine in the export of butter from this port.
Receipts for week, 27,415 pkgs.; exports do., 12,861 pkgs.

CHEESE.—The receipts have been small and the market has held along very steady, showing a moderate amount of trade only, with the exports for the week, 28,700 boxes. Quotations are for
State factory, fancy, at 12¾c.; do. good to prime, 12@12¼c.; do. fair to good, 11@12c.; do. half skimmed, 9¾@10¾c.; Wisconsin factory, fine, 12¼@12½c., do. good to prime, 11½@12¼c.; do. fair to good, 10¾@11¾c.; Ohio factory, fine, 11¾@12¼c.; do. good to prime, 11@11½c.; do. flat, fair to good, 10@10¾c.; do. poor to fair 9@10c.
Receipts for week, 12,040 boxes; do. last week, 40,-312
Exports, 26,750 do.
Liverpool cable, 61s.
Steam, Liverpool, 37s. 6d.@45s.

COTTON—Has been active and excited, closing strong at for September, 11.70@11.72c.; October, 11.22c; November, 11.04@11.05c.; December, 11.08@11.09c.; January, 11.15@11.19c.; February, 11.32@11.34c.; March, 11.48@11.49c; April, 11.63@11.64.
Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	9¾	9¾	9⅝
Strict ordinary	9¾	9¾	9¾
Good ordinary	10⅝	10⅝	10⅝
Strict good do	10¾	11	11
Low middling	11⅜	11½	11½
Strict low middling	11½	11¾	11¾
Middling	11¾	12	12
Good middling	12⅜	12⅜	12⅜
Strict good middling	12½	12⅝	12⅝
Middling Fair	13	13⅛	13⅛
Fair	13¾	13⅞	13⅞

STAINED.
Good ordinary..... 8 5-16 | Low middling..10 7-16
Strict good ordinary. 9 9-16 | Middling.....11 5-16

DRIED FRUITS.—Apples have little attention, with prices unchanged. Peaches are quiet. Small fruits have a good demand.
Apples—Old State at 5¾@6½c, new Tennessee at 3½@4c.; new Virginia at 4@5c.; fancy sliced North Carolina at 6¾c.; evaporated, ring cut, at 8½@9½c. Old peeled peaches at 8@11c. Blackberries at 8c.; Raspberries at 25@26c. Pitted cherries at 19@20c. Whortleberries at 11c. New Georgia peeled peaches at 16@17c.; new North Carolina peeled peaches at 13@10c.; new unpeeled peaches, quarters at 7½c. new unpeeled peaches, halves at 8c.
Exports for week, 1,050 pkgs. of apples.

EGGS.—Receipts for week, 7 160 bbls.; do last week, 7,727 do. Moderate supplies have retained strong prices and the market closes firm with stock well sold up.
Near points, 20@21c.; State and Pa. 19½@20c.; Western and Canadian fresh, 19c.; second quality, 17@18½c.

FLOUR.—Trade is more active and prices stronger.
Latest prices are: $3.25@4.10 for inferior to very fancy superfine state and Western; $3 85@4.10 for poor to choice extra State and Western, odd lots and lines; $4.15@4 30 for choice to fancy do.; very inferior to good white wheat, trade and family extras, $4.65@5.50; good to choice do. at $5.60@6.00; (very choice to fancy do. at $6.10@6.35.) red and amber winter wheat inferior to choice trade and family at $4.25@5.85; round hoop Ohio, $4 20@4.65; and trade and family brands of do. at $4.70@5.35; St. Louis at $4.65@5.40 for inferior to good extra; $5 25@5.85 for good to choice (and $5.40@6.25 for very choice to fancy brands); Minnesota clear, inferior to fancy at $3.90@6.25; Minnesota "straight," poor to fancy, at $5 75@7.25, and patent inferior to very fancy at $5.75@8.50; unsound stock at from $3.25@4 85; city mill extra at $5.00@6.25 for fair to very choice for the West Indies; do. for England, $3.85@4.25 for poor to choice spring wheat, and $4.40@5.00 for winter wheat product; do. trade and family extras, $5.25@6.50; do for South America, $5.25@5.65.; No. 2 at $2.25@3.40 for poor to very fancy.
Receipts for week, flour, bbls. 104,100; cornmeal, do. 4,200; wheat, bush. 1,110,625; corn, do. 1,559,400; oats do. 251,450; rye, do. 71,500; malt, do. 48,400; barley, do. 2,800; beans, do., 1,400; rice, pkgs. 1,575.
Exports for week, flour 64,400 bbls.; corn meal, 3,900 bbls.; wheat, 1,074,700 bush.; corn, 1,761,025 bush.; oats, 4,900 bush.; peas, 8,660 bush.; rice 750 pkgs.

CORN MEAL.—Sales at $2.50@2.75 for yellow Western, and $3.20@3.35 for Brandywine.

FRESH FRUITS.—Heavy Fall shipments of apples to Europe continue a feature, but prices are low enough to do almost anything in an experimental way. A very heavy crop is assured from sections. Exports for the week, 14,000 bbls. or about 40,000 since the season opened.
Fall pippins and greenings 75c@$1 bbl. King $1.50@1.75c; Alexander, $1.75@2; Detroit Red, Twenty Oz,, and Malden's Blush, $1.50; Gravenstein, $1.50@2; N. J. Baldwins $1; The crop of Florida oranges was fortunately uninjured by the recent severe Southern storms. It is estimated that 300,000 half-bbl. cases will be packed this season. This yield is remarkable when it is remembered that in 1877 the crop did not exceed 2,500 pkgs. Pears are improving in sale as peaches run out. Bartletts are scarce and bring $10@12 ₩ bbl; Duchess, Beurre d'Anjou, B. Clairgeau, B. Bosco Louise bon $5@6; B. Diel $4.50@5; Swan's Orange $4.50@5.50; Sickle choice $8@10; other $4@6; cooking $2@3. Peaches show only ends of Northern orchards; prime to extra $1@1.75 culls, 60@70c. per basket. Plums are reduced to few and small packages. German prunes, per half bu. basket $1.50@1.75; Damson ₩ crate, $1@1.25; Reine Claude and Copper, $1.50@1 75. Quinces $5.50@6 for State apple. Peanuts arrive freely; late low prices brought out a speculative demand; sales for consumption only moderate. Va. 5¼@5½c.; extra prime, 4½c.; good to prime, 4@4¼c.; shelled, 5¾@5¾c. Chestnuts will be a big crop from received accounts a few quoted $7@8 per bu. Grapes have been scarce latterly but there are plenty to come. Delawares, cases of 18 3-lb boxes $4; bulk and basket per lb., 7@10c.; Catawbas, 6@7c.; Concords, cases 18 3lb boxes $3; in bulk, 3@4c.; Isabella 3c. Salem 5@6c. Cranberries have a little shipping demand; Cape Cod ₩ bbl., $5.50@7.50; N. J. per crate $1@2. Watermelons range at $100@ 25 ₩ 100; crop all here. Nutmeg melons 50c.@$1 50 ₩ bbl. quality variable.

GRAIN.—Wheat has been active; the exports for the week are 1,300,000 bushels; prices are firm.
Latest sales are for No. 1 white at $1.08@1.08¼; do. September, at $1.07¾; do. October; at $1.07@1.07½; do. November at $1.07¾@1.07¾; do. steamer grade at $1.06¾@1.07¾; No. 2 white at $1.06@1.06¾; ungraded white at $1.01@1.08; mixed Winter at $1.05; No. 2 red at $1.07@1.07¾; do. September, at $1.07¾@1.08¾; do., October, at 1.07¾@1.08¾; do. November, at $1.08¼@1.08¾; No. 3 red at $1.04@1.04½; ungraded red at 92¾c.@$1.08¾; No. 2 Milwaukee spring old crop, at $1.05¾. Rye is active and quoted 97@98c. for prime State, and 95@96c. for Western. Corn is weak and fairly active; sales of New York No. 2, regular inspection, at 50¾@51¾c.; do., September, at 51c.; do. October, at 51¾@52c.; do., November, at 53¾@53¾c; ungraded mixed Western at 50¾@51¾c. Oats are in liberal demand and show an advance: latest sales are of No. 1 white at 45@50c.; New York No. 2 white at 48@49c.; No. 3 white at 47@48c.; New York No. 1, 48¾c.; No. 3 at 47¾@48c.; do., September quoted at 43¾@43c.; do., October, at 38¾@38½c.; do., November at 38½c. No. 3 at 44@48c.; ungraded White Western at 45@50c.; ungraded mixed Western at 45@48c.; white State at 50@51c.; No. 2 Chicago at 48c. bid.

HAY AND STRAW.—Receipts are moderate, demand good and prices strong.
Shipping hay quoted at 80c.; medium to prime do., 90c.@$1.15; salt hay at 60@65c.; clover do. at 65@75c. Straw at 90@95c. for long rye; 65@70c. for short rye; and 60@70c. for oat.
Exports for week 1,122 bales.

HONEY.—Arrivals are quite free, but the weather thus far prevents much exposure and buyers are few. White clover, single comb 13c.; larger pkgs. do. 15@16c.; buckwheat 12@16c.; extracted 8@11c. dark to white.

HOPS.—Offerings of choice stock are small, and prices of this grade therefore about nominal. Other qualities are more freely offered and sales easy in price. Quotations are for

	Cents per lb.
New Yorks, crop 1880, medium to choice	27 @30
New Yorks, crop 1880, low to fair	25 @26
Eastern, crop 1880	25 @30
Wisconsin, crop 1880	25 @30
Yearlings, crop 1879, choice	23 @26
Olds, all growths	4 @14
Pacific Coast, new	none.
Pacific Coast, olds	nominal.

OIL CAKE.—Western is quoted $29@29.50. ₩ ton.

POULTRY AND GAME.—Dressed poultry has declined 1@2c. since Tuesday, and is henceforward likely to show the easy ruling figures of an advancing season.
Turkeys, choice, ₩ lb., 14@14½c.; fair to good, 12@13c; Phila., dry-picked, 14@15½c. Chickens, do., 17@19c.; Bucks Co. do 16@17c., State scalded, 14@15c.; Western, scalded, 13@14c Fowls, Phila., dry-picked, 15@16c.; N. J. d. p., 14@15c.; scalded 14@15c.; State, d.-p. 14@15c.; State, scalded, 14@15c; Western, scalded, 13@14c; poor, 11@12c. Ducks, Spring d.-p., 13@16c.; mixed 12@14c. Squabs, white, ₩ doz., $2.25@2.50; dark, $1.25@1.50.
The rush of Jewish trade has subsided and the market for live poultry has to take ordinary market chances. At the close the tone is easy.
Chickens, N. J., 13c.; Western 10@11½c.; Southern, 10@11½c. Fowls, N. J., 13@14c.; Western, 13@13c.; Southern, 12@13c. Roosters, 6@7c.; turkeys, old, 12@13c.; young 10@12c.; ducks, choice, 70c@$1; other, 50@60c.; geese, choice $1.75@2; other, $1.00@1.50; pigeons, 20@30c. The low rates for chickens is mainly on account of very poor quality.
The list is large but the weather is too warm for showing game and by this fact sales of course are restricted.
Wild ducks mallard prime 67@75c.; teal 40@50, common 20@30c. Partridge, prime, ₩ pair, $1 25; soft, 50@75c.; grouse, $1.25; woodcock, $1@1 25.. Eng. snipe, ₩ doz., $2; Sand snipe, 40@50c.; grass plover, $2.50; plover, $2, wild pigeons flight $1-25; venison short saddle 18@20c.; whole deer, 10@12c.

PROVISIONS.—Hog products have been more freely offered and have tended lower.
Mess pork quoted at $15.10@15.15 for Sept. and Oct., and $13. 5@3.25 for Nov. deliveries. Bacon at 8.75c. for long clear, and 9¼c. for short clear. Beef—extra India mess quoted at $18@20 for city; $10 for extra mess and $9 50 for plain mess; $10.50@11 for packet, and $11.50@12 for family mess, Beef hams at $17.50@18. Lard—Western steam at 8.17½c. for spot lots; 8.12½@8.15c. for Sept. and Oct; 8-10 for November. Steamine at 8½ for prime..
Receipts for week, beef, 325 pkgs.; pork, 1,050 bbls.; cut meats, 31,167 pkgs.; lard, 15 250 pkgs.
Exports for week, beef, 1,169 pkgs.; pork, 1,015 bbls.; cutmeats 9,323,253 lbs.; lard, 6,154,900 lbs.

SEED.—Clover is quiet, quoted at 8¼@8¾c. Timothy is dull at $2.40@2.50.
Receipts for week, 2,900 bushels.

TOBACCO.—Export demand is good and trade from manufacturers very fair, with prices strong.

VEGETABLES.—Exports of potatoes for week, 8,182 bbls.; of onions, 35 do. There is a good export demand for common grades of potatoes. Rose have a fair sale, but the market indicates some weakness, in view of larger receipts. Good crops and quality are reported in prominent raising points. E. Rose, $1.60@1.75 per bbl.; peerless, $1@1.25; culls, 50@60c. Sweet potatoes quiet, but prime are firm. Del. River $2.50@3.00; N. J., $2.15@2.50; Va., $2.25@2.50. Cabbage is unusually low. Tomatoes are steady. Corn active; late crop turning out well.
Green corn, ₩ 100, 75c.@$1.00; tomatoes, ₩ bush., 25@35c.; cucumber pickles, per 1,000 $1.50@1 75; egg plant, per bbl., $1.00@$1.50; Lima beans, per bag, 20c.@$1; shelled, per bush. $2.50@3.00; turnips, 100 bunches, 50@75c.; Russia turnips ₩ bbl, 50c.@$1.00; beets, 100 bunches, $1 00@1.50; bullnose peppers, ₩ bag, 75c.; cabbage, flat Dutch, ₩ 100 $2@4; red do., $3@5; marrow squash, ₩ bbl. 50@62c.; onions, white, $3.50@4.00 yellow, $3.00@3 25; red, $2.75@3 00; carrots, ₩ 100 bunches, $1.50@2.00; pumpkins, ₩ 100 $2 50@5; okra, per 100, 15c.; cauliflowers, ₩ bbl., $2@4.

WOOL.—There is a moderate degree of activity only and prices unsettled and easy. Quotations are for
Ohio, Penn., and W. Va. XXX 46@48c.; XX, 43@45c.; X, 43@45c.; No. 1 16@48c., No. 3 42@44c.; coarse 35@38c, combing 43@46c.
N. Y. Mich. and Wis. XX 38@41c.; X 38@40c.; No. 1 44@47c.; No. 2 38@42c; coarse 33@35c.; combing 42@46c.
Ind., Ky. and Tenn. XX 38@41c., X 38@40c.; No. 1 44@46c.; No. 2 38@42c; coarse 33@36c.; combing 42@46c.; combing unwashed 30@37c.
Ill. Iowa, and Minn. X and XX 36@40c.; No. 1 43@45c.; No. 2 37@41c.; coarse, 30@34c.
Ga., Ala., Miss and La. fine unwashed 33@35c.; medium unwashed 30@31c.; coarse unwashed 25@30c.; burry 14@20c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Sept. 18, 1880.

BEEVES.—Receipts for the week 11,542 head; do. last week, 13,461 do. The market was thinly supplied early in the week, and the heavy offering of yesterday gave butchers an opportunity to dictate their price views. Compared with Wednesday native good stock sold $1.00 per head or ½c. per lb. lower. Common grades, including Texas and Colorado, ½@¾c. do. Many droves were put on the scales which is an indication of the apathy of butchers. The weakness is in some degree attributable to a low wholesale dressed beef market, and it is thought its influence will be felt to Monday's sales. Quotations:—Texans and Coloradoes, 7@8½c., to dress 55 lbs.; common to fair native steers, 8@9¼c.; to dress 55@56 lbs.; good to choice, 9¼@10¾c., to dress 57 lbs.

COWS AND CALVES.—Supplies are largely from Maryland and Virginia. Market firm for good stock. The range is $30 to 60 per head the latter not in a wholesale or car-load way. For common or low quality there is no sale.

VEAL CALVES.—Supplies have been more liberal, and the market is easier than at our last. Dressed begin to arrive, quoted in good order at 8@10c It is rather early for them, as cool nights and mornings hardly offset the possible damage of a hot day.
Live calves, Bucks Co. and N. J., fed 6½@7c., State choice, 5½@6½c.; poor, 4@5c.; Mt. Holly, heavy to light, 5¾@6¾c.; buttermilk, 2½@3c.; grassers 2@2½c.

SHEEP AND LAMBS.—Receipts for week, 40,012 head; do last week, 30,802 do. The sheep market has been well supported, regardless of the large receipts. Quoted at the close 4@5¾c. poor to prime sheep; selected wethers, $5.50 per 100 lbs.; lambs quiet, only choice selling; New Jersey, 6½@6¾c.

SWINE.—Receipts for the week, 19,639 head; do. last week, 21,429 do. Market strong for fair to prime at 5¾@5¾. City dressed, 7¾@7¾c., with good demand.

TERMS FOR 1880.

THE subscription price of THE RURAL NEW YORKER is

Single Copy, per Year	$2 00
" " Six Months	1 10
Great Britain, Ireland, Australia and Germany, per Year, post-paid	$3 04 (12s. 6d
France, " "	3 04 (16¼f.)
French Colonies, " "	4 08 (20¼f.)

Any one sending a club of eight is entitled to one copy, one year, free.

Agents will be supplied with canvassing outfit on application.

Entered at the Post-office at New York City, N. Y., as second-class mail matter.

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Inside (Agate space)	40c. per line.
" 13th page	50 "
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$1 per 100 buds by mail. Wager Peach and others, 50c. per 100. Treatise on Small Fruit Culture free.
C. A. Green's Fruit Farm,
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LINCOLN CREAMERIES
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AGENTS WANTED.
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Garmore's Artificial Ear Drums
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S. W. Corner 5th & Race Sts., Cincinnati, O.

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A CURE for the most prevalent and fatal diseases that afflict mankind **FOUND AT LAST.**
Internal medicines never did nor never can cure **KIDNEY DISEASE. STOP IT NOW;** apply Day's Kidney Pad **AT ONCE.** and be cured of all affections of the **Kidneys, Bladder and Urinary Organs.** It is the only treatment that will cure **NERVOUS AND PHYSICAL DEBILITY,** and that distressing complaint, **"BACK ACHE."** It will annually save many times its cost in med'cines and plasters, which at best give but temporary relief. Sold by Druggists or sent by mail on receipt of price, **$2.** Our book, "How a Life Was Saved," giving a history of this new discovery and a large record of most remarkable cures, sent free. Write for it.
DAY KIDNEY PAD CO., Toledo, O.

Reading for the Young.

RAIN ON THE FARM.

My dear little children
  Stand up in a row;
And just let us see, now,
  Does any one know,
How the little round drops
  Of warm Summer rain,
Spatter and hop,
  And spatter again,
While little pug noses
  Press close to the pane;
And rollicksome toes-es
  Can hardly refrain
From an out-of-door play,
  In the dribbling charm,
When the rain comes pattering
  Down on the farm?

It turns up the litt'e
  White leaves on the trees,
That dance so, and flutter
  About in the breeze;
And hits the red berries
  That hide from the sun;
And dabbles the cherries,
  That swing one by one
High up when the birdies,
  Their dessert have done.
It colors the mosses
  A livelier green
It nods and it tosses
  The daises between,
And it sends the wee chicks
  To lie cuddled and warm,
When the rain comes pattering,
  Down on the farm.—MAUDE MEREDITH

IN-DOOR GARDENING—NO. 1.

MAUDE MEREDITH.

UPON the hills I see the golden brown,
  And in the valleys lie the Summer's red
The pastures bare and sloping grain-fields dun,
  All seem to whisper us, that "Summer's dead."

The purple grapes hang heavy by the river side,
  The flower borders turning dead and sere,
The rustling leaves beneath the arbor trees
  All whisper low that "Winter's reign is near."

THERE are few things pleasanter or more cheering during the dreary Winter season out-doors, than the green or blooming plants inside the comfortable home, and while every well-regulated household may have a part of the interest in the beauty of the Summer flower garden transferred to the sitting room or parlor for the Winter, I will give a few hints to the Horticultural Club in the transfer of the beauty of Summer out-doors to the beauty of Winter in-doors.

Now that the seed pods hang heavy and brown in the borders and the woodbine flaunts scarlet banners on the arches, whispering us of the near approach of that enemy of our flower beds, "Jack Frost," we must needs bestir ourselves if we would save our treasures from the touch of his blighting hand; window boxes must be retouched with varnish, flower-pots, last Spring discarded, again brought out, and all the new designs or inventions for making them attractive, added. Then comes the task of selecting. Not all the Summer favorites can find accommodation in the windows, and it requires considerable care and forethought to select only the best, those that will make the best show as Winter bloomers, or what is almost as good, by their bright or graceful foliage make the beholder forget the lack of bloom.

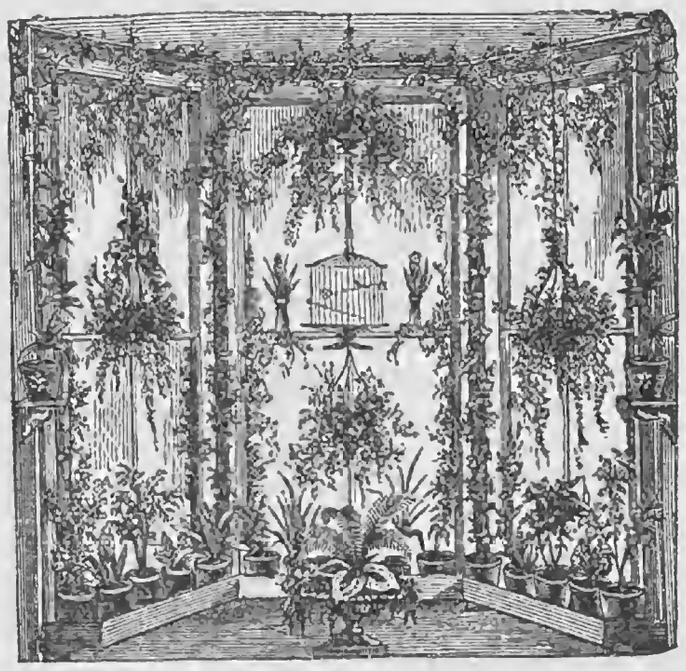
First, in selecting pots, do not use too large sizes, a small pot, if steadily cared for, and, by that, I mean if not neglected and allowed to become too dry, will furnish twice the bloom that the same plant potted in a much larger pot would afford. Large pots mean a profusion of foliage, small pots, of bloom. All pots should have a layer of charcoal on the bottom, red coals taken from the kitchen stove and cooled answer the purpose, affording better drainage, at the same time keeping the earth from souring.

I have found a soil composed entirely of leaf mold from the depths of the woods to be the very best, requiring the least water, and producing the richest color in leaf and bloom, but where it can not be procured, any good loamy soil, mixed one part sand, to two of soil, will do excellently, or in case of necessity, well rotted manure, but it must be well rotted, mixed one part soil, one of manure and one of sand, will answer. The fine dust swept from the street can be used as a fertilizer if no other is procurable. Now, that our pots are ready, comes the process of transferring. I usually water my plants thoroughly some hours before, selecting a cool, cloudy day if possible, and do the work as late in the afternoon as I can, thereby giving the plants the benefit of a nap before beginning their new life, which, by the way, should be quite in the shade in some cool room for the first three days.

All fine fibrous rooted plants are easily removed, while those of a single, or tap root, are best left to the ravages of the frost king. Some choice kinds as, for instance, the mignonette, can be planted in pots where they are expected to remain, in July or August, and make fine Winter bloomers.

Foremost in the floral ranks for lawn or conservatory is the extensive family of Geraniums. The large Zonale Geraniums that filled our borders with their flaming reds, their dainty pinks, and pure white through all the Summer will not prove good Winter bloomers; being so exhausted with Summer flowering, the removal causes them to droop their leaves, and half the Winter is consumed in an attempt to reorganize their shaken forces; but if we have carefully set cuttings through the Summer months that are about coming into bud, we can transfer them to the windows with little apparent harm, and they will continue to grow and bloom almost uninterrupted. The large stand-bys of the Summer, if lifted from the earth, about as a farmer "pulls" his cabbage, and fastened, roots uppermost, to the beams overhead in the cellar will keep until another Spring, when they may be set out, and with a little pruning they will grow rapidly into another Summer of bloom. A variety should be selected, if possible some of the double varieties, although I have a fancy for the familiar faces of some of my old friends like Francis du Bois and Jean Sisley.

Among the novelties we find New Life, a vivid scarlet, irregularly striped with salmon and white. In the double varieties are Casimer Perier, a flaming orange, bordered with salmon; Ernest Leuth,



IN-DOOR GARDENING.—FIG. 308.

an intense glowing crimson; Mme. Baltet, the best of all the double whites; Jennie Dolfus and Naomi as double pinks. These, or any other similar variety of color, are quite sufficient to illume the flower borders through the Summer, or the window garden in the gloomy Winter days.

There is an endless variety of silver-leaved, bronze, and tricolor, as ornamented foliage; about a dozen scented varieties, with the double and single Ivy-leafed Geraniums, which, together with the Pelargoniums or Lady Washington Geraniums, make up a list sufficient of themselves to fill our window garden, all requiring about the same culture and being the most easily cared for of all house plants, asking only moderation in all except light—that, however, seems to be a necessity for perfect development.

Among hardy Winter flowering plants I have a great fancy for the abutilon, really a greenhouse shrub, growing from five to ten feet in hight, and by some called Flowering Maple, from the resemblance its leaves bear to the maple. There are a number of varieties, some requiring a support like a fucia, and having a leaf rather long and narrow. But I do not fancy the abutilon when it attempts vine nature. I like it as a stately, symmetrical tree in miniature.

The abutilons are very popular on account of their cleanliness, healthfulness and almost constant bloom, whether as a bedding plant in Summer, or a house plant in Winter. In color of flower they range from pure white to crimson, scarlet and deep orange, with all intervening shades and veining. The foliage of some varieties is of a deep green, others, as A. Thompsonii, mottled with yellow shading out into a creamy white.

Achania is another green-house shrub, a continuous bloomer, bearing scarlet flowers and, from its freedom from insects and its easy cultivation, a most desirable house-plant.

Almost all begonias are also desirable for window gardening, as each has special merits either as constant bloomers, or from beauty of foliage, and in the same list we place Bonvardias, requiring about the same temperature as begonias, an average of 65 degrees, easy of culture and a profuse and brilliant Winter bloomer.

These last named require more heat than geraniums and abutilons, and can be given the warmest side of the plant stand or the brackets nearest the stove.

I must add just one word for the carnation, the old favorite that always flourished on the little plant stand beneath the clock in our mother's kitchen, and from which as an especial reward for good conduct, we were given now and then a great fragrant blossom, just as, dinner basket in hand, we stopped for the good-by kiss before starting on our long tramp to school. Never will the fragrance of the carnation drift past us, that it does not instantly picture the old red school house, the rows of pine desks, the childish faces, the clean pink pinafores and the great spicy bloom, mother's parting token, that lay on the desk just above the speller, and to which we stole admiring glances between each heart-breaking word.

"Your voiceless lips, O Flowers! are living preachers,
  Each cup a pulpit, and each leaf a book,
Supplying to my fancy numerous teachers,
  From loveliest nook.

"In the sweet-scented pictures, Heavenly Artist!
  With which Thou paintest nature's wide-spread hall,
What a delightful lesson Thou impartest,
  Of love to all!"

LETTERS FROM THE COUSINS.

UNCLE MARK AND COUSINS:—I see so many letters from the cousins I thought I would write too, I cannot say I care much for gardening. I like to see a good garden and pretty flowers as well as anybody. I guess the trouble with me is I don't like out-door work. Although if you would send some seeds they would be gladly accepted. For Elsie, my sister, likes to make gardens as well as I like to watch her. I guess we will have a well filled cellar this Winter, for ma has 300 quarts of fruit put up. Then we will have 100 bushels of apples if they are not stolen. And we are going to try to get some nuts. We have a great many vegetables to gather yet before frost. This is the first year for us to take the RURAL. We like it very much. Do any of your nieces or nephews never hunt stones, I am trying to get a specimen from all the States. Perhaps some of the cousins would send me a stone from a State I have none from. I have a stone from Iowa, Nev., Wis., Mo., Ark,, Kan., Dak., Minn., and N. Y. I got a stone that looks like petrified honey comb. I got $2.00 premiums for pantry stores at the Eldora fair, two years ago last Fall, $10.75 a year ago last Fall, $9 last Fall, and I was entitled to $9 more but they gave it to some one else by mistake. I am in my fourteenth year but I will soon be too old to write to you, will I not? Now Uncle Mark give an account of yourself, are you a real uncle? Ma never had any brothers or sister, so you are not her brother, and I guess could not have been a favorite brother of my fathers, or he would have said a little more about you, who are you any way? Do you like long letters. You have one here. I hope your waste basket will be too small for it. But good-bye. Your affectionate niece,

Eagle City, Hardin Co., Iowa. FLORENCE DALE.

[Uncle Mark does not like to tell his real history, sometimes we *play* characters as well as act them, although not always *real*; but there are some nieces in Iowa who can tell you all a bout Uncle Mark if they have a mind to.—U. M.]

UNCLE MARK.—I send a peach to-day, picked off of a tree grown from a pit that I planted three years ago—when I was six years old. I think it is a pretty good peach for the first trial don't you? I have a nice little flower bed, verbenas, pinks balsams, pansies and tube roses. I have also a few shrubs, flowering almonds, Japan Quince etc., that I got over at my grandfathers I dug up the sprouts from his bushes and brought them home and planted them, and they are doing first rate. I have a beautiful black walnut tree about two feet high that grew from a nut that I planted. I am saving flower seed for next year. Of the seeds sent to my father from the RURAL NEW-YORKER, he has nice young plants of all, except the magnolias, growing finely, and expects to have plenty of flowers from them next Summer. He has large mangels from the seed sent but don't think they are large enough to take the prize offered for the three largest. I would like to join the Horticultural Club with your permission. Your nephew. HARRY R. F.

Elmira, N. Y.

[The peach was very fine, it is not a very large sort but is a free stone of most excellent flavor, and was just ripe. We add your name to the list. U. M.]

DEAR UNCLE MARK AND RURAL COUSINS:—I have never seen a letter from Bitterroot Valley, Montana, yet, and thought I would write. I am nine years old but never went to school but very little but my mother has taught me at home. My father has taken the RURAL a long time and it will always be a welcome visitor with us. My father owns 200 acres of land and a band of cattle, horses and other stock. I love flowers very much and we have a good many nice vines this year. Crops are good here this year. Wheat will go about 40 bushels to the acre, oats 50 to 60. Some of the cousins will be surprised to know I never saw a railroad, but hope to some time. I wish some of them had the privilege I have to catch nice mountain trout and gather huckleberries, and rove over the mountains and see the playful deer, and the great big bears, but the latter I never care to bother. Please don't cast this in the waste basket as it is my first. ELLA GRACE.

DEAR UNCLE MARK:—I am a little girl eleven years old. I want to join the Horticultural club. I have three brothers and one sister. We all love flowers, my oldest brother and sister and I have flower beds. Ma has snapdragons, phlox, four-o'clocks, balsams, pansies, gladiolas, mignonette and others too numerous to mention. The most of the seed we got from the RURAL last Spring has done well. I like to read the letters from the cousins. From your niece,

LAURA G. BABENHOUSE.

Wayne Co., Iowa.

DEAR UNCLE MARK:—I have long wanted to join your club, and thought I would write, and hope this will not go in the waste-basket. I have a flower garden, and have all colors of balsams, pansies, sweet peas, petunias, phlox, drummondii, poples, portulacas, verbenas, and zinnias. Our Cuthbert raspberry plants are all alive. We have harvested our Molds ennobled oats. We take the RURAL, and like it very much. W. D. H.

Rockford, Ill.

Miscellaneous.

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TRADE MARK.

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Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,
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No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

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Fine Mile Track and Commodious Buildings on the New National Fair Grounds, within five minutes' ride of the Capital. Steam-cars direct to the Grounds by the Baltimore and Ohio Railroad.

Trotting Races October 5, 6, 7, 8 and 9. Purses, $8,000. Entries close at 11:00 p. m. September 21, 1880.

International Tournament, Military Prizes, Incubator-hatching Chickens, Bicycle Races, Grand Cavalcade of animals on the track.

The largest premiums ever offered in the country for Horses, Cattle, Sheep, Poultry, &c. Liberal awards for Household, Agricultural Departments.

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Premium List now ready.

Excursion Tickets at reduced rates on all the Railroads centering in Washington. Liberal arrangements made for transportation of objects intended for exhibition. W. M. GALT, President.

EDWARD C. DEAN, Secretary.

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FARM for sale, 184 acres, highly improved. Will sell at ⅔ value. Good reasons given for selling. Address, at once, M. PATTERSON, Windfall, Ind.

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STRAWBERRIES The two largest and most productive—**Mt. Vernon** Seedling and **Kirkwood**, each yielded in 1879 at the rate of 10,000 quarts per acre, and averaged in market 10c. per quart, 40 acres Strawberries and Raspberries. **Kieffer's Hybrid Blight-proof Pear.** "Forty years' Experience in Pear Growing," telling how to avoid the Blight. "Forty Years among Small Fruits," telling *what* and *how to plant*. Either sent by mail for 15c.; both for 25c. Catalogues of fruits and Flowers **free.**
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PERSONAL ITEMS.

President Hayes has accepted an election as vice-president of the American Bible Society.

Ex-Governor Fenton, of New York, has declined a nomination for Congress from the thirty-third district of this State.

Justice Swayne, of the United States Supreme Court, according to a Washington dispatch, will retire from the bench next winter.

A Texas clergyman, about to become chaplain of a penitentiary, preached a farewell sermon to his congregation, who had ill-treated him, from the following text: "I go to prepare a place for you, so that where I am ye may be also."

Lord Beaconsfield, when he was the Disraeli of only 22 years, was a remarkable-looking young fellow. He had a pale, almost delicate face, jet black hair clustered in curls on a marble brow, beneath which flashed strangely brilliant black eyes. His figure was slender and lithe, and he wore a dress coat of black velvet, white kid gloves with draperies of black silk fringe falling from the wrists over his hands, and a waistcoat resplendent with gold lace.

[Fort Wayne (Ind.) Sentinel.]

Will Wonders Ever Cease?

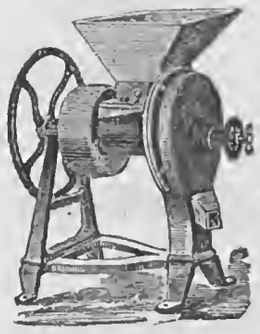
Mr. John G. Fledderman, the well-known Merchant Tailor, in Union Block, writes: "I was a sufferer for many years with Neuralgia and Rheumatism, and found no relief until I tried St. Jacobs Oil. After using two bottles I was entirely cured."

Miscellaneous.

WROUGHT IRON FIELD & GARDEN ROLLERS.

I manufacture a full assortment of these articles of wrought boiler iron. On exhibition at Pennsylvania State Agricultural Fair, F to 10. For Sale by JAMES C. HAND & CO., Market Street; or by ARAD BURROWS, Jr., No. 1,403 South Front Street, Philadelphia.

HARRIS FARM TRUCK, to be used in front of harrow, Plow, Cultivator, Road Scraper, etc. The Farmers' best friend. See advertisement in Fair Edition. Send for circular to SAXTON & AMIDON, Buffalo, N. Y.



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Emerson's Voice of Worship, ($1), for Singing Schools.

Perkins' Temple, ($1), for Singing Schools.

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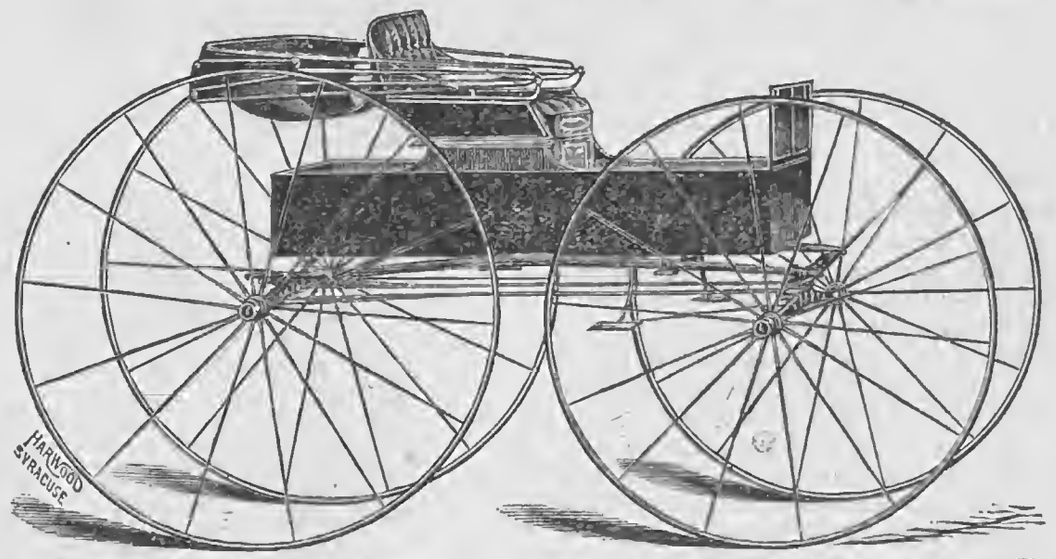

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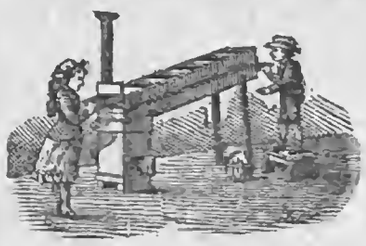

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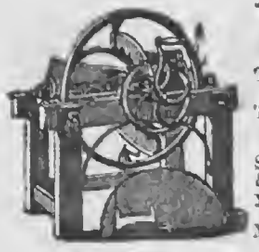

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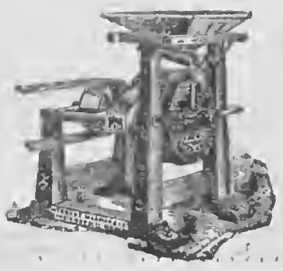

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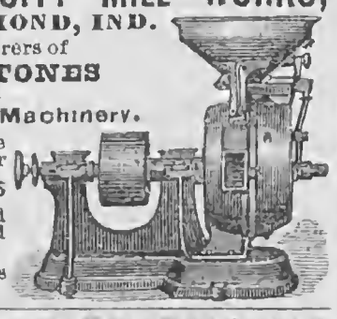

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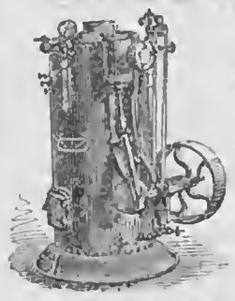

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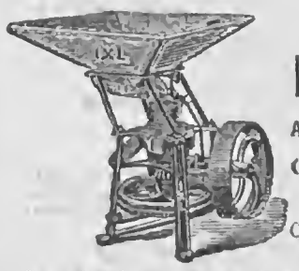

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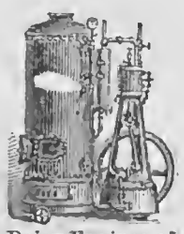

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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Dairy Husbandry.

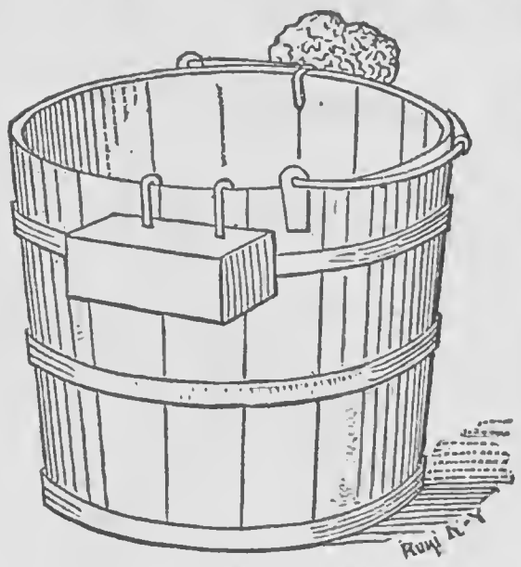
THE DAIRY COW—NO. 9.

HENRY STEWART.

Apparatus for Milking.

Every reasonable person desires to have his or her food perfectly clean. Milk and dairy products are not always clean, to put it only very mildly, and the filth that finds its way into milk is of a very disagreeable, if not unwholesome kind. As a large portion of the milk of a family cow—and much of that sold—is used by children, owners of cows should be excessively careful to have the milk perfectly clean and pure. This is easy to be done if it is desired. It requires only the determination to do it, and a very little attention.

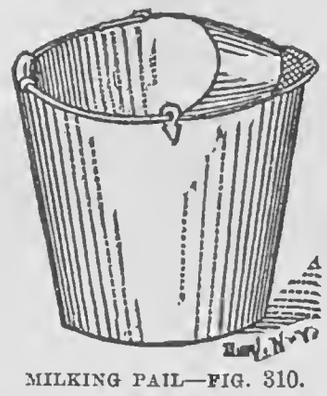
The cow is not a cleanly animal by any means, and some cows seem to delight in making themselves filthy. One of my best cows will take pains to lie down directly in her droppings, so that the udder is always besmeared, and other cows are very careless about it, at the best, so that it is necessary that a part of every milking apparatus should consist of a pail of water, a sponge, and a towel. Before the cow is milked the udder should be washed and wiped dry. For this purpose I have used a pail arranged as shown in the engraving,



DAIRY PAIL—FIG. 309.

which is taken to the barn at every milking. Previously the stable man has brushed and carded the cows, and has cleaned and sanded or littered the floor, so that there is no coarse filth to remove, and only the remaining smears. But if these are left on the teats, the filth will get into the pail in spite of all efforts. The pail has a hook on one side upon which the sponge is carried, and a box on the other, in which an old towel or pieces of cloth are kept. With these the udder and teats are washed and dried before the cow is milked. The time used—not lost—is well spent.

The milking pail should be provided with a strainer, and I have found none made for sale free from some objection, either as regards the difficulty of cleaning or durability. I have my pails made to order with the strainer upon the half-cover of the pail at the edge, and with a lip at the edge to cause the milk to flow easily. There is no difficulty in washing this pail, the wire gauze cannot be broken in the washing, and it is perfectly cleaned with ease. Hairs *cannot* be kept out of milk at some seasons, and a fine hair carried lengthwise *will* pass through the finest wire cloth. It is therefore necessary to use precautions in straining. A hair will not pass through a cotton cloth, and in straining milk into a deep pail I use the strainer shown at Fig. 310, which has a piece of washed, somewhat coarse and thin, white muslin, fastened around the bottom hoop. This causes the milk to pass through three strainers at one time, which is sufficient. Where the milk of several cows is strained the strainer should be rinsed after each use, otherwise the after milk passes over all the impurities gathered in the strainer. For shallow pans the double strainer, Fig. 311, is excellent.



MILKING PAIL—FIG. 310.

The middle strainer fits closely into the bottom of the basin over the fixed strainer, and the basin rests in the perforated hoop which stands in the milk pan. A cloth may be tied over the top of the basin if thought proper. With all these precautions the most complete cleanliness is within easy reach, and if the cow is healthy and is well fed, the most fastidious person may drink the milk without any apprehension. While it is so easy to be clean, the conscientious dairyman need have no excuse for violating propriety, and excuse himself by the idea that it can't be helped.

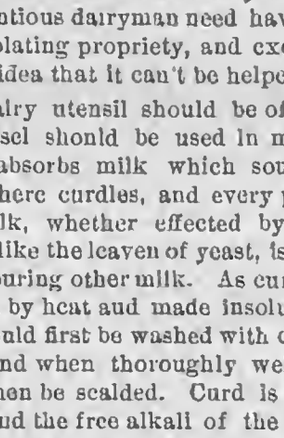
Every dairy utensil should be of tin. No wooden vessel should be used in milking, as the wood absorbs milk which sours in the pores and there curdles, and every particle of curdled milk, whether effected by rennet or by acidity, like the leaven of yeast, is an active agent for souring other milk. As curd of milk is hardened by heat and made insoluble, dairy utensils should first be washed with cold water and soap, and when thoroughly well cleaned they may then be scalded. Curd is dissolved by alkali, and the free alkali of the soap not only removes the grease of the milk, but also any particles of milk which by any accident may have been retained in a crevice or corner, and there soured or curdled. To make the cleaning of dairy vessels more easy it is well to have no sharp corners, but to have all the joints made round, and this may be done easily if one has the milk pails made to order.

The Herdsman.

HEREFORD CATTLE.

A. B. ALLEN.

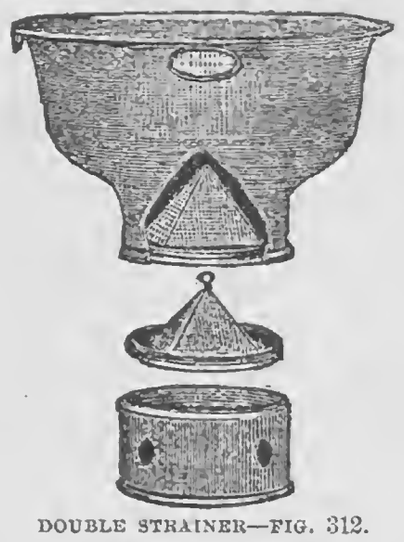
Owing to their large size, fine points, good form, quick feeding, early maturity, hardiness, and the excellent quality of their beef, quite a boom has sprung up latterly for these cattle, particularly for stocking our great Western plains. The importations of Herefords from England thus far this year, I believe, number fully 200 head, or possibly more, all of which have gone to the Western States and Territories for breeding purposes exclusively.



STRAINER.—FIG. 311.

The first Hereford importation into the United States, so far as I can learn, was made in the year 1816 or 17, by the late distinguished Kentucky statesman, the Hon. Henry Clay, and kept on his farm at Ashland, near Lexington. Soon after this, Admiral Sir Isaac Coffin, of the English navy, sent a Hereford bull, and possibly a cow or two, to his friends in Massachusetts. I hear of no other importations till 1840, when upwards of 20 were brought to Albany, New York, from which place their produce went to other parts of the State and the West. A large herd was kept for some time, and may still be, on a farm at the head of Otsego Lake: but they did not find much general favor for some time among our cattle-breeders; not because they were wanting in merit, but owing to the greater fancy for Short-horns, which took precedence at once over all other breeds, and will probably still continue to do so. Other small importations continued to follow from time to time in the United States, but in larger numbers in Canada.

In the past century the Herefords were usually of a dark-red color, approaching sometimes almost to a brown. Among them, now and then, was a gray or roan, or a pure white with red ears. Now the fashionable color is a yellowish to a deep mahogany red with white or brackled face, a line back, and white sometimes down the neck, on the chest, and under the belly. The horns are long, usually standing out straight from the sides of the head of bulls, but with cows, and more especially with bullocks, they take a lofty, upturned form, which gives the animals a very noble appearance.



DOUBLE STRAINER—FIG. 312.

The modern change in color of the Herefords some attribute to a stolen Short-horn cross, which may probably be the case in a few instances; but I should think it may be derived from crossing those of a white and roan color on the dark-reds, which would easily make the present difference of colors. I much prefer those of the yellow or golden red mingled with some white; for I have found such more compact in form, with finer, softer hair and better handlers. They are said also to mature a little the earlier, are more easily kept, and are quicker feeders. The cows also of this color are better milkers than the dark-reds. The English breeders have not cultivated the milking quality to any extent, being satisfied if a cow can bring up her own calf. At the West this is rather an advantage, as the calf is usually allowed to run with the cow till she weans it herself when it is five to seven months old, according to circumstances. The same practice used to be followed in Ohio and adjacent States formerly with Short-horn cows, and as many of these were great milkers, and the calves did not suck all they made till pretty well grown, it gave the cows great pain to retain a part, and often ruined their bags and some of their teats.

The Herefords excel in the brisket and loin, two important points in all animals destined for the butcher; but they are apt to drop from the hucklebones to the tail, and here and in the hind-quarters, they are not generally nearly equal to the Short-horns. Their breeders aware of this for some time past, have been endeavoring to improve them in these points, in which I heartily wish them success.

A strong rivalry is destined to go on hereafter between the Herefords and Short-horns, to stock the broad Western plains; and which, ever finally takes precedence will be obliged to do so by showing superior merits. I think the latter at present the best animal, especially for grading up the produce of native cows, and making acceptable steers for supplying European markets. The only objection I ever heard to Short-horns is, that some of them are a little tender; but this is owing entirely to their being over-fed when young, and tenderly brought up. I have seen them for years in a cold, Western climate, and found them to be as hardy as the native cattle there, or any other breed whatever.

Sheep Husbandry.

THE AMERICAN MERINO.

The American Merino is one of the triumphs of American breeders. The thorough acclimation and adaptation of the Spanish sheep to our peculiar circumstances and necessities is a remarkable and conspicuous instance of successful efforts to reach a desired end. Our native-bred Merino now stands first in the ranks of fine-wool sheep in the world, and is sought by foreign breeders as a source of improvements in their flocks. Its fleece is the heaviest, the staple is the longest and as fine as the finest, and its carcass the heaviest of any living Merinos. No other sheep is so well adapted for the purposes of a people who desire strength and durability as well as beauty in their dress staples, or as a basis upon which to build up different cross-breeds which may be profitably kept upon arable as well as grazing farms, to supply the best mutton, as well as every class of raw material for our native manufacturers.

The Merino is the oldest domesticated sheep. It supplied the ancient Romans with the fine wool from which the imperial purple robes were manufactured, and with such care was the wool grown, that the sheep which bore it were continually blanketed or otherwise protected, even in the warm climate of Spain. From that time up to 1809 and 1810 the Spanish Merino stood first as a wool producer, and in those years nearly 4,000 of those sheep were imported into America from the choicest flocks of that country. A few importations had been made in 1800 and the following years; and it was from the importations of 1802, by Col. Humphreys, that some of the best strains of Vermont Merinos have descended. The history of these Merinos and their descendants has been varied and eventful, and their "ups and downs" have been wonderful. Animals have sold for one dollar at one time, and $10,000 have been refused for one at another time. But, after all, we have now arrived at a steady, substantial condition in which this sheep, excellent in every respect, stands upon its merits, as the first variety in the world as regards utility. It is the basis of our enormous wool production of 250,000,000 pounds per annum, worth to-day $100,000,000. It supplies directly the material for the fine cloths used for men's garments, the finer fabrics for ladies woolen clothing, the mixed fabrics of wool and cotton known as delaines, and by other names recognized only by ladies, as well as for an infinite variety of articles of lesser note. Its wool is not only carded, but is combed and therefore supplies a wide range of uses. Indirectly, as the parent of grades, it helps to produce wools fitted for nearly every use, from the carpets under our feet to the hats upon our heads, the umbrellas which shelter us from the shower, and the broad flag which waves over and shelters every citizen from foes at home or abroad.

Formerly its carcass furnished but a poor quality of mutton, but now its mutton is respectable both as to size and flavor. Crossed

under the larger breeds it furnishes the best and fattest market lambs, and makes desirable mutton for home use and for export. In short, if one intends to keep sheep of whatever kind, unless it be some other pure variety for breeding, he cannot begin without the help of the American Merino. It not only exists as a splendid example of successful breeding, but it points emphatically to the hope that in time we may produce distinctive types of other breeds as greatly improved upon the imported originals as this has been.

The American Merino is a medium-sized sheep, weighing, alive, from 120 to 150 pounds. Its figure is accurately represented in our illustration, which is a portrait of a once famous ram, "Golden Fleece," bred by Mr. E. S. Stowell, Cornwall, Vt. It is squarely built, with deep flanks and brisket, and is covered with wool in every part except the tip of its nose. It carries the still favorite wrinkles in its skin, although it is far from being as wrinkled as many rams of this breed. Merino wool is peculiar for its heavy yolk and plentiful grease, but while this is a necessary and advantageous peculiarity for a fine and close-wool sheep and prevents the cotting of the fleece, it is especially valuable when the rams are used for the improvement of the common native sheep of the Western States and Territories, whose fleeces are dry, coarse, harsh and of little value; but which, when improved by crossing with the Merino, are soft, fine and of a staple almost of equal value with the wool of the pure breed. So in crossing with the long-wool breeds whose fleeces are apt to be thin and open on the back, the pure Merino cross has a fleece as long and as lustrous as that of the parent, but it is softer, closer, and gives better protection to the graded sheep from storms.

The introduction of the pure Merino in Texas, Colorado and New Mexico has doubled the value of the flocks there, for no flockmaster can afford to grow native wool when one cross of Merino not only doubles the weight of the fleece, but doubles the value of the staple. Moreover, the increase of size in the cross-bred wethers has given them a value as mutton which the native sheep never had. It is not uncommon for a Western flockmaster to import as many as 50 rams in a "bunch," from Vermont or Western New York for use in his flock on the Western plains. Our Merino is at home in the hills and valleys of Vermont and Northern New York; in the western fields of Wisconsin and Michigan; on the rich prairies of Iowa and the bottoms of Ohio; it braves the "blizzards" of Minnesota, the hot, dry winds of Colorado and Kansas and the "northers" of Texas and New Mexico; it thrives everywhere, in sun and snow, in valley and mountain and dry plain; it is cosmopolitan; it is American in every sense of the word. It has also carried its good qualities into the far-off isles of the Southern Ocean and is welcomed as a benefactor among the flocks of Australia and New Zealand, where it has gained the reputation of being the best sheep of its kind in the universe, a distinction which it fully deserves.

The Poultry Yard.

GEESE.

HENRY HALES.

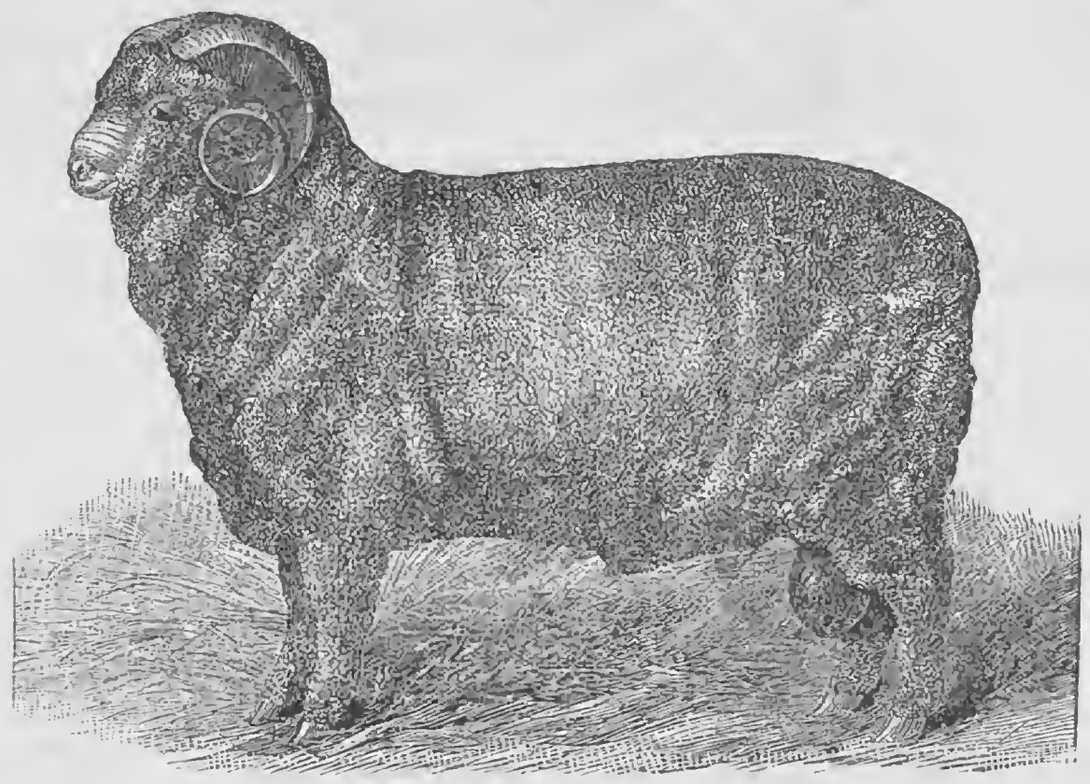
LIKE poultry, geese contribute a considerable share to the sustenance of man, and have done so from very remote times. Some of the first things we learn are the melodies of Mother Goose. The common goose is bred from the wild Gray-lag of the Old World, and was imported by the early immigrants to this continent, with what results are seen at our great markets, where immense numbers are sold in Fall and Winter.

Geese are kept at a good profit where the locality is well adapted to raising them. When kept on some waste lands which are of little use for any other purpose geese are often very profitable. They require but little water, being better vegetarians than ducks; in fact, they will graze like sheep. Their legs are set further forward than those of ducks, which enables them to walk easily. They will often walk a long way daily to beat all over their pastures. On commons, or such waste ground, where many cottagers turn out a number of flocks, it is a pretty sight to see each flock trailing in Indian file at nightfall to its respective home. By giving them a light feed of grain or corn at night, they will be very punctual in this habit.

There are several varieties of domestic geese, besides the common. The principal sorts are the Emden, Toulouse, and China geese, all of which are large varieties.

The Emden, so called from the town of that name, now in the province of Hanover, are pure white and of immense size. Some geese have been exhibited weighing up to 26 pounds each, and ganders as high as 32 pounds. The feathers, being white, are more valuable than dark ones. The bills are flesh-colored, the legs deep orange.

The Toulouse, so named from the city of the same name in southern France, are gray; the necks are dark; the bodies and breasts are lighter; the legs of a deep orange, the bills dark-red, light towards the points. These noble geese stand squarely on their legs; their large, deep breasts give them a very solid appearance. The legs and necks are a little shorter than those of other breeds, and they show a sort of dewlap, or loose flesh, under the upper part of neck. They are the embodiment of the true goose shape and build, and with that peculiar gray color, they are the truest representatives of the goose. Some are occasionally bred a lighter silver gray.



MERINO RAM "GOLDEN FLEECE."—FIG. 313.

The China geese show two varieties—white and gray. These are also large geese with a thick, almost black, knob at the upper part of the base of the bill. Their necks are long which gives them a swan-like appearance. They show a stripe down the back of the neck. In the gray-colored this stripe is brown; in the white, the streak is faint; but all pure-breds show this stripe and also a dewlap. This goose is a native of the southern and eastern parts of Asia. All geese have a strong, brassy-like call, but this one gives out a strong harsh note like a deep trumpet blast. It is more prolific than other geese; while others lay about 15 eggs, this bird lays about 30, but the eggs are not so large as those of the two former breeds.

There are several other sorts of geese, but they are kept more for curiosity than profit. Geese are less troublesome than poultry or ducks. They are good mothers to the goslings but are not good hatchers. Two to four geese are enough for one gander; the latter shows a preference for one female more than for the others. The eggs may be set under hens—three or four are enough for a moderate-sized hen. When a goose appears tractable (some are very ugly when inclined to sit), it is well to let her hatch one brood, and when those hatched under hens are big enough, they will all go together.

Thirty days is the time required to turn out a gosling from the egg. They are hardy and easily raised when young. They should be fed just like young ducks. Oats, corn, or wheat meal with potatoes, chopped green onions, chives and salad are good for them; but they soon learn to graze. It is best to coop up the mother goose or hen for a week or two till the little ones get strong enough to follow her well, or they get tired out and left behind. I have seen an old goose turn back and try to rouse up a flagging gosling, showing astonishing solicitude. Goslings grow quickly and when well fed take on flesh rapidly. They are more easily kept than ducks on a farm in Winter; they will eat more vegetable food, such as turnips and other refuse vegetables chopped up for them. It is said they will eat hay, tied up in bundles in their house in Winter, but it must be kept off the floor.

Geese are a great protection from thieves or intruders; they will raise an alarm when they hear a strange footstep or noises. In parts of southern Asiatic Russia, where the people dwell far apart, they keep geese as a protection in the lower part of the house when they retire up-stairs for the night. Many people think geese simple things, but the reverse is the fact—they are very cute and observing, knowing friends from foes, and have a very discerning ear for sounds.

Many people used to pluck the feathers off the breasts of these birds three or four times a year; this is a barbarous practice too cruel to be countenanced. Just before the time of molting it may be done with profit and not much loss to the bird, as the feathers at such times come off very readily naturally, and it does not make the bird any weaker, but to compel nature to make new feathers out of season, is a hardship to the suffering bird. The quills are still in demand for pens, although the demand for them for this purpose is nothing like what it was before we had steel pens.

The goose does not bear out the theory advanced by some naturalists that an animal lives to a shorter or longer life in proportion to the time it takes to mature. Geese mature early yet live to a great age; many are known to have lived thirty or forty years, and some say they can live to double that age, but as they become ill-tempered as they get old, many are killed on that account. A blow from an old goose's wing is no joke. They do not lay until they are over a year old, but as they are so easily kept on grounds adapted for them, they are profitable in such cases, especially if there is some natural water, as they must always have access to water, even if it be but a small pond.

Horticultural.

RURALISMS.

THE adornment of the grounds connected with public suburban and country schools is a subject that has occupied a good many of my thoughts for years past. Mostly unfenced, covered with stones, heaps of dirt, and overrun with weeds, they present a deplorable appearance. It seems to be nobody's business to look after them: at least, nobody makes it his business, and nothing is done. This condition of things is a reproach to the country, and a great shame to school and district committees. It is sad to think that the young and plastic minds of children should receive their first teachings in the midst of such surroundings. I think that an effort to have a part of the public school moneys set apart for the improvement of these grounds would be successful. If not, there ought to be public spirit enough in every school district to raise the money. In any case, there is no sufficient excuse for the present general condition of these school grounds.

I was for years a member of the Board of Education of a neighboring city, and I am therefore prepared to say that school committees would seldom be without means of ornamenting the school grounds if they manifested some interest in the subject; but they seem generally to care nothing for it; which is presumptive evidence that the right men are not in the right places. In the suburbs of Newburgh there is a district school, the grounds of which will compare well with almost any private garden in the place; but it is done by the janitor at his own expense, much to his honor, and no thanks to the school committee.

There is a district school almost within sight of the window where I am writing. Last Spring the grounds were inclosed with a neat fence. The principal and his scholars gathered the stones and built a mound of them, and made a small bed for flowers. I gave them some cannas, etc., for the bed, and a tub planted with nummularia and portulacas for the mound. The children were given a kind of ownership in the plants, and undertook the weeding and watering, and during vacation have done their part faithfully. The plants have looked remarkably well all Summer. This arrangement gave the children a personal interest in the plan, and secured its success. This might very generally be done, and this case is only mentioned as one of several such examples. But this column is not the place for a discussion of the subject, and I say no more. I thought, however, that an allusion to a subject of so much interest and importance might lead others to think seriously of it, and in this way do some good.

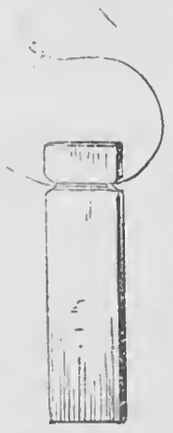
I regret to see that the black thrips is increasing among us at a fearful rate. It is by far the most destructive of its class, and the hardest to kill. I believe it to be an importation from Japan. It would seem to have good taste, for it attacks first some of our most highly prized and beautiful plants, and soon makes them unsightly things. It is very hard to manage. A strong solution of carbolic soap will kill all that it touches; but it is difficult to make it reach them, and will injure some plants when made strong enough to kill these pests. Tobacco smoke is an effectual remedy, but it must be made so dense and strong that it badly injures fuchsias, heliotropes, orchids and other plants, which should be removed from the house when smoking for the black thrips. Unfortunately, it is taking to the grape-vine, both under glass and in the open air, and is worse than its brothers, bad as these are.

There have come to my personal knowledge some deplorable cases of poisoning by the use of Paris-green and London-purple in the state of powder. They are dangerous things to use in the garden in any form, unless the utmost care be used, especially near beds of lettuce and similar plants. I think it is a plain duty of all editors and seedsmen to warn the public against the use of these remedies in the form of powder. Human life is worth too much to be risked in this way.

I do not remember ever to have seen the mealy bug and scale so very abundant as they are now (Sept. 2) and have been during the Summer. The season seems to have been favorable to their increase, for they have both multiplied with a fecundity scarcely less than that of the green fly. It is always well to note such exceptional seasons. They should have, and generally do have, the effect of calling attention to better methods for their destruction. Thus far I have used nothing better than a solution of black carbolic soap. A little experience enables one to judge about how strong it may be made with safety. There are specifics sold in the seed-stores, some of which are good; but they are altogether too costly for use. I would advise all who grow plants in pots to free them thoroughly from these pests before taking them into the house, especially those who grow plants in rooms.

In speaking of metal labels in a former paragraph I had concluded to say nothing about wooden labels. They will continue to be used, however, for a long time to come, and I will therefore tell the reader how he may add to their usefulness and durability in quite an inexpensive way. I have for about five years been making experiments with this end in view, and find it most conveniently and satisfactorily accomplished by using a refined petroleum oil. It has also been tried with the best results by friends to whom I have recommended it. I was led to use it from knowing that petroleum is an excellent wood preserver. All you have to do is to dip the labels in the oil, or, better, tumble a bundle of them into a pan of it for a short time, and take them out to dry. You may at any time thereafter write upon them with a common lead pencil, and the writing will remain legible for years. I say years, because at the end of two years I find the writing about as plain as when first put on. The oil has some body, and is very penetrating and preservative. Labels buried in the ground for a year showed no signs of decay. I strongly recommend this oil to nurserymen and florists as being better than paint, no trouble to use, pleasant to write upon, and very cheap. Those who cannot conveniently get this oil will find kerosene a good thing to use in the same way, but not nearly so lasting.

[In this connection we beg leave to interrupt Horticola for a moment. We have for three years past used wooden labels with a copper wire so fastened, as shown in the cut, that there can be no danger of its binding or cutting into the wood. One end of the wire passes through a loop in the other end. The labels are first thrown into raw linseed oil that is barely colored with white lead. This will preserve them for years and give a surface that can be easily written upon with lead pencil. Eds.]



WOODEN PLANT LABEL.—FIG. 314.

I must thank "Kit" for his kind allusions to me on p. 502. He does me but simple justice in supposing that "Ruralisms" will be free from any thing in the nature of malice or ill-will. Happily, I have no personal animosities to ventilate, and I entertain none but the kindliest feelings for the whole horticultural guild.

Field Crops.

JUNE GRASS, OR BLUE GRASS.—[Poa pratensis.]

PROFESSOR W. J. BEAL.

In the Northern States this is also known as "Spear Grass," "Green Grass," "Kentucky Blue Grass." In Kentucky it is often called "Blue Grass." It is one of the most common and most useful grasses of this country and of Europe. The genus Poa, to which this belongs, also contains several others of importance, such as Fowl-Meadow Grass, Rough-Stalked Meadow Grass, Wire Grass, etc. They are all fine and nutritious. A scientific description here would be passed over or not understood by most readers.

The lower palet is supplied with woolly hairs on the back. The leaves are compressed, and at the tip resemble the end of a little boat. The panicle is short—pyramidal; the foot stocks run extensively at the base, much like those of Quack Grass. The flowers in Michigan appear about the 1st of June, and nearly all come on at once. It is hard to find a single panicle of flowers after the first crop has passed out of flower. Inquiries are often made in reference to this grass, although it is common almost everywhere. In most places the flower stalks are short and would make only a light crop of hay. In strong, rich land the crop of hay would be medium in bulk, though heavier than most people would estimate. The hay, if cut when in flower, as it should be, is excellent for all kinds of stock. A little forkful goes a great way when compared with clover hay. As I mentioned, there is no second crop of stems, but the leaves continue to grow throughout the year when the weather is not too dry or too cold.

There is no better pasture than that produced by June Grass, though some people are not satisfied with the quantity. June Grass is a perennial, and will last as long as any grass, or as long as insects or cultivation will permit. More than one year is required for it to become well established, hence it is not well adapted for alternate husbandry.

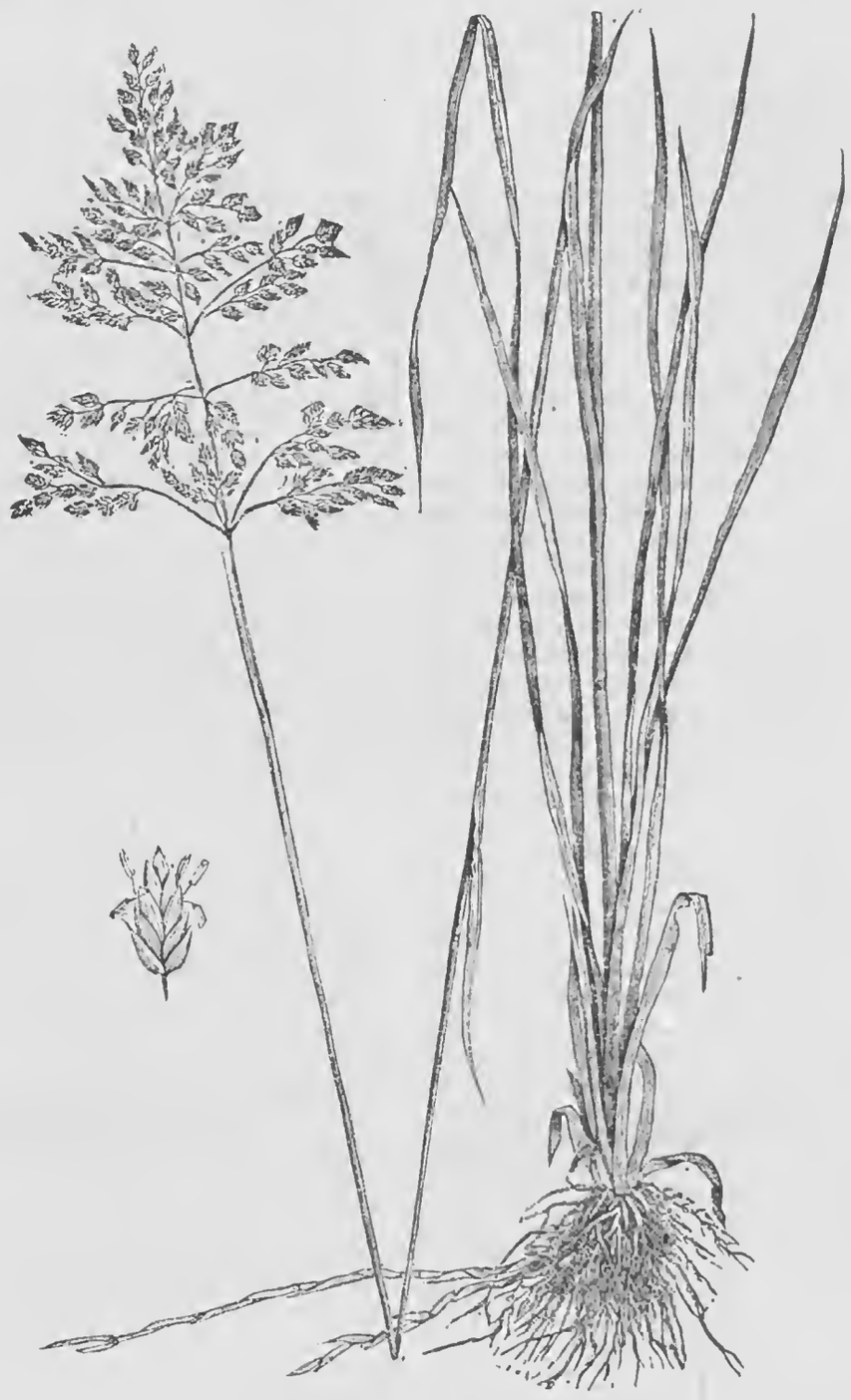
In the RURAL, within two years, I stated the result of an experiment at the Michigan Agricultural College. Seeds were obtained in Kentucky from two different seedsmen of what they called Blue Grass. In all respects, so far as any one could see, they were identical with the June Grass at the Agricultural College. The Kentucky grass was no larger, no earlier, no later.

In low or wet ground June Grass is one of the hardest weeds to kill out or keep down. This every farmer is too familiar with. There is no grass of my acquaintance, except Quack Grass, which will spread faster from a few seeds or roots. June Grass is the best of all our grasses for a lawn, and when sown on rich land and cut often, it makes a soft, thick, green turf, which is a delight to the eye and to the feet which tread upon it. For a good lawn there is no need of sowing any other. A uniform appearance in the grass is desirable. Where the grass only is sought for, and that in the shortest space of time, prepare the soil well and sow the grass early in Spring or September, if not too dry. It is a mistaken notion to sow oats or clover or some rapid-growing plant with June Grass to shade the young plants. It would be about as sensible to raise pigweeds to shade corn, or some coarse weeds to shade wheat.

In my grass plats, where I have raised from 150 to 200 sorts of grasses and forage plants for the last seven years, June Grass causes more trouble than all the rest combined. It gets into everything. Other weeds can be quickly seen and taken out, but June Grass must be allowed to grow awhile to be distinguished from some of the other grasses. Near my beds of grasses on dry sandy loam was an old lawn seeded with June Grass and Perennial Rye Grass. June Grass ran out the Rye Grass in about five or six years. Within three years the seeds of several large Fescue, Orchard Grass and Oat Grass have blown into the June-Grass lawn and taken a firm footing. In several places the June Grass is giving up more than half the ground to these large grasses. No manure has been used within ten years. This contest is watched with much interest, and suggests the propriety of trying the experiment on a larger scale on some of our old pasture or meadows.

SHALL POTATOES BE DUG TO PREVENT ROTTING?

It is a question which there has been much discussion upon, whether, after potatoes have begun to rot in the ground, it is best to dig and store them immediately, or to leave them undug until they have done rotting. Many claim that if dug and collected together they will continue to rot as badly as if left in the ground, or even worse, while others argue that the rotting will be checked, at any rate, to a considerable extent, and more be saved than if left undug, especially if they are stored in not too large quantities in a body, and in a cool place. I have always been disposed to accept the theory that after the rot has appeared the sooner they are dug the less rot there will be; provided, at least, they can be stored in small quantities together, as in barrels or small boxes, and kept in a cool cellar or other suitable place; and my observation



JUNE GRASS—POA PRATENSIS.—FIG. 315.

and experience have served to substantiate this belief.

In the Summer of 1878 I began digging my Early Rose potatoes early in September, and found at that time a very few rotten ones among them. After digging about half of them I was, by some means, prevented from finishing the work for about two weeks. I remember that during this time, in conversation with a friend, a farmer of many years more experience than myself, I expressed my regret at being unable to finish digging them, and my fear that they were rotting badly, and he made the remark that he would rather they would rot in the field than in the cellar. Now for the result. When I dug the rest of them I found fully one-half or more of them rotten, and quite as large a proportion of these rotted after being put in the cellar, as of those first dug, neither of them rotting badly after digging. I have long made it a rule to dig as soon as possible after the rot appears, and am yet to be convinced that I make an error in so doing; but would be glad to hear from any one who, by actual test, has proved this theory false. E. J. BROWNELL.

The Mold's Ennobled Oats.

Friend Talcot's criticisms upon Mold's Ennobled Oats, in the RURAL of September 4, may be all right, but as far as yield is concerned they are tremendous. From the small package received from the RURAL office—not over an ounce—I have 9½ pounds after a hen and chickens had got some fine heads that had broken over. I planted them in a drill one row across my garden, without any special care or manure, with the above result. From one kernel which I pulled up, with 19 stalks and full heads, I had 762 grains of oats. I think them very handsome while growing, but how they will prove for feed, time will tell. So far as I have any recollection I believe Mr. Talcot was the first agricultural writer that denounced the much-praised Norway Oats, and for this he deserves the thanks of the farming public.

Too much cannot be said in favor of the Beauty of Hebron potato. S. L.

Sharon Center, N. Y.

Farm Topics.

THE TRUTH ABOUT IT.

[THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

THE VALUE OF FOOD AND FODDERS.

In his column of "Jottings," (page 569), "Kit" refers somewhat doubtfully to the feeding values of certain kinds of fodders as tabulated in an article in the RURAL on feeding cows, page 520. He seems to have missed sight of the fact that in that article I expressly stated that I was doubtful of the correctness of the estimates of the value of the coarse fodders as given in the tables and referred to by "Kit." The truth of this matter is that these theoretical values are all we have to guide us, and are by no means satisfactory, and never can be, although many very elaborate experiments have been made to verify them in practice. More especially is the difficulty found in feeding milking cows, when the product of milk is made the test of these supposed values; for a great deal depends upon the manner in which the fodder is prepared for the cows.

For instance, last Winter I fed for two weeks to 15 cows some excellent, clean, Timothy hay, bright and green, but consisting almost wholly of stalks and heads—just such hay in fact, as would be thought the choicest kind of horse hay, and worth to sell one-half more than mixed clover hay. But the product of milk fell off nearly one-half, and the butter was very inferior. I was surprised, however, to find on the last days of the two weeks, that the cows were gaining rapidly in milk, and in searching for the reason, found it in the fact that they were eating up their bedding as fast as it was thrown under them. The bedding was sweet, marsh hay cut on a swamp and thought to be dear at $5 a ton, the price at which I bought it. To verify this, the marsh hay was fed for a whole week and the Timothy was used no more. The milk kept gaining the whole week, and was nearly up to the former weight, when the cows were fed on mixed clover, Red Top and Blue Grass, such as is known as the best cow hay. This was fed, cut and wetted to a thin mush with steeped malt sprouts, and cotton-seed meal. This mode of preparing the feed produced the most milk I could get from the cows. When the same hay was fed long and uncut and the sprouts and meal were given separately and dry, the milk fell off again more than one-third. There is much to be learned in the matter of feeding. We are as yet only on the threshold of our knowledge of the art. I am sure that the feed is better digested and made more productive by mixing the fine and bulky together, and adding some moisture; perhaps it is better masticated and made more digestible, by the mixing. Just now I am feeding my experimental cows upon cut grass, and I find it makes a loss in the milk to give the meal dry and separately instead of scattering it over the grass in the feed troughs.

The value of the food given to cows in a year's feeding is enormous, probably equal to $500,000,000. To use this to the best advantage is of vast importance, because it may easily be used so as to lose one-fourth of its possible value. Here is a great field for investigation by experiment stations, which should not be alone devoted to the growing of crops. For what is the profit if a farmer should grow great crops and lose a large portion of them in the feeding of them to his stock? I am a strong advocate of cutting, grinding and mixing food. I have practised it for 20 years, and am satisfied that in that time it has been a saving to me of one-third of the fodder and grain that have been used. Now, if this is the truth of this matter, it must have a very important effect on the values of fodder, the coarse fodders, especially, of which the indigestible portions are greater than those of the finer fodders. Perhaps if "Kit" were to try some salt, or fresh, marsh hay by cutting it and mixing it with the usual ration of feed, he might find the pound of fat or of flesh that he has as yet never been able to lay his hand upon.

H. STEWART.

JOTTINGS.

HOW WILL POTATOES SELL?—"How are your potatoes turning out?" asked a friend, one of our best potato growers, a few days ago. I replied that we had not dug any yet except in the garden, and the yield there seemed fair. Our field crop came up badly from some cause and I have heard the same complaint from others. "It is pretty general!" said he "one of my neighbors had 10 acres, and they came up so badly that he went over the whole piece and replanted and thinks it paid him to do it. I am almost through digging, and find I have not more than half a crop; nor are they so large and smooth as last year. I think this is generally true in my section and I shall be surprised if you are an exception."

I was, of course, somewhat anxious to know whether my friend's surmises were to be realized in my own case, and two days' digging of our early planted seems to confirm his anticipation; the tubers are less in number and more knobby than last year, indicating that the rains induced a second growth. I still have hopes of a better yield from a piece planted June 1, as they made a fine growth of vines, and promised well. If this condition of things prevails to any great extent, prices ought to rule higher than last year.

What are the reports from RURAL readers elsewhere, notably in the great potato sections of the country?

WHAT KIND OF CORN—TALL-GROWING OR SHORT?—A neighbor has just called to show me some corn he is quite elated with. It is a twelve-rowed yellow flint, planted June 5; ripe September 1. The stalks are small, six feet high, the ears averaging 10 inches long and set about eighteen inches to two feet from the ground. Up to the Fourth of July he did not think it would amount to anything, the drought had pinched it so, and it was planted where nothing else would grow; but after the rains came he never saw anything grow so fast. The low setting of the ears renders it less liable to be blown down and the stalk is so small there is little waste in feeding, and it will bear planting closer than our large-stalk and tall-growing varieties, and I am not certain but the yield of grain will be as great. I am not satisfied with the corn I have grown for the past few years; the ears are large, it is true, and so are the stalks—10 feet high, with from four to six feet below the ears; of no use for fodder, though it might do for firewood, but will it pay to grow it for this purpose?

The premiums at our fairs generally go to the big ears and the tall stalks; but it is a question with me whether this is the best and most profitable kind to grow. Even conceding that the large stalks make no greater demand on the soil than the small ones, the yield of grain should be greater to compensate for the extra labor in handling them, and unless the grain increases in the same ratio with the stalks, where is the profit? If I were not such a small farmer, I should like to put in an acre each of eight or ten varieties alongside of each other under like conditions, for the purpose of experimenting on this one point. The reader will say, "Yes, and a mongrel lot of corn you'll have!" True, there would be a good deal of mixing, but that would not interfere materially with the object in view. It is just such experiments as these that would teach us something.

COMMERCIAL FERTILIZERS.—In a recent conversation with a friend on the effects observed from this season's experiments with fertilizers,

I asked if he had seen the analyses made by the N. J. Experiment Station, and published in the RURAL of August 28, and noticed the difference between the cost and estimated values there given. He replied that he had seen and read them, but did not recollect the feature referred to. Reaching for a RURAL, I called his attention to Bulletin No. 5, giving analyses of seven brands of bone, three of which cost more than their estimated value, the most notable of which, No. 31, costs over $16 per ton more than it is worth, while, on the other hand, No 43 is worth $14.25 more than it costs. How many superficial readers of the RURAL would reply as he did: "Well, now! I never understood this before and am glad I have learned something! I shall read these reports hereafter with increased interest." It is always unpleasant to be told we have "paid too dear for the whistle," and equally gratifying to learn that we get more than our money's worth; but it will be remembered that this is the scientific view and the query arises—Is it not possible for the market value of these ingredients to be higher than their actual worth for fertilizing purposes? You perceive that both of these samples are valuable chiefly for their phosphoric acid, as each contains less than one per cent. of nitrogen. It is a question with me whether some soils are as much benefited by phosphoric acid as by nitrogen, or whether those brands in which phosphoric acid largely predominates give as good results as they would if the amount of nitrogen was increased, or whether phosphoric acid alone is as beneficial as when combined with nitrogen, potash, etc., to a greater degree. I have used this latter brand, and, from first to last, a good deal of many others of like character on poor land, and I confess my faith has not been strengthened from the visible results, for I have failed to see the benefits which have been so apparent to my friends elsewhere. The question above all others that needs answering is—Does the use of commercial fertilizers pay? Will the actual and *positive facts* sustain an affirmative answer? If so "let's have 'em;" if not "let's have 'em" all the same. KIT.

Farm Economy.

Poor Cow Manure.

"COMMERCIALS are high; freight on them is higher, and then they are not sure, any way"—so said one of my neighbors the other evening at a little "farm chatter" we were having at my house. "You don't know how to apply them," said I, "and there's where all the trouble arises. Why, you don't even use stable manure, but wade through it knee-deep seven times a day, instead of hauling it out on to your land. Your grain crops are poor, your horses are poor, your cattle are poor, your grass land is poor, your cows are poor, and all your manure is poorer still. What's the use of buying fertilizers till you have put your land in good order with the means you have at home? Fertilizers have no effect on sand, gravel or stones, but strawy manure has. Now first make soil, then you will make crops, then cattle, then manure, then more soil, more crops, more cattle, and as you will make good cattle, you'll make good manure, and so on till the crack of doom—that is to say, daybreak on dooms-day morning, I suppose."

"Well, but I don't want to haul manure till then!" "No matter, somebody else will. You do your duty now or there will be no last man when day breaks. Poor cow manure is a mighty weak article and very slow in its effect on crops." S. R. M.

Reclaiming a Wet Flat.

IN the RURAL of September 4, I notice that A. M. of Bay City, Michigan, inquires about the merits of the mole plow. In Iowa it is worthless as a ditcher or drain-maker. We have a ditching machine here, however, which is worked by two yoke of oxen and cuts a ditch 30 inches deep, 24 inches at the top, and 10 inches at the bottom, making an open ditch, for 20 cents per rod. Instead of plowing his flat, wet land after getting the surface water off in the Spring, I would suggest to him to go over it with a heavy Scotch harrow, giving it a good hatcheling, sow on it Timothy seed and after it is up, turn in his cattle and keep it fed off close. Then sow Timothy and clover and let the cattle tread it. In seeding some wet land here in Iowa, I first burned the old grass off, and after it was free from surface water I sowed Timothy and clover and turned in my cattle and let them eat it and tread it in—I did not even harrow it. Anyone who never saw anything of the kind would hardly believe what progress can be made in reclaiming the land by seeding it in this way. Not only can a good stand of grass be obtained, but a better sod, if the old wild-grass sod is not turned up. This does well here, but perhaps it might not on the marshes of Michigan, but I am under the impression that it would prove satisfactory at least on some of them. J. B. B.

Quasqueton, Iowa.

Pomological.

ARTIFICIAL FRUITING OF TREES.

IN the RURAL of July 24th, W. I. Chamberlain gives an interesting account of Mr. Spaulding's experiments in inducing fruitfulness in trees that would be otherwise unfruitful, by girdling or disbarking. Mr. S. Parsons, in the issue of Aug. 28, gives another method, by incisions at or near the top of the branch to be made fruitful. Both methods as well as many others have been tried, and the best of them practised here for years; still the subject appears not to be generally understood among those who have practised it.

A tree or plant may be made more fruitful in three different ways:

1st. Extra food and cultivation will induce fruitfulness by supplying a surplus of alburnum, which changes what would otherwise be leaf buds into fruit buds. Everybody is supposed to understand this method and it needs no comment from me.

2d. When the vitality of a tree is injured, it will immediately make an effort to reproduce itself by seed. Of this method there are many minor forms or varlations. Thus, greenhouse men cramp the roots of their plants in small pots to produce an extra-large number of flowers; orchardists sometimes bore holes in the trunks of trees that are making a strong growth of wood but do not produce fruit; nails are driven into the trunks, and root-pruning by deep cultivation is also practised for the purpose of forcing trees to fruit; all of which will be successful if done at the proper time; but if continued too long or employed too freely, they will ultimately destroy the tree. When a tree or plant receives an injury shortly after the young shoots have commenced to grow, the growth will be stopped while there is still a quantity of crude and prepared sap in the body of the tree and branches. There is thus a surplus which will change leaf buds into fruit buds. An unusual example of this I saw some years ago:—Mice had girdled an apple tree in June, and, of course, gnawed all the new wood completely off. The growth was stopped, but the tree perfected its fruit, and was alive the following Spring, the fruit buds partially opened, but there was not a leaf bud to be seen. This tree must have received a limited quantity of sap through the body of the trunk—there was no bark whatever.

3d. This method is the principal one we have to deal with, and consists in a partial stoppage of the alburnum from being deposited as new wood, so that the surplus thus formed may be diverted to forming fruit buds. After the bulk of the crude sap has ascended into the leaves and been assimilated, or changed into alburnum, it is then distributed into the different parts of the tree, a portion to form new wood, a portion to support and mature the fruit, "if there should be any," and the remainder, "if any," to form new fruit buds. Now where all, or nearly all, this prepared sap is taken to form new wood, there will be no fruit, but if we by any means prevent a portion of this sap from being deposited as new wood, there will be a surplus which will force fruit buds into existence. These means must be used when, or shortly before, the greatest amount of alburnum is being deposited, and shortly before the proper time for fruit buds to form, or else we shall have nothing but a plentiful crop of suckers, latent leaf buds being rushed into shoots.

The minor forms or variations of this method, that are most successful and most generally used here, are binding a cord or wire tightly around the branch or trunk of the tree we wish to fruit; Mr. Spaulding's method of girdling, "but not disbarking," simply cutting through the bark around the tree or branch "sometimes more than once" just below the point you wish to be fruitful; and pruning and cutting back the young shoots. These will all answer the purpose, and where properly done will never injure the tree. One orchard, now eighty years old, after having been girdled or bound more or less for 30 years, shows no ill effects from the usage. No doubt some of the trees have died, but, if from this usage, their case was something like that of the poor colored woman down South, who died from smoking, at the age of 106.

Yesterday I examined a peculiar phase of artificial fruiting: a Bartlett pear, in the orchard of Mr. W. Carmichael, had been pruned when the young shoots had made a few inches of growth. Very hot weather had then set in for some days; the pruning had stopped the growth of the shoots; the excessive heat had forced the latent buds not only into fruit buds but into blossoms, and there are now two crops of fruit on the single tree—pears nearly ripe and half grown.

Disbarking will not injure a tree if done just as the greatest amount of alburnum is being deposited, unless this new wood is scraped, or dried by excessive heat. I have seen three trees completely disbarked. The first was in the orchard of Mr. John Ferguson, and was a scabby, gnarly tree that had never made any growth. The bark was carefully taken off, from the roots to the small branches; in a couple of hours it was covered by a sap-like froth, and by the next morning this had become more firm. In three days I saw it again, and the new bark was quite firm. Next year it had a crop of apples, and made a good growth, and is now as healthy a tree as any in the orchard. The next tree was one that grew in a fence corner, and was disbarked by using a spade. It also lived, but wherever the spade touched there was a dead spot. The third was disbarked in the morning of a very hot day. No bark formed, and it dried up, but the branches lived for some time.

Where incisions are made in the bark they should be made immediately *below* the part we wish to fruit, as it is the prepared sap we wish to divert, not the crude. I think Mr. Parsons is mistaken in claiming his method as the most logical and scientific, as the girdling is certainly the most successful. If the idea in his method is to divert the crude sap from forming wood, it is a mistake, as it will simply go into other branches or push latent leaf buds into young shoots or suckers. If the idea is to prevent the alburnum from ascending to the young shoots, then all will have to be served alike, which would be a great deal of trouble, and even then would sometimes fail to produce the desired effect, but the young branches above the incisions would fruit.

I have not tried fruiting grape-vines or anything that fruits on the new wood, but some of my neighbors say that it can be done in the same way as apples or pears. In conclusion, I would like to hear through the RURAL from some more of its contributors on this subject, and if I am wrong, I should like to be put right.

Ont., Canada. THOMAS FORFAR.

THE MINER PLUM IN VERMONT.

THIS variety of plum referred to by Mr. Prince of North Carolina, in RURAL of July 31, page 488, is one of the few sorts that are entirely hardy in Northern Vermont. My tree is double the size of Mr. Prince's, and has bloomed full three years in succession, only to have the fruit cut off by late frosts. A few specimens have remained on the tree, but I cannot say they have ripened. Though well colored, they are not soft enough to eat late in October. They are, however, excellent for cooking. We have many garden varieties of our native red Canada plum, that are much larger than the Miner, and some which are better for eating than that is described as being. As these red plums in their wild state are far better than the original of the European plum (the Sloe), and as they show in the garden great susceptibility of improvement, besides being iron-clad against Winter's cold, I have great hopes that we may get something from them soon that will equal the better class of plums from imported stock. The curculio hurts this family of plums far less than the common cultivated sorts. We rarely fail of good crops in favorable years.

T. H. H., M. D.

The Waterloo Peach Again.

I am in receipt of a letter from Charles Downing, in which he denies having written any commendation of the Waterloo Peach. (See issue of Aug. 28th.) I penned the article with the impression—which I still have—that I had seen somewhere the statement that some one had sent specimens to Mr. D., upon which he had bestowed a measure of commendation. My recollection of having seen this is quite vivid, but I am unable to recall the exact circumstances, and inasmuch as this may have appeared without the approval or even assent of Mr. Downing, I take occasion to recall what I said in the article in question, so far as Mr. Downing is concerned. T. T. LYON.

Industrial Societies.

THE NORTHERN OHIO FAIR.

(Rural Special Report.)

THIS large, and in many respects excellent, fair is a private enterprise, managed by a stock company and board of directors. It has so happened for several years that the weather has been anything but *fair* during the days on which this fair has been held. It has rained a part or all of the time. One of the directors told the writer he had a bet of two to one that it would rain every day of the fair this year. He lost his bet—as he hoped to do. The fair was a success.

The grounds of the Association are splendid—the finest but one or two in the country. They are well located within the city limits of Cleveland, and reached by the Lake Shore Railroad, which runs its freight for the fair right into the grounds, and its passenger trains right alongside. The writer attended both the State fair at Columbus, and this at Cleveland, and desires to make no comparisons that are untruthful or invidious to either. The former seemed more clearly agricultural. The show of live stock and agricultural machinery was probably in the aggregate three times as large. The show in both these departments was immense at Columbus, and thoroughly creditable at Cleveland. There were acres of machinery and implements at Columbus, and a really good show at Cleveland. At Columbus there were about 30 portable and traction engines competing and running machinery, and six or eight at Cleveland. There were five or six machines making tiles on the grounds at the former place, and one or two at the latter.

But in its *city* aspects the Northern Ohio fair was far ahead. Cleveland is a much larger city and her merchants, and manufacturers, and florists, and gardeners, and artists, and musicians, and *citizens* take great interest in the fair. The schools close and the children go, and it does them good. The stores and shops close (many of them), and the clerks and employés and proprietors go, and it does *them* good. The grounds are finer, as I have said, and the speed-ring is far better—indeed one of the best in the land. The racing is better, too, and is made a far more prominent feature. The "trotting park" is separated from the fair grounds proper by St. Clair Street, but connected by a bridge. The "Pumpkin Show" is on one side and the races on the other, and the sober-minded needn't cross the bridge. But they *usually do*. They go to show their children the evils of racing! And they can see the whole show. Pools are sold before the races and between the heats at a club house close at hand, and on the grounds in front of the judges' stand. The races are regular races and don't pretend to have a specially agricultural or Presbyterian leaning.

But, on the whole, the fair is good agriculturally, and there is room for it and for the "tri-State," at Toledo, and the "Southern Ohio," at Dayton. They do not serve to injure the regular State fair at Columbus. They are beyond its "suction range," as Holmes calls it, and have constituencies of their own, and the result of their existence will probably be to locate the State fair permanently at Columbus, at least if it receives proper local and railway encouragement there. For there is no real necessity for it to rotate or migrate, with a good and large fair in every corner of the State. There is room for them all. Agriculture cannot have too much stimulus and encouragement. The State Board, too, that has charge of the State fair, has other work, and is just inaugurating a system of Farmers' Institutes for the Winter, and monthly crop and stock reports for the Summer, that will take much time and labor. They will therefore doubtless be glad of the help of independent societies in the exhibition work. OCULUS.

THE INTERNATIONAL SHEEP EXHIBITION.

(Rural Special Report.)

THE erewhile "gorgeous palaces" of the Centennial Exhibition were last week made to serve in a somewhat incongruous association. One who remembers the main building, then grand in its brilliant coloring of new paint, with its crowded aisles and its infinite display of attractive articles, but now dingy with dust, neglected and deserted, can scarcely help the wish that all that magnificence had disappeared as swiftly as it arose, as a passing fairy creation, leaving its brilliance fixed upon the mind as a pleasant memory, rather than to see it once more in its present condition of decay and helplessness. The sheep exhibition, although a decidedly useful thing, did not seem in place there, and the shrill bleat of the diminutive Merino mixed with the sonorous bass of the huge Cotswolds and Oxford-Downs, by no means mingled harmoniously with the rattle of a grand piano at a near-by music stall, and the pealing of the large organ in the distance. So the rough wooden pens of the sheep, the odor of trampled cabbages, and the long-drawn-out arrangement of the exhibition stalls around two sides and one end of the vast building, dwarfed into very inconsiderable proportions what would have made a creditable display elsewhere. "To what base uses may we not return?"—But, not to criticise a good thing too closely, "let us return to our muttons."

This exhibition was intended to be international; but the international part was absent; unless an enterprise belonging to several of the Sovereign States may be held in a sense to be international; or it may be the new arrivals from a foreign country shown by an enterprising importer may furnish an excuse for admitting that it was truly international. But it is a beginning, and as such was a good one. The energetic and capable Agricultural Commissioner, General Le Duc, has been a moving spirit in this enterprise, and to him the duty of opening the entertainment was entrusted. The Commissioner has the true idea of the importance of this interest to a nation which uses 250,000,000 pounds of wool, and possesses unexcelled facilities for producing twice this quantity, and yet imports one-fifth of it, thus

failing to supply its own wants. In his opening speech he remarked:

"Our country is capable of growing any and every grade of wool that may be called for in the manufacture of any and all fabrics, and in such quantity and so cheaply that, instead of importing, we should have such quality, surplusage and price as to command the markets of the world. I have seen recently hundreds and thousands, yes, hundreds of thousands of acres of land in the hilly and mountainous regions of Virginia, North and South Carolina and Colorado that are admirably adapted to the raising of sheep, and where the "tread of the sheep would be golden" to the wretchedly poor farmers, who barely live by the cultivation of the worn-out hillsides of a country whose healthy and temperate climate, fine water and bright skies should attract immigration and capital to engage in the production of wool and mutton. If, as I hope, one of the results of this Convention will be to increase largely the breeding of sheep in these regions, I will feel richly compensated for any work or assistance I may have rendered to the gentlemen who have projected and executed this plan of an international sheep exhibition."

The sheep exhibited were of remarkable excellence, consisting chiefly of the three most valuable varieties for our uses: viz, the American Merino, the South-Down and the Cotswold. There were Hampshire-Downs, Oxford-Downs, Shropshires and Lincolns in lesser numbers, but in no way of less excellence. With two exceptions the lots exhibited were native-bred, and proved beyond a doubt that America may be made a "sheep's paradise" if the shepherds only do their part well. It goes without saying that the Merinos were all that could be wished, for to see a poor or ill-conditioned Merino at an American exhibition is the rarest sight. This sheep is modest and homely, but it bears a true golden fleece, and the beauty of its wool, when the dark and unattractive surface of the fleece is carefully spread apart, never fails to delight even the non-professional beholder. A good flock of these sheep was shown by Mr. Hammond (a historic name), of Middlebury Vt, who took a pardonable pride in explaining to every inquirer the nature of the prominent wrinkles upon his excellent rams, and the fineness and curl of the wool. This sheep, being cosmopolitan, it was not surprising to find flocks from Illinois and Missouri and the Northwest, as well as from Pennsylvania, New York and Vermont.

The South-Downs were represented best by a remarkably good flock, sent by Samuel J. Sharpless, of Philadelphia, and another owned by R. M. Fisher, of Danville, Ky. Mr. Sharpless's South-Downs were in excellent health and hardy, and had evidently come direct from his pasture. Of his large flock not one specimen could be objected to as undeserving of the honor of competing with the best. Mr. Fisher's flock showed how well this noble sheep can match the no less noble Blue-Grass fields of Kentucky. They were heavy, broad-loined, smooth-built sheep, with a fleece and make-up that required no odds in comparison with the new arrivals from Lord Walsingham's flock, shown by Mr. Cooper, of Pennsylvania. These imported sheep always carry to me the idea that they were last seen in a barber's shop, and under the shears and manipulation of the "tousorial artist"—an appearance which they soon lose after their introduction to our more rough-and-ready management. As a sample of what the South-Downs can do under trying circumstances, a flock which had been sent to the Philadelphia House of Correction, was brought from that institution and looked well, notwithstanding the association.

A flock of Cotswolds from Illinois was shown by Mr. Abner Strawn of that State. These were magnificient sheep in no way gotten up for show, but in working order, and were no new importations, thus showing that this sheep does not, or need not, go back upon us in our climate. A fine ram with good, blotched face and legs and a fleece 11 inches in length, turned the scale at 340 pounds, and good feeding might easily add 50, if not 100 lbs. more to his weight. It was a matter for regret that some other fine flocks of American-bred Cotswolds were not present to compete with Mr. Strawn. A few Hampshire-Downs and Shropshires were shown by Mr. W. Homeward, of Newark, Del. These were fine specimens of these sheep, which are desirable for those whose business is to supply the markets with early lambs. The recent importations of Oxford-Downs by Mr. T. S. Cooper, of Pennsylvania, showed mostly what could be done by English breeders with these sheep. This was the international feature of the exhibition, or at least all that could be seen of it unless a *sheep baiting*, as it might be called in point of fact, outside, with some dogs called sheep dogs, were to be considered as the foreign element. These imported sheep were monstrosities of fat and feeding, and a mild protest might be gently given against the mistake of importing such sheep merely to take premiums at shows. Why should it not be possible that premiums could be competed for only by native-born sheep? And why should an importer and dealer in sheep or live stock be rewarded for the possession only by purchase, of sheep fatted for exhibition in another country, where it is well known that the course of feeding is destructive of the only value for which these animals are supposed to be brought hither. To be enormously fat is no merit in a sheep; not even for the butcher; it may be for the oleomargarine dairymen; but for no earthly use besides, unless for the soap boiler or candle maker, and these people as yet have not got so far as to offer prizes for fat.

In a ring, outside, the visitors were offered a novel entertainment, which in future would certainly be more honored in the breach than the observance. It was supposed to be a trial of sheep dogs and had as much similarity to the genuine article as the chasing of the wild, untamed Texan steer in the streets of New York City has to a real Spanish bull fight. Five sheep were let out of a pen along with a dog, with the expectation that the dog should drive the sheep around a ring like a half-mile track, and into another pen near the starting point. The trial was a failure. The sheep were not the kind to be driven, and the dogs not the kind to drive. The result was ludicrous, and in a circus ring would kill the clown with jealousy. One dog, after scattering his sheep scared one out of the inclosure through a window into the exhibition building, where the poor animal (the sheep) went, consistently enough, into the Secretary's office for protection, and to have its wrongs righted. Another dog, after chasing the sheep back and forth, lay down; and one sheep, evincing the greatest sagacity, spied the open pen and walked into it of its own accord. The truth is, we don't want shepherds' dogs yet in America, excepting on the plains to guard against wolves and to bring in stragglers; and there we have dogs to the business and the manner born. This international feature of sheep-dog trials we can dispense with in future, or at least, until we possess those kinds of sheep that need dogs to drive them, as the half-wild mountain sheep, fleet as deer, that carry little weight of fleece to hamper them in a race with a dog over brush and rocks, and through briars and heather where a man could not follow. The dog truly has his place among sheep; but at this exhibition he was as much out of place as those curs which do more to prevent sheep-keeping than all other obstacles combined. A genuine sheep dog trial would be an interesting exhibition; but it wants, for success, a well trained dog, a capable shepherd, and sheep that have learned to know the dog as a companion and not as an enemy to be feared; lastly, it needs the right thing in the right place. SHEP.

Arboricultural.

TREE PROTECTION.

S. B. PECK.

THAT trees are a protection is beyond dispute. They protect from the cold of Winter and the heat of Summer; and cold, hot, inhospitable and songless of birds is a country without them. They bear seeds, fruits and nuts for the birds and squirrels that delight us with their music and their gambols, as well as delicious fruits for the pleasure and health of man. "Woodman, spare that tree" is the sentiment of every lover of nature.

But the manner in which they protect us is not always well understood. It is often supposed that they protect vegetation in the same manner in which they protect us and our animals; but this is not so. Winds cool our bodies, but they are not necessarily cold in themselves, and whether they sink or raise the mercury in the thermometer depends on whether they come from a colder or warmer region than that surrounding the instrument.

Every live animal is a constant generator of heat, always giving it off to the surrounding air; winds dispel this heat and thus cool the air around us. Trees and other vegetation, though they have the effect to shut off this wind, yet do not, like animals, generate heat, but in Summer absorb heat in sunshine by the constant evaporation of water through their leaves, and also by shutting off the scorching rays of the sun from the shaded space around them.

Trees, valuable as they are for protection, do not protect our plants from frost except in a vertical line under them; on the contrary, they, as well as everything else that obstructs the free circulation of air, favor frost.

Every farmer of any experience knows, whether he is able to explain it or not, that inclosed valleys are always more subject to untimely frosts than level plains, and *they* more so than side-hills, the latter often being uninjured when in all other aspects tender vegetation is killed. He is slow to learn, however, that any protection against wind has in a measure the effect to produce this dreaded enemy to horticulture, most especially to the raising of fruit. Time and space forbid a full explanation here of the cause and effect of frost; suffice it for the present for me to say, that always, except in extreme cases, killing frosts occur only on still nights, or rather on early mornings, and that anything that disturbs this atmospheric calm tends to prevent frost. Sloping aspects produce currents of air, by the fact that the atmosphere, as it cools after sundown, becomes heavier, and thus, like water, seeks the lowest ground, and crowds the air of the valley up the slopes. During sunshine the earth is heated up rapidly by the rays of the Day God, but as soon as he disappears this accumulated heat passes directly upwards, but any shade, like fogs, clouds or smoke, prevents this upward flow of heat and thus hinders frost, while winds or currents of air have the same effect by *disturbing* this upward flow.

If I have made myself understood by this brief attempt at explanation, and have thus taught some one the value of a due selection of aspects for all frost-fearing fruits and tender vegetables, my object will have been accomplished. That this part of the science of horticulture is partially ignored by the average country farmer, as well as by many pomologists, I have daily evidence, both by observation and by reading the printed remarks of many on this subject of tree protection. I would by no means discourage the leaving or the planting of trees for protection or ornament, but the right selection of the place in which to plant them or our fruits requires deliberate consideration.

Those who have access to the annual reports of the Michigan State Pomological Society will see the effect of tree protection as there reported in the reports for 1874, page 133, and for 1877, page 302. In both cases peach orchards were evidently destroyed by protection.

Muskegan Co., Mich.

The Apiarian.

BEES.

ANYONE in the country, however limited his space, can keep bees at a considerable profit, for it must be recollected that they have the whole region round them to roam in and freely forage for honey, no matter to whom the land belongs. Thus those who possess the fewest acres are just as well off for bee pasturage, as those who possess the most.

Think of the hundreds of fruit trees within a circuit of a few miles around nearly everyone's habitation, whose numerous early Spring blossoms invite all the bees of the neighborhood to come and sip their nectar freely and without price. Then, there are thousands of wild flowers; and, soon following, millions of white and red clover heads; the blossoms of grain, of peas, of beans, and other things during the Summer, which the eye of man does not note, but the acuter one of the bee does.

Then in Autumn there are fields of buckwheat, and wild flowers still linger in abundance. What treasures all these combined are for this highly intelligent and ceaselessly laboring little insect to draw from for the gratification and sustenance of man, the sweet treasures of all of which, except for these busy little creatures would go to waste.

As soon as cold weather has set in, hives can be safely removed to any reasonable distance. Let every one who is now destitute, possess one, at least of these, and as many more as can be well attended to. Women are just as capable as men to manage bees, or even more so, as they have a gentler hand, more patient disposition, and, we may add, a better tact for the pursuit of this light and pleasant home industry.

If instruction is wanted in the management of bees, plenty of cheap books on bee-raising are published, and the RURAL during the year has frequent articles on the subject, and is always ready to answer all inquiries with regard to this pleasant business.

Miscellaneous.

GLEANINGS.

Encourage the Use of Cheese.

IT is a duty every public writer, or speaker, and the press generally owe to the agricultural interests and citizens of the country, to urge upon the public an increased consumption of cheese. Our facilities for dairying in the great northern belt of the grass States, in the elevated and rolling regions of the middle belt of States, and in the mountainous sections of the far West, the South and the Pacific Slope, are practically inexhaustible. Dairying is like an engine that furnishes motive power to itself—it is capable of building up the lands which support it. It is a branch of farm industry that will not only give us immense quantities of cheese, a food hardly second to any in its cheapness, excellence and economic value; but indirectly it will give us immense additions of veal, pork, butter and beef. If the home consumption of cheese can be so stimulated as to keep a constantly increasing demand for it so as to keep dairying constantly and rapidly expanding over those wide areas so well designed for it, keeping pace with our rapidly growing population, it will indeed be a national blessing, and an object well worth laboring for by those who would form, guide and direct public opinion, taste, habits and modes of living. There is no article of equal value as food whose consumption needs to be more encouraged, or which would do so much real good.

The Lesson of the Year

agriculturally from the deep, sharp long-continued drought, is deep, thorough, frequent cultivation. A rich, friable oft-stirred soil will stand the drought much better than one of opposite characteristics. The lesson of a wet season is the benefit and necessity of drainage. There seems to be a happy mixture, kind, and condition of soil that is neither too wet nor too dry; that sustains itself amid wet or dry influences of the seasons, and, properly handled, always liberally responds to the demands made upon it, and gives good crops without much regard to wet or drought. But we have great quantities of soil not of this happy consistency and component make-up, that can and ought to be mechanically and artificially improved by draining, impacting, admixture or fertilization. This is a gradual work, and one the farmer must do by regular siege approaches rather than by a single dash or charge. It must be the outcome and crowning work of years, a little here, a little there, by good calculation and economic plans slowly, persistently surely carried out. This will be for true and lasting agricultural progress.

A Criterion of Agricultural Skill.

About as good an index as one can have by which to judge of the State of agriculture in a town, section, country or State, and especially of any farmer, is the success, extent and quality of the wheat crop produced. It requires, except on virgin soils of great richness and full of the elements of plant growth, skill, judgment and good management to raise good crops of good wheat. Those farmers, as a rule, in our older sections are the most prosperous who plant, cultivate and produce the most wheat and corn. I am not talking of dairy, trucking or fruit sections or farmers, but more particularly of the great mixed farming sections of our country. Wheat is a plant of delicate tastes, peculiar in its likes and dislikes, and one that will not bear neglect in any respect. It must, more than most plants, have its likes administered to and its enemies and adverse conditions beaten off, to do well. Wherever good wheat can be produced, the highest type of farming will be found necessary to, and employed in its culture. The flour made from it will be the material most used in making the bread of that community. The more advanced in civilization a people become the better they live, the more flour, sugar, meat, and improved vegetables they will use; the better their stock and domestic animals will be fed and cared for, and the more all will enjoy life.

The Percheron Horse

stands among the first of the business breeds of horses. He has been bred for business for so long a time that his characteristics have become firmly fixed and are sure of successful transmission. He has become a thoroughbred in the fullest sense of the term and as a thoroughbred business horse has attracted, and is now attracting, the attention of all civilized nations, and especially of the United States. While the undue encouragement given by Agricultural Societies and public attention to trotters and speed horses, has directed the aims of the farmers and horse breeders to a wrong standard and in a wrong direction, we see many signs of reaction and of a return to the breeding of more generally useful and intrinsically valuable draft, farm, truck and business horses. The Percheron horse is called in to aid in this reform, and is sure to leave much of his mark for good in wide circles from the points where the best specimens are kept for breeding purposes. J. W. LANG.

REMDY FOR WARTS.—W. B. R., Medina, N. Y., says that a simple remedy for warts on animals is the application of muriatic acid. Small warts can be be safely cut from a cow's udder, and killed by a drop of muriatic acid applied with the point of a small stick. He has also removed flat warts the size of a 25c. piece from the inside of a horse's leg by carefully scraping off the top and applying muriatic acid in the same way.

BRIEFLETS.

THE White Elephant Potato ripens a few days after the Late Snow-flake. The latter is quite uniform in size, smooth, beautiful. But the W. E. will yield three times as much and, though not distinguished for beauty, is just as good in quality. . . . . Mr. Ricketts brought to the RURAL Office last week eight or ten bunches of his seedling grapes. Nobody supposes that his many kinds will do well everywhere. But it begins to appear that those

thus far offered for sale, will thrive in *some* places. Well, if there is but one chance in 20 that such beauties as Lady Washington or Excelsior or Jefferson would do well—we should take the risk. We are having several of the kinds left by Mr. Ricketts engraved for our readers. . . . . Dr. Bailey, of Winning Farm, does not reply to our charges against him. . . . . We are sowing over 50 varieties of wheat. . . . . Chester County Mammoth Corn is well named. We pulled one ear a few days since that measured 13½ inches in length, with 20 rows and 60 kernels in a row—making 1,200 kernels. No doubt there are larger ears than this in the field. It requires about the same length of season as Blount's. Both are now (Sept. 18) nearly ready to cut. . . . . We have bushels of cow-peas. What better proof is needed that they will ripen in this climate? . . . . . The cost of the plain paper alone upon which the Fair Number of the RURAL NEW-YORKER is printed will be, when completed, $3,300, in round numbers. . . . . But the compliments the Fair Number has thus far received are worth to us more than tongue can tell! . . . . . Honest words of praise are ever gratefully received. But we hope our friends will criticise the RURAL with entire freedom. How can we hope to improve it if they do not tell us wherein we could please them better? . . . . The pear Louise Bonne de Jersey is now in the fruit markets in large quantities. This is a showy pear with its red bronze cheek. But often there is an astringency about it and a thickness of skin that are not agreeable. This is one of the kinds that do well on the quince. . .

CATALOGUES, ETC., RECEIVED.

JOHN SAUL, Washington D. C., Descriptive catalogue of Dutch and other bulbous flower roots. Hyacinths, Tulips, Narcissus, Crown Imperials, Irises, Crocuses, Snow-drops, Anemones, Ranunculus, Scillas and Lilies.

BARR & SUGDEN, 12 and 13 King St., Covent Garden, London, W. C., England. One of the most complete catalogues of Spring bulbs published.

"How to Keep Boys on the Farm," by Geo. D. Hunt, Salem, Ohio, a little book of 48 pages. Price 20 cents.

GEO. S. WALES, Rochester N. Y., Catalogue of all small fruits—shrubs, vines, roses. Sent gratis.

NEW JERSEY AGRICULTURAL EXPERIMENT STATION.

VIII.

THE following samples of fertilizers are from the stock intended for this year's use. They have been sent in by farmers and dealers, and are now, September 4, just completed:

BONE MANURES AND PHOSPHATES.	52.	56.	57.	60.	61.	64.	67.
Nitrogen in organic matter.....		2.80	2.36	2.15	.75		5.30
Phosphoric acid, reverted.....	4.91	.83	....	....	....	8.43	....
" insoluble.....	14.43	2.24	....	....	....	3.88	....
" total.....	....	1.28	16.70	27.46	....	13.86	....
Potash.....	....	....	....	....	20.38	....	....
Estimated value.....	$23.27	8.87	28.64	29.56	45.05	36.18	....
Cost in market.....	$23.00	14.00	33.00	35.00	45.00	45.00	45.00

52. Orchilla Guano. From Summerill & Hires, South Penns Grove, Salem County. In very good condition.

56. Rotten Bone. Manufactured by G. W. Baker, Williamsburg, L. I. From stock of Azariah Dunham, Metuchen.

57. Corena Settlings. Made by Geo. W. Baker, Williamsburg, L. I. Sampled and sent by Azariah Dunham, Metuchen.

60. Raw Bone. Manufactured by Thompson & Edwards, Chicago, Ill. Sent by J. W. Pancoast, Sharpstown, Salem County. In good condition.

61. Pure Fine Ground Bone. Manufactured by Thompson & Edwards, Chicago, Ill. Sampled and sent by J. W. Pancoast, Sharpstown, Salem County.

64. Atkinson & Pettit's Phosphate of Potash, Philadelphia. Sampled and sent by Wyatt W. Miller, Salem. N. J. In good condition; like fine ashes.

67. Pure Bone Phosphate. Manufactured by J. S. Yarnell, Medla, Pa. Sampled and sent by I. W. Nicholson, Camden.

SUPER-PHOSPHATES.	53.	58.	59.	63.	65.	66.
Nitrogen in organic matter.....	3.20	.95	1.32	1.49	1.11	2.05
" as ammonia.....	....	....	....	.57	3.17	....
Phosphoric acid, soluble.....	2.60	....	.42	....	3.03	6.87
" reverted.....	3.69	2.40	3.48	.71	2.46	2.08
" insoluble.....	6.55	11.07	11.33	.70	5.90	4.34
" total.....	....	....	....	....	....	....
Potash.....	4.25	....	....	....	3.34	1.40
Estimated value.....	$40.21	23.62	28.45	10.79	46.14	36.46
Cost in market.....	35.00	35.00	36.00	17.00	48.00	38.00

53. Swift-sure Fertilizer. Manufactured by M. L. Shoemaker & Co., Philadelphia, and sold by Enoch Dudley, Moorestown. Sampled and sent by Joshua R. Evans, of Hartford, Burlington County.

58. Dissolved Bone Meal. Manufactured by Thompson & Edwards, Chicago, Ill. Sampled and sent by J. W. Pancoast, Sharpstown, Salem County.

59. Ammoniated Bone Superphosphate. Manufactured by Thompson & Edwards, Chicago, Ill. Sampled and sent by J. W. Pancoast, Sharpstown, Salem County.

63. Ammoniated Phosphate. Manufactured by G. W. Baker, Williamsburg, L. I. Sampled by Azariah Dunham, Metuchen.

65. Lobos Peruvian Guano, from stock of S. A. Willetts, Haddonfield. Sent by I. W. Nicholson, Camden.

66. Raw Bone Phosphate (Plow Brand). Manufactured by Walton, Whann & Co., Wilmington, Delaware. Sent by I. W. Nicholson, Camden. GEO. H. COOK, Director.

New Brunswick, Sept. 6, 1880.

Everywhere.

RURAL SPECIAL REPORTS.

ALA., Sand Spring, Limestone Co., Sept. 13.—In the RURAL Fair Number I see W. H. Watkins, N. Y. asks, in Querists' Department, "What State in the South is best adapted to sheep husbandry, and what part of that State?" I would like to say, through the RURAL, to W. H., or any of its numerous readers, that Northern Alabama is a good place for sheep husbandry, and anyone wishing to go into that business would do well to come and see this part of Alabama. In this township, the northeastern corner of Limestone Co., there are no high hills or swamps; the land is rolling, with plenty of fall to carry off surface water, while there are good soft-water springs and brooks. The timber is principally oak, but there are chestnut, poplar, hickory, beech, black and sweet gum, dogwood, and persimmon, and a large growth of wild grass all over the country where not cultivated, on which stock of all kinds feed and get fat in Summer. I have seen sheep live all Winter here in the woods without any food whatever except this grass and what they could browse from low bushes; but, of course, it was a poor living. The country is new in point of improvements, though there are some settlements 75 years old in the vicinity. Within the past two years over 20 Northern families have settled in this township, and there is not a negro living in the place. The west line of the township is five miles east of the Louisville Nashville, and Great Southern Railroad, and the North line joins Tennessee.

I came from Northern Indiana here two years ago last Spring, and have had better health here than there. Improved land sells at from $2 to $10 per acre, and there is considerable goverenment land at $1.25 per acre, or it can be taken up under the homestead law. The wheat in this and adjacent counties was a failure this year on account of the rust, but the cotton, corn, sweet potatoes, and cow-peas are good. Apples, peaches, pears, plums and grapes do well here when properly attended; but they have been very much neglected since the war. Clover, Timothy, Red Top and Blue Grass do well. Wheat sells at $1; corn, 35c.; sweet potatoes, 50c.; cow-peas, 75c., cotton, 9½c.; butter, 15c.; eggs, 10c.

WARREN MASON.

CANADA, Belmont, N. S., Sept. 10.—Hay crop better than last year; wheat, not so good—weevil-eaten; oats, fair to good; barley, an average; buckwheat, ditto; potatoes, very good, no bugs or blight. Roots of all kinds are suffering from drought; we have had no rain for three weeks. The Golden Mangold keeps ahead of all others. Pearl Millet and cow-peas are no good for this place. L. D.

DAKOTA, Herman, Lake Co., Sept. 11.—The prairie here is very rolling, with many natural meadows, but no wet depressions. There are several pretty lakes, all supplied with fish. Antelopes feed along the streams. Wheat was a splendid crop; but oats were a complete failure hereabouts, owing to rust. Corn is poor; but potatoes are fine. The country is too newly settled yet for fruit, as most of the settlers have come here within the last two years. S. S. S.

FLORIDA, Starke, Bradford Co., Sept. 13.—The storm mentioned in my last proved much worse in the counties south of us and on the Gulf Coast than here. In this county the loss on cotton is estimated at 25 per cent. In Leon county to the west of us there will be a loss of 600 bales. They raise a short staple in all the southerly counties and the loss there must be very heavy. In Orange, Volusia, Sumpter and Brevard counties, the loss on the orange crop is fully 50 per cent., the heavy wind having blown the fruit against the long thorns with which the trees are covered, and injured them so that they will drop off before they are ripe. The weather is now very warm with frequent showers. I. S.

ILL., Champaign, Champaign Co., Sept., 10.—Heavy rains on the night of 1st, and rains equally heavy with a great deal of thunder, lightning and wind, on the afternoon of the 3rd, have put an end to the drought, and put the soil to soak in fully six inches of precipitation. Preparation for Fall wheat seeding will now go on with a rush, and pastures and meadows will resume their wonted color. B. F. J.

IOWA, Davenport, Sept. 12.—Business is very lively here, although late rains have made the roads very muddy, so farmers have not brought in their produce as lively as they would have done had the roads been in not so bad a condition. We have had a bountiful harvest, however, and the country is full of grain, and that of a good quality. Corn looks splendid, and bids fair to be the finest crop ever raised in this country. The following are about the ruling prices:—Wheat firm, with an average demand; No. 2 Spring, 85@90c.; barley, 55@66c.; oats in demand at 27@28c.; corn in demand at 32@35c.; flour, from $5.60 to 8.10; butter, 20c.; eggs, 10c.; onions, 65@70c.; potatoes, 30@45c.; apples, 50c.; grapes—the market is overstocked at 2@3c. per lb. G. W. S.

KAN., Everett, Woodson Co., Sept., 11.—We have been having quite heavy rains of late and the ground is in fine condition for sowing Winter wheat and there has been a considerable area sown already, and other farmers are busy getting ready to sow. Nearly all of the corn in this vicinity has been cut for fodder. It did not ear well on account of the dry weather. Fruit is plentiful and cheap. Apples are selling at 40c. and 50c. per bushel. Potatoes are good but not a heavy yield. J. J. D.

MICH., Lichfield, Hillsdale Co., Sept. 13.—Well, the Blount corn is not all dead yet. I had two patches planted, the first on April 21, the other on May 6. All is ripe and cut, and some husked out. I cut two stalks, with four ears on each, which weighed 11 pounds, measured 13 feet—six feet 10 inches to the top of the lower ear, and nine feet 11 inches to the top of the upper ear. All were sound; but I find it was planted too thick to do well. I think we have to learn how to plant and cultivate this corn in order to be successful and raise a good crop. I also had two different kinds of white Ohio Dent, two kinds of yellow Dent, and two kinds of speckled Dent. One of these I got up by mixing three different kinds of corn together. It is a great improvement on all. I also had six different kinds of Flint or eight-rowed, called Smut-nose, Large White Flint, Yellow Eight-rowed, Large Red Blaze, and the Improved King Philip. The kinds best adapted to this country are the White Ohio, Yellow and Speckled Dent, and all the flinty or eight-rowed sorts. The cow-peas are getting ripe. I find three different kinds, one a light brown, one a speckled, and one a jet black—a very nice bean. We have had a season very favorable to the growth of crops. Wheat was a fair crop. Corn is coming out well. Potatoes are good. Apples are plentiful, so that they are selling for from 25 to 50 cents a barrel. Pasture is abundant at this time. G. K.

MISSOURI, Carthage, Jasper Co., Sept. 19.—This has been one of the most propitious seasons for the farmers ever known in this section of Missouri. Our wheat crop was very large, averaging from 10 to 30 bushels per acre. Corn is nearly always good and this year it is better than the average. Potatoes have done remarkably well, while oats have been rather above the average. The drought which prevailed in Kansas did not extend to Missouri. We are now suffering with a cattle plague which is making sad havoc among our herds. The writer has lost 32 head out of a herd of 100, while others have lost a greater percentage, some losing four-fifths of their number. One dealer has purchased 4,000 hides since June 1st. Some think it is Texas fever while others call it murrain. As soon as taken, cattle begin to droop their heads and ears, stop eating, have some fever, leave the herd and try to be alone. Their water becomes of a dark color and frequently their stomachs become perfectly dry. Milch cows dry up immediately after being taken, and nothing seems to cure them if severely affected. W. H. P.

MINN., Howard Lake, Wright Co., Sept. 11.—We have had very good crops, in general, of cereals, fruits and vegetables of all sorts raised so far north. There has been a little diminution in the yield of No. 1 wheat owing to long-continued rains while a good deal of the wheat was left in the shocks awaiting to be thrashed, in order to avoid the labor of stacking. This shocked wheat sprouted sufficiently to reduce its grade from No. 1 to No. 2. There was scarcely any No. 3, however. Some was not injured at all, and all of it was better than was expected. Within a few miles of this place a hail storm toward the end of August did much damage to the crop, some having lost all their wheat, owing to its being completely riddled by hailstones as large as an egg. The storm did not extend as far South as this place fortunately. Wheat is worth here 70c per bushel; corn, 50c; beef steak, 8 to 10c. Wild plums are abundant and delicious. Wild cranberries and grapes are now ripe and abundant. S. A. M.

NEW JERSEY, Tom's River, Ocean Co., Sept. 12.—The cranberry crop is unusually early. Picking began here on Sept. 5. There have been less scald, insects, and other causes of injury than usual. The average crop will be pretty fair. A. W. A.

N. Y., Syracuse, Onondaga Co., Sept. 17.—The last six weeks have been rather cool. Slight frosts occurred on the 16th and 17th ult. and again some days since, only notable as showing a difference of 60° in the temperature of a single day. Of all the farmer's staple crops, hay sustained the most injury. There is a large acreage of corn in this section, and I never saw it look so well. It has been mostly cut up and stooked. Of fruit, strawberries were most deficient; grapes are plentiful and hardly pay for cultivation. The most enormous crop of apples ever produced load the orchards this year. Not a third of them will be used for any purpose. A large sowing of wheat will be made in this county this Fall; the new fertilizers which are extensively used, rendering crops of 30 to 40 bushels per acre reasonably certain. ONONDAGA.

N. C., Lynn P. O., Polk Co., Sept. 10.—The season has proved more moist than is usual here. This affected the corn crop very favorably; but not so with the fruit, the rain and the natural ripening process caused many peaches to fall, which, if not used at once, are of no value. Pears are doing well just now. The Bartletts are very large and sweet. The Seckel and other small varieties are just coming in. The cotton crop is good, just opening; too much rain causes the plant to "shed" its fruit as the blossom falls. Flour and meal are lower in view of a good coming crop just in sight. The superior and abundant crop of fruit on the Thermal Belt of Tryon Mountain, has induced quite a number of men of capital to examine the situation this Summer and the result is, a large fruit farm is to be planted out at once—2,000 pear trees, 2,000 peach trees and other fruits. The land was bought for $8 per acre. The same parties propose to try the strawberry as a crop for the Eastern markets. Ordinary varieties mature on the South side of the mountain early in April. L. R. M.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Queries about Fertilizers.

L. D., Belmont, N. S., asks 1, whether oat and buckwheat hulls are of any value for manure; if it would pay to haul them two miles, and which would be the better plan—to compost them with black muck, lime and potash, or to use them for bedding; 2, are leather cuttings and scraps from shoe factories and tanneries and the waste of wool from woolen factories of any use for manure; and if so, how should they be used for that purpose; 3, would a liquid of lime, salt, potash and water be a good fertilizer, and in what proportion should they be mixed.

ANS.—1, Oat hulls are excellent feed and too valuable to be used for manure. The writer has found them to increase the milk considerably when fed in place of good hay. It would certainly pay to haul them two miles. Buckwheat hulls may be thrown into barn-yards and will be useful as an absorbent, but are in-

jurious when used as bedding for animals on account of the readiness with which they heat when packed closely. They are charged with making pigs scurfy and mangy, and we believe the charge to have some truth from unfortunate experience. They may be composted with black muck and lime very usefully. 2, Leather scraps and wool are rich in nitrogen, but require time for their decomposition. They are best used by plowing them in under a shallow furrow. Wool waste is remarkably effective as a fertilizer for hops. 3, Lime, salt, and potash, may be used as well dry or separately, as dissolved or mixed. Nothing is gained by mixing or dissolving them. Lime may be used at the rate of 25 to 40 bushels per acre; Potash, in the shape of potash salts, 400 to 600 pounds, and salt in the same quantity.

Rendering Bones a Quick Fertilizer.

W. M. C., Glenwood, Utah, says that crude soda is plentiful in that section, and the bones of dead animals are a nuisance from their abundance, and he asks whether if they are boiled with caustic soda or potash—as is done in making home-made soap—the nitrogen and phosphoric acid in them can be reudered a profitable fertilizer.

ANS.—Bones cannot be prepared in a fit condition for a fertilizer by boiling them with potash or soda. The soda or potash here referred cannot be caustic. Caustic soda or potash is free from carbonic acid, by combination with which it is made mild. Soda or potash is made caustic by treating it with caustic or newly burned lime, which deprives it of carbonic acid. It does not exist naturally, as it has an affinity for carbonic acid and water which it draws from the atmosphere, and returns to a mild or carbonated state. There is no practical way of reducing bone to a powder and saving the nitrogen, except by grinding. The bones may be softened in small quantities by placing them in layers with fresh wood ashes and keeping the heap moist for some months; or they may be treated by sulphuric acid and made into superphosphate. But this is troublesome and dangerous to unskilled persons. The best plan is to burn the bones and reduce them to bone ash, which contains all the phosphate of lime, the nitrogen being lost. But of this very much can hardly remain after the long exposure to which the bones must have been subjected.

The Rural Branching Sorghum.

R. M. P., Brockport, N. Y., asks, 1, where can he procure enough seed of the RURAL Branching Corn to sow an acre; 2, how much seed would be needed for an acre; 3, will it mature in that section; 4, where can he get roots of Prickly Comfrey.

ANS.—1, You cannot at present purchase the seed of the Rural Branching Sorghum. Whether it will be offered for sale next Spring or not depends upon the crop we are now having grown for us in South Carolina. 2, We have not estimated that exactly. A very small quantity will suffice for the reason that it should be sown in drills one seed to every two inches, and the drills four feet apart. As soon as it appears above ground, the plants should be thinned out to 18 inches apart. It so resembles Finger and other common grasses at first that the seeds should be sown far closer than they otherwise would need to be, to insure a good stand. 3, Seed matured with us last year, though quite destroyed by sparrows. We may say that it will require an unusually long and favorable season in your climate. It seeds so abundantly, however, that, when generally cultivated, as we have little doubt it will be, seed should be sold as low as wheat, which, considering the small quantity needed per acre, would render the cost of seed a mere trifle. 4, The sets (roots) are sold for 50 cents per pound by most of our leading seedsmen.

New Seedling Grapes.

S. V. S., Syracuse, N. Y., says: "For some years I have been engaged in the effort to improve the quality of our native grapes by raising new varieties from the seed. Out of several hundred seedling vines fruited I have selected two as possessing sufficient merits to entitle them to a place in the list of cultivated varieties. At the suggestion of Messrs. Smiths and Powell, nurserymen of this place, I venture to send you by express a sample of each kind and to ask you for a candid expression of opinion in regard to their merits. While I consider them very good, I fear I am naturally biased in their favor and therefore not altogether a good judge. The vines have proved themselves to be both early and hardy."

ANS.—When those who send us grapes or other fruit do not write their initials or names upon the boxes, we are not always able to identify the packages they send. The box which we presume S. V. S. sent to this office, contained two kinds of grapes—white and dark red. They are very much alike in size and quality. Tender pulp, sweet, rich—rather foxy; skin a little soft. Unless these grapes are remarkably early or productive, we can hardly advise our friend to propagate them. There are too many others which are as good.

Quince Culture.

O. W. F., Blackstone, Mass., asks for an article on quince culture, telling the best manures to use, the time to set out the quinces, the best location, and kind of soil, etc., with full particulars from the time of planting to the gathering in of the fruit.

ANS.—It would be best for you to propagate by bending branches down in the Spring under the soil, leaving a few buds out. Such layers will usually root by Fall when they may be cut from the main stem, and be transplanted. Or, you may procure cuttings a foot long and plant them now. Cover with earth so that only a quarter of the cutting will be left aboveground. Press the earth *closely* about the cuttings and cover with manure until next Spring. If plants are purchased from nurseries, Spring for your climate would be the best time to transplant. The quince needs a deep, rich soil and it should be as well prepared as if corn or potatoes were to be planted. Then an application of manure every two years should be given. An occasional light dressing of salt is thought by many to be beneficial. Cut out all suckers. Confine the trees to one stem. Plant them 10 to 12 feet apart. The Orange and Rea's Mammoth are the best varieties. The above, though it might be elaborated so as to fill two columns, tells essentially the whole story. We are always pleased to furnish articles upon *any* rural topic to the order of our friends.

Fertilizers for Wheat.

D. J. A., Moore's Station, Va., asks whether it would be advisable to drill with wheat 200 pounds per acre of a mixture of slaked lime and kainit (German potash salts) in proportion of two parts of the former to one of the latter. In that section the best results are obtained by using dissolved South Carolina rock or bone, two parts to one of kainit; and he wishes to learn what difference it would make to use slaked or pulverized lime instead of the South Carolina rock.

ANS.—The dissolved South Carolina rock is superphosphate of lime containing soluble phosphoric acid, no different from that made from bones, and it should be treated in the same way. If lime is mixed with it, or if lime is applied to the soil along with it, the lime combines with the excess of phosphoric acid and forms insoluble phosphate, thus destroying the value of the dissolved phosphate. Kainit, which is a mixture of salts of potash, magnesia and soda, will be useful and may be mixed with the phosphate without injury. So may plaster, which is sulphate of lime, and will be as useful as the slaked lime. A very good mixture would be 200 pounds of the rock superphosphate, 200 pounds of potash salts (high-grade muriate of potash is the best and cheapest in the end), and, if desired, 100 pounds of blood guano to furnish the nitrogen. But at this season, the nitrogen may be dispensed with.

Growing Seedling Apples and Grapes.

M B., Newark, N. J., asks how should apple and grape seeds be planted, and what soil is best suited to them.

ANS.—The best way would be to procure the apple seeds now and preserve them in boxes of sand during the Winter. The boxes may be buried or kept in the cellar. In the latter case it would be necessary to keep the sand slightly moist, or the seeds would become dry and germinate slowly or not at all. Prepare a little plot the same as for lettuce, radishes or beets. Make it mellow and tolerably rich. Plant the seeds a few inches apart. The young seedlings should be protected the following Winter and transplanted in the Spring either to nursery rows or where they are to remain. If you have glass, or even a sunny window, grape seeds may be planted now. Flower-pots will answer. Plant the seeds half an inch deep and cover with glass. The seeds should be planted as soon as taken from the grape, in which case many will germinate in a month. The young vines may be planted in the open ground next Spring, when they will have made a growth of from one to three feet. We have frequently urged our friends to raise seedling grapes.

Income from Sugar Cane Culture.

C. P., Cinnaminson, N. J., referring to a statement in the Fair No. of the RURAL, to the effect that a Louisiana planter sold his crop of sugar last year from 3,287 acres for $565,000, asks for further information on that head.

ANS.—The result is by no means remarkable. The possible product of the sugar lands of Louisiana is twice as much as this, and if the machinery were capable of extracting the juice, the production would be equal to nearly 6,000 pounds of sugar per acre, which, at only five cents a pound, would realize $300, and in addition nearly 4,000 pounds of molasses, worth, at two cents a pound, $80 more. But the defective processes waste a large part of the product. Sugar cane contains 10½ per cent. of sugar and an average crop is 60,000 pounds of cane per acre. It is an example of what yet remains to be accomplished in this direction by the invention and employment of improved processes in the manipulation of the cane.

Lung Trouble in Lambs.

L. C. R., New Geneva, Pa., says the lambs there are dying with a disease resembling catarrh; they run at the nose and seem to have a difficulty in breathing, and he asks for a remedy.

ANS.—This is evidently a disease of the lungs, which has not yet progressed so far as pneumonia, but may very soon take that form, if not prevented. It is probably due to cold taken in consequence of overheating and sudden cooling. The treatment in such a case is to keep the lambs in a dry, shady yard for a few days; give them pine tar in the drinking water and half a drachm of saltpeter once a day for three or four days. To prevent this trouble, both sheep and lambs should be provided with shade in the pasture in the hot weather and shelter from sudden showers. Exposure to a shower, on a hot day, when the animals burdened with their warm woolen coats, are in a state of profuse perspiration, will produce this trouble with the lungs, which if neglected may soon change to pneumonia or pleurisy.

"Cassava."

E. W. K., Glen's Falls, N. Y., sends the leaf of a vine which produces a slim root and is sometimes called "Cassava" along the Hudson River, and asks whether it is the cassava or mandioca spoken of in the RURAL of Sept 4, in the Domestic Economy Department.

ANS.—We cannot identify this vine from a single leaf; but it cannot be the cassava referred to, which is the meal or bread made from the roots of several species of manihot which grow in the West Indies, South America and Africa. The chief species—Manihot utilissima—from whose roots nearly all the cassava and tapioca come, is a shrub from six to eight feet high, with large tuberous roots often weighing 30 pounds. There are two other species whose roots are also utilized for the same purposes, but these are not nearly so common, and none of them grows along the Hudson.

Keeping Choice Seed Potatoes till Spring.

W. B A., New Milford, N. J., asks the best way to keep a few choice seed potatoes in the best condition until Spring, regardless alike of consequent trouble or expense.

ANS.—Whenever we have valuable seed potatoes we place them in boxes of dry sand, and keep the boxes in a room or dry cellar where the temperature is low. Probably a potato packed in a box in sand and buried 18 inches deep in a dry place would keep until needed for planting in the Spring. If any of our readers know of better plans we would be glad to hear from them.

Miscellaneous.

E. C., Menard, Texas, asks, 1, for the name of a reliable dealer in seeds in the North; 2, the name of a good practical work on sheep husbandry suitable for Western sheep owners; 3, the name of an English work on sheep husbandry in Australia and New Zealand.

ANS.—1, All the seedmen who advertise in the RURAL are trustworthy; we admit the advertisements of no other. 2, The Shepherd's Manual by our contributor Henry Stewart, is the latest and most complete work on Sheep Husbandry published in this country—price $1.50, to be obtained through the American News Co., N. Y. City. 3, A Treatise on the Australian Merino by J. R. Graham, Melbourne, Australia (1870) is the only work known to us and we believe the only work relating to the subject. The work can propbably be obtained through any of our large book-dealers.

W. S. (*address mislaid*) asks how much potash should be used with a ton of bone dust; what kind of potash is the best, and how should it be mixed with the bone dust; which is the better—sowing it broadcast or drilling it in with the grain.

ANS.—There is nothing gained in mixing anything with bone-dust, and if potash should be mixed, it would be dangerous to drill it with the seed. Bone-dust is best drilled with the seed because it is placed where the young plants can reach it at once and make immediate use of it. If potash is used, it would be best to sow that broadcast and harrow in before the seed is sown, or sow it on the loose soil immediately after the harrow. The high-grade muriate of potash, containing 50 per cent. of actual potash, is the best form in which to apply potash, that is, in the absence of unleached wood-ashes, which are always the best.

Geo. W. Strong, Davenport, Ia., writes us—"In the list of premiums offered in the RURAL of April 26th 1879, is an offer of Dickens's works, made by the Farmers' Publishing Co., as the second prize for the greatest weight of shelled Blount's corn obtained from the RURAL's free seed distribution, three months after harvest. Now I won the second prize for my yield of corn, and got the feed mill all right, but did I not win Dickens's works also? I have never seen anything said in the RURAL about the winners of the book prizes, and hence rise for an explanation."

ANS.—Will Conrad Wilson, who offered these premiums in the name of the Farmers' Publishing Co., please explain.

G. E. N., Afton, N. Y., asks for an analysis of sour milk.

ANS.—Milk contains when fresh about the following constituents:

Caseine or cheesy matter	4.50	per cent.
Butter	3.13	do.
Milk sugar	4.75	do.
Saline matter (phosphates, &c.)	0.60	do.
Water	87.02	do.
	100.00	

When the butter is taken out, the remaining substances are, of course, left. When the milk is sour the sugar has been changed to lactic acid, by the action of the caseine and no other change occurs, so that sour milk if the cream has not been taken, differs from fresh only in the change of the sugar of the latter into acid.

J. M. McL., Okolona, Miss., asks what he should do for a sick peach tree. It has stopped bearing for two years, or rather the fruit shrivels and drops off while small, or becomes so worm-eaten as to be worthless. The tree is slowly dying, probably half of it is already dead,

ANS.—This is no doubt the yellows. It is incurable. The best thing that can be done is to dig up the tree, root and branch, and burn it. Be careful not to set another near the place, as this disease is highly contagious, and may be communicated by the budding knife.

G. K., Litchfield, Mich., asks what is the best time to sow Red Top; how much seed should be sowed per acre; should it be sown by itself or mixed with timothy.

ANS.—Sow Red Top in the Spring. Prepare the ground well and harrow until fine, then sow the seed, one and one-half bushel, or 20 pounds, per acre, with eight pounds of Timothy, and cover with a light brush harrow very lightly.

J. E. M., South Bend, Ind., asks which of these addresses is proper: John Smith, New York City, N. Y., or John Smith, New York, N. Y.

ANS.—The first is the proper way of addressing a letter to Mr. Smith, so far as the name of the town is concerned; but a letter addressed either way would not reach the gentleman, as the city directory shows there are 168 men of that name in the city, to say nothing of the large number of juvenile and other sorts of John Smiths that are not mentioned therein.

T. R. W., Roselle, N. J., sends a branch of a lilac bush covered with what he thinks either a fungus growth or an insect pest, and asks what is it.

ANS.—It seems to be a bark louse. We would advise the application of equal parts of linseed oil and tar applied warm early in Spring. This forms a varnish which will crack off as the stems expand in the Spring.

L. D., Belmont, N. S. wants to know the best apples for his country. He would also like to analize soil, and asks if it would be necessary to study with a chemist.

ANS.—1. Gravenstein, King of Tompkins County, Large Yellow Bough, Northern Spy, Red Astrachan, Ribston Pippin, Yellow Bellefleur. 2. Yes.

M. A. P., Sterling Station N. Y., sends some flowers of a weed which is greatly injuring a meadow, and asks how to get rid of it without plowing the meadow.

ANS.—It is a Golden Rod. Without plowing, you can only exterminate it by persistent mowing, an almost impracticable remedy.

C. S., Fayette, N. Y., asks what shall she do with her magnolias, two of which germinated in July and are still in pots; would it be well to transplant them this Fall and cover them during the Winter.

ANS.—No, it would be unsafe to plant them out this Fall. Wait until Spring.

C. S., Fayette, N. Y., asks what kind of beet seed will give most dark red *inside*, not on the surface merely, as the blood beet.

ANS.—Long red mangel. It is not so dark red as the blood beet either inside or outside, but is dark red and some roots are quite light red.

A. H. W., River Falls, Wis., says he sends two specimens of grass for name.

ANS.—The box had been opened in the mails. We received but one specimen and that was not marked. It is Setaria glauca—Bottle Grass; of no particular value.

J. R., Huntington, Pa., sends a bunch of grapes for name.

ANS.—The specimens are so crushed that we cannot identify the variety positively. The fruit resembles Iona, however.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, SEPT. 25.

G. W.—G. A. G. Jr.—J. R.—G. H.—L. H.—G. W. T.—R. M. S.—T. K.—M. O.—W. L. H.—T. R. B.—S. H. M.—R. H. R.—L. S. S.—W. T.—B. S.—T. R. H.—A. B. A.—W. W. W.—Syracuse.—no name.—B. C. D—C. D.—J. D—A. A. P.—G. W. P.—A. G. N.—H. O.—M. K. S.—A. C. E.—G. L. P.—N. A.—G. D. C.—A L. R—P. N.—G. J.—J. C. E.—D. B.—F. E. L.—G. C. D.—S. McC.—A. E. B., thanks.—J. L. P.—A. B. A.—L. B. H.—T. T. L.—J. C.—G. G.—S. B. P.—J. C. L.—G. H.—J. R.—F. D. P.—Ermengende—N. J. S.

Dyspepsia, Biliousness, Nervousness and miserableness all cured with Hop Bitters.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, OCT. 2, 1880.

MR. HENRY STEWART writes us from his farm in New Jersey: "Rural Branching Sorghum 11 feet high, and if it doesn't freeze it will ripen seed. Second growth by Aug. 5 six feet high; third growth, two feet. It is the boss fodder."

We have just sent three of our own plants to the Queens County Agricultural Fair. The first, though planted late upon poor, hot soil without manure, is ten feet high. The second, cut August 5th, is four feet high. The third, cut August 25th, is 18 inches high.

THE ENGLISH SPARROW.—We have always felt a great fondness for animals—especially birds, which we could never feel reconciled to see shot upon our premises. We were among those years ago to praise the English sparrow and to advocate its protection. But we now warn farmers against this bird as a formidable enemy—more formidable than the insects he is supposed to kill by his staunchest friends. We have already remarked upon the serious damage which our wheat fields sustained by its ravages, and we have now to speak of the injury it has done to corn. It is found, upon a careful examination of our fields, that as many as one ear in every three has been damaged—sometimes only at the very tip; sometimes as far as six inches down the ear, or as far as the sparrow could separate the husk so as to eat the kernel.

Those farmers who are benevolent enough to share their crops to this extent with this unruly, greedy bird, may do so of course, though it is hard to tell how severely their benevolence may be tested in a few years, so rapidly does the sparrow increase its numbers. But we think such kindness might more wisely be extended to many of our native song birds which seem to have been driven away to the fields or woods or to other parts where the sparrow's yelp is not yet heard.

IS IT A FACT?—A short time ago a daily paper in this city remarked that dealers here who handle large amounts of Western butter had lately noticed that the 50-pound tubs which usually weigh from 50 to 52 pounds each when full, frequently weighed from 56 to 60 pounds. It was said that this increase of six to eight pounds in the same bulk was noticed only in Western packages; but even skillful buyers failed to detect any foreign substance in the suspected article. The paper went on to say that recently a prominent butter and cheese dealer in this city discovered the fraud during a Western trip. A Cincinnati company is largely engaged in the manufacture of powdered soapstone, and it was asserted that this shrewd dealer discovered that some farmers and butter packers in that section used it to adulterate their butter, it being impossible to detect the cheat by any ordinary test. This report has produced a good deal of excitement among the butter dealers in Cincinnati and the farmers of the adjoining country, and a number of prominent dealers have published a card emphatically denying that soapstone is used for any such purposes by them, or, according to their belief, by anyone else in that city. This is a matter which should be promptly and carefully investigated, and should any be discovered guilty of the fraud, they should receive the severest legal punishment possible, besides getting the unenviable notoriety attached to the widest publication of their names in the public press. Even the rumor of such a swindle tends so greatly to injure the butter interest in that section, that already a report is out that the scandal is the work of the oleomargarine men to injure the sale of genuine butter.

A NEW USE FOR DYNAMITE.

IT has occasionally been suggested that the severe frosts of our Northern Winters would be likely to seriously interfere with the process of preserving green fodder by burying it in pits. It has been supposed indeed by some persons that, in order to prevent the soil from freezing, it would be necessary to cover the pit with some kind of a house or shed; though it stands to reason that the action of the frost might be hindered, if need were, by covering the earth above the pit with straw or leaves. It is of interest to note in this connection that in some parts of Germany the farmers are familiar with the freezing of the earth used to cover the pits in which beet roots are stored, and that latterly a plan of opening the frozen ground with dynamite has been put in practice. It is stated that for opening a trench forty feet long, eight holes of a foot or more in depth were bored with a wheelwright's auger and cartridges placed in each. After the explosion, a couple of men removed the fragments of frozen soil in less than an hour, and none of the beets were harmed. This method of opening is said to be not only easier than the old system of digging a small hole, with pick and bar, at one end of the trench and creeping in beneath the frozen roof,—but much safer, since the earth was liable to fall unexpectedly. As applied to the opening of pitted fodder, the use of dynamite would have the merit of encouraging the establishment of small pits by farmers unable or unwilling to go to much expense for special constructions. It lends itself to the policy of cautious experimenting with ensilage which has been advocated by several of our correspondents.

OUR WASTE LANDS.

Now that the wave of emigration has found a western shore upon which it recoils, the current must stop or find some other direction. The limit of successful agriculture in the West seems to have been reached, for already thousands of settlers have found that they have gone too far and have actually penetrated the arid districts where no vegetable growth can thrive without irrigation, although it may exist without it. It is therefore well that attention should be called to the vacant lands in the East and South, where there are millions of acres which need only cheap reclamation to become productive. The broad Alleghany ranges, with their outlying spurs and parallel ridges, are all but unoccupied, and land on those hills and in the valleys between them can be purchased in large tracts for nominal prices. Whole counties in Maine, New York, Pennsylvania, West Virginia, Tennessee and Kentucky large tracts in other States and smaller tracts almost everywhere, are ready and waiting to be reclaimed. Parts of them may be profitably turned to timber culture and the remaining portion, the better share of the land, is admirably adapted to grass and grazing either for lighter and more hardy beeves or the hardier kinds of sheep. The attention of those philanthropic societies, whose aim is to encourage the seating of industrious men of small means upon farms of their own, might be turned to these tracts, upon which the annual fires now purposely set every Spring, destroy the young timber and kill the grass and so keep back their reclamation.

THE EFFECT OF MANUFACTORIES.

IF the whole community were engaged in raising food there would be no markets, excepting foreign ones, to which the surplus would be sent to be exchanged for manufactured articles. But it is convenient and economical to have markets near to the producer to avoid the cost of carriage for long distances. This becomes very conspicuously true and plain when a factory or other industrial enterprise is operated in a community of farmers; and it is beyond question that nothing more rejoices a farmer than to see mills built and operated and a village growing within sight of his farm. The remarkable growth of the manufacturing industry of the United States cannot fail to have a most beneficial effect upon agriculture. One instance may suffice.

Paterson in New Jersey had in 1873, 30 silk manufactories within its limits. Its population was then about 30,000. Now it has 102 factories engaged in the silk industry, which employ 12,599 operatives, who earn in wages more than four million dollars per annum, or $80,000 weekly, or more than $13,000 daily; and which turn out an annual product valued at over twelve million dollars. The present population of that city is over 50,000. The farmers for miles around find a good market for their products there, and eager buyers for hard cash at prices considerably higher than are current at the not-far-distant New York markets. Everywhere throughout our land there are such busy centers of industry springing up, which provide markets for agricultural produce. These markets are daily increasing, and this fact ought to be a matter for congratulation by farmers who are benefited, and by those who hope to be.

GERMS AND THOUGHTS GERMANE.

Recent investigations have very much added to our knowledge of contagious diseases of men and animals. Since the discovery of infusorial life and its propagation in liquids containing organic matter in solution, and which at first was supposed to be spontaneous and self-productive, a great number of careful investigations have been made. The most accurate and successful investigator in this line has been that accomplished chemist, M. Pasteur. The result of more than 30 years' constant work in this direction has been to greatly simplify our knowledge of virulent diseases. In a practical manner it has been first surmised and then proved, that the fatal epidemics which from time to time destroyed many thousands of human beings, sweeping in a steady wave over countries and continents, were occasioned by the presence of filth, and that the human system, enfeebled by unhealthful conditions, offered every convenience for infection and contagion.

Sanitary measures afforded relief, but the precise means by which the infection was conveyed were not understood until after the discovery of the existence of peculiar organisms existing in the blood of diseased persons and the fact that these organisms had specific differences and could be cultivated and reproduced with all their specific variations and peculiarities. The results of many investigations have shown, for instance, that such diseases as small pox, yellow fever, cholera-morbus, malaria, and even boils, in mankind, are occasioned by the presence in the blood of certain distinctly different parasitic organisms, each one peculiar in its own specific developments and each one re-productive of its own kind by inoculation or contagion.

So in animals, it has been found that the fatal hog-cholera, the parturient fever of cows and the frequent and as fatal chicken-cholera and other similar epizootic diseases are caused and spread by means of specific germs which can be bred or cultivated in watery solutions of organic matter, one drop of which infected matter injected into the veins of any animal liable to that particular disease, is sufficient to produce that disease in its most virulent form. It is a vast help in combating disease, in man or in animals, to know its character. That is the main part of the battle. That provides us with means for prevention and suggestions as to successful treatment. But prevention is the best cure. And it is a wonderful help that we know that the germs of the most virulent diseases enter the system either by the stomach or the lungs, or by contact with previously diseased and exposed surfaces.

This knowledge, therefore, should put us on our guard against filth and foulness of air, of food, of water, and every one of our surroundings; moreover, it should caution us to maintain the most perfect health possible by the use of the most nutritious food, abundant water, the avoidance of all weakening excesses of whatever kind, either negative or positive; for it is very certain that although these germs may be present, yet in systems fortified by vigorous health they find no acceptable resting place, and are disorganized and disappear, unless they find such conditions as favor their enormously rapid production in the blood.

INCOMPREHENSIBLE TO THE FARMERS.

VERY recently there appeared in our columns a pertinent protest against the clothing of common facts in such language as may be beyond the comprehension of ordinary readers, and the understanding of which is a task and labor, irksome even to those who can comprehend it, but who have not the time to spare for the mental operation required for the necessary consideration. Language is to be used for the conveyance of thoughts and ideas; and in these days when rapidity of execution is the first requirement in work of all kinds, whether of the hand or the mind, the language used should be such as to strike the mind instantly and produce immediate effect. Our time is too short even for study, except with those whose business is study; and even these have no time to waste in acquiring knowledge more slowly than is absolutely necessary. The best writers are those who are the most easily understood and who use the fewest and simplest words to communicate their ideas. As a curious example of a very simple truth that has been often expressed and is by no means unknown to persons of very moderate comprehension, we might present the following remarks made by no less a person than the Duke of Argyle, in one of his recent publications in England. The Duke who is an accomplished agriculturist and a scientific man says: "Out of the chemical elements of nature, in numerous but definite combinations, it is the special function of vegetable life to lay the foundation of organic mechanism, while it is the special function of animal life to take in the materials thus supplied, and to build them up into the highest and most complicated structures. This involves a vast cycle of operations, as to the unity of which we cannot be mistaken—for it is a cycle of operations obviously depending on adjustments among all the forces both of solar and terrestrial physics—and every part of this vast series of adjustments must be in continuous and unbroken correlation with the rest."

If this was intended for the instruction of plain farmers, how much easier it would have been to have said that vegetables nourished by the soil, supply food to animals; and animal substance, returning to the soil, furnishes the nourishment for a succeeding growth of vegetables; and in this manner the vital forces of nature operate continuously. The same truth has been put even more forcibly by a farmer who said, "more grass, more cattle; more cattle, more manure; and more manure, more grass;" thus signifying the natural sequences of the mineral, vegetable and animal functions. We might here pertinently refer to the aggravating difficulty in reducing the metric weights and measures, of grams and centimeters, into the common grains and inches of daily use, in those instances where reports of chemists are published for popular information. The whole value of these is lost to those persons who are unacquainted with the value of the metric tables, but if the writers would add the common values, in parentheses, to their tables—a very small trouble to them—the usefulness of their work would be complete. Public teachers of whatever kind should aim to be the most widely effective, and nothing is lost in any way, but much is gained in every way, by being plain and simple.

BREVITIES.

WE shall be able to report the yield of our Chester County Mammoth and Blount's corn, shortly.

THE bushel of Clawson wheat which we cleaned out for the Queens Co. Fair weighs 66 pounds. We think its weight will average 63 pounds. Nevertheless, this is our last year with Clawson. Our main crop will be Silver Chaff, which we believe will yield more and make a better flour. Let us see.

THE production of sufficient sugar for the wants of the people of the United States, if not for export, now seems to be a fact to be counted upon at no distant day. One of the greatest drains of wealth from this country for the past half century has been to purchase sugar, at one time as much as $100,000,000 going abroad annually for that purpose, and there was on our part at one time a serious consideration of purchasing Cuba to save that outgo. But in the sugar cane, sorghum and beet root there are now probabilities that the census will show a beginning which will warrant the hope of the production of all our own sugar at no distant day. Besides, the patronage of Cuban sugar growing is one of the greatest aids to keeping slavery alive in that island, and America has now grown past that relic of barbarism, and it is with great pleasure that the efforts to produce our own sugar will be contemplated.

A REWARD of $5,000 has lately been offered for a stock-car which on experience shall prove the most suitable, humane and comfortable as well as economical for the transportation of cattle, sheep and hogs from the western prairies to the Eastern markets. The main requirements in the stock-car of the future must be an economical arrangement. Years ago palace stock-cars were invented with partitions between the animals, fodder racks and water tanks, but the railroads declared they could not afford to use them. The animals on them, it is true, arrived at their destination in a condition so much better than usual that the owners could well afford to pay the trifling extra cost of transportation, owing to the larger space allotted to each animal and the outlay for the various conveniences; but the cars had generally to go back empty, or the fixtures had to be removed and carried back on top of the cars. Either some acceptable form of car should soon be devised, or laws should be passed compelling the railroad companies to use greater care and humanity in transporting stock. These are absolutely needed, not only for the sake of the poor, ill-used dumb brutes, but also for the sake of the public who eat the meat rendered unhealthful by the fever and suffering often now endured by the animals during their transportation. We have frequently protested against the cruelty to which animals are subjected on shipboard during their passage to Europe; but there are multitudes of well authenticated instances where sufferings quite as great, and almost as protracted are endured by stock during their travels by railroad, and these are capable of much more easy amelioration than those by sea. For animals intended for export, the previous hardships by rail, often predispose them to disease on shipboard and not a few of the cases of disease and death among stock on the transatlantic voyage are due to this cause.

Literary Miscellany.

IN TOWN.

I HAVE a friend across the street,
We never yet exchanged a word,
Yet dear to me his accents sweet,
I am a woman—he a bird.

And here we twain in exile dwell,
Far from our native woods and skies,
And dewy lawns with healthful smell,
Where daisies lift their laughing eyes.

Never again from moss-built nest,
Shall the caged woodlark blithely soar;
Never again the heath be pressed,
By foot of mine forevermore!

Yet from that feathered, quivering throat,
A blessing wings across to me;
No thrall can hold that mellow note,
Or quench its flame in slavery.

When morning dawns in holy calm,
And each true heart to worship calls,
Mine is the prayer, but his the psalm,
That floats about our prison walls.

And as behind the thwarting wires
The captive creature throbs and sings,
With him my mounting soul aspires,
On Music's strong and cleaving wings.

My chains fall off, the prison gates
Fly open, as with magic key;
And far from life's perplexing straits,
My spirit wanders, swift and free.

Back to the heather, breathing deep
The fragrance of the mountain breeze,
I hear the wind's melodious sweep,
Through tossing boughs of ancient trees.

Beneath a porch where roses climb,
I stand as I was used to stand,
Where cattle-bells with drowsy chime
Make music in the quiet land.

Fast fades the dream in distance dim,
Tears rouse me with a sudden shock;
Lo! at my door, erect and trim,
The postman gives his double knock.

And a great city's lumbering noise
Arises with confusing hum,
And whistling shrill of butcher's boys;
My day begins, my bird is dumb.

—Temple Bar.

INMATES OF LESTER HALL.

CHAPTER IV.

(Continued from page 645.)

Slipping the check into his pocket-book, Rex. crossed languidly to the table, sat down, glanced at some letters lying there, wrote one or two, then pushed away his seat.

"My head aches furiously," he muttered impatiently; "and I'm tired. I got no sleep last night with that horrid cough."

He flung himself down in the armchair again, passed his hand wearily over his brow once or twice, and fell into a heavy but disturbed sleep, which lasted some time. Awaking with a start he glanced vacantly around him, then recollecting where he was, he uttered an exclamation and rose, staggering slightly, as if weak or giddy.

"Almost six o'clock," he exclaimed, glancing at his watch. "And I have to meet Carewe at the club at half-past."

He rang the bell, desired the clerk who answered it to send for a carriage, and asked whether his uncle had left. The answer was an affirmative one, and a few minutes after Reginald Lester, having fortified himself with a brandy and soda at the nearest restaurant, was rolling rapidly towards a fashionable club, where he was engaged to dine with two or three kindred spirits.

This was how he kept the promise he had given to his uncle. If Mattie could have known! If she could have seen—would she not have felt that no greater degradation could have fallen on her brother than this?

CHAPTER V.

DANGER AHEAD.

"Easy is the descent of Avernus," says the Latin proverb, and easy, thrice easy, did Reginald Lester find it. Once entangled in the snares of dissipation, excess and gambling, he could not set himself free. Not that he made much effort to do so; he did not care for his freedom, he plunged deeper and deeper into the mire; although he was perhaps a trifle more careful to conceal his conduct from his uncle.

Even when he found that his health was seriously affected by his manner of life it did not seem to deter him; he went on his way regardless of the incessant cough which racked his frame, or of the greater increasing weakness and languor and of the greater and greater disinclination to any active exertion.

For many weeks Mr. Daton never suspected that his nephew was deceiving him, and breaking the promise he had given "upon his honor;" and when he discovered it by chance, his wrath was terrible. There was a short but stormy and decisive interview between them, during which the merchant was stern and bitter, the young man by turns sullen and indifferent, which ended in a command from Mr. Daton that his nephew should never darken his door again, and by Rex. Lester taking his hat, bowing low with a nonchalant, mocking grace, and leaving his uncle's presence, outwardly smiling and indifferent, but inwardly full of anguish and despair. He knew that ruin was at hand now; he knew that he was deeply, irretrievably in debt, and that one whisper of his uncle's displeasure would cause his creditors to swarm round him like bees.

"The game is up," he said to himself, bitterly, as he went out into the street.

"I am ruined. I have run a-muck, as Carewe calls it, with a vengeance! There is nothing left for it but a bolt, I suppose, and shame, disgrace, and death after. Good Heaven! why have I not the courage to put a pistol to my head and end it all!"

He walked on slowly for a few yards, then hailed a cab, gave the coachmen an address, and promised him double fare if he went fast. The horse chanced to be a good one, and they dashed off rapidly, pulling up at a little arched door in the wall of the grounds surrounding the house whose address Rex had given.

Opening this, Reginald passed through the grounds, which were small, but well kept and carefully walled in. The house stood well back from the road, and was almost concealed by the tall trees and dense shrubbery.

Rex. Lester's imperative knock at the door was answered by a man-servant out of livery, who admitted Rex into the dainty miniature halls, with its tesselated pavements, its shaded lights and scented flowers, and assisted him to remove his overcoat in solemn silence.

"Get me some brandy, Carter," said Mr. Lester, curtly; and when the man obeyed his behest, he drank a deep draft of the fiery spirit, and pulled himself together, as it were, with a slight shudder.

"That's better," he said, with a ghastly laugh, as he handed the glass back to the servant, and passed up the low, broad carpeted staircase to a room on the first floor, from whence the sound of voices came, whose doors were hidden under heavy velvet curtains, which muffled the tones and laughter into a softer key.

Reginald Lester entered the room, pushing aside the velvet hangings, and opening the doors without the slightest formality, nor did his entrance cause any disturbance as he stood for a moment looking at the scene before him.

The room, one of a suite of three opening one into another, was brilliantly lighted and richly furnished.

The air was heavy with perfume and with the aroma of choice cigars, and around each of three or four tables were grouped some half-dozen men playing various games of cards or dice or chance.

The play was at its highest as Reginald entered, heaps of gold and notes stood upon the tables, and more than one of the faces of the gamblers was pale and haggard, others flushed and triumphant; and the play was proceeding almost in silence. Now and then one rose for a moment from the table, and crossed to a small table on which stood glasses and decanters full of various kinds of wine, and drank down a deep draft before he returned to the table.

"Hallo, Lester, is that you? Just in time," said a voice, after a minute or two. "Come on, we'll make room for you here."

So saying, the speaker, a handsome, fashionable, even aristocratic-looking man of two or three and thirty, drew a chair to his side; and after a momentary hesitation Reginald went over to the table and sat down, leaning his head on his hand for a moment, as he looked at the glittering heap which lay at his friend's elbow.

"You appear to have been lucky, Carewe?" he said, languidly.

"Very," said the other, carelessly. "Try your luck, Rex—fortune is befriending us."

"She won't do so long," said Reginald, with an attempt at laughter which brought on a paroxysm of coughing, after which he lay back in his chair for some minutes completely exhausted; then strengthening himself by a draught of strong, fiery Roussillon, he joined in the game, taking out of his pocket a handful of notes, which he began to stake with reckless excitement.

For some time he won steadily, and the excitement rose higher and higher, while the noise seemed to die gradually away, and the stillness of intense, highstrung excitement succeeded.

Reginald sat with his elbow on the table, and a fierce, almost delirious light in his eyes; he knew that it would be the last time he should play. That even if he won largely to-night it would avail nothing; while if he lost, deeper shame, more complete ruin stared him in the face.

He did not speak beyond the usual formula of the game; no word passed his lips, but the deadly pallor of his face contrasted strongly with the spot of vivid, burning red on either cheekbone; and the fierce glitter of his hazel eyes, so sunken and hollow, would have told a sorrowful tale to any pitiful observer.

The night-hours wore on; the play rose higher and higher; one or two men left the tables empty-handed, with their faces ashy pale and their hearts full of bitterness and despair; but the gap made by their absence was soon filled up, and the play went on without intermission. At last the run of luck, which had flowed so completely in Reginald's favor, turned, and he began to lose, until the heap of notes and gold rapidly and surely diminished, and grew perceptibly less, while the ghastly pallor deepened on his face and the feverish glitter in his eyes. At last the last sovereign was gone, and Rex. Lester sat staring at the table in a silence so stricken and complete, that the man who sat by his side glanced at him rather anxiously.

"You are not going to be so mad as to stop now?" he said, in a low tone. "The luck will turn again."

"I am cleaned out," Reginald said, with a ghastly laugh.

"Never mind, go; you can always get money," said Mr. Carewe, in the same hurried whisper, and Rex. hesitated for a moment, then he shook his head, and rose unsteadily from the table, staggering slightly in his gait as he did so.

Reginald crossed the room with the steady, faltering gait, and went to the window, pushing aside the curtains and opening it, admitting a keen gust of wind as he did so. The dawn was breaking dimly and feebly in the east, and the day was dawning cold and chill. Reginald leaned out far into the night, although he shivered as he met the chill blast.

"Shut that window, Lester; are you mad?" said Mr. Carewe, turning his face for a moment,

"It is bitterly cold."

Reginald obeyed mechanically, and turned from the window, standing still for a moment in the same strange, undecided manner. Then he went towards the door, staggering and slow, as if he moved only by an effort; and just ere he reached it he stood still again, swaying to and fro, and then fell suddenly forward his full length on the floor.

There was a slight stir at the gambling-table and Mr. Carewe rose hastily and went to his friend's assistance. He knelt beside him and raised his head with hasty, unsteady hands, and an exclamation of horror broke from his lips! Reginald's eyes were closed, and from his lips there came a thin red stream which stained the whiteness of his linen and dyed Carewe's hands as he raised the feeble head.

"I believe he is dead," he said, in a low, horror-stricken tone. "Help me, one of you!"

Very gently they lifted him, and carried him into another room, and while one tried to staunch the terrible hemorrhage another rushed off for a doctor. Fortunately medical aid was quickly forthcoming, and soon the hemorrhage ceased, and when consciousness returned, Rex. was sufficiently recovered to be taken in the doctor's cushioned carriage to his own chamber.

There the doctor left him, with strict injunction for perfect quiet, and there, for twenty-four hours Reginald lay passive, languid, facing his ruin with thoughts full of despair. His only visitor, and even he was by no means a frequent one, was Mr. Carewe; and on his second visit Reginald told him frankly of his circumstances, of his quarrel with his uncle and his ruin.

Mr. Carewe listened in silence, with his face darkening and his eyes filling with a baleful light.

"You led me to believe that you were sure of your uncle," he said, coldly. "You have lived fast and loose for the last two years without the slightest excuse for so doing. How do you intend now to escape from your creditors? How do you intend to settle those debts of honor you so recklessly contracted?"

"You have no right to reproach me!" said Reginald, furiously, with a flush on his cheek. "You led me on; you introduced me to those who have ruined me; you were the tempter!"

"Gently, gently!—you must not excite yourself!" said Mr. Carewe, with a sneer. "You are to keep quiet, you know. I will send you a doctor whose charges shall be moderate, considering your circumstances. Adieu!"

"Carewe, you shall not go—you shall not leave me thus;" said Reginald, hastily, forgetting his weakness and exhaustion. "Carewe, I say, you must wait!"

His voice failed, and he sank back on the cushions completely exhausted, while Carewe, with a slight gesture—half mocking, half pitying—of farewell, passed out of the room, leaving Reginald panting, furious, excited, but too feeble to prevent him.

In the afternoon of that day the doctor of whom Mr. Carewe had spoken came, and although he carefully avoided any mention of Mr. Carewe, he devoted himself with care and skill to his patient. So four days went by almost unnoticed, and not one of the gay friends of Reginald's butterfly career came near him.

Ill news travels apace, and it soon got bruited abroad that Mr. Daton, the great merchant-prince had disowned his nephew, and that they had quarrelled irreparably; and the bills came pouring in, and angry creditors had fierce encounters with poor Reginald's servant, who, strangely enough, was faithful to him in his extremity.

On that fourth day Reginald, turning suddenly upon the doctor with a strange earnestness asked abruptly:

"Is there any chance of getting over this?"

The kind, grave eyes avoided his as the physician answered, in that stereotyped sentence:

"While there is life there is hope."

"Have you any? Doctor, you are honest, even though you—forgive me, I hardly know what I am saying; but you are honest and true—answer me honestly and truly, shall I recover?"

"You ask me a question no human being dare answer decisively," said the other, tremulously.

"What is your opinion?" persisted Rex. "Shall I get well?"

"I think—I am afraid not!" stammered the other.

"Why are you afraid?" said Rex. with a bitter smile. "Should you not rather rejoice that such a life as mine is ended thus, and not by a dose of laudanum or a pistol-shot? Well," he went on in a moment, "I am glad to know it, Poor Mattie! poor little Cecil! this is the end of it all!"

He sank back, closing his eyes wearily; but by-and-by, when the doctor took his leave, he roused up, and held out his trembling, burning fingers.

"Thank you doctor," he said, with a little sad smile. "You have been a good friend to me—the only one, save the uncle whose regard I have alienated, the sisters whom I have neglected. Good-bye, and thank you."

"Until to-morrow," said the doctor, as he went away; but the next day, when he came to see his patient, he found that he had left.

"Left while I was away getting that medicine," said the servant, with something very like tears in his eyes. "He put his watch on this slip of paper addressed to me, and there is this note for you, sir."

The doctor took it and read it in silence. It contained a few grateful words of farewell, written in a tremulous, unsteady hand.

"You need not trouble about me any more," it said. "I am going where I shall be well taken care of; and believe that, living or dying, I shall never forget your goodness to me."

That was all, and as the doctor folded the little note, and put it carefully away in his pocket-book, handling it tenderly as though it had been a lady-love's dainty epistle, he thought that the "never" would mean but a short while only if it meant the space of Reginald Lester's short life, for that his days were numbered.

CHAPTER VI.

DEATH-BED.

The June roses are blooming richly at Lester Hall! the lilacs and laburnums have faded with the spring, but the wilderness of summer flowers makes the air sweet and fragrant; and daily Cecil Lester runs out in the fresh morning sunshine, filling her white hands and dainty muslin apron with floral treasures, to be transferred to the old china bowls and Venetian vases, to decorate the rooms of the old Hall.

Three years in their flight have made but little alteration in Mattie Lester. They have, it may be, matured her loveliness into more "perfect perfection," deepened the gold of her hair and the blue of her sweet blue eyes, but there is no other change in her; while Cecil has become, from a handsome, half-formed girl, a stately and beautiful woman, looking older at eighteen than Mattie at one-and-twenty.

More brilliant than her sister, and far more intellectual, she had taken for some months the lead in the little household, Mattie being well content to be set free from household cares, and at leisure to dream the hours away over her beloved piano, for she was *fanatica per la musica*, as Cecil declared, laughingly, sometimes.

She herself was no musician compared to Mattie, but she had a contralto voice of singular beauty and richness, and one which, if properly trained and cultivated, would have made her fortune on any stage. In character Cecil was ardent and impulsive, brave and generous, loving and hating well, and possessing as much resolution in her pretty little finger, to use a homely expression of speech, as her brother and sister joined together.

A woman at eighteen Cecil certainly is, though many girls are children at that age; and many a poor or sick person in the village could have told you stories of Cecil's womanly tenderness which you, if you had only seen her face, with its haughty beauty, would have found hard to believe. Her manner is generally cold and proud to a fault, but when she unbends she can be winning and gracious to a degree; and there is more danger in that winning genticness from Cecil than in the most tender and bewitching coquetries of another woman; and to those whom she loves Cecil is ever most gentle and tender. Eyes and tone soften so often as she addresses them, and even the touch of her little hand, as it meets theirs, tells more strongly than any words how dear they are.

It is morning—a bright, sunshiny, June morning—not much past seven o'clock, an hour when townspeople are beginning to grumble that it is time to get up, but which in the country is so lovely with the song of birds, the scent of flowers, and the clear sunshine. Breakfast is ready in the quaint little sitting-room where we first made acquaintance with Reginald Lester and his sisters, and a bright little wood-fire is burning on the great wide, old-fashioned hearth, for Cecil likes to make the coffee herself, and to be assured that the water was boiling. Coffee is made; Mattie at her piano is playing some grand, solemn melodies of Bach's, which rise and fall on the stillness; and Cecil, having finished her breakfast preparations, stands for a moment, basket in hand, to listen ere she goes out to pick the fresh blossoms opening in sunshine. The beautiful melody goes on, swelling richly out under Mattie's skillful fingers, and Cecil, with a soft light in her eyes which her sister's music can always bring there, passes out of the hall into the gardens beyond.

Very busily and very intently she moves among the flowers, touching them with gentle, almost reverent, fingers—she has a strange living love of flowers—filling her basket with roses and mignonette, and feathery heather, and sweetly-scented stephanotis and syringa, and looking very fair to see, with the sunshine on her chestnut hair, as she passes through the alleys in her simple print morning-dress, so dainty and fresh and simple—the three principal things required in a woman's toilette, believe me, fair reader.

The soft music-strains die away, and Mattie, rising from the music-stool, appears for a moment at the door.

"Come in, dear. The coffee will be cold if you linger among your flowers."

"I am coming," answers Cecil, in her soft, rich voice.

And Mattie goes back into the screened-off sitting-room, while Cecil turns her face homewards, softly humming a song as she goes.

Suddenly the song comes to an abrupt conclusion, the flower-basket falls, scattering its fragrant treasures over the pathway, and Cecil stands still. Her foot has touched some obstacle in the pathway, unheeded in her absorbed interest in the flowers; and looking down, she sees the prostrate figure of a man.

The rich color fades in Cecil's cheek, and a look of alarm steals into the lustrous eyes. Then she stoops and touches him lightly on the shoulder, for the face is hidden, and she cannot tell whether he is sleeping or not. His dress is that of a gentleman, but dusty and travel-stained; and one hand, lying helplessly by his side, is white and slender—very slender, and the hand of one who has never done any manual labor.

"What is the matter? Why are you lying here?" says Cecil, half imploringly, half imperiously.

Both words and touch are unheeded; the man lying at Cecil's feet gives no sign of life, and the young girl's heart sinks with a sudden inexplicable dread, at which the next moment she almost laughs.

"What an absurd idea," she says, half aloud, and stands trembling a little, with the rich color fading in her cheek, looking down at the prostrate figure in silence.

Then, in a minute, she stoops again, and putting her hand on his shoulder, she gives him a little shake, which rouses him effectually; he raises himself slightly on his elbow, and turning his face towards her, looks at her for a moment with vacant, unsteady gaze.

Cecil's heart stands still for a moment. The face, so wan and haggard, so ghastly, is perfectly familiar to her, and the next moment she has fallen on her knees beside him.

"Rex!" she says, under her breath. "Oh! Rex!"

Into the dim, weary eyes there comes a gleam of pleasure.

"Cecil—little Cis—is it you?" he murmurs, softly. "I have come home, you see. I could not die without seeing—you—and Mattie once more."

"Die! oh! Rex!" falters Cecil, too sick at heart, too horrified at the change in her brother, at the seal of death on his face, which even her inexperienced eyes cannot fail to discern, to say anymore, while her brother leaned against her for a moment feeling yet more keenly, at sight of her brilliant beauty and freshness, his own ruin.

"Can you help me up?" he says, in a moment. "I walked up—from the—station—but I could get no farther last night, I suppose. The sight of—the old place was too much for me. Can you help me, Cis?"

Every word he utters seems to require an effort to force it from the parched, blackened lips, and the red spot which contrasts so vividly with the ghastly pallor of his face deepens in his hollow cheek.

"Yes, I can help you, Rex."

"Shall I call Barton?" she says, gently. "He is so much taller than I am; he will help you better."

"Barton—no, I cannot see him," and the shame-stricken look deepens in Reginald Lester's blue eyes. "And yet he knew me—when—"

The words die away on his lips.

"I am quite strong enough to walk."

Very slow and faltering are his steps, but with his sister's assistance he manages to reach the house. The stone steps leading to the hall door are very formidable, but they are mounted at length, and Reginald Lester enters the home of his ancestors, never to leave it again until he is carried forth to his last resting place.

Cecil says nothing; she cannot speak, her heart is too full, and her lips are quivering ominously. Is this the return home of the brother whom she so much loved, and of whom she has always thought with so much pride—this ruined, broken-down man, can he indeed be Reginald Lester, who had left them less than three years ago, so strong, so bright, so gay—so full of hope for the future, so secure in the present? Can it be that his stay, but a brief one after all, has destroyed all this, and made him the wreck he is?"

Mattie, looking up suddenly from a paper over which she glances as she stands by the breakfast-table, sees them as they enter; the beautiful girl, the broken down dying man—and the paper flutters out of her hands and lies unheeded at her feet, as she faces them in surprise too great for words, growing white to her lips.

Reginald Lester sees his sister's face as she turns towards him in its startled pallor and terror, and he tries to say a few words as he holds out his hands to her, but the fictitious strength, born of excitement, which had sustained him during the long northward journey, and had given him strength to find his way from the station to the Hall the previous night, dies away, and he sinks forward helplessly at his sister's feet in a dead swoon.—To be continued.

BRIC-A-BRAC.

"FETCH THE PIE."

A pretty little anecdote about Patti is told by a Vienna paper. In the year, let us say 18—, Adelina Patti was a charming young girl in the first bloom of beauty. It is not necessary to refer to portraits or anecdotes in order to know this, as it is quite sufficient now to see her and hear her sing. Well, at that time Berlioz was one of her most ardent admirers. One evening, after dinner, Patti requested him to write something for her in her album. "Two lines, or only two words," begged the charming singer, with her most bewitching smile, as Berlioz did not seem inclined to grant the request. At last Patti said: "If you will do what I desire, you can make your own choice. You can either have a kiss from me, or one of those pies from cook of which you are so very fond." Berlioz at once took the pen and wrote on one of the leaves of the album the two words, "Oportet pati." "But I don't quite understand this," said the diva, a little perplexed. "Oh, that is cook's Latin," answered Berlioz, slyly laughing. "It means, 'Fetch on the pie.'"

De Summer's gwine fast away,
  Dis hotness cannot last;
The 'skeeter's hum will soon be o'er,
  De flies be wid de past.

Dis world am but a flestin' show,
  We cannot tarry here;
We lib a while, den go away
  Upon de solem bier.

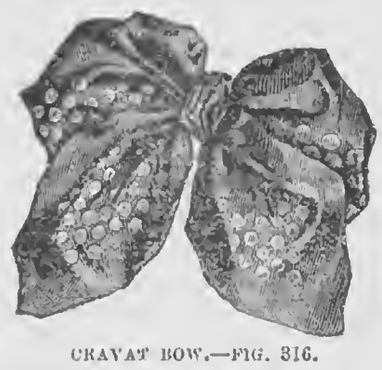
De watermellyon am deceit,
  Persimmons cannot stay;
Cold chicken pie can't keep us heah
  When we are called away.

Our Sunday cloze am wanity,
  Our money am—

The clerk of the court bade the witness give his name, age, etc., and hold up his hand to be sworn. He took the oath with such dignified composure and deliberateness that every one felt that there stood before them a calm, self-poised, truthful man, whose evidence would go far to settle the minds of the jurors in this sensational case. There was a murmur as every one settled himself to drink in his testimony. "Now, sir," said the judge, "be good enough to tell the jury what you know about this important case." "I don't know anything about it," said the witness, blandly. "Don't know anything about it? Then why did you have yourself summoned as a witness?" "So as to get a good seat where I could hear and see everything—tickets wern't to be had for love or money."

THE SERENADE.

"I will stay," he sang, "and will sing my say,
  While slumber seals your eyes;
And the still deep night will see me stay
  Under the starlit skies,
I will wake and sing till the morning star
  Shall glow in the eastern sky."
But he didn't; her "pa" came out right thar,
  And "lifted" him nine feet high.



CRAVAT BOW.—FIG. 316.

A college professor encouraged his geology class to collect specimens, and one day they deposited a piece of brick, streaked and stained, with their collections, thinking to impose upon the doctor. Taking up the specimens, the professor remarked: "This is a piece of baryta from the Cheshire mines;" holding up another, "This is a piece of feldspar from the Portland quarries; and this," coming to the brick, "is a piece of impudence from some member of this class!"

BEAUTIFUL SKIRT.

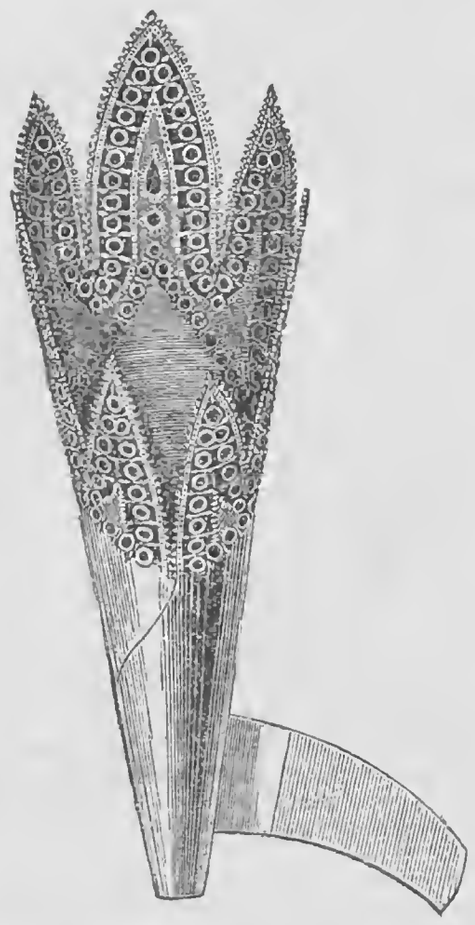
Oh, skirt! beautiful skirt!
Jerked through the dust and dragged through the dirt!
  Once you were white
    As the mantle of snow,
  And the leaves of the lily
    When spring zephyrs blow.
Stiff to the touch and fair to the eye,
Neat to the gaze of each passer-by;
  Now tattered and spattered—
    Oh! piteous wrong,
  Beautiful skirt,
    They made you too long.

It is reported that a reverend D. D. when passing along Church street, heard a woman shout out to her little boy (who was working in the middle of the street with mud and water), "You little devil, what are you doing there?" The D.D. who had been unperceived) went silently up to the woman and said, "Are you the mother of that child?" at which the reply was, "Yes." After viewing her from head to foot, he exclaimed rather loudly, "I never saw the devil's mother before," leaving the said devil's mother somewhat astonished and bewildered.

THE MAIDEN AND THE BEE.

"A cottagen leaned whispering by her hives,
  Telling her bees some news, as they lit down
  And entered, one by one their waxen town."
—*Jean Ingelow's "On the Borders of Cannock Chase."*

And presently a bee, a great big golden bee,
That appeared to be the watch-dog of the trea-sury,
Shot like a ball from out the waxen town,
And on the nose of cottager serenely sat him down,
Saying; "Excuse this liberty, O pretty maid divine,
But I have news to tell thee, in return for news of thine."
The maiden didn't linger long a-whispering to the bees;
But struck a frightful galopade, her hair upon the breeze,
And the howls that she emitted, as she danced and pranced and ran,
Were heard, the neighbors tell me, clear from Beersheba to Dan.—Cincinnati Enquirer.



BOUQUET HOLDER.—FIG. 317.

At a party not long since, where questions were asked, and facetious if not felicitous answers were expected, a coal-dealer asked what legal authority was the favorite with his trade. One answered, "Coke." "Right," said the coal-dealer. Another suggested, "Blackstone." "Good, too," said the questioner. Then a little hard-faced man in the corner piped out, "Little-ton." Whereupon the coal-dealer sat down without saying anything.

For Women.

CONDUCTED BY MISS RAY CLARK.

WEAVING THE WEB.

"This morn I will weave my web," she said,
  As she stood by her loom in the rosy light,
And her young eyes hopefully glad and clear,
  Followed afar the swallow's flight.
"As soon as the day's first tasks are done,
  While yet I am fresh and strong," said she,
"I will hasten to weave the beautiful web
  Whose pattern is known to none but me."

"I will weave it fine, I will weave it fair,
  And ah! how the colors will glow!" she said,
"So fadeless and strong will I weave my web
  That perhaps it will live after I am dead."
But the morning hours sped on apace;
  The air grew sweet with the breath of June;
And young Love hid by the waiting loom,
  Tangled the threads as he hummed a tune.

"Ah! life is so rich and full," she cried,
  And morn is short though the days are long!
This noon I will weave my beautiful web,
  I will weave it carefully, fine, and strong."
But the sun rose high in the cloudless sky;
  The burden and heat of the day she bore;
And hither and thither she came and went,
  While the loom stood still as it stood before.

"Ah! life is too busy at noon," she said;
  "My web must wait till the eventide,
Till the common work of the day is done,
  And my heart grows calm in the silence wide!"
So, one by one, the hours passed on,
  Till the creeping shadows had longer grown;
Till the house was still, and the breezes slept,
  And the singing birds to their nests had flown.

"And now I will weave my web," she said,
  As she turned to her loom ere set of sun,
And laid her hand on the shining threads
  To set them in order, one by one.
But hand was tired, and heart was weak;
  "I am not as strong as I was," sighed she,
"And the pattern is blurred, and the colors rare
  Are not so bright or so fair to see!

"I must wait, I think, till another morn;
  I must go to my rest with my work undone;
It is growing too dark to weave!" she cried,
  As lower and lower sank the sun.
She dropped the shuttle; the loom stood still;
  The weaver slept in the twilight gray.
Dear heart. Will she weave her beautiful web
  In the golden light of a longer day?

DESCRIPTION OF CUTS.

Fig. 316.—Cravat Bow. The bow is of ruby satin, dotted with cream color, but the design may be followed out in the use of many other colors and kinds of material. The above however, is one of the fashionable combinations.

BOUQUET HOLDER.—FIG. 318.

Figs. 317 and 318.—Holders for button-hole and girdle bouquets. These holders are made of heavy white paper, in the form of a cornflower. The cuts represent the natural size.

PIC-NICS.

Pic-nics are all well enough in their way, but why will people give them in such terribly warm weather.

I attended one a few years ago (don't imagine it was my first, for I have a long experience), and don't think I can be tempted to attend another soon. Up two hours earlier than usual, dressed "on time," swallowed a hasty breakfast and went off in a frantic hurry. It was a "church affair," so we repaired thither; finally the word was given and we were marched off, two-and-two, for a walk of at least a dozen squares, on the sunny side of the street (and it was just exactly three-quarters of an hour after the appointed time). Once on the boat, we really had a pleasant time, only landing every other square to wait for, and take on, belated pic-nicers. Then the singers got in a corner and murdered an innumerable amount of Sunday-school songs, and the enthusiastic base-ball players must have a game played over our heads.

All these, however, were trifles; you should have witnessed our landing, *that* was worth the pencil of Frank Leslie's, or some other, caricaturist. Such pushing, running and jumping; such a sudden display of activity by dignified elderly people was never before witnessed. If the captain had given us but three minutes to land in there could not have been more haste.

But it did not end there, for they went running and yelling along the sandy shore, like a lot of lunatics just escaped.

We had to walk the distance of about two squares in the hot sand, and then be pulled by the arms and pushed on the back up the most outlandish steep bank, where once landed in safety, many were off at a break-neck pace. Some of us were unfortunate, most especially I, for the young man below did not push at the right moment while the young man above pulled with a will, and as I am no fairy in weight the consequence was, the gent above took a seat suddenly, in preference to coming down face-forward, and I "bit the dust" in a manner neither graceful nor funny (to me at least). Helping hands were extended, and I was landed on terra firma with my hat jammed down over my face, my dress soiled, my fan broken and the sound of "giggles" in my ears.

These also were mere trifles; so brushing off the dust and squaring my hat, I trotted off with the rest.

We had barely reached the spot destined for our days pleasure (?) when some simpleton began pitching "bean bags;" this was splendid sport, we all agreed, and immediately formed into an immense circle, with a half-dozen bean bags flying around; for convenience we got into an open space, in the hot sun, of course, and I had forgotten my gloves. It was very pleasant and exciting at first; that tall young gentlemen *would* pitch the bags clear over my head, and away I would gallop, grab it—miss it—try again, and raise my head just in time to see another go whizzing by. My arms ached, the perspiration poured from my red face, but I was not going to be the first to give up, so I kept bravely on, and could not help feeling vexed when the handsomest gentlemen in the ring sauntered off with—I was going to say—the handsomest girl, but I take it back, for she had red hair and freckles; it was her *dress* that was the handsomest, and I don't care how much men may rave about woman's extravagance in dress, take nineteen men out of twenty, and put them in company with two young ladies, one intelligent and sensible, but plain in face and dress, the other gay, showy in dress and a regular flirt, to whom common sense is a stranger, and those nineteen men will all bow down and worship number two, leaving her companion to the twentieth man, who, I may as well remark, is not always to be found; he is a myth, generally speaking.

They will all tell you how much they admire and respect a plain, sensible girl, and all that sort of thing; but I am of the opinion that the reason so many plain, sensible girls are slighted is that the men who do it have not the *sense* to appreciate them.

But I am digressing! Dinner time came at last, and after choosing six or seven different places, we finally selected a spot on which to demolish the contents of our baskets. What a grand day it was for the bugs and ants! they came in whole droves, like "Parson Hardbake"—to "sample our cookery." The butter was melted to oil, there was too much water in the lemonade, some one got the cake I wanted, and above all, it was unmercifully warm.

Just as we got under full headway, the sun crept around the tree, and shone full in our faces, and we finished dinner under an umbrella. Then a kindly disposed person dropped a piece of ice down my back; it was cool, but decidedly uncomfortable if allowed to remain in one place.

After the feat of eating dinner was accomplished, another simpleton (they always attend picnics,) proposed games, and we commenced with "dropping-the-handkerchief." Round and round we ran having a "splendid" time, until one lady caught her foot, and measured her length on the ground; two gallant gents flew to her aid, and as they lifted her up, she hysterically gasped—"I'm not hurt!" I don't suppose she was; she had severely skinned her chin, knocked her nose a trifle to the left, and had her mouth full of dirt. But the poor thing had torn her dress and stained it with grass, besides knocking her hat entirely out of shape. She had courage worthy a better cause, for she made three more trips around the ring, and then went off for a "drink of water." I wanted a glass of water soon afterwards, and I just *happened* to to find her sitting on a log, crying dismally. Poor thing! I suppose she was tired.

Then a friend (?) asked us to go boating and we eagerly assented; we started happy, and came back miserable. Our feet were wet and muddy, our skirts draggled, and we had been in mortal terror of drowning. The sun glared on the water, the sentimental ones sang boat songs, and the oarsman splashed water on us.

And the swing; of course you must try that when you go to a picnic, even if you haven't been in one for ten years. How frantically I grasped the rope with both hands, how sick I was, and how those girls did laugh at me.

Thank heaven, it was over at last, and I was home, tired, sick, dirty, torn, draggled, and hungry, but telling every one I had had a splendid time. Need I speak of the next day, when I could not raise my hand to my head? You who have "been there," know how it is, so I refrain.

ALLINE RAY.

MISS IRENE'S IDEAS CONSIDERED.

I notice in the issue of Aug. 28, page 559, a brief article over the signature "Miss Irene." She seems to think "the majority of husbands are failures; although before marriage, angels."

Well now, I have been an old maid nearly thirty years; and for one of the best of reasons. I never had an offer, and yet I am cheerful and hopeful.

I am compelled to differ most respectfully, with old maid, No. 1, in nearly every other particular. I admit there are crabbed censorious husbands, but they are the exception. Nine-tenths of the husbands in the circle of my acquaintance, (I wish

I had one) are entirely different from Miss Irene's *expressed* views of them.

I do not believe, that tillers of "Mother-earth" are thereby made heartless and rough. I can hardly credit Miss Irene's sincerity when she says, "that is the principle reason she did not marry some years ago."

It has been said, that old maids are the salt of the earth. In a certain sense it may be true, but the trouble is that somehow or other too much pepper or mustard gets into the salt. Perhaps in Miss Irene's case, this discovery was made by somebody? before he was caught, and he respectfully discontinued his amour'—— and it seems Miss Irene failed in all her modest, maidenly attempts to "bring him back to a realizing sense of his sin of omission."

Miss Irene uses strong language; every sentence has snap in it. She speaks of "thousand wants, sleepless nights, anxious days, husband cross as sin, struggling with dirt, &c., and one nervous little woman to wrestle with it all." Oh my!!

Now I mistrust, just a little, that Miss Irene, even now at this late day, (if she had an opportunity) would take the chances and wrestle with them all manfully, rather than to wrestle all alone with her dear self, I know I should.

Miss Irene closes her talk on what she "knows about husbands, (she don't know anything) in this language. "Ah! some of these husbands deserve —— deserve to be in hearing of an old maid's voice, at its crucifying pitch, once a week."

Facts prove, that men choose to remain in celibacy, or go to purgatory than to run the risk of tying themselves to screeching, toothless, one-eyed, cast-iron old maids. OLD MAID, No. 2.

New York.

DINNER HINTS.

THE laying-out or decoration of the dinner-table may be considered more a matter of taste than of etiquette; but still there are certain things which ought to be attended to.

Whether the dinner be a large or small one, luxurious or plain, absolute cleanliness is the first essential. The linen should be spotless; the cloth itself smoothly laid, and free from creases or wrinkles; the napkins neatly, but not elaborately folded; the glasses, spoons, forks, knives, brightly polished; the plates and dishes without a speck. No one thing adds so much to the enjoyment of a dinner as this. A zest is given to the homeliest of food, while the richest and costliest of dishes are spoilt by an untidy plate, a stained or a tumbled tablecloth, or imperfectly-cleaned knives and forks.

The dining-room should be well, but not too brilliantly, lighted. It should be comfortably warm, but not hot, or many guests may experience discomfort before the meal is over.

The word "cover," in the phrase "covers were laid for six or twelve," signifies the appointments placed on the table for the use of each of the guests. These, in large and small dinner-parties, consist of:

Napkin at each place.
A tablespoon for soup.
A silver knife and fork for fish.
Two large knives.
Three large forks.

Sometimes a tumbler or goblet is added; but it is more usual for these to remain on the sideboard in readiness to be handed to a guest if asked for. The silver knife for fish is not essential, but it is a great comfort and convenience.

Knives, forks, and spoons for dessert do not form part of the cover. They are not placed before the guests until the dessert is about to be handed round.

It is probable that more than two large knives and forks will be wanted, but it is not usual to place more than three, including the fish-knife, when the table is set out. Extra knives and forks are kept in readiness, and are handed to the guests as they are required.

The knives and forks should never be placed lengthwise on the table, but in a position ready for use at each side of the place to be occupied by the plate.

ABOUT WOMEN.

THE Queen of Spain lately gave birth to a daughter.

MRS. PROFESSOR CORSON, of Ithaca, N. Y., will have charge of the art department in Wells College this year.

MISS MYRA REYNOLDS, valedictorian of the last class at Vassar College, has been selected to fill the position of teacher of English.

THE marriage of the Baroness Burdett Coutts will probably not take place before six or seven weeks from now. It is doubtful whether Mrs. Money, her sister, will consent to allow her to remain at the head of Coutt's Bank after the marriage.

A FREE excursion to Rockaway was given recently to the New York sewing girls by the owner of the Grand Republic. The steamer was well filled with many hundreds of these girls and their friends, who enjoyed a rare day of happiness, such as comes not often in their monotonous life.

CORRESPONDENTS' CORNER.

To the Editors of the RURAL NEW YORKER:—I have been a reader of your paper since January last and am well pleased with it, and having seen the cut of those fans No. 258 in the issue of August 7th, I would like to know where I can get one and what it will cost for one or both. Please answer as soon as convenient. From a well wisher and constant reader. J. B. F.

[The feather fan mounted on pearl can be obtained for $10.75; on bone for $2.75. The smaller one for 50c. We will purchase for you if wished.—Eds.]

Please tell us through your paper where we can buy linen thread and braid for braiding patterns, white, gray or brown. I take the RURAL in connection with Ehrich's Fashion Magazine. The seeds you sent 1879; the Acme tomato and Beauty of Hebron potato were of real value to us.

Wishing you all success,

N. Y. J. M. L.

[The braid and thread can be purchased at almost any fancy store, and no doubt can be secured by applying to Ehrich's.]

No one can be sick if the stomach, blood, liver and kidneys are well. Hop Bitters keeps them well.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN THOUGHTS FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

IT is a popular idea that no apples will make jelly but crab apples, and I give as my own opinion that the Siberian Crab stands first for fine color and its own peculiar flavor. But when this cannot be procured it may be unknown to some housekeepers that any red-cheeked, tart apple, especially the Famcuse, Strawberry and others of that quality and color, can be utilized in this way, the smallest specimens serving for this purpose. Indeed, when peeling large apples in quantity, the *skins*, if peeled rather thick, are useful for making a very fair jelly, though it seems unnecessary so to use them when they make such fine, pure vinegar. I know a noted housekeeper who lives within earshot of that Great Babel where the RURAL is published, who, by keeping a jar for apple parings, never buys vinegar, although she puts up large quantities of pickles. The vinegar was a very pale red and of fine flavor, while it was safe from the many adulterations to which this useful condiment is subjected. Apple parings, warm water with a very little brown sugar and a weight to keep the ingredients under cover, that was all that was necessary and it certainly is a great saving where much vinegar is used. Speaking of pickles, I suppose every one knows that nasturtium seeds, and green and unripe pods of radish seed are a great addition to the pickle jar, as are also bits of the outside stalks of celery, adding a flavor that is otherwise unknown.

DOMESTIC RECIPES.

Cider Jelly for the Sick.

One pint of clear sweet cider, one package of Cox's gelatine, two pounds of white sugar, one pint of cold water, one quart of boiling water, juice of two lemons and the grated rind of one. The gelatine must be soaked in the cold water one hour. To this add the sugar, pour over it the boiling water, stir until dissolved, pour in the cider, strain through a flannel bag, wet your glasses or molds in cold water, pour in the jelly, and set away to cool; make several hours before wanted for use. This also makes a very nice dessert for persons in health. MARY B.

To Color Butter.

The bought coloring matter that I have used for several Winters, I have always mixed in with the cream just before churning. The past Spring when complaining to a friend that while we had beautiful golden butter, our buttermilk was so yellow that we did not care to drink it or use it for cooking purposes, she asked why we mixed it with the cream at all? Why not color the salt? I must confess I had never thought of this before, but since I have tried it, I see no reason for returning to my old method. The deepness of color of the salt must depend upon the lack of color in the butter. Thoroughly incorporate it with the butter—it does not show the color at once—let stand over-night and in the morning just work it through before packing or making into prints. MRS. L. BRADY.

Rolled Jelly Cake.

If Mrs. C. C. will try the following recipe for jelly cake, I do not believe she will ever again think her cake not as nice as she has eaten. Beat the yelks of 12 eggs with one pound of pulverized sugar, add the whites beaten to a stiff froth with three-quarters of a pound of flour, which has been sifted three or four times. The whites and flour should be stirred in alternately, a little at a time. Have some shallow tin-pans, 12 by 18 inches and an inch deep; line with thin, brown paper—do not grease—pour in batter, spread out with a knife and bake in a good oven. When done take out, let it get somewhat cool and turn out upside-down. Wet the paper with a soft cloth dipped in water and pull off. Spread with jelly and roll up, being careful to place the outer edge against something so that it will not unroll. Sprinkle with powdered sugar. Use no baking powder, as that makes it too brittle to roll. The paper lining should be larger than the pan so that you can take hold of it in turning out.

That Jelly.

I should advise bringing it to the boiling point, letting it rest two or three minutes; turn out and stand in a *cool* place. MRS. L. J.

Canning Tomatoes.

Fifteen years' experience in canning tomatoes has taught me a few things which, perhaps, the ladies of the RURAL would like to know. First,—the tomatoes should not be over-ripe; they should be firm enough to pare with a sharp knife, and should not remain off the vines over-night before being used. Do not scald them to get the paring off, as that alone will help to start fermentation. I always select for canning those that are yet green near the stem. Boil until heated thoroughly through; turn into any good self-sealing glass (I prefer the Little Mason); screw down the lid as tightly as you possibly can immediately, and if, when cold, you can tighten it more, do so. Set in your cellar and keep from the light; and your tomatoes will come out as fresh in January as when put in, and not have that half-sour taste which Mary Wager-Fisher's had. JANE D. M'ELRATH.

To Clean Zinc.

Put on the zinc a little sulphuric acid and rub over with a cloth so that every part is wet. Afterward wash off with clear water, and then the zinc will be bright and clear.

Pickled Peaches.

Take fine free-stone peaches, rub with a woolen cloth to remove the down, and put into a brine made of one-half cup of salt to a gallon of water—it should be cold—and let stand nine days. Then wipe them dry, pack in a jar, and cover with cold vinegar (spiced if you choose). When wanted for table halve them, removing the stone, and sprinkle with sugar. I think them very nice.

MRS. M. A. PARSONS.

Tomato Catsup.

Scald and run through a sieve half a bushel of tomatoes. Add three tablespoonfuls of salt, one tablespoonful of red pepper and one of black pepper, three tablespoonfuls of mustard, two of cloves, one of allspice, one pint of vinegar, two green peppers and two onions chopped fine. Put cloves, allspice, peppers and onions in a muslin bag; put all in a kettle and simmer four hours, or until as thick as desired.

Chili Sauce.

One dozen fair-sized onions, twenty-four ripe tomatoes, four teaspoonfuls of salt, eight of sugar, three of ground cloves, four of cinnamon, two of ginger, one of ground black pepper, two of mustard, two and one-half cups of vinegar. Chop tomatoes and onions fine, add spices; boil two and a half hours. Add vinegar, hot, after the ingredients have boiled one hour.

Sugar Cookies.

One cup of butter, three eggs, one cup of sugar, one teaspoonful of baking powder sifted into flour; enough flour to roll out thin. Flavor with lemon, vanilla, or nutmeg.

Clove Cake.

One cup of sugar, one of molasses, one of milk, one of lard, one of raisins, one teaspoonful of cloves, one of cinnamon, two of baking-powder, two eggs; flour to thicken about as ginger-bread.

Ginger Snaps.

One pint of molasses, one cup of shortening, one cup of brown sugar, one tablespoonful of soda, one-half cup of boiling water, two tablespoonfuls of ginger. Mix stiff and bake in a quick oven.

Molasses Cake.

One teacupful of molasses, one egg, one teaspoonful of soda, one cup of sweet milk, one of shortening. Mix enough flour to make of right consistency.

Mountain Cake.

One pound of flour, one of sugar, one-half of butter, one cup of sweet milk, six eggs; beat whites separately, two teaspoonfuls of baking powder. Bake as jelly-cake, with icing instead of jelly. MRS. NICHOLS.

QUESTIONS ANSWERED.

Crystallizing and Coloring Grasses.

WANTED—Recipes for the above.

D. H. BILLINGS.

ANS.—For coloring grasses we have found nothing better than Leamons' Aniline Dyes. As to crystallizing them, we gave directions in RURAL of Oct. 18th, page 680, 1879, which we will republish. They are as follows:—

Dissolve 18 ounces of alum in a quart of water, heating it over a slow fire in a covered tin, and stirring it occasionally with a stick until dissolved. When nearly cold, suspend the grasses to be crystallized by a thread from a small stick laid across the mouth of a deep glass or earthen jar into which the solution is poured. Let remain in the alum water 24 hours; take out and suspend in the shade to dry. The crystals will be larger if the solution is allowed to become almost cold before putting in the grasses.

Miscellaneous.

ST. JACOBS OIL
TRADE MARK.

THE GREAT GERMAN REMEDY.
FOR
RHEUMATISM,
Neuralgia, Sciatica, Lumbago,
Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,
Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

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Assets, Jan. 1, 1880 .. $1,137,549 73

FARM for sale, 134 acres, highly improved. Will sell at ⅔ value. Good reasons given for selling. Address, at once, M. PATTERSON, Windfall, Ind.

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Wind Mills.

Halladay Standard.
VICTORIOUS AT
Phila., 1876—Paris, 1878
25 Years in Use.
GUARANTEED SUPERIOR
To any other Windmill Made.
17 SIZES—1 MAN TO 45 HORSE POWER
Adopted by the leading R. R. Co.'s and by the U. S. Govt. at Forts and Garrisons.
$3,500,000 worth now in Use.
Send for Catalogue "B" and Price List.
U. S. WIND ENG. & PUMP CO., Batavia, Ill.

CHALLENGE WIND MILLS
Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merits. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.
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Works in a lighter breeze than any other. Governs itself perfectly. Its operation can not be interfered with by ice or sleet storms. **Well made, Strong, Durable.** Illustrated circulars of all our goods sent free. Address MARSEILLES M'F'G. CO., Marseilles, La Salle Co., Ill. Send for Catalogue "C."

IMPROVED CALIFORNIA WIND MILL.

Simple, Strong, Durable, Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers, CLARK & CO., SOMANAUK, ILL.

News of the Week.

HOME NEWS.

MONDAY, Sept. 27, 1880.

A misplaced switch on the 22d threw an engine and six cars from the track on the Rome, Watertown and Ogdensburg Railway.....Benjamin Westmoreland, aged 72, of Dinwiddie county, Va., was thrown from his wagon and fatally injured on the 21st.....A fire in Cincinnati destroyed the Marmet coal elevator and some machine works adjoining. Loss, $62,000; fully insured..... ....Wood fires are destroying considerable property in the vicinity of Kewannee, Wis..... Several stores in Denver, Col., were damaged by fire to the extent of $60,000 on the 22d.....William Evans was instantly killed on the 22d in a colliery near Pottsville, Pa., by a fall of coal.... ... At the wedding reception of Dr. Simeon Denton and bride, of Hancock county, Ill., some of the invited guests were dangerously poisoned. The theory is that a drug was introduced into water, of which they drank freely. Medical aid was summoned and antidotes were administered. Some were alarmingly ill and vomited blood, but no deaths.....The Cheyennes are again reported to be in a threatening attitude in the Indian Territory.....The fourth annual reunion of the Army of West Virginia was largely attended at Parkersburg.....Mrs. Leonora Borg and three children were poisoned by eating smoked salmon in New York on the 22d. One child may die.... ....The body of one of the men killed in the Hudson River tunnel was found on Tuesday evening. Little more than the skeleton was left..... Silas M. Waite, the absconding President of the First National Bank of Brattleboro, Vt., whose defalcation amounts to $450,000, was captured at Omaha on the 21st.. .....The first order for silver certificates based on a gold deposit in New York was received by the United States Treasurer on the 22d. It was for $25,000, the certificates to be paid in St. Louis at the Sub-Treasury.....Sadie White, aged 19, a daughter of Hugh L. White, of Richmond, Ky., and generally designated as "The Belle of the Blue Grass Region," committed suicide on the 22d, by cutting her throat, while temporarily insane.....John C. Cahill, late postmaster at Bucatunna, Miss., was arrested on the 23d, by Post-office Inspector John A. Galbreath, charged with opening registered letters from his office; also with paying debts and buying goods with postage-stamps, contrary to the law forbidding postal employes to do so.....The Indiana Encampment, G.A. R., and the Soldiers' Reunion, convened in Indianapolis on the 22d.....At Las Vegas, Col., Sept. 22, Samuel Matthews, while under the influence of liquor, killed a lady acquaintance and committed suicide. No cause for the act is assigned.....The pickets at Corning, Ohio, were fired upon by the strikers on the 22d. They returned the fire, but, as far as can be learned, no one was injured. It is said most of the miners living at Corning would return to work at the sliding scale of prices but for fear of vengeance from their associates in the miners' union. At the suggestion of the Sheriff of Perry county the New Lexington Guards, who had a skirmish with the strikers on Sunday last, were relieved from duty and ordered home. The two other militia companies will remain on duty for the present.....The centennial celebration of Maj. John Andre's capture at Tarrytown, N. Y., occurred on the 22d. The day was celebrated by the ringing of bells, salutes from men-of-war in the harbor and cannon on the hill-tops and a grand procession, including the 71st and 22d New York regiments, the 7th brigade of the State militia, and the Hartford (Ct.) foot guard. There were also exercises in a big tent, Samuel J. Tilden presiding, Orlando B. Potter reading a historical sketch and Chauncey M. Depew delivering the address. A bronze statue of a revolutionary soldier will be unveiled on the spot where Andre was captured.....The 12th reunion of the army of the Cumberland opened at Toledo, Ohio, on the 22d, some 500 members being present, including Gens. Garfield, Sheridan, Prouty, Cist and Meissner.

At the School Commissioners' election at Binghamton, N. Y., 147 women voted.....James S. Grover, a prominent citizen and merchant of Oak Creek, Wis., hanged himself, on the 20th.... ....J. Tarault'z's stove and hardware factory at Graytown, O., was destroyed by fire, on the 20th. Loss, $20,000; insurance, $8,000.....Internal Revenue Deputies Lowe and Eliot report from Calhoun county, Alabama, that they attempted on the 19th to arrest Joseph Little for illicit distilling, when the latter thrice shot and badly wounded Lowe.....A committee of prominent lawyers at St. Louis, after examining the law on the subject, has reported that Oklahama is public land, and comes within the pre-emption and homestead laws..... The King & Curtis elevator at Kellogg, Ia., worth $11,000, was burned on the 19th, together with 10,000 bushels of wheat and 4,000 bushels of corn. Insurance, $4,000 on the building and $1,000 on the grain.....The Cabinetmakers' Union furniture factory and lumber yard at Tell City, Ind., together with a number of small dwellings occupied by workmen, were destroyed by fire on the 18th. The lumber was valued at $50,000. The total loss is placed at $200,000.....It is said Major Walsh, of the Manitoban mounted police, has secured Sitting Bull for three years for a company of Canadians, who propose making a tour of the United States and Canada with him, commencing on the 1st of January. He will appear in a border-life drama.

The Presbyterian church at Green Bay, Wis., 60 dwellings, some of them the best in the city, and 30 barns were burned on the 20th, the flames only stopping at the river; loss $170,000, insured..... Memphis celebrated the continued good health of the city with a business and trades procession over three miles long.....Western Reserve college at Hudson, Ohio, with an endowment of $250,000, is to be removed to Cleveland and its name changed to Western Reserve University, to secure $500,000 offered to it by Amasa Stone of Cleveland on those conditions... .....Mrs. Hazzard of Monticello, Ill., gave birth to five babies on the 18th. They are all alive..... ...October 2d has been fixed for the laying of the corner stone for the obelisk in Central Park, New York. The Masons have been invited by Grand Master Anthony of New York to turn out en masse..... The soldiers' monument in Antictam cemetery was unveiled on the 17th with imposing ceremonies and in the presence of a large number of spectators. Mr. M. Brosius delivered the oration..... There has been a very heavy increase in exports at New York recently. Last week the amount was $12,798,658, more than five millions greater than for the corresponding period last year.....Two Indians, a Navajo and a Ute, in New Mexico, became enamored of the same maiden. To settle the vexed question they resolved to imitate the white man, and had recourse to a duel with knives. One was killed and the other seriously wounded..... Boston celebrated her 250th birthday, on the 17th, in a big, hearty and successful manner. The Journal says of it: "The weather was all that could be desired, the crowds were immense and orderly, very few intoxicated persons were visible day or night, good nature generally prevailed, even in the most densely crowded streets, the procession started promptly on time, and the whole affair was creditable to the city."

At the depth of 1,400 feet an artesian well at Little Rock, Ark., has developed a strong vein of salt water which rises to a hight of 700 feet in the well.....Work on the harbor at Michigan City is rapidly progressing. This movement will help make that port one of the most important on the lakes, and nearly the entire lumber shipments of the South will be transferred to the railroads centering there.....Howard and Denig, contractors for the new Indiana State House, are paying all their employes in gold. The men at the Statehouse building numbering 200, were, on the 10th, paid their wages for the month of August, amounting to $7,000, in gold. An additional $5,000 of the same coin, just from the mint, has been provided for the pay-rolls at the brickyard and the stone quarry.

The contract for the monument of the late Senator Morton of Indiana, to be set up in Indianapolis, has been awarded to Simmons, of Rome. His model is represented as standing on a granite pedestal, and on the steps of the monument proper the Goddess of Liberty sits holding the American flag half-furled. This figure is to be removed on the suggestion of the committee, On three sides of the square laurel wreaths are entertwined with the Union Jack, and on one is a cannon and sword. Morton is represented as speaking, with his right hand in gesture, dressed as he was accustomed to dress, in a frock coat. The cost of Simmon's statue will be about $20,000.....The earnings of the different railroads throughout the United States for the month ending with July were $29,000,000 larger than for the corresponding period of last year.....The Texas Pacific railroad has inaugurated a grand immigration scheme and proposes to bring from Europe this year 10,000 German and Scandinavian farmers to settle upon its lands.

Larkin G. Mead, sculptor, has just shipped to America the models for the two remaining bronze groups for the Lincoln monument at Springfield, Ill. He is now engaged on studies for a statue of General Sutter, the California pioneer, at whose mill gold was first discovered in that State, and who was recently buried at Litiz, Pa. .....Mr. Mead is also modelling a colossal figure representing the Mississippi River, which is to be presented to the city of New York as an additional embellishment to Central Park by Mr. Elliott F. Shepard. The figure, which is a reclining one surrounded by fruits and animals, is to be executed in white marble.....A gang of five tramps attacked a party of emigrants bound for Kansas, who were camped about 12 miles north of Columbus, and in a skirmish Andrew Mably, one of the emigrants, was shot through the hand. One of the tramps was mortally wounded and carried off by his comrades.

Next Monday, Oct. 4, Mrs. Amelia Lewis will lecture on food and cooking at the Y. M. C. A's Hall, Fulton St. corner of Gallatin Place, Brooklyn, at 8. P. M. Admission 50c. Mrs. Lewis is an English lady who has invented a new system of cooking and is the author of several works on that and kindred subjects.

POLITICAL.

The October elections are expected to give a pretty certain indication of how the presidential election will result.....Georgia will elect, on Wednesday, October 6, State officers and a Legislature, which will choose a United States Senator. It should be noted that Georgia will not elect its Representatives in Congress at the State election, but will choose them on Tuesday, November 2.....Indiana will elect, on Tuesday, October 12, State officers, Representatives in Congress, and a Legislature, which will choose a United States Senator.....Ohio will elect, on Tuesday, October 12, minor State officers, Representatives in Congress, and a Legislature, which, in the case of the election of Gen. Garfield as President, will choose a United States Senator.....West Virginia will elect, on Tuesday, October 12, State officers and a Legislature, which will choose a United States Senator. The people will also vote upon two proposed amendments to the Constitution of the State—one relating to courts, and the other to the right of trial by jury in certain cases. As in Georgia, the Representatives in Congress in West Virginia will be elected on Tuesday, November 2.....It may be added that the town elections in Connecticut will be held Monday, October 4, and that a proposed amendment to the Constitution of the State will be submitted to the vote of the people, the amendment providing that hereafter Judges of the Supreme Court of Errors and of the Supreme Court shall, upon nomination of the Governor, be appointed by the Legislature.

[Rochester Sentinel.]

"Buckwheat Cakes and the Measles."

When a young husband had gone from home and with fond solicitude telegraphed his little wife, —"What have you for breakfast, and how's the baby?"—he received the brief, suggestive reply,— "Buckwheat Cakes and the Measles." We have the report of a case in our midst, not where Measles was in the bill of fare, but where Sciatic Rheumatism confined Mr. J. Dawson, the well-known druggist, to his room for a long period. It was stated to our reporter in the following words: The senior of this firm was attacked with Sciatic Rheumatism December last, and for four weeks could scarcely leave his room. He used St. Jacobs Oil, and is now able to be at his place of business, feeling no worse for his recent affliction. The inference is convincing.

AGRICULTURAL NEWS.

There are now in use in New Zealand, which, not so very long ago, was the subject of Sydney Smith's familiar joke about cold curate on the sideboard, 5,000 reaping machines and more than 1,000 thrashing machines, of which 374 are worked by steam power.....It has been estimated that of the horses in the world Austria has 1,367,000; Hungary, 2,179,000; France about 3.000, 000; Russia, 21,470,000; Germany, 3,352,000; Great Britain and Ireland, 2,255,000; Turkey, about 1,000,000; the United States, 9,504,000; the Argentine Republic, 4,000,000; Canada, 2,634,000; Uruguay, 1.600,000.....The Mark Lane Express of the 20th, in its review of the British grain trade the past week, says: "Rains and floods have greatly damaged the crops still standing in the North of Scotland. As thrashing proceeds it is found, in the midlands especially, that the yield of wheat is considerably below anticipations formed during the brilliant harvest weather. This caused growers to be bolder in resisting a decline. A decided reaction has taken place, raising values one shilling to two shillings per quarter both in London and the country. The supplies of home-grown wheat were comparatively light, but parcels suitable for milling sold readily. Larger millers, however, have not shown such inclination to increase their stocks as they would have done if the improvement in price promised to be the first step to a prolonged rise. There is not much chance of prices attaining but a very moderate level if only subject to the legitimate influences of supply and demand, as the American surplus far exceeds the estimated Old World deficiency. Arrivals at ports of call have been small. There has been considerable business in wheat, both for Great Britain and the continent. Prices steadily advanced, red winter closing 1s 3d@1s 8d and Australian is dearer on the week. Maize was in moderate request at about 3d advance. American red winters generally held above buyer's views, but there has been an occasional advance of 1s per quarter for special shipments. Barley quiet. The sales of English wheat during the week were 44,524 quarters at 39s 11d, against 13,214 quarters at 47s 4d for the corresponding period last year. The imports into the United Kingdom during the week ending September 11 were 1,939,021 cwt of wheat and 240,012 cwt of flour..... Tobacco raising in Pennsylvania has not been carried on many years, but is assuming large proportions. The estimates for the season reach 100,000 cases of 400 pounds each, of which Lancaster county claims 40,000 to 45,000; York, 18,000; Chester, 10,000; Bucks, 5,000; Lebanon, 5,000, etc. Last year's crop amounted to 80,000 cases—about $5,000,000 in value. The plant is chiefly grown in small fields, from half an acre to a few acres each, in some instances reaching 50 to 60 acres. The yield is said to be 1,300 to 2,000 pounds to the acre in most cases, in some instances reaching 2,400 pounds, and realizing about 13 cents per pound, on an average. At this rate the 40,000,000 pounds of this year's growth would amount to $5,200,000. .....The value of breadstuffs exported during eight months ending August 31 amounted to $181,-856, 766, against $137,914,047 last year..... ...Wheat exports in August were 21.787,475 bushels, or 777,-356 less than same month last year.....Corn exports in August were 8,532,180 bushels, or 3,847,-837 more than corresponding month last year.... ....Flour exports in August were 502,858 barrels or 46,500 more than in same month of 1879..... The stock of lard in New York on September 15th, was 32,373 tierces, and at Chicago 75,914, making a total at these two principal points of 108,287 tierces, against 116,220 at New York and 97,850 at Chicago a year ago—a total of 214,070. Decrease, 105,783 tierces.....The International Corn Market was opened at Vienna, Austria, on the 16th inst. Statistics of the crops of the Austrian Empire estimate their condition, taking 100 as the average, as follows: wheat, 98, rye,97; barley, 109; oats, 107. The quantity available for export, reckoned in centals, is estimated 6,000,000 rye, 5,000,000 wheat, 4,000,000 oats.....A despatch from Alexandria, Egypt, reports that the rise in the Nile is quite up to the average, and the prospects of the crops are very satisfactory.....It is estimated that 16,000 people are in absolute need of food in Western Kansas, owing to the failure of crops there this year and last. Assistance is urgently needed and sought in their behalf.... ....A couple of French peasants discuss the fertility of their respective provinces. "At Bordeaux," said one, "if you let a match fall to the ground the next year there will grow up a forest." "At Marseilles," cried the other triumphantly, "you let a suspender button fall, and in eight days you will have a pair of pantaloons ready made."..... The Fiji Islanders, who, up to six years ago, when England adopted them, were cannibals, and indulged in fricaseed traders, with cold missionary on the sideboard, have become so civilized that they wear clean shirts on Sunday, sing hymns, and eat yams and beefsteak like any orthodox Christian. What with cocoanuts, cocoanut fiber, cotton, sugar, and coffee to export, and a luxuriant soil to grow all these products in, the colony ought to have a grand future.

"Maud S." beat "St. Julien" and his remarkable record of 2.11¼ Saturday week, trotting a mile at Chicago in 2.10¾. Her second quarter, made in 30¾, was also the fleetest on record.....Parts of Kansas have been visited by vast clouds of butterflies. They settle in every yard where there are trees, making them look as though the leaves are brown with frost. There are millions of them, of large size, with long, black bodies and brown spotted wings.....The largest sugar producer in Louisiana made last year on 3,200 acres 6,480,000 pounds of sugar and 7290 barrels of molasses, for which he received over half a million dollars. The largest wheat raiser in the world, Dalrymple of the northern Red River country, raised a crop of wheat which sold for $450,000, but it took 23,000 acres of land to raise it on, nearly six times as much as was required to raise the sugar and molasses.....The Gardener's Monthly says the original Seckel pear tree stands on the farm of Mr. Bastian, on the "Neck," between the rivers Delaware and Schuylkill, below old Philadelphia. The tree is a mere shell, about 150 years old, but yet bears a few pears.....The receipts of grain at New Orleans for the year just closed were 8,745,119 bushels of corn and 4,541,393 bushels wheat, against 3,912,569 of the former and 1,643,287 of the latter in 1879.....The assessed valuation of property in Nebraska is $90,000,000,, and out of a total of about 46,000,000 acres it appears that 13,000,000 acres, or nearly one-third the whole amount is now in private hands. The State is rapidly filling up with an enterprising and intelligent class of farmers and others.....An epizootic disease has attacked nearly all the horses belonging to the horse railroads and omnibus companies of Boston and a great many private horses also. The distemper is spreading quite rapidly. It is accompanied by a low fever, and inflammation of the throat and air passages.....An agent of the Delaware Beet Sugar company, with headquarters at Wilmington, Del., has been in Oswego N.Y., trying to buy any beets grown there this season. The people of Wilmington have $100,000 in the enterprise.....The Produce Exchange of this city has addressed a letter to Secretary Sherman stating that the receivers and exporters of butter find that the statistics as to the quantity of actual butter exported are seriously at fault by reason of large exports of oleomargarine as butter. The Exchange informs Mr. Sherman that he would confer a favor not only upon the Exchange, but upon the entire dairy interest of the country, by giving directions to have oleomargarine cleared as such, and not as butter...

...English statisticians say that England will pay $60,000,000 less for foreign grain during the coming year than was paid in the crop year just closing Even with a favorable harvest, however, Great Britain grows but one-half of the wheat it eats and the London Times, more in earnest than in jest, says the English farming, a-field and in the dairy, will shortly be a pursuit which wealthy men may indeed keep up for their amusement, but which no sane man will pursue for profit.....

Great Distress

is often suddenly experienced from an attack of cramp in the stomach, colic or other painful affections for the relief of which nothing is superior to Dr. Pierce's Compound extract of Smart-Weed, or Water-Pepper, compounded from the best French brandy, Jamaica ginger, smart-weed, or water-pepper, and anodyne gums. For diarrhœa, dysentery, bloody-flux, cholera-morbus, its warming, soothing, astringent, and heating properties render it a perfect specific, unsurpassed as an anodyne and stimulating embrocation or liniment. Should be kept in every family. Sold by druggists at fifty cents.

$200,000 Worth of Rifles—The Largest Transaction in Sporting Arms on Record.

A NOTEWORTHY EVENT TO ALL SPORTSMEN.—The Evans Rifle Co., manufacturers of the world-renowned twenty-six-shot Evans rifle (whose factory at Mechanics Falls has been complimented by both American and foreign manufacturers as the most extensive and complete in the world), have taken a signal, and in the face of the advance in fire-arms, a most commendable step. The Evans is the most expensively made, and has hitherto been the highest-priced of all Magazine or Repeating Rifles, embodying as it does a marvelously ingenious action. The Evans is the only repeating-arm in existence carrying cartridges in its magazine for a whole day's sport, and having that magazine entirely concealed within itself *and in the stock*, where the weight should be, not under the barrel, varying the "hang" of the arm with every shot. The Evans Rifle Company have run their factory to its utmost capacity for the past two years, and have thereby accumulated an immense stock of rifles, made at the lowest possible figure obtainable under the most favorable circumstances. The price of the Evans has hitherto been $40 and upwards, and it is well worth it; but now the Evans Rifle Company propose, though it is in the face of a fierce opposition to the trade, to reduce the price of their arm to $18 and $20, thus placing the finest and most complete repeating rifle in the world on the par (pecuniarily) with a common single-shot rifle.

The Evans Rifle Company have transferred their entire product to the warerooms of the well-known Boston house of G. W. Turner & Ross, whose facilities for conducting this immense sale are unsurpassed, and through that firm will be offered over six thousand of the new and latest improved model Evans rifles at half former prices, and the sportsmen of all countries will not be slow in taking advantage of the offer. We refer the reader to the advertisement and the testimonials of such well-known shots as A. J. Boyd, Texas Jack, and others.

"Good Literature."

Is the name of a new weekly paper, about the size of the New York Daily Sun, the first number of which appeared September 23. It aims to be more a literary *news*paper than any of its contemporaries (or any of its numerous dead predecessors), and proposes to depend upon its readers for support instead of upon the advertising patronage of publishers, which is supposed to have been the life-blood (or poison) of literary papers heretofore. No advertisements will be admitted, and no gratuitous specimen copies of books for notice accepted. The editors propose to *buy* the books they write about, and "will try to tell readers of good books what they want to know, that is worth knowing, about books and living literary workers." The price is quite as astonishing as the scheme—50 cents a year—and it is hardly necessary to add that the paper emanates from "The Literary Revolution" headquarters, The American Book Exchange, Tribune Building, New York.

"TYPE SETTING BY STEAM,"

Is one of the items which has helped to spread the fame of "The Literary Revolution," during the past year. While this process has been largely used, much the larger portion of its publications have been produced by the old hand-work methods, machinery not being best suited to all classes of work. Another innovation which will add to the reputation of the "Revolution" and interest many readers, is the establishment of a large printing house in which the work, excepting a portion of the heavy manual labor, will be done exclusively by women. The American Book Exchange will win many good wishers because of this new departure.

A Successful Dairyman

is the one that makes uniform "gilt-edged" butter the season through, and sends his butter to market in perfect condition. The best dairyman all through the country have by long and varied experience found that there is no article so perfectly adapted to keeping up the golden June color, now absolutely necessary in order to realize the best price, as is Wells, Richardson & Co.'s Perfected Butter Color, made at Burlington, Vt. Buy it at the Druggists, or send for descriptive circular.

MRS. LYDIA E. PINKHAM, 233 Western Ave. Lynn, Mass., is rapidly acquiring an enviable reputation for the surprising cures which daily result from the use of her VEGETABLE COMPOUND in all female diseases. Send to her for pamphlets.

$500 will be paid for any case that Hop Bitters will not cure or help. Doubt not.

To Housekeepers.—The attention of heads of families is respectfully invited to the superior quality of BURNETT'S FLAVORING EXTRACTS. They are entirely free from the poisonous oils and acids which enter into the composition of many of the factitious fruit flavors now in the market. They are highly concentrated, have all the freshness and delicacies of the fruits from which they are prepared, and are less expensive.

The Markets.

SPECIALS FROM THE CHIEF CENTERS.

Until Saturday, Sept. 25.

Boston.—BUTTER—Fine butter is scarce, and commands extreme prices, and the best Vermont September made sells at 30c. Northern—Choice creamery, 30@32c ₩ lb; choice New York dairy, 27@29c; choice Vermont, 28@30c; long dairies, 25@27c; common, 17@19c. Western—Choice creameries, 29@32c ₩ lb; fair to good, 26@28c; dairy-packed, 22@26c; choice ladle-packed, 20@24c; common, 17@20c. CHEESE—We know of some fine cheese that cannot be bought below 13¼c, but at the same time very little is sold at this figure, and 13@13½c is as high as buyers are willing to pay. Fine factory, N. Y. and Vt., 13@15¼c ₩ lb; fine factory, Ohio and West, 12½c; fair to good, 11@12c; skims, 7@8c. EGGS.—Eastern, 19c ₩ doz; New York State, 18½@19c; Canadian, 18@18½c; P. E. Island, 18@18½c; Western, 15@17c; egg oats, 36c. POTATOES.—The demand is almost wholly for Rose, which have sold at 50@55c for York State, Vermont and New Hampshire stock, and 55@60c for Maine Central and Houlton. White potatoes have sold down to 45c, and there is not much call for them. Sweet potatoes are in good supply, and the market is dull at $2.25 per bbl for good ones, while poor stock sells lower. ONIONS show no change, and the market is quiet at $3 for yellow and $2.50 per bbl for red. GRAPES are plenty and dull at 4@5c for Concords and Isabellas, 6@7c for Catawbas, and 7@8c for Delaware. APPLES are in abundant supply, and with the exception of choice eating fruit, prices rule low, and $1@1.25 is the price of good shipping apples. A few Cape cranberries have been received, and sell at about $7 per bbl. PEARS range from $2@3.50 per bushel, and choice Seckels will bring $4. Tomatoes are 30@50c a bushel box, according to quality.

Chicago—WHEAT dull; No. 2 red winter, 92@92⅛c.; No. 2 Chicago spring at 90½c. for cash; 90⅝@90¾c. for October; 91⅛@91½c. for November. CORN active at 39⅝@39¾c. for cash; 39@39¾c. for October, 40⅛@40½c. for November. OATS unsettled at 29½c. for cash; 29¼c. for September, 28½c. for October; 28¾c. for November. RYE easy at 83¼c. BARLEY firm at 77c. PORK irregular at $17.75@18 for cash; $18 bid for September; $17.80@$17.90 for October; $12.80 for November. LARD unsettled and lower at $7.67½ for cash and bid for October, $7.85@7.87½ for November. BUTTER—Choice to fancy creamery 29@30c. ₩ lb; fair to good 26@28c.; fine to fancy dairy 23@25c.; good to choice do. 19@21c.; medium to fair do in shipping lots 16@17c.; good to choice ladle-packed 17@20c.; fair to good packing stock, 15@18c. We quote: Full cream, 11@12½; Part skim, 10@11; Full skim, 8½@9¼; Low grades, 6@7. POTATOES—Early Rose were quoted at 40@50c. in lots. Farmers are not bringing in so many, and this gives outside shippers a better chance. Sweet potatoes were in good request at $2.75@3.75 per doz. SEEDS—Timothy strong and in active request. About everything in the way of cash seed taken, and the quality of some lots was quite poor; futures were also in demand. The market was so much better that former asking prices could be easily obtained. Cash, sales were made at $2.25@2.35 for poor to fair; good to prime seed sold at $2.38@2.40, a high grade to very choice recleaned ranged at $2.42 to $2.48; seller September sold in settlement at $2.40; a few cars of seller October were sold at $2.35. Clover ruled dull and nominal; quotations ranged at about $4.50@4.75 for old medium. Flax was in good demand; prices were a shade better and sales were liberal: a good share of the business done was on speculative account; sales were made early at $1.22, on a basis of pure; later at $1.23@1.24, and some at $1.24½, with a high grade at $1.25.

Cincinnati. WHEAT dull; No. 2 amber, 93@95c; No 2 red winter, 95@96c. CORN dull; No 2 mixed, 44c. OATS easy; No. 2 mixed, 32@32½c. RYE dull and drooping; No. 2, 91@92c. BARLEY easier; No. 2 fall, 92c. PORK dull at $16. LARD steady at $7.90@$95. BULK MEATS quiet; shoulders, $5.50; clear ribs, $8.65. BACON in fair demand; shoulders, $5.25; clear ribs, $9.25; clear sides, $9.75. BUTTER—Fancy Creamery sells at 32c, and prime at 30@31c, choice Dairy at 25@27c, choice Western Reserve at 23@25c, prime to choice Central Ohio at 18@21c, and common at 14@16c ₩ lb. CHEESE—There has been a good demand all the week and the market is steady and firm for prime factory at 12½@13c ₩ lb. Some choice mild do. sells at ½c more. SEED—The demand for Timothy continues good, but it is not as brisk as it was a week ago; the market is firm, however, at $2.60@$2.65 ₩ bushel for prime to choice from store, and dealers buy at $2.40@$2.45 for car lots on arrival. CLOVER is quiet; dealers buy round lots at 8c, and small sales are made at 8¼@8½c ₩ lb from store. Dealers buy Flaxseed at $1.00@$1.10 per bushel. POTATOES—The market is quiet at 45@50c ₩ bushel for choice Early Rose on arrival and $1.50@$1.60 ₩ bbl in prime shipping order from store.

St. Louis.—WHEAT.—No. red winter 84½@85. CORN.—No. 2 white 39½. OATS.—No. 2. 29¼. RYE.—No. 2. 85½. BUTTER.—Quiet, but steady; supply scant of desirable grades. We quote: Creamery—choice 30@32c; off-stock at 29@30c; dairy—selections of choice at 26@27c; fair to prime medium 18c to 23c; low 13@15c; near-by country—poor 12@13c; choice 18c to 20c. POTATOES. Unchanged; at 45c per bushel sacked and $1.35 per barrel for Rose or Peerless. Near-by growth in larger receipts—sold mainly at 45@47c. APPLES.—Market almost glutted with small poorly packed, and undesirable shipping fruit; and, as there is little or no sale (no demand whatever for this class of stock, it is almost worthless; choice large red well packed or Bellefleur, meanwhile find sale. Ben Davis at $1.75@1.85, Bellefleur $1..0@1.70, other choice shipping varieties at $1.25 to $1.50. Sales: 200 barrels various at $1.40 do at $1.15 54 choice do at $1.25 del. 100 do do at $1.25 to $1.40.50 Roman Beauty and Redstreak at $1.60, 40 bris choice Roman Beauty at $1.75. PEACHES.—Receipts light. GRASS SEEDS.—Timothy in good demand and steady, at $2.25 for fair to $2 35 for strictly prime in car lots. Sales: 193 sks at $2 28 184 at $2 31, 267 at $2 32, 190 and 77 p. t. 199 at $2.32½, 20 at $2 37, 20 at $2.40. Other seeds neglected. Clover nominal at $4.99. Seed inspection (and grading) has been established in the St. Louis market, to take immediate effect.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Sept. 25. 1880.

BEANS AND PEAS.—The bean market shows no animation; buyers seem awaiting the new crop. White Kidney and pea bean scarce and nominal. Red kidneys dull and mostly of low grade. New not likely to open high. New green peas dull at $1.50@1.55; quality against sales. B. E. peas have fallen to $2.50 per 2 bushel bag.

Marrow beans, prime, $1.65@1.67½; other, $1.50@1.60; mediums, new, $1.55@1.60; old prime, $1.45@1.47½; other, $1.30@1.40; pea $1.55@1.70; white kidney, $1.70@1.80; red kidney, prime, $1.40@1.45; other, $1.30@1.37½.

BEESWAX.—There is little doing with the market unsettled; quoted 23@24½c. for Western and Southern.

Exports for week 1,800 lbs.

BUTTER.—Last prices have been well supported, but the sales at the close have not quite the free or wholesale character of a portion of last week. The scarcity of creamery is its main feature of strength, and many first-class buyers are turning their attention to the fine ends of half tubs and other pails. For this reason selected tubs are quoted higher than before, and sellers are reluctant to break off such tops, even though the new prices have a favorable sound. Cutting up dairies or lots is a bad habit to encourage, but with the busy season coming on sellers dare not risk the loss of a customer. If the latter is allowed to shop much at this season he may stumble upon a nice little line that might make his absence felt for some time. Both State and Western are above steady or speculative export trade. The quality of State is remarkable even as a bulk thus far, as will be seen by the close range. Western brings good figures, being enough under State to attract the market trade and grocers who retail in populous wards where taste is not very discriminate and a few cents is an important feature.

Creamery, fine State, 31@33c.; fine Western, 31@32c.; all good to prime, 29@30c.; fair to good, 27@29c.; poor to fair, 26@27c.; sweet cream, 27@30c.; State firkins, 24@28c.; pails and half tubs, choice, 28@29c.; good to prime, 26@27c.; poor to fair, 25@26c.; Welsh tubs, choice 26@27c.; other, 22@25c.; Western imitation creamery, 24@25c.; dairy, fresh, 24@25c; other, 16@23c.; factory, fine June, 20c.; present make, 18½@19½c.; poor, 16@16½c.

Receipts for week, 33,072 pkgs.; exports do., 9,685 pkgs.

COTTON.—The activity on speculative account has been more general, and dealings in spot rots fair, with prices closing firm.

Latest prices are for September, at 11.71c.; October, 11.20@11.21c; November, 10.99@11c.; December, 11@11.01c.; January, 11.11@11.13c.; February, 11.27@11.28c.; March, 11.42@11.44c; April, 11.57@11.58c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	9	9	9
Strict ordinary	9¼	9⅜	9⅜
Good ordinary	10⅜	10⅜	10⅜
Strict good do	10¾	10¾	10¾
Low middling	11¼	11⅜	11⅜
Strict low middling	11⅜	11⅜	11⅜
Middling	11¾	11⅞	11⅞
Good middling	12⅜	12⅜	12⅜
Strict good middling	12¾	12⅞	12⅞
Middling Fair	12⅞	13	13
Fair	13½	13⅝	13⅝

STAINED.

Good ordinary	8 13-16	Low middling	10 5-16
Strict good ordinary	9 7-16	Middling	11 3-16

Receipts for week, 21,894. Exports do. 17,517.

CHEESE.—The market has worked a little better this week under a stronger export demand and more moderate receipts; 13¼c. is general on fancy factories at the close. The shipments for the week are 46,239 boxes. Quotations are for State factory, fancy, at 13½c.; do. good to prime, 12¾@13c.; do. fair to good, 11½@12½c.; do. half skimmed, 9¾@10¼c.; Wisconsin factory, fine, 12¾@13c.; do. good to prime, 12@12¾c.; do. fair to good, 11¼@12c.; Ohio factory, fine, 12¾@12¾c.; do. good to prime, 11¾@12c.; do. flat, fair to good, 10½@11¼c.; do. poor to fair 9¾@10¾c.

Receipts for week, 68,828 boxes; do. last week, 42,-640.

Exports, 43,194 do.

Liverpool cable, 64s.

Steam to Gt. Britain, 35s.

DRIED FRUITS.—Apples have rather more attention, especially sun-dried lots, for which prices are very steady. Peaches are quiet and unchanged. Small fruits are firm and in demand.

Apples—Old State at 5¾@6½c., new Tennessee at 3¾@4c.; new Virginia at 4@5c.; fancy sliced North Carolina at 6@7c.; evaporated, ring cut, at 8½@9¾c. Old peeled peaches at 8@14c. Blackberries at 8c.; Raspberries at 25@26c. Pitted cherries at 19@20c. Whortleberries at 11c. New Georgia peeled peaches at 16@17c.; new North Carolina peeled peaches at 18@20c.; new unpeeled peaches, quarters at 7½c.; new unpeeled peaches, halves at 8c.

Receipts for week, all kinds, 2,350 pkgs.

Exports for week, 326 bbls. of apples.

It is expected that a higher grade of apples will be wanted for export use this year than formerly.

EGGS.—Receipts for the week, 8,400 bbls.; do last week, 7,100 do. The demand has run remarkably steady with the high prices that have ruled. Canadian and Western form the main supply. States not turning out well. At the close extra fresh Ohio held for 21c.

Near points, 20@23c.; State and Pa. 20½@21½c.; Western and Canadian choice, 20@20½c.; second quality, 19@19½c.

FLOUR.—There has been freer sellers, and prices tending easier on the larger receipts,

Latest prices are: $3.25@4.05, for very inferior to very fancy superfine State and Western; $3 90@4.15 for poor to choice extra State and Western, odd lots and lines; $4.15@4.25 for choice to fancy do.; very inferior to good white wheat, trade and family extras, $4.65@5.50; good to choice do. at $5.60@6.00; (very choice to fancy do. at $6.10@6.35;) red and amber winter wheat inferior to choice trade and family, at $4.25@5.85; round hoop Ohio, $4.25@4.85; and trade and family brands of do. at $4.70@5.85; St. Louis at $4.65@5.40 for inferior to good extra; $5.25@5.85 for good to choice (and $5.85@6.25 for choice to fancy brands); Minnesota clear, inferior to fancy at $3.90@5.25; Minnesota "straight," poor to fancy, at $5.75@7.25, and patent inferior to very fancy at $5.75@6.60; unsound stock at from $3.25@4 85; city mill extra at $5.00@5.25 for fair to very choice for the West Indies; do. for England, $3.90@4.25 for poor to choice spring wheat, and $4.40@5.40 for winter wheat product; do. trade and family extras, $5.25@5.50; do for South America, $5.25@5.65; No. 2 at $2.25@3.50 for very poor to very fancy.

Receipts for week, flour, bbls. 100,650; corn meal, do. 4,175; wheat, bush. 1,492,500; corn, do. 2,195,800; oats do. 271,700; rye, do. 98,250; malt, do. 23,160; barley, do. ——; beans, do., 2,288; rice, pkgs. 2,500.

Exports for the week, flour, bbls., 83,200; corn meal, do. 5,560; wheat, bush. 1,483,722; corn, do. 715,210; oats, do. 4,500; peas, do. 2,775; beans, do. 781; rice, 1,000,

CORN MEAL.—Sales at $3.25 for Brandywine, and $3.50@2.75 for Western.

FRESH FRUITS.—Exports of apples for week, 17,200 bbls. Green lots dull; red sorts firm with a good shipping call.

Mixed Western $1.25@1.50; Fall pippins $1@1.25; Baldwins $1@1.50; greenings 75c@$1; King and Detroit Red, $1.50@1.75; Twenty Oz., $1.50; Gravenstein, $1.50@2. The season has opened up some very acceptable table varieties of attractive color in commercial quantities. Cranberries in light demand and tending lower. Fancy Cape Cod $6.50 ₩ bbl.; poor to choice, $4.50@6; Cape, boxes, $2@2.25; N. J. do. $1@1.75. Quinces in better stock; common $2.50@3; prime $3.50@4, which is lower. Peaches have no offering to speak of; cull 75c. ₩ basket; prime to extra $1@2. Pears are fairly steady. Boston sends almost all the Bartletts, quoted $4@5 ₩ bu. box; Seckles, choice $8@10; common, $4@6; Duchess, Louise bon and B. Dial $4@5; Beurre d'Anjou, $4@6; B. Bosce and B. Clairgeau, $5@8; cooking $2@3. Plums hardly of account; crates 75c.@$1.75 as to quality. Grapes are in good demand and plenty enough to rule cheap. Delaware, cases 18 3-lb boxes $3,50@4; in baskets ₩ lb 6@8c.; Catawbas, cases 18 3-lb boxes $2.50@2.75; baskets ₩ lb 4@5c.; Concords, cases 18 3 lb boxes $1.50@2; bulk ₩ lb 2½@3½c.; Isabella 3c. Salem 5@6. There is more demand for peanuts at late prices; Va. hand picked 5½@5¾c.; extra prime 4½c.; good to prime, 4@4½c.; shelled 5½@5¾c. Chestnuts $6@7 ₩ bush.; Northern better than Southern.

GRAIN.—Wheat has an active demand; the shipments for the week reach 1,350,000 bushels; prices are unsettled.

The latest sales are of No. 1 white at $1.07½@1.08½; do. September, at $1.08; do. October, at $1.06¾@1.06¾; do. November at $1.07@1.07½; do. steamer grade at $1.06@1.06½; No. 2 white at $1.07; ungraded white at $1.01½@1.10½; mixed Winter at $1.04¼@1.05; No. 1 red at 1.10¾@1.11; No. 2 red at $1.06@1.07; do. September at $1.06¾@1.06¾; do., October, at 1.06¾@1.07; do. November, at $1.08@1.10½; December, at $1.09¾@1.09¾; do., steamer grade, at $1.03; No. 3 red at $1.03½@1.04; ungraded red at $1.10¾@1.11; No. 2 Chicago spring, old crop, at $1.04¾@1.05 Rye at 91@93c. Corn is freely offered and closed weak; latest prices are of New York No. 2, at 50¾@50¾c.; do., September, at 50¾c.; do. October, at 51¾@51¾c.; do., November, at 52½@52¾c; do., December at 53c. bid and 53¾c. asked; ungraded mixed Western at 50@51c.; No. 2 white at 52¾c. Oats are at lower prices, with free sellers; latest sales are of No. 1 white at 45¾@46c.; New York No. 2 white at 44@46c.; No. 3 white at 42@43½c.; New York No. 1, 45@46c.; No. 2 at 45@45c.; do., for September at 43¾@44c.; do. October, at 38½@38¾c.; do., November at 38½c. No. 3 at 42@43¾c.; ungraded White Western at 42@46½c.; ungraded mixed Western at 41½@44c.; white State at 46c.; No. 3 Chicago quoted at 44@45c.

HAY AND STRAW.—There is very good demand and prices strong.

Shipping hay quoted at 80c.; medium to prime do., 90c.@$1.15; salt hay at 60@65c.; clover do. at 65@75c. Straw at 90@95c. for long rye; 65@70c. for short rye; and 60@70c. for oat.

Exports for week 2,677 bales.

HOPS.—The offerings are somewhat freer and brewers buy a little more freely, with prices steadily. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	27 @30
Do. medium	25 @26
New Yorks, crop 1880, low to fair	23 @24
Eastern, crop 1880	23 @27
Wisconsin, crop 1880	23 @27
Yearlings, crop 1879, choice	23 @27
Olds, all growths	4 @14

HONEY.—Quoted as before, with an offering exceeding wants of trade.

White clover, comb, single, 17@18c.; larger pkgs, do. 15@16c.; buckwheat 12@13c.; extracted 8@12c. as to color.

POULTRY AND GAME.—Fair prices still rule for dressed; near points not so firm as good State lots are coming, which are very useful for general trade. Geese are in market, but too early for ready sales. Western fowls and chickens low, not doing much better than live.

Turkeys, choice, 15c., ₩ lb.; fair to good, 13@14c; Phila., dry-picked, 15@17c. Chickens, do., 16@17c.; Bucks Co. do. 14@16c.; State scalded, 11@12c.; Western, scalded, 11c. Fowls, Phila., dry-picked, 15c.; N. J., d.-p., 13@14c.; scalded 12@13c.; State, d.-p. 11@12½c.; State, scalded, 11@12c; Western, scalded, 11c.; poor, 9@10c. Ducks, Spring d.-p., 13@15c.; mixed, 11½@13c. Squabs, white, ₩ doz., $2.50; dark, $1.12@1.37. Geese, Phila. per lb 15@16c.; poor, 9c.

Liberal supplies of crops are coming from all points, and the market is very soft. Turkeys run small Geese easier; ducks steady.

All game has an easy time. The weather is treacherous for holding and bad for display.

Mallard ducks, 50c.; teal, wood and common 20@30c. Partridge, prime, $1 25; soft, 50@75c.; grouse, $1.12@1.25; woodcock, 60@75c.; Eng. snipe, ₩ doz., $1.50@1.75.; Sand snipe, 40c.; plover, $1.50@1.75; yellow legged snipe, large $1.50; small 40c.; reed birds $1.25; black 25c.; wild pigeons flight $1.25; stall-fed, would bring $1.75; venison plenty demand, only fair. Short saddles 16@18c.; whole deer, 10@12c.

PROVISIONS.—Hog products have been fairly active and closed easy.

Mess pork at $15.25 for spot lots; $14.90 for Sept. and Oct., deliveries. Bacon at 8-85c. for long clear, and 9¼c. for short clear. Beef at for extra India mess quoted at $19@20 for city; $10 for extra mess and $9.50 for plain mess; $10.50@11 for packet, and $11.50@12 for family mess. Beef hams at $16.50. Lard—Western steam at 8.32½@8.35c. for spot lots; 8.35c. for Sept.; 8.30c. for Oct; 8.25 for Nov. Stearine at 8% for prime. Tallow at 6¾@6 7-16c. for prime.

Receipts for week, beef, 1,475 pkgs.; pork, 450 bbls.; cut meats, 27,100 pkgs.; lard, 11,125 pkgs.

Exports for week, beef, 1,200 bbls.; pork, 2,950 bbls.; cutmeats, 6 893,427 lbs.; lard, 1,154,750 lbs.

TOBACCO.—Export demand is fair and home trade more active, with prices firm.

VEGETABLES.—Exports of potatoes for week, 6,656 bbls. In effect the market is better for buyers, as they have an advantage in quality at former prices. Only best packed, round hoop Early Rose make the extreme, $1,62@1.75; fair to good, $1,25@1,50; peerless, $1@7.25 Sweet potatoes easy, with a large supply. Cabbages lower. There is a weak feeling in onions. Eastern stock sells quicker than State.

Green corn, ₩ 100, 50@75c.; tomatoes, ₩ bush., 25@30c.; cucumber pickles, per 1,000 $1.50@2; egg plants, per bbl., $1@$1.50; Lima beans, per bag, 75c.@$1.25; shelled, per bush. $2.50; turnips, 100 bunches, 50@60c.; Russia turnips ₩ bbl, 50@87c. beets, 100 bunches, $1@125; bullnose peppers, ₩ bag, 75c.@$1; cabbage, flat Dutch, ₩ 100 $2@3.50; red do., $3@5; marrow squash, ₩ bbl. 50@60c.; onions, white, $3@4, yellow, $2.75@3; red, $2.50; carrots, ₩ 100 bunches, $1,50@1.75; pumpkins, ₩ 100 $3@5; okra, 20c.; cauliflowers, ₩ bbl., $2@4; celery, per dozen, 75c.@$1.

SEED.—Clover is quiet at 8¼@8¾c. Timothy quoted at $2.50@2.60. Flaxseed is steady at $1.40.

Receipts for week, 8,893 bushels.

Exports for week, 160 bags.

WOOL.—There has been a better demand through the week and prices generally steady and without change from last week.

LIVE STOCK MARKETS

NEW YORK, Saturday, Sept. 25, 1880.

BEEVES.—Receipts for the week 12,749 head; do. last week 14,542 do. Good to choice cattle were in light supply and firm; very choice touching 11c.; common and low grades weak and in buyers' favor in all instances of closing sales. Native cattle were so easy in price that Texas stock which usually furnishes the cheap trade was neglected at 6½c. for very fair lots. Old oxen, heifers and dry cows sold at 7@7½c. to dress. 55@55 lbs.; poor to fair native steers, 7@9c.; to dress 55@56 lbs., good to choice, 9¼@10¼c., to dress 56 lbs.; and about a carload of extra at 10¾@11c., to dress 57 lbs.

COWS AND CALVES.—Receipts are moderate and prices are firm. Supplies were sold early at a range of $30@50 per head, the latter for single selected. Good stock steadily quored at $50@55.

VEAL CALVES.—Choice quality calves have been scarce and wanted; good under grades of fed fairly steady. Buttermilk and grass dull.

Live calves, N. J., fed 7@7¼c., State choice, 5½@7c.; poor, 4½@5c.; Mt Holly, large, 5½@7c.; buttermilk, 2½@3c.; grassers 1¾@2c.; fair to prime hog dressed 7@10c.; common, 4@6c.

SHEEP AND LAMBS.—Receipts for week, 35,189 head; do last week, 40,012 do. Market for sheep quiet and and barely steady at 3¾@5¾c. Lambs firm with a moderate supply at 5@6c.

SWINE.—Receipts for the week, 25,034 head; do. last week, 19,669 do. At the yards rates were firm and a fraction above earlier sales. Corn quoted $5.40@5.70; rough heavies $4.80; N. J. dressed heavy to light 7¼@8¾c.; State do 7¾@8½c. City dressed declined on change to 6¾@7¾c., heavy to pigs.

Remember that a little Hop Bitters saves big Doctor bills, and cures when all else fails.

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Reading for the Young.

RHYMES AND ANIMALS.

I STRUNG the following rhymes together to tickle the ears of my little boys, four and six years old. They tease their mamma to read them over and over again, and then fetch the big illustrated dictionary to have her point out the funny animals with such strange names and tell what she can about them. This fancy for rhyme and rhythm is, I suppose, a characteristic of nearly all children, and perhaps the publication of this will amuse a wider circle than my little household. The aim has been, after euphony, to have the most incongruous animals in juxtaposition:

Alligator, Beetle, Porcupine, Whale,
Bobolink, Panther, Dragonfly, Snail,
Crocodile, Monkey, Buffalo, Hare,
Dromedary, Leopard, Mudturtle, Hare,
Elephant, Badger, Pelican, Ox,
Flyingfish, Reindeer, Anaconda, Fox,
Guineapig, Dolphin, Antelope, Goose,
Hummingbird, Weasel, Pickerel, Moose,
Ibex, Rhinoceros, Owl, Kangaroo,
Jackal, Opossum, Toad, Cockatoo,
Kingfisher, Peacock, Anteater, Bat,
Lizard, Ichneumon, Honeybee, Rat,
Mockingbird, Camel, Grasshopper, Mouse,
Nightingale, Spider, Cuttlefish, Grouse,
Ocelot, Pheasant, Wolverine, Auk,
Periwinkle, Ermine, Katydid, Hawk,
Quail, Hippopotamus, Armadillo, Moth,
Rattlesnake, Lion, Woodpecker, Sloth,
Salamander, Goldfinch, Angleworm, Dog,
Tiger, Flamingo, Scorpion, Frog,
Unicorn, Ostrich, Nautilus, Mole,
Viper, Gorilla, Basilisk, Sole,
Whippoorwill, Beaver, Centipede, Fawn,
Xantho, Canary, Polliwog, Swan,
Yellowhammer, Eagle, Hyena, Lark,
Zebra, Chameleon, Butterfly, Shark.

—W. H. K., in Cincinnati Gazette.

BOUQUETS OF AUTUMN BERRIES.

MAUDE MEREDITH.

CRIMSON and gold, crimson and gold,
When the Summer's wane, and the days grow old,
When the crickets cry in the reedy ways
And the Autumn drapes with her mist of haze.

The old anecdote of the boy who wished that each season as it came "would always last," has been sometimes quoted as an example of the fickleness of human nature, but foolishly so, as each season holds its own peculiar charm, so much so that we never could wish any season to make haste to pass, and yet the joy of each one is enhanced by its coming and going, by its changing, shifting panorama. The soft warm breath of Spring, the glowing heat of Summer, falling hot and still on the dense green of the forest trees, and the long lances of the fragrant fields of corn, the gorgeous coloring of Autumn boughs swinging low with ripened fruits, and brown nuts beating a soft tattoo on the dry earth. Even the storms of Winter, through which comes the jingle of sleighbells, and the laughter of home returning schoolboys, all have their varied fascination, and add to the joy of nature's lovers, and the name of her worshipers is legion.

We have been away over the hills through field and wood in search of our Winter bouquets. Not the grasses of which we gathered great store in the full beauty of meadow and sedge, but the hardy Autumn berries, that defy the early frost and cling to their branches long after the foliage lays in heaps and wind-row, by fence and moss-grown hollow.

Brightest and best for Winter bouquets is the climbing bitter-sweet, celastrus scandens, whose

CLIMBING BITTER SWEET.—FIG. 319.

capsuled berries, of a brilliant, waxy scarlet with coverings of orange, brighten not only their native hedge-rows and forests, but, transferred to the parlor mantel, light up as a minature "burning bush," to which it is closely allied. Euonymus Americanus, being a shrub, from two to five feet in hight, called also bitter-sweet or burning-bush, from its brilliant appearance in the early Autumn. These berries once gathered are a "joy forever," as time has but little power to destroy their beauty. They loose, to be sure, much of their glossy freshness, but sufficient brilliancy of color remains to make them useful in filling up boquets of grasses or grains. In and out among the flowery foliage of the woodbine hide the purple clusters, minatures of the royal fruit that gladdened the heart of

"—The homeward turning Jew
When Eschol's clusters on his shoulders lay,"

and swinging in their slender red stems, are very pretty but fall to quickly if cut for ornament.

The woodbine, also, called Virginia creeper, is called by botanists, ampliopsis quinquefolia, and no longer confounded with the poison ivy as formerly.

Next we find the black alder, prinos verticellatus, as it is called. It is a native of our woodlands, a trim, upright shrub, of about eight feet in hight, the bright, scarlet berries clinging all Winter to the naked twigs.

"O'er yon low wall, which guards our unkempt zone,
Where vines and weeds and scrub oaks intertwine,
Safe from the plow, whose rough discordant stone
Is mossed to one soft gray by lichens fine,
The tangled blackberry, crossed and recrossed weaves
A prickly net-work of ensanguined leaves;
Hard by, with coral beads, the prim black alders shine."

The native dog-wood, cornus stolonifera, are dotted over with a small, white berry, that we gather to relieve the blaze of our red clusters and bring out the shades of the purple woodbine.

This shrub is sometimes called red osier and red twigged dogwood, on account of its red bark, which makes it very conspicuous when the leaves

VIRGINIA CREEPER.—FIG. 320.

have fallen. Here comes a spray of American holly, ilex opaca. Residents of our eastern coasts know more particularly of the beauty of this plant, as the Christmas festivities approach, as its handsome, glossy leaves and bright scarlet berries light up the churches and homes with an aspect of beauty strongly contrasting with the snow and ice outside, making real the old English song:

"The mill-wheel's frozen in the stream,
The church is decked with holly;
The mistletoe hangs on the garden wall,
To 'fright away melancholy."

The useful barberry, b. canadensis, also contributes some of its violet colored fruit to our already half-filled basket.

A few clusters of rose hips, though they lose much of their beauty in drying, and some of the little apple-like fruit, the thorn, will finish our collection for this time, except as we pass the old garden on our homeward way, where we stop for the beautiful white wax balls, called by some snowberry, symphoricarpus racemosus, that swing half the Winter over the mossy garden wall. A half hour spent in arranging our gleanings will add beauty to the unoccupied nooks and corners of the room.

"As on the ground of somber fir
And azure studded juniper,
The silver birch its buds of purple shows,
And scarlet berries tell where blooomed the wild sweet rose."

SEPTEMBER DAYS IN IOWA.

AGAIN the golden apples swing on the heavy laden boughs, and the grapes cluster on the vine, sending a rare spicy fragrance far beyond the vineyard, through the quivering sunlight. The bird songs are hushed, save here and there the shrill call of a bevy of querilous jays, still darting about the oak branches like brilliant flocks of lapiz lazuli, that awaken remembrances of the melodies of June, for

Once again September sun has spread
Her veil of amethyst above our head,
And, touching summers fading robe of green,
With fleck of crimson here, and gold between,
Has, by the highways all her warriors stood,
Brave golden rod, and asters of the wood,
And garnered in her wreath of golden grain
From breezy upland or from blossoming plain,
Her task fulfilled, her labors wholly done,
Behind her all the seasons victories won,
With folded hands she stands, and grand,
And smiles with gladness on the restful land.

The woodbine trails its blood-red banners against the brown rock on the river side, and the fisher-boy shoots his skiff under the overhanging grape vines, and drops the purple clusters into his white splint baskets until, heavily loaded, he drifts homeward in the sunset, catching the echo of shouts and laughter as a crowd of jolly boys fill huge sacks with black walnuts, butternuts and hickory nuts, in anticipation of the long winter evenings.

The wild plum spreads the ground in crimson and gold of luctous fruit, where the busy housewives gather up their winter store of preserves and plum butter, which old Dolly draws home in the heavy express, long since innocent of paint or varnish. Each housewife wears the spacious brown sunbonnet—log-cabin—one the exact counterpart of the other; but nature is prodigal with her gifts, and hearts are full and happy. Has not the same wagon, with quilts for cushions, and an abundance of straw on the bottom for softer stowage of the little boys, taken all the family to the fair? Grandpa and grandma on the middle seat, father, mother and little Jennie in front, Hattie and the two grown girls on the back seat, and the little boys in the soft (?) corners. Once at the Fair Grounds the wagon found lodgment in the rapidly filling semi-circle. Dolly and Jim are tied to the hind wheel, the bag of oats brought from under one seat, a basket of lunch from another, the white cloth spread, and the fair is a picnic also. But the picnic proper is the "Harvest Home," and oh! the "Harvest Home" among the merry Hawkeyes! The velvet green of meadows, the gold of grain stubble far away on all sides. In the stillness of the oak groves the squirrel hies away with a long ch-u-r-r, and the great black walnuts in their plump green rinds, play a heavy bass to the light trebble of the dropping acorns. The scarlet crab apples gleam from out the thickets, and in the fence corners, where droops the crimson tiped sumac, the prairie hen calls her mother brood. Away in the blue the silvery cloud lands lie, and over all falls the amber sunshine of September.

All over the land the year holds up her hands filled with her products, and we say "a fair." Fair has it been? Ay, to some all years are fair, but others there is ever the sound of sobbing rain drops and dripping eaves. M. M.

LETTERS FROM THE COUSINS.

DEAR EDITOR:—My paper came to-day; the dear old RURAL. How glad I was to see it again I got excited over its arrival, and behaved quite childish, no doubt, in the estimation of my less interested neighbors here.

I have been reading the Free Plant and Seed Distribution; well do I remember my first packet of Chinese Pink seeds. I now have a most beautiful bed of the plants, all in bloom, from seeds I have carefully saved every year.

I have not been able to plant and care for all the seeds that the RURAL has sent me, and I have exchanged some with my friends.

A few days ago I saw the Hollyhocks in blossom, and lovely, indeed, they were.

I have about sixty varieties of annuals this Summer.

I intend exhibiting some of my plants at the fair to be held the 21st, 22d and 23d of this month. We shall also exhibit the Golden Rural Tomato, the Ovoid Mangels, and probably some of the Beauty of Hebron potatoes, all from the RURAL'S Free Seed Distribution.

I have a beautiful bed of scarlet geraniums in blossom; cutting came originally from the RURAL

Thanks to the donor, and may God bless you, is the wish of your friend. MARY WALEY.

Connecticut.

DEAR UNCLE MARK:—We did not get our seeds planted very early and the dry weather prevented their growing very well until August, when the Summer rains came, and then they grew finely. We are going to have a larger and nicer garden next year. If you will come down here we will show you how things grow in the Sunny South. You must not come until the frost nips the chills. Give our love to all the cousins.

VIRGIL, EUGENE, ELLA, MOLLIE and TULULA
Burleson Co., Texas. HERRON.

DEAR UNCLE MARK:—I am a little girl six years old. Papa takes your good paper, says he cannot do without it. I like to read the letters and I want to join your club. I mean to have a garden next year, and will you please remember me when you send seeds. I have a little sister three years old, and a little brother sixteen months old, he is full of mischief. My grandma helps to take care of him. This is my first letter, I hope you will print it, as I want to surprise my papa. LIZA G. POWELL.

Steuben Co., N. Y.

The Puzzler.

HIDDEN ISLANDS.

Neighbor Neold is gone.
Suma trap that dog.
Did the bride sing?
A melitas maniac.
Cap ever deny it?
Cana rye is tall.
Must Helen answer?
Meuncey, London is a great city.
As great a crime as murder.

☞ Answer in two weeks. JAYHAWKER.

ACROSTICAL ENIGMA.

My first comes in the murmering breeze.
My second sits in his chair at ease.
My third assists the young and gay.
My fourth prefers in crowds to stay.
My fifth is near my lady love,
My sixth's at home in realms above.
My seventh is seen in waters clear.
My eighth remains with kings, I hear.
My whole is missed altho' 'tis near.

☞ Answer in two weeks. MARY WALEY.

A DIAMOND PUZZLE.

1, A letter; 2, to speak falsely; 3, inflamed; 4, an andiron; 5, a hotspur; 6, the sacred book of the Boodhists: 7, pertaining to dower; 8, to receive; 9, a letter. GUS.

☞ Answer in two weeks.

DIAGONAL PUZZLE.

1, A consonant; 2, a French pronoun; 3, a sort of rose; 4, lazy; 5, a stream of water. Primals and diagonals form two animals.

☞ Answer in two weeks. LITTLE ONE.

A SQUARE.

1, A berry; 2, the first vertebra of the neck; 3, to mend; 4, to make; 5, a plant. G.

☞ Answer in two weeks.

PUZZLER ANSWERS.—Sept. 25.

DIAMOND PUZZLE:—

```
      G
    G E M
  G E N E T
G E N I S I S
  M E S N E
    T I E
      S
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HIDDEN BUILDINGS.—1, Mill; 2, capitol; 3, barn; 4, store; 5, shanty.

DROP LETTER PUZZLE.—"All is not gold that glitters."

CROSSWORD ENIGMA.—Pomegranite.

TENNYSONIAN ENIGMA.—"He makes no friends who never made a foe."

Sabbath Reading.

SOME TIME.

SOME time when all life's lessons have been learned,
And sun and stars forever more have set,
The things which our weak judgments here have spurned,
The things o'er which we grieved with lashes wet,
Will flash before us, out of life's dark night,
As stars shine most in deeper tints of blue:
And we shall see how all God's plans were right,
And what seemed most reproof was love most true.

And we shall see how, while we frown and sigh,
God's plans go on as best for you and me,
How, when we called He heeded not our cry,
Because His wisdom to the end could see;
And e'en as prudent parents disallow
Too much of sweet to craving babyhood,
So God, perhaps, is keeping from us now
Life's sweetest things because it seemeth good.

And if, sometimes, commingled with life's vine,
We find the wormwood, and rebel and shrink,
Be sure a wiser hand than yours or mine
Pours out this potion for our lips to drink;
And if some friend we love is lying low,
Where human kisses cannot reach his face,
O, do not blame the loving Father so,
But wear your sorrow with obedient grace!

And you shall shortly know that lengthened breath,
Is not the sweetest gift God sends His friend,
And that sometimes the sable pall of death
Conceals the fairest boon his love can send;
If we could push ajar the gates of life,
And stand within, and all God's workings see,
We could interpret all this doubt and strife,
And for each mystery could find a key.

But not to-day. Then be content, poor heart!
God's plans, like lilies, pure and white unfold,
We must not tear the close-shut leaves apart,
Time will reveal the calyxes of gold:
And if, through patient toil we reach the land
Where tired feet with sandals loosed may rest,
Where we shall clearly know and understand,
I think that we shall say, "God knew the best."

THE VOICE OF CONSCIENCE.

A PRACTICAL point is the duty of keeping conscience alive and tender. It is the will of God that we should have this testimony of approval, which indeed will sustain us in every good way, will encourage to perseverance, and will comfort in trial. Nothing, save the approbation of God, exceeds the value of an approving conscience; in fact, the voice of an enlightened conscience is the voice of God within us, His word echoed in the heart. On the other hand, it is God's merciful provision that this voice warns us against sin, deters us from evil purpose; or, if we have done wrong, reproaches us as guilty, and so leads us with true contrition to that fountain where all sin may be washed away. St. Paul describes it when he said "I exercise myself" to keep a conscience void of offence toward God and men. This exercise grows into a habit of godliness. Whereas to tamper with conscience or to silence its voice leads to hardness and impenitence of heart, with readiness for all evil.

Another duty is to be tender towards the consciences of others. The apostle gives many directions as to this in regard to those who are true believers. For instance, some may imagine that the Divine law prohibits certain things which it really does not. We are not to urge a weak or less instructed brother to violate his conscience by imitating our freedom, and so sin against light which he possesses. The noble spirit of St. Paul decided in such a case to deny himself in lawful things rather than make his brother to offend by acting against his conscience.

While it is obviously a Christian's duty thus to act tenderly towards a brother, the same rule does not apply to cases when it is not conscience but self-will, or prejudice, or false teaching that dictate the conduct of others. To accommodate ourselves to opinions or practices which we know to be contrary to the word of God is only to strengthen error, and it is our duty to point out the mistake of ascribing to conscience what is due to false feeling or wrong teaching.

May we be enabled to deal faithfully with our own consciences, and justly and tenderly with those of others. And may we assure ourselves that we are led and governed by the Spirit of God. Thus only shall each of us be enabled to say, "I have lived in all good conscience before God until this day."

LITTLE THINGS.—Great virtues are rare; the occasions for them are rare, and when they do occur, we are prepared for them; we are excited by the grandeur of the sacrifice; we are supported either by the splendor of the deed in the eyes of the world, or by the self-complacency that we experience from the performance of an uncommon action. Little things are unforseen; they return every moment; they come in contact with our pride, our insolence, our haughtiness, our readiness to take offense; they contradict our inclinations perpetually. It is, however, only by fidelity in little things that a true and constant love to God can be distinguished from a passing fervor of spirit.—Fenelon.

THE apostle of the Gentiles said: "I am not ashamed of the Gospel of Christ, for it is the power of God unto salvation to every one that believeth." The goal of its missionary ambition and hope is, that it goes forth to save. Not that it simply aspires to save, but it does save. To this result as well as to this intent it is the wisdom of God and the power of God.—London Christian.

MY own experience is that the Bible is dull when I am dull. When I am really alive, and set in upon the text with a tidal pressure of living affinities, it opens, it multiplies discoveries, and reveals depths even faster than I can note them. The worldly spirit shuts the Bible; the Spirit of God makes it a fire flaming out all the meanings and glorious truths.—Horace Bushnell.

PERSONAL ITEMS.

Mrs. Scott-Siddons says that an American servant will tie on her veil in a natty, graceful way that an English duchess knows nothing about.

Ex-Postmaster General Key presided in the United States Court at Knoxville, Tenn., on Wednesday for the first time since his retirement from the Cabinet.

J. M. Hill, a brother of Senator Benjamin H. Hill, of Georgia, died on his farm near West Point, in that State, a few days ago. He was over 70 years of age and during the greater part of his life was a man of influence in his county.

The late Vice President Wilson's mother-in-law, Mrs. Mary Howe, of Natick, Mass., celebrated recently her ninety-fourth birthday, and was visited by a large number of friends and neighbors. She is still in remarkably good health and spirits.

[Monroe, (Mich.) Commercial.]

Mr. Clarence B. Stoddard, the druggist, informed us that Mr. Louis Hope, a sufferer with rheumatism for a number of years, obtained the greatest relief by the use of St. Jacobs Oil.

Miscellaneous

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6 The Little Ones at Home.
7 Old Black Joe.
12 See That My Grave's Kept Green.
18 Grandfather's Clock.
24 Sweet By and By.
26 Whoa, Emma. [Maggie.
33 When You and I were Young,
36 When I Saw Sweet Nellie Home.
48 Take this Letter to My Mother.
49 A Model Love Letter—Comic.
53 Wife's Commandments—Comic.
54 Husband's Commandments.
56 Little Old Log Cabin in the Lane.
58 Marching Through Georgia.
60 Widow in the Cottage by the Sea.
65 The Minstrel Boy.
70 Take Back the Heart.
72 The Faded Coat of Blue. [Night.
77 My Old Kentucky Home, Good
84 I'll be all Smiles To-Night, Love.
86 Listen to the Mocking Bird.
93 Her Bright Smile Haunts Me Still.
94 Sunday Night, When the Parlor's
95 The Gypsy's Warning. [Full.
102 'Tis but a Little Faded Flower.
104 The Girl I Left Behind Me.
105 Little Buttercup.
107 Carry Me Back to Old Virginny.
112 The Old Man's Drunk Again.
116 I Am Waiting, Essie, Dear.
119 Take Me Back to Home & Mother.
120 Come, Sit by My Side, Darling.
121 Kiss Me, Kiss Your Darling.
123 A Flower from Mother's Grave.
124 The Old Log Cabin on the Hill.
130 Coming Thro' the Rye.
131 Must We, Then, Meet as Strangers.
135 The Kiss Behind the Door.
139 I'll Remember You, Love, in My
141 Old Wooden Rocker. [Prayers,
146 You May Look, but Mustn't Touch,
150 There's Always a Seat in the Parlor for You, [for You.
152 I've no Mother Now, I'm Weeping
153 Massa's in de Cold, Cold Ground.
159 Say a Kind Word When You Can.
160 Cure for Scandal—Comic.
165 I Cannot Sing the Old Songs.
161 Waiting, My Darling, for Thee.
170 I'm Lonely Since My Mother Died.
172 Tenting on the Old Camp Ground.
176 Don't You Go, Tommy, Don't Go.
180 Willie, We have Missed You.
182 Over the Hills to the Poor House.
185 Don't be Angry with Me, Darling.
191 Flirtation at the Fan.
196 Thou Hast Learned to Love Another.
203 There's None Like a Mother.
204 You Were False, but I'll Forgive.
208 Old Log Cabin in the Dell.
209 Whisper Softly, Mother's Dying.
211 Will you Love Me When I'm Old?
220 Annie Laurie.
222 Sherman's March to the Sea.
174 Come, Birdie, Come.
223 Love Among the Roses.
232 Old Arm Chair (as sung by Barry)
239 The Sailor's Grave. [In the Garden
242 Farmer's Daughters; or, Chickens
243 Oh! Dem Golden Slippers.
246 Poor, but a Gentleman Still.
249 Nobody's Darling but Mine.
251 Put My Little Shoes Away.
252 Darling Nellie Gray.
255 Little Brown Jug.
256 Ben Bolt.
257 Good-Bye, Sweetheart.
260 Sadie Ray.
270 That Finigan's Wake.
273 The Hat My Father Wore.
275 I've Only Been Down to the Club.
277 Kiss Me Again.
272 The Vacant Chair.
280 The Sweet Sunny South.
283 Come Home, Father.
284 Little Maggie May.
286 Molly Bawn.
288 Sally in Our Alley.
290 Poor Old Ned.
292 Man in the Moon is Looking.
295 Broken Down.
300 My Little One's Waiting for Me.
301 I'll Go Back to My Old Love Again.
302 The Butcher Boy.
305 I'se Gwine Back to Dixie.
304 Where is My Boy To-Night?
310 The Five Cent Shave.
319 Linger Not, Darling.
320 Dancing in the Sunlight.

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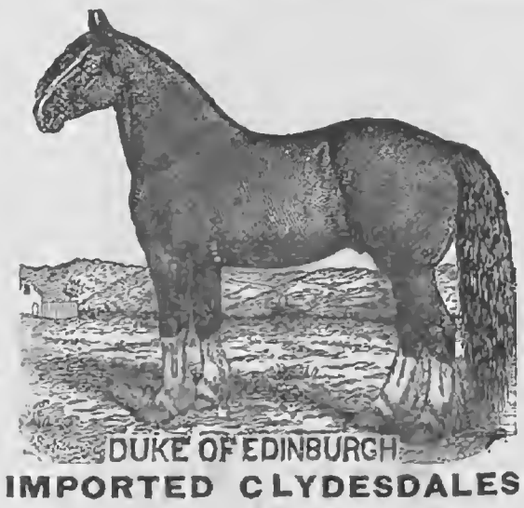
Miscellaneous.



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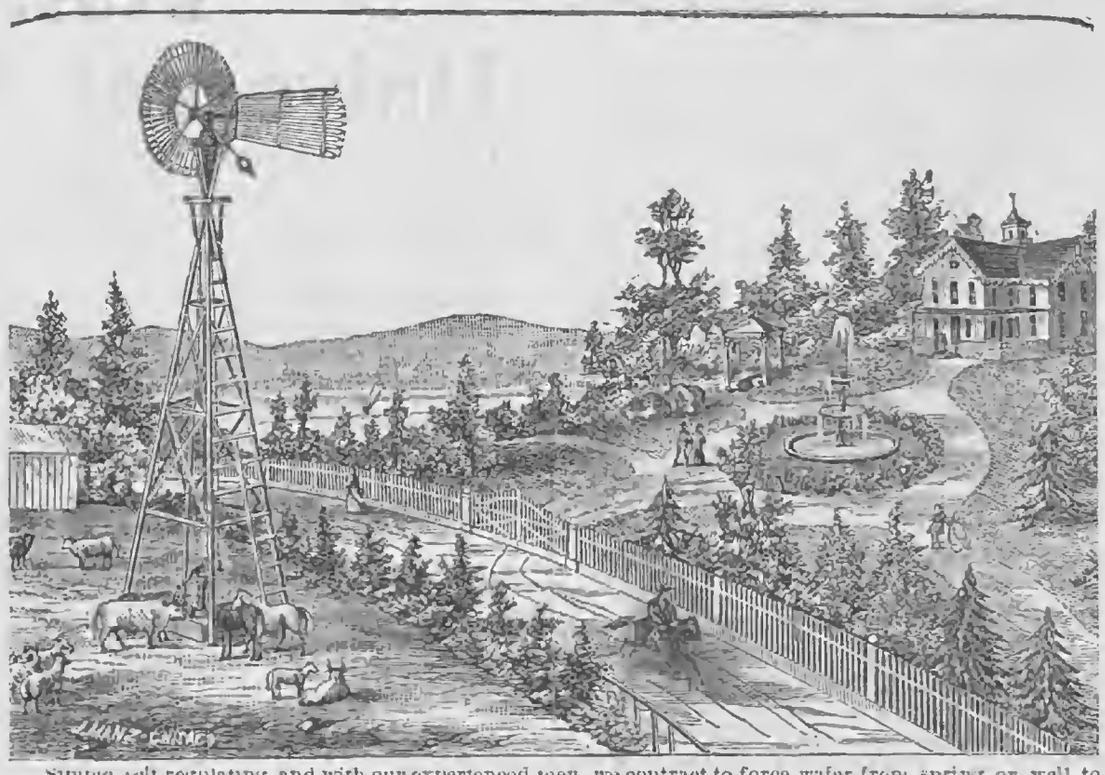

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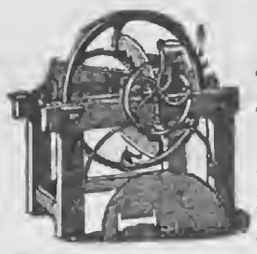

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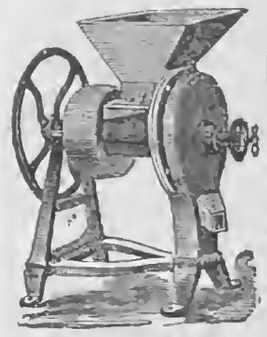

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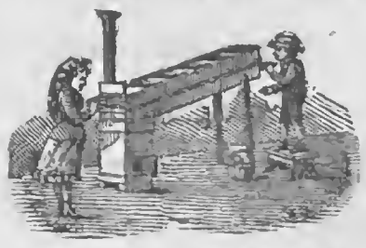

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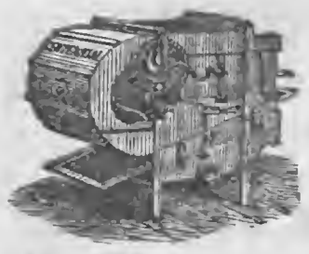

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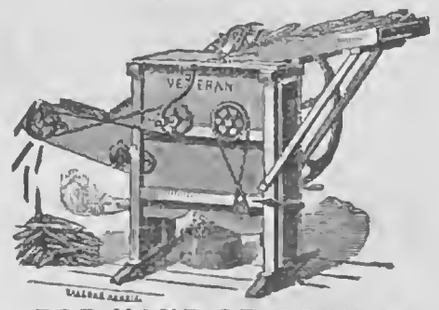

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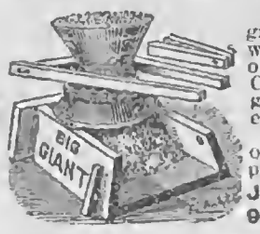

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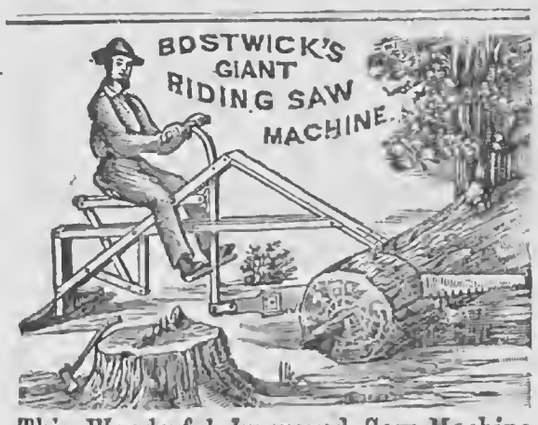

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Vol. XXXIX. No. 41. Whole No. 1602. | NEW YORK, OCT. 9, 1880. | Price Five Cents. $2.00 Per Year.

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"LADY WASHINGTON."

LADY WASHINGTON GRAPE. (From Life.)—Fig. 321.

The Vineyard.

LADY WASHINGTON GRAPE.

In the RURAL NEW-YORKER of Nov. 10th., 1877, was presented a portrait of this grape. But although it represented accurately the bunch from which the drawing was made, yet that bunch was considerably under the usual average size. Mr. Ricketts (Newburgh, N. Y.) brought several bunches to this office a week or so ago, from one of which our present illustration is made.

This grape has been sold during the past year. It is beautiful in appearance and of excellent quality, so that it only remains to be seen how well or ill it is adapted to various localities. The vine with us is very vigorous, bearing large leaves. The berry is, as may be seen, medium to large, round, yellowish with a tint of delicate pink where exposed to the sun, and covered with a thin, fine bloom. The flesh is soft, tender, juicy, sweet and good. Ripens with Concord.

THE "BETA."—A NEW SEEDING GRAPE.—Mr. P. R. G. Atwill, of Woodmont, Conn., sends us specimens of a new seedling grape, of which he writes:—"Six years ago in thinning a bed of beets, I found a grape seed just started. As it grew, I trained it to a stake, and at the end of the season it had made some six feet of growth. That Fall it was transplanted to the side of a board fence where it has remained since. It now has a spread of 16 feet and has fruited for the third time. It is perfectly hardy, and thus far free from mildew. The fruit begins to ripen between the Hartford and Concord. At the time this seedling was found no grape had been grown in the neighborhood of the garden, it is therefore a chance seedling. The bunches are not as large or as perfect as last season, owing to the number of rose bugs that infested the vine during the time of blossoming. From the place in which it was found—a bed of beets—I have given it the name of 'Beta.'"

REMARKS. Bunches rather small—compact. Berries white, medium size, globular. About the quality of Concord. These bunches, though loose in the box, arrived in perfect order. The skin seems firm though not tough, and the berry may prove valuable for the market.—EDS.

Pomological.

FRUITS AT THE MICHIGAN STATE FAIR.

T. T. LYON.

WHEN we consider the abundance of the fruit crop of the past season in our State, we are forced to the conclusion that our recent State fair has not, so far as the exhibit of fruits is concerned, realized all that may have been reasonably anticipated. Pomological Hall although well filled, was less crowded than usual. Plums and quinces were quite as fine and the display nearly or quite as extensive as heretofore. Among grapes, pears and peaches there were many excellent exhibits, although in diminished quantity. So far as peaches are concerned this may fairly be attributed to the extreme warmth and wetness of the season, which seem to have had the effect to bring the early and the later varieties very nearly together in ripening, maturing them at so early a period that those usually in season were ripe and gone too early for this purpose; while the occurrence of hot and wet weather for a week or more, just prior to the fair, induced the rot, even among varieties usually exempt from such a malady, ruining many thousands of bushels in the peach-growing regions and compelling the premature shipment of large quantities of the fruit at far from profitable rates. For this reason, doubtless, many varieties usually prominent in exhibits, were almost, if not altogether, unrepresented.

The display of apples was nearly or quite as large as usual; and the quality very satisfactory. A notable circumstance connected with this part of the exhibit was the conspicuous absence of the larvæ of the codling moth, as well as of overgrown specimens, and also of the scabby and defective fruits that so generally mar our collections. These latter results may doubtless be attributed to the general bountifulness of the crop preventing excessive development; and to a favorable season, with the consequent exemption from fungus, cracking and weather discolorations. To these we may add the fact that the preceding Winter was doubtless fatal in an unusual degree to many of the insect depredators upon our trees as well as fruits.

The reasons that under the above circumstances, have conspired to occasion a diminished exhibit, as compared with previous less plentiful seasons, must of course be sought in other directions. Those charged with the duty of working up and bringing together this exhibit may have relied too much upon the bountifulness of the crop of fruit; while, at the same time, those intending to exhibit may have been deterred by the anticipation of a surfeit; but to those fully conversant with the matter, the result will be in a great degree attributed to the well-known fact that, in the face of the notorious lack of space for last year's exhibit, in the same hall, the Agricultural Society, whose duty it was, had announced its determination not to increase the space for this purpose.

In the absence of professional exhibits of plants and flowers, the room was occupied by amateurs and smaller dealers; and although the space was by no means crowded, the *quality* is believed to have been a decided improvement upon the display of the previous year.

The officers of the State Pomological (now Horticultural) Society, who have now for several years been in charge of the display of fruits and flowers, have been earnestly engaged in the effort to perfect these portions of the Premium List, together with the system of examining, awarding and reporting premiums, with the purpose of rendering the whole as attive as possible, and at the same time increasing its educational influence. To this end the rule is imperative that no exhibitor shall be allowed to compete for a premium with a specimen which he has not *correctly named*; while in all collections for specific objects, his own judgment as to the relative values of varieties is made to appear in their selection. On the other hand, superintendents of divisions are selected with reference to their ability as judges, and are constituted chairmen of their respective committees, and supplied with blank reports designating the particulars which are expected to constitute such report; aiming by such means to secure, in such reports, the opinions of the committee as to the relative values of the fruits in question. In the making of the awards they are required "to consider, 1st, the value of the varieties for the required purpose; 2nd, the color, size and evenness of the specimens; 3rd, their freedom from insect marks or other blemishes." This system of awarding premiums has now been in operation three or four years, with such slight modifications as have been suggested by experience; and since exhibitors and committees have become familiar with them, they seem (as during the recent exhibition) to have proved highly satisfactory to all concerned.

Horticultural.

NOTES FROM THE RURAL FARM.

Cow-Pea Report.

ELEVEN different varieties of this Dolichos, which is neither bean nor pea, were received from W. B. Jones, of Herndon, Ga., and planted in drills six feet apart—one seed every six inches, May 18. Every other plant, where all grew, was hoed out, leaving them 12 inches apart in the drills.

WHIPPOORWILL OR JAVA has grown two feet in hight and spread out six feet. It began to ripen fruit (seeds and pods) Sept. 5th.

CONCK PEA has grown one foot in hight, spreading out over the ground 12 feet. It has not yet (Sept. 18) bloomed. It covers the ground so entirely that only a green mat of leaves can be seen.

GOAT PEA has grown two feet high. Pods began to ripen Sept. 1st. It has made but little vine, spreading out only two to three feet.

POOR LAND PEA.—This does not prove the best of the eleven varieties, as earlier we supposed it would. It has grown two feet in hight, spreading out four feet. Seeds were ripe Aug't. 15, and have been forming and ripening ever since.

BLACK-EYE CROWDER.—Only a few seeds germinated. The vines are low, spreading out and covering the ground for a space of six feet. No fruit has formed.

LITTLE LADY PEA.—Low vines, spreading over four feet of ground. In bloom Sept. 15. Cannot ripen its seeds.

LITTLE BLACK.—Immense vines, two feet high, spreading out 11 feet and covering the ground with a dense mat of vines and leaves. Fruit began to ripen Sept. 10.

THREE-CROP PEA.—Poor growth of vines. Ripens Sept. 15.

TORY PEA.—The same may be said of this as of Little Black.

EARLY FAVORITE.—The same may be said of this as of Tory and Little Black.

RED RIPPER.—Same as of Tory, Little Black and Early Favorite.

GOOSE PEA.—This grows low and does not cover the ground well. Ripens a great quantity of fruit; spreads out eight to ten feet. Fruit (pods) average eight inches in length with 20 seeds each.

The land where these peas grow had been in pasture for seven years. This was plowed and harrowed. No manure or fertilizer of any kind was applied. It is very plain from this report that the statement made by several agricultural papers that the seeds of cow-peas would not ripen in this latitude is a mistake. As anybody that chooses to visit this farm may see, some of the kinds are loaded with pods, some of which, as above noted, began to ripen in August. The vines are still green, fresh and growing. For the thriftiest of those mentioned six feet apart are too little. Unless sharp frosts should come earlier than usual, the vines will still make considerable lateral growth, and they have already entirely covered the space allotted to them.

Zinc Plant Labels.

P. B. M., in a late RURAL, says: "A label 'boom' is greatly needed." It is a matter of no little importance. I like to use a pencil and a common lead one, too—none of those patent affairs for me. Take strips of zinc, either new or old, it matters little which, and write name, date, etc., thereon, with an ordinary lead pencil. The writing may not be very distinct at first, especially if the zinc is new, but it will soon become so, and will remain for many years perfectly legible. How such an inscription made with plumbago on a zinc surface becomes practically ineffaceable may interest the scientific student, and the fact should not fail to arouse the attention of the practical horticulturist.

Way, Kansas. ELBRIDGE GALE.

REMARKS.—President Gale stated the above in the RURAL NEW-YORKER two or three years ago—the writer of this cannot at this time give the date, not being at the "Rural Grounds." But we wrote his name, the year, month and day upon a zinc label with an ordinary lead pencil, and attached it to an elm tree where it now remains. The letters are now more distinct than the day they were written. Pages have been written about plant labels and the necessity of some invention which should combine cheapness, durability, etc. Now, does not this one of Professor Gale solve the problem?—EDS.

Field Crops.

THICK vs. THIN SEEDING.

THE question of thick or thin seeding is just now receiving considerable attention from farmers through agricultural papers and Farmers' Clubs. It is a question of no little importance, and should be carefully considered by every farmer. From the differing and conflicting opinions that I hear expressed on this subject by farmers themselves, and from my own experience and observation, I have come to the conclusion that the question of thick or thin seeding is governed almost solely by the character of the soil and the way in which it is prepared.

In the report in a late RURAL of the experiments conducted by Professor I. P. Roberts, of Cornell University, who obtained the greatest yield from wheat with seed sown at the rate of three bushels per acre, we are led to believe in heavy seeding. But, on the other hand, we hear experienced, practical farmers report, through our (Elmira) Farmer's Club, that the best results were received from thin seeding. My experience has demonstrated to me that while thick seeding is advisable on a thin soil, thin seeding will give the best results if the soil is rich and in good condition otherwise. The same rule applies in a measure to the preparation of the soil. If we sow our wheat on cloddy, lumpy fields we must apply more seed per acre in order to obtain a good yield, though the soil may be rich in fertility; but, on the other hand, if the wheat ground be carefully and thoroughly prepared, a less quantity of seed will be required; for in the latter case good seed will grow, whereas if the soil is hard and very lumpy, much of the seed must perish. It is probable that the soil on which Professor Roberts experimented, where the best yield was received from wheat sown at the rate of three bushels per acre, was rather thin. Had the soil been deep and rich, doubtless his tables would have appeared quite different. In favor of thin seeding I will add that most of our best crops of wheat, as far back as my memory goes, have been produced from thin seeding. In one instance we harvested 40 bushels per acre (the largest yield of wheat we have ever realized), from seed sown at the rate of 1½ bushel per acre.

The secret of success in growing wheat is in having a good soil and giving it a thorough preparation before the seed is sown. When this has been accomplished let the seed be drilled in at the proper time, and of the proper thickness, which should vary with the condition of the soil, and there need be little fear of failure.

The question of thick or thin seeding applies to all kinds of grain as well as to wheat. Doubtless millions of bushels of grain are wasted annually from over-seeding, that might have been saved had our farmers a better knowledge on the subject. G. A. G., JR.

WHEATS.—Professor Blount writes us: "By this mail I send you a small quantity, each, of the Eldorado, the Black Bearded Centennial and my Hybrid No. 10 wheat. The latter is but two years old. It is the progeny of the Diehl, as father, and of the Virginia Golden Straw, as mother. It is a beautiful sample. Of course it is not 'fixed' yet. The Centennial I send is an enormous wheat and, what is most wonderful about it, some heads are smooth, the rest bearded. There are from 70 to 100 grains in every head; heads four and one-half inches long and nearly three-quarters of an inch in diameter, close and entirely filled, with not a single spikelet vacant."

[Received and sown. Many thanks. EDS.]

Dairy Husbandry.

THE DAIRY COW—NO. 10.

HENRY STEWART.

Setting Milk for Cream.

THE greatest mistakes in the dairy are made in setting the milk for cream. In the family dairy, where one cow supplies milk and butter, the arrangements are usually better than in some farm dairies. Here the arrangements are often surprisingly bad. I have seen the milk of four cows set in a sleeping-room, and under the bed. The young woman who managed that dairy prided herself on her good butter. What she knew of bad butter must have been fearful to contemplate. In some farm-houses the milk is set in the living-room where the cooking and eating are done, and where, in the evening, the farmer and the hired man smoke their pipes and dry their wet boots and socks under the stove. No wonder some persons prefer oleomargarine to butter made in that fashion. If these lines come under the notice of anyone, man or woman, who keeps milk under such circumstances as these, or in any way approaching to them, I would say to him or her, that good butter cannot be made in that way, and the labor spent over it is only half or quarter paid for.

The first necessity in setting the milk is perfect purity of place and surroundings. Then there should be the following adjuncts:

A moderate circulation of fresh and moist air.

Shelves raised at least three feet from the ground.

A temperature not over 60° in Summer, and not below 45° in Winter.

Perfectly clean utensils, and very little light.

It matters little how or where these conditions are secured; that they *are* secured is sufficient. The following reasons may be given; viz., milk readily absorbs odors and the odors are concentrated in the cream, with stagnant air the natural odor of the fresh milk, which is disagreeable to some persons, cannot be removed; in the dry air the cream becomes of a leathery toughness and often produces specks in the butter, and always makes an inferior quality. When milk is kept on the ground in a cellar or milk-house, it is brought into contact with the coldest air in which all the bad odors of the place are condensed. At a higher temperature than 60° the milk will sour and often thicken before the cream has risen, and to have the best butter, the cream should be taken from sweet milk. At a lower temperature than 45° the color of the cream is much lightened, and the butter will be too light in color; besides, there is danger of freezing, and frozen cream will not make good butter. If the milk pans are not quite sweet and clean, the milk will sour too soon. With too much light the butter will not have the rich, deep color that is desired.

When the milk is brought in from the cow-stable or the shed, it is strained at once into the pans, and these are put away in the place provided for them. If it is not strained at once, some cream will rise, if the milk is rich, and this cream will be caught in the meshes of the strainer and be lost. Before the milk is poured out of the pail it is safe to first pour out a quart or so and return this into the pail; this will remove any stray hairs that may have fallen on to the outside of the strainer spout or lip of the pail. This is more especially advisable with those pails the strainer of which cannot be wiped with a clean cloth. The improved strainer pail, described in the last article—which, by the way, is my own invention and is not patented—may be easily cleaned or wiped to remove any hair, dust or other impurity which may have fallen on it. In placing the milk pans on the shelves, it will be found convenient to have them arranged in regular order and to retain this order always, so that there is never any doubt about the right pans to be skimmed. The shelves may be arranged so as to make this very easy and not to move any pans; but if but one shelf

is used, the pans must be moved along to fill the place of those skimmed at one end and make room at the other end for the fresh milk. Hereafter I shall describe my method for arranging the shelves in a convenient way for this and other purposes. The pans should never be covered. If it is necessary to cover anything to exclude flies, mice or other vermin, the windows should be covered with fine wire gauze, and to guard against mice the shelves should be purposely arranged. (This will be explained by-and-by.)

When the milk has stood 36 hours the cream will have risen, and should be skimmed off. At this time the cream will be thick and adherent, and on good milk that has been set two inches deep in shallow pans, should be at least a quarter of an inch thick. This will give 12 per cent. of pure cream, which is as much as I have ever *known* any cow to give, although it has been often said that such a cow gives 25 or 30 per cent. of cream. One of my cows will show 28 per cent. of cream in a five-inch-deep test-glass; but this is not pure cream. This same milk set in a 20-inch-deep pail will show about six inches of cream; but when cream rises in a deep vessel a large quantity of milk is brought up with it and stays with it, and the 28 per cent. which is shown in a deep Cooley pail, shrinks in a Ferguson Bureau pan to 12 per cent. There is an advantage, however, in this diluted cream, which is, that it is in precisely the best condition for good churning; while in skimming the pure cream at least an equal quantity of milk should be poured off with it into the cream jar, and both be stirred up together. To remove the cream, a small, flat cream knife should be passed around the edge of the pan to loosen it, and the film of cream is then floated and pushed with the cream knife over the edge of the pan into the cream jar. This will remove enough milk with the cream to dilute it sufficiently. Every time cream is poured into the jar it should be stirred, otherwise there will be danger of having white specks in the butter.

A GOOD FAMILY COW.

I have often admired a little Alderney cow belonging to a lady friend, who modestly wishes her name not to be made public. Simply to look at such a cow is suggestive of creamy milk and golden butter. A few days since I had a talk with this friend about milk and butter, during which she showed me her account with this cow, the only one she has. A family of twelve (including servants) with occasional visitors, have to be supplied with milk; but she has generally managed to save one milking each day for butter.

She began keeping an account on the 28th of February, when the churning yielded five pounds. On the 25th of August (the day before I saw the account book) the churning gave four pounds and a half. The whole amount of butter made during the interval of six months was one hundred and ninety-one pounds. This, it seems to me, is a great show from a small cow when you take into consideration the prolonged drought, and that a large family was supplied with milk at the same time. If all the milk had been saved for butter the result would have exceeded four hundred pounds for the six months; and the lady thinks she does better than this when there is plenty of good grass. She is very careful to know that the cow is well cared for and gently treated.

I find from the dates that there were two churnings a week, those in the first week in March yielding eleven pounds, and the next week, nine and one-half pounds. In the first week of June the yield was ten and a half pounds, and in the two following weeks it amounted to nine and ten pounds respectively. The last two churnings (August 25) or one week, gave eight and a half pounds. The reader can get the weekly average from the figures before given, but he must keep in mind that only one milking a day was saved for butter, and that hay had to be used for feed during a part of the drought. I have more than once eaten the butter, and can ask for nothing more delicious. I inquired, "Do you ever use artificial coloring for your butter?" The reply was decidedly earnest and characteristic. "No! I don't want any frauds about my butter." This case is given to show what can be done with a good cow, good food, kind treatment, and a goodly share of the "know how;" and this "know how" might be learned by many who have all the requirements for keeping a nice little Alderney.

PETER B. MEAD.

THE OUTLOOK FOR CHEESE is favorable for good prices. The make in England is reported by the best authorities to be small and imported stock has been sold close up to arrival. In this city dealers say accumulation is not extra-heavy, while reports from the chief cheese-making regions indicate that the stock held back is, as a rule, comparatively light. It is probable therefore that the present slight depression will be only temporary.

The Herdsman.

NOTES.

BY A STOCKMAN.

"ROOTS are a joy to shepherds, but a cause of anxiety to masters," says the Agricultural Gazette. Unfortunately we are not in danger of suffering much anxiety in this respect, for our supply of roots is not so liberal that sheep are likely to be over-fed with them. This too applies more to these succulent, over-grown roots that have been highly manured with superphosphate, than to our more solid ones, grown upon less highly fertilized land. But the caution is worthy of regard, because an over-feeding of roots in cold weather is dangerous to in-lamb ewes and so chills the internal organs as to endanger the vitality of the fetus.

WHAT is the reason that we, handicapped as we are with high-priced labor and the enormous burthens and risks of long railroad and shipping charges, can compete in foreign markets with the native farmers and beat them by a large margin in prices, if not in quality? Perhaps the gentlemen who came from England to investigate this problem have not yet solved it completely. They have missed, it maybe, one very important condition of the problem. For instance, in a recent issue of the London Times there were two leading articles side by side; one discussing this very question as it was affected by the importation of American meat and bread, and its influence on English agriculture; and the other referring to the opening of the season for partridge shooting. To hunt and shoot, over the farms occupied by their tenants, game that has been fed upon the crops grown by those tenant farmers, and at their expense, is one of the privileges exacted by the owners of the land, and five hares consume as much as one sheep, while partridges and other feathered game consume and destroy a large portion of the grain. How large a part in the solution of this question do these facts comprise?

Do sheep owners realize the loss occasioned every year in the condition of their flocks by the abounding sheep ticks? It is rare to see a flock that is not grevionsly annoyed by these pests, and the sheep are constantly nibbling in their fleeces to allay the irritation caused by them. I have known lambs to be so pestered with ticks, after the sheep have been sheared and the ticks deprived of shelter have left them and gathered upon the lambs, that they have died in consequence. And yet there is an effective remedy, viz: dipping the lambs early in the season or both sheep and lambs later. The most effective dip is an infusion of tobacco and sulphur. The late Mr. Grant, the large sheep owner of Ellis Co., Kansas, once told me that the produce of wool was increased 20 per cent. by two dippings in the year, one immediately after shearing and one in the Fall. The sheep and lambs feed and thrive so much better from the ease given to them as to make this difference. From my own experience I am sure he did not overrate the benefit and profit.

THE French people have more ready cash in individual possession than any other nation in the world. It is not the wealth of a nation that makes the people rich, but the general diffusion of wealth. This is the case in France. The French are a nation of small farmers. There are more land-owners in that country than in America. The farms are small; the majority are under 20 acres, and a very large number under 10. It may not be that this is the only reason for the money wealth of these people; they are notably economical and thrifty. But the small farms have something to do with it. The farmers of some of the eastern counties of Pennsylvania, where the farms are comparatively small, could well compete with the French in their possession of money wealth. Almost every farmer has his hoard invested. These men have a habit of feeding a few head of beef cattle or a flock of sheep every Winter. They sell little grain but wheat, and feed their fodder and coarse grain to purchased stock. They make more profit to the head of stock than is made upon large grazing farms, and their land is rich and high-priced, because of the large quantity of manure that is made in feeding stock. The consumption of meat is continually increasing and with the extension of manufactures there are more mouths to fill every year, so that it is not probable the supply can ever become excessive.

WHAT shall be the farmer's domestic meat supply? This is worth considering as well as what he shall produce for sale. The farm should feed itself, for it is a waste of money for a farmer to employ a butcher to cater for him. Beef is out of the question unless it is salted, and salt beef is only a makeshift enforced by obvious circumstances. Poultry and mutton will furnish a constant supply, with occasional helps from other sources. Mutton hams cured and smoked are excellent for Summer use, and if the legs are cured a carcass of mutton can be easily disposed of in a farmer's family. This is a very important item for consideration, when a farmer asks himself "Shall I keep a few sheep or not, and what kind shall I keep?" If I were to advise him in regard to the latter point, for domestic use I should say, Merino grades crossed with South-Down.

The comparative value, in some cases, of sheep and cattle is curiously shown in the instance of the Falkland Island Company which occupies the island of that name in the Atlantic Ocean east of Cape Horn, and Patagonia. This company owns more than 100,000 sheep, which have been obtained by crossing the native South American kind by Cheviot rams. The income from this flock is $150,000 annually, while from nearly 30,000 cattle the yearly product is only a few thousand hides. In speaking of this company, a contemporary not quite a thousand miles from where geographies are published, mentions "the adjacent country of Buenos Ayres." It is a question if two places distant from each other more than 15 degrees of latitude can be called adjacent. This reminds me of a citizen of the Quaker City at the recent sheep exhibition, who was admiring a pen of handsome Merinos; looking at the card, he remarked to me. "These are Merino sheep; Merino? Merino? where is Merino? I suppose these sheep come from there, don't they?" To which I wickedly replied "Why yes; of course."

Sheep Husbandry.

ENGLISH MOUNTAIN SHEEP.

YOUR mention of the Herdwick Sheep (in the Fair No.) reminds me of a circumstance which happened many years ago, and which may be of interest to your readers. I was visiting England when a young man, nearly 30 years since, and passing through what is known as the Lake region, found myself in a picturesque country of beautiful lakes, but very small to an American view, embosomed in mountains and woods, with most charming dells and valleys interspersed. Here were the homes of the poets and the Cumberland mountain sheep; and the latter I must say were the more interesting to me. Rydal Mount, the home of Wordsworth; Grassmere, the home of Mrs. Hemans, and the little lodging house where Hartley Coleridge stupified himself with opium, and every night after a debauch drank up, in his burning thirst, even the water provided for his oft-forgotten ablutions, were all visited as a matter of course, but left few pleasing impressions for their human connections. The grand beauties of Helvellyn were more to my taste, and on its slopes and crags I made the acquaintance of the flocks of Herdwick sheep and the shepherds to the manor born, with their wonderful dogs.

Low down on the mountain side I came across a man gesticulating somewhat in the manner of an old-fashioned semaphore telegraph. Waving his arms and throwing his cap, with a face set steadfastly up the mountain, one could not but follow his view. Away up among the mountains small patches of gray could be seen moving over the slopes and gathering into a central mass. These were sheep which were being collected by the dogs in obedience to signals given by the shepherd at least a mile below. Having a good view of the slope, the latter could see the scattered sheep, and could direct the dogs to them, where they were grazing behind huge jutting crags, but out of sight of the sagacious animals. In a short time the sheep were collected, and not too soon, for the clouds were fast gathering on the mountain and the storm foreseen by the shepherd was near at hand. Down the mountain, pell mell, over rocks and ravines, galloped the sheep with dogs on their flanks and rear. The flock was soon on the road and driven homeward. As I followed, talking with the shepherd, another large flock appeared in front quite filling the road. Here seemed to me a dilemma—how could these meeting flocks avoid getting mixed, and if mixed what could separate such half-wild creatures again? At a word the dogs darted ahead and in a moment crowded the sheep to one side of the road; the other flock was turned in the same way to its side of the road, and, like two passing trains, the flocks scampered past each other in two long lines, separated by a narrow space in which the dogs were. It was my first experience with mountain sheep and shepherd dogs, and as I trudged along the road in company with the shepherd—one single man in charge of more than 3,000 sheep, but having a score of dogs to help him—he related to me the most wonderful stories of his dogs, and of his sheep as well.

But to make a practical application, let me say that these sheep make profitable the poorest possible pastures. The mountain sides, covered with heather and scrubby vegetation, furnish pasturage which is turned into useful wool and the best of mutton for flavor. The annual rental of such mountain pastures in consequence of this use, affords a considerable income to the owners of the land, and the farmers make good profit from their flocks Some time we shall be glad to have such sheep on our mountain ranges which are now totally useless, but which will then afford subsistence to many shepherds and much wool for our coarse manufactures. H. S.

CLOSE CONFINEMENT OF SHEEP DURING WINTER.

I HAVE a small flock of pure-bred South-Down sheep, but shall Winter only about 60. I shall let them run daily on a 100-acre pasture lot whenever the weather is not too rough, feeding them nights and mornings with rowen hay, and once a day with half a pint of grain or other stimulant. I shall give all those ewes lambing early a few carrots and a little corn meal, and I shall let these as well as the rest run out in the sunshine a few hours every day there is any; and even if snow is lying on the ground, that will not prevent them from going out for two or three hours. I will give a report next Spring and show that these South-Downs will have more and better lambs than any ewes managed in the usual coddling way. I mention this and confidently make these assertions, because through some stupid mistakes, it is over and over again repeated that English sheep cannot be kept except in small numbers; that they cannot live exposed in rainy weather, and although nobody attempts to compare Merino mutton with theirs, yet it is really thought the Merinos are hardier. The fact is, that in England every farm of about 300 acres keeps more sheep than many a thousand-acre farm in the United States, and the farms of that size also grow double the grain and support double the cow stock, in addition to the sheep, that any farms of the same size in America do.

In consequence of less roots being fed in the United States, the young sheep do not grow so fast, and the first fleeces shorn are not half as heavy as those from yearling sheep in England. I am aware that South-Downs have much less wool than other breeds, and that the Oxford-Down has much longer wool, and that the fleeces weigh about double the weight. The Oxford Down is an example showing the folly of some breeders in being so very much opposed to crossing; for this breed was perfected from crosses. G. G.

The Horseman.

BREEDING TROTTING HORSES.

IN an admirable article on this subject in the Kentucky Live Stock Record, it contends, in order to obtain those of first-class performance, for a copious infusion of thoroughbred blood, either late or remote. In this we entirely agree with our respected cotemporary, for how else could the fine form and limbs, high spirit, intelligence, indomitable will and endurance that characterize our best trotters be obtained. Not from the cold-blooded horse surely, for where have these ever been found in him to any remarkable degree? But the advocates of cold blood say that he gives the trotting action. Admit this, and what would this action amount to, when great speed and endurance were required, unless well fortified with crosses of the thoroughbred. Yet several of the latter, it is said, occasionally possess fast trotting as well as running action. This we believe was particularly the case with one or two of the progenitors of imported Messenger, the fountain-head of the best American trotters.

Although admitting the value of pacing blood in assisting to make up some of our fastest trotters, still our cotemporary prefers that of the racer, if he must choose between the two, when a fresh cross is needed. In this again we think he is right, notwithstanding the pacer has undoubtedly a large infusion of the thoroughbred in his composition. This may be seen in the fine high-spirited amblers and pacers, bred pure or nearly so, in Cuba and Spain, from the Andalusian, which is a direct descendant from the Barb brought over from Africa by the Moors, when they invaded Spain many centuries ago.

It is contended that the progenitors of the fine-limbed Narragansett pacer, so famous for years past for speed and endurance, were brought from Cuba to Rhode Island in vessels engaged then in the West India trade: and that the pacers of Kentucky and Tennessee are high-crossed descendants of the thoroughbred, which have been going on ever since the first settlements of these States.

Now as to what is thoroughbred, our cotemporary says the fifth consecutive cross from the cold-blood horse is admitted into the Eng-

lish Stud Book as pure. Not being familiar of late with this publication, we desire to ask if that is the rule which now governs it? If so, would our cotemporary admit to his Stud Book, if the editor of one, a fifth consecutive cross, originating on the dam's side from a great coarse English Lincolnshire black mare, standing perhaps 18 hands high, and weighing 2,000 pounds with little better or faster action than an old cow? For our own part, we should fear the cart-horse blood of such an animal would crop out every little while, to the injury of the racer down to four times a consecutive fifth cross from him, if not for a whole century or more.

SADDLE HORSES.

At the present moment there is a great market in England for almost every variety of agricultural produce, but prices for the general run of such animals as are exported, though satisfactory to the common graziers and stock farmers, are not high enough to tempt men of capital to breed, raise and prepare them for market.

Raising trotting and other horses does not remunerate very highly, because so few become fast enough to sell for the best prices, and as trotting is an unnatural pace to race in, a great deal of expense is necessary to keep and pay trotting men to handle the colts. Breeding race horses is no better, on account of the tendency among thoroughbreds to grow light and weedy, so that should they fail in being fleeter than the average there is no demand for them.

Now, as the best saddle horses in England are always in demand, and those of extra merit sell for very large sums, any gentleman who would go intelligently to work in selecting dams of powerful frames and using a stallion of the most fashionable blood, might secure an income of many thousands per annum by such management as would bring out from 10 to 20 young horses just fit for riding in the chase, and the thousands might be tens of thousands if with proper breeding and management, these young horses were large and strong enough to carry gentlemen of heavy weight up to the hounds.

The art of successful stock farming consists in producing such animals as will sell for great prices without being obliged to expend heavily in preparing them, and these animals can be brought out fit for sale without any expensive training.

Saddle horses commanding prices equal to those of the best trotters here will require no breaking to harness, for it would be a serious drawback to a valuable hunter to have been used in any way in harness. G. G.

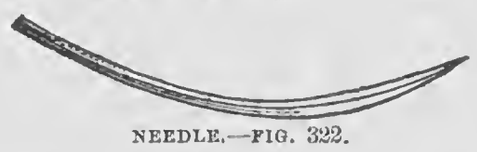
Veterinary.

TREATMENT OF WOUNDS IN ANIMALS.

Accidents *will* happen even with the greatest care. But as a rule we are not careful and run risks recklessly. It would not be so bad if means were always at hand to repair damages. Almost every careful farmer has something upon which he can lay his hand to repair a plow, a wagon or harness; but if his horse runs into a fence, or is kicked in the stable, or happens to meet with any such common accident, or a cow is hooked by a cross companion, there is running hither and thither for help, and no help at hand. And so the damage is greatly worse in its effects than it might otherwise have been, and an animal may be lost or seriously reduced in value for want of ten cents' worth of material and a very little foresight. Wounds in horses or cows are mostly superficial and consist of cuts or lacerations of the skin and subjacent tissue. These are very readily healed by prompt and proper treatment.

The first thing to be done in case of such a wound is to secure the animal, if any surgery is to be performed, as cutting or stitching. The wound is then to be cleansed with cold water, which tends to arrest the bleeding, while warm water encourages it. If the lips or edges of the cut or tear will not be subjected to severe strain by the movements of the animal, they may be held together by plasters of common black pitch, or of an adhesive mixture of melted resin and tallow or beeswax, spread upon stout cloth, such as strips of bed ticking or strong sheeting. The plaster is cut into strips about one inch in width, and is applied to the shaved skin, in such a manner as to resist the strain which would open the wound. Openings should be left in the lowest portion of the wound to permit the escape of pus that may be formed, and to inject any stimulant needed to produce healthy healing action. But it is always safe to close a wound with stitches.

Surgical stitches are made with a curved flat needle, having a thin, sharp-edged blade, which will cut its way through the skin. It is very difficult to force a round needle through tough skin, and for this purpose a needle shaped as shown at figure 322, is used. This may be used for a delicate operation and the coarser needle shown at figure 323—which is a

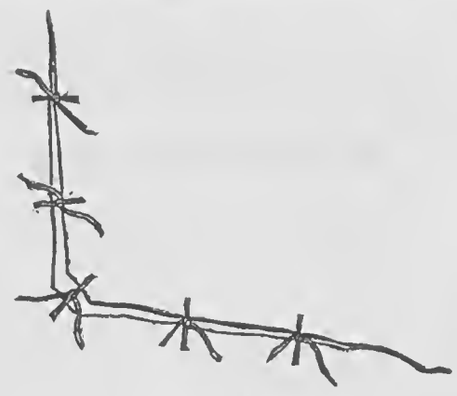


NEEDLE.—FIG. 322.

common packing needle—may serve for rougher work. The needle should be kept sharp and whetted upon a fine stone to secure smooth, keen edges to the blade, which will enable it to pass through the skin with ease and with the least pain. Usually the lips of a wound, especially when it is contused, as if made by a kick or blow, are not very sensitive and will

NEEDLE.—FIG. 323.

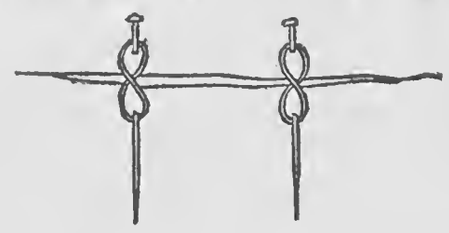
be all the less so the sooner the wound is operated on after its infliction. So that the operator need not be at all nervous about hurting his patient, and in fact the less he thinks of it the more easy will be the operation. The edges of the wound are pierced in places opposite to each other and the thread is drawn up and tied and then cut, leaving the wound as shown at figure 324, which is the form of a very



WOUND.—FIG. 324.

frequent cut or tear made by kicks or collisions with fence posts or ends of rails. If the laceration is irregular, the stitches should be placed where they will do the most good in supporting the parts and keeping them in contact until natural adhesion occurs.

Sometimes it is difficult to get the lips of a wound in contact, as where the injured part is hollow instead of prominent, and in such cases a quilled suture is made. This consists of placing pieces of quill or cylindrical pieces of wood, as sections of common lead pencil or peeled twigs of trees, upon each edge of the wound and passing the thread over these and tying the ends. This causes pressure to be exerted upon the lips which closes the wound. A very simple suture is made by passing a strong pin through the edges of the wound and winding a thread around the pin, and across the cut, in the form of a figure 8, shown



WOUND.—FIG. 325.

at figure 325. This is the usual method of closing the cut made by a lancet in the operation of bleeding.

To produce healing of a wound in a horse or a cow, some stimulant is nearly always required. This may be common spirits of turpentine or the compound tincture of benzoin or that of myrrh and aloes. Either of these may be applied with a feather once a day, or if the wound is deep, the stimulant should be injected to the bottom with a common squirt can or a syringe. Wounds should always heal from the bottom, and to secure this the opening should be kept free, by means of a plug of lint dipped in the stimulant used. Lint may be made by scraping a piece of linen cloth such as a towel, with a knife, and collecting the loose fibers. Linen only should be used, and never cotton or wool for this purpose. If pus is inclosed in a wound and the opening is permitted to close, an abscess will be formed, or the pus will be absorbed, with some future ill effect. In the case of deep, punctured wounds careful search should be made for the possible presence of splinters or other foreign bodies, and to enlarge the opening will often facilitate the search or assist in the ultimate healing.

If the wound bleeds freely during its treatment, it should be kept clear by means of a sponge or a soft linen cloth, as an old handkerchief. Profuse bleeding may be stopped by pressure by pads, or by twisting a towel or a strip of bag cloth above the wound, and sometimes by sprinkling upon it powdered sulphate of copper, or the dust of puff balls. Simple cuts may often be healed very quickly by cleansing the part and binding a pad of lint upon it, which may absorb the blood and form a clot which will protect it from the irritating effects of the atmosphere. Nothing else more irritates raw flesh than contact with air; and the first thing to be done to soothe the pain of a wound, is to protect it from the atmosphere.

Injuries to cows' teats are very common by one animal stepping upon another when the latter is lying down. Such wounds can only be treated by stitches so placed as to restore the injured parts to their natural position. To insert a silver milking tube into the teat, will help to keep it in position while the stitches are being made, and in this delicate organ the fine needle (fig. 322), should be used. The milking tube should be left in the teat so that the milk may escape as it is secreted. In such delicate operations as this, the use of photographers' collodion, which is made of gun-cotton dissolved in chloroform, will be of great benefit, as this substance painted over the wound with a soft camel's hair brush, forms an air-proof film which shrinks as it hardens and draws the parts closely together, as well as protects them from air.

The appliances needed to be kept on hand for use in emergencies are few and simple. They consist of the two needles shown; a skein of white, waxed silk; some of the adhesive plaster mentioned; some prepared lint; a small bottle of tincture of benzoin or myrrh; a piece of soft sponge; a soft, old, worn towel; a few stout pins; and, if possible, a foot or two in length of fine silver wire for making stitches, and lastly a silver milking tube. With these, kept in a safe place, ready to hand, one may always be ready to repair damages in case of accident, and possibly save a valuable animal from loss or serious injury.

Farm Economy.

CIDER VINEGAR.

The enormous supply of apples all over the country suggests the idea that a good part of them may be turned into cider vinegar with profit. Vinegar may be made direct from the apples, but it is much preferable to first extract the cider.

When cider is intended for vinegar it should be made with the same cleanliness as if intended for drinking or keeping, and the casks into which it is put for fermentation should be equally sweet, and if old whisky casks are used it improves the cider as well for vinegar as for drink.

There should be nothing added to the juice, as pure juice is best; the mustard seed, sulphite of lime, and other such ingredients used for stopping fermentation, injure the vinegar. The better the apples the better the vinegar, and cider made late in the Autumn from fruit rich in juices, is much better than that from windfalls and early-gathered fruit, as cider is better for the same reasons.

Vinegar may be made from crushed apples or from the pomace after the cider is pressed out, as is often done from the pomace of grapes and of other fruits. The apples are ground and put into shallow holders where they are left to ferment for a couple of days, then pressed and the juice put directly into old vinegar casks containing mother of vinegar. If the weather is cool the casks are placed where they will be kept warm, and in a few months the vinegar may be drawn off into clean vessels. The chief auxiliary to producing vinegar quickly is exposing the fluid to the air at a mild temperature, but for the best cider vinegar, where haste is not necessary, it is better to extract and barrel the cider, allowing it to ferment as in the best process of cider making, and then using the cider as desired. Most cider vinegar, and perhaps the best, is made by leaving the bung open and allowing the change to take place gradually, which will be in a longer or shorter time as the temperature is warmer or cooler.

Numerous methods are in practice by large manufacturers who purchase large quantities of cider and expose it to the air in large vats in various ways. One process is to allow the cider to run slowly over beech shavings; another allows it to trickle down over boards or shelves, while still another process is to force bubbles of air through the liquor continuously.

A French method consists in scalding the barrels with water and then pouring boiling vinegar into them and rolling them until the barrels are thoroughly saturated, when the barrels are filled about one-third full of cider vinegar and some two gallons of cider poured in each seventh or eighth day until the casks are two-thirds full. In two weeks from the time of adding the last two gallons, one-half is drawn off and the process repeated. The casks are kept as near a temperature of 80 degrees as possible.

This last process gives farmers a hint for producing cider as may be desired, by keeping the barrel in a warm place and adding cider to the vinegar barrel, or by putting a quantity of sharp vinegar into the cider.

The cores and parings left from drying apples may be used as above described, or they may be placed in jars or tubs and warm water poured over them, and set in the sun or other warm place for a week or ten days and the juice added to the vinegar barrel, or used with the addition of cider. The principle of vinegar making is fermentation, and this comes from the presence of sugar, and may be hastened by yeast or similar aids, but the best agent to produce fermentation is strong old vinegar. The richer the juice in saccharine matter the stronger the vinegar, and the warmer the temperature and the more the vinegar is exposed to the air the more rapid the process.

Industrial Societies.

THE QUEENS CO. AGRICULTURAL FAIR.

First Premiums to the Rural New-Yorker for Seedling Potatoes, Wheats, Corn and Oats.

(Rural Special Report.)

All things considered, I deem this one of the most efficient and successful fairs of the country. I am far from wishing to pay the Secretary a compliment such as is usually passed as a matter of courtesy on such occasions, when I say that to his intelligent, unremitting, courteous efforts seems to be due in a great measure the happy adaptation of all the fair machinery to the purposes which are intended to be subserved. There was no confusion or disorder anywhere. I heard on the part of visitors only words of praise, and, though 15,000 persons were collected together upon these grounds during Wednesday (the middle day), there was no department, no special class of articles, which could not be leisurely examined by everyone.

Only in the stock department was there an approach to failure, and in that the failure was well-nigh complete. A Guernsey bull or so, several Jerseys and Short-horns; a few South-Down ewes and bucks and a dozen hogs—Poland-Chinas, Berkshires, Yorkshires and Chester-Whites—completed the exhibit. The poultry department was, however, as usual, varied and extensive.

Among farm implements, Kemp's Manure Spreader, described in our fair reports, attracted a good deal of attention and favorable comment. A better display than usual of reapers and mowers, pulverizing harrows, grain and fertilizer drills of many kinds, was well arranged over the lawn appropriated to this department. The beautiful "Twine Self-binding Harvester" of the Walter A. Wood M. & R. M. Co., attracted while in motion such crowds of people that its continued action was not deemed desirable.

The display of vegetables, grain, etc., was one of the best, both in quantity and quality, ever exhibited. Mangels and beets, cabbages and pumpkins were of immense size. The Rural New-Yorker took the first premium for varieties of wheats and seedling potatoes. Twelve ears of the Chester County Mammoth Corn also took the first premium for heaviest ears, and the Blount for the greatest number of ears on a stalk. The Mold's Ennobled Oats also took the first premium as the best in their class. Thus the Rural's first exhibit at fairs has proven very gratifying, everything which was entered for competition having taken a first prize.

The Rural Branching Sorghum elicited many remarks from farmers who read the explanatory labels. It is a suggestive fact that most visitors do not read labels, unless they are in conspicuously printed letters or the article itself excites the curiosity to further inquiry. Upon each plate of seedling potatoes the Rural had been at the pains of writing upon the label the number of eyes planted and the exact weight of yield in pounds. I did not observe one person who seemed to notice it—as if the potato itself, and not the yield, were all that it was worth while to look at. Again, I have never seen the fact better demonstrated that size is with judges, among vegetables as with fruits, that which determines the awards of premiums. The first premium for late potatoes was given to the largest potatoes, with large, goggle eyes and homely shape, while a bushel of Late Snowflakes of uniform, medium size and perfect symmetry, with small, surface eyes, were passed over as if they had been buried in the earth. It was the same with the mangels, beets, squashes, pumpkins, sweet potatoes, etc., etc.

Mr. Ricketts exhibited at this fair his grapes for the first time. Among them was one which struck my fancy immensely. It was numbered 97, and is a seedling of the Concord and Trentham Black. The bunch is very large, loosely set; berry very large—as large as the monstrously exaggerated pictures of Moore's Early—black, blue bloom; flesh tender, aromatic, sweet, vinous, juicy. Mr. R. says the leaves

are large like the Concord and the vine thrifty. When offered for sale, this grape, possessing, as it does, both size and quality, must commend itself to the public taste.

In speaking of potatoes, I had almost forgotten to mention the White Elephant, a plate of six of which was placed among the seedling display. I should have said *two* plates, since two were required to hold them. These were the largest potatoes exhibited, each one equaling the size of the cut in your Fair Number. It happened (when their merits were being discussed) that a lady was standing by who had eaten several of the White Elephants which had been sent to her by one of the editors of the RURAL. She pronounced them, notwithstanding their size, of excellent quality.

The floricultural display was beautiful in detail and in arrangement, occupying the entire space allotted to it and, in fact, crowding other departments. It well deserves a special report to itself, which I am aware, at this time of fair reports from all parts of the country, your space would not permit. The pomological exhibit was also full and well worthy of extended remark. It was very evident here as elsewhere that fruit of all kinds had ripened considerably earlier than in average seasons.

The RURAL tent, which was pitched in the middle of the grounds, served not only as the headquarters of the RURAL family, but as a convenient resting place for many personal friends and inquiring strangers. The venerable proprietor of the RURAL NEW-YORKER and his wife (the father and mother of its editor) now between 70 and 80 years old, were "keeping house," and as hale and happy as their children and grand-children who flocked about them. Such references perhaps may not here be in place, but I may be pardoned for expressing the hope that they may yet long live to enjoy the marked effect which their Experiment Farm, and the RURAL NEW-YORKER are exerting upon the agriculture of our country. MAJOR.

NEW JERSEY STATE FAIR.

(Rural Special Report.)

THIS fair was held at Waverly from Sept. 20 to 27. The attendance was very large throughout, and the fair a complete success financially considered. With a few things corrected by the officers of this society, the New Jersey fair might rank among the foremost of those of her sister States, and perhaps outstrip some of them in point of attendance. Officers of *this* association, as well as some others, will soon be taught that an agricultural State fair is a place for farmers to exhibit their products and to gain information from their neighbors' exhibits, and not a place for all classes of fakirs, side-show-men and horse trotting, and the sooner this lesson is learned and applied, the sooner will more of our intelligent and progressive farmers become interested in these meetings and aid in their advancement.

The show of poultry was particularly noticeable and the exhibits fine in every class, the breeds being Asiatics, Hamburgh, Spanish, American, Polish, French and Bantams. The attractions in this department were increased by the exhibition of an artificial hen engaged in hatching chicks by the dozen. The competition on cattle was confined to the State of New Jersey alone; but the exhibits in Jerseys, Ayrshires, Devons, Short-horns, Herefords, Holsteins, as well as the show of natives and grades, were fine, and did credit to the exhibitors.

There was also a very fine display of agricultural implements, and while the variety and number were not so large as at the New York and some other State Fairs, still the exhibits were good, and the exhibitors present found many purchasers for their machinery and implements. A Western Plow Co. more ambitious than some of their Eastern competitors, believing that New Jersey farmers are interested in improvements made in plows as well as in other implements, exhibited, through their general agent, a full line of plows, from a single-horse to a three-horse plow, and during the Fair sold over a car-load to New Jersey farmers. This fact not only shows that the plow was popular, but that the farmers of New Jersey are keeping up with this age of progress. R. H. Allen & Co., of New York, had a full line of the agricultural implements and machinery of which they are the manufacturers and general agents, and this was an important feature of the exhibition.

MR. A. M. FORRESTER, exhibited the Belle City Feed Cutter, made by David Lawton, Racine, Wis. This machine is simple in construction and very strongly and durably built. It cuts four lengths of chaff, varying in length from one-third of an inch to two inches, and the change is made without taking off or putting on extra wheels. By a simple device the operator can stop and reverse the rollers, in case of accident, or when a piece of iron or wood gets into the machine. Both first premiums for hay and fodder cutters were awarded to this machine at the Pennsylvania State Fair, Sept. 1880; and also the first premium at the New Jersey State fair. G. B. B.

Scientific and Useful.

SIGNIFICANCE OF ACTIVE NITROGEN FOR GRAIN.

PROFESSOR F. H. STORER.

THE importance of active nitrogenous manure for the cereals and the capacity of leguminous crops to thrive without nitrogenous fertilizers, on fairly good land, are well illustrated by some field experiments of Professor Heiden, at Pommritz, in Saxony. In so far as the present statement is concerned, these experiments prove nothing new. The facts they illustrate have been known for many years. But there is never any harm in looking at such facts occasionally from new points of view, and the well-known accuracy of Professor Heiden as an investigator gives special value to his results and insures for them a permanent place in agricultural literature. In these experiments crops were grown during nine consecutive years, both on land that received no manure and on land that was manured repeatedly with sulphate of ammonia. The experiments were made on newly broken, heavy, strong soil which had resulted from the disintegration of granitic rock. Each of the plots measured one square Saxon rod (18.44 square metres). Upon the plot which was manured, 1,000 grammes of sulphate of ammonia were distributed and worked in with the utmost care at the intervals recorded in the table. During the year 1868 the plots were spaded four times but nothing was sown upon them. The subsequent cropping will appear from the table. The weights of the crops obtained are given in grammes, as stated by Professor Heiden. Inasmuch as the figures have no value excepting as they serve to compare the results one with another, there is no incentive to change them to their equivalents in pounds and ounces.

Crop Grown.	In the year.	Manure used.	Am'ts Harvested. Grain.	Chaff and Straw.
Oats.	1869	No manure	820	2,090
		Sulphate of Ammonia applied in 1868	3,090	5,885
Oats.	1870	No manure	89	320
		Sulphate of Ammonia applied in 1868	89	322
Oats.	1871	No manure	167	523
		Sulphate of Ammonia applied in 1871	5,267	9,185
Vetches.	1872	No manure	1,666	6,399
		Sulphate of Ammonia applied in 1872	2,233	7,214
Rye	1873	No manure	825	2,523
		Sulphate of Ammonia applied in 1873	4,298	13,522
Clover.	1874	No manure	.....	12,472
		Sulphate of Ammonia applied in 1873	.....	3,942
Rye.	1875	No manure	1,595	3,730
		Sulphate of Ammonia applied in 1873	1,190	2,643
Peas.	1876	No manure	4,220	7,030
		Sulphate of Ammonia applied in 1873	2,035	6,700
Rye.	1877	No manure	970	1,902
		Sulphate of Ammonia applied in 1877	8,380	10.568

The importance of the nitrogenous manuring for the oats and the rye is most conspicuously set forth, as well as the comparative indifference of the leguminous crops, viz., the vetches, the clover, and the peas. One interesting feature is the good work done in 1869 by the sulphate of ammonia which was applied in 1868; and another is the absolute inefficiency of this old manuring in the year 1870, which appears, however, to have been an unfavorable season, anyway. In noting the better yield of clover from the unmanured land in 1874, and of peas in 1876, it is to be remembered that the soil of the unmanured plot had been less strongly cropped in previous years than that which had been manured. It is the special merit of the active nitrogenous fertilizers that they enable grain to put to profit the natural strength of the soil more fully than would be done without their aid.

Miscellaneous.

STRENGTH OR FASHION IN WAGON WHEELS.

A MAN brings his wheels to a smith and says: "Now, I don't want you to dish those wheels," "All right," says the smith, and he sets the tire, and in a few weeks they need setting again, because they were not put on tight enough, so that the person who wants his wheels kept in the fashion has to pay for it. The same is the case with axles on light wagons. The wagon is brought to the wheelwright, and the owner says; "The axles on this wagon are straight (or 'bent down,' as the case may be,) wouldn't they be stronger if bent up?" In reality what he means is, "Wouldn't they be more fashionable?" but he doesn't like to say it out. The polite reply, of course, is "Yes," and the axle is weakened in accordance with the fashionable mode. When the front axle of a light wagon is bent up, and the shafts are attached near the wheels, when the horse starts, especially if he does so suddenly, it has a tendency to turn the axle over and break the reach; whereas, if the axle were straight, or bent down a little, it would not act so. Again, as soon as the axle begins to "give down," if bent up, it gets longer and longer, and consequently tends to break the bed pieces. On the other hand, if originally straight or bent down, it tends to pull the frame together, especially if it touches the collar, as it should. Yet the majority of wagon makers seem to think the axle stronger if bent upwards, and, of course, most of the public follow the opinion of these; but who has ever seen a whiffle-tree pulled against the crook? W, V.

VARIOUS NOTES.

I Rise for Information.

WILL some one please tell me the value of a $40 phosphate on a soil receiving sufficient water to dissolve its soluble parts? Having that little matter settled, will the same or another person tell me the value of a $40 phosphate on a soil which receives only half enough water, and also upon one which receives no water. I have a faint suspicion that there is a money value in water, and the replies to the above will help to determine it. I read that all a soil needs to make it produce a crop is manure; I do not read anything upon the manner of applying it, or any suggestion that water *per se* is at all requisite. I read that old Ben Franklin, when he set sawdust pudding before his guest, was considerate enough to have it moist, and also provided water as a solvent, probably thinking that the joke would be *too* dry. Is it not the driest of jokes to inform us that we must apply $A^{50}P_{40}N_{30}W_{00}$, and never say "water" once, unless the last term in the above formula indicates that two negatives make an affirmative?

It seems as if we must trust to luck for water, and as "no water, no crop," so after all the chemicals, we depend upon luck for the crop. If that is the case, why go to the expense and trouble of applying any fertilizer? Here we come round to the starting point again. If water is so important, so absolutely, vitally necessary, why not at least hint in strong terms that to get back our $40 and our labor, and a little more as a profit, we must arrange some artificial mode of watering our chemicals, or we shall lose our labor and our pains?

How many farmers buy manure, meet with a dry season, lose faith and fall back into the old dry rut? Now the way out of all this is, to irrigate, on a small scale at first, and with the profits of the first year (which are as sure as taxes) enlarge, and ever after make money.

Destruction of Insects.

The salt question is always on the carpet, and while it is very certain that salt is not a manure, it is equally certain that its application is a decided benefit. The retardation and often complete ruin of crops by insect depredations is well known, but is not at all appreciated to its full extent. Salt can act in but three ways beneficially. It attracts moisture, and hence is useful in dry seasons: it drives away insects and, therefore, is useful in all seasons; and when thoroughly dissolved by heavy rains, it acts by assisting inert or insoluble material to become fit for plant food.

The first mode is a slight gain, not enough though to pay for the salt; the second is very valuable, paying for the salt and trouble of application from 10 to 100 times over, according to the prevalence and destructiveness of the insects; the third mode is of but little value because insolubles are generally proof against its feeble action. If we sum up the gain from the three modes of action, we perceive such a very decided gain, that one fair trial is sufficient to convince the most skeptical. The only danger is in an excess, but as five bushels per acre will do no harm, the danger is not likely ever to be alarming, as few farmers can afford to waste salt anywhere.

To Grow Morning Glories.

We have had the driest season this Summer ever known in Nebraska. It proves the axiom that "an attempt upon the life of a plant, prematurely forces it into flower and fruit." In the early Spring there was sufficient moisture to grow morning-glory vines quite well, but the intense drought since, acting as "an attempt on the life of the plants," has caused them to burst into an extraordinary abundance of blossoms, and of more brilliant colors than usual. The flowers are at the same time unusually large. Anyone can apply this principle artificially.

Another mode of producing the same result I have applied to Lima beans. When any vine is trained high on pole or string, it seldom flowers till it reaches the top and hangs down. This hanging down is an interruption of its natural mode of growth, *i.e.* an attempt upon its life. I train Lima beans to poles only four feet high, which they top in a short time, and at once burst into fruit. All vines which from their tenderness are liable to be caught by early frosts in the Fall, should be trained low and they will produce earlier and heavier.

Sour Soil or Sweet Soil?

I have growing a plant of rhubarb and a plant of Amber Sorghum close together. Both plants show their full characteristics—the rhubarb is very sour, and the sorghum is very sweet. I queried some time ago of the writers to the RURAL NEW-YORKER what sour soil was, as I had never seen any, but received no reply. Now I ask: What sort of soil is that in which both sour and sweet grow to perfection? That kind of soil out here which produces the common clover-leafed sorrel also grows sorghum, and produces catnip, horehound, sage, peppermint, and I can see no reason why, if protected by glass, with artificial heat, it would not grow oranges, lemons, and all tropical medicinal plants. Is not this "sour soil idea" only a relic of barbarism, or is it the relict herself, the wife of the old agricultural barbarian himself? It is certainly an old woman's notion, not worthy of enlightened farmers of the present day. S. RUFUS MASON.

Dodge Co., Neb.

Grasshoppers and Bird Pests.

A curious grasshopper visitation is to be noted as one of the peculiarities of the season. A section extending from the southern towns in this county through Cortland and into Broome, sixty miles in length and three to five wide, along the valley of the Tioughnioga River, was invaded by swarms of this locust pest. They are reported to have done serious injuries to all kinds of herbage and foliage.

Another singular development has taken place in this locality during the past season. In addition to the insects, larvæ and other pests that we have to fight, in order to save things that we depend upon for consumption or pleasure, we have the fruit-destroying birds to contend with. The birds in this city and its suburbs have attacked the grape crop with the most destructive effects. Many grape growers have lost almost their entire crops, and where the pests did not take all the fruit, they spoilt the remainder by picking the berries open. The maranders are the English sparrow, the robin and the oriole. The sparrows came into my grounds by the hundreds. We killed scores of them, with a good many robins and orioles, and finally drove them off. The oriole does not appear in this section in very great numbers, but he is the slyest thief of them all. The sparrow has become an unmitigated nuisance. I think some of them will get a dose next Winter, that will thin out the obnoxious swarms.

Freaks of Lightning.

I notice several accounts of the oddities of the electric fluid in the RURAL, but what occurred in this vicinity will be hardly matched. Early in August, a light shower passed over the city, nowise remarkable except for two tremendous peals of thunder. In one of them the lightning struck in the ground, in a low and level piece of meadow land belonging to me. As it penetrated into the earth the bolt seemed to break up into numbers of sparks, as some six or eight holes were made in a space of four to six feet square, the largest of which was three or four inches in diameter. I happened to be on the spot the next morning, and saw this for myself. People for fifty rods round were more or less affected by the shock. There were plenty of trees and buildings close by and a brick-yard within fifteen yards. "ONONDAGA."

Syracuse, N. Y.

AN INVITATION.—Col. F. D. Curtis writes us that the public are cordially invited to a "Pig Party" and farmers' pic-nic at Kirby Homestead, Charlton, Saratoga Co., N. Y., on Thursday, Oct. 7. No special invitation is needed. A lunch—and Mrs. Curtis is famous for her lunches—will be provided for those from a distance. Should it rain on Thursday, the party will meet next day.

COUNTRY AND CITY LIFE.

GEN. WM. H. NOBLE, OF BRIDGEPORT, CONN.

THE very name of RURAL NEW-YORKER bridges between town and country. By a mental "Rapid Transit," it takes us out of the rush and heat of busy mails, to the cool, and quiet, and delights of country life. There is a good deal in a name. To one wisely placed cling prestige and tender sentiment and heart memories, as to a torn and tattered battle flag. Such a one speaks a history of honored tradition, or a glorious purpose. I doubt a good deal whether "a rose by any other name would smell as sweet." There is more than its perfume floating on the air. It has stood for all that's lovely, gentle and refined, from Eden down. "RURAL NEW-YORKER" emblems and speaks for a close alliance of the best estate and life of town and country. No city airs or apeings are at home or wanted among the woods and fields or floods gladdened with fruit and flowers, and sheltering home trees swaying to the breeze, and golden harvests. Not polo games, or hops, the fox hunt or the race, nor the better life at spas or by the ocean's surge, promise the blood to cross with country life.

The city's need is rest, to think and gather

strength and nerve for the stir and head toil of the mart. The hope of country life is quickened brain and enterprise, born of the crush of men in crowds. To guide and commingle these streams of life is just the purpose for which "RURAL NEW-YORKER" stands an emblem and an utterance, its business and glory is to be in this a power.

To such a mission, the age and country offer wondrous helps. The life we lead, the air we breathe, the duties and empire resting on our country homes, have left on us but few markings of peasant life. The Yank don't play the peasant worth a cent. Besides, the rail and poney routes bearing to every hamlet, before sundown, the sun-up thoughts and doings of the world, the speaking fire that girts the land, the voice along the wires, and all that our better life avails, fast leave our peasant class in the dim distance as but a memory and a myth.

Yet if by peasant you mean the dwellers in rural homes, the tillers of the soil, we are in truth building up "the finest peasantry on earth." But to us the word no longer bears its import of old. It no longer means a rustic look or garb, no longer marks an humble reverence and bashful fear of those above in place, or wealth, or social chances. Our country dwellers of to day meet the situation. Self-government has educated the owners of the soil for their place and duty. Above all others in numbers and stake in the Republic, they step forward to bear up and defend this empire of the free.

To help them with brain and purpose, right methods in the field and homes, right thoughts and tastes is what the RURAL NEW-YORKER means. God speed the work!

WHAT OTHERS SAY.

KEEPING ONIONS.—A Minnesota writer says, in the N. Y. Sun, that he makes as deep a pit as he can with the plow for onions and cabbages in a dry, sheltered place near the house, scraping out all the loose dirt with a hoe, and putting in some chaff or straw from the straw stack, and tramping down well. Then he hauls the onions from where they grew and piles them in carefully on this, and puts more chaff on top and covers up with a foot of dirt from each side, and packs it smooth with the spade, where they can remain a part or all of the Winter, or until wanted. They were quoted at $1.25 last Winter and Spring in Minneapolis. If they freeze it will make no difference; they will come out all right when the frost leaves the ground. Cabbages may be pulled up on a dry day and packed in the other end of the pit, roots up, and also covered with straw and dirt, when they or the onions can be taken out as wanted. The cellar is one of the worst places to keep onions or cabbages in, as it is almost always too damp or warm.

A CORRESPONDENT of the Mark Lane Express says that he had opportunities of discussing with two experienced American farmers the price at which wheat can be produced in their country. One said that if the price should drop below 80 cents (3s. 4d.) per bushel at Chicago, the area of wheat-growing in the United States would soon begin to decrease. The other considered that a farmer in the States was paid if he received a dollar per bushel for his wheat, but that it would not answer to grow the crop for much less. He came from a district, too, where 35 bushels per acre are often produced, and where he has water carriage close to his farm.—Most farmers in the West would be willing to sell their wheat for considerably less year in and year out. It would be more satisfactory, however, if the sections were mentioned from which these farmers came.

"A DISCUSSION on the ear-marking of cattle took place at a meeting of the Bedale Chamber of Agriculture the other day," continues the same writer. "Dr. Brown, who read a paper on the subject, took up a curious position. He did not seem to object to the ear-marking of women, a species of mutilation which is a survival of savagery, and only a little more tolerable than ringing noses. At any rate, he held that if women choose to be mutilated it was no one's business but their own. When little girls are taken by their mothers to have their ears pierced, however, it is doubtful if they have much choice in the matter; and there seems to me to be more reason for the Society for the Prevention of Cruelty to Animals to interfere with these atrocities than with the ear-marking of cattle. The latter practice seems cruel; but Dr. Brown did not succeed in showing how all cattle could be permanently marked in any way which would cause less suffering. Branding on the hoofs is absurd; for, as some one remarked at the meeting, it would often be necessary to wash the animals' feet to find the marks. As to branding on the horns, that answers very well with cattle which have horns, but cannot be carried out with very young animals or with polled cattle. Cannot some one invent a little machine that would quickly clip a letter or figure down to the roots of the hair? The question of ear-marking, however, applies chiefly to sheep. According to Dr. Brown, ringing pigs' noses is excusable, while docking lambs' tails is inexcusable. Why? Both operations are performed because it answers the purpose of those who keep the animals to have them done, and the pig-ringing inflicts ten times as much suffering at the time as the lamb-docking does, besides being a perpetual source of discomfort afterwards. No, Dr. Brown, these nice distinctions "will not wash." If cattle and sheep are to be protected, it will be only fair to stand up also for girls and pigs.

IT is unfortunately impossible to get accurate statistics of the number of Short-horns on the continent of America, a writer in the London Agricultural Gazette remarks. It may be stated, however, that herds are met in every direction, and that at one sale alone this Autumn 300 head were sold in four days. It seemed to him that the Short-horn is destined to play a most important part in the agriculture of America. It seems to be the cosmopolitan of the various breeds of cattle. It thrives all over, and wherever cattle are known there it will be found. Its rapid maturing powers will give it the preference over all other breeds.

THICK AND THIN SEEDING.—The following letter was read before the Farmers' Club at a late meeting. We take the letter and the subsequent discussion from the Husbandman of Elmira, (N. Y.)

"I have learned of an instance of thin seeding with oats, the results of which I think are worth reporting. Mr. H. C. Whitewood of Canisteo, N. Y., sowed last Spring upon five acres of measured ground, two and a half bushels of oats, or two pecks per acre, and harvested and thrashed from the said five acres 355 bushels of oats, or 71 bushels per acre. The ground was a very rich piece of black mucky soil that had been marshy and covered with alders. The water had nearly disappeared and last fall Mr. Whitewood pulled up the alders and plowed the ground; he was more anxious to get the land seeded to grass than to raise a crop of oats, and sowed the oats more to protect the young grass plants than for any other purpose. The catch of grass is a decided success. About three years ago Mr. Whitewood cleared a similar piece of land, plowed and sowed to grass, sowing three pecks of oats to the acre and harvested over 50 bushels per acre. He says that the oats in this case were so thick that in many places the grass was smothered. I obtained the above statement from Mr. Whitewood in person. He is perfectly reliable and there is not the least doubt about it I am fully satisfied.—Charles Whiting."

W. A. ARMSTRONG remarked that the Club might accept the report as true, and it supports in a very striking manner the propositions made there regarding thin seeding. The ground was good, so each single plant reached out and spread by tillering until the space was occupied.

J. S. VAN DUZER said that there must be one practical good resulting from this discussion of seeding—that farmers will consider with more care the preparation of their land for the seed. Thorough fitting is stipulated by the advocates of thin seeding as the first necessity. This should not be misunderstood; yet there will be thin seeding on poor land, farmers will overlook the important requirement so often mentioned here—complete preparation—they will scant the seeding and be disappointed. He was satisfied that rich land does not require so much seed as poor land, whether the crop be wheat, barley or oats; but he was not sure that a reduction in the amount of seed commonly used, without corresponding advantage in better preparation, would result in profit.

J. BRIDGMAN.—In the Spring of 1879, I begun sowing oats at the rate of two bushels to the acre. After drilling a portion of the field I added a peck, and after proceeding over a considerable strip farther I set the drill for still another peck, making two and a half bushels to the acre, with the purpose of noting what difference might appear in the yield. As the result of my observations, I came to the conclusion that two and a half bushels were about right, and I sowed that amount to the acre last Spring. The crop was 70 bushels to the acre, and I think it would have been less if I had sowed less seed.

W. A. ARMSTRONG.—Yet we have a greater yield reported from two pecks of seed.

J. BRIDGMAN said it was true, and he thought the statement worthy of belief, for he has some knowledge of Mr. Whiting whose name appears with the report, and he must say that he is a gentleman whose word is good. He tells a remarkable story, but it must be credited.

G. W. HOFFMAN last Spring sowed oats at the rate of one and a half bushel to the acre and the crop lodged, long before it was time for it to ripen, so he cut it for fodder. The land was good; it had been in beets and as a preparation had been manured. The oats were as thick as he wants to have them in any season, and it is probable that the thick growth caused them to lodge. On gravelly land two bushels of seed to the acre may be required, but he would never go beyond that. He has said that land not capable of yielding a full crop of wheat from five pecks of seed to the acre is not fit for wheat, and that is still his judgment.

THE Germantown Telegraph, the editor of which has made fruits a careful study, has somewhat revised his list of favorites. It is now as follows:

STANDARD PEARS.

1. Giffard,	10. Belle Lucrative,
2. Doyenne d'Ete,	11. Manning's Elizabeth,
3. Early Catharine,	12. Seckel,
4. Kirtland,	13. Howell.
5. Bloodgood,	14. Anjou,
6. Summer Julienne,	15. Sheldon,
7. Tyson,	16. St. Ghislain,
8. Brandywine,	17. Lawrence,
9. Bartlett,	18. Reading.

In the above list, from No. 1 to 8 are Summer varieties: from 9 to 16 Autumn (early and late); and 17 and 18 Winter, thus affording a sufficient number for each of the periods, of the best known sorts for this region.

APPLES.

1. Malden's Blush,	7. Cornell's Fancy,
2. Baldwin,	8. Red Astrachan,
3. Smokehouse,	9. Wagener,
4. Northern Spy,	10. Porter,
5. Smith's Cider,	11. Gravenstein,
6. Fallawater,	12. Tompkin's Co. King,

13. Roxbury Russet.

PEACHES.

1. Crawford's Early,	5. Crawford's Late,
2. Hale's Early,	6. Ward's Late,
3. York's Early,	7. Smock's Late,
4. Old Mixon,	8. Susquehanna.

GRAPES.

1. Telegraph,	4. Clinton,
2. Concord,	5. Salem,
3. Hartford,	6. Rogers' No. 32.

RASPBERRIES.

1. Hornet,	3. Philadelphia,
2. Herstine,	4. Brandywine,

STRAWBERRIES.

1. Captain Jack,	3. Sharpless,
2. Seth Boyden,	4. Triomphe de Gand.

BRIEFLETS.

THE Chicago Fat Stock Show will be Nov. 15th—20th. . . . . People who believe in homœopathy, instead of whipping their children very hard when they do wrong, should give them just a single, gentlest of taps. . . . . According to M. Chevreul, one of the greatest advantages of draining is to insure the free access of atmospheric oxygen. A plant cannot live without oxygen any more than an animal. Even the roots cannot perform their duties in a soil insufficiently aerated. Hence the importance of stirring the soil when it is compact. . . . . Gather squashes, beets, mangels and carrots. . . . . It is well to leave apples in shallow heaps, as they are gathered in the orchard for a day or so if the weather is fair. . . . . It is a good plan to give fruit trees a wash of lime, powdered aloes and soot at this time or a little later. Mice and rabbits are less liable to gnaw the bark. The plan of making a mound of earth about newly transplanted trees, "so as to give support to the stems" is, we think, a useless if not a bad one. It makes the bark tender and induces buds to push in the Spring. Besides, these little mounds really give no support. The earth yields to the swaying of the stem, leaving spaces which in Winter hold water or ice. . . . . Grape vines may be advantageously pruned as soon as the leaves begin to fall. . . . . The maximum of comfort and the minimum of expense should be the farmer's motto. . . . . Sweet potatoes should not be dug until after the first frost. Then it is well to leave them for several days, covering them at night, if frost is feared—with the vines. Sweet potatoes, to keep well, need a temperature over 40 deg. They should be placed on shelves in single layers and exposed to free currents of air.

CATALOGUES, ETC., RECEIVED.

FOURTH ANNUAL CATALOGUE OF THE AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS, FOR 1879–'80.—Like the other agricultural colleges, this promising young institution owes it origin to the Congressional Morrill Bill passed in 1862, donating public lands to the several States and Territories which should provide colleges for the benefit of Agriculture and the Mechanic Arts. On Nov. 1, 1866, the Legislature of Texas formally accepted the provisions of the Congressional Act, and the State received from the General Government scrip for 180,000 acres of public land, the proceeds of which constitute the present permanent endowment of the College. In 1871 the Legislature began to fulfill its obligations by the construction of suitable buildings for which $202,000 were appropriated, and the county of Brazos secured the location of the college by a donation of the college farm—a tract of 2,416 acres. Finally on Oct. 4th, 1876, the college was opened. In the present session there are, we notice, 144 students. From the report of President, John G. James, we gather that until his incumbency, less than a year ago, Agriculture and the Mechanic Arts, for the benefit of which the institution was founded, were not only neglected, but that "the college had sedulously cultivated a sentiment antagonistic to the development of these branches of study and which continually decried them." Under the present management there seems a strong probability that the object for which the institution was founded, will honestly receive a fair share of attention,—an example of reformation that should be followed in the management of more than one other falsely styled agricultural college.

THE ILLINOIS INDUSTRIAL UNIVERSITY has now 15 Professors—two chairs being vacant. There are ten Professors of the Industrial Arts and Natural Sciences. These have seven assistants. There are three Professors of Languages and Literature—one of Ancient, one of Modern and one of English. These have one assistant. There are distinct Professorships of Agriculture, Horticulture, Veterinary Science, Agricultural Chemistry, Architecture, Civil Engineering and of Mechanical Engineering.

Of the 317 young men in attendance last year, 170 were in the industrial or Natural Science courses, 100 in the Literature and Science courses, with 47 Elective, or Preliminary.

Subdividing this classification, there were in Agriculture, 27; Architecture, 12; Civil Engineering, 33; Mechanical Engineering, 37; Chemical course, 47; Natural History course, 14; English and Modern Languages, 89; Ancient Languages, 11. Each student is required to have at least one study each term, selected from a prescribed list relating to Agriculture and the Mechanic Arts. Aside from this, choice of studies is allowed.

WHEAT CULTURE.—How to Double the Yield and Increase the Profits, by D. L. Curtiss. This is a small, paper-bound pamphlet of 72 pages, 12 mo., which is a compendium of what is at present known on the subject of which it treats. Price 50 cents. Published by the Orange Judd Company, 245 Broadway, N. Y.

PREMIUM LIST of the State Agricultural and Mechanical Society for the 13th Annual Fair to be held at Columbia, S. C., November 9th and 12th. Thos. W. Holloway—Pomaria, Secretary.

J. T. LOVETT, Little Silver, N. Jersey—Catalogue of the Monmouth Nurseries, Strawberries, Raspberries, Blackberries, Gooseberries, Currants, Grapes, Cranberries—also fruit trees.

BOWKER FERTILIZING COMPANY, 81 Exchange Street, Rochester; 3 Park Row, New York, and 43 Chatham Street, Boston. Bowker's Grain Phosphate Circular.

CIRCULAR NO. 70.—Illinois Crop Prospects. Consolidation of Reports returned to the Department of Agriculture, Aug. 2, 1880.

Everywhere.

BEYOND THE MISSISSIPPI.

JUST as I was trying to collect my scattered thoughts, and bring them into readable form, my tympanum was assailed by an ominous grunt; and as visions of a devastated cabbage patch danced through my excited brain, I sprang up from my study chair, catching a *towel* that hung near wherewith to cover my auburn locks, and rushed frantically to the fray. By dint of the exercise of lung and limb, and with the help of Nick—not *Old Nick*—the garden was soon cleared of intruders, the hole in the picket fence patched as none but a woman can do it, and once more I was seated ready to enjoy the glory that belongs to the conqueror. This is some of the variety that is said to be the "spice of life," but for my part I am willing to dispense with condiments, and live on plainer fare.

But some reader is saying, "What has this to do with life 'Beyond the Mississippi?'" A great deal, I assure you. It is the frequent experience of thousands that are living in the West, and who are but just making a beginning. They have purchased either a tract of wild land, having all the fencing to make, or are trying to bring some old, neglected, half-fenced, and poorly improved farm, into a better condition. In either case the fences are insufficient to protect the growing crops. There is work enough for three, and only one man to do it, and in undertaking too much, his strength fails, sickness follows, and as other evils in their turn are heaped upon him, he

despairingly turns his face toward the old homestead. He has lost all desire to remain in a locality which has brought to him only vexation and disappointment. What wonder, then, that the little farm is sold for less than the cost of the improvements, that the few articles of furniture are packed in a covered wagon, and the family turn their faces eastward. "Going back to see my wife's people," is the reply of nine out of ten of the eastward-bound emigrants. They are sick, discouraged, yet hoping for better times that never come, and they wend their way back to their old native hills and valleys, perhaps to fare no better. But if poverty and disappointment should still be theirs, yet it is with old friends and familiar scenes around them, and the graves of their loved ones near.

The vast number of emigrant wagons that line the roads with their white covers, is almost beyond belief. Some are well equipped for the trip, and "Go West" rejoicing. Alas! that so many should return, sorrowing! Nearly all who travel westward through this section at present are bound for Southwestern Missouri. Last Spring the great movement was towards Kansas, and the greater part of them are going back now, and most especially those who went to Western Kansas. The great complaint seems to be "want of water," and the prevalence of hot, scorching winds which dry up all vegetation, and literally blow the wheat ont of the ground. The first time I was told this, I was extremely incredulous, and I ventured to inquire: "Might it not be a canard?" but it has been corroborated by hundreds of others. Though seemingly incredible, yet as they relate it, it is not impossible. What a Missourian would consider an extremely high wind, the Kansas citizen can enjoy all the time, with an occasional gale thrown in by way of variety, and a cyclone or two, when the inhabitants need a new sensation. Their land is very sandy, and the continuous winds blow the sand away from the roots of the wheat plants, until they are entirely bare. It is the last straw that breaks the camel's back, and so it continues to blow and blow and blow, until the poor wheat finally succumbs plant by plant, until the places that once knew them know them no more.

We, too, have dry weather, hot suns, an occasional cyclone, the potato beetle, the chinch bug, snakes and the curculio; but we never have had the "army worm," nor has our wheat ever been blown to "kingdom come," roots, stalk and head. Our railroads have never been compelled, through fear of having their tracks demolished, to carry a starving population out of the State *gratis*. This has been done in Kansas. Eastern Kansas is doing better, though emigrants report drought there also. That that great State has great resources, and that it has a prosperous future before it, I do not deny. But to succeed there, a man should have money enough to carry him through while he weathers the gale. Emigrants certainly make a great mistake in passing the fertile and beautiful prairies of Illinois and Iowa, and the well wooded and finely watered lands of Missouri, with its inexhaustible mines of coal and a whole mountain of iron, its Normal schools, its numerous railroads that cross the State in every direction, in fact, a State that has within itself an independent support for all its inhabitants; that only needs the skilled hand of the mechanic and artizan to bring forth and develop its vast wealth; emigrants, I repeat, make a mistake in passing by these for other and less desirable locations. But now the tide seems to have turned, and is flowing in our favor.

Crops in the river counties of Missouri have all turned out well, as far as I have reports, though in this section corn will be light owing to a very dry and hot July and August. There was rain as often as every two weeks, and sometimes more frequently; but the hot sun blistered every green thing. The celebrated "Oldest Inhabitant" never before experienced such a hot Summer. The ground was so hot that a person could not hold his hands on it without experiencing a burning sensation. No wonder that the corn dried up and turned yellow, and the grass turned brown: but the first cool days and refreshing rains of September changed all this, and the earth rejoices in a carpet of lovely green. Wheat is a good crop, and on all sides you see the carriers piling up the golden straw, and hear the short, shrill toot-toot of the engine that occupies the place of the ten horses that of yore furnished the power that separated the wheat from the chaff. The steam-thrashers hereabouts hurry the work so rapidly that they fail to do it well. Complaints are numerous of wheat being wasted, and one farmer near here says his wheat is badly cracked, averaging a peck of cracked wheat to every two bushels. "The more haste, the less speed," and "Haste makes waste," are two maxims which it would be well for them to observe.

The fruit crop is immense. Peaches are plentiful at 50 cents a bushel, though very fine named varieties being $1.50. The Heath is the most sought for, though there are a great many sold under that name that never had a right to claim the remotest kinship to the Heath. Grapes are abundant, though there are but few on the market, as they are manufactured into wine. The owners of vineyards, as a rule, do their own manufacturing, and consume a large share of their own product. Wine is plentiful at 75 cents a gallon. The population is largely German, and, of course, wine, beer, Bologna sausage, and Limburger cheese find a quick sale. The county seat contains, or claims, 7,000 inhabitants, and nearly all the stores, shops, saloons, restaurants, drug-stores, etc., are kept open Sunday forenoons. A person can buy anything on Sunday, about as easily as on any other day. Nearly every Sunday since warm weather commenced, there has been an excursion from the county seat to the chalybeate springs, about twelve miles out of town. I am told that dancing, billiards, croquet, horse-racing and kindred amusements are the order of the day.

Farmers in this vicinity are just on the eve of wheat sowing, and the wise ones are postponing it as long as possible to prevent the ravages of the Hessian fly, which is said to injure especially early-sown wheat. The ground is in splendid condition and pulverizes well. The dry weather prevented most farmers from plowing the ground twice.

Just now the "Young American" is reveling in the delicious flavor of paw-paws and persimmons, and his pockets vainly endeavor to rival his stomach in plethora, while mothers are anxiously replenishing their bottles of paregoric, and stores of hops, hoping thereby to alleviate the pains of insulted and overburdened nature.

The mocking birds and bobolinks are feasting on the luscious sweetness that awaits them, growing fat and clumsy, and forgetting their songs in their gormandizing, preparatory to their flight homeward.

But what can be finer than this glorious September weather? The days are perfect. The nights over whose darkness the twinkling stars shed their radiance, are cool and refreshing, soothing the weary toiler to quiet slumber. A few slight frosts have cleared the atmosphere of all malaria, and all nature rejoices in the pleasure of existence.

Adair Co., Mo. BESSIE VICTOR.

RURAL SPECIAL REPORTS.

GA., Washington, Wilkes Co., Sept. 20.—Cotton is being picked, ginned and marketed very quickly hereabouts. In a late article in the RURAL it was said that hitherto cotton seed had to be planted by hand, as the adherent lint prevented its uniform deposition. Thousands of cotton planters, however, are now used in the South. In this section three patented planters are successfully used in planting the crop. J. C. L.

IOWA, McGregor, Co., Clayton, Sept. 23.—Wheat at thrashing time is turning out a very poor yield per acre—from three to ten bushels generally. A couple of days ago I got from the mill 133 pounds of flour from four bushels of wheat, or 44⅓ pounds per bushel. A good deal of sorghum has been raised in this township and two or three mills are working it up into molasses and sirup; they are not yet prepared to make sugar; but they make a fine golden sirup. The owner of one of the mills tells me he is making 100 gallons every 24 hours. All the mills are running night and day, each having two sets of hands. The juice runs from the press first into a large pan where it is heated to the boiling point; then let off by means of a cock into two settling pans where it stands to settle a while. Next it passes into the main boiling pan where it boils, being constantly skimmed until it becomes thick enough for the finishing pan. There it is again constantly skimmed until it is considered thick enough, when it is let off into the cooling pan where it stands until it is cool enough to be put up in kegs or barrels. J. R. J.

KANSAS, Harlan, Smith Co., Sept. 14.—Away out on these Western prairies we are trying to build up a home. The past year has been discouraging, on account of the severe drought; but we are still hopeful, for we have had rains again, and we cannot think the Lord took pains to make this country so fertile and beautiful, without intending it to be settled up. The wild plants of this country are, most of them, very different from those that grow in the East. Many of them are of exquisite beauty, and a few are adapted to, and are well worthy of general cultivation. The Sensitive Rose is a favorite with everyone here. It is a perennial trailing plant with delicate, pinnate leaves. The leaflets shrink from the touch as if endowed with sensation. They also fold up at night, as if for sleep. The flowers are numerous, are delightfully fragrant, and resemble silk tassels of pink and gold. There are two kinds of cactus—curious and unique in form, bearing strange and beautiful blossoms.

L. B. H.

KANSAS, Council Grove, Morris Co., Sept. 20.—It is very dry here. This is thought to have been the driest year since that year when the grasshoppers devastated Kansas. This is a nice section, and, in spite of everything, I think a fair crop of corn will be raised here.

J. H.

OHIO, University Farm, Columbus, Franklin Co.—We have had almost a perfect season for corn, which is now being harvested. Wheat was a fair crop, over a large acreage. Less will be sown and more of that after corn, this Fall, consequently next year's crop will probably be smaller. Potatoes are a good yield; but we do not raise enough for the home market. Fruit of all kinds is and has been very abundant. Our demand for northern apples will be very light this winter. Business brisk, manufacturers far behind orders, and everybody happy—except professional croakers.

C. E. T.

OHIO, Little Hocking, Washington Co., September 18.—Wheat in this region was only fair; corn is good; early potatoes are a partial failure, late ones promise well. Very few oats were raised, and but little sorghum. Fruit is so plentiful that it is a drug in the market; thousands of bushels are being dried in patent evaporators—price twenty cents per bushel delivered. Farmers in the Ohio Valley are largely engaged in raising potatoes, many of them planting 100 acres, and as a natural consequence we are all striving to get the best, so send along your White Elephant. A. L. C.

OREGON, Canby, Clackamas Co., Sept. 12.—Grains of all kinds are good here. Wheat was a good yield but brings a low price. Oats and barley are fair. The weather for harvesting crops has been unusually good; but advices from Great Britain indicate that low prices will rule for this season at least. Fruits of all kinds are scarce and high, dried apples selling at 12½ cts, per pound, plums as high as 20 cts. The apple crop is a failure in this part of the State. Potatoes are scarce and high, selling readily at 60 cts. per bush. Onions, one and one-half cents per pound. What Oregon wants is a European immigration in place of the hordes of Chinese coolies that swarm to these shores. The Pacific Slope will be the tail of the Union kite until the Burlingame Treaty is abrogated.

J. S.

TEXAS, College Station, Brazos Co., Sept. 23.—Corn and cotton are the main crops in this section of the country. The former will yield only a medium crop, mainly for lack of cultivation. In passing through the country, nearly every corn field one sees is covered knee-deep with a dense growth of grass and weeds. The cotton has suffered severely by the ravages of the cotton worm, but, in spite of this, the crop will be good. Picking is now going on, and laborers are scarce. Planters pay 75c. per 100 pounds, and a good picker can pick 300 pounds a day. At this season the whole colored population, men, women and children, resort to the cotton fields, and those who do not divide their earnings with the bar-keepers, or in other ways spend their money foolishly, can earn almost enough to keep them till next cotton-picking season. Generally the land is rich. In the bottom lands of the Brazos River cotton grows as tall as a man on horseback. Late equinoctial rains have retarded picking and damaged the crop to some extent. Apples will not succeed here, but grapes, peaches and pears grow and fruit luxuriantly. C. C. G.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

The European Cabbage Worm.

W. S., Syracuse, N. Y., asks what sort of a worm is the European Cabbage Worm; is it the worm that bores through the head of the cabbage and cauliflower and which has caused so much loss thereabouts the past season.

ANS.—The European Cabbage Worm—Pieris rapæ—was first introduced from Europe into Canada in 1857, since which time it has spread widely over the Eastern, Middle, and some of Southern and Western States. The caterpillar or worm is of a pale-green color, finely dotted with black, with a yellowish stripe lengthwise along the back, and with a yellow stripe formed of small yellow spots along each side. When full-grown it is from three-quarters of an inch to an inch long. The worms may be found from April to October, of all ages, feeding on leaves of cabbages, mignonette, stock, nasturtiums and other members of the cabbage or mustard family. They are supposed to have four or five generations in the course of a year, the last generation passing the Winter in the condition of crysillds. In the butterfly form, this pest is of a white color with a black dash at the top of the fore-wings and a black spot on the front edge of the hind-wings above, with two black spots on the underside of the fore-wings. Besides these spots, the male has one in the middle of the fore-wings above, and the female has two. The Spring butterflies are much whiter than those produced later in the season, and sometimes lack some of the black spots. Occasionally light yellow males are found, but hardly ever yellow females. From the above description of this pest, our friend can easily decide whether the insect that has troubled him is the European Cabbage Worm.

Cleansing Amber-Cane Juice.

A. A. H., Corry, Pa., asks how to cleanse the juice of Amber-Cane so as to make a good sirup.

ANS.—As the juice comes from the crusher strain it to remove the coarser matter. Have a pan made with galvanized iron bottom and wooden sides to hold 100 gallons, placed on an arch; heat the juice to 180 deg. Fah., and add five pints of cream of lime, stirring it in thoroughly, and remove the fire—do not let it boil. Remove the scum from the top, and when it settles or coagulates, draw it off with a swing pipe or siphon. The sediment can be strained through a coarse bag. When this clear liquor cools to, say, 110 deg. Fah., some preparation should be added to neutralize the lime. F. L. Stewart of Murraysville, Pa., puts up a powder which is probably as good as anything that could be got at once. There is, however, an aluminous jelly being used quite extensively at present. This is made from porous alum and sal. soda. A quantity of the alum is placed in a tub of water and a similar quantity of the soda in another tub of water—six pounds of each. After they are dissolved, enough of the soda water is added to the alum water until effervescence ceases, then a jelly forms in the bottom. The water is dipped off and the jelly used to destroy the excess of lime. After this, boil down as fast as possible to a sirup.

Queries about Peach Trees.

G. H. Bozzardsville, Pa., says he has a peach orchard of 700 trees planted three years ago last Spring, 21 feet apart, and he asks, 1, would it be advisable to plant as many more trees next Spring on the same ground between those now growing; 2, would the borer be likely to be more troublesome on these trees than on those planted at a distance from a peach orchard; 3, which are the better—peach trees brought from a warmer or a colder climate.

ANS.—Peach trees are usually planted about 20 feet apart. They are then allowed to grow as they will. If cut back every year or so—as it is well to do—perhaps 15 feet would be a sufficient distance. The plum stock dwarfs the peach somewhat so that thus worked and cut back the trees might be set as close as every 10 feet. In your case we should not recommend that you set trees between those already growing. 2. Not necessarily. The trunks should be washed in Spring and Midsummer with lime, potash, &c. 3. If there be any choice, we should prefer the colder climate. Other queries will be answered in due time.

Miscellaneous.

T. H. B., Windsor, Ohio, asks, 1, what is the value of road dust as a fertilizer; 2, is bone that has been softened by remaining in wood ashes as good a fertilizer as ground bone.

ANS.—1. This question can hardly be answered definitely; for the value of the road dust will depend upon the nature of the soil, the amount of travel over the road and of foreign fertilizing material consequently mingled with the dust. 2. Yes.

A. N. L., East Orrington, Me., sends for name a plant which is becoming a serious pest in meadows thereabouts. Its root resembles a parsnip both in appearance and odor, but it is only about six inches long, and scarcely three-quarters of an inch in diameter.

ANS.—Daucus Carota, Wild Carrot. This is becoming more and more a vile pest. It is a biennial plant and might be exterminated by persistent mowing.

L. B. H., Harlan, Kan., asks why shouldn't RURAL subscribers exchange seeds and plants through means of our columns.

ANS.—For the first year after the paper came under the present management there was a special Exchange Department for this very purpose; but it was abused in so many ways, that it was thought advisable to discontinue it.

W., Morehead, Kansas, asks whether we could sell a bushel of Blount's White Prolific Corn.

ANS.—No. We sell absolutely nothing but the RURAL. The sale of this corn has been advertised in our columns by several seedsmen, and doubtless will be again before seeding time.

P. D. G., Lancaster, Ky., asks where seed of the old Mediterranean bearded wheat can be obtained.

ANS.—From B. K. Bliss & Co., 34 Barclay Street.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, OCT. 2.

J. S.—P. T. J.—T. H. B.—W. M.—L. B.—A. B. A.—J. H. S.—E. P.—M. J. R.—J. C. H.—M. & V. T.—M. A. W.—J. V.—H. M. T.—R. R.—H. S. B.—J. D. G.—H, B.—J. H. M.—P. B. M.—A. F. R.—M. B. P.—J. A. L.—M. M. W.—W. A. S. H. B.—J. M. B.—D. R. B.—G. H.—W. E. T.—J. R.

It is impossible to remain long sick or out of health where Hop Bitters are used.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, OCT. 9, 1880.

SILVER CHAFF WHEAT.—We have now thrashed our Silver Chaff wheat. This it will be remembered was of all kinds that most injured by the Army Worm. It was upon this plot that our chickens were turned which, while feasting upon the worms, destroyed also a good deal of the wheat. The yield of two plots of Silver Chaff—together less than two-thirds of an acre—was but ten bushels. Nevertheless our own impression is that under the same favorable conditions, it would have yielded more grain than any of the others. Acting upon this we have sown Silver Chaff instead of Clawson which for six years had been our choice, as it is at the present time that of three-quarters of the farmers of Long Island. We regret that the press of our own farm work did not enable us to commend this wheat to our readers earlier in the season.

THE APPLE CROP.—This is unprecedentedly large this season, and thousands of bushels of the early crop are said to be rotting on the ground at the West, as they are not paying there even as stock-feed, or to be made into cider. If properly gathered, packed, and shipped, the larger sizes of fair, smooth Winter fruit, may find a good market abroad. The English Magazine of Pharmacy says, if a soft kind of tissue paper is soaked in a solution of salicylic acid, and dried before it is used, and each apple be enveloped in three or four folds of this, and precaution be taken to prevent the bruising of the fruit in gathering, storing, packing and shipping, the salicylicated tissue paper envelopes assist much in preserving the fruit and retaining its fresh, aromatic taste. This tissue paper is very cheap, and the method of preparing it is very simple. It has only to be dipped once in the solution and then dried.

DRILL BROADCASTING WHEAT.

AT the solicitation of one of our implement friends, we were induced to try a set—or rather part of a set—of drill tubes so constructed as to sow wheat broadcast. The tube is spread out at the lower end V-like, while a round center piece and a wire are so fixed as to scatter the seed as it falls. This it does with more evenness than it could possibly be sown by hand, while the seed is deposited as deep as need be and well-covered. Five of those tubes were put in the place of the ordinary tubes, leaving four of these. Thus, it may be seen, ten of the broadcast and eight of the old tube drills would alternate in the field. Thus far we are only enabled to note that the seeds sown by the old tubes were the first to germinate. The theory of the broadcast drills seems to us a very reasonable one. It seems to combine the advantages of both drill and broadcast sowing. Our test has been upon a four-acre field, and we shall in due time report results.

ANOTHER OLEOMARGARINE FRAUD.

FOR a considerable time the conviction has been inevitable here among dealers in butter and others interested in honest transactions in agricultural products, that a large amount of oleomargarine was annually exported under the name of butter. Every day the stuff is fraudently sold in hundreds of stores in this and other cities under this name; and it was only natural to suppose that those who, reckless of exposure and punishment, barefacedly perpetrated this fraud upon their fellow-citizens would not hesitate to repeat the swindle in foreign markets in which their cheating would subject them neither to disgrace nor chastisement. Investigation has fully confirmed this supposition, and lately President Parker, of the Produce Exchange, in behalf of the butter dealers of this city, and indirectly of the dealers and producers of butter all over the country, wrote to Secretary Sherman complaining of the lack of discrimination between butter and oleomargarine in the statistics of exports from this port.

In reply to this letter, Mr. Joseph Nimmo, Jr., Chief of the Bureau of Statistics of the Treasury Department, writes that the statistics of domestic exports *now* give the quantities and values of butter separately from those of oleomargarine, and that the acknowledged exports from the port of New York during the year ending June 30, 1880, amounted to 31,061,610 pounds of butter, valued at $5,179,071; and 19,833,320 pounds of oleomargarine worth $2,581,317. These figures make the butter average only about 16⅔ cents per pound, and the oleomargarine a trifle over 13 cents. Even this margin, however, is amply sufficient to induce such unscrupulous men as some of the oleomargarine dealers, to ship their concoction as butter, so as to get butter prices for it.

The law under which our export statistics are at present obtained give ample opportunities for such fraudulent transactions, inasmuch, as they merely require that the "manifests" of the exports shall be sworn to, before a clearance shall be granted for a foreign port, without providing for any examination of the merchandise to verify the correctness of the representations made in the manifest. Accordingly, the difficulty in obtaining the correct statistics of the exports of these two products—one of the dairy and the other of the shambles—lies not in any culpable carelessness in the Customs officers, but in the fraudulent description of oleomargarine as butter in the sworn manifests. To remedy this defect, it should be provided that wherever any doubt exists of the character of goods exported, they should be examined by experts before shipment, just as, under like circumstances imports are frequently examined to prevent impositions upon the revenue.

THE GREATEST YIELD OF INDIAN CORN ON RECORD,

Produced under Inexpensive Cultivation, without Farm Manure! (?)

OVER 150 BUSHELS OF BLOUNT'S CORN (SHELLED) TO THE ACRE!

No less than 300 bushels of Chester Co., Mammoth Corn (ears) per acre!

(The following dispatch from the RURAL FARM comes to us as we go to press. Eds.)

RURAL FARM, Oct., 2nd, 1880.

We were prepared for a great yield of Chester and Blount. But the yield is so remarkable that we shall not ask our readers to accept our statements alone, but shall have them examined and corrobated by well known agriculturists whose testimony cannot be doubted. The Chester Co. *must* yield, from estimates thus far made, not less than 300 bushels of corn in the ear to the acre. We have hopes it may yield as high as 325 bushels. The Blount, judging from what we have already measured, will yield over 150 bushels of shelled corn per acre. Readers will bear in mind that these estimates are not based upon the product of small plots which have been richly manured and carefully tended. We speak only of the yield per acre. The field upon which the Blount corn has been raised, has received no farm manure in seven years. It had been mown and in pasture during that time. The sod was plowed under in early Winter and and this Spring was thoroughly harrowed and rolled. The corn was drilled in twelve to fifteen inches apart, the drills four feet three inches apart. One dressing of concentrated corn fertilizer at the rate of 300 pounds to the acre, was given previous to the last harrowing. When the corn was several inches high, it received another application of the same fertilizer, at the rate of 100 pounds per acre, and when eighteen inches to two feet high, another of 100 pounds of concentrated potato manure. The field was cultivated four times—twice with cultivator, twice with hoe—always flat, all hilling up whatever having been carefully avoided.

The field under Chester we have always considered the poorest of the farm. It had not been cultivated in fourteen years. The sod over a portion was quite worn-out and the soil, which is gravelly, was as hard as a brick-bat. This was plowed and only 300 pounds per acre of corn fertilizer sown (all in one sowing), no farm manure of any kind being used. Like the field under Blount, it was thoroughly harrowed and rolled, the seed drilled in, the drills *three and a-half* feet apart. It was cultivated the same as the Blount field in all respects. Whether the Blount or Chester will yield the more *shelled* corn has not yet been determined. RURAL readers, when all the facts of this immense yield are presented, may judge for themselves to what it is due. It is apparent that it is *not* due to rich soil or high manuring. The kinds of corn, method of planting, and cultivating, alone remain to be considered.

THE RAILROAD POWER.

THE West has a vital interest in the strict guarding of the growth of the great railroad power of the nation. To curb or restrain that power there are two methods which may be used. The first is to enable the country to become as far as possible independent of these growing institutions of wealth and power, and second to create such a competition as will regulate traffic to some extent in the interest of those having goods to be transported. In the last instance the railroads become a great middle power, living out of the profits between the producer and consumer no less than before, although their profits may be diminished.

In the first instance, so far as each section may become self-contained and independent, so far may the profits be kept at home, or not paid to a power living upon producer and consumer, but producing nothing and consuming but little.

And here the whole question of railroads is opened. There is no doubt of the benefit of the railroads, both to the far-apart sections of a country, and to the morelocal traffic. But the prosperity of a railroad is in the necessity one locality has for the products of another, and of each for the markets of distant sections.

Did each section produce all it consumed, it would pay no profits to railroads. Did each section consume all it produced, it would not be obliged to search for markets abroad. The question then arises, does each section so produce and consume as far as is practicable? We think not, as is illustrated all the time in the growing of new manufactories all over the interior, rendering the transportation of raw material and provisions to the seaboard less and less necessary, and also causing less demand for the return of manufactures.

It is steadily becoming more and more aparent that it is better to move the machinery and the consumer to the raw material and the provisions, and to export the surplus manufactures, than to carry the raw material and provisions to the machinery and consumer and then return the product. So far as this economy is practised so far the country is independent of railroad traffic.

Whether it is for the interest of the nation to create and support a gigantic railway system of long transportation, for the sake of the division of labor, and the greater number of consumers thus provided, with the market for iron and mechanical labor thus afforded, is for the public to decide, but that decision will no doubt be in favor of the greatest economy to each section. Did the East raise its provisions, and did the West use up its raw material of various kinds and in so doing make its manufactures and consume a large portion of its provisions, the dependence upon railroads would be reduced to a minimum, and this is the influence gradually but steadily at work threatening the supremacy of the railroad power which would otherwise amount to a monopoly.

A THREATENED HORSE DISTEMPER.

IT depends very much upon the condition of the season, whether we shall be discommoded by a prevalent epizootic among our horses. Indications that an outbreak of this kind is immiment are already appearing in this city where upwards of 4,000 horses are now sick. The distemper has also appeared in Boston and in other cities, and some rural districts. There is little doubt that this disease, a true influenza, is malarial; or what is understood by that term. It is epizootic because the conditions which produce it are prevalent and affect all those animals whose systems are prepared for it by a previously enfeebled or abnormal condition. This has been produced by the rigorous heats and dryness of the past Summer; and now if the fall season should turn out changeable, from warm to sudden cold, with rain storms and damp weather, we shall have every physical and atmospheric condition favorable to the development of this disease, which is a catarrh of the mucous membranes of the respiratory organs accompanied with a low fever of typhoid type.

There is no doubt that this disease, like all those which are known as epidemic or epizootic, are preventible by good sanitary precautions. It is well to be forewarned. "It is in the air" already, and the precise moment when half the horses in a wide locality may be prostrated as by a sudden blow, everywhere instantaneously effective, cannot be indicated. To strengthen the animals and put them in a condition of robust health is the first thing to be done; the weak and worn need rest and good nursing; the plethoric and strong require to be cooled by laxative and antiseptic medicines. Every stable needs to be cleansed, ventilated, disinfected and drained. Generally stables are too warm and close and the abundant pungent vapors constantly irritate the tender membranes of the throat, nose and lungs, and prepare these in the readiest manner for the attacks of disease. This defect requires immediate attention.

When exposure to storms cannot be avoided, water-proof covers should be provided for the horses, and good care be taken to rub the coat dry after returning to the stable, and by careful attention prevent chilling of the body. Such chilling is wonderfully productive of what are known as malarial diseases. The germs and causes of these diseases, we believe, enter not so much through the lungs, as through the pores of the skin, or rather, being already in the blood, are prevented from escaping through the infinitely numerous pores in the perspiration by its sudden stoppage, through a chill. The sudden stoppage of this excretion through the skin throws a large quantity of poisonous matter brought to the surface for ejection, back again into the circulation, and also produces all the febrile and congestive results. Our domestic animals are so much exposed, by our thoughtlessness, to these evils that the wonder is, not that they are sometimes stricken down suddenly and without warning, but that they escape diseases so well.

The present opportunity is one that may well be used to impress upon our readers this fact, and to urge its careful consideration upon them.

BREVITIES.

THE White Elephant potatoes, six in number, displayed at the Queens Co., Agricultural Fair, weighed eight and a-half pounds.

PROF. BLOUNT: You advise in selecting seed corn to select only the topmost ear when there are more ears than one. Suppose the topmost ear is not so large; the kernels not so perfect as the others—would you still select it?

WE read very favorable accounts of the Beauty of Hebron Potato in the agricultural press of many different sections. We hope our second venture in the dissemination of new potatoes may prove as gratifying as the first.

OF the 12 ears of Chester County Mammoth Corn, grown at the RURAL FARM, which took the first premium at the Queens County Agricultural Fair, five of the best weighed eight and a quarter pounds. They bear 4,984 kernels or an average of 996 4 5 each. They are from 16 to 22 rows and average one foot in length. The longest is 13½ inches.

OCTOBER 1st.—We have to-day completed the sowing of 64 different varieties of wheat—for the most part new varieties or those very little known. While indebted to many of our subscribers for specimens sent, our first thanks are due to the farm Superintendent of the Ohio State Agricultural College, Mr. Thorne; Prof. Tracy of the Missouri Agricultural University, and Prof. Blount of the Colorado Agricultural College.

A REMEDY for itching tails and manes of horses is to wash the parts thoroughly with strong carbolic soap-suds as hot as the hand can well bear. If this, repeated two or three times per day for a few days, does not effect a cure, then dress the parts with petroleum lamp oil. But if the itching in the tail comes from worms in the rectum, then inject strong salt water into it and rub the outside of the same, directly under the tail.

An excellent way of disposing of some of our superabundant apple crop is attaining extensive dimensions. Last Saturday the fleet of steamers leaving this port for Europe took out the largest quantity of apples ever exported in one day. Of the vessels bound for Liverpool one had on board 7,500 barrels of apples and another 5,000. The low price at which the fruit can be sold in Europe must obtain for it a large sale, and its fine quality once known is sure to maintain for it in future a profitable market.

MAJOR FREAS advises to pack apples in dry barrels, and keep them under a shed, protected against rain or moisture, to remain there until late in November and freezing weather approaches; then to remove them to a cold, dry cellar, and headed-up the barrels, is as good a way way, where the quantity on hand is large, and the purpose is to keep them over winter for Spring sales. In fact, he has known apples put up in this way, that have been preserved sound and good into June!

MR. JOHN CLAY, JR., of the English Agricultural Commission, which visited the United States last year, says in his report: "The splendid herds showed an immense wealth among the farmers, and the labor of years in improving these will result, undoubtedly in a *great financial success, and a lasting benefit* to the country, because we have always observed, that a country which abounds in flocks and herds supports a well-to-do race of people." These remarks are no less true than encouraging to our live stock breeders of all kinds.

Literary Miscellany.

THE INDEPENDENT FARMER.

LET sailors sing the windy deep,
Let soldiers praise their armor;
But in my heart this toast I'll keep,
The independent farmer.
When first the rose in robe of green,
Unfolds its crimson lining,
And 'round his homely porch is seen
The honeysuckle twining,
When banks of bloom their sweetness yield
To bees that gather honey,
He drives the team across the field,
Where skies are warm and sunny.

The blackbird clucks behind the plow,
The quail pipes loud and clearly;
Yon orchard hides beyond its boughs
The home he loves so dearly,
The gray old barn, whose doors infold,
His ample store in measure,
More rich than heaps of hoarded gold,
A precious, blessed treasure;
But yonder in the porch there stands
His wife, the lovely charmer,
The sweetest rose on all his lands;
The independent farmer.

To him the Spring comes dancing day,
To him the Summer blushes,
The Autumn smiles with mellow ray,
His sleep the Winter hushes;
He cares not how the world may move
No doubts or fears confound him;
He smiles in calm content and love
On children gathered 'round him.
He trusts in God, and loves his wife,
Nor grief, nor ill may harm her,
He's Nature's nobleman in life—
The independent farmer.

INMATES OF LESTER HALL.

(Continued from page 662.)

CHAPTER VII.

THE sun is sinking slowly to its rest behind the western hills, changing the blue of the Summer sky into a gorgeous mass of gold and purple and red, and tinging the hills beneath with a rosy glow. Everything is very still in this evening hour—the laborer has left work; the "plowman homeward plods his weary way;" the bells are ringing out softly the call to evening prayer, and as the soft chime reaches over hill and dale, it steals into the room where Rex. Lester lies, with his face turned towards the window which opens on the west, and the red light falls on his pale face, giving it a strange, unearthly beauty, which may linger until he has passed through the dark valley which he is entering now.

Yes, Reginald Lester is dying; this is the last sunset he will ever see, which is shedding a stream of golden light on the couch on which he lies, on Mattie's head as it is bowed on the pillow near her brother's, and on Cecil's beautiful pale face, which is turned towards the window, white and still, and tearless, but full of a sorrow too deep for tears

It is but the day after that on which Cecil Lester found her brother prostrate on the greensward; but the two girls know the truth now—know that their brother is dying—dying, too, from the effects of the life he has led in that great city which swallows up so much that is good, and noble, and beautiful, for Rex. has not spared himself. He has told them freely all; he has made confession with faltering, broken voice truly, and great drops of pain on his brow, and the two girls who love him so truly find no room in their hearts for blame, only for pity.

But now, in these his last moments, there rises within him all the bitterness of his blighted hopes, of his ruined life; and while he owns that he has sinned, and sinned grievously, he blames bitterly the man who has taken advantage of his weakness and led him yet deeper into temptation and sin. He is telling Cecil of him now, in the weak, hurried accents of extreme weakness, and Cecil listens with the anger and pain in her eyes deepening, and the proud lips taking a yet more determined fold.

"Were it not for him I should not be here, dying, disgraced, ruined," he murmurs, bitterly. "He tempted and me when he had led me on to disgrace and shame, he threw me over without a word of regret."

Cecil's white teeth meet under her red lips and her eyes flash.

"This man, who is he?" she says, softly, as she bends over her brother and wipes the death-dew from his brow; and Rex. looks up at her with a sudden gleam of resentment in his dying eyes.

"His name is here," he says, feebly, putting out one weak hand, and feeling in the pocket of the loose coat he wears. "When I was dying—dying through him—he sent me this. Heavens! if I could only find strength to take my revenge—once!"

"I will find strength!" said Cecil, calmly. "I will revenge! I promise it, Rex."

He looks up for a moment into her face, so pale and set and stern.

"You will do it, Cecil?" he murmurs feebly. "And yet no! What a legacy for you, poor child!"

He has taken a little slip of paper out of his coat pocket, but he does not give it to her.

"I will do it! He shall suffer, even as he has made you suffer!" says the young girl, impetuously. "Why should he be exempt?"

"Cecil—Cecil!" says Mattie's low, broken voice, "Rex., my dearest brother, forgive him now!"

Reginald turns away from her a little impatiently. Consciousness is fast failing him, but he holds the little slip of paper tightly in his feeble fingers.

"Were it not for him I should not be dying here!" he says, with a last effort of strength. "It is he who has killed me, he through whom I am dying—Cecil—remember—this is the name—Ca—Ca——!"

His voice fails him, a dreadful spasm contracts his face, and he falls back exhausted, while Mattie puts some reviving cordial to his lips which the doctor has left when he called an hour ago, and told them that Rex. was dying.

"I will not forget, Reginald," says Cecil, steadily, as the dying eyes meet hers.

One hour, two hours slip by, the sun has set, the gorgeous golden clouds have died away; the gray evening shadow steals into the room, and the shadow of death creeps over Rex. Lester's face.

Suddenly he opens his eyes and gasps forth:

"Mattie—Cecil—forgive!"

The words die away, the heavy eyelids close; a long sigh, a shudder which passes all through the prostrate form, and all is over.

Mattie sinks down by the bedside, sobbing passionately; and Cecil, as she stoops and puts her tender lips to those which can never again return her caress, draws gently from the stiffened fingers the paper which is clasped in them, and slips it into her dress.

"I will remember, Rex," she says, softly. "I will keep my vow."

And thus she makes a vow which will color her whole life hereafter, and in the keeping of which she will sacrifice all the brightness and beauty of her life.

Poor Cecil!

CHAPTER VIII.

A NEW LIFE.

Mr. Daton's house was a very stately and magnificent mansion—as magnificent as it was possible for wealth to make it; but superb as it undoubtedly was, it was neither artistic nor in the most correct taste. Mr. Daton himself cared very little about it; so long as he had one comfortable room to himself, he did not take much interest in the rest of the house; and it created considerable surprise in his household—most of his servants had been with him for years—when he became possessed with a mania for altering and redecorating the reception-rooms of his house, and on becoming the convert of a certain great high-art, upholsterer, who had orders to completely metamorphose the drawing rooms, and to furnish a charming little boudoir in the newest style.

Well and thoroughly did the great man fulfil the great merchant's requirements. The drawing-room, from being a heavy, old-fashioned room, hung with crimson velvet and gold, became a fairy-like apartment, and was made altogether the most charming combination of high art and real elegance that could be imagined.

Mr. Daton could hardly believe that he was in his own house when he entered the room, but he looked pleased, and expressed his satisfaction in a manner which must have been agreeable to the great man who had made the change.

About the boudoir he was rather dubious; he did not quite appreciate the hangings, the dado of black and gold, and the quaintly-shaped chairs, but he supposed it would be all right; while the dining-room was in its way quite as great a success as the drawing-room.

The household were naturally thrown into a state of excitement by these preparations, and many were the discussions in the servants' hall as to the master's future plans; and of course the conclusion of the servants in general was, that these alterations and improvements pointed but one way—that their master was going to take to himself a wife.

"He was so dreadfully cut up at Mr. Lester's death," said the housekeeper, as she and Mr. Forbes the butler sat over a cup of tea in her comfortable sitting-room down stairs, "that I thought he would never take any interest in anything again; but lor', the poor young gentleman—a sweet young fellow, to my mind—has not been dead a year, and the master is quite himself again."

Quite himself again! Mrs. Bradley was perfectly right, for Mr. Daton seemed more cheerful than he had done for many a long month; and he was neither of an age nor of an appearance to preclude the notion that he was about to take a second wife, and give his stately home a mistress.

But the one did not necessitate the other; and although the house was to have a mistress, Mr. Daton had no intention of taking a wife, as Mrs. Bradley soon ascertained from her master's own lips.

"My two nieces are coming to live with me," he said, quietly, one morning, when she was summoned to his presence. "I wish you to give directions that they should have every attention paid them. Miss Lester is a most amiable young lady, and I have no doubt that you will all find her a kind and considerate mistress."

There was a slight emphasis on the last sentence which showed that Mr. Daton meant his eldest niece to be really the ruling spirit of the household, and which Mrs. Bradley was too sharp a woman to misunderstand or to neglect.

By-and-by Mr. Daton went away for a few days, and returned with two beautiful girls, exquisitely dressed in mourning, and attended by a French maid, who was extremely pretty, and soon made herself a favorite in the servants' hall, although Mrs. Bradley looked rather unfavorably on her slim waist and coquettishly-arranged hair.

"We have been in Paris since our dear brother's death," said Miss Lester, in her first interview with Mrs. Bradley; "and I am quite unused to the management of a large household, so I shall be glad of your advice and assistance, Mrs. Bradley."

Which speech, accompanied by one of Mattie's gentle smiles, quite won the housekeeper's heart, and made her declare that "though Miss Cecil was a trifle haughty, Miss Lester was the sweetest of young ladies."

His nephew's death had given Mr. Daton a great shock; the news came upon him with the suddenness of a thunder-clap, and he had traveled north immediately, and had arrived in time to see the marble face of the young man he had so much loved before the coffin was closed upon it. And although, in truth, he had nothing to blame himself for, there was much self-reproach mingled with his grief.

Very soon, however, when its first bitterness had passed away, he transferred the affection he had conceived for Reginald to his two sisters, and more especially to Cecil, who on her side grew to love and esteem this new-found uncle with all her heart; and when he urged the girls to give up their lonely existence in the old home, and to live with him, Cecil seconded the proposal strongly.

And so it was arranged that they should leave Lester Hall, and take up their residence with their uncle, after spending the first year of their mourning in Paris, where Cecil, at eighteen, threw herself into studies with a passionate ardor and energy which surprised her sister, who—while Cecil was going heart and mind not only into the mysteries of languages, but into the study of deportment, manners, and elegance—confined her study to that of music alone.

Mr. Daton was very frequent in his visits; and as months went by he was more and more struck with the alteration and improvement which Paris life was making in his youngest niece. Her style was perfect—her manners, always graceful, perfectly self-possessed, quiet, a trifle languid perhaps, and always tinged by that air of *hauteur* which is only not objectionable in a beautiful woman. Her dress, too, was unexceptionable, Mattie teased her sometimes for her study of the toilette, but the result was so charming, so artistic, and Cecil herself so lovely, that her vanity—if vanity it were—was perfectly excusable.

"I don't see why you need care so much about it," said Mattie, one day. "You are quite beautiful enough, Cecil."

"Am I beautiful?" the girl answered, thoughtfully.—"I am glad to be beautiful, and I intend"—a curious, darkened look came into the beautiful hazel eye for a moment, then she laughed slightly—"I intend to be perfectly irresistible!"

And perfectly irresistible Cecil was when she made her *debut* into society, at a grand ball given by her uncle shortly after the young girl's arrival in town—and a very great sensation she made. Both sisters were in white, without a touch of color, for both were in mourning still; and while Mattie's loveliness excited much admiration, her sister's more stately beauty caused general comment, and that first night's success made her an acknowledged belle.

Mattie herself was too sincerely unselfish to be jealous of her sister's superiority, and she rejoiced in her triumph all the more when she saw that Cecil herself was pleased, with a keen, eager pleasure Mattie did not quite understand. As for Mr. Daton he was proud and pleased beyond measure at seeing his nieces appreciated as they deserved. He had resolved that their *debut* should be a successful one, and it was so.

Cecil had her own horse and groom, and rode daily with her uncle, who smiled with pleasure at the admiring looks which followed his beautiful niece; and in the afternoon the sisters showed themselves for an hour or two in the handsomely appointed carriage which their uncle had given them, exquisitely dressed, and the observed of all observers. Then in the evening there were half a dozen different engagements to be fulfilled, although Mattie generally contrived to spare an hour for the opera, where she would listen to the divine strains of Rossini and Bellini, sitting as quietly absorbed in the music as Mrs. Audley herself, a lady whom Mr. Daton engaged as companion and *chaperone* to his nieces.

What a change such a life as this was from the retirement of Lester Hall. It was a continual round of gaiety and adulation, wearing beautiful dresses, meeting pleasant people and hearing exquisite music. Both girls were much sought after and both thoroughly enjoyed, Cecil especially, their popularity; and it would have been small wonder if, in the excitement of this new and brilliant existence, the young girl had forgotten the sad circumstances connected with her brother's death, and the vow of vengeance on him who had led him into evil. But she did not, and in every action of her life she had been influenced by the vow—by the desire for revenge against this man whose name was written on the slip of paper her brother's dying hand held. Unknown to, even unsuspected by her sister, this ruling motive colored all her life. She had formed no definite plans of revenge, but she had some dim and vague consciousness that her only arms against this man, whoever and whatever he was, would be her beauty, her grace and her fascination—therefore these must not be neglected.

It was a strange, wild scheme to enter into any girl's head, more especially into the head of a girl like Cecil, naturally so impulsive, so true and so frank; but she had conceived it, and if ever the power of vengeance came to be hers, she would use that power, even if it broke her own heart to do so.

None could have guessed that this young girl, seemingly so brilliant, so careless, so haughty, was cherishing such a desire in her heart; and it would have surprised not only the beautiful Miss Lester's partners, but those who loved her so dearly, her uncle and her sister, if they could have seen her sometimes on her return from some brilliant assembly, where she reigned supreme. If they could have seen the color fade from the beautiful face, the light die out of the lustrous eyes, the smile leave the sweet mouth, they would have wondered; and although if Mattie had seen her sister go to her dressing-case, take out a slip of paper, on which a few words were written, and stand brooding over them with firmly set lips and eyes full of yearning sadness and pain, she might have known that she was recalling her dead brother's last moments, even Mattie would not have know the dark thoughts filling her heart.

And these were the words written on the paper which Cecil had read and re-read so often:

"You have only your own confounded folly to blame for what has happened; had you taken your measures more skillfully, D——would not have discovered anything. I can't help you; I have run 'a-muck' myself, and must keep dark for a time."

The name signed at the end of these words was "L. Carewe," and whenever Cecil read it there came before her eyes vividly, as if it had been but yesterday, her brother's death—the beautiful dying face, the broken, feeble voice, the sunken eyes lighted with one flash of resentment, as the words came, gasped forth from the pale lips:

"When I was dying—dying through him—he sent me this. Heavens! if I could only find strength to take my revenge once!"

And her own answer sounded clearly in the young girl's ears:

"I will find strength; I will revenge; I promise it, Rex. He shall suffer, even as he has made you suffer."

And though as yet, Cecil could not see her way clearly, she was resolved to keep that promise even if it cost her the happiness of her life, or her life itself.

CHAPTER IX.

A DINNER.

"MATTIE, have you made out the list of invitations for me to fill in?" said Cecil, one morning, when the brilliant season was drawing to a close, as she entered the boudoir, and threw herself into a low chair beside the fire, which the cold, damp day, in the month of June though it was, rendered necessary.

"Yes, dear," Mattie answered from her seat, where she was writing letters, "but are you not going to ride this morning?"

"No, I am rather tired," replied Cecil, listlessly as she crossed her feet on the footstool.

"Flirted too much last night, I suppose," her sister said, with a smile. "Poor Mr. Gerald, I felt quite sorry for him!"

"Did you? there was not the least necessity; he is quite well able to take care of himself. Oh, Mattie, I am getting rather tired of it all," said Cecil, wearily, as she looked into the red gleam of the fire with a tired expression on the beautiful face.

"The reaction," said Mattie, gaily. "Never mind, the drive to Richmond will quite restore you."

"To Richmond?" said Cecil, looking up. "Oh, I had forgotten. Is it to-day the dinner-party takes place?"

"Yes," said Mattie, with the prettiest blush. "How could you forget?"

"It is quite possible!" said Cecil, laughing. "You were not likely to do so, Mattie. What answer is Mr. Edgar to have when he pleads his suit? Nay, darling, I did not mean to vex you, but surely you have noticed how irretrievably gone the poor young man is."

"Are you sure he is not 'irretrievably gone,' as you call it, on Miss Cecil, sister?" said Mattie, with a little laugh, which was not quite spontaneous.

"Quite sure," said Cecil smiling. "And I think to-day will decide it. Mattie; Richmond Park is a charming place for that kind of thing."

"Is it?" said Mattie, laughingly. "You have had more experience than I have. There is the list, Cecil; and as I have finished my notes, the desk is at your service."

"Thanks!" and Cecil moved languidly across the room, and took her sister's place before the writing-table, while Mattie went to the piano, and began to play some soft, dreamy melodies, which did not interfere with her sister's work.

For some minutes the silence was only broken by Mattie's soft music, for Cecil went on languidly addressing and filling the cards for a large ball with which Mr. Daton intended to conclude the season, without comment, and mechanically as it were.

She had almost finished her work when a name towards the end of her list arrested her attention. The fair face bending over the dainty invitation-cards flashed suddenly to the roots of the bronze-brown hair, then she grew white as death, as mechanically she took up the card and filled it in with the name of "Dr. L. Carewe," and having done so, she sat with the card before her, staring at it as if something in its aspect fascinated her.

"Mattie," she said, after a pause, speaking with her usual indifference of tone and manner, "who is Dr. Carewe?"

"I really don't know, dear," said Mattie, absently. "Uncle Henry knows him, and I think he said he was under some obligation to him, and hoped we should be civil. Uncle Henry says he is one of the cleverest men of the day, and that he will make a name for himself in his profession."

"Indeed!" said Cecil, quietly, as she put the invitation-card into its envelope, and addressed it to "Dr. L. Carewe," and concluded her writing without further comment, although the color was coming and going in her fair face, and the little jeweled hands shook so that they could hardly hold her pen.

"There are the cards, Mattie," she said, as she rose; "and now I think I will go to my room. My head aches, and I do not care for luncheon; if I lie down now I shall be fresh for this evening."

"Shall I come with you, and bathe your head a little?"

"No, thank you; I shall be better alone," said Cecil, ungraciously; and she went swiftly upstairs to her own apartment, locking herself in as she closed the door.

"At last—at last!" she said, aloud, as she paced up and down the pretty room. "At last, after all this weary waiting, my time will come! Rex, my brother, I will keep my vow; even as you suffered, he shall suffer; ay, and more—a thousand times more, if it be possible! It has been hard to wait, but at last my opportunity has come—at last!"

She went over to the looking-glass, and standing before it, examined herself critically—not like a young girl pleased and proud of her own beauty, but like a connoisseur examining a picture to discover its power.

What would be the effect if she strove to please? Would she fail now?

She looked at the face the glass reflected—at

the lustrous eyes, the matchless complexion, the tender carmine lips, the graceful head.

"I cannot fail now—I cannot fail now!" she said, proudly, as she turned away and threw herself on the sofa, where she sat, lost in thought, as the hours slipped by, recalling the past, meditating on the present, and planning for the future.

Not two years had passed since her brother's death, and but a few months since she had known the life the great world lives, and tasted of its pleasures. In those few months she had been sated with homage and admiration; she had awakened love in many a heart, even in this prosaic nineteenth century, when love is supposed to be a thing of the past; her days had been filled with variety and beauty, luxury and pleasure. No trouble had come to her, no suffering had touched her but she had not been happy. In the core of her rose the asp had lain, for her vow was still unkept—her brother was still unavenged!

But now, for the first time, it seemed possible that he might keep that vow, and avenge that brother; and with the possibility came a momentary fierce joy and triumph, succeeded almost immediately by as keen a pang of suffering. The thought was hateful to her—it was repugnant to the girls' really noble nature to cherish such a thought—but she turned away from the pleadings of her better nature, and conquered them by the recollection of her promise to her brother; but, nevertheless her reverie ended in a burst of tears.

But there were no traces of emotion upon her face as, a few hours after, she left her room, dressed for dinner at Richmond; and as her uncle went to meet her as she entered the dining-room, he thought she had never looked more beautiful.

"How are you, my darling?" he said, fondly. "Mattie tells me you had a headache."

"I am quite well now, as you see, dear uncle," she said, as she lifted her face to his. "Where is Mattie? Mr. Edgar will be here in a moment."

"Mattie is not yet down," he answered, smiling. "That is rather unusual, is it not, Cecil?"

"Ah! but to-night is an unusual occasion," said Cecil, smiling. "What shall we do without our Martha, uncle?"

"Do you think she will leave us, Cecil?"

"I think Mr. Edgar will steal her!" said Cecil, smiling.

Here Mattie entered, looking very lovely in a dainty dress of cream and blue; and she was followed almost immediately by Mr. Edgar a handsome young man of large fortune, who had been Mattie's most devoted admirer ever since her appearance in society. And judging from Miss Lester's blush and sweet shy smile of welcome, he was not the least favored among her admirers.

His four splendid bays and carriage were very handsome.

The drive was a pleasant one; and Cecil, sitting beside her uncle, with her hand in his, enjoyed thoroughly the swift motion through the still, dewy evening air; and Mr. Edgar divided his attention between his other friends and Mattie with strict impartiality.

At length they reached the great hotel, and Mr. Edgar pulled up in dashing style before it.

"I hope we are the first arrivals," he said, as he relinquished the reins. "I do not like my guests to arrive before me."

"Is that one of your guests?" said Mattie, smiling, as she indicated a tall man, who was slowly pacing up and down the entrance-hall, apparently lost in thought, and so absorbed that he had not noticed their arrival.

"Yes, so it is!" said Mr. Edgar, eagerly. "My best friend. I hope you will like him. Hallo, Lawrence!" he added, calling out in his gay voice. "I'm delighted to see you! I thought you would fail me."

"Not likely, when I had promised to come," said the gentleman, in a deep, rich voice, which had a singularly pleasant tone in it, as he came down the steps to meet his friend, and shook hands warmly; while Cecil, from her elevated position, glanced down at the stranger, and saw that he was a tall man, considerably taller than Mr. Edgar, who was himself of no mean stature, largely built, with a pale face, having tawny beard and keen gray eyes.

"Not handsome," said Cecil to herself, "but very nice and rather *distingue*," she added, as she watched the introduction to Mattie, and then saw that her uncle was evidently well acquainted with the stranger, for they shook hands warmly; and then Miss Cecil had to turn her attention to her own proceeding, and to make her descent from the elevated seat she occupied.

This she felt no difficulty about as it was not the first time by many that she had done so; but to-day it so chanced that just as she put her little feet on the ladder, the horses made a sudden plunge forward, the ladder was thrown down, and but for the instant movement of Mr. Edgar's guest Cecil might have met with a serious accident. As it was, she was more frightened than hurt; and when they all gathered round her, as she stood still supported by the strong arms which had caught her as she fell, she tried to laugh and assure them that she was not hurt; but the effort was beyond her—she gasped for breath; the beautiful head fell against the arm that held her, and her eyes closed!

Still, she had not lost consciousness, and she had a dim idea that a pleasant voice said hurriedly: "It is nothing, do not be alarmed, Miss Lester; and that strong arms lifted her as if she had been an infant, and carried her into the hotel; that the same strong hands very gently and tenderly laid her down and applied restoratives; and when she opened her eyes she saw Mattie, looking pale and startled, bending over her, while the strange gentleman stood near, holding her wrist between his fingers in a strictly professional manner.

"You are better?" he said, bending down as her eyes met his; and something in his voice so cheerful and re-assuring sounded pleasant in Cecil's ears.

"Yes, much better," she said, faintly. "How foolish of me! Did I frighten you, Mattie?"

"Yes, a little; I have never known you to faint before, Cecil. I was afraid you were hurt, said Mattie, smiling. "It was fortunate we had a doctor near at hand, was it not?"

"I was very foolish," said Cecil, trying to smile. "I don't know what possessed me."

"You feel no pain at all, I hope."

"Oh! no," said Cecil, as Mattie went away to give news of his niece to Mr. Daton. "I am only very much ashamed of myself."

"There is no need," he said, with a little smile. "You might have been severely hurt. It was quite natural to faint under the circumstances."

"That I am not hurt I owe to you," said Cecil, coloring a little. "How can I thank you?"

"Nay, I am glad to have been of some slight service to you," he said, quietly. "No, you must not move yet awhile," he continued, as she made a movement to rise.

Cecil replied with a few laughing words of protest, at which he smiled; but something in his manner showed that he expected to be obeyed, and Cecil leaned back on the cushions and glanced with more interest than was usual in her at his face, he stood leaning against the open window, with his face turned towards the park, looking green and beautiful with luxuriant Summer attire. —To be continued.

NEW PUBLICATIONS.

Half a Century.—By JANE GREY SWISSHELM. Price $1.50. Chicago. Legal News Co., publishers.

The reputation of the author is wide-spread. She is a strong advocate of progressive principles and clearly asserts her opinions. This her latest work combines the historical, biographical and novel features of literary production. It portrays her own character and life—showing great activity in many fields of labor. The fifty years of experience is related in an instructive and entertaining manner; leaving the reader with the knowledge of more than personal reminiscences. One of the striking points is that of the ghost, showing the fallacy of this particular superstition. Much of interest might be quoted but we leave the rest to be obtained from a perusal of the book.

Eastward Ho! or adventures at Rangeley Lakes. By Capt. CHARLES A. J. FARRAR. Boston. Lee Shepard.

The author has succeeded in that which he has undertaken, viz.: the "instruction and amusement of American boys in this, the first of a contemplated series of books. The love of the marvellous usually indwelling in a boy's heart will be roused by this history of the brave boys who tramped amid the wilds of Maine braving danger, bears, and divers evils; enduring hardships and fatigue during their vacation instead of a luxurious rest at home. Their many exploits are told in a pleasing manner, while the description of scenery, which is illustrated by a map, adds not a little to one's geographical knowledge.

Practical Lessons in English.—By J. M. B. SILL, A. M. New York and Chicago. A. S. Barnes & Co., publishers.

These "practical lessons" in English, bid fair from the novelty of their arrangements to become attractive to teachers, and a rest to scholars, who welcome something new in the study of Grammar. The author dispenses with many tiresome features which belonged to this study in the school days of yore. As a guide to perfect composition it is invaluable.

MAGAZINES FOR OCTOBER.

THE PHRENOLOGICAL JOURNAL.—Contents: Sojourner Truth, portrait; Notes on the Psychology and Pathology of the Brain (Continued); Studies in Comparative Phrenology—The Ethmoidal and Sphenoidal Bones in the Quadrumana, Carnivora, Rodent and Bird, illustrated; The Literati of Concord; James B. Weaver, the Greenback Candidate for the Presidency, portrait; Intellect, as a Means of Obviating Our Faults; Inside and Out, a Society Sketch; O. S. Fowler, to the Patrons of the Phrenological Journal; A Weather Guide for the People, illustrated; Beer and Bread; Henry S. Tanner, M. D., the Great Faster, with portrait; The Value of Health and Life; The Young Chemist's Revelations; Notes in Science and Agriculture; Editorial Items; Answers to Correspondents; What They Say; Personal; Wisdom and Mirth; Library Notices; Publishers' Department.

LIBERAL CULTURE FOR WOMEN.—The fears entertained by certain of our old-fashioned doctors concerning the effect of high education upon young women have not, to all appearance, retarded the increase of colleges for their special training, or the growth of a public sentiment in favor of supplying all the advantages for the cultivation of the feminine mind, which are at the command of the masculine. Vassar has found it necessary to add departments for the study of sciences and languages, which are usually pursued by the few who make them special subjects of investigation. Smith College finds it expedient to expand its curriculum to meet the demand of a growing student roll and an advancing scholarship.

Even old Harvard has yielded to the pressure of influence, and opened her doors, with certain conditions not altogether fair, we think, to young women who aspire to high scholarship, and who can *pay* liberally for the instruction.

The West has been somewhat in advance of the East in affording academic opportunities to girls, mixed and special colleges having been in existence in Ohio, Illinois, Indiana, Wisconsin, and other States for twenty-five or more years; and they have performed a noble work in raising the tone of moral and intellectual character of the Western population.

The recognition of woman's equality carries with it an admission of her right to a liberal education, and her liberal education, we think, will do more toward re-solving successfully the complex problem of her sphere in society than any other method.

The thousands of cultivated women who now grace the walks of professional and even business life, have demonstrated in the most practical manner, not only their capability for good work in vocations once regarded as belonging peculiarly to the masculine intellect, but also that they may prosecute such vocations without injury to health, and without relinquishing a degree of true womanliness.

We can no longer assert that systematic study is more detrimental to the health of girls than boys for it has been found that under like conditions girls exhibit a better physical average than boys, and so are even less likely to break down under mental strain. This being considered, we would naturally expect the declaration which has been made by certain of our leading educators, that the young women are outranking the young men in the studies of the average college curriculum. To our masculine ear this utterance goes somewhat "against the grain," but we may apologize for our sex by pointing to the very manly athletic exercises which take up so much of the time of young men in our best institutions—the rowing, ball-playing, etc., which have their advocates among learned sanitarians as quite essential to vigorous physical development?

We are in favor of high mental training for American women. The character of our institutions early brings into activity the selfness, individuality, or sense of independence inherited from independent, self-helpful fathers and mothers, and they need liberal education for the general work society has for them to do, whether as wife and mother, or as one who must earn her own living.—Phrenological Journal, for October.

GOOD COMPANY, NUMBER TWELVE.—Two papers just read before the American Social Science Association are given, both on subjects which have been attracting considerable attention of late. One, about food adulterations, is by a competent authority, Prof. S. W. Johnson of the Yale Scientific School. It will doubtless relieve some people who have been somewhat alarmed by recent newspaper paragraphs. The other, Associated Charities, explains the modern method of organization by which the various benevolent societies and individuals in a town unite so that a large proportion of money given in charity need not be wasted as is now generally the case, and the deserving poor be more effectively reached. It is by an authority on the subject, Rev. Oscar C. McCulloch of Indianapolis, one of the places where the plan is in practical operation. Two other articles bearing on the same general subject are The Destruction of the Poor by President John Bascom of Madison, Wis., University, and an account of the doings of the late Conference of Charities and Corrections.

Savonarola and the Renaissance is a careful synopsis and estimate of the great reformer's work by Mr. Noble C. Butler of Indianapolis. There are three stories; When Two and Two did not make Four, by Miss Louise Stockton; The New Jerusalem, a Millerite story; and How Cherry Thought of It. One of the sketches tells of some of the great excursion places near New York where people flock by the ten thousand in Summer; another of a visit to the factory in Meissen, Germany, where such exquisite china is made.

There are also Recollections of Seward, Greeley, Lincoln and Douglas; and papers about camp meetings, in favor of family movings as a social benefit, about the servant girl question; besides other articles.

Taking Turns at the Crib has special application where public officials are about to be nominated.

Good Company, Number Twelve ($3.00 a year; Springfield, Mass.,) closes the volume, and subscriptions should be made at once. A specimen copy will be sent to any one not familiar with it for ten cents.

THE OCTOBER ATLANTIC has no serial story, but instead gives one long short story called "A Florentine Experiment," by Constance Fenimore Woolson, one of the best of American writers of stories; and another, "Deodand," by W. H. Bishop, author of "Detmold." Dr William James, brother of Henry James, Jr., writes a very interesting and thoughtful article on "Great Men, Great Thoughts, and the Environment." "Socialistic and other Assassinations," by James Henry Haynie, brings together many curious facts for those who study social phenomena. The second part of the "Intimate Life of a Noble German Family," is quite as engaging as the first part, and gives us a most interesting insight into the lives and ideas of the higher classes of Germans. The careful and valuable "Reminiscences of Washington" this time relate to President Tyler's administration. Richard Grant White discourses of the prevalent habit of drinking in England, terming it "A National Vice." The political article discusses the "Business Issues of the Presidential Canvass." "People of a New England Factory Village" is a paper of genuine interest. Mr. Whittier has a characteristic, beautiful poem, "The Minister's Daughter." Mr. Aldrich contributes a short poem, "Comedy," and there are also poems by Robert Louis Stevenson, Helen Barron Bostwick, I. Oppenheim, and Francis Ekin Allison. Several important recent books are reviewed in the careful and readable style for which the Atlantic is distinguished, and the Contributor's Club contains several bright little essays.

ST. NICHOLAS.—Contents: Frontispiece, "Ahoy, lads! Ahoy; Hap; The Lantern Fly; Robin, Good-bye! Poem; A Tired Mother, Picture; Ludovick's Rocks; A Tragedy; Jack and Jill; Concluded; Naughty Kitten: "It is the Cat!" Picture; Lily Chapel; Day-Dreams, Poem; The Naughtiest Day of my Life, Concluded; The Major's Big-Talk Stories, No. VIII.; Zack's Excursion Trip; In the Orchard, Poem; Some Man-Eaters; The Stove and the Thermometer, a fable; Charity's Charter Picnic; Slumber-land, Poem; The Cat's-meat Man of London; The Alphabet in Council; How to save Time; Discussing the Crops, Picture; The House with the Lace Front; The Little Violinist, Picture; The Fairport Nine, Concluded; Washing Dolly's Clothes, Picture; For very little Folk; Jack-in-the-Pulpit; The Letter-Box; The Riddle-Box.

SCRIBNER'S MONTHLY.—Contents: Porpoise Shooting, Illustrated; The Grandissimes, XII. (Concluded; Among the Reeds; Jean Francois Millet—Poet, Peasant and Painter, II., Illustrated; The New South; A Group of Poems; Shantytown, Illustrated; Miss Stotford's Specialty; Peter the Great, IX., Illustrated; Seven Seconds; To Bolt or Not to Bolt; "There is a Natural Body;" One Hundred Miles in Mammoth Cave, Illustrated; Sea-Side Lawn Planting, Illustrated; A Free Lending Library for New York; Topics of the Times: Communications; Home and Society; Culture and Progress; The World's Work; Bric-a-Brac.

For Women.

CONDUCTED BY MISS RAY CLARK.

WOMAN'S WORK.

DARNING little stockings
For restless little feet;
Washing little faces
To keep them clean and sweet;
Hearing Bible lessons,
Teaching Catechisms,
Praying for salvation
From heresy and schisms—
Woman's work!

Sewing on the buttons,
Overseeing rations,
Soothing with a kind word
Other's lamentations;
Guiding clumsy Bridgets,
Coaxing sullen cooks,
Entertaining company,
And reading recent books—
Woman's work!

Burying out of sight
Her own unhealing smarts;
Letting in the sunshine
On other clouded hearts;
Binding up the wounded,
Healing of the sick,
Bravely marching onward
Through dangers dark and thick—
Woman's work!

Leading little children
And blessing manhood's years;
Showing to the sinful
How God's forgiveness cheers;
Scattering sweet roses
Along another's path;
Smiling by the wayside,
Content with what she hath—
Woman's work!

Letting fall her own tears,
When only God can see;
Wiping off another's
With tender sympathy;
Learning by experience,
Teaching by example,
Yearning for the gateway,
Golden, pearly, ample—
Woman's work!

At last cometh silence—
A day of deep repose;
Her locks smoothly braided,
Upon her breast a rose;
Lashes resting gently
Upon the marble cheek;
A look of blessed peace
Upon a forehead meek!
—Richmond Christian Advocate.

SUSY'S FANCY WORK.

"I THINK it is too warm even for fancy-work said Laura vigorously fanning herself as she entered the room, where Susy was busy over pasteboard and glue, shaping rough crosses and picture frames, out of common box-board. "I wonder at you, Susy working so hard this uncomfortable day."

"I am improving my time, while the children are at the picnic, by getting some Christmas things prepared."

Christmas things this time of the year! I guess you must want to keep cool thinking about it."

"I like to be in season with my preparations then I am not hurried when the time comes, and I am not likely to forget anybody, I have a box-full of goods now all finished and labeled and tied up securely and put away in a safe place, ready for the Christmas tree. It is so easy to prepare little things as you go along through the year, and so hard when you put all off until December.

Just now I am preparing these crosses and frames for Autumn leaves. I made some beautiful ones last year and they have adorned various niches in very handsome rooms ever since. I will get my frames ready, and when the leaves turn their brightest I shall prepare a box full for use. Some leaves turn early and I have a good many already prepared. I find nothing better to fix their colors and give them a gloss than fine resin ironed over them with a warm iron, giving them only a thin coating of the substance. When I put them on a cross like this I begin at the ends of the arms all around and sew on the leaves lapping them so as to hide the stitch every time. Work towards the center. There will be a vacant space, on which fasten a pressed flower bringing the stem through a hole in the pasteboard.

You see I have not much money to spend on Christmas gifts, Laura, so I have to depend on my wits mainly to devise something that will make the little folks happy. I save scraps all through the year and it is astonishing what can be done with them. See this little box of dolls things for Lucy all made from some old trimmings aunt gave me."

It was a wonderful box, sure enough, a dainty dolls hat with satin ribbons and a downy white feather (from the breast of the white turkey, I will say in confidence) lace fichus, a fine lace edged handkerchief, and even a lace shawl; what little

girl's eyes would not sparkle over such a gift to her new dolly. Even the baby had his box of treasures fashioned by Cousin Susy's nimble fingers. And the reason why she could make everybody such dainty presents in such profusion on Christmas day was just because she bore it in mind all through the year and began in season. I hope some other dear girl will say. "I will do just that way myself." LOIS.

JUST TRY THE EXPERIMENT.

Fine rains have made the late gardens bring forth abundantly, and fruit trees are so laden in many sections that they need props to keep them up.

While we rejoice in these good things which the kind Father has given to us, let us remember those near us who have no part or lot in this abundance. The poor and struggling householders who have no ground to cultivate, and where existence seems almost a daily miracle.

What a blessing to the poor widow yonder, stitching her life away on that dreary "Southern work", as they call it, would be a basket of supplies from your luxuriant garden. A few hills of potatoes, which you would never miss, a dozen of corn, a paper bag filled with those ruby tomatoes. How her children's eyes would brighten at the sight of a basin of white harvest apples, a few pears or rosy peaches. I know the garden would be none the poorer, for I have tried, and have seen others try, this experiment of scattering and yet increasing.

Good Grandfather M. drove into town one day with a load of fine apples, but the market was full and no one cared to buy. He did not wish to take them back, so he bethought him of a poor widow who might be glad to have them, so he drove around to her little house, and told her if she could store them away she might have them. Such joy and gratitude he had seldom seen, as shown in her broad Scotch face, and in the faces of her four children. He had not even guessed her great destitution, but afterward ascertained that these apples and bread were their main living all that Fall.

Every year after that, as long as she lived in that section, she was told to come in the Fall and get a wagon load of apples from the orchard for her Winters supply. A good neighbor kindly loaned his horse, and the children helped pick up the fruit, partaking of a bountiful dinner at the farm house. It was *the* event of the year to them. Always after the good woman went away she asked for the Lord's blessing on the orchard. "May ye never want for an apple crop."

It is years ago since grandfather died, but at times the neighbors still say. "How is it your orchard always bears whether others do or not?"

"It is the old Scotch woman's blessing," is the answer.

If you were sending a gift to your Lord you would not hestate to pick out your soundest, fairest fruit. Remember he has said, "Inasmuch as ye have done it unto one of the least of these, ye have done it unto me." It seems wonderful that he should notice such little gifts, but we have his word for it. Surely that should be a sufficient stimulous. MRS. J. E. MON.

A FEW HINTS.

IN wearing shoes, always smooth out the wrinkles and the marks of the toes and ankles when taking them off at night. Then they will look new very much longer, as they will not so soon become set to the shape of the foot, and white spots will not form at the great toe and side.

Change stockings backward and forward from foot to foot. In this way they will wear evenly, and not be so likely to break out in holes on one side while the other remains comparatively good.

When taking a sponge bath in warm weather, begin at the waist first and finish with the feet. Then change the water and towels, and completing the bath, end with the face and neck. In this way one does not become all heated up with the exertion and feel scarce cleaner and fresher than before.

A lady friend has made for every sleeping room in her house a valuable convenience, in the following manner: first, she took a soap box and had it mounted upon four legs, which were originally pieces sawn off in shortening bedsteads. To the box she had attached an outer lid, with hinges. An inner lid fitted at the top upon the strips nailed in for the purpose just below the edge of the box. This inner lid was perforated in the centre, and provided with a movable piece, and both lid and piece could be easily moved whenever required. Immediately beneath the inner lid and on the bottom of the box, in the centre, was nailed a large square block, of a size sufficient to support a piece of crockery ware, and of a thickness adequate to raise it up so as to touch the inner lid from below. The whole woodwork was then stained to imitate walnut; so that when finished the article made quite an addition to the bed-room furniture. Such a one, bought at a store, would have been quite expensive; but this cost but a few cents and it looks almost as well. An article of the kind is especially valuable to those living in the country where the lack of drainage precludes other conveniences—particularly is this the case in cold or stormy weather. But those living in the country may think such a thing too costly, and, in consequence, often suffer much annoyance. To all such I would say, here is a simple, easy mode of supplying yourselves with what, once had, you will never want to do without.

MARGARET B. HARVEY.

FARM LIFE.

IN these *striking* days, when nearly every newspaper contains some article advising the "out-of-work" mechanics and laborers to leave the crowded cities and villages and try earning their bread by the tilling of the soil—there is often much wonder expressed at the reluctance of those unfortunates to take this good advice. But when I look about and see the lives that many farmers lead, *I* do not wonder.

I know men worth all the way from five to twenty thousand dollars, with fine houses, and commodious barns—few of the latter large enough to contain their bountiful harvests—whose days from early dawn till long past sunset, are spent in the most unremitting toil. True, time enough is taken to satisfy Nature's craving for food and drink, but how? why, by hurrying into a hot kitchen, taking a hasty "dabble" at the sink, sitting down to a disorderly table and sharing with the flies, of the abundant supplies, provided by the tired, and probably cross housewife, for we women are apt to be touchy when we are overworked and worried, just as *some* of our masculine companions are.

Don't imagine farmers hereabouts lack for fine parlors and shady dining-rooms, oh, no! but these cannot be used *everyday*—they must be kept for company; so, too, the pretty dresses and adornments of the mother must be saved, and the faded soiled ones worn, to correspond with the uncombed hair and untidy feet, which too often is the uniform "from morn till dewy eve." There is no need of farmers living in this way, but that many *do* we all know, some one wiser than I must say why.

But is it a wonder that sons and daughters leave such homes as these—where books and newspapers if provided, are often unread, for lack of time—and try other ways of getting a living—more enticing than farming, which should be the most pleasant of all labor?

Who can see the beauties of this lovely earth better than the farmer and his family, if they do not spend all their time in the cultivation of their land, but remember that they have heads and hearts?

It will be easy to convince these unemployed townsmen that it is good to live in the country, when we learn to appreciate, and make good use of our blessings. When our lawns are as clean and attractive as the little squares in town; our houses and families as neat and attractive as the merchants' or the lawyers' houses and families, and when farmers and their families have read, marked and learned, so that they can converse more intelligently than many are capable of doing now.

MARY MANN.

FASHIONS.

HOODS, fichus, and peterines, of various styles and dimensions are now fashionable.

COLLARS are also being made immensely large; for morning wear they are not altogether white, but scolloped out and embroidered with red, black, blue, &c. This, well and tastefully selected, gives much harmony to the toilet. The cuffs are either plain or plated, but always matched to the collar.

THE deep sailor-collar in surah of two shades of color, plain or figured, fastened with a somewhat loose bow of the same, is very pretty. It is worn with the high-necked dress, either of the same or of another color, according to taste, provided the colors, if contrasting, are selected with care.

HATS for morning wear are made very simple, with little ornaments; as a rule they have neither flowers nor feathers, but only a large bow of soft surah in front upon the crown; below this a thick quilting of unbleached tulle or lace, coming a little beyond the border; behind, the ribbon or surah, twisted so as to become quite small, is passed through the straw and then tied under it in a bow, which droops over the chignon; this is a very clever arrangement, for with the small knot of hair which it is now considered pretty to wear at the back of the head, there is under the hat, with its lowered brim, an empty space unpleasing to the eye.

A DUCHESS hat is of Leghorn straw, open border, lined with a band of dark red velvet slightly gathered at both edges. Two long shaded red feathers trim this hat, one droops over the crown, the other comes forward over the edge of the border; a bow of palest pink satin placed on the right side completes the trimming.

THERE is also a bonnet of fine black English straw, edged with a jet bead border, finished with a bead fringe; semi-wreath of large closely-pressed red poppies round the front part; aigrette of black and old-gold feathers at the sides; bow and very wide strings of poppy-red satin.

To these very new and stylish bonnets and hats may be added the pretty little Creole hat of rough-and-ready straw, bent down in front and at the back, and trimmed with a Madras kerchief in rich warm colors, coquettishly tied on one side. For young girls the kerchief is sometimes exchanged for an enormous Alsacian bow of velvet or satin ribbon.

Plaids, not in the Scotch but Madras style, prevail in new Autumn goods. Here colors are so blended together as to form an harmonious whole. Uncertain shades of green and blue, with every possible shade of yellow; deep reds, with flesh color, dull shades of lilac, grays and browns; such are the favorite mixtures, as different as possible from the bright tints of Scotch plaids.

Madras plaids are extremely fashionable. They are now reproduced in silk and woolen fabrics. When not entirely of this plaid, the costume is very generally trimmed with plaid kerchief-borders effectively disposed, so as to show to the best advantage round the outline of double skirt or tunic, blouse or casaquin-bodice.

A dress of Madras plaid in attenuated shades of green and blue, with a few touches of bright red and yellow, is made in the Princess shape behind and with a basque in front. It is trimmed in the shape of a fichu with bands of bluish-green velvet finished with a flowing bow of satin ribbon to match; a pointed tablier, trimmed at the edge with a similar band, and is finished at the back into two shawl-points, which form the tournure. The skirt is trimmed round the foot with a deep fluting, edged with a band of velvet.

BE INDEPENDENT.

A Word to Young Farmers' Wives.

THE unavoidable labor on a large farm can be much more easily met and accomplished if every mistress of a house would cultivate sturdy independence with regard to her household affairs.

A woman with half a dozen children ought not to expect to have as many nice things or as many leisure hours as the neighbor who perhaps has none, or only one.

Every woman should plan her affairs with an eye to her own income, and not wish to copy from her friends.

Happiness and peace lie in the path of independence. If your neighbor makes four kinds of cake when she expects you to tea, set her a better example when she returns your visit, by getting a less elaborate meal, and by this means save your time and strength. AUNT RACHEL.

No matter what your feelings or ailment is, Hop Bitters will do you good. Prove it.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

MENTAL AND SOCIAL IMPROVEMENT.

M. H. L.

How interesting and full life becomes when we have well defined aims—how listless and unhappy without them. The poor factory girl toiling day after day, thinking of Saturday's pay, and how much comfort she can give to those who depend upon her, is far happier than the well-to-do person without any purpose in life. Is it not because boys are usually educated with a definite aim that they are mentally stronger and better able to meet the rubs of life than the girls who often pass much time in listless dreaming over their possible future, the result perhaps of reading silly novels which tend to give perverted and false views of life, weakening instead of giving vigor to the brain? Let the girls be educated with a practical outlook and how different their future would often be, and would we not have fewer unhappy marriages where the wife is full of fancied neglects, often imagining herself a victim to misplaced affection?

This is an age of progress, and instances can be adduced to show that the time has passed for discussion about whether or not the girls can be educated side by side with the boys. This has been fully tested, and when women vote we shall not hear so much of wife beating.

In "The Popular Science Monthly" for May, 1878, is an article on wife torture in England, in which facts are given that would startle the most credulous. I am glad our English sisters are up and doing in the women question. I spent a short time in a somewhat isolated country village this Summer, and the simple villagers were surrounded by the most charming scenery. Nature had been lavish in her gifts to them, but they plodded along day after day, never seeming to look up and drink in the grand and beautiful about them. I could not help thinking that if Charlotte Bronte had had such surroundings, instead of that barren moor whence she sent out Jane Eyre, a book full of imagination and fire which has thrilled the civilized world, how she would have appreciated it. The trouble with the villagers seemed to me to be that they had so few wants. They eat, drank and slept, living only to gratify their lower instead of cultivating their higher natures; in short, without a well defined and exalted aim in life.

The long Winter evenings would soon be upon them, and I ventured to suggest that it might be a good plan for some of the younger and more intelligent among them to organize a kind of literary society where they could converse freely on some topic previously agreed upon. For instance, take some city—Paris, London or New York; or, if preferred, take a famous individual—Wesley or Luther—and let each member read up and use all available means of finding out on the subject what will be instructive and interesting at their meetings. In this way the latent talent will be developed and an influence will spread abroad which would open up a desire for still further investigation on other topics. I was gratified to learn on my next visit that the project had been favorably received, and on Sunday I had the pleasure of hearing the minister announce from the pulpit that on such a day and hour the first literary meeting would take place. Is not this a step in the right direction?

WHAT TO DO IN AN EMERGENCY.

A PERSON accidentally got a fourpenny coin into his windpipe. It was wedged in edgewise, and his breathing was not interrupted, except that it produced a kind of wheezing noise, similar to that of an asthmatical person. He sought a surgeon, who administered an emetic, and said that nothing more could be done. The emetic failed to remove the coin. The next day he called on another surgeon, who by auscultation could detect the coin at the bottom of the windpipe. He was told that no more could be done for him, and that mortification would soon set in. A lady told him of a similar accident, and the way it was removed was by placing the gentleman on his head, and giving him a violent slap between the shoulders at the bottom of the windpipe. A cushion was placed on the floor for his head, his legs held up and a violent blow given on his back soon made him exclaim, "Here it is!" The coin fell from his month to the floor.

HATTIE HOPEFUL.

SPONGE CAKE—AND STIR PANCAKES.

THE following recipes were given us by Mrs. G. T. H., of Long Island. Mrs. H. has become noted, and justly, in her neighborhood, for her sponge cake, and her directions for making it are in this wise: Nine eggs, the weight of eight eggs in sugar and the weight of four in flour, a tablespoonful of lemon juice and a little of the grated rind. Separate the yelks from the whites, adding the yelks, one at a time, to the sugar and beating each thoroughly with the sugar, then stir in the lemon juice and rind, next the whites whipped to a stiff froth and, lastly, the flour—puttingit all in at once—after which stir as little and lightly as possible. For baking use the ordinary round bread tins or bar cake tins. Line with paper, grease or not, at pleasure, and bake in an oven suitable for bread baking (an oven that will brown bread within 10 minutes after placing it in oven) 40 or 45 minutes. Try with a bent broom whisk. As soon as taken from the oven turn out of the pan and *slide* onto an inverted sieve—this requires dexterity. Mrs. H. always frosts the bottom of the cake, that being the smoothest.

The recipe for "stir pancakes" originated in her immediate family and these are a very popular dessert with them. She remarked that in times of unexpected guests, when there was not time for a more elaborate dessert, these cakes filled up the gap and were always sure to be appreciated. Take a quart of sweet milk, four eggs, a pint of sifted flour, slightly heaped, and a little salt. Beat the eggs, add a little of the milk, then a little of the flour and so on until all are in. Put a piece of butter the size of a walnut, into a frying-pan; when heated put a teacupful only at a time of the batter into the pan, and at once commence to stir up with a knife, exactly as one would when scrambling eggs. Work into a round cake about the size of a small tea plate, and as soon as nicely browned, turn with a griddle-cake turner and brown on the other side. As they are taken from the frying-pan do not pile one upon another. Serve with butter and sugar—granulated or powdered.

DOMESTIC RECIPES.

To Clarify Fat.

Cut into small pieces, fat of either beef or mutton. Put into a saucepan and cover the pieces with cold water. Stir until the water boils, skim carefully and allow to boil until the water has all been discharged in vapor—the fat will then be of the color of salad oil—strain, and it will keep any length of time.

MRS. L. JONES.

Apple Batter Pudding.

Four beaten eggs, one pint of rich milk, two cups of flour, one teaspoonful of salt, two even teaspoonfuls of baking powder. Peel and core eight ripe, tart apples; put into a deep, baking-dish; fill the center of each with sugar and pour the beaten batter over them. Bake an hour and eat with cream and sugar, flavored with nutmeg or lemon.

Good Apple Butter.

Boil a kettleful of new cider until reduced two-thirds. Have a quantity of tart, juicy apples pared, cored and sliced, and put in as many into the kettle as the cider will cover. Cook slowly until tender, skim out and put in a second supply of apples. When tender turn all out and let stand over-night. In the morning return to the kettle and boil down until quite thick. Add whatever spice you please. It requires almost constant stirring.

MRS. J. J. K.

Quince Preserves.

Pare, quarter and core, saving the skins and cores. Just cover the quarters of quince with cold water and simmer until tender. Take out the pieces carefully, and lay on flat plates. Add the parings, etc. to the water, cover tightly and stew an hour. Strain through a jelly-bag and to each pint of the juice add a pound of granulated sugar. Boil, skim, add the pieces of quince and boil gently 10 minutes. Turn out and let stand over-night. In the morning skim out the pieces, boil up the sirup, put in the pieces, simmer 10 minutes, take out onto flat dishes and set in the sun. Let the sirup boil until it begins to jelly, then fill the glass cans two-thirds full of the fruit and cover with the sirup. MARY B.

To Bleach Ferns.

A 10-year subscriber asks some of the RURAL readers, who have experience, to give directions for bleaching ferns.

The greatest nourishing tonic, appetizer, strengthener and curative on earth. Hop Bitters.

News of the Week.

HOME NEWS.

MONDAY, Oct. 4, 1880.

Dr. Buchanan of Philadelphia, of bogus medical notoriety, has given up the fight his colleges and their charters have been annulled. The Doctor is safe in jail.....Job Chadwick, son of a wealthy farmer at Cresswick, N. J., while attempting to stanchion a ferocious bull, was gored so severely that he died on the 30th.....Mr. John Murray of Greenville, N. J., went to his barn on the evening of the 27th to water his cattle. He had not been gone long before Mrs. Murray heard groans from the direction of the barn. She ran out of doors and called her husband's name. There was no reply, except another groan, that unmistakably came from the barn. Mrs. Murray hastened to the barn, and as she approached a ferocious bull bounded out of the stable and ran into the open lot. She found Mr. Murray lying on the stable floor, with his hand upon a wound in his left side. He had been pierced by the horns of the bull so that part of his intestines protruded. Mrs. Murray called for help, and her sons came and aided her to carry Mr. Murray to the house. Dr. Wilkeson was summoned, and the wound was sewed up. He says that three days at least must elapse before he can announce positively whether Mr. Murray is out of danger.

James Hanna and a male companion at a hotel in Stroudsburg, Pa., blew out the gas when retiring and were suffocated.....James Forrister and his wife retiring at the hotel at Indianapolis, blew out the gas. Forrister was found dead. There are no hopes of his wife's recovery..... The clearings of the Associated Banks of Chicago for the month of September were $142,000,000, or or $28,000,000 greater than for September, 1879. The clearings for the nine months ending in September were $1,195,000,000, an increase compared with the same period last year of $343,000,000. Business is lively in every branch and department, and the prospects for commercial activity during the Fall are more favorable than usual during a Presidential campaign.....At Hoboken, N. J., the famous Stevens battery, on which nearly $2,000,000 have been spent, was sold on the 28th to William Laimbeer of New York for $55,000.....The Brush electric light has been introduced in many places in Pennsylvania and Ohio iron mills; New England cotton, woolen and silk factories; Western iron mines, seaside hotels, public parks, Mississippi and Sound steamers, circuses and the streets of two or three Western cities. New York city is to have a headquarters, near Madison Square, from which half a dozen machines will work as many circuits and supply 300 lights. In the district to be illuminated are thirteen hotels, five club houses and many large restaurants and stores. The electric light is used in a few isolated places in Philadelphia.

Boston capitalists have organized a company to continue the Atchison, Topeka and Santa Fe railroad to the city of Mexico.....A lawyer, Horace Wilbur, and his client, Mrs. Lynhall, of Philadelphia, were found drowned at a broken wharf, on the 29th. It is a mooted question whether it was murder and suicide or accidental death on the part of both. No one witnessed the going overboard, and their final end is shrouded in mystery.

INDIAN TROUBLES.

Indian massacres in the far West continue to be reported at intervals. A dispatch from Tucson, Arizona, says two miners report that Gen. Carr had a fight with a small party of Victorio's band, 18 in number, in the Hatchet Mountains, killing them all.....A dispatch from Fort Ellice, British America, dated September 15, says the Stoneys are now following the Mandrills. It seems that the Saiteaux made a desperate resistance, killing 13 of the Mandrills. Ocean Man, the chief of the Stoneys, is among the killed, and a head man of the Saiteaux. Fifteen Stoneys came in Sept. 14, and have gone north, to Riding Mountain, for help. They were in war paint, and came in yelling like demons, with a scalp on a pole. As far as known, 21 have been killed on both sides, and the Indians say the plains are strewn with dead horses and bodies of the slain. The Stoneys were driving the Mandrills so hard toward the boundary that they were leaving the scalping to be done on the return. Thirteen Mandrills had been killed when the runner left. He brought the one scalp as proof of his story, and says he found the brave it belonged to dragging in the stirrup and shot through the heart. He has the dead man's horse and saddle also. The Saiteaux and Stoneys fought all day before they were all killed, and the band of Stoneys now in chase came on their scalped bodies next day.

The influenza, which has for sometime prevailed among horses at Boston, roached New York, and a small percentage of animals among the street-car horses show signs of disease by coughing, but their appetites are not affected; they yield readily to treatment, and a recurrence of the epizooty of 1872-73 is not generally anticipated.....Anna Stroker, aged 17, on trial at Manitowoc, Wis., for the murder of Miss Nancy Heywood, her employer, confessed her guilt to her mother, who visited her, crucifix in hand, and adjured her to tell the truth. The girl, who cannot read or write, repeated the confession in Court, saying that Miss Heywood called her "crazy," which so exasperated her that she pushed her down on the floor and crushed her head with an axe..... ....President Hayes and party are in Oregon.....Epidemic diptheria has caused the schools to close at Bennington, Vt..... ...The Statue of Admiral Farragut, by Mrs. Vinnie Ream Hoxie, was placed in position in in Farragut Square, Washington, on the 29th.... ..Hough's saw mill, furniture store and adjoining stables, Hull's cabinet shop and Hughes' slaughter houses, at Prescott, Ontario, were burned on the 29th. Loss, $15,000; insurance, $6,000.....Frank Beeron, former land agent of the Burlington and Missouri railroad, who perpetrated extensive frauds by selling worthless land certificates, was arrested at Omaha on the 29th.... ....A fire at Fort Dodge, Iowa, on the 27th destroyed the dry goods store of Hall & Julius, the boot and shoe store of Crosby & Co., the hardware store of Prussias and the First National Bank, besides some smaller buildings. Loss, $100,000; insurance, $55,000.

On Sunday, Sept. 19, Mrs. M. Hazzard, wife of a popular and well-known merchant of Monticello, Ill., became the mother of five well formed babies, two of whom were alive at birth. There were four boys and one girl, altogether weighing 19½ pounds. The two living, a boy and a girl, weighed nine pounds, about 4½ pounds each. The remaining boy died in about two days from the time of birth. The mother is rather a delicate woman, about 35 years old, and weighing about 115 pounds. She is getting along as well as mothers ordinarily do under such circumstances. She was the mother of six children previous to this numerous affair. None of her people were ever known to have even twins.....The steam-ship Castello cleared from Savannah, Sept. 30th, for Liverpool with 7,118 bales of cotton, the largest cargo of cotton ever cleared from any Atlantic port..... A fire at Schuylerville, N. Y., on the 30th, burned the following business houses: Oliver Brisbin & Co., E. Washburne, dry goods; J. Horin Brook, hardware; Seth Lawrence, drugs, and the Western Union Telegraph office; Joseph T. Smith, jeweler; Miles Root, furniture; Seward Winney, meat market, and the Schuylerville Standard printing office. The total loss is estimated at $50,000. .....Frederick Billings of Vermont, was on the 28th, elected president of the Northern Pacific Railroad. The stockholders adopted a resolution urging the directors to provide for the speedy completion of the railroad from the western terminus on the Montreal river to Puget sound.

At Wilkesbarre, Pa, September 29, Justice Hoffman pleaded guilty to the charge of murdering his child, and was sentenced to the Eastern Penitentiary for nine years. Hoffman shot at his wife five times in July last and killed a child in her arms.....A skeleton, supposed to be that of a tramp, has been found in the woods near Millerstown, Butler county, Pa.....The clothing of a workman was caught between cogwheels in a mill at Davenport, Iowa, and he was being slowly drawn in, when two comrades grasped his arms, and a desperate "tug of war" ensued. The wheels would not let go, and the men braced and pulled with all their might. The workman was finally rescued, but without a particle of clothing about him.....Jay Gould has paid the travelling expenses from the Indian Territory of 16 young Indian girls who are to be placed in Mr. Moody's Seminary at Northfield, Mass., educated at the Federal expense and returned to their homes.

S. M. Waite was arrigned in Court on eight indictments at Bellows Falls, Vt., and pleaded not guilty to each. He is charged with larceny, forgery and negotiating forged notes. The time of trial has not yet been fixed.....F. M. Shaw, late President of the First National Bank of Paoli, Kansas, which went into liquidation some months since, was arrested at Paoli on the 28th, charged with making false entries in the report of the condition of the bank.....The corner stone of the new State House of Indiana was laid on the 29th, at Indianapolis, with appropriate ceremonies, under the auspices of the State officers and State House Commissioners. Ex-Governor Hendricks delivered the oration.

The famous Oneida Community has purchased water power at Niagara Falls, organized itself into a joint stock company and is now no longer a "community."....Miss Sarah A. Brown, of Lawrence, a Massachusetts girl of mature years, having received the democratic-greenback nomination for county superintendent of schools, will now, it is said, withdraw from the democratic State ticket on which she has been named for the State superintendency.....The ceremony of fastening down the connecting rail in the Northern Pacific railroad extension, between Montana and Dakota, will take place Oct. 5. Two handsome silver spikes have been already forwarded to give the occasion gorgeousness.....The coal hunters at Red Oak, Iowa, are now down four hundred and eighty feet, and think the prospect very encouraging.....It recently cost Harrison county, Iowa, $70 to place a fine of $5 on a man who had bruised and battered a neighbor.....Bishop Hennesy, of Dubuque, will lay the corner-stone of the new cathedral at Keokuk next week.....It is estimated that over two hundred families have moved into Ida county, Iowa, since last March.....The Northwestern railroad will soon build a new depot at Des Moines.....A Lincoln, Iowa, man caused the arrest of of two boys for stealing watermelons. Then he compromised with their father upon payment of one dollar, and coming before the justice to withdraw the case, he was handed a bill of costs for $15.80.....Old Simon Cameron, who has lately been on a visit to Indiana, called on Dr. J. G. Kennedy, in Acton, near Indianapolis, a companion of his youth, but whom he had not met for sixty-two years.....Preliminary surveys for a ship canal from Toledo to Fort Wayne are now being made under an appropriation of $15,000 by Congress.....The body of a woman buried near Indianapolis, thirty years ago, and recently exhumed for removal, was found to be petrified.

A watch factory is projected either at Madison Wis., or Baraboo, and it is said that capitalists of Madison have agreed to take $100,000 stock, while Baraboo, which can furnish by far the best water power, has offered to take $40,000 stock and furnish water power and buildings.....The business of Helena, Ark., for the last twelve months is estimated at $2,500,000. The cotton receipts were 55,000 bales, and it is expected that for the ensuing year 75,000 bales will be received.....Dr. Tanner has been outdone by a Dakota bull belonging to Captain Hadley, of Fargo, which ran off into some woods with a chain attached to his horns, and got fastened to a tree, where he remained six weeks without water or food of any kind; when found he was still alive and happy! .... Near Deadwood a bull leisurely entered a house, probably to get away from the flies. The woman fled in terror and summoned several men, who found the bull in a bedroom quietly chewing his cud, and so well satisfied with his surroundings that it was necessary to twist his tail until it kinked before he would vacate the premises..... At Pala, in Southern California, the anniversary of St. Louis is celebrated by religious ceremonies and bull fights, all under the auspices of the monks belonging to the mission of San Louis Rey. This year a great concourse of Spaniards and Indians gathered. After each day's mass for the week there was bull-fighting in the churchyard. These encounters did not amount to much, but a fight between a bull and a bear proved more satisfactory.....A completion of the census from best sources shows a population fully 50,000,000 in the States and 800,000 in the Territories of the United States.

[La Fayette Journal.]

Such Reports Do One's Heart Good.

Mr. Frank Wilke, North and 9th Streets, stated, that it was not only highly praised by his customers, but the St. Jacobs Oil has not failed to give satisfaction in a single case.

FOREIGN.

The most exciting topic across the Atlantic is still what will Turkey do with regard to surrendering Dulcigno to the Montenegrins. Three or four days ago the Porte asked the Powers to delay until to-day before sending the combined fleet to enforce its surrender. The delay was granted, but no news has yet arrived of the Sultan's final decision. The Ambassadors at Constantinople are most pressing in their efforts to make the Head of the Faithful comply with the wishes of the Infidels, but the Ottoman priests—300 of them—have already besought him not to yield an inch, and they are backed up by all the most pious or bigoted of the Turks. Doubtless the Sultan fears that if he gives way to Europe his own subjects may depose and assassinate him before the Powers could interfere; yet the probability is that he will yield. There is little doubt but that he thought that the combination of the Powers would be broken by the delay, but in this he has been deceived. Christendom cannot now in honor fail to enforce its demands through fear of anything that can be done by the "unspeakable" Turk. If war results, however it may turn out for others, it will certainly be much to the loss of the semi-barbarous Ottoman.

There seems to be a species of "reign of terror" among Irish landlords. A week or so ago Lord Mountmorres—an Irish Lord with no seat in Parliament—was assassinated. He was reduced by his own early extravagance and that of his forefathers almost to poverty, owning only 300 acres, and was grasping and very unpopular as a landlord and magistrate. The English public attribute his "taking off" to the inflammatory harangues of the Irish agrarian agitators, but the latter maintain that the Land League is in no wise responsible for it. Anyhow other landlords are in a "funk." It is as yet doubtful whether the Government will take any severe measures with regard to the island. A couple of men have been arrested for the murder, merely because they had lately been evicted by the dead man; but it is doubtful whether any one will ever be convicted for it—none has ever suffered for the murder of Lord Leitrim some time back, though that caused as great a sensation.

The "news-makers" of England are holiday-making. There is a good deal of talk about several strikes, chiefly among the cotton mills of Lancashire; but as winter is approaching they may not take place. In France the excitement about the religious orders is abating, the Government having decided to act quietly but firmly against them. There is a strong impression that Gambetta is preparing to advocate a warlike policy—against Germany, of course. Public opinion, however, at present is decidedly against any such a policy, although a triumphant war with Germany is the hope and prayer of nine out of every ten Frenchmen. In Italy there is some fear lest old Garibaldi should cause trouble. His son-in-law was imprisoned some weeks ago for taking part in a public demonstration against the government and in favor of a Republic. Garibaldi demanded his release which was refused, whereupon the old warrior left his island home, Caprera, and went to Genoa, some say to attempt to release his son-in-law by force; while others suppose he intends to head a Republican up-rising. The newspapers say, however, that he is too patriotic for that and that he meant nothing at all by his movement—and, of course, they know everything. In South Africa the English have another war on their hands—this time with the Basutos—some killed already on both sides. The main question now in Afghanistan is "Shall Candahar be kept by the British or handed over to their new Ameer, Abdurrahman Khan." The probability is it will be abandoned. Ayoob Khan is on his way to Herat whence he threatens to return and attack Candahar once more. After all, the danger of war between Russia and China is by no means over.

[Cleaveland Plain Dealer.]

Mr. Theodore Hively, tobacco and cigar dealer, 109 Seneca street, was recently laid up with rheumatism so that he couldn't walk. After liberal use of various preparations he purchased a bottle of St. Jacobs Oil, and, to use his own expression, "It was the first thing to afford him anything like relief." He has completely recovered by its use.

AGRICULTURAL NEWS.

AFTER paying all expenses of the late Ohio State Fair, the amount remaining in the Treasurer's hands is $10,208.59.....Reports from 54 central points in the cotton districts of Louisiana, Mississippi, Texas, Alabama, Georgia and Tennessee, giving the condition of the cotton crop to September 24, showed that bad weather damaged the crops in all these States except Georgia.....Of our $824,000,000 of exports of home productions, $680,000,000 consist of the products of agriculture alone, or 82½ per cent. of the whole.....The Des Moines Glucose company has purchased 14 acres just east of the city limits, and will erect enlarged works thereon, with a capacity of 3,000 bushels of corn daily.....The Baltimore grain elevators have a storage capacity of 3,350,000 bushels, exclusive of the several floating elevators. The Baltimore and Ohio railway company are erecting an additional elevator, to be completed in February next, to have a capacity of 1,500,000 bushels.... ....According to Lorin Blodget, the value of the annual wool manufactures are about as follows: Six New England States, $127,500,000; New York, New Jersey, Pennsylvania and Delaware, $93,340,000; Twelve Western States and Utah, $41,200,000; California, Oregon and Washington Territory, $7,250,000; Total, $283,120,000.

The United States Consul at Lyons, France, informs the Department of State that the cereal crop of France this year will amount to 102,000,000 hectolitres, an average yield. Nevertheless there will be a large demand for American wheat. In Germany the cereal crop is a mediocre one, and in Russia somewhat of a failure.....The Virginia State Fair commences Oct. 26, instead of the 22nd as heretofore published.....At St. Louis a proposition to lower the present grades of Nos 1, 2, 3 and 4 red Winter wheat one-half a grade, to take effect Jan. 1, was voted on Sept. 30 by the members of the Merchants' Exchange, and adopted by a vote of nearly two to one. The contest was the most exciting that has occurred on 'Change for several years, and quite a number of the most prominent and influential members of the Exchange took an active part in it.....The net surplus of barley in Canada for export for five years, as indicated by the customs returns alone, has been as follows: Year ending June 30, 1880, 8,133,128 bushels; 1879, 6,077,540 bushels; 1878, 7,851,702 bushels; 1877, 6,520,406 bushels; 1876, 10,074,578 bushels. This is irrespective of stocks held over, either in the hands of farmers or in warehouses, which would not vary the exhibits in any important degree..... The "fly suffocator," an insect resembling the mosquito, is the latest affliction that has visited the Russian peasantry. Last month, in the Mirgorod district of the Poltava province, 1,142 head of cattle, 2 horses, 272 sheep, and 173 pigs were killed by it. The flies are said to enter the air passages of the animals and thus suffocate them. .....In St. Petersburg several suspensions are announced in the grain trade, the liabilities being large. The difficulties are due to shipments from America forcing down prices, after speculators had based their calculations on a deficient harvest in Russia.

It yearly takes 200,000 acres of forest to supply cross-ties for the railroads of the United States. It takes 15,000,000 ties to supply the demand, for which on an average the contractors get 35 cents apiece, making in the aggregate $5,250,000. In building a new road the contractors figure on 2,700 ties to the mile, while it takes 300 ties to the mile to keep a constructed road in repair. The average of a good piece of timber land is 200 ties to the acre and 12 ties to the tree. White or burr oak is considered the best timber for the purpose, although cherry, maple, ash, and even locust have been used. The business gives employment to an army of choppers, who are paid ten cents apiece for each tie. A single man has been known to get out thirty-five ties in a day, yet the average is only ten, while an expert will probably get out twenty.....The peanut crop is estimated as follows: Virginia, 1,600,000 bushels, Tennessee 1,100,000 and North Carolina 2,800,000 bushels. The crop at 22 pounds to the bushels, will make the enormous aggregate of 62,040,000 pounds which, at an average of four cents per pound, would reach the sum of $2,481,600.....We learn from St. Petersburg that the harvest beetle, referred to in a late editorial, which is entomologically called Anasoplia austriaca, is estimated to have destroyed nearly one-third of the Russian crops in the provinces ravaged by it. Not only the South and East, but even the centre of the empire is now attacked. Tauridis, the Don territory, the provinces or Ekartermoslav, Charkof, Pultava and Bessarabia have been visited by the insect with more or less severity. The professors charged by the Government to investigate the matter recommend an abandonment of rye and wheat culture for a time.....Kansas cattle raisers, in order to hinder competition, and prevent the spread of Texas fever among their own herds, had a law passed forbidding the passage through the State, of herds from Texas, but a United States Court has declared the act unconstitutional. .....

THE SALE OF DISEASED ANIMALS.—In the State Circuit Court at White Plains, Westchester County, N. Y., a jury on October 2, decided a suit which is of much importance to farmers and others who sell and buy cattle, horses and other farm animals. This suit was brought by Hiram Finch, a large stock dealer, of North Castle, Westchester County, against Dr. Jonathan Carpenter, of Hall's Corners, Ontario Co., to recover the sum of $900 for five cows sold him and for which he held the Doctor's notes, which were not paid when they fell due. The defence was that the cows were afflicted with pleuro-pneumonia, and that their presence among thirty-five other sound animals caused the disease to spread, so that the defendant lost every cow but two. Mr. Finch denied that the cows had the disease, and a long array of expert witnesses were called in support of each opinion. Their testimony lasted two days, resulting in the ac-

knowledgment that if the disease was not pleuro-pneumonia, it was something very close akin to it. The jury rendered a verdict for Dr. Carpenter giving him $110 damages and the notes for $900, making a total of $1,010. Thus the principle is established by this verdict that a man who sells diseased cattle, and, analogously, diseased stock of any kind, not only forfeits the pay for them but is liable for damages for any spread of the disease due to their presence among sound animals.

The Saturday Review closes a review of the English harvest, as follows: "The farmers must make up their minds to accept low prices, which, however unsatisfactory to them and to their landlords, will be regarded with equanimity and satisfaction by people who are not landowners or farmers. But in the result the depreciation in the value of arable land which has already taken place will be confirmed and generalized. There is nothing in prospect to attract capitalists to invest in farming operations in the grain-growing line."..... All reports from France and Italy agree that the silk crop in those countries will be more abundant this season than for the past ten years.....All along the Atlantic coast and some distance inland, the horse epizootic has already visited nearly all the towns from Boston to half way down between New York and Philadelphia. It does not seem very fatal as yet, however. The following treatment is strongly recommended: as a preventive give the horse twice a day one-third of a teaspoonful of chlorate of potash dissolved in one-third of a bucket of water; for treatment of disease give three doses daily. Feed and water as usual.

DR. R. V. PIERCE: Buffalo, N. Y.:—DEAR SIR—I wish to state that my daughter, aged 18, was pronounced incurable and was fast failing, as the doctors thought, with consumption. I obtained a half dozen bottles of your Discovery for her and she commenced improving at once, and is now well and strong. She took the Discovery last fall.

Very truly yours, REV. ISAAC N. AUGUSTIN.
Shipman, Illinois.

American Carpets.

Manufacturers of Carpets in the United States have within a few years so greatly improved their products, that they are now successfully competing with foreign manufacturers, and the value of the importations of Carpets, in consequence, has fallen off more than one-half.

This result is not attributable to the Custom duties on foreign goods, but rather to the improvements constantly made in design, coloring, finish and texture, until now American Carpets are considered superior to those of European manufacture, in a comparison of their positive wearing qualities, when the cost is taken into consideration.

Among the houses who have done much to produce this result may be mentioned Messrs. J. & J. Dobson, the proprietors of the "Falls of Schuylkill Carpet Mills," who occupy the large and elegant buildings, Nos. 40 & 42 West 14th Street, New York, as a salesroom.

This enterprising firm have just opened their new Fall styles and designs manufactured expressly for their own retail trade, which for beauty of patterns, elegance in finish, durability in wear, and economy in price, compare favorably with anything in the market.

These goods are shown by them in the various grades of Axminsters, Wiltons, Moquets, Velvets, Brussels and Ingrains, and are designed and colored in many instances to harmonize with the prevailing styles in Furniture, Wall Papers and Window Hangings.

Besides their own goods, they at all times have large lines of Turkish and Persian Rugs, Mats and Carpets of the different leading varieties, as well as full assortments of Oil Cloths, Linoleum, Rugs, Mats and Mattings, which they sell at reduced rates.

This store is under the personal management of Mr. John Van Gaasbeek, a gentleman long known and appreciated in the Carpet trade of New York.

Facts vs. Theory.

In regard to the method of coloring butter, the theory is that cows when well fed and cared for will make yellow butter; the fact is that not one in ten will, except in times of flush pasture.

This is just the reason that the very best Dairymen in this country use Wells, Richardson & Co.'s Perfected Butter Color. They warrant it to add at least five cents per pound to the value of white butter, a return of one dollar for every cent it costs.

MRS. LYDIA E. PINKHAM, 233 Western Avenue, Lynn, Mass., is rapidly acquiring an enviable reputation for the surprising cures which daily result from the use of her VEGETABLE COMPOUND in all female diseases. Send to her for pamphlets. Sold by all druggists.

DURING October, the price of the large type edition of the "Library of Universal Knowledge," to all who subscribe and pay in advance, as they commonly do for a newspaper or a magazine, is $20.00 for the 15 octavo volumes complete, in cloth, and $15.00 for the same in half Russia, gilt top. It is a larger Encyclopædia than ever before sold for less than $100.00, besides being the latest, freshest, and in all important respects the *best* in the field, for the general reader.

Why do Hop Bitters cure so much? Because they give good digestion, rich blood and healthy action of all the organs.

Burnett's Cocoaine is the best and cheapest Hair Dressing in the world. It kills dandruff, allays irritation, and promotes a vigorous growth of the Hair.

The Markets.

SPECIALS FROM THE CHIEF CENTERS.

Until Saturday, Oct. 2.

Cincinnati.—WHEAT steady; No. 2 amber, 96c,; No. 2 red winter, 98c. CORN dull but firm; No. 2 mixed, 43c. OATS.—No. 2 mixed, 32½@33½c. RYE in fair demand and firm; No. 2 90c. BARLEY steady, with a fair demand; No. 2 Fall, 95c. PORK unsettled at $17@18.75. LARD firmer at $7.85. Bulk-meats dull; Shoulders, 5½c. Clear Rib. 8¾c.; Clear Sides, 9½c. BUTTER—The bulk of the sales are at 15@20c but choice stock ranges up to 25c. Packers are buying common stock at 14@15c, but it has to be pretty good to command the latter figure. Fancy creamery sells at 32c, and prime at 29@31c; choice Dairy at 24@25c. choice Western Reserve at 22@24c, prime to choice Central Ohio at 18@20c, and common at 14@16c ₱ lb. CHEESE.—The market has ruled stronger at ½c per lb advance, but the demand is only moderate; prime to choice factory selling at 13@13½c ₱ lb. APPLES. Prime to choice at $1@1.25 ₱ bbl on arrival. Inferior are difficult to sell at any price. Home-grown sell at $1.25@1.50 per barrel in prime shipping order, and some fancy stock brings a little more in a small way. POTATOES are in only moderate demand but steady. Prime to choice Early Rose sell at 45@50c ₱ bushel on arrival, and $1.50@1.60 ₱ bbl in prime shipping order from store. Hogs.—Common, $3 85@4.50; light, $4.60@4.90; packing, $4.70.

Boston.—BUTTER.—Northern—Choice creamery, ₱ lb, 30@32c; Choice New York dairy, 27@28c; Choice Vermont, 28@30c; Long dairies, 24@26; Common, 17@19c. Western.—Choice creameries, 29@32c; Fair to good, 26@28c; Dairy-packed, 20@25c; Choice ladle-packed, 20@23c; Common, 17@20c. CHEESE.—Good lots of dairy and factory cheese sell at 12@12½c; fair do. at 11c, and there is not much factory here selling below that price. Fine factory, New York and Vermont, ₱ lb, 13½c; Fine factory, Ohio and West, 12½@13c: Fair to good, 11@12c; Skims, 18@20c. POTATOES.—Northern white are selling at 45c; Northern Rose at 50@53c; Eastern Rose at 55@57c, and Houlton stock at 60c per bushel. Sweet potatoes sold from the boat at $3.50. ONIONS, $3.25 per bushel for Western yellow, and $2.75 for red. FRUIT.—Tomatoes range from 35@50c per bushel box. The market has been flooded with grapes, and prices have ruled at 3c for Concords and Isabellas, and 6c for Catawbas. Cranberries are dull at $4@6 per bbl. Quinces sell slowly at $6 per bbl for choice York State. Pears in good order range from $1.50 to $4 per bushel, the latter price for Seckels. Apples are plenty and sell at $1.25 for choice shipping fruit, and 75c to $1 for common. Choice eating fruit is scarce, and sells for $2 per bbl.

Chicago—WHEAT active and firm; No. 2 Red Winter, 94½@95c.; No. 2 Chicago Spring, 94@94¾c., cash; 94¾c., November; 95½c., December; No. 3 do., 88@89c. CORN steady and firm; 39½c., cash; 40½@40¾c., November; 40¾c., December. OATS strong and higher at 30¾c., cash; 30¾c., October; 30½@30¾c., November. BARLEY firm at 74½c. PORK easier at $18, cash; $18@18.25, October; $12.65@12.67½, November; $12 15@12 20, all the year. LARD fairly active at $7 80@7 82½, cash; $7 82½, October and November; $7 72½, all the year. BULK-MEATS dull and lower; Shoulders, $5 25; Short Rib, $8 05; Short Clear, $8 35. BUTTER—But slight change was observable in any of the features of the market. Creamery, 27@30; Good to choice dairy, 22@26; Ladle packed, 17@20; Packing stock, 14@16; Grease, 8@10c. CHEESE—Full cream, 12@12¼; Part skim, 10@12.

St. Louis—WHEAT, slow; No. 2 Red Fall, 94½c; cash; 94½c@94½c, October; 96½c, November; 97¼c December; 94½c@94¾c, all the year; No. 3 do., 89c@89½c; No. 4 do., 86@86½c. CORN firm at 38 7-8c, cash; 39½c@39¾c, November; 38¾c@38¾c, December; 38c@38¼c, all the year. OATS higher at 29½c@29¾c, cash; 30c, November. RYE slow at 82½c bid. APPLES.—Ben Davis at $1.75@$1.85; Bellefleur, $1.50@$1.75; Baldwin, Winesap, Pennsylvania Red-streak and Northern Spy at $1.25@$1.50; Pippin, Rambo, Domino, Romanite, mixed, and all other varieties 25c@$1. BUTTER.—Prices easy, and tending downward on all save dairy—creamery, 3 '@32c; dairy—selections of choice, 27c; choice, 24@26c, medium at 18c for fair to 23c for prime. low 14@15c; country or near-by make at 12½c for poor to 15c for fair and 18c for sweet yellow. POTATOES.—Steady at 40c to 50c @ bu. and $1.25@$1.30 ₱ barrel, near-by growth mainly at 45@47c ₱ bu. GRASS SEEDS.—Steady, at $2 25 for fair to $2 35 for prime. Sales; 27 sks on p. t., 27 at $5.27½, 182 at $2.34 Clover dull at $4 90.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Oct. 2, 1880.

BEANS AND PEAS.—The bean market is quiet. not much animation expected until new arrive regularly and have their customary influence upon the workings of the market. A few new marrows have sold at $1.80; do medium, $1.55@1.60. New pea and white kidney will have a clear field. Red kidney are easy and without encouragement for new; Green peas are dull; higher at the West than here, owing to scarcity of prime. The ravages of bugs have been unusually serious. Sound lots nominal at $1.50@1.55; Southern B. E. peas tending lower; last price $2 per 2 bushel bag.

Marrow beans, prime, $1.62½@1.65; other, $1.50@1.60; mediums, prime, $1.45@1.47½; other $1.35@1.40; pea, $1.55@1.75; white kidney, $1.65@1.75; red kidney, prime, $1.40@1.45; other, $1.30@1.37½.

BROOM CORN.—Now will be quotable next week. Sale at St. Louis new crop 3½c. common, and 6@6½c prime hurl.

BUTTER.—The strong prices that were pressed upon the market had only a short life, the attempt to anticipate the early advance of last Fall having proved a failure. Supplies are larger, as the trade depends largely upon a local outlet. At the close inside prices are chiefly quotable. Dairies are offering, but sales are moderate as the fine lines of some counties will not appear until the weather will not cause a deviation in appearance. At this season a few extra marks of ladle worked extra Western dairy exceed current quotations; some Michigan goes close to State tubs. Ordinary Western is steady when of table merit. Exporters name very low figures, though the market is reported firm abroad.

	Rects. pkgs.	Exp'ts, firkins.
June 1, 1880, to Oct. 1, 1880...	632,383	156,953
June 1, 1879, to Oct. 1, 1879...	648,788	150,505
June 1, 1878, to Oct. 1, 1878...	554,577	130,805
June 1, 1877, to Oct. 1, 1877...	581,618	105,257
June 1, 1876 to Oct. 1, 1876,..	482,593	61,686

Creamery, fine State, 31@32c.; Western, 30c.; good to prime, 28@29c.; fair to good, 27@28c.; poor to fair, 26@27c.; sweet cream, 27@30c.; State firkins, 22@26c.; entire dairies, 25@27c.; pails and half tubs, choice, 27@28c.; good to prime, 26@27c.; poor to fair, 21@24c.; Welsh tubs, choice, 25c.; other, 20@24c.; Western imitation creamery, 21@25c.; dairy, fresh, 24@25c.; fair and other, 19@23c.; factory, fine June, 19@20c.; present make, 19@20c.; medium, 17½@18½c.; poor, 16@16½c.

Receipts for week, 32,070 pkgs.; exports do., 8,500 pkgs.

CHEESE.—The market opened this week strong, in sympathy with the country, but shippers did not respond and by the close there is a decline which gives more activity. Exports for the week, 30,000 boxes. Quotations are for

State factory, fancy, at 13@13½c.; do. good and prime, 12½@13c.; do. fair to good, 11½@13½c.; do. half skimmed, 10@11c.; Wisconsin factory, fine, 12½@13c.; do. good to prime, 12½@12½c.; do. fair to good, 11½@12½c.; Ohio factory, fine, 12½@12½c.; do. good to prime, 11½@12½c.; do. flat, fair to good, 10½@11½c.; do. poor to fair, 9½@10½c.

Receipts for week, 99,405 boxes.
Exports, 42,287 do.
Liverpool cable, 64s.
Steam to Gt, Britain, 35@40s.

COTTON.—Has been active and generally higher closing weak for

October 11.06; November, 10 80; December, 10.79@10.80c.; January, 10.90@10.91c.; February, 11.04@11.06c.; March, 11.21@11.22c; April, 11.36@11.38c.; May, 11.50@1.52c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8¾	8¾	8¾
Strict ordinary	9¼	9⅜	9⅜
Good ordinary	10⅜	10¼	10¼
Strict good do	10½	10⅝	10⅝
Low middling	11	11⅛	11⅛
Strict low middling	11⅛	11⅜	11⅜
Middling	11⅜	11⅝	11⅝
Good middling	11⅞	12	12
Strict good middling	12⅜	12¼	12¼
Middling Fair	12⅝	12⅝	12⅝
Fair	13¼	13⅜	13⅜

STAINED.

Good ordinary..... 8 9-16 | Low middling..10 1-16
Strict good ordinary. 9 3-16 | Middling..... .11 15-16
Receipts for week, 21.523. Exports do, 7,460.

DRIED FRUITS.—Apples have a moderate trade demand and rule steady. Peaches are more active. Small fruits are quiet and firm. Quotations are:

Apples—Old State at 5¼@6½c, new Tennessee at 3½@4c.; new Virginia at 4@5c.; fancy sliced North Carolina at 6@7c.; evaporated, ring cut, at 8¾@9½c. Old peeled peaches at 5@14c. Blackberries at 8c.; Raspberries at 25@26c. Pitted cherries at 19@20c. Whortleberries at 11c. New Georgia peeled peaches at 15@17c.; new North Carolina peeled peaches at 18@20c.; new unpeeled peaches, quarters at 7½c.; new unpeeled peaches, halves at 8c.

Receipts for week, 2,050 pkgs.
Exports for week, 1,114 bbls. of apples.

EGGS.—Receipts for the week, 6 856 bbls.; do last week, 8,380 do. Supplies have sold steadily at a slight daily advance. Choice Ohios almost up to near points. Market closes strong.

N. J. and L. I., per dozen, 25c.; State and Pa. 23@23½c; Western and Canadian fresh, 22½c.; second or held, 20@21½c.

FLOUR.—The market has shown a good deal of activity, but closed weak on a decline in wheat.

Latest prices are: $3.30@4.10 for very inferior to very fancy superfine State and Western; $4.00@4.20 for poor to choice extra State and Western, odd lots and lines; $4.20@4.35 for choice to fancy do.; very inferior to good white wheat, trade and family extras, $4.75@5.35; good to choice do. at $5.35@6.10; (very choice to fancy do. at $6.15@6.50;) red and amber winter wheat inferior to choice trade and family, at $4.40@6 00; round hoop Ohio, $4 35@4.85; and trade and family brands of do, at $4.85@6 00; St. Louis at $4.75@5.50 for inferior to good extra; $5.70@6.00 for good to choice (and $6.00@6.50 for choice to fancy brands); Minnesota clear, inferior to fancy at $4.10@6.50; Minnesota "straight," poor to fancy, at $5.75@7.35, and patent inferior to very fancy at $5.75@8.75; unsound stock at from $2 30@5,00; city mill extra at $5,10@5.30 for fair to very choice for the West Indies; do. for England, $4.00 24.35 for poor to choice spring wheat, and $4.45@5.00 for winter wheat product; do. trade and family extras, $5.25@6.50; do, for South America, $5.40@5.75.; No. 2 at $2.50@3.50 for very poor to very fancy.

Receipts for week, flour, bbls. 110,390; corn meal, do. 3,476; wheat, bush. 1,082,600; corn, do 1,303,400; oats do, 650,100; rye, do. 77,950; malt, do. 28,928; barley, do. 160,120; beans, do., 1,575; rice, pkgs. 1,396.

Exports for the week, flour, bbls., 76,600; corn meal, do. 3,000; wheat, bush. 1,535,600; corn, do. 1,260,900; oats do. 4,412; peas, do. 2,630; beans, do. 626; rice, 1,681.

BUCKWHEAT FLOUR—Ranges form $2.40@2.75 per 100 lbs.

FRESH FRUITS.—Exports of apples for week, 26,883 bbls.; since Jan. 1, 178 700 do.; same period last year, 92,900 do. The unprecedented Fall trade makes the enlargement. Apples have declined; $1.50@1.52 is very extreme for special selections outside of Gravenstien.

Western N. Y., mixed, ₱ bbl., 75c.@$1: Fall pippins, 75c.@$1: Baldwins in shipping order, $1@1 25: other, 75c.@$1; greenings; 75c @$1, Kings, $1.25@1.37; Twenty Oz., 87c.@$1; Gravenstein, $1.50@1.75; common, 37@50c. Cranberries weak in price with a liberal supply. Cape Cod, fancy, ₱ bbl., $6; poor to choice, $4@5.75; boxes, $3; N. J., prime boxes, $1.25@1.75; poor, $1 $1.12. Quinces show poor quality as yet; extras, $4@5 ₱ bbl.; other, $2.50@3.50. Peaches have a prolonged quotation; extra, $2.50 per basket; other, 75c.@$2. Pears show a lighter offering; prices low but firm; Boston best boxes Bartletts, $3@4; Louise Bunce, B. Diel and B. d'Anjou, $3@4.50; Virgalieu, 3@5; Seckles, choice, $10@12; other, $6@8. Plums about gone crate, $1.25@3 the latter for table sorts. Grapes easy in price but active; Delaware, cases 18 3-lb boxes $2,50@4; baskets ₱ lb 5@7c.; Salem, 4@5c.; Catawba cases, $1.75@2.25; baskets, 3@4c.; Concords, cases, $1.50@2; bulk, 2½@3½c.; Isabella 2½@3c. Peanuts steady at last figures: 4@5½c, as to grade. Chestnuts, $2.25@2.25. New hickory nuts, $2 50.

GRAIN.—Wheat has been active, the exports for the week reaching 2,020,000 bushels, with the market ruling higher most of the week through the threatening situation of affairs in the southeast of Europe, but closing easy.

The latest prices are of No. 1 white at $1.09½@1.10; do. October, at $1.08¾@1.08¾; do. November at $1.18¾@1.08¾; No. 2 white at $1.07¾@1.07¾; ungraded white at $1.06@1.12; No. 1 red at 1.13@1.14; No. 2 red at $1 08¾@1.08¾; do. October, at 1.08½@1.08¾; do. November, at $1.09½@1 10; December, at $1.11@1.11¾; No. 3 red at $1.07@1.07¾; do., steamer grade, at $1.01; ungraded red at $1.03@1.11: No. 2 Milwaukee spring new, at 1.08: No. 2 Chicago spring, old at $1.07¾ afloat. Rye is at 95@96c. for No. 2 Western. Corn is fairly active and strong; the exports for the week have been 1,050 000 bushels; latest prices are for New York No. 2, at 51¾c.; do., October, at 51¾@5 ¾c.; do, November, at 52½@53c; do., December at 53¾@54¾c.; ungraded mixed Western at 51¾@52¾c. Oats are unsettled, closing weak; latest sales are of No. 1 white at 43@43¾c.; New York No. 2 white at 42¾@42¾c.; do. for October delivery, at 40c. bid and 40¾c. asked; No. 3 white at 40@41c. New York No. 1, 42½c. No. 2 at 41¾@42¾c.; do., October quoted at 39¾c. bid and 39¾c. asked; do., November at 38¾c, do. December at 38c. bid and 38¾c. asked; No. 3 at 40@40¾c.; ungraded White Western at 40@41¾c.; ungraded mixed Western at 38¾@42¾c.; white State at 42@45¾c.; mixed State at 42½@43c.; No. 2 Chicago at 42@42¾c.

HAY AND STRAW.—There is a good demand and a firm market.

Shipping hay quoted at 80c.; medium to prime do., 90c.@$1.15; salt hay at 60@65c.; clover do. at 65@75c. Straw at 90@95c. for long rye; 65@70c. for short rye; and 60@70c. for oat.

Exports for week 1,700 bales.

HONEY.—Sales are still in a moderate retail way at about 2c. above the following holding.

Rates for round lots, white clover, single comb, 17@18c.; larger pkgs 15@16c.; buckwheat 12@13c.; extracted white, 10@12c.; dark, 8@9c.

HOPS—Have been more freely offered and prices tending easier. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	25 @28
Do. medium	23 @24
New Yorks, crop 1880, low to fair	21 @22
Eastern, crop 1880	21 @25
Wisconsin, crop 1880	21 @25
Yearlings, crop 1879, choice	20 @25
Olds, all growths	4 @14

POULTRY AND GAME.—Supplies of dressed are running uneven. At this season the market always suffers from the sending in of rough lots and prices are somewhat unsteady.

Turkeys, choice, 13¾@13c., ₱ lb.; fair to good, 11@12c; Phila., dry-picked, 14@15c. Chickens, do., 16@17c.; Bucks Co. do. 13@14c.; State scalded, 12@13c.; Western, scalded, 11@12c. Fowls, Phila., dry-picked, 13½@14½c.; N. J., d.-p., 12@13c.; scalded 12@12½c.; State, scalded, 11@12c; Western, scalded, 10c.; poor, 9@10c. Ducks, Spring d.-p., 15@17c.; mixed, 11½@13c. Geese, Phila. Spring 15@16c.; fair, 11@13c. Squabs, white, ₱ doz., $2.25@2.50; dark, $1.12@1.25.

Live poultry ran down so low for a number of days that shipments abated. Good lots are in demand and common thin stock irregular.

Chickens, New Jersey, per lb 11@12c.; State, 10@11c; Western, 10@11c.; Southern, 10@11c. Fowls, New Jersey, 11@13c.; Western, 10@11c.; Southern, 10@11c. Roosters, 4@5c. Turkeys, young, 11@13c.; old, 9@11c. Ducks, choice, 55c.; other, 40@50c. Geese, choice, $1.75; other, $1@1.50.

General trade for game opens slow; the weather prevents display. Venison arrives in bad condition. For all birds there is an easy tone.

Mallard ducks, 40@50c.; teal, wood and common 20@35c. Partridge, prime, $1 00; soft, 40@75c.; grouse, 90c.@$1: woodcock, 50@85c.; Eng. snipe, ₱ doz., $1.50. Sand snipe, 40c.; plover, $1.50; wild pigeons, flight $1.50: stall-fed, $2.25; venison short saddles 16@20c.; whole deer, 10@12c.

PROVISIONS.—There has been a slight speculative movement which has carried prices up sharply, and pork especially taking attention.

Mess pork at $20.25, buyers' option this month. Bacon at 8-70c. for long clear, and 9c. for short clear. Lard—Western steam at 8.85 for spot lots; 8 30c. for Oct; 8-22½@8.25 for Nov., and 8.20@8.22½c. for Dec. Strealine at 8 9.16@8 11.16c. Tallow at 6¾@6 7-16c. for prime. Beef hams at $16.50. Beef—extra India mess quoted at $19@20 for city; $9.50@10 for extra mess, and $9 00 for plain mess; $10.75@11.75 for packet, and $12@13 for family mess.

Receipts for week, beef, 422 pkgs.; pork, 1,800 bbls.; cut meats, 27,709 pkgs.; lard, 5,315 pkgs.

Exports for week, beef, 1,700 bbls.; pork, 2,675 bbls.; cutmeats, 3 089,903 lbs.; lard, 4,378,735 lbs.

SEED.—Timothy is strong at $2.70@2.80, Clover is quiet at 8¼@8¾c. for prime to very choice.

Receipts for week, 3,336 bushels.
Exports for week, 894 bags.

TOBACCO.—There is a brisk export demand and a fair home trade, with prices well sustained.

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4 @ 4¼	4¼@ 5
Good lugs	4¾ @ 5	5¼@ 5¾
Low leaf	5½@ 6	6 @ 6½
Medium leaf	6¼@ 7½	7¼@ 8½
Good leaf	8 @ 8½	9 @10¼
Fine leaf	9 @11	11 @12
Selections	12 @15	12 @15

SEEDLEAF.	Crop 1878.	Crop 1879.
New England Havana seed	— @—	14 @25
Wrappers, common	13 @15	— @—
Medium	16 @18	— @—
Fine	20 @ 7¼	25 @35
Selections	30 @40	37½@45
Seconds	— @—	10½@13
Fillers	— @—	5½@ 7
Penn. assorted, low	12 @13	10 @12
Assorted, fair	14 @15	13 @16
Assorted, fine	16 @18	18 @22
Wrappers	18 @35	— @—
Fillers	10 @12	6 @ 7
N. Y. seed'd, com. to medium	10 @11	— @—
Ohio assorted	8½@13¼	7½@10
Wrappers	15 @25	15 @25
Wisconsin assorted	8 @12	7 @10
Havana seed	15 @20	16 @18
Wrappers	12 @18	— @—

VEGETABLES.—Exports potatoes for week, 6,146 bbls.; since Jan. 1st, 141,055 bbls.; do. last year to date, 125,195 do. Supplies are very free and prices are a shilling or so in buyer's favor. Snowflake show that they will hold a commercial place. State E. Rose, per bbl., $1.25@1.50, the lower for bulk; Snowflake, $1.25@1.50; pearless, $1.12@1.25. Sweet potatoes abundant and low; Delaware, $3.25@2.50; Va. and N. J., $1.50@1.65. Onions steady. Cabbage cheap. Demand for celery opens early.

Green corn, ₱ 100, 50@75c.; tomatoes, ₱ bush., 25@30c.; cucumber pickles, per 1,000 $1.50@2; egg plants, per bbl., $1@$1.50; Lima beans, per bag, 1.25@$1.75; shelled, per bush. $2.50@2.75; turnips, 100 bunches, 50@75c.; Russia turnips ₱ bbl, 50c.@$1; bullnose peppers, ₱ bag, 75c.@$1; cabbage, flat Dutch, ₱ 100, $2@4; do. red, $3@5; marrow squash, ₱ bbl. 30@50c.; Hubbard do., 75c.@$1; onions, white, $3.50@4 yellow, $2.75; red, $2.50; carrots, ₱ 100 bunches, $1.50; pumpkins, ₱ 100 $2@4; okra, 25c.; cauliflowers, ₱ bbl. $2@3; celery, per dozen, 75c.@$1 00 beets, 100 bunches, $1@1.50.

WOOL.—There has been less life to the market with prices easy. Quotations are for

Ohio, Penn., and W. Va. XXX 46@48c.; XX, 43@45c.; X, 43@45c.; No. 1 46@48c.; No. 2 42@41c.; coarse 35@38c.; combing 43@48c.

N. Y. Mich. and Wis. XX 38@41c.; X 38@40c.; No. 1 44@47c.; No. 2 38@42c.; coarse 33@35c.; combing 42@46c.

Ind., Ky. and Tenn., XX 38@41c.; X 38@40c.; No. 1 44@46c.; No. 2 38@42c.; coarse 33@35c.; combing 42@46c.; combing unwashed 30@37c.

Ill. Iowa, and Minn. X and XX 36@40c.; No. 1 43@45c.; No. 2 37@41c.; coarse, 30@34c.

Ga., Ala., Miss. and La. fine unwashed 33@35c.; medium unwashed 30@31c.; coarse unwashed 25@30c.; burry 14@20c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Oct. 2, 1880.

BEEVES.—Receipts for the week 14,817 head; do. last week, 12,749 do. An overstocked market depressed prices, and the yards were not cleaned at the close. Cherokees and Texans sold at 5@7¼c.; Coloradoes, 7@8c., though a few pretty fed of the latter brought 8¼c.; poor to fair native steers, 7 9c., to dress: 4@56 lbs.; good to choice, 9¼@10¾c., to dress 56@57 lbs.; extras, 10¾c. These prices are fully ¼c. off since Wednesday. Exporters wants were limited and a blue opening is looked for on Monday.

COWS AND CALVES.—This usually neglected market is quite firm at late rates, but there is no inducement for large receipts; range, $30@60 the latter for singles.

VEAL CALVES.—Prices are regarded high at the close; sellers look for an early change, especially as dressed will soon be a feature.

Live calves, N. J., fed, 7¼@7¾c.. State choice, 6¾@7½c.; good, 6@6½c.; poor, 4½@5½c.; Mt Holly, large, 5@7c.; buttermilk, 3@3½c.; grassers 1½@2½c.; fair to prime hog dressed 7@10c.; common, 3½@5c.

SHEEP AND LAMBS.—Receipts for week, 38,538 head; do last week, 35,189 do. Sheep quiet prime lambs in good demand. Very common sheep, 3½c.; good to prime, 4@4½c. Lambs, 5@6c., a few extras at $6.20 ₱ 100 lbs.

SWINE.—Receipts for the week, 27,529 head: do. last week, 25,934 do. Late quotations for live, $5.10@5.50; country dressed pork, 7@8c.; heavy to light N. J. city dressed and State, 7@8c.; do. Western, 6¾@7½c.

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Reading for the Young.

SONGS FOR CHILDREN.

A. B. C.

THREE bright little boys
Took their A B C's,
And planted them deep,
So they grew into trees.
All the trees bore fruit,
When the boys grew up,
And knowledge poured joy
To the brim, in their cup.

JUMPING-JACK.

Jumping-Jack, Jumping-Jack, where shal we go?
Out in the garden to dig with the hoe;
To dig for potatoes and dig for red beets,
And dig for whatever the little pig eats!

Jumping-Jack, Jumping-Jack, where shall we sleep?
Under the hay with the black chimney-sweep.
Jumping-Jack, Jumping-Jack, what shall we wear?
Pantaloons made out of Nanny-goats' hair.

Jumping-Jack, Jumping-Jack, where were you born?
In the small end of a little cow's horn.
Jumping-Jack, Jumping-Jack, where will you die?
Under the rim of a gooseberry pie.

—Mendel in N. O. Democrat.

OUR NUT-BEARING TREES.—No. 1.

MAUDE MEREDITH.

ONE of the pleasantest sources of amusement to the young folks is the gathering of a store of nuts for the Winter evenings. The presence of nut-bearing trees is also one of the delights of farm life of which too little thought is given. It is a simple thing to plant a few hickory nuts, butternuts, black-walnuts or chestnuts in a convenient place in the Fall, and with a little protection from cattle, see them grow into fine, shapely trees. Yet how few do it? How is the nutting season of old New England times neglected?

The greater proportion of nut-bearing trees belong to the genus Juglans, from the Latin Jovis glans, the nut of Jove, these, together with the hickories, carya, make up the walnut family. Added to these are the beech-nut, the chestnut and some small shrubs like the hazel bushes.

On the prairies of the West, where the rapidly growing cottonwood and Lombardy poplar are set as wind-breaks about buildings, the different varieties of nut trees might be planted, as they are of rapid growth, though a little particular as to food material, preferring for growth a deep loamy soil, dry rather than moist, but the fruit has the best flavor and produces the most oil, when the tree is grown in calcareous soils, or among calcareous rock. In a wet-bottomed soil, no matter what the surface, it will not thrive.

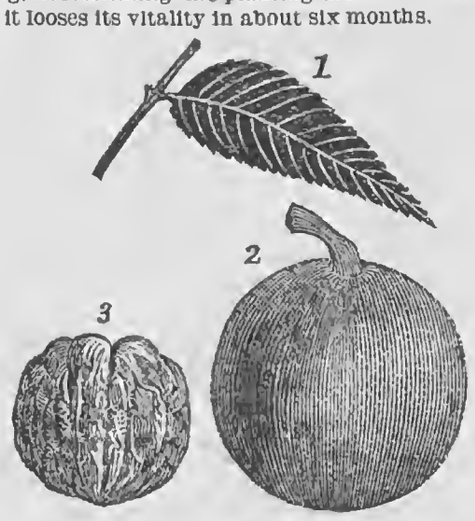
In referring to different branches of the walnut family, the Juglans regia, or European walnut, commonly called English walnut in our market, will perhaps take the precedence, although not strictly speaking, an American tree, being a native of Asia. It grows abundantly throughout Europe, but in this country it ripens its fruit only south of the latitude of Washington. In Europe much attention is given to its cultivation, and about a dozen varieties are known, distinguished by the abundance, size or shape of the fruit, the thinness of the shell and quality of the kernel. These are propagated by grafts upon budding stocks. The sap of this tree (like those of our species) contain sugar and has been used in some countries as a source of that product; and is sometimes concentrated and fermented to make walnut wine.

Where this tree abounds, large quantities of the nuts are pressed, for their oil, which is used for food the same as olive oil, the residue being used by artists and in the finest kinds of printers ink. The fruit is in great demand throughout Europe for table use as a food by the poorer classes, a dessert by the rich. While green it is sought for the purpose of preserving or pickling, when ripe as an article of export also. But leaving our foreign cousins for members of the American family proper we find the black walnut J. nigra as ranking first in importance, principally, at present, for the value of its timber, in the manufacture of furniture there being few homes in all the land that do not contain articles of furniture made from its strong, beautiful wood; being very hard fine-grained and susceptible of a high degree of finish. When first cut it is a purplish brown, but with age turns very dark, almost black.

The tree itself, is very stately growing from 60 to 150 feet in hight, growth remarkably rapid and at the age of eight to ten years it begins to bear, though age increases its productiveness. It is found, more or less in forests from New England to Florida, but is much less abundant east than west of the Alleghanies, where, especially in the valley of the Mississippi it is one of the commonest trees. When in the forest it has a clear trunk 30 to 50 feet without a branch, but in open ground it branches rather low forming a wide spreading head. There is a specimen standing on the grounds of the late William Cullen Bryant at Roslyn, L. I., the seed of which was planted in 1713; at three feet from the ground it measured 25 feet in circumference. The fruit is spherical, the surface of the husk a greenish yellow when ripe, and nutting parties can hardly imagine a more pleasing sight than the long vistas of brown wooded way, clear of low limbs or underbrush, as no tree or grass will grow in the shade of the walnut, the brown earth dotted or heaped in little colonies with the great yellowish globes, near in size and shape to a medium sized orange, and the soft thud, of nuts all the time increasing the store already fallen.

All along the Mississippi of a fine Autumn day may be seen the single express, or open buggies from town or farm starting for neighboring groves for a days pleasure of nutting, taking along their picnic lunch, perhaps a book and hammock also, but certainly a quantity of sacks to bring back the winter's stock of walnuts. The rind soon turns black, and with very little time or trouble may be taken off or if left will dry down and drop apart when the nut is cracked.

The nut has a corrugated, hard shell, with an oily kernel, which becomes rancid if kept too long, necessitating the planting the same season, as it looses its vitality in about six months.



BLACK WALNUT.—FIG. 326.

In the tree planting districts of the west, the nuts are gathered into heaps covered, with straw and earth to keep out the rain, and in Spring are planted where the trees are to stand. A better way is to plant directly, in the Autumn where the trees are expected to remain, for like the lemon and orange, most nut-bearing trees are tap-rooted, and therefore do not bear removal.

If necessary to sprout in little nurseries, a flat stone should be placed some six or eight inches below to give the root a horizontal bent, until time for removal.

PANAMA HATS.

PANAMA hats are principally manufactured in Veraquas and western Panama. Not all, however, known to commerce by that name are plaited in the Isthmus, by far a greater proportion being made in Manta, Monte Christi and other parts of Ecuador. The hats are worn almost in the whole American continent and the West Indies, and would probably be equally used in Europe did not their high price, (varying from $2 to $2.50) prevent their importation. They are distinguished from all others by consisting only of a single piece, and by their lightness and flexibility. They may be rolled up and put into the pocket without injury. In the rainy season they are apt to get black, but by washing with soap and water, besmearing them with lime juice, or any other acid, and exposing them to the sun, their whiteness is easily restored.

So little is known about these hats that it may not be out of place to give an account of their manufacture. The "straw" (paja), previous to plaiting has to undergo several processes. The leaves are gathered before they unfold, all their ribs and coarser veins removed, and the rest, without being separated from the base of the leaves, is reduced to shreds. After having been exposed to the sun for a day, and tied into a knot, the straw is immersed in boiling water until it becomes white. It is then hung up in a shady place, and subsequently bleached for two or three days. The straw is now ready for use, and in this state sent to different places, especially to Peru, where the Indians manufacture from it those beautiful cigar cases which sometimes bring as high as $30 each. The plaiting of the hats is very troublesome. It commences at the crown and finishes at the brim. The hats are made on a block, which is placed upon the knees, and requires to be constantly pressed with the breast. According to their quality, more or less time is occupied in their completion—the coarser ones may be finished in two or three days, while the finest may take as many months. The best times for plaiting are the morning hours and the rainy season, when the air is moist. In the middle of the day and in dry, clear weather, the straw is apt to break, and this, when the hat is finished, is betrayed by knots, and much diminishes the value.

BONNY.

BONAPARTE is the name of a very intelligent horse that is owned by Col. H. James, of the town of Urbana, in the State of Ohio. One of Bonny's peculiarities is that he will not bear to be hitched. Whenever any one ties his bridle-strap to a post he quietly and deliberately breaks the strap, but at the same time does not think of running off. He will stand by the post until wanted. Bonny has a different gait for each person who drives him! If he sees the young son of Col. James get into the buggy, he starts out at the top of his speed. If the little girls get in he will jog along as gently as he can, fearing, no doubt, that some harm might befall his passengers. He knows when Sunday comes, and if hitched to a carriage will trot soberly and religiously to the meeting-house, without being directed by the bit. One day recently his feet became sore because his shoes were worn. Pat, the stable boy, who has long believed that Bonny knows more than many men, took two shoes, tied them together with a string, shook them before Bonny's face and hung them across Bonny's neck. Bonny understood. Without a word from Pat he trotted out of the gate and went directly to the blacksmith shop, a long way off, where he had been shod for twenty years.

LETTERS FROM THE COUSINS.

MY DEAR RURAL COUSINS:—I think Uncle Mark, bless his kind heart, rather dared me to tell you all about him and now I'm just going to do it. I'll tell you how it happened. Mamma and I were riding down Broadway in one of those funny stages, and we came to a pretty park and such a big, big grand building. Mamma said it was the Post Office, but I never saw such a nice, lovely place before, and looking right past that we saw the name RURAL NEW YORKER, on another building, and I thought it would be lovely to go in and see Uncle Mark, so Mamma pulled a little strap to let the driver know we wanted to get out, and when we got down the little steps at the back of the stage, there were so many teams we could not stir, then a policeman came along and walked across with us. I guess the drivers are afraid of blue coats and brass buttons, for they never drive over them, but I think they would drive over me if I did not dodge.

When we went up a flight of stairs we saw the office door and when a man opened it we called for "Uncle Mark." "Oh, yes," he said, "he is in," and took us into an outer office and gave us seats and then went and spoke to Uncle Mark. Now I know you all want to know how he looked when he came in. (What if he should pull my ears if I tell you?) He has black hair cut short and the prettiest brown moustache, I like that, 'cause you see my papa wears one, and a man don't look old and cross like some men do that have lots of whiskers. His eyes are blue, and the laughingest, twinklingest sort of eyes you ever saw.

He was real pleasant and said he liked all his little neices and I guess he does, any way *I* liked *him*. He looked so young and so full of fun that I wanted to tell him all about my doilies—I've only five left—and the kitties and bird, and the goldfish and soft-shell turtles, and lots of things, but I didn't have time. Mamma said afterwards that he was older than he looked, she knew, else he couldn't be uncle to so many children, I 'spose.

Guess I'll have to send Florence a little piece of quartz I got while on a visit to my aunt's in Vermont this summer.

If this finds room—out of the waste basket—Mamma says a waste basket is a very charybdis, I'll tell you about a little girl I saw in Chicago, all alone there. Yours truly,

Dubuque, Iowa. GEORGIA G. SMITH.

DEAR UNCLE MARK:—I have been so dilatory about writing to you I hardly know whether you own me as a member of your club any more. I received those seeds you sent last Spring and now have some beautiful flowers from them. The China Pinks especially are most beautiful. The ockra came up and did well, but our folks do not care much about it. May be they do not know how to cook it just right. We have many beautiful flowers now, both in the yard and greenhouse. We have one abutilon of the Mesopotamian variety that has been in bloom ever since last February, and now has not much less than 100 buds and blossoms on it. Good bye. LETHA ABBOTT.

Clermont Co., Ohio.

DEAR UNCLE MARK:—I am a little boy five years old. I cannot print very well yet, so I will get mamma to write this time. I want to tell you about my fox. I had a fox, and his name was Charley, he got loose one night and tried to get our chickens. I caught him once, but he scratched me, so I had to let him go; and when papa came home from Mr. Collins', he could not catch him, so he took his gun and shot poor Charley. He skinned him, and stretched the skin out on a board and put it in the woodshed; then he took it to town and sold it. I cannot read, but I know my letters. I learned them from my spelling blocks that Santa Claus brought me last Christmas. I have no brother or sister to play with, but I have a big dog named Jack. SEYMOUR A. AYRES.

Michigan.

DEAR UNCLE MARK:—I will write and thank you for the seeds you sent me last Spring. Most of them grew and bloomed very nicely, considering the dry weather. My okra did better than anything else, but father had plenty of that before. My Surprise melon was splendid. I saved all the seed from it to plant next year. I read all the letters from the cousins. I like to hear from them. Father says I may meet some of them sometime. I hope I shall. It has been very dry for a long time, but now we are having lots of rain; but I am afraid this letter is too long now, so I will close. Your little niece, VIOLA GRACE DILLE.

Kansas.

DEAR UNCLE MARK:—You must think us very ungrateful for not thanking you for the seeds which you were so kind as to send us. Our seeds all grow nicely. We have 15 nice vines of the Surprise muskmelons and 11 plants of okra. The flowers are in bloom and are really very pretty. Mamma has Mold's Ennobled oats, some of the heads of which measure one foot in length. Her Golden mangels are perhaps not so large as some others, the largest being about six inches through. Greetings to all and thanks to Uncle Mark.

ROBERT, EDWIN and ANDREW GUFFIN.

Johnson Co., Iowa.

DEAR UNCLE MARK,—My China pinks are growing nicely, and I have a great many different colors. My portulucas, phlox, drummondii, Sweet mignonette and Surprise muskmelon come up very well. My okra came up very nicely. I have a nice bed of gladiolus, and I have some nice balsams and pansies, too, and I have a nice row of watermelons. We have had a ripe melon and it tasted very good. MARY E. WILD.

Ottumwa Co., Mich.

DEAR UNCLE MARK:—I should like to join the Horticultural club and become one of the cousins if there is room for one more. We moved from New York State to Virginia. We live three miles from Richmond. I like it very much here, I can raise such good watermelons, and muskmelons, and peanuts, and sweet potatoes. I have not many flowers this Summer. Yours truly,

Richmond, Va. ALICE CAREY.

Sabbath Reading.

BREAD UPON THE WATERS.

'MID the losses and the gains;
'Mid the pleasures and the pains,
And the hopings and the fears,
And the restlessness of years,
We repeat this promise o'er—
We believe it more and more—
"Bread upon the waters cast
Shall be gathered at the last."

Gold and silver, like the sands,
Will keep slipping through our hands;
Jewels, gleaming like a spark,
Will be hidden by the dark;
Sun and moon and stars will pale,
But these words will never fail,—
"Bread upon the waters cast
Shall be gathered at the last."

Soon, like dust, to you and me,
Will our earthly treasures be:
But the loving word and deed
To another in his need,
They will unforgotten be!
They will live eternally—
"Bread upon the waters cast
Shall be gathered at the last!"

Fast the moments slip away,
Soon our mortal powers decay,
Low and lower sinks the sun,
What we do must soon be done;
Then what rapture if we hear
Thousand voices ringing clear—
"Bread upon the waters cast
Shall be gathered at the last."

MORNING STUDY OF THE BIBLE.

THE best time for Bible reading is in the morning. The mind and body are fresh, after the repose of the night, and the highest powers of thought may be brought to bear upon the chapter selected. But, with most people, each recurring morning brings its own pressing tasks. Business cares, the daily toil, and the duties of the household, are the first and most engrossing concerns. Some hours must pass, with many, before they can find time to sit down to any quiet reading.

I would plead, however, with every one who may happen to look at this article, that the plan be honestly tried, of taking some words from God's book for the first meditation of the morning. If you have a fire to light, or breakfast to prepare; if you must hurry forth in the early gray of dawn to take down shutters and sweep out a shop; if you must hasten to dress the little children, or start off for a long journey to the store you attend, or the school in which you teach, or the factory where you toil, still you will be wiser, richer, and happier, if you are resolute about this.

But to the multitude whose mornings are comparatively within their own control, I would say, make for the next month a fair, steadfast trial of the plan of studying the Bible when your faculties are at what MacDonald somewhere calls "mental high-water mark." Very often there is pressing work on hand; the little dress must be finished, the cake must be made, the dinner must be ordered, the sweeping must be attended to, the letters must be written, and the newspaper must be read. By-and-by will do for the Bible reading. Thus we argue, and before we know it noon comes, guests arrive, unexpected affairs crowd upon us, and there is no room for the still hour with God, for the sweet preparation of the heart to seek him.

Every Christian admits the duty of frequent reading of the Bible. To how many is it more than a duty, even a dear and thrice precious privilege, that they are ready to cry, "how sweet are Thy words unto my mouth, yea sweeter than honey unto my taste!" This experience comes only to those who make it part of their life's work to study the Scriptures. You wonder at the familiarity of this or that friend with the Psalms, the Epistles the Gospels. It has been gained a little at a time, by patient daily reading, thoughtful and prayerful reading, too, which was hived by the soul as something worth treasuring. We shall all gain immeasurably in our influence, as well as in our own comfort, by giving more of our unwearied thought to the Holy Book. A few tired, sleepy, worn-out moments at night, and those only, are almost an insult to the Master whom we profess to serve.—Presbyterian Journal.

THERE is no hurry in eternal things. We must indeed run to do the commandments of God, but we must run cautiously, and look about us while we run. If we are not slow we shall miss things. We shall miss seeing God, and miss hearing Him, also. We can hardly be reverent unless we are slow.—F. W. Faber.

IT must be confessed that there is a great deal of preaching about God which is neither helpful nor edifying. As long as the pulpit deals in cold abstractions, there will be no kindlings of devotion no glow of spiritual life. The people are thirsting for God—for *the living God*.—B. D. Thomas.

LIFE has such hard conditions that every dear and precious gift, every rare virtue, every pleasant faculty, every genial endowment, love, hope, joy, wit, sprightliness, benevolence, must sometimes be put into the crucible to distil the other elixir—patience.

JEREMY TAYLOR says: "If Christians must contend, let it be like the olive and the vine, which shall bear most and best fruit; not like the aspen and elm, which shall make the most noise in the wind."

WE do not become righteous by doing what is righteous, but having become righteous we do what is righteous.—Luther.

PERSONAL ITEMS.

When President Lincoln was asassinated in 1865, his family being left in needy circumstances. the late Marshall O. Roberts quietly sent Mrs. Lincoln $10,000 as his contribution toward a proposed fund of $100,000.

Senator Burnside tells this story at the expense of his colleague, Senator Anthony. They were dining together one day when ham formed one of the dishes. "If I ever turn farmer," said Mr. Anthony, "I shall raise plenty of calves, so that I can get some nice hams like this."

A remarkable woman, Mrs. Mary Ann Dean, died lately in St. Louis. She was 37 years old, and had been married 20 years. She was the mother of 21 children, of whom there were three pairs of twins, two sets of triplets, and four were born at one birth. Ten of her children are living.

In spite of the denials, the statement proves to be authentic that the engagement between Ulysses Grant, jr., and Miss Flood has been broken off. The young man was seen walking with a girl that was not very "nice," and Miss Flood broke off the engagement—loss to Young Grant $2,000,000, certain chances, and a handsome, spirited wife.

Of the present Administration, Mr. Gladstone, Mr. Foster, Mr. Mundella, Mr. Bright, Mr. Chamberlain, and Sir Charles Duke, are Radicals, and three, or even four—some say the whole six—are Republicans. It is not so very absurd an impression, therefore, that there is a veiled sympathy on the Treasury bench for the crusade commencing in England against the hereditary legislators.

Mrs. Susan J. Henry, widow of the late Captain Patrick Henry, last surviving grandson of Patrick Henry, of Revolutionary fame, died a few days ago in Washington. Mrs. Henry inherited property which was lost during the war. For a number of years she was a clerk in the Treasury Department, and at the time of her death had just received an appointment in the Agricultural Department.

The late Amelia Frances Wood, of Boston, bequeathed $3,000 to the Channing Home there, $1,000 each to the Mass. Homœopathic Hospital, the Young Men's Christian Union, the Free Hospital for Women, the Children's Mission to the Children of the Destitute, the American Unitarian Association, the Children's Hospital and the Humane Society, and $500 to the Society for the Prevention of Cruelty to Animals.

Sir F. Roberts, the conquering hero of Candahar and so-styled "Savior of Afghanistan," is son of a clergyman of the Established Church in Waterford, Ireland. His brother, Samuel U. Roberts, is one of the Commissioners of the Board of Public Works in Ireland. Sir F. Robert is a member of the order of Good Templars and a staunch teetotaler. He has a Good Templars attached to every regiment under his command. Sir Gardet Wolseley is also a total abstainer.

W. H. English, the Democratic candidate for Vice-president, is a man standing about five feet nine inches high in low-cut unbuttoned gaiters. His head would be bald but for an ingenious, though not an entirely ingenous combing of his side hair, and is well shaped for business. He has a shelving forehead, a clear gray eye, full dyed beard, and red socks. He wears perhaps, two inches too short, brownish vest, no watch and a silk cravat, with the knot nearer his ear than his windpipe.

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Miscellaneous.

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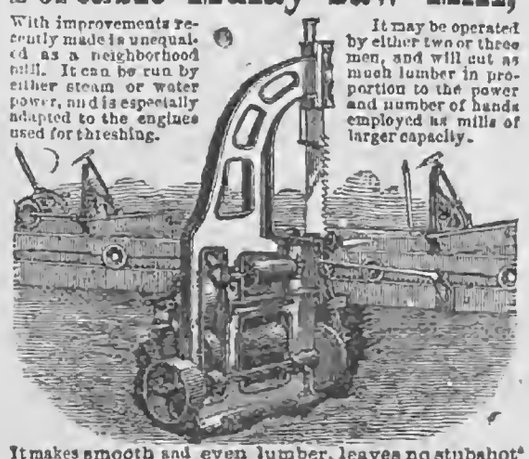

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Humorous.

MR. YOUNGWOMAN wants to know "what is the best way to mark table linen?" Leave the baby and a blackberry pie alone at the table for three minutes.

A MAN in Iowa has been arrested for assaulting his own wife, and he has been found guilty, even though it was shown that he only stuffed her mouth full of putty when he wanted to go to sleep. Do men have no rights at all?

"I'D have you know," exclaimed Mrs. Uppakrust, haughtily tossing her head, "that my family always moved in the upper circles." "Yes," whispered Mrs. Blunt to her friend Sarah Jones, "I've hern tell that the scum allers rises to the top."

"WELL, Ethel, dear," said an uncle to his little five-year-old niece, "if you like your new toy, come and put your arm around my neck and give me a kiss." The little maiden complied, but as she did so, she remarked: "Oh, uncle, how I do spoil you!"

"ANY letter for me?" asked a young lady of the female postmaster, in a country town. "No," was the reply. "Strange," said the young lady aloud to herself as she turned away. "Nothing strange about it," cried the f. p., through the delivery window, "you ain't ans'ered the last letter he writ ye!"

"WRITE carefully," says De Quincey. "You can never tell how much good your work may accomplish." No truer words were ever spoken. A man brought around a perfectly lovely poem about the sun-kissed leaves of September, yesterday, just as the office boy had built a fire in the grate and was looking for something to light it with.

"Bob Brown, did you say that my father had not as much sense as Billy Smith's yellow dog?" "No, I never said any such thing. I never said that your father had not as much sense as Billy Smith's yellow dog. All I said was that Billy's yellow dog had more sense than your father; that's all I ever said." "Well, it's well you didn't say the other, I tell you."

Johnny wanted to go to the circus and his father said: "Johnny, I'd rather you'd go to school and study, and may be you'll be President some day." "Father," said Johnny, "there's about one million boys in the United States, isn't there?" "Yes." "And every one of them stands a chance of being President?" "Yes." "Well, dad, I'll sell my chance for a circus ticket."

AN Irish nobleman, riding along a country road in Ireland, saw a very fat boy dozing by the roadside. "Which is the way to Macroom, my lad?" asked the nobleman. "That way," replied the boy, lazily moving the toe of his boot in the direction of the place. Astonished at his extreme laziness, my lord dismounted. "Boy," said he, "if you can show me a lazier act than that I will give you half a crown." The boy eyed him speedily for a moment, and, turning half over on his side, muttered: "Put it in my pocket, sor." He got his half-crown.

A LEAP YEAR INCIDENT.—Not a hundred miles from Thornhill a young lady had been spending the day with a bachelor minister and his sister. The young lady, whose name was Miss Hope, had been very gratified with the kindly treatment received at the good old Scottish manse, and on leaving expressed her thanks for the kindness of the minister, making at the same time the remark, "That she had not heard him in the pulpit; but" she continued, "I will be over on Sabbath to hear you"—"I shall be very glad to see you, Miss Hope, and under the interesting circumstances you might suggest a 'text' for the occasion, and I will do all the justice to it I can."—"I will be glad to do that, sir" replied the lady. "How would this one do—'Lay hold of the 'Hope' set before you?'"

Tarry Not

until you are driven to the verge of distraction by a disordered liver, but as soon as the organ turns mutinous, discipline it with a course of Hostetter's Stomach Bitters, an anti-bilious medicine which ensures active secretion by the liver, and a regular habit of body. Pains through the right shoulder-blade and ribs, vertigo, nausea, coating of the tongue, constipation, and sick-headaches, which are all incidental to biliousness, are promptly remedied by this active and thorough specific. As a remedy for debility it cannot be surpassed, strengthening the stomach and promoting digestion, enriching the blood, and invigorating the nerves. It protects the system against malaria, and cures the disease in its various forms radically—it overcomes a tendency to rheumatism, remedies disorders of the kidneys and bladder, and expels impurities from the circulation.

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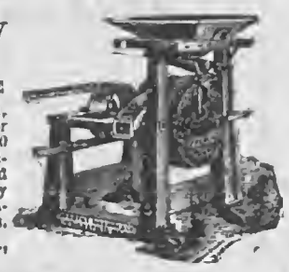

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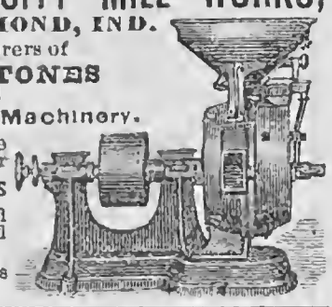

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THE RURAL NEW-YORKER

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Industrial Topics.

TEA CULTURE.

CONSIDERABLE space is this week given to illustrations of the cultivation and curing of the tea-plant in the East Indies. Tea culture is not an established paying industry in the United States, as yet, but there is a considerable number of tea plantations where the plant has been growing for several years, and the feasibility of developing the industry is at least promising.

As a *resumé* of what has been done in the United States, chiefly in Georgia and South Carolina, in tea cultivation, we give the statement of General LeDuc, Commissioner of Agriculture, with reference thereto as made to us.

"The tea-plant had been grown and distributed by the Department of Agriculture for some years, more as matter of curiosity than with the effort to make a tea garden, or to establish its growth as a business, although some few persons had obtained seed from China and elsewhere, and had made efforts to raise and manufacture tea, although with but little result in any case. Probably the largest number of plants collected by any one person, are those collected by Dr. Jones, of Liberty county, Georgia, near Savannah, who some time before the Rebellion undertook to raise a number of plants with a view of making tea. His plantation was practically abandoned, and after the war, his daughter, Mrs. Scraven, prepared tea in a rude manner from leaves picked from the old trees of which there were three or four hundred growing wild in the edge of a forest, the seeds falling from which scattered through the brush, had grown into quite an extended thicket, from which Mrs. Scraven was in the habit of selling plants and seed to those persons who wished to purchase.

When, as Commissioner of Agriculture, I wished to promote the cultivation and manufacture of tea in this country. I purchased from Mrs Scraven plants and seeds for distribution, and I scattered these throughout the South, and we are now reaping the reward of this effort by learning from the growth and condition of these plants the soils and climates best fitted for the production of this necessary article.

It is unnecessary to go into details at this time, and I will simply say that by great good fortune, a Mr. John Jackson, who had for fifteen years been cultivating tea in Assam, India, traveling in this country, had his attention drawn to my efforts tending to encourage the cultivation of tea, and entered into correspondence with the Department, and visited me at Washington. The result was that Mr. Jackson took a trip through the South, visiting the various localities in which the tea-plant was growing, and was so entirely satisfied with the prospect of successful and profitable cultivation that he purchased the plantation of Mrs. Scraven, and commenced to establish a tea garden, with the assurance that the Department would aid him by all proper means.

Mr. Jackson employed a large force of negro laborers, put up some necessary houses, and has already 165,000 plants growing in fifty acres which he proposes to increase to several hundred acres as rapidly as he can obtain proper seeds or plants. After some earnest solicitation, and with the untiring effort of Hon. D. Wyatt Aiken, member of the House for South Carolina, a small appropriation was obtained from Congress in aid of this industry. I have made an examination, assisted by Mr. Jackson, of a large area of South Carolina, in which are found many locations in which the soil and climate were pronounced by Mr. Jackson as exceedingly favorable for the production of the tea plant. This preliminary examination showed more land suitable for tea culture in the belt of country about forty or fifty miles back from the coast, the best land being mostly situated in that portion which is regarded as unhealthy for white people during the Summer months, but not particularly unhealthy for the negro, who seems to live and thrive unharmed by the malarial atmosphere of the rich lands of that section. Mr. Jackson assures me that there is no better soil for the plant in those parts of India with which he is familiar, and which have proved so great a source of profit to the English and Scotch tea companies.

For a number of years persons throughout the South owning one or more tea plants have made tea as best they knew how, but in a very crude fashion, bruising the leaves and drying them in a Dutch oven, or even in the sun, and storing them away as a family supply of the fragrant herb, which they pronounced better than any they could purchase at the stores. Notably this has been done in the last two years, or since the publication and circulation by the Department of a little treatise upon tea culture and manufacture. But no tea has been made of a commercial character until Mr. Jackson commenced to manufacture tea in the proper form, and send it to the Department as an evidence of what could be done, even with the old and neglected plants he had purchased. These teas are undistinguishable from the finest qualities of Indian teas on the market, and have been pronounced by the best tea experts in this country and in London to be of superior quality and flavor. The prices offered for them are eminently satisfactory to the producer. There would seem to be nothing wanting now to secure a fair start toward the accomplishment of the production of our own tea but the continuation of well-directed efforts.

The cost, according to the testimony of Mr. Jackson, will be from 15 to 20 cents per pound, and the wholesale price offered in New York is 40 to 50 cents, and in London 50 to 70 cents per pound. The teas heretofore manufactured and submitted to New York and London houses to ascertain their value, were of the English breakfast sorts, which are not so much used in this country as in London, where they are largely used for mixing with inferior teas to raise the grade."

TEA PLANT.—Fig. 327.

The leaf of the tea plant is manufactured in different ways to secure the different brands of tea for the markets in which it is put. The difference lies in the manipulation of the leaf. Green teas are made without fermentation, whereas the English teas of the breakfast class are all fermented in different degrees according to the quality desired.

Tea culture in China, as at present practiced, is the result of long experience and the devotion of much capital to the industry, until a system peculiar to the climate, labor and customs of the people has grown into existence, which can hardly be copied in the United States, unless coolies be imported and given the labor. As this is impracticable, the next thing is the employment of negro labor, as the locations found best adapted to the growth of the tea plant are those where malaria renders it unhealthy for white labor.

The cultivation of the plant, which grows to the size of quite a tree, consists rather in keeping the plant pruned to the proportions of a shrub and the production of an abundance of new, healthy leaves, than in growing large plants. The manipulation in curing the leaves furnishes the different varieties of tea.

In Fig. 327 we give an illustration of the appearance of the tea-plant when one year old. Figure 328 shows a leaf of an indigenous plant growing without cultivation and presenting a much coarser appearance than the cultivated leaf.

Figure 329 shows three varieties of tea leaves, the smallest is that of the Chinese plant, and the other two are those of Assam hybrids. In Japan only the first three tender leaves of the plant are taken, as shown at the top of plate Fig. 330, while in India six leaves are taken for curing.

The cultivation of the tea plant and the curing of the leaves for tea, cannot essentially differ in this country from the practice in India, but the preparation of the soil can be done with machinery, and there is no possible doubt but intelligent labor and the invention of machinery will make the production of tea much more profitble than where both are wanting. The industry cannot be forced into existence to advantage, but every family in the States south of Virginia and Kentucky may grow its own tea supply with no difficulty. Plants do not bear sufficient for profitable gathering until five years old, so that the necessary time and outlay are considerable. Peculiar climate and soil will have much to do with flavors, and experiments in curing will be necessary, and all will require time and outlay. The industry is a promising one, and great numbers of tea plants are being distributed over a wide range of territory and conditions of soil and climate, and but a few years' time will be required to determine quite definitely the conditions required for successful cultivation. There is no doubt the area of tea cultivation will be extended and that soil suitable for this industry will be found from the James River around fifty miles on the coast as far as the dry region of Texas skirting the Gulf. In fact there is no want of soil suitable for the cultivation of tea.

The plant seems to thrive best upon soil not naturally moist, but yet where there are frequent rainfalls. In experiments in the manufacture of tea it was found that only the young and tender leaves would answer, and in the process of curing, the product was one pound of tea from five of leaves.

The process of curing is simplified to the following general principles: 1, the leaves are placed in a sieve over boiling water until wilted; 2, they are then placed in a coarse linen cloth and wrung out by twisting the cloth; 3, the curled leaves are then placed in a tinned iron pan over a fire and stirred briskly and rolled between the hands until they become brittle. Figure 331 shows the process of heating and curing. Figure 332 shows the appearance of the tea leaves from their green state to that of being dried for packing. Figure 333 shows implements in use and manner of storing the tea. Figure 334 shows the rude mechanical appliances for cleaning tea, while figure 335 indicates the process of picking out any uncurled leaves.

Arboricultural.

TREES FOR WIND-BREAKS AND HEDGES.

THESE are among our greatest wants, and more particularly on nearly all the wide plains stretching eastward from the Rocky Mountains. For wind breaks, and at the same time for forming a good hedge against horses, cattle and sheep, there is nothing superior to the Norway Spruce. For this purpose it should be planted in a double row ten feet apart each way, the inner trees opposite the central space of the outer ones. This is a very hardy tree which grows rapidly, and, being an evergreen, it is much more desirable than deciduous trees for winter shelter. The hemlock comes next in utility to the Norway Spruce, and is of equal hardiness and rapidity of growth, except in stiff, clay soils. The best deciduous tree for a hedge is the Honey Locust, as it does not sucker like the Yellow Locust. Its thorns are longer and stronger than those of the Yellow Locust, and consequently it makes a much more formidable hedge. If properly cut as it grows, neither sheep nor swine can get through it, nor in fact scarcely a rabbit or vermin of equal size. It does not shelter or harbor vermin, as most other hedges do, especially that of the Osage Orange, which has been so much planted at the West.

For timber, fence posts and railroad ties the Catalpa is said now, by many, to be nearly as durable as the Red Cedar or Yellow Locust. If so, it would be the most desirable tree of all to cultivate for these purposes, as it is hardy and grows very rapidly even in a poor soil. Added to this, it is among the most ornamental of our trees, as it has long, broad leaves, and from the latter part of June into July it is covered with a mass of snowy blossoms. We understand that one nursery establishment alone in Illinois, contracted last Spring to set out among its customers, at least 1,500,000 Catalpa trees. These not only assist to lessen the force of the fierce winds which sweep over the plains so destructively at times, but also soften the climate, help to make it more equable and bring in a greater rainfall, or serve to render that which occurs more beneficial.

Farm Topics.

EXPERIMENTS ON GRAVELED BOG-LAND.

PROFESSOR F. H. STORER.

THE merit of the German method of reclaiming drained bogs by covering the soil with gravel, as contrasted with the older method of mixing gravel with the soil, has been tested in Holland by Carsten, who grew oats upon contiguous plots of moor-land which had been reclaimed according to one or the other method. As will be seen from the following table, inferior crops were obtained in every instance from the plots where the gravel and moor-earth had been admixed than from those where the gravel was simply spread upon the surface of the soil and left there permanently, according to the method explained in detail in the RURAL of February 14th.

Each of the experimental plots measured one fifth of an acre, and they were manured as it is stated in the table.

Manure on one-fifth of an acre.	Bush. of oats harvested from one-fifth acre. Where gravel was spread on surface.	Where gravel was mixed with earth.	Cost of the manure for one-fifth acre.
55 lbs. rectified guano. 55 " steamed bone-meal. 33 " sulphate of potash and of magnesia.	6.13	5 56	$4.00
66 " plain Peru guano. 55 " steamed bone-meal 33 " sulphate of potash and of magnesia.	8.51	6.13	4.25
33 " nitrate of soda. 66 " steamed bone-meal 33 " sulphate of potash and of magnesia.	4.26	1.94	3.80
110 " rectified guano.	9.37	6.81	3.80
Same money value of plain Peru guano.	11 08	7.66	4.00

It was thought that most of the nitrate of soda was washed away by rains and that better results would have been got from this material by using a larger quantity of it and applying it at intervals as a top-dressing.

Simultaneously with the foregoing experiments, a couple of plots were manured with night-soil from city cess-pools, applied in such quantity that the cost of it amounted to $14.87 for each of the one-fifth acre plots, and there were harvested from the one plot 12.14 bushels of oats, and from the other 11.35 bushels. It is remarkable, both as regards the night-soil and the guano, that the largest crops were obtained from the manures most likely to be charged with the ferment which would promote nitrification of the moor-earth. It is noteworthy also that an amount of plain guano costing $20 to the acre, gave almost as large a crop (55½ bushels to the acre) as the night-soil, which was applied at the rate of $74 to the acre and gave 58½ bushels of oats, as the mean of two trials.

It has been suggested that the method of reclaiming bogs by covering them with gravel is too costly to be practised here in America, so long as land continues to be as cheap as it is now; and the remark is doubtless true in general and especially as regards large stretches of swamp land. But there are numberless special instances, particularly in the older States, where, taking all things into consideration, small patches of bog could best be reclaimed in this way—notably in the vicinity of houses and where circumstances are specially favorable for moving the gravel. In any event the process deserves the attention of all thoughtful men, because it enforces some very important lessons in respect to moisture, tillage, manuring and the action of frosts.

GLEANINGS.

Weeds are Everywhere Present.

THEY spring up in a night; they flourish like Jonah's gourd; they come without planting, flourish in spite of neglect and of persistent fighting. The land seems full of their seeds; manures are loaded with their germs, and their number is legion. What is a weed? It is a plant out of place. Beans are a weed in a corn patch; corn is a weed in a potato field; wheat is a weed in any place but a wheat field. But aside from plant out-of-place weeds, we have hundreds and hundreds of weeds that are weeds everywhere, anywhere, always. They are never in place; if so, their place has not as yet been found. Weeds want looking after early and late—all the time. The plow, cultivator, hoe, rake and hand must be kept judiciously employed in their subjugation and destruction. Clean culture is the only culture to be admitted. It is the only culture the good farmer knows or practices. Weeds in the field are not the only ones to be looked after. They are by the wayside, in the yards and pastures, scattering their fecund and fertile seeds. They are in every by-place and nook. One weed will propagate evil over a large space. Crops are never beyond the power of injury by weeds until they are harvested. The appearance of the roadsides is a good indication of the farmer's practices; the appearance of his hoed crops is the same with regard to his thrift in all things. Weeds draw heavily on the soil and particularly on the fertilizers used. They are hardy, persistent, vigorous, and claim the lion's share if permitted to grow.

Good Cattle

are the best investment a farmer can put his money into. I never knew a man satisfied with himself or his trade, who bought poor stock at any price to keep. Good Short-horns, Herefords, Jerseys, Ayrshires or Holsteins are cheap at high figures. They produce the best of beef, work, milk, butter, cheese, leather. It is extremely necessary to profit that the farmer buy healthy, thrifty, high-bred animals, those that produce, or are capable of producing the most and best of these products. The next thing, after good blood, is good feed and then good care. Breed, feed, care, are three-thirds of successful cattle husbandry. Good breeds amount to nothing without proper and abundant feed. They amount to but little with proper and abundant feed if not properly sheltered and cared for. They must have suitable pastures and soils, and the surface of the country must be adapted to their constitutions. The Short-horn and Hereford are out of place on broken pasturage and hilly ranges; the Ayrshire, Devon and Jersey are there at home. The Holstein delights in rich, alluvial meads and succulent bottom grass-lands. Good cattle are a necessary adjunct to good farming everywhere and always accompany it. The introduction of good stock into any farming community always has a good effect by stimulating it to better effort and better feeding. It places a higher standard before the farming public. It excites a favorable emulation that works good to all beneath its influence. Good cattle are the highest type of agriculture.

Disproportionate Premiums

at our county and State fairs would seem to call for attention from the public, and especially from the cattle breeders and owners they militate against. The horse premiums are very disproportionate and much larger, taking the class together, than the cattle premiums. I fully appreciate that noble, but not noblest, animal, the horse. I am alive in every sense to his value and services. The horse interest is vast and varied and of immense importance to the country. I appreciate his every quality from the farm to the turf; his every service, civil or military, of draft, conveyance or speed; and summing all and all up, I cannot but make him second to horned cattle in use and benefit. In draft, farm service, and transportation the patient ox is as useful as the horse. In speed and conveyance the horse is ahead. But here ends the comparison. The horse furnishes no food or but very little, and the leather from his hide is inferior. Beef, butter, milk, cheese, tallow, leather, veal, horns, glue and a hundred other articles of use, comfort and luxury come from the cattle, the whole vastly overshadowing and outweighing the usefulness of the horse, with all his utility, splendor and fascination. Yet the agricultural fairs award ten times the attention and money to the horse; hold out ten times the inducements to horsemen, and direct ten times the effort and ten times as much public attention to the horse as to cattle. It does not seem right, and stockmen, farmers and the press should help to adjust a proper balance between the two, so that each may be equally encouraged as each has intrinsic merits and affords benefits to the country.

Pruning Fruit Trees

is a subject with which almost every one who owns and occupies land is more or less interested. It is a subject upon which a wide variety of opinion exists as to time, character, amount and style. Some kinds of fruit need, or will bear, a great deal more and a great deal severer pruning than others. It is a process that calls for a great deal of correct, wholesome thought, and a large amount of the best common sense in judgment. I am aware that experts and experienced nurserymen will form, mold, train, guide and direct trees into almost any form and shape. This may be called the artistic, the scientific side of pruning and training, but the great mass of our orchardists and farmers never can or will attain to that degree of proficiency, and, in fact, it is not necessary that they should. What we want for the masses is to know how little pruning, and when applied, a tree will do ordinarily well with under average circumstances. I have an impression from experience and observation that too much pruning is done than rather too little. The result is the trees have long, unprotected trunks and limbs with fine branches, buds and bearing wood at the far extremities. I believe that every fruit tree should be trained so low as to afford self-shade for trunk and large limbs, and a partial mulch by its dense shade. The fruit is more easily gathered, that which falls less bruised, and winds and storms have less rake upon them.

J. W. LANG.

Dairy Husbandry.

THE DAIRY COW—NO. 11.

HENRY STEWART.

Different Methods of Setting Milk for Cream.

THE dairyman is a fortunate individual. While he sleeps or dreams sweetly or uneasily of the high or low prices of cheese or butter or milk, scores of inventors are tossing in sleepless unrest, all intent upon discovering some new dairy appliances. Thanks to these inventive minds, we have the most effective and convenient devices for setting milk for cream. To mention all of these would be impossible in these limits, but a typical method of each of the two systems of setting milk, viz.: that with deep pails and that with shallow pans, may be described.

Formerly milk was put in shallow pans and only seldom in deep, earthen jars, and we owe the deep pail system to the Swedish dairymen. With the deep pails, deep, cold spring water tanks or ice closets are required, and where flowing cold spring water can be secured, there this more modern system is very convenient, chiefly because of the economy of room. A 20-quart, deep pail is nine inches in diameter; a 10-quart pan is 15 inches, and a pool to hold 400 quarts of milk in deep pails may be no larger than four feet long by three feet wide, while to hold 400 quarts in shallow pans would require a trough 60 feet long and 16 inches wide. The advantage is obvious, and for those who use spring-houses it is a great economy. With a deep pail the milk of a family cow may be lowered into a well and kept at a regular temperature the whole year, and the milk-house becomes a very simple affair. The simple deep pool in which the pails are immersed to within two inches of the upper edge, may be built up of bricks laid in cement, or with walls of cement. This may be constructed above a spring so that the water flows in at the bottom and over the top, and escapes by a pipe built into the side; or the pool is supplied by water brought in a pipe from a spring or from a well near-by. With a spring there may be a constant flow of water and no ice be required. With well water a supply of ice will be required in the Summer, and the house will need to be warmed in the Winter.

But great improvements have been recently made in both the deep and shallow setting of milk. One inventor entirely submerged the milk pails under water by means of a peculiar arrangement of the covers of the pails. This method, known as the Cooley system, effectually seals the pails and perfectly secures the milk from any contamination whatever from the air. By regulating the temperature of the water with ice, the milk may be kept anywhere—in the stable, the kitchen or the setting-room; and as the water tank is made non-conducting, the outside temperature has no effect upon that within. This is a very popular method and is in use in many of the best dairies and creameries. But the use of this method is necessarily confined to those who have a supply of cold water or ice, or who have facilities for disposing of the waste water. Many people are prejudiced against deep setting, and in favor of shallow pans, from which the cream can be skimmed in the usual manner. In fact, mankind differ so much in opinions and prejudices that it is impossible to find any one method against which some objection may not be raised, whether it be justly or unjustly. So in setting milk, some will use shallow pans. The arguments in favor of this method are chiefly cheapness and convenience. Where one has a very good milk-house or cellar perhaps nothing else can be preferable to the common pressed tin pans which have rounded corners and are more easily cleaned than any other milk pan in use. But there are very few such milk-houses and cellars, and to adapt the shallow-setting system to every sort of condition, the invention of the Ferguson Bureau Creamery has been made. This may be kept in a room, or kitchen, or a cellar, as the temperature is regulated by ice kept in a chamber above the milk. The milk pans are inclosed by glazed doors so that dust and other impurities are excluded. These two contrivances are typical of the two different methods, and although there are several modifications of these apparatus I don't know that any one improves upon the original device in any particular.

It has been said that the quantity and quality of the butter produced differ to some extent with the deep or shallow setting of the milk. Some persons have disputed vigorously over these claims, and some have made careful tests. But there has been nothing proved in support of any such claim for either system. After a whole year's continuous trial of both of the apparatus above described, I am unable to perceive any difference in the production of cream or butter either in quantity or quality, and the whole question becomes one of convenience in use. It is very true that one who is expert, from long use and experience of dairy methods may do as well with one system as with another, just as a good workman never finds fault with his tools; but there are those who need the very best arrangements because they do not perfectly understand the principles of their work. Such persons should use the very best appliance they can procure, and whichever they may choose, should stick to it without changing and with perseverance; for one who becomes familiar with a certain way of working will always do better, even if it is nothing more than whittling a stick with the left hand. My weekly production of butter never changes, and the quality never varies, when made in the submerged deep pails or the shallow pans in the Bureau Creamery; the only difference is that the cream is more solid and is of a deeper yellow in the shallow pans than in the covered pails.

Sheep Husbandry.

SHEEP AND THEIR PROFITABLE PRODUCTION.

THE judicious breeding and rearing of sheep is undoubtedly the most profitable branch of husbandry pursued in America. If any one is in doubt as to this, let him consider:—first, the value of the fleece; second, the mutton; third, the pelts; fourth, the increase of the flock; fifth, the improvement of the soil on which they feed, and, lastly, that they can be kept on lands so rough that the herbage must necessarily go to waste, unless cropped by sheep.

What breed of sheep would be best to rear and keep to insure the greatest profit? This can only be answered by each flock-master for himself, as it depends on a combination of climate, soil and situation. On cheap lands, distant from a mutton market, fine-wooled breeds, such as the Merino, Silesian and others of cognate blood, are generally found to be the most profitable, as the wool, the pelts, and the increase of the flock alone, are of any considerable value. Long-wooled breeds to a certain extent may also be kept here, and pay well when their fleeces fetch a fair price for combing for worsted stuff goods. On higher-priced lands, convenient to a good meat market, or to a port of exportation to ship them abroad, choice mutton breeds which bear a reasonably good fleece, are to be preferred. Here mutton, as in Great Britain, is the chief thing to be depended upon for profit, wool being only a secondary consideration.

Of the various mutton breeds, which are considered best? In answer to this we may say that each one may be the best for a certain time, and according to circumstances. If a

combination of a considerably increased size and more flesh is immediately desired in the produce from lean native or Merino ewes or their grades, then a fine, compact, long-wooled ram would be best to cross upon them; but only one, or, at most, two crosses should be made, for beyond this the carcass would run too much to tallow, and the mutton prove too fat for table consumption, except, perhaps, the quarters. After these crosses, the grade sheep should be bred together, or a South, or some other Down ram be put to the ewe, the produce of which would be still more improved in the mutton quality.

For the production of very choice, well marbled, lean, tender, juicy meat, the pure South-Down is the best of all breeds of sheep. Added to this, he is very hardy and thrifty, matures early and fattens quickly. A flock of ewes properly taken care of, annually yield a considerable percentage of lambs over their number, and, being excellent nurses, almost invariably bring them all up well. This is the original Down of England, from crosses of which all other Down varieties have sprung, or at least have been greatly improved. Such are the Hampshire, the Shropshire, and the Oxfordshire. These three last have now become essentially the same as the first mentioned, the only difference being a somewhat increased size, particularly in the Oxford. For this reason we have no doubt this will prove the best and most profitable sort to breed for exportation. The general British market prefers the largest size that can be obtained, which combines with size a lean, tender, savory quality of mutton.

The losses of sheep from disease and other causes, have been very large for two years past in Great Britain; in consequence of this, there is an active demand for them now from America, with the prospect of a continual increase. Thousands, if properly bred, may be disposed of there for years to come at good prices, where only hundreds have heretofore been taken. Here is a most promising opening for our flock-masters, and if they bestir themselves to fill it judiciously, they will be sure to reap a rich reward.

The Poultry Yard.

RAISING CHICKENS FOR MARKET.

L. S. HARDIN.

There is a strange fascination in the idea of hatching chickens artificially. To every one who has had the life nearly bothered out of him by the erratic ways of the old hen, the offer of a method for doing without her services, is a welcome one. While I can hardly say it has been the dream of my life to own an incubator, yet it is with a deal of satisfaction that I have at last got one really at work in my little cellar, and day by day I see the chicks forming in the eggs, and not only does all go on after the most approved natural methods of the hen, but the systematic workings of the automatic regulators of heat and cold seem almost life-like in their strict attention to duty just at the appropriate time.

I have promised a faithful record of my experience—to "nothing extenuate nor set down aught in malice"—my purpose is to raise "Spring chickens" or "broilers" for the New York market the year round. The newspaper quotations and price currents place the wholesale prices from $2 a pair in March, to 75 cents a pair in June—the chicks to weigh from one and a half to two pounds each. This weight the authorities tell us with a unanimous mouth should be reached when the chicks are eight or ten weeks of age, and should cost from six to fifteen cents a pound. All of this may be true, but unless I am greatly mistaken I shall modify my opinion of these figures to a large extent before I reach the end of this series of articles. I verified the selling prices above by interviewing the market-men who sell early Spring chickens.

The best I have so far been able to do with house-raised chickens this Fall is to bring them to one pound two ounces in weight when eight weeks old. I hope to do better than this with improved methods of feeding and still greater confinement of the chicks. So far I have been able to utilize the "scraps" of the house to such an extent that the outlay will not show what a large flock of chicks will cost when fed with purchased food alone. I have many misgivings about their costing only fifteen cents a pound, and much more about their costing only six cents. But whatever it is I shall faithfully record it. It is not my purpose to prove that chickens can be successfully hatched and raised from incubators. That has been done over and over again, and what has been done, can be done, and my failure would only prove my own incapacity for the work, not its impracticability.

The machine I procured had been in service before, some 4,000 chickens having been hatched from it, and it is one of the modern improved sorts. The gentleman who owned it had loaned it, and from neglect the heating apparatus, which never had been very well made, totally failed to work, so I supplied its place with a modern, improved oil stove that keeps a 500-egg oven at a mean temperature of 103 degrees, with a consumption of only three gallons of kerosene a week. At twelve cents a gallon this is but 36 cents a week, though the stove runs night and day. The stove that came with the incubator burnt this much oil in three days. Eggs are 30 cents a dozen, and as I live in a small village near the city where everybody keeps a few hens, I find no trouble in getting all the fresh eggs required. So far not one egg has proven infertile, which has surprised me very much from the fears I was led to entertain by the warnings I had received on this point. In selecting eggs I make it a point to reject all that are very large; to avoid double yelks that will not hatch, and very small eggs that produce small chickens; for I have always noticed that the pigs and chickens that are the largest at birth, as a rule keep ahead of their smaller brothers and sisters.

It is my design to make as good a start as possible. It will be found that among those who grow the eggs you buy, some keep much larger fowls than others, with more vigorous cocks and cleaner nests. Everything about such flocks is usually of better character than in the case of others, and it pays in this particular to get the best. Where a dash of Asiatic blood is to be found in the flock, it insures quick-growing broilers. This, it is true, can hardly be said of the pure-bred Asiatics, as they are too leggy when young, but this characteristic is much changed by the liberal intermixture of other blood. While, as a rule, you are obliged to take what you can get when picking up eggs about the country, yet it is always well to keep an eye on these points and do the best you can. I have never been a believer in raising your own hens and eggs. My purpose is simply to determine if broilers can be raised and disposed of with the assistance of an incubator, at a profit. To do this, I shall not always adopt the best method perhaps, but so far as I can find out, I shall always adhere to the most economical mode of conducting the business.

Long ago I determined there was no money in eggs. For quality one egg is just about as good as an other, while the greatest economy of feeding is in allowing the hens to act as scavengers of the farm, which is the general method and one against which no plan of purchased food can compete. Then, eggs can be shipped such long distances, that while the farmers of Iowa or Tennessee are enjoying fine, open weather that makes the hens lay freely, we may be having a bitter cold that freezes all thoughts of eggs entirely out of the hens' heads. With broilers circumstances change. A city the size of New York consumes an immense quantity, while it is impracticable to get them economically to market from a great distance. The hotels, restaurants, and private families, aggregating a total of over two millions of people, are dependent upon the local producers. Ice cars are of little use in this connection, as a frozen chicken is not the delicacy that a purely fresh broiler should be. Here it seems to me is a grand market that needs developing, and I can see nothing but the incubator to do the work with. Wherein lie its weak as well as its strong points I shall try to find out, and all who wish to try this market may know its hard places by the time I have finished with it.

Like every other undertaking, to make the most complete success of it, the man should be admirably adapted to the work. This I may not be, but by an honest effort I can point out to the one that is capable, should I fail, those features of the market or management of the chicks that need changing and overcoming. Many incubators are now in use raising fancy strains of chickens, while the open market is supplied by the old method, nor do I believe it can be successfully competed with so long as supplies from the Far West where food is cheap, come in direct competition with fowls raised upon purchased food near the city. We must take up that branch of the business, that the others cannot reach. To do this, special attention must be paid to the quality of the flesh, and all modern improved methods of feeding be adopted. To accomplish this, recourse must be had to the best instructions to be found in chicken literature, and we will thoroughly test the French system of feeding to produce the finest quality of flesh with the least outlay for food. It is an experiment with me, but as I shall take every precaution to insure success, and note carefully the course of the trial, my good or ill fortune, honestly stated, will be instructive to those who may read what I shall have to say, and the whole of my experience shall be given in the RURAL.

KINDS OF TEA LEAF—FIG. 328.

Industrial Societies.

ILLINOIS STATE FAIR.

(Rural Special Report.)

THE Illinois State Fair was held at Springfield from Sept. 27 to Oct. 2. The receipts reached some $18,000; but for the fact that the expenses of running the Fair were considerably less than last year, the sum received would have fallen short of paying premiums and current expenses. As it is, it will just about meet them. It must be conceded, therefore, that the Fair was not very largely attended. On Thursday the crowd was large—probably 25,000 persons were on the grounds. Wednesday the attendance was only fair, and on the other days quite slim.

One feature of this fair—and it is a feature occurring every two years—needs attention, with a view to correcting a manifest abuse. I refer to the annual election of officers, which, by the law of organization, must take place on Wednesday of fair week, and upon the fair grounds. It has come to be the practice to devote the entire day to this work. That is, it has come to pass that it takes almost the entire time of the acting vice-presidents, their assistants and others, to secure a re-election, or to substitute some favorite. The afternoon is entirely consumed in the election itself. At this fair nearly the entire exhibition programme was suspended, much to the disgust of visitors, who were loud in their protests against the practice. There is demand for reform here, that should in some manner be speedily met.

The horticultural display was fairly good, though inferior to that made at most Western State Fairs this Fall.

The hall devoted to textile fabrics contained fewer specimens than last year, but in merit they were superior.

In fine arts nothing very remarkable was shown. The exhibit was of about the usual character, not positively bad, yet not worthy of great praise.

The swine exhibit was very choice. Indeed, I doubt if so uniformly good a lot of hogs were ever seen at an Illinois fair, and this is saying a great deal. We have had many larger shows. The Poland Chinas and Berkshires predominated.

The sheep exhibited were pretty strong in the long and middle-wools, though there were fine specimens of imported Spanish Merinos.

The poultry display, as a whole, was larger than ever before, and the birds, with few exceptions, of rare excellence. The Brahma and Cochin class made a very attractive feature, there being eighy-five entries. The Plymouth Rocks were fully represented with choice birds. These fowls seemed to be the general favorites. The old Black Spanish were not as numerous as at former exhibitions. The once popular Houdans were represented by only a single coop, and the owner said he would sell them as soon as he had a chance. The Hamburgs and Polish fowls seem to have many friends, there being 31 entries of them. There was a much less number of Game stock than usual. The Bantam class was full, there being 41 entries of the different varieties, of very choice specimens.

The show of waterfowls, geese and ducks was excellent, as was that of turkeys. There were two large displays of pigeons, which added much to the interest of the show. Rabbits and ferrets helped to make up the display. The poultry interest is growing in importance and shows a decided improvement from year to year.

The fast horse business was the worst failure of any feature of the fair. Contrary to its course for many years, the State Board at its meeting last Winter, decided to introduce "speed rings" into each day's programme. They carried out the programme but it did not draw a crowd; there were no very noted horses present and the whole thing was a fizzle. It is quite probable that there will be a change at the next Board meeting. The "agricultural horse trot" is a thing of the past as an attraction in an Illinois fair ground.

The show in agricultural implements was exceptionally fine. In other departments there seemed to be a falling-off from last year. The fact is, that in but few places can a first-class fair be maintained for two successive years, and there, as a general thing, only by the offer of large premiums and by the most strenuous efforts to please, not only on the part of the fair managers, but also on that of the resident citizens.

MESSRS DEERE & Co., Moline, Ill., made their usual handsome display of their celebrated plows and cultivators in their permanent building on the grounds. They had a very fine specimen of a stuffed deer from Minnesota, emblematic of the name of the firm, mounted on the top of the building, with gilt ones as weather vanes on each corner. As usual, the goods they had on exhibition were gotten up in the very best style—sulky and hand plows and cultivators finished up as fine as workmanship and art could make them. Although they were crowded with orders dur-

ing the past season, yet these enterprising manufacturers filled every one they received. Their Gilpin Sulky plow, which we lately noticed as the only one used on the Dalrymple farm, attracted a great deal of attention. These plows have been in the market for the past five years, and 40,000 of them are now in use. They are celebrated for their lightness of draft and general durability. The fact that of the large number sold there has not been a single complaint shows that they are all that the manufacturers claim for them.

MESSRS. CHANDLER & TAYLOR, of Indianapolis, Ind., made a very handsome display of their Eureka Drain Tile Mills, Mulay Saw Mills and Phœnix portable engines in full operation. Their saw mill attracted a great deal of attention. They showed practically that it could be run with their ten-horse power engine with ease, leaving power to spare. Their new Eureka Tile Mill has proved itself to be all the manufacturers claim for it, and its work on the grounds making tiles from 2½ to nine inches in diameter, and also a fine quality of brick, proved to the satisfaction of the spectators that it could do the work. W. W. C.

VERMONT STATE FAIR.

(Rural Special Report.)

THE annual show of the Vermont State Agricultural Society, at Montpelier, during the third week in September, was much interfered with by bad weather, and was consequently not pecuniarily very successful. On the last two days, however, the attendance was large, and the exhibits themselves were nearly all of a high class in each department. Every popular breed of cattle, Jerseys, Ayrshires, Devons, Short-horns, Guernseys and Dutch, were represented in the stalls by excellent herds, some of which are of long standing, and nearly all in the hands of practical men, who know how to maintain them at a high standard of excellence and make them profitable. The greatest falling off was in the Short-horns, and this, notwithstanding the existence of some of the finest herds in America within the State. The popularity of the Jerseys with the farmers, and the little general interest in breeds deemed too large for profit in a hill country like Vermont, seem to have the effect of discouraging breeders of this class of stock from exhibiting them.

In sheep, there was a superb show of Merinos and Cotswolds, and an excellent one of Southdowns, the adjoining province of Quebec competing with some fine flocks of the two last. Something over 300 sheep in all were shown. There was but a small show of swine, and only a moderate one of work oxen and fat cattle. In poultry, the display was very large and generally excellent, nearly every variety of domestic fowls being represented in something near 150 coops.

The exhibition of vegetables, seeds, flowers and fruits, though moderate in extent, was superior in quality. The fruits, particularly, were very good, and compared with previous shows demonstrated a decided progress, which bids fair to continue and increase.

Orleans Co., Vt. T. H. H., M. D.

MONTREAL HORTICULTURAL SOCIETY.

[Rural Special Report.]

THE annual exhibition of this energetic association took place at the Victoria Rink, Montreal, Sept. 14, 15, 16 and 17, and was decidedly the fullest and best made during the past four years. Last year (which was a good show) the entries were 1,000, this year 1,300. Some of the fruit was not unpacked, and many plates were deposited upon the floor for the lack of table room, although the hall is a very large one. The display of roots and other field and garden vegetables was extensive and remarkably good, while the floral exhibit was simply immense. Montreal has a large number of good gardeners, both amateur and professional, and the rivalry in both classes was very close.

The building was finely decorated and the band of the garrison artillery furnished superb music. The attendance was all that could be desired in point of numbers, and the result, both financial and otherwise, cannot be other than highly gratifying to the Society, which is not only doing much to promote a taste for ornamental gardening and the culture of useful plants, but, by the information it is disseminating both by its exhibitions and its excellent reports, is vastly increasing the skill and success of the orchardists and other fruit-growers of Canada. Already the stimulus given to the culture of the apple has been shown by a large area of new plantations, which are, in consequence of the information derived through this society, of sorts thoroughly adapted to the climate and soil of the country, and are under a system of management which promises, and indeed has already achieved, a success which a few years ago would have been deemed impossible. H.

Miscellaneous.

The Niagara Grape.

MR. J. S. WOODWARD, Lockport, N. Y., kindly sends us a basket of this grape, which is now, we believe, for the first time offered for sale. These grapes had been handled at the N. Y. State Fair, where they were exhibited. Nevertheless they were received at this office in perfect order, not a berry having dropped from the bunch. The skin of this grape is firm, though thin. Between the pulp and the skin the flavor is agreeably sweet. The pulp itself, if broken, is rather acid. But this is not perceived as grapes are ordinarily swallowed. The berry is large, of a pea-green color, ripening with the Hartford. The bunches are long, compact and showy. The quality seems to us better than that of the Concord, while its splendid shipping qualities and, as we learn, the vigor and fruitfulness of the vines must secure it a ready sale.

The Best Wheats for Ohio.

Our heaviest-yielding wheat in the past three seasons has been Silver Chaff. Golden Straw ranked next this year with us, and went ahead on the black sands of Erie Co., near the lake, where it made a fine crop, weighing 63 pounds per bushel. Velvet Chaff has out-yielded Clawson for two successive seasons here, and also brings a higher price in market. Clawson seldom weighs more than 60 pounds per bushel. It is a bad wheat year if Velvet Chaff weighs *only* 60 pounds. Saudomirka continues to promise well, except for its lateness in ripening, being several days later than Clawson. Zimmermann sent to us from the Missouri Agrl. College, promises well. I send you a package containing Golden Straw, Sandomirka, Velvet Chaff and Zimmermann, as being the most promising of our varieties, next to Silver Chaff. The last two are old varieties, but are not widely known and may be new to you. C. E. THORNE.

State University, Farm Dep't., Columbus, O.

INDIGENOUS INDIAN TEA LEAF.—FIG. 329.

Wasteful Feeding.

Here where land is cheap and whence corn, oats, or wheat have to be hauled quite a distance to market, stock is the principal dependence for making money and for getting the best price for our products. For instance, corn is worth, say 20c. a bushel in the market; but by feeding it to hogs one can get 40c. for it when sold in the shape of a fat hog. The usual way is to buy up good stock hogs, and then feed and fatten them for market. It is calculated that for every five pounds of corn one pound of pork can be made, and with corn at 30c. a bushel, and hogs at $4 per hundred, it pays well to feed the corn to hogs in place of selling it.

Different farmers, however, have different ways of feeding. One of these which I think very extravagant is what is called "turning in;" that is, turning the stock right in to the field of corn and letting them eat it up. The land here is mostly in what we call patches, so that if a man has 40 or 50 acres of corn, it may be in eight or ten different pieces, and he turns his hogs into one at a time until they are fat enough for market. Of course, it saves some trouble in gathering and feeding, but I think the saving is more than lost in what is sure to be wasted and trodden down in the field. It is only practiced to a small extent and as pork is high and corn rather scarce this year the practice will be followed less than ever this Fall. N. J. SHEPHERD.

Miller Co., Mo.

The Book Premium.—An Explanation.

MR. G. W. STRONG, who took the 2d prize in the Rural competition, inquires through the RURAL if he did not also win the Book Premium, offered by the Farmer's Pub. Co. through me, as their representative. The information asked for was duly furnished to Mr. Strong at the proper time. But as the RURAL now calls on me to explain, I will most cheerfully respond. The decision of our Co., as already clearly stated and published, was as follows.

"Although the prize-takers in the Rural Corn Trial of last season did not make separate entries or separate reports under the offers we made for the best weight of grain per bushel, yet we are so well pleased with the results they obtained in competing under a different offer, and regard their success as so deserving and creditable that we cheerfully accord to each of the first six winners a discretionary award, as a recognition of the merit and the intrinsic value of their achievement.

We have therefore entered their names on the subscription list of The Business Farmer and Station Record, to receive the same prepaid by mail, every month and every year, as

LIFE SUBSCRIBERS,

without any charge or cost. We have also mailed to each a copy of Chemical Farming, bound in cloth, and we propose further to add (to the three highest winners), a duplicate bound volume of our journal at the end of the first year."

Soon after this Mr. Strong wrote to me saying, "I have received the first three copies of the Business Farmer; also the book and have read them with great interest. I think that every farmer in the land should have them, and I thank you for your generosity, etc."

Thus it appears that Mr. Strong clearly accepted the decision of the Company by making a courteous acknowledgment without any hint of dissatisfaction. CONRAD WILSON.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION,

BULLETIN NO. 47, SEPT. 21, 1880.

Fertilizer Analyses.

459. Bridgeport Ground Bone (dissolved).

460. Manhattan Blood Guano.

Both the above were made by the Manhattan Fertilizer Co., New York and Bridgeport, and sent to the Station by F. C. Stickney, Bridgeport.

476. Matfield Special, for corn, sampled and sent by C. E. Lord, Chester.

468. Tankings, sold by S. E. Merwin & Son, New Haven, and sent to the Station by J. D. Sage & Sons, Long Hill, Ct.

482. Nitrate of Soda, sold by Sisson & Butler, Hartford,, sampled and sent by T. N. Bishop, Plainville.

	459	460	476	468	482
Nitrogen	0.89	2.47	6.06	7.38	15.91†
Soluble phos. acid	5.18	6.09	1.16		
Reverted " "	3.41	0.75	.88		
Insoluble " "	5.24	2.99	1.55	8.27	
Potash		1.29*	5.26*		
Estimated value per ton,	$29.99	$31.80	$35.62	$40.27	
Cost,	$30.00	$45.00	$45.00	$35.00	

*—As muriate. †—Equivalent to 96.30 per cent. of nitrate of soda. Estimated value, $4.13; cost, $4.50 per 100 lbs.

S. W. JOHNSON, Director.

BRIEFLETS.

THE London Garden reproduces the engraving of the Kittatinny Blackberry from Mr. Roe's article in Scribner. . . . . The reason men succeed who "mind their own business" is because there is so little competition in that line. There is a fortune in it for every man who diligently seeks it, except the minister. He has to mind everybody's business but his own, and hence ministers almost invariably die poor. . . . . A writer in the London Gazette says: "Some employers of servants still lend their countenance and sanction to a most reprehensible practice of great antiquity in the North—that of allowing sweethearts to "sit up" during the night time, extending into the mornings, in the kitchens of the farm-houses." We believe some employers of farm "help" in this country as well still lend countenance to this practice. . . . . Good early apples for Maryland, says J. J. Thomas, are Primate, Carolina, Red June, Red Astrachan, Early Harvest, etc. Gravenstein, Maiden's Blush and Porter are good Autumn sorts; and Smokehouse, Smith's Cider, Yellow Bellflower, London Pippin, Northern Spy and Nickajack are good Winter varieties. Several might be added to the list, and other cultivators would throw out some of these. . . . . The Mark Lane Express is not quite sure that there is much love lost between the people and the House of Lords. . . . . Langsdon Plum—to which we have alluded lately—is nearer to curculio-proof than any other we know of. The plums are as hard as bullets until well ripened. They are about one inch in diameter; the flesh is sweet and agreeable, though the skin is tough and bitter. The tree is very ornamental in foliage and form, and the plums are as red as a cherry in the intermediate stage of ripening. . . . . The White Day Lily (Funkia) is often seen in old-fashioned gardens; but it is pretty enough both as to foliage and flower to be seen in every garden. . . . . A very pretty shrub, and one very little known in America, is Desmodium penduliflorum. A plant of this was sent to the Rural Grounds two years ago by Mr. John Saul. It has wintered well and we shall ere long present our readers with its picture taken while in full bloom. . . . . There is no better time than the present in the entire year to transplant grape-vines. As we have often done before, we urge it upon those of our readers who have not all they need to furnish grapes for the family, to purchase one or more vines. Those who cannot afford to do so, may obtain cuttings from friends. Let them be about eight inches long, including two joints—one near either end. Plant these in mellow soil so that the upper joint shall be at the surface of the ground. Cover with litter of some kind when sharp frosts may be expected and so leave them until Spring. . . . . It is stated that Fultz does best on low land and Clawson on high land. We have raised Clawson on high lands for many years, and Fultz on high land last season, and now we have it on low. We may therefore judge as to the above statement next Summer. . . . . The lessons taught by our corn experiments are:

1, thorough preparation of the land by harrowing and rolling; 2, *drill* seeding from one to two feet apart; 3, *flat* cultivation. . . . . To these we ascribe our great yield of Blount and Chester. Try it, readers, another year. . . . . Mr. Read derives some comfort from the assumption that America does not seem fitted for the production of barley, mutton or wool. . . . . Barbed-wire fences. They have been tried in various parts of the country. We hear few words in their praise—many against them. . . . . Many journals are wroth that certain "Newspaper Directories" estimate their circulations far too low. We hear no fault-finding on the part of those whose circulations are placed far too high. And these latter are as six to one of the former. . . . . No doubt the late sowing of wheat is the only feasible way of protecting it against the Hessian Fly. The yield, of course, will not be so heavy as when sown earlier. Farmers have to choose whether they will sow early and take the risk of the Fly, or late, with the probability of a smaller crop. . . . . Mr. G. W. Hoffman has several times stated that any land that will not produce a full crop of wheat with five pecks seeding to the acre, should not be used for wheat, for it is not good enough. Thick seeding will not compensate for poverty of soil. . . . . A wheat is now advertised in the London papers as "Oakshot's Champion White Wheat." Some of the heads bear 80 to 90 grains Judging from our trials of Mold's Improved Wheats, we have not much confidence that Oakshot's would prove here better than many of our own varieties. . . . . Mr. Fletcher Carr believes the following recipe to be a sure cure for lice on cattle, horses or hogs: Take equal parts of home-made soft-soap and warm water, mix them together, and rub thoroughly in the hair of the animal. It will not loosen the hair, or cause the skin to crack, or become sore, but on the other hand, it removes all scurf, softens the skin, and improves the thrift of the animal. Pres. McCann bought a lot of steers infested with blue lice and tried a mixture of soft soap and about four times its bulk of water. It took off the hair and cracked the skin; but the lice disappeared. . . . . It is recommended in England to leave potatoes intended for seed exposed to the light until they begin to "green." Treated in this way they will keep better and prove more plump and vigorous. . . . . . Few of our new native seedling grapes are of higher promise than the Prentiss. It ripens with Concord. The bunch is large—the berry medium, yellowish-green skin which is thin but firm. The flesh is tender, sweet and juicy. The vine is a strong grower, productive and hardy. . . . . The Rural Home justly complains that the price of agricultural weeklies is too low. Let us suppose a case: The price of the RURAL NEW-YORKER is $2 per year. The price of agricultural monthlies is from one to two dollars per year. Supposing the average to be $1.50 and that the contents, paper and engravings cost the same, the subscriber should pay for the RURAL not less than $6.50 per year according to the Rule of Three. The engravings from nature in the RURAL NEW-YORKER are one of our heaviest items of expense; while if they were mere reproductions they would cost far less than original printed matter occupying the same space. We are not complaining that the price of monthlies is too much—but that the price of weeklies is too little. We heartily wish success to all, but the disparity of price is not fair.

WHAT OTHERS SAY.

WE find the following in the Mark Lane Express, London:

FARMER BEN'S THEORY.

"I tell ye it's nonsense," said Farmer Ben,
"This farmin' by books and rules,
And sendin' the boys to learn that stuff
At the agricultural schools.
Rotation o' crops and analysis!
Talk that to a young baboon!
But ye needn't be tellin' yer science to me,
For I believe in the moon.

"If ye plant yer corn on the growin' moon,
And put up the lines for crows,
You'll find it will bear, and yer wheat will, too,
If it's decent land where 't grows.
But potatoes now are a different thing,
They want to grow down, that is plain;
And don't you see you must plant for that
When the moon is on the wane.

"So in plantin' and hoein' and hayin' time
It is well to have an eye
On the hang o' the moon—ye know ye can tell
A wet moon from a dry.
And as to hayin', you wise ones now
Are cuttin' yer grass too soon;
If you want it to spend, just wait till its ripe,
And mow on the full o' the moon.

"And when all the harvest work is done,
And the butcherin' times come 'round,
Though yer hogs may be lookin' the very best,
And as fat as hogs are found,
You will find yer pork all shriveled and shrunk
When it comes to the table at noon—
All fried to rags—if it wasn't killed
At the right time of the moon.

"With the farmers' meetin's and granges now
Folks can talk till all is blue;
But don't ye be swallerin' all ye hear,
For there ain't mor'n half on't true.
They are trying to make me change my ways,
But I tell 'em I'm no such coon;
I shall keep right on in the safe old plan
And work my farm by the moon.

HEREFORDS AND SHORT-HORNS.—The Short-horn has no quality superior to that which the Hereford possesses; if it has, let it be fairly shown, says a writer in the London Agricultural Gazette. Take each point in order; both breeds have been well tried, both as grazers and feeders. It is acknowledged that the Hereford is the best grazer, and it is asserted in England and America that four Herefords can be fed on the same meat as three Short-horns. There is evidence to show that the milking quality of the Hereford is as good as of the high-class Short-horn, and her milk is much richer. The London market bears testimony to the superiority of the Hereford meat, by always quoting it in advance of the Short-horn. Their early maturity and weight for age have been tested again and again, and there is little difference in either breed. The merit of the Hereford for crossing purposes has been disputed, but now it is an indisputable fact that they are fast gaining ground in the good opinion of graziers.

HAIR HARVEST.—The following is going the rounds of the French press:—"The hair-harvest in France is now in full activity, and dealers are attending the different fairs, and persuading the fair ones to part with their tresses. In certain districts the girls regularly cultivate their hair for the market, the crop being ready for cutting every three years. The Norman women's hair is the finest; the Bretonnes', on the contrary, is the most coarse; while the longest locks come from Limousin. Hair in the north is bleached by the sea-air, and in the mountainous districts it is dark and curly. The Americans are the chief customers for all kinds of colors; Germany takes tons of fair hair; and much of the same hue is sent to England."

TEA LEAF AND MANNER OF CURING.—FIG. 330.

THIN WHEAT SEEDING.—Mr. W. A. Armstrong, in his advocacy of thin-seeding when the ground is well prepared, made the following remarks at a late meeting of the Elmira Farmers' Club:

"Now, let us see what one bushel of seed may do, considering the matter by the light of facts with which we all have familiar acquaintance. A single kernel of wheat in the fruit becomes 30, or more—most varieties give as much as 36 kernels to each full head. Then if each kernel of the bushel of seed gives thirty-fold in the yield, the bushel must give thirty-fold. But this is the lowest limit of capability for the fruitful seed, for it is based on the lowest product, one ear for each kernel of seed. When the soil is suited to wheat, and is well fitted for the seed, a single kernel, by tillering, may produce thirty heads. In good growth it should never average less than four or five stalks, and as many heads. Take the lower number and the bushel of seed, if each kernel reaches a moderate limit of production, must give a crop of 120 bushels. But this is never raised on an acre of ground, hence the conclusion that some part of the seed is wasted, even when but one bushel is sown. That is to say, sowing one bushel to the acre presupposes waste, and it may therefore be assumed that when two bushels are sown where less than one is required, one bushel is wasted. By this process of reasoning, the conclusion that 20,000,000 bushels are wasted annually in the seeding in this country is inevitable:—if it be assumed that as many acres are sown annually with two bushels to the acre. The acreage of wheat is estimated at about 32,000,000, and the average yield less than 18 bushels to the acre. There is great waste somewhere, if as much as one bushel of seed is used to the acre, for that should increase more than eighteen-fold; but more seed is used—certainly a half bushel more—and the waste is therefore still greater."

Mr. Armstrong during a recent visit to Ohio, ascertained the following from a Mr. Benedict of Braceville.

Mr. Benedict had a field, a portion of which was in potatoes in 1879, and gave a very poor crop. He plowed the field for wheat, and by an error in setting the drill, he got less than a bushel of seed on about an acre of the potato ground, and then set the drill to distribute about two bushels to the acre on the remainder of the field. At the harvest the thinly-seeded acre gave a much heavier crop than any like area of the thickly-seeded portion.

HORSEMEN AFTER FAIR PREMIUMS.—No class of exhibitors, says the N. Y. Tribune, at a fair are so sharp for premiums as horsemen. The fuss and worry of the average horse exhibitor and the physical energy put forth, if spent in a political way, might send him to Congress. When disappointment comes, as come it must to nine out of ten, there ensues a flow of tropical language which might be Congressional, for it is expressive if not elegant. The trotting-horse generally is still in the foreground, and commands the attention of the multitude. The useful Norman or Clydesdale goes too slow.

A PROFITABLE ORCHARD.—J. S. Woodward, Lockport, N. Y., has a 200-acre farm four miles out of town, which was visited by the Editor of the Country Gentleman. He writes that his 30-acre apple orchard is 14 years old, in which 200 sheep and 40 swine destroy all the codling worms that fall, and very few of these insects are found in the fruit. Sheep have proved more efficient than swine in the greater vigilance with which they seize every dropping apple. To prevent the sheep from eating the bark of the trees, he washes the trunks with a mixture of lime wash, common and whale-oil soap and sheep dung. These animals are kept in the orchard till September. They eat the fruit and branches within their reach, and some years have thus devoured 200 or 300 bushels, but the benefit resulting from keeping them so late overbalances any loss. In all cases the sheep must be well fed in troughs with grain, in addition to the grass and fallen fruit. He thinks the hogs cleared out all the canker worms at the commencement of the entrance of these insects into the orchard. The trees are mostly Baldwins, with Rhode Island Greenings, and Roxbury Russets. Last year the crop amounted to 2,600 barrels, which sold for over $5,000.

WINTERING BEES.—Mr. J. King advises in his bee journal that, inasmuch as honey stored in June and July is thicker and contains less acid than that stored later in the season, it be removed from the hives and put away in a dark, dry place for Winter purposes, and its place in the hive be filled with frames full of comb foundation set in the center of the hive; and, if a dearth of honey in the flowers occurs, feed a little sirup from the best brown sugar each evening from the entrance of the hive. This, says Mr. King, will promote rapid breeding, and by the time Fall flowers are ready there will be a host of vigorous young workers to store it away. As bees are not inclined to store honey in boxes in the Fall, Mr. King uses the extractor and replaces the empty combs in the center of the breeding department of the hive, a process which, he believes, invariably excites the bees to intense activity. When the Fall harvest is going on the queen will appropriate space in these center frames of the empty comb in order to insure a sufficient number of the young bees going into winter-quarters. Finally, Mr. King extracts all the combs containing honey and no brood to speak of, and puts them away for use in early Spring; in their places he sets the frames full of summer-stored honey. With six or seven frames in the center of each hive he brings the close-fitting division boards close up and places a chaff cushion on top of the frames, about four inches thick. Air-holes are left open in each end of the cap and the entrance is contracted into about one inch space. Quinby gives the necessary supply of honey at five combs, averaging five pounds each, or six weighing four pounds each, for wintering indoors, with an excess of five pounds for hives wintered outside.

CATALOGUES, ETC., RECEIVED.

DAIRY FARMING, by Prof. J. P. Sheldon, published by Cassell, Petter, Galpin & Co., New York. This is the 15th monthly number of this splendid work to which we have had frequent occasions to refer during its publication. It will probably be completed in 25 numbers at 40 cents each, and will be the most exhaustive work that has ever appeared on the subject of which it treats. It is copiously illustrated both by large finely colored plates, one as a frontspiece to each number, and by numerous wood-cuts of dairy appliances, buildings, plans, etc., etc. We would strongly advise our readers to secure this work, which is full of varied instruction in every branch of dairy husbandry.

FARMING WITH GREEN MANURES, by C. Harlan, M. D., published by J. B. Lippincott & Co., Philadelphia, Pa. This handsomely gotten-up, cloth-bound volume of 269 pages, 12 mo., is a second edition, revised and enlarged, of a work already favorably known to some of our readers. It is not so much a record of personal experience or observation on the subject of which it treats, as it is a compilation of what has been said on it in various books and periodicals. A perusal of it will give a good deal of information with regard to other people's experiences on green manuring.

Everywhere.

RURAL SPECIAL REPORTS.

ARK., Paris, Logan Co., Sept., 20.—Grain crops are an average in this county; but the rust has shortened the cotton crop very materially. But little wheat was sown in this region and the yield has been poor. The Spring drought ruined the oat crop; most persons have not even saved their seed. Of the seeds sent me from the RURAL Office, Mold's Ennobled Oats did well, considering the drought. I am well pleased with them. The Telephone Peas were injured by dry weather and were planted two weeks too late, but I consider them superior to any we have in this country. The Cuthbert Raspberries did well, but we planted most of the other seeds in open ground and they failed to germinate on account of the drought. The Mulberry cuttings got open in the mail and were dried up so much that, although carefully treated as grafts on growing stocks, they failed to grow. I procured some seed of your sort of Doura corn, and it is now ripening the grain. It proves to be an old acquaintance. I first saw it in Twiggs County, Georgia, in the Fall of 1822, where the boys were cultivating it for parching corn, under the name of Egyptian Wheat, and I have cultived it for fowls, and at one time had flour made of it, of which it makes an excellent article. I lost the seed about the end of the war, or soon after, and was glad to get it again. It is a splendid fodder plant and can be profitably sown broadcast when laying by Indian corn, to be fed off by stock, after the corn is gathered. I drill it in rows, like sorghum, and thin out to eight or ten inches apart. When planted for grain, it should be put in at, or about, the time of planting corn. I also have the old white-seeded Dhoura corn which we plant for fowls and fodder, for which it is very good, but it seldom tillers much, unless the soil is very rich. Teosinte will not do here, it fails to make seed or even head. We may keep the roots alive through the Winter by mulching, for the second year. H. M. Y.

ARK., Greenwood, Sebastian Co., Sept. 22.—I would suggest to the correspondent who pleasantly described the RURAL Farm, and so wittily mentioned the mosquitoes, in a recent number of the RURAL, that he emigrate to this country where a person may travel all day without seeing any, and where one very rarely comes in contact with them at night. For some unexplained reason the climate of Western Arkansas does not agree with mosquitoes. But we have other pests here, commonly called chiggers, which are equally as troublesome as the Northern mosquito: and unless one is familiar with the use of soda water and soft-soap, he will be in perpetual torment during the warm season, and especially while blackberries are ripe in the months of May and June. Being about the size of the point of a pin, it is a very difficult matter to see them unless one has a good microscope. My Blount Corn was planted March 30th, and in 90 days it was fully matured. I planted it in drills four feet apart. It yielded at the rate of 80 bushels, shelled, per acre. I gathered it as soon as it was dry on the stalks, reserved the most fully developed top ears for seed, braided them in bunches and hung them in the loft of my cabin. On examination a few days since, I found the weevil had commenced working in the grain, so I took them down, pulled off the husks and laid them away in a tight bin, after giving them a good sprinkling with Turkish insect powder. I planted another piece of common Dent corn for a late crop on June 14th; that also ripened in 90 days, and made a fair crop, taking the mode of culture into consideration. Last season I planted a premium patch of Blount's Corn in Northwestern Penn., about the middle of May, and while it made an immense growth, it failed to get ripe before frost in September following. The soil is so much warmer and more sandy here, and we have so much more sunshiny weather, that crops mature much earlier than in the Northern States. R. R.

MO., Pleasant Mount, Miller Co., Sept. 21.—We had a good rain here the other day. It came in good time as the ground was very dry. Farmers are busy sowing wheat, and the rain will help greatly, as the ground was so dry that some were afraid to sow, thinking the seed would not germinate. It will also help pastures and give us plenty of stock water. Stock of all kinds are still bringing a good price. Good sucking mules are worth from $25 to $35 and two-year-old mules are worth from $80 to $110, according to size, etc. Good stock hogs ready to fatten sell at from 3½ to 4½ cents per pound; the profit on them being in feeding. N. J. S.

NEB., Harvard, Clay Co., Sept. 28.—Although the season has been very dry, the crops have done a great deal better than could be expected. This is a good wheat country, yet the crop is light this year, yielding from 10 to 15 bushels per acre; corn, from 10 to 40 bushels; barley, 10 to 20. Potatoes are not very good throughout this section; the Early Ohio has done the best with us. It beats the Early Rose "all to smash," and is about 10 days earlier. M. A. W.

N. Y., Afton, Chenango Co., Oct. 1.—Crops, except grass, have been pretty good. Corn is a good average; potatoes are rotting very badly, but the yield is good—above the average. They are selling for 20c. to 25c. per bushel. Oats are an average crop in bushels, though the grain is light—price, 40c. to 45c. Wheat is a light yield—price, $1 to 1.25. Hay is scarce—price paid, $12 per ton at barn. Stock is cheap; one can have the pick of a dairy at from $15 to $20. The drought has cut our butter crop short quite a good deal. From last May until this week we have not had rain enough to wet the ground two inches. I think that feed (hay and grain) is higher than it will be next Spring, for farmers are cutting down stock and holding their feed, and using everything that is feed. This season will be a benefit in this way—it will tend to cull out the poor cows. Creameries and cheese factories, too, tend to make better cows. Farmers take their milk there, and they learn to a pound of milk what their herds yield. Then a competition arises among them, each being anxious to get ahead of his neighbor, and, of course, if he is ahead he tries to keep there, and will feed his cows a little better. This keeps the cows in better flesh and in better condition for Winter. These butter and cheese factories not only make a better article than private dairies, but they tend to the culling out of the poorer cows and the better feeding of the better ones left. Some farmers here get from 12 cows as much butter or cheese as others do from 18 or 20. G. E. N.

CURING TEA LEAVES.—FIG. 331.

N. Y., Elmira, Chemung Co., Oct. 4.—Autumn thus far has been most favorable for farmers. Warm weather and abundant rains have given wheat a good start and furnished good, fresh pasturage for stock. Our first killing frost occurred Oct. 1st. Up to that time tender plants remained green and second-growth tobacco continued to grow until it had in many cases assumed considerable size and blossomed. Fruit is very plentiful throughout this county, especially apples, which are a drug in our market (Elmira). Fall apples can be obtained in large or small quantities for 20c. per bushel. The tobacco crop was housed in good season and generally in good condition, not having been damaged in the least from storms of wind or hail. Early crops are already nearly cured and in most cases show indications of desirable colors. Late-set crops, favored by plentiful rains after Aug. 20th, made good growth and if the weather continues favorable through the curing season, will, it is probable, make as good a quality as the early crops. G. A. G. JR.

N. Y., Rural Farm, Oct., 8.—Cutting the second growth of grass and clover—the first having been very light—is now occupying the time of our farmers. This has delayed wheat sowing ten days beyond the usual time. Our wheat is all in save a few experiment plots which will be sown as soon as the rain which is now falling ceases. Our heavy yields of Blount and Chester Corn excite the interest and comment of our farmers. Most of it still remains in stooks awaiting the inspection of several prominent men who have been invited to test the accuracy of our statements. MAJOR.

N. C., Brookston, Warren Co., Sept. 27.—We are now having fine weather for cotton picking, which is much earlier than usual. Though we have an extra growth of weeds, the yield will hardly be above the average, some fields having been injured by rust. The corn crop is giving even better returns than were anticipated, being at least 10 points above the average. Crab Grass is abundant. Stock having access to stubble fields are in fine condition; such as are confined to outside grazing are poor, as usual. Prices:—cotton, 10½c.; sweet potatoes, 40c.; eggs, 12½c.; wheat, $1; labor per day, men, 40c., with rations; women, 25c.; picking cotton, 40c. per 100 pounds. M. B. P.

OHIO, Camden, Preble Co., Sept. 29.—Those that got their ground plowed soon after our rains, got their wheat in, in fine condition. It has come up well and the fields begin to look green. Corn is a good, not a large yield; it is curing out nicely. We are having it cool and dry—splendid weather for housing tobacco, of which there was an unusually large amount raised in this vicinity. W. M.

TEXAS, San Antonio, Bexar Co., Sept. 23.—Much rain, a great drawback in gathering the cotton crop. Corn is a light average crop; it was planted late, the first planting having been killed by the frost; it is worth 65 cents per bushel; cotton, nine cents. Wheat averaged 13 bushels per acre in this neighborhood, though hurt by the rust. The International Railroad is now being built between here and Austin. G. W.

UTAH, Brown's Park, Summit Co., Sept. 25.—I've lately removed to this place from Rock Springs in this Territory. That was a coal-mining district, where nothing grew but sage bushes. This is mainly a stock-raising country, right on the banks of Green River, which runs into the Colorado about 100 miles south of this place. All the cultivated land here has to be irrigated. Wheat, oats and most other field crops grown here seem excellent, as do all sorts of garden stuff. W. S.

VERMONT, East Poultney, Rutland Co., September 28.—I have been a reader of your valuable paper for eighteen months and in that time have received a great benefit from the experience of those who contribute to its pages, to say nothing of what comes from the Experiment Farm. I have for some time felt a growing desire to add an occasional word "of thanks if nothing more." My experience in farming is very limited as are my acres. Dr. Hoskins once remarked, in an agricultural meeting, that he at one time owned 16 acres; my number exceeds that by six, and being very willing to learn from others I hope some day to make my little farm as productive as his. Now, a word about corn. This season, after studying through and through a circular put out by the Hoosier Drill Co., obtained through the RURAL, I became convinced that it was best for me to drill my corn, which I did with a hope to have a planter by-and-by, dropping one kernel in a place ten or twelves inches apart. The result is the best crop I ever raised, the growth being even and good, hardly a stalk being without a good, sound ear and very many with two, and a few with three. After I was through planting I was pleased to notice that at the Experiment Farm the corn was also drilled. I am watching for the result of your trial. J. H. M.

CAUSE OF CHANGE IN DEFIANCE WHEAT.

I am much pleased with the constant improvement which I observe in the RURAL, and am greatly interested in the result of your experiment with shriveled Defiance Wheat. I think you have obtained a new variety by the treatment to which it has been subjected. In my numerous experiments I have met with results somewhat similar. Seedlings of potatoes which yield much seed, usually resemble the parent, while varieties which yield only occasionally a few small, imperfect seeds, sport into numerous forms and colors; the strain seems to break by being subjected to new and unusual conditions. The small and imperfect kernels growing on the tassels of corn, if planted, will sport, producing new varieties. The same law holds good with most of our fruits, as cherries, pears, apples, plums, etc. As a general rule, plants which bear very small seeds sport oftener than those which bear an abundance of large, plump seeds. All my experiments lead me to believe that round, plump seed usually produces plants like the parent strain, while *small, weak, imperfect* seed oftener produces new varieties.

The Cuthbert Raspberry plants which you sent me last March, have made a strong growth. Some of the branches are now loaded to the ground with their weight of fragrant fruit. I have 23 kinds of Ricinus growing this year; the Rural Bronze is the finest of all, and the one I would part with last. The strain seems to be well fixed, as in a long row all are of the same hight, color and general habit.

Sonoma Co., Cal. LUTHER BURBANK.

The Querist.

ANSWERS TO CORRESPONDENTS.

Tests for Oleomargarine.

L. H. S., Franklin, Mass., asks whether there is any simple test for distinguishing oleomargarine from butter.

ANS.—There are two ways in which oleomargarine is used—as an adulterant of genuine butter and in its natural condition. No easy or certain way has yet been discovered of detecting oleomargarine in butter. Of several tests that have been given from time to time experience has shown that none can be relied upon except where the oleomargarine is poorly and carelessly made, or where the would-be butter is entirely oleomargarine, except the small portion of cream churned with it to flavor it. Of these tests Professor Caldwell, of Cornell University, who has experimented a good deal in the matter, says the following gives the best results:—Over a piece of good butter as large as a chestnut, in a wine-glass, pour about twice its bulk of ether; stir it up until the fat is all dissolved. Let it stand a few minutes until the undissolved salt has settled at the bottom. Pour the clear solution off into a tablespoon and set it aside for an hour or two, or until all the ether has evaporated. Treat a piece of oleomargarine in just the same way, and on comparing the fatty

matter of each left behind, that from oleomargarine will be found to have a more or less distinct tallowy odor, which may become more apparent if the spoon is held for a moment in the hot steam from a boiling kettle. The residue from good butter has no such odor; but genuine butter may be adulterated with half its weight of oleomargarine, and the adulteration cannot be detected by this test, though the best we have. The simplest and perhaps the best means of detecting genuine butter from genuine oleomargarine is to heat samples of both several degrees above the boiling point of water, when it will be noticed that the butter foams much more than the oleomargarine. There are several other tests which experts alone can employ successfully, but even with these the detection is often doubtful to the unprejudiced, as is seen frequently in our police courts when efforts are being made to convict dealers who have been selling oleomargarine as butter, without having stamped the containing vessels as the law directs. The matter was up before Congress during the last session, and it is to be hoped that the scientists to whom it was referred will be able to devise or discover some simple and certain test before the meeting of the next Congress.

Cribbing.

R. H. M., Pittsford, Mich., asks for the cause and a remedy for crib-biting.

ANS.—Crib-biting is due to a diseased condition of the stomach, and for it no cure has yet been discovered except on the principle of restraint. Young horses that have been raised on a farm and have had plenty of hay, grass or other bulky food, often become cribbers when stinted in their allowance of such food. The unusually empty stomach is annoying to the animal, producing an uneasy sensation, which leads to biting the manger and finally to cribbing as a means of distending the half-empty stomach. Then again, nervous and excitable horses frequently become cribbers from confinement. Indeed confinement and its frequent attendants, unclean stables, inaction, and foul air are the most common conditions that lead to the fault. The animal seems to be affected as with heartburn or dyspepsia, as may be inferred from the slight belchings that generally accompany the action. To relieve crib-biting the stable should be well ventilated, a lump of rock salt placed in the manger, and should this not effect a cure, add a piece of chalk, and if this too fails, dampen the food, and when feeding it, sprinkle some magnesia upon it and mingle a handful of ground oak bark with each feed of grain. It frequently happens, however, that none of these cures the fault, and then the most common method of restraint is to buckle a leather strap so tightly round the neck, just behind the jaw, that when the horse attempts to crib, the muscles of that part press so hard against it as to cause so much pain that the horse desists from cribbing. A better, perhaps, and certainly a safer remedy is to have no point in the stall on which the horse can rest his teeth for the purpose of cribbing, unless it be placed higher than the usual hight of the manger. A hight of about 56 inches from the floor is sufficient for an ordinary-sized horse, and a manger less than 18 inches high is also considered quite safe.

Japan Clover—Lespedeza striata.

M. B. P., Brookston, N. C., sends, for name, specimens of a plant of which he says: "It appeared among the mountains of North Carolina about the year 1865, and has been known as Japan Clover. Since then it has spread until it is now found east of the center of the State. It grows along roadsides, in old fields and along the edges of woodlands and in open spaces among the trees, affording good pasturage for cattle, sheep and hogs."

ANS.—This is Lespedeza striata. It was first noticed, according to Mr. Killebrew, in 1849 near Charleston, S. C., the seeds having been brought probably from China or Japan in tea boxes. It has thence spread over many States, rooting out in Tennessee broom and other grasses. It flourishes upon the poorest soils, and is not killed by the severest droughts. Thus, as cattle like it and it is perennial in warm climates, it is valuable on soils where little else will grow. Mr. Pendleton says of it: "As it has a small leaf, it interferes with the idea of botanists that large-leaved plants feed mostly on the atmosphere." But the leaves, though small, are very numerous. Again he says: "It has great endurance so far as roots are concerned, but the branches and leaves will parch and die out under a burning sun. The plant, however, soon rallies when rains set in." It is good pasturage for stock. The familiar name is Japan Clover, and Mr. Pendleton gave it the additional name of King Grass, which is not needed. Besides, it is misleading to call clovers, grasses. "King Grass" suggested itself because it soon roots out and destroys "every living plant in its path."

Cost of Making Pork.

R. H. G., Magnolia, Ind., asks what is the cost of making pork with corn at, say, 30 cents a bushel.

ANS.—It is impossible to give a definite answer to this question, as so much depends upon conditions that vary greatly in different cases. Young pigs, say from five to eight months old, gain in weight much more, from the same quantity of food, than older ones. Some breeds too gain more than others, and all the recognized breeds, more than "scrub" animals. Then again, the temperature, and the amount of exercise they take have more or less influence on their gain from the food they eat, to say nothing of the manner in which this is given them, and various other points of treatment. In an article on Swine Husbandry in the first quarterly report of the Kansas State Board of Agr'l. for '80, it appears that with corn at 20 cents a bushel the cost of making pork is given by different farmers, at all the way from one to three and a half cents a pound, with an average of about two and a half cents. A careful farmer who experimented in winter feeding a few years since, says that his hogs averaged eight pounds gain from 80 pounds of corn in the ear; eight and one-half pounds gain from 60 pounds of shelled corn; nine and one-third pounds gain from 60 pounds dry meal, and 10 pounds gain, in another case, from 80 pounds of corn in the ear.

Treatment of Echeverias.

S. McC., Olney, Ill., asks the best way to winter echeverias; what is the best mode of propagating them, and when should the seeds be sown, all in the absence of a greenhouse.

ANS.—In the absence of a greenhouse echeverias may be wintered safely and with very little trouble in any cool room where it is not likely to freeze hard. They must be sparingly watered while dormant. If a very cold night should occur, a few newspapers or a sheet will be sufficient protection. If the room should be warm enough to excite growth, they should be kept near the light. They will keep well in a cool cellar, but must have very little water. The strongest plants are soonest obtained from offsets. A more rapid way is to propagate from leaves. Detach the ripened leaves from the old plant and insert the end slightly in a pan or pot of sand, or even lay them on the top of the sand. Nearly every leaf will make two or three new plants. Seed in your case should not be sown till Spring (say March) in sandy soil in shallow boxes placed near the windows, the young plants separated as soon as they can be handled and got out-of-doors as soon as the weather will admit. The echeveria is not nearly as tender as is generally supposed.

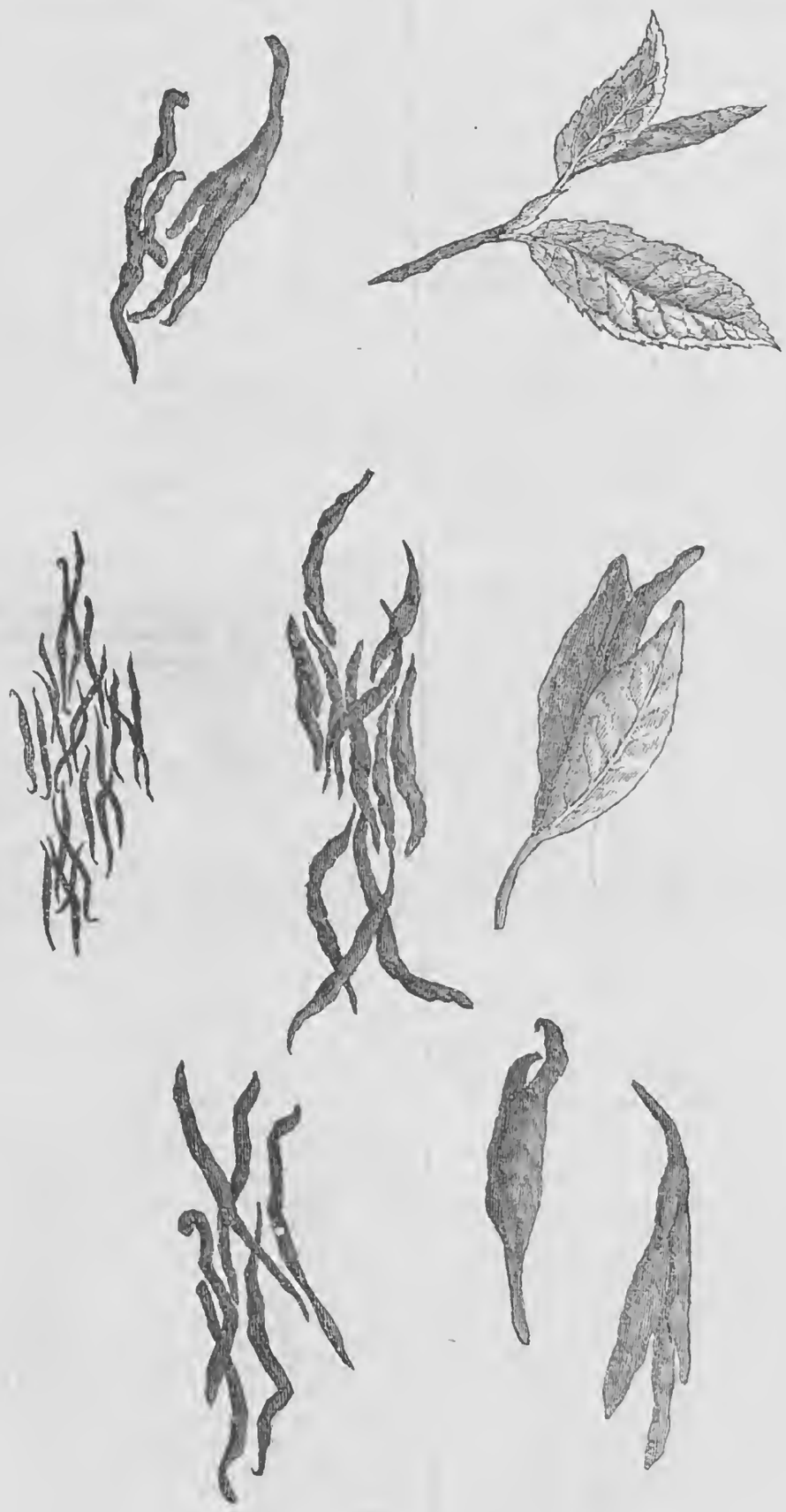
Attention, Pigeon Fanciers!

H. S. B., East Schodack, N. Y., asks some one well "posted," to tell him, 1, how to raise pigeons; 2, how to prevent them from flying to other folks' premises; 3, will they breed in confinement, and, 4, will they thrive with their wings clipped.

[Remark.—Speaking for ourselves, the only trouble that we have had with pigeons is that they increase too fast. We do not think they would do well if confined, though, doubtless, they would breed. The propensity of pigeons to wander over neighboring premises is one that cannot be controlled except by giving them every care which would induce them to remain at home.—Eds.]

Miscellaneous.

J. A. S., Greencastle, Pa., says that he forwarded to us a specimen of wheat properly marked for identification, with his initials and address, and asks its right name; thereabouts it is called Ankney, and is quite a popular sort. 2, A couple of agents are there selling a wheat they call Golden Chaff Eureka; it is a smooth wheat which they claim grows unusually tall, with heads from five to six inches in length, containing from 50 to 60 grains and yielding from 40 to 50 bushels per acre. It is said to have been grown in this State.



TEA LEAF AND ITS PRODUCT.—FIG. 333.

ANS.—1, Among a dozen boxes of wheat, we find none marked as above. 2, We do not know of any variety of wheat called Golden Chaff Eureka. Golden Chaff is an old variety extensively cultivated some 30 years ago, but it has long since fallen into disfavor. It is late in ripening; the straw is tall, the heads long, the grain good and the flour excellent. It is still cultivated here and there, for "auld lang syne's" sake, but there are now a great many better varieties. It is also known by different local names, such as Golden Straw, Whig, Red Chaff, Shot, etc. Eureka wheat resembles Clawson. We put no faith in the representations of the agents alluded to.

J. P. P., Utica, Mich., asks whether the Rural Branching Sorghum and the Poor Land Cow-pea will mature there.

ANS.—An experiment is the best guide to determine that point. Not the least important object of the RURAL Free Seed Distribution is to enable the farmers of the country to test what success can be achieved with the most promising new seeds and plants in their own neighborhoods. Success or failure for one year, however, is no absolute proof of the fitness or unfitness of a plant or seed for any particular locality, as various specially favorable or unfavorable conditions of seed, season or cultivation may in a single case determine this point in a direction contrary to the result of a series of years. See Cow-pea report last week.

R. J. W., Wallsburg, Erie Co., Pa., asks what is the true name of the wheat thereabouts called "Log Cabin;" 2, is Blount's Prolific Corn suitable for that latitude—42 deg north, and if so, where can it be had.

ANS.—1, We do not know. 2, It has thriven as far north in many cases; though several of our reports from that latitude have been unfavorable. It will grow earlier, however and anyhow a small experimental plot would help to decide the question. It can be had from B. K. Bliss & Sons., 34 Barclay St., or J. M. Thorburn & Co., 15 John St., this city.

J. C. H., Richfield, Utah, asks, 1, which is the best knitting machine and what is the price; 2, where can information be obtained about taxes on goods sent from that place to this.

ANS.—1, See advertisement of the Twombly Knitting Machine in this issue, and send P. O. card for price etc. It's as good as any we know of. 2, No taxes are levied on goods sent from one part of the country to another, by the municipal, State or general government, which alone can levy taxes. Freight charges, however, are often called taxes on industry, and what these are can be learned at the next railroad station.

C. M. Y., Marshall, Minn., asks where can Blount's White Prolific Corn be bought; its price per bushel, and whether it would be likely to do well so far north as central Minnesota; 2, where can he get a bushel of Mold's Ennobled Oats. The oats from the RURAL'S Free Seed Distribution gave the heaviest yield he has ever seen.

ANS.—1, Blount's Corn, we fear, would hardly mature so far north. 2, B. K. Bliss & Son., of this city can furnish the oats, and this is at present the only firm we know of that can.

W. S., Brown's Park, Utah, asks whether a windmill and pump would do to pump water for irrigating purposes out of the Green River on whose bank his place is—the land being eight feet higher than the surface of the river.

ANS.—Yes. A good windmill, such as any of those advertised in the RURAL, would probably be the very best means of getting up water for that purpose. Should a large area require irrigation, of course more than one windmill would be needed.

J. W. S., Pitkin, Col., asks the best authority on cranberry culture, and where plants can be purchased in quantity.

ANS.—White's Cranberry Culture, $1.25, Eastwood on the Cranberry, 75c., are as good as any. To be had through the Am. News Co., N. Y. City. The subject is treated in a briefer way in several works on the culture of small fruits. Cuttings can be had through J. T. Lovett, Little Silver, N. J., or of most prominent nurserymen.

O. B. S., Seymour, Wis., asks us to send him the White Elephant Potato; but he is one of several who have applied for our Free Seed Distribution without inclosing the two three-cent stamps—half of the postage which we are obliged to pay. Our last Distribution was sent to hundreds who inclosed no stamps for postage. But we shall not do so again. Those who are unwilling to pay half the postage are not the persons who, as a rule, would give our seeds the careful test they deserve.

J. D. G., Cambridgeborough, Pa., sends for name a leaf of a plant which, he says, grew from one of the seeds sent out by the RURAL in '79.

ANS.—We do not recognize the leaf as belonging to any of the seeds or plants we have sent out. It looks like that of a Canna.

W. W. W. Griffin, Ga., has some land which he intends to reclaim from a salt marsh, and he asks whether it would be an excellent place for growing asparagus.

ANS.—Yes.

D. E. McA., Tryon, N. C., says he has forwarded specimens of fruits from Tryon Mountain.

ANS.—They have not been received.

N. S., Nineveh, N. Y., says he sent some specimen grapes for name.

ANS.—They have not arrived here.

J. H. S., Alpena, Mich., asks what is the proper season for girdling grape vines.

ANS.—As soon as the fruit is set.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, OCT. 9.

D. F.—W. H. Y.—Dr. A. E. S.—S. E. V.—E. P. P.—F. D. C.—A. S. S—S. L. I.—A. B. A.—R. S. P.—S. F. B.—G. A. G. Jr—H. M.—S. K. M.—J. B. A.—A. L. J.—A Subscriber.—T. T. L.—E. L. A.—W. G. T.—W. C., M. D.—G. E. N.—E. L. P.—F. N.—L. L.—G. G.—F. W. R.—A. L. J.—H. S.—J. B. C.—E. N. B.—H. B.—E. W. S.—C. H. E.—R. W. F.

Hop Bitters have more patience than Job, curing thousands of patients daily. See Proverbs.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

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THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, OCT. 16, 1880.

SPECIAL NOTICE.

MANY of our subscribers are sending us the required amount of postage stamps (six cents) requesting us in return to send the White Elephant Potato, as if additional postage were required for the other seeds or a separate application necessary. We beg our readers to understand that six cents are all we ask from them for the *entire* distribution—the rest of the postage the RURAL pays. Applications may be made from now until March. Write the name and address plainly and say "SEND SEEDS." That is all we desire except that our friends will not stick the postage stamps to their letters.

OUR new posters and premium lists are now ready, and will be sent without charge to all who apply.

FIRST, *thorough preparation of the land* by plowing, harrowing and rolling. Second, *drilling in the seed* from one to two feet apart, according to the size of the stalks of the variety planted and its suckering habit. Third, FLAT cultivation. Fourth, *sufficient* cultivation to keep the surface mellow and free of weeds. The above we believe to be the treatment to which we owe our immense yields of Indian corn.

REPUBLICAN and Democratic politicians, from platform and editorial room, are loudly claiming for their respective parties a monopoly of the praise due for the present prosperity of the nation. The former attribute it to the course of the Administration; the latter, to the action of the present Congress. Was there ever a stronger proof of the unscrupulous mendacity of this brazen-faced class than this assignment to political faction of the merit due almost exclusively to the agriculturists of the country? If the restoration of prosperity to the nation is indeed a valid ground for placing in control of the government the class that has been mainly instrumental in accomplishing it, then farmers to the front, and let us have a farmer President and Administration. Thus shall the farmers of the country perpetuate the prosperity they have created. But, alas! the millenium has not yet begun.

THE FINANCIAL STATISTICS OF THE COUNTRY make an excellent show. Although breadstuffs and cotton, our principal exportable commodities, have hardly yet begun to move, still gold is already flowing into the country from Europe at the rate of about $4,000,000 a week, $28,000,000 having been received from the first week in August to the beginning of this month. During September the public debt was reduced nearly $7,000,000, making a reduction of $26,000,000 since the commencement of the fiscal year, June 30 last. Since 1865 the debt has been reduced $900,000,000, and not only has the interest on this vast sum been saved, but that on the remainder has been greatly reduced by paying off the debt on which there was a high rate of interest, and, instead, borrowing money at a lower rate. To some, however, the justice and expediency of great haste in paying off the public debt are more than doubtful. It is done to lighten the burdens of future generations; but has not the present generation already done enough for those that are to come? Has it not poured out its blood and treasures profusely, chiefly for their benefit? And why should its industries be hampered by excessive taxation to pay a debt which they owe us, inasmuch as it was mainly incurred for their welfare, and which, with the inevitable development of the wealth of the nation and the rapid increase of its population, they will be better able to pay than we are?

THICK AND THIN SEEDING.

CONSIDERING the question of thin *vs.* thick seeding of grain, there is this to be said: Every garden, whether vegetable or flower, shows that those plants which have plenty of room are larger and more vigorous than those which are crowded. Even though the soil is no richer or even poorer, every part of the plant receives its due share of sun and air. The richer the soil, then, the *more* room within certain limits a given plant requires. To sow three bushels of wheat per acre upon strong land well prepared, would be to crowd the plants and thus to deprive them of the air, light and moisture necessary to their full development. Half, perhaps one-third, of that amount of seed would, under such conditions, furnish the plants with the needs of a healthy existence. We should then have larger stems, larger heads, heavier grain and an increased power of resisting diseases and the attacks of insect pests. The exact amount of seed which should be sown per acre, however, must so vary according to soil, preparation, climate and the characteristics of the varieties sown that, guided only in the avoidance of extremes by what we know of the laws of plant life, no rules can be laid down. It is a matter for each farmer who should know all about those conditions, to determine for himself.

AGRICULTURAL SCHOOLS.

THE agricultural colleges are complained of for not fulfilling the promises made for them of giving farmers or sons of farmers a practical knowledge of agriculture, and for not annually turning out a crop of educated youths who will make the wilderness blossom as the rose, to a profit as well as to beauty.

When Mr. Morrill proposed the bill giving aid to these colleges, the objection was made to him that it was not *colleges* but *schools* which the country wanted. His reply was that "one college in a State would be enough to furnish teachers and experimental operations, while the nation could not well assist the States in establishing schools. But," said he, "the States will second the enterprise by themselves establishing schools of the rudiments of agriculture and mechanical pursuits."

The question now occurs—is it not practicable to organize a system of schooling, or modify the present system, so that some acquaintance with the rudiments of soils and cultivation, as well as with fibers and materials and the use of tools and machinery upon them, will be taught? It is not the colleges which can be of use to the great number of young men, but schools may be, and it is believed to be as good discipline for a boy to be half of the day in connection with observations and the study of nature growing and dormant, as all day confined to the abstractions of books, as now practised.

IRISH AGITATION.

THE agitation in Ireland seems to be fast approaching a phase in which the Government must either make large concessions not only to the tenantry, but also to the politicians of the island, or else adopt strong repressive measures. The agitation against landlordism has combined with the agitation against British Rule—the Land-leaguers have "pooled issues" with the Home Rulers and Fenians, and the union has increased the boldness of the speakers at public meetings and inflamed the populace to more frequent deeds of violence against the persons or property of obnoxious landlords or of tenants who either pay rent when their neighbors refuse to do so, or are rash enough to take land from which the former occupiers have been evicted. Not a week passes without a murder or an attempt at one, and frequently two or three are perpetrated in different parts of the island within as many days. Resident landlords live in a state of constant apprehension for their own safety and that of their families and properties while deriving little or no income from their land, so that many of them are already on the verge of bankruptcy. Absentee landlords, while shifting the risks of violence on their agents, receive little but execrations and hatred from their estates, while both classes are threatened by a national strike against rents. Such a measure would inevitably bankrupt many of them and greatly incommode almost all; nor could the whole disposable force of the British army evict the tenantry of the country should they combine in their refusal. As usual in public commotions in that island, factions have already arisen, and the Protestants of the north are being vehemently urged, in the name of their allegiance to the British Crown, to arm and organize against the Catholics of the rest of the island. The present movement, however, is not confined to the adherents of any particular religion, for some of the bitterest and ablest of its leaders are staunch Protestants. At present serious trouble seems inevitable in the near future, and rebellion or revolution looms grimly in the backgrounnd.

OLD BUT GOOD.

ONE of the most interesting signs of our national prosperity is the lowering of the rate of interest in the West. A few years ago 10 per cent. was the usual rate at which money was loaned to farmers, and often even more was exacted either in the form of interest or a bonus for the loan, or as commissions or other expenses for procuring it. The wealth of the people, however, has increased so rapidly of late that the demand for this sort of accommodation has greatly decreased, and as the needs of the people have grown less, the exactions of capital have diminished. It is doubtful whether there has ever been a time when so much real money has been in the hands of the agricultural community there as at present. For the last three or four years crops have been excellent in quantity and quality, prices have been good always and sometimes very good, and previous distress has taught the people the advantages of economy, and made them careful in expending their accumulations. Mortgages in vast numbers have been paid off; new dwellings and barns have been built and paid for; farms have been greatly improved; better stock has been largely introduced; new furniture and household conveniencies have brightened the homes and lessened the toils of thousands of families. The crops and the prices this season also promise to add to the general prosperity, and all signs are hopeful that after this year the number of industrious, wide-awake farmers will be comparatively small, who can apply to themselves our earnest advice, reiterated often at this flush season—"Get out of debt."

GOING TOO FAR.

DURING the past year the starving settlers in Western Kansas have been loud in their complaints of the misrepresentations by which railroad companies had induced them to immigrate into that arid region on the assurance that the land and climate were admirably adapted to farming purposes. Confiding in these protestations, thousands abandoned their old homes, with their fond memories and friendly associations, and journeyed to the Land of Promise in the Far West. In hundreds of cases they went too far, however, and encamped in the desert beyond, where for the last couple of years their labors have failed to give them even a scanty livelihood, and had not help come from the prosperous parts of Kansas and the neighboring States, the newcomers who could not get away, would have found graves instead of homes in the land of their adoption.

It is not unlikely, however, that this region, which with its Buffalo and other wild grasses is even now the great grazing range for the vast herds of the West, may yet be brought under successful tillage; but, if it shall, it will probably be at the cost of many years of severe labor on the part of successive bands of transient settlers. The waves of westward immigration, breaking on the edge of the "Great American Desert," will recede and again advance, gaining a little on the waste on every return. Just as on the shore of the ocean, too, the advancing tide often forms pools in favorable spots ahead of the line of incoming waters, so small areas of the "desert," which springs or streams may render less inhospitable than the surrounding waste, will doubtless be permanently settled in advance of the general line of colonization. But in view of the large tracts in every way well adapted for agricultural purposes, that still remain unsettled, not only in all the frontier and most of the Western States, but here and there also in the Middle and Eastern States and still more in those of the South, the wisdom of facing the grievous hardships that must be endured by the pioneer subduers of the waterless regions west of the 100th parallel, is more than doubtful, and the morality which for selfish greed tempts the ignorant to the venture by all manner of alluring devices, is worthy only of the soulless corporations that practice it.

Even for those for whom the promising future of Kansas has an irresistible attraction, there still remain open to settlement large tracts of land in every way excellent for farming purposes in that State east of the "desert" line. Into this world of ours thousands have been born on this and the other side of the Atlantic, whose arduous mission it seems to be to act as pioneers beyond that line and fit the country for more steady but less enterprising citizens, and to those among these who intend emigrating westward before the others have accomplished their mission, we would say in warning tones: "In going West, as in other affairs in life, don't go too far."

BREVITIES.

IN husking Chester Corn we have found one ear with 28 rows and 69 kernels in the row. The ear is just one foot long and nine inches in circumference in the middle.

IN England we see that there are two kinds of variegated tulip trees offered for sale. One has a yellow-blotched leaf, the other a yellow-margined leaf. Both kinds are said to be as hardy as the type, and very handsome. We are not aware that these have been offered by American nurserymen.

THE new potato, Magnum Bonum, is well thought of in England, where it originated. Mr. Rose, of this country, has a new and valuable seedling which unfortunately he has also named Magnum Bonum. He sent us a box in the Spring for seed, which was planted at the RURAL GROUNDS. The yield has been heavy—the quality is good.

THERE are pretty strong indications that the price of wheat will be good this year, and as seen by our market reports elsewhere, quotations have already a decidedly upward tendency. At home the surplus, it is believed, will not be so great as was anticipated earlier in the year, as the crop has not thrashed out as well as was expected.

THE export of apples increases in magnitude as the season advances. For the present week we learn of freight contracts from this port for about 13,000 barrels for Liverpool; 900 for London; 3,000 for Glasgow, and 15- for New Castle, and doubtless the Continental lines also will engage in the business. The White Star and Inman lines have the bulk of the contracts for Liverpool. The ocean freight to all the trans-Atlantic ports is four shillings or one dollar per barrel.

OUR benevolent friend, the A. A. in a conspicuous manner declares that its hints and suggestions *are never copied from previous years*, but are freshly prepared for every month. Nevertheless it copies, *verbatim et literatim* from October 1878, a large number of the hints, etc., given for 1880; and in doing that furnishes in itself a conspicuous example for its own column devoted to humbugs. But it is not *this* sort of humbug that the A. A. finds it advantageous to expose. There is no money in it.

THERE are many vines that are attractive for special features; but in all respects, for this climate, there is none more desirable than the honeysuckle. It has not a fault. Its flowers are fragrant and charming. Its foliage is ample, half evergreen, bright and pleasing. It will make a thing of beauty of an old stump—a neglected corner. It will clothe an arbor, trellis or piazza with its thick-growing, slender stems, and its delightful perfume will be grateful to passers-by. Of all honeysuckles, no other is more desirable than Hall's Lonicera Halleana.

ONE of the finest beds of flowers we have ever cared for was one of seedling geraniums (pelargoniums,) about 45 feet in circumference. The plants were pictures of health during a hot, dry Summer and this luxuriance was due, we believe, to a mulch or covering of grass renewed twice or thrice during the season. This was strewn over the soil between the pelargoniums soon after it had been cut, about two inches thick. Being fine and short it soon dried, becoming sufficiently matted together to keep it in its place. This, besides suppressing the growth of weeds, acted as a cooling shade to the soil and a preserver of the moisture beneath.

BLESS us, how pleased we shall be when election is over! We saw the other day two fine hickory trees to be used as "liberty poles" that had been cut down by a farmer in the vicinity of the Rural Farm. It occurred to us—especially as we know he is not a very successful farmer—that he might have been better employed. Farmers cannot afford to waste their time over politics. It is well to talk of patriotic motives and all that. But patriotism lies in the direction of making the farm pay and the farmers' families comfortable and happy. As for the average political paper, there is no truth in it, and farmers could determine as well whom they should vote for if they never read a line of its pages.

WHILE the rapidly increasing manufacture of glucose is a benefit to farmers in that it affords a growing market for their corn, the abuse of the manufactured product is becoming a serious injury to them as well as to the rest of the community. Analyses made in different parts of the country show that the adulteration of sugar by glucose is largely on the increase. If the glucose were pure, no effects injurious to health would result from its use; but as its sweetening capacity is considerably less than that of cane sugar, its employment would be a fraud, inasmuch as it is estimated that fifty cents' worth of corn would produce five dollars' worth of sugar at present prices. Moreover, the glucose used as an adulterant is rarely pure, and consequently is generally unhealthful, causing dyspepsia and similar disorders. Formerly the presence of glucose in sugar could be detected by a sticky feeling, so that granulated sugar might be considered free from it; but the art of adulteration has made such strides of late that now fine-looking specimens of granulated sugar are found on analyses to be badly but skillfully adulterated with the product. Nearly all candies and other "sweet-stuffs," as well as honey and nearly everything into whose composition sugar enters are similarly adulterated, and from the frauds thus perpetrated on the public the farmers are as great sufferers as the rest of the community.

Literary Miscellany.

THE MINISTER'S DAUGHTER.

JOHN GREENLEAF WHITTIER.

In the minister's morning sermon
He had told of the primal fall,
And how thenceforth the wrath of God
Rested on each and all.

And how, of His will and pleasure,
All souls, save a chosen few,
Were doomed to the quenchless burning,
And held in the way thereto.

Yet never by faith's unreason
A saintlier soul was tried,
And never the harsh old lesson
A tenderer heart belied;

And, after the painful service
On that pleasant Sabbath day,
He walked with his little daughter
Thro' the apple-bloom of May.

Sweet in the fresh green meadows
Sparrow and blackbird sung;
Above him their tinted petals
The blossoming orchards hung.

Around on the wonderful glory
The minister looked and smiled;
"How good is the Lord who gives us
These gifts from His hand, my child,

"Behold in the bloom of apples
And the violets in the sward
A hint of the old, lost beauty
Of the garden of the Lord!"

Then up spake the little maiden,
Treading on snow and pink:
"Oh Father! these pretty blossoms
Are very wicked, I think.

"Had there been no Garden of Eden
There never had been a fall;
And if never a tree had blossomed
God would have loved us all."

"Hush, child!" the father answered,
By his decree man fell;
His ways are in clouds and darkness,
And He doeth all things well.

"And whether by His ordaining
To us cometh good or ill,
Joy or pain, or light or shadow,
We must fear and love Him still."

"Oh, I fear Him!" said the daughter,
"And I try to love Him, too;
But I wish he was good and gentle,
Kind and loving as you."

The minister groaned in spirit
As the tremulous lips of pain,
And wide, wet eyes uplifted
Questioned his own in vain.

Bowing his head, he pondered
The words of the little one;
Had he erred in his life-long teachings?
Had he wrong to his Master done?

To what grim and dreadful idol
Had he lent the holiest name?
Did his own heart, loving and human,
The God of his worship shame?

And lo! from the bloom and greenness
From the tender skies above,
And the face of his little daughter,
He read a lesson of love.

No more as the cloudy terror
Of Sinai's mount of law,
But as Christ in the Syrian lilies
The vision of God he saw.

And as when in the clefts of Horeb
Of old was His presence known,
The dread Ineffable Glory
Was Infinite Goodness alone.

Thereafter his hearers noted
In his prayers a tenderer strain,
And never the gospel of hatred
Burned on his lips again.

And the scoffing tongue was prayerful,
And the blinded eyes found sight,
And hearts as flint aforetime,
Grew soft in his warmth and light.

INMATES OF LESTER HALL.

(Continued from page 678.)

CHAPTER X.

"NOT handsome?" had been Cecil's mental verdict at her first glance at Dr. Lawrence, but now she was inclined to alter it, for there was something peculiarly attractive in his appearance—in the proud turn of the head, the tall, strong form, the keen gray eyes; and the mouth, shaded though it was by his heavy moustache, was a beautiful one, firm and resolute, yet tender and refined. There was something, too, in his manner which Cecil liked, although it piqued her not a little to see that he seemed quite indifferent to her presence—something strong, yet tender—imperative, yet gentle—and some feeling rose in the heart of the young girl that she would like to have such a man at her feet; that such a conquest would be a greater victory than any other she had yet achieved. Certainly no other man had appeared so heedless of her beauty as this big, unimpressionable doctor.

"How is your patient, Lawrence?" said Mr. Edgar's voice at this juncture, at the half-open door, and the doctor turned from the window and looked at Cecil with a smile, which was partly in his eyes and partly in his mouth, and which was a singularly pleasant one.

"She is better. You may come in, Edgar," he said. And Mr. Edgar came in, and began expressing his regret at the accident.

"I never was so vexed at anything," he said, eagerly. "I have been abusing those idiotic grooms by way of relieving my feelings; but it has not done much good. Lawrence, if Miss Cecil is equal to coming in to dinner, you shall have the honor of taking care of her."

"She is quite equal," said Cecil, smiling. "Perhaps Dr. Lawrence thinks that he has had sufficient trouble with me already," she added, gaily, as she put her hand through the doctor's arm. "Nevertheless, he shall, as you say, Mr. Edgar, have the honor of taking me in to dinner. Do you object?"

He only answered her by one glance of the gray eyes—but under that glance her own eyes fell! She had been too well accustomed to admiration both expressed and understood, not to read it at a glance, and generally she heeded it but little; but there was that in his eyes which told her that his admiration was not merely the ordinary feeling her beauty seldom failed to exact, but something far deeper, something which might strengthen into love!

Sir Edgar's dinner-party was a brilliant one; the guests were numerous and well selected; the dinner, of course, perfection; the host himself was in the highest spirits, while his eyes so frequently sought Mattie's face with an eager glance, that it was no secret to any of the guests what his feeling towards her was.

To Cecil Lester, and to the man seated beside her, the dinner was evidently a pleasant one. She was pleased to be charmingly gracious, more gracious than anyone present could remember having seen her before—and Dr. Lawrence had no power to resist such witchery as hers. It may be that once or twice, as his eyes fell on her matchless loveliness, he thought of the madness it would be to love her—he, a physician, not unknown perhaps, but as yet with little wealth or fame, but he forgot all prudence in the magic of her society, and all his reserve melted as ice before the sunshine; and although he kept his quiet, reserved manner, his eyes spoke all that his lips left unsaid.

When dinner was over, and they were sauntering up and down the terraces and gardens, he lingered still by her side, intoxicated by her wondrous beauty and grace, heedless of his danger, feeling only that he was happier than he had ever been in his life, and without pausing to analyze his happiness. And indeed Cecil herself was almost irresistible that night. There was on her an infinite gentleness, a gracious sweetness, which had a wondrous charm. All her haughty coquetry seemed to have fallen away from her.

There was that old-world deference and veneration in the Doctor's manner, which brought out Cecil's better nature, and drove away all her pride and indifference. He talked well—his conversation was not that vapid, empty, even if sometimes brilliant, society small talk. He spoke of life as it is, real and earnest; he gave her, quite unconsciously, glimpses of his own life, brave, self-denying, and laborious. He spoke on many topics; and even those on which Cecil spoke lightly and brilliantly, with half disdain, half satire, he touched upon earnestly, as if in all things to him there could be no half measures, and Cecil thought she read a frank, loyal nature, which had nothing to conceal.

"I may see you again, perhaps," he said, as she gave him her hand in farewell.

"I hope so."

He stood bareheaded as the drag drove away; and even for some minutes after it had disappeared he remained there looking in its direction, lost in thought. And as he drove away in his brougham he was haunted by the perfect loveliness of Cecil Lester's face.

"How do you like my friend the doctor, Miss Cecil?" said Mr. Edgar, as they drove back to town.

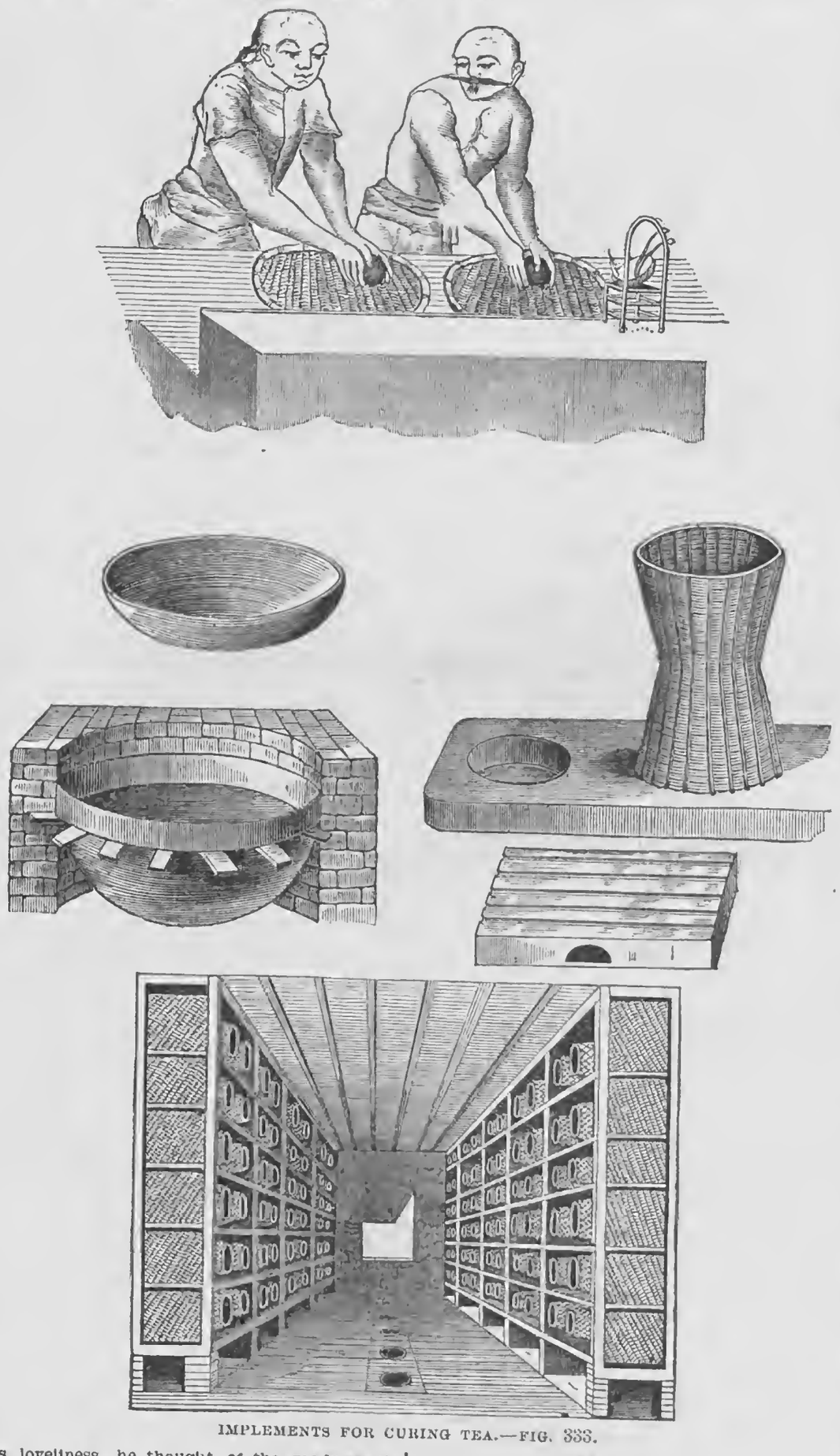
"He is very pleasant," said Cecil, languidly, although there came a faint rose-flush in her face as she spoke.

"Pleasant! he is one of the best fellows out," said Mr. Edgar warmly. "The finest fellow I know is Lawrence Carewe, whatever his past life may have been."

There was a moment's silence, then Cecil said, calmly:

"What name did you say, Mr. Edgar? I fancied his name was Lawrence.

"So it is," replied Mr. Edgar; Lawrence Carewe."



IMPLEMENTS FOR CURING TEA.—FIG. 333.

CHAPTER XI.

TEMPTATION.

"I believe the wisest thing for me to do would be never to see her again."

Dr. Carewe was standing in his study, holding the invitation to Mr. Daton's ball between his fingers as he made the above remark, debating with himself whether he should go to this entertainment, although he was dressed and the carriage was waiting to convey him to it. He had accepted the invitation without hesitation at the time of its arrival, but in the week which has elapsed he has repented that acceptance.

On three several occasions he had met Cecil Lester since his introduction to her at Mr. Edgar's Richmond dinner, and the wonderful charm she had exercised over him on their first acquaintance had deepened and grown stronger. The quiet, even tenor of his life was completely disturbed; he was restless, unhappy and absent. He could no longer take pleasure in the pursuit of his profession, which had been his greatest joy; his studies palled upon him; he, hitherto the most practical of men, had become dreamy, living two lives, heeding little how time went or what he did. He, who hitherto had no time to fall in love, as he had said carelessly in the past, now fell a captive to a sudden passion, strong as it was imprudent, mad as it was irresistible.

"Shall I go or shall I not go?" he muttered to himself, as he paced up and down the study; and as my readers will readily surmise, the answer to his question was in the affirmative, and Dr. Carewe went out of his house, entered his brougham and drove to Mr. Daton's.

The ball was at its hight as he entered; numerous as had been the invitations issued and accepted, the house of the merchant prince had ample accomodation for his guests. It was a magnificent *fete*; no pains or money had been spared to make it a success, and the gold spent so lavishly had done what had been asked of it. Everything possible to add to the enjoyment of the guests had been procured, and the guests were enjoying themselves as much as it is ever possible for those belonging to the *creme-de-la creme* of society to do.

One object the ball certainly succeeded in if it had been meant to do so, the betrothal of Mr. Edgar and Miss Lester was made publicly known thereby, for Cecil had been correct in her assertion that "Richmond was an excellent place for that kind of thing." When on that evening Sir Edgar had spoken of his love to Mattie, she had not repulsed him; and Mr. Daton's consent to their engagement had been cordially given.

Mattie was discharging her duties as hostess, very gracefully, but a little languidly, for she was tired; and having lately caught a troublesome cold, which had ended in her cough, was not quite in her usual health, although she seemed very happy in the society of her happy *fiance*.

Around Cecil, as was usual on such occasions, clustered a little court of admirers, more eager, more sedulous, more devoted than around any other; and the young girl herself was queening it with all her usual grace and haughtiness. Dr. Carewe watched her from where he stood and marked her great beauty with eager, longing eyes, wondering how he had ever dared to hope or dream that he might possess it.

She was dressed in white silk, which fell around her in heavy, lustrous folds, with rich soft lace about it; and pearls of great beauty and value were twisted round her throat and in the masses of her bronze-brown hair. There was not a spot of color about her, save in the red lips, and she looked wondrously beautiful.

"Ah, Dr. Carewe! is it you?" she said, carelessly, as Lawrence made his way to her side; and as he bowed low in answer to her indifferent greeting, she continued her vivacious conversation with a young man of great wealth, who was her latest victim. Although for a time she took no further notice of him, Dr. Carewe stood watching her, wondering at the dazzling glitter of her wit, the brilliance of her intellect, as those around her vied with each other in vivacity and quickness of repartee. Soon she dismissed her court and with a slight motion of her fan signed Dr. Carewe to her side.

"You don't care for dancing?" she said, with a smile. "You give fresh air the preference. Will you care to come out on the balcony?"

"Will I care?" he said, softly, under his breath; and as she laid her hand lightly on his arm and felt the quick throb of his heart, the proud, lustrous eyes darkened, as if with some sorrowful or scornful thought.

"You came late," she said, glancing at him with a slight smile, as she sank on a low-cushioned seat among the flowers of the balcony. "Were you detained by patients?"

"No," he said, calmly.

"Why did you not come earlier then?" she said, imperiously.

"You do me too much honor in taking such an interest in my late appearance," he said, trying to speak with indifference, but with a tremor in his rich, deep tones.

"Show me that you appreciate the honor by giving my question an answer," said Cecil, smiling, and letting her glance dwell upon him for a moment, the lustrous eyes meeting calmly—almost mockingly, it would seem, the passion in his own, as they looked down at her.

"I was undecided whether to come or stay away," he said, hurriedly. "It would have been prudent to have done the latter, but——"

"But, what?"

"But I did not, you see!" he rejoined, with a little bitter laugh; "although Heaven knows it would have been wiser to do so!"

"Why would it have been wiser?" she said, looking at him through her long lashes.

For a moment he did not answer—perhaps he was afraid that if he spoke the burning love he felt towards her would have found utterance; then he said, half lightly:

"What has a musty old doctor in common with such a scene as this? He would feel more at home by a death-bed!"

"Even if it were through his fault that one lay there!" she said, without looking at him, with a tone in her voice which was new to him.

He looked at her in some surprise, and for a moment answered nothing; then she rose from her seat, and moving across the balcony, leaped over the side, toying with the flowers.

In a moment he joined her.

"Do you think death the most cruel thing that could happen to one we loved?" she said, abruptly.

"No," he answered, musingly, "I can imagine worse even than death."

"Yes," she said, suddenly, "disgrace and shame!"

There was a bitter intonation in her tone which struck him; he glanced at her with some painful feeling in his gaze.

"Ay," he answered, "and the unworthiness of one we love."

"Even so," she said, with strange intensity. "That is the bitterest suffering of all."

He drew a step nearer to her as he stood by her side.

"You can have never known that suffering,"

he said, gently. "Heaven keep you from ever doing so!"

"I will never know it," she said, with a strange little laugh. "Because——"

"Because I shall never love!" she answered, coldly.—To be continued.

MAGAZINES FOR OCTOBER.

HARPER'S MAGAZINE.—Contents: The Ascent of Fujiyama; Illustrations — Fujiyama, from the Otomitona Pass—The Crater of Fujiyama—The Morning Shadow of Fujiyama—Pilgrim's Rest; Art-Needlework; Keats—A Sonnet; Reminiscences of John James Audubon; A Romance of the Hebrides; An Autumn Holiday; A Demon-Hunt with St. Hubert in Touraine; Does Farming Pay? A Poem; The Metropolis of the Prairies; White Wings—A Yachting Romance; The Throckmortons—A story; Some Peculiarities of Turkish Politics; Washington Square—A novel; Is it all there Still—A poem; "Bad Peppers."—A story; A Buddhist Vision—A poem; Modern Bee Culture; Morning and Evening by the Sea—A poem; The "Sophia Walker;" Editor's Easy Chair; Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

A ROMANCE OF THE HEBRIDES.—The world, even in its hero worship, is a discriminating world. It indeed loves all greatness, but it dearly loves successful greatness; and it is not to the martyrs of "lost causes" that it sings anthems and erects monuments. Even among the ranks of this abortive chivalry it exercises a partial respect. The honorably born have more than their just share of honor thrust upon them; those of humbler birth are often mulcted of even that fair proportion which they have too well earned.

Such reflections as these, mingled perhaps with some indignation, must force themselves upon the hearts of all who stand once in a lifetime within the beautiful kirk-yard of Kilmuir, and look over "cloudy seas" and the bold islands of the Hebrides. For here, on this lonely hill, without a stone to mark her grave, rests the bravest and the fairest of the Macdonalds; the devoted adherent of the Stuarts against the house of Hanover in England; the eager partisan of the house of Hanover against the colonists in America.

It was in 1853 I stood within the ruinous family mausolcum of the Macdonalds of Kingsburgh. Anxiously I pushed aside the high thistles to look for some remnant of a headstone that her sons had placed above her grave in 1790; but every particle had been carried away by admiring pilgrims, and its only guardian was the somewhat remarkable growth of Scotch thistles that not inappropriately shook over it their purple blooms.

"Why is there no monument to Lady Flora?" I asked of the "black Macdonald" who was our guide.

"Is it ta stone ye mean, ma'am? Ta daisies and ta thistles are a heap ponnier. Yes, intect."

But, for all that, it was impossible to avoid contrasting this ruinous plot and its neglected grave with the splendid cathedral of S. Pietro, in Frascati, where in a coffin of cypress-wood, with the crown, secptre, and sword of his race, rests the man whose life Flora Macdonald risked her own to save. For the Prince, the high altar of the cathedral, and a costly marble monument in St. Peter's, Rome; for the simple clanswoman, an unmarked grave on a Hebredian hill.

But though Lady Flora is gradually slipping out of history—in spite of Dr. Johnson's propheey—there is a sentiment of admiration for her wonderful life and character which quietly passes on her name from generation to generation.

THE ECLECTIC MAGAZINE.—Contents: Steel Engraving.—Robbins Reef Light, New York Harbor; Hours in a Library—Sterne. By Leslie Stephen; Peasant Life in Bengal. By J. Talboy Wheeler; Lotters to and from Hans Christian Andersen; A Scandalous Romance; A Reindeer Ride through Lapland; Fiction, Fair and Foul. By John Ruskin. II; The Carver and the Calipa. By Austin Dobson; Jelly-Fishes. By Andrew Wilson, F. R. S. S. Central Asia; The Meeting-place of Empires; Thoughts in a City Church; White Wings; A Yachting Romance. By William Black; Minuets; Romance of Literary Discovery; In Memoria; Tom Taylor. By Thomas Hughes; The Blackbird. By W. W. Story; Instances of Longevity Bitter-Swect; Literary Notices; Foreign Literary Notes; Science and Art; Varieties.

DESTRUCTIBILITY OF HUMAN BONES.—An instance of the readiness with which human bones disappear is shown in the fact that the Dutch Government in 1843 drained off the great Haarlem Lake, on which there had been many shipwrecks and naval fights; and where thousands had found a watery grave. The canals and trenches dug to a considerable depth through the rescued land are estimated to have an aggregate length of thousands of miles, and yet not a single human bone was exhumed from first to last. Some weapons and a few coins and one or two wrecked vessels alone rewarded the efforts and researches of the curiosity-hunters. Here, as in cavern deposits and river gravels generally, works of art alone furnished evidence of the existence of man, even though no part of the deposit could be more than 300 years old, as the lake was formed by inundation toward the end of the sixteenth century.—Eclectic Magazine for October.

THE AMERICAN NATURALIST.—Contents: The Food of the Darters; On the Former Extent of the Triassic Formation of the Atlantic States; Notes on Stone Implements Found in New Jersey; Some Noteworthy Birds; On the Microscopic Crystals Contained in Plants; Editor's Table; Recent Literature; General Notes; Botany; Zoology; Anthropology; Geology and Paleontology; Geography and travels; Microscopy; Scientific News; Proceedings of Scientific Societies.

SOME NOTEWORTHY BIRDS.—That was a memorable event in the annals of bird lore when those Arctic owls made their remarkable raid upon us in our centennial year. What it was that induced *Nyctea nivea* to make that visit in such numbers after the big show was closed, and the world's folk had left, may be a question. Probably the commissariat was under consideration; in which case our snowy owl had grave reasons for his coming. Winter is hardly a prime season for delicacies in the larval line, and the construction may seem awkward, yet it will bear assertion that these birds of Pallas were after grub. Though bold, Nyctea did not put on style. It was simply that sort of personal bearing which comes of innocence. In the Northern cities he even perched on chimney-tops, and in rural places was familiar with men, even unto rashness. Our farmer friend, his family filling the large carry-all wagon, was on his way to church, when lo! by the roadside, "a sitting on a rail," was one of these Arctic owls. No man is himself at all times, and our good friend's piety was sorely tried, for the strange bird actually ogled at him with its big brass-button eyes. He would have railed at the bird; He was on the fence what to do. It is Sunday. Shall he send Thomas back for the gun? The wife suggests they'll be late to meetin'. The bird owes his life to that good woman. In the markets of New York these owls were suspended in strings like poultry. Upon inquiry, Terence was told that they were Spanish geese. "Sure then, for a goose, it has an uncommon knowing face." To many a village "bird-stuffer" in the Eastern States, that Winter of '76 brought a large increase of business. In not a few parlors of my acquaintance, a snowy owl became a fixture, and was pointed to as an avian prize. But our splendid bird has become unable to uphold its reputation. The tidy housewife charges it with bringing in that tiny reprobate, the clothes moth, *Tinea flavifrontella*, it of the yellow face, which after plucking Nivea in spots, finishes on the rep upholstery. A young friend captured one of these Arctic raiders alive. So long as he was well supplied with mice, the bird was quite good natured, and even submitted to the caresses of his master; but the young man found the demands of that hungry maw very exacting; in fact that owlish stomach was too capacious for him to fill, so he killed the bird in order to have it stuffed.—Samuel Lockwood, Ph. D., in Am. Naturalist for October.

VARIETIES

THE only way to have a friend is to be one.

Prejudices are like rats, and a man's mind like a trap; they get in easily, and perhaps can't get out at all.

NEVER does a man portray his own character more vividly than in his manner of portraying another's.

Rome, Italy, now spends $200,000 yearly on its public-schools, and at the beginning of this decade they had none.

In Sweeden nearly two thousand "school gardens" have been established as instruments of useful scientific education.

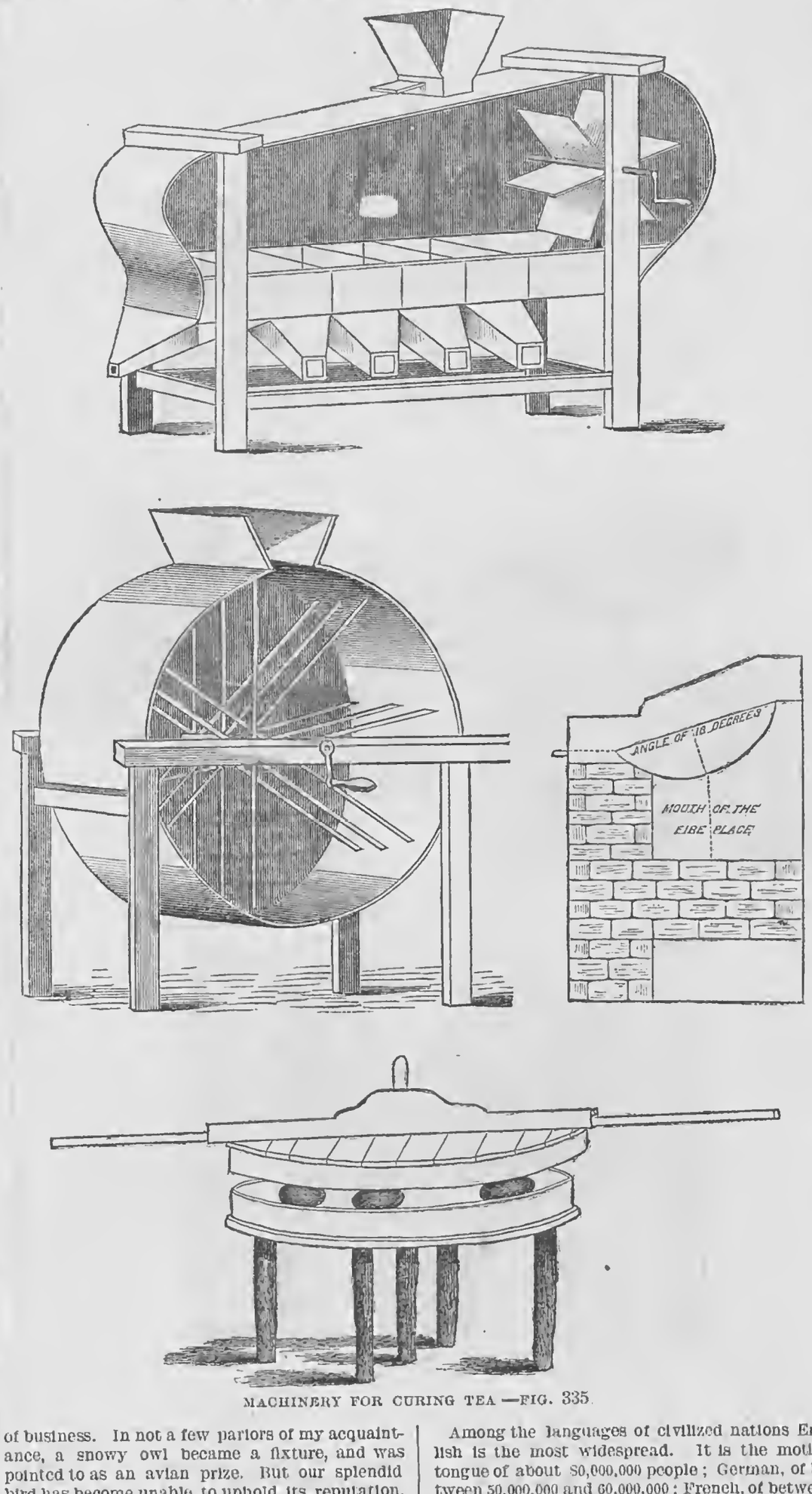
He who is false to a present duty breaks a a thread in the loom, and will see the defect when the weaving of a life-time is unrolled.

Prof. Henry Draper has stated facts which seem to point to the conclusion that it is not improbable that the planet Jupiter is still hot enough to give out light.

German manufacturers have found another use for paper. They make stoves of that material, in which the fire blazes cheerfully without the slightest injury to the paper enclosing it.

No man should be so much taken up in the search of truth, as thereby to neglect the more necessary duties of active life; for after all is done, it is action only that gives a true value and commendation to virtue.—Cicero.

No less than six nations are now engaged in Arctic explorations, chiefly by means of advance stations. Denmark, Russia, Austria, the United States, Germany, and Holland all propose to establish stations in the Arctic regions as a basis for future research.



MACHINERY FOR CURING TEA.—FIG. 335.

Among the languages of civilized nations English is the most widespread. It is the mother tongue of about 80,000,000 people; German, of between 50,000,000 and 60,000,000; French, of between 40,000,000 and 50,000,000; Italians of 28,000,000, and Russian, of between 55,000,000 and 60,000,000.

A DESERVED REPROOF.—Even in this age there are still left some ladies who know what is due to their own dignity. We give an anecdote illustrating this: A certain gentleman had for some time admired a certain lady without knowing her. She had been informed that he desired to know her, and it chanced one day that they met at the house of a friend and were introduced. Exhibiting his sudden sense of satisfaction at the encounter, he darted eagerly forward, and with hands extended, exclaimed, "Happy to meet you, Miss F——; delighted to make your acquaintance." The lady suffered the pendant hand to lie before her as she replied, "You haven't made it yet, sir," giving him to understand that the acquaintance of a lady is not made from a single introduction, nor is her hand to be shaken as if it were a Chinese puzzle. It is to be hoped that the over-bold youth profited by the lesson.

For Women.

CONDUCTED BY MISS RAY CLARK.

TRUE AND FALSE ECONOMY.

I THINK we often make a mistake on the score of economy in the matter of home-made articles. We are apt to congratulate ourselves on the great "saving" we have made in some such enterprise, when in fact, it was a pretty dear bargain.

Passing by the vexed question with regard to the economy of rag carpets, I can't help thinking my friend's home-made, white counterpane was a rather costly affair. There was the first cost of the materials used, coarse, unbleached muslin, and balls of candlewick—the sum would certainly have been half enough to buy a pretty Marseilles spread, which would have been handsomer and more serviceable and far more easily laundried.

Then came the long, tedious process of making. If a woman's time has any money value, it would far more than cover the remaining cost of the bought counterpane.

So the many pieced quilts, which so abound in country places—are not really so economical as seems at first glance, nor really so comfortable as good woolen blankets.

Where they are put together as a pastime, they make very pleasant fancy-work for leisure minutes.

If anyone "takes comfort" in these homemade manufactures, then they become really valuable, even though they are expensive luxuries.

The way to take our recreation is in the manner we like, not in the way that suits some other person.

But young ladies, anxious to save time for self-improvement, would do well to buy, rather than make most of their fancy articles. It takes almost as much money to buy the wool for a knit shawl, as to buy the article itself; and everyone knows how nearly endless is the task of knitting one. So, too, of the many trimmings wrought so laboriously with the crochet needle, you can buy prettier Hamburg edge at almost the cost of the materials.

A few neat collars and cuffs bought at a trimming store, will have a style and finish that cannot be given them when manufactured at home and more real satisfaction is gained and days of worrying saved.

Learn to take the value of time into the account in estimating the comparative economy of home-made articles over those you buy.

What is economy for one person, under some circumstances, is extravagance in another.

Cases in point may readily be recalled. For some house-keepers with neither chick nor child to take up their time, it may be all very well to sit down day after day to the piecing of silk quilts and chair and sofa covers, but for busy, over-taxed mothers, it would be too expensive a luxury.

When working-women learn to buy ready-made clothing more generally, they will have taken an advance step towards their emancipation, and will no doubt, add years to their lives. LOIS.

THE GOLDEN MEDIUM.

No mistress who regards her authority can afford to treat her servants with undue familiarity; neither should she regard them as inferiors; but there is a golden medium to be obtained. Treat your servants with confidence and consideration, and do not suspect them of doing wrong. They must be trusted more or less by the whole household, and trust, in most cases, begets a sense of responsibility. Require careful performance of their duties, strict obedience to your orders, tidiness and cleanliness in their persons, respectful manners and willing service, and make them understand how much their good conduct adds to the comfort of the whole household. They must have time to do their washing and keep their clothes in order, or they cannot be clean and tidy. Treat them with kindness, but never with familiarity. Don't ask unnecessary questions. If they are sad and moody, take no further notice of it than to suggest if (practicable) that the usual holiday hours should be taken on that day, rather than on the one appropriated to them. Without wholesome intervals of amusement, uninterrupted work becomes intolerable. For that reason, servants should be allowed to receive friends, and even lovers, in the evening, when the day's work is done. If you deny them the privilege of companionship, you establish an unnatural condition, which is a premium for deceit and worse than deceit. Servants will have male friends. Do not compel them to hide in areas, or to make appointments, but let everything be honest and above-board. There are and must be different modes of pleasure and enjoyment, and in the gratification of wants and wishes, but there is a common womanhood. Let us remember this gratefully, and feel how much it is in the power of every mistress of a household to elevate those she employs. "Good mistresses make good servants."

INTERROGATIVE.

DID you ever hear a woman say that she found no time for reading, and then see the same woman fretting away her time on patch work and other silly trifles?

Did you ever see a woman lay in a good stock of currant and elder-berry wine; use cider daily, on her dinner table, and then mourn over the slow progress of temperance reform?

Did you ever hear a man express his aversion to "strong-minded" women, and still show a decided fondness for discussing politics and other current topics with an intelligent female friend, to the utter neglect of his dear domestic angel, who doesn't read the papers?

Did you ever hear a woman deliberately lie to her little child, about the most sacred mysteries of life, and still call herself a Christian mother?

Did you ever hear a minister discourse beauti-

fully and touchingly upon our duty toward our brethern who are not favored with earthly riches; speak so truthfully and tenderly of our equality in God's sight, and still have an evident partiality for the society of those of his people who possess the greatest number of loaves and fishes?

Did you ever know a man who would cheerfully and uncomplainingly squander twelve or fifteen dollars per year on tobacco, and yet would growl like a caged bear, if his weakly wife hired a little extra labor?

Did you ever know a professing Christian who prayed earnestly and persistently for the temperance work and workers, and yet would vote for "party" when there was a prohibition candidate in the field?

Is'nt consistency a raro jewel? ERMENGARDE.

THOSE HUSBANDS.

I see that husbands are taking a course of lectures from various sources, and I thought that I would have a word to say too. As to husbands waiting on their wives there is something to be said on both sides. A wilful, selfish, or indolent wife with an easy, amiable husband is capable of becoming a fearful domestic tyrant. When the wearing care of little children comes it is so easy to call on some one else to do this or that, or to amuse the children, and often a tired laboring man who enters his door at night, needing rest, finds that his labors have but just begun. So much is required of him—which he is too kind to refuse to do—that he is made a slave of, by means of his noblest qualities.

It is not always a man though, who becomes so situated. An affectionate wife whose delight it is to make those she loves happy, labors to please until her loving services are exacted of her as if they were a right; often unthinkingly it is true, but a woman is a drudge all the same, if her whole time is required of her, to be spent in pleasing others even her dearest friends.

All individuals whoever and whatever they are, have certain inherent personal rights which they should themselves respect and then others will do so also.

Men and their wives should be considerate, and reasonable in their requirements of each other in order to be happy. AUNT RACHEL.

TAKING LEAVE.

It is not easy to terminate a visit or call in a thoroughly easy manner. Some people do not know how to leave a room. It is painful to see them anxious to beat a retreat from a call or a visit, and yet apparently as unable to escape as rats in a trap, although nothing bars their egress, and all persons concerned would gladly dispense with their company. The art or science of departure, both from localities and positions, is worth studying in great as well as little matters, and calls for the exercise of tact. No visitor is likely to be popular who has not the tact to leave at the proper time, a house at which he may be staying. One of the greatest difficulties in bidding farewell to a host is to convey to him the impression that you have enjoyed yourself. Expressions of thanks for a pleasant visit are apt to have a stereotyped and conventional ring about them. A hospitable man likes to know that his friends have been happy; but when each of them mutters a sort of little grace on his departure, he feels that they are but paying him an ordinary social compliment. A smile, or a cordial pressure of the hand, is more eloquent than words.

WEDDING ANNIVERSARIES.

The following gives the time and names of wedding anniversaries:

First year—Cotton; Second year—Paper; Third year—Leather; Fifth year—Wooden; Seventh year—Woolen; Tenth year—Tin; Twelfth year—Silk; Fifteenth year—Crystal; Twentieth year—China; Twenty-fifth year—Silver; Thirtieth year—Pearl; Fortieth year—Ruby; Fiftieth year—Golden; Seventy-fifth year—Diamond.

ABOUT WOMEN.

It has been ascertained that Amasa Stone is the man who will give $500,000 to Western Reserve College, at Hudson, Ohio, if it shall be removed to Cleveland. At a meeting of the trustees, held lately, it was practically resolved to remove the college to Cleveland and to change the name to "Western Reserve University." The college already has an endowment of $250,000.

THE Princess of Wales is a picture of modest good taste as she walks the deck of her husband's yacht. She always wears there a plainly made dress of some dark color, with a sailor's hat, or a close soft hat, which is exceedingly becoming to her. Her little daughters are dressed in dark serges or simple cottons, and sailors' hats always crown their long, fair hair.

A WOMAN on a New Brunswick railway displayed rare presence of mind the other day. She was walking over a long and narrow bridge, when a train came upon her, and there seemed no way of escape. Instead of losing her head and jumping into the water, as many would have done, she deliberately lowered herself between the sleepers and hung there until the train had passed over her; then she drew herself up and resumed her walk. The astonished train hands gave her three cheers for her display of courage and muscle.

MRS. PRESIDENT HAYES is not dead yet, nor likely soon to be. But of her, while yet living, it may be said: "*nil nisi bonum.*" Just now she is president of a charming cottage in the beautiful grounds of the National Soldiers' Home, a mile or two out of Washington, where, amid fruit, flowers, books and innocent amusements, the first family in the land while the cool hours of this delightful Summer away. Mrs. Hayes is noted in Washington for one thing which seldom gets into print: "doing good by stealth." In this exercise of her religious principles, she knows no seasons—only need and suffering. Where there is a sick man or woman known to Mrs. Hayes, her carriage will be seen there afternoons, and "Jere," the coal-black coachman, who descended to this dynasty from the last will be found disguised as a ministering angel. From the modest suburban cottage, superb cream, rare peaches, pears, grapes, dainty pots of butter, every delicacy that its vicinage affords, finds its way, via "Jere" and the carriage, to the bedside of the afflicted. Mrs. Hayes' successor will have to be a very superior woman to fill her place.—Woman's Journal.

Purify the blood, Cleanse the Stomach and Sweeten the Breath with Hop Bitters.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

BETTER HELP IN OUR KITCHENS.

T. M.

The question was asked in the RURAL some time ago why girls to help in our kitchens were so hard to be found. The question was answered by some one saying it was false pride that kept so many girls from earning a living in that way, I agree with the writer; but, instead of the false pride belonging to the girls, I think it very often belongs to those who so much need help. I do not think the pride is false that will keep a young girl from doing work which is called drudgery and considered so degrading as to unfit her who engages in that kind of labor for taking her seat at the table with those for whom she works, or when her day's work is done for a place in the family room. I admire the pride that will cause girls to strive hard to be respectable.

But why housework should be called drudgery more than other kinds of labor, is what I don't understand. I know it requires much watchful care to prepare good food and keep a nice, comfortable home for a family; but, while it is constant labor, is it not much more healthful than many other kinds of work in which women engage? When I engage a girl to do our sewing in our house, I never think of asking her to take her meals in the kitchen while we take ours in the dining-room. I do not expect her to go in and out at the side door and at all times be treated as an inferior, and yet that is the way many kitchen girls are treated. Now, I don't blame any nice, bright girl for keeping herself out of the way of such treatment.

If we want good help in our kitchens (and I think if there is a place where good help is needed it is there), let us lay aside our false pride. Let us no longer call the work drudgery, but make our kitchens pleasanter and then find a good, intelligent girl; give her good, reasonable wages; treat her as any intelligent woman should be treated, and the trouble will be over so far as help in the kitchen is concerned.

I do think there is great need of reform in this direction. How many women are toiling out their lives for want of good, reliable help, while there are many women and girls who like housework better than any other work, but will engage in teaching, sewing or any thing else rather than be one of the degraded ones.

Much of the help now to be had is worse than none at all, and why? Because we keep our best girls and women from helping us. They won't do it and I don't blame them. To this rule there are exceptions. I have known girls to rise above all this foolishness and because housework was best for them, to do it and bear the reproach. I, for one, would be strongly in favor of less pride and better help in the kitchen.

THE PRESERVING OF EGGS.

ACCORDING to a German paper linseed oil is the very best substance with which to coat eggs to render the shells impervious to air. The experiment was as follows: Ten eggs were coated with linseed oil, ten with poppy-seed oil, and ten others were left uncovered, the weights of all being ascertained. The thirty eggs were laid on sand, taking the precaution that no eggs touched one another. After from three to six months they were reweighed and opened, with the following results: The unprotected eggs had, after three months, lost eleven per cent. in weight, and after six months, eighteen per cent. On opening them they were found only half full and quite spoiled. Those covered with poppy-seed oil had lost in three months three per cent, and in six months four and one-half per cent; on opening them they were found full and without bad smell. Those covered with linseed oil had lost, after three months, two per cent, and after six months, three per cent; on being opened they were found full and smelling perfectly fresh and sweet.

Poached Eggs With Cream.

Add a tablespoonful of vinegar and a little salt to a frying-pan of hot water. Break the eggs carefully into this. Cook much or little as best liked, skim out carefully and place on buttered toast. Have a cup of milk heating in a sauce-pan, thicken with a teaspoonful only of corn starch, add a large spoonful of butter, season with salt and pour over the eggs. This is a very nice tea-dish. A. E.

Oysters now-a-days are placed in fresh water as soon as they are caught, where they are kept for a day or so to fatten. Though more plump in appearance, much of the natural sweetness of the oyster is thus destroyed.

DOMESTIC RECIPES.

Sauer Kraut.

Slice the cabbage on a "cutter." Prepare an oak barrel or keg; line the bottom and sides with cabbage leaves; put in a layer of cabbage, about four inches in depth; sprinkle lightly with salt; pound down the cabbage until compact; add another layer of cabbage and salt; repeat, pounding each layer, until the cabbage is within a few inches of the top. Cover with leaves; spread over a cloth; have a board to fit inside of the barrel and put on a heavy weight. If there be not brine enough to cover the cabbage within two days, pour over some weak brine. Examine every day as the scum rises. Lift up the cloth carefully and wash off all scum—attend to this faithfully. Keep in a warm place until fermentation ceases, which will be in from three to six weeks. Then keep in a cool, dry place.

Sweet Potatoes.

Boil until almost done, peel and bake quite brown, basting with melted butter several times.

Celery Vinegar.

Cut up into bits a large bunch of fresh celery; scald a quart of good vinegar; to it add a tablespoonful of sugar and a teaspoonful of salt. Pour over the celery. Keep in a large jar tightly corked. In two or three weeks strain into small bottles and seal or cork tightly.

Brawn.

Select a pig's head weighing six pounds. Wash and clean thoroughly (a good way is to soak in brine for 12 hours); stew with a pound of lean beef until the bones will slip out easily. Take from the liquor—their should be but little—remove the bones, chop the meat finely while hot; season with two teaspoonfuls of salt, one-half teaspoonful of black pepper, a dash of cayenne, half a teaspoonful of mace and a teaspoonful of ground cloves. Mix thoroughly and press into bowls. MARY B.

Smoky Walls.

Brush thoroughly with a broom; wash with strong pearlash water, rinsing at once with clean water. When this becomes thoroughly dry, give a thin coat of whitewash, having a liberal quantity of alum dissolved in it. When dry, finish with whiting and good size. A. M. L.

Flannel Cakes.

Make a sponge over night of a quart of new milk, two tablespoonfuls of good yeast, a little salt and flour for rather a thick batter. In the morning add a tablespoonful of melted butter and two thoroughly-beaten eggs. Bake on a griddle.

Egg-Plant.

A small egg-plant, two beaten eggs, four tablespoonfuls of bread crumbs, pepper and salt. Slice the vegetable very thin, pour over boiling water and let stand 10 minutes. Then drain, wipe dry with a towel and dip slice by slice into the beaten egg, season the bread crumbs with pepper and salt, and roll the slices in it. Fry in butter to a delicate brown on both sides. MRS. M. L.

PICKING OUT UNCURLED LEAVES.—FIG. 335.

QUESTIONS ANSWERED.

Lemon Pie.

MRS. A. S., asks for a recipe for a good meringue pie—ingredients to make but one.

ANS.—The juice and grated rind of a large lemon, a cup of white sugar, two eggs, a teaspoonful of butter, a tablespoonful of corn-starch, and a cup of boiling water. Beat well the yelks of the eggs, add the corn-starch and mix smooth. Stir this into the boiling water; add the sugar, juice, rind and butter. Let the mixture thicken; then pour into a pie-dish lined with rich paste. Bake until the crust is a delicate brown. Beat the whites (I almost always add an extra white) to a stiff froth; stir in two tablespoonfuls of powdered sugar, and spread over the top. Return to the oven till a pale brown.

Remember Hop Bitters never does harm to the smallest child, but good, always and continually.

News of the Week.

HOME NEWS.

MONDAY, Oct. 9, 1880.

THE town elections in Delaware and Connecticut seemed to give slight not gains to the Republicans. .....The mails were distributed for the first time from Chicago's new post-office, on the 6th.... ..One yellow fever case is reported to the National Board of Health, from Key West, Florida..... The Grand Jury of the United States Court, at Atlanta, Ga., has found true bills against 28 persons for armed attacks on internal revenue officers in the Second district.....The amount of foreign gold that has come to this country since July 1 last is estimated by Treasury officials to be about $35,000,000.....Three men supposed to belong to a gang of horse thieves—Dunn, Frank and Shamblin—have been implicated, by the confession of one of their numebr after arrest, in the murder and robbery of Daniel Hinkle, another of their comrades, whose dead body was recently found near Poplar, Mo. All the accused are in custody.....A private dispatch at San Francisco announces that the tourist party, with Judge Donohue, of the New York Supremo Court, while returning from the Yosemite in a six-horse coach, were capsized near Milton, California. Father Traynor had a leg broken, and his death followed its amputation. Judge Donohue and his wife and Mr. Walton sustained slight injuries. The other members of the party were not hurt.....Hon. R. G. Miller, City Collector of New Brunswick, N. J., indicted for embezzling $17,000, was arrested on the 3d and held in $10,000 bail for trial.....The National Construction Company, of New York city, is to build a mammoth iron pier, 925 feet long, at the foot of North Carolina Avenue, Atlantic City, N. J. .....The fate of some Mexican revolutionists is given in a private letter from Mazatlan, saying that ex-Governor Rubi, who was captured at the battle of San Vicente, has been shot by order of the military authorities. It is also stated in the same letter that Colonel Ramirez, the chief of the Sinaloa revolution, had entered Mazatlan in disguise, with the evident intention of taking the first steamer bound for San Francisco. His guide betrayed him, but he managed to escape to the woods about five miles from Mazatlan, where, at last accounts, he was surrounded by soldiers to prevent his escape. His capture was expected at every moment, and it is believed that when caught he will be shot.

A reduction of 10 per cent was made in the wages of the operatives of the mills of the A. & W. Sprague Manufacturing Company at Providence, R. I., now run by a trustee, on the 1st instant. On the 4th the help at Natick struck, and the mills were shut down. The operatives went to the Arctic and Quidneck, and made an unsuccessful attempt to get the operatives in those mills to strike. The trustee seems indifferent about starting up the Natick mills.....Mrs. William Clarke, of Lovilla, a suburb of Jacksonville, Fla., and her three children, were terribly burned by the explosion of a gasoline stove. The children died in a short time, and the mother is not expected to survive.....The New York Historical Society has directed its executive committee to make arrangements for the erection of a suitable memorial to Captain Nathan Hale upon the spot where he was executed by the British, September 22, 1776.. .....Mrs. Harriet A. Merrihew, convicted in Lewis county, New York, of murder in the second degree for killing David Merrihew, was sentenced to the Onondaga penitentiary for life.

The official majority in Arkansas against the repudiation amendment now foots up 3,660, and may reach 4,000.....D. C. Bailey and Callie Embanks died at Dallas, Texas, from the effects of morphine administered by mistake.....Joseph Abbott was convicted, at Elmira, N. Y., of murder in the first degree, and sentenced to be hanged November 19, for the killing of George Reed, a fellow-convict, in the Elmira Reformatory, in April last. .....Six hundred hands employed at the stove works of Rathbone, Sard & Co., at Albany, N. Y., were thrown out of work by the striking of some 237 moulders, who demanded the discharge of their foreman for refusing to pay a fine to their union, which demand the firm refused to accede to..... Mr. Burchard, Director of the Mint, says that the coinage of silver at the United Sates Mints for the last fiscal year will foot up about $28,000,000. Adding to that the net exports of silver bullion and probable consumption in the arts, etc., the production of silver for the year will be about $35,000,000.....Two of the most valuable buildings, comprising the extensive works of Holmes, Booth & Hayden, at Waterbury, Conn., containing many costly machines and tools, were destroyed by fire on the 5th. The loss will exceed $200,000, and the business of the company will be greatly crippled The works are well insured.

New glass works have been started at Rochester, Beaver county, Pa., with a capital stock of $20,000..... Diphtheria is prevailing to an alarming extent in Johnstown, Pa.....The boilers in Pitt & Cravage's mills at Bay City, Mich., exploded on the 2nd, killing George Parker.....

The New York, as well as the Chicago dry goods houses, are increasing their sales to the West this year 100 per cent. over those of last, and to the South fully 200 per cent. Some of the houses in New York have orders that cannot be filled for two months. The large establishments are working relays of clerks day and night. Some of the imports of silk and satin goods are of the richest and most costly description. Some of them are of all shades of blue and pink, and embroidered in pure gold and silver. One house in New York has just imported the third lot of such goods: and, to give an idea of how women will dress this year, suffice it to say that this line sells for $35 to $45 a yard, and that it takes about fourteen yards for a complete costume.....J. O. Wright, cashier in the office of the late Sheriff of New Orleans, has been arrested for embezzlement..... William Style, of Claremount County, O., was robbed of $3,500 in gold on the 4th, by a substitution of valises.....One Nolan has been found guilty of murder at Castroville, Texas, and sentenced to ten years of imprisonment..... .....The writing paper mill at Elkhart, Ind., owned by J. R. Beardsley, John Cook and Mrs. Benjamin F. Davenport, was burned on the 5th. Loss, $38,000 insured for $16,000.....W. H. Fairchild, recently arrested at Chicago on the charge of having murdered Richard French, the step-father of his wife, in Harper county, Kansas, in 1878, has confessed his guilt.....The report of the local steamboat inspectors at Detroit, in regard to the burning of the Marine City on Lake Huron in August last, blames all the officers of the steamer, whose licenses have accordingly been suspended.....

Dick Allen who has just arrived at Denver from the South, reports that warrants were issued for the arrest of Agent Berry, Captain Kline and Hoyt on the charge of murdering young Jackson, the freighter, whom they turned over to the Uncompahgre Indians, add that officers have gone to the Los Pinos reservation to make the arrests. He further states that the citizens and freighters are thoroughly aroused, and should the men be taken they will likely be lynched before they can be conveyed to Gunnison City.....The safe in the office of the Western Hotel at St. Louis was robbed on the 6th, of money, watches and other articles valued at between $3,000 and $4,000. John Slater, night porter, who has served a term in the penitentiary, is supposed to be the thief, as he is misssing.....Camp & Walker's extensive steam saw-mill, located near Suspension Bridge, Minneapolis, Minn., was destroyed by fire on the 6th. Loss, $76,000; insurance, $17,500.....Thomas Forrest, who fatally stabbed Michael Corbis, for discharging him from employment at the California Mine, Silver Reef, Utah, was taken from jail on the 5th by masked men and hanged.

The Post Office Department has issued an order stopping the delivery of registered letters and postal money orders addressed to R. J. Kozboth, of 48 Broad street, New York city, who it is alleged is engaged in conducting fraudulent stock operations, doing business under his own name and the aliases of "The Mutual Stock Company, Nos. 1 and 2.".....Henry Bijot, the Frenchman who killed Harriet Renaut, a respectable married woman, at New York, in August last, because she refused to run away and marry him, was committed for the Grand Jury, having been in the hospital in consequence of an attempt at self-destruction. He claims the woman had her throat cut in attempting to wrest a razor from him.....In the suit of James A. Whalen against General Phil. Sheridan, to recover the value of certain personal property in Mississippi, of which he was dispossessed by the general while in command of the Department of the Gulf, in 1865, Judge Blatchford, of the United States Circuit Court of New York, handed down his decision, denying the motion of plaintiff to file a bill of exceptions, and with leave to make application to the Supreme Court, to which plaintiff has taken out a writ of error. The bill of exceptions should have been filed before the entry of judgment, and the Court is not satisfied that the case for relief is made out.

A terrible railroad accident occurred at Pittsburg, Pa., late Saturday night Oct. 9th, when one section of an excursion train out of Pittsburg ran into another which had been stopped on the track near the city. So great was the force that the locomotive plowed its way nearly to the middle of the rear car, splitting it wide open. Those on the rear platform, seeing the danger, leaped off and escaped. To make it still more horrible, one of the locomotive's cylinders was broken, allowing clouds of scalding steam to envelop the wounded and those who were unable to get out of the way. Twenty-five were killed and some fifty others wounded, some of them dangerously.

FOREIGN.

THE "Eastern Question" is still the most prominent in European politics. It was hoped that the Sultan would surrender Dulcigno to the Montenegrins, as he had asked the Powers to delay until Monday the threatened demonstration of the combined fleet. Having besought in vain the German Emperor to interfere in his behalf, last Tuesday he refused to yield. He promises, however, that if the fleet withdraws, he will endeavor to persuade the Albanians to surrender the town, and as regards Greece, he will surrender a strip of territory a great deal smaller than she demands, and considerably less than was agreed upon at the Berlin Conference. Moreover, he engages to begin the promised reforms in Asia Minor within three months, and that reforms in European Turkey shall be carried out as far as compatible with the integrity of the empire. If the naval demonstration is made, however, he declares that he would abdicate rather than make any concession. As the Porte has always been liberal of promises, and niggardly in performance, the Powers have decided not to permit themselves to be "fooled" again. England and Russia are the most determined to exact compliance with the requirements of the Berlin Conference, while France and Austria hesitate to have recourse to force. Germany and Italy are ready to indorse any action that may be mutually agreed upon. As neither Austria nor France would consent that their portion of the combined fleet should engage in any absolutely hostile movement, it has been decided that the vessels of three of the Powers—probably England, Russia and Italy—should be ordered to carry out the coercive measures which have been agreed upon.

Vice-Admiral Seymour, commander of the British contingent, who has also been entrusted with the command of the combined fleet, has already issued orders to the Russian commander to prepare for action. It was first contemplated to blockade Constantinople, and afterwards it was proposed to blockade Smyrna and a couple of other ports in Asia Minor; but these projects have, for the present, been abandoned, and it is now probable that some of the Turkish islands in the Grecian Archipelago will be seized upon. Fifty tons of ammunition and a large number of cannon and gatling guns have already left Portsmouth for the Mediterranean, and before our next issue it is probable that war will substantially have been begun against the Turks. The Montenegrins have all the men they can spare from harvest under arms ready to attack Dulcigno, if sure of support from the Powers. They ask money from the latter, however, to enable them to keep so large a force in the field, as they are themselves poor. The Albanians have withdrawn a short distance from Dulcigno, but are ready to return should the Montenegrins attack the place. Riza Pasha, commander of the Turkish troops in the neighborhood, who some weeks ago drew off, to allow the Montenegrins and Albanians "to fight it out," instead of surrendering the town as the Powers insisted should be done, still stands aside with his forces awaiting events. The Albanians, it is said, are liberally supplied with arms by the Turks, and a number of Ottoman troops have been disbanded in the neighborhood with the express purpose, it is alleged, that they should join the Albanians as volunteers. This morning's cablegrams intimate that Germany and Austria are still decidedly reluctant to resort to war measures in order to coerce the Porte to make the desired concessions. Great Britain and Russia alone are determined at all hazards to force compliance with the terms of the Berlin Conference. It may be that the agreement that has hitherto existed among the Powers, will be disturbed before action is taken, and it is upon such a contingency that the Turks mainly rely to carry their point.

In Ireland the Land-leaguers, who insist that those who till the soil should own it; the Home-Rulers who declare that the "Gem of the Sea" must have a Parliament of its own at College Green instead of a paltry representation at Westminister, and the Fenians who proclaim that Erin shall be entirely independent of the hated Sassanach, have combined, and are directing their chief efforts at present to the land question. Monstrous mass meetings are still being held in different parts of the island. To these the peasantry flock from all the surrounding country and many of them are attended by masses of men from distant points, marching in serried ranks to show that in case of necessity a large part of the population is organized, drilled, and ready to support by force the measures they demand. While the harrangues at each meeting are of a highly inflammatory nature, great care is generally taken to remain within the letter of the law, however far its spirit is exceeded. The occasional murders and frequent destruction of property that are, in a great measure, caused by the violent passions aroused by the language used at such assemblages, are often excused on the ground that they are the natural results of ages of cruel oppression. Rents are still refused in some sections unless when collected by the machinery of the law, and it is proposed to inaugurate a national strike against paying a farthing to rack-renting landlords. Orangemen are urged to be ready for action against their Catholic countrymen in the event of trouble. Mr. Foster, Secretary for Ireland, has just intimated that the Government is likely soon to suspend the right of *habeas corpus*. The agitation seems thoroughly well organized, and well under control of its leaders who appear determined, for the present at any rate, to keep within the law. Indeed it is likely that high legal advice is taken as to how far they can go without incurring legal penalties.

In France, yesterday's cablegrams announce that it has been determined at last to take vigorous action against the religious orders, and it is said that next week many of them will be expelled just as the Jesuits have already been. This is sure to arouse the bitter opposition of the religious folks against the government; but Gambetta and the radicals demand the measure, believing that the clericals are hostile to the Republic anyhow. A strong party is opposed to any coercion of the Turks by force of arms, as they wish to keep clear of all political entanglements, doubtless to be ready to take advantage of any opportunity that may arise for getting an advantage over Germany. Bismarck has declared, however, that Germany will not be a party to any hostile measure, unless all the Powers combine in it. The difficulty has been avoided, however, by appointing three of the Powers to carry out the orders of the whole, as the French and German contingent to the fleet need then take no part in the movement.

AGRICULTURAL NEWS.

THE Dixie Agricultural and Mechanical Association will have its annual meeting at Wadesboro, N. C., on the 26, 27, 28 and 29 of October.... ....The three countios of Dane, Rock and Jefferson, Wis., raise nearly all the tobacco in that State, and the little village of Edgarton, on the line of the St. Paul railroad, is the center of the trade. This year the crop is said to be one of the largest ever raised, and the prospect is now that it will command the highest price. Buyers are already in the field offering to make contracts at eight and a half cents. Some idea of the profit of tobacco culture may be formed when it is known that a good yield per acre is about 1,600 pounds, which at the current price to-day, would bring the farmer $128. The crop is also more certain than wheat, and less liable to attacks from enemies that destroy it. It is estimated that over $10,000,000 will be paid for tobacco this year in Wisconsin. .....On the 4th inst. great numbers of large, white butterflies appeared in the township of Lackawaxen, Pa., much to the alarm of farmers, who feared another insect visitation. So dense was the mass in some places that it looked like a snow storm.....The yield of champagne this year will be one of the smallest, but also one of best for many years.....In a ballon ascension from Montreal, Canada, Sept, 24, the aeronauts, at the hight of 8,400 feet, were met by a shower of thistle seeds falling toward the earth.

The epizooty has almost entirely disappeared from this city and neighborhood. It was of a very mild type, and caused little fatality though nearly half the horses hereabouts were more or less affected by it. In a stable we know of three old horses that were affected by the epizooty some eight years ago, escaped this year, though four younger animals in the same stable were attacked. The advice given editorially on the matter last week is the best that experience here has hitherto taught. The ailment has already spread south as far as Washington and west beyond Cincinnati and nearly as far as Chicago, by latest telegrams. There is little doubt but that its ultimate range will be as extensive as the epizooty that caused so much inconvenience and loss nearly a decade ago. This appears to be of the same kind; some say precisely the same in nature, but of a milder type.

"And the Leaves Were for the Healing of the Nations."

This is fully exemplified in the demonstration that so common a pasture weed as smart-weed, or water-pepper, possesses medicinal properties when combined with essence of Jamaica Ginger and other efficacious vegetable extracts, as in Dr. Pierce's Compound Extract of Smart-Weed. It constitutes a most potent remedy for bowel affections as diarrhœa, dysentery, flux, etc. It is also an efficacious medicine for colds, and to break up fevers and inflammatory attacks, and for the alleviation of pain. Every family should keep a supply of it. 50 cents by druggists.

Goldsmith's "Vicar of Wakefield," complete, for 6 cents, is one of the Revolution pamphlets that have lately been selling by the hundred thousand. People have thought it amazingly cheap, but you get the same thing handsomely and strongly bound for 8 cents, in the Acme Library of Modern Classics, which contains that and four other famous classics for 40 cents. American Book Exchange Publishers, New York.

Volumes II. III. and IV. of the "Library of Universal Knowledge," large-type edition, are now on the presses, all printing at the same time. This is the busy season of the year for publishers generally, and printers commonly are pressed to the utmost, so that we have found it nearly impossible to get presses enough to meet our needs. We are now taking the resources of eleven large printhouses, and are rapidly gaining on our delayed work. Vol. II. will be ready about Oct. 11, vol. III. Oct. 15, and vol. IV. Oct. 20. American Book Exchange, New York.

We are strongly disposed to regard that person as the best physician who does most to alleviate human suffering. Judged from this standard, MRS. LYDIA E. PINKHAM, 233 Western Avenue, Lynn, Mass., is entitled to the front rank, for her VEGETABLE COMPOUND is daily working wonderful cures in female diseases. Send for circular to the above address.

For Thirty Years

I have been afflicted with kidney complaints. Two packages of Kidney-Wort have done me more good than all the medicine and doctors I have had before. I believe it is a sure cure. So writes an old lady from Oregon.—Salt Lake City Tribune.

Quiet nerves and Balmy Sleep in Hop Bitters, for sleepless Ladies and Invalids.

Burnett's Cologne is of the best quality, and is filled in elegant bottles of superior finish and beauty. It is offered in POPULAR sizes and at POPULAR prices. This refreshing perfume is thus brought within the reach of every one. It is prepared from the purest and best materials, and with the utmost care.

In Quarter and Half Pints, Pints, and Quarts. In Basket style, cork and glass stoppers.

The Markets.

SPECIALS FROM THE CHIEF CENTERS.

Until Saturday, Oct. 9.

All sorts of grain, especially wheat, has had an upward tendency during the week.

BOSTON.—BUTTER.—The market is a cent a pound less than last week on the fine grades. Western ladle packed, unless freshly made, is neglected, and western dairies sell slowly. The bulk of the receipts from New York and Vermont consists of long dairies. Northern—Choice creamery, ₱ lb, 30@32c; choice New York, 27@28c; choice Vermont, 28@30c; long dairies, 25@25c; common, 17@19c. Western—Choice creameries, ₱ lb, 29@32c; fair to good, 27@28c; dairy-packed, 20@25c; choice ladle-packed, 20@22c; common, 17@20c. CHEESE.—Good cheese sells at 12@12½c; and there is nothing less than fine offering. Fine factory, New York and Vermont, ₱ lb, 13½@13½c; fine factory, Ohio and West, 12½@13c; fair to good, 11@12c; skims, 7@8c. POTATOES.—Northern whites 43@45c, and Rose from 50@53c, with the best Houlton stock at 53@55c. Sweet potatoes are plenty at $1.50@$1.75 per bbl for Norfolk stock. ONIONS steady at $2.75@$3 for red, and $3.25 for yellow. APPLES.—Choice at $1@1.25, fancy eating $1.50@1.75, and common fruit at 50@75c ₱ bbl. There is no demand for cranberries, and the market is dull at $4@$5 ₱ bbl. GRAPES.—Isabellas at 4@5c, and Catawbas at 6@7c ₱ lb. QUINCES are dull at $3 per bbl for New York. TOMATOES are pretty nearly through for the season, and job at 35@50c per bushel box. WOOL.—Buyers operating cautiously, and holders not disposed to ease off in the least. Combing and Delaine Fleeces continue in demand, and in unwashed and unmerchantable Fleeces a fair business is doing. Transactions in California wool moderate. Pulled wools in steady demand at current rates. No change in foreign wool. Sales include Ohio and Pennsylvania and West Virginia X, XX, and XXX at 44½@47c; Michigan X and No. 1 at 30½@45c; Wisconsin X and fine No. 1, 40@43c; Combing and Delaine at 44@52c; Kentucky combing at 36c; Georgia at 36c; Missouri at 33½c; Texas at 19@30c; Territory at 18@37c; Unwashed and unmerchantable at 18@40c; Spring California at 23½@33c; Fall California at 19c; Super and X Pulled at 40@50c; Scoured at 46@52c.

Chicago.—WHEAT excited, active and firm, No. 2 Red Winter, $1; No. 2 Chicago Spring, 97¾c., cash; 98¾c. November; 99¾c. December; sales at 97¾c@99¼c. November; No. 3 do., 92¾c; Rejected, 75c@79c. CORN active and firm at 39⅝. bid cash; 40¾c. bid November; 41@41¼c. December; sales at 40⅛@40¾c. December. Rejected, 38¾c. Oats active and firm at 30¼c. cash and November; 34¾c. May. RYE firm at 83c. FLAX-SEED, $1.25 PORK steady at $18 cash; $18.25. October; $12 55@12 60, November, $12 20 bid, all the year; $12 90 bid January. LARD strong and higher at $8 32½@8 35, cash; $8 17½@8 20. November; $8 12½@8 15, all the year and January. BULK MEATS moderately active and higher. BUTTER.—The demand continues active on local, shipping, and export account, with prices firm and unchanged. We again quote: Choice to fancy creamery 29@30c. per lb; fair to good 25@28c; fine to fancy dairy 23@25c; good, do, 19@21c; medium to fair do in shipping lots 16@17c; choice ladle-packed 17@20c; fair to good packing stock 15@16c; grease butter 8@10c. CHEESE. Fair to choice makes continue in active request at firm rates. We again quote good to fine cheddar creams at 12½@13c. per pound and do flats at 12@12½c. while the poorer goods were going all the way from 10c to 12c., or as to condition and amount of injury. CIDER.—The supply of newly-made is liberal, and the demand is only moderate. We quote strictly fresh juice at $4 per bbl. SEEDS Timothy and flax were active and strong with other kinds slow. Clover was dull at $4.50@4.75 per bushel for good to choice medium, with mammoth going at about 25c. better. Timothy was quotable at $2 20@2 25 for poor and foul to fair, and $2.37½@2 37½ for good to fully prime, and $2 33@2 35 for extra bright samples; nothing was doing for futures. Flax was in quite good request at $1 22½@1 23 for good, on a basis of pure, to better for fine and desirable sorts. Hungarian and millet were about 60c for good, for cash or future delivery. WOOL.—The asking rates from store for eastern Iowa, Wisconsin, and Illinois wool ranged as follows: Tub-washed, bright 46@48c per pound; do. dingy and coarse 41@43c; fleece-washed medium 40@42c; do fine 36@38c. do coarse 33@35c; unwashed medium 28@32c. do coarse 20@23c; do fine bright 25@26c; do heavy 18@21c. bucks' fleece 16@18c. Consignments from western Iowa, Nebraska and Kansas sell about 2c. per lb less than this range, and burry and poor conditioned lots at 3@5c less. Colorado wool (unassorted) is quoted at 25@28c per pound for medium to fine; 19@25c for coarse to medium, and black at 21@23.

St. Louis.—WHEAT excited and higher; No. 2 Red Fall, 99¼c@$1.00¼, cash; 99⅞c@$1.00¼, October; $1@$1.02 1-8, November; $1.02@$1.04, December; $1.04, January; $1, all the year; No. 3. do., 75@96c; No. 4 do., 91c. CORN higher at 39@39¼c. cash; 39¼c, October; 39¼@39¾c, November; 38½@39c, December; 38¼c@38 7-8c, all the year; 44 1-8@44¼c. May. OATS higher, but second at 29¼c, bid cash and October; 30½c, November; 31¼c bid December. RYE quiet at 83¼c. PORK quiet; jobbing at $15.85@$16. LARD, $8.50, bid. BULK MEATS firm and higher; car lots of 30-day meat—Shoulders, $5; Clear Rib, $8; Clear Sides, 8¼c. BACON firmer; Shoulders, 5¼c; Clear Rib, 8¾c; clear sides, 9c. BUTTER—Creamery mainly at 30c; selected dairy 26c; prime to choice do. at 20c to 24c; low 13@15c; country at 10@12½c for poor, to 15@17c for sweet yellow. HOGS firm; Yorkers and Baltimores, $4-$4.70; mixed packing, $4.50@$4.70; butchers' to fancy, $4.80@$5.10. CATTLE in fair demand; supply light; grass Texans and mixed butchers' stuff weak at $2@$3. SHEEP steady at $3@$3.75.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Oct. 9, 1880.

BEANS AND PEAS.—Small samples of new beans quoted: Marrow $1.75; medium, $1.55; pea, $1.70@1.75; red kidney $1.65. An easy feeling prevails but no large home or export parcels of beans are in treaty. Green peas quiet at $1.50@1.55; Southern B. E. off to $1.75 per 2-bu. bag.

Marrow beans, prime, $1 60@1.62½; other, $1.50@1.55; mediums, prime, $1.45@1.47; other $1.35@1.40; pea, $1.55@1.60; white kidney, $1.65@1.75; red kidney, prime, $1.40@1.45; other, $1.30@1.37½.

BUTTER.—As was feared by many in the trade, strong starting quotations for the Fall have proved interruptive to general business. Present indications are that there must be considerable unbending before the trade puts on a wholesale pace or else there will be an uncomfortable accumulation of State stock that is easily condemned in a dull market. Sellers of Western have begun to mark down all grades, and this calls off a certain class from under grade, and even good State. Very good full dairies are included in the receipts, but there are few bids for valuable linen. As a rule dealers have ceased cutting off fine ends of dairies. Sometimes a customer can be made by the concession breaking into fresh, fine ends, but if the practice is prolonged it is ruinous for average quality. Foreign buyers are not a power in supporting prices, and their absence tends to make sellers solicitous as to the future and the outlook is that the the local or retailing trade, which loudly deplores a diminished demand, will soon have to be met. The most marked decline for the week is in creamery. A portion of the exports are thought to be butter substitutes.

Creamery, fine State, 30c.; Western, 28@29c.; good to prime, 26@28c.; fair to good, 23@26c.; poor to fair, 24@26c.; sweet cream, 25@28c.; State firkins, 22@24c.; entire dairies, choice, 25@25½c.; other, 23@24½c.; pails and half tubs, choice 27@27½c.; good to prime, 25@26c.; poor to fair, 24@24c.; Welsh tubs, choice, 25@27c.; other, 20@24c.; Western imitation creamery, 20@23c.; dairy, fresh, 23@23c.; fair and other, 18@22c.; factory, fine June, 18@19c.; present make, 18@19c.; medium, @17c.; poor, 15@16c.

Receipts for week, 34,100 pkgs.; exports do., 11,555 pkgs.

COTTON.—Has been more active and closed firm. Latest prices are for

October, 11.02; November, 11 01; December, 10.86@10.89c.; January, 11.02@11.03c.; February, 11.17@11.18c.; March, 11.33@11.31c; April, 11.49@11.50c.; May, 11.64@11.66c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8 5-16	8 5-16	8 5-16
Strict ordinary	8 15-16	9 1-16	9 1-16
Good ordinary	9 15-16	10 1-16	10 1-16
Strict good do	10 5-16	10 7-16	10 7-16
Low middling	10 13-16	10 15-16	10 15-16
Strict low middling	11 1-16	11 3-16	11 3-16
Middling	11 5-16	11 7 16	11 7-16
Good middling	11 11-16	11 13-16	11 13-16
Strict good middling	11 15-16	12 1-16	12 1-16
Middling Fair	12 7-16	12 9 16	12 9-16
Fair	13 1-16	13 3-16	13 3-16

STAINED.

Good ordinary	8¾
Strict good ordinary	9
Low middling	9¾
Middling	10¾

Receipts for week, 30,479. Exports do. 15,551.

CHEESE.—There has been a slow market until towards the close when with concessions more trade resulted on export account, with the shipments for the week, 42,600 boxes. The latest prices are for

State factory, fancy, at 12¾@13c.; do. good and prime, 12¼@12¾c.; do. fair to good, 11¼@12¼c.; do. h'f skimmed, 10@11c.; Wisconsin factory, fine, 12¼@12¾c.; do. good to prime, 12@12¼c.; do. fair to good, 10¾@12c.; Ohio factory, fine, 12¼@12¾c.; do. good to prime, 11¾@12c.; do. flat, fair to good, 10¾@11¾c.; do. poor to fair, 7@10c.

Receipts for week, 63,018 boxes.

Liverpool cable, 65s.

Steam to Gt. Britain, 35@45s.

HONEY.—Some parcels have gone into the hands of retailers, but the market is not active compared with the heavy supply.

White clover comb, single pkgs. 17@18c.; larger pkgs 15@16c.; buckwheat 12@13c.; extracted white, 10@12c.; dark, 8@9c.

DRIED FRUITS—Show little of interest. Trading is mostly in small lots, and prices varying slightly only. Quotations are for:

Apples—Old, State, at 5@6c., new, Tennessee at 3½@4c.; new Virginia at 4@5c.; fancy sliced North Carolina at 6@7c.; evaporated, ring cut, at 8¼@9¼c. Old peeled peaches at 8@14c. Blackberries at 8c.; Raspberries at 25@26c. Pitted cherries at 19@20c. Whortleberries at 11c. New Georgia peeled peaches at 16@17c.; new North Carolina peeled peaches at 18@20c.; new unpeeled peaches, quarters at 7@7½c.; new unpeeled peaches, halves at 7¼@8c.

Receipts for week, 1,591 pkgs.

Exports for week, 1,022 bbls. of dried apples.

EGGS.—Receipts for the week, 8,200 pkgs.; do last week, 6,856 do. Supplies continue light for general wants and good Fall prices are ruling. Near points are hardly quotable. Limed eggs quoted at 18c. for fine State.

N. J. and near by, per dozen, 25c.; State and Pa. 23@24c.; Western, fresh, 22@22½c.; Canadian, 22@22½c.; second or held, 21@21½c.

FLOUR.—There is an active export and home trade and prices advancing.

Latest sales are at: $3.40@4.10, for very inferior to very fancy superfine State and Western; $4.00@4.25 for poor to choice extra State and Western, odd lots and lines; $4.25@4.35 for choice to fancy do.; very inferior to good white wheat, trade and family extras, $4.75@5.15; good to choice do, at $5.05@5.10; (very choice to fancy do. at $5.25@5.50;) red and amber winter wheat inferior to choice trade and family, at $4.50@5.00; round hoop Ohio, $4.45@4.40; and trade and family brands of do. at $4.20@5.00; St. Louis at $4.75@5.00 for inferior to good extra; $5.00@5.10 for good to choice (and $5.10@5.50 for choice to fancy brands); Minnesota clear, inferior to fancy at $4.00@5.50; Minnesota "straight," poor to fancy, at $5 75@7.25, and patent inferior to very fancy at $5.75@8.75; unsound stock at from $2.50@5.00; city mill extra at $5.20@5.40 for fair to very choice for the West Indies; do. for England, $4.90@4.35 for poor to choice spring wheat, and $4.50@5.25 for winter wheat product; do. trade and family extras, $5.40@6.75; do. for South America, $5.40@5.75.; No. 2 at $2.50@3.50 for very poor to very fancy.

Receipts for week, flour, bbls. 102,000; corn meal, do. 1,500; wheat, bush. 1,585,750; corn, do. 1,600,650; oats do. 423,400; rye, do. 58,600; malt, do. 56,150; barley, do. 171,800; beans, do., 6,300; rice, pkgs. 1,175.

Exports for the week, flour, bbls., 75,650; corn meal, do. 3,600; wheat, bush. 1,547,500; corn, do. 515,575; oats, do. 2,677; peas, do. 2,750; beans, do. 1,207; rice, 850.

CORN MEAL.—Sales at $2.60@2.75 for yellow Western, $3.25@3.30 for Brandywine.

FRESH FRUITS.—Exports of apples for week, 36,500 bbls. The market is still largely supplied with apples and with better receipts qualities favor buyers. Exporters continue to buy heavily, but the total is perhaps swelled by stock going on owners' account. Pears are thinning down. Virgilieus, which used lead the trade in old times, have to give to place to hardier, better-keeping stock. Seckles are scarce; there have been none too many this Summer. Duchess are plenty and very cheap for so useful a table pear. Cranberries are stocking up; demand quite limited. Grapes active, fine quality assisting sales. Peanuts weak, they have to divide the trade with new Fall sorts. Chestnuts and hickory bring fair prices.

APPLES.—Western N. Y., mixed, Fall pippins, and 20-oz., $1@1.25 ₱ bbl.; Baldwins in shipping order, $1.25@1.37; Greenings, 75c @$1. Kings, $1.2@1.37; open heads and common, 50@75c. Cranberries, Cape Cod, fancy, $6; other, $3@5.50; do. boxes, $1.75; N. J. boxes, $1@1.50. Quinces, common to fair, $2@3; good to extra, $4@5. Fancy Boston pears, $3@6 per bush. box; Duchess, ₱ bbl., $3@5; Louise Bon, $3@5; Virgalieu, 3@6; Sheldon, $3@5; cooking, $2@3. Delaware grapes, cases 18 3-lb boxes, $3@4; in baskets ₱ lb 6@8c.; Catawba cases, 18 3-lb boxes, $2.25@2.75; in baskets, 3½@4½c.; Concords, in cases, $1.50@2; bulk and baskets, 2½@4c.; Isabella 2½@3c. Peanuts, Va. hand-picked, 5¾c.; good to extra prime, 4@4¼c.; shelled, 5½@5¾c. Chestnuts, $2@3 ₱ bush. of 60 lbs. Hickory nuts, $2@2.25 per bush. of 50 lbs. Florida sends some very handsome lemons which command $3.50@4 ₱ box. Oranges are not in quotable stock; it is early for a demand. Those arriving are merely drops.

GRAIN.—Wheat has an active, export and speculative demand and prices higher

The latest sales are of No. 1 white at $1.11¾@1.14; do. October, at $1.11¾@1.13; do. November at $1.11¾@1.12¾; do. December $1.13@1.13¾; ungraded white at $1.03@1.14; mixed winter at $1.10@1.10¾; No. 1 red at 1.16¾@1.17; No. 2 red at $1.11¾@1.14; do. October, at 1.11¾@1.13¾; do. November, at $1.11¾@1.13¾; December, at $1.13@1.15; do. January, at $1.14@1.14¾; No. 3 red at $1.10@1.11; ungraded red at $1.04¾@1.14¾; No. 2 Milwaukee spring, choice, at $1.12; No. 2 Chicago at $1.03¾@1.03. Rye at 87@88¾c. Corn is active and higher latest sales are of New York No. 2, at 53¾@53¾c.; do., October, at 52¾@53¾c.; do., November, at 53¾@53½c.; do., December at 54¾@54¾c; ungraded mixed Western at 53¾@53¾c.; new crop yellow Southern, a small lot, poor quality, at 48c. Oats are more freely offered and prices easy; latest sales are of No. 1 white at 41c.; New York No. 2 white at 40@40¾c.; do. No. 3 white 38c. October 38¾@39c. do. December at 39¾@39¾c. No. 3 at 38c.; ungraded white Western at 40@40c., ungraded mixed Western at 38¾@41c.; mixed State at 41¾c.; No. 2 Chicago 40c.

HOPS.—The arrivals are larger and prices unsettled and weak. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	23 @26
Do. medium	21 @23
New Yorks, crop 1880, low to fair	18 @21
Eastern, crop 1880	20 @24
Wisconsin, crop 1880	20 @24
Yearlings, crop 1879, choice	20 @25
Olds, all growths	4 @14

LEATHER.—Quotations are for hemlock sole 23@24; 24@26 for middle; 24@26 for heavy, and 21½@33 for good damaged do.

HAY AND STRAW.—Demand is liberal and prices strong.

Shipping hay quoted at 80c.; medium to prime do., 90c.@$1.15; salt hay at 60@65c.; clover do. at 65@75c. Straw at 95c@$1 for long rye; 70@75c. for short rye; and 65@75c. for oat.

POULTRY AND GAME.—Dressed turkeys exceed the want of trade and prices are very easy; few reach 14c. Fowls and chickens have a fair demand, as good stock can be had at inside figures. Ducks are doing well; geese begin to sell. It is thought that eastern ducks will be plenty enough this season for a New York quotation.

Turkeys, choice, 11@12c., ₱ lb.; fair to good, 10@11c; Phila., dry-picked, 13@14c. Chickens, do., 15@16c.; Bucks Co. do. 13@14c.; State scalded, 12¾@13c.; Western, scalded, 11¾@12¾c. Fowls, Phila., dry-picked, 13¾@14¾c.; N. J., d. p., 12@13c.; scalded 12@13c.; State, scalded, 11@12c; Western, scalded, 11@12c.; poor, 9@10c. Ducks, Spring d.-p., 16@18c.; mixed, 12@14c. Geese, Phila. Spring 13@14c.; fair, 9@10c. Squabs, white, ₱ doz., $2.25@2.37; dark, $1@1.25.

Live poultry is in rather light supply, but prices are only fair, as deliveries of dressed are free.

Chickens, New Jersey, per lb 12@13c.; State, 11@12c; Western, 11c.; Southern, 10@11c. Fowls, New Jersey, 11@12c.; Western, 11@11¾c.; Southern, 11c. Roosters, 5@6c. Turkeys, young, 10@11c.; old, 9@11c. Ducks, choice, 60@75c.; other, 40@55c. Geese, choice, $1.75; other, $1@1.50.

There is an easy tone to prices throughout the game market. Trade is somewhat brisker as sellers can exhibit more stock and do not depend upon the ice-box as much as formerly. A good many bear have arrived, mostly, however, in a spoiled condition.

Mallard ducks, 50@60c.; teal, 35@40c.; common 25@30c.; a few red heads and canvas backs have sold at $1@2 respectively. Partridge, prime, 90c.@$1 00; eastern, 50@60c.; soft, 35@25c.; grouse, dry, 75@85c. wet, 50@60c.; woodcock, State, 75@85c.; Western, 50@60c.; Eng. snipe, ₱ doz., 40@50c. Sand snipe, 40@50c.; plover, $1.50@1.75; wild pigeons, flight $1.25; Minn. short saddle, venison 16@20c.; other short saddle, 14@16c. whole deer, 10@12c.

PROVISIONS.—In hog products lard has been unusually active on export account, and prices advancing other articles have been dull.

Mess pork at $16, for spot lots. Bacon at 8-¼c. for long clear, and 8¾c. for short clear. Lard—Western steam at 8.80 for spot lots; 8.72½c. for Oct; 8.60 for Nov., 8.45c. for Dec. and Jan. deliveries. Stearine at 9c. for choice. Tallow at 6¼@6 5-16c. for prime. Beef hams at $15.50. Beef at for extra India mess $19@20 for city; $9.50@10 for extra mess and $9.00 for plain mess $11@11.75. for packet, and $13@13.25 for family mess.

Receipts for week, beef, 450 pkgs.; pork, 1,575 bbls.; cut meats, 20,850 pkgs.; lard, 23,120 pkgs.

Exports for week, beef, 1,750 bbls.; pork, 4,798 bbls.; cutmeats, 5,619,902 lbs.; lard, 5,921,075 lbs.

SEED.—Clover is in moderate demand and steady, quoted at 8¾@9c. Timothy is quiet at $2.70@2.80, Flaxseed quoted at $1.40.

Receipts for week, 2,256 bushels.

Exports for week, 650 bags.

TOBACCO.—There is a brisk demand for Kentucky leaf, with prices generally steady.

VEGETABLES.—Exports of potatoes for week, 10,900 bbls. Potatoes are firmer and steadier with an improved export demand using up considerable stock. Nova Scotia E. Rose, $1.75@1.87. State, $1.25 $1.50; snowflake, $1.37@1.62; peerless, $1.12@1.25. Sweet potatoes have ruled low, but at the close there is a prospect of recovery. Garden stuff begins to favor sellers, as the frost in some cases has sent down supplies. Lima beans have advanced.

Sweet potatoes, Va., $1.25@1.50; extra, $2@2 50; Green corn, ₱ 100, 50@75c.; tomatoes, ₱ bush., 20@25c.; egg plants, per bbl., $3@4; Lima beans, per bag, 2.00@$2.50; shelled, per bush. $3.50@4.00; turnips, ₱ bbl 50c; Russia turnips ₱ bbl. 50c.; bullnose peppers, ₱ bag, @$1.50; cabbage, flat Dutch, ₱ 100, $2@$3.50; do. red, $3@4.50; marrow squash, ₱ bbl. 40@50c.; Hubbard do., 75c.; onions, white, $3.50@4; yellow, $2.50@$3.75; red, $2.50; chester, $2 25@$2.40; carrots, ₱ 100 bunches, $2.00; pumpkins, ₱ 100 $2@4; okra, 25c.; cauliflower, ₱ bbl. $1@1.50; celery, per dozen, 75c.@$1.00; beets, 100 bunches, $1.

WOOL.—Trade has been slack again this week, manufacturers buying only to replenish assortments. Prices generally have been held very steady. Quotations are for

Ohio, Penn., and W. Va. XXX 46@48c.; XX, 43@45c.; X, 43@45c.; No. 1 40@48c.; No. 2 42@44c.; coarse, 35@38c.; combing 43@48c.

N. Y., Mich. and Wis. XX 38@41c.; X 38@40c.; No. 1 44@47c.; No. 2 38@42c.; coarse 33@35c.; combing 43@46c.

Ind., Ky. and Tenn. XX 38@41c.; X 38@40c.; No. 1 44@46c.; No. 2 35@42c.; coarse 33@35c.; combing 42@46c.; combing unwashed 33@37c.

Ill, Iowa, and Minn. XX 36@40c.; X 36@40c.; No. 1 43@45c.; No. 2 37@41c.; coarse, 30@34c.

Ga., Ala., Miss. and La., fine unwashed 33@35c.; medium unwashed 30@34c.; coarse unwashed 25@30c.; burry 14@20c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Oct. 9, 1880.

BEEVES.—Receipts for the week 12,415 head; do. last week, 14,817 do. For the closing day there was some interruption to receipts at 60th street owing to a delayed train. The Jersey yards however, were full enough to supply all wants. The market was quite as strong as on Wednesday, and in some cases a shade better, more particularly in good low priced wholesaleing stock. Texans quoted 6¾@8¾. Colorado, 6¾@7¾c. Grass cattle generally quoted 7¾@8c to dress, 54@55 lbs.; poor to fair corn fed steers, 8¾@8¾c to dress 56 lbs; good to choice, 9¾@10¾c to dress 56@57 lbs.

COWS AND CALVES.—There is no quotable change; the range is $30@55 for common useful to prime milkers, for private use some singles bring $60.

VEAL CALVES.—With fair receipts of live and dead the market holds very good rates. Outside figures were obtained only in a small way.

Live calves, N. J., fed, 7¼@7¾c., State choice, 6¾@7¼c.; good, 6@6¾c.; poor, 4¾@5¾c.; Mt. Holly, large, 5c.; light and medium, 6@7c.; buttermilk, 3@3½c.; grassers, 2@2½c.; fair to prime hog dressed, 10@10¾c.; common to fair, 7½@9¾c.; dressed buttermilk, 5@6c.; do grass, 3½@4c.

SHEEP AND LAMBS.—Receipts for week, 23,316 head; do last week, 39,535 do. Sales slow and many head left over. Poor to prime sheep 3½@5c. Lambs 4½@6½c. A few selected wethers for export made 5½@5¾c.

SWINE.—Receipts for the week, 31,675 head; do. last week, 27,529 do. Market quoted steady at 5½@5¾c, the latter a holding sale for two carloads of fine Ohio. City dressed and State, 6¾@8c.; do. Western, 6¾@7c. Country dressed pork, light, 8@8¼c.; thin weights 6¾@7¾c.

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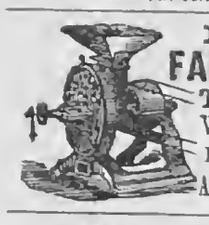

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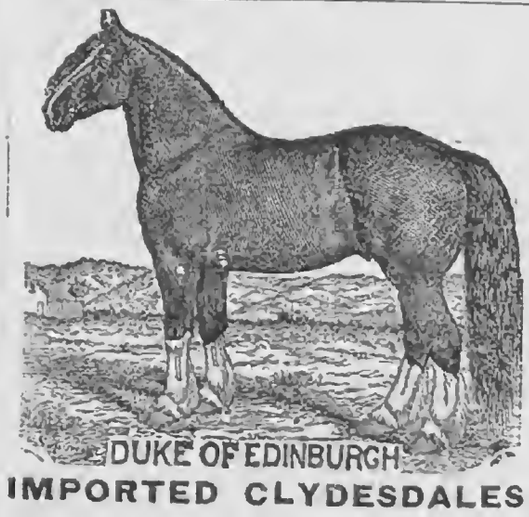

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Reading for the Young.

HOW THE DAY ENDED.

BY MAUDE MEREDITH.

I SAY, Tilly, got the baskets all packed? Here, what's to be done with this sort of a pie-thing with a cake laid over it? Oh, it's a "picnic pie," eh! well! everything in? Hallo! here's the team. I say, all aboard!

"All aboard for Oak Grove Spring!" cried voices from the barouche, and Clyde hurried out, followed by his sister Tilly.

Clyde and Matilda Barton, as Aunt Mehitable called them. She had "brung up" sister Sara's children. Sara was never a very considerate, calculating sort of a woman, and this last of all, leaving two little helpless children, while she quietly slipped down into her grave under the daisies beside the soldier husband, was the most inconsiderate of all, so Aunt Mehitable thought, and she ought to know about it, for she took the children home to her little yellow house at the end of the street, and though Clyde had grown up a merry, manly fellow, and had been able in a short time to bring in his weekly wages, and little Tilly, after the few first years of mumps and measles, had shown her tact in decorating the little house and desolate, weedy yard, Aunt Hitty had "all she could attend to to keep the bugs off the taters and the weeds out on the onions," yet to-day, as the carriage load drove off, Aunt Mehitable sighed, looking after it, and murmured, "Such a site of trouble children is; but then it was dreffal like Sara to do so."

Aunt Hitty would never realize that she was growing old and feeble, but Clyde, now almost a man, more manly with his 18 years than many a one at 25, was her sole support, and that little Tilly, already 16, had nursed her through ails and attacks of rheumatism innumerable, she saw, as is the habit of the world, only her own virtues and the obligations of others to her. Meanwhile the merry picnic party bowled along, joined now and then by others, until some 30 or 40 merry young folks met at the Spring. It was a day on which to be merry, the Summer holiday, July 4th. The little Western village seldom invested in powder on such occasions, and only some of the young people, decorating their horses with innumerable little flags, improved the day for picnicing, Oak Grove Springs being the pleasantest resort. Games of quoits and base ball, where some of the girls "surely, surely," had fingers broken, so they declared at least; skiff rides on the river and the picnic dinner finished out the day, and tired and dusty they returned home at an early hour, quite satisfied with their patriotic endeavors.

After the teams were returned and paid for, as they lounged out of the little office, which was also the bar-room, an ugly question came up in the minds of the boys, what to do with the evening? Most of them were at some kind of employment in the village, and this one day in the year business was set aside and the windows closed.

"Let's go boating," suggested Clyde Barton; "there is a full moon and it will be lovely; cool, too! We can race if we choose, two to a boat, you know. What d'ye say, boys!"

"*I* say my new shoes pinch awful," and Charlie Herne ratrly took a limp step or two.

"Go up to your room and change them, suggested Roy Carman, "we'll all go along." And off they started.

Charlie Herne was a clerk in the post office and slept in a room just back of it.

"I'll have to be back in an hour, when the stage comes in," said Charlie.

Tom Haseltine stretched his six feet of indolent manhood on Charlie's bed with a yawn. "I say, boys, I'm tired, let's get us a lunch and, I say, some of old Bob's good cider, or—stay! Becky Stout made lots of wine from her grapes last year, and now she wants to sell it. That drunken scamp Tom Brown says she has mixed whiskey with it, for it is too much for his perpendicularity, but I don't believe it; she gave me a little taste one day—awful stingy little drop—but it was rousing good, now I tell you! Nothing but home-made, you know, boys," he said with a winning tone of voice and a good natured smile.

Then followed a little discussion for and against—boating or supper. Harry Hereford holding out stoutly against the supper.

"It's all very well, he said, "but me and Clyde knows just how it will be; there aint one of us used to cider, even, and we'll get stupid and silly and like as not fight and shame ourselves and every one belonging to us. I know I wouldn't want *my* mother to know of it, would you, Clyde, if you's in my place?"

Clyde and Harry were the best of friends; both brave, honest boys trying to do right. Harry, for the sake of his widowed mother, whose idol he was, and Clyde from a manly instinct, and a feeling that loving little Tilly had no other friend and protector, and he needs must be a man. But numbers over-ruled and the two friends at last said aside to each other: "We don't need to drink, we'll just have a pleasant time and not touch the wine."

And steadily they adhered to their decision, until late in the evening, after the stage had gone and the wine had began to effect the spirits of the boys, who now began persistently to banter the two who were conspicuous by their repeated refusals to drink.

At last, half shamed by the raillery received, Clyde and Harry promised to take one small glass each if the boys would then go home. The promise was readily given and, at a wink from Tom, a liberal dose of clear whisky was poured into each glass and they were then filled with wine.

The boys, unsuspecting the cheat, drank off the contents of the glasses, and then arose to go, but, by a sort of combined effort from all the party, they were detained a few minutes for this and for that, the boys purposing to have some fun at the expense of "These temperance fellows, that were so afraid of being drunk."

A queer feeling of torpor, a being lifted up into dreamland was creeping over their senses, at which their companions winked and chuckled inwardly, and at last declared they were thirsty.

Harry who grew merry, called for more wine, but Clyde, naturally quiet and thoughtful, grew sullen under the effects of the mixed liquor, and at first remonstrated, then querilously accused the boys of foolishness, then of meanness.

By this time Harry had swallowed down two or three glasses, and uproariously insisted on Clyde's drinking, at last, thoroughly angered, he cried, "Yes, I'll drink another glass, like a fool, and then Harry Hereford, you'll go home."

Some of the boys still sober enough for mischief, filled the glass nearly full of whisky adding a little sugar and wine. Clyde had never tasted either before, so he took the draught unconsciously, and dropping the glass caught Harry by the coat and endeavored to force him away. But Harry, wild with the drink, his merry nature seemingly turned into foam, he laughed, shook off the hand, bantered Clyde, and finally, catching up another glass, cried, "Drink, drink to the merry god! Swear by Bacchus! swear! drink!" trying to force the cup to his lips.

At this the other boys set in and a general good-natured scuffle followed, but out of which half of the boys came with red hot tempers, pulling off of coats, "squaring off," and with many a stagger, declaring themselves ready to "find their honor" at any cost, and a general melee followed, Harry still sensible enough to follow close after his best friend, Clyde. The door was pushed open, Tom's burly weight fell against Clyde, throwing him upon the wide, stone step. In an instant he gained his footing, struck out in the half-darkness, at the figure near him, whom he supposed to have struck him.

A moment more and a very white, sober face leaned over a face yet whiter, upturned in the moonlight. From a ghastly cut across the temple flowed a stream of red, red blood, and the chilling lips whispered—"O, Clyde, you did not mean to ——" then a heavy sigh, and Harry Hereford lay dead.

A hush fell on the little group as Clyde gathering the head up on his knee tried to wipe away the blood, muttering incoherent words of endearment to his friend, the merry boy, who could now never answer him back again.

At last he cried, throwing up his arms. "Oh, *don't* stare so! don't Harry! for God's sake look away! oh, just a minute! just a minute!" and springing to his feet he dashed away through the alternate lines of moonlight and shadow and was lost to sight.

Slowly then the clouded minds of the terror-stricken revelers began to act. At Charlie's orders poor Harry's body was raised carefully and laid on his own bed, and one after another the boys straggled off to tell the dreadful news to the older people.

At last Harry's mother had to be told the terrible truth, and the blow on the already shaken constitution was too severe. A deadly pallor grew slowly up from lip to fore head, a strange ashen blue, the eyelids quivered a moment and were closed forever.

Harry and his mother were buried side by side, and then for the first time the neighbors turned to the living. Clyde had not been seen, could not be found though they advertised in the nearest papers, telling him to come home, there was no arrest to be made, he had not struck with any murderous intentions, and only that Harry's head had hit the sharp corner of the scraper by the door mat, he would not have been hurt. Yet no word or tidings came.

Aunt Hitty bewailed the luck that followed Sara and her children, and poor little Tilly, almost broken hearted, crept out in the shade of the Summer trees, a terrible weight falling on her young heart, she drew away from all companionship, and the little village left her alone with her grief.

By and by she took to long rambles away by the river side, and off over the fields of grain, hoping always, vainly, that under some shrub or tree she should find her brother. Thus she wandered on, always picturing him as perhaps asleep in the shade of this corn field, and then not finding him, thinking he would surely be sitting under that cotton-wood, tired, and forlorn, heart-broken by his terrible deed, dreading to be alone, yet fearing the face of man. Though she would rush up to him, throw her arms about his neck, tell him how every one pitied him, and no one really blamed, no one wished to deliver him into the hands of the law, in fact the law had no hold on him.

Over and over she pictured the meeting, how she would lead him home, how she would comfort and caress him, and in her anxiety for her brother forgetting her own misery. For in her girlish heart Harry had been the one ideal hero, while Clyde had filled the place of father and mother and kindred: he was all she had, her brave brother.

One day when the westward sun threw long slant shadows over the field, and the trunks of trees stretched out gaunt black ghosts of shadows toward the east, Tilly turned slowly homeward. A month had now passed and not a word had reached them from the lost Clyde. Had the law reached its searching fingers forth, no wood would have been sufficiently dense, no hamlet far enough removed to have hid him. But only the friendly interest of a little village, and the agonized fear and love of one little sister searched after him, and no word came, no trace was found.

Slowly, sadly she turned her steps homeward, scarcely heeding the course she took, when suddenly the sound of a voice arrested her, a voice from out of the very ground, smothered, indistinct, strange, yet familiar singing that old song, "Over the Sunset Hills," the very words she and Clyde had sung so often together, accompanying themselves on their mothers old harmonia.

Tilly clasped her hands and held her breath, looking eagerly on every side, thinking she should see the handsome face, and springing form of her brother come suddenly in sight from—she hardly knew where, but he did not come. The voice died out, then began again.

The sun had gone down now, and a cool breeze shook the leaves on the oak, and rustled through the long lances of the corn in the field beyond. Perplexed and frightened, fearing some hidden tramp yet held by something in the voice, she drew nearer and nearer the sound, then all was still, and she waited. A hermit thrush burst forth in rapturous song, and a whip-poor-will called wierdly close at hand. "Hush, oh birds!" she cried, and the sound of her own voice in the gathering shadows startled her.

Then the voice began again:

"Over the purple hills, my darling,
Over the sunset sea."

A waver in the next line and then in full clear tones:

"I'm coming, coming to thee."

There was no longer any mistaking Clyde's voice and Tilly rushed forward crying "Clyde! Oh, Clyde!" when a voice from an old deserted mineral shaft at her feet, answered, "I knew you would come, Tilly. The angels always hear if we sing," and Tilly white with delight kneeling by the shaft peered over in the darkness, crying out her joy and gladness, telling Clyde all the cheering words her full heart could think to say, and, begging him be cheerful and wait until she brought help, she rushed away to the village and soon with lanterns and ropes and rope-ladders, half of the village turned out to the rescue.

When with shouts and words of cheer the villagers gathered around the shaft, no word of answer came to all their calls, and at last thinking hunger had exhausted him and he slept, a rope ladder was hastily lowered, and poor Tom Haseltine, who could never forgive himself for being the first cause of all the harm, tying a rope about his chest, with nervous, tremulous fingers fastened a lantern to his shoulder and began the descent. The shaft was deep, and it was some time before the slacking ropes showed that Tom had reached terra firma.

There was a suppressed sound of words and then a call for "more ropes" and after a long interval, in which a strong cable was lowered, the cry "Heave away" and slowly hand over hand, two of Centralia's old miners, standing on planks that spanned the mouth of the pit, drew the burden up.

Whispers of "Is he dead?" "Can he be asleep?" "What is the matter?" ran round the circle, but Tilly, breathless and motionless, gazed down into the darkness.

Slowly the moon began to rise over the eastern prairies, and scattered, like bits of gold, its yellow rays among the oak branches, and silvered, here a broad strip of sward, there a white bowl of a silver birch, and at last fell on the men as they stood on the heavy planks.

"Stand back!" and the crowd swayed and gave room. Tilly fell on her knees, and bent her face low, while one stepped upon the plank beside the other, and Charlie Herne drew the other plank out of the way. Slowly the burden came up to the clear cold moonlight. A shudder ran through the crowd. The hair was matted, damp, the face and clothes covered heavily with the clinging yellow ochre, and the gaunt, hollow eyes were wild and sightless. Clyde Barton had crossed the

"——Mystic river
That flows from the unknown sea."

Only "a little of old Becky's wine," only a "little fun," as Tom had thought it, when he smuggled in a half pint of whiskey from the drug store, but on Tom's heart in letters of blood are written the words: "Look not upon the wine when it is red, when it giveth its color to the cup."

The Puzzler.

A PYRAMID PUZZLE.

A vowel; a cape of New England; mountains of New England; a river of Virginia; a city of Kentucky; the centrals form a vegetable.

☞ Answer in two weeks. L. O.

A FRACTIONAL PUZZLE.

Take one-third of rug; one-fifth of sloop; one-fourth of junk; one-eighth of iron-clad; one-eight of schooner; one-ninth of canal boat; one-ninth of steamboat. Take one from each and form a vessel. O.

☞ Answer in two weeks.

A SQUARE WORD.

A city of China; a bird; a city of India.

LITTLE ONE.

PUZZLER ANSWERS.—Oct. 2.

ACROSTICAL ENIGMA:—Ray Clark.

A SQUARE:—

B A C C A
A T L A S
C L O U T
C A U S E
A S T E R

DIAGONAL PUZZLE:—

T
A I
P U G
I D L E
R I V E R

HIDDEN ISLANDS:—Borneo; Sumatra; Hebrides; Tasmania; Cape Verde; Canary; St. Helena; Ceylon; Crimea.

DIAMOND PUZZLE:—

F
F I B
F I R E D
F I R E D O G
F I R E E A T E R
D E D A G A T
D O T A L
G E T
R

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FROM THE CALIFORNIA HORTICULTURIST.—The RURAL NEW-YORKER for July 10th contained 1,000 special crop reports from all parts of the United States. These general reports, for which this journal has acquired a reputation, are worthy of high commendation."

FROM SUBSCRIBERS.

"I cannot tell you how much we like the RURAL and how much we have missed it for the last two weeks. I heard my wife say last Saturday evening when our mail was brought from the Post Office, that she did not care even to look at it now that the RURAL did not come.

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PERSONAL ITEMS.

Moody and Sankey are going to "revive" the Californians.

George Bancroft, the historian, celebrated his eightieth birthday at Newport, on the 2nd inst.

Count de Chambord, the head of the Legitimist party in France, has just completed his sixtieth year.

MISS HELEN GLADSTONE, the daughter of the Premier, is one of the successful candidates in this year's class list of Cambridge University examinations.

George Washington Childs, owner of the Philadelphia Ledger, and Anthony Drexel, the banker, have bought 630 acres of land near Philadelphia, and intend to make a popular suburb of it.

Ex-Gov. Hubbard, of Conn., is about to give up his law business and go to Europe with his family. One of his daughters who married his coachman some months ago, is now a seamstress in Hartford, and her husband still drives a coach.

Jacques Offenbach, the celebrated musical composer, died on Oct. 5th, at Paris. He was born of Jewish parents in 1819, at Cologne, in Germany, but went to Paris when 14 years old. He was the originator and prince of Opera Bouffe, having composed all the best works of that type, and as manager brought out quite a number.

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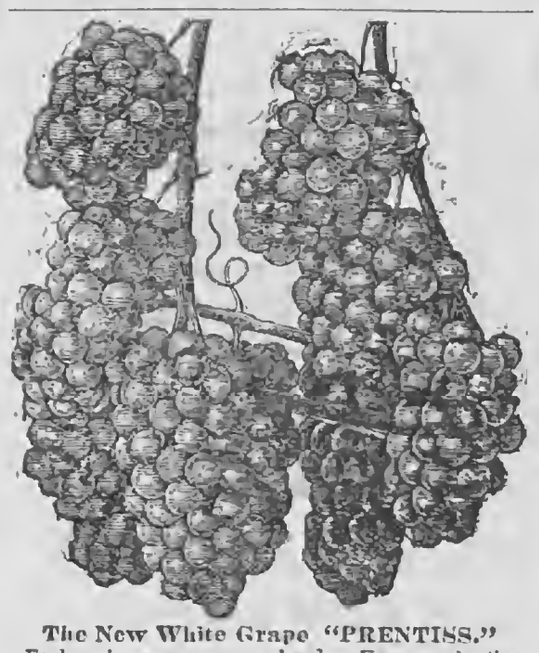

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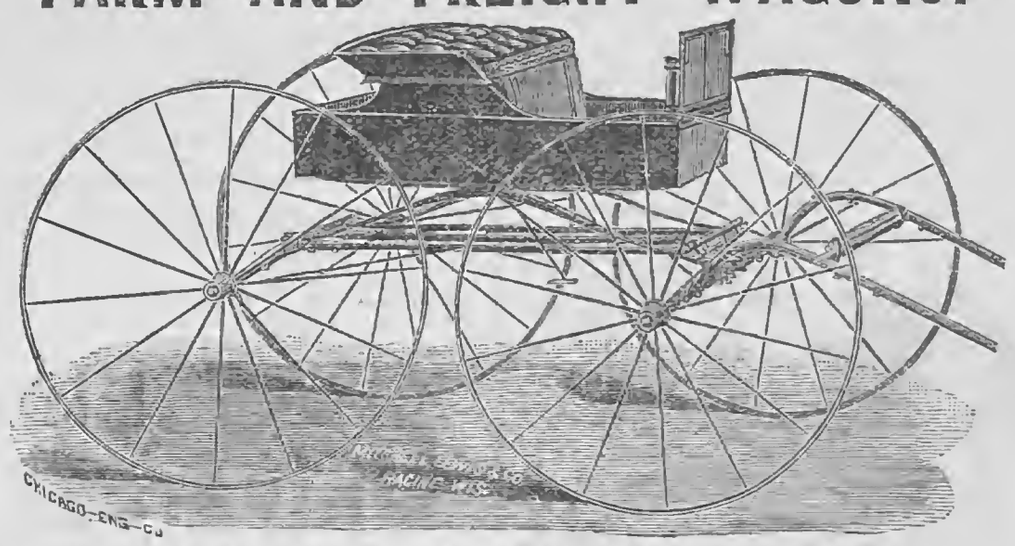

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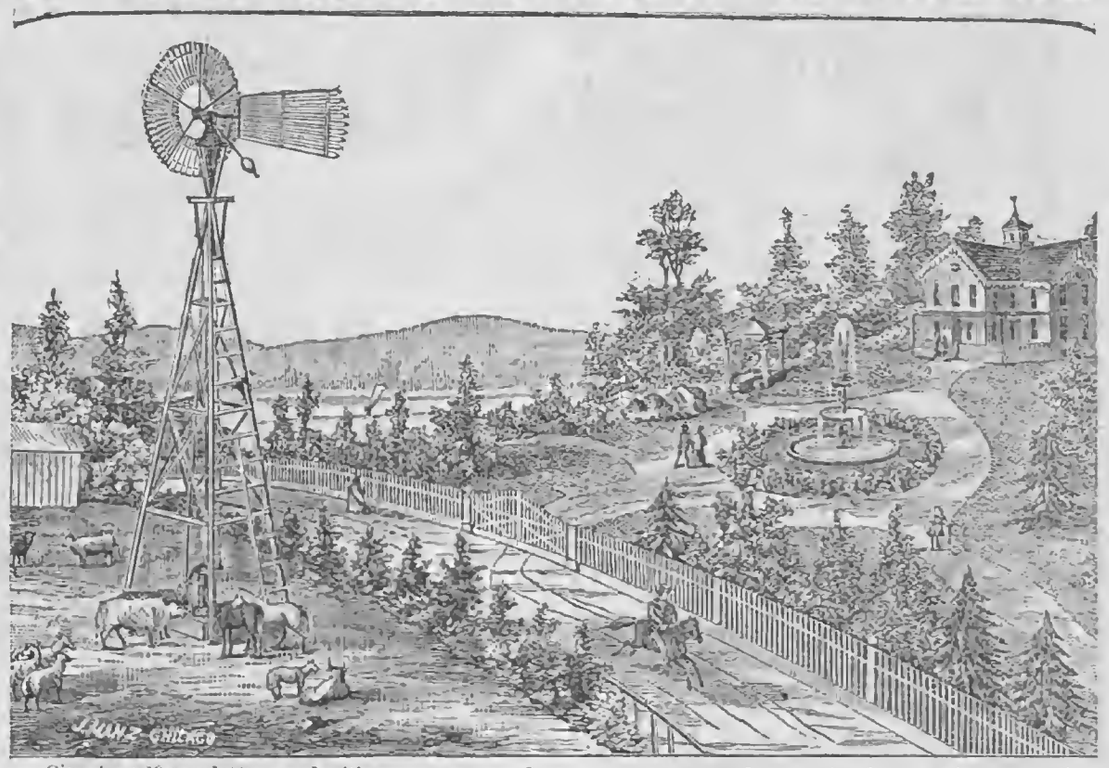

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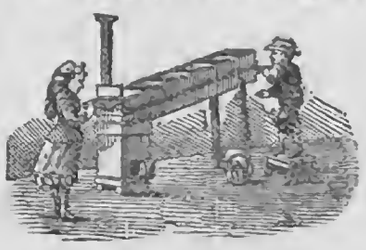

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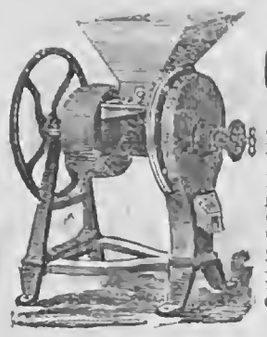

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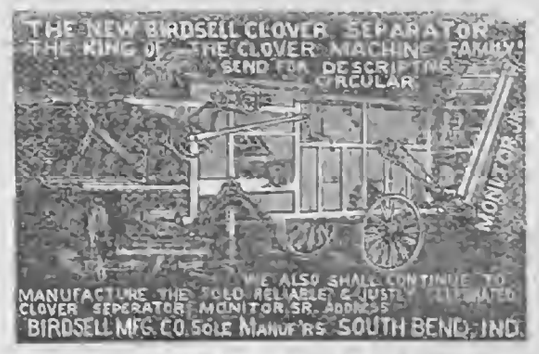

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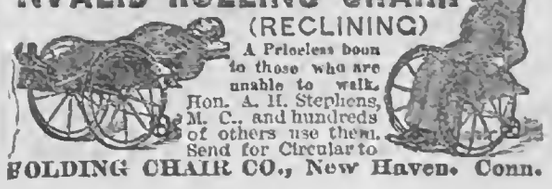

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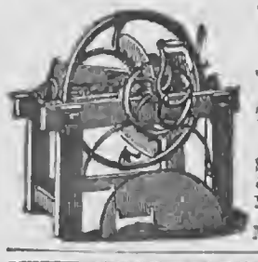

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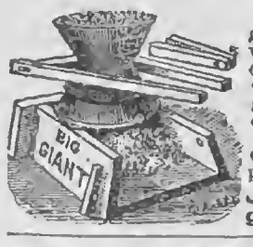

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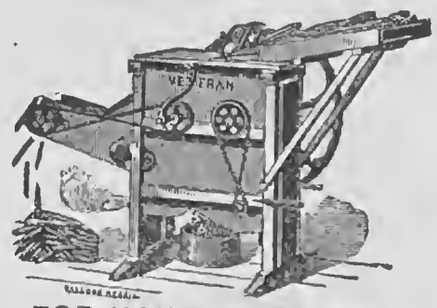

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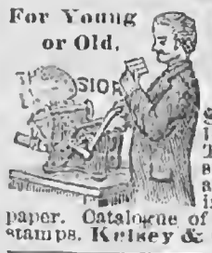

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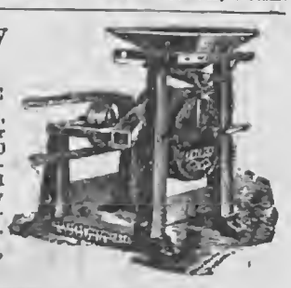

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Floricultural.

THE INDIAN AZALEA.

JAMES TAPLIN.

Readers of the Rural must not confound these plants, which are evergreen, with the hardy American and hybrids of the same, which are deciduous and stand our severest Winters unprotected; for with the exception of the old A. Indica alba and amœna, which will stand unprotected at least as far north as New York, most of the varieties are injured by a very little frost, and many of the newer varieties appear to be more tender than older sorts. This may be from growing the plants for a great portion of the year in hot, moist, shady houses to increase the stock and obtain large plants in as short a time as possible, as it is nothing unusual for many of the best growers to obtain two and sometimes three growths in one season, although the plants flower only once.

The Belgian growers make a specialty of these plants and send a large number to this country, besides sending them to all the markets of Europe. They also send out a number of new seedlings each year, including many fine varieties. They turn their attention to a great extent to doubles and semi-doubles, and also to an increase of size in the single sorts, paying less attention to the shape and substance of the flower than the English raisers of seedlings, a fact which may be confirmed by comparing any half dozen varieties raised in the two countries. But the double and half-double sorts last much longer in flower and are also of more service if required for cut flowers, for which they are very useful, especially in the Winter and early Spring; for by selecting the early-flowering varieties and growing them early in heat, and then keeping them as cool as possible through the Summer, and afterwards giving the plants a warm, moist house, it is easy to have them in flower at Christmas, although they are usually of most value at Easter.

Many people have complained to me that they have little success with these plants when grown as window plants. This is caused by baking them in the Winter in hot, dry rooms and allowing the plants to get very dry sometimes. If an azalea, the ball of soil of which is, and should be, full of its fine, hair-like roots, once gets thoroughly dry, no amount of watering short of soaking in a tub of water, will moisten it, and many of the roots are sure to perish. In a room heated to 70 degrees in Winter the delicate roots round the inside of the pot are undergoing a baking process all the time; but if grown in a room from which the frost is only excluded, it might be grown with success by placing it out-of-doors in the Summer.

Azaleas may be propagated from seeds and cuttings and by grafting; the seeds, being very fine, must be either sown on the surface of pots in fine, sandy soil, or, if covered at all, with only a dusting of fine sand, covered with a square of glass and sheltered from the sun, it being difficult to water them without washing the seed away, and they must never be allowed to become dry. It is best to stand the pots in a pan of water and so allow them to water themselves; the seed soon vegetates and if the plants are kept growing without check, some will flower in less than two years, when the best varieties may be retained and grown on, and any others, if required, may be used as stocks for grafting any varieties it is desirable to increase by that system. If the seeds are saved from good varieties, they will often vary considerably in growth and flower, but probably there will be nothing better than the parent plant, and possibly nothing so good. In some instances I have seen all the seedlings come exactly like the parent with scarcely a variation even in the habit of growth. A case in point was the variety called Stella, which is a good sort yet, and when sent out new, probably 25 years ago, was a grand improvement on the then existing sorts. A friend raised several hundred seedlings from it, and I saw them all in flower the first time, and every plant could have been sold for the original parent. The only way to get new varieties from seed is by careful cross-fertilization, when, if nothing new or superior to present kinds is obtained, there are sure to be many distinct and desirable sorts for home cultivation. There have been several fine batches of seedlings raised in this country and brought before the Floral Committee of the New York Horticultural Society, which, if well grown, would compare favorably with many of the European seedlings; and as the plants flower in about the same time as seedling geraniums, it is a good field for amateurs of leisure to engage in.

To propagate by cuttings it is only necessary to prepare some pots with fine sandy soil with a layer of sand on the top, to prevent damping; take off the half-ripened wood from two to four inches in length; remove a few of the lower leaves and cut to a joint; place them thickly near the edges of the pot; give a good watering, and place the pots in a close frame; shade from sun, and water when necessary; keep closed until they commence to root, and then give air and light until all are rooted, when they may be potted singly in small pots and treated as advised for seedlings. Many good growers turn the plants out of pots into a prepared bed of soil in a house or frame after a three-inch pot is well filled with roots, and grow them during a Summer on that plan, finding they make more growth with less care than when grown in pots. As the growth advances, pinch out the tops from shoots to form a good head. The second growth will flower at the proper season, and, of course, will have many more shoots than if not pinched. It is well to allow the plant to grow about a foot high without pinching; the plants then will have nice clean stems, in fact, they are miniature standards while small, and can be trained to any shape as they become larger, the pyramid being the most popular, and by judicious pinching that or any other shape may be obtained without much trying. The Belgian growers plant all these young plants out, but they use decayed leaves for the purpose, which combined with abundance of water induce a quick and very fine-looking growth, but the plants do not generally grow so well afterwards, and if that soil becomes thoroughly dry it is almost impossible to moisten it again. I have put such plants in a tub of water for a night, and found only the outside wet in the morning. I have also found the light kind of soil employed for potting azaleas in Europe not so satisfactory in this dry climate, as the moisture evaporates too quickly and the best roots perish.

Grafting is not of much importance to amateur growers, and is not much employed in this country, except to increase new and scarce varieties, and for a few of the weak-growing sorts, such as the variegated section, by grafting which a year is gained in the size of the plants. But to propagate by grafts requires a hot-bed and more care than many have time to devote to the job, and a number of cuttings or seedlings must be prepared for stocks the previous year. As regards soil, any soil free from lime will grow them more or less satisfactorily, clay and bog peat being the worst, and a good upland peat, and a good, friable loam in about equal parts, the best. If the soil contains little sand, some clean sand should be added, but as the soil, even in two parts of a small garden, is seldom alike, a novice can try the most likely to be found in his district. I have a loam here which will grow azaleas equally as well as it does roses, but that is not often the case. I may add that it is necessary to make the soil very firm in the pots at all times in potting azaleas, and also to see that the drainage is perfect, for the plants detest stagnant water. When the plants are large and in vigorous growth with pots very full of roots, and it is not desirable to increase the size of the pots an occasional watering with weak, clean liquid manure is of great service.

If plants are kept in good health and frequently syringed over-head while growing, insects are not troublesome, but occasionally a plant will become infested with thrip or red spider; then a dip in a mixture of tobacco water, soap and sulphur will clean it. I usually give about two dippings during the Winter when plants are not growing; and seldom see an insect during the Summer. I prefer keeping plants indoors during Summer, but there is no objection to placing them outside if necessary, if precautions are taken to prevent worms from entering the pots, and if the same attention is given them as inside. The main objection to keeping them outside is that the plants are often expected to look after themselves, for which reason I have seen many fine plants spoiled past recovery. Young plants which are expected to make more than one growth must be kept inside, whether grown in pots or planted out.

Among the many sorts at present in cultivation it is difficult to name a list from so many good kinds, but I will give a few of the most popular and distinct which are all very fine: Baronne de Vriere, pure white, one of the largest flowers I have seen; Bernhard Andreas, deep rose, very double, one of the finest; Bernhard Andreas alba, one of the best, if not the best double white known, when true; but out of a dozen I once received but two, the remainder being another white not nearly so good. It does not make so much wood as many others; Bijou de Paris, pure white striped with rosy carmine; Borsig, one of the most popular double whites; Charmer, bright amaranth; Daphne, pure white stripped with pink; Due de Nassau, rosy purple; Extranei, violet rose, a fine shade, an old but very fine sort; Juliette, fine-shaped rose; La Victoirea, fine orange flower, with dark blotch; Madame C. Van Langenhove, white striped with crimson, very fine, Flag of Truce, double white, one of the best trade plants, but late importations have been much diseased; Madame C. d'Hamall, pure white; Madame Vandercryssen, rose, fine; Madame Marie Le Febvre, very large white; Mrs. Merritt, violet-rose, semi-double; Mrs. William Bull, white, large and fine; Neptune, orange, shaded with violet; Rubens, bright scarlet, fine; Souvenir du Prince Albert, rose and white, very double, one of the best.

AZALEA, MRS. CARMICHAEL.—After B. S. Williams.—Fig. 336.

CHINESE AZALEAS AS WINDOW PLANTS.

The Chinese or Indian Azalea—Azalea Sinensis, or Indica—is one of the chief plants employed at the present day in most well-fur-

nished greenhouses or conservatories, yet of its unquestionable value as a window plant we hear little said. All over Europe, we find this peculiar value of the Chinese Azalea abundantly recognized. Uncounted thousands are used there every year in the humblest homes, but in America the same culture seems to make its way slowly. Let us consider a few brief directions for successful azalea culture in the dwelling-room,

Buy the azaleas you propose to cultivate in the room, some time in October, when they have fully matured their leaves and buds. It would not be advisable to bring them in as soon as October, if it were not for the danger of sharp frost during that month. In any case, they must be set out in the open air as much as possible during days that are not positively frosty to harden both leaves and buds and fully prepare them for the trying changes of a dwelling-room in Winter. When Winter has fairly set in, the azaleas should be placed permanently in the room it is intended they should occupy, and in the lightest and sunniest of its windows. If at all convenient, windows with southern and eastern exposures should be selected, for the light from these quarters produces earlier and better flowers than that from the north and west. Thus, while in late February or early March we can have flowers on azaleas exposed to the east and south, at least a month more must elapse before the plants looking elsewhere for light, can bloom. Water moderately and only now and then while the azaleas have not as yet begun to grow. During full growth, however, be quite liberal in this respect. The tendency which azaleas often show in the dwelling-room to suffer from thrip, green fly or red spider, may be overcome by dipping their heads once or twice a week in tobacco water. This treatment must be followed up with increasing care until Spring advances sufficiently for the plants to be safely plunged in the open ground.

About the middle of May usually, Chinese Azaleas may be safely set out or plunged pot and all. If the top of the pot be set an inch or two below the surface of the ground and immediately well watered, the plant will continue to put forth and ripen new sets of leaves with no other moisture than dew and rains. Once in awhile, during dry, hot weather, artificial watering may be done with great benefit. At least once in two years, if not every year, a fresh potting should be given window-grown Chinese Azaleas. I am assuming that young plants of moderate size are employed. Old, large plants may remain in the same pot several years without becoming pot-bound or stunted. Whether a larger pot be used or not, will depend on the growth the roots have made during the last one or two years. Fresh soil should be used in either case, composed of rich, sandy loam mixed with a liberal quantity of old, well rotted manure Before potting, remove about an inch of the soil from the ball of roots, and compact, instead, the fresh earth firmly round about the plant in the pot. Chinese Azaleas like this treatment. Water should be now given in small quantities and at short intervals in order to soak the potting earth thoroughly. But we must not forget the pruning! It is important. First, cut back hard in early Spring the stems and twigs that have just bloomed in order to start out a vigorous young growth, and then pinch the strongest young shoots at their extremities from time to time to develop strength and symmetry. Do not strive too much for absolute regularity. All azaleas naturally arrange themselves in layer-like masses with strata of flowers piled one upon the other. This being their natural habit, it seems a pity to clip the plant into absolute formality.

In conclusion, I subjoin a list of a number of the varieties best adapted to window culture, for many kinds have buds that are so constituted as to drop or become injured by the peculiar conditions of a dwelling-room. Some kinds, again, are in every way hardier than others. Of those that are suited to window gardening it may be said that no better or more easily managed plants exist for that purpose. A list of varieties well adapted for window culture may be made as follows:—Amœna, Fielder's White, Indica alba, Belle Gantoise, Brilliant, Burlingtonii, Distinction, Criterion, Delicate, Eulalie Van Geert, Flower of the Day, Iveryana, Murrayana, Perfection, Frederick the Great, Georgiana, Leana, Mad. Amoroise Verschaffelt, Marie Vervaine, Alexander II., Miltonii, Queen Victoria, Racemosa, Senator Kessler, Standard of Perfection, Adelaide of Nassau, Obtusa, etc. The engraving annexed represents the variety Mrs. Carmichel. It forms an excellent example of the best modern improved hybrids of the Chinese Azalea. S. PARSONS, JR.

House-Plants.

The season for out-door plants for this year is about over, and arrangements must immediately be made for the in-door plants, if one wishes to enjoy their beauty and fragrance the coming Winter; and I certainly wish that no family who read the RURAL NEW-YORKER should be entirely destitute of a few choice house plants. In Winter, when no flowers are seen out-of-doors it is very pleasant to have a few flowering plants in the house. They are a source of enjoyment not only to the owner indoors, but they cheer and enliven the spirits of the passers-by. I know of a bay window in this town that in winter is always beautiful, and is daily admired by many people who pass it, and they often stop to take a closer look. It is a fact, I think, that the cultivation of window plants is yearly becoming more popular, and I am glad to see it so. All who wish to make homes beautiful, should cultivate flowers in the house in winter, as well as out-of-doors in Summer. F. H. D.

Corning, N. Y.

Field Crops.

RURAL BRANCHING SORGHUM.

THERE is need for more fodder crops. The feeding of cattle for the production of milk and butter promises to be one of our most profitable branches of agriculture, and a prolific fodder plant that will permit of cutting freely and will quickly recuperate after the cutting, will be of great value. The Rural Branching Sorghum is such a plant. A careful test of this plant this season has proved its qualities, and a history of this season's experience with it may be interesting.

On account of the unusually dry weather in the Spring, the planting was delayed until May 21st. This was fully a month later than the first planting of sweet corn. The soil is a sandy loam, and was manured with well rotted cow manure at the rate of about 16 tons per acre, and a light dressing of lime. The soil was in fair order and by no means rich; equal only to fairly good corn land that would make 50 bushels of corn per acre. The seed was planted in drills opened with a plow and covered with a hoe, about three inches deep. It appeared above ground in four days after planting, notwithstanding the soil was very dry and no rain fell. On account of the dry weather it grew slowly, but after rain fell it shot up with remarkable vigor, branching or tillering very freely. The seed was dropped three inches apart, but the tillering brought the stalks to within an inch of each other as they stood in the rows. On July 9, the plants in one row were cut and fed and all were eaten up clean by the cows, the stalks being wholly consumed. On August 21st, the other rows were eight feet seven inches high, and until the dry weather came were growing three inches a day. On that day twelve stalks, cut from one foot of row weighed nine pounds, which would be equal to 65 tons per acre. The row which was cut on 9th of July, is now (Sept. 30) over six feet high and has blossomed. Part of the row, of second growth was cut the second time, and on Sept. 30, was two feet high and had thickened up considerably. On account of the close planting the stalks are fine, none being more than three-quarters of an inch and the majority less than half an inch thick. The stalks are now over 11 feet tall and have passed the blossoming stage and promise to mature seed. Some stalks were cut to-day (Oct. 4) and given whole to cows and a horse. The cows ate all but a few pieces of stalk, but were not hungry, having been all day on good pasture. The horse ingeniously managed to take his stalks by the blossom end and chewed up the whole by degrees without letting go. This animal evidently chose the best manner of disposing of them.

On cutting some sections of the stalks for examination under the microscope, they were found full of starch grains, and in one stalk, which had been touched by the frost, a few crystals of sugar were found. On chewing a piece of this stalk, it was found to be nearly as sweet as the Amber Sugar-cane. The starch grains were so plentiful that they adhered to the fingers when the sap dried upon the hands after cutting the stalks, and on scraping these dry granules off and examining them under the microscope, they appeared as small as the grains of rice starch and very much smaller than those of corn, wheat or potato starch. The large quantity of starch contained in the stalks goes to show that they must be unusually nutritious. The season has been remarkably unfavorable. Long-continued dry weather has seriously stunted the corn crop and has curtailed the growing season at least one month. But for this, the sorghum would have ripened seed at least two weeks ago. The frost of the first of October which killed tomatoes, has very slightly touched the sorghum, discoloring a leaf here and there, and only seriously touching a few of the stalks at the end of the rows. It is at least as hardy as corn.

This new fodder plant evidently promises to be a valuable addition to our list of feeding crops. From its habit of growth and ability to stand repeated cuttings, it would probably produce the most fodder by being drilled in rows 12 to 18 inches apart, and cultivated with an implement arranged for the purpose; then cut when three or four feet high with the mower and left to grow up again, which it will do very quickly thickening up very much in its second growth. Three cuttings may be easily made and the last growth may be pastured down at the end of the season. This method would produce soft, fine, succulent fodder which would be consumed without any waste whatever. HENRY STEWART.

RURAL SEEDS, ETC.

THE Cow-pea grows astonishingly and is relished by sheep. It ripens easily in this climate—in a line with Utica. It is very prolific, and is evidently of real value. Blount's Corn ripens with me and bears from two to three ears to a stalk. My hired man has difficulty in carrying a dozen stalks in his arms. For fodder and for seed it is only inferior to Moore's Concord Sweet Corn which is, in my judgment, the unrivaled corn up to date. Mold's Ennobled Oats are a marvel of productiveness, rather late; about two weeks after the common oats. Straw short, and seed about double the weight of other kinds. The Siberian Fir seeds germinated; but the magnolias have not done so yet. I shall look for them for five years yet. The pentstemons are a failure. From your flower seeds in general I have secured not much of special value.

Among my notes for the year I find that corn fodder cut during the Summer and fed to cows, as compared with cut grass, gives milk as five to six; or lessens the supply about one-sixth. It ought to be fed not oftener than one meal out of three. The yield of potatoes in this section is less by one-third than last year; that of corn equal to last year's. Your crop reports are of great value; and your special numbers on berries, cereals etc., are inestimable. You have my sincere thanks for the real value of your work to myself. You have taken the lead by making your paper immensely useful.

Among the small fruits I find the New Rochelle Raspberry to be of great value; but with us Turner is practically worthless. [Are you postive that it *is* Turner? Eds.] It is sweet, soft, hardy and useless. Cuthbert and Gregg deserve all the praise they get. I am still much attached to Davison's Thornless Black Cap. E. P. POWELL.

Oneida Co., N. Y.

"SHALL POTATOES BE DUG TO PREVENT ROTTING?"

THE above question is put by friend Brownell in a recent number of the RURAL, in which he gives his experience in that line, and solicits the experience of others. In the first place, the answer depends upon certain circumstances, and one important one is, the place and conditions under which the tubers are to be stored; but, first, I would not permit the potatoes to begin to rot, if it could be prevented. This condition, however, is very likely to follow, if potatoes are left in the ground during a season of alternate showers and hot weather that frequently occurs in the early Autumn; and, such being the case, it is very reasonable to suppose that early digging would remove the potatoes from these unfavorable conditions; but at the same time if the potatoes are to be stored in a hot cellar, there are chances that they will then rot. On the other hand, if the cellar is cool and, withal, a little moist, and the potatoes are sound, I believe there will be no trouble with rotting. I can fully corroborate friend Brownell's experience in this line, and am fully persuaded that it is better for us to dig our potatoes to save them from rot, although I am aware of the general idea that if they are to rot, it is better for it to occur in the ground—which is all right, provided they are to rot; but this I do not believe is necessary.

My cellar is cool and what would be considered pretty moist in fact, in the wet season more or less water runs in the drains under the flagging. The potato bin is on one side of the cellar and directly over a drain, with open joints in the flagging. When I dig my potatoes they are put into the bin without even straw upon the bottom and with the sides against the wall, and yet they will keep, save as they disappear to satisfy culinary demands. I have had experience directly in the line of Mr. Brownell's, but the most marked and distinct occurred last season—the Fall of '79. Having decided to spend some time in Western New York, I dug a part of my potatoes in August, or as soon as the tops were partially dried, and put them in the cellar as described above, while the remainder were left in the ground until late in the Fall. The result was that, so far as I know, not a single potato of the first lot rotted after they were dug, while of those that were left in the ground at least half rotted during their stay there, but none of them did so after having been placed in the cellar. From the little experience I have had in that line, I am convinced that, other things being equal, it is far better to dig potatoes early, or as soon as they are matured, storing them in a cool cellar, and then I should have no fears of their rotting. WM. H. YEOMANS.

Tolland Co., Conn.

Planting Potatoes in the Fall.

In your experiment in planting potatoes in the Fall you hardly made the conditions favorable. The tubers when planted so deep—six inches—have not sufficient space, the pressure of the compacted soil checking the yield, causing the tubers to be badly shaped. If they had been planted at an ordinary depth, then hilled up, and the surplus earth leveled in the Spring, a better crop would have been harvested, and the tubers should be planted whole, so that their vitality would not be impaired. My experiments have always been confined to early varieties for early use, the soil yielding to the growing tubers better in the fore, than the after part of the season, when more compacted by drought and time. D. S. MARVIN.

Horticultural.

RURALISMS.

There have lately been many inquiries in the RURAL about the fig. There are perhaps few who know that this fine fruit can be successfully grown in the vicinity of New York city and somewhat north of it, without lifting the plants in the Fall. The fig is not entirely hardy here, but it needs no great amount of protection during the Winter, without any disturbance of the roots; and this protection is easily given when the plants are grown in the right way. Mr. L. H. Meyer, of Staten Island, has had a plantation of figs for many years, and has never lost a crop, if I remember rightly. He never disturbs the roots of the plants. Mr. Downing used to grow it successfully at Newburgh. His plan was to loosen the roots, bend the plant down, cover or bury it for the Winter and reset it in the Spring. There are two other ways in which I have grown a few plants successfully; but by far the least troublesome, and as good as any, is the plan adopted by Mr. Meyer. The ripe fruit of the fig is healthy and refreshing, and should be grown by every one who has a place for it, if only a single plant. It is necessary to begin with small plants.

I am sorry to say I have discovered another source of anxiety for the strawberry grower. Noticing on a rainy day that the young leaves of some plants here and there were drooping or lying detached, I made a close examination and discovered that the mischief had been done by slugs. The point of attack is the crown, where the leaves are tender, and where much harm can be done. The owner of the plants will be on the watch for further developments. Looking at the right time, I discovered four cases in my own beds, with the slugs at work. Those who understand the nature and habits of the slug will look with apprehension to its spread to the strawberry field. It has been multiplying very fast among us for several years, and gives us a good deal of trouble in the greenhouse during the Winter. The slug works while men sleep.

Not long since I saw, at Mr. S. P. Carpenter's, the original tree of the Geo. Peabody Arbor-vitæ (Thuja). It was nearly twenty feet high, and handsomely furnished from top to bottom. It is quite hardy and exceedingly ornamental, retaining its beautiful golden hue during the hottest of Summers. It is a fine tree for the lawn. At Mr. Hance's, and also at Mr. Lovett's, I saw medium-sized but very fine specimens of Biota, *var.* elegantissima, another fine arbor-vitæ of recent introduction, and resembling Geo. Peabody in general appearance. This also retains its beautiful golden hue during the Summer, and is a fine subject for the lawn. In Western New York I am told it is not hardy; but it seems to be quite so in the sandy soils of New Jersey, Long Island, and some other places. A tree of doubtful hardiness should never be planted in a rich soil. For small lawns, where tall and spreading evergreens are inadmissible, there is nothing more appropriate than the arbor-vitæs and retinosporas.

The talk now is for an agricultural college, to be located in New York city. There is no place for an agricultural college in New York that I know of. An agricultural college without a farm attached is an agricultural absurdity. Cornell would seem to answer for the present; but if we are to have another, or one purely agricultural, New York city is not the place for it. Long Island or West Chester County would do; but let us first have the "Experiment Stations" under way. In attempting too much we may lose all.

A very pretty climber for the garden is Passiflora Pfordtii, a comparatively recent introduction. It produces its large and handsome flowers very freely during the Summer,

but is at its best in August and September. During the latter month, as the weather gets a little cool, it is no unusual thing for the flower to remain open two days, and sometimes even more. It is a good plant to grow wherever a place can be found for it. It does well also in the greenhouse, and is much easier to grow than those that require a strong heat.

The following extract from a letter from Mr. Downing will interest many: "The Cuthbert Raspberry appears at present the most profitable one for market. The Turner is also good; but to eat and for family use I have seen nothing to exceed Brinckle's Orange. Pride-of-the-Hudson is a fine sort if well cared for, and so is the old Franconia." I am somewhat inclined to go just one step further, and say that, to eat, I have never seen any raspberry to equal the Brinckle. If it were only hardy and strong, we might be content to wait a long time for another.

I have received for trial some plant labels made of very thin sheet-brass. They are cut into good shape, and pierced with an eyelet hole. I have not yet given them a sufficient trial, but a very hard pencil or a bodkin creases the name in a way that would seem to be durable. I shall refer to them again after further trial. Few things are more needed than a durable plant label that will carry an indelible name.

HORTICOLA.

[We beg to suggest that we don't want anything better than the common zinc labels, using a lead pencil to write the name. This, as we can show at the Rural Grounds, will remain perfectly distinct for—we know not how many years. EDS.]

The Vineyard.

THE CENTENNIAL GRAPE.

THIS grape is a seedling of the Eumelan, grafted upon an Iona root. It somewhat resembles the Delaware and the Catawba; but, being of a lighter color than either, it may be classed as a white grape with a pink cheek. It ripens about midway between these old favorites; keeps, when packed for winter use, as well as the Catawba; the skin being tough it does not crack or burst like the Delaware while ripening, and it is free from a loose, dangling shoulder. For quality of fruit it is conceded by all who have seen it to be quite equal to those old sorts. For both the table and for wine, it is superior to the Delaware in size of berry and cluster. It is also superior to the Catawba in earliness and quality, and superior to both of these old favorites in health of foliage or exemption from mildew. It will doubtless do well wherever the Eumelan now succeeds. Its reproductive organs are simply perfect; there are never any emasculated clusters and some of the fruit must be cut off to prevent overbearing. It has not been analyzed for grape sugar, but it is plain enough that it must rank near the Delaware, and it is as free from pulpiness.

As to hardiness, the vine seems much like its parent; the growth, however, is a little less rank and it ripens its wood earlier in the season. It is therefore very hardy, and propagates splendidly from cuttings. Having tested its great fruiting capacity and other characteristics since 1875, the first season of its bearing, I can truly say I am delighted with this grape. If it succeeds as well after testing in other localities as in this, it will probably prove to be our best native grape for the main crop upon our Atlantic seaboard.

The botanical class to which it belongs—Vitis æstivalis—has long been looked upon as the one from which our finest grapes must originate. There is some evidence in the appearance of the fruit, that it may be a hybrid with the Delaware. I used pollen for hybridizing from the Delaware and other vines upon the cluster from which it was propagated. If upon closer observation this should be determined, then its botanical classification would be one-fourth Labrusca and three-fourths Æstivalis. Growing seedlings from it will probably decide the question. It would not do to class it as a hybrid until I am sure of it.

I trust you may see in these grapes some confirmation of my theory, that grafting is an important factor in the process for breaking up prepotency and improving our native grapes; also that there is no necessity to endanger the health of our vines by hybridizing with foreign kinds to obtain quality of fruit.

Watertown, N. Y. DANIEL S. MARVIN.

REMARKS. The description of the Eumelan, it seems to us, applies quite well to the Centennial, so far as quality is concerned. The berries, however, are more crowded upon the bunch and not so large. The skin is strong; not one imperfection appearing in the several bunches received. Mr. Marvin sends us also several others of his seedlings which are certainly of excellent quality.

THE LADY WASHINGTON GRAPE.—Your spirited and truthful illustration of this promising grape reminds me that I have not reported its conduct in this part of Western New York, where we are not especially favored with those surroundings that conspire to make grape-growing eminently successful; where we hug the faithful old Concord, and caress novelties with a long pole, as though they were animals that might bite. I planted the Lady Washington one year ago last Spring. I cut away all the first season's growth but two buds, for propagation. These buds have made canes this season, measuring over twelve feet each. I gave no Winter protection, and only fair attention, and it is perfectly healthy and hardy thus far. With the treatment given I did not expect any fruit, yet two clusters appeared. I drew a heavy paper bag over each as soon as out of blossom, and did not remove them till the grapes were ripe. I exhibited one of the clusters at our Western New York fair recently—it was the only specimen shown. This is, indeed, a beautiful grape, early and good, yet not the best in quality. The cluster is compact, shouldered; berries irregular, often large. The reddish tinge apparent on some parts of the clusters adds much to their beauty. I am disposed to be hopeful on the subject of white grapes—yes, I may say that I am bordering on enthusiasm. Good white grapes that we can all grow and enjoy—why this has been our dream for years.

Clifton, N. Y. CHAS. A. GREEN.

Farm Economy.

FEEDING THE CORN CROP.

PROFESSOR E. W. STEWART.

INDIAN corn is the great crop of the United States. In 1879 the product was a round fifteen hundred millions of bushels, and its market value was estimated at $600,000,000; and we exported over 98,000,000 of bushels, amounting to $53,200,000. Most of these 98,000,000 bushels was used to grow meat in England and on the Continent. Had it been fed for the production of meat in this country, the meat product would have sold for $15,000,000 more than the corn, and we should have saved the fertility carried off. But we may congratulate ourselves that only a little more than six per cent. of the whole crop was sold, leaving 1,400,000,000 bushels for home consumption. If we are to suppose it all used to fatten cattle, and that 50 bushels will fatten a steer, it would take 28,000,000 cattle to consume it all. But immense quantities of corn are used for human food; for making corn sugar, starch, and in other manufactures; for growing pork and mutton and for feeding poultry. It thus has a great bearing upon the welfare of the whole people.

In all the older States much labor is bestowed upon this crop in husking, shelling, grinding, etc., for the use of animals. In the great corn States of the West, cattle are turned into the fields and allowed to do this work for themselves, wasting much corn, as Eastern farmers suppose; or it is shocked at maturity and afterwards carried to cattle in the fields. In both cases, the cattle are followed by hogs to pick up the waste corn. The most wasteful practice is turning cattle into the field—"hogging down" as it is called, for then the fodder is of little value; but if the corn is put in shock when the stalks are green and succulent, the fodder will have a value in nutriment of 75 per cent. of that of hay per weight when cured, and the grain will be equally valuable as when left till the stalks are nearly dry before cutting. This matter of shocking the crop of corn at the proper time will be seen to be of great consequence when it is understood that the fodder is worth, at least, $5 per acre more than when left till the leaves are dry and bleached and the rind of the stalk is more tough and woody.

AN IMPROVED METHOD OF FEEDING.

This article is written to call attention to an improved method of feeding the corn crop in all States whose corn is shocked and husked for cattle or sheep-feeding. The labor of husking, shelling and grinding may all be saved by the new method. In feeding corn from the shock to cattle a very large portion of the corn passes them whole, because it is not raised and remasticated. When corn, shelled or in the ear, is fed alone to cattle it is not raised and remasticated, for the kernels cannot be formed into a cud, and thus it passes on, and the broken corn is partly digested, but the whole corn is not acted upon by the gastric juice, and is expelled in its whole state. If this corn is mixed, when swallowed, with hay or other fibrous food, it will be raised and crushed in the remastication, so that the digesting fluid may act upon it.

The new plan is to render it necessary for the cattle to eat the grain and corn fodder together, and when thus mixed both are raised and remasticated together. This is accomplished by simply cutting the unhusked corn-stalks—ears and all—into very short pieces by running them through a large cutter and reducing the whole to fine chaff. Such a large cutter run by a sufficient power, will reduce into these thin shavings two tons per hour, costing less than simple husking. This breaks the rind of the stalk into fine shreds, shaving up the cobs, splitting most of the kernels, mixing the coarse and fine parts of the fodder together, rendering all soft and easily masticated—leaving no short edges to irritate the mouth as when cut one inch or more in length.

The reader will see the great improvement of this plan when he considers that it costs less labor than husking, as an acre of corn can be thus prepared for feeding in one hour with the aid of two men. This method also saves all the food there is in the crop, carrying out the plan of nature to feed the grain and stalk together—the bulky with the concentrated. This will also improve the health of the cattle as well as save a large percentage of food. This method also enables the feeder to compound the ration practically according to scientific principles. The entire corn crop—stalks and grain, in their best estate—is even too poor in albuminoids or flesh-forming substances to make a well-balanced ration alone. But if two pounds of linseed meal or cottonseed meal, be added for each steer per day, it will balance the constituents of the ration and fatten cattle more satisfactorily. Either of these oil-meals may usually be purchased at the mills for $20 per ton, so that this addition to the ration would cost only about two cents per day for each steer.

This plan is adapted to feeding on a large or small scale; but the greater the number of cattle, the less labor proportionally. It is adapted to feeding in a warm stable or in the open air. In the former case, the whole ration may be steamed or slightly fermented, or fed dry; and in the latter case it must be fed dry in troughs, because if steamed or moistened and fermented, it would freeze in the troughs. This plan is not theoretical but practical, the writer having put it in practice for several years. B. A. Avery, of Syracuse, N. Y., having fed 100 cows on this plan for six years, regards the corn crop, fed in this way, as valuable as if husked, shelled and ground into meal.

Farm Topics.

WESTERN NOTES.

B. F. JOHNSON.

Barbed Wire Fencing.

It having been assumed, because stock might injure themselves by accidentally or intentionally coming in contact with barbed wire fencing, that therefore the invention is a barbarous one and that its employment should be regulated by law or frowned down by public opinion, I have made some inquiries as to the facts in the case and with the result below.

The Illinois Central Railroad was the first company to make use of the barbed wire on an extensive scale, having begun putting it up three years ago. On the Chicago branch, extending 365 miles, between Chicago and Cairo, some 65 miles have been built, and a responsible officer of the company informed me he had heard of no complaints from farmers, and he was in a position to know of them, if they were made. On the Springfield division, where this fence is now used nearly exclusively, the road-master informed me he knew of but a single accident happening on account of it, and that to a stray mule hastening home in the night, and not informed of the existence of the new-fashioned barrier. Horses which feed and wander about in the night, sometimes run on the fence unawares, and get scratched, but never a second time. Mules are rarely hurt, and cattle seldom or never. When an old board fence is torn away, or a rail fence removed, and the barbed wire is put up in its place, when it is finished and the men leave, cattle approach in a body; examine the new contrivance closely; smell of it; "study" a while over the matter; then apparently make up their minds it won't hurt them if they don't trouble it, and quietly return to their grazing. Of its effectiveness against breachy cattle, the road-master relates an instance where, near Weedman Station in DeWitt County, a large lot of feeding steers were pasturing against a half mile or more of common plank or board fence, which some of them broke through, and got upon the track nearly every day. The usual barbed wire fence was put up, which the mischievous steers came up to and examined as soon as the men had left; took in the situation as above, shook their heads, tossed their horns, moved off in a body and have never broken or attempted to break through since.

The first wire fence put up by the Illinois Central Railroad consisted of five strands, three barbed and two plain, viz. the second and the fourth. But this was found to be a mistake, and five strands, all barbed, are now the rule. Other railroad lines are adopting it as fast as old fences decay, and soon the railroads will be fenced with nothing else. On the Illinois Central Railroad which uses the best material, the cost has been reduced to below 82@85c the rod, divided as follows:

5 barbed wires—5 lbs	58c
1 7-foot white cedar post	11c
Building, staples, rails and braces	14c
	83c

Of course, no account is made of freightage on material which, for a fence equally good, would make the cost to the farmer from two to five cents more, according to location.

When to Dig Potatoes

is a question brought quite prominently forward at this time. For this latitude, the experience of twenty years in my case decides they should remain in the ground; for the early ones, until late in October, because they are safer there than anywhere else; as for the late ones, they are seldom fully ripe before that time. When dug in September or early in October, we almost always have a warm, moist spell of weather, in which early potatoes stored in quantity will surely heat and sprout, and sometimes rot. If spread out, they shrink; and if exposed to the light, they become green; and if piled or buried, they heat. In the South potatoes must be dug soon after they mature, or the heat destroys them; in the North I can conceive that they will rot if left in the ground—South they are apt to spoil out of it, demonstrating that there is nothing absolute in agriculture, and that what may be good practice in one section may be bad in another.

Onions on the Prairie.

Those who imagine the prairies are restricted to a few special crops and know nothing of diversified farming beyond corn and grass, wheat and oats, sheep, horses, hogs and cattle, will scarcely credit the statement that for the onion crop, a Timothy or Blue Grass sod, when handled by those familiar with the fragrant esculent, produces yields of onions of superior excellence as to amount and quality. The land usually chosen is moist and at the same time with good natural drainage, conditions which insure a strong, deep soil, capable of producing 50 to 60 bushels of corn per acre. The sod is turned early in the Spring, or, better, late in the Fall, and the surface is fined by repeated goings over with a sharp-toothed harrow, a week or two before seeding. Some time in March or early in April, the seed is sown by a drill, at the rate of five pounds per acre, the rows being 16 inches apart, and, when weeded, the plants stand from three to four inches in the row. Sod is preferred because it is free from weeds, and manure is not used because it fouls the land, and the cultivators generally have not come to understand the value of special fertilizers for onions. The stand generally, on which everything in an onion crop depends, was not very good this year; but otherwise the season was favorable, the drought doing little or no damage. The yield is from 200 to 300 bushels per acre, and the price realized $1 per bushel by the quantity. The onions of this year's crop are smooth, round, solid and large, not over-grown, or inclined to draw up and become *scullions*. But it is estimated an acre of onions demands as much labor as 40 acres of Indian corn.

The Rural's Estimate of Clawson Wheat

is the general estimate of this country. It is the wheat for poor land and careless farming; for much starch and more bran; but not for rich soils and intensive agriculture. But, then, if Clawson should be grown for any considerable number of years on the strong wheat soils of the Western winter-wheat belt, it would soon begin to, and ultimately change its character. The outer pellicle would grow thinner, the amount of bran diminish, the starch change into gluten, the form of the grain lengthen, its consistence grow harder; in fine, the Clawson would no longer be Clawson, but something improved and refined. Poor soils not only grow wheat in small quantity but poor in quality. Strong, rich soils produce, not the largest crops, but those of the best kind of grain, while the very largest crops are generally produced when such wheats as the Fultz and the Clawson, originating on worn soils, are transferred to strong and rich but not too rich lands.

The Texas Cattle Fever

is said to be prevailing to an alarming extent in some portions of Kansas. It has also broken out and carried off town cows and straying cattle in Missouri and Illinois, which, feeding about the railroad stock pens, came in contact with the *virus* lodged where Texas cattle have been loaded and unloaded, and fed and watered. The cars, too, in which Texas cattle are conveyed, are said to be sources of infection. It is quite evident some general law governing the transportation of cattle should be enacted by Congress as soon as may be.

Hereford Cattle.

Mr. A. B. Allen is right when he speaks of a strong rivalry as likely to arise between the Herefords and the Short-horns for the stocking of the Western plains. It is possible a rivalry, too, may arise near home, when a

time comes, if it is not now here, when a steer is wanted which will lay on fat and flesh enough on grass alone, between the first of May and the first of November, to make number one beef, without the aid of corn. One or two years' feeding on corn, when corn is worth about 30 cents the bushel, is apt to result unprofitably, and feeders are finding it out, and coming to rely on grass more. The Herefords, Mr. A. has examined were no doubt open to this objection, "that they are apt to drop from the "huckle-bones to the tail, and here and in "the hind-quarters, they are not generally "equal to the Short-horns," but I think if he had seen some of the best Herefords of Mr. Culberstone's herd, exhibited at the Illinois State Fair, he would correct his estimate, at least so far as hind-quarters are concerned, and especially in the case of the bull at the head of Mr. C.'s herd, which was remarkably good on that point. But the rivalry in breeding is not confined to beef cattle. It has invaded horsemen, and a strong rivalry is already showing itself between the Normans and the Clydesdales, in the matter of draft horses. Within ten years the Clydes have been increasing in popularity, but something like a rage is being developed for them now, of which nobody can anticipate the outcome.

Dairy Husbandry.

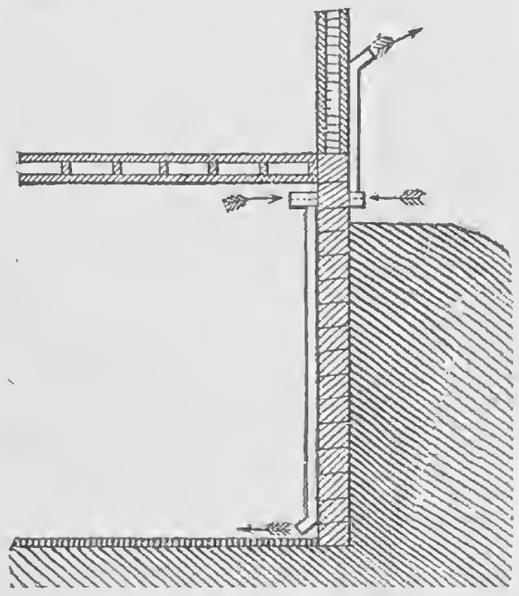
THE DAIRY COW—NO. 12.

HENRY STEWART.

MILK-CELLARS.

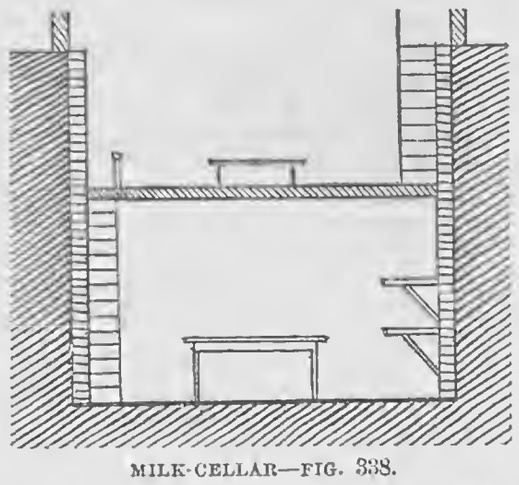
No dairy is well furnished unless it is provided with a good milk-house. The quality of the butter made depends greatly upon this, and even if the best appliances—such as have been described—are used, their convenience and economy are in proportion to the good or bad arrangement of the milk-house.

The first requisite of a milk-house is evenness of temperature. In a building that is not cooled by ice or warmed by a stove, the most regular temperature is secured in a cellar. The common receptacle for milk is a cellar, because every house is supplied with one, or should be, and it is the most convenient place for it. For a family dairy the cellar will be the appropriate place for keeping milk; and if it is not fit for this particular purpose, which requires absolute cleanliness and purity, it is not fit for human beings to live over. If it is not fit for this purpose, it should be made fit by thorough cleansing, and draining, if necessary; laying a floor of cement, moderate lighting and ventilation, and the protection of the windows by wire gauze. A slatted outside door is very suitable for a milk-cellar, and this should be on the north side and opened at night. The walls should be closely pointed and whitewashed inside. The common practice of protecting a cellar from frost by heaping litter from the stable around it, is very objectionable. Nor should turnips or potatoes be stored in a cellar in which milk is kept, unless it is divided by a tight partition and the root cellar abundantly ventilated.



MILK-CELLAR—FIG. 337.

Ventilation for a cellar may be provided by carrying a tube or spout from the floor to the ceiling, and through the wall out of doors where it should be protected by fine wire gauze. The arrangement is explained in the illustration, in which the cellar wall is shown with the spout fixed against it. The outlet is divided in the center, and one half communicates with the spout which reaches to the bottom of the cellar, and this furnishes an inlet to fresh, cold air. The other is connected with the short upright spout outside, through which the warm, fouled air escapes, as shown by the arrows. This arrangement has been found very useful both for purifying and drying the air of a cellar; for the cold air coming in at the bottom is drier than the warm air passing out, and the moisture of the cellar is continually absorbed and carried off so long as any warm air flows out of the upper spout. The spouts are provided with slides by which they are closed when it is necessary. The cellar should be well ceiled with lath and plaster, otherwise dust will be dropping from the rooms above; and in any case this is advisable, for if no other means of ventilation are provided, air will pass up and down through the floor over the cellar and it may be bad for the milk, and for the occupants of the rooms above as well. The ceiling not only preserves cleanliness, but regularity of temperature at the same time.



MILK-CELLAR—FIG. 338.

In the Southern and some Western States the houses are not provided with cellars. Where an outside cellar is desirable, in these and other cases, an excellent arrangement is as follows: See illustration. A cellar is dug 12 feet deep; the walls are built of stone, concrete or brick. A sub-cellar at least eight feet deep, is made by throwing a floor over the cellar four feet below the surface. An outhouse or shed is built over this as a protection and is lighted by a sash in the roof. A sash is placed over a raised frame in the floor, as shown, which lights the sub-cellar. Steps are provided for access to each cellar. The sub-cellar is furnished with shelves and a bench and in such dry soils as will admit of it, a cellar of this kind is one of the best possible for a small dairy or, indeed, for household purposes. It is light and cool and the temperature will not vary from about 60 degrees, or somewhat less, the whole year. It should be kept whitewashed, by which the light is well diffused about it. It may be found convenient to use the upper portion as a churning room and for storing milk utensils.

Cellars are apt to be damp. In this case the air may be dried by means of a peck of fresh lime placed in a box or tub in the cellar. Twenty pounds of lime (one peck) will absorb about seven pounds of water, and to take seven pints of water from the air of a cellar will make it very dry. The lime will simply fall to a powder and may be then used for many useful purposes, or be added to the garden compost heap.

Where the cellar cannot be used on account of the wetness of the soil, an above-ground cellar must be provided. This may be partly sunk in the ground, but if there is any danger of water soaking into it, it should be wholly above the ground. It becomes then, properly, a milk-house, and the description of such a house will be undertaken in the next chapter.

WAUPACA CO., WIS., DAIRYING.

This county lies just south of the latitude of Green Bay. It is intersected by the Wisconsin Central Railway and the Milwaukee, Lake Shore, Western and Green Bay and Minnesota Railways and by Wolf River which is navigated by steamboats. It is just now in a state of transition from lumbering to agriculture. The soil is greatly diversified; there are tracts of sandy land, well dotted with pine stumps, of little seeming value, yet being fast settled by foreigners who seem to thrive where Americans would starve. There is also a large extent of oak openings, varying from sandy to clay loam, but for the most part the country is very good farming land yielding fine crops of clover, corn, potatoes, rye, etc. There are also large tracts of strong, fertile, loamy land originally covered by a heavy growth of oak, maple, basswood, ash, ironwood, butternut, hickory, etc., that produce excellent crops of the cereals and grasses, and seem to possess a permanent fertility.

Blue Grass, White Clover and Red Top are indigenous to the land and to the oak openings. These grasses form a perfect sward and grow so luxuriantly as to exclude weeds. It is doubtful if our pastures will need renewing for a life-time, some of them having steadily improved in quality and yield for a term of years.

Mr. L. Hayward, of Royalton in this county, informed me that he had mowed the same meadow fifteen years successively, and still had good crops. Many of our farmers have undertaken to compete with the prairies in the production of grain, wool and meats. Beaten and disheartened in this unequal struggle, they long to join the rush for Dakota or Kansas, and their farms can usually be bought at about the cost of the improvements. Others of keener discernment and many from the dairy regions of New York and New England, have discovered that in soil, grasses, waters climate and abundance of fuel and building materials, Fox River Valley is as unrivaled for the dairying interest as for its water power and manufacturing adaptability. These men have built up our creameries and cheese factories which have already won sweepstakes on butter and cheese at some great fairs. I need only add that the prices of feed per ton are:—bran, from $6 to $10; middlings, $7 to $14; corn-meal, $13 to $18. It would not surprise me to see, at an early date, an exodus of Eastern dairymen from their worn-out farms and moss-grown pastures settling upon these virgin soils, and rejoicing in the good things that nature's God has so richly deposited in this favored region. T. W. R.

Weyauwega.

Sheep Husbandry.

ROCKY AND PARTIALLY BARREN LANDS FOR SHEEP PASTURES.

There are millions of acres of such lands in the United States and Territories, and where it is not more profitable to keep them in forest, they may be utilized as pastures for the support of sheep. They ought to be owned in tracts sufficiently extensive to maintain flocks large enough to afford keeping a shepherd, with trained dogs to attend them constantly Two or three of these dogs for his companions, make it an easy task for a single man to handle a large flock, and keep any from straying or getting lost; and they are a protection to the sheep from vicious dogs by day and night, as they invariably attack and drive off any such that approach.

Sheep may be pastured here in Summer, and then be sold off or taken to better lands to Winter. But it frequently happens that narrow valleys are found winding between rocky hills, sufficiently fertile and free from stones to be easily cultivated for various crops. Where this is the case, the English system may be pursued of sending the sheep on to the hills for pasture during the day, and hurdling them on the growing crops in the valleys at night; or these may be cut and soiled to them in racks, if preferable. A succession of crops must be cultivated for this purpose, commencing in the Spring with rye; and continuing during Summer and Autumn with other products, which are too well known to our readers to require enumerating here. Folding the sheep at night on these, enriches the land adequately to bear good crops the ensuing year, and thus it may continue to be cultivated indefinitely.

In England these soiling crops are inclosed with shifting hurdles, in squares of about an acre each, and the sheep, when driven down from the hills at night, are divided into bands of 100 or so, and each band folded on to a separate division. An acre of clover usually feeds 100 sheep during the early evenings and mornings for a week, and other crops do the same in proportion. No better preparation can be made there for a succeeding wheat crop than this, if it be ever desired to grow one.

In such a system of sheep pasturing and soiling, they can be made sufficiently fat for market to be drawn from early in Summer, and thus continue on for repeated drafts till cold weather sets in. If the valleys are large enough, forage can be raised there, not only to fatten off all the sheep desired from the flocks, but also to winter over what is required for breeding and store purposes the following season. This is one of the most easy and profitable systems of farming that can be followed in our country, and it only requires to be duly considered by flock-masters, to induce them to adopt it as rapidly and extensively as cheap lands can be obtained.

Sheep for such lands should be of medium size, compact form, early to mature, hardy and active. The South-Down breed, or its high crosses are usually adapted for this system of feeding and fattening in England, and we think they would be the most suitable breed for American flock-masters. Richer, smoother, and more level lands are better adapted for the larger Down breeds, and particularly for that of the Oxford, the biggest of all. Still richer lands and more abundant feed are requisite for the Cotswold, the Lincoln, the Leicester, and other long-wooled breeds, as they excel in size, and are not so active to range in pastures and work for a living.

The Herdsman.

HEREFORD CATTLE.

In my article in the Rural of the 2d inst., it escaped me to say that there have been repeated importations of Herefords for years past into the State of Maine, where from their large size, great muscular power, hardiness and endurance, the pure-bred and even grade oxen are in high favor for general farm work, and more especially for lumbering. The forest trees of Maine are of extra girth and hight turning out the heaviest class of logs. It consequently requires extra-powerful oxen to haul these to the river banks, to be floated down to a market on the breaking up of the ice in Spring. Nothing is superior to the Hereford for this purpose; and although the loaded sleds may glide easily over the compact, snowy paths, still it requires a *big team* and a *strong one* to bank the formidable sticks of timber which the forests of Maine have grown up so profusely.

After working the oxen till they are seven to nine years old, they are usually turned out to a rich grass pasture in June, to fatten during the Summer, they being admirable grass-feeding beasts. In Autumn they are either sold for slaughter, or taken up and stall-fed a while, and then sold during the Winter for the same purpose. The flesh laid on during this time, being nearly all new, is as tender, sweet and juicy as that in the two to three-year-old steers at the West, which have been well fed from birth and never worked in the yoke. Herefords and their crosses are also used to some extent as working oxen, and for fattening in some of the New Hampshire, Vermont and Massachusetts districts and are found among the most profitable and valuable of cattle. A. B. Allen.

THE GOAT IN ENGLAND.

The English people of fashion have taken up the goat; an animal proverbially significative of general wickedness. They have labored long and arduously to make it popular as a dairy animal and as a substitute for the gentler sheep for the production of mutton and lamb. With this intent the British Goat Society recently held the first of a series of kid dinners at the Alexandra Palace. One hundred and thirty-two members have enrolled themselves as admirers, supporters and defenders of the British goat. Earls, dukes, baronets, and one baroness, an estimable lady whose name—Burdett-Coutts—is connected with every charitable and philanthropic purpose, are numbered among the vice-presidents. This ought to give the British goat social standing at once, and easily reconcile an irate housekeeper who has detected the hair on the shank of her last quarter of lamb, to this delinquency of her roguish butcher. Fifty distinguished persons sat down to eat goat and kid prepared by a skillful *chef-de-cuisine*. Swiss scenery with pictures of mountain goats, adorned the bill of fare; and on the whole the banquet was considered as settling all doubts as to the beauty and excellence of the goat not only as a source of mutton and lamb, but also of milk and butter; for all these helped to furnish the *menu*.

A British Goat Herd Book is already established, and goat exhibitions are held and well patronized, as, of course, they would be when earls and dukes are exhibited at the same time. Here in America the way of the goat is hard. He is despised and rejected, and is a subject of derision to the small boys, and a source of trouble and annoyance to the poster of handbills, not to speak of his raids upon the properties of the laundry-women whose lighter articles of attire so soon become the prey of his uncontrollable appetite. Not even the high-bred Angora can hold his own in this country; and the farmer who has been rash enough to purchase a pair, "to get into the stock," is tired of climbing on to his barn roof to gather them in from their elevated roosts every evening.

It is all in association. The present low and vulgar tastes of the American goat, prevent his rise in society, and as we have no earls or dukes here to introduce him to high life, there seems to be no encouragement to hope for his recovery from his present depraved and despised condition.

Industrial Societies.

THE TRUTH ABOUT IT.

[The object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—Eds.]

PROFESSIONAL EXHIBITORS.

"Hippodroming" is known as the practice of carrying around a herd or flock got up for show, to take premiums at agricultural fairs. It is an objectionable practice. It is a foreign and imported fashion and is falling into well-deserved disrepute in its own home. The English people are setting their faces against it, and the judges of some of the prominent exhibitions are instructed to pass over those animals which are fed, fattened, shorn, shaved, trimmed and otherwise prepared to catch the popular eye and sweep away the premiums from more useful and deserving cattle.

A notable example occured at the recent international sheep exhibition at Philadelphia. A noted dealer in cattle imported a number of sheep, which had taken first premiums at English shows, for the purpose of exhibiting them

at our fairs. These sheep arrived just in season to begin their starring tour at Philadelphia. Here they won $2,660 in premiums. There was never a sum of money more uselessly or worse bestowed. These exhibitions are intended, or so declared to be, for the encouragement of agriculture. In what sense is agriculture encouraged by an exhibition of animals which are simply monstrosities of fat, and which are so debilitated by the injurious feeding as to be incapacitated for the only purpose which they are supposed to be intended for, namely, breeding? It is safe to say that these particular animals are useless for that purpose. They cannot be kept up in the condition in which they appear at the fairs without soon reaching the inevitable result of the overfeeding to which they have been subjected. These animals are jealously guarded, lest some inquiring farmer, intent upon getting the worth of his money in valuable information, might disturb the rest of these pampered lumps of fat. "Do not touch or disturb the animals" is conspicuously enjoined upon the visitors by means of a large card, in the manner of the menagerie, where one is particularly requested not to stir up the monkeys or to look at the elephant too closely.

The truth of this is, that it is not agriculture; it is show business; and ought to be severely reprobated as a waste of money and a gross diversion of it from its legitimate uses. It is the introduction of side-shows, no more relevant to the business in hand than the exhibition of "the fat woman," and "Barnum's Great American Giantess," eight feet high, 13 feet round, and who weighs 640 pounds." So these sheep are considered in proportion to their weight, and weighing 340 pounds each by dint of cramming with oil-cake and corn, they take the ribbons from the more really worthy and in every way valuable sheep weighing a hundred pounds less. The last accounts of this flock are that they are now starring it at St. Louis, and are engaged to appear wherever the money premiums offer sufficient inducement.

The owner, who has had no hand or work in getting up these sheep, will probably receive in premiums more than their cost and then dispose of them to some deluded fancy farmer who can "point with pride" to his prize animals, which cost—so much. And the exhibitor retires on his laurels and his greenbacks, and laughs in his sleeve and thinks the fool-killer missed a good many whom he ought to have looked after, and about this time next year he will be on hand to repeat his annual performance.

No wonder that the plain, sensible farmer is "down" upon agricultural exhibitions, and finds solace in studying agriculture around the trotting course, where more excitement can be had for his 50 cents, than in front of such disheartening and disappointing "studies" in his art as these show animals, useless for any good purpose, and only intended for taking premiums which they don't deserve. H.

NEBRASKA STATE FAIR.

(Rural Special Report.)

THE Nebraska State Fair for 1880 was held at Omaha last week. The Omaha people, in the excess of that liberality and enterprise for which they have ever been characterized, fitted up forty acres of ground in a most magnificent style, at a cost of about $25,000. Everything was new, put up substantially and permanently, to be used hereafter as State exposition grounds. The halls were large, of modern architecture, well lighted and ventilated; stables, stalls and stock pens were of the very best, arranged to be totally closed in case of inclement weather. At this fair, however, it was propitious, and the attendance large. On the principal days from 20,000 to 25,000 people were on the ground.

The annual address was delivered by Judge J. W. Savage, and was a masterly, practical effort in all respects. The Judge is a practical Western man, having had long experience in this part of the country, and, consequently, he knows of what to talk and how to say it. The State Horticultural Society holds its annual fruit exhibition in connection with the fair under the auspices of the State Board of Agriculture. In fact, the two are one and the same. The exhibition, as a whole, was the best ever held in the State, and in all respects it was a grand success. The fruit show was not so extensive as at other times heretofore. Omaha is not situated in the best fruit region of the State, and, besides, except for apples and grapes, this has not been a fruit year in Nebraska. Washington County, the next north from Omaha, where much attention has been given to fruit culture, was well represented on this occasion. E. N. Grennell and Hiram Craig, two veterans, had on exhibition about 500 plates of fruit of various sorts—principally apples and grapes. Mr. Hubbard, of Fredonia, in your State, had on exhibition specimens of his new white grape, "Prentiss," which attracted universal attention, and to which was awarded the first premium as the best new seedling on exhibition.

The farm-product feature, while fine as to quality, was not as extensive as we desired. *Horse trots* draw crowds and swell gate receipts, 'tis true; but they do not increase, in my opinion, the exhibits of soil products. The "trot" feature gave more satisfaction this season with us than ever before. Heretofore they have been *clean steals*. This year they may be called "middling to fair" in this respect. We secured the services of honorable non-resident gentlemen in the judges' stand.

Cattle, horses, hogs, sheep, poultry and implements were shown in greatly increased numbers, and of greater excellence than heretofore. Cattle, hogs and sheep are now leading factors in the industries and products of the not-long-ago "Great American Desert."

People never before left our fair grounds in such good humor and with such universal commendations.

Can't the RURAL come to see us next year?

ROB'T W. FURNAS.

[The RURAL would be very glad to do so. Eds.]

Miscellaneous.

BRIEFLETS.

S. B. PECK writes us that those who are fond of ornamental climbing plants will find the Chinese Yam (Dioscorea batatas) to their taste; and the curious in vegetation will be gratified by digging up the ground tubers at the end of the second year. . . . . The British harvest, after all the fuss about it, will prove a fair average. . . . . The Japanese government, it appears, has determined to establish fifty farms for the particular purpose of breeding cattle and sheep, and it intends after a while to establish others more strictly agricultural. . . . . We beg to state that those of our readers who intend to subscribe for the Inter-Ocean, Free Press, etc., in connection with the RURAL NEW-YORKER, may rest assured that we shall forward such subscriptions without the least delay. It is a matter of pride with us to wish to secure more subscriptions for them than they secure for us. . . . . Mr. D. S. Marvin, who has sent us a box of his seedling grapes, says: "Can Mr. Ricketts show anything among his hybrids superior to them. They are purely native. The 'Centennial' is in my judgment the best native grape we have for the main crop, and I hope to live to show you further improvements." . . . . The Philadelphia Herald says that as the coming frosts will soon ripen the nut crop every newspaper should warn its readers against eating chestnuts in the dark. It is not only unwise, but it is cruelty to insects. . . "Black-bearded Centennial" wheat. Who has it for sale? . . . . The Norristown Herald, referring to the duel which recently took place between a Ute Indian and a Navajo, in which the former was killed and the latter seriously injured, remarks. "This is very sad. When the untutored child of the forest becomes civilized and adopts the ennobling pursuits of the Christian pale-face, he can fight duels all day without anybody getting hurt." . . . . Xanthoceros sorbifolia which, several years ago, we had much to say about, may be propagated by root cuttings, Mr. Meehan says. . . . . Hyacinths and tulips for Winter flowering should be potted at once or placed in glasses of water at once. Set them in a darkened, cool place until the roots are well developed, then give them light and warmth. . . . . We are surprised that Mr. Meehan does not know that "pindars" is one of the local names for—for Arachis hypogæa—*sometimes* called peanuts! . . . . Speaking of Mr. Meehan reminds us that Dr. Gray has named a beautiful new stone-crop, Sedum Meehani, thus connecting his name with the botany of the country which he has worked hard to illustrate. . . . . It will appear from the following that our estimate of Fay's Prolific Currant illustrated and described in the RURAL NEW-YORKER of Sept. 18, is well supported. Mr. Downing says: "They are very large and showy. As to 'Fay's Prolific,' judging from the branch you sent me, it indicates the most prolific bearer I have seen. The strings or clusters are very long and hold their size well in proportion to the end. The clusters are much larger and longer than those of the Cherry Currant." And Marshall P. Wilder says: "I infer that the variety was raised from the Cherry Currant. If so, the bunches are longer and the bearing qualities of the tree seem to be greater and the flavor of the fruit in advance of that of its parent." . . . . In the suit of The Pope Manufacturing Company, of Boston, against McKee and Harrington, of New York City, for infringement of the patents belonging to said Company, relating to bicycles and velocipedes, the Court has ordered an injunction to issue against McKee and Harrington for their infringement of said patents, restraining them from manufacturing or selling bicycles. This decision seems to settle the question as to the validity of the patents controlled by the Pope Company, giving it the sole control of the manufacture and sales of all bicycles or velocipedes now in common use. . . . . The A. & M. College of Texas opens with nearly 100 students and every indication promises a prosperous session. Success to this college and to its Professor of Agriculture, who furnishes the above note. . . . . .

A Cheap Well.

Dig down to a depth of five or six feet a hole four feet in diameter; brick it up—using water-lime mortar. Below this dig your well in diameter a little less than the bricked top, and as you go down plaster the dirt or sand on the sides with water-lime mortar. A well dug and plastered in this way costs one-half the price of an ordinary well of the same depth and diameter, and is proof against all kinds of vermin, nor can any dirt wash down from the sides. I have a well made in this way, that has done excellent service for eleven years, and in that time it has been cleaned out only once. There is no need of cleaning such a well, as there is no accumulation of filth in it. The bricking at the top is done to avoid injury from frost, as the plaster peels off where the ground behind it has frozen. G. W. T.

Otsego, Wis.

THE BLACK RAT.—A "Subscriber" writes us from Victoria, British Columbia, that a black rat, smaller and much more timid than the Norway rat, is common in the sparsely populated country districts of Vancouver's Island, although in the towns and more thickly settled sections the Norway rat only is found.

WHAT OTHERS SAY.

THE BOY ON THE FARM.—From a thoughtful, interesting leading article in the N. Y. Tribune, by Charles A. Green, we take the following:

"Our homestead farm was one of the best in New York State, located on an eminence commanding views of great beauty, surrounded by friendly and intelligent neighbors, adjacent to attractive villages, churches, and schools. My father possessed liberal views of life, and we all indulged in luxuries in common with those out of debt, and with something in the bank. My brothers and I were given opportunities for recreation, education and private enterprise. While yet a lad I leased the homestead for two years, during which term, prices ruling high, I cleared over $2,000 above all farm or personal expenditures. Notwithstanding such favorable circumstances, often cited as a recipe for making boys "stick," none of my father's children continued farmers. With a fair prospect of ultimately owning the homestead, I left it, served an apprenticeship, and for twelve years was a banker in a city. There I learned how easily fortunes are made, and how easily lost. Learned the value of good digestion, and of the refreshing sleep of him who labors under the open sky. Learned, when clouds threatened, when the waves of the panic shook my bark, and the sea was strewn with wrecks, that the farm was a safe harbor, and I longed to cast anchor again in that quiet retreat, remembering only the pleasant chapters of my farm life. Do I then regret having left the old homestead? No, for there discontent would have relaxed my energies. No, for I cannot help feeling that I am a stronger man than I could have been had I remained. The principal cause of the discontent of the boys on the farm is this: Many of them were designed by the Almighty for specialties; are endowed with qualifications for mechanics, navigators, inventors, lawyers, doctors, clergymen, etc.

What a wonderful provision that all are not born for one pursuit. What confusion and suffering would result were it otherwise. Knowing well the characteristics of my brothers and schoolmates, who did not "stick to the farm," I am confident they would have made poor farmers, whereas in their proper spheres they were successful. Therefore I dispute the popular theory that we may advance agriculture by inducing those boys to remain farmers whose natural inclinations would lead them into other pursuits. Neither can I concede that the best boys leave the farm. There is much in agriculture that may allure men of ability to pursue it, and many of our best balanced minds are thus engaged. If the brother who follows a specialty carves a more brilliant record, it is in part for the reason that he beats continuously in the same channel, like the tireless Niagara. A man struggling for success in a field wholly unsuited to his tastes and natural endowments is pitiable, and often ridiculous. Who would thrust a child into such bondage? The discovery of our proper place in life being half the battle, let us make farm homes attractive to the boys, but for a nobler purpose than to induce them to remain against their better judgment. There is no famine in the land; our farms are occupied; the granaries of the world are overflowing. There is room, however, for a few more Fultons, Morses, Downings, Websters, and Lincolns. My experience with farm and city life teaches the wisdom of giving the boy on the farm opportunities for travel and thorough education. If then he chooses farm life he will make the better farmer, and more useful and honored citizen."

THE AVERAGE YIELD OF CORN, says the N. Y. Times, is less than half of the possible yield. When one thinks how little the second half of 100 bushels of corn per acre costs, the profit of growing such a crop becomes apparent. And it is easy to produce such a yield. One wants the right kind of corn, the right fertilizers and manner of applying these, and a little extra work in cultivation. The cost of the land and of planting and tending the crop is the same for 20 bushels as for 100 on an acre.

BLOUNT AND CHESTER AT THE RURAL FARM.—The above article goes on to state that the present season the Editor of the RURAL NEW-YORKER, on its Experimental Farm on Long Island, has grown, in field culture, more than one hundred and fifty bushels per acre of shelled grain of Blount Corn, and over 300 bushels of ears per acre of Chester County Mammoth Corn. The fertilizer used has been at the rate of 500 pounds per acre; 300 pounds used before planting; 100 pounds when the corn was six inches high, and 100 pounds when it was two feet. It is easy to figure up the cost of a bushel of corn thus grown, with the fertilizer at $10 per acre, at less than 20 cents a bushels for the grain, leaving the fodder out. If all this is true, and if it may be applied to other crops as well as corn, what becomes of the complaint that farming does not pay?

[The Chester Mammoth field received but 350 pounds of fertilizer applied all at one time, viz., before planting. Eds.]

A GREAT ORCHARD.—The Farmer's Review publishes a detailed account of the orchard of A. R. Whitney, of Illinois, who has 155 acres in apple trees. He set the first 400 trees in 1843, and now has 16,000 in bearing. He began with 144 sorts, though only 30 are left, his object being to test them. For Summer and Autumn, he chooses Red Astrachan, Maiden's Blush, Snow and Bailey's Sweet, and for Winter and Spring, Domine, Jonathan, Willow Twig, Ben Davis and Winesap. His largest crop, in 1876, was 26,000 bushels, one-half of which was shipped to market, and the other half made into cider. He does not count on a full or heavy crop oftener than once in four years. For the codling moth he turns sheep into the orchard, by which these insects are nearly cleared out. The long-wool sheep are best, as Cotswolds, Leicesters and South-Downs; Merinos eat the bark. The soil of the orchard is rich enough without manure. Mr. W. advises for an orchard that it slope to the north, cultivation with corn for a few years, then seeding to clover, to be plowed under every three or four years.

MARVEL OF PERU.—"Is it worth growing?" was the question put some time ago in reference to this fine and useful old flower, and the answer given was, "Oh, ingrate world, to ask such a question. Look into the tiny front court of the cottager in the cool of the day, and be struck dumb with astonishment at the scintillating beauty of the great, round, dense bushes clothed with bright light-green shining leaves, and pink, white, scarlet, purple, or rosy flowers that truly glitter, as if blessed with a better sort of daylight than the grand plants that swelter in my lord's garden." In such forcible terms has Mr. Shirley Hibberd placed on record his impression of this old American herbaceous perennial, introduced from South America as far back as 1596 or thereabouts.

ORIGIN OF BREEDS OF CATTLE.—Prof. Sheldon of England in a lecture says: "We are not in a position to state how it came to pass in one country, that two such diverse races of cattle as the Long-horns and the Short-horns, should have been evolved. But whatever may have been the process of crossing the breeds, whether designed or not, this one thing is clear—viz., that while the Long-horns were produced in the district of Craven, a fertile corner in the West Riding of Yorkshire, bordering on Lancashire, the Short-horns sprang up in the Tees-water district, on the other side of the same county. We may venture to assume that the marked distinctions between these two famous breeds of cattle are owing, in the first place, to the proportions in which the ancient blood became intermixed; and, in the next, to the soil and climate of the districts severally. In the one it is reasonable to suppose the blood of the Bos urus predominated; in the other that of the Bos longifrons. The rest is owing to the influence of locality and to the control of man. Of the other great breeds—the Herefords, the Devons, the Sussex, the Jerseys, the

Ayrshires, the Polled breeds of Scotland and England, the Welsh breeds, the West Highlanders, and the Kerrys—we can speak no more definitely, and we must be content to assume that to natural and artificial selection, coupled with the influence of climate, of soil, and of herbage, are attributable the diversities of character in our breeds of cattle, which are at once so interesting and so marked.

EARLY PANSIES AND VIOLETS.—Few things are more valued in Winter than a bunch of Sweet Violets says Prof. Meehan. A few may now be potted, and they will flower in the window towards Spring; or a small bed of them may be made in a frame, which should be protected by a mat from severe frost. To have pansies flower early and profusely in Spring, they may be planted out in a frame, as recommended for the violet.

THE BEST ROSE.—In France recently they tried to find out what was the best rose by vote. La France had 79 votes, while Marie Van Houtte had but 25. The old La Reine had 42, and General Jacqueminot 52. These votes are like our fruit votes. The one which is the most extensively grown will get the most votes, because half the voters do not know of many other kinds.

"LA FRANCE" ROSE.—Here in Rochester, says Mr. Hooker, in the Gardener's Monthly, the La France Rose is proving itself worthy of its name and fame. Nothing can excel it in beautiful, delicate color, exquisite and abundant perfume, and profuse, constant blooming from the commencement to the close of vegetation; just as long as growth is maintained, beautiful bloom will follow; in fact, the habit of overflowering is its principal drawback.

MOSS MULCHING.—For want of a better name Mr. Peter Henderson has given this to a practice that he has recently introduced into his greenhouse department. Some time about the first of January of this year, one of his young men suggested mulching with moss (sphagnum) a lot of roses, grown in seven-inch pots, that had become somewhat exhausted by being forced for flowers for the holidays. Believing the idea to be a good one he at once had a lot of nearly 3,000 plants so mulched, mixing, however, with the moss, a good portion of bone dust, perhaps one part by weight of bone dust, to thirty parts of moss. In two weeks the effect began to be easily perceived on all the roses that had been so mulched, and without shifting they were carried through until May with the most satisfactory results, many of the plants having by that time attained a hight of from four to five feet, and though they had bloomed profusely during a period of nearly six months, they were in the most perfect health and vigor. Among the plants afterwards so treated, were azaleas, begonias, caladiums, carnations, crotons, dracænas, eucharis, gloxinias, palms, pandanus, poinsettias, primulas, roses, hot-house grape-vines, and hundreds of other genera. In strong-growing plants the roots can be seen striking upwards into the mulch in four or five days after it is put on, and in nearly all cases within two weeks.

One great advantage is that by this system plants can be grown as large and fine in a four-inch pot as in a six-inch pot without the mulch, for the reason that the plant is now fed by the moss and bone from the surface of the pot—the best feeding point, as most cultivators of experience now believe. Another advantage of the mulching system is its great saving of labor, for it just takes about one-fourth of the time to mulch the surface of a pot as it does to shift it. Another, is its saving of watering—the moss acts as a sponge, retaining and giving out the moisture to the plant just as it is wanted. Another, that it crowds down all weeds, and does away with the necessity of stirring the soil in the pots or borders. Another and most important advantage to Mr. Henderson is, that it lightens the weight of his goods by one-half, that is, he gets as large a plant with half the weight of soil. In his practice of thirty years, he has never seen a method of culture that he believes to be of such importance; hundreds who have visited him this season have been equally impressed with its value.

It may be that this moss and bone mulching is nothing new in the culture of plants, as it is an idea, from its simplicity that may very likely before have occurred to others, and may have been long ago practiced; but it is new with him, and if any one has before done so and withheld the knowledge from the public, more shame to him, if the result with him has been as gratifying as it has been with Mr. Henderson.

PREPARATION FOR AN ORCHARD.—"If we were going to prepare a piece of ground for an orchard," says the Horticulturist, "we should manure it heavily and put in a crop of potatoes; then in October manure again lightly and put in rye. On this, in April, we should sow red clover. The rye off, we should then consider it ready to plant trees. For apples, pears, plums or cherries, we should mark out the rows ten feet apart, and put the trees ten feet from each other. This will be twice as thick as they will be required when full-grown, but they grow much better when thick together; and they will bear more than enough fruit to pay for the room they occupy, before the time comes to cut every other one away."

DR. HOSKINS, of Newport, Vt., finds the following in the N. Y. Times of Sept. 1st.

"LOST NATION WHEAT.—A. M. A., Orleans County N. Y.: This variety is frequently mentioned in newspapers, but is not heard of elsewhere. We have seen no mention of it in any lists of wheat grown for experiments in which every known kind was procured. The first mention of it was in Oregon papers, and it is hardly probable that any excellent kind of wheat could come into use without being very soon widely known, and it is, therefore, unlikely that this kind, if it exists at all, is worth much."

Dr. Hoskins comments upon the above as follows: "As the Lost Nation wheat has for so many years led every other sort in Maine, and has for half a dozen years at least been very popular in Vermont and New Hampshire, and as all (I believe) of the premiums offered by the Maine Farmer last year went to crops of Lost Nation, it would seem that our brother who runs the agricultural department of such an eminent metropolitan journal as the New York Times ought, at least, to have heard of it. It has certainly been pretty liberally discussed in some other New York journals, especially in the RURAL NEW-YORKER, the editor of which has been successful in transforming the Lost Nation from a Spring to a Fall (Winter) wheat which promises even better in productiveness than the famous 'Clawson.'"

WHEAT HYBRIDS.—In the Bulletin of the Botanical Society of France, February 27, 1880, says the Gardeners' Chronicle, we find a note of M. H. Vilmorin on the hybridization of wheat, the general result of which is that Triticum sativum and T. Spelta cross reciprocally with the greatest ease, and give origin to an offspring absolutely uniform, and in which all the individuals seem to have borrowed their characters from one or other of their parents in rigorously identical proportions. M. Cosson, in adverting to M. Vilmorin's researches, recalled similar phenomena in Ægilops triticoides, a fertile hybrid, the characters of which are so fixed and invariable as to constitute a species.

EX-GOV. FURNAS.—We find the following in the Omaha Daily Herald. "Ex-Gov. Furnas has been a member of the State Board of Agriculture for twenty-one years, and one of the foremost promoters of the interests of Nebraska's farmers and horticulturists. It was quite fitting, therefore, that his associates should present him with a testimonial. The token is an ebony cane, highly polished and handled with a solid gold crook, richly engraved and chased. The inscription from the donors is engraved on the crook, and their names appear on a shield. The following are the sentiments and names of the donors:

"Presented September 25th, 1880, to Robert W. Furnas, ex-President State Board of Agriculture, by members of the Board, as a token of regard and appreciation of his valuable labors, for twenty-one consecutive years of active service as a member of the Board." Then follow the names.

PRACTICE ON THE FARM.—The Royal Agricultural Society very rightly, when adopting its motto "Practice with Science," placed practice first. It is in close attention to details that the elements of success in farming are to be sought. Economy in general management cannot be attained and habitually practised unless a man understands "even to the nail's breadth" the particular departments of his business. This particular knowledge can only be acquired on a farm step by step and day by day, as the working of the farm goes on. The ornamental famer, like the ornamental manager or director in commercial affairs, is a complete failure. We find the above in an editorial of the London Agricultural Gazette.

Everywhere.

A TRIP THROUGH SOUTH JERSEY.

E. WILLIAMS.

YIELDING to the wishes of a friend to accompany him, I have recently revisited South Jersey after an absence of 15 years or more, and was pleased to note the changes that have taken place in that time. Taking an afternoon train on the Central Railroad at Newark, a ride of about two hours brought us to Manchester, where we stopped for the night. My first visit to this place was before the railroad was built, and, with the exception of two or three settlers, all was then one vast wilderness. Now two or three substantial brick stores, with the cosy cottages of the settlers, are a pleasing contrast with "the olden time," and a large jute factory—which I regretted not being able to visit—affords employment to a large number of the town people.

My friend's object being to see the country, we were up early the next morning making a tour on foot over the town and the surrounding country, giving him a pretty clear idea of what once was known as the "Pine Barrens" of New Jersey. The soil is sandy and naturally poor; to many who are only acquainted with heavy soils it would be considered worthless; yet the fine and thrifty maples that line the main street show, beyond question, there are elements of fertility beneath the surface, that the casual observer would not suspect; but surface-rooted crops need and demand manure for success, and the ignoring of this fact, and the difficulty or inability to supply it, are the chief causes of failures and dissatisfaction. "Feed the soil if you would be fed by it" is emphatically true here.

At Mr. Battey's, two miles east of the town, we saw very good corn on the poorest white sand with the aid of a little fish scrap, and where lime had been applied a few years previous, its benefits were plainly apparent. His grapes—Concords—with little care were doing very well; there was very little rot, and the clusters were large and well ripened. He also showed us a fine crop of Amber Sugar-cane eight to eleven feet high with three to seven stalks in the hill on land without a particle of manure. I hope he will give RURAL readers the results of his sugar and sirup experiments. Mr. B. also keeps bees with profit, but an examination of his onions induced my friend to conclude they would be one of the most profitable crops he could raise. I have never seen such wholesale destruction of strawberry plants by cut-worms as in a patch of about three acres of his seedlings which were almost entirely destroyed; in fact, this is the first well authenticated case where the veritable cut-worm has done the mischief. He said they were dug out by the handful from about a single plant, and thus vanished one of the finest prospects of a bountiful crop he had ever had. The soil thereabout is well adapted to grape growing, as Mr. B's. vines attest; but the rot, over-production, and subsequent low prices had caused the abandonment of acres of vines near his place, by the owners who, having invested their all in one pursuit, had been compelled to return to mechanical labor for their bread and butter.

Our next point was Tom's River, the quiet county seat of Ocean County, where we spent several days. Here much of the land, especially north of the town, is heavier and more substantial than much of the sandy lands, and is well adapted to the growth of grasses and cereals. Here we saw finer crops of corn than we have seen in my county (Essex), not even excepting my own, which, however I think fully as good as the average hereabouts.

A mile or so east of town is "Cranmoor Farm" on which is a fine herd of Jersey cattle, where the proprietor, a N. Y. city merchant, and his wife spend their Summers and surplus funds in developing the herd and the resources of the farm, in preference to visiting the fashionable mountain or seaside resorts, and not only do they take pleasure in it, but benefit the whole community by giving employment to scores of laborers. At the time of our visit the farm buildings were being remodeled, and a large force was engaged in reclaiming a piece of swamp land along the river, which in time will be the best grass-producing portion of the farm. A steam engine at the barn grinds all the feed used on the place and that for the neighbors besides, and steams the fodder in Winter.

A short distance east is the residence of your contributor, the venerable A. B. Allen, whose evergreen and deciduous ornamentals on the lawn as well as the fruit trees in his garden, show what an apparently poor soil is capable of producing in the course of 10 years. His cherry trees were particularly fine, and his pears and apples, both standards and dwarfs, were very creditable.

A mile or so further east is the new Summer resort of Highland Hights, the camp-meeting ground occupying a natural grove on a bluff 30 to 40 feet above the river, the surrounding ground being disposed of in lots, many of which are already occupied by handsome cottages, and more are in course of erection, thus opening up a demand for the surplus products of the surrounding country.

To the north of the town, on what is called the Freehold Road, for several miles extend nice productive farms that would be a credit to any portion of the State, whose crops attest the generous and productive capacity of the soil, proving to the most casual observer that South Jersey is not all a sandy, barren wilderness. Here we saw a farm of 500 acres (far too much for any one person to own in such a locality), used for dairy purposes, the pasture fields affording abundant evidence of their ability to produce the cultivated grasses satisfactorily.

Falling into the custody of the Sheriff and the editor of the Courier, we were shown over the county as far as Whitesville and beyond, a distance of about 14 miles, not excepting the cranberry bogs, where the yield was expected to reach two hundred bushels per acre at the lowest estimate. During the trip we passed over thousands of acres of wild land of good quality, which, cleared and put under cultivation, would yield bountiful crops. The trouble is, it is held in large tracts by individuals and companies who neither improve it themselves nor dispose of it at such prices as will justify others to step in and occupy it. A good deal less of this "dog in the manger" policy would be a benefit all round.

Near Lakewood we called at the extensive fruit farm of Capt. Perry, managed and directed by Mrs. Perry. The orchards, though young, were very promising and her Clairgeau trees, heavily laden with fine specimens of rosy-cheeked fruit, were declared by some of the party to be the finest sight of the kind they ever beheld. May present hopes be realized in the future, for the lady deserves success. The young pear trees of Mr. McBean near-by were also looking remarkably well, producing exceedingly fine specimens of fruit. A large vineyard of Concord grapes adjoining his place, the property of a city gentleman, after about $10,000 had been expended on it, had been abandoned on account of the rot, and left to take care of itself, the owner returning to city business. Mr. McB. informed us that since it was left in this neglected condition, it had borne more and better grapes with less rot than before. Can we see any connection between good care, severe or excessive pruning, and rot in this case? There are plenty more cases of like character all about us.

I hope no one who gets into the custody of the aforesaid Sheriff and editor will fare any worse than we did, or find it a more difficult task to escape from them.

From Tom's River we went west by rail over a poorer portion of the county to Pemberton in Burlington County; thence on foot 14 miles to New Egypt in Ocean County, near the line of Burlington. This is a purely agricultural district and probably there is no better in the State, and such crops of corn and such an extent of corn fields I have not seen on this side of Illinois. My companion, who by the way was from Hunterdon County, had pretty elevated views respecting the corn-producing abilities of his section, and while admitting Ocean County was well up beside it, he acknowledged Burlington was ahead, without dispute; and yet in conversing with farmers *en route* as to the probable yield per acre of these fields, the estimates varied from 50 to 70 bushels of shelled corn. Now *if* they were anywhere near correct, how must a field look that yields 100 bushels of shelled corn to the acre, as is often claimed. If 70 bushels are the maximum of such fields as we passed on that tramp, I want to see *one* of a hundred bushels and have a hand in measuring it. [Hasten, friend Williams, to the Rural Farm.—EDS.]

Going to Highstown, in Mercer County, by rail, the crops, as seen along the route, were not so good. At this place Mr. Charles Black kindly showed us over a fine agricultural district in the vicinity of the town. The apple crop here is very abundant. His trees of Smith's Cider were a sight to behold, loaded down with fruit literally like ropes of onions, and this variety being an annual bearer, it is no wonder it stands so high in public favor in Southern New Jersey and Eastern Pennsylvania. He also took us to see the original tree of the Reed Plum, a seedling of the Illinois Plum grown by Mr. Reed. There were several trees besides the original one, all loaded down with an immense crop of the beautiful scarlet fruit, and this was said to be the case every year. The fruit is round, nearly or quite an inch in diameter, and is probably the best of all this class, and where our finer kinds do not succeed, it will prove a valuable acquisition, especially for canning purposes. Passing through Middlesex County to South Amboy and over into Monmouth County, we spent a day or two among the farmers and truckers from Keyport to Middletown and Port Monmouth; but space forbids further particulars. [We should like the particulars.—EDS.]

Horace Greeley's advice "Young man go West" was all well enough, but I am the more fully convinced from this trip that in accepting it, one might go further and fare worse than to anchor in New Jersey. I know the broad and fertile fields of the West are enticing, but low prices and cheapness are not always synonymous terms, whether applied to lands or crops; and society, schools, transportation, proximity to markets, etc., are all important factors in determining the choice of location, and are too often lost sight of. The query put to the Connecticut Board of Agriculture last Winter "Whether the cost of moving the corn crop of the West to the seaboard would produce the same crop at home?" was a pertinent one, and such questions should receive careful and mature consideration from all farmers who contemplate a change of residence. Pages might be written on this one subject alone, but these brief notes have already exceeded the limits designed.

Montclair, N. J.

RURAL SPECIAL REPORTS.

CANADA, Collingwood, Ont., Oct. 7.—The Ennobled Oats have done nobly. I have harvested nearly a peck, imperial measure. They are put away for seed next year. The mangels are ahead of any others we have, and are growing finely. The Cow-pea is growing away, as we have had no frost here yet; but it is doubtful if it will ripen so far North. The raspberry is alive and likely, I hope, to live; but it has not had fair play. We will use it better hereafter. All the flower seeds failed except one magnolia, on account of the drought, which was very severe in this section.

J. B A.

ILLINOIS, Ludlow, Champaign Co., Oct. 4.—Frequent light rains during September kept the pastures fresh and favored wheat, which now looks promising. A larger acreage was sown than last year. Considerable was sown among corn with one-horse drills. The press drill, with tubes like those of the corn-planter and a wheel following each tube pressing the seed firmly into the ground, and furnished with a seat for the driver, is the favorite drill now. Wheat yielded, in this neighborhood, from 15 to 20 bushels per acre; oats, 35 to 40 by weight; flax, nine to thirteen; Timothy seed, six to eight bushels. Corn-husking has not commenced yet, and the yield can only be guessed at. It is considered, however, only about half a crop. Wheat is worth 90c; oats, 25c; flax, $1.05; corn, 34c; Timothy seed, $2.25; apples, 35 to 40c; potatoes, 50c; butter, 20c per pound; live hogs, $4 50 per cwt. We have had no severe frosts yet, though on September 14th, we had a light one which singed corn leaves on the lowest ground, and on the 30th another hard enough to partially kill tomato and sweet potato vines. "G."

KAN., Wichita, Sedgwick Co., Oct. 10.—We have had the most unfavorable season, in this part of Kansas, that has been known for eight years. Drought, winds, changeable temperature, insects, etc., have all afflicted us. Wheat as reported by thrashers, averaged 10 bushels per acre; oats, 20 bushels. Grass was not one-half a crop. Corn is not gathered but is estimated to be cut short from a quarter to a half. The Fall is very favorable and most of the wheat sown. Most of the seeds and plants of the last seed distribution, as well as what I got of others, are gone where the "woodbine twineth," although I gave them the best and frequent care and attention under the circumstances.

A. J. P.

MICH., Georgetown, Ottowa Co., Oct., 7.—Our crops are as follows: Wheat yielded less than last year; mine was 21 bushels. Hay was very good. Corn averages about 60 bushels of ears per acre. Potatoes are a fair crop. Of apples we had almost too many. Peaches are plentiful. Barley, rye and buckwheat are but little raised here. Grapes are about an average and strawberries were not very good. Wild blackberries were plentiful. H. A.

MINN., Cedar Mills, Meeker Co., Oct., 4.—We have had a great amount of rain this season, yet the crops are all rather above the average, except corn; few pieces of wheat yield less than 20 bushels per acre. The Beauty of Hebron potato is as good as, or better than, the Early Rose, and a little earlier. M. E. B.

TEXAS, Dayton, Liberty Co., October 4—We are now enjoying fine weather for cotton picking, after our heavy rains last month. I have planted the Ennobled Oats again, as this is the proper season in this latitude. They are now up. Cotton worms made their appearance in September, but we were helped considerably by the wild canary, which gobbled them up in great numbers. G. G.

TEXAS, Lockhart, Caldwell Co., Oct. 6.—All cotton hereabouts is planted, not by hand but by cotton-planters of which at least a dozen different patterns are made and sold in this town. Indeed cotton planters are more generally used here than corn planters and I am using a combined corn and cotton planter which is a complete success. This is *apropos* of a late article in the RURAL. In that article a method of removing the lint from the seed is given. This will certainly be a decided advantage, if the process is not expensive. We sometimes wet the seed and roll them in ashes to dry them, which "lays" the lint, and makes them plant better. As to the removing of the lint making them come up five days earlier, I doubt it very much. When the ground is moist and warm, they will come up in a week, and very often begin to come in four days, and I think it hardly probable that they could be made to come five days earlier. S. K. M.

VA., Newmarket, Shenandoah Co., Oct. 7.—Farmers are seeding; every one is rushing to get in the wheat crop. Some of them seeded two to three weeks ago; others have just finished, while others are just beginning. Some farmers seed from 125 to 500 acres to wheat in this section. On an average in this valley they seed about 40 to 50 acres. Some wheat is up and looking well. Corn is a fair crop. Pumpkins, etc., are plentiful. Apples are hardly an average crop here. Prices are as follows: wheat, 88@93 cents; corn, 45@50 cents; rye, 60@65 cents; oats, 20@35 cents; pork, sides clear, 9@10 cents; hams, 12@12½ cents; shoulders, 9@10 cents; butter, prime, 20 cents; eggs, 15@16⅔ cents; lard, 7@8 cents; potatoes, 40@45 cents. P. S. W.

The Querist

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

SEVERAL letters asking substantially the same questions, often reach us within the same week, or before the answer to the first has been published. In such a case, we always presume that the answer to one, will suffice for the others also.

Planting Grape Vines; Blount's Corn, etc.

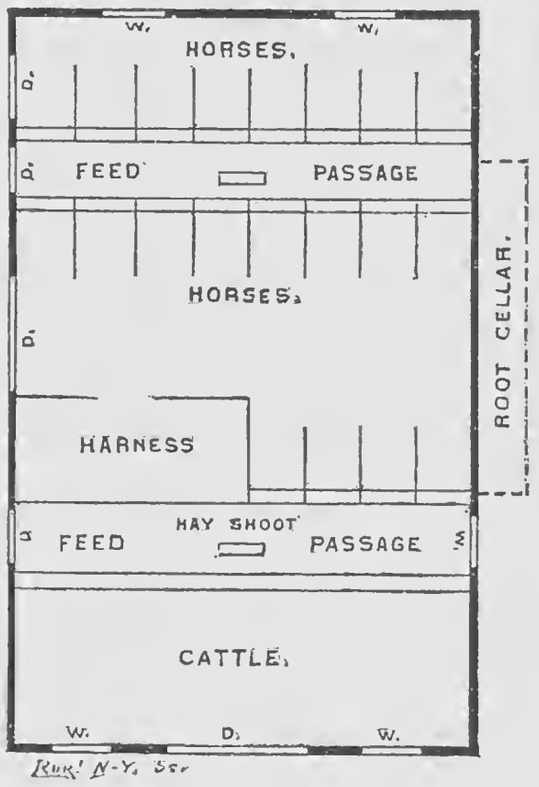
C. H. E. Montgomery, Mich., asks, 1, what is the value of shavings from the fleshy side of buffalo hides that have been preserved with salt and alum, per wagon load, for fertilizing purposes; 2, what amount of manure should be placed in a trench before planting grape-vines therein, and how deep should the trench be dug—the soil is a sandy gravel, with sand and clay for subsoil, while the location gives a perfect surface drainage; 3, full directions for budding fruit trees; 4, is Blount's White Prolific corn a Dent or Flint sort; where can seeds be had equal to those of the Rural Experiment Grounds.

ANS.—1, We do not know. Perhaps some of our readers can furnish the information. 2, Enough is as good as a feast. The practice of filling pits or trenches with rich, raw manures for vines or any plant whatsoever, is simply wasting time and money. A plant needs just so much food. If that is furnished, all is done that it is possible to do to give it health and vigor, except cultivation and situation. The plan of using loads of manure in the preparation of asparagus beds so that "once manured they will last for a life-time," as advocated by many, is extremely senseless and will no doubt so be considered in years to come when vegetable physiology and hygiene are better understood. If your soil is too heavy, add sand or leaf mold. If too sandy, use plenty of muck, if you can procure it. Use the same quantity of manure (well-rotted farm yard manure is best) that you would if preparing a field for a yield of 100 bushels of corn. A surface spread of bone flour and wood ashes from time to time would prove advantageous. The trench should not be dug more than 18 inches deep. Nothing is gained by inducing grape-vine roots to go deeper. 3, Our friend will have to refer to back numbers. Late Summer and early Autumn are the proper seasons for budding. We shall give full directions in time for another year's work. Grafting, which is Spring work, is the next to be considered. 4, White Dent with large grains and very small cobs. The ears average under size. 5, D. M. Ferry & Co., Detroit, Mich., probably, but we cannot say whether the seed has been as carefully selected as our own. *This* year we have selected the best ears (generally the top ones) only from stalks that bore five ears. Moreover, we have selected only from the shortest stalks and from those ears that ripened first, with the shortest shanks, etc., etc. We have spent hours in this selection tying differently-colored rags to indicate special characteristics. If in this way we should succeed in establishing a marked improvement, we shall again send this "Improved" Blount's to our subscribers. We may say that our selections from our last year's field, which was but a quarter of an acre and produced at the rate of 72 bushels of shelled corn to the acre, has, as it appears, made the corn two weeks or more earlier, so that it is now perfectly adapted to this climate, with time to spare. We are satisfied that the peculiarities of varieties of corn can be preserved only by such selection. That unusual marks or traits are thus fixed is proof thereof. All of our seed from stalks bearing three ears and over (except our own selection) will be sent to the Department of Agriculture, Washington, D. C. An application to the Commissioner may secure some.

A Convenient Barn.

F. S., Tonawanda, N. Y., would like a plan of a bank barn on level ground, the building to be 40 x 60, the lower part to be for stock—20 horses and about 10 head of cattle—and the upper portion for grain, mixed farming being the rule there. He proposes that the building should stand north and south and be seven feet in the clear, for horses, and the upper portion 18 feet, and made of boards. As stone costs $4 per cord there he asks, whether it would not do to have stone walls only 2½ feet high on three sides to save the use of that material. He also wants a small root cellar somewhere. Is a hip-roof better than a common one?

ANS.—We would suggest a plan for the purpose required as here given. The root cellar might be placed under the bank or bridge for the roadway to the barn floor, as shown. The stable portion should be at least eight feet in the clear; a hight of seven feet is too low for safety or health, as there is not room for a horse to throw up its head or for good ventilation. The walls may be made of concrete of gravel and hydraulic lime which will be as good as stone or brick. The corners should be



built up of brick or stone. A hip-roof is not desirable; a plain roof is better for a barn and is cheaper and tighter. The accompanying cut shows a plan of a barn such as is desired. Many good suggestions as to building may be got from The Carpenters' and Builders' Guide; or Harney's Barns and Stables; either of which can be procured of the American News Co., N. Y.

Skim-Milk vs. Corn or Bran, etc.

W. N., Afton, N. Y., asks what is the relative value of sour milk and corn or wheat bran for feeding purposes—how much sour milk is equivalent to, say, a pound of either.

ANS.—The only proper comparison that can be made between skim-milk or "sour milk" and corn and wheat bran is by comparing the dry, digestible food in 100 pounds of each. Skim-milk contains about 90 per cent. of water, and corn-meal and wheat bran about 14 per cent. of water. The following table will show the digestible constituents of each, together with the calculated value per 100 pounds.

	Digestible nutrients.			Nutritive ratio.	Comparative value.
	Albuminoids.	Carbohydrates.	Fat.		
Skim-milk	3.5	5.0	0.7	1.9	0.23
Butter milk	3.0	5.4	1.0	2.6	0.22
Whey	1.0	5.1	0.6	6.6	0.11
Indian Corn	8.4	60.6	4.8	8.6	1.10
Western Yellow Corn	7.5	67.3	3.1	10.0	1.04
Oats	8.7	43.3	4.0	6.2	0.94
Wheat bran, coarse	10.0	48.5	3.1	5.6	1.01
" " fine	8.9	51.8	2.6	6.9	1.00

These valuations are fixed upon the German estimate. They estimate each pound of digestible albuminoids as worth 4½ cents, and digestible fat the same, each pound of carbohydrates at 9-10 of a cent. The nutritive ratio means the proportion of albuminoids to carbohydrates and fat, but each pound of fat is equal to 2 4 pounds of carbo-hydrates. For example, skim milk has 3 5 albuminoids and .7 of fat, making 4 3 pounds in 100, and this multiplied by 4½ cents, gives 18 2 cents, and five pounds of carbohydrates (whey) amount to 4 5 cents, added, making 22.7, or 23, cents per hundred pounds; and the value of corn and other foods is obtained in the same way, It will thus be seen that 4 52 pounds of skim-milk are worth one pound of Western yellow corn, and 4 34 pounds are equal to one pound of wheat bran, and 4.08 pounds are equal to one of oats. We have also given butter-milk and whey for comparison We have found, practically, that skim-milk fed before getting too sour, is comparatively even more valuable than here given. When fed to pigs of 50 pounds' weight until they reached 150 pounds' weight, four pounds of skim-milk have been found equal to one pound of corn-meal and bran mixed together; that is, 400 pounds of milk would produce as much increase in weight as 50 pounds of corn and 50 pounds of bran mixed and fed together. All the elements in the milk are very digestible and all are utilized. Some may be surprised to find whey of about one-half the value of skim-milk, but that is when fed as nearly sweet as it can be. Whey is only a partial food, and requires some other food, such as bran, oats or oil-meal, to be fed with it. We trust this short table may teach an important lesson to many feeders.

White Horses.

M. R. H., Millwood, Kansas, asks whether gray horses become white with age.

ANS.—No; but they become of a lighter shade of gray. One can always judge the color of gray horses will be by the shade of gray of the head and joints. Horses of a gray color begin to get lighter when about five years old. There are very few perfectly white horses now, most of those called so being actually a light shade of gray. The original white horse came from Northern Africa, and rarely exceeded a hight of 14 to 14½ hands. The dun horse is said to have originated in Central Asia the chestnut in Tartary; the spotted in China, Piebalds are very numerous on the pampas of South America; black horses are supposed to be of English origin; and they are very rare in Arabia, while bays are common in all climates. For the last 200 years white horses have been raised by the Danish government near Copenhagen, with white hoofs, white manes, white tails and eyelashes, and rose-colored eye-lids and nostrils without a single colored hair or spot on their bodies. Christian IV received, from the Dey of Algiers, their ancestors, a white stallion and mare said to have been descendants of Mahomet's celebrated white mare.

Miscellaneous.

F. E. H., Harlan, Kan., having heard the barberry highly recommended as a hedge plant, asks whether it has any advantage over the Osage Orange for that purpose. The latter, he says, is not well adapted to interior hedges, as it is such a rampant grower. Although its top can, of course, be kept cut, its roots occupy too much ground. Wishing to hedge in his orchard and fruit garden, against depredators, he asks what hedge plant is best adapted to dry, strong, hilly ground.

ANS.—The Osage Orange is the best plant for you we know of. Next we should recommend the Honey Locust. The ornamental Japan Quince makes a strong hedge. The barberry is too slender in its growth and not vigorous enough for the land you speak of. See article "Trees for Windbreaks and Hedges," in last issue, for other trees suitable for hedges.

E. C. Sligo, Pa., has 18 catalpa trees set out about one foot high in April, '79. They are now of different sizes, two attracting a great deal of attention as they grew about six feet the past Summer, making with last year's growth nine or ten feet, with a few branches five feet long, near the ground, all this year's growth. Our friend asks how can these trees be got into the shape of an open umbrella, having no limbs near the top. Would it be advisable to cut the top off—or would doing so stop the growth.

ANS.—No, you need not be afraid of stopping the growth. Simply cut off the top branches at the hight desired and continue to do so each Fall.

E. L. A., Russellville, Ala., asks what kinds of wheat would be likely to do well in that section—northern Alabama; rust is the great and almost the only enemy to the plant.

ANS.—We have heard better reports of Nicaragua wheat than of any other variety in the Gulf States. Fultz, Bowden and Mediterranean are also more or less success-ful; but all are liable to be injured there by rust. Clawson and Boughton have also been tried in Alabama, with moderate success. Seeds can probably be furnished by W. B. Jones & Sons, Herndon, Georgia, who will also furnish local information as to varieties.

A. S. S., Waco, Texas, says that the Southern seasons are so much earlier than the Northern that to do justice to the seeds and plants of our Free Seed Distribution, they should be sent out to our Southern friends earlier than to those of the North, and he asks whether we can do so.

ANS.—We shall do all we can in this matter, and thank our friend for the suggestion.

E. S. B., Kent Co., Mich.—Wheats do not mix like corn. The fertilization takes place before the stamens appear which is known as "flowering." The crossing of wheats is a delicate operation and will need careful practice before success can be hoped for. Spreading the glumes and palets apart so as to introduce foreign pollen, is apt to injure the flower so that seed can not form.

L. S. I., Augusta, Ark., a year ago, set out some Black Cap Raspberries which, owing to unfavorable weather, made slow growth until the past season; now they are long and spindling, and he asks whether he should cut them back two or three feet now or in the Spring before the growing season.

ANS.—In the Spring.

S. T. B., Buckeye Centre, Ills., asks the best time to trim spruce or pine trees.

ANS.—March, August or September.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, OCT. 16.

M. P. W.—A. H.—F. E. B.—J. S.—N. I. B.—G. M. D.—W. E. B.—E. W. T.—M. N. N.—F. H. S.—T. W.—W. J. C.—F. G. H.—E. R. T.—J. L.—J. T. H.—L. S.—H. C. B.—J. K.—P. S. W.—A. L. J.—M. E. B.—M. B. W.—F. H. S., thanks.—E. W. S.—C. A. G.—C. C. G.—H. S.—C. E. J.—A. M. G.—B. F. J.

No health with inactive liver and urinary organs without Hop Bitters.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, OCT. 23, 1880.

COME now, RURAL friends or enemies, to the Rural Farm, and examine the yield of corn—or else accept the statements we shall present as the truth, and forever after hold your peace.

THE yield of Blount and Chester Corn has brought us a great number of urgent requests to sell quantities for seed. We must, as heretofore, refuse all. We value the confidence of our readers more than we do the profits resulting from such sales. Just so soon as an agricultural journal SELLS seeds or plants, just so soon its readers will naturally distrust the sincerity of its praise or censure.

C. C. GEORGESON, late of the RURAL staff, and now Professor of Agriculture in the State College of Texas, writes us as follows:

"I have examined the Tillandsia, usneoides (black moss), which grows here in abundance, and find that it *has* roots attached to the branches. I inclose a specimen which will show it."

The specimen shows that the thread-like roots merely serve to attach the plant and hold it in position as in all true epiphytes of which this is a good example. The roots are attached merely to the surface of the bark the same as moss or lichens cling to walls or rocks. The question we raised, to which Prof. Georgeson probably refers and which was explained by Prof. S. W. Johnson, was—"If air plants derive their sustenance from the air, whence come the potash, phosphoric acid, &c., found in the ash of such plants?"

A FEMININE SWINDLE has just collapsed in Boston. A few years ago a Mrs. Howe opened what she called the Ladies' Deposit, in which women only could invest their savings in sums of not less than $200 or more than $1,000, interest to be paid quarterly in advance at the rate of eight per cent. per month. Of course, any person outside of a lunatic asylum ought to have known that no legitimate business could afford to pay so heavy an interest on deposits—nearly one hundred per cent. per annum; yet enough fools, and many of them otherwise considered right-minded, were found in the seat of female culture *par excellence*, to swell the deposits to the neighborhood of a million dollars. The large interest seems to have been irresistible to hundreds, while the silly story of the manageress that benevolent Quakers were supporting the institution with $1,500,000, was swallowed unquestioningly. It has lately been discovered that no part of the funds was ever invested in business, and therefore that the "bank's" only income consisted in the deposits of its dupes, the interest on which was paid out of the principal. Lately, when, owing to a newspaper exposure of the fraud, depositors claimed their money, the institution unable to meet its liabilities, at once collapsed. From the outset it was a sheer fraud, and its originator stands a good chance of getting her deserts inside prison walls. Yet, after all, the fool-killer would find plenty of work in hundreds of country places just as well as among the gulled dupes of the Ladies' Deposit. How many fraudulent concerns thrive in every city of the Union supported mainly by rural gullibility, eagerly investing its hard-earned dollars in schemes just as dishonest as this collapsed Boston swindle and no more plausible.

FARMING FOR BOYS AND GIRLS.

An Agricultural Text-Book for Youths.

WE shall begin to publish next week and continue weekly, a series of short articles on the science and art of agriculture for the use of farmers' children by our contributor, Henry Stewart. These articles are intended to form a text book on agriculture which may be used in rural schools, and we expect them to be very useful and instructive. The series will include articles on poultry and the dairy for the use of girls. They will appear in the Department for the Young and be written in the manner of plain, simple, but entertaining essays, with illustrations. We call the attention of our young readers to these articles, and believe our older readers also will be interested in them.

THE RURAL BRANCHING SORGHUM.

IN calling attention to the article by Mr. Henry Stewart, on the Rural Branching Sorghum, we would remark that it has been grown at the Rural Farm and Rural Grounds for three years. Last year it matured seeds which were for the most past destroyed by sparrows. This year the seeds were planted late, so that they are now "in the milk" and probably will not mature. It is a singular fact that our six acres of this plant now growing near Aiken, S. C., which were planted earlier than our little plot at the Farm, have not yet, we are advised, matured seed, and "frost is feared." "It has grown to stalks and canes", writes the gentleman who is raising it for us.

From the first announcement of our "Plant and Seed Distribution" until the seed is actually received, we are in a fever of anxiety, lest failure, for one cause or another, may come to disappoint us and our readers. We are glad to be able to say that all of the kinds announced are secured beyond a doubt—except this Branching Sorghum, and in this case we have good hopes that enough seed will be harvested to supply each applicant with a trial package at least, though perhaps containing fewer seeds than, from the area sown, we had intended to distribute.

THE "EASTERN" TROUBLE.

DURING the late Turko-Russian war, the little mountainous Christian principality of Montenegro, with an area of 1,700 miles and a population of about 150,000 souls, burst into fierce war against the Turks with whom it had maintained a chronic state of warfare ever since the Ottoman occupation of the Byzantine Empire in 1452. On the conclusion of peace between Russia and Turkey the former stipulated that its fierce little ally should regain its independence, which was partly lost in 1862, and also obtain, for the first time in its history, access to the neighboring sea by the cession to it by the Sultan of the little port of Dulcigno on the Adriatic, hitherto an integral part of the adjacent Mahommedan principality of Albania.

During the war Greece, too, was eager to join in the attack upon the "Sick Man of Europe," in hopes of obtaining a goodly share of his effects after his demise, but the little kingdom's belligerent aspirations were checked by England and the other pacific Powers who were unwilling that Russia should be aided by an attack upon the rear of her foe, and anxious to confine hostilities within the narrowest possible limits. Accordingly Grecian warlike proclivities were easily restrained by assurances that Grecian territorial ambition should be measurably satisfied at the close of the war. When the Treaty of Berlin finally patched up a peace between St. Petersburgh and Constantinople, Russia strenuously insisted that her ally, Montenegro, should be satisfied, while caring little for the demands and prayers of Greece, which, in spite of a community of religion and much past friendship, had failed her in her time of need. It was finally agreed, however, that Turkey should cede to Greece also a strip of territory on the north of her present borders; but the Porte, taking advantage of the indefinite nature of this proviso, has hitherto failed to make any concession whatever.

The Powers having lately determined upon a joint naval demonstration to force the Sultan to carry out the provisions of the Berlin treaty, that dilatory and tricky potentate delayed to make any concession until the fleet was on the point of seizing more valuable parts of his territory, when, last Tuesday, he declared his willingness to surrender Dulcigno.

This tardy concession will probably lead to the withdrawal of the combined fleet, as the concert between the Powers, as to its action, was already in danger, even before the Sultan had yielded to the pressure upon him; but it is likely that at least England and Russia will still insist upon the proposed cession of territory to Greece and the promised reforms in Asia Minor and Turkey in Europe. The reluctant action of the Porte has saved Europe from at once taking a step that must have led to a war, the ultimate extent of which no modern prophet could have foretold; but the peril has not been removed, it has only been deferred.

So intimate are the economic relations of all nations at present, that any national disaster—such as failure of crops, bankruptcy or war—affecting one or more directly, affects all indirectly. This truth was forcibly exemplified, in a manner that touched the pocket of every farmer in the land, by the rise here of three cents a bushel in the price of wheat on the announcement, at the close of last week, that the combined fleet was about to take hostile action against the Porte, followed by a temporary fall of five cents a bushel on the arrival of the news that Dulcigno would be surrendered and the probability of a war be thus at least postponed.

THE PROSPECTIVE WHEAT MARKET.

The wheat crop of North America and Europe having been harvested long enough to allow of the thrashing of at least enough to indicate the average yield, so large a mass of information with regard to it, has been collected by different agencies that, by careful comparison and sifting, an estimate, at least approximately correct, can now be formed of the amount of the surplus in some countries and of the deficiency in others, and consequently of the probable price of the commodity during the coming months in the markets of the world.

In this country, although the prospects of the unharvested crop were excellent, the yield of thrashed grain has not been so large as was expected, and consequently our surplus for exportation will be considerably less than was anticipated earlier in the season, from the favorable reports of the standing crop and the increased area under it. A couple of months ago some sanguine estimates put the aggregate yield as high as 550,000,000 bushels, whereas, from present indications and statistics, it can hardly be much over 465,000,000 bushels against 448,000,000 bushels last year.

These figures show an excess of only 17,000,000 bushels in the total yield of the crop this year over that of last, and it is believed that the home requirements for consumption and seeding during the coming season will be from 15,000,000 to 20,000,000 bushels more than during that which has gone by, so that the entire exportable surplus from the present crop can hardly be much greater than that from the last, which, according to to the best attainable returns amounted, in round numbers, to 180,000,000 bushels.

In the United Kingdom, our best customer, the latest reports tell us that the yield of wheat this year is a fair average. An average yield there during the five years from 1865-'70 was 29 bushels per acre; from '75 to '79 it was 24 bushels, and last year only 18 bushels. The acreage under wheat there last year was 2,890,136, and this year it cannot be over 2,800,000. Estimating a fair average yield at 28 bushels per acre, the total yield of home-grown wheat this year will be about 78,000,000 bushels, while the average consumption of wheat in the United Kingdom is from 188,000,000 to 192,000,000 bushels, and in view of the natural increase of population, the latter quantity will most likely be required this year. On this basis there will be a market for 114,000,000 bus. in the British Isles. The latest reports from France say that the yield there is a small average. To the 30th of last June the imports of foreign wheat during the year amounted to 73,000,000 bushels, and it is estimated that from 30,000,000 to 40,000,000 bushels will be required this year. Until within the last couple of weeks Germany, Belgium, Holland and Switzerland were thought to be the only other European countries likely to need any considerable importations of foreign wheat, and the requirements of these were estimated at about 30,000,000 bushels, making the total of the European deficiency 179,000,000 bushels, or just about the amount of our exportable surplus.

From the latest cablegrams, however, it seems not unlikely that this year Russia, instead of exporting 80,182,704 bushels as she did in 1879, according to official reports, may this year become an importer of wheat, several cargoes of American grain having been already imported into some of her Baltic ports, and one at least into Odessa, in the Black Sea, hitherto her principal point for shipping wheat, backed as it is by the chief wheat-growing districts in the Empire. Several other cargoes have also been ordered for that place by the merchants there, a pretty strong proof that if Russia does not become a customer of ours during the coming year, she cannot, at any rate, prove a formidable rival. Although the West Indies and South America import little or no American wheat, yet they do a considerable trade with us in wheaten flour, and thus afford a by no means despicable market for some of our surplus.

Austria-Hungary, Italy and Spain will each have some surplus wheat for export, but the amount of this has not yet been ascertained. India, Australia, New Zealand and Chili will also, as heretofore, compete with us in the European markets. The exportable surplus of the first, according to present indications, will be about the same as last year; that of the second and third, whose harvest time comes about February, will probably be greater; while that of the last is likely to be somewhat less owing to the drain made upon the agricultural population by the requirements of her exhausting war with Peru and Bolivia.

In forecasting the price of wheat the coming season, then, it must be borne in mind that our exportable surplus will be, at the lowest estimate, fully as great as last year, while the demand in our European markets will be less, owing to the crops there having been very considerably better this year than last. On the other hand, our chief competitor hitherto in those markets is at best grievously crippled this year, and may even become a customer of ours, while competition from other quarters will not be seriously increased. It seems not unlikely that the increase in European crops generally this year will, to a great extent, be counterbalanced by the deficit in Russia, and that this country will find a profitable market for every bushel of wheat she can spare for exportation.

At this season last year the speculative movement of the great Chicago wheat syndicate had begun to influence the price of that cereal; but without any such influence to-day, prices are not much lower than at the corresponding date last year, and the tendency, both here and in Europe, is steadily upward. It must not be forgotten, however, that navigation will close in another month or six weeks, when all the industries of the country, and especially its agriculture, will be at the mercy of our railroads, which will doubtless at once put up freight charges, and every cent added to these is subtracted from the price paid to the producers, for "the farmer pays for all."

BREVITIES.

WE regret to state, in reply to many inquiries, that Fay's Prolific Currant, illustrated in this journal Sep. 28, will not be offered for sale this Fall. Mr. Josselyn has so decided.

ONE of the best evidences of the growing prosperity of the Southern States is the increasing call for skilled labor, machinery and appliances for the erection of repair shops, wagon and blacksmith shops, millwrights, and also for putting up new wood and iron-working machinery. In the number of all these little shops, which are really the forerunners of manufacturing, there is a promising growth, and the demand for laborers and operatives is with difficulty supplied. No better opening is offered for labor or capital than in the South.

MANY doubt that our Blount's corn, cultivated and manured as we have stated, has yielded 150 bushels of shelled corn per acre. "There must be *something* wrong," says one. "I do not believe that 150 bushels of shelled corn *can be* produced upon one acre," says another. The truth, however, is as we have stated and shall be able to prove. We once smiled at Mr. Conrad Wilson's talk as to the "Possibilities of the yield of Indian corn." But we have realized his possibilities by easy, inexpensive methods, and we have a very strong faith that we can do it again and again, and that every other farmer may.

WE have received the following from our friend in South Carolina, who is raising for us the six acres of Rural Branching Sorghum. Our readers may share with us the glimmer of hope which it gives.

AIKEN CO., S. C., Oct., 4.

Dear Sir:—So soon as your two hasty notes were received, I hunted for Mr. S., and this morning is the first time I have been enabled to see him. He says he thinks he can let you have some. He is in the same boat with me. All depends on when the frost strikes. 'Tis excessively dry here now, and that has saved us so far; for they have had frost north and east of us. If frost will only hold off for two or three weeks, we shall be enabled between us to let you have some. So *take courage*. We may be happy yet. Don't give up. Will you just keep quiet for a few days? We will report as we progress. I hope for the best. My loss will be heavy.

A RESPECTED friend and experienced horticulturist criticizes the New Jersey State Fair thus severely. His strictures are substantially those which we have many times heard before and, indeed, have ourselves uttered in these columns. That we could have no personal motive in giving them publicity—if, indeed, we could be narrow-minded enough to be so influenced by such a motive—is apparent from the fact that we have no acquaintance whatever with any one of the officers of the Society: "I was at the Waverly Fair only one day, but saw enough to know there was no improvement in the arrangement of the horticultural department in which I take most interest, and my fair criticism of the exhibit would include a severe scoring of the utter inefficiency of the Superintendent and Board of Managers, whose only aim seems to be to get together a large exhibit regardless of any system in arranging it or allowing the contributor to derive any credit or benefit therefrom, except an accidental award or two. The self-importance and egotism of official position and the desire to make money seem to be the chief desires and aims of too many of the present managers. To get into office and keep in, is their motto."

For Women.

CONDUCTED BY MISS RAY CLARK.

MARRY A GENTLEMAN.

Marry a gentleman,
Girls, if you can,
Minded and built
On the generous plan,
Though he may neither
Have silver or gold!
Title or fortune,
"To have or to hold."

Though he may labor
With spade and with hoe,
Though he may naught
But his mother tongue know,
Though he live under
Society's ban,
Marry a gentleman,
Girls, if you can.

Marry a gentleman,
Girls, if you can,
Gentle and tender
Though no less a man,
One who will treasure,
His child or his wife,
Scorning to rob them
Of sweetness in life.

One who will never
The brute's part assume
Filling his household
With sorrow and gloom,
If on love's altar,
The flame you would fan,
Marry a gentleman,
Girls, if you can.

You will be happy,
And you will be glad,
Though he only
Be commonly clad,
Pleasure is fleeting,
And life but a span—
Marry a gentleman,
Girls, if you can.

DESCRIPTION OF CUTS.

FIG. 339 AND 339½.—BACK AND FRONT OF DRESS FOR LITTLE BOY OF THREE YEARS OF AGE.

The dress is shown in different materials. Fig. 339 is of fawn cashmere, with checked collar, cuffs,

FIG. 339. FIG. 339½.

and waistband; Fig. 339½ is of striped cloth, trimmed with bands of velvet piped with satin.

FIG. 340.—MAGNOLIA PANEL.

This is a design for panel decoration. The artist will readily detect beauty of arrangement and an appropriate flower for exercises of skill. A copy of this touched up with natural colors will make a pretty ornament for a mantle or bracket.

FIG. 341.—BONNET.

The bonnet is of black chip, trimmed with dark

FIG. 341.

ruby twilled silk, coffee-colored lace, and coffee and ruby feathers.

FIG. 342, 343 AND 344.—WORK-BASKET.

Any round wicker basket with handles will be suitable to be ornamented in this style. The inside is lined with olive-green satin, finished at the Illustration fig. 343, which fringe ornaments the edges with the heading of the fringe shown in outside of the basket. A wide ecru braid is used for the heading; it is ornamented with long-stiches, worked in olive and crimson wool, and a scalloped fringe made by working loops of wool over a mesh into the braid, one scallop of crimson and one of olive alternately. The method of making the rosettes of Berlin wool which separate the tassels is shown in Fig. 344. The tassels are made by tying equal lengths of wool together; they are suspended from the braid by double lengths of wool, knotted in at the depth of scallop.

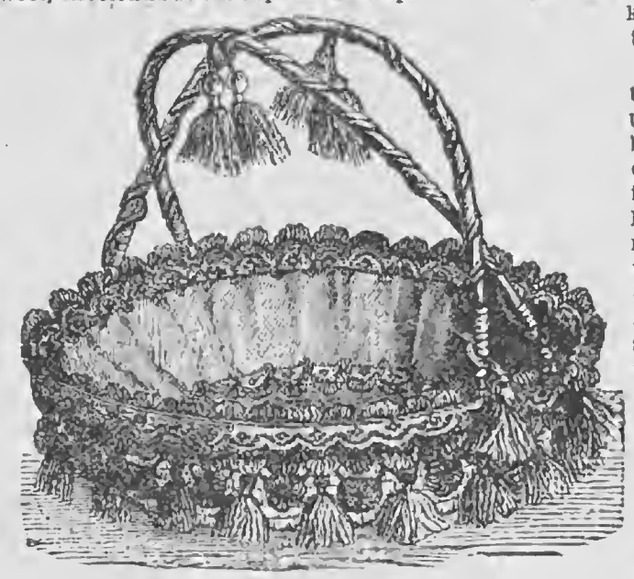


FIG. 342.

FIG. 345.—COVER FOR FLOWER-POTS.

The foundation is of card-board, covered with brown paper, cut to fit the pot it is intended to cover. The stripes are formed of oak-bark, glued to the foundation. The borders at the top and bottom are composed of petals of fir-cones, acorns, oak-galls, and beech-mast; these must be carefully cleaned with a brush and water. The separate petals are softened in water, and are sewn to the card by a needle and brown silk; the larger pieces are fastened on with glue. When the work is completed and quite dry, it should be painted over several times with a good, clear copal varnish.

BOYS, AND THEIR HOME SURROUNDINGS.

VIRGINIA FRANKLIN.

In all the articles written for the comfort and beautifying of home life, in its thousand varied aspects. I wonder why it is that so little is ever said pertaining to the home life of the boys of a family.

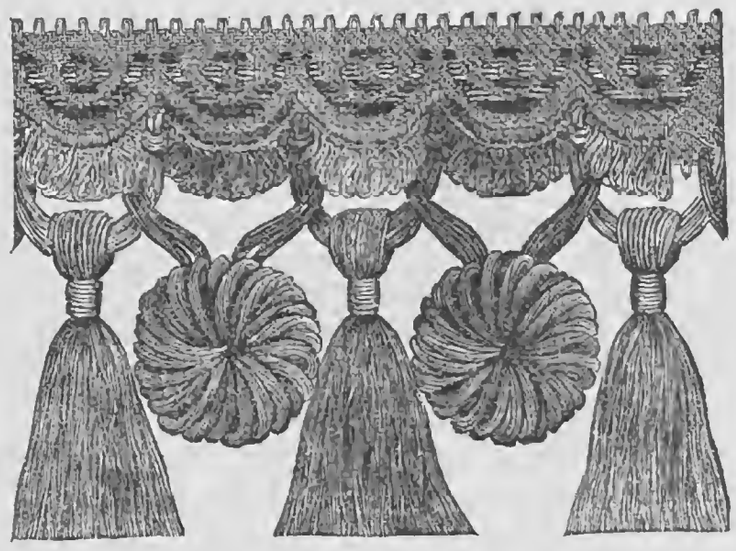


FIG. 343.

I know there are the hackneyed themes about making home attractive in reading matter; innocent games; cheerful social intercourse; with other things that all go to make up an ideal home for the whole family; but what I have especially in mind now, is the apparent little interest taken in the surroundings of the boys' private life, though in most homes it might well be thought—by a glance into their rooms—that no such idea, as a wish for seclusion, even lodged in a boy's brain.

Perhaps one reason why mothers give so little thought and time to the comfort and beauty of boys' sleeping apartments, is, that as they are in it so seldom (most of their time outside of school being spent in the street) it is thought of no consequence, but were those rooms made equally attractive with those in which their sisters spend so much time and take pride in beautifying, would not the boys be oftener found in their rooms, instead of roaming off, no one knows where, from the time school is dismissed until tea-time, and alas! too often in the evening.

Let us look at the average room occupied by the boys of a family, situated oftentimes in the less attractive portion of the house, being dark and dismal, as if boys and sunlight were wholly at variance with one another. I, for one, never yet saw that boy who does not like all the fresh air and sunlight he can get, and were mothers more ready to admit these same health giving mediums into the boys' rooms, they would not have so much cause to complain of their being always in the street. Then too there is the almost universal custom of furnishing these rooms with all manner of odds and ends, in fact using them as so many store-rooms for dilapidated furniture, this together with faded carpets, curtainless windows, and bare walls, makes an altogether uninviting, cheerless apartment.

Nearly all homes have some pleasant room that could be very easily given up to the boys. Let each have a separate appartment if possible, but, if not, give to each his individual part of closet and bureau, that he may learn to be orderly.

Let them have a good substantial set of furniture (which can be purchased without great expense, in these times) and don't allow a broken chair; faded carpet; cracked pitcher, or mirror, in the boy's room, any more than you would think of putting them in the guest chamber, which always looks so tasty and neat.

As regards the decoration of the walls, the boys themselves will soon furnish the pictures, if they can be assured there is a place where they can be kept, and all fear of their being consigned to the dust box is removed.

Suppose these pictures are not always of the higher order of art, they surely show that the boys have some appreciation of the beautiful in life, therefore if the collection of picture cards is good and wholesome in the subject portrayed, give them an honorable place on the walls of the boys' rooms, and never fear but what their taste will be educated to a higher standard in due time. Again, boys must, and will have all sorts of articles collected in different stages of their life, as every mother can testify, but even the most heterogeneous collections can be made to have places of their own, so the boy can have his pleasure of possession, and the mother's pride in her orderly house remain undisturbed.

Then, mothers let "the boy's room" be just as warm, bright and cheerful as motherly love and sisterly ingenuity can make it (for depend upon it boys do notice and appreciate little useful ornaments in their room, even if they don't speak of it) and if the room is often full of merry boy companions, drawn there because of its attractiveness, don't fret either because of the noise made, or confusion that will take only a few extra touches to straighten, but be thankful that you have succeeded in making "home the best place" to the boys.

HINTS.

To restore color when acid has been dropped on any article of clothing, apply liquid ammonia to kill the acid; then apply chloroform to restore the color.

To Clean Gold.—Powder some whiting, and make it into a moist paste with some sal volatile. Cover over the gold ornaments and surface with a soft brush, let it dry, and then brush it off with a moderately hard brush.

To Join Alabaster.—Ornaments of alabaster or plaster may be joined together by means of a little white of an egg thickened with finely-powdered quicklime, or by a mixture of newly-baked and finely-powdered plaster of Paris, mixed up with the least possible quantity of water.

To Make Lavender Water.—Best English oil of lavender, four drachms; oil of cloves, half a drachm; musk, five grains; best spirits of wine, six ounces; water, one ounce. Mix the oil of lavender with a little of the spirit first, then add the other ingredients, and let it stand, being kept well corked for at least two months before it is used, shaking it frequently.

To Wash Flannels, Etc.—It is always best to wash flannels, calico dresses and aprons before the white clothes are wet, especially if the day is cloudy and threatening. Then if it rains the white clothes can be rubbed, scalded and left in the rinsing water, and it is a small matter next day to wring them out, blue them, and hang them out to dry.

Crimping Hair.—To make the hair stay in crimp, take two pennyworth of gum-arabic, and add to it just enough boiling water to dissolve it. When dissolved, add enough alcohol to make rather thin. Let this stand all night, and then bottle it to prevent the alcohol from evaporating. This put on the hair at night after it is done up in paper or pins will make it stay in crimp the hottest day, and is perfectly harmless.

Necessity of Good Ventilation in Rooms Lighted with Gas.—In dwelling-houses lighted by gas, the frequent renewal of the air is of great importance. A single gas burner will consume more oxygen and produce more carbonic acid to deteriorate the atmosphere of a room than six or eight candles. If, therefore, when several burners are used, no provision is made for the escape of the corrupted air and for the introduction of pure air from without, the health will necessarily suffer.

To Gild Picture Frames.—The surface of the gilt must be carefully covered with a strong size, made by boiling down pieces of white leather or clippings of parchment, till they are reduced to a strong jelly. This coating being dried, eight or ten more must be applied: The size being mixed with a small quantity of whiting. The last coat is composed of screened massicot, or sometimes yellow ochre. Let it dry thoroughly, and then damp the surface a little at the time with a damp sponge, and apply the gold leaf before this dries. It will immediately adhere, and when dry, those parts which are to be brilliant are burnished with an agate or dog's-tooth burnisher.

Marking Ink.—A red ink for marking clothes, which is not attacked by soap, alkalies or acids, is

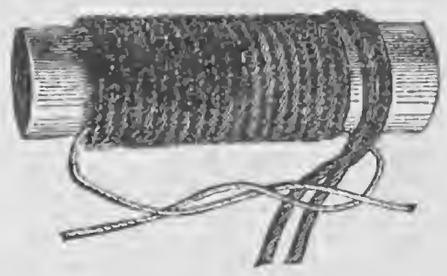


FIG. 344.

prepared as follows:—Enough of finely powdered cinnabar to form a moderately thick liquid is very intimately mixed with eggs' albumen, previously diluted with an equal bulk of water, and beaten to a froth, and filtered through fine linen. Marks formed on cloth with this liquid by means of a quill are often fixed after they have become dry by pressing the cloth on the other side with a hot iron. The ink will keep in well closed bottles for

FIG. 345.

a long time without separation of the suspended cinnabar. A black indelible ink is made by putting one and two-thirds parts of nitrate of silver in sixteen parts of distilled water, and adding two parts of gum-arabic and one-third part of sea-green.

Reflection from Lamps.—Never set the lamp upon a red table-cover; if you can not find time to make a green lamp mat, put a piece of green card board under the lamp and you will find the reflection upon your work much more agreeable to the eyes than that from the red cover.

CORRESPONDENTS' CORNER.

Will Miss M. D. please tell us how to play French Charades, Twenty Question, What's My Thought Like, Crambo, Borrow and Return? The

FIG. 340.

plays are mentioned in Rural of Sept. 18. She will oblige BERTHA H.'S SISTER.

Literary Miscellany.

WORK AND WAIT.

A HUSBANDMAN, who many years
Had plowed his fields and sown in tears,
Grew weary with his doubts and fears.

"I toil in vain! These rocks and sands
Will yield no harvest to my hands;
Tho best seeds rot in barren lands.

"My drooping vine is withering;
No promised grapes its blossoms bring;
No birds among its branches sing,

"My flock is dying on the plain;
The heavens are brass—they yield no rain;
The earth is iron. I toil in vain!"

While yet he spake a breath had stirred
His drooping vine, like wing of bird,
And from its leaves a voice he heard:

"The germs and fruits of life must be
Forever hid in mystery;
Yet none can toil in vain for me.

"A mightier hand, more skilled than thine,
Must hang the cluster on the vine,
And make the fields with harvest shine.

"Man can but work; God can create;
But they who work, and watch, and wait,
Have their reward, though it come late.

"Look up to heaven! behold and hear
The clouds and thunderings in thy ear—
And answer to thy doubts and fear."

He looked, and lo! a cloud-draped ear,
With trailing smoke and flames afar,
Was rushing to a distant star.

And every thirsty flock and plain
Was rising up to meet the rain
That came to clothe the fields with grain.

And on the clouds he saw again
The covenant of God with men,
Re-written with his rainbow pen,

Seed time and harvest shall not fail,
And though all enemies assail,
My truth and promise shall prevail."

INMATES OF LESTER HALL.

(Continued from page 694.)

He smiled a little sadly and incredulously, but made no other comment. After a momentary silence she spoke again:

"Dr. Carewe, if some one had deeply injured you, would you revenge the injury?"

She turned towards him as she uttered the words, and looked up inquiringly in his face.

"Of what avail!" he said. "Would revenge wipe out the injury? Would not the noblest revenge be to pardon the offender?"

"Is that your theory?" she said, turning away. "It is not mine!"

"Yours!" he said, smiling. "What can your bright life have to do with revenge!—your life, which is as cloudless as even I could wish it!"

"Even you!" she repeated, with some scorn. "Even you! What do you know of my life?"

"It is a happy one, is it not?" he said, gently. "It has no clouds to overshadow its brightness."

"Has it not? You forget," she said, coldly. "You forget my brother!"

She turned to him as she spoke, and saw, as her words fell upon his ear, that he started and turned very pale, but he said nothing.

"Avenging an injury would not blot it out," she said, "but would it not be a satisfaction to know that it was avenged, and that the person was punished who deserved to suffer?"

"I cannot tell," he said, wearily. "You know what our great blind poet says of it:

"'Revengo, at first though sweet,
"'Bitter ere long, back on itself recoils.'"

"Does Milton say that?" she said dreamily. "Well, he may be right. But this is a strange ball-room conversation, Dr. Carewe," she added. "Let us change the subject. What do you think of Mattie's engagement? Do you approve?"

"Who could do otherwise?" he said, smiling. "They are admirably suited to each other; and while I think Mr. Edgar a most fortunate man to have won such a bride, Miss Lester is also fortunate to have won such a deep, true affection as he has given her—such a perfect love."

"Love!" said Cecil, with a little sneer. Who speaks of love in this century of ours? We are far too sensible to credit its existence."

"You cannot doubt it," he said, half bitterly, half sadly.

"Ah! do not say such things," she said, scornfully. "Such society-talk is not in your way. Why should I know more joy and less sorrow than those around me?"

"Your life should never know a dark hour if I could guard it," he said. "Ah! if it were but possible for me to keep them from you!"

"What!" she said, with an attempt at galety. "A cold, reserved medico like you, would you care to keep dark hours from——"

She stopped abruptly, and something in his face silenced her.

"I am not cold—I am not reserved—when you are concerned," he said, with sudden passion. "I would to heaven it were so! Why should a doctor be cold?" he continued, mastering his agitation by a strong effort, and trying to speak lightly. "We are not all reserved; alas! some of us love but too well."

"Not wisely, but too well," she said, with her light, scornful laugh, which cut him like a knife as it fell upon his ear.

"Even so," he said with a smile.

"It is very pleasant to be cold, though," said Cecil, toying with her flowers, and looking very beautiful as she nestled in the fleecy lace shawl wrapped around her. "It saves one a great deal of suffering to have no heart!"

"True," he assented. "But one loses much joy. Ah! child," he went on, suddenly changing his tone to one of the deepest tenderness, "why do you try to belie yourself thus? Why do you try to make yourself out so cold and heartless, when your own nature is so noble and true? Do you think that I cannot read you aright? Do you imagine that I cannot see into that warm little heart of yours, and guess at all you are striving to conceal. Cecil, if I deemed you what you yourself say you are, should I love you as I do?"

She made no answer. Her face was averted from him; but if he could have seen it he would have been startled at its ghastly pallor, and he might have heard the fierce, loud throbbing of her heart. As she heard the impassioned words—as she noted the rich melody of his voice—as she felt (she could not see) the deep, earnest gaze which lingered on her face, she thought, with a sudden, fierce triumph, that what she had striven for she was about to attain; that she was near the fulfilment of her vow—near the vengeance for which she longed. This man had tempted her brother to ruin, and shame, and death. She, Rex. Lester's sister, had it in her power to give him pain and suffering—to make him know misery as acute as Rex. had suffered.

While she was thinking thus he stood silent at her side. He had spoken those words impelled by the passion of the moment, and ere they were uttered he repented having spoken them. His love for her, great as it was, was touched by a great humility, and he could see its hopelessness even when it mastered him most. And yet to have the right to love her—to hold her to his breast—to touch his lips to hers, Lawrence Carewe felt, in the madness of that moment, that he would willingly give his life!

But had he known the motives which had actuated her in the evident favor she had so constantly shown him, how would he have looked upon her? Had he known that she had used the wondrous charm of her beauty and sweetness to ensnare and bring him to her feet, only to gratify her own wild desire for revenge, how would he have regarded her? Who can tell? He himself was too noble to doubt her for a moment; he had invested her—as men are apt to do those women whom they love—ay, and women also—with all nobility, all sweetness, all perfection—while in her heart she was cherishing a base scheme unworthy of her!

"My remark was an impersonal one," she said, with a slight smile; "no more; so you might have spared that pretty speech, doctor."

He answered nothing; but there came a look into his eyes, which she saw—a look of incredulity and mortification, for her words, in their cold, languid scorn, seemed to chill him. Cecil saw their effect, and the languid, satirical smile passed from her lips, as she turned to him with a touch of that winning sweetness which she used but seldom, but which had so much power; and although her lips were white, she smiled as she lifted her eyes to his, while Lawrence Carewe's glance returned hers full of passionate love, and appeal, and pain.

For a moment she stood silent; something in that moment—some better feeling—was tugging at her heart strings and bidding her put aside the treacherous purpose. Why should she delude him thus? and while her heart pleaded for him, it may be that it pleaded too for herself—what if, in hurting him, she wounded herself also?

He drew a step nearer to her, and put his hand tenderly on hers. The resistless spell of her great loveliness was upon him, and he was powerless against it. Another moment, and he would have poured out at her feet the vast love that was burning in his heart. The passion within him would have found utterance, but even as he laid his hand on hers there was a quick step on the balcony. His name was repeated in several voices, and Mr. Edgar, pale and agitated, stood before him.

"Lawrence, will you come?" he said, quickly. "Mattie has fainted, and—come—come, for Heaven's sake!"

His agitation was excessive, and Cecil started forward, trembling in every limb.

"What is it?" she said, faintly. "Mattie ill! What is the matter?"

Dr. Carew glanced at her for a moment. All his composure had returned, and he was his calm, cool, professional self again.

"Come with me," he said, "you may be of use, but you must be calm and quiet, you know."

"Yes, yes," said Cecil, rapidly, as they threaded their way through the gay company in the ball-room, following Mr. Edgar, who led them out of the ball-room into Mattie's boudoir, whither they had carried her.

They had laid her on a couch, and Mr. Daton and her maid, both looking pale and startled, were by her side. Mattie was pale as death, and perfectly unconscious. As she lay she looked like a sculptured marble figure in her rich white draperies. Cecil ran to her side and knelt down, uttering a cry of terror, for there, flowing from the pale lips, staining the purity of the silken robes, was a vivid, red stream of blood.

By-and-by the guests dispersed, without having seen either Mattie or her sister; and as they went they said among themselves, with hushed voices and awed faces, that Miss Lester had burst a blood vessel and was dangerously ill.

CHAPTER XII.

CECIL'S AFFECTIONS DISCUSSED.

For several days Mattie Lester's life was in danger, and Mr. Edgar wandered about the house, looking haggard and miserable, and very unlike the gay, handsome, triumphant young lover who had wooed and won her. Even when the immediate danger was over there was grave cause for anxiety, and Dr. Carewe, was rarely absent from his patient for many hours together. His devotion and care knew no bounds, and as pulmonary diseases were his speciality, both Mr. Edgar and Mr. Daton were quite willing to entrust their beloved invalid to his care; while Cecil, who was terribly anxious and distressed, looked upon him with the most complete confidence and reliance, forgetting entirely that he who, in great measure, was the saviour of her sister was the destroyer of that noble young brother of whom she had been so proud, and whose legacy to her had been one of vengeance.

It was impossible but that they should be much thrown together during Mattie's illness, for Cecil was a very devoted nurse.

In after time Lawrence Carewe looked back on those days as some of the happiest in his life. It was so sweet to see Cecil's beautiful eyes turn to him in appealing entreaty—to see how she trusted and looked up to him—to touch her little hand sometimes in their ministrations to the sick girl—to hear her voice murmur some sweet broken words of thanks, or a fear that his constant attendance would fatigue him.

No wonder that in those days his love for her grew more and more intense—no wonder, too, that seeing her so gentle and lovable in her care of Mattie, he even dared to hope for himself; and so went on, blindly loving her and hoping to his fate.

At length the tender care and skill lavished upon her had their reward, and Mattie Lester's face was turned towards recovery; and once turned, she amended rapidly. Soon all danger was over, and the hearts of those who loved her lost their heavy load of anxiety and care.

Mr. Edgar's joy at her restoration equalled the pain he had endured at her danger, and his gratitude to the young physician, whose skill and care had been so greatly instrumental in her recovery was vast and limitless.

"You don't know what I feel towards you, old fellow," he said, with a tremor in his voice, as his two hands grasped Mr. Carewe's, and his pleasant blue eyes, with something suspiciously like tears in their depths, met his friends. "I cannot find words to thank you—I have no words. To strive to pay such a debt would be hopeless; but Heaven grant that the day may come when I can show you, in any way, my gratitude; and for the life saved you shall ask what you will, and it shall be yours."

The eager, passionate words came from his heart, and Lawrence Carewe knew all their sincerity, all their truth; and though he smiled as he disclaimed all gratitude, his own heart throbbed with a sudden wild hope.

"You owe me nothing," he said, hurriedly; "but if, in your generosity, you think that you do, some day repay it by saying a kind word for me to——"

His voice failed, and a flush rose in his cheek as he faltered at the name of the woman he had grown to love, even as himself had said, "not wisely, but too well."

"To Cecil," said Mr. Edgar, quickly. "Nothing would give me greater pleasure, old fellow, but—do you think she is worthy of such a heart as yours? She is beautiful and very charming, but she is so fond of power—of admiration——"

"Beneath it all she has a noble heart," said Dr. Carewe, warmly; "and I shall hold him greatly to be envied who shall win her love."

"Then may it be you," said Mr. Edgar, cordially, as he again pressed his friend's hand and went away to spend a happy hour with Mattie, who had been promoted to a couch in the boudoir, and who welcomed him with the prettiest blush and the sweetest smile imaginable.

Naturally their conversation turned on the man to whom they owed so much, and naturally, too, Mr. Edgar told his *fiance* of the doctor's hopes and fears.

"I don't think Cecil would have him," he said, dubiously. "She is so brilliant and so much admired, and of course he would not be a good match for her."

"Not a good match! Oh! Edgar, when he is so good, and noble, and true," said Mattie, reproachfully, "I should think Cecil a very lucky woman if she married him."

"So should I, dear, as far as he himself goes, but from a worldly point of view she would not be so."

"But, Edgar, I fancy that Cecil likes Dr. Carewe," said Mattie, with a little smile into her lover's eyes as he bent over her.

"Do you, my darling? That would be good news! What makes you think so?" said Mr. Edgar, drawing the pretty golden head on his shoulder, and settling himself comfortably on the low seat he occupied by the sofa.

"A great many things. She had always been so charming to him," said Mattie, meditatively. "So gentle and gracious; and when he was staying here, and when I was so ill, and when I was getting better, I used to notice several little things which seem to say that she cared for him. Really, Edgar, I think Dr. Carewe has a very good chance of winning her."

Meanwhile, Cecil herself—how fared it with her while her sister and her *fiance* were discussing the state of her affections, and while Dr. Carewe was resuming his usual practice with his heart full of hope and love? How fared it? Not well!

She knew, she felt sure, with a woman's unerring instinct in such things, that Lawrence Carewe loved her, and she knew, also, that she had striven to win his heart. She knew that for him, to gain that love, she had drawn upon her store of fascination, and spared no pains, and that her object in so doing had been, not his happiness, but her own vengeance.

She had that vengeance in her power now—it was possible to her to make him suffer even as her brother had suffered—to make him endure pang for pang, anguish for anguish!

What mattered it to her, she said, scornfully, to herself, as she paced up and down the apartment, pushing back her hair from her brow with impatient, fevered hands, that he had changed his way of life—that people spoke of him now as devoted, noble, and kind—if by his example and by his influence he had led her brother into sin, and shame, and death? Should he not atone—should he not suffer for that sin? And how?

Through a cheated hope, which should end in desolation; through a love given, to be rejected with scorn, and contempt, and mockery!

That was Cecil Lester's vengeance, and over it she brooded night and day, until her brain was dizzy and confused, and she had no power really to judge between right and wrong.

Sometimes softer thoughts would come to her. For that life which he had destroyed should not the life he had been instrumental in saving make atonement? Should she relinquish her cherished purpose? should she spare him now at the last? But such thoughts as these were but evanescent. Before her eyes once more would come the recollection of her brother's death-bed; the remembrance of his dying words, of her promise—her vow given to the dead, and sacred! And then she would take out the slip of paper, and con the brief words—cruel, heartless words—unlike, how vastly unlike, anything she had ever heard from Lawrence Carewe's lips, yet written in his handwriting, and signed by his name; and as she read them the passionate, unreasoning anger and hatred filled her heart again, and the longing for vengeance rose high.

But with it all she knew that, in cherishing the vengeance, she erred most deeply. She would not see—she tried to blind herself to the blamelessness and nobility of his life. She said to herself again and again that it was but a mask to hide and cover base, dishonorable actions, of which the world knew nothing; she shut her eyes to his frank, loyal, generous nature; to that tender patience and charity which thought no ill and suspected no evil; which believed in her purity and good faith when she was so little trustworthy; and there were moments—rare, alas! and swiftly passing—when that faith rose up and shamed her—shamed her to the very depths of her nature—but failed to turn her from her purpose.—To be continued.

A FAMILY OF CHAMELEONS.

THE chameleons have long been an object of peculiar interest to scientific investigators, because of their curious power of altering their appearance to conform to surrounding objects. Dr. Bacheler, of Midnapore, India, has given in the Popular Science Monthly the result of numerous observations of a family of chameleons which he has been keeping. The chameleon does not change its color always to match its surroundings, but its power to hide itself by a change of form is no less wonderful. In a normal state of rest the color is of light pea-green, at times blending with yellow. The least excitement causes transverse stripes to appear, running across the back and nearly encircling the body. These stripes occupy about the same amount of space as the groundwork, and are most susceptible to change of color. At first they become deeply green, and, if the excitement continues, gradually change to black. When placed upon a tree, the groundwork becomes a deep green, and the stripes a deeper green or black, and so long as they remain on the trees the color does not change. Placed on the scarlet leaves of the *dracæna* and among the red flowers of the acacia, no change was observed. But its changes of shape are still more remarkable. Sometimes it assumes the form of a disconsolate mouse sitting in a corner; again, with back curved and tail erect, it resembles a crouching lion, which no doubt gave origin to its name, *chamai-leon*, or ground lion. By inflating its sides it flattens its belly, and viewed from below, takes the form of an ovate leaf. The tail is the petiole, while a white serrated line, which runs from nose to tip of tail over the belly, becomes the leaf's mid-rib. Still again, throwing out the air, it draws in its sides, and at the same time expands itself upward and downward till it becomes as thin as a knife, and then viewed from the side it has the form of an ovate leaf which lacks a mid-rib, but the serrated line of the belly and the serrated back stimulate the serrated edges of a leaf. When thus expanded it has also the power to sway itself, so as to present an edge to an observer, thus greatly adding to its means of concealment. Half a dozen chameleons placed in a small tree, not three feet in diameter across the top, are very difficult to discover, although one is certain they must be there.

NEW PUBLICATIONS.

The Undiscovered Country. By W. D. HOWELLS Boston: Houghton, Mifflin & Co.

If the claim made by Mr. Trollope is true "that novels teach people, especially young people, how to talk;" then this latest work of the well known author deserves the prior claim of teaching people, old and young, how to think on at least one subject which under the very ear of progress, in civilization and education, continues to absorb and mystify the credulous portion of the community. A subject which in the interest of fraudulent pretenders and under the guise of spiritualism has become so disreputable as to rank among the greatest humbugs of the nineteenth century.

No one can read this book through carefully and not be strongly impressed by the contrast between the simplicity, truth, and earnestness of Dr. Boynton and the illusions he vainly struggled to grapple with. The results, so painful to all with whom he came in contact, cannot be too hastily passed over.

On the other hand the beautifully drawn character of Egeria commands our highest admiration and sympathy, showing an intimate knowledge, and the closest observation of a woman's nature.

Many of the pages are interwoven with a picturesqueness as fresh and bright as the scene they recall. Nature's tenderest moods seem to be crystallized in such perfection that no artist with his choice of colors could approach.

For those who appreciate the sentimental there is a little of the most natural falling in love that we can remember since our first experience. We heartily recommend the work for its pure, conscientious tone.

In the closing chapter the author tells us "The grass has already grown long over Boynton's grave. They who keep his memory think compassionately of his illusions, if they were wholly illusions, but they shrink with one impulse from

the dusky twilight through which he hoped to surprise immortality." If he has found the undiscovered country he has sent no message back to them. They wait; and we must all wait.

BRIC-A-BRAC.

It rested 'tween two rows of corn,
And wildly to itself it said—
"How can I help but feel forlorn—
I'm nothing but a pumpkin head!"

"SHE'S DET."

THE following colloquy took place outside a house in an American city, between some country visitors, unable to obtain entrance, and a German living next door:

"Jane at home, did you say?"

"Nein, Chane's nod ot home."

"Where is she?"

"She's gone the cemetery down."

"When will she come back?"

"Oh, she won't come back already any more; she's gone to stay; she's det!"

CICERO said: "Nothing should be done hastily." The old chap was wrong. If you see a man coming at you with an axe, get away as hastily as you can.

A MAN has invented a chair that can be adjusted to eight hundred different positions. It is designed for a boy to sit in when he goes to church.

WHY HE WEPT.

As an illustration of the case with which the one step can be taken from the sublime to the ridiculous, the following anecdote of the great French caricaturist, "Cham," is good:—

Once they were talking before "Cham" of the effect of a powerful painting upon the mind, and some one said, enthusiastically, "The painter with his brush can bring tears to the eye as well as the poet with his lyre."

"That is indeed true," replied M. de Noe; "I was in Ary Scheffer's studio yesterday, and he was showing me one of his pictures, and, though I am not usually in the melting mood, I fairly wept for ten minutes."

"Ah, I heard that Scheffer was treating a very pathetic subject, and you found his wonderful brush——"

"Oh, that isn't it; he stuck his wonderful brush in my eye while gesticulating."

FITTING emblems are not always appreciated. The neighbors of a poor fellow who died erected a tombstone to his memory and had placed above it the conventional white dove. The widow looked at it through her tears and said—"It was very thoughtful to put it there. John was very fond of gunning, and it was an especially suitable emblem."

"POLITICS is all a humbugs. Dey told me all I had to do vas to bay oud some moneys, and I vould git elected shust like a nodinks. Ven I vent to de bolls, vat you tink dat man at de bolls he told me? He shust told me, 'Don't you got excited;' und I vasn't do nodinks, but shust talking to my friends dat I tought vas agoing to vote for me. Und den he said again, 'Ve don't vant no excitement round here to-day;' but vat I care for him? Nodinks. I shust talked und talked mit everybody. und tings vas gittin' on bully. How many votes you tink I got? Dree, shust dree, one in A Instinct, and two in B Instinct, and one of dem was scratched. You shust wait; it efer I find de man who scratched my name off dat dicket I scratch him, you bet. Oh, yes, I vas beat."—Cincinnatt Gazette.

INDENTICAL.—In one of the most recent strikes an employer was using his best eloquence to convince the workmen how wrong they were. "You do the work, it is true," said he; "that is labor. I pay you wages for your work; that is capital. Therefore our interests are indentical." "Yes, shouted a workman, "about as identical as the interests of a milkmaid and a cow!" Without applauding the logic of the workman, the cleverness of the retort must be admitted.

VARIETIES.

THE papyrus manuscript recently discovered in the cave of a hermit near Jerusalem, and said to be the work of St. Peter, has been submitted to a committee sent out by the Biblical Society of London, and they have come to the conclusion that the papyrus is in reality the work of the great apostle. They have offered $100,000 for the documents in vain.

LARGE numbers of false turquoises have lately come from Vienna to London, and are still arriving. The detection is difficult, the back of every specimen having been pecked out and the holes filled with black cement, to imitate the matrix of the genuine stone.

AMAZED the other day at the rapid growth of a fungus, a botanist calculated that it had developed 10,000,000 cells in one day, or 116 cells a second. Professor Gray, however, cites an instance where a century plant formed 2,000,000,000 cells in twenty-four hours, or 231,481 a second.

THE following public expression of gratitude was recently inserted by a Saxon farmer and his wife in the columns of a German newspaper: "Thanks, most heartfelt thanks, to all those who, upon hearing of our misfortune on Monday, Aug. 16, when a sudden flash of lightning felled our two cows and she-calf to the earth, at once rushed to our assistance. Thanks more especially to the master butchers, Messrs. Thomas, Reichel, and Fischer, who kindly slaughtered the dying animals on the spot, thus preserving us from the cruel loss of finding the ill-fated beasts unfit for human consumption. Thanks, finally, too, to all those who speedily came from far and near, and bought up the meat with such avidity that by five in the afternoon there was not a scrap left. May heaven mercifully protect them and us all against any similar terror and calamity in future, and bless them a thousandfold for the truly extraordinary sympathy they have shown us.

"Kunersdorf, Aug. 18, 1880." C. DRESSLER AND WIFE.

SOME of the features of taxation in England are peculiarly just and desirable. If anybody leaves you $500 you have to pay $10, and if he dies without a will then pay $15 to get this $500; The Government fee on a $50,000 legacy is $1,000, and $1,500 if there be no will, and if the legacy be $1,000,000, then the Queen's fee is $77,500, or, without a will, more than $100,000. If you study and become a barrister, the admission costs you $250, or as much as you are likely to earn the first year. When you graduate in medicine you pay $50. If you become a mere notary public to administer oaths it costs you $140. When you execute a lease to rent your house for anything above $150 a year, you pay about seventy cents. If you want arms and crest on your carriage, you pay $11, and if you get these arms "granted" to you, and in a measure fully recognized, you have to pay $50 license. One carriage is taxed $11 a year. Your dog costs $1.25 a year. For a license to carry a gun you pay $2.50. The tax for every male servant is $4.

Weakness and sickness changed to health and strength with Hop Bitters, always.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN THOUGHTS FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

"YES baby," I said, talking foolishly to the little one, who lay on the lounge beside me. "You must look at mother and be content. I cannot hold you, and write, and that is one result of having a scribbling mamma." The little two-month-old babe smiled serenely at this small talk and was quite satisfied, so long as I chatted to her, now and then, between sentences. Yet young as she is, I find when we have visitors who dandle and jump her in their arms she would soon learn to like that kind of gymnastics. But she thrives well with warmth and quiet and will lie for an hour at a time beside me as I write or sew. I think the habit babies form during the first weeks of their existence decide the fact as to the amount of care they will need from the arms of mother or nurse. But they like to be talked to, for ours smiles sweetly when I tell her to "be good and let me write for the RURAL," proving that we are social animals even in infancy.

We have just been been putting up our pickles and trying a recipe for making them green, that I saw in a Western paper, which is said to be destitute of poisonous properties. Five grains of saffron in a quarter of an ounce of water; four grains of indigo carmine in half an ounce of water; mix and leave standing separately 24 hours; then put together and the result is a fine green—to be mixed with the vinegar which is to cover the pickles and then be poured off and fresh cold vinegar put on. I tried a little and succeeded in securing a very nice color, but to my mind nothing is better than grape leaves placed in layers in the pickle jar, between the cucumbers. They impart a natural greenness and we know they are safe. In speaking of grape leaves, I am taking it for granted that every reader, whether owning a small plot of ground, or a large farm, indulges in the cultivation of that luscious fruit, which in its richness embodies the wealth of a Summer's sunshine. As an ornament to a table for dessert, what is more beautiful than its variety of color? and its flavor how pleasant to the taste! Better for the children than puddings or pies, and less trouble to the housewife. Plant grapes and plant the best of which the RURAL gives us good description and advice.

HOUSEKEEPING HELPS.

WHAT housekeeper—by this I don't mean women who simply live in the house and let it keep itself, but those who feel an honest pride in housekeeping—does not appreciate any little help in household affairs she may receive from those more experienced than herself. This is especially the case with young housewives. I well remember what a time I had after the war was over, and the servants gone, to find out what was put in biscuits besides soda—whether water or milk was used. Now I can make good biscuits with a pint of rich buttermilk or thick milk, a full teaspoonful of soda well crushed and sprinkled on the flour; a pinch of salt, lard the size of a turkey's egg, and flour enough for a soft dough. It is always best to test the milk before using. If it be not old, do not use quite so much soda. This is also a good recipe for egg bread, but do not make the corn dough too stiff to run.

Try dipping your butter paddle in cold water, rubbing it with salt, rinsing off before working the butter. This is much better than dipping in hot water especially in Summer.

In tying up preserves always use several folds of paper to exclude the air. A nice way is to save all the old tissue paper patterns, cut the paper the size you want, dip into the white of an egg on both sides, put three or four folds over the jar and tie down. When dry it makes them air tight.

In making quince jelly, you can use as much pippin apple as you have quince—it makes better jelly. Be sure to cut the cores out or it makes the jelly ropy. MISS POLLIE.

SAUSAGE.

NINE pounds of fresh pork, six teaspoonfuls of black pepper, eight of salt and ten of powdered sage. Mix thoroughly, cook a bit to see if properly seasoned, and pack in jars, covering with melted lard. If you prefer to keep in skins, empty them, cut them into lengths, scrape with a dull knife, put to soak in salt and water, let stand three days, then turn them inside out and soak two days longer. Again scrape, rinse well in soda—baking—and water, wipe, tie up one end, blow into it, and if whole and clean, stuff with meat.

Bologna Sausage.

Five pounds of lean beef, two pounds of lean pork, one pound of fat, salt pork, ten teaspoonfuls of powdered sage, one teaspoonful of cayenne pepper, three of black, a grated nutmeg, two teaspoonfuls of powdered cloves, and salt to taste. Grind the meat, season, stuff into beef-skins, prick each in several places, put into warm water, bring to a boil and boil slowly one hour. Take out the sausage and let dry in the sun. Rub the outside of the skins with melted butter. If you wish to keep them longer than a week, rub the outside with black pepper. You can peel off the skins before sending to the table. MARY B.

HINTS.

To remove grass stains, wash the stained places in clean, cold, soft water, without soap, before the garment is otherwise wet.

The fine siftings of coal ashes are excellent to scour knives with.

To cure an ingrowing toe nail—keep a notch cut in the middle of the nail at the top. Always cut the nail straight across, instead of in at the corners.

To darken hair—apply strong, cold black tea every morning.

To clean kid gloves—wash in deodorized benzine. Dry on the hand; rub with a clean cloth while drying.

Cookies.

Two cups of sugar; one of butter; two eggs; one-half cup of sweet milk; three teaspoonfuls of baking powder. Flavor to suit the taste; mix stiff; bake in a quick oven.

Tea Cake.

One cup of sugar and two eggs beaten well together, half a cup of butter, half a cup of sweet cream, two cups of flour, and three teaspoonfuls of baking powder. LAURA.

QUESTIONS ANSWERED.

To Clean Horns.

Could you inform me how to clean and polish horns? Boiling does not seem to give the desired effect. A SUBSCRIBER.

ANS.—Horns are whitened or bleached by rubbing with powdered pumice-stone and water, exposing to the sun while still moist, repeating the process until the desired effect is produced. They may also be whitened by immersing them for a short time in a weak solution of sulphurous acid or chloride of lime. To prepare horn for ornamental purposes, saw it into plates or sheets, remove the pith, soften by soaking and boiling in water, after which expose it to a powerful pressure. A fine polish may be given it as follows:—Scrape the horn perfectly smooth, rub with very fine sand-paper, then apply charcoal wet with water on a piece of woolen and lastly rub with rotten-stone or putty powder. Finish with a little sweet oil rubbed on with soft leather.

Cement for Iron.

What will close up a crack in a stove door?
M. A. B.

ANS.—Mix finely-pulverized iron—procured at the druggist's—with liquid water-glass to a thick paste and apply to the crack.

Turkey Red.

R. J. W.—The directions for coloring the above are so complicated and lengthy that our space will not permit of their publication. The process is one not likely to be attempted on a small scale. However, if you still wish the method please send your address and we will mail it to you.

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Miscellaneous.

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USE ONLY THIS THE FIRST AND THE BEST

News of the Week.

HOME NEWS.

MONDAY, Oct. 18, 1880.

THE elections on Tuesday, Oct. 12, in Indiana and Ohio both resulted in the election of the Republican tickets. The election in West Virginia resulted in a Democratic victory.....The Vermont State Legislature is proposing to change its election day to November and the time of the assembling of the Legislature to January..... Gen. Grant made a speech at a reception in Boston on the 13th in which he suggested the policy of more intimate relations with Mexico, saying that that country grew the tropical products needed in the United States, while the United States produce the manufactures which Mexico needs.....An estimate of the amount of gold and silver in the United States shows an increase since 1879 of $83,300,305 in gold coin and $37,748,350 in silver coin. This increase is said to be from actual coinage and the net import of United States coin. The total amount estimated as in the country on October 1 is $369,381,003 gold and $749,799,335 silver. Of these amounts there are $67,204,293 of gold in the Treasury and $302,676,709 in circulation or held by banks, and $72,454,600 silver in the Treasury and $77,344,735 in circulation. In addition the Treasury holds $68,040,540 in gold bullion and $5,557,579 in silver bullion, which the mints are turning into coin as rapily as their facilities will admit. This is a larger amount of specie than has ever before been in the country. The increase of gold bullion is from imports of foreign gold during the past year.....The celebration of the settlement of the city of Baltimore has engaged the people of that city during the past week....., The burning, on the 12th, of the Chicago Academy of Music destroyed one of the most popular and successful theaters of the West. This is the third time it has fallen a victim to the flames. It was first burned down during the great fire, but was immediately rebuilt, only sixty days being occupied in the task. In 1873 it was again burned down, and now the flames have once more paid their respects to it. ....At the school meeting, at Perry, N. Y., Oct. 14, Mrs. A. Walker and Mrs. E. Tuttle were chosen members of the Board of Education for three years.....The water company of Paterson, N. J., owing to the low stage of the Passaic, is unable to supply the citizens and manufactories with the water they need. Part of the city has been cut off, and it is contemplated to put consumers on an allowance of one or two hours per day. The rolling mill, the Bridge works, the Barbour works, Dexter, Lambert & Co.'s works and other manufacturing establishments are almost entirely idle for want of water. From 2,500 to 3,000 operatives are thrown out of employment. Especial efforts are making to keep water on hand to put out fires.

The West Shore Tunnel, at West Point, N. Y., caved in near the laboratory, Patrick Kerrigan, the foreman of the track layers, fell into the pit and it is supposed he is killed..... ....A syndicate of cattle dealers of Toronto, Ont., has contracted with the Allan and Dominion lines of steamships for space for 80,000 head of cattle for the ports of Liverpool, London, Bristol and Glasgow .....At the school election in Fayetteville, N. Y.—the home of Matilda Joslyn Gage—102 women voted. The women candidates for trustee, clerk and librarian, were elected. The battle was well fought on both sides. A daughter of Mrs. Gage is elected clerk and Mrs. Frances P. Carr trustee by 126 majority.

More Indian troubles are apprehended with the Utes in Colorado.....The Eighth Congress of the Association for Women's advancement met in Boston, on the 13th.....Frank Hammer, assistant postmaster at Allendale, Mo., was arrested on the 12th night for rifling registered letters and stealing ordinary letters and packets.....A fire at Stanton, Montcalm county, Mich., destroyed $50,000 worth of property.....Charley Deyo, of Shawangunk, N. Y., was fatally shot by a playfellow, who was carelessly handling a pistol.... ....Reports from Omaha state that a heavy storm west of that point has prostrated all the wires between Omaha and the North Platte.... ...A steam saw mill, the property of Robert Augur & Co., of North Bruce, Ont., together with a large quantity of lumber, shingles, etc., was burned on the 13th. Loss, $10,000.

A fire at Huntington, Conn., on the 13th destroyed the spoke factory, cider mill, vinegar works, barn and store house, all owned and occupied by George S. Thompson; also a dwelling house owned by Agur Johnson. Mr. Thompson's loss is about $15,000; insurance, $1,000. Mr. Judson loses $5,000, and has $1,800 insurance on his house and $400 on the furniture.....Several gentlemen connected with the Chicago, Milwaukee and St. Paul railroad company—including Messrs. Mitchell, Merrill, Carey and Walker—have organized the Central Illinois and Wisconsin railway company, with a capital of $1,000,000. It will construct a road from Rockton, on the Racine and Southwestern Division of the St. Paul road, to Kankakee, crossing the Chicago, Burlington and Quincy, Chicago and Alton, Rock Island and Pacific and other lines. Twenty miles of track will be laid this Fall.....General Grant visited Plymouth Rock, handled the sword of Miles Standish, at Plymouth, Mass, and held a reception, when the citizens and school children called upon him. Arrangements are making at Montpelier, Vt., for the reception of the General week after next.....At the fire on the 13th at Shelbyville, Ind., the total loss amounted to upward of $35,000. The principal losers were Conroy, Waller & Dapretl, furniture manufacturers, $23,000—insured; J. K. Stewart & Co., planing mill, $7,300—insurance, $1,500; Samuel Hamilton, $2,500—insurance, $1,000; W. L. Craycraft, dwelling, $1,000—insurance, $450. Several other dwellings were burned.

The water in the James River is so low that Richmond is threatened with a water famine. One of the reservoirs, which supplies the lower part of the city, is almost dry, and the other, which supplies the upper part, contains little over two feet of water. Several large industries, including a number of tobacco factories, which require a large water supply, suspended operations in consequence of the scarcity, throwing out of employment many hundreds of employes, including a large number of women and children.....Lawrence P. McCarthy, 14 years old, of Syracuse, was run over at Apulia, on the Syracuse and Binghamton Railroad, and instantly killed.....Mary Steinbaugh and William Crump, victims of the railroad disaster at Pittsburg, died at the Western Pennsylvania Hospital. These make 30 deaths up to the present time.

The forest fires south of South Amboy, N. J., have spread into Monmouth County, and are burning valuable timber lands. Many acres have been burned about Sayreville, and all hands have been called out to fight the flames, which are said to be under control.....As the result of arrangements made by Col. Thompson, Supt. of the Railway Mail Service, who has just returned from an official visit to the South-west, orders were issued at the Post Office Department to place railway mail service on the newly completed Louisiana Western Railroad, from Vermilionville, La., to Orange, Texas. This service, which is to begin on the 1st of November, will make a continuous line of railroad mail communication from New York City to Houston, Texas, and shorten the mail time between New York and Galveston and other points in southern Texas materially.

No rain of any great amount has fallen throughout the Delaware Valley for nearly three months, in consequence of which the Lehigh, Delaware, Neversink, and Lackawaxen Rivers are unusually low. Perhaps the heaviest losers by the long continued drought are those who have mills and manufactories on the shores of creeks emptying into the Delaware, between Hancock, N. Y., and Easton. Many flour and saw mills have done nothing at all for six weeks; a few mills and factories on the larger streams have been able to run part of the time. The effects of the drought are beginning to be severely felt in the small country villages where there are no water companies, the inhabitants relying wholly upon cisterns and wells for their water. In many places these wells and cisterns have given out, and the people are obliged to go long distances to get their water from the mountain springs. Many wells that were never known to give out are thoroughly dry. The farmers in the remote districts are put to great inconvenience on account of the scarcity of water, and some are obliged to drive their cattle a mile or more for drink.

The fraudulent woman's deposit Bank in Boston has been closed by the Sheriff.....A terrific explosion occurred at the Garden in the 14th, City Distillery Company's works at Clybourne-avenue and Morgan street Chicago, killing seven persons and severely injuring four others. An experiment was being tried with a new steaming process. The corn was put whole into a mammoth kettle, 16 feet high, and steamed. Then a strong pressure of steam was applied to force it through pipes into the mash-tub. The pipes became choked up, stopping the passage of the swollen corn and instantly increasing the pressure on the kettle. A terrific explosion followed, blowing the roof of the building clear off, and killing outright, or burying beneath the fallen timbers, scalding corn, and debris, ten men and one woman who happened to be in that part of the distillery .....Navigation is closed on the Delaware and Hudson canal on account of the drought.

A United States Judge has decided that Tennesee bondholders have no lien on the railroads of the State.....The Illinois Supreme Court has decided that the stockholders of the collapsed Chicago savings banks are liable individually and collectively.....Miss Annie Chapin, daughter of a prominent citizen of Warsaw, Ind., was arrested for forgery. Her lover visited her in jail, shot her dead, and then killed himself.....An injunction has been issued by the United States Circuit Court, at Louisville, prohibiting the Post-Office Department from interfering with mails for lottery dealers..... The contract for the extension of the Boston, Hoosac Tunnel & Western Railway has been let.... ...Ex-Sheriff Gouthreaux, of New Orleans, is alleged to be a defaulter to the amount of $150,000.

A severe storm of snow and wind occurred in the northwest on the 16th. At Milwaukee the wind was from the south, blowing between 60 and 70 miles an hour. A large fleet of vessels sought that harbor for safety and rode out the gale in the bay. Despatches from La Crosse say that the storm all along the Southern Minnesota railway was the severest known in years. Passenger and freight trains were blockaded in the snowdrifts from 10 to 12 feet deep, and teams with provisions have been despatched to their relief from several points. Reports of cattle, horses, etc., having perished are constantly received. It is the severest storm ever known in Southern Minnesota and Eastern Dakota.

THE WORLD'S FAIR.

The committee appointed to decide upon a site for the World's Fair, at New York, in 1883 are making a careful examination of the sites proposed. On the 16th the committee visited Manhattan square and Morningside and Riverside parks and examined their fitness for the purpose. The general belief is that Port Morris will be selected as affording the best facilities, both by water by land for visitors and the reception of goods.

[Wausau Central Wisconsin.]

Being asked concerning the Oil, Mr. Aug. Kickbusch informed the questioner that St. Jacobs Oil had proved an excellent and most useful remedy in every family that had used it. A large majority of cases pronounced incurable have been entirely cured.

FOREIGN.

The war between Chili on one side and Peru and Bolivia on the other is still raging with the ferocity characteristic of the Spanish-American race. There was lately some hope that the matter would be settled by the arbitration of the United States, and Minister Christiancy went from Lima, the capital of Peru, to Santiago, the capital of Chili, to urge that mode of settlement, but, according to the latest reports, he has returned without having accomplished his object. The Chilians have been devastating all the seaboard towns and country in the north of Peru, after having done the same in the south, and now they are threatening to destroy Lima and the rich surrounding country. They are rapidly collecting 30,000 picked troops for the purpose, and expect to capture the city in a few weeks. Peru seems resolved to fight to the last gasp rather than surrender any of her territory. The niter beds about which she began the war, are all now in the hands of her enemy, who is deriving a good income from the sale of the product. Bolivia has withdrawn most of her forces and is taking little part in the present phase of the struggle; all parties are becoming utterly exhausted, and the contest is fast coming to the same issue as the battle of the Kilkenny cats. Europe would have intervened already were it not that intervention is left to this country, through respect for the Monroe Doctrine.

The European outlook is somewhat less belligerent than at this time last week. Just as the detachment of the combined fleet was about to move against Turkey, the Sultan agreed to surrender Dulcigno with the surrounding territory, and thus averted immediate hostilities. The wretched little place has a miserable harbor, about 3,000 bigoted Mussulman inhabitants, and isn't worth half the money spent in securing it. Most likely the Mahommedans will quit it sooner than submit to Christian rule with its attendant cruelty when practiced by the fierce Montenegrins. The Turks and the latter are to hold a convention to-morrow to decide when the place will be given up. Already Greece says that unless the territory promised her is ceded within a specified time, she will occupy it. That would mean war with Turkey which wouldn't "leave a grease spot" of Greece, unless other Powers intervened, and then the war would spread—the Lord knows how widely. The "Eastern Question" will take a long time to settle.

Agitation, etc., continue in Ireland. Arrangements are being made by the Government to prosecute the principal leaders of the Land League and to throw a large increase of troops into the island. Parnell is defiant, and urges organization throughout every parish in the country. In France the decrees against the religious orders are being vigorously enforced, and a large number of magistrates have resigned rather than have any hand in the measure. The present House of Representatives will be dissolved next year, as its term then expires, and the Republicans are pressing anti-clerical action in order that the agitation attending it may by that time have subsided. Spain is agitating in a mild way for the restoration to her of Gibraltar—might as well ask for the moon. The completion of the great cathedral at Cologne has been celebrated with vast rejoicings, the Emperor William and his court attending, together with most of the German princes, princlings, princesses and prominent men.

[Mt. Clemens, (Mich.) True Record.]

W. T. Lee, Esq., of this paper says: Being convinced of the efficacy of St. Jacobs Oil in curing rheumatism, I have no hesitancy in recommending it.

AGRICULTURAL NEWS.

There have been already seven or eight million bags purchased in Calcutta for next year's California and Oregon crop, and the market there is advancing. With 6,000,000, which will be the probable make of the Jute Company, there is already a supply of 13,000,000 to 14,000,000 for the crop of 1881. It would seem that the business of jute raising would be a good one for our farmers to embark in: and so it would, did they understand it properly and could they emulate the patience of the Hindoo and raise it as cheaply.....The hop crop this year is about twenty-five per cent larger than last year.. ....A very heavy frost the first of the season, fell about Weldon, N. C. on the morning of the 14th.....Cotton-seed oil is sent from Arkansas to Europe, and is sent back to America as pure olive oil. Arkansas people think, however, that it can be refined there..... The production of silk goods by the New Jersey factories reached $15,000,000 in amount last year..... Seventeen Normandy stallions were shipped from this city to Wilmington, Ill., the 74, where, after recovering from the effects of their ocean passage from France, they will be sold. They are of different colors, although most of their coats were dapple gray, with the spots peculiar to these horses. In weight they range from 1,600 to 1,800 pounds, but were expected to gain about 200 pounds each in a few weeks. The importer expects that most of the stallions will go to California. They are valued at from $1,600 to $2,000 each. As the seventeen large stallions were lead through the streets single file to the freight depot of the New York Central and Hudson River Railroad they attracted considerable attention..... Grain exports from New Orleans during September were 1,430,421 bushels, against 727,679 in the corresponding month of 1879.....An officer at a fair, at Ridgeville, Ind., caught a man climbing over a fence and deliberately shot and killed him with a pistol.... ...W. H. Blackwood, of Haywards, Alameda county, California, realizes $12,000 from twelve acres of apricots.....The cost of cultivating an acre of medium white beans in Canada is set down at $14; the yield per acre at twenty to twenty-five bushels, and the average price at $1,25. Those shipped are mostly sent to the United States.....The beet crop of France is excellent, especially in quality; the factories are already at work, accepting orders, at good prices, for the delivery of new sugar..... Rugby, the town now being founded by Thomas Hughes and others in East Tennessee, is in some respects a community. The store will be on the co-operative plan, the purchasers receiving a share of the profits. A large part of the land will remain undivided, and be devoted to pleasure grounds and stock raising—the latter for the benefit of all settlers. The managers will provide plans for buildings free, but will not impose any restrictions as to the kind of houses to be erected. No liquor will be sold in Rugby, except by an apothecary for medicinal purposes.....The estimated cotton crop is 5,700,000 bales. Last Spring it was 7,000,000. Between Spring and Autumn the difference is almost one-fifth. Fall reports are most to be trusted.....The result of the distribution of jute seed by the State Commissioners of Louisiana, last June, can now be estimated. The reports from all sections of that State where the seed was planted are very favorable. The plant grows to a hight of 15 feet on alluvial soil and of 10 to 12 feet in the pine flats and hills. It is very free from the attacks of insects so injurious to other Southern crops, while the cost of production is small. Specimens of the fiber are now to seen at the New Orleans Cotton Exchange.

Dr. Pierce's Golden Medical Discovery cures every kind of humor, from the worst scrofula to the common pimple or eruption.

Four to six bottles cure salt-rheum or tetter.

One to five bottles cure the worst kind of pimples on the face.

Two to four bottles clear the system of boils, carbuncles, and sores.

Four to six bottles cure the worst kind of erysipelas.

Three to six bottles cure blotches among the hair.

Six to ten bottles cure running at the ears.

Five to eight bottles cure corrupt or running ulcers.

Eight to twelve bottles cure the worst scrufula.

Sold by druggists, and in half-dozen and dozen lots at a great discount.

Visit to Beatty's Factory, Washington, N. J.

The Hon. Daniel F. Beatty, Mayor of Washington, N. J., the piano and organ man, extends a cordial invitation to all to visit his manufactory at Washington, N. J. Those of our readers who desire to purchase either a piano or organ, can then have an opportunity to select the instrument they want personally. Besides, it is quite a treat to go through an establishment as large as that of Mayor Beatty's. He has made a wonderful success of his business, and it is said to be the largest of its kind in the world. Those of our readers who are unable to visit him should send for his Holiday Newspapers, beautifully illustrated, sent free of postage. Read Mr. Beatty's advertisement to be found in another column.

"It is Curing Everybody,"

writes a druggist." Kidney-Wort is the most popular medicine we sell." It should be by right, for no other medicine has such specific action on the liver, bowels and kidneys. Do not fail to try it. See adv.

We are strongly disposed to regard that person as the best physician who does most to alleviate human suffering. Judged from this standard, MRS. LYDIA E. PINKHAM, 233 Western Avenue, Lynn, Mass., is entitled to the front rank, for her VEGETABLE COMPOUND is daily working wonderful cures in female diseases. Send for circular to the above address.

Tropic Fruit Laxative, an agreeable substitute for pills and nauseous purgatives. One lozenge is the dose. Physicians prescribe it. Sold by druggists.

Hop Bitters strengthens, builds up and cures continually, from the first dose.

Frank Leslie, Esq., of the "Illustrated Weekly," says: "For some time past I have been using your COCOAINE, and think it far preferable to anything I have over used for the hair."

The Markets.

SPECIALS FROM THE CHIEF CENTERS.

Until Saturday, Oct. 16.

Boston.—BUTTER—The bulk of the receipts consist of long dairies and medium grades that are not wanted by the trade and are held at too high figures for export. Northern—choice creamery, ₩ lb., 30@32c.; choice New York dairy, 27@28c.; choice Vermont, 28@30c.; long dairies, 22@24c; common, 17@19c. Western—choice creameries, ₩ lb., 29@32c.; fair to good, 26@28c.; dairy-packed, 20@25c.; choice ladle-packed, 19@22c.; common, 16@18c. CHEESE—Northern factory, fine, ₩ lb, 13@13½c.; Western factory, fine, 12½@13c.; fair to good, 11@12c.; common, 8@10c. POTATOES—Northern whites sell at 45@48c. and Rose at 48@53c., while Eastern Rose sell at 50@55c., the latter price for Houltons. Sweet potatoes are in fair demand, and sell at $1.75 per bbl. for Norfolks. ONIONS—in bulk have sold from the cars at $1@1.05 per bush., and in barrels red ones have sold at $3 per bbl., Western yellow at $3.25, and nattves at $3 50. APPLES—are plenty and there is a fair shipping demand at $1@1.25 ₩ bbl for choice fruit. Fancy eating apples sell at $1.50@1.75, and common at 50@75c.; ₩ bbl. CRANBERRIES—are dull at $5 for Cape, and $3@4 for country. QUINCES sell at $3@4 ₩ bbl., and are in good supply. PEARS rauge in price all the way from $1.50@3.50 ₩ bush. CHEST-

NUTS are selling at $3 ₱ bush. SEEDS—The market both for Calcutta linseed and American flaxseed is nominal; the former held at $1.35, and the latter at $1.35 ₱ bush. Grass seeds are in diminished demand and prices are less strong, with a decline in timothy. Timothy, $2.75@2.80; Hungarian, $1.25; red top, sack, $2.75; Kentucky blue grass, $1.25; red clover, 8½@9½c.; white clover, 25c.; millet, $1.25 orchard grass, $2.25.

Chicago.—WHEAT active; No. 2 Red Winter, 99c@$1.00⅝. No. 2 Chicago Spring, $1.00⅝@$1.00⅞; cash; $1 02 1-8, November; $1.03 5-8, December; No. 3 Chicago Spring, 95c. CORN in fair demand, at 39⅜c@39 7-8c, cash; 40⅜c, November; 41⅛c December; 45⅛@45 5-8c, May. OATS dull at 32½c, bid, cash; 33c, October; 30¼c, bid, November; 30 7-8, December. PORK easier at $18, cash; $12.-47½@$12.50, November; $12 92½, January. LARD steady, with a fair demand at $8.30, cash; $8.15, November; $8.05, January. BUTTER—creamery, 28@31c ₱ lb; good to choice dairy, 23@27c; ladle packed, 17@20; packing stock, 14@16c; grease, 8@10c. CHEESE—We quote:—Full cream, September, 13@13¼c ₱ lb; full cream, August, 12@12½c; part skim, September flat, 12½c; part skim, July and August, 10@11c; full skim, 8@10c; low grades, 6@8c. SEEDS—Timothy was more active and steady at $2.15@$2.33, prime being about $2.30. FLAXSEED advanced about 1c per bu, selling at $1.26⅝ for poor to $1.27@$1.28, the bulk of the business being at the outside. November and January sold at $1.28. The demand for flaxseed is said to be chiefly from parties who have contracts to fill this month. The shipping movement is also large, shippers being anxious to send the seed forward, as freights are advancing and the season of navigation is drawing to a close. Clover seed was quiet at $4.25 @$4 60. WOOL—Good to choice medium tub, 45@48c ₱ lb; coarse or dirty tub, 39@41c; fine unwashed fleece, 20@25c; coarse unwashed fleece, 21@24c; medium washed fleece, 38@41c; fine and coarse washed fleece, 36@38c. HOGS—Market good; strong movement; all heavy firmer; common to good mixed packing, $4.50@$4.70; choice heavy, $4.80@$5.10; light slow and easy at $4.60@$4 80. CATTLE—Market steady and quiet; export steers, $5.20@$5 85; good to choice shipping, $4.60@$4 90; common to medium, $1@$4 35; butchers' active but steady, at $2 20@$3 30; bulls, $2@$2 60; stockers, $2 40@$3.30; Western Texans, $2 85@$3.10; natives, $3.25@$3 a0; through Texans, $2.50@$2.80. SHEEP—Feeders, $3.90; common to choice mlich, $4.25.

Cincinnati.—WHEAT strong; No. 2 Amber, $1.01@1.02; No. 2 red Winter, $1.03. CORN firm; No. 2 mixed, 42@42½c. OATS in good demand; No. 2 mixed, 33½@34c. RYE dull; No. 2, 89½@90c. BARLEY steady; No. 2 Fall, 95c. PORK dull and nominal; jobbing at $17. LARD in fair demand at 8¾c. BULK MEATS dull and lower; Shoulders, 5c.; clear rib, 7¾c. BACON easier; shoulders, 5½c.; clear rib, 8¼c.; clear sides, 9½c. BUTTER—For creamery there is a steady but moderate demand. Fancy creamery sells at 30@31c.; and prime at 28 @29c.; choice dairy at 24@25c.; choice Western Reserve at 22@24c.; prime to choice Central Ohio at 18@20c., and common at 14@16c. ₱ lb. CHEESE—There continues to be a fair consumptive demand for choice mild factory, and it is firm at 13@13½c, ₱ lb, but some prime stock which is a little sharp sells at ¼@½c. less. SEED—The consumptive demand for Timothy is light, but the jobbing prices are steady at $2 55@2.60 ₱ bushel for prime to choice from store, and dealers buy at $2 40 for car lots on arrival. Clover is quiet; dealers buy round lots at 7½c. and small sales are made at 8@8¼c. ₱ lb from store. Dealers buy flaxseed at $1.15 per bushel.

St. Louis.—WHEAT No. 2 Red Fall, $1.02@1.02⅜ cash; $1.02@1.05¼. November; $1.05¼@1.07¼, December; $1.06⅝@$1.07. January; $1.02 bid all the year; No 3 do. 95c.@95¾c; No. 4 do. 90½c@ 91c. CORN lower at 39½c@39¾c., cash; 39⅝c@ 39¾c. November; 39¾c.@39¾c., December; 39¾c. all the year; 44¾c.@45c., May. OATS lower, at 28¾c.@29c. cash; 29½c., November. RYE dull at 82½c. BARLEY 70@85c; PORK jobbing at $15 50. Lard nominal at $8.15. Bulk meats dull; shoulders, $1.95, Clear Rib $7.80; Clear Sides, $8.10. Bacon lower; Shoulders, 5¼c.@5¾c; Clear Rib, $8 50@8. 55. Clear Sides, $8.75. CASTOR BEANS prime at $1.33. BUTTER prices continue weak and drooping, under a very light demand, liberal supply, and discouraging tone of advices from other leading markets. Choice dairy best sustained. We quote; Creamery mainly at 30, selections of choice dairy at 25@26c; medium 16@18c, low 11@14c; near-by country make 10@12c. for poor to 14@16c for good. WOOL—Tub washed—Choice 45c, lamb and fair do 40@44c. dingy and low 38@37c; Unwashed—medium 27@28c; course do 22@24c, merino 16@20c. lamb 23@26c. Kansas 20@25c, well-grown fall clip Texas 22@23c. Burry, black, cotted, etc., 5@15c. less—Southern burry 12½@13c. Sales: Small lots tub at 45c. 3 sks do lamb at 42c. 9 sks. choice Missouri fleece washed at 37c. 12 sks choice Missouri mixed combing unwashed at 29c. HOGS dull; Yorkers and Baltimores, $1.60@4,75; mixed packing, $4.50@4.80; butchers' to fancy, $4 80@5; SEEDS Quiet. Timothy at $2.20 for fair to $2 30 for prime. Clover at $4.70@4.75 nominally; red top at 60c; other seed neglected. Sales; 8 sks timothy at $2.25 at $2.30, 57 redtop at 60c; flaxseed higher and firm, at $1.20@1.21 on basis of pure.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Oct. 16, 1880.

BEANS AND PEAS.—Marrow beans steady with a moderate export call. Medium beans quiet; few prime old left. New sell close to arrival as follows: Marrow $1.75; medium, $1.55@1.55; pea, $1.70@1.75; red kidney $1.60. The crop is said to be a full average one.

Old beans, marrow, prime, $1 60@1.62½; other, $1.50 @1.55; mediums, prime, $1.45@1.47½; other $1.35@1.40; pea $1.55@1.60; white kidney, $1.65@1.80; red kidney $1 35@1.45. Green peas have more inquiry; only prime quality asked for; quoted $1.50@1.55; Southern B. E. peas held at $1.75 per 2 bu. bag.

BUTTER.—Trade lacks Fall activity and aside from the finest table marks of creamery and extra half tubs there is quite a yielding feeling in prices. State dairies, the feature of the season, are decidedly slow. When they are limited as to price by country owners negotiation is more or less hampered when a sudden bid is made. It is thought that farmers will carry a large portion of the crop this season as there is no speculative "craze" as there was last season. Shippers are taking good lots; they would operate more largely if sellers could spare what they would pick out at their price, say 25c, for prime choice lines. For Western late made they have filled up pretty well at 19@20c. Western has a good, steady local demand at our figures.

Creamery, fine State, 30@31c.; Western, 29@30c.; good to prime, 27@29c.; poor to fair, 25@26c.; sweet cream, 25@28c.; State entire dairies, choice, 25@26c.; other, 23@24c.; firkins, fair to choice, 22@25c.; State pails and half tubs, fine fresh, 27@28c.; good to prime, 25@26c. fair to poor, 24@25c.; poor, 21@22c.; Welsh tubs, fine, 26@27c.; poor to good, 20@25c.; Western imitation creamery, 20@24c.; dairy, fresh, 22@23c.; poor to good, 16@20c.; factory, June, 18@19c.; current make, 19@20c.; poor to good, 15@18c.

Receipts for week, 25,400 pkgs.; exports do., 13.100 pkgs.

CHEESE.—Receipts have been small while the demand has been very good for choice factories at firmer prices, closing at 13@13¼c., and more generally the outside price made.

State factory, fancy, at 13@13¼c.; do. good and prime, 12¼@12¾c.; do. fair to good, at 11¾@12¼c.; do. h'f skimmed, 10@11c.; Wisconsin factory, fine, 12¼@ 12¾c.; do. good to prime, 12@12¼c.; do. fair to good, 10¾@12c.; Ohio factory, fine, 12¼@12¾c.; do. good to prime, 11¾@12c.; do. flat, fair to good, 10¾@11¼c.; do. poor to fair 7@10c.

Receipts for week, 37,160 boxes.
Exports for the week, 38,600 boxes.
Liverpool cable, 66s. 6d.
Steam to Gt. Britain, 35@45s.

COTTON.—There has been less life to the market, but prices are firm. Latest prices are for

October at 10.74@10.76c.; November at 10.75@ 10.76c.; December at 10.81@10.82c.; January at 10.96@ 10.97c.; February at 11.12@11.13c.; March at 11.28@ 11.29c.; April, 11.43@11.45c.; May, 11.58@11.60c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8 3-16	8 3-16	8 3-16
Strict ordinary	8 13-16	8 15-16	8 15-16
Good ordinary	9 13-16	10 15-16	10 15-16
Strict good do	10 13-16	10 5-16	9 15-16
Low middling	10 11-16	10 13-16	10 13-16
Strict low middling	10 15-16	11 1-16	11 1-16
Middling	11 3-16	11 5-16	11 5-16
Good middling	11 9-16	11 11-16	11 11-16
Strict good middling	11 13-16	11 15-16	11 15-16
Middling Fair	12 5-16	12 7 16	12 7-16
Fair	12 15-16	13 1-16	13 1-16

STAINED.

Good ordinary	7⅛	Low middling	9¾
Strict good ordinary	8¾	Middling	10⅜

Receipts for week, 31,965 bales. Exports do., 10,980 bales.

DRIED FRUITS.—Apples have a moderate inquiry and prices generally steady. Peaches are quiet and unchanged. Small fruits are held firm.

Apples—Old State at 5@6c., new Tennessee at 3½@4c.; new Virginia at 4@5c.; fancy sliced North Carolina at 6@7c.; evaporated, ring cut, at 8½@9c. Old peeled peaches at 8@14c. Blackberries at 7½@8c.; Raspberries at 25@26c. Pitted cherries at 19@ 20c. Whortleberries at 11c. New Georgia peeled peaches at 16@17c.; new North Carolina peeled peaches at 18@20c.; new unpeeled peaches, quarters at 7@7½c.; new unpeeled peaches, halves at 7½@8c.

Receipts for week, all kinds, 4 607 pkgs.
Exports for week, 720 bbls. of dried apples.

EGGS.—Receipts for the week, 7 200 pkgs.; do last week, 8,200 do. With continued light supplies the market is firm and high for prime marks. It is thought that stored or ice house eggs have hurt the demand, still they will be the only lots that can be offered to cheap buyers until limed are more of a feature.

State limed 18@18½c.; Western 17½@18c; near points fresh 24@25c.; State and Pa. 22½@23; Western and Canadian, fresh, 22½@23c.; seconds, 20@21c.

FEED.—Sales are at $17.50@18.50 for 40 to 60 lbs., $18.50@19.50 for 80 lbs.; $19@21 for 100 lbs.

FLOUR.—Demand has been brisk from exporters and home trade buyers, and prices have tended higher.

Latest prices are: $3.50@4.10, for very inferior to very fancy superfine State and Western; $4.20@4 40 for poor to choice extra State and Western, odd lots and lines; $4 40@4 60 for choice to fancy do.; very inferior to good white wheat, trade and family extras, $4.90 @5.75; good to choice do. at $5.75@6.35; (very choice to fancy do. at $6.50@6.75;) red and amber winter wheat inferior to choice trade and family, at $4.70@6.25; round hoop Ohio, $4.65@5.15; and trade and family brands of do, at $5.25@6 35; St. Louis at $4 90@5.85 for inferior to good extra; $5 85@6.35 for good to choice (and $6.35@6.75 for choice to very fancy brands); Minnesota clear, inferior to fancy at $4 20@6.50; Minnesota "straight," poor to fancy, at $5 85@7.25, and patent inferior to very fancy at $5.75 @8.75; unsound stock at from $2 50@5.00; city mill extra at $5.50@5.85 for ordinary to fancy for the West Indies; do. for England, $4 20@4.60 for poor to choice spring wheat, and $4.85@5.40 for winter wheat product; do. trade and family extras, $5.60@7.00; do. for South America, $5.70@6.00.; No. 2 at $2.70@3 65 for very poor to very fancy.

Receipts for week, flour, bbls. 108,675; corn meal, do. 3,050; wheat, bush. 1,165,100; corn, do. 1,129,150; oats do. 86,100; rye, do. 83,800; malt, do. 45,200; barley, do. 206,800; beans, do., 7,230; rice, pkgs. 1,750.

Exports for the week, flour, bbls., 74,800; corn meal, do. 2,550; wheat, bush. 2,042,700; corn, do, 1,475,000; oats, do. 7,124; peas, do. 5,300; beans, do. 406; rice, 1,200

CORN MEAL.—Sales at $3.60@3 for Western, and $3.35@3.40 for Brandywine.

FRESH FRUITS.—There is a degree of better feeling in apples, but trade is not working up to the supply. Quality is now very fine and many good holding lots are in. There is no promise of much advance. Newtown pippins are selling near-by orchards at $1.25@1.50 per bbl., buyers supplying cooperage.

Western mixed, $1.25@1.87; Baldwins $1.25@1.50 in shipping order. Greenings, $1@1.12. Kings, Fall pippins and 20-oz., $1.25@1.50; open heads, 50@75c.; exports are large and are being widely distributed abroad. Cranberries dull and weak; fancy Cape Cod, $5.50@6; poor to good, $3@4.50; boxes, $1.75@1 87; N. J., $1@1.50. Quinces are cheap; best, $5 per bbl.; others, $2.50@4. Pears are scarce; California and Mass. boxes firm at $4@6; Duchess, Beurre Bosc and B. Clarigeau, Duchess in bbls., $5@6; Lawrence, $4@ 5; Beurre d'Anjou, $5@6; Vicars, $5@5. Florida lemons, $3@3.50 per box. La. oranges, $4@5 per bbl. Chestnuts plenty at $2.25@3 per bush. of 60 lbs. Hickory nuts, new, $2@2.25 per bush. of 50 lbs.; do not mix old with new. Peanuts quiet, hand-picked Va., $5@5½c.; extra prime, 4@4½c.; good to prime, 3½@4c.; shelled, 5¼@5½c. Quality generally superior to former seasons, Va. leading. Small uniform bags are most desirable; the Virginia standard is 66 inches and is best liked by the trade here and West.

GRAIN.—Wheat has been active and advancing; the exports for the week reach 2,000,000 bush.

The latest prices are for No. 1 white at $1.17@1.18¾; do. for October, at $1.17@1.17¾; do. for November at $1.16¾@1.17¼; do. December at $1.18@1.18¾; No. 2 white at $1.15@1.16¼; ungraded white at $1.12¼@1.20; mixed winter at $1.16 No. 1 red at $1.20@1 22; No. 2 red at $1.13@1.20; do. October, at $1.17¾@1.19¼; do. November, at $1.17¾@1.19½; December, at $1.18¾@ 1.20½; do. January, at $1.19@1.21; do. steamer grade at $1.15@1.15¾, No. 3 red at $1.15@1.17; do. steamer grade at $1.09; ungraded red at $1.05@1.22; No. 2 Chicago spring at $1.15¾; ungraded at 95c. Rye at 1.02@ 1 05. Corn is higher and strong and active; latest sales are of New York No. 2, regular inspection, at 55@55¾c.; do., October, at 55¾@55¾c.; do., November, at 55@55¾c.; do., December at 55¾@55¾; ungraded mixed Western at 55@55¾c.; No. 2 white, in store, at 57c. Oats are active and at better prices; latest sales are of No. 1 white at 45@45½c.; New York No. 2 white at 41@41½c.; No. 3 white 39@39½c.; New York No. 1 at 40c.; New York No. 2 at 39¾@40c.; do., October, at 39¼@39¾c.; do. November at 39¾@40c.; do., December at 40½c. bid; No. 3 at 38¾@39½c.; ungraded white Western at 40@45c.; ungraded mixed Western at 38¾@40c.; mixed State at 41c.

HAY AND STRAW.—Demand is active and price firm; receipts are very moderate.

Shipping hay is at 85c.; medium to prime do., 95c.@$1.15; salt hay at 60@65c.; clover do. at 65@75c. Straw at 95c.@$1.05 for long rye; 70@75c. for short rye; and 65@75c. for oat.

Exports for the week, 1,250 bales.

HOPS.—There is more doing in small lots on wants of brewers, and prices generally steady. Quotations are for

	Cents per ₱.
New Yorks, crop 1880, prime and choice	23 @25
Do. medium	20 @23
New Yorks, crop 1880, low to fair	18 @20
Eastern, crop 1880	18 @22
Wisconsin, crop 1880	18 @22
Yearlings, crop 1879, choice	17 @25
Olds, all growths	4 @14
Pacific coast, new	none
Pacific coast olds (nominal)	nominal

HONEY.—The demand is mainly for a few single boxes for store decoration. A wholesale owner would meet concessions.

White clover comb, single pkgs, 17@18c.; larger pkgs 15@16c.; buckwheat 12@13c.; extracted, dark to white, 5@12c.

OIL CAKE.—Western is active and quoted $32 per ton.

POULTRY AND GAME.—Dressed poultry has a fair demand for prime. Prices good as ice expenses are now diminished. Parcels from remote points should still be ice-packed.

Turkeys, State and Western, choice, 13@13½c., ₱ ₱.; fair to good, 12@12½c; Phila., dry-picked, 14@15c. Chickens, do., 15@17c.; Bucks Co. do. 18@19c.; State scalded, 13@14c.; Western, scalded, 12@13c. Fowls, Phila., dry-picked, 14c.; N. J., d.-p., 13@14c.; scalded 13@14c.; State, scalded, 12@13c; Western, scalded, 12 @13c.; poor to fair, 10@11c. Ducks, Spring 16@18c.; mixed, 10@14c. Geese, Phila. 11@13c.; fair to good, 8@10c. Squabs, white, ₱ doz., $3.50; dark, $1.25@1.50.

Live poultry has sold well under free receipts. Ducks and turkeys run poor.

Chickens, New Jersey, per ₱ 12@12½c.; State, and Penn. 11@12c; Western, 10@11c.; Southern, 10@11c. Fowls, New Jersey, 12c.; State and Penn. 11@12c. Western, 11@11½c.; Southern, 10@11c. Roosters, 5@6c, Turkeys, N. J. 10@12c.; Western 9@10c. Ducks, choice, ₱ pair 75@87c.; other, 45@55c. Geese, choice, $1.75; other, $1@1.50.

When game has the good fortune to arrive dry sales are quick; wet or soft birds drag. Venison not plenty and not much wanted: a few State deer till special wants.

Mallard ducks, 50@60c.; teal, 30@40c.; common 20@ 30c.; partridge, prime, 90c.@$1 00; eastern, 50@60c.; soft, 20@30c.; grouse, prime, 30c.@$1; soft, 25@30c.; woodcock, State, 65@75c.; Western, 40@60c.; Eng. snipe, ₱ doz., $1.50@1.75c; Sand snipe, 40@50c, plover, $1.50@1.75; wild pigeons, still-fed, $.50@1.75c.; flight $1@1.25; Venison saddle, 15@18c.; whole deer, 11@12c.

PROVISIONS.—Hog products have been active and advancing.

Mess pork at $16, for spot lots. Bacon at 8-30c. for long clear, and 8¾c. for short clear. Lard—Western steam at 8.77½@8.80 for spot lots; 8.75@8.77½c. for Oct; 8.70 for Nov., and 8 55c. for Dec. and Jan. Stearine at 9@9½c. Tallow at 6¼@6 5-16c. Beef hams at $15.50. Beef—India mess $19@20 for city; $9.50@10 for extra mess and $9 00 for plain mess $11@11.75. for packet, and $13@13.25 for family mess.

Receipts for week, beef, 1,035 pkgs.; pork, 5,200 bbls.; cut meats, 26,450 pkgs.; lard, 25,300 pkgs.

Exports for week, beef, 2,500 bbls.; pork, 4,650 bbls.; cutmeats, 6,467,653 lbs.; lard, 4,101,700 lbs.

SEED.—Clover is steady; quoted at 8¼@9c. Timothy is firm at $2.70@2.80.

Receipts for week, 1,806 bushels.
Exports for week, 800 bags.

TOBACCO.—There has been a liberal demand for export and the market closed firm at the prices quoted.

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4 @ 4¼	4¼@ 5
Good lugs	4¾@ 5	5¼@ 5¾
Low leaf	5½@ 6	6 @ 6½
Medium leaf	6¼@ 7½	7¼@ 8¾
Good leaf	8 @ 8¾	9 @10¼
Fine leaf	9 @11	11 @12
Selections	12 @15	13 @15

SEEDLEAF.	Crop 1878.	Crop 1879.
New England Havana seed	— @—	18 @25
Wrappers, common	13 @15	— @—
Medium	16 @18	— @—
Fine	20 @27½	25 @35
Selections	30 @40	37½@45
Seconds	— @—	10½@13
Fillers	— @—	5½@ 7
Penn. assorted, low	12 @13	10 @12
Assorted, fair	14 @15	13 @16
Assorted, fine	16 @18	18 @22
Wrappers	18 @35	— @—
Fillers	10 @12	6 @ 7
N. Y. assorted, com. to medium	10 @11	— @—
Ohio assorted	8½@13½	7½@10
Wrappers	15 @25	15 @25
Wisconsin assorted	8 @12	7 @10
Havana seed	15 @20	16 @18
Wrappers	12 @18	— @—

VEGETABLES.—Exports for week, 7,230 bbls. potatoes. The market is not so stiff as it was last week; most buyers can suit themselves at $1.50 extreme. E Rose, Nova Scotia $1.75. State, $1.25@1.50; snowflake, $1.37@1.50; peerless $1@1.12. Sweet potatoes firmer with reduced receipts. Choice $3.25@3.50; Va. and other $1.40@1.75. Onions have advanced. Prime garde stuff in good demand.

Green corn, ₱ 100, 50@75c.; tomatoes, ₱ bush., 30c.; egg plants, per bbl., $3@4; Lima beans bag, 2.50@$3.00; shelled, per bush. $4.50@5.00; tu white and Russia ₱ bbl, ₱ @75c.; beets, $1@2.25; nose peppers, ₱ bag, $3; cabbage, flat Dutch, ₱ 100, $2@$3; do. red, $3@4; squash, Hubbard 75c.@$1; marrow 50@62c.; onions, white, ₱ bbl, $3.50@4 yellow, $2.75@3; red, $2.75; chester, $2.15@2.75; pumpkins, ₱ 100 $2@4; okra, ₱ 100 25c.; cauliflower, ₱ bbl. 75c.@ $2; celery, per dozen, 75c.@$1.00.

WOOL.—There has been a very fair trade this week, manufacturers showing more interest and prices have ruled steady and unchanged.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Oct. 16, 1880.

BEEVES.—Receipts for the week 13,324 head; do. last week, 12,115 do. The closing sales show a decline of ¼c. compared with Wednesday—the test day of the market. Heavy receipts are looked for next week and buyers whose wants were not urgent with the present warm portions of the week bought only sparingly. There was a large number of natives on sale and these showed the most decline. Texas and Colorados quoted 7@8¼c. to dress 55 lbs.; some Indian native stock 7¼c.; Va. dry cows and heifers 6¼c.; poor to fair native steers 7½@9c. to dress 55@56 lbs.; good to choice 9¼@10¼c, to dress 56 @57 lbs. a few fancy 10¾@11¼c.

COWS AND CALVES.—Supplies are small compared with former seasons, but there seems to be no urgent demand as recent prices continue full. Common, but useful to prime heads $30@55, with an occasional selection $60.

VEAL CALVES.—Good market sizes of live or dressed have had a steady sale; the latter must be strictly prime at 11c.

Live calves, N. J., fed, 7¼c., State 7@7½c.; fair to good, 6@7c.; poor, 5@5½c.; Mt Holly, 5@7½c.; buttermilk, 3½@4c.; grassers, 2¾@3½c.; dressed choice fed, 11c.; fair to prime 8@10¾c.; common 3¾@6c.

SHEEP AND LAMBS.—Receipts for week, 37,414 head; do last week, 33,316 do. There has been a steady trade during the week, market closing somewhat slow. Sheep 4@5¼c.; common to prime lambs 5@6¼c; a few state $6.20 per 100 lbs.

SWINE.—Receipts for the week, 32,944 head; do. last week, 31,675 do. A decline in the West and warm weather here causes a quiet market; best rate at close $5.30. Live hogs $5.30@5.31 per 100 lbs.; corn-fed dressed N. J. pigs heavy 6¾@7c.; light 8@8¾c.; do. State 6½@8¾c.; city dressed 6¾@7c. Western.

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Reading for the Young.

SWING, ROCKER, SWING.

LITTLE EVIE'S GOOD-NIGHT SONG.

The evening hour is creeping on,
Swing, rocker, swing;
The play-day time is almost done,
Sing, baby, sing.

Oh, Evie sits on mamma's knee,
Swing, rocker, swing,
A happy little boy is he,
Sing, birdie, sing.

The fire-light glows upon the wall,
Swing, rocker, swing;
While evening shadows cover all,
Sing, baby, sing.

Through the window pane he sees,
Swing, rocker, swing,
The witches dancing merrily,
Sing, birdie, sing.

Their bonfires burning clear and bright,
Swing, rocker, swing,
While happy, dancing in the light,
Sing, baby, sing.

Oh, baby's eyes must go to sleep,
Swing, rocker, swing;
Of infant dreams drink long and deep,
Sing, birdie, sing.

Oh, colder grows the Winter night,
Swing, rocker, swing:
While witches dance by window light,
Swing, rocker, swing.

—MAUDE MEREDITH.

THE BLUE JAY.
Corvus Cristatus.

This elegant bird, which seems to be peculiar to North America, is distinguished as a kind of beau among the feathered tenants of our groves and forests, by the brilliancy of his dress, the oddness of tone and gesture, and his superabundant loquacity. He is, indeed, a gay fellow, large and strong, measuring eleven inches in length, and, as his name would indicate, of a most beautiful blue color interspersed with markings of black and white in striking and artistic fashion. His head is ornamented with a crest of light blue or purple feathers, which he can elevate or depress at pleasure, giving the jay its jaunty, defiant air. A collar of black passes around the neck in graceful curves, and forms a crescent on the upper part of the breast. Chin, cheeks, and breast white; greater wing-coverts a rich blue; exterior sides of the primaries light blue; those of secondaries a deep purple, except the three next the body which are a splendid light blue. All these, except the primaries, are beautifully barred with crescents of black and tipped with white, tail feathers also marked with traverse curves of black and tipped with white.

When in the early Spring every thicket pours forth its harmony, the shrill call of the jay sings out conspicuously. He appears to be among his fellow-musicians what a trumpeter is to a band, some of his shrill notes somewhat resembling that instrument, yet, at will, he can imitate the song of almost any other bird, and whether his shrill cat-squall is an imitation of the cat-bird, or only one of the varied expressions of his own peevishness, I could never quite determine. For, like many people, the jay is subject to great rise and fall in his emotional mercury; at one moment in the highth of bliss chattering softly, very like a duck, to his sweetheart in the cedar, but, instantly he discovers your approach, he flies off screaming furiously, as though he called all the feathered kingdom to chronicle the insults heaped upon him.

The Blue Jay builds a large nest; frequently in cedar, sometimes but not often, in an apple-tree, lines it with dry fiberous roots, and lays five eggs of a dull olive, spotted with brown. The male is very careful never to be heard near the nest, but makes his visits as quietly and secretly as possible, to avoid attracting attention.

The chief employment of the Jay through the Autumn is foraging to supply their winter stores and as they are very fond of chestnuts and acorns, corn and all hard seed vegetables, with seeds of forest trees, they act the part of useful agents in disseminating these seeds, by dropping a part of their gleanings as they cross fields and alight on fences and hedge rows, to deposit their stores.

Wherever the Jay has had the advantage of education from man, he not only shows his aptness as a scholar, but his suavity of manners is only equaled by his art and contrivance and it must be confessed that his disposition for thieving fully keeps pace with his other acquirements. A lady friend became somehow possessed of a young Jay which she kept and tamed, teaching him many tricks. He was given the name of "Ted" to which he would answer with the most cheerful alacrity, showing the greatest evidence of pleasure when petted and praised. If bothered by visitors he would rush to Mrs. D. with ruffled plumage and the most laughable cat-like cries. But "blood will tell" and though Mrs. D. became greatly attached to her pet, yet he sometimes proved an annoyance by his passion for theft. If she laid down her thimble a moment Ted's bright eyes discovered it, and tipping his head with a serio-comic look, he straightway deposited it in some out of the way nook or corner, the pedal, of the sewing machine being his chosen place, and any article too large to be driven through the iron belting, was industriously hammered and pounded with his strong bill, by the hour.

If caught thieving about the farmer's barns or corn-fields, the Jay darts noiselessly away, as though conscious of his crime and detection.

But the jay hunter imitating the call will draw about him numbers of jays, and, if sharp and wary, is sure of his aim.

These birds seldom associate in any considerable numbers, except in September and October, when they visit, in flocks numbering from a dozen to 40 to 50, the groves of oak in search of their favorite acorns, and, right here let me say, where there are oak forests, there will also be a great profusion of jays, and one can hardly imagine the pleasure to be derived for an idle hour spent in watching these bird-theatricals. I have in mind a hammock swung between two oaks in a grove by the side of the Mississippi river, where as the early autumn days come, flocks of these brilliant saucy fellows darted in and out, chattering, fluttering their brilliant colors about the dark green of the glistening oak leaves; holding a brown acorn so firmly and closely to the limb with one foot, while with the sharp bill they cut the soft shell, and devoured the meat, and if by chance a piece fell to the ground the birds would drop after it so suddenly as to give one the impression that they had fallen dead, and all the time utterly indifferent to the hammock and its occupant, evidently considering them a friend and admirer, or of too little consequence to be afraid of. Blue jays are more numerous in the West, probably because of their fondness for acorns.

As a mark against the jay I am sorry to admit that it is universally believed that this brave handsome fellow sometimes so demeans himself as to rob the nests of other birds; but I will not say he does do it, for, through our orchard and the oaks surrounding it, were scattered nests of many other birds, which the jays never seemed to "molest or make afraid," but we all lived together like a happy family, in perfect harmony.

MAUDE MEREDITH.

A NEW PUZZLE CRAZE.

"HAVING already reduced myself to a condition of almost helpless idiocy by attempting to solve the fifteen puzzle, my mind has finally collapsed under the following one, which has been furnished to a New Hampshire newspaper by 'a gentleman of our city,' who claims that it is a complete mind-wrecker:

A
A
A

B
B
B

'The object of the puzzle,' says the gentleman, 'is to place three articles of a kind on the lines marked A and three of a kind on the B lines, with a blank line between. Take, for instance, silver and gold coins. Place the silver coins on the A lines and the gold pieces on the B. Now change the gold pieces to the A lines, and vice versa, by advancing directly forward, either moving to the next unoccupied lines or jumping a coin over one other (and only one other at a time) of the opposite kind. Continue until the silver and gold coins have changed places and are in regular order, one above the other. There can be no retreating—the moves must all be made forward."

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—My Dolly Dutton corn and Surprise Musk-melon are treasures, and when on the table each person seems to try to see which would praise them most. Last year the pigs destroyed nearly all the corn, but left me a poor little ear or two, which I planted last Spring and every kernel came up, I guess, and there were so many ears on each stalk, and it was so early and sweet, all were praising it. I have saved plenty of seed for next year. The musk-melon, our folks say, is rightly named; it is so beautiful when cut, and so delicious to eat. I do not like musk-melon. I didn't have a very good place for them, only three plants came up. I planted them between some potatoes, but as soon as I could I pulled out the potatoes, and put some manure around my plants and watered them through the dry weather, they grew fast, and had a few melons. We have had but two, but my mother has thrown away all the seed she had saved of other kinds and we are going to raise none but these another year. I planted part of the okra seeds and they came up; but one morning I went out to see them and they were gone. I guess the chickens must have eaten them up. I will try them again next year. My pinks are just lovely yet, and phlox and mignonette are too pretty and sweet entirely for frost to kill. I want to thank you again for your kindness.

From your niece, BERTHA H.

Orange Co., N. Y.

DEAR UNCLE MARK AND RURAL COUSINS:—I don't know whether I am a cousin or not, as I never wrote to the RURAL before, but my papa takes the RURAL and my ma sends there for seeds. Now I have just thought why can't I send to the RURAL for a name for my little baby sister, she is six months old, but she has no name, so I am going to ask the cousins to propose some names to choose from. She is fat and fair and has dark blue eyes. I think she is quite old enough to be one of the cousins, for she likes flowers, and I must teach her gardening as soon as she is old enough. I wish the cousins would send in the names soon, and Uncle Mark, may be you have some nice ones to propose? I am twelve years old and go to school. I am going to watch the RURAL to see when to send for the seeds it is going to offer. I wish I could get some of the magnolia seeds of last year for I want a grand, old magnolia tree some day, and want a seed to start it from. I must stop or this will go into the waste basket, and then baby will get no name. Your affectionate niece,

Seneca Co., Ohio. MARY B. WALKER.

UNCLE MARK:—My mama takes the RURAL. She thinks it is a splendid paper and I love to read it especially the letters from the cousins; I am a little girl eleven years of age, and I have a little sister nine years old, her name is Violet, we both want to join the Horticultural Club, even mama says she would like to be one of the cousins, but she is afraid Uncle Mark don't take such old people as sho. I love flowers dearly, we live in the country, but we have no home to call our own, for my papa is very poor. Sister and I raised $10 worth of chickens last year, this year we only raised a few. I go to school, study arithmetic, geography, grammar, writing and spelling, and read in the fifth reader. Now, Uncle Mark, I wish you would remember me when you pass the seeds around, and I will try and do the best I can with them. From your new cousins,

MAUDIE and VIOLET TERRY.

Prophetstown, Ill.

DEAR UNCLE MARK:—I had splendid success with my seeds, which you sent me. I sowed the pinks in a box and have twenty plants in blossom. The rest were sown in the beds and are very pretty. The hollyhocks, which we received in 1879, delighted us all with their beautiful flowers. We live about five miles from the city of London, Ont. Pa has two large fish-ponds, in which are a great number of trout. I had almost forgotten my grape vines. We sowed the seed in a box directly after receiving it. It staid about a month without making its appearance, when we put it out of doors. About the middle of May I wanted to put some slips in this box and found two vines, which are about eight inches high now.

Your loving niece, SADIE B. VINING.

DEAR UNCLE MARK:—The seeds you sent us grew finely all of them, except the okra, which by mistake was plowed up by the hired man when two inches high. The melon bugs were determined to take all of our vines, but we saved a few. The Surprise is the most delicious musk melon I ever ate. We had beautiful phlox and portulaca all colors, splendid double pinks, fine variegated coxcomb and a nice bed of mignonette, besides many other flowers. Frank's radishes were very fine from seed you sent last year, but his corn did not fill well as it was planted in a row apart from other corn. Two of his grape seeds came up. Thanking you very much. M. NELLIE B.

Cedar Mills, Minn.

DEAR UNCLE MARK:—I want to thank you for the seed you sent me. I planted them late in an open bed and all did well except my pinks; they came up well but did not grow well, they have had two blossoms on them. My phlox and portulacas have been beautiful all Summer. My favorite of my phlox was a pale buff one. I did not save any seed of my musk melons. I planted them and the vines were very nice, but they did not bear. Melons of all kinds in this country were nearly a complete failure this year. Uncle Mark, I am very much obliged to the cousins for writing to me. I have enjoyed their letters so much. From your niece, ALMA ALLEN.

Russellville, Ala.

DEAR UNCLE MARK:—I deserve to have my name stricken from the cousins list for not having written before. I received the seeds you sent me and thank you very much for them. I planted the phlox and pink seeds in a box soon after their receipt, and transplanted them to the garden as directed, the pinks are the most beautiful I have ever seen, the most of them being double. The phlox have been in blossom for over two months and are very pretty. The coxcomb and mignonette look very nicely; the portulacas are very handsome, they are of different colors from my others, there being some white ones among them.

Your nephew, BURTON D. NILES,

Sherburne, Chenango Co., N. Y.

DEAR UNCLE MARK:—I am a little girl twelve years old, I would like to join the Horticultural Club. This is the first year my father has taken the RURAL, and we all like it very much. The seeds my father received from the RURAL did not all come up. The mangolds did not amount to anything. I would like to send that cousin in Iowa a stone from Illinois if she will pay the postage, as I have quite a collection. From your niece, FRANKIE NOBLE.

Mt. Carroll, Ill.

DEAR UNCLE MARK:—My father has been taking the RURAL for 13 years so you see we are old friends, in fact, I was about two years old when my father first took it. Will Uncle Mark and the Cousins receive me as a member of the club? I do not see any boy's letter from this part of the country. I hope not to be forgotten in the free seed distribution. I am truly yours.

Dallas, Texas. MICHAEL J. REVERCHON.

DEAR UNCLE MARK:—My papa takes the RURAL and he reads me the cousin's letters. I would like to join your club if you will let me. I go to school every day; I have got a dog, kitten, and some flowers. I like to hoe in the garden. I hoed all the Cow-peas you sent with the RURAL. I am five years old and have one brother. Your nephew,

Nova Scotia. IRA LEE DEARMOND.

DEAR UNCLE MARK:—I am a little boy thirteen years old and would like to join your RURAL Club. Mother has some Iris plants which please tell her how to care for this Fall.

Taylor Co., Iowa. Truly, WILLIE WINKLEY.

[The Iris is perfectly hardy and requires no protection during the Winter, although a coarse mulch benefits plants of all kinds.—U. M.]

UNCLE MARK:—I would like to join the Horticultural Club. I am very much interested in the culture of flowers and vegetables, and have a few beautiful plants that are blossoming beautifully. I would like to have many flowers, but do not have time to care for them. Yours very truly,

East Randolph, N. Y. LITTLE BEAR.

DEAR UNCLE MARK AND COUSINS:—I am 14 years of age. I am very much interested in the Cousins' letters, and have often thought I would write too. We have several kinds of flowers, asters balsams, pinks, pansies, petunias, zinnias and several other kinds. ELLA PATRICK.

Jefferson Co., N. Y.

Sabbath Reading.

KINDNESS.

KINDNESS light of pleasure lends,
When pale Grief her shadow sends
O'er the soul;
When the storms of life defy,
When the loud waves sweep on high,
'Twill console.

It will comfort, heal, and soothe,
By its soft caresses move
Our heart's pain,
As the kiss of evening showers
Bids the Summer's drooping flowers
Smile again.

Simple, small, its acts may be,
A kindly word in charity,
A look of love.
Or wide in sympathy, each one
Angels love to look upon
From above.

As the sunbeam carries light,
Life and beauty in its flight
Thro' the air;
So, true kindness from the heart
Doth perform a sunbeam's part
Everywhere.

"OF SUCH IS THE KINGDOM OF HEAVEN."

A BLIND old beggar, with his hat in his hand,
Neglected by the passers-by,
I noticed shyly at the corner stand,
With moisture falling from his sightless eye;
A child came by—a laughing little creature—
With joy and innocence in every feature,
Skipping forth gaily to the apple stand.
She saw the beggar and became less gay;
Then flung the bit of silver in her hand
Into the old man's hat and ran away.

PLYMOUTH ROCK.

OF all spots on the American continent Plymouth Rock is, religiously and historically, the most interesting and sacred. Here is the source and spring of America's greatness, the beginning and the basis of her history. Plymouth Rock, the memorable landing-place of the Pilgrims is covered with a massive granite canopy, in the upper part of which are deposited the bones, gathered from the neighboring hill, of several who died during the first year. The place will ever be regarded with interest as holy ground by their descendants all over the States, and indeed by all lovers of Christian freedom.

Pilgrim Hall, in front of which is a portion of the rock on which the Pilgrims landed, contains a museum of relics of the "Mayflower." Here, among other things, is a copy of the Indian Bible, translated by John Eliot, the apostle to the Indians, who arrived in 1630 learned the Indian language, reduced it to writing, translated the whole Bible into it, wrote the whole, it is said, with one pen, and had it printed and published by the year 1661. It was the first Bible printed in America. A copy was sent to Charles II., and Richard Baxter says of it, "Such a work and fruit of a plantation was never before presented unto a king." The marvel is all the greater when we recollect that the Indians at the outset were hostile to the settlers. Eliot went among them, showed them kindness, won the good-will of some, became their friends and sought their protection during Philip's war in 1675. The language, however, of his version is extinct, and only one person now living can read it.

Burying Hill commands an extensive view, and was an outpost of defence in the early days of the settlement. Here are the graves of William Bradford the Governor, Miles Standish, and others.

The fairest and most durable memorial, however, of the Pilgrim Fathers is the civil and religious liberty of the United States.

"Aye, call it holy ground,
The soil where first they trod,
They left unstained what there they found,
Freedom to worship God."

MANY people wonder why the Old Testament has been handed down to us; why it did not perish with the generations for which it was written. There are great highways in the Bible through which one may go and gather the great fundamental truths; there are also the by-paths, the canons, and gulches, and mountain fastnesses where one can find truths and beauties of the rarest and most precious kind. As the gold is hidden in the quartz, and the diamond in the sand, so God has hidden in the unattractive portions of the Scriptures some of the richest treasures to reward those who have the patience to seek and dig them out.—P. S. Henson.

THE preacher's words had power because they accorded with his thoughts, had reality and depth, because they harmonized with the life he had always lived. It was not mere breath that this preacher uttered; they were the words of life, because a life of good deeds and holy love was melted into them. Pearls pure and rich had been dissolved into the precious draught.—Hawthorne.

THE characters of Christians differ. It is the peculiarity of the life of the Saviour to impart different gifts, and a different selection of gifts to different believers, so that while all have a family likeness to the Master, yet they are not "like to like," but "like in difference."—Charles Butcher, D. D.

IF thy thoughts should, like the laborious bee go over the world from flower to flower, from creature to creature, they would bring thee no honey or sweetness home, save what they gathered from their relations to eternity.—Richard Baxter.

PERSONAL ITEMS.

Mr. Peter Cooper, is now 91 years old.

Mr. Whittier says: "I am out-of-doors a great deal, and in Summer take long walks. I still write when I feel like it, but have no regular habits of work, I read a great deal, but am beginning to have trouble with my eyes. My health is good."

General Hancock says that he has had only one application for office as yet, and that was from a man who wished to go as Minister to Corea. He had understood that every white man, on landing there, had his head taken, and he desired the operation performed on himself.

The Ex-Empress Eugenie has purchased the Farnborough estate, in Hampshire, from the widow of the late Thomas Longman, the publisher, for £50,000. It comprises some two hundred and fifty acres of finely-wooded grounds. The Empress intends to build on the property a mortuary chapel to receive the remains of the late Emperor and the Prince Imperial.

The following twenty men are estimated to be worth the sums following their names:

William H. Vanderbilt	$100,000,000
Astor, of New York	75,000,000
Jay Gould	75,000,000
Russell Sage	75,000,000
Fair, of California	50,000,000
Flood, of California	50,000,000
Mackie, of California	50,000,000
August Belmont	30,000,000
James G. Bennett	30,000,000
S. J. Tilden	25,000,000
Edward Clark	25,000,000
Keene, of New York	20,000,000
Peter Cooper	20,000,000
Senator Jones	20,000,000
Solon Humphreys	15,000,000
Sidney Dillon	15,000,000
Oakes Ames, Jr.	15,000,000
Perry H. Smith, of Chicago	15,000,000
Pierre Lorillard	15,000,000
Senator Sharon	15,000,000

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and all who, in consequence of overwork, find themselves suffering from a gradually increasing brain and nervous exhaustion, and who feel that they are slowly losing vitality and the power to do their best, and that a breakdown in the near future is almost inevitable, will find in Compound Oxygen a new agent of cure and restoration, *which acts as a revitalizer*—and with this a promptness that at once stops the downward drift. The paralysis which so often arrests the steps of business men and hard brain-workers after they have passed middle life, might in most cases be prevented by an occasional use of this revitalizing agent. Our Treatise on Compound Oxygen, its Nature and Action, is sent free. Address Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

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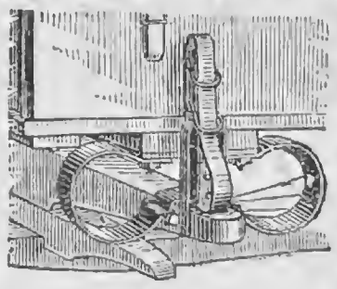

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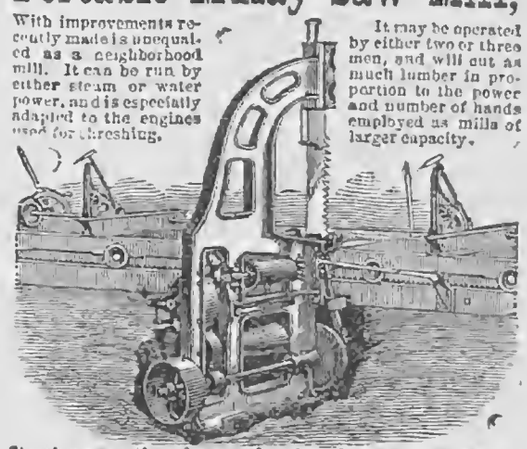

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Humorous.

MRS. THEODORE COOK of Utica pays her respects to the Japanese fan in the last number of St. Nicholas, as follows:—

There lives in the land of Japan
A very lugubrious man,
Who sketches with toil,
In water and oil,
Strange scenes for the Japanese fan.

He paints with the Chinaman's queue,
And uses vermilion and blue;
He delights in large herds
Of long-legged birds,
Which he makes with their bodies askew.

He strives with the noble intent
To picture each current event;
He often spends hours
Over intricate flowers,
And receives just the eighth of a cent.

A COMPOSITOR who cannot agree with his wife says he must have taken her out of the wrong font.—Puck.

"BRIDGET, the dust upon the furniture is intolerable. What shall I do?" "Do I do mar'm, pay no attention to it."

LIVES of grocerymen remind us
They can make their starch half lime,
And with sugar wholly blind us,
Putting sand in all the time.

"YOU can't play that on me!" said the piano to the amateur who broke down on a difficult piece of music.

WE are told that the doctors are daily discovering new diseases. Let's abolish the profession.—Boston Post.

A little girl sent out to hunt eggs came back unsuccessful, complaining that "lots of hens were standing round doing nothing."

COLLECTOR.—How many times do you wish me to call for this money? Debtor—My dear sir, you need never call again. I shall not be offended.

GEORGIE (four years old) at the tea table—"Mamma, may I have some sardines?" Mamma—"Wait till I'm ready, Georgie." Georgie (surprised)—"Why, ma, it's me that wants 'em!"

A YOUNG man on Main street says he is going to attempt the feat of going forty days without working. He says if his employers do not watch him, he thinks he can accomplish the task.—Rockland Courier.

"Can dogs find their way home from a long distance?" says an exchange. It's according to the dog. If it's one you want to get rid of, he can find his way home from California. If it's a good one, he's apt to get lost if he goes around the corner.

A LITTLE girl once said that she would be very glad to go to heaven, because they had plenty of preserves there. On being cross-examined, she took down her catechism and triumphantly read: "Why ought the saints to love God? Answer: "Because He makes, preserves, and keeps them."

"ANY good shooting on your farm?" asked the hunter of the farmer. "Splendid," replied the agriculturist, "There's a lightning-rod man down in the clover meadow, a cloth peddler at the house, a book agent out in the barn and two tramps down in the stock yard. Climb right over the fence, young man, load both barrels and sail in."—Hawkeye.

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To the great West seems always at the flood. As the great forests are swept away, and settlements are established along the streams of that vast region, an enemy obtrudes himself among the homes of the settlers, scarcely less to be dreaded than the barbarous Indian. Fever and ague scourges those new communities, and it is only by the use of an efficient preventive that its malarious breath can safely be inhaled. Hostetter's Stomach Bitters, a fortifying and protective medicine, without a rival on this continent, has for over a quarter of a century been the chief resource of the new settler, the miner and agriculturists of the West in time of sickness, his surest safeguard against the inroads of disease. This medicine, besides being an antidote to malaria, counteracts the effects of exhaustion, hardships and exposure, and remedies rheumatism, dyspepsia, constipation and debility.

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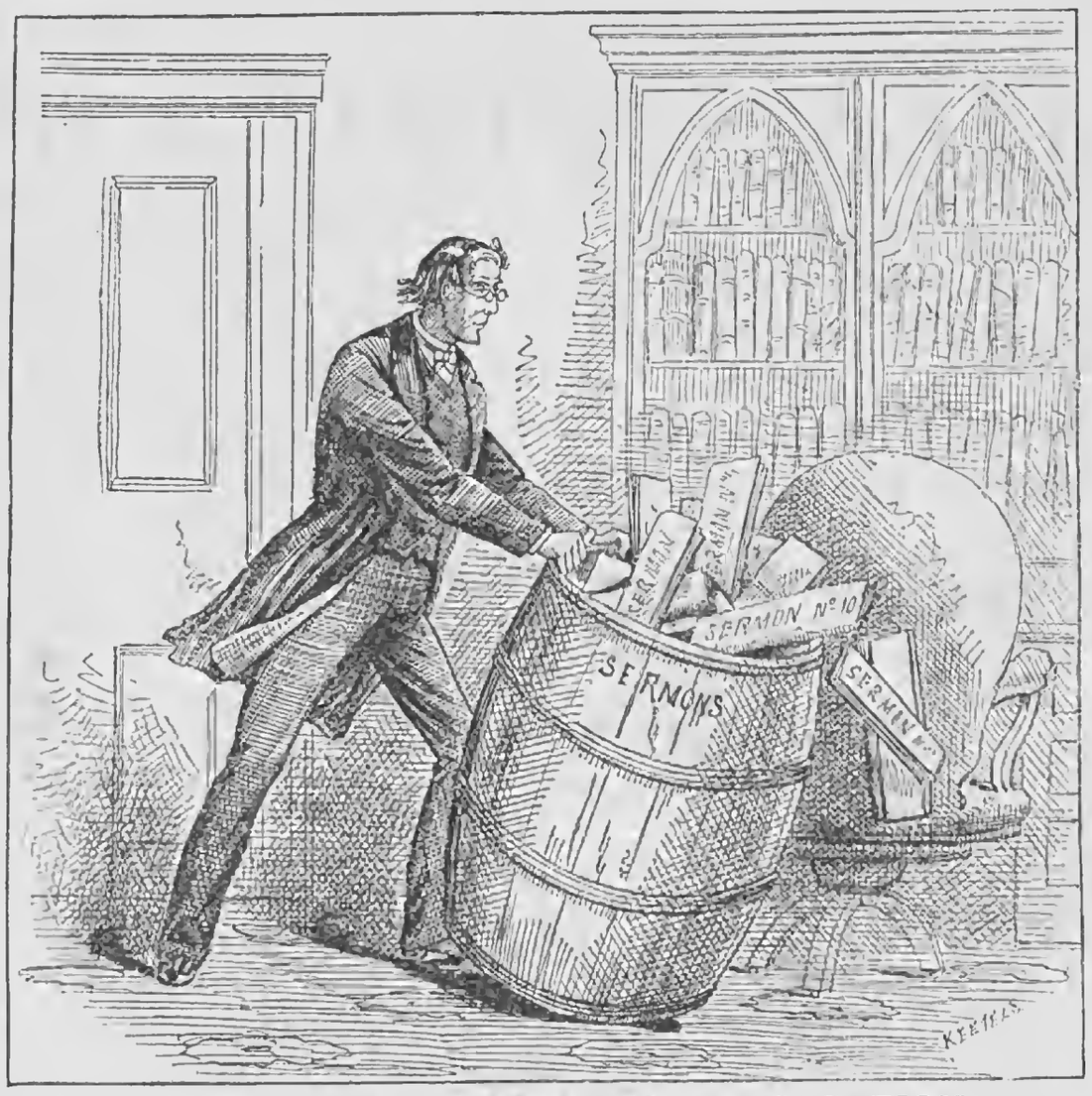

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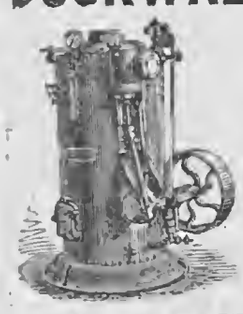
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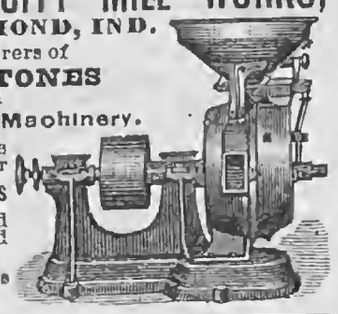

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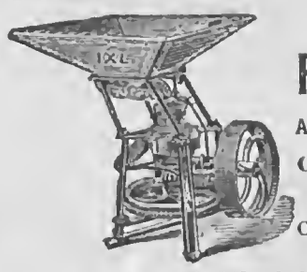

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

Ralph Evans

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Farm Topics.

WESTERN FARMING.—XIV.

W. I. CHAMBERLAIN.

Bonanza Farming—III.

IT is, I think, an important question whether Dakota is likely to be a desirable home for "small farmers;" for, as I have tried to show in former articles, farming on the immense scale on which Messrs. Dalrymple, Cass, Cheney and Grandin do it, is not likely to be permanent or long continued. Nor, I think, do these gentlemen so regard it themselves. Nor will farming probably be permanent on the smaller but still very large scale of the Messrs. Williams, Steele, Vandeusen, Clark and others, each of whom has a thousand acres or more in wheat and oats. For with farms even of this size or with so much under cultivation, it seems well-nigh impossible, under the present system, to restore the diminishing fertility, and wheat after wheat exhausts it much more rapidly than corn or varied crops. Smaller farms, with a recuperative rather than an exhaustive system of agriculture, will in time, then, be a necessity in Dakota as well as elsewhere. The land must be farmed by men who live upon it and intend to make it their future homes, and not by those who go there year by year in Summer time and strip it of one more year's crop and then retire to warmer climes for Winter.

What, then, are the obstacles or objections to Dakota as a place of permanent residence for "small farmers"; how serious are they, and how far can they be overcome? They seem to me to fall chiefly under the head of climate and lack of fuel, good water and fruit.

The Winters are long and severe. But so far as suffering personally from cold is concerned, that is a mere comparative matter. The people of one latitude always think it too cold a little further towards the pole. New Orleans pities shivering Cincinnati in Winter, and Cincinnati wonders how they live at all in Cleveland and Chicago. Chicago says, "We're all right, but, bless us, they catch it in St. Paul!" And St. Paul says, "It's quite mild here, but they *do* freeze up in Fargo and Winnipeg." Immigrants usually follow nearly the same parallel of latitude or temperature in moving. Those who come to Northern Dakota are largely from Canada, Northern New York, Vermont, New Hampshire and Maine, Minnesota or Wisconsin, or from Norway and Sweden; and they expect and are accustomed to the cold. Personal inconvenience from the Winter cold will not be a serious obstacle. But will the cold entirely suspend profitable labors or prevent mixed husbandry? It will certainly suspend tillage. That it will prevent the raising of clover and Timothy and the profitable keeping of stock I am not at all sure. Stock are absolutely essential to permanent success in agriculture. They are Nature's condensers of coarse products and of values and restorers of fertility. Oats and vegetables grow most luxuriantly in Northern Dakota, and the early-maturing corn will do pretty well. But long distances and the necessary cost of freight make it unprofitable to raise much for shipping except the higher-priced wheat. But, now, if domestic animals can be profitably kept, they will condense these crops for market, and in addition furnish the very means needed for retaining and restoring the fertility of the soil.

Whether clover and Timothy will really thrive in northern Dakota I am not sure, but believe they will. I saw both thriving in small plats of an acre or so near Fargo, and see not why they should not grow as in Northern Vermont, except that the snow-fall is so light and the winds so high as to leave the fields less protected. If they will thrive, the problem of Dakota mixed agriculture is solved. The fertility can be maintained with a much smaller amount of stock comparatively. Grass and especially clover, even without stock, recuperate the soil for wheat by those processes of nature which even yet we do not fully understand. At all events, there is no doubt that potatoes, beets, carrots and Hungarian Millet will thrive, and on these and on corn and oats, with their stalks and straw, cattle and sheep can be stable-fed or corral-fed in Winter, while the native grasses will furnish pasture in Summer, even if clover kills in Winter. And by proper management the immense amounts of manure made from these and from the judicious rotting of the wheat straw used as litter or bedding, can be drawn and spread upon the fields when they are so frozen as to prevent tillage. With this Winter care of good herds of cattle, sheep and horses, the long Winter will not be the dull and unprofitable season it now is, when farmers, as Mr. Dalrymple says, "crawl into their holes for five or six months and pull the holes in after them." Thousands of horses are brought into the Territory now each year. The long Winter of almost entire rest for teams would greatly favor the breeding of colts, the mares being worked in Summer. Thus the mere coldness of the Northern Dakota Winters need not prevent a profitable mixed husbandry by "small farmers."

The question of fruit, fuel and water must go over to another article.

Floricultural.

THE SWEET-SCENTED SHRUB.
(Calycanthus floridus.)

A FAMILIAR-SOUNDING name, known indeed to many, but seeming more familiar still from the natural homely suggestiveness of its simple terms. Many shrubs, it is true, are sweet-scented. We almost expect every flower to be sweet-scented. Why, then, distinguish this one shrub by an agreeable title which applies to many others? Simply because it bears the palm, in its way, for fragrance among all shrubs. Spicy, sweet, penetrating, poignant, one breathes its odor, especially when crushed, with no thought of comparing its delicious peculiarity in this respect with that of any other plant. It is simply, from very excellence of odor, *the* sweet-scented shrub. The flower, however, which is so distinguished in odor, is very unpretending in appearance. Yet there is something very quaint and attractive in its simple foliage and pure outlines as well as in its solid, reddish-brown self-color. At a little distance these attractions are hardly noticeable and serve the purpose only of relieving the rich green foliage with dark, reddish spots of solid tint. These flowers are also valuable because they bloom in July and August.

The Sweet-scented Shrub is termed, botanically, Calycanthus from the two Greek words Kalyx, a calyx, and Anthos, a flower, in allusion to the attractive, flower-like color of the brown calyx. In foliage, the Calycanthus floridus—for we speak of the species best known as the Sweet-scented Shrub—is decidedly effective. The leaves are large for a shrub, ovate and shining. Their texture is firm and their color an agreeable lively green, while the contour of the bush itself is roundish and at the same time picturesquely irregular. Indeed, it is well worthy, for its leaves alone, of a place in any collection of choice shrubs. Its position in shrub groups should be somewhat intermediate, or among the larger-growing plants.

Although the Calycanthus floridus is well suited to an isolated position on the lawn, we should generally prefer to plant it near the outer line of the group, where its decided attractions can be more readily seen and effectively blended in their peculiar manner with surrounding foliage. It is a good plan sometimes to group together masses of the Sweet-scented Shrub. The effect of their irregular, picturesque contours thus blended, is fine, although other shrubs, the althea, for instance, present a stiff, monotonous appearance when treated in like manner. Calycanthus floridus transplants easily, like most deciduous shrubs, and is entirely hardy. For years it was considered somewhat difficult to propagate except from seed, and elaborate operations in the way of layering were undertaken. Of late, however, it is propagated with comparative ease from cuttings of its own roots stuck in sand.

SWEET-SCENTED SHRUB.—FROM LIFE.—FIG. 346.

The other species of Calycanthus, lævigatus, glaucus, etc., do not materially differ from C. floridus in their appearance as members of the shrub group. Minor distinctions exist in the narrower and perhaps more shining leaves of the Lævigatus and also, perhaps, in the lighter color and later appearance of the flower of the same species. C. glaucus differs from C. floridus still less. Virtually, therefore Calycanthus floridus is the Sweet-scented Shrub which forms lawn-planting material of excellent character, whether we consider its habit of blooming in Mid summer or its attractive foliage and spicy odor.

Field Crops.

FLAX CULTURE.

THE SOIL that will produce a good crop of grain is suitable for flax; but the best is a deep, rich, mellow, clayey or sandy loam free from wet. On cold, wet low-lands and river bottoms and also on dry sandy soils flax will prove a failure owing chiefly to mildew. Heavy, slippery clay soils will yield only a light crop, unless thoroughly underdrained, well pulverized and fertilized. River bottoms and uplands in which a black mucky soil predominates, if well drained and rich enough to produce a good crop of grass, will yield a good crop of fiber and a small one of seed, but if the soil is sufficiently fertile to produce a good crop of potatoes, corn, oats or rye, it will also give a large crop of both seed and fiber. In the West less attention is generally paid to selections of suitable soil than in the older-settled States, and it is there found that fair crops can be grown on nearly any kind of land, if it is dry and free from weeds. The manuring, too, which is needed elsewhere, is unnecessary on the naturally fertile soils of the trans-Mississippi States. Land that has been under hoed crops the previous year is most suitable for flax, as it can be kept freer from weeds than other sorts, and the previous manuring will render an application of the fertilizers to the flax unnecessary. A clover or rich pasture sod, however, as well as a wheat, barley or oat stubble, or land that has been under corn, if free from weeds and sufficiently rich, will all produce good crops of flax.

THE PREPARATION OF THE SOIL, if heavy, should be begun at least as early as the previous Fall, by plowing it thoroughly and deeply in late October or early November for this latitude, so that the action of the frost during Winter may mellow it before Spring. If the land is not sufficiently rich from the manure applied to previous crops—which is always a desirable condition—and barnyard manure is to be used, it is better to plow it under in the Fall, so that the different ingredients may become diffused in the soil before Spring. For this purpose thoroughly rotted manure only should be used, that from sheep and hogs being the most suitable. If weeds appear before Winter, they should be destroyed by the use of the harrow or cultivator. When the soil is light and porous Fall plowing is not advisable. In the Spring so soon as the ground has become dry enough, it should be again plowed deeply, cutting thin furrow slices; then harrowed twice and rolled. The finer the soil, the better the crop, the more

even the growth and the finer the fiber. If it is desired to apply fertilizers at this stage, wood ashes are an excellent application, and so is a mixture of equal parts of plaster, salt, and ashes sown at the rate of, say, six bushels per acre after the land has been plowed and harrowed. The ground must not be made too rich, however, for in that case the flax is sure to lodge badly. Immediately before sowing the seed, care should be taken to destroy all weeds, for these cannot be easily got rid of after the crop has come up. The ground, too, should be leveled, all large stones removed and all small ones pressed down, to facilitate harvesting.

SOWING should be done as early in the Spring as the ground is dry, mellow and warm, and danger from heavy frosts is over, the date varying with the locality, from the last of March to the first of May. If sown too early weeds and grass are likely to be troublesome, the crop to be stunted and hard frosts to be harmful; but early sowing is necessary to obtain a fine quality of lint, as then the crop grows more steadily. With reference to the soil, the best time to sow is when it is friable after a shower and just after a final harrowing. As the seed is very slippery, great care must be taken to sow it evenly, which is best done by sowing—generally by hand—half of it first one way, and then cross-sowing the other half. A good sower of grass seed should find little difficulty in sowing flax seed properly. To cover the seed a brush harrow, drawn by hand, is the best implement, as the trampling of a team is thus avoided and the seed is covered just deep enough—not over an inch. A light seed harrow is also extensively employed. This should be drawn up and down and crosswise to spread the seed evenly, and prevent it from growing in rows in the depresssions made by the harrow teeth. Sometimes the seed is left to be covered by the rain; but this is the lazy man's method and usually results in the lazy man's crop. Hand weeding is generally considered too expensive in this country: but great care should be taken before sowing the seed, that all weeds and grass are thoroughly extirpated, and any single weeds should be *cut* after the crop is up—if *pulled* some of the flax is sure to come up with them. The weeding should be done with bare or stockinged feet, so as not to injure the crop, and when the latter is about six inches high. Care must be taken to leave the ground level, otherwise the flax will not ripen evenly. To insure this object a light rolling is generally given after seeding.

THE SEED should be selected as carefully as corn seed, as its character greatly influences the yield and quality both of the seed and fiber. For the latter Riga or Dutch seed is considered the best; but, as these kinds are expensive, American seed is generally used. Plump, bright, oily, heavy seed, that will sink in water, is the best, and it would be well to run even this, when convenient, through a fanning mill, to blow out all the light seed by a strong blast. When one grows his own seed, the flax that grows on the best ground and ripens earliest should be selected and half thrashed, as the plumpest, earliest-matured and most productive seed will shell out first. It is well to procure the seed from a distance occasionally; for if grown for a number of years in the same section, it degenerates. Old seed should not be used, as it does not vegetate sometimes. The quantity of seed to the acre will depend on the fertility of the soil and the object for which the crop is raised. A rich soil requires less seed than a poor one; and when the flax is grown for lint, much less is required than when it is raised for seed. When sown thinly, each stalk is furnished with several branches, each of which produces seed. In that case, however, the lint is coarse and uneven, and is fit only for tow. The number of branches depends upon the thickness of the crop and the fertility of the soil. When the seed is sown thickly there is but a single stem which produces less seed, of course, but a finer fiber. When raised for seed, from half a bushel to a bushel is usually sown, according to the richness of the ground, the former quantity being the rule. For lint, from two to two and a half and sometimes three bushels are sown; and for lint and seed, about a bushel and a half is the usual amount.

HARVESTING is the most laborious and important process in flax raising. When the flax is grown entirely for seed, or for seed and "coarse tow"—which consists of the entire fiber of the flax in contradistinction to "fine tow," consisting of the lint separated from the long fiber when the flax is dressed—it should be allowed to get ripe before it is harvested, though not ripe enough to shell readily. It can then be cut with a scythe, cradle or reaping machine, the same as ordinary grain. Sometimes no attempt is made to keep the stalks straight or the butts even, and it is then called "tangled flax," and, having been cut close to the ground, it is cured, raked, cocked, stacked or put in the mow, just like hay. If such flax is not housed, the top of the stack should be well covered, as it will not turn rain so well as hay. When flax is cut with a reaper and the stalks are to be kept straight, it is forked off the platform in gavels which should be tied just below the bolls and set on the butt-ends. If it is too long or heavy to allow it to be forked off while the reaper is in motion, it will usually pay to stop the machine and take each gavel off by hand. If the crop is grown for fiber, the best way to harvest it is to pull it by hand, especially for small growers. Pulled flax sells for a higher price than cut flax, because, in addition to the greater length of the fiber, it runs more smoothly in spinning and makes a cleaner, smoother thread, for the reason that the fibers taper from a few inches above the root until they run out entirely at its end; whereas in cut flax the ends of the fibers are stumpy.

WHEN the flax is pulled too soon there is a loss in the quantity, and when too late, in the quality of the fiber. The proper time for pulling is when the bolls have begun to turn from green to brown, the stems have become yellow for two-thirds of their length, and the leaves have died half way up the stalk. While pulling, the workman takes a breadth about four feet wide, and either spreads the flax in a swath behind him, throws it down in gavels, or binds it himself as fast as he pulls it. He should grasp a handful just below the bolls, so as to leave the short stalks, grass and weeds standing, and with both hands pull it up with a quick jerk; for if pulled slowly a much larger quantity of earth will adhere to the roots. When a double handful has been pulled it should be "butted" a couple of times on the ground to "even" it and get rid of the adhering soil. If the weather is threatening, it is well to bind it at once and throw about eight gavels together to facilitate setting them up in long stooks, which should be only two bundles thick, as the flax will then dry quicker and better. The stooks should always be set north and south, so that the sun can shine on both sides during the day. In this case it will require about two weeks to cure before it is fit to be put in the barn, stack or mow; for, although the outside of the bundle may appear thoroughly cured, the inside will be too green. In fine weather it is better to spread out each double handful, as it is pulled, in a swath about an inch thick, leaving a space of a few inches between the spread gavels, or alternating them butts and ends, to facilitate turning and binding. Care must be taken to lay the butts as even as possible and the stalks quite straight, and this position should be carefully preserved in subsequent operations. After the swath has been dried on one side, it should be turned over to sun the other, and then bound and set in stooks, to be taken to the stack when cured.

When for any reason the flax has grown of various lengths, each kind should be bound in separate gavels; otherwise a large part of the short fiber will be separated from the long fiber in the dressing and be wasted in the tow. Moreover, if short stalks are bound together with long ones many bolls will not be thrashed, so that the seed will be lost. Flax that has lodged and suffered from wet should also be kept by itself; and the proper assorting can most easily be done while pulling or mowing, by putting each sort in separate gavels. The bundles need not be kept separate, however. Three or more machines have been devised for pulling flax, but although some of them do good service under favorable conditions, none of them has yet superseded hand-pulling.

THRASHING may be done in several ways. If the thrashing machine is used, open the concave so that the teeth will just meet; thrust the top of each bundle against the cylinder in motion, withdrawing it and turning it partly round until all the bolls are removed, being careful not to allow it to be snatched out of the hands; or the bundle may be unbound by one man, held in fan-shape against the revolving cylinder by another, and rebound by a third. If a flail is used, lay the heads of the bundles together on the barn floor, thrash only the tops, and shake the bundles to get out the seed. In "whipping" the heads of the bundle or of a part of it, are struck sharply over a large stone, inverted plow or stout barrel. "Rippling," by which the bolls are removed by drawing the tops through a coarse hatchel or comb with sharp-pointed iron teeth, is an Old-Country practice, seldom employed here. Nearly every new thrashing machine, however, has a clover huller attachment, while there are at least a couple of excellent clover hullers and separators which hull, separate and clean the seed by one operation. The owners of these generally travel with them through the clover-growing districts, and perform quickly and well the work that was formerly done imperfectly and laboriously.

"Retting," "breaking," "scutching," etc., relate to the manufacture rather than the culture of flax, although at least the first of these operations is usually performed by the grower, and the others might often be profitably done at home in Winter when other kinds of farm work are partly or entirely suspended.

THE WHITE ELEPHANT.

Reports from New York, Pennsylvania, Ohio, Michigan, Washington, South Carolina, Wisconsin, Oregon.

It has been stated in these columns that White Elephant potatoes were sent last Spring to sundry persons in various parts of the country, with the request that they would plant them and report the results. The following are average specimens of the reports thus far received:

ROME, Oneida Co., N. Y.—The White Elephant Potato has produced more than any potato I ever planted, and that, too, under unfavorable circumstances. I think they will prove a valuable acquisition. I shall hope another year to give a still better account, as I intend to avoid the unfavorable conditions in which they were grown the past year, and grow them on ground well prepared, under more favorable circumstances.

JONATHAN TALCOTT.

FOND DU LAC, Fond Du Lac Co., Wis.—In regard to the White Elephant Potato, I observe in it the same strong and robust-growing habit as in the Beauty of Hebron. This alone is a valuable trait in both varieties in the way of resistance to the potato beetle. The Elephants grow close together in the hill and are therefore easily dug. The yield was really enormous, and the crop was fully ripe on September 15. We dug from the one potato planted (in 18 hills, one eye in each), two bushels and one peck, full measure. Its flavor cannot be too highly spoken of; it is the finest we have had for years. No sign of rot or disease. We found but very few small ones in the hill. All were solid and of a good, well formed size. In short, I think the Beauty of Hebron for early, and the White Elephant for late will be the two standard varieties for those who want to plant potatoes for profit on either a *large* or *small* scale. E. HANTZE.

CORVALLIS, Missonla Co., Oregon.—About the 1st of May, I planted one half of the potato sent here for trial—the White Elephant. This half of one potato produced 15 pounds. I shall save them all for planting next year. The President, B. L. Arnold, planted the other half; I have not yet heard the result of his experiment. B. J. HAWTHORNE.
Oregon Ag'l College.

MAMARONECK, Westchester Co., N. Y.—The White Elephant Potato kindly sent me for trial has proved itself, even in the past unfavorable season, to be all you claim for it. It is exceedingly large and wonderfully productive, and the quality is excellent. Baked, it comes to the table dry, mealy, and pure-flavored. I feel sure that the White Elephant will have a "big run." It occurs to me that it would make a splendid potato for a "fat man's clam bake." PETER B. MEAD.

COLUMBUS, Franklin Co., O., Oct., 15.—The White Elephant Potato received from you was planted with special care, but failed in productiveness when compared with Dunmore, Burbank and Early Rose, which had the same opportunities.
C. E. THORNE, Farm Manager.
Ohio Ag'l College.

NEW CASTLE, Westchester Co., N. Y.,—The White Elephant has grown finely and produced well. Its quality, however, is not first-class, but in so unusually unfavorable a season as the past has been with us, this crop can hardly be taken as a criterion.
F. M. HEXAMER.

AGRICULTURAL COLLEGE, Orangeburg, S. C. The White Elephant potato was planted with care, though rather late for this latitude. It did remarkably well for a time, but the severe hot weather of Mid-summer burnt the vines to the ground. We plant early in February and harvest early in June or else the Irish potato does nothing.
E. COOKE.

DETROIT, Mich.—The White Elephant Potato did very well with me. I raised a full half bushel from the tuber sent me. It is a nice, white, mealy potato, a strong grower and very productive. The bug troubled them very much. FRED. WALTZ.

MORRISVILLE, Bucks Co., Penn.—The White Elephant Potato grew very irregular in size, but the quality is excellent. I had about a peck and a half from the potato sent. It has been a poor season for the crop with us.
E. S. KIRKBRIDE.

NEWTOWN, Long Island, N. Y.—This has been a very poor season to try new varieties of potatoes; but we gave the White Elephant you sent us as fair a trial as the season would allow. We are very much pleased with it and think very highly of it. It is very prolific; we have one bushel from the one potato. The only fault we have to find with it is that it is white, which makes it less salable than a colored potato. JOHN E. BACKUS.

A COMPARISON OF POTATO VARIETIES.

LAST Spring I bought nine kinds of potatoes, one pound of each; cut them to one eye; planted them two feet apart, and gave them the same care.

Below I give the number of eyes, time of planting, time they were dug and the yield in pounds:

Planted.	Dug.	Variety.	No. of eyes.	Yield ℔ lb.
April 29.	Aug. 26.	Early Ohio	40	46½
"	Sept. 11.	Extra Early Vermont	70	117½
"	"	" Snowflake	55	117
"	Oct. 1.	Beauty of Hebron	23	94½
"	"	Mammoth Pearl	35	181¾
May 7.	Sept. 23.	Burbank's Seedling	26	84
"	"	Early Rose	60	114
"	"	Brownell's Superior	39	68
"	Oct. 1.	Snowflake	70	131

The Early Ohios were not large, but there were few small ones. Of the Extra Early Vermont some were large but a good many were small. The Early Snowflakes were large and handsome, a few only being small. The Beauty of Hebron were large and handsome, with no small ones; one weighed nearly 28¼ ounces. The Mammoth Pearls were large and handsome, few were small. Burbank's Seedlings were large, but spongy; only a few were small. Of Early Rose some were large and a good many were small. Brownell's Superior were the evenest and handsomest potatoes I think I ever saw—not large. Snowflake large and handsome, but few in a hill.
Essex Co., Mass. HENRY MERRILL.

MOLD'S WHITE WINTER WHEAT.—A friend, at Lakeport, Lake Co., California, sends us samples of the above wheat, of which he says:—

"Two years ago I got four quarts of wheat from the Agricultural Department at Washington, and drilled it on something less than half an acre, and harvested 1 122 pounds. Last October I sowed the seed on several acres of very gravelly and clayey land that has been in grain every year for twenty years without any manure. On July 6th, I cut the crop and measured the product from a small piece of about average growth, and it yielded at the rate of 50 bushels per acre. The day after thrashing I had some ground and got 75 pounds of No. 1 flour per 100 pounds of wheat. I am now selling the same for seed at two cents per pounds while other wheat is selling at one cent."

REMARKS.—Thanks for the beautiful heads which are among the finest we have ever seen. We counted the kernels of three heads, and found them to contain respectively 102, 90 and 95. Many spikelets contained five kernels. The variety is Mold's White Winter. It has not done well with us.—EDS.

RATHER DOUBTFUL.—A friend writes us:—"At another time I will report the yield of my boy's acre of Blount Corn. I think it will surpass yours in hight and quantity of grain." It may in hight—we hope it may in yield.—EDS.

Farm Economy.

THICK AND THIN SEEDING.

SEEING by two late issues of the RURAL that farmers are interesting themselves with regard to the quantity of seed that should be sown per acre, I give the results of my experience and observation in the matter.

In the Summer of 1878 I began preparing 31 acres for wheat better than I had ever done before, bestowing a little better cultivation on a lot of 15 acres than on the remainder. This lot was so thickly covered with wheat straw that it took a man to fork it into the furrow. I harrowed it once before harvest and cultivated it once before and three times after harvest. Before the last cultivation about half the ground was again covered with fine barnyard manure, which was put on the poorest spots.

I began sowing on August 31, having set the drill at 44 quarts per acre, and drilled the same quantity on the other field. Neither myself nor, I think, any of my neighbors ever saw a handsomer piece of wheat than mine was on May 26, '79. On that day there came a heavy rain-storm which left the wheat badly lodged. Most of it righted up again, however, but shortly three consecutive storms left it as though a man had turned into the field a span of three-year-old colts, with a roller attached to them, and left them to run at their own wild will. It was so badly lodged that I don't believe there was in the whole field unlodged wheat enough to make a dozen sheaves.

Now for the final result. From that 15-acre lot I thrashed 690 bushels of good, plump, clean Fultz wheat; yet an idea can be formed of how badly it was lodged from the fact that from the rakings I thrashed 40 bushels, which are included in the above yield, making for the field an average of 40 bushels per acre

The other field, on which somewhat less care was bestowed, was sown to Diehl and yielded 471 bushels, an average of 29½ bushels per acre, making the average for the entire crop 37½ bushels per acre. One of my neighbors at the same time sowed two bushels per acre, and his crop averaged 27 bushels per acre.

In the Fall of 1879 I gave the same treatment to one of my fields, sowing just 1½ bushel per

acre, and the yield averaged 30½ bushels, Last Fall, too, the same neighbor, declaring that it was the abundance of seed that made a good crop, sowed two bushels per acre, and harvested an average of 17 bushels.

With regard to that 15 acre lot, I must state that I seeded it down to clover in the Spring of '79, but on account of the wheat having lodged so badly, it smothered the young clover all out. It was against my inclination, therefore, that I sowed it once more to wheat, so as to seed it down to clover again last Spring; and the yield this year averaged 22 bushels per acre, and, moreover, I got a good stand of clover and Timothy.

This Fall my neighbor sowed to wheat a field adjoining one of my wheat fields. Adhering to his old rule, he sowed two bushels of seed per acre, while I sowed at the rate of only 1½ bushel; and engaged to have a larger average yield than he would have next year. I am thoroughly convinced that the condition of the ground has more to do with a good crop than the quantity of seed.

In the RURAL of October 9, under "What Others Say," reference is made to a discussion between two farmers, one of whom says that should wheat drop to 80 cents a bushel at Chicago, many would drop wheat-raising, while the other asserts that a farmer must get a dollar a bushel to make a profit. Now, in my opinion, both are right; for the cost of raising wheat rests a good deal with the farmer himself. If he farms so as to harvest only 15 bushels per acre, he should receive at least $1.25 per bushel for his wheat; but to make wheat-raising profitable, he must get a yield of upwards of 20 bushels per acre, and obtain one dollar per bushel for his crop. He cannot raise wheat with profit with a smaller crop or a lower price for that yield. I would prefer the profit on sheep, with wool at 25 cents per pound, to that on wheat at $1 per bushel, with a yield of 20 bushels per acre, provided the farmer is not too careless to count his sheep before housing them at night, and not too lazy to be out at five o'clock every morning in lambing time to see by what percentage his flock had increased during the night, particularly in bad weather.

Kendallville, Ind. J. S.

Pomological.

OUR FRUIT PROGRESS.

A LETTER FROM MARSHALL P. WILDER.

My Dear Sir:—I am much pleased with the RURAL, especially with your enterprise in fruit culture and the new varieties which are constantly coming to notice. It is our good fortune to live in an age of extraordinary progress in pomology.

No country has such facilities for fruit culture, and no nation has made such rapid advances as we have witnessed in our day. The number of new and really fine kinds of American grapes that have appeared within a few years is astonishing. It is only about 40 years since we talked of the hybridization of the grape, and it was then considered by many as of no practical value. Look now at the results, and these are only the beginnings of that day when every section of our broad land is to be furnished with varieties suited to the several localities; varieties which will be as hardy and certain of success as our most common fruits. See the number of fine sorts of which the Concord is the mother! and it is only 26 years since it came to notice. Look at the hybrids of Rogers, Ricketts and others, and note the progress. Look at Ricketts's Lady Washington, a graft of which has made this year 75 feet of wood, and which possesses more vigor than the Concord, its mother.

Look at the Prentiss, Duchess, Pocklington, Niagara and other white grapes of this year, and who can doubt the beneficial influences of cross-fertilization, either natural or artificial. I have written more than I intended, and so close. MARSHALL P. WILDER.

Dorchester, Mass.

Penciled Zinc Labels.

AN esteemed contributor writes us as follows under date of Oct. 9:

"You are manifestly unaware that the use of these penciled zinc labels was warmly advocated a dozen or more years ago by the distinguished horticulturist, Mr. Marshall P. Wilder, of Dorchester, Mass. The subject was much talked about at the time, and I remember to have myself heard Mr. Wilder describe his experiences, as long ago as the Winter or Spring of 1866–'67, at a meeting of the Boston Society of Arts. I examined the labels which were exhibited by Mr. Wilder at that time, and understood that many of them had been in actual use for considerable periods. Together with the other members of the Society, I was a good deal interested in seeing how the graphite of the pencil had shielded the zinc beneath it from oxidation. The writing was plainly visible in the shape of non-oxidized or comparatively little oxidized markings on a field of more completely oxidized zinc.

Educational.

AGRICULTURE IN SCHOOLS.

IRELAND has taken a step in advance of all other countries in regard to the teaching of the rudiments of agriculture in the public schools. Perhaps there may be reason and wisdom in this as well as justice, for agriculture in that unfortunate island must necessarily be in a deplorable condition, when the soil, proverbial for its excellence, does not support its occupants. In such a case the first principles of the profitable culture of the soil may well be taught in the schools, which are the only means of reaching a population that is quite without any other source of instruction. But it is an evidence of a popular need of rudimentary instruction, that a beginning has been made, in Ireland, in the way of teaching children as much as possibe of the first principles of the industry by which they are supported and must soon support themselves. This need is as apparent in America as in Ireland.

It is a fundamental one, at least, so far as regards the rural population. It is admitted that it is the duty of the State to instruct the youth in such knowledge as shall make them industrious and useful citizens. This is one of the first principles of our beneficent form of government. In urban schools, children and youths are taught the principles of mechanics and other useful sciences, as well as to read, write and figure; they are also taught the principles of commercial industries, and in all useful and practicable ways are prepared to enter the several employments open to them in towns and cities. In rural schools the system of education does not adapt itself so well to the special requirements of the children and young men and women who attend them; and when the time comes for these to leave school, they are too apt to look from home for employment, because their minds have not been turned in the direction of their home pursuits.

More money can be made by a young man upon a farm than in a city store or office. The wages paid by farmers are more than the average paid in stores and offices. A youth of 16, who thinks himself well paid at three dollars a week in a lawyer's office, can earn as much in money, with his board in addition, on a farm. This is the lowest rate paid by farmers and a competent farm workman can earn more money than that. The young man who earns eight or ten dollars weekly in a city is thought well off. But when the cost of board, and the requisite expensive clothing, and the wasteful habits of city life are all covered, there is nothing left to lay by. The young farmer can easily save a hundred dollars a year, and in a few years by study and observation can become such a master of his art that he can rent a farm, stock it with his savings, and earn a comfortable and independent living. It is worse than useless for those who have influence in molding popular opinion to lead young men to believe there is no place for them in the country, and to say that a man cannot be a farmer unless he owns his farm. To do this in all cases is an impossibility. Does every man engaged in business own his store, his stock or his business? Not by any means. Every one hopes to do this in time, but the prizes which fall to the successful ones are buried under thousands of blanks and failures. It is not so on the farm. The industrious young man who is able to rent a farm, has a far better chance of owning it, or another, in a reasonable time, than the clerk in a store or a workman in a factory has of owning a similar business for himself. Farming is a progressive business. Stock accumulates very fast and in a few years a small beginning attains to respectable proportions. If one only knows how! And here is the point which we wish to enforce.

Rural youths should be educated in the principles of the art and science of agriculture; taught to think and reason about it; and become possessed of the ability to be their own teachers afterwards. This rudimentary knowledge can only be taught in schools. We propose to make an effort in this direction. We begin in this number, on page 730, a series of articles on Farming for Boys and Girls, to which we earnestly call the attention of parents and teachers. We ask that these articles be read and criticised. They are intended for the older children and will be written plainly, in a style that shall be correct as examples of composition, and as such admissible into schools. We suggest that they be read in families, as the children are gathered around the evening lamp, and made the subjects of conversation and discussion: also that they be read in schools, by one of the scholars who is capable of reading them well, and that the class then recompose them in their own words and style, as an exercise not only in agricultural science, but in composition. The matter will be found interesting and instructive, and may thus be made to serve two useful purposes. We ask the co-operation of school directors and teachers in this important work and shall be pleased to receive suggestions from them in aid of our design.

Veterinary.

TEXAS FEVER.

D. E. SALMON, D. V. M.

THE interest in this disease, which had nearly died out among Northern stock raisers since the great outbreak of 1868, seems to be once more aroused by the report that Texas cattle affected with it have lately been landed in England. As a consequence, many of our papers have contained accounts of the nature of the disease, which are more or less misleading; and even the most trustworthy statements that have appeared contain important assertions which, it seems to me, can hardly be justified by what is at present known of the disease. One thing is certain, and that is, that in a vast district in the Southern States the cattle, though apparently healthy, harbor the germs of a fatal disease that may be transmitted by them through the pastures to Northern cattle; and, on the other hand, Northern cattle taken to this district almost invariably contract the malady.

The northern boundary line of this district begins, at the East, somewhere in Virginia, and has a southwesterly direction, following very closely the line of the Blue Ridge Mountains, crosses the northern parts of Georgia and Alabama and deflects somewhat to the north through Arkansas and the Indian Territory.

Another point may be safely admitted, viz., that cattle which have never been within the habitat of the disease, as outlined above, though they may contract it, are incapable of transmitting it to other susceptible animals. We may go a step farther, even, and admit that the cattle from this infected district are not sound; that their enlarged spleens and their stomachs covered with erosions, or scars where these have been, are indubitable evidence that they are suffering from an affection to which they have become inured, by long exposure, to such an extent that their general health, *under ordinary conditions*, no longer suffers from it.

But we must hesitate before accepting the assertion that Southern cattle never show the disease in the acute form after being taken North; and that, consequently, Texas steers could not have been landed in England while suffering from it. Usually they do not; but when exposed to the fatigues and sufferings of long transportation, there is reason to believe that their powers of resistance are so reduced that the germs, which they carry in their systems, gain the ascendancy. Thus, Gamgee saw in Kansas a Texan steer suffering from the acute form of Texas fever as a consequence of the fatigue induced by being stampeded. In 1868 large numbers of these animals died at Cairo, Illinois, where they were landed from the boats, and it was believed that their death was due to Texas fever. Again, the New York Commissioners found two Texas steers at Buffalo in a dying condition, and on being slaughtered, "they presented every characteristic symptom of the genuine Texas cattle disease." A similar case has been reported to me in the mountains of North Carolina. It seems probable, therefore, that the fatigues of an ocean passage may be sufficient to produce the acute symptoms even in Texas steers.

Now, what is the danger to our English friends by the importation of Texas cattle? It would seem that under existing regulations there is absolutely none. The disease is only transmitted through the pastures; Northern cattle have stood in the same stables with newly imported Texans, they have pastured in lots separated from them only by a board fence, and have not contracted the disease. American cattle, being all killed at the port of landing, there is, then, no possibility of an extension of Texas fever in England.

The effect of using the flesh of acutely diseased animals as food is not well known. The New York Commissioners attributed certain epidemic affections of the digestive organs, which occurred in New York city in 1868, to the use of meat from such diseased cattle. The evidence in favor of this view, however, was not very tangible. As a rule, the flesh of animals suffering from an acute disease should be rejected, no matter what the nature of the malady. The flesh of Southern cattle, not affected with the disease in an acute form, is used over the extensive region I have mentioned, with impunity. The animals are not feverish; their flesh is perfectly normal in appearance; and the slight lesions I have mentioned as generally to be found, evidently have no injurious effect upon it.

But these animals harbor a contagious germ—is this without effect on the healthfulness of the flesh as food? The habitual use of such flesh over a large district, must be the answer to this question. We are in complete ignorance as to the nature of the germ in question, and it may be doubted if its habitat, in the body of these animals, extends beyond the digestive organs and bile ducts.

In my report to the Commissioner of Agriculture, which will soon be published, I have furnished evidence which proves the gradual extension of the infected district towards the North, and I have insisted upon the importance of adopting measures for checking this extension. These measures are the well-known sanitary regulations which nearly all civilized nations, with the exception of the United States, have adopted to limit the destructiveness of contagious diseases. The individual States seem powerless in this matter, and it is only by a Congressional law of general application that we can hope for relief; but while the contagious pleuro-pneumonia of cattle is not deemed of sufficient importance to receive the attention of our Congress, it is scarcely to be hoped that Texas fever will receive any notice from this august assembly until it is too late to accomplish beneficial results.

Dairy Husbandry.

THE DAIRY COW—NO. 13.

HENRY STEWART.

Milk-Houses.

MILK-HOUSES may be constructed of wood, of stone or of brick. If well constructed, one kind may be made as useful as another. For some purposes a frame house is the best, retaining an even temperature better than any other. Air passes through brick and plaster with much greater facility than is generally supposed. In a test once made the air, forced by a wind pressure of only three pounds on a square foot, passed through a brick wall plastered inside, with such ease that, when collected by a funnel one foot square and discharged

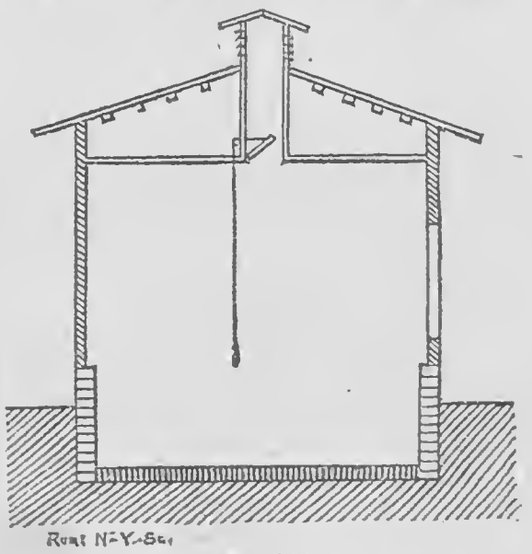


FIG. 347.

through a small orifice, it was sufficient to extinguish the flame of a common candle. It is this passage of air through brick, which causes a deposit of ice on the inner surface of the wall of a warmed house when a cold wind is blowing outside, or a deposit of dew on the inner wall of a cold house when a warm wind is blowing in the Summer. But a frame house must be well constructed, otherwise it will soon begin to decay at the foundation and this will at once destroy its usefulness. The frame house should be supported upon brick foundations, and if the soil is suitable, the foundation should be sunk at least four feet below the surface. A section through the center of a convenient milk-house is shown in the illustration—fig. 347.

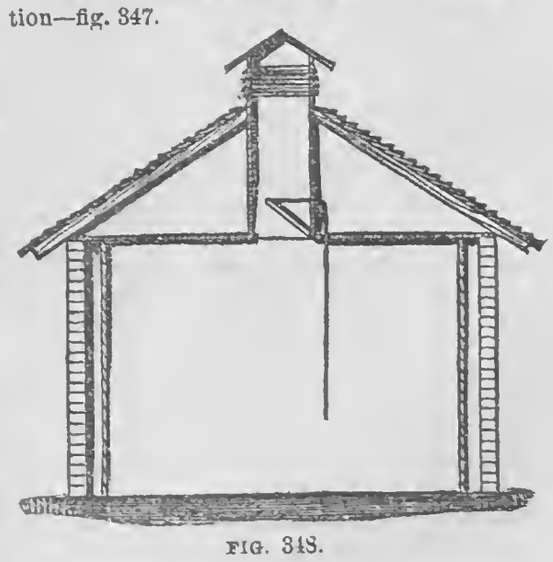
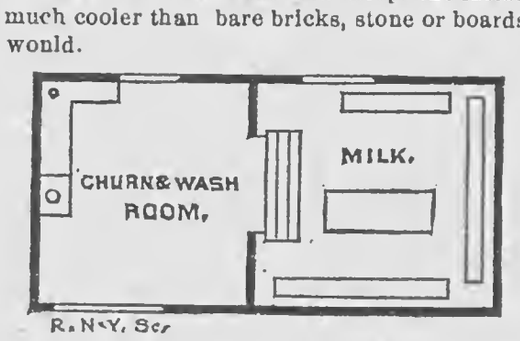


FIG. 348.

The foundation is of brick or stone, and is carried up sufficiently to preserve the timber from decay. The floor is covered with hydraulic cement concrete three inches thick, and is finished with a light coat of clear cement and sand in equal parts. One window is on the north side, and is protected by a wire gauze screen against flies. A space of two feet is left above the ceiling, and through this

a ventilator is passed, which is closed by a trap-door that can be raised by means of a cord reaching down below The walls and ceilings should be plastered and a hard-finishing coat of plaster-of Paris, costing only a few dollars extra, will add much to the cleanliness Lime wash will be always peeling off and the scales will fall down upon the milk occasionally. The hard finish is less porous than the lime, which is an advantage. A brick, stone, or concrete milk-house will be preferable where the material can be procured easily; stone or concrete will be the cheapest where the stone or gravel is abundant, and either is better than brick both for Winter or Summer use. If the walls are lined inside by means of furring strips four inches thick upon which the laths are nailed, a considerable air space will be secured and this will help greatly to preserve an even temperature in the house. A section of a house constructed in this manner is shown at figure 348. The outside of the milk-house should be painted or washed white, as this reflects the heat and keeps the inside much cooler than bare bricks, stone or boards would.



DAIRY HOUSE.—FIG. 349.

For a butter dairy, a churning room will be required, and this room should be provided with a sink and water for washing pans and utensils. A plan for an arrangement that has been found convenient is here shown. To secure drainage, the floor is raised at least a foot above the level of the ground, and the surface outside should be graded up to the door-step which should not be raised more than seven inches. It is very inconvenient to have steps up to a dairy, because in Winter these are slippery with snow and ice, and it is a severe tax on any person to carry heavy palls up a number of steps. The sink in the churning room should be provided with a pump from a cistern or well close by; a cistern is the best because it will receive the water from the roof and keep the ground dry about the foundation. A drain should be provided in the corner of the sink. Above the sink some racks may be made to hold spare milk pans, pails, etc. The milk-room is reached by a few board steps with a rise of not more than seven inches each. The shelves are ranged around the sides and a wide, low table is in the middle for the cream jars and to do the skimming upon. If deep setting is practiced less room will be required: But it will always be well to estimate for the largest possible amount of space and room in a dairy, and then make it still a little larger, In my experience in planning dairies for myself and others, I have never yet found one too large, but many that have soon proved too small.

Herdsman.

THE GOAT.

An effort has been made in England for some time to bring the goat forward as an object for greater consideration in agricultural circles, and, besides the British Goat Society, of which Lady Burdett-Coutts is patronness, the manager of the Alexandra Palace, a place of public entertainment, recently arranged an exhibition of some one hundred fine specimens of British and foreign goats, an illustration of some of which we have re-engraved from the London News.

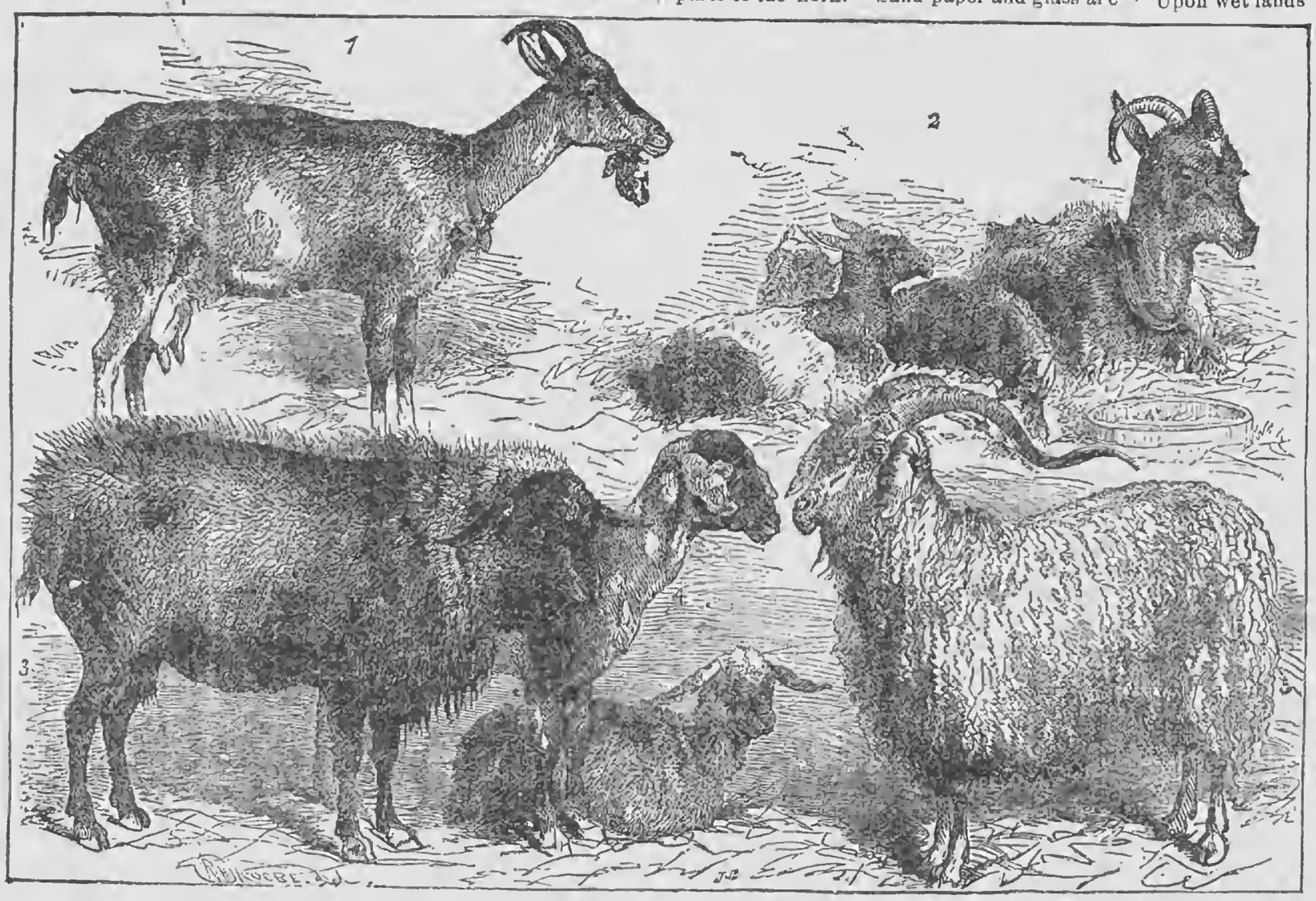
The illustration is of five of the animals on exhibition. Figure 1, is the common domestic goat, four years old, of which species one or more may be seen upon the small estates of most of the peasantry in the highlands of all the European countries, serving to supply milk and often meat. Campbell in the poem of the "Soldiers' Dream" of being at home again, has this suggestive line—

"I heard my own mountain goats bleating afar!"

The same species imported into America is the companion of the poor family from New Foundland to Central America, and is oftentimes the greatest blessing of the occupants of those poor hovels.

Figure 2, represents another domestic goat with kids. Figure 3, is a Hungarian goat belonging to Lady Burdett-Contts and is five years old. Figure 4, is an illustration of another belonging to Lady Burdett-Coutts, with kid. Figure 5 is an Angora goat two years old. The foreign species, with the exception of the Angora, do not seem to have been taken up for experiment as yet. There are several species of wild goat found in the East, and some few domestic animals are known which somewhat resemble the wild ones and a few of them were on exhibition.

What is expected to be gained by the consideration of the goat at this time does not appear. If for the purpose of improving or for the discovery of some more useful breed for practical husbandry, the world will wish the British Goat Society all possible success. There would seem to be material foundation enough in the goat family for some practical results; but it is apparently necessary to cross and breed out some of the more marked peculiarities of the animal before any favorable results can be hoped for. Certainly the rougher, rockier portions of all countries may well be the home of the goat provided the hair or milk or flesh or all these may be made a source of profit. The Angora is the most hopeful at present, but although experiments are being made with it in America, its raising does not yet seem to have become profitable away from the Pacific coast.



VARIETIES OF THE GOAT.—FIG. 351.

HORNS CRUMPLED BY ART.

There is nothing about the dairy cow that calls forth so many whimsical notions and tastes in breeders as the horns. The breeders of Angus and Galloways want a smooth poll—no horns at all. The Short-horn or Durham breeder and also the Jersey breeder want rudimentary, crooked, drooping or crumpled horns, like an old snag or gnarled root, antique and all awry, one turning into the jaw-bone below or lying back on the neck, the other poluting to the stars or reaching out straight forward, like the antennæ of an insect. The Devon breeder wants a bright, white, keen, scimetar-shaped horn—a villainous instrument for attack or defence, something that will make the blood run cold when the old cow shakes her head at you in the open field with no friendly hedge or tree in sight. Even the Devon does not rank first in horns, however; the Texan steer can give him two in the game and lead him by a foot on either horn. Here, however, there is some sense in horns, for often these cattle have to protect themselves from wild beasts, and a strong horn is their only defence.

But why have not these excrescences of civilization been bred off long ago? Of what earthly use are horns on a cow? The younger and weaker members of the herd are victims to these cruel instruments, and dealers in hides tell us that all pelts are injured more or less, the damage amounting to millions of dollars in the aggregate—by the marks or scratches that each animal receives some time in its life-time from the horns of another. This is a source of great perplexity and often of contention between buyers of hides and the tanner. Who has not made a visit to the stable and found the worst cow in the herd, as it always happens, loose and raking the sides of her helpless companions that are chained up powerless to protect themselves, their sides reeking with blood and perhaps a dead embryo calf or pierced udder as the sad result of too much horns on the head of the boss cow. On bulls these horns are doubly dangerous. Hogs, sheep, horses and human beings are the victims of these desperate and armed beasts. Polled bulls are as quiet as young heifers or old cows. It is the sense of power for mischief that instigates the evil disposition of a bull.

In producing new breeds of sheep the folly of horns has been recognized and they have been left off, though in this instance there is some cause to leave them on as a protection against the ravages of dogs. But why should

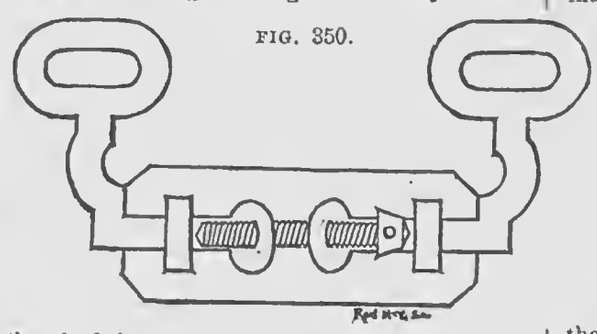


FIG. 350.

they be left on our improved breeds of cattle? The average Jersey cow has, as said before, only a rudimentary horn and it grows in any direction if left to itself, and is so soft she is almost certain to lose part or the whole of it before she has reached maturity. The shell often slips off so easily that it is impossible to tell how the accident could have occurred, and the cow's beauty is marred for life. This very softness of the horns makes it an easy matter to train them in any shape desired. The breeders on the island of Jersey have taken advantage of this, and often, if not always, put clamps, such as are figured above, on the horns to give them a uniform and crumpled direction.

This instrument is made of iron, consisting of a plate that fits against the forehead. The rings slip over the points of the horns, and the other end of the bar passes through staples in the plate, sliding backward and forward with the ends turned up and pierced by holes in which a thread is cut. Through these ends a long-threaded bolt screws, to constantly shorten up the rings. They are put on and screwed tightly, but not enough to hurt the animal. In three or four days they will be found to have become quite loose from the effect of the horns growing toward each other. The screw must then be tightened again or the clamps will drop off, and, if the animal is at pasture, be lost. They are tightened by passing the point of a nail into the hole in the end of the bolt and screwing it up. In a few weeks the most stubborn horns can be brought into the most graceful curves or "bug shaped." In connection with the clamps a coarse, half-round rasp should be used to take off all the rough, thick parts of the horn. Sand-paper and glass are too slow; a rasp will do the work in one-eighth of the time. A heavy, coarse horn on a Jersey is a great blemish. With persistent rasping the coarseness can soon be entirely removed. This is only a "fancy" point, but it goes a long way in making a sale to the average buyer. I have known it to add more than $50 to the value of a young bull and twice this amount to a heifer. The buyer may know how it is done and, in fact, see the clamps on the animal; but the pretty horns will still tempt him to buy. Care must be taken not to screw the clamps too tightly or they will break the bone of the horn.

L. S. Hardin.

STOCK NOTES.

BY A STOCKMAN.

The Hereford is now favored with a boom. I have had some hot discussions with friends of the Short-horn, in defending this breed which has been unjustly neglected, while the Short-horn has been enjoying its much inflated prosperity. The Hereford is an ancient family. It partakes with the Devon the honor of an old-time pedigree and history, and it bears its escutcheon, like the Devon, in its distinctly marked family features, which are reproduced with the greatest faithfulness.

The Short-horn is a made-up breed in comparison with the Hereford. It is fast becoming more distinctly marked in color, as the frequent roan becomes more fashionable; and the best families become more thoroughly intermingled with the rank and file. But it does not seem so well suited to bear the hardships of the plains as the Hereford, and the persistent work of the friends of the latter, notably of Mr. Miller, of Beecher, Illinois, has brought the meritorious white faces into popularity, and, as might have been expected, they are more than holding their own.

Beef and mutton are fast becoming the popular aliment. Our large foreign population, unused in their former homes and poorer circumstances to so expensive a food, are greatly increasing their consumption of meat. It is a fortunate thing, for it is a matter of history that the beef-eaters, the best fed people, have led the world in war and peace. And if the general consumption of beef and mutton will bring the United States into the position of the first nation of the world, or rather keep it there; or if, to take it the other way, the first nation of the world must eat the most beef and mutton, then there is a promising outlook for graziers and shepherds.

The gentle sheep has always been a wealth producer. The latter end of Job "was blessed, for he had 14,000 sheep," which would mean to one of us an income of just as many dollars per year, if not twice as many. What an investment for capital, that brings in 50 or 60 per cent. yearly, with almost the certainty that appertains to U. S. four-per-cents. A flock will easily increase 60 to 70 per cent. yearly, and half that will be compounded after the second year. This rate of increase is enormous and sufficiently points to the vast profits that are made from successful sheep rearing.

One of the greatest difficulties in keeping sheep arises from the attacks of the liver fluke. Upon wet lands and in very wet seasons, the danger is greatly increased. The past year has seen the English flocks reduced at least one-fourth by this destructive parasite. Only one known breed is proof against this pest of marsh pastures and low lands. This is the Romney-Marsh sheep, and it is curious that none of our speculative breeders has as yet made this sheep fashionable. Its value is not only in its adaptation to low lands, but it yields excellent mutton and a fleece greatly in demand for mohair and other lustrous fabrics.

Marsh lands are remarkably prolific in grass. To make such lands serviceable for sheep culture would be a vast advantage and economy. In that part of England where the Romney-Marsh sheep are kept the marshes are ditched, and even diked, to keep out the tide water; and on these exposed lands these hardy sheep feed in Summer and Winter. Some of these pastures are so luxuriant as to carry 14 sheep to the acre. What a sheep this would be for those of our farmers who think this animal is well provided for on the lee side of a straw stack! With this even they might secure their mutton.

Another breed that seems desirable for our purposes is the Dorset sheep which in England bears lambs twice in the year and has the habit of breeding at whatever time of the year may be desired. For market lambs what could be a more appropriate sheep than this? And yet this has been neglected.

Just at this season the wide-awake farmers, who keep their farms rich and make money in each hand, are picking up a few ewes from

each passing flock. They know at sight those which suit their purpose; young and thrifty, with small heads, broad loins and deep flanks; ewes which will bring a good lamb and fatten up rapidly when the lamb is weaned. A smutty face is a further commendation, for that is derived from a mixture of South-Down blood. Then they procure a good ram, or, having one, breed it to these ewes. Fifty ewes may cost now a matter of $200. With good care next year they will bring $250. The manure will pay for their care; the extra value will pay 25 per cent. interest on the money; the lamb will pay all the cost of the feed; and the wool will give a stock dividend equal to 30 or 50 per cent. What other business affords a better profit?

Industrial Societies.

THE ST. LOUIS FAIR.

[Rural Special Report.]

THE annual fair of the St. Louis Fair Association, at St. Louis, Oct. 4–9, was one of the most successful meetings ever held by that association. The display in all of the departments, excepting stock, was larger than usual, and the attendance was all that the society could wish for. On Wednesday there were over 40,000 people in attendance, principally farmers from Southern Illinois and Missouri. On Thursday there were 80,000 on the grounds, mostly from the city, as on that day all business was suspended and every one went to the fair.

The weather during the week was all that could be desired, and exhibitors and visitors were well paid for their atttendance. The association should endeavor to obtain better facilities for reaching the grounds, as this is the only objectionable feature at this fair. The grounds are four miles from the center of the city, and the four horse-car lines running to them cannot carry one-third of the people that generally attend on Wednesdays and Thursdays.

The show of cattle, though not as large as on some previous years, included some very fine stock. There were of Devons, 24 head, two herds; Ayrshires, 34 head, three herds; Jerseys, 114 head, eight herds; Holsteins, 16 head, two herds; Herefords, 31 head, five herds. The Missouri breeders did not come out as strongly as they ought, most of the cattle shown being from other States. The show of swine was very large and good, as was also the display of sheep. Floral Hall was well filled with a fine and choice collection of plants and flowers. The exhibit of farm and garden produce was also good.

The agricultural implement department carried off the honors, however. Here was shown farm machinery of all descriptions from every part of the country, covering several acres of ground. All the large machinery was shown in full operation, giving to the exhibit life and animation. A large number of traction engines were exhibted on the track, and the attention they received shows the interest the introduction of steam for farm use is attracting throughout the country. Large, attractive and permanent buildings were occupied and owned by such firms as Deere, Mansur & Co; the Moline Plow Co; the Oliver Chilled Plow Co; Koenig & Co; Ferd, Baur & Co; the Walter A. Wood Mower and Reaping Machine Co., and many others. These buildings, filled with all the latest improvements in agricultural machinery, were at all times surrounded by crowds of farmers looking for labor-saving implements. There was a number of new self-binders in operation. Plows—gang, sulky and hand—were shown by the hundred. Thrashing machines, portable engines, hay and cotton presses, clover hullers and all the larger kinds of machinery covered an immense space outside of the buildings, and were all practically shown. One of the pleasant incidents of the fair was the presentation of a handsome watch to Assistant-Superintendent, W. F. Schoenhard, by the agricultural implement exhibitors and attendants, in return for the accommodating spirit that he always shows in attending to the many wants of exhibitors in that department.

THE WHITMAN AGRICULTURAL CO., of St. Louis, made the largest and handsomest display of agricultural implements manufactured within the State of Missouri, and received the first premium, $100, for the same. They were also awarded three other first premiums, which covered all of their entries. Their Monarch and Young America corn and cob mills attracted a great deal of attention. The sale of these mills during the past Summer has been unprecedented. This company make only lever or sweep mills, and challenge competition. The grinding of corn and cob together has become a question which farmers must look into. We have had reports highly commending it as the most economical way of feeding, and the manufacturers of this class of mills are now competing hard for this trade. The Whitman Agricultural Co. claim that they make he only mill with the cast cast-steel grinder, and they warrant their mills to give good satisfaction. They will grind corn and cob, shelled corn, oats and other small grains, and can be regulated to make family meal. The Whitman Co., also showed a large variety of corn shellers, with a capacity of 10 to 300 bushels per hour; also a full line of feed cutters, horse powers, road scrapers and a large assortment of other machinery. The demand for their goods has been so large during the past season that they will have to increase their facilities, and they have already made arrangements to enlarge their works at the corner of Eighth Street and Clark Avenue, so as to be able to meet the increasing demand.

J. A. FIELD & CO., of St. Louis, made one of the most interesting displays. In addition to their large exhibit of agricultural machinery they had three of their Big Giant feed mills in operation. Two of them were run by horse-power, using their sweep; and the other, a geared mill, was run by a portable steam engine. They showed practically just what their mill would do, and also the improvements that have been made since they first started it. They now use cast steel grinders. Their automatic sifting attachment attracted a great deal of attention and is a valuable improvement, as it allows the farmer to sift or bolt his meal at the same time he grinds it, and make a fine grade of family meal. Messrs. Field & Co. now make five sizes of their celebrated Big Giant mills, from one-horse sweep to six-horse steam power. They had framed and on exhibition letters of inquiry and orders from nearly every part of the globe showing the world-wide reputation their mills have already obtained. Their foreign trade is rapidly increasing, while at the same time they have hard work to keep up with their home orders.

THE OLD HOUSE OF P. P. MAST & CO., Springfield, O., exhibited a large number of their celebrated machines. Their display included the Buckeye spring-tooth grain drill, Buckeye combined grain and fertilizer drills, one-horse grain drill, Buckeye cider mills, Buckeye walking and riding Cultivators, Plow Sulkies, etc. This house is one of the largest and oldest in the country, and their goods have a well earned reputation all over the land. All through the fair they attracted great attention and many large sales were made on the grounds for early delivery, as buyers find that when they want the Buckeye drills and cider mills they must order early. Messrs. Mast & Co., although running their large factory night and day during the past season, were utterly unable to fill their orders. They are now running a branch house in St. Louis to accommodate their large Western trade, and with increased facilities hope to be able to fill all orders promptly for next season.

THE VANDIVERE CORN PLANTER CO., Quincy, Ill., manufacturers of the "Vandivere," "Quincy" and "Barlow Rotary" corn planters, made a fine exhibit of their justly celebrated Barlow Rotary which attracted special attention. This planter has gone through three seasons, and its superior merits are fully established in the minds of all farmers who have used it. It is celebrated for correct drop, easy throw of bar and general ease of handling. There are fifteen chambers in the drop plate, and the corn can be seen for five hills in advance. This is a feature long desired and used only on this machine. It is adapted to any kind of check rower. As a drill planter the manufacturers claim that in accuracy of drop and ease of change from check row to drill, it cannot be excelled. Its success has been so great that the company has been compelled to largely increase its facilities to supply its trade for the coming season. At the Illinois and Ohio State fairs this planter was a center of attraction.

THE SOUTH BEND CHILLED PLOW CO., of South Bend, Ind., made a handsome display of sulky and hand plows in their tent. They had on exhibition 22 hand and three sulky plows all finished in elegant style that attracted a great deal of attention. These plows have met with a great success. The company commenced business in 1876, making that year 600 plows; since then they have enlarged their works four times, and claim that next year they will turn out 50,000 finished plows. Their "South Bend" sulky plow was put upon the market this year for the first time, and has made a fine reputation. It is very simple in its construction, and is celebrated for its lightness of draft and ease of operation. Its self-lifting attachment for raising the plow out of the ground is a positive motion, relieving the operator from all strain, and at the same time causing no side draft. A boy nine years old can operate it.

THE ST. LOUIS BRANCH OF THE GIBBS & STERRETT M'F'G CO., whose headquarters are at Corry, Pa., made their usual fine display of Climax mowers, reapers and droppers in their permanent building. They showed a full line of machines in motion, thus displaying them to full advantage and allowing the spectators to see for themselves the many points on which they have built up their good reputation. The motive power was supplied by one of their reversible ten horse-power engines with boiler. The boiler is a locomotive portable; the engine has a peculiar link motion that makes it very convenient to handle. During the past season they have added open guards to all their mowers and reapers. The Climax machines are gaining ground rapidly, and during the past season these enterprising manufacturers have had all they could do to fill orders.

THE FARMERS' FRIEND M'F'G CO., Dayton, Ohio, made a fine and handsome exhibit of their well-known Farmers' Friend force-feed grain drills and corn planters. Their grain drill is too well known to our readers to need a description. Their corn planter, which was awarded the first premium at the late Kansas City fair, attracted a great deal of attention. This improved rotary drop planter has a tilting lever by which it regulates the depth of planting and also holds the shoes in the ground; by its use the planter is governed perfectly in either hard, trashy or mellow ground.

THE JERSEYVILLE AGRICULTURAL WORKS, Robert Newton, proprietor, exhibited Davenport's new patent self-lifting sulky plow transmitting the powers at will from the end of the beam to the rotating axle for the purpose of utilizing the team to throw the plow out of the ground, thus making it effective, simple and durable, and so easily handled that a boy can operate it. This is a great improvement and the plow will prove a very valuable addition to the labor-saving machines of the West.

THE TURNBULL WAGON was exhibited by the manufacturers, Turnbull & Shelly, Defiance, Ohio. They made a fine display, having a full line of their farm wagons on Exhibition. They created quite a sensation by attaching Dillon's celebrated team of imported Percheron stallions to their exhibition wagon and driving it around the track. This wagon was made of oak and poplar and finished up in the handsomest style. Attached to the fine team of iron-gray stallions weighing 1900 pounds each, this made a very attractive showing.

N. P. CONE, general agent of the Mechanicsburg Machine Co., Mechanicsburg, Ohio, exhibited the celebrated Baker grain drill. Although this drill has been introduced in the West but two years, the sales the present season have been three times greater than last year's, and the company are now making large additions to their shops at Mechanicsburg, so as to enable them to fill their increasing orders. The popularity of this drill is well deserved.

MESSRS. NASH BROS. of New York and Harrisburg, Pa., exhibited their Acme Harrow. The pulverising and clod-crushing harrow we have often spoken highly of during the past season. Although a new thing here, it attracted a great deal of attention, many dealers returning several times to give it a more thorough examination. The fact that 3,200 of them were sold the first year and that every one put out gave good satisfaction, shows that this harrow is all that the manufacturers claim for it.

THE BIRDSELL M'F'G CO., SOUTH BEND, Ind., made a handsome show of their Monitor Jr., clover huller and separator in motion. The Messrs. Birdsells have been making clover hullers for the past 25 years, being the pioneers in the business. From a small commencement their factory has grown to its present large dimensions. They now have a capacity for turning out one complete machine every hour. The Birdsell machines are well-known all over the United States, and every year adds to their popularity. The New Monitor Jr. has already placed itself in the front rank.

J. E. PORTER, of Ottawa, Ill., exhibited his patent wire-cable hay derrick and the Porter wood-track carrier in full operation. Mr. Porter's display attracted a great deal of attention and for the third time in succession he received the first premium at this fair. K.

Miscellaneous.

ENCOURAGE THE BOYS.

I HAVE frequently seen questions which concern "keeping the boys on the farm" asked and discussed through the agricultural press. While I consider it a subject worthy of discussion, I also think its importance has been misapprehended by many. We do not hear the question so seriously considered in other vocations. If the merchant's son does not follow his father's calling nothing is said, or if the blacksmith's son and the carpenter's son do not respectively follow their father's callings it brings about no public discussions; but because a farmer's boys sometimes leave the farm in pursuit of some other vocation more suited to their tastes, it is taken for granted that they have taken an objectionable step.

It seems to me that it is the duty of every father to study carefully the natural traits of his boys, so as to find out, if possible, what pursuit in life they are naturally the most fitted for. This once found, he should give them opportunity to follow the calling for which he thinks them best adapted.

We don't want our boys to be farmers if their natural tastes turn to some other legitimate industry. If a farmer has a son whom he wishes to become a farmer, he should aim to make his child life on the farm full of pleasure rather than hardships. It is not surprising that boys who are compelled by a rigid father to toil early and late, indefinitely, in the drudgery that usually falls to the lot of farmer boys, when their developing nature needs sympathy and encouragement, find nothing in farming to attach them to the business. It is not their fault. They see only the dark side of farm life and miss all the pleasurable events which should stand as monuments in their memory for the remaining years of life.

Boys need encouragement, and if we wish our boys to become farmers, we must attach them to the business, or, in other words, cause them to like farming rather than abhor it. The boy who has a liking for farming will usually make a good farmer. Give the youngsters an interest in the farm proceeds, if possible. Let them do something for themselves; council with them and discuss the plans and affairs of the farm. A boy thus treated, if he has any business tact for farming, will show it and make a good farmer. If, on the contrary, he shows no inclination toward the business, and has a liking for some other legitimate industry, he should be encouraged in that.

Among the most interesting features that I remember in my life as a farmer's boy, are the opportunities my father gave me to do something for myself. When but a small child he gave a brother and myself a share in all the eggs we could find about the place. In later years he gave us each a garden plot and encouraged an emulation between us, as to which should keep his garden in the best shape, the management being left entirely to us. Every year we were each given a young calf or colt to raise, and when it had grown up it was sold and the proceeds added to our little store of funds. Such conduct would seem like child's play to many farmers who make a practice of getting as much work as possible out of their boys at the least cost or trouble. If farmers would begin early to vary the monotony of farm life for their boys and to encourage them in the ways above mentioned, there would be less complaint made of boys leaving the farm and fewer discontented young men on the farms of our country. G. A. G., JR.

Elmira, N. Y.

THE SUGAR PRODUCT.

THERE is a promising increase in the production of sugar as reported from different sections of the United States at this time. The importations of raw sugar into the United States are worth, in round numbers, $75,000,000 annually, and it is worth the while for our farmers to endeavor to produce all we need, instead of allowing it to be purchased abroad.

To pay for this imported raw sugar $75,000,000 worth of wheat and corn must, of course, be exported, which might just as well bring money, instead of money's worth, into the country. Added to this, there is an outlay of the cost of the transportation of the wheat outward and of the sugar inward, and the consumers of the imported sugar also pay upon it a duty of nearly $45,000,000.

If this sugar were raised at home, instead of raising so much wheat and corn, the freight charges would be saved, the employment of lands and the labor of the people would be more diversified, the soil would be less exhausted, because the refuse from sugar growing is greater than that from wheat. Sugar, too, would be lower in price, the people would have another industry to occupy the land, and one requiring the employment of more capital, machinery and labor.

If the same amount of fertility were brought back in the sugar, as is carried away in the wheat and corn sent to make the exchange, the only net loss would be in the cost of transportation; but such is not the case; the crop of corn and wheat is far more bulky and represents a much greater degree of fertilizing element than is brought in by the raw sugar, while that brought in by sugar importations does not find its way to the land, but is lost. Added to this there is much land suited to sugar beets, sugar cane and sorghum, which is not suited to wheat, while there is prospectively greater profit in the cultivation of these than in wheat. The question of home sugar product bids fair to have a favorable solution at an early day.

The Water Supply.

East of the Alleghany Mountains there is a serious complaint of low water in the rivers and streams, wells drying up, etc., which calls for some earnest consideration on the part of scientists. The disappearance of the forests may not be the cause of a lighter rainfall, but that and the draining and reclaiming

of the land, have destroyed the natural reservoirs for feeding springs, and allowed the water from rains and melting snows to run off immediately instead of soaking into the ground. What shall be the remedy is the question. Steam may be used in place of water power, and the vast wind power blowing to waste is not as yet utilized, but the barren hills and drying stream beds call for a greater reservoir supply either natural or artificial, and such must needs be arranged for at no distant day. If, instead of draining the swamps these depressions had been excavated ten feet in depth and made into ponds, it would have given a partial reservoir supply, and in thousands of places there are natural depressions which may now easily be made to hold water, but the work must be extensively and systematically done to afford a complete remedy. B.

These Promised Book Premiums.

In the RURAL of the 16th inst., I find Conrad Wilson's explanation about the book premiums. Now I did receive the three papers and book, but I was not aware that they were sent in place of the book premium. I did not so understand it. I acknowledged the receipt of them and think they were very good papers; but I take the RURAL NEW-YORKER and I got from it all the information that was in the other papers, and a great deal more. I wrote twice to the Farmers' Publishing Company and asked for information (inclosing stamps to pay postage), and never got any answer, and I have received only the three papers and the little book. I had about made up my mind that the Farmers' Publishing Company was a fraud, so I thought that I would ask the RURAL. I knew I would get an answer from it.

Now, Mr. RURAL, I question the right of Mr. Wilson to make the change he did. I tried to fulfill all that was required in regard to the corn premiums, and did so to the satisfaction of the RURAL and through it I got the Challenge Feed Mill promptly. GEO. W. STRONG.

Davenport, Ia.

ANOTHER PREMIUM.—A friend writes us from Union, Broome Co. N. Y.—"I have from the RURAL Free Seed Distribution a splendid lot of beets, some of which are very large. I took the premium on beets at our fair, and hope to capture that RURAL prize also. Only one of the raspberry plants lived but that has made a splendid growth. Five out of the seven willow cuttings lived and have thriven finely. The Ennobled Oats did well, and received a great deal of praise at the fair. They were not thrashed, but they looked excellent."

NOT A BIT OF DOUBT OF IT.—A friend and well-known agricultural writer says:

"I am glad to hear you were so successful at the Mineola Fair, for you unquestionably fully deserved it. Every farmer on Long Island ought to take the RURAL—it is doing so much for them, and they sadly miss their own interests in not doing so."

BRIEFLETS.

WE are receiving many congratulations upon our yields of corn. . . . . Professor Beal improves the keeping qualities of white onions by using for seed only those which keep the longest in the Spring without sprouting. . . . . Now is the time to arrange Winter gardens for the kitchen or sitting-room. They may consist of flower pots simply—of soap or any other boxes that happen to be in the cellar or about the premises. It is easy to decorate these with moss, evergreen cones or something of the kind, so as to cover their ugliness. Then sow lettuce and radishes. An azalea, pink, violet, pansy or other plant that thrives in a low temperature, may be introduced to make such little gardens attractive. . . . . Gladiolus bulbs are best kept in paper bags in a room over 32° and less than 45°. Tube-roses are best kept in a warm room—say between 60° and 70°. Seed potatoes are best kept in dry sand in a temperature just above freezing. All roots may be kept well in this way. . . . . Where roots are stored in cellars we should avoid making the piles too deep. Nothing sooner promotes heating, fungoid growth, dampness and decay. . . . . Pits for keeping mangels, turnips, beets, potatoes, etc. should be dug on ridges or at least on high, dry soil. They may be dug three feet deep and wide. After storing the roots, cover lightly with straw or hay—then earth and finally boards, so slanting and overlapping as to shed the rain. As Winter advances increase the amount of earth. . . . . Remember the advice we have often given *not* to cover strawberry plants too early. The object of covering is not to keep them warm—or yet to keep them cold—but rather to assist in preserving a uniform temperature and to retard the action of both heat and frost. A good time to cover strawberry beds is *after* the first hard freeze of Winter. . . . . Let the covering be as light as possible and yet cover the plants. Salt hay is excellent for this purpose—straw, leaves, the finer parts of corn-stalks, evergreen branches or long manure may also be used. Laths or slender pieces of wood should be laid over the covering to retain it in its place. . . . Major Freas's method of protecting trees against rabbits and mice is to bandage them with any old cotton or woolen cloth—for mice, eight or ten inches high; for rabbits, two feet. . . . . It would not be surprising if Four-o'clocks were again to become fashionable. Already we find among the proprietors of costly grounds some who have never seen them—know not what they are. Marvel of Peru is another common name for this plant, the botanical name being Mirabilis Jalapa. . . . . Belle de Nuit it is called in France. We find in English catalogues eight different sorts, viz., yellow-striped, scarlet, white or silver-striped, purple, sweet-scented, white and gold variegated leaved. The roots are perennial; the flowers bright and showy and the plant of quick growth and round, branching habit. . . . . The Rural Branching Sorghum is at this date, Oct. 16, as green and fresh as ever. We are again cutting that which was cut in mid-August. It is now two to three feet high. . . . . What right has a man to fret or scold over poverty so long as he can find money to buy whisky, tobacco or cigars? We know of a grumbling farmer who, though not too poor to buy whisky, is yet too poor to provide his hard-working wife with the necessary comforts of life. Do such people ever take the above view of it? . . . . . The Syracuse Herald says that the report that Alice Oates is to be offered the position of Professor of Husbandry at Cornell University lacks confirmation. . . . . Dr. Eagan has given immediate relief in every instance for rhus (sumach) poisoning by topical application of fluid extract of Grindelia robusta, either pure or diluted as exigencies demand. As the RURAL stated a year or so ago, physicians use this also for asthma. . . . . As stated elsewhere, we would be pleased to forward to any of our readers who may apply the RURAL NEW-YORKER "Poster" for 1880–81. We should be glad to have one of these tacked up in the barn or carriage house of every one of our subscribers. . . . . Very few of our agricultural contemporaries have mentioned our yields of corn. Having the good of agriculture at heart, it might be supposed that they would hasten to present the facts to their subscribers. . . . . The great London (England) seeds house of Jacob Wrench and Sons writes to one of our seedsmen as follows: "We are sorry we cannot order the Beauty of Hebron Potatoes unless you can guarantee that there shall be no dead beetles in them, as they are undoubtedly a grand potato in every way—especially flavor." (!) . . . . . The following is a copy of a letter from the Commissioner of Agriculture, Gen. Le Duc, to the firm that will next year offer the White Elephant Potato for sale; "My opinion of the White Elephant Potato is shown by the expression now of my wish to learn what quantity you have for sale, and the price asked." . . . . . Prof. Roberts tells us that 50 bushels of wood ashes per acre increased the yield of grass more than any other manure—ground bone improved the clover. . . . . Mr. E. H. Libby (late editor of Land and Home and previously of the American Agriculturist and Scientific Farmer) says in the Christian Union, that "a worse thing could happen than for the recently organized 'New York Experiment Station,' which, has done no work, has no foundation, no laboratories or trained specialists, to unite with the Cornell University Experiment Station, and give the latter its present and prospective funds." (!) . . . . . A lady traveler remarks that the cleanliness and order on board ship, where all the work is done by men, including that of the kitchen and the care of the cabins, almost convince her that woman has mistaken her vocation in attempting to grapple with housework.

WHAT OTHERS SAY.

THE amount of capital employed in British agriculture, inadequate although it often is to secure the fullest returns, is enormously in excess of that required in ordinary farming throughout the States. So says Mr. Finlay Dun of England.

HOUSE and buildings there cost less than half the amount expended upon them here, he continues. Great tracts of country are in little need of artificial drainage. Where frost for three months secures an adamant way of ice, and Summer drought for a still longer period gives firm transit over meadow and prairie, expensive roads are little needed. The herd law, in force throughout many States, forbids cattle being turned out without a keeper, and diminishes the need of fencing. These conditions obviously economize outlay. For £3 an acre American farmers are generally supplied with the requisite buildings and permanent equipments which in England cost £10.

NEW METHOD OF PRESERVING RAW MEAT.—A new and apparently most valuable method of preserving raw meat, discovered by Professor Artimini, of Florence, and patented in England, promises to have a great effect upon their markets. According to a report by Professors Barff and Mills, of the Glasgow University, and Dr. Stevenson, of Guy's Hospital, meat six months old was found to be perfectly sound and good, the muscular fiber unchanged and the nutritive properties unimpaired. The material employed is said to be less expensive than salt and not only wholesome but pleasant to the taste.

INCUBATORS.—"We recently heard it affirmed," the Mark Lane Express (England), remarks, "that incubators were being used by every poultry breeder in the country, and that these machines were a great success, both of which statements are untrue. The makers of incubators have to sell their articles, and they endeavor by every means to induce people to purchase them. But it is very doubtful if a purchase is ever repeated. The real facts are that the large and more successful breeders of poultry will not use the incubator, as they know from practical experience that a few good sitting hens, costing only a few shillings each, are more to be trusted, give less trouble and bring up the chickens stronger and better than when these are hatched in an incubator, and reared under artificial mothers. The competition is now so keen amongst poultry exhibitors, and the desire to win a cup at the Crystal Palace or Birmingham so great, that if these incubators were actually found to be better adapted for hatching and rearing chickens than a hen, they would at once come into general use, and the broody hen would have no duties to perform except to lay eggs."

HOG KILLING IN CHICAGO.—Professor Sheldon (our occasional English correspondent) is now visiting this country. The following account is taken from the Live Stock Journal of London:—"In Chicago I visited the meat-packing establishment of Messrs. Armour & Co., which is situated close to the Union Stock-yards. This establishment is said to cover an area of over twenty acres, and is, of course, the largest of its kind in the world. . . . . An inclined and covered way leads from the stock-yards to the upper story of the slaughter-house, and up this plane the pigs are driven direct from market. A pen holding about fifty of the doomed porkers is situated nearest the place where they are knifed, and outside this one are two or three others adjoining the top of the plane. In the pen first mentioned two men are posted, whose duty it is to slip a chain-noose around a hind leg of each pig; to this chain is attached a swivel, which hooks on and slides along a horizontal bar of iron overhead. Immediately a pig is noosed he is hoisted in the twinkling of an eye some three feet clear of the floor, by means of a chain and pulleys, the chain for the moment being hooked near the noose on the pig's leg. Here the swivel is placed on a bar of iron, and a shove is given to the pig, which travels a few yards along the bar of iron, clearing a low door which separates the pen from the slaughter-house proper. In the latter stands a man who is armed with a sure blade of steel, and, as the suspended animals glide past him, he gives each one of them the *coup de grace* with singular dexterity. In a moment the deed is done, and the pig glides along, beating the air with his helpless feet, the blood flowing out in a stream against the sides of the pen, until he fetches up a few yards away against a whole gallows-ful of earlier victims. Sometimes the man with the knife takes a flying shot, and again a pair of them, but each time his aim is deadly and instantaneous. It is considered a fair day's work for this man to stick 3,600 hogs, but he has done as many as 5,000 in a day. . . . The earlier part of the process I have been describing is indescribably revolting, with the yells of the dying pigs and the streams of blood which fly about in all directions; but the latter part, after the disemboweling processes, is conducted with all the decency and cleanliness possible in such a place. Here the men are cleanly in dress and person, whereas in the earlier stages such a condition is impossible. But everywhere system and order reign and labor-saving appliances are used wherever possible.

STANDARD CURRANTS AND GOOSEBERRIES.—The standard currants and gooseberries which were displayed at the Centennial excited a great deal of interest. It was then claimed for them that borers would not trouble the MISSOURI stock upon which they were worked and that the finest foreign kinds would not mildew. We purchased half-a dozen, paying, as we remember, $1.50 each. We found that, though the currants bore well and were curious as ornamental plants, all of the gooseberries mildewed in spite of the free use of sulphur. Our report to this effect was not received at the time in a very friendly spirit and was attributed, in one case, at least, to "hasty conclusions." Now, however, that two years have passed since our report, Mr. H. G. Hooker of Rochester, who, as we remember, was the first to offer them for sale, writes to the Gardeners' Monthly as follows:—Currants and gooseberries will grow and bear heavy crops when worked high (or low) upon the Missouri flowering currant stock, but the stock is not stiff, and always requires a stake to maintain it upright. The fruit is not better or less liable to mildew when worked in this manner; and such plants must always be very high-priced, as they are difficult to work and the stocks need age to make them stout enough to stand well. They are curious, especially when currants and gooseberries, both red and white, all appear in one head upon a tall stem, and that is all the recommendation they will bear.

THE GROUND CONTACT OF LIGHTNING-RODS.—We find the following in the Journal of Chemistry: In a recent article in the Journal of Telegraphy, the noted electrician, David Brooks, argues that the subterranean section of a lightning-rod should be enlarged in as great proportion as the earth's specific conducting capacity is less. A half-inch square rod, in his opinion, should have a ground-plate no less than 270 feet square. In lieu of this, there should be a connection with gas and water pipes. He adds that after thirty years' observation he has never known of a case where the occupants were injured when the building was fitted with gas and water pipes. The buildings were sometimes set on fire by the electric fluid passing from the lightning-rods or metallic roofs to the gas-pipes, but there was no injury to persons in any part of the building below the higher points to which the pipes extended. His general conclusion is that gas and water pipes are the best lightning-rods ever erected, because they are electrically in perfect connection with the earth. They should extend to the very top of the building, or be connected by a rod running to that elevation.

A NEW VINE.—The London Times has the following: A French explorer, M. Lecart, who is at present on the banks of the Niger, writes home from "Koundian (Gangaran), July 25," that he has discovered a new vine, which promises to be of great economical value. He says the fruit of the vine is excellent and abundant, its cultivation very easy, its roots tuberous and perennial, while its branches are annual. It can be cultivated as easily as the dahlia. He himself had been eating the large grapes of the vine for eight days, and found them excellent; and he suggests that its culture ought to be attempted in all vine-growing countries as a possible remedy against the phylloxera. He is sending home seeds for experiment, both in France and Algeria, and will bring home specimens of the plant at all stages. It is not without danger that M. Lecart has been able to make this discovery, as he states that the people of the Soudan are in a state of great excitement and apprehension at the many attempts of white people to penetrate into their country. The story of the last expedition sent by France into the south of Algeria has spread to all parts, and the conviction of the natives is that the travelers are collecting information preparatory to conquest. Perhaps the natives are not very far wrong.

Everywhere.

"BEYOND THE MISSISSIPPI."

THE artice "Beyond the Mississippi," by Bessie Victor, in a late RURAL, tends to mislead rather than instruct. She should have given the town and county that are commented upon; then the reader could learn something about some particular locality. Anyone would naturally infer that Adair Co., Mo., was the place described, which is not at all the case. Adair County has no surplus of grapes to make into wine, no Limburger cheese, no beer garden and but very few German residents that are not good citizens. We have no licensed saloons; drug-stores only are open on Sundays. There are no excursions on Sundays, and but few dances or horse races, at least of an objectionable type. Bessie seems to see the wrong side of the picture. Nothing is said about the good citizens of the community. The article is certainly a good one to encourage immigration, but not to this locality. Adair County acknowledges no superior in the West for morals, educational advantages, health, good water, good crops of grain, grass and fruit. We have in Kirksville, the county seat, a State Normal school—tuition free to all—enrolling about 500 students a year; a public school of eight divisions; also one jail and nine churches, all orthodox. In the county there are about 65 district schools, and nearly all are used for preaching, unless the neighborhood has a church. There are also four cheese and butter factories that do good work, while there are some creameries that make butter exclusively and ship it to St. Louis. We have a first-class flouring mill and stores and groceries in abundance. We need a foundry and machine shop and a plow and wagon factory to make matters complete. Our

county is about two-thirds prairie and one-third timber. There is an abundance of building stone and stone coal. We have two railroads, one from St. Louis north, and the other from Quincey west. Improved land can be bought for $10 to $25 per acre; wild land for $5 to $10. There is no place in the northeast part of the State that offers greater inducements to immigrants than Adair County. We have scores that have been father west and northwest and who have returned satisfied to stay here. Our population is made up largely of Eastern people, and we claim to have got out of the old-fogy rut that was worn deep in slavery times. The people are now free, happy and intelligent.

Kirksville, Adair Co., Mo., JAKE.

RURAL SPECIAL REPORTS.

KANSAS, Ellinwood, Barton Co., Oct. 10.—The prospects for Western Kansas, at present, for a full wheat crop next year, have not been so good for the five years that I have been here. On October 2 we had very good rains, so that the farmers have again begun plowing to put more wheat in. The area of wheat sown is larger than last year, and it comes up at once. Last year much did not even sprout. The corn crop is far below an average this season. A heavy frost on October 4, killed the late vines, such as squash, etc. J. G. S.

MONTANA, Warm Springs, Deer Lodge Co., Oct. 10.—Grain crops have been badly damaged by hail, and will yield only about one-fifth of an average crop. The hay crop is larger this year than last. Potatoes are a fine crop; the average yield all over this valley is fully 300 bushels per acre. Last year I had poor luck with the RURAL'S Beauty of Hebron, saving only six tubers, which I planted this year and dug one bushel this Fall. The RURAL'S mangold are splendid; all the people here want some. They weigh from eight to thirteen pounds apiece. Farmers are through with haying and grain cutting and are thrashing and gathering their potatoes and root crops. A. J.

MO., Tipton, Moniteau Co., Sept. 24.—Our corn crop was light. Fruit is abundant. Wheat was considerably injured by chinch bugs; sowing the Fall crop is very nearly all finished. M. S.

N. Y., Farmer Village, Seneca Co., Oct. 18.—We have had a very dry Summer. Wheat crop, good; corn, ditto; oats and barley rather short, owing to dry, hot weather at the time of heading; very little seed clover in the county. A great deal of Timothy has been sown this Fall. Fall wheat does not look well—not much top and it is turning yellow from drought. A great deal of phosphate is used in this part of the county; very little wheat is sown without it. Apples are plentful and cheap, selling at from 50 to 75 cts. per barrel; windfalls, 10 cts. per bushel at the dry house. Fall pasture is short; hay scarce and high; straw in great demand. W. M. C.

N. Y., Jonesville, Saratoga Co., Oct. 19.—Fall rains have hitherto failed us, and water is scarce; many wells are dry and some farmers have to drive their stock a considerable distance to water. Crops in general were fair. Hay and potatoes, however, are light. Fall feed has been very poor. Hay sells at $16 to $20 per ton; oats, 45c. per bushel; potatoes, $1.25 per barrel; butter, 28 to 3.c. per pound; pork, $7 per 100 pounds. The ground is so dry that we cannot plow. F. B. W.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Choice Peaches.

G. H., Bossardsville, Pa., asks, 1, the names and a description of the best varieties of peaches for market; 2, the names of three or four varieties of peaches that ripen about the same time—September 1—in that section. Monroe Co., Pa.

ANS.—We can devise no better reply to the queries of our friend, than to refer him to the lists and recommendations of John Rutter, of West Chester, Pa., to be found at pages 86 to 88 of his book, recently published with the commendation of the Pennsylvania Fruit Growers' Society. Mr. Rutter's long experience, on the spot, *ought* to be a guarantee for the soundness of his advice; although it is to us a matter of astonishment that the society should become committed to such a medly of crudities, not to say ignorance, as appears upon its pages. We cannot even commend his list of varieties, without a measure of dissent. Amsden's June and Alexander (both included in the list) are, for all practical purposes, identical; hence one may be omitted. Downing and Wilder are yet too little known; while, last year, they ripened with the foregoing, and were in no respect better. Beatrice is too small for market, hence of doubtful value for the purpose. Hale's Early is under similar condemnation, on account of its strong tendency to rot before maturity. For these reasons, these varieties, if planted at all, should certainly be planted but sparingly till their success shall be more fully assured. George IV. is a very fine amateur peach, ripening in advance of Early Crawford; but it lacks the firmness of texture so essential in a market peach; and hence if planted for this purpose, it should be because of a lack of others to fill its particular season. Yellow Rareripe may mean any one of quite a number of varieties to which this name is applied; hence the planter should assure himself as to its identity before planting. Susquehanna is a large, beautiful and excellent yellow peach; but it has been charged with persistent lack of productiveness; and for this reason, it should be employed with caution. Salway. Late Heath and Headly (?) are commended as October varieties; and may be expected occasionally, in unfavorable seasons, to ripen imperfectly. They would, doubtless prove more satisfactory farther south. The peaches recommended by the N. J. Hort. Society for general culture are: Crawford's Early, Honest John, Large Early York, Mountain Rose, Stump the World, Old Mixon, Crawford's Late, Morris Co. Rareripe, Smock, and Keyport White. The four last named are late varieties.

The Agricultural Colleges in the United States.

E. E. B., Manor, Texas, asks us to publish a list of all the agricultural colleges in the United States where boys can pay for their education by their work.

ANS.—In all our agricultural colleges, so far as we know, some fees are charged all the students, and in all of them the latter have to pay for their own board. In most of them, however, wages are paid to those among the students who work on the college farms. Full information as to the terms on which students are admitted can be obtained by writing to the president of each college, and for the convenience of such of our readers as may desire to obtain such information, we here give a list of all the agricultural colleges in the country.

Colleges with no farms are marked with a star.

Name of the institution.	Post-office address of the president.	State.
Ag. and Mech. Col. of Ala.	Auburn	Ala.
Ark. Industrial University	Fayetteville	Ark.
Ag., Mining, and Mech. Arts Col., Univ. of Cal.	Berkeley	Cal.
*Sheffield Scien. Sch'l, Yale Col.	New Haven	Conn.
Ag. department of Del. Col.	Newark	Del.
Florida State Ag'l Col.	Tallahassee	Fla.
*Ga. State Col of Ag'l and Mech. Arts	Athens	Ga.
North Ga. Ag'l Col.	Dahlonega	Ga.
Illinois Industrial Univ.	Urbana	Ill.
Purdue Univ. Ag'l Col.	La Fayette	Ind.
Iowa State Ag'l Col.	Ames	Iowa.
Kansas State Ag'l Col.	Manhattan	Kan.
Ag'l and Mech. Col., Ky. Univ.	Lexington	Ky.
Ag'l and Mech. Col of La.	New Orleans	La.
Me. State Col. of Ag. and Mech. Arts	Orono	Me.
Maryland Ag'l Col.	Ag'l Col	Md.
*Mass. Inst. of Technology	Boston	Mass.
Mass. Ag'l Col.	Amherst	Mass.
Mich. State Ag'l Col.	Lansing	Mich.
Col. of Ag. and Mech. Arts, Univ. of Minn.	Minneapolis	Minn.
Col. of Ag. and Mech. Arts, Univ. of Miss.	Oxford	Miss.
Alcorn University	Rodney	Miss.
Ag'l and Mech. Col., Univ. of Mo.	Columbia	Mo.
Mo. School of Mines and Metallurgy, Univ. of Mo.	Rolla	Mo.
Ag'l Col., Univ. of Neb.	Lincoln	Neb.
Col. of Ag., Univ. of Nev.	Elko	Nev.
N. H. Col. of Ag. and Mech. Arts, Dartmouth Col.	Hanover	N. H.
Scientific School of Rutgers Col	N. Brunswick	N. J.
Col. of Ag., Mech. Arts, &c., Cornell Univ.	Ithaca	N. Y.
Ag'l and Mech. Col., Univ. of N. C.	Chapel Hill	N. C.
Ohio Ag'l and Mech. Col.	Columbus	Ohio.
State Ag'l Col., Corvallis, Oregon	Corvallis	Oreg.
Penn. State Col. of Ag.	State College	Pa.
*Ag'l and Scientific dep't Brown Univ.	Providence	R. I.
S. C. Ag'l Col., and Mech. Inst., Claflin Univ.	Orangeburgh	S. C.
Tenn. Ag'l Col., Univ. of E. Tenn.	Knoxville	Tenn.
Ag'l and Mech. Col. of Texas	College Stat'n	Texas.
*Univ. of Vt and State Ag'l Col.	Burlington	Vt.
Va. Ag'l and Mech. Col.	Blacksburgh	Va.
Hampton Normal and Ag'l Inst.	Hampton	Va.
Ag'l dep't, Univ. of W. Va.	Morgantown	W. Va.
Col. of Arts, &c., Univ. of Wis.	Madison	Wis.

Fruit Houses.

Rev. V. Le Roy Lockwood, D. D., Ann Arbor, Mich., writes us: "We have in our city a 'pomological society,' composed of many fruit growers, especially of peaches. This is a very fine region for this fruit, and this season the yield was unusually large, as it was indeed everywhere else. We had two weeks of very hot weather accompanied with much rain and dampness. It was impossible to gather and ship the fruit crop at once, and the market became glutted, while great quantities perished on the trees. Hence our society feel the need of some way of protecting and preserving the fruit for a few days in such emergencies until the market is relieved, the weather cooler and prices more remunerative. This season's experience shows that nearly all the profits are lost under such circumstances. We have been discussing the feasibility of making a large union fruit-preserving house where all interested could place their peaches in baskets on shelves for a few days, when necessary, and so have them in good condition for the market when the great pressure is removed. Now we have only some vague hints as to the best mode and plan for making such a house, but no practical experience. Can you put us in correspondence with proper parties, or refer us to any book or paper containing such plans, instructions, etc., as we need? I believe there are some patented houses for such purposes. We prefer a house which it will pay one or two individuals or more to erect without paying a patent royalty. Are there any such within your knowledge?

[We have no information of any value upon the above subject, and therefore publish the letter so that those who have may reply, if they will. Eds.]

A Southern Cow.

G. S. H., Warthen, Ga., asks, 1, what is the best cow for milking purposes; 2, what kind of food is the best for milk; 3, how many pounds of food can a cow consume per day; 4, what is a cheap and convenient plan for building stables for stock; 5, what is the average weight of a grown bronze turkey; 6, where can such turkeys be had; 7, where can four-gallon cows be purchased and at what price.

ANS.—1. For Georgia the Ayrshire would be found the best in all probability, or perhaps a high-grade Jersey; but the Ayrshire is very hardy and will keep in good order where other cows will not. 2. In the Southern States wheat bran and cotton-seed meal, two quarts of each daily, with grass, corn fodder, green or dry hay; or cow-pea vines would be excellent food and easily procured. 3. Such a cow as could be kept in the South, that is, one of the smaller breeds, as Ayrshire or Jersey, would consume 60 pounds of grass or 15 pounds of hay daily with the meal above mentioned. 4. There is no cheaper or more convenient plan of stalls for stock than the dairy sheds described in the article on The Dairy Cow, page 634. 5. Bronze turkeys weigh from 12 to 40 pounds, according to breeding and feeding. 6. These turkeys are quite common and can be procured of any poultry dealer. Study the advertising columns. 7. Sixteen-quart cows are very plentiful and can be purchased for $50 upwards. Doubtless a short advertisement in the business columns of the RURAL NEW-YORKER would bring you several offers of such cows.

Vomition in a Cow.

A. W., Southold, Suffolk Co., N. Y., has a yearling heifer that appears well and has a good appetite, but she vomits during the night nearly all the food she has eaten during the day. In what she throws up stones as large as a crow's egg, have been noticed sometimes. His cattle are well supplied with good water drawn three or four times a day; but this beast will drink the drainage from the cow yard in preference. She does not appear to fall away in flesh, though she has been vomiting in this way for about six weeks.

ANS.—This is a very rare condition and due to a depraved appetite, probably induced by indigestion. Confine this animal in a stall that she may eat only what is given her; feed light but nutritious mashes, *not cooked*, with a small quantity of Timothy or other good hay. Give a mild purgative, from half a pound to a pound of Epsom salts, after which, give with food, daily for a month, sulphate of iron, one drachm; nux vomica, one half drachm and ground anise-seed, two ounces.

Compost of Ashes and Cotton-seed.

B., no address, asks whether hard-wood sawdust and unleached wood ashes will make a good compost if mixed with one-tenth by bulk or weight of cotton-seed meal.

ANS.—This compost would not be advisable. It would be too concentrated and too dry. If you can procure muck from a swamp and use 10 parts of this with one part each of ashes and whole cotton-seed, you would have a good compost. Whole seed is preferable to the meal for this purpose, as the hulls are rich in potash and phosphoric acid. It would be best to burn the sawdust and convert it to ashes and use these. Sawdust is too dry and encourages dry-rot in manure or composts; it does not rot soon in the soil, and there is little in it that is valuable except the ash. If swamp muck or pond muck is not available, the earth from a cow-pen or the black soil and decayed leaves from woods might be used. The heap should be kept moist.

Billygoattawny.

V. G. F., Flushing, L. I., asks the meaning of the above word which he styles long, odd and unpronounceable, and which he lately found in a description of the dishes at a dinner.

ANS.—If our correspondent will divide this word into three parts, he will find it easily pronounced. "Billy," the first part, is the name usually given to a domestic "he" goat. The second part is "goat." The third part, "tawny," may mean the color, which, if so, should be written with e left out. The name Billygoattawny was given to a dish of kid or goat soup, served up as one of the dishes at the "Kid Dinner," lately partaken by the members of the British Goat Society, when they held their superb show of goats at the Alexandra Palace in England, reference to which was made in our last issue, and is again in this.

Patent Bee-hives.

C. C., Damascus, Pa., asks for the names of the various patented bee-hives, if any, as he is informed that there is no patent on any hive now, all having "expired." He and several of his neighbors would make the "American" and several other hives, if they were sure that they would not infringe on a patent by doing so.

ANS.—There are a few features patented in certain hives; for instance, Shock of Iowa, has a patent on the porous walls to his hives; Geo. T. Wheeler, on the shoulders on his frames, etc., etc.; but when the Langstroth patent on movable frames "ran out or expired" in 1876, all that was practical in bee-hives became public property. There is no patent of any description whatever on the American, Langstroth, Quinby, or Gallup hive, and these are the best hives in use at the present time.

Miscellaneous.

W. H. C., Springboro', Ohio, asks, 1, whether clematis can be propagated in this country and, if so, how; 2, do we know anything about a preparation called "Ozone Preserving," advertised in a Western agricultural paper.

ANS.—1. Clematis may be propagated by cuttings, grafting, layers or seeds. Seeds germinate slowly, requiring generally from six months to two years. The cuttings should be placed in sand and subjected to bottom heat. The finer kinds of clematis are best grafted upon vigorous-growing stocks. Upon their own roots they ofttimes prove feeble. 2. The number of fresh nostrums that are being constantly introduced to the dear public is too great for us to "keep track of" any of them, unless our attention has been specially called to it, hence we at present know nothing about the above preparation.

F. E. B., Keene, N. H., asks, 1, the address of Gen Le Duc, Commissioner of the National Sheep and Wool Exhibition; 2, the best place to commence sheep raising on a capital of $900.

ANS.—1, Washington D. C. He is the Commissioner of Agriculture. 2, Some parts of Georgia, Tennessee, Alabama, Texas, California, Oregon and the Western Territories, are especially adapted to raising sheep profitably, as are many other sections; but success depends on so many contingencies that it would be unwise for us to recommend specially any particular locality.

A Subscriber, Bedford, N. Y., asks, 1, whether air-slaked lime is as good as unslaked lime for composting with swamp muck; 2, whether it will pay to buy lime at $1.50 per barrel for that purpose.

ANS.—1, Yes if placed in layers very thin and fine. But unslaked lime is always lumpy, which would make its action too fierce in some places. Better slake the lime by water. This is better than air-slaked lime. 2, If the land needs lime, yes; if not, farm manure, ashes, fish, flesh, blood, offal, night-soil, bird dung or potassic fertilizers had better be used. See article, by Prof. Storer, entitled "A Scientific View of Composts," in the RURALS of Aug. 7. 14 and 28, especially the last, and "The Value of Lime in Composts" in "The History of a Poor Farm" in RURAL of Nov. 15th, 1879.

T. B. N., St. Joseph, Mo., referring to our statement, in a late issue, that the sod of the field on which grew our great yield of Indian corn, was plowed under in early Winter and thoroughly harrowed and rolled last Spring, asks whether it would be well to break prairie now for corn and harrow it in the Spring.

ANS.—We cannot answer this question better than by saying we shall plow our field intended for corn next season (now in pasture) as soon as our more pressing farm work is completed.

L. H., Warren, O., asks for full instructions in flax culture.

ANS.—The article on this subject under "Field Crops," was written in answer to this and several other inquiries on that topic, all of which are answered in one part or another, of the article.

W. H. J., Newark, N. J., asks whether the suckers from old Strawberry plants are as good to set out as young and vigorous plants.

ANS.—The young plants are produced from suckers of the older ones.

J. B. A., Collingwood, Canada, asks whether the magnolia can be wintered out-of-doors, or must it be housed.

ANS.—It must be housed in your climate.

M. N. N., Hermitage, Mo., sends a specimen of an apple for name.

ANS.—The apple, though well packed, was wholly decayed when received on Oct 15.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, OCT. 16.

L. S. H.—J. W. L.—J. E. R.—G. W. F.—R. G. K.—W. M. C.—E. P. F.—J. B.—G. U. S.—R. M. L.—J. A. M.—J. H.—G. H.—A. W.—J. C. M.—J. S. W.—W. G.—J. P.—M. P. W.—J. H. M.—W. H. B.—W. S. C.—J. G. B.—N. F. H.—T. T. L.—C. N. G.—C. D., thanks.—H. K.—N. J. S.—F. K. P.—C. N G.—W. M.—A. J.—B. P. M.—F. W. S.—C. A. B.—F. B. W.—H. A. W.—R. A.—W. H. C.—D. E. S.

To restore nerve and brain waste, nothing equals Hop Bitters. Believe this.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, OCT. 30, 1880.

It may be well for us to announce that we have begun to prepare special numbers of the RURAL NEW-YORKER for 1881, devoted first, (January) to Indian Corn; second, (February) to Strawberries; third, to selected Hardy Plants suitable for country home grounds; fourth, (early September) to Wheat. These numbers will be amply illustrated from nature, and we now solicit articles for them from those who have made such plants a special study or have valuable items of experience to communicate. We do not desire long articles or descriptions of those ordinary methods well-known to all good farmers. Those who favor us will kindly mark the MSS "For Corn Number"—"For Wheat Number," etc. We have now growing at the Rural Experimental Grounds seventy-five kinds of wheat, as many of strawberries, a very complete collection of hardy ornamental woody plants from which to make our own notes, while from our happy experience with corn during the past season, we hope to impress upon our readers some valuable teachings.

SPECIAL NOTICE.

MANY of our subscribers are sending us the required amount of postage stamps (six cents) requesting us in return to send the White Elephant Potato, as if additional postage were required for the other seeds or a separate application necessary. We beg our readers to understand that six cents are all we ask from them for the *entire* distribution—the rest of the postage the RURAL pays. Applications may be made from now until March. Write the name and address plainly and say "SEND SEEDS." That is all we desire except that our friends will not stick the postage stamps to their letters.

OUR readers generally, with every horticulturist and pomologist in the country, will regret to learn of Mr. Chas. Downing's loss by the death of his wife, which occurred on the 18th inst., and all will sympathise with him in his bereavement.

READERS of this journal will recall our remarks as to the disappointment, which most farmers experience who estimate the *yield* of Clawson wheat by its *appearance*. As compared with Fultz we have shown that this difference is owing to the fact that the spikelets of Fultz bear three, sometimes four, kernels, while Clawson spikelets bear an average of only less than three. The number of grains to a spikelet or floret in wheats is an important item to which we would call the careful attention of farmers. As supporting what we have said against Clawson, we present the following extract from the Seventh Annual Report of the New Jersey State Board of Agriculture. "*The Clawson wheat showed the largest heads and the tallest and heaviest straw.* On thrashing we got 39 bushels of Clawson wheat, which is at the rate of 19½ bushels per acre; 244 bushels of Fultz wheat, which is at the rate of 30½ bushels per acre. The same marked difference in the yield of the two varieties has been found for three or four years in succession."

THE DUCHESSE PEAR.

WE cannot advise our friends in selecting pear trees for new orchards or for the garden to choose the Duchesse. It may be granted that at present it is one of our most profitable market sorts. But we learn from fruit dealers that it has not sold as readily this season as in past seasons; while, on the other hand, more Seckels than ever before have been sold. For the very reason that the little Seckel is steadily growing in favor, the Duchesse is losing ground. In other words, the public are learning (though slowly indeed) that the size of the Duchesse is a poor equivalent for the quality of the Seckel. Duchesse pears *must be* of the largest size or they are worthless. Grown upon pear stock, we find that they shrivel in spite of our best efforts to ripen them, while even upon the quince (dwarf) they require plenty of manure. Judging of this pear by our own experience, we are forced to the conclusion that it has seen its best days and that its reputation even as a market variety is and deserves to be in "a rapid decline."

"THE SERE AND YELLOW LEAF."

THE gorgeous beauties of the Fall of the year are not only charming but instructive. To the young they show only a perfection of color and blending of tints which delight the eye by their brilliancy. To those of maturer years they convey a soberer pleasure which appeals to the higher sensibilities. "The sere and yellow leaf" has been too often considered as betokening the infirmities of age creeping upon us, denoting enfeebled powers and the warning of an approaching dissolution. The popular mistake that it is to the effects of a killing frost that this exquisite coloring of leaf is due, only helps to carry out this delusion. But it is the ripening of the foliage, the maturity of its age, the full service of its purpose in creation, that brings about its beauty and magnificence. Thus considered, "the sere and yellow leaf" must not be applied in its popular sense as the withering of decay, as the termination of a by-gone life and the end of all usefulness. On the contrary, it signifies but the accomplishment of a purpose in life, the end of a busy season, the beginning of a season of quiet and rest.

THE FLAX INDUSTRY.

ONE of the most promising openings for a new business is offered to those who will establish depots for receiving and curing, preparing and classifying flax fibers. There are a great quantity and variety of flax straw now grown, but there is wanting a system with machinery for curing and preparing the fiber.

There are no mills weaving fine linens, but there are two or three making crash and several large thread and yarn and twine mills—one at Mechanicsville, N. Y.; one in New York City; smaller ones in different places, while a branch of the Barbour thread mills of Ireland employs some 500 hands at Paterson, N. J., and Messrs. Finlayson, Bausfield & Co., of Scotland, have, also, during the past year established a branch manufactory of threads at Grafton, Mass.

In these mills something over two million dollars' worth of raw flax is used, the greater portion of which is imported, because our flax growers do not systematically cure and classify their product. But little of the flax grown in the United States is of a character to suit these mills. Flax grown for seed is too coarse, but the straw may be used in yarn and to mix with foreign fiber, if it be properly prepared and classified according to color and fineness.

The suggestion of depots for receiving the flax straw from farmers is made in the belief that companies making it a business could afford to put in modern mechanical appliances for the purpose, and in time a system of preparation and classification would grow up, as well as the opening of a market for the fiber when prepared. Added to this, our farmers would be led to grow flax for both seed and fiber, and also for fiber alone.

CANADA GOING TOO FAR.

IMPORTATIONS of cattle from Canada to Great Britain have considerably increased during the time the latter has enforced restrictions on importations from this country. It is only natural, therefore, that the Dominion, while not at all anxious that the embargo on our cattle should be removed, should be very anxious to avoid any cause for the establishment of similar restrictions on its own trade. Solicitude on this point is doubtless the chief cause of its absolute prohibition against the importation of cattle from this country. England declares that, to guard her own herds against contagion from ours, not only must no cattle be imported beyond the ports of debarkation directly from the United States, but also that none shall be introduced indirectly through Canada; and that any attempt to do so will cause the enforcement of a like embargo on cattle from that country. Such a threat would justify our neighbors in placing upon cattle importations from this country restrictions as stringent as those they enforce against importations from other infected nations. But while they permit the introduction of cattle from Great Britain, France and other countries whose herds are notoriously infected with pleuro-pneumonia and other contagious diseases, after a ninety-days' quarantine, it seems unneighborly, nay, unjust, that they should prohibit absolutely the importation of cattle even from our Western States which have hitherto remained wholly free from pleuro-pneumonia. If a quarantine of ninety days is considered sufficient to guard their herds from contagion through imported European animals, why should not a similar quarantine be equally efficacious as regards animals from this country? We do not pretend that our condition as friendly neighbors affords any claim for exceptional consideration, but we do insist that it should not subject us to an exceptional hardship, and the attitude of the Canadian Government towards us in this matter is so inconsistent with its conduct towards more distant nations that our Government should at once make a strong protest against a discrimination so injurious to our interests, and, we honestly believe, ultimately to those of our neighbor. Even self-interest does not justify injustice.

THE BUSINESS OF EXPERIMENTING.

EVERY person knows, who has a gift or a taste for experimenting, that it is an unprofitable business, so far as money is concerned. It is expensive of time and money, and, as time is money to most of those whose tastes lie that way, the cost is doubly great. Occasionally one fortunate individual strikes a good thing, just as the originator of the Concord Grape or the Early Rose Potato did. Most people spend a life-time and find nothing to reward their labor and perseverance. But even when a real "bonanza" is found, it brings but little reward to the discoverer or producer. The public gets the benefit; the person whose labor has been spent gets the empty honor, and his virtue is its own reward. This is, perhaps, unavoidable, but it is not fair; and, being unfair, it is objectionable, and therefore operates to disgust people with this sort of employment.

It is easy to perceive that the successful originator of an improved potato, root, grain, or fruit, is as much a public benefactor as the inventor of an improved process, machine, or implement. The public has gained many millions of dollars from the Rose Potato and the Concord Grape, but what have been the rewards of the originators? In the nature of things it is difficult, if not impossible, to protect a plant as a machine can be protected, by a patent. But why should the public be averse to recompensing those who have labored long and industriously for its benefit? Probably no person engaged in agriculture is, or has ever been, averse to the fair and just compensation of those persons from whose industry and skill important benefits have been derived. The difficulty does not exist in this direction, not in any unwillingness to return the obligation, but in ignorance of any practicable manner of doing this. Much has been thought, said, written and proposed upon this question, but no solution has yet been reached.

There is no reason why the subject should be forgotten, but every reason why it should be carefully considered until some method may be devised for the continued employment of experimenters, in the hope that we may secure still further advantage from their investigations. There is no doubt that the promise of a substantial reward for success in this way would encourage and stimulate those engaged in experiments of this kind to more devoted efforts. The State of New York has liberally appropriated the handsome sum of $20,000 yearly for two years for the support of experiment stations. There is no doubt whatever that if one-tenth part of this sum should be devoted to the encouragement of efforts to produce new and improved varieties of vegetables, grains or fruits, it would have a beneficial result. The money might possibly be used in the shape of awards for the production of some notably excellent new variety, in some such manner as that by which the American Institute has a standing offer of a premium for some striking mechanical discovery or invention, of whatever kind it may be, so long as it is manifestly worthy of the reward. If such an arrangement had been in existence, there is no doubt that some very useful services might have been rewarded to some extent, and however inadequate it might have been, the reward would have been beneficially bestowed. It is enough that we keep this matter in view, for its fuller consideration, without going so far as to offer any defined proposition for its development.

BREVITIES.

ON the 19th a frost occurred at the Rural Farm which killed cow-peas, Rural Branching Sorghum, sweet potatoes and tender plants generally. The thermometer was 34 deg. at 6.30 A. M.

UPON our several plants of the great Cuzco Corn, there was *one* ear which we hoped *might* mature a grain or so. After our frost of last week, seeing that the end of the season of growth had arrived, we pulled and husked that ear. The *cob* was four inches long. There were no kernels.

MR. Douglas says that the Wild Black Cherry (Prunus serotina) is one of the most rapid growers of all our valuable Northern hardwood forest trees, making lumber almost equal in value to the Black Walnut. It grows freely on any dry land, even if too poor for agricultural purposes. It is healthy everywhere, of upright growth and is very easily transplanted.

PROF. BUDD of Iowa, has said—speaking of the American White Ash—"A grove of ten acres, thinned to six feet apart, containing twelve thousand trees, at twelve years, were eight inches in diameter and thirty-five feet high, the previous thinning paying all expenses of planting and cultivation." This is, in fact, one of the most valuable trees for forest planting.

THE Roman Hyacinth is white and about a week earlier than the others. But the single flowers and the racemes as well are smaller. We might compare them to ordinary hyacinths after they have bloomed three years in the open ground. The Muscari or Feathered Hyacinths are very beautiful and yet rarely seen. As things of curiosity those who grow this class of plants in the open ground or for forcing, should try them.

SEVERAL subscribers ask us whether it is worth while for them to compete for our premium for the largest mangel grown from our Free Seed Distribution. To these we say that we have not yet compared the sizes mentioned in the statements already sent in, and even if we knew the largest size given we would not think it fair to tell it yet. Let every one who has succeeded in growing an exceptionally large mangel forward his statement. A postal card doesn't cost much.

AT a recent stock sale of the Duke of Portland, at his magnificent seat of Welbeck, ham sandwiches made up a part of the lunch furnished on the occasion. Within a few days after this, four of the persons partaking of the sandwiches died, and 60 to 70 became seriously ill. A post-mortem examination discovered nothing poisonous in the food, nor any trichinæ, and its fatal effects remained a mystery till some one thought of examining the room in which the food was kept the night before it was eaten. Then the "murder was out," for in it is a long open drainage channel covered simply by a grating. From this came the poison, which infected the ham made up into sandwiches, causing the four deaths and so much sickness. It is surprising that such an open drain can be found in so magnificent a building as Welbeck Abbey, inhabited by so intelligent and good-hearted a man as the Duke of Portland. But the late Prince Albert of England caught his death from a sewer pipe in a still more magnificent building—Windsor Castle.

THE recent gale on the coast of Florida, in which the steamer Vera Cruz was lost, played havoc with the orange crop on Indian River, as the following extract from a private letter from Rock Ledge will show. "The cyclone destroyed over half of the finest orange crop ever grown on Indian River. With no storm I think our oranges would have been *par excellence* in every respect—size, perfection and quality. From 600,000 oranges that would have been shipped over this route, we now come down to 200,000. This loss could have been nearly all avoided had the earlier settlers only left sufficient timber to serve as windbreaks for the protection of their groves. Major M.'s *little* grove was not hurt, being well protected in this way. In his *big* grove, with no protection, half the fruit was blown off. G. H.'s, ditto. Mrs. D. lost 80,000 out of 100,000; no protection at all. But there will be some oranges left, even in this district. My own I thought very fine, and they gave promise of being exceptionally so. A good many that were left are scarred so as to mar their uniform beauty, yet I shall have a few fine boxes if no other calamity befalls them. Weather delightful now, only rather warm."

No grain has been exported from the Baltic ports of Russia since September 1, but several cargoes have been already imported and more have been ordered. From Odessa, in the Black Sea, to Taganrog, in the Sea of Azoo, little or no wheat has lately been received from the back country, which usually supplies the greater part of the wheat for exportation. Reports received at St. Petersburgh from the various provinces give a gloomy view of the prospects for food during the coming Winter: shortage and failures of crops are nearly everywhere announced. It has become a problem how the government can keep the inhabitants of many districts from starvation, and measures looking to that end have already been inaugurated. Since our article on "Our Prospective Wheat Market" appeared in our last issue, we have received trans-Atlantic "exchanges" containing Dr. J. B. Lawes's estimate of the present wheat crop and the probable demand for foreign wheat the coming season in the United Kingdom. We estimated the average yield per acre there at 28 bushels; he puts it at 28½; we figured out the requirements of foreign wheat there at 114,000,000 bushels; he thinks it will be about 112,000,000. Considering that we proposed to give only an approximate statement, and that his can only be an approximate estimate, there's very little difference between these two entirely independent statements. The more we learn of the European wheat market, the stronger is our conviction that the prices of wheat here will remain at least firm, if they do not advance considerably.

Literary Miscellany.

THE SONG-BIRD'S DEPARTURE.

AROUND the cedars and the lawn
The evening mists are early drawn,
On each its cobwebs glittering bells
At noon of Autumn's cold breath tells:
The woods their golden mantle wear
To grace the passing of a year;
Saddest of all, resounds no trill;
From blithesome warbler—all are still.

The cuckoo long ago has fled,
The blackcap dulled his sable head,
The whitethroat sought more sunny climes,
The fearful swallow left betimes;
O'er barren moor or stubble bright
The wood-wren wings her silent flight,
While many a whistle from the skies
Marks where the plover southward flies.

What guides these birds to warmer lands?
Doth chance impose such strict commands?
Did myriad races die before
Survivors sought a foreign shore?
Not so! Creative Love impressed
Upon their natures His behest,
And still, obedient, they observe
The charge, nor from His purpose swerve.

We grieve, but lasting song would cloy
Capacities of sober joy;
And though we mourn the silent bands
Of birds which flit to stranger lands,
Brighter the welcome we extend
Next April to each well-known friend,
And more we long 'mid Winter's snow
To hear new songs when lilies blow.

INMATES OF LESTER HALL.

(Continued from page 710.)

CHAPTER XIII.

"I HAVE asked Carewe to dine with us this evening," said Mr. Daton, a few days after, as he entered Mattie's boudoir, "to celebrate your coming downstairs again, Mattie, dear—your first dinner with us for so long."

"I am so glad you have asked him, Uncle Henry!" said Mattie, smiling. "I shall be delighted to see him, and was just wondering why he had not been to see us for so many days."

"He has been worked to death!" said Mr. Daton. "He is getting to be quite a celebrated man in his profession, and very deservedly so. I am sure we have every reason to be thankful to him, and to speak highly of his skill, have we not, Cecil?"

"Every reason," said Cecil, briefly.

She was sitting on a low chair, with her hands crossed idly on her lap, and her eyes fixed on the red gleam of the fire.

"I hope you will be civil to him, my Lady Disdain," said her uncle smiling.

"I generally am," she rejoined, carelessly.

"Indeed, yes. I think Lawrence finds favor in your sight, Queen Cecil," said Mr. Daton, gaily. "And no wonder, for he is morally and physically one of the finest fellows I ever met!"

"I did not know you valued men by the length of their limbs or the power of their muscles," said Cecil, disdainfully.

Mr. Daton laughed, as he glanced over at the graceful figure, and noticed the hot flush which rose in the soft cheek.

"Nor do I, my child," he answered, gravely, in a moment. "Lawrence Carewe's life would be equally noble in my eyes—equally grand and self-denying—if he were a hunchback! But I do not think that he would be so in yours, Cecil," he added, smiling, as he put his hand caressingly on her shoulder.

Cecil put up both her hands, clasping them over his, and drawing it down to her lips in silence. Whatever she was to others, to her uncle she was always gentleness itself.

"You like him so much, Uncle Henry?" she said, with a touch of regret in her soft voice.

"I like him—I honor him deeply, and I should be very sorry that sorrow should come to him through any one connected with me," he said, meaningly; and the flush died away in Cecil's cheek as she heard the words.

She answered nothing, but touched her lips softly to his hand again, and her uncle read that mute caress to mean that his interest in Dr. Carewe was pleasant to her.

"If she loves him I will give her to him with every confidence," he said to himself, as he went down to his own den—the only simple, unadorned room in the superb house—where he wrote his letters, kept his accounts, and interviewed his niece's suitors when obliged to do so. "But he must not take her from me; I cannot give up my Cecil."

For some minutes after he had left the boudoir there was silence between the two sisters; then Mattie looked up suddenly and said:

"What do you mean to do, Cecil?"

"To do! About what?"

"About Dr. Carewe?

"About Dr. Carewe!" repeated Cecil, lifting her pretty eyebrows with a puzzled expression which was wholly assumed.

"Yes," said Mattie, quietly.

"What do you mean, Mattie?" said Cecil. "Are you speaking in enigmas?"

"Nay, there is no enigma," said Mattie, quietly still, but with a pained expression her sweet blue eyes. "You must know what his feeling toward you is."

"Must I?" laughed Cecil, rising languidly.

"Of course you must!" said Mattie, rising also, and speaking more vehemently than was usual with her. "Oh! Cecil," and she drew near her sister and put her arm fondly round her, "he is too good, too noble to be trifled with! Do not wound such a heart as his!"

Cecil looked down at her for a moment with a sudden gleam of pain in her lustrous eyes; then she laughed lightly.

"My dear little sister," she said, gaily, "do you think every man who comes near is going to be idiot enough to fall in love with me?"

"Lawrence Carewe has done so," said Mattie, gravely, "You know it, Cecil!"

"He has never told me so," said Cecil, evasively.

"As if it needed to be told in words!" said Mattie. "You know it, Cecil."

"I do not choose to know it until he tells me so," said Cecil, impatiently. "Upon my word, I am getting quite tired of the mention of his name! One hears nothing else in this house from morning till night?"

"Cecil," said Mattie, gravely, "I owe my life to him!"

"Nonsense, any other doctor would have done the same!" said Cecil, coldly. "He himself says so."

"Because he is all generous, all noble," said Mattie, gravely; "Cecil, do not make him suffer as others have suffered. He is worthy a better fate."

"I cannot be responsible for his folly any more than I can for the folly of a score of predecessors."

Mattie's arm fell from its clasp and she turned away.

"I do not know you, Cecil!" she said. "You are strangely unlike yourself!"

"Am I" said Cecil, and into her lustrous eyes came the old shadow of pain as she put out her hand and drew her sister, half reluctant as she was, to her side. "Am I? How, Mattie?"

"You seem so cold, so heartless. Oh, Cecil, it is not possible that you do not love him when he loves you so greatly!"

"Does love beget love? she answered slowly. "Is that your experience, Mattie?

"But he is so noble, so true," said Mattie almost despairingly.

"Not nobler, not truer than many others," said her sister, calmly.

"Cecil, you have no heart!" said Miss Lester, indignantly, as she withdrew her hand from her sister's; but Cecil caught it again in hers, and turned her face to Mattie with an expression of such hopeless, despairing misery upon it, that all her anger melted, and she put her arms around her sister.

"Oh, Cecil, dearest, what is it?" she said, anxiously. "I did not mean to hurt you."

For a moment Cecil rested her head against her shoulder in silence, the great salt tears gathering slowly in her eyes, and her lips quivering with some painful thought; then she rose slowly, and loosed her sister's gentle clasp.

"Let me go!" she said, hoarsely; you cannot understand. I hardly understand myself sometimes; but you need not pity Dr. Carewe," she added, with unconscious bitterness. "It is not he who deserves pity—or, at least, not he alone."

As she spoke she disengaged herself, touched Mattie's cheek with her lips, and left her puzzled, and surprised, and touched, but without a clue to the truth; while Cecil, rushing to her own room, burst into a passion of tears.

Poor, unhappy Cecil! She was tasting even now the bitterness of her error. Her revenge had recoiled on herself, and, although she knew it not, she was laying the foundation-stone of her own misery in the fulfillment of her vow.

CHAPTER XIV.

THE VOW KEPT.

"Will not somebody be charitable, and give us some music?"

Dinner was over, and they were sitting in the small drawing-room opening into the conservatory, and a pair of tall footmen were handing tea and coffee with ponderous solemnity, while Mr. Daton leaned back in his armchair half asleep; and Cecil, looking wondrously beautiful in an exquisite demi-toilette of soft Indian muslin, trimmed with a profusion of lace, with no ornament about her save a knot of blue ribbon nestling in the lace at her throat, was sitting on a low seat by her uncle, her fingers clasping his.

Mattie and Mrs. Audley were busily engaged over some intricate Chinese puzzle which Mr. Daton had brought home that afternoon, and the two young men, Mr. Edgar and Lawrence Carewe, were standing, coffee-cup in hand, talking, when Cecil uttered the remark with which our chapter opens:

"Will not some one be charitable, and give us some music?"

"Take pity on yourself," answered Sir Edgar, laughingly, while Lawrence Carewe went forward to take the empty coffee-cup from her hand. "We have not heard the sound of your voice for ages, Cecil."

"Have you not?" she rejoined, gaily. "I am not in the humor this evening, Dr. Carewe; may Mattie sing us something?"

"Not to-night!" the doctor answered, smiling; "but she may play an accompaniment for you, if you will be so good."

"I always play my own," said Cecil, languidly, as she rose from her seat, and moved across to the piano. "Nevertheless, I will sing if you will promise to sing after."

"Do you sing, Dr. Carewe?" said Mattie, quickly. "Why did you never tell us, and how did Cecil find it out?"

"I guessed it," Cecil answered, turning her lustrous eyes on the doctor's face with a little smile in their depths. "You see I can read you, Dr. Carewe," she added, as he bent for a moment to open the piano.

"Can you?" he said, in a low tone, but with a passionate tremor in its low, tender note. "Can you guess, I wonder, that which I dare not tell you?"

She glanced at him, and smiled again—a slow, lingering, sweet smile: then she turned from him abruptly, and putting her white, jewelled hands upon the keys, played a gay prelude.

"What are you going to sing, Cecil?" said her sister, looking up for a moment from the carved ivory toy between her fingers.

"You shall see," said Cecil, gaily; and then to an air in whose gay strains ran an under current of sadness, sang the following words:

"'Woman's faith and woman's trust,
Write the characters in dust;
Stamp them on the running stream,
Print them on the moon's pale beam
And each evanescent letter
Shall be clearer, firmer, better,
And more permanent, I ween,
Than the things those letters mean.

"'I have strained the spider's thread
'Gainst the promise of a maid:
I have weighed a grain of sand
'Gainst her plight of heart and hand.
I told my true love of the token,
How her faith proved light and broken;
Again her word and troth she plight,
And I believe again ere night.'"

"I don't like that song, Cecil," said Miss Lester. "It does not suit you either. Now, doctor, it is your turn."

"Do you mean that as a warning, Miss Cecil?" said Lawrence Carewe, as she rose and relinquished her place to him, and in his low tone there was a tremor of intense feeling.

She drew back a little, and the beautiful face paled, and over its loveliness came a dark shadow of pain, of tenderness, almost of remorse. Then she smiled.

"As a warning, as a challenge, what you will," she said, carelessly. "Are they not true words?"

"It may be so; Heaven only knows!" he said, as, seating himself by the piano, he struck a few chords with the power and brilliance of a thorough musician.

"I do not know what to sing," he said, breaking off suddenly with an uneasy laugh, and his quiet face stirred with a deep feeling unusual to him.

"Let it be anything you like," said Mattie smiling. Dr. Carewe I feel angry with you for having hidden your talent from our knowledge!"

He laughed again, and his eyes went longingly to Cecil where she stood in her long, softly-flowing muslin dress and the little gleam of azure silk at her white throat. His glance lingered on the picture as he sang.

Then the rich, melodious voice died away, and Dr. Carewe turned from the piano with a light in his proud, gray eyes, and with a flush on his cheek; there was a momentary silence as he ended, during which he saw that the graceful, white-robed figure had disappeared; then Mattie said a few words of thanks and approval.

"It will take a good deal to make me forgive you, doctor," she said gaily. "You have deprived us of a very great pleasure all these weeks. Mr. Edgar, why did you not tell us how well he sang?

"Because I dont like to be surpassed," said he, laughing. "Go on Lawrence; now that you have shown us your power, we won't let you off. You see, Cecil has escaped; quite overcome, but she is quite within earshot in the conservatory, so go on, like a good fellow. Play us something now—you play as well as you sing!"

Dr. Carewe turned to the piano again and began to play—playing he scarcely knew or heeded what, letting his thoughts run riot as his fingers moved over the keys; pouring out all the tumult of his feelings on the senseless notes. Mattie listened entranced where she sat, while Mr. Daton slumbered quietly in his armchair.

And the rich, tender melodies were finding their way to another listener's ears, and to her heart; for without, in the conservatory, Cecil heard, with a quiver on her lips, and a wonderful light in her eyes, the prayer, the pathos, the entreaty he was pouring forth in music; and for the moment her evil purpose was charmed away from her, even as the melody of David's harp exercised the evil spirit from the heart of the Israelitish king of old and her eyes grew humid and tender, and her color came and went, as she leaned her head on her hands, and listened to the music as it rose and fell.

By-and-by it ceased—gradually dying away in a slow, mournful wail, and the musician rose abruptly from the piano.

"Thank you—thank you," said Mr. Daton, opening his eyes with a start, and rousing himself from his slumbers. "Dear me, how well you play, Carewe! I had no idea you were such a musician! Why, where is Cecil?"

"She is in the conservatory, I think," said Mattie.

"All alone?" said her uncle. "That won't do, Carewe, go and see after her, will you? I'll say good-night now, as I have some letters to write."

So saying, Mr. Daton left the drawing room, and after a momentary hesitation, Dr. Carewe disappeared in the direction of the conservatory, leaving Mr. Edgar and Mattie in that blissful dual solitude which is so delightful when two people understand and love each other.

The conservatory in which Lawrence Carewe disappeared was a double one—at least at one end of it there was a second division curtained off, and furnished with some pretty, luxurious lounging-chairs, a table, and a low couch. This inner conservatory was at all times a favorite resort of Cecil's; and it was here that Dr. Carewe found her.

She started slightly as he entered, and laughed a little nervously as she looked up.

"How you startled me, Dr. Carewe!" she said, gaily. "You have made my heart beat dreadfully!"

"Did I startle you?" he said, tenderly. "I am very sorry; I did not mean to do so. Pray, forgive me!"

She glanced up at him and smiled, then moved aside her fleecy white draperies, and made room for him on the couch by her side. He sat down in silence, his heart throbbing quick and fast. The silence lasted for a moment, then Cecil spoke.

"How well you play," she said, carelessly, without glancing at him. "I had no idea you were such a musician."

"That I have pleased you is only too great an honor," he said, gently.

"You are becoming quite a courtier," she answered, with some languid amusement in her manner. "What has changed you so, I wonder?"

"What?" he said, with sudden passion, turning to her quickly. "Need you ask? Do you not know, Cecil?"

She laughed slightly.

"Perhaps I can guess, but I cry you mercy, Dr. Carewe. I am surfeited with pretty speeches, false and true; at least," and she turned to him with one of her sweet, bewildering smiles, "I can claim exemption from them from you."

"You can claim what you will from me, and it is yours," he said, while the passion in his heart forced its way upwards to his throat, and made his voice tremble as he sat there by her side.

"What I will? You give me a wide margin, Dr. Carewe,' she said, while over her beauty there came for a moment a troubled shadow. "Are you sincere?"

"Sincere?" he echoed, passionately. "You know that I am. If it were my life you asked for, it is yours—do with it what you will."

The words were brief enough, but the look which accompanied them said more than volumes could have done, and meeting that glance the rich color faded a little in Cecil's cheek.

"You take one back to the old chivalrous days," she said, lightly; "but you talk very foolishly, Dr. Carewe. Your life! what should I do with such a gift, and what payment could I make you for it?"

She spoke lightly and carelessly, with all her old languid grace and some little amusement; but as she spoke she turned her face towards him and smiled into his eyes, and the color came and went in his face, while mad words rose to his lips in reply, words which it required the strongest effort to restrain, but which he checked—he dared not speak them yet—although the room seemed to turn round about him, and a mist seemed to hide her from his sight.

Cecil saw his emotion and guessed what was the purport of the words he would have spoken; she felt the burning glance of his eyes, as they dwelt upon her; she could hear faintly the beating of the passionate heart as he sat by her side, and she knew that her triumph was at hand—that the words which Mattie's illness had arrested on his lips on the night of the ball would be spoken now, spoken with tenfold passion in proportion as his love had grown since that day; and she would not spare him—spare him through whom her brother sinned and fell? Never—Nay! though she had seen nothing unworthy in him, though even in her eyes he seemed noble and true beyond all nobility and truth, she would keep her vow—he should suffer, pang for pang, "an eye for an eye, and a tooth for a tooth!"

Silence fell upon them as they sat, the death-like calm which often precedes a storm; and in that silence a chill fell upon Cecil—a strange, sudden foreboding, as she remembered the words he himself had spoken to her:

"Revenge, at first though sweet,
Bitter ere long, back on itself recoils."

And as she recalled them, an involuntary shudder ran through her, and shook her from head to foot.

He turned to her quickly, with swift anxiety. "You are cold—you shivered!" he said, hurriedly "May I get you a shawl?" You will not return to the drawing-room yet?"

"Oh! no, I am not cold," she answered, with a smile. "Did I shiver? It was your fancy! I am not cold. See—feel my hand!"

She put out her hand to him, and touched his with her slender, jewelled fingers, and at the touch his calmness fled—he caught it in his, and raising it to his lips, covered it with wild, passionate kisses, which burned like fire on the soft flesh. She bore the caress in silence, then she withdrew her hand from his slowly, and turned slightly away. Could it be that she loved him?

"Cecil," he said, brokenly, "Cecil."

For a moment she answered him nothing—perhaps in that moment she felt a pang of compassion for the suffering she was about to cause; but if she did, she conquered it, and turned to him with a smile of bewildering sweetness, and said, softly:

"Well?"

"You are not angry?" he said pleadingly.

"Angry!" she repeated. "Why should I be angry?"

"Why?" he echoed, passionately. "Great Heaven, is it true—is it true that you will listen to me?"

He took her hands in his once more, he bent his head low over them, and laid his lips upon them in one long passionate kiss; in the silence she could hear the rapturous beating of his heart, the heavy breathing as they came from his lips, and she sat, silent, pale indeed, with a strange, fitful pallor, bearing his kiss, his touch, that her triumph might be yet more perfect—her revenge yet more complete!

"Cecil," he said, in a moment, mastering his excitement by a strong effort, and speaking with some degree of calmness, "it is no new thing to you to have poured out at your feet the whole love of a man's life and heart; it is no new thing to you to hear that I love you with all my heart and soul, and strength. I have had no hope until now. I know myself to be so unworthy of you—that I have fought against that love for my life. I have struggled—Heaven knows how vainly—to conquer it. But now! oh! my darling, you do not repulse me—you do not send me from you—you do not reject that love, and my happiness seems greater than I can bear."

"Does such love exist now-a-days?" she said, in a low tone, as she turned her eyes upon him for a moment. "Has it not died with the poetry and, chivalry of the past?"

"I know not," he said, wildly—"I care not. know only this—that I love you as a woman was never loved; and that for your love, to win you as my own, I would give my life—my very soul!"

"Oh! hush," she said, quickly and tremulously "No woman is worthy of such love as that."

"Worthy or not, it is thus I love you, Cecil," he said, passionately. "Who says you are not worthy?"

"I say so."

"You! Ah! my darling, how can you judge?" he said, with a faint smile, as he sank down on his knees before her, his hands clasping hers still, his eyes looking upward to the beautiful averted face as if they would read her soul. "Ah! my love, answer me," he said, hoarsely, "just one word to put me out of my pain?"

"You know but little of me," she said, in a low tone, as she bent towards him for a moment, wondering why his passionate words thrilled her with such joy and pain—why his trust in her was so sweet with such a wondrous sweetness, and yet bitter as gall. "You cannot tell——"

"I love you!" he said, simply, as he bowed his head on her hands, and silence fell upon them once more as he knealt there. For a moment she bent towards him with a wonderful tenderness filling her lustrous eyes—then she drew back slightly, the beautiful face set and hardened until it was motionless, as if carved in stone, and she drew her hands softly from his clasp.

"Rise!" she said, in a chill, gentle voice. "Do not kneel there; I have something to say to you."

He looked up quickly; there was a certain hesitation upon her face; her eyes were dark and troubled; her mouth firm and set. Something in her manner chilled him. The glow faded from his face, as, in obedience to her request, he rose and stood before her.

What was it she was about to answer him? On that answer hung the joy or sorrow of her future life.

For a moment there was a silence, and then Cecil spoke, and even as on her face the tenderness had died away, even so the softness and sweetness had left her voice, and left it hard, and cold, and metallic.

"You say that you love me," she said, calmly; "and I have no reason, neither do I wish, to doubt you. That you love me I believe; others have done so ere now—others whose love I have not striven to win; while for yours I have striven—I say it frankly. Nay, do not interrupt me," she added, quickly, as he was about to speak. "You think it was to return your love that I strove to win it. You are mistaken."

"Mistaken!" There was a passionate, wounded incredulity in his voice; an agony of doubt and fear in the great eyes that sought hers. "Mistaken!" he repeated, passionately. "Cecil you are mocking me, are you not? You are too noble to betray, and your own lips tell me that you tried to make me love you!"

"And I succeeded, did I not?" she said with a smile—a smile so chill, so cold, so mocking!

"Succeeded! Great Heavens! could you fail?" he said, passionately. "But you are mocking me now, Cecil, are you not? Ah! love, forgive me that ever for one moment I doubted you. You love me a little, at least. Forgive me, I must have mistaken your words. My brain seems on fire, I know not what I say or what I hear!"

He stooped over her, and tried to take her hands, but she prevented him, and rose from her seat.

"Wait—you are premature," she said, coldly. "You do me too much honor in deeming me too noble to trifle with a man's heart. You see I am capable even of such baseness at that."

He looked at her in dumb, incredulous pain. Deep as his love had been, his faith in her truth and purity; and the wistful glance of his eyes, the touch of his hand as he laid it for a moment over hers, prayed for denial of the words she spoke.

She shook off his hand as if its touch burned her, and lifted her eyes full on the colorless face of the man who loved her with such a passionate love.

"When you were loving me," she said, pressing her hands to her heart as if to repress its passionate throbbing—"when you were with me, did you ever think, or did you quite forget, whose sister I was, and what was the name of the man who had been the ruin of Reginald Lester?"

A low, hoarse cry broke from him, and he staggered back from her, holding out his hand to ward off her blow, while his great frame shook and quivered as if her words stirred him with fear or dread, and his eyes fell before her glance.

Even as her words had effected him, so they moved the girl herself. She shrank back, white and trembling, feeling that now all hope was over. He could not deny the charge; and whatever lingering hope had been in Cecil's heart, it died away for ever.—To be continued.

NEW PUBLICATIONS.

Curiosities of Music. A collection of facts not generally known, regarding the music of ancient and of savage nations. By Louis C. Elson. Published by Oliver Ditson & Co.

Musical history has hitherto been rather a dry field for research, but with this genial guide we suddenly find it full of flowers and pleasant prospects. Like other "curiosities," these stories indicate no little amount of research and hard labor and have been brought together after consulting quite a multitude of books. Hindoo Music, Ancient Egyptian Music, Biblical and Hebrew Music, Music of Ancient Greece, of Rome, of China, of Japan, of Africa, and of Savage Nations generally, are each described somewhat at length, and we are also treated to a very readable account of the music of the Middle Ages, and of the rise and progress of the opera. Mr. Elson chats pleasantly about the kings, or musical stones; the fancied virtues which Confucius and others attributed to tones. It will be seen that this is an appropriate book to be on the shelves of libraries and that it is entertaining to the general reader as well as to musical people.

Sea Air and Sea Bathing. By H. Packard, M D. Price 50 cents. Philadelphia. Published by Presley Blakiston.

The intention of the writer of this one of the Health Primers, has been to explain the beneficial results of sea-air and sea-bathing. Among the many points of interest and instruction are those treating of the time and manner of bathing and also the means of treatment in drowning accidents. The various kinds of baths are also described. To touch upon all the striking features would require an extended notice that would fail to accomplish the benefit imparted by a reading of the book.

Brain-work and Overwork. By Dr. H. C. Wood. Price 50c. Philadelphia. Published by Presley Blakiston.

The subject is treated in so clear a manner that the ideas can be readily grasped by nearly all grades of intellect. It is, of course, particularly adapted to those engaged in brain work, and a careful reading will reveal facts often unknown, and show the necessity of attention to symptoms heretofore unheeded.

Mr. Bodley Abroad. By the Author of "The Bodleys Afoot," "The Bodleys on Wheels," &c. Boston: Published by Houghton, Mifflin & Co.

This, the latest of the Bodley series, holds its reputation with as firm a grasp as any of its predecessors. As a source of instruction and entertainment to the juvenile community it is doubtful if it could be excelled. Children of older growth might also dwell on its pages with no slight interest. Historical facts are treated throughout with much precision, but related in a style to captivate the lover of romance.

Our Homes. By Henry Hartshorne, M. D. Price 50c. Philadelphia: Published by Presley Blakiston.

This one of the American Health Primer Series, is devoted to the consideration of the necessities of healthy homes. The author treats of the following topics: Situation; Construction; Light; Warmth; Ventilation; Water Supply; Drainage; Disinfection; Population; Workingmen's Homes. Under these heads are shown the evils to be guarded against and the laws to be complied with to insure health to the inmates.

BRIC-A-BRAC.

A little girl in the public school the other day had occasion to parse the word "angel," and before deciding as to the gender asked her teacher if "there were any men angels."

A SWARM OF BEES.

B patient, B prayerful, B humble, B mild;
B wise as Solon, B meek as a child;
B studious, B thoughtful, B loving, B kind;
B sure you make matter subservient to mind;
B cautious, B prudent, B trustful, B true,
B temperate in argument, pleasure and wine,
B careful of conduct, of money, of time,
B cheerful, B grateful, B hopeful, B firm,
B peaceful, benevolent, willing to learn;
B courageous, B gentle, B liberal, B just,
B aspiring, B humble, because thou art dust;
B penitent, circumspect, sound in the faith,
B active, devoted, B faithful till death,
B honest, B holy, transparent and pure;
B dependent, B virtuous, and you'll B secure.

She Changed her Mind.—A big good-natured doctor was desperately in love with, and had been twice refused by, a fair-haired little woman. But instead of the disappointment curing his love, it only made the passion grow more intense. After the last refusal, he told her that if ever she changed her mind, to let him know, as his love for her was unchangeable, and he would be proud to be her husband. Some months later he was driving home from seeing a patient, when he saw his lady-love riding in his direction. Supposing she would merely bow and pass on, as she had often done before, he did not pull up his horse. But the moment Miss Dixon came up to him, she reined in her horse, stopped, and called out:

"Won't you stop, Dr. Hill?"

He raised his hat, and replied, "I shall be happy to do so," then waited for her to speak.

She was gazing at the ground and blushing deeply, but, quickly looking up, she filled the doctor's honest heart with surprise and gladness by saying:

"Dr. Hill, I have been closely watching you lately, and seeing nothing but goodness and noble-mindedness in your character, and believing you will make an excellent husband, I am willing to marry you."

A Turkish Joker.—The best known story of the traditional Joe Miller of Turkey is that of his thrice fooling an assembly of true believers out of a sermon, by three successive jocular replies. The first time he ascended the pulpit he said, "Oh, true believers, do you know what I am going to say? They replied, "No;" whereupon he asked, "Of what use is it to preach to such ignoramuses?" and came down from the pulpit. The next time, when he asked the same question, they answered, "Yes, we know;" whereupon, he said, "Then it is useless for me to tell you," and came down. The third time, having taken counsel together, the congregation prepared an answer which they thought would corner their joker-preacher, and said, "Some of us know and some of us don't;" whereupon he promptly replied, "Let those who know tell those who don't, and once more came down.

The worst cut up man of the hour, according to the Cleveland Voice, is that Western reporter who, in describing the appearance of the belle of the town at a local picnic intended to say that she looked au fait, but, of course, the types had to get it "all feet."

"Look here Matilda," said a Galveston lady to the colored cook, "you sleep right close to the chicken house, and you must have heard those thieves stealing the chickens." "Yes, ma'am, I heerd de chickens holler, and heerd de wolces ob de men." "Why didn't you get out then?" "Case, ma'am (bursting into tears), case, ma'am, I knowed my ole fadder was out dar, and I wouldn't hab him know I'se lost confidence in him foah all de chickens in the world. If I had gone out dar and kotched him it would hab broke his ole heart, and he would hab made me tote de chickens home foah him, besides. He done tole me de day before dat he's gwine to pull dem chickens dat night."—Galveston News.

For Women.

CONDUCTED BY MISS RAY CLARK.

REST.

Knitting, busily knitting,
The dear old grandmother sits,
While through the window in sunshine,
The lazy butterfly flits.
It lights on the well-worn Bible,
And sways on its beautiful wings,
While the good old grandmother ponders
And sweetly, but feebly sings.
The hollyhocks, tall and slender,
Stand close by the open door,
Like sentinels, watchful and tender,
Their shadows thrown on the floor.
The blossoms tempt bees by their sweetness,
And blush in the light of the sun.
While birds, in their nests 'mid the tree-tops,
Cease carroling one by one.
And now she has finished the knitting,
And thinking of far-away lands,
She watches the butterfly flitting,
And folded are grandmother's hands.

She dreams she hears little feet coming,
And all her faint pulses are stirred,
For loud o'er the sound of bees humming,
The voices of children are heard.
They troop up the garden path gayly,
And rush through the doorway in glee;
But soon, in demure satisfaction,
Are seated on grandmother's knee,
She tells them the old-time stories
And presses them each to her breast,
Calls them grandmother's dear morning-glories,
And no one knows which she loves best.
Her dreams change slowly to others,
More sad, and yet they are bright,
For three little heads are all shining
Above her, like angels of light;
And six little fair hands are beckoning
And a bright golden gate opens wide,
Where her dear old husband stands waiting,
And gladly she walks by his side.

And, thus sweetly resting, they found her
That day at the setting of sun
With a halo of glory around her,
For grandmother's work was done.

AUTUMN LEAVES.

Autumn leaves in these days are so plentiful that one cannot walk in country lane or village street, or anywhere that the maple grows without the most perfect beauties fluttering at one's feet, as if asking to be picked up and allowed to be useful yet a little longer, by helping to make the home bright and cheerful through the cold Winter days.

Jack Frost does a wonderful work for the Autumn leaves, such rare combinations of colors are seen.

I have just been getting in my Winter stock of leaves and my thoughts run so decidedly to this subject that at the risk of telling my Rural sisters what they already know, I shall tell what I have done and what I intend to do with my leaves. I have long ago ceased to varnish leaves, it gives them a bright look, but I tire of the unnatural shine, besides they curl badly when varnished.

I have tried many ways of preserving leaves, and think waxing the best. I take the leaves as soon as gathered and if damp wipe them with a soft cloth, then lay as many of them as I can upon an old paper and scrape a little wax (common yellow beeswax is as good as any) upon each leaf. I then take a flat-iron just warm enough to melt the wax, a very slight warmth will do it, and any approach to heat will fade the leaf. I am particular that every part of the right side of the leaf shall be covered with the wax. As soon as the wax hardens on the edges I put them to press, and when I am ready to use them I find them looking as bright as the day they were gathered.

Leaves cared for in this way will not curl, and they have a more natural look than any other, while at the same time the color is preserved.

No doubt the maple is the most attractive of the leaves, but I have learned not to allow myself to be so dazzled by its attractiveness that I shall slight the little beach leaf which may be arranged quite as effectively as the maple.

These leaves (of the beach) while they are yet a fresh green are spotted with bright red, yellow and brown and are very beautiful. I have gathered a large quantity this year, and shall arrange them thus; I shall take a long piece of thread wire and fasten leaves to either side of it by short pieces of wire. I can bend it in any shape that I wish and, as the wire is invisible I have a vine which surpasses any wax fixing and almost rivals nature; it can be trailed over white curtains around pictures, or wherever wanted.

Surely there is no excuse for blank unornamented walls when nature has so bountifully furnished material, out of which such a variety of pretty ornaments may be so easily made. August.

HOW TO SWEEP AND DUST.

To sweep and dust a room properly is an art, and like all fine arts has a right method. Well done, it renovates the entire room, and the occupant takes possession feeling that "all things have become new."

It is not merely a performance to be done by the hand, but a work into which taste and judgement—in other words, brains—must enter. Are these closets opening into a room to be swept? Arrange the shelves, drawers or clothing, preparatory to sweeping day, then let this be the first to be swept. Cover the bed with soiled sheets, as also all heavy articles that cannot be removed, first, however, having carefully dusted and brushed them. Remove all the furniture that can easily be set in the hall or adjoining room, having first dusted it; then take a step-ladder, begin to sweep or brush, or wipe the cornice and picture cords and pictures. Draw the shades to the top of the window, or if there are inside blinds, dust them carefully. Open the windows. All the dust left in the room now is in the carpet or air, and the windows will soon settle it.

Now begin to sweep, not toward a door or corner, but from the outer edge of the room toward the center, where the dust will be taken up with a small brush and dust-pan. Go over the room once more; this time with a dampened broom; that removes the bit of dust and gives the carpet a new, bright appearance. Replace the articles of furniture as soon as the air is entirely free from dust, uncover the rest, and the room is new and clean. All this seems an easy thing to do, but there is not one in a hundred who will follow out the detail. Some will sweep the dust into the hall or from one room to another, and then wonder why their house is so dusty again. Others forget cornice and pictures, and thus leave a seed of future annoyance; while a third class will do all but using the damp broom, which is as the finishing touches to a picture.—Farm and Fireside.

THE HYGIENE OF THE FACE AND EYES.

It is a mistake to believe that a good complexion depends upon the use of such and such cosmetics. It really depends upon digestion, which itself depends upon our mode of life. Persons who rise early and go to bed regularly at ten, who take plenty of air and exercise, eat with moderation at regular hours, having their meals at intervals long enough for the digestion of one to be thoroughly accomplished before they begin the next—these persons are sure to digest well, and in consequence have clear, healthy complexions, which will require no other cosmetics but plenty of soft water and good toilet soap.

The hygiene of the eyes is very simple. For them, as well as for the complexion, good digestion is equally necessary; more so, for no cosmetic could attenuate the yellow tinge which biliousness imparts to them; and if some mysterious pencils can supply the insufficient shadow of rare eyelashes, good health alone can give them that brightness which is their principal beauty.

Never read in bed or in a reclining attitude; it provokes a tension of the optic nerve very fatiguing to the eyesight.

Bathe your eyes daily in salt water; not salt enough, though, to cause a smarting sensation. Nothing is more strengthening, and we have known several persons, who, after using this simple tonic for a few weeks, had put aside the spectacles they had used for years, and did not resume them, continuing, of course, the oft-repeated daily use of salt water. Never force your eyesight to read or work in insufficient or too broad light. Reading with the sun upon one's book is mortally injurious to the eyes.

FOR "OLD MAID NO. 2."

I have been a reader of the Rural since January. In the issue of Oct. 2nd, an article over the signature of "Old Maid No. 2," Miss Irene's idea considered, was read with much interest, and I answer the old maid. She states that she has been an old maid nearly thirty years, and never had an offer, and yet she is cheerful and hopeful. I am a bachelor of nearly 24 years, and as such I answer the old maid.

In regard to crabbed men I say that all are not crabbed; as to myself; I am pleasant and always meet the ladies with a smile, and try to do what is right in regard to the ladies' welfare. I have never offered my heart and hand to any lady, but I have a strong desire to do so to some maid, for I am faithful and kind. I think "old maids" really need kind words.

As for Miss Irene, I hope she has found a nice young man she can love by this time. "Old maid No. 2," will find one if she writes to the Rural New-Yorker often, for it is read by many farmers, and they all want a wife to help make tomato cat-sup, &c.

"Old maid No. 2," is probably correct in mistrusting just a little that Miss Irene at this late day (if she had an opportunity) would take a chance rather than wrestle alone with her dear self.

I hope to hear again from "Old maid No. 2." Accept my warmest wishes for the welfare of the old and young maids and the editor of the Rural New-Yorker. I remain your friend, Dr. A. E. S.

ABOUT WOMEN.

Sara Bernhardt has sailed for America. Her arrival is looked forward to, with interest by many, but the productions and not the producer should receive applause.

The Princess of Wales, when at Sandringham, has little tea parties for which she herself makes the butter in a silver churn, and she spreads it on slices of bread which she cuts with her own hands. While she is at her work she wears a chintz dress, and a little white apron.

A young Japanese lady of sixteen, Minet Yuba, daughter of an official in the Emperor's household, has arrived in the East from San Francisco. She is a graduate of the English school in Tokio, and will remain three years in America to perfect her education. She is a poet and a landscape painter, and is described as being extremely polite. She has a light complexion, fascinating black eyes, and a bright, cheerful countenance.

Mrs. Yoakam, of Coos River, Oregon, aided by her daughter and one hired man, carries on her farm, and she has this Summer already laid down 1,600 pounds of butter, for which she expects to realize 50 cents per pound in Winter, and besides sufficient hay for her stock, she has 40 tons to sell.

Fanny Davenport pays $2,400 to Anna Dickinson for her new play, and $50 a night for every performance after it has run three weeks.

Mrs. E. D. Gillespie, who is kindly remembered as the efficient President of the Woman's Branch of the Centennial Management, is writing interesting letters from Switzerland to Andrew's American Queen.

Mrs. Lydia Mountly Roosevelt died at New York, aged 86 years. She was the widow of Nicholas J. Roosevelt, the inventor of the Western

river steamboats, and was the first lady to ascend the Mississippi river in one of them in the year 1810.

MISS THOMPSON, the eccentric Scotch girl who lately shod her horse with gold, has been sent to a British asylum for the insane. She is the daughter of a former civil official in Dumfries, Scotland, and has succeeded in wasting a fortune through her crazy pranks.

MISS LUCY LARCOM writes to the Marblehead Messenger that her poem, "Hannah Binding Shoes," had no real foundation in fact; that she knew many Hannahs in Beverly, but none in Marblehead and that the poem was suggested by the glimpse of a woman sitting at a window binding shoes, which she had on a drive through Swampscott, Marblehead and Salem.

FASHIONS.

Hoops are becoming more and more fashionable; to most dresses is now added a cape and a hood by way of mantle.

A tourist hat is of coarse Leghorn straw, simply trimmed with a torsade of seal-brown satin, and with a brown and crimson plumaged bird laid quite flat across the left side of crown and brim.

The fashionable bracelet is a gold circlet, from which droops one large pearl attached by a small gold ring.

Combinations of brocaded or figured materials with plain ones seem likely to be still very fashionable this Winter. When the whole bodice is not of the figured materials, all the trimmings are—the collar, facings, cuffs and other effective appliances; while upon the skirt the same appears in panels, tabs or simply in bias bands, forming headings to the flounces or other trimmings, which are of the same fabric as the dress.

The new bonnets are mostly of black or colored satin, pleated, not shirred. The shape is a compromise between the Directoire and the Cabriolet; the border open and protruding, lined with satin pleated fanwise, a small curtain behind. The trimming consists mostly of feathers and bows of satin ribbon, put on rather forward upon the crown.

Black velvet bonnets are often lined with pleated dark red or gold-colored satin, and trimmed outside with black feathers and jet ornaments.

Jet is once more extremely fashionable for ornamenting not only bonnets, but mantles and dresses. Sometimes the whole tablier of a dress is beaded with jet; or lappets, basques, revers and facings are covered with jet beads, rendering a black toilet most elegant and stylish.

Velvet is still used extensively for skirts of costumes.

The Directoire is a simple style of cloak, with a plain shoulder-piece and long loose fronts, the back slightly fitted to the waist. It is made of black silk or cashmere, and more or less richly trimmed with passementerie, jet and black lace.

Very pretty indoor jackets are made in the casaquin style, moulding the waist, and coming down low over the hips. A new model for the casaquin or basque waist is the plain square in front, with the back-pieces continued about two inches lower down, and edged with lace or fringe, while all the rest of the outline is finished plain. The sleeves have facings trimmed to match with this back part. The front is trimmed from the neck down to the waist-line with a lace quilling.

The Jersey bodice is much worn of very fine wool, with sleeves of the same wool knitting. A collar and cuffs of embroidered velvet are added to it. It is worn with a short skirt of cashmere, kilted all the way down; a very narrow fluting of silk or satin of some bright contrasting color is added on just under the edge of the kilting. A wide scarf crosses over the skirt, and is tied at the back; it takes the place of a tunic. The mantle which goes with this costume has wide sleeves and a hood. I will describe one such costume, to make my description easier to understand:

Short skirt of navy-blue Hindoo cashmere, with fluting of blue and red Pekin silk round the edge. Wide scarf of wool and silk Pekin of the same color; the blue stripe is wool, and the red stripe is silk. This scarf is thrown across the dress, draped over the hips, and slightly looped up behind, so as to form a light puff. Jersey of navy-blue woolen knitting with velvet collar and cuffs embroidered with red. Vigogne mantle, with a hood lined with Pekin, and sleeves with wide Pekin revers. This costume is most practical.

Silk cord and tassels or cord and knots are much used for dress decoration.

Plush is very fashionable this season. It is used for dresses, cloaks, and hats, amethyst, bronze, myrtle green are the colors most effective. A black ground closely shot with red is one of the latest productions in this material.

Shot fabrics are all the fashion this Autumn, also small cashmere and Madras patterns, the whole combined with self-colored tissues.

A pretty dress is made thus: the skirt-front is composed of alternate flutings of greenish-blue cashmere and plain bands of Turkish cashmere in a medley of colors, commingled so as not to appear gaudy; two flutings and one cashmere band go all round the foot of the skirt. The sides and back of the skirt are covered with a puffed drapery of Turkish cashmere, looped up with bows of greenish-blue satin. The bodice is a long-waisted casaquin, also of the Turkish cashmere, trimmed with a deep turned-down collar, and tapering revers of blue cashmere, edged with Languedoc lace. It is fastened down the middle with small blue and gold buttons. At the back and sides the basque of the casaquin is slit open and turned up with revers of blue cashmere. The sleeves are trimmed with a plain band of the same and flutings of Languedoc lace.

The elegant costume can also be made of any fancy woolen material, with flutings, collar, and revers of satin or surah.

Young ladies have been adopting mantles in the Russian style, in the shape of a long casaque of dark blue serge, lined with silk of the same color. It is trimmed with thirty or forty rows of narrow braid, and has a small pointed hood lined with silk. This dainty hood is the great favorite of the day. It is, as already hinted in former letters, added on to capes, mantles, and even bodices. Small paniers are also worn, and the paniers and hood together give a charming Louis Quinze look to our new Winter costumes.

CORRESPONDENTS' CORNER.

EDITOR RURAL NEW-YORKER:—I have obtained many valuable ideas from your paper, and have several very pretty and useful articles from directions given therein. In your issue of September 18, Art Amateur says she has beautified her windows with "sheets of patented silk paper painted with brilliant oil-colors," and as no such article can be found in the city near us, will she please inform me where it can be obtained, the expense, the precise manner of putting it on, and if it is suitable for large plate-glass in a hall door. By so doing she will oblige a reader of the RURAL.

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Domestic Economy.

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PEN THOUGHTS FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

I HOPE no mother with a fretful baby will feel as if I had praised my little two-months-old girl at her expense, or considered her complaisant behavior due to my own management; for such is not the case. I regard such effects as altogether the consequence of the health of the parents, combined with regularity in feeding and hours of sleep. The child of a sickly, nervous parent, whether father or mother, is likely to be wakeful and fretful, while the best dispositioned babe can be easily spoiled by irregular hours for dressing, for feeding, and for its daily sleeps. And when very young, as soon as a child has plenty of food, is warm and comfortable, *put it down* in a crib, cradle, or lounge (I prefer the latter), and never rock. If this practice is begun early, the infant soon learns to lie peacefully there, especially if in sight of its mother, leaving her hands free for other work and giving it a needed change of position, more restful than if always in arms. I know all about it, young mother, how tired you feel; of the aching between the shoulders, and the wakeful nights and if the little one is restless *with* regular habits, then set yourself at once to improve your own health by diet and out-door exercise, and so the nervous baby will be strengthened and quieted as its health improves. A mother's will has a strong influence over her tiny charge, and if she uses it aright, even in these early weeks of life, the little darling will yield to her stronger mind, and become accustomed to the hours for sleep she selects for it. But if *she* is nervous and irritable, how *can* it sleep serenely, or how can she expect it to be calm and contented?

DOMESTIC RECIPES.

Angels' Food.

FOUR ounces of flour, after weighing add a heaping tablespoonful of the same material; twelve ounces of powdered sugar; a salt-spoonful of salt; the whites of eleven eggs, flavored before beaten,—rose is generally used—one teaspoonful of cream-of-tartar. Put sugar, flour, salt, and cream-of-tartar together and sift through a fine sieve six times; then stir in lightly the whites of the eggs beaten to a stiff froth. Put into a pan without grease, and bake in a good oven about fifty minutes. This cake must be baked in a NEW PAN, as one kept for any other purpose does not answer as well. When baked turn it over on two or more tumblers until cold; then remove it from the pan, and ice it with thin icing. Soda is not used, and a pan with a tube in the center is preferable for baking.

Imperial Cake.

One pound of butter, one pound of sugar, one pound of flour, one nutmeg, one pound of raisins, half a pound of citron, ten eggs, one wine-glass of brandy, one wine-glass of wine, and one pound of blanched almonds.

Snow Cake or White Sponge Cake.

One tumblerful of flour, one and one-half tumblerful of sugar, one small teaspoonful of cream-of-tartar, (no soda), and the whites of ten eggs. Beat the eggs very light, sift the flour, sugar, and cream-of-tartar together, and stir gradually to the eggs. Bake in a round, papered pan 45 minutes. After baking, frost it with the white of one egg, three spoonfuls of powdered sugar, and then cover with grated cocoanut. MRS. D. SNEDEKER.

Brooklyn, L. I.

Roll Jelly Cake.

Three eggs, one cup of sugar, granulated, four tablespoonfuls of cream, one-half teaspoonful of soda, one cup of flour. If sweet cream is used, add one teaspoonful of cream-of-tartar. Bake in a long, shallow pan to a light brown. When done, turn bottom up on a bowl or cloth, spread with jelly and roll up while warm, wrap the cloth around it and set in a cool place until needed. For sponge cake use the same recipe omitting the cream. It seems to me all the recipes given in our papers are so rich or elaborate in construction as to be of little use to busy housewives whose time is fully occupied. The above will be found quickly and easily made and very palatable.

MRS. C. E. J.

Roll Jelly Cake.

That J. C. C. may have more than one recipe to try for jelly cake that will roll, I send mine which is very simple and so quickly made and baked that it is a favorite with us and many others who have tried it. Three eggs well beaten, one cup of sugar, one and one-half cup of flour, two teaspoonfuls of melted butter (not hot), three teaspoonfuls of sweet milk one teaspoonful of cream-of-tartar, one-half teaspoonful of soda or one of baking powder. I bake in a long bread pan, buttered, having the batter as even as possible. Spread jelly on the top as soon as taken from the oven. Loosen from the sides of the pan if necessary. Begin at one end and roll, slip the knife under and draw a little from the end of the pan and roll a little farther, so it will lie on the end of the cake and keep from unrolling. After a few minutes remove to a platter where it will lie straight. I roll the bottom out, as it will not crack so easily as the top and requires less handling. Should the cake be too thick to suit you, bake next time in a larger pan or in two. This is also a good rule for layer cake in which case you can add more milk and flour. For the jelly I used one orange grated, one cup of sugar and three eggs. Cook 15 minutes, stirring all the while. I took twice the rule for the cake, as I wished a larger one and this amount of filling was sufficient. MRS. E. R. F.

Fig Cake.

Two cups of sugar, one-half cup of sweet milk, one cup of butter, three cups of flour, three teaspoonfuls of baking powder; 24 figs sliced thin. Drop them in after you have put the cake in the tin to bake.

Currant Cake.

One cup of sugar, one-half-cup of butter, one-half cup of sweet milk, three teaspoonfuls of baking powder, one cup of English currants, roll them in flour; one and one-half cup of flour.

Ribbon Cake.

One cup of sugar, one-half cup of butter, one-half cup of sweet milk, one large teaspoonful of baking powder, two cups of flour, three eggs, taking out two of the whites for frosting. Bake in three layers, put spices and fruits in middle layer, between each light one put jelly, then frosting between each.

Marble Cake—(dark).

One cup of brown sugar, one-half cup of molasses, one-half cup of butter, one-fourth cup of milk, yelks of four eggs, two teaspoonfuls of cloves, two of cinnamon, two nutmegs, one teaspoonful of baking powder, two cups of flour.

Light Part.

One cup of white sugar, one-half cup of butter, one-fourth cup of milk, whites of four eggs, one teaspoonful of baking powder, one-half cup of flour, lay in layers or spots. This makes two large layers. MRS. N.

Brooklyn, L. I.

Calf's Heart.

Wash off the blood—do not soak it—stuff with common bread dressing, seasoned with sage and minced onion. Tie a piece of greased paper over the top to keep in the dressing. Put into the oven and bake two hours, basting very often. Put the heart on to a platter, thicken the gravy in the pan, season and pour around it. E.

VARIOUS FORMS OF DRAWN-BUTTER SAUCE.

Pickle Sauce.

Add to the drawn-butter just before serving two or three tablespoonfuls of minced cucumber pickels.

Egg Sauce

is made by adding two or three hard-boiled eggs chopped like dice.

Parsley Sauce.

Mix with the drawn-butter three spoonfuls of minced parsley.

Lemon Sauce.

Chop fine the inside of a lemon, removing seeds, and mix with the sauce.

Oyster Sauce.

Add oysters strained from their liquor and let come just to a boil in the sauce.

A. E. M. B.

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Miscellaneous.

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THE request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness.

News of the Week.

HOME NEWS.

MONDAY, Oct. 25, 1880.

THERE is no longer any hope of the safety of the Lake steamer Alpena, which must have foundered on Lake Michigan during the gale of the 16th and 17th .....The Presidential election occurs on November 2d, before the next issue of the RURAL will reach its subscribers. The canvas has been one of the most closely-contested for years, and the vote will no doubt be much the largest ever given .. . ...Two cotton sheds, a brick warehouse and two thousand bales of cotton were burned in Charleston, S. C., on the 17th, the loss amounting to $200,000.....On the Shenandoah Valley Railroad, at East Liberty, Page county, Virginia, the entire trestle-work, 1,260 feet long and 94 feet high, went down with a crash in one promiscuous ruin, instantly killing Walter Jones, of Barboursville, Orange county, Va., and seriously injuring Stewart Bocock, of McGaheysville. Rockland county, Va. Loss, $10,000. This accident will probably delay the completion of this section of the road several months.....Dogs got into a herd of sheep belonging to Owen Potts, of Brown's Mills, Burlington county, N. J., and killed 61 of them. Twenty-five others were mutilated and had to be slaughtered .....It is stated at the Interior Department that the Northern Pacific Railroad will be completed within two and a half years.

The forthcoming annual report of the Director of the Mint will show that upon 84 per cent. of the total domestic exports during the last fiscal year the prices realized were about 10 per cent. higher than for the previous year. This increase was on manufactured articles as well as agricultural products, the principal being: Cotton, 25 per cent.; cotton manufactures, 12 per cent.; breadstuffs, 20 per cent, and iron and iron manufactures, 40 per cent.....Mrs. Lydia Maria Child, the well-known authoress, died on the 20th at Wayland, Mass., aged 78.....The Chief of the Bureau of Statistics reports that the total value of the exports of domestic breadstuffs from the United States during the month of September, 1880, were $23,881,936, and during September, 1879, $35,828,848. For the nine months ending September 30, 1880, $208,679,542, and during the same period in 1879, $176,399,946. .....The Indian who murdered the toll collector at Sitka, Alaska, was hanged on the 7th instant. .....Dispatches from North and Northwestern Ontario report a severe snow storm in progress, about four feet of snow having already fallen.... ....A fire at Leadville, Col., on the 16th, destroyed John F. Leninger's book store, Lewis' pawn shop, J. Billing & Co.'s liquor store and Hall's book store Loss, $20,000; insured.

Elfreda Partridge, Carrie Hichborn, Emma Berry and Frederick Patterson were drowned by a boat upsetting in the harbor of Stockton, Me. The bodies of the girls were recovered.....A fire at Sheboygan, Wis. destroyed ten buildings. Loss, $10,000; insured.....Jack Pierce shot and killed Joseph Hornbeck at Rawlins, W. T. Both were teamsters.....A twenty-three-inch strata cave has been discovered, on the line of the Texas-Pacific railroad, west of Palo Pionto, in the canyon of San Antonio.....Mrs. Julia D. Bates, widow of Hon. Edward M. Bates, United States Attorney General under President Lincoln, died at St. Louis on the 16th.....A fire at Wyoming, Stark Co., Ill., destroyed Stone's clothing store, with several smaller places of business. Loss from $40,000 to $50,000; insurance, nominal.....Mrs. Isabella Pidgeon, working as a weaver in the Crescent Mill at Fall River, Mass., has just fallen heir to a fortune of $170,000, left by an uncle who died recently in Australia.....James Lowrey, a carpenter residing at St. Paul, Minn., in a fit of temporary insanity, shot his wife with a revolver, and then blew out his own brains. The woman may recover.....The shipments of bulk grain from St. Louis to foreign ports via New Orleans, from January 1 to October 16 were 13,914,000 bushels, against 6,164,838 bushels for the same time last year.

The report made by Dun, Wiman & Co., at Montreal, of the failures in Canada for the quarter ending September 30, show only 130, with liabilities of $1,319,763, against 417, with liabilities of $6,998,617, for the corresponding quarter last year. .....Seventeen Mormon elders from Utah left for Tennessee, Georgia, Alabama, Mississippi, North Carolina and Virginia, whither they go to make converts to the Mormon faith and secure Mormon emigrants to Colorado.....The Mexican Congress has passed a law by which the Government pays a subvention of $20 monthly to every newspaper published in the republic, the newspapers being required to treat matters of public importance in a manner harmonizing with the necessities and interests of the country..... The body of a little girl named Hassack, whose parents perished by the explosion of the Garden City distillery at Chicago on Friday night, was found among the ruins on Saturday. The bodies of those reported missing have been recovered. The deaths caused by the explosion now number eight.....Governor Murray, of Utah, in his annual report to Secretary Schurz, recommends the substitution of a commission for the Territorial Legislature, in order to get rid of polygamous legislators, and cites Congressional legislation regarding the Northwest Territory and the District of Columbia as precedents.....A boiler exploded at Massilon, Ohio, on the 16th, in Russell & Co.,s paper mill, causing damage to the buildings estimated at $10,000.....A collision on the Cincinnati, Hamilton and Dayton Railroad at Jones' Station, nineteen miles north of Cincinnati, resulted in the injuring of fifteen passengers.

The woman suffrage movement is slowly progressing. In New York and Massachusetts the experiment is being tried in a restricted form in the election of school officers, and a dispatch from San Francisco announces that the Oregon Senate and House have agreed to a constitutional amendment allowing women to vote—the Senate by a vote of 21 to 9 and the House by 32 to 27. Of course this amendment must be ratified by the people in convention or by popular vote before it becomes effective.

A fire at Portage, Wis., destroyed the Pettibone block, in which were located Goodman's clothing establishment, J. E. Wells & Co's hardware and tin store, Loomis Gallet & Breeze's knitting works (employing 50 hands) Bullard's paint shop, the Odd Fellows' Hall, the armory of the Guppy Guards and several other smaller shops. The loss will reach $50,000... ....The Vermont Legislature, in joint assembly, formally declared George F. Edmunds their choice as United States Senator.

Orr, Leonard & Daniels' largeoil mill at Piqua, Ohio, was burned with its ad-joining warehouses both full of flaxseed and oil. The loss is $10,000; one-fourth insured.... The woolen mills, anchor works and other manufactories at Camden, Me., have shut down entirely for want of water. The Megantlcook River was never known to be so low.....A fire broke out in the shoddy manufactory of Benjaman Hey, at Second street and Broadway, in Cincinnati on the 20th in such a way as to cut off escape from the third story, where a number of women were at work. The firemen made heroic but ineffectual attempts to rescue the women. After extinguishing the fire they succeeded in extricating the dead bodies of five women. They were Mrs Doggett aged 40 years; Mrs. Segner, aged 50; Mrs. Jackson, aged 30; Mrs Barrett and Miss Welsh. The loss by the fire is estimated at $25,000; insurance, $12,000.

A most extensive forgery project was nipped in the bud by the arrest of J. B. Doyle at Chicago, on the 21st, and the further arrest of three accomplices in Brooklyn, on the 22d. More than $200,000 of spurious United States bonds were obtained.... ....The Wabash railroad company has secured its objects as the result of the recent railroad war. The company get a connection to Omaha when they build ninety-five miles from Prairieville to Shenandoah, near Council Bluffs, that part of the road to be operated jointly by them and the Chicago, Burlington and Quincy. The company also get entrance to Chicago and its part of all pool arrangements.....The rain of the 20th-23d has put an end to the protracted drought in the Eastern States.....A gravel train on the Chicago, Milwaukee and St. Paul railroad ran into a drove of cows, near Stillman Valley, Ill., ditching ten cars and killing several persons. John Ryan, a section man, was killed outright. The killed and wounded numbered fourteen. Three of the train hands are reported killed. Many of the wounded were boys living in the neighborhood, who were having sport on the train while it was switching. .....John Reed had his head caught in the machinery of the Fishback rolling mill at Pottsville, Pa., and was fatally injured.....The New York Central railroad, it is said, gives direct employment to over 12,000 persons.....The New Orleans Picayune hears that the Cunard steamship company will put on a line of vessels between that port and Liverpool.

The manufacture of barbed wire fencing has increased from 10,000 pounds in 1874 to 27,337,000 pounds in 1879, and it is estimated this year's production will reach 50,000,000 pounds.....Captain Eads assures New Orleans shippers that a few hours' dredging in one place in the jetties channel will enable the Great Eastern to come up to New Orleans drawing 29 feet.....A new method of tanning hides, not by any form of tannin but by chrome, is being tried in Scotland. It is said to be cheaper, quicker, and to make better leather than the old ways.....The Saginaw Valley lumber shipments thus far this season are the largest in the history of the trade of Michigan. The shipments of lumber from the port of Bay City for the month of September are 7,882,921 feet. The lumber shipments from the Saginaw River from the beginning of the season to October 1 are 824,025,286 feet, an increase of 135,392,343 feet over the same period of last year.....The Toledo, Peoria and Warsaw and the Missouri, Iowa and Nebraska Railroads have ceased to exist as independent corporations, and will hereafter be known as the Peoria and Iowa Division of the Wabash, St. Louis and Pacific Railway Company.....Superintendent Walker, of the Census Bureau, will make a complete report of the enumeration of population to Congress at its next session. A report to Congress in the session next following the enumeration has never before been made.

FOREIGN.

THE Post Office at Manchester, England, was burnt yesterday, it is supposed by Fenian incendaries, and at the same time telegraphic communication with London was cut off. Two regiments of infantry have been ordered to the town. Manchester has a very large Irish population, and was the scene of a very fatal explosion in the Fenian outbreak of '67.....The British government has decided to prosecute the leaders of the Land League for conspiracy to resist the laws. About 200 indictments are being prepared against Parnell and other members of Parliament who are prominent agitators in the movement, as well as against journalists and public speakers, all of whom will, it is expected, be arrested towards the end of this week. It is reported that in despair of securing a verdict against the accused in Ireland, a change of venue to England will be sought by the government from the Court of Queen's Benoh. This is the first time such a step has ever been tried, and great doubts exist as to its legality. The Irish policy of the Gladstone Ministry is bitterly opposed by all parties; but the Ministry says it will stand or fall by that policy. A large number of outrages against property have occurred during the week in Ireland. The tenants of Mr. King-Hartman, a very large land owner and an ex-M.P., have been warned if they pay rent they will be shot. Excitement at fever heat. Large numbers of arms are being sold from this country. More troops are being sent to the island.....The city of Oxford will probably be disenfanchised for a term on account of gross frauds in the election of its member of Parliament at the last general election.....Harry Beckett, the well-known actor, died in London last Saturday.....Archbishop McCabe of Dublin will soon be made a cardinal. He has written a strong pastoral letter against the programme of the Land League, which will henceforth be opposed by most—not all—of the Catholic clergy. The letter has excited the fierce resentment of most of the leaguers.

The speech of the King of Greece on opening the legislature on Thursday is regarded as a declaration of war against Turkey. Greece has under arms nearly 40,000 men ready to invade the Turkish territory which she claims. Inasmuch as Turkey could easily crush her if unaided, the plucky little kingdom would not begin war unless pretty certain of foreign aid. The government has notified England that, having failed to receive aid from the European Powers, she will occupy Thessaly alone. Notwithstanding the continued refusal of France and Germany to join with Great Britain in pressing for the immediate satisfaction of Greece's claim upon the Sultan, Mr. Gladstone will insist single-handed in the name of England upon the full surrender of the disputed territory, an action which, it is seen, points directly to a general European war.....Much excitement in Albania on the death of several prominent chiefs who were opposed to the cession of Dulcigno. Suspicion of poison.....Riza Pasha, the Turkish commander, has taken measures to disarm the most turbulent of the Albanians in and near Dulcigno, and the Porte peremptorily ordered him yesterday to surrender the place unconditionally to Montenegro within five days. After the surrender Montenegro will liberate all imprisoned Mussulmen and proclaim an amnesty.

In France the expulsion of the religious orders is causing great excitement. In several instances all the police commissioners of a town have resigned rather than execute the decrees against them; a very large number of magistrates have done the same for the same reason, and others have been publicly excommunicated for enforcing the decrees. In spite of numerous rumors that the government was "weakening" in the matter, the latest cablegram says it has been finally decided to persist in the persecution....In a late trial it came out that Gen. Cissy, while Minister of War some years back, was very intimate with a lady who was separated from her husband, and who is now accused of having been a Prussian spy. Through her, it is alleged, the German Government obtained all the secrets of the French War Department. When the matter became public the other day Cissy was promptly removed from the military command of one of the departments which he held at the time. This measure has caused great excitement among the Republicans with whom the general is a favorite, and they with him demand a trial and conviction before punishment.

It has lately been made public that shortly after the death of his wife the Izar married morganatically the Princess Dolgorouki, with whom he had several children during the tzarina's life-time. The tzarewitch, his eldest son and heir to the throne, together with his other children, being opposed to the marriage, left St. Petersburgh at the time in order not to be present at it. His health has been very poor of late, and he has retired with his wife to Livadia, his winter residence, and it is reported that he is desirous of transferring the reins of government to the tzarewitch, he himself retaining the "imperial privileges," and remaining permanently in his present quarters, provided his children by his present wife, born during the lifetime of the last, are legitimatized and acknowledged to be princes and princesses ranking after his children by the tzarina. The tzarewitch has gone to Livadia and will probably consent..... The Nihilists, after all, are not exterminated but only resting, or perhaps secretly undermining the present order of things. The Representative of Hamburg will shortly ask to have the city proclaimed in a state of siege on account of the Nihilists. Prussia will make a similar proposal in regard to Altona, Ottensen and Wendsbeck.

The Canadain syndicate that is trying to raise money in England to build the Canadian Pacific Railroad, report very favorable prospects..... Several severe shocks of earthquake were felt at Dijon, France Wednesday. An earthquake occurred at Lisbon, which was felt in almost every part of the country. No damage is reported. An earthquake occured in several towns of the province of Zamora, Spain. The shock was also felt at Madrid.

Forty days having elapsed since the birth of the Infanta Mercedes, imposing ceremonies took place in the palace at Madrid, Spain, Thursday, on the occasion of the first appearance in public of Queen Christine. The papal brief was read, and gifts from the Pope to the queen and infanta were presented.....The arrest of Warschafsky, a well-known capitalist and purveyor to the Russian army, is in connection with the army supply contract of the last war. It is stated that evidence is forthcoming that Warschafsky defrauded the authorities out of 22,000,000 roubles. Boren, secretary of chief of the army, and chief administrator during the late war, has also been arrested at Odessa.

A dispatch from Buenos Ayres, by way of Lisbon, received at London on Monday, says: "A terrific snow-storm occurred in this province on the 18th of September, and it is estimated that 700,000 cattle, 500,000 sheep, and 250,000 horses perished. .....There are contradictory reports about the war between Chili and Peru and Bolivia. The latest is that the belligerents have agreed to abide by the arbitration of the President of the United States in the present difficulty, and they are to invite all the different States on this continent to agree to the establishment of a system of arbitration for the settlement of all future questions among themselves.

[Saginaw Daily News.]

Mr. George Schick informed our reporter that he had been suffering with rheumatism in his feet so badly that for weeks at a time he would be unable to leave his bed. He tried various remedies without relief, and concluded to use St. Jacob's Oil. It acted like magic. In two days he was entirely cured.

AGRICULTURAL NEWS.

Generally speaking the French farmer is not a jolly soul. Whether he be a man of education or not, he settles down into a grub sort of life, faring frugally on soup and the thinnest of ordinary red wine or cider. The stock of his soup is bacon, and he eats butchers' meat only twice a week, that is, on Sunday and market day. When he attends market he makes a succulent dejeuner and drinks a good deal of beer afterward at the cafe. This is his only cheerful time.....Epizooty has become epidemic in nearly every town in Southern New Jersey. In Ocean and Monmouth Counties, especially in the towns skirting the coast, the malady is as violent as it was in its visit in 1876. Several deaths are reported. In Burlington County hundreds of horses are affected, but the disease there is of a mild type. The horses in the furnace towns are suffering the most. Wild onions are being used as a cure for the disease by the farmers with much success It has also extended westward some distance beyond Chicago and is still traveling steadily. In some places it is quite as severe as on the former visit; but generally it is of a milder type, seldom proving fatal.....The exports from New York of wheat and corn on last Friday week were larger than for any previous day in the history of this port. Of wheat there were exported 720,206 bushels, and of corn 420,022, a total of 1,140,228. This is largely due to shippers who, having made contracts, hastened recently to cover them for fear that prices would advance later in the month. The Mark Lane Express, of the 18th, in a review of the grain trade for the past week, says: "The weather has been very favorable for the wheat sowing, and, as the farmers will be fully occupied therewith, thrashing will be restricted during the present month. In English wheat, the proportion of first-class samples in good condition has been exceedingly small. The demand for good qualities has been active, and at the more important of the provincial markets they advanced 1@2s. per quarter. In foreigns, wheat has been subject to reaction and uncertainty during the week, but at the close it was firm, and the decline was fully recovered..... Under date of October 6th, it is stated that the French farmers were occupied with field work and were bringing very little wheat to the markets, in consequence of which it was higher, with a more active sale.....The exports from Atlantic ports from July 1 to Oct., 16, 1880, have been 2,213,863 bbls of flour and 59,647,418 bushels of wheat, equal to 69,609 802 bushels of wheat. The movement of wheat at Western lake and river ports has been quite moderately increased for the week ended Oct, 16, as compared with the previous week, but still it is not nearly so large as it was for the corresponding week in 1879. The movement of wheat at San Francisco from July 1 to Oct 4, 1880, has been only about one-half as much as it was for the corresponding period in 1879. The exports from July 1 to Oct 4, 1880, have been 3,099,842 bushels against 6,182,100 bushels for the corresponding period in 1879. The exports from Oregon from July 1 to Oct 1, have been 48,880 bushels of wheat.

The cotton crop of the United States for the year ending September 1st, is estimated at 5,757,397 bales, the largest probably ever raised, and worth $200,000,000. For 1878-9, the crop was 5,037,531 bales. This year's crop, not yet picked, is expected to be still larger than that of 1879-80. .....Several of Kankakee's, Ill., leading men have formed a joint stock company for the manufacture of glucose and grape sugar. The capacity of the factory will be, for the present, 1,000 bushels of corn per day.....Among the exports from this port on Saturday, were 50 tons of fresh meat for Liverpool and 1,200 quarters for London, together with 50 head of prime cattle and 250 dead sheep. The export of apples still continues very heavy.....The visible supply of wheat Oct. 16, was 15,764,158 bushels, vs. 14,422,158 bushels October 9, 1880; 23,205,349 bushels October 18, 1879, and 16,503,659 bushels October 19, 1878. The stock here in store October 16, 1880, was 1,171,893 bushels, vs. 1,934,748 bushels October 9, 1880; 3,734,878 bushels October 18, 1879, and 620,419 bushels October 19, 1878.....The deliveries at Seaboard ports for the week ending October 22, were 3,540,719 bushels vs. 3,106,362 bushels the previous week, and 5,622,461 bushels the corresponding week in '79. The export clearances from thence for Europe for the week, were 3,666,524 bushels vs. 3,589,626 bushels the previous week, and for the last eight weeks, 29,843,461 bushels vs. 40,321,174 bushels the corresponding eight week in '79. The receipts here for the week were 1,741,842 bushels vs. 1,126,426 bushels the previous week. The sales for the week were 6,575,000 bushels vs. 9,214,000 bushels for the previous week. The stock at Atlantic seaports, October 6, 1880, was 3,231,935 bushels, vs. 7,512,333 bushels October 18, 1879.....The visible supply of corn October 16, 1880, was 20,262,111 bushels vs. 19,934,220 bushels October 9, 1880; 10,562,315 bushels October 1879, and 10,439,577 bushels October 19, 1878.

The outlook in Russia is very gloomy as regards food for the coming Winter. The average export of wheat is about 40,000 bushels, although it was much more last year owing to the high price and a bountiful harvest. This year there will be no export of wheat, and it is pretty certain there will be a considerable import. Everywhere the harvest was short, and in many places almost an entire failure; nor is there much prospect at present that the country will soon be able to have large crops again. Insect pests abound and leave little hope of fine harvests; drunkness among the peasantry is even more injurious than their antiquated system of husbandry, while the numerous holidays

of the Russian Church keep them idle nearly one-third of the time.

Nearly all the horses at the national capital are down with the epizootic. In the middle of last week the disease commenced to spread. In the surrounding country, Maryland especially, farm-horses have the affection, and in some instances farmers are put to much inconvenience, as well as the city railway company at Washington..... Commissioner LeDuc is manufacturing sorghum in his mill in the rear of the Agricultural Department at the rate of several thousand pounds a day.

The treasurer of the Maine Beet Sugar Company asserts that last year the company worked 9,000 tons of beets into 900 tons of sugar and molasses, which sold for over $110,000 dollars, and gave a moderate profit over and above the State bounty. .....The Colorado Live Stock Insurance Company was recently organized in Denver. It proposes to insure horses, cattle and mules against death.....It has been found that the cotton stalk, its branches, and the cotton bolls that are left by the cotton pickers, contain a fiber which, when properly prepared, is equal to the finest manilla for the manufacture of cordage and the like. Planters are recommended to bundle and stack the stalks after cotton picking is over. This discovery will add very materially to the value of the cotton crop, once the market for stalks has been established.....A syndicate of cattle dealers of Toronto has contracted with the Allan and Dominion lines of steamships for space for 20,000 head of cattle for the ports of Liverpool, London, Bristol and Glasgow.... Texas cattle men are more than satisfied with the season's business, as their stock brought one dollar a hundred more than was expected. The drive for the season aggregates over 300,000 head, 125,000 of which were taken to Nebraska, and the rest stopped South, mostly on the Kansas line.....A leading Liverpool Grain Circular of last Friday says:—"The Wheat trade during the past week has been much quieter, millers only operating sparingly, and previous prices were not generally obtainable. Cargoes in all positions, in consequence of easier offers from America, were dull and lower. At Liverpool since Tuesday the business in wheat has been merely retail, at rather under Tuesday's prices. Corn, in consequence of recent large arrivals, has been somewhat cheaper. The attendance at to-day's market was about average. Wheat sold slowly, Michigan and red winter declining 1d. to 2d. Flour was quiet, but prices were maintained in consequence of limited stock. Corn was less actively inquired for and gave way slightly."..... ....The week's circular of the Liverpool Cotton Brokers' Association of above date says:—"Cotton has been in increasing demand throughout the week, and quotations for all descriptions have advanced. American was in condiderable demand, which was freely met. The quotations for Orleans, middling uplands, and Mobile, are unchanged. Ordinary advanced ½d. and all other grades 1-16d In Sea Island a fair business was done. Quotations for Island cotton are easier. Futures during the first two days were dull. On Monday and Tuesday they became active and advanced 3-32d. @5.32d. Since then the market has been quieter and closed easier. The final rates show an advance of ½d. for October and 1-16d. for other positions.

ERRATUM.—The Price of the Hoosier Corn Drill is $20 instead of $15, as stated in our Premium List and Fair Number.

He Still Lives.

Some years ago Dr. R. V. Pierce, of the World's Dispensary and Invalids' Hotel, of Buffalo, N. Y., and London, was sent for to examine a terrible disease of the knee joint, resulting in ulceration and extensive sloughing of the bone and tissues. The man's life had been despaired of by the previous attendants. Amputation at the the thigh was promptly decided upon and skillfully performed by Dr. Pierce, and as after treatment to purify the blood and prevent a recurrence of the malady the Doctor's Golden Medical Discovery was freely prescribed. The man's system was thoroughly purified and strengthened, he rapidly gained his health, the stump healing nicely, and he is to-day a happy man. This case was among the first in which this wonderful blood-purifier was tested. It has since manifested its wonderful power over the worst scrofulous and other blood diseases. Taken for a time it so purifies and strengthens the system as to strongly fortify it against the encroachments of diseases. Sold by druggists.

MIDDLEVILLE, Mich., Feb. 15th, 1879.
Hon. R. V. PIERCE:

Dear Sir—I would say that I have sold your medicines for seven years. The Golden Medical Discovery is the best cough remedy I have ever used, and in every case where I have recommended it, it has cured. I have used it in my family for my children. It cures their colds and coughs in a day or two. My wife has used it several times when down sick. It invariably gives immediate relief. Its sale increases daily. J. B. KESTER, Druggist.

"I'm All Played Out,"

is a common complaint. If you feel so, get a box or bottle of Kidney-Wort and take it and you will at once feel its tonic power. It renews the healthy action of the kidneys, bowels and liver, and restores natural life and strength to the weary body. —Times.

Let the poor sufferers from female complaints take courage and rejoice that a painless remedy has been found. We refer to LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It is prepared at 233 Western Avenue, Lynn, Mass. Send to Mrs. Pinkham for pamphlets. Sold by druggists.

TROPIC-FRUIT LAXITIVE removes Habitual Costiveness and all kindred complaints, It is composed entirely of concentrated fruits and medicines. Druggists sell it.

Sour stomach, sick headache and dizziness, Hop Bitters cures with a few doses.

Burnett's Flavoring Extracts are used and endorsed by the best Hotels, Confectioners, and Grocers throughout the country. They are perfectly pure, and of great strength—at once the cheapest and best; and received the highest award at the Centennial Exhibition.

The Markets.

SPECIALS FROM THE CHIEF CENTERS

Until Saturday, Oct. 25.

Chicago—WHEAT unsettled; No. 2 Red Winter 98@99c.; No. 2 Chicago Spring, 99¼c. cash; $1 November; $1 01⅝c. December; No. 3 do, 92c.; CORN dull at 39½c., cash; 39¾c., November; 40⅝@40¾c., December. OATS dull, 29c. cash; 29⅛@29½c., November; 30½c., December. BARLEY 81c. PORK in active demand at $18 75, cash, $11 60@$11 62½, November; $11 57½, December; $12 45 bid, January. LARD dull, at $7 90@7 95 cash; $7 75 bid, November; $7 75, December. Bulkmeats steady BUTTER—Choice to fancy creamery at 26@28c ₱ lb; fair to good 24@26c; fine to fancy dairy at 22@26c; good to choice do, 17@20c; medium to fair do in shipping lots 14@15c; good to choice ladle-packed 17@20c; fair to good packing stock 15@16c; grease butter 8@10c. CHEESE—The arrivals exceed the sales and stocks show some increase, as exports continue and local jobbers are buying sparingly. We again quote good to choice full cream cheddars at 12@12½c ₱ lb; good to the best flat makes at 10¼@11c., and poor, hard-skimmed dull at 6@7c. SEEDS—A good demand prevailed for timothy at $3 45@2 50 ₱ bushel for prime; lots containing plantain selling at $3 30@2 35. The receipts of flax were larger and the market easier buyers bid $1 25 for pure. Clover was nominal at $4@4 50 for common to prime, and Hungarian and millet were dull at 55@60c for prime. Hogs—Mixed packing, $4 20@4 40; light, $4 25@4 50; choice heavy, $4 50@4 65; market closed weak. CATTLE—best grassers scarce; shipping, $4 50@5 25; butcher', $2 20@3 30; stockers, $2 60@3 35; Western strong; natives and half-breeds, $3 50@3 75; Texans, $2 90@$3 30; through Texans, $2 50@3; Calves dull at $7@12 ₱ head. Sheep—common to medium, $3 30@$3 75; choice heavy, $4@4 50.

Cincinnati.—BUTTER—Fancy Creamery sells at 30@31c. and prime at 27@28c, choice Dairy at 23@25c, choice Western Reserve at 21@23c, prime to choice Central Ohio at 17@20c. common at 14@15c. and inferior at 9@10c. ₱ lb. CHEESE, Choice mild factory at 13@13½c ₱ lb., but some prime stock sells at ½@¾c. POTATOES—Michigan Early Rose sell at 45@47c. and New York do. at 55c. on track, and 5@8c. more from store. Russets sell at 33@35c. on track. HAY.—Common sells at $13@14 prime do. at $15@16 ₱ ton, and prairie hay at $11@12 per ton in bales on arrival. Wheat and rye straw are dull at $7@8 and oats straw firm at $9@10. SEED.—Timothy $2 60@2 70 ₱ bushel for prime to choice from store and dealers buy at $2 45 for car lots on arrival. Clover is quiet; dealers buy round lots at 7@7½c., and small sales are made at 8@8¼c. ₱ lb from store. Dealers buy flax seed at $1.15 per bushel. Hogs—Common light and $3.50@4.25c; fair to good light $4 30@4.50; extra quality light or medium weights $4 50@4 55; fair to good heavy or packing grade $4.35@4 50; selected butcher qualities $4.65@4 70. Prices corresponding time last year $2.90@3,90, packing grades $3.40 @3.65. WHEAT scarce and firm; No. 2, amber, 98c.@$1; No. 2 Red Winter, $1.03; CORN steady; No 2 mixed, 33c.½c. RYE easier; No. 2, 89c. Barley in fair demand but lower; No 2 Fall, 83c.@90c. CATTLE—Choice to extra shipping steers, $4.50@$4 85; fair to good shipping steers, $3 90@$4 40; good to choice butcher grades, $3,40@$4; fair to medium do., $2 5a@$3.25; common do., $1.75@$2.25; good to extra fat cows and heifers, $3.35@$3 90; fair to good heavy oxen, $3 50@$4.25; common to good stockers and feeders, $3 25@$3.50. SHEEP—Common to fair sheep, 2½@3½c, good to choice, 3½@4½c ₱ lb, extras ranging up to 4¾0, and in some cases a shade higher. Lambs are in good demand, and the market firm; common to fair 3@4c, good to choice 4½@4¾c per ₱, extras up to 5c.

St. Louis.—WHEAT No. 2 red fall at 99½@$1. CORN 39½c. OATS at 29½@29¾c. Rye at 65@95c. BUTTER.—Choice steady—all else and in buyers' favor. Creamery 29@30c, to 31c—fancy favorite brands 320; dairy—selections of choice at 24@25c, and for some almost as good as creamery 26c; medium at 13c to 17c; common at 11@12c. SEEDS—Flaxseed in demand and firm; scarce at $1 21 on basis of pure. Timothy stiffer at $3 25@$2 30 in car lots; clover steady at $4.50@$4 60; others nominal. WOOL—Demand, though light, is improving; prices unchanged. We quote: tub-washed—choice 45c, lamb and fair do. 40@44c, low and dingy 33@37c; unwashed—medium 27@28c; coarse do. 22@24c, merino 16@20c, lamb 23@25c. Kansas 20@26c, well-grown fall clip Texas 22@23c. Burry, black, cotted, etc., 5@15c less—Southern burry 12½@13c. Sales: Tub 13 sks at 43c, 7 at 44c, 2 at 45c; 2 sks unwashed at 24c.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Oct. 23, 1880.

BEANS AND PEAS.—The old stock of beans and those now included in the receipts are of under grade quality, and new crop, which are fairly plenty, lead the demand. Sales for local use are improving. Shippers, whose chief wants are marrows and white kidneys, seem to be holding off until the offering contains larger and assured cured lines. Red kidneys are cultivated to an extent that puts them into an ordinary price list. Black beans will not move freely until the weather settles cold. Green peas quiet. Prices unchanged, but it is thought that trade will revive when qualities are more reliable. Southern B E. peas dull.

BEESWAX.—Demand is light and and prices lower; quoted at 23½@24 for Western and Southern.

BUTTER.—Outside of choice creamery and fine ends of State and Western the market is quiet. Sellers attribute the lull to politics, buyers to stringent prices, and both parties make a good shot at the situation. It is not likely that much animation will develop until the election is over, and then it is to be hoped that some of the weighty dairies can be moved. Receipts are moderate but dealers cannot make a favorable price argument of the fact, as it is known that there is plenty of stock to be marketed and the season is young. Oleo is the great antagonist of lower priced table stock, especially for eastern use. The weather has been very favorable for the production of substitutes and even running quality is a great attraction to retailers who do not have to cater to a fastidious line of consumers. Exporters are bidding about last prices; sales for Europe small.

Creamery, fine State and Western, 30@31c.; good to prime, 27@30c.; poor to fair, 23@25c.; sweet cream, 24@28c.; State entire dairies, choice, 24@27c.; other, 23@25c.; firkins, fair to choice, 21@25c.; State pails and half tubs, fine fresh, 28c.; good to prime, 26@27c.; fair to good, 24@26c.; poor, 21@22c.; Welsh tubs, fine fresh, 26@27c; poor to good, 20@23c.; Western imitation creamery, 20@24c; do-dairy, fresh, 23@24c.; poor to good, 16@21c.; factory, June, 17@19c.; current make, 19@21c; poor to good, 15@18c.

Receipts for week, 23,725 pkgs.; exports do., 8,825 pkgs.

COTTON.—There is a fair degree of activity and a steady market at the close for

October at 10.82@10.84c.; November at 10.85c.; December at 10.94@10.95c.; January at 11.09@11.09c.; February at 11.23@11.24c.; March at 11.39@11.40c.; April at 11.54@11.55c.; May, 11.70@11.71c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Orlands.	N. Orleans and Gulf.	Texas
Ordinary	8 3-16	8 3-16	8 3-16
Strict ordinary	8 13-16	8 15-16	8 15-16
Good ordinary	9 13-16	9 15-16	9 15-16
Strict good do	10 3-16	10 5-16	10 5-16
Low middling	10 11 16	10 15-16	10 15-16
Strict low middling	10 15-16	11 3-16	11 3-16
Middling	11 3-16	11 7 16	11 7-16
Good middling	11 9-16	11 13-16	11 13-16
Strict good middling	11 13-16	12 1-16	12 1-16
Middling Fair	12 5-16	12 9 16	12 9-16
Fair	12 15-16	13 3-16	13 3-16

STAINED.

Good ordinary	7⅞	Low middling	9⅝
Strict good ordinary	8¾	Middling	10¾

Receipts for week, 33 250 bales. Exports do., 14,250 bales.

CHEESE.—The arrivals have been somewhat larger, the bulk arriving late from central New York. Some accumulation of stock has occurred the market leaving off rather easy; quotations are for

State factory, fancy, at 13@13¼c.; do. good and prime, 12½@12¾c.; do. fair to good, at 11¾@12¼c.; do. h'f skimmed, 10@11c.; Wisconsin factory, fine, 12½@12¾c.; do. good to prime, 12@12½c.; do. fair to good, 10¾@12c.; Ohio factory, fine, 12¾@12¾c.; do. good to prime, 11½@12c.; do. flat, fair to good, 10¾@11½c.; do. poor to fair, 7@10c.

Receipts for week, 67,130 boxes.
Exports for the week, 45,330 boxes.
Liverpool cable, 66s. 6d.
Steam to Gt. Britain, 40@45s.

DRIED FRUITS.—Apples made out moderately, without change in prices. Peaches are steady and in moderate demand. Small fruits are quiet. Quotations for

Apples 8@8¼c., for evaporated prime, and 7@7½c., for ₱ lb do with Carolina sliced at 5@5¾c. for good to prime; Virginia and Tennessee 3¾@4¼c. Peaches at 28@29c. for evaporated peeled; 14c. for unpeeled do; peeled peaches at 16@20c.; unpeeled do. 6½c. for halves. Blackberries at 7½c Cherries at 18c. Raspberries at 25@26c.

Exports for week, 5,363 bbls. of dried apples.

FRESH FRUITS.—Exports of apples for week 34,871 bbls. Prices are steady for prime good keeping showy apples; last week rates named with confidence as receipts have been lighter for the week. New Jersey apples have no valuable place.

Western N. Y. mixed, $1.12@1.37; Fall pippins $1.25 @1.50; Baldwins in shipping order, $1 25@1.50; Greenings, $1@1.25. Seitzenbergs fine this year, $1.25@1.50; Kings, $1.25@1 50; 20-oz., $1@1 50, N. J. open heads, 50@75c. Cranberries rather more active at last figures. Cape Cod, bbls. fancy, $5.00@5.75; poor to choice, $3@5.25; boxes, $1.75@2; N. J., do. $1@1.50. Quinces slow of sale and lower; $1.50@3. Pears scarce; fancy Boston boxes choice $4@6; fair to good $1.50@3; Duchess, in bbls. $5@7; Lawrence, $1@5; Beurre d'Anjou, $5@7; Vicars, $3@5. Grapes are quiet since prices stiffened. Catawbas cases of 18 3-lb. $2.75@3, baskets 5@6c.; Concords cases $2.50@2.75; bulk and baskets 4½@5½c.; Isabella 2½@4c.; chestnuts, bush. of 60 lbs. $1.75@2 25. Hickory nuts, new, per bush. of 50 lbs. $2.25@2 50. Peanuts dull; new quoted under old; Va. hand-picked per lb. 5c.; extra prime, 4@4½c.; good to prime, 3½@4c.; shelled, 5½@5¾c. The entire crop is estimated at 2,220,000 bushels.

FLOUR.—The offerings are liberal and prices easy, giving an active trade.

Latest prices are: $3.60@4.25 for very inferior to very fancy superfine State and Western; $4.25@4 50 for poor to choice extra State and Western, odd lots and lines; $4 50@4.70 for choice to fancy do.; very inferior to good white wheat, trade and family extras, $4 85 @5.65; good to choice do. at $5.65@6.25; (very choice to very fancy do. at $6.35@6.65;) red and amber winter wheat inferior to choice trade and family, at $4.70@6.25; round hoop Ohio, $4.65@5.15; and trade and family brands of do. at $5.25@6 35; St. Louis at $4.90@5.85 for inferior to good extra, $5 85@6.35 for good to choice (and $6.35@6.75 for choice to very fancy brands); Minnesota clear, inferior to fancy at $4 20@6.10; Minnesota "straight," poor to fancy, at $5 75@7.15, and patent inferior to very fancy at $5.75 @8.75; unsound stock at from $2 50@5.00; city mill extra at $5.40@5.85 for ordinary to fancy for the West Indies; do. for England, $4 25@6.65 for poor to choice spring wheat, and $4.85@5.40 for winter wheat product; do. trade and family extras, $5.60@7.00 do. for South America, $5.70@6.00.; No. 2 at $2.75@3.75 for very poor to very fancy.

Receipts for week, flour, bbls. 122,500; corn meal, do. 2,925; wheat, bush. 1,915,500; corn, do. 1,335,050; oats do. 381,600; rye, do. 68 800; malt, do. 21,000, barley, do. 162,400; beans, do., 7,521; rice, pkgs. 2,220.

Exports for the week, flour, bbls., 69,850; corn meal, do. 4,175; wheat, bush. 1,706,625; corn, do. 1,187,015; oats, do. 2,040; peas, do. 1,871. beans, do. 515; rice, 850

BUCKWHEAT FLOUR.—Is quoted at $2.15@2.35, and buckwheat is held at 60c.

GRAIN.—Wheat has shown sharp fluctuations according as speculative influences varied. Export trade is good, with purchases for the week of 1,265,000 bush.

Latest prices are for No. 1 white at $1.14¾@1.14¾; No. 1 white for October, at $1.13¾@1.14¾; do. November at $1.13¾@1.14¾ do. December at $1.15@1.16¾; do. steamer grade, $1.12½c.; ungraded white at $1.10¾ @1.14¾; mixed winter at $1.13@1.13¾; No. 1 red at $1.19; No. 2 red at $1.16@1.17; do. October, at 1.15¾@ 1.17¼; do. November, at $1.15¾@1.17; do. December, at $1.16¾@1.18¾; do. January, at $1 18¾@1.19¾; No. 3 red steamer grade at $1.13@1.13¾; No. 3 red at $1.14 @1.15; ungraded red at $1.10@1.18¾; No. 2 Chicago at $1.15 bid and $1.16 asked. Rye at $1@1.03. Corn is fairly active and unsettled in price; latest prices are for New York No. 2 at 55¾@55¾c.; do., October, at 55@55¾c.; do., November, at 55¼@55¾c.; do., December at 55¾@55¾ ungraded mixed Western at 55¾@56c.; No. 2 white at 58c. Oats are lower and fairly active; latest prices are for No. 1 white at 44 @44½c.; New York No. 2 white at 39@39¼c.; No. 3 white 36¾@37¾c.; New York No. 1 at 38¼c.; New York No. 2 at 38¾@38¾c.; do., October, at 38¼c; do. November at 38¾@38¾c.; do., December at 39¾@39¾c.; No. 3 at 36¾c.; ungraded white Western at 38@45c.; ungraded mixed Western at 35@38¾c.

HAY AND STRAW.—Demand is good and prices well sustained.

Shipping hay is at 85c.; medium to prime do., 95c.@$1.20; salt hay at 60@65c.; clover do. at 65@75c. Straw at $1@1 05 for long rye; 70@75c. for short rye; and 65@75c. for oat.

Exports for the week, 1,300 bales.

HOPS.—There is a limited amount of business and as supplies steadily accumulate prices are unsettled and lower. Quotations are for

	Cents per ₱.
New Yorks, crop 1880, prime and choice	20 @23
Do. medium	18 @20
New Yorks, crop 1880, low to fair	16 @17
Eastern, crop 1880	16 @20
Wisconsin, crop 1880	16 @20
Yearlings, crop 1879, choice	16 @23
Olds, all growths	4 @12
Bavarians	30 @35

HONEY—Trade is still of a retail style and full quotations would not be urged for round parcels as receipts are oppressive.

White clover comb, single pkgs. 17@18c.; larger pkgs 15@16c.; buckwheat 12@13c.; extracted, dark to white, 8@12c. Extracted is pushing strained aside when purity is guaranteed.

LEATHER—Quotations are for hemlock sole, 22@ 23½c. for light; 23½@25c. for middle; 24@26c. for heavy, and 21@22½c. for good damaged.

OIL CAKE.—Western is quoted $32 per ton.

PROVISIONS.—Hog products have tended lower on diminished demand Latest prices are for

Mess on the spot for export $16; do. for delivery on October contract, $18 bid. Bacon at 8c. for long clear. Beef for extra India mess at $18.50@19 for city; $9.50@10 for extra mess and $9 for plain mess; $11@11.75 for packet, and $13@13.25 for family mess. Beef hams at $16. Lard—Western steam at 8.37½c. for spot lots; 8.37½c. for Oct.; 8.37½ for Nov.; 8 2½c. for Dec.

Receipts for week, beef, bbls. and tcs.; 5,102; pork, 2,650 bbls.; cut meats, 25,820 pkgs.; lard, 22,639 pkgs.

Exports for week, beef, bbls. and tcs. 1,606; pork, 3,400 bbls.; cutmeats, 5,313,369 lbs.; lard, 5,666,850 lbs.

SEED.—Clover is firm at 8¼@9c. for prime and choice lots. Timothy is quiet at $2.70@2.80, Flaxseed quoted at $1.40.

Receipts for week, 708 bushels.
Exports for week, none.

POULTRY AND GAME.—A good many straw-packed parcels have turned out good, but remote points, if they ship at all, should use ice. The better way now is to await advices. Demand fair; prices good.

Turkeys, State and Western, choice, 13@14c., ₱ lb.; fair to good, 11@12c. Philia., dry-picked 14@16c. Chickens, do., 15@17c.; Bucks Co. do 14@15c.; State scalded, 13@14c.; Western, scalded, 12@13c. Fowls, Philia., dry-picked, 14@15c.; N. J., do., 13@14c.; scalded 13@14c.; State, scalded, 12@13c; Western, scalded, 11½ @12c.; poor to fair, 10@11c. Ducks, Spring 15@17c.; mixed, 12@13c. Geese, Philia. 11@13c.; fair to good, 8@10c. Squabs, white, ₱ doz., $2.00; dark, $1 25@1 50. Live poultry is in demand when quality is all right. City killers cannot use thin birds and compete with the style of dressed now coming.

Chickens, N. J., 12@12½c.; State and Penn, 11½@12c; Western, 10@11c.; Southern, 10@11c. Fowls, N. J., 12c.; State and Penn, 11@12c.; Western, 11@11½c.; Southern, 10@11c. Roosters, 5@6c. Turkeys, N. J. 11@12c.; Western 10@11c. Ducks, choice, 65@75c.; other, 40@ 55c. Geese, choice, $1.75; other, $1@1.50.

The game market is well supplied and prices are not above a good class of trade.

Mallard ducks, ₱ pair, 50c.; teal, 40@50c.; common, 25@30c.; a few canvas backs, $1.50@1.75; red heads, 50@75c.; partridge, prime $1 00; eastern, 50@60c.; soft, 25@30c.; grouse, prime, $1@1.12; soft, 25@30c.; woodcock, State, 60@65c.; Western, 40@55c.; Eng. snipe, ₱ doz., $1.75 Sand snipe, 20@40c. plover, 1.75; wild pigeons, stall-fed, $.62@1.75c.; flight 31@1.25; venison saddle, ₱ lb, Minn., 12@20c.; do. other, 15@18c.; whole deer, 11@12c. Bear, 18@20c.

TOBACCO.—There is a good demand for export and a fair local trade, with prices strong.

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4 @ 4¼	4½@ 5
Good lugs	4¾@ 5	5¾@ 5¾
Low leaf	5¾@ 6	6 @ 6¼
Medium leaf	6¼@ 7¾	7¾@ 8¼
Good leaf	8 @ 8¾	9 @10¾
Fine leaf	9 @11	11 @12
Selections	12 @15	12 @15

SEEDLEAF.	Crop 1878.	Crop 1879.
New England Havana seed	—@—	18 @25
Wrappers, common	13 @15	— @—
Medium	16 @18	— @—
Fine	20 @25	25 @35
Selections	30 @40	37½@45
Seconds	—@—	10½@13
Fillers	—@—	5½@ 7
Penn, assorted, low	12 @13	10 @12
Assorted, fair	14 @15	13 @16
Assorted, fine	16 @18	18 @22
Wrappers	18 @35	—@—
Fillers	10 @12	6 @ 7
N. Y. ass'ted, com. to medium	10 @11	—@—
Ohio assorted	8½@13½	7½@10
Wrappers	15 @25	15 @25
Wisconsin assorted	8 @12	7 @10
Havana seed	15 @20	18 @18
Wrappers	12 @18	—@—

VEGETABLES.—Exports for week, 3 800 bbls. Demand moderate with full supplies of potatoes and no probability of a sudden advance. Nova Scotia Early Rose $1.75; State $1 37@1.50; Snow Flake, $1.37 @1.50; Peerless, N. J. $1@1.12; do. State $1.12@1.35; Sweet potatoes weak at $2.25 for selected and $1@1.75 for common to good; onions steady; other items firm since the frost.

Green corn, ₱ 100, 50@75c.; tomatoes, ₱ bus., 35@40; egg plants, per 100 $3@4; Lima beans, per bag, $3.00@3.50; shelled, per bush. $4.50@5.00; turnips, white and Russia ₱ bbl. 50@75c.; beets, $1@1.25; bull-nose peppers, $2@2 50; cabbage, flat Dutch, ₱ 100, $2@3; do. red, $3@4; squash, Hubbard 75c.@$1; marrow 50c.; onions, white, ₱ bbl. $3.50@4 yellow, $2.75 @3; red, $2.75@3; chester, $2.50@2.75; pumpkins, ₱ 100 $3@5; okra, ₱ 100) 25c.; cauliflower, ₱ bbl. $1@ $2; celery, per dozen, 75c.@$1 00.

WOOL—Demand has been rather better and the market somewhat steadier without absolute change in prices. XX Ohio, Penn, and Va. fleeces quoted 45@47c.; X, do. at 44@45c.; No. 1 at 47@49c.; No. 2 at 42@44c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Oct. 23, 1880.

BEEVES.—Receipts for the week 13 440 head; do. last week, 13,3.4. The market has been slow and dragging all the week. On each market day the supplies have exceeded the wants of trade though sellers offered liberal concessions. Prime native and Texans held Wednesdays prices in the sales that occurred, but common and medium stock fell off a strong ½c. Texas quoted 7@7¼c. to dress 55 lbs; poor to fair native steers 7¼@8¼c. to dress 54 @56 lbs.; good to prime 9@9¾c. to dress 56; choice 10@ 10½c. to dress 58@57 lbs.

COWS AND CALVES.—Prices rule about as before; $25@3 per head for common; $35@40, fair to good; $55@60, prime to choice. Receipts small as good milk-yielders are worth quite as much at home. Such regular trade as exists is in few hands and of late years car load lots and frequently good singles depend upon a chance customer.

VEAL CALVES.—Fine veal dead or alive has sold rapidly; common and heavy grades have ruled dull. Live calves, N. J., fed, 7½c., State 7@7½c.; fair to good, 6½@7c.; poor, 5½@6c.; Mt Holly, heavy, 4@6c.; light, 6½@7½c.; buttermilk, 3@4c.; grassers, 2½@2½c.; dressed choice fed, 10½@11c.; fair to prime 8@10c.; common 4@7c.

SHEEP AND LAMBS.—Receipts for week, 37,223 head; do last week, 37 414 do. Trade has been light in sheep but prices hold as the weather will increase the demand. General sales, 4@5c. ₱ D., with a few fine Kentuckys at 5½c. wethers.

SWINE.—Receipts for the week, 41,183 head; do, last week, 32,94i do. Market weak. Many State and N. J. hogs are too fat for the season. Live hogs, $4.87@ 5.10 per 100 lbs. corn fed; dressed N. J. heavy pigs, 6¾@6¾c. per lb.; light, 7¼@8c.; city dressed State, 6 @8c.; do. Western, 6@6¾c.; pork tenderloins, 12c. in boxes.

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Reading for the Young.

AUTUMN IS HERE.

WHAT visionary tints the year puts on,
When falling leaves falter through motionless air
And nimbly cling and shiver to be gone!
How shimmer the low flats and pastures bare,
As with her nectar Hebe Autumn fills
The bowl between me and those distant hills,
And smiles and shakes abroad her misty, tremulous hair.

Far distant sounds the hidden chickadee
Close by my side; far distant sounds the leaves;
The fields seem fields of dream, where Memory
Wanders like gleaning Ruth; and as the sheaves
Of wheat and barley wavered in the eye
Of Boaz as the maiden's glow went by,
So tremble and seem remote all things the sense receives.

The sober robin, hunger-silent now,
Seeks cedar-berries blue, his Autumn cheer;
The squirrel, on his shingly shagbark's bough,
Now saws, now lists with downward eye and ear,
Then drops his nut, and, with a chipping bound
Whisks to his winding fastness underground;
The clouds, like swans, drift down the streaming atmosphere.

The red oak, softer grained, yields all for lost,
And, with his crumpled foliage stiff and dry,
After the first betrayal of the frost,
Rebuffs the kiss of the relenting sky;
The chestnuts, lavish of their long hid gold,
To the faint Summer, beggard now and old,
Pour back the sunshine hoarded 'neath her favoring eye.

O'er yon bare knoll the pointed cedar shadows
Drowse on the crisp, gray moss; the plowman's call
Creeps faint as smoke from black, fresh-furrowed meadows.
The single crow a single caw lets fall;
And all around me every bush and tree
Says, Autumn's here, and Winter soon will be,
Who snows his soft, white sleep and silence over all.

FARMING FOR BOYS AND GIRLS.—NO. 1.

HENRY STEWART.

The Value and Pleasure of Agriculture.

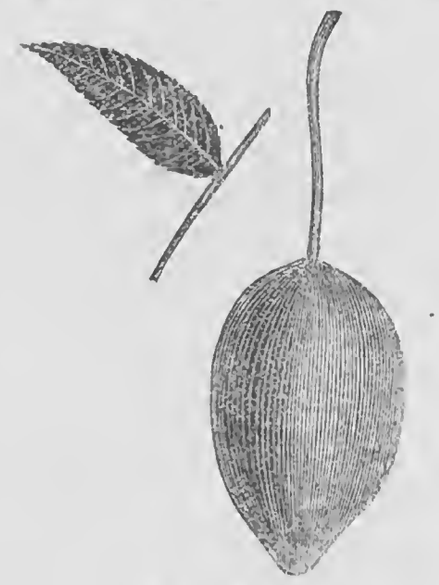
THE chief desire of a man or a woman should be, first, to be useful; and next to be happy. A man's first duty is to mankind; and the next is to himself; and the greatest happiness to a good man is to be of use to, and serve his fellow creatures. In doing this the man helps himself at the same time. The production of food and the materials for clothing, is the business of the farmer. No other employment can be so useful as this; and in this lies the value of agriculture to the world. No other employment is so full of pleasure as agriculture, when it is rightly pursued. It is then, not a laborious work merely of the hands, but a healthful, pleasant labor; full of the most agreeable enjoyment; because in the work of the garden and the field, the farmer is brought face to face with the works and the beauties of nature; and finds, in the sprouting of seed, the growth of plants; the maturity and ripening of vegetation; the growth of his animals; the delights of the changing seasons, which bring to him a ceaseless round of work that is both interesting and profitable; in all these, he finds food for thought and means for instruction. In short, a good and successful farmer, in his daily practice, becomes acquainted with many of the wonders of science which appear to him more clearly than to any other man, if he will only take the trouble to open his eyes, and turn his mind to the examination of them. It is a great thing to think of, that the farmer feeds and clothes the world; that of all men he is the most important to the comfort, wealth and happiness of the human race; that his influence, if it is exerted for good, increases the enjoyment of mankind, and that the result of his work is to set in motion the wheels of all the factories and locomotives in the world; to fill the freight cars; to load the ships; to give employment in one way or another to every smith and carpenter; to every miner; to every lawyer and doctor; to provide in fact for the means of carrying on every honorable and profitable industry. No youth or young man or woman can find a better, happier, more noble, or when well conducted, more profitable work than that of the farm. It is work; there is no doubt of that. But the man who is employed honestly is the truly happy man. It is the idle and vicious who are unhappy. We are told by the wisest of men, that "the sleep of the laboring man is sweet;" and no one sleeps and rests more sweetly than the boy or the man who has spent his day in the corn field, the hay field or at the plow; or the girl who has done her share in the dairy, in the care of poultry, and in her household duties. How all this work may be performed in the best manner, and how the most profit and enjoyment may be derived from it, will be explained in the succeeding chapters.

NUT-BEARING TREES—No. 2.

Ripening hang the nuts
Upon the laden boughs; the clusters brown
Of russet hazels; the spiked bursting husks
Of polished chestnuts; and the teeming store
Of mellow walnuts. Autumn tide hath come,
And pours from out her overflowing horn
Her welcome blessings on the grateful Earth!

The butternut, or white walnut, juglans cinerea, is the friend and favorite of every New England boy, and what one of them has not blessed his lucky stars all the days of his early years, if in some rocky pasture or out of the way corner of his father's farm were to be found some half dozen of these trees. Growing with equal rapidity with J. nigra, it only reaches a hight of from 30 to 60 feet with low spreading branches, extending horizontally, giving the tree a flat tufted head, hardly artistic, although very grateful to all boyish eyes. The form of the fruit is an oblong-ovate, with a tapering tip, rough with prominent irregularities; and woe to the boys' fingers, if missing the blow while cracking, the fingers come between the hammer and one or more of these "irregularities." The husk is thin and tough and of a dried brown appearance when ripe. Growing in clusters, of three to five on a stem, they often fall off as they grow, proving a great comfort to childish pickers, as a bunch of five fills a basket much more rapidly than a single nut. The kernel is sweet and pleasant, but from its abundance of oil, whence its name, requires care in drying, lest it become rancid.

The bark and shells, also, afford a brown color, sometimes used in dyeing wool, and a mild and

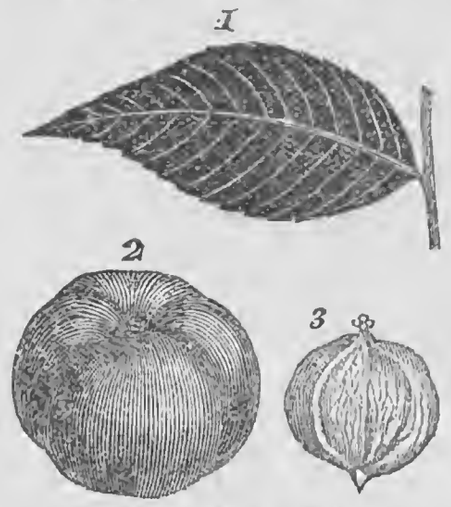


BUTTERNUT.—FIG. 352.

useful laxative is extracted from the inner bark of the root. According to an experiment published in the Massachusetts Agricultural Journal, the sap of the butternut is capable of producing as much sugar as that of the maple. Four of these trees yielding in one day nine quarts of sap, from which one and one-fourth pounds of sugar were made.

The hickory, Carya, belongs to the natural order of juglandacea, which comprises but two other genera besides this and the walnut. There are nine or ten species, all of them remarkable for stateliness and general beauty. In the autumnal scenery the hickories contribute a pleasing share to the vivid coloring, each species possessing its own peculiar tints, yet all of some shade of yellow, lighting up a hillside here with flaming gold, and there dropping into the most fashionable tint of "old gold" imaginable. The hickory is very desirable as an ornamental tree, having the compound leaves of the juglans order, composed of from five to 15 leaflets; from 60 to 80 feet in hight, of symmetrical build and stately appearance. The fruit is a large, roundish nut, the husk of which opens partially or wholly of itself by four seams. The different species vary so much in size and form that it is often impossible to distinguish them by one character alone.

The genus carya is exclusively American, of which we find many varieties. C. maxima bears



HICKORY NUT.—FIG. 353.

fruit as large as an apple with a very thick husk. The shell-bark or shag-bark hickory, C. alba, is easily distinguished by its shaggy bark, its excellent fruit and its rather small ovate leaf buds. The delicious flavor of its fruit is not surpassed by any foreign nut. The nuts vary greatly, some individual trees having nuts with astonishingly thin shells, and were it not for the difficulty of grafting these might be propagated; but attempts to graft the hickory are rarely successful, though it has been accomplished by setting the graft just below the surface of the ground, and the French nurserymen are said to succeed by herbaceous grafting, i. e., the scion and stock both of unripe wood. They are also very hard to transplant, having a large tap root and few of the fibrous roots. The nuts should be buried in the Fall, and planted in the Spring where the tree is expected to remain.

As a fuel the hickory excels all other Northern wood, making hard charcoal, and the ashes are very rich in potash. On account of the density and tenacity of the wood, it has a wide appreciation in the arts. Yet it is liable to the attacks of insects and decays rapidly if exposed to the weather.

The bitter-nut hickory, C. amara, is the most graceful and remarkable for its finely-cut foliage. Its recent shoots are of an orange-green, smooth and mottled with orange; its fruit, however, is intensely bitter and valueless.

The pig-nut, C. porcina, is also a large tree, with a close bark and tough, valuable wood, used especially for axe helves and wagon axles. The fruit is abundant, but of a disagreeable taste, useful only in the case of very hungry pigs—with good teeth, and little girls with lead pencils to make doll faces.

The mocker nut, C. tomentosa, varies much in thickness, size and shape of shell; the kernel is sweet, but very difficult of extraction, a fact which is supposed to have given it the name of mocker-nut.

In the woods of Pennsylvania and westward to Illinois and Kentucky, the Western shell-bark hickory, C. sulcata, is found, having a nut twice as large as that of the C. alba, but of inferior flavor.

The nutmeg-fruited, C. myristiceformis, is a rare and local species, found in South Carolina, the fruit of which is very small, smooth and brown, streaked with white and strongly resembling the nutmeg in appearance, but the kernel is very small and of little value.

The pecan hickory, C. olivaformis, is a more Western and Southern species, extending along the rivers as far north as Illinois, but not known except in cultivation in the Atlantic States. The nut is olive-shaped, has a very thin shell, on which people are apt to test the durability of their incisors, and if finding them up to the standard, proceed to use their molars on the sweet-flavored kernel contained therein, but if, instead, they succeed in gaining only a toothache, they are apt to fling away the pecan, denounce the nut-bearing trees of America generally and this one in particular, and—invest in peanuts thereafter.

The tree is usually from 60 to 70 feet in hight, but there is one growing at the Bartram estate near Philadelphia, said to be over 90 feet. The trunk is straight and finely formed, yielding a wood which, though coarse grained, is heavy and durable.

The pecan is rather late in coming into bearing, trees over 30 years old often bearing no fruit, but old trees in the forests bear abundantly. Like the shell-bark, the nuts of this species vary greatly in size and thickness, and the home traffic in both is very large, but large quantities of the pecan nut are shipped to Europe, where they are expressed to obtain their oil. The little port of Indianola, Texas, shipping some years as many as 100,000 bushels.

The Puzzler.

HIDDEN COINS.

1. Rub Lena's cheek.
2. Lera peeped.
3. Philip, is Toledo in Ohio?
4. Why does my game-cock crow not?
5. 'Twas a Hindu cathedral.
6. Ha! ha! squatter sovereignty.
7. He is a millionaire.
8. 'Tis allegro, at times.
9. "'Tis a penguin," each exclaimed.
10. He expounds the word.
11. Philip, I stare Enfield out of countenance.
12. Percy's Ester ceded it.
13. I saw Carl in Rome.
14. To climb the bank no team shall stop me.
15. You'll not agree, N. Back you must go.
16. With ale raisins should be eaten.
17. List to the tale Vyaito told.
18. The mad bull I only just escaped.
19. Is Ico upon the roof?
20. One pole on top of another.
21. He joined the guild, Ernie.
22. Flo, ring the bell.
23. Are you really angry?
24. Errix, doll argued the point by crying.
25. When I use my pen Cecil laughs.

☞ Answer in two weeks. LITTLE ONE.

ACROSTICAL ENIGMA.

My first comes in the early Fall.
My second in the Spring.
My third will help the husbandman.
My fourth will help the king.
My fifth is kept in every house,
My sixth in every land.
My seventh creates a little globe.
My eighth is in your hand.
My ninth came in with brother Carl.
My tenth with sister Kate.
My whole will give a cousin's name
I love to contemplate.

☞ Answer in two weeks. MARY WALEY.

A NAME PUZZLE.

Place ten female names so as to form an eleventh. LITTLE ONE.

☞ Answer in two weeks.

PUZZLER ANSWERS.—Oct. 9.

A SQUARE WORD:—

S E H
E M U
H U E

A PYRAMID PUZZLE:—

O
A N N
W H I T E
P O T O M A C
C O V I N G T O N

A FRACTIONAL PUZZLE:—Gondola.

A GREAT REVELATION.

Some Valuable Thoughts Concerning Human Happiness and Timely Suggestions About Securing It.

Synopsis of a Lecture Delivered by Dr. Chas. Craig Before the Metropolitan Scientific Association.

"THE free and independent thought of this age accepts statements only where they are proven to be truth, while the development of mental power seems equally great in every other department of life. The valuable inventions of the day are counted by thousands. The increase of scientific study is universal. The spirit of inquiry in all fields is so marked as to cause

COMMENT ON EVERY SIDE,

while people seem investigating and advancing in every direction which can help them morally, mentally or physically. This is specially true of the human body and everything which concerns it, and the truths which the people have found, even in the last fifty years, are simply marvelous. How really ignorant some cultured and supposably scientific people were only a few years ago, as compared with the present day, may be better understood from a few illustrative facts. A prominent writer prepared an elaborate essay to prove that steamships could never cross the Atlantic, and his pamphlet was issued just in time to be carried by the first steamer that went to England. People once believed that the heart was the seat of life and health. It is now know that this organ is only a pump, simply keeping in moment what other and more important organs of the body have created and transformed. It was once supposed that if a person felt a pain in the back, the liver was deranged; if a pain came in the lower chest the lungs were affected and consumption was near; it is now known that a pain in the back indicates diseased kidneys, while troubles in the lower chest arise from a disordered liver and not imperfect lungs. A severe pain in the head was once thought to come from some partial derangement of the brain; it is now known that troubles in other parts of the body and away from the head, cause headaches and that only by removing the cause can the pain be cured. It is a matter of

PRIVATE HISTORY

that Gen. Washington was bled to death. His last illness was slight, and caused principally by weariness. A physician was called who 'bled him copiously.' Strange to say, the patient became no better. Another doctor was called, who again took away a large amount of the vital fluid. Thus in succession four physicians drew away the life of a great man who was intended by nature for an old age, and who prematurely died—murdered by malpractice—bled to death. That was the age of medical bleeding!"

The speaker then graphically described another period which came upon the people, in which they assigned the origin of all diseases to the stomach, and after showing the falsity of this theory, and that the kidneys and liver were the causes of disease, and that many people are suffering from kidney and liver troubles to-day who do not know it, but who should know it and attend to them at once, continued:

"Let us look at this matter a little more closely. The human body is the most perfect and yet the most delicate of all created things. It is capable of the greatest results and it is liable to the greatest disorders. The slightest causes sometimes seem to throw its delicate machinery out of order while the most simple and common-sense care restores and keeps them in perfect condition. When it is remembered that the amount of happiness or misery we are to have in this world is dependent upon a perfect body, is it not strange that simple precautions and care are not exercised? This is one of the most vital questions of life. People may avoid it for the present, but there is certain to come a time in every one's experience when it must be faced.

"And here pardon me for relating a little personal experience. In the year 1870, I found myself losing both in strength and health. I could assign no cause for the decline, but it continued, until finally I called to my aid two prominent physicians. After treating me for some time they declared I was suffering from Bright's disease of the kidneys, and that they could do nothing more for me. At this time I was so weak I could not raise my head from the pillow and I

FAINTED REPEATEDLY.

My heart beat so rapidly it was with difficulty I could sleep. My lungs were also badly involved; I could retain nothing upon my stomach, while the most intense pains in my back and bowels caused me to long for death as a relief. It was at this critical juncture that a physical longing which I felt (and which I most firmly believe was an inspiration) caused me to send for the leaves of a plant I had once known in medical practice. After great difficulty I at last secured them and began their use in the form of tea. I noticed a lessening of the pain at once; I began to mend rapidly; in five weeks I was able to be about and in two months I became perfectly well and have so continued to this day. It was only natural that such a result should have caused me to investigate most thoroughly. I carefully examined fields in medicine never before explored. I sought the cause of physical order and disorder, happiness and pain, and I found the kidneys and liver to be the governors, whose motions regulate the entire system."

After describing at length the offices of the kidneys and liver, and their important part in life, the doctor went on to say:

"Having found this great truth, I saw clearly the cause of my recovery. The simple vegetable leaf I had used was a food and restorer to my well-nigh exhausted kidneys and liver. It had come to them when their life was nearly gone, and by its simple, yet powerful, influence had purified, strengthened and restored them and saved me from death. Realizing the great benefit which a knowledge of this truth would give to the world, I began in a modest way to treat those afflicted, and *in every case* I found the same

HAPPY RESULTS

which I had experienced. Not only this but many, who were not conscious of physical trouble but who, at my suggestion, began the use of the remedy which had saved my life, found their health steadily improving and their strength continually increasing. So universal, where used was this true, that I determined the entire world should share in its results, and I therefore placed the formula for its preparation in the hands of Mr. H. H. Warner, of Rochester, N. Y., a gentleman whom I had cured of a severe kidney disease, and who, by reason of his personal worth, high standing and liberality in endowing the Astronomical Observatory and other public enterprises, has become known and popular to the entire country. This gentleman at once began the manufacture of the remedy on a most extensive scale, and to-day Warner's Safe Kidney and Liver Cure, the pure remedy that saved my life, is known and used in all parts of the continent.

"I am aware a prejudice exists toward proprietary medicines, and that such prejudice is too often well founded, but the value of a pure remedy is no less because it is a proprietary medicine. A justifiable prejudice exists toward quack doctors, but is it right that this prejudice should extend towards all the doctors who are earnestly and intelligently trying to do their duty? Because Warner's Safe Kidney and Liver Cure saved my life before it became a proprietary medicine, is it reasonable to suppose that it will not cure others and keep still more from sickness now that it is sold with a government stamp on the wrapper? Such a theory would be childish."

The doctor then paid some high compliments to American science, and closed his lecture as follows:

"How to restore the health when broken and how to keep the body perfect and free from disease must ever be man's highest study. That one of the greatest revelations of the present day has been made in ascertaining the true seat of health to be in the Kidneys and liver, all scientists now admit, and I can but feel that the discovery which I have been permitted to make, and which I have described to you, is destined to prove the greatest, best and most reliable friend to those who suffer and long for happiness, as well as to those who desire to keep the joys they now possess."

PERSONAL ITEMS.

Mr. Thomas Carlyle is suffering from insomnia.

Robert Toombs, of Georgia, intends to build a cotton factory worth $200,000 at Washington, in that State.

Ex-Congressman Eugene Hale denies the report that he is going to move from Maine to Michigan. He will stay in Maine and watch the Senatorship.

Mr. Samuel H. Gladstone, a cousin of the Premier, is now in this country for the purpose of buying land in Colorado or some other Western State.

The return of the King and Queen of Greece to Athens on Sunday was the cause of a great local and patriotic demonstration. Public opinion favors action against Turkey, even without foreign support.

The girls who were to be confirmed recently in St. John's Roman Catholic Church, Concord, were officially informed beforehand by the Bishop that he would not lay his hands on any head that bore banged or frizzed hair.

The death of the venerable Peleg Sprague leaves Hannibal Hamlin as the senior living representative of Maine in the United States Senate. All who had preceded him are now dead, as well as Nourse and Fessenden, who came after.

Agent Meeker's remains were removed from the White River Agency to Greeley, Col., a few days ago. Miss Josephine Meeker, the agent's daughter who passed through a terrible ordeal while a captive of the Utes, has regained her health.

Mayor Rose of Davenport, Iowa, threw the first shovelful of earth in the work of excavating for a soldiers' monument in that city. "Twenty-one years ago," he said, in his address, "I was shovelling very near this spot for a dollar a day."

Among the passengers by the steamer Scythia from Queenstown for New York this week, was Viscount Lymington, Liberal member of Parliament for Barnstable, who intends to study the land system and agriculture in the United States.

Charles Talmadge, son of an ex-Mayor of Milwaukee, and recently married to one of the most respected young ladies in that city, has been caught at burglary. He made a practice of crawling through transoms into business offices to steal.

Ex-Senator Simon Cameron recently bought a dwelling house built on the lot of ground in Maytown, Lancaster County, on which stood the house in which he was born, in 1799. He has presented the house to the Lutherans of Maytown, the house to be used as a Lutheran parsonage, and to stand as a memorial to his wife, Margaret Brua Cameron, who was a devout Lutheran.

[Logan (Ohio) Hocking Sentinel.]

Hocking Valley News.

In the absence of anything startling or terrific—politics and the exploits of the army worm excepted—news from this delightful valley will not prove nerve-tingling. However an item of very great importance to many people is communicated by Mr. F. Harrington, Wholesale and Retail Druggist of Logan, who thus writes: Mr. Alex. McClurg, Union Furnace, states that his wife had been afflicted with rheumatism for the last twenty-five years, being unable to walk without canes or other help the most of that time; has now used two bottles of St. Jacob's Oil and walks not only about the house but also in the fields without any help.

Trees, Seeds, Plants, &c.

New and Rare Winter Flowering Plants.—New Fruits, Dutch Bulbs, &c.

New Pears, new Peaches, new Cherries, new Grapes, new Strawberries, &c., with a large stock of all kinds of Fruit trees, shrubs, &c.

DUTCH BULBS.—Large importations direct from the leading growers in Holland. First quality Bulbs. Beautiful Hot-house plants, Orchids, Dracenas, Crotons, &c. Winter flowering plants, Roses, &c., well grown. Cheap by the single plant or doz., by mail or express. Catalogues mailed to applicants.

JOHN SAUL, Washington, D. C.

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A superior stock of **PLANTS** of all the good *old and choice new* kinds.

The largest collection of Strawberries in the U. S. Head-quarters for the Cuthbert Raspberry. 5 New White Grapes. Illustrated catalogue, giving cultural notes, *honest* descriptions and *fair prices*, FREE.

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The Only Medicine

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The Liver, the Bowels and the Kidneys.

These great organs are the natural cleansers of the system. If they work well, health will be perfect; if they become clogged, dreadful diseases are sure to follow with

TERRIBLE SUFFERING.

Biliousness, Headache, Dyspepsia, Jaundice, Constipation and Piles, or Kidney Complaints, Gravel, Diabetes, or Rheumatic Pains and Aches,

are developed because the blood is poisoned with the humors that should have been expelled naturally.

KIDNEY-WORT

will restore the healthy action and all these destroying evils will be banished; neglect them and you will live but to suffer.

Thousands have been cured. Try it and you will add one more to the number. Take it and health will once more gladden your heart.

Why Suffer longer from the torment of an Aching back? Why bear such distress from Constipation and Piles?

KIDNEY-WORT will cure you. Try a package at once and be satisfied.

It is a dry vegetable compound and

One Package makes six quarts of Medicine.

Your Druggist has it, or will get it for you. Insist upon having it. Price, $1.00.

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In response to the urgent requests of great numbers of people who prefer to purchase a **Kidney-Wort** already prepared, the proprietors of this celebrated remedy now prepare it in liquid form as well as dry. It is very concentrated, is put up in large bottles, and is equally efficient as that put up dry in tin cans. It saves the necessity of preparing, is always ready, and is more easily taken by most people. Price, $1 per bottle.

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The largest Company in the country which insures only farmers' property and residences. Over twenty six years old.

Capital.....$200,000 00
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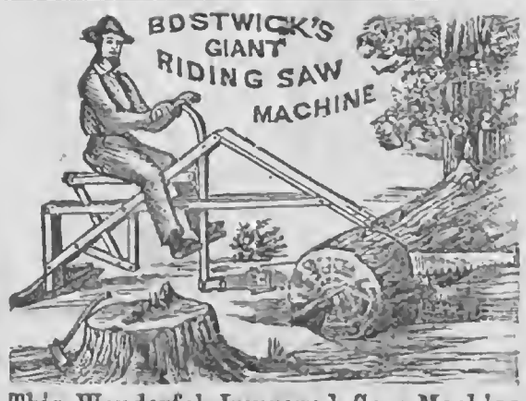

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is warranted to saw a **two-foot log in three minutes,** and **more** cord wood or logs of any size in a day than **two men** can chop or saw the old way. ***Every Farmer and Lumberman needs one.***

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Implements and Machinery.

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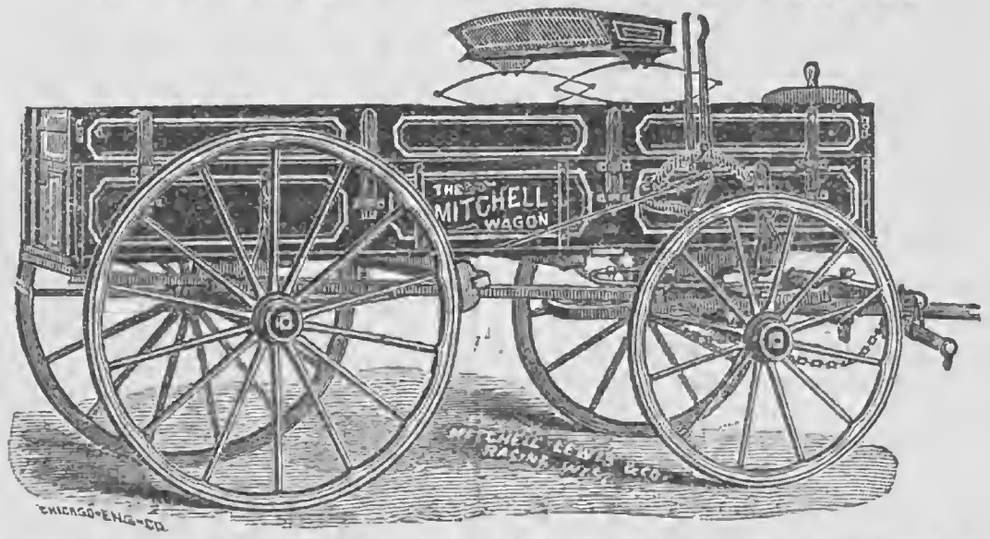
MANUFACTURERS OF

FARM AND FREIGHT WAGONS



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The MITCHELL WAGON is Monarch of the Road, only the very best stock used in its construction and made by the best wagon mechanics in the world. The Spring Wagon and Buggy Department is entirely separate from the Farm Wagon shops. And for the manufacture of this class of work we have facilities unsurpassed. Send for Catalogue and Illustrated Price List.

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PERFECTION OBTAINED IN

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This Cutter has *received* the First Premiums *at every Fair*, and has no *equal*. Do not fail to examine it.

The Neatest, Strongest, Simplest, Cheapest, and most Perfect Root Cutter in the Market.

This Cutter is built with a heavy oak frame, well bolted together; is staunch and strong, neatly finished, handsomely striped and ornamented. The cutting apparatus consists of *twenty-five steel knives* (gouge shaped), so arranged on a wrought-iron shaft that they are perfectly secure; no chance of becoming loose or breaking. The roots are neatly cut in pieces suitable for feeding. No coarse, ungainly pieces are left by this Cutter. A boy can easily cut 25 to 40 bushels per hour, so easily does it do its work. ☞ Don't fail to examine it.

We are manufacturing three sizes, designated by numbers,—1 2 and 3.

Nos. 1 and 2 designed for hand use.

No. 3 is the Power Cutter, and will cut 100 bushels per hour.

Price, No. 1,.....$12.00
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Sent by mail postpaid on receipt of price.

Cannot get out of order. Will last a lifetime.

This is the only Cheap Practical Hand Corn Sheller in the market and is in every way the

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Shells 25 to 30 bushels a day **very easily.** Is especially recommended to farmers who shell large quantities of corn for seed. It has been customary to remove the imperfect kernels from both ends of the ear with the hand, and use the full, perfect kernels of the center for seed. This is a long, tedious process, but with this sheller it can be done in one-tenth the time. To poultrymen, to seedsmen and to anybody who shells corn, we recommend it. Can be carried in the pocket and samples of corn taken from any part of the field by shelling only part of an ear.

Our PREMIUM CORN SHELLER is destined to become the **Leading Hand Corn Sheller** of the day, and you will find it profitable and to your advantage to secure the sale of it. When it is once introduced no other small sheller will be wanted in your locality. This Sheller opens a new field for reliable agents. A very profitable business can be done upon a small capital.

Believing this to be the Best Low Priced Corn Sheller ever invented we have secured the General Agency for the United States, and we want

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Sample sheller and price list sent prepaid to any address upon receipt of $1.

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AGENTS WANTED FOR THE

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Stove-Pipe Shelf.—*THE MOST convenient article ever offered to Housekeepers. One Agent made* $144.67 *in ten days. No freight charges.*

Address, **R. S. HARTZELL & CO.**
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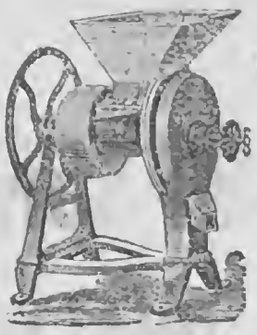

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BEST WASHER AND WRINGER *the World.* Guaranteed to do perfect work or money refunded. Warranted for 5 years. Price of Washer, $8. Sample to agents, $8.50. Price of Wringer, $7.50. Sample, $4.25. Circulars free.

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The Cheapest and Best.

Will Crush and Grind Any thing.

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The Monitor Jr. is the most perfect Clover Thresher, Separator, Huller and Cleaner in the world. The Threshing and Hulling Cylinders run under-shot. They also continue to manufacture the old "Monitor," with *Threshing* and *Hulling* Cylinders running *over-shot.* Send for price list, terms, and descriptive catalogue. Address as above, and say you saw this in the RURAL NEW-YORKER.

Humorous.

KISSING is somewhat like seven-up. If he begs, and she thinks she can make points in the game, she will give one.

A SYRACUSE grocer used to smoke his pipe while leaning against the kerosene barrel. His mail now goes to the dead letter office.

ONE of the first requisitions received from a newly-appointed railway station agent, was: "Send me a gallon of red oil for the danger lanterns."

"THERE'S one kind of ship I always steer clear of," said an old bachelor sea-captain, "and that's courtship, 'cause on that ship there's always two mates and no captain."

A MOBILE paper describes a young lady with hair "as black as a raven's." The ravens weren't wearing any hair to speak of last Summer, but we suppose the style has changed this year.

"ELLA, is your father at home?" said a bashful lover to his sweetheart; "I want to propose something very important to him." "No, Clarence, papa is not at home; but I am. Couldn't you propose to me just as well?" And he did, with perfect success.

I WAITED anxiously with dread unfeigned—I held my breath, my utterance was choked—My muscles twitched, my every nerve was strained—With humid tears my handkerchief was soaked—Till in a moment agony was eased—I quickly turned my head aside—and sneezed!

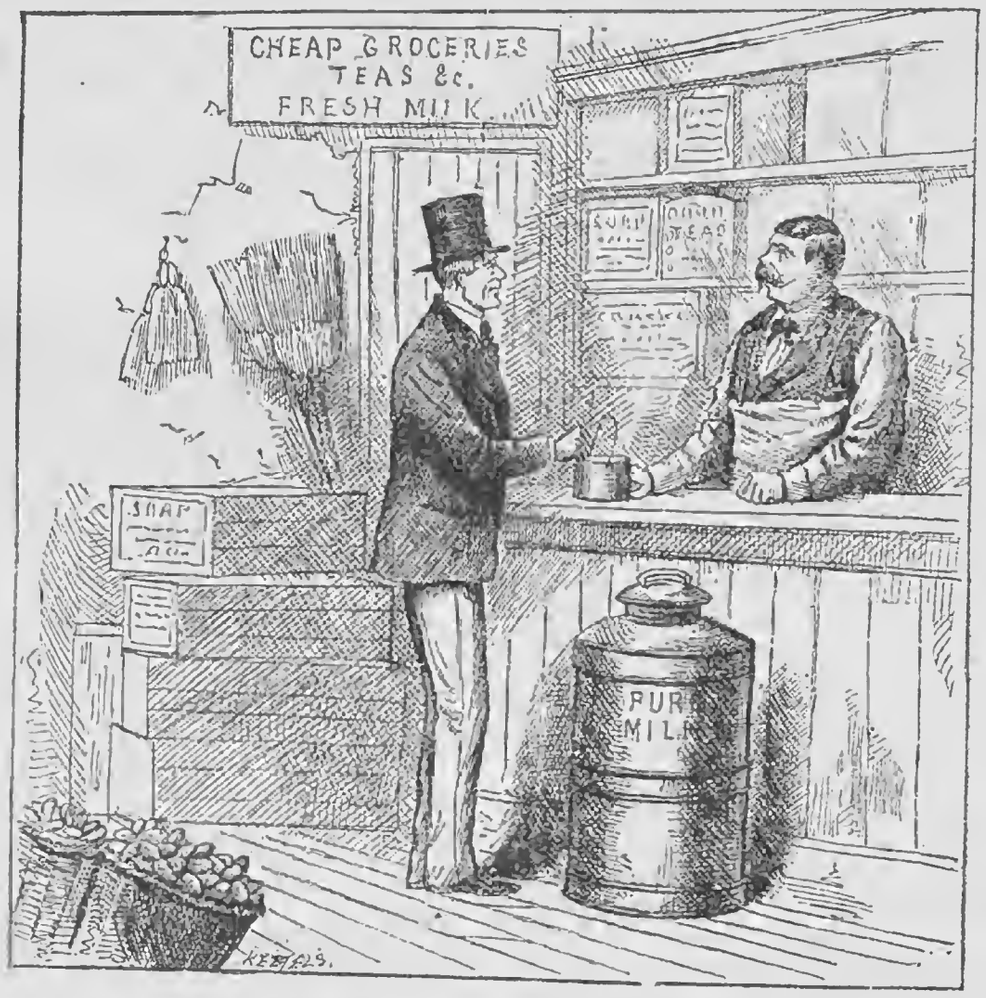
A GENTLEMAN, recently about to pay his doctor's bill, said, "Well, doctor, as my little boy gave the measels to all my neighbor's children, and as they were attended by you, I think you can afford at the very least to deduct ten per cent. from the amount of my bill for the increase of business we gave you."

A SOLDIER of a cavalry regiment was brought up for stealing his comrade's liquor ration. He was an Irishman, and his defence was unique. "I'd be sorry indade, surr, to be called a thief. I put the liquor in the same bottle, and mine was at the bottom, and sure I was obliged to drink his to get at my own!"

"How came these holes in your elbows?" said a widowed mother to her only son. "Oh, mother, I hid behind the sofa when Col. Gobler was saying to Maria that he'd take her even if you had to be thrown in; and he didn't know I was there; and so I held my tongue and laughed in my sleeves till I burst 'em."—[Littell's Living Age.

"WHY, Bridget," said her mistress, who wished to rally the girl, for the amusement of her company, upon the fantastic ornamenting of a plate of butter, "Why, Bridget, did you do this? You're quite an artist; how did you do it?" "Indade, mum, it was myself that did it," replied Bridget. "Isn't it pritty, mum? I did it with your fine-tooth-comb, mum."

"CAN you tell me where to buy a white shirt?" said a gawky fellow to a man at Lexington, Ga. The information was given, and the inquirer—who was accompanied by a blushing girl—said to the merchant while buying the shirt: "Can you tell me where to get a marriage license?" Of the license clerk he asked: "Who's the best minister to tie the knot?" Thus the couple cautiously proceeded toward matrimony.



INSINUATING.

Customer.—"Give me a pint of half-and-half!"
Grocer.—"Half-and-half?"
Customer.—"Exactly: half milk, half water."

Poisoned Atmosphere,

And poisoned water, having lost their purity and become contaminated with the rank effluvium and noxious soluble products of decaying vegetation, breed not only malaria in its various forms, but give rise to disorders of the stomach, liver and bowels, always of a dangerous character. No antidote to malarial poison has yet been discovered which has so signally demonstrated its remedial value as Hostetter's Stomach Bitters, which breaks up the worst paroxysms of fever and ague and bilious remittents, and prevents the first attacks, or a recurrence of these and kindred malarial disorders. As a stomachic and general tonic, as a recuperant of vital energy, and as a restorative of bilious regularity, active secretion, and a healthy habit of body, this preparation is unrivalled. Throughout those portions of the United States and in tropical countries where such disorders are prevalent, it is regarded as a standard anti-malarial specific.

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The Victor Double Huller Clover Machine excelled the Birdsell, Monitor, Jr. and Ash and Clover Hullers, on every point in the great national Clover Huller trial, at Toledo, Ohio, Fair, on September 16 and 17, 1880.

Ashland Huller was ruled out in first days trial for bad work. Second day the Victor got seven per cent. more seed from same quantity of straw than Birdsell Monitor, Jr, did, and 300 per cent. more seed from the Monitor, Jr. straw than the Monitor Jr. did from Victor's straw, as will be seen by Committee's report which will be sent free upon application to

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$3,500,000 worth now in Use.
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Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merits. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.
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Simple, Strong, Durable, Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers.
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1,000,000 acres well-watered Timber and Prairie Lands along the line of the St. Louis and San Francisco R. R. for sale at from $2.50 to $8.00 per acre *on seven years' time.* Excellent for Stock, Fruit, and Farming. The best Tobacco Region in the West. Short winters, convenient markets, superior schools, low taxes, healthful climate, good society. Free transportation from St. Louis to purchasers of land. *Send for maps and circulars.*
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Rifles, Shot Guns, Revolvers, sent c. o. d. for examination
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all styles, Gold, Silver and Nickel, $6.00 to $150 Chains, etc., sent C. O. D., to be examined. Write for Catalogue to **Standard American Watch Co., Pittsburg, Pa.**

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and other desirable strains of **Trotting Stock,** for sale, **cheap,** and on **easy terms.** All stock guaranteed as good as represented. Catalogues sent free. Correspondence solicited. Address
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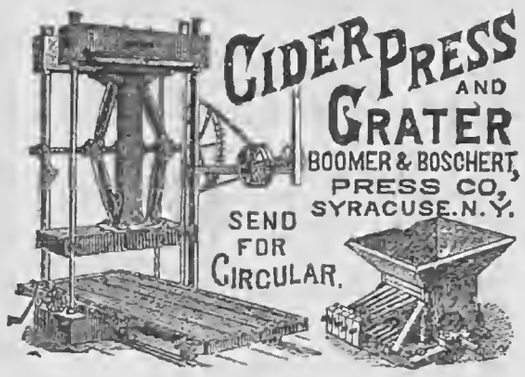

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Every Man His Own Miller.

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Grinds twice as fast as any other Mill of same size and price. Manufactured by
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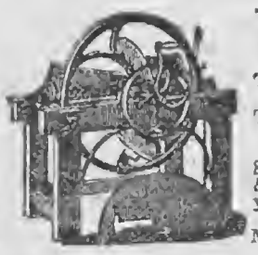

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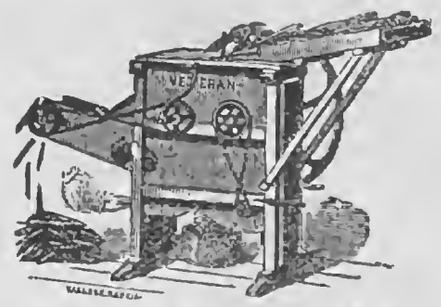

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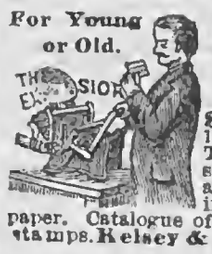

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THE RURAL NEW-YORKER

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The Vineyard.

THE JEFFERSON GRAPE.

MR. RICKETTS's grapes are quite dissimilar in appearance and flavor. A complete collection would seem to supply all that the lover of grapes could desire, if only such a collection could be made to thrive in the same locality, which we presume will rarely, if ever, prove to be the case. The Jefferson is now offered for sale by Mr. J. G. Burrow, of Fishkill, Duchess County, N. Y., who controls the entire stock. Our engraving is a true reproduction of an average size bunch which was sent to this office by Mr. Burrow, not knowing it was to be drawn and engraved. We have a specimen vine of the Jefferson at the Rural Grounds, which has not yet fruited or, indeed, made a very strong growth. In other places, however, we hear it has grown vigorously. Mr. Charles Downing, at our request, gives his opinion of this grape, which is as follows:—

JEFFERSON.—One of James H. Ricketts's Seedlings—a cross between Concord and Iona; vine a vigorous grower, rather short-jointed; leaves, large, thick and downy; bunch, large, sometimes very large, shouldered, very productive; shoulders, often double, compact; berry, medium large, roundish-oval; skin,

THE JEFFERSON GRAPE.—Drawn from Life.—Fig. 354.

thick, light, bright red, with a thin whitish bloom; flesh, meaty, crisp, tender, juicy, sweet, slightly vinous and aromatic; quality very good or best. The berries adhere well to the peduncle. It ripens about with the Concord, and is a promising grape, both for home use and market.

Mr. Bateham said of this grape as follows:—

This, to my mind, is the most promising of all Mr. Ricketts's Seedlings, if there is no mistake as to its parentage, which is claimed to be Concord crossed with Iona. The fruit resembles Iona in color and size of bunch and berry, but the quality is not so rich and vinous, but more sweet and meaty.

Mr. George W. Campbell, of Delaware, Ohio, says:—

The quality of the Jefferson grape is entirely satisfactory. Indeed, I have seen no native red grape the flavor of which pleases me so well. To my taste it is superior to the Iona; and if it proves generally hardy, healthy and productive, it will merit a cordial reception from all grape-growers, and will, doubtless, command an extensive sale. There can be no question as to the beauty and excellence of the fruit, and if the character of the vine proves satisfactory, it must rank as one of our best and most valuable grapes.

NEW GRAPES OF WESTERN NEW YORK.

E. WILLIAMS.

LAST SPRING Secretary Woodward, of the Niagara Grape Company, sent me an invitation to visit them this Fall and see the Niagara growing. As this method of observation is the only safe one by which to arrive at satisfactory conclusions respecting the merits of any new fruit, next to growing and observing it on one's own ground, I decided to accept the invitation. Having induced an amateur friend to join me for company's sake, we took an evening train of the New York and Lake Erie Railroad from Jersey City on the 22d of September, arriving at Buffalo at eight o'clock the next morning. After breakfast we took a train to Dunkirk and thence to Fredonia, to the grounds of T. S. Hubbard, to first see and inspect

The Prentiss,

a new native white grape now being offered for sale for the first time.

At the outset Mr. Hubbard informed us that the fruiting vines of the Prentiss were at Pulteney; his vines were grafts set the year previous, and not a fair sample of its capacity. We, however, had an opportunity to observe the foliage and growth of the vine in comparison with others. In one part of the vineyard there was some mildew on the foliage, but it was not seriously affected, while Delaware, Croton and several others were entirely denuded. The Prentiss is a seedling of Isabella, a good grower, but not as stout and vigorous as its parent. A one-year-old vine on my own ground, received from Mr. Hubbard last Spring, has made a growth of 12 feet, and the wood is apparently well ripened. The bunch of the Prentiss is medium, compact: berries, slightly oval, from one-half to five-eighths of an inch in the short diameter, juicy, sweet and pleasant; it keeps well The vine is very productive. Samples of the fruit in fine condition were shown at the Winter meeting of the New Jersey Horticultural Society last January. This keeping quality alone must make it a valuable addition to our list of pure native grapes. We had the pleasure of tasting a great many other varieties in his trial grounds, including several of Rogers's Hybrids, which were new to us. We were particularly impressed with No. 32 (red) and No. 39 (black) for their large berries, good bunches and heavy crops. For a show my friend thought them ahead of all the rest. Mr. Hubbard, as is well known, is an extensive propagator of vines for the trade. He has about thirty acres in young vines, and as he puts about 30,000 cuttings on an acre, the reader can form some idea of the extent of his business.

In our rambles with Mr. Hubbard we accidentally stumbled into the flower garden of a Miss Denton, and such a show of balsams, portulacas and zinnias I never saw before. A large bed of the last, perfectly double, dark scarlet and a mass of bloom, far surpassed in beauty, to my eye, any massing of salvias I have ever seen. Such a gem was worth going miles to see.

Returning to Buffalo by the evening train, we went on to Niagara Falls and passed the night. The next morning we took an early train for Lockport, 20 miles distant, reaching that town at eight o'clock A. M. Not finding Mr. Woodward in town, we inquired our way to Mr. Hoag's, a mile or two distant, and wended our way thither. We here learned that he, too, was temporarily absent; but we were warmly welcomed by his genial wife, and invited to an easy-chair on the spacious piazza to await his return. And here we fell into good company by finding the Hon. Shelby Reed and D. E. Rogers, of Scottsville, on the same mission as ourselves. These gentlemen are prominent farmers and fruit-growers, the former being President of the Western New York Farmers' Club and member of the Board of Control of the Agricultural Experiment Station, and the latter is the originator of the new and promising seedling peach named Wheatland. In such good company the hour sped quickly by till Mr. Hoag's return was announced. Making known the object of our visit, we were invited to walk out and inspect

The Niagara

at home. We were accompanied by Mr. Smith, the President of the company owning the grape, and by the father of our host, a gentleman of 84, who was as agile and spry in his movements as the youngest of us.

The "lay of the land" is gently sloping to the south, at the foot of the hill range north of the canal, much lower than the town itself or the adjacent county; not to my view the most favorable location for the best results. It is an old vineyard site of Ionas, Delawares, etc., set when those varieties were in their zenith. They eventually failed and were rooted out. Strawberries followed them, and they, in turn, were followed by these grapes, being set with one-year-old vines in the Spring of '78. The rows run north and south about 10 feet apart; the vines are trained with horizontal arms on wire trellises about five feet high. The vines are very vigorous in growth, covering the trellises completely with a dense mass of large, thick, leathery, dark-green foliage. Several rows of Hartfords adjoining were badly infected with mildew, while on the Niagaras only now and then a leaf showed any sign of its presence. These young vines bore ample testimony as to productiveness. Two of them had had some of the lower leaves removed for the purpose of photographing them. One of these vines contained 63 clusters of fruit, the fruiting canes being confined to two arms, each two feet six inches long. The weight of the fruit, estimated by several of the party, varied from 21 to 30 pounds, and each thought his estimate a low one. We saw the original vine, which was layered in '76, producing 48 layers. The year following it produced 30 pounds of fruit, some clusters weighing 14 ounces, and it was heavily loaded at the time of our visit.

The bunches are large, compact, sometimes shouldered, green in the shade, of a fine, delicate amber color in the sun, and so transparent that the seeds are readily seen when held to the light. The berries are large, oval, three-quarters by seven-eighths of an inch by actual measurement, with a thin, tough skin, adhering firmly to the peduncle. We lifted several clusters of one-half pound weight by a single berry. The flesh is tender, sweet and juicy, with more foxiness in the smell than in the taste. The standard of quality will vary with individual tastes, some declaring the Niagara equal to foreign grapes, while others would discard it for its foxiness. The clusters exposed to the sun are the sweetest, richest and handsomest. Judging from the testimony of those who have tasted the samples I brought home, it will please if not satisfy 99 out of 100.

Another important feature is its early ripening and long keeping and carrying qualities. On the 24th of August, just a month previous to our visit, a gentleman from Hammondsport took a basket of fruit with him—at which time it was considered riper than the Hartfords alongside—and at this writing a bunch on my table looks almost as fresh and plump as when taken from the vine four weeks ago. These vines have had an annual dressing of ashes and plaster. Your illustration in the RURAL of October 25th, 1879, does it no injustice, unless it is that the clusters are really a little more compact than they there appear.

But the question comes up, will it not do as well away from home? Nothing short of actual trial will answer this; but I see no reason to doubt—taking into consideration all its characteristics—that it will succeed well wherever the Concord or Hartford thrives, and my only regret is to announce that the company who control the whole stock do not expect to offer vines for sale under a year or two; and when they do, they propose to send them out under seal so that every purchaser can, if he choose, have a guarantee against fraud. This is a laudable desire on their part, but unscrupulous parties will sell spurious vines for it, if they can make money by so doing, and if their customers are humbugged it is their own fault. Besides grapes Mr. Hubbard has planted dwarf pears (Duchesse) quite largely, and has a fine quince orchard of seven or eight acres, producing a large crop which he had commenced marketing in Chicago at five dollars per barrel.

Thence we went to Rochester and the next day walked to Mr. Chorlton's to see

The Pocklington.

This is also a native, a seedling of the Concord, and it has the same strong, tough leaf as its parent. The vines, too, are strong and vigorous, but the fact that it was set last year on ground that had been in evergreens, will account for any apparent lack of vigor and productiveness. The fruit had been mostly gathered; that remaining was covered with netting to protect it from the birds. The clusters are large and compact; the berries round, averaging perhaps a little larger than the Niagara, of pale green or light amber color, sweet, thin-skinned with tough pulp, and, as Mr. Chorlton says, "if we can endure the foxiness"—a fatal objection to some people—it will become popular. On our return we called at

Mr. Hooker's Nursery,

to see the original Brighton vine which still reserved a small portion of its large crop for our palate, and still maintains its character as one of the best hybrids extant. Mr. Hooker also showed us Emmelan, very fine—evidence that it *does* succeed in some places. Here also all the choice varieties had to be covered with netting to protect them from the birds, but the Champion hung drying on the vines unmolested. The birds want better fruit, so does Mr. Hooker, and my experience with it this season forces me to the same conclusion. Even if it is a few days or hours earlier than others, they are so much better we can afford to wait. Mr. Hooker is paying considerable attention to the clematis, and showed us a fine display of the Fall bloomers.

A visit to Rochester would be far from complete without calling at

The Flower Farm of Vick,

the celebrated seedsman, who we regret was in town when we called. Though late he had a fine show of gladiolus, chiefly seedlings; zinnias, cannas, etc., etc. Among potatoes I learn the "Chicago Market" is destined to take a front position. As an indication of his prosperous business, I am glad to note the erection, in the center of his flower garden, of a massive and imposing four-story brick building, about 50x150 feet, into which he had just moved, to accomodate his immense business The first floor is to be devoted to the printing and publishing of his magazine, catalogues, seed bags, etc.; the second and third floors to offices, the packing and mailing departments; and the fourth story to storing seeds. When once settled and in running order, this building will be well worth inspection, as it will be about as near perfection as human ingenuity can make it, for Mr. V. is just that kind of a man. A cursory glance over

Ellwanger & Barry's Home Grounds

showed that the pear blight had visited their splendid experimental pear orchard and somewhat marred its beauty since I last saw it; but, notwithstanding this, it was producing the finest crop of pears I have seen anywhere this season. The apple crop of Western New York is, as here, very abundant, and the evaporating establishments are welcome messengers in relieving the market.

I might extend these notes to an indefinite length, did space permit; but the design was merely to chronicle for the benefit of RURAL readers the results of my observations on the white grapes for which the trip was especially made. I regret very much I could not have seen the Duchess at home, by way of contrast with the others, but other duties prevented my doing so till it was too late, and I can only say that the four vines on my own ground have made such a vigorous and healthy growth as to greatly disappoint me, and I am very hopeful regarding its future.

Returning we enjoyed gazing at the ever-changing Autumn landscape for which this country is famous.

"Till night drew her sable curtains o'er the earth,
And pinned them with a star."

The forest-covered hill-sides had put on their finest and brighest colors, embracing every shade and hue of amber, yellow and crimson, and as the evening sun shed his parting rays on the scene, it formed a painting after Nature which my companion declared the most beautiful picture he ever saw. Thus ended our trip and here end our notes thereon.

Cinnaminson, N. J.

The Niagara Grape.

We have received a box of these grapes from Mr. J. S Woodward, of the Niagara Grape Company, Lockport, N. Y., who writes to us:—

"I take the liberty of sending you to-day by express a small box of "Niagara" grapes, that you may compare them with those sent from the State fair. These were fully ripe by August 20, and were cut on October 20, thus having hung ripe on the vines two full months. In tasting and comparing them, remember they are entirely and purely native, as hardy and vigorous as the Concord and more productive. The leaves are yet green and vigorous, while all others in the vineyard are off or are turned a dead yellow. You will observe the difference in color between those that were in the sun and those in the shade."

Oct. 21.

[The above were received in perfect order, each grape as sound as a nut. The Niagara is just what is needed in our markets to-day. The quality is no better than that of Concord, but the vigor of the vine and the keeping qualities of the fruit, so far as can be judged, cannot be questioned.—EDS.

Some Disinterested Testimony Respecting the Niagara Grape.

Last week the Rural Farm was visited by Dr. Henry Stewart, Dr. F. M. Hexamer, Dr. A. R. Ledoux, Mr. C. V. Mapes, and Mr. E. Williams. During their visit a dish of white grapes (the name was not mentioned) was placed before them, and each one was requested to state his opinion of their quality. Mr. Williams, said: "It appears to be the Niagara, though they are richer and better than Niagaras I have before tasted. Whatever it is, if you can grow that grape, you will go a long way to find one better."

Dr. Ledoux, said: "It is splendid."

Dr. Hexamer, said: "It comes the nearest to Niagara of any grape I can think of, though it seems rather better. The Niagara is the greatest step in advance since the Delaware."

Dr. Stewart, said: "It is a first-class grape—far ahead of the Niagara."

Mr. Mapes, said: "I thought it a hot-house grape."

The grapes were sent to us by Mr. Woodward, as elsewhere noted in our present issue.

Pomological.

KEEPING WINTER APPLES.

THE question is being discussed as to whether a dry or a wet cellar keeps apples best. A writer in the New York Tribune says apples keep excellently in his cellar, which is a wet one, and cites the remark of an experienced buyer that whenever he entered a cellar and was compelled to walk on boards to keep out of the water, he was sure to find the fruit in good condition. On the other hand, many writers recommend a dry cellar as the best for keeping apples. Who shall decide the question?

That water is not injurious to the keeping of apples, even when actually in contact with them, is shown by the fact that they keep perfectly well on the ground under leaves all Winter. A friend of mine living in Montreal says that seeing some very fine Fameuses exposed for sale in that city, he inquired how they were kept. He learned that they were part of the cargo of a canal boat which had sunk in the canal and was frozen in before it could be raised. When this was effected in the Spring, it was found that the cargo of apples, which would not have kept much longer than January in the air, had been preserved perfectly in the water. An old custom of burying apples in the ground, the same as roots, for Winter storage, also demonstrates that moisture in contact with apples does not necessarily cause rotting. In Russia I understand that apples are preserved in tight barrels with water, in the way practiced in this country with cranberries. On the other hand, apples keep perfectly in dry cellars, as many fruit growers can testify.

What then is the essential requisite for the safe Winter keeping of this fruit? Simply, I believe, the preservation of a low uniform temperature as near the freezing point of water as possible. This can be maintained in dry cellars, but much more easily and perfectly, I think, in wet ones. The presence of water has a controlling power over the variations of temperature near the freezing point, as all know who have had to keep water in a cold cellar to keep it from freezing. The moisture does no harm to the apples. It may even be a direct benefit in preventing evaporation from and consequent withering of the apples, though this evaporation is very slight at the low temperature necessary in fruit cellars for success in keeping apples over until Spring. In Canada apples are rarely stored for keeping in house cellars. A special cellar is made, deep, with thick stone walls laid in mortar. These walls rise above the surface only about ten inches, to allow of small windows for ventilation and light. There is a double floor above filled in with moss or sawdust. This floor is covered by a roof-like attic and the apples are there kept until the approach of severe frosts, when they are sorted, barreled and lowered into the cellar through a trap-door which is then closed and packed in the same way as the floor. At times during the Winter when the weather is not freezing this cellar is opened and fruit removed for sale. When properly made and managed there is little or no loss in the way of storing Winter apples. T. H. HOSKINS, M. D.

Farm Economy.

CIDER MAKING.

To the fact that the apple crop does not come regularly every year may be attributed the other fact that there is a want of the same systematic process of making and keeping cider as is found in wine making. The juice of the apple, as of all other edible fruits, is capable of manufacture into a wholesome, palatable beverage, or of fermentation into vinegar or distillation into liquors, just as the producer and manufacturer may determine.

These fruit juices vary in character in differ-

ent kinds of fruits and in different varieties of the same fruit, and to insure the finest product the best quality of juice is required. As generally made, cider is but the product of a scraping together of the refuse of the orchard, some apples giving juice of one kind of strength and some of another, while some of the apples may be windfalls and partially ripened, or over-ripe and decayed. This is an unfavorable condition for making fine cider, but if the object be simply to save as much as possible of the orchard refuse, then this irregular plan may be the only practicable one.

But in so far as ripe, perfect fruit is selected, and that of a quality of juice corresponding in richness, and care and skill are used in the process of manufacture will the result be favorable. The apples should be fully ripe, sound and free from stems and leaves or other foreign substances. Apples having a slightly astringent flavor make cider which keeps best, and, when practicable, apples should be left to become ripe and sweetened and dry by exposure to the Autumn sun before being worked up. They gain in sugar and lose in water by such exposure.

Cider made early in the season has less body and does not keep as well as that made in cooler weather, nor can fermentation be as easily controlled. Cider made after the first of November is likely to have better keeping qualities, a better body and a higher flavor. When made from apples of the same kind it is easier to regulate fermentation and easier to preserve the cider, and apples should be selected with this object in view so far as practicable.

There are various opinions in regard to presses and crushers, some preferring to have apples crushed fine, but the juice then is more muddy and cannot be clarified as easily. If pressed as soon as crushed, the juice will be of a light color, but when the apples are coarsely ground and the pomace allowed to remain in the vats for some time before pressing, the juice will have a deeper color and an appearance of greater richness. A heavy pressure brings out more of the sugar and fruit flavor and the cider has better keeping qualities.

On the care and handling of the juice the quality of the product largely depends. For wine making, cool, underground cellars are provided and the fermentation carefully regulated, and with cider making the process of fermentation should go on at as low a temperature as possible, and the barrels should be kept full at all times that the impurities may overflow. When sufficiently fermented, the cider should be drawn off into clean casks or vessels or bottled direct. Old cider makers usually have some special process which they use in their cider making, the advantage of which has been learned by experience, but the business of fine cider making is yet in its infancy, and there is room for a great deal of improvement.

Some add sugar before the juice begins to ferment, and others put in alcohol and others mustard seed, but the simplest process for the farmer who makes but a few barrels is to endeavor to conduct the fermentation at a low, even temperature and then to draw off the clear cider, being careful not to disturb the settlings, and either bung tightly or bottle and wire.

Old liquor casks are best for keeping cider, but if new ones are used they should be fumigated with sulphur, by dipping strips of cloth in sulphur and then lighting and suspending them inside the barrel, which is then bunged up to keep in the sulphur till the barrel is wanted for use.

Various substances are added to cider to stop fermentation—sulphite of lime, salycilic acid, etc., etc., but none of these improves the character of the cider, but rather injures it, and retards the ripening by which a true cider is obtained. Professional cider and wine and vinegar makers use elaborate processes combined with skill gained from experience and by the construction of cool cellars, and are rewarded accordingly. There is yet room for much effort in this direction. Cider may be bottled securely at the close, or near the close, of the first fermentation and will become sparkling in a short time. Cider which has become stale may be bottled and a lump of sugar added and it will become sparkling.

HANDLING FLAX.

Although in frequent cases, after the flax has been thrashed, the stalks are sold to the manufacturer to prepare the fiber for use or sale, yet as this is often done either wholly or, more commonly, in part, by the farmer himself, a short account of the processes will be either of use or interest. The flax stalk consists of three parts:—first, a woody, central hollow stem, called the "shove," "shoove," "shives," "boon" or "hurl;" second, a fibrous sheath surrounding the "shove," and, third, a delicate outside covering of skin or bark. The fibrous sheath or fiber—the only valuable part of the stalk—is held fast to the "shove" by means of a mucilaginous substance, and the object of the subsequent processes is to separate it completely from its worthless surroundings.

Rotting or Retting has for its object to dissolve this glutinous substance, and when the process has been properly attended to, the shives readily separate from the fiber. There are two ways of rotting flax—acriel or dew rotting, and water rotting or steeping. The former is the slower, but being the more convenient and the less unpleasant, it is the mode commonly practiced in this country. As soon after the harvest as convenient the stalks are carried to a smooth grass plot and spread out in long swaths, care being taken to spread them of a uniform thickness of a quarter to a half inch, with the butts even and the straw straight. To prevent tangling and to facilitate turning a space of a few inches should be left between the adjacent swaths. In a week or ten days the swath should be turned upside down by running a long, slim pole under it and turning the "poleful" over. This can be done better by two men, or a man and a boy, with a long pole than by one man with a short pole, because when a portion of the swath is raised the part connecting it with the rest of the swath is likely to become more or less tangled unless somebody stands on the part where the separation is to be made. Some only turn the flax once—when the top side is thoroughly weathered; it is better, however, to turn it twice, lest the under side should become moldy, especially on wet ground. Dew rotting takes a longer time in cold and dry than in wet and warm weather, alternate rain and sunshine being the most favorable condition for speedy rotting. The period varies from three weeks to double that length. The flax is sufficiently rotted when the stalks assume a silver-gray color, and the stem, if it is bent between the fingers when dry, snaps like glass, and the fiber separates freely from the shives. The straw should then be collected by rake, or, preferably, by hand, and bound in moderate-sized sheaves, which should be set on end until thoroughly dry.

In water rotting the flax is either placed in a sluggish stream, or a pit is prepared for it, through which there is a flow of water from a stream or spring. "Soft" water, however, dissolves the mucilaginous substance sooner than "hard" water, and water impregnated with iron or other mineral matter is unsuitable, as it is apt to discolor the fiber. A like effect is produced in a stagnant pool, so that a change of water is necessary to a satisfactory result. The flax in the water should not touch the ground, so that it is always convenient to make a rough platform, four or five inches from the bottom, of rails or boards held down with stones or stakes for it to rest on. On this the bundles are placed in an inclined position and the water is let into the pit until it is four or five inches over the top of the flax, which is held down by stones or other weights or by poles laid across and prevented from rising by being fastened to stakes. If the flax is over-rotted the fiber is injured or ruined, so that great care must be taken to prevent this mishap. The cooler the water, the longer the flax will be in rotting; but if of the right temperature the process should be completed in six or seven days. After steeping five days the flax should be frequently examined to determine whether it is rotted enough. To decide this point, take from the center of a bundle an average-sized straw; break a piece about six inches long from the middle of it, and draw the boon downwards; if sufficiently watered it will slip from the fiber without breaking the latter. The bundles should then be lifted out carefully, unbound, and the flax spread out to dry on the grass in swaths, much the same as in dew rotting.

If it has been taken a trifle too soon out of the water the rotting can be completed on the grass. When the flax has been rotted enough, it is gathered in bundles and housed, stacked or sold. In some places rotting is followed by firing, especially when the rotting has not been sufficient. This is done by spreading the flax thinly, either on a rack about four feet high, under which a low fire burns; or over an underground flue, through which the heat from a fire passes. Manufacturers generally prefer to buy the fiber either before or after rotting, as they usually have conveniences for performing the other operations better than they can be performed on the farm.

Breaking, when done on the farm, is performed either with a hand or power "break," the object being to break the straw across at short intervals so as to facilitate the separation of the shives from the fiber. By shaking the broken stalks well most of these are got rid of, and those that still remain are worked out by

Scutching.—For this a scutching or swingle board is needed—an upright, hard-wood board of a convenient hight, fastened at the bottom to a horizontal support or sunk in the ground. On the top of this, or, better in a notch cut at a convenient hight in the side of it, a handful of the broken flax is placed, and struck sharply, close to the board, with a scutcher or swingling knife—a hard-wood, doubled-edged knife about two feet long. Each handful of flax is turned and shifted on the board until the shives are thus beaten off. A revolving power scutcher with a number of knives arranged like the spokes of a wheel, is also used for the same purpose.

Hatcheling is the final process of dressing, and consists in drawing the scutched fiber through a comb or hatchel consisting of iron teeth about six inches long, one-eighth of an inch in diameter at the lower end and tapering to a point. About ten of these are set a quarter of an inch apart in a hard-wood board, and the fiber is drawn through them until it is freed from all shives and coarse tow, when each handful is slightly twisted, and the product is ready for market.

Breaking and scutching are largely done at present at one operation by a machine which does not take up much more room than an ordinary fanning mill. The bunch of flax is spread upon a table in front of the machine, a set of grooved rollers seize upon the stalks and break them thoroughly by a peculiar motion. Then they pass straightway to the scutchers above the rollers, where they are freed from the shives. The whole operation takes but a little time, and leaves the flax beautiful, clean and shining, without a single tangled fiber. A machine of this kind in each flax-raising district would make a great difference in the profits of the farmers, who would then be able to realize a fair income from the fiber as well as from the seed.

Farm Topics.

WESTERN FARMING.—XV.

W. I. CHAMBERLAIN.

Bonanza Farming.—IV.

In the preceding articles of this series it seemed clear that the mere coldness of the climate need not prevent successful mixed husbandry by "small farmers" in Northern Dakota. The questions of water and fuel, however, still remain to be considered.

Most of the surface and well water is not good. It is too alkaline and brackish to be palatable or healthful for man or beast. The waters of the Red, James and Missouri Rivers, when settled or filtered, are palatable, but that of most of the ponds and creeks is not good, and if wells are dug the surface water usually makes the well brackish. There are good wells, but they are rare and expensive. It seems to me that filtered cistern water will have to come largely into use. Even in Ohio, where brooks and springs abound and wells are easily dug, the filtered rain water is coming more and more into general use. It is, on the whole, if properly managed, the purest and the best. If now all farm buildings have their eaves thoroughly spouted, and very large cisterns are built with good filters, it seems to me enough water can be obtained. All barns and sheds of every kind would have to furnish their share of the water for the stock and, with abundant storage for all the water that falls on all roof surfaces, the supply might answer for all drinking purposes for both man and beast.

The question of fuel is a serious one. There is no wood in large portions of the Territory, except in very limited supply along the few water-courses, and coal has not yet been found, except of a half-formed and inferior character; and the settler may well ask whence the fuel is to come for the long and severe Winters. This problem will be solved in time. Coal in paying quantity and quality will, no doubt, be found within accessible distance, and the timber culture laws, most liberal in their character, will in a few years produce fuel from the fast-growing varieties of trees. But at present coal seems not to be used. I did not at least notice it on sale in the towns, nor being transported on the railways. Wood is found in large quantities back in the timber regions of Minnesota, but the freight of a hundred miles or more is expensive.

The future of even Northern Dakota is, I think, assured. The Territory has enough of the best wheat land in the world to make two States like Ohio, and it is all cleared and ready for the plow, and nearly all of it free from stones. Settlers will surely come in, and will find means of overcoming the difficulties and drawbacks I have mentioned. Men accustomed to cold climates will find nothing alarming in the long Winters. But the facts in the case should be fairly stated, as I have tried to do, and the drawbacks clearly understood, or else disappointment and failure will ensue. For an Ohio and New York farmer who is out of debt or in a fair way of getting out, and who owns an average farm, I should consider it most unwise to think of going West. Ohio has been specially blessed of heaven in soil, climate, products and resources. All the animals, grains, fruits and vegetables of the temperate zone thrive in every county of our fertile State. Our mineral resources are vast. The finest timber covers our hills and plains, and coal underlies a large portion of our area. Stone, for buildings, bridges, foundations, railway ballasting and roads, and gravel for roads are found in almost every school district of the State. We can travel all Winter on hard turnpike gravel roads, instead of being stuck in the mud for four or five months as in some of our fertile Western prairie States. In wheat even Dakota cannot surpass our yield. Certified yields of over 40 bushels per acre are reported to our State Board of Agriculture from nearly every county in the State, and some yields are reported as high as 50 and even 60 bushels per acre. The average from the whole State this year will probably exceed 20 bushels per acre, and our new crop reports will soon show a close approximation to the exact yield. Our State is the very home of the vineyard and the orchard, while stock breeding and feeding, dairying and wool growing thrive. In short, every branch of agriculture and mechanical and manufacturing industry finds its home in Ohio, and our Winters are so mild as not to suspend work.

So, while I should certainly think it unwise for an Ohio farmer in comfortable circumstances to leave this abounding and diversified agricultural prosperity for even the bright promises of the West, but should advise him to stay and develop the resources of his own farm and State by a wiser and more skillful and faithful husbandry, yet for those who have no farms, or for those whose farms are in less favored regions, or for those whose farms are covered by a hopeless debt, Dakota and our other new Western States and Territories have many and decided attractions. One thing, however, should be fairly understood by those who go West to escape debt—viz the cost of starting a Western farm. For very moderate buildings, teams, machinery, implements and necessary household furniture, even on large farms like the Dalrymple and Grandin estates, it costs about $12 per acre *at the outset*, and this does not include land or the live stock, except teams. And for any wheat farm of less than 300 or 400 acres in Dakota, the proper equipment would cost even more per acre, and if stock raising was contemplated, the expense would be still greater. Now, unless our immigrant looks this necessary expense fairly in the face and makes provision for it, he will soon find himself involved in the same hopeless debt he expected to escape. It may as well be fairly understood that it takes considerable skill and capital or great self-denial, or rather all three combined, to make a success of farming at the West or anywhere else.

The great West will furnish happy homes for almost countless millions of our sons and daughters, or for those in less favored lands across the lakes, or the Atlantic: but the varied misfortunes, privations and reverses of a new country will be sure to be found there for a long time, and no one should go who is not prepared to meet them.

Field Crops.

NOTES FROM THE RURAL FARM.

Wheat Notes Continued.

Mold's English Wheats (white and red Winter) at one time promised to yield heavily. The straw was short and heavy, the leaves broad and of a deep green color. The heads looked large and full; but the yield did not fulfill this promise. One plot was manured at the rate of 900 pounds per acre of unleached ashes. The drills were 12 inches apart, the ground hoed once, Oct. 24. This yielded at the rate of 9½ bushels per acre. Another plot was treated in the same way, except that at the rate of 900 pounds of Crocker's "ammoniated bone superphosphate" was sown in lieu of the ashes. This yielded at the rate of 12 1-6 bushels per acre. Upon another plot the seed was sown broadcast at the rate of 40 pounds per acre. This was manured at the rate of 1,800 pounds of the same fertilizer per acre. The yield was at the rate of 11⅓ bushels per acre.

Lost Nation (Spring wheat) was sown September 18, in drills six inches apart, at the rate of one bushel per acre, the plot fertilized with the same ("ammoniated bone superphosphate") concentrated manure, at the rate of 500 pounds per acre. The yield was 10 bushels per acre.

Arnold's Gold Medal was sown broadcast (one bushel per acre) and no fertilizer used. The yield was 20 bushels per acre.

Wyson's Fultzo-Clawson was sown the same as Gold Medal, except that 500 pounds per acre of the same superphosphate were used. The yield was 22⅔ bushels per acre.

Fultz was sown in four different ways:—First, in drills six inches apart, without fertilizers. Yield, 23⅔ bushels. Second, the same, with drills 12 inches apart. Yield, 28 bushels per acre. Third, drills 12 inches apart, seed two inches apart in drills; fertilizer in drills at the rate of 500 pounds per acre. Yield, 26 bushels. Fourth, same as the last, except fertilizer sown broadcast. Yield, 24⅔ bushels.

Defiance; 600 pounds of the same fertilizer

and 600 pounds of unleached ashes. Drills 12 inches apart. Forty pounds of seed sown to acre. Hoed October 20. Yield, 20⅓ bushels. Another plot was treated the same, except that no ashes were used. Yield, 24⅓ bushels.

CHAMPLAIN; forty pounds of seed broadcast, 240 pounds salt, 240 pounds same fertilizer per acre. Yield, 14⅜ bushels. The Defiance and Champlain here referred to were sown for the *first* time as Winter wheats. We mention this lest they might be mistaken for the same varieties which we have sown three years as Winter wheats.

CLAWSON. Four acres of this yielded 102 bushels. We judged from its appearance it would yield 30 or over. The seed was drilled in at the rate of 1¾ bushel per acre. Sixty tons of farm manure were used. The depredations of the army worm, of course, reduced the yield considerably—possibly from 10 to 15 per cent. This, as has already been stated, is our last crop of the popular Clawson. Our main crop for 1881 will be Silver Chaff, of which about five acres have been sown. The field is that upon which 70 bushels per acre of Mold's Oats were harvested the past season. The land is fertile—we gave it a thorough preparation, and shall hope for the best crop of wheat ever raised upon this farm It was sown September 23, and now covers the ground. October 30 we completed our wheat sowings for the season, having sown 77 different varieties. These, we trust, will furnish us with ample material for a special wheat number next Summer, ere it is time to sow for another year.

Other Testimony as to the Value of the White Elephant.

I think the White Elephant a valuable potato. I cut the one sent me into 37 pieces, and found it solid, white and crisp. I planted the pieces in my garden 18 inches apart, 24 inches between the rows. The season was unfavorable for the potato crop on account of the drought, especially at the time of setting. I also had grape-vines and several sorts of berries near the potatoes, which, I consider, took a considerable part of the moisture which the latter should have had. The potato bugs too were plentiful; but I kept them well looked after. The potato vines from every piece came up strong and vigorous. From some of the pieces more than one sprout came up. When they were well up, I took them off and set them out on ground from which I had just taken a crop of peas. The yield from the pieces amounted to one bushel and a half, extra measure (1½), weighing 90 pounds. The product from the sprouts I dug October 20, they being later on account of having been put back by transplanting. I had nearly one bushel, or 54 pounds, some of them weighing over one pound each, making in the aggregate, 2½ bushels by measure, or 144 pounds by weight. I have tried them by boiling, and find the quality first-class. I think them better than the Rose potato. I expect to plant them next season and have much confidence in them.

Morrisville, Pa. ELLWOOD PARSONS.

The Herdsman.

STOCK NOTES.

BY A STOCKMAN.

IF we are getting a good deal of money from Europe for grain, meat and dairy products, we are paying a good deal back again for high-bred stock; and being very liberal in purchases and prices, American buyers help the business very much both in creating a large demand and raising values of such stock. Our buyers and importers of stock are shrewd enough to want the best. Nothing is too good for America, and nothing seems to please an English or Scotch breeder more than to have Americans looking over his stock.

But if Americans have a national failing, it lies in the direction of too great a confidence in their own judgment and the ease with which they are flattered into making mistakes. Just now we are importing heavy horses in large numbers. The latest foreign purchase of such animals was recently made by a Western breeder who brought over nearly a hundred head of French horses in one shipment, and now buyers are scouring Scotland for Clydesdales. It is easy to perceive that big bone and coarse hair are too highly considered by the majority of importers, and that fine bone and light, silky hair on the legs are not in popular favor. This is a mistake. Scores of French horses and Clydesdales of the former kind have been brought over the water for one of the latter. This is explained by the statement of a Scotch breeder who complains that American buyers will not go beyond $1,000 while Australian buyers do not stick at $5,000 if they get the kind that suits them. And so we are getting second-rate animals, good as far as they go, but not the best.

These purchases are not confined to the West. I notice in a Scotch paper that Smiths & Powell, of New York State, have purchased 12 Clydesdales at recent fairs for importation. These are of the most noted blood and breeding in Scotland, and these gentlemen will doubtless soon find their good judgment in going for the best will be its own reward.

It is strange that that excellent type of beef cattle, the Polled Angus, does not become popular with Western breeders. It may be that the practice of stall feeding these cattle and the high feeding to which they are subjected for the purpose of winning prizes have affected their constitution unfavorably. One noted herd of these cattle in Scotland has taken 600 prizes, including 120 gold medals. This goes to show that prize winning is not always accompanied by every excellence and may become a damage. As a contrast, there is the Hereford which is rapidly becoming the most popular breed on the plains. In one week in August, 143 animals of this breed were shipped from Liverpool to New York, and since then another large lot has been shipped to Missouri, and still another lot of 29 to Colorado and some to New Mexico. At this rate it will not be long before the Short-horn will begin to feel the competition. Fashions change, but this is not all fashion.

This is the time when the shepherd needs to be on the alert. The change of season and the falling off of the supply of green food will begin to affect the condition of the flock. The ewes now in lamb are taxed seriously to keep up their condition. A sheep that goes into winter-quarters weak and poor rarely recovers. One that begins the Winter hearty and in full vigor will generally come out in the Spring in excellent condition, with a fine lamb or two at foot. Of all the helpful foods for sheep, linseed-oil meal is the best. It suits their constitution and digestion. It is too bad that nearly all our product of this useful food substance is permitted to go abroad. St. Louis, Chicago and Cleveland are centers of production, while New York and Brooklyn produce a large quantity. It can thus be procured easily in any locality.

Messrs. Read & Pell, the English Commissioners, seem to think that American farmers can never amount to very much as mutton and wool growers. This seems strange to us who remember that the wool crop of California alone equals 50,000 000 pounds, and that Colorado, Dakota, Montana, New Mexico, Arizona and Texas possess pasture grounds sufficient to produce 500,000,000 pounds of wool, and that there is room enough on the tidewater regions of the Atlantic Slope and on the mountain ranges back of it to produce mutton that would more than supply the whole world. All that is required is that farmers should give their attention to it and to get rid of a few millions of useless and destructive curs.

The Horseman.

HORSE NOTES.

Cut Hay Producing Colic in Horses.

SEVERAL months ago we gave instances in the RURAL of this occurring in one of our own horses. The hay was passed through a straw-cutter; Indian meal and bran, half and half, were mixed with it and all then wet with a few quarts of water. Suspecting after a while that this method of feeding was the cause of the colic in the horse, we changed to uncut hay, giving the meal dry and separate from it. This was about two years ago, since when the horse has been perfectly well.

We noticed recently in English journals, the same injurious results from cut hay and meal wet up together and fed to horses, as they eat their ration thus prepared too greedily and quickly to be digested easily. Colic is apt also to follow when a horse comes into a stable hot and very thirsty, and he is also allowed to drink immediately as much cold water as he craves, and is then fed his dry meal followed by uncut hay. Drinking cold water when the horse is very warm also produces founder and other diseases.

Tough Hoofs of Horses.

It is stated that the Arabian horses, so largely used as cavalry in the British army in India, possess such tough hoofs that they rarely require shoeing. In a full-grown horse the hoof becomes as hard as flint, and he can make the most severe marches without injury to his feet.

In ancient times, historians inform us, all horses went unshod, and to be able to do so particular attention had to be given to breed from none except those having the toughest of hoofs. Mr. Story, the American sculptor at Rome, in one of his publications speaks of the Italian horses still retaining this extra toughness of hoof, derived, doubtless, from the old Roman breed.

Brittle and tender feet in horses, it is contended, come from the following neglect in breeding: First, hereditary predisposition; second, imperfect nutrition; third, alternations of moisture and dryness; fourth, diseases of the foot; fifth, faulty shoeing. Horse breeders would do well to consider all these points attentively, and beware not only of them but all other defects of body and limb, external and internal.

Horses Pawing in the Stable.

A light chain is recommended by some to break them of this trick, fastened above the knee to hang down loose, but not long enough to touch the floor. If horses kick, fasten the chain in the same way on the hind leg. If a horse is at all nervous—as such as paw and kick usually are—we should be afraid that the chain would frighten and cause him to kick and paw so much more violently as to jerk it around and seriously injure his legs.

The Swine-Herd.

CHESHIRE OR JEFFERSON CO., N. Y., PIGS.

COL. F. D. CURTIS.

TWENTY years ago the leading breed of hogs exhibited in the State of New York at the State fairs, was the Cheshire. They originated in Jefferson County, N. Y., and filled more pens than all other breeds put together. As a natural consequence they attracted a great deal of attention and, being in the hands of enterprising men, they were always in fine order and showed well. One of the first and most successful breeders was Mr. A. C. Clark, Henderson, Jefferson Co., N. Y; Messrs. Converse, & Huffstater were later, and large breeders. A Mr. Green followed and kept up the breeding and competition for several years. For a number of years we do not recollect seeing at the State fair in New York any exhibitors from Jefferson County. Mr. Davis and one or two other exhibitors still show fine specimens of these hogs, but they reside in other counties.

The proper name for the Cheshires would have been Jefferson County hogs, as there was no doubt of the place where they originated, but there always was a doubt of the Cheshire part of it. It was claimed by some of the later exhibitors and breeders that they descended directly from a pair of Cheshire pigs bought of Mr. Woolford of Albany, N. Y., who, it was said, imported the blood directly from England as a distinct breed. Mr. A. C. Clark never made any such pretensions, but told us that he improved his pigs by crossing them upon the best white hogs he could find. At a Utica State fair about 20 years ago he exhibited the finest specimens of the breed we ever saw, and these were, he said, a cross made by first-premium stock purchased by him at the London, Canada, provincial fair. This stock was probably Yorkshire and the first improvements made in Jefferson County were undoubtedly made in the same way by large Yorkshire pigs imported by Messrs. Hungerford & Brodie, Adams, Jefferson County N. Y. Pig excitement rose high in Jefferson County about those times and several men made it a special business to breed and exhibit Cheshire pigs. They went far and near to exhibit them and at St. Louis pigs of this sort won the pork-packers' premium as the best breed on exhibition. This triumph over the Berkshire, Poland-Chinas and other breeds gave the Cheshires an extensive notice and popularity and led to their introduction into the West.

The Cheshire was a finer breed and better hog than the Chester-Whites and for a time took the lead among the white hogs. The Berkshires and Poland-Chinas have now nearly supplanted them in the West; and in the East the small Yorkshires have led them. For the want of fresh blood to cross upon their stock, the Jefferson County breeders inbred so closely that their stock soon began to deteriorate and established the propensity to lose their tails which dried up and dropped off when the pigs were small. The skin also became very thin and pinkish in color, and they often had so little hair as to be almost hairless. This unfitted them for the sunshine or for Winter, and kept them sore and scabby.

The Cheshires are long in the body and fine-boned with a small amount of offal in proportion to the size and length of the body. They often have very long snouts which naturally go with a long body. The flesh is fine-grained and tender. They would improve any coarse breed. The ears are small and erect, the cheeksfull and the hams round and plump.

The breed with the characteristics of the old Jefferson County stock is likely to become extinct, as it cannot be kept up without new crosses upon the Yorkshires, or other improved white breeds. Care enough was not taken in forming the breed to establish families not closely akin, so that new strains of blood of the same breed might subsequently be obtained. There was so much rivalry among the early breeders that the future welfare of the breed was not considered, and a foundation laid among them which could make it permanent. The Cheshires may be classed as an American breed and a valuable one; and they ought to have been perpetuated with the distinctive name of the Jefferson County breed, with the characteristics which they possessed. If they run out it will be because of the lack of careful breeding and of a good understanding among breeders, looking to definite and permanent results, without which any breed of animals will sooner or later be destroyed.

The Poultry Yard.

SELECTING AN INCUBATOR.

L. S. HARDIN.

I HAVE procured circulars from all the best known and most popular makers of incubators, and, after studying them carefully, I have come to the conclusion that each and all of them were written for the sole purpose of selling machines and not with a view to letting the public know wherein lie the real virtues and shortcomings of each patent. As Mr. Wright in his admirable work on Practical Poultry Keeping, says "It will not do to purchase an incubator, light the lamp, put in the eggs and expect that, provided the lamp be only kept burning, all will go right." While such is the conclusion one is irresistibly driven to after reading most of the circulars on the subject, it is eminently fallacious. The man, and I may say the only man, to succeed with an incubator is one who has made up his mind and will carry out his resolution to give his personal attention to the business and not be disheartened or discouraged with numerous failures. The more chicken knowledge and close attention he brings to bear upon it, the greater will be the measure of success. The machine will not run itself and if one has not the time and patience to master the difficulties it is better not to attempt to raise chickens by artificial means. The only person I would encourage to buy one would be the man who intends carrying on a business in which the incubator is an indispensable factor. There is no fun about it.

While some of the troubles pointed out in circulars are more imaginary than real, others that are almost insurmountable are rarely, if ever, mentioned. For instance, keeping the lamp filled with oil and supplying the battery with blue-stone are pointed out as great labors in the circulars of some machines in which these objections have been avoided or measurably overcome. The man who is too indifferent to the occupation to attend to these small troubles, is the last one to run an incubator. The real trouble comes in where personal judgment, without the enlightening influence of experience, must be used. For instance, with your incubator you receive a mercury gauge and with the machine comes a bottle of dirty stuff that you know, only by its weight, is mercury. Following instructions, you pour this into the gauge; put it in its place and start the lamp; but after heating up the oven to 150 degrees or more, you cannot get the gauge to work, and if you have been foolish enough to put eggs in the oven, they will be all well cooked. The dirt on the mercury has stopped up all the small glass tubes and you must take it out and clean up—and such a job as you will have of it! The instructions say pour the mercury through paper cornucopias until clean. You must make a hundred or more of these to accomplish the end. I discovered a better plan, which was to gently pour the mercury from one white vegetable dish to another, carefully wiping the dish clean each time. This is only one of many troubles you meet with. By the man who has a definite purpose in view and who remembers that there is no business ever carried to a successful issue without trouble and plenty of it, the incubator can be managed and I am satisfied, if properly managed, with a great saving of time, trouble, and money expense over the old-hen plan.

The incubators now on the market may be divided into two classes:—first, simple and troublesome; and, second, intricate and risky. The first class are not expensive and, like the old Egyptian plan, must be regulated by hand. To be sure a very nice lamp or oil stove is used to keep the temperature regular. The plan is based upon the theory that an oil lamp may be made to produce a uniform heat without further attention for 12 hours. There is more theory than fact about this. Having tried it, I will suggest a few of the difficulties I met with. We want a range of heat in the oven from 102 to 104 degress—no more and no less. We watch the lamp until 103 is reached, when we gradually turn down the wick until the heat becomes stationary. At the end of six hours it will be found that the oil in the lamp, or especially that in an oil stove, has become heated and burns much more freely than at first, thus raising the heat in the oven above 104 degrees. As the end of the 12 hours approaches the wick becomes charred and the lamp burns less

freely, the heat in the oven falling below 102 degrees. Then at the other end there is trouble. When the thermometer on the eggs indicates 103 degrees the eggs are not so warm as they will be at the end of six or 12 hours. There being a cool bottom to them lying in damp sand or over a pan of water, the eggs gradually increase their temperature during the whole 12 hours. Then again, the outside temperature may greatly increase or decrease while you sleep. These causes of excess or deficiency of heat, combined or singly, will in the hands of a beginner be almost certain to prove fatal. Every time the thermometer on the eggs reaches 108, if only for a few minutes, some of the chicks will die. Low temperature can be better tolerated, but it weakens and injures the chicks if it occurs often. Possessing, as I do, considerable pluck, I cannot say that I would have the courage to try one of these incubators if it was given to me *gratis*.

The incubators of the next class—those I term intricate and risky—are far more reliable. They are automatic or self-regulating. They work either with the thermostatic bar or mercury gauge, and I believe in some instances with both. With the thermostatic bar I am not familiar, but it is on the same principle as the mercurial gauge. Both are worked with a battery which, crudely speaking, is this:—a glass jar is filled with water. In this we pour two pounds of the sulphate of zinc and one handful of blue-stone. Sheets of copper are placed in the bottom and a bar of zinc on top of them. Wires run from the copper and the zinc through a magnet and through the mercury gauge. A movable bar placed near the magnet opens and shuts the damper that admits hot air from the furnace to the egg oven. When the battery is working the magnet attracts the movable bar and closes the damper; when the latter is not working a small spring, not strong enough to overcome the magnet, opens the damper, admitting warm air to the oven. The mercury gauge starts and stops the battery. The battery can only work when there is a complete "circuit;" that is, when the wires connecting the copper and the zinc in the battery are connected. The mercury in the tube forms part of the wire or circuit. When the oven becomes hot, the mercury expanding moves up the glass tube of the gauge until it touches a small wire which completes the circuit and starts the battery, causing the magnet to attract the movable bar and close the damper. As the oven cools off the mercury drops down the glass tube and breaks the circuit, stopping the battery and allowing the small spring to open the damper and allow more heat to enter the oven. This up-and-down movement is kept up continuously.

A great trouble I have experienced has been to get the mercury to run smoothly up and down this glass tube. If it would only run as smoothly as in ordinary thermometers there would be no trouble; but, unfortunately, my machine is not so nicely made. The tube is open at the top and infinitesimal particles of dust enter the tube, causing the mercury to stick to the sides of the glass, refusing sometimes to go up and at other times to come down. The only escape from accident—and I have had several of them—is to clean out the tube with a broom straw once a week. This is a tedious job, and the danger is that you do not know when the mercury is going to stick.

There are incubators that advertise two batteries, one, I suppose, to open and one to shut the damper; but I have found no trouble in getting my battery to work promptly and strongly, while the expense—a handful of blue-stone once in two weeks—is only nominal. Then it is easy to tell when the battery is getting weak by the noise of the damper closing. The great risk with the second class of incubators is that their perfect working for a week lulls the owner to sleep, and, all of a sudden, something stops to the utter destruction of the eggs and the probable inability of the untrained owner to know how to start it again. The makers of this second class of machines, like the makers of all other machines to work on the farm, charge from a third to a half more than a fair profit would warrant.

ROAD DUST IN THE HEN HOUSE.

The extreme and long-continued heat of this Summer, extending as it did late into the month of September, has been a prolific source of the multiplication of all kinds of vermin on fowls. Those who were either too indifferent to adopt plans for the suppression of the pests, or who are not sufficiently versed in the little convenient tricks of the trade to know how, must suffer pecuniarily, while the poor chickens must bear the burdens upon their innocent backs. It is well known that oil in liberal quantities is sure death to all insects. This is due to the stopping up of the breathing openings along the sides of the insect, like the port holes of a man-of-war. Thus the oil causes death by suffocation. Well fed animals produce oil enough on their bodies, thus keeping the insects on them in moderate subjection, while ill-fed and half-starved animals are sure ultimately to fall a prey to these parasites.

It will thus be seen that well fed fowls have, on their own bodies, a partial means for keeping down their enemies; but there is no doubt that they do much better if aided in this warfare by the skill of their owners. To accomplish this, many use kerosene or crude coal oil, or any kind of cheap oil to brush over the walls of the hen-house and particularly over the perches and about the nests. Oil, however, is a nasty thing to have about, and while it banishes vermin it is very apt to disgust the operator, and, if a female, cause her to give up the whole business or, at best, to put its use off until too late to be of the most service. After using oil, we abandoned it for the cause above stated, and found a better and far more agreeable remedy in road dust, dry ashes and whitewash. For the purpose of being handy, to clean and purify, we made perches, shelves, nests and partitions all movable, and as often as judgment dictated or necessity required, we removed everything and gave the house a good and thorough wetting inside with whitewash. No fears of getting it too thick. Slosh it into all the cracks; but, over and above all, we always keep on hand a goodly supply of road dust, and sift all the ashes on to the heap. This we spread one or two inches deep over the floor of the hen-house. It instantly absorbs all droppings, keeping the air fresh and pure, and every time a hen flies up or down to or from the nests or perches she raises a dust that settles on the perches, nests, etc. This dust may not be immediate death to insects, but it renders life so miserable to them that they immediately vacate the premises. It seems not only to hinder, but effectually to arrest their locomotion, like a horse in a bed of quick-sand. The effect on the chickens is like magic so far as ridding them of lice is concerned.

Now is the time to collect road dust, and with the assistance of the ashes, two or three barrels of the dust will last through the Winter.

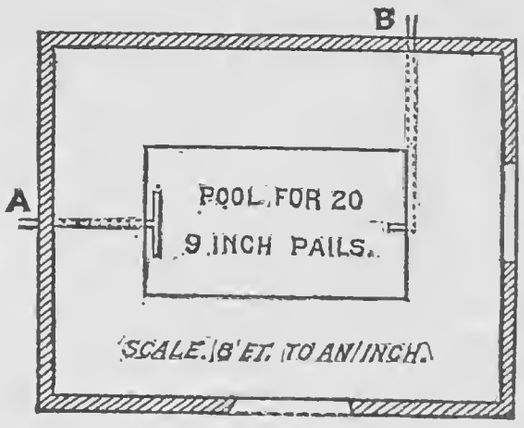
Dairy Husbandry.

THE DAIRY COW. NO 14.

HENRY STEWART.

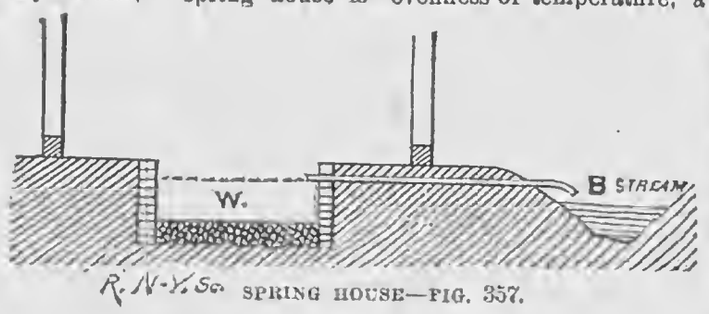
Spring Houses.

The most desirable milk-house is one that



MILK HOUSE—FIG. 355.

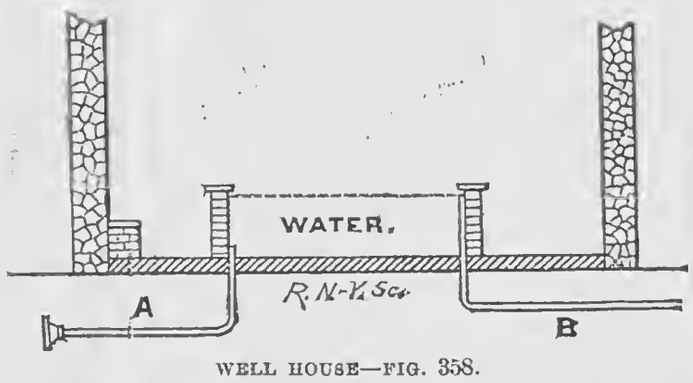
is supplied with a flowing stream of cold spring water. This secures the requisite evenness and lowness of temperature and an advantageous moisture and purity of atmosphere. The best materials for spring houses are, first, stone; then, concrete; and lastly, brick. Wooden spring houses may be acceptable under such circumstances as will avoid dampness; for instance, when water is brought from a distant spring in a pipe laid underground, and made to discharge in a tank excavated or built in the center; or a bank or pool may be constructed upon a spring which fills the reservoir and flows off without wetting the ground. But as one of the important points about a spring house is evenness of temperature, a



SPRING HOUSE—FIG. 357.

solid, heat and cold-proof wall is desirable.

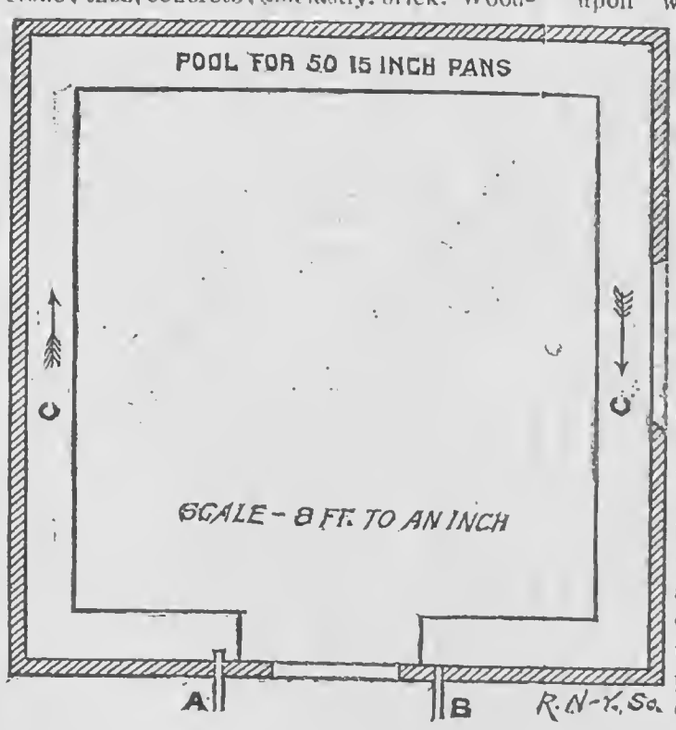
Spring houses may be used for either shallow or deep setting, but the economy of the latter is too obvious to be disregarded. For instance, to set 400 quarts of milk in shallow pans holding eight quarts each, a trough of more than 96 square feet of surface would be required. The two arrangements are compared in the accompanying diagrams—figs. 355-356. Each pool has the same capacity, viz: for 400 quarts of milk or for



WELL HOUSE—FIG. 358.

about 30 cows if the milk is sold; or for about 12 cows if butter is made. The compactness of the house, fig. 355 which has the pool in the center, is evident. Either of these plans is convenient for the system to which it is applied and the construction of the tank and house is the same. In fig. 356, A. is the inlet pipe, B. the outlet and C. shows the pool and the current of the stream.

The house should be roomy. A brick or concrete floor is preferable to any other. The concrete is made of gravel or coal ashes, and mixed with a thin mortar of water lime and sand, in the proportion of one of lime to three of sand. The concrete is laid three inches thick and well rammed down. The pool should be lined with white brick laid in cement, if it is below the surface; if it is raised above the surface, it may be built of brick laid in cement and painted inside. For a handsome pool, the inside may be lined with porcelain tiles and the top of the wall covered with a marble coping. A section of a house provided with such a pool is shown at fig. 358. The house may be sunk two feet below the surface or built on the level of the ground, as may be convenient. The water is brought into the tank by a lead pipe, A, at the bottom and escapes at the water level of the tank, as shown at B. The passage around the tank, is intended to be three feet wide, which gives ample room for brick benches here and there, upon which cream jars, pails or dishes of butter or spare utensils may be placed. The drainage of such a house should be perfect, and good ventilation should be secured by such methods as have been described in previous chapters. The roof should be divided from the lower apartment by a ceiling having two or three feet of space above, by which the heat of the sun beating on the roof, is shut off. The cooler the house is kept, the drier it will be; for the evaporation of the water will be less, and the less the evaporation, the less condensation there will be upon the floor, the walls, and the sides of the tank. A small frame spring house built, as a preliminary test, by the writer, and which had the pool sunk in the ground so as to utilize a spring which existed on the spot, has been found very useful. It cost less than $40 and the pool was large enough to hold 200 quarts of milk. The plan is shown by the diagram fig. 357, in which a section across the house and pool is shown. This house is 12 feet square. The pool was sunk until a boiling spring was reached, and the bottom was paved with flat stones loosely placed, the water rising through the spaces between the stones until it flowed out of a pipe at the top, shown at B, leaving a depth of 18 inches of water in the pool. As the water rises suddenly when several 20 quart pails of milk are put into the pool, the outlet is made of three-inch glazed drain tile, covered with wire gauze as a protection. The drain discharges into a stream close behind the spring house.



MILK HOUSE—FIG. 356.

To cool 200 quarts of milk from 75 or 80 degrees down to 55, requires either considerable time or a good flow of cold water. With a flow of two quarts per minute of water at a temperature of 55 degrees, and an air temperature of 80 degrees, four hours are required to reduce the milk to the temperature of 60 degrees, and the temperature of the milk cannot be reduced as low as that of the water unless the pool is protected by a covering from the air. It may thus be found advisable to provide falling doors to cover the tank when the water supply is not more than two quarts in a minute, which is equal to a flow, without pressure, of a quarter-inch stream of water.

Industrial Implements.

PULLIAM'S PATENT BOLSTER SPRINGS.

These springs are intended only for farm wagons, or such as have bolsters and standards, with cleats on the wagon bed to keep it from sliding backward or forward, and for drays, trucks, hacks, etc. They have been in practical use for over three years, and have given general satisfaction. Among the claims put forth in their behalf are—that they prevent a great deal of wear and tear in every part of the wagon; that their use does away with the necessity for a spring seat; that they convert a common lumber wagon into a comfortable spring wagon, and that they adapt any wagon excellently for the conveyance of fruits, vegetables, etc. The accompanying cut represents three springs as used for extra-heavy loads—usually only two springs are needed. The springs are attached to a cross-board notched at each end, so as to fit on each side of the bolster standard, and placed crosswise on the bolster. The wagon box is to rest on top of the cross-board, but is not to be fastened. Cleats put on each side of the rear bolster standards keep it from sliding. We have frequently seen these springs in use, and can recommend them to our readers.

PULLIAM'S BOLSTER SPRINGS—FIG. 359.

Spreading Out.—Messrs. Skinner & Wood, of Erie, Pa., will occupy their new works, corner of Chestnut and 12th Streets, about December 1st. The main building is two stories high. 150x45 feet. Foundry and boiler shop 80x155 feet. Mr. L. G. Skinner commenced business at Walrath, N. Y., about 1867, and since then has gradually but steadily increased his business until it has reached its present proportions, and the Skinner engine and boiler are known all over the United States. Seven years ago he moved to Erie and took in Mr. Wood as a partner. This year they have built and sold nearly 200 engines; their new works will give them a capacity of 400 a year.

Miscellaneous.

AN EXPERIMENTAL DAIRY FARM AND A HUGE SILO.

The experiments of wealthy men in agriculture and kindred industries are of benefit to the whole farming community. In this way problems of interest to all, but the investigation of which would be too expensive for the ordinary farmer, are solved by the ample means of one. His are the labor, the outlay, the skill and the honor, while the general public reaps most of the reward.

Messrs. Whitman and Burrell, the well-known manufacturers of dairy implements, are the last to add their names to the roll of those who are trying to benefit the agricultural public in this way. They have just started, near Little Falls, in this State, an experimental dairy farm, at which the various questions that are constantly arising in the dairy business will be carefully investigated. As the nucleus of the experiment station a model creamery and a superb cattle barn are already nearly completed.

The latter building is three stories high, 92

feet in length, 36 feet in width and 47 feet from the basement floor to the peak of the roof. It stands on the side of a steep hill from which there is an entrance to each floor.

On the north side of it an enormous silo has been built, at a cost of $1,500, for the preservation of green fodder during Winter. It is 56 feet long, 16 feet wide and 22 feet in interior depth. In making the foundation the soil was removed for three feet below the bottom, and the space filled up with cobble stones, on the top of which rests a stone pavement. The walls are three feet thick and pointed outside and inside. The interior is divided crosswise by a brick partition 20 inches thick, grouted, like the whole interior, with Portland cement, thus forming two silos. To fill these, eight acres of a species of Southern yellow corn were sowed in drills 14 inches apart, about June 10. It was cut about September 10, when the ears were still in the milk. The stalks were nearly as large as those of the Blount Corn, averaging 12½ feet high and weighing from four to five and a half pounds each. The silos are at present only half full, though they contain 600 loads of fodder corn. In filling them a cutting machine, run by steam power, was placed on an opening high up in the side of each silo at the level at which the corn was delivered, the delivery end of the machine projecting over the silo, so that as fast as the stalks were cut they dropped to the bottom, where three men were kept busy distributing and trampling them down. It took four days to fill one silo, and three the other. Each silo is covered with boards 16 feet long, tongued and grooved together in sections three and a half feet wide. These are covered with planks laid across to bind them together, and the whole weighed down with 50 tons of stone for each silo. This enormous superincumbent weight, compressing the contents into a solid mass, has already caused a shrinkage of several feet since the silos were filled. These are now hermetically closed and will not be opened until the first of December.

Zinc Plant Labels.

From several articles going the rounds of newspapers I notice much is said of the excellence of zinc labels for fruit trees, as though they were of recent use. By reference to the volumes of the Horticulturist of A. J. Downing, published some 30 years ago, it will be found that I had used zinc labels, written upon with the black lead pencil, for many years before. A chemical ink had been used for this purpose before that time, but this not being always at hand, I occasionally wrote without it, and soon found that the writing became indestructible, the plumbago being so, while the zinc corroded and wore away, thus making the inscription permanent. So much for the history and application of the thing of which I have had at least forty years' experience.

Dorchester, Mass. MARSHALL P. WILDER.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN No. 48, OCT. 23, 1880.

Forrester's Fertilizers.

The seven fertilizers whose analyses are herewith reported were manufactured by H. J. Baker & Bro., New York, and were sampled in May, June and July, and sent to the Station by S. B. Wakeman, dealer, of Saugatuck. The samples were received July 17th.

473 was taken from stock bought by A. C. Lyon of Easton.

469. Forrester's lawn dressing.
470. " fruit tree manure.
471. " wheat manure.
472. " strawberry manure.
473. " tobacco manure.
474. " grass manure.
475. " rye manure.

ANALYSES.

	469	470	471	472	473	474	475
Nitrogen of nitrates	4 39	....	....	....	2 31	....	....
Nitrogen of ammonia salt	....	3 03	3 78	2 43	2 05	3 07	4 53
Nitrogen of organic matter	....	58	70	50	1 11	2 37	83
Phosphoric acid, soluble	4 93	1 30	4 57	4 19	3 87	2 12	4 32
" " reverted	80	2 25	08	4 69	trace	trace	trace
" " insoluble	1 13	0 73	1 53	2 75	0 93	0 05	1 21
Potash	12 56	15 05	5 63	9 74	9 69	7 45	11 34
Chlorine	11 21	11 03	4 84	2 68	50	7 38	10 55
Estimated value per ton	$49 47	$38 18	$39 00	$46 19	$51 27	$35 63	$46 37
Cost at N. Y. per ton	$47 50	$42 50	$45 00	$42 50	$47 50	$45 00	$47 50
Cost at Saugatuck per ton	$49 00	$44 00	$46 50	$44 00	$49 00	$46 50	$49 00

S. W. JOHNSON, Director.

BRIEFLETS.

If the age of men were to be reckoned only by hours and days well spent most of us would be in our infancy—some of us not yet born. . . . . We have received a sample of excellent sugar made by our occasional contributor, "Hector Bertram" of Corning, N. Y., from Early Amber Cane. His accompanying letter, which we intended to publish, was lost. . . . . Mr. H. B. Ellwanger, writing of peaches to the London Garden, says that Alexander and Amsden are so much alike that one will answer for the other. They ripen a week before Early Beatrice, the Alexander averaging the larger; —the Amsden being a trifle better in quality. Like their parent, Hale's Early, they are semi-clings, juicy, large and of high flavor. Waterloo, judging from the fruit of the original tree, averages larger and earlier. . . . . Early Beatrice and Early Louise are of poor quality. Early Rivers ripens within a day or so of Louise and is a superb sort, the best in flavor of any Mr. Rivers has raised. Cooledge's Favorite is one of the most desirable varieties for any purpose, that we have. Scarcely any other sort combines in equal measure the qualities of hardiness, productiveness and high flavor. . . . . Mr. Ellwanger deems Crawford's Early and Crawford's Late our most popular yellow-fleshed market varieties. . . . . We should like to make our special CORN NUMBER worth from $100 to $5,000 to every subscriber. It will be the first number in January. All of our writers, all of our subscribers are solicited to contribute *any* valuable information they may be possessed of in relation to corn. . . . . The vintage of California is now pretty well ascertained to be the largest ever produced in that State. It is estimated at as high as fourteen million gallons. . . . . Mr Conrad Wilson issues this month a double number of his Business Farmer and Station Record. It has been somewhat delayed by Mr. Wilson's sudden and severe sickness; but it is a grand number and we trust Mr. Wilson may long carry on his good work without interruption and with all the zest and earnestness that characterize his present work. . . . . Robert Douglas and Sons, of Waukegan, Ill., speak of the ailanthus tree as follows: "It may be planted in every part of the United States south of the 40th parallel, in the very poorest soil and most exposed situations. It will grow with great rapidity while young. Produces timber of great value for fuel or cabinet work. It should not, on account of the disagreeable odor of the male flowers, be planted near dwellings. It is especially recommended for poor, dry, barren soils." . . . . . They recommend the Red Cedar (Juniperus Virginiana) for the plains of Kansas and Nebraska, where, in fact, it is the only indigenous tree. We think that enough has not been said in favor of this tree as a hedge plant. It will bear cutting back as well as the arborvitæ, and is more hardy. . . . . It is suggestive that, notwithstanding the fact that many die of starvation in India, the poppy in many parts of the country displaces the cereals. . . . . Professor Cook finds, from experiments begun in 1872 and continued every year since, that sulphate of ammonia has no beneficial effects upon corn, but that, on the contrary, both corn and stalks are diminished in weight by its use. He finds that the use of muriate of potash has been beneficial to both corn and stalks and this has been the case so many times that he considers that it establishes the fact that corn is a potash plant.

CATALOGUES, ETC., RECEIVED.

MANUAL OF CATTLE FEEDING, by Henry P. Armsby, Ph. D., Chemist of the Connecticut Agricultural Experiment Station; published, by John Wiley & Sons, 15 Astor Place, N. Y. This handsome, cloth-bound volume of 525 pages goes a great way towards filling a great desideratum in American agricultural literature. Investigation into the laws which form the basis of the rational feeding of live stock has been industriously carried on of late years, and many important advances have been made, especially in Germany, particularly within the last 20 years; but unfortunately the ascertained results have been almost inaccessible to American readers, as only fragments of the works containing them have been translated, chiefly for the columns of agricultural papers. The present work draws largely upon the works of the celebrated German scientist, Wolff, but Kuhn's tables of the composition and digestibility of feeding stuffs have been substituted for those of the former expert, because tables arranged on the latter's plan are thought preferable to those containing simple averages, as do Wolff's. The author, however, has not been content to confine himself to mere translations of foreign works, valuable as these would have been; but he has made many additions and given numerous new illustrations. Nor has he merely stated the results, for he has also indicated the processes by which these results have been reached, and the degree of certainty attached to them, as well as pointed out the direction in which our knowledge is still deficient. The work is written and arranged in a form intelligible to ordinary readers who are willing to bestow on it the fair share of attention and study without which no valuable information can be obtained. We strongly recommend it to all our readers who desire to avail themselves of the profitable results of the special studies of many careful scientists who have spent years in investigating the subject of economical stock feeding.

ANNUAL REPORT of the Michigan State Board of Agriculture for 1879. This report is very full in Farmers' Institute reports and miscellaneous papers covering all the important features of State agriculture, and showing that the society is in a very flourishing condition and doing the most efficient service.

NORTH AMERICAN AYRSHIRE REGISTER, VOL. IV., This handsome volume of 176 pages, 8 mo., by Dr. E. Lewis Sturtevant, South Framingham, Mass., contains the pedigrees, traced to importations, of 232 bulls and 482 cows of the Ayrshire breed, together with some additions to, and corrections of, the contents of former volumes, and a list of the Ayrshire breeders in this country.

QUARTERLY Report of Statistics, Treasury Department, relative to imports, exports, immigration and navigation of the U. S. for three months ended June 30, 1880. Also containing other statistics relative to the trade and industry of the country.

SPECIMEN BOOK OF 100 ARCHITECTURAL DESIGNS, showing plans, elevations and views of suburban houses, villas, sea-side and camp-ground cottages, homesteads, churches and public buildings by Bicknell & Co., 194 Broadway, N. Y.

REPORT of the Entomologist of the United States Department of Agriculture for 1879 by J. Henry Comstock. Illustrated. This is full of practical, timely information and reflects much credit upon Prof. Comstock.

WHAT OTHERS SAY.

SUPERABUNDANCE OF APPLES.—We wish to suggest for the consolation of orchardists who are inclined to murmur at the superabundant crop of apples this year, that already there is evidence that this superabundance will be overruled for good to American fruit-growers. Apples are being shipped to Europe this Fall in greater quantities than ever before, and as they are cheaper than ever, they will advertise themselves thoroughly and successfuly, and we shall hereafter expect a foreign demand such as we have not known in the past. So Mr. Hyde expresses himself in the N. Y. Times, agreeing with our "Brevily" in the RURAL of October 9.

DIGGING POTATOES.—A Maine farmer says in the N. Y. Herald that he paid his men $1 25 per day for digging and pitting potatoes, which cost six cents per bushel. He told two of the men he would give them five cents per bushel if they would do the work. They took the job and went to work, and dug and pitted 100 bushels per day, and went home sometimes by four o'clock in the afternoon. The farmer saved one cent per bushel, or $1 per day; the men doubled their wages.

SUGAR FROM AMBER SUGAR CANE.—Mr. E. M. Potter, of Kalamazoo, Mich., sends the Telegraph of that place a sample of sirup from the Amber Sugar Cane and the following statement of the manner in which he grew the cane and had it made:

May 10—Planted about 1-5 of an acre in eight rows, 3 1-2x2 1-2 feet, 20 rods long. May 10—Hoed and thinned to four to five stalks in a hill. June—Cultivated and hoed again; afterwards cultivated two or three times. Sept. 16—Stripped off leaves and cut off seed-top. Sept. 17—Cut and hauled 68 bundles in two loads to Anderson's mill one mile west of Comstock and corded it up, piling each tier of bundles crosswise. It was made Sept 22, and brought home Sept. 27, 32 gallons of molasses equal to the best New Orleans. Paid 20 cents per gallon for making. We find the above in the Michigan Farmer.

EFFECT OF REMOVING POTATO BLOSSOMS. As the potato plant is propagated by its tuber after the manner of a bud or cutting, the effort made by the plant to produce its flowers and seeds must be a waste of power, which detracts from the desired crop—the tubers. We (Mark Lane Express) know an instance in which a six-acre field of potatoes was tested to show the truth of this postulate; three rows had the blossoms cut off and three rows were left intact, alternately all over the field, and the produce of the rows which had been deprived of the flowers showed a very marked increase over that of the rows which had not been so treated.

ADORNING SCHOOL GROUNDS.—If parents and school trustees cannot be induced to regard common decency in the matter, says Mr. Thomas, it would be well to procure the passage of a law that no district should receive public money, that did not have at least a dozen thrifty shade or evergreen trees on the school grounds. These trees would not cost ten dollars. Agricultural and horticultural societies should take hold of the the matter. It would be more important than giving premiums for fat pigs and big apples.

AMERICAN ARBOR VITÆ—THUYA OCCIDENTALIS.—We find the following in a catalogue just received from Robert Douglas & Sons, of Waukegan, Ill. Specimens of the above were sent to the Rural Grounds two years ago where we have found them to be as described below. Earlier reference has not been made to them in these columns for the reason that we were not informed as to when they would be offered for sale. The Golden Juniper referred to in the last paragraph is especially attractive and has not during the two years been in the least harmed by frosts or heat:

"We take great pleasure in introducing to the trade for the first time the following varieties of Thuya occidentalis originated on our own grounds:

LITTLE GEM.—One of our own seedlings, most dwarf and compact growth ever introduced. The original plant is over ten years old, eight inches high, and 45 inches in circumference, a beautiful dark green. It is by far the finest arbor-vitæ for edging we have ever seen.

WHITE-TIPPED.—This is one of the most beautiful of our sports of which we have about 15 different varieties. The ends of the branches are tipped with white from the last of June until the following Spring. During the growing Season the variegation is not as bright as it is after it has finished its growth, when it is very handsome, as the dark green color shows off the white tips to good advantage.

A GOLDEN THUYA OCCIDENTALIS that holds its golden color nine months in the year, during which time it is very conspicuous.

A THUYA OCCIDENTALIS, pyramidal in form and with very distinct foliage, somewhat resembling a retinospora.

Next year we will introduce a very fine Golden Juniper. It is one of the best plants for ornamental rockwork we ever saw. It is as bright as the Golden Yew, and retains its color nearly or quite all the season."

EUROPEAN LARCH.—Robert Douglas of Waukegan, Ill., says of this that it succeeds best planted on gravelly upland, anywhere north of the 40th parallel; grows rapidly even on thin, poor soils. Timber durable and valuable for ties, posts, etc. If planted on very rich or undrained soils, the timber is said to be of little value. Must be planted *very early* in the Spring.

WHITE ASH.—This they remark may be planted in rich, strong soil, in any portion of the United States north of the 38th parallel. Wood unequaled for all purposes requiring strength, elasticity and lightness. It is becoming scarce, and is in great demand.

HARDY CATALPA, C. speciosa, may be planted in rich, strong soil, anywhere south of the 42d parallel, but has not been tested in New England. Is especially recommended for the Western prairies, where the growth is exceedingly rapid. Wood unequaled for durability, and in great demand for ties, posts, etc.; also valuable for cabinet work. Especially recommended.

WILD BLACK CHERRY, Prunus serotina, may be planted in any part of the United States, in a dry soil. Grows rapidly. Wood in great demand for cabinet making.

SCOTCH PINE.—Will grow rapidly in the poorest soil and most exposed situation, where it will make better timber than on too rich soil.

ACCLIMATING CATTLE IN TEXAS.—One of the greatest obstacles to the improvement of the vast herds of cattle on the Texas prairies by crossing the cows with bulls of the Short-horn, Hereford, Polled Angus or other desirable breeds, lies in the difficulty of acclimating these. The great majority of cattle imported from the North or Europe into the Lone Star State soon succumb to the Texas fever; nor is there any known system of treatment by which the animals can be guarded against its attacks. In the National Live-Stock Journal for October, a Texan correspondent gives his experience with regard to 30 head of cattle he imported from Kentucky in '79. These consisted of 20 Short-horn heifer calves, five Short-horn bull calves, two yearling Short-horn heifers and three Jersey heifers. On their arrival in thrifty condition on December 13, they were put in a lot where no other cattle had been for several months, and carefully rationed on crushed corn, ground oats and cotton seed with hay and oat straw as rough feed, the feed being changed slightly several times as judgment directed until March 20, when, the prairie grass being good, the heifers were turned out.

By April 16, it was found that several of them had the fever, and between that date and the 30th, in spite of the most approved remedies, he lost six calves, when treatment was discontinued as useless, except the use of the syringe to keep the bowels open. Of the 25 calves, 23 were sick, all at about the same time, and 11 died of the fever, among which were four of the five bulls. Four of the five heifers proved to be with calf; all had the fever; and three of them died; with one exception all that passed bloody urine died. The calves received the best attention, were sheltered from sun and "northers," yet his loss was as heavy as that of those who turned their thoroughbreds, on their arrival, among Texan steers to shift for themselves. In 1868 Prof. Gamgee said of the Texas fever:— "So far as treatment is concerned the whole history is a record of failure," and the saying is true yet.

INOCULATION FOR PLEURO-PNEUMONIA.—It has sometimes been said that inoculation should be practiced in this country as a protection against fatal results from pleuro-pneumonia among our herds. The number of animals affected by this disease among us, however, is so small that the best preventive is totally to stamp out the plague by slaughtering the diseased animals. As in the case of small pox, inoculation for pleuro-pneumonia produces a mild and manageable form of the malady in the animal operated upon; but the disease can be spread from such subjects, and therefore, however advisable it may be where a large number of cattle are affected, as in some districts in Germany and Russia, the practice is highly objectionable here. Even in Europe there is a growing opposition to the practice. The veterinary editor of the North British Agriculturist, in commenting upon its advantages and disadvantages, says:—

"Even with such skillful and experienced operators as Mr. Rutherford and Mr. Watson, and notwithstanding the use of properly selected virus, two or three per cent. of the cows operated upon lose their tails. A certain smaller proportion are affected with blood-poisoning, and a few actually die. From causes not yet explained, some animals operated on are not protected against the disease. Still another objection has been urged to inoculation. The artificially produced disorder may generate virus which, it is stated, may suffice to set up the unmodified disease in all its contagious activity. It is only amongst herds where the disease has already appeared, or amongst animals believed to have been exposed to contaglon, that inoculation can be justified." And even in such cases it cannot be justified in this country.

BREEDS OF CATTLE FOR THE WESTERN PLAINS.—The problem which of our recognized breeds of cattle are the best adapted both for making beef and improving the herds on our vast Western ranges, is in course of solution by actual experiment. A close and shrewd observer of the results already noticeable is Mr. J. W. Clarke, of Iowa, author of a recent work entitled "Perplexing Cattle Problems." In a chapter on the above subject he intimates his opinion that the Devon and Hereford are better adapted for the plains than the Short-horn, for the reasons briefly summarized here. Both these breeds are more active, muscular and capable of more exertion than the Short-horn. In early Spring, when stock are weakest, the tussocks of bunch-grass on the ranges are more or less widely scattered, so that when first turned out cattle have need of much walking and muscular exertion to pick up a living, and here the Devon and Hereford excel the Short-horn. Owing to the bleak character of the country, the absence of timber, the frequency of keen, often-changing winds, and the long distances to water and to the corrals, muscular, vigorous, active and enduring cattle are better adapted to it than light-muscled, thin-skinned animals like the Short-horn, which, although excellent fat-framers with abundant feed, seasonable shelter and little exertion, are not so well adapted to the hardships of the Western country as the more muscular and hardy breeds.

ON the grounds of prepotency, too, there is no breed the bulls belonging to which impress their special characteristics more powerfully on their progeny than do the Herefords and Devons, both of which are older breeds than the Short-horn. Then again, the Herefords, with their thick skins and vigorous circulation, can endure exposure better without loss of flesh; while the Devons—the perfection of muscular fullness for beef—are well fitted to supply vital growth and enduring vigor in forming, by crossing on good native stock, a nucleus of a middle-sized, active breed specially adapted to the conditions of the Western plains. Moreover, the cattle on the Western ranges are almost exclusively grass-fed, and the grass-fed Hereford supplies beef which is usually quoted higher than that of the Short-horn in the English markets, while Devon beef brings there top prices except in competition with the small supply furnished by the West Highlanders.

Everywhere.

RURAL SPECIAL REPORTS.

ARKANSAS, Little Rock, Pulaski Co.—The cotton crop is not so large as expected, owing to ball-worm and too much rain in September; but the crop is a good one nevertheless, and farmers are jubilant. Cotton is coming in very fast and selling at good prices, 10 and 10¼ cents per pound. I think the crop will exceed that of '79, more ground having been planted. Little Rock has a very large cotton-seed oil mill, and another one was built during the Summer across the river in Argenta. W. G.

ARKANSAS, Greenwood, Sebastian Co., Oct. 20.—We have had but little rain this Fall, and no signs of frost yet. The weather is just splendid for picking cotton. The crop this this season is hardly up to the usual average. Prices rule above 10 cents, therefore farmers are not discouraged. Other crops have turned out unusually fair. We planted Beauty of Hebron Potatoes August 3d for a second crop, and in 60 days they had matured sufficiently for table use, and will yield a profitable crop. R. R.

KY., Forks of the Elkhorn, Franklin Co. Oct. 19.—We have had dry weather for the last six weeks. All small grain has been put in—quite a large acreage. Our crop of apples for the Winter will be slim—hardly any in the county. I won the first premium at our county fair with beets grown from the RURAL seed. A. N. B.

MINN., Howard Lake, Wright Co., Oct. 23.—Wheat is now bringing 84 cents per bushel at this point, and one of the elevator men thinks both elevators have taken in about 60,000 bushels this Fall. It averages better than for years before—much less of No. 2 and scarcely any No. 3. One man raised 72 bushels of oats per acre on a five-acre field. Wheat is said to average about 23 bushels to the acre, although some goes as high as 30 bushels. Potatoes bring only a low price here, but they are being shipped South by the car load, and are good—price 15 to 25 cents. Very few States can grow such fine, good-tasting, mealy potatoes as Minnesota. Butter is of all prices almost, the best bringing 25 cents per pound. Hay abundant and better than usual. Our great snow storm of the 16th inst. astonished even old settlers. 'Tis said the fall was greater by some inches than at any one time last Winter. Nearly all gone now. S. A. M.

MO., Pleasant Mount, Miller Co., Oct. 20.—New wheat is coming up nicely. We have had just enough rain to make it sprout quickly after sowing. A few have not yet finished putting it in, although it is getting quite late. Corn is being gathered, and a large quantity is being fed out to fattening hogs, which are up to the present time doing first-rate. There is a large number of hogs being fattened for market, prices for which are now good, being about four dollars per 100 pounds for gross weight. We need more rain, especially for stock water. N. J. S.

NEBRASKA, St. James, Cedar Co., Oct. 21.—The weather is very dry. Corn was damaged somewhat by drought—late corn only half a crop; early corn, first-rate. Wheat was splendid in quality of grain, but thin on the ground—from 10 to 15 bushels per acre. Potatoes, good; oats, heavy; barley, do. Improvements are being made—but slowly. A genuine blizzard began here on October 15 and lasted until the 17th. It is snowing again to-day—very hard on stock, as the ground is not frozen and the snow is very damp and wet. This is very unseasonable weather here, and farmers are not prepared for it—sheds out of repair and corn not gathered. I. N. S.

N. Y., Fluvanna, Chautauqua Co., Oct., 20.—The weather is delightful, the mercury ranging from 65 to 82°. Winter wheat is looking exceedingly well. A larger breadth is sown than usual. Potatoes are a short crop; worth 40c. per bushel. Corn is giving a good yield of fine quality. Hay sells readily at $12 per ton. Butter fluctuates from 23 to 27 cents. It is a little too dry for pastures. The fruit crop is abundant and therefore can be procured at low figures. Pork is a quick sale at six and a half cents. Buckwheat is coming in a little light. Poultry is plentiful at high figures. Chickens 8c. live; turkeys, 13 to 14c. dressed. H. A. W.

OHIO, Camden, Preble Co., Oct. 18.—We have had a little rain, which has brightened up our wheat and will probably stop the fly which was working on that sown early. Our corn is a fair crop and the dry weather has been fine for it to mature well. My mangolds turned out magnificent: yielded at the rate of 1,250 bushels to the acre, 60 pounds to the bushel. I have 20 pounds of cleaned cow-peas. They covered the ground from eight to twelve feet. Thinner land would have yielded more peas and not so much vine, I think. Our county fair closed on the 1st inst. There was a fine display of horses, hogs and sheep. The cattle show was not as large as usual, but the quality of those exhibited was much better than on former years. The display of fruit, grain and vegetables was magnificent. The floral show, too, was very fine, and so were those of poultry and machinery. W. M.

PA., Nittany, Center Co., Oct. 22.—We are having beautiful Fall weather. Farmers are busy husking corn. Corn is a good crop throughout this county, among the mountains of the old Keystone State. Wheat badly frozen; much of it shrunk in the grain and will be of poor quality. The hay crop was short and hay will be scarce before Spring. It is now worth $15 to $20 per ton. Wheat in the ground is growing nicely. Some is turning yellow, however, being injured by something at the root. The season has been remarkably dry. We have not had enough rain all Summer to raise water in the streams. J. H. B

PA., New Alexandria, Westmoreland Co., Oct. 23.—With Golden Ovoid Mangels, Blount's Prolific Corn and Rural Branching Sorghum, we have from the RURAL, in addition to a first-class paper, advantages never before offered. J. W. P.

RHODE ISLAND, Providence, Oct. 18.—From the seed of the Ovoid Mangel received from the RURAL in the Spring, I have just carried to the cellar one large cart load with side boards on—16 to 18 bushels. One of them weighed, unwashed, 18¾ pounds, (!) though it was closely trimmed. About half a dozen of the beets turned moldy in the field. E. F.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Honey Locusts.

A Subscriber — address mislaid, says last Spring he planted some Honey Locust seed for the purpose of raising hedge plants. On examining the plants this Fall he finds very few which have any thorns, and he asks, 1, why so many plants are without thorns; will they be likely to have thorns in a year or two; would it be well to leave the thornless plants in the nursery until they are a couple of years old on the chance that thorns might appear; 2, would grape cuttings be likely to grow after a considerable trip by mail.

ANS.—There is a thornless variety of the Honey Locust, seeds of which probably you had sown. Probably they will never have thorns. In any case, no harm would be effected by leaving them in the nursery for two years before removing them to the hedge row. 2. Yes. It cut after the fall of the leaf and the wood is well ripened, they may be preserved in sand until next Summer.

The Voorhis Watermelon.

W. H. B. Afton, Ia., says: "Of two packets of seed sent out through the Rural Free Seed Distribution there was but one vine that produced what was thought to be the Voorhis melon. The rest of the vines produced small, round dark-green melons, and occasionally one which was marked alternately with light and dark-green stripes. The seeds of the supposed-to-be Voorhis melon were saved and planted last Spring and the product was quite a variety of melons, but they were all worthless. Will some one please explain the cause of such variation among melons?

ANS.—The Voorhis is a dark-green melon, never *very* large, but exceedingly sweet in favorable seasons. In this climate it is impossible to produce fine watermelons without rich soil and good cultivation, no matter how good the variety.

Miscellaneous.

H. K., Chebanse, Ill., asks in how many years black Damson plum pits become bearing trees, if put in now, and whether the seedlings would require grafting. 2. He has some Concord grapes, seven years old, that, owing to the severe drought probably, have made very little wood growth this season, and he inquires whether they should be cut back this year. 3, He set out a Delaware and Martha grape last Spring, which have made a growth of five and four feet respectively, and he asks whether it would be right to let them bear a bunch each next year.

ANS.—1, Yes; probably they would need grafting. Seedlings may bear in a few years—they may not in many. 2, The Concord, whether the season be wet or dry, is always a vigorous grower. No doubt the roots are injured from some cause. Cut it back severely and dress the surface of the ground liberally with stable manure, wood-ashes and bone. Fork this in to the depth of five or six inches. The grape-vine bears fruit only upon canes of the previous year's growth. In cutting back severely, therefore, you need not look for fruit next season. 3, Ordinarily, yes. But we doubt if they *will* bear having made but a poor growth.

A. W., Everett, Pa., asks, 1, our opinion of the Albany Corn and Seed Planter, and what drill do we use in planting corn; 2, would we vary our Free Seed Distribution so as to let him have a package of our Blount Corn with the White Elephant instead of other seeds, with which he may not be able to succeed.

ANS.—1. The Albany Corn and Seed Planter has an excellent reputation. We have not tried it. In our planting we used the Hoosier Corn Drill (see premium list) which was sent to us for trial. 2. We have saved only a small quantity of Blount's Corn for seed—and this with a view of improving it. The ears have been selected not from those stalks which bore the greatest number of ears necessarily, but from the most prolific stalks bearing such ears as are freest from the characteristic imperfections of this variety. We would be greatly pleased to vary our Distributions to suit individual friends—but really it is impracticable.

C. N. G., Poughkeepsie, N. Y., among several queries, asks if we have any set days at the Rural Farm and how should visitors get there from New York. He wants to see our crop of Blount's Corn.

ANS.—We are now fast closing our work at the Rural Farm (Oct. 25). Nearly all the work that needs our personal attention is completed and the farm will soon be left in the hands of the farm manager and his family. Before this reaches the eye of our friend, Blount's corn will, for the most part at least, have been husked. The Long Island R. R. (taking boat at the foot of Pine Street, James Slip or 34th Street) goes direct to Pearsall's Corners or Hewlett's Station, either of which is within a mile and a half of the farm. The other questions will be answered later.

H. B. K., no address, asks, 1, how to plant Horse Chestnuts; 2, how should Water Chestnuts be treated to make them sprout: 3, why do potatoes grow snagged, the seed having been smooth; 4, which will bear the sooner, grape-vines started from cuttings or from seed.

1. Place the seed in sand in a box as soon as ripe removing the outer burr and bury the box. Plant in the Spring. 2. We do not know what Water Chestnuts are. 3 Drought, too deep planting, second growth, the unequal pressure of the soil, stones, etc. 4 From cuttings. Seeds *may* fruit the third year—they *may* not in ten. Cuttings should fruit the third year usually.

A. J. B., Clarksfield, O., being very well pleased with the results from the seeds sent out by the RURAL last season, asks, where he could get a larger quantity to plant next Spring.

ANS.—In due time we shall notice the Spring catalogues of seedsmen. Wherever, as heretofore, we find seeds which the RURAL has introduced or disseminated, therein offered, mention is made of the fact as an answer to many inquiries we are all the time receiving similar to the above.

R. G. K., Collyer, Kan., referring to a late article in the RURAL on nut-bearing trees, asks where can he get fresh seed of the English walnut—the Report of the Department of Agriculture for '78 says this variety will thrive in that section.

ANS.—We find them announced in the catalogue of James M. Thorburn & Co., 17 John Street, N. Y.—40 cents per pound.

J. H., Hartford Co., Conn., asks, 1, where can he get Chester County Mammoth Corn; 2, what other large varieties of corn are there.

ANS.—1. All the prominent seedsmen will sell it for another year. 2. Compton's Yellow Flint; White Horse-Tooth (Southern White); King Philip (eight-rowed); Dutton Yellow Flint, 10-rowed.

J. W. K., New Alexandria, Pa., asks where can he get seed of the Golden Ovoid Mangel to plant a half acre next Spring.

ANS.—The Ovoid Mangels will no doubt be offered by seedsmen generally another season. We shall call special attention to such items in the Spring catalogues sent to us for notice.

D. J. A., Moore's Store, Va., asks whether Lost Nation Wheat is a bearded or a smooth sort; is it white or red; does it yield well and where could he get a small quantity for seed.

ANS.—Smooth, white. Yes, it yields well in the Eastern States and Canada as a Spring sort. Ask Dr. Hoskins, Newport, Vt.

N. A. C. Oshkosh, Wis., asks whether the Clematis Jackmanii and the Dutchman's Pipe are hardy.

ANS.—Yes; both are hardy.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, OCT. 30.

W. H. H.—S. W. J.—S. B.—J. W. L.—J. H. B.—M. C. D.—A. S. S.—E. A. B.—H. W. R.—A. L. J.—L. S. H.—C. D., thanks.—H. C. C. M.—R. G., thanks.—L. E. J.—A. B. A.—"Maggie."—H. E. D. E. R. D—W. T.—S. A. M.—A. G.—W. J. C.—Wm. B.—A. S.—Estelle.—J. E. P. —J. T.—A. B. A.—S. C. G.—A. W. H.—T. H. M.—C. R. W.—M. R.—L. K. G.—H.—M. R. O.—T. S.—W. M.—Lottie.—A. R.—S. H.—W. L. N.—T. H. O.—Willie.—S. H. R.

Hop Bitters is a preventive and cure for Ague; it is your own fault if you have it.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT E. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, NOV. 6, 1880.

Now that the end of 1880 draws near, let us say to those of our subsrcibers who do not wish to renew for another year, that they need not trouble themselves to write us to that effect. All names pass off from our subscription list when the subscription term expires. This is our invariable rule. The NUMBER on the printed address of every subscriber is a constant reminder of the end of the subscription term.

THE fact is that canned tomatoes are just as good in every way as fresh tomatoes. Properly cooked they cannot be distinguished. It matters, in point of fact, very little which is the earliest tomato—whether the crop is great or small it is always greater than the demand—or what are trifling differences between varieties. Canning establishments prefer large, smooth tomatoes—and herein the requisites for home use and the market agree.

EVERY one admits that in the wind power of the country blowing to waste, is a source of all the power that could be wished, could it be curbed or harnessed into service. The windmill is the best and only thing yet for utilizing this power, but supposing a man, instead of a dam and pipe and turbine wheel should simply set a float wheel out in midstream and depend upon the natural supply of water, sometimes less and sometimes a flood, what would be said of him? Is there no means by which the winds may be directed to a certain purpose? The field is as promising a one as many others were when inventors and discoverers began their labors.

KEEP ACCOUNTS and know precisely what is done, and is doing, and how the business of the farm is paying, in what particular it is paying, and where it is losing. Farming *does* pay. It is the most profitable business in the world. The loose and careless manner in which it is generally carried on would utterly wreck any less profitable business. There was once a man who made certain attachments for looms known as "pickers," and prepared the raw hide from which they were made himself. But he thought it was a more cleanly and better business to buy the hides and merely cut them up and make the pickers. So he bought the hides from a neighbor, and the first year he was overwhelmed with debt and sold out, and his neighbor became rich by curing hides. The unfortunate man made money so fast before, that he never troubled himself how it was made, and only learned too late that one part of his business was profitable and the other was not; but then he had given over to his neighbor the profits and kept the losses for himself. It is much the same with farming, for no one can tell where he is losing or making money, without accounts. Just now is a seasonable time to consider this matter and to begin a new and more reasonable and safe system.

TO INCREASE THE PROFITS OF THE CORN CROP.

WE do not claim that our yields of Blount and Chester are the greatest ever before produced, but that they are the greatest yields produced upon considerable areas and at so little expense.

We do not know what useful information is gained by trials of farm plants on small plots when treated in a way not applicable to ordinary field culture. It is known that at the rate of over 200 bushels of shelled corn per acre has been raised on fractions of an acre, which have been richly manured and hoed and raked as if they were garden plots. Dr. Chamberlain, who took the first prize for Blount's Corn offered by the RURAL, raised at the rate of 190 bushels per acre on a plot 33 feet square. But the plants were treated to liquid manure, and otherwise an amount of labor was given to the plot which cost more than the corn was worth. We do not want to know how much corn, wheat, oats or potatoes can be raised to the acre regardless of cost, but how much we can add to our present yields with less than a proportionate addition to the cost of producing them. Since to ascertain that we may greatly increase the yield of our crops only as the cost of production is increased is of no practical value to the farmer, we must ask, are there simpler, less expensive methods by which we may increase them? That this question may be answered in the affirmative, our late yields of corn are offered in proof, produced as they have been at a cost no greater than that with which ordinary yields of 60 bushels are produced and by a system of planting and cultivation quite different from those adopted by good farmers generally.

COMFORT FOR THE CONQUERED.

WRITING before the settlement of the political struggle what can be read only after its outcome will be known to all, our words here can have no special reference to either party. To the victors, to whichever side they may belong, we would merely counsel moderation in their first hour of exultation; to the vanquished we would offer a few words of consolation. A comparatively small number of them, however, will be downcast because their aspirations for office have been disappointed; for these words have no solace, and if they had a superabundance we would not offer a monosyllable. The depression of the vast bulk, however, will be due to an honest belief that the prosperity of the country, if not ruined, will be at least jeopardized by the success of their opponents. Out upon such a conceit! Which of us is unpatriotic enough to tolerate such a reflection on a republican form of government? Having an abiding faith in the American People, we cannot for a moment imagine that the triumph of either of the great factions whose struggle for supremacy is now agitating the country, can make or mar the prosperity of the nation. That is a blessing the People will always place above partisan success, and woe to the faction which in the time of its sway shall threaten the continuance of that prosperity or check its increase—its day of ascendency will be brief and its return to power long-deferred. If the fear of the Lord and the love of country shall not prompt our rulers to wisely foster the welfare of the nation, the fear of the People and the love of office are pretty sure to restrain them from foolishly injuring its prosperity. Cheer up, then, oh ye down-hearted! The nation is safe, and your day of triumph may come round—four years hence.

FOUR YEARS' RESPITE.

BY the time this shall have met the eyes of our readers the battle at the polls will have decided the issue of the political campaign. The lightning will have flashed the conqueror's name to every corner of the land, and details of the victory alone will be waited for. The prophets on one side will be jubilant at their foresight; those on the other exasperated at the perversity of things in general. The victors will be temporarily wild in the first flush of their triumph at having saved the country; the vanquished momentarily depressed at their having failed to do so. On one side congratulations will be loud on the skill of the leaders and the earnestness of their followers. On the other, recriminations will not be silent on the blunders of the officers and the lukewarmness of the men. The oratorical and editorial "mud-slingers" will have suspended their unworthy work until the next local or national election, and the foul stuff will have already begun to drop readily from the objects of their assault unless a previous smirch of their own formation has given it a congenial sticking place. The rancor and bitterness of party warfare will have begun to subside into the friendly civility of neighborly intercourse. The banners, torches, transparencies and other gaudy paraphernalia of marching turmoil and partisan excitement will be on their ignoble way to the lumber room or junk shop. The wheels of business, having passed safely over the quagmire of a political crisis, will roll with their usual ease along their customary tracks whichever party is roadmaster. The men who, selfishly or disinterestedly, have been for months spending their time in clamorously attending to the affairs of the nation, will have begun to take thought of quietly attending to their own. Yes, when our friends shall read this page the victory will have been won, "the country saved" and common sense and routine will have begun to resume sway.

A GLANCE AT OUR COMPETITORS.

SOME idea of who our chief competitors are in the European wheat markets may be formed from the following statement of the amount of wheat on passage to the United Kingdom on Oct. 14, '80. The heaviest amount on the way was from California and Oregon—3,912,000 bushels. It must be remembered, however, that the voyage from the Pacific Slope to Great Britain, like those from some of the other places mentioned below, is very long, and that wheat is nearly always transported from such distant points in sailing vessels, so that the amounts at sea at any one time from such countries and from places not so far away from which wheat is generally carried in steamers, form no criterion of the relative exports from the countries in the course of the year. The quantity on passage from the American Atlantic ports—including the United States and Canada—was 3,497,600 bushels; of this the Canadian contribution must have been a comparative trifle. From Australia and New Zealand there were on the way 2,688,000, and from Chili 864,000 bushels. All, or nearly all, the wheat from these places is carried in sailing ships, and the voyage is long and tedious. Egypt and British India contributed 944,000 bushels—most of it doubtless from the land of the Pharoes. Russia's quota was unprecedentedly small for that date—only 144,000 bushels, of which 48,000 had left Taganrog and the other ports on the Sea of Azov and 96,800 were from Odessa. All other countries combined contributed only 124,000 bushels, making an aggregate of 12,173,600 bushels on passage to the United Kingdom. Many of the vessels, however, call at British ports only to receive orders as to the places at which they must deliver their cargoes, so that all this wheat will not necessarily be converted into British brawn and muscle.

IS IT A MISFORTUNE?

No International Dairy Fair will be held this year here or elsewhere in this country. Has an International Dairy Fair ever been seen here? Well, we shall not now argue whether the name under which the dairy show was held here in '78 and '79, was or was not a misnomer—we merely mean that that sort of an International Dairy Fair will not be repeated anywhere this Fall. True, this has been a foregone conclusion for some months, but the official announcement was not made until last Monday afternoon, when a very small handful of the officers and managers of the moribund or defunct institution met here to make up a plausible reason for the intermission. The Presidential election offered them the desired pretext, and it was accordingly proclaimed that no fair would be held, because to hold it in the heat of the Presidential canvass would be to insure failure; or, barring this, to subject those interested in its success to trouble and expense for which no amount of success could compensate them. Back of this ostensible reason, however, is the real one. The two former fairs were got up incidentally for the benefit of dairymen, but primarily for the advantage of a couple of rival salt dealers, and these having come to loggerheads, refuse to co-operate with each other, and so the Great International Dairy Fair has collapsed—at least for the present. Moreover, farmers everywhere, but especially at the West, have begun to be a trifle doubtful whether the benefit they obtained from the display of an array of packages of butter and cheese before sight-seeing city folks compensated them for the injury done to their business by the advertisement given to oleomargarine by exhibiting it at the same time. Well, by this time twelvemonth our farmers *may* have become enterprising enough to take a deeper interest and a more prominent part in the management of an exhibition peculiarly their own; the rivalry of the salt men may have become less wrathful; the venders of oleomargarine may be less audacious, and— But among all the obstacles to an International Dairy Fair this year, one only will certainly be absent next season—there will be no Presidential election.

OH, FOR A PROPHET!

In spite of the fact that the aggregate wheat crop is somewhat larger this year than last, the stock in the hands of dealers is considerably less. On Oct. 23 last the visible supply of wheat, comprising the stocks in granaries at the principal points of accumulation at lake and seaboard ports and the shipments by rail from Western lake and river ports, amounted to 17,480,091 bushels against 25,691,223 bushels on Oct. 25, in '79, or a decrease this year of 8,211,132 bushels. The great rise in the price of wheat last year, after a large part of the crop had left the hands of the producers, has led farmers to hold on to their wheat this year in the hopes of a like advance. Moreover, last year the indebtedness of the farmers was considerably heavier than it is now and consequently more of them were forced to realize on their crops at the earliest moment, to lift mortgages or pay interest on them, to meet other liabilities and often to obtain money for household expenses. In the absence of pressure from this cause during the present season, many of them are anxious that a part at least of the great profits from their product, that went into the coffers of the dealers last season, should go into their own pockets this year. It should be borne in mind, however, that the rise last year was largely due to the most gigantic wheat speculation this country has ever witnessed, which proved ultimately disastrous to the managers of it. At present there are no signs of a similar movement on the part of dealers this season, so that this factor in the possible advance of prices will probably have to be eliminated this year. In a short time, too, navigation will have closed and the railroads are sure to raise freight rates, while in Spring our wheat will have to meet competition from the surplus of all the wheat-growing nations of the world, some of whose harvests occur about the end of our Winter. On the other hand, the latest advices with regard to European crops show, at the best, no improvement on former reports. The average yield in the United Kingdom is reported considerably less on a somewhat larger acreage than we mentioned week before last, making the aggregate yield about the same as that given by us. The quality of our wheat, too, is put down at 10 per cent. better than last year on the Pacific Coast, and from 12 to 15 per cent. better in the rest of the country. There is an opportunity for realizing a large fortune before the man who can accurately foretell the prices of wheat during the coming season.

BREVITIES.

ALL competing for our Golden Ovoid Mangel little premium will now send in the weights of the three largest roots at once. We may call for them to be sent to the RURAL office by express at our expense.

IF the rows of our Blount's Corn had been nearer together; if they had been three feet six inches instead of four feet three inches—would the yield of corn have been greater or less? Who can tell? Were we to act upon our present impressions and were we again planting corn for a great yield, we should choose three feet nine inches as promising a better yield than either of the other distances.

JUST as this issue of the RURAL is going to press, we are saddened by the news of the sudden death, on Sunday night, Oct. 24, of Mr. R. F. Johnstone, the able editor of the Michigan Farmer. While his manly character endeared him to a large circle of friends, his indefatigable labors and sterling honesty in the editorial chair make his death a heavy loss to the agriculture of the country, and especially of his own State.

IT is said that the fashionable dames of the City of London alone spend £100,000 (say about half a million of dollars) on flowers during the season; what, then, must be the annual cost of flowers for the whole Kingdom! Florists in the vicinity of London pay from $30 to $70 rent per acre for the land they cultivate, and yet many of them make small fortunes in the course of a few years in growing flowers. Violets alone have netted from $500 to $1,000 per acre, and other flowers in proportion. But sometimes there is a glut in the market, and little or no profit is then realized. Of lavendar water, about 28,000 gallons are annually distilled in England. Of hyacinths, tulips, crocuses, tuberoses, pelargoniums, Lily of-the-valley, roses, bouvardias, gardenias, fuchsias, myrtles, hydrangeas, mignonette, and some other flowers, such quantities are produced that it would be impossible to give an account of them.

LATE advices from California indicate that in view of the great decrease in the wine production of France, owing to the ravages of the phylloxera, foreigners are already looking to that State for a supply of wine. A leading German wine merchant has written to his San Francisco correspondent that he thinks the pure, unadulterated red wines of the Golden State will be better appreciated in Europe than the Spanish wines of the same class, and inquiries have come even from Egypt as to the character and extent of the vintage there. This is unusually large, amounting to about 10,000,000 gallons; yet this production is but a trifle in comparison with the vintage of France before the ravages of the phylloxera had seriously injured her vineyards. For the 18 years immediately preceding the French revolution of '48, the annual product averaged 800,000,000 gallons. During the Empire it rapidly increased until in 1869 it was 1,865,000,000 gallons. In 1870 the depredations of the phylloxera began to be seriously felt, yet in '75 the vintage reached its highest point—2,239,000,000 gallons. Since then, however, there has been a steady decline to 1,120,000,000 in '76; 1,506,000,000 in '77; 1,306,000,000 in '78, and 800,000,000 in '79—just about the same product as half a century ago. There is a standing offer of a reward of $60,000 made by the French Academy of Sciences for the discovery of a remedy against the pest, but hitherto the only hope has been in the planting of American vines, the roots of which appear to offer a greater resistance to the insect than do the native vines of any European country.

Literary Miscellany.

OUR SHIPS AT SEA.

How many of us have ships at sea,
Freighted with wishes, and hopes, and fears,
Tossing about on the waves, while we
Linger and wait on the shore for years,
Gazing afar through the distance dim
And sighing, will ever our ships come in?

We sent them away with laughter and song,
The decks were white, and the sails were new,
The fragrant breezes bore them along,
The sea was calm and the skies were blue,
And we thought as we watched them sail away
Of the joy they would bring us some future day.

Long have we watched beside the shore
To catch the gleam of a coming sail,
But we only hear the breakers' roar
Or the sweeping night wind's dismal wail,
Till our cheeks grow pale, and our eyes grow dim
And we sadly sigh, will they never come in?

Oh! poor sad heart with its burden of cares,
Its aims defeated, its worthless life,
That has garnered only the thorns and the tares,
That is seared and torn in the pitiful strife,
Afar on the heavenly golden shore
Thy ships are anchored for ever more.

INMATES OF LESTER HALL.

(Continued from page 726.)

CHAPTER XV.

VENGEANCE FALLS UPON HERSELF.

In a breathless silence Cecil and Dr. Carewe stood for a few moments facing each other. The light from the hanging lamp fell upon both faces, and lighted up the shamed, stricken agony of his—the disdainful anguish of hers.

"Now do you understand?" she said, speaking slowly, with cruel precision and coldness. "Do you understand why I strove to win your love?—that I might get my own revenge!"

"Revenge on me for that?" he said, hoarsely, looking at the rigid calm of her face with the yearning of despair in his piteous glance. "Is that your justice, Cecil?"

"It is my retribution," she said, calmly. "For it I won your love; for this moment I have striven, and now I have taken my vengeance!"

"Great Heaven!" he said, brokenly, as his frame shook with a sudden shudder, and his lips could hardly frame the words, "for a brother's——"

She interrupted him fiercely.

"And why not, she said, bitterly. "Why not?"

"It is not just," he said, brokenly, as he turned from her; then his great love mastered him, and he caught her hands in a fierce, nervous clasp, and drew her to him.

"My darling, have pity!" he said, earnestly. "What can I do to atone. Save your sister's life; they say I helped to save it; will it not atone for that other whose loss you yourself hardly regretted as I did? If you will trust your happiness to me, Cecil, I shall hold it as the most precious treasure. Nay, you shall not go; you shall hear me!" and, before she could resist him, he had caught her in his arms, and was looking with mad longing into her eyes. "Answer me—you will trust me, Cecil? Nay, you shall be mine; I love you! I will not give you up!"

Cecil paled to her lips and her eyes flashed.

"Coward!" she said, scornfully.

And at the contemptuous word his clasp fell from around her, and he drew back slightly, while she looked at him for a moment with an expression of superb disdain. Then her eyes fell, and with a sudden gesture she turned from him.

"Forgive me!" he said, hoarsely. "I was mad, but the madness is past. Spare me yet one moment more, and I will trouble you no longer!"

His voice was choked and broken, and the vibration of intense suffering in his tone made her pause. She stood still, her face averted from him, her head erect. With all her haughty calmness there was a quiver on her lip.

"I cannot give you up," he said, at length, in a broken voice of pain. "Cecil, have you no pity? You gave me hope—you let me be happy for a few brief moments—but now you have no mercy! I would lay down my life for you—I would give you all I hold most dear! Have you thought of what you are doing? Have you ever asked yourself at what a cost to me you have gratified your caprice?"

"It is no caprice," she answered him, haughtily, without a change on the beautiful white face as she spoke.

"No caprice! True, I had forgotten," he said; and as he looked down at her with his longing, miserable eyes, it struck him then how heartless she must be to wreak such a vengeance, and his voice died away in a sob of anguish too deep for words, "You to betray me thus!" he cried in a moment—"you, Cecil!"

The unutterable sadness and tenderness of his voice struck upon her heart, and she turned to him for a moment, all the rigidity fading from her face, and a warmth of passion replacing it.

"Even I!" she said, with a break in her voice, of pain, of triumph, of anguish and of joy.

"If you had ever loved, you could not have done this thing," he said in a low tone of pain. "Had your own lips not borne witness against you, I should not have believed it. Against all the world I should have held you true!"

The words stung her as no more violent reproach could have done, and she shivered as they fell upon her ear. For a moment she seemed as if she would have uttered some words of apology or atonement, but she checked them.

"Let me compliment you on your histrionic powers," she said, shortly. "And now, if you will excuse me, I will wish you good night."

He stood for some moments where she had left him, stunned as it were by this blow, which he had no power to resist, and which had fallen upon him with crushing force. He had lost her; lost her completely and for ever, and in the anguish of that thought he could not realize the wanton cruelty of her conduct, the unwomanly revenge she had shown!

A mist came before his eyes as he thought of that hope he had cherished which had been so rudely dispelled—of that love which had given him a few short hours of joy, purchased by a lifetime of suffering. He was a man young and strong, yet he shuddered and sank down on the couch as he remembered, bowing his head in a stupor of misery on the cushions where she had rested.

How long he lay there he never knew, but after a time a friendly hand was laid upon his shoulder. He lifted his head and raised his eyes, full of a blind, vacant misery, to the pleasant kindly face of Mr. Edgar bent upon him full of concern and alarm.

"Lawrence, are you ill? What is the matter, old fellow?"

Dr. Carewe made no answer, but he sat upright, and pulled himself together.

"We thought Cecil was with you," said Mr. Edgar, gently. "Mattie has gone to bed. Lawrence, let me get you something; I am sure you are ill."

"No, I want nothing," was the quick answer. "Have patience with me for a moment, and I shall be all right."

He rose, and leaving the conservatory, went out on to the balcony beyond, pushing back his hair from his brow as the cold night air blew upon his face, and his breath came in the quick gasps of a man in pain. Mr. Edgar watched him in silent anxiety; he guessed that some terrible sorrow had come to him—it was impossible to doubt that, and it seemed as if his bodily strength was unequal to the strain upon it—as if it would fail him in his necessity.

Mr. Edgar knew how great that strength was; more than once he had proved the fearless courage of his friend during their intercourse together. He had seen him arrest the headlong course of a pair of infuriated horses; he had been by his side when he had rescued a woman fainting with terror from a crowd of roughs who would have trampled her under foot; he had been with him during a storm in the Atlantic, on board a thirty-ton yacht, and remembered how bravely and cheerfully he had sustained the courage of the crew, and heeded nothing of the danger; and he had never seen him moved as now.

The night air blowing fresh and chill revived him dispersing the mists from his troubled brain, and awakening him to a sense of the blow which had fallen upon him.

"Lawrence," Mr. Edgar said, tenderly, his own face pale and troubled, his own voice unsteady, "what is this that has come upon you? Will you not trust me, old friend? You know there is nothing on earth I would not do for you."

Lawrence Carewe stretched out his hand and grasped his friend's with a pressure that spoke louder than any words.

"I know it well, but you cannot help me in this, Edgar. It is my own folly, and I deserve to suffer; but the blow was sudden and unexpected. Somehow," he smiled—a smile sadder than the tears which stood in his gray eyes—"somehow I had been mad enough to hope—wild as that hope was; but I am awake now—I have come to my senses, and——"

"Cecil—she has refused you?" said Mr. Edgar, coming suddenly to a sense of the situation. "How shameful, when she has encouraged you so evidently! She is just as heartless as——"

"Hush! hush! I cannot bear that, Edgar! I was ready enough to blame her a short while ago; but now I can only feel—that I love her."

"Lawrence, old fellow I wish I could help you," said Mr. Edgar, unsteadily, touched to the heart by the terrible grief which looked at him out of the weary, haggard eyes of his friend. "Can I do nothing?" Shall Mattie speak to her?"

"Of what avail? She gave me no undecided answer. I'm not the first man who had to give up the happiness of his life, nor shall I be the last. And now good night, Edgar."

"Nay, I am going with you," said Mr. Edgar, resolutely, and Dr. Carewe looked at him and laughed a low, bitter laugh of pain.

"There is no river on my way home," he said, bitterly. "You need not be afraid, Edgar.

As the two young men passed out of the dining-room, and stood for a moment in the hall, putting on their overcoats, neither of them saw a white face looking over the banisters, and two large eyes watching Dr. Carewe with a passion of pain and love in their depths. Then, as they opened the hall-door and went out, the white figure fled rapidly upstairs, and the next moment Cecil was lying on her bed, struggling with a passion of tears which shook her slender frame from head to foot, and left her exhausted as a child.

If Mr. Edgar could have seen her thus he might not have had such hard thoughts of her as those which filled his heart, as, having left Lawrence Carewe at his door, he drove rapidly in the direction of his own house.

CHAPTER XVI.

ENGAGEMENT.

The gray dawn is breaking, and the light is appearing in the eastern sky, when Cecil Lester raises herself from her pillows and gazes vacantly around the room. How the night has passed she cannot tell, for the passionate tears and sobs have exhausted her to stupor; and as she rises and stands still for a moment, trying to recall what has happened, she staggers feebly, and is forced to catch at a chair for support.

The last two or three hours have been a complete blank to her. Whether she has slept, or whether she has fainted, she does not know. The reaction following on the great mental excitement of the evening previous has come upon her. The strained nerves have given way, and she sinks down wearily on a great armchair which stands at her bedside, pushing back her hair from her brow with trembling fingers, and drawing each breath sadly and wearily.

All is intensely still in her room and in the house. None of the household is stirring yet; and as her hand falls heavily to her side again, she wonders dreamingly why she still wears her evening dress.

Then suddenly she remembers, and there comes before her Lawrence Carewe's face, pale, agonized, reproachful, as she had seen it last night, and her head sinks again upon her hands as she tries to shut out the mute anguish of those gray eyes, and a shudder runs through her from head to foot.

"What have I done—what have I done?" she murmured between her pale lips. "Oh! what have I done?"

And the answer flashes before her as if written in letters of fire:

"You have kept your vow—you have made him suffer—you have attained your vengeance! Are you not happy?"

She rises from her seat, and paces up and down the room. Every pulse within her is beating and throbbing.

"What has come to me?" she says, half aloud, as she paces to and fro, "what has come to me? Should I not rejoice? Why—why—why do I suffer like this?"

She draws back the curtain, and opening one of the windows, leans out to the cool, fresh morning air. But it seems to give her no relief; and turning away with a gesture of weary passion, she faces the truth at last.

"I love him—I love him—I!" she says, passionately. "And he, how will he think of me? How will he despise me now? He has seen me as I am; he knows me now! How long will his love last—how long?"

She breaks into a laugh, bitter and forced, as one who laughs in a death-agony. The warmth of the room oppresses her. She feels choked and stifled—she sees still the grieved and wondering eyes—she hears again the broken, pleading voice!

"You to betray me thus!" it says, sadly. "You, Cecil!"

"This is folly—this is madness!" she says, after a pause. "I have but kept my vow. He deserves to suffer—let him do so! I will not grieve. He has brought it on himself. Oh! Rex.—Rex., you know now that I have kept my promise—at what a cost!"

She goes to the looking-glass, sees her face is colorless with the agony of the past few hours. Its glory is faded, its loveliness gone. The great lustrous eyes look out at her, dim and weary. She turns away with a bitter laugh.

"Let it go," she says, passionately—"let it go! It has done its work. I have no need to be pretty now!"

A hard, bitter anguish sweeps over her face, and staggering forward, falls prone and helpless, her proud head bowed, her face white with the whiteness of death, her eyes closed like one dead.

And thus her maid finds her a few minutes later and stands aghast at the sight of her young mistress stretched there, still wearing the evening-dress she had put on her the night before; and glancing at the bed, she sees that it is undisturbed.

She does not summon any assistance. Some instinct tells her that it will be more prudent not; for Mademoiselle, the maid is a wise woman in her day and generation, and she sees that this is no ordinary fainting-fit. So she kneels down by her mistress, raises the beautiful head on her arm, and applies restoratives. By-and-by Cecil's senses return to her; the sweet lips quivor, the heavy eyelids are lifted, and she looks wonderingly about her.

"You are better?" says the maid, gently, as she assists her to rise, and places her in a chair.

"Yes, I am better," says Cecil, faintly. "I do not know what made me faint. Lisette, do not tell Miss Lester; it would make her anxious."

"You were overtired, perhaps," suggests Lisette, trying to speak unconcernedly, but feeling her heart ache for the misery on Cecil's face. "That long ride yesterday was too much for her."

"Yes," said Cecil, eagerly, "that was it, Lisette. But do not tell Miss Lester."

"You may count upon my discretion," said Lisette, quietly; and though she kept her young mistress's counsel, she "thought the more," and puzzled her brain to discover the cause of her illness with but little success.

Meanwhile the preparations for Mattie Lester's marriage went on apace, for the health of the bride-elect was completely re-established, and Mr. Edgar had pleaded so eloquently for an "early day" that Mattie had not had the heart to resist his entreaties. The wedding-day was fixed for early in autumn, and the young couple were to spend the winter abroad, taking a long tour in the South of France and Italy.

"It will be far better that Miss Lester should not be exposed to the variations of this variable climate of ours," Dr. Carew had said. "If I were you, Edgar, I would keep her abroad all the Winter; there are lovely spots in the South of France where you can spend your honeymoon, and Cannes, Nice, and Mentone are all very gay during the winter season."

"As if we shall want gaiety," said Edgar, gaily.

But he took his friend's advice. A pretty villa was engaged at Cannes, which was to be their headquarters for the winter months, and Mattie set about the business of the trousseau with all expedition.

Of course the wedding-outfit was to be a very costly and elaborate one; Mattie's future position demanded that it should be so. Miss Lester herself was in a constant state of appointments with milliners and dressmakers, boot makers and jewelers, until Mr. Edgar grew quite frantic at the demands on her time.

"I never see you now," he grumbled, half comically, pathetically, one day, when they were alone. "It is too bad, Mattie; there are scores of things I want to consult you upon."

"You will get quite enough of me by-and-by," said Mattie, laughingly. What do you want to consult me on now, Edgar? It seems to me that I have as many consultation as Mr. William Gull himself."

"Yes, with milliners and dressmakers," said Mr. Edgar; smiling. "Do you think I wont allow you to buy any more clothes, Mattie, that it is necessary you should have so many? I never come here but you and Cecil are discussing patterns and styles, and shapes and makes, just as if you don't look pretty in everything," he added, fondly, as he drew her to his side.

"That's a very pretty and dutiful speech, she said, laughingly. "What is your business, Edgar? I only have an hour to give you, as I am due at Elise's at half-past twelve."

"There!" said Mr. Edgar, half ruefully, half triumphantly. "Is it not a true bill, convicted out of your own mouth, Miss Mattie? Well, my business will not take more than half an hour. Have you chosen the bridesmaids' lockets?"

"Yes, those with the pearl shield and the initials in diamonds," said Mattie.—To be continued.

MAGAZINES FOR NOVEMBER.

Appletons' Journal.—Contents.—The Rights of Married Women; All Alone, a story (in Two Parts—Part Second); The Influence of Art in Daily Life; Part IV. Beauty; The Growth of Sculpture; Literary Success a Hundred Years Ago; A Colorado Sketch; The Life and Passion of Hector Berlioz; The New Renaissance; or, The Gospel of Intensity; Guizot's Private Life; Love's Heralds; Some Current Novels; Story of an Honest Man: Stillwater Tragedy; The Grandissimes; Salvage; White Wings; The Wellfields; Troublesome Daughters; The Confessions of a Frivolous Girl; The Worst Boy in Town; Anecdotes of English Rural Life; Editors Table: An Art Discussion, New American Comedies, Further about Infinitesimal Doses; The Mudfog Papers; The Peasant in Art and Literature.

Among the penalties which, according to popular report, fame of any kind is sure to exact, one of the heaviest, perhaps, is that which the successful author has to pay when the juvenile or other feeble productions which he himself has consigned to oblivion are dragged forth without his consent from their half-forgotten hiding-places, and exposed to the scorching light of his later-achieved celebrity. There are few authors, probably, even the most successful, who have not at one time or another written things which they would willingly have the public overlook; and their bitterest foe in cases of this kind is the fanatical admirer or speculating "bibliographer" who, together, are rapidly becoming one of the greatest pests of literature. The latest sufferer from this sort of posthumous pillorizing is Dickens. No other author, probably, of real genius and power, ever took a more lenient view of his own productions than Dickens, and it might fairly be inferred that anything that he choose to leave unutilized had better be left in the obscurity to which it had sunk. Not so, however, have his mercantile-minded admirers been willing to admit. Even Forster made use in his biography of every scrap of unpublished writing upon which he could lay his hands, including the foolish preface to the first edition of "American Notes," which his friends had wisely induced Dickens to suppress; and now in "The Mudfog Papers" we have a glimpse of the lowest deep which the profane eye of the curiosity hunter can reach.—Editor's Table in Appletons' Journal for November.

The Atlantic Monthly.—Contents:—The Portrait of a Lady, I.—V.; The Jew's Gift, A. D. 1200; The Silk Industry in America; His Best; Storms of Autumn, Georgics of Virgil, Book I., Verses 311-334; Intimate Life of a Noble German Family, Part III; The Future of Weather Foretelling; A Sleeping City; Philosophy and Apples; A Search for the Pleiades; Reminiscences of Washington, VIII., The Tyler Administration, 1843-1845; North Wind in Autumn; What is a Fact? Letters and Notes from England; Mr. Aldrich's Fiction; Recent Poetry; Mahaffy's Greek Literature; Shakespeare et l'Antiquite; An Englishman's England; A True Republic; The Contributors' Club,

The Future of Weather Foretelling.—In no other part of her wide realm has Science done so little for the good of man or her own fame as in the department of meteorology. In the solid earth her prophecies have long had a high value, in the far-off heavens her empire is affirmed, but in the unstable air between these two well-possessed provinces there is a region that is not yet subjugated. Around the border of the domain of meteorology some gains to the cause of law and order have indeed been made: we control the lightning, we are able to track a clearly defined storm for days on its path, and can help the sailor to knowledge that often enables him to escape its clutches when it assails him on the deep sea; but as for foretelling the weather in any proper sense, we have not yet attained to it. Is it attainable? Can we hope to compass the conditions of our days so that we may sow and reap, travel, feast, or make war in weather of our choice? This is, after all, perhaps the most interesting of the questions that the future history of science must determine. But though the perfect answer is not to be given at present, there are some things in the existing conditions of our science that make us hopeful that we are but at the beginning of weather forecasting

There have been two distinct scientific efforts at weather foretelling, as distinguished from the current survival of the modes of thought of ancient ages that are introduced in our ordinary weather prophecies, that, undertaken by Admiral Fitzroy, in England, and that, begun in this country by the United States Signal Corps, under the control of the late General Myer. Both of these have made their basis of the simple principle that weather always has a history; that it means conditions that pass from one region to another by certain laws of movement and at a certain rate. This general fact was long ago recognized by me-

teorologists, but it was not until the telegraph enabled knowledge to outstrip the storms that it was possible to make any use of it in foretelling the weather. By the admirable labors of the United States Signal Service this method of announcing the weather that is journeying towards any locality has been brought to a high point of perfection, but it has not to any extent helped us to foretell the creation of weather. When a weather area forms in the far West, it is now traced as clearly as the path of an army, until it passes away. Sometimes the state of the barometer will tell something about storms that have not yet gathered themselves for their eastward march, but beyond this there have as yet been no means of foreseeing. The weather bureau is of no more use than a ground-hog or a goose-bone for telling us whether our coming Spring or Summer is to be warm or cold, rainy or dry. Is this the end of our advance? Can we hope to do no more than take the storms we find afloat, and trace them on their courses; or can we hope to look behind them to the conditions of their origin so clearly that we can foretell their time and place of working? —[N. S. SHALER in November Atlantic.

HARPER'S MAGAZINE.—Contents: Saint Cecilia; Rabelais at Home; Around the Year, A Poem; Saline Types; Upon Spur, A Poem; Old Dutch Masters; The Broken Bars, A Sonnet; The Level Land, A Poem; An Autumn Pastoral; Pig-sticking in India; In Western Massachusetts; Midnight, June 30, 1879, A Poem; The Drift-wood Fire, A Story; White Wings, A Yachting Romance. (Concluded.)—Porcelain Painting; Washington Square, A Novel; Securing a Competence; Rev. Mr. Bland's Wrestle with the Chester White Hog, A Story; October, A Poem; A Scientific Common School Education; The Battle of King's Mountain, A Poem written for the Centennial Celebration of the Battle, October 7, 1880; Editor's Easy Chair; Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

WILL EDUCATION YIELD SUBSISTENCE?—An education, yes; but what sort of an education? A bricklayer's education, an artisan's, a farmer's, would indeed help him to earn a living. A college education would give him a social advantage, but it would not, in itself, increase his chance of earning a living; it would rather diminish it. For, as was pointed out in an interesting paper lately published in this Magazine, our colleges do not, like the French and German universities, instruct a young man in the bread-winning pursuits; the American colleges are, on the contrary, institutions for general culture. I do not take up the question here of the amount and value of the culture they supply. The point for us to note is that the educated young American who has not a special education as a bread-winner is worse off, as to his money prospects, than the young American who has no college education at all. Dig he can not, and to beg he is ashamed. Two of the professions at least are fatally overcrowded. The United States, with a population not greatly larger than that of the German Empires, graduates every year five times as many physicians; for the German Empire limits the number of its doctors, and we do not limit that of ours. Very many of our physicians not only wait years for practice, but never get into practice at all. It is much the same with the profession of law. In both professions there are prizes for a few, and failures more or less complete, for the many. The engineering, mining, and other scientific professions offer a somewhat better chance, and public life, almost neglected as a profession, will attact a better class of young men from year to year. But upon none of these, save in favored and exceptional cases, as where a son succeeds to his father's practice, can a young man depend for fortune, or even for immediate support. They, too, offer a certain social dignity. But as a rule it is the laborer, artisan, or tradesman that has the better chance of supporting himself; it is the educated man that has, more frequently, to wait before he can pay his way. If, therefore, we educate sons, it is all the better reason why we should provide, not indeed for their independence, but some aid during the years which they are likely to spend in waiting before they can achieve their position.

It is to be remembered, too, that these years of waiting may become, with such aid, years of scholarly or scientific accomplishment, if not of money-making; years of strengthened preparation; years that might introduce and brighten a career, instead of wasted years that cloud or spoil it.—T. M. Coan, in Harper's Magazine for November.

LIPPINCOTTS MAGAZINE.—Contents: The Ruins of the Colorado Valley; The Arts of India; Adam and Eve, Chaps. 30-33; A Pivotal Point; The Mistakes of Two People; Limoges, and its Porcelain; Three Roses; The Practical History of a Play; How she Kept her Vow; A Narrative of Facts; Heinrich Heine; Dawn; Mrs. Marcellus; Automatism. Two Papers.—I; Our Monthly Gossip; Literature of the Day.

LIMOGES, AND ITS PORCELAIN.—The traveler who, leaving Paris by express at 10 A.M., reaches the Orleans depot at Limoges at six in the evening, will see spacious boulevards, imposing buildings and a general air of stateliness and pretension, recalling the metropolis he left behind him in the morning. His omnibus will whisk him through streets crowded with promenaders, a picturesque panorama of well-dressed people, with a generous sprinkling of the light-blue jackets of the chasseurs, the gleaming helmets of the dragoons, the red kepis of the infantry, the broad-brimmed hats and sable mantles of the priesthood and the red-and-orange headkerchiefs of the working-women. If it be late in the season and the days are short, he will see at every turn cafes ablaze with light, and the wide sidewalks before them lined with tables at which, cool as it may be, crowds of loungers are seated sipping beer, absinthe or eau sucree. But, looking up the dingy side-streets, here and there he may detect, by the lines of flickering, straggling gas-lights, glimpses of another Limoges—glimpses of steep streets ending in stairways; of narrow and darkened passages where the opposite buildings nod to each other from across the street until they all but touch; of courts where curious little enshrined images of the Madonna and the saints look down from niches in the corners, and where heads are peeping out from every window to catch a whiff of evening air; and of somber alleys, each lighted by a single lamp suspended midway, under the uncertain rays of which swarms of children and dogs are vying to awaken the loudest echoes.—Geo. L. Catlin, in Lippincott's for November.

THE AMERICAN NATURALIST.—Contents: The Island of Dominica; The Sand-hill Crane; On the Microscopic Crystals Contained in Plants; On the Origin of the Lac; Botanizing on the Colorado Desert, I.; Editors' Table; Recent Literature; General Notes; Zoology; Anthropology; Geology and Palæontology; Geography and Travels; Microscopy; Scientific News; Proceedings of Scientific Societies; Selected Articles in Scientific Serials.

BOTANIZING ON THE COLORADO DESERT.—In February of 1877, by way of the stage road between San Diego and Fort Yuma, I made a little expedition across the interesting region above named. A desert is not naturally supposed to be the most eligible locality, nor Mid-winter the best season for making botanical excursions, yet seldom has a week's recreation of that kind given me more satisfaction than that upon which I have preserved the following notes:

In passing from west to east across Southern California, the first glimpse one gets of the desert is a fine bird's-eye view. From the San Diego plains, all treeless, brown and dusty, an easy two days' journey brings the traveler up to the level of that broad plateau which constitutes the summit of the coast range. Across this forty-five miles of mountain top, one travels pleasantly; now through handsome groves of evergreen oaks, then among a succession of low, rounded, stony hills, between which some bits of fresh, green mountain pasture spread themselves; here passing a settler's cabin with its newly ploughed fields and its group of blooming peach trees, and there meeting a merry, boisterous gang of mountain herdsmen. Having thus come to the eastern verge of the plateau, the great wilderness breaks all at once upon the view, beginning a dizzy half mile down beneath your feet, and stretching away to the eastward for a hundred miles. It was past the middle of the afternoon when I reached this interesting point, and paused to rest a while and enjoy the novel scene, so desolately grand, which lay before me. The region in question is far from being a flat, monotonous expanse of naked sands. Its general level is broken by many abruptly rising knobs and peaks and by several prolonged chains of high and sharply defined rocky hills, all lifting themselves up like precipitous islands above the even surface of a sea; and although these peaks and ranges are destitute of verdure, and red as the sands that drift about their bases, they yet combine to make a most impressive picture when viewed at a distance, and from this aerial elevation where the desert first appears in sight. Aware that the stage station where I must pass the night was not more than two miles away by the steep, winding road, I lingered here until the sun was near its setting, and the shadows of the peaks and pyramids I sat among, were measuring their dark lengths upon the plain afar below and the purple evening clouds had reflected their own almost gorgeous coloring to the vast, varied landscape that stretched eastward and northward so very far away. This strange sunset scene was beautiful beyond all desciption, and will be treasured for a lifetime in the beholder's memory.—Edward Lee Greene, in American Naturalist for November.

THE ECLECTIC MAGAZINE.—Contents: The Unity of Nature. I. General Definition and Illustrations of the Unity of Nature.—What it is, and What it is Not; English, Rational and Irrational; The Bayard of the East; The Seamy Side of Letters; At Sea, 1850; Mental Imagery; An Artist on Art; Fiction—Fair or Foul.—III. Byron; Mr. Ruskin on Wordsworth; White Wings, A Yachting Romance; A Colorado Sketch; Letters from Constantinople; Hypnotism; The Impending Crisis in Turkey; The Dreams of Youth; Archibald Forbes (with Portrait); Literary Notices; Foreign Literary Notes; Science and Art; Varieties.

APPARENT SIZE OF THE MOON.—M. J. Plateau proposes a method of estimating approximately the apparent distances at which the moon seems to different persons to be in the sky. This means consists in looking at the moon steadily until the retina is sufficiently fatigued to produce an "accidental" image or ghost. The observer must then turn his gaze to a blank wall, on which he will see the accidental image projected as a tinted patch of the same shape as the moon. He is then to retreat from, or advance to, the wall until the image appears to him to be of the same size as the moon did itself. The distance measured off between the observer and the wall will be the same as that at which he unconsciously takes the moon to be. One of the sons of the author having made this experiment, found the distance to be in his case about fifty metres. This seems a small distance, but it was the result of a single experiment under circumstances which were not very favorable. M. Plateau concludes the brief memoir on the subject, presented by him to the Academie, by cautioning all persons who may be interested in the subject to take care, in repeating the experiment, lest the great brilliance of the luminary should damage their sight.

AN old sign is, that a child grows proud if suffered to look in a mirror when less than twelve months old; but what the average infant can see in a mirror at so young an age to make it proud is difficult for any but its parents to understand.

For Women.

CONDUCTED BY MISS RAY CLARK.

MICHAEL'S MALLET.

LONG, long ago in the olden day,
On a slope of the Tuscan hills there lay
A village with quarries all around,
And blocks of marble that piled the ground;
And scattered among them everywhere,
With wedge and hammer, rule and square,
With the dust of the marble powdered white,
Sat masons who chiseled from morn till night.

The earliest sound that the baby heard
Was neither the whistle nor song of bird,
Nor bleating of lambs, nor rush of breeze
Through the tops of the tall old chestnut trees,
Nor the laughing of girls, nor the whoop and shout
Of the school at the convent just let out,
Nor the tinkle of water plashing sweet
From the dolphin's mouth in the village street.

But foremost and first that sharp and clear
Arrested the little Michael's ear
When he waked from sleep, was the mallet's knock
On the chisel that chipped the rough-hewn block;
From the dawn of the day till the twilight came,
The click of the tools was still the same;
And constant as fell the fountain's dip,
Was the *tap-tap-tap!* and the *chip-chip-chip!*

And when he could crawl beyond the door
Of the cottage, in search of a plaything more,
Or farther could venture, a prying lad,
What toys do you think were the first he had?
Why, splinters of marble white and pure,
And a mallet to break them with be sure;
And a chisel to shape them should he choose,
Just such as he saw the masons use.

So Michael, the baby, had his way,
And hammered and chipped, and would not play
With the simple and senseless sort of toys
That pleased the rest of the village boys,
They laughed at the little churches he
Would daily build at his nurse's knee;
They scouted the pictures that he drew
On the smooth, white slabs with a coal or two;
They taunted and teased him when he tried
To mould from the rubbish cast aside
Rude figures, and screamed "*Scultori!*" when
His bits of marble he shaped like men.

But who of them dreamed that his mallet's sound
Would ever be heard the earth around?
Or his minute churches in time become
The mightiest churches of Christendom?
Or the pictures he painted all the dome
Of the Sistine—grandest of sights in Rome?
Or the village baby that chiseled so
Be the marvelous Michael Angelo?

—Margaret F. Preston, in Wide-Awake.

THE GARDEN OF THE MIND.

SITTING down to my desk last evening my eye was attracted to a paragraph in the paper lying near. Drawing it toward me I read—"If soils require the warmth of sunshine, the gentleness of showers and the roughness of storms, so do minds according to their different natures and conditions need often to be rewarded by smiles, frequently to be assisted by good nature, and at times to be shaken and awarded by punishment. They are only obstinate and sullen natures, however, that want the last, as they are the most hardy and stubborn plants and trees that require to be moved by the tempest to the very roots."

So then, I said, leaning back in my chair, so then, I am chief gardener of that bit of personal property commonly called the mind; not a very desirable piece of real estate I must admit, for (drawing my face down to harmonize with the doleful words of an eminent divine,) there are "plenty of weeds but no flowers."

What's the reason? Because—— I gave it up. I never puzzle long over conundrums at any time and this being one of the most difficult ever presenting itself I tried to dismiss it at once. No use—It returned again and again with a persistency that at last conquered. The mind is a garden of supreme value which we should seek with never failing zeal, to cultivate.

We marvel at the charms in Nature; we mark its growth and decay commenting upon its changes. Each fresh discovery we hail with delight, going into ecstacies over a new flower found in our rambles, yet too often forgetting that within the grasp of all lieth the opportunity to produce rarer blossoms than are strewn upon earth.

In our intercourse with the world we meet with people of whom we say: "For some reason an interview with them always seems productive of good; we part with them feeling wiser and better." Is it not because their mind is one vast field of rich blossoms and wide expanse of living verdure, with never a decaying or uncouth plant intruding? Or if an objectionable seed has drifted within the enclosure it has been driven so far back in the corners that we seldom come in contact with it.

There are other conservatories that remain unsolved mysteries to us. We never get beyond the high, cold, marble wall and the entrance is opened to but few. Then we catch glimpses of stately exotics that are to be looked at only, never to be touched, not a blossom, or leaf even, ever given away. We turn aside, wondering within ourselves how much happiness such minds might create and yet how little good they really accomplish.

Again, there are thorn-hedges surrounding the brightest, bonniest gardens. You get woefully scratched effecting an entrance, but once inside you account that scratching one of the happiest privileges granted humanity. The colors are dazzling the fragrance is delicious and the designs unique. There is a sort of confusion in the whole which, though not commendable, is certainly bewitching. Everything grows in the rich, warm soil, weeds as well as flowers, but occasionally the gardener is seized with a reproachful sense of duty and wages war against the weeds for a season, then rests again.

There is another field, yet so full of ugly sights is it that we recoil from its rank herbage, the vile weeds and huge thorns. We shrink from the poison odors and shudder when compelled to pass near. Poor, unweeded, ill-kept gardens! Should we pass them by? Would it not be better to tarry for a while and lend a willing hand to pluck out the weeds, even as we would from our own? What if a stain or scratch should be our portion, should we refuse assistance? No, a thousand times *no!* Underneath this mass of tangled briars and weeds may be found some little wild flower that is dying for the light—a little plant that, under the influence of cautious treatment and sunlight, will spring up to notice and cause the gardener to feel its worth, awaken to its beauty, and make way for its growth by uprooting all the weeds which hitherto had choked it.

I think that in assisting others we are apt to reflect too much upon how much good we might do if we possessed more. Let us leave these thoughts and return to our work with increased energy, uprooting the weeds with the fond hope that soon there will be only the flowers left—bright blossoms that we can scatter broadcast. ESTELLE.

VISITING.

WHEN guests arrive in response to an invitation, the mistress and master of the dwelling, whether a mansion or a cottage, should spare no pains to make the visit an agreeable one. Many well-meaning people, from over anxiety to do so, alter the entire arrangement of their households, and in consequence fail to achieve their object; for if a visitor perceive—and he is almost certain to do so—that you have changed your ordinary routine of living, an uncomfortable feeling that you are—to use a homely phrase—"putting yourself very much out of the way" will prevent any true enjoyment from being felt. Therefore the host's first care should be to make a visitor aware that his presence is not a disturbing element, and that the action of the domestic machinery will not be deranged in consequence. This is the truest courtesy, and a course which never fails to put a visitor at his ease. Let whatever is performed be done without apparent effort, so that the effect produced may be that the visitor finds himself a sharer of your own home-enjoyments—not that you have to tax your energies to afford him entertainment.

There should, however, be no sort of neglect on the part of either host or hostess, and the comfort of a visitor should be carefully studied.

For instance, the guest's room should be made as comfortable and pleasant as possible. If the weather is cold, a fire in the grate will be felt as a most welcome attention. Do not think it sufficient to ask, "Would you like a fire in your bedroom this evening?" Such an inquiry could hardly fail to have a chilling effect, and a negative reply would most probably be given. It is quite easy to judge whether the weather is sufficiently cold to make a fire an agreeable addition.

Pens, ink, paper, envelopes, matches and a few books and flowers, should find a place. Generally visitors bring their own writing-materials; but should these by chance be forgotten, it is pleasant for them to find that their wants have been anticipated. For the same reason, a properly-furnished work-box, with buttons, scissors, etc., should be provided, and especially if the visitor is a lady. It would be impossible to enumerate all these little conveniences, so much depending upon circumstances; but it is just these little things which have the most to do in making a visit an enjoyable one.

While visitors are with you do not, if anything occurs to annoy you, trouble them with the details of what has gone amiss. Such a course only tends to make them feel that they are putting you to some inconvenience.

On the other hand, the guest, perceiving something to be wrong, should abstain from making any remark upon it—should appear, indeed, not to have seen it. Equally reprehensible is it to suggest changes and alterations to the host—to criticize his taste or call his judgment into question. Or, if his children should be fractious or rude, it is out of place for the guest to remark upon it, or to find fault with what they say or do, if the parents do not see fit to interfere. There is a wide diversity of opinion upon some points as to what is agreeable or disagreeable—proper or improper. It may be said that all persons have their own particular ideas; and however much a guest might disapprove of what he saw or heard, it is bad taste for him to interfere in any way, or to attempt to effect a reformation; and any such interference would probably fail to effect any good result, and would almost certainly be resented—if silently. The proper course to pursue in such a case is for the visitor not to accept a second invitation to a house where he found the mode of life adopted by the inmates to be uncongenial to his taste.

From first to last a rigid observance of the law "bear and forbear," by host and guest, will be found essential to the preservation of harmony and enjoyment.—Correspondent.

OUTDOOR SAFETY.

THE fear of the weather has sent multitudes to to their graves, who otherwise might have lived in health many years longer. The fierce north wind and the furious snow-storm kill comparatively few, while hot winter rooms and crisping summer suns have countless hecatombs of human victims to attest their power. Except in localities where malignant miasmata prevail, and that only in warm weather, outdoor life is the healthiest and happiest, from the Tropics to the Poles.

The general fact speaks for itself, that persons who are out of doors most take cold least. In some parts of our country, near one half of our adult deaths are from diseases of the air-passages. These ailments arise from taking cold in some way or another; and surely the reader will take some interest in a subject which, by at least one chance out of four, his own life may be lost.

All colds we believe arise from one or two causes

1. By getting cool too quickly after exercise, either as to the whole body or any part of it.

2. By being chilled, and remaining so for a long time, from want of exercise.

To avoid colds from the former, we have only to go to a fire the moment the exercise ceases, in the Winter. If in the Summer, repair at once to a closed room, and there remain with the same clothing on, until cooled off.

To avoid colds from the latter cause, and these engender the most speedily fatal diseases, such as pleurisies, croup, and inflammation of the lungs, called pneumonia, we have only to compel ourselves to walk with sufficient vigor to keep off a feeling of chilliness. Attention to a precept contained in less than a dozen words would add twenty years to the average of civilized life.

Keep away chilliness by exercise; cool off slowly. Then you will never take cold, indoor or out.

THE CHARITY OF EXTRAVAGANCE.

Whenever the laboring men are out of employment they begin to hate the rich. They feel that the dwellers in palaces, the riders in carriages, the wearers of broadcloth, silk, and velvet, have in some way been robbing them. As a matter of fact the palace-builders are the friends of labor. The best form of charity is extravagance. When you give a man money, when you toss him a coin, although you get nothing, the man loses his manhood. To help others to help themselves is the only real charity. Whenever I see a splendid home, a palace, a magnificent pile, I think of the thousands who were fed, of the women and children clothed, of the firesides made happy.

A rich man, living up to his privileges, having the best house, the best furniture, the best horses, the finest grounds, the most beautiful flowers, the best clothes, the best food the best pictures, and all the books that he can afford, is a perpetual blessing. The prodigality of the rich is the providence of the poor. The extravagance of wealth makes it possible for the poor to save. The rich man who lives according to his means, who is extravagant in the best and highest sense, is not the enemy of labor. The miser who lives in a hovel, wears rags and hoards his gold, is a perpetual curse. He is like one who dams a river at its source.

The moment hard times come, the cry of economy is raised. The press, the platform and the pulpit unite in recommending economy to the rich. In consequence of this cry, the man of wealth discharges servants, sells his horses, allows his carriage to become a hen-roost, and after taking employment and food from as many as he can, congratulates himself that he has done his part toward restoring prosperity to the country.

WHAT "WIFE" MEANS.

Says Ruskin: What do you think the beautiful word "wife" comes from? It is the great word in which the English and Latin languages conquered the French and Greek. I hope the French will some day get a word for it instead of that *femme*. But what do you think it comes from? The great value of the Saxon words is that they mean something. Wife means "weaver." You must either be house wives or house moths, remember that. In the deep sense, you must either weave men's fortunes and embroider them, or feed upon and bring them to decay. Wherever a true wife comes, home is always around her. The stars may be over her head, the glow-worm in the nights cold grass may be the fire at her feet, but home is where she is, and for a noble woman it stretches far around her, better than houses ceiled with cedar or painted with vermilion—shedding its quiet light for those who else are homeless. This, I believe, is the woman's true place and power.

A SUN GLEAM.

After a Summer evening's shower how entrancing it is to behold the gorgeous embellishment the declining sun imparts to already lovely nature.

Then, the recent somber, dusty roads glisten like dark amber; and the tiny brooks are transformed into streams of purple wine. From every meadow-blade hangs a rich diamond, and a myriad of gems tip the tree leaves.

The wooded mountain-tops are magically beautified into masses of emerald; and if from the opaline clouds swings a rainbow, we think we have discovered where the flowers keep their colors stored!

Amid all this, the sweet evening anthem of the happy birds sounds through the fragrant air, and we, too, blend our thankfulness to the Great Giver of all goodness.

Home Adornment.—Nature is active in adorning her dominions; and man, to whom this beauty is addressed, should feel and obey the lesson. Let him, too, be industrious in adorning his domain—in making his home, the dwelling of his wife and children, nor only convenient and comfortable, but pleasant. Let him, as far as circumstances will admit, be industrious in surrounding it with pleasant objects: in decorating it, within and without, with things that tend to make it agreeable and attractive. Let industry make home the abode of neatness and order—a place which brings satisfaction to every inmate, and which in absence draws back the heart by the fond associations of content. Let this be done, and this sacred spot will become more surely the scene of cheerfulness and peace. Ye parents, who would have your children happy, be industrious to bring them up in the midst of a pleasant, a cheerful, and a happy home. Waste not your time in accumulating wealth for them, but plant in their minds and souls, in the way proposed, the seeds of virtue and prosperity.

Cheerfulness.—Carry the radiance of your soul in your face; let the world have the benefit of it. Let your cheerfulness be left for good, wherever you are, and let your smiles be scattered like sunbeams—"on the just as well as on the unjust." Such a disposition will yield you a rich reward, for its happy effects will come home to you and brighten your moments of thought. Smiles are the higher and better responses of nature to the emotion of the soul. Let the children have the benefit of them, these little ones who need the sunshine of the heart to educate them, and would find a level for their buoyant nature in the cheerful, loving faces of those who lead them. Let them not be kept from the middle aged, who need the encouragement they bring. Give your smiles also to the aged. They come to them like the quiet rain of summer, making fresh and verdant the long, weary path of life. Be gentle and indulgent to all, love the true, the beautiful, the just, the holy.

Every woman cannot be beautiful, but can be sweet-tempered; and a sweet temper gives a loveliness to the face more attractive, in the long run, than even beauty. Have a smile and kind word for all, and you will be soon more admired—nay, loved—than any mere beauty. A sweet temper is to the household what sunshine is to trees and flowers.

CORRESPONDENTS' CORNER.

If Bertha H.'s sister will send her address to us, we will forward it to Miss "M. D." who writes that she will give the information required concerning the games.

HINTS.

Brooms should always be hung up, and kerosene cans should always be set into an old tin dish which is past using for baking purposes.

To Clean Black Materials.—Take the article you wish to clean, on the side you intend to make up as the right side; brush well all the dust out of it; then take a piece of black flannel or an old black woolen stocking (it must always be black); dip it into cold coffee, and sponge well the material all over alike; then fold up each piece or breadth nice and even, and let it remain damp for three or four hours. Iron on the wrong side, and the old dusty, shabby dress will look just as fresh and bright as new. I have tried this receipt on black silk, paramtas, lusters and merinos, and consider it the best I have used. It neither streaks, deadens the gloss nor rots the material.

To Raise the Pile on Velvet.—When the pile is pressed down, cover a hot smoothing-iron with a wet cloth, and hold the velvet firmly over it; the vapor arising will raise the pile of the velvet with the assistance of a light whisk or clothes brush.

Scorched Linen.—Peel and slice two onions, extract the juice by pounding and squeezing; cut up half an ounce of fine white soap and add to the juice; two ounces of fuller's earth and a half pint of vinegar; boil all together; when cool spread over the scorched linen and let it dry on it; then wash and boil out the linen and the spots will disappear, unless burned so badly as to break the threads.

Be reserved, but not sour; grave, but not formal; bold, but not rash; humble, but not servile; patient, but not insensible; constant, but not obstinate; cheerful, but not light. Rather be sweet-tempered than familiar; familiar rather than intimate; and intimate with very few, and with those few upon good grounds.

To Clean Brass.—Salvers and flower pot vases in daily use, look better than new by always following the proper Algerian recipe, from a native of Tunis. Strew the salver over with sand, and squeeze some of the juice of half a lemon over it, sufficient to wet it, then rub round and round as hard as you can and for some time; carefully do the edge in the same way, and remember to be equally careful about the back, or else it becomes a mass of virdigris. Then wipe all the sand and lemon juice off with a clean rag or cloth, and squeeze some more lemon juice over the tray, rub it on, and then dry. Twice a week is necessary. This recipe should not be used on engraved trays.

The white wheaten loaves, considered so desirable, are by no means the most nutritious, as some of the most nourishing principles of the wheat are lost in the whitening process. By this process the flour is deprived to a great degree of its gluten and phosphate, both important elements of food. Whole meal flour has been offered to the public but its dark color has interfered with its sale. Bread made of such flour needs no yeast, as enough carbonic acid is evolved in its preparation to secure sufficient lightness of the dough. Some persons have supposed that a lack of the phosphates in the flour generally used by Americans was one of the causes of the defectiveness of the teeth so common in this country.

Exercise.—Exercise is a necessity; it prolongs life and greatly improves living; it better fits us for our duties; without it, we do not more than half live. He only who exercises sufficiently can know the joy of good health, good appetite, good digestion, refreshing sleep. It causes the blood to circulate quickly, freely and equally, and will drive away the blues. It increases respiration, thus bringing a larger quantity of elixir of life, oxygen, to purify and vitalize the blood. It rounds and hardens the muscles and educates them into every-ready, faithful and efficient servants of the will. It limbers the joints and strengthens every part of the body. It invigorates the mind and renders it active and efficient in all its operations.

Restoring Faded Flowers.—The majority of flowers begin to wither after being kept in water for 24 hours. A few may be revived by giving them fresh water with a pinch of saltpeter in it; and even quite withered flowers can be restored by placing them in a cup of boiling water deep enough to cover at least one-third of the stems. When the water has cooled the flowers should be bright and erect again. They may now be inserted in fresh cold water, after having shortened their stems by about an inch. Thin-petalled, white and light hued flowers, however, do not revive so completely under this treatment, as deep-hued thick-petalled blossoms.

Take Hop Bitters three times a day, and you will have no doctor bills to pay.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN THOUGHTS FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

"Economy!" I sighed as I said it: I am sure every one who has to practise it must be tired of the word. For the crops are garnered and average only one-third, a mid-winter thaw and subsequent frost having proved the ruin of the fruit buds in this warm valley, while those on more exposed situations were uninjured. The consequence is, that we have to live in the hope of a future that will give us better returns. "It is no fault of ours," I say to the children. "God giveth the increase, and we can but do our best." But the lesson is a hard one to learn, where the sons are steady workers almost to manhood, and the daughters of the house almost to woman's estate. So many wants and needs—food, dress, education, and the thousand other things that every housekeeper knows of. We are tempted to say, "How many idlers have to spare, and know not the need of *economy!*" Yet perhaps it is the very lesson we need, the best training our children can have, to teach them habits of carefulness in a too careless age, habits of saving among much waste. Who knows? the very thing we think so hard may be a blessing in disguise. Of course, we have plenty and to spare for a poorer neighbor, but we feel the necessity of inculcating habits of carefulness in a year when the crops are but one-third, and try therewith to be content. The children will be as healthy, the old garments will serve another season, the hearth-fire be just as bright, let us hope, and we will look forward to the Winter with cheerfulness and try many devices to make "ends meet." "Pay as you go and practise what you preach," is the best of mottoes—it ought to be engraved in every farmer's home, and taught by example to his children. So we are not to be down-hearted if times are hard. It will only teach us to exercise our ingenuity and look forward. I was delighted some years ago to see for myself that motto in Edward E. Hale's Sunday school, so often quoted, the last clause of which reads—

"Look forward and not backward
And lend a hand."

And among the many readers of the Rural there are those, I am sure, who need cheerful words of promise; who in their lives have to practice economy and deny themselves many things their hearts long for. But the lesson is not lost, and when times improve, or worldly goods come to us again plentiful and abundant, we shall feel able to appreciate them better for the years of self-denial, during which we have been called on to exercise economy.

DOMESTIC RECIPES.

For Burns or Scalds.

Varnish the wound with the white of an egg. The application of the egg is more soothing than sweet oil and cotton, the common remedy for burns.

Pickle for Curing Meat.

To five gallons of water allow eight pounds of salt, three pounds of sugar, three ounces of saltpeter, and two ounces of potash. Boil all together until the impurities from the sugar and salt rise to the top, skim, pour into a tub to cool and when cold pour over the meat. The meat should be killed at least 24 hours before packing and a very good way is to sprinkle with a little powdered saltpeter as soon as the meat is cut up—this removes surface blood.

Lard,

Leaf lard, skin carefully, wash, drain, cut into bits, put into a tin pail and set into a pot of boiling water. After melting, throw in a small quantity of salt to make the sediment settle, then *simmer* for half an hour or until clear. Strain through a coarse cloth into jars. Tie over bladders or paper and cloth, the latter dipped in melted grease. The other fatty portions, wash, drain, cut into bits and put into an iron kettle over a slow fire. Add a small teacupful of water, to prevent burning. When the bits of fat are reduced to fibers, take out with a skimmer. Watch constantly and toward the last stir constantly. The fire should be moderate from first to last. Sprinkle in a little salt, and when the fat looks clear, take from the fire and when cool enough, strain through a sieve or coarse cloth into jars. When straining lard, do not press the cloth as long as the clear fat will run through, and when you do squeeze it, strain that part into another jar. Lard keeps best in small quantities so it is well not to use over-large vessels. Keep closely covered in a cool, dark place.

Mary B.

Spiced Apple Pudding.

Three teacupfuls of bread crumbs, a pint of new milk, three teacupfuls of apples chopped fine, a teacupful of sugar, two well beaten eggs, a tablespoonful of ground cinnamon, a teaspoonful of mace, half a teaspoonful of ground cloves. Put the milk into a tin pudding dish, let come to a boil, stir in the bread and let soak before adding the other ingredients. Add the whipped whites the last thing. Bake 45 minutes. Eat with sauce. A. L.

Lemon Zest.

Rub loaf-sugar over the surface of lemons. The friction breaks the oil-ducts and the sugar absorbs the oil. Put into fruit jars in the lump or pound fine. Keep tightly corked. This is very fine for flavoring custards, creams, etc.

Coffee.

The best cup of coffee is made by using a mixture of two-thirds Java and one-third Mocha.

Delmonico is said to allow one and one-half pound of coffee to a gallon of water. The water is filtered through the coffee—it is not boiled.

Fried Mush.

This simple breakfast dish is much improved if the slices of mush are first dipped in beaten egg and then in cracker crumbs, frying in a mixture of lard and butter to a light brown. The meal should be thoroughly cooked and the mush allowed to become cold before slicing.

Cod-fish Balls.

Cut the cod into pieces, soak in luke-warm water for an hour or longer. Remove the bones and skin, shred, put over the fire in cold water. As soon as the water begins to bubble turn off and pour over cold water. As soon as it is hot it is done. While the fish is cooking make ready some mashed potatoes. Allow as much again potato as fish and mix together while both are hot—this last is particular. It does not make any difference if the balls are cold when fried, but they must be hot when the ingredients are put together.

Hop Bitters purifies the blood, and removes all pimples and eruptions.

Miscellaneous.

No Preparation on earth equals St. Jacobs Oil as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

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News of the Week.

HOME NEWS.

MONDAY, Nov. 1, 1880.

The Presidential election which takes place on the 2d, will be remarkable for being one of the most earnest and desperately contested elections in the history of the country. Also for the abandonment of the questions of State rights and sectional issues, and the adoption of vital questions relating to the internal development of the nation instead, and which promises to open one of the widest and most national fields of discussion yet brought before the people. The RURAL has carefully avoided any expression of opinion, in fact it has none whatever to express upon political questions. The material advancement of the nation, however, is one in which the farmers have a vital interest.... ....In the Vermont Legislature a long list of amendments to the State bankruptcy law was presented, making many important changes and including debts due persons out of the State in the general discharge. A bill was also introduced requiring that packages of oleomargarine be stamped, in letters one-half an inch long, "Oleomargarine;" and also that when retailed certificates stating the article to be oleomargarine must be given the purchasers. The fine for selling unbranded packages was placed at $100.....A man supposed to be R. P. Bull, a private detective, and formerly editor of the Democratic Press at Gainesville, Ark., has been murdered by an unknown man near Fort Worth, Texas. He was killed with an axe while asleep.....The will of the late Lydia Maria Childs gives $2,000 to the Hampton Agricultural College in Virginia, and distributes $9,000 more among half a dozen charitable institutions..... Owen Clancy, a teamster, was killed at Carrollton, N. Y., on the 27th, while unloading logs .....The steamer Trader, a small craft lying at her wharf at Memphis, was burned to the water's edge on the 27th.....The store and residence of Mrs. A. Burks, at Eagle Pass, Texas, was burned on the 25th. Loss, $10,000; insurance, $3,000.... An incendiary fire destroyed most of the business part of Augusta, Wis. The loss is $200,000.

There was turned out from the Grant Locomotive Works in Paterson, N. J., on the 25th, a new locomotive of peculiar construction, intended for the Pittsburg, Fort Wayne and Chicago Railroad. Eugene Fontaine, the inventor, claims that this locomotive can be made to go 90 miles an hour, while the machinery is run no faster than that of an ordinary locomotive traveling at the rate of 60 miles an hour. An incendiary fire in the factory of the Ansonia Clock Company at Brooklyn resulted in its total destruction, together with machinery and stock, involving a loss of nearly $1,000,000, upon which there was an insurance of $395,000. The insurance was divided between 95 companies, the policies varying from $2,500 to $10,000. The employes thus thrown out of work number 1,000. .....About a month ago Dr. P. H. Talbott, a prominent citizen of Maryville, Mo., and the editor of a Greenback paper published at that place, was shot through a window at his residence and killed while he was retiring for the night. On the 27th his son Albert was arrested for the murder, and Mrs. Talbott, the doctor's widow, and Ed. Talbott, another son, and a hired man named Weth have now been arrested as accomplices.....Patrick Dailey, a farmer living near Post Town, Butler county, N. Y., had a quarrel in a saloon at Middletown, where he was shot and instantly killed by Thomas Johnson, who escaped.....Hon. E. D. Mansfield died near Morrow, Ohio, at an advanced age. He has been widely known as a political and general writer for the Cincinnati and New York papers, over the signatures of "E. D. M." and "Veteran Observer."

John Duff, an eminent railroad contractor, especially distinguished as the builder of the Hannibal and St. Joseph and the Union Pacific Railroads, died at Jamaica Plain, Mass., of pneumonia. He leaves property estimated at $4,000,000 in value.... ....Michael Hendricks, said to be a nephew of Governor Hendricks, of Indiana, has been murdered near Leadville, Col. The guilty parties are said to be two McCallum brothers, as young Hendricks had been tried for and acquitted of the murder of their brother.....Mrs. Meaker, who, with her son, Almon, is in jail at Montpelier, Vt., under an indictment for killing little Alice Meaker, her husband's half sister, at Waterbury last spring, made a desperate and nearly successful attempt to burn the jail. She set fire to her cell, but the flames were discovered in time to prevent any serious damage.....Frank Allison, a merchant of Woodland, Carroll county, Va., had for some time suspected his partner in business, a young man named Hawks, of criminal intimacy with Mrs. Allison. He left home on the 28th, but unexpectedly returned at night and caught the guilty pair together, whereupon he shot and instantly killed Hawks, and then shot his wife in the breast and abdomen, inflicting fatal wounds. Hawks was 25 years old and Mrs. Allison was 33. Mr. Allison surrendered himself, leaving the dead and dying where he had shot them down. All the parties are well connected.....At Delphos, Ohio, on the 27th, Ella Salinde, eight years old, fell into a fireplace while putting on fuel and was burned to death..... Robert F. Johnson, for 25 years Editor of the Michigan Farmer, and widely known throughout the State died suddenly at Detroit on the 26th, it is supposed of heart disease..... John V. Farwell, senior partner of the firm of Farwell & Co., of Chicago, has filed a suit for libel against the Daily News for $50,000. The libel is understood to consist in an article reviewing the early history of Mr, Farwell's business life.....

H. T. Moore, an old citizen of Clayton county was killed on the 29th, near Jonesboro, Ga., by Thomas Betts, colored, in a dispute about the proceeds of a sale of cotton. Betts was arrested.... ....Mrs. Lincoln, the widow of President Lincoln, arrived from Europe on the 28th.....Lewis Green, colored, who had just sold his cotton at Giddings, Texas, was fatally shot and robbed by highwayman on the 28th .....The case of James B. Doyle, who was arrested by the Government officials at Chicago, with $204,000 in counterfeit United States bonds in his possession, came up before Commissioner Hoyne. Doyle waived an examination and held for trial in $30,000 bail.... ....At Little Rock, Ark., on the 29th, Jackson Greene was found guilty of murder in the first degree in killing Benjamin Borland on the 29th.... ....The lumber yard of J. T. Rodgers & Co., at Peoria, Ill., was burned by an incendiary fire. Loss, $30,000. Insurance, $16,000.

Unusual interest is taken in the selection of a site for the World's Fair to be held at New York in 1883, and the committee on sites has visited and examined all the proposed places and is now hearing arguments in favor of each, a decision is expected in a few days.

Two deaths from hydrophobia occurred on the 25th, Mrs. Kirby at Franklin, Ky., who had been bitten by a puppy last Summer, and Mrs. Augusta Schuler, a German woman residing at Addison, Ill. She was bitten by a mad dog about ten months ago, and on Sunday last symptoms of hydrophobia began to manifest themselves. She died in frightful paroxysms. She was over 40 years old and weighed about 220 pounds. The mad dog and about 15 other dogs which it had bitten were killed at that time.....The Chicago Tribune publishes a record of the ravages of the great storm of Oct. 16 on the lakes, showing that upward of $500,000 damage was done to vessels and cargoes, and that 93 persons perished. There were 17 total wrecks, involving a loss of $153,900, and in all 66 vessels were damaged to a greater or less extent.....The boiler of Jasper Smith's steam mill at Warrenton, Ala., exploded on the 27th, killing a man and a boy and seriously injuring several other persons, one of whom had his right leg torn completely off. The mill and a cotton gin were blown to pieces.... ....A fire occurred on the 28th in the three-story brick building on the corner of Howard and Lexington Streets, Baltimore. The loss is estimated at $25,000; insured principally in home offices.... ....A fire occurred at Bridgewater, Penn., on the 28th, destroying one frame and one brick dwelling. Mrs. Hempshill, 80 years of age, who was too feeble to help herself, perished in the flames. Two little boys, who were in the habit of carrying coal for the old lady, are also missing and are supposed to have perished.

Nov., 25th has been designated as a day of thanksgiving and prayer by the president..... Joseph B. Dixon editor of the Homer (N.Y.) Republican, was on the 29, run over on the railroad and was killed... ....Peter Wright, colored, was hanged at Liberty, Pa., for the murder of Robert M. Maupin, white, in June, 1879.....Deputy Sheriff George Heber was shot and instantly killed by Sylvester Merritt, at Sturgis, City, Col., on the 27th. Heber was the aggressor, and the killing was in self-defence.....William B. Spooner, formely a prominent merchant of Boston, died on the 29th aged 74. His charities are said to reach $700,000 notwithstanding which, and the loss of $150,000 by the great fire of 1872, he leaves a large estate to his widow and relatives.... ... The rotary bleacher and boiler in the G. and G. A. Robertson paper mill at Hinsdale, N. Y., burst on the 29th. The mill was completely ruined. Loss, about $200,000. Elbridge G. Blackmore was killed and George Leland and Frederick Fields were seriously injured.

The Chief of the Bureau of Statistics presents in his quarterly report for the last quarter of the year ended June 30, 1880, just issued, a statement showing the immigration into the United States during that period, from which we learn that the total number of immigrants was 457,257, of which there were from Great Britain and Ireland, 114,876; Germany, 84,638; Sweden, 39,186; Norway, 19,895; Austria, 12,904; Italy, 12,327; Denmark, 6,576; Switzerland, 6,156; Russia, 4,854; Hungary, 4,363; France, 4,313; Netherlands, 3,340; Poland, 2,177; British North American Provinces, 99,706 ... ... An early Winter and a very cold one, with a very heavy snow-fall, is predicted; the better for the springs and next season's crops.

A significant sign of the growing prosperity of this continent is to be found in the fact that it seems almost impossible to supply the demand for labor on the part of the Southern railroad companies. Application for large working forces are constantly received at Castle Garden, and quite a large number of immigrants are now being sent South, instead of being directed to the mining districts of the West .....The Southern Pacific will reach El Paso in a few days, and the line between San Antonio and that point is being run, while conferences of railroad officials at San Antonio look as if the Southern road were an assured fact.....Several flouring mills at Sherman, Texas, are to be converted into woolen and cotton mills. The uncertainty of the wheat crop in that locality, and the better chances for cotton and wool are the sufficient reasons for the change. .....The Gulf, Colorado and Santa Fe road is making over one mile per day laying track near Cameron. They are working about 200 hands at that point, and the bridge is now nearly completed. .....The Brazos division of the Texas and Pacific railway, with headquarters in Dallas, was formally opened on the 25th ult.

A sugar factory at Leavenworth, Kansas, was burned on the 29th. Loss, $75,000.....R. M. Mattison's flour mill at Fairbank, Minn., was burned on the 29th. Loss, $20,000.....Exports from Canada during September were $11,316,537; imports, $8,244,122, and duties, $167,504 .....Monumental cotton press, Union Dock, Baltimore, was burned on the 30th. Loss, $40,000, besides a quantity of cotton.....,The Tontine States at New Haven, Conn., were burned on the 31st.....Imports of merchandise into this country during september amounted to $93,200,000, against $44,200,000 same time in 1879. Exports for September of this year were $71,200,000 and last year $65,400,000. Increase of imports was 23½ per cent., and nine per cent. for exports. Imports of gold and silver for September were $19,700,000 and $28,400,000 last year. During the last nine months exports of merchandise have exceeded imports by $73,800,000..... Montana and Dakota are now reported free from Indian troubles, Sitting Bull and the leaders of the Sioux having surrendered to General Miles..... A serious Chinese riot is reported in Denver, Col., in which several persons were killed.....The residents of northern Michigan do not wish to have the deer exterminated. At the opening of the present season they advertised that hunters would not be welcome, and would probably lose their dogs if they came. Their request is disregarded, and the mortality among the dogs by reason of poison is greater than among the deer.

A short time since, while Wilmot Armstrong was building a dam near one of his camps in the vicinity of Trout Isle, Michigan, one of his men found a stone pipe, buried two feet under a cedar tree. The workmanship on it was said to be fine. The top of the bowl has a rim of brass, and the bowl has been cut into near the entrance of the pipe-stem, and a piece of brass fitted into it and from it to the stem, and rivited with brass rivets. .....Citizens of Fargo, Dakota are disposed to resist the payment of bonds voted to the Northern Pacific railroad, alleging that while the company has built the shops, as stipulated, it has not entirely fulfilled its part of the contract.....In digging a well at Plankinton, Dakota, last week, the workmen found a beautiful sea shell at the depth of eighty-six feet, and several well-preserved pieces of timber at 100 feet below the surface.... ....The annual product of the woolen manufactories of the United States is estimated at $288,329,000, and the dairy products at $350,000,000. Butter being an excess of consumption, the balance has to seek a foreign market, while the production of wool being far below our consumption, we are annually importing large quantities.

Wolves are committing serious depredations in Otter Tail and Jackson counties, Minn. John Dolan, of Kimball, who had a flock of over a hundred sheep, lost so many by the wolves that he felt compelled to sell the rest.....Business in Atchison, Kansas, has reached a pitch of prosperity never known before. Last year there were seven brick yards, and this year nine brick yards cannot supply the demand.....Near Fair Haven, Stearns county, Minn., some days since, a man while working around a home-made sorghum mill was caught by the "sweep," to which a yoke of cattle was attached, and had his head crushed against a stick of upright timber. He fell dead instantly..... A Stillwater, Minn., lumber firm have already sent a large number of men, besides 140 horses and 50 oxen, to their various lumber camps. The firm expect to get out about 45,500,000 feet of logs this Winter. Their last Winter's crop was 27,000,000.

[Logansport, (Ind.) Daily Journal.]

I sell more of St. Jacobs Oil remarked Mr. D. E. Pryor, 112 E. Broadway, to our reporter, than of any other article of its kind, and I consider it the best liniment in use. It has to my own knowledge cured severe cases of rheumatism in this community.

FOREIGN.

Affairs in Ireland are fast coming to a crisis, and rebellion or revolution, leaving the background, is coming rapidly to the front. The government has prepared indictments against half a dozen leaders of the Land League, having abandoned the wholesale prosecution it was at first reported it contemplated. The head and front of the agitation is Parnell, against whom political wrath is hottest. Less of an orator than O'Connell, he is more of a revolutionist, and the question of the hour is whether he will submit quietly to prosecution or raise his followers. Monstrous mass meetings are still being held here and there among the farmers, but up in Protestant Ulster counter-meetings begin to be held, by the Orangemen chiefly. Threats and occasional outrages are still the order of the day. Never have the peasantry throughout the island been so thoroughly armed, while a large part of them have been drilled considerably by night, chiefly by ex-soldiers from this country. In England public opinion strongly favors prompt coercive measures; and in case of rebellion the movement is sure to be suppressed promptly, but the "Irish Question" will still remain to be settled—and to that question the attention of the whole world has now been forcibly attracted.

Great Britain's position just now is not a comfortable one. While bent sternly upon suppressing Irish revolt with a strong, aye, and a cruel hand, she has for years been encouraging revolt in every country in Europe. While on the alert to go to war to keep down the Celts at her own doors she seems resolved to go to war to free the Slavs under the Turkish yoke, and away in Afghanistan her efforts to subjugate the natives seem futile, for by last reports the whole country was once more in a state of anarchy, Abdurrhaman Khan, having been killed at Cabool, and all the tribes having once more taken up arms. There is some comfort in the lack of confirmation of this news, since, if true, either Afghanistan must be reconquered, or the British must withdraw and suffer a serious loss of prestige not in India alone but throughout all Asia and elsewhere. Fresh troubles have broken out in South Africa, too. No sooner have the Zulus then been conquered than the Basutos have burst into revolt, killed a number of magistrates and missionaries and threaten the colonists. Owing to the vast extant of the British Empire, not a year passes without war and its horrors devastating some part of it.

There are rumors that the Tzar is dead—poisoned, it is said, by the Nihilists. The reports are contradicted, however, but it is said he is very sick and may die at any moment. Gen. Loris Melikoff, chief of the Russian executive government, who has lately been at Lividia with the Tzar, has returned to St. Petersburgh, having obtained authority to begin a large number of reforms in the administration, among which is a great deal more freedom for the press. Meanwhile, the condition of the Russian peasantry is said to be growing more deplorable every day, what with heavy taxes, short crops, widespread drunkenness and general demoralization.

Dulcigno was to been have surrendered two weeks ago; it is not surrendered yet. Those Turks beat the world in procrastination. It's excellent diplomacy, however, for by their manœuvering they have already put an end to the concert between the Powers, dispersed the fleet that was to make a demonstration against them and so wearied the world with their promises and want of faith that folks are getting disgusted with the whole thing. If it costs so much trouble to obtain the surrender of the miserable little village of Dulcigno to the Montenegrins, whose claim to it is pretty strong, how much more will it cost to force a cession of the very much larger territory demanded by Greece for much less valid reasons? In fact, England and Russia alone, still "stick up" for the Hellenic claim. There is a better prospect just now that the Montenegrins will be soon satisfied. Riza Pasha, who has hitherto delayed matters in that quarter, has just been replaced by Dervich Pasha who is authorized to arrest the Albanian chiefs who resist the cession of the town and to send them on board a Turkish man-of-war. About 10,000 Turkish troops are being concentrated at Dulcigno to effect its surrender—but it seems to us it will be some time yet before this is done, unless Great Britain and Russia insist peremptorily on it, and back up their demand by actual force.

In France, the commotion about the government's harsh treatment of the religious orders is increasing in bitterness and extent. Even in this country the summary expulsion of the few assemblies of Catholic religious orders, scarcely known to the general public, would cause some excitement, how much more in France where monasteries and houses of these orders are much more numerous, while the members are known in every corner of the country, and control a large share of the schools and seminaries. Unlike the Jesuits who submitted quietly, the two religious societies whose members have been driven from their homes during the past two weeks, barracaded their dwellings against the police who had to expel the recusants by force every time. This, of course, intensified the public excitement. The government, however, seems firmly resolved to carry out the anti-clerical decrees, and refuses to receive any petitions against them.

The Earl of Beaconsfield is suffering from gout in the tongue.....Heavy rains continue in England. Floods are reported from various parts of the country. A portion of the railway between Dublin and Wicklow is washed away. Incoming vessels report terrific weather on the Atlantic during the past few days. .....It is said that Kurds are firing into the town of Urumiyah, northern Persia. The town of Khoi, in the same province, is also threatened by them. Another body of barbarians destroyed Mahmudjet, two miles from Fainkaleh. Reinforcements of Persian troops are on the way to Teheran, and are a week's journey from Sainkaleh.....The text of the speech of the king of Greece at the opening of the chamber of deputies, the 21st inst., shows it was much more moderate and restrained in tone than appeared from the telegraphic summary. The king represents the necessity of maintaining an army on a war footing, rather as an obligation entailing heavy charges than as a menace of immediate action.

Mr. George Knoehr after having tried all remedies recommended to him for Rheumatism, received no relief until he tried the St. Jacobs Oil, the first application of which gave him relief, and the continued use cured him.

AGRICULTURAL NEWS.

Of the disposals of public land during the twelve months ending June 30, 1880, there were homestead entries, 6,045,570 acres; timber-culture entries, 2,193,184 acres; cash entries, 850,740 acres, total area of public lands surveyed since the beginning of the surveying operations until the date above given, is 752,557,195 acres, leaving still unsurveyed an estimated area of 1,062,231,727 acres. It is estimated that 1,500,000 baskets are used in the South for harvesting a crop of cotton. These are made of oak splits and generally last but one year. They cost the planters about $2,000,000. At a recent brewers' exhibition in England, good beer was shown brewed from maize and rice. The probability of American maize supplanting English barley is suggested.....The president of the Massachusetts agricultural college, Levi Stockbridge, has accepted the congressional nomination of the Greenbackers in the 10th district of Mass.....The wool clip of the world has increased five times since 1830, when it was about 320,000,000 pounds in weight, in 1878—the latest year for which there are complete figures—Europe produced 740,000,000, River Platte 240,000,000, United States 208,000,000, Australia 350,000,000 and South Africa 48,000,000 pounds, making a total of 1,586,000,000 pounds. Great Britain and France consume each about the same quantity of wool—380,000,000 pounds a year. Germany consumes about 165,000,000 pounds; United States 250,000,000 pounds; and Russia, Austria and other countries, 400,000,000 pounds.....

It will cost the cotton planters about $40,000,000 to market their crop this year, of which $25,000,000 will go into the pockets of colored laborers, many of whom are women and children.....The quality of sorghum juice grown in Western Kansas is superior, owing to the long and sunny season. A very extensive sorghum and sugar factory has just been put in operation near Larned. The owner has 700 acres of sorghum, which will give employment to a large number of hands.

Columbus, Miss., with a population of 7,000, offers $2,000 to have the next exhibition of the Mississippi Valley Horticultural Society held here. ..... Iowa's standing among her sister States is

said to be as follows: first in corn, second in hogs, and third in wheat.....The raising of horses in the great Yellowstone Valley has become an important and profitable business. Some of the herders have from 500 to 1,500 each, and dispose of their three-year-old colts at from $50 to $100 per head. The animals feed on grass alone, and the only shelter from the weather is roughly built sheds.

Butter-Making in July and August.

Butter-making can be carried on in hot weather as successfully as in June by using the Gilt-Edge Butter-Maker. It reduces time of churning one-half, increases production six to ten per cent. Storekeepers pay three to five cents a pound extra for butter made with it. Sold by druggists, grocers and general storekeepers. Send stamp for "Hints to Butter-Makers" Address, Butter Improvement Co., Buffalo, N. Y.

OUAQUAGA DAIRY, SUSQUEHANNA VALLEY, N. Y., May, 28, 1879.

BUTTER IMPROVEMENT CO., Buffalo, N. Y.:

Gentlemen—Please accept a sample of butter made from "hay-fed" cows and with the use of your Gilt-Edge Butter-Maker; without its use the butter made was almost as white as lard, while with its use (as you will observe from the sample sent you) the butter is of a very beautiful, even golden color leaving nothing to be desired in that direction. Several of my neighbors, dairy farmers, have tried your powder and are loud in its praise. It passes in market as "creamery butter" and is worth from three to five cents per pound more than dairy butter. H. C. BRYANT.

Let the poor sufferers from female complaints take courage and rejoice that a painless remedy has been found. We refer to LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It is prepared at 233 Western Avenue, Lynn, Mass. Send to Mrs. Pinkham for pamphlets. Sold by druggists.

Tropic Fruit Laxative, an agreeable substitute for pills and nauseous purgatives. One lozenge is the dose. Physicians prescribe it. Sold by druggists.

We know that there is nothing on earth equal to Hop Bitters as a family medicine.

Industrial Notes.

Improvements have been made in nearly every branch of manufactures during the past few years, but in none, perhaps, to a greater extent than in that of salt. The invention of Thomas Higgin, of Cheshire, England, some four years ago, marked a new era in this industry, and it is considered that this process will work as great a revolution in the salt trade as the discovery of the Bessemer process has in that of steel. As an illustration of how quick Americans are to appreciate an improved article, the annual imports of the new-process-salt have increased in four years from 6,000 to 90,000 sacks.—American Grocer.

The constantly increasing sale of BURNETT'S COCOAINE, confirms the opinion of the best judges, that it is equal, if not superior, to any domestic or foreign. It also received the highest award at the Centennial Exhibition.

The Markets.

SPECIALS FROM THE CHIEF CENTERS

Until Saturday, Oct. 30.

Boston.—BUTTER.—Prices not improved, and except for fine grades they are more or less nominal. Northern, choice creamery 30@32c. per pound; choice New York dairy, 27@28c; choice Vermont 28@30; long dairies 22@24c; common 16@18c. Western choice creameries 29@32c; fair to good 26@28c; dairy-packed 20@25c; choice ladle-packed 19@22c; common 16@18c. CHEESE. Prices are firm, and we quote at 13@13½c. for good, and 11@11½c. for fair lots, but not many cheeses are offered below 12c. Northern factory, fine 13@13½c; western factory, fine 12½@13c; fair to good 11@12c; common 8@10. Vegetable and Domestic Fruit. POTATOES.—Prices remain at 40@45c. for white stock, and 50@55c. for Rose, the latter price for Houlton. Sweet potatoes are firm at $2 for prime ones, and $1.50 for culls and stock in fair condition. There are not many native onions offering, and the market is supplied mainly with New York State, which range from $3@3.25 per bbl. There is a good shipping business for apples, although it is not so brisk as a few weeks ago. Grapes are plenty at 3c. for Isabellas and 5@6c. for Catawbas. There is a good supply of cranberries, and prices range from $3@4.50 for country berries, and $5@6 for Cape. Quinces are dull at $2@5 per bbl. There is a fair supply of chestnuts that sell from $2.50@2.75 per bushel.

Chicago—WHEAT active, firm; No. 2 Red Winter, $1.02¼; No 2 Chicago Spring, $1.01⅝@1.01⅞, cash; $1.02. November; $1.03⅛, December; No. 3 Chicago Spring, 91½@93c.; Rejected, 74@76c. CORN active, 39½@39⅝c., November; 40¼c., December; 45⅜c., May. OATS dull, 28⅜@28⅝c., cash; 29c., November; 30½c., December. BARLEY easy at 85@90c. PORK unsettled; $18.50 cash; $12@$12.15, November; $12.12½, December; $13 50 bid, January. Lard active, and firm, and higher; $8 05@8.07½, cash; $8.02½@8.05, November; $8 asked, December; $9 bid, January. Bulkmeats moderately active and higher; Shoulders, $5.70; Short Rib, $7.45; Short Clear, $7.60.

BUTTER—Fine goods were not very plentiful and were held with confidence, but low and medium grades were easy. Creamery, 27@30; Dairy, choice, 24@25; Dairy, fair to good, 22@23; Ladle packed, 17@20; Packing stock, 13@15; Grease, 8@10. CHEESE—Full cream, September, 12¾@13¼; Full cream, August, 12@12½; Part skim, September flat, 11½@12; Part skim, July and August, 10@11; Full skim, 8@10; Low grades, 6@8. HOGS active; good, scarce; common to good mixed packing, $4.40@4.60; choice heavy, $4.70@4.85; light, $4.50@4.70, closing strong at 10c. higher. CATTLE—good to choice shipping, $4.60@5.15; common to medium, $3.80@4.25; butchers' steady at $2@2.90; feeders, $3@3.50; Westerns strong; half-breeds and natives, $3.25@3.50; Texans, $3@3.20; through Texans, $2.90@3.10.

Cincinnati.—WHEAT scarce and firm; No. 2 Amber, $1.02; No. 2 Red Winter, $1.00. CORN—Demand fair and market firm; No. 2 Mixed, 43½c; New ear, 35c. OATS dull and lower; No. 2 Mixed, 31c. RYE in fair demand; No. 2, 90c. BARLEY in fair demand; No. 2 Fall, 90c. PORK quiet; jobbing lots, $15; 500 bbls. at $20. LARD stronger, $8,05@$8.10. Bulk-meats quiet; Clear Rib, 7¼c. Bacon in fair demand; Shoulders, 5¼c; Clear Rib, 8¼c; Clear Sides, 8½c. BUTTER—Fancy Creamery sells at 30@31c, and prime at 27@28c, choice Dairy at 23@25c, choice Western Reserve at 23@25c, prime to choice Central Ohio at 18@22c, common at 15@16c and inferior at 10@13c ₩ lb. CHEESE—There has been a moderate demand and a steady market with prices closing firm for choice mild factory at 13@13½c ₩ lb, and some good to prime but rather sharp do. sells at 12@12½c.

St. Louis, Mo.—WHEAT firm; No. 2 Red Fall, $1@1 00⅝, cash; $1 00½@1 00⅝, November; $1 03¼@1 04⅛, December; $1 05¾@1 06¼, January; No. 3 do, 93@93½c; No. 4 do, 88@88½c. CORN lower at opening, but advanced to 38⅜@39½c. cash; 38¼c. October; 39½@39⅝c. November; 39¾@39¾c. December; 39⅝@39⅞c. January; 43⅛@44c. May. OATS slow at 29⅜@29½c. cash; 29⅝@29¼c. November; 30¼c. December. RYE firm at 83½c. BARLEY steady at 90@95c. PORK lower at $14 for new. Lard nominally 7¾c. Bulkmeats steady and unchanged; Bacon firmer; Shoulders, 5½c; Clear Rib, $8 70@8 75; Clear Sides, $9 05@9 15. BUTTER: Choice grades in steady local demand and firm; near-by country make in pails sells fairly, but other descriptions quiet and weak in price. Creamery, 29@31c.—latter for selections; Dairy, selected, 25@26c; prime, 18@20c.; medium, 13@16c.; common, 12@13½c.; country in pails sells fairly at 11@12c. for ordinary to 15@17c. for sweet yellow, and in rolls at 14@16c.; choice Northern roll at 18@20c. CHEESE easy; full cream, 13@14c.; part skims, at 11c. for fair to 12@12½c. for prime mild; poor and skims, 4@8c. GRASS SEEDS unchanged; offerings light and of small and poor lots. Red-top at 40c. for poor to 47½c. for prime; Timothy at $2 25@2 35—latter for prime in car lots; clover at $4 55@4 60; Hungarian and millet nominal, prime of each at 50@52½c. Sales, 50 sks. Hungarian at 45c., 41 red-top at 42c. East track, 20 trashy timothy at $2 20. Flaxseed steady, with sales of three cars at $1 18 on basis of pure and one car on p. t. Hogs steady; Yorkers and Baltimores, $4 50@4 60½; mixed packing, $4 40@4 50; butchers' to fancy, $4 50@4 65.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Oct. 30, 1880.

BEANS AND PEAS.—The demand for beans is steady at good, full prices for new. Old in fair demand when prime. Choice green peas scarce and firm; new quoted at $1 90@1 95 for prime Wisconsin Southern B. E. peas a shade stronger; $1 50@1.85 per ⅞ bush. bag,

Marrow beans, new, $1.75; old, $1.52@1.65; medium, new, $1.50@1 55; old, $1.35@1.40; pea, new, $1.55@1.75; W. kidney, new, $1.65@1.80; red kidney, new, $1.40@1.70; black, or turtle soup, 1.55@1.60. California sends 3,000 bags beans this week.

BEESWAX.—Trading is moderate, with Western and South-rn quoted at 23½@24½c. Exports for week, 12 500 lbs.; since Jan. 1st, 80,000 do.; same time last year, 85,800 do.

BUTTER.—The market has the unpleasant phase of a one-sided demand. All buyers of State expect some Fall-fair red grade, when they pay above 24c. for tubs or pails. Under grade creamery closes with other packages. Fortunately the offering now includes a better showing of nice useful table stock and most of the small buyers—and small buying is the rule as yet—can be accommodated without sellers being compelled to resort to the bad practice of breaking into fine dairies. Fine creamery holds up to the last rates as there is no surplus of choice. As before medium butter has to take its chance with perfect oleomargarine. Manufacturers of that product seem delighted with the stubborn holding views that have prevailed among farmers of late. Western also helps substitutes, as it rules too high for the common use of cheap retailing prices and much of the market trade. Welsh tubs are scarce and wanted. Exporters have bid 24c. for firkins and the full rate for best Welsh, good to prime factory fill all present wants of Western for export use.

Creamery, fine State and Western, 31@32c.; good to prime, 28@31c.; poor to fair, 23@26c.; sweet cream, 24@29c.; State entire dairies, choice, 25@26c.; other, 23@24c.; firkins, fair to choice, 21@25c.; State pails and half tubs, fine fresh, 28c.; good to prime, 26@27c.; fair to good, 24@26c.; poor, 21@23c.; Welsh tubs, fine fresh, 27@28c.; poor to good, 20@25c.; Welsh tubs, fine, fresh, 27@28c.; poor to good, 20@26c.; do. dairy, fresh, 23@25c.; poor to good, 16@21c.; factory, June, 17@19c.; current make 19@20c., poor to good, 15@18c.

Receipts for week, 29,310 pkgs.; exports do., 6,950 pkgs.

CHEESE.—The arrivals have been larger, the demand quieter on account of tame foreign advices, and prices easier. Shipments for the week 33,900 boxes. Quotations are for

State factory, fancy, at 13c.; do. good and prime, 12½@12¾c.; do. fair to good, at 11@12c.; do. part skimmed, 9@10½c.; Wisconsin factory, fine, 12½@12¾c., do. good to prime, 12@12½c.; do. fair to good, 10½@12c.; Ohio factory, fine, 12½@13c.; do. good to prime, 11½@12c.; do. flat, fair to good, 10@11½c.; do. poor to fair, 7@10c.

Receipts for week, 67,571 boxes.
Exports for the week, 33,900 boxes.
Liverpool cable, 63s. 6d.
Steam to Gt. Britain, 35@36s.

COTTON.—Export demand has been good and prices closed firm. Latest prices are for

October at 10.36@10.38c.; November at 10.61c.; December at 10.81c.; January at 10.92@10.93c.; February at 11.06@11.07c.; March at 11.21@11.22c.; April at 11.36@11.37c.; May, 11.50@11.51c.; June at 11.63@1165c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8 1-16	8 1-16	8 1-16
Strict ordinary	8 11-16	8 13-16	8 13-16
Good ordinary	9 11-16	9 13-16	9 13-16
Strict good do	10 1-16	10 3-16	10 3-16
Low middling	10 9 16	10 13-16	10 13-16
Strict low middling	10 13-16	11 1-16	11 1-16
Middling	11 1-16	11 5 16	11 5-16
Good middling	11 7-16	11 11-26	11 11-16
Strict good middling	11 11-16	11 15-16	11 15-16
Middling fair	12 3-16	12 7 16	12 7-16
Fair	12 13-16	13 1-16	13 1-16

STAINED.

Good ordinary	7⅞	Low middling	9⅛
Strict good ordinary	8⅝	Middling	10⅜

Receipts for week, 37 205 bales. Exports do., 13,352 bales.; do. since Jan., 546,152; do. last year, 536,625.

DRIED FRUITS.—The market has been quiet and showing little or no important change.

Apples 7@8c., for evaporated, prime, and 6½@7c., for fair do with Carolina sliced at 5@6c. for good to prime; Virginia and Tennessee 5¾@6½c. Peaches at 27@28c. for evaporated peeled; 11c. for unpeeled do; peeled peaches at 18@20c; unpeeled do. 6½c. for halves. Blackberries at 7½@8c. Cherries at 17½.8c. Raspberries at 25@26c.

Exports for week, 2,220 bbls. of dried apples.
Receipts for week, all kinds, 2 500 pkgs.

EGGS.—Receipts for the week, 10,350 bbls.; do last week, 7,000 do. Limed stock adds to the receipt, but the supply of fresh is not above the wants of trade and prices are firm and high. State and New Jersey very scarce.

Near points 26@27c.; State and Pa. 24@25; Western and Canadian, fresh, 23c.; second grades, 21@22c. State limed 18@18½c.; Western 17@17½c.

FLOUR.—Trade has been active and prices strong. Latest quotations are: $5.00@4.25 for very inferior to very fancy superfine State and Western; $4.25@4 50 for poor to choice extra State and Western, and lots and lines; $4.50@4 70 for choice to fancy do.; very inferior to good white wheat, trade and family extras, $4.85@5.65 good to choice do. at $5.05@6.35, (very choice to very fancy do. at $6.35@6.65;) red and amber winter wheat inferior to choice trade and family at $4.70@5 25; round hoop Ohio, $4.65@5.15; and trade and family brands of do. at $5.25@6.35; St. Louis at $4.90@5.85 for inferior to good extra; $5.85@6.35 for good to choice (and $6.35@6.75 for choice to very fancy brands); Minnesota clear, inferior to fancy at $4.20@6.50; Minnesota "straight," poor to fancy, at $5 75@7.15, and patent inferior to very fancy at $5.75@8.75; unsound stock at from $2 50@5.00; city mill extra at $5.50@5.85 for ordinary to fancy for the West Indies; do. for England, $4.25@4.65 for poor to choice spring wheat, and $4.85@5.40 for winter wheat product; do. trade and family extras, $5.60@7.00; do. for South America, $5.70@6.50; No. 2 at $2.75@3.75 for very poor to very choice; fancy brands held higher.

Receipts for week, flour, bbls. 118,665; corn meal, do. 3,400; wheat, bush. 2,262,000; corn, do. 2,187,100; oats do. 433,800; rye, do. 60,000; malt, do. 31,520; barley, do. 205,950; beans, do. 7,181; rice, pkgs. 2,425.

Exports for the week, flour, bbls., 61,700; corn meal, do. 2,500 wheat, bush. 1,328,900; corn, do. 1,290,350; oats, do., 2,500; peas, do. 2,086; beans, do. 846; rice, 237.

CORN MEAL.—Sales at $3 40 for Brandywine, and $3.65@3 for yellow Western.

FRESH FRUITS.—Exports of apples for week 33,850 bbls.; since Jan. '80 318,400 do.; same time last year 133 3'0 do. showing a large gain for '80. Supplies of Winter stock are liberal and the home demand is improving. Prices steady but no higher.

Western N. Y. mixed lots, $1.12@1.37; Fall pippins $1.37@1.50; Baldwins shipping order, $1 25@1.50; Greenings, $1@1.25. Spitzenbergs $1.37@1.50; Kings, $1.25@1.50; open heads, 50@75c. Cranberries show more activity and better prices for prime hard capes. Cape Cod, fancy, $5.75@6; good to choice, $4.50@5.50; poor to fair $3.50@4; do. boxes, $1.75@2; N. J., do. $1.25@1.75. Quinces low; quality not extra; barrels range $1@2.50. Boston pears fancy per box $4@5; fair to good $2@3; Duchess, in bbls. $6@8; Lawrence, $1@5; Beurre d'Anjou, $6@8; Vicars, $3@5. Grapes quiet but firm. Catawbas cases of 18 lb. $2.75@3; baskets 5@6c.; Concords cases $2,50@2.75; bulk and baskets 4½@5c.; Isabella 3@4c.; California pears now have a place at $3@5 per case. Cal. Tokay grapes $6@8 per case of 40 lbs. Peanuts dull and lower: Va. hand-picked per lb 4¾c.; extra prime, 4c.; good to prime, 3½@3¾c.; shelled, 5@5½c. Hickory nuts, bu. of 50 lbs. $2.25@2.50.; chestnuts, $2@3.

GRAIN.—Wheat has been in active export demand and prices strong. Exports for the week, 1,450,000 bush.

Latest prices are for No. 1 white at $1.14@1.15; No. 1 while for October, at $1.14¼@1.14¾; do. November at $1.14¾@1.15; do. December at $1.15¾@1.16¾; do. January at $1.18; No. 2 white at $1.13 ungraded white at $1.13@1.18; No. 1 red at $1.20½@1.21; No. 2 red at $1.16@1.16¾; do. October, at 1.16¼@1.16¾; do. November, at $1.16¾@1.17¾; do. December at $1.18¾@1.19¼; do. January, at $1.19¾@1.20¾; No. 3 red at $1.14¼; steamer grade at $1.07½@1.08; ungraded red at $1.18¾@1.21; No. 3 Chicago at $1.17¾; ungraded Spring, at $1.13¾@1.14c. Rye at $1@1.02. Corn is active and firm, with shipments for the week of 1,650,000 bushels; latest prices are for New York No. 2 at 55 ¾@55¾c.; do., October, at 56¼c.; do, November, at 55¾@56c.; do., December at 56¼@56¾; do. Jan., at 57¾c.; ungraded mixed Western at 56¾@56c.; No. 2 white at 58c.; No. 3 53¾c.; steamer mixed at 54c. Oats are higher and in good demand. Latest prices are for No. 1 white at 41c.; New York No. 2 white at 41@41¾c.; No. 3 white at 38@38¾c.; New York No. 1 at 39¾c.; New York No. 2 at 39@39¾c.; do., October, at 39¾@40c.; do. November at 39c.; do., December at 39¾@40c.; do. January at 41c.; No. 3 at 37½c.; ungraded white Western at 39@44c.; ungraded mixed Western at 36@38c.; white State at 41@44c.; No. 2 Chicago quoted at 39c. bid.

HAY AND STRAW.—There is a good demand and a strong market; latest prices are for

Shipping hay is at 85@90c.; medium to prime do., $1@$1.20; salt hay at 60@65c.; clover do. at 65@75c. Straw at $1@1 05 for long rye; 80@85c. for short rye; and 70@75c. for oat.

HONEY.—The demand has improved and prices are named with more confidence.

White clover comb, single pkgs. 17@18c.; larger pkgs 15@16c.; buckwheat 12@13c.; extracted, as to color, 8@12c.

HOPS.—Demand is more active, including about 1,200 bales taken for export within a week and prices closed steady. Quotations are

	Cents per lb.
New Yorks, crop 1880, prime and choice	20 @23
Do. medium	18 @20
New Yorks, crop 1880, low to fair	16 @17
Eastern, crop 1880	16 @20
Wisconsin, crop 1880	16 @20
Yearlings, crop 1879, choice	16 @23
Olds, all growths	4 @12
Bavarians	30 @35

Receipts liberal, 3,831 bales for week.

OIL CAKE.—Western is quoted $33 per ton.

POULTRY AND GAME.—Supplies are enlarging and prices are making a cool weather movement; that is, inside rates are mostly quotable for wholesale parcels. The additions at present mostly State. Turkeys have opened in demand.

Turkeys, State and Western, choice, 12@13c.; fair to good, 11@12c. Phila., dry-picked, 14@15c. Chickens, &c., 13@15c.; Bucks Co., 14@15c., State scalded, 11@12½c.; Western, do., 10@13c. Fowls, Phila., dry-picked, 12@13c.; N. J., do., 12@13c.; scalded, 10@11c.; State, do., 10@11½c.; Western, do., 10@11c.; poor to fair, 9@10c. Ducks, Spring, 12@15c.; mixed Western 12@13c. Geese, Phila. 10@15c.; fair to good, 8@9c. Squabs white, ₩ doz., $2@2.25; dark, $1@1.25.

Receipts of live are heavy, and as they meet a fairly large offering of dressed prices have seriously declined. From this time out cooped stock will have a more precarious sale.

Fowls and chickens, N. J., 9@10c.; State and Penn., 8@9c. Western, 7½@8c.; Southern, 7@8c. Roosters, 4c. Turkeys, N. J., 10c.; Western, 8c. Ducks, choice, 6½@7c.; other, 40@60c. Geese, choice, $1.75; other, $1@1.50. Pigeons, 25@35c.

The game market is well supplied and prices are fairly good considering the season. Quail will be in next week; expected to open at $2.25. Supply of wild ducks mostly Western. A few Western flight pigeons quoted 75c. ₩ doz. Venison has improved.

Canvas back ducks ₩ pair, $1.25@1.50; red heads, 40@60c.; mallard ducks, 20@40c.; teal, blue winged, 30@35c.; green do., 20@25c; partridge, prime, $1@1.12; Western, 85c.@$1; Eastern, 50@80c. soft, 30c. Grouse, prime, $1, soft, 30c. Woodcock, State, 40@60c. Eng. snipe, ₩ doz., $1.62@1.75 sand snipe, per doz., 40.@60c. Plover, $1.62@1.75. Venison saddle, Minn., 15@17c.; other, 13@15c. Whole deer, 10@11c.

PROVISIONS.—Hog products have been in demand and are higher, mess for export at $15@15.50. Bacon at 7¾ for long clear. Beef hams at $16 75@17. Beef at 18.50@19 for city. India mess $9.50 for extra mess and $8 50 for plain mess. Lard, Western steam at 8 70@8.75 for spot lots; 8.50 for November; 8.40@8.42½ for December.

SEED.—Clover is quiet at 8½@9c. Timothy has little demand, quoted $2.70@2.80. Flaxseed quoted at $1.40.

Receipts for the week 1,630 bush. Exports, 265 bags.

TOBACCO.—The market has not shown important change, with business moderately active.

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4 @ 4¾	4½@ 5
Good lugs	4¾@ 5	5¾@ 5¾
Low leaf	5½@ 6	6 @ 6½
Medium leaf	6¾@ 7¾	7¾@ 8½
Good leaf	8 @ 8½	9 @10¾
Fine leaf	9 @11	11 @12
Selections	12 @15	12 @15

SEEDLEAF.	Crop 1878.	Crop 1879.
New England Havana seed	— @—	14 @25
Wrappers, common	13 @15	— @—
Medium	16 @18	— @—
Fine	20 @ 7¾	25 @35
Selections	30 @40	37½@45
Seconds	— @—	10½@13
Fillers	— @—	5½@ 7
Penn. assorted, low	12 @13	10 @12
Assorted, fair	14 @15	13 @16
Assorted, fine	16 @18	18 @22
Wrappers	18 @35	— @—
Fillers	10 @12	6 @ 7
N. Y. ass'ted, com. to medium	10 @11	— @—
Ohio assorted	8½@13½	7½@10
Wrappers	15 @25	15 @25
Wisconsin assorted	8 @12	7 @10
Havana seed	15 @20	16 @18
Wrappers	12 @18	— @—

VEGETABLES.—Exports of potatoes since Jan. 1st, 173,500 bbls.; corresponding period, '79, 149,000 do. Supplies of potatoes are liberal and prices are unchanged. The new brand that is seeking a commercial place, "Burbank," does not turn out finely. Eastern E. Rose, $1 75; State, $1.37@1 50; snowflake, $1.37@1.50; State peerless, $1.12@1.25; N. J. $1@1 12. Sweet potatoes mainly of poor quality; best quoted $2.25; other, $1@1.50. Tomatoes running out. Squashes abundant and cheap. Celery active, Onions are scarce and higher.

Green corn, ₩ 100, 75c.@$1; tomatoes, ₩ bus., 40@60c.; egg plants, per 100 $3@4; Lima beans, $3@3.50; shelled, per bush. $4.50@5.00; turnips, white and Russia ₩ bbl. 40@62c.; beets, 75c.; cabbage, flat Dutch, $2 50@$3.50; red, $3.50@4.50; Hubbard squash, 75c.; marrow, 40@50c.; onions, white, $4@4.50; yellow, $3.50; red, $3.25@3.50; Chester, $3.50@4.50; pumpkins, ₩ 100, $2@5; cauliflower, ₩ bbl. $1@2; celery, per dozen, $1 00@1.25.

WOOL.—Demand has been only moderate this week and the market has not shown marked change. Quotations are for

Ohio, Penn., and W. Va. XXX 46@48c.; XX, 43@45c.; X, 43@45c.; No. 1 46@48c.; No. 2 42@44c.; coarse 35@38c.; combing 43@48c.

N. Y. Mich. and Wis. XX 38@41c.; X 38@40c.; No. 1 44@47c.; No. 2 38@42c; coarse 33@35c.; combing 42@46c.

Ind., Ky. and Tenn., XX 38@41c.; X 38@40c.; No. 1 44@46c.; No. 2 38@42c; coarse 33@37c.; combing unwashed 30@37c.; combing 42@46c.

Ill. Iowa, and Minn. XX 36@40c.; X 36@40c.; No. 1 43@45c.; No. 2 37@41c.; coarse, 30@34c.

Ga., Ala., Miss and La. fine unwashed 33@35c.; medium unwashed 30@33c.; coarse unwashed 25@30c.; burry 14@20c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Oct. 30 1880.

BEEVES.—Receipts for the week 12,730 head; do. last week, 13,440 do. With unfavorable weather and a depressed meat market there was a slow, dragging demand for cattle. Good to prime native steers are in light supply and sold fairly at steady prices. Common to fair stock, which largely composed the offering, compared with Wednesday, declined $1 ₩ head and ½c. ₩ lb. Texas and Colorados were scarce; sold at 7¼@8¼c respectively. Large droves of Ohio, Indiana and Kentucky sold at 7@8¼c., to dress 57 lbs.; good to choice sold at 9@10¼c., to dress 56 lbs Some Eastern Illinois steers sold at rate equivalent to 11¼c.

COWS AND CALVES.—Supplies have been small and have contained no prime milkers. The range is quoted $25@50 common to good. There is no inquiry for extras, and a bid would probably not exceed $55 or $60.

VEAL CALVES.—Supplies large and common have a slow sale. Prime live or dead quoted to all the market will bear.

Live calves, N. J., fed, 7¼@7¾c., State, 7@7¼c.; fair to good, 6½@6¾c.; poor, 5@5½c.; Mt Holly, heavy, 4@5c.; light, 6½@7½c.; buttermilk, 3@3½c.; grassers, 1¾@2¾c.; dressed choice fed, 10@10½c.; fair to prime, 8@9½c.; common, 3@5½c.

SHEEP AND LAMBS.—Receipts for week, 32,344 head; do. last week, 37,428 do. Heavy wethers were in good demand and firm; other grades slow. Some of the pens were overstocked, and anything under prime closed weak. Sheep, poor to prime, 4@5½c.; extras, 5¾c. Lambs ranged 5¾@6c.

SWINE.—Receipts for the week, 46,187 head; do. last week, 41,186 do. Live hogs, $4.75@5.00 per 100 lbs. corn fed; dressed N. J. heavy pigs, 5¾@6¼c. per lb.; light, 6¾@8c.; city dressed State, 5¾@8c.; do. Western, 6@6½c.; pork tenderloins, 11c. in boxes.

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How cold a touch hath set the wood on fire,
Until it blazes like a costly pyre
Built for some Ganges Emperor old and swart,
Soul-sped on clouds of incense! Whose, the art,
That webs the streams, each morn, with silver wire,
Delicate as the tension of a lyre?
Whose falcion pries the chestnut burr apart?
It is the Frost a rude and Gothic sprite,
Who doth unbuild the Summer's palaced wealt
And puts her dear loves all to sword or fight;
Yet in the hushed, unmindful Winter's night,
The spoiler builds again with jealous stealth,
And sets a mimic garden cold and bright.

FARMING FOR BOYS AND GIRLS.—NO. 2.

HENRY STEWART.

The Soil, What It Is.

ALL forms of matter or substance which exist, in whatever shape they may present themselves to our view, whether in rocks, soil, the air, water, or in the bodies of animals or in plants, are divided into two classes, viz: inorganic and organic. These are to be distinguished as dead and living matter; the one is without life and does not grow or increase its substance, and the other grows and is continually changing its form; it is called organic because it is organized, by which is meant that it consists of certain structures, the forms of which are visible to sight and are continually changing. These organic substances are all derived originally from inorganic matter, such as the soil, water and the atmosphere. The soil, in the form in which it is found in fields and gardens, or in any condition in which it produces vegetation, consists of inorganic and organic substances mixed together. The inorganic particles of the soil are derived from the solid rocks, of which the earth has been once, or is now, composed. These have been broken up and are being broken up every moment, but slowly, into small fragments by the agency of air and water chiefly, and are capable of being slowly dissolved in water. The organic particles of the soil consist of the remains of animal and vegetable matter which have decayed and have returned again to their original element. Although this organic matter may have lost its structure and form, and has become mixed with the mineral parts of the soil, it is still considered to be of organic origin. Thus when manure is added to the soil, in course of time it decays and is lost to sight; its remains are mingled with the soil in which they become food for a new growth of vegetables, which in turn become food for animals, and in turn everything which comes from the soil goes back to it in some form or manner. The soil produces plants; these plants furnish food to animals in part and in part remain and decay in the soil; in time animals die and their bodies go back to the soil either directly or indirectly. Thus there is a ceaseless round of change always going on which we can trace very distinctly, and the soil is the great storehouse from which everything comes and to which everything returns.

The inorganic parts of the soil which are of the most interest to us are those which are used by plants as food, and which we can trace in the plants. These are lime, potash, soda, magnesia, silica, alumina, phosphorous, carbon, sulphur and iron, which are solids, and oxygen, nitrogen, chlorine and hydrogen, which are gases.

But these substances do not exist in the soil in a free or pure state, but are combined one with another in various ways; for instance lime, potash, soda, magnesia and alumina are oxides of different metals; that is to say that these metals are combined with oxygen and in this condition appear as the commonly known substances named. Again, most of these oxides are combined with carbonic acid and form carbonates; soda may lose its oxygen and combine with chlorine forming common salt; phosphorus, sulphur and carbon combine with oxygen and form phosphoric, sulphuric and carbonic acids, each of which are most important and interesting substances in the growth of plants; silica is a compound of silicon with oxygen; water is a compound of oxygen and hydrogen; the air is a compound of oxygen and nitrogen; and ammonia another substance of the greatest importance to plant growth, is a compound of nitrogen and hydrogen. A compound is such a mixture of two substances as produces by the combination, a new and different substance forming a perfect union in fact; while a mixture is only the mingling of particles without combination, as sand may be mixed with sugar, but the two do not form a union. Thus the inorganic part of the soil is a remarkably intricate combination of a large variety of substances and not, as might appear, a simple substance which merely serves to hold the roots of plants. The organic part of the soil is of equally intricate composition and the two mixed together form the material which the farmer plows and sows and from which he gathers his crops. The soil is slowly soluble in water and only furnishes food to plants when thus dissolved. A plant cannot live without water; this we know; but it cannot live and grow unless the water contains a certain supply of the substances of which the soil consists, and these substances taken from the soil in the water which plants absorb are called plant food. It is easy to see that so long as the soil contains plenty of these food substances in a soluble condition the farmer will have no trouble in growing bountiful crops; also that if the soil is not able to supply them, it becomes poor, and profitable crops cannot be grown. Therefore, as the soil is deprived of a portion of these substances by every crop that is grown, it is the business of the farmer to supply the loss, and enrich his soil continually by manure and by cultivation, so as to enable it to produce crops that can yield a reward for labor.

THE BANK SWALLOW, OR, SAND MARTIN.

MAUDE MEREDITH.

I wonder if the little readers have been interested in our talk about birds? And if they would like to know something about the bird-folk that live in the little tunnels they may have seen in some deserted gravel bank, or river shore. The Bank Swallow, Hirundo Riparia, closely resembles the other members of its family, but though being the most social among themselves, are the least intimate with man. On high sandy river banks, or, what better pleases them, the sides of deserted gravel-pits, they scratch out and bore holes from one to two feet deep, in which they build their nests. The powers of this pretty bird would seem to be quite inadequate to the arduous labors which it performs with such apparent ease, and few would suppose, after contemplating its tiny bill, that it was capable of boring tunnels into tolerably hard sandstone. But such is the case, for Sand Martins have been known to drive their little tunnels into sandstone hard enough to destroy all the edge of a knife. Yet, like all little folks, he does not *prefer* a hard task to an easy one, and can he find a loose sandy soil, yet quite firm enough for solid walls to his little domicile, he will choose it, or the sandy intervals between layers of stone, where the work is comparatively easy. It often tries and abandons several localities as being too hard, but when it discovers a suitable place sets to work earnestly, working in a circular direction and using its legs as a pivot, and by dint of turning round and round as it works, succeeds in forming a tolerably circular cavity.

The tunnel in all cases slopes gently upward to prevent the rain from flowing in. At the farther extremity of the burrow, which is always rather larger than at the entrance, is placed the nest, a very simple structure, composed of dry grass lined with a few soft feathers, where the eggs, usually five in number, and pure white in color, are deposited.

Few foes can molest the nest or little ones until old enough to venture out of their strong fortress, when an army stand ready to swoop down upon them. The crow and magpie wait at the entrance of the holes in order to snap up the young on their first appearance in public, and if escaping these enemies, while first attempting to fly in little crowds, the kirtsel and sparrow-hawk sweep suddenly down carrying dismay and desolation among the little flocks. And with sorrow I must admit that boys are sometimes enemies of these little creatures, considering it great fun to dig out their nest. In some places there are rules against molesting the swallow, as they are so useful in destroying flies and bugs. I read an account of one gentleman who took about a gill of the hard outer wings of the cucumber bug from a single Martin house, after the birds had migrated. Think of the busy little fellows as gardners! And the length of time it would take a little boy to rid the cucumber beds of so many of the striped pests.

The Bank Swallow is always in advance of others of the same species, arriving in any given locality so early in Spring as often to encounter cold storms and rough weather; at which times they take refuge in their holes and huddle together for warmth, coming out again in clear weather, so benumbed as to give rise, among some, to the belief that the swallow hibernates, but this is not a fact, as search in their houses through the winter months, fails to discover any birds. The Bank Swallow is five inches long, and two in extent; upper part mouse colored; lower, white, with band of dusky brownish across upper part of the breast; tail forked, the exterior feather slightly edged with white. They seem to enjoy a visit to the seashore, where they go in great numbers, previous to their departure South, which occurs about the 20th of August.

"O'er fell and fountain sheen,
O'er moor and mountain green,
O'er the red streamers that
Herald the day:
Over the cloudlets dim,
Over the rainbows rim,
Musical cherub, soar, singing away!

Then when the gloaming comes,
Low by the heather blooms,
Sweet will thy welcome and bed
Of love be!
Emblem of happiness,
Blest is thy dwelling-place—
Oh, to abide in the desert
With thee!"

BEARS AND HORNETS.

HORNETS build their nests high up in the branches of trees, or fasten them to rocks out of reach of harm. But cunning as these insects are, they are no match for the bear. A bear discovers a hornets nest far out on a limb too small to bear his weight or high up on the breast of a rock. If the former, he climbs the tree, breaks off the longest branch he can get, and holding it in his fore paws thrashes the nest until it drops to the ground. Sometimes he dances or stamps on the limb until the nest is shaken off. If the nest is on a rock, the bear goes up to the top of the ledge above it. Then he gathers large stones and pieces of wood and rolls them down the side of the rock until one strikes the nest and sends it tumbling to the ground below. The hornets seem to know what has caused their ruin, and not one of them deserts the fallen nest, but all seem to await the appearance of the bear, when they attack him at once. "A hornet sting," says the old hunter, "is equal to a blow from a sledge hammer every time, and one hornet'll knock a bull down. But their bite won't raise a lump as big as a buck shot on a b'ar, and the shaggy creature seems to think it's a heap o' fun. He'll stand up on his hind legs and square off with his fore paws at the hornets, jest as if he was boxin' with somebody, only he's durn careful to keep his eyes shet. Then he'll lay down and roll all over the rest, as if he wanted to show the hornets how he didn't care no more for 'em than as if they was gnats. Once I see a big she b'ar, which had knocked a hornet's nest as big as a peck measure off'n a tree, take it under her arm and walk off with it as coolly as if it was one of her cubs."

WHAT A NATURALIST SAW.—An English naturalist, while preserving an tsand spiders in bottles of alcohol, met with a touching exhibition that caused him to forego further experiments. He wished to preserve a large female spider and twenty-four of her young ones that he had captured. He put the mother into a bottle of alcohol, and saw that after a few moments she folded her legs upon her body, and was at rest. He then put into the bottle the young ones, who, of course, manifested acute pain. What was his surprise to see the mother arouse herself from her lethargy, dart around and gather her young ones to her bosom, fold her legs over them, again relapse into insensibility, until at last death came to her relief, and the limbs, no longer controlled by this maternal instinct, released their grasp.

LETTERS FROM THE COUSINS.

UNCLE MARK:—Will you please let me join the Horticultural Club? I am twelve years of age, and live in the north woods of Michigan. We came here in June, so that I could not have a garden this Summer, but I intend to have one and plants next year, and try and raise some nice vegetables I brought some slips of house plants with me and they have grown nicely. I like it in the woods first rate. I, too, like one of the cousins, can go huckleberrying and what splendid times we did have, and how good the dinner tasted in the open air. We have had plenty of huckleberries, raspberries, and blackberries, but we do not have any peaches or apples. The leaves are now beginning to turn their colors, and what a beautiful picture we will have with the dark green of the hemlock, and the red, yellow and brown of the beach, birch and maple. MINNIE D. JUDSON.

Indian River, Mich.

DEAR UNCLE MARK:—I see lots of little boys and girls writing to you, so I thought I would write. I am a little girl nine years old, I go to school and read in the Third Reader. I have three brothers, Lenly, Wilbert and a little baby brother. I like him very much. He never cries. I wish you to remember me when you send out seeds. Good-bye. BIRDIE MCDOWELL.

Norwich, Ontario.

DEAR UNCLE MARK:—I have long wanted to join your club. Is there room for me? I go to school in the city of Dowagiac. Pa raised 30 bushels of sweet potatoes and 250 bushels of Irish potatoes. I have quite a number of house plants. We have 17 stands of honey bees. Pa has taken the RURAL for the last 20 years. I have four pets, a cat, a dog, a cow and a chicken. The cat is four years old. I have been offered $25 for it, but that is no temptation. he weighs 12½ pounds.

Yours truly, MINNIE CONNINE.

Cass Co., Mich.

DEAR UNCLE MARK:—My papa takes the RURAL and we all like it very much. Mamma likes to read it and all the rest of us, especially the letters of the RURAL cousins. I am 13 years of age, and I love to go to school, I study arithmetic, and geography. We thank you for the seeds you sent us. We have a magnolia which we raised, and would like to know if we are to keep it in the house all winter. Your niece, E. L. BERLIN.

Monroe, Clason Co., Pa.

[The Magnolia will live out of doors through the winter in your climate. U. M.]

DEAR UNCLE MARK:—I want to join the RURAL Club, and I want you to send me seeds in your next seed distribution, and I will plant them. I love gardening very much. May I get up a club for the RURAL and try for any one of the premiums you offer? My love to all the cousins. Your nephew, HENRY J. L.

Jefferson Co, N. Y.

[You can of course, try for premiums, Uncle Mark will be pleased to add all the new readers to the club. UNCLE MARK.]

DEAR UNCLE MARK:—We are two little sisters, ten and six years old, please may we join your Horticultural Club? We live in a big farm about five miles from the city; we have a little brother and his name is Gillie, he is four months old, when may he join? If Uncle Mark accepts us as cousins we will in our next write about our plants and pets. MAY and NELLIE HATFIELD.

Luddington, Mich.

[Uncle Mark adds all three of the names to his Club list.]

DEAR UNCLE MARK:—I am a little girl ten years old and I would like to join your club. I have flowers that are very nice. Ma got flower seeds from the RURAL, but it was so dry they did not come up well but the Cuthbert is doing well. Ma takes the RURAL and we like it very much. Please remember me when you send seeds. From your niece ADA HAMILTON.

Hansell, Franklin Co., Iowa.

DEAR UNCLE MARK:—We are much interested in the letters from the Cousins and wish to join the Club. Maud, ten years old, Guy, eight years, Floss, six and Irene four. We are all great lovers of flowers, plants and gardening. We had a nice yard during the Summer, but the frost has made sad havoc with them now. J. F. B.

Susquehanna Co., Pa.

[Nora S., Elkhart, Ind., will find her name among the club members when seeds are again sent out. Uncle Mark will be happy to add the names of every one of the young folks in the land.]

Sabbath Reading.

QUESTIONINGS.

WHY do the children leave us, O our Father—
The little children cradled on our breast?
Why do our doves fly upward in the morning
While other birdlings sleep within the nest?
Can it be true that music up in heaven
Is sweeter when their voices join the hymn?
Is richer light to realms of glory given
For that which fading left our homes so dim?

And can the angels who, all day are giving
Care to the lambs within the Shepherd's fold,
Need, as a mother needs, amid her grieving,
The little ones at night to clasp and hold?
When shall we see again the precious faces
That gave our homes such sunshine when they smiled?
Oh, what shall fill the heart's sad vacant places,
Or hush the tones that plead, "Give back the child!"

Why must we listen vainly for the patter
Of little feet at morning on the stair?
And miss the merry sound of childish laughter,
Or gentler tones saying the evening prayer?
Why vainly long for kisses falling purely
From lips that said their good-night at our knees?
Oh, He that made the mother-heart hath surely
No chiding in his own for thoughts like these,

E'en this how can we know—His hand hath smitten
In wrath or mercy? Only he can tell.
Perhaps in some sweet day there may be written
Upon our hearts this record, "It is well."
Perhaps the broken hearts that thrill and quiver
Through all the night under the hand of pain
May in the morning of a glad forever,
Wake 'neath God's touch to melody again.

BE COURTEOUS.

I WILL give you a text, a little short text of two words only, which you will have no difficulty in remembering: these two words are, "Be courteous."

You all understand what it is to be courteous; it is to be polite, and to think of other's needs. It is a part of good manners to be courteous to one another, and when we see any one rude and forgetful in his behavior, we say of him that he has never learned manners But courtesy is even more than this; it is a part not only of good manners, but also of religion. The Bible teaches us a great deal about courtesy in deed and word It tells us to be gentle in speech and manner, to be patient with one another, not to answer again; not to think only of our own pleasures, nor to choose out the best places for ourselves. If in all such little things as these we think not of ourselves, but of other people, then we shall be truly courteous; for courtesy, is, in fact, "unselfishness in trifles."

One day at a crowded crossing, an old man was standing hesitating, afraid to venture over. Just at that moment a young girl passed by, with her Prayer-book under her arm, on her way to church. She saw the old man's difficulty, and coming up to him, she took him by the hand and guided him carefully across the dangerous road. Then, with a pleasant smile, she turned back and went on her way again. It was but a little thing, yet it showed the spirit of true courtesy, ever on the watch to help others.

It is impossible to say how much good may not be done by one courteous deed Not long ago I read of a heathen soldier in India who was serving under an English captain. This captain was a very good man, who by his unfailing kindness to his men made himself so beloved by them that any one of them would have been ready to die for "the father of their regiment," as they used to call him.

The soldier longed to know what prompted this spirit but would not venture to ask. He said to himself, "Surely this man must have the true religion." He was taken dangerously ill, and was removed to the hospital. As he lay suffering and wretched, the door opened and in walked the captain, come on purpose to visit his sick soldier. He sat by the bedside and talked to him, and told him about our Savior. The man hardly understood what was said to him, for his mind was full of his captain's kindness in thus remembering him and coming to visit him. As soon as he was well again he went to the captain's house and asked him that question which he had delayed so long—"What is your religion?" "I am a Christian," he replied. The soldier did not know much about Christianity, but he thought that the religion which made a man so good and brave and unselfish must be the true religion. He wished, he said, to become a Christian himself; and so, after he had been carefully trained and taught, he was baptized. To the end of his life he showed himself a true Christian, and died at last happy in the thought of his Savior's love. Thus the courtesy and unselfishness of one man led a heathen soldier to believe, and brought him out of darkness into light.

Be courteous in word as well as deed. Whenever you are spoken to or asked a question, take the pains to give a courteous answer. It is as easy to answer politely as to answer rudely, and how differently every one feels toward any one—whether he be a child or a grown-up person—who takes the trouble to attend to what is said and to answer pleasantly, and one who answers carelessly or rudely! No one knows, until they try, how much happiness they have it in their power to give to others, just by speaking pleasantly and courteously, for, that is a most true old saying which tells us that "good words are worth so much, and cost little." F. E. A.

THE gentle mind is like a smooth stream which reflects every object in its just proportion and in its fairest colors. The violent spirit, like troubled waters, renders back the images of things distorted and broken, and communicates to them all that motion which arises solely from its own agitation.

PERSONAL ITEMS.

Gambetta has a premature look of old age.

Mr. Elihu B. Washburne, formerly United States Minister to France, arrived from Bremen on the Mosel on Friday, Oct. 29.

Lewis Irwin displeased his parents, at Gallipolis, Ohio, and while his mother pounded him with a club, his father shot him with a pistol.

The Prince and Princess of Wales and the Crown Prince and Princess of Germany will attend the marriage ceremony of Prince Rudolph of Austria, heir-apparent to the throne, early in February.

President Washburn, of Robert College, Constantinople, who is at present in Boston, predicts a revival of the ultra-Turkish spirit in the mind of the Sultan, in which event a religious crusade against the enemies of Islam is likely to be declared.

Thomas L. Butler died at 91, in Louisville, a few days ago. His father and four uncles distinguished themselves in the Revolution. Washington once gave this toast at a dinner: "The Butlers and their five sons," and Lafayette wrote in a letter: "When I wanted a thing well done I ordered a Butler to do it." Members of the family moved to Kentucky, and became of social consequence there.

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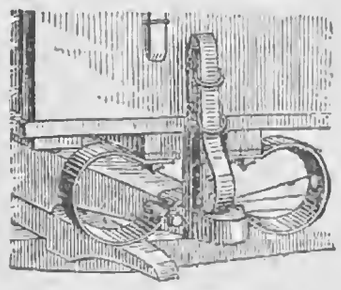

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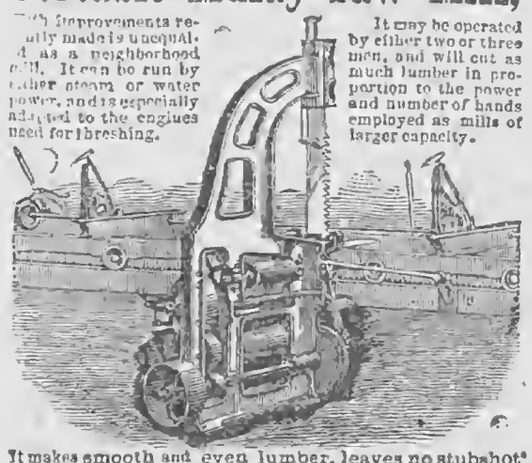

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No special room or extra fire needed. Gilt-Edged Butter made at all times, winter or summer. It surpasses all others in quantity and quality of butter made. It excludes flies, dust and odors; is constantly at the correct temperature 53° to 60°; has room for the cream and butter, and saves three-fourths the labor. **THE FERGUSON CONCUSSION CHURN** is the best. It combines scientific principles with the best labor saving devices. No floats or paddles. Brings the butter in granular form, and secures the largest yield. Send for illustrated circular to **The FERGUSON MF'G CO., Burlington, Vt.** Ag'ts Wanted.

NEW PREMIUM CORN SHELLER.

ONLY $1

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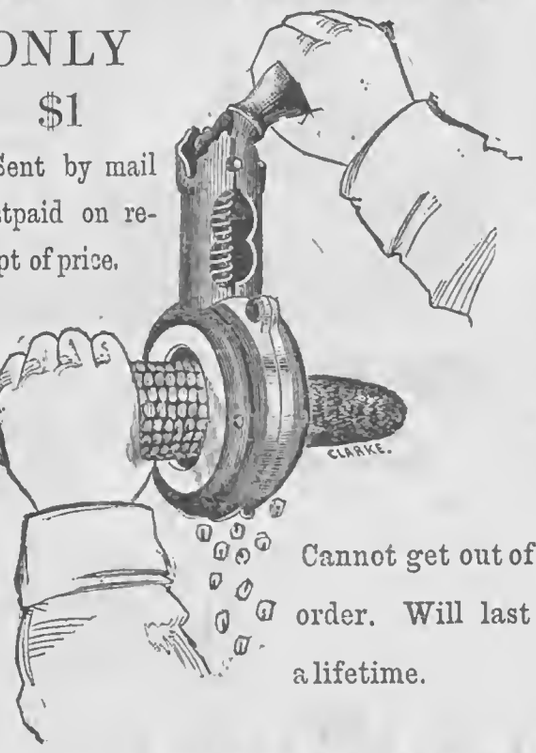

Cannot get out of order. Will last a lifetime.

This is the only Cheap Practical Hand Corn Sheller in the market and is in every way the

BEST HAND CORN SHELLER EVER INVENTED.

Shells 25 to 30 bushels a day **very easily.** Is especially recommended to farmers who shell large quantities of corn for seed. It has been customary to remove the imperfect kernels from both ends of the ear with the hand, and use the full, perfect kernels of the center for seed. This is a long, tedious process, but with this sheller it can be done in one-tenth the time. To poultrymen, to seedsmen and to anybody who shells corn, we recommend it. Can be carried in the pocket and samples of corn taken from any part of the field by shelling only part of an ear.

Our PREMIUM CORN SHELLER is destined to become the **Leading Hand Corn Sheller** of the day, and you will find it profitable and to your advantage to secure the sale of it. When it is once introduced no other small sheller will be wanted in your locality. This Sheller opens a new field for reliable agents. A very profitable business can be done upon a small capital.

Believing this to be the Best Low Priced Corn Sheller ever invented we have secured the General Agency for the United States, and we want

CANVASSING AND LOCAL AGENTS IN EVERY COUNTY.

Sample sheller and price list sent prepaid to any address upon receipt of $1.
Address all orders to Publishers of

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General Agents for the United States. Springfield, Ohio.

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The celebrated Borel and Courvoisier Watches were awarded the first prize in London in '62, grand prize at Paris in '67, first prize at Centennial in Philadelphia, and lastly gold medal at Paris in '78. These watches have stood the test for the past 20 years, and pronounced by best judges equal to any made. They all have Nickel Movements, Tempered and Hardened Breguet Hair Springs, Isochronised for railroad use in Key and Stem Winders, with all modern improvements in the art of watch making. Large numbers are in use on the principal railroads in the country. As a guarantee that they are what we claim for them, we refer by permission to the dealers named below who have sold them for years:

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Beautifully finished, accurately adjusted, nickel movement, 17 Fine Ruby Jewels, 16 Size, Stem-Winding, solid Gold Settings, ¾ Plate

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Specially adapted to Railroad and all other uses where accurate time and adjustment are necessary. 18 Size, Full Plate, Nickel, beautifully finished, Gold Settings and Gold Trimmed.

STATE STREET.

¾ Plate, Nickel, 16 Size movement, Quick Train, Gold Settings.

Factories and General Office, Springfield, Mass., U.S.A. **New York Office, 12 Maiden Lane.**

Humorous.

"Do we eat too much," asked the "Detroit Free Press," and out of five dozen boarding-house keepers, sixty answered in the affirmative.

SOME young men went out the other night to "have a little time." They had just as little time as they wanted to get out of a neighboring orchard, and a vicious dog had all the fun.

"CÆSAR," said a good-natured gentleman to his colored man, "I did not know till to-day that you had been whipped last week." "Didn't you, massa?" replied Cæsar; "I knowed it at the time."

A CERTAIN doctor of divinity said every blade of grass was a sermon. The next day he was amusing himself by clipping his lawn, when a parishioner said, "That's right, doctor, cut your sermons short."

TEACHER—"Suppose that you have two sticks of candy, and your big brother gives you two more; how many have you got then?" Little Boy (shaking his head)—"You don't know him. He aint that kind of a boy."

AN elderly resident of Newtown was approached by an agent for a cyclopædia. "I guess I won't get one," said the elderly resident, and frankly added, "I know I never could learn to ride one of the pesky things."

"I UNDERSTAND that Dr. Jones is abroad," said Brown; "is he traveling for his health?" "I suspect," said Fogg, "that he is traveling for his patient's health. I know one of them who has improved on his traveling added Fogg, with energy.—Boston Transcript.

A MEMPHIS man wanted to kill a mosquito on the back of a friend's neck, and without stopping to mention his design, hit the insect a belt, and when his friend got up and brushed the sand out of his mouth and eyes, four men had to hold him while the matter was explained.

ONE of the New York wholesale dry goods houses has a new clerk whose father from the country went in to see him the other day and was surprised to learn that all the salesmen had nicknames. He asked the floor walker why his son was called "Jury." "Oh," was the reply, "he is always sitting on cases."

A YOUNG man with an umbrella over-took an unprotected lady acquaintance in a rainstorm, and extending his umbrella over her requested the pleasure of acting as her rainbow. "Oh!" exclaimed the young lady, taking his arm, "you wish me to be your raindear." Two souls with but a single umbrella, two forms that stepped as one.

NOT long ago an Irishman applied to an overseer in a Tyne shipyard to be put on a job. He was informed that his request could not be complied with; but as Pat continued to gaze at an anchor which was lying in the vicinity the foreman repeated his reply that there was no work for him and advised him to go away. "Divil a bit will I stir, sorr, till I see the man that's going to use that pick!"

THE London Church Times tells the story of some Sunday-school children taken for a picnic to the seaside. One of the teachers asked her scholars how they liked the sea. "Very much, miss," replied a child; "but where are the tinnamies?" "The tinnamies, my child! What do you mean?" "Why, you know," the child replied again, "the tinnamies that go with the sea. You know the commandment says, 'the sea and all that tinnamies,'" This was the way the child had been repeating "the sea and all that in them is."

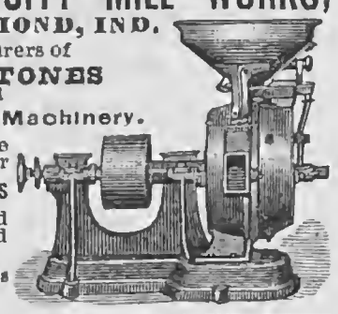
Cause and Effect.

The stomach is accountable for more headaches, nervousness and general physical derangement than any other organ. These effects, of which its weakness and derangement are the cause, are of course only to be permanently remedied by a medicine which restores its regularity. The primal action of Hostetter's Stomach Bitters is upon the stomach, the equable action of which it renews. As a consequence, the associate organs, the bowels and liver, regain activity and vigor, and the brain and nervous system generally experience quietude, which they never can while the gastric and bilious functions are disturbed. Infinitely greater bodily comfort is derivable from a systematic course of this genial medicine, than is to be found in a recourse to heady stimulants, and local "tonics" and "appetizers," so-called, the alcoholic principal of which, usually fiery, is unmedicated by the admixture of botanic remedial constituents.

THE VELOCIPEDE OF THE FUTURE.

C. GILBERT'S
STARCHES,
ARE ABSOLUTELY PURE.

RICHMOND CITY MILL WORKS,
RICHMOND, IND.
Manufacturers of
MILL STONES
and
Flouring Mill Machinery.
We manufacture the best French Burr CORN AND FEED MILLS in the country. Send for description and prices.
State you saw this in RURAL N.-Y.



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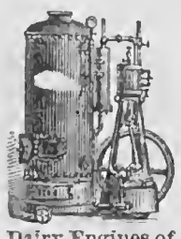
Established 1840.



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BOOKWALTER ENGINE

Compact, substantial, economical and easily managed.
Guaranteed to work well and give full power claimed.
Engine and boiler complete, including governor, feed-pump, drive-pulley, etc., etc. at the low price of

3	Horse power....	$240
4½	" "	280
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Manufactured at Springfield, Ohio. Send for Descriptive Pamphlet.
JAMES LEFFEL & CO., Springfield, O.
Or, 110 Liberty St., New York City.

A VALUABLE STOCK FARM FOR SALE at a bargain by C. E. ROBINSON, Portlandville, Iowa.

Mill Manufactory
Established 1851,
CRIST MILLS,
OF FRENCH BUHR STONE
Portable Mills for Farmers, Saw Mills, etc.; 16 sizes; over 2,000 in use. Price from $80 up. Complete Mill and Sheller, $95. A boy can grind and keep in order. Adapted to any kind of suitable power. Complete Flouring and Corn Mills.
NORDYKE & MARMON CO., Indianapolis, Ind.

I. X. L.
FEED MILL.
All Iron but the Hopper.
Cheap, Effective and Durable.
CAN BE RUN BY ANY POWER.
Capacity from 6 to 30 bushels per hour, according to size. Send for Catalogue and prices.
U. S. WIND ENGINE & PUMP CO.,
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Monarch and Young America
CORN AND COB MILLS
Only mills made with Cast Cast Steel Grinders.
Warranted superior to any in use, for all purposes. Will grind faster, run easier and wear longer. *Satisfaction guaranteed.* Also, Corn Shellers, Feed Cutters, Cider Mills, &c. Send for circulars and prices.

Manufactured by
WHITMAN AGRICULTURAL CO.,
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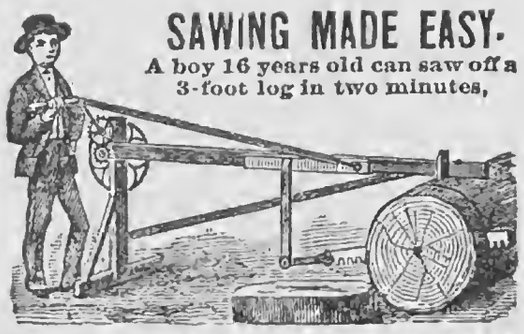
THE request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness.

SAWING MADE EASY.
A boy 16 years old can saw off a 3-foot log in two minutes,



Our new portable **Monarch Lightning Sawing Machine** rivals all others. **$50 cash** will be given to two men who can saw as *fast* and *easy* in the old way, as one boy 16 years old can with this machine. Warranted. Circulars sent Free. Agents wanted
MONARCH LIGHTNING SAW CO.,
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FOR POWER AND PURITY OF TONE
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THEY ARE J. ESTEY & CO BRATTLEBORO VT. UNRIVALED

TROPIC FRUIT
LAXATIVE
UNLIKE PILLS,
And the usual Purgatives, is pleasant to take,
And will prove at once the most potent and harmless **System Renovator** and **Cleanser** that has yet been brought to public notice. For **Constipation, Biliousness, Headache, Piles,** and *all disorders arising from an obstructed state of the system,* it is incomparably the *best curative extant.* Avoid imitations; insist on getting the article called for.
TROPIC-FRUIT LAXATIVE is put up in bronzed tin boxes only. Price 60 cents. Ask your druggist for Descriptive Pamphlet, or address the proprietor,
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COLUMBIA BICYCLE.

Bicycle riding is an accomplishment easily acquired, and is rapidly becoming the most popular of out-door sports; as a health restorative it is invaluable, bringing into action every muscle of the body, strengthening the lungs, and invigorating the wearied brain. The practicability of the machine is generally conceded throughout the country, and the thousands of bicycles in daily use are constantly increasing in number. Send 3c. stamp for catalogue, with price list and full information. THE POPE M'F'G CO.,
76 Summer Street, Boston, Mass.

NEW DESIGNS
IN
WILTON, AXMINSTER, MOQUETTE,
VELVET, BRUSSELS AND INGRAIN
CARPETS.
Manufactured by Ourselves
Expressly for the Season's Retail Trade.

THESE GOODS WILL BE FOUND TO COMBINE TO AN UNUSUAL EXTENT
Elegance in Style and Finish,
Durability in Wear, and
Economy in Price.
WE ALSO OFFER AN EXTENSIVE ASSORTMENT OF **Turkish, Persian** AND **East Indian** CARPETS, RUGS AND MATS, DOMESTIC OIL-CLOTHS, AND OTHER **Popular Floor Coverings** AT
Extremely Moderate Rates.

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CARPET MANUFACTURERS AND RETAILERS
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SPECIAL
PROPOSITION!
We will send by MAIL, (postage paid) 3½ LB. PACKAGE of our celebrated SUN-SUN CHOP TEA on receipt of $2.50. It is the FINEST imported BLACK TEA, with a GREEN TEA, flavor. Warranted to SUIT ALL TASTES. Parties wishing to test it before buying in quantity, we will send
Sample on receipt of 6 cts.
Postage stamps taken. SPECIAL TERMS ON LARGE ORDERS. Particulars free.
The Great American Tea Co.
IMPORTERS,
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P. O. Box 4235 NEW YORK.

THE NATURAL BUTTER COLOR
Was awarded the diploma of highest merit at the International Dairy Fair, New York, by the Committee of Judges, also at the St. Louis and Illinois State Fairs. It is the cheapest and best in the market. Cheese color by the gallon. For sale by dealers. Manufactured by R. S. WHITE & CO., Fort Atkinson, Wis. Write for circulars and price list.
Mention THE RURAL NEW-YORKER.

BADGER STATE
Butter Color.
Received the only honorable mention granted to any Butter Color at the International Dairy Fair of 1879. If not for sale by your dealer, send for circular, &c., to the manufacturer, E. SHELDON, Fort Atkinson, Wis.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XXXIX. No. 46.
WHOLE No. 1607.

NEW YORK, NOV. 13, 1880.

PRICE FIVE CENTS.
$2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

THE NAOMI GRAPE—From Life.—Fig. 360.

The Vineyard.

PORTRAITS OF NEW AND PROMISING GRAPES CONTINUED.

NAOMI.

A COUPLE OF RICKETTS'S SEEDLING GRAPES.

For the past four years the Naomi Grape and indeed all the rest of Mr. Ricketts's seedlings have been closely watched by me.

The Naomi,

is a hybrid raised by Mr. Ricketts of Newburgh, N. Y., parentage Clinton fertilized by Muscat, but what one I am unable to say. Its delicious Muscat flavor, however, proves clearly that it is closely connected with this class. Although it is a hybrid, I consider it very hardy, but I would not be understood to say that it is entirely so. The parent vine has borne a fair crop of elegant fruit each year since my first acquaintance with it, though it is partially shaded by a pear tree standing within a few feet of it, and has had very poor culture, its owner, I am sorry to say—nevertheless it is true—being a heedless cultivator, as Mr. Husmann truly remarked in one of his articles published last Fall. It has sometimes been covered with leaves through the Winter, while at other times I have known it to remain on the trellis till Spring without protection, uninjured. The vine is a fine, vigorous grower. I have a vine raised from a single bud cutting this season, that has grown twelve feet, and its diameter four inches above the ground is half an inch. Foliage large, quite thick and coarse; bunch large, shouldered sometimes heavily; berry, medium, somewhat oblong; color green, sometimes slightly shaded with red when fully exposed to the sun, and covered with a delicate white bloom; flesh, breaking juicy, rich, quite highly flavored with Muscat; ripens with Concord or perhaps a trifle later; quality best, and it is an excellent keeper, I have eaten it in good condition the last of February plump and sound. With good vineyard culture I am confident the Naomi can be profitably grown for market; indeed, I am so favorably impressed with it that I intend to graft it largely in my vineyard next Spring.

The Lady Washington.

is also one of Mr. Ricketts's seedlings—parentage Concord fertilized with Allen's Hybrid. It is one of the most hardy and vigorous growers with which I am acquainted, fully equaling the Concord in this respect. Its foliage is large, thick and downy; its bunches are large, often very large, uniformly compact, and generally shouldered; color, light-yellowish amber, slightly tinged with delicate pink when fully exposed to the sun. It will grow and succeed well on ordinary soil that will produce good Concords. Of this fact I have abundant proof in my own vineyard, and I am inclined to believe that too strong a soil is detrimental to it as it encourages too rampant a growth at the expense of fruit. Any tyro can grow the Lady Washington. In conclusion, I would say I have no doubt that many of Mr. Ricketts's seedlings will succeed far better with those who are good cultivators than they do with him.

J. G. Burrow.

Naomi.

Of the Naomi grape Mr. Charles Downing writes us:—

"One of James H. Ricketts's seedlings; vine, very vigorous, rather long-jointed; leaves, large, deeply lobed, coarsely serrated; bunch, large, long-shouldered, often double-shouldered; berry, medium, roundish, inclining to oval, pale greenish white, often with a tinge of light red where exposed to the sun, and a thin grayish-white bloom; flesh, juicy, melting, rather crisp, sweet, sprightly and very good, with a trace of Muscat flavor. The berries adhere well to the pedunele. It ripens with the Concord, and is a good table grape."

Pomological.

POMOLOGICAL IMPROVEMENT IN MICHIGAN—PEACHES.

T. T. LYON.

Peach culture in Michigan has, up to the present time, been confined mainly to the popular varieties of the East. It is only within the last two or three years that anything like improvement has been accomplished, or even (so far as the public are aware) attempted, in the way of the local origination of varieties of peaches with reference to local wants. More recently, however, a few of our more progressive cultivators have set themselves at the work of elaborating something of this kind, to fill seasons not yet satisfactorily supplied, and to supplement varieties now in use, but lacking some qualities more or less essential to the purposes for which they are grown.

Notwithstanding the readiness with which the process of artificial hybridization may be performed upon the peach, I am not aware that any of our experimenters have sought improvement through this means. On the other hand, however, one of our fruit growers has planted what may be designated as an experimental plat, by alternating in rows three varieties of peaches, with the expectation that many of the blooms would become crossed through the influence of winds or the transferring of pollen by insects. The seeds from the fruits grown under the circumstances were planted, and the resultant trees have, many of them, fruited for the past two or three years.

In this case the Hill's Chili (which was one of the three parent varieties) seems to have vindicated its fixity of character, since 40 or more of the resultant seedlings are unchanged and unmistakable Hill's Chilis. The Early Crawford—another of the parents—seems to have almost wholly failed to transmit its peculiarities; while the third variety—Hale's Early—while yielding much to the vigorous constitution of the Chili, shows the force of its one marked peculiarity—earliness; in the production of several sorts which, while losing the white flesh and with it the tendency to cling to the pit, range from the season of Hale's Early to nearly that of Early Crawford, thus supplying what at least our Western markets seem to demand—a set of good yellow market peaches from and after the season of Hale's Early.

It is yet too soon to speak assuredly as to the ultimate value of these new candidates for the favor of planters, although I am inclined to regard some of them as very promising. I am not aware that they are yet propagated and offered for sale.

Yet another well-known peach grower of our State has been for several years experimenting in a somewhat different direction. His experiments, so far as peaches are concerned, have been mainly confined to the two Crawfords—Early and Late. His process is to plant the pits of these varieties, in nursery, and when the seedlings have made a year's growth, to select such as most clearly manifest the peculiarities of the parent; his purpose being to push his improvements in the line of the parents. I learn that by this process, which has now been in progress several years, he has been able to secure an orchard of several hundred trees, seedlings of Early Crawford, with little if any variation from the type of the parent.

In one instance, at least, however, he has succeeded in obtaining a new variety with reniform glands, with fruit in color and quality like Early Crawford, but which, after four years' fruiting, proves to be ten days earlier and about one-fourth larger.

His experiments with the Late Crawford have not been so long in progress, and although conducted in a similar manner seem to have shown a greater aptitude for variation on the part of that variety, since, in his selections from a season's planting, he has now in bearing a set of four seedlings in size, form and general appearance much like the parent, but some of them more beautiful, the four covering the season from before Late Crawford to early October, while in quality all are as good as the parent, and one or more of them are claimed to be decidedly better.

Besides these, several apparently promising seedlings have come to my knowledge during the past season, one being a very early peach apparently a seedling of Hale's Early, and of season and quality much like Amsden and Alexander.

Field Crops.

TWO CAREFUL EXAMINATIONS AND REPORTS UPON BLOUNT AND CHESTER CORN.

Report on a field of corn at Hewlett's, Long Island, belonging to the Rural New-Yorker, made Oct. 12th, 1880. Size of plot, 310 ft. by 122.4, or .87 of an acre of corn—"Blount's Dent"—sown by machine in rows four feet three inches apart, and each single kernel intended to be 15 inches from its neighbors. Flat culture, with, as we understand, 300 pounds of Mapes's special corn fertilizer harrowed in broadcast before planting, 100 pounds of the same when the corn was six inches high, and 100 pounds of potato special when about 18 inches high. From a judicious selection of stooks and careful measurement and weighing, we find the total yield was 227 bushel baskets of corn on the cob, or 261 bushels upon an acre,

We also shelled and weighed a quantity and ascertained the gross weight of three and seven-eights baskets to be 136 pounds, or 35.1 to one bushel, and further that 35 pounds of corn in the ear gave 28.95 pounds of grains and 6.05 of cob, and measured 17.1 quarts.

This calculation showed that the equivalent of 261 bushels of corn on the cob was 139.4 bushels of grains, and about three bushels or a little more which Mr. Carman had selected from the most prolific stalks, and had already placed in the barn, or a grand total of about 142 bushels of shelled corn per acre.

Robert J. Dodge, C. E., Pres't Farmers' Club, American Institute.
W. N. Habbershaw, F. C. S.,
Chemist, N. Y. State, Ag'l Society.
L. C. Benedict, Ed. N. Y. World.

We freely accept the above report as the actual yield per acre, and our best thanks are due to those who for five hours worked diligently for the data upon which it is based. Nevertheless we beg to call the committee's attention to one circumstance which, we think, was not considered in the final estimate. In the course of the husking, Mr. Dodge ordered what *seemed* to be about the smallest stook in the field husked as if to ascertain what would be the *minimum* yield. The other stooks husked were selected because they seemed to be of *average* size. The yield of this small stook was counted as that of an average stook the same as the others, which must have materially reduced the estimated number of bushels per acre. This circumstance, we think, was overlooked by the committee, as, indeed, it was by us until we received the above report, which, being less than we anticipated, set us to figuring out how it could have been arrived at.—Eds.]

Mr. Bruggerhof (of the firm of James M. Thorburn & Co.) was one of those who a few days previously to the above investigation—estimated the yield of the Chester Co. Mammoth. His estimate was based upon the yield of stooks in the west portion of the field, and as we have since ascertained that part of the field yields most heavily. The following is his certificate:

This is to certify that three stooks of the Chester Co. Mammoth, which I selected as of average size, were husked and measured in my presence, and that at the same rate per acre the yield would be at least 300 bushels of perfect ears. F. W. Bruggerhof.

THE SILVER CHAFF WHEAT.

During the Fall of 1877 we received from the Department of Agriculture at Washington one-half bushel of Silver Chaff wheat, with the following description:

"This wheat comes from York County, Province of Ontario, Canada, where it has been successfully grown for two years. It is a distinct variety of smooth, white, winter wheat, withstands the severest frost, and is not liable to disease or rust. Its weight is 62 pounds to the measured bushel."

During the three seasons over which we have now grown this wheat it has given proof of being a most valuable variety, having yielded larger crops than either Fultz or Clawson, having a stiffer straw and harder berry than the Clawson, being as free from all diseases as that variety, and showing no sign of smut, which has proved very injurious to the Fultz in some localities. At the harvest of 1878 the Silver Chaff was several days later than the Clawson in ripening, but it is apparently becoming earlier, having ripened on the same day as the Clawson this year.

I have before me a number of letters written by farmers living in various sections of Ohio and several of the neighboring States, who have grown the Silver Chaff wheat during the past season. The substance of these letters is, that in clay or sandy lands it has averaged somewhat larger crops than the varieties with which it was compared, which were, in nearly every case, either Fultz or Clawson; but that on black lands it has suffered a little more than other varieties from the peculiarities of this season which have caused many acres of wheat to fill imperfectly, thus producing shrunken grain. This climatic trouble has apparently been greater south of the 40th parallel, causing, in many cases, and especially in the Southern States, an almost complete destruction of the crop, without regard to variety. I infer from my correspondence, that through the Northern States the wheat growing on black soils has suffered more than that on sands or clays, and that while, on such soils, the Silver Chaff has suffered a little more, the Velvet Chaff has suffered considerably less than Fultz or Clawson.

The quality of the straw of the Silver Chaff has generally been reported as satisfactory, one correspondent writing "I do not believe any land can be too rich for it," which corroborates my own experience, but in some cases it has lodged from the pressure of high feeding, or broken from the effect of rust or of the climatic causes mentioned above. C. E. Thorne.
Ohio State Ag. Col.

SELECTING SEED CORN.

This comes to me in the Rural of October 9. "Prof. Blount: You advise in selecting seed corn to select only the topmost ear when there are more ears than one. Suppose the topmost ear is not so large, the kernels not so perfect as the others—would you still select it?"

By no means. Reject it as well as every other ear on the same stalk. Reject it as you would a defective animal. Stockmen never select imperfect and diseased specimens to breed from, nor are they satisfied to take fair specimens from a poor or defective parentage. No more should the farmer select his seed from poor and defective stalks or ears. If the stalk be a healthy one and free from injury by insects or weather, the topmost ear is always the largest, best formed and has the best filled grain, provided the parents from which it came were perfect. Every variety of standard corn produces its best ear nearest the tassel for reasons that are quite evident. Being nearest, it receives the pollen first and in greater quantity than those below it; another reason is that it is the natural distance from the soil, etc., etc. A careful examination of the stalks in every stage of their growth always shows that the lowest ear has the longest shank, the next has a shorter one, and so on to the topmost one, which sets close upon the stalk. It shows also that the lowest ear is the smallest and the top ear the largest, as above stated. A. E. Blount.

Farm Economy.

WHICH FORM OF NITROGEN IS MOST READILY ASSIMILATED BY PLANTS? No. I.

PROFESSOR F. H. STORER.

The question has been a good deal debated abroad whether it is better to use sulphate of ammonia or nitrate of soda, when an active nitrogenous fertilizer is needed for field crops, and there is a great deal to be said on both sides of this purely practical question. That each of these chemical compounds can give excellent results, under fit conditions, has been shown by practical experience at the farm in numberless instances. The power of the soil to fix and hold the ammonia of the ammonium salt is of advantage in some cases, though perhaps disadvantageous in others; while, on the other hand, the easy diffusibility of the nitrate in the soil may be beneficial to the crop or wasteful of the manure, according to circumstances.

The subject is all the more difficult because there is good reason to believe that plants are not by any means indifferent as to the kinds of nitrogen which are presented to them. One species of plant may find the nitrates excellent food and thrive upon them continuously, while another kind may be grateful for ammonia as well as for the nitrates. More than this, one and the same plant may, at different periods of its growth, make good or bad use of one or the other kind of nitrogenous food. In view of these facts, it becomes a matter of great interest to find out, if possible, which crops or classes of crops are especially apt to feed upon ammonia or upon nitrates; or, indeed, upon the other compounds of nitrogen such as those found in dung, urine, and guano, which are known to be true food for plants. The value of this information would by no means be limited to the narrow question whether an ammonium salt or nitrate of soda should be bought in a given case; for it would apply to the whole subject of manuring, either with dung or with chemicals. In the light of desired information, the farmer would naturally strive to give to those crops which can feed upon ammonia such manure as contains this substance ready-formed or which produce it when they putrefy. Possibly, it might even be best in some cases to try to hinder nitrification in the field and to maintain the manure at the ammoniacal stage of decay for a suitable length of time; while in the case of crops which crave saltpeter it should be looked to that the land is marled, or provided in some way with an abundance of carbonate of lime, and in general the arrangement should be such that the process of nitrification may go on in the soil of the field more rapidly than it would naturally. To the crops which prefer to get their nitrogenous food in the form of urea or uric acid we would naturally give fresh manure, guano or urine—as has been done often enough in the history of agriculture by folding sheep.

A good deal of study has been given by chemists in past years to the question, which is the best nitrogenous food. The earlier trials were made in the hope of determining precisely the comparative value of nitrates and ammonium salts considered as plant-food. It was soon perceived that the nitrogen in the nitrates is much more generally directly available than that in the ammonium compounds. It was seen that for many kinds of plants the nitrates can supply nitrogenous food, and to all appearance they can supply it in the best possible way. But as regards ammonia, it was by no means so clear that it could ever serve directly

as plant-food. Knop and other experimenters were unable to grow seed-bearing plants, by way of water-culture, when the nitrogenous food was given in the form of ammonium salts alone, though with nitrates, and with mixtures of nitrates and ammonium salts, they succeeded well enough. In many cases it appeared that ammonium salts were not at all fitted to directly supply the plants with nitrogenous food; but it was argued that the fact was probably of no great importance as regards field crops, since ammonia is known to change to nitrates in the soil. More recently several attempts have been made to determine, in respect to particular kinds of plants, whether ammonia salts or nitrates are preferred as food at one or another stage of growth, and this is the point which is now of special interest.

Some valuable suggestions have been gained already, and no doubt the problem will be solved in process of time, in spite of certain difficulties which have beset it hitherto. Not the least among these difficulties was the liability of the ammonium salts to change to nitrates in the actual course of the experiment—a tendency which can probably be counteracted henceforth; for it has recently been discovered that the change of ammonia to nitrates is not a matter of mere chemical oxidation as had been supposed, but is caused by certain minute organisms whose life, or whose activity at least, can readily be destroyed by the vapor of chloroform and various other chemicals. Among these vapors there will doubtless be found some which while keeping the ammoniacal fertilizer intact during the whole course of the experiment, will have no influence whatsoever upon the growth of the plant. As an instance of this kind of perturbation, an experiment of Bayer may be mentioned. He sought to grow oats, by way of water-culture, in a solution of fertilizers where the nitrogen was in the form of bicarbonate of ammonia. The plants started in a miserable, crippled way, and most of them died after a short time. Some of them grew, however, in a feeble way until the time of blossoming, and even bore a few seeds. But when the experiment was just about to be concluded the plants suddenly began to grow freely, and on examination it appeared that almost the whole of the ammonia salt had been changed to a nitrate. On repeated trial he was unable to grow healthy oat plants with ammonium salts, though the oats grew readily under the same conditions when supplied with nitrates. In field experiments made recently by Professor Heiden, to test this point, it appeared that crops of oats did better with nitrate of soda than with sulphate of ammonia.

Some of the most noteworthy experiments upon this question are those of Julius Lehmann. He grew a large number of plants of buckwheat and of Indian corn in solutions which were all of similar composition in respect to the ash ingredients, but which differed from one another in that some of the solutions contained nitrate of iron while others contained sulphate of ammonia. The buckwheat plants grew very well in the solutions that contained nitrates, as well indeed as they would have grown in a garden, but they grew very badly in the solutions that contained the ammonium salt. This result does but confirm the observations of previous observers, who found that buckwheat succeeds when fed with nitrates and that it does not need ammonia.

Indian corn, on the other hand, behaved in a very different way from buckwheat. The plants were placed in the jars on the 19th of June, just after they had germinated, and in a week's time all the plants fed with the nitrate seemed to be in a starving condition, while those fed with ammonia grew freely from the first and exhibited most conclusive evidence that they were getting the right kind of food. But at the end of six weeks the appearance of all the corn-plants suddenly changed, both those which were getting the nitrate and those fed with the ammonium salt. The nitrate-plants became green all at once, although no change had occurred in respect to the outward conditions under which they were growing, and from that time forth the nitrate-plants grew well and rapidly. But with the ammonia-plants the precise reverse of this occurred, and at the very same time. The leaves of these plants lost their healthy color and the plants took on a sickly appearance; while the nitrate plants grew continuously and developed normally until the 15th of September, the ammonium-plants ceased to increase in size, they remained stationary in a miserable condition.

Moreover, on changing some of the sickly nitrate-plants, during the first period, into jars that contained the ammoniacal food, they revived immediately and took on a lively green color in two days' time; and so, conversely, on putting some of the healthy ammonia-plants into a solution that contained nitrate of soda they became at once pale and sickly. So, too, during the second period, when, as it appeared, the corn-plants had need of nitrogen in the form of a nitrate, such a shifting of the plants from one kind of jar to another immediately exhibited the advantage of this kind of food. Lehmann changed some of his plants repeatedly and found that he had it completely in his power to make the plants pale and sickly or green and healthy, as he might will.—To be continued.

The Poultry Yard.

MANAGING AN INCUBATOR.

L. S. HARDIN.

I HAVE no desire to take issue with the makers of incubators, but I must, nevertheless, as a faithful chronicler of facts, warn my readers against the ease and luxury with which an incubator can be managed—according to several pamphlets before me. This is evidently a mistake, that is, so far as it relates to the citizen of average capacity. Some people have a knack of making things go without an effort, but the chances are that you are not one of that class. I was told to-day of a neighbor who used up 250 eggs before he got started. That reconciled me to my mishaps, for it has cost me 45 eggs to get four chicks, and they are but five days old, though they are very fine specimens. My next batch are now hatching out, and I expect far better luck with them. But more of this anon.

Suppose the incubator has arrived. If it is not a self-regulator, all you have got to do is to buy a lamp if none comes with the machine, light it and put in the eggs, and then sit down and watch it until you get the lamp to burn regularly and at the proper temperature. Remember the whole machine must get thoroughly warmed, say four or five hours after the lamp is first lit, before you can depend upon a steady heat in the oven. It is a better plan not to put in the eggs until the machine has been run a day or two. If the incubator has a thermostatic bar for a regulator, it will need but little adjusting before it is ready to start. The room selected to work in should be as free from superficial atmospheric changes as possible, and the warmer the better for Winter work, as the warmth saves oil and the less changes of atmosphere the less danger of the machine failing to protect the eggs. The above requirements are best found in a dry, warm cellar, but a more convenient room upstairs will do.

If the incubator has a battery to work it, you should know something of the principles involved. Such knowledge will save you a world of trouble and explain errors and avoid mishaps that you could not otherwise discover or avoid. The printed instructions that came with my machine were of no value to me at all outside of my previous knowledge of the principles governing a battery and the hints I fortunately got from the last owner of my machine. The only advice I can give is—should the battery stop working, don't get discouraged, but tinker with it and change things around until it starts again, when you will wonder that you had not thought of "that" before. Build a good strong bench or table against the wall to handle the eggs on. If you do not buy one with the machine, then make an egg-tester. You can do this easily enough by taking an old pasteboard hat-box and cutting a hole in the end, the size of an egg, and pasting a piece of black velvet or silk around this hole on the outside. Place a kerosene lamp in the box, cut a hole in the cover to let the lamp chimney pass through, and put it on. Air-holes must first be made in the sides of the box near the bottom, or the lamp will not burn when the cover is on the box. The incubator should rest upon a strong, firm stand, so that it will receive as little jarring as possible. At first I bought the most expensive kerosene oil, but afterwards found this needless, as the cheaper quality, 112° proof, burned just as long to a given quantity. It then cost 12 cents a gallon. You should have two oil cans holding two or more gallons each, so as to have one on hand full all the time, as you sometimes cannot get oil at the store just when wanted, as storekeepers often refuse to draw it at night or on Sundays. If you have a good place to keep a barrel, it is cheaper to buy in that way, as it makes a difference of about four cents a gallon, though it is well not to go so deep into the oil trade until you get better established in business, as the first barrel and faucet will cost something like two dollars. The barrel will afterwards be exchanged.

Either the types or my pen made a mistake in the estimate in my first article. I find that a 500-egg machine burns five instead of three gallons of oil a week, which, at 16 cents, present price, is 80 cents a week, or $2 40 for each hatching, which is much less than the cost of corn would be for hens enough to cover that number of eggs three weeks.

If sand is used in the pans, get the cleanest you can, and let it be thoroughly dried if to be used a second time. Sift all the gravel out of it, as it is apt to crack the eggs. Have a good pair of shears to trim the lamp with and a small tin bucket to heat water in. A small oil stove is invaluable in this business, as you often require warm water when it would be ruinous to wait to kindle a fire. This, by the way, is one of the most inexpensive and delightful conveniences about the house. A lady who has ever used an oil stove will not be without one.

If the supply of sand is at all convenient, the same panful should never be used more than once, as the old eggs taint the sand, which renders the air impure in the oven. Air heated to 104 degrees draws all the bad odors out of anything. Heat must be economized as much as possible, and to accomplish this all pipes leading into the oven should be wrapped with several thicknesses of felting, and all openings about the bottom of the furnace not absolutely needed to give a draft to the stove or lamp, should be closed, while extra sand or blankets may be put on top of the stove or oven and heater. By keeping everything clean and sweet-smelling in the oven much of the prescribed ventilation can be dispensed with, to the saving of much kerosene. The lamps should be turned just high enough to give the required heat, with a sufficient surplus to guarantee against a cold snap just before daylight, when we sleep soundest and are therefore most off our guard. Excessive heat not only wastes oil, but uses up the battery and causes more rapid and frequent changes of the atmosphere over the eggs.

In regard to the battery, the only supply necessary to keep on hand is a sufficient quantity of blue-stone (blue vitriol) to add a handful to the jar once in two weeks. This is quite inexpensive, costing only 25 cents a pound—about six handfuls.

In selecting eggs get the freshest possible, as they will stand rough usage and erratic temperatures best, and this is a virtue you will probably stand in need of with your first batch. It is hardly necessary to call attention to the economy of using the eggs of common fowls to begin with; but to illustrate the risks—while I have sat up with my machine night and day for something over a month, I have but 11 chicks out of 70 eggs, and those who preceded me say I have done remarkably well with my first hatches. I look for better luck as I proceed. Medium-sized eggs should be chosen. Get them in the oven as soon as possible after they are laid. Though it is more convenient in handling the chicks that they should come out in clutches, yet if long delays occur in getting the different lots of eggs, they had better be put in the oven in smaller numbers. Mark in figures the day of the month at one end of the egg. It is needless to put the month on, as that will be remembered. On one side of the egg make several marks with a soft pencil, so as to be able to tell when each egg is turned. If sand is used, it should be kept so damp that the top never dries, while it should not be so wet that it will leave the print of the sand on the egg. Water slightly discolors eggs and they should be watched, for too much dampness drowns the chicks. The eggs should be turned morning and night; my instructions say three times a day, but I am satisfied this would keep the eggs in the oven cold too long, as it requires several hours to get them back to the proper temperature after taking them out for the shortest time possible to turn them. At first, in turning them it is well to dip the fingers in water to make them stick to the egg and prevent breaking; but as you become accustomed to it, after a few accidents, you can become quite expert. It is best, of course, to have drawers that turn the eggs, which saves time, labor and oil. Some use a small garden sprinkler for wetting the eggs, but I prefer my hand dipped in water heated to about 100 degrees, and each egg should receive some of it. As the chicks in the eggs reach "maturity" the sprinkling should be more liberal, and the last day dip each one in the water. Once a day the eggs must be aired. Good judgment is your best guide here, the length of time to let them remain out depending upon the outside temperature, from 15 to 30 minutes being usually required. Let them feel a little cool, but not cold, to the hand when you lay it on them. Do the sprinkling just before returning the eggs to the oven. The longer within reason they remain out without getting too cold, the better.

Weed out the old Stock.

The great mass of fowls kept by farmers are used, so to speak, as scavengers; that is, they live simply by picking up what would otherwise be lost about the farm. Feeding them is rarely thought of, unless what is thrown out to them from the scraps in the kitchen in cold weather be called feeding. In Summer it would not be wise to feed much, if any; while in Winter it is the part of wisdom to feed, not only a little but liberally. When this is done some discretion must be used or all the pains and cost of the operation will be thrown away on a lot of "dry," old hens that have long since laid out their last eggs, or only retain enough to make an apology for sitting on other hens' eggs after laying a clutch of two or three at most. When a hen is born into the world she holds within her body the embryos of all the eggs she will ever lay, no matter how long she may live. The first twelve months after she begins laying she will yield almost one-fourth of her full complement of eggs, and by the end of the second year nearly three-fourths of all she will ever yield, while the remainder of her life is occupied in delivering the last quarter of her full yield. So it will be seen that the first and second years of her busy life are the most profitable ones to her owner. It is, therefore, economy to weed out the old hens with a severe discrimination. Keep nothing over three years old, and if the greatest economy is practiced and the largest profits demanded, as they should be, then nothing over two years old will remain on the farm. As the Fall months merge into Winter, chicken feed becomes more scarce and all of it should be reserved for the hens that do the work. Old, superannuated cocks should go into the pot along with the old hens. I recommend the pot in preference to the market, as the farmer will get more real money return in this way than by selling old chickens at ruinous rates, as the store-keeper is certain to force him to. L.

The Herdsman.

THE BOOM IN JERSEYS.

RICHARD GOODMAN.

LAST SPRING the first of the combination sales of horses and thoroughbred cattle of Kellogg & Co., took place in New York city, and was a decided success as to the Jerseys, of which alone I write for various reasons. Primarily the animals were all selected from the herds of the best breeders, who consented to spare some of their choicest cattle, and they were sold as belonging to such owners whose names, in connection with that of Mr. Kellogg, guaranteed that each animal was as represented. Secondly, at that time there was quite a furor, now dying out, about certain lines of breeding, and the judicious managers of the sale were careful to have several animals of those strains on hand for competition, and the result justified their foresight. Unexampled prices were given for a few cows, and the average of the whole sale was better than that for imported animals direct from the island of Jersey, and plainly proved that when the same care is taken to cull from home-bred herds the best products, as is taken by the dealers abroad, we can successfully compete with the latter, and that buyers of Jersey cattle are no longer ensnared by the word "imported" any more than ladies are in the purchase of silks for dresses, but that home production if equally good will be chosen in preference, and if better will always be in demand. The report was current that the Kellogg sale was under the fostering care of the American Jersey Cattle Club, but that was a mistake caused probably by the fact that Mr. Hand, the Treasurer of the Club, and a most competent judge of Jerseys, was in his individual capacity interested with Mr. Kellogg in the enterprise, and the success of the undertaking was owing in a large measure to their joint judgment and management.

Another sale under the same united direction has recently taken place—in the middle of October—and the results, so far as the Jerseys were concerned, was again a success, though there were no animals of any of the special "boom" strains and no such extraordinary prices as before for individual cows, but all were disposed of upon their real merits. The highest prices were for "Easter Flower," owned by Mrs. Jones, of Canada, a most enthusiastic lady breeder, who within a few years has got together an excellent herd of butter-making cows, whose product she utilizes with profit; and "Saumarey Lass," owned and imported by Mr. George A. Beck, of Stockbridge, Mass., a few years since, with many others, to stock his fine farm then recently purchased. Easter Flower brought $510, Saumarey Lass $430. The herd of the estate of the late William Redmond, whose farm was at South Orange, New Jersey—an early and prominent breeder of Jerseys—though showing that they had not received since his decease the same attention he was in the habit of having bestowed upon his favorites in his lifetime—sold for very fair average prices, and the herd bred with care by the late H. S. Parke, of Bayside, Long Island, and kept up in good condition by his executors, made the excellent average of $275 each, several ranging from $300 to $400 apiece.

The herd of Mr. Parke was an excellent example of judicious breeding from a well-selected bull—a continuance of the same struggle for excellence not only through one Summer but several seasons—and the uniformity of the herd in color, shape, good udders and other prominent "points" made it attractive to purchasers, and must have been gratifying to the amiable gentleman who was so earnest as a breeder and whose loss is so sincerely mourned by his associates. The bull "Golddust," imported by Mr. Parke through Mr.

Weld, was, as his name represents, golden-hued—a color which he invariably imparted to his progeny—with a hide delicious to handle, and though just in his prime, five years old, was sold for $45, whilst a male calf of his get a few months old brought $200! Mr D F. Appleton, one of the most enterprising of Jersey breeders, who seldom hesitates at the price, if what he desires in the line of cows or bulls suits him, and who was undoubtedly prepared to give six or eight times the amount actually paid for "Gold dust," if there had been any competition, was the judicious and lucky purchaser and all signs will fail if the product of his "Ipswich" herd during the next two or three years is not superior to its predecessors, notwithstanding the excellence of the blood and breeding already imparted. The remaining Jerseys were sold for fair prices, and no one could complain that the sale was not well advertised and managed nor that many, if any, desirable animals brought much less than they were worth.

Of course, this second sale was not intended to be a compeer of the first, but breeders were allowed to send such animals as they pleased to be sold only under their own names, and the prices they brought depended not only upon the reputation of their owners, but upon their actual merit and condition. "Easter Flower" was not a solid-colored cow, though she brought the highest price at the sale, neither is "Jersey Belle of Selmate," though her owner has refused to put any price upon her; yet the herd of Mr. Parke owed much of its beauty to its uniformly light fawn, and much as we may deprecate "giving away" any valuable qualities as a sacrifice to "color," there can be no doubt that, other things being equal, "solidity" is attractive to buyers, and that a herd of *good* animals of uniform color always makes an impression. But it is rare that one bull will so impress nearly all cows which receive his services as did "Gold dust"—though our lamented Lenox, whose *shade* we trust is now feeding in pastures new, had the like quality—but if a breeder is lucky enough to own such a one he can do no better than to hang on to him and use him so long as he can beget.

The lesson from these sales is that good animals bring good prices, and vice versa; that we have in this country as valuable breeding herds as can be found in the world; that not only breeders themselves, but all those dealing in Jerseys, are aware of the fact, and that with judicious management we can compete even at public auctions with any imported stock.

Lenox, Mass.

FANCY PEDIGREES AND INDIVIDUAL EXCELLENCE.

W. I. CHAMBERLAIN.

A JOINT public sale of highly bred Shorthorn cattle was held at Delaware, Ohio, October 21st 1880. The cattle sold were owned, and almost without exception bred by four parties, viz, C & F P. Hills, Hon. T. C. Jones & Son, T. L Harrison and Hon. T. F. Joy, and a printed catalogue, as is usual at such sales, gave full pedigrees of animals The Messrs. Hills & Jones are two of the oldest and best breeders in Ohio, while Mr. Harrison is a well known breeder of St. Lawrence Co., N. Y. and Secretary of the New York State Agricultural Society, and Mr. Joy has an excellent local reputation in Ohio as a breeder. The sale was conducted under the rules of the Ohio Short-horn Association, which fact alone would have assured perfect fairness in every respect, had it not been already secured by the known character of all the gentlemen concerned.

The animals sold were of excellent families or strains, but had not been put in special show condition at a large and worse than useless expense. They were in good breeding condition, and not pampered and grain fed in dark stables to put on luxurious fat and artificial gloss and color for mere fancy bidders at fancy prices. There was not a fancy or illegitimate figure obtained during the whole day, but rather a steady run of good and remunerative prices. The day of fancy prices is past in Ohio, but the day will never pass when the careful, honest, sagacious breeding of Short horns will fail to be remunerative. The total receipts for 89 animals actually sold, were, as I figure it, $11 045 or a shade over $124 per head all around. This price is good when it is known that two of the bulls were six years past, and that a large number of "young things" from four to ten months old were included in the catalogue.

While it is true that "*fancy*" pedigrees were not at a premium, yet nothing was more evident than that a straight and unbroken line of approved ancestry was in all cases deemed essential, and that any question on any ancestor even quite remote greatly injured the price of the animal on sale. It was a most intelligent and exacting crowd of bidders, and in every instance they seemed to demand two things, viz. individual excellence, and a good pedigree.

The Rose of Sharon family seemed, as a rule, to bring the best prices, but little preference being given to the Kentucky branch in the past of any animal. It was perfectly evident that neither pedigree nor premiums awarded in the past would sell an animal unless he individually filled the eye of the purchaser. For example, the eighth Baron Morley, 28 537, bred and owned by Mr. Harrison, had taken first prize as yearling bull and in prize herd in 1876 and as aged bull and head of prize herd in 1879, both at New York State fair, these two being the only times he ever was exhibited. But the animal himself did not fill the eye of the bidders, most of whom were naturally fastidious, and had, besides, seen the fine show of "aged bulls" at our late State fair and had had their eyes spoiled for anything not pretty near perfection, individually. And so, though the Baron had a good show record, and was line-bred Princess with but a single out-cross, he went at the ridiculous price of $60. True, his age was against him (six years past), but Duke Dunmore, 32,248 was six months older and had just sold for $300. But he was a straight Rose of Sharon of the Kentucky branch, and had a form and bearing that filled the eye of Short-horn men.

The most noted breeders of the State were at the sale, and replenished their herds with choice animals. Also several well known gentlemen from other States, as, for example, Professor S. Johnson, of the Michigan Agricultural College, who, being clearly a judge of cattle and having the State of Michigan to back him, bore off several of the very choicest animals offered. My footings of the sale, in round numbers, are:

C. & F. P. Hills	30½	head at $151	per head,	$4,600
T. C. Jones & Son	28½	" 115	"	3,285
T. L. Harrison	8	" 151	"	1,215
T. F. Joy	22	" 88	"	1,945
Total	89	124		$11,045

Hills and Jones owned the bull Duke Dunmore in company. Hence the "½" above. The animals were widely scattered by the sale among common farmers as well as breeders, and will do much towards grading up the dairies and herds of the State of Onio.

STOCK NOTES.

MESSRS. POWELL BRO'S., of Springboro, Pa., have for years been recognized as the most extensive importers of Clydesdale horses in America, and are also noted for the high quality and worth of their stock. We had the pleasure of inspecting their last importation of ten Clydesdale stallions landed from the Circassia, of the Anchor Line, from Scotland, on Oct. 31st. It is no disparagement to any others to say that these were pronounced by good judges the finest lot ever landed at this port. They not only had large size—several of them weighing over a ton each—but they also had unusual quality, style and action. They stood the voyage well. This lot are all registered in the Clydesdale Stud Book of Scotland, and are a great credit to the skill of Mr. Powell, as shown in their selection They are bays and browns. One of the lot goes to Smiths & Powell, Syracuse, N. Y. Messrs. Powell Bro's have made several large importations this season. They landed seven at Boston last week, and other lots shortly before; they have still other purchases to arrive.

Sheep Husbandry.

EARLY LAMBS.

THE breeding of these may be greatly increased and made one of the most profitable industries of American flock-masters. They are quick of sale, and command high prices in consequence of the rapid increase of the wealth and population of our cities. Since the introduction of steam engines into so many barns, for the purpose of grinding grain, cutting fodder and cooking roots, warm winter-quarters are easily made for ewes, in which they may safely lamb all Winter and rear their offspring. Thus they may begin to drop them early in November, and so continue comfortably housed till mild Spring weather.

Early lambs may be most profitably raised in conjunction with cows kept for the dairy; for to bring them forward rapidly and well fattened for market, it is generally necessary to feed them cows' milk in addition to what they draw from their dams, and the more especially if there are twins or triplets. The lambs can be taught to drink milk by the time they are four weeks old, or possibly a little sooner. Begin with a gill to half a pint morning and night, fresh drawn and warm from the cow, and go on increasing the quantity to the full extent of the lamb's subsequent appetite. Lambs can thus be grown large enough, and well fatted for the market when six to eight weeks old, and their flesh is then so delicate and savory as to command the highest price. Milk of the Channel Island and some other cows may possibly be found too rich for the lambs, causing them to scour; if so, dilute it with pure warm water before feeding. It might be best also to add a tablespoonful or two of oil meal or flaxseed gruel. When kept on longer, they can be fed a little flaxseed and oats ground together, raw cotton seed and oil-meal, and, at a suitable age, hay, roots, cooked or raw, and grain of some kind.

Much judgment and a little experience are required in feeding lambs, as well as other young stock. The great thing is to promote a rapid, healthy growth, at the same time keeping them from scouring. They are easily made to scour unless the food is of the right kind, and if too much at a time is forced upon them. Apartments for ewes and lambs should be kept well aired and clean. This is essentially necessary for their health, as sheep require a fresher and purer air than any other kind of domestic animals. In mild days they may be turned out into a dry yard for exercise a few hours, but never when the ground is wet or muddy. When lambs get to be two months old, if the weather be still cold, they and their dams can be gradually inured to sheds open in front to the south, but in case of a threatening snow storm or heavy rain, the lambs, at least, should be stabled or kept where neither snow nor drenching rain can reach them.

At the South, early lambs can be more easily and cheaply raised than at the North, for there open sheds only would be required to protect them, and green pastures may be had in abundance nearly all Winter for the ewes and the lambs also to nibble as soon as they got old enough to do so. But even there we would recommend, if desired to push them forward rapidly, feeding milk as above stated and cotton-seed meal, as oil-meal or flax-seeds not so easily obtained, and both are dearer there than at the North, while cotton-seed meal is much cheaper. The lambs at a suitable age can be quickly transported by steamers to Northern markets, and insure on their sale a profitable return to Southern farmers for their breeding and rearing. They would also give them plenty of fresh meat at home, and thus avoid their being so confined as they now are to salt pork and bacon.

As to the best breeds of sheep to produce early lambs, the different sorts of Downs, and especially the pure South Downs, are preferred in England, and it should be the same here. But crosses of these as well as those of the various kinds of long-wooled sheep answer an excellent purpose, and may be largely and profitably used. On lean grade Merino and native Southern ewes, perhaps the first cross of a Cotswold, Lincoln, or Leicester ram may be best, but one should rarely go beyond one cross, otherwise the lambs might be too fat for delicate eating.

As these three latter breeds are of extra-large size, care should be exercised to select as roomy ewes to breed to them as possible, and also to select the smallest and most compactly formed rams of their breed for this purpose, otherwise the fetus would be so large as to make yeaning dangerous. Unless such care is used in coupling sheep, both dam and offspring are often lost. We are aware that it is said the bones of long-wooled rams are so fine in proportion to their size, that little is risked in coupling them with quite small ewes; but those most experienced in such breeding declare that there is more or less danger in it, and we therefore caution our readers to be careful in making selections for their flocks.

Other breeds of sheep besides those we recommend above are used in England for the production of early lambs, such as the Dorset, etc; but they are smaller and not so hardy and thrifty, and, moreover, have horns, which are quite objectionable in mutton sheep. These may be called rather fancy animals than otherwise. We believe that the system of raising early lambs was first begun in Dorsetshire, England, and thence has gradually spread over the United Kingdom.

As poultry begins in late Winter and Spring to diminish, in the meat markets, nothing is found equal to early lambs to supply its place, and we trust their numbers may be rapidly increased hereafter for this highly desirable purpose.

MUTTON SHEEP.

No doubt this class of sheep is destined to take the same precedence among us, in the course of a few years, as it has long since taken in Great Britain. Mutton there is much more largely consumed than either beef or pork, and, when coming from the right sort of sheep, it is more savory than either and more healthful than the latter, particularly in summer weather. It can be produced more cheaply than beef or pork, and we have only to give due attention to breeding such sheep as supply mutton of the best quality, to increase its consumption rapidly among our people, and also its exportation.

As to the breeds of sheep for this purpose, the various classes of Downs are unquestionably preferable; and they are so hardy, prolific and early to mature, that they may be made, with proper attention, to stock the country rapidly.

Next best to the Downs as mutton sheep, are the numerous crosses made by their rams, as well as by those of the larger-sized long-wooled on native ewes. When this produce becomes well fixed in that type which particular districts prefer for their regular breeding, then the males and females of these crosses may be put together, and serve to stock the several localities as desired by their occupants.

For a breeding flock farmers should pay special attention to selecting such only as are of strong constitution, good form, hardy, quick feeders, and early to mature, coupled with as valuable a fleece as possible, although this is of secondary consideration. The possession of all these qualities in a breeding stock, is of the utmost importance, and should be carefully considered in each individual sheep; for the better or worse they may be, the greater or less will be the profit realized out of the flock. When anyone has not sufficient confidence in his own judgment to make a proper selection of breeders, he should avail himself of the services of a friend who is capable of doing it for him, as he may be assured this is well worth the extra trouble and moderate expense such a course may be to him.

Feed is the next thing of importance, and in giving this be careful that it is such as will keep the sheep at all times in good store order; not over-fat on the one hand or lean on the other. If too fat, neither males nor females will produce as many or as strong lambs as when fairly kept, nor will their offspring be so hardy and thrifty. The milk of over-fat ewes is liable to give their lambs the scours, while that of the lean is not sufficient for their full nourishment. Thus, in both cases, the growth of the offspring is checked, and they never can be made as good sheep as if they had been properly nourished when young.

Of the best kind of feed for store keep or fattening sheep every farmer must learn to judge for himself, and act accordingly, for this varies with the climate, season and weather. Take, for example, a hilly pasture in dry weather. The grass then will be scant, wiry and so hard of digestion as not to furnish sufficient nourishment for the flock. If then it can be brought down at evening to richer land, growing a more succulent herbage, and hurdled there till morning, this will assist in digesting the drier food of the day, and fill their stomachs with all that is necessary to keep the sheep in good condition, or even fatten them for market.

Again, during a superabundant fall of rain, grass becomes so rank and watery that if eaten too freely it causes scours. The flock ought then to be fed partly on dry hay or straw, if they will eat it, to correct this looseness, and in any event have a moderate ration mornings and nights of linseed meal or flax-seed ground half and half with oats. When fed roots in Winter the same ration should be added, which will generally prevent scouring.

One great consideration to the farmer in keeping sheep is, that the carcass is so much smaller than that of the bullock that he can easily supply himself with fresh meat. This is not only more palatable and healthful than salt meats, but the consumption of it in hot weather is nothing like such a provocation of thirst as the latter to all out-door laborers. When families are small, neighbors can take turns in furnishing a carcass of fresh mutton to be divided among them, or, if the family is large, the meat can be kept in good order till consumed, especially if there is an ice-house in which to store it. Such every farmer ought to have, not only for this purpose, but for various others, which add so greatly to the comforts of all during hot weather.

Mutton has advanced in price in Great Britain during the past few years considerably more than beef or pork, in consequence of the enormous destruction of sheep there from various causes during this time; it will consequently take several years to fill up this gap. In the meanwhile, our own population is rapidly increasing, and the taste for good mutton with it, thus making an extra market both at home and abroad for our flock-masters. They will now see that they have every encouragement in the future, not only to improve their sheep, but also to add largely to their numbers.

MOUNTAIN SHEEP produce the choicest flavored and tenderest mutton and a very valuable wool for domestic purposes. For instance, the Welsh mutton produced in the mountains of Wales is sold by English confectioners as a delicacy, and the Welsh flannel is the best of its kind, never shrinking and hardly ever wearing out. Everybody has heard of Shetland wool, which is made into ladies' knitted shawls of strange devices, and into the softest hose and underwear. And the Shetland sheep are exposed on those bleak storm-swept moors in those rocky isles of the northern ocean which we should think uninhabitable. The Cumberland mountain sheep, the Herdwick, and the Scotch black faces, which feed on the rocky Gramplans, are also noted for their useful wool, short but strong and soft, and of the warmest, fleeciest kind, and are by no means small, for they reach a weight of 130 pounds.

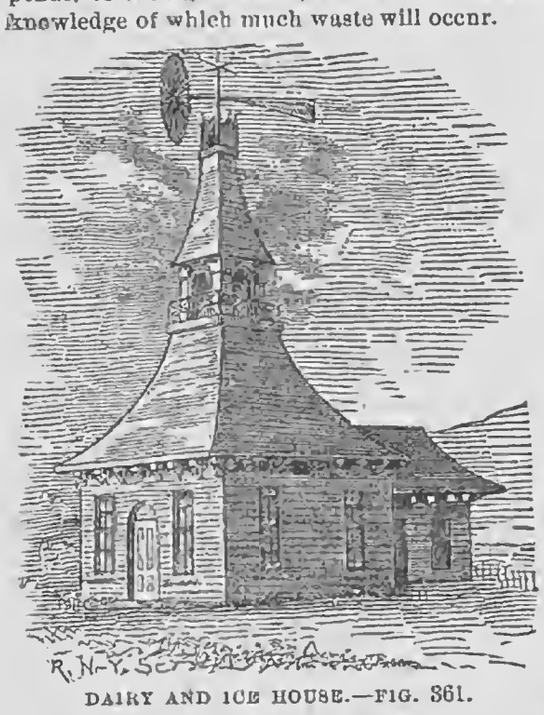
Dairy Husbandry.

THE DAIRY COW. NO 15.

HENRY STEWART.

The Use of Ice in Dairies.

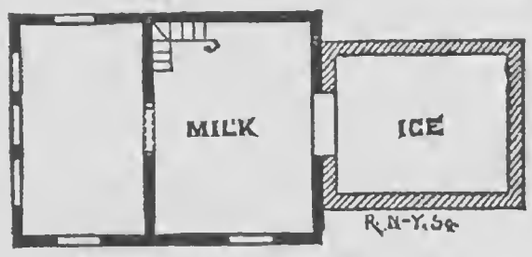
THE use of ice is one of the modern improvements and has done more than anything else to raise the quality of the butter made in dairies. A family dairy can scarcely be conducted successfully without the use of ice; the milk dairyman finds it indispensable; and the butter maker who desires to produce a fine quality of goods cannot dispense with it. The consumption of ice is regulated by a few precise conditions upon which its economy depends, to a large extent; and without some knowledge of which much waste will occur.



DAIRY AND ICE HOUSE.—FIG. 361.

The most economical use of ice is when it is applied directly to the cooling of the milk alone, and is not wasted in cooling the surrounding air or the readily conducting walls of ill-adapted vessels or receptacles for the milk. Probably the most convenient manner of using it is in a non-conducting refrigerator, closet or tank of the kinds which have been heretofore described. In using these it is well to remember that once the water or the air in the tank, or closet, and the substance itself of these, have been cooled to the lowest degree, the greatest economy consists in preserving the low temperature by keeping up a supply of ice. The loss of ice by conduction from a well constructed closed refrigerator is very small; but if this is left open when not in use, a considerable quantity of ice will be required to cool it down again, and this waste is loss. One pound of ice will cool one pound of water of 174 degrees to a temperature of 32 degrees. In other words, one pound of ice in melting absorbs 142 degrees of heat. This is known as the measure of the latent heat of water at 32 degrees, and which must all be given off to the atmosphere before the water can become completely changed to ice. It may be said, then, that water absorbs cold, which is the same thing practically, as giving out heat; and this result may often be turned to good account in milk rooms or dairies in cold weather, to prevent the milk from freezing, by putting a tub of warm water into the dairy. The water will freeze before anything else, and in freezing actually warms the air and contents of the dairy, or rather, in reality, takes up all the cold in excess of 32 degrees, until it is frozen.

One pound of ice, therefore, in melting, will absorb sufficient heat to reduce four pounds of milk from 80 to 45 degrees; and if a good refrigerator is used, there will be little loss of



MILK AND ICE ROOMS.—FIG. 362.

ice in overcoming the waste from the cooler. The quantity of ice to be provided may therefore be readily calculated, by considering that every pound melted, will take 142 degrees of heat from a pound of milk; 71 degrees from two pounds; 47 degrees from three pounds; 36 degrees from four pounds; or eighteen degrees from eight pounds. If therefore the milk is first set in cold spring or well water, and reduced down to 60 degrees, one pound of ice will then be able to reduce nearly 10 pounds of it to the still lower and perfectly safe temperature of 45 degrees. At this temperature the cream may all be raised from milk in 12 hours, and milk may be kept sweet for 72 hours or longer.

An ice house and a supply of ice will be found indispensable to every well conducted dairy from a one-cow establishment up. The supply of ice may be procured without difficulty by throwing a low dam across a small stream, and collecting the water in a pond, or by excavating a pond, where there are no other means of getting it. A cubic foot of ice weighs about 55 pounds, or one ninth less than water. A surface of less than 80 square feet of ice six inches thick will yield a ton, and a pond of a quarter of an acre will therefore give 136 tons with ice of this thickness only. The ice house and dairy should be contignous and yet separate. The communication may be by a double door, as in the plan here given, in which the ground floor and elevation of a building proposed by the writer and built by a Western dairyman, are shown. The ground plan includes a churn-room with a milk-room attached, and an ice house in the rear communicating by double doors. The dairy is intended for the use of portable creameries and is supplied with cool spring water from a well under the floor, to which a windmill is attached. A connection with the windmill operates the churn. The upper story is used as a store room for butter pails and spare utensils, and is reached by a stair-way in the milk-room. This upper story provides excellent ventilation in the milk-room. The method of construction of the milk room, as regards floor, light, etc., and of the furnishing, is similar to that previously described and need not be repeated. The construction of the ice house is of sufficient importance to occupy the next chapter.

AMONG THE CREAMERIES.

IT is not many years ago—not a score of years at most—since the farmers of Orange and Chenango Counties manufactured the butter and cheese from their dairies of 20, 30 or 40 cows, storing it carefully through the Summer, sure of securing a good price for the entire stock in the Autumn. Times have changed. Creameries have started up everywhere. Instead of a score or two of dairy women engaged in butter making, one deft-handed maiden does the work of all. The creameries of Chenango County are thickly scattered over hill and valley throughout its entire extent. They do not attempt to compete in size with the mammoth Western creameries, which have taken away the reproach of the old-time Western butter. From two hundred to six hundred cows are perhaps the usual number for a Chenango County creamery. Let us look in upon one where the milk of more than 400 cows is manufactured into butter and cheese.

The building is situated in the valley of the Unadilla, near the base of a hill from which an abundance of pure cold water is brought in large iron pipes. The large cheese room is furnished with counters which fill all the space, and extend over the entire room. The rooms below are three: first, the "make room," containing two huge tin vats within wooden vats for cheese making; a gang press where 15 cheeses are pressed by one screw; an old-style press for four cheeses, and a steam-engine. Second, the churn room, where four two-barrel churns are worked by the engine in the room below, and huge stacks of "white clover" creamery pails and a butter worker complete the furniture. Third, the milk-room filled along its entire length with large tin vats standing in larger vats filled with water. Opening from this room is the platform where the milk is lifted from the wagons by a windlass and huge iron tackle, poured into the weigh can which stands on large Fairbank's scales, and is thence through tin conductors carried to the milk or cheese vats.

If "full stock" cheese is to be made, the milk is carried at once to the cheese vats, rennet, etc., added and the whole brought to a proper temperature by heated water around the vats from the steam-engine. Then, when the curd is formed, it is cut by curd knives, perpendicularly and horizontally, into small squares, scalded and salted, the whey drawn off, the curd ground through a curd mill, and then packed into hoops and placed in the press. If half-skim cheeses are to be made, half the milk is allowed to stand in the vats for 12 hours. The cream from this is slightly soured, and churned the following morning. The cream being at the exact temperature required—58 to 60°—and the motion of the churn dasher steady and exact, the golden globules appear in about 30 minutes. The butter is washed in cold water, salt is added and in a few hours the butter is worked through the patent worker, and packed in pails, a gilt-edged article. Everything about the creamery is clean and sweet. The forewoman has one male assistant through the entire season, and a second through the press of work. The most perfect cleanliness is exacted, and the air is as sweet as in a Jersey woman's dairy. In many creameries large pools of water hold the "coolers"—deep pails in which the milk is placed.

Creamery butter brings in market from three to ten cents per pound more than dairy butter, a most potent argument in favor of thus uniting the small dairies into one where a perfect article is made. Western butter it was once thought would never interfere with State; creameries have proved this opinion a fallacy. Near Elgin, Illinois, forty creameries scattered over the prairies gather up the milk so easily produced, and manufacture an article rarely equaled. So with as good a grace as possible we have only to resign ourselves to the inevitable, thankful for the institution of creameries. MRS E. J RICHMOND.

Industrial Societies.

VIRGINIA STATE FAIR.

[Rural Special Report.]

THE 20th annual exhibition of the Virginia State Agricultural Society, opened at Richmond on October 25, and the exhibits, both in variety and quantity, were fully equal to those of former years. The weather during the entire fair was pleasant, and no rain interfered to trouble the exhibitors or prevent a large attendance. The fair on the first two days was poorly attended, farmers and others preferring the circus and other outside attractions. On Thursday and Friday, however, the attendance was very large, and the receipts sufficient to place the fair on a paying basis.

The grounds of the society are fine, and well laid out. The location is good and easy of access; and, with a few additional buildings, now in contemplation, this Society will have grounds of which it may justly feel proud. The officers spared no pains to accommodate the exhibitors, and their efforts in this direction have met with universal approval and made many warm friends. Owing to the absence of a suitable house for the shelter of poultry, comparatively few coops were shown, but what was wanting in quantity was made up in the quality of the birds exhibited, and thus this department was far from a failure. Some very fine Houdans, Light Brahmas, White and Brown Leghorns, Plymouth Rocks, Golden and Silver Pheasants, Cayuga, Rouen and Pekin ducks, Games, Bantams, etc., attracted large crowds of visitors.

In the Stock Department the entries showed forty-six head of Jerseys, forty-four Shorthorns, twenty Devons, seventeen Ayrshires, six Holsteins, fourteen grades and a few Herefords. Of farm horses only a few Clydesdales and Percherons were shown, and these were not extra-fine specimens of the breeds. The Agricultural implement exhibit was one of the largest ever shown on the grounds, local dealers especially seeming to vie with each other in the quantity and variety of their exhibits of implements of which they were the manufacturers or general agents. The Baltimore Plow Co. had a variety of their plows on exhibition in which they met with sharp competition from local manufacturers and dealers. A string-binder manufactured by the Walter A. Wood M. and R. M. Co., was run by an engine manufactured by Wm. E. Tanner & Co., of Richmond, and was especially admired by all who examined its perfect operation. Space will not admit of a minute account of all the implements exhibited, but we give below a brief description of the implements and machinery which were especially noticeable.

MR. M WILLIAMS, St. Johnsville, N. Y., had on exhibition a thrasher made by him, and sold during the past season to Mr. Morrison, Fredericksburg, Va. The thrasher was shown in full operation, and the purchaser informed us that he had thrashed 15,000 bushels of grain with it during the past season, and that entire satisfaction was given in every case. So great has been the demand for these separators that the manufacturer has found it necessary to enlarge his works in order to supply his largely increasing business, and hopes to be able to fill all future orders with promptness.

MR. W. HUTCHENS, general agent of the Baltimore Plow Co., Baltimore, Md., exhibited a full line of the Roland chilled plows, from a single to a four-horse implement. These plows are of the latest improved patterns of chilled plows, and the sales during the past season have exceeded anything ever before known in the history of the company. They are now using the celebrated Bower's patent reversible point, which is claimed by the manufacturers to be the most advantageous and economical improvement ever made in a plow.

MR. V. WETHERILL exhibited the "Little Giant thrasher and cleaner," manufactured by Messrs. Heebner & Sons, Lansdale, Pa. This company has been in business since 1840, and their long practical experience of the needs of farmers in this line and the best way of meeting them, has enabled them to place a first-class machine upon the market. Among the many points of excellence of the "Little Giant" we notice an iron cylinder, a new iron concave, a patent duster and a self-adjusting wind regulator, and steel teeth, which combine with other meritorious points to make this separator *all* that the manufacturers claim for it.

NEW JERSEY AGRICULTURAL WORKS, Trenton, N. J., exhibited the Butterworth thrasher and cleaner. This separator is supplied with adjustable boxes throughout, which entirely prevent all lost motion; this is effected by simply setting the set-screws. This separator was a center of attraction, its noiseless motion being particularly admired. It won the highest prize—a silver medal—at the North Carolina State fair, held at Raleigh Oct. 19–23, 1880.

W. H. BROWN, general Southern agent of the Empire Grain Drill Co., Shortsville, N. Y., had on exhibition one of their force-feed fertilizer drills. As the principles of *force feed* applied to the sowing of fertilizers is a novelty in this class of machines, the "Empire" attracted the attention of a great many farmers, and its meritorious points were shown up by Mr. Brown much to the satisfaction of all who carefully examined its workings. G. B. B.

BIG GIANT CORN AND COB MILLS. In noticing these at the St. Louis fair we neglected to report that they were awarded the first premium over all competitors. This is the third year in succession that these celebrated mills have carried off the first premium at the St. Louis fair. They were also awarded the first premium at the Baltimore, Md fair and at every place where they were exhibited this year. Their new cast-steel grinders are a valuable improvement. At a recent trial the Big Giant No. 1, which is the smallest size, ground one bushel of ears of corn in four minutes with one mule, showing a draft of 110 pounds. This was the best record in the trial—and shows a remarkably light draft in comparison to the work done. K.

The Apiarian.

THE DRONE BEE.

THE drones are bees of larger size, stouter, and more squarely built than the workers. They commonly make their appearance in the hives in April, May and June; and are usually expelled from the colonies by a summary process in July or August. The head of the drone is much more spherical than that of the worker, the body is more bulky and hirsute, and the abdomen terminates more obtusely. Drones fly more heavily and make a louder humming than the workers when on the wing. But their apparently most distinguishing characteristic is the want of a sting, which constitutes the formidable weapon of the worker, and with which even the queen is armed.

Singularly contradictory opinions respecting the sex and functions of this kind of bee have been entertained by eminent apiarians, and are still cherished and advocated by some recent writers. Some, indeed, go so far as to refuse to acknowledge them to be natural and necessary members of the busy commonwealth, regarding them rather as misbegotten monsters or parasitical intruders. Such extravagant notions scarcely deserve notice otherwise than as curious vagaries not seriously requiring refutation. The workers build the cells in which the drones are bred; and the queens, in healthy colonies, lay the eggs from which they are hatched. They and the workers are the off-springs of the same mother, and have an equal claim to be regarded as constituent members of the community.

But, conceding their rank and equality, of what sex are they, and what is the design of their brief and moononous existence? They are the male bees, and are hatched from unimpregnated eggs. The function of the drone is solely to impregnate the queen. Without this the queens would remain barren, and the race could not be perpetuated. Bees are well aware that drones are absolutely indispensable in certain conditions of the colony. At the very time when, from want of pasturage and the unfavorable state of the weather, other colonies will destroy even the drone larvæ, those which are queenless and engaged in rearing queens will cherish their drone-brood as carefully as they do the royal cells. Strong colonies alone and such as, in the consciousness of increasing numbers, contemplate swarming, produce drones. After the swarm has departed, and when the young queens are making their nuptial excursions, the drones are always most numerous. True, a colony which does not swarm, or rears no queens, would have no occasion for drones. But as the contingencies which may prevent swarming cannot be foreseen, drones are, nevertheless, produced, because in the event of being wanted they could not be suddenly bred.

Just what the longevity of the male bee is, I am unable to state. It is probable, judging from analogy, that they live till accident, the worker bees, or the performance of their natural function cause their death. The worker bees are liable to kill off the drones, which they do by constantly biting and worrying them. They may also destroy the drone brood. It is not very rare to see workers carrying out immature drones even in Mid summer. At the same time, too, they may destroy inchoate queens. Such action is prompted by a sudden check in the yield of honey, and in case of the drones it is most common at the close of the season. The bees seem very cautious and far-sighted. If the signs of the times presage a famine, they stay all proceedings looking to the increase of colonies. On the other hand, unlimited honey, rapid increase of brood, crowded quarters—whatever the age of the queen—are sure to produce many male bees; while any circumstances that indicate a future need of drones will prevent their destruction even in late Autumn. LIGURIAN.

Scientific and Useful.

NEW JERSEY AGRICULTURAL EXPERIMENT STATION.

IX.

THE following analyses are those of different fertilizers which have been sent in to the Station at the close of the present season.

Samples 71, 73 and 72 are of the same brand as 58, 59 and 60 of bulletin VIII. A second set of samples has been analysed, as Mr. Pancoast was not satisfied that those first made fairly represented the stock.

1.—BONE MANURES.

	68.	71.	75.	77.	88.
Nitrogen in organic matter	4.79	2.12	3.83	3.88	3.01
Total phosphoric acid	15.69	15.74	21.54	20.51	14.84
Estimated value	$36.41	27.28	40.01	36.79	27.89
Cost in market	$36.00	33.00	2.50	36.00	27.00

68. Ground slug. Manufactured by the Elizabeth Glue Co. Sampled by Chas. E. Little, Elizabeth. This is the bony substance of horn cores, ground.

71. Raw bone. Manufactured by Thompson and Edwards, Chicago, Ill. From stock of I. W. Pancoast, Sharpstown, Salem Co. Sampled by Jesse Lippincott, Woodstown.

75. Ground bone. Manufactured by Harrison Brothers & Co., 105 S. Front Street, Philadelphia. Sampled and sent by Joshua Waddington, Salem.

77. Paterson and Jones raw bone. Sampled by Joshua Waddington, Salem.

88. Ground bone. Manufactured by the Preston Fertilizer Co., Greenpoint, L. I. Sampled by C. C. Van Doren, Franklin Park.

2.—SUPERPHOSPHATES OF LIME WITH POTASH.

	69.	70.	76.	78.	82.	83.
Nitrogen as ammonia	.72	....	....	....	....	....
" in organic matter	.70	1.99	1.50	2.20	2.29	5.54
Phosphoric acid, soluble	3.35	6.78	4.35	8.22	.87	....
" " reverted	2.65	2.31	1.18	1.09	2.08	2.62
" " insoluble	1.93	5.31	6.27	3.03	5.56	3.31
Potash	3.33	1.99	.53	.35	3.22	3.04
Estimated value	$24 83	38 29	25 95	31 16	34 25	....
Cost in market	$33 00	40 00	37 00	40 00	26 00	....

69. Chemical fertilizer for wheat. Manufactured and sampled by E. W. Lanning, Ewingville, Mercer Co. Home-made fertilizer.

70. Pure bone fertilizer. Manufactured by I. S. Yarnall, Media, Penn. Sampled from stock of Chas. Darnell, by Henry I. Budd, Mount Holly.

76. Smith's raw bone phosphate. Manufactured by J. J. Smith & Son, New Windsor, Maryland, from stock of J. W. Smith, and sampled by Joshua Waddington, Salem.

78. Ammoniated bone superphosphate. Manufactured by E. Frank Coe, No. 16 Burling Slip, N. Y. Sampled by J. B Johnson, Perryville.

82. Soluble marine guano. Manufactured by J. J. Allen's Sons, 124 S. Delaware Avenue, Philadelphia. Sampled by Clayton Conrow, Cinnaminson.

83. Fish and potash manure. Manufactured by James E. Otis, Tuckerton. Sampled by Joshua Forsyth, Pemberton.

3.—SUPERPHOSPHATES WITHOUT POTASH.

	72.	73.	84.	87.
Nitrogen in organic matter	1.18	1.09	3.09	2.32
Phosphoric acid, soluble	.42	....	....	7.92
" " reverted	3.46	2.58	....	.74
" " insoluble	11.73	11.58	....	2.96
" " total	....	....	1.06	....
Estimated value	$28.58	25.21	38.84	34.15
Cost in market	$36.00	35.00	29.00	35.00

72. Ammoniated superphosphate. Manufactured by Thompson & Edwards, Chicago, Ill. Sampled by Jesse Lippincott, Woodstown, from stock of I. W. Pancoast, Sharpstown, Salem Co.

73. Dissolved bone meal. Manufactured by Thompson & Edwards, Chicago, Ill. Sampled by Jesse Lippincott, Woodstown, from stock of I. W. Pancoast, Sharpstown, Salem Co.

84. King Crab fertilizer, from stock of Nathan Pancoast, Moorestown. Sampled by Geo. L. Gillingham, Moorestown.

87. Ammoniated bone superphosphate. Manufactured by Preston Fertilizer Co., Greenpoint, L. I. Sampled and sent by C. C. Van Doren, Franklin Park.

GEO. H. COOK, Director.

New Brunswick, N. J., Oct. 16, 1880.

Miscellaneous.

BRIEFLETS.

THE double lilacs—who has them for sale in this country?. . . . . The California Privet, as it is called in some catalogues—Oval-Leaved Privet as it is elsewhere and more properly called, its botanical name being Ligustrum ovalifolium, is everywhere liked. It will thrive in all sorts of soil—on gravelly hills—on lake-sides. The leaves are broad, thick and shiny and the bushes are symmetrical, green and beautiful. They are often cut back by Winter's severities, but their growth is so strong that they quickly recover in the Spring. For hedges, for parts of the garden of secondary interest, for school yards and church yards, for parks and city gardens, this shrub is just the thing. . . . . Mr. C. M. Hovey remarks in the London Garden to which he contributes some very interesting American horticultural notes: "It has surprised me that in the profusion of donations which Harvard University annually receives, there should not be found one single giver who puts any interest in, or cares anything about a garden." Possibly those who might make liberal donations are, as Mr. Hovey seems to be, more interested in English horticulture than in that of their own country. . . . . The Prairie Farmer refers to the pleasant circumstance recently noted in these columns that ex-Gov. Furnas has been "caned." And he deserved it too! . . . . . It seems to us that the quality (flavor) of the Niagara Grape is very like that of Mr. Campbell's Lady. But the Niagara has the stronger skin and does not crack. . . . . The engraving of the Lady in Mr. Campbell's catalogue is one of the few that does not in any way exaggerate its actual appearance. . . . . St. Louis, it appears from Colman's Rural, is Chicago's chief outlet for its cabbage crop. St Louis consumes it in kraut-making and pays an average of six dollars per 100. We wish Long Island could be assured of such a price. Cabbage-raising would take the place of wheat and corn. . . . . We learn that several seedsmen and nurserymen are at work upon catalogues for the Spring which shall be more accurate and elaborate than any they have previously issued. We are glad to hear it and shall take special pleasure in calling the attention of our readers to all that concerns them. If the RURAL NEW-YORKER gives us pleasure more from one source than from others it is that we know it is exerting a wide and lively interest in new fruits and plants of special merit. . . . . For those having small greenhouses or window gardens, it is well to keep on hand a quart or so of pure liquid manure from the stable. Add lime to neutralize the odor. Use a tablespoonful of this to a gallon of water for the plants, to be used every two weeks during the Winter. . . . . Among the very best of plants for the Winter garden are geraniums, carnations, fuchsias, justicias, bouvardias, ivy geraniums, vincas, lobelias, camellias. These will all do well in a cool temperature—say 60 degrees. . . . . It appears from the California Horticulturist that the Cuzco Corn from which so much was expected in that climate, has disappointed the many who planted it. "As a rule no startling success has been anywhere obtained." It is suggested by a Frenchman that one cause of failure is that the female flowers are not ready to receive the pollen until the males ones have dried up. . . . . One of our friends who has been reading a good deal about the adulterations of all sorts of foods, comes to the conclusion that "this world is a very dangerous place to live in." . . . . The editor of the N. Y. World says that "the time has come when quality is exacted rather than size and that many prefer to have served on their tables two turkeys of moderate size than one of extra-large proportions. . . . . A poem in Harper's for September closes thus:

What compensation has a man
Who earns his bread by sweat of brow,
If home is made a battle-ground,
And life one long, eternal row?

Cuttings of many hardy plants may now be made. Select stems of the past season's growth—that is, growth of the Summer of 1880. Make them from six to 10 inches long, the lower end being cut off just beneath a bud. Currants, gooseberries, grapes; many kinds of hardy shrubs, such as honeysuckles, viburnums, spiræas, weigelas, elders, deutzias, lilacs, &c., may thus be easily propagated. . . . . Such cuttings may be placed in narrow trenches of mellow soil only permitting the upper end to appear above the ground. Then cover with hay, straw or long manure. In the Spring they may be set where desired or in nursery rows for future use. Such cuttings may be stored in boxes of sand in the cellar, but care must be taken that they be kept sufficiently moist to prevent shriveling and not wet enough to induce decay. . . . Whether they be planted separately or in rows, the ground should be rich, mellow and well compacted about the lower end. Such plants as the blackberry, many of the raspberries, the Great Panicled Hydrangea, Sweet-scented Shrub, ornamental quince, and many others may be propagated from root cuttings. They should be two or three inches long, a quarter-inch thick. Pack these in boxes of sand and treat them as recommended for stem cuttings. . . . . The New York Sun took us to task for stating that the Japan Persimmon would not fruit in this climate. Now this paper states: "We doubt whether this fruit can be produced in the North." Had it been better informed, it might, perhaps, have saved its readers a penny or so. . . . . We want all of our readers to read the articles under Farming for Boys and Girls in the Youths' Department. Most of our readers, whether old or young, will find that there is something in each one worth reading. . . . . "During the three seasons in which we have now grown Silver Chaff Wheat," says Mr. Thorne of the Ohio University, "it has given proof of being a most valuable variety." See his article in another column. . . . . It is suggested that a suitable opening for many choirs would be, "Oh, Lord, have mercy on us miserable singers." . . . . . One of the best traits of the Niagara Grape is that it will hang upon the vine for a long time after it is ripe without being injured in any way. . . . . The farm tool-house should never be without a coil of copper wire. . . . . Clear up the cellars. Allow not one particle of decayed vegetable or animal matter to remain. Then whitewash every part that can be whitewashed. . . . . All shrubs or trees about the house which have not made a satisfactory growth the past season should now have a dressing of manure. If growing in sod, bone flour and wood ashes or fine manure may be used. . . . . Remember that the best feeding roots of plants are not those nearest the stem. The best feeding roots are oftenest those furthest from the stem. Spread the fertilizer accordingly. . . . . "Any good shooting on your farm?" asked the hunter of the farmer. "Splendid," replied the agriculturist, "there's a drive-well man down in the clover meadow, a cloth peddler at the house, a candidate out in the barn, and two tramps down in the stock-yard. Climb right over the fence, young man, load both barrels and sail in."—Burlington Hawkeye. . . . . The girl who can climb trees can gather the prettiest Autumn leaves, but it is the smart girl who takes a young man along to do the climbing.—Phila. Kronikle-Herald. . . . . Mr. Mapes remarked while husking Blount's Corn the other day, "I'd rather do this than to see Sarah Bernhardt." . . . . . To what extent the fertilizer used upon Blount's Corn made the husking more entertaining to Mr. Mapes, it would be cruel to surmise. Our own opinion is that Mr. Mapes either likes to husk corn as an amusement or that, for some reason, he does not like Bernhardt. . . . . The Michigan Farmer deems that man happy who eats home-made butter. He alone can be sure he is not lubricating his bread with lard, tallow, suet or soapstone. . . . . The Millstone, the first journal of its class in this country, copies from the Fair Number our article on Wheats with illustrations. We are much obliged for the Millstone's very complimentary allusions to the work of this journal. . . . . Autumn leaves—after November. . . . . Archdeacon Denison thinks that the artificial drying of cheese, and, indeed, all factory processes, are to be abhorred. He declares that a real Cheddar should not be eaten under 18 months or two years from the date of making. . . . . There is no better time of the year to drain land that needs to be drained than now. . . . . Rainy, squally, snowy, stinging weather may be looked for at any time—hurry up corn husking.

CATALOGUES, ETC., RECEIVED.

ENSILAGE OF GREEN CORN, from the French of Auguste Goffart, with the latest facts connected with this system. By J. B. Brown. Published by the New York Plow Co., 55 Beekman St., New York. While we commend to our readers this book which contains all needed information upon the subject, we believe that the advantages of the system have been greatly overestimated and that it will never be popularly adopted in this country.

PRICE LIST of Hardy Grape-vines, etc. Geo. W. Campbell, Delaware, Ohio. We find in this Ricketts's Jefferson, Lady Washington, El Dorado, Highland and Welcome offered. It was our impression that Mr. Burrow as yet controlled the sale of the Jefferson.

WHAT OTHERS SAY.

WHEAT YIELD DECLINING IN ENGLAND.—Commenting upon the wheat reports the Live Stock Journal of England says: "A third and disagreeable fact which appears too clearly, is that the "average" crop per acre is *sensibly diminishing*, in spite of more expensive methods of cultivation. In 1870 it was reckoned at 29½ bushels, on an average of the then past five years. But in the last ten years the average has been only 25¼ bushels, and during the last *six* years it has been only 24⅛ bushels.

The last important fact we shall gather from the interesting figures before us is the rapidly decreasing value per acre of the wheat crop. The decline here is the most startling of all, and though we have clearly shown it before, and endeavored to point out its inevitable lessons, we are glad of another opportunity to put the facts in a striking light. For the five years ending 1870, with an average of 29½ bushels per acre, the average value of wheat to the farmer (after paying for seed) was £8 7s. 10d. per acre. For the last nine years it has been only £6 12s. 2d., and for the last five years only £5 18s. 3d. This was reduced by the small yield in 1879; but if the average price remains at 40s., even the better harvest of this year can only yield £5 10s. to £5 12s. 6d. For reasons we have given in past issues, we trust the average price will be a little better than this; but allowing, say, £6 per acre, it is impossible to show how wheat is to be grown at a profit at this rate, save, perhaps, on the large scale and the continuous system, as carried out at Wolston. On the ordinary arable farm, it clearly appears that wheat can at present only be grown at a loss.

THE moral is obvious, the Journal continues in another part. The pressing—the crying necessity—is to find *a general substitute for wheat as a straw crop*. . . . . To make money by wheat is utterly hopeless for the present, and the want of the times is a system which will, without injury to the land or other crops, throw wheat *generally* out of the rotation. The sooner this necessity is understood and faced, the sooner is farming likely again to pay its way.

WATERMELONS IN CALIFORNIA.—The immense yield of the watermelon vine in certain parts of California, and the peerless quality of the product, are both well-known facts. The Pacific Rural Press says that the average melons weigh from 25 to 29 pounds each. There are large numbers left in the field after the marketing season, and from these the seed is taken and sold at a fair profit. Growers have hoped and expected that their surplus might be turned to account in sugar making, but the analysis of Lodi melons made last year by Prof. Hilgard did not favor the project. . . . . This year fine handsome melons, of at least 30 pounds' weight, were sold some days as low $3 per 100, and retailed about San Francisco for five cents each.

PEAR BLIGHT.—D. B. Weir has this to say upon pear blight, in the Prairie Farmer:—"For one, after having given the subject much study, I have no faith in finding any cure for a cryptogamic parasite that preys upon a vital part of any vegetable, for many and good reasons, among which are these: First, in its inception it is generally entirely hidden from our view. We cannot see it or know of it practically until it is too late to cure. Secondly, it kills and utterly decomposes as it pervades. The most skillful physician in the world cannot cure a man with a disease the most easily controlled, if he does not see him before he is dead; no more can you cure a pear tree with its most vital tissues not only dead but decomposed. Prevention then, so far as pear blight is concerned, is all we have to study. Can we prevent it? I am confident we can, to some extent, both by proper systems of cultivation and medication. These are points I do not wish to treat on at present, but will simply say that if I have learned anything about pear blight correctly, many of the things recommended by some in case of blight—such as cutting off diseased branches, slitting the bark, thereby making fresh wounds—are exactly wrong. My experience is that anything that wounds the bark or weakens the vitality of the tree renders the tree liable to blight.

THE most profitable orchard that the Country Gentleman ever saw, over twenty years old, was on a very fine piece of land, with deep and well drained soil, cultivated, and regularly and moderately manured. It occupied seven acres, and from it the owner paid the heavy debt on his hundred-acre farm, and placed several thousand dollars at interest. He could not have done this on a rugged hillside.

HOGS will pay, taking the years together, the Western Rural thinks. There is going to be a constant increase in the consumption of pork, and the increased demand must be supplied. If bad luck comes one year or two years, there is an aggregate of good luck awaiting you in the end.

PHYTOLACCA DECANDRA.—"A correspondent lately asked us (London Chronicle) if this singular and handsome plant, the berries of which are so conspicuous at this season, was poisonous. We presumed not, but had no certain knowledge. We now find from an

article in the American Gardeners' Monthly that in New England the young shoots of the Poke-weed are considered a very delicate vegetable, and are, during the Spring months, always to be found on sale in the markets. The young, succulent shoots, when from four to six inches in length, are cut off near the ground, tied in bunches, and offered for sale in the same manner as asparagus."

THE NEW ENGLAND FARMER remarks that cider, made very late in the season and stored in a cold place, will keep sweet because active fermentation is prevented. If it is rich and sweet when it comes from the press, and care is exercised in making it from good, sound apples, it will not become sour if kept in a moderately cool cellar in a tight cask or in bottles.

THE CABBAGE WORM.—To save his cabbages and as an experiment, Mr. Howard tells the Fruit Record that he mixed four quarts of air-slaked lime, one quart of fine salt, and a quarter of a pound each of red and black pepper. When the dew was on he applied this mixture by means of a large-sized tin pepper box to 400 cabbages, that were doubtless as wormy a lot as could be found. He gave them but one dose, but it did its work so effectually that there has been no further trouble on account of these destructive pests.

HOW TO GROW EXTRA YIELDS OF CORN.—The efficient editor of the agricultural columns of the N. Y. World, who was one of those who examined the yield of our Chester and Blount Corn, writes as follows respecting it in the columns of that journal: "The publication of extra-large yields of corn, especially where the gains have been made in ordinary field culture, is of universal benefit. These announcements not only keep before the farmers the important fact that the average crops of the country are far below possible yields, but stimulate progressive ones to improve their modes and work up to the highest attainable point rather than plod in old beaten tracks. When these large yields are produced in the worn lands of the Eastern States, with fairly good culture and at a comparatively low cost, they assume, of course, additional interest, for the cost of production is a serious question in farm economies.

The statement recently made that more than 150 bushels of shelled Blount Corn to the acre had been grown in field culture with an expense not exceeding $10 per acre for fertilizers, on the experimental farm of the RURAL NEW-YORKER, has set more than one doubting Thomas to thinking, and many enterprising practical men to investigating the matter. A number of the latter, during a visit of inspection to the field where the crop referred to stood in the shocks, made a careful estimate, and from this calculation a yield was shown of 200 odd bushels of corn in the cob to the acre and 140 odd bushels of grain. . . . . This yield illustrates the efficacy of careful selection of seed, preached from time out of date, but too seldom practised. . . . . It is, furthermore, favorable to planting in drills, a mode generally conceded to induce the greatest yields, and its absolutely flat culture. . . . . And last, but by no means least, it proves that excessive yields are not confined to small garden plots receiving special care and expenditure, but are within the reach of every farmer who tills ordinarily good soil, provided he drops into it the best of seed, feeds it judiciously and gives it fair culture.

"PRESERVED MEATS are poisonous" is a somewhat startling announcement; yet that was the practical summary of Dr. Moore's evidence, says the London Live Stock Journal, given the other day at an inquest. A case of fatal poisoning by American corned-beef was under investigation, and the doctor affirmed his belief that it was due to the absorption by the meat of a portion of the metal of the tin or the solder. Mr. Bernard Dyer suggests a somewhat more soothing explanation, that the meat itself was diseased before it was preserved.

A NEW VINE PEST.—A new vine pest has made its appearance in the Rheinthal, canton St. Gall, say the London papers. The disease is said to resemble in some of its characteristics the potato oidium, but it is much more virulent, the grapes affected by it becoming rapidly putrid. Several vineyards have been completely devastated by the malady, which is believed to be of American origin. *Of course.* If not of American origin, where could it have originated?

LAST year's crop of tobacco in Pennsylvania was the heaviest ever grown there, and amounted to 31,000,000, pounds according to the Telegraph. During the past season it is estimated that 149,000 acres were devoted to the plant in that State, and that the aggregate yield will reach 40,000,000 pounds.

IN A SERIES of seventeen corn crops raised in Saline Co., Missouri, by farmers competing for a Granger premium of $200 for the largest yield, it appears that twelve crops out of the seventeen gave an average yield of over one hundred bushels per acre; and this not for one acre only, but for an area of ten acres in each case. We find the above statement in the Business Farmer.

NEW WHITE GRAPES.—Dr. Hexamer describes Lady Charlotte, in the American Garden, as follows:—"Raised by C. G. Pringle of Charlotte, Vt., from Delaware, fertilized by Iona. Color, light green, becoming amber or golden, with a reddish tinge, in the sun; bunch very large, very broad-shouldered, narrow and pointed below; berry, compact of medium size, globular. Flesh with some pulp, but juicy and very sweet, without the least acidity in the center, or foxiness in its flavor. Vine a rampant grower and great bearer; leaves, healthy very large, bearing much resemblance to those of the Iona. The original vine has stood the Winters of Vermont without protection for the past ten years and has borne annually a large crop of fruit.

TRY IT.—Semi-tropic California, which by the way is a very handsome monthly, says:—"Place a bunch of perfectly sound grapes near your bee-hives, and in a few hours examine them and see if the bees have eaten any; if not, puncture several with a pin and note the effect on the sound grapes and the ones punctured, and then let us know if the bees really eat grapes. We ask for a full test, and reports from grape-growers and bee-keepers."

Everywhere.

RURAL SPECIAL REPORTS.

CANADA, Glenmorris, County Brant, Oct. 24.—Farmers are now busy securing the root crop. A considerable quantity having been raised in this locality, and winter threatening to set in early, farmers will need to be up and doing while it is day, for the winter cometh when no man can pull turnips. Thrashing is getting pretty well through, being done mostly by steam, and the grain is finding its way to market. Wheat is now worth from $1 to $1.05 per bushel, and barley about 60 cents. Wheat seems to be above and barley below an average crop. Corn and oats in general were good. I have not thrashed the Mold's Ennobled Oats yet, but I have a good-sized sheaf. The mangels grew splendidly. I tried a small patch of Blount's Prolific Corn the past season, but I think it grows too high to come into general use. I planted a couple of rows of Early Amber Sugar-Cane alongside of the corn and am well satisfied with the result, having obtained nearly a hundredweight of fine sirup from it, causing much less work than making maple sirup. Having obtained a packet of China Corn from Cole & Brothers, Pella, Iowa, seedsmen, I think it can be raised with profit for a fodder plant. I showed it at our provincial fair as a fodder plant not heretofore cultivated, and obtained the first prize. R. R.

CANADA, Cornwall, Ont., Oct. 20.—I consider the plant and seed distribution alone worth the price of the RURAL. The Golden Ovoid Mangels and the Ennobled Oats are far ahead of anything of the kind raised here. I should have competed for the mangel prize but the season has been very unfavorable for roots of all kinds. W. S. T.

CONN., Columbia, Tolland Co., Oct. 30.—Harvesting is being pushed now. Corn is more than an average and of a good quality. Potatoes are not an average crop, though of good size and quality. Onions are better than for many years. Oats were fair, and are being thrashed; the yield is from 25 to 30 bushels per acre. A few who have ventured to try to grow peach trees in this section have been rewarded with a good crop of excellent fruit, with promises of continued success, which is an encouraging outlook in this direction. There also seems to be a growing desire to enter into the cultivation of small fruits, more especially the strawberry, with good results. The apple crop is large, but cannot be said to be of the first quality; the fruit is large and fair, but is greatly injured by the depredations of the codling moth—Carpocapsa Pomonella—and as a consequence much of the fruit is falling prematurely to the ground. A very noticeable and commendable act of farmers in this section is the cleaning up of roadsides, removing bushes and weeds and leaving the places in good condition. W. H. T.

IOWA, Trenton, Henry Co.—I like the RURAL very much, and will do all I can to get subscribers, but it is up-hill work in my neighborhood. A great many farmers don't appreciate an agricultural paper as they ought to. Wheat was pretty nearly a failure; corn good; late potatoes, short; early potatoes, good. Early Winter wheat looks well. I don't think as much was sowed as last year. My Cuthbert Raspberries, mangels, oats and cow-peas did well; the other seeds were a failure. I think I was too late in planting them. W. L.

KANSAS, MCPHERSON CO., Oct. 23.—The yield of crops in this county has been very moderate—corn, 18 bushels per acre; oats, 11 bushels; potatoes, 35 bushels; of barley and rye there was none to speak of. In Rice, the adjoining county, wheat yielded five bushels per acre; corn, 17; oats, eight; potatoes, 40. Little or no barley or rye was produced there also. Potatoes as a rule are better in that county than in this, as the land there is newer. More farmers mulch potatoes there than here, and in this part of Kansas that is the only way to raise potatoes. The above figures, I think, are as reliable as any that can be got at present, for I have much experience in both counties, being on the dividing line, with a farm in each, and having made it a part of my business to get the exact figures. The young wheat never looked better at this time of the year. C. M.

KANSAS, Parkersville, Morris Co., Oct. 25.—We have been having splendid Fall weather, with rain every few days, until the night of the 15th, when we had a "norther" and ice a quarter of an inch thick. Fall wheat is looking fine. Although it was a dry season, the show of farm products at our fairs was about as good as usual. J. E. R.

N. Y., Dewittville, Chautauqua Co., Oct. 20.—Chautauqua Lake is situated 1,305 feet above the ocean level. My garden is over 200 feet high. Latitude about 42.20. I never have raised any mangels before the Golden Ovoid. Of the seeds you sent me I raised 556 beets—whole weight, 1,921 pounds. I sowed the seed about the middle of May and gathered the crop last week. My cow-peas I sowed in a drill as I would other peas. My drill was less than two rods long. I had two pounds four ounces of ripe seed. They commenced to ripen the first of September and continued to ripen until the first of this month. Of the Cuthbert Raspberry one plant died; the other lived and had 25 good-sized, ripe berries. The plant has made a good stand. The pea vines grew rank and thrifty. I have six kinds that got ripe. Wheat and oats are good crops, but not much wheat is grown here. Corn is very uneven—some very good and a great deal under an average. Potatoes ditto. Buckwheat, a large crop for this county. S. B.

OHIO, Thompson, Geauga Co., Oct. 25.—We have had a dry Summer for some of the crops. Wheat, however, was a very good crop; oats light—95 per cent. of an average crop; corn 80 per cent.; potatoes 95; hay about 90; apples 100; peaches 50; grapes 90, and small fruits a good crop. The rivers and creeks are lower than they have been for a long time. Now we are having some light rains, with sleet and cold. I. G. H.

WIS., East Troy, Wolworth Co., Oct. 25.—Fall work is nearly finished, except husking corn and making cider. Help is very scarce and the work goes on slowly. Corn is the best crop we have ever had, and apples are so plentiful that they are rotting on the ground. Potatoes were a good crop. There is not any clover seed, but a large crop of clover hay. H. A. T.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Soiling, Etc.

C. N. G., Plainfield, N. J., having leased a farm, 150 acres of rather rough land, on which he intends to move next Spring, asks, 1, how best to conduct a soiling system for cows and sheep; 2, will Hungarian Grass sown in April or May be as successful as if it were sown later—in June or July.

ANS.—Soiling either partial or complete may be practiced on any land that can be plowed. It is not profitable on poor land except as a means of improving and enriching it. In your case it should be begun gradually. In beginning in the Spring the most practicable plan would be to put in a few acres of oats as early as possible and follow this with some early kinds of corn. These crops should be put in, in succession, one acre a week so that they may come into use as they may be wanted. Hungarian Grass requires hot weather to grow vigorously or it makes a very poor growth. It should not be sown until late in June. It will make as much growth in six weeks of hot weather as in 12 weeks of cool weather. It comes in very usefully as a second crop to be sown on the ground from which the oats and earliest corn are taken. In soiling for sheep the crops are not cut but are fed from the ground by folding the sheep inside portable fences.

Crossing Corn.

E. F., Providence, R. I., having grown Sturtevant's Waushakum Corn for three years, asks whether it would be well to cross it with any other sort—Compton's, for instance.

ANS.—We are not familiar with the Waushakum Corn, never having raised it. But it would be merely guesswork for us to express an opinion. The parents of corn must be selected the same as the parents of animals, viz: with a view to blending good qualities, all of which may not exist in either parent. We may say to our friend that crossing corn and obtaining a distinct new variety is a process that requires years to accomplish. We are surprised to find that many suppose this can be accomplished in a single season, and that the crossed kernel will the next season reproduce itself. We have been working for four or five years with a cross between Stowell's Evergreen and Black Mexican and the new variety is not yet "fixed" by any means.

Killing Borers.

G. H., Bossardsville, Pa., asks whether hot water will kill the borers in trees?

ANS.—No; hot water cannot reach the borers. They must either be prevented from entering the tree or else picked out after they have entered. Wash the trunk in early Spring with lime, tobacco water, soft-soap, sulphur, aloes, etc. Such washes may generally be depended upon to prevent the female from depositing her eggs. The grub upon entering makes a very small hole, though its depredations after entering the tree may extend in all directions. A wire is sometimes used to punch the grub to death, though this is not always effectual. The perfect insect upon emerging bores a round hole many times larger than the hole bored by the grub in entering, which is scarcely larger than the head of a pin. The large round hole is therefore evidence that the insect has escaped.

Miscellaneous.

G. H., Ovid., N. Y., asks the meanings of some words he came across in reading some English agricultural papers, and which have no place in his dictionary.

ANS.—*Byre*—a stable.

Stedding—farm buildings, also with hay and straw stacks surrounding them.

Down Calving—a cow just ready to calve.

Quay or *Quey*—a heifer before calving.

Sterk, Stirk, Sturk—a yearling steer.

Gimmer—a sheep one to two years old.

Hog, Hogget—a yearling sheep before being shorn.

Teg, Gelt, Yelt—a wether sheep.

I. S., Starke, Fla., asks where and at what price can Nova Scotia land plaster be obtained.

ANS.—Nova Scotia plaster must be procured from New York where it is imported. It may be procured in barrels finely ground from any of the dealers in fertilizers for one dollar per barrel. It is usual for the local plaster mills to procure a supply of the rock in bulk from New York and grind it for sale; but the fertilizer manufacturers grind it very fine and as its effect is in proportion to its fineness it is better to get that which is ground for special use by the manufacturers.

L. G. M. S., New York City, sends specimens of a Winter crab apple, a seedling of the Red Siberian Crab, and asks our opinion of them, and whether there are any other Winter crabs that equal them in size and quality.

ANS.—Those received are very handsome, varying from one to one and a half inch in diameter. They are richly colored and we should judge of good quality when ripe. We have seen specimens of Hyslop, Meader's Winter and Lady Elgin as large and handsome, but as to the average merits of the various sorts, as compared with this, we cannot, of course, say anything.

R. B., New Philadelphia, Texas, says he would like to obtain some of the Blount Corn and Beauty of Hebron Potato for seed.

ANS.—Both of these have already been offered by seedsmen. See previous numbers and notices of catalogues. The RURAL never sells seeds or plants under any circumstances. It is our desire to create a demand for excellent varieties. The seedsmen and florists do the rest.

A. B. S., Waco, Texas, sends leaf and fruit of vine, and asks its name.

ANS.—This is called "Dish-rag" Sponge Cucumber, etc. The botanical name is Cucumis acutangulus. The fruit is sometimes eaten when very young the same as cucumbers. When ripe it becomes very tough and spongy and is often used as a sponge.

R. M. L. Oak Burn, N. Y., asks how to treat his Cuthbert Raspberries during the Winter—should they have any protection?

ANS.—We would advise a light covering three inches deep of straw or long manure upon the ground about the stems and extending three feet away from them. We do not suppose they will *require* any protection.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, NOV. 6.

W. L. D.—H. C.—S. W. J.—M. M.—J. E. H.—W. F.—H. C.—A. L. J.—L. S. H.—F. M. S.—A. B.—S. E. M.—W. V. A.—M. Y.—T. S.—M. K.—J. D. D.—S. J. V. C.—M. W. F.—J. H. R.—F. H. G.—S. B. P. C. E. T.—B. F. J.—L. Y.—F. H. S.—W. F.—R. R. T. T. L.—E. W.—G. H.—N. L. W.—L. M.—T. R. S. H. W.—M. R.—T. S. H.—K.—B. R.—Jessie.—R. M. T. L. H.—O. L.—M. R. N.

That invalid wife, mother, sister or child can be made the picture of health with Hop Bitters.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, NOV. 13, 1880.

NOTICE.

FROM some obscurity in our clubbing announcements, many of our readers are applying to us for specimens of the journals with which we club. We beg to state that all applications should be made to the journals of which specimen copies are desired, which will be promptly furnished to our subscribers without charge. Address, therefore, by postal card or by letter :—The Weekly Inter-Ocean, Chicago, Ills.; The Weekly Detroit Free Press, Detroit, Mich. ; The Weekly Globe-Democrat, St. Louis, Mo. ; The Weekly Pioneer-Press, St. Paul, Minn. ; The Weekly World, 35 Park Row, N. Y. ; The Weekly Evening Post, corner Broadway and Fulton Sts., N. Y.

Subscriptions for the RURAL NEW-YORKER and any one or more of the above will be attended to without delay.

ANNOUNCEMENT.

SINCE the past Spring and Summer were seasons of almost unprecedented drought in some places, it is probable many of the Cuthbert Raspberry plants sent out by the RURAL NEW-YORKER failed. In case of such failures we will send other plants upon receiving the address of the applicant and a two-cent stamp for postage. All applications must be made to John T. Lovett, Little Silver, Monmouth Co., New Jersey, and the applications must be CONFINED to those whose names are upon our lists as having applied for our Plant and Seed Distribution of 1879–80.

REMEMBER, RURAL friends, the first of our next series of special numbers will be the CORN NUMBER, to be issued about Jan. 1st. If you have any good facts, oblige us with them, even if they may be stated in a line.

A KIND word for the RURAL NEW-YORKER from our subscribers to their friends at this time would prove more effective than if spoken later in the season, when many will have settled upon their journals for another year. Speak it, friends of the RURAL, if you can! You will find that during 1881 we shall not disappoint any reasonable expectations.

WE wish some (*all*, for that matter) of our readers would try this experiment: Plow a *part* of any field *now*, intended for corn or oats. Then plow the entire field in the Spring. Observe which bears the better grain, that plowed both in the Fall and Spring or that plowed only in the Spring. Most farmers will have an opinion as to what would be the result. But *few* farmers have tried the experiment as we have suggested—so that the *difference* may be seen and, at harvest, measured.

WE would suggest to those who have no woodlands that, as a measure of economy, it is well to plant cuttings or roots of fast-growing trees like the Weeping Willow, Catalpa and Silver Maple. These planted in corners of fields or out-of-the-way places soon make large trees and may then be cut down, without being missed, and used for fire-wood. The Weeping Willow, for instance, in six years from a cutting will make a tree 18 inches in diameter and 30 feet in hight.

TO THOSE having gardens, we would say, spade up the soil now. Turn it over and leave it so until Mid-winter for the action of the frost. Usually in February a thaw accurs. Then it may be worked down and a new surface presented to the air and for the frost to work upon. We cannot estimate the benefits too highly of thus opening our soils to the influence of the wintry elements. Spade deep and thus bring to the surface the hard under stratum that may have lain hard and almost inaccessible to roots for years. Thus the soil will be lightened for another season. It will have become richer through the ammonia and carbonic acid imbibed from the atmosphere. It will resist drought better because it receives more moisture during rainfalls and can the more readily return it to the surface during periods of dryness.

DRYING POTATOES so as to preserve them even for several years in any climate, is a new industry that has sprung up in California. The tubers, which are dried and pressed by a newly devised machine, are said to retain to a great extent their natural taste and original freshness. The first shipment made by a San Francisco merchant to Liverpool brought $160 per ton over all expenses of shipment. Only about 20 tons were exported last year, but these sold at the rate of three dollars per sack for green potatoes, and the demand has become much greater than the supply. California capitalists are reported to be turning their attention to the matter, and several companies are being organized to push the industry. If the process proves as satisfactory as at present claimed, it opens a fine prospect to the farmers not only of the Pacific Slope, but of the rest of the country also.

WOOL.—What Chicago as the center of the packing business, is to the hog trade of the country, Boston as the center of manufacturing business, is to its wool trade—the prices in both places powerfully influence those for the respective products throughout the remainder of the land. For some months wool sales in the "Hub" have been slow, as sellers held their wool firmly for high prices, which manufacturers refused to give unless their requirements forced them to do so. Throughout the country, too, farmers have been keeping their wool back more than usual, a prudent precaution, as we suggested several months ago. Stocks in the hands of manufacturers are now nearly exhausted, and for the last couple of weeks they have been buying freely even at an advance on the figures they formerly declined to pay. Hitherto the mills have gone abroad for a good deal of their supply, but this year most of them have used the domestic clip exclusively, and there is no doubt but every pound of it, coarse and fine, can be sold at prices satisfactory to the producers.

WHERE ENGLAND GETS BREAD.

SOME English statistics just received show the amount of wheat and flour, reduced to a wheat standard, imported into the United Kingdom during the year ending August 31st. From these figures it appears that from the following countries the quantities opposite the names were imported :—

United States	89,359,969	bushels.
Canada	10,130,388	"
Russia	8,998,748	"
Germany	6,867,361	"
Australia	5,410,285	"
British India	4,640,783	"
Egypt	4,270,832	"
Chili	3,343,982	"
France	696,207	"
All other countries	4,960,369	"
Total imports	188,678,924	"

Of the wheat imported from Canada 7,250,000 bushels merely passed through the Dominion from the United States, making the aggregate importations from this country 96,609,969 bushels, while those from Canada dwindle down to 2,250,000 bushels. Thus it will be seen that the United Kingdom obtained from this country about 70 per cent. of the wheat it needed, while British India and Australia give only about seven and one-fifth per cent., and Russia only about six and a half per cent., about two-thirds of which came from the Black Sea ports. The supply from either of these quarters this year will be trifling. All exports of cereals have stopped from the Baltic ports, into which large shipments have been made, 18,000 centals having been sent thither from Liverpool alone during the week ending October 22. The wheat exports from all parts of Russia to England since the opening of navigation in March to October 20, last, amounted to only 891,800 bushels, against 21,582,292 in the corresponding period in '7-.

In this connection it may be interesting to learn that, according to our Bureau of Statistics, the exports of breadstuffs from all ports in this country to all foreign countries, from September 1st, '79, to August 31st, '80, were 156,736,326 bushels of wheat and 6,609,416 barrels of flour, equal to 29,742,372 bushels of wheat, making our total exports of wheat for the twelve months, 186,478,698 bushels. Deducting from this aggregate the amount imported into the United Kingdom, there are left for the rest of the world 89,868,729 bushels, or a little less than half our total exports of wheat.

THE OUTLOOK FOR THE HOG CROP.

THE eight months known as the Summer pork-packing season ended on October 31, the aggregate number of hogs packed in the West, according to the most trustworthy calculations and estimates, having been about 5,240,000, against 4,050,000 in the corresponding period last year—an increase of 1,190,000 hogs, although for the twelve months the increase was only 660,000. The receipts of hogs at the seaboard during the same period were 1,955,000, against 2,015,000 in '79—a decrease of 60,000, so that the aggregate of Western packing and seaboard receipts for the eight months was about 7,195,000 hogs, against 6,065,000 last year—an increase of 1,130,000, or 18⅝ per cent. With the Summer pork-packing season the great Chicago "corner" in mess pork, whose history is given elsewhere in this issue, also came to an end, and henceforth, until the formation of another "deal," the various articles of pork will bear a proportionate value—the price of mess pork having lately been forced disproportionately high in comparison with prices of other kinds—and the pork market, released from the control of one party, will move on in its regular course. It is therefore a fitting time to consider what this is likely to be.

The enormous transactions in pork at Chicago and elsewhere in course of the "deal," afford, of course, no indication of the amount of the article that actually passed from seller to buyer, for most of such transactions were settled by the payment of the difference between the price at which the sale was made in advance and that at the date when the product had to be delivered. As a matter of fact, the amount of pork on hand in the country now is somewhat less than at this time last year, so that it is estimated that it would require an increase of 10 per cent. of hogs to make the present crop equal to that of '79. With the growth of population of the world and its advance in material comfort, the consumption of hog products yearly increases from five to ten per cent. Consumption, too, is largely dependent upon the prosperity of the people, and this year our own population, who, of course, are the largest consumers of our hog products, were never better off; while our chief foreign customers, the lower and middle classes of Great Britain, are also considerably more prosperous than they have been for the last few years. This is partly due to the improvement in the agricultural outlook; for, besides the gain to the farmers themselves from this improvement, their increased prosperity, by enabling them to make larger purchases, imparts briskness to manufacture and trade, thus bettering the condition of the millions dependent on these industries. But the British prosperity is largely a reflex of our own, for we are this year importing an unusually large amount of goods from the Mother Country, thus giving profitable employment to her packed millions and enabling them to purchase more of our agricultural products, and among these not the least important are our hog products.

In view, therefore, of the curtailment of our hog crop by hog cholera and other diseases, as well as of the moderate supply on hand and the probable increased demand, it seems not at all unlikely that hogs will be "firm" this year. Local causes may here and there depress prices, and so now and then may an unusually large supply at the chief hog markets; but, as a rule, the price of hogs this year should be satisfactory to farmers.

BREVITIES.

RIGHT once more—didn't we prophesy the country would be "saved"?

ATTENTION is called to the remarks of C. E. Thorne, of the Ohio State University upon Silver Chaff Wheat.

THE profits of the mammoth Chicago pork "deal" are variously estimated from two and a quarter million to seven million dollars.

WE are very glad to see that Walter A. Wood, one of the staunchest friends of agriculture in the United States, has been elected to Congress.

UNUSUALLY large shipments of wheat are being made from here to Marseilles and other Mediterranean ports hitherto supplied chiefly from southern Russia.

WE have been spreading stable manure over our grape-vine borders. This is a good plan. It is a protection to the roots and the juices soak down ready for use next Spring. We have a mind to add a sprinkling of ground bone and unleached ashes.

FROM August 1 to September 30 the amount of wheat and flour, calculated as wheat, imported into France, aggregated 14,619,760 bushels, against 11,769,120 bushels for the corresponding time last year—or an excess this year over last of 2,850,640 bushels. Since the end of September, however, shipments have been falling off slightly.

NOW that the election is over, we presume all good farmers—whatever interest they may have taken in it during the latter part of the contest—will give themselves up to promoting the interests of the farm. Here is enough to engage our best thoughts—our unremitting labor. The outlook for farmers has never been more encouraging in the history of this country. But let us not rest upon our oars. Let us work hardest while it pays best, and then in the dismal times of the future, which are sure to come sooner or later, we may enjoy the results of having provided for a rainy day.

UNTIL last Fall Canadians found a market for their surplus rye in the United States alone, no attempt having been made to export it to Europe. In the Autumn of '79, however, an enterprising merchant of Montreal, in spite of much discouragement from his neighbors and from lack of facilities for procuring bills of exchange, sent a pioneer cargo of 60,000 to 70,000 bushels to Antwerp, and found the venture profitable. Since then the trade has largely increased, exports having been made to London, Liverpool, Antwerp, Havre, Hamburg, Bordeaux and Marseilles.

THE Burning Bush (Euonymus atropurpureus) is not a very handsome shrub, either for its foliage or flowers. But its berries, now that leaves are falling and the garden begins to look dreary, are bright and beautiful. The capsule, or outer covering which is of a crimson color breaks open like the burr of a chestnut revealing the orange aril of the seed within. These arranged into bouquets with other Autumn fruits or berries as, for instance, the Bitter-sweet (yellow), Black Alder (red), and Callicarpa purpurea (purple), interspersed with sprays of Autumn leaves, make very pretty ornaments for the mantel or table.

WE continue our beautiful engravings from nature of the new and promising grapes of the period. Respecting the *quality* of these grapes, it is an easy matter to speak positively. But as to how they will thrive in different parts of the country readers must bear in mind we have nothing to say. That can be ascertained *only* by tests, and several years are required to make them. We speak positively of such new fruits only as have been tested in our Experiment Grounds, and even then our reports are to be taken as but *one* bit of evidence *pro* or *con*, for that which falls or thrives with us may not thrive or fail in other soils and climates.

STATISTICS of the fruit trade, owing to the perishable nature of the products and the rapidity with which they are distributed, are difficult to collect, and the Census Bureau calls upon fruit dealers to facilitate the work by making returns of the quantities and values of the different kinds of fruit handled during their last complete trade year. Such returns will be considered strictly confidential and used only in making up the grand aggregate of city and town trade. Owing to the importance of the national work now in course of preparation, it is hoped that dealers will be careful and prompt in conveying accurate information, although it may cost them considerable trouble.

THE good prices American apples brought in the English markets a short time back are reported to have caused the shipment of fruit very carelessly selected, while a great deal of the exported Winter apples have been picked too early. This is said to be especially the case with Baldwins and Greenings, with the latter of which the English market seems to be overstocked. Both to keep up prices and to insure a favorable market in future by the good quality and fine appearance of our present shipments, too much care cannot be taken in selecting good specimens alone for export. The advantages of careful selection in the home markets are constantly noticeable, and ocean freight should be paid on nothing except choice fruit especially adapted to the taste of our foreign markets. In England small, handsome apples are preferred to large specimens by the better class of buyers.

OUR readers are fully aware that for this climate we prefer Spring to Fall for transplanting fruit and, in fact, ornamental trees and shrubs generally. We have also condemned the practice so often advocated, of heaping up the earth about the stem "as a support" etc., for the tree. We find in the Nebraska Farmer that our contributor Ex-Governor R. W. Furnas says that his twenty-five years' experience in Nebraska are strongly against Fall planting of trees; that he has witnessed twenty failures to one success. If attempted, however, he says it will be worth while to observe the following precautions: "Plant early and cover the roots deeper with soil or mulch than intended to remain during the growing season. In putting on this additional covering, be careful not to heap it up against the body of the tree. If soil is placed against the body of the tree, freezing, to any extent, injures the bark. If mulch, it affords a hiding place for mice." His future planting—and he expects to keep at it so long as life lasts—will all be done in the Spring.

DURING the past month 30,647 immigrants landed at this port—a larger number than during the corresponding month of any previous year. Among the various nationalities the Germans were considerably the most numerous, and they were mostly small farmers driven from home by light crops, heavy taxes and the odious burthen of compulsory military service. A large proportion of the new-comers are bound for the West, and these are the most desirable class, for, as a rule, they have more capital, intelligence and character than those whose lack of means forces them to over-crowd still more the labor market in our Eastern cities. Apart from whatever sums of money these additions to our population may bring with them, their presence among us adds greatly to the nation's wealth. The worth to the country of a man's labor has been put at $1,000; that is, beyond supporting himself, he should add that amount in one way or another to the national wealth. On this basis it has been estimated that such a flood of immigrants as are now flocking to this country must add the enormous sum of about $500,000,000 per annum to its wealth. This may be a trifle high; but the Bureau of Statistics estimates that the immigration to our shores from '65 to '75, when it was much less than now, added every year to our wealth an aggregate of $125,000,000.

Literary Miscellany.

THE OLD OAK TREE.

I LOVE the woods arrayed in Summer green,
Or tinged with russet Autumn's golden sheen;
In pensive mood I gladly seek their shade,
And ramble through each leafy glen and glade
But yet, howe'er the forest may delight,
The opening plain brings still a welcome sight
No dearer spot the landscape holds for me
Than that white-gowned, spacious grassy lea
Where stands in solitude the old oak tree!

In by gone days, how often here I've strayed,
And lovingly thy giant form surveyed;
Returning now from lands, I long have ranged,
I come in age and find thee all unchanged.
'Tis truly writ that life is but a span,
At least that portion which belongs to man;
For but as yesterday it seems to be
When, still a boy, I cut my name with glee
Deep in thy rugged bark, dear old oak tree!

In rising manhood three staunch friends were wont
From time to time to seek this cherished haunt;
Each took his chosen path the world to roam,
With hopes to meet in after days at home.
Alas! ere many years had fleeted o'er,
One sank to rest on far Arabia's shore;
The next found sailor grave in tropic sea;
While I am left alone of all the three
To keep the tryst beside the old oak tree!

How still the air around this regal oak
Ere yet my voice the charmed silence broke;
Till now unheard the drowsy feathered throng
Awake to pipe with joy their evening song;
The daisy closes with a glance of love;
The dark'ning shades surround the mystic grove.
Oh! when the Fates send forth their dread decree,
That bids the day no longer break for me,
May sunset find me 'neath the old oak tree!

—Chamber's Journal.

INMATES OF LESTER HALL.

(Continued from page 741.)

"That is all right. Now look here, little woman; I am in a difficulty. You know I want Carewe to be my best man. I don't know how I shall support myself on such a trying occasion without his assistance."

"He does not refuse you, does he?" said Mattie, anxiously.

"No; but I am afraid it will be awkward about Cecil."

"About Cecil? How do you mean?" asked Mattie, in some surprise; for at Lawrence Carewo's request Mr. Edgar had kept the fact of his rejection from her knowledge.

"Well, you see, dear, Lawrence was awfully in love with her," stammered Mr. Edgar, rather confusedly, "and she did not behave well; she led him on, and then threw him overboard as coolly as possible!"

"Oh, Edgar!"

"It is quite true, love. You yourself thought she cared about him, but it was only a flirtation after all. Still, do you think Cecil will object to his being my best man?"

"I don't see how she can, if he does not object to meeting her," said Mattie. "But, Edgar, are you sure he told you he cared for her?"

"Yes, quite sure; it was one night that he was dining here, do you remember? He and Cecil were together in the conservatory for some time. When I went in," Mr. Edgar continued, "Lawrence was alone, and I never saw a fellow so cut up in my life. He did not tell me what had passed between them but I gathered that she had refused him. I was furious, for I had every hope that he would have been successful, but he would not let me blame her. 'I love her' was all he said. I wish she could have heard him."

"How wrong of Cecil," faltered Mattie.

"Wrong! it was cruel; for she had certainly encouraged him," said Mr. Edgar, indignantly. "I can't help feeling angry with her, Mattie. Lawrence is too good a fellow to trifle with."

"Did he feel it so much?" said Mattie, regretfully.

"Feel it! It almost killed him," said Mr. Edgar, bitterly. "She had raised his hopes so high."

"I thought she cared for him," said Mattie, in a low voice.

"No man could resist her if she behaved to him as she behaved to Carewe," said Mr. Edgar, decidedly. "It was unpardonable, Mattie."

"It is incomprehensible, Edgar," she answered. "Do you know that once I spoke to her about it: I asked her if she cared for him, and something in her manner that day seemed to me to say that she loved him almost unwillingly as it were."

"If she loved him, she betrayed him," said Mr. Edgar. "Will you find out, if she will condescend to walk in and out of church with him?"

That evening, just before dinner, Mattie went into her sister's room and found her alone. She was standing by the toilet-table, dressed for dinner, looking pale; and as she lifted her eyes on Mattie's entrance, Miss Lester almost started at the expression of hopeless misery in their depths.

"Cecil, dear, what is the matter?" she said, impulsively; but Cecil gently loosed herself from the tender hands.

"There is nothing the matter," she said, petulantly. "What should be the matter, Mattie?"

"Nothing, I hope, dear," said Mattie, gently. "I want to ask you something, Cecil."

"Well, I am listening," she answered, ungraciously.

"Have you any objection to Dr. Carewe being Edgar's best man?" said Mattie. "You know it is a bridesmaid's privilege to choose—or it ought to be, if it is not."

"Objection?" said Cecil, slowly. "No, I have no objection. Why should I have?"

"That is satisfactory," said Mattie, as she turned away; but Cecil put out her hand and caught her dress.

"Wait a minute, Mattie," she said, calmly. "I too, have something to tell you. Prepare to offer me your congratulations."

"Congratulations!" and Mattie turned quickly. "Oh! Cecil, is it Dr. Carewe?"

Cecil looked at her with some haughtiness and surprise in her lustrous eyes.

"That would hardly be a matter of congratulation," she said, disdainfully. "I was going to tell you of my engagement to Mr. Eleston."

"Mr. Eleston!" repeated Mattie.

"Yes," said Cecil, calmly.

"But, Cecil, you refused him!"

"Possibly; but I have changed my mind—that is a woman's privilege, you know," she answered, still with the same proud composure of manner. "Well," she continued, after a moment's pause, "do you not wish me all happiness, Mattie?"

"My darling, yes!" said Mattie, warmly, as she kissed her. "But, oh! Cecil, are you sure that you love him?"

"Is that necessary?" Cecil asked, with a slight half-ironic laugh.

"I think so," Mattie said, gravely.

"So we differ," answered Cecil, smiling, "Hark, is not that the dinner-bell, Mattie?"

They left the room together; but as they went down stairs Cecil paused a moment.

"Uncle Henry has given his consent," she said, steadily. "Mr. Eleston spoke to him to-day. He is very glad. You will not try to make him dissatisfied, Mattie? Believe me, I love him quite well enough to make him a good wife."

"I was not thinking of him but of you Cecil," said Mattie, gently. "It is not for me to interfere, you know, since you wish it."

CHAPTER XVII.

IN BRIGHTON.

THE engagement between Cecil Lester and Mr. Eleston took the great world in which they moved by surprise, for although the devotion of the young man had been very evident, Cecil had always seemed to discourage his attentions, and treated him with a half-kindly, half-indifferent gentleness, which was less promising than coldness or disdain would have been.

However, his patient devotion had won its reward at last, for Cecil had accepted him; Mr. Daton had given his consent; a diamond engagement-ring glittered on the little white finger. He was raised to the seventh heaven, and there was not a happier man in Brighton, whither he had accompanied Mr. Daton and his niece after the wedding of Mattie and Mr. Edgar and their departure for France.

He was a good-looking young fellow, slender and fair, with curly, golden hair, frank, smiling blue eyes, and a hearty, cheery manner, which impressed people favorably. He was very young—only two or three years older than Cecil herself—and his pride and delight in his beautiful *fiancee* were pleasant to see, and won her uncle's heart. He made a very pleasant addition to the Brighton party, Mr. Daton thought, and prevented Cecil from moping after her sister, which she was rather inclined to do, he said to himself, remembering the white face, so still and stony, which he had seen as she passed down the aisle on Dr. Carewe's arm.

Five or six weeks passed quietly and pleasantly enough. Mr. Daton went up to town occasionally; long, pleasant, chatty letters came from Mattie and her husband, from various places in France and Italy, where they were evidently enjoying themselves to the uttermost. Cecil rode, drove and danced with almost feverish energy; Mr. Eleston lived in a bright day-dream of happiness; and Mrs. Audley worked wonderful designs with her crewel silks and worsted, and went on the even tenor of her way.

One bright frosty morning early in December Cecil found herself the first down to breakfast and for some minutes the only occupant of the dining-room. She crossed over to the window, and stood for a moment looking out on the Parade at the sea, lying so calmly, deeply, beautifully blue, stretched out before her, more than one passer-by turned to have a second look at the beautiful weary face, and the wistful, yearning eyes.

In a few moments the butler entered with the urn, and Cecil went over to the table to make the tea; and she had just completed her task, when Mrs. Audley's maid came in with a message from that lady to the effect that she had a bad headache, and begged to be excused appearing at breakfast. As the maid left the room she encountered the butler, who was bringing in the letters, some of which he deposited at Mr. Daton's place, and two or three of which he presented to Miss Lester.

Cecil took them negligently; the one which lay on the top was addressed to her in the bold, dashing caligraphy of her *fiance*, who was absent for a few days—the others were notes of invitation probably; Cecil threw all three aside a trifle indifferently, with a slight expression of annoyance.

"Not one from Mattie; I fully expected one from her this morning. Good morning, Uncle Henry; is it not cold? Go to the window and see how dreary the Parade looks. I begin to wish Ernest would come back. I quite miss him."

"Do you, my darling? So much the better. Where is Mrs. Audley?" asked Mr. Daton, as having returned Cecil's affectionate greeting, he went to the table, and taking up his letters, glanced at their superscriptions.

"She is not well—she has a headache," said Cecil, taking her seat behind the urn. "Will you have tea or coffee, Uncle Henry?"

"Tea, if you please, my child, he replied, rather abruptly. "Ah here is a letter from Mattie."

"From Mattie?" echoed Cecil. "I am so glad! I expected to hear from her this morning, and not receiving a letter, I fancied she might be ill. What does she say?"

"It is a long letter, Queen Cecil," said her uncle, smiling. "I think it must wait until after breakfast. This speaks well for her health."

So saying, he held up some closely-written sheets of foreign paper.

Cecil laughed.

"What a lengthy epistle! Poor dear uncle! You shall read it out loud to me after breakfast as a great treat."

"The queen commands, and I obey," he answered, with a comical resignation. "The fact is, Cecil, Ernest has completely spoiled you—you are getting quite unbearable. Poor fellow, I quite pity him!"

A sudden shade swept over the beautiful face.

"Poor Ernest!" she said, softly, and said no more until breakfast was over, when she left her seat, sat down in a large arm-chair before the fire, crossed her dainty little feet on the fender-stool and her hands on her lap, and said, coolly:

"Now, Uncle Henry, please."—To be continued.

THOMAS HUGHES: HIS "TALK TO STUDENTS."

MANY a reader of the RURAL, I am sure, have read "School Days at Rugby" and "Tom Brown at Oxford," and will be glad to hear something about their author, the famous Englishman, Thomas Hughes, who is now in this country founding a colony in Tennessee, lecturing, visiting and becoming Americanized generally.

Mr. Hughes will probably never get over being a schoolboy, in a way, for in meeting with students he lives over his own school life. The way I happened to see and hear him and take him by the hand, came about, was because he came to talk to the students of Haverford College (about nine miles out of Philadelphia) about his own school life at Rugby, and of the famous Dr. Arnold, who was head master there at that time. The College faculty, with commendable appreciation, sent out invitations to various persons in the city and the neighborhood to be present at the talk, so there was a goodly company present, and when, at a quarter past four in the afternoon, Mr. Hughes stepped to the desk on the platform of the audience room, there was a lively greeting of cheers. One thinks of Mr. Hughes as "Tom Brown" and endowed with unchanging youthfulness and boyhood; but the reality shows a man of 60 years of age, or thereabouts, tallish, slim, bald-headed, blue-eyed, with a fringe of sandy hair and mutton-chop side-whiskers of the same hue, clear-cut features, showing decided firmness and character, blended with a look of business and benevolence—if you can imagine that. He began to talk in a clear, English voice, with the intonation and accent that is so peculiarly and strikingly English to the ear, but which is difficult to make apparent on paper. His talk was quite informal, and he half leaned on the desk in front of him as he talked, planting one foot and then the other alternately in front of him, as if to make his attitude an easy one, and making one hand, which had a sore finger, the plaything of the other—being handsome hands, too, with long, tapering fingers that looked to be the exact counterparts of the hands of Drs. Elizabeth and Emily Blackwell, his famous countrywomen, who have done such splendid work in this country.

Mr. Hughes said the way he happened to be sent to Rugby was from the fact that his father had been a fellow pupil at Oxford with Dr. Arnold, and Mr. Hughes was so impressed with the superiority of Arnold as a young man that when he became head master of the school at Rugby he at once decided to send his two boys to him, one of whom was the now famous "Tom" Hughes.

But "Tom" had been at Rugby about three years before Dr. Arnold recognized anything of particular interest in him, and the way it chanced was this:—Dr. Arnold was a great reader of Scott's novels (derided nearly all others), and encouraged his "boys" to read Scott. He often alluded to passages in them which illustrated passages in the Latin authors the boys were reading. Upon this occasion they were reading "Horace," and Dr. Scott asked for an illustration of the passage from Scott. "He began at the head of the class," said Mr. Hughes, "and came down, down, down—I was always well toward the foot—until he came to me and I could give him the quotation. He seemed greatly pleased, and told me to go to the head of the class, where I went; but, as usual, I did not stay there long." [Laughter.]

After that the Doctor depended upon "Tom" to give the illustrations from Scott, when all the rest of the class failed. But upon one occasion, when Baron Bunsen, the famous scholar, had been brought in as a visitor by the Doctor, all the class failed, even young Hughes, who was "dreadfully ashamed."

The Doctor, when he had famous men visiting him, was in the habit of bringing them into the class, so that the boys could have a chance to see them. One of these visitors was Archbishop Whateley (author of Whateley's Logic, etc., etc.), and when he preached he made a great impression on the boys, because he would stop almost in the middle of one of his strongest sentences and, diving his hand in his waistcoat pocket, would bring out a huge pinch of snuff, for, although a snuff-taker, he always carried the stuff in his waistcoat pocket instead of in a box.

He related another anecdote of Whateley which was even worse. The boys—some of them, of whom "Tom" was one—had been invited to dine with Dr. and Mrs. Arnold in honor of the Archbishop. The table was covered with a beautiful, fine, snowy cloth, and spread with shining glass and china and silver, and the boys were ranged around waiting for the entrance of Dr. Whateley. Suddenly he rushed into the room, with his hands full of a mass of grass and dirt, and a curious worm that he had never seen before, and which he had found in his walk, and full of talk about it he deposited the mass on the faultless table-cloth with perfect unconcern, as though he had not committed a most boorish and uncivilized act. Imagine Mrs. Arnold's disgust, and think of such an example by a really great man in the presence of young men whose habits were being formed!

Mr. Hughes described Dr. Arnold as being a tall, loose-jointed man, with a shambling, ungainly walk, as our lamented Lincoln had, with bushy hair, piercing eyes, and a strong, heavy under-jaw that was a sort of barometer of the man. By the working of that under-jaw the boys could always tell when any one of them was making a poor recitation or otherwise appearing meanly in the eyes of the Doctor, as it would take on, to them, a terrible form, swelling with the feelings within.

The appointment of Dr. Arnold as head master was at the outset quite extraordinary, as he was what the English call a "Radical," and he really reformed the high school system throughout England.

At that time only about 2,000 English boys from the higher classes were being educated annually, in England, while now the boys receiving a higher education, number 20,000. At Rugby, Dr. Arnold revolutionized the school, making himself the target for abuse all over England. Among the various high-handed things the boys had, were packs of hounds, and they made themselves the terror of the neighborhood.

Dr. Arnold discharged the hounds and at one time expelled a party of boys, which at that time was unheard of, and brought wrathfulness down upon his head from all quarters. But he said it did not matter whether there were 300, or 200, or two boys at Rugby; but it *did* matter that the number there should be gentlemen. He pulled affairs out of old grooves, attacked old prejudices; in a word, was a reorganizer. Old friends fell away from him; he was hurt because of the misapprehension of his motives, but he kept on in the strong, frank, open-hearted, brave way in which he started, and gradually friends rallied about him, the boys were devoted to him, his books and speeches aroused England, and soon gained an immense influence. He seemed to respect nothing because it was old, but only because it was right. One great point he made with the boys was that they should never separate secular from religious work. He would have them believe all days to be holy and to be as conscientious in all their week-day work as in their religious devotions on the Sabbath. And such an industrious man! Mr. Hughes recalled the times when he and another boy, would climb out on a certain roof where they could look down into the Doctor's study, where late at night, after a hard day's work, they would see him absorbed in writing the books that afterward made him so famous.

It was a common saying in England that with Dr. Arnold, every question was an open question every morning when he got up. And his great power lay in his freedom from bigotry, the broadness, liberality, justness and bravery of his views.

He had the courage of his own opinions, and in his opinion, all classes of society, Quakers, Methodists and Presbyterians had as much right to higher education as the communicants of the State Church—the Episcopalians. So it came about that schools multiplied, and the doors to a liberal education were opened to all. It seems perhaps a small thing to us, but it was a great innovation in England.

It is always a pleasant thing to hear a pupil lauding his master, and it certainly was a treat to hear Mr. Hughes tell why it was that the Head Master at Rugby was so beloved and so great.

In his pronunciation Mr. Hughes, in one respect, is open to criticism. He rarely if ever sounds the "g" in syllables ending in "ing." He would say "exceedin'ly," "straggliu'," "governin'," "leav in'," etc. He pronounces "been" as most English people do, "bean"—and which, according to Richard Grant White, is the correct way. After he had concluded his talk of an hour and a half, the college conferred upon him the degree of Doctor of Laws. The degree was conferred upon him in Latin and he responded in that tongue, although quite surprised at the honor extended him, showing that at least some of the Latin that he learned at Rugby belonged to him yet.

As we were leaving the college we met Mr. George W. Childs, whose guest Mr. Hughes was, in Philadelphia, and with his usual ready tact, he presented us to Mr. Hughes, who shook hands as cordially as if he had not already had his hand nearly shaken off in this much hand-shaking country. He showed a genial, hearty, even jolly manner, as if his heart was as young yet as any school boy's, and it was easy to see that he must be greatly beloved by the people who know him. He says that Dickens went through this country with his eyes shut—otherwise he would never have written about Americans as he did. Mr. Hughes' memory of faces is not so good as Gen Grant's, for example, for when we were introduced he remarked with an expression of gladness, "I thought I remembered your faces," and it was the first time that he had ever seen them! He evidently does not like our protection system, for he said that straw hats cost so much last Summer when he came here, that he couldn't or wouldn't pay the prices asked; but he found that he could buy a new copy of his last book for *three* cents, and bought it. That must have been because of the enterprise of "The American Book Exchange."

MARY WAGER-FISHER.

BRIC-A-BRAC.

"Just look at my thimble," said a young lady to her beau; "it is actually worn out. Don't you think I ought to be rewarded for my industry?" The young man replied that he thought she should be, and the next day he sent her a new cap for her finger with the following lines:

"I send you a thimble for fingers nimble,
Which I hope will fit when you try it;
It will last you long if its half as strong
As the hint which you gave me to buy it."

TO A COMPLAINING SUBSCRIBER:—We are sorry you don't like the paper. We publish it simply to please you. We should ask you to come down to the office and edit it, only that if you did, some idiot might write to tell you how much better he

could do it himself, and that would annoy a nervous person like you. The exchange from which this is taken will get along in the world.

From an Album we extract the following:

Remember me and bear in mind,
A faithful friend is hard to find;
And when you find one that is true,
Stick him fast with Spaulding's glue.

A CHARMING young girl at Bellaire,
Was in trouble about her front hair;
If arranged in a bang
It never would hang
At all straight, but waved wild in the air.
And she heated an iron red hot,
And went in for a frizz on the spot,
She will never look cute,
But by purchasing jute
Is as likely to fool folks as not.

A LADY of amiable disposition was lately instructing a class on duty to the neighbor. At the termination of the lesson, and after an oration on the virtue of returning good for evil, in the belief that she had made a favorable if not a lasting impression on the youthful minds, she wound up with the following question, "Suppose a person were to be unkind to you, or strike you, what would you do?" A pause ensued, when one little girl, sharper than the rest, made the following laconic and not unnatural reply, "'It 'm again."

FIG. 363.

A TALL, elderly, refined-looking gentleman recently went into a small post office in a rural region of England. He asked some question relative to the registering of a letter, and was very sharply, rudely, and unnecessarily snubbed by a young woman in attendance. He asked her if she thought that was a proper way to answer an inquiry in a public office. She said she thought she had been quite civil enough for him. He asked her, with ominously increasing mildness of manner, if she would favor him with her name. She emphatically declined to do so. He then said he thought he would tell her his name, which, however, she declined to hear, saying that his name was no concern of hers. He calmly replied that he thought it was, for his name was John Manners, and he was the Postmaster-General.

LIFE STORY.

Seven years of sport and play,
Seven years of school from day to day,
Seven years of college or apprentice life,
Seven years to choose a wife,
Seven years to pleasure's follies given,
Seven years to business hard driven,
Seven years for some a wild goose chase,
Seven years for wealth a bootless race,
Seven years to hoarding for your heir
Seven years of weakness spent in care.

HERE is a story they are telling just now in London of a troop ship: In the ladies' cabin were four wash-basins, one of which was much larger than the others. There were three ladies in the cabin whose husbands were about equal in rank. The women always think they have a right to presume on the rank of their husbands when taking choice of berths, etc., and there was a great discussion as to who was entitled to the big basin. It was referred to the paymaster of the ship, who could settle nothing, and eventually to the captain. He gave a decision worthy of Solomon. After first asking them if they would abide by his verdict and not give any more trouble in the matter, which they readily agreed to do, he said he thought it was only fair that the oldest lady should have the biggest basin. That basin was never used during the whole voyage out.

ONE of the curious products is the sedate, stiff-rimmed father who does not love to read, and who, keeping his children within doors during the long evenings, tells them to "set and think." To their impatient inquiries, "What shall I do? he invariably replies in a hard, discouraging tone, "Can't you set and think?" The children of that man are likely to become sour, dry, hard and morose. Their minds become air-slaked and lack-in spirit. One evening a little boy who had been sitting for an hour in the presence of his silent father, who had commanded him to "think," said "Father, what are you thinking of?" "The days when I was wild. And, young man, what are you thinking of?" "The days when I shall be wild."

FIG. 364.

RECORDER—You are charged with choking, beating and kicking Parson Bledso, without the slightest provocation. The evidence shows that he addressed you in the most courteous manner, asking after your health, whereupon you fell upon him like a savage. "You dunno Parson Bledso, does yer, boss?" "I do not." "Jedge, no man honahs Parson Bledso moah den I do. He is a puffec gemmen ob de ole school." "What did you break the bridge of his nose and kick him in the abdomen for then?" "Jedge, he is the persuasivest talker you eber heerd. Ef I hadn't hit him in de mouf, in one moah minit he would hab borrowed dat dollar I'se been sabin up to go to de suckus wid, but I has got a better skuse dan dat ar." "What is it?" "You see, Parson Bledso has been proachin' powerful agin chicken stealin', and I has been making an earnest effort to reform. I haint pulled a pullet in two days. Ef I hadn't hit de pasture in de mouf he would hab talked me outen dat ar suckus dollar, and den—" "What then?" "Den, ob course, some white man's chicken coop would hab had to furnish de kerlatcrials to raise anudder suckus dollar. I would hab backslid, suah, and de parson heeself would hab been ter blame foah de defection in de party." "Yes, I see." "So you see do you boss, dat when my pasture ran his mouf agin my knuckles, when I reached out from the shoulder, I was starting a culled reform movement." The recorder took the case under advisement. He said he wanted to look up the authorities.

LEAP YEAR PRIVILEGE.

She took his arm, and as they walked
Adown the lighted street,
'Twas by the merest chance, of course,
They chanced a priest to meet,
"Poor man," said she, "how poor he looks,
How sad, forlorn and drear;
I wish you'd help the Christian man
To twenty dollars, dear."
He took the hint, of course he did,
Then something more was said,
And ere he left her 'twas agreed
That soon they should be wed.
Said she, while swinging on the gate,
"Mind, we're engaged, my dear,"
And thus do girls manipulate
The rights of this leap year.

FIG. 365.

"GOT any matches?" asked Smithkins, stepping into the grocer's. "Well, I hain't got anything else," replies the man of pints and pounds. "You may put me up half a dozen bunches," says Smithkins "I'll be after them presently." By and by he returns. Handing the matches the grocers says sweetly, "Is that all to-day sir?" "Why, no," Smithkins returns; "I did want ten pounds of sugar, and a barrel of flour, and a tub of butter, and a few other things; when I asked you if you had any matches, you said you hadn't anything else, so I bought the other things over to Herringbone's across the way." You can fancy the feelings of the grocer, but they cannot be described. He is very particular how he answers customers ever since that day.—Boston Transcript.

MRS. M——is beautiful, rich, and fashionable but is unable to read. One day, while calling upon her friend, Mrs. B——, she perceived a richly bound copy of the Holy Bible; and smilingly she inquired if she might take it home and read it. Wondering much, Mrs. B—— assented; and one week after the book was returned. "Were you pleased with it?" asked Mrs. B——, dryly. The sweet, blue eyes of Mrs. M—— fairly sparkled with pleasure. "Oh, my dear friend, it is a charming novel. They got married at last."

For Women.

CONDUCTED BY MISS RAY CLARK.

LITTLE VOICES.

When the western sun is sinking,
And the timid stars are blinking,
And the sheep-bells' distant clinking
Tunes the evening air;
Children's voices gaily ringing,
Shouting, laughing, talking, singing,
Ride the balmy breezes, flinging
Music sweet and rare.

When the Winter fires are gleaming,
And the ruddy cheeks are beaming,
And the hollied rooms are teeming
With the radiance bright;
Lordly roof and cottage rafter
Echo back the merry laughter
Of the happy children after
Every new delight.

Richly sweet, and sweetly pleasant,
Ringing out the past and present,
Comes the voice of lord and peasant
Merrily and clear;
We forget awhile the madness
Of our dreaming and our sadness,
And rejoice with them in gladness,
Losing every fear.

'Mid the Summer's fragrant breezes,
When the chill of Winter seizes
Every verdant gem, and freezes
Every pool and stream;
Come the children's voices ringing,
Ever fresh, and ever bringing
Joy to sorrow, sweetly flinging
Over us a dream.

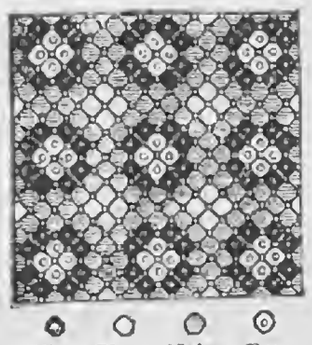
Little merry voices swelling
Round about our childhoods' dwelling,
Frank and fearless, fondly telling
Of the happy yore;
And we bless the children's laughter,
Echoed from the dome and rafter,
And their little voices after
Love them more and more!

W. M. A.

DESCRIPTION OF CUTS.

FIG. 366.—DESIGN IN BERLIN WORK.

Four colors are required for this design, which



Olive Green. Blue. Maize. Rose.
FIG. 366.

may be used for slippers, mats, cushions or footstools. The maize color will look best worked with silk.

FIG. 363.—BONNET.

The bonnet is of dark-green beaver, trimmed with feathers and satin ribbon.

FIGS. 364 AND 365.—WINTER BONNET FOR LITTLE GIRL OF FIVE OR SIX YEARS OF AGE.

The bonnet is of white beaver, with trimmings of blue plush; blue tuft and ribbon to match.

FIGS. 368 AND 369.—PALETOT FOR LITTLE GIRL OF FOUR OR FIVE YEARS OF AGE.

The front is shown in Fig. 368, the back in fig. 369, in different materials. Fig. 368 is of fawn-colored tweed; the bottom of paletot and pelerine are finished by rows of machine stitching; bows of satin ribbon ornament the neck, the opening at the back of paletot and the muff; the collar and bands on muff are of brown seal; the muff is hung round the neck by a brown silk cord. Fig. 369 is of golden beaver-colored velveteen, with trimmings of golden beaver fur.

FIG. 367.—CHILD'S PALETOT, WITH CAPE: TRICOT.

Materials Required: one-half pound of blue and one-half pound gray Berlin fingering, and a tricot-hook.

No difficulty will be found in working this paletot. It is advisable to have a paper pattern cut the exact size required, so that the work may be placed upon it from time to time, in order to keep the increase and decrease in the correct proportion.

Commence with a chain the length required from the neck to the bottom of paletot, work to the pattern in ordinary tricot, either in stripes of

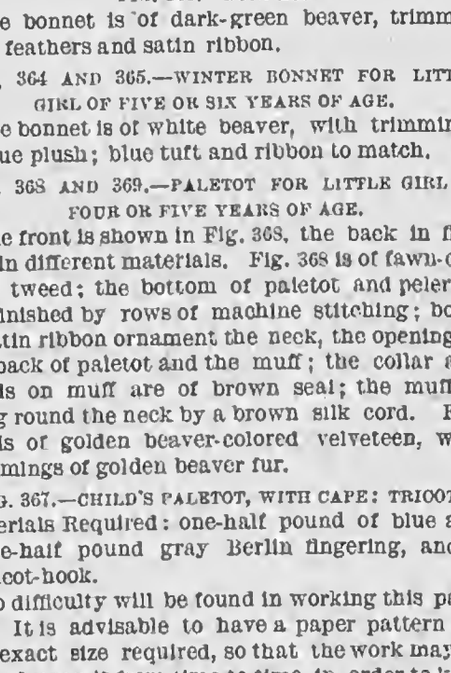


FIG. 367.

four rows of each of two colors or in one color. To increase a stitch, work up two loops through one stitch, then in working off work as two stitches; to decrease, draw through two loops together. As will be seen from the paper pattern, an increase is needed to form the neck, and a gradual slope for the shoulder. Care must be taken to keep the increase and decrease always at the same end, or the bottom of the paletot will be thrown out of shape. The back and the two fronts are worked separately, and must be sewn together under the arm and at the shoulder. The sleeve is worked lengthwise. For the ball fringe, which finishes the bottom of paletot and cape, commence by making the balls.

FIG. 368.

For the heading of fringe, which is also used as a trimming for the front of paletot and sleeves, work loops of double wool over a mesh an inch wide into a piece of narrow braid at each side, thread some balls on a length of wool, and fix to the braid between the two rows of loops by a needle and thread, working the stitches between the balls.

For the fringe, before working the second rows of loops on the braid thread a needle with double wool, draw it through a ball, pass the wool through another ball, leaving about half an inch of wool between the two balls; pass the wool through the braid, leaving a loop of about two inches, fasten with a buttonhole stitch, pass the wool again down through the last ball, and repeat for the length required.

For the second row, thread a needle again with double wool of a different color if preferred, join to the first loop of last row, pass it through a ball, join by a buttonhole stitch to a loop between the two balls of last row; pass the wool again through the ball, make a loop over the same mesh used for the heading to keep the edge even, and repeat. Now work the row of loops on the other side of braid, and sew the balls in the center; the fringe is sewn on by a needle and wool.

The cape is joined to the paletot at the throat by working a row of double stitches through the edge of both; it is tied at the throat by a chain of crochet stitches, with tassels at the ends.

The balls are made as follows: Cut two rounds of cardboard alike, and a little larger than you wish the balls to be; cut in the center a circular hole about the diameter of one-third of the whole round, put the two card circles together, and with long needlefuls of wool sew through the center hole and over the outer circle of card, so as to cover it completely and evenly; continue thus till the center hole is filled up, then with a penknife or scissors cut quite through the wool all around down to the edges of the card, and slip a piece of

FIG. 369.

wool of sufficient length in between the two cards, tie it tightly together, and trim the balls with scissors. The good shape of the ball depends upon the center hole being quite the right size. If it be too large, the ball will be rather flat; if too small, it will be oval in form.

THE BEARD.

WE masculines sometimes speak sneeringly of the earnest devotion paid to fashion by the female sex; but with what reason? True, there is in our female fashions a seeming (if not real) sacrifice of convenience, comfort, propriety, good taste, and even health at the imperative demands of fashion in the materials and make-up of all articles of dress and in the manner of wearing the hair. But who are to blame? We, her worshippers, defenders, admirers and protectors, do not tolerate in her any departure from the rules of the goddess fashion, and if there is any guilt or foolishness attached to the followers of this science I do not see why we men should not bear a part of it, for though we have taught our tailors that in the fashion of *our* apparel we will not tolerate much inconvenience to please them, still we will let our barber (if we tolerate one at all) play all manner of antics with our distinguishing feature, the beard.

The real difference in the folly of the two sexes is that the females follow an almost exact uniform

ity in their coiffures, while the men, as far as able, practice an infinite diversity.

I have lately amused myself by looking over the likenesses of noted men of the present age as they appear in our publications, and noticing the differences in the manner in which they are represented as wearing the beard. In nine numbers of the Phrenological Journal of 1875 I find 35 likenesses of eminent men, and in these many styles are shown.

I have also the likenesses of 38 eminent men residing in the Fifth Congressional District of the State of Michigan, which show great diversity of style.

Now let us moralize over these facts. It has been said "there was nothing made in vain," and I have heard this class of men debating the question whether or not the beard of man was inflicted as a punishment for original sin. As for me, I verily believe it a blessing, and I agree with Dr. Holland in advising "if you have a beard, wear it," and if you ask me, as others have, "Why, if the beard is a blessing was it not given to woman?" My reply will be *I don't know*, neither am I disposed to criticise the works of the Creator, but to admit that "He doeth all things well." Of the eminent men of the age it seems that only 16 out of 73, or less than 22 per cent., hold to the above doctrine, but undertake to improve upon the works of the Almighty. S. B. P.

[Although not strictly woman's matter, the above article is inserted with the presumption that it will be accepted with interest.—R. C.]

OLD MAIDS ONCE MORE.

On page 726, Oct. 30, No. of RURAL NEW-YORKER appears an article over the signature, Dr. A. E. S., which in my estimation is exceedingly superficial.

He says he is a bachelor of nearly 24 years. Does he mean he has been a bachelor 24 years, or that it is 24 years since he was born?

No man can claim the honor of bachelorhood who has seen only 24 years.

He says he is pleasant and always meets the ladies with a smile (oh) and tries to do what is right in regard to the ladies' welfare—has a strong desire to offer his heart and hand to some maid, for, he says, "I am faithful and kind." Now judging from the very transparent article over his initials, I think he will render himself sufficiently and acceptably serviceable to old or young maids in keeping away from them. He delights seemingly in lauding his own merits and singing his own praises, which is a very objectionable feature in any man's character. The article is not worthy a genuine M. D. I think maids old or young would advise the Doctor to study human nature a little more thoroughly; in the mean time put aside his "strong desire" which savors more of beardless youthfulness than a reasoning, intelligent, experienced bachelor.

OLD MAID No. 2.

FASHIONS.

Black lace scarfs, wound round and round the throat and fastened at the left side with a silver brooch, appear to be more fashionable than ever.

The new glove is the Sara Bernhardt, which fastens only at the wrist, and above it is closed like a stocking and wrinkles stylishly on the arm.

Imported surtouts are not as long as those made here and more nearly resemble basques than the polonaises, for which surtouts have been considered a substitute.

The demand for diamonds is very great this year.

The garnet shade is much brighter than formerly.

Cardinal red is now presented in much brighter shades.

Bonnet string are shirred at the ends and trimmed with tassels, balls, lace and fringe, as suits the fancy.

Ostrich feathers are used profusely on bonnets and hats.

The popularity of plush is unbounded, and plush jackets with basques added to them are used with cashmere skirts of every color to match. The sole trimming consists of large and handsome buttons, which are very fashionable indeed. The Tam O'Shanter hat or the drawn bonnet matches the plush.

The new Winter petticoats are winsey. Some have the lower edge half a yard deep, embroidered in a contrasting colored silk, such as old gold or cardinal or dark blue, in spots the size of a florin. Others have equal and unequal perpendicular stripes of a contrasting color, the newest interwoven with tinsel. The material is wide enough for the depth of the skirt.

Fancy cloths are fashionable for ladies' Winter suits; they are of some dark tint with dashes of bright color—red, yellow and blue, which, however, are not very visible unless you look quite close.

Serge and cloth dresses in tiny check patterns are fashionable in very dark or neutral tints, which are very generally, however, brightened up by some touch of red either in the trimmings or the cravat or bonnet.

Indoor jackets are made this month of navy-blue, or seal-brown cloth, with borders of Turkish cashmere of the brightest colors. Ruffles of yellow lace are worn round the neck and wrists.

Plaids have quite come into favor again; skirts are made entirely of thick plaid surah, of ribbed texture, kilted all the way up; the coat bodice is of some self-colored material, and the rest is embroidered of the prevailing colors of the plaid pattern.

The new Winter bonnets are conspicuous for the beauty and richness of the materials of which they are composed; fancy shot velvets, satins and plush as soft and as fluffy as down. Their shapes are in general large and protruding, though some exceptions still appear in the way of close capotes,

ABOUT WOMEN.

VINNIE REAM HOXIE'S statute of Admiral Farragut is in position in Farragut square, Washington, D. C. It was cast at the Washington Navy Yard. It is of bronze out of the old propellor of Farragut's flagship, the "Hartford." It is of heroic size, and represents Farragut with a marine-glass in his left hand, and with his left foot resting upon a block and tackle. It stands upon a pedestal of Maine granite ten feet six inches high, and the total cost is $20,000.

IT is said that the Empress Eugenie has decided to leave England, being moved to that determination by Parliament having set its face definitely against the erection of a monument to the Prince Imperial in Westminster Abbey. It is thought that in the future she will reside at Chateau of Arenberg, Switzerland and her present intention is to erect a mausoleum wherever she fixes her residence, and remove the remains of her husband and son from England.

THE TOILET OF ELEGANCE.

For preserving the complexion—Temperance.
For whitening the hands—Honesty.
For sweetening the breath—Truth.
For removing stains—Repentance.
For improving the sight—Observation.
A beautiful ring—The family circle.
For improving the voice—Civility.
The best companion to the toilet—A wife.
To keep away moths—Good society.

A little Hop Bitters saves big Doctor bills, long sickness, suffering and perhaps death.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE KITCHEN CLUB RESUMES.

ANNIE L. JACK.

THE Kitchen Club met for the first time this Autumn at Dr. Read's, and we discussed the important subject of children's education. This topic must lie close to every mother's heart, and to none more so than to the hearts of farmers' wives who know that their little ones labor under many disadvantages. Long distances from schools, the busy times when all the help possible is needed at home, inclement weather with bad roads, and many other causes combine to irregularity, especially in the elder children's education. So we were cheered and helped by the talk of Mrs. Wheatly, a lady of superior learning, who is principal of a distant academy; for she told us that no class came to her school that she so gladly welcomed as the thoughtful, quiet boys and girls of farmers. They are not so frivolous, so easily led into mischief or so prone to evil as the children brought up in towns and villages, who come in contact with all sorts of people and influences, and we thought of Lincoln and Greeley and of the immortal Daniel and of the young David who tended his flocks; of the Patriarch Abraham, and of all the other great lights of the world who have been agriculturists in their day and generation, and thinking, we took courage. Who knows, but with such snatches of teaching as they can receive, with nature for their best and truest guide, with plenty of good reading and the fruits and flowers of the earth in their season ever near them, farmers' children may not miss so much the technical knowledge so valued and so valuable. The boy who works hard at Latin and algebra amid work to be done and many difficulties, will prize it more than if taught to gain his mental pabulum, as it were, with a silver spoon. All this and more we said to each other, and after a unanimous vote against sending children too early to school, and regarding other things of local import, our meeting broke up in the early twilight and we decided that in the education of our children we were by influence and example *all* instructors, that it was not all learned in the confinement of the schoolroom, with perhaps strange teachers who did not study the temperament of their charge, or know that "There are more things in heaven and earth than has been dreamed in their philosophy."

SUNDRIES.

Breakfast-Cakes.

MY family are much addicted to breakfast cakes of almost any kind, so I have rung the changes on various sorts until the opening of the buckwheat season, which casts everything else into the shade. With a long griddle, which bakes eight cakes at a time, it is but little trouble to supply a family at breakfast with cakes, even on a rather warm morning. A sort we like very well is made of two cups of boiled rice, two cups of buttermilk, two eggs, an even teaspoonful of soda, and flour enough to make a thin batter. A spoonful of molasses improves the color. The same cakes with two cups or more of soaked, stale bread in place of the rice, are very good. Soak the bread over-night and pour off the water in the morning, mashing the bread fine. But the best of all, we think, are made of grated green corn, mixed up in the same way. If you will only shut your eyes you may fancy you are eating fried oysters. Always remember that a rather thin batter and a hot griddle are the secrets of having nice cakes of any sort.

Much has been written against the use of buckwheat, but after twenty years' trial I have failed to see any ill effects of it in my family. It seems to suit all members, whether active school children, or those in sedentary employments. We eat buckwheat cakes for breakfast from Fall until May, if we can buy the flour so long. Very likely it is with this as with almost everything else, what agrees with one household may not with another.

It is healthful and appetizing to invent a variety in even the common staples of every-day fare. Now, bread is an article we expect to see on our tables three times a day the year round, and we never tire of it; yet even here one can have much variety, as you will agree after turning the leaves of the cook-book. But it is not good policy to make a kind your family do not like. I could never convince my family that Graham bread, or gems, or anything in that line was good, and as they were all in good health without it, there was no occasion to try it medicinally, so we dropped it. A light corn-bread made with baking powder and one egg we think excellent. Two eggs are apt to make it tough, though light. As a general thing, it is well to cook what your family like rather than what "they ought to like," and I often feel sorry for a poor child who is perhaps forced to eat food for which he has a real antipathy. A lady told me how much she endured in childhood in the endeavor to "break her in to eating mush and milk." The sight of it now always called up the old feeling of loathing. Nature is a good housekeeper and knows what is wanting in her larder better than we can tell her. It is well to listen rather more than we do to her suggestions. AUNT EVA.

To Protect Silver-ware from Tarnishing.

Mr. Strolberger, a silversmith of Munich, tried various unsuccessful ways of protecting his wares from discoloration in the show windows. At last he hit upon the expedient of coating his silver with a thin coating of collodion, which he found to answer perfectly. The article is first warmed and then painted over carefully with collodion diluted with alcohol, using a wide, soft brush for the purpose. Silver goods thus protected he states have been exposed in his window for over a year without growing dim, while other pieces not protected become black in a few months' time.

We have never tried this recipe, and therefore give it for what it is worth.

To Clean Baby's Kid Shoes.

"There, baby Denton," said I after we had returned from the fair, "your pretty blue shoes are past best wear, unless milk, soap and flannel will work wonders." Thinking they could not look worse, I wet one end of a small piece of flannel in sweet milk, rubbed on a little *white* soap and then rubbed the soiled kid with it. I was careful not to use the flannel after it became soiled, frequently applying soap and milk to a fresh place. Well, the shoes were much improved by their soap and milk bath and will do little one-year-old good service yet. MARY B.

Camphor Ointment.

One tablespoonful of brandy, two tablespoonfuls of beeswax, three tablespoonfuls of sweet oil, one teaspoonful of strong spirits of camphor.

Chocolate Cake.

One cup of sugar, one-half cup of butter, four eggs, the whites beaten to a froth, one and a half cup of flour, one teaspoonful of baking powder. For filling, take a quarter of a cake of Baker's chocolate, to it add a cup of water, boil, then add a cup of milk and when it again boils stir in a tablespoonful of corn starch dissolved in a little milk. Boil, then sweeten to taste and flavor.

Soft Molasses Cake.

One cup of molasses, one cup of butter, one cup of sugar, one cup of milk, two eggs, one teaspoonful of saleratus and four cups of flour.

Orange Pie.

Juice and part of grated rind of two oranges, the yelks of four eggs, two tablespoonfuls of butter, one cup of sugar. The whites are beaten to a stiff froth, a little sugar added and then spread over the top after the pie is done. Return to the oven to become slightly browned.

Sausage Meat.

To 10 pounds of meat allow one-fourth pound of salt, one ounce of pepper, one-half ounce of allspice, and if liked one-half ounce of sage.

For Curing Hams.

Eight gallons of water, 14 pounds of salt, one quart of molasses, one-half pound of saltpeter. After the meat is cut, place on a board and let stand over-night. In the morning rub with fine salt, pack into a cask and pour over the above mixture.

Curing Beef.

Four gallons of water, six pounds of salt, four ounces of sugar and two ounces of saltpeter. Cut up the meat, cover with a weak brine and let stand 24 hours before covering with the above.

Indian Bread.

One quart of fine Indian meal, one and one-half pint of wheat flour, three pints of milk, four eggs, two good teaspoonfuls of baking powder, one-fourth pound of butter.

Molasses Crullers.

Two teacupfuls of molasses, two teacupfuls of cream, two eggs, one teaspoonful of saleratus, and flour to mix and roll.

French Cake.

Four tumblerfuls of flour, two and a half tumblerfuls of white sugar, one tumblerful of milk, one-half tumblerful of butter, three eggs, juice of a lemon and two teaspoonfuls of baking powder. MRS. AUGUSTUS HEWLETT.

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Miscellaneous.

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News of the Week.

HOME NEWS.

MONDAY, Nov. 8, 1880.

THE Presidential Election resulted in the election of General Garfield, republican, by some 34 majority of the electoral vote. All the Northern States with the exception of New Jersey and Nevada went Republican.....Hamilton & Co's oil mill at Shreveport, La., was destroyed by fire on the 1st. Loss, $80,000; insurance, $49,000 .....Hon. John T. Keen, Mayor of North Danville, Va., was thrown from his buggy and died from his injuries on the 1st.....Chauncey P. Reeve, a farmer, aged 65, drove in to Middletown, N. Y., to see a doctor, and died on his wagon in front of the physician's door. Heart disease was the cause..... Robert Payne and Scott Thompson have been arrested at Danville, Va., upon the charge of being concerned in the death of Scott Hawkins, whose body was found in the canal at that place on the 23d ult.....Thaddeus M. Baird, a well-known citizen of Surrey County, Virginia, committed suicide by shooting himself through the head. A few days previously he attempted suicide with a razor. Deceased was for many years a conductor on the City Point Railroad.....Three brick buildings at Fort Dodge, Iowa, occupied respectively by Mr. Morgan as a drug store, the First National Bank and Beth Vincent, were burned on the 31st ult., involving a loss of $25,000; partially insured.

One of the buildings of the Laflin & Rand Powder Works, at Mountain View, about nine miles from Paterson, N. J., was blown up on the 3d, and two men were so terribly injured that they died the next morning. .....Ranker & Lutz's brewery at Fort Wayne, Ind., was destroyed on the 2d by an incendiary fire. The loss is $10,000..... While hunting in Dinwiddie county, Virginia, William Scott was accidentally killed by a companion named William Mabry.. .....The Interior Department has received dispatches from Ute Commissioner Meacham and Agent Berry announcing that they arrived safely at Rawlins, Wyoming, on the 1st, and that they would place themselves at the disposal of the authorities at Denver. Their roundabout route through the mountains was selected in order to avoid apprehended risks of mob violence in Southern Colorado.

The rain has enabled the Delaware and Hudson Canal to resume navigation, and several hundred boats, with 90,000 tons of coal, were waiting at Port Jervis for water. If the water lasts 6,000 tons will reach tidewater daily until the ice closes navigation.....A fire at Bayou Sara, La., on the 30th, destroyed a block of buildings, including Picard & Weil's store and dwelling, John F. Irvine's, Alexander's, Hart's, Brown & Co.'s and Martinez's stores and the telegraph office. Loss estimated at $30,000.....Mary Warnock, aged 15 years, employed at the Barbour Flax Spinning Mill at Paterson, N. J., while engaged in oiling a shaft was caught by the hair in the machinery and completely scalped, both ears being torn off with the skin of the skull. She was taken to St. Joseph's Hospital, but her recovery is hopeless ... .The Brush electric light is to be introduced into the Pennsylvania Railroad shops at Altoona. .....Thirteen men were precipitated into the bottom of a colliery shaft at Mons, Pa., and killed by the breaking of the hoisting apparatus on the 14th.

Policeman Fred. Kalsch was fatally shot by Charles Marshall, colored, at Cincinnati, on the 3d, while endeavoring to disperse a disorderly crowd.....The Memphis and Arkansas River packet, Ouachita Belle, struck a snag five miles above Austin, Miss., and sank within ten minutes. She had a good list of freight. The boat was valued at $20,000. No lives were lost.....During a Republican jollification at Frankfort, Ky., on the 3d, a difficulty occurred between Hon. William H. Sneed and Jerry Lee. The latter drew a pistol, when Officer Conway interfered and Lee's pistol went off in his hand, the ball taking effect in the lower part of Conway's bowels, inflicting what is thought will be a fatal wound. In a few minutes afterward Frank Egbert shot a negro boy named George Whittaker for hollooing for Garfield. It is thought he cannot recover..... The Memphis steamer Robert Mitchell, en route from Cairo to New Orleans, struck a hidden obstruction while making a crossing at Fox Island, six miles below Memphis, and sank. Her cargo consisted of 750 tons of grain and breadstuffs and 625 bales of cotton, all consigned to New Orleans merchants.

A fire originating in a small harness shop at Sturgeon Bay, Wis., destroyed Sellers's furniture store, the Northwest Telegraph Company's office, Mosse Brothers' hardware store, Palmer's barber shop, Amasse's meat market and restaurant, Reiffer's saloon, Collard's tailor shop, Gross' saloon and the village hall. Loss, $14,000; insurance light.....George Munro, the New York publisher, has endowed a chair of history, political economy and rhetoric at Dalhousie College, in Nova Scotia, the incumbent of which will be Rev. John Forrest .. ....In an election row at Lexington, Miss., J. W. Ashcraft was killed by T. J. Lockhart, the latter was fatally wounded and C. M. Hull, editor of the Holmes County Times, was painfully wounded.....A fire at Benicia, Cal., destroyed two brick buildings containing the construction department, machinery and bullet presses of the United States Arsenal. The loss is estimated at $200,000.....The Silver Lake woolen mills at Milfords, Del., were totally destroyed by fire, on the 2d. The loss is only partially covered by $4,000 insurance.

While Charles Stafford and Henry Vickery were digging gravel from a bank near Attleboro, Mass., it caved in and both were killed. The former was 37 years of age, the latter 35. Each leaves a widow and two small children.....The boiler of an engine on the Fall River and New Bedford Railroad exploded while drawing a train over a bridge. The engineer, George F. White, was killed, and the fireman, James Thompson, was severely injured. The train narrowly escaped being thrown from the track.....P. M. Mattison's flour mill at Faribault, Minn., was burned on the 30th. Loss, $20,000.....Charles O'Neill was fatally shot in the abdomen, at Cincinnati, during a street fight.....The boiler of the Atlanta (Ga.) Flouring Mills exploded on the 30th, killing the engineer and fireman.... The citizens of Arizona have been devoting the past week to receptions in honor of General Fremont.

In Sussex county, Va., Mattie Sharp was standing near a fire, when her clothing became ignited, and before help could be had she was fatally burned..... ..A band of thirty Apache Indians attacked a picket of twelve men of the Ninth Cavalry, 150 miles south of Fort Quitman, N. M., killing two soldiers.....The charter of the Cape Cod Ship Canal Company of New York will be revoked, the company not having complied with the terms. The Cape Cod Canal Company of Massachusetts will take up the work as readily as possible.....The articles of incorporation of the Chicago Driving Park were forwarded to Springfield, Ill., on Oct 30th. The incorporators are B. H. Campbell, H. V. Beamis and A. T. Richmond. The incorporation will have a capital stock of $1,000,000, divided into shares of $100 each.....A. B. Nichols, of Washington, D. C.; Hoyt Sherman, of Iowa, and J. B. Bloom, of New York, have been designated as Government Commissioners to examine the recently completed section of the Atlantic and Pacific Railroad fifty-two miles westward from Albuquerque, N. M.....The discussion for the proposed site for the World's Fair to be held at New York, in 1883, still continues vigorously with the proposition to hold it at Central Park.....The steamer Rhode Island went ashore on Bonnet Point, above Narragansett Pier, on the 6th, and went to pieces on the 7th. She weathered the heavy wind and rain storm that prevailed during the night, but with the incoming storm and tide she began to shiver and tremble, and for an hour or more presented a scene grand beyond description.....Four blocks in the business portion of Watford, Ont. were destroyed by fire on the 5th. Loss, $150,000..... From 200 to 300 miners have stopped work at Akron, Ohio. They demand an advance of ten cents per ton.

Frederick Kester, the Iroquois county wife murderer, will be hanged at Danville, Ill., January 21, 1881.....George Glass was shot dead on Thursday night at Madison, Ind., by George Watson or Frederick Treock. It is stated that Glass hurrahed for Jeff Davis and in the ensuing altercation he shot Watson in the leg, and it is supposed that Watson returned the fire, killing Glass..... Margaret Dempsey, said to be 111 years old, was found starved to death in her hut on the mountains near Ulsterville, N. Y.....Samuel L. Lawton, Township Collector of Delevan, Ill., and a prominent merchant, has disappeared. There is a deficiency in his accounts of $3,000. The total amount of his peculation is not yet known..... Sheriff Desmond, of San Francisco, has been indicted for felony in permitting the escape of prisoners; a citation has also been issued by the Grand Jury commanding Mayor Kalloch to show cause why he should not be punished for contempt in attacking that body in the prelude to a sermon last Sunday. The report attacks a number of county officials and institutions and praises others. It is noticeable that the unfavorable comments are confined to the officers elected by the workingmen.....A. Albert Mitchell, colored, was on the 5th hanged at Louisa Court House, Va., for the murder of Charles K. Walton, in March 1879. Mitchell had been sheltered by Mr. Walton in his store on the night the murder was committed. As Walton lay asleep on the side of his bed Mitchell struck him twice with an iron bar and then proceeded to rob the money drawer. While thus engaged Walton called out to Mitchell who struck his protector another blow, which killed him.....A special from Leadville, Col., says Eldridge J. Dawson, Assistant Postmaster, and Edward A. Clark, Stamp Clerk, were arrested on the 5th, on a charge of stealing Government funds. The amount of their deficiency is about $6,000.

FOREIGN.

In Ireland the excitement is still increasing. The government has added more names to the list of the leaders of the Land League indicted, so that they now number 13. A couple of weeks ago Mr. Healy, private secretary to Parnell, was arrested on the charge that he with another had "intimidated" a farmer who had taken a farm from which another tenant had been evicted on refusing to pay a thoroughly exorbitant rent. They had merely advised him not to be "odd" and incur the ill-will of his neighbors. The trial is yet to come off, but meanwhile Healy has become a candidate for Parliament for Wexford. This is only a sample case of a government prosecution instantly making an insignificant person a personage of importance. Meetings are constantly being held throughout the country, at which language more and more inflammatory rouses still more the ardent national temperament; the resolution seems to be hardening to resist at all hazards rent-paying except at a figure satisfactory to the tenants; the English determination to "put down" all opposition also appears to gain strength; the Channel fleet has been ordered to the Irish coast, and the announcement has excited "indescribable excitement."

In France the members of the last of the "unauthorized" religious orders have been driven from their homes and the Republic is happy. They were said to be "unauthorized" because an obsolete law of the beginning of the century said that they, having many foreign members, must be authorized by the State to dwell in the country. It was a vestige of the state of society under the heathen French Revolution, was forgotten for years, and resurrected the other day when the government were defeated in the Senate on a law they wished to pass against the Jesuits.....In Russia the Tzar is still unwell at Livadia, and negotiating with his legitimate children about the future status of his illegitimate, ones after his death. The Princess Delgorouki is to be declared Tzarina, anyhow, and her children will probably be legitimatized and acknowledged princes and princesses "of the blood." This is the chief question that now engrosses the moribund head of the Russian Empire and the Russian Church, while his subjects are starving in many of the provinces and the Nihilists are once more inspired to fresh excesses by the conduct of the supreme ruler and wretchedness of his subjects.

Prince Gortschakoff is again reported very ill and unlikely to recover.....Persia has refused to allow stores to be sent to the Russian General, Skobeloff, who is warring against the Turcomans, on the ground that the crops are poor. Were not such the case in Russia, the army would have been supplied from home.....The Kurdish invasion of Persia is being repulsed with great loss. Thirty of the invaders have been crucified for committing excesses.....Dulcigno has not yet been surrendered, but the Sultan has sent a sealed letter to Dervisch Pasha, commander of the Turkish troops in the neighborhood, and it is supposed that it contains an order to give up the town at once at any cost, as a council of the Ministers, held at Constantinople on Saturday, advised such a measure..... The Porte has decided to raise the strength of the army in Thessaly and Epirus to 42,000 men; the Greeks having 48,000 ready to invade those provinces, a part of which they claim. .....An International exhibition is to be held in Berlin in 1882.....During last week an international "go-as-you-please" six-days' pedestrian match was held in London, at which Rowell, the plucky, chunky little Britisher, once more came out ahead, beating Hart's time in the last competition here, by one mile, thus making the best record ever attained. Nearly a dozen started, but three only kept on to the end—Rowell, who scored 566 miles, Littlewood, 470 miles, and Dobler, 450 miles. The last was the only "survivor" of three Americans who started. The receipts were only £1,200, or $6,000, of which Rowell's share will be hardly one-tenth of what he received in this city. The next match will probably be held here—there's a world more money in it.

[Kalamazoo, (Mich.) Daily Gazette.]

It is an unprecedented success said Mr. Chas. S. D'Arcambal, the well-known Burdick House druggist, when asked for his views in regard to the St. Jacobs Oil; it is highly extolled, and is giving general satisfaction.

AGRICULTURAL NEWS.

THE NATIONAL FARMERS' ALLIANCE.

If the farmers of the country were as closely united with regard to legislation hostile or friendly to their interests, as are those engaged in other industries, they would have little cause of complaint of unfair taxation, oppressive railroad exactions, or legislative neglect of measures conducive, if not essential, to their welfare. United, their numbers would force legislation in accordance with their just demands; without State or national unanimity of action, the injustice to which they are often subjected and the salutary measures they have a right to expect are alike disregarded by our law-makers, with whom expediency and self-interest are usually more potent than justice or the national welfare. Combination alone can right this wrong, and effective combination is impossible without organization. Hence the necessity of associations such as the Grange, and the Farmers' Alliance. For its social, economic and educational benefits the Grange has deserved well of the farmers of the country, and in these respects we heartily wish it length of days, increase of numbers and growth of prosperity. But while it has done a good deal for the farmer in these directions, the National Farmers' Alliance, just organized, promises to do a good deal for him in another. The Grange has meddled little in politics; the Alliance, while non-partizan, proposes to work against class legislation and the encroachments of concentrated capital and the tyranny of monopoly; to provide against being imposed upon by swindlers and swindling advertisement in the public prints; to oppose in their respective political parties the election of any candidate to office, State or national, who is not thoroughly in sympathy with the farmers' interests; to demand that the existing political parties should nominate farmers or those who are in sympathy with them for all offices within the gift of the people; and to do anything in a legitimate manner that might serve to benefit the producer. In so far as it honestly pursues these aims the new association shall receive our hearty support, and in so far as it attains them, our sincere applause.

THE CHICAGO PORK CORNER.

The inside history of the great Armour "pork corner," to which reference was made editorially in the RURAL a couple of months ago, in which the Armours made a profit of $7,000,000, came out in Chicago on Friday last. The history of the operations goes back to the Summer of 1879, at which time Phil. Armour and his Milwaukee partner, John Plankington, went to Europe with the intention of "cornering" the pork market of the world. They were abroad about two months, and during their absence ordered the purchase here of an enormous amount of provisions, including 60,000,000 pounds of ribs, bought at less than 4½ cents per pound, and 150,000 barrels of pork at an average of only $8 per barrel. On their return to America in September they found the market strengthening. Prices went up and they realized a profit of $2,000,000. In the next two or three months pork advanced to $14 per barrel, and ribs in proportion. Under the impression that the boom was going to continue they made further purchases. Then came the reaction, pork going from $14 to $9.25 in spite of all that could be done to bolster it. The $2,000,000 went and another $1,000,000 after it. The members of the firm at once set about retrieving their losses, and sent agents through this country and Europe, and from the reports made satisfied themselves that the product of the hog would be in demand for the ensuing four months. They began in April to purchase all the actual stock of mess pork in Chicago and a trifle over 100,000 barrels in store in other cities. This they bought at prices ranging from $9 50 to $10 50, the average being about $10. In addition they secured "options" on 1,250,000 barrels more, so that they could claim this quantity in the future at certain specified figures from other parties, and then awaited developments. They took occasion to let everybody know that they had all the pork in existence and a great deal more. The manipulators had laid their plans to force the price up to $20, but they wanted it to go up gradually. But, when it became apparent to the traders and speculators that a great bull movement was on foot, prices were run up with such rapidity that it was feared the effect would frighten off the "shorts" and induce them to settle too early. To prevent such a move the Armours threw nearly a half million barrels on the market, and this served to check the boom and keep it within their control, and at the same time produce the impression that they could not or did not carry out their published programme of forcing quotations to $20. Operations were not alone confined to America, but all of Europe was taken in, and wherever men were found willing to sell pork they did not have, the Armours were graciously accomodating. They knew that they held all the pork and that those who had sold them the article would have to come to them for it or settle the differences. The amount of money that was placed against this game was enormous. In striking this balance the lucky owners of the "brace" find they have made not less than $7,000,000. In other words, they got back the $3,000,000 lost when pork went down last Winter and $4,000,000 besides. The Wall Street dealers feel as hard as their Western brethern in misfortune, and a vast sum of New York money is placed to the credit of the Chicago "bulls."

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and seaboard ports, and the rail shipments from Western lake and river ports:

	1880, Oct. 30, bush.	1880, Oct. 23, bush.	1879, Nov. 1, bush.	1878, Nov 2, bush.
Wheat....	19,118,102	17,480,491	28,832,849	17,962,755
Corn.....	19,364,445	19,388,286	11,615,214	10,964,922
Oats.....	5,065,878	4,799,0 3	3,358,457	3,475,743
Barley...	2,611,581	2,479,900	4,360,004	5,083,904
Rye.....	897,687	865,733	967,513	1,406,538
Total.	47,045,193	44,963,053	49,123,487	38,563,872

Last Saturday a meeting of gentlemen interested in the N. Y. State Agr'l. Experiment Station took place at Garden City, L. I., embracing some of the most intelligent of Long Island farmers. Dr. A. S. Heath, of the American Institute Farmers' Club, who presided, said that although it is probable that the site of the State Agricultural Station will be a hundred acres on the Stewart estate, the Director of the station will make experiments on the lands in every county in the State, thus giving every part of the commonwealth all the advantage that may be gained from the existence of such an institution.....Subsequently a resolution was passed unanimously that it was the sense of the meeting that the experiments should be so distributed as to make every county a participant in the benefits arising from the station. A gentleman said that Garden City will undoubtedly offer such attractions as will influence the founders of the State Agricultural College in fixing upon a site for that institution. It is not improbable that if the projectors of the college select Garden City their college may start with an endowment that will make it from the outset the best institution of its kind in the world.....In view of the increasing business of those Long Island farmers who are selling vegetables and milk in New York City, it was agreed to ask the Long Island Railroad Company to run a night train for that industry. The farmers who are thus to be benefited dwell within about thirty miles of the city, and their number has been largely increased within three years past. They ask for such facilities as shall enable them to deliver vegetables absolutely fresh from the ground.

The Elmira Farmers' Club offered premiums to boys for the largest yield of corn from a given portion of an acre. These premiums have been recently awarded. The largest product was at the rate of 110 bushels and 30 pounds per acre. Manure had been applied at the rate of 60 loads per acre, which at the rate of $2 a load, made the corn come to $1.43 per bushel. But in many places the manure would be reckoned at only $1, and a strong soil would hold more than half its value for succeeding crops. The crops of the other applicants were 69, 69, 66, 56, and 53 bushels per acre. Even at the high cost mentioned, the experiment was a praiseworthy one, as showing the possibility of the crop.....J. N. Marden, Jr., of Baltimore, Md., owns a pear farm in that State, which is the largest this side of California. It contains 15,000 trees. Last Spring he tried the experiment of keeping the frosts away by building fires around 2,500 of the trees on frosty nights. The rest of the orchard produced a comparatively small quantity of pears, while the field around which the fires were kept yielded 3 000 boxes which sold for more than $6,000.....Shipments of flour from Minneapolis Jan. 1 to Oct. 20, of the present year amounted to 1,464,595 barrels, and shipments of mill stuff during the same period amounted to 52,598 tons.....The gate receipts of the fair in Indianapolis, this year, were about $14,000; last year they were over $18,000, but, owing to the decreased expenses this year, the net receipts are as great as those of 1879, viz—$4,000.

In California Missouri grapes are sold from growers to wine makers for $20 to $27 per ton, and foreign grapes for $27 to $35, against $14 to $16 for the former, and $20 to $26 for the latter, last year.

.....The phylloxera has been ravaging the California vineyards, having during the last eight years laid waste about 700 acres in the Sonoma Valley.....Chicago's fruit trade, as shown by the U.S. census returns, foots up the annual aggregate of $16,592,890, and proves Chicago one of the greatest fruit markets in the world.....The culture of flax is greater in Russia than in any other country. In 1878 the quantity exported was valued at £8,000,000—$40,000,000—or 10 per cent. of the total exports.

THE Mark Lane Express says that the markets of this country will never be supplied with first-rate mutton so long as American breeders prefer Cotswold to Down sheep.....At a recent sale of rams at Melbourne, Australia, three Tasmanian Merinos realized 175, 150 and 125 guineas each, or about $925, $760 and $735.....Pleuro-pneumonia is now prevalent in most of the settled districts in South Australia .....Prof. Toussaint, of the Toulouse Veterinary School, France, is reported to have discovered a preventive of anthrax, or black-leg, which bids fair to be an invaluable preservative from this fatal disorder. So highly is the discovery esteemed in France that the government has already rewarded him, while the Academy of Sciences has conferred one of its most valuable prizes on him. At last accounts he was inoculating a large number of sheep in districts in which the disease was very destructive.....The inroads of the phylloxera are on the increase in the department of Savoy. At the close of 1879 there were 68 points attacked, extending over 65 acres; but the disease has now appeared in 175 fresh places... ....By last accounts from the Argentine Republic, the wheat sown there in August was very promising, and the acreage considerably larger than last year.....In New South Wales a heavy snowfall, on August 21, did much injury to crops .....In Victoria and South Australia a great deal of damage was done by heavy rains; and the rabbit pest has been brought to the notice of the government.....In Queensland late wheat had hardly appeared above ground on August 7th; the weather was fine and the sun hot for that wintry season. At Cape Colony drought was complained of under date of Sept. 14, making the pastures short; but ostrich farming was reported highly profitable, sales being at excellent prices—four-year-old birds selling for $350 to $575 per pair; and breeding birds from $625 to $1,000 a pair.

Railroad freights from Chicago and other points in the West eastward were advanced five cents per cental on Nov. 1 on boxed meats, hog products and live hogs.....A national anti-horse-thief convention lately held at Keokuk, Ia., was largely attended by delegates from the seven nearest States.... ...The ocean insurance on live cattle has been advanced to 12 per cent. as Winter is on us, and it is expected that shipments of live cattle from New York will now decrease, while beef shipments will correspondingly increase. Ice has dropped from $10 to $7 per ton .....Hog packing houses are being erected in many parts of the West .....More oleomargarine is shipped to Rotterdam than to any other European port. Glasgow, Scotland, receives about half as much. More than four times as many cheeses are shipped to Liverpool than to any other European port. Glasgow holds second rank.

Figures Don't Lie.

SPARTA, Union Co., Oregon, May 30, '79.

BUTTER IMPROVEMENT Co., Buffalo, N. Y.:

Sirs—The package of "Butter Maker" forwarded by you to W. W. Ross, Esq., of this place, was handed over by him to me for trial, and orders to report the results to you, as I have the management of his dairy.

I have the honor to report that one gallon of sweet cream churned at a temperature of 65 deg. and treated with the Butter Maker according to directions accompanying package, produced four and one-half pounds of butter of a fine golden color, and firm, waxy texture, and of delicate flavor; time occupied in churning and gathering the butter, twenty minutes.

One gallon of sweet cream, same lot, churned without the powder, produced four pounds of butter several shades lighter in color, not so firm or waxy in texture, but no perceptible difference in flavor; time occupied in churning, at same temperature as above, forty-five minutes. The fine, even grain, rich, golden color, increased quantity from the same amount of cream, and the difference of time occupied in the churning and gathering the butter, are greatly in favor of using your preparation, and I have no hesitation in recommending the same to my friends and the public generally. Very respectfully, your obedient servant, GEO. W. EASTERBROOK.

LYDIA E. PINKHAM'S VEGETABLE COMPOUND will at all times, and under all circumstances, act in harmony with the laws that govern the female system. Address Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass, for circulars. Sold by druggists.

TROPIC-FRUIT LAXATIVE removes Habitual Costiveness and all kindred complaints. It is composed entirely of concentrated fruits and medicines. Druggists sell it.

When worn down and ready to take your bed, Hop Bitters is what you need to relieve you.

Burnett's Cocoaine allays irritation, removes all tendency to dandruff, and invigorates the action of the capillaries in the highest degree. The COCOAINE has earned a deserved reputation for promoting the growth and preserving the beauty of the human hair. Ladies dressing their hair elaborately for the evening will find it imparts a healthy natural gloss to the hair, and will cause it to retain its shape for hours.

The Markets.

SPECIALS FROM THE CHIEF CENTERS

Until Saturday, Nov. 6.

Boston.—WOOL.—Last week prices increased considerably and the improvement is fully sustained. Many manufacturers have been buying freely, some of them stocking up ahead in view of a probable advance in the price of all kinds of wool Were there the usual supply of water to the mills purchases would be even heavier. About 3,000,000 lbs. of domestic wool have been sold during the week, mostly to manufacturers but some to dealers. At the close 43c. are wanted for good wool and some are holding for 45c. As to Ohio washed fleeces, one large house sold for 47c. at the close of the week when five days before they only realized 45c. for the same grade. Pulled wools are looking up, and they are now held 1½@2c. higher, with considerable sales at a substantial advance. Advices from the country are that wools there are still more strongly held, and that 42@45c. are insisted upon for choice Ohio and Pennsylvania. The San Francisco market is moving along quietly and firmly with sales at 24@25c. for nice free Fall, and so down to 12½c. for poor and burry. The receipts of domestic wool during the week were 5,837 bales, against 2,128 for the corresponding week last year. The total receipts of domestic wool since Jan. 1 have been 238,993 bales, against 259,264 last year.

Cincinnati.—WHEAT strong: No. 2 Amber, $1.04½ No. 2 Red Winter, $1 05. CORN firm; No. 2 Mixed, 44½c; New ear, 40c. OATS dull; No. 2 Mixed, 32½@33½c. RYE easier; No. 2, 89@90c. BARLEY in fair demand; No. 2 Fall, 95c. PORK dull and nominal at $14. LARD strong at $9.10: Bulk-meats in good demand: Shoulders, 7½. Bacon quiet but steady; Shoulders, 5½c; Clear Rib, 8½c; Clear Sides, 8½c. Hogs active and firm; common, $3.90@4.35; light, $4 40@4 60; butchers', $4.65@4 75. BUTTER—Dairy is not in excessive supply, and the average quality is good, but really fine is not plenty and the bulk of the sales are at 20@23c .only a moderate amount being good enough to bring more. The lower grades are slow but are generally worked off at previous prices. Packers are not buying much of any kind. Fancy Creamery sells at 31@32c, and prime at 28@30c, choice Dairy at 23@25c, choice Western Reserve at 22@23c, prime to choice Central Ohio at 18@20c, common at 15@17c and inferior at 10@13c. ₱ lb. CHEESE—Has been in moderate jobbing demand and with more free offerings, the tone of the market is easier and prices are a little lower, prime to choice mild factory selling at 12½@13c ₱ lb. SEED—There is only a moderate business in this line; dealers bid 6½@7c. for good to prime Clover and 7½c. ₱ lb. for fancy; there is no consumptive demand. Timothy seed is offered at $2.50@2 55 ₱ bushel for prime in store, and dealers bid $2 35 on arrival. Dealers buy Flaxseed at $1.15 ₱ bushel.

Chicago.—WHEAT steady; No 2 Chicago Spring, $1 01¾@$1.02, cash; $1.03¾ bid, December; $1 04½ January. CORN in good demand and a shade higher at 40c cash; 40½c@40⅝c. December; 40¾c. January; 45¼@45½c. May. OATS moderately active at 29½c.@29⅝c. cash; 30¼c. bid, December; 33c asked, May. Rye and barley steady and unchanged. PORK unsettled, at $13 75@14 cash; $13.-12½. November; $12 20, December; $13.40, January. LARD fairly active and a shade higher at $8.07½@$8 10, cash; $8, December and January. BULK MEATS unsettled; Shoulders, $4 60; Short Rib $7 34; Short Clear, $7 45. BUTTER.—Creamery, 26@30c; dairy choice 24@25c; dairy, fair to good 22@23c; ladle packed 17@20c; packing stock 13@15; Grease 8@10. CHEESE, full cream, September and October 12½@13c: full cream, August 12@12½c; part skim, September flat 11½@12c: part skim July and August 10@11; full skim 8@10c SEEDS. Timothy at $2 20@2 44 prime closing at $2.37½@2 40. Flax-seed sold freely at $1.28 and was quoted weak at the close. Prime medium clover sold at $4 50 and closed at $4.57½ Millet and Hungarian were quoted at 45@50c.—HOGS: market active and firm; mixed packing, $4 50@4 75; choice heavy, $4 80@5; light, $4.60@4.80; market closed quiet and weak. CATTLE good scarce; exports firm at $5 30@5 60; good to choice $4 70@5.10; common to medium, $3.75@4 40; butchers' slow; common to fair, $2 @3 50; good, $2 75@3 75; stockers, and feeders, $2 40@3 10; Texans, $2 60@3. Sheep common to medium, $3 25@3 75; good, $4@4 25; quality poor. WOOL was quiet and firm. The improvement East has a bracing effect here, and dealers expect a revival of trade at an early day. Good to choice medium tub 45@46c; coarse or dirty tub, 39@44; fine unwashed fleece 20@25c; coarse unwashed fleece, 2½@23c; medium unwashed fleece 29@31c; medium washed fleece, 38@41c; fine and coarse washed fleece, 35@39c.

St. Louis, Nov. 6—WHEAT, No. 2 Red Fall, $1.01@$1 01¾, cash and November; $1.04@$1.04⅝, December; $1.06¾@1.00 7-8, January; $1.08 7-8@$1.-09 3 8, February; No. 3 do., 94 5-8c@95 1-8c; No 4 do., 90c@91c. CORN, 39 7 8c, December; 40c, January; 44c@44 1-8c, May. OATS, 29 7-8c@30 1-8c, cash; 30¼c, November; 31c December. RYE quiet at 88c, bid. PORK quiet at $14. Lard quiet at $8. Bulk-meats dull and nominal. Bacon dull; shoulders, $5 12½; Clear Rib, $8.62½; Clear Sides, $8 87½. HOGS quiet; Yorkers and Baltimore, $4-25@$4.40; mixed packing, $4.35@$4 55; butchers' to fancy, $4 55@$4.75. CATTLE—Supply very light and wholly of low grades; mixed native butcher stuff, $2.25@$3.25; choice butcher steers would bring $3.50@$4; good Texans, $2.25@$3,25. SHEEP $3@$4, the outside price for fancy.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Nov. 6, 1880.

UNUSUAL interest in election matters caused a panic in general business from which it has not had time to recover. Values are only nominal in many items, but an early movement is predicted and current quotations are named with confidence, excepting where rates have reached a point which to some degree restricts free buying. Butter, eggs and some kinds of poultry come under this head.

BEANS AND PEAS.—The demand for beans is fair, but it requires colder weather to bring out a good business, especially for local use. New lead the trade. Green peas firm and not plenty. B. E. do. have little inquiry.

Marrow beans, new, $1.75; old, $1.52@1.65; medium, new, $1.50@1 55; old, $1.40@1.45; pea, new, $1.55@1.75; white kidney, new, $1.70@1.80; red do., choice, $1.70@1.75; fair to good, $1.45@1.50; black, or turtle soup, 1.55@1.60; green peas, perfect Wis., $1.90@2; So. B. E. peas, per 2-bush. bag, $1.80@1.85.

BEESWAX.—There is a moderate demand and a steady market; sales at 23½@24½ for Western and Southern.

BUTTER.—Exports are small and the home trade is merely filling limited daily wants. Western butter when named at the under grade of State have a fair sale for general use. The upper class of buyers insist upon perfection when the extremes are forced. Few sales of dairies reported.

Creamery, finest, 31@32c.; good to prime, 28@31c.; fair to good, 25@28c.; poor to fair, 23@26c.; sweet cream, 24@29c.; State entire dairies, choice, 25@26c.; good to prime, 24@25c.; fair to good, 23@24c.; firkins, 21@25c.; State pails and half tubs, fine fresh, 28@29c.; good to prime, 26@27c.; fair to good, 24@26c.; poor, 20@23c.; Welsh tubs, fall prime, 27@28c.; good to prime, 25@26c.; fair to good, 21@23c.; Western imitation creamery, 20@25c.; dairy, fresh, 22@24c.; good to prime, 20@22c.; fair to good, 18@20c.; factory, June, 17@19c.; do. current make, 20@20c.; other, 18@19c.; poor, 14½@16c.; grease butter, 9c.

	Rects. pkgs.	Exp'ts, firkins,
June 1, 1880, to Nov. 1, 1880...	753,600	176,969
June 1, 1879, to Nov. 1, 1879...	793,282	196,365
June 1, 1878, to Nov. 1, 1878...	692,895	146,631
June 1, 1877, to Nov. 1, 1877...	664,467	121,157

Receipts for week, 28,130 pkgs.; exports do., 5,535 pkgs.

COTTON.—Trading is very moderate with prices unsettled Latest prices are for

November at 10.85c.; December at 10 87@10.84c.; January at 10.93c; February at 11.05@11.06c.; March at 11.19@11.20c; April at 11.33@11.34c.; May at 11.46@11.47c.; June at 11.53@11.60c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8	8	8
Strict ordinary	8⅜	8⅜	8⅜
Good ordinary	9⅜	9⅜	9⅜
Strict good do	10	10⅛	10⅛
Low middling	10⅛	10⅜	10⅜
Strict low middling	10⅜	11	11
Middling	11	11⅛	11⅛
Good middling	11⅜	11⅝	11⅝
Strict good middling	11⅝	11⅞	11⅞
Middling Fair	12⅜	12⅝	12⅜
Fair	12⅞	13	13

STAINED.

Good ordinary..... 7 11-16 | Low middling.., 9 7-16
Strict good ordinary. 9 9-16 | Middling.....10 3-16

Receipts for week, 38 761 bales. Exports do., 11,331 bales.

CHEESE.—A light exportation shows the dull condition of trade that has prevailed this week. Supplies have accumulated and prices have ruled weak. But few lots exceed 12¾c, but when a strictly fancy parcel is needed 13c is quotable. The good and medium grades have been most difficult to sell and for these buyers have had especially the advantage. Quotations are for

State factory, fancy, at 13c.: do. good and prime, 12½@12¾c.; do. fair to good, at 11@12c.; do. half skimmed, 9@10½c.; Wisconsin factory, fine, 12½@12¾c.; do. good to prime, 12@12½c.; do. fair to good, 10@12c.; Ohio factory, fine, 12@12½c.; do. good to prime, 11½@12c.; do. flat, fair to good, 10@11½c.; do. poor to fair 7@10c.

Receipts for week, 42,462 boxes.
Exports for the week, 35,000 boxes.
Liverpool cable, 67@68s.
Steam to Gt. Britain, 35@45s.

Comparative receipts and exports from June 1.

	Receipts, pkgs.	Exports, lbs.
June 1, '80 to Nov. 1, '80	1,868,775	87,348,200
June 1, '79 to Nov. 1, '79	1,908,600	78,618,750
June 1, '78 to Nov. 1, '78	2,147,100	88,718,160
June 1, '77 to Nov. 1, '77	1,671,000	75,771,500

DRIED FRUITS.—Demand continues very moderate with prices unsettled and generally favoring buyers. Quotations are for

Apples 7@7½c., for evaporated prime, and 6@7c., for fair do with Carolina sliced at 5@6c. for good to prime; Virginia and Tennessee 4½@4¾c., Peaches at 27@28c. for evaporated peeled; 14c. for unpeeled do; peeled peaches at 16@20c.; unpeeled do. 6c. for halves. Blackberries at 7½@7¾c. Cherries at 17½@18c. Raspberries at 25@26c.

Receipts for week all kinds, 1,724 pkgs.
Exports for week, 3,425 bbls. of dried apples.

EGGS.—Receipts for the week, 8,332 bbls.; do last week 10,550 do. Market strong for prime fresh marks The bulk of the offering is composed of held or second grades; these are slow with good limed competing.

Near points 26@27c.; State and Pa. 24½@25c Western 24½@24c; Canadian, 22½@23c.; off grades, 21@22c. limed State 18@18½c.; do. Western 17@18c.

FLOUR.—A strong range of prices noted and a good degree of activity to some little extent on export account.

Latest prices are: $3.65@4.35 for very inferior to fancy superfine State and Western; $4.35@4.60 for poor to ch ice extra State and Western, odd lots and lines; $4.60@4 85 for choice to fancy do.; inferior to good white wheat, trade and family extras, $5 00@5 50; good to choice do at $5.50@6.30, (very choice to very fancy do. at $6.50@6.75,) red and amber winter wheat inferior to choice trade and family, at $4.90@6 25; round hoop Ohio, $4.75@5.25; and trade and family brands of do. at $5.35@6 55; St. Louis at $5.00@5.85 for inferior to good extra; $5 85@6 35 for good to choice (and $6.25@6.75 for choice to very fancy brands); Minnesota clear, inferior to fancy at $4 80@6.10, Minnesota "straight," poor to fancy, at $5 75@7.30, and patent inferior to fancy at $5.75@8.50; Wisconsin stock at from $2 75@5 50; city mill extra at $5.60@6.10 for ordinary to fancy for the West Indies; do. for England, $4 35@4.75 for poor to choice spring wheat, and $5.00@5.75 for winter wheat product; do. trade and family extras, $5.75@7.00 do. for South America, $6.00@6 25, the latter for very choice; No. 2 at $3.10@4 for poor to very choice.

Receipts for week, flour, bbls. 127,582 corn meal, do. 1,475 wheat, bush. 1,161,750; corn, do. 1,298 50; oats do. 741,600; rye, do. 10-5 5. malt, do. 3,050 barley, do. 361 700 beans, do., 15,984 rice, pkgs 1,200.

Exports for the week, flour, bbls., 92,500; corn meal, do. 7,207 wheat, bush. 1,216 800; corn, do. 1,601,975; oats, do., 4,398 peas, do. 16,092 beans, do. 1,047; rice, 1,750.

BUCKWHEAT FLOUR.—Is quoted at $2.15@2.30, and buckwheat grain at 53c.

FRESH FRUITS.—Exports of apples for week 38,000 bbls. Many of the e go direct from the country. The city supply is lighter but buyers are now used to low prices and the call is not strong enough to make an advance.

Western N. Y. mixed lots, $1.12@1.25; Baldwins in shipping order, $1.37@1.50; Greenings, $1@1.25 Spitzenbergs, King and Pound Sweet, $1.50@1.75; Lady Apples $6@7. Cranberries steady with light receipts of Eastern. Cape Cod, fancy, $6@6.50 p or to choice, $3 00@4.50 per boxes, $1.75@2; N. J., do. $1.25@1.75. Quinces have no inquiry quoted $1@2.00. Boston pears fancy per box $4@5; fair to good $2@3; Duchess, in bbls. $6@8; Lawrence. $4@5.50; Vicars $3@5; California $3@5 per case; do grapes per 40-lb. case $6@8 muscat, Tokay and Emperor. Grapes are thinning down; prices firm for prime; Catawbas cases $3@3.25, baskets 4½@7c.; Isabella 3@4c. Florida oranges open at $2,50@3 per bbl box for fair quality. Peanuts dull and weak; Va hand-picked per lb. 4½c.; other 3½@4c; shelled, 5@5½c Chestnuts per bush of 60 lbs. $5@3. Hickory nuts, bu. of 50 lbs. $2@2.25.

GRAIN.—Wheat has been less active on export account but generally steady.

Latest prices are of No. 1 white at $1.16@1.16¾; do. November at $1.16@1.16¾; do. December at $1.17½@1.18 ungraded white at $1.10@1.18; No. 2 white at $1.14¾@1.15½; mixed winter at $1.15; No. 1 red at $1.22@1.23¾; No. 2 red at $1.17@1.18; do. November, at $1.17¾@1.17¾; do. December at $1.18¾@1.19½; do. January option at $1 20½@1.21¾; No. 3 red at $1.14¾@1.16; ungraded red at 90c.@$1.18¾; New York No. 2 spring at $1.15; rejected spring at $1. Rye at $1.02@1.04. Corn is steady and fairly active; latest prices are of New York No. 2 at 56¾@57c.; do., November at 56¾@57c.; do., December at 57¾@58c. do. January at 58½c.; ungraded mixed Western at 56¾@57c.; No. 3 at 56c.; New York steamer mixed at 55@55½c.; New York yellow at 58c.; No. 2 white at 58½c. Oats are firm and fairly active; latest sales are of New York No. 2 white at 42@42½c.; No. 3 white at 39¾@39½c.; New York No. 1 at 41c; New York No. 2 at 40@41c; do, November at 40@40½c.; do., December at 40½@41c.; do. January at 41½c.; ungraded white Western at 40@44c.; ungraded mixed Western at 38@40c.; No. 2 Chicago quoted at 41c.; No. 3 November at 40½c

HAY AND STRAW.—There is a very fair call for supplies while receipts are moderate and prices generally strong; latest prices are for

Shipping hay at 90@95c.; medium to prime do. $1@$1.20; salt hay at 60@65c.; clover do. at 75@80c. Straw at $1@1 05 for long rye; 80@85c. for short rye; and 70c. for oat.

Exports, 1,575 bales.

HONEY.—The demand has enlarged but holders have not advanced late rate.

White clover comb, single pkgs. 17@18c.; larger pkgs 15@16c; buckwheat 12@13c.; extracted, white, 10@12c.; dark, 8@9c.

HOPS.—There is a very good demand from the home trade and increased call from exporters with prices generally strong. Latest prices are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	20 @23
Do. medium	18 @20
New Yorks, crop 1880, low to fair	16 @17
Eastern, crop 1880	16 @20
Wisconsin, crop 1880	16 @20
Yearlings, crop 1879, choice	16 @23
Olds, all growths	4 @12
Bavarians	30 @35
Bohemians	35 @40

LEATHER.—Quotations are for hemlock sole, 22½@24c. for light; 23½@25c. for middle; 24@25c. for heavy, and 21@22c. for good damaged.

OIL CAKE.—Western is quoted $30@32.50 per ton.

POULTRY AND GAME.—Supplies of dressed have exceeded the wants of trade and a rainy close of the week did not help sales. Many Western and State lots will suffer if they have to be carried over Sunday.

Turkeys, State and Western, choice, 12@12½c.; fair to good, 10@11c; Phila., dry-picked, 13@15c. Chickens, do., 13@16c.; Bucks Co., 13@14c.; N. J., 11@13c.; State scalded, 10@12c.; Western, 10@11c. Fowls, Phila., dry-picked, 12c.; N. J., d.-p., 11@12c; scalded, 10@11c; State do., 10@11c.; Western, do., 10@11c.; poor to fair, 8@9c. Ducks, Phila., d.-p. 13@16c.; State scalded, 11@13½c.; Western mixed 11@13c.; very poor, 8@10c. Geese, Phila 10@12c.; other, 8@10. Squabs, white, ₱ doz., $2@2 25; dark, ₱ doz., $1@1 25.

Live poultry very low even with moderate receipts. There will be no settled place for it after this date.

Chickens, N. J., ₱ lb, 8@9½c., State and Penn., 8½@9c; Western, 8c.; Southern, 7@8c. Fowls, N. J., 8½@9c.; State and Pa., 8@8½c.; Western, 8c.; Southern, 7@8c. Roosters, 4c. Turkeys, N. J., 9@11c.; Western, 8@9c. Ducks, prime, ₱ pair, 75c.; other, 40@60c.; Geese, choice, $1.62@1.75; other, $1@1.50. Pigeons, 25@30c.

Wild ducks are coming from all points; market low, outside rates for Havre de Grace. The weather is wet and mild, which is adverse to the game trade. The tone of the market is easy except for prime quail.

Canvass back ducks, ₱ pair, $1.00@1.75; red heads, 30@75c.; mallard ducks, 40@50c.; B. W. teal, 30@35c.; G. W. teal, 25@40c.; common, 20@25c; partridge, $1; Western, 75@90c.; Eastern, 60@80c., soft, 30@40c. Grouse, prime, $1; soft, 75@80c. Woodcock, State, dry, 40@50c; Western, 30@40c. Eng. snipe, ₱ doz., $1.52@1.70. Plover, $1.25@1.50. Sand snipe, 40c. Quail, prime, $2@2.25; do, other, $1.25@1.50. Venison Minn., saddle, ₱ lb 13@16c.; other, 6@12c. Whole deer, 9@10c. Hares, ₱ pair, 35@40c. Rabbits, 25@35c.

PROVISIONS.—Hog products have been active and closed strong. Latest prices are $15 for spot lots, $14 85 for Nov. Bacon at 8¾ for short clear and 7¾c. for long clear. Tallow at 6 5-16@6¾ for prime; stearine at 8¾@9. Beef hams at $16 75@17. Beef at $18.50@19 for tierced city extra. India mess 19.50 for barreled extra mess, and $8.50 for plain mess, $11@12 for packet. Lard at 8.70 for contract grade on the spot 8.52½@8.55 for November; 8.40@8.42½ for Dec. and Jan, 8.42@@8.45 for Feb.

SEED.—Clover is quiet; prime to choice quoted at 8½@9c. Timothy is inactive, quoted $2.70@2.80.

Receipts for the week 1,100 bush. Exports, 480 bags.

TOBACCO.—The market has not varied from last week and is moderately active.

VEGETABLES.—Exports of potatoes for week, 4,225 bbls. Outside prices are hard to obtain with continued liberal receipts. Peachblows scarce, but Rose give good satisfaction to the local trade. Eastern E. Rose, $1.75; State, $1.37@1.50; snow flake, $1.37@1.50; peerless, $1.@1.25. Onions scarce and firm, Garden truck in smaller variety

Tomatoes, ₱ bush., 50@75c.; turnips; w. ₱ bbl., 40@60c.; Russia, 50@75c.; beets, 75c.; cabbage, Flat Dutch, ₱ 100, $2 50@3.50; red, $3.50@5.00; Squash, Hubbard, ₱ bbl., 75c.@$1; marrow, 40@50c.; onions, white, $4.50@5 yellow, $3.50; red, $3.25@3.50; Chester, $3@$4.50; carrots, $1@1.25; pumpkins, ₱ 100, $4@6; cauliflower, ₱ bbl. $1@$2; celery, per dozen, $1.00@1.25.

WOOL.—There has been a very good trade this week and a strong market without change in prices. Latest sales include X and above Ohio fleeces at 45@46c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Nov. 6, 1880.

BEEVES.—Receipts for the week 12,848 head; do. last week 13,011 do. Liberal receipts, a broken week, several wet days and an overstocked meat market depressed trade badly, and the pens were not cleared even at a decline from Wednesday's figures. Cattle have generally lost money this week, mostly a common stock Texan hardly made 6½c.; Colorados sold at 7½c.; poor to fair native steers 6¾@8¼c. to dress 54@56 lbs; good to prime 8¾@9¾c. to dress 58 lbs; choice 10@10¾c to dress 56@58 lbs.

MILCH COWS.—The demand has improved but the trade is in few hands; common to prime milkers show a range of $30@55 per head; extra, $60.

VEAL CALVES.—Prices tame for general stock and the meat market is well supplied. Choice selections firm at the extreme.

Live calves, N. J. prime to choice 7¼c., State, good to prime, 7@7¼c.; other 5@6¾c.; Mt. Holly, heavy, 4@6c.; light, 6¾@7½c.; buttermilk, 3@3½c.; grassers, 2@2½c.; dressed N. J. prime 10½c.; State 10c.; fair to good, 8¾@9½c.; common, 8½@5½c.

SHEEP AND LAMBS.—Receipts for week, 28 870 head; do. last week, 31,344 do. The early prices of the week for sheep were barely supported at the close: poor to good 3¾@5¾c.; a few export head 5¾c. Lambs ranged 5@6¾c. A weak tone in sheep skins tends to check demand.

HOGS.—Receipts for the week, 34 408 head; do. last week 46,187 do. Market dull for live, closing easy $4 85@5. 0 per 100 for corn. New Jersey pork light, 7¾@8c; upper weight 8¾@7c: city dressed State 5¾@8c. do. Western 5¾@6¾c, pork tenderloins, 11c.

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Reading for the Young.

THE ZOOLOGIST'S WOOING.

When I first saw you, Eland deer,
My heart it did repine;
Because I gnu how good you were,
And wished that you ermine.

When I your tapir fingers pressed
Upon that eve in May,
The glance you gave me sealed my fate,
And I am still yours toady.

I'll never break ape art the lynx
That bind my heart to thine,
Till I shall lion my last couch
And in my grave recline.

Gaze, Eland dear, upon me now,
(That's civet pleases you),
One glance from your bright eyes will light
This mole dering fire anew.

And if it is for porcupine,
Though it should ruin me,
I'll bring as many hamstu you
As one could wish to see

But then, of course weak antelope,
For that would be a boar;
But we can stay right here rat home,
And I'll never leave you mohr.

FARMING FOR BOYS AND GIRLS.—NO. 3.

HENRY STEWART.

Water and Its Uses.

No plant can thrive or grow without water. It is as indispensable to plants as it is to animals. Plants contain from 65 to 95 parts of water in every 100. Hungarian grass contains 65 per cent. of water while it is in blossom, while a pumpkin contains 95 per cent. Water is then the most important food for plants, because it supplies the greater part of their substance. But this is not the only office it performs in the growth of plants. It is equally useful in another way, and that is in bringing all the mineral or solid food to them in such a condition that it can be used; for nothing whatever is taken up by the roots of plants that is not dissolved in water. Every part of the soil, or of manure that may be in the soil, that enters a plant by its roots must first be dissolved in water; and the quantity of water that enters a plant in this way must necessarily be very great. For instance, all the water that goes into the roots of grass or clover during the growing season, if it were collected at one time, would stand 12 inches deep over the field. Every pound of wheat produced needs for its growth from first to last 200 pounds or more of water, and for every pound of ash, or mineral matter, that exists in a tree, or any other vegetable, 2,000 pounds of water have passed through the plant. No water is ever taken in by the leaves of a plant; all that is ever absorbed is taken in by the roots. The water thus taken in passes up from the roots and mingles with the sap; and after leaving behind it in the plant its load of dissolved matter, passes out through the leaves; and the more vigorously the plants grow, the more water they require for their sustenance in this way. On this account it is that in a wet season grass and other crops grow more than in a dry season. It does not matter how rich the soil may be, if there is not water enough for a plant, it will not grow in it. But if the supply of water is abundant, there may be a good crop on poor land, because the more water there is in the soil, the more of the soil will be dissolved and the plants will take up more water, if it is necessary for them to do so, to procure enough mineral food for their full growth. Again, it is one of the advantages of having good and rich soil, that in dry weather, when the supply of water is not abundant, the plants can procure all the food they need from a smaller quantity of it, and while crops are poor on poor soil, they may be very good upon rich soil. This is one of the ways in which the good farmer, with good land, escapes injury from a dry season; while the poor farmer, with poor land, suffers severely from a partial or total loss of his crops.

To secure a large yield of grass, some farmers practice a method of artificial watering which is known as irrigation. This consists of leveling the surface of the fields, forming banks around them and providing canals with gates and sluices by which the water from streams or reservoirs may be spread over the grass. In some cases as much water as would form a total depth over the field in the whole season of 50 to 100 feet is used in this way; either by flowing the field occasionally and leaving the water to remain several days until the soil is well soaked, or by causing the water to flow in a slow current over the grass continually. By this system of cultivation grass is forced to grow as much as one inch a day and to yield during the growing season as much as 80 tons of green fodder per acre in several cuttings. This is an interesting example of the value of water for vegetable growth, and goes to show that the extent of the product of the soil may depend in a great measure upon the quantity of water that is supplied.

Water is not a simple substance, but a compound of two gases, viz., oxygen and hydrogen, united in the proportion of eight parts of the former with one of the latter by weight, and by measure of one volume of the former with two of the latter. It is one of the most abundant substances in existence; it exists dissolved in the air in very large quantities; it forms three-fourths of the substance of every living animal; it is found in every stone and rock; it may be solid as ice, liquid as in its most common form, or in vapor as in steam or the moisture of the atmosphere, the latter of which takes the visible form of clouds or fogs when it is condensed by cold into very small round particles which float in the air, moved here and there by the winds. The office of water is so important in agriculture that every farmer should be interested to learn all about it.

NUT-BEARING TREES—No. 3.

The Beech.

This forest tree of the genus *fagus* is to be found in the temperate regions of the northern hemisphere on both continents. F. sylvatica is the common white beech of Europe. Of this the American tree grown in Florida and other southern States is taken to be a variety.

F. ferruginea, or red beech, has the leaves oblong, ovate, acuminate pubiscent beneath, coarsely toothed obtuse, and unequally subcorded at base; nut acutely three-sided, muricate; most frequent in the northern United States.

F. purpurea, whose bright blood-colored leaves, seem like a mass of flame when tossed by the wind, on a clear, sunny day is much prized as an ornamental tree for lawns and parks.

F. cuprea, also is sought for its peculiar copper-colored foliage, and F. pendula, or weeping beech, is also set in lawns and cemeteries.

The beech is easily grown from seed as also by grafting, budding and in arching. Ine th early Spring, if wandering in the woods or the near vicinity of beech trees, one will see, starting out from among the brown leaf-mats, little green, three-sided affairs, somewhat resembling growing beans. They are very dainty and white when first out of their brown shell, and very sweet to the taste, a sort of mixture between the flavor of a nut and a vegetable.

Soon the little affair opens again after the manner of a bean, and the two first leaves push out into the light, and the beech tree starts on its slow compact growth, scarcely ever bearing fruit until the 50th year of its age, and then not each successive year. The tree lives only about 250 years.

It thrives in a deep, moist soil, attaining sometimes, as on the banks of the Ohio, the hight of 100 feet, but it also succeeds well on a rocky soil,

AMERICAN BEECH.—FIG. 370.

and has been found growing among debris at the foot of rocky cliffs. When crowded by its kindred or by other trees its trunk rises pillar-like even to 80 feet before branching out, then making a sudden tufted crown. Standing alone it sends out branches at a hight of from 18 to 30 feet, at an angle far and wide, the lower ones almost horizontal, while the upper rise to form the majestic crown. Its light grayish or leaden-greenish bark, smooth and shiny, presents a tempting surface to pocket knives, and how many a man grown old away from the scenes of his boyhood, will be reminded of some shining bole by the song:

"N, for Nannie, and B, for Ben,
I see them now as I saw them then,
On the bark of the beech tree old;
She waist deep in the clover white,
While the mellow beams of the June sunlight,
Fell on her curls of gold."

Few boys or girls have grown up on the farms that have not in mind a beech tree somewhere with its "N, for Nannie, and B, for Ben," and the Summer idyl that died perhaps when the season faded, yet here is its silent grave-yard, and where it will remain long after the carver has forgotten the Summer and the tree monument. I mind me of a tree away by the side of a little singing brook, and on its smooth bark cut the words "My Birdie.' Alone it stands and the winds whisper it and the rill sings by, while lover and maid have gone out into the busy whirl of life.

Young beeches are useful for live hedges, as they bear pruning, and as their branches coalesce by being tied together. The wood is yellowish white in the common beech, brownish in the red, and very hard. Its close wood cells, with thick walls, afford a great quantity of heating material so that the wood ranks next to hickory and maple as fuel. It is also incorruptible when constantly under water. The tree is so rarely struck by lightning, that woodmen and Indians consider themselves safe while under its shelter. A very good oil is extracted from the beechnut, almost equal to that of olives, and keeping longer than any other after purification.

Wild animals feed on the nut, and swine revel and fatten if allowed a beechnut range. The little chipmunks or ground squirrels, tamias, trust to the beechnut almost exclusively for their Winter stores, making their tunnels in the ground in some quiet spot, carrying carefully away every bit of earth taken out of their excavations, in order to attract less attention, and lay up a store, in subteranean palaces of perhaps a bushel or two of nuts apiece and little boys, on mischief bent, are sometimes known to dig out these little storehouses and appropriate their contents, rather than gather them for themselves.

MAUD MEREDITH.

SOME SIGNS OF AUTUMN.

Just over the hill there, the woodpeckers are making preparations for the moonlight nights of the next fortnight, when, led perchance by a lordly log-cock, they will steer their way across the Gulf Stream to the uttermost south. Even now, dark though the nights are, they can be occasionally heard calling to each other across the tree-tops. The blue-jay will remain with us, but his gaudy plumage is already the worse for wear, and there is a droop to his top-knot in curious contrast with its bristling defiance when, seven months ago almost to a day, he sat upon the catalpa tree and noisily announced the approach of Spring. Even the children have developed a tendency to bring their playthings into the house; and there is something suggestive in the complacency with which the two-year old sits and watches the lonely white butterfly—the ghost of Summer time—flit in and out among the morning-glory vines. Two weeks ago, the same youngster would have sent his straw hat sailing after the wandering insect, but now he is content to languidly watch it drifting about with melancholy uncertainty. There is nothing in the morning-glory vines to attract the attention of a reasonable butterfly. The blossoms have closed and locked their doors. They hold their reception now from four to seven a. m., and the butterfly abroad that early, is likely to go home with the rheumatism.—Atlanta Ga. Constitution.

A FAITHFUL DOG.

A few days ago the engineer of a train near Montreal saw a large dog on the track, barking furiously. The engineer whistled, but the dog paid no attention to the noise, and refused to stir. The dog was run over and killed. The engineer observed that the animal crouched close to the ground as he was struck by the cowcatcher. A minute later the fireman saw a bit of white muslin fluttering on the locomotive, and he stopped the engine. On going back to where the dog was killed it was discovered that not only the dog, but a little child had been killed. It was then seen that the dog had been standing guard over the child, and had barked to attract the attention of the engineer. The faithful animal had sacrificed his life rather than desert his charge. The child had wandered away from a neighboring house, followed by the dog, and it is supposed that the child lay down and went to sleep on the track.

Correct Speech.—Correct speech is such an indisputable mark of a lady or a gentleman that it cannot be too often repeated that the true standard of pronunciation is one in which all the marks of a particular place of birth and residence are lost, and in which nothing appears to indicate any habits of intercourse other than with the well bred and well informed wherever they may be found. In the matter of accent, the aim ought to be to avoid all that is local, affected or vulgar. Let no transgressors imagine that they can escape with impunity. Their speech will betray them, and even well-educated children will be merry and satirical over them behind their backs.

The Puzzler.

HIDDEN BIRDS.

1. No, my little bird of Paradise no one is sure.
2. I pity the poor heathen.
3. Nape, a cocked rifle is very dangerous.
4. No, Jab, I (Ruth) deny it.
5. The nymph I custarded.
6. What a caper Callie cut.
7. Trundle your hoop? O, Eva! you are too big.
8. See that dot, Terel?
9. Will you sell your farm?
10. I, the glorious Spring do venerato.
11. Hiram Lecush at church.
12. See if in Charley's store they keep taffy.
13. The cannon-ball struck the stern.
14. What a wretch, Ough!
15. I like Agra best of all.
16. "Bedab! chickens are foine," quoth Pat.
17. For those who love beef, eat Erney's potted beef.
18. Moses is kind to every one.
19. This tilt is sure to win the prize.
20. Trees of palm I peddled.
21. He is noted for swiftness.
22. Watch Jmney's wall, Owen.
23. With a double-painted canvass belt, Du C. kept his tent dry.
24. For Obin, red-breasted shirts were sent from Paris.
25. Gastur T. led over his lame horse. L. O.

☞ Answer in two weeks.

A FRACTIONAL PUZZLE.

One-quarter of Noah; one-quarter of Abel; one-fifth of Herod; one-third of Ham; one-quarter of Shem; one-fifth of Hagar; one-seventh of Solomon; take one from each and form the most faithful man of the Bible. Little One.

☞ Answer in two weeks.

A DIAMOND PUZZLE.

A consonant; a pronoun; a sort of rock; a puzzle; an animal; a boy's nickname and a consonant; a vowel.

☞ Answer in two weeks. Little One.

A NAME PUZZLE.

Place five male names so as to form a sixth.

☞ Answer in two weeks. L. O.

PUZZLER ANSWERS.—Oct. 30.

Hidden Coins.—1, Ruble; 2, Rupee; 3, Pistole; 4, Crown; 5, Ducat; 6, Sovereign; 7, Mill; 8, Groat; 9, Guinea; 10, Pound; 11, Pistareen; 12, Sesterce; 13, Carlin; 14, Bank-note; 15, Greenback; 16, Thaler; 17, Levy; 18, Bullion; 19, Coupon; 20, Napoleon; 21, Guilder; 22, Florin; 23, Real; 24, Rixdollar; 25, Pence.

Name Puzzle.—Celestine, Hettie, Rachel, Inez, Salome, Thomasine, Ida, Adelia, Nell, Aurora. Initials form "Christiana."

Acrostical Enigma.—Annie L. Jack.

Sabbath Reading.

MORNING.

LAURA S. HAGNER.

Oh, mystery of morn,
So stainless and so fair!
Thy birth should wake the world
To penitence and prayer.

Each day is a reprieve
To erring, sinful man,
And angel spirits grieve
To view the wasted span.

What griefs may hidden lie,
In ambush 'mid the hours;
What blessings in that Summer sky,
To fall like Summer showers!

Father! our hearts prepare,
For all Thy love may send:
Help us to serve Thee day by day,
And trust Thee to the end.

THE LIVING CHRIST.

The picture of Jesus Christ could never have been drawn had there not been a living Christ from which to draw it. The life, character, the teachings of Christ could never have been written by mortal men, if that life had not first been witnessed, if that character had not been seen, if those teachings had not been heard. If this is so, then the simple existence of these books is sufficient proof of their historic truth; for the reason that what they describe is beyond human invention. Here is the marvellous picture. Here are the books. They must in some way be accounted for. No respectable scholar denies that they have been in the world from the earliest Christian age. Either Jesus Christ lived, and this is a natural record of his real life, or somebody of that age invented it.

Now, for four unknown and unlettered men to conceive of such a character as that, to actually set him in motion, with all the graces and virtues of an inimitable and noble manhood, to supply wisdom for him, to furnish him with the strength and loveliness of Jesus Christ, to carry through consistently a being making such stupendous claims, to make that airy fiction the source from which stream all our best thoughts of God, and to make him, at the same time, a real brother man, so real that we clasp him as our own flesh and blood—for four unknown men, I say, to have risen in the darkness of the old Roman world and done that, is a miracle of *authorship* which surpasses any miracle of the New Testament. The character of Jesus is the supreme miracle. It is far easier for me to believe that Jesus Christ came down from heaven, as these men say he did, than to believe that they manufactured him.—Dr. Mitchell, in Chicago Standard.

The cross of Jesus summons the whole race to the Father's house. "They shall come from the east and from the west, and from the north and from the south, and shall sit down in the kingdom of God." If I be lifted up, I will draw all men unto me," If the mission of Christ was for all men, the mission of the church is to all men, for her function is to carry out the purposes of the Master: her duty co-extensive with the sphere of His work; her glory the fulfillment of His. Christ did not feel that the wants of Jerusalem, and the test of Israel, justified a neglect of Ethiopia or Parthia, Macedonia and Rome. We have no right to love and live in a land less broad, or limit our sympathies to a brotherhood less universal.—Wayland Hoyt.

Which?—The inquiry often made, "Which is the most important, pulpit labor or pastoral labor?" is like the query, "Which of the two blades of a pair of scissors is the more important?" We should answer, "*Both.*" The man who visits, and does not prepare for the pulpit by diligent study; the man who preaches and does not visit, either of them will find his usefulness, we will not say paralyzed, but very greatly abridged. If a man studies with the condition of his people in view, he will study to ten-fold advantage; if he visits with his pulpit in view, he will visit to ten-fold advantage. We may add that no minister can afford to lose the benefit to his own mind and heart. Many of the best sermons are born of a visit to the bed side of some aged saint, to the kitchen of some plain toiling woman, or to the workshop of the mechanic.—Nat. Baptist.

The maxim that knowledge is power is true only where knowledge is the main thing wanted. There are higher things than knowledge in the world—there are living energies; and in the moral world, certainly, it is not knowledge, but aspiration, that is the moving power; and the wing of aspiration is prayer. Where aspiration is wanting, the soul creeps; it cannot fly; it is at best a caged bird, curiously busy in counting and classifying the bars of its own confinement.—J. S. Blackie.

Sanctified afflictions are among the most precious blessings of the Christian's present lot:—patience and submission to God's holy will, are thus brought out and strengthened, and he is eminently glorified.

Let it not be imagined that the life of a good Christian must necessarily be a life of melancholy and gloominess; for he only resigns some pleasures to enjoy others infinitely better.—*Pascal.*

How often, having spent our strength over material things, we bring to the cause of Christ jaded bodies and wearied minds. We need a consecrated enthusiasm in the doing of God's work.

PERSONAL ITEMS.

Bismarck has for many years believed that he will die in 1891.

Ex-Governor Seymour was so sick that he could not vote on election day.

Mr. English says it isn't such an awfully salt river, but that it is extremely brackish.

Ex-King Amadeus is now on a tour in England, buying up horses for the royal stables of Italy.

It is rumored in army circles in Washington that Gen. Miles will succeed Gen. Ord, who, it is believed, will be retired.

The Viceroy of Ireland receives $100,000 a year and "allowances," but loses money because of the hospitality he must give.

M. Gambetta has purchased a site for his tomb at Pere la Chaise, opposite the mouument of M. Thiers, and he has paid for his last abode the sum of 150,000 francs.

President-elect Garfield is a member of Pentalpha Lodge, No. 23. Columbia Chapter, No. 1, and Columbia Commadery, No. 2, of the Masonic Order in Washington.

General Grant says that the man who did most toward the republican victory was Wade Hampton; and that President-elect Garfield ought to make him Secretary of war.

The Earl of Cawdor and party, numbering six guns, recently succeeded in bagging the extraordinary number of 596 hares in one day. Gamekeepers and gillies were, of course, unable to carry them, and they were conveyed to the castle in carts.

Charles Dudley Warner, having much newspaper work to do, devotes only his Saturdays to magazine and book writing. He was born in Massachusetts and is 51 years old. His thick hair and beard are gray, but he appears young. He is of medium hight, and grave, thoughtful and refined.

[Daily Chicago Times.]

Mr. George Barnes, of Bagnall & Barnes, South Water street, said that his wife had been a severe sufferer with neuralgia for years and had tried many remedies in vain. St. Jacobs Oil is the only thing that brought her relief.

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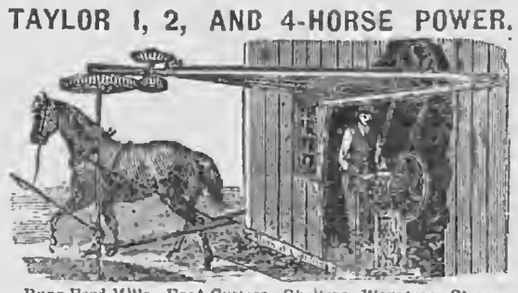

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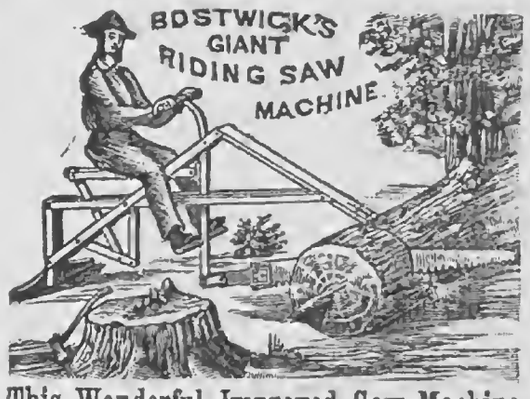

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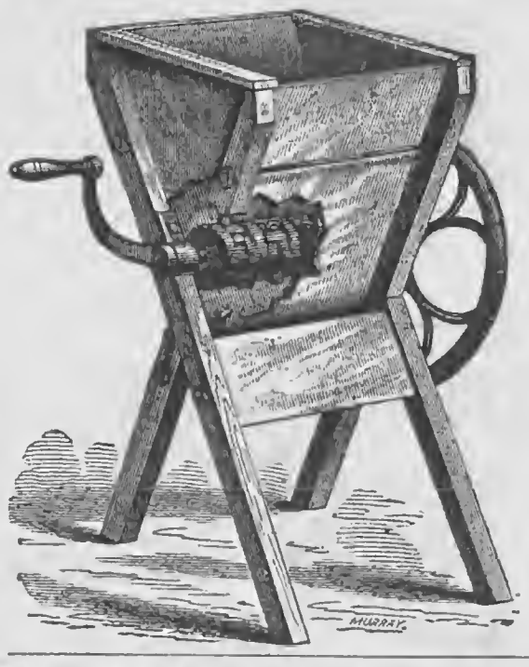

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The Neatest, Strongest, Simplest, Cheapest, and most Perfect Root Cutter in the Market.

This Cutter is built with a heavy oak frame, well bolted together; is staunch and strong, neatly finished, handsomely striped and ornamented. The cutting apparatus consists of *twenty-five steel knives* (gouge shaped), so arranged on a wrought-iron shaft that they are perfectly secure; no chance of becoming loose or breaking. The roots are neatly cut in pieces suitable for feeding. No coarse, ungainly pieces are left by this Cutter. A boy can easily cut 35 to 40 bushels per hour, so easily does it do its work. ☞ Don't fail to examine it. ☜

We are manufacturing three sizes, designated by numbers,—1, 2 and 3.

Nos. 1 and 2 designed for hand use.

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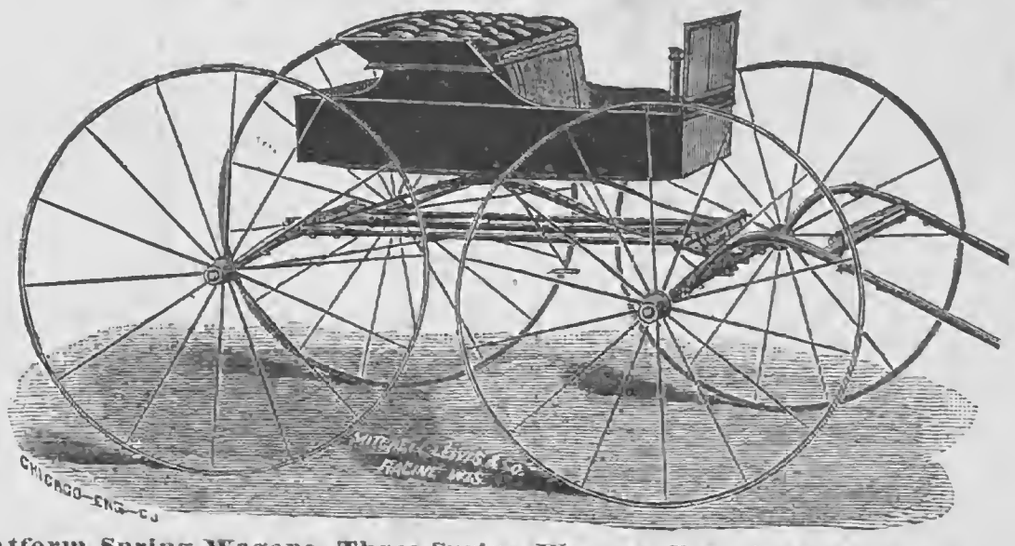

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Cannot get out of order. Will last a lifetime.

This is the only Cheap Practical Hand Corn Sheller in the market and is in every way the

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Shells 25 to 30 bushels a day **very easily.** Is especially recommended to farmers who shell large quantities of corn for seed. It has been customary to remove the imperfect kernels from both ends of the ear with the hand, and use the full, perfect kernels of the center for seed. This is a long, tedious process, but with this sheller it can be done in one-tenth the time. To poultrymen, to seedsmen and to anybody who shells corn, we recommend it. Can be carried in the pocket and samples of corn taken from any part of the field by shelling only part of an ear.

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MAMMA—"Why, my dear Willie, what in the world is the matter with little Oscar's head?" Willie—"Well, we're playin' 'William Tell,' an' somehow my arrow won't hit the apple, but keeps pluggin' his eyes an' nose."

"'PEARS to me your mill goes awful slow," said an impatient farmer boy to a miller. "I could eat that meal faster'n you grind it." "How long do you think you could do it, my lad?" quoth the miller. "Till I starved to death," answered the boy.

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Bodily decay is greatly hastened by causes scarcely perceptible in the beginning, but which prey upon and undermine the constitution proportionately to the degree of neglect with which they are disregarded. A diminution of vital energy, the proximate cause of which is a failing of digestive power, is dangerously subversive of regularity in every function of the body. To lay in a stock of vigor is the only philosophic way to restore health on a permanent basis. The Nation's favorite tonic, Hostetter's Stomach Bitters, is specially adapted to the use of debilitated invalids, whose stomachs fail in duty, or whose liver or bowels are inactive. A steadily pursued course of this regulating invigorant, protects those wise enough to adopt it from the consequences sure to ensue from a disregard of the causes of failing strength. The Bitters moreover, not only enriches the blood, but purifies it.

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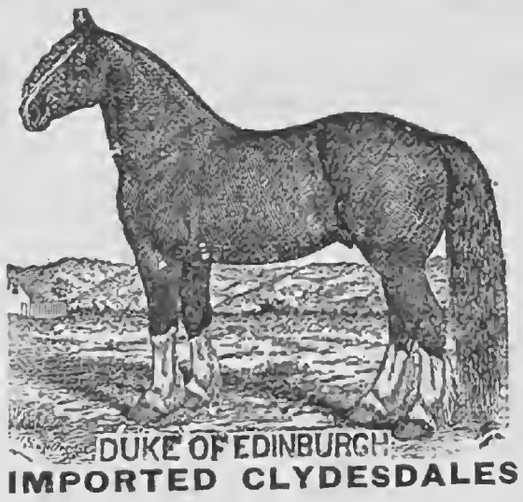

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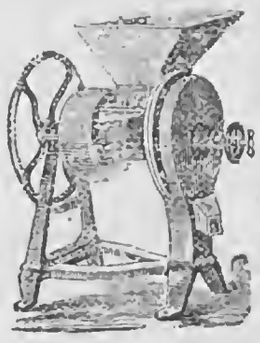

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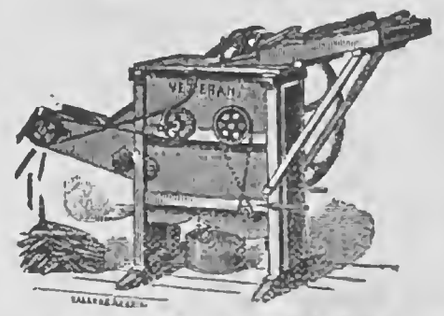

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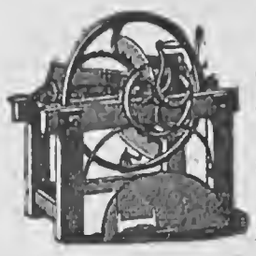

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THE ONE THAT RUNS LIGHT ENOUGH FOR WIND-POWER.
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 47. WHOLE No. 1608. | NEW YORK, NOV. 20, 1880. | PRICE FIVE CENTS. $2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Arboricultural.

THE CUT-LEAVED BEECH.
Fagus Sylvatica Heterophylla.

If the elm is, according to Loudon, the most magnificent vegetable of the temperate zone, the beech is at least the most magnificent shade tree. England glories in her Burnham Beeches, her beeches at Windsor and her beeches on many an old estate throughout the kingdom. America is also equally proud of her beeches on the few lawns she possesses that are worthy of the name. The European beech is not common on the lawns in America. Nor do we often see an American beech except as it may be a remnant of former native plantations. The richly-colored Purple Beech is still more uncommon, and the Weeping and Cut-leaved Beeches are only to be seen at rare intervals.

By what name shall we call the Cut-leaved Beech? It is fern-leaved or cut-leaved—asplenifolia or heterophylla—likewise laciniata, quercifolia, incisa and dissecta. Cristata and castanifolia are similar and yet different. For that matter, they are all different. The very leaves on the same tree are different, as may be seen by our illustrations, which represent distinct foliage taken from one specimen. The existence of this strongly marked characteristic has induced us to employ the name Heterophylla, or, as it may be translated, leaves with no regular form.

Cut-leaved Beeches are slow of growth, hardy and not easily transplanted unless they have fibrous roots in abundance. It is a fact not generally known that beeches, as well as magnolias, are among the most difficult of deciduous trees to move. The Cut-leaved Beech is no exception to this rule. When the disgusted planter gazes on the lifeless remains of his Purple or Cut-leaved Beech which he set out in the Spring with many precautions, and feels disposed to blame the nurseryman, let him first endeavor to recall whether he did not do the unpacked tree injustice by allowing its roots to remain unprotected under the pitiless stress of sun and wind at least one-half hour before he set it out. Or, perhaps, he has knowingly bought a plant with poor roots and other inferior qualities at a correspondingly low price. We see such lack of common sense and ordinary knowledge displayed from time to time that no loss of trees in transplanting should be considered strange, unless it is positively known that every precaution has been taken and the best of plants employed.

As an ornamental tree, many consider the Cut-leaved Beech almost unsurpassed. Some distinctly place it among the best half-dozen lawn trees. Its special and distinctive charm lies in the airy outline of its foliage. Perfect pyramidal symmetry might seem at first its distinguishing attraction. If you will consider, however, more carefully the minutely waving nature of the young and narrowly divided leaves of its otherwise regular contour, I believe that you will agree that the varied delicacy of its airy outline makes, after all, its principal attraction.

One of the best instances of topiary work to be seen in this country is on Mr. H. W. Sargent's lawn at Fishkill-on-the-Hudson. It is a Cut-leaved Beech some eight feet high trimmed into a perfect pyramid or truncated cone and pierced by a Gothic window on a level with the eye. The view thus revealed is a delightful little picture of rock and tree and distant mountain-side. Surprise, of course, adds greatly to the inherent charm of such a scene.

The grandest Cut-leaved or Fern-leaved Beech in North America is unquestionably the magnificent specimen that stands in front of the Redwood Library in Newport. Its proportions are colossal and the outline and spread of its branches picturesque and irregular in the highest degree. There are other large Cut-leaved Beeches in the country, twenty to twenty-five feet high and as much in diameter, but nothing like this beech of Newport.

I might justly occupy still farther space in describing the rich and varied coloring of the leaves, the strangely picturesque bark and branches, and the marked and sturdy forms of Winter nakedness, but these peculiarities, partake after all, of the general characteristics of the genus. We feel, besides, that neither pen nor pencil can do justice to the subtler qualities of a tree. Every one should see a Cut-leaved Beech, and thus learn in reality how excellent a tree it is. S. PARSONS, JR.

THE SPECIMEN from which our leaves were drawn was planted at the Rural Grounds six years ago. It is now scarcely six feet high, though the soil is fairly rich and no other tree or shrub grows near enough to interfere with its natural development. But it is just this class of trees that should be selected for small places—say from one to three acres in extent. They are always in keeping—always admit of that variety which gives to the owner hundreds of plants to see and to study, instead of limiting him to a few, as must be the case where large-growing trees are employed.

Pomological.

HORTICULTURAL IMPROVEMENT IN MICH.—OBSTACLES IN THE WAY.

T. T. LYON.

The Average Michigan Farmer

although doubtless fully as intelligent as the class generally; and, as a rule, disposed to make the orchard one of the interests of the farm, can rarely be induced to so far inform himself as to varieties and management as to become qualified to decide and act wisely for himself. As a consequence, his selections for planting are largely the result of accident; or of the advice of the nurseryman or "peddler" who may have an interest in his choice. Hence, conservative and slow though he may be, he too often becomes the victim of sharpers and even swindlers and is not unfrequently imposed upon with wonderful and even impossible fruits; such as tree strawberries; hybrids of the plum and the grape; apples without cores; Utah hybrid cherries; curculio-proof plums etc., etc., generally at prices as fabulous as the alleged qualities of the fruits palmed upon him. Occasionally a would-be progressive farmer ventures upon what may be termed a hybrid between farm and orchard, making commercial fruit growing a sort of adjunct of the family orchard. In such case, it is too often true that the slow farmer's idea, that "a tree can take care of itself" is acted out in the treatment of the orchard, which, as a very natural if not inevitable result, becomes a practical and (in all probability) a pecuniary failure. Somewhat extended observation would seem to indicate that, as a rule, where the two are combined, the management of the orchard is rarely kept up to the highest point of efficiency and profit; and that, in case of neglect of either, the orchard is quite sure to be the first to suffer.

Commercial Orchardists,

who may be assumed to have the best possible inducements for intelligent and considerate practice, are by no means always up to the standard requisite for intelligent and successful results; but are too often inclined to accept their information, as well as their practice, at second hand. One of their most noticeable failings, as a class, may be assumed to be a tendency to look too closely to immediate results—a disposition doubtless too common among all classes; but one which applies much less profitably to the orchard

DISSIMILAR OR CUT-LEAVED BEECH.—Fagus Heterophylla.—Fig. 372.

than to most other agricultural pursuits. A very natural sequence to this tendency is, that it is comparatively difficult to introduce a promising novelty, even for trial, the disposition being to wait till some one else shall have demonstrated its value; instead of testing it for themselves, and thus becoming informed of its real value in time to be able to adopt promptly, whatever shall prove worthy of adoption for their purposes.

Farm Orchards

are needed for a distinct purpose; and hence the varieties selected for such purpose should be chosen for their fitness for the same. The commercial idea calls for good handlers, bright-colored and productive, with but slight regard to mere quality; while the wants of the family demand fine quality, delicacy, and other minor particulars by preference. Unfortunately the preponderance of the "market idea" among both nurserymen and planters is often so decided that family requirements are in a measure crowded aside. Indeed, it is not unfrequently true that nurseries fail, in whole or part, to propagate and offer for sale many of the very finest of even the old, well recognized varieties; while newer sorts, no matter how desirable, are only taken up when necessary to meet a pressing demand.

The Tardy Introduction of Novelties

in Michigan, is doubtless largely due to the causes already stated; but it is believed that the very superiority of our climate, for such pursuits, may have much to do with the matter. The almost universal success, here, of varieties popular at the East, coupled with the fact that both our people and our orchards have been imported very largely from that direction, has almost wholly determined our selections; and although the pomologists of the more westerly States have, under the stimulus of a necessity peculiar to their region, been long engaged in the creation of a class of fruits adapted to local needs; they have been in the main outside of our line of supply; while our planters have doubtless acted upon the idea that, in their case, quality was being subordinated to hardiness; so that we here must expect to lose rather than gain by the introduction of these new creations, since the old well known and thoroughly recognized sorts, already among us, are abundantly satisfactory, so far as hardiness is concerned. It is beyond doubt true that the alleged tendency of market varieties to override, or crowd aside those more especially of an amateur character, is increased by the circumstance that many if not most of the finest of amateur varieties are of feeble or otherwise unsatisfactory habit; and hence less acceptable to both the nurseryman and the orchardist; while few purchasers are found willing to pay for the increased expense or time requisite for their production.

Farm Economy.

WHICH FORM OF NITROGEN IS MOST READILY ASSIMILATED BY PLANTS?

No. 2.

PROFESSOR F. H. STORER.

From the evidence of the experiments noted in my last article it is difficult to escape the conviction that the corn plant needs ammonia (or urea?) when young and nitrates when more mature. It is to be remarked that these results agree closely with those obtained by Stohman in his earliest experiments with corn. His plants grew best in solutions that contained both nitrates and ammonia. The significance of this fact is seen now more clearly than it was at the time the experiment was made, for attention was distracted from it by subsequent experiments of Stohman and others in which it was found that corn could apparently be grown in the absence of ammonia. Lehmann's results are in full accord also with Kuehn's experiments made in 1866. Several experiments upon corn made by Hampe, and repeated by Wagner, show also that this plant can use ammonia (as well as urea and uric acid) in the earlier stages of its growth, and from the record of these trials it seems probable that the plants got an abundance of nitrates, in due course, from the oxidation of the ammonia in the solutions. Taken all together, the experiments go to show that ammonia alone is insufficient for the growth of corn; that nitrates are needed by the more mature plant; and that mixtures of ammonia and nitrates may fitly be used for fertilizing this crop.

Lehmann experimented with tobacco also, in a similar sense, though in this case he grew the plants not by way of water-culture, but in sand to which all the necessary kinds of food had been added. To some of the plants he gave nitrate of soda and to others sulphate of ammonia. The tobacco plants fed with the ammonium salt were healthy and sound from first to last, and the plants grew normally all the while. The nitrate-plants remained far behind the others during the first half of the experiment and had a pale color and sickly appearance; but during the last half of the experiment they manifested a strong tendency to improve. They became green and their growth was evidently stronger than before, though in spite of this improvement, the final weight of the nitrate-plants was comparatively small. The intimation given by these trials that ammonia may be better food than the nitrates for tobacco is all the more surprising inasmuch as tobacco is one of the plants that is apt to take up nitrates freely from the soil and store them in its leaves. Like the mature corn-plant, the tobacco in these experiments evidently fed upon nitrates during the later stages of growth, and it is in the highest degree probable that even in the jars which contained ammonia, nitrates were really formed during the second period. Since the plants were grown in sand, in this case, it was impossible to prevent the formation of nitrates, as had been done for the corn-plants, by frequently changing the solution.

Lehmann grew lupins also, and it appeared that nitrate of soda was on the whole better fitted to feed these plants than sulphate of ammonia. His experiments, as regards lupins, have recently been repeated by Wein who finds that, in spite of the fact noticed by Lehmann also, that this plant stands in comparatively little need of nitrogenous manuring anyway, the use of nitrate of soda is, nevertheless, advantageous on the whole, while sulphate of ammonia seems to be actually hurtful. Heiden also has offered evidence to show that sulphate of ammonia is of no use to lupins, not even in the earlier stages of growth, and that rye does not feed upon ammonia directly. In field experiments upon rye manured with sulphate of ammonia the plants were miserable until the end of April when they began to grow luxuriantly. Meanwhile the soil had been tested from time to time for nitrates and none had been found until the end of April. From that time forth they were found in abundance. The fact that sulphate of ammonia has been found so useful as an application to grain in England is readily explained by the supposition that it gradually changes to a nitrate in the soil.

Lucanus found in laboratory experiments that nitrates were absolutely necessary for the luxuriant growth of his clover-plants, and Dr. Gilbert has called attention to the fact that in the field experiments of Dr. Lawes and himself, nitrate of soda has been found to act much more favorably than sulphate of ammonia upon the growth of leguminous plants, such as peas, beans, and clover.

The upshot of the experiments seems to be that while there are some plants which feed upon nitrates during their whole life, other plants can only use nitrates freely after they have reached a certain development; and that while there are some plants which are benefited by ammonia when young, there are other kinds which get no good from it even in the earlier stages of growth. These results of laboratory experiments are manifestly in accord with the facts well known to farmers, that some crops, like Indian corn, for example, will succeed well on land that has just been dressed with fresh stable manure, while other crops had better always be manured with well-rotted dung. Furthermore, they go to show the utility, suggested long ago by Stoeckhardt, of using mixtures of nitrogenous fertilizers, in many cases. A mixture of a small quantity of nitrate of soda—or of sulphate of ammonia, in the cases where ammonia salts are to be preferred, to act in the earlier stages of growth—together with a quantity of nitrogenized organic matter to be nitrified in the later stages of growth—may often be a more economical method of manuring than either one of the ingredients taken by itself. It is not improbable that mixtures of sulphate of ammonia and nitrate of soda would do better service in many cases than either of these salts by itself. It was noticed some years since in the laboratory experiments of Birner & Lucanus that while healthy oat plants could not be grown in the absence of nitrates it was still true that better plants were got by using both sulphate of ammonia and nitrate of lime than when only the nitrate was employed. It is to be noted in this connection that more or less of ammonia compounds, and usually some nitrates also, are contained in growing plants at all the different stages of their development, the ammonia compounds, moreover, are commonly present in plants in larger quantity than the nitrates are. It would seem as if each of the two substances had some special physiological function to perform within the plant, and as if it would be well to provide the plant with both of them.

The noted experiments of Hellriegel on the growth of barley-plants, showed that barley succeeds perfectly when fed with nitrates, but does not succeed when fed with ammonium compounds, under conditions which preclude nitrification. More recently Haesselbarth has confirmed this result. He finds that barley grows perfectly well when fed with nitrates, and also when it is manured with ammonium salts provided the soil is marled, *i. e.*, it succeeds when the conditions are made favorable for changing the ammonia to a nitrate. In both cases his plants took up almost the whole of the nitrogen that was contained in the fertilizers offered to them, and the weights of the dried crops were very nearly equal. But in the absence of marl only about half of the nitrogen contained in the ammonium salts was taken up by the plants and the dried crop only weighed a third as much as the others. These remarks apply both to sulphate of ammonia and to chloride of ammonium, but not to phosphate of ammonia, which gave exceptionally bad results. Only three-fifths of its nitrogen were consumed by the plants grown in the marled earth and only one-seventh by those where no marl was used, and the weights of the crops were correspondingly low. It was determined, moreover, by special trials that a large portion of the ammonia compounds in the marled earth did actually change to nitrates during the course of the experiment.

THE VALUE OF A CARRIAGE-BOLT AND A RIVET.

A CARRIAGE-BOLT is an iron bolt with a broad head at one end and a screw and nut at the other. It is to be procured of all sizes, from one-eighth of an inch thick up to one inch. Its form is as here shown. It costs, in quantity, not much more than cut nails, and its value consists chiefly in the fact that it can never, practically, be used up. For if used in making a gate, for instance, when the gate is worn out, or banged to pieces by neglect, as is the usual fate of a gate, the bolts may be taken out and used for another gate, and so on as

FIG. 373.

long as a man may live, and his children may use them after him. But a nail's life is ended when it is once used, and this fact may have given rise to the adage, whose origin is supposed to be shrouded in mystery, "as dead as a door-nail." For use on the farm there are few more convenient and useful things than these bolts. For putting together wagon-boxes, hay-racks, feed-racks, gates, doors, portable fences, and for putting hinges on, as well as for repairing almost every wooden thing of large size and heavy weight, carriage-bolts are indispensable. A gate put together with carriage-bolts will out-last a dozen made with nails; a door fastening put on with a bolt is safe and permanent, and so is a hinge, and they are cheap. In short, when one has used a few bolts and found their value, he will never be without them. The neck is made square, so that it will not turn in any hole into which it is driven.

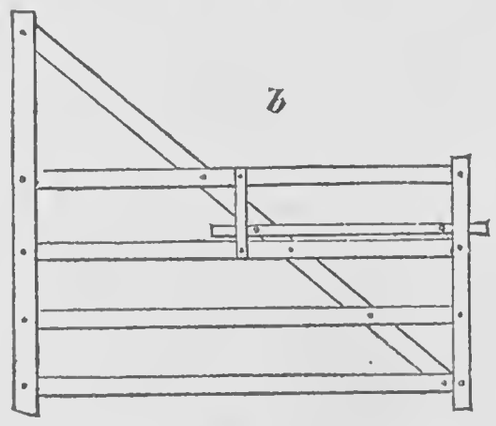


FIG. 374.

At fig. 374 is a yard-gate made with fence-boards put together with carriage-bolts. Any one can make it and put on the hinges and hang it in one hour. To do this, take a piece of fence-board nine feet long and one foot and a half feet; lay these on a barn floor or on a level piece of ground. On these lay the four bars, 12 feet long; square them with a square and lay the brace on them as shown. With a quarter-inch bit and a brace bore the holes as shown in the illustration and put the bolts through them. Then lay over the cross-bars a second upright for the head-post and another for the foot-post; mark these and bore them and put them in place. The bolts should be three and three-fourths inches long if the fence strips are "plump inch;" if they are "scant inch" three and a half inches will be long enough and three-sixteenths of an inch thick will be strong enough. Put a washer over each bolt under the nut, and screw up the nuts. Put one hinge on the gate at the lowest bar, to which it should be bolted, and the upper hinge should reach from the head-post to the brace near the top. The result will be a gate of the cheapest construction, light, strong, and one that cannot sag. A slide-bolt may be made to work between the foot-boards and between the brace, and a short, upright piece which is bolted to the bars, as shown. Two pegs in the slide-bolt prevent it from going too far in either direction. This is but one example of many in which light carriage-bolts may be made useful.

A copper rivet and a burr are the best things to repair broken harness with. They will be found useful for making straps, for repairing iron hoops and for many other useful purposes. But for fixing harness they are invaluable. To mend a trace, for instance, a hole, or two or three of them, may be made in the leather with a small blade of a penknife, a gimlet, or, which is best, with a punch, for the special purpose. A small, sharp knife-blade, twisted around in the leather, will cut a smooth hole. The rivet is inserted from the inside of the trace, the burr is placed over the end, and a few blows rightly directed will fasten the rivet permanently. It will not break or wear out. The hammer blows should be struck a little sidewise, so as to make a conical spread of the rivet, and not directly upon the end of it. The effect of this is shown in the drawing. A roll of copper wire is also a handy thing to have about a barn; for with it one may splice a cracked shaft, mend the handle of a tool, repair a broken cradle-finger, sew harness, and even fasten a button on to his clothes. For the last-mentioned purpose nothing else is so easy, ready or effective.

Care of Farm Implements.

We often see, when passing along a country highway, mowing machines, hay rakes, wagons and other farming utensils lying out exposed to the weather. Sometimes this is because the owner has no convenient place for them, and at other times it is through negligence, but whatever the cause it is always poor economy. The value of implements and machines necessary to use in the proper and successful management of an ordinary-sized farm, amounts to about $500, and the wear and tear of them is of necessity a great deal; but if allowed to remain out in all kinds of weather they will often receive more detriment from the exposure than from actual use. The implements used on an ordinary-sized farm can all be stored easily in a building 30x40 feet, the cost of which need be but little, not to exceed $50. A little thought and computation will show to any farmer the advantage of such a building for storing farm implements. But a building, however well-built, will not protect from the weather, implements that are left in the field. We must exercise some care in keeping them in their places. G. A. Goff, Jr.

Field Crops.

MORE TESTIMONY CONCERNING THE WHITE ELEPHANT.

The White Elephant Potato I believe to be an excellent variety as to productiveness, quality and time of maturing, being a medium late, which is also a great consideration, as they can be housed for Winter use much earlier than the late varieties, thus freeing the land for Fall seeding or other purposes. Having so few to start with, I cut them to one eye to make them go as far as possible, and planted in the same field with the Beauty of Hebron, giving both the same treatment. The early season was very dry here and affected the Beauties and Roses very much, but the Elephants, being strong growers, did not suffer so much and turned out a much larger yield of good, salable tubers. Of course, the trial this season in this locality was not a fair one, but I saw enough to convince me that they are a No. 1 potato for a general late crop. The Elephant is a good cooking, salable, well-shaped potato. I shall plant more of them next season.

Bay Ridge, L. I. David C. Bennett.

The members of my family, who are good judges of potatoes, pronounce the White Elephant as good as the Early Rose. It is large and productive. W. J. Beal.

State Agricultural College, Lansing, Mich.

The specimen tuber of the "White Elephant" sent to the President of the College was turned over to me for planting. I cut the potato to single eyes and planted them in my specimen beds along with other kinds, but the season proved so dry that potatoes of all kinds were with me a failure. I have saved the few fair tubers gathered for what I hope will be a more satisfactory test next year.

E. A. Popenoe.

State Agricultural College, Horticultural Department, Manhattan, Kansas.

The White Elephant Potato I think an excellent variety. It matures early, grows to a good size, is prolific so far as tried, and when cooked is mealy and of fine taste or flavor. I raised enough from half of the one you sent

me to plant a hundred (100) hills or more, and should it keep well this Winter, I promise myself a nice crop next Summer.

B. L. ARNOLD, Pres.
State Agricultural College, Corvallis, Oregon.

REPORT UPON CHESTER COUNTY MAMMOTH CORN ON THE RURAL FARM.

NEW YORK, Oct. 23, 1880.

ED. RURAL:—Upon the same day—Oct. 12,—upon which we measured the field of Blount's Corn we also examined a field of yours containing about four and a quarter acres of Chester County Mammoth Corn, yellow, and found from a measurement of one acre the yield to be 236 bushel baskets of corn on the ear per acre. This field had some appearances of a greater crop than the Dent, but we could not ascertain such to be the fact. Our measurements were as carefully made as in the former instance, but, time pressing us, we were unable to shell and weigh the net proceeds. The stooks we found not uniform in size or yield, and after counting the stooks upon an acre, we took a few measurements of distances between individual stooks as a check, and found this calculation differing somewhat. The stalks in this field mostly bore one large ear each, and the cob seeming to be large, it would appear that the yield of grains would not be so great in proportion as upon the Dent field of smaller ears. The cultivation, as we learned, was similar in both pieces, excepting that the Chester was enriched by only 350 pounds of Mapes's special fertilizer, against 500 pounds upon the Dent field.

In measuring an acre we began at a point half way between adjacent stooks upon the north and west, and found that 208 feet by 200 feet, brought us again to center lines between stooks, this area gave 41,600 feet, or .955 of an acre, and counting 52 stooks, one acre should contain 54 34 stooks of an average of 4.34 bushels, or 236 bushels of ears per acre.

ROB'T J. DODGE, C. E.,
Pres't Farmers' Club, Am. Institute.
W. N. HABBERSHAW, F. C. S.,
Chemist N. Y. State Agr. Society.
L. C. BENEDICT, Editor New York World.

LARGE YIELD OF POTATOES.

MR. N. C. JESSUP, of West Hampton, Suffolk Co., L. I., has brought to this office some very fine specimens of a large white potato known for several years past as the Burbank Seedling, of which he informs us that he has raised fully 1,000 bushels upon two acres of ground during the season just closed. The seedling is a late potato, having been planted April 25th and harvested October 1st, and very large, one of them, he says, weighing two and one-half pounds!

The ground was plowed two years previously, and the first year had a crop of rye with less than 10 bushels to the acre. The next year there were 15 000 fish applied and the ground was planted in corn, and yielded 140 bushels of ears to the acre. Upon a third part of the two acres for the potatoes there was at the rate of 18 000 fish to the acre applied. Upon another third part there were 15 loads of coarse yard manure, with about 10,000 fish. Upon another third part there were 20 loads of coarse yard manure and 400 pounds of guano applied. The yield was pretty nearly the same all over the two acres.

In planting, the potatoes were cut three eyes to a piece and dropped in the furrow some 18 inches apart, and where so manured the coarse manure was raked in and, with the potatoes, covered with the plow about four inches deep. The seed was dropped in every other furrow, leaving the rows but two feet apart. The cultivation was with a small, single mold-board plow, a single furrow, soon after the potatoes were up, and a light single furrow with a small double mold-board plow later.

At the rate of 250 pounds of muriate of potash was applied at the time of planting upon every other row over a small part, but the yield was not improved. A part of the fish was lightly plowed in upon a part of the two acres in the Fall; the rest were spread upon the top of the ground before plowing for planting in the Spring. The manner of applying the guano Mr. Jessup does not state, but the yield was the same where applied and where other manure was used. Mr. Jessup thinks that had care been used to insure perfect "seed" there would have been 50 bushels to the acre greater yield. The soil was from light to heavy sandy loam. The secret of the good yield may perhaps be found in part in having good seed potatoes, part in the nearness of the rows and the hills, and a part in the fact that the manure was applied directly where the potatoes could reach it, and still another part in the complete covering of the ground by the vines, thus keeping the ground moist, light and mellow.

A Woman's First Potato Crop.

Seeing in past numbers of the RURAL the high esteem in which the Beauty of Hebron Potato was held by some of your subscribers, I will give my experience with it this season. I obtained a small potato which weighed just three ounces. It had thirteen eyes. I cut it into pieces of one eye and I put one piece in a hill. Each hill was fertilized with a tablespoonful of superphosphate of lime, and the pieces were planted the 22nd of May. They were hoed but once and dug the 12th of September. I had a half bushel measure heaping full. Several will weigh a pound apiece. Several of my friends who saw the "seed" before planting, have also seen the product and they think it a good yield—equal to 160 bushels from one bushel of seed. Who can beat this crop this year? The "seed" came from one of your last year's subscribers.

Oneida Co., N. Y. MRS. E. R. DAVIS.

The Poultry Yard.

PREPARING POULTRY FOR MARKET

SOME of the largest poultry dealers in New York have published directions for fattening and preparing fowls for this market. The salient points in the directions are:—

Never let poultry forage and shift for themselves for at least ten days before killing them; for they are apt to range in the barnyard and pick up filthy food which defiles the entire bird, its flesh on this account frequently becoming so tainted that it is unfit for food. To make the best flesh the fowls should be constantly kept highly fed from the beginning, with plenty of clean, cold water; thus they are always ready for the table. With but very little extra attention the flesh for poultry will be juicier and richer in flavor than that of fowls fattened from a low and emaciated state, and it will always command a quick sale and the highest price. Do not "cram" a fowl before killing it to make it appear heavy. The undigested food soon begins to ferment and putrifaction takes place, injuring the sale of the bird a great deal more than is gained in weight by this dishonest practice. If allowed to remain in the coops 24 hours without food before it is killed, the bird will keep fresh longer and present a better appearance. The best food for fattening fowls, old or young, is barley meal alone or mixed with equal quantities of corn meal cooked and fed warm. A small quantity of brick-dust in the water is recommended. This will make their flesh fatter and more solid, giving it a fine golden color after being dressed.

The best mode of killing poultry, as it causes instant death without pain or disfigurement, is to suspend the birds by tying their legs firmly to a pole or heavy wire across the killing room at a convenient distance from the floor, and to open the beak and with a sharp-pointed, narrow-bladed knife make an incision at the back of the roof, which will divide the vertebræ and cause immediate death. Dry pluck the feathers and pin feathers all off neat and clean while warm, without breaking the skin; then plunge the bird into a kettle of very hot water, holding it there only long enough for the bird to "plump;" then hang it up—turkeys and chickens by the legs, and ducks and geese by the heads. Do not remove the entrails, heads or feet. (They must be drawn for the Boston market.) This mode gives the poultry a nice, buttery, golden color that attracts the eye of the epicure.

Pack only when thoroughly dry and cool (not frozen) in medium-sized, clean boxes or barrels in thoroughly cleaned and dusted rye straw, and to be extra-nice wrap every bird in clean white (not printed) paper, fold the head under its body, with the legs stretched out; lay it in the left-hand corner, back up, with its head toward the end of the box; fill the first row; then commence the second in the same way, only let the birds' heads pass up between the rumps of two adjoining ones. This makes the packing solid. In the last row reverse the order, placing the head toward the end of the box, letting the feet pass under each other; should there be space between these rows wide enough to lay in a few sidewise, do so; if not, fill it tightly with straw so the poultry cannot move. Over this layer place straw enough to prevent one layer from coming in contact with the other, and add other layers until the box is full. Great care must be taken not to break the skin; for during transportation such places turn black and injure the sale.

DUCKS.

FOR the table every one is willing to admit the duck's excellence, though the want of cleanliness in its habits meets with everybody's reprobation. As a feeder it has few equals while its feathers in the market stand high above those of the hen or turkey and only second to those of its giant companion, the goose.

Ducks are easily hatched and if properly managed they are easily raised—much more so than chickens or turkeys. Probably the worst thing for ducklings is the first thing they usually receive and that is unlimited range and water to swim in. The little things are, in a measure, nude, and should be kept in pens with dry soil floors or stone pavement that can be washed down daily. No kind of poultry will succeed on bare boards. All the water they need is best furnished by burying an old pot in the ground and laying a round piece of board on top of the water with room for the ducks to stick their heads in and fish out the corn that is put in the water. This amuses them and does no harm, while, if allowed to go off to ponds or streams, they are very liable to fall a prey to vermin in some shape, or to get their bodies wet and chilled from remaining too long in the water. Their pens must be kept clean if they are expected to thrive.

Ducks are enormous eaters. They feed not only incessantly all day, but if it is a moonlight night they will up and at it again every hour or two before morning. Owing to their voracious appetites they are considered non-paying fowls. It is generally claimed that they eat their heads off. We know of no statistics going to show how many pounds of corn it requires to make a pound of duck, but we do know that ducks are very rapid growers and have but little doubt that if penned and judiciously fed enough to make the most rapid growth, they would return a handsome profit for the food consumed. L. S. HARDIN.

POULTRY SHOWS.

THE season for poultry shows is approaching and every lover of fowls should make a point of attending at least one during the Winter. Aside from the beauty of the birds and the wonderful shapes and sizes to be seen among them, the exhibition may be made useful by enabling each to decide which variety would be best suited to his circumstances, and if the means are not at hand to indulge in a yardful of full-bloods, a few pure-bred cocks may be purchased to take the place of those at home, and in one season these will work wonders in the flock. Grading up is not only a useful but an exceedingly entertaining occupation, and one within the means of any one able to keep a half dozen hens. We append a list of poultry shows to take place this Winter.

POULTRY SHOWS, 1880-81.

VERMONT.—Windham County Poultry and Pet Stock Association, Brattleboro, Jan. 4-7, 1881. J. Henry Pratt, Secretary.

Champlain Valley Poultry Association, Burlington. Jan. 11-14, 1881.

Wide Awake Poultry Club, St. Johnsbury. Dec. 28-30, 1880. Chas. S. Hastings, Secretary.

Vermont Poultry Association at Rutland, Jan. 18-21, 1881. C. C. Pierce, Secretary, Rutland.

MASSACHUSETTS.—Southern Mass. Poultry Association, New Bedford. Jan. 6-11, 1881. Wm. P. Shephard, Fall River, Secretary.

Central Mass. Poultry Association, Worcester. Jan. 11-14, 1881. W. H. Fitton, Secretary.

NEW HAMPSHIRE.—Mascoma Poultry Association, Lebanon. Jan. 18-20, 1881. Fred. Moulton, Secretary.

INDIANA.—Northern Indiana Poultry Association, Ft. Wayne. Jan. 18-22, 1881. F. C. Barrett, Secretary.

Terra Haute Poultry and Pet Stock Company, Dec. 14-21, 1880. A. B. Salsich, Secretary.

White River Valley Poultry Association, Anderson. Dec. 23-25, 1880. R. I. Hamilton, Secretary.

NEW YORK.—Springville Poultry Association, Springville. Jan. 12-14, 1881. A. L. Twitchell, Secretary.

Union Poultry and Pet Stock Association, New Berlin. Jan. 18-21, 1881. J. H. Bell, Cor. Secretary.

Eastern New York Fanciers' Association, Troy. Jan. 5-12, 1881. Thos. H. Richardson, Secretary, Green Island.

MICHIGAN.—Saginaw Valley Poultry Association, East Saginaw. Jan. 11-14, 1881. C. T. Beaty, Secretary.

NEW JERSEY.—New Jersey State Poultry Society, Newark. Dec. 14-21, 1880. J. H. Baldwin, Secretary, East Orange.

PENNSYLVANIA.—Pottstown Poultry and Pigeon Club. Dec. 15-17, 1880. E. L. Pennypacker, Secretary.

Lancaster County Poultry Association. Jan. 14-19, 1881. J. B. Lichty, Secretary.

Poultry and Pet Stock Association, Germantown. Jan. 3-6, 1881. Samuel S. Ford, Cor. Secretary, Mt. Airy, Philadelphia.

Butler County Poultry Association, Butler, Jan. 5-7, 1881. W. T. Mechling, Secretary.

OHIO.—Cleveland Poultry, Pigeon and Pet Stock Association, Cleveland. Jan. 12-19, 1881. H. M. Sexton, Cor. Secretary.

DISTRICT OF COLUMBIA.—District of Columbia Poultry Association, Washington, D. C. Dec. 15-22, 1880. S. M. Clark, Secretary.

A Seasonable Hint.

We would suggest that now is a good time to patch up the hen house. Mend the broken hinges, roosts and nests, for there are probably plenty of them needing a slight repair. Clean out the old straw from the nests, and burn it. Gather together all the chicken coops and nail on strips wherever they are missing. Nothing gives greater delight even to the owner than order and system about the chicken premises, while in the end it greatly pays to keep things in repair and in their places. The younger members of the family should be encouraged to do this, getting a fair share in the profits of the enterprise, while by regular care the Winter through the yield of eggs will be treble what it otherwise would be if everything about the hen-house is left filthy and at sixes and sevens.

FOR WINTER LAYING hens should have warm dry quarters, but that does not mean that they should be shut up in a close room. No matter how cold the air is they should have a good sniff of it every day, and their room should be well aired also. A dry shed to dust themselves in and feed under, with an Eastern or Southern exposure to give them a sun bath, is of great value to them. With these surroundings and a regular supply of mixed feed one may reasonably look for a generous supply of eggs.

The Herdsman.

ORIGIN OF HEREFORD CATTLE.

I HAVE had frequent inquires as to this, but can only answer that in common with all other British cattle, it cannot be traced to any definite beginning as now bred, but the progenitors, at least in part, are supposed to be such as were described as far back in the course of time as the 10th century, because there was a law then in England that a compensation should be paid for injury done by one prince to another, with 100 cows and a bull of white color with red ears. Speed records that Maud de Brehos, in order to appease King John, who was highly incensed against her husband, made a present to his queen of 400 cows from Brecknockshire, "all white with red ears." Now as pure Herefords of the present day occasionally crop out of this color, it is thought with good reason, that the above cattle might have been among the early progenitors of them.

Mr. Thomas Duckham, editor of the English Hereford Herd Book, says that Lord Scudmore, who died in 1671, introduced red cows with a white face from Flanders. These were bred to the white cows with red ears, and produced those of the various colors of our times. The present fashion is a white face with a red body, but I believe a lined back is also admissible, together with more or less white on the throat, breast and belly. I believe, also, if a few white patches occur on the body the animal is not put aside in consequence of these. I have seen Herefords of rich strawberry roan color, also pure red, excepting a mottled (speckled) face.

A. B. ALLEN.

NOTES BY A STOCKMAN.

IT is something unusual at this time to find a man of sufficient intelligence to write a readable communication to an agricultural journal, that professes to believe in the "signs." A correspondent who has written some valuable articles about sheep in the Ohio Farmer recently declared "that on reference to his diary he found his lambs bleated more when weaned with the 'sign' somewhere in the vitals, than when it was elsewhere." This reference to the vitals may be a sly and sarcastic hit at a popular delusion; doubtless a weaned lamb would find a sign of discomfort in the vitals from an empty belly, and might reasonably bleat more on that account. Is this what Mr. Stephen Powers would have us to understand?

Cincinnati is becoming a very extensive sheep market. The receipts of that city have increased from 181 673 in 1873 to very nearly 500,000 in 1879. This is fortunate for the Southern sheep interest, which is thus provided with an outlet that promises to reach grand proportions. There is no more promising field for this industry than the mountain region of the South as well as parts of the lowland region. The opening of a new railroad from Cincinnati into the heart of this southern region offers an excellent market for sheep and lambs and nothing prevents the home manufacture of wool but the want of the raw material.

The Fall sales of Cotswold sheep in Kentucky have been unusually successful. In the magnificent pastures of that State this breed develops all the excellencies which mark its larger compeer the Short-horn. The Short-horn and the Cotswold are well suited for companions, and in the rich, broad, park-like fields of the blue-grass region, both reach their highest excellence; and as a consequence bring their highest prices. At these sales, rams brought from $50 to $225 per head; a flock of 55 head brought $3 070. Elsewhere this breed seems to be losing ground. Without the most luxurious pastures and the most skillful feeding, neither the carcass nor the wool reaches perfection. It is not in place on small farms any more than Short-horn cattle would be, and farmers who have not the requisite facilities for keeping them are dis-

appointed in the results. Purchasers for the market do not look with favor upon the mutton of Cotswold, and as mutton is the chief end of a sheep, a breed that is not productive of superior mutton can never be popular among farmers who look to the markets for the disposal of their surplus stock. Yet this fine sheep has a large place to fill in the world. For crossing on the common grade Merino it cannot be surpassed; and while it is in demand for crossing there must be business for breeders. And Kentucky has proved itself to be remarkably well adapted for breeding fine stock of all kinds.

The headquarters of the largest breeders of Short-horns are in Kentucky. The grazing farm of Mr. George Hamilton, near Mount Sterling, keeps 250 cows and heifers, all high-bred and members of the first families. A combination of the Hamilton family own, in all, about 700 head. The reputation of Kentucky stock has been well earned by careful breeding and persistence and perseverance in keeping to well chosen families. One of the oldest breeders in that State, Mr. Abram Renick, who may be called the father of Short-horn breeders, keeps only one family, the Rose of Sharons, of which he has now 65 females and all are descended from one cow bred by Mr. Bates, the noted English breeder. How rare is this quality of perseverance! And yet it is a key to success in any enterprise, and much more in agriculture, in which one has to wait longer for results than in any other. What farmer sticks to one plan, one method, one kind of stock or, in many cases, even to one farm, for a dozen years. This constant change is the vice of our system, or rather of our want of system. And failure, or at least indifferent success, and grumbling are the consequences. Farmers should learn that success in keeping stock comes from within the herd or flock and not from without. No one can make a mark who is ever changing his breeding animals, for he cannot stamp any certain character on his stock, and he cannot improve.

The great bugbear of farmers in this business is close breeding. A farmer who was discussing this question with me recently, seemed to think what he called incestuous breeding of animals was a crime, an unnatural and reprehensible proceeding. He had never heard or known how our best stock has been bred, and how closely the most successful breeders have kept to one blood. Mr. Bates never hesitated to use the same bull on mother, daughter and granddaughter, when the animal suited him, This was his great principle in breeding, and he once remarked that "it was by keeping to this rule that *his success had been entirely due.*" Now no man can hope to improve his stock except by the use of superior males; for it is from these only that improvements come. It is impossible to change one's breeding animal every year; this is perhaps a fortunate thing for the second or third cross of a good pure-bred male upon the progeny of a fairly good but common-bred female must improve the cross each time. There are two things that should be done by farmers; there may be more, but these are indispensable; these are, to study the principles and history of breeding; then choose good and suitable stock for the purpose and stick to it, improving it as skillfully as they may. This is important because it is from improved stock first, and then better feeding that the improved system of agriculture that is needed must start.

Dairy Husbandry.

THE DAIRY COW. NO 16.

HENRY STEWART.

Construction and Use of Ice-Houses.

Ice will retain the solid form for a long period if kept in a perfectly well-constructed house. The principles of construction upon which the effectiveness of an ice-house depend are: non-conductibility of the walls; perfect drainage at the foundation; perfect sealing of the floor and the drains against the entrance of air; sufficient protection from rain and air at the top; and ample ventilation in the upper covering. With all these secured the material and the form of the building are secondary considerations.

Some years ago a friend who had a Summer residence on the border of one of the picturesque lakes which abound in the upper peninsula of Northern Michigan requested me to build and fill an ice-house for him, for a supply of ice for his family in the coming Summer. I performed this commission and, as it turned out to be the best ice-house I have constructed at any time, I will describe it here. The house was 24 feet by 18, outside measure; the outside wall was made of diagonal boarding covered with dressed weather-boarding, six inches wide, laid over paper sheathing. The studding was of 2x4-inch stuff. An inner wall of common boarding laid horizontally was built 12 inches from the outer wall, and the studs of both walls were kept from spreading by numerous pieces of hoop-iron securely nailed to the opposite studs. This space was filled with fine refuse charcoal (braize) from charcoal kilns at an adjacent iron furnace. The roof was of common pine shingles laid upon tight boarding and open around the eaves for the thickness of the rafters. The roof projected three feet at the eaves. The foundation was dug out three feet, the earth being a dry, porous gravel that needed no artificial draining. The ice was of the best kind, being two feet thick, clear and free from snow, such ice being quite common in that severe northern climate, where the mercury sometimes stays many degrees below zero for weeks and often sinks into the bulb of the thermometer, or to 32° below zero. It was packed closely in square blocks and a space of 18 inches was left around it, which was packed closely with leaves, raked up in the woods before the snow fell, for several feet, and the rest was packed with sawdust. The house was 14 feet from sill to plate and the ice was packed from the floor, which consisted of two feet of sawdust, to within two feet of the eaves, and covered with from two to three feet of sawdust. Several small holes were cut in the form of stars in the front and rear gables. The house was filled in very cold, dry weather, and as soon as filled the double doorway, which was made of strips of matched boards placed crosswise, was filled with sawdust. Three outside doors, one above another, for use as the ice might be lowered in hight, were hung and closed by latches. Outside stairways were made by which the two upper doors were reached.

ICE HOUSE.—FIG. 375.

This was done in the Winter of 1860. The owner, whose business was in New Orleans, was detained by the war and did not see his ice-house until 1865, in the Summer of which year it was opened, and some of the ice was still there in the center of the packing and a considerable thickness of the packing was frozen around it. I don't think much of the ice had melted, but believe the bulk of it had evaporated, knowing how rapidly blocks of ice will disappear by evaporation even in the coldest weather in that climate.

I do not know that there is any better way of constructing an ice-house than the above; but perhaps it was unnecessarily elaborate. Since then I have kept ice perfectly well in a corner of a barn by making a board partition at the required place, lining the barn wall inside and packing it full with clover chaff—which, by the way, is an excellent non-conducting substance, as are also buckwheat hulls, oat chaff and buckwheat chaff—and by packing the ice well with at least a foot in thickness of dry sawdust all around and above it.

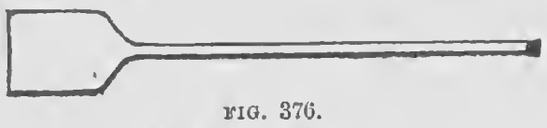
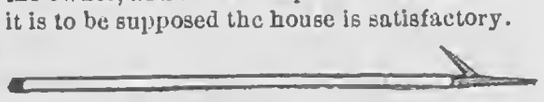


FIG. 376.

The ice-house attached to the dairy described in the last chapter, was made with double walls, a foot thick, the outer wall of common siding and the inner one of rough boarding without any protection, the space between these being filled with sawdust. No inside packing is used, but the ice is laid close to the inner wall, and every crevice is filled with broken ice so as to make a solid mass. At least, these were the instructions given to the owner, and as no complaint has been made it is to be supposed the house is satisfactory.



ICE FORK.—FIG. 377.

The easiest method of filling an ice-house is by a sliding trough upon which the blocks are drawn in by ice-forks or ropes to which ice-tongs are attached. The ice-fork consists of a long handle having two sharp steel points affixed at one end, one to push and one to pull with, as shown in cut fig. 377. Ice should be cut in cold, dry weather and packed as soon as cut. It should be cut in regularly-shaped blocks; 24x16 inches, or 18x12, is a convenient size, because with these the joints can be broken and each layer made to seal the joints of the one below it. In packing the house a quantity of broken ice should be kept on each layer and swept and packed into the crevices with a broom and a thin-edged wooden implement made for the purpose (figure 376). The fine dust left upon the ice will help to separate the blocks when they are taken out for use.

SOME RECENT NOTES ON THE CENTRIFUGAL CREAMER.

PROFESSOR G. C. CALDWELL.

Cooling the Cream Before Churning.

It has been found in some recent experiments, of which an account is given in a recent number of the Milch Zeitung, with cream from a centrifugal separator, having a temperature of 57 to 60 degrees, that if it was churned at once 17 per cent. less butter was obtained than if it was first cooled down to about 34 degrees; and on making a further application of this result it appeared that butter was in general more easily made from cooled cream. The importance of cooling the centrifuge cream is well understood in Sweden; therefore the use of this instrument does not do away with the necessity of ice or cold water in the dairy, and suitable cooling arrangements. Nevertheless there is no little gain in the smaller extent of these arrangements that would be necessary, and the shorter periods of time for which they would be called into requisition. When the cream was obtained by ordinary methods it was observed that if the milk was set at a temperature below 55 degrees, there was a loss of only 2.3 per cent. of butter in consequence of not cooling the cream before churning; but if the cream rose at a temperature of 60 or above, a loss of 19 per cent. of butter resulted from not cooling it.

Quality of the Butter from Centrifugal Cream.

When centrifugal separators were first introduced it was quite commonly asserted and believed that the butter made from the cream would not keep so well as that from cream obtained in the ordinary manner, and that, therefore, this process could not be used to advantage unless the cream or the butter was to be consumed immediately. There appeared to be, in the nature of the case, no good ground for any such assertion; supposing the cream to be as carefully kept, and the butter as carefully made in the one case as in the other, we should reasonably expect it to be equally good. In some recent tests of the centrifugal creamer, by Fleischman and Vieth, samples of butter from cream raised in cooled cans, and from cream separated by the centrifugal process were sent to an expert in dairy produce; most careful tests revealed no difference either in flavor or in keeping qualities.

Quantity of Butter Yielded by the Centrifugal Process.

Numerous experiments have shown that a greater weight of butter is obtained from a given quantity of milk with the centrifugal creaming process than with other methods of separating the cream; in the various tests that have been made, this increase ranged from eight to 30 per cent. The difference varying according to the character of the milk. It has been shown that this larger yield is really due to a more complete separation of the butter fat from the milk, and not to a larger proportion of salts and water or other foreign matters in the butter; the skimmed milk from the centrifuge is poorer in fat than that from the Swartz process or from any other method of setting the milk for cream in common use in Europe. In several comparative tests recently made the proportion of fat in the centrifuge skimmed milk ranged from 0.21 to 0.44 per cent; when the cream was separated by ordinary methods from milk of the same richness in fat, the proportion of fat left in the skimmed milk, though in some cases lower than the highest limit with the centrifugal machine, was in others fully twice as great.

The Temperature of the Milk and Yield of Butter.

The temperature of the milk as it flows into the centrifugal machine is a matter of great importance, as shown by numerous recent experiments. The last number of the Milch Zeitung contains an account of some trials with Fesca's machine which illustrate this point. On running about 11 pounds of milk at a temperature of 60 degrees through the machine per minute, the skimmed milk contained 1.5 per cent. of fat, against 3.1 per cent. in the whole milk, and from 38 to 40 pounds were required to a pound of butter; if the milk was first warmed to about 90 degrees when delivered from the machine, it contained but 0.5 per cent of fat if run through at the same rate; if passed through at the slow rate of 6.5 pounds per minute, the milk delivered contained in the two cases of cool and warmed whole milk, 1.0 and 0.3 per cent. of fat respectively. Fleischman and Vieth, as the result of a large number of experiments with a De Laval's centrifugal separator, found that the proportion of fat in the skimmed milk decreased invariably with the elevation of the temperature of the milk delivered to the machine. On raising the temperature from 48 to 100 degrees, and testing the milk delivered by the machine at several points between these two extremes, the fat fell from 0.58 to 0.15 per cent. These figures illustrate very strikingly the superiority of some machines over others, as well as the point under discussion.

These centrifugal machines are in great demand in Europe; some of the firms that manufacture them are crowded with orders faster than they can be filled. Their usefulness in the dairy is fully established there, and it is plain that they must sooner or later come into extensive use in our great dairy regions here. Meanwhile, valuable experience in their construction and management is being accumulated, of which we shall have the full advantage, when our dairymen shall come to realize the necessity of adopting this improvement over what they will not long hence regard as the clumsy and cumbersome method of setting the milk in pans or pails, that must be carefully kept cool for 24 or 36 hours before the cream can be obtained. Such slow and poky ways will then, at least so far as regards factory butter making, be turned over to people who still cast their votes for Andrew Jackson for President.

Floricultural.

A WESTERN FARM GARDEN.

WILLIAM FALCONER.

A reader of the Rural who resides in Morgan County, Illinois, has written to me for advice. She says:—"By the assistance of my two sons (one 16 and the other 12), who never saw a flower garden in their lives, I have laid off and made about 35 large and small beds, besides some winding paths with borders. I have several different designs, some, I think, very pretty for children to have made. I have also some large tubs as substitutes for vases. I wanted some kind of a lawn vase or basket, but could get none to suit me here."

Flower Beds.

I appreciate all attempts to beautify our homes by the use of flowers and ornamental gardens, but a multiplicity of flower beds is old-fashioned, and, I am happy to say, now an almost obsolete adornment. Neither have I any sympathy with the geometrical filiforms that once were fashionable as flower beds, for it is not the outline of the bed so much as what it contains that is modern art. The circle, oblong square, diamond, heart, and five-cornered star are the most desirable shapes. In the days of our forefathers the outline of the bed was its pattern, for at that time the beds were mostly scifs and ribbons, *i. e.*, each bed was either filled entirely with one kind of plant or with rows of several kinds. Now-a-days, however, the outline of the bed has but little to do with its pattern, only oblong squares and circles are most esteemed, because they are the easiest designs on which to define a pattern. The great variety of plants at our command and available for the flower garden renders it easy work to display in one bed intricate geometrical designs neatly and accurately, and of great diversity of hue.

But this is not the garden of the Western farmer who has no greenhouse but his window. He wants around his home trees and shrubs and vines and lovely flowers, bright and permanent—plants that want no hot-house nursing, but year after year come up again, each season stronger than before. Arranging such plants in a series of little beds is neither for the good of the plants nor consistent with modern gardening. Large oblong squares are the most convenient beds for perennials, for in such we can have masses of many plants and a continuance of bloom from April to November. Regarding the

"Winding Paths,"

I can only say meaningless walks annihilate the very end for which they are introduced; every path should be a needed one, and there should not be any path that is not needed. First determine that a path is needed there, then tone your path in easy, graceful curves. Straight walks, unless they cannot well be waved, are not desirable, and much less so are those of oft-repeated or deep S-like curves.

Garden Vases

are of great variety and necessarily high-priced. A vase to suit us depends upon whether we want the vase for its own ornamentation or for the same purpose we want a flower-pot or bed, namely, to grow plants in. Proper vases should be so constructed as to have an air chamber between the outside shell of the vase and the basin that contains the plant-roots. This is usually accomplished by the assistance of a zinc basin made to fit inside the earthen vase. This chamber counteracts the parching action of the sun and wind upon the roots, for in vases, as in pots, the most vital rootlets creep around just inside the casing of the vase, and therefore under ordinary circumstances they are the first to suffer from heat and drought. But if the vases be heavily filled with drooping plants before they are put outside, the inside basin may be unnecessary, the green mantle being protection enough. Wooden vases, as tubs and half-barrels, need not have the inner basin, as the action of the weather injurious to the roots is very much less on wood than on earthenware. There are many cases in which vases are admissible to the garden, but in no sense, nor under any circumstances, can I countenance the garden use of vases for the vases' sake. The plants the vases contain are the ornament, the vases are merely flower-pots, and the better the pots are hidden by the plants, the prettier appear the vases.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION,

BULLETIN No. 49, OCT. 30, 1880.

Analyses of Swamp Muck.

446. Muck No. 1. Upper stratum.
447. Muck No. 1. Lower stratum.
448. Muck No. 2. The above were sent by D. H. Van Hoosear, Secretary Farmers' Club, East Wilton.
449. Cured Muck.
450. Fresh Muck. Sent by S. B. Wakeman, Saugatuck.
451. Muck. Sent by G. W. Stanley, New Britain.
452. Fibrous Muck, from above 453.
453. Bottom Muck, from below 452. Sent by Henry Hine, Oxford.
454. Mucky soil of drained meadow, from Augustus Storrs, Mansfield.
465. Swamp Muck, from Ed. C. Birge, Southport.
467. Swamp Muck. A, upper layer, B, lower layer; from Lewis Davis, Milford, Ct.
492. Muck, from W. E. Simonds, Canterbury.

ANALYSES OF SWAMP MUCK.

The fresh or undried samples contain per cent.:—

	446	447	448	449	450	451	452	453	454	465	467A	467B	492
Water	80 68	62 25	42 19	88 04	88 51	32 08	77 33	70 80	67 36	73 81	87 13	81 36	79 73
Organic (vegetable) and volatile matter	15 93	26 33	12 80	5 72	10 40	53 82	21 83	7 65	19 75	23 39	11 55	6 94	16 74
Ash, including sand and soil	3 39	11 43	45 01	6 24	1 09	14 10	0 84	21 55	12 89	2 80	1 32	11 70	3 53
	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00
THE ASH CONTAINS,													
Silica and substances insoluble in acid	2 19	7 66	36 06	3 34	0 42	9 83	0 42	1 61	7 87	1 63	0 48	10 78	2 63
Oxide of iron, alumina and phos. acid	0 35	0 88	6 32	0 70	0 13		0 31		4 55	0 34	0 20	0 57	0 27
Lime	0 44	1 78	0 69	1 32	0 23	1 38	0 09	0 05	0 11	0 38	0 35	0 09	0 42
Other matter not separately determined	0 41	1 10	1 93	0 88	0 31	2 89	0 12		0 46	0 45	0 29	0 26	0 21
Nitrogen (in organic matter)	0 41	0 33	0 33	1 36	0 25	0 91	0 24	0 36	0 41	0 60	0 31	0 18	0 44
Poisonous iron—salts; soluble in water	none	none	none	none	none	none	none	trace	much	none	none	none	none
The dry (water-free) mucks contain per cent.:—													
Organic and volatile matter	82 44	69 48	22 14	89 93	90 51	79 24	95 87	25 95	60 33	89 31	89 74	37 23	82 58
Ash	17 56	30 52	77 86	10 07	9 49	20 76	4 13	74 05	39 68	10 69	10 26	62 77	17 41
Lime	2 27	4 71	1 19	2 13	2 00	1 88	0 39	0 26	1 33	1 45	2 72	0 48	2 07
Nitrogen	3 12	0 87	0 57	3 19	2 18	1 34	1 05	0 89	1 25	2 29	2 40	0 96	2 17
The organic matter of the mucks contains per cent.:—													
Nitrogen	2 57	1 25	2 58	2 41	2 40	1 69	1 10	3 44	2 08	2 57	2 68	2 59	2 63

Samples 446, 447, and 448 are from a swamp of ten acres, owned by Messrs. John and Andrew Jackson, of Wilton. 446 and 447 are from the head of the swale, the former from the surface, the latter from a lower stratum. 448 was taken from the same swale one-half mile distant and at a lower level. Muck from both localities has been used for many years as an absorbent, and also applied in Spring direct to crops after having been dug in Fall and exposed to air and frost during Winter. 446 and 447 have given very good results. 448 has been less valuable.

The analyses show large differences of composition, in the fresh samples. We observe, first, that 446 is a very pure muck and quite fully saturated with 80 per cent. of water; 448 is drier and contains 45 per cent. of soil and mineral matter, while 447 stands intermediate. If the three were applied in corresponding states of dryness, we can see that in the first two we should have much more organic matters, with more nitrogen, and likewise more lime than in the last. This appears from the figures above given showing the composition of the dry, water-free mucks.

The per cent. of nitrogen and that of lime in the dry samples may be taken as fair measures of their relative value. 446 ranks accordingly among the best, while 448 is nearly the poorest of the samples here reported.

The inferiority of 448 is evidently largely due to the fact that three-fourths of it nearly are sand or soil. Reference to the last line of figures in the table shows that the organic matter which it contains is as rich in nitrogen as that of 446. We see, in fact, that in both these and in seven of the other samples the organic matters contain about 2½ per cent. of nitrogen.

449 and 450 are, it is understood, two samples from the same bed, the former dug a year ago or more, and exposed during the Winter, the latter a freshly excavated sample. The cured muck, 449, is used as an absorbent and for composting. The questions asked by Mr. Wakeman are: "Is the cured muck worth carting 100 rods to use as an absorbent and in compost?" and "has the muck any value in its fresh state?"

The differences in composition which appear in the undried samples are almost entirely due to their unlike proportions of water, viz: 38 and 85½ per cent. Dry, they agree in containing about 90 per cent. of organic matter with 2.2 per cent. of nitrogen, and about 10 per cent. of ash with two per cent. of lime.

To Mr. Wakeman's questions the following answers were given:

1. 449 is well worth carting 100 rods to use as an absorbent. It contains, as analyzed, with 38 per cent. water, nearly twice as much nitrogen as good stable manure, and of this there can be no reasonable doubt that a good portion would become available to crops, especially after composting with dung and urine. It also contains four times as much lime as stable manure.

2. As to the value of 450, the fresh-dug muck, it would doubtless be serviceable if well pulverized and distributed upon sandy, droughty soil. It contains nothing injurious to vegetation.

The chief advantages of "curing" muck by exposure to air and frost are, 1, pulverization, 2, removal of a share of the useless water, and 3, removal of soluble poisonous salts of iron. 450, like all but two of the samples here reported, is free from injurious iron-salts, and except for the cost of carting its extra water and the convenience of application, it might most probably, be applied as well fresh as cured.

451 was a well cured or dried sample, but still retained 32 per cent. of water. The composition in the dry state shows it to be rather above medium quality, with 1.9 per cent. lime and 1.3 per cent. nitrogen. Its contents of sand and soil (15 per cent. or more of the dry muck) depresses the nitrogen, but the organic matter itself contains a less proportion of this element than that of any other sample except 452.

452 and 453 represent respectively the upper and lower layers of the same bed. 452 was coarse and fibrous from undecayed vegetation. The organic matter of 453 was more fully decomposed but was admixed with clay and fine soil to the extent of seventy-four per cent. These are the poorest mucks here reported, averaging, water-free, but one-third per cent. of poor lime and one per cent. of nitrogen. The bottom sample contains some soluble and poisonous iron-salts which would disappear by thorough weathering, or more speedily and certainly by composting with ashes, potash or lime. Such muck would probably not pay to apply fresh except on light leachy land, and there would be of advantage mainly as an amendment of too great porosity and droughtiness and not as a fertilizer.

454 is an interesting sample, as it represents a piece of meadow land that has been drained and cultivated for three or four years, but all attempts to get crops of buckwheat, corn or turnips have totally failed—even weeds do not grow upon it. The surface of the ground as it dries becomes white as if salt or plaster had been sown upon it. The barrenness of this soil is due to iron-salts soluble in water, mainly proto-sulphate of iron, the same thing as copperas or green vitriol, which is present in considerable proportion and which thus poisons and destroys all vegetation. The remedy is a copious application of leached ashes or lime. Unless there is permanent bottom water also poisoned by iron-salts, the lime will shortly cure the difficulty. The sample is more of a muck than a soil, containing 60 per cent. of vegetable and volatile matters, and not only has excess of iron-salts but is deficient in lime and presumably in other mineral plant food, so that leached ashes would be the most suitable application.

485. This muck is seen, from the statement of its composition in the water-free state, to contain nearly 90 per cent. of vegetable matter with 2.3 per cent. of nitrogen and 1.5 per cent. of lime; it is accordingly of excellent quality. Mr. Birge states that it can be delivered on the adjacent upland at 18 cents per cart load of 25 bushels. Mr. Birge asks:

1. After letting it dry on the upland, will it pay to cart to the yard one-half or three-fourths mile distant for litter?

2. Will it pay to top-dress pastures near the swamp with the raw muck?

3. Will it pay to compost with lime at the swamp?

Queries 1 and 3 were answered in the affirmative. In reply to the second question, a doubt as to the advantage of its direct use was expressed. Plainly, however, actual experience alone can positively decide these questions, and the answers given, being offered without a careful examination of all the circumstances of the case, are merely opinions that are intended to be safe, but are not expected to be exact.

467A and 467B are respectively the black upper and the brown lower layers of the same deposit. Mr. Davis asked which is the best, and if either or both are worth applying to sandy loam directly or after composting with something besides yard manure.

The analyses indicate the muck to be of the best quality. The lower portion is, however, largely mixed with soil. This renders it less rich in nitrogen and lime, and therefore inferior as a fertilizer, but as the soil it contains is mostly of very fine pulverization, it is not less valuable as an amendment on light, open-textured soils. The best materials, next to stable manure, to compost with would be unleached wood ashes, or fresh burned and slaked lime. By slaking the cheapest oyster-shell lime mixed with, say, one-tenth as much kainite (potash salts) or low grade sulphate of potash, and composting with the muck, the latter will not only yield its nitrogen rapidly, but its lack of potash, magnesia, etc., will be supplied. To one cord or 100 bushels of muck, 10 bushels of lime may be used.

492 is also a muck of high quality, judged from the analysis, the dry substance containing over two per cent. each of lime and nitrogen.

In conclusion I would refer my readers, for full details as to methods of handling and composting, to my Report on Peat and Muck, published in Transactions of the Connecticut State Agricultural Society for the year 1858, and afterward revised and enlarged and issued by Orange Judd & Co., under the title "Peat and its Uses as Fertilizer and Fuel."

F. W. JOHNSON, Director.

Miscellaneous.

BRIEFLETS.

MR. J. J. H. GREGORY writes us that he is afraid that we shall have to go to the tropics to get seed from the Branching Sorghum. But we think it will seed in Virginia. We have picked a number of fully ripened seed from our plants of the past season, and the seed was sown late. . . . . . One of the most serious mistakes which farmers make is to work out in the rain, snow or sleet, and to allow their sons to do so. Thus heavy colds and malarial diseases are frequently contracted, which, though they may pass away, have their effect in undermining the health and in shortening life. . . . . . Gather the leaves. Cover them with earth, so to remain until another Fall. This makes the very best of soil for potting plants. . . . . . And now there is a variegated ailanthus. It is hard to find out what anybody wants an ailanthus of any description for. If it were the only tree that grew upon the earth—well, even in that case we should prefer to enjoy it upon our neighbors' premises.

Old folks and young folks! are you reading Farming for Boys and Girls? If not, begin now, while yet the early lessons are before you. Read them, if not for *your own* instruction, so that you can talk them over with your children and thus engage or deepen their interest in what may prove of great service to them in after years. . . . . . Thanks to Mr. John Saul for a package of new plants. . . . . . In a sketch of the life of Charles M. Hovey and his services to horticulture, the Mass. Ploughman says that in 1837 he "produced the azalea and other flowers from seed by hybridization." Would the Ploughman kindly inform us what were the parents of the azalea—that is, what plants Mr. Hovey crossed, the seeds of which produced the azalea? (!)—"Among evergreens he has produced a fine Chamæcyparis." Will the Ploughman also kindly inform us what sort of an evergreen that is? . . . . . To inquiring friends: The Niagara grape is not for sale. We do not know when it will be offered. . . . . . . Those who want handsome shrubs that will grow close to the house and thrive with little or no care should select the privets and bush honeysuckles. . . . . . . We see that James Veitch & Sons, of London, are advertising new varieties of Iris Kæmpferi (Lævigata), seeds of which we sent to our subscribers in our last free distribution. They announce 12 different kinds and charge an average of one dollar for each plant or root. We quote from their advertisement:—"It is quite impossible in words to give an idea of the splendor and symmetry of these flowers. They fall into two groups—those in which the three outer segments, petals or falls are large and grow downwards, the inner segments or standards being small and upright; and those in which the outer and inner segments are of equal size, giving the flowers a round and symmetrical appearance; such flowers being termed 'duplex.' At the base of the segments in most of the varieties is a yellow or orange blotch or eye, contrasting most beautifully with the ground color of the flower." We hope that some day or other the value of our seed distributions will be appreciated. We have a strong faith that several years hence the iris will be esteemed as highly as was the gladiolus ten years ago.

THE BUSSEY INSTITUTION.

IN giving a list of the agricultural colleges in the United States in the RURAL of October 30, we inadvertently omitted the name of the Bussey Institution at Jamaica Plains, Mass., of which our esteemed contributor, Professor F. H. Storer is the Dean and also Professor of Agricultural Chemistry. By way of reminder of our omission our friend sends us a circular of the institution, which shows the wide range of instruction there given in agriculture and horticulture as well as in kindred studies. Professor Storer says:

"We call ourselves a school, as you see, but that circumstance doesn't make the fact any less true that the instruction given at the Bussey Institution, is not surpassed by that of any agricultural "college" in the country. Indeed, in all the list given in the RURAL on page 723, there are not more than three schools that deserve to be mentioned in the same connection with the Bussey Institution, as colleges of agriculture. Moreover, we are devoted *solely* to agriculture, horticulture, and veterinary science as related to agriculture. I suppose the omission from your list is explained by the fact that the name of the Bussey Institution was seldom if ever given in the lists of agricultural schools formerly published in U. S. Agricultural Reports. At the time, I thought so little of the authority that I never cared to take the trouble to correct the error. But I must confess to a pang when one of the leading agricultural papers of the country calmly ignores us as if we were doing nothing for the great cause of agricultural education, and as if our earnest endeavors to give the best possible instruction, calmly and quietly, were of no account."

THE BOOK PREMIUMS AND MR. STRONG.

DID this gentleman win the book premium he claims, or did he not? As it is time this question were settled, I now proceed to relieve the doubts of our disappointed friend with a few facts, so clear and unmistakable that he will not fail to see his error. As Mr. Strong has seen fit to change his complaint into an attack, he places me under the necessity of showing that he owes an apology for the course he has taken, and the language used.

The decision made by our company, that he did not win the Book premium, was based on reasons perfectly unanswerable. Hence instead of attempting to answer them, he simply persists in claiming an award that he has not earned. At the same time he gratefully accepts a discretionary award made by our company, which was entirely voluntary on their part, and was simply offered because they were pleased with a performance that fairly took a premium from another party, although it did not at all meet the case of our offer.

But let us now frankly say to Mr. Strong, that there is another reason why he failed to win the books. *There is a fatal error in the figures reported.* If he is a practical farmer, he ought to know that a shrinkage of corn amounting to less than one per cent. after three or five months from harvest, is too absurd to be entertained. But the weight he reports makes the shrinkage even less than three-quarters of one per cent. Whether the second weighing was three months or five months from harvest, we have no means of knowing. We have not seen or heard of any regular and certified report from the competitors under our offers, and did not even know that any parties were trying for them, till about the 1st of April, when we received a brief pencil memorandum of weights which certain parties had sent in to THE RURAL.

Absurd, however, as this claim evidently is, we shall not cancel the discretionary award already accepted by Mr. Strong. On the contrary, we will still give him a chance to win the coveted books.

If he will at any time within three years produce the same amount of corn as he has here reported, and from the same number of kernels planted, and will send in a proper report of the WEIGHT PER BUSHEL at the proper time, and all duly verified, and showing that the shrinkage at three months is not more than three-quarters of one per cent., we will not only hand over to him the books in question but also a library of 100 volumes from Harper's Half Hour Series. CONRAD WILSON,

On behalf of Farmers' Pub. Co.

AN INTER-STATE AGRICULTURAL CONVENTION is to be held at Springfield, Ill., on November 30th and December 1st and 2nd. Its object will be to discuss and, if possible, adopt a uniform system of reports, that shall give to farmers and others prompt and reliable information in regard to the probable and actual grain, fruit and meat supply of the great West. Other topics of mutual interest will be discussed, with a view to increasing the efficiency of each State Board by union with and knowledge of the methods of others.

CATALOGUES, ETC., RECEIVED.

ILLUSTRATED Descriptive Catalogue of Daniel F. Beatty's celebrated grand, square and upright Piano-fortes and Golden-Tongue, Church, Hall or Parlor Organs, Washington, New Jersey. This is a large catalogue of 56 pages, profusely illustrated and giving all needed information to those who are interested in the above instruments. Sent free to all,

How Pure Milk may be Supplied to Boston at reasonable prices to consumer and fair returns to producer—A pamphlet of 20 pages treating of a matter of importance to every inhabitant of every town in the Union as well as to the surrounding farmers—how to supply good milk not in Boston alone but also in all other towns and cities at fair prices to consumers and fair profits to producers.

WHAT OTHERS SAY.

The Harmless, Useful Toad.—A writer in the London Journal gives some interesting statements respecting the toad. In the matter of feeding, he says the toad is not very particular, either as to quality or quantity. Anything that creeps or crawls will do for him—wood lice, beetles, spiders, slugs, worms, even snails with their shells, are put out of sight as if by magic, for he has a peculiar way of taking his prey. He watches the moving insect for a second or two, then, suddenly darting out his tongue while at a distance of one or two inches, the insect is snatched up and swallowed instantly. One evening he gave one a wasp and a humble-bee; both were snapped up directly they commenced to move, apparently without causing the toad the slightest discomfort, though they must have reached his stomach in a tolerably active condition.

In plant-houses, especially forcing-houses, where insects increase their numbers so rapidly at all seasons, the toad's services are especially valuable; and if a suitable ladder, made of a narrow board with bits of lath tacked on it two inches apart, be set in a corner, slanting from the floor to the stage, he will climb it, and thus be enabled to make himself still more useful.

But perhaps the most remarkable fact concerning the toad is, that though he can, and does, eat a great deal, he can exist a long time without eating anything. Years ago he buried one for a month in the earth, as an experiment, and when dug up it was apparently as well as ever. More recently, having been bothered with myriads of wood-lice in an early cucumber-house, and not being able to find toads in February, he, later on, when they became plentiful, buried three in a nine-inch pot, with a slate on the top, 18 inches under ground, that he might have them handy for the next early forcing season. But that season he did not require them, so they remained buried until the following one, and were then, on being taken up, apparently not much the worse for their eighteen months' fast, though they didn't have any ice-water or alcoholic baths.

There is one system of tillage, says the London Chronicle, far too prevalent, in small gardens particularly. It is that of digging and manuring only one spade deep till a few inches of the top soil are poisoned with dung, and turned into a moving mass of slugs and grubs, while the subsoil is as hard as adamant.

Stirring the Soil.—It is more than 200 years ago since there lived Jethro Tull, the famous agriculturist, who was such an enthusiast for stirring the soil that he formed the opinion that crops could be produced without the aid of manure. It is a matter of considerable importance, remarks the Gardeners' Chronicle, that the atmosphere should enrich and sweeten the soil, and unless its surface is in a fit condition to allow the air to permeate it, its valuable properties are lost. Travelers inform us that the Greeks in their vineyards throw up the earth between the vines in ridges, the object being to enrich and sweeten the soil by exposure, adding and mixing manure with the ridge of earth before returning it to the roots, which it would appear they are in the habit of pruning annually.

Applied Science.—Professor Huxley, in his address delivered on the occasion of the opening of Sir Josiah Mason's Science College, at Birmingham, on Oct. 1, said:—"I often wish that this phrase, 'applied science,' had never been invented, for it suggests that there is a sort of scientific knowledge of direct practical use which can be studied apart from another sort of scientific knowledge which is of no practical utility, and which is termed 'pure science.' But there is no more complete fallacy than this. What people call applied science is nothing but the application of pure science to particular classes of problems. It consists of deductions from those general principles, established by reasoning and observation, which constitute pure science. No one can safely make these deductions until he has a firm grasp of the principles, and he can obtain that grasp only by personal experience of the processes of observation and of reasoning on which they are founded."

"The fact is," says the Western Rural, touching a subject to which we have many times referred, "children under 12 years old instead of being set to steady labor, should be sent to school and to play. Their muscles need an unimpeded growth—their bones and joints need consolidation, and their minds need free scope among the beauties of nature, in the pure air, and under the blue sky. But after this, up to 18 or 20 years, they are still growing, and being knit together for the great battle of life, health and happiness; and hence parents cannot be too careful in giving wholesome admonitions and practically guiding them in the flowery pathway of health, which depends materially on the proper use or the abuse of the organs of the body in childhood and youth."

Hedges.—In treating hedges of Osage, Honey Locust, or other deciduous plants, remarks Mr. Meehan, we like the plan of letting them grow as they will for two or three years, and then, when the stems are a couple of inches thick, saw them to the ground. A mass of strong sprouts then pushes up, which can be pruned into shape the next Summer. Where hedges are to be thus made, or older ones have been neglected, they can be cut down to the ground any time in the Fall or Winter season. It seems that in spite of all that has been said, Osage Orange and Honey Locust are the best plants for farm fences, or where any very strong fence is desired. Berberry, Silver Thorn, and Pyrus Japonica are the next best—indeed, except that it takes rather longer to make a good fence, the last named would be as good as the first two in all except cheapness.

The Best Autumnal Roses among Hybrid Perpetuals.—The two Roses which will give the greatest number of really fine blooms after the first of July until cut off by the frost, are Marguerite de St. Amaude and Francoise Michelon, says Mr. Ellwanger, in the Gardeners' Monthly.

Below are given in order of merit the best twenty-four autumnals; as La France now goes in the class of the Hybrid Teas, it is not included in this list; if it were, it would have the place of honor:

LIGHT COLORS.

1. Francoise Michelon,
2. Marguerite de St. Amande,
3. Countess of Serenye,
4. Abel Grand,
5. Mdlle. Therese Levet,
6. Baroness Rothschild,
7. Mdlle Eugenie Verdier,
8. Paul Neyron,
9. Victor Verdier,
10. Countess of Oxford,
11. Rev. J. B. Camm,
12. La Reine,
13. Mme. Boll,
14. Princess Charlotte,
15. Boildieu,
16. Baronne Prevost,
17. Anna de Diesbach.

DARK COLORS.

1. Alfred Colomb,
2. Marie Baumann,
3. Horace Vernet,
4. Pierre Notting,
5. Maurice Bernardin,
6. Louis Van Houtte,
7. Prince Camille de Rohan.

Killing Codling Moth and Canker Worm.—There seems to be no doubt but that water, in which Paris green or London-purple has been put, if pumped over the trees through a hose from a garden engine when the fruit is first forming, will prove a perfect security against codling moth and canker worm. We do not like the idea of using these poisonous substances in things we directly eat, says Mr. Meehan.

Manure from Swamp Muck.—To make a complete manure from swamp muck, says Dr. Stewart, we would proceed as follows: Take of seasoned swamp-muck 40 bushels, or one two-horse wagon load; mix thoroughly with it five bushels of wood-ashes, 100 pounds of fine bone flour; 100 pounds of finely ground plaster, and throw it into a heap, in which it will heat and ferment, and leave it for two or three months. This will be equal to twice its bulk of the best cow manure. If night soil could be added to it, it would be increased in value.

What are Diatoms?—The New York Times answers: Diatoms are microscopic aquatic vegetable organisms, endowed with a power of motion, and consist of simple cells covered with a coating of silex and increase by a process of budding and separation. Their structure is very curious and beautiful, and some species have their silicious coatings exquisitely marked, and thus form interesting objects for study under the microscope. They are very minute, measuring a thousandth part of an inch up to twice that size. Some species of the genus Bacillaria are supposed, with good reason, to invade the blood of animals and to produce various febrile diseases, such as hog and chicken cholera. It is highly probable that the largest number of diseases which affect animals most virulently are produced by the infection of the blood by these minute organisms, which by their rapid increase disorganize it and render it unable to support life. A large variety of these diatoms are found in guano, into which they have doubtless been carried in the excrements of sea birds, which have either fed upon these vegetables, or upon fish which have eaten them, as they exist plentifully in sea water. The bulk of large beds of rocks is formed of the remains of diatoms, and the bed of the ocean for hundreds of miles in places consists of mud formed of their shells or coatings.

Manuring for Potatoes.—The distinguished chemist, Dr. Augustus Voeleker, says that he has made a good many experiments on the potato crop with a view of ascertaining how the produce could be raised, and he has found that when the manure is applied early in Spring, so that it becomes thoroughly part and parcel of the soil in which the potato is grown, the effect is superior to what it is when the same manure or the same manuring mixtures are applied later in the season. Cover them in and get them as much distributed as possible with the soil. There must be time allowed for the mineral constituents to be thoroughly changed in the soil. We know, as a matter of scientific interest, that the form in which plants take up their food is not the crude state in which we apply it. Take, for instance, the case of potash. If you apply potash in the month of April for the potato crop, it is practically of no effect whatever. We usually apply to the land a cheap salt of potash, the crude potash salts which are very largely imported from the North of Germany, kainite or crude potash salts, and if you apply them in the Autumn they undergo a series of chemical changes—the potash gets fixed in the soil, other constituents pass into drainage, which are considered of less importance, and then you get the potash not so soluble as to injure the crop nor so insoluble as to be ineffective. You obtain the necessary element, potash, in a condition much more favorable to the healthy growth of all plants, not only potatoes, than you obtain it by crude application. Potash is not more specially necessary for potato culture than it is for any other crop—for wheat or turnips. The fact is that all green crops take a very large proportion of potash out of the soil, that has to be supplied in some shape or other, in the case of light soils especially.

Horse-meat as Food.—Some very interesting statistics have been published by the society for promoting the use of horse-flesh and the flesh of asses and mules as food, showing how steadily the consumption of these articles of diet has been increasing in Paris and the provinces since the foundation of the society in 1866. The London Agricultural Gazette says that the weight has increased from 171,300 pounds in 1866 to 1,982,690 pounds in 1879. In the principal cities of the provinces the consumption of horse-flesh may be considered to have fairly taken root. At Marseilles, in 1870, there were 599 horses eaten; 1 031 in 1875, and 1,533 in 1878. At Nancy, 165 in 1873, over 350 in 1876, and 705 in 1878; at Rheims 291 in 1874, 423 in 1876, and 384 in 1878; at Lyons 1,839 in 1873, and 1,313 in 1875. The average price of horse-meat is from 25 to 30 cents per pound. Each horse furnishes about 200 kilogrammes (400 pounds) of meat, which is capable of being prepared in many by no means unappetizing ways, such as *pot au-feu*, boiled, roast, hashed, haricot, jugged, filet, etc.

Inoculation as a Preventive of Anthrax.—M. H. Toussaint, the celebrated French veterinarian, has been making a large number of experiments on different animals to discover some preventive of anthrax or black-leg, and finally declares that after many unsuccessful attempts he has at length arrived at a very simple method of effecting his purpose, and this is done by inoculation. It is well known that some animals, like the pig, never take anthrax, while others, and among them some kinds of sheep, resist inoculation for the disease. The great merit of his method of inoculation is that it is always effective, and in a letter to the American Veterinary Review for October, he discribes his mode of performing this operation.

"I first used the filtration of carbuncular blood from a dog, sheep or rabbit he says." "For that purpose I took the blood of an inoculated animal, as he was about dying or immediately after death. This blood was defibrinated by beating, run through a cloth and filtrated through ten or twelve sheets of paper. It is by this process that three pups three months old, and the first ewe, were vaccinated. But this is a dangerous method and not at all practical, as often the fissures allow bacteridics to pass through, and they cannot be recognized with the microscope, as they are very few, and then animals which we wished to save were killed. Being unable to obtain a filter giving a sufficient quantity of filtrated matter, I used heat to kill the bacteridics, and exposed the defibrinated blood to 50° temperature for ten minutes. The result was complete. Five sheep vaccinated with three cubic centimeters of this blood have been inoculated with very active carbunculous blood and showed no effect from it. However, to obtain a complete immunity, it is necessary to make several inoculations. Thus, after the first preventive inoculations, I inserted under the skin of the ear of two sheep carbunculous blood of the rabbit and spores of culture. One of these died with a large number of bacteridies in the blood. I then inoculated again the four remaining sheep with the blood of the dead sheep, after heating it to 55°, and since that time each sheep has been inoculated twice with carbunculous blood without result."

Everywhere.

MICHIGAN NOTES.

There may be better locations on "Uncle Sam's" farm for hoarding up wealth than are found in Manistee County, but for the poor working man, there are but few better localities in which to get a comfortable living, and keep a respectable hold on society than in the various towns of this county. To be sure he must labor if he is desirous of rising in the world; but if he is ordinarily careful, he will enjoy the best of health, and that will add to his happiness as bags of gold would never do with disease eating at his life and heart.

The soil throughout the country varies from a light sand to a rich clayey loam, with a limy subsoil. The timber is maple, beech, elm, ash pine and hemlock, readily convertible into lumber if desirable. The old forest trees have grown to a great hight, and many of them are of gigantic size. Wheat, rye, oats, barley and corn are grown to a considerable extent. Fruit growing is proving a success, and large orchards are beginning to appear on many farms. Berries of almost all kinds are found in every successful farmer's garden to a greater or less extent, and nowhere can one find finer garden vegetables than can be raised here. For grains, fruits, and vegetables the stands at our county fair would compare favorably with those in any county in the State. Summer pasturage for stock costs almost nothing; for from the first of April cattle feed in the woods, and by the first or middle of June, are ready for market. Our Winters are long and often accompanied with deep snows, but the thermometer seldom falls ten degrees below zero. On the coldest morning during the past Winter the mercury stood 5° above zero. The Winter previous, it went but 2° below. Land can be bought for from $1 25, up to any figure, according to location and improvements. Go into what country you will, and you will find discontented ones, who wish always to be on the move, and these are always ready to sell cheap for cash. Such are found here. Energetic men frequently come and buy these places, go on with improvements already well begun, make a good living, and think it is one of the best localities in the world. There are some here who have been East, West and South and now declare that, all things considered, they could do better here than anywhere else. The grasshoppers are never a pest; the "tater bugs" can be vanquished; cyclones as yet have never visited this region. Work is plentiful, and wages are good. Farm hands get $15 to $18 per month; carpenters, $2.00 and $2 50 per day.

Education receives more than ordinary attention. It is the aim of almost every district to procure good teachers. Churches of various denominations are organized in nearly or quite every town in the county, and the most fastidious may find congenial society. Literary circles are numerous, instructive, even in seemingly out-of-the-way places. Thrift and enterprise are seen here and there through the various townships. Handsome frame houses are taking the places of the old pioneers' cabins, and well improved farms, with fruitful orchards occupy the place that twelve years ago was one dense forest. M. E. A.

Bear Lake, Mich.

RURAL SPECIAL REPORTS.

Bozeman, Gallatin Co., Mont. Ter., Oct. 26.—The seeds and plants the Rural was kind enough to send me last Spring were duly planted, with the following results:—Golden Ovoid Mangels attained large size, although the season was short and very dry and unfavorable for root crops; used irrigation. Mold's Ennobled Oats, planted in drills, were the best filled and prettiest-looking oats I have seen; but unfortunately Jack Frost nipped them severely; used irrigation. Magnolias and Ables Siberica didn't come up at all. The other flower seeds came up and are doing finely. The Cuthbert Raspberry plants were received in splendid condition and planted in good, rich, dark soil (dark clay loam), situation partly shaded. The plants commenced to grow, but afterwards died. I experimented with 50 Cuthberts, which I bought of E. P. Roe, in Cornwall-on-the-Hudson, and planted them right alongside of Turner, Philadelphia, Herstine, Davidson's Thornless and Mammoth Cluster; but not a single plant survived, while all the others (except Herstine, which didn't make a very rapid growth) were growing finely and fruited abundantly. The Snyder Blackberry, of which I set out 50 plants early last Spring, shared the fate of the Cuthbert—not a single plant survived. My farm is about 4,900 feet above sea level, and is situated on the head-waters of the Missouri River, at the foot of the Rocky Mountains, in Gallatin Valley, Montana Territory. I set out an orchard last Spring and shall report the results to you next year. The trees are all looking well so far, and five cherry trees fruited last Summer. Winter wheat froze out to a certain extent last Winter, and

although of A1 quality, turned out only about half a crop. Spring wheat got hurt by the frost and most of it will only make chicken-feed. Oats turned out good; the frost hurt them but little. Potatoes were good, both in quantity and quality. A. G.

KAN., Parsons, Labette Co., Nov., 2.—We have had ice a quarter of an inch thick. Wheat never looked better in spite of the small rainfall; our dry time is of two years' duration and is manifested now in the drying up of the creeks. The R. R. shops here are bringing water on the tenders for the use of the shops. Further west the roads have carried the water for the use of the engines, nearly 200 miles. The two eastern tiers of counties in the State have nearly an average crop of corn, but it is known that Kansas will need all the corn that she has raised. Hay is being shipped from Kansas City 200 miles west for the use of stockmen. Can this pay? No, but a greater loss may thus be avoided. Why don't they sell the stock? Because the stock is so thin it is not salable, and the hope is entertained that a mild Winter and the dry grasses of the Southwest will tide them over the Winter. Corn is being brought to market rapidly and being shipped as far as Galveston, Texas. It is as dry as corn is in Illinois in May. Wheat, potatoes, oats, apples and flour are being shipped to Texas. Cabbage, onions etc., also pass here daily in car-loads to the same destination, and there never passes a train from or to St. Louis that has no lager beer cars. Texas has a good crop of corn this year, but probably not half as much as is required. Her corn is generally poor in quality, and the weevil makes sad havoc with it. Cotton and sugar growing will continue to buy breadstuffs and meats from the West, simply because it is a matter of economy, in spite of the spasmodic cry of raising enough for home consumption. We are having the business boom strong. Bricklayers are receiving $5 per day and carpenters are receiving $2 25—an increase of 50 cents in two months. Winter wheat is worth 60 to 75c; corn 21c; oats, 25c; flour, choice, $2 35 per 100 lbs. by the quantity; potatoes, 50c; onions, 60c; apples, 50c; coal 12½c; per bushel; pine lumber, $25 to $50 per 1000 feet; castor beans, 85c. per bushel of 46 pounds. The price a month ago was $1.30. The crushers have agreed to crush prices. The crop was light this year, but the high prices at which most of the crop was sold have made it the best paying crop of the year. As usual farmers are all "going into beans" next year, when, of course, the few crushers will pay them just enough to induce them to put in another crop. J. B.

MICH., Fowlerville, Livingston Co., Oct. 30.—Wheat is worth 96c; corn, 25c; potatoes, 25c; butter, 20c; eggs, 16c, so we farmers ought not to find much fault. H. C.

N. Y., Erieville, Madison Co., Nov. 3.—The Eunobled Oats would have done splendidly were it not for the grasshoppers. The straw grew very heavy and the heads were fine; but the hoppers took more than half of them. I only got three quarts, but these I have put carefully by and hope for better luck next year. The cow-peas I planted in rows about 3½ feet apart, and one foot apart in the rows. They grew about two feet high, spread out about four feet and made a perfect mat. They ripened in September and I have saved seed enough to try them again in a larger way next year. The Beauty of Hebron potato did splendidly this year. Last year I had bad luck with it; but I saved "seed" enough to plant 72 hills this year. The first ten hills I dug would have made a bushel, but I left a part of them in the ground until late when I found them badly rotted. They ought to be dug when mature; then there is no danger of their rotting if stored in a cool cellar. My cellar is cool and dry and my potato bin is raised six inches from the cement floor and in it the tubers are put as soon as dug. If there are any signs of rotteuness in any the affected tubers are sorted out, and whenever a new load is added, I sprinkle a little unslaked lime over them, and I've never had a potato to rot. Blount's Corn I planted again this season, and it didn't grow so high as it did last year. It had two to three ears on a stalk and part of it ripened. I think that next year I can get it all to ripen, if we have a good corn year. I planted the Pearl Millet on June 10, and it grew eight feet high and headed, and I think some of the seed will grow, but I hardly think it would be safe to raise it here for a fodder plant—as it was a warm sandy place on which I tried it. Some Early Amber Sugar-cane of mine grew 12 feet high and ripened seed; I could raise it as well as corn, if enough of my neighbors also grew it so that we could get the proper machinery for making sirup.

S. J. V. C.

NEW YORK, Corning, Steuben Co., Nov. 3.—Wheat is looking fine—very different from what it looked a year ago. The past season has been one of good cheer to the farmer; for most crops have been good, and although they may not bring so much money as on some other years, he naturally feels better with heavy crops, than with light ones. Apples have been a very heavy crop here as well as in other places, and we are obliged to dispose of them at a very low price and thousands of bushels will not be gathered; but they will not be lost for all that, for the cattle and other animals can make good use of them, as it is found of late years that they are of much more value for stock feeding than was formerly supposed. I hear the Beauty of Hebron Potato spoken well of by all who have tried it. Many farmers complain of the Early Vermont rotting badly, while other varieties, by the side of them, rotted but very little. What is the verdict of the RURAL NEW-YORKER'S readers? Is it more subject to rot than other varieties? Corn husking is not yet completed. More plums were raised the past season than in several years together. I tried the experiment of planting field corn in drills this year, and will say that, for one, I do not like the plan at all; for it is more work all through the season, and the corn was not as good as where planted in hills. The best method, I believe, is to row it both ways, so as to run the cultivator both ways. F. H. D.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

West Highland Cattle.

R. M., Lovett, Md., asks: what sort of cattle are the West Highlanders, and whether any have been imported into this country.

ANS. The West Highland cattle, also known as Kyloes, are a small breed, the weight of a well-fed bullock usually ranging from 600 to 800 pounds—flesh, hide and tallow. They are an original breed, bred for centuries in the Scotch Highlands and the Hebrides, the roughest climate and country in Great Britain. Owing to the nature of their ranges and the rough treatment they receive, they possess great hardihood and endurance, and the bulls are remarkable for their power of transmitting their special characteristics to their progeny when crossed on cows of other strains. They mature early and their flesh is beautifully interlarded and laid on thickly on the choice points. From exposure to inclement weather for centuries their coat is very shaggy and thick, enabling them well to withstand the rigors of Winter. They are very picturesque and aristocratic in appearance and hence are highly prized for pasturing among deer in English parks. Their prevailing colors are black, red, yellow, dun, cream and brindle. The head is short with fine muzzle; the forehead broad and overhung with long, shaggy hair; the eye prominent; the horns wide and curving gracefully; the ribs boldly arched; the legs short and muscular; the back straight; and, as remarked, the body covered with a profusion of shaggy hair. We do not know of any importations of cattle of this breed into this country; though they would certainly be profitable in some of the rugged regions of the West, as their hardiness of constitution and thick coats would adapt them excellently to the conditions of such districts, while their activity would enable them to pick up a livelihood where other breeds would starve, especially as, like sheep, they thrive on coarse pasturage which others would refuse. Moreover, their beef would be just the thing for exportation, as its finely marbled character always secures the top prices in the English markets—usually a couple of cents a pound above that of any other breed.

Composting Woolen Waste,

F. G. H., Worcester, Mass., says: "I have a quantity of waste shoddy from a satinet mill, principally wool shoddy. I wish to work it into a compost to fertilize a kitchen garden. What chemicals would be best to mix with the shoddy and old leaves and refuse from the garden, to decompose the wool so as to make it into a fine compost? There are large quantities of this waste shoddy thrown away in this country, and if you could inform your readers how to work it up properly, it would be appreciated. Its effects are excellent, scattered on grass land, but it mats together when used in the garden, so one cannot cultivate easily."

ANS.—Wool waste decays or putrefies slowly, partly because it is greasy, and the treatment it requires is such as will remove the fat. If the material is soaked in putrid urine or manure water, or in milk of lime, the removal is accomplished in part. In the last case where lime is used the fiber is made much more friable. A similar effect is produced by steam under a pressure of three or four atmospheres. We should therefore recommend that if this last process cannot be applied, the shoddy be soaked in thick milk of lime, and then be worked into a compost with the manure of the yard. Some more energetic mixture is needed than old leaves or garden refuse—something that is itself strongly prone to putrefaction. But if no other materials than these can be had for composting, the addition of a moderate quantity of lime to the mixture, the shoddy having been previously itself soaked in milk of lime, may hasten the decomposition. The pile should be kept always moist, but not soaking wet, and should be forked over from time to time to keep it porous and secure free access of air.

Paralysis of the Hindquarters of Pigs.

B. R. W., Ellis, Mo., has a couple of six-months-old pigs that cannot stand on their hind legs, though otherwise they appear to be in good condition and eat heartily; they drag themselves along on their fore legs and cannot use their hindquarters, and he asks for the cause and a remedy.

ANS.—Paralysis of the hindquarters of pigs is due to various causes. If there is a soreness or tenderness on pressure over the loins, it may be due to either a sprain, rheumatism or lumbago. It may also be owing to the presence of a large number of worms in the intestines, coupled with constipation. Diseases of the spinal marrow or its envelopes, scrofula affecting the bony structure and "kidney worms" may all produce weakness of the hindquarters. Owing to the number of different causes to any one of which the ailment may be due, it is hardly possible to prescribe at a distance the best sort of treatment. If owing to worms in the kidneys, Fowler's solution of arsenic may be given in doses of a spoonful morning and evening, every second week for some time. If the cause is not known, it would be well, as a general treatment, to apply over the loins a liniment made of one part of powdered cantharides, two parts of oil of turpentine and two of olive oil. If there is costiveness, give to each pig from one to three drachms of powdered castor-oil seeds and a quarter to half a pound of rye flour mixed in a pint to a quart of sour milk or thin gruel the first thing in the morning, and repeat it once a week, the quantity depending on the age of the pig. Besides this, it would be well to give, twice daily, fifteen grains of powdered camphor, four grains of powdered nux vomica, half a drachm each of powdered aniseed and ginger; mix with a little treacle and rub on the roots of the tongue. Half the dose will be enough for pigs less than three months old. Give sloppy or steamed food and plenty of sour milk. A few sliced raw onions daily in the food are good, and free access to clear drinking water is necessary. A cure in such cases is generally slow and uncertain.

Bee Queries.

E. T., Cleveland, N. Y., asks: 1, the best time in the year to purchase bees; 2. about how many bees in a strong colony; 3. what would be the price per colony with hive; 4. how many pounds of honey per colony for wintering.

ANS. 1. It is safe to purchase any time in Summer. If purchased in April or May one should get strong colonies, and he can afford to pay more for them than later on, as he will get more honey from them. If one purchases bees in the Fall, he should insist on getting them at least one-third cheaper than the regular price in Spring, or else the seller should guarantee that they will winter safely. It is always best to get the bees from some apiarian near at hand. 2. A prosperous colony at the beginning of the swarming season consists of a fertile queen, a few hundred drones and about 40,000 workers. 3. The price will depend somewhat upon the relation of supply and demand; but it will give a fair idea of what it should be, to say that for box hives crowded with black bees—Italians are rarely found in such hives—five dollars per colony are about a fair price. For the same sort of bees in hives such as one may desire to use, eight dollars per colony are a reasonable price. For pure Italians in such hives, ten dollars per colony are not too high a figure. 4. To winter safely each colony should have 30 pounds by weight of good capped honey.

Miscellaneous.

J. H. S., Chelco, Oregon, asks, 1, what sorts of watermelons and muskmelons would be the best for that climate; 2, what is ammoniated bone dust; 3, its cost; 4, how much of it should be put in a hill; 5, is the Canada Victor Tomato earlier than Hathaway's Excelsior.

ANS.—1, We cannot answer this question. The best way is to procure a paper of each advertised in seedsmens' catalogues and plant a few hills of each. We have tried all kinds of melons at our Experiment Grounds. But we have no idea what would thrive best in your very different soil and climate. 2, "Ammoniated bone dust" is the addition of blood or flesh or guano, sulphate of ammonia or some other nitrogenous manures, to bone. Bone (raw) also furnishes some ammonia. 3, About $35 per ton. 4, A tablespoonful would suffice. We should not put it in the hill. It is better to mix it with the soil. 5, There is no difference worth speaking about between them.

G. H., Fountain Green, Del., asks, 1, whether catalpa seeds should be planted this Fall; 2, is the rhododendron hardy in that latitude, and what would be their price?

ANS.—1. Better place the catalpa seeds in boxes of sand and bury the boxes. Plant next Spring. 2. Some rhododendrons are hardy, some are not, for your climate. Try the following:—Lee's Dark Purple, Grandiflorum, Purpureum elegans, Album elegans, Everestianum, Roseum superbum. Rhododendron Catawbiense grows wild from Virginia southward and is very pretty. R. maximum grows in the North and South, westward to Ohio. The varieties first mentioned would cost at retail about one dollar each. Many of the catalogues we shall notice between January and March in our columns will furnish lists and prices.

J. T. H., Catskill, N. Y., says he is going to Maryland to start a small fruit orchard of 2,000 trees with a small capital, and he asks our advice as to selecting the best kinds for the New York market, also the names of a couple of trustworthy nurseryman in that section.

ANS.—The best way to ascertain what fruit to plant in Maryland for the New York market and what will succeed best in the location in which our friend intends to settle, is to visit that neighborhood and make inquiries of the fruit growers there as to the most valuable and profitable kinds to plant. D. S. Myers, Bridgeville, Delaware is a reliable nurseryman and so are the Hoopes Brothers and Thomas, West Chester, Chester Co., Pa.; and so is John Saul, Washington, D. C.

R. H., Circleville, Va., asks 1, how many cows should a fifteen-months-old bull be allowed to serve—would one serving every couple of days be too much; 2, how many ewes a day should a ram serve.

ANS.—1 Once every second day will not be too often for a short season, if the bull is kept in good condition. 2, Four ewes a day would not be too much for a Cotswold or South Down ram properly fed and in good condition; under like circumstances a Merino ram would serve six or eight. Only one serving should be permitted, the ewe being removed immediately thereafter.

L. R. B., Kenyon, O., asks if the one dollar corn sheller advertised in our columns is good for anything—if it is *worth* one dollar.

ANS.—We sent to the agents for one to try, having the tips and butts of a large quantity of corn to shell for seed. It suited us exactly and we would not part with it for considerably more than its cost, if we could not get another.

E. C., Menard, Texas. in the RURAL of Oct. 2, asked the name of an English work on sheep husbandry in Australia and New Zealand.

"Australian," now of Yakima City, Washington Territory, writes us that "The Management of Sheep and Stations," by James C. Jordan, published by Geo. Robertson, 69 Elizabeth Street, Melbourne, is old but good.

J. M. B., N. Y. City, referring to an answer in this Department in our issue of Nov. 6., in which we say—"the grape-vine bears fruit only upon canes of the previous year's growth," asks whether that statement is correct.

ANS.—Yes; it is entirely correct.

E. C. E., Euclid, Minn., asks what is the address of the manufacturers of the Evans rifle.

ANS.—Messrs. Turner & Ross, Boston, Mass., manufacture the Evans rifle, and also deal in other repeating guns of the finest quality.

H. C., Gray's Summit, Mo., asks where he can get seed of the Chester County Mammoth and Blount Corn, and its price.

ANS.—The above is the inquiry of 100 others. In our notices of Spring catalogues we shall give the information desired.

D. T., Brooklyn, Kings Co., L. I. Place them in a dark, airy room or cellar in which the temperature is just above freezing. They may also be kept by burying them in dry, gravelly soil two feet beneath the surface. Others questions will be answered under Domestic Economy.

C. S. S., Rochester, N. Y., asks if H. A. Whittemore, (Fluvanna, N. Y.) whose announcement appears in our columns or did appear last week, is trustworthy and will he send the two pounds of Silver Hulled Buckwheat to each person who subscribers for the RURAL through him?

ANS.—We have known him for many years. He is among the RURAL'S best friends—so, at least, we have always considered him.

S. A. M., Howard Lake, Minn., asks whether the pentstemon is hardy.

ANS.—It is in this climate.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, NOV. 13.

D. & C.—P. B. M.—S. L.—W. F. G.—A. B. A.—J. H. McA.—S. L. L.—E. F.—H. W. R.—W. J. M.—J. S., thanks—J. A. M.—H. P.—J. P. B.—F. R. S.—O. W. D.—L. B. T.—E. P.—A. E. W.—J. H. F.—C. D. P.—C. B.—G. E.—L. S.—T. T. L—W. J.—A. E. M—M. M, S., thanks—J. M. B.—F. H. D.—T. H. H., mail—T. P. McC.—L. W.—H. C. F.—J. B. C.—C. H.—W. L.—G. C. C.—N. S.—D. A. D.—J. S., plants received, thanks—M. B. P.—J. B.—N. J. A.—E. K.—F. H. S.—J. L. S.—W. B. J., thanks—J. L.—W. B. P.—M. P. W.—T. H. H.—W. S. F.—W. C. B.—E. M. L.

When the brain is wearied, the nerves unstrung the muscles weak, use Hop Bitters.

THE
Rural New-Yorker,
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Conducted by
ELBERT S. CARMAN.

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SATURDAY, NOV. 20, 1880.

A WORD BETWEEN THE RURAL AND ITS READERS.

ALL of our agents, friends and readers are invited to send for our Premium Lists, posters and specimen copies. All or any will be sent promptly without charge. *If each one of our subscribers could find it convenient to send us another subscription besides his own, the Rural's circulation would be doubled for* 1881! We respectfully submit that the RURAL NEW-YORKER would be an appropriate and acceptable present to many hard-working, worthy farmers or gardeners who may feel that they cannot themselves afford to subscribe.

We repeat that friendly words spoken now will be more effective than if spoken later when many will have determiued upon their reading matter for another year. The RURAL will appreciate such kind words and endeavor by continued, unremitting work and downright devotion to their interests to prove more valuable to its readers during 1881 than it has proven during any year of its existence. In all sincerity we pledge ourselves to this. Our first aim in the future as it has been in the past will be to elevate the professions of agriculture and horticulture to their legitimate spheres among the industries of mankind; to make them respected by all good, intelligent people and to impress upon the people of our country the fact, which is now quietly ignored, that it is to the American farmer that America owes her present prosperity and greatness. It is quite natural that the RURAL should desire to be foremost—first in this grand work. The *one additional subscription and the friendly word* would greatly aid us in that direction, good readers.

PROBABLY cabbage worms have never been more numerous in many parts of the country than during the present season. Acres upon acres were riddled by them upon Long Island, and it would appear nothing has been discovered, not dangerous to human life, that will destroy them. We saved our own cabbages by going over them and cutting the worms in two with a sharp, pointed pair of scissors. They are so nearly the color of the leaf that it is a trying, wearisome matter to discover them at first, but the eye becomes trained after a while and one is surprised at the rapidity with which at length he is enabled to destroy them.

GREAT BUTTER COWS. — It is quite exhilarating to read the numerous accounts which have for a few months past been given to the papers of the great butter yields of various cows. It began with one pound per day, then rose to two pounds, which were thought quite extraordinary; but this wonder did not last long; for before one could scarcely turn round, the record jumped up to three pounds, then the dairy public began to take breath, and thought it could not be exceeded, when, lo! out jumps four pounds, with the possibility, on the part of one writer, that this will soon be surpassed. It was formerly considered a great thing for a cow to give her weight of milk in a single year; but now comes a race of cows that will produce that weight of butter; and perhaps in course of time double upon it.

BORDERS or trenches for grape-vines are often prepared by digging out the earth, let us say, two feet in depth, four feet in width and of a length depending upon the number of vines to be planted. This trench is then filled-in to the depth of a foot with stable manure and the rest with the good soil taken out of it. It would be far better to throw in the good soil first and finish with the manure. In this case the soil beneath into which the roots would freely penetrate would receive the juices of the manure. In the other case the hard sub-soil, into which the roots should not be encouraged to grow, would receive those juices.

We have often seen garden beds prepared in the same way. But it is in fact a mere waste of labor and manure. The feeding roots of most plants grow near the surface and there is where their food should be most abundant. It is better that the food should go to the roots than that the roots should be obliged to grope for it in all directions through the hard, airless sub-soil.

YIELD OF CHESTER CO. MAMMOTH CORN.

THE Report of Messrs. Dodge & Co., as may be seen by reference to page 767, gives the Chester Co. Mammoth an average of 236 bushels of ears per acre. We find that one bushel of this corn in ears weighs 35 pounds, making 17 quarts of shelled corn weighing 28 pounds, or a total average of 125 bushels of shelled corn per acre. It must appear, therefore, until we are enabled to present our report of the measurement of the entire yield of the field that one acre (the best) of the Chester Co. Mammoth yielded 300 bushels of perfect ears, or over 159 bushels of grain, and that the average yield of the entire field is 125 bushels of grain. The *actual* measurements of the entire fields of both Blount and Chester will be published in our Corn Number.

JUTE.

ONE of the most promising new fields for farming in the Southern States is the cultivation of jute. As a fiber it is largely taking the place of flax and hemp in coarse products, and it is also said to be much used in much finer goods, some of the handsomest carpets being partly of jute. There is no doubt but the demand is to be large and to steadily increase.

A distribution of seeds in the vicinity of St. Louis last Spring, by Professor Waterhouse, of the Washington University, brought two samples of products. One grown by Dr. Shaw, of Shaw's celebrated botanical garden, had no unusual culture and grew to the hight of several feet and produced seed. Another grown by Professor Jenks was six feet and three inches high on October fifth. This specimen had frequent waterings while growing.

Jute is as easily raised as corn, and, planted in March or April it may be harvested in June, July and August, after cotton has been laid and at a time when there is no other special call upon the farm force. The labor of cultivation is light, as its growth is so rank as to overshadow everything else in the field and its yield is simply enormous. There is a very wide field of industry in jute cultivation and one which will eventually be very profitable. The importations of jute during the year ending June 30, 1880, were over $7,000,000, all of which can easily be produced at home.

INCREASE IN THE MANUFACTURE AND CONSUMPTION OF WOOLEN GOODS.

ANOTHER great encouragement for flock-masters to add to the numbers of their sheep as fast as possible, is the rapid increase of woolen manufactories in our country for twenty years past, and the cheapening and improvement of their fabrics. The consequence is an unprecedented demand, especially for underclothing. Seventy years ago, linen fabrics were almost the only ones used for this purpose and also many household purposes. Sixty years ago, when cotton manufactories had been established to some extent, their fabrics began to take the place of linen; and now for 20 years past the use of woolen goods has been rapidly superseding in many instances both linen and cotton.

This change is highly gratifying, as woolen garments are much the most healthful, even in hot climates, and should be worn in our own, Summer as well as Winter, particularly those next the skin, when they can be borne with comfort. They absorb the perspiration of the body more freely, and guard it against sudden chills and rheumatism. All who wear woolen under-clothing are not nearly so liable to take those severe colds which are almost certain to bring on other ailments more or less dangerous.

Close observation of the medical faculty for some years past, substantiates the above. It is found particularly the case with travelers, sailors and soldiers, who are so much exposed to sudden changes of the weather at all times by night as well as by day and also to sudden changes of climate. Woolen under-clothing may be found irritating and uncomfortable at first to a very sensitive skin. In this case adopt such as is fabricated of a mixture of cotton and wool, and after getting well accustomed to that, change for pure wool.

The fleeces of our flocks have been so varied and improved within 50 years past, as to furnish nearly all the sorts necessary for the manufacture of thick goods for blankets and men's wear, and also for the finer dress goods of ladies and children's under and over garments. These different qualities of wool can be easily multiplied now to any extent, and the manufacturers have only to express their desires to the flock-masters to insure their being rapidly fulfilled.

A NEW SENSATION.

A SENSATIONAL story is in circulation, to the effect that butter which has been adulterated with soapstone has been sent from Western cities to New York for sale; and that some Western farmers have purchased the soapstone finely ground, by the barrel, for the purpose of mixing it with their butter. This story is a transparent fraud beyond a doubt. What its object may be, for it has an object certainly, is difficult to comprehend, unless it be an attack upon the reputation of Western butter. That it is without good basis may easily be proved by any person who knows what soapstone is, or who will procure some and try for himself if he can add 20 per cent. in weight of it, that is, 10 pounds to 50 pounds of butter, or even more, as it is charged, without easy detection by the taste or sight. As a test we have reduced to the finest powder a specimen of the soapstone from the locality mentioned, Philadelphia—the quarries are within a few miles of that city and known to us—and have mixed it with five times its weight in butter. The mineral is left upon the tongue as the butter dissolves and is gritty to the teeth. Its peculiar, pearly glistening appearance and silvery whiteness are also distinctly visible to the unaided eye, and under a common pocket lens are plainly visible. The author of this remarkable "*canard*" is the victim of a hoax or is himself the author of what Artemus Ward once wrote as a "goak," or perhaps worse. Western butter is at the head of the market and has attained its well deserved position by its merits and in spite of difficulties and prejudices. Western dairymen are not fools. Having an excellent reputation which is highly profitable to them, they are wise enough to retain it in the only way that is possible. No doubt soapstone may have been used for adulterating lard, and that it can be so used without easy detection, and lard is notoriously subjected to adulteration with various cheap or valueless matters, such as water, for one, by certain manipulations. It may be, too, that the lowest grades of butter, that have been "milled," as it is called, and which are sold for cooking purposes only, may have been mixed with lard so adulterated. This is possible. But that good butter can be so adulterated or is likely to be, is not true; it is, in fact, beyond possibility, without easy detection. If any reader has been disturbed by this false, sensational story; let him rest in peace. If we felt inclined to be jocular over this matter, we should say that all this soapstone business is nothing but talc anyhow.

BREVITIES.

MR. PURDY deems the Worden one of our most valuable *early* grapes for the million. This is much like the Concord.

IF children must eat candy, let it be Rock Candy. All others are liable to have been adulterated with glucose or something worse.

GLUCOSE is defined in a recent French paper as follows:—"Glucose—a product with which wine is manufactured without grapes, cider without apples and confectionery without sugar."

MR. SIDNEY in his able work says: "The beauty of the cart horse depends not on fine quality or delicate symmetry, but on a sort of elephantine ponderosity that bespeaks power in every muscle and in every limb."

"WHAT pear shown at this meeting is as good, all things considered, as Beurre d'Anjou?" was asked at the last meeting of the Western New York Horticultural Society. Pres. Barry answered—"None. Anjou is the best pear in the world."

COL. WARREN, the editor of the California Farmer, lately enjoyed a dinner prepared by several friends in honor of his 75th birthday. In 1854 he established his journal and has done more, probably, than any other person to develop the agriculture of his State.

A WELL known agricultural writer and editor makes this remark in a private letter to the RURAL: "Now I hope for four years of peace and prosperity—glad in my whole heart election is over. I detest this political wrangling and the slanders of either party."

MESSRS. READ & PELL in their report of agricultural matters in America, use several odd words respecting corn. In one part they speak of corn-shellers for "stripping the grain from the core." In another they allude to the value of the "green cobs for the table."

NOTWITHSTANDING the great yield of grapes all over the country the past season, there was not one day when Concords were sold in New York city at retail for less than six cents per pound—full weight. And yet many of the growers sold their entire crops for less than two cents per pound!

A FEW days ago we saw a Hercules's Club at the office of Thorburn & Co. of this city. It was three feet and ten inches in length. There was nothing very extraordinary about this, but we were informed that the seed from which this gourd was grown was brought from Patagonia by the Wilkes's Expedition in 1834. Thus, it will be seen, the seed was not less than 46 years old.

WE would advise our readers for the latitude of Philadelphia and north of it, who received the Cuthbert Raspberry, to cover the earth about the stems for a distance of two feet with barnyard manure. Those living south of Philadelphia might better wait until the first freeze. This mulch will tend to prevent sudden freezings and thawings, and in this way help the roots as well as by furnishing ready food when Spring arrives.

THE editor of the Chicago Weekly Tribune, commenting upon our corn yield, says: "There is nothing remarkable in the yield, and we only call attention to it as an illustration of what a little extra manure and work will do for a crop of corn in a climate and soil not nearly so favorable as ours for its growth." We beg to state there is a good deal that is remarkable in the yield and that instead of "extra manure," a comparatively small quantity was used.

WHAT trees to plant about the home—what shrubs? These questions we shall endeavor to answer in our Tree and Shrub special number of the RURAL NEW-YORKER, to be issued before the Spring planting season arrives. We shall endeavor to give all needed information regarding the subjects treated. At the Rural Grounds we have over two acres of land in ornamental trees and shrubs, scarcely any two of which are alike, and we shall commend only those which have proven hardy and the finest of their class.

OUR occasional contributor, Prof. Sheldon, who has been visiting Canada (we regret he did not favor us), writes to the Live Stock Journal respecting the Canada methods of raising corn for soiling and for hay. He concludes: "Now, it appears to me that in the warmer parts of Britain, and on good soil, this corn would be found very useful to dairy farmers as a staple green crop for soiling; in any case, it would do to use by way of variety among other crops." We would suggest Blount's White Prolific as an excellent kind for the purpose.

COL. WILDER writes us: "I am glad that you keep up the illustrations of American grapes. We are making grand additions to our list and the time will come when we shall have grapes, wines and raisins to compete with the world. So I said in my former addresses, in my Report of the Paris Exposition, 1867, and other places. We can scarcely begin to estimate the results which are to arise from the capability of our wide range of territory and climate. Think, for example, of the great North-west equal in fertility and salubrity to California—a territory equal to 22 States like Ohio—soon to be occupied by the swarming millions going west.

DOUBLE FLOWERS.—In a communication to the Academie des Sciences, M. Heckel attributes the formation of double flowers (from the replacement of stamens by petals) to long-continued self-fertilization, and he proves his statement by adducing the results of some experiments made by him on Convolvulus arvensis, wherein he effected self-fertilization for three generations, and in the third succeeded in producing double flowers.

According to this philosophy, one would suppose that all cleistogamous flowers, as, for example, the Closed Gentian, would become double, which is far from the fact. It is our impression that the Cardinal Flower and also L. syphilitica are self-fertilizing. We have never heard of a double flower of either. It might be supposed, also, that oats and wheat would long ago have become sterile through doubling up.

THE exports of flour from this country are increasing even more rapidly than those of wheat, and it would seem that the day is not far distant when a large proportion of the wheat crop will be sent abroad in the shape of flour, thus securing to our own working classes the labor of milling. For some time back, English millers have felt the competition, and now a wail on the same subject comes from Hungary. The yellowish, adhesive Hungarian flower has long held a front rank in Europe where it found customers at high figures in Great Britain, France, Germany and Switzerland. A few years ago, in view of demand for the article, a large number of new mills were built at Pesth and other points, but so great has been the falling off of late in this trade that many of these are now idle, while others are forced, in order to compete in prices with our product, to make lower grades of flour, thus endangering the reputation which gave rise to the demand for their goods. Although American flour is not yet considered quite so good as Hungarian, still it is confessedly so fine and can be placed on the market so much cheaper, that it is fast driving its rival out of the markets of Great Britain, France Switzerland and some parts of Germany.

Literary Miscellany.

WHAT TEMPERANCE DID.

My story, marm? Well, really, now, I have not much to say;
But if you'd called a year ago and then again to day,
No need of words to tell you, marm, for your own eyes could see
How much the Temperance Cause has done for my dear John and me.

A year ago we hadn't flour to make a batch of bread,
And many a night these little ones went supperless to bed;
Now look into the larder, marm,—there's sugar, flour and tea;
And that is what the Temperance Cause has done for John and me.

The pail that holds the butter, John used to fill with beer;
But he hasn't spent a cent for drink for two months and a year;
He pays his debts, is strong and well as any man can be;
And that is what the Temperance Cause has done for John and me.

He used to sneak along the streets, feeling so mean and low,
And he didn't like to meet the folks he used to know;
But now he looks them in the face, and steps off bold and free;
And this is what the Temperance Cause has done for John and me.

A year ago these little boys went strolling through the streets,
With scarcely clothing on their backs, and nothing on their feet;
But now they've shoes and stockings and garments as you see;
And that is what the Temperance Cause has done for John and me.

The children were afraid of him—his coming stopped their play;
But now when supper time is o'er, and the table cleared away,
The boys all frolic around his chair, the baby climbs his knee;
And this is what the Temperance Cause has done for John and me.

Ah, those sad days are over of sorrow and of pain;
The children have their father back, and I my John again!
I pray excuse my weeping, marm—they're tears of joy, to see
How much the Temperance Cause has done for my dear John and me.

Each morning when he goes to work, I upward look and say;
"Oh, Heavenly Father, help dear John to keep his pledge to-day?"
And every night before I sleep, thank God on bended knee,
For what the Temperance Cause has done for my dear John and me.

INMATES OF LESTER HALL.

(Continued from page 757.)

CHAPTER XVIII.

Mr. Daton smiled, and began to read Mattie's letter to Cecil:

"MY DEAR UNCLE HENRY:

"I hope neither you nor Cecil have been anxious at my silence; but in case you have, I will begin my epistle by assuring you that I am quite well, that Edgar is quite well, and that you should have had a letter before if I had not waited until I could give you some definite tidings about something which has interested us greatly during the last few days——"

"What can that be?" interrupted Cecil, from her seat by the fire, a little curiously.

Her uncle continued:

"You know under what deep obligations to Dr. Carewe we both lie; and you will, I am sure, be glad to hear that we have been able to be of some slight service to him here. As the tale concerns us nearly, I will give it you in detail."

(As the reading continued, a faint color had risen in Cecil's face, and at the mention of Dr. Carewe's name a sudden interest had lighted up the great brown eyes, and made the tender, mobile lips quiver.)

"It is altogether so strange and so sad a story," continued Mr. Daton, reading off the closely-written pages of Mattie's letter, "that I hardly know how to begin it. Edgar would tell it better than I can do, but he has been obliged to go out on business connected with it, and do not wish that there should be any further delay. You will remember that when I last wrote we were going to spend a day or two at Monaco, as we were both curious to see the mysteries of the gambling saloons—at least I was—for Edgar had been there already. I will not enlarge on what we saw—it was a brilliant but a very sad sight; the eager, haggard faces, some flushed with triumph, others white with despair. While we were there a gentleman rose from one of the tables, and as he was about to leave the room, caught sight of Edgar, paused irresolutely for a moment, then came up to us.

"'You are Mr. Edgar, I believe?' he said, abruptly, and when my husband had answered in the affirmative, he went on quickly:

"'Am I mistaken in supposing that you are acquainted with a man named Carewe—a doctor, I believe?'

"'You are not mistaken,' said Edgar. 'Lawrence Carewe is one of my best friends.'"

"'You know his whereabouts?'

"'Certainly,' replied Edgar, in some surprise.

"'Then,' pursued the stranger, 'you can send him word that if he wants to see his brother alive, he had better lose no time in making his way here for his hours are numbered.'

"'His brother!' exclaimed Edgar. 'Do you mean Lionel Carewe?'

"Yes."

"'He is here—and ill?" said my husband;

"'Can you give me his address?"

"'There it is.'

"He wrote a few words on a card, gave it to Edgar, bowed, and walked away. When we examined the card, we found that the address given was that of the hotel where we were staying, so we drove back at once and made inquiries. The proprietor told us that a man named Carewe was there—very ill, dying, and in great distress, having lost everything at the gambling-tables.

"'I let him stay here out of charity,' he added, with a shrug of his shoulders. 'He would give no address of his friends; he said he had none, and only wanted to die in peace.' We asked if a doctor had seen him. 'Oh yes,' was the reply, 'but he said nothing could be done for him.'

"'Can we see him?' asked Edgar, feeling rather indignant at the man's manner.

"'Certainly, if monsieur wishes, but he is in a room at the top of the hotel. Miladi will not care to climb so high.'

"'Will you come, Mattie?' Edgar asked me, and of course I said, 'Yes;' so we went up together and found the poor fellow in a wretched attic at the top of the house. He was lying on the bed fully dressed; he had fallen there in a kind of stupor, on his return from that hateful Casino, and there he had laid for three long days and nights, dying, his only attendant one of the under-servants at the hotel, who came to him in her spare moments. He was lying with closed eyes when we entered, his breath coming in faint gasps, and his face awfully worn and emaciated; but Edgar knew him at once, and whispered to me, 'It is Lionel Carewe, Lawrence's brother.' Soft as the whisper had been he heard it, and opening his eyes, stared wildly at us.

"'Lawrence,' he said feebly, 'who talks of Lawrence—poor Lawrence?' My husband went up to the bedside, and bending down, spoke to him gently and soothingly, and a gleam of consciousness came into his eyes.

"'Don't send for Lawrence,' he said, faintly. 'He can do no good—I am dying; my hours are numbered now. He could not get here in time,—and it would grieve him.'

"'Your brother would wish to be sent for, I am sure,' said Edgar, earnestly. 'Let me telegraph for him, and meanwhile if we can be of any service to you, it will give us great happiness—my wife and I.'

"'Your wife?' he repeated, glancing over at me. 'Is that your wife? Her face—I know it. What is her name?'

"'Mattie Edgar now; it was Mattie Lester,' said Edgar, as I drew near.

"'Lester,' he repeated, with a start. 'Had she a brother Rex.? Poor Rex. Lester!'

"His mind seemed to wander again for a moment. We were just debating what we should do when he began again: 'He is dead,' he muttered. 'He said I had led him on to ruin. Lawrence tried to help him. Ah! how my head burns. Red, did you say red? and I laid on black. Ah! I have lost!'

"He fell back exhausted and panting, and I remembered then that dear Rex. when he was dying, had complained bitterly of some one who had led him into error, and I knew that this must be the man he meant. It was very distressing to hear his mournful ravings, but we procured him every assistance in our power and medical advice, and we telegraphed for his brother. For a few hours he lingered, then just at the last he regained consciousness and recognized Edgar. 'It is a fitting end for such a life as mine,' he said, sorrowfully. 'Poor Lawrence did all he could to reclaim me; he has been so good, but it was no use. Well, it is over now.' Then he told us his story brokenly and at intervals, the old, old story of folly and sin, of his terrible downfall, how he had gone from bad to worse, how he had succumbed entirely to his passion for gambling, how he had lost everything—honor, health, and reputation. He asked us questions about Lawrence; he seemed glad to know that he was rising so rapidly in his profession, and then he would lie back exhausted and fainting and we thought the end was near. Once he spoke to me, asked me to forgive him for the wrong he had done to Rex.; and when I told him that I owed my life to his brother's skill and care, he seemed pleased, and said, feebly, 'That Lawrence, poor fellow, had always to atone for his sins.' Then he thanked us for our goodness—it was so little we could do, that the words made our hearts ache—and gave us some last messages to his brother; but I am thankful to say that Dr. Carewe came in time to see him. It was evening when he came, and Edgar and I were with him; he was dying, and his weakness was extreme; but his face lighted up as his brother came in and knelt down by the bedside.

"'Lionel,' he said, softly. 'Dear old fellow, do you know me?'

"'Yes—I am glad—you forgive me, Lawrence,' came brokenly from his lips. Then his eyes closed, a shiver ran through him, and all was over. Edgar took me out of the room then; but I caught one glimpse of Lawrence Carewe's face, and I could guess how deep had been his affection for his unhappy brother. Dr. Carewe stayed for the funeral, which took place on the second day after the death. He feels this very acutely, and looks wretchedly ill; still I think it must be a relief to him to know that 'after life's fitful fever' his brother sleeps well. If you can do anything, dear uncle, I know you will—he has been such a true friend to us that I should be only too glad if we could repay our great debt of gratitude in any measure. When you go up to town, do call. Cecil will be able to tell you what passed between her and our dear brother on his deathbed, which will explain to you the remorse which poor Lionel Carewe felt when he was dying.

"Give her our love, and kind regards to Ernest. I hope you are both well, and that Cecil is having some good gallops over the Downs. Write to us, both of you, soon, and tell us all home news. We are not tired of our *exile* yet, but we often talk of you and wish we could have a glimpse of you.

"Ever, dear Uncle Henry,
"Your loving niece,
"MATTIE EDGAR."

The long epistle had reached its end at last, and Mr. Daton replaced it in its envelope.

"Poor Lawrence," he said, sorrowfully. "Poor lad, he was so fond of that ne'er-do-well brother. I shall never forget how he came to me to plead Rex.'s cause, and how deeply he felt that his brother had led him astray."

There was no answer from Cecil, but Mr. Daton did not seem to expect any, and in a moment he spoke again.

"I suppose there is nothing we can do to help him over his trouble, Cecil?" he said, wistfully; but there was no reply.

He rose hastily from his seat, and came round so that he could see her face. It was lying back on the cushions of her chair, white and still, with dilated eyes.

"Cecil," he said, gently, touching her shoulder—"Cecil, speak to me, dear."

She looked at him in silence, with unspeakable misery in her glance.

"Cecil, are you ill, my child?" he asked, bending tenderly over her.

"Ill?" she said, feebly. "No; I—am—not—ill."

The words were spoken with an effort, and a pause between each; she tried to rise, putting her hand up to her brow with a gesture of pain; then she fell back, her eyes closed—Cecil Lester had fainted away.

CHAPTER XIX.

PENITENCE.

"CECIL, what is the matter with you, dear? You look anything but like yourself, and your pale face makes me quite anxious."

Cecil Lester and Mr. Eleston are standing in the dining room waiting for the horses to be brought round for their morning ride, and Cecil is ready. She wears her hat and closely-fitting dark green habit; in one hand she carries her whip—a dainty jewelled toy; the other lies passively in her lover's as he stands beside her, looking down with a shade of trouble in his pleasant blue eyes, on the beautiful face which looks so pale and so grave in the bright morning sunshine.

"Anxious," echoes Cecil, with a little smile, which is sad enough not to reassure him. "There is no need for anxiety, Ernest; I am always pale in the morning, you know!"

"Are you, my darling!" he says, fondly. "I don't like it though; I like to see you with your pretty color in your cheeks."

"It will soon come when we have had a canter over the Downs," she answers him, a little wearily. "You are only too kind and too careful about me, Ernest."

"Too careful of you, my darling?" he says, fondly," "How could that be?" I love you—do you know what that means, Cecil—I love you?"

She shivers slightly as she listens, but suffers him to draw her to him with fond tenderness.

"There are the horses, Ernest," she says in a moment, rousing herself and lifting her fair head from its resting place against his shoulder. "We will go and have a good gallop, and disperse all these blue imps which are troubling me."

"Where shall we go?" asks Mr. Eleston, as he gets into his saddle. "Will the Downs be too cold for you this morning, Cecil?"

"Not a bit; there is no other place where we can have such a good gallop," she answers, warmly. "I feel like riding this morning, Ernest, so I hope you are in the humor."

"When am I not in the humor for riding?" he answers, laughing, as they canter away.

But Cecil's enthusiasm soon fails her, and after an hour's good scamper over the Downs she declares her self tired, and Ernest instantly acquiesces. As they ride slowly homeward, he notices that the pretty rose-flush which the keen air blowing over the Downs has brought into her cheeks has faded again, and that the beautiful face looks pale and grave.

"I don't think I will put in an appearance at luncheon," she says, forcing a laugh. "My head aches. I will go and lie down. Excuse me to Uncle Henry, Ernest."

"Yes, love," he answers, ruefully. "But, Cecil, how shall I get through the afternoon without you?"

"As best you can," she answers, smiling; then, as if to atone for the careless speech, she lifts her face to his, and he stoops and kisses her fondly on the forehead.

"Your head is very hot, and your hands are very cold, my darling," he says, anxiously. "I think you must be ill, Cecil."

"I shall be quite well by-and-by," she replies, as she goes up-stairs, and he stands in the hall, watching the graceful figure until it disappears, when he sighs and goes in to his own luncheon, troubled, dissatisfied, but trying in his loyalty to Cecil to dismiss the feeling.

The week which had elapsed since Mattie's letter awakened her to a knowledge of the great error she had committed in thinking of Lawrence Carewe as the man who had been the ruin of her brother, has been a time of acute misery, of unutterable agony. That she had failed in her vengeance she heeded little. Who could read the description of the miserable fate of the reckless, dissolute gambler, who was Lawrence Carewe's brother, and feel anger towards him for his misdeeds? He had been sufficiently punished without her intervention; but when she looked back upon the past, her heart was filled with the bitterest agony and self-reproach. She remembered how she had striven, how she had used all the fascination of her great beauty to win the heart of Lawrence Carewe, and how entirely she had succeeded; how, when he had declared that love to her, she had repulsed it with contempt and scorn, and revealed to him the cruel purpose which she had cherished. How could she atone?

Cecil rose from her chair, and began pacing up and down the room with quick, restless steps. How could she atone? How—how? She could not atone, she thought, wearily, but could she not win forgiveness? Surely, if she confessed, and told him how sorry she was, he would forgive; he was so generous and so noble he would not cherish resentment against her.

"Oh, my darling, my darling," Cecil said, half aloud, as she sank into her seat again. "You will forgive me."

"My darling"—the words had escaped her lips unconsciously, involuntarily, and as she remembered, a burning blush covered her face from her white throat to the roots of her bronze-brown hair, and she hid her face on her hands with a movement of such pretty shyness and shame that it was a pity no one was present to enjoy it; but the hot flush soon faded, the fingers fell from before her face, and showed it white, cold and mournful.

Then as her hands fell on her lap, the gleam of the great flashing diamond—the outward sign of her engagement to Mr. Eleston—caught her eye, and a sob broke from her lips. She had forgotten him; her whole thought had been for Lawrence Carewe; her own suffering—and she suffered as a woman of a strong, passionate temperament only can suffer—was unheeded. She could only think of the man who had suffered so cruelly through his love for her, through the nobility which had never doubted her, and even when he knew all had never reproached her. He was her only remembrance as she lay there; he—Lawrence Carewe—who had suffered a martyrdom through her.

She loved him; she did not attempt to blind herself to that fact; it would have been useless trying—she loved with a strength which she herself hardly fathomed—a power which would have made her suffer any doom, could she have given him back his peace, have obliterated her image from his heart! But was that possible? Ay, perhaps such a blow as she had dealt him might have killed his love for ever, but he would forgive her. She had that hope still, and when she had his forgiveness she could bear the rest.

She opened her writing-table, and dipped her pen into the ink. She meant to write to him; she dared not see him to ask his pardon, now that her loyalty and her allegiance belonged to another—but she would write. She drew the paper towards her, and sat for some minutes lost in thought; then she began to write, and her pen coursed rapidly over the paper until she had finished the note It was a brief one, but Cecil had not dared to make it longer, and the few lines she had written were cold compared to the passion at her heart. They were as follows:

"Perhaps when you see the name signing this letter you will cast it aside with contempt; but even if you do so I cannot help it. I have heard from Mattie the bitter mistake I made. Can you forgive me? I know this is asking much from you! I think it is asking what I myself in your place would not grant; but great as my sin was—my repentance has been as great—let that plead for me! I am very unhappy. Forgive and pity!

"CECIL LESTER."

That was all she had written, and the paper lay open before her for a minute or two; then she stooped and put her lips passionately to the senseless paper.

"He will touch you," she said, softly, "He will hold you in his hands—happy paper!"

"Only to know him happy," she said, pitifully "only that! I could bear the rest."

Very flushed and feverish was Cecil that night when she went down to dinner, with a bright hectic flush on each cheek, and a strange feverish lustre in her beautiful eyes. Her manner, too, was unusually fitful—she was petulant, and the next minute she atoned for that petulance with a gracious sweetness all her own—she was gay, and the next moment there would be tears in the sweet, slumbrous brown eyes. Her uncle and her lover looked at her anxiously, she seemed so strangely unlike herself; and when—earlier than her wont—she bade them good night, Ernest followed her to the door with wistful tenderness, which brought a quiver to her lip.

The next evening, when she was dressing for dinner, the answer to her note was brought to her. One glance at the black-edged envelope told her from whom it came, and her fingers trembled as she took it and laid it unopened on the dressing-table, waiting until she was alone. Lisette was unusually long over her operations that evening. It was true that there was a dinner-party that night, and therefore an elaborate toilet was necessary, according to Lisette's notions; but Cecil thought that she had never been so long before, and at last dismissed her with an impatience which was unusual to her.

Then her mistress took up the letter, holding it tenderly in her unsteady fingers, touching it passionately with her lips, hardly daring to break the seal, longing, yet dreading to open it. When she mustered courage to do so, she saw that the answer was even more brief than her letter, and a film passed before her eyes.

"The wrong, the injury were beyond all forgiveness," she said, faintly. "Dare I read?"

"You ask me to forgive," wrote Lawrence Carewe. "I would have forgiven you death itself. I can forgive your error; but if ever it should happen to you to be loved again as I loved you, remember my misery and be pitiful."

The answer was a generous one, but it cut Cecil to the heart, this was the heart she had lacerated—this the love she had betrayed. Very pale and grave was her face as she put the paper away in that secret drawer of her dressing-case, where the other paper had been hidden so long; but when she went down stairs there was a softness in her manner which Mr. Eleston had never known, and which made him very happy.

"I really think you love me a little Cecil," he whispered fondly once, and she gave him her hand and smiled, but she did not look at him, so that he did not see the misery in her eyes. He little knew that she was trying, poor child! to atone to hi for the wrong done to another—to be "pitiful."

CHAPTER XX.

CHRISTMAS-TIME.

It is drawing near Christmas-time. The weather is bitterly cold, but Mr. Daton and his niece still linger in Brighton; and on a fine, frosty December morning Cecil is sitting in the library, with half a dozen letters before her, debating with Mrs. Audley which of their many invitations to spend Christmas they would accept.

"I don't think it is very pleasant running from house to house," said Cecil, rather discontentedly. "Uncle Henry does not like it; so we can only accept two. Mrs. Brayburn, you see, asks us for three weeks, and Mrs. Walsh for three more; and as those two time each other very well, I suppose we had better accept them. By that time," added Cecil, her eyes brightening at the thought, "Edgar and Mattie will be thinking of turning their faces homeward, and we shall want to be at home to receive them. I think I will write and accept these, Mrs. Audley."

"Well dear, of course you know best," said Mrs. Audley, placidly. "But before you accept, don't you think it will be prudent to find out if Mr. Elesston is invited?"

Cecil's face flushed slightly—the beautiful, weary face, which had a trick of looking so sad when in repose—and her red lip curled.

"I really don't see that it is necessary for Ernest to be with me wherever I go," she said, a little coldly. "I think there is nothing more unpleasant than for an engaged couple to be always thrown together for people to make remarks upon."

"Hallo! what treason are you giving vent to, Queen Cecil?" said a gay voice behind them.

And Cecil turned to the door, where Ernest was standing.

"Good morning, Mrs. Audley," he said, as he entered the room and shook hands with that lady. "Good morning, my darling," he added, lowering his voice, as Cecil gave him her hand. "How are you this morning?"

"Quite well—I am always well," she answered, a little wearily. "When did you ever know me to have anything the matter with me? I am one of those people who never have a toothache, and who live to be a hundred!"

"I am delighted to hear it!" he said, laughing. "I am in no hurry to get rid of you yet."

"Are you not? Ah, well, never mind, you'll be tired of me soon enough!" she said, gaily.

"I am quite willing to risk that!" he said, laughing, but looking at her with a very fond light in his blue eyes. "But what important discussion did I interrupt?" he went on, as Mrs. Audley rose, and gathering up her silks and wools, prepared to vacate the library. "Don't let me drive you away, Mrs. Audley."

"I have some letters to write," said Mrs. Audley, who was getting a little tired of "holding the gooseberry-bush."

"Mrs. Audley has a perfect idea of her duties," he said laughingly, as he looked down at his *fiancée*. "What called for that remark about engaged couples which fell upon my ears?"

"We were talking about the Christmas invitations, and Mrs. Audley was saying that I ought not to accept any without knowing whether you had received an invitation to the same houses," answered Cecil.

"Heaven bless the old lady for looking after my interests!" said he, cordially, as he sat down on a stool at Cecil's feet, and took her jewelled hand into his, too much in earnest in himself to note that the small fingers gave him no answering pressure, but lay passive in his grasp. "What would she like for her Christmas gift?"

Cecil smiled languidly, but made no reply. Looking down at the proud blonde head, the handsome, animated face turned up to hers, her heart ached to think how little love she had to give him in return for the passionate devotion he laid at her feet, the vision of another face, much less handsome, but full of proud power, was before her.

"Where do you intend to spend Christmas, Ernest?" she said, gently, in a moment.

"Wherever you do."

"That is satisfactory," she replied, with a slight laugh. "But if you are not asked?"

"I should go all the same!"

"In what capacity?"

"Your uncle's servant, if I could not get admission under any other terms!" he replied.

"Foolish boy!" she said, lightly.

"Am I foolish!" he replied, half sadly. "Well, never mind, Cecil. No one suffers for my folly but myself."

"And do you suffer for it?" she asked, leaning forward. "Ernest, do I make you unhappy?"

"You!" he answered, fondly. "Do you want to see the happiest man in England? If so, here he sits at your feet!"

"What makes you happy?" said Cecil, half smilingly, half sadly. "Because you have made the worst bargain ever a foolish man made?"

"The worst! Look at yourself in the glass, my Cecil, and repeat that remark if you dare!"

"Do you think it is a good bargain because of my pretty looks?" she said, sorrowfully, "They will not last long; but if you are content, I must not complain. If you are willing to take such a worthless woman into your life——"

"Cecil, how dare you? You are mine now, and no one shall disparage my property!" he said, with tender indignation, an uncomfortable misgiving striking him as he looked at the beautiful face, the sad eyes, and felt how the hand lying in his burned. "Is anything grieving you?"

"Grieving me!" Cecil replied, with a start. "What should grieve me, Ernest? If you are the happiest man, am not I the happiest woman? Have I not reason to be? Have I not wealth, position, beauty, and the truest lover?"

She put her hand for a moment on the curling fair hair with a gentle touch, which dispersed all Ernest's anxiety and raised him to his former state of bliss.

"But, Ernest, really you know it is not quite imperative that we should be visiting at the same houses," Cecil said, in a few moments. "We surely need not present that pitiable spectacle of an engaged couple to all our friends. You know a man in that position is really a sad sight! He is just as if he were mounted on a stool of repentance for some misdeed!"

"I don't much care what I look like, Cecil," he answered, good-humoredly, "so long as I am near you. Besides, I shall only meet looks of envy, and hear people wondering, as well they may, what have I done to be so blessed—what the beautiful Miss Lester can see in Mr. Ernest Elesston."

"What can I see!" she echoed, laughingly. "Why, Ernest, are you not rich, and handsome, and clever? Are not those sufficient reasons?"

"Undoubtedly!" he answers, laughing also with some pain in his face.

"Well, then, where is the cause for surprise?" she asked him, gaily. "Don't you think that Cecil Lester, whose face, such as it is, is her fortune, is a very lucky woman to have won one of the great matrimonial prizes of the season?"

"Don't talk so," he said, quickly, the pain which was on his face reaching his voice. "It hurts me, Cecil!"

"I am sorry. Forgive me!" she said gently, and slipped her hand caressingly into his.

"Now to business," she went on, in a moment. "Where do you intend to spend Christmas?"

"Well, of course, under ordinary circumstances, I—and I hope you, too, Cecil—would have spent them at home. I so want you to know my mother but you see Ida's health unfortunately keeps them abroad."

"That is no answer to my question, Ernest," Cecil said, a little impatiently.

"Patience," he said, as he fumbled in his coat pocket, took out some four or five unopened letters and threw them on to her lap. "There, Cecil, read those and decide."

"But, Ernest, they are all unopened! They may not all be invitations," Cecil said, demurely, with a glance at him. "And they are all directed in feminine calligraphies."

"You may freely open them," he said, proudly. "Cecil, do you think I would——"

"Deceive me? Oh! dear no. But, Ernest, engaged though we be, I should not like you to read all my letters."

"That is different," he said, but half sadly. "You have never told me you loved me, Cecil."

She put her hand over his for a moment with a sudden little gesture of remorse and self-reproach. Ernest bent down, and touched it with his lips softly; and without further comment Cecil began to open the letters.

"Yes," she said at last, when she had completed her task; "it is all right. You have invitations for the same date as ours. We are going to accept those two, so if you like, Ernest, we will go together."

"If I like, Cecil!" he said, smiling. "Who would not like? But, darling child, don't you think it would have been ever so much pleasanter to keep Christmas quietly at home—just you and Mr. Daton and myself."

"Christmas at home—what a terrible idea!" said Cecil, with a slight shudder. "It is such a sad time at best, that——"

"Sad!" repeated Ernest, in amaze. "Why Christmas ought to be a very jolly time."

"It ought to be, but is it? All one's sad thoughts come at Christmas-time."

"I wonder what sad thoughts you ever have, Queen Cecil?" he said, caressingly. "Your life has been all brightness, has it not?"

"Do you think so? Have I never told you of my lonely childhood and girlhood," said Cecil, gently "nor of my brother's death? Poor Ernest, you love a stranger, not the true Cecil!"

And then she told him, softly, about her brother's death, and of her vow of vengeance; but, although she told him of Lionel Carewe's sad death at Monaco, she did not tell him of her revenge on his brother. Lawrence Carewe's name never passed her lips unless she were obliged to speak of it; but as Ernest watched her he wondered at the heavy trouble which made the sweet lips quiver.

"Do not talk of it any more, my dearest," he said, tenderly. "Trouble shall have no part in your future life, Cecil, if I can keep it from you."

And as Cecil listened to his tender words, and looked into the true, honest eyes raised to hers, her heart smote her bitterly.—To be continued.

NEW PUBLICATIONS.

Song Bells—By L. O. EMERSON.—A Music Book for Common Schools and Juvenile Singing Classes. Boston: Published by Oliver Ditson & Co.

Song Bells has 216 pages, of which about 50 are devoted to the "elements," 36 pages to easy and pretty melodies in all the usual keys, 104 pages to the usual school songs, including some unusually popular ones, as "Blue Alsatian Mountains," "Nancy Lee," and "Twickenham Ferry," after which 20 pages contain sacred music for opening and closing. "Graded" singing books are now in use in a number of cities and towns, but a genial general collection like this is not out of place even there; as an extra book, while it is just the thing for thousands of schools that are but partially graded.

It is quite a number of years since Mr. Emerson has favored the boys and girls with one of his new genial and well-selected collections of school songs. Excellent new graded singing books are now much in use; but there is about as much need as ever of good general collections in which songs of the kind that attract the public favor may be inserted, without any arrangements to difficulty.

The Welcome Chorus—A Song-Book for High Schools, Academies and Seminaries. By W. S. TILDEN. Boston: Published by Oliver Ditson & Co.

The first thing noticeable in connection with this "welcome" book is the graceful title, which is ornamented with a view of a high school building. On opening the book we find a well-arranged interior. There is an elementary course, a little high-toned for a grammar scholar, but just about right for the young lady or gentleman who is to use the book. Now that better times in musical matters are at hand, principals and teachers will be interested in examining the new book, whose author has had a hand in two others, and who evidently is master of his vocation. The Welcome Chorus commences with a sort of *high* elementary course, which is followed by quite a large division containing sacred music for opening and closing exercises, and for practice. After this the rest of the book (or 150 pages) is filled with appropriate glees or part-songs, arranged in four parts. It is understood that beginners may all sing one part, that is the air; afterward, as they become more competent, they may try two parts, or three, or four. Meanwhile the four parts played in harmony make an excellent accompaniment to the singing, whether it is in one or more parts.

MAGAZINES FOR NOVEMBER.

THE HERALD OF HEALTH—CONTENTS:—General Articles: Common Mind Troubles. (6); A Talk about Kindergartens; Dangers in the Prime of Life. Our Dessert Table: A Song with a Moral; The Soul's Prophecy; In Sickness. Topics of the Month: Prison Reform; Health in the Schools; Gladstone's Recovery of Health; Death of Byron; Statue of Burns; Business Rules; Sand and Mud Baths; A Powerful Man; Relic of the Incas; Paris Smells. Studies in Hygiene for Women: Prof. Newman on Cookery; A Nice Dish; Soda in Cooking; Heating Flour while Grinding; Corns; Esquimaux Wives; My Sick Boy; Oatmeal; Current Literature; Health Foods.

PRISON REFORM—There has been a feeble demand for prison reform from a few earnest and philanthropic people for many years, and through their efforts a good deal has been done to mitigate the severity of treatment criminals receive, and make it somewhat more rational—but it seems still as if there was much more to do in this direction, more perhaps than can be accomplished within a century. There ought to be a rational system of treating criminals, free from all cruelty on the one hand, or mawkish sentimentality on the other hand. One is as bad as the other. To treat an unfortunate being as a monster who has no rights any one is bound to respect, is itself a crime quite as great as anything the criminal has done. To incarcerate him in a dungeon away from light or air, or means of preserving his health, as is so common, is an insult to our better nature which ought not to be tolerated anywhere. To keep him on a meager and unnatural diet, and to deprive him of all opportunities except the very poorest for mental and moral improvement, is inconsistent with the enlightenment of the age in which we live. On the other hand sentimentality, pity, and coddling are not what is required in a true reform in the treatment of criminals. Sentimentality weakens whatever it touches—cruelty debases all that it acts upon. What is needed is something that will tone up and strengthen, rather than debase or weaken the character of the criminal. This can only be done by a system of education which shall be rational and adapted to his requirements. In our asylums for idiots we train these unfortunate creatures in a way to develop their weak intellects up to as high a standard as they are capable of rising. In the reform school for boys in Ohio a somewhat similar course is pursued, and it has worked so well that the boys rarely or never run away from the place, although the restrictions are so slight they could do so if they wished. These boys are not only taught every branch of agriculture, horticulture, and more or less of mechanic arts, but educated intellectually and morally. It is rational education, not punishment, that they receive. Health, intellect and moral nature are all braced up and strengthened. Even the hardest cases are generally made over into decent boys. This is reasonable and wise. The same course should be pursued with criminals. They should be educated, made over into decent men so far as possible, and their terms of imprisonment should be located in the country, and a large tract of land should be had, and this should be reclaimed and improved by prison labor, which need not compete with the labor of those outside, as now; but it should be made self-supporting. No speculators should control it. It might take years to perfect the plan, but it can be done, and some day will be done if humanity progresses as we hope and believe it will. Justice demands it. Criminals are too often so from an imperfect physical and mental organization and defective training, just as idiots are. They cannot compete with stronger men in the battle of life, and so take an easier way, as they erroneously think, to earn a living. Most of these can be reformed by a right course. It is our duty to do it.—M. L. Holbrook, M.D., in Herald of Health.

PHRENOLOGICAL JOURNAL.—CONTENTS: Five Great Men in Science; Notes on the Physiology and Pathology of the Brain; Studies in Comparative Phrenology: Sphenoidal Bone in the Carnivora, Rodent and Bird. Illustrated; Names and Places; Sandford R. Gifford, N. A. Portrait; The University of California; The Brantford Indians; Elphaz, the Pseudomaniac—The Phrenological Commentator. II.; How they Look in Outline; Keep a Journal; Confucius; Health in the Pulpit; Microscopic Analysis of Milk. Illustrated; Curing Disease by Fasting; The Bible for Health; Notes in Science and Agriculture; Editorial Items; Poetry; Answers to Correspondents; What They Say; Personals, Wisdom, Mirth, Library.

CELIA LAIGHTON was born in Portsmouth, N. H., June 29, 1835. When but four or five years old, her father, being disappointed in certain political expectations, purchased Hog Island (now Appledore) and made it his residence, declaring he would never return to the mainland. Here the girl lived for ten years, and during all that time rarely saw other men besides her father and brothers, yet her thoughtful, observant nature found much employment amid the rocks and shoals, and the vistas of the sea which surrounded her. These rougher phases of nature furnished material for many a tender verse which later on found its thousand readers in circles far away from the Isles of Shoals.

At length the lonely rocks became interesting to the outer world, as a seaside resort for Summer visitors, and among the first to go to Appledore was Mr. Thaxter, then a Portsmouth lawyer, who, being in delicate health, visited the island to recover his physical vigor, and built a little cottage. He saw the maiden of the Isle, was pleased with her appearance, and in process of time won her affections. Her father at first opposed a marriage, but at last reluctantly consented. Her first visit to the mainland was made on her wedding tour. Since then Mrs. Thaxter has passed her life sometimes on shore and sometimes at the Isles, where she has a modest and tasteful cottage in the vicinity of the well-known Appledore House, which is kept by her brothers. This cottage is reached by a well-worn path, often traversed by visitors to the island and guests of the hotel, nearly all of whom know the authoress by reputation, as the mixed crowds found at the popular water-resorts in the neighborhood of our large cities seldom make their appearance here, preferring to air their coarseness and lack of intelligence in some more congenial locality.

Mrs. Thaxter's poems and other writings bear so much upon the scenery and life of the Isles of Shoals, among which she has spent almost her whole mortal career, as far as it has extended, that she might well be named their poet and historiographer. Two volumes of hers published in Boston, are entitled "Poems," and "Among the Isles of Shoals" the latter being a collection of prose sketches. Of her poetry, perhaps "The Wreck of the Pocahontas," "Rock Weeds," "The Swallow," "Midsummer Midnight," would be among the favorite selections of those who are familiar with it.—Phrenological Journal for November.

ST. NICHOLAS.—CONTENTS.—Frontispiece, Once upon a Time; The Crew of the Captain's Gig: Golden-hair; a Russian Folk-story; Thirteen and Dolly, Verses; The Swiss Glaciers; A Nonsense Rhyme; The Magician's Daughter; Thistle-down, Poem; The Agassiz Association; The Outcast, Poem; Gleaning; Tom; Kitty's Shopping; Bugaboo Bill, the Giant, Verses; Mystery in a Mansion, chapters I and II; The Crow-child: Tinsel Without, but Metal Within, Verses; Fine, or Superfine; Some Curious Nests; Our Little Schoolgirl, Verses; The Great Secret; The Sad Story of the Chilly Family, Verses; Lacrosse; Sewing-machine Designs, six illustrations by H. W. Troy; Picture-jingle; For Very Little Folk; Jack-in-the-Pulpit; The Letter-Box; The Riddle-box, illustrated.

LACROSSE.—The Indian of North America is commonly supposed to be a grim and sober creature, who never laughs; a man who at all times conducts himself in a sedate and rather gloomy manner. He is very dignified, and never, never smiles. It is said that, when at home, he is always thinking of going on the war-path, or planning a grand and mighty hunt, or sitting by his wigwam thinking of nothing in particular, which is always a solemn proceeding in anybody.

Now, it is a curious fact that the Indian has been strangely misrepresented. It has been discovered that he really liked a little fun, and could enjoy a game as well as any one. The Chinese fly kites, and the wild Arabs of the Desert tell stories. It is thought the ancient Egyptians played jack-stones, and we may be sure the Japanese enjoy many games, as you may learn by looking at their picture-fans. All the civilized nations have games; the English like cricket, we have base-ball, and the people of Holland are supposed to have invented skates, for which they deserve the lasting gratitude of mankind. It is interesting to find that, after all, the Indians have been very badly treated by the historians, and that they, too, had an eye for fun, and even had a game of their own.

When the French first explored the great country to the north, along the St. Lawrence and the lakes, they found the Indians had a wild and exciting game that they played on the grassy intervals along the rivers, or on the ice in winter. Hundreds of Indians would sometimes play at a ball game, like that shown in the above picture. They used a ball of stuffed skin, and a curious bat, looking something like a "hockey," having a net of reindeer hide between the handle and the crook of the hockey. The French called the bat a *crosse*, and, naturally enough, the game was soon called "La Crosse." This is fortunate, for the Ojibways called it "Baggataway," and the Iroquois called it "Tekontshikwaheks," and there certainly would be little satisfaction in playing a game with either of these distressing names.—St. Nicholas for November.

DEMOREST'S MAGAZINE.—CONTENTS: Following out the Text; Oil picture from a painting by Mr. T. W. Wood; The Playmates. Steel Engraving; The Poetry of Autumn; The Flowers of the Field; Thanksgiving; Seed Time and Harvest; The Trumpet Major; Talks with Girls; Augusta Evans Wilson; A Wasted Harvest; Following Out the Text. House and Home—My Housekeeping Class; Fashionable Stationery; A Summer on the Rhine; Correspondents' Club, Young America's Corner—Where the Harebells and Violets Grow. Elizabeth Kirkwood, Concluded. What did he Make; Aspiration; Illustrated Rebus. Fancy Work. Editorium Fashions. Ladies Club.

This number of Demorest's presents many new styles, represented by cuts and written explanations, which as usual will serve to meet the demands of its patrons. Literary matter fills many of its pages.

DOMESTIC MAGAZINE.—Contents:—Fashions, Illustrated; The Undergoing; November Poem. Bertine; An Episode Mizpah (Poem) Selected; Treasure Trove; Art Paper; The Miracle of St. Agatha; The Relief Ship at Twilight (Poem); Fact, Rumor, and Comment; St. Martin's Summer (Poem); A London Letter; Household Department; New Books; Notes; Answers to Correspondents; Varieties; Publishers' Department.

THE reader of this number will find the customary matter of fashion, literature etc. The Household Department by Mrs. H. W. Beecher is interesting and calculated to confer a benefit upon hitherto careless housekeepers.

For Women.

CONDUCTED BY MISS RAY CLARK.

GRANDFATHER'S PET.

THIS is the room where she slept,
  Only a year ago,—
Quiet and carefully swept,
  Blinds and curtains like snow.
There, by the bed, in the dusky gloom,
  She would kneel with her tiny clasped hands and pray!
Here is the little white rose of a room,
  With the fragrance fled away.

Nelly, Grandfather's pet,
  With her wise little face,—
I seem to hear her yet
  Singing about the place;
But the clouds roll on and the streets are drear,
  And the world seems hard with a bitter doom,
And Nelly is singing elsewhere—and here
  Is the little white rose of a room.

Why, if she stood just there,
  As she used to do,
With her long, light yellow hair,
  And her eyes of blue,—
If she stood, I say, at the edge of the bed,
  And ran to my side with a living touch,
Though I know she is quiet, and buried, and dead
  I should not wonder much.

For she was so young, you know,—
  Only seven years old;
And her face was so wise and sweet to see,
  And it still looked living when she lay dead,
And she used to plead for mother and me,
  By the side of that very bed!

I wonder now, if she
  Knows I am standing here,
Feeling, wherever she be
  We hold the place so dear?
It cannot be that she sleeps too sound,
  Still in her little nightgown dress,
Not to hear my footsteps sound,
  In the room where she used to rest.

I have felt hard fortune's stings,
  And battled in doubt and strife
And never thought much of things
  Beyond this human life;
But I cannot think that my darling died
  Like great strong men, with their prayers untrue,—
Nay! rather she sits at God's own side
  And sings as she used to do.

MISS IRENE AGAIN.

Poor Miss Irene! What a flutter and a stir her letter has instituted?

It has been very amusing to read some of the replies to it. In the eager haste of some of the ladies to refuse to drag the married men over the coals, they have unconsciously given an occasional thwack that sent them right into the fire.

I am a married woman and I *know* that my better-half (?) is an exception that don't deserve to go over the coals, but at the same time I bear witness that Miss Irene was right in saying that *some* of them deserved to be dragged over the coals. I know, as all do, that there are exceptions, but sometimes I think they are largely in the minority.

Taken altogether, the majority of farmers' wives do have a hard life. It is churn and bake, wash, scrub and iron; make up beds, sweep and dust; sew, patch and darn, year in and year out. Her work is monstrous. It is she who must have the children, and she who must have the care of them, in addition to the other work. There is many a wife with a kind, affectionate husband, who is working herself into an early grave, because her husband is too blind to see that her burdens are too heavy, and she toils on, thinking it is her duty and never blaming him. *He* must have "help" to to do his work, and new machines also, while week after week she must "chug, chug, chug," with the old churn that makes her arms and shoulders ache.

If the baby is cross in the night it is mother whose rest must be broken, while father rests, because he "has the living to make." It makes no difference if she does have to wash or iron the next day.

I tell you, the majority of farmers' wives are a crying shame against their husbands. You will know them when you see them; pale, tired-looking women, dowdily dressed, and who look at you as you pass them in the street with a wistful, pleading look, that always reminds one of a deer at bay.

Now, I know exceptions, so don't all rise to quench my eloquence, as you did Miss Irene's. I know whereof I speak, for my mother was a farmer's wife and I too have "been around."

If somebody "dodges" at this, I'll know there is a guilty husband around.

I presume some of you have heard of the man who was struck in a crowd, but knew not who did it; seizing a stone he sprung upon a stump (it might have been a barrel, but it is proper to say "stump speech,") and said: "Somebody in this crowd struck me and I am going to hit him with this," at the same time aiming as though about to throw; every one but the man who had struck him stood still, while he quickly dodged and the first man threw away his stone and proceeded to thrash number two.

Speaking of "No. 2," Dr. A. E. S., is it not a little singular that she has lived to be nearly thirty years without ever having a chance to *help* make tomato cat-sup? (How absurd! a farmer *help* his wife make tomato cat-sup?) And you are *nearly* twenty-four, and are faithful and kind? Just wait until you and "No. 2," or her prototype are twain, and see how long you will be the latter. A man generally is that until he gets married, and then he pulls off his gloves and lets his wife see how brawny his hands are, and how hard he can hit with them.

For my part, I am strongly inclined to suspect "No. 2" of being a fraud—in other words, a married woman dodging for a guilty spouse.

Now, No. 2, if I'm wrong, I suppose you will "pitch into" me, and make it lively. They say old maids are generally pretty high-tempered, and the way you criticised Miss Irene, leads me to suspect you of being so.

An uncle of mine used to say that at twenty-five a woman was "simply an old maid," but at thirty she was a "*darned* old maid," and would explain to his reproving wife that by "darned" he meant "snarled," because, he would say, they were generally so "snarly at that age."

ALLINE RAY.

ECONOMY IN DRESSING.

FOR those who have money enough to buy dress material; take them to a fashionable modiste and there leave all care of them 'til they go for the finished garment, for these, articles are not written

I suppose, however, that that class comprises about one per cent. The remaining ninety-nine have to look more or less closely after the dressing of themselves or daughters; turning old dresses or renovating by adding to material, or renewing trimmings.

In the revolution that has taken place in dressing—gradually—during the last two years, home dressmaking has become a much easier matter than formerly. Twenty-two yards was a moderate dress pattern (I bought 27 yards of striped summer silk five years ago for a dress, and I have this last year, made *two* complete costumes of that dress). Dressmakers would make up the pattern for you at a cost of from $12 to $20, and declare they made very little at that, while they were assisted by a person not a born genius, serving an apprenticeship, to put on the elaborate trimming that made a dress a work of art.

There *are* such dresses now. We read of actresses who have costumes the trimming of which cost $15,000, but it is fast becoming bad taste to wear such dresses in private life.

Twelve yards of black satin, or seven yards of the plain satin, and five yards of brocaded satin, at a cost of $1.40 a yard, will make a lovely suit, rich, stylish, and at a cost of $18.50. Make the basque, round and finish to wear either over or under the skirt, make it plain and laced behind. The sleeves tight-fitting and trimmed to the elbow with three bands of brocaded silk, graduated, the highest band one-third the width of the one at the wrist, finished at the neck with a shirred ruffle of the brocade.

Make a short walking skirt of the plain satin trimmed with a flounce 12 inches in depth of the brocade cut bias and shirred—very scant, for it sets out too much if made full. The back of the skirt is two breadths of satin shirred at the top six inches in depth very closely. A wide belt lined with very stiff material, and two yards of the brocaded silk tacked to the dress as a sash and tied loosely, either on the left side or at the back finishes the dress. It can be worn without the sash.

The dress is lined throughout with fine, corset jean—without dressing or starch in it.

A plain skirt to look well, must set well, and for years I "labored" over skirts pulling back, so they would not "bulge" before, or "flop" behind, as a tantalized dressmaker said. I finally got a perfect fit and am happy.

Money cannot buy that pattern: if I had to do without it, I would feel much inconvenience. In my next article I will describe a made over ladies cloth polonaise.

O. W. D.

Mich.

HINTS.

INK ON CARPETS.—Take up as much of the freshly-spilt ink as possible with a sponge, then wet with water and soak with a sponge repeatedly; finally, rub the spot with a little wet oxalic acid, or salt of sorrel, wash off with cold water and rub with aqua ammonia.

TO CLEAN LOOKING-GLASSES.—Keep for this purpose a piece of sponge, a cloth, and a silk handkerchief, all entirely free from dirt, as the least grit will scratch the fine surface of the glass. First sponge it with a little spirits of wine, or gin-and-water; so as to clean off all spots; then dust over it powder-blue, tied in muslin, rub it lightly and quickly off with the cloth, and finish by rubbing it with the silk handkerchief. Be careful not to rub the edges of the frame.

HOW TO CLEAN HAIR BRUSHES.—It is best to clean two at a time, in this way: First comb them well, to remove the loose hair or dust, then dip the bristles only in very warm water, sprinkle each brush with plenty of powdered borax, and rub the two together; after they are cleansed thoroughly, have a pitcher of hot water, and pour it over the bristles; keep the back of the brush as dry as possible. Shake the water well out, and dry quickly in the sun. Brushes washed in this way will retain their stiffness.

BLEACHING FLANNEL.—Flannel which has become yellow with use may be bleached by putting it for some days in a solution of hard soap to which strong ammonia has been added. The best proportions are one pound and a half of hard curd soap, fifty pounds of soft water, and two-thirds of a pound of strong ammonia solution. The same object may be attained in a shorter time by placing the flannel for a quarter of an hour in a weak solution of bisulphate of sodium, to which a little hydrochloric acid has been added.

ABOUT WOMEN.

MISS KELLOGG has been very successful in opera at Vienna. She is the only cantatrice who, during the past few years, has been allowed to sing in Italian in the Imperial Opera House, all others singing in German.

MISS FANNY DAVENPORT has everything about her new play ("The American Girl," written by Amadecheron) American; and her dresses are not only made in America, but she publishes the fact.

MRS. LYDIA MARIA CHILD, the well-known authoress, who died recently, was born in Midford, Mass., February 11, 1802. Her ancestor, Richard Francis was born in Cambridge, Mass., in 1636. She was educated at the public schools and spent one year in a seminary at Midford. From 1825 to 1828 she kept a private school in Watertown. In 1828 she was married to David Lee Child a lawyer of Boston.

MISS KATE FIELD has been successful in arranging with Mr. Anthony Pulbrook, the founder of the London Ladies' Dress Association, to visit New York and start the association in this city in connection with the parent establishment, but each as a separate undertaking. Mr. Pulbrook expects to leave England early in November, and on his arrival the public will be informed of the manner in which the association will be conducted.

SHE was only a factory girl, but she had a lead pencil, and she had faith. She earned her living in the thread-room, and one morning wrote on a clean, white spool her name and the words, "Wanted a husband." When it had been wound with thread it was sent to a South Norwalk shoe factory, where it fell into a man's hand. He opened a correspondence, the girl replied that she was engaged, but would find him another as good as she, and a marriage has taken place as the result of the spool's message. Who says that the age of romance has gone by?

MISS EMILY A. SMITH, Assistant State Entomologist of Illinois, has been elected a member of the Entomological Society of London.

MISS CLARA LOUISE KELLOGG has brought away from Vienna a souvenir of the pleasant impression she made upon the audiences of the Grand Opera. An unknown admirer sent to her hotel, anonymously, a bird of beautiful plumage in a cage of gold.

MISS EMMA C. THURSBY has been spending the greater part of the Summer in Germany, where she has been staying for the benefit of her health, studying at the same time, so that her singing shows remarkable improvement.

A CRITICISM.

I DON'T like the advice given in the RURAL for girls to *stick* their hair with gum-arabic to keep it in curl. It is a wrong to the pretty, soft, shining locks that young girls ought to have, and if it will not curl without gum-arabic, why, let it go straight.

A. L. J.

[The hint to which the above writer refers appeared in issue of October 23d, and was applied to crimping, not curling, the hair.—R. C.]

Don't physic, for it weakens and destroys, but use Hop Bitters, that builds up, up!

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PEN THOUGHTS FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

"ANOTHER cookery book!" It was the family cynic who said it when, on the occasion of a birthday, I gave one of our amateur cooks Mrs. Henderson's "Practical Cooking and Dinner-giving." It has been proved to me by experience that there is no book little girls like better; for I am certain no gift of mine has given more pleasure or been of more use, than Marion Harland's "Common Sense in the Household," given to one of my girls nine years old, some years ago. And we had wanted Mrs. Henderson's book a long time and were not disappointed. It was so different from the rest of our cook books; so charming in its pictures of the breakfast and dinner and tea tables, for which it catered, that we could not help feeling a sort of fascination in its contents. It does not make one feel so economical as do the thin pages of Juliet Corson's little book, but seems to have struck a happy medium that is always needed in cooking to make us feel at home with the writer and with one's own provision of ingredients.

One chapter on "Cooking as an Accomplishment," is especially entertaining and I will quote a few lines. "A young lady can scarcely have too many accomplishments, for they serve to adorn her home and are attractive and charming generally. But of them all—painting, music, fancy-work or foreign languages—is there one more fascinating and useful, or one which argues more intelligence in its acquisition than the accomplishment of cooking?"

There is to be established this Winter in the city of Montreal a cooking school by a lady from the South Kensington School, London, England. It deserves to succeed, but I doubt if it will for different reasons. One is, the contempt with which young girls look upon this work, inculcated by precept and example, and another, that no *class* could be found in this most conservative of cities, every clique in it deeming itself exclusive. And in this case, as in all country homes also where young girls must practice at home the domestic arts, I advise mothers to give them some one or two of the best works on the subject—even though a family cynic should exclaim, "What! another cookery book."

Ointment for Chapped Hands.

Melt one ounce of spermaceti and one-half drachm of white wax in one ounce of oil of sweet almonds, then add one-half ounce of pure glycerine and stir until cold. Scent if you please with whatever perfume liked. This is excellent for chapped hands or lips. For the hands apply at night and draw on a pair of old kids to prevent soiling bed-clothing.

MARY B.

Puff Puddings.

Four eggs, yelks and whites beaten separately. To the yelks add three cups of sweet milk, a tablespoonful of melted butter and three cups of sifted flour. Stir in the whites the last thing. Bake in buttered cups—I use 10 teacups. Eat hot with sauce.

E. L.

Beef Tea.

Mr. Wilkinson of St. Mary's Hospital, London, advises the following improved method of preparing beef tea:

The meat is cut into small pieces and placed, in the evening, in an earthenware vessel, with sufficient cold water to cover the meat; in this it is allowed to remain all night. In the morning the meat is taken out, placed in other water, and boiled for several hours. The meat of the previous day is then passed through a mincing machine, and put into the cold liquor in which the meat was steeped the previous night, and upon this the boiling liquor from the day's beef tea is poured, and the whole well stirred, and it then forms the complete beef tea. The characteristics of good beef tea are that all the nutritious elements of the beef should be made available; and by the process carried out as above this is effectually done, the albumen, fibrine, and gelatine being all retained and taken by the patient. Moreover, by the above method a much smaller quantity of meat is required than under the ordinary mode, and it would, consequently, not become a jelly if allowed to stand; but by adding a larger quantity of beef this result could of course be obtained. (This forms with us what is called beef jelly.) It should, however, be remarked that in very hot weather the beef tea cannot be made in this manner, as it would become sour from the length of time required for its preparation.

QUESTIONS ANSWERED.

Cafe-au-lait.

Please tell me how much coffee I must use in making the celebrated *cafe-au-lait*.

MRS. A. B. J.

ANS.—One pound of coffee to a quart of water. A tablespoonful of this "black coffee" is added to a cup of boiled milk. The milk should be new, and slowly simmered to a creamy richness before using.

Autumn Leaves; Coloring Grass; Keeping Grapes.

1. Will you please tell me how to press Autumn leaves so they will keep their color; 2, also how to color grasses red, blue, purple and yellow? 3. Can grapes be preserved on their stems until Christmas, and if so, how?

D. THURSTON.

ANS.—1. Immediately after gathering, rub each leaf with a moderately *warm* iron, which has been first rubbed with white wax. Pass the waxed iron but once over each leaf, waxing it afresh each time. 2 Use Leamon's aniline dyes. The different colors come in small packages and can be procured of almost any druggist. 3. Yes. Pack in perfectly dry, old sawdust or cork chips. Keep in a cool, dry atmosphere, little above freezing.

Superfluous Hair, etc.

Can you give us a recipe that will permanently remove superfluous hair; also, what will make the hair soft and pliant? These recipes are required by certain lady friends, and if you know of anything that will serve their purpose it will oblige them very much. Have tried some of the superfluous-hair-removing powders, sold at $1 a small bottle, and found them to be complete frauds.

J. F.

ANS.—We know of nothing, neither do we believe there is anything that will remove superfluous hair without injuring the skin. In books on hints and of recipes for the toilet there are scores of recipes for removing hair, all of which in our estimation are harmful, and we advise our friends to let them alone. As to making naturally harsh hair soft and pliant, one might as well set to work to try and change his complexion. All fluids, pomades or oils tend, by evaporation, to carry off the natural moisture of the hair, and the more volatile the substance used, the more effectually the vitality of the hair is impaired. Alcohol, therefore, so much used in preparations for the hair, changes its natural color and renders it brittle. One of the most harmless preparations we know of is a mixture of one part glycerine to three of rose-water. This, while it does not produce any permanent change in the texture of the hair, makes it for the time being soft and pliant.

Physicians of all Schools use and recommend Hop Bitters; take their advice.

News of the Week.

HOME NEWS.

MONDAY, NOV. 15, 1880.

The Stewart block at Middlebury, Vt., was burned on the 10th. The following are the losses and insurances: Hon. John W. Stewart, on building, $10,000; insurance, $6,000. T. M. Chapman & Co., dry goods, groceries and provisions, on stock, which was partially saved, $4,000; insurance, $2,000. Masonic Lodge, $2,000; insurance, $1,000. L. D. Eldredge and C. M. Willis, attorneys, books and papers, amount unknown. The offices of the secretary of the Vermont Merino Sheep Breeders' Association and Town Collector M. C. Monroe, were in the building.....Montana has fourteen newspapers, and they are classed as being Democratic, three; Republicans, three; Independent, seven; Grange, one.....There are seventeen lepers at the Small-pox Hospital in San Francisco—sixteen Chinese and one white man. It is not long since Chinatown was overhauled, when a large number of these persons were discovered. They were put upon the steamer and sent back to China..... .At Millett's ranche, in Seymour County, Kansas, a man named Hankinson and a Mexican were engaged in roping a large bull. They had thrown two ropes on the animal, the Mexican having hold of one while the other man had tied his rope to some stationary object and was trying to throw the animal by making him lunge forward. Upon making the lunge the stationary rope broke and the pull made by the Mexican caused the bull to turn suddenly and dart in an opposite direction, and as he went he caught his pursuer on his horns and tossed him aside. Upon examination the gored man was found to have received a rupture several inches in length in his abdomen and the larger intestine was torn in two places. The man lived a day or two and died.....Charles Reed, station agent at Tenino, W. T., has a railroad velocipede, and recently fixed it with a short arm so it would run on the narrow-guage, it having been built for the wide track. He can run into Olympia in an hour.

The Supreme Court of Illinois has made public a decision, which is regarded as a virtual triumph of the Western Indiana Railroad over the Lake Shore and Michigan Southern, regarding entrance into Chicago for the Western Indiana road..... On the 7th John Berkley, colored, while returning from church with two other colored young men, three miles from Bloomfield, Ky., was fired on by some one concealed in the weeds in a fence corner and his heart literally torn out. His companions fled without discovering the criminal. When his body was found it had been robbed.....The five-year-old son of John Glass, of Williamsport, Pa., was caught in a swinging bridge at that place on the 10th and killed .....Ellen Skeets, a colored woman, was burned to death by the explosion of a coal-oil lamp at Coleville, McKean county, Pa., on the 9th.....William McGregor and wife lodged in the Allegheny, Pa., lockup on the 9th. They represented themselves to be the parties who were arrested on suspicion of being members of the Bender family.....A fire at Petrolia, Butler county, Pa., on the 10th, destroyed the Bly-Miller Hotel, Orrwig's paint store, Backus's hardware store, the offices of the United Pipe Line, Western Union Telegraph, the bank, and Harley's purchasing office. Loss, $15,000.

The question involved in the case of the New York Elevated Railroad Company vs. Commissioners of Taxes, decided in the Court of Appeals, was that the city had the right to assess as real estate the structure of the Elevated Railroad Company and impose a tax upon it. The railroad claims it owns no real estate unless the foundations or posts are such. The Court below held that the foundations and superstructure were properly taxable as real estate, and the Court of Appeals sustains that view.....Moses Grinnell, 70 years old, shot and killed Charles Thomas, unmarried, on the 10th, at Tiverton, Four Corners, R. I., in a dispute about a trifling affair. The murderer is in custody..... Leonard Heffner's restaurant in Ellenborough, Wis., was burned on the 6th, and two of Heffner's children—aged three and five years—perished in the flames. The mother was severely but not fatally burned.....The Smithsonian Institution has been informed by Professor Swift, of Rochester, that the comet announced as discovered by Lohse is that discovered by himself on the 10th of October, 1880, and is identical with the third of 1869.....In the Union County Circuit Court of Arkansas, on the 8th, Bennett, who assassinated A. C. Jamieson in March, 1879, by shooting him from an ambush, was convicted of murder in the first degree, and will probably be hanged..... During a bar-room fight at Memphis, Tenn., Mat. Reeves, a steamboat mate, was stabbed eight times by Monroe Clink, a night watchman. Reeves died from the effects of his injuries, and Clink has been arrested.

Mrs. Reed, of Spearfish, Dakota, was before a Deadwood Justice of the Peace the other day upon a charge of burglary. She became involved in a dispute with a neighbor, Charles O. Bates, over the ownership of the house he was living in, and during his absence hitched a bull team to the building and dragged it away. She was acquitted. .....A pig won on an election bet at South Bend, Ind., was, as the proceeds of all bets should be, turned over to the central committee, and on Friday was sold at auction for the benefit of the poor, realizing $216.....Social circles at Gardiner, N. Y., are greatly excited at present over the elopement and marriage of Miss Carrie M. Plant, a young white woman, with James W. Sampson, a mulatto. Miss Plant is a niece of Mr. John H. Deyo, a well-to-do farmer, residing in the town of Gardiner, who, during the war, was extensively engaged in trading along the Mississippi, and was estimated to be worth $150,000. He was well known at New Orleans and thereabouts. After the war Mr. Deyo settled down on his farm in that town, and as he was childless his niece Carrie Plant, was adopted into the family. During the past Summer Mr. Deyo being sick and unable to assist in the working of his farm, hired James Wesley Sampson, a young colored man about 21 years of age. He was a good worker, polite and pleasant about the farm, and soon won the good-will of those about him. After a time it was noticed that Wesley was paying Miss Plant too much attention, and her uncle two weeks ago concluded that it would be advisable to send his niece off on a visit for a month or so. But before he could make his intentions known both Wesley and his niece were missing. Search was at once instituted, but without avail. The climax was reached on Saturday last, when it was discovered that, after encountering many difficulties, the runaway couple had been made man and wife....

An old and bitter feud in Gallia County, Ohio, ended in murder on Saturday the 10th. The scene was at the little village of Bladensburg, 12 miles below Gallipolis, on the Ohio River. John J. Jeffers was quietly riding along the road when he met his bitter enemy, Col. James H. Montgomery. When within a few paces of each other, Montgomery squatted, and, cocking a carbine, shot Jeffers through the body. The man lived only two hours. In his ante-mortem statement he said that previous to the fatal shot he exclaimed, "Look out." This is not denied by the murderer. No weapon was found on the deceased. After the shooting Jeffers remained quiet for fear that his enemy would finish the job with another bullet. Montgomery surrendered. Two years ago Jeffers opened fire on Montgomery from behind a straw stack, emptying five cartridges from his revolver. He claimed that Montgomery was intimate with his wife. This the wife denied, and other facts confirming her story, a defense of insanity was set up by Jeffers' attorneys at the trial which followed the former shooting. On the third trial Jeffers was sent to the Ohio Penitentiary, and had been home two months when he met his death. Two weeks ago, Jeffers had Montgomery arrested for perjury in the above case. He was acquitted, and was on his way to swear out a peace warrant against Jeffers when he bagged his game. The murderer has been the scourge of that most villainous section of the country for years. Two men have been sent to their long home by his ready weapon. He served a term in the Ohio Legislature, and was the Democratic candidate for Senator from this district last Fall. He is prominent in local politics and is a noted bully, and very quarrelsome. He served with distinction in the late war.

A lad in Elmira, N. Y., has lost an eye from epizootic poisoning. His other eye is endangered. The lad wiped his face with a handkerchief he had used to remove some mucus that his horse had coughed on his coat sleeve.

FOREIGN.

THE IRISH DISTURBANCES.

Dispatches from London say that there is reason to believe that the Ministry do not contemplate any immediate exceptional measures for the preservation of peace in Ireland, but intend to defer action until the meeting of Parliament, which may be expected early in January. The St. James Gazette, in its leading editorial expresses fear that the Ministry are driving, or being driven, toward legislation creating a peasant proprietary throughout Ireland, probably with a view to extending the operation to the rest of the United Kingdom later on. The ultimate means will probably be the purchase of the land by the State and its distribution to the peasantry, to be paid for in a certain term of years. Nothing short of this will be accepted by the Irish agitators. The Radical members of the Government and their support will consent to coercion. The Ministry will yield to the Radicals rather than suffer the Cabinet to break up. An attempt may be made to clothe the plan in some disguise, but substantially, and in its full effect, this is what the extreme men in the Cabinet are hoping and striving for. Should the measure fail to pass the House of Commons, or having passed the Commons, be rejected by the House of Lords, as it almost certainly would be, the demagogues would go to the constituencies with a good cry, for the imagination of the masses is readily kindled by schemes for transferring property from rich to poor men, and they know that they would never be taxed for carrying out such a scheme. It would be the affair of the income-tax payer.

BURIED IN A COAL MINE.

Early on the morning of Nov. 12th, an explosion of gas occurred on the south side of Foord Pit, at the Albion Mines, Stellarton, Nova Scotia. All the miners were at work in different bands. The explosion was so terrible as to sweep quite across the pit, killing men and horses within reach. Almost all the men on the north side will be saved, while all at work on the south side have been lost. At least sixty are said to be missing. Five men have been brought up and are likely to recover. Probably forty are shut up with the fallen coal on the south side. The accident, it is presumed, was caused by some miner firing a shot in the forbidden part of the workings. The number still in the pit is said to be 44. It is feared another explosion will occur when the pit gathers gas again. Work is totally suspended at all the collieries in the county and miners have come to the scene of the accident in great numbers, but altogether powerless to render any assistance on account of the precarious condition of the pit. At ten o'clock on the 13th another very heavy explosion occurred, blowing the roof and gear of the fan shaft, timber, bricks, etc. high into the air. It is fully expected that the fire, which must now be immense in the mine will soon show itself from the mouth of the shaft, when all the buildings in the vicinity will be in the greatest danger. Very great fears are entertained that the whole workings of Foord Pit will be destroyed, though efforts are now being made by a large gang of men who are at work digging a trench to let into the mine water from the river close by. This is a last resort, and it will take a good while to get sufficient water in to drown the fire. It is hoped that the fire may be confined to Foord Pit and prevented from extending to the workings of Cage Pit, situated half a mile west of Foord Pit. These pits are connected by a tunnel. Should these works be destroyed the consequence to the working classes connected with the mine will be terrible. Untold misery must be the result. The employes of the company number over 500. Other and more terrible explosions may occur at any time. The greatest excitement prevails.

[Manchester, (Mich.) Enterprise.]

Messrs. Haeusler & Kingsley, Druggists, Manchester, say: We handle St. Jacobs Oil with abundant success, and it has given excellent satisfaction to our customers.

AGRICULTURAL NEWS.

The weather in the Northwestern States during the past week was fine, with colder though seasonable temperature. The field work has been further advanced than usual, and a large area of Winter Wheat has been sown in the Spring Wheat producing States. The Winter Wheat has a fine appearance, showing an even luxuriant growth.... There has been an increase in the visible supply of Wheat of 2,632,464 bushels, and a decrease in the visible supply of Maize of 2,041,584 bushels, as compared with the statement of the previous week. The stock of Wheat at the Atlantic ports at the close of navigation will be much less than last year. The visible supply of Wheat Nov. 6, 1880, was 8,674,127 bushels less than on Nov. 8, 1879, and of Corn 5,874,170 bushels more this year than last at the corresponding dates.....The exports of Wheat and Flour from North American Atlantic and Pacific ports from July 1, to November 8, 1880, have been equal to 87,562,000 bushels against 94,363,000 bushels for the corresponding period in 1879.....An early close of canal navigation is expected; probably by the 28th instant. Lake navigation will be practically closed on the 28th of November, as insurance policies on hulls of vessels usually expire at that date, and special rates, usually very high, prevail after that date Shipments via the St. Lawrence for Europe will probably terminate for the season by the 25th of November. Shipments of Grain from Buffalo by canal will be limited after the close of this week. The stock of Wheat on the canal November 6, was about 2,240,000 bushels, and of Maize 909,000 bushels; and on the lakes—Wheat, 1,862,000 bushels and of Maize 3,140,000 bushels.....The estimate of the Agricultural Department or the Wheat crop of the United States in 1880 will be published on Monday, this afternoon, and will be about 30 million bushels more than the crop of 1879. The increase is mostly in the Pacific States.....The Agricultural Department's estimate of the California and Oregon Wheat crop of 1879 was 3,011,800 acres area, and 43,188,800 bushels yield. The outcome of the crop of these States in 1879 was about 10,000,000 bushels less than the Department's estimate. The exports from these States was 23½ million bushels, and seed and food about nine million bushels, making the outcome 32½ million bushels instead of 43,188,800 bushels.....The estimate of the crop of the Spring Wheat States in 1879 was also too large. There is now a generally prevailing opinion among commercial men engaged in the Wheat trade that the crop of 1880 is no larger than that of 1879, and the opinion of a very considerable number is that it is less than the crop of 1879.

News from Sydney dated September 3, states that cattle were dying in the Armidale district of New South Wales from want of grass, and lambing prospects were gloomy on account of the long-continued drought.....In Queensland, at the same date, no rain had fallen..... ...In South Australia, by September 11, there had been abundant rains, which had extended to the northern parts of the colony where they were greatly needed..... In Victoria mild Spring-like weather had prevailed, although from a number of the cereal-growing districts inland frequent complaints of want of sufficient moisture were being received. Pastoral prospects in the colony were generally reported as good ..... .In Western Australia, according to news of September 4, sheep depasturing in the neighborhood of Port Darwin were doing exceedingly well. Feed abundant and the natives friendly and tractable. The export of wool from Port Wallcott this shearing, will probably reach 2,000 bales.....

In France the Minister of Agriculture has issued a notification to the prefects, rendering the disinfection of railway trucks in which live-stock have traveled compulsory, and requiring, further, the cleansing of the pens and parts of depots passed through by them. The Hungarian Minister of Agriculture has devoted 30,000 florins to institute means for the prevention of the phylloxera. It is proposed to employ the sum in the following manner:—First of all a center will be formed where all questions, relating to this disease, will be discussed and, if possible, many of the present confusing ones will be answered; the various means of stopping and curing the phylloxera will be tried, and the powers of resistance contained in the native varieties of the vine to its ravages, well tested. The means used in France will be generally used in this center also, as they have up to the present, been followed by the greatest success. The use of sulphur, submersion, and the cultivation of the American vine will be tried. A large quantitity of these vines are to be procured from America, in order to have them at hand for the supply of vinegrowers in Hungary.....A Beet Sugar Company commenced operations at Farnham, Ont., Oct. 12; a large number of men are being employed, and buildings 300ft. in length are in course of erection.. ....The raising of Angora goats in Western Texas is increasing, and it is alleged to be a profitable business.....The North American Bee-Keepers' meeting, at Cincinnati, was attended by one hundred and fifty delegates from different States.....It has been estimated that the yield of the Cuban sugar crop this year is about 545,400 tons, against 680,000 last year, a decrease of about 20 per cent.

Minnesota is grinding her immense crop of Spring wheat—40,000,000 bushels—into flour, and shipping it to New York and Europe, on direct orders. The crop of that State has thus ceased to be a factor in the speculative wheat trade of the West.....The prospects for the Egyptian cotton crop continues excellent.....Spain, with only 17,000,000 inhabitants, turns out yearly twice as much wheat as does Italy with 28,000,000 of inhabitants... ....From one-acre of ground in North Denver, 1,843 watermelons have been produced and sold this year for 30 cents each—a total of $552.90.....The Houston Post estimates the cotton crop of Texas for this year at 1,250,000 bales, or one-fourth of the entire crop of the United States.

The Proof of the Pudding is in the Eating.

Grocerymen and storekeepers pay 3 to 5 cents a pound extra for butter made with Gilt-Edge Butter Maker. It increases production 6 to 10 per cent.; reduces labor of churning one-half; gives a rich golden color the year round. Sold by druggists, grocers and general storekeepers. Send stamp for Hints to Butter-Makers." Address, Butter Improvement Co., Buffalo, N. Y.

LYDIA E. PINKHAM'S VEGETABLE COMPOUND will at all times, and under all circumstances, act in harmony with the laws that govern the female system. Address Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass, for circulars. Sold by druggists.

There are more cures made with Hop Bitters than all other medicines.

[Daily Fort Wayne Sentinel.]

Mr. S. H. Joseph, Agent of Emerson's Minstrels, remarks: I can with truth speak from experience; and in saying St. Jacobs Oil acts in a marvelous manner I but partly express my good opinion of it.

Big Giant Still Ahead.—At a trial of Corn and Cob Mills, held at St. Louis, October 27, 1880, the Big Giant, made by J. A. Field & Co., came off victorious, leading its rivals by a large majority. Their No. 1 Mill was the one used; it ground one bushel of ear corn in 3⅗ minutes, while the best time shown by its competitors was 5 minutes, using only one horse, its draft was 110 pounds. Its competitors used two horses, and their lightest draft was 225 pounds. The Big Giant showed superiority in every point—draft, time, work and price, and also showed *that they do use* a cast cast-steel grinder. All this was done with their smallest-size mill.

Tropic Fruit Laxative, an agreeable substitute for pills and nauseous purgatives. One lozenge is the dose. Physicians prescribe it. Sold by all druggists.

The Markets.

SPECIALS FROM THE CHIEF CENTERS

Until Saturday, Nov. 13.

Chicago.—WHEAT active; No. 2 Red Winter, $1.04½@$1.04½; No. 2 Chicago Spring, $1.04½@$1.05, cash; $1.05, November; $1.05⅝, December; $1.06½@$1.07, January; No. 3 do. 92c@94½c. CORN fairly active at 42c. cash; 42½@42⅝c, December; 42⅝c@42¾c, January; 47c asked, May. OATS easier, at 30½c, cash; 31c bid, December; 31 3-8c @31½c, January; 35½c bid, May. RYE firm at 84c. BARLEY firmer at 89c. PORK easier at $13.50 @$14.25, cash; $12 15 bid, November; $12.20 bid, December; $13.55@$13 57½, January. LARD easy at $8.05@$8.07½, cash; $8.02½, December; $8.07½ @$8.10, January. Bulk-meats easier; Shoulders, $4.60; Short Rib, $7.10; Short Clear, $7.20.

Cincinnati.—WHEAT easy; No. 2 Amber, $1.07; No. 2 Red Winter, $1.08. CORN scarce and firm; No. 2 Mixed, 47c; new car, 42c. OATS quiet, but firm; No. 2 Mixed, 33c. RYE dull and nominal; No. 2 at 92c. BARLEY in good demand: No. 2 Fall, 92½c@95c. PORK quiet at $13.50. Lard in good demand at $8.10@$8.12½c. Bulk-meats steady; Shoulders, 4½c; Clear Rib, 7½c. Bacon quiet, but steady; Shoulders, 5½c; Clear Rib, 8 1-8c; Clear Sides, 8¼c.

St. Louis.—WHEAT—No. 2 red Fall, $1.03⅛ @1.05⅝, cash; $1.03⅞ bid November; $1.05¼ @1.05⅝, December; $1.07⅛@1.08, January; $1.10⅝ @1.10⅞, February. CORN dull and nominal, cash; futures better at 42½c. bid cash; 42½@42⅝c., November; 41¾@41½c., December; 41¼c., January, 42c., February; 45½c., May. OATS dull at 31@31½c. cash; 31c. bid November; 31½c., December. RYE steady at 86c. BARLEY steady and unchanged. PORK dull at $14. Lard quiet at $8. Bulkmeats steady and unchanged. Bacon lower; shoulders, $5.50; clear rib, $8.20; clear sides, $8.40.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Nov. 13, 1880.

BEANS AND PEAS.—The market for beans is fairly steady, prime new receiving most attention. Fancy beans are scarce at this moment, but the supply will arrive in time. Green peas firm for perfect Wisconsin; Eastern in bags quoted at 10c. under bbl. Southern S. E. peas quiet.

Marrow beans, new, $1.75; old, $1.62½@1.65; medium, new, $1.50@1.55; other, $1.40@1.45; pea, new, $1.55@1.75; white kidney, new, $1.70@1.80; red do., choice, $1.75; fair to good, $1.45@1.50; black, or turtle soup, $1.55 @1.60; green peas, $1.90@1.95; So. S. E. peas, $1.80@1.85.

BEESWAX.—Has a moderate inquiry and small. Sales at 28@27 for Western and Southern.

BUTTER.—Supplies are not being released in large volume, and holders of high-grade stock, creamery or half-tubs manage to dictate recent prices, That is about all they venture, for, when they mention anything above annexed rates, there is a risk of the buyer turning to some of the small well-made lines incident to Fall receipts, and which may be obtained at best entire dairy prices. For any valuable export purpose the market is over the heads of foreign shippers. Of course, there are many common and Summer lines of State and considerable old Western which could be dealt in, but quotations for them are too near what were paid early for a nicer style of goods. Locally there has been some revival at full dairy sales, but the standard looked for had to have Delaware or best Chenango merit. Some dealers have been holding creamery in view of reduced make. Better deliveries of Western are expected. Local trade is quite evenly divided, as prices for the grades of State that compete with Western are very close to each other.

Creamery, finest, 32@32½c.; good to prime, 30@31c.;

fair to good, 27@30c.; poor to fair, 24@27c.; sweet cream, 25@26c.; State entire dairies, choice, 26c.; good to prime, 24@25c.; fair to good, 23@24c.; firkins, 21@26c.; State pails and half tubs, fine fresh, 23@29c.; good to prime, 26@27c.; fair to good, 24@26c.; poor, 20@23c.; Welsh tubs, fall prime, 27@28c.; good to prime, 23@25c.; fair to good, 21@22c.; Western imitation creamery, 20@26c.; dairy, fresh, 23@24c.; good to prime, 20@22c.; fair to good, 18@20c.; factory, June, 17@19c.; do, current make, 19@21c.; other, 16@19c.; poor, 14@15c.; a few rolls, 26@28c.

Receipts for the week, 31,225 pkgs. Exports for the week, 4,800 pkgs.

CHEESE.—The feeling this week has been a trifle stronger on choice brands, and at the close these reach 13¼. Ordinary lots of fancy run at 13 for September made, and 12¾ for the October. The market closes in good shape with moderate accumulations only. Quotations are for

State factory, fancy, at 13@13¼c.; do. good and prime, 12¼@12¾c.; do. fair to good, at 11@12c.; do. b'f skimmed, 8½@10c.; Wisconsin factory, fine, 12¾@12¾c.; do. good to prime, 12@12¼c.; do. fair to good, 10¾@12c.; Ohio factory, fine, 12¼@12¾c.; do. good to prime, 11¾@12c.; do. flat, fair to good, 10@11¾c.; do, poor to fair, 7@10c.

Receipts for week, 44,922 boxes.

Exports for the week, 24,900 boxes.

Steam to Liverpool, 35@45s.

COTTON.—There has been little life to the market this week, with prices unsettled. Latest prices are for

November at 10.80c.; December at 10.74@10.75c.; Jan. at 10.84@10.85c.; February at 10.95@10.97c.; March at 11.10c.; April at 11.23@11.25c.; May at 11.35@11.37c.; June at 11.47@11.49c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	7 15-16	7 15-16	7 15-16
Strict ordinary	8 9-16	8 11-16	8 11-16
Good ordinary	9 9-16	9 11-16	9 11-16
Strict good do	9 15-16	10 1-16	10 1-16
Low middling	10¼	10¾	10¾
Strict low middling	10 11-16	10 15-16	10 15-16
Middling	10 15-16	11 3 16	11 3-16
Good middling	11 5-16	11 9-16	11 9-16
Strict good middling	11 9-16	11 13-16	11 13-16
Middling Fair	12 1-16	12 5 16	12 5-16
Fair	12 11-16	12 15-16	12 15-16

STAINED.

Good ordinary	7¾	Low middling	9¾
Strict good ordinary	8¾	Middling	10¼

Receipts for week, 49,567 bales. Exports do., 18,531 bales.

DRIED FRUITS.—The most prominent item to note this week is in extensive purchases of low grade apples, which have exceeded 200,000 bs. on wants of the French markets; the prices have been from 3½@3¾; evaporated apples are in moderate demand only, and as they are plenty prices are easy. Peaches move out well in small lots. Small fruits are firm.

Evaporated apples are quoted at 7¼@8c. for better qualities; sliced apples at 5@6¼c. for good to choice North Carolina 3¾@4¼c. for Va. apples, 4¼@4c. for Tenn. do; 4¾@5¼c. for State do; 3½@5c. for western Ohio and Mich. Peaches at 27@30c. for evaporated peeled; 14¾@14¾c. for unpeeled do.; N. C. peeled at 18@20¾c.; for the better qualities, and 12@16c. for fair to good lots of peeled peaches; unpeeled peaches at 6½@7¾c. for halves and 6¾@7c. for quarters. Plums at 13¾@14¾c. Blackberries at 7½@8c. Cherries at 18c. Raspberries at 24¾@25c. Whortleberries at 12c

Receipts for week, all kinds, 2,375 pkgs.

Exports for week, 4,328 bbls. of dried apples.

EGGS.—Receipts for the week, 11,379 bbls.; do last week 8,332 do. Supplies are large, but as before, mainly composed of limed. All fresh lots are selling readily. A few Southern come forward and bring prices quite up to best Western. The small size of Southern checks their sale. Limed more for common use.

Near points 29@30c.; State and Pa. 26@27c; Western fresh, 25½@26c.; seconds, 23@24c.; Canadian, 24½@25c; limed State 18@18½c.; do. Western 17@18c.

FLOUR.—Prices have been generally strong on a good demand for all grades, the shippers buying freely.

Latest prices are: $3.65@4.35 for very inferior to fancy superfine State and Western; $4.65@4.90 for poor to choice extra State and Western, odd lots and lines; $4.90@5.00 for choice to fancy do.; inferior to good white wheat, trade and family extras, $5.10@6.00; good to choice do. at $6.00@6.50; (very fancy do. up to $6.85@7. an extreme;) red and amber winter wheat inferior to choice trade and family, at $5.00@6.35; round hoop Ohio, $4.90; and trade and family brands of do. at $5.45@6.35 (the latter for strictly fancy; St. Louis at $5.10@6.00 for inferior to good extra; $6.00@6.50 for good to choice (and $6.50@7.00 for choice to very fancy brands); Minnesota clear, inferior to fancy at $4.80@6.50; Minnesota "straight," poor to fancy, at $5.90@7.25, and patent inferior to fancy at $5.90@8.50; unsound stock at from $2.90@5.50; city mill extra at $5.20@6.15 for ordinary to very choice for the West Indies; do. for England, $4.60@4.90 for poor to choice spring wheat, and $5.10@5.85 for winter wheat product; do. trade and family extras, $5.90@7.00; do. for South America, $6.00@6.35, the latter for very choice; No. 2 at $3.35@4 for inferior to very choice.

Receipts for week, flour, bbls. 155,700; corn meal, do. 6,250; wheat, bush. 884,150; corn, do. 1,005,300; oats do. 275,400; rye, do. 60,000 bs; malt, do. 21,420; barley, do. 160,000 beans, do., 7,656; rice, pkgs. 4,400.

Exports for the week, flour, bbls., 91,300; corn meal, do. 2,400 wheat, bush. 706,200; corn, do, 896,725; oats, do., 2,600; peas, do. 2,050; beans, do. 709; rice, 700.

FRESH FRUITS.—Exports of apples for week 35,000 bbls. The market is quiet, and prime Winter fruit is going in store. For wholesale business the inside range is full; selections make outside figures which show an advance in Spitz. Lady apples have a wide range, $3@8 per bbl.

Western mixed lots, $1.12@1.37; Baldwins in shipping order, $1.37@1.50; Greenings, $1@1.25; Spitzenbergs, King $1.50@1.75; Pound Sweet, $1.75@2. Cranberries steady; sales retarded by mild weather. Cape Cod, fancy, $6.25; other $4@5; per boxes, $1.75@2.50; N. J., do. $1.25@1.75. Quinces cheap; small call. $1@2.00. bbl. Boston pears bush. box $2@6; Cal. $4.50@5 per case. Florida oranges $2@3 per h'f bbl. box; finer marks soon expected. Grapes in fair supply for the date. Catawbas cases $3.25@3.50; baskets 5@6½c.; Isabellas cases $1.50@1.75; baskets 3@4c. Peanuts dull and lower Va hand-picked per b. 4¼@4½c; other 3@3½c; shelled, 5@5¼c. Chestnuts per bush. of 60 lbs. $2; butternuts, 60@75c.; pecan 9@9½c.

GRAIN.—Wheat has been active and advancing; demand largely on speculative account.

Latest prices are of extra white at $1.19¼; No. 1 white at $1.17@1.17¼; do. November at $1.17@1.17¾; do. December at $1.18¾@1.19; do. Jan. at $1.20¾@1.21; ungraded white at $1.12¾@1.18; No. 2 white at $1.16; No. 2 red at $1.18¾@1.19¼; do. November, at $1.18¾; do. December at $1.20¾@1.21¾; do. January option, at $1.22¾@1.23¾; No. 3 red at $1.15@1.16; ungraded red at $1.12¾@1.21; choice hard No. 1 spring at $1.24; No. 2 Chicago spring at $1.16; ungraded spring at $1.14. Rye at $1.02@1.04. Corn is fairly active at irregular prices; latest sales are of New York No. 2 at, 58¾@59¼c.; do., November at 58¾@59¼c.; do., December at 59@59¾; do. January at 59¾@60c.; ungraded mixed Western at 58¾@60¾c.; No. 3 at 56¾@57¼c.; New York steamer mixed at 57@57¾c.; No. 2 white at 59½@60c. Oats are offered freely at easier prices; latest sales are of No. 1 white at 47c.; New York No. 2 white at 42@43¼c.; No. 3 white at 41@41½c.; New York No. 1 at 42c.; New York No. 2 at 41¾@42¾c. do. November at 41¾c.; do. December at 42½c.; do. January at 43¾@43¾c.; No. 3 at 40¾@40¾c.; ungraded white Western at 43@50c.; ungraded mixed Western at 39@42c.; No. 2 Chicago quoted at 42c.

HONEY.—Is in fair demand at late prices; best comb 18c.

HOPS.—There is a very good trade; the exports for the week reach 2,800 bales, and brewers buy to a fair extent. The country markets are up 1 to 3; but here prices are just firm. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	20 @23
Do. medium	18 @20
New Yorks, crop 1880, low to fair	16 @17
Eastern, crop 1880	16 @20
Wisconsin, crop 1880	16 @20
Yearlings, crop 1879, choice	16 @23
Olds, all growths	4 @12
Bavarians	30 @35
Bohemians	35 @40
Pacific coast, new	33 @25

HAY AND STRAW.—There is a liberal demand and a strong market. Quotations are for

Shipping hay at 90@95c.; medium to prime do., $1@$1.20; salt hay at 60@65c.; clover do. at 75@80c. Straw at $1@1.05 for long rye; 80@85c. for short rye; and 70c. for oat.

LEATHER.—Quotations are for hemlock sole, 22½@24c. for light; 23½@25c. for middle; 24@25c. for heavy, and 21@23c. for good damaged.

OIL CAKE.—Western is quoted $32 per ton.

POULTRY AND GAME.—Receipts are assuming a full volume, but the weather has been unsettled for large sales. The demand, however, seems to be opening and supplies have been pretty well cleaned up. Thanksgiving stock should be here by Nov. 23d if the weather is cold. Mixing fowls and chickens in the same package is again deplored by the trade. Dry-picked poultry has lost some of its firmness as prime quality of scalded now arrives regularly.

Turkeys, State and Western, choice, 12@13c.; fair to good, 10@11c. Phila., dry-picked, 14@15c. Chickens, do., 13@15c.; Bucks Co., 13@14c.; N. J., 12@13c.; State scalded, 10@12c.; Western, 10@11c.; poor, 8@9c. Fowls, Phila., dry-picked, 11½@13c.; N. J., d.-p., 11@12c.; scalded, 11@12c.; State do., 10@11c.; Western, do., 10@10½c.; poor to fair, 8@9c. Ducks, Phila. d.-p. 13@15c.; State scalded, 12@14c.; Western mixed, 11@13c.; very poor, 9@10c. Geese, Phila. 11@12c.; other, including Maryland, 8@10. Squabs, white, ₰ doz., $2; dark, ₰ doz., $1@1.25.

Live poultry has now only a chance sale, as city killers have mainly stopped operations. Opening sales have been good during a few days, but by night the decline has been sufficient to make a low average for owners.

Chickens, N. J., ₰ lb, 10c.; State and Penn., 9½@10c; Western, 9@9½c.; Southern, 8@9c. Roosters, 4@5c. Turkeys, N. J., 10@11c. Western, 9@10c. Ducks, prime, ₰ pair, 75c.; other, 40@60c. Geese, choice, $1.75@2; other, $1@1.50. Pigeons, 25@35c.

Game has not had a reasonable chance. With mild weather and poor showing stock the market has ruled unsettled. Wild ducks are low. Sportsmen at this season fill some of the demand that later on goes to the regular market. Quail are firm, being the newest item. Venison arrives in poor order, frequently sour.

Havre de Grace canvas back ducks, ₰ pair, $1.20@1.50; Norfolk, 50c@$1; red heads, 10@75c.; mallard ducks, 30@35c.; Broadville, 20@25c.; teal, 10@25c., the latter for blue-winged; common duck, 10@20c. Quail, prime, $1.50@1.75 ₰ doz.; poor, $1@1.25; partridge, 50@80c, the latter for prime State. Grouse, prime, 80@90c.; drawn, 60@75c. Woodcock, 40@50c. English snipe and plover, $1.25@1.50. Sand snipe, 25@30c. Rabbits, 25@30c. Venison, Minn., saddle, ₰ lb 12½@13c.; other 8@12c. Whole deer, 7@9c.

PROVISIONS.—Hog products have been moderately active at strong prices. Mess pork quoted at $15 for prompt delivery. Bacon at 7¾c. for long clear, and 8¼ for short clear. Beef at $18.50@19 for city extra India mess; $9.50 for extra mess in barrels, and $8.50 for plain mess, in barrels. Beef hams at $18.50@19. Tallow at 6¾@6¾ for prime; stearine at 9¾. Lard, Western steam at 8.75 asked; 8.60@8.62½ for November; 8.47½@8.50 for Dec. and 8.50@8.52½ for Jan.

Receipts for week, beef, bbls. and tcs.; 1,611; pork, 2,211 bbls.; cut meats, 47,689 pkgs.; lard, 24,805 pkgs.

Exports for week, beef, bbls. and tcs., 1,530; pork, 3,600 bbls.; cutmeats, 10,999,572 bs.; lard, 7,215,012 bs.

SEED.—Clover is quiet, quoted at 8¼@8c. Timothy is firm; quoted at $2.70@2.80. Flaxseed quoted at $1.40@1.42½.

Receipts for the week 5,120 bush. Exports, 451 bags.

TOBACCO.—Exporters have bought moderately and there is a very good home trade, with prices strong.

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4¾@ 5	5¼@ 5¾
Good lugs	5¼@ 5¾	6 @ 6¼
Low leaf	6 @ 6½	6½@ 7
Medium leaf	6¾@ 7½	7¾@ 8½
Good leaf	8 @ 8½	9 @10½
Fine leaf	9 @11	11 @12¾
Selections	12 @15	12¾@15

SEEDLEAF. Crop 1879.

New England Havana seed	18 @25
Wrappers, common	13 @15
Medium	15 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@13
Fillers	5½@ 7
Penn. assorted, low	10 @12
Assorted, fair	13 @16
Assorted, fine	18 @22
Wrappers	18 @15
Fillers	6 @ 7½
N. Y. assorted, common to medium	8 @11
Assorted, good	12¾@16
Ohio assorted	7½@10
Wrappers	15 @25
Wisconsin assorted	7 @10
Havana seed	14 @18
Wrappers	1 @18

VEGETABLES.—Exports of potatoes for week, 8,600. Receipts have fallen off suddenly and though the export sales are light the market is firm for all good stock. Eastern Early Rose $1.75; bbl. Slate $1.50@1.65; snowflake, Burbank and prolific $1.50@1.62; peerless $1@1.25; sweet potatoes firm for choice; Phil. $2.25@2.50; other $1.25@2.

Tomatoes, ₰ bush., 75c.@$1; turnips, ₰ bbl., 40@50c.; Russia, 50@60c.; beets, 75c.; cabbage, flat Dutch, ₰ 100, $2.50@3.50; red, $3.50@4.00; Squash, Hubbard, ₰ bbl., 75c.@$1; marrow, 40@50c.; onions, white, $4.50@5; yellow, $3.25; red, $3.25; Chester, $3; carrots, $1@1.25; pumpkins, ₰ 100, $4@5; cauliflower, ₰ bbl. $1@$2; celery, per dozen, $1.00@1.25. Onions easier at the close.

WOOL.—The market is advancing and is quite active, manufacturers buying freely. X and XX Ohio at 46@47c.; pulled at 40c.; washed Med. combing at 33½c.; Spring California at 18@35c.; Spring Texas at 21@30c.; full do. at 21@27c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Nov. 13, 1880.

BEEVES.—Receipts for the week 11,328 head; do. last week 12,839 do. The week has been an uninteresting one for sellers. At the close the yard men tried to force prices, as there was a prospect of better beef-selling weather, but butchers fought them to their views and a decline of ¼c. is to be noted compared with Wednesday last. No Texans on sale. Rough Michigan oxen sold at 6¼c. to dress 54 lbs; poor to fair quality native steers, 7c. to dress 55 lbs; and 8¼c. to dress 56 lbs; good to choice, 9@10¼c. Poor State dry cows sold as low as 1¼@2c. live weight. The Board of Health seized a number of miserable dry cows that were offered for butchers' use; and it promises to keep a sharp lookout for those scrapings of poor farms and dairies, in the interest of the health of our citizens.

COWS AND CALVES.—Free arrivals meet a fairly ready sale, the range for the style of cows coming being $30@55 per head. Extras do $8@10 better when a special customer is in market.

VEAL CALVES.—Live calves have sold well, as dressed have spoiled badly during the warm days. Dressed to bring top figures must be strictly prime. Live calves, N. J., prime to choice 7¼@8c.; State, good to prime, 7@7½c.; other 5@6¼c.; Mt. Holly, heavy, 4¼@5c.; light, 6¾@7¼c.; buttermilk, 2¾@3¼c.; grassers, 2@2¾c.; dressed N. J. prime 10@10¼c.; State prime 9¼@10c.; fair to good, 8@9c.; common, 3½@5½c.

SHEEP AND LAMBS.—Receipts for week, 32,674 head; do. last week, 28,850 do. Common and medium grades of sheep drag; prime lots firm. Sheep quoted 3¾@5¼c.; a few extras, 5¾c. Lambs, poor to prime, 4¾@6¾c.

SWINE.—Receipts for the week, 44,400 head; do. last week, 31,408 do. Market dull at $4.60@4.75 per 100 for live corn hogs. Country-dressed pressed for sale with adverse weather. New Jersey dressed, light, 7¼@8c; other, 5¾@7c; city dressed State 5¾@7¾c.; do. Western 5¾@6¾c; pork tenderloins, 9c.

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YOUTH'S COMPANION,
41 TEMPLE PLACE, Boston, Mass.

Reading for the Young.

THE WASP AND THE BEE.

In a garden sweet and fair,
Once a bright and busy pair
Held a brief conversation on a lily.
"Mr. Wasp," remarked the Bee,
"Your maneuvers puzzle me,
You must either be a lazy rogue, or silly.

"In the school where you were taught,
Was the fact before you brought
That our time is equivalent to money?
Now for days and days we've met
'Mid the pinks and mignonette,
But you never seem to carry any honey!

Said the Wasp: "You make me smile
With your blunt, outspoken style,
You have many things to learn, I must declare;
For a thousand sunny hours
You've been pumping at the flowers,
And you never dreamed of poison being there.

"From the phlox and columbine,
Bleeding heart and eglantine,
Soon your treasury of honey-comb you fill;
While I, coming in your wake,
From the self-same blossom take
All the rankest sort of poison by the gill.

Let me whisper in your ear:
I have found while roaming here
Over garden, over orchard, over field,
That the fairest growths of flowers
Which adorn these haunts of ours,
The most deadly kind of poison often yields."

"Bless my sting!" exclaimed the Bee,
"Every day we live to see
Will some wonder carry with it, I suppose.
Who would think a nauseous drug
Could be stored away so snug,
In the heart of such a blossom as the rose?"

And, with that it flew away,
To a field of blooming hay,
On the buttercup and clover to alight:
While the Wasp set out to find
Something suited to his mind,
And was soon in a camelia out of sight.

FARMING FOR BOYS AND GIRLS.—NO. 4.

HENRY STEWART.

The Air and its Uses in Agriculture

THE AIR serves a most important purpose in the growth of plants. Out of 100 parts of the weight of plants grown as farm crops, 95 to 99 of these parts are derived from the air, in one way or another. Every person, then, who lives on a farm ought to know something about this very needful substance. The air surrounds us in every direction; it penetrates into every space, no matter how small. It cannot be seen, yet it possesses color, for the beautiful light blue of the sky, and the deep blue which bathes a distant mountain, are really caused by the air through which our sight passes, just as when we look through a piece of colored glass every object appears to be of the color of the glass. Air has weight. Its weight can be felt when we stand in a strong wind, for wind is only air in motion, and the force with which the breeze presses upon our bodies, or upon any other object, is nothing more or less than the weight of the air increased by its motion; just the same as the force of a ball which strikes the hand consists of its weight multiplied by its motion or velocity. The weight of the air is known to be 538 grains, or one ounce and 58 grains (nearly one ounce and a sixth of an ounce) to each cubic foot, so that a room 40 feet square and 18 feet high would contain about a ton of air. Knowing the weight of air we can tell very nearly how much of it surrounds the earth, that is, its hight above the ground, because we know that a column of it exactly one inch square weighs just 15 pounds. It is because of its weight that it forces itself into every crevice and opening, however small, and penetrates into every part of the soil, filling every space between the particles, unless it is dislodged and forced out by water. When, however, the water sinks into the soil or dries out of it, the air immediately fills the space again. The air consists of a mixture of two gases, oxygen and nitrogen, or very nearly 21 parts of the former and 79 of the latter in bulk. The weights of these two gases differ, for in 10,000 pounds of air there are 2,317 pounds of oxygen to 7,683 pounds of nitrogen. These gases are mixed together only, and do not form a union; in a similar manner to that in which a quantity of rye and wheat might be mixed together and still remain separate in reality so far as the individual grains are concerned. The air also usually contains several substances which exist in it as impurities, and are derived chiefly from the decay of organic matter. These are carbonic acid, ammonia, and nitric, nitrous, and sulphurous acids. These occur in very small quantities, the first being the most abundant, but yet there are only four parts of it in 10,000 of air. Nevertheless this small quantity exerts, and has exerted, a most wonderful effect on vegetation, for it has been the principal substance which has entered into and formed the plants which have, in their decay, produced the vast beds of coal and peat, whose total quantity is far beyond the power of the mind to conceive.

The air also contains about one part in 100 of water in a state of invisible vapor; dissolved in fact, and as imperceptible to the sight as salt or sugar are when dissolved in water. Warm air can hold more water than cold air; when the air is cooled the vapor invisible before, becomes perceptible, and forms fog or clouds; when the cold becomes greater the vapor is still more condensed, the small particles join together and fall in drops as rain, or if the cold is very great, crystals of beautiful shape form and fall as snow. All these peculiarities of the air render it very useful to the farmer, for if the air were dry there would be no rain, if it were pure there could be no vegetable growth, for the principal part of a dried plant is derived from the carbonic acid of the air, a substance in itself that could not be breathed by an animal for one minute without sudden death; and the ammonia and nitric acid are also very necessary to plant growth. Besides these, the oxygen of the air is needed to support plant life. It is required for the first sprouting of the seed; its presence is necessary to enable the first tiny rootlets to absorb, and the first weak leaves to digest and convert into plant substance, the food which exists in the soil; not a single bud can open without the needed supply of oxygen, and this gas is also necessary to enable the plant to unfold its blossoms, and it endows these with their delicious fragrance: it gives sweetness to some fruits, an agreeable acid to others and it performs an essential service in the ripening of the seed. From the birth to the death and decay of a plant, oxygen is always serving an active purpose, and as animals could not exist for one moment without it, so plants would never exist in its absence. This furnishes one of the many analogies which exist in the life and growth of both animals and plants.

Let us consider for a moment how useful it is for a farmer or gardener to know of these facts in regard to the air which surrounds us. Let us consider a corn field in the Summer time. A shower has fallen and as the hot sun has quickly dried the surface of the soil, it has become baked, hardened and encrusted. No air can penetrate. The corn is deprived of its needed supply of air. The roots cannot take in their nourishment; the circulating sap is not able to change its burden of food into life giving elements; the leaves droop, curl and become pale, the plant is suffering and no longer grows; it simply exists, sickly and weak. The farmer comes with his cultivator and loosens the ground and destroys the hardened crust upon it. The air instantly circulates through the mellowed soil, the roots go to work with vigor, the plant breaths and feels again, and the observant farmer noticing the improvement, sees that the cultivation of the soil is of great advantage to his crop; but why it should be, he cannot tell and does not know, unless he understands the nature of the air and its wonderful influences upon plant growth.

A FAITHFUL DOG.

EVERY one will remember the Mill River horror of a few years ago and the bursting of a reservoir among the hills, above Williamsburg, Mass., which brought desolation and death to so many homes, and laid waste entire villages.

Riding about four miles below Williamsburg a short time ago, when a fellow passenger remarked, pointing to a clump of trees by the river side.

"I shall never forget a scene I witnessed there during the search for bodies after the Mill River disaster some years ago. The drift wood and debris had made a deposit beside that tree nearly twenty feet in depth and there I saw a large dog crying pitifully. As we drew near we found that the dog was fastened down by a stick of timber and unable to move. His eyes were like balls of fire and he was fearfully emaciated. At first we feared to go near him, but finally released him and gave him some food. He dropped the food looking down and whining.

'Some one is here,' one of our company said, and we commenced digging, and while doing so the dog lay very quiet, but the moment we ceased he seemed to grow almost frantic. When we commenced digging he laid down again but no effort would induce him to taste the food before him. At last after hours of labor we found the body of an old man, and a little later a little boy, over which the faithful dog had been keeping watch. The joy of the poor brute was great but the food which he had so generously refused would never be eaten by his young master.

This story interested me greatly, said my friend, for I knew the dear little boy who went out with his faithful dog to the meadows that dreadful morning and the kind old man, his grandfather, who hearing that the terrible flood was coming went out to seek him. They were all swept away, but the marvel was how they kept together during that fearful four miles and how the poor dog should know they were buried deep below him. He had not tasted food for a week, but he will never know want again. The family so terribly bereaved reside in Boston now, but the heroic dog is boarded in Williamsburg where the friends over whom he kept such faithful watch are sleeping."

MRS. E. J. R.

GIVE THE BOYS TOOLS.

ALMOST all boys are naturally mechanics. The constructive and imitative faculties are developed in part, at a very early age. All boys are not capable of being developed into good, practical, working mechanics, but most of them show their bent that way. There are few cases in which the boy has no competent idea of the production of a fabricated result from inorganic material, but such cases are. Given the proper encouragement and the means, and many boys whose mechanical aptness is allowed to run to waste, or is diverted from its natural course, would become good workmen, useful, producing members of the industrial community.

The mechanical boy ought to have a shop of his own. Let it be the attic, or an unused room, or a place and tools. Let him have a good pocket knife, gimlets, chisels, gouges, planes, cutting nippers, saws, a foot rule, and material to work. Let the boys have a chance. If he is a mechanic it will come out, and he will do himself credit. If he fails he is to follow some calling that does not demand mechanical skill.

ALLIGATORS' NESTS.

THESE nests resemble haycocks. They are four feet high, and five in diameter at their bases, being constructed with grass and herbage. First, they deposit one layer of eggs on a floor of mortar, and having covered this with a stratum of mud and herbage eight inches thick, lay another set of eggs upon that, and so on to the top, there being commonly from one to two hundred eggs in a nest. With their tails they then beat down round the nest the dense grass and reeds, five feet high, to prevent the approach of unseen enemies. The female watches her eggs until they are hatched by the heat of the sun, and then takes her brood under her own care, defending them, and providing for their subsistence. Dr. Lutzenberg, of New Orleans, told me that he once packed up one of these nests with the eggs in a box for the Museum of St. Petersburg, but he was recommended, before he closed it, to see that there was no danger of the eggs being hatched on the voyage. On opening one, a young alligator walked out, and was soon followed by the rest, about a hundred, which he fed in his house, where they went up and down stairs, whining and barking like young puppies.—Lyell, the Geologist.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I did not receive any seeds but I thought I would tell you of what flowers I have. I have quite a variety of flowers, of which I will name: Phlox, Drummondii, Sweet Mignonette, single and double Chinese pinks, single and double Japanese pinks, and the Heddewigii Pink, balsams, cockscombs, snap-dragons, petunias, coreopsis, pansies, China asters and morning glories. My pinks have done grandly; there are some of them which measures two and one-half inches in diameter. The phlox was one mass of beauty. I never had such a mignonette before. It seemed as if it would smother itself in its rapid growth. My cockscombs and China asters are beginning to be beautiful. My balsams are quite large and handsome. My snap dragons are indeed beautiful; more so than ever before. My petunias have done finely—but my pansies did not do very well as it was very dry, but I tried to be faithful in watering them. We had a coreopsis which came up last Fall, and wintered nicely. We transplanted it quite early. When it commenced blossoming, which was the first of June, it measured three feet four inches in hight, and three feet in diameter. On the 4th of July it had 109 blossoms on it, each blossom as large as a 50 cent piece, and several times since then it has had 200 blossoms on it at one time. Some neighbors and friends whom I thought were superior florists were looking at my bed and I was regretting that the drought pinched it, they said they did not see how it could be any handsomer. Will you please give me the botanical name of what is commonly known as camphor plant. Your affectionate niece, PETUNIA.

[Cinnamomum camphora is the botanical name of the green-house plant known as camphor tree.—U. M.]

DEAR UNCLE MARK:—I will give you and the cousins my experience in sweet-potato growing away up here in Northern Vermont. Last Spring I purchased of B. K. Bliss & Sons, of New York, 100 sweet potato plants of the Early Golden variety; these I planted three feet apart each way, putting three plants in a hill. Owing to the dry weather about one-fourth of these died; from the remainder I dug one bushel and a peck of potatoes. Whether this is a large or small yield I do not know, but I think it would pay well to raise them at 75 cents per bushel if they yielded at this rate. I take great interest in reading the RURAL, especially the horticultural columns, and should miss it very much if I did not have the reading of it.

Yours truly, W. H. RAND.
Chittenden Co., Vermont.

[To succeed well in the more northern States there should first be a ridge constructed by turning two furrows of earth over well-rotted manure, and after this ridge is nicely smoothed and rounded the plants should be set from 10 to 15 inches apart and kept carefully weeded. One hundred and fifty bushels to an acre would be a fair yield. —U. M.]

DEAR UNCLE MARK:—Many thanks for the seeds you so kindly sent me. They all grew finely and flowered beautifully. The portulaca were very pretty and of six different colors. Every seed of the musk-melon grew and was a surprise, indeed. They were the best we ever had. I have saved the seeds from the best ones to plant next year. I am interested in the letters from the cousins, though I think some of them very careless with the seeds which require so much labor and expense, or they would take more pains to cultivate them and not say they failed to grow or they forgot to plant them, or neglected them in other ways, which showed they took little interest in their culture. We ought to take all the pains we can, for what is worth doing at all is worth doing well.

Your grateful niece, ALICE SPARROW.
Oneida Co., N. Y.

UNCLE MARK:—My mother takes the RURAL and we think it a splendid paper. We have only taken it this year. I should like to join your Horticultural Club if you will let me. The seeds you sent my mother all did well but the oats, we did not raise any at all. We raised a Mangold Wurtzel that weighed ten and one half pounds, and we thank you very much for the seeds and hope you will remember us again in the free seed distribution. Yours truly, MELLIE KING.
Dekalb Co., Ill.

UNCLE MARK:—My father has taken the RURAL for more than 20 years, and likes it very much. I am 13 years old and go to school. We live on the shore of Lake Champlain. I would like to join the Horticultural Club. I am much interested in the culture of flowers. We have a few, but they are not very choice. I think Edith would be a very pretty name for Mary Walker's little sister.

From your new cousin, S. B. H.
Washington Co., N. Y.

Sabbath Reading.

"GOD KNOWS."

[Some years ago a child's body was found on the South coast of England, having been thrown there by the waves. The parish clerk, on being asked what should be put on its grave, answered in perplexity: "God knows." This proved a fitting epitaph.]

Where the tear-fed violet blooms,
Where the shade of the sunbeam chases;
Where in mossy marble tombs
Sleep the dead beneath the daisies,
Where the mourner slowly wanders
When the bird has sought its nest,
And amid the gloaming ponders
Over those who tranquil rest;

Clouds across the crimsoned sky
Homeward gayly were careering:
But in that lone churchyard, I
Heeded not that night was nearing.
Discords in my bosom swelling
Broke the music of life's song,
For my soul was weary dwelling,
'Mid the over-earthly throng.

Far within the stilly shade
Of a quiet, sequestered corner,
Where the wild flowers bloom and fade,
Gently nurtured by no mourner,
Was a grave, an infant's only,
No one knew the name she bore.
Ask the waves which, dark and lonely,
Cast her lifeless on the shore.

O'er the grave a humble stone
Reared its lichened head so lowly,
Like a sentinel alone,
Watching 'mid the silence holy.
Hither came the croaking raven;
From this stone its weird notes rose;
On its surface rudely graven
Were the simple words: "God knows."

As a moonbeam on the sea
Charms the sad wind's shrieks to singing
So these tender words to me
Turned my song, sweet solace bringing.
Though my thorn-strewn way was dreary,
Though my feet found no repose,
Yet my soul, life-worn and weary,
Rested in the thought: "God knows."

EXTRACT FROM A SERMON BY C. H. SPURGEON.

I was present at a meeting of believers a short time ago, when a conversation of this kind occurred. A brother in the Lord, one of the most fervent men I know, said that sometimes when his piety flagged, and his heart grew cold, he found it a very blessed thing to go and visit the sick and the dying; and he found this to be such a sweet restoration to his faith that he recommended us all, as often as we could, to frequent dying beds. Now, another brother who was present, who preaches the Gospel, but who at the same time is a butcher, said he thanked God he did not need to go to a dying bed to see Jesus, and to get his heart set right; that he had had as sweet fellowship with God in Camden Town Market, as he ever had in the house of prayer, and that he found it best always to live, as his brother wished to live sometimes—namely, always conscious of sin, and always looking to the sin offering.

Come to Jesus, then, as you came at first. Fly to the fountain always as needing constant cleansing—not as though you had not been washed, but still abiding, continuing in blessed recognition of your present cleansing that flows from the fountain filled with blood. It is very sweet to remember that the fountain we sing about as being opened in Jerusalem, is opened "for the house of David and for the inhabitants of Jerusalem"—not so much for sinners, though it is opened for them, as for saints—"for the house of David and the inhabitants of Jerusalem." Let us always be coming to it; and each morning and each night let this be the cry of our spirit, "Still guilty, still vile, still polluted, we see Jesus, and seeing Him, we know that we are saved."

Should not this, also, be the mode of our life in another respect? We are now disciples. Being saved from our former conversation, we are now become the disciples of the Lord Jesus; and ought we not, as disciples to be constantly with our Master? Ought not this to be the motto of our life, "We see Jesus?" We should not regard the commands of Jesus Christ as being a law left to us by a departed Master whom we cannot see, and to whom we cannot fly. Is it not better to believe that Christ is a living Christ, that He is in the midst of His Church still, observing our order, noting our obedience or our disobedience, a Master absent in one sense, but still in another point of view ever present, according to His promise—"Lo, I am with you alway, even unto the end of the world?"

THERE is a power in the soul, quite separate from the intellect, by which God is felt. Faith stands serenely far above the reach of the atheism of science. It does not rest on the wonderful, but on the eternal wisdom and goodness of God. The revelation of the Son was to proclaim a Father, not a mystery. No science can sweep away the everlasting love which the intellect does not even pretend to judge or recognize.—F. W. Robertson.

"UNDER whose preaching were you converted?" "Under nobody's preaching," was the pleasant, smiling reply; "it was under Aunt Mary's practising." The life that her aunt led before her was the means of leading her to the Savior. It was not what the aunt might have said, but it was what she did—her consistent example, which was the means of her niece's conversion.

DYING and death are two distinct things:—there is something gloomy and melancholy about dying, whereas death is nothing, but as it opens the way to glory—R. Watson.

TRUTH is in morals what steam is in mechanics—nothing can resist it.

PERSONAL ITEMS.

Senator Chaffee has presented his son-in-law, Ulysses S. Grant, Jr., $400,000 in government bonds.

Marcus Richardson, who was 100 years old on October 30th, voted at Bangor, Maine, the 2d inst.

Capt. R. F. Loper, the veteran steamship builder, died in Brooklyn on Sunday, 7th, in the 79th year of his age.

Ex-Congressman Lucien C. Gause, of the First Arkansas district, died at his home at Jacksonport, in that State, last week.

Judge Edward Rawle, a native of Pennsylvania and resident of New Orleans for 56 years, died on Friday of paralysis, aged 83 years.

Lucretia Mott, one of the most widely known philanthrophic workers, died at her residence near Philadelphia on the 11th, aged 88 years.

The property of Mr. Victor Newbomb, the retiring president of the Louisville and Nashville Railroad Company, is estimated at $6,000,000.

Garibaldi was utterly prostrated by his journey to Milan. His condition made a profoundly painful impression on the Milanese public. He was unable to receive anybody.

The bronze statue of Admiral Farragut, executed by Mrs. Vinnie Ream Hoxie and erected in Farragut Square, Washington, will be unveiled about the 10th of December.

Professor A. J. Gordon, of the Locustdale Military School, an eminent and widely-known teacher, died suddenly on Sunday, while attending church in Culpepper, Va.

Mr. Cyrus W. Field has ordered a Christmas dinner at Shanghai and expects to make New Year calls at Hong Kong. He will sail from San Francisco on the 18th instant.

General Thomas Ewing, who has been traveling for his health in the West, was suddenly seized with malarial fever at Columbus a few days ago and is now lying dangerously ill there.

Lord Lymington, eldest son of the Earl of Portsmouth, has arrived in New York. When asked the object of his trip to America he replied: "Oh, it's quite the thing now to do the States, you know."

Dr. Sarah E. Wilder, of the class of '79, of Boston University of Medicine, and Kate G. Mudge, of the class of '80, of the same college, are in Zurich, Switzerland, studying the German language, before going to Vienna, to engage in hospital and dispensary work.

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A well-known merchant of Hanover, N. H., whose wife had long been afflicted with Asthma, sent for the Compound Oxygen Treatment. After using it a little over a month he wrote:—"I thought I would write and tell you of the *wonderful effects of Compound Oxygen.* My wife was a very sick woman, coughing incessantly all day and nearly all night. Could get no rest at night until she used chloroform and alcohol, or chloral. Her sufferings during the asthmatic attacks were distressing in the extreme. * * *Now has no cough and no appearance of the Asthma;* is able to do considerable work, and we believe that when two months expire she will be a well person." Our Treatise on Compound Oxygen, with full information, sent free. DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

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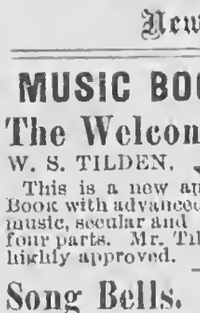

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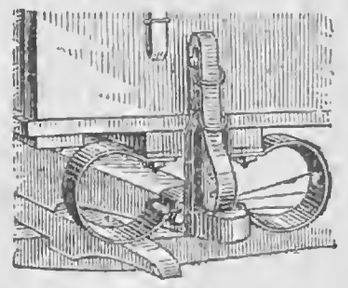

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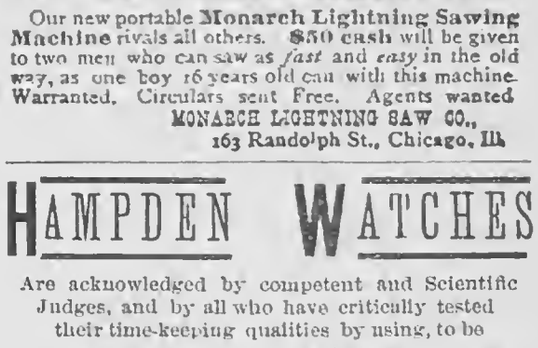

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Humorous.

"It is true," said an old philosopher, "that two heads are usually better than one, but it never could be thus with the two heads on the same pin."

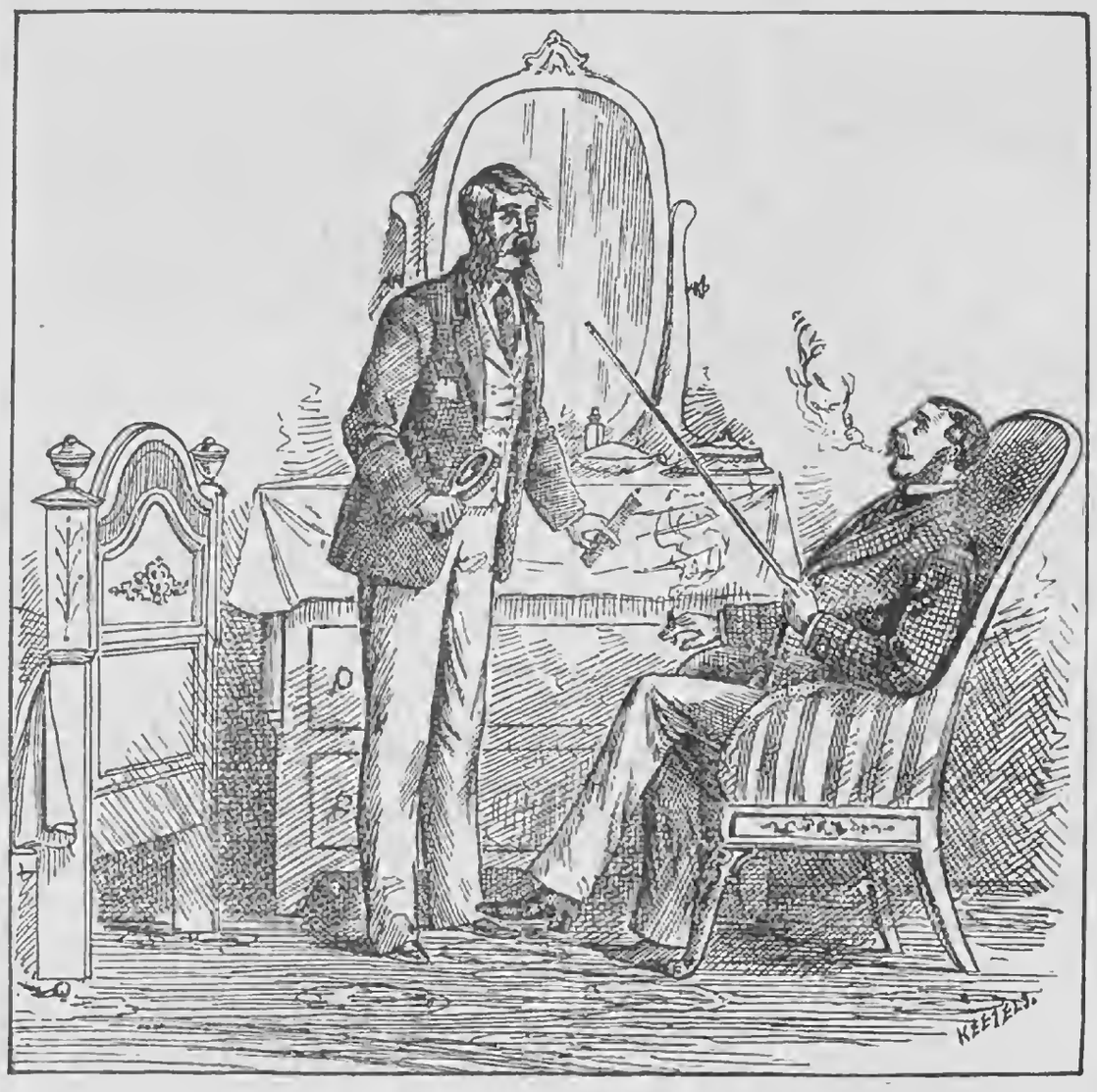
The boy who left the piece of ice in the sun to warm up, was no more foolish than the man who opened the store and expected people to hunt him out and buy his goods, without advertising.

A man who married a Jewess shortly afterwards joined the temperance society, and never dared to kiss his wife from that day, because he had considered himself prohibited by the pledge from meddling with Jew-lips.

He said he was bashful, and blushed painfully, and asked her if she could spell bashful. She said she might do it on a pinch, and spelled it b-a-s-h-f-o-o-l. Then he looked uneasily at her and began to wonder if she were unutterably ignorant or superlatively sarcastic.—Lampton.

A five-year-old son of a family the other day stood watching his baby brother, who was making a great noise over having his face washed. The little fellow at length lost his patience, and stamping his foot, said: "You think you have lots of trouble, but you don't know anything about it. Wait till you're big enough to get a lickin' and then you'll see—won't he, mamma?"

A notion seller was offering a Yankee clock, finely varnished and colored and with a looking glass in front, to a certain lady, not remarkable for personal beauty. "Why, it is beautiful," responded the vender. "Beautiful, indeed! a look at it almost frightens me," said the lady. "Then, marm," said Jonathan, "I guess you'd better take one that ain't got no looking glass."



PHILOSOPHICAL.

Jones—"Why, Brown, how gray you're getting!"
Brown—"Ah ha! I don't mind how *gray* I get, so long as I don't get *blue*."

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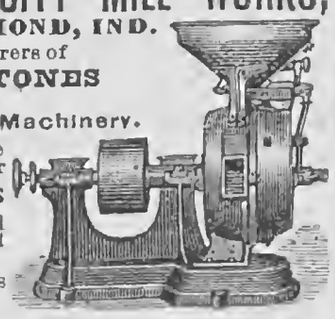

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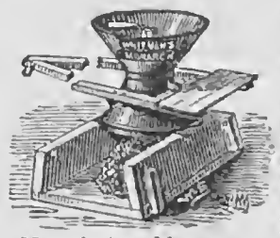

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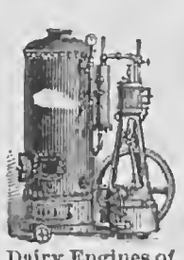

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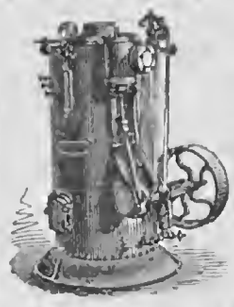

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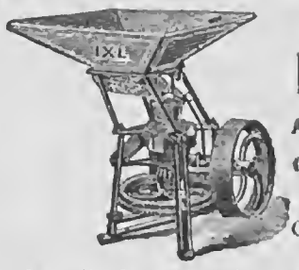

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 48. WHOLE No. 1609. | NEW YORK, NOV. 27, 1880. | PRICE FIVE CENTS. $2.00 PER YEAR.

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The Herdsman.

HIGH-BRED DUTCH (OR HOLSTEIN) CATTLE.

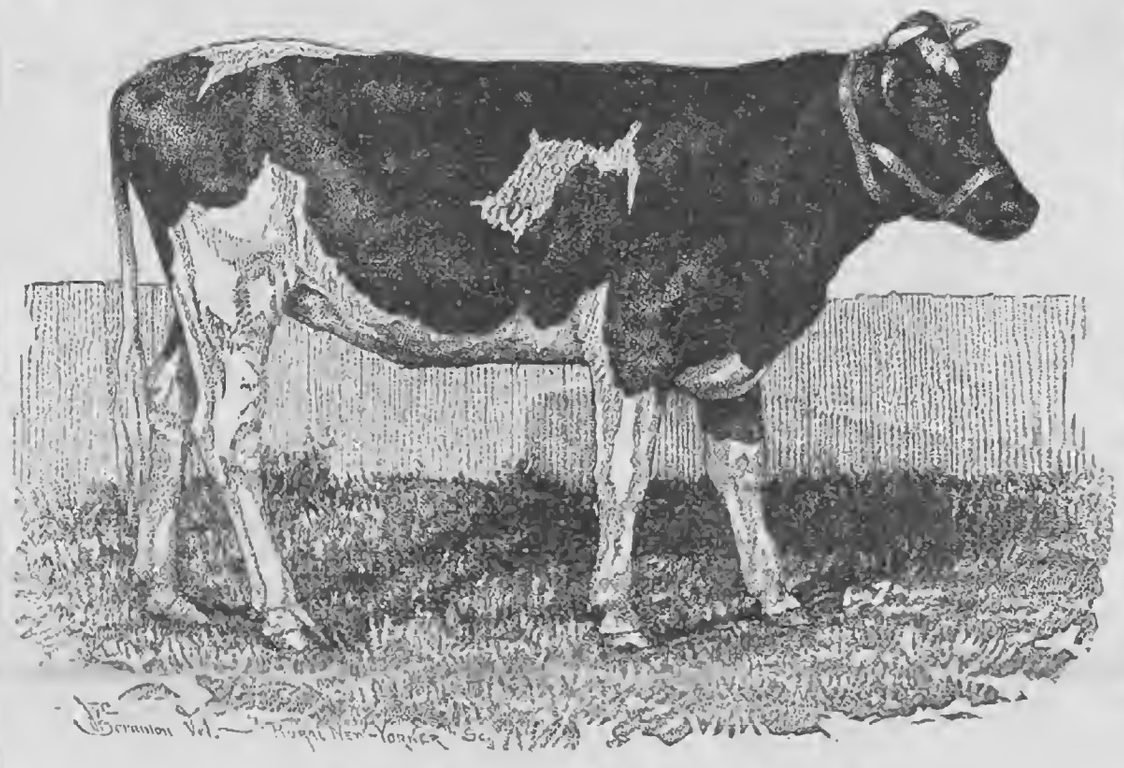
WE secured pictures of several of the prize animals at the recent show of the New York Agricultural Society at Albany, and in presenting our readers a portrait of the fine bull "Billy Boelyn" and of the two beautiful heifers "Nannie Smit" and "Panacea," offer a short sketch of the herd, sincerely regretting that the noble cows "Ondine" and "Johanna,"—the former a first prize winner at Rotterdam in 1878—would not stand still enough for our photographer to get their pictures.

The Kriemhild Holstein Herd.

This admirable herd imported, bred and owned by Mr. Gerrit S. Miller, of Peterboro, New York, is only eleven years old. Mr. Miller brought in the year 1869 four animals selected by his brother who had been led to prefer this breed because he had witnessed the accurate testing of the several prominent breeds in comparison with one another at the German agricultural school which he had been attending. This breed has attained such popularity within half a dozen years, that it is hard to realize that at the time spoken of Mr. Winthrop Chenery of Boston stood almost alone as an importer and breeder of these, yet so it was. These four animals, "Hollander," "Dowager," "Crown Princess" and "Fraulein," soon began to attract the attention of dairymen and farmers of Madison County and vicinity, and it only took one season to convince them of the great excellence of the breed for milk, independent of its beef qualities. Mr. Miller bred from these animals until '73, when he exhibited a herd at our State Fair in Albany. The competition was strong, the 1st prize herd from the New England Fair and the 1st prize herd from the Rhode Island State Fair, in addition to a fine lot imported by T. E. Whitney, were in the *show ring*, yet he took the herd prize, 1st and 2nd on cows, 2d on two-year-old heifers, 1st and 2d on yearling heifers, and 1st on aged bull. This was quite encouraging. In 1874 at Rochester and at Utica the herd was equally successful. From that date to this Autumn he has not exhibited at any fair. In 1876 six head were imported, "Billy Boelyn" among the number. An old cattle dealer of Holland of 25 years' experience, spent a week in hunting up this bull, and when he returned with his prize said, "he was as fine a bull as could be found in that country." In 1878 Mr. Miller imported eight heifers and the cow "Johanna"—winner of the 1st prize as milch cow at Albany this year—was among the lot. In January, 1879, he visited Holland again and selected seventeen as good animals as he could find. Among this number was the dam of the 1*st prize bull at the Paris Exposition*, said to have given 95 pounds of milk per day; unfortunately this cow died the day she arrived in port. Another of this lot, "Empress," said to have given 108 pounds per day was nearly used up by the unusually rough passage. These cattle were selected for their great milking capacity coupled with beautiful straight forms, fine bone, good size, and for having all the escutcheon that could be found with the true milking form. In September of the same year, Mr. Miller's last importation, also of 17 head, was selected on the same principle. This herd won at our State Fair in Albany this year the large gold medal under strong competition. It is the third time the herd has been exhibited at the State Fair and it has *won the herd prize each time*.

"Nannie Smit" won the 1st prize as a two-year-old. She was selected by Mr. Miller from the herd of GERRIT SMIT, in Holland. She dropped her first calf last June and produced in thirty days 1,293 pounds of milk, the largest yield in one day was 50 pounds. In addition to her great milking powers, she has a beautiful, straight, broad back, is deep in the hindquarters, light in front and carries an udder, perfect in form.

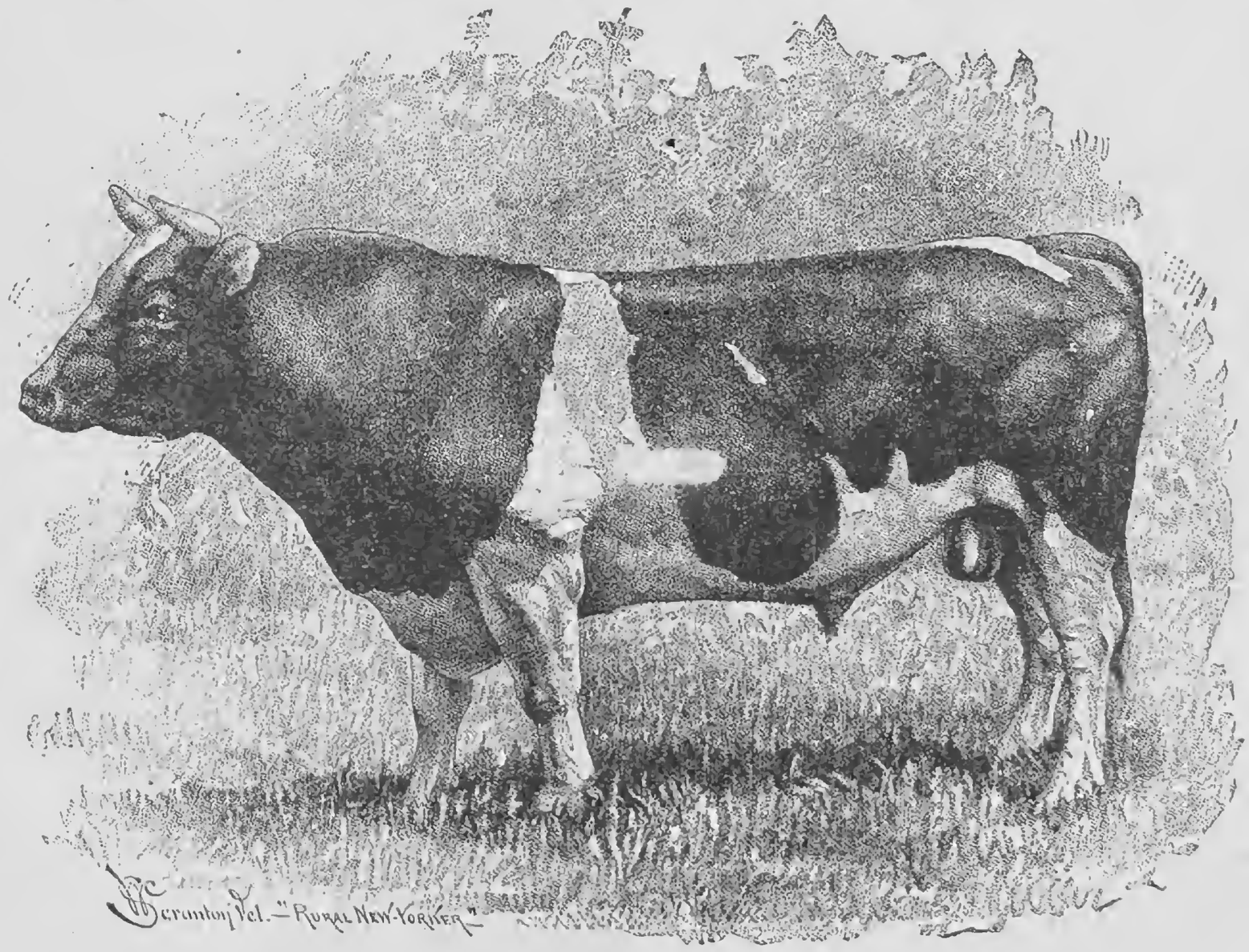
"Panacea" won 1st prize as a one-year-old, a daughter of Billy Boelyn and an animal of remarkable form and substance for her age.



PANACEA, ONE YEAR OLD.—FROM LIFE.—FIG. 376.

Her dam "Pansy" is a deep milker (having given over 6,000 pounds of milk as a two-year-old) and is now owned by Messrs. Forbes and Hall in Colorado.

"Billy Boelyn" (2d prize bull) is a very perfectly formed bull. He is long, low, straight and broad and unusually well filled in all points; his stand is perfect, legs strongly set wide apart; his weight is 1872 pounds. He has proved a valuable breeder and imprints his form on most of his get, two of which took 1st prize at this fair. He was calved in 1875. "Empire" (1st prize bull calf) sired by "Billy Boelyn," dam "Empress," is an elegant calf resembling both sire and dam and is to be the head of the future herd.



HOLSTEIN BULL, (Billy Boelyn.)—From Life.—Fig. 377.

NOTES BY A STOCKMAN.

IN keeping sheep for profit the great point is to secure cheap pasture. Where wool alone is the source of income cheap land is an absolute necessity and the supply of this is rapidly diminishing. There are few localities left in the United States where land can be procured in large tracts for 50 cents to one dollar per acre or even less than 50 cents. But such tracts can yet be procured in the mountain regions of Southwestern Missouri, West Virginia and North Carolina where the climate is all that can be desired.

A pastoral life has many attractions for persons of quiet, easily satisfied dispositions. Others had better never contemplate keeping sheep, for there can be no success without patient and persistent "sticking to it." There is no excitement about the business, but slow growth and gradual progress only. It is somewhat of a "humdrum" character year in and year out and that suits but few Americans. But one who begins, cannot leave off without loss; there is nothing to be done but to go on and work and wait for a few years. Those who look for excitement and to make money by the jump should avoid sheep keeping. Peculiarities of breed and character are, as one might say, "local issues." These peculiarities are formed and fixed by the character and circumstances of distinct localities. Thus every distinct kind of breed of sheep, cattle or horses possesses its distinct mark which is often lost as soon as the locality is changed. A notable instance is afforded by the Jersey cow which in America has lost its original angularity and boniness and has become smooth, fine-boned, larger-bodied and of much handsomer form. Compare old Duchess which was owned some years ago by Mr. Sharpless of Pa., with the modern Filbert or the daughters of Alpha and Eurotas. The climate and soil of America have a more refining influence than the ocean breezes of Jersey, and this breed here becomes superior in every way to the old stock from its native fields. As Americans use the English language with greater propriety and elegance than the English themselves, so the English cattle are surpassed by their descendants of American birth.

With sheep this is still more conspicuous, and instead of trying to keep sheep up to a sort of cosmopolitan standard, we should strive to procure some good local varieties and breed these to perfection. If England and its sister provinces of Wales and Scotland and Ireland possess twelve or fifteen distinct breeds of sheep, we might possess fifty, each thriving best in its own native place, and in time we might become the source from which the rest of the world should procure their means of improvement. This should be the

alm of America, first in peace, first in war, and first iu all the arts and industries.

A Western breeder states that his steers sired by a pure-bred Short-horn bull are now selling at $50 per head, while those sired by a grade bull are bringing $30 to $40. The difference is about the usual rate, and is sufficiently large to give a handsome profit every year on an investment of $200 in a good pure-bred bull. This note is well worth noting by every farmer whom it may concern.

It is difficult to discover any person who has made a single dollar out of Angora goats except the breeders. There are the breeders and their victims; the former make the money and the latter lose it. There are many persons to be found who have paid $50 for a pair of goats, or even more, and who have been glad to bestow them upon a friend after a year or two of experience with them, and the friend might well have said, "an enemy hath done this," as soon as he had discovered the hollowness of the goat delusion. Still one may read now and then of a new victim paying his $50 for experience in this line of business, in which the profit is all on one side.

What is the cost of so insignificant an insect as the cattle gad-fly: *Œstrus bovis?* $250,000 yearly is said to be the loss occasioned by the damage to the hides every year that are sold in the Chicago market alone, by reason of the perforations made by the grubs in the skin. A difference of two cents a pound is made on one-fourth of the 50,000,000 pounds of hides sold yearly in Chicago, on this account. The total loss in America may then easily be one million dollars annually, and yet this pest might be exterminated if owners of cattle would set about it.

Sheep Husbandry.

STARTING IN SHEEP HUSBANDRY.

I AM glad to see a little more interest manifested through the RURAL in that profitable animal, the sheep. I think that all farmers—dairymen not excepted—should keep at least a few sheep. But in starting one must not enter the business blindfolded; for he has a number of things to take into consideration. Among these is his proximity to market. If near a good market, perhaps mutton sheep would be the best for him to select. If not near a market, which is my own condition, he must make both wool and mutton his object. He must also consider the lay of his land, in order to determine what size sheep is best for him. If very rough and barren, choose the small and active kind, as they are the best foragers. If the land is only moderately rolling and of medium productiveness, the novice in sheep-keeping must select animals of medium size; but if his land is level and rich, producing excellent pasture, he must take the large kinds of sheep—the larger the better. It will follow as a matter of fact that the small sheep will, or at least should, produce a fine, short, close fleece; the medium size, a fleece of medium length and quality; and the large ones, a long, coarse fleece as a rule. Now the majority of farmers are so placed with regard to the character of their land and distance from market that they should keep medium-sized sheep and grow a medium quality of wool; and as a greater part of our clothing is made from this sort of wool, we are sure of a market.

But I do not mean to say that starting right is all that is necessary to make sheep husbandry profitable — far from it. The man who keeps sheep must always strive to increase the profit derived from his flock; and in so doing he will improve its quality. He must strive to improve the hardiness and constitution, compactness and quality of fleece of his flock as well as their mutton qualities. He must be very careful in selecting his breeding ewes, and still more careful in choosing his rams; for in breeding from a poor ewe her offspring alone suffers from her inferior quality, whereas the qualities of a ram, be they good or bad, affect all his progeny; hence a person should use his best judgment in selecting his rams for breeding. Do not breed from a ram that only cost five dollars, thinking that he is cheap; for he is not, no person can raise a good breeding ram for five dollars. Better by far pay $25 for a good one, for there is such a thing as being "penny wise and pound foolish," and this saying is applicable to the farmer who is not careful enough in selecting good males for breeding. I can breed up a flock of sheep that will suit me better and give more profit than a flock of any established breed of sheep in existence. I think if a man tries, he can breed a flock of sheep that will suit his particular location better than this can be done for him by any person in the Old Country or anywhere else. We want some flocks of thoroughbred sheep, of course, to get our breeding rams from, but we do not all want them, or at least that is my experience.

Cortland County, N. Y. S. E. M.

Dairy Husbandry.

THE DAIRY COW—NO 17.

HENRY STEWART.

Furniture for Dairies.

THE proper furnishing of a dairy has much to do with the convenience, economy and quality of the work done in it. Time and labor are saved, and cleanliness is secured by an effective yet simple arrangement of the shelves for holding the pans. In family dairies the milk is kept, sometimes necessarily, in a room or a cellar. Where one or two

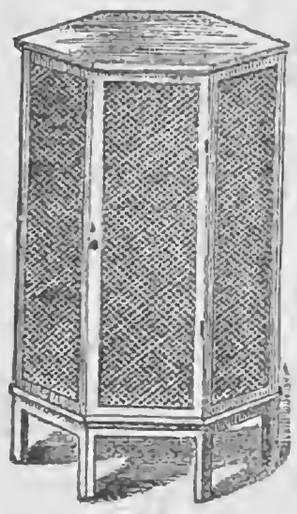


FIG. 376.

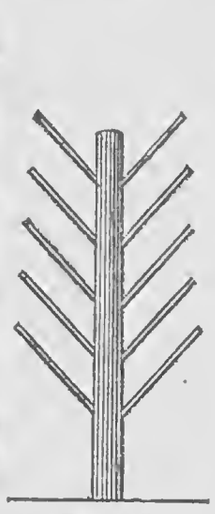


FIG. 377.

cows only are kept this cannot be avoided. In such cases a convenient arrangement is a milk closet protected by fine wire gauze (shown at fig. 376), or inclosed with glass. The latter method will permit the use of ice, by making an ice chest of the upper part and putting the top on hinges for a cover. The interior arrangement of the closet is shown at fig. 378 The shelves are fixed to a movable, upright shaft, so that they may be turned around to bring any pan that may be required to the front. An arrangement of shelves for a larger dairy, to be put up in a cellar, is shown at fig. 379

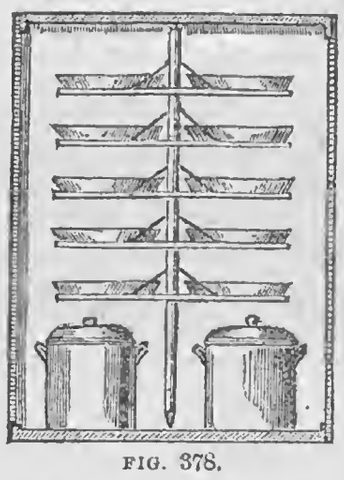


FIG. 378.

This consists of a strong post set on a pivot at the bottom, upon which it turns, and having the top fitted in an opening in the ceiling in which it may be moved around when desired. The advantage of this arrangement is, that a table or bench upon which the milk may be strained into the pans may be placed near the shelves and the shelves moved around so as to avoid the labor of carrying the pans of milk

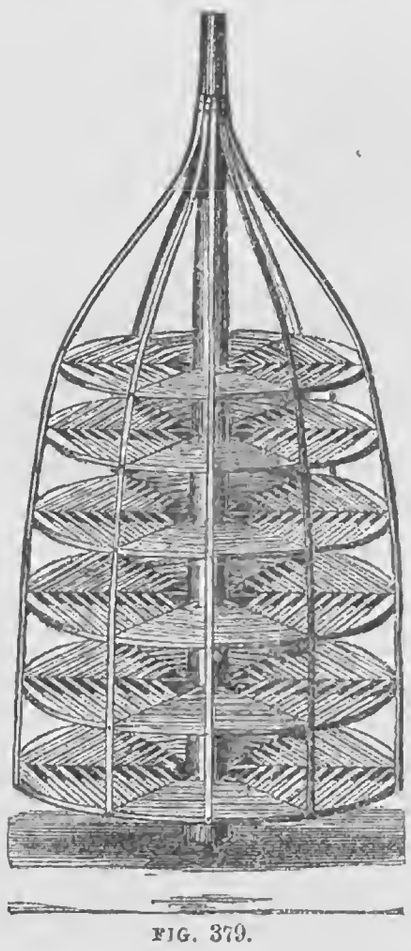


FIG. 379.

from place to place. So in skimming, the pans of milk are brought around to the table or bench and hundreds of steps are saved to the dairy-woman or man who does the work. Many modifications of these arrangements may be made so as to suit varied circumstances, the principle of their construction remaining the same.

A very useful refrigerating closet which may be kept anywhere in a kitchen, cellar, dairy-house or even in a barn is shown at fig. 380. This is made on the principle of an ordinary refrigerator, having thick, non-conducting walls and a door lined with zinc. The lower space is intended for the milk pails and above these is an ice chamber, with a shelf made of slats or bars. The pails are covered and the dripping water from the melting ice falls upon the pails and helps to cool the milk within them. The water is conducted away by means of a pipe, but it may be permitted to remain in the bottom to excreise its full cooling effect upon the milk, before it is drawn off. This closet was designed by Mr. L. S. Hardin whose name is familiar as a freqnent contributor to the RURAL NEW-YORKER, and it possesses many conveniences and advantages for both small and large dairies.

Milk Pans.

The tin pans in common use for setting milk have one objectionable feature; this is, the seam around the bottom in which sour milk *will* be concealed, unless great circumspection is used. The pressed pan, of which fig. 381 gives a section, has no such hiding place for the sour milk, which acts upon the fresh milk in the same manner as rennet, and will often curdle it in a few hours and before the cream has been able to rise to the surface. The pressed pans are therefore much easier to clean and much safer in use. It is also an improvement on the pans to have supports on the bottom at

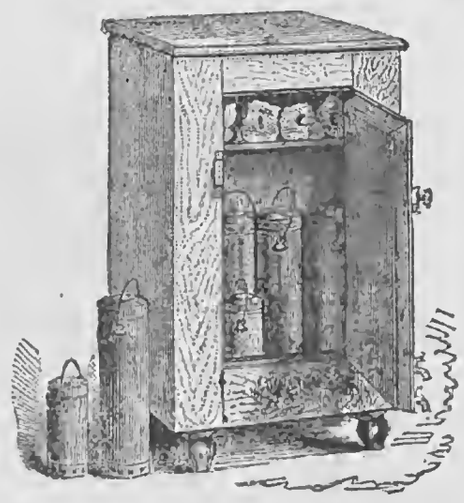


FIG. 380.

least half an inch thick to raise the bottom of the pan from the shelf. This permits the air to circulate under the pan and cools the milk more quickly than if it rested closely upon a solid shelf. The slatted shelves are intended to assist in this more rapid cooling. The deep pails which are preferred by so many dairymen, are about 20 inches deep and from eight to nine inches in diameter. A rim encircles the bottom, which raises it about an inch and which is perforated with several holes to admit air to circulate under the bottom. The shape of these pans is shown above, with the Hardin refrigerating closet, in which they are

FIG. 381.

used. These pails may be used either in dry, ice or cold water setting, but cannot be used except with ice or cold water, the effect of which secures the low temperature by which only the cream can be raised rapidly enough through so great a depth of milk to prevent loss by premature souring.

Washing Pans.

The furniture of a dairy is not complete without arrangements for washing, drying and airing the pans. A sink in the dairy room or the kitchen, with a small pump attached to it and connected with a well or cistern, will be necessary to save trouble and secure effectiveness. In dairying, as in business, it is the economy of labor upon which the profitable results depend next after feeding and managing the cows; and in many cases a well managed herd of cows has been rendered less profitable than it might have been, by poor arrangements in the dairy. In family dairies every housekeeper will as easily recognize the utility of the best method of cleansing the apparatus and arranging the furniture in a systematic way, as a business dairyman whose living depends upon his success. Nevertheless, I have been in dairies and creameries where the system in operation was totally devoid of the commonest means of insuring the necessary cleanliness; and in seeing this the natural consequence—a poor quality of product which unfortunately is the rule rather than the exception—is by no means surprising. Above the sink there may be a rack in which shallow pans may be kept upon their sides; or lath shelves upon which deep pails may be placed bottom upwards. An out-door rack placed in a sunny exposure will be found very convenient. For shallow pans this may be provided on the porch of the milk house, or of the kitchen; for deep pans a post set in the ground near the dairy, and furnished with a number of pins, as shown at fig. 377 will serve as a rack for airing them.

A NEW CREAMING TANK.

T. H. HOSKINS, M.D.

THE Douglas family of Vermont, though it has furnished one eminent public man to the country, is essentially a family of farmers, and they are men who do credit to the profession of agriculture. Francis D. Douglas of Whiting, while a member of our State Board of Agriculture, did much to popularize the deep setting of milk for cream. His open creaming tanks, which he constructed and began to use some ten years ago, and still uses without further modification, were fully described by him before large audiences in all our chief dairy towns, as well as in New York, Massachusetts and Connecticut, where he was invited to address agricultural meetings. These addresses of Mr. Douglas and his high reputation as an extensive and very successful butter dairyman did much to familiarize the minds of our farmers with the practice of deep setting, and prepared them to accept easily the connected principle of cold setting which has revolutionized dairy practice throughout the country. Mr. Douglas is so well pleased with the results of deep setting in tanks where the water is not reduced in temperature below 50 degrees, that he has seen no reason for using a lower temperature. His milk sours before skimming, and is fed to calves and swine. His butter, mostly from Jersey grades, is of the first quality, and is all sold at a fancy price to private customers. He milks between 40 and 50 cows.

E. B. Douglas, of Shoreham, a brother of the gentleman above referred to, has considerably modified the tanks devised by the latter, and has adapted them to cold setting. Mr. D., in a recent tour of agricultural observation through the State, stopped a couple of days with the writer, who was so interested in an account of his improvements, that he exacted from him the promise of a description of them for publication in the RURAL. This has been received, and is as follows:—

"We have a tank two feet deep, six feet long and 27 inches wide, made of two thicknesses of boards, with a thin air-space between. This tank is lined with galvanized iron. Two covers are used to save ice in hot weather. This is sufficient for 35 cows. The milk is strained into pails 20 inches deep and eight inches in diameter, with a narrow hoop on the bottom pierced for the circulation of water beneath the pail. The pails have no covers. They are set, when filled, in the water, which is tempered with ice, and if the temperature is kept below 45 degrees, we are sure to get all the cream in 12 hours. It makes no difference how cold the water is kept if the milk does not freeze. There is more bulk of cream than in warmer setting. It is soured before churning, when it is brought to 60 degrees in Summer and 64 degrees in Winter. A barrel churn is used, and the salting is regulated according to the taste of the customer. No fire is kept in the milk room in Winter, as the heat in the milk keeps the water from freezing. The box being furnished, it can be lined for $10 or $15 by any tin-worker. The pails cost from 60 cents to one dollar each. If you have spring water below 50 degrees, you may use this tank Winters without ice, and let the milk stand 24 or 36 hours without harm before dipping the cream. The method of souring the cream is by warming a sufficient quantity in Winter and mixing it with the whole mass to have it sour the morning before it is to be churned. We have perfect control of the seasons and made 60 pounds of nice butter one day in Midsummer. The cream is perfect for sale or table use."

The above is Mr. Douglas's description of his apparatus, upon which there is no patent, and which he says he would not exchange for any of the more costly apparatus for sale. Any further particulars would no doubt be cheerfully given by Mr. Douglass on application by letter. I hope I may be pardoned for adding (what my own experience suggests) that such letters of inquiry should contain a stamped and addressed return envelop. Signatures are often deficient in legibility.

In the RURAL NEW-YORKER of July 31 I notice that Col. Curtis says: "If writers would quote and readers would understand the statements made in regard to Jersey milk which we made several years since, which Dr. Hoskins in a recent article misquotes, there would be no grounds for so much display of rhetoric." As I never happened to see that article written "several years since," I don't see how I could misquote it. Referring to my file of the RURAL (every reader ought to keep one), I find that in the article of mine to which he adverts (RURAL, May 1, p. 280.) I quoted two lines and a half from Col. Curtis's note in the RURAL, April 3, p. 246, and that I had it *verbatim, literatim et punctuatim*, exactly as there printed. This is, I feel sure, the only extract I ever made from the Colonel's writings. If, however, I have anywhere else misquoted him, and he will tell me how, I will apologize handsomely. I regard *purposed* misquotation as an inexcusable offense, but I do not imagine

that Col. C. means to charge me with that. I hope he will now admit that I was not even careless. Regarding the question of the wholesomeness of Jersey milk, it seems that between him and me there is no difference. But I think he is mistaken in thinking there is none between us and Dr. Sturtevant. If what the Doctor has meant is only that Jersey milk needs more watering than Ayrshire when fed to babies, he has said it in a very obscure way.

The Swine-Herd.

ECONOMY IN FEEDING PIGS.

COL. F. D. CURTIS.

ECONOMY in feeding is necessary if there is to be any profit in the making of pork. More flesh and fat can be extracted from food of any kind when it is cooked. Some things are comparatively valueless when fed in a raw state, but when cooked are excellent food and decidedly fattening in character. The most remarkable of this class of food are potatoes, which require to be cooked in order to be digestible. When cooked the starch in them, the fattening portion — is readily assimilated in the stomach; but when fed raw, it is otherwise. Raw potatoes are therefore among the poorest kinds of feed for swine; but when cooked they are among the very best. The nutritive value of corn is also nearly doubled by being thoroughly cooked. When fed raw a considerable portion passes through the stomach, especially if it is dry and hard, without the least chemical change and quite a percentage is not digested. Where corn is very cheap and fuel and labor dear, it will pay best to feed raw, but where the relation is otherwise and corn is high in price and fuel and labor cheap, it will always pay best to cook it. Whether this important article of food should be fed raw or cooked depends therefore upon circumstances which must govern every farmer, rather than upon any arbitrary rules.

Next to cooking, grinding is the most important condition in the preparation of grain of any kind. All ground food is better fitted for digestion in the stomach and assimilation, especially if it is fed whole. No animal when hungry will feed slowly enough to properly masticate grain, but it will rather hasten to fill the stomach as rapidly as possible. Such a mass of unmasticated food will not be fully digested and, of course, will be voided without the animal receiving the full benefit from it. It serves to stop hunger, but does not make its proper quota of fat. Half the quantity put in a condition to be fully digested, would add more to the growth of the body than the whole quantity. As pigs are usually fed, it may be set down as an assured fact that there is a loss of fully one-half of the food unless we give the credit to the manure, which is an expensive way of adding value to it. However cheap corn may be, this is not a profitable way of feeding, for in such localities manure has a proportionately small value, as it is not needed. The miller's toll—one-tenth for grinding—must be taken into account and the expense of taking to and from the mill, in considering the cost, so that the value of ground feed is a relative one, and must also be determined by the circumstances.

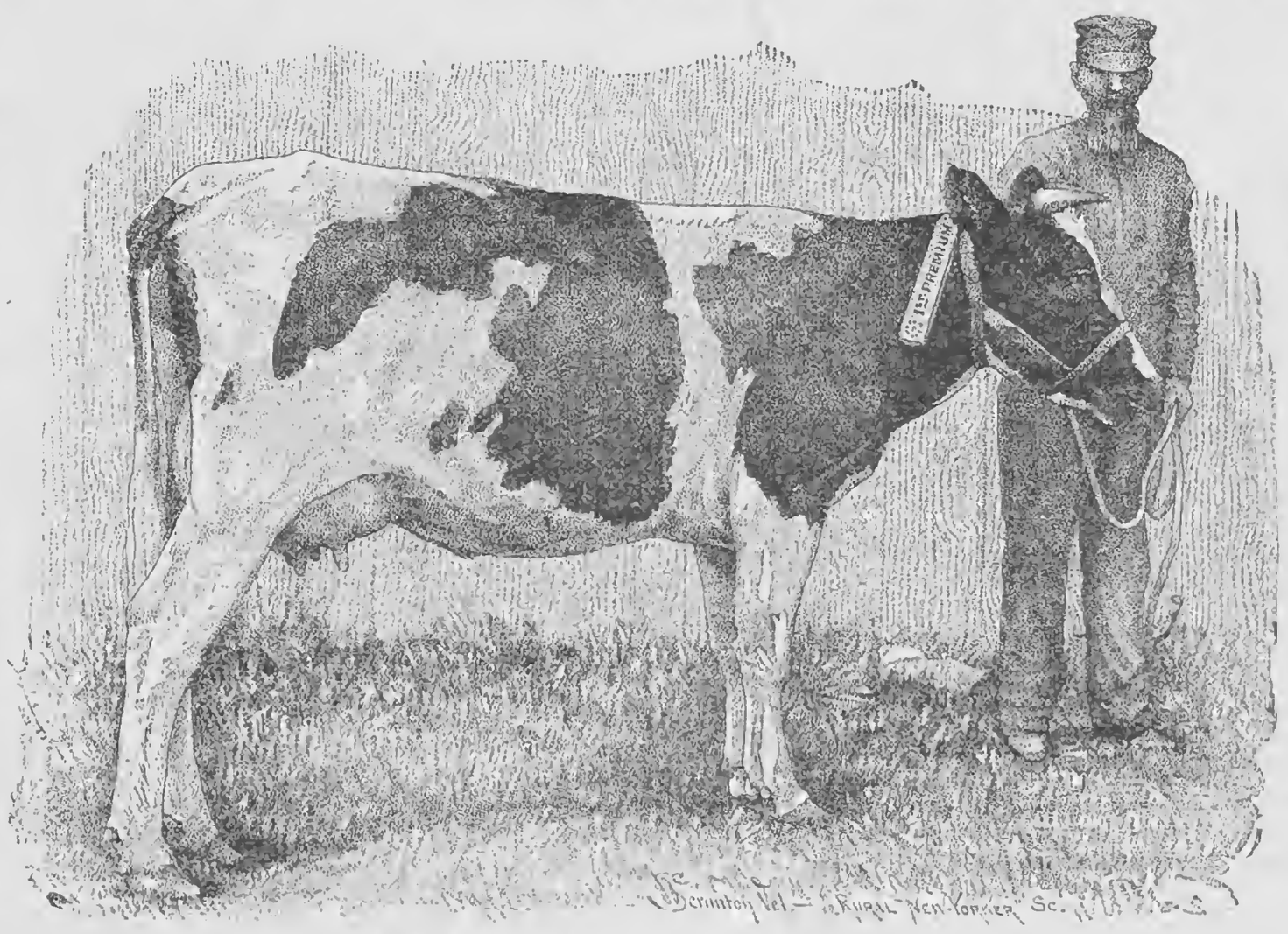
Soaking the grain to a condition of softness so as to make it more readily digestible, will save the miller's toll and make it more profitable in some cases than to have it ground. When grain is thus prepared pigs will do well on it. In cool weather it may be soaked for 48 hours and should be fully this length of time to put it in the best condition for feeding. In hot weather the time for soaking should be less, or else the grain may become tainted and unpalatable for pigs. The first degree of fermentation, an acid state, is the proper one, the most palatable and healthful for pigs. Beyond that fermentation is not healthful. When food reaches a vinous condition—that of vinegar—it is not fit for pigs or any other animals to eat.

The preparation of food, therefore, requires careful attention that it may be properly and profitably utilized. Most vegetables may be rendered more valuable by cooking, and when this is done, they should be mixed with bran or meal to absorb the juices, otherwise there will be too much liquid and this form of food will be found to be washy and weakening. Too much liquid in the food of pigs acts as a diuretic and is too stimulating for the kidneys and urinary organs. The bran or meal should be mixed with vegetables and cooked with them to absorb the natural excess of water. When this is done there will not be such a volume of liquid taken into the stomach, but the food will be more concentrated and healthful.

Vegetables—beets, mangels or pumpkins—may be fed raw in connection with grain and they will be found to aid in digestion and at the same time they will keep animals in a healthy condition. When fed in this manner, they tend to increase the appetite and to prevent fever which is the natural result of feeding grain alone. They are cooling and laxative in their nature and therefore serve as antidotes to the heating and costive effects of grain. Sloppy food of all kinds makes soft and flabby meat, while dry food tends to make it firm and solid. A judicious mingling of the two kinds of feed always makes better meat by making it firm enough and at the same time keeping it free from any feverish tendencies. Such meat will also possess a good flavor because the conditions under which it is made are healthful.

When pigs are fed corn on the ear they do not eat it so ravenously as if shelled for them, and they masticate it better. More hogs are fattened in this manner than in any other; but we believe that it would be more economical to grind the ears, cob and all, and feed it in this form. There is fully five per cent. of nutriment in the cob, as has been tested by repeated experiments, besides its containing chemical properties conducive to health, and it also tends to promote a distension in the bowels and action similar to that of raw vegetables. Every farmer, if he wishes to feed his pigs for any length of time, should unite the cob with the corn to keep them in good health. If fed in this manner they would not be liable to founder, the effect of the feverish condition. When cob is united with corn in the stomach the food is not so compact in the stomach and is more readily penetrated by the gastric juices, hence digestion can be more rapid and complete.

Shelled corn should be scattered thinly on the ground so that it may be picked up slowly, which will cause the pig to more thoroughly chew it. If thrown in a mass pigs will swallow it whole, when it will not be digested as the gastric juice will not penetrate the unbroken shell of the kernel. Such feeding is exceedingly wasteful.



NANNIE SMIT.—TWO YEARS OLD.—FROM LIFE.—FIG. 382.

The Poultry Yard.

RAISING ARTIFICIALLY - HATCHED CHICKENS.

L. S. HARDIN.

IT is evident to the most casual observer that chickens hatched without a mother must be raised without a mother. Born orphans, they must remain orphans. When my incubator produced the first chick, what a commotion there was in the house. The birth of a baby wouldn't have been a circumstance to it, and while the women folks would have known what to do with a new baby, we all looked at one another with blank bewilderment when the question was asked what we should do with the new chick. The thermometer outside was down nearly to the freezing point, while in the incubator the temperature was 105 degrees. The little chick's hair stood on end and he was panting for dear life. He must come out of there, and as his brothers and sisters were following him out of the shells, we began to prepare all sorts of receptacles for them. We rigged up a mother on the heater and put in it several chicks that lived a few hours and then died. We decided it was too cold, so we put others in a box and put them back in the incubator, where some of them were smothered with the heat. It was evident something must be done or we would soon have no chicks to experiment with. I determined in my own mind that a temperature of about 90 degrees would be correct, so I rigged up the brooder and started the lamp, put in the thermometer, and when the proper degree of heat was reached put what was left of the young chicks into the brooder and they began to brighten up. The problem was solved, though its solution cost me the lives of many fine chicks.

With further experience I find the following treatment a complete success: After the chick breaks the shell let him scramble around and dry himself in the incubator, which will generally take a few hours, though some are much stronger than others. After too much exercise they begin to pant, and should, of course, be removed. I have a box 12 inches square and six inches high. To the lid of this tack strips of woolen cloth an inch wide and two inches apart. These rags should hang within two inches of the bottom. Put a half inch of dry sand in the box. The brooder is kept at a temperature between 80 and 90 degrees. The young chicks, when perfectly dry, are taken from the oven and put in the box and the box put in the brooder where the other chicks are. Air-holes should be cut in the *lid* of the box, for if cut in the side the other chicks peck out the feathers of the little ones through these holes. This box keeps the chicks warm and they soon brighten up, and at the end of 12 hours are ready to take the first lesson in eating. Take a hard-boiled egg and chop the white and yelk up together as fine as grains of wheat; with it cover the bottom of a little pan—the top of a blacking box will do. Place this in the box with the chicks and while tapping with the finger in the feed, repeat "tuck, tuck," like the clucking of a hen—fig. 383. A little patience and one chick will see something and peck at it, when the others will follow suit, and in a few minutes the first lesson is learned. After a few meals, with this process repeated, it will be only necessary to rap on the box and the little fellows will be ready for their meal, and also be spry enough to be put out of the box and run with the others in the brooder.

FIG. 383

The next lot of chicks I feed as follows: Stale wheat bread is soaked in water. A cupful of oat-meal or rice has boiling water poured over it and is stirred until it takes up all the water. I mix two handfuls of soaked bread, with the water squeezed out, with one handful of this oat-meal, and dry it all with unbolted corn meal until it crumbles freely. A little salt is mixed with it. This, with a little meat once a day, is their sole feed, and it is given about every three hours until the chicks are a week old, or until the wings are large enough to cover their backs, when they are put in a pen. This third lot is fed the above mixture five or six times with meat or worms once a day, and a head of cabbage is hung in the pen for them to peck at. The bottom of this pen is covered with dry sand and ashes with a pile of old mortar and broken oyster shells to be picked over.

For a water fountain I use a small tin pan, covering with a stone all the top except just enough to allow the chicks to drink, as shown at fig 384. Turn the open part next to the wall so the little things cannot scratch dirt into it. Chicks are very fond of scratching the feed out of the pan. To prevent this I take a sheet of tin —fig. 385—bend it over and put the feed under the bent part. This prevents their treading on or scratching out the feed and caters to their natural taste for hunting under things for food. It is also cleaned more readily than a pan.

The body of the brooder—fig. 386—is made of zinc with an air chamber over and under the back end. The lamp setting under it sends the heat up through the heater and out through the top where a nursery for young or sick chicks is placed to utilize the waste heat. This form of brooder, with a warm chamber and the chicks feeding in the open air, I believe to be better than those where the chicks are never subjected to a cool atmosphere. The short stay while they feed in the open air tends to harden and invigorate them. All brooders, boxes or pens, used to keep large numbers of chicks in, should have the bottom lined with zinc, as wood or earth is sure in time to become saturated with excrement, no matter how clean you try to keep it, and it is the ammonia arising from these tainted floors that causes such pens in time to prove fatal to the chicks.

I promised to tell the truth about my experience in hatching the eggs, and here it is: The last eggs that hatched out were bought Oct., 10. Up to that time I had purchased 105 eggs at 30 cents a dozen. About one-third of these proved unfertile and were cooked and eaten or hard-boiled and fed to the young chicks, leaving about 75 eggs for the incubator to work on. Out of these I now have 27 as fine chicks as I ever saw. By my own awkwardness and want of experience I have killed or

FIG. 384.

lost fully one dozen. My machine was an old one and the battery was worn out. The gnage never was worth a cent. All defective parts have been renewed except the guage and I have learned to doctor that. Owing to the above faults the temperature in the oven has run too low for days at a time, and for hours it has been at 82 degrees, while it has taken short trips as high as 110 degrees. The only wonder is that I got a chicken out of any of the eggs. It is astonishing how much an egg will stand.

From my experience with hens I am satisfied I will be able to get more chicks from a given number of eggs with the incubator than

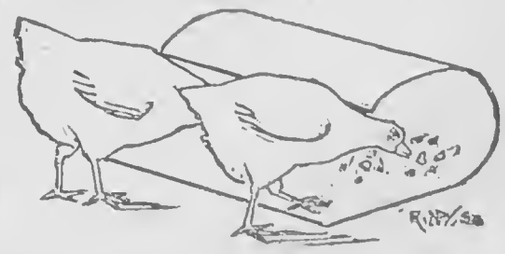


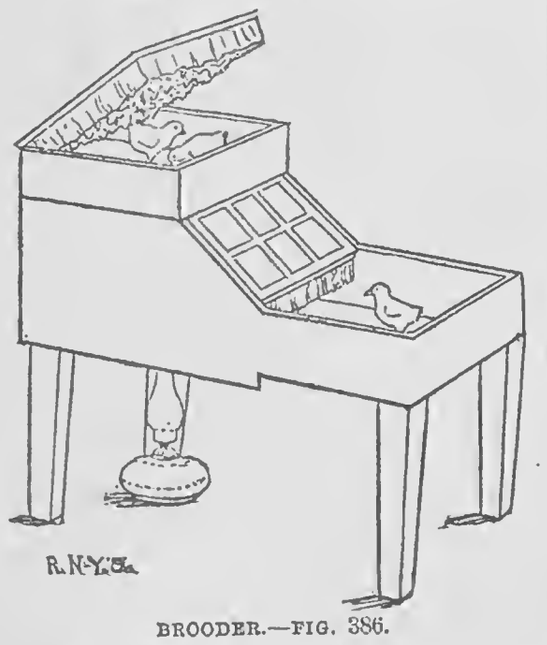
FIG. 385.

I ever could with hens. It would be a poor hand who could not raise from a fourth to a third more chicks with brooders than with the best hens.

LIME FOR LAYING HENS.

THE shell of a hen's egg is composed of almost pure lime which she is obliged to fur-

nish from her food. Eating pure lime will not always accomplish this. Each article she feeds upon, whether flesh or vegetable, has in its ingredients a certain amount of the carbonate of lime, and in the wild, natural state with but few eggs to lay in a season, it was easy for the hen to store in her body all of this material necessary to meet her requirements; but in the present artificial state, with a large quantity of eggs to lay in a year, she needs some artificial aid in order to supply this extraordinary demand for shell material.



BROODER.—FIG. 386.

When hens have not a wide range they should be supplied with lime in some form. The best mode in which this can be supplied is in the shape of old mortar or plaster crumbled, or of oyster shells broken fine with a hammer. Some writers advise burning the shells first to make them brittle and easily broken, but this will be found only an extra trouble by the close observer, as a hen will require several times the amount of burnt shells that she will of fresh ones. The best way to break them is to have a keg with both heads out; place it over a flat stone; lay the shells on the stone and either drop a heavy stone on them, or make a pounder with a handle to it like those with which paving stones are beaten down in streets. The keg prevents the pieces of shell from flying away and being lost. A hen eats these pieces with great avidity, which is a very good proof that they are useful to her. If pure lime is fed it should be first air-slaked to prevent it from being too strong and dangerous to the bird. Burnt or broken bones answer quite as well as lime or shells.

Farm Economy.

PRESERVATION OF APPLES.

PROFESSOR F. H. STORER.

A SET of experiments made recently in Germany, by Sorauer, are interesting as bearing upon the question, brought forward on page 731 of the RURAL, whether Winter apples can best be kept in a dry or a damp cellar. The results of these trials clearly corroborate the conclusions set forth by Dr. Hoskins in your issue of November 6th. Sorauer premises that while there is no longer any doubt in men's minds that light and warmth had better be excluded in order that apples may be kept fresh and be hindered from becoming over-ripe, there is still a wide diversity of opinion as to whether damp or dry air is most favorable for the preservation of the fruit. To test the question, he experimented upon several kinds of apples, particularly the "Winter Golden Pearmain." Three separate lots of the apples having been weighed out, one lot was spread on shelves in an ordinary fruit cellar, another lot was kept in air from which moisture had been pretty thoroughly removed by means of chemicals, and the third lot in air that was completely saturated with moisture. On re-weighing the several lots after the lapse of some time, it was found that the apples kept in the air of the cellar had lost three and a half per cent. of their weight; those kept in dry air almost eight per cent.; while those kept in air saturated with moisture had lost but little more than one-half per cent. It could not be perceived that any advantage was gained by using the dry air. On the contrary, the apples kept in the dry air shriveled more than the others, and manifestly ripened more rapidly, so that in the later months of the experiment they were less sweet than the others, and a larger proportion of them decayed. Not a few of them became rotten-ripe, and this in spite of the fact that, as was naturally to be expected, rather less moldiness appeared, as time went on, upon the fruit kept in the dry air than upon that in the air which was saturated with moisture. The importance of hindering the fruit from coming too quickly to full maturity was further illustrated in these experiments by the fact that the first apples to decay were those which were ripest, that is to say, most mature, at the beginning of the experiments.

It was found to be true of apples kept upon shelves in the cellar that they gave off more water by evaporation in a given time when they were green than they did afterwards, as they became riper. It appeared also, rather remarkably, in a trial between apples whose stems had been broken off and those whose stems had been left uninjured, that the latter lost rather more by evaporation than the former; the inference being that there is no harm in breaking the stalks of apples in the process of gathering.

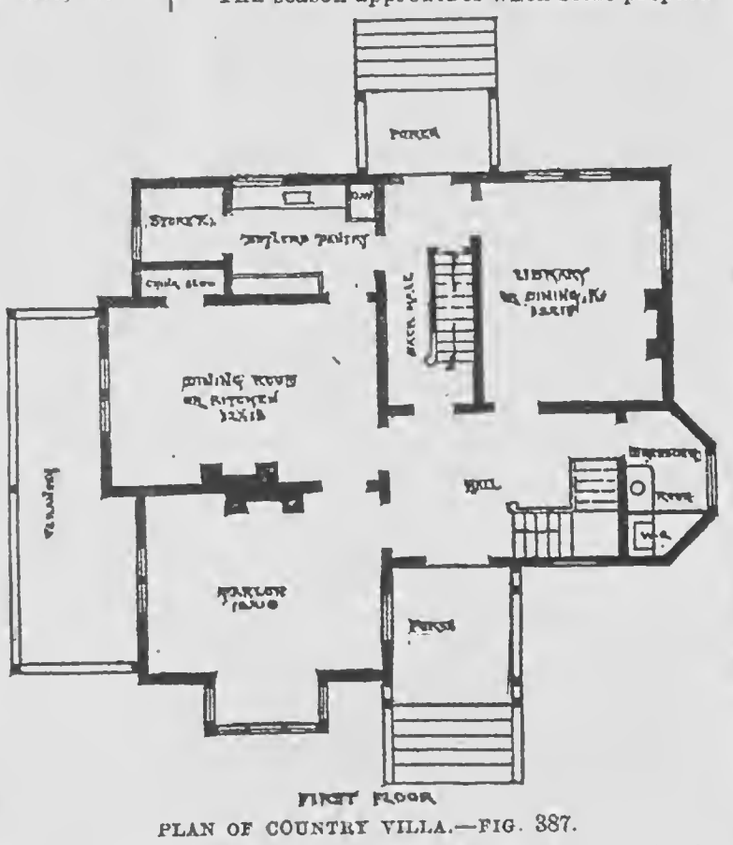
Other experiments were made to determine how much influence the natural varnish on the skin of apples has upon their preservation. To this end, the waxy covering was removed from a number of apples by gently rubbing them with a mixture of alcohol and ether, then washing them with very dilute potash lye and finally with much water. It was found that apples thus treated lost five per cent. more of their weight, by evaporation, in a given time than apples which had been left in their natural condition and similarly stored. As regards this point, Sorauer is in full accord with the popular conviction that the unhurt skin of an apple is to be regarded as the chief protection against decay. He found that apples whose waxy coating had been left unharmed did not decay for a long time after he had smeared them with mold, although they were left all the while in a moist and warm place.

Still other experiments were made to test the question whether there is any advantage in packing apples, layer by layer, with straw or sand. Four kinds of apples were packed away in glass vessels, half of each lot in chopped straw and the other half in dry sand. It appeared not only that the sand was decidedly preferable to the straw, but that the use of straw is not to be commended. Although there was no loss through decay of the apples packed in the straw, they nevertheless shriveled more than apples which were lying free in the cellar, and they acquired a musty taste from the straw as it became damp. The use of dry sand, on the other hand, seemed to be advantageous, since the fruit packed in it retained an uncommonly fresh appearance and excellent flavor, and promised to keep, in good part, until July. The sand-packed apples lost only about half as much water by evaporation as those which were lying free upon the shelves; they were almost wholly free from moldiness, and when one of them happened to decay it did not infect the others. Even those apples which had been bruised did not decay any more rapidly than the sound fruit, provided that the skin had not been broken. Other apples were wrapped in tissue paper and compared with those left uncovered, both in a dry chamber and in the cellar. No advantage was derived from the paper excepting in the dry room, for in the cellar mold developed itself more rapidly upon the apples wrapped in paper than on those which were lying free.

It seems plain that the main points to be considered in storing apples are, to keep the temperature of the room so low that the fungi which cause decay cannot flourish, and to have the air of the room moist enough to hinder the fruit from shriveling. If the storehouse were warm, moisture would doubtless be injurious, since the conditions would be favorable for the propagation of the hurtful fungi; but if the room be cold enough to hold the fungi in check, moisture will do good rather than harm.

ICE HOUSES.

THE season approaches when some preparation for storing a sufficient quantity of ice for the family use during hot weather may be considered. The appearance of an article upon the subject of ice houses in connection with dairying in the last issue, affords an opportunity for suggesting the preparation of a house and the storing of at least a small quantity of ice. As will be seen by reference to Mr. Stewart's article upon the Dairy Cow, there is no very elaborate or expensive outlay necessary. The only requirements are that there should be perfect drainage and ventilation, and that the walls be rendered non-conducting by the use of leaves, straw, charcoal, saw-dust, tan-bark, or other substance, and that the ice be closely and compactly put in with some non-conducting material around the layers and upon the top. There is, perhaps, little need of anything between the layers, provided the ice be closely packed, for if a stream of water could be so conducted as to trickle upon it and freeze the mass into one solid body, it would be as well. In many instances a mass of ice is piled up squarely over an excavation or upon a platform upon the top of the ground, raised so as to insure drainage, and the house afterwards built around it. When once the effort is made and the pleasure of a glass of ice water and other uses of ice are once experienced during warm weather, the family will not afterwards willingly be without the cheap luxury.



PLAN OF COUNTRY VILLA.—FIG. 387.

BOOK FARMING.

WE came here about two years ago from Ohio, to see if the climate would give me any relief from asthma. I had been afflicted for several years and have been improving since I came here until now I am almost cured. I bought a poor, worn-out farm of 150 acres, half cleared, the rest oak and pine timber. I knew nothing about farming, practically, being a carriage-maker by trade. I owned about an acre of land in Ohio, and took great delight in working in the garden. I loved it, and intended as soon as I could to be a farmer. I have taken agricultural papers and periodicals for the last 20 years, and tried to learn the true theory of successful farming. There is no paper I have ever seen that suits me as well as the RURAL, and I could not do without it for three times its cost. When I came here I had just $11 in cash after paying my freight bill on the railroad, but I was out of debt and owned my farm and a team of horses. To recount how I have succeeded would be a long story, and I would like the thousands of poor mechanics in the North to know it, as I am sure a great many of them could do likewise and better their condition greatly. Suffice it to say, I and my family have improved in health; we have not run into debt; we have now four cows, eight hogs, 12 sheep, two horses and feed for our stock and ourselves through the Winter. We are happy and owe our prospering chiefly to the agricultural papers of the country, the first and best of which is the RURAL NEW-YORKER. Long may it flourish! The farmers in this section have just done sowing their wheat. There has been a large acreage sown. The tobacco crop was a failure here this year, owing to the fly and the drought. The corn crop is excellent—the best in 10 years. Wheat is about half a crop. Oats, Winter, tolerable; Spring, a failure, some not being worth cutting. Potatoes and garden truck generally were very poor owing to the dry Spring. Should you wish it will write you again. G. L. A.

Chase City, Mecklenburg Co., Va.

[Yes, we wish it. Such experiences as yours are just what we do wish most of all. What you have done—others may do. Tell them. Eds.]

Rural Architecture.

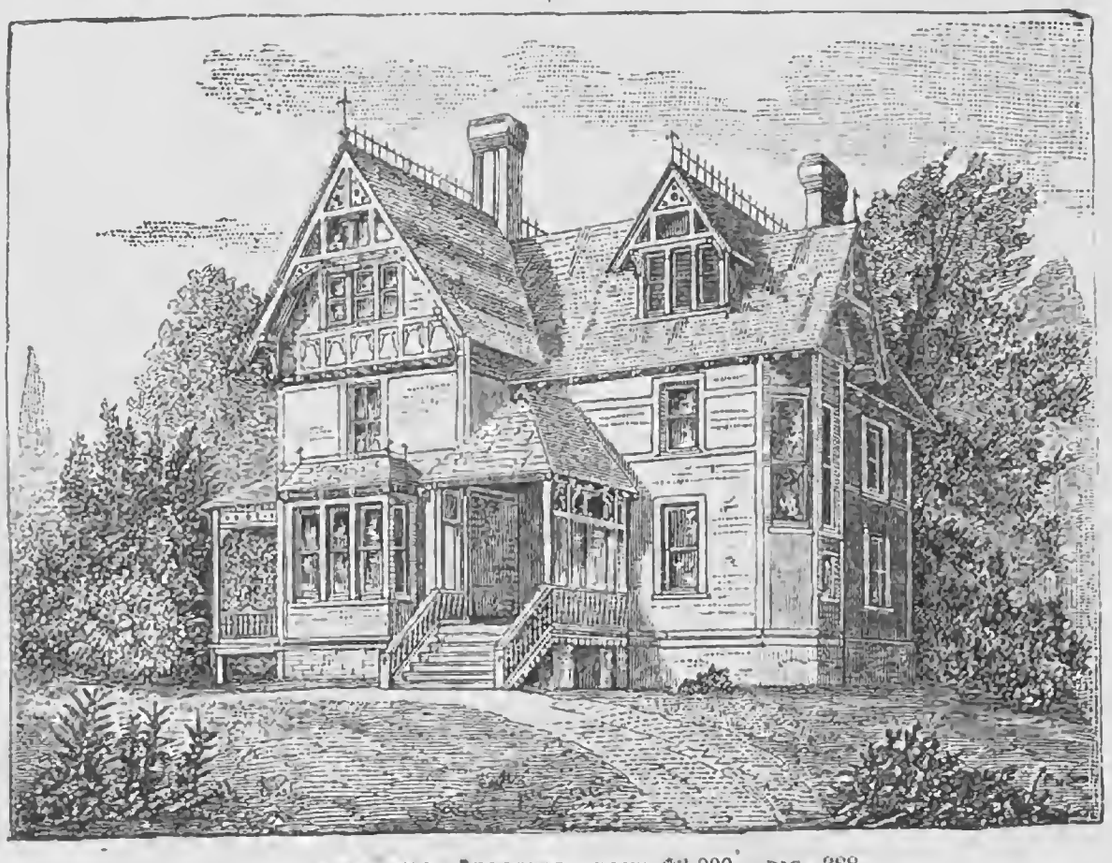
DESIGN FOR COUNTRY VILLA.

WE give herewith a very neat and complete design for a first-class country villa, which, constructed of wood, comes within the reach of those possessing neatly laid out grounds and desiring a moderate-sized and moderately expensive dwelling.

As will be seen by reference to the plan of first floor, the shape has been selected for the purpose of utilizing space without constructing a large frame, and is therefore in part oval or circular rather than entirely square, affording a more picturesque appearance in keeping with rural scenery, and adapted to the presence of foliage and drives as found at country seats and country places.

At the same time the good arrangement of the rooms and their individual comfort and convenience are greatly promoted, while to the appearance of the whole there is given such character and picturesqueness as will add greatly to the value and attractiveness of the property. A special and somewhat new feature is the location of a conservatory in front of its first landing of stairway in octogon end at the right and dressing-room below. The library is in the rear of main hall, and at the right of back hall, which includes the back stairway. The parlor occupies the front of the house at left hall, with dining-room, butler's pantry, store room, china closet and dumb-waiter in the rear. The plan is arranged for kitchen in the basement, although it can easily be included on principal floor, if desired. The second floor contains three bedrooms, bath-room and five closets. Two or three rooms may also be included in the attic plan.

The cost of the villa, according to the estimate of Messrs. Bicknell & Comstock, architects, No. 194 Broadway, N. Y., who furnish us the illustrations, is about $3,000



A COUNTRY VILLA, COSTING ABOUT $3,000.—FIG. 388.

Miscellaneous

CATALOGUES, ETC., RECEIVED.

HISTORY OF THE MASSACHUSETTS HORTICULTURAL SOCIETY FROM 1829 TO 1878.—This octavo volume of 575 pages is, both in matter and treatment, a model for future works of the kind. The collection and orderly arrangement of the great mass of antiquarian and other information contained within its covers, display a praiseworthy degree of painstaking ability. Its typographical execution, too, is not unworthy of the excellence of its contents. The paper is good, the type large, clear and restful to eyes wearied with the smaller print of ordinary books and newspapers. It is a work which should find a prominent place in the library of every lover of horticulture, not only in the State with whose horticultural progress it mainly deals, but all over the country, for although the Horticultural Societies of New York and Pennsylvania were established before that of Massachusetts, yet the latter has done more for the horticulture of the entire country than any similar association in the land, and the history of its career during the first half century of its labors embraces a large variety of topics of nearly as much interest to horticulturists everywhere as to those of the old Bay State.

More interesting to the general reader than even the history of the Society is an introduc-

tion of 54 pages, giving a pithy sketch of horticulture on this side of the Atlantic down to the year 1829 when the Society was established. The first settlers, it seems, found that the Indians already used fish manure for corn, selected the finest ears for seed, possessed varieties specially adapted to cold and warm climates, and were in the habit of planting their corn "when the leaves of the White Oak were as large as a mouse's ears." In 1629 we learn that "thirtie, fortie, fiftie, sixtie-fold were ordinarie" yields of corn in Plymouth Colony. In 1631 we are told the Pilgrims planted 20 acres of Indian corn and six of barley and peas, while grapes, white and red, very sweet and strong; strawberries, gooseberries, raspberries; plums, white, red and black; and roses of the same colors, "single, but very sweet indeed," were all abundant. Of Peregrine White's apple orchard planted at Marshfield in 1648, a venerable tree survived until it was cut down a few years ago, when the land passed away from the old settler's descendants; while a pear tree, imported by Gov. Prince from England about 1640, and planted at his homestead near Cape Cod, bore 15 bushels of fruit a year as late as 1836, and though the larger of the two stems that formed the tree was blown down in 1857, the remaining stem is now five feet around the butt and 35 feet high; while another pear tree planted by Anthony Thatcher in 1840, bore fruit in 1872. The Rhode Island Greening apple seems to be the oldest of our present favorites, having been introduced away back about 1765. But want of space prevents further reference to the interesting reminiscences with which the 54 pages of the "Introduction," are richly packed.

The first step towards the present work was taken in 1854, when, on motion of Mr. C. M. Hovey, it was voted by the Society that the Committee on Publication should consider the propriety of publishing such a history. No action, however, was taken until 1861, when a committee of six, consisting of President Joseph Breck, Edward S. Rand, Marshall P. Wilder, Charles M. Hovey, Joseph S. Cabot and Eben Wright, was appointed to collect and publish a complete record of the proceedings of the Society from 1829 to 1862, inclusive. Rev. Luther Farnham was appointed editor, and prepared the history to the close of the year 1852. In 1862, President Breck, in his valedictory, stated that the work would require revision, but nothing was done until 1871, when the subject was placed in the hands of another committee, embracing M. P. Wilder and C. M. Hovey, of the former committee, and these appointed Mr. Robert Manning, the present Secretary of the Society, to revise and complete the work.

Under his able editorship the history has been brought down so as to include the first half century of the Society, and his laborious research, strict accuracy and great application have produced a work which for its lucidity, fullness and finish reflects no small honor upon him. The appendix, besides a good deal of other information, contains a full list of all the officers and members of the Society since its foundation, among which occur some of the best-known names in American horticulture.

In concluding this brief notice we once more strongly recommend all lovers of horticulture to secure a copy of this truly excellent work, and to do so at once, as we learn the supply is limited. The work can be had from Mr. Robert Manning, Secretary Massachusetts Horticultural Society, Boston, at the moderate price of $3.

MICHIGAN HORTICULTURAL SOCIETY.—The tenth annual meeting of the Michigan State Horticultural Society will be held in Ann Arbor, on Monday, Tuesday and Wednesday, Dec. 6, 7, 8, in acceptance of an invitation from the Washtenaw County Pomological Society. Ample arrangements will be made by the local society for the reception and entertainment of members of the State society and delegates from branch societies. Others will find good hotel accommodations at reduced rates. A cordial invitation is extended to all interested in horticulture to be present at the sessions and join in the discussions upon the various topics presented.

T. T. LYON, President.
CHAS. W. GARFIELD, Secretary.

HOW TO AVOID THE DOG DISTEMPER.

I HAVE raised many a puppy to doghood, and of several different breeds, and never had a case of dog distemper. The way I avoided this was, not to feed the pups any meat till they were about nine months old, and then sparingly till they were a year old. The best food I have found for puppies is a mixture of Indian and oat-meal, half and half, or wheat grits or Graham meal. With either of the above, half and half, and made into bread, or boiled into mush, the dogs have thriven well. With this, when they would eat it, I have given some boiled potatoes, turnips or carrots. Now and then a puppy will also take cabbage as a part of his vegetable food. Soup made from boiled bones is a good thing to mix with the bread or mush, or a little pot grease may be added to it for a better relish. Give a tender bone now and then for the puppy to gnaw.

Puppies and dogs may be fed all the skimmed milk they will drink. This should be given warm, and then it is not apt to scour them. If they get too loose at any time, give a little astringent medicine, or change their food. Fine wheat flour boiled to a thickish mush in milk, is an excellent thing for a change of food, and to stop looseness. Perhaps rye flour might do as well as wheat, but I did not happen to have it on hand to try it when my dogs were affected with scouring, which was never serious with them.

Kittens may be raised pretty much in the same way, and thus kept from disease. But they can have a little fish now and then. This I don't like to feed to dogs for fear of their getting choked with bones. Both should have free runs in the open air, and where they can get at grass during the mild season. This is healthful for them, and they like to eat a little every day. Cat-mint is also excellent to keep cats and kittens in good order, and if they can get it either green in Summer or dried in Winter, they will nibble just what is wanted and no more. B. A.

RURAL BRIEFLETS.

LET us repeat—The Niagara is not yet for sale. . . . . .

OUR remark respecting this much-talked-of grape that, in quality, it was "no better than the Concord" has brought out several protests. Here is one from our respected contemporary The Rural Home:

"We have eaten a great many grapes, and, although we make no pretensions to a critical taste, we know when a grape accords with our taste and think we can make comparison between two grapes with which we are familiar. We have long been familiar with Concord and are getting pretty familiar with Niagara, and we have never thought of putting the latter down as low in quality as the former. It is much pleasanter without foxiness, sweeter and richer. It does lack, as we have before said, a certain vinous flavor prevalent in the best foreign varieties, and it is also free from those unpleasant peculiarities of flavor to be met with in most foreign or hybrid varieties. . . .

THE Ohio Farmer proposes for next year not only a new "dress," but to enlarge itself. The Farmer is a good paper and we are glad to see this evidence of its prosperity. . . . . .

THERE is room for the display of a more liberal spirit among the members of the agricultural press towards one another. A few weeks ago we sent the following advertisement to a number of Eastern and New York State Journals for one insertion:

"The Fair Number of the RURAL NEW-YORKER will be issued in September. It will consist of 40 pages with original engravings and articles from our best writers. Our readers are invited to send for copies which will be forwarded without charge."

THE New York State papers, to which it was sent, viz. the Husbandman, (Elmira), Rural Home (Rochester) and The Cultivator and Country Gentleman (Albany) published it promptly. The Eastern papers, with the exception of one, ignored it entirely. That one (the American Cultivator) was polite enough to return our advertisement indorsed "Respectfully declined." . . . . . .

WE would state that the columns of the RURAL NEW-YORKER are open to the announcements of any of its agricultural or horticultural contemporaries. And we should not object to adding the recommendation to our readers that they send for specimen copies of the journals so announced. If by such a course we were to injure the interests of the RURAL NEW-YORKER, we should at least have the satisfaction of knowing that we had placed them as subordinate to the interests of agriculture. . . . . .

IT may be supposed that the province of rural journals is to serve rural people. Is this best effected by seeking to confine them to the reading of one rural journal only? . . . .

THOSE who are inclined to sit in judgment and who delight in drawing odious comparisons might dwell upon the harmony of things as between the much-talked-of, worn-out fields of New England and the tolerant, great-hearted spirit of her Agricultural Press. . . . .

OUR advice to our readers—to all—is to send for as many specimen copies of different farm journals as it is practicable or pleasant for them to examine carefully, and then subscribe for those which seem best suited to their several requirements. . . . . .

IT would seem from Prof. Storer's note on page 769 that his opinion of the U. S. Agricultural Reports formerly and now published, is different. . . . . .

QUASSIA is recommended by a Western peach grower as a remedy against blight and green fly. A weak solution only is advised. . .

SOME people are so gloomily disposed that they are unhappy when the moon is full because they can't see the dark side of it. . . . .

SEVERAL of our readers have complained that these "Briefletts" are *too crowded*. Here is one from our esteemed friend Dr. F. M. Hexamer: "Please do print the Briefletts in separate paragraphs. As it is, the reading of them is hard and a great strain upon weak eyes."—Hence the change. The RURAL is conducted to please its readers and we have only to learn of their wishes to respect them. . . .

DR. HEXAMER at the same time pays us a compliment: "Your grape illustrations," he says, "are splendid." . . . . . .

READ Prof. Storer's article on the Preservation of Apples. . . . . .

WHAT OTHERS SAY.

MR. W. I. CHAMBERLAIN has remarked—in the Cultivator, if we remember rightly—that as a mere child he recited Greek in a preparatory school, to a learned college professor. One day the professor remarked that out of 300 English grammars already published, there was not one really good one, and in the simplicity of Mr. C.'s heart he asked him why he did not write one himself! He was not offended, but immensely amused at his childish innocence, and only said "it is far easier to criticise others' grammars than to make a good one yourself!" Kindly criticism is always welcomed by managers of fairs, and is sometimes useful. But criticism of fairs and of State and county boards often comes from non-exhibitors, and even non-attendants—from those who do not put their own shoulder to the wheel in honest effort to help. Shakespeare makes one of his characters say, in substance, "I could easier teach twenty men what it were well to do, than to be one of the twenty to follow my own teaching."

SMALL POTATOES.—A correspondent of a leading publication writes that he made an experiment the past season which he thinks fully explodes the theory that small seed potatoes will only return a small crop of small potatoes. Any theory of that kind was exploded, the Germantown Telegraph supposes, before that writer was born, and the whole letter is an admirable illustration of a class who are continually fancying they are exploding something when there is really nothing to explode.

Still there is some misapprehension as to this small potato seed business, and it may be worth while to set it right. It is not the size of the potato, but the vigor and strength of the eyes on the potato, that make up the case. These are often as large on a potato of moderate size as on a very large one. If the eyes are of the same strength—of equal vigor—it is the same as if they were all cut from the same tuber. A strong eye starts to grow and almost immediately sends out roots of its own, and has no farther dependence on the old piece. It gets its food wholly from the earth. If it is a weak, puny sprout of course it takes a whole season to get strong, and in the meantime can only send out very weak threads that must be able to form nothing but very small potatoes.

PROFESSOR HILL of England, in a lecture upon the cart horse, observes that the face should have an intelligent and good-tempered expression, and this is usually found in horses with a broad, flat forehead, a straightly-inclined nose, a moderately square muzzle (in brown horses a tanned one is preferred) with some expansion of nostril, full and prominent eyes, and thin lids. A small, sunken eye, particularly with a Roman nose, gives a horse a sulky, piggish expression, and often denotes obstinacy and bad temper. Again, the submaxillary space, or distance between the branches of the lower jaw, should be moderately wide, and not bulging or lumpy towards the chin, otherwise a profile view is considerably depreciated. The ears also, which are indicative of alarm, temper, or play, demand attention. They may be directed forward, or as it is termed, "pricked," from excitement fear, or inquiry, or be laid backward from play or vice, while frequently you may observe one is carried forward, the other backward, especially when going. This is for the purpose of collecting all sounds, and such an animal is usually attentive to all that goes on around him.

PROF. SHELDON writing to the Live Stock Journal of London from Canada says:—"But Canadian cheese has obtained a high reputation, and most deservedly so, in England. It has great body, a good flavor, plenty of quality, and as a rule is well made. I visited several factories in the neighborhood of Ingersoll, and also the Tavistock factory, which belongs to Mr. Ballantine, M.P.P., and is situated a few miles from the city of Stratford-on-Avon. This is one of the most conveniently arranged factories I have seen, and the cheese made in it is excellent. The milk received daily at the time of my visit was about 17,000 pounds, from nearly 1,000 cows. The temperature of the curing room is kept, for Autumn cheese, at 65 deg.; for Summer at 75 deg.; and Spring fodder cheese at 80 deg., there or thereabouts."

AGAIN he says:—"The grand secret of the Cheddar system of cheese-making—which, by the way, is probably the best system the world knows—consists in the ripening which the curd gets after separating it from the whey, and before salting and pressing it. But even in the Cheddar system it is well known that the Autumn cheese does not mature like the Summer's, and this Mr. Ballantine declares is owing to the night's milk of Autumn not ripening like that of Summer. Now, to those who have studied the question of cheese-making in its scientific as well as practical aspects, this argument of Mr. Ballantine appeals at once to the suffrage of one's judgment. He, at all events, is thoroughly convinced of its soundness, and I have had other testimony to the same effect. The expedient is worth trying in England; it is simple enough in all conscience; try it."

MR. C. E. THORNE, of the Ohio State University, makes a very interesting report in the Farmer of wheats which were sent out to a number of persons in various parts of the State. The following is a summary:

COMPARATIVE YIELDS.

Fultz	24 reports;	average 28¾	bu. per acre.
Clawson	10 "	" 28¾	" "
Silver chaff	15 "	" 26¼	" "
Velvet chaff	11 "	" 26	" "
Gold medal	13 "	" 21¾	" "
Sandomirka	7 "	" 24½	" "

Of Clawson, Mr. Thorne speaks as follows: "A further inference which seems fairly deducible from our tables, is that the Clawson is not our most productive wheat. We have noticed on this farm that its straw appeared to be losing its stiffness, while the grain seemed to be improving in quality. This improvement in the grain has not been maintained this season, however, while the buyers of the vicinity have finally executed their threat of lowering the price of Clawson from five to ten cents per bushel below that paid for red wheats. The importance of a very small increase in the productive power or in the market value of a variety of wheat will be realized when it is remembered that the wheat crop of Ohio for 1878 was nearly thirty-five and one-quarter million bushels, from two and one-eighth million acres of land, an average of sixteen and one-half bushels per acre. An increase in productiveness of one-half bushel per acre would add more than 1,000,000 bushels to the total crop, while an advance of five cents per bushel in the market value of the whole would amount to a total of a million and three-quarters of dollars.

TASTELESS COD-LIVER OIL.—Dr. Peuteves, in La France Medicale, recommends, in order to render cod-liver oil tasteless, to mix a tablespoonful of it intimately with the yolk of an egg, add a few drops of essence of peppermint, and half a tumbler of sugared water, so as to obtain a *lait de poule*. By this means the taste and characteristic odor of the oil are entirely covered, and the patients take it without the slightest repugnance. Besides, the oil being thus rendered as miscible as the water in all its proportions, is in as complete a state of emulsion as the fats at the moment they penetrate the chyle vessels, consequently absorption is better assured.

KEEPING CIDER.—In 1869, a writer in the N. Y. Sun, says that he purchased a small farm in New Hampshire, and in 1870 (the bearing year) made 23 barrels of cider, averaging from 36 to 48 gallons each. He bought in Boston very sound, empty, iron-hooped whisky casks. In making his cider, he filled the casks himself, as the cider came from the press. To allow the pomace to be any considerable time in the trough causes the spirit to evaporate, and the cider turns red; but if it is at once barreled as it comes from press, it is nearly white and will keep for years, the spirit being in it. He bunged the barrels at once on filling; if they burst he let them go. He never lost but one. He sold some of his cider the next Spring for bottling without racking off, and after two years drank some at a gentleman's table in Boston. It was white, clear, and far better and more delicious than Rhine wine. His apples were natural fruit, and all No. 2 Northern Spies, Baldwins, and Spitzenbergs. (No rotten ones.) As apples are plentiful this year, try his method and you will have clear, spirited, and fine cider, with nearly double the strength of ordinary cider. As long as the liquor is closely bunged from the air it will be sweet. As cider is the natural wine of our country, he is astonished that some scientist has not taught our countrymen to make and preserve it properly long since.

HOW TO GET ON IN THE WORLD.—To show what can be done by industry and pluck, a writer in the Ohio Practical Farmer refers to what a young German has done under his own eye. He hired him in March, 1875, for one year, at $18 a month, for seven months, and $15 for the remaining five months. He could not speak a word of English, had no money, and not even an acquaintance in Ohio. He saved about $150 that year, and then rented four acres of land and went to gardening. The writer does not know what he is worth today, after five years of gardening, but he has a good horse and wagon, hot-bed sash and frames that must have cost him over $200, plows and tools, and comfortable furniture for

his house, and money laid up and is already beginning to talk of buying a small farm. He thinks, however, that he is worth nearer $2,000 than $1,000 His business has increased so that he keeps considerable hired help, on which he is making a profit, and he is known and respected by the entire community, The writer concludes, if he had spent a hundred dollars the year he worked for him, he doubts if to-day he would have been doing business for himself.

IODINE has been recommended as a substitute for quinia by good authorities. The dose for adults is 10 drops of the tincture in one-third glass of sweetened water, thrice daily. For children, proportionately less. We find in the Druggist's Circular an essay read by F. Grinnell, M. D., on the value of iodine as a remedy for malarial diseases, from which we make a few quotations:—"At that time," the Doctor says, "I treated 135 cases of intermittent fever, 74 being males and 61 females; these included children and in some instances infants. The quotidian and tertian types of the fever were the forms principally presented. I also treated four cases of diarrhea and eight cases of neuralgia, each of malarial origin, using the same remedy, only adding astringents or opiates as indicated. One hundred and forty-seven cases were thus treated with the iodine, and the results were *fully equal to those treated with the sulphate of quinia*. The remedy seemed to act almost as by magic; in many instances the paroxysms were not repeated after the medicine was given, though the doses were repeated for a day or two after the cessation of the fever. In cases of enlarged spleen there was a more speedy reduction in the size of that organ than when the sulphate of quinia was used." The fact that the cost of iodine is so little in comparison with quinia, especially renders it a boon to the poorer classes, who can ill afford to purchase quinia, and the physician who treats them and furnishes the remedy finds his bill for drugs not an insignificant item of his expenses, with little to show in return. The fact that iodine exerts such a pronounced effect upon those very glands which appear to harbor the malarial poison seems to render its great value in these cases quite philosophical. It only seems strange that in the settling up of our great West, with malarial poison ever opposing the onward march of civilization, and the great scarcity and high price of quinia, the value of this remedy had not been earlier and more generally appreciated.

KAEMPFER'S PLANTS.—At the British Museum the other day—that is, in the New British Museum at South Kensington—we (London Chronicle) had an opportunity of seeing the herbarium made by Engelbert Kaempfer in Japan in the last years of the seventeenth century, hard upon two hundred years ago. It was interesting to see among them the camellia, the aucuba, the sciadopitys, the maples, the weigelas, the retinosporas, the azaleas, and a number of plants now familiar in our gardens. Some of these were figured and many described in Kaempfer's *Amœnitates*, published in 1712. Others were published by Sir Joseph Banks, in 1791, in his "*Icones Selectæ Plantarum quas in Japonia collegit et delineavit Engelbertus Kaempfer.*"

SMOKING ORCHARDS UNSUCCESSFUL.—A writer in the Rural World describes an unsuccessful attempt to keep off the curculio, by smoking his trees, fifty in number. A barrel of coal tar was bought, and several holes dug six inches deep through the orchard. Corn cobs were dipped in the tar, placed in the holes, and set on fire. The operator says that he "got a nice smoke," and had his holes to suit the wind. This work was repeated three mornings in each week for a month. The whole process did no good, the young fruit being badly stung. As this remedy, comments Mr. J. J. Thomas, is frequently recommended by those who have given it little trial, such failures as this are worth recording. The jarring process, properly conducted, is easier, cheaper and more efficient; if not properly applied, it is of little use.

FEEDING BEES IN WINTER.—Prof. Cook writes to the N. Y. World on this subject as follows: After an unpropitious season bees are apt to go into winter-quarters ill provided with stores. Well informed and cautious apiarists, aware of this lack, feed weak colonies during the Fall sufficiently to supply the need.

It is never desirable to feed liquid stores, either honey or sirup, in Winter, and not well to feed at all unless positively demanded. The best way to feed, if we must, is to put candy made from granulated sugar on the frames, just above the cluster. This will be kept warm, and can be taken, and will disturb the bees so little that, if it must be done, it will generally succeed. If the bees can pass the Winter until March—and the stores needed during the cold Winter are very light, compared with those consumed later after brood-rearing commences—then we may feed either honey or sirup. Then the bees can fly occasionally and will receive no harm from liquid food. This food, too, will stimulate brood-rearing, and thus work a double benefit. The feeder will need to be so constructed as to keep the food near the cluster or the bees will not appropriate it, because of the cold.

No one should fail to use a division-board in Winter and Spring. Keep the bees crowded on to so few frames that all will be covered, and Spring dwindling will do little harm.

A HEIFER WITH A WOODEN LEG.—A valuable heifer belonging to a farmer near Northallerton recently broke its leg, and it had to be amputated. Truth (London) says that the animal has since been fitted with a wooden leg, on which it moves about with the utmost ease, "which proves the absurdity of hastily ordering the destruction of animals that meet with such accidents."

VICK'S NEW SEED HOUSE.—FIG. 389.

JAMES VICK'S NEW BUILDING.

AMONG our seedsmen we know of no one that holds a higher place in the esteem and confidence of plant-loving people than James Vick, of Rochester, N. Y. He has earned this place by fair and liberal dealings with his patrons through many years. Whether Mr. Vick, by a life-time of hard, unremitting labor, has been prompted merely by a desire to establish a large and remunerative business, or whether a love of creating an appreciation of the floral treasures of the world has been the stronger incentive, it would be difficult to judge, for he has been eminently successful in both respects.

To meet the requirements of his increasing business it has been necessary for Mr. Vick to increase the area of land under cultivation and to erect new buildings. The most conspicuous of these latter is one built last Summer about two miles from the heart of the city, an engraving of which is herewith presented. It is one hundred and sixty-two feet front and fifty-four deep. Here Mr. Vick has his packing and shipping rooms, printing office, bindery and business office. Convenient to the grounds and green-houses, his artists also find in it convenient and congenial headquarters. Easily accessible by horse-cars, which leave the city every few minutes, Mr. Vick designs to make these grounds worthy the visits of friends who pass that way.

Everywhere.

NOTES FROM WESTERN KANSAS.

I COULD write an article on Kansas for the RURAL and make the whole State, from north to south and from east to west, a Paradise for the new settler, and verify every statement of enormous production by the affidavits of good men. I could make the climate delightful and the rainfall abundant, and support the statements by the records. On the contrary, I could write an article, supported by affidavits of good men, that neither Kansas nor any part of it is a desirable place for the immigrant; that the climate is detestable, the soil poor and the rainfall totally insufficient to insure fair crops, and support the statements by the records. I can go into the neighborhood of orchards that produce thousands of bushels of the finest apples and pears and peaches in the world, and I can get the statement of men near-by who "han't got" any orchards, that fruit won't grow in Kansas; and so on through the whole catalogue. Now can't you see where the truth comes in? The same set of men that are "starving" in Western Kansas to-day would have starved in Central Kansas five years ago, or in Eastern Kansas 20 years ago; and they would starve in Queens County or Orange County, or in any other county of New York or New Jersey or Pennsylvania if they settled there under like circumstances (were it possible) in any year, There is a great deal of this starvation going on every year on the frontier, but it won't pay to get it prominently before the public, except about once in five years. Kansas has had four eras of it now; one more, possibly *two*, and then the western line will be passed and Kansas be freed from this disgrace.

Immigration often seems to move without judgment or adequate reasons, and until you can persuade the man who has worked on shares some of his "wife's father's land" for a few years, the shoemaker who knows more about farming than John Johnston, or the factory operative who knows more than the proprietor of Kirby Homestead, and the machinist who knows more than the RURAL, that their very valuable services cannot be spared from the East; in short, until you can sort out and fit each one to a proper and suitable place adapted to his or her capacity, means and profession, and then by some miraculous power hold each to his or her place, I don't see how you are going to do away with destitution and suffering on the frontier.

As long as great railroad corporations subsidized and pampered by government, have millions of acres of land to sell and can make more money by selling it to poor people than in any other way (for as a rule they can sell it three or four times over on account of defaulted payments, and get in the long run two or three prices for their land); just as long as Government by its land laws invites speculation in *poor men's rights*; just so long will destitution and suffering exist, and anything either I or you could write won't check it, in my judgment.

Given a steam engine: look at it: under the manipulations of its master, what a power! what a display of the ingenuity, skill and work of man in its construction! At the will of its master it can walk, run, draw great loads, run factories, propel great palaces over the ocean, etc., etc. Well, right in the mountains of Pennsylvania are the iron, the coal, the water, all the elements of this great power. Let the editor of the RURAL go out on Long Island and on the south side gather up the clam diggers, the fishermen, the coasters; let him go into North Hempstead and gather up the farmers who draw manure from New York City, and raise great crops of wheat and Timothy hay and have great dairy barns and feed brewers' grain to cows and furnish the city with *pure milk*; let him go over to Oyster Bay and Little Neck and get the oystermen, or down to Flushing, Astoria and Flatbush and get the "truck"men, and then go about the city and gather up the stevedores, the draymen, the porters, the clerks and book-keepers; get them all together by thousands and show them the engine. Tell them there is nothing about it but iron, wood, coal and water, and that all these exist in inexhaustible quantities down in the mountains in Pennsylvania, and that they can be had for almost nothing. Let all go down there and go to making engines.

Don't they know all about catching eels and porgies, bony fish and blue fish, sea bass and black fish? Can't they sail a sloop or scull a boat to perfection? Don't they know all about feeding brewers' grains, and raising and selling Timothy hay; how to raise onions, celery, Lima beans, radishes, cucumbers and cabbages; how to load ships, draw boxes and barrels, tie up packages of dry goods and groceries, enter them on the books and foot up the ledger? Can't they do these things and many more? They are an intelligent, enterprising and go-ahead set of people, and, of course, they can make steam engines and run them, too, and they will. They've been fools to live as they have in such a humdrum manner, but now they will all make engines and every man of them will have one of his own, and be independent.

Now, shut your eyes and dream out a few years' existence with this motley horde of engine-makers out in the wilderness of the mountains--and they are forced, too, to get their bread and butter at the same time out of the business—and you will have a counterpart of this starvation horde in Western Kansas.

Given a soil of incomparable fertility—proof: don't the railroads and State fairs show the products, the great ears of corn, the large grapes, the plump wheat, the big melons, the enormous potatoes, the luscious fruit? Yes. Don't the records show rainfall, sunshine, dew? Yes. Isn't the land that will produce all these things free to all? Yes. Let all go and take big slices and make farms and all have big potatoes, golden wheat, fine cattle and horses and luscious fruit. *The idea is a grand one*, and under it, gather up thousands of broken merchants and bankers, dilapidated preachers and lawyers, machinists, clerks, bookkeepers, draymen, sailors, railroad laborers, factory operatives and the men who worked their "wives' fathers' farms on shares," with now and then a good practical farmer for spice, a few keen speculators and a lot of young men just out of school to make advisory committees of; put them out here with little or no capital on the wide frontier; stay with them a year and then I think you could take in the situation.

The two past seasons have not been propitious, yet they are not the cause of this destitution, but they serve as a pretext for getting it before the public and soliciting aid. The real cause is behind, and is in the character of the immigration. Such a mass of helpless humanity thrown down together anywhere under the delusive idea that they can get something for nothing, would be destitute and suffering. It is just like the mining mania. One in twenty who have no means or experience "strike it rich"; the other nineteen drag their weary way back, if they can, to old homes and old-time ways of getting bread; but the one successful one will be the "will-o-the-wisp" that will lure 20 more into the same position in order to find out which will be the one successful man. They are all that one till the trial.

So in the settlement of these Kansas lands the agricultural wealth is here, just as the gold is in the mountains, and as the years roll round it will be developed; but of the developers three-fourths will be stranded and wend their way back to the East.

The RURAL talks about "emigration recoiling;" it has recoiled for twenty years, but every recoil creates an undertow that sweeps back more on to the great uncultivated area than the recoil bore from it. No doubt there is a vast amount of destitution in Western Kansas and also in other parts, but it came here from further East, and has held its own remarkably well. Of starvation there is none, unless the folks choose to starve rather than apply for food through the regularly constituted authorities. Every municipal township has its trustees, and every county its County Board of Commissioners who are authorized and compelled by law to relieve and support, if necessary, every applicant who can prove his necessity, and they can raise money by taxation, or bond the county, under limitations, for that purpose. H. L. J.

RURAL SPECIAL REPORTS.

CANADA, Pembroke, Ont., Nov. 6—We have an old and enthusiastic gardener here who gives the RURAL seeds a thorough trial, and under his care they have all done more or less well, especially the Beauty of Hebron Potato. The shrub—whose name I know not—did not bloom with us the first season, but the present year it put forth a profusion of blossoms and was the admiration of all. Please give us full information about it. [Our friend forgets that we have no means of knowing to which he refers. EDS.] Some of the hollyhock seeds produced plants with flowers nearly black. I inclose a leaf of one of the plants which has grown with us for two years without producing bud or flower—what is it?—T. S.

[The leaves look like those of the deutzia seeds of which we sent out two years ago. It will probably bloom next season. It ought to have bloomed last year.—EDS.]

CANADA, Frazerville, Quebec, March 9.—Your Mold's Oats and Golden Mangels did splendidly with me. The oats were sowed on the 25th of May and cut on the 25th of September, well ripened. The Cuthberts entirely failed; they were too dry when put into the ground. No magnolia seeds have yet sprouted, but the pentstemons have come up; also two of the man-root seeds and many of the Iris Lævigata. Two of the Abies Sibirica had grown in the house, but died in July when in the open ground. J. E. P.

ILL., Ludlow, Champaign Co., Nov. 6th.—During the first half of October the weather was fine, with no hard frosts till the 17th, when the storm which prevailed over the Northwest amounted here to a Texas "norther," and gave us a skim of ice and a light flurry of snow. Since then we have had some pleasant weather and some chilly and November-like, but dry and favorable for work. But to-day is snowy with about two inches on the ground, and a chilly wind blowing keenly from the north. A great deal of Fall plowing has been done, and corn husking is only fairly begun. Corn is turning out from 15 to 40 bushels per acre, with 25 about the average, as nearly as I can judge, which, considering the large acreage, poor cultivation and unfavorable season, is as good as could be expected. Wheat is looking well thus far with about the right amount of top. Fat hogs are worth $4.15 to $4 25 ₱ cwt, live. Stock hogs are in good demand and hard to buy, probably because poor corn is considered worth more to feed than to sell. There is no disease among swine as yet. A few cases of epizooty are reported among horses. "G."

INDIANA, Hall's Corners, Allen Co., Nov. 5.—The Ennobled Oats did well; I have about three quarts for seed another year. The cow-peas also turned out a good crop; but unless the stock will eat them, I don't know what they are good for. The other seeds also did well. I think the Seed Distribution worth to me the price of the paper. Your corn statement shows a very good crop, though I think my boy, under 18, can make as good a showing on one acre. We gave him one acre for competition with other boys of this State and others, for a premium offered by one of our papers for the largest yield of corn on an acre. W. H. H.

[Please send us particulars about the yield, culture, kind, etc., etc., of that boy's acre. Eds.]

KANSAS, Freedom, Butler Co.—The acreage of wheat is larger than ever in this section and it is looking very well considering the dry weather; no rain in four weeks. Feeding commenced this year on Oct., 5, and we have to feed until April 20 or May 10. Markets are active. Hogs have been up to $4 35 per hundred; but are down now to $3.25. Beef cattle have been selling for $4.50 from the sward; butter, 25c; wheat 65 to 80c., and not much coming into market. W. J. B.

NEW YORK, Pitcher, Chenango Co., Nov. 9—The last two days have been warm and pleasant. Last Sunday the air was quite full of snow, and the wind blew a perfect gale. We have had heavy rains during the past few weeks; the ground is full of water. It has been very wet for plowing. The great crop of apples is nearly all gathered. We dispose of them mostly by feeding them to stock. Cows, horses and hogs all help to save them. One of my neighbors had over 3,000 bushels of grafted apples. He saves a few for family use and the rest he feeds just as fast as the cows will take them. L. W. S.

WIS., Louisville, Dunn Co., Nov. 6.—We have had good weather for husking corn and plowing. Prices are good and farmers are in fine spirits. So are laborers, as work is plentiful and wages good. Wheat, No. 1, 80c; hay, $9 per ton; live hogs, 4½c; beef and stock cattle, 2½c. to 3c; potatoes, 30c. A great many of them are rotting. Prices of good land are low; good, improved farms can be had for $10 to $20 per acre with good water. We always have a healthful climate, and plenty of work for all who come to this place to live. Wages now, $1 per day and board. We have had some snow but it has all gone and the weather is delightful. T. M. S.

WISCONSIN, Eagle, Richland Co., Nov. 6.—Fall wheat was never known to be so slow in making a start. Quite a large acreage has been sown. We sow by the first of September or the last of August, and get about 25 to 30 bushels per acre. Corn-husking is well under way. Corn is only an average crop and we have plenty of hogs, sheep and cattle to feed it to. The weather has been rather dry for a month; it is raining now. Lots of Early Amber Cane are raised here—over 6,000 gallons of sirup have been made in this town. J. H. F.

WIS., West Salem, La Crosse Co., Nov. 4.—My Mold's Ennobled Oats rusted badly and were late in ripening. The beets were fine, and the cow-peas ripened. Blount's Corn matured earlier and better than last year. The weather has been quite hot the past week; farmers are busy husking their corn; the crop is not as good as was expected. M. L. H.

The Querist.

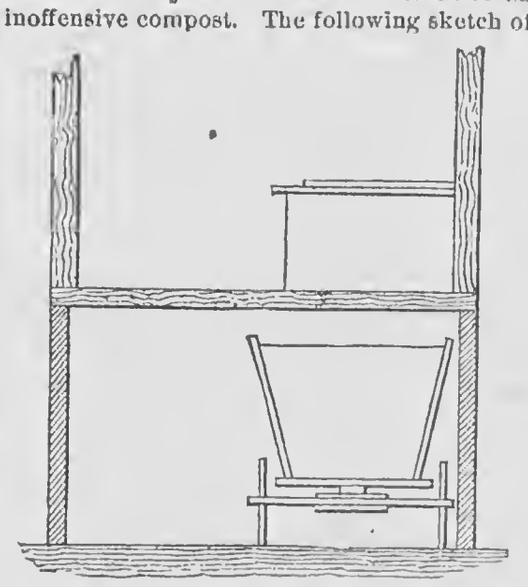
ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Constructing a Privy.

J., Leroy, N. Y., asks how to construct a privy vault adjoining a dwelling-house so that no unpleasant odor shall arise.

ANS.—This is a question that presents two points of consideration; first, the construction of the vault, and, second, the disposal of the refuse. For if this is allowed to accumulate, no means whatever can prevent the inevitable consequence of decomposition and foul odors. We suggest the following plan which will be found convenient and effective at very little cost and trouble and which will completely avoid every inconvenience that attaches necessarily to our present barbarous and dangerous system. Let the house be raised three feet above the ground, upon a close basement. In this basement have a movable vault mounted upon low wheels which can be drawn away when filled or at regular intervals of a week or a month, and emptied upon the manure heap where it will disappear; or, in places where there is no manure it may be thrown upon the ground and covered up or buried in it or reduced by the admixture of earth to an inoffensive compost. The following sketch of



PRIVY VAULT.—FIG. 390.

the basement (the doors being removed), will help to make the method plain. The movable receptacle may have a foot of earth or sand in the bottom as an absorbent or deodorizer and a box of dry earth with a scoop may be kept in the house and one responsible person should make a practice every day of adding sufficient of this earth to keep the contents of the box inodorous. When necessary it may be removed to some convenient place and allowed to accumulate until it can be used or disposed of. There is no better fertilizer for grass lands than such a compost and any farmer would be glad to have the disposal of it. This plan would remove what is now a nuisance and a constant menace to health and life.

Feeding Dairy Cows.

A. W., Everett, Pa., says—"Rye is worth 66 cents per bushel; oats, 30; corn, 35; millet and Hungarian each about 60; buckwheat, 50; wheat bran and middlings, $1 00 per hundredweight; and bran, separate, 85cts.; clover hay, $10 per ton; Timothy, $12.; corn fodder five cents per bundle; butter, from 20 to 25 cents per pound. Now, I would like to know which of the above-mentioned grains I had better feed to make the most clear money on my butter, and which kind of hay I had better feed, or had I better feed fodder? Will it pay to cut the fodder? We have tread-power and can hire a cutter at $1 per day. I would also like to know how many cows it would pay me to keep at the above prices for feed. Butter gets as low as 10 cents per pound in Summer. Grain-fed beef can be sold for four cents, live weight—which will pay the best? Would it pay to steam the feed at the above price? Could I get a six-horse vertical steam engine that would run my machinery profitably, which consists of a small Separator Union Grist mill and other farm machinery, and that could be made to steam the feed also by means of pipes or any way you could suggest?"

ANS.—The cheapest (that is the best) feed for cows is clover hay and corn finely ground mixed with an equal portion of bran and middlings. Corn fodder at five cents a bundle, is dearer than clover hay at $20 a ton, unless the bundles are very large indeed. The comparative value of good clover hay and corn-stalks is as 20 to 8; that is, hay at $20 per ton is equal to corn-stalks at $8. By all means cut the hay, wet it and mix the meal with it. Ten pounds of cut hay thus fed are worth 15 pounds given loose. You can get an excellent fodder cutter for $30 to cut for 40 cows. A horse-power will be better for you than a steam engine and much cheaper; steaming food is one of the obsolete, so-called improvements, and is rarely practiced by those who farm for profit. Keep as many cows as you can get feed for, if they are good ones, and make butter only in the Winter and grow feed in the Summer.

Roup in Fowls, Etc.

J. S., Greenville, Pa., asks, 1, which do we think the best breed of fowls for general purposes—the Plymouth Rock or Light Brahma; 2, which of the two is the hardier; 3, what will cure the roup.

ANS.—1, Plymouth Rocks. Both are excellent but we think there is a little point in favor of the P. R. 2. There is little difference in that respect. 3. This disease is very contagious, and the affected birds should therefore be promptly separated from the remainder of the flock, and put into a dry, warm but well-ventilated place. There is a great number of nostrums for the cure of this disease. An old remedy is five drops of tincture of iron in a tablespoonful of water three times a day. Give scalded feed well seasoned with Cayenne pepper. Another is confinement alone in a warm, dry place, and a tablespoonful of castor oil every morning for a week. In aggravated cases the following recipe is strongly recommended:—Powdered sulphate of iron, half a drachm; capsicum powder, one drachm; extract of liquorice, half an ounce; make into thirty pills, give one at a time, three times a day for three days. Then take half an ounce of sulphate of iron and one ounce of Cayenne pepper finely powdered; mix carefully a teaspoonful of these with butter, and divide into ten parts; give one part twice a day. Wash the head, eyes and inside of the mouth and nostrils with vinegar, which is very cleansing.

Melon Raising in Oregon.

A correspondent whose name we have mislaid, asks several questions respecting the raising of melons in Oregon, to which we reply as follows:

ANS.—We should doubt melon growing for market being a paying crop in Oregon, but of that our correspondent must be the best judge. There are two plans for advancing the plants earlier; one by selecting the warmest ground at command, and after thorough cultivation, marking out spots at the proper distance for the hill throughout. Then make holes, say a yard wide and six inches deep, fill with horse manure in a state of fermentation (other manure is not so good, being too cold) and replace the soil over the top. This will make hills, and be warmer and drier than on the level. These hills may be covered with any cold-frame lights, or, if such lights are of use for other purposes in the Winter, they may be used for both purposes. If no such lights are used, a rough frame, 18 inches square, covered with glass, may be used and raised up to allow the plants to run under, and be removed when the cold rains are over. But probably the best plan would be to prepare a hot-bed in the usual manner with manure; sow the seeds in four-inch pots, and plant out, without breaking the roots, on hills prepared as before advised, after the cold rains are over; but we think neither would pay unless melons are very high-priced, and we should try the venture on a small scale first.

Treatment of Skins, etc.

W. J. B., address lost, asks, 1, how to tan skins with the hair on, so as to make them soft; also, how to tan skins with the hair off; 2, how to preserve bird skins until they are mounted—three or four weeks; 3, Is there any creamery that will do where ice cannot be had, but where there is cold well water?

ANS.—1, Skins cannot be tanned with the hair on; instead they must be tawed and not tanned. Tawing is done with alum and salt. The skin, either fresh or steeped in water, is spread and covered with a mixture of powdered alum and salt in equal parts. It is then folded in two, the flesh-sides together, and either rolled up, if it is a single skin, or piled in a heap if there are many, and kept so for 10 days. Each is then scraped, and rubbed dry with a piece of chalk, being pulled and stretched meanwhile to make it soft and pliable. If the hair is to be removed, this is done first by spreading lime paste on the flesh-side and leaving the skins placed in pairs, flesh-sides together, in a heap until the hair parts easily. The skins are then steeped in alum and salt liquor. 2, Bird skins are dusted with arsenic, which preserves them from decay and from vermin. 3 Cold well water will make a good substitute for ice as far as it goes. Read carefully the articles on "The Dairy Cow," in which all such points as these are treated. You can have a cold-water tank, as described in article No. 14 on Spring Houses, if you will change the water.

Lost Nation as a Winter Wheat.

E. W. G., Somerset, Pa., asks for full information about Lost Nation wheat as a Winter variety.

ANS.—We must refer our inquirer to late RURALS for a report of the yield of Lost Nation as a Winter wheat. From our plot of last Summer we carefully selected the best heads, the grain of which was sown again in September as one of the seventy-seven varieties now growing at the Rural Farm. We can state positively nothing as to the value of this wheat as a Winter sort. Another year will probably enable us to do so. Of all the wheats we have thus far tried, we are best pleased with Silver Chaff, Velvet Chaff and Shunmaker.

Miscellaneous.

S. S. B., Westchester, N. Y., asks, 1, when should ground bone be applied to grass land; 2, will it be of any service to clover; 3, when should it be applied to corn.

ANS.—1. Ground bone, if the flour of bone, will be felt in its effects in one or two months if the weather is moist, but it is safest to apply it three to six months before it is expected to be wanted by the crop. Coarse ground bone does not become as readily soluble. 2. When applying coarse ground bone to a field of corn one Spring there was a quantity left over, which was directed to be sown upon an almost barren place in the meadows, but where there were some Timothy and some red clover growing. The result was not perceptible at haying, but in the Autumn the growth of grass and especially clover was three times as great as in the surrounding field, and the cattle ate it very closely. 3. Coarse bone applied to corn in the Spring has but little influence upon the crop; if applied the Fall previous bone stimulates the starting of the corn crop, but unless other manure is used to continue the food supply, the corn shows that the food from the bone is early exhausted.

J. L., Auburndale, Mass., says: "This Spring I sowed a lot of large "Red Weathersfield" onion seed on poor land very thickly, and did not cultivate them, intending them for setts, next Spring, for early onions; they have grown about as large as hickory-nuts; will it be safe to set them out next Spring or would they be likely to run to seed? The tops have all died, and they appear to be quite ripe."

ANS—Our friend does not state when they ripened off. If they have grown all Summer, the onions will have matured and will certainly run to seed next season, if planted out.

N. J. A., Grand Rapids, Mich., asks, 1, whether Blount's Corn is likely to mature in that latitude; 2, where seed can be had; 3, where can Ennobled Oats be bought.

ANS—1. We are of the opinion that it would. You should save seeds to mature, and we have no doubt your season would be long enough the second year. 2. Probably of D. M. Ferry, Detroit, Mich.—price about $2 50 per bushel. 3. B. K. Bliss & Sons, N. Y. City, are the only firm we know of at present that offer the oats.

D. & C., Danbury, Conn., ask whether if corn-stalks are thoroughly steamed they will be all eaten up, and whether it will pay to cut and steam them; will it pay to steam all kinds of fodder?

ANS.—The expense of labor and fuel is usually more than the saving in using steamed fodder, if there is any economy at all. Cutting the fodder and grinding grain *will* pay beyond a doubt, but this generally is as far as economy can go in preparing food.

H. P., Cornwall, Vt., asks how to kill ferns or brakes.

ANS—There is no known remedy but uprooting them and often where the pastures are so rough that it is impracticable to plow, there is no other way but to dig them up with a grub hoe, or to confine a drove of hogs upon them. In the latter case water must be supplied the hogs and some corn scattered among the brakes.

R. S. P., Bolster's Mills, Me., sends a fern for name.

ANS.—This is Adiantum pedatum—the Maiden-Hair Fern—the most beautiful of all our ferns, abounding in damp, rocky woods. The above question was mislaid.

A. S. S., Union Co., Pa., Mr. J. G. Burrow will furnish you a catalogue without charge which will give you all the information respecting the Jefferson Grape you desire. His address is Fishkill, N. Y.

Inquiries are made respecting the dictionary offered in advertising columns for ten cents.

ANS.—It is the same as that previously offered, only the cover is paper.

S. L. L., Hanley, Ia., asks how much should a large mangel-wurzel weigh.

ANS.—One weighing 15 pounds would be considered of fine size.

Y. J. W., Topsham, Me., sends leaf of a shrub for name.

ANS.—The leaf is not known to us.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, NOV. 20.

A. L. J.—I. P. R.—T. H. M.—A. B. A.—M. L. T.—We do not care for poetry.—W. J. B.—L. W. S.—F. M. S., no, much obliged, we do not want the gopher—T. R. S.—W. J. B. (Kansas), Reserved for Corn number.—M. J. G.—W. L. T.—L. T.—O. S.—J. M. B.—A. B. A.—F. H. S.—G. W. H.—T. B.—L. S. H.—M. P. B.—A. G.—C. C. G.—R. C.—Elsie.—W. H.—H. W.—W. S.—L. S., thanks—J. A. F.—J. T.—J. S.—E. G.—G. L. A.—J. S.—J. W. L.—T. W.—H. E. McC.—J. B.—A. S.—J. H. P.

When life is a drug, and you have lost all hope then trust in Hop Bitters.

THE
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Conducted by
ELBERT S. CARMAN.

Address
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READERS are respectfully requested to bear in mind that the RURAL NEW-YORKER is promptly discontinued at the end of the subscription term. We keep no subscription account books, and we *cannot*, therefore, regard requests that the paper be continued, unless accompanied by the subscription price. This is $2.00 per year and (please note) $1.10 for six months. Those desiring our Seed Distribution—which is necessarily strictly limited to subscribers—should add their share of the postage—viz., six cents—unless they subscribe in connection with the other journals with which the RURAL clubs—as already announced.

LOSSES IN BREEDING AND PURCHASING RACE-HORSES.—Lord Roseberry, who married a daughter of the wealthy English banker, de Rothschild, recently sold 15 of his stud for the very low price of 3,370 guineas. One of these horses alone had cost him, three years ago, 6,000 guineas ($30,300); he now fetched only 135 guineas ($680). Another horse for which he paid over 1,000 guineas ($5,500), when a yearling, sold for 75 guineas ($379.) There is nothing more uncertain than the breeding of race-horses, and millions upon millions of dollars are annually lost upon them in England, and a great deal of money in our own country. It is safer to breed trotting horses if one is determined upon going into fancy animals; but it is infinitely more sensible and profitable to breed handsome carriage horses and good, strong farm and work horses.

RYE-BREAD is the ordinary food of the working classes in Germany, where 7,300,000 tons of rye are consumed yearly. The average rye crop is 6,200,000 tons; but this year it is only 5,200,000 tons, so that the country must either import 2,100,000 tons, costing $89,200,000, or else substitute other forms of food. The import duties on the rye needed would be 21,000,000 marks or $5,000,000—a direct tax on the absolute necessities of the people. Moreover, the scarcity will, of course, raise the price of this sort of food and also that of others that may serve as substitutes. In Russia, too, the rye crop, which there also is the staple food of the lower classes, is reported to be 40 per cent. short, and in St. Petersburgh the price of rye-bread is twice as high as in ordinary years. Indeed in all the Baltic region people are suffering severely from the partial failure of this crop last season.

TAKING the country through, wheat this year is about 10 cents per bushels lower than at the same date last year; corn about two cents per bushel higher; hogs 75 cents per 100 pounds higher; lard $1.10 per 100 pounds higher; pork $2.50 per barrel higher for January delivery; for earlier delivery the price is not so high, as there is a considerable amount of old stock on hand which will not be "regular" after New Year's, and will, therefore, most likely be thrown on the market before. Winter hog packing has begun all over the West, and the business is brisk. Farmers are selling freely, both because tney are satisfied with present prices and because, as a rule, they expect better figures for corn, and, therefore, think they can make more profit by selling it later on than by feeding it to the hogs. The amount of packing in the West thus far considerably exceeds that at the corresponding date last year, aggregating at 15 chief points 915,000 on Nov. 15 against 595,000 at the same time in '79, an excess of 320,000 hogs.

MIGRATION TO AND FROM CANADA.—Taking advantage of the distress in Ireland, Canada is seeking to obtain thence a desirable class of agricultural laborers. A telegram from Toronto announces that the Minister of Agriculture has submitted to the home government a plan the main points of which are the free transportation of emigrants from the afflicted districts at the expense of the imperial government, and the grant to them by the Dominion of certain lands in the northwest, together with enough implements and seeds to enable them to start new homes there and develop the country. The carrying out of this plan would be a good thing for the distressed Irish peasantry and not a bad one for our thinly-settled northwestern territory, for most of the newcomers could be pretty sure to find their way thither before long. There are not more than two or, at most, three European countries from which the tide of immigration to the United States is stronger than that from Canada. The records of the Huron district, the leading point for crossing the line, report a total of 94,375 emigrants from the Dominion to this country during the year ending June 30 last. Of these only 18,936 came from various European countries, while 75,435 were Canadians.

THE NEW YORK EXPERIMENT STATION.

We have already informed our readers that an appropriation of $40,000 has been made by the Legislature of New York State for the establishment of an agricultural experiment station. The best plan to render this station of most service to those who are to be benefited by it is to be determined by a Board of Control, as we have explained. Several meetings have been held and the resolutions adopted have been forwarded to a committee appointed by the Board, for its guidance. At all of these meetings—and this is what we wish to comment upon—the subject of practically testing the value of commercial fertilizers has been mentioned as if that were the chief object of establishing the station. This is a question which every farmer must determine for his own soil, even though a sub-station were established in every county in the State, and the less time and money appropriated for that purpose, the more there will remain for investigations which may prove of real service to the farming community. It is to be hoped that the control of this station will not fall into the hands of specialists. It may be necessary to employ chemists, geologists and entomologists, but only as department officers. The Director should be an educated, earnest farmer.

OLD-TIME EPIZOOTICS.

Thanks to the general use of steam in traveling, it is comforting to reflect that in spite of the very great annoyance and inconvenience caused by the horse diseases in recent years, particularly by the epizootic which prevailed in the year 1872, the inconveniences to which people are subjected nowadays in the lack of horses are really much less grave than those which our ancestors had to contend with, in similar circumstances. For our forefathers, the prevalence of a severe epizootic meant the cessation of all traveling and transportation, whether for long or for short distances; excepting, of course, such service as may be done by oxen and by men on foot. Some idea of the gravity of the situation is suggested by the following extracts from an old Birmingham newspaper which we chanced to come across a few days since. On February 4th, 1760, notice was published that "the horses belonging to the Birmingham stage coach are so much affected by the present distemper that prevails among them, that its journies are obliged to be discontinued until their recovery." And in the week following another notice appears underneath that of Feb. 11th, 1760, "the horses belonging to the Birmingham stage are still so bad that it would be dangerous to attempt their going with the coach this week; but on Monday next, the 18th, Mr. Peyton proposes that the coach shall set out to go from hence as usual; after which he hopes it will meet with no other interruption."

THE WHEAT CROP OF 1880.

ELSEWHERE we give by States the Department of Agriculture's estimate of the wheat crop of the country for 1880. It will be seen that the aggregate yield this year is put at 480,849,723 bushels against 448,755,118 bushels last year, an increase of 32,094,605 bushels. The acreage, however, this year is estimated at 36,037,950, against 32,835,909 in '79, an increase of 3,202,041 acres. The increase in total yield, therefore, is proportionately less than that in acreage, so that the average yield this year is 13.03 bushels, against 13.7 last year; 13.1 in '78 and 13.9 in '77. Previous to 1877 the average yield for 15 years was 12.2. The proportion of the wheat crop, per head, kept at home for food, seed, etc., for several years was as follows: 6.03 bushels in '78–9; 6.09 bushels in '77–8; 5.34 bushels in '76 7; and 5.23 bushels in '75–6. Estimating the domestic requirements of '80 1 at six bushels per head of a population of fifty millions, we have an aggregate of 300,000,000 bushels, which, deducted from our estimated total yield, would leave 180,849,723 bushels for exportation. In the above estimate of domestic requirements, however, is included all the flour made in the country. Of this an equivalent of 27,057,385 bushels of wheat was exported during the year ending June 30 last, and the equivalent of 25,333,713 during the preceding year. It is reasonable therefore to suppose that an equivalent of at least 29,000,000 bushels of the present year's wheat crop will be exported in the form of flour. Deducting this amount from the domestic supply and adding it to our exportable surplus, we have for the former a total of 271,000,000 bushels, and for the latter 209,849,723 bushels. From a careful comparison with a large collection of other trustworthy estimates, however, we feel pretty confident that the agricultural Department's estimate of the aggregate yield is somewhat too high. For California and Oregon alone an increase of 15,491,200 bushels is given, which, judging from the Department's overestimate of the yield there last year and from other data, seems to us excessive. While conceding to the Department's Bureau of Statistics a fair measure of care in its inquiries and estimates, we are persuaded that the total wheat yield this year is from ten to fifteen million bushels less than its estimate, and that our exportable surplus will be correspondingly smaller.

AGITATION NEEDED.

Last week a large number of representative cattle raisers and breeders met at Chicago and passed a series of resolutions urging Congress, at its next session, to adopt prompt and effective means for the suppression of pleuro-pneumonia among our herds. For upwards of two years, the RURAL NEW-YORKER has persistently pressed upon public attention the necessity for energetic Congressional action in this direction. While many other agricultural papers, both East and West, have either belittled the danger to which our vast cattle interests have been exposed from this destructive and insidious malady, or persistently denied its existence among us, we have repeatedly insisted on the need of legislation both to prevent its spread and to extirpate it from our borders. The Boards of Agriculture of Massachusetts, New York, New Jersey, Pennsylvania, and some other States, have already joined us in urging upon Congress the need of speedy action in this matter, and resolutions looking to this end should be passed in every other State at the earliest opportunity. We have just learned that the National Grange, at its annual meeting lately held at Washington, passed resolutions urging such legislation. Great as has been the increase of our exports of live cattle to Great Britain of late, there is no doubt that it would have been much more rapid, if freed from the restrictions placed upon it owing to the presence of this disease in a few scattered parts of the country. Among a large and influential class in Great Britain there is every disposition to remove these restrictions at the earliest opportunity. Even within the last few days the cable informs us that a vigorous effort is to be made, at the next meeting of Parliament, to greatly modify the regulations at present governing the importations of cattle from this country. This favorable disposition across the water should be encouraged by vigorous action on this side. Hitherto whenever our English friends have sought to lighten the embargo, it has been objected that it could hardly be expected the British government should be in a hurry to relieve our trade of a burden which our government, owing to its culpable remissness, was doing so little to remove.

Judge Jones, of Ohio, who was lately sent to England by the President to investigate the matter, reports that the present embargo on our cattle causes a loss of from $15 to $25 on each imported steer. Having to be slaughtered at the port of debarkation 14 days after landing, there is not time enough for the beasts to be put in good condition after the hardships of the voyage and the previous railroad transportation. Moreover, the meat has to be thrown on the market whether this be favorable or unfavorable, so that often it has to be sold at a loss, whereas in the absence of restrictions the animals could be well fattened, driven where wanted and slaughtered only when a good price could be obtained for the meat. The number of cattle to be imported from this country during the current year is estimated at 150,000 head, so that a loss of even $15 on each would entail on the trade a total loss of $2,250,000 for a single year. The farmers of this country are the chief sufferers by this loss, a part of which would pay all the expenses of eradicating the plague of pleuro-pneumonia to which it is due. It is notorious that "President-making" and the making of political "records" occupied the time and attention of Congress at its last session almost to the entire exclusion of needed legislation, and that no industry suffered more from this neglect than did agriculture. Now that the President is "made," let us have some honest, useful work from our legislative Solons.

BREVITIES.

RURAL GROUNDS, Nov 22.—Thermometer at six o'clock A. M. 13 degrees.

THERE is a good prospect that we shall be earlier in putting up and mailing our Seed Distribution than we were last year. There may still be a doubt as to the Rural Branching Sorghum—but it is so small that we no longer worry over it—and all the rest are secured beyond a peradventure.

WE have received the following letter from Gerrit S. Miller in reference to our engravings of his stock: "Gentlemen—Yours of 15th inst. inclosing proofs of my Holsteins, is at hand. I think you are doing the best work of the kind I have ever seen. I am well pleased with the copy of the photograph."

WE learn by cablegram this morning (Nov. 22) that the great Eastern Fresh Meat Company with a capital of $1,500,000 has been formed in England. It proposes to import carcasses from North and South America and for this purpose the Great Eastern steamship has been fitted up with refrigerating appliances. Well, while we should wish that as much as possible of the profit of our export meat trade should go into the pockets of our own citizens, we welcome all honorable competition. The more buyers in the market, the better the prices for farmers.

On November 17, the National Grange held its annual meeting at Washington, D. C. As the sessions were secret, there has not been time enough yet for the proceedings to dribble out to public notice. It is said, however, that the reports indicate that, instead of the membership having fallen off, as has been generally supposed, the Grange now numbers as many members as at any time in its history. Nearly half of its patrons appear to be women, to whom its social features are especially attractive and beneficial. In this and other respects the Grange has been a blessing to the agriculture of the country—long may it flourish!

So great has become the substitution of oleomargarine for the poorer sorts of butter in this market, that commission men say that only two kinds of butter can be sold here—creamery and oleomargarine! A new Chicago sensation is that a new process has been discovered for converting lard into butter and that a lard "boom" is among the approaching probabilities. Exports of the stuff have, it is said, been made to Europe where, it is reported, it has given high satisfaction as a butter substitute. Six factories are reported to be turning out twenty-five to thirty thousand pounds a day of the concoction which sells all the way from 13 to 27 cents a pound.

A COMMITTEE of the Elgin Board of Trade has been investigating adulterations of butter and cheese at Chicago and are reported to have discovered that "anti-huff" is largely used there in the manufacture of cheese. This is a compound of alkali, sal soda and other articles which is said to destroy the albumen of the cheese and prevent the latter from puffing up enabling the maker to work in buttermilk. The stuff is used only in making skim-milk cheese and as yet there is no difference in price between the anti-huff preparation and the ordinary article. The stuff has been only lately discovered. Cheeses in which it is used soon become leathery and then break down and crumble to pieces. It is also thought they are injurious to the stomach.

THE BEST AUTHORITIES WILL SOMETIMES DIFFER:—According to the Report of the Ohio State Board of Agriculture the aggregate yield of the wheat crop of that State this year is 52 522,700 bushels, while the Department of Agriculture's Report gives it only 37,792 800 bushels, a difference of fourteen and three-quarter million bushels. The former figures, nevertheless, are said to be based on actual township canvass since thrashing. Last year, too, there was a pretty little discrepancy of 4,476,700 bushels between the estimates of the same excellent authorities, the State Board putting the total wheat yield at 41 052,120 bushels, and the Agricultural Department allowing a yield of only 36,581,360 bushels. Then, too, the former claimed that 2,319,323 acres were under the crop; but the latter could find only 1,876,480 of them.

THE receipts of wheat at St. Louis have been much greater this year than ever before. A late Globe-Democrat says that for fully a fortnight the receipts of wheat there had been nearly as great as those at Chicago. In July and early August there would be nothing remarkable in this, because the Winter wheat of the Southwest, a great part of which goes to St. Louis, is harvested from two to five weeks earlier than the Spring wheat of the Northwest, most of which goes to Chicago; but at this time the receipts of this sort of wheat are usually heaviest at the usual markets, and therefore the Chicago receipts should be much larger than those of her rival. Most of the St. Louis wheat is carried by a new line of barges to New Orleans whence it is shipped to foreign markets. Since January 1, it is said twice as much wheat has been shipped to Europe by this route, as there was in the corresponding period last year.

For Women.

CONDUCTED BY MISS RAY CLARK.

THE CHANGE.

Out of the long white dresses
And into the dainty frocks,
Little blue shoes with buttons,
In the place of the worsted socks:
No longer a helpless baby,
Carried in arms all day,
But a restless, mischievous fellow,
Brimming with frolic and play.

Getting himself into troubles
That seemingly have no end,
Tearing "bid holes" in his dresses,
For patient mamma to mend!
Bumping his curly round noddle
Which mamma's soft kisses must cure;
And meeting a hundred misfortunes,
Which babies must learn to endure.

Too soon I shall lose my baby,
And do the best I can
To welcome the magical power
Which changes the boy to man!
Oh! that the years were slower
In rolling the months away,
And would that for many a season
My baby a child might stay!

I wonder how he is dearer,
As only a babe on my breast?
Or changed to this roguish fellow
Whose feet are never at rest!
Is a rosebud any the sweeter
Before 'tis a full-grown rose?
Ah! the love that is born with the baby
Must grow as the baby grows!

DESCRIPTION OF CUTS.

FIG. 391.—DRESS-SLEEVE.

The sleeve is of striped material; the puffings at the lower elbow and wrist are of plain material; this sleeve will be found very suitable for a velvet or velveteen dress, with the puffings in satin.

FIG. 391.

FIG. 392.

FIG. 392.—DRESS-SLEEVE.

The gauntlet is one of the newest sleeves for Winter dresses; the top of sleeve is quite plain; it must be made of two materials; in our model the top and cross folds are of woolen broche, the cuff of velvet or velveteen. The sleeve is tight to the waist and fastens with six buttons.

FIG. 393.—LADIES' CRAVAT.

The cravat is formed of stripes of Oriental pattern ribbon and stripes of black lace insertion; it is trimmed with black lace.

FIGS. 394, 395, 396, 397.—LETTERS: CROSS-STITCH.

The large initial letters are now very fashionable for marking household linen. To prevent the trouble of counting threads, canvas may be put over the linen and worked through, and the threads of the canvas drawn out when the work is finished.

REVELATIONS IN FURS.

No more appropriate time than the present could be selected to greet the reader with warmth. The expressions clothed in fur taking the form of wrappings, creates in thought the comfort to be gained

FIG. 393.

by possession of one or more articles. The reality, however, is what we wish to disclose.

For information received, we extend thanks to C. G. Gunther's Sons, 184 Fifth Ave., N. Y.

Sealskin continues unsurpassed in popularity, and is conceded the highest rank in the fur kingdom. It is the existing *mode* and a particular feature in the fashionable arena. Fashion has not dictated its use to be confined to the sacque or jacket, but has granted an extended license, the result of which shows cloaks large enough to almost entirely envelope the person; this beautiful fur is also revealed this season in the deep ulster.

In sealskin sacques the pile turns upward, this fact serves as a test for well-made garments.

The pieces usually comprising the sealskin set are the sacque or jacket, the muff and boa; it is in exceptional cases accompanied with the cap or hat; sometimes a cloak in some form is substituted for the sacque with the neck finished with a collar which obviates the necessity of a boa.

The sacque deviates slightly from the former make up, being somewhat more slender in shape, the change being affected by blocking in the centre of the back, making deeper curves in the under arm seams and the shoulders of the approved hight. They are made both single and double

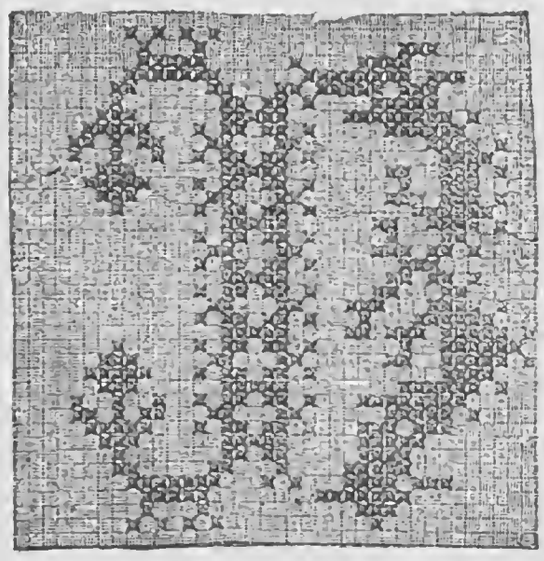

FIG. 394.

breasted, the preference being given to the former; a square collar and lapels opening in a shallow point at the throat. The fronts are slightly lapped and fastened with loops of cord set on the edge of the right side, over large cross-bars. The sleeves although fitting more closely than previously are not strained.

Furriers still advise the plain finish in sacques when first purchased, a bordering being held in reserve for renovation after a year or more of wear. The average depth is from 35 to 37 inches.

The cloaks are all trimmed and in models, are in a measure modifications of the dolman mantle cut deep and extending to within a few inches of the bottom of the skirt.

The "Medicis" is the dolman modified; it has deep mantle-shaped sleeves curving to the back. In sealskin or in silk with fur lining this style is extremely popular; the former are shown trimmed with black fox, Argentine fox, blue lynx and Arica chinchilla and are pictures of elegance.

The "Albani," the *Roi de Lahore*—a model of which is valued at $375—the Paletot and Pelisse—$400, being the value of one style of the latter two—are other forms introduced.

Fur-lined cloaks are still in great demand. Some of the materials used in making are Sicilienne, velvet brocade, *gros-grain* from Antwerp, and a new cross-barred, heavy silk fabric called *barre*. The squirrel is usually patronized in lining. A good circular may be bought for $70 or $80. Those in wool armure with a silk surface are useful and handsome, and when well lined, costs $75.

The popularity of sets will be revived, being worn more than for many previous Winters. The velvet and cloth cloaks will need this addition to insure completeness.

To a certain extent the collar and cape will supersede the boa. The small round collar, the medium large Eugenie collar cut off square across the front, yet long enough to cover the chest, and the large, stylish pelerine, covering the shoulders nearly to the waist like a coachman's cape are styles seen in new sets.

Muffs remain small. The round muff and those with a border of another kind of fur are the styles exhibited by the above furriers.

The black fox pelerines cost from $45 to $60; some in monkey-skin and black hare, the latter a thick lustrous fur, cost but $5 to $10, and a pretty muff to match may be obtained for from $4 to $6. The capes are of great service and will no doubt be greeted with applause by persons needing particular protection and yet wishing to avoid the weight of long cloaks.

Young ladies and misses favor the leopard sets. The pelerines cost $20; the smaller collars $7 to $15—the latter the most popular. Fawn-skins and chinchilla are other favorites.

In trimming, the black fox is the choice of elegance. This border for wraps costs from $7 a yard upward. The black hare is a thick, long, lustrous fleece; it is a pretty, low-priced trimming, costing $1.25 a yard.

Caps of seal-skin for ladies have large high crowns or are indented and have a turned-up band all round. The former is designated as the Hungarian, the latter as the Cossack. Birds, breast feathers and leopards' paws are used for trimmings.

From the many styles and prices of fur apparel, selections can be made to meet the demands and circumstances of the majority of would-be purchasers.

VANITY FAIR PAPERS.—NO. 1.

A New Material for Screens, Lambrequins, Grate Curtains.

While table scarfs, lambrequins and curtains are made of all grades and varieties of goods, usually, it is only the costliest fabrics that are employed as screen coverings. Plushes, silks, satins and velvets are regarded as necessities in screen decorations. These materials, rich though they be, are, however, eclipsed by the gold and silver cloth lately imported from France.

The gold cloth is made of gold thread and cardinal crewel. It is woven in such a way as to resemble a sheet of shimmering gold dashed with a suggestion of cardinal. The latter color intensifying the general effect of brilliancy.

The silver cloth is composed of interminglings of gold thread, silver thread and black silk. The effect is even more beautiful than that of the gold cloth. The yellow of the gold presents a sharp contrast to the white of the silver and the slight infusion of black serves to relieve it of the faintest suspicion of tawdryness.

These cloths are designed mainly for screens. They present too pronounced a background for the advantageous display of delicate embroideries so that applique designs are usually employed on them.

Two screens made of this material are shown: one of gold cloth with a Calla Lily and leaves appliqued in plush, with cardinal plush bordering. The other of silver cloth has a square of heliotrope satin in the center with a hand-painted design of a girl with a petticoat of pink and a robe in two shades of purple; the screen, which is framed with a border of heliotrope satin, is embellished with beautifully painted morning glories in pale pink and lilac.

Lambrequins.

Scallops are out of date and lambrequins, whether for mantel or window decoration, are made in Eastlake style. Many materials are used in their construction, and the greatest possible latitude is allowed individual taste in the matter of ornamentation.

There is a fancy just now for using sets of scenes from Mother Goose as designs on mantel lambrequins. A popular one represents six episodes in the life of Cinderella. The lambrequin, which is of old gold sateen is arranged in panels and the design is outlined in seal brown Japanese embroidered silk. The panels are separated by bands of crimson plush. A broad band of the same material, and a rich fringe in cardinal, old-gold, seal brown, Nile green and Watteau blue finish the edge.

"Puss in Boots" scenes are used on a lambrequin of Turkish satin in two shades of olive-green. The designs are filled in with bright colored crewels and filoselle. A heavy fringe of olive-green and cardinal chenille with a rich heading is placed at the edge.

Curtains or hangings for grates should show the same colors and materials as the mantel draperies. The rods and rings, too, should correspond with the metal used in furnishing the grate and its

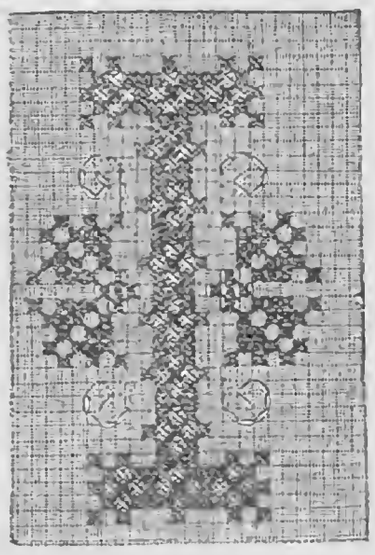

FIG. 395.

appliances. When drawn, the curtains are hung over an arm which should be of brass or of nickel plate.

FAITH RIPLEY.

FASHIONS.

Skirts are worn fuller than last year.

The Derby hat is very much worn again this Autumn.

Muffs are now made of velvet with a center of fur to match.

Plush hats are very fashionable.

Pale blues are very much worn in evening costumes.

Handkerchief crown hats are coming into favor.

Surah silk is much in use for bonnet strings.

Tassels of all kinds, including lace ones are fashionable.

Mull and lace fichus of every description remain ashionable.

Old fashioned neckerchiefs are very popular with the ladies.

Ribbon is not so much used for bonnet-strings as satin serge and soft crushable damassee silks.

Velvet fruits are used as trimmings for plush hats.

Easy simplicity is the characteristic of most coiffures.

Fashionable coiffures make the head look very small.

Ostrich feathers are lavishly used for bonnet trimmings.

Many evening bonnets are in white or cream plush, with pearl or crystal ornamentation.

Short sashes, very wide, and made of double material, are much used with plain round waists.

Crown braids and puffs are entirely out of date, the fashionable coiffure being very flat and smooth.

Cashmere-colored buttons and belt buckles are seen on the Oriental costumes so fashionable at present.

The newest flounces are shirred half their length and the lowest half is pressed to form plaits.

Prune or plum color, in dark shades is a favorite with middle aged and elderly ladies.

Basques of figured or brocaded fabrics, with skirts of plain goods, are very popular.

Polonaises, jackets, basques, overskirts, trimmed skirts and princess dresses are equally in favor.

Cords, both beaded and plain, will be largely used in trimming polonaises and outside wraps this fall.

Oriental textures and effects will be very fashionable this season.

Large hats and bonnets, as well as very small ones are much worn.

Plush bands are seen on the bottom of some plain skirts of satin or velvet brocade.

Black jet is used in fringes of every width, galloons, *passementeries*, *quilles*, cords, tassels, spikes, frogs, and buttons.

Large gilded hooks and eyes, little gilded pigs

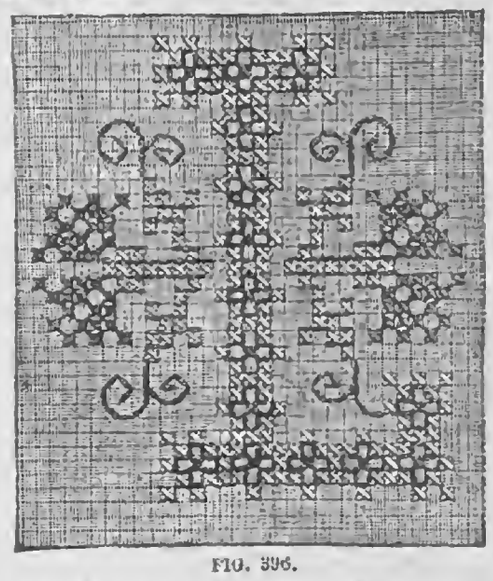

FIG. 396.

and elephants, gilded spiders, beetles, and insects, of various kinds are found among new bonnet ornaments.

ABOUT WOMEN.

Mrs. Langtry is now living in New Jersey.

Jenny Lind is fifty-nine years old, and the sweetest, kindest looking woman one sees in a year's travel.

The Empress of Germany is a very charitable lady. She supports a school and hospital in Berlin out of her private purse.

Miss Van, the American singer, who has achieved such distinction in Rome, is a Cincinnati girl. She is quite a handsome blonde, with golden hair, and is only twenty years old.

Isabella McCulloch, the divorced wife of Brignoli, died in New York the other day. Brignoli abandoned her in Europe, and about two years ago she applied for a divorce. Since then she has supported herself as a church singer.

Little Jeanne Hugo, the granddaughter of the poet, has received from Professor Nordenskjold the gift of a paper knife made from the tooth of a moose. On one side is this inscription: "Product of the hunt in the Polar Sea, offered to Mlle. Jeanne Hugo by A. E. Nordenskjold."

Carlotta.—The ex-Empress Carlotta has fortunately lost all memory of her Mexican experience, never making any allusion to it. The unhappy princess in the darkness of her mind still retains the habits of court etiquette, exacts all ceremonious adjuncts, even to a guard of honor, and always attires herself in a handsome costume for dinner. The only visitor whom she consents to see is Queen Marie Henriette, who shows a kindly devotion to the invalid which does her honor.

Miss Anna Louise Cary is having some new gowns made in Paris. Among them is a princess wrapper of light blue cashmere, finished around the lower edge in points trimmed with silver braid. Below the points is a knife plaiting covered with Valenciennes, and above them a quilling of the same lace. A purple morning dress, made with a skirt and half-fitting sack is also trimmed with silver braid, and is quite as pretty as the wrapper. A brown walking suit, a short dinner dress of two shades of blue, are among the other gowns which the singer is to have for herself, and not for the dear public, for which her finest garments are designed.—Cincinnati Gazette.

CORRESPONDENTS' CORNER.

Editor:—Will you please print in your paper

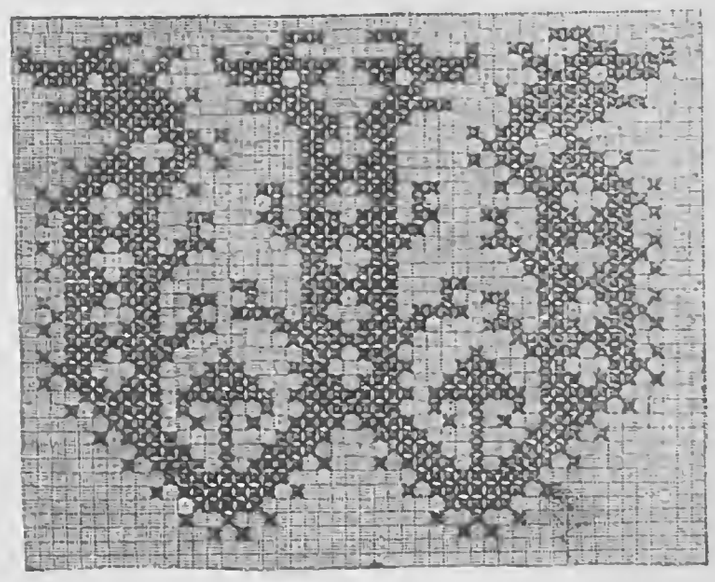

FIG. 397.

the "flirtations," especially do I want the "handkerchief" and "hand" flirtations; and oblige

A Constant Reader.

If possible, in a later issue the desired information will be given, although we do not approve of the adoption of the rules and hope the knowledge is desired as a means to prevent the practice.

R. C.

Will you please give me the address of a Fur Dealer in New York, and oblige R. W. H.

C. G. Gunther's Sons, 184 Fifth Ave., New York City, are large dealers in furs. Their stock consists of great variety both of style and quality. A communication with them will in all probability result in satisfaction. Eds

Literary Miscellany.

NATURE'S CHILDREN.

EVA EDGERTON.

Daisies and buttercups, milkweed and clover,
Ye are so beautiful all the world over,
I would not change you for exotics rare,
Breathing their life away in the soft air,
Ye are so humble, down by the glade
Where silver-tongued brooks ripple 'neath the cool shade,
Growing so beautiful in your seclusion,
Scattering blossoms in richest profusion,
On the steep hillside, over the ledges,
In the wild brambles and through the thick hedges,
Ye are so lavish with all of your treasures,
Covering the earth with such brimming measures;
Asking no recompense, seeking no praise,
Starring the meadows and dusty highways;
But, oh! do ye know, ye gold-hearted daisies
Each of you tell of life's saddest phases!
For, when the parting with loved ones is over,
Under the daises and under the clover,
Knowing you'll guard them with tenderest care
We lay our loved and lost, down 'neath you there,
Lay them to rest, until over the river
We meet, no more to part, never to sever.

INMATES OF LESTER HALL.

(Continued from page 774.)

CHAPTER XXI.

THE JOURNEY.

Mrs. Audley went away to spend the Christmas holidays with her relatives; Mattie wrote that she and her husband were to spend theirs at Cannes, "where the orange-flowers are blossoming under our windows;" and Cecil wrote to accept the two invitations she had selected, and to decline the others. Then there were a few days devoted to shopping and to interviews with dressmakers, for a three weeks' campaign in a fashionable country house is an important matter, and although Cecil was engaged, she had by no means retired from the field, and had as many victims as ever.

Just before the time fixed for the journey to Mrs. Brayburn's the weather broke up, and from being fine, clear and frosty, became wild, blustering and snowy. If the truth were known, Mr. Daton would far rather have seconded Ernest's proposal to spend Christmas quietly at home; but Cecil's will was law, and he found himself one snowy day in a comfortable first-class carriage, with Cecil wrapped to the chin in sealskin and sables, and Ernest in attendance, bound for one of the most charming places to visit, for Mrs. Brayburn made a most delightful hostess, and her husband seconded her admirably.

The journey was not a long one, and in the cushioned compartment, with every contrivance to keep out King Frost, there was not much inconvenience from cold.

Mr. Daton, with a most discerning idea of what would be expected of him under the circumstances, leaned back comfortably in his corner and fell fast asleep; while Cecil, wrapped in her furs, looked dreamily out of the window at the fair white world through which they were speeding, and forgot altogether the presence of her handsome, fair-haired lover, who, from his corner opposite, devoured the beautiful, wistful face of his lady-love with his eyes.

"Cecil," he said, at last, in a low tone, judiciously calculated not to disturb the obligingsleeper; but low as his voice was, the girl started and turned her eyes away from the snow-covered landscape with a nervous shudder. "Why, how you started, love," said he, smiling. "Were you asleep with your eyes open?"

"I really think I was," Cecil answered, a trifle pettishly. "Why did you speak to me, Ernest?"

"Probably because I had something to say," he replied, gaily. "Shall I say it now, Cecil, or shall I let you return to your slumbers?"

"It is as well to get it over," she answered, languidly.

"One would think you alluded to a visit to your dentist," he said, lightly. "I hope it is not so unpleasant as that, Cecil?"

"I hope not," was the rather ungracious rejoinder. "I am in a very bad temper as it is."

"Then perhaps I had better defer our conference," he said, gently. He was getting used to Cecil's pretty tyrannies, and had ceased to resent them, even if he ever had done so. "I may hope for a more favorable audience some other time."

"You shall have it now," she said, suddenly, turning to him with a smile, which made Ernest change his seat from one facing her to one beside her and take her hand in his.

"Thank you," he said, tenderly.

And Cecil exclaimed, with a little burst of remorse:

"How patient you are, Ernest! You make me ashamed of my ill-temper."

"Whoever heard of a rose without thorns?" he said, smiling.

"There are more thorns than leaves to this one," she said, laughingly. "Well, what is this important communication you wish to make?"

"I had a letter from my father this morning," said he, fondling the little gloved hand left in his, "and he fears, from the state of Ida's health—not to mention my mother's, which is almost equally delicate, that they will not return this next year at all."

"I am very sorry to hear your mother is so delicate," answered Cecil, kindly; "but I have no doubt that such a long stay in a warmer climate will benefit her greatly. Mr. Edgar writes that Mattie is quite strong, and I have no doubt that she will derive equal benefit."

"I hope so," said Ernest; and there was a short silence.

"Cecil," he asked then, with the red blood flushing his cheek, "when are you going to make me the happiest of men?"

Cecil started, and her eyes met his with a quick look of alarm; then hiding her emotion, she said, smiling;

"I thought you were the happiest of men."

"But I shall be happier when you are my own, Cecil," he said, eagerly. "When may I put another ring on this dear hand? Nay, my dearest, I did not mean to startle you. Is the idea such an alarming one, Cecil?"

"No—no," she said hurriedly, turning her face from him to hide the sudden pallor which had overspread it, "it is not that—but, Ernest—you—are very happy—we are very happy as we are.

"Why, Cecil, what do you mean? Do you not think you will be equally happy as my wife? Do you not think that I will do my best to make your life one cloudless sunshine?"

"I am sure you will," Cecil answered, looking distressed; "but Ernest, you must not hurry me. I do not want to be married yet. I cannot leave Uncle Henry so soon."

"Uncle Henry," repeated Ernest, "he would not wish to stand in the way of your happiness, Cecil."

"I know that," she said, petulantly; "but because he is so unselfish, is that any reason why I should be selfish? Think how good he has been to me. I will not leave him yet. We are both young enough to wait a little."

"Cecil," he said, with a sudden gravity, "what is this? I know that before we were engaged you told me you did not love me; but you said you were willing to be my wife. Have you changed your mind since then?"

"Changed my mind?" she said, with a little nervous laugh; "No, I have not changed my mind. I like you"—she turned to him with a very kindly light in her lustrous eyes—"I like you a thousand times better now than I did then. No, you need not go into raptures," she added, lightly. "How could I help liking you when you are so good to me? but, Ernest, you must give me time. You must let me get accustomed to the idea."

"But we have been engaged two months," remonstrated Ernest; "and my father is anxious that the marriage should take place soon, and hopes that we will go and pay them a visit."

"He is very kind, but," and Cecil turned quickly to him as she spoke with a pretty, imperative air of decision—"but it is quite out of the question that I should be married while Mattie is away. So that settles the matter!"

"How long is she to remain away?" said he, ruefully.

"They will not be home till the Spring."

"The Spring! When is the Spring, Cecil? Does that mean April, or May, or June?"

"It might mean March," she answered, lightly. "Shall we leave it an open question, Ernest?"

"No," said Ernest, firmly; and when a man shows firmness a woman generally gives way. "We will say a fortnight after their return."

"A fortnight—certainly not!" said Cecil. "A month if you like, but not a day sooner!"

"Well, be it so," said his lordship. "But I do not think you are kind to me, Cecil!"

"It is because I am kind to you," she answered, looking at him a little wistfully—"it is because I am kind to you that I do not want to let you be in such haste. I am not such a desirable possession after all! But," and Cecil started up with a look of intense relief, "here we are at our journey's end! How lovely all those frosted trees look! Uncle Henry, wake up; we are at our destination at last!"

CHAPTER XXII.

THE MEETING.

Mr. Brayburn had driven down himself to meet his guests, and was standing on the platform of the little country station. When the train stopped, he came forward eagerly to assist Cecil to alight.

"Here you are!" he said, cheerily. "Not quite frozen, I hope, Miss Lester. Mr. Daton, I am delighted to see you! That little wife of mine prophesied you would not come. Ernest, I knew that, under the circumstances, you would not fail me."

"Not likely!" said Mr. Eleston, gaily, while the servants collected wraps and dressing-cases, and Mr. Brayburn hurried Cecil to the carriage, which was waiting outside, with an omnibus for the servants and the baggage.

As they turned into the grounds belonging to the estate, Cecil broke into a little cry of delight at the beautiful white, fairy-like scene which lay before them. Trees, hedgerows, and grass were all covered with the glittering frost; the sun was setting in the west, and the red light was shining on the beautiful white world. Beyond rose, a fine old red brick mansion, stately and ivy-grown, and the last rays of the setting sun were gleaming on its many windows, giving it the appearance of a house on fire.

"How beautiful!" said Cecil, softly.

And Mr Brayburn looked delighted at the appreciation of his estate, and he bent over her kindly.

"Yes, it is a fine old place. But I have heard a great deal of the beauty of Lester Hall."

"It is a ruined beauty," she answered, half sadly. "Uncle Henry wishes to restore it, but I do not know. Perhaps—"

Mr. Brayburn's was a comparatively modern house, with large windows and every modern comfort; and the room into which Cecil was led, was a large square apartment, which looked very inviting and cosy after the long, cold journey. A blazing coal-fire was burning in the wide grate; huge fur rugs were scattered over the polished oak floor; wide low armchairs and a large round table, groaning with novels and all manner of light literature, stood near the fire; wonderful old cabinets, full of art-treasures, stood against the walls. The firelight threw a ruddy glow over the room, and over the pretty gipsy-table, with its dainty tea-service, which stood before the hearth—on Mrs. Brayburn's graceful figure, seated in a low chair beside it, and on a tall, broad-shouldered man, with a great tawny beard, who, standing with his elbow on the mantelpiece, was talking to her ladyship in a deep rich voice, which was the first sound which met Cecil's ears as she entered the hall.

Mrs. Brayburn, an extremely pretty and coquettish brunette, rose and fluttered across the hall to greet her guests. She was a French-woman, and had brought into her home all the graceful vivacity of charm of her country-women, with a little spice of coquetry, which made her all the more bewitching.

"Ah, Cecil, *ma belle!*" she said, gaily; "not quite frozen, I hope. No, I see you are not. What a lovely color! A journey on such a cold day agrees with you. Mr. Dayton, how good of you to come! Ernest, I will not thank you. I suppose you would have come even without an invitation."

"The temptation would have been a very great one," said he, who was no mean performer in the art of flirtation, "It is so long since I had the great pleasure which I enjoy now, that I was getting quite desperate."

"*Traiment!*" laughed her ladyship, with a glance at Cecil, who was removing some of her costly wrappings, and looking at them with a smile. "Cecil, you will have some tea? I think you all know Dr. Carewe?" she added, as she moved over to the table and began to manipulate the pretty cups and saucers.

Meanwhile Mr. Daton was greeting Lawrence Carewe—for the tall man was the doctor—with much warmth and cordiality; and, then Cecil, turning to him suddenly, but without a word, held out her hand with a little smile, in which there was an unspoken prayer. Lawrence Carewe hesitated for a moment—only a moment—and the hesitation was perceptible to no one but to Cecil herself; then he touched the little hand with his own lightly and coldly. The blood rushed into Cecil's face, then she turned very pale, and her hand, as he released it, fell heavily to her side; but she turned to Ernest with a sudden gesture of confiding affection.

"Ernest," she said, gently, "can you—will you ——"

Her voice failed her, but she smiled, and Ernest took her hand and pressed it fondly, as he asked her "if she were very tired?"

"Are you very tired, Cecil?" said Mrs. Brayburn. "I will give you some tea, or would you prefer to go to your room at once?"

"I think, if you will excuse me, I would like that best," Cecil answered; "I am very tired."

"You look so pale," said Mrs. Brayburn, anxiously. "Doctor, come and prescribe for Miss Lester."

"I am only tired, and Dr. Carewe could not prescribe anything better than rest and a cup of tea," said Cecil, hurriedly.

"I will take you up myself," said her ladyship, slipping her hand through Cecil's arm. "I will come back and give you some tea directly, Mr. Daton," she added, looking back with a smile as they passed up the broad stone staircase.

By-and-by Mrs. Brayburn returned and the guests came back from the lake where they had been skating. The girls were clustering round the fire, laughing and chatting, while the young men were handing cups of tea, and maccaroons and cake.

Ernest was in deep conversation with a beautiful blonde, Violet Heriot, with eyes as blue as the flower after which she was called. He was looking very handsome, and the doctor, as he watched him, thought that he was a man likely to take any woman's fancy, so tall and straight, with his frank, smiling blue eyes and his Greek features. Involuntarily, Dr. Carewe glanced over at his own image, and met the questioning glance of his own stern gray eyes, which were examining his rugged features in the glass. He turned away with an impatient sigh; but as he did so, he met another glance from a pair of hazel eyes, belonging to a pretty fairy of seventeen, who was not yet "out," but who had been permitted to join the Christmas party at her aunt's, and who was an especial favorite with Lawrence Carewe. She was looking pale, he thought, and there was a sorrowful look in her eyes which touched him, and he crossed over to her side.

"What is the matter with you, Miss Tyrrel?" he said, smiling. "Are you very tired, or has anything vexed you?"

"I think I am tired," she said, a little sadly. "Dr. Carewe," she added, "can you tell me—has Miss Lester come? I am so anxious to see her."

"Yes, she arrived this afternoon," he answered, gently. "Why are you so anxious to see her?"

"Is she so beautiful?" said Lotile Tyrrel, eagerly.

"She is very beautiful," he replied, gravely, angry with himself for the tremble in his voice as he spoke, but in some surprise at the girl's eager face and wistful eyes. "That is Mr. Ernest Eleston talking to Miss Heriot."

"I know; I have known him a long time," the child said. "But he has not seen me. Do you think he cares for her very much?"—To be continued.

NEW PUBLICATIONS.

The Eden Tableau or Bible Object-Teaching—A study by Rev. Charles Beecher. Boston: Lee & Shephard. Cloth 12 mo. Price $1.50.

We submit the following extract from a letter received by the publishers concerning this book:

"Just at this time of thought, there are some reasons why 'The Eden Tableau' should be taken notice of.

"1st. The existing schemes of Theology are based on the doctrine of the fall of Adam. This is true of Catholic, Greek and Prostestant schemes. They are as much built on that doctrine as a house is built on its foundation, whether of rock or sand.

"2nd. Science by its developments claims to have demolished that doctrine until there is not a vestige left. Eminent orthodox leaders, in whom great confidence for their learning and piety is placed, it is understood, admit that Adam and Eve were not historic realities but that the whole was as a parable.

"3rd. These things are fermenting and coming towards an explosion, perhaps at the next Triennial Congregational Council that will bring on a new discussion of the whole subject, especially, the question of the Fall of Adam.

"The Churches cannot stave it off—they must define their position!

"This book of Rev. Charles Beecher is in order—it is *apropos*. For it offers a possible compromise between extremes, and is perfectly original and unhackneyed, being the first time in Church history that an attempt has been made to apply the law of analogy consistently to the explanation of the Eden Emblems; therefore, it is a book that should excite interest, and is in the line of present thought.

The Danbury Boom. By James M. Bailey, "The Danbury News Man." Boston: Lee and Shepard. Price, cloth, $1; paper, 50.

This is the title of the genial New England Humorist's fourth volume, which opens with a timely bit of political "booming." In addition to the "Boom" we have a great variety of spicy effusions, having brevity, and, therefore, of course, the soul of wit, of decided humor, and dealing with the perplexities of human nature in an original way. Much fun and no little wisdom is to be found in this book, especially if the advice given by the author in his preface is followed.

"There is no plot to this book, and, consequently, there is no need of hasteuing through its pages to see how things are going to turn out. Take plenty of time to read it. Go through it leisurely and get the whole benefit of the novel, but don't attempt to take in the whole of it at once; don't dare to read long at it. 'It is not a free hand.'"

MAGAZINES FOR NOVEMBER.

The American Antiquarian.—Contents:—The Emblematic Mounds, and the Totem system of the Indian Tribes; Relics of Aboriginal Art and their Ethnological Value; Ancient Quartz Workers; The Rabbit and the Grasshoppers; An Otoe Myth; On the Alabaster Quarries and Flint Works found in Wyandot Cave; Aboriginal use of Copper in War and Peace; The Oriental Department.—Evolution; Correspondence; Editorial Notes; Gleanings from Magazines; Book Reviews.

The Idol Montezuma.—Montezuma is still the great Divinity of the Pueblos. His image is preserved and worshipped by the surviving tribes. As late as in 1857, Mr. W. Davis, then United States Attorney for New Mexico, was shown this idol, which he describes as follows:

"It resembles nothing upon the earth, in the heavens above, or in the sea beneath. It is a cylinder shape, nine inches high and nine in diameter, and made of tanned skin. The upper end is closed with skin and the lower end left open. One-half of the cylinder is painted green and the other half red. Upon the green side is fashioned the rude resemblance of a man's face. Two long apertures in the skin, in the shape of right-angled triangles, with the bases inward, are the eyes. There is no nose. A circular piece of leather about two inches below the eyes represents the mouth. Two similar pieces, one on each side, opposite the outer corners of the eyes, are intended for the ears. A small tuft of leather and feathers crowns the top.

"The three Indians present," he continued, "looked upon it with the greatest veneration. They knelt around it in the most devout manner, and went through the form of prayer, while one of their number sprinkled upon it a white powder."—American Antiquarian.

Scribner's Monthly.—Contents: The Sower. After the painting by Jean-Francois Millet; Peter the Great as Ruler and Reformer I; Bordentown and the Bonapartes; "O Silver River Flowing to The Sea;" Walt Whitman, with portrait; The Secret of Second-sight, by an ex-conjuror; Two Singers: Tiger-Lily, in Three Parts—Part I; The Thought of Astyanax Beside Iulus; Zerviah Hope; The Lost Hellas; A Chapter on Tableaux; Jean-Francois Millet—Peasant and Painter, III; "O Tell me not of Heavenly Halls;" Elihu Vedder; On Two Pictures by Vedder: I. The Young Martyrs. II. The Cumæn Sibyl; Mr. Gladstone, with portrait from a photograph (by permission of Marion & Co.); St. Martin's Summer; Leonard Woods; Artemus Ward; "Pray You, Love, Remember;" Topics of the Time; Home and Society; Culture and Progress; The World's Work; Bric-a-Brac.

The present number of Scribner's is presented in a new dress, and contains many fine illustrations, together with its usual good selections of literary matter.

A GLANCE BACK ONE HUNDRED YEARS

One hundred years ago not a pound of coal nor a cubic foot of illuminating gas had been burnt in the country. No iron stoves were used and no contrivances for economizing heat were employed until Dr. Franklin invented the iron-framed fireplace, which still bears his name. All the cooking and warming in town, as well as in the country, was done by the aid of a fire kindler on the brick hearth or in the brick ovens. Pine knots or tallow candles furnished the light for the long winter nights and sanded floors supplied the place of rugs and carpets. The water used for household purposes was drawn from deep wells with creaking sweeps. No form of pump was used in this country, so far as we can learn, until after the commencement of the present century. There were no friction matches in those days, by the aid of which a fire could be easily kindled, and if the fire went out upon the hearth over night and the tinder was damp, so that the spark would not catch, the alternative remained of wading through the snow a mile or so to borrow a brand of a neighbor. Only one room in any house was warm, unless some member of the family was ill; in all the rest the temperature was at zero during many nights

In the winter. The men and women of one hundred years ago went to their beds in a temperature colder than that of our barns and woodsheds, and they never complained.

BRIC-A-BRAC.

THE DIVINE AND GAUZY SARAH.

What is this Sarah slim,
This sublimation dim,
That fills the papers?
Is it imaginative,
Some thought creative,
Or just a mingling of the misty vapors?

Perhaps a bit of fog
From o'er the ocean,
Borne by the winds and tide?
Or a mere notion,
A gaseous fancy, Frenchy, too,
Or just a bit of 'vaporated dew.

Ether materialized,
Varnished and sized,
A fluid that will volatilize:
But we sadly mistrust
'Tis a bit of French dust,
Blown into American eyes.

"You goin' to the State Fair this year?" inquired one boot black of another, as they met at the post-office yesterday."

"Course. You goin'?"

"Course."

There was a silence of half a minute, during which they looked each other over. Then the first one asked:

"Do you sneak in with a family or climb the fence?"

"I sneak. How do you do?"

"I climb."

There was another interval of silence, and then the little one observed:

"But there need't be no hard feelin's between us."

"Oh, no, no," replied the other; "all we differ on is the minor particklers. We is just as solid as wheat on the main question. You won't give me away to the purleeee?"

"Naw! And you?"

"I never squeals!"

They shook on it and borrowed a match to light a cigar-stub and smoke in partnership.—Detroit Free Press.

CHANGED SOME.

A HUNGARIAN entered the studio of a portrait painter and said:

"I want you to paint a portrait of my late father,"

"With pleasure, sir. Have you a photograph of the lamented deceased?"

"No; but you don't want any photograph. Just paint a wild-looking Hungarian, between sixty years old and six feet high, with a big white moustache."

Four weeks later the family came round to see the picture.

"Bravo," says the Hungarian, warmly; "it's a speaking likeness, only the old gent seems to have changed a good deal since his death."

A GENTLEMAN had a board put upon a part of his land, on which was written, "I will give this field to any one who is really contented." And when an applicant came, he asked, "Are you contented?" The general answer was, "I am." And his reply invariably was, "Then what do you want with my field?"

THE owner of a pair of bright eyes says the prettiest compliment she ever received came from a child of four years. The little fellow, after looking intently at her eyes, a moment, inquired naively, "Are your eyes new ones?"

"HAVE you given electricity a trial for your complaint, madam?" asked the minister, as he took tea with the old lady. "Electricity!" said she. "Well, yes, I reckon I has. I was struck by lightning last summer and hove out of the window, but it didn't seem to do me no sort of good."

IT was a talkative Englishman who was bragging of what superior things they had in the "hold country" to everything here, and it was a serious-faced Yankee who said: "Well, I will allow there is one thing in England better than we find here—there is a better class of Englishmen there." It took the Englishman half a day to discover that the remark didn't convey a personal compliment.

SPLITTING THE DIFFERENCE.

A YOUNG man with the blush of country life on his cheeks sold out his produce on the market yesterday and entered a shoe store and said he wanted a pair of shoes for his wife.

"What number?" asked the clerk.

The young husband scratched his head, looked very much embarrassed, and finally said:

"Well, I've been married eight months, but this shoe business stumps me. I don't hardly believe she wears 'levens, and I don't think she can git into fives. I guess if we split the difference we'll hit her pretty close."

He was given a pair of eights, and after squinting along the soles he observed:

"I guess them'll do. She's awful proud, and I know she'll squeeze into 'em for all she's worth."—Detroit Free Press.

A POOR old deaf man resided in Fife, and was visited by the new minister shortly after his coming to the pulpit. The minister said he would often call and see him, but time went on, and he did not visit him until two years after, when, happening to go through the street where the deaf man was living, he saw his wife at the door, and therefore could do no other than inquire for her husband. "Well, Margaret, how is Tammas?" "None the better o' you," was the curt reply. "How! how! Margaret?" inquired the minister. "Oh, ye promised twa years syne to ca' and pray once a fortnight wi' him, and hae ne'er darkened the door sin' syne." "Well, well, Margaret, don't be so short. I thought it was not very necessary to call and pray with Tammas, for he is sae deaf ye ken he cannot hear me." But, sir, said the woman; with a rising dignity of manner, "the Lord 's nae deaf." And it is to be supposed the minister felt the power of her reproach.—Leisure Hour.

Sour stomach, bad breath, indigestion and headache easily cured by Hop Bitters.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ONE WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

IT is Saturday afternoon and we have been busy with housework; Janet and I, busy with our preparations for the Sabbath day, and we've hardly had time to breathe. I do not know what I should do without Janet; she is at once my "help," as people call it, and my friend. I never pay her wages, but leave a little note in her room every month inclosing the amount agreed on, and it pleases me to add always some tiny gift, to show that I am grateful to her for her honest work and faithful heart. It is five years since she came to us fresh from bonnie Scotland and I have been thankful ever since that Lawrence was inspired to go down to the steamer when it landed her in the nearest city, and secure her help for me. She is so fond of the children, too, especially of little Alex, who has been born since she came here, and even Nora, who does not make many friends, and was a shy, reserved girl, soon became as fond of Janet as of an elder sister. For we all live together in a low-browed cottage that belonged to Lawrence Clay when we were married, and here I brought my baby sister, Nora, to whom I have been a father, and mother and sister, all in one, since she was three weeks old. She is sixteen now, and has developed into a tall, stately girl, who seldom smiles, but has a sweet, winning manner and a voice of rich, full tone, that always commands attention even from strangers.

Our four children are of course perfection in their fond mother's eyes. Lonsdale, the eldest, is fourteen; then the two girls, Celia and Karen, aged nine and eleven; and lastly, baby Alex, who repudiates the name. Quite a large family I think to myself this Saturday afternoon, as everything gets into place, the children come from their bath rosy and clean, and we prepare for tea. Karen goes into the parlor to practice and is going over the first part of "Silvery Waves," very trying to my rather acute musical ear, and Lonsdale has made his way up stairs and is trying to make music sound from an old violin. How tired I feel! It seems to me that nothing would be so bad as this "over and over again." I think of the coming day and mentally repeat, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and on again through the routine. It is breakfast and dishes; dinner and dishes; supper and dishes, till one is fairly sick of the same cups and saucers and plates, and would fain have them broken now and then just for the sake of making a purchase of a new pattern. I know all about the cost, but these moments will come in every woman's life. In this, as in other things, it is rusting that *tells* most, and is hardest to endure. And this is one of the days on which I feel so rusty that the hinges of my very soul seem to creak. Of course Janet washes the dishes. But then she is a woman, too, and I know how she feels for all her sturdy independence and power of sticking to the work through thick and thin.

A man's work is so different from ours. It is varied by the seasons and by circumstances, and very few things are a steady job for 365 days. Then they have voting and elections of all sorts of officers, and school meetings, and fifty other ways besides of getting a little out in the world. But we seem to have nothing. If we go out to tea, we are at once set down as gossips, and all the household gets demoralized by our absence. And so a great many women in country places get a chronic habit of staying at home, saving and scraping to add to the bank account, and degenerating into cooking and mending machines, until the rusty wheels stop some day, and each family finds they can do without her to whom they never before gave a thought of rest, or else— But I will only quote the newspaper statistics, which say there are more farmers' wives go mad than those of any other class. And while my tired heart is thinking of these things, Janet is crooning a song to little Alex., who is tired, too, and has cuddled himself in her sheltering arms; and this is what she sings:—

"It's a bonnie, bonnie warl'
That we're living in the noo,
An' sunny is the lan'
We often traivel throo';
But in vain we look for something
To which our hearts can cling,
For its beauty is as naething
To the palace o' the king."

And so the Saturday settles with a glowing sunset into the promise of a glorious Sabbath.

DOMESTIC RECIPES.

To Prepare Hulled Corn.

TAKE about three quarts of wood ashes, put into a large kettle and pour over six quarts of cold water. Let come to the boiling point and boil five minutes, skimming several times. Take from the fire and pour in a little cold water to help settle it. Put three quarts of shelled corn into another kettle and pour over the strained lye. Now let boil half an hour, then skim out the corn and rinse well with several waters, rubbing with the hands until the black chits come off. Put back into the kettle with clear water and boil until soft. Salt and eat with milk, or butter, pepper and salt.

Mutton Hams.

Allow one-quarter of a pound of saltpeter to half a pound of brown sugar. Put into an oven to heat and while hot rub thoroughly into the legs of mutton. In the morning rub well with common salt. Place something under the mutton to raise it from the drippings. Let stand three or four days, then give another *thorough* rubbing with salt and after a week hang up to dry. You may smoke them if you please. When dry, keep in canvas bags.

Apple and Bread Pudding.

Put a layer of apple sauce in the bottom of a pudding-dish, then a layer of bread crumbs, sprinkle with sugar and little bits of butter. Another layer of apples and a second layer of bread crumbs are added with sugar and butter and a cup of rich milk to wet the top layer of crumbs. Bake in a good oven three-quarters of an hour. Eat with sweetened cream. Flavor with nutmeg. FARMER'S WIFE.

Thanksgiving Pudding.

Fifteen Boston crackers, one quart of rich milk, nine eggs, half a teacupful of butter, one-fourth pound suet, one-half cup of molasses, one pound of raisins, one pound of currants, a little mace, cinnamon and salt. Scald the milk and pour over the pounded crackers the night before making. The eggs should be beaten separately and the whites added last, the currants first washed then dried and the raisins rolled in flour. Boil in a tin pail or mold three or four hours, the longer the better. Eat with rich sauce. MRS. J. B.

Curing Hams.

I have used the following for a long time for my hams and think it preferable to putting the hams into brine, for I think brine has a tendency to make lean meat hard and tasteless. For a common-sized ham take one ounce saltpeter and enough fine salt to rub the ham twice. After rubbing the hams thoroughly lay them in a cask with a hole in the bottom, or anywhere so that the brine may run off. After one week, take up and rub on remainder of salt and saltpeter. After a week or ten days longer, take up and rub over with salt alone. After another week they are ready to smoke. L. E.

Bread from Grown Wheat.

Scald the flour when making sponge and let cool before adding yeast. Knead the dough a little stiffer than for good flour.

Salve for Frost Bites.

Six ounces of mutton tallow, six ounces of lard, one ounce of peroxyd of iron—red iron rust—one ounce of Venice turpentine, one-half ounce of oil of bergamot, one-half ounce of bole Armenian rubbed to a paste with good sweet oil. Heat the mutton tallow and iron rust in an iron vessel, stirring constantly with an iron spoon, until the mass becomes perfectly black, then add the other ingredients, stirring until well mixed. Apply upon linen daily.

MRS. D. B.

Roasting Chestnuts.

Cut a small piece off from each shell—just enough to show the meat—and put a cupful into a corn-popper. Shake over a clear fire until they become mealy.

Lemon Bread Pudding.

One pint of fine bread crumbs, yelks of four eggs, one quart of rich milk, two tablespoonfuls of melted butter and one cup of sugar. Flavor with lemon. Cover and bake about one-half hour. Beat the four whites to a stiff froth, mix with it a teacupful of powdered sugar and the juice of a lemon. Spread over the pudding and return until slightly tinged.

MARY B.

Hard Soap Made with Washing Soda.

Pour five gallons of boiling water over six pounds of washing soda and three pounds of unslaked lime. After it settles and becomes clear, pour off. You may then turn over it two gallons of clear cold water to be added from time to time as the soap is in danger of boiling over. To the five gallons of soda and lime-water add six pounds of perfectly clean fat and boil about two and a half hours, or until it begins to harden. Throw in a handful of salt just before taking from the fire. Pour into a tub and let stand until solid. M.

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Miscellaneous.

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News of the Week.

HOME NEWS.

MONDAY, NOV. 22, 1880.

THE committee on a site for the World's Fair to be held in New York in 1883, has recommended a portion of Central Park for that purpose, and there is probability of a serious opposition to the decision before the selection is confirmed by the city authorities.....A cold snap, starting at the Rocky mountains on the 6th and 7th with the thermometer at zero, traveled across the country, reaching the Atlantic on the 19th.....A dispatch from Des Moines, Iowa, says the jury in the case of Henry Osborne, charged with the murder of his wife, on February 18 last, brought in a verdict of guilty of murder in the first degree, and fixed the penalty at imprisonment for life. The jury at first stood eight for hanging to four against, and after a contest of 24 hours agreed on the verdict Osborne had separated from his wife several months before, and meeting her on the streets that evening seized a large stone, followed and knocked her down and crushed her head with the stone, two little boys witnessing the deed.... ....The Mississippi Valley Inter-State River Improvement Convention, at New Orleans, adopted resolutions approving the report of the Mississippi River Commission and requesting Senators and members of Congress from the States included in the Mississippi Valley to use their best efforts to secure the passage of the bill on the subject brought before Congress, recognizing the improvement of tributary streams as second only in importance to the Mississippi stream, and claiming that it is the duty and interest of the Government to establish a general system of river improvement, embracing the whole system of rivers in the valley of the Mississippi.

Gen. Nelson A. Miles, Colonel of the Fifth United States Infantry, has been appointed to succeed the late Gen Myer as Chief Signal Officer of the Army. .....The conviction of Moett, the Taghkanick, N. Y., wife murderer, has been affirmed, and he will be re-sentenced at the January term to be hanged.....William J. Martin, a murderer, under sentence of death, confined in jail at Lebanon, Mo., has been released by the sheriff's niece, a girl 15 years old, with whom he has eloped. The girl has been the prisoner's principal custodian of late. It took place some time during the day, as everything was all right when the sheriff was called away on business in the morning. The guilty pair have been traced to a point on the Tuscambia road, a few miles distant. It is not thought probable that Martin will be captured alive, as he is a desperate character and is armed with a Spencer rifle, which he took from the jail.

Two hundred and twenty-six street lamps at Providence, R. I, which extend over a distance of nine miles, are now extinguished by electricity in fifteen seconds by one man .....Good waterproof varnish may be made by dissolving one ounce of India rubber to a jelly in one pint of turpentine; then add one pint of linseed oil and mix over a slow fire.....Aiken & McLaren's Wynantskill knitting mill, at Westsand Lake, N Y., was consumed by an incendiary fire. Loss, $35,000; insurance, $16,000.....The passenger depot of the New Orleans, St. Louis and Chicago Railroad, at New Orleans, was burned, with two coaches. The loss is $30,000.

A statement is made showing the expenditures on account of the war of the rebellion chargeable to appropriations on the books of the office of the Second Auditor of the Treasury. The amount disbursed on account of said war up to June 20, 1879, was $1,558,138,343.88.....The Narragansett Hotel, at Providence, R. I., was sold at auction to a representative of the bondholders for $320,000..... Harry Richards, engineer of the American rice mill, on Fulton street, New Orleans, was caught in the machinery and crushed to death.....The Vermont Senate has refused a third reading, by a vote of 17 to 12, to the bill reducing the number of Supreme Court Judges from seven to six..... On November 1, 1880, the estimated amount of gold and silver coin and bullion in the United States was as follows: Gold, $154,012,030; silver, $138,271,327. Total gold and silver, $612,283,357.....Frederick Hunt and Stillman Williams were sentenced at Chicago, by Judge Blodgett, to two years each in the penitentiary for forging army discharges with the intent to draw soldiers' pay.....The Canada Pacific Railroad syndicate are about to establish at Montreal an immigration bureau similar to that in New York, for Canada, in view of the large immigration expected next year to the Northwest.....In the Superior Court at Chicago, before Judge Smith, judgment was entered in favor of Mary White, for $3,000 damages sustained from the explosion of a soda-water fountain in Kranz's candy store, by which the plaintiff was badly burned and laid up in her house for several months.

The Dominion line steamer Montreal, for Liverpool, went to sea on the 16th through the jetties with the largest cargo ever taken from New Orleans, consisting of 6,669 bales of cotton, 42,658 bushels of corn and 2,000 packages of miscellaneous cargo, the total being equivalent in bulk to 9,565 bales of cotton.....A fire in a grocery store at the corner of Government and Royal streets, Mobile, Ala., totally destroyed the large brick building. The inmates barely escaped with their lives, some having to pass down the escape ladder. The Signal Service Office records and instruments were all destroyed. Loss estimated at $30,000, nearly all covered by insurance..... The Goshen Manufacturing Company's building at Goshen, Ind., took fire on the 16th, and the fire soon communicated to the saw mill of Albright & Davis, the business house of Harris & Co., the business blocks of Mrs. Henry Hall, the tenement house of James Dougherty, six stables and a number of warehouses. Loss, $40,000 to $50,000. The insurance is divided between six companies..... The cases of Judge Coles, late County Judge of Pittsylvania county; Judge Bouldin, of Charlotte county, and other Virginia County Judges indicted for not putting negroes on their juries, came up lately in the United States District Court, Judge Alexander Rives presiding, now in session at Danville, Va., and the Court directed a nolle prosequi to be entered in each case. The announcement of the Court's order was received with surprise and applause.

The official list of the missing and dead among the recent inmates of the burned insane asylum at St. Peter's, Minn., contains the names of 27 persons. Eleven are said to be probably burned. They were demented and sick patients, incapable of making any efforts to save themselves. Thirteen are marked "missing," and many of these are believed to be safe. Three died after being rescued from the burning building.....A snake story is told of Mr. John Skell, of Hickory township, Lawrence County, Pa., who came across a large black snake in a thicket. Unable to remove his eye from that of the snake he soon fell to the ground unconscious. Skell's son, who had gone in pursuit of his father, found him prone upon the ground with the snake coiled about his body. He made a noise, when the snake raised his head, and the young man shot him dead. The old gentleman was brought to his senses with considerable difficulty, and it is feared that he has received a shock from which he cannot survive.

The advantage to the public of a rigid and honest inspection of food articles is shown in Boston where the Board of Health reports that its chemist is now unable to find any adulteration worth mentioning in any of the specimens of flour, sugar and groceries examined. Two years ago adulterations were the rule in the samples examined, and the Board waged a stern and relentless war on the dealers..... The Japanese make a bird-lime which not only snares birds but which catches and holds animals as large as monkeys. Dr. Palmer, in the Louisville Medical News, expresses the belief that a remedy for the opium habit is to be found in cocoa.....Old wall paper can be very much improved in appearance by simply rubbing it well with a flannel cloth dipped in oatmeal.... ....The remarkable feat of reconstructing the railroad suspension bridge at Niagara Falls has just been completed without interruption to traffic.....There is now in the museum in the city of Mexico a remarkable sword made from an aerolite or meteor that fell in the State of Durango, Mexico. .....To preserve leather hose, belting etc., in good condition, freely apply crude castor oil, warmed if possible.....Another marvel recently brought to light in the Yellowstone Park is nothing less than a mountain of volcanic glass.

The output of coal from Ohio mines for the year ending December 31 will reach if not exceed 7,000,000 tons.....The steamer Oceanic, which sailed from San Francisco for Hong Kong on the 18th, carried out 850 Chinamen.....Milwaukee merchants formally dedicated their new and commodious Chamber of Commerce building on the 18th. .....Sitting Bull and his braves are said to be having a successful buffalo hunt between Milk and Missouri Rivers, a short distance south of Wood Mountain, on the international frontier..... Three small children of Hyatt Hutton died at Wilmington, Del. It was thought that death was caused by scarlet fever, but subsequent investigation goes to show that accidental poisoning was the probable cause. This idea is advanced by the attending physician, and in proof of it it is stated that shortly before the children were taken sick they ate uncooked sweet potatoes, on the vines of which in raising Paris-green had been sprinkled to drive away the potato beetle.

The body of a French-Canadian boy named Truro, who mysteriously disappeared from Great Falls, N. H., has been found in a well. A post-mortem examination showed that the boy was killed before the body was thrown into the well. .... It was decided by President Hayes, in the case of the Hirth murderers at Washington, that Bedford and Queenan should be hanged on Friday, 19th instant, and that the sentence of Sandy Pinn should be commuted to imprisonment for life in the Albany Penitentiary.....Among the prisoners arraigned for intoxication at the Toombs, at New York, was Patrick A. Gallagher, one of the survivors of the Custer massacre. His residence was given as Deadwood, Dakota. In consideration of his antecedents Justice Patterson committed him temporarily.....President Hayes has appointed Charles W. Slaig, of Fairfield, Iowa; Otis P. G. Clark, of Newport, R. I., and A. B. Nichols, of Philadelphia, commissioners to examine and report upon fifty miles of railroad constructed by the Northern Pacific railroad company west of the Missouri River.

A horrible tragedy became known at Batesville, Ohio, on the 8th. Frank M. Bledenbaugh, a young and wealthy German, who three years ago married the daughter of a neighboring farmer, came home late on Saturday night, Nov. 6th, and, entering the room where his wife and child were sleeping, assaulted them with an axe. His wife's skull was crushed by a single blow, and then he cut his son's throat with the edge of the axe. He then went to the room where Mrs. Stephens, a visitor, and her child and servant were sleeping, and killed Mrs. Stephens and her child. The servant girl was awakened and sprang toward the door, but was knocked senseless and left for dead. Upon recovering consciousness she gave the alarm, and the neighbors came to the house. It was not till morning that the murderer was found in the tobacco house with his throat cut. He is not fatally injured. Jealousy, drunkenness and insanity are supposed to have led to the commission of the horrible crime.

Russell Dart, a prominent citizen, shot, probably fatally, Emil Seifert, a music teacher and violinist, at Buffalo, N. Y., on the 10th. Seifert made love to Mr. Dart's daughter, while acting as her teacher, and had been forbidden the house. On the 9th he visited the house and, producing a carving knife, threatened to kill any one who prevented him from seeing Miss Dart. He was ejected, and promised not to return. At 7 o'clock he returned and was shot by Mr. Dart, who was arrested and asserted that he acted in self-defence..... At Buffalo, N. Y., Linnie Bryans, aged 20, snapped what she thought was an unloaded pistol at James Kelly, aged 18, and killed him.....Collector Sinclair, at Galveston, Texas, telegraphs that the notorious moonshiner, Hut. A. Marine, who, charged with the murder of Deputy Marshal Cooper, broke jail, has been arrested in Texas and will be sent to Knoxville, Tenn., for trial..... The people of Kansas have adopted the constitutional amendment prohibiting the manufacture and sale of liquors in the State, by an estimated majority of 20,000.

The Pittsburgh, Pa., Iron Works were burned on the 18th. Loss, $35,000.....Another great railroad organization is foreshadowed in the decision in the Missouri, Kansas and Texas R R. case by Justice Miller as Judge of the United States Circuit Court for Kansas, placing that property in the hands of Jay Gould and his syndicate. There will be a special meeting of the stockholders of the company at Parsons, Kan, when the scheme of a great railroad consolidation, of which the Missouri, Kansas and Texas forms a part, will be presented to them. This scheme is in outline as follows: The Union Pacific and Central Pacific, the Texas Pacific, Missouri Pacific and the Southern Pacific of California are to be consolidated with the Wabash system, and General Grant has been invited to accept the Presidency of the vast aggregation of railroad interests which practically monopolizes the carrying traffic of the country west of the Mississippi. Then the system is to be extended to City of Mexico.

[Fond du Lac Commonwealth.]

Mr. S. Clark, one of Fond du Lac's oldest citizens, states: I have used St. Jacobs Oil and am well satisfied that it is a splendid article to relieve pain, and that very quickly.

FOREIGN.

IN Ireland affairs are becoming decidedly more warlike. The peasants are reported to be arming and secretly drilling all over Leinster, Munster and Connaught, but especially in Munster. The Protestants of Ulster are also excited; but it is against their Catholic countrymen. There is no doubt but the leaders of the Land League could cause an armed outbreak at any moment, but their policy seems wiser—to keep the country agitated and thus depreciate the value of landed property with a view to forcing the government to buy it for the peasantry, who might pay for it by installments. "Boycotting" is a new word produced by the agitation. Captain Boycott is an agent for Lord Erne's estates at Lough Mask, near Ballinrobe. He is a good Orangeman and an arbitrary agent. The tenantry feeling greatly aggrieved by his temper and conduct, refused to pay him rent, to gather his crops or to sell him anything. By the Land League's order no one was to work for him, so that he was perfectly isolated. To save the crops a lot of friendly Orangemen collected in the north, whence they went to Dublin, and thence, guarded by 2,000 troops, repaired to Lough Mask to gather Boycott's crops. They have been there on a sort of pic-nic for upwards of a week. The crops were worth about $2,500; already the expense to the government has been at least $25,000, while the volunteer helpers have also spent a good deal, and, worse still, the crops have been badly gathered, while the injury done to the house, woods, fences, etc., etc., by the encamped troops has been several times as great as the value of the crops. It was expected that the "relieving" force would be attacked; but the Land League seems content to hold them in dread of such an event, and to make them ridiculous. The tenants on the place offer to pay full rent to Lord Erne, but they will have nothing to do with Boycott, who has fled for safety to London. The Land League has now decreed that thirteen other obnoxious landlords shall straightway be "Boycotted."

The Liberal English papers are nearly unanimous in favor of a change in the land laws of Ireland in the interest of the tenants and against coercive measures, while the Conservative press insists that before any concessions are made, order must be restored. At present there is no immediate prospect of any unusual exercise of governmental might, though in case of an actual outbreak, short work will be made of the disturbers of the peace. John Bright, Mr. Foster, Secretary of State for Ireland, and, it is believed, Mr. Gladstone himself, are in favor of alterations in the laws. Nothing is being done just now in pressing the prosecutions against Parnell and the other agitators. The former has just gone to France, he says on private business, the public think to meet some of the exiled Fenian leaders.

[Evansville, (Ind.) Journal.]

Mr. Frank S. Mueller, 925 W. Franklin street, cited to a Journal reporter the case of Mr. Henry Rhenick, who for four years suffered with Rheumatism, which was cured by the use of two bottles of St, Jacobs Oil.

AGRICULTURAL NEWS.

A cold wave from the Rocky Mountains swept over nearly the whole country during the past week. There have been heavy snowfalls in the West, Northwest, and in the Northern parts of the Middle and Eastern States. Upwards of a week ago snow fell in West Virginia, North Carolina, Tennessee, and even in Northern Texas, yet not a flake has been seen here.....The exports of canned meats for the year ending Oct. 1, were about 665,000 cases. There is a good deal of complaint about the quality of the meat canned at Chicago—it is said all refuse meat goes into cans.

In Great Britain during the thirteen weeks ending Sept 25, 230 fresh outbreaks of pleuro-pneumonia were reported and 756 animals were attacked.....During the same time 602 fresh outbreaks of swine fever were reported, 3,061 swine having been attacked. Foot-and-mouth disease, too, was very prevalent. The Mark Lane Express of Nov. 16 in its review of the British grain trade for the past week, says: The weather has been mild but rainy, and altogether a large proportion of the wheat sowing has been accomplished under very favorable circumstances..... .....Mr. Edward Atkinson is working earnestly in behalf of the great exhibition of cotton, and the appliances for its cultivation and manufacture, to be held at Atlanta, Ga., and will personally visit many portions of the South to enlist supporters for his scheme..... The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Seaboard ports, and the rail shipments from Western lake and river ports and afloat on New York canals:

	1880. Nov. 13, bush.	1880. Nov. 6, bush.	1879. Nov. 15, bush.	1878. Nov. 6. bush.
Wheat.....	23,244,966	21,750,566	29,842,144	17,765,793
Corn.....	16,492,430	17,282,861	11,156,711	10,896,949
Oats.....	4,477,433	4,916,365	3,372,973	2,818,962
Barley.....	3,472,544	2,702,172	5,007,249	5,986,644
Rye.....	552,385	889,592	1,092,999	1,176,357
Total.....	48,239,778	47,561,552	50,371,376	38,004,705

Lord Blantyre is a model landlord. He recently sent a tenant a check for £948 odd, being the amount he considered the tenant had paid him in fifteen years in excess of a fair rent for his holding.....August Wentzel, of Alsace township, Berks County, Pa., has put up 460 gallons of tomato catsup this year.

THE WHEAT YIELD OF 1880.

According to the report of Mr. Charles Worthington, Statistician of the Department of Agriculture, the yield of wheat in the various States in 1880 is as follows:—

STATES.	1880. Bushels	1879. Bushels.
Maine.....	353,145	488,688
New Hampshire.....	204,525	159,529
Vermont.....	520,096	493 924
Massachusetts.....	15,606	15,354
Rhode Island.....	.....	.....
Connecticut.....	43,720	39 348
New York.....	12,931,237	10,746 660
New Jersey.....	2,473,974	1,784 115
Pennsylvania.....	22,299 090	22,307,247
Delaware.....	1,369 040	1,012,583
Maryland.....	7,485 800	6 999,696
Virginia.....	9 322 350	8,851,007
North Carolina.....	3,478,080	3,223 836
South Carolina.....	690,720	1 140,400
Georgia.....	2,582,370	3,616 920
Florida.....	.....	.....
Alabama.....	946,620	1,501,592
Mississippi.....	374,000	417,312
Louisiana.....	.....	.....
Texas.....	3,901 500	3,454 200
Arkansas.....	1,167,600	1,384,000
Tennessee.....	9,309 600	11 552 640
West Virginia.....	4,651,140	4,350 580
Kentucky.....	5,347,120	7,681,520
Ohio.....	37,792,800	36,591,360
Michigan.....	50,705 000	28,773,120
Indiana.....	38 341,990	40,709,148
Illinois.....	53,767,200	44 896,530
Wisconsin.....	16,464 000	20 565 465
Minnesota.....	40,752,000	31 857,135
Iowa.....	36,098,400	32,787,048
Missouri.....	30,688,000	26,802 300
Kansas.....	19,850,000	18,089,060
Nebraska.....	10,208 000	13 013,703
California.....	45 760 000	35,000 000
Oregon.....	12 920 000	8,188 800
Other States and Territories.	18,005,000	16 900,000
Total No. of bushels.....	450,849,723	448,755,118

The following compilation will show at a glance the comparative yield in the several general divisions of the country, in bushels:

	1880.	1879.
New England States.....	1,167,092	1,196,843
Decrease.....	29,751	
Middle States.....	39,073,341	35,850,605
Increase.....	3,222,736	
Southern States.....	49,256 900	54,473,703
Decrease.....	5,216 803	
Western States.....	314,667,390	297,145,167
Increase.....	17,522,223	
California and Oregon.....	58,680 000	43,188,800
Increase.....	15,491,200	
Other States and Territories	18 005,000	16,900,000
Increase.....	1,105,000	

A copy of the important work just completed by Mr. S. B. Ruggles, on the agricultural progress of the nation and its effect in cheapening the food of America and Europe, was laid before the New York Chamber of Commerce by the Executive Committee last week. The consolidated tables show a growth in cereal products from 615,000,000 bushels in 1840 to 802,000,000 in 1850, 1,238,000,000 in 1860, 1,387,000,000 in 1870, 2,178,000,009 in 1877, and 2,431,000,000 in 1879. The annual product increased from $3,965,000,000 in 1850 to $7,977,000,000 in 1860, and $11,000,000,000 in 1870, yielding, after payment for labor and wages, a net amount of $2,170,000,000, or about twenty per cent. on the total. The statement is made that there are 400,000 000 acres of land immediately available, north of the Ohio River, which can produce in wheat, or other cereals, at least 4,800,000,000 bushels annually.

Storms are reported from all parts of Germany with serious floods in Wurtemburg.....Some of the German papers are advocating free trade in grain, on the ground that without it famine and distress will soon be at the door of the German peasant.....Landlords in England are still making large deductions of rent to their tenants—from 10 to 50 per cent.....Milling is said to be the largest separate manufacturing industry of the United States. The United States census in 1870 gave the value of the five leading industries in round numbers, as follows:—flour and grist mill products, 445,000,000 dols.; iron and manufactures of iron, 347,000,000 dols; lumber, 250,000,000 dols.; boots and shoes, 182,000,000 dols; woolen manufactures, 179,000,000 dols..... Formerly American breadstuffs went almost wholly to Liverpool whence they were distributed to France, Germany, Holland and other parts of the Continent. All this is rapidly changing, as continental buyers now mostly order directly from the American markets.

The Recipe

for Gilt-Edge Butter Maker was obtained from one of the most extensive dairy farmers of Ireland, noted for the excellent and superior keeping qualities of his butter, which was eagerly purchased by London dealers for export to India, where the warm climate puts butter to a very severe test. It has been thoroughly tried by a large number of

the very best butter-makers in this country, and they have given it their emphatic approval. Price 25 cents per package. Sold by all storekeepers.

COLLINS, N. Y., Feb. 19th, 1879.

Gentlemen :—We churned one gallon of cream to-day at a temperature of 56 deg., using your Gilt-Edge Butter-Maker. Time of churning, 15 minutes—result, 4 1-8 pounds of butter. Color, good. As we had not previously weighed our butter, of course we cannot tell whether there is a better per cent. or not, but appearances indicate it, and the quality is at least two cents per pound better. Yours, &c.,

M. E. WILBUR, Prop'r of Collins Creamery.

ARCHIBALD FORBES.—The famous war correspondent of the London Daily News is preparing for the Youth's Companion a series of articles relating his personal adventures on the great battle-fields of Turkey, Zulu Land, and in the Franco-Prussian War. Mr. Forbes has been six times a prisoner. Few men have had more remarkable experiences, and no one whose pen is so graphic in picturing them.

The ladies who some time since were unable to go out, having taken LYDIA E. PINKAM'S VEGETABLE COMPOUND, are quite recovered, and have gone on their way rejoicing.

TROPIC-FRUIT LAXATIVE removes Habitual Costiveness and all kindred complaints. It is composed entirely of concentrated fruits and medicines. Druggists sell it.

That low, nervous fever, want of sleep and weakness call for Hop Bitters.

Premature Loss of the Hair, which is so common now-a-days, may be entirely prevented by the use of BURNETT'S COCOAINE. It has been used in thousands of cases where the hair was coming out in handfuls, and has never failed to arrest its decay and to promote a healthy and vigorous growth. It is at the same time unrivaled as a dressing for the hair. A single application will render it soft and glossy for several days.

The Markets.

SPECIALS FROM THE CHIEF CENTERS.

Until Saturday, Nov. 20.

Boston.—BUTTER—Northern—Choice creamery, ℔ lb. 31@33c ; choice New York dairy, ℔ lb. 27@28c.; choice Vermont, ℔ lb. 28@30c.; Long dairies, ℔ lb. 20@24c ; common, ℔ lb. 15@17c.; Western—Choice creameries, ℔ lb. 29@32c.; fair to good, ℔ lb. 26@28c ; dairy-packed, ℔ lb. 20@25c.; choice ladle-packed, ℔ lb. 19@22c ; common, ℔ lb. 15@17c. CHEESE—Northern factory, fine ℔ lb. 13@13½c.: Western factory, fine, ℔ lb. 12½@13c.; fair to good, ℔ lb. 11@12c ; common, ℔ lb. 8@10c. EGGS—Eastern, ℔ doz., 26@27c ; New York State, ℔ doz. 25@26c.; Canadian, ℔ doz., 25c.; P. E. Island, ℔ doz., 26c ; Western, ℔ doz., 22@25c ; limed, ℔ doz., 17@19c ; egg oats, 36c. VEGETABLES AND DOMESTIC FRUIT—Peerless and Prolific sell at 45c.; Northern Rose at 48@53c., and Eastern at 50@55c., the latter price for choice Houlton stock. St. John's potatoes sell at $1 50@1.60 ℔ bbl. Sweet potatoes sell fairly at $1.75@2 for Norfolks and $2.25 for Richmond. The market is rather heavy for onions, and sales are not so readily made; $2.75 per bbl. is the outside price for red, and yellow sell at $3 25@3 50, including Vermont, New Hampshire, York State, and Danvers and Marblehead stock. Apples are firm for shipping fruit at $1.25 ℔ bbl. and some lots of fancy eating apples will bring $1 50 per bbl., while fair lots sell at 75c. There is moderate demand for cranberries at $3.75@4.50 for country, and $5@6 for Cape berries.

Chicago.—WHEAT active and firm; No. 2 red winter, $1 08; No. 2 Chicago Spring, $1.08¼@1.08⅜, cash; $1 08⅜, November; $1.08⅞, December; $1.10, January; No. 3 Chicago Spring, 95¼@97¼c. CORN active and firm; 45½c cash; 43⅛c bid December; 43⅜@43⅛c. January; 48⅜@48⅜c. May. OATS active and firm; 32⅛@32⅜c cash; 32½@32⅛c. December; 33c. January; 37⅛@37⅛c May. RYE strong at 86½c. BARLEY active at 98c. PORK active and firm at $13@13 75 cash; $12 40@12 45 November and December. Lard active, firm and higher at $8 30 cash or December; $8 30 asked, the year; $8 32½@8.35 January. Bulkmeats steady and unchanged. BUTTER—Choice to fancy creamery, 29@31c. ℔ lb.; fair to good do, 26@28c.; fine to fancy dairy, 22@25c; good to choice dairy, 18@21c; medium to fair dairy in shipping lots, 15@17c; ladle packed, good to choice, 17@19c; fair to the best packing stock, 13@15c; grease butter, 8@10c. CHEESE—Choice to fine full cream cheddars 12@12½c. ℔ lb; common to good do 8@11c; prime part-skimmed 9½@10½c; and poor, hard skimmed stock nominal at 5@7c. CIDER—The supply is fair and good to choice juice sells at $3@3 50 ℔ bbl in a small way to the retail trade. Half-barrels were quotable at $1 50@1.75. HIDES AND PELTS—Green salted light hides 9½@10c. ℔ lb; do heavy cows and branded, 9¼@9½c No 2, or damaged, 8½c; green-salted calf, 14c dry-salted hides 13c, and No 2 dry-salted and skins two-thirds price; dry flint, 15@16c; dry calf 15@17c, and deacon, 50c; green-salted and bull hides 6½c. Sheep pelts are in fair request at 32@35c ℔ lb for estimated amount of wool on each pelt. SEEDS—The market was quiet but firm for clover, slow for timothy, and easier for flax, while in other kinds there was hardly anything doing. We quote fair to prime medium clover at $4@4 50 ℔ bu; fine new mammoth do at $4 75@5 ; fair to good timothy at $2 20@2 30; fully prime do at $2.35, and flax at $1 19@1.20 for good, on a basis of pure. HOGS—Receipts of the week 208,000 head; the most ever received before was last January, one week, 276,000 head, quality very good; some sales lower, mixed packing, $4 45@4 70; light, $4.30@4 75; choice heavy $4 80@4.90; market closed weak, with 16,000 head unsold. CATTLE—Receipts of the week 35,000 head, against 34,000 one week last September, being the largest recorded; market steady; good to choice shipping, $4 60@5 15; common to fair, $3 60@4.30; butchers' steady and easy: common, $2@2.40; good, $2 80@3.30; stockers' steady at $2 40@3 30; half-breeds and natives, $3 20@4 10; through Texans, $2 60@3. SHEEP—Market quiet but steady; common to medium, $2.70@3 25; good, $3,50@3 90.

Cincinnati.—WHEAT strong; No. 2 amber, $1.08 ; No 2 Red Winter, $1.08@1 10. CORN firm ; No. 2 Mixed, 52@53c.; new, shelled, 48c. OATS quiet; No 2 Mixed, 35c. RYE steady; No. 2 at 97c. BARLEY active and firm; No. 2, Fall, 96c@$1. PORK dull and nominal at $13. Lard strong and higher at $8 30 Bulk-meats quiet but steady ; Shoulders $4 75 ; Clear Rib, $7.25. Butter in demand, and market firm ; choice Western Reserve, 20@23c.; choice Central Ohio, 16@20c.

St. Louis.—WHEAT—No. 2 Red Fall, $1 06¼@$1 06½, cash; $1 06¼@1 07¼, December; $1 09¼@$1 10, January; $1 12@1 12¼, February; No. 3 do., $1 04@1 04¼ ; No. 4 do., 95c. CORN easy at 44½@56c., cash; 45c., November ; 43⅜@43⅜c., December ; 43⅜@43⅜c., January ; 43⅜@43⅜c., February ; 46½@47c., May. OATS firm but slow at 32⅜c. cash ; 33⅜c bid. December; 34c bid January. RYE firm at 94⅛c. BARLEY firm ; prime to fancy, 75c@$1 05. WHISKY higher at $1 12. PORK dull at $13 75. LARD firm at $8 15. Bulkmeats quiet; Shoulders, $4 40@4 50; Clear Rib, $8 30@8 90 ; Clear Sides; $7@7 10. Bacon dull; Shoulders, 5½c.; Clear Rib, 8c.; Clear Sides, 8½c. HOGS fairly active ; Yonkers and Baltimores, $4 30@5 40; mixed packing, $4 40 4 65 ; butchers' to fancy, $4 70@4 80. BUTTER dull. We quote: Creamery—best at 30@32c. seconds at 26@28c ; Dairy—selections at 25@26c, prime to choice 20c to 24c, fair 14c to 18c, common 12@13c; country in irregular pkgs at 12@13c to 16c. Roll coming in more freely—choice sells readily at 15@22c—top figures for Northern. WOOL—Demand limited and prices easy; Tub washed—choice 47c, No. 9 medium 45@40c, dingy and low 37@40c, lamb, 42½@43c ; Unwashed—choice mixed combing 29@30, coarse do 24@26, choice medium 28@29c ; low do 23@24c, light fine merino 18@20c, lamb 24@26c, Kansas 25@26, well grown fall clip Texas 23@26c, Burry, black, cotted, etc, 5@15c ℔ lb less—Southern burry sells at 12½@13c. HIDES—Steady, Dry Flint 18½c damaged 15½c; Dry Salt 14½c—damaged 12½c ; Green Salt 9½c—damaged 8½c : Uncured 8c—damaged 7c ; Bull and Stag 7c for green salted and 11½c for dry; green calf 13c. Branded 10 ℔c off. SHEEP PELTS—Green : large 95c@$1, medium 60@75c, small 50c, lamb 60@75c, shearling 25@35c; dry—large 60@70c, medium and lamb 25@50c, shearling 10@30c.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Nov. 20, 1880.

BEANS AND PEAS.—Old crop beans do not conflict with new to any extent and the market is steadier and something higher for prime standards. Red kidneys are also stiffening; green peas weak; offered at $1.85@1.90 for Wis bbls., and $1.75@1.80 for eastern bags. Southern B. E. peas $1 80@1.85.

Marrow beans, $1.80; other, $1.65@1.75; medium, $1.52@1 57; other, $1.40@1.45; pea, $1.55@1.75; white kidney, $1.75@1.90; red do., choice, $1.80@1.85; fair to good, $1.50@1.65; black, or turtle soup, $1.60@1.65; lima, $4 50@5.

BUTTER.—The approaching festival enlivens the demand and prices for all grades are named with confidence. Foreign shippers are not giving much relief to the stored lots of under grades, but a good local demand is a favorable start and it has not opened any too early. Very fancy creamery brings 35c at this moment. All full dairies showing a good average quality and money-making lots are selling promptly. This movement is the best feature of the market this week. Western butter has a full share of the active call. It is reported that 30,000 pkgs are dragging on the market in Liverpool. Roll butter not of fine quality as yet. This line of stock has lost much of its former demand, and it must be fine to keep a place in the trade.

Creamery, finest, 33c.; good to prime, 31@32c.; fair to good, 28@31c.; poor to fair, 25@28c.; sweet cream, 26@31c.; State entire dairies, choice, 26@27c.; good to prime, 24@25c.; fair to good, 23@24c.; firkins, 22@26c; State pails and half tubs, fine fresh 30c.; good to prime, 27@29c.; fair to good, 25@27c.; poor, 20@22c.; Welsh tubs, tall prime, 28@29c.; good to prime, 24@26c.; fair to good, 22@24c.; Western imitation creamery, 22@27c., dairy, fresh, 23@25c.; good to prime, 20@22c.; fair to good, 18@20c.; factory, June, 20@21c.; other, 18@20c; rolls, 19@21c.

Receipts for the week, 35,176 pkgs. Exports for the week, 6,863 pkgs.

CHEESE.—Shipments for the week have been moderate owing to the reason that only the strictly fancy September made have been urgently wanted by shippers in order to meet the Christmas trade. The accumulation of the other grades has not disturbed prices. Quotations are for

State factory, fancy, at 13@13½c.; do. good and prime, 12½@12¾c.; do. fair to good, at 11@12c.; do. h'f skimmed, 8½@10c.; Wisconsin factory, fine, 12½@12¾c.; do. good to prime, 11@12½c.; do. fair to good, 10½@12c.; Ohio factory, fine, 12½@12¾c.; do. good to prime, 11½@13c.; do. flat, fair to good, 10@11½c.; do. poor to fair 7@10c

Receipts for week, 93,619 boxes.

Exports for the week, 26 228 boxes.

Liverpool cable price, 67s.

Steam to Gt. Britain, 40@50s.

COTTON.—There has been an active inquiry and the market closed strong. The feature has been the cold weather and the fear of some damage to the crop. Latest prices are for

November at 10 91@10.95c.; December at 10.94@10.95c.; Jan. at 11.06@11.07c.; February at 11.20@11.21c.; March at 11.35@11.37c.; April at 11.48@11.50c.; May at 11.59@11.61c.; June at 11.70@11.72c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary....	8	8	8
Strict ordinary....	8½	8½	8½
Good ordinary....	9⅜	9⅜	9⅜
Strict good do....	10	10½	10½
Low middling....	10 9-16	10 13-16	10 13-16
Strict low middling....	10⅞	11	11
Middling....	11	11¼	11¼
Good middling....	11⅜	11⅜	11⅜
Strict good middling....	11½	11¾	11¾
Middling Fair....	12¼	12⅜	12⅜
Fair....	12¾	13	13

STAINED.

Good ordinary....	7 11-16	Low middling....	9 7-16
Strict good ordinary.	8 9-16	Middling....	10 5-16

Receipts for week, 43 685 bales. Exports do., 12,0,1 bales.

DRIED FRUITS.—Apples have a good demand and prices very firm. Peaches meet with a very fair inquiry. Small fruits are generally well sustained in price. Quotations are for

Evaporated apples at 7½@8½c. for better qualities sliced apples at 5@6½c. for good to choice North Carolina 3½@4½c. for Va. apples, 3½@4c. for Tenn. do; 4½@5½c. for State do: 3½@5c. for western Ohio and Mich. Peaches at 27@30c. for evaporated peeled; 11½@11½c. for unpeeled do.; N. C. peeled at 18@20½c.; for the better qualities, and 12@16c. for fair to good lots of peeled peaches; unpeeled peaches at 6½@7½c. for halves and 6¼@7c. for quarters. Plums at 8c. Blackberries at 8c. Cherries at 18c. Raspberries at 24@25c. Whortleberries at 12c.

Receipts for week all kinds, 2 852 pkgs.

Exports for week, 8,013 bbls. of dried apples.

EGGS.—Receipts for the week, 11,341 bbls.; do last week 11,379 do. The market continues strong for suitable table marks, and there is a better movement for bakers' and pastry lots. Limed begin to work steadily and their price relation to fresh admits an advance.

Near points 30c.; State and Pa. 27@28c ; Western choice, 26@27c.; seconds, 24@25c.; Canadian, 25@26c; Southern, 26c.; limed State 18½@19c.; do. Western 17½@18½c.

FLOUR.—There has been active business on export and home trade account, with prices higher and strong.

Latest prices are: $3.65@4.40 for very inferior to fancy superfine State and Western; $4.65@4.90 for poor to choice extra State and Western, odd lots and lines; $4.90@5.00 for choice to fancy do.; inferior to good white wheat, trade and family extras, $5.10@6 00; good to choice do at $6.00@6.50; (very fancy do. up to $6.55@7. an extreme;) red and amber winter wheat inferior to choice trade and family, at $5.00@6 35; round hoop Ohio, $4.90@5,40; and trade and family brands of do. at $5.45@6 65, the latter for strictly fancy; St. Louis at $5.10@6,00 for inferior to good extra; $6.00@6.50 for good to choice and $6.50@7.00 for choice to very fancy brands; Minnesota clear, inferior to fancy at $4.70@6.50; Minnesota "straight," poor to fancy, at $5 10@7.25, and patent inferior to fancy at $5.90@8.50; unsound stock at from $2.90@5 50; city mill extra at $5.90@6.10 for ordinary to very choice for the West Indies; do. for England, $4.65@5.00 for poor to choice spring wheat, and $5.00@6.00 for winter wheat product; do. trade and family extras, $5 90@7.00; do, for South America, $6.10@6 35, the latter for very choice; No 2 at $3 40@4,10 for inferior to very fancy.

BUCKWHEAT—Quoted at 58@60c. and buckwheat flour at $1 80@2.15.

Receipts for week, flour, bbls. 178,000; corn meal, do. 5,040; wheat, bush. 1,940,200; corn, do. 1,289,140; oats do. 286,025; rye, do. 159,450, malt, do. 43,300; barley, do. 557,250; beans, do., 12,088; rice, pkgs. 3,182.

Exports for the week, flour, bbls., 91,000; corn meal, do. 7 775 wheat, bush. 795,800; corn, do. 833,450; oats, do., 860; peas, do. 22,074; beans, do. 361; rice, 431.

FRESH FRUITS.—Apples still go abroad largely, 35,000 bbls for the week. Many of these have been bought here and in the country and have waited for freight room. Prices easy, and many Winter sorts are going in stock.

Western mixed lots, $1@1.25; Baldwins in shipping order, $1 25@1.50; Greenings, $1@1.25; Spitzenbergs, King $1.50@1.75; Pound Sweet, $1.75@2. Lady apples, choice, $7@8; poor to fair $3@5. It pays to sort the latter. Cranberries are active for local and out of town use; prices firmer. Cape Cod, fancy, $6@6.50; other $1@6.25; for boxes, $1.75@2.12; N. J., do. $1.25@1.75. Florida oranges are not in good display for the season; choice half bbl. boxes $3.50@4; fair, $3. Burton pears, fancy, $4@5; fair to good $3@3.50. Cal. pears firm at $4@6 for Winter Nells and E. Beurre; $4@5 other varieties. Cal. grapes have worked into trade very satisfactorily; though prices are high there seems confidence enough in them to make a last shipment of 10 tons. Tokays $5@7 ℔ 40 lb. case; Emperor $7@8; State Catawba firm when in good order; 5@7c. in bulk; cases $3@3 50; Isabellas 3@4c. bulk; $1.50@1.75 cases. Peanuts continue low: Va. hand-picked 4¼@4½c other grades 3½@3½c, new crops. Chestnuts scarce, worth $3@3.50 ℔ bush of 60 lbs: Northern, and $2@2.50 for do. Southern. Hickorynuts quiet; $1.75@2 ℔ bush of 50 lbs. Bull nuts 75c@$1. Black walnuts 50c. Pecans 8½@9½.

BEESWAX.—Has a higher demand, with 23@24c. quoted for Western and Southern.

GRAIN.—Wheat has been very active and higher. Speculators have seized upon the feature of cold weather along the canals as likely to interrupt navigation and extensive operations have resulted.

Latest prices are of extra white at $1.23½; No. 1 white at $1 21½@1.22; do. November at $1.20½@1.21½; do. December at $1.21½@1.22½; do. Jan. at $1.24@1.24½; do. steamer at $1.18½@1.19, ungraded white at $1.16@1.22; No. 2 white at $1.20; mixed Winter at $1 20; No. 1 red at $1.28@1.28½; No. 2 red at $1.22½@1.23½; do. November, at $1.22½@1.23½; do. December at $1.23½@1.24½; do. January option, at $1.25½@1.26½; No. 3 red at $1.20; ungraded red at $1.16½@1.23½; No. 2 Chicago spring at $1.17; New York No. 2 Spring, November at $1.18 bid and 1.20 asked. Rye at $1.01@1.03. Corn is higher and active; latest prices are for New York No. 2 at 59½@60c.; do. November at 59½@60c.; do. December at 60½@61½c; do. January at 61½@62½c. ungraded mixed Western at 57@60c.; No. 3 at 57@57½c.; No. 2 white at 60@60½c. New York yellow at 60@60½c ; low mixed at 59c. white southern at at 58@60c. Oats are doing better with a liberal demand: latest prices are New York No. 2 white at 41½@41½c.; No. 3 white at 43½c.; New York No. 1 at 44c ; New York No. 2 at 43½@44c.; do. November at 43c.; do. December at 43½@44½c.; do. January at 43½@46½c.; No. 3 at 42½@43c.; ungraded white Western at 45@50c.; white State at 47@48c; mixed State at 45c.; No. 2 Chicago in store at 43½c.

HAY AND STRAW.—The receipts are, small, demand good and prices well sustained. Quotations are for

Shipping hay at 90@95c.; medium to prime do., $1@$1.20; salt hay at 60@65c.; clover do. at 75@80c. Straw at $1@1 10 for long rye; 80@85c. for short rye; and 65@70c. for oat.

Exports for week, 305 bales.

HONEY.—Demand fair; sales not large. White clover comb, single, 17@18c; larger pkgs. 15@16c.; buckwheat 12@13c.; extracted white, 9@11c.; dark, 7@8c.

HOPS.—There has been a very good business for export, the shipments for the week being 2,4 0 bales, and brewers buy to a fair extent, with an advance in prices secured. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	22 @25
Do. medium	20 @21
New Yorks, crop 1880, low to fair	18 @19
Eastern, crop 1880	18 @22
Wisconsin, crop 1880	18 @22
Yearlings, crop 1879, choice	16 @23
Olds, all growths	4 @12
Bavarians	30 @35
Bohemians	35 @40
Pacific coast, new	23 @25

OIL CAKE.—Western is quoted $31.50 per ton.

POULTRY AND GAME.—The weather has taken a favorable turn for Thanksgiving sales, but extravagant prices are not looked for. Present figures are firm and can hardly recede as quality will or should help to increase sales. Ducks in demand chickens and fowls will have to sell upon their merits for a week or so.

Turkeys, N. J. 13c ; State and Western, choice, 12@12½c.; fair to good, 10@12c Phila., dry-picked, 13@15c. Chickens, d.-p., 13@15c.; Bucks Co., 13@14c.; N. J., 12@13c.: State scalded, 11@12c.; Western, 10@11c.; poor, 8@9c. Fowls, Phila., dry-picked, 11@12c.; N. J., d.-p., 11@12c.; scalded, 10@11c.; State do., 10@11c.; Western, do., 10 @; poor to fair, 8@9c. Ducks, Phila. d.-p. 13@14c.; State scalded, 12@13c.; Western mixed, 11@13c.; very poor, 9@11c. Geese, Phila, 11@12c.; other, including State and Maryland, 9@11 . Squabs, white, $2@2.25; do. dark, $1.25.

Supplies of cooped stock is mostly from near points but prices are low as dressed fully supplies all wants.

Fowls and chickens, ℔ lb. 8@10c. Roosters, 4@5c. Turkeys, 10@12c. Ducks, choice 60@75c.; other, 40@45c. Geese, extra, $2; good, $1.50@1.75 ; ordinary $1@1.35.

The cold snap meeting a small supply of game has made prices strong and as a busy week is expected the market closes firm. Rabbits numerically scarce. Quail likely to make $3 before the 25th.

Wild ducks, canvas back Havre de Grace and Western $1.75@2; Norfolk, $1.50@1.75; red heads, 60c@$1; mallard, 75@90c.; teal, 35@50c. the latter for blue-winged; common 25@30c Quail, prime, $2.25@2.50 ℔ doz., other, $1.75@2; partridge, 60c@$1 12, the latter for State. Grouse, prime, $1.12@1.25, drawn, 75c.@$1; Woodcock, 60c.; Missouri wild pigeons ℔ doz $1 12; Rabbits, 30@35c.; Venison, best saddle, 14@15c.; poor to fair, 11@13c. Whole deer, 9@11c.

PROVISIONS.—Hog products have been in active demand and prices strong. Mess pork quoted at $14 .0@14.75 for job lots. Bacon at 7½c. for long clear and 6⅜ for short clear. Beef quoted for extra India mess at $18.50@19.50 for city; $9.50 for extra mess, and $8 50 for plate mess: $11@12 for packet, and $13@13.25 for family mess. Beef hams at $18@18 50. Stearine at 9½@9⅜. Tallow at 6⅜@6⅜. Lard, Western steam at $8.75 for spot lots; $8 70@8.72½ for November; 8.60 for December; $8 60 for January and $8.65 for February.

Receipts for week, beef, bbls. and tcs.: 1,100; pork, 2,125 bbls.; cut meats, 39,475 pkgs.; lard, 23,100 pkgs.

Exports for week, beef, bbls. and tcs. 2, 00; pork, 4,700 bbls.; cutmeats, 12,449,306 lbs.; lard, 6,111,275 lbs.

SEED.—Clover is quiet, quoted at 8½@9c. Timothy is slow quoted at $2.70@2.80.

Receipts for the week 8,004 bush. Exports, 374 bags.

TOBACCO.—There is a fair amount of business and a firm market.

VEGETABLES.—Exports of potatoes for week, 6,900, bbls. Supplies of potatoes are moderate and prices for best are moving up. Good common are fairly firm. White onions have their cold weather firmness. Cabbages higher; cauliflower slow, celery active with liberal supplies.

Potatoes, E Rose Eastern $1.68@1.87; State, $1 62@1.75; do. in bulk $1 37@1.50; Burbank and prolific $1.37@1.62; snowflake $1.50@1 75; peerless $1@1.25 sweet choice $2 50@; other, $1.25@1.50. Tomatoes, ℔ bush., 75c.@$1; turnips; w. ℔ bbl., 40@50c.; Russia, 50@75c.; beets, 75c.; cabbage, flat Dutch ℔ 100, $3@$4; red, $4@5; Squash, Hubbard, ℔ bbl., 75c.@$1; marrow, 40@50c.; onions, white, $5@5.50; yellow, $3@3.25; red, $3; Chester, $3; carrots, $1@1.25; pumpkins, ℔ 100, $4@6; cauliflower, ℔ bbl. $1@$2; celery, per dozen, $1.00@1.25.

WOOL.—There is an active trading and the market has marked strength. Quotations are for

Ohio, Penn., and W. Va. XXX 50@53c.; XX, 48@49c.; X, 47@49c.; No. 1 49@50c.; No. 2 45@48c.; common 44@46c.; combing 50@52c.

N. Y. Mich. Ind. Wis. XX 43@45c.; X 43@45c.; No. 1 48@49c.; No. 2 44@46c ; common 41@44c.; combing 48@50c.

Iowa, Vt. and Ill. X and XX 42@41c : No. 1 47@49c.: No. 2 43@46c.; combing 45@48c.

Mo., Ky. and Tenn., washed fleece, 46@48c.; unwashed fleece 30@37c.; unwashed combing 30@38c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Nov. 20, 1880.

BEEVES.—Receipts for the week 12,967 head; do. last week, 11,328 do. The market has been active all the week and prices for Wednesday were supported for medium stock and advanced ⅛c. on prime. Quarters of the droves show a uniform improvement. Texans quoted 7½c. to dress 55 lbs.; Colorados 7½@8½c. to dress 55 lbs.; poor to fair native steers 8@9½c. to dress 55@56 lbs ; good to choice 9½c. to dress 56@57 lbs ; extra, 11½@11½c. to dress 58 lbs. Some fancy Kentuckys were rated 12c. Shipments of fine cattle unusually heavy this week; the trade taking about the best in market.

MILCH COWS.—There is demand enough to make a classification. Good cows seem to be wanted but it is not well to ship them at a venture. Common to poor, $30@40 per head ; good, $45@50; prime, $55@50; extras, $65.

VEAL CALVES.—Market firm and fed lots of live bring good prices. Prime dressed also active.

Live N. J. prime to choice 7½@8c., State 7½@7½c.; fair to good 6½@7½c.; poor 5@6c.; Mt. Holly, medium to light 6@7½c.; heavy, 4@6c.; buttermilk, 2½@3½c.; grassers, 2@2½c.; hog dressed calves, prime 10@10½c; fair to good, 8@9½c.; very poor, 3½@5½c.

SHEEP AND LAMBS.—Receipts for week, 40,869 head; do. last week, 32,674 do. Market steady with a fair trade. Sheep 3½@5½c.; coarse ewes and bucks, 3@3½c.; lambs, 5@6½c. common to choice.

SWINE.—Receipts for the week, 41,765 head; do. last week, 41,400 do. Market steady, but closing at inside rates,

Live quoted $4.90@5; New Jersey pork light 7½@8c.; medium, 6½@6½c.; heavy, 5½@6c ; city dressed State 5½@7½c. heavy to pigs; city dressed Western 5½@6½c; pork tenderloins, well packed 9@10c.

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34 Park Row, N. Y

Reading for the Young.

THE NEW ARRIVAL.

MA.

A CHARMING little tiddy iddy bit of mother's bliss,
A tiny toddles, sweet as flowers of Spring;
A precious popsy wopsy—give its mammy, den a kiss,
A pretty darling itsy witsy ting!

PA.

So *that's* the little fellow! H'm! A healthy looking chap,
Another mouth to feed as sure as fate!
No, wife, I *don't* consider that his coming's a mishap,
But still I *could* have done with less than eight.

BROTHER.

My eye! Is that the baby? What a jolly little pup!
But I say, ma, wherever is its nose?
And I say, father, by and by, when he gets more grown up,
He'll wear my worn-out jackets, I suppose.

UNCLE,

Another? Well, thank goodness, I'm not a married man,
What! Don't I think him pretty? No, I don't.
To keep him from the workhouse you must do the best you can;
Don't think that I'll assist you—for I won't!"

DOCTOR.

How are we getting on to-day? I trust we soon shall mend,
We mustn't think we're strong just yet, you know:
We'd better take a something which this afternoon I'll send.
And let me see—hum!—ha!—ah, yes—just so.

NURSE.

He's lovely, that he is, mum! See them sturdy little legs!
He's twice the size of Lady Smither's third;
And when he comes a-cutting of his little toosey pegs,
He'll be a man, he will, upon my word.

NEIGHBOR.

Oh yes, dear, he *looks* healthy, but you mustn't trust to that—
I do not wish, of course, your dearest hopes to dash,
But when I see a tender babe, so ruddy, strong and fat,
I—look, dear, on his face! Is that a rash?

MA (*da capo*).

A charming little tiddy iddy bit of mother's bliss,
A tiny toddles, sweet as flowers of Spring;
A precious popsy wopsy—give it's mammy, den a kiss.
A pretty darling itsy witsy ting!

WINDOW GARDENING.

MAUDE MEREDITH.

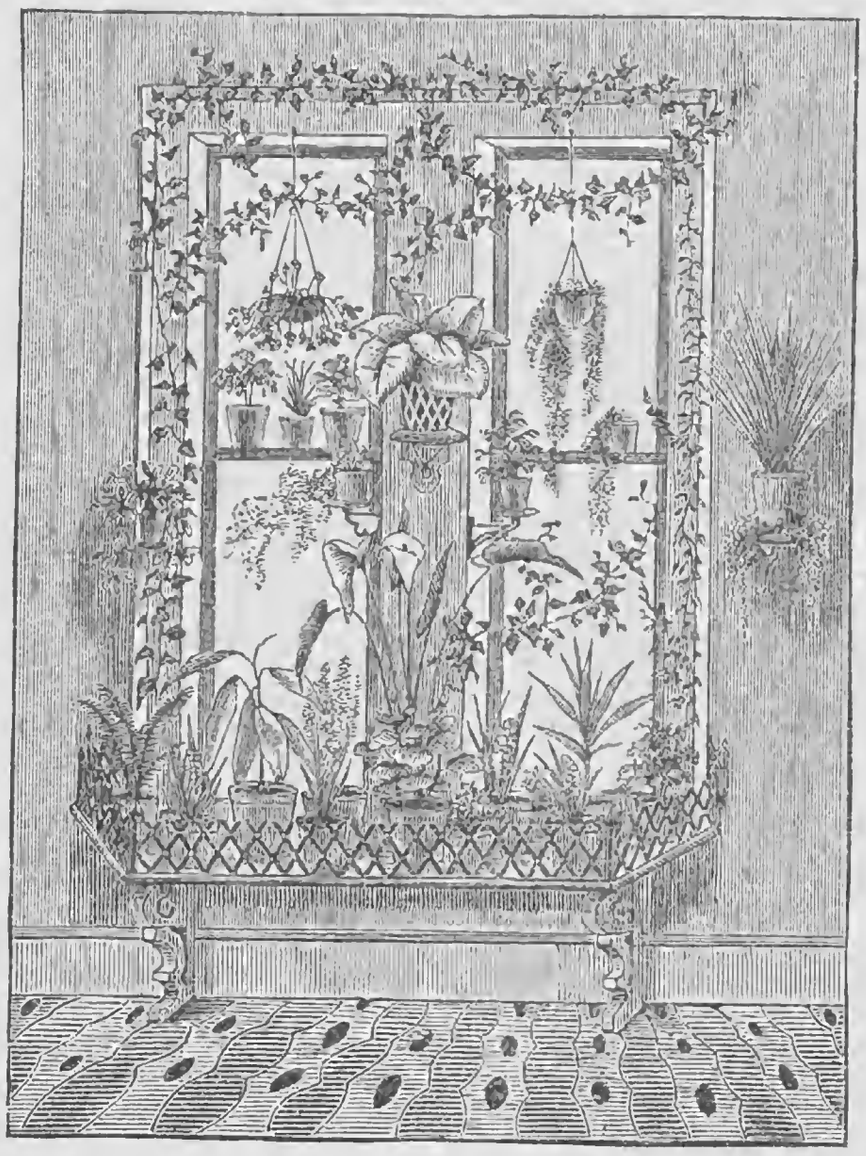
AN illustration is given upon this page, figure 398, showing the pleasant appearance of a window furnished with plants during the Winter months. Many a child has found his first development of taste for rural subjects in the contemplation of the beauty of growing plants in the house in Winter. The window need not be as elaborate as here shown, but plants may be of such number as the circumstances will admit.

There is in window gardening one advantage not found in using pots alone, as in parlor gardening. Window-boxes may here be used and less care will be required, and so a greater variety of plants may be cared for in a small space. As here shown the window garden consists chiefly of pots set upon brackets and shelves, making a very ornamental appearance; but a box or boxes may be used alone, or with pots, and vines trained up the window or upon the walls. Hanging-baskets make a fine addition, especially in the absence of brackets.

The window-box may be a simple wooden box of the shape desired, or more elaborate and expensive, and made of pottery-ware, or lined with zinc, as the taste and means dictate. A box of the length of the window-sill, or two made to fit the sill for convenience of handling, covered inside with pitch, or they may be used plain. The outside may be ornamented with coarse bark or simply painted. The earth should be light and porous and with coarse gravel or charcoal in the bottom. If preferred, there may be small boxes and placed upon an old table, or upon a stand purposely constructed, with one stair above another. The addition of simple trellises or uprights with cross-pieces and the training of vines upon them gives a pleasant variety, but whatever may be said, the taste of the gardener should be cultivated by designing and arranging these details so far as possible.

If a couple of wires or willow strands or ratans are bent over from one end of the box to the other and slats fastened across them a couple of wax plants, hoya carnosa, may be planted and will grow over the arch making a complete mass of waxen beauty. The leaves, like the English ivy, are strong and firm, never falling off unless through some accident, and as they will bear almost any neglect they seldom lose a leaf. A soft sponge will clean the dust from the leaves, and the great clusters of fragrant bloom of a pure waxen white, are of rare beauty, remaining perfect for weeks. The buds usually set the season before blooming, and if the flower is not cut; will bloom year after year from the same flower stalk. It is also a rapid grower, I have had one young plant throw out four branches, or runners, each about two yards in length in one season. The wax plant requires a light, sandy soil, and only a small quantity of water. A very rich soil kept moist will rot the plant off near the root. In the same pot can be placed any drooping vine, the numerous family of sedums, moneywort, or that prettiest of all droopers the Coliseum Ivy, Linaria Cymbalaria. On a lower shelf may be placed pansies and primroses. As they require to be kept cool, a north window suiting them best, but as most windows are raised more or less above the baseboard they will find sufficient shade, and very few are the house plants that afford greator satisfaction. Care should be taken in watering the primrose that no water fall on the buds, as it causes them to rot. In the Spring they can be turned out into the shady border, and another Autumn the plants should be divided and put into small pots, and kept shaded until well rooted, then as they grow, repotted using a pot of larger size. The primrose usually commences flowering in December, and continues until the next May or June. For a hanging basket, nothing could be prettier than a clump of oxalis bulbs, mixed varieties, if preferred, or an entire basket of a single kind. This plant also prefers a light sandy soil with liquid manure occasionally. I have sometimes had my oxalis disappear entirely, and at first thinking it dead I turned the soil out of the pot, when I discovered quantities of bulbs, fresh and just ready to start a new growth which they soon did, blooming with fresh vigor. Just the cause of the freak I never understood.

For the shelf in front, a tall trellised fuchsia for centre piece with foliage plants on either side will make a brilliant showing, and after filling the box with geraniums or other shrubby plants, set German ivies or any other drooping vine along the edge to cover the front of the box and twine about the rustic supports. No window will be perfect without pots of English ivy on either side to arch the window. Too much cannot be said in praise of this hardy plant for indoor use. Growing either in the shade or in the sunlight, bearing almost any change of temperature to which a living room is subjected, it still thrives and goes on its quiet way to beauty and perfection.



WINDOW GARDEN.—FIG. 398.

Maderia bulbs planted in boxes and hung behind pictures will send out dainty runners and entirely wreathe the cords and frames, although preferring strong sun and rich earth, yet they will do very well on the most meagre fare. And the common ground ivy—the Jill-go-over-the-ground—of our childhood's kitchen garden, makes a very airy delicate basket plant. The sweet alyssum of our mother's flower borders is also utilized, and this, like the mignonette, should be planted in the pot where it is expected to bloom, as transplanting after the profuse blooming of Summer they are sure to die.

All plants, as well as people, require fresh air, and their leaves, which serve for lungs, should be kept as free from dust as possible. A fine rose wateringpot will aid in cleaning the leaves and leaf stalks always showering the plants in preference to pouring a quantity of water about the roots, which necessitates a strip of oilcloth underneath the plants, that can be readily wiped up, giving the plants proper care without injuring the carpets.

A steady temperature of from 60 to 70 degrees by day and down to 50 at night is best adapted to the requirements of most plants grown in common windows.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK: I have been thinking I would write to you for a long time, but have been afraid it would be so poor a letter it would never escape the waste basket; but if you will accept my humble self as one of your nieces, I will try and write again. I am very fond of flowers, and have a window-garden, and have a small variety of flowers in our yard. I wish to ask if I should dry the roots of geraniums before hanging them up in the cellar by their roots for Winter. A friend told me she dried hers before she put them in the cellar. Our cellar is quite damp, and I would like to inquire of Uncle Mark and of all the cousins, if there is a pure white fuchsia owned by any of them, and if I could get a plant of this color by sending to a florist. Your niece and cousin,

MAG(GIE)NOLIA.

[We have lost your address. There is no certainty in obtaining colors of fuchsias. There is no special need of drying the roots of the geranium before hanging them up.—U. M.]

UNCLE MARK: I am thirteen years old. We came up here to the back woods of Canada to try and be farmers. I would like to join your club and be one of the cousins, if you will accept me. Next Spring I am to have a patch of ground to cultivate for my own, and I would like to get all the seeds I can to try my skill. JAMES COLE,

Uplands, Ont.

DEAR UNCLE MARK:—I would like to join the Horticultural Club and become one of the cousins. I am 13 years old, I play the violin and can play a little on the guitar, but I can't say I have done very well in raising flowers. This is our first year of taking the RURAL and we all like it very much. I like to read the cousins' letters. We live 65 miles from Chicago. From your niece,

Iroquiose Co., Ill. LAURA JANE KENWORTHY.

DEAR UNCLE MARK:—I am a little girl 11 years old. I would like to join your club. My papa has been taking the RURAL for two years. I have a Canary bird and my mamma has quite a number of house plants. Please remember us when you send seeds. Your niece, LINNIE BERLIN.

Clarion Co., Pa.

DEAR UNCLE MARK:—I am a little girl 11 years old. Papa has taken the RURAL for 18 years. I have two little sisters, Effie and Nettie. We all wish to join your club. Please remember me when you send seeds. From your niece,

Muscatine, Iowa. SARAH EDITH FRAZIER.

The Puzzler.

HIDDEN OFFICERS.

1. In lieu ten ants were caught.
2. Cad, ether I dangerous.
3. The air is humid! Ship men alive!
4. Eugene rallied at last.
5. Recommo Dorcia is quite ill.
6. Use a semibreve this time.
7. Have some bad rum! Majority rules.
8. On the brig a diersis was read.
9. I saw him drag Oma nearly home.
10. As for Dick be dives too deep.
11. Privately speaking, he falsifies.
12. Gaspro C. tore my dress.
13. I see the border lying down.
14. Let (by my command) Erin C. hie fast to camp.
15. In the dismal hospital, stew arduously the beef tea.

☞ Answer in two weeks. LITTLE ONE.

A TRIPLE ACROSTIC.

The first word of a page inserted at the bottom of the preceding page. One who betroths. A bible curse. A wine. Primals, centrals and finals form three vehicles.

☞ Answer in two weeks. L. O.

PUZZLER ANWERS.—NOV. 13.

HIDDEN BIRDS.—1. Bird of Paradise; 2. rhea; 3. peacock; 4. jabiru; 5, nymphicus; 6. capercaillie; 7. hoopoo; 8. dotterel; 9. ousel; 10. ring-dove; 11. cushat; 12; finch; 13. tern; 14. chough; 15. grebes; 16. dabchicks; 17. beefeater; 18 siskin; 19. stilt; 20 palmiped; 21. swift; 22. chimney swallow; 23. canvas back duck; 24. robin red-breast; 25, turtle-dove.

A DIAMOND PUZZLE.—

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  S H A L E
C H A R A D E
  E L A N D
    E D D
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NAME PUZZLE.—Zaccheus, Ezekiel, Naaman, Alpheus, Solomon. Initials form "Zenas."

A FRACTIONAL PUZZLE.—Abraham.

Sabbath Reading.

THE GOLDEN SIDE.

THERE is many a rest on the road of life,
If we would only stop to take it;
And many a tone from the better land,
If the querulous heart would wake it.

To the sunny soul that is full of hope,
And whose beautiful trust ne'er faileth,
The grass is green and the flowers are bright,
Though the wintry storm prevaileth.

Better to hope, though the clouds hang low,
And to keep the eyes still lifted;
For the sweet blue sky will soon peep through,
When the ominous clouds are rifted.

There never was a night without a day,
Nor an evening without a morning,
And the darkest hour, the proverb goes,
Is the hour before the dawning.

There is many a gem in the path of life
Which we pass in our idle pleasure,
That is richer far than the joweled-crown
Or the miser's hoarded treasure;

It may be the love of a little child,
Or a mother's prayer to heaven,
Or only a beggar's grateful thanks
For a cup of water given.

Better to weave in the web of life
A bright and golden filling,
And to do God's will with a ready heart,
And hands that are swift and willing,

Than to snap the delicate silver threads
Of our curious lives asunder,
And then blame heaven for the tangled ends,
And sit to grieve and wonder.

SITTING DOWN WITH JESUS.

"COMMAND the multitude to sit down," They do so, in long lines, upon the verdant grass. He takes the five loaves and two fishes out of the rustic lad's basket, and begins to distribute. The meager provision grows and grows, until not only are all the thousands abundantly fed, but there is a surplus of broken food to fill a dozen baskets.

There is something akin to this in our spiritual experiences. We often worry like the disciples, about the best means of feeding our souls, or of bringing the Gospel bread to needy souls around us. We invent new methods; we try all manner of devices; we get up all "attractions" in the sanctuary and the Sabbath school; we go to all sorts of "villages to buy." "Oh, if we only sit down with Jesus, and accept what he bestows, with His rich blessings on it! Oh, if congregations would sit and receive the Gospel of life from their own Shepherd, and pray over it and practice it! If teachers would only aim more to keep their classes sitting quietly at the feet of Jesus, to take in His truth, and to think about it! The transcendent truth of the new birth was revealed to Nicodemus when he sat as an inquirer at the Savior's feet. The woman of Sychar found the well of salvation only by waiting to be taught by the great Teacher. The most zealous worker needs to have instruction, prayer, reflection, and heart-converse with God, or else he will become superficial and shallow. Like Mary he must sit down with Jesus, and gain deep views of Jesus and of himself.—Rev. T. L. Cuyler.

THE HOUR BEFORE CHURCH.

I HAVE in my eye at present the hour before you go to church on the Sunday forenoon. I am anxious about it. The note struck then is likely to give tone to your spirits all day. Redeem it as much as you can from family duties; redeem it wholly from plaiting and putting on of apparel; redeem it wholly from all vain conversation. How very much the power of the minister depends upon the preparing of the hearer's heart! If you once come up to church with your mind crowded with trifles, what can ministers do? They can do nothing but beat the air. What else can they do if there be nothing before them but air to beat at? It will make a sound, and that is all. I fear that many of my dear people spend more time on Sunday morning in putting veils on their faces than in taking the veils off their hearts—more time in trying to make themselves appear before men what they are not than in trying to make themselves appear before God what they are.—W. Arnot.

THE LORD WAS WITH JOSEPH, yet it might not have seemed so to some men in Joseph's condition. Hated by his own brethren. Sold into slavery. Lied about because of his well-doing. Cast into prison unjustly. Did that look like having the Lord's presence? "But the Lord *was* with Joseph." And the Lord is with a great many of His children who are having a very hard time in the world. Because we are hated, and are lied about, and are suffering unjustly, we mustn't think that the Lord has neglected us. It is our own personal comfort, our personal prosperity, our personal popularity, that is the test of God's presence and favor. He is just as near to us when everybody else seems to have deserted us as when we are the center of a great circle of love and admiration. And it is better to have the Lord with us in a prison than to be without the Lord in a palace.—H. Clay Trumbull.

A LADY on one occasion said to Mr. Wesley:—"Supposing you were to know that you would die at 12 o'clock to-morrow night, how would you spend the intervening time?" "Why, just as I intend to spend it," said he. "I should preach to-night at Gloucester, and again to-morrow morning. After that I would ride to Tewkesbury, preach in the afternoon, and meet the Society in the evening. I should then repair to friend Martin's house, as he expects to entertain me; converse and pray with the family; retire to my room at 10 o'clock; consign myself to my Heavenly Father; lie down to rest, and wake up in glory."

PERSONAL ITEMS.

Senator Matt. H. Carpenter is attending to business in Washington, although his health is precarious.

Mrs. Frances Hodgson Burnett is so ill that she writes while lying on her back. She is writing a new novel.

A Liverpool paper announces that Mr. Hayes will visit England next year and occupy the pulpit of eminent Wesleyans.

Solon Robinson, the well-known writer on agricultural topics, died on Thursday week at Jacksonville, Fla., where he had gone for his health.

Colonel Ingersoll expects to remain in Washington, which he considers as good a town to loan money in without collateral as any in the world.

President-elect Garfield is having his house at Mentor painted slate color. Now he can, with a piece of chalk, write the names of his forthcoming Cabinet on it.

Mr. Russell Hancock, son of General Hancock, who, with his family, has been spending the Summer on Governor's Island, has gone home to his plantation, in Mississippi.

Major Walsh, of the Northwest Mounted Police, whose name has recently been associated with Sitting Bull's surrender, is in Chicago to undergo treatment for an attack of erysipelas.

Justice Swayne, of the United States Supreme Court, is said to know that his place, upon his retirement, is to be filled by Stanley Matthews, to whom it was promised three years ago.

It seems possible to have a good many acres in County Kerry without much income from them. Lord Lansdowne's 94,644 acres are valued at £8,042 a year, Lord Ventry's 91,501 at £15,283, Mr. Bland's 32,540 at £2,638, the O'Donoghue's 10,405 at £887.

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KIDNEY DISEASES,
LIVER COMPLAINTS,
Constipation and Piles.

Dr. R. H. Clark, South Hero, Vt., says, "In cases of Kidney Troubles it has acted like a charm. It has cured many very bad cases of Piles, and has never failed to act efficiently."

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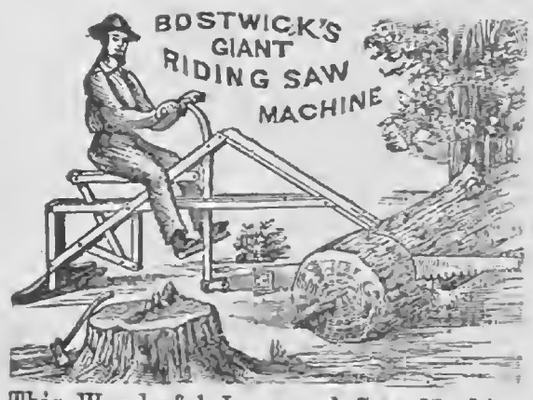

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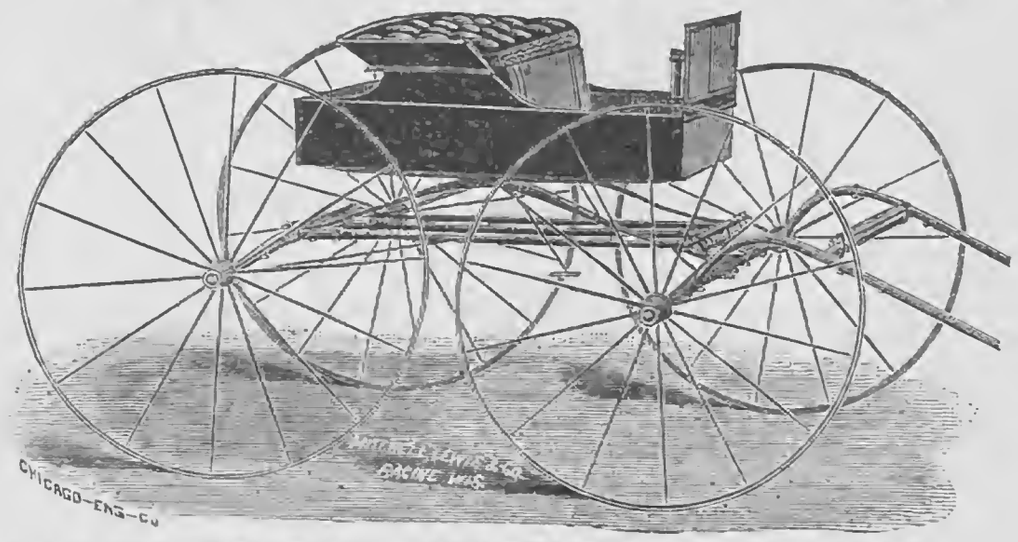

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A SOUTHWESTERN editor, speaking, of a large and fat contemporary, remarked that if all was grass, he must be a load of hay. "I expect I am," said the fat man, "from the way the donkeys are nibbling at me."

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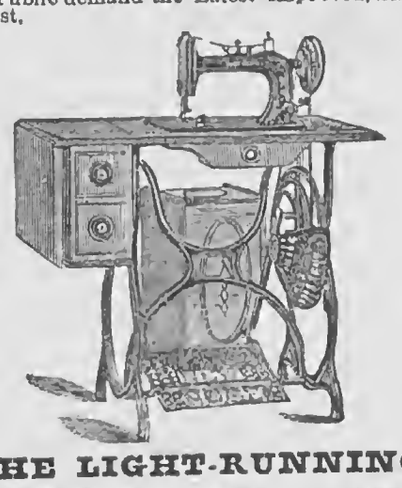

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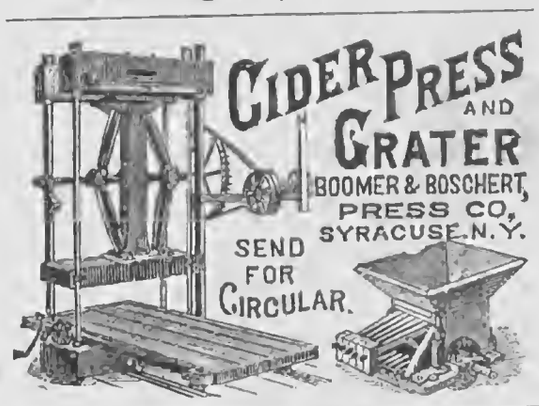

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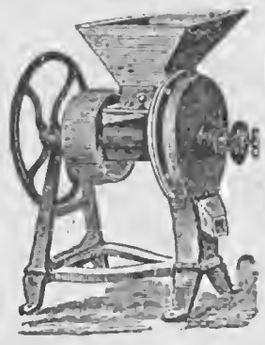

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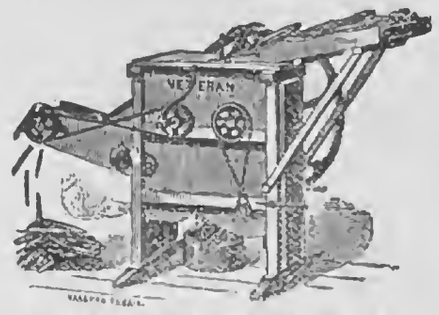

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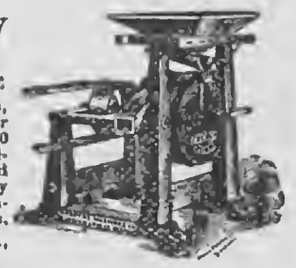

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 49. WHOLE No. 1610. | NEW YORK, DEC. 4, 1880. | PRICE FIVE CENTS. $2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Horticultural.

VICIA SATIVA—VETCH.

H. W. RAVENEL.

THERE are four indigenous species of vetch in this country east of the Mississippi, namely, Vicia Caroliniana (Walt.), V. acutifolia (Fill.), V. micrantha (Nutt.), and V. Americana (Muhl.). The first three are mostly confined to the Southern States, the fourth is not found south of Kentucky.

The native vetches, however, are all feeble in habit and growth, and mostly confined to the borders of thickets and damp woods, rarely ever attempting to dispute possession of the richer open pastures with weeds and the stronger grasses. They have never attracted much attention as forage plants.

It is a curious fact that not only have our foreign population become so readily naturalized and assimilated in this country, but a vast number of foreign plants have also found here a congenial home, and have outstripped the native species in hardihood and vigor. The vetch is one of these. Vicia sativa, the common vetch of Europe, is found all over our country.

Here in the Southern States it is specially vigorous and widespread in all directions. I have frequently had specimens sent to me for name from this and adjoining States, described as a most luxuriant and promising forage plant. It grows mostly in rich, dampish grounds and waste places, in the corners of cultivated fields, gardens, etc. In good soil it attains a hight of two to three feet. The stems are tender, soft and succulent, and the whole plant is eaten with avidity by animals. This species is an annual. It flowers here about May. The seeds ripen and fall in the course of the Summer, and the plant dies out. Towards Autumn the seeds germinate and the young plants grow slowly all Winter, running up rapidly at the approach of Spring.

This species may be readily distinguished from the other introduced vetches—viz., V. cracca, hirsuta and tetrasperma—by having the flowers in pairs, sessile in the axils of the leaves. The others bear their flowers on elongated peduncles. It could doubtless be cultivated in many parts of the Southern country very profitably as an early green forage plant, and also be cured as hay for Winter use.

Later in the season, and during the Summer months, the cow-pea is the general favorite, as giving the greatest yield, both for hay and for vegetable matter to enrich the soil.

Aiken, S. C.

NOTES FROM THE RURAL GROUNDS.

Grape Vine Specific Names.

SPECIALISTS, from long familiarity with them, are prone to use terms which are not understood by the majority of those who are the very ones to be enlightened. During the present unparalleled interest in new cross-bred or hybrid grapes the originators speak of them as of Lubrusca, Æstivalis or Vinifera origin, as if these botanical names were as well known as those of the common plants of the garden. It is desirable, however, that they should be, since the present grape revival is not one that is likely soon to die away, for the field of research is one that is scarcely more than well entered, and it would be hard to exaggerate the interests which may be centered in the future grape industry of this country.

VITIS VINIFERA, which has been extensively used as one of the parents of our new hybrid grapes, is the European species. From this it is supposed that the thousands of varieties of grapes cultivated in Europe have originated. But they are not hardy in this climate, and the object of crossing our native species with them is that we may combine in new seedlings the best characteristics of each, while still preserving the hardiness and vigor of our native kinds. There are many lesser marks which aid in determining this species, but the most prominent characteristic—though this cannot be accepted as an invariable guide—is that the skin adheres to the pulp, while in our native species the pulp readily slips out of the skin when the latter is pressed.

THE EUROPEAN VETCH—Vicia Sativa.—Fig. 399.
From a Specimen sent from Aiken, S. C.

VITIS LABRUSCA.—This is our Northern Fox Grape, common in moist thickets. The berry, of a purple or amber color, with a tough musky pulp, is about three-quarters of an inch in diameter, ripening in late September. The earlier improvements of this are the Concord, Isabella and Catawba, while the Concord is one of the parents of most of the scores of new varieties which are now being introduced. The leaves are woolly beneath, and when lobed the sinuses are rounded and not angular.

VITIS ÆSTIVALIS.—This is our Summer Grape, which is also common in thickets. The berries are scarcely one-third of an inch in diameter, black with a bloom, pleasant in flavor, and ripe in October. Mr. Ricketts has used this to some extent as a parent for several of his hybrids—we know not with what results.

VITIS CORDIFOLIA.—This is our Frost or Winter Grape. The leaves are thinner than those of the others (never woolly), and coarsely-toothed, without conspicuous lobes. The berries (a quarter of an inch broad) are a dark-blue or black with a bloom; sour, ripening after frost. The flowers are sweet-scented, and it is found in thickets or along river banks.

VITIS VULPINA is the Southern Fox or Muscadine Grape, and the original of the Scuppernong. The bark is not thrown off as in the others, in strips, but is close like that of a young pear tree. The leaves are roundish-heart-shaped, shiny on both sides, coarsely toothed and rarely lobed. The berries are about three quarters of an inch in diameter, musky, thick-skinned, purple without bloom, ripe in Autumn, and borne in small bunches. This is common along river banks from Maryland, Kentucky and southward.

Here, then, we have the stock out of which our grape growers are to manufacture, so to speak, our improved grapes. It would seem that we have the least to hope for from seedlings of, or crosses with, the Frost or Summer Grape, and that we have most to hope for from the others. The work has scarcely begun, and yet the results have been both gratifying and astonishing beyond all parallel in the history of pomology.

LARGE RASPBERRIES.—We read of a new Black-cap raspberry called the Hoosier Mammoth, some berries of which have measured one inch in diameter. The size of large fruit is often guessed at, and, without the least thought of deceiving, people exaggerate it in their own minds as if in appreciation of the beautiful specimen which they have plucked or which has been placed before them. This is very natural. One prefers to add to the merits of that which is fair, rather than to belittle it. Raspberries, whether red or black, rarely attain the size of one inch in diameter, as may be seen from our smaller diagram, on next page which is precisely of that size.

So with strawberries. We often hear of specimens two inches in diameter and occasionally those of three. By comparison, however, with the outer circle, which is precisely two inches in diameter, it may appear how easy it is to be mistaken.

THE GOLDEN JAPAN RETINOSPORA.—This is now (Nov. 20) as golden as gold itself. There is no other evergreen that is more pleasing, more striking for the Winter garden, while its Spring growth of a feathery, soft, pale-green color is no less beautiful. It has proven entirely hardy here during six years, and we say to you, good reader, if you have evergreen shrubs to purchase next Spring, forget not the Retinospora plumosa aurea.

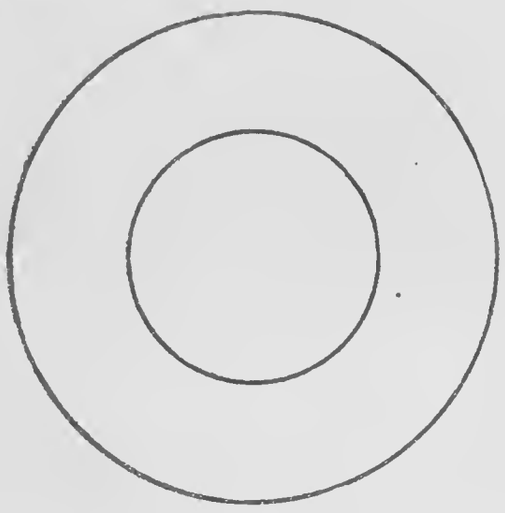


FIG. 401.

RUDBECKIA HIRTA.—In the London Garden we find the following respecting this Cone Flower:

"For planting in front of shrubs or making large masses in the grounds, this is one of the finest plants that can be grown. The flowers are single, orange-yellow, with a black center, and, like all single flowers, are greatly in favor with ladies when cut for the drawing-room. When grown in rich, heavy soil the plant remains in beauty from the end of August until the flowers are destroyed by frost. Another point in its favor is that it is easily and rapidly increased by division of the roots, and when fairly established annual top-dressing is all that it requires, but, like all the herbaceous tribe, it enjoys good fresh soil, and when the beds become crowded the plants should be broken up and replanted."

This flower is spreading rapidly over the Eastern States, where it seems to have been introduced with clover seed from the West, and it bids fair to become in many places as great a pest as is the Ox-Eye Daisy-Leucanthemum vulgare. Our English friends need not trouble themselves as to how it may be increased or best cultivated. We can assure them that if left alone it will be found to take care of itself only too well.

RURALISMS.

IN bringing forward the subject of labels I had no intention of speaking of those of zinc written on with a common lead pencil. I see that some speak of this use of zinc labels as something comparatively new; but I was all over this ground a good many years ago, and could show, if necessary, some pretty old zinc labels written on with a common lead pencil. I think it must be more than 25 years ago that I received from my old friend, the Hon. Marshall P. Wilder, a communication on this very subject, and published it. He had at that time, if I mistake not, been writing on zinc labels with a lead pencil for several years, and with satisfactory result. It was that communication that first brought this use of zinc before the public, and it did much good; for many orchardists and others have from that time used the zinc and common lead pencil. Probably many more will use it now. I am familiar with all this, but still it does not meet the point I had in view. I want to stop that profanity, and zinc will not do it.

I had just written the above, to give credit where I know it is justly due, when I received a welcome letter from Mr. Wilder, from which I make an extract. It is interesting in showing how Mr. Wilder first came to use the common lead pencil. Mr. Wilder says: "I have noticed in the "RURAL" the notes on zinc labels. The story is that some thirty or more years ago, when they were first introduced, the writing was done with a chemical ink of sal ammoniac, etc.; but not having this in my pocket, I wrote with the black lead pencil, and in a year or two I found that it became permanent, and I have used them ever since. This I made known (through the Horticulturist, I think). [It was through the Horticulturist.] I use them also for my camellias and green-house plants. The philosophy of the thing, is, that while the zinc corrodes, the plumbago is impervious to the atmosphere. I have been amused to see how many have claimed the discovery." It was a "happy thought" which led Mr. Wilder to use the lead in this case.

How very beautiful the Black Alder (Prinos verticillatus) is looking just now, especially on low grounds. In clumps and as single plants they seem to warm up the imbrowned landscape, and remind one of a warm Autumn sunset. Is there a more ornamental berry-bearing plant? One could almost regret that they are native plants, as otherwise we might sometimes see them in the border or on the lawn. Though usually found on low and moist ground, I have seen many a fine specimen growing on the upland. I use it for lawn planting and shall continue to do so, as I find it to do well, besides being exceedingly ornamental at a time when most other plants have taken on the sober hues of Winter.

I notice what Mr. Henderson says about pot-grown grape vines; but he fails to catch the point. Let me see if I can make it plainer. A man who has won public favor and confidence may do a good thing and be praised for it; or, at least, it will be accepted as a good thing, as it should be. Another man, who, instead of public favor, has, for some reason, aroused against himself a strong prejudice on the part of his professional brethren and a part of the public, may do the same good thing and be abused for it. That was Dr. Grant's case. While suffering most from it he said a time would come when a man could grow good pot vines without being abused for it. That time has been for several years. There can be no doubt that some vines, and especially the Delaware, were much enfeebled by being propagated from green wood; but that was so great an evil that in time it corrected itself. There have been several other cases of a similar nature, and all of them men who were eminently benefactors of horticulture, but victims of unreasoning prejudice. It has always seemed to me that their punishment was altogether disproportionate to their foibles. As to grape-vines, my conviction is that a well-grown pot vine is about the best vine that can be grown, and the more we have the better.

The mealy bug has been, and still is, so very abundant as to give rise to very general and loud complaints. I noticed in many places last Summer such numbers of both mealy bug and scale as I have never seen before, and I noticed at the same time a remarkable absence of the green fly. Many fine plants were hopelessly ruined. A description of the condition of a plant lately brought to me by a lady amateur may help some to fight this pest somewhat successfully. She had several times gone carefully over some plants, and killed every mealy bug she could *see*, but it would not be long before they were covered again. Finally she determined to know where they came from, and took a seat by the side of one of the worst, a Passiflora Decaisneana. Presently she saw the mealy bugs coming out of the soil. She drew the earth away for about an inch around the stalk, and found the mealy bugs crowded together nearly half an inch thick. The top (about 20 feet) was cut off and the plant brought to me. It was in a ten-inch pot. On being turned out of the pot the roots were found to be densely covered with mealy bugs from top to bottom. It is safe to say that there was fully half a pint of mealy bugs in that pot. She informs me that she found the roots of other plants to be covered in the same way, but not so badly, except a large specimen of Cereus flagelliformis. This lady's discovery should be of great value to those not familiar with the habit of the mealy bug.

In such a case my treatment would be of the heroic kind. I should turn the plant out of the pot, plunge the ball of earth in a tub of strong soap-suds, wash away all the soil, and clean off every root. I should then repot carefully and shade the plant till it showed signs of growth. If necessary I would top-prune. If the plant were not a valuable one I would destroy it. There is no insect pest so much to be dreaded in the green-house as the mealy bug, and none so difficult to destroy. It must not be supposed that you can drown them. I have plunged a plant to the bottom of a barrel of water and let it remain there three days without killing them.

HORTICOLA.

[How would it do to dip the roots in alcohol? Eds.]

Pomological.

POMOLOGICAL IMPROVEMENT IN MICHIGAN.

T. T. LYON.

APPLES.

In the matter of apples very little has recently been developed in the way of originating and bringing out new varieties. It is, however, true that the Shiawassee Beauty (a new fruit of twenty years since) not only retains its popularity with those who try it, but that, with no one interested in pressing it upon public attention, it is slowly but steadily displacing that old favorite of the north, the Fameuse or Pomme de Niege, on account of its comparative exemption from the unfortunate tendency of that old favorite to scab and crack. When both are perfect the "Beauty" (an exceedingly appropriate suffix) has all the delicious and attractive qualities of the Fameuse, only a little hightened. It has evidently come to stay.

CHERRIES.

This season has brought out a new sweet cherry, which, though it originated a number of years since in Lenawee County, Michigan, has only now been introduced to the notice of the public.

It belongs to the class of Bigarreaus; possessing the high, piquant flavor, as well as the firmness of texture of that old favorite. The fruit will probably prove slightly smaller in size and, aside from its fine quality, it is said by the originator to be exempt from the liability to crack and decay in rainy weather—a defect so nearly fatal to the profitableness of many of our finest cherries. The tree is said to be of fine, upright, spreading habit, and very hardy. Should experience confirm these commendations, I trust the variety will be found useful and valuable, notwithstanding the many excellent varieties with which it will be compelled to compete.

GRAPES.

A year since I was surprised at the result of an experiment by Mr. W. Fulkerson, of Clinton County, with the seeds of a single bunch of Wilder (Rogers's No. 24,) grape; not so much on account of the high quality of the resultant varieties, as for the number of seedlings of fair quality.

Another of our prominent fruit growers, along with his experiments with seedling peaches, as heretofore noticed, has also directed his attention to the grape, by planting a quantity of seeds of Salem (Rogers's No. 22). Of somewhat less than one hundred plants, derived from this planting, a considerable number have now borne two years, and others only one year. Of these the originator has selected five white varieties and five other colors, several of them black; all of which he regards as highly promising and better in quality than the parent; while one or more are thought to be of finer quality than Delaware, besides being of larger size and the plants more vigorous. The plants cannot yet be supposed to have developed their full quality, or the ultimate characteristics of the bunch; hence, while I regard them as eminently promising, I suspend judgment respecting their ultimate value.

What most surprises me is that these two Rogers's Hybrids should possess such fixity of quality and constitution, as to so wonderfully excel our presumably more obstinate *pure natives* in keeping up the general character of their progeny, and transmitting their unusual, and presumably fugitive, peculiarities to them. I, at least, will feel a peculiar interest in watching and noting the outcome of these experiments, and I look to them in connexion and comparison with those of Ricketts, and in contrast with the Prentiss, Niagara, Duchess, Brighton, and the Moore Seedlings, for a more full settlement of the so long doubtful question, how far it shall prove practicable to interweave and blend the desirable qualities of *Vitis vinifera* with those of any or all our natives without too great a sacrifice of vigor and adaptation to sustain the inflictions of our, in some respects, more trying climate.

PLUMS.

Michigan, especially Northern Michigan, is believed to possess a climate more than usually favorable to the growth and perfection of the plum, whether we consider the healthfulness of the tree, or the beauty, quantity and quality of the fruit. The past season, however, has been exceptional in this respect, since, even at the extreme north, the weather at the time of ripening was such as to occasion extensive loss of crop. That such weather, however, will rarely occur, we may reasonably anticipate. Little attention is bestowed upon the plum in Southern Michigan, mainly on account of the depredations of the curculio. Still we are indebted to Lenawee County for a new variety—a medium-sized purple plum, which, so far, proves nearly or quite proof against the rotting of the fruit, and although not specially attractive in appearance, is said to be a good grower, hardy and productive. In quality it will rank as "very good."

STRAWBERRIES.

In small fruits little advance has been made among Michigan growers, except in strawberries. Even with these the really valuable seem to attract little attention until taken up and brought to notice by more progressive growers abroad. As an illustration, the Bidwell even in the locality where it originated, failed to command attention, till its real merits were discovered by Eastern growers, since which it seems to be coming to the front. So far as I know, the Marvin and the Shirts, both highly promising new varieties, are largely indebted to growers outside of this State for even their present standing at home.

THE FULTON PEAR.

When I find myself in a city my first visits are to the fruit stands and markets. The last week of October I was in Portland, Maine, and my eye was soon attracted by trays of beautiful pears, considerably larger than the Seckel, remarkably uniform, as though all from the same mold, of a bright cinnamon russet in color, and very spicy in scent. The flavor on eating did not disappoint the expectations raised by these preliminaries. The dealer called them Fulton pears, said they were a native of that vicinity, abundantly produced and very popular. The price was ten cents a dozen, with big Duchesses alongside selling at eight and ten cents each. I let the Duchesses alone and filled a large pocket with the Fultons, filling its mate on the other side of my overcoat with Garden Royal apples.

Returned home I now consulted my Downing and found the following description, with an outline perfectly corresponding in size and form to the Fulton as I saw them:

"This American pear is a native of Maine, and is a seedling from the farm of Mrs. Fulton, of Topsham, in that State. It is very hardy, and bears every year abundantly. Tree moderately vigorous. Young shoots rather slender, and yellowish reddish brown. Fruit below medium size, roundish, flattened. Skin at first entirely gray russet in color, but at maturity of a dark cinnamon russet. Flesh half buttery, moderately juicy with a sprightly, agreeable flavor. Very good, October and November."

A word of the Garden Royal apple. I have not often noticed it elsewhere, but it was plentiful on all the fruit stalls in Portland, and advertised by large placards. It is an excellent and very beautiful apple of its season. It is figured in Downing, rather below its real size as grown in Maine. It originated in Sudberry, Mass. The tree is very productive, fruit tender, juicy, rich, mild subacid, aromatic, best. Season September, but in Maine good until November. The Fulton pear and Garden Royal apple are noble and equal companions in the aristocracy of fruits. T. H. HOSKINS, M. D.

Field Crops.

CULTIVATION OF THE CRANBERRY.

A. B. ALLEN.

THE cranberry being anti-scorbutic, makes it, perhaps, the most healthful of all our fruits; and as it can be cooked in many different ways, it becomes one of the greatest luxuries of the table.

Soil for Cultivation.

The cranberry can be grown on a great variety of soils, but those which yield best are, a deep, rich muck or peat; the bottoms of old mill ponds after the water is drawn off; and black sand with a clay subsoil. The berry is so liable now to be attacked by many destructive insects, and injured by various diseases, that the best soils only will yield sufficient to render it a good, paying, marketable crop. For home consumption poorer soils may be cultivated to a moderate extent by our farmers, as it makes little difference to them as to the profit of the yield of what they only want for family use.

Location.

The place chosen to make a cranberry meadow should be lined with abundant banks of clear, coarse sand, have fall enough to drain it well, and springs of water sufficient to overflow it when required. One or more straight ditches, according to the breadth of the land, must first be cut through its whole length two feet deep, and three to five feet wide, or broad and deep enough to carry off all the water readily. Narrow ditches about one foot deep are then cut from 30 to 50 feet apart, according to necessity, at right angles to the mains in order to prevent any water from standing on the meadow, as it is essential to keep this in continued movement from the upper down to the lower end of the meadow. If it be a swamp with trees, these are cut down, the timber and brush removed, the stumps cut below the surface, all shrubs and small roots grubbed up, and the land perfectly leveled. It is then generally sanded from two to eight inches deep, or as an extreme, 15 inches, according to the richness and depth of the muck. If a turfed meadow is selected, this is cut into blocks about a foot square, and carried off on the dry land, packed in heaps, and, when well rotted, returned and spread on the meadow whence it was removed; or it is turned over flat and left, remaining to decompose on the surface. A savanna or dry meadow found clear of all obstructions, may be plowed. In doing this a sharp, extra-wide share must be used, so as to turn the sods flat over, and not have the furrow lapped in the slightest degree. After this, level the surface and sand it as thick as required.

Dam for Overflowing.

A dam is now made at the foot of the meadow with a flume and gate for the purpose of shutting down to let the water rise to overflow the cranberry vines, and again opening to draw off the water when required. This dam can be formed of the most suitable and nearest

material to be had, and must be made strong enough to resist any possible pressure that can be brought against it by an extra rise of the water from rain or melted snow.

Planting the Vines.

The best time for this is in early April on to the middle of June, according to latitude and climate. Some plant later in Summer and also in early Autumn, but there may be a little risk in doing so. Make drills about three feet apart, and set three to six cuttings four inches deep every twelve inches in these. Press the ground solidly about them and let the tops lie slanting near the ground. This enables them to root with more certainty, and to sucker better than when left standing perpendicularly. On meadows of thin soil the vines may sometimes be simply dropped on the surface, then covered with an inch or two of sand. This is the most expeditious way of planting, but not the most certain for taking root, and making a good subsequent growth. As berries of the largest size sell the most readily and fetch the highest price, be careful in selecting vines for planting to obtain such as produce these most abundantly.

Cultivation.

All weeds and grass must be kept out from among the cranberries while the vines are growing, and as long as they continue bearing; for if left to grow, these greatly lessen production, and ultimately take complete possession of the crop. A hoe may be used the first year for destroying weeds, but after this the vines cover the ground so thickly, that a hand-fork and trowel are the only proper implements for this purpose; and with these the ground, being quite loose, the work is got over rapidly. Cutting off the heads of weeds just as they are coming into blossom sometimes destroys them in the course of two or three years, but pulling them out by the roots is much the most effectual way to get rid of them.

Time of Bearing.

This begins abundantly in three to four years after planting, the time being dependent upon the richness of the soil and the care bestowed on the vines. If the fruit is picked sooner it is liable to injure the subsequent crops.

Fertilizers.

Great caution must be exercised in the use of these, as they have often done more harm than good. The only safe way is to experiment with a few square rods of the berries for two or three seasons, and note the result. If favorable, then fertilize a larger breadth; if not, cease applying them. The best fertilizer yet tried and the most certain to work well, is a sprinkling of fresh, rich muck well pulverized and mixed with sand.

Flooding.

This should be done the first Winter after planting. The water is then let on, according to the climate, from early to late in November and not taken off till from early in April to the first week in June. It must cover the meadow from two to four feet deep. It is again sometimes let on to a shallow depth in the Summer to destroy certain insects and weeds. Great care, however, must be exercised in this last flooding, lest the water should then do more injury than good.

Picking.

This is done in the latter part of September, or early in October, according to climate. A rake and other lately invented implements are occasionally used, but these are more or less objectionable on account of tearing the vines or injuring the fruit. As there are plenty of women and children, their hands are still the most suitable of all things for this purpose. They pick as rapidly if not more so than men, and as their labor is cheap, it still continues the best means of gathering the crop.

Care of the Fruit.

After picking, the only care necessary of the fruit is to handle it in such a manner as to prevent bruising. Pack in moderate-sized, well-ventilated boxes, and store in cool, well-ventilated rooms into which neither sun nor frost penetrates, till sent to market.

Yield.

This is according to soil, cultivation, the season and absence or attacks of disease and insects. The crop may vary from a few bushels up to one thousand per acre, but a fair average is 100 to 150 bushels. Anything less than the two latter yields at the present low prices of berries, would not pay a fair interest on the cost of production.

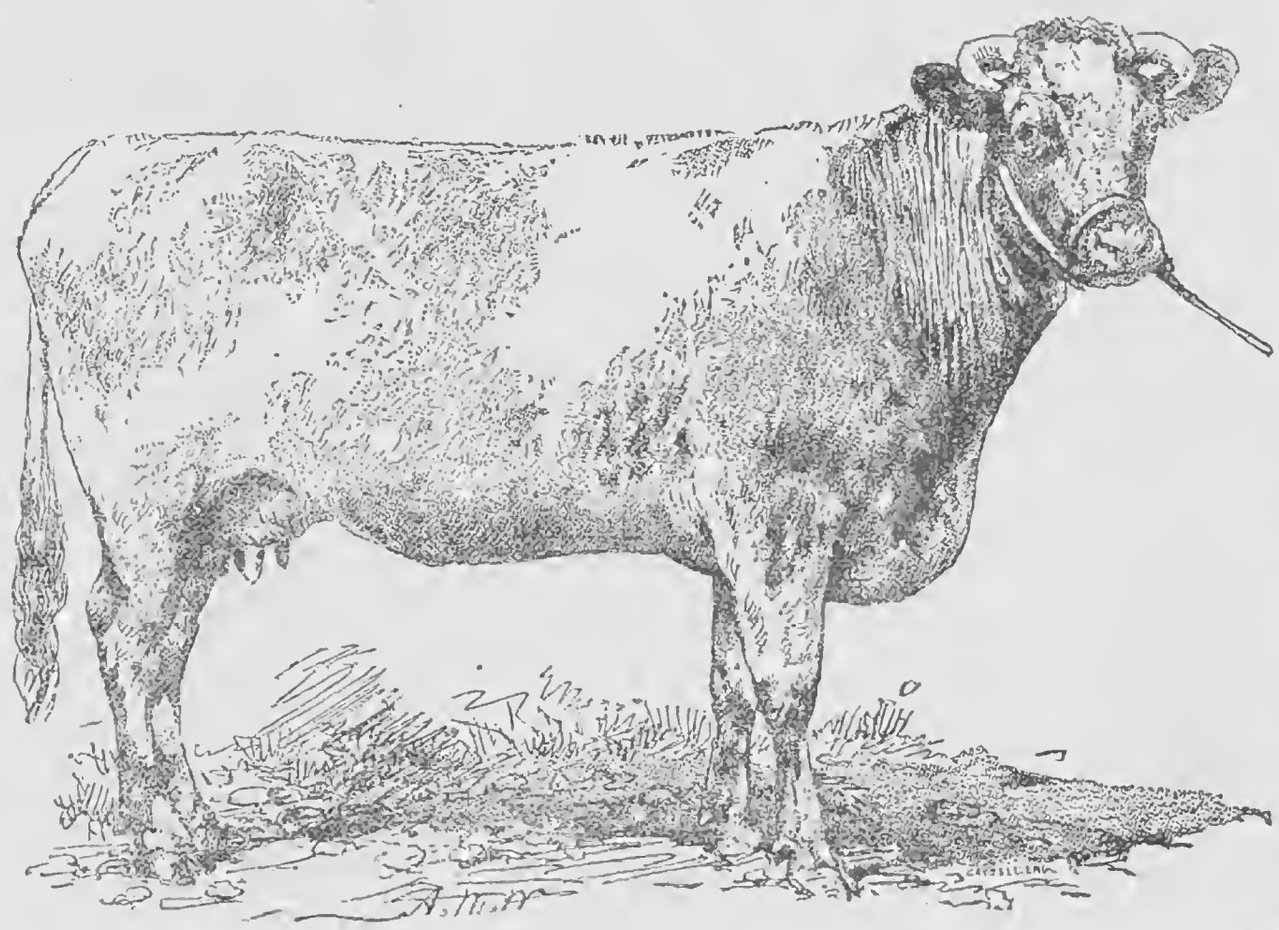
Expense of Making Meadows.

This foots up usually from $100 to $300 per acre; but some cost considerably less or more according to circumstances. If a swamp be well wooded with valuable timber trees, the sale of these may pay the whole expense of turning it into a cranberry meadow. If no wood of value is upon it, then the expense would necessarily be large.

General Observations.

The above is intended as merely a brief account of cranberry culture; to go into it fully in detail would require the writing of a considerable volume. But from the study even of this no one could be certain of making a good meadow and successfully managing it thereafter. It requires a long experience to accomplish all this properly, and to those who think of embarking in the business it will be advisable to engage a thoroughly reliable, practical man to assist them till they become fully acquainted with all the details.

It will be seen now that the crop is precarious on account of being subject to attacks of numerous injurious insects and diseases of various kinds. Some have also been badly injured from fires running over them, caught from burning forests in the Spring. Added to this, the expense of storing and marketing is considerable, and the price often low. All these matters should be taken into serious consideration before embarking in the making or purchasing of a cranberry meadow with a view to its subsequent cultivation. It would be advisable in any event to commence with only a few acres; if successful, gradually increase; if not, then give it up, pocket the loss resignedly and go into something more reliable and profitable.



SHORT HORN COW, "LADY WELLESLEY SECOND."—FIG. 402.

The Herdsman.

OUR ANIMAL PORTRAITS.

Short-horn Cow "Lady Wellesley Second."

The accompanying cut, redrawn from the Agricultural Gazette, is a fine representation of the Short-horn cow Lady Wellesley 2d, belonging to the Wolverton branch of the celebrated Princess tribe, which have been bred in this country for several generations. Her sire was the pure "Duchess" bull Duke of Geneva 9th, and her dam traces to the same cow as Lord Bective's beautiful Lady Sale of Putney. She was bred by Mr. E. H. Cheney, from whom she was purchased by Mr. L. Rawstone, of Holton Hall, England. The Princess tribe has always borne a high reputation for its fecundity and deep-milking power, as well as for its beauty, and is to-day second to no Short-horn tribe in popularity.

NOTES BY A STOCKMAN.

If the man who grows two blades of grass where but one grew before, is a public benefactor, he who produces two pounds of meat where but one was raised before deserves equal credit. Among the useful men of this sort is my friend Col. F. D. Curtis, of Charlton, N. Y., who first introduced the Victoria breed of swine. The Colonel deserves the credit of being the originator of the idea of herd records for these useful animals, and was the leader in the movement for holding the first convention of swine breeders that was ever held in the world. This convention fixed the scale of points and the standard of excellence of the established breeds of swine. I well remember how several years ago Col. Curtis, myself and another constituted ourselves the committee who supervised the birth of this new idea and who helped it to stand upon its feet. But the whole credit is due to the Colonel whose faith was strong while ours was weak. The strong will and determination led to success, and the fruits of that movement have been exceedingly beneficial to the pork interest; for it gave a vast incentive to improved breeding and the results have undoubtedly been to increase the average weight in a certain period; to improve the quality; to decrease the proportion of offal, and consequently to cheapen the product and increase the demand for it.

The Victoria breed of swine is an improved Suffolk and an improved Yorkshire at the same time. It has the fineness of the Suffolk without its tenderness and its excessive tendency to fat, and the size and fleshiness of the Yorkshire without its coarseness. Its skin is thin and fine; the hair is fine and abundant; it has length of body, with depth of side and shoulder and an excellent ham—what more can be wanted in a pig? At the recent Fat Cattle Show some Victorias from Indiana were exhibited which are reported to have averaged 360 pounds of weight for pigs from six to ten months old. The originator of a breed of pigs that can reach such a profitable weight at so early an age, has certainly "done the State some service," and should be warmly congratulated on his victory as well as on his Victorias.

The third annual Fat Cattle Show of Chicago has just been held. This is purely a Chicago institution and is jealously so considered by that live city. It is a similar affair to the English Smithfield Butcher Cattle show and this Western association thinks its modern effort surpasses that time-honored one of England. Perhaps it does. Why not? We have better Short-horns here than our distant competitors; otherwise our cattle would not be in demand over the water at higher prices than can be obtained there for native cattle; and American beef would not be sold under the false guise of "the best home-fed." Certainly this Chicago cattle show is an educational institution and instructive as well as curious. The catalogue of entries contains in three adjoining columns the age in days, the weight and the average daily growth. At a glance one can see how much loss and how much gain each animal has made.

The youngest beef is the most profitable; it is certainly the most palatable. The farmer who fats and slaughters a two-year-old steer or heifer has some choice, tender meat at the lowest possible cost. If he fed the steer till four years old the meat would cost 50 per cent. more. Let us consider the following figures taken from the aforesaid catalogue:

Age in days.	Weight.	Gain per day from birth.
688	1,880	2.73 lbs.
585	1,490	2.54 lbs.
572	1,400	2.44 lbs.
721	1,590	2.20 lbs.
940	1,975	2.10 lbs.
1,197	2,005	1.67 lbs.
2,692	1,690	0.62 lbs.
2,765	3,125	1.13 lbs.
4,225	1,170	0.40 lbs.
4,256	1,455	0.34 lbs.

Here is a wonderful difference. Part of it is evidently due to the animal itself, but without any doubt the 2,005-pound animal would have been more profitable a year earlier than at the end of 1,197 days. The enormous weight of 3,125 pounds even is produced at a comparative loss, while the 11-year-old beasts had "eaten their heads off" many years before. These were cows and, of course, may have paid their way as breeders, but it exemplifies the principle that after two years a beef animal loses money.

It is the same with sheep and pigs. A fat wether at 20 months and a pig that is slaughtered before it has been fed over one Winter, are more profitable at these ages than if longer kept. This being plainly the fact, how important it is that those interested in feeding stock of any kind should keep only those that mature early and are rapid feeders.

The fact is that there is much to learn from agricultural fairs and exhibitions of all kinds. To the observant man there is presented an epitome of the results of the best work of hundreds of enterprising, thoughtful and capable men. "In the multitude of counsellors there is wisdom," and the more a man sees of the successful work of other men, nay, the more he sees of the failures of unsuccessful ones, the more he may learn to guide himself in his own work. The greatest result of this fat cattle show is the plain proof given of the value of well-bred stock. The best animal and the first on the above list is a grade Short-horn. So are the second and third; the fourth is a pure-bred. Grades are always better beef animals than the pure-bred; this is characteristic of high-bred animals and their crosses. But the heavier grades can only be produced through the pure-breds. These are the material to be used. After the full experience of many years a farmer who goes on breeding from scrubs is simply throwing away opportunities of making the most of his labor.

A Western Opinion of Short-horns and Percherons.

An esteemed contributor writing to us from Illinois, says:—The Herefords are coming to the front, but the Short-horn interest is so powerful that the Hereford breeders do not get a fair chance, and the Short-horn papers cannot be made to acknowledge the fact until long after it has been fully accepted by the people. In a word, I find most agricultural journals are one to two years behind the times, and when one writes he is compelled to write what the facts were one or two years ago and not what they are at present. For example, the Percheron horses have been tried and found wanting, and they are going out of fashion faster than they came into it; yet who dares to say so plainly and to say that all or nearly all they are good for is for slow work in a cool climate. No doubt the Clydesdales are an improvement. I should not be surprised if we found the Russian horse, which originated on the steppes and under the intense cold of Central Asia, the stock we want for a climate which is tropical in Summer, and arctic in Winter.

Dairy Husbandry.

THE SWARTZ OR SWEEDISH SYSTEM OF CREAMING.

All the late methods of cream-raising by the use either of ice-water or cold air are based on the system discovered some years ago by Mr. Swartz, of Hofgarden, near Wadstena, Sweeden, and which is known either as the Sweedish or Swartz system. The main point of this system is, that the milk is set in ice-water to cream. It is to the employment of this method that is due the high price obtainable for Sweedish and Danish butter in the English market, and its advantages have set inventors in this and other countries to work in order to devise the most convenient and economical way of embodying the cardinal point of the system—the cooling of the milk rapidly by the use of ice. In Sweeden the milk is carried to the factories every night and morning immediately after milking, from a circuit of not more than a mile and a half around each factory. It is there measured, and at the end of each month the farmer is paid a stipulated price for the quantity he has delivered.

The Cooling Tanks.—For cooling or "setting" the milk, square or oval tanks or cisterns are used, the size depending on the requirements of each dairy. Usually they are not over nine feet in length by three in breadth, inside measurement, with a depth of six inches. Such a cistern is large enough to cool about 115 imperial gallons of milk. It is made of two-inch plank and is, of course, water-tight. The milk-pails are usually placed on a large grate fastened with wooden wedges inside the tank. Figure 404 shows a top view of a tank and the arrangement of the milk-cans in it; while in figure 405 a sectional view is given, affording an idea of the depth and showing the inlet and outlet water-pipes. Experiments show that the more quickly the milk is cooled, the more completely does the cream separate from it. To reduce the temperature quickly, therefore, ice is broken into small pieces and put in the water surrounding the pails in the tank. From 40° to 45° Fah. is found, as a rule, to be quite low enough, even in Summer, and in Winter this temperature is easily maintained by the use of a little snow instead of ice. If the temperature can be reduced to 42° by a flow of

spring water, no ice is needed, but as the temperature of spring water is usually that of the It seldom is low enough in Summer.

THE MILK CAN.—In order to promote the apid cooling of the milk, the pails for setting it are made small and oblong, because this shape has been found the most effective to this end besides permitting the cream to be easily skimmed off the milk. The cans are made of iron or steel-plate completely tinned inside and out. They are usually about 20 to 24 inches deep, and hold from two to three gallons each, the milk generally rising to within two or three inches of the top. One of the cans is represented at figure 406. Originally when the milk was cooled by spring water these cans had a diameter of 18 inches and a depth of 24, but since ice has been used almost exclusively, their size has been decreased. Figure 407 represents a milk-strainer which fits on top of the can and through which the milk is strained as soon as convenient after having been drawn from the cow. Figure 408 shows a lid which covers the can in hot weather or whenever it is desirable to keep the milk from contact with the outer air. Two little funnels, one at each end, permit the escape of the gases and odors from the milk in the early stages of cooling. In hot weather the water in the tank rises to the same hight as the milk in the cans, so that the cream as well as the milk is kept quite cool and sweet; but in cold weather the surface of the milk is a few inches higher than that of the water.

WHEN THE CREAM RISES.—In Summer the temperature of the cooling-room is kept as low as possible, but in Winter it is never allowed to fall below 50° Fah., if possible. The time required for the cream to rise depends on the temperature of the milk, of the water in the tank and of the room. If the temperature of the ice-water at the time of setting the milk does not exceed 38° Fah.—which is as low as it ever should be—and does not rise higher during the cooling, the cream may be skimmed off in from 12 to 18 hours, but it is safer to let it stand 24 hours, as at that low temperature the cream rises rapidly, but is thin and requires a longer time to become firm.

THE CREAM should be put into an ice-water bath immediately it is skimmed, and ought not to be kept more than two days in Summer and three days in Winter before it is churned, otherwise it will become bitter and acquire a bad taste which it will impart to the butter. The cream raised by this method is thinner than that which rises in flat vessels in comparatively warm rooms; but there is more of it, so that the amount of butter obtained from a given quantity of milk is about the same in each case; while that secured by this system is of finer quality; the skim-milk, too, is better, while the expense for vessels and buildings is considerably smaller.

BUTTER MAKING.—A temperature of 57° to 60° Fah. has been found the best for making the butter, something, of course, depending on the quality of the cream, the season, etc. The churn commonly used is driven by water or steam power, and consists of a barrel resting on a frame and vertically movable on trunions. In it a churn-staff armed with two wings rotates at a speed of 120 to 180 revolutions, according to the quantity of cream in the churn, which usually contains from 17 to 60 gallons. The butter comes in about 45 minutes, and is separated from the buttermilk first by a strainer and then by hand work. It is then tested by the dairymaid and divided into three classes, after which it is weighed, when the particulars are entered in the factory journal. Before churning some fluid annatto is added in quantity suitable to the different seasons, and the varying tastes of the markets for which the butter is intended. The assorted lumps of butter are carefully worked together one after another, and from two to five per cent. of pure, fine, dry salt is added, the quantity here, too, depending on the taste of the market to which the product is to be sent. From a quarter to a half per cent. of sugar is also mixed in. It is then packed in beech-wood casks holding from 60 to 100 pounds each, and which have previously been saturated with brine, the name of the dairy having been pressed upon the top of the butter, which is then covered with a piece of gauze on which a little salt is scattered. If the butter is of first quality the name of the dairy and the weight of the butter are painted on the cask, but if this contains second-class butter the initials of the dairy alone are put on it, while third-class butter is sold at once or returned to the deliverers of the milk.

Self-turning Cheese Shelves.

Not the least troublesome duty in farm dairies where cheese is made, is that of turning the cheeses. In factories this is easily accomplished by the use of self-turning cheese shelves, a specimen of which is here illustrated, with the suggestion that its introduction more generally into farm dairies would be a welcome saving of labor to the women of the family upon whom usually devolves the duty of turning the cheeses. In each frame there are three or more "sets" of shelves, each containing three rows of cheese. Each of these sets is turned separately and easily in about the time it would take to turn a single cheese by hand, with the advantage of allowing each cheese to rest on a dry spot at every

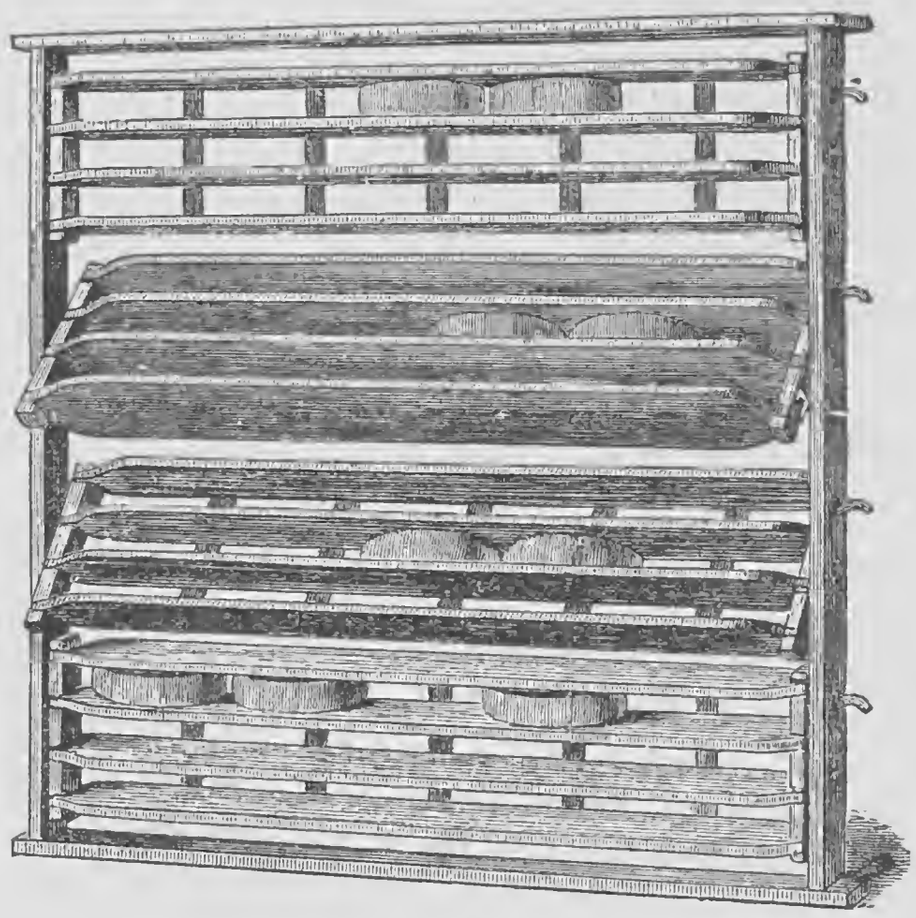


FIG. 403.

turning. The sets are held in position by a catch and carry-latch in the end, and strips of wood at the back prevent the cheese from slipping off. The cut fig. 403 fully explains the nature of this excellent labor-saving contrivance.

The Poultry Yard.

MANAGING AN INCUBATOR.

L. S. HARDIN.

FURTHER experience with my incubator has led me to change or modify some of my previous statements. That others may avoid some of the errors into which I have fallen, it will be well to call attention to them. The instructions that came with my machine advised me to put two pounds of sulphate of zinc into the battery jar. This I found a great nuisance, as it covered the jar and all the apparatus with which it came into contact, with a white crust, and was so disagreeable to the hands that I would neglect cleaning the zinc to avoid it. An expert in telegraph machinery told me that this sulphate of zinc did more harm than good, and was only used for starting the battery. Acting upon his suggestion, I dissolved two handfuls of bluestone in water, emptied and cleaned the jar and zincs, refilled with fresh water and the dissolved bluestone, put back the copper and zincs, and all went on better than before. I have had great trouble with the glass tube in the gauge because it gets foul with dust and prevents the mercury from working smoothly. Cleaning it with a straw is a poor device. I now use a short piece of very fine wire and wrap the end of it with the finest sewing silk. This makes an admirable swab to clean the tube with. On replacing the wire in the tube, I lay a piece of cotton cloth on top of the tube and push the wire through it; this excludes the dust and causes the gauge to work much better.

In hatching I am now getting out about 75 per cent. of the fertile eggs, but at this time of year, when the hens and cocks are molting, only about two-thirds of the eggs produced in ordinary flocks are fertile, and as fresh country eggs are selling for 35 cents a dozen at the store, the egg account is a pretty expensive item. It is very hard to procure eggs at this season of the year, no matter what you are willing to pay for them, as hens have nearly stopped laying. I have engaged all the eggs from several flocks, ranging in numbers from 60 to nearly 100, and find it impossible to get, on an average, more than a dozen eggs a day, which is below the capacity of my machine; for this I can utilize about 150 eggs a week. By offering farmers a cent a dozen more than hucksters pay, all their spare eggs can be engaged. Next season I hope to get many of them to use cocks of the larger breeds, so as to make early broilers.

I now have in the neighborhood of 100 chicks from a few hours to four weeks old, and some I procured that were hatched by an incubator at Coney Island, are over three months old, and a finer lot all through I never saw. The percentage of loss is very small. Those that have broken the shells and come out strong have grown right along, and I have not lost one of them. In every batch of eggs there are always two or three chicks that cannot get out of the shells. These I help out and fuss along with them. Nearly all such die about the third day, and those that live are crippled so that it does not pay to work with them, except for the experience one acquires in handling them.

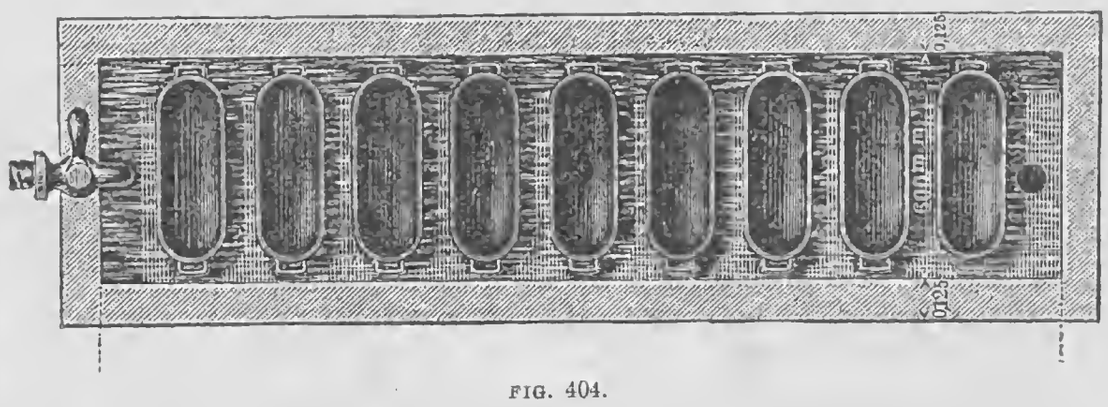


FIG. 404.

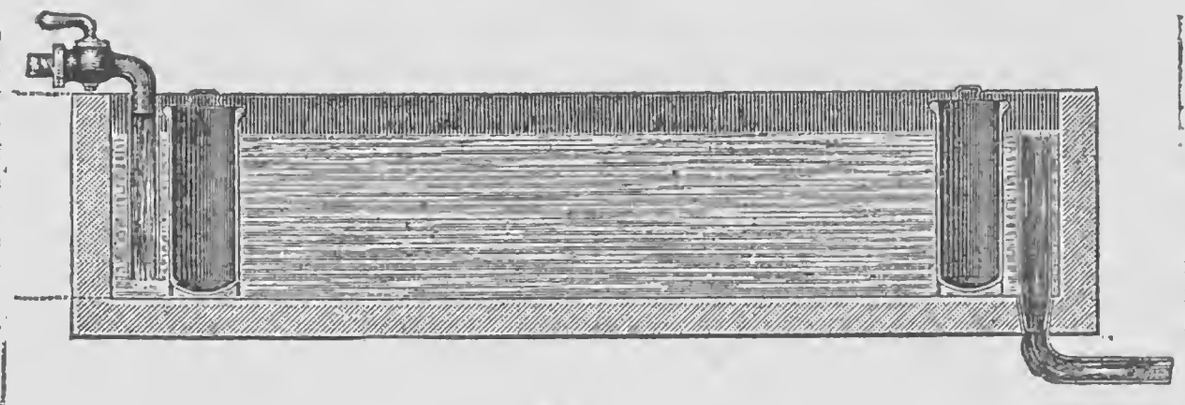


FIG. 405.

I have learned to "cram" a little chick to perfection, for I find that the instant anything troubles a chick it ceases to eat and, of course, soon dies unless forced to eat.

It is astonishing how interested every member of the family has become in the incubator since the brooders have begun to be filled up with little chicks. Even the neighbors pay daily visits and cannot get over their amazement at this singular undertaking. Presents for the little chicks come in so rapidly that I have not bought any feed to speak of, though, of course, this state of affairs will not last forever. The little things are handled so much that they are very tame and grow amazingly and eat enormously. As Wright says, they are the hungriest of God's creatures, and, unless sick, have wonderful appetites. I am experimenting with different kinds of feed—cornmeal, coarse and fine, oat-meal, bran-bread, wheat, worms, meat, cabbages, potatoes and, in fact, everything that offers a fair chance to be a good and economical feed. Of the effect of these I will be able to speak more wisely after further experience. The chicks need constant attention, at least they do now, as we have not got fully settled down to a routine with them, but we are rapidly working in that direction.

FEEDING CHICKENS.

THERE is no point in the chicken business about which there is a greater diversity of opinion and practice, and about which there should be greater unanimity of practice than that of feeding poultry. This applies particularly to young chicks the first two days and the first two weeks. We will give a small bill of fare. Some people will insist upon it that other

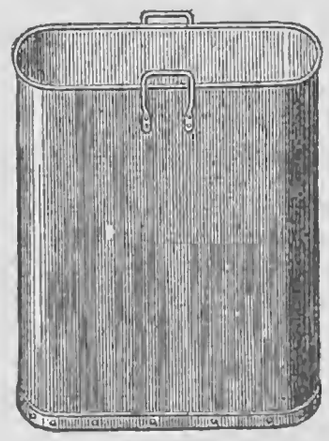


FIG. 406.

things are better while the price or trouble of procuring such food may deter others from following our advice. But this at least is a good list of feed and if better can be had it certainly should be. The first meal should be bread crumbs and boiled yelk of eggs mixed in equal parts. One yelk will feed 12 chicks. First week, oat-meal moistened with milk morning and until night, when cracked corn should be given. This feed the first week or ten days

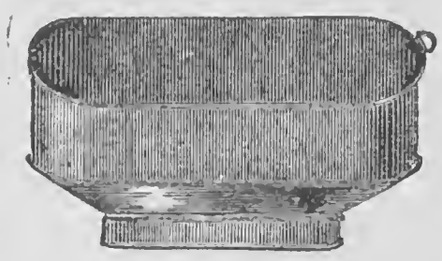


FIG. 407.

will give chicks a good start, and as they do not eat much at this time the expense will not be great. A little minced meat the first week is excellent. They should be fed every two or three hours during this week, and no food should be left in the coop or left over to sour. If too much has been made up, feed it to the older chickens, as it will give the little ones the scours. We know this advice is not exactly seasonable, but it naturally precedes the regime for older fowls.

FIG. 408.

After the first week the morning meal should be either of corn, buckwheat, barley or oats mixed one half in bulk with wheat bran. Mix with milk if you have it, if not, with water, only until it crumbles; do not make a slop of it. At noon the feed should consist of boiled potatoes mashed, a little hashed meat, uncooked, and not too much of it, with cabbage leaves, turnips or something green and fresh. At night whole corn and a little wheat if convenient. Wheat screenings are delusive and more costly than good whole wheat.

The following is an excellent list to choose from.

LIST OF FOODS.—Grains: Barley, buckwheat, hemp, linseed, millet, maize, oats, wheat.

Meals.—Barley-meal, Indian corn-meal, linseed, oatmeal, sharps or pollards.

Aids in Feeding.—Bone-dust, rice, oyster shell (prepared), ground barleycorns, salt, meat, house-scraps, bones, liver, fat, fish, hay seeds, sunflower seeds, etc.; green food of all sorts.

If feeding is carried out with judgment, and changes are rung upon the foods named above, the

poultry will be kept in health, and will produce chicks with good vigorous constitutions.

Of special feeds some precaution must be taken; for instance, many feed bone meal to strengthen the fowls. This is a good idea; but it should not be given to laying hens or fowls just before killing, as it gives a bad taste to the eggs and flesh. There should be an interval of at least one week between feeding bone meal, onions, fish or other strong food and laying and killing time.

We have often been amused with the shifts lazy people make for feeding fowls; one of these is the inevitable "self-feeder." Well we remember when they were first introduced and then we often saw them well filled. Indeed, if we remember rightly, we have seen corn put in them several times a day, although they would hold two weeks' feed; but then the thing was a novelty, and we liked to see it work. Nowadays go on any rich man's farm and you see these empty perpetual feeders standing around weather-beaten and forlorn, while the poor fowls after a full feast for a month or so must go to scratching again. The trouble it takes to shell corn enough to fill one of these boxes is of course the same as it would be to supply the chickens a little every day, while the fact that the mind is not charged with its attendance causes it to be forgotten at the right time, so that chickens would actually starve to death if dependent upon it. The safest and by far the best plan, and as little trouble as any, is to give a moderate feed night and morning, which soon becomes a habit—harder to break than to perform.

Breeding for Feather to Exclusion of Quality.

What is called "hen fever" is a kind of passion that takes possession of a person or community for certain kinds or breeds of fowls. The public poultry exhibitions that have grown out of this rage that has been in existence now for many years, tend to keep it alive, and while it may be of great service to the community at large by the introduction of new foreign or home-bred breeds of poultry that excel all others we now enjoy, there is one thing certain, and that is, it leads breeders to pursue false standards of excellence, and as these standards are generally chosen for their prominence, as color of feather or weight of flesh—points that are easily determined and boasted of—they are certain to be pursued to the injury if not to the destruction of the more valuable but more subtle characteristics of egg laying and quality of flesh. The standard of excellence published by the American Poultry Association sets the feather markings for all the breeds, while it requires no virtue of egg laying or table quality, which are the only genuine purposes for which poultry are designed. We think it time poultry journals should begin to devise some plan for retaining these useful qualities in the pedigreed birds as well as in our common barn-yard fowls.

GEESE.

ON looking over the article in the RURAL of October 2d, on this subject, I observe that the writer says the white China goose shows a "faint brown stripe" down the back of the neck. Can such be *pure-bred?* I think not. I have kept some of this breed and known others for upwards of 30 years past, and I never saw a brown stripe on the back of their necks, or a feather of any kind on them save a pure, snowy white.

As the writer remarks, they are quite swan-like in their appearance, and I may add, for graceful form, elegance of movement and beauty, no water fowl excels them. They also lay many more eggs than the larger breeds. Taking Spring and Autumn together, I have gathered upwards of 60 eggs from each goose in my flock. The small, gray China, with a dark stripe down the back of the neck, lays equally well, and is a graceful, beautiful bird.

F.

The Horseman.

A CONVENIENT HORSE-SHOE.

AMONG the numerous horse-shoes lately devised in this and other countries, that invention in England by Mr. Joseph Offord seems worthy of special notice. Its object is to fit the hoof with a movable but firm covering which can be readily adjusted to fit every kind of work and road, so that, like its master, the horse may own several sets of shoes for different occasions. The device consists in having one or more perfectly wedge-shaped holes in the side and close to the edge of each shoe—fig. 409 in which triangular cogs, or wedges, are inserted. These are fastened by the fangs being brought, without touching the hoof, to the outside of the shoe, over which they are clenched with a small hammer. The cogs do not penetrate the hoof, and there is no risk of hurting the horse. The holes, being wedge-shaped, cannot fill up with stones or dirt, and

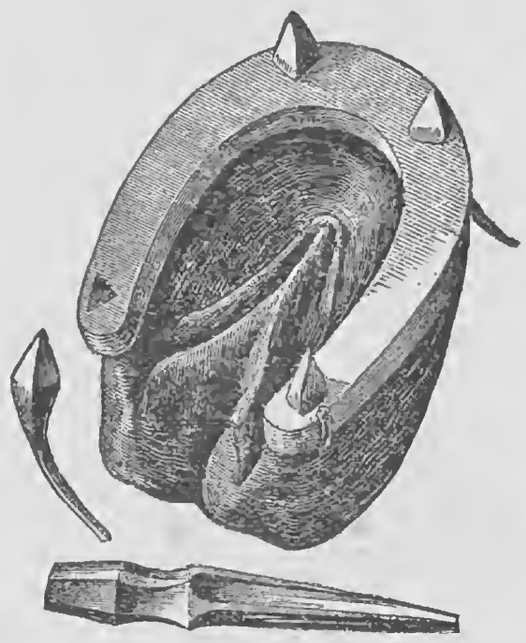


FIG. 409.

the fangs being malleable, the wedges are easily removed or inserted at pleasure. It is necessary, however, to get the holes punched in the shoes before the horse is shod, and for the coachman to be provided with a supply of these patent cogs to insure safety on any road in frost or on wood.

As many are accustomed to use a cog which screws into the shoe, Mr. Offord has prepared a steel wedge-shaped one (fig. 410) for this purpose. The screw cogs are, of course, more expensive. In using them the shoe has to be drilled and tapped with one or more holes before the horse is shod. The cogs are inserted

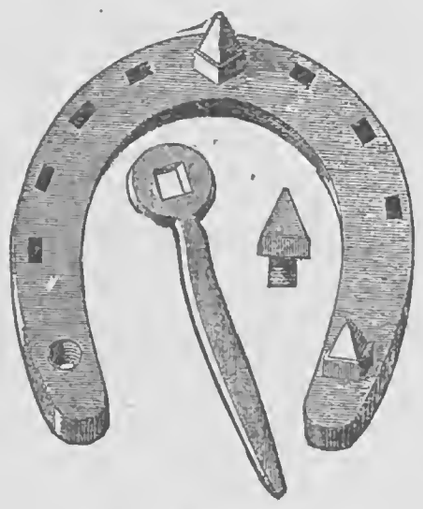


FIG. 410.

into these holes when needed, or removed at pleasure by means of a wrench provided for this purpose. We give two illustrations, reproduced from the Agricultural Gazette, showing both these methods, with the punch, wrench, and dogs, both of which have stood the test of many years' experience, and have given great satisfaction.

Farm Economy.

NEW STEAMING APPARATUS.

THE question is still a mooted one whether it is or is not better to steam feeding stuff. There is no doubt but that some kinds of food, if fed whole, are better cooked or partially cooked before feeding, and to supply this need we notice a newly arranged apparatus for that purpose, an illustration of which is given upon this page, figures 411 and 412, re-engraved from the Agricultural Gazette (England).

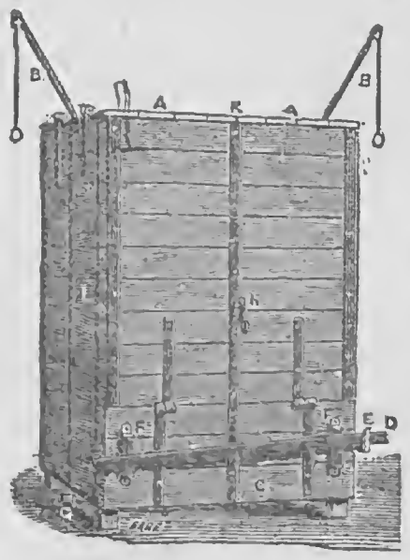


FIG. 411.

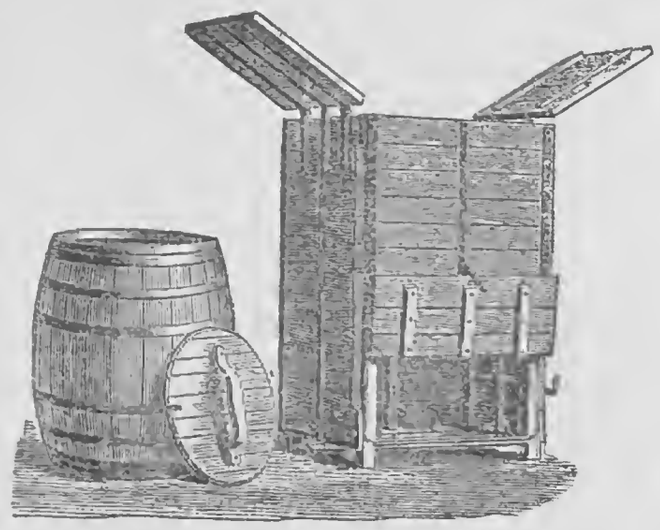


FIG. 412.

The apparatus is constructed of sound, well-seasoned boarding, one and one-quarter inch in thickness, grooved and tongued and bolted to the main frame to prevent warping and to insure strength and durability. In working it, the doors, A A, at top are opened by means of the lever handles, B B, which also answer the purpose of brackets to hold the doors in such a position, when open, as to form a hopper to guide the food into the steamer; the bottom door, C, is lined with India-rubber to make it fit steam-tight, being closed at same time by turning down the hand lever bar, D, and pressing it tightly between the fastener or catch, E, and the wedge-shape rest, F F. The cut fodder, with the meal, etc., intended to be cooked with it, may then be conducted into the apparatus by means of shoots, communicating with the floor above, where the cutter, mill, etc., are placed, or it may be filled by means of a scoop or basket. The top doors are then closed, and being mitred at the point, K, where they meet, they overlap each other and prevent the steam from escaping until the whole contents have been thoroughly cooked. The steam is then turned on by opening a tap connected with pipe G, which conducts the steam to five jets in base of apparatus, by means of which it is distributed throughout the contents, thoroughly cooking them, and also depriving them of any mustiness or ill flavor resulting from weathered hay, spoilt corn, etc., which is a very important and valuable result. The cooked food may afterwards be discharged by opening the door C, which is kept in position by catch H.

Fig. 411 shows apparatus with doors closed, as seen when the steaming process is in operation. Fig. 412 shows apparatus with doors open, as seen when the apparatus is being filled and discharged.

WINTERING STABLE MANURE.

A. B ALLEN.

SOME contend that in order to preserve its fertilizing salts, stable manure should be covered by a roof. If it be pure and without litter of any kind, it is undoubtedly best to have it well sheltered from sun, wind, rain, and snow; but if, on the contrary, the manure abounds with litter, or it is composted with sod, muck or peat, shelter over it is injurious rather than beneficial; for the outside elements are just what it requires to assist in a more rapid decomposition and finer pulverization, which better fit it for application to Spring crops. Rain and snow contain more or less ammonia, according to the season and the frequency of the fall of them; and these, saturating the manure, add considerably to its fertility in the course of a few months. As I have neither sod, peat nor muck, but plenty of coarse marsh hay and straw, I use these lavishly for stable bedding. In addition I also use them in making up manure heaps in the following manner:

Make a bed of one or both of these, a foot thick, on the open ground where most convenient, and daily spread all the stable manure over this bed till it is about four inches thick; then put on the next layer of straw or hay only six inches thick, and over this a layer of only three inches of manure, and thus proceed till the heap is as high as is wanted, finally with a layer of six inches of pure manure without litter in it. This last is necessary to top the heap, in order to make it rot equally in a short time from top to bottom. I usually make the heaps about five feet high, and they soon settle down to four feet.

Leaves of trees may be substituted for hay and straw when obtainable if neither of the latter can be had. Manure thus heaped up never fires, although decomposing rapidly, and none of its salts filter through the bedding; all are retained by the several layers of hay and straw, and assist in rotting them, and making the whole heap a homogeneous mass. The object in having the lowest layer twice as thick as the subsequent ones, is to insure its saving all the salts that may be washed down from the other layers into it. When a quality of manure is wanted richer than the above, we sprinkle fine ground bone dust or meal and guano alternately over each layer as fast as made, in a greater or less quantity as desired.

A fair amount of these mixed with a heap containing ten two-horse wagon loads—say five cords—would be 150 pounds each. This additional fertilizing matter would make the ten wagon loads sufficient to manure half an acre of land—unless excessively poor—for all ordinary crops grown on the farm. Superphosphate may be substituted for bone dust, but it does not usually contain as much of the fertilizing elements for the price as the latter, and is not so reliable. Pure, fine, ground bone dust or flour mixed up with stable manure as above, is as well fitted in a few months to be applied to crops as superphosphate; and fine sifted or manipulated guano, of course, is always ready for immediate application. If the manure is to be applied to potatoes, or for the production of fruits, potash is also an excellent additional fertilizer to be sprinkled on every layer as fast as added to the heap. Some are at the extra labor of tossing over this compost once or twice before using it, but I have found this unnecessary. Forking it down straight from the top to the bottom in loading in to the wagon, and doing the same when unloading it for the crops mixes it sufficiently.

Miscellaneous.

CATALOGUES, ETC., RECEIVED.

CATALOGUE of Thoroughbred Jersey Cattle, Cotswold and South Down Sheep, Berkshire and Essex Swine, for sale at the Co-operative Stock Farm, Fredricsburg, Va. Address A. P. Rowe.

AN Argument for a Protective Tariff, The Farmer's Question: Being a reply to the Cobden Club tract entitled, "The Western Farmer of America." By Jonathan B. Wise. John Wilson & Son, Cambridge, Mass.

RURAL BRIEFLETS.

OUR CORN NUMBER is now under full way. It bids fair to be the best of the Rural Specials. It will be the first number of the new year. . .

ONE of our most prominent scientists writes us as follows: "You understand that, as a general rule, all a scientific writer can do is to *detect good things*, and tell of them. It is seldom that we can talk of novelties without citing their source. For example, one of your writers had an article on Tuberculosis in your Fair No., which would have carried much greater weight, if the authorities for his facts had been mentioned. I, for one, looked askance at his conclusions until I saw, some time afterwards, what evidence they rested on—viz., some recent German experiments. I still think, by the way, that your correspondent stated his convictions too strongly." . . .

PROF. GEORGESON writes us from his college (College Station, Texas) that good laborers there are exceedingly scarce. They can hardly be obtained at any price. The many railroads in construction absorb the labor which is greatly needed at the college. The climate, he says, is delightful. They had the first light frost of the season the 6th and 7th inst. Outdoor work can be prosecuted all Winter. Prof. Georgeson intends shortly to plant seed and seedlings of 100 species of forest trees, selected with reference to their adaptation to the climate and the wants of the State. . . . . .

THE editor of the Fruit Recorder, quoting from and commenting upon, what we have said regarding the size and quality of the Gregg Raspberry, asks if we ever saw a Mammoth Cluster measuring one inch in diameter? To this we answer that we have not. The Gregg, the Recorder says, will average one-fourth larger than the Mammoth Cluster, while, as it is blacker and firmer, it is more salable and better for drying. The Mammoth Cluster, he says, is the best-flavored among Black-caps and though an enormous yielder, he thinks the Gregg will yield twenty-five per cent more fruit. . . . . .

THE common practice, in preparing new beds for asparagus, of burying the manure two feet beneath the surface should be called the Tantalus system. . . . . .

OVER three years ago, the RURAL, from experiments with plants growing in its Experiment Grounds, condemned Prickly Comfrey as of very little value when compared with other forage plants which are as easily raised. Later we condemned, also from our own trials, Pearl Millet which was at the time being advertised throughout the country by many—or rather by several—seedsmen. Well, they have had their day. The RURAL is glad to know that its readers cannot reproach it with an advocacy of these two wretched failures. . . .

IT is to be regretted that during several years past the subscription price of many of the *weekly* agricultural journals of this country has been reduced to so low a figure as to render it next to impossible for them to serve the farming interests and the country home in the most telling way. As a matter of course, we advocate the lowest possible price for such journals, which is compatible with stability and effectiveness. But when a reduction of fifty cents per year is made from a price which was none too high, and a doubled circulation for the future is counted upon to cover the

loss which would otherwise inevitably be sustained, the change is one full of doubt and danger. . . . . .

SEVERAL years ago we reduced the price of the RURAL NEW-YORKER from $2.65 to $2 50 and later to $2.00. The latter change we have always regretted. We do not think it alone has ever added five hundred subscribers to our list, while it has materially limited our power to continue those improvements which, during the past four years, have marked the gratifying progress of this journal. . . . . .

WE cannot say that we very highly appreciate that class of subscribers anyhow, who cannot afford to pay fifty cents annually for the encouragement of the best agricultural writers and for the production of original, honest, first-class work. . . . . .

WHILE, however, there are thousands who deem $2.50 or even $2 00 high for agricultural *weeklies*, the price of agricultural monthlies is never a subject of comment. We must therefore conclude that there are thousands of people who are earnestly interested in rural affairs, that, all other things being equal, had rather pay $1.50 for twelve monthlies than fifty cents more for FIFTY-TWO weeklies. The old saying—"A penny wise and a pound foolish" never had a stronger application than here. . . . . .

WE beg our readers to understand that our comparison is not made from any invidious thought. We do not believe there is any other journal that would glory more heartily over the unqualified success of our entire agricultural press, according to the measure of individual merit. But we submit that the discriminations in favor of monthlies are unjust and senseless. If the price of weeklies is right—then the price of monthlies is at least three times too high. If the price of weeklies is already too low, it is suicidal on the part of publishers to run it down still lower. . . . .

THANKS to Professor Beal and to Dr. Sturtevant for specimens of corn. . . . . .

JUSTICIA writes thus forcibly in the London Garden on the subject of making schools more attractive to pupils by means of gardens. "A beautiful development of the garden idea is now taking root in men's minds on the continent of Europe and in America. To make school beautiful and pleasant is a great aim, and to make it so by means of a garden is to follow a very sure road to further good——A living garden would be bettter than any number of diagrams on the walls or any other roundabout way of teaching what can only be really taught through the eyes. . . . . .

"UP to the present time" Justicia continues, "the schools of our own and other countries, however well managed in other respects, have been far from beautiful to see, being often dismal to the hardened adult, let alone an impressionable child. Of course, the one easy and delightful way to change all this is through the garden, and where so much is sacrificed, as in most civilized countries, for philanthropic purposes, it may be hoped that many people will endow schools with gardens. . . .

QUOTING from this enterprising journal we are reminded to remark upon the change which has come over it, as shown in the number for Oct. 30. Previously it consisted of 16 pages and a cover. Now it consists of 20 pages without a cover. The price was 6d. Now it is 4d. per copy. Either one of these changes, it might be supposed, would suffice for once. The two together will necessitate a formidable increase in its circulation to insure the same income as before the change. But Mr. Robinson's motto has ever been "onward." He has thus far taken no step backward and we trust he never may. . . . . .

IT is proposed to change State prisons into banking houses. There would be a full supply of officers and clerks. . . . . .

Mr. E. WILLIAMS gives to the N. Y. Tribune a very interesting article upon "Possibilities in the Corn-field." He describes his visit to the Rural Farm with Dr. F. M. Hexamer, Dr. A. R. Ledoux, Mr. C. V. Mapes and Mr. Henry Stewart, and the conclusions which were arrived at from their investigations. The article ends:

"What is the average yield per acre? I have no statistics at hand, giving the average yield per acre in New York or New Jersey; but Illinois is one of the great corn-growing States of the Union, and I find, in her Agricultural Report for 1878, the average yield per acre reported by counties, varies from seven to forty-nine, while the average in the State was twenty-nine bushels. The yearly average from 1860 to 1878 varied from eighteen to forty bushels, while the general average for that period is given at thirty-two bushels. I think the general average of the Eastern and Middle States is higher than this, but not so high as it ought to be, and if such exceptional crops as above cited will induce trials and experiments with varieties, fertilizers, or culture that will enable us to equal or even approach such yields, it will go far toward answering the query presented to the Connecticut Board of Agriculture last Winter, namely, "Whether the cost of moving the corn crop of the West to the seaboard would not produce the same crop at home." . . . . . .

WE are *very* happy to be able to place before our readers the following hopeful letter. It seems to give a reasonable assurance that we shall not be disappointed in sending a trial quantity of seeds of this valuable fodder plant to those who apply for our seed distribution:

AIKEN CO., S. C., NOV. 13, 1880.

"It is about the middle of November and still our 'Branching Sorghum,' is growing. We have had no killing frost as yet, and although the ground is wet and cold and growth is slow, yet the seeds are filling out, and I begin to think I shall have quite a quantity of seed for you. Of course as 'tis still growing, it will take time to dry, so it can be thrashed out and cleaned, and this will bring it late—yet the best of it is that the prospect is fair for a small crop. At least "*let us hope so.*" I can fully appreciate your anxiety on its account and the confusion its non-arrival would make, and I therefore wrote as I did, so as not to make too much noise in case of a failure; but the holding off of frosts has brightened the prospect. Now can you give me any hints of the best plan for thrashing and cleaning it, for I am a novice in the business?" . . . . . .

WE would advise our friend to write to Dr. W. B. Jones, of Herndon, Ga. He has raised various sorts of Doura, Egyptian Corn, etc., for years, and can give the information desired. . . . . .

THOSE who are tormented—or rather whose plants are tormented—with that disgusting pest, the *mealy* bug, will do well to read Horticola's notes of this week. . . . . .

MR. W. C. BARRY takes up a subject which, it seems strange, has never, or so rarely been touched upon before. In an article to the London Gardeners' Chronicle he says that during a visit to England he noticed the scarcity and high price of grapes. They were 3s. and 4s. per pound. The question naturally suggested itself whether it might not be possible to produce cheaper fruit by cultivating the American grape. . . . . .

The chief obstacles, it appears, to open grape culture in England are late Spring and early Autumn frosts, as well as moist, dull, cloudy weather. "Are there," Mr. Barry asks "no localities—at least in the Southern parts of England, where these frosts do not prevail and where there is a sufficient amount of solar heat to mature the grape?" . . . . . .

ANOTHER impediment to the introduction of the American grape is the quality of the fruit. English people consider it too pulpy and too foxy. This judgment has been arrived at by testing varieties like the Concord, Isabella and Hartford Prolific which even here hold but a second rank. Mr. Barry regrets that such an opinion should prevail, as it works against a trial of our new varieties, many of which, he thinks, might prove desirable if not profitable for open-air culture in England. . . . .

IN late proceedings of the Elmira Farmers' Club, as reported in the Husbandman, Mr. G. W. Hoffman, is reported as having said:

"How the cutting out of non-bearing stalks of corn can increase the yield of those that are left, except as they are given more room, passes my comprehension." . . . . . .

IT is very plain that cutting out non-bearing stalks can in no other way increase the yield of the *present* crop. The loss of pollen from the earless stalks would indeed tend to reduce the yield. That is to say, there would be less pollen for the silk (pistils) of the perfect plants. But in the one case (where all of the plants are permitted to remain) the seed (ovules, rather), would, some of them, be fertilized by the pollen of the earless plants; while in the other all the seed would have for parents those plants bearing one or more ears. . . . . .

IF we desired still further to increase the fruitfulness of the variety of corn known as Blount's White Prolific, or any other kind, the best method that occurs to us would be to cultivate a small plot—say one-eighth of an acre. Seed corn should have been previously selected from those stalks only which had borne the highest number of ears. Then just before the silk appears, cut out every stalk bearing less than *two* or perhaps *three* sets. The yield of this plot would suffer not only on account of the removal of such stalks, but also from a deficiency of pollen, in consequence of which many of the ears would be imperfectly filled out. But there can be little doubt that corn so produced would, if planted another year, yield a greater number of ears to the stalk than seed saved in the usual way. . . . . .

WE know that insects, vegetable parasites and diseases of all kinds increase in plants—we observe it more especially among edible fruit-bearing plants. The gardener or the fruit grower complains. "There is a pest for everything," he says, while gloomily anticipating the time when it will cost more to raise fruits than they are worth. But few are thoughtful or just enough to place the blame where it belongs, viz., upon those who for years have been torturing plants by all sorts of unnatural proceedings and treatment in order to please the eyes of people and to produce fruit that meets with a ready sale. Thus while we are pleased with the results which unnatural conditions produce—while we are delighted with a special growth caused by checking the evenly distributed powers and functions of plants, we may look for corresponding evils in one form or another, and a wider field for the practice of microscopists, "fungologists," entomologists, and, in fact, plant doctors of all sorts. . . . . .

WHAT OTHERS SAY.

MR. OTSTOT, on being asked what Winter apples he would recommend for Southwestern Ohio, gave the following list: Ben Davis, Smith's Cider, White Pippin, Rome Beauty, Jennetting, Winesap, Jonathan and Newtown Pippin.

CORNFLOWER.—Some of the prettiest things in the show-house at Kew of late have been some pots of Centaurea Cyanus, the common cornfield weed, whose blue flowers are so charming, says the London Chronicle. Now that it is raised to the dignity of a show plant we shall not care to call it a weed again. It is said to be the favorite flower of the Emperor of Germany, and another Emperor is stated to have preferred it to all other flowers in his garden. We must say their Imperial Majesties show their good taste.

FRUITS FOR KANSAS.—The Kansas Agricultural Report gives the following as the answer to many questions as to the varieties that produced a full or fair crop in 1879. The answer is given in the order of the quantity borne:—Of apples, 50 of the reports name the Rawle's Genet as the most productive; 19, the Willow Twig; Winesap and Ben Davis, 18 each; 16 Maiden's Blush, Rambo and Northern Spy, 14 each. Peaches were almost an entire failure. Pears (in the order named), Bartlett, Duchesse d' Angouleme, Seckel, Flemish Beauty. Plums, Wild Goose, and Miner.

THE FRUIT RECORDER knows of no one where the Kittatinny stands the Winter, who would advise planting the Snyder. But what does recommend it (the Snyder) is its extreme hardiness.

CRANBERRY pickers being unusually scarce about Cookstown, N. J., this season, in order to get his crop promptly gathered, Major Newbold, of that place, as we learn by the Germantown Telegraph, offered as a prize to the male picker who gathered the greatest quantity in one day, a valuable double-barrel gun and to the best female picker, a handsome cottage set of furniture. About three-fourths of the population of Cookstown contended for the prizes, which resulted in the crop being gathered in a single day, a prodigious amount of work having been accomplished.

ON warm soil and in sheltered situations, peas sown at this season and kept well covered during Winter will often grow finely in Spring and produce a crop long before Spring-sown peas are ready for the table. So says the experienced Dr. Hexamer.

THE GARDEN ON THE FARM.—President McGregor of the Oxford Farmers' Club—as reported in the Farm and Fireside, of Ohio, says that we run too much to the great staples, and the average farmer has a contempt for eggs, butter, honey, etc; he looks upon them as small, peddling business. The truck patch will pay in dollars and more in health. All the interests of the farm depend on health, and the road to health often runs through the truck patch. At a dish of red raspberries and cream the farmer forgets his weariness. Apiarists tell us that the egg which under ordinary rearing produces the working bee, if put in a superior cell and fed on the royal jelly, makes a queen. So the diet and surroundings of our children have much to do with their characters. Many children have been injured by ginger snaps and painted candy, but by extract of white clover and ripe fruits, never. Many luxuries are beyond the reach of farmers, but strawberries they *can* have, and these he believes to be a means of grace. He doubts not that hog-and-hominy has often been the means of back-sliding.

A NEW BREAD.—There will undoubtedly be a great demand for wheat-meal bread, says the Mark Lane Express. At one shop, it says, they are selling more of it than of white bread, and it is already reported to be sold by over a hundred bakers in London. English millers, in making the meal, will get a good start upon their rivals in America and Austria. The bread is especially to be recommended for the use of working men and their families, and most of all to those who, like the agricultural laboring class, do not eat much meat. It is to be hoped that the Bread Reform League will soon have branches in all parts of the country.

CLYDESDALES, comments the above journal upon American notes, are outnumbering the French horses called Percherons in the State of Illinois. Something with more style and better action than the Percheron was called for, and the Clydesdale appears to fill those requirements.

MILK AND LIME WATER.—The Boston Journal of Chemistry remarks that milk and lime water are frequently prescribed by physicians in cases of dyspepsia and weakness of the stomach, and in some cases are said to prove very beneficial. Many persons who think good bread and milk a great luxury frequently hesitate to eat it, for the reason that the milk will not digest readily; sourness of stomach will often follow. But experience proves that lime water and milk are not only food and medicine at an early period of life, but also at a later, when, as in the case of infants, the functions of digestion and assimilation are feeble and easily perverted. A stomach taxed by gluttony, irritated by improper food, inflamed by alcohol, enfeebled by disease, or otherwise unfitted for its duties—as is shown by the various symptoms attendant upon indigestion, dyspepsia, diarrhea, dysentery, and fever—will resume its work, and do it energetically, on an exclusive diet of bread-and-milk and lime water. A goblet of cow's milk may have four tablespoonfuls of lime water added to it with good effect.

EXTRA-HARDY APPLES.—We find the following in a catalogue just received from R. G. Chase & Co., of Geneva, N. Y.: In the northern portions of the United States and adjoining provinces of Canada the feeling has prevailed until recently that nothing in the shape of apples could be grown, except crabs. While this is true as regards many of the old varieties, a few Russian apples and northern seedlings have been introduced, which, though they may require better care than that under which the crabs will thrive, have proved themselves equally hardy. In proof of this we would point to the Duchess of Oldenburgh, growing on the highlands of Oneida and Lewis Counties, and in Northern New Hampshire and Maine. The following list we rate as hardy as the Duchess of Oldenburgh, and consider the fruit of many of them of better quality than the Baldwin. Against each variety we give the season of ripening at the North.

Tetofsky	August.
Duchess of Oldenburgh	September.
Alexander	October.
Peach	October and November.
Aucubafolia	November and December.
Clark's Orange	November to February.
Plumb's Cider	November to February.
Wealthy	November to February.
Bethel	December to February.
Haas	December to March.
Rubicon	December to March.
McIntosh Red	November to April.
Pewaukee	January to April.
Walbridge	March to June.
Quince Apple	March to June.

LARGE IOWA APPLE ORCHARD.—A local paper [the Country Gentleman, from which we take the following, does not give the name] states that Hon. John N. Dixon of Mahaska county, Iowa, has safely housed, ready for barreling and shipment, 35,000 bushels of apples this season, in addition to enough of the smaller, poorer or injured fruit to make 500 barrels of cider of 45 gallons each. Of this immense crop of apples, he sold 1,500 barrels to one man in Minneapolis, 600 barrels go to England, and 500 to the Black Hills. He has sold about 2,000 barrels to local points in the State, or, in other words, he has sold 4,600 barrels, or 14,000 bushels, leaving about 21,000 bushels yet on hand. Messrs. Schenck & Co. have already delivered to him 6,000 apple barrels, and have contracted to furnish him with 6,000 more, to be delivered as soon as possible. These barrels will each hold three bushels, and will carry the entire product. It is estimated that the cider will more than pay for all the cooperage and the entire expense of harvesting and shipping the apples. From remarks he made in relation to the price received for those already sold, and estimating the balance of the crop at even the same low price, Mr. Dixon will pocket not less than $10,000 clear money, as the product of his orchard of 160 acres, which contains a large number of trees not bearing.

MILK.—Referring to the recent outbreak of fever in Paddington from the supply of milk, with which we (London Live Stock Journal) dealt in a recent article, Dr. Stevenson, the Medical Officer of Health for Paddington, suggests that the simple and effective preventive is to boil your milk before using it. He adduces the common practices of France, Germany, Switzerland, and India as a further persuasive to the adoption of this somewhat unusual precaution.

"OUR American friends are shipping milk in glass jars or bottles, direct from the producer to the consumer," continues the same journal. "The idea is an ingenious one, and so far is proving a great success, one farmer alone has ordered and has in use over ten thousand of these novel vessels, which, when filled with the milk drawn from the cows, are sealed securely down, with the result that the consumer is insured of the genuine article, for which the farmer in return can command a paying price. Why should not the experiment be tried in this country? Indeed, why should it stop at milk? . . . Pans of butter and bottles of milk might in this way be sent from country to town without the inter-

ference of the omnivorous middleman, and greatly to the enrichment of the farmer."

BACTERIA.—We copy the following remarks from an able address delivered before the British Medical Association by Mr. Lister, upon the action of those extremely minute plants known in a general sense as bacteria. Under certain circumstances, earth, air, water, our very bodies teem with living organisms of such extremely minute size that the highest powers of the microscope alone suffice to make them obvious to the eye; other means of observation show the great probability that still more minute organisms exist in myriads. It will suffice for our present purpose to speak of all these as bacteria. Assuredly our forefathers would have laughed to scorn the idea that there was any use in studying creatures of such infinitesimal minuteness; in our own times the so called practical man has been known to sneer at and deride such investigations. But what if it be proved that the various processes of fermentation, to which he owes his wine, his beer, his vinegar, depend essentially on minute organisms?—what if it be proved that still smaller organisms interfere with his digestion, and, worse still, putrefy his tissues and poison his life-blood till he, and thousands like him, are laid low with epidemic pestilence? And in a general sense, all this is proved. It is proved that if certain organisms enter the blood, putrefaction and blood poisoning of necessity occur; that if an organism of a certain kind gain entrance one particular form of disease occurs in consequence; and that if some other organism gain access to the body another disease shows itself. On the other hand, it is proved that if these organisms can be kept out no putrefaction, no ulceration, no disease occurs. Mr. Lister has turned his knowledge to practical account, and by its means sensibly reduced the sum of human misery and suffering. His address contains a brief statement of the facts of the case as at present known, and justifies the hope that the prolonged study of these minute plants and their ways of life may lead to the adoption of practical means of prevention, in the case of many fevers and blood diseases, as efficacious as properly performed and properly renewed vaccination is proved to be in the case of small pox.

BLACK GRAPES—EUMELAN.—Speaking of this grape in the Gardeners' Chronicle of London, Mr. W. C. Barry says: The bunch and berry, though not large, are of good size, and the flesh is tender, juicy, sprightly, refreshing and very agreeable. No grape that he knows has such a pleasant vinous flavor, and it is surprising what a quantity of the fruit can be eaten without causing any uneasiness. The only defect which this variety exhibits is the habit of the vine. Had it the vigorous constitution of the Concord or Hartford it would undoubtedly be cultivated almost to the exclusion of all other black varieties, Mr. Barry thinks. It is such a poor grower that it requires to be grafted upon a vigorous variety, then it succeeds admirably.

LINDLEY, OR ROGERS'S No. 9, is in Mr. Barry's judgment, all things considered, one of the best red grapes we have. The bunch is large and long; berry of medium size; flesh sweet, juicy and high-flavored. The Delaware has long been regarded as the best table grape, but he thinks that the Lindley, when it becomes known, is destined to supersede it. The fruit is certainly equal in flavor, much larger, more showy, and the vine is a stronger grower.

Everywhere.

NOTES FROM CENTRAL KANSAS.

ACCORDING to a letter from Frank Wilkeson in the New York Sun, 16,000 people in Western Kansas are now starving, owing to the failure of their crops on railroad lands sold to them as fertile, but in fact barren wastes on which no crop can be grown, the representations of the railroads to the contrary notwithstanding.

This item, which I clip from an Eastern paper, refers to a letter written to a New York paper by a nephew of the Secretary of the Northern Pacific Railroad. A number of years ago, before the Northern Pacific Railroad got under way, the Wilkesons bought a large tract of railroad land here in Central Kansas and Frank was forwarded out here with a great flourish and a monstrous array of machinery, and was going to open up a grand "bonanza farm" that would not only astonish the natives but make a sensation in New York; but somehow Frank took more kindly to boon companions, his dog and gun, etc., than to steady business, and his fields did not get sowed right or his crops harvested right. A consultation was held by the "elders" and the conclusion reached that their interests were in another direction, that they had vast quantities of land at the north (acquired under the Jay Cook fiasco) and they wanted immigration turned northward, and they said to Frank, "You are an utter failure as a farmer, but we have hit upon a plan to make your failure *a success* after all. You stay where you are, and write *down* the Kansas Pacific lands; and your failure to raise crops will serve as a good illustration—*it is the land*, not you, that is in fault. You can write good letters; do it, and we will pay you a good salary." And so Frank has staid here and written letters for Eastern papers.

Frank has a magnificent crop of wild sunflowers and pig-weeds as big as four-year-old cherry trees, etc. The sulky plows, the improved harrows, the harvesters lie rusting about the fields.

The town bummers when they want to hunt prairie chickens, fill their flagons and go out to Frank Wilkeson's; when they want to hunt Jack rabbits, they fill their flagons and go ont to Frank Wilkeson's, and so on. And when country life palls on the noble Frank, the steeds are harnessed to the imported wagon, and the green baize door closes behind the seeker after the pleasures of life in town.

Now other capitalists who live East have large farms in Frank's immediate vicinity and contract all the work done and raise big crops. They have not only made ten per cent. per annum on their investments, but doubled and trebled their original capital. Men on all sides of him, who live on their land, raise good crops, have fine herds of blooded stock, horses, cattle, sheep and hogs that would draw attention at a New York State Fair. The county ships off annually over one million dollars' worth of grain and stock. Where does it all grow?

H. L. J.

RURAL SPECIAL REPORTS.

ILLINOIS, Champaign, Champaign Co., Nov. 21.—Since the 16th inst. we have had the coldest spell in November I remember in 25 years' residence in Illinois. There are a few inches of snow on the ground, but it has not melted at all. The mercury has been at zero or below at sunrise for five or six days. B. F. J.

OHIO, Bennington, Monroe Co.—The cow-peas, beets and raspberries did well; but I can't get more than four ears to grow on a stalk of Blount Corn. T. W.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Farm Manures.

E. E. H., Scotia, N. Y., inquires whether it is advisable to draw out manure in the Fall, and spread it on land to be plowed in the Spring for corn, and also if it will pay to build a cistern in the barnyard to catch the leachings.

ANSWER BY PROFESSOR I. P. ROBERTS.

No better method can be practiced than to draw ont all manure, whether fresh or otherwise, between the 1st of October and the 1st of March, and spread it directly from the wagon or sled upon the ground, whether it be plowed or unplowed. There might be a slight danger of waste by washing where the manure was spread on steep hill-sides or upon an unusually deep fall of snow; but this waste is much less in practice than in theory and need scarcely be avoided in most cases. In my experience, manure of the same quantity and quality, spread on the soil in November, has given 20 per cent. better yield of corn than the same amount spread on immediately before plowing in the Spring. My reasons for winter manuring are several: The manure has to be handled but once, and that at a time when work is not pressing and time therefore not so valuable, and when the fields are not wet as in Spring. The chief difficulty in spreading manure is to make it perfectly uniform so that the fertility of the soil shall be uniform. By winter manuring we really distribute twice as the plowing in Spring performs a redistribution. As manure is usually kept at least one-half, and frequently a greater proportion, is wasted by leachings and escape of ammonia; practically, in this climate the wastage of manure when spread in the Winter on the field is very slight—not one-tenth of what it is when left in the yard in a hot heap; and in this way also all the leachings are saved. A single experiment which I performed will illustrate the loss occasioned by bad handling; Land No. 1, no manure; land No. 2, a given amount of manure which had been exposed to loss by leaching and heating for three or four months; land No. 3, the same amount of manure as on No. 2 from a covered barnyard where all the urine had been saved. No. 1 yielded 20 bushels of oats, (roundly stated); No. 2 yielded 40 bushels; No. 3 yielded 60 bushels.

In regard to whether it will pay to build a cistern, I would say, yes; almost anything will pay which husbands the fertility of the farm. My observation teaches me that in the State of New York during the last year, double the amount of fertility that has been purchased in the form of commercial fertilizers, has been wantonly wasted around the barns. Any one who has passed through the country and observed the old grain barn modified into a dairy barn by the addition of a lean-to for cattle, will readily appreciate the perfect arrangement for leaching out all the valuable constituents of the manure, by the following single diagram:

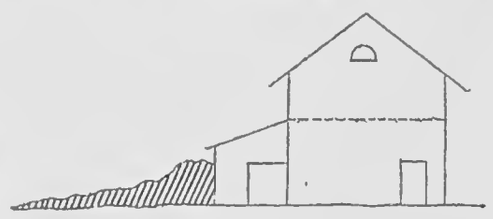


FIG. 413.

I can point out a far better way than to build a cistern, but if circumstances and means will not admit of it, a durable cistern can be built very cheaply in the following manner:

Dig a hole of the desired diameter and 14 feet deep, shaping the bottom like that of a large kettle; lay a flat stone, one to two feet square, in the middle of the bottom and about it lay brick *flatwise* until the curved portion is passed and the walls become perpendicular. Then make a four-inch wall the remainder of the distance. An expert mason can arch the top or "draw it in" without any frame and leave a hole about two feet in diameter across the top, which should be a little distance below the surface of the ground. About this hole build a curbing two to four feet high and cover the arch with earth to secure it from frost. The cistern should not only be laid with good cement but should have two coats inside. Throughout the prairie countries of the West, this is the universal method of building cisterns, and it is admirably successful. Place in it a good boat-pump of galvanized iron.

The leachings are not only worth saving but contain a large percentage of the most valuable constituents of the manure. A little care must be exercised in their application. If strong, they should be applied just before or after a rain; or, if put on when the soil is dry, they should be diluted, or else the first effect will be to "burn" rather than to cause an immediate or rapid growth. Joseph Harris claims that "the drainage from the barnyard contains a little more than half as much nitrogen as the cow-dung; and it is probable that the nitrogen in the liquid is in a much more available condition than in the dung. It contains nearly five times as much potash as the dung. * * * * On an average, a ton of the urine of our domestic animals contains more than twice as much nitrogen as a ton of the dung." A cow voids of urine from four to eight tons a year, according to character of food.

The waste of keeping manure in uncovered barnyards is best illustrated by a few tables from reliable authors:

			Nitrogen, lbs.
(J. Harris.)	5 tons fresh	in November	64.3
Same	5	April	46
"	5	August	25
(Moreton.)	5 tons fresh		40
	5	when half-rotted	35
	5	cheesy state	30
	5	completely decomposed	20

(Moreton.) Manure made in box-stall having 71.04 water, dried at 75 deg. F., gave 2.37 per cent. ammonia, 0.3 per cent. phos. acid, 2 per cent. potash and soda.

Manure made in open barnyard at the same time, having 71 per cent of water and dried at 75 deg. F., gave 1.7 per cent. ammonia, .21 per cent. phos. acid, .8 per cent. potash and soda.

The better way to save leachings—where circumstances will admit and where you have sufficient absorbents—is not to have them. This may be accomplished by having a covered barnyard, which pays for itself in a short time, not only by preserving the manure, but by protecting animals from the inclemency of the weather. I am now using one 60x46 and 11 feet deep, two sides of stone and two of wood. The bottom is paved and cemented, making it solid and water-tight. This accommodates the droppings of 18 cows and 12 horses. The cattle are largely fed on cut corn-stalks; the coarser pieces not eaten are used for bedding, and, with the manure from the horse stables, form sufficient absorbents to take up all the urine. So much of the cows' horns is removed as is safe, and into this covered barnyard all the cows are turned for exercise and water, remaining there most of the day. This is the most successful experiment I have ever tried. Every particle of urine is saved; the tramping of the cattle prevents too rapid heating; the cold cow manure is mixed with the warm horse manure, and, what is best of all, it is neither damp nor offensive. The cows, when they become accustomed to their close quarters, are about as peaceable as so many sheep. Eleven windows and three large ventilating shafts furnish abundance of light and air. In Summer, when there is comparatively little cow manure, the horse manure is spread and wet with water enough to keep it cool. If it is not convenient or desirable to have the animals over the barnyard, a barnyard serving the same purpose can be built very cheaply.

Cornell University.

The Albemarle Fertilizer.

H. L. L., Westfield, Mass, asks whether the Albemarle Fertilizer sold by parties in this city is as valuable as its circulars claim it to be.

ANSWER BY DR. A. R LEDOUX.—The "Albemarle Fertilizer" is simply *alba marl*—white marl. It owes its fertilizing and mechanical effects almost entirely to the carbonate of lime it contains. It is not a complete manure in any respect. I have examined it and seen Dr. Doremus's analysis. Lime is of great value as an application to very many soils, especially to clay soils, and on this account the fertilizer in question would, in many cases, show a really beneficial effect for one or two seasons, but after that it would do *injury* on most soils. Marl of the same character is found in Virginia and North Carolina in great abundance. In the latter State it underlies 33 counties. In the South an application of lime or marl will often produce a sudden and marked improvement in the crop, but a second application will nearly always show no result, or else an injurious one. As to the price, I should be guided by the cost of ordinary ground lime in any locality. There is only a minute quantity of assimilable plant food in the "Albemarle."

Analysis of Ox Gall.

M. Y., Cincinnati, Ohio, asks for an analysis of beef gall or bile.

ANS.—The bile of the ox has been examined by chemists with much care, and the results of these investigations have been as follows: Ox bile is a variety of soap, made by the union of two distinct resinoid acids with the alkali soda. These acids are known as glycocholic and taurocholic, and both contain nitrogen. The latter acid contains sulphur. Ox bile also contains a portion of mucus, very small quantities of cholesterine, a small proportion of stearic, oleic and lactic acids combined with potash and soda. Besides these, there is a peculiar coloring matter which is joined to an alkaline base. More recent examinations of this exceedingly composite substance have led to the discovery of another component to which the name of lecithin has been given. This substance contains oleo-phosphoric acid. No quantitative analysis has been made to our knowledge.

Feeding Oats to Sheep.

A Subscriber, Linn, Iowa, asks whether it will pay to thrash oats for sheep—oats are worth 20 cents per bushel and it will cost seven cents per bushel to thrash them."

ANS.—It is best to feed the oats in the sheaf. The sheep will thrash them cleaner than any man can do, not wasting any grain, and will eat up nearly all the straw. It will be best to feed the sheaf oats in a rack so that the sheep will not trample them underfoot. Sheep grind their food so thoroughly that the grain need not be ground, nor need any fodder be cut for them.

How?

Inquirer, Chester Hill, N. Y., asks how to feed a pet Baltimore oriole in Winter.

ANS.—We have never had experience in keeping this bird, but trust some one of our readers can answer the inquiry through our columns.

Miscellaneous.

L. B., Yates Co., N. Y., 1, asks if we are personally acquainted with the merits of the Lion feed-cutter advertised in the RURAL Nov. 13; 2, where he can obtain one and, 3, if it will work as well in corn fodder as in straw and hay.

ANS.—1, We have often seen the workings of the feed cutter mentioned, and it does its work well. 2, We suppose from any general hardware dealer. If not obtainable there, write to the manufacturers, Messrs. Belcher & Taylor, Chicopee Falls, Mass., (3) Yes, just as well.

G. G. Dayton, Texas, says that the leaf rollers play sad havoc with his Isabella grape-vines, though they do not touch the Scuppernong growing near by, and he asks for a remedy for the pest.

ANS.—Whale oil soap and water will kill them. It is not very efficacious, however, as the trouble is to touch them. Picking off the leaves is the only other remedy that we know of.

S. E. G., North Bend, Neb., asks the cause why the small twigs of apple trees die.

ANS.—It is due to the twig-blight. The cause is not positively known. It may be an insect, it may be due to the weather. This sort of blight rarely proves of a serious nature.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, NOV. 27.

W. V. A.—J. W. M.—J. B.—H. J. M.—I. P. R.—F. H. S.—G. G.—H. T.—J. S.—W. F., Jr.—J. B.—J. B. S.—C. D., thanks.—L. E. K. T.—A. L. J.—E. P. P.—W. H. F.—N. K. R.—E. W.—M. W. F.—M. E. S.—A. J. C. S.—C. S.—L. S. H.—B. W. P.—W. H. O.—C. C. Y.—G. H. F.—A. P. A.—E. B. H.—R. G., thanks.—M. W. F.—A. B. A.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, DEC. 4, 1880.

NEARLY two years ago we strongly reprobated the extortionate charges made by the Union Stock Yard Company of Chicago. From the entire Northwest, as far as Kansas, aye, and Texas, the live stock of the country converges towards the Western Metropolis, on its way to market for the East or Europe, and on every single animal that arrives there an exhorbitant profit is made. Feed is supplied at an extortionate price, the handling of the animals is brutal in its cruelty and detrimental in the damage it inflicts upon them, while even the hotels connected with the yard charge a price in accordance with the company's other exactions, while their fare is as shabby as the rest of its conduct. This abuse has ceased to be a local grievance; its evil consequences extend over so wide a territory that all of us are deeply interested, and while public opinion everywhere should condemn it, local legislation should promptly put an end to it.

RURAL PAPERS AND EXPERIMENT FARMS.—The Western Rural needs an experimental farm before its ambition can be satisfied. *Every* agricultural or horticultural paper needs such a farm if it cares to make its teachings original and trustworthy. It is also necessary—the farm procured—that the editor should spend not less than one-third of his time, during the growing season at any rate, *in the field.* And he must work with his own hands, as well as see to it that his instructions are carried out by others. It seems to us that the time has passed when an editor can sit in his office, week in and week out, year after year, and yet instruct farmers What to do and How to do it, who are themselves *practicing* farm work from morning till night. No matter how thorough his farm education may have been, farm methods are constantly changing. New seeds are brought to notice every season. Cross-breeds and hybrids of fruits, grains and flowers are to be carefully tested. Improved or new agricultural implements are every year to be examined and their comparative excellence ascertained. An editor cannot shut himself up in his office and yet know about such matters.

THE COST OF EXPERIMENTS.—It is a matter of surprise that there are many in Michigan (as in other States) who insist that the Agricultural College should conduct a great number of experiments in the interests of agriculture and horticulture and yet return to the State, "dollar for dollar," all it receives from the State. The object of an experiment is to find out something of value. If such experiments could be conducted and yet return to the experimenters all they cost in time and money, we should not need *public* institutions for such purposes; private enterprise would prove ample. We know from our own experience upon the Rural Farm and Grounds that valuable facts or results cannot be obtained without a great amount of painstaking, tedious labor. And the worst of it is that they are rarely obtained even then. In experiments the chances are largely *against* success, and the adverse ratio becomes greater according to the value of the information sought. Had Dr. Lawes, of Rothamsted, been obliged to make his experiments "self-supporting," they would have been ended in their infancy, instead of being conducted perseveringly, patiently, through 40 years.

WEATHER PROPHETS.—"He that observeth the wind shall not sow, and he that regardeth the clouds shall not reap," is the Scriptural warning against the weather-wiseacres; but, alas! like too many other Scriptural warnings and injunctions, it is too often disregarded or forgotten. The weather prophets have of late been contradictory in their vaticinations, Vennor, of Canada, foretelling an early and severe Winter, with a "very" universal superabundance of snow; while Devoe, of New Jersey, predicts a mild Winter, with more slush than snow and rain than frost. The New York Herald's private prophet agrees, in the main, with the Canadian as to the earliness and severity of the Winter; but while the latter is content to draw his conclusions from the meteorology of North America, the Herald man, disdaining all domestic sources of recondite information, goes to mysterious Asia for the cause of the phenomenon. There he finds that throughout the vast and arid wastes of the central and northern parts of that mighty continent the atmosphere this year is exceptionally dry and that the earth is therefore losing a great deal of its heat to a cloudless sky. Hence the formation there of intensely cold waves that will move eastward across Behring Straits and over the Rocky Mountains, whose snowy summits will add to the frigidity of the icy currents on their cheerless way across the continent to the Atlantic. Phew!

DEVON CATTLE.—We are glad to see that more attention is again paid to this beautiful and highly useful race of cattle, both at home and abroad. They have been partially overlooked for some years past, owing to the great rage for Short-horns. Nothing is equal to them for working oxen of a medium size; their beef is of first quality; and some of the families are still bred to retain their original great milking points.

By late sales in England, we notice that Devons have fetched fully as high prices as the average Short-horns, and we understand it is nearly the same in our own country. They are the most profitable of any breed of cattle to be reared on short pastures or hilly or mountainous lands—they are so hardy and active they will thrive and get fat on these, where larger animals could not. The only objection urged by some few persons against Devons is, that they do not mature quite so early as Short-horns, and that they are from one-fifth to one-fourth less in size. But on the rich pastures of the West the breeders are increasing the size somewhat, and are striving for earlier maturity. To the first of these we are opposed, for if the size is much increased it will unfit Devons to occupy the lands profitably for which they are now fitted. A few months' earlier maturity would be beneficial, and if it is attained without loss of any other good quality, it will of course prove advantageous to the breeder, and more especially the feeder.

SWINDLERS ABROAD.

ABOUT six months ago, and again three months since, we warned our readers against the untrustworthy character of the Chicago Produce Exchange Company, which, both in country papers and by circulars, advertised that they were ready to do a large business in "puts," "calls," "straddles," etc., in grain, on terms very advantageous to their patrons. We insisted that it was a swindle similar to the great stock swindle fully exposed in these columns about a year ago. It is to be hoped, therefore, that none of our subscribers are among the dupes out of whose pockets this swindling concern filched the $100,000 for which it has just failed. In view of the unusually large number of swindling concerns at present operating among farmers—supposed to be flush after selling their crops—we shall at once resume our exposures of such frauds, temporarily suspended during the Summer lull in their operations. We beg our readers, therefore, to promptly inform us of any such rascals "working" in their neighborhoods, giving us the fullest possible information, to enable us to "diagnose" their cases for the benefit of our readers at large. Even in spite of the extreme caution with which we admit advertisements into our columns, we have been twice deceived into admitting the advertisements of parties who failed to carry out their engagements. In both cases we promptly exposed these so soon as we were informed of their dishonesty, and should we ever in future be imposed upon by similar frauds, we shall be delighted to make their real character known so soon as we learn of their misdeeds through our friends or otherwise.

IRISH AGITATION.

DID it occur to any of our readers on Thanksgiving Day to be thankful that he was neither an Irish tenant nor an Irish landlord? For ages the condition of the former has been rescued from absolute misery only by his natural buoyancy and unambitious contentment. Satisfied with little, his landlord has always taken care that he should never have much, by wringing from him every farthing he could make beyond enough to supply the bare necessaries of life. Never "forehanded," therefore, whenever an unfavorable season has visited him, it has brought misery and starvation for him. Little wonder that he has at length rebelled against his oppressors—the trodden worm, we are told, will turn against the foot that weighs down upon it. Of the landlords, eighty are reported to be guarded from the wrath of their tenantry by policemen, both at home and wherever they move abroad. Thirteen are "Boycotted" by the Land League—a penalty more severe than excommunication in olden times. The execrations of the nation are constantly in their ears and the fear of it at their hearts, while the Government is avowedly unable to afford them safety or relief.

The English Tories still insist on coercion before any measure of reform of recognized abuses shall be introduced into Parliament, and in this repressive policy they are supported by one branch of the Liberals, who believe in a "strong" government rather than a just one. The majority of the Cabinet, however, conscious that the crushing of the present movement would settle nothing except what all acknowledge—the superior might of the Government—seem resolved, so soon as Parliament meets, in January, to introduce a bill looking to the ultimate establishment of peasant proprietorship in Ireland. The late expedition of the military to collect the crops on Lord Erne's estate, near Ballinrobe, seems to have convinced all that it is as unwise as it is inconvenient to attempt to gather in the harvest with the bayonet.

A SPECIMEN RAILROAD OUTRAGE.

THE latest specimen of railroad extortion and arbitrary tyranny was perpetrated in Baltimore by the Baltimore and Ohio road, last Friday. Like a thunderbolt from a speckless sky there burst upon the grain trade of the city, without a word of warning, the announcement that after the 6th of December, the rates of storage on wheat in the railroad's elevators would be raised to three-sixteenths of one cent per bushel for five days or parts of the same, and 2⅜ cents per bushel for each and every ten days thereafter or parts of the same. These exorbitant charges are exacted on the ground that the storage capacity of the elevators is insufficient to accommodate the vast bulk of grain accumulating in the city, and that this heavy tax will force the owners of the grain to ship it promptly, and thus make room for more cereal shipments over the road from the West. The capacity of the elevators is 2,850,000 bushels and they now contain 2,703,865 bushels—2,087,158 of wheat and 616,707 of corn. Moreover, several tobacco warehouses in the city are said to be filled with grain and so are many railroad cars on the track, so that the grain blockade is almost complete. At first glance, therefore, it would seem that the grounds for the railroad company's action have at least some plausibility.

It must be borne in mind, however, that the lack of sufficient storage capacity is due to the fault of the railroad company, which thus profits by its own negligence, while the loss falls upon its customers. Last year there was a similar grain blockade which should have warned the company to enlarge its facilities for this season. Moreover, while it levies a heavy tax on its patrons avowedly to force them to ship their grain in the absence of vessels from the harbor, it is itself rushing more grain from the West, thus increasing the embarrassment. Already wheat in the Oyster City has fallen from four to five cents a bushel, while the trade there has become thoroughly demoralized. The Company received the grain with the implied agreement that it should be subject only to the usual rates of storage, and the additional tax arbitrarily imposed on it has depressed values and shaken confidence in the future, inasmuch as the whole trade is thus shown to be at the mercy of the greed of the Company. The grain dealers have entered some vigorous protests, signed a series of condemnatory resolutions, and intend to seek legislation regulating storage charges in future.

BREVITIES.

OUR portraits of distingnished farmers and horticulturists will be continued through 1881.

A *free copy* of the RURAL NEW-YORKER for 1881 will be mailed to any present subscriber who will send us a club of SEVEN.

WE are looking for a fall in the price of American apples in the markets of England. We advise our exporters to ship cautiously at present.

YES, we would esteem it as an exceeding favor if our present subscribers would interest themselves to procure us new subscribers from among their friends.

WE should feel much obliged if subscribers in renewing would state what Departments of the RURAL please them most, and suggest wherein improvements might be made.

THOSE intending to contribute to the Corn Special of the RURAL NEW-YORKER (the first number in the new year) are requested to send in their notes at once.

THE sudden closing of the canals leading to this city has shut up, it is estimated, no less than seven million bushels of grain, and straightway the "bulls" in the produce market have become jubilant at the prospect of higher prices for breadstuffs.

THE port charges in this city have become so excessive that the Maritime Exchange has resolved to take action looking to their amendment. The producer and the consumer are both sufferers from these exactions of the middlemen and it is to be hoped that the self-interest of the public at large will find some means of putting a check upon such extortion.

AUTHORITIES AGAIN DIFFER:—The San Francisco Chronicle from careful inquiries, estimates the wheat crop of California and Oregon at 36,000,000; the Department of Agriculture's Report puts it at 58 680.000 bushels—a difference of 22,680.000 bushels! Last year, however, the actual outcome of the wheat crop on the Pacific Coast was about ten million bushels less than the Department's estimate.

CONVICTED dealers in watered milk have paid fines to the amount of five thousand dollars in this city during the past year. Inasmuch as not one dishonest dealer in ten is detected, and inasmuch as each fellow who has been "found out" in one such offence, has been guilty of a great many undetected adulterations, what a quantity of watered milk must the Gothamites have swallowed during the twelvemonth!

EXPORTS of live cattle to Europe have become very small, owing to the risks during the voyage at this stormy season. A specimen loss was that on the steamer Brandford City which reached West Hartlepool, England, on November 23d, with a cargo of cattle from Boston, having lost 476 head during the voyage. In the three months ending October 31, as many as 11,115 head were lost, or seven per cent.—and that in comparatively mild weather.

THE OHIO HORTICULTURAL SOCIETY will hold its annual meeting at Columbus, December 8th, 9th and 10th proximo. All who take an interest in Horticulture are invited. Local Societies will send Delegates. The Ad-Interior Committee will report. Valuable and interesting papers are expected and lively discussions. Take your fruits for display and for identification. Annual fee of membership $1. Geo. W. Campbell, Esq, Acting Secretary, John A. Warder, M. D. President.

IT has again become necessary that we should state that those desiring specimen copies of the several papers with which we have made special clubbing arrangements, should apply to those papers, viz., The Weekly Inter-Ocean, Chicago, Ills.; The Weekly Detroit Free Press, Detroit, Mich.; The Weekly Globe Democrat, St. Louis, Mo.; The Weekly New-York World, 35 Park Row, New York; The Weekly Pioneer Press, St. Paul, Minn.; and the Weekly Evening Post, New York city. Specimen copies will be sent *free* to those of our friends who apply. Subscriptions for any or all of them will be promptly forwarded by us.

EXPORTS of cattle from Canadian ports have ended for the season, and during the Winter months exporters will deal in American cattle at Portland and Boston. It was lately announced in England that Canadian stock dealers had contracted for 20,000 head of American cattle for shipment to Great Britain, and some of our transatlantic contemporaries became well-nigh hysterical at the bare prospect of the possible introduction of these into the United Kingdom as Canadian cattle, in which event it was strongly insisted that Canada, too, should be scheduled. The announcement that Canadian dealers intend to ship American cattle from American ports, may explain the matter and allay the excitement of our jealous contemporaries.

IT is seldom that Government can regulate the price of breadstuffs in modern times; yet Russia has just given an instance in which the Government has had a salutary influence in this direction. In St Petersburg the price of breadstuffs has lately been extortionate, but on Nov. 9, Gen. Melikoff, in whom are now embodied the executive powers of the Empire, gave a significant hint to the municipal authorities with regard to the necessity of lowering the starvation price of bread, as well as of grain, flour, etc. Straightway the prices of flour, etc, were reduced about 20 per cent. and that of bread nearly one-half. That the high prices were the result of speculative extortion is shown by the fact that the stock of grain stored in the city is considered sufficient for the ordinary requirements of two and a half years.

THE National Grange at its late meeting in Washington is reported to have passed resolutions demanding that the Bureau of Agriculture should be made a Department, and that its head should have a seat in the Cabinet, demanding an anti-discrimination railroad law, a revision of the patent laws and the enactment of a graduated income tax. It also pledged itself to hold each senator and member of Congress responsible for his action with regard to these resolutions, and to oppose, without regard to party, any member who may fail to support the principles embodied in them. Several of these resolutions have for years been persistently supported by this paper, and what is wise and praiseworthy in the others shall receive our hearty concurrence.

THE French government has reduced the duty on imported sugar from 73 francs 32 centimes, to 40 francs, the new tariff having gone into force last month. It will be interesting to notice what effect this reduction will have upon the beet sugar industry of the country, which is supposed to have flourished mainly on account of the almost prohibitive duty upon its foreign rival. There is no doubt that the immediate effect will be a large increase in the consumption of sugar, and consequently an increase in activity at the great sugar refineries at Paris, Nantes and Marseilles. Since 1844, the yearly consumption of sugar in England has increased from six to sixty pounds per head of the population, while in France it has remained almost stationary.

Literary Miscellany.

THANKSGIVING.

EDGERTON,

We'll offer up, in terms sincere,
And free from all alloy,
The thanks we owe to Him who gives
The blessings we enjoy—
The seed-time of another year,
And harvest of abundant cheer.

No epidemics scourge the land,
No pestilence, or war,
With gospel light and liberty,
We're blessed beyond compare.
Then let us offer thanks sincere
For blessings of another year.

INMATES OF LESTER HALL.

(Continued from page 790.)

Lawrence Carewe hesitated a moment. Looking down at the fair, childish face, he saw the shadow of pain in the sweet hazel eyes, the little firmly-closed mouth, and he wondered whether it were possible that this young girl felt the pang of unrequited love which had once stabbed his own heart.

"Do you think he loves her very much?" repeated Lottie Tyrrell, with a piteous prayer for a negative answer in her hazel eyes.

"I am sure so," Dr. Carewe answered, firmly—cutting deep, like a skillful surgeon; and although he saw the shiver which ran through the slight figure, he made no further remark, but began talking to her of different subjects, in his pleasant, cheery manner, and let her emotion pass over unnoticed: putting her so completely at her ease that in a few minutes, when Ernest came up with a smile and outstretched hand to greet her, calling her his little playfellow, she was able to reply in the same playful tone; and even when he said how pleased he was to see her then, as he wanted her to know Cecil, she said calmly she was very glad also.

Poor little Lottie! it was very hard, although the story is a common one enough.

Ernest Kleston had been visiting at her father's some months previously, and he had taken a fancy to the pretty hazel-eyed little damsel, and had treated her to a kind of elder-brotherly kindness, which she had mistaken for a warmer feeling and cherished in her heart, until her own liking for him had deepened into love. Fortunately he was very young, and at an age when such wounds are soon healed; but she felt it keenly now, and there was a touching heroism in the calmly-cordial manner, which Dr. Carewe saw and admired.

Meanwhile in her own rooms, having replaced her traveling attire by a warm dressing-robe, Cecil had dismissed her maid and was sitting over her fire with a hot blush burning on her fair face and a feverish light in her lustrous brown eyes, while her fingers—on one of which gleamed Ernest's beautiful diamonds—were locked tightly together.

The sight of Dr. Carewe had been unexpected, and the sudden tide of joy which had overwhelmed her when she caught the sound of his rich, deep voice had startled and bewildered her; but it had soon ebbed in the strange, stinging agony which followed, when she had met the cold glance of the gray eyes which once had looked upon her so tenderly, and felt the cold, touch of his hand as it met hers.

Sitting there in the warm, luxurious chamber, before the scented wood-fire on the hearth, Cecil Lester shuddered through all her limbs at the recollection of that look and that touch; but the next moment she threw back her head proudly, and her eyes flashed with a sudden light. It was thus, then, he meant to treat her—to treat Cecil Lester, the petted, idolized beauty who reigned supreme wherever she went. How dared he? He! the man who had trembled at her touch—who had prayed for her love—who had bowed himself to the very earth before her—who had prayed to her to have pity! He to scorn her—he!

But the next moment Cecil's proud head sank, her eyes filled with slow, salt tears, and her lips quivered. The pride was but shortlived; the revulsion of feeling followed immediately. He had loved her, and she had wronged him. Was it not right that he should despise her? Had she not earned his contempt? How infinitely beneath him she was! Ah, if she could but win him to think more kindly of her—to give her a fuller pardon than he had given her yet—perhaps in time he might give her back the love she had forfeited; he might——

Cecil started up shivering in every limb, and pressing her hands to her heart as if she wished to check its furious throbbing. How dared she let such thoughts as these enter her heart? she, the betrothed of another—she, whose allegiance, whose loyalty, whose affection, were all the possessions of another, whose wife she would be, if she lived, in a few months! If she lived, and she was young and healthy and strong—she was not likely to die, she thought bitterly. Oh, if by some fortunate reading of her destiny; it were to come to pass that she should have consumption and die, as girls young and strong and beautiful as she had done, would he be a little sorry—would he care?

Poor Cecil, she was almost desperate as she paced up and down her room with restless, eager steps, and without intermission. If any of those to whom she had accounted for her pallor by the plea of fatigue had seen her then, they would have disbelieved that plea entirely. There were no traces of fatigue in the fierce energy and passion of every movement, until at length her strength failed her, and she sank down in her chair faint and exhausted, her mind in a tumult, her brain in a whirl. She had no idea of being faithless to Ernest, she had accepted him freely as her lover; she had promised to marry him; and although she had told him that she had not given him measure for measure in love, she meant to be a good wife, and make him happy if she could. But when she had done so, she had not faced the possibility of Lawrence Carewe's being exonerated from all share in her brother's downfall. She had owned to herself that she loved him, but she had resolved to crush that affection as unworthy of her, and as a means to that end she had accepted Ernest; and when the doctor's innocence had been proved—when she had known that the man whom she had so cruelly injured was the man who had tried to help her brother, and alleviate the misery of his last days of suffering—she had written and asked his pardon; she had tried to force herself to believe that she had no love for him now, but she had not anticipated such an ordeal as his presence in the house with her.

She had met him at Mattie's wedding, but her manner had been cold and stately as his own. Then she had thought herself justified, now she knew that she had erred grievously, and she had no courage to face the torture of his cold words and frigid looks. How should she bear it?

Fortunately, she was too proud to show how she suffered, and by the time Lisette came to commence the task of dressing for dinner her mistress was quite herself again.

"Mademoiselle is looking her best to-night," says the Frenchwoman, well pleased as she surveyed the fruits of her labor when Cecil was dressed: "I am glad, as it is always well to make a good impression at first."

"But I know almost every one here," said Cecil, rather languidly.

"But there are many young ladies here whom mademoiselle does not know," said Lisette, straightening a fold of the long black velvet robe, cut in a straight, old-world fashion, which Cecil wore.

"And they are all so anxious to see mademoiselle."

"Indeed!" and Cecil laughed her slight, languid laugh, and passed out of the room, looking so wondrously lovely in her black velvet and pearls, that it was no wonder that little Lottie Tyrrel, who was sitting by Dr. Carewe in the drawing-room as she entered, drew a long breath of admiration and surprise, and said, half to herself and half to the man at her side:

"How beautiful she is—how beautiful! No wonder that he loves her!"

"No wonder," said Lawrence Carewe.

CHAPTER XXIII.

CHRISTMAS FESTIVITIES.

Mrs. Brayburn's at Christmas time was, as I have said, a very pleasant place to visit at; and when I said so I spoke advisedly. Not only was it pleasant for her guests, but for the little folk in the nursery and school-room, whose holiday-time it was and who had every enjoyment suited to their ages and capabilities of being amused; but the grand event for the little people in the neighborhood was the children's party, which took place on Christmas eve, and possessed the additional attractions of snapdragon, blind-man's buff and charades, in which amusements everyone, old and young, was expected to take part. It was almost impossible to feel depressed or low-spirited in such a cheerful atmosphere; and even Dr. Carewe threw aside the gravity habitual to him lately, and entered into the fun, submitting to be blindfolded with very good grace.

"Now, children, you must be very careful," said Lottie Tyrrell, who was queen of the revels, and looking very pretty and very childish for her seventeen years in her pretty velvet dress and her bright hair showering down over her shoulders. "Dr. Carewe has very long arms, and he will be sure to catch some one soon."

"He shall not catch me."

"Nor me."

"Nor me," shouted the gay, little voices, as the children rushed helter-skelter across the hall, while their elders contented themselves with finding places of security in corners and behind pieces of furniture, while the blind man groped his way about and uttered threats of vengeance against the captured one.

"Whoever I catch I shall kiss," he said, ferociously, as he made a dive at Lottie, who slipped by him with the most adroit agility, and almost ran into Mr. Kleston's arms.

"Did you hear that frightful threat, Lottie?" he whispered, gaily, "if he is allowed to carry it out, I shall be blindfolded next time and I shall catch you."

The girl's fair face flushed and paled alternately as she laughed and turned away.

At this moment Cecil appeared at the top of the marble staircase, and came slowly down, smiling to herself at the gay shouts which proceeded from the happy children. As she came she was fastening in her belt a sprig of flowers, and, absorbed in the occupation, she did not lift her eyes until, as she entered the hall, she walked straight into the blind man's arms, and he held her firmly, but gently, with one hand.

"Fairly caught," said Mr. Brayburn, laughing.

"But he must guess who it is, papa," said one of the children, gleefully; "and Dr. Carewe says he will kiss whoever he has caught."

"But I will not carry out my threat by compulsion," said the blind man, gaily, as he passed his hand gently over Cecil's sleeve as she stood smiling, but very pale, in his grasp. Still, you know it is Christmas-time, and we are under the mistletoe."

"Not quite," laughed Mrs. Brayburn. "Come, doctor, guess what fair lady you have there, and if you guess rightly you shall talk about your reward afterwards."

"I know who it is," said the doctor, bending his tall head over Cecil, with a very kind smile. "I think I meant to catch her—started with the deliberate intention of doing so. Shall I have my reward, Miss Tyrrell?" he added, as he removed the handkerchief from his eyes, and saw that he held—not Lottie Tyrrell, as he had imagined—but Cecil Lester.

There was a momentary silence as their eyes met; then the children's gay laughter rang forth, and Dr. Carewe removed his hand from Cecil's wrist, bowing low.

"I beg your pardon," he said, gravely and coldly.

And Cecil turned haughtily away, and crossing the hall, sat down in a low window-seat, with a flush of wounded pain still on her face.

"Your threat—your threat! You must keep your threat, and take your vengeance, Dr. Carewe!" said half a dozen children, as they danced about him, shrieking with laughter.

But Mrs. Brayburn hastily interposed.

"Dr. Carewe is too generous to take vengeance on a lady," she said, gaily.

And as she spoke, Lawrence Carewe almost involuntarily looked over at Cecil; and as their eyes met, there was the same entreaty in hers, the same contempt in his.

"Who's the next victim?" said Lawrence, coolly. "Shall I sacrifice myself again?"

"I will relieve you, doctor, if you will allow me," said Ernest, coming forward with his usual easy grace. "I am afraid I shall not prove such a generous victor as you have done."

So saying, he submitted to be blindfolded and led into the middle of the hall, where he proved the truth of his prophecy by catching Lottie Tyrrell, and holding her triumphantly under the mistletoe.

"Now, Miss Lottie," he said, smiling into the hazel eyes which drooped beneath his glance, "have you anything to say against my taking my revenge? Have you, Lottie?" he added in a lower voice, bending down.

And the girl grew very pale as she lifted her eyes to his.

"Please do not," she said, tremulously.

And something in her voice and look struck him, and made him, as he loosed her, turn away with a sudden gravity on his own face.

There was no more blindman's buff that afternoon, for the dusk was gathering thickly in the hall, and the servants had entered to prepare the room for snapdragon.

Ernest went over to Cecil's side and sat down with her in the window seat, but both were silent and abstracted. The elders of the party had settled themselves comfortably around the fire. Lottie Tyrrell and Dr. Carewe were standing together. The girl's face was flushed and downcast, her companion's pale and stern, and neither seemed inclined to talk; but Lottie's hand was slipped confidingly through his arm, and his fingers were closed over it. Evidently pretty Lottie and the doctor were great friends.

By-and-by, when the hall was sufficiently dark, the servants brought in the great dish of burning raisins, and the little folks clustered round the table with merry shrieks of laughter and dives for raisins, and Cecil leaned her head wearily against the window-frame, and wondered why the pain at her heart was so strong, and why she felt so unkindly towards pretty, hazel-eyed Lottie Tyrrell.

"You are tired," said Ernest, gently, bending over Cecil.

"I think I am always tired now!" she answered, wearily, as she rose and joined the group round the fire, entering into the discussion with apparent animation; although Ernest, watching her, thought that her eyes were sadder than he had ever seen them, and he sighed at the thought that with all his love, he could not give happiness to this beautiful, brilliant woman who had promised to be his wife.—To be continued.

GLEANINGS.

A YANKEE says that "the man who thinks Poe the greatest American poet must be raven mad."

CONNECTICUT Yankees are making oil barrels out of paper, and the same material will be used for tobacco and sugar barrels.

"LANDLADY," said he, "the coffee isn't settled." "No," she replied, "but it comes as near to it as your last month's board bill does;" and that man never spoke again during the meal.

MR. MOODY'S sermons have been translated into Arabic. Protestant missionaries in Syria read extracts from them every Sunday evening to their converts.

THE aim of education should be rather to teach us how to think than what to think—rather to improve our minds so as to enable us to think for ourselves than to load the memory with the thoughts of other men.—Beattie.

ALL the Nihilists tried for plotting against the life of the Czar of Russia, have been found guilty. Five of them have been sentenced to death and eleven to hard labor in the mines, their terms of punishment ranging from life to fifty years. Three women were sentenced to fifteen years penal servitude.

POSTMASTER General Maynard has directed that all magazines, pamphlets and other like reading matter received at the dead letter office shall hereafter, instead of being sold for waste paper, be distributed to charitable and reformatory institutions in and around Washington.

A YOUNG lady in the country whose beauty formed a matter of general admiration and discussion, in passing a group of officers on the street, heard one of them exclaim as follows: "By heaven, she's painted." "Yes, sir, and by heaven only," she quickly replied. The officer acknowledged the full force of the remark and apologized.

A GLIMPSE OF REMENYI.—When Remenyi touched his violin fondly with the bow it reminded one of a little spring starting out of a nutshell and tripping with sounding footsteps towards the sea. The birds wake up overhead, and come fluttering down to trail their shining wings in the sparkling water, twittering all the while. The stream widened, and, like a ribbon of gold, went flashing through meadows green, past farm-houses where farmers' girls were singing.—Toronto World.

AMONG the improvements at the White House, Washington, which have been in progress during the absence of the President and Mrs. Hayes on the Pacific coast, much praised, is a flooring of encaustic tiles in the large vestibule, into which the main or north entrance opens. This tiled pavement is described as a wholesome relief from a much-soiled and green carpet which did duty there for many years.

THE New York Times says: "Gen. Grant has rented the residence of ex-United States Senator Jerome B. Chaffee, on Fifty-second Street, and will hereafter make his home there. Mr. and Mrs. U. S. Grant, Jr., will also reside at the same place. Ex-Senator Chaffee has taken up his abode at the Union League Club. Mr. and Mrs. U. S. Grant, Jr., will depart for the West in a few days, intending to visit Santa Fe, New Mexico, before their return to New York.

BRIC-A-BRAC.

AUTHORS are spoken of as dwelling in attics, because so few of them are able to live on their first story.

PHILOSOPHY.

What is a tear but water;
What is a sigh but air!
We live to-day, we die to-morrow,
Why should a mortal care?
—Steubenville Herald.

MR. BERGH is appealed to for the relief of animal suffering. The potato bugs in the Far West are freezing to death.—Boston Globe.

A JERSEY, like a coat of mail,
The shapely form incases.
And to a dainty waist can't fail
To add developed graces;
To draw it on requires a knack
Quite easy to attain,
But what a business 'tis, good lack,
To get it off again!

"Is there a letter here in a scented envelope for my wife?" he asked the postmaster, while the green fire from his eyes made the office look like a leafy forest. "Yes, sir," answered the postmaster, as he handed it out. The jealous man tore it open at once, when, lo and behold! it was the milliner's bill for one hundred dollars. The end.

APROPOS to the discussion of sense-perception:

The pharynx now goes up
The larynx with a slam
Ejects a note
From out the throat
Pushed by the Diaphragm."
—Yale Record.

THE Paris Figaro tells a story which Sara Bernhardt tells on herself. When playing in "Ruy Blas," at the Odeon Theater, a fellow threw a loaf of bread at her from the peanut gallery with the remark that he hoped she'd eat it and get a little fatter. The story now circulating about her is that an empty cab drove up to the stage door of Booth's Theatre and Sara Bernhardt got out.

A MAID, as by court records doth appear,
Whom $50,000 made so dear,
Unto her waiting lover sternly said:
"Forego the weed before we go to wed.
For smoke take flame; I'll be that flames bright fanner
To have your Anna, give up your Havana."
The wretch, when thus she brought him to the scratch
Lit his cigar and threw away the match.

WITHOUT AN E.

IT is well known that the letter "e" is used more than any other letter in the English alphabet. Each of the following verses contains every letter of the alphabet except the letter "e:"

A jovial swain should not complain
Of any buxom fair
Who mocks his pain and thinks it gain
To quiz his awkward air.

Quixotic boys who look for joys,
Quixotic hazards run;
A lass annoys with trivial toys,
Opposing man for fun.

A jovial swain may rack his brain
And tax his fancy's might;
To quiz is vain, for 'tis most plain
That what I say is right.

EASILY EXPLAINED.

GILHOOLY got come up with yesterday. He had bought a barrel of apples from De Smith's grocery, which did not give satisfaction.

"What's the reason," said Gilhooly indignantly, "that the further down I go in the apples the worse they get?"

"The reason for that is that you didn't open the barrel at the other end. If you had only done that the apples would be getting better all the time.—Galveston News.

A CHICKEN lived; a chicken died;
His drumsticks and his wings were fried.
His feathers by a dealer dried,
And, very shortly after, dyed.
Soul he had none; admitting that,
How comes it? There upon her hat,
His plumes—a mortal chicken's—rise
A glorious bird of paradise.

THE Chairman of the Committee on Astronomy heaved a deep sigh and reported as follows: "Dis committee am well awar' of de fak dat a comet has recently bin diskivered about 60,000,000 miles on de road to Heaben, an' dat it am now supposed to be approachin' de y'arth at a rapid rate, but de committee sees no speshul occashun to get excited. It will be a month or so before said comet can git here, an' de chances am dat de 'arth will mash it at de fust bump. Dis committee advises de members of de club to git dar' butes tapped, dar' overcoats patched and dar' wood hauled up fur Winter, an' let de comet bizness take keer o' itself."—Free Press.

A COUPLE of old darkies met the other day, and began talking over matters and things. "How is

ole Colonel Jones comin' on, what used to own you before de war? He is so ole he must be gettin' to be childish and losin' his reasonin' powers." "Don't know nuffin' about him. Hain't seen him since befoah last Christmas." "Why, what's de matter?" "Ain't got no use for such old gemmans. Last time I was dar, I fotched him a big red fish I had kotched. I tole him ef he would gimme a tableknife, I would scrape an' clean de fish. What do s'pose he sed?" "Asked yer to come in and get a dram and chat awhile about ole times on de ole plantation." "No, sah. He tole me, ef I couldn't borry a table knife from some ob de neighbors, dat he would radder clean de fish himself. I s'pose he was a-fearcd I'd be keerless in handin' de knife back, when I got done wid it." The other darkey rubbed his chin and remarked: "I see by dat ar dat de ole man's still got de use of his reasonin' powers."

For Women.

CONDUCTED BY MISS RAY CLARK.

THAT'S MY BOY.

Big blue eyes with roguish twinkle;
Dimples ever running riot;
Busy tongue that's never quiet;
Forehead fair, with ne'er a wrinkle;
Clustering hair of sunny hue;
Nose a little snub 'tis true—
That's my boy!

Never ending, still beginning;
Pockets full of dirt and crumbs;
Crazy over horns and drums,
Noise in all things ever winning;
Bragging he of "Jim" is master,
While I run for white court plaster—
That's my boy!

So it goes—some pain some pleasure,
Wondering 'twixt tear and smile,
Will it be thus all the while—
Joy and grief in equal measure?
Shall I cry, in bitter sorrow,
In some dread far off to-morrow,
That's my boy?

Ah, no, no! Mother's eyes look far ahead,
And mine see with tender pride,
By a gray-haired woman's side,
One whom, now that years have sped,
Brave, yet gentle, is her stay:
One of whom she'll proudly say—
That's my boy!

NOVELTIES IN NEEDLEWORK.

Needlework is classed under two heads Useful and Ornamental, or I should rather say was, substituting the past for the present tense, as of late we have had another class, which though coming under the second heading, is yet given a title peculiarly its own, that is, Artistic Needlework—work which more nearly approaches the painter's art than does any other kind; work in which the colors are so beautifully blended, and the idea of the designer is so well carried out that the needle becomes the rival of the brush in a certain sense. For centuries the needle has played an important part in the domestic history of the highest in the land. The most wonderful piece of needlework is probably the Bayeux tapestry, said to have been worked by Matilda, wife of William the Conqueror, which measures two hundred and twenty-seven feet in length by about twenty inches in breadth. The subject is the Conquest of England, and the tapestry is most valuable as a historical document representing as it does so many principal events of that time unmentioned in history. Queen Elizabeth was clever in the use of the needle we are told. Probably she found the occupation soothing to her fiery temper, for it has a wonderful charm, even a long prosy seam being somehow most restful to the mind.

Sewing-machines have done wonders for us; but in proportion to the celerity with which we get over our "plain" work, we find something new in the "fancy" department for which the needle only will answer. Only a few years since we were content with plain hems and seams on our household linen, with simple initials in the corners, marked in red ingrain cotton—even the cotton being superseded in some instances by marking in ink; now we are getting more luxurious, bed linen must be embroidered in colors, and trimmed in the most dainty manner with lace and frilling.

While on the subject of bedrooms, I may suggest one or two novelties for their decoration. A light quilt to throw over the bed in the daytime made at a trifling expense. Almost every housekeeper possesses two or three old linen sheets which have become too thin for actual wear; these make capital foundations for quilts. Choose one much larger than the bed, so that it may hang over the sides; stitch a false hem all round with colored cotton or silk. Get some Turkey red twill, cut into strips about two inches broad; stitch these lengthwise down the sheet at intervals, then add a band of the same all round, about an inch in from the hem, and finish off with an edge of furniture lace. A pattern in wools can be worked on the plain spaces between the red, if liked; and, if the *white* ground of the sheet is disliked, it can be stained the fashionable color by dipping it in clear strong coffee, taking care that every part is well saturated; the lace edging should then be coffee colored as well.

Crochet is looked upon as very old-fashioned fancy work now so many new ideas have taken its place; yet those who are clever at crochet, and who do not take readily to new-fangled notions, need not despair, as some of the prettiest antimacassars of to-day may in part be made from squares of this work, of a pattern as fine and lace-like as possible. As the artistic taste of the time has decreed that white is too cold and hard for decorative purposes, these squares must be "dipped," to give them the tinge of old lace. To the crochet join alternate squares of satin, satteen, silk, or velvet, work over the joins with old gold silk, with a star of the same in the center of each square; border with an edge of crochet, and you have a handsome antimacassar. The silk or satin squares should, of course, be of one color—say, deep red, or rich purple; and, instead of stars, they might have a bunch of tiny flowers embroidered in the center, such as heather, or violets.

Another kind of fancy work, which has somewhat fallen into disrepute, is patchwork. It is undoubtedly fidgety work, as if one side of a diamond, or hexagon, be but the twentieth part of an inch longer than the other, it spoils the whole pattern, and must be picked out at once. Carefully cut shapes in tin are the best guides for cutting the papers, and last a lifetime.

Patchwork ought to rank as art-needlework, for where the worker has an eye for color, knows how to blend her shades well, and to choose pleasing contrasts, the result is beautiful. It can never be merely mechanical work, as a certain amount of invention is necessary as the worker goes on. In Germany it is known as "silk mosaic," a most appropriate name, as it strongly resembles mosaic work. Besides the ornamental qualities of patchwork, it is economically useful, as scarcely a scrap need be thrown away as too small, the tiniest bits of chintzes, cretonne, silk, ribbon, or velvet proving themselves worthy of a place.—Correspondent.

MANNERS.

When, in general conversation, certain opinions are pronounced or propositions advanced at variance with, or in opposition to, your own ideas, do not rush into an argument. A disputatious person is never a favorite. If you do not agree with what is said, it is best to remain silent. Of course, if you are asked for your own opinion, give it clearly and firmly, and yet in a manner that cannot be construed as offensive by those holding different views; and if the matter is one with which you are only partially or not at all acquainted, own the fact rather than slavishly follow what another has said. No one can know everything, and the candid expression that you are not competent to judge in one case will cause your opinion on other points to have all the more weight.

Some people bristle with objections like a porcupine with quills. No matter what is mentioned or proposed, there comes an objection in a moment. Such a habit may be almost unconsciously acquired and indulged in, but it is a very vexatious one.

Should you meet with a person of this temperament do not attempt to defend your own views. He would continue unconvinced; so drop the subject and turn the conversation into another channel.

If a person appropriates to himself the best seat in the room, or stands with his back to the fire, or yawns while he is spoken to, or, in fact, does anything which shows selfishness, indifference, or disrespect, it is needless to say he creates an unfavorable impression, and displays want of proper training.

It is always well to comply with, and defer to, the wishes of others as far as possible. Should a person of greater age or higher rank than yourself desire you to precede him, either in passing through a door or entering a carriage, the proper thing to do is to obey immediately.

Precedence is always given to ladies—so, in ascending or descending a staircase the lady should go first. The contrary is stated in some books on etiquette, but this is not in accordance with the usages of the best society.

At church the gentleman holds open the door, and the lady precedes him up the aisle, stopping at the pew-door for the gentleman to open it. Many ladies, however, do not wait, but open the door themselves and enter at once.

The only occasions when the order of precedence is reversed are on entering a theater or concert-room, or walking along any crowded thoroughfare. The gentleman in these cases goes first to clear the way.

With regard to other cases of precedence, be more solicitous about giving others their position than about taking your own.

A lady should not be permitted to defray the cost of her entrance-fee to any theatre or exhibition, or to pay for refreshments, &c. If she insists upon reimbursing the amount the gentleman must comply with her wishes.

Except in large households, where servants are constantly in attendance in the hall, it is customary, before allowing anyone to leave the room; to ring for the servant to open the front door. Everyone is entitled to the civility, and its omission may cause resentment. Except, of course, when you accompany your visitor to the door yourself, as you would do if you wished to show especial respect or regard, or when you are on such terms of intimacy with your visitor that all formality is dispensed with.

When a lady is about to leave a room the gentleman should always rise and hold the door open for her to pass out.

If you wish to say pleasant things and avoid disagreeable ones, be attentive to the faces, manners habits and appearance of those in whose company you find yourself. A homely but pithy old proverb tells us, "It is not well to speak of the gallows to a man whose father was hanged." Beware, then, how you plunge into personalities or make critical remarks upon the mental shortcomings or personal defects of others. If you are thoughtless and inattentive, remarks which you intend as generalities may be taken to be personal, and great offense given. A person addicted to the habit of passing adverse criticisms upon almost everything is only tolerated, if not shunned—never liked. Do not, therefore, set up for a critic lest your friends should say, "Do not invite ——; she is sure to say something unpleasant to somebody. We must only invite her when we are quite alone."

Many well-meaning and otherwise likeable persons are guilty of this fault, and that only through sheer carelessness or thoughtlessness. The remedy is to take care always to think twice before speaking once.

INTENTIONS.

In response to a request from our friend and contributor, Mrs. A. L. J., and also the outgrowth of a preconceived thought of our own, we will, in the succeeding issue, give cuts of articles suitable for Christmas presents, most if not all of which may be manufactured at home. More or less expense may be incurred in making, according to the taste and pecuniary ability of the makers. It has been our good fortune to visit the establishment of Lord & Taylor, a leading New York house, and although our compositor politely informs us that "no more copy will be received for the current number," we promise a report of this also for next week.

We here take occasion to discourage our friends from sending us poetry, as we have a large stock in store, much of which by necessity, will have to be consigned to the waste basket. Thanking the senders for their good intentions, we suggest that we will be pleased to receive anything else.—R. C.

ABOUT WOMEN.

Miss Genevieve Ward, the actress, speaks very many languages, including Russian.

A Pittsburg paper says that Mary Anderson is billed to play in New York for five weeks in December. It takes the handsome Mary to spin out time.

Miss Parloa has begun her fourth season's work at Lasell Seminary, Auburndale, by an introductory free talk on "Woman's Work."

The daughters of the Duke of Richmond are persistent and successful fisherwomen, and as catchers of salmon are said to be rivaling their countrymen.

Ague, biliousness, drowsiness, jaundice and rheumatism, Hop Bitters removes easily.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ONE WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

Sabbath.—I give the children permission to study their hymns from any part they may choose, and sometimes they make a wide range, ambitious Lonsdale giving me a page from Milton, while the girls generally choose Whittier, knowing he is my favorite. To-day Celia came to me to recite one of his most beautiful poems, and I told her the old Quaker was almost a saint already. One verse in particular is full of trust and Sabbath rest:—

"All as God wills, who wisely heeds,
To give, or to withhold,
And knoweth more of all my needs
Than all my prayers have told!"

Karen, who has a fancy for looking into odd corners to find something beautiful I have not seen, came to me with a sweet poem called "Sufficient Unto the Day," and it ended in this wise:—

"And whatever He sends from day to day,
I am sure that His name is Love,
And He never will let me lose my way,
To my *rest* in His home above."

All about this day of rest. I suppose it has often occurred to the reader as well as to myself, that the world would soon become demoralized if the Sabbath was ignored, or if God had gone on improving the world and neglected to rest on the seventh day and hallow it. But in this grand work of creation nothing was forgotten.

We have a habit, when the day is done, of sitting around the open fire and telling in the twilight what we have thought of the day's discourse, or of our readings if we had been housekeeper in our turn. To-night I was greatly amused by Janet's rather original ideas on the subject of the morning service in the Scotch Presbyterian church to which she belongs.

"It's no use talking," said Janet, giving the fender a little push with her foot; "for my part I'm about tired of hearing one woman abused from the pulpit, and that's Lot's wife. She is held up as an example for all ancient and modern times, and yet there was a great deal of good feeling in her that has never been appreciated by clergy or history. I wonder who could blame the poor woman for looking back? for this human act was enough to place her above selfish Lot, who was only intent on self-preservation. It is not recorded that *he* stopped by the way or went hand in hand with her to help her make good speed. But this tender-hearted woman could not lightly leave her home, where she had sojourned so many years, her kinsmen, no doubt, and neighbors, who were to suffer death all together. The fields and flowers and many a pleasant memory of those she loved must have filled her heart, not too intent on self to think of these things, and so she "looked back," as all of us do, to the brightness of the past, and so she became a pillar of salt, a statue of aridity and thirst, to be for ever derided, the butt and warning of all ages. Over her poor, dead face no loving friend ever wept, no requiem was ever sung, no grass could grow, only the wide waste of land where lava encrusted everything, and Lot went on his way and soon forgot her."

We were all used to Janet's talks, and this one was very interesting, as she gave it with a little indignation in her tone, and now and then a breaking out of broad Scotch in her accent. And then she joined the children in the Scotch version of the 23d Psalm, and united sang in low, sweet tones,

"The Lord's my Shepherd, I'll not want. He makes me down to lie,
In pastures green he leadeth me. The quiet waters by."

DOMESTIC RECIPES.

Favorite Pudding.

One-half cup of butter, one cup of sweet milk, three eggs, whites and yelks beaten separately, two teaspoonfuls of cream-of-tartar, flour to make a stiff batter; steam until done. Serve immediately, with sauce made as follows:—One pint of boiling water, one cup of sugar, butter the size of an egg, and one wine glass of wine. Thicken with corn-starch. A pudding made like the above, and baked with fruits, canned peaches, jam, marmalade, or whatever is preferred, spread over it, is very nice indeed.

Vanity Cakes.

Yelks of eight eggs and one cup of sugar. Knead with flour, and fry in hot fat. Roll them and cut in fancy shapes before frying.

Cracker Pie.

To a common-sized tin, allow one cup of cracker crumbs, one-half pint of water, one teaspoonful of tartaric acid, one cup of sugar and spice to suit the taste. Bake with two crusts.

Frosted Apple Pie

Line a pie tin with puff paste. Slice in apples, sugar them and add a little butter, no water, and a little lemon essence or juice. Bake and when done spread a thick frosting of beaten egg and sugar over it, return to the oven till the frosting is warmed through.

Mrs. L. E. K. Turner.

Apple Short Cake.

Slice enough tart apples to fill two round pie-tins. Make a crust out of one teacupful of sour cream, a teaspoonful of soda, a little salt and flour to roll out. Roll out upper crusts, fit over the apples and bake. The fruit should be juicy and no water added. When done, turn bottom upwards, sprinkle over sugar and a few bits of butter, turn back again, pile one on the other and serve warm with cream or as you please. J. C.

To Dry Sweet Potatoes.

A good way to preserve sweet potatoes for future use when they show signs of decay, is to dry them in the same manner as you would any fruit. Boil, peel and slice quite thin and dry on plates around the fire. When wanted for the table, put the quantity desired into a *closely covered* tin or porcelain stew-pan—iron darkens them—with but little water, not enough to cover them, and let *simmer* two or three hours. When done the water should have evaporated, or what little there is left should be of the consistency of sirup. Mash and serve as you would Irish potatoes, omitting the milk.

Mary B.

Boiling Milk.

The source of the scarlet fever epidemic near London was traced by Dr. Stevenson, a medical officer of health, to the milk sent there from two farms in Oxfordshire. Scarlet fever had previously prevailed in Oxfordshire, and the milk sent out from there was found to contain the infectious germs. The doctor advises all who have the care of invalids or infants to boil their milk before using it. We are not in favor of sounding useless alarms, but in the case of infants or delicate persons we think it as well to boil the milk before giving it, especially when it may come from several cows.

A Mold of Cold Meat.

A pound or a little more of cold meat—beef, mutton, anything except pork—two ounces of maccaroni, one teacupful of fine bread crumbs, a tablespoonful of butter, one egg, pepper and salt. Cut the meat very fine. Wash the maccaroni in cold water then boil for half an hour drain and cut into inch-lengths. Mix with the meat crumbs, butter pepper and salt, mix thoroughly, bind together with the beaten egg and pack into a well-greased basin or bowl and steam for an hour. This is very nice for breakfast or tea, sliced and eaten cold. J. A. L.

Stewed Kidneys.

Three kidneys, cut each into three or four lengthwise pieces, a cup of stock, liquid meat has been boiled in, a teaspoonful of minced onion, pepper and salt to taste and two tablespoonfuls of melted butter. Simmer 15 minutes add juice of half a lemon, skim out the slices of kidney and arrange on thin slices of toast. Thicken the gravy with a spoonful of browned flour and pour over all.

Farmer's Wife.

Boils, Pimples, Freckles, Rough Skin, eruptions, impure blood, Hop Bitters cure.

The Literary Revolution.

Holiday Time.

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JOHN B. ALDEN, Manager.

AMERICAN BOOK EXCHANGE,
Tribune Building, New York.

News of the Week.

HOME NEWS.

MONDAY, Nov. 29, 1880.

Governor James D. Williams, of Indiana, died at Indianapolis on Saturday, Nov. 20, aged nearly 73 years. Gov. Williams was born in Pickaway County, Ohio, from which place his parents removed at an early date to Knox County, Indiana where Governor Williams has continued to reside and to be recognized with the best interests of the State since its organization. Since 1841 Governor Williams has been in one way or another in public positions, but always maintaining the same quiet demeanor and homely garb of homespun which has given him the name of "Blue Jeans." Gov. Williams, like President Lincoln, was tall and ungainly, being six feet four inches in hight, but one of those sturdy, honest yoemanry to which the early progress and prosperity and good society of the new nation of the West are largely due..... Isaac P. Gray, who, as Lieutenant Governor of Indiana, succeeds Governor Williams, is a native of Chester County. His retiracy from the Presidency of the Senate leaves that body a tie, and will make a probable dead-lock in the organization of the Legislature.....The statue of General Daniel Morgan, the "Hero of Cowpens," has been completed by J. Q. A. Ward, the sculptor, and left on the 24th in plaster for Philadelphia to be cast in bronze. It is eight feet and a half in hight, and will surmount a granite column of 16 feet at Spartansburg, S. C. The unveiling, which was to have taken place on January 16, 1881, the centennial anniversary of the battle, has been postponed to April 15. The statue will be ready in bronze on February 22.....Professor James C. Watson, the distinguished astronomer of Wisconsin State University, died on the 23d at Madison, Wis., aged nearly 42 years. He was born of American parents in Elgin County, Ontario, January 28, 1838, spent his boyhood in Michigan, graduated at the University of Michigan, Ann Arbor, in 1857, became a teacher of mathematics there and assistant at the observatory, was appointed Professor of Astronomy in 1859, of physics and mathematics in 1860 and Director of the Observatory in 1863, discovered 18 asteroids, for which he was awarded, in 1870, the gold medal of the French Academy of Sciences; observed great eclipses of the sun at Burlington, Iowa, in 1869, and in Sicily in 1870, and was at the head of the very successful American expedition which went to Pekin, China, in 1874 to observe the transit of Venus, on which occasion he was accompanied by his wife. He discovered while at Pekin a new asteroid which he named after a Chinese goddess, Ne-Wha, celebrated as having once repaired the heavens when they had fallen into ruin. In 1878 Professor Watson observed the great solar eclipse from a station in Wyoming and was prominently connected with the discovery of an intra-Mercurial planet. A year or two ago he was made director of the splendid new observatory at Madison, Wis., endowed by private liberality on condition of securing his services. Besides astronomical charts and numerous monographs, he was author of "A Popular Treatise on Comets" (1860) and "Theoretical Astronomy" (1868), which treated of the motions of the heavenly bodies revolving around the sun in connection with the law of universal gravitation, and illustrated by numerical examples and auxiliary tables.

The N. Y. Commercial Bulletin advises the consolidation of three Northern New England States into one State, thus saving the expense of so many organizations This bids fair to start a discussion of the whole question of State consolidation, the lesser with the larger or adjoining States, that natural boundaries rather than arbitrary divisions be considered. This would unite all New England into one, not very large State, and give New Jersey, Delaware and Maryland to the adjoining States.....The vicinity of Kingston, Tenn., has just been the scene of a most sad occurrence. On the 17th was celebrated the marriage of Joel Hembell, well known in that county, and Miss Dail, an accomplished daughter of Colonel Dail, at whose residence about forty ladies and gentlemen had assembled. Subsequently a reception was tendered the couple and extensive arrangements had been prepared for their entertainment. By some means in preparing the feast arsenic was used instead of soda. About forty persons immediately after supper was served, exhibited symptons of sickness, and five of the number have since died. The father of the bride, who was not expected to live, is reported better. About thirty other persons who were present are reported seriously ill, a number of whom will probably die from the effects of the poison. The poisoning is thought to have been accidental.

A terrible murder was committed at No. 67 Lewis Street, N. Y., on the evening of the 10th. Andrew J. Gillen sought the hand of Mary Segerson in marriage, but the brothers opposed the match. Gillen called on Miss Segerson, but she told him to leave the house. He asked for a glass of water, and when the girl returned with it he caressed her and said, "Mary, I love you." At the same moment he drew a revolver and shot her through the head, killing her instantly. The murderer immediately disappeared, and it is said threw himself into the East River.

M'lle. Bernhardt, a prominent Parisian actress, who has created considerable sensation in Paris and London during the past six months, commenced an engagement at Booth's theater in this city last week, and received one of the largest ovations ever accorded to an actress. She comes under an engagement with Mr. Abbey, theatrical manager, and it is said will make the tour of the United States during the early Winter. A considerable number of her paintings and pieces of sculpture are on exhibition at the Union League Club and their merits variously considered. The discussion of her probable influence upon society promises to be the topic of interest for the Winter.

Chicago is the only one of the five largest cities in the United States, the others being New York, Philadelphia, Brooklyn and Boston, in which the males are in excess of the females by the present census. In New York the excess of females has decreased since 1870, in the other three cities it has increased, almost doubling in Boston, a circumstance due doubtless to the annexation of suburban districts. The total excess of females over males in the four Eastern cities mentioned is 100,912. San Francisco is probably the only large city in the country besides Chicago in which the males are in a majority, owing perhaps to the Chinese.....Unprecedented cold weather has been experienced all over the country. The mercury stood 24° below zero at Hanover, N. H., on the 22. The Hudson river is blocked with ice and continually freezing at and above Coxsackie, N. Y. There was good skating at Saugerties. The Erie canal continues frozen at Syracuse. The ice is two inches thick on the canal at Buffalo. Monday night was the coldest for years at Danville, Va., the thermometer Tuesday morning standing 17° above zero. Lake St. Clair has completely closed at Detroit, Mich. The sudden blockade has caught a large fleet of loaded vessels on the chain of lakes, 74 bound from Buffalo to Chicago being frozen up at different points. The thermometer dropped to 25° below zero at Winnipeg, Manitoba, Tuesday. In Vermont and New Hampshire snow, and some sleighing have been reported. In Michgan and Wisconsin the snow is deep enough for the lumberman to begin logging.

The result of the Mississippi River Improvement Convention at New Orleans on the 16th and 17th, has been to awaken a very important industrial question all along the line of that river. It is claimed from New Orleans that the latitudinal movement of commerce across the continent is artificial and unnecessarily expensive; and that in the nature of things the *drift* must bear the call over the *pull*, and that eventually the business relations of the United States must be reconstructed on that basis.....The contracts have been awarded for the construction of the New Orleans Pacific Railroad from Shreveport to the Mississippi River at Bayou Goula, and work has been commenced. Four thousand tons of rails have been purchased, to arrive at the mouth of the Mississippi before January 1st.

Congress meets Dec. 6th, the first Monday of the month.....President Hayes will sail for Europe next May, according to the Chicago Inter-Ocean. .... The land-league organizations forming in New England are alarming the Canadians, who scent another invasion. The Quebec authorities are evidently preparing for the worst, as they have recently received 10,000 stand of arms and have 2,000,000 rounds of rifle ammunition in the city magazine.....Edwin Booth has telegraphed a protest against the presentation of the Passion Play at the theatre which bears his name, but over which he long since ceased to exercise control. The play is not to be produced.

The statue of Alexander Hamilton, a gift of John C. Hamilton, his son, was unveiled in Central Park, N. Y., on the 22d, before many spectators, including the Society of the Cincinnati, the St. Andrew Society, the Society of Engineers, the St. Nicholas Society, the Hamilton Literary Society, and other organizations. John C. Hamilton made the presentation address, and Mayor Cooper accepted the statue on behalf of the city. Secretary Evarts was expected to deliver an oration on the life and public services of Hamilton, but had to return to Washington before the coremonies.....

The remains of six unidentified victims of the St. Peter, Minn., asylum fire were buried on the 19th. No more missing patients have reported, and it is feared that all reported missing are dead. The list of dead now numbers 32..... "One of the most remarkable traits of this peculiar people in Alaska is their aversion to salt, which they will not eat in any form. I have seen them, when offered a choice piece of corned-beef on the vessel, taste it, and, on finding that it had been salted, spit out the mouthful with a wry face and throw the remainder on the deck in disgust. No matter how putrid a whale or seal may be, they eat it, raw and unseasoned, with evident relish"..... Detroit is forming a company to build the Fontaine locomotive, which some railroad men think will revolutionize the construction of locomotives. The Fontaine engine differs from the standard engine in having the power applied by a single rod on each side running from the cylinder to a large drive wheel immediately above the front driver on the ordinary locomotive. The upper drive wheel is of the same diameter as the lower, but it bears upon a flange several inches smaller than the lower driver, and thus brings into play the principle of large and small pulleys in the driving of ordinary machinery. The Fontaine locomotive also has no dead centers, for the lower driver acts as a huge balance-wheel, carrying the upper wheel past the point where power is lost.

Reports made to the Health Commissioners of Chicago show that diphtheria is spreading in that city very rapidly, and it is stated that the disease is more violent than usual, whole families in some cases being taken sick. The presence of the disease, in many instances, is charged to defective sewerage, and landlords are being compelled to put their houses in good sanitary condition in this respect.....Four months ago a band of outlaws kept the citizens of Fort Pierre, Dakota, a town on the east bank of the Missouri River, in terror till the respectable portion of the community organized a vigilance committee, with the determination of ridding the place of the roughs. Last week the two opposing forces came together, both strongly armed. A fight ensued, resulting in the killing of Arkansas Joe, the leader of the gang, and the wounding of four others. The vigilants escaped unhurt.....Edward Dangan's two daughters, four and seven years old, died Sunday at Kankakee, Ill., from poisoning, and two other children are in a critical condition. Dangan arrived two weeks ago bound for Canada, and has been living in the utmost poverty. He says the children's mother died several weeks ago. A bottle of belladonna was found in the house and Dangan will be arrested, pending the coroner's investigation.

Thomas Hastings, Cassius Nephew, John Ripon, H. Tibbetts, and a boy named Schoemaker were seriously burned by an explosion of powder, at Palmer's Sons' fire works factory, at Rochester, N. Y., the powder being fired by a hot coal on the bottom of a boy's shoe. The boy broke the rules of the establishment by going within the guard-rail above the stove, opening the stove and putting his feet beneath the grate to warm them.....H. S. Maxim, a New York engineer, has invented an electric light and formed a company, which agrees to light the city post-office for $10,000 a year less than has been spent for gas. This light is said to neither flicker nor dazzle, and is very much like Edison's in appearance—a glass bulb, about the size of an egg, enclosing a bit of carbon, which attains a white heat in an atmosphere of gasoline vapor when the electric current passes.....The Department of State at Washington declines at present to furnish any particulars concerning the newly-concluded treaty on the subject of immigration between the United States commissioners and China. It is understood, however, that Secretary Evarts regards the provisions of the treaty as highly satisfactory, and covering the whole subject of Chinese immigration into this country..... White Eagle and a delegation of Poncas are shortly to visit Washington to make arrangements for the removal of the tribe to the Indian Territory.

[St. Louis Evening Chronicle]

People in Glass Houses, etc.

While it may be proper that those "living in glass houses should never throw stones," we think it is eminently proper that those working in glass houses should say a "good word" for anything of benefit to themselves. In this connection, Mr. Isaac Correy, Manager Salem, N. J. Glass Works, remarks: I am pleased to say that I have used the Great Remedy, St. Jacobs Oil, for Rheumatism, with excellent results; other members of my family have also been greatly benefited by its use.

FOREIGN.

In Ireland the agrarian agitation is still kept up at red heat. Things seem to be drifting to a crisis fromwhich the only outcome will be a Fenian rising. The attention of Europe is now directed to the condition of things in that unhappy island, and doubtless other nations are chuckling at the sight of a British Venetia, or Bulgaria, or Poland, where oppression and discontent are as rife as in those foreign dependencies whose sad fate England is accustomed to bemoan. Were it not for the strong military force now in the West of Ireland anarchy would be everywhere prevailing in that section. This morning's cablegram says that the first battalion of the Guards are about to start for Ireland. These number 800, with few or no Irishmen among them. The fact is that in a struggle with the natives, England could hardly rely on the loyalty of the bulk of the Irish soldiers in her army. It is well known that the Fenians have been tampering with the "rank and file," and in case of revolt there will probably be a good deal of desertion. John Bright and his colleague, Mr. Chamberlain, the radical members of the Cabinet from Birmingham, insist that no coercive measures shall be employed against the malcontents, until the effects of reforms of the present land laws shall have been tested. Many say, however, that even if the extreme demands of the Land League were conceded, the agitation would still continue, as what the malcontents really want is a repeal of the Union with England, and that will never be yielded, inasmuch as it would weaken the Empire.

[Grand Rapids Times.]

A Builder's Testimony.

Chas. S. Strickland, Esq., of 9 Boylston Place, Boston, Mass,, after relating his surprising recovery from rheumatism by St. Jacob's Oil, says: I cannot find words to convey my praise and gratitude to the discoverer of this liniment.

AGRICULTURAL NEWS.

The assessment this season shows 964,695 sheep in Illinois, an increase of 117,595 over last year. This is the largest number in any year since '74..... .....For the year ended June 30, '79, we imported 39,000,000 pounds of wool. In '80 we imported to the same date as much as 128,131,000 pounds, worth $28,700,000. Although the number of sheep in the country is increasing, the amount of our manufactures is increasing much more rapidly..... .....A couple of French military officers are now traveling through the West, having been commissioned by their government to investigate the horse supply of this country, with a view to ascertain whether in case of necessity the growing demand for horses in Europe could be supplied from America..... .Winter rates on storage of grain in Chicago went into effect on November 15. The rates are 1¼ cent per bushel for the first 10 days or part thereof, and one-half cent per bushel for each subsequent 10 days, until four cents per bushel has accumulated, when the grain is carried free until April 15, '81.....The next annual meeting of the Kentucky State Horticultural Society will be held at Bowling Green, on Wednesday, the 12th of January next.

Maine hay is very popular in Boston, her citizens purchasing 1,000 tons of it weekly. Shippers of live stock to Europe prefer it to any other hay. The crop this year is larger and of more than average quality.....Formerly California wheat sold in the English markets at a higher figure than wheat from any other part of America; but now it sells for less than any other American wheat, because the grain is no longer bright and clean owing to slovenly farming—there has been a loss, from this cause only, of 17½ cents per 100 pounds or cental.

In British India the weather has been favorable for the wheat crop, a good yield of which is looked for.....At Cronstadt in the Baltic, 40 steamers were frozen in during the first week in November, and exports of oats and other grain have ceased for the year.....The Indian corn crop along the Danube is reported to be good and England expects considerable shipments in Spring.....Although the wheat crop of Switzerland is reported to be good, prices of wheat there are very high. .....By the the last estimate France will need about 45,000,000 bushels of foreign wheat this year. About half her requirement last year.....During the week ending Oct. 31, the stock of wheat at Odessa and the other Russian Black Sea ports was very small, and the arrivals from the interior trifling and in poor condition. The Taganrog and the other ports in the Sea of Azov report ditto, ditto. Navigation in the latter ports is closed for the season.....The New York canals were closed by ice on the 24th instant. The amount of grain frozen in on the canals and Hudson River is about 1,662,000 bushels Wheat, 4,757,000 bushels Corn, 216,000 bushels Barley, and 16 000 bushels of Peas. There is no present prospect that the canals will be reopened before Spring.....

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and seaboard ports, and the rail shipments from Western lake and river ports and afloat on New York canals:

	1880. Nov. 20. bush.	1879. Nov. 22. bush.
Wheat	24,190,673	29,772,798
Corn	17,925,815	11,446,692
Oats	4,296,074	3,179,884
Barley	3,621 098	5,085,287
Rye	853,147	1,247,443
Total	50,896,807	50,728,904

A feature of the trade in Cincinnati is canvassed sugar-cured geese. This is a novel article of commerce, but is said to have a considerable sale. Supplies of geese are obtained chiefly from Canada, ...Some great land swindles by Western forgers have just came to light in Cincinnati..... A. J. Tullis, a lawyer, and Jacob Nina, who were indicted by the Grand Jury for forgery were arrested there on Nov. 23, and Cornelius Wegeldrick, an associate, was also arrested next day. The forgeries with which they are charged are of a startling character, involving deeds to large quantities of land owned by the eccentric millionaire, Jeremiah Tullis, who died two years ago. It is said that some ten thousand acres of land near Fort Dodge, in Iowa, have thus been fraudulently conveyed, and innocent parties are now occupying the property. Other lands in Illinois, Missouri and Tennessee have been likewise disposed of. The method was to make a deed from Tullis to McGoldrick, dated a year or two before Tullis's death. Then McGoldrick would deed the land to another of the party, by whom it would be sold to the innocent victim.....Considerable devastation has been wrought, during the last three years, in several agricultural districts of central Germany, by the hamster, or marmot. In the district of Aschersleben, two years ago, nearly 80,000 marmots were caught and killed on the municipal estate alone, comprising some 30,000 morgen of land under cultivation. Last Autumn the trappers succeeded in capturing 83,000 odd, but the nuisance has re-appeared in greater force than ever this Autumn, and it is feared that nothing short of cremation, inflicted upon the surface of the municipal domains, will rid them of the pest.

The newly organized Farmers' Alliance is reported to be spreading pretty rapidly .....The Department of Agriculture's report of the corn, tobacco and potato crop is as follows:—

CORN.—The crop of corn shows no increase over that of last year, but rather a slight decline for the whole country. The Atlantic States all show an increase, particularly the States of New York, New Jersey, Pennsylvania and Virginia. The Gulf States suffered from drought in the Spring and too much rain during the Summer, except the State of Texas, which almost doubles her product. In the States north of the Ohio River, Ohio and Michigan increased their yield, while Indiana and Illinois decreased. West of the Mississippi River Iowa alone increased her yield. On the Pacific slope California shows an increase.

TOBACCO.—There was less land planted in tobacco this year than last. The decrease was principally in the States of Maryland and Virginia. In Ohio, Pennsylvania and Wisconsin there was a decided increase. Early in the season the weather was not propitious, but in August and September it was very favorable. The average yield per acre, as reported Nov. 1, is 740 pounds, against 795 last year.

POTATOES.—The area planted in potatoes was this year about equal to that planted in 1879, but in the total crop there is quite a decline. The yield per acre is reported this year at an average of 91 bushels, against 98 in 1879 and 99 in 1878. Only three States—Texas, Arkansas and California—report an increase in the yield. All others report a decline more or less. Insect injuries are not of general complaint, but drought is almost universally mentioned.

While there was a falling-off in the value of the breadstuffs exported from this country during the month of October of this year as compared with the corresponding month of last year,—being only $25,711,468 in the former month, as against $33,048,607 for the latter month,—the value of the exports for the ten months ending October 30, 1880, exceed the value of the exports for the corresponding period of the previous year by $23,332,686.....Pleuro-pneumonia has again broken out among the cattle in Virginia, immediately across the Potomac, from Washington. Members of the National Grange in session at the latter place said that, from the investigations they had made, they were confident that if the disease ever crossed the Allegheny Mountains it would result in the loss of millions of dollars' worth of property. The danger was just as imminent at the beginning of this Congress, when pleuro-pneumonia appeared near Alexandria. But Congress only referred the subject to the Committee on Agriculture. That Committeee is organized in the strictest State rights' interest, and has de-

clined to do anything except to make a report so impracticable that it was referred back to the Committee, where it has been suffered to die....

Dr. Pierce's Extract of Smart-Weed is a compound fluid extract of smart-weed, or water-pepper, Jamaica ginger and other ingredients known to be efficacious in curing colic, diarrhœa, dysentery, blood-flux, and kindred affections. It also breaks up colds, fevers and inflammatory attacks. Sold by druggists.

Tropic Fruit Laxative, an agreeable substitute for pills and nauseous purgatives. One lozenge is the dose. Physicians prescribe it. Sold by druggists.

The ladies who some time since were unable to go out, having taken LYDIA E. PINKAM'S VEGETABLE COMPOUND, are quite recovered, and have gone on their way rejoicing.

Kidney and urinary trouble is universal, and the only safe and sure cure is Hop Bitters—rely on it.

Burnett's Flavoring Extracts.—*The superiority of these extracts consists in their perfect purity and great strength.* They are warranted free from the poisonous oils and acids which enter into the composition of many of the factitious fruit flavors now in the market.

The Markets.

SPECIALS FROM THE CHIEF CENTERS.

Until Saturday, Nov. 27.

Boston.—WOOL.—Our sales show a total of nearly two and a quarter million pounds of domestic, and over three hundred thousand pounds of foreign—a very good week's work. The principle operations continue to be centered in domestic wools, and the largest movements are in washed fleeces, California and pulled. Fleeces are fully as strong as ever, owing to the unabated views of holders in the country; and the sales are in moderate sized lots and show a wide distribution. Pulled wools in our market are selling remarkably well. Fine combing is also in good request. Ohio and Pa., XXX, 50@52, No. 1, 49@50, XX and above 48@50, X 47@48, Michigan X and above 44@46, Wisconsin X and above 45@45, New York, 40@43, Vt, N. H., and Maine 40@43, Georgia, 37@40; Combing washed 49@55. Unwashed 35@40, Delaine, washed 48@55, Unwashed 36@40, Texas, eastern 27@30, Oregon, valley 38@40, Eastern 32@35, Nevada, 22@28, Kentucky, unwashed 35@40, Unmerchantable, 33@38, California, Spring, 38@40, Fall, 20@32, Pulled 33@50, Secured 45@95, Tub washed 45@52, Scoured, fleece 60@95, Pulled, Super western 35@38, eastern 45@50, New York 40@45, Extras 40@45, Combing 38@45, Foreign—Canada combing 45@48, do Pulled 37@45, Australian 43@48, Cape Good Hope 29@32, Carpet washed 30@32, do unwashed 18@20, Montevideo 35@40.

Chicago—All kinds of grain active; No. 2 Red Winter, $1.09; No. 2 Chicago Spring, $1.09¼ cash; $1.09¼, December; $1.10¼, January; $1.11¼, February; No. 3 Chicago Spring, 93c@96½c; Rejected, 74c@79½c. CORN, 42c, cash and December; 42½@42⅝c, January; 47⅝c@47¾c, May. OATS, 32¼@32⅜c, cash or December; 32¼c, January; 37c, May. RYE, 91c. BARLEY exceptionally firmer at $1.05. PORK dull and lower at $13@$13 75, cash; $12.20 bid. November and December; $13.70, January. LARD dull and weak at $8 52½@$8.55, cash; $8 55, December; $8.60, January. Bulk-meats dull; Shoulders, $4.05; Short Rib, $7.10. BUTTER—Prices were without marked change. They were firm, especially for good to choice grades, such being in light supply and in fairly active demand. Low and medium grades remain under neglect. Creamery, 30@33; Dairy, choice, 25@27; Dairy, fair to good, 22@24; Ladle-packed, 17@20; Packing stock, 12@15; Grease, 8@10. CHEESE—But slight change was apparent in this market. There was a light demand, a full supply, and a rather easy set of prices. Full cream, September and October, 12½@12¾; Full cream, 11@11½; Part skim, 9@10; Full skim, 5@6; Low grades, 4@5. HAY—Was in fair request and steady. The offerings were only fair, and shippers and local dealers were taking the car lots. No. 1 timothy ₩ ton, $15@15.50; No. 2 timothy, ₩ ton, $13.50@14.25; Mixed, $12@13; Upland prairie, $13@14; No. 1 prairie, $12@12.50. HOGS—Market opened weaker than on Friday; a large number still on hand of a common kind; mixed packing, $4.40@4 65; light, $4 50@4.65; choice heavy, $4.85@5.05. CATTLE—Best firm; others lower; cars very scarce; exports, $5.50@6.25; some fine Missouri in market; good to choice shipping, $4 80@5 20; common fair, $3.80@$4 50; butchers' weak at $2.20@2.90; stockers steady and active at $2 40@3.20; feeders, $3 20@3.40; long-horns and half-breeds, $3.60@3.90; Texans, $2.85@3.15. SHEEP—Market quiet; common to medium, $3 20@3 60; good, $3.90@4.15.

St. Louis.—WHEAT unsettled, No. 2 Red Fall $1.05⅝@1.07¼, cash; $1.07½@1 08 December, $1.09⅞@1.11, January, $1.13@1.14 February, $1.15⅝@1.16⅝ March, No. 3 do. $1 05¼, No. 4 do. 98¾. CORN 43 cash and November, 43¼@43½ December, 43¼ January, 43¾ February, 44¾ March, 46¾@46⅝ May. OATS 34 cash, 33¾@34 December, 35¼@35½ January. RYE easy at 89. PORK dull at $13.90 asked, cash; $13.16¼ January. LARD lower at nominally 8¾, bulk-meats lower; shoulders $4.45@4.50, clear rib $6.90@6.95, clear sides $7.10@7.15. BACON dull, shoulders 6½, clear rib 7⅞, clear sides 8¼. HOGS quiet, Yorkers and Baltimores $4 10@4.20. mixed packing $4.40@4.60, butchers' to fancy $4.60@4.80. CATTLE in good demand, only small local trade, extra heavy fat steers would bring $6. SHEEP in good demand, small supply.

Cincinnati.—WHEAT unsettled, No. 3 Amber, $1.07, No. 2 Red Winter, $1.08, CORN easy; No. 2 Mixed, 50, new, shelled 47. OATS, firm, No. 2 Mixed, 37. RYE active and firm, No. 2 $1. BARLEY active and firm, No. 2 Fall, 97@$1.PORK quiet at $13. LARD dull and drooping at $8.55. Bulkmeats quiet, Shoulders, 4 5-8, Clear Rib, 7¼. Bacon quiet, but steady, Clear Rib, $7.80, Clear Sides, $8.20. BUTTER strong and higher, choice Western Reserve, 24@25, choice Central Ohio, 20@23. HOGS dull, common, $3.90@$4.20, light, $4.25@$4 45, packing, $4 40@$4.00, butchers', $4.65@$4 70 MILL FEED—The demand is more active, especially for Middlings, and prices are higher. Bran sells at $13.00, Shipstuffs at $13.50@$14.00, and Middlings at $16@20 ₩ ton in bulk and 50c more in sacks on track. HAY—There is a more active local and shipping demand and the market is stronger. Common selling at $12@$14, prime do. at $15.50@$16 ₩ ton, and Prairie hay at $11.50 per ton, in bales on arrival. Wheat and Rye straw are dull at $7@$8, and Oat straw firm at $9@10. SORGHUM—Is firmer under moderate receipts and a good demand; good to choice sells at 32@35 per gallon in lots. Sales are made at 1@2c more by the single barrel. CHEESE—There has been a quiet but steady market all the week for prime to choice factory at 12@12½ ₩ lb. EGGS—Under light receipts the market has ruled strong and prices have advanced to 27@28 per dozen for fresh. Fruit house stock sells at 23@25.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Nov. 27, 1880.

BEANS AND PEAS.—Supplies of beans are not oppressive and as a rule all grades are firm, but must be choice to realize extremes. Green peas have declined Wis. $1.70@1.75 prime, So. B. E. peas saleable at $1.80@1.85 per 2 bu. bag.

Marrow beans prime $1.85@1.87½, fair to good $1.70@1 80, medium, prime $1.57½@1.60, fair to good $1.45@1.52½. pea, $1.55@1.80, white kidney, $1.80@1.95, red do. prime $1.85@1.90, fair to good $1.65@1.75 black, or turtle soup, $1.60@1.75, lima, $4.50@5.

BEESWAX—Small sales are noted at 22@24 for Western and Southern.

BUTTER—Anything that points to or tends to diminish supplies strengthens the New York markets, and the favorable turn which butter took last week by the pull of the holiday, is further secured by a recent snow storm. Fancy creamery is decidedly stiff, supplies being restricted to Western, in fact some brands are not offering at the quoted extreme. Selections of other styles are visibly helped with the advancing tone, and besides there is so much stock that obtains in merit by showing better on the tryer in cold weather, that the market may be reported better in some way for all useful goods. State dairies have a good call when they have good long fall tops. Western dairy and factory sell out clean when fresh; all early marks of western are quiet. Roll butter not plenty; only rosy, cloth-wrapped half barrels bring the extreme.

Creamery, finest, 31@33c.; good to prime, 32@33c.; fair to good, 28@31c.; poor to fair, 25@28c.; sweet cream, 28@32c.; State entire dairies, choice, 27@28c.; good to prime, 25@26c.; fair to good, 23@25c.; firkins, in dairies 24@27, pails and half tubs, fresh, 30@31c, good to prime, 28@29c.; fair to good, 25@28c.; poor, 20@23c.; Welsh tubs, tall prime, 29@30c; good to prime, 25@28c.; fair to good, 22@24c.; Western imitation creamery, 22@28c.; dairy, fresh, 25@26c.; good to prime, 22@24c.; fair to good, 20@22c.; factory, late made 20@21c.; other, 15@18c.; rolls, 18@21c.; poor western 13@15c.

Receipts for the week, 26,440 pkgs. Exports for the week, 3,677 pkgs.

CHEESE.—Trade has dragged this week, exporters being very indifferent, and taking only 22,000 boxes. When strictly fancy September was needed 13¼ was met, but other fancy lots have been freely offered at 13, and have been hard to sell, and stocks have been steadily accumulating. Quotations are for

State factory, fancy, at 13@13¼c.; do. good and prime, 12¾@12¾c.; do. fair to good, at 11@12c.; do. half skimmed, 8½@10c.; Wisconsin factory, fine, 12¾@12¾c.; do. good to prime, 12@12½c.; do. fair to good, 10½@12c.; Ohio factory, fine, 12¼@12¾c.; do. good to prime, 11¾@12c.; do. flat, fair to good, 10@11¼c.; do. poor to fair 7@10c.

Receipts for week, 64,097 boxes.
Exports for the week, 23,000 boxes.
Liverpool cab's price, 67s.@66. 7d.
Steam to Gt. Britain, 50s.

COTTON.—Never before in the history of this trade has the market shown the excitement noted the past week. Sales of the options made in one day reached 400,000 bales, an unprecedented total, and once or twice have been above 300,000 bales. Prices have shown an unusually rapid advance, leaving off, however, with some reaction from the best figures. The activity was started by the reports of cold weather South, and possible injury to the crop, and with this Speculators went to work with a will, and as the market went steadily upward a large number of outside orders came in, which with an increased desire to invest by parties in the South, served to increase the confidence. The exporters, and to some extent the spinners, have been kept out by the feverish course of the market, and it is not likely that these branches of the trade will start up until a more settled feeling prevails. The closing prices are for

November at 11 98@12c.; December at 12c.; Jan. at 12.20@12.21c.; February at 12.36@12.36c.; March at 12.53c.; April at 12.64@12.66c.; May at 12.77@12.79c.; June at 12.85@12.87c.; July at 12.92@12.94c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	9	9	9
Strict ordinary	9¾	9¾	9¾
Good ordinary	10⅜	10⅜	10⅜
Strict good do	11	11⅛	11⅛
Low middling	11 9-16	11 13-16	11 13-16
Strict low middling	11⅞	12	12
Middling	12	12⅛	12⅛
Good middling	12⅜	12⅝	12⅝
Strict good middling	12¾	12¾	12¾
Middling Fair	13⅛	13⅜	13⅜
Fair	13¾	14	14

STAINED.

Good ordinary	8 11-16	Low middling	10 7-16
Strict good ordinary	9 9-16	Middling	11 5-16

Receipts for week, 41,470 bales. Exports do., 10,802 bales.

Receipts since Jan 1st, 937,450 bales do in '79, 828,900 do. Exports for corresponding period in '80, 595,867 bales; do. '79, 403,462 do.

DRIED FRUITS.—All articles have moved out well. An increased demand noted for apples especially evaporated lots and low grades of Western, the latter wanted for export, and for evaporated peaches with small fruits having a fair sale. Prices are generally strong. Quotations are for

Evaporated apples at 7¾@8¾c. for better qualities sliced apples at 5@6¼c. for good to choice North Carolina 3½@4¼c. for Va. apples, 5¾@4c. for Tenn. do; 4¼@5¾c for State do; 8¼@5c. for western Ohio and Mich. Peaches at 2?@3c. for evaporated peeled; 14¾@14¾c. for unpeeled do.; N. C. peeled at 18@20¾c. for the better qualities, and 12@13c. for fair to good lots of peeled peaches; unpeeled peaches at 6¾@7¾c. for halves and 6¾@7c. for quarters. Plums at 5c. Blackberries at 6c. Cherries at 18c. Raspberries at 24½@25c. Whortleberries at 12@13½c.

Receipts for week, all kinds, 5,612 pkgs.
Exports for week, 6,741 bbls. of dried apples.

EGGS.—Receipts for the week, 8,342 bbls.; do last week 11,54 . Market firm and higher after an active demand for Thanksgiving, and the possible restrictions of supplies in advent to cold weather,

Near points 33, State and Pa. 30, Western choice, 29@30, seconds, 25@26, Canadian, 27@28, Southern, 28@30, the lower for Tenn, limed State 19@20c., do. Western 18@19.

FLOUR—Has sympathized with wheat in showing marked activity on export and home trade account, and prices higher.

Latest prices are: $3.75@4.50 for very inferior to fancy superfine State and Western; $4.20@5.25 for poor to choice extra State and Western, odd lots and lines; $5.25@5 40 for choice to fancy do.; inferior to good white wheat, trade and family extras, $5.35@6.25; good to choice do. at $6.35@6.85; (very fancy do. up to $7.25, an extreme;) red and amber winter wheat inferior to choice trade and family at $5.25@6.05; round hoop Ohio, $5.20@5 35; and trade and family brands of do. at $5.75@7.00, the latter for strictly fancy; St. Louis at $5.35@6,25 for inferior to good extra; $6.25@6.85 for good to choice and $7.00@7.25 for choice to very fancy brands; Minnesota clear, inferior to fancy at $5 00@6.50; Minnesota "straight," poor to fancy, at $6 15@7.35, and patent inferior to fancy at $6.00@8.50; unsound stock at from $3.20@5.75; city mill extra at $5.15@6.35 for fair to very choice for the West Indies; do. for England, $4.90@5.25 for poor to choice spring wheat, and $5.35@6.00 for winter wheat product; do. trade and family extras, $5.25@7.35; do. for South America, $6.25@6.65, the latter for fancy; No. 2 at $3.70@4.25 for inferior to fancy.

Receipts for week, flour, bbls. 146,500; corn meal, do. 5,658; wheat, bush. 1,645,400; corn, do. 889,300; oats do. 245,300; rye, do. 31,740; malt, do. 88,046; barley, do. 422,550; beans, do., 5,704; rice, pkgs. 1,950.

Exports for week, flour, bbls. 66 134; corn meal, do. 3 576; wheat, bush 734,800; corn, do. 808,890; oats, do. 3,500; peas, do. 5,726; beans, pkgs. 454; rice, do. 1,189.

FURS AND SKINS—There will be no settled prices until later on in December.

FRESH FRUITS.—Exports of apples since Jan. 1st 455 700 bbls; same time last year 210,600 do. The demand is very slack for apples owing to the damage and suspected damage by the late frost. Lots in perfect condition are firm and higher, though only in a small way for trade use; shippers decline to risk exportation.

Baldwins in bbls. $1.50@1.75; Greenings, $1.25@150; Spitzenbergs, $1.50@1.75; Pound Sweet, $1.75@2. Lady apples, $3@7; common to good fancy, $8@10; Liverpool market overstocked with apples, but it is thought a good outlet will arise for points near that city and make room for future business here. Cranberries active and firm; one dealer reports a sale of over 1,000 bbls. during past 10 days, some going to Europe. Cape Cod fancy, $6.75; other $4@6.25; for boxes, $3@2.25; N. J., do. $1.37@1 87. Florida oranges do not turn out very attractively yet; prices good for the style of fruit arriving; choice half bbl. case $3.50@4; fair to good, $3@3 50; one-third bbls $2@2.50. Burton box pears range $3@6. Calif rnia fruits unchanged. Catawba grapes rate 5@7c. in bulk or cases. Isabellas 3@4c. Peanuts firmer with improved sales; Va. hand-picked 6¾c; other grades 3½@4c; shelled 4@5c. Chestnuts ₩ bush of 60 ℔s $3@3.25. Hickorynuts ₩ bush. of 50 ℔s $1.50@1.75, which is easier. Butternuts, western, 60@75c. Black walnuts 50c. Pecans 9½@9¾c.; yield of latter large this season. The readiest market is entertained for this valuable Texan product.

GRAIN.—The market has shown much excitement the past week for all articles. The sudden cold snap, and the detention on the canals in consequence of several millions bushels of grain has been the lever to hoist prices to a comparatively extreme basis. Speculative operations have been unusually extensive, but the exporters have been more or less hindered by the radical changes. Towards the close there has been some reaction. Latest prices are for wheat as follows:

No. 1 white at $1.22@1.24, do. November at $1.22@1.23¾ do December at $1.22½@1.24¾, do. Jan. at $1.24¾@1.26¾, No. 2 white at $1.21@1.21¾, ungraded white at $1.17@1.24¾, mixed Winter at $1 21½, No. 1 red at $1.31, No. 2 red at $1.24¾@1.27¾, do. November at $1.24¾@1.27, do. December at $1.24¾@1.27¾, do. January option at $1.27¾@1.29¾, do. February at $1.29@1.31¾, No. 3 red in lots at $1.21½, ungraded red at $1.17@1.31, New York No 2 Spring at $1.20, ungraded Spring at $1.15. Rye at $1.01@1.07. Barley at $1 for No. 2 two-rowed state. Corn at for New York No. 2 61¼@61¾c., do November at 61¼@61¾c, do. December at 61¾@61¾, do. January at 62¼@62¾, ungraded mixed Western at 58@61¾, No. 3 at 58@58½, No. 2 white at 61½. New York yellow 61¾@63¾, New York steamer mixed at 58@59, new mixed at 61½, yellow southern at 62¾, white southern at 61@63½. Oats at for No 1 white 49, New York No. 2 white at 46¼@47, No. 3 white at 44¾@44¾, New York No. 1 at 45@45½, New York No. 2 at 44¾@45½, do. November at 44¾, do. December at 45, do. January at 46¼@46½, No. 3 at 43¾@44 ungraded white Western at 45@52¾, ungraded mixed Western 43@45, white State at 51. No. 2 Chicago quoted at 45 bid.

HAY AND STRAW.—Receipts continue moderate, demand active and prices strong. Quotations are for

Shipping hay at $1.05; medium to prime do., $1.20@$1.40; salt hay at 70c.; clover do. at 95@1.05. Straw at $1.10@1 15 for long rye; 80@85c. for short rye; and 70@80c. for oat.

Exports for week, 690 bales.

Since June 1st the export demand has nearly doubled.

HOPS.—Shippers are steady buyers, but brewers are doing little, and with some increase in the receipts the feeling is less firm. Quotations are for

	Cents per ℔.	
New Yorks, crop 1880, prime and choice	22	@24
Do. medium	20	@21
New Yorks, crop 1880, low to fair	18	@19
Eastern, crop 1880	18	@22
Wisconsin, crop 1880	18	@22
Yearlings, crop 1879, choice	16	@23
Olds, all growths	4	@12
Bavarians	30	@35
Bohemians	35	@40
Pacific coast, new	23	@25

Receipts for week, 5,086 bales. Exports for week, 3,440 bales.

OIL CAKE.—Western is quoted at $30,50@31 ₩ ton.

POULTRY AND GAME.—The Thanksgiving supply was heavy and as prices were low enough to allow large local loading up the market at the moment is weak and easy, especially for turkeys. There was a better mixed demand than has been noticed on former similar seasons. A good many parcels of long transportation are frosted and sales are thereby hurt. Heavy arrivals expected.

Turkeys, N. J. 13c.; State and Western, choice, 11@11½c.; fair to good, ¾@10 c. Phila., dry-picked, 12@14c. Chickens, d o., 12@13c.; Bucks Co. 11@12c.; N. J. 10@11c.; State scalded, 9@10c.; Western, 9@10c.; poor, 7@8c. Fowls, Phila., dry-picked, 10@11c.; N. J., 10@11c.; scalded, 10c.; State do., 8@9c.; Western, do., 8@9 c.; poor to fair, 7@8c. Ducks, Phila, d.-p. 11@13c.; State scalded, 11@12c.; Western mixed, 10@11c.; poor 8@9c. Geese, choice fat 10@11c.; other, including State and Maryland, 8@9. Squabs, white, $2.00; do. dark, $1.25.

Live fowls and chickens hardly pay for the sending.

Roosters 3@4¼. Fowls and chickens 6@7¼. Turkeys 7@9. Ducks prime to ₩ pair, other 40@60. Geese extra 82, prime $1.75, common to good $1.00@1.25.

Sales of game were very liberal for the festival table and the market is now under a full with easier prices, quail showing the most decline. Venison has a better movement.

Wild ducks, Havre de Grace and Western canvas back per pair $1.75@2; red heads, 75c@$1; mallard 55@60c.; teal, 35@50c. the latter for blue-winged; common 25@35c. Quail, prime, $1.25@1.37 ₩ doz.; other, $1.00; partridge, 60c@$1.12, the latter for State. Grouse, prime, $1@1.12; drawn, 62@80c.; Woodcock, ₩ pair 65@75c.; Rabbits, 25@35c.; Hares, 35@40c.; Venison, best saddle, 15@16c.; poor to fair, 13@14c. Whole deer, 10@12c. Bear, 20c. Wild turkeys, 18c.

PROVISIONS.—Hog products have sympathized with the speculative excitement in breadstuffs and show a sharp advance.

Mess pork quoted at $14.50@15 for spot lots. Bacon at 7.80@7 87½c for long clear, 8¼ for short clear. Beef hams at $18. Beef—Extra India mess quoted at $18@20 for city; $9.50 for extra mess, and $8 50 for plain mess; $11@12 for packet, and $13@13.25 for family mess. Lard, Western steam at $8.15 for spot lots and November 9.12½ for December, 9.15 for January and 9.22½ for February. Stearine at 9 9-16@9¾. Tallow at6¼ for prime.

Receipts for week, beef, bbls. and tcs.: 1,200; pork, 3,575 bbls; cut meats, 32,502 pkgs.; lard, 16,225 pkgs.

Exports for week, beef, bbls. and tcs. 1,800; pork, 4,027 bbls.; cutmeats, 8,760,488 lbs.; lard, 5,553,017 lbs.

SEED.—Clover has more demand and is quoted at 8½@9c. Timothy is quoted at $2.75@2.85.

TOBACCO.—The market has not varied from last week's prices being held steady and demand good.

VEGETABLES.—Exports of potatoes for week, 5,304 bbls.; since Jan 1 '80 195,541 do; do. '79 177,900 do The market is quiet; many lots have been caught in the sudden frost and buyers are suspicious in such an event. Guaranteed lots firm. Eastern stock is not turning out as good as for last season. Onions are scarce and firm. Cauliflower giving out. Celery has a large sale this season and though crop is large prices are very firm for choice. Cabbages higher and tending upwards.

Potatoes, E. Rose Eastern $1.68@1.87; State, $1 62@1.75; do. in bulk $1 37@1.50; Burbank and prolific $1.37@1.62; snowflake $1.50@1 75; peerless $1@1.25 outside rates double heads; sweet choice $2 50@; other, $1.25@1.50. Turnips; w. ₩ bbl., 50@62c.; Russia, 50@75c.; beets, 75@87, cabbage, flat Dutch, ₩ 100, $3@$1.50; red, 5@7; Squash, Hubbard, ₩ bbl., 75c.@$1; marrow, 40@50; onions, white, $5@5.50 yellow, $3.25@3.50, red, $3.25; Chester, $3.25; carrots, $1@1.25; pumpkins, ₩100, $4@8; cauliflower, ₩ bbl. $3@$4.50; celery, per dozen, $1@1.50.

WOOL.—The course of the market is still to favor holders on a very good demand from manufacturers and reserved offerings.

X and above Ohio fleece held at 48@49, XXX Ohio at 50, other Western fleeces 43½@46, scoured California at 77@80, scoured Texas and Cape at 75@90, fall Texas at 21@28, choice fall Texas at 30@34, spring Texas at 18@32.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Nov. 27, 1880.

BEEVES.—Receipts for the week 12,298 head; do. last week, 12,964 do. The beef market loses a couple of days when poultry week is here. The supply is not as large as it looks as a large export took place this week; yesterday more than one-half of the offering went to exporters. Good cattle for butcher's use were consequently firm at full former figures. Medium qualities are off about ¼c from Wednesday's rates. Poor Colorados did not meet a buyer; common dry cows and heifers sold at $10@12.50 per head and 2½@3¼ ₩ ℔ live weight; poor to fair native steers 7@9¾, to dress 54@56 ℔; good to choice 9¾@11, to dress 56@57℔.

SHEEP AND LAMBS.—Receipts for week, 22,471 head; do. last week, 40,869 do. The demand is moderate but with small receipts sellers did not press stock for sale. Market closes 3¼@5¾ sheep; 5¾5¾ lambs; choice latter a shade higher.

HOGS.—Receipts for the week, 43,765 head; do. last week, 16,015 do. Market weak for live.

Live quoted 4¾c; some prime quality Ohio held for 5c; New Jersey dressed pork, light 7½@8c.; medium 6¾@7c.; heavy, 5¾@6c; city dressed State light 7¾@7¾c, medium 6¾@6¾, heavy 5¾@6, city dressed Western 6@6¾ roasting pigs 10@12 dressed; pork tenderloins in cases 9@10.

COWS AND CALVES.—Receipts have run light and not of fine quality. There have been sales at $30@45. A good grade of animals would sell in car-load lots at $45@50; higher priced cows would be subject to special order.

VEAL CALVES—Poultry week has slackened the demand for live or dressed calves; prices only steady.

Live N. J., prime to choice 7¾@8c., State, 7¾@7½c.; fair to good 6½@7¼c.; poor 5@6c.; Mt. Holly, medium to light 6@7¼c.; heavy, 4@5¾c.; buttermilk, 2½@3½c.; grassers, 2@2½c.; hog dressed calves, prime 10@10½c; fair to good, 8@9½c.; very poor, 3½@5½c.

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Reading for the Young.

SPELLING IN THE NURSERY.

"G-u-n," said Grace to Willie;
"What does that spell?" "I don't know,"
He is three and she is seven.
"G-u-n! Goose?" "Oh, dear, no!"
"Rooster? Boy? Stick?" Each time
Gracie shook her curly head,
"'Tain't conundrums I am giving
But a lesson-word instead.

"When a little boy shoots
At a rabbit, what goes off?"
Gracie said, her face in a study,
As she quelled a little cough,
Thinking he would surely guess it,
"You're so stupid! I'm quite hoarse
Talking to you." "What goes off?
Why, the rabbit does, of course."

FARMING FOR BOYS AND GIRLS.—NO. 5.

HENRY STEWART.

The Sun's Light and Heat and Their Effects.

It is very easy to ask what may seem a simple question and yet the wisest man may not be able to answer it. For instance, if we ask what is light, no positive reply could be made. We are about as much in the dark too in regard to the nature of heat. The most we know about these two important questions is that light is supposed to be the result of the passage of very rapid undulations or waves which proceed from any luminous body, and that heat is the result of some particular motion of the particles of any body. When any substance is in a condition to cause these waves to proceed from it it is called luminous or light giving, and when the particles of a substance are forcibly pressed together, as in a piece of iron beaten rapidly with a hammer, the substance gives out heat. If what we think of light and heat is true, they are simply forces or motion, and not matter, and we know more of the effects and properties of these forces than we know of their nature. So far as light and heat are of service in the growth of plants, a knowledge of their properties is sufficient to enable us to learn how useful they are in enabling seeds to germinate; leaves to digest plant food; the plant to turn its liquid food into solid substance; flowers to charm us by their colors and fragrance, and fruits to delight us by their exquisite tints as well as their delicious and varied flavors. Seeds may sprout in ice, but ice is not absolute cold and possesses some degree of heat; but this is exceptional, for the ordinary seeds that are sown in gardens and fields require a considerable amount of heat to grow, and some will fail to grow without a high degree of heat. Seeds sprout better in the dark than in light, but as soon as leaves begin to form light is needed to give them color and vigor. Thus in practice it is proper to cover the seeds with a sufficient depth of soil, and not, as some farmers do who are not well informed on this point, leave a large portion of it on the surface of the ground in the belief that it will grow. Much loss occurs from this mistake and bad practice. As soon as the leaves are formed they begin to give off oxygen gas and take in carbonic acid gas; in the dark the reverse takes place. The former process is necessary to the formation of wood or solid vegetable substance, so that without light a tree or plant could not be produced. The action of the sun's light upon leaves converts the sugar of the sap into wood fiber, the sugar being first produced from starch and the starch being produced from carbon and water. For it may be said that starch consists of 12 parts of carbon and 10 of water; vegetable mucilage and wood fiber consist of the same, and sugar has one part more of water, so that the carbonic acid taken into the plant in the night is changed during the day into vegetable substance by a series of operations that are very interesting to one who studies chemistry to a very moderate extent only. The wonders of plant growth and life are so simple and yet so strange, when understood, as to make the study very attractive even to young persons, while they are necessary to the success of older persons who live upon farms.

One of the effects of light is to produce wholesome plants. Some plants become noxious when grown in a weak condition in a poor light, as, for instance, potatoes that sprout in a cellar are poisonous in some cases. There are plants that are sour in the morning, tasteless at noon and bitter at night. This is explained by the fact that if carbonic acid loses one-fourth of its oxygen it may be changed into oxalic acid which is a deadly poison and very sour; or on the other hand an excess of carbon in a corresponding degree would have the same effect; and this effect may be produced by the want of sufficient light. Lastly: the coloring of fruits and flowers is due to the action of light. Without light, if flowers could grow, they would have neither color nor scent; and fruits would be tasteless and colorless. For if a part of the surface of an apple or peach before it is ripe, be covered with slips of paper, the color will not appear there. In this way some persons have caused names and designs to be marked on fruits by pasting paper cut to the form desired upon the surface while the fruit is ripening. As has been already stated, starch is changed to sugar by the action of light, and heat has the same effect; so these blessed influences of the sun are the true life givers, for without them, no plant could grow; no fruit could ripen; and without vegetable life no animal could exist and the beautiful earth would be cold, dark and utterly devoid of any life whatever.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I am almost afraid to come in with my report so late. I received the seeds from your Spring distribution but got no cox-comb seed as mentioned in the RURAL. The double China Pink I planted in box and in four days I had about 30 plants up. Some were pink, others white, and as double as could be. I have saved some seed from them. Phlox, mignonette and portulaca done wonders; they were much admired for their beauty and fragrance, and much more for being presents from the RURAL. Okra came up and bloomed; the pods grew about half an inch long and then died. I think we are too far north to grow Okra. The Surprise Muskmelon did well. I have had two vines with five melons on them. I was very proud of them, but an Indian thief stole them all on the night of Aug. 19th. I was very much disappointed. I have sold potatoes and onions and got $6.75. I think I did pretty well for the first time I ever made a garden. I will not invite you, Uncle, to call on us, for I don't suppose you will ever come near here, but if ever you do you will be a welcome guest. I hope some day to meet some of my American cousins. Accept the best wishes of your affectionate niece,

Temiskuemangue, Canada. LIZZIE F.

DEAR UNCLE MARK:—The past season has been very dry, the dryest for twelve years, for this reason my garden was not very good. The grapes were an entire failure, I had one plant growing nicely, but it died some time in July. My Okras were very dwarf growing only nine inches high, the first flower was but half an inch from the ground. Of the Surprise Melons I raised eight large ones of very good flavor, I have raised a large lot of seed for next year. The flowers did the best of all as I had them close to the well and could water them frequently. The pinks were the handsomest, such a variety of shades and color and very double; the phloxes were beautiful, but I neglected pinching them back and they grew too spindling. I raised but one plant of portulaca, and that was white, it grew to be very large and had a great many flowers. I have been studying botany this Summer with Gray's "Manual," and "Field and School Book of Botany," but think they are not suited to this Western country. Can you recommend a botany of the Western States?

Yours Truly, WILLIAM I. MASON.

Dodge Co., Neb.

[There is no better book than Gray's.—U. M.]

DEAR UNCLE MARK:—I have been thinking for a long time I would write to you, and see if you would let me join the Horticultural Club. I live on a farm among the hills of Westchester County, on a farm of a hundred and forty-six acres—and the name of it is Lake-side View. Our farm runs by the Croton Lake that supplies New York city with water. In the Winter we get our ice to fill the ice-house, but last winter it did not freeze hard enough to cut. We have a team of horses and a yoke of oxen, and twenty cows and about fifty chickens. I have only one pet and that is a canary bird and his name is Charley. I have an organ and can play on it. It is a very pretty one. We have taken the RURAL for eight years, and like it very much. My father goes to New York every week to his business, and is not home only from Saturday night till Monday morning, and I drive to the train to meet him and take him home; we live two miles from the depot and 38 miles from New York City. Yours truly, BELL.

DEAR UNCLE MARK AND COUSINS.—I will tell you about the seeds you sent us last Spring. The beets you sent us came up and one of them weighed 17½ pounds. The oats and cow-peas came up, but the hens also scratched them up. And a few of the flower seeds came up, but the weather was so hot it destroyed them. The Beauty of Hebron potatoes came up. There were three sent us year before last, and last year we raised a pan full, and this year we raised a barrel full. If any of the cousins have any coxcomb seed I would be glad to exchange some of my seeds for them, and, Uncle Mark, please remember me in the free seed distribution this year, and I will try and do better with them than I did last Spring. I have a pair of bantams. I think if I had taken them to the fair I would have got the premium. I did not see any there as nice as mine.

Your loving niece. ELLA PATRICK.

Dexter, N. Y.

UNCLE MARK AND RURAL COUSINS:—Not seeing any letters from this part of the country, I will ask to be admitted to your interesting club. I am not a grandmother, though the gray hairs are gathering on my head, yet I love to hear from the children, and not one of their letters escapes being read. I think it a grand idea for them to learn to write letters. We live in the Timber; a steam saw-mill stands about 100 yards from our house, and I cook for from eight to twelve hungry men every day. I am a great lover of flowers and have a large window full of house plants. There are a great many beautiful wild flowers here in the Spring, some of the prettiest blue flowers I ever saw. With good wishes for the RURAL and all of its band, I say good-bye. WANDERER.

Medical Lake, Wash. Ter.

DEAR UNCLE MARK:—My sister Birdie has been writing to you, and I would like to introduce myself to the Cousins of the RURAL. I am a little boy eight years old. I go to school and read in the second reader. We live in the county of Oxford, which is called by many the garden of Canada. My pa gives me a piece of ground to plant for myself, and I hope you will send me seeds for it. Your nephew, LINDLEY MCDONALD.

Oxford Co., Canada.

DEAR UNCLE MARK: I like to read the letters of the cousins. I am a little boy 11 years old. I go to school and learn grammar, geography and arithmetic and read in the Fourth Reader. The school is one mile and a half from where I live. Please send me some seeds. I had no garden this year, but intend to have one next year.

Your nephew,

Milwaukee County, Wis. J. J. SHUMMOCK.

Hop Bitters does not exhaust and destroy, but restores, cures, and makes new.

Sabbath Reading.

PEACE.

THERE is such a thing as "peace subsisting at the heart of endless agitation." You may remember the attempt that was made a year or two ago to build a steamer in which the central saloon was to hang perfectly still while the outer hull of the ship pitched and rolled with the moving sea. It was a failure, but the theory was sound and looked practicable. At any rate, it is a parable of what may be in our lives. If I might venture, without seeming irreverence, to modernize and so to illustrate this command of our Lord's, I would say, that He here bids us do for our life's voyage across a stormy sea, exactly what the "Bessemer" ship was an attempt to do in its region—so to poise and control the oscillations of the central soul that however the outward life may be buffeted about, there may be moveless rest within. He knows full well that we must have rough weather, but He would have us counteract the motion of the sea, and keep our hearts in stillness. "In the world ye shall have tribulation," but in Him ye may have peace.

He does not wish us to be blind to the facts of life, but to take all the facts into our vision. A partial view of the so-called facts certainly will lead to tumultuous alternations of hope and fear, of joy and sorrow. But if you will take them all into account, you can be quiet and at rest. For here is a fact as real as the troubles and changes of life: "Your Father knoweth that ye have need of these things." Ah! the recognition of that will keep our inmost hearts full of sweet peace, whatever may befall the outward life. Only take all the facts of your condition, and accept Christ's word for that greatest and surest of all—the loving Father's knowledge of your needs, and it will not be hard to obey Christ's command, and keep yourself still, because fixed on Him.

But now consider the teachings here as to the true source of the agitation which our Lord forbids. The precept itself affords no light on that subject, but the context shows us the true origin of the evil.

The first point to observe is how remarkably our Lord identifies this anxiety and restlessness which He forbids with what at first sight seems its exact opposite, namely a calmness and peace which He also condemns as wholly bad. The whole series of warnings begin with the story of the rich man whose ground brought forth plentifully. His fault was not that he was tossed about with care and a doubtful mind, but the very opposite. His sin was in saying, "Soul, thou hast much goods laid up for many years; take thine ease, eat, drink, and be merry."

Our Lord points out the great madness and the great sin of being thus at rest, and trusting in earthly possessions; and then with a "Therefore, I say unto you." He turns to the opposite pole of worldly feeling, and shows us how, although opposite, it is yet related. The warning, "Take no thought for your life" follows as an inference from the picture of the folly of the man that lays up treasure for himself and is not rich towards God.

SPAIN has some devoted laborers at work in different parts of the peninsula. One of these, whose wide range of experience and observation give weight to his testimony, writes: "From what I have seen while journeying in parts of the center, north and northeast of Spain, and further from what I have heard by correspondence and otherwise, I am convinced that the Gospel leaven is quietly spreading all over the land. We are apt to forget that, as a rule, God's work in grace is like God's work in nature: the seed is sown, is covered up, and in darkness and silence, unobserved, it strikes root downwards, only appearing and growing upwards when so rooted. The Gospel seed, which has been largely sown in Spain through chapels, Sunday and day-schools, evangelists, and especially through the wide circulation of the Scriptures and a very wide circulation of tracts, is taking root, and in due time the fact will be seen and recognized. Such being the case—I am sure I may be allowed to speak in the name of the Christian laborers of Spain—we hear with pain and dismay that the funds of some great Christian agencies have so decreased as to compel them to decrease the staff through which excellent service was done for the Savior's cause. Above all is this to be deplored in the case of the colporteurs. The real evangelist in Spain is the godly colporteur. A reduced staff of colporteurs means a reduced area of work all over Spain.

Miscellaneous.

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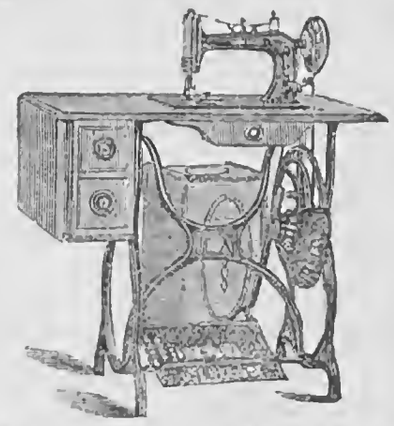

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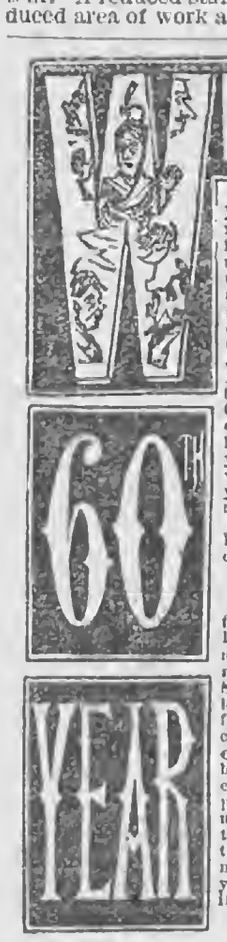

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Kellogg, of Louisiana, is a large manufacturer in the sugar trade. He sells mainly in Texas.

Colonel Ingersoll is so honest a pagan that he refuses to deceive a trout with an artificial fly.

Judge Tourgee, author of "The Fool's Errand," is of medium hight, weighing about 150 pounds, and he has dark hair and eyes. He is supposed to have a promising political future before him in Colorado.

Mr. and Mrs Smith Hayden of Marshall, Texas, quarreled about the doctrine of baptism on getting home from church, where they had heard it preached about, and the wife in her passion struck the husband a fatal blow with an axe.

It is said of the Baron Ricasoli, the great Italian statesman who has recently died: "He was seventy-one years old, and during all those seventy-one years he never did an act unworthy of a patriot and an honest man, and never heard his integrity called in question by his wildest political enemy."

It is rumored that the Czar intends, in the event of his abdication, to fix his residence in the Crimean Palace of Livadia, which is certainly as delightful a retreat from the cares of State as any ruler could wish. The little port of Yalta, twelve miles distant from Balaklava and eighteen from Sebastopol, lies in the hollow of a tiny bay formed by the curve of a huge sloping ridge, half way up which stands the Czar's palace.

When a band serenades General Grant it is the best policy for the members to choose the easiest tune. The General does not know one tune from another. The other evening while a band was playing "The Last Rose of Summer" he said, "I always did like 'Home, Sweet Home,' especially that part of it which refers to the oaken bucket." The band began another air, "Yankee Doodle," and General Grant said, "I always did like that tune of 'Home, Sweet Home,' That refrain about 'Away Down Upon the Swanee River' always struck me as being very sentimental."

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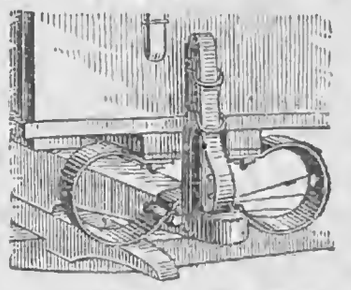

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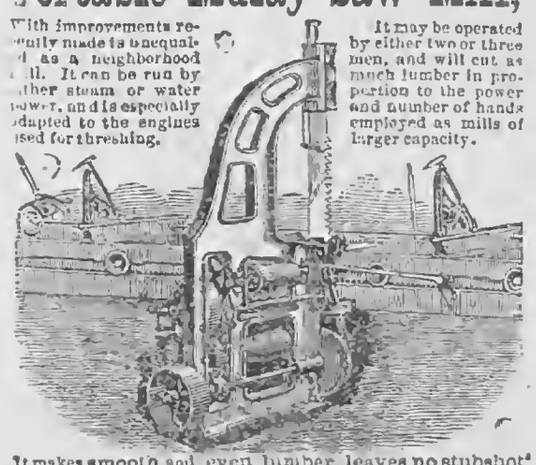

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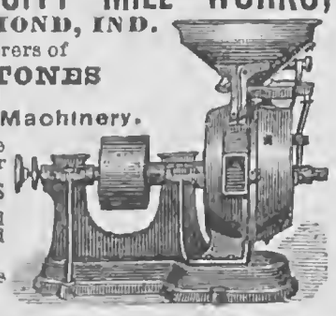

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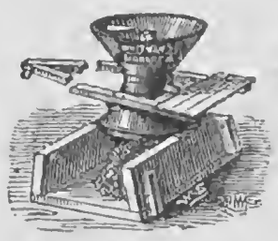

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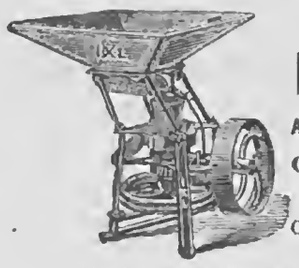

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XXXIX. No. 50. WHOLE No. 1611. | NEW YORK, DEC. 11, 1880. | PRICE FIVE CENTS. $2.00 PER YEAR.

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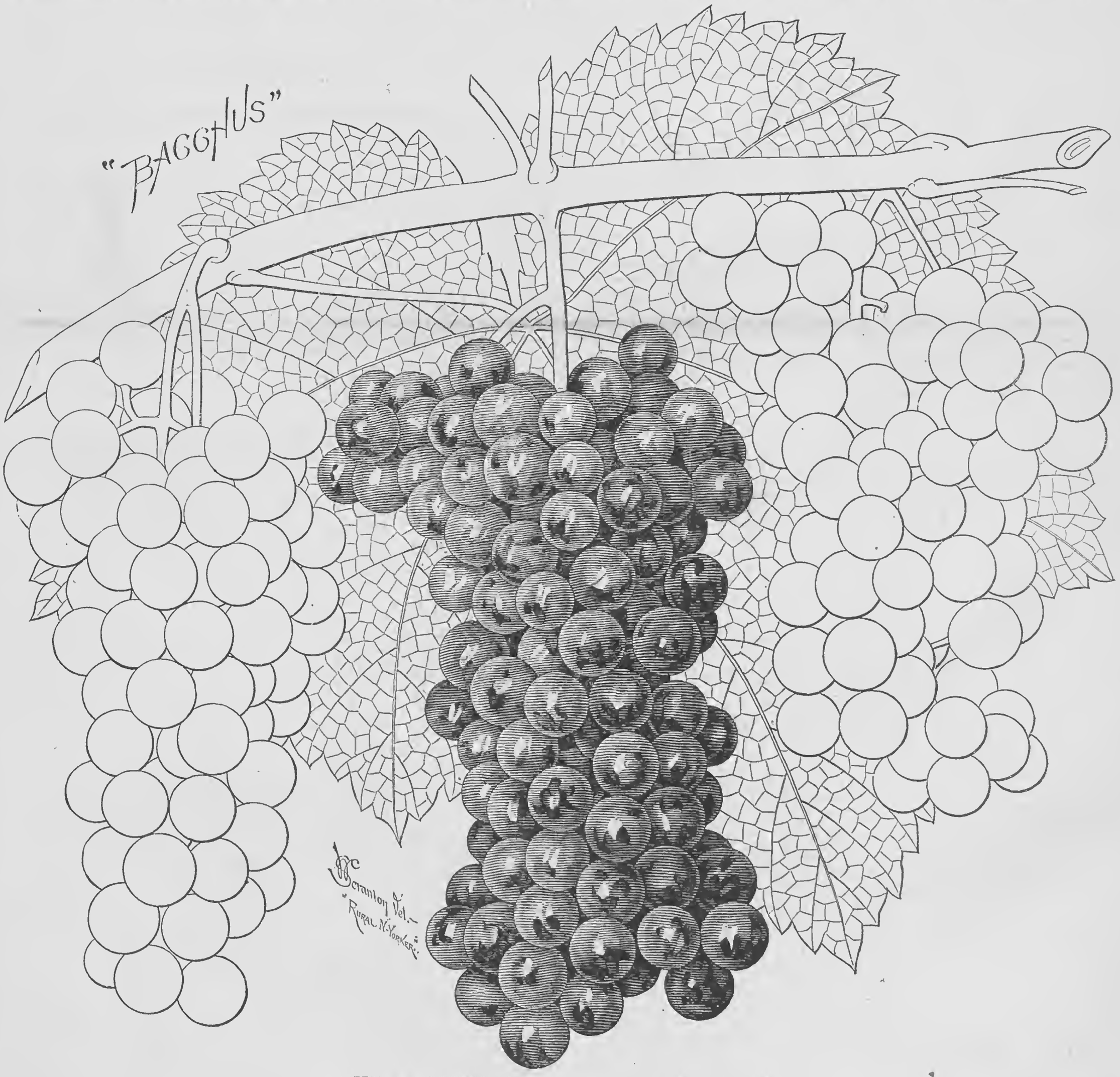
The Vineyard.

OUR GRAPE PORTRAITS CONTINUED.

The Bacchus Grape.

AMONG the bunches of different kinds of grapes which Mr. Ricketts brought to this office early in the Fall was the Bacchus, an engraving of three bunches of which (two in outline) is presented on this page. It is a wine grape. The berry is medium in size, as shown; pulp, half tender and juicy; color, black with bloom. The vine is said to be vigorous, hardy and productive, while the bunches, as may be seen, are shouldered and about six inches long. It is a seedling of the Clinton, and Mr. Ricketts says that it has with him stood all possible tests for 12 years as to hardiness of leaf and fruit. Nothing is known as to whether it will thrive in different soils and situations or not. Those who purchase the grape must take the risk, for they have nothing to guide them. Mr. Ricketts has exhibited this grape at many fairs, and those who have eaten it agree, it is said, that it combines all of the peculiar qualities necessary in a wine grape of the first merit. It seems that the Bacchus grows readily from cuttings, 952 having grown out of 1,000.



THE BACCHUS GRAPE—From Life.—Fig. 414.

The Duchess Grape.

Under date of Nov. 26th, Messrs. A. J. Caywood & Son, of Marlborough, N. Y., write us:

"We send you by mail to-day a taste of the Duchess Grape. We ought to have sent them while they were fresh, but failed to do so through an oversight. These have been lying on a shelf in a closet for the past two months, and all our best clusters are gone. Mr. Charles Downing told us last night that the clusters we sent him six weeks ago are lying on the shelf, perfect, except that they are beginning to raisin. He remarked that they were getting as sweet as a raisin."

[The little box was received during the late cold snap. We can repeat Mr. Downing's words, "They were beginning to raisin," and "were as sweet as a raisin." To our taste the Duchess is an excellent grape. There is no acidity about it, no foxiness; the flesh is tender, the vine hardy and prolific. If we were

setting out a new vineyard, we should *want* many of the new grapes that have of late years been announced; but if we could not have them all, the Duchess would not be one of those marked off the list.—ED.]

How the Grape-Vine Bears Fruit.

"The grape-vine bears fruit only upon canes of the previous year's growth;" so says the RURAL. I am pleased to say if such be the case, that I have several vines that are of different behavior, if I rightly understand the RURAL; for they put out canes from the previous year's growth, and on these new canes or shoots the fruit is borne. Is not that the usual way? If there are vines which behave differently I would like to obtain *one*. [The fruit buds exist on the canes of the previous year's growth. These buds push and bear fruit. Now, is not the statement plain enough? —EDS.] The Cuthbert Raspberry plants received from the RURAL's distribution last year, came safely to hand, and they had *roots*, too, very fine ones; but owing to there being snow on the ground and that frozen, I covered them in a box of soil for a week or two, at the end of which I broke up the frozen ground and put them out; but in the Spring I had to set them in a new place, still they made a very fair growth from which I hope to obtain a few berries next season. W. H. WHITE.

Worcester Co., Mass.

THE NIAGARA.—Mr. Woodward writes as follows:—"I must confess myself a little surprised that you should pronounce it (Niagara) no better than Concord and can only explain the fact on the ground that your Concords must be much better than ours. Grown side by side here with Concords, it is as much better than they, as they are better than Champions. In fact, I have given it to some fine judges of grapes side by side with Rebeccas grown in the same vineyard, they not knowing "which was which," and have every time found them to pronounce it better than that famous sort."

Do Bees Puncture Grapes?

The Semi-tropic California says: "Place a bunch of perfectly sound grapes near your bee-hives, and in a few hours examine them and see if the bees have eaten any; if not, puncture several with a pin and note the effect on the sound grapes and the ones punctured, and then let us know if the bees really eat grapes. We ask for a full test, and reports from grape-growers and bee-keepers."

Having picked up the RURAL the other day, on looking through it, I came across the above paragraph and thought I would give you an account of what the bees and wasps did for my grapes this season. Perhaps it is nothing new to professional growers, but it is new to me and perhaps will be so to other amateurs.

I have in my garden 12 different varieties of Rogers's best numbers, all bearing and young ones. One vine (the number I cannot tell) is, or rather the fruit is, very much like the Delaware, only the berry is larger and the bunch longer and not so compact; but it is very sweet, nothing acid about it whatever. Towards the end of the season, I noticed that many of the bunches had been about half eaten by something, only the skins of the berries remaining; at first I supposed the injury to be done by the birds, but on closer examination I found swarms of bees about the grapes and noticed that they made a puncture in the berry, and afterwards the wasp finished it by eating everything inside except the skin and seeds. The skin then dried hard and the bunch became almost unfit to eat. On this particular vine I can safely say more than half the grapes were destroyed in this way. For the three years I have had these grapes, this is the first time I have known bees to attack them. I may also add the other kinds, such as the large and small blue sorts, in fact, all the other varieties were left untouched. I do not believe there is any remedy for their destruction. But as to all appearance the bees have had their first taste of grapes in this part of the country; next year they will, perhaps, come in swarms so that the people here will have very few grapes to pick after the bees shall have taken all that may be good, to make honey for other people.

Clifton, Ont., Canada. L. S.

Pomological.

PEACHES.

T. T. LYON.

The Commercial and the Amateur Idea.

APPEARANCE VS. QUALITY.—In the marketing of fruits, although none of the yellow peaches will compare favorably with many of the pale-fleshed, so far as quality and delicacy of texture are concerned, the market persistently demands yellow varieties, apparently on account of the richer and more attractive color of the flesh. Possibly in Eastern markets this preference may be less positive; but at the West it is so decided that commercial orchards, as a rule, are almost wholly made up of the yellow-fleshed kinds; the principal exceptions being the earlier varieties which mature before the advent of the yellow favorites.

THE NEWER VERY EARLY VARIETIES, Downing, Wilder and Saunders, sent out a few years since by Engle, of Pennsylvania, are yet too recent to have established a reputation; but, so far, they have matured little if at all in advance of Alexander and Amsden, and have developed no qualities, whether of earliness, flavor or size, entitling them, or either of them, to claim precedence. They seem to be similar to the Amsden and Alexander in most respects, including the objectionable tendency of the flesh to adhere to the pit.

ALEXANDER AND AMSDEN are so entirely similar in both tree and fruit as to be practically indistinguishable; hence although certainly of separate origin, they may, for all practical purposes, be treated as identical. Like their supposed parent, Hale's Early, the flesh adheres to the pit, and they have also its objectionable tendency to rot before maturing. In spite, however, of these objections they are, at least at the West, becoming somewhat prominent as market varieties.

BRIGG'S RED MAY has hardly yet established a character on the eastern slope of the continent; although where it has fruited it seems to have created a favorable impression. It is certainly a very beautiful, fine-sized fruit, of good quality. The fact, however, that it is a serrated-leaved variety will be a mark against it, only to be wiped out by continued and successful experience.

EARLY BEATRICE can hardly now be called a new peach even in this country. It has the reputation of being too small; but its earliness may be considered as in some sense an offset to this objection, while its fine color and high quality (for so early a peach) certainly render it desirable, at least as a variety to be planted for home use.

EARLY LOUISE is open to the objection of being too small; but coming in immediately after the preceding, it fills a place not otherwise provided for. In color and flavor it is satisfactory.

EARLY RIVERS, although destitute of red, is, nevertheless, a very striking and attractive peach. Considering its beauty, fine size and excellent quality, it is well worthy of consideration by both the commercial and the amateur planter. It is rather delicate in texture, and hence will require careful handling; besides which the pits are almost invariably cracked open. Nothwithstanding these drawbacks, it is gaining in favor even among market planters.

GEORGE THE FOURTH is one of the old amateur, pale-fleshed sorts, that cannot yet be dispensed with. It is too delicate in texture for railroad transit to market, notwithstanding which it is not without favor even among market planters.

HALE'S EARLY comes before it, and, despite its adhesion to the pit and a tendency to rot before ripening, it remains one of the most profitable market varieties, at least in the Michigan fruit belt, where the open, airy exposure, especially upon light soil, seems to act as a check upon this tendency. In interior, sheltered localities and on heavy soils, the tendency is aggravated; and the variety becomes unprofitable. As we go northward along the easterly shore of Lake Michigan, this liability to rot entirely disappears.

SERRATE EARLY YORK is still considered a fine peach, where known, but its tendency to mildew of the foliage is fatal to its popularity at the North. At the South it is believed to be more popular.

EARLY TILLOTTSON is liable to the same objection in even a greater degree. It also is more successful at the South.

COOLEDGE'S FAVORITE is a fine amateur, pale-fleshed peach, in season after George IV., and preceding the Early Crawford, coming in at a season when it has few competitors. It is desirable only for home uses.

TROTH'S EARLY is desirable only as a prolific, early market peach, and hardly good enough for even that purpose.

SNOW AND SNOWFLAKE are white, entirely without red, and desirable for special uses on that account. They may prove identical.

THE CLARK APPLE.

MR. ISAAC F. TILLINGHAST, of La Plume, Lackawanna Co., Pa., writes us with regard to this apple:

"Knowing your interest in new fruits and vegetables, I send you by express to-day a box containing some specimens of the "Clark Apple" a variety which originated in this county some 25 years ago. The tree is a rapid grower, and an early and profuse bearer. The fruit is always fair and smooth, and is thought by all who know it here to be of most excellent quality—but of that I wish you to judge. It never has been brought to the attention of nurserymen, and I think it would become very popular if it were only known. Its season is from October 1st to January, though I have seen some of its fruit kept till Spring. I think that the original tree, a chance seedling, still stands but a few miles from my office. Its name was derived from the farm on which it grew. There are no young trees in existence, but cions can be furnished."

We sent some specimens of the fruit to Mr. Charles Downing, of Newburgh, N. Y., together with Mr. Tillinghast's account of the apple, and have received from him the following comments thereon:

"The Clark apples were received in good condition. Specimens have been sent to me for two seasons in succession by Samuel Stevenson, Clark's Green, Lackawanna Co., Pa., who informs me that it originated with Deacon Wm. Clark about 100 years ago, and that the tree is still standing in the village of Clark's Green. Mr. Stevenson says that it is very popular in that locality, but has been disseminated but little out of the neighborhood of the place of its origin. It is a very tender, pleasant-eating apple—not rich, but one almost any person can eat without being surfeited. It has just sufficient sugar and acid to make it agreeable. Mr. Stevenson writes me that the tree is vigorous, and a prolific bearer on alternate years, and the fruit ripens, or rather is in use, from October to January.

There is some little difference in the statements of Mr. Stevenson and Mr. Tillinghast; the former states that the tree is 100 years old, while Mr. Tillinghast says it originated in his county some 25 years ago and the tree still stands a few miles from his office. I do not know how far La Plume is from Clark's Green, but I have no doubt that they are the same apple." See page 815 for portrait.

The Ella Park Apple.

Nine years ago, with grafts of some other varieties, I obtained from a nursery in Kansas City, a few cions with labels bearing the above name. As I was not particularly anxious to hasten the fruiting of the variety, these with others were root-grafted, and set out in nursery rows in the Spring following. Subsequent events caused the "Ella Park" to be overlooked. Four years after planting, the "block" in which they had stood was being "cleared" of the crooked and unsalable trees remaining after the Spring sales of '76, when by accident the few trees of this kind came under notice. Two trees were selected, and "heeled in" for my own planting, where pressure of other work caused them to remain another year, when they were so injured by neglect as to be discarded, not, however, without first cutting a few grafts, which were set in a bearing tree for trial. Last year a few specimens of fruit were produced by the grafts, which, however, received no attention. This year, though, they fruited plentifully, some of the apples being very fine in size and external appearance. This fact aroused sufficient interest to induce me to look after the variety, but I cannot now find any description of either fruit or tree, which leads to the inference that it is not propagated to the extent that its apparent merits would justify. The fruit is large to very large, roundish, yellow, covered entirely and evenly with crimson, the color being similar to that of the "Kane" apple, as described by Downing, and which is well known in this section; flesh yellowish, and at this date, too solid to judge fairly of its quality, though I think it will out-rank the Baldwin in this particular, which, however, is possible without its attaining to any very high standard of excellence. Upon the whole, I am greatly pleased with the "Ella Park," and believe it will have many friends here when once known. J. W. KER.

Caroline County, Md.

Arboricultural.

SOME MERITS IN THE AILANTHUS.

PROFESSOR F. H. STORER.

ON page 769 of the RURAL, you remark *briefly*: "It is hard to find out what any one wants an ailanthus for." "if it were the only tree that grew upon the earth—" you go on to say! Now it seems to me that the ailanthus is almost, if not quite, *the only tree on earth*, of so comely appearance, which will grow in certain places, and I will try to make it plain to you why I, for one, wish for and esteem the ailanthus in places which it is fitted to fill. I understand, of course, that your remark applied to the door-yard and garden-lot, and that you wish to keep out of range of the odor of the ailanthus blossoms; with all of which I cordially agree. We will certainly do well in keeping the mature ailanthus (when in blossom) at something more than arm's length. Three particular merits of the ailanthus occur to me, which are so distinct and well-marked that they should be more widely known than they seem to be.

1.—Few trees can so well bear the drip of evergreens as this. Hence in many situations the ailanthus is peculiarly well-fitted for filling in gaps between evergreens, or for growing on the edges of pine groves to conceal any bareness or raggedness which may exist where the lower branches of the pines have died, or where some of the trees have been injured by wind or by insects. Several years since, I lived upon a small place where there was a row of large White Pines close to the public road, and beneath them were a great number of ailanthus trees of various sizes—most of them rather young—which grew up to and overlapped the lower branches of the pines. This ailanthus thicket screened and concealed both the dusty road and the bare trunks and the interior limbs of the pines, while the contrast between the light, lively green of the ailanthus leaves and the dark somber foliage of the pines was extremely agreeable to the eye. I have seldom seen a more effective bit of tree grouping than was afforded by this wholly unpremeditated arrangement. In a case like this, young trees are perfectly competent to produce the desired effect. More mature trees might be cut down as soon as they began to bear blossoms and become unpleasantly odorous.

2.—The Ailanthus will grow freely in a darker shade, whether of trees or buildings, than any other equally ornamental tree with which I am acquainted. I have grown them in the very heart of a city (Boston) on the north side of a high brick building exposed to darkness, smoke, dust, and grime, where the conditions were most unfavorable for vegetable life; yet the trees throve in this situation. Naturally enough, they grew upward continually, with very slender trunks, and had to be braced and tied firmly to the building or they would have fallen of their own weight. It is not seldom that a cold, dark wall or building, such as this, had better be concealed from the eye by foliage. The ailanthus enables us to effect such concealment readily and cheaply.

3. Very few trees or plants are better adapted than the ailanthus for binding and improving sandy soils, and there are numberless localities where the growth of the tree should be encouraged to this end. Not only will the ailanthus grow in almost any place, not too completely devoid of water, provided the climate is suitable, but every Autumn it drops an enormous proportion of litter upon the land, and the character of this litter is peculiarly well suited for covering the soil and improving it, since the great foot-stalks of the leaves are so large and heavy that they are comparatively little acted upon by the wind. These stalks not only remain themselves beneath the trees but they bind and overlie many leaves and keep them in place. Any one familiar with the tree will see at a glance that the droppings from the ailanthus must tend to remain where they have fallen to a much greater extent than the leaves of most other trees. That is to say, a large proportion of the ailanthus litter comes to rest just where it is wanted when we are striving to bind a sandy plain by its means. The brittleness of the young wood and branches of the tree may perhaps be no disadvantage, as regards the service now in question, for the branches broken and torn off by the wind would but be added to the other accumulations of vegetable matter beneath the trees. The merit of the ailanthus for binding sands has been made tolerably familiar to American readers by the writings of Mr. Marsh. In describing the improvement of certain sand plains near Odessa (see his "Man and Nature," page 515, and his "Earth as Modified by Human Action" page 608), he says: "The tree best suited to this locality and, as there is good reason to suppose to sand plains in general, is the Ailanthus glandulosa. The remarkable success which has crowned the experiments with the ailanthus at Odessa, will, no doubt, stimulate to similar trials elsewhere, and it seems not improbable that the Arundo and the Maritime Pine, which have fixed so many thousand acres of drifting sands in Western Europe, will be, partially at least, superseded by the tamarisk and the ailanthus." "Sixteen years ago," says an Odessa landholder, "I attempted to fix the sand of the steppes, which covers the rock ground to the depth of a foot, and forms moving hillocks with every change of wind. I tried acacias and pines in vain; neither would grow in such a soil. At length I planted the ailanthus, which succeeded completely in binding the sand." "This result encouraged the proprietor to extend his plantations over both dunes and sand steppes, and in the course of sixteen years this rapidly growing tree had formed real forests."

Horticultural.

Depth in Soil.

Some years ago, visiting the nursery of a prominent florist near Boston, whose specialty was the production and sale of roses the year round, I observed that the earth in which they were planted was from four to six feet deep, and he told me that that was the main cause of his flowers blooming and bearing as they did. A year since I observed that a gardener near our

village, after his land was plowed in the Fall, had it all spaded yet deeper, the stones removed and the whole work done in Old Country style where labor is cheap enough to allow such luxuries. The results this season spoke for themselves, and in addition to these were the comparatively light hoeing and weeding, and so satisfied was I with what I saw and learnt thereby, that one-half of my large garden has been this Fall treated in the same way and the balance will be another season. Old gardens lightly plowed and dug get "case-hardened" at the bottom and allow neither water nor air to permeate freely, whilst a great depth of soil supplies perfect drainage and aeration, and consequently warmth and more even temperature all the time. The manurial matters are more perfectly distributed in the latter condition and not so soon exhausted and dried up, the ground is worked more easily and is more productive. Gardens continued in the same place year after year require, more than others, this deepening of the soil and occasionally a good sprinkling of salt. R. G.

Lenox, Mass.

THE YELLOW OVOID MANGELS are a surprise to me. With no extra care they have grown to a large size, and are of just the right form for compact storage. They prove to be excellent for table as well as for stock, and, what is of equal importance, they are easily lifted from the ground by hand. I class them with Lane's Improved Sugar Beet as my two best varieties. The parsnip has been a favorite root with me for feeding, as it so admirably resists drought; but the difficulty of digging the roots will hereafter put them in the corner. I am surprised to see how few farmers grow the salsify. Properly cooked it is an invaluable vegetable. Leave most of them in the ground until Spring, with the parsnips; but bury a few in a box in the cellar for Winter use; also a few parsnips. Cover them well with rather dry earth. E. P, POWELL.

Oneida Co., N. Y.

Field Crops.

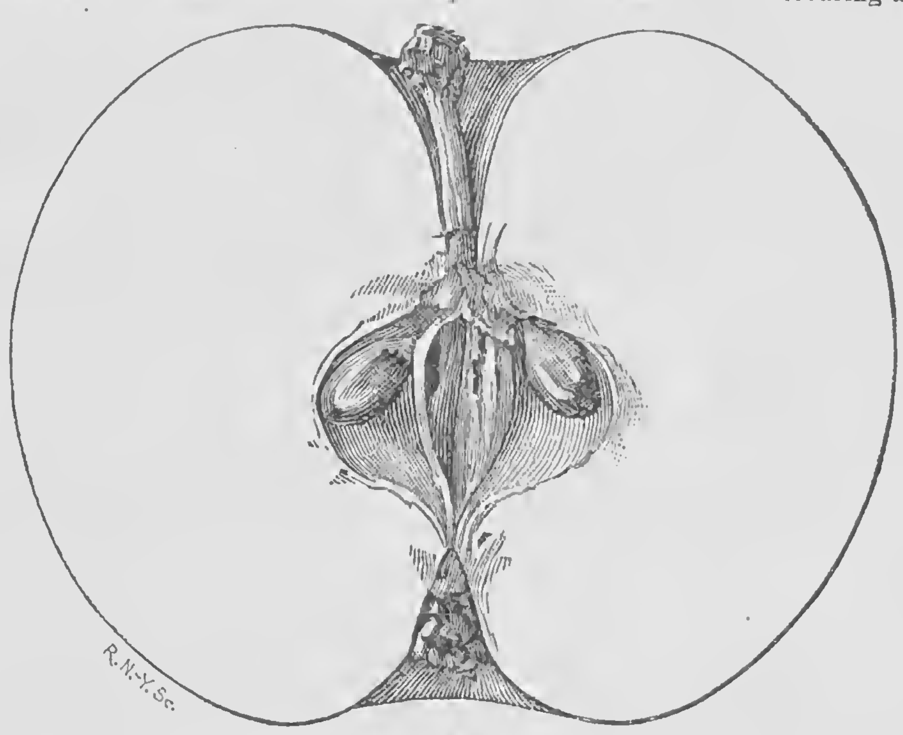
CUZCO CORN.

RURAL readers may remember what has been said respecting Cuzco Corn in these columns. The kernels are immense—so large, in fact, as to be curiosities. A friend in California sent us a quantity of the grain, and we, reserving a small quantity to try at the Rural Farm, sent it to a number of our subscribers in the South. The reports so far received are, "immense stalks—no ears," or "mere nubbins." Of the row planted at our farm, only two plants grew. One of these showed two sets, which in due time developed silk, showing they were ready to receive the pollen. But there was no pollen. That from the tassels above had matured and fallen several days previously, while other corn in neighboring fields was beginning to ripen. As before stated, there was not a kernel upon the two cobs, which were about six inches long and covered by heavy husks. For the same reason, probably, the little lots sent South failed. In many varieties of Indian corn we have found, as stated two years ago, that there is a difference of several days between the ripening of the pollen and the appearance of the silk. It follows that the ears upon a given stalk in such cases must depend upon other plants for pollen.

Last season was very favorable for corn, and although the Cuzco was planted late, it had time to have reached the milk stage of maturity, at least. In further trials of this it would be well to make two or three plantings, each three or four days after the other, so that the silk of most of the plants when appearing would have pollen for fertilization. At best, however, we do not believe this South American Cuzco Corn is worth anything, though advertised last season in several papers as a wonder. The bigness of the kernel cannot, under the most favorable circumstances, compensate for the smallness of the ear. It might, perhaps, prove of value if, by crossing, we could increase the size of some of our best corn while suppressing every other characteristic of the Cuzco.

EXPERIMENTING WITH POTATOES AND SMALL FRUITS.

For several years I have been trying to produce new varieties of potatoes or sports at will by the selection of eyes. I find no difficulty in changing the color of potatoes, and sometimes the form and quality, as well as the time of ripening, etc. I have produced a variety I have named the Buff Peachblow, which has yielded twice as much as the colored or ordinary Peachblow, and ripened six weeks earlier, both kinds having been planted at the same date and having received precisely the same treatment. The quality is the same in both cases, or perhaps mine do not waste so much in boiling as the original or colored Peachblow,



THE CLARK APPLE—FIG. 415.

The origin of another variety is as follows: I found a volunteer potato in the garden with one colored eye, the others being perfectly white, as was the tuber. From the colored eye I raised one potato, a dark purple—and one pure white. They grew to about the size of a nutmeg the first season. After the fourth season's growth I find the colored potato a fixed type and a smooth tuber, perfect in form; in color, dark purple or Indian red, mottled with white. But I am yet somewhat doubtful about its quality, although some of our principal dealers pronounce it, after cooking, the very best. I somewhat fear the beauty of its appearance has influenced their taste in some degree. I have named it the Indiana. I am also trying to raise the eyes of all Peachblows to a level with the surface. In this attempt I have met with some success, but it is a tedious business. I have also the white potato that grew on the same stem with the Indiana or purple potato, and it is a curiosity. As yet it has no fixed form, except that it is not a long one. Its eyes are so smooth and level with the surface that they are hardly discernible by the sense of feeling. This season, for the first time, I have obtained one large, white, waxy-looking potato. I intend to cultivate this until its type is fixed.

Since I have got into the way of experimenting with potatoes, I have also been work- in the same manner with the Snyder Blackberry, as well as with grapes, and some other small fruits. I have thus obtained a new blackberry of fixed type, but it is so difficult to tell just yet whether it is an improvement.

Bellevue, O. J. S. B.

THE ANNUAL PRODUCTION OF POTATOES for the last five years, according to the reports of the Department of Agriculture, has been 153,789,000 bushels. Of this quantity forty bushels out of every hundred have been grown in the New England States, New York, New Jersey, and Pennsylvania. In Maine potatoes and hay are the principal crops, and of food products the State exports little except potatoes. Vermont, Minnesota, Massachusetts and Michigan report the largest yields per acre, the yield in each being considerably over 100 bushels, while the average for the rest of the country is about 85 bushels per acre.

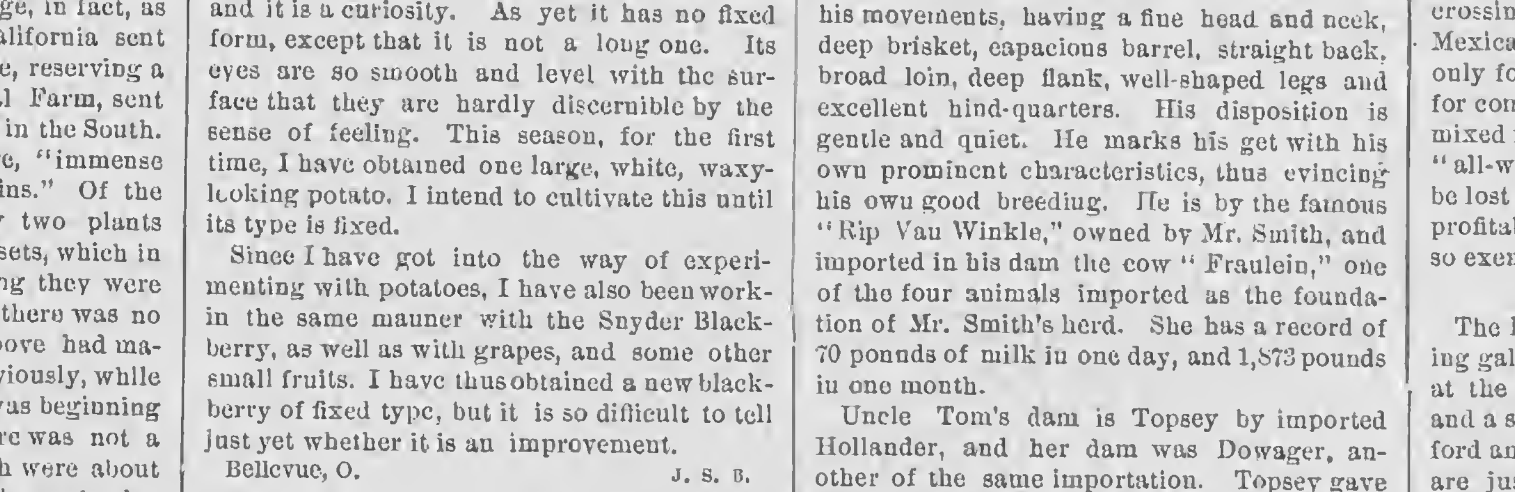
The Herdsman.

HOLSTEIN BULL—"UNCLE TOM."

OUR photographer was not so successful as we could have wished in securing a likeness of the bull which won first premium in the class of aged bulls of the so-called Holstein breed at Albany at the last State Fair. He is the property of Messrs. Smiths and Powell, of Syracuse, N. Y., whose herd, at the head of which he stands, is one of the most famous in the country.

"Uncle Tom," No. 163, (H. H. B.) is of a velvety black, with star in forehead, white legs and switch. He was dropped April 17, 1875, and bred by Mr. Gerrit S. Miller, of Peterboro, whose herd was noticed in the RURAL of November 27. His weight varies but little from 2,400 pounds, and he has won the first prize three years in succession at the State fairs, namely, at Elmira in 1878, at Utica in 1879, and this year at Albany. So completely does he fill the eye and meet the requirements of the admirers of this noble breed that it were a vain as well as a thankless task to criticise him. Though large and powerfully-framed, he is symmetrical in form and free in his movements, having a fine head and neck, deep brisket, capacious barrel, straight back, broad loin, deep flank, well-shaped legs and excellent hind-quarters. His disposition is gentle and quiet. He marks his get with his own prominent characteristics, thus evincing his own good breeding. He is by the famous "Rip Van Winkle," owned by Mr. Smith, and imported in his dam the cow "Fraulein," one of the four animals imported as the foundation of Mr. Smith's herd. She has a record of 70 pounds of milk in one day, and 1,873 pounds in one month.

Uncle Tom's dam is Topsey by imported Hollander, and her dam was Dowager, another of the same importation. Topsey gave as a two-year-old $40\frac{1}{2}$ pounds of milk in one day and has subsequently equaled her dam's yield of 70 pounds, averaging 64 pounds a day for a month, and producing 6,005 pounds in five months. Imported "Dowager" has a record of $12{,}681\frac{1}{2}$ pounds in one year.



HOLSTEIN BULL, "UNCLE TOM."—FROM LIFE.—FIG. 416.

"Uncle Tom" has never yet been beaten in the show ring, and should he ever be, we hope to be there to see, and, if it is fairly done, to give our readers a picture of the successful youngster, for he must have the advantage of comparative youth who will win in such a contest.

Our readers will doubtless be interested in the following transcript from Messrs. Smiths and Powell's accurate records of the milk yielded by their herd.

MILK RECORDS OF HOLSTEIN COWS OF THE HERD OF SMITHS & POWELL.

	age.	1 day. lbs. oz.	1 month lbs. oz.	lbs. oz.		lbs. oz.	
Neilson	7	74 12	2,206 6	9,805 5	in 6 months	11,543 12	in 8 months
Jannek	7	71 13	2,110 4	9,250	" 6 "	11,221 14	" 8 "
Aegis	6	82 12	2,289 9	10,904 5	" 6 "	13,863 4	in 8½ "
Aaggie	6	84 13	2,263 2	9,563 2	" 5 "	12,111 3	" 7 "
Juniata	6	60 13	1,499 14	6,482	" 5 "	.....	
Porceleutje	6	64 9	1,891 3	6,275 2	" 4 "	9,161 12	" 7 "
P. of Beemster	4	55 4	1,637 7	6,799 2	" 5 "	.....	
Sappho	3	64	1,765 5	5,582 14	" 4 "	7,315 8	" 6 "
Duchess of F.	3	62 3	1,535 7	5,243 8	" 4 "	.....	
Finesse	3	49 3	1,366 12	5,619 14	" 5 "	9,376 11	" 8½ "
Lady of the Lake	2	45 13	1,844 11	7,056 12	" 6 "	.....	
Ethel	2	45	1,240 11	6,431 4	" 6 "	8,023 6	" 7½ "
Imogena	2	47 4	1,263 4	5,771 4	" 5 "	7,307 1	" 7 "
Matron	2	44 14	1,243 7	5,641 14	" 5 "	7,862 11	" 8 "
Iola	2	43 14	1,249 10	5,536 13	" 5 "	6,481 13	" 7 "
Harvest Queen	2	44	1,249 11	4,952 6	" 5 "	.....	
Butterfly	2	41 1	1,161 2	5,254	" 5 "	.....	
Mermaid	2	41 1	1,183 11	5,153 9	" 5 "	.....	
Aegis 2nd	2	44 10	1,288	3,245 9	" 3 "	.....	
Lakeside Belle	2	40 7	1,115 13	3,148 14	" 3 "	.....	

NOTES BY A STOCKMAN.

At the Fat Cattle Show in Chicago, five recently imported French Merino rams were exhibited. This is the first importation of these sheep for many years. I prognosticate repeated importations of them, and for the following reason: We are breeding too much for fineness of wool and yolk, instead of heavier carcass and large fleeces. It is a pity that as a people we refuse to look ahead. There is a story extant of a man who was once ruined by success. He once picked up a gold coin that had been lost and ever afterwards went about with his eyes bent to the ground lest he should miss another chance, and, therefore, was unable to see anything else about him. Just now there is an urgent demand for Merinos of a particular kind—fine-wooled, yolky, and wrinkled, for crossing on the common native Western and Mexican sheep. But are we to raise sheep only for crossing? There is a large demand for combing Merino wool, "de-laine wool," for mixed fabrics of wool and cotton, and for soft "all-wool" goods. This purpose should not be lost sight of in the eagerness to meet the profitable demand for breeding animals, and so exemplify the old story.

The Hereford "boom" has received a favoring gale. The first prize for slaughtered beef at the Fat Cattle Show went to a Hereford; and a second prize went to a cross-bred Hereford and Short-horn, and as the Hereford men are just now making the most "blow," the credit will be claimed for their favorite breed. Nevertheless the Hereford can well afford to stand upon its own merits as a producer of beef of fine flavor, well mixed and marbled with fat, and that yields well on to 70 per cent. of live weight on the best specimens. The Short-horns need not fear the competition, however. It is best for any breed to have an active rival, for then there is a strong inducement for it to be kept up to the highest point of excellence. Competition is the main-spring of business. The judges at Chicago did a good thing when they deprecated over-fattening. Americans have an eye to economy in their marketing, and have not yet acquired a taste for excessive fat in their meat. Prize beef will not as easily sell here as in England for double price because it is half fat; and to feed excessively fat meat is a waste of feed and good material.

The Chicago Show ended very pertinently in a pointed discussion on pleuro-pneumonia. It is a disgrace to any rational government that so serious a menace to our stock interests should be permitted to exist any longer than may be necessary to slaughter every diseased animal. This is a people's government and the people are responsible for its failures and neglects. As the country is now "saved" for four years longer, Congress may be induced to take measures to save our cattle from this imminent danger. State legislation cannot do it; it is beyond its province and its power. If stockmen, dairymen and farmers will force this subject on the consideration of their representatives,

something may be done to meet this urgent case before the coming Spri g, If every diseased animal were summarily slaughtered and its carcass disposed of in a safe manner and this method kept in force for a few months, there would be an end to the danger. In this respect, the first cost would be the least. The reflection of what would happen were this disease to become prevalent on our vast Western pastures. Is sufficiently appalling to stockmen—and farmers, too—to cause an intense interest in checking it while check is possible. Let every one interested not wait for committees to "resolute," or inspectors to inspect, but let every one write to his representative insisting on immediate action by Congress, which has already three bills before it for consideration. Every dairyman, farmer and breeder, from the Atlantic to the Pacific and from Canada to the Gulf, is deeply interested in averting this constant danger.

By-and-by there will be an outcry for more wool; "much cry and little wool," in fact literally, of the long, fine, pure Merino kind; and then those who have kept this grade of sheep will find their reward. But the shepherd who really knows his business and will look ahead should buy none but this kind of Merino f. r crossing on his low-grade natives. And these are precisely the kind that are kept pure in France in the Rambouillet flock, from which the above-mentioned importation was made.

Persistence is a valuable quality. In breeding it is all-important, and there is no more conspicuous and successful instance of persistence in a line of breeding than in this same Rambouillet flock of Merinos. Begun in 1786, with about 300 sheep, it was bred to improve in size and weight upon the Spanish Merino. In 1846 an importation was made into Connecticut of ewes weighing 150 to 200 pounds and rams from 200 to 300. Such sheep have both wool and mutton, precisely what we want; they have size, wool free from excessive yolk and grease, and that scours with less loss than that of the Spanish or Silesian Merinos; and the skin is more folded than wrinkled. While these may not be so desirable for crossing on the dry, harsh, and coarse-wooled native sheep, yet they are precisely the type towards which our Merinos were approaching when the demand from breeders on the Western plains began to bring about a fresh boom for excessively yolky and fine-wooled sheep. But having found the treasure by this accident, let us not spend all our energies in looking for more of the same kind, when others are lying around loose in other directions.

Rural Architecture.

ABOUT ICE-HOUSES.

Much has been published about ice-houses for farm and family purposes, and a great deal of money has been expended in constructing them, without satisfactory results. Let me, therefore, give readers of the Rural a description of mine and its management. Built at a moderate outlay, it has been in use 10 seasons during which it has required only trifling repairs, has kept the ice in excellent condition from season to season, and is yet as good as ever before. No "filling" or "packing" is used. In a place near the barnyard on a sandy loam with gravelly subsoil, I dug a space 14 feet square and three feet deep, leveling the bottom and throwing the soil outside. In this I placed a frame of the same size, of 3 by 6, scantling 16 feet high, substantially braced and tightly covered inside and out with ⅞-inch tongued and grooved white pine of good quality. I then banked the soil all around it about two feet high. Around this casing, at a distance of about eight inches, I made another frame six inches higher than the inclosure, and boarded it up also closely with good stuff, beginning about one foot above the embankment. On this outside frame, strongly attached to the inner one without much obstructing the air chamber, rests the shingle roof with a steep pitch, extending three feet over the eaves and sides. Near the points of the roof is a sash, C, Fig. 417 two by three feet, with slats pitched 50 deg. and on the inside end a strip one inch high, as shown at D, to make the passage of snow or rain impossible.

A is a side view; B an air-chamber; E, Fig. 418, gives the inside space; F is the entrance on the east side in a shed K. Under the same roof at the gable end, L, is a sash like C on the west end. The entrance F is closed by one-inch boards, fitting nicely in a slide and on the outside by three doors—H, of the same stuff, about three by four feet and the bottom I, is closed like the walls. The division M in the shed goes only to the base of the roof. Now you will observe that there is a free and copious passage of air all around the inner casing, going up under the roof through the six-inch space over the same, and any heated air or evaporation is carried off by the open space above the ice, the open shed, and ventilators in the eaves. For drainage I put an even layer of corn-stalks, about two feet deep, on the bottom, and on this the ice is laid.

The ice, when even only six inches thick, is cut as nearly as possible in square blocks of 12 by 18 inches, and placed close to the inner boards, and any crevices are filled with small pieces. On every other layer clean water is poured through a fine rose, and the filling is continued in this manner up to about 18 inches from the top of the inner wall, making in a few days afterwards a solid block of ice. The upper doors are kept open after sunset until about eight A.M. every cold day, and it is only after the chances of freezing weather are over that all doors are shut and about a foot of rye straw is placed on the top of the ice.

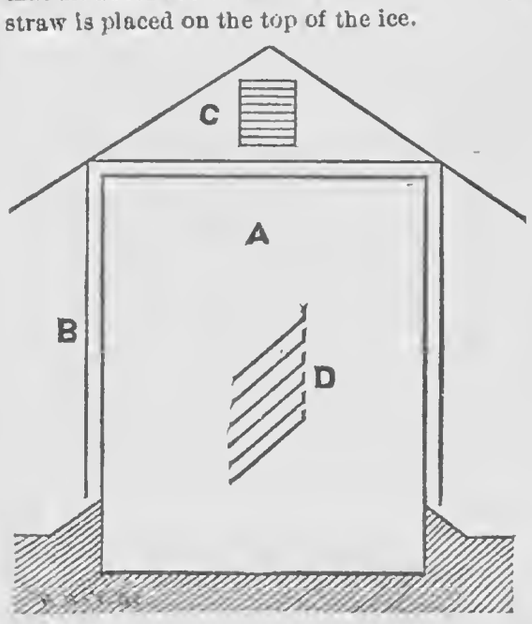


FIG. 417.

Should natural drainage not be practicable, make a clay or cement floor with a good fall to one corner; connect a small drain pipe about 2½ inches, with this corner: lead it about 15 feet, with fair descent from the house, into a suitable hole filled with coble-stones, and cover the pit two feet with soil. If corn-stalks are not on hand, straw, hay (salt), or any similar substance will answer. It is also very useful, before putting in a new crop of ice, to remove all old substance used for drainage. Keep all doors and slides open, and put the new drainage material in shortly before filling.

Passaic Co., N. J. WM. F. HEINS.

Dairy Husbandry.

THE DAIRY COW—NO. 18.

HENRY STEWART.

Trouble with Milk.

Frequent trouble may occur in milking, from very insignificant causes. A dairy cow is a machine, and just as a machine of any kind may work smoothly and beautifully in the hands of an expert, while it may go wrong in the most contrary manner when run by an unskillful person, so a cow in the hands of a capable dairyman goes on day after day steadily without the least trouble; but under the care, or rather want of care, of one who is not expert in managing her, she will always be ailing; her milk will sometimes fall off suddenly; sometimes it may be mixed with blood; sometimes it will be ropy; it may yield bitter cream, or speeky butter, and in other ways it may trouble and annoy the owner. The principal troubles with milk are, loss of quantity, ropiness, mixture with blood, a bitter flavor, foaming in the churn, difficulty of churning and white specks in the butter. Most of these come from without the cow and are avoidable. nodules and swellings about the udder, the joints and the head. The milk of such cows is usually thin, bluish in color and frequently mixed with strings of ropy or tenacious fibrous matter which comes from the teats without any other appearance of disorder, and may not be detected in the milk until this comes to be strained. But healthy cows need never cause any trouble in regard to the milk if they are properly cared for. If anything is wrong, the cause may always be found in the manner in which the cow is treated—either the food is suddenly changed; or it is deficient in quantity or quality; or it is not rightly prepared; or the cow's health is suffering from some accidental cause, as exposure to heat or cold, or storms, or some sudden change which interferes with the circulatory system; or she has been chased by dogs, or roughly handled by her companions or her keeper. Something that might have been avoided has happened to produce the trouble.

For instance, when the milk falls off in quantity, the first thing to suspect is something in the feeding or the watering. A cow will often fall off in milk when changed from dry feed in the Spring, too suddenly or abruptly, on to grass. The grass acts upon the bowels as a laxative and diuretic and, in stimulating other organs, interferes with the secretion of milk, by changing the currents of the circulation. It may not follow that a change from moderately good to more stimulating food will always produce an increase in the milk; if too suddenly made, the change may easily reduce the flow of milk for a time. In the same way the increased feeding will often so stimulate the milk organs as to cause them to pass blood into the milk ducts unchanged, instead of elaborating it into milk, and then the milk is mixed with blood. This result also may occur from any undue excitement of the circulation of the udder, such as excessive exercise in running; or from bruising or pressure when a cow lies upon a well-filled udder, or from contact of the udder with damp or wet ground at any time, or with a cold floor in the Winter.

The careful owner of a cow should always consider that the udder is a highly nervous and vascular organ, provided with a very finely diffused circulatory and secretive apparatus, and that a slight injury may have a very serious effect upon it. It is most probable that the cell structure of the milk glands is itself the source from which the milk is derived, and that these cells are replenished from the arterial blood conveyed to and distributed through the udder. When, therefore, it is considered that in a cow giving 30 pounds of milk in 24 hours, all this quantity is actually produced by the two-fold change of blood into cells and of cells into milk and cream, the activity of the organ which performs this enormous work must be, indeed, wonderful; and it should not be surprising that a supposed insignificant circumstance may produce some unexpected and serious results. Bearing this in mind, one who keeps a cow should ever be watchful and cautious against the least variation of treatment that may so easily affect the condition of the milk.

Ropy, bitter, or acid milk, the latter producing specks of curd in the butter, may be and are usually, caused by ill health in the cow, by which the condition of the blood is affected. The milk in its normal, healthful condition is slightly alkaline; but when the blood is out of condition its alkallnity may be much increased, or the milk may be acid. In one case only, however, have I found ropy milk excessively alkaline; in every other case in which I have tested such milk, it has been distinctly

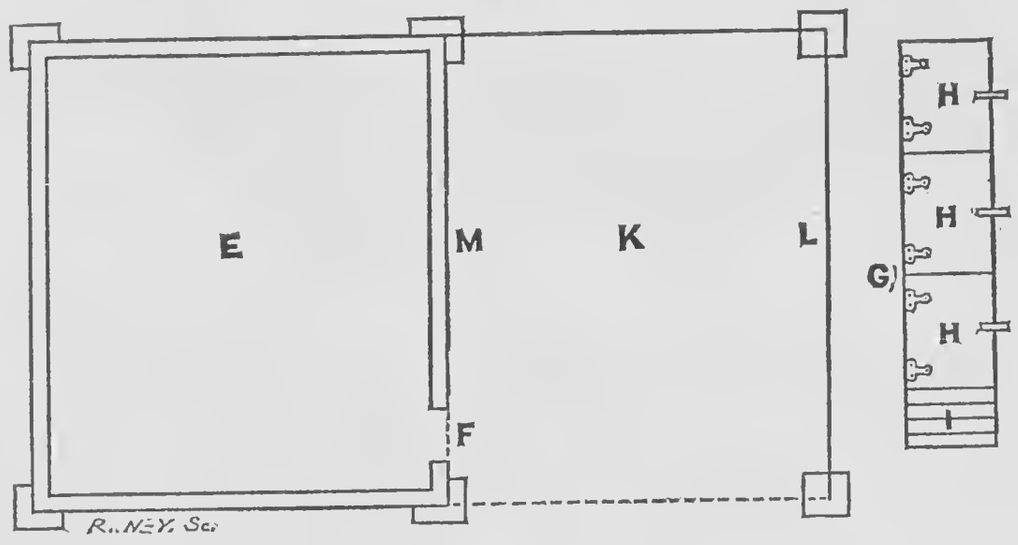


FIG. 418.

A cow may be constitutionally delicate and more subject to ailments than another more robust, and if she is very defective in this respect, she is poor property and should be got rid of as soon as possible. There are some cows that are constitutionally scrofulous and naturally subject to tuberculosis and other similar diseases, such as softening of the bones and suppuration of the milk glands. Cows so diseased are easily distinguished by their thin, white skin, the bloodless appearance of the membranes of the eyes, and the occurrence of acid and has sometimes showed, by the test of litmus paper, a high degree of acidity and has become very soon completely curdled; the long, fibrous clots placed under the microscope, appear simply as curd formed in the ducts and molded by them into the stringy pieces which pass through the teat into the milk. This ropy or stringy matter is easily dissolved in a solution of carbonate of soda or potash, and would therefore seem to be caused by acidity. The white specks which often appear in the butter are due to a similar cause, and are merely particles of curd or cheesy matter which are formed in the milk and adhere to the cream and are carried up, and mingled with it, and so go with it into the churn. In this case they are only partially removed by the most careful washing, and the butter is unavoidably injured by them.

The best remedy for all these troubles with the milk is to administer a free dose of salts, one pound of sulphate of soda (Glauber salts) or of sulphate of magnesia (Epsom salts), being given dissolved in warm water, by means of a common drenching horn; and after this has operated, a daily dose of one ounce of hyposulphite of soda may be given with benefit, for two weeks, so as to effectually free the system from all acidity. This salt is a most valuable medicine in the dairy on account of its antiseptic and alterative properties, and a pound or two of it may be beneficially kept for use. It is readily taken when powered and sprinkled over a mess of scalded bran or some cut feed, and it will be found useful in all these cases of trouble with milk. The improper behavior of milk in the churn is due altogether to the after management of the milk and requires special consideration.

A famous cow is "Eurotas 2,454;" that is, if we are to believe her report. One may believe a good deal about Jersey cows because as butter makers they are a phenomenal race. But as regards this cow, the report tells a good deal about "the development of udder, milk veins, and apparatus for the conversion of food into milk," etc., etc, which tends to throw some suspicion upon it. Because, as regards milk, the cow's yield is only equal to 10 quarts a day (22 lbs.), quite a moderate one, and surpassed by thousands of cows, and for it no wonderful development of udder, veins, etc. is necessary. But as regards the amount of butter in the milk, the report is amazing. This is over 10 per cent. or one pound to 9 67 pounds of milk. As two pounds of solid cream make but one pound of butter, this is equivalent to 21 per cent. of solid cream, or, one inch in thickness upon 4½ inches of milk. Before one should pay $1,500 for a calf from a cow with such a phenomenal record, it would be at least safe to know that the record is genuine and free, not only from fraud, but also from too enthusiastic figuring. S.

Farm Economy.

AGRICULTURAL SUGGESTIONS.

RICHARD GOODMAN.

Ground Bone.—I look upon this as the best substitute for barnyard manure for a grass farm, taking price as an essential part of the consideration. Twenty years ago I brought up a worn-out farm with it, using then the raw bone, costing about $50 a ton, ground up in pieces varying from a quarter of an inch to almost dust. The latter showed good effects the first season, and the other dissolved gradually and left an impression annually for five or six seasons. I now use for seeding down a pasture or meadow the bone dust of Peter Cooper's glue factory—coarser or second quality—sowing it in the Spring, at the rate of 500 pounds to the acre, and harrowing it in with the seed, and top-dressing lightly every Fall a few years thereafter—say 200 pounds to the acre. I purchased through Mr. L. J. Hand, 130 Water Street, New York. At the New Jersey Experimental Station, where seven specimens were subjected to scientific analysis, the *fine* bone-dust manufactured at Cooper's glue factory was estimated at $42 25 per ton for agricultural purposes, the actual cost being $28. I find the next lower grade, called "coarser," just as good for all purposes, and it costs about $3 a ton less.

Ensilage for Butter-Makers.—There is probably no question of the utility and economy of this preparation of food for beef cattle, and perhaps for cows whose product is solely to be used as milk, but how far it will be beneficial to those who convert the latter material into butter is questionable. Accounts of the opening of several silos recently, show that on the surface of the mass there was quite a must or mold, and in some cases more fermentation than a good dairyman would like to have in the food his kine swallow. This ought not to affect the milk perceptibly, but after the latter has stood the usual time, and its essence has become cream, that and the butter would be likely to become affected, at least in the tempering of that delicacy of flavor which is the chief charm of gilt-edged butter. We have not yet been able, by means of any of the recent portable creameries, to obtain that nutty, delicate flavor in the butter which is imparted by the old-fashioned method of setting in open pans in a proper temperature, in a room uncontaminated with any other flavors. Conversing recently with an experienced dairyman, who is now managing a large establishment furnishing milk in sealed cans, he informed me that it

was not unusual for customers to complain of the ill effects of the milk upon children, and, tracing the cause back, he generally located the difficulty at some farm where the cows were fed largely on apples or had some other improper food. There is no donbt all cows will eat with avidity the contents of the silos and, like us humans, prefer a mixed, moist diet to a dry one of hay and bran; but it is yet to be proved whether, for all dairy purposes, the lacteal fluid and the cream and butter will be as good and fine for the delectation of discriminating epicures, as the same products produced from the usual fodder, early-cut hay, wheat-bran and corn-meal. There is another consideration apt to be overlooked by the enthusiast and new beginner, embodied in the homely proverb, "You can't get more of a cat than her skin and what's inside of her." No more food will come out of the silo than is put in. There are some chemical changes, of course, but probably the most efficacious of the results is the softening of the corn butts and the other hard substances by the vinous fermentation, so that the animals can eat and digest everything; but was not that result reached as effectually by the steaming process so much in vogue a few years since and now practiced in a limited degree? Great credit is due to those enterprising farmers—and they are increasing daily—who will experiment and test for the benefit of themselves and others, and it is wise to let those who have the means and the knowledge satisfy themselves and give the results of their work before too many, without due preparation, rush in and get disappointed and perhaps deter others from having a good thing.

WATER.—Water is now what is wanted in New England, on the farm and in the villages as well as in the manufacturing establishments, and the dairymen especially cry for it almost as zealously as did the thirsty rich man to Lazarus. The Winter has closed in upon us without the usual Fall rains; the Summer has been almost a continuous drought; the wells are dry, cisterns only partially filled, and the springs closed up. It looks as if our farm hands and horses will be occupied all the Winter in drawing water from the brooks and rivers for the cattle, and the latter will have to run great risks in going to those streams sufficiently near, on the ice and snow.

Among all the devices to surmount the difficulty attending this condition of things, the most feasible appears to be deepening the dried-up wells by *boring* or *driving* new wells in soils suitable to this purpose. There are several machines invented for *boring* to any depth, now coming into use here and at the West, and they bore through rock as well as earth, until water is reached. Then iron pipes screwed together are inserted, a force pump applied and the supply is unfailing. *Green's "driven wells"* have been seen at almost all the country fairs, and are familiar to the farming community. One great advantage of this system of reaching water, next to the supply obtained at all seasons, is that the water is free from all surface impurity, as nothing can leak in through these iron pipes, and the well can be near the barnyard without injury. When an old well is deepened, the water reached and the pipes inserted, the well is filled up around them with clay and earth. The cost of *boring* is usually $5 to $6 per foot through rock, and the cost of piping, about $1 per foot, is to be added; through earth alone about $3 per foot, and where cement instead of iron pipes is used the cost is two-thirds less than iron, but the joints are not so close, and if the well is near a barnyard it might not be safe from intrusion of the flow from it in wet seasons. We are not as clean as the Persians, according to Herodotus, were—"who never spat or washed their hands in a river, nor allowed anyone to do so," and for pure water for house or barns there seems no better way for those aloof from mountain springs to obtain it than by delving into the bowels of the earth, which are supposed to be clean, and if we don't go near enough to the hot regions below, we shall get a good article and plenty of it. A wind-mill can be used instead of a force pump, when required, and the water thereby constantly distributed to the tank of the dwelling-house and barns, and from the latter into the mangers of the cattle.

How to Feed the Pigs.

A good plan for a pig trough is here illustrated. It is so constructed that without trouble

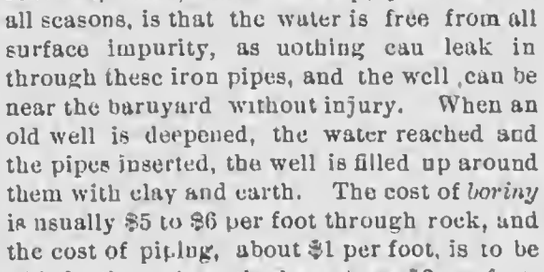


FIG. 419.

or delay, the swine can be shut away from it while the feed is being put in. T is the trough, divided by cross strips to prevent the swine from crowding one another. D is a door hung over the center of the trough. When it is desired to shut the swine away from the trough, the door is swung in and bolted (B) on the side of the trough. After the feed is evenly distributed, the door is swung to the ontside of the trough, and bolted.

Monroe Co., N. Y. CHAS. A. GREEN.

Entomological.

THE GRAPE-VINE FLEA BEETLE.

This little insect, a small blue or brown jumping beetle, less than one-fifth of an inch in length and which is shown, much magnified, in the two illustrations, figures 420 and 421, has the scientific name of Haltica chalybea, of Illiger, and is of the order Coleoptera, and family of Chrysomeladæ. It is found eating into the grape buds in early Spring.

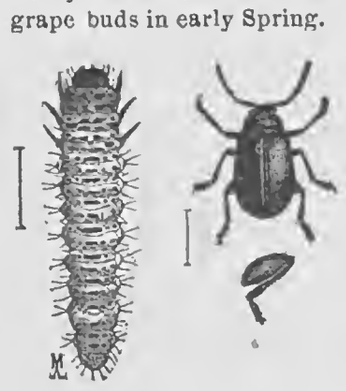


FIG. 420.

In May and June the brown, sluggish larvæ are found upon the upper surface of the leaves, eating irregular holes and often partially or wholly skeletonizing the leaf.

A sketch of the natural history of the flea beetle is given by Prof. Comstock in the forthcoming report of the Department of Agriculture, from which we are permitted to reproduce the accompanying illustrations for the RURAL.

The greatest damage which is done by this flea beetle, so called from its jumping habit, is in eating the young vine buds in early Spring. The adult beetles hibernate in great numbers in the Fall under the bark or the

FIG. 421.

splinters of supporting posts, or on the lower portion of the grape-vines, in the joints of fences, or under sticks, stones or logs, and, in fact, in any convenient place where they can find promising protection. During the first warm, sunny days of Spring, as the buds of the vine are beginning to swell, the beetle leaves its winter-quarters and flies, or jumps, to the nearest vine for its food. There it gnaws holes into the buds often deep enough to bury itself.

As soon as the leaves unfold, the females deposit their eggs of a straw color, in irregular clumps of four or five, upon both under and upper side of the leaves. The young larvæ hatch some time in May or early in June, according to climate, and commence to feed upon the leaf, cutting irregular holes. The larvæ attain full growth in from three to five weeks, and may be found in almost as wide a range of latitude as the grape vine itself.

Figures 420 and 421 show the size and appearance of this pest, and its habits of feeding. After feeding sufficiently the larvæ drop from the vine and work their way under the ground some two or three inches, form a smooth cavity around themselves and are transformed to pupæ, about 15–100 of an inch in length and of a yellowish-brown color. Here they remain from two to three weeks when the perfect beetle emerges, see fig. 420. A second brood may be found in the warmer latitudes, but one brood a year is all that there is any certain knowledge of.

The remedy for this insect is to use posts without bark, in the vineyard, and to make examination of the lower part of the vine or any other places, and remove any that may there be discovered, and to rake up, late in the season, and burn all refuse or rubbish in which the beetle has taken refuge. In the Spring the appearance of the beetle should be noted, and all beetles' eggs and larvæ carefully destroyed with the fingers. The beetle drops and feigns death when interrupted in feeding. Holding a strip of cotton cloth, three feet by six, saturated with kerosene, under the vine and giving this a sharp jar, will collect and destroy the beetles while beginning to eat early in the Spring. Sprinkling with a solution of whale-oil soap—two pounds to fifteen gallons of water—or dusting the leaves with lime also aids in the destruction of the pests.

The Cabbage Pionea.

In the RURAL for August 7th, I ventured the statement that there must be three broods of the Pionea worm in this latitude and possibly four or five, giving my reasons for such a conclusion. Though I have not taken the trouble to rear them since writing, I have observed them on the cabbages in my garden since then, and my observations fully confirm the conjecture I made at that time—that there are at least four broods. While it is quite probable that the more rapidly developing specimens may run through five broods in a season under favorable circumstances, and the slowest developing only through three, the average number will produce four broods, according to their appearance in my garden.

At times I have seen the Pionea and rape worms on the same head, but they are generally found on separate heads. The rape worms, by the way, are much less numerous this year than last, showing that the parasites on them have been present in full force. On the subject of remedies, it is probable that pyrethrium will prove the only safe one that will be sure not only for this but the rape worm. Paris-green and London-purple are effectual in killing the worms, but they are not safe, as they are liable to remain on the heads and kill the people who eat these. G. H. FRENCH, Carbondale, Ill.

Industrial Implements.

AN EXCELLENT PORTABLE MILL.

THE accompanying cut represents a very serviceable mill designed and made by the Nordyke & Marmon Co., of Indianapolis, Ind. It is of the upper-runner type, placed in an iron hurst frame. All its material, except the stones and curb, is of iron or steel, which renders it extremely durable. Every part is accurately fitted, adjusted and balanced, and thus the utmost steadiness of motion is secured. The mill runs very lightly, and the stones, being of equal thickness and in perfect running balance, no trouble arises from their action. In flouring middlings or wheat it is only necessary to keep the furrows and faces smooth and true, and to follow the usual directions for good milling. The mill has the latest improved

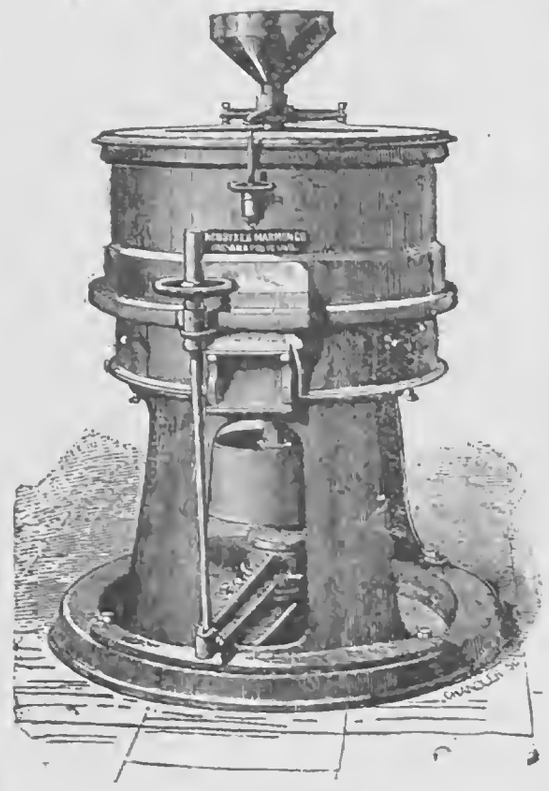


FIG. 423.

self-tramming driving iron; the bush or upper bearing of the spindle is self-adjusting; the bed-stone is movable and held firmly in its place by suitable screws, which are used for tramming and leveling it. Several sizes are made. The fact that the mills of this well-known firm were awarded the highest prize at the Missouri State Fair lately held at St. Louis, and at the recent Millers' Exposition at Cincinnati, speaks eloquently in praise of their merits. For full particulars with regard to them we refer our readers to the Company at the above address.

Miscellaneous.

NOTES.

IT seems to me that the deer may be taken in hand and bred into an animal of more general utility, and certainly there are few greater objects of beauty. Does not the deer offer a subject of as much interest as the outlandish goat for experimenting with?

There is want of a kind of meat somewhere in character between beef, and mutton and pork—not so tough and coarse as beef, and yet not so fat and indigestible as pork, and still of a better flavor than mutton, as generally found upon our tables; something larger than poultry and not as expensive, and yet more compact and meaty, yet not as heavy as beef. C. C. B.

The cry of food adulteration comes periodically round, and nearly scares the life out of all sensitive, nervous people. The coffee is half peas for body, half chiccory for strength; the sugar and sirup are half glucose or sorghum, just as though any and all of these were not perfectly wholesome. The olive oil is half lard, or cotton seed or fish or some other, as though they were not all oil, and who knows which is best? C H.

Rice is not only one of the most wholesome, but one of the most palatable cereals, when carefully cooked, and its area of cultivation is very rapidly extending. The crop in Louisiana in 1870 was but 60 000 barrels, while the present crop is estimated at 250 000 barrels. The price ranges from six to eight cents per pound at wholesale, which is three or four times more than that of wheat, but no more than flour, and there is no waste in it as in wheat. J. F. B.

EXTRACTS FROM SUBSCRIBERS' LETTERS.

I like the RURAL. It has a heart in it.
E LEWIS STURTEVANT.
So. Framingham, Mass.

I subscribe for the RURAL NEW-YORKER because it is the best agricultural paper I take, and I want it every week steadily.
Watertown, N. Y. D. S. MARVIN.

I must say the RURAL is the very best paper I ever read, and I read a good many.
New Market, Va. MRS. P. S. WISE.

The RURAL is an especially welcome visitor, week by week, helping very much to relieve the dullness and loneliness of our isolated situation. My husband esteems it very highly for the information in agriculture and horticulture it affords, and I enjoy its literary and miscellaneous contents. MRS. L. B. HALE.
Kansas.

The RURAL grows better and better. I will do all I can to add to its circulation. I hope to get a large club this Fall. Your premiums are very liberal and valuable. F. B. WEED.
Saratoga Co., N. Y.

IF the White Elephant should prove to be as good a potato as the Beauty of Hebron, it will be worth the cost of the RURAL to each subscriber, and the RURAL is worth more than any other farmer's paper that I have seen.
Oneida Co., N. Y. H. E. DAVIS.

I HOPE the RURAL is prospering as well as it appears to be, for its appearance is very inviting and successful. MARY WAGER-FISHER.
Bryn Mawr, Pa.

[It is safe in this instance to judge by appearances.—EDS]

I LOVE the RURAL. I have learnt something about fruit growing every week since last January, when I had my first number. It has made me an enthusiast about grapes, raspberries, strawberries. H. KENWORTHY.
Iroquois Co., Ill.

I HAVE taken the RURAL since Jan. 1, 1880, and like it very much.
MRS. ELIZABETH A. BRIGDEN.
Van Ettenville, N. Y.

THIS morning I *take* time to answer your letter. It is your fault that I am so hurried. My advertisement in the RURAL NEW-YORKER tells almost too well. J. T. LOVETT.
Monmouth Nursery, Little Silver, N. J.

WE think the RURAL is a splendid paper.
Hartwick, N. Y. G. W. SILL.

I WAS so well pleased with the seeds you sent

me last Spring that I will take pains to get new subscribers and renew. W. C. BELDING.
Swanzey, N. H.

THE RURAL is the only agrienltural paper I read. In the busy season I seldom read even N. Y. Daily, but the RURAL is an enjoyment I do not forego. GEO. S. JOSSELYN.
Fredonia, N. Y.

WOULD that more of our non-reading planters and farmers could see and take the RURAL NEW-YORKER. Through your paper we have received many large orders for what we have sold. W. B. JONES, M. D.
Herndon, Ga.

WE are very much pleased with the RURAL and RURAL seeds; the only query is how can you raise so large a crop.
Livingston Co., Mich. MRS. HENRY CROOP.

I AM told that the RURAL NEW-YORKER is the best weekly agrienltural paper in the world, but as I never see it, I cannot speak from personal knowledge. JOSEPH HARRIS.
Moreton Farm, Rochester, N. Y.

I MUST have the RURAL; it is a welcome visitor every week. It seems to get more interesting. I think it one of the most valuable papers published, and one that our children can safely read and from it learn something worth learning. I consider it one of the very best papers ever placed before a family.
Ontario County, N. Y. E. F. MANAM.

IT will give us great pleasnre to recommend the RURAL whenever we have an opportunity, because it is worthy of it. You are certainly making it a first-class paper, and we congratulate you upon your success and your bright prospects for the future. Your portrait of the Naomi Grape in last number is very tempting. What are we to do with all the new and wonderful grapes? ELLWANGER & BARRY.
Mount Hope Nurseries, Rochester, N. Y.

—— the leading agricultural paper in the United States. EX-GOV. R. W. FURNAS.
Brownville, Neb.

MY wife says the RURAL is really the best of all the agricultural papers I get, and I assure you I think so, too. I am still Secretary of the Board of Trade here, and Secretary of the Northwestern Dairymen's Association.
Elgtu, Ill. R. P. MCCLINCY.

RURAL BRIEFLETS.

WE once asked a nurseryman why he gave so much of his grounds to the Balsam Fir or Balm of Gilead, as it is often called. "Because," said he, "of all trees in my nursery, that is chosen first by nine out of every ten that come to purchase." No doubt a careful estimate of the different kinds of evergreen trees to be seen about country and even city homes as well as public parks and cemeteries, would show that the above experience is the rule and not the exception among nurserymen in general. Young Balsam Firs are very captivating. They look to be the embodiment of health and vigor. Their leaves are of the greenest and they never present the faded hue that those of the spruces and arbor-vitæs beside them, during a considerable part of the year, assume. But this freshness of youth is really their only charm. As they grow older they become less compact. There is more of stem and twig and less of foliage, and, finally, at an early maturity the lower branches, as if attacked by some disease, begin to decay and the tree, at a time when it should serve us best, has lost both symmetry and beauty of foliage and is only permitted to remain because we cannot afford to wait another ten years for the growth of a better tree to fill its place. . . . . .

THERE is now in England a variegated form of the Virginia Creeper. The leaves are splashed with yellow and the variegation does not impair the vigor of the species. There is also a variegated tulip described in the Garden as golden-margined. But the variegation is not constant, solid green leaves occurring here and there. . . . . .

Mr. HOVEY, in some thoughtful and entertaining notes to the London Garden, speaking in opposition to the prevalent fondness for creating double flowers, says:

"I think Lindley once raided upon cultivators for their attempts to spoil some of our prettiest flowers by making them double; and though I cannot agree with this as a rule, I do think that nature has placed in our hands some few flowers which it would be as great a mistake to improve upon as it would be to make a double-headed horse."

The beauty of many flowers has been enhanced by the change from a single row to many rows of petals as, for example, pelargoniums, balsams, portulacas, roses, camellias, petunias and asters. But there are many others which are far prettier with single flowers, as, for instance, the Rose of Sharon or Shrubby Hibiscus, the violet, lilies of all kinds, the gladiolus, tulip, hyacinth, mock-orange, lilac, clematis and many others . . .

SEVERAL years ago we spoke of having seen several spikes of blue (light blue) gladiolus which were exhibited in the show room of one of our city seedsmen. This announcement was received with some incredulity by several of the English horticultural journals. Little has been heard of them since and upon inquiry the reason seems to be that the corms are not very vigorous, rarely more than reproducing themselves and never forming bulblets. Unless, therefore, a more rugged blue variety should again be grown from seeds, it must be a long time before a blue gladiolus can be offered for sale. . . . . .

THE editor and assistant editor of the American Entomologist have dissolved that relationship. The interests of the latter, it appears, are liable to call him at any time to New Mexico. For the same reason we hope it may not necessitate his retirement from the agricultural editorship of the N. Y. Sun. . . . . .

IT has been suggested to Sarah Bernhardt—and the advice is just as good to all thin people—that if she wants to get fat she should board at restaurants or second-class hotels and help herself freely to the butter! A question may arise whether *first* class hotels would not answer. . . . . .

PUCK says that it is the impulsive pullet that very, O vary often does the heavy work for the farmer's basket. The thoughtful, brooding old hen may cackle-late, but she doesn't lay early and often. . . . . .

IT appears that the wheelbarrow is now called the *unicycle*. But the Boston Post thinks that it is just as hard to run with a big trunk on it as it was under the old name. . . . . .

WE have received a letter from an esteemed correspondent, who has often placed us under obligation by the freedom and sincerity of his criticisms, in which we find the following:

You ask for something *new* and valuable upon the subject of corn growing. Corn has been grown in America since 1492, to our knowledge, and long enough previously to shrond its origin in an impenetrable cloud of mystery. How can there be anything *new* upon that subject? I think, before we tell the farmers anything more about its cultivation, we should teach them the commonest principles of plant growth in general. I don't think you know how many farmers read agricultural journals out of mere curiosity, to see what you say, without the smallest idea of practising your precepts, or taking the least pains to understand them. Your contributor, Mr. Stewart, is on the right track, but although he is perfectly well posted on the subject, he doesn't know how to handle it. He is altogether too abstruse for children, and, in fact, even for three-fourths of the farming community of adults. He is not the first writer by any means who knows all about his subject, but who has not the faculty of communicating his ideas clearly and concisely. Often the best professors are the poorest teachers; they have the knowledge, but it hangs fire, it is bottled up and the cork wired down. . . . . .

MR. SAMUEL L. BOARDMAN was for 16 years editor of the Maine Farmer, six years Secretary of the Maine Board of Agriculture, and recently agricultural editor of the American Cultivator. He is now the editor and one of the proprietors of a new paper called The Home Farm published at Augusta, Maine. Mr. Boardman is well known as an able agricultural writer, and we hope that his work may meet with a hearty response from the farmers of Maine, who it seems to us, stand in much need of a live, liberal-spirited farm journal. . .

OUR friend and valued contributor, Mrs. Annie L. Jack of Canada, asks us the following question:

"What percentage of split beans, broken in thrashing, will be likely to grow?" Can any of our readers answer? We cannot. . . .

WHAT OTHERS SAY.

MR. HYDE remarks in the New York Times, that if one wishes to cultivate his farm like a market garden, it may pay to plow in the coarse manure and harrow in the fine, but as a rule he would recommend the application of the manure to the surface of the soil. This is nature's method, and is the most successful for common practice.

"IF you want to enjoy a green old age," says the New York Herald, "live on your income while you are young. A debt is like a drizzling rain, which makes you uncomfortable all the time, while bills all receipted and a lucky penny laid up for bad weather make the heart warm when the mercury is at zero."

MR. J. S. WOODWARD discourses in a late New York Tribune upon the care of stock during Winter. He thinks that any man who lets his cattle stand shivering in the lee of a straw-stack, or old fence, or under an open shed, should be tied in the same place and be compelled to stay one night with the thermometer at zero and the snow flying thick and fast about him; if this does not convince him of the necessity of good warm stables, he is not fit to be called by the noble name of farmer, and the quicker he gets out of the business the better for it and himself.

MR. WOODWARD thinks that the subject of *ventilation* is as little understood for stables as for dwellings. He says that it is next to impossible to open windows or ventilators at the sides of the stable without some animal taking cold or suffering from a draft. Another fact we should remember: every day we keep a young animal with no growth, and every day a mature animal is allowed to get poorer, we are keeping them at a loss and can't afford it; we should see to it that they are so well cared for and fed that they are constantly thriving, and to this end we should feed plenty of good nutritious feed and plenty of some sort of roots or other green food. But above all things keep them *warm*.

IMPROVING COFFEE.—It is rarely the case that adulterating material improves the article adulterated. The Grocer remarks that the stimulating properties of coffee, while they make it a popular article of consumption, are unfortunately the sources of a multitude of nervous diseases. Consequently it was found necessary, after many years' experience of its baneful effects when used in its full strength, to discover some means of ameliorating these by the admixture of a harmless substance resembling coffee in flavor as nearly as possible. An article was finally selected for this purpose after careful experiment, which is now extensively employed, not only for diluting and partially counteracting the injurious qualities of coffee, but for imparting a more agreeable flavor to many brands which would otherwise be unpalatable by reason of their sharpness and generally unpleasant taste. It is hardly necessary to say that this indispensable requisite in the preparation of coffee is chicory, a simple, harmless vegetable substance, which materially lessens not only the bad qualities, but also the high cost of an unmixed coffee. It is stronger than pure coffee and gives a good color to the decoction. It is used largely at European hospitals on account of its superior qualities of nutrition and total absence of nerve-stimulating agents. The nutritious matter in chicory, according to analysis, amounts to 66 per cent., while that of coffee is but 31.

MR. EDMUND HATHAWAY, says in a forcible and touching essay on the treatment of animals: "The effect of the barbarous treatment of inferior creatures on the minds of those who practice it is still more deplorable than its effects upon the animals themselves. The man who kicks dumb brutes kicks brutality into his own heart. He who can see the wishful, imploring eyes of half-starved creatures without making earnest effort to relieve them, and feeling a twinge of conscience, is on the road to lose his manhood, if he has not already lost it. And the boy who delights in torturing frogs or insects or despoiling birds' nests, or dogging cattle and hogs wantonly and cruelly, will generally prove a worthless creature, or worse than worthless, when grown up."

LIGURIAN HONEY BEES.—A year or two since many of our apiarians were quite enthusiastic in regard to the merits of the Ligurian honey bees, as it was claimed that they were more industrious than either the common bee or the Italians; but it seems that the Ligurians have some faults as well as other varieties. A Mr. Watts, who has recently issued a revised edition of Mr. Taylor's book upon the apiary, says that if the Ligurians gather more honey than the common bees, it is because they do it by robbing the hives of the latter. This is certainly a serious charge against the new favorites, and it would be well, remarks the New York Sun, for apiarians to investigate the matter thoroughly before introducing them in any considerable numbers.

THE Detroit Free Press says that the papers of France are rejoicing about the excellent prospect of there being lots of champagne this season, because the grape crop is good, just as if there was any connection between plenty of grapes and plenty of champagne. In America chemical science has reached such a state of perfection that it really makes very little difference, as far as wine is concerned, whether grapes are plenty or not.

THERE are certain bits of advice that can scarcely be repeated too often. We find the following in the New York Herald: Nothing is more important for a young man than to stand well with his employer, and there is no better general rule than this, to do every task with a thoroughness and faithfulness which make criticism impossible and excite admiration.

FROM 1857 to 1878, says Mr. C. M. Hovey, writing to the London Garden, there was not a single failure of the pear crop. But in 1878, from some cause, there was a great failure; not more than one-sixth of a crop. It was not owing to any severity of the Winter, for it was a mild one; and the cause has been generally attributed to the three years of continuous heavy crops, which had tasked the trees beyond endurance. From a record which he has kept he finds that the average price of pears in 1870 was about $3.50 per bushel; in 1875 about $2.75; and in 1879 about $1.35—that is, for choice, selected fruit, gathered from an average of 150 varieties, including such fine sorts as Beurré Superfin, Hardy, Doyenné du Comice, Beurré Clairgeau, B. Giffard, B. Langelier, etc.

AN amateur neighbor, remarks Mr. Hovey in another part of the same article, whose garden of about half an acre is directly across the street, and planted with pear trees, often inquires about the new pears and their value in the market, hinting occasionally at our enthusiasm for the new sorts while he sticks to the old. His trees are all Bartlett and Seckel, and for years he has disposed of his whole crop to one dealer, who takes them away without any other labor than that of gathering the fruit, and at almost double the price of Mr. Hovey's 200 varieties of all the finest pears. Having as long ago as 1868 obtained all the information he wanted in regard to these kinds, Mr. Hovey began to graft them over with Bartlett, Beurré Bosc, Dana's Hovey, and Beurré d'Anjou; and he really feels relieved in the pear season that he has no longer to see time wasted in gathering such a motley lot of unsalable pears, to set aside the disappointment when he had expected something near the description, to find it comparatively inferior.

AMONG new pears Dana's Hovey holds a prominent position. A counterpart of the Seckel, from which it was probably raised, it has held its high price for ten years firmer than any other new pear. Mr. Hovey thinks that, whatever catalogues may show, as compared with twenty-five years ago, the new pears are not superseding the old, but are rather supplementing them in the most satisfactory way.

THE DOUBLE HORSE CHESTNUT.—Speaking of this in another article of the same journal, Mr. Hovey, whose residence is Boston, Mass., says that he has two very fine trees of it, some 40 feet high, and 15 inches in diameter, which were selected during a visit to England in 1844, with many other, at that period new and rare trees. They flower abundantly, and the huge heads of double blossoms are scarcely surpassed, if equaled, by those of any garden shrub. If the blooms were upon a bush no larger than the Hydrangea paniculata, they would be almost as attractive, and he is not sure they would not vie with those of that plant; unfortunately, they are so fugitive that their beauty is soon gone—the only drawback to its more extensive cultivation.

BUTTER TEST OF JERSEY COW, EUROTAS.—The accompanying table of the butter record of this remarkable cow, the property of Mr. A. B. Darling, near Ramsey, N. J., is given by the New York Herald.

Eurotas, 2,454. Dropped calf Oct. 31, 1879, has calved again Nov. 4, 1880. The intervening test for butter commenced with Nov. 10, 1879, and ended with Oct. 15, 1880 (period, eleven months and six days), at which time she became dry:

Month 1879.	No. of days.	Weight of milk	Weight of butter. lbs.	oz.
November	21	451	40	1
December	31	755	74	0
1880.				
January	31	746	79	2
February	29	667½	77	1
March	31	653½	75	6
April	30	602	68	11
May	31	770½	87	11
June	30	837	88	6
July	31	760½	80	5
August	31	704	66	7
September	30	454½	32	5
October	15	123½	8	10
Totals	341	7,525	778	01

The total yield, it will be seen, amounts to 778 pounds one ounce of butter for the year, which is the highest yield on record. The greatest previous recorded yield was that of Jersey Belle of Scituate, owned by Mr. C. O. Ellms, of Scituate, Mass., which made 705 pounds of butter in a year. In the present case no account was kept of the milk and butter made during the first ten days of her milking period, and, as her last calf was dropped a few days within a year from the date of the commencement of the test, she would be entitled to the additional time had the trial commenced five days earlier. The weights of milk and butter were taken at each milking and churning, the butter being weighed before adding the salt, but not until the buttermilk was thoroughly rinsed and worked out. In Winter she had all the hay she wanted and in addition a pail of gruel or bran and oat-meal, thin enough to drink, three times a day. When grass came to stimulate the milk-secreting organs, she was fed three quarts of corn-meal daily in two feeds, corn having previously been found to tend rapidly to flesh. In hot weather she was stabled from the midday sun, and fed green fodder while up, with the choicest pasture while turned out.

CONSUMPTION OF MILK IN THE BRITISH ISLANDS.—Our occasional contributor, Prof. Sheldon, in a late address before the Wilts and Hants Agricultural College, stated that each man, woman, and child in the United Kingdom consumes, on the average, as milk and in

cookeries, one-third of a pint per day, or 15 gallons per year. This mode of consumption disposes of 525,000,000 gallons, leaving 900,000,000 or so to be made into cheese and butter. Of this second balance it is probable that 350,000,000 gallons are devoted to cheese, and 550,000,000 to butter. In this event, some 126,000 tons of ripe cheese are produced, and 29,285 tons of butter per annum. From America and Canada about 70,000 tons of cheese per annum are imported, and from other sources, about 30,000 tons, which, together, amount to about four-fifths of the home production. Of butter, about as much is imported as is produced at home.

HEREFORDS AND SHORT-HORNS.—In discussing the comparative merits of these breeds the Mark Lane Express says that the relative usefulness of both breeds in England is no criterion whatever of their relative usefulness in this country. There are few graziers, it thinks, in England who would buy Short-horn bullocks if they could get Herefords, and yet the breed does not extend itself in that country, a pretty conclusive proof that for other purposes than beef production, they do not give satisfactory results. The agriculture of England, in its opinion, is tending more and more towards a system of breeding, rearing and feeding cattle on arable farms where the return is to be made in both milk and beef; and it is decidedly of opinion that the Short-horn will meet these conditions while the Hereford will not. But in this country, or rather in those parts of it devoted to the rearing of cattle under the system of allowing the calf to run with the dam and take all her milk—a system of grazing pure and simple—it thinks the Hereford will be the right beast in the right place. It believes that this question will be thoroughly tested, not by fanciers or fashion mongers, but by men whose single aim is to make the best possible return for their beef cattle, and it predicts an easy victory for the Herefords.

PROFITS ON TEXAS CATTLE.—The cost of keeping cattle in Texas is estimated by the Fort Worth Live Stock Journal at about $1.50 a head, or $1500 a thousand. Four men, with 12 to 16 horses, will tend a herd of 1500. The profits are as follows: Beeves, per head, cost $15; running expenses, $1.50; sell at $22, with a profit of 32 per cent. Profit on cows costing $13.50 per head; cost of keeping, $1.50, making $15. Increase of calves, 75 per cent., worth $5 per head. Net profit, 23 per cent.

DURATION OF GLANDERS.—In a late discussion before the Central Veterinary Medical Society of London, Mr. Hunting stated, as reported in the London Veterinary Journal, that the period of incubation of the disease, during which it might rest in the system without any outward symptoms being noticeable, might vary from eight days to three months. The French law is understood to be that if symptoms of glanders become manifest within 18 days after the sale of a horse, it is inferred that the animal had glanders in its system prior to its sale, and therefore the seller is responsible. According to Mr. Hunting, it is extremely difficult to determine from the manifest symptoms of the disease how long the animal has been suffering from it, and he did not believe any one could say positively that any particular horse had been glandered for one month, or any other definite period. From this opinion, however, Mr. Steele differed somewhat, maintaining that under certain conditions and with certain peculiar symptoms it is possible to fix the duration of the disease at least to within one month. Mr. H.'s assertion that the disease is due solely to contagion was not controverted.

THE HOLSTEIN CROSS.—Mr. Geo. E. Brown, the extensive cattle dealer of Illinois, writing to the National Live Stock Journal, of Chicago, says that his first impression was against a Holstein-Jersey cross, but he has seen many excellent results and not one failure from crossing pure Holstein bulls on grade Jersey cows, and he believes that for practical dairy purposes a judicious cross of this kind may be relied upon to produce uniformly good results, whether the male be pure Jersey or pure Holstein. In crossing, however, his first choice would be the pure Holstein on grade Short-horns. This cross, he says, not only insures a deep milker, but retains the size and detracts nothing from the beef value of the Short-horn. Next to the grade Short-horn he would choose the Jersey or Ayrshire, his choice being governed by the class of cow desired—a butter cow or a deep milker.

THE FUTURE OF CATTLE RAISING IN TEXAS.—In urging upon the stock raisers of the Lone Star State the importance of improving their herds, the Texas Live Stock Journal says that all stockmen already recognize that it is hard to find a good range to-day. Those who have lately moved towards Western Texas have difficulty in finding water in places where stock are not already located. However plentiful land may be, water is scarce—to be had only by building tanks or boring wells, the expenses of which scrub stock will not pay, nor can poor men meet them on land which is not their own. In districts deserted by cattle the farmer is taking up the land suitable for agriculture; sheep men, too, are taking a share, and cattle men must soon stop turning out their herds on unlimited ranges, and confine them in close quarters, and soon it will not pay to raise beeves that when three years old will not average $18 a head; because the contraction of the pastures will not allow them to be raised in large numbers, and in small bunches the price of such scrub stock will not pay for taking care of them. The only way out of the difficulty, it insists, is to improve the breed and to raise animals that give a good profit in States where they are grazed on valuable land, where every pasture is fenced, where they are fed for market, and where there are expenses unknown at present to Texas stockmen.

BUTTERINE IN DUBLIN.—For some years past large quantities of butterine have been disposed of in Dublin as pure butter. Hitherto the fraud has escaped almost unnoticed, to the great loss of dairy-farmers. Recently, however, says the London Fanciers' Gazette, the authorities, aroused to action by the Rev. Canon Bagot and other members of the Agricultural Society, have set their faces against the practice. Several of the venders of this stuff were brought before the police-magistrates by the Corporation and sanitary officials the other day, and fined in sums of £5 and £10. The certificate of Dr. Cameron, city analyst, set forth that the samples submitted to him consisted of a compound of foreign fats, instead of butter fats. In one of the cases the prosecuting official deposed that one of the cools of butter was marked butterine, but over the "ine" was placed a smaller label, marked 10d., so that the apparent marking on the cool was "butter, 10d." The magistrate said this was a very bad case of deception, and imposed a fine of £10.

CATALOGUES, ETC., RECEIVED.

THIRTY-SEVENTH Annual Report of the N. Y. Association for Improving the Condition of the Poor, for the year 1880, etc.

How Persons Afflicted with Bright's Disease Ought to Live, by Joseph F. Edwards, M. D., published by Presley Blakiston, 1012 Walnut St., Philadelphia, Pa. A neat little cloth-bound volume of 87 pages, containing a good deal of useful information for those afflicted with this disease, and their helpful friends.

Everywhere.

RURAL SPECIAL REPORTS.

FLA., Starke, Bradford Co., Nov. 23.—We are having an unusually wet and unpleasant Fall. We had a light frost the 15th of this month, and to-day there is a very cold northeast wind; it may freeze to-night. We have prepared for a frost by covering all very tender things, but we shall risk the orange trees. Many cover their small trees, but we think it best to let them get toughened, hoping the process will be gradual enough not to hurt them. They will stand a very heavy freeze if the sap is down, as we found two years ago, when they were completely covered with ice and not hurt at all. The rains through October and November injured the cotton crop, and planters have not realized more than half a crop. The sea-island or long-staple cotton is only raised on the Sea Islands bordering on South Carolina, Georgia and in Florida from the Suwanee River to the ocean, this State, producing over half the crop, which in grade rates with the best. Short cotton is raised west of the Suwanee to the northern and western boundaries of the State. Our long-staple cotton is a fancy article sold by itself, and is made no account of in the New York market reports; it is mostly sold in Savannah, and is used in the manufacture of the best qualities of thread. It is also used to mix with silk in making ribbons and other silk goods. The fiber is so long and silky that it can be used for purposes for which the short staple would not answer. Two years ago the Willimantic Thread Company sent an agent here to buy up this cotton for their manufactory without the intervention of middlemen. It usually sells for about three times as much as the short staple. Last year the best short staple sold in Savannah for 12 cents, and the best long staple, for 36 cents, so you will see that as both kinds are raised in the State, it is necessary to make a distinction.

I. S.

N. Y., North Blenheim, Schoharie Co., Nov. 25.—In a late issue of the RURAL, the Editor asks the result obtained by raising corn on land plowed in the Fall and crossed-plowed in the Spring. I cannot give any results with regard to corn, so raised; but I can tell about a crop of oats, raised under such circumstances. Last Fall I plowed about one-third of a four-acre lot of rye stubble, and in the Spring I plowed the whole field, and the result was that the oats grew about one foot taller where it was plowed the second time than on the rest of the plot, and were the best oats by half. People who passed by the field wondered what made the difference. I am well satisfied by this and past experience that it pays to cross-plow in the Spring for any crop. The long, dry Summer shortened the hay and potato crops in this section; but corn never was better on the hills or on the Schoharie flats. Rye was a fair crop, as usual; as was wheat. As this is a dairy section farmers do not sell much grain. Prices rule about as follows: hay, $15 per ton; corn, 70c. per bush.; rye, $1.00 per bush.; potatoes, 40c. per bush; wheat, from $1.10 to $1 25; oats, 40c.; buckwheat, 50c.; dairy butter, 25 to 28 cents per pound; pork, $6 to $7 per 100 pounds. The dry weather has caused a short crop of butter this season. It is nearly all sold, and most of it has gone to market. Hops are a poor crop and are selling from 13 to 21 cents per pound. We are having some very cold weather: we have about two inches of snow, with the thermometer below zero for the last three days. The streams are all closed up and roads are fine. I am glad to learn through the columns of the RURAL that the New York Experiment Station officers are getting ready to do something. I would like to have them locate a sub-station, up in this section of Schoharie County, as we are a very poor class of farmers it would do us some good.

I. P.

MICH., Menominee, Menominee Co. Nov. 26.—This is a newly-settled country, and lumbering is the main business as yet. Most farmers are getting three crops this Winter—cedar posts, logs and cord-wood. In Summer they get a few potatoes and some garden stuff. The day is not far distant, however, when there will be some pretty large farms hereabouts, as the land when cleared of its timber is well adapted for agriculture, and there will be a good home market among the lumbermen for everything raised on the farm.

F. F.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Value of Pumpkins for Milch Cows.

J. M. B., Auburn, N. Y., asks if pumpkins are of much value for milch cows?

ANS.—The pumpkin is not properly appreciated by dairymen or the general farmer. It is so easy to raise them in this land of Indian corn that the farmer ought to study their value more closely. The English farmer founds the prosperity of his agriculture upon his turnip crop, and it is generally credited with a large share of the advancement made in England during the last fifty years. Let us, then, compare the pumpkin with the turnip, and to do this properly we must look at the chemical constituents of each. Chemistry is the basis of all accurate knowledge of comparative values. Professor F. H. Storer, of the Bussey Institute, has made the most thorough chemical examination of the pumpkin, and we give his analysis in the following table, together with a German analysis:

	Water.	Albuminoids.	Crude fiber.	Carbohydrates.	Fat.	Ash.
Pumpkin (European)	89.1	0.6	3.7	6.5	0.1	1.0
" flesh (American)	93.5	0.9	0.98	3.9	0.12	0.67
" rind "	86.2	2.8	3.40	5.70	0.49	1.40
" seeds, etc. "	77.8	6.0	3.80	4.80	6.90	1.50
Turnips	91.5	1.0	0.55	5.80	0.15	0.80
Rutabagas	87.0	1.3	1.10	9.50	0.10	1.00

Here it will be seen, if you take the average of the whole pumpkin, it is equal to ordinary turnips in nutritive matter, and is scarcely inferior to the rutabaga. The seeds are very rich in muscle-forming matter and fat. They are too rich to feed in large quantity, and care should be taken to feed the whole pumpkin together. The seeds sometimes become separated, and then are eaten in too large quantity by some cows, and they are a strong diuretic and act upon the kidneys; but if fed with the whole pumpkin they will do no injury. Cows are fond of the seeds and will eat them in preference to the flesh if they find them separate. The rind is also richer than the flesh, but is not so digestible, having much more woody fiber. One most important point in favor of the pumpkin is its agreeable flavor and the good quality of milk it produces. It yields a fine-flavored butter, and is a very healthy food for cows. The pumpkin can be raised much more cheaply than the turnip. In fact, it can be raised almost without labor. We have raised from two to four tons upon an acre with corn, and without interfering with the yield of the latter. If pumpkins were raised alone on good land, probably 25 tons could easily be produced upon an acre. Every dairyman might easily raise one to two tons for each milch cow kept, and it would add materially to his income.

Miscellaneous.

I. S., Starke, Fla., incloses specimens of an insect which infest the leaves of the orange tree, and requests its name.

ANS.—This insect, which was once so destructive to Florida orange groves, presents the appearance of a minute, narrow, elongated scale, with a narrow, semi-transparent, whitish margin. It adheres closely to the leaf, and is apparently formed by successive semi-circular layers, on the margin of the leaf. It is about a tenth of an inch in length when fully grown. It is known as the Orange Scale, and belongs to the genus Coccus. If one of the scales be carefully opened, the larva, or grub, may be seen in the cavity of the shell. The head of the grub is placed toward the narrow part of the shell, and from the under part of the breast, a piercer, or thread-like filament, proceeds, by means of which the insect sucks the juices from the leaves. It is said to have first made its appearance in Florida in 1838, on some Mandarin orange trees procured in New York.

F. B P., London, Pa., inquires what to do with barren, hilly pastures, and those too rough to plow, too dry to grow grass, and too much overgrown with ferns and brush to be of service.

ANS.—This is a much-vexed question. If it will not pay to mow the brush and dig it out; if it cannot be plowed, and if too dry for grass, plant it to chestnut, or hickory, or maple, or black-walnut timber; set an apple or pear orchard upon it; pasture sheep upon it in the daytime, and give them other food at night; herd a drove of hogs upon a few acres at a time, and scatter some corn on it; make ponds which will keep the water standing on it; sow or plant almost anything upon it in order to get shade, moisture and soil. Sheep like the tops of hilly ground, and will lie on the sunny side of a wind-break of trees or a board fence or stone wall and soon enrich the soil.

F. M. B., Bucklin, Mo., asks, 1, whether little pieces of the lower roots of pæonies will ever make plants if planted in October, or is it necessary to take a whole toe; 2, the names of a few cheap gladioli that will be likely to do well there; 3, why did her double tulips blast in the bud last Spring?

ANS.—1. Probably not—we have never tried such small pieces with pæonies; but we judge from our experience with other root cuttings. 2. Charles Dickens, Eugene Scribe, John Bull, Le Poussin, Mazeppa, Meteor, Penelope, Vesta. It would be far better for our friend to send for the Spring catalogues which will be announced early in the new year, and order mixed assortments. Really fine kinds are offered for 75 cents per dozen. The chief difference is that the names have not been preserved. 3. A severe frost would have blasted them. If the bulbs were unharmed, we do not think of any other cause.

S. N., Middletown, N. Y., asks how to make use of old refuse by burning it under earth.

ANS.—Several years ago there was started a patent plan of enriching earth by burning refuse under it, called "The Poor Man's Manure." It is better to cover all kinds of refuse which must be burnt, with a layer of earth or peat as in a coal pit. It serves to retain the valuable parts of the refuse, and at the same time dries the earth or peat which is then a very valuable absorbent for house slops, or privies, or barnyard liquids.

F. L., Granville, O., asks, 1, whether D. F. Beatty, of N. J., is a reliable dealer in pianos; 2, whether the Ohio Hedge Co. have a patent for bending and tying down the hedge, as they claim.

ANS.—1. D. F. Beatty sells cheap pianos, but they are as represented; and so far as we know he is quite trustworthy. 2. We do not know anything about the Ohio Hedge Company, or about their claims for a patent.

J. W. L., Smith's Grove, Ky., asks whether apples, potatoes—sweet and Irish—turnips, etc., will keep in the same cellar without the evaporation from one injuring any of the others.

ANS.—We know of no reason why they should not, unless that "*etc.*" includes something of a nature different from that of the things mentioned.

F. M. B., Bucklin, Mo., asks for the entomological name of the five-spotted sphinx, and if the tobacco fly is a sphinx.

ANS.—The five-spotted sphinx is known as *Sphinx quinquemaculatus*. The tobacco-fly, (more properly moth) is a sphinx and the large "Green worm" often found on tobacco plants is the larva of a sphinx.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, DEC. 4.

F. B.—J. B.—I. P.—W. V. A.—S. R. M.—M. E. S.—J. R. B.—H. L. W.—W. B. J.—I. S.—J. D. P.—L. S.—A. L. J.—L. S. H.—M. C. W.—T. T. L.—A. A. S.—W. F.—C. W. H.—Mrs. M. L. S.—M. W. F.—A. B. C.—E. W.—E. M. S.—A. B. A.—M. P. W.—F. R. M.—E. G.—F. W. B.—W. H. B., thanks—T. H. H.—C. H. J.—C. G.—L. B. W.—K. B.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
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SATURDAY, DEC. 11, 1880.

OUR readers who desire them would greatly oblige us if they would send for *specimen copies* to the journals with which we club. We can not furnish specimens of those journals. When our readers desire to SUBSCRIBE for any of them, in connection with the RURAL NEW-YORKER, we shall be happy to forward the subscriptions with all promptness. The publishers of those papers agree to send specimen copies to *Rural subscribers without charge.* The combination prices are probably the lowest ever before offered. Each paper is offered at its lowest *club* price. Address, therefore, for specimens, The Weekly Inter-Ocean, Chicago, Ills.; Weekly Detroit Free Press, Detroit, Mich.; Weekly Globe-Democrat, St. Louis; Weekly New York World, New York, N. Y.; Weekly Pioneer Press, St. Paul, Minn.; Weekly Evening Post, New York, N. Y.

FROM the tests made by the RURAL as well as from other tests since carefully made, it may now be set down as a fact that the germinating power of weevil-eaten peas is, that under the most favorable circumstances as high as 25 per cent. may be made to grow—but that under ordinary conditions less than 12 per cent. will grow. That is to say—about 88 per cent. of weevil-eaten peas are worthless.

WHEN there is no number upon subscribers' papers, the subscription term expires with the year. Please look under the heading "RURAL NEW-YORKER." No. 50. shows the numbers that have been issued *this* year—two more will complete the year. The number underneath is the *whole* number issued of this journal, and it is this series of numbers which shows subscribers when their time expires. For instance, those papers which are numbered 1,611 on the outside, end with this number. If the number were 1,615 on the outside of the paper or wrapper, the subscription would end one month, or four numbers, hence. If now we receive a yearly subscription, 52 numbers are added to 1,611 (the present number) making 1,663. When our whole number reaches 1,663, that subscription expires. This is very plain to most of our readers. Our apology for the above explanation is that it does not seem to be plain to all.

THE RURAL NEW-YORKER DOES NOT SELL SEEDS OR PLANTS.

NEVER in our experience has any topic the RURAL has ever treated excited so much interest—so many inquiries—as the Chester and Blount's corn. This is due, no doubt, to our large yields at the Rural Farm, produced, as they were, at less than the usual cost of good corn crops in general. As if the majority of our readers were not aware that we never *sell* to subscribers any of the seeds or plants which we raise, hundreds have asked at what price we would sell the corn. Many have *insisted* that we should sell them, if not large, small quantities of it.

It has seemed necessary, therefore, that we should again state in this prominent place, that we do not, under any circumstances whatever, *sell* the seeds or plants which we are testing at our Experiment Farm. If we do not place them in our Free Plant and Seed Distribution, our friends must look to seedsmen, florists or nurserymen, if they desire to make purchases. The RURAL NEW-YORKER disseminated the Blount's Corn two years ago, and it has ever since been offered by prominent seedsmen. When we succeed in fixing any improvements upon this variety, we may again send it to subscribers. As for the Chester Co. Mammoth, it has already been offered by seedsmen for several years, though its merits had not become very well known previous to the immense yield at the Rural Farm. As seedsmen have offered this variety in years past when its good name was not well established, surely they will not abandon it now that it has shown its great value.

We do not like to talk of what we are doing at the Rural Farm, so long in advance of our power to gratify curiosity. But we are tempted to state that we have reason to hope for more from our wheat experiments than from any others we have ever made. And the results promise to be those in which our good friends may share.

ALLUSIONS WHICH MAY BE PARDONED AT THE END OF THE YEAR.

The RURAL NEW-YORKER has never before received so many compliments as during the present year. These kind words have been to us very acceptable, for we have worked hard and earnestly to merit them. Hard, unremitting labor that meets with no response saddens the heart, let it, at the outset, be ever so full of enthusiasm and trust. The present year—so fast drawing to its end—has been one of exceptional prosperity with this journal. We have considerably increased our circulation; the good name of the RURAL NEW-YORKER has been strengthened; its influence has been extended; its candor and integrity of purpose have been recognized, at least by those who have read it attentively. We have distributed among our subscribers plants and seeds for the farm and garden, which we have believed to be the most desirable among novelties, or those not generally known, that could be purchased at home or abroad. We have maintained our Experiment Grounds for the purpose of determining the best methods of culture, and of testing and originating new seeds and plants, some of the results of which have already proven, and others of which must prove, of appreciable value to the farmers of our country. With rare opportunities to sell the seeds or plants, the value of which has thus been ascertained and made known, we have, without one exception, refused to do so, esteeming more highly the confidence of our readers, which might reasonably be shaken were we to sell the seeds and plants which we have ourselves introduced or disseminated.

Thus while we have benefited our subscribers without cost, we have also benefited the seedsmen of the country who have availed themselves of the demand which the RURAL'S Seed and Plant Distributions have created. Among less weighty matters, we may mention that we have moved from less to more expensive quarters; we have increased our clerical force; we have improved our paper in several respects with which our readers are familiar. All these things we have done, and yet, as the year closes, we find that the income of the RURAL NEW-YORKER has exceeded its expenses, and so we say that this year, with us, has been one of exceptional prosperity.

As, therefore, in the past, our work has been appreciated by our readers and we have been so favored with their encouraging words—so with a grateful recognition of this and with light hearts, we anticipate almost impatiently the labor of another year. With increased experience and means and with the ever-intensifying love which must grow out of the intelligent study, practice and presentation of agriculture, may we not hope still greatly to extend our influence and to feel that we are powerful to promote this foremost, first, best interest of our country?

IS GEN. LE DUC TO BE REMOVED?

Ever since the election of General Garfield to the Presidency, newspapers all over the country have been discussing the probable composition of his Cabinet and conjecturing which of the present Secretaries of Departments it would be wise or expedient for him to retain in office. The public interest in this question is a fair measure of the importance of the character and fitness of the men who are to be the chief aids of the President in wisely executing the laws and his special advisers in suggesting needed legislation. It is quite proper, therefore, that the mouth-pieces of public opinion should canvass and suggest the fitness of those who are to hold such influential positions in carrying on the government of the country and shaping its laws. This is particularly true where a special industry, demanding special knowledge on the part of its representative, is concerned. Of this nature there is only one Department in the Government—a Department which is also an anomaly in that, while quite independent and representing half our industrial population as well as the foundation and most of the superstructure of our national prosperity, it is as yet without any representation in the Cabinet. Yet in view of the paramount magnitude and importance of the industry it subserves, of its urgent need of appropriate legislation, of the special qualifications essential in its representative, and of the difficulties with which he has for the present to contend owing to his singular position, there is no Department whose head should be selected with greater care, in order to conserve and promote the best interests of the country, than the so-called Department of Agriculture.

During the fiscal year ending June 30 last, the total exports of the country amounted to $823,946,353. Of this vast aggregate the products of the farm, just as they came from it, contributed $529,944,779. To this sum should be added $115,690,540 as the value of raw material, such as flour, provisions, etc., and $8,506,038 for farm products used in exported manufactures, making a grand total of $654,141,487 against $169,804,866, the worth of our exports from manufactures, mines and all other sources. Moreover, the farm has fed and clothed our own population and contributed more than half the raw material to our manufactures—yet the head of the Department representing it in our Government has had to be content with the paltry salary of $3,000 a year, one-third that of the heads of other Departments, half that of the United States Geologist, and three-fifths that of a Congressman!

Little wonder, therefore, that since the establishment of the Department in 1862 there has been a succession of men of very mediocre talents at its head, men whose principal labors and ambition have won for them, one after another, the not altogether inappropriate name of Superintendent of the Congressional Seed Store. The meagre salary and the unimportant standing of the Department prevented men of superior abilities and attainments from seeking a position at its head. On the appointment of the present Commissioner, therefore, it was only natural for many of our contempories to consider him of the same character as his predecessors, and on this supposition alone several of them decried him from the outset, and to maintain their infallibility a few of them have been disparaging him, in a milder way, however, ever since. Others objected to him mainly because his name was unknown to them, but these have since remembered that the names of all our most honored men were at one time equally obscure. Others again, because his services had won the rank of General in the late war, found fault with his appointment on the ground that a soldier could know nothing of agriculture or its needs, as if, in sooth, the farmers of the land had not contributed brains as well as muscle to its volunteer armies—a fact which most of these have since acknowledged in his case. To the honor of journalism and especially of agricultural journalism, however, most of our contemporaries waited to see the conduct of Gen. Le Duc in office before pronouncing upon his fitness for it, and without a single exception known to us, these now highly appreciate his efforts for the benefit of agriculture.

A man of fine natural abilities and broad attainments, he has been earnest and indefatigable in his labors as head of the Department which he has raised to such high national importance that its representation in the Cabinet cannot be long deferred. By putting a heart into his work, he has put life into his Department, and stimulated our farmers to improvements in old methods, while intelligently investigating the practicability of adding to the agricultural industries of the nation. In this direction the problem of supplying the country with home-raised sugar has already been substantially solved, mainly through his persistent labors. From this source alone there must be, according to reasonable estimates, an annual saving to the country of 2,000 per cent. upon the total cost of the Department since its foundation.

Through four years of struggle against miserably inadequate appropriations and consequent partial helplessness in a field of vast necessities; against opposition in the legitimate scope of his own Department, and early disparagement from many of those whose support he had a right to expect, Gen. Le Duc has labored so honestly and successfully for the benefit of agriculture as to increase the esteem of those who know him, conquer the good opinion of impartial judges, and silence the carpings of most of those who decried him without reason. If good services under difficulties in the past merit recognition from the incoming President, and if the prosperity of the greatest industry of the country is to be placed before mere personal or political considerations, Gen. Le Duc will remain for the next four years at the head of the Department of Agriculture, in or out of the Cabinet.

During the term of his office he has made the requirements of the industry an earnest study; to-day he knows more about these and the best means of meeting them than any other man in the country; he is now the soul of the movement which is destined in a few years to keep at home the $85,000,000 we now pay annually for foreign sugar; the farmers of the country have learnt confidence in his ability and faith in his efforts, and to remove him now from the midst of his successful labors would speak ill for the statesmanship and the regard for the agricultural prosperity of the nation, with which General Garfield has been credited.

For ourselves, we care not for the politics of the head of the Department, be they Republican or Democrat, and though we highly esteem the present incumbent personally, we should blush to allow personal preference to influence our expressed opinion on a matter of so much public importance. In recommending the continuance of Gen. Le Duc in his present office under the next President, we are actuated solely by our honest conviction that such a measure would conduce most to the best interests of agriculture, which we have close at heart.

THE INDIAN TERRITORY.

SEVERAL organized raids have been made by land speculators and squatters upon the Indian Territory. Considerable pressure has been brought to bear by interested parties upon Congress to permit the settlement of the Territory by citizens, notwithstanding the fact that it has been solemnly set apart as the last refuge of the distressed aborigines. Since the occupation of the Territory by the various tribes of Indians who now inhabit it, a great advance has been made in their condition. From savages, a large number of them have been changed to civilized and industrious farmers, who cultivate more than 300,000 acres of land, own 297,040 cattle and 400,282 swine, and produced the present year 2,346,042 bushels of corn, 336,424 bushels of wheat, 16,800 bales of cotton and other usual farm crops in proportion. All this was done by about 60,000 souls, proving that these men are at least as industrious as many white men and are in as prosperous a condition. Uncivilized Indians in the Territory own 864,137 sheep and 78,812 head of cattle; and the present year produced 415,777 bushels of wheat with other crops in proportion, on nearly 200,000 acres of cultivated land. All this has been done under the objectionable system of common ownership of the soil. When the change to absolute and individual possession, which is so much desired by the Indians, and which desire, in itself, is a conspicuous proof of increasing civilization, shall have been made, it is beyond doubt that this Territory will soon become as productive under the labor of the Indians as the contiguous States are, in proportion, under the labor of white men. Here is a solution of the Indian problem, and one that will make men and women of these people. We do not wish to hear of attempts made to rob these poor people of the last vestige of their inheritance, by white men who have now more land than can be brought under cultivation in the next century.

BREVITIES.

THE Holstein bull Uncle Tom is drawn from a poor photograph. The drawing is a correct portrayal of the photograph, which is all our artist had to guide him. The light falls in such a way as to give the impression of a heaviness of neck and shoulders which is not true to nature.

THE New York State Dairymen's Association will hold its fourth annual convention at Delhi, Delaware County, December 21, 22 and 23 inst. Addresses will be delivered by Prof. L. B. Arnold, Dr. F. E. Engelhardt, Hon. T. S. Gold, F. D. Curtis, S. Hoxie, Maj. Butler Fitch, Orville Wilsey and others.

WE beg to state that many are applying for the "Distribution," forgetting to send their share of postage. We deem it only fair that we should disregard such applications. The worst of it is, however, that these forgetful friends are liable to charge us—when they fail to receive their seeds—with having acted in bad faith.

WE regret to learn that the California Horticulturist has ceased its separate existence and become a part of the Pacific Rural Press. The latter is to be congratulated upon the accession, but it would seem that California, with its immense horticultural interests and remarkable climate, ought to be able to support a purely horticultural magazine. Mr. Charles H. Shinn, the editor, has done his work to the very end in a spirited and able manner.

For Women.

CONDUCTED BY MISS RAY CLARK.

A MOTHER'S WORDS.

ANNIE L. JACK.

When the elder children were round me,
And needed my every care,
Noisy and rough with cloth rent knees
And tumbled, wind tossed hair;
I often thought, when they were grown,
How free my life would be
Then I could rest, and they would work,
And lift all care from me.

But now, my boy so bearded
I hardly seem to know,
He's half ashamed to kiss my cheek
And afar in the world must go.
My girls, though loving in their way,
Have grown so very tall—
And seem so strange—I often sigh
And wish that they were small.

Ah! mothers, when you are weary
And the children seem to crowd,
When they seek you in their troubles,
Or their glad tones are too loud,
Think not of that far future,
When they may help you rest,
Enjoy the present, happy days,
While they love mother best.

DESCRIPTION OF CUTS.

Fig. 423 and 424. Lady's Pelerine, (Crochet. Materials: White Berlin Wool and Wooden Crochet Needle.) A well-fitting pattern is cut out in lining, and the pelerine is begun from the lower edge, as follows: Along 5 chain, work to and fro in the

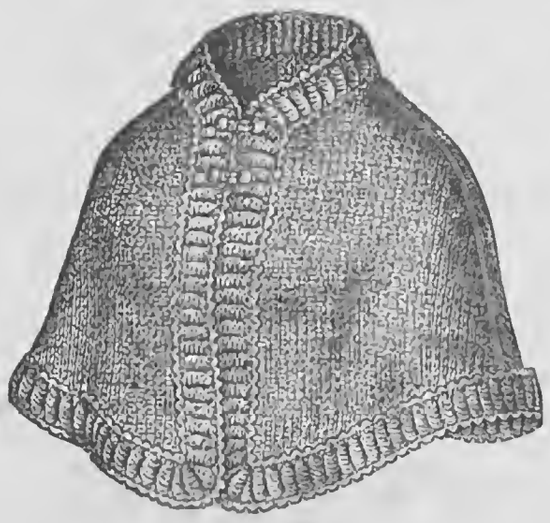

Fig. 423.

ordinary Victoria stitch, increasing as required by the pattern. To decrease, crochet 2 or more stitches together in the 2nd row of a pattern row. If it is necessary to decrease by a greater number of stitches, leave them unnoticed at the end of the row. To increase, cast on, at the *left* side of the work, a chain corresponding in length to the lower edge of the pattern, and in the pattern row where the increase is to be made, take up a sufficient number of stitches out of this chain. To widen on the *right* side of the pattern, crochet a sufficient number of chain at the end of a return row, and take up one stitch out of each in the following row. To increase in the middle, take up a stitch out of the horizontal part of the stitch between two vertical parts. When the separate parts of the pelerine are joined together, a piping cord covered with white cashmere is placed between them. Round the outer edge is a border

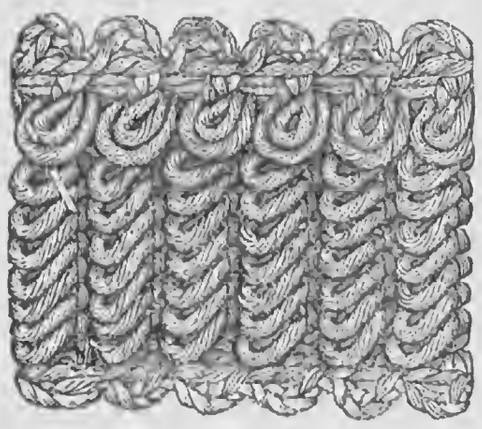

Fig. 424.—Detail of Fig. 423.

(see 424). This border is crocheted with single Berlin wool and wooden needle, as follows: Along 10 chain, miss 1, 9 double, 1 chain. 2nd row; Turn the work, on the side of the work which is now the wrong side place a flat mesh 1 inch wide, * pass the thread from back to front over the mesh, and crochet 1 double in both parts of the double in the preceding row, so as to form a loop, repeat 8 times from *, last of all 1 chain, and draw out the mesh. 3rd row: Turn the work, 1 double in every stitch, last of all 1 chain. Repeat the 2nd and 3rd rows till the border is long enough (of course the loops

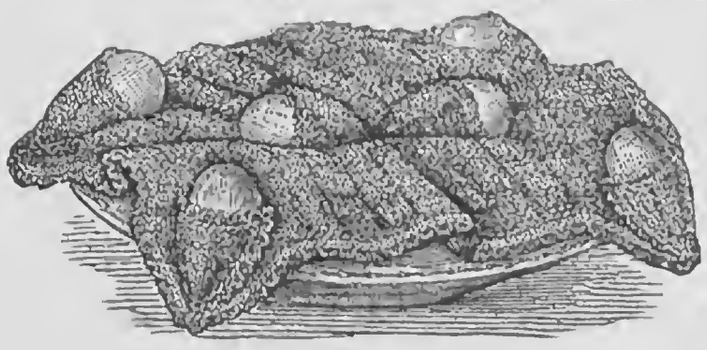

Fig. 427.

are on the *outside* of the pelerine). Then work along each side of the border a row as follows: * 1 double in margin, 1 purl of 3 chain and 1 double, miss 1, repeat from *. Then sew the border on to the pelerine, and add silk buttons to fasten.

Fig. 425.—Purse: Beadwork and Crochet.—The beads are sewn on fine canvas; the groundwork is of dark ruby beads, and the circular design of gold beads in the form of a wreath; both sides may be alike, or, if preferred, the monogram of the owner may be worked in gold beads on the opposite side. To join the two sides, place them together, and with a crochet-hook and silk, work double-stitches through both nearly all round, leaving a space for the first opening; then work four rows of double-stitches.

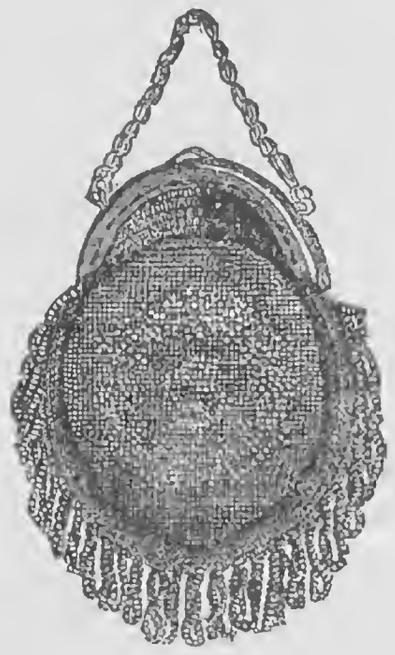

Fig. 425.

For the opening, work on each side separately:
1st row—One double into each stitch of canvas.
2nd to 5th rows—Pass over the two first and two last stitches. A steel clasp is sewed to each side of the opening with a needle and silk.

For the bead-fringe, thread gold beads on silk, and sew them in loops at equal distances to the last row of double-stitches.

Fig. 422.—Hairpin-Cushion.—For this, a box of cardboard five inches square and two inches deep is needed. Cover the sides and bottom with glazed lining, and strain over the top a piece of coarse knitting of wool; use pins about No. 12. Do not stuff the box; ornament the sides with a small piece of perforated cardboard worked with a cross-stitch design, of which we have given many illustrations in our paper. At the top and bottom edges of the box put a fringe made over a large pencil or knitting-pin with wool and wire. A double piece of fine wire, and four strands of Shetland wool, or crewel of four colors together, form the fringe. Each time, after twisting the wool round the pin, twist the wire once; two rows of

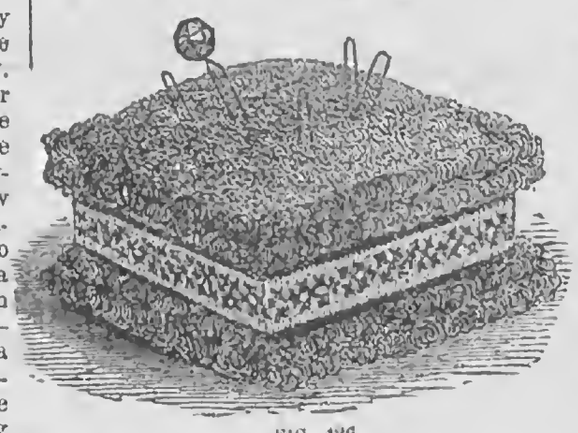

Fig. 426.

this fringe, one up and one down, are sewn round the frame.

Fig. 433.—Cotton-Basket.—This little basket is composed of six sections of cardboard, ornamented with painted designs, or little colored designs may be cut out and gummed on; the sections are tied together with bows of blue ribbon. The bottom is a hexagon of cardboard, also ornamented with flowers. The sides are glued to the bottom, which stands out about an eighth of an inch beyond the sides; this is bound with a piece of gilt paper gummed on.

Fig. 427.—Egg-Warmer.—Materials Required: two oz. pale blue, one oz. pink Berlin wool, two pins, and a crochet-hook.

Cast on eighty-one stitches.
1st Row: Knit three and purl three alternately.
2nd Row: Purl three and knit three alternately.
3rd and 4th Rows: Like 2nd row.
5th Row: Like 1st row.
6th Row: Like second, then repeat from the 1st row. This forms a basket-pattern. Continue the pattern until you have made the foundation the length required.

For the pockets, six of which are needed: Cast on twenty-eight stitches, decrease by knitting two together in every third row.

1st Row: Knit.
2nd Row: Purl.
3rd Row: Knit.
4th Row: Purl.
5th Row: Knit.
6th Row: Knit. Repeat from the 1st row until no stitches remain.

For the crochet edge, which is worked round the foundation and each of the pockets: Work one double into a stitch, four chain, one treble into the first, pass over two stitches, and repeat from the beginning of the row.

The arrangement of the pockets on the foundation will be seen from the illustration; they are sewn on by a needle and wool.

Fig. 434.—Sweetmeat Vendor.—This little figure will be found to give great delight to children, and is suitable either to be placed on the Christmas tree or to decorate the table of a children's party. It is made of several kinds of dried fruits such as French plums, raisins, figs, &c. Take two pieces of wire, fix upon each of them two plums for legs, then pass both lengths through two Normandy pippins for the body; a large plum must be taken for the head; it is carved out with a penknife for nose and mouth, and beads are pressed in for eyes. The hat is made of a piece of writing paper arranged in the form of a cone, tacked together and gummed on a paper brim. For the tray, upon which are placed two or three sugar birds and small cones of sweets, take a piece of cardboard, cover it with crimson paper pinked out at the edge; this is fixed to a stick with a little glue; it must be tied round the waist with cotton. A wide collar of muslin is fastened round the throat of the little man. The two plums which form the legs, and the stick of the tray, must be glued to a square piece of stout cardboard or wood to form a stand.

Fig. 432.—Jewel Box.—The foundation of the box is strong card-board; cut two pieces of the card-board, seven inches in length and four in breadth; one is for the bottom and the other for the lid; the two pieces for the sides measure seven inches in length and three in depth, those for the ends, four in length and three in depth; cover each piece of card on the outside with dark-blue watered silk, and on the inside with wadded and quilted satin; bind the edges with gold-colored satin ribbon; sew the sides and ends together and then to the bottom, fix the lid to one side by hinges of ribbon, and finish each corner with a bow of ribbon. The little box may be used to keep jewelry in, or it will serve as a work-box. It may also be made to hold a little Christmas present, or be filled with choice sweetmeats.

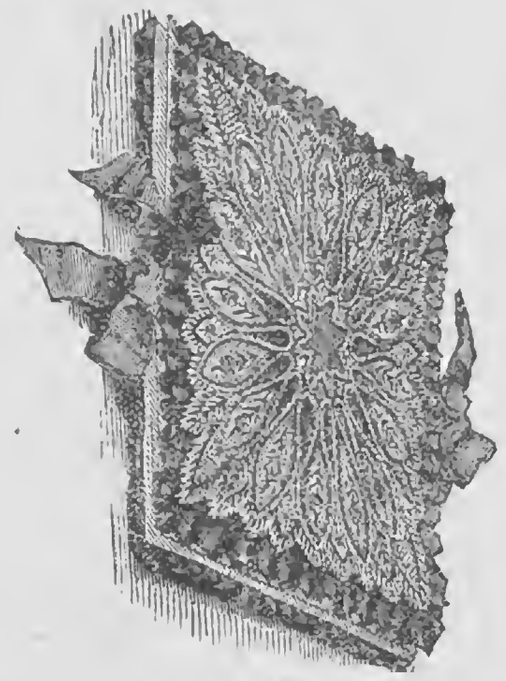

Fig. 428.

Fig. 428.—Handkerchief Sachet.—The sachet is composed of two pieces of card-board measuring ten inches square, covered with rose-colored silk, and lined with quilted silk of the same color. The embroidery for the top, a quarter of which is shown in the full size, is worked on ivory-white satin, embroidered with gold and rose-colored silk; the edges and small holes in the center are cut out with a sharp pair of scissors. The sachet is finished with a quilting and bows of rose-colored satin.

Fig. 429.—Nubian Warrior.—This little figure is made in the same way as described for fig. 434, except that small plums and raisins are used, four of graduated size for each leg. The arms are made by passing a wire through the shoulders and thread-

Fig. 429.

ing three or four large raisins upon it. The hair is made of black wool frizzed out with a comb; it is glued to the plum, and is piled up high and kept in place by means of a large pin; a piece of scarlet cotton or silk is wound round the figure to form a kind of cloak and knickerbockers. The shield is an oval piece of card covered with silver paper, and the spear is cut out of a piece of wood.

Fig. 435.—Doll's Cradle.—With care and a little trouble this little cradle may easily be made. Take a large walnut-shell and thoroughly clean it; carefully saw off the end of half, glue the other two pieces together, and ornament the edge with a little border of cut gold paper; glue two semi-circles of wool on the bottom for rockers, and pad the inside with wood to make a bed, upon which place a very small doll; a little piece of cambric and blue silk form sheet and coverlet.

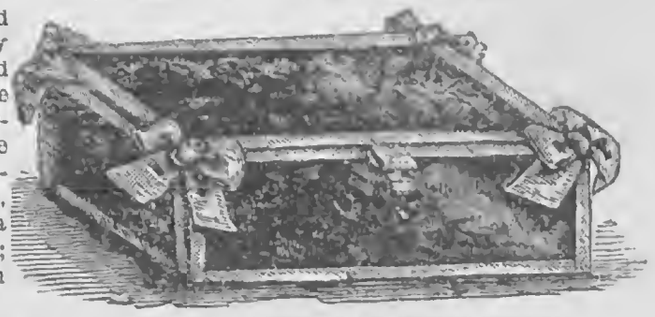

Fig. 432.

Fig. 436.—Basket for Firewood. (Crochet.)—Open basket of Italian straw, gilt on the outside, and having on each side a vandyked border of dark olive velvet, and crochet pattern of blue and olive wool. Wools may be used for the border along the lower edge of the basket, and for the two rows of tassels.

Fig. 430 and 431.—Ornament for Christmas-Party Supper Table.—This ornament is easily made; it is suitable either for a Christmas-tree or supper-table. Procure a wooden doll about eighteen inches in hight, break off the arms, make a hole through the shoulders, through which pass a stout wire, covered with wadding then with pink silk; this takes the place of the arms (see Fig. 430), the loose coat must be made of some bright-colored silk, edged with gold paper cut at one edge to form a fringe, the legs are covered with fringed gold paper, twined round spirally; the trousers are composed of two rows of small bon-bons, which must be tied to the legs with sewing silk; the silk coat is tied round the waist with a piece of ribbon, from which are suspended gilded cones, the fringe of the coat falling over the last row of bon-bons as a flounce; another row of bon-bons is fixed round the body, the sleeves and collar being composed of bon-bons of a smaller size. Father Christmas holding a tree is placed in one arm, and a baby doll in the other. A golden cornucopia forms the cap, with fringed paper for the hair; it is ornamented by a gilt chain. A fancy star or some little trinket is suspended from the neck.

Fig. 430.—Detail of Fig. 431.

WHAT MAY BE SEEN IN NEW YORK.

To those of our friends who contemplate a "trip" to the city and also others remaining outside its limits, we wish to relate what the former may experience and the latter enjoy hearing of, that is, a visit to the establishment of Lord & Taylor, corner of Broadway and Twentieth street.

As a special privilege, a call was made upon the genial proprietors and afterwards we were escorted to the suit department and then allowed to wander at will through the different departments gaining desired information from the agreeable and attentive clerks.

Fig. 431.

In anticipation of the many balls and holiday receptions, costumes to please the diversified tastes were displayed. Elegance of material combined with artistic taste was here revealed. The first attractive feature was a dress of pink silk and embossed velvet, marooned figured, en train; A fan-shaped pleating of the plain silk on the lower portion of the front breadth and the upper part which formed the overdress; on the bottom of this was handsome fringe. The two materials were well combinated, the outside of sleeves being of embossed velvet, the under of solid pink; at the back was a knot with ends from which depended knobs of maroon beads. The neck, cut square, was filled in with lace; the sleeves plain at wrist with lace to finish.

Another was of white satin having beaded panier, the front decorated with beaded trimming to match the panier, this, with corresponding appointments completed this elegant dress which was valued at $215. But to use an expression for which the ladies in general no doubt receive undue credit, the one which was "a love of a dress" was of heliotrope satin with velvet em-

For dinner and street attire were shown many modes. Dinner dresses of black silk and velvet with jet trimming cost $185., $200. and $220. Black silk walking suits ranged in price from $80 to $250.

FIG. 433.

A suit costing $130. was constructed of brown satin and plush, the basque of striped plush with revers having beaded trimming to match. Another, of olive-brown silk, with passamenterie and cashmere trimming, was valued at $140. A black satin with revers and other appointments of old gold, was embellished with handsome jet knobs, balls and other ornamentation. Still another of wine-colored cashmere with plush trimming, formed the group selected for special reference. The English walking jacket style was used on many of these. A wrapper with long train was of light, or "baby," blue cashmere, trimmed with cord and satin in fancy pleating down the entire front.

Yes, there were many less elaborate suits which would meet the wants of persons of plainer taste and with whom economy is a necessity; this answer we give in expectation of a query from many quarters. These, however, we have not specified, considering most readers to be familiar with the medium styles.

Next the cloaks attracted our attention; in these the most fastidious could scarcely fail to find their peculiar fancies gratified. A dolman of embossed plush with passamenterie trimming and chenille fringe with beaded end; A cloak of satin de Lyon lined with old gold plush with trimming of chinchilla fur was extremely elegant; another was made with a long cape of embossed velvet; Dolman of Sicilian satin lined with purple plush bordered with heavy chenille fringe.

FIG. 434.

A French walking jacket—one of Worth's—was trimmed with satin and narrow braid edged with gilt threads, the buttonholes bound with the braid, the buttons of cashmere design. A long coat of embossed velvet, double-breasted, with cashmere buttons was plain but rich. A particular novelty was a long coat or cloak bordered with heavy fringe, the neck and sleeves finished with shirring and silk cord at the back. The seam at the back was opened about half way up from the bottom and pleatings of embossed velvet inserted. Plainer coats at $22 and less, completed the display.

Shoes have their place in fashion's domain, and keep pace with the changing modes. In this department were exhibited shoes and slippers of red, white and black satin embroidered with beads, ranging in price from $3.50 to $14. Misses' and children's slippers, with warm lining, costing $1 00 to $1.35 invited attention. The lovers of comfort who ride in the frosty weather, will undoubtedly secure at first sight a pair of the carriage shoes; they are made of velvet lined with fur, valued at $5. Money well expended would be our verdict to purchasers. The common sense shoe for daily wear had not been forgotten.

In dress material, cashmere with bordering and fringe complete for suits of overskirt and basque, costs from $40 to $44; price of overskirt $10.25. Suere satinette at $1.50 to $1.75 is an improvement on the old goods bearing the name of satinette. These with many other goods are in the popular shades.

The woolen, hosiery and lace departments contributed their share toward the supply of visitors' wants.

Fans exquisitely finished, and others of plainer make can be here selected, and as Christmas gifts would supply the giver with a pleasing memento. One was of embossed satin with feather edge at $2.50; one of pearl and plain white satin at $4.75; another of héliotrope plush with feather edge and ivory handle at $5. White satin with spray of flowers and carved ivory handle at $2.50. Another composed of long, black feathers with design of birds in painting at $12.50. Other plainer ones at 75 cents were worth notice and the price asked.

Fancy articles in seemingly endless variety met the gaze. Brushes and combs of celluloid, whisk holders, cushions, card receivers in majolica-ware, silver, gilt and shell, scent bottles in cases of plush, in wood, etc. Pails with satin covering and satin gathered at the top, to form a basket shape, something new for hair receiver, also used for other purposes.

Many other novelties in this line deserved more attention than time allowed.

My story would be sadly incomplete if the few words on handkerchief holders were omitted. Of these, one costing $4.50 was of white satin within and without edged with pleating of blue satin ribbon, in the center a spray of flowers, hand painted, was a marvel of beauty, another of much the same make had painting of birds with sprays of reed, another of heliotrope was extremely pretty. Some were puffed instead of pleated.

We might increase and enlarge upon the details but, as expectation rather than realization is with many the soul of enjoyment, we leave a field for this particular class, who as the holiday season approaches will doubtless avail themselves of the pleasure of a similar visit.

CROOKED FOLKS.

It is a happy household which has not one crooked member, some one who calls forth the forbearance of the rest and is a constant means of grace, by giving them a chance to restrain their tempers and speak civilly when human nature sets quite the other way.

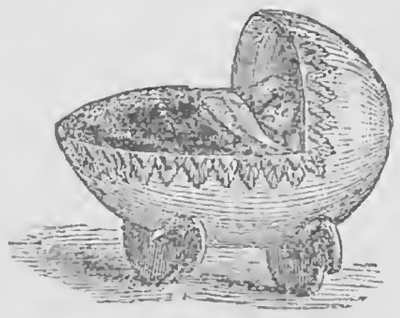

FIG. 435.

It is a very easy thing to get along with pleasant people; anybody can do that, and "there is no merit in being jolly under such circumstances," as Mark Tapley would argue. But how to get along with crabbed folks who set your nerves on edge continually; oh! that is where grace is needed.

Yes, that is just it; grace only can give you the perfect victory. Good, plain, common sense, though, will suggest many things wise and expedient.

There is most likely a best side even to such people, anyway a better side. Find that out and then give them a chance to let their virtues shine. Stir up the bad side as little as you can. Concede a number of things you might stand out for rather than have strife.

Yet beware about too great yielding or you have fastened a tyranical "old man of the sea" upon your shoulders, who cannot be easily shaken off.

Where you must have your own way take it as quietly as possible Use few words and let the other side do all the storming; it is so much better and such a saving of self-respect and dignity of character.

Soften your heart toward the person, particularly if she is aged, and remember that you will never regret your forbearance and kindness when that gray head lies in its coffin-pillow.

Age has many infirmities, and where the temper has not been disciplined in youth or chastened by God's grace, it is apt to be most unlovely; a suggestive thought for those who are now coming up the path they must shortly begin to descend.

We have all of us seen or known old people on whom it was arduous to attend. But pity should make our hearts tender toward them. It is a lonely thing to come to that pass in life when we have left behind us the hopes and joys of existence, and life itself has become but a bundle of infirmities.

The aged live in the past. Draw them out on their favorite topics. Avoid the sharp angles of character as much as you can, and as a general principle keep pleasant yourself towards crooked people, young or old, and you have disarmed them of all their ability to injure you.

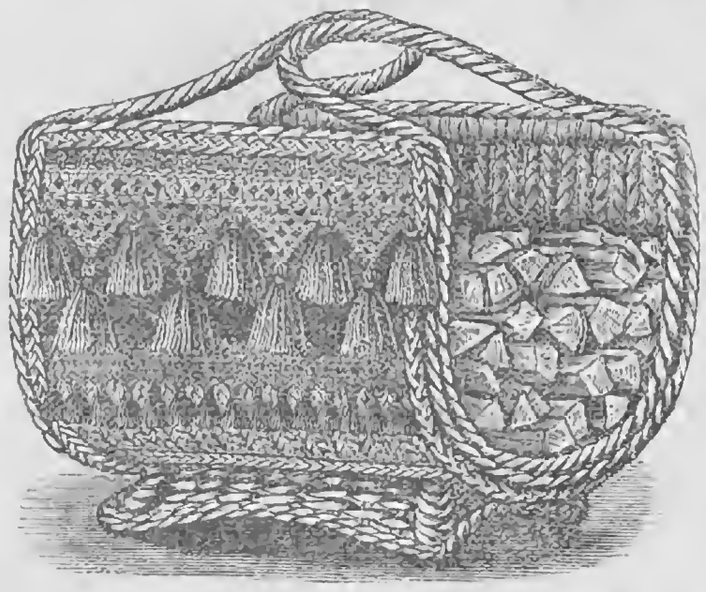

FIG. 436.

Mrs. J. was a woman no neighbor could endure, and she thought poorly enough of each in return. But that sweet daughter-in-law of hers, who lived near was a jewel in her eyes. "I can tell you," I once heard her say emphatically, "if one wants to quarrel with Lucy they will have to do it all themselves." She admired and respected the gentle spirit of the girl, though so entirely the reverse from her own. AUNT OLIVE.

ELEVEN years ago Clara Morris played eight times a week for $20. She now plays six times a week for $2,000.

Literary Miscellany.

WHAT THE CHIMNEY SANG.

BRET HARTE.

Over the chimney the night-wind sang
And chanted a melody no one knew;
And the woman stopped as the babe she tossed,
And thought of the one she had long since lost,
And said, as her tear-drops back she forced,
"I hate the wind in the chimney!"

Over the chimney the night wind sang
And chanted a melody no one knew;
And the children said, as they closer drew,
"'Tis some witch that is cleaving the black night through—
'Tis a fairy trumpet that just then blew,
And we fear the wind in the chimney."

Over the chimney the night wind sang
And chanted a melody no one knew;
And the man, as he sat on his hearth below
Said to himself, "It will surely snow,
And fuel is dear, and wages low,
And I'll stop the leak in the chimney."

Over the chimney the night wind sang
And chanted a melody no one knew;
But the poet listened and smiled, for he
Was man, and woman, and child, all three,
And he said, "It is God's own harmony
This wind that sings in the chimney."

INMATES OF LESTER HALL.

(Continued from page 805.)

CHAPTER XXIV.

DINNER was over, and the guests assembled at Mrs. Brayburn's were seated in chairs placed in the most approved concert semi-circle before a heavy red velvet curtain, which concealed one-half the room which had been arranged as a stage.

The children, the older portion of them at least—for the very small people had been carried away to bed in various stages of fatigue—were seated in front, while behind, those of the guests who were not going to take part in the tableaux were chatting, talking and flirting, while waiting.

The room was but dimly lighted, all the lights being concentrated on the stage, which, when the curtain rose, was found to be brilliantly lighted for the first tableau, which chanced to be a representation of Millais' matchless picture, "The Black Brunswicker," which was personated by Miss Heriot and a handsome young officer, Captain Edward Tyrrell, Lottie's brother. Very beautiful looked Miss Heriot in her sweeping white satin robes; and Captain Tyrrell had drilled his handsome face into the sad sternness of the young officer as he tried to leave the lady of his love on that awful night, the eve of Waterloo.

There was but one fault to be found with the picture, which was a complete success (even Bijou, Mrs. Brayburn's little dog, behaving perfectly), and that was, that the woe depicted on Miss Herlot's face was marred by the little expression of gratified vanity which played round the sweet carmine lips. The curtain fell amid loud applause, and on their return to the room both performers were received with warm expressions of praise.

"Now, Miss Lester," said the manager quickly, "you are next. Fall into position. I think I need not school you—you have the very expression on your face now."

The second tableau was a representation of the companion picture, "The Eve of St. Bartholomew," or the Huguenot picture, as one generally (correctly or incorrectly) hears it called, and was personated by Cecil and Mr. Brayburn's brother, who had some slight resemblance to the beautiful face Mr. Millais has given his hero. This picture was as perfect as its predecessor, and the guests were loud in their applause and commendation.

"How wonderfully your niece got that expression, so sad and sweet," said an old lady, sitting beside Mr. Daton; and he himself was haunted by an idea that Cecil's eyes were always sad and sweet now as they were then.

The third tableau was one of quite another style and represented a scene from Longfellow's poem, "The Courtship of Miles Standish:" that scene where John Alden undertakes to plead his friend's suit with Priscilla, and the dainty little Puritan maiden turns on him with the demure question, "Why don't you speak for yourself, John?"

The actors in this tableau were Lottie Tyrrell and Ernest Eleston, and two more suited to the subject and to each other could not have been chosen. His lordship made a very prepossessing John Alden, and looked properly bewildered, shamed, and pleased as the pretty little damsel turned to him with the hot blush on her cheek, and the half-mocking, half-tender look in her hazel eyes; and amid the applause that followed the fall of the curtain the young people left the stage and re-entered the room in a rather subdued silence.

"That must have been a pretty picture, Miss Tyrrell," said Cecil, looking up smiling, "Did Ernest behave himself? I heard one man who played John Alden winking audaciously with the eye which the audience did not see, and covering Priscilla with confusion."

"I hope you did not think me capable of such an atrocity," said Ernest, seating himself by Cecil.

"No, of course not," she answered, smiling; then she put out her hand and drew Lottie down to the sofa by her side with a tender, caressing touch.

"Do not run away," she said, gently. "None of us are wanted for the next tableau, are we?"

"No," said Lottie, blushing, and looking pleased at Cecil's gentle manner, and the next tableau which was a representation of Retsch's engraving, "The Game of Life," passed while they sat there in silence; and Cecil held Lottie's hand in a warm, tender clasp, and looked at her with kind, wistful eyes, in which lay an unspoken pain.

"She is a pretty child," she said, gently, when the girl left her side to take part in the next tableau. "Do you think her father would let her marry Dr. Carewe, Ernest?"

"Marry Dr. Carewe, love!" said Ernest, coloring a little. "Why do you think of such a thing?"

"I think he—he—he likes her," said Cecil, softly, "and that she likes him."

"Do you?" said he, smiling. "Well, he is much older than Lottie; but I should think General Tyrrell would consent—Carewe is such a splendid fellow. I should be glad to see Lottie settled," he added.

"Why?" said Cecil, speaking absently.

"Oh! for many reasons," said Ernest "She is a tender little soul, and wants some one to pet her and take care of her. There is Mr. George coming to you, sweetheart. I wonder what he wants now?"

"Miss Lester, you are too generous to refuse us another favor," said Mr. George, smiling. "The rest of our tableaux are taken from Tennyson's 'Idyls,' you know. The first is Enid, at her window, singing the song of 'Fortune and her Wheel.' Miss Tyrrell makes a charming Enid, but she cannot sing, and it would add so greatly to the effect if the song is sung, that I feel sure you will do us this pleasure."

"If you wish it, certainly," Cecil answered; and when the curtain rose on "Enid," the audience was charmed by the sound of a rich, sweet voice, singing:—

"'Turn, Fortune, turn thy wheel, and lower the proud;
Turn thy wild wheel thro' sunshine, storm and cloud
Thy wheel and thee we neither love nor hate.

"'Turn, Fortune, turn thy wheel, with smile or frown;
With that wild wheel we go not up nor down;
Our hoard is little, but our hearts are great.

"'Smile and we smile; the lords of many lands;
Frown and we smile, the lords of our own hands;
For man is man and master of his fate.

"'Turn, turn thy wheel above the staring crowd;
Thy wheel and thou are shadows in the cloud;
Thy wheel and thou we neither love nor hate.'"

"Does not she sing beautifully?" whispered Lottie to her friend Dr. Carewe, when she was released. "Have you ever heard her sing before?"

"Yes," said Lawrence, softly, for the sound of the rich, sweet voice had taken him back to the past—to those few wonderful days of happiness unutterable when he had been mad enough to think Cecil loved him.

"Did you know her well?" said little Lottie, in a hushed tone, for Cecil was surrounded by a little halo of romance in her eye—so beautiful—so queenly—so beloved.

"No," he answered, and his voice changed and hardened. "I did not know her well. Hush! my child, she is singing again."—To be continued.

THE EYE-OPENER.

It does not necessarily follow that every name mentioned here belongs to an out-and-out swindler; we wish only to guard our friends—and their friends—against investing money where we have good reason to believe they will either lose it altogether, or receive for it a very inadequate return. The information on which we shall base our judgment will come to us in the future—as it has in the past—from various sources, and we shall be always careful to avoid doing injustice to those against whose methods of doing business charges are made, while resolute in exposing all dishonest attempts upon the pockets of our friends.

L. Strong, 194 Clark Street, Chicago, advertises a "Grecian Wedding Jewelry Casket, containing six pieces, none of which could be bought separately in any city in America for less than six dollars," yet this generous soul is willing to sell the whole $36 worth for 35 cents. A fraud? Why, yes, of course, and to arrive at this conclusion it isn't necessary to know—what is a fact—that no "L. Strong" is known at the address given.

Chicago is rich in such philanthropists. L. Platt, 87 and 89 Washington Street is another of 'em. His "line" is the literary one. Leaving a Philadelphia "concern" to "take folks in" with the Bible, he offers them a like chance of being duped with Shakespeare. He is anxious to present everybody with an $8 perfect edition of the entire works of the poet *gratis*, charging only $2 for packing and expressing. Oh, Platt, you must think the world is "flat"!

That Quaker City "concern" is not the only one that speculates in the public gullibility with regard to the Bible. A. J. Nettleton *alias*, the Excelsior Bible Publishing, 71 Dearborn Street, Chicago, is running an opposition shop at which the world can get $15 Bibles for $5. Sanctimonious Nettleton!

Cheap watches are being largely advertised both by circulars and otherwise. Many of these "watches" are mere toys "meant to deceive"; and it may be taken as a safe rule that cheap in such cases means worthless or nearly so. Bear this in mind, and don't be tempted to invest in such useless baubles.

Like a hydra, Chicago swindlers are many-headed, or rather, like a Spanish princeling, they are many-named. Thus one of the tribe is variously known as M. G. Sanford & Co; J. Wallace & Co.; James Winslow & Co.; G. G. Knox & Co.; the Sprague M'f'g Co.; the United States Steam Engine Co.; Prof. R. Hendricks; the Imported Fire Arms Co., and the Empire Wringer Co. He has many irons in the fire and deserves to be branded with every one of them, red-hot.

Another of the same tribe is Scott, who, according to a Chicago contemporary, as plain James P. Scott, publishes at Chicago what he calls the Agent's Guide; as Aaron Hopewell, he deals in needles; as D. D. Dinsmore he tries to make the people believe that he will sell a fifteen-dollar

Webster's Unabridged for forty-three cents; as Frank A. Blade he advertises a new map of the United States and the world; as W. H. Wiseman he sells paper handkerchiefs, and as D. D. Dinsmore again he sells a Treatise on the Horse and His Diseases. Mr. Scott, in his Agent's Guide advises agents to try Mr. "Hopewell," the needle man, and so on, one of his allases recommending another.

PRESIDENT-ELECT GARFIELD, when he was a very small boy of three years old, went to school to a lady who in her old age delighted to relate the little fellow's pranks. He was so persistently mischievous that to keep him still his teacher promised that he might sit on the larger bench as soon as he learned to read. He went to work with a will to learn, and before he had been at school a week he could say his letters, and several weeks before the end of the term he claimed and received his permission to sit on the high seat with the other scholars.

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CONCERNING BEDS AND BEDDING.

MARY WAGER-FISHER.

A VERY expensive feature of house furnishing is the bedding, and a nice bed, and a good one, should be well taken care of and protected from dust. A great many people who claim to possess "common sense" still continue to have their bed-room floors covered with a carpet which is nailed down and not taken up and shaken more than twice a year. It follows that whenever the carpet is swept, more or less dust is put into motion and settles in due proportion upon the bed. If, prior to the sweeping, the bed be covered with a large duster, this difficulty will be avoided.

For a bed of large size it requires ten yards of calico to make a duster—four widths, two and a half yards in length. Very nice calico, well starched, can be had for from seven to eight cents a yard. For ten cents a yard beautiful chintzes can be had, in bright rich colors. For a three-quarter bed three widths of the calico are enough, but the length must be two and a half yards. If all the bed-rooms in the house are swept on the same day, at least two dusters are required for "sweep-day" purposes, while a duster each for all beds not in constant use is needed. To keep a spare bed "made up" is a great piece of extravagance. The bed linen and bed spread become gradually soiled, and when the bed is to be occupied it needs to be made up afresh in order to be in proper condition. The best housekeepers keep all their bedding—pillow-cases, sheets, covers, etc.—folded when not in use, and the bedding carefully protected with a chintz cover, which lends a bright and tidy appearance to the room. Some have a case made of blue-and-white checked cotton for protecting the mattress from soil. A pair of sheets the size of the top of the mattress, with a thin layer of cotton between, and quilted on a machine, is very nice for a sandwich between the sheet and mattress. It is easily worked, adds to the comfort of the bed, and protects the mattress. Whatever will keep bedding *clean* is desirable, for it is undeniably laborious work to clean bedding.

Long sheets which turn down a full half yard over the bed covers protect them very much from becoming soiled. For warm, heavy blankets in constant use, and which can only be cleaned without injury at considerable expense, a shield of white muslin can be very effectively used. If the blanket be two and a half yards wide, that much in length of muslin will be required, with a little allowance at each end for a hem. Fold the muslin straight through the center the long way, so that one half will go on one side of the top end of the blanket and one half on the other side. With a needle and thread fasten the muslin to the blanket across the top with basting stitches, and again at the bottom of the muslin. The muslin shield can be removed and washed as often as one likes.

Bed-ticking stained with blood from nose-bleeding, wounds or other causes, may be cleaned by applying starch, well moistened with water, to the spot. Renew the wet starch until the stain is extracted, the wet starch absorbing it.

A cheap and very comfortable bed, with an under-bed of straw, hay or husk, can be made by putting on the top a light cotton "mattress," which can be made at home. For the two sides of the "mattress" bed-ticking is best, and they should be somewhat longer and wider than the top of the bed, as in tying the size is somewhat reduced. Put two or three times as much cotton between the "sides" as are put between those of a "comfortable," and tie quite closely; finish by turning in the two edges and sewing them overhand, or stitch on machine.

Beds of straw or husk look infinitely better and are far more comfortable when the ticks are made like those of a mattress, with a straight, upright piece sewed in all around. The corners should be clipped off, so that the tick will be round at the "corners," as it fits the bedstead better. Do not fill the tick through an opening at one end, but through a slit cut in the middle of the top "side." This slit should be two feet long; one side should be faced, and on the other sew a wide piece to act as a lappet, which should button over on to the faced side. When the filling of the tick becomes disarranged or needs to be stirred up, the convenience of the slit will be made manifest. I once supposed that everybody made straw ticks in this way, until I found out differently, which must be my excuse for giving this description.

If a bedstead has become infested with the small insect that the English call a "Norfolk Howard," and is difficult to be kept free from the pest, give a good coat of paint to every part of it that is not varnished, and you will have no further trouble with bugs.

ONE WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

MONDAY.—We do not follow that law of all good housewives that says 'Thou shalt always wash on Monday," for to do so does not suit our convenience. So, when the morning work is done up, we sort over the clothes and soak them, I often taking the opportunity to mend a rent in a curtain, or some fine fabric, that will iron the better for being repaired before washing. But I often say I can mend clean garments without any trouble, but always protest against having to patch any dirty thing. I have seen men bring in a pile of bags from their granary, dump them on the kitchen floor, with dust and refuse of all sorts in them, and call upon the women-folk to mend them at once; I should always object unless allowed to put them through the washing-machine first. While we were busy at this sorting for the wash, I talked to the little girls of their lessons that are still recited at home, after they have taken their share of household duties. This is easy work for my afternoons when knitting or sewing, and I enjoy having them with me and watching the development of their ideas. We have no text books in horticulture, but in the study of botany take every day the name of a plant or flower and give the methods of cultivation and uses, culled from our varied reading. To-day we were talking of fruits, Karen saying that she would like best to live where oranges grow, and I told her if she were there awhile she would give them all for a rosy apple, and how wise it was of the Creator to suit the growth of the fruits to the needs of the people of different climates, and the fruits of every climate to the seasons when we seem to require them, and how wonderful was this provision when we remembered that these varied fruits contained the elements needed to keep the system in health and to purify and correct the action of the blood. Sometimes Alex. is very tiresome during lesson hours when he cannot go out of doors. I find nothing amuses him better than a lead pencil and a piece of paper, or a volume of bound magazines, of which we have plenty. True, they get thumbed a little, but so long as a child does not destroy a book, I consider it is a very good kindergarten, and it educates the senses. We bought our "St. Nicholas" and "Wide Awake" in order that the children might gain all possible good from them, and that cannot be done by keeping them in the book-case. I find by taking one or two studies a day, each day in the week, I can teach all the children need, and on Saturday they have extra household duties and extra musical practice, so that every day is full. So together we work, and hope and endeavor to "act in the living present."

DOMESTIC RECIPES.

An Alabaster Effect.

Common plaster-of-Paris figures may be made to look like alabaster by simply dipping them into a strong solution of alum water.

Ink Stains from Paper.

First wash the paper with tepid water, using a camel's hair brush for the purpose. Next, wet the stains with a solution of oxalic acid—one ounce to a pint of water—and finally wash the spots with clean water and dry with white blotting paper.

To Cook a Pie Melon.

Peel, cut into small pieces and stew until tender. To every pint of cooked melon add one teaspoonful of tartaric acid. Sweeten to taste; season with butter, allspice or nutmeg, and bake same as green apple pies, which they resemble.

Pork Apple Pie.

Make crusts same as for any pie. For filling: First a thin layer of sour sliced apples, then sprinkle over little bits of salt pork—chopped fine and rinsed in cold water—with plenty of sugar and cinnamon or nutmeg. Put in two layers each, of apples and pork; add a very little water; dust over flour; put in crust and bake three-quarters of an hour in a moderate oven. Eaten warm. MARY B.

QUESTIONS ANSWERED.

Keeping Muskmelons, Tomatoes, etc.

U. D. V., Robeaygeon, Ont., Can., asks, 1, how to keep muskmelons and tomatoes until the Fall shows; 2, how to keep cabbage and mangels so as to have seeds for next year's planting.

ANS.—1. The best method to keep early muskmelons, tomatoes or apples so as to be shown at the fairs later in the season, is to place them in a dry box and put it in the ice-house or refrigerator—the former is preferable. By keeping a journal of "when planted" and "when ripe" one can judge in the Spring about what time it is best to sow or plant to suit the Fall shows. 2. Cabbages, if only a few choice heads are chosen for seed, can be pulled up and hung in a dry, cool cellar *heads downward*, with whatever earth clings to the roots. If many are to be kept, *pit* them and keep them covered with snow. Mangels are easily kept in a good dry cellar.

Suffer on, Groan on, Sicken on, Die on, if you will not use Hop Bitters and be cured.

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Susan Coolidge,	Harriet Prescott Spofford,	Julia Eastman,
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Frances M. Peard,	Rebecca Harding Davis,	Ruth Chesterfield,
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News of the Week.

HOME NEWS.

MONDAY, Dec. 6, 1880.

Mr. and Mrs. Kelley, of Norwich, Conn., who had been from home during the evening, were returning home, when they were met by James Goode, who quarreled with Kelley. Mrs. Kelley, thinking her husband in danger, stepped between the two men and received a serious knife wound in the left side. She was carried home and the wound was dressed. Later in the evening Goode was stabbed in the abdomen. The surgeon says he cannot recover, and Mrs. Kelley is also supposed to be in great danger .....The President and Mrs. Hayes entertained at dinner President-elect Garfield and wife and the members of the Cabinet (with the exception of Attorney-General Devens, who was out of the city), most of them being accompanied by their wives. Other invited guests present were Chief Justice Waite and wife, Justice Strong and wife, Assistant Secretary of State Hay and wife, Senator Morrill and wife; George Bancroft, the historian; Congressmen Butterworth and Townsend of Ohio, and Horace Davis, of California; ex Congressman Shellabarger, Mr. and Mrs. Norris, of San Francisco.....A boiler exploded in Andrew Moore's foundry at St. Charlotte, Mich., demolishing the building and killing outright George Moore, his son, and another man, unknown, and severely injuring four others, one or more of whom may die.

Col. D. M. Brown, a well-known citizen of Pembroke, Ky., and a member of the last Legislature, was shot and instantly killed by Cass Wilkins, a clerk in a livery stable, the result of a quarrel about Wilkins's care of Brown's horses ..... Brockway, Owens and Smythe, supposed forgers of United States bonds and currency, recently arrested at Brooklyn, were released at the suggestion of officers of the Secret Service, it being intimated that there were other parties they were trying to get hold of.....General Ingalls, of the Quartermaster's Department of the Army, has had a member of the firm of Sherwin & Co., commission merchants at Chicago, arrested upon the charge of embezzlement in connection with a grain speculation in which the General was concerned. .....The small steamer W. J Portivant, owned by Memphis merchants and plying the Hatchie River trade, struck a snag near Bollvar, Tenn., and sank in six feet of water. The boat was valued at $9,000 and was insured for $6,000. The cargo was valued at $1,000 and was insured.

Carrie Haines, 20 years of age, in a fit of despondency, caused by unrequited love, threw herself in front of a passenger train at Fairmount, Ill., and was instantly killed.....William Ash, a constable of Terre Haute, Ind., was shot and killed by Elijah Pierson, a crazy man, in an attempt to arrest the latter on a peace warrant.....Mrs. Mary E. Welsher was found guilty at Le Sueur, Minn., of the murder of her husband.....A convention is now in session at Syracuse, N. Y., with the object of securing the recognition of the Christian religion by the United States Government.... ....A baggage car on the night express over the Texas Pacific road caught fire near Sulphur, Tex., and was entirely consumed, with 93 pieces of baggage and 50 sacks of mail... ....The bank clearance at Chicago, consisting of only five business days, aggregated $39,400,000, being the largest week's clearance for the present quarter. The country demand for money is very great, over $1,000,000 being withdrawn from that city on Saturday for country account, and fully one-half of this was sent out in gold.

Considerable feeling is manifested at Galveston, Texas at the quashing of the indictment, on a technicality, against Abe Rothschild, for murdering Bessie Moore in January, 1877, at Jefferson, Rothschild is a resident of Cincinnati.....The Secretary of the Interior has issued an order providing for an increase of 100 pupils in the number of Indian youths now educated at the Forest Grove (Oregon) Industrial school, and 50 additional at the Hampton (Va) school..... .. Senators Woodin, Pitt and Fowler, a committee appointed last Winter to investigate abuses alleged to exist in the management of the New York insane asylums, with a view of improving their administration, have begun the investigations.

The silk industry in Paterson is somewhat depressed. Most of the mills are running on short time and with a reduced force. This trade has not had a dull season before in seven or eight years, and the operatives are somewhat alarmed. The manufacturers are at a loss to account for the present dullness, as in former years they were often busy at this time in preparing for the Spring trade. An unusually abundant crop of raw silk and excessive production are the most general explanations of the falling off in the demand for silk goods. The markets are said to have been overstocked for some months, but the dealers expected to work off their large supplies in the Fall, in which they have been disappointed.

A large box was received and unpacked at the White House at Washington, on the 23d, which was found to contain a massive desk or writing table—a present from Queen Victoria to the President of the United States. It is made of live oak, and weighs 1,300 pounds; is elaborately carved, and, altogether, presents a magnificent specimen of workmanship. Upon a smooth panel is the following inscription: "Her Majesty's ship Resolute, forming part of the expedition sent in search of Sir John Franklin in 1852, was abandoned in latitude 74 deg. 41 min., longitude 101 deg. 22 min. West, on May 15, 1854. She was discovered and extricated in September, 1855, in latitude 67 deg. North, by Captain Buddington, of the United States whaler George Henry. She was purchased, fitted out and sent to England as a gift to Her Majesty Queen Victoria by the President and people of the United States, as a token of good-will and friendship. This table was made from her timbers when she was broken up, and is presented by the Queen of Great Britain and Ireland to the President of the United States as a memorial of the courtesy and loving kindness which dictated the offer of the gift of the Resolute."

Information from all business centers in the United States shows a much better condition of trade than had been looked for, and a more active movement of merchandise and a generally larger consumption of raw materials and production of manufactured goods. The exports have been lighter because needed at home, while the importations of all kinds of goods have been largely increased, and are still finding ready markets. The power of consumption has evidently increased. If no disturbance is caused from without a steady and healthy improvement may be anticipated. Such a disturbance is not likely to be excited unless it comes from the money market.

If we consult the reports in business circles, we shall find a very encouraging financial condition of the country. There was never a time before when money was so abundant; never a time when investment securities were in such demand as now, at such prices. The market is constantly feeling the effect of purchases of the best railroad stocks at prices which reduce the rate of dividend upon the investment far below six per cent. The banks are fed by a stream of foreign gold which goes far to offset the drain to the interior usual to the season. In a few weeks the money current will set back towards the seaboard, and when it comes the supply of currency bids fair to be in greater excess than has ever been the case.

[St. Paul Pioneer Press.]

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We hate growling, no matter the source or cause and recommend herewith the remedy. Use St. Jacobs Oil and laugh at pain. It will do the work every time.

AGRICULTURAL NEWS.

Not only has Russia begun to import grain, which until this year she has been largely exporting, but it seems she is also importing wool, hitherto one of her staple products of export. Lately a vessel arrived at Odessa with 915 bales from the Cape of Good Hope, addressed to a merchant in Moscow, and the same merchant expects to receive shortly 1,500 more bales from the same place. .....The Hares and Rabbit Bill lately passed in England, from which so much was expected in the way of relief for farmers from the nuisance of ground game, turns out to be of much less benefit than was anticipated. The Act contained too many restrictions as to the mode and time for killing the pests to be of material benefit to farmers, who have too much other work on hand to spare the necessary time to get rid of the hares and rabbits, or even to materially lessen their numbers. Game-keepers are unusually vigilant in prosecuting all who in any way violate the new rules, while magistrates seem determined to deal with offenders with unwonted severity. Then again landlords exert a good deal of pressure to render the Act void, while the pests are protected more carefully than ever on their own land, where their tenants have no right to kill them, although the pests are pretty sure to invade their crops from these places of refuge. Much grumbling among the tenants prevails, and it is not unlikely that the Act will have to be greatly modified before the farmers will derive any great benefit from it.....As a new remedy for the phylloxera, M. Poinet, in the Transactions of the Academy of Sciences, France, recommends the cultivation of wormwood in the vineyards, where it would serve as a green manure. He says that in the tracts in North America, which are covered with it, he found an entire absence of fleas, ants, worms and other insects, and he therefore thinks the phylloxera could not exist in its vicinity.....Water is reported to be exceedingly scarce through Northern and Central Illinois.....It is estimated that the actual consumption of American cotton this year will be 5,600,000 bales, supposing the trade to be moderately prosperous; but in view of the small stock on hand at the close of the season, it is thought that 6,750,000 bales will be needed to prevent scarcity, while 6,000,000 bales will not be too large an amount to prevent "corners."

The annual meeting of the Ohio State Grange will begin at Columbus Dec. 14.....Sorghum sirup is worth 40 cents a gallon in St. Louis by the car-load for pork-packing, being sweeter than N. O. molasses.....The Ill. State Hort. Soc. will meet at Warsaw Dec. 14. All invited.....The Cane Growers' Association meet in St. Louis Dec. 21 to discuss the subject of the sorghum sugar-cane industry..... ..A telegram from Melbourne, dated Nov. 6, states that the exports from Melbourne, Adelaide and Sidney to Great Britain for the month of October have been 44,000 qrs. of wheat, 6,100 tons of flour, 3,200 casks of tallow, and 106,000 bales of wool.....The extent of the cattle-grazing belt of the United States, on unsettled land, is stated to be about 2,000 miles long by 250 miles in width, and it reaches from the Rio Grande to Manitoba in Canada .....In the quarter ended June 30, 443,080 rabbit skins were exported from New Zealand, their estimated value being £3,870.

According to reports from Australia, dated Sept. 25th, the news from all the colonies were cheering. In South Australia the heavy and general rains had done an immense amount of good, and the prospects in neighboring colonies were also much brighter. The drought in New South Wales had completely broken up. In Queensland, too, the much-needed rain had fallen abundantly, and it is hoped that the agricultural and pastoral interests will have no cause for further anxiety in this respect. A heavy and continuous downpour has been experienced in all parts of Victoria; in fact, in some districts it has been rather too bountiful, causing floods and doing some little damage, but fortunately not so much as it was one time anticipated. The crops on some of the low-lying lands have suffered, and newly-planted potatoes have rotted in the ground, but the mischief wrought has been as nothing compared with the benefit which the colony generally will receive from this welcome visitation.

In Australia, in 1879, potatoes were planted on 88,000 acres and averaged 112 bushels.....Our yearly imports and exports of potatoes, ending June 30 each year, compare as follows for three years:

	Imports, bushels.	Exports, bushels.
1877-78	528,584	744,403
1878-79	3,624,149	625,842
1879-80	731,768	696,080

The imports are mostly early potatoes from the Bermuda Islands.

A beet sugar manufactory has been built at Franklin, Mass, at a cost of $126,000 which employs 80 persons and will run day and night. The beets are raised in the adjoining country and in the valley.....A St. Mary's, Canada, dealer last week shipped to this city in one shipment twenty car-loads containing 210,000 dozen or 2,520,000 eggs, valued at $37,200 .....From estimates published a few years ago by the international statistical congress in France, showing the average yield per acre of principal crops in European countries, the following is copied for the products mentioned:

	Wheat, bush.	Rye, bush.	Barley, bush.	Potatoes bush
Great Britain	29.9	34.5	39.	165.4
Austria	15.6	15.2	17.5	84.2
Hungary	12.6	18.6	14.5	137.8
Prussia	17.6	17.2	25.8	.....
Bavaria	29.2	16.9	20.9	105.
Belgium	27.9	25.4	35.1	191
France	17.1	15.8	20.8	128.
Spain	16.1	....	18.4	126

The yearly production of potatoes, the yield per acre, and the average price received by farmers throughout the country on the first of December in the years mentioned, have been as follows:

	Production, bushels.	Yield per acre.	Price, cents.
1876	124,800,000	71.6	65.6
1877	170,992,000	94.9	44.8
1878	124,027,000	69.9	58.9
1879	181,626,000	98.9	43.6
1880	168,385,000	91.4	....

Before last year prices, of course, were in greenbacks which varied in value.

The first of the Herald prophet's cold Asiatic waves, the telegram says, struck the Pacific Coast on Friday and Saturday last, bringing rain and turmoil with it. It is expected to cross the Rocky Mountains about to-day and reach the Atlantic towards the end of the week.

Is this news, or have our readers already detected the slip?—In the article on the Swedish System of Creaming in our last issue, the depth of the "cooling tanks" is given as six inches, instead of twenty-six inches as the author wrote.

For diarrhœa, dysentery, bloody-flux, cramps in stomach, and colic, whether affecting adults, children, or infants, Dr. Pierce's Compound Extract of Smart-Weed is a sovereign remedy. It is compounded from the best brandy, Jamaica ginger, smart-weed, or water-pepper, anodyne, soothing and healing gums. For colds, rheumatism, neuralgic affections, and to break up fevers and inflammatory attacks it is invaluable and should be kept in every household. Fifty cents by druggists.

The Literary Revolution.

Orders for the large type "Shakespeare" have been very heavy—strange if they had not been. Have *you* ordered it?

Five volumes large type "Library of Universal Knowledge" are now being delivered to purchasers. Volume six will be ready the first of December.

The offer of the large type "Library of Universal Knowledge," fifteen volumes complete for $11.00, terminates with December 31, the cash to be received by that date.

The announcement of our "Library of Classic Fiction" and "Acme Library of History" will both startle and please the reading public. Please take notice that the "Literary Revolution" is only getting fairly started. Save that money you were going to invest in high-priced books. The "Revolution" will give you what you want and your *money's worth*, as rapidly as the books can be manufactured.

"Young's Bible Concordance" is perhaps the most important work in religious literature which the present century has produced. It certainly is almost a necessity to every minister and to every thorough student of the Scriptures, and deserves to find a place by the side of every family Bible. It is having an immense sale.

The brilliant historical story, "Uarda," which has won a place in the esteem of readers and critics by the side of those other famous historical novels, Kingsley's "Hypatia," Bulwer's "Pompeii," Scott's "Ivanhoe" and George Eliot's "Romola," will be issued in book form December 8, in our beautiful and handy "Acme" edition, cloth bound, for the low price of 35 cents, plus 7 cents for postage.

TROPIC-FRUIT LAXATIVE removes Habitual Costiveness and all kindred complaints. It is composed entirely of concentrated fruits and medicines. Druggists sell it.

Inaction of the Kidneys and Urinary organs causes the worst of diseases which Hop Bitters cure.

ELIXIR VITÆ FOR WOMEN.— Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., has made the discovery! Her VEGETABLE COMPOUND is a positive cure for female complaints. A line addressed to this lady will elicit all necessary information.

Burnett's Cocoaine promotes the growth of and beautifies the Hair, and renders it dark and glossy. The COCOAINE holds, in a liquid form, a large proportion of deodorized COCOANUT OIL, prepared expressly for this purpose. No other compound possesses the peculiar properties which so exactly suit the various conditions of the human hair.

The Markets.

GIST OF THE MARKETS.

DURING the week there has been a fall of from 3½ to 4½ cents per bushel in wheat at all the chief collecting centers, and a depression in nearly all other farm products also. The drop was started at Baltimore owing to the arbitrary action of the B & O. R. R. mentioned editorially last week. That disagreement has been since patched up, the owners of the stored grain having agreed to lessen the amount to 1,500,000 bushels by shipping or storing it elsewhere the railroad to pay cost of doing so, and rescinding its order for higher charges on storage. The prices in other markets sympathized with those at Baltimore, however, and the shock extended to many other products. Moreover, while early in the season the visible supply of grain was considerably less than at the corresponding dates last year, this difference has been nearly obliterated by the immense quantities lately thrown on the market, which have had a depressing effect on prices. Here is the visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and seaboard ports, and the rail shipments from Western lake and river ports and afloat in New York canals:—

	1880. Nov. 27, bush.	1880. Nov. 20, bush.	1879. Nov. 29, bush.	1878. Nov. 30, bush.
Wheat	24,622,480	24,190,673	28,217,800	18,100,035
Corn	16,683,747	17,935,815	10,265,951	8,930,653
Oats	3,657,260	4,206,074	3,626,417	2,455,966
Barley	2,419,380	3,621,098	4,979,733	6,117,481
Rye	871,647	853,147	1,234,487	1,506,963
Total	48,284,514	50,896,807	47,755,447	16,411,103

SPECIALS FROM THE CHIEF CENTERS.

Until Saturday, Dec. 4.

Chicago.—There has been a fall in prices of nearly all farm products during the week, as may be seen by this comparison: As compared with last week, No. 2 red Winter wheat is 6c. lower; No. 2 Chicago Spring 3½c. lower for cash and proportionately for future delivery; corn, 1½c. lower for cash and 3½c. for "futures;" oats ½c. lower; rye 3½c. lower; barley 3c. lower; pork about $2 lower for cash and 60c. for January; lard 27½c. lower; hogs from $15 to $20 lower; cattle steady. WHEAT active, very weak; No. 2 red Winter $1.03, No 2 Chicago Spring $1 05¾@1.05¾ cash, $1 06¾ January, $1.07¾ February, sales at $1.06¾@1.08¾ January; No. 3 do. 88@90, rejected 65@70. CORN active but weak at 40¾ cash, 40¾ January, 45¾ May, rejected 36¾. OATS dull and weak at 32 cash, 32½ January, 36¾ May. RYE easy at 87½. BARLEY easy at $1.02. PORK unsettled but active at $1.75 cash, $13 for old cash, $11.40 December, $13 07½@13 10 January, $13 25 asked February; lard easy at $8 35 cash, $8.47½@3.50 January, $8.60 February; bulkmeats dull and weak: shoulders $4.25, short rib $6.70, short clear $7. HOGS—Market fairly active, good clearings made; mixed packing $4.20@4 50, light $4.25@4.50, choice heavy $4 65@4.85; fresh hogs, quality good. CATTLE—Market quiet and unchanged; exports scarce; butchers' firm at $2.20 @3, stockers dull at $2.40@3 20; through Texans slow, steers $2.70@2.90, cows $2 40@2 60, scalawags $2, medium and half fat shipping very much neglected. SHEEP scarce and firm.

Cincinnati.—During the past week wheat has fallen from 3½c to 4c.; No. 2 mixed corn has dropped 2c and new shelled ½c., oats, steady; rye, 1c lower; barley steady; pork has risen $1, and lard fallen 35c, other kinds of pork about steady. WHEAT—No. 2 Amber, $1 03½; Red Winter, $1.05. CORN easy; No. 2 Mixed, 48c.; new, shelled, 46½c. OATS in light demand, but holders firm; No. 2 Mixed, 37c. RYE easy; No. 2 at 99c. Barley firm; No. 2 Fall at 98c.@$1. PORK dull and nominal; new, $14. Lard dull and drooping at $8 30. Bulkmeats dull and nominal; Shoulders, 4½c; Clear-Rib, 7½c. Bacon scarce and firm; Clear Sides, 8½c. BUTTER dull; choice Western Reserve, 24@ 26c.; choice Central Ohio, 18@21½c. Hogs dull; common, $3 75@4 15; light, $4 20@4 35, packing, $4 40@4 50; butchers', $4 60@4 70.

St. Louis.—There has been a fall here, too, in most things. Since last week No. 2 red Fall wheat has dropped from 4c to 4½c for cash and futures, too; corn has gone up ½c for cash, and is about the same as the previous Saturday for "futures;" oats, steady; rye ½c lower; pork steady for futures; other pork about 40c lower; hogs about 40c lower except the best sort, which are nearly steady. WHEAT declining; No. 2 Red Fall, $1 04½ @$1 04½, cash, not worth over $1 04 at the close; $1 06¼@1 08, January; $1 02¾@1 11¾, February; $1 11⅞@1 13¾, March; No. 3 do., $1 02½@1 02¾; No. 4 do., 94@94½c. CORN 43¾@43½c., cash and December; 42½@42⅝c., January; 42⅞@43¼c., February; 43¾@44⅞c., April; 45⅝@45⅞c., May. OATS firm but slow at 33½@33½c, cash; 35½c bid, January; 35⅞c. bid, February. RYE 88½c. PORK $13 20, February; cash nominal. LARD dull at $8 25 asked, $8 15 bid. Bulk-meats lower: Shoulders, $4; Clear Rib, $6 50; Clear Sides, $6 70. Bacon dull and nominal. Hogs dull; Yorkers and Baltimores, $3 80@4 10; mixed packing, $4 25@4 50, butchers' to fancy, $4 60@4 75. CATTLE scarce and dull for low grades; shipping grades in good demand.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Dec. 4, 1880.

BEANS AND PEAS.—A good steady demand prevails for all grades of beans, particularly for the standard white sorts. The market closes firm with some advance on best marks. Green peas rather plenty as the trade is light; quoted easy at $1.70@ 1.75 for Wisconsin bbls. So. B. B. peas have advanced to $2 per 2 bush. bags, southern freight is higher.

Marrow beans prime $1.85@1.90, fair to good $1.70@1.80, medium, prime $1.57½@1.60, fair to good $1.45@1.52½, pea, $1.55@1.80, white kidney, $1.80@2.00, red do. prime $1.85@1.90, fair to good $1.65@1.75 black, or turtle soup, $1.60@1.75, lima, $4.50@5.

BEESWAX.—Small sales were at 22@24 for Western and Southern.

BUTTER.—The market retains its advanced position and some upper grades have further improved. The demand is satisfactory as the strong figures now named for strictly choice has sent a good volume of trade to next quality or good to prime stock. The weather is cold enough to give confidence to wholesale buyers and dairies have a good Winter movement. The strength of the call however comes from a steady grocery want and a steady local movement is regarded as more favorable than speculatively free purchases, as buyers for city use have a certain fault to fill. Shippers are shut out by the present rate of Western and State. Fine Western partakes of the strong feeling in table grades of State. A good deal of stored Western is offered easy.

Creamery, extra fine, 36@37c. good to prime, 33@35c; fair to good, 30@33c.; poor to fair, 22@29c.; sweet cream, 28@32c.; State entire dairies, choice, 28c.; good to prime, 26@27c.; fair to good, 24@26c.; firkins, in dairies 24@28, do. lines 22@25, pails and half tubs, choice, 31@33c, good to prime, 28@30c.; fair to good, 26@28c.; poor, 20@23c.; Welsh tubs, fall 29@30c.; fair to prime, 26@28c.; Western imitation creamery, 24 @30c.; dairy, fresh, 26@28c.; good to prime 24@26 fair to good 21@24c.; poor 16@18, factory, late made 21@ 23c.; fair to prime 15@20, poor 13@16; rolls, choice, 20@21c.; fair to good, 18@19.

Receipts for the week, 31,468 pkgs. Exports for the week, 2,356 pkgs.

CHEESE.—The market has been moderately active only this week, and supplies have accumulated

Most of the sales of prime and fancy grades have been at 12¾@13¼, with extra desirable parcels at 13. The shipments have been 26 300 boxes. Quotations are for

State factory, fancy, at 12¾@13c.; do. good and prime, 12@12¾c.; do. fair to good, at 11@12c.; do. h'f skimmed, 8¾@10c.; Wisconsin factory, fine, 12¾@12¾c. do. good to prime, 11¾@12¼c.; do. fair to good, 10¾@12c.; Ohio factory, fine, 12¼@12¾c.; do. good to prime, 11¾@12c.; do. flat, fair to good, 10@11¼c.; do. poor to fair 7@10c.

Receipts for week, 65,260 boxes.

Exports for the week, 26 000 boxes.

Liverpool cable price, 66s.

Steam for dairy products to Gt. Britain, 42s 6d.@52s. 6d.

COTTON.—There has been a fair degree of activity this week, with prices, however, generally tending lower. The latest prices are for

December at 12.03@12.04c.; January at 12.17@12.18c.; February at 12.32@12.33c.; March at 12.47@12.48c.; April at 12.60@12.62c.; May at 12.73@12.74c.; June at 12.83@12.85c.; July at 12.90@12.92c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	9	9	9
Strict ordinary	9¾	9¾	9¾
Good ordinary	10⅝	10⅝	10⅝
Strict good do	11	11⅛	11⅛
Low middling	11 9-16	11 13-16	11 13-16
Strict low middling	11¾	12	12
Middling	12	12⅛	12⅛
Good middling	12⅜	12⅝	12⅝
Strict good middling	12⅝	12¾	12¾
Middling Fair	13¾	13⅜	13⅜
Fair	13⅝	14	14

STAINED.

Good ordinary	8 11-16	Low middling	10 7-16
Strict good ordinary	9 9-16	Middling	11 5-16

Receipts for week, 35,000 bales. Exports do., 14,719 bales.

DRIED FRUITS.—The market is active for all descriptions and generally strong at the slight rise in prices quoted. Latest quotations are for

Evaporated apples at 8¾@8¾c. for better qualities sliced apples at 5¾@6¼c. for good to choice North Carolina 3¾@4¼c. for V.a. apples, 4@4¼c. for Tenn. do 4¾@5¼c for State do; 3¾@3¾c. for western Ohio and Mich. Peaches at 28@30c. for evaporated peeled; 10¾@13c. for unpeeled do.; N. C. peeled at 19@21c; for the better qualities, unpeeled peaches at 6¼@7¼c. for halves and 6¼@7c. for quarters. Plums at 15@16c. Blackberries at 8c. Cherries at 18c. Raspberries at 25c. Whortleberries at 12@12½c.

Receipts for week all kinds, 4 118 pkgs

Exports for week, 5,173 bbls. of dried apples.

EGGS.—Receipts for the week, 6 063 bbls.; do last week 8,34?. Fresh eggs are very scarce from any point and the new high rates are readily obtained from special call. Limed native and firmer.

Near points 34@35 State and Pa. 30@31, Western fresh 30@31 Southern 30@31, Canadian 27@28, second grades 26@27, limed State 20@21, Western and Canadian 19@20.

FLOUR.—There has been a reaction this week to lower prices in sympathy with wheat. A very fair trade has been done,

Latest prices are: $3.45@4.25 for very inferior to fancy superfine State and Western; $4.75@5 10 for poor to choice extra State and Western, odd lots and lines; $5 10@5 25 for choice to fancy do.; inferior to good white wheat, trade and family extras, $5.10@6 00; good to choice do. at $6.00@6.65, (fancy do. up to $7;) red and amber wheat inferior to choice trade and family, at $4.30@5 35; round hoop Ohio, $5.00@5 50; and trade and family brands of do at $5.10@6.75, the latter for very choice; St. Louis at $5.10@6,00 for inferior to good extra $6.00@6 65 for good to choice and $6.75@7.00 for choice to fancy brands; Minnesota clear, inferior to very choice at $4,75@6.25; Minnesota "straight," poor to fancy, at $5 85@7.25, and patent inferior to fancy at $5.90 @8.50, unsound stock at from $3 25@5.75; city mill extra at $5 85@6.10 for fair to very choice for the West Indies; do. for England, $4.75@5.25 for poor to very choice spring wheat, and $5.25@6.00 for winter wheat product; do. trade and family extras, $6.25@ 7.85 do. for South America, $6.25@6.60, the latter for fancy; No 2 at $3 45@4 for inferior to fancy.

Receipts for week, flour, bbls. 151,670 corn meal, do. 4,360 wheat, bush. 1,769,470; corn, do. 737,532; oats do, 210,300; rye, do. 80,782. malt, do. 38,018; barley, do. 202,4 0; beans, do., 16,920; rice, pkgs 708.

Exports for week, flour, bbls. 141,850; corn meal, do. 2,760, wheat, bush 617,535; corn do. 825 643; oats, do, 3 636; peas do. 3 565; beans, pkgs. 1,545; rice, 875.

FRESH FRUITS.—Exports of apples for week 37,076 bbls The market for apples has assumed a firmness that could not have been expected had it not been for the late frost. A good many lots have been lost in bulk owing to the scarcity of empty barrels, and the consequent lack of care. Some of the frozen stock now arriving brings 50c@$1 ₱ bbl. when fairly useful. Prime nicely-kept lots very firm. The stock of cranberries has been largely broken into at an early date and the market is exceptionally strong for fine Capes. Florida oranges in good demand when choice. Pears and grapes scarce. Chestnuts are out.

Baldwins in bbls. $1.75@2.50. Greenings, $1.50@1.75, Spitzenbergs, $1.75@2; Northern Spy, $1.75@2; Choice Sweet, $1.75@2 Lady apples, poor to good, $3@5; Cranberries, Cape Cod fancy, $7@7.50; good to choice $5.75@6.75, poor to fair, $4@5.50; Cape boxes, $3@2.25; N. J, do. $1.50@1.87. Florida oranges, choice half bbl. boxes, $3.50@4; fair to good, $3@3.50. Burton box pears $3@5 Catawba grapes 15@7c. Peanuts, Va. hand-picked 4¾@5, extra prime 4@4¼, good to prime 3¾, shelled 4@4¾. Hickorynuts ₱ bush. of 50 lbs, $1.75, Butternuts, western, 50@75c. Black walnuts 50c. Pecans 8@10c.

GRAIN.—The markets for all articles have dropped back a little this week, as expected after so strong an advance as occurred. Exporters have bought a little more freely at the decline The receipts here are moderate, but the visible supply has increased, especially of wheat, the comparatively high prices naturally starting supplies forward from growers' hands. Latest sales of wheat are of:

No. 1 white at $1.19¾@1.20¼, do December at $1.19¼ @1.20, do January at $1.23@1.24¼, do. February at $1.25¾@1.25¾; No. 2 white at $1.18@1.18¾, ungraded white at $1.16@1.20¾, mixed Winter at $1 19@1.19¾, No. 1 red at $1.20¾@1.30, No. 2 red at $1.23@1.24¼, do. December at $1.23¾@1.24¾, do. January option at $1.26¾@1.28¾, do. February at $1 28¾@1.29¾, No. 3 red in lots at $1 19¾@1 0¾, ungraded red at $1.15@ 1.27¾, in bond Canada in bond at $1.18, No 2 Spring at $1.17@1.17¾. No. 3 Spring at $1.15. Corn at for New York No 2 60@60, do December at 61@61¾, do. January at 61¾@61¾, do. February at 62@62¼, do. May option quoted at 59¾ bid and 60 asked, ungraded mixed Western at 58@61¾, No. 3 at 57¾@58¾, New York steamer mixed at 58@58¾, No. 2 white at 61¾, Oats at for No 1 white 43¾@43¾. New York No. 2 white at 40¾@40¾, No. 3 white at 41¾@41¾, New York No. 1 at 40@, New York No. 2 at 41¾@45¾, do. December at 41¾, do. January at 40¾@40¾ No. 3 at 41@ 41 , ungraded white Western at 45@50, ungraded mixed Western 42@44¾, white State at 48@50¾, No. 2 Chicago quoted at 45 afloat.

HAY AND STRAW.—Demand is liberal and prices specially strong.

Selected retail State hay brings $1.25@1 40 per 100 lbs; other grades of timothy at $1.20@1.25 do, grades for railway and shipping wants at $1.05@1.10, clover mixed at 1.00, clover clear at $1, salt hay at 50@55c.; Straw—long rye, $1.05@1.10, short rye, oat, wheat and barley 60@70.

HONEY.—Market quiet but expected to revive before or by the holidays.

White clover comb single 17@19, larger pkgs. 15@16, buckwheat 12@13, extracted 7@11.

HOPS.—A very fair trade is in progress, but supplies have increased and prices have tended easier. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	22 @23
Do. medium	20 @21
New Yorks, crop 1880, low to fair	18 @19
Eastern, crop 1880	18 @22
Wisconsin, crop 1880	18 @22
Yearlings, crop 1879, choice	16 @26
Olds, all growths	4 @12
Bavarians	30 @35
Bohemians	35 @40
Pacific coast, new	20 @23

Receipts for week, 7,230 bales. Exports for week, 5,319 bales.

LEATHER.—Quotations are for light hemlock sole 22½@24, middle do at 23¾@25, heavy do at 24@25,

OIL CAKE.—Western is quoted $30.50@31.

POULTRY AND GAME.—A considerable surplus of turkeys and fowls left from Thanksgiving's receipts with later free arrivals have overstocked the market and rates are extremely low. Only bright extra fresh birds will bring the extreme. It looks like a low market for this month though the present ranges will be apt to check supplies. Geese and ducks sell better than for several former seasons.

Turkeys, N. J. choice, 10@11, State do. 9@9½c, good to prime 8@9, Western, choice, 8@8½, good to prime 7½@8, fair to good 7@7½. Phila., dry-picked, 14@12, Chickens, do., 11@12½c.; Bucks Co. 10@12c.; N. J. 10@ 11c.; State scalded, 9@10c.; Western, do., 7@8c.; poor to fair 5@6c. Fowls, Phila, dry-picked, 10; N. J., 9@ 10c; scalded, do 9@10c.; State and Western prime, 8½@9c.; poor to fair 5@6. Ducks, choice 10@12c.; state and N. J. 10@11c.; Western, poor to good 6@9c.; Geese, choice 10@11c.; other, 8@9.. Squabs, light ₱ doz. $1.75; dark $1.

Live poultry has only a chance sale with dressed quoted down.

Fowls and chickens 6@8c. roosters 3@4.; turkeys 7@9. Ducks choice 65@75 other 40@60. Geese extra $1.75@2 other $1.00@1.50 pigeons 20@25.

There has been a decided drop in prices for all birds except choice wild ducks. Small birds and rabbits are very plenty, Perhaps dealers have made the mistake of trying to establish the rules of the holiday week.

Wild ducks, canvas back $1.25@1.75, the latter for Havre de Grace; red heads 50@75c mallard 50@60, teal, 30@50c, the latter for blue-winged; common 25@30c.; prime trapped ₱ doz 50@$1; poor 30c partridge, 40@50 the latter for State, Grouse, prime, ₱ pair $1 drawn, 60@80c. Hares, 35@40c; Rabbits, 20@ 25c.; Venison, Minn. short saddle, 15@16c.; other 12 @14½c. Whole deer, 9@10.

PROVISIONS.—Hog products have been less active and tending lower.

Mess pork quoted at $14 25 for old and $15.25 for new for export. Bacon at 7.50 for long clear, 7¾ for short clear. Beef—Extra India mess quoted at $18 @20 for city; $9.50 for extra mess, and $8.50 for plain mess; and $13@13.25 for family mess. Beef hams at $17 25@17 50. Lard, Western steam at $8.37½ for spot lots, $8.90 for December, $8 95@8.97½ for January and $9 for February, Stearine at 9¾ for choice. Tallow at 6¾ for prime.

Receipts for week, beef, bbls. and tcs.: 1,196; pork, 16,800 bbls.; cut meats, 53,575 pkgs.; lard, 42 300 pkgs.

Exports for week, beef, bbls. and tcs. 2,536; pork, 5,395 bbls.; cutmeats, 14,785,502 lbs.; lard, 5,515,300 lbs.

SEED Clover is in demand and firm at 8¼@9. Timothy is quiet at $2.75@2.85. Receipts for week, 3,094 bushels.

TOBACCO.—A very fair trade has been done and the market is strong.

VEGETABLES.—Exports of potatoes for week, 8,700 bbls. The market is firm with checked supplies and very fancy Rose and Snowflake are held a shade above quotations onions are quiet, high prices reducing the demand. Other items steady.

Potatoes, E. Rose Eastern double heads $1.75@2, State $1 75@1 87, do. in bulk $1 62@1.75 Burbank and prolific $1.50@1.75; snowflake $1.75@1 87; do. in bulk $1.65@1.75; peerless, state, $1.25@1.50; do. N. J. $1 12@ 1.37; peachblows $1.87@2 Sweet potatoes, Del. $2.50 do. Virginia $1.25@1.50. Onions, white, $5@5.50 yellow, $3.25@3.50; red, $3 25@3.50; Chester, $3.25@3.50, beets, 75@87, carrots, $1@1.25; marrow squash 40@50; Hubbard, 75c.@$1; cauliflower, $1@3; cabbage, ₱ 100, $3@6; pumpkins, $4@8 celery, per dozen, $1@1.50, turnips white, 50@62.

WOOL.—Trade has been brisk this week and while no further advance has been made no difficulty was experienced in maintaining strong prices. Latest sales are of

X and XX. Ohio fleeces at 48@50, medium do. at 48½ @50; Mich. fleeces at 45, State fleeces at 42@.

LIVE STOCK MARKETS

NEW YORK, Saturday, Dec. 4, 1880.

BEEVES.—Receipts for the week 12,081 head: do. last week, 13,293 do. With light receipts the market has had a very satisfactory run all the week. Heavy supplies however are not needed. Quite a number of thin natives are included in the receipts. A car load of fancy Ky. steers sold at 12. to dress 58 lbs, prime to medium steers ranged at 7@8¾, to dress 55@ 56lbs, fair to good 8¾@9¼, to dress 56 lbs, prime to choice 10@11. to dress 57 lbs, extra 11¼@12.

SHEEP AND LAMBS.—Receipts for week, 31,528 head; do. last week, 22,471 do. Demand light and prices more or less irregular. Poor Texas sold at 2¾, choice Ohio wethers 6¼, general sales are 4@4¾. lambs 5@6.

VEAL CALVES.—The demand has been small and prices are low, Cheap poultry has some effect upon small meat.

Live calves, N. J., prime 7¼, State, prime 7, fair to good 6@6½, Mt. Holly, heavy, 4@5, medium to light 6 @7¼, buttermilk, 2½@3, grassers, 2@2¼c.; dressed calves, choice 9@9¼, fair to prime 7@8½, common, 3@5.

MILCH COWS.—Receipts are very small and former prices are sustained. A fair range for common useful to good $30@45, choice $50.

SWINE.—Receipts for the week, 48,823 head: do. last week, 43,765 do. Good city dressed compete with country pork and State and N. J. is lower. Live hogs about steady for choice, under grades dull.

Live hogs corn 4.50@4 70, per 100, country dressed pork light 7@7¼, medium 6@6¾, heavy 6¼@6, city dressed State 5¼@6¾, city dressed Western 5¾@5¾, Pork tenderloins 9@10

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THE ATLANTIC MONTHLY

FOR 1881

WILL CONTAIN

Serial Stories,

By ELIZABETH STUART PHELPS, author of "The Gates Ajar," etc; GEORGE P. LATHROP, author of "A Study of Hawthorne"; W. H. BISHOP, author of "Detmold"; W. D. HOWELLS, author of "The Lady of the Aroostook," "The Undiscovered Country"; and HENRY JAMES, Jr., author of "The American," "The Europeans," etc.

Short Stories and Sketches,

By HARRIET BEECHER STOWE, T. B. ALDRICH, SARAH ORNE JEWETT, CONSTANCE FENIMORE WOOLSON, MARK TWAIN, ROSE TERRY COOKE.

Essays

On biographical, historical and social subjects, by GOLDWIN SMITH; EDWARD EVERETT HALE, on the social, political and religious life of the world in the time of Christ; WILLIAM M. ROSSETTI, on "The Wives of the Poets;" JOHN FISKE, on the "Early Culture, Myths and Folk-Lore of our Aryan Ancestors;" R. L. DUGDALE, on "The Relation of Society to Crime."

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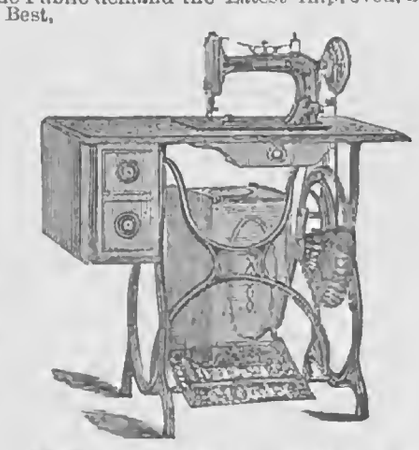

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Reading for the Young.

FARMING FOR BOYS AND GIRLS.—NO. 6.

HENRY STEWART.

Preparation of the Soil.

It has been said, "As a man sows, so shall he reap." This is true in every sense in which it can be used, and it applies in the most forcible way to the manner of preparing the soil for sowing the seed. This work needs to be done most carefully, that the seed cast into the soil may be able to receive the utmost benefit from the soil itself, as well as from the water, air, light, and heat, which all exert so great an influence upon it. The first work in preparing soil for the seed is to plow it. The modern plow is constructed upon truly scientific principles—by which is meant that it is not

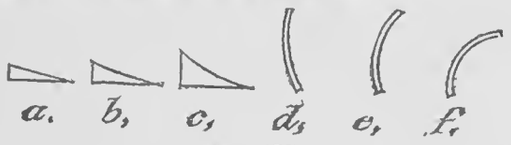

FIG. 437.

made by guess-work, but is shaped in conformity with certain well-known rules and principles of mechanics, so as to use the force applied to it in the best and most effective and economical manner. It is necessary for the young farmer to understand these principles, and why plows are shaped as they are, because he can then use them much better and do better work with them than if he knew nothing about it. The work of the plow is to turn over the soil so that a fresh portion may be brought up and exposed to the air, and the manure, weeds, sod or stubble may be covered up, and also to break up and loosen the soil. That the latter part of the work be well done is very important; and a well-made plow in the hands of a good plowman does this work better than it can be done in any other manner, better even than it can be done with a spade. The plow also cuts out the furrow slice as well as turns it over; it therefore requires, for easy work, to have a sharp edge and the general form of a wedge. To turn over the soil, the surface of this wedge is required to be curved or rounded and hollow, so that when the furrow slice is cut loose it is lifted and turned partly over, and in the bending the slice of soil is broken loose, crumbles and falls apart. The following illustrations show how this useful work is done. At figure 437 is shown the form of the plowshare and the mold-board as if the plant were cut across in several places from the middle of the share to the end of the mold-board. When the share at *a* enters the soil, it first cuts the ground loose and lifts it a little.

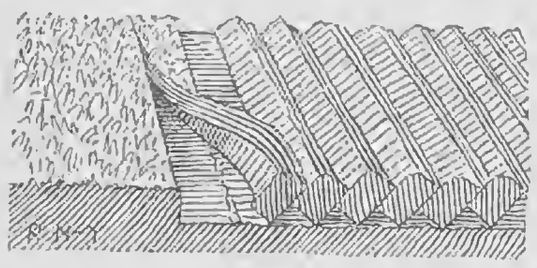

FIG. 438.

When the furrow slice is pushed along the plow share to *b*, it is lifted still more and begins to bend and turn at *c*. When it comes on to the mold-board at *d* it is nearly on edge; at *e* it is bent so much that the soil crumbles and the slice falls apart, unless it is very tough; and at *f* the furrow slice is turned over so that it falls into the position shown at fig. 438. This illustration shows how the furrows lap and lie, one upon another. By using a differently shaped mold board the furrow slices may be laid flat, and for some purposes this is done, but what useful purpose is served by it that is not done by lap furrowing, does not seem very clear. In making lap furrows, the top soil and any manure or other useful matter that may be upon it, are placed in the best possible position to be mixed with the soil. This is easily seen by referring to fig. 439. This is intended to represent the surface of a field that has been manured. As the furrow slices are turned over on their edges, the top soil, and the manure, which is shown by the dark lines, lie between the slices from the bottom to the top, except where they are covered with a little of the loose, broken soil which falls into the

FIG. 439.

new furrows. When the harrow is drawn across these furrows, the teeth will mix the soil and manure together very completely. But, although this may not be done, when the seed is sown it falls into the small furrows and is covered by the soil from the edges, as the harrow passes over them. The roots of the young plants find a supply of manure to feed upon directly in their way as they go down into the soil and as they go still further down, they find more food ready for them. As the fullest growth of the crop is the object sought by the farmer, this manner of plowing is then seen to be precisely what he requires to gain his object. A little observation, thought and study may very easily explain such matters as this to the young farmer, so that he may not only know what he works for, but why he does this or that, and how his work should be done to make it more profitable for him. The plow crumbles and loosens the soil and makes it mellow; this is necessary to make a soft bed for the seed in which the young roots may easily force themselves in their search for food.

At figure 440 is shown the effect of good plowing upon the soil, in which the furrows are straight and even in width and depth. In this case every part of the soil is turned; the surface of the field is raised evenly, and if one should push a stick into the soil at several places, he would find everywhere the same depth of the same soft, mellow soil. But let a man or boy handle the plow without care; let him permit it to sway to this side or the other; to run out of the ground in places; and to make the furrows crooked; the effect would be just like that shown at figure 441, in which the (light), soft upper soil rests upon a very uneven, (dark) sub-soil, and if one tries to push a stick into

FIG. 440.

the ground, he finds a hard bottom very close to the surface in many places. The consequence would be that the seed might sprout, but the plants would be very poor and weak, or would die for want of soil to grow in and because they could not enter the hard soil to find food. Besides, as the air and the warmth of the sun could not penetrate this hard soil, these could not serve their purpose in preparing food for the young plants, and the plants would starve; and when the sun's heat becomes fierce in the Summer time, this shallow soil would dry out and the crop would perish. Thus poor work gets poor pay, and it is only good work that is well paid for; for we see

FIG. 441.

that nature herself refuses to help those who will not, or do not, help themselves, by doing their work well.

PREMIUMS.

DEAR UNCLE MARK:—What premiums may I have for getting new subscribers to the RURAL?

Monticello, Iowa. H. P. T.

[We have had inquiries similar to this several times of late, and have concluded to make one answer which will cover them all at this time. The cousins may, of course, work for any of the premiums offered in our premium list as published in the Fair number, or we will furnish an extra copy of the RURAL for every seven new subscribers.

We have also selected as of special interest to the young the articles illustrated on this page. For the young ladies we have five varieties of albums, given for clubs of eight, eleven or eighteen names. Also books from the house of Lee & Shephard, counting each subscriber as 50 cents.

Fig. 442, is a Monitor clock. Our illustration is about a quarter of the size of the clock. The Monitor is an accurate time-piece, and an alarm and a daily calendar in addition. The *white* dial is 3¾ inches in diameter; the clock is wound, set and regulated at the back, and the admirable "movement" is inclosed in a seamless copper case, that is stamped out and heavily nickel-plated. A club of 7 secures the "Monitor."

FIG. 442.

This cut, Fig. 443, is a boy's express wagon, constructed with iron axles and heavy welded tire wheels. It is 16x33 inch body, has good-sized wheels and the front ones turn under the box; is

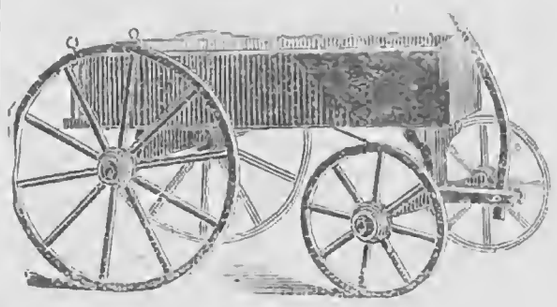

FIG. 443.

well made throughout, which of course, combines strength. The possession of one of these satisfies many a boy's ambition. It is a toy which is both useful and amusing. Price $5. This wagon is given for a club of 12 subscribers.

Fig. 444 is a velocipede, suitable for boys from the ages of 6 to 9. Its front wheel is 22 inches and has an iron hub; the wheels are oval tired and

FIG. 444.

the handles tipped. It is upholstered with a finely-stitched leather saddle, with wood parts painted and ornamented. Exert yourself to obtain the needed number of subscriptions. Price $6. Given for 14 subscribers.

Fig. 445 is a pocket knife as here shown. The engraving shows the parts of the knife, except the very effective screw-driver hidden by the opened

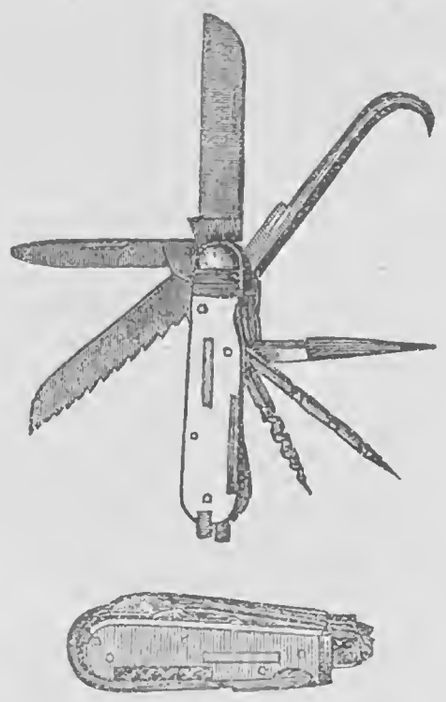

FIG 445.

large blade. All inclosed in a compact white handle, the whole weighing only two ounces. This knife is given for a club of 8.

THE OLD FARM-HOUSE.

"NURSE, tell me once more, please; then I will shut my eyes and try to sleep."

So nurse told the good news again. Next day they were all to go to grandpa's. "Where the ducks are?" cried Mollie.

"Yes, the ducks, the brook, and the old farm-house, the horse and carriage, and ever so many good things," said nurse.

"Will mamma let me wade in the brook? I must ask her before I can get a wink of sleep."

Mamma was busy packing. She brushed away some tears when she heard little feet along the hall. Mollie forgot the fun in a moment: "Mamma is thinking about little Allie in heaven—how she is not here to go to grandpa's."

Then Mollie clapped her hands and cried, "Let us take the lame girl; her mother has no money to send her to the country. Would not this please Allie if she could look down!"

So the poor little lame girl had a good time at the farm.

Though Allie might not know, we are sure Jesus was pleased with love shown to one of his dear children.—Sunbeam.

A good excuse for sickness or yourself and family is that you don't use Hop Bitters.

The Puzzler.

HIDDEN BUSINESS MEN.

1. Is that spot terebinth?
2. Do you bake rolls?
3. Thus add Le Rena.
4. I am mamma's only child.
5. Do you sell at retail or only wholesale?
6. Put the hen in the coop, Ernest.
7. With this hoe make radish beds.
8. Those present were Messrs. Jones, Black, Smith and Brown.
9. Let the cob rick lay, Erlington.
10. I saw papa in terrible agony.
11. Look at the mat in Nerva's hall.
12. I can make Ruth laugh.
13. Bah! Don't krout stink, Erving?
14. Use a corn-cob, Blerney.
15. Did you shuck Sternay's oyster.
16. What a buff arm, Ersie.
17. It put Philip B. in terror.
18. I saw a carp enter a shark's jaw.
19. He is a Jew, Elermo.
20. "I left de clocks mit her mither."
21. Down in the cabin, Et, make Rosa lie down.
22. You'll undertake riddle guessing.
23. On our pup, Holster, eruption is visible.
24. Homer chants in church.
25. The negro certainly is a lower race,

☞ Answer in two weeks. LITTLE ONE.

VERBAL CHARADES.

My first is in wine, but not in beer.
My second is in courage, but not in fear.
My third is in case, but not in box.
My fourth is in keys, but not in locks.
My fifth is in green, but not in yellow.
My sixth is in ball, but not in bellow.
My seventh is in yours, but not in ours.
My whole is a sweet smelling bunch of flowers.

☞ Answer in two weeks. W. C. F.

NUMERICAL ENIGMA.

The whole consisting of 25 letters is a proverb.
The 10, 6, 25, 17, 2, is a kind of tea.
The 5, 3, 19, 9, 20, 13, 10, is to gesticulate.
The 21, 4, 14, 8, 7, 19, is the turning point.
The 3, 14, 1, 13, 22, 1, is barbarous.
The 12, 14, 1, 15, 11, is a fragment.

☞ Answer in two weeks. "GUS."

PUZZLER ANSWERS.—NOV. 27.

ANSWER TO TRIPLE ACROSTIC—

C a t e H w o r D
A f f i A n c e R
R a C e A
T o K a Y

Primals form "cart"; centrals form "hack"; finals form "dray"

HIDDEN OFFICERS.—1. Lieutenant; 2. Cadet; 3. Midshipman; 4. General; 5. Commodore; 6. Brevet; 7. Drum-Major; 8. Brigadier; 9. Dragoman; 10 Khedive; 11. Private; 12. Proctor; 13. Orderly; 14. Commander-in-chief; 15. Hospital Steward.

THE RURAL NEW-YORKER.

AT this season of the year we are receiving many calls for specimen copies. For the information of the new readers into whose hands the present number may fall, we present a list of those who may be considered as the present contributors to our columns; from which it may be seen whether or not our claim to having the most eminent practical writers is well founded.

Dr. J. B. Lawes.....Rothamsted, England.
Prof. J. P. Sheldon, Hants. & Wilts. Ag'l Col. "
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Prof. S. W. Johnson, Sheffield Scientific School, Yale College.....Conn
Gen. W. H. Noble..... "
W. M. Yeomans..... "
Prof. F. H. Storer, Bussey Institute.....Mass
Hon. Marshall P. Wilder, Boston..... "
William Falconer, Cambridge University.... "
Richard Goodman, Pres. J. C. C..... "
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F. Gulley, Farm Manager " " ..... "
Prest. T. T. Lyon, Pom. Society..... "
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PERSONAL ITEMS.

The Emperor of Austria is called "The Good." He is very liberal.

The estate of the late Governor Williams, of Indiana, is estimated to be worth $100,000, $75,000 of which is invested in farming lands.

Congressman Alexander H. Stephens is suffering from dyspepsia even more than is usual for him. The very lightest food is hard for him to digest.

Jim Mace, the once well-known English pugilist, is keeping a hotel in Melbourne. He is said to have become a "model moral man," and is, moreover, making money fast.

Colonel Fair, of Pacific coast fame, had a narrow escape from death a few days ago. He was inspecting a drift when the earth caved, fatally injuring a miner who accompanied him on the trip of inspection.

P. T. Barnum, the famous showman, has been seriously ill in New York city for over a week, suffering much agony from an obstruction of the intestines. His condition for several days was critical, but he is now thought to be out of danger.

The people of Turin are very fond of the Queen of Italy. She has no guard of soldiers when she arrives in that city. Her smile is everywhere welcomed with cheers from an admiring populace in Italy. The Marguerite has become the national flower. The King of Italy is grave, thin and haggard.

President Hayes has written his message; but he does not wish to have it put into type for fear that some one may wish to print it before Congress meets. At least that is the story now afloat at Washington. The manuscript is kept carefully guarded; and two sentries who went to sleep over it have been relieved.

Count de Chambord, whom the French Legitimists consider the rightful King of France, although in his 61st year, and suffering from a slight halt in his gait, owing to a fall from his horse in early youth, still takes delight in all field sports, and follows the chase with the ardor of his ancestors. At Frohsdorf, his residence, the "royal hunt" is maintained with great ceremony, the only evidence which recalls the memory of the court splendors of Versailles and Fontainbleau.

General Longstreet, our Minister to Turkey, was President Hayes' choice for Postmaster General, but it was thought that he might have trouble in being confirmed by the Senate. The General by the way, is not a man who can keep money. When he had a yearly income of $10,000 in Louisiana, he gave most of it to his old soldiers, one of whom during the September riots in New Orleans drew a bead on Longstreet three times with his rifle, but had not the heart to shoot his old commander.

[Cleveland, (Ohio) Herald.]

A Hammock's Wild Way.

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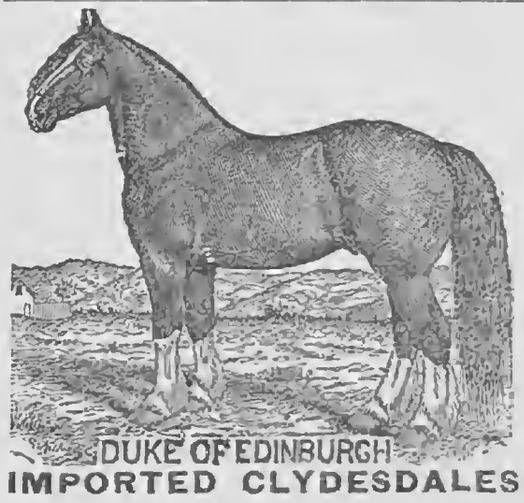

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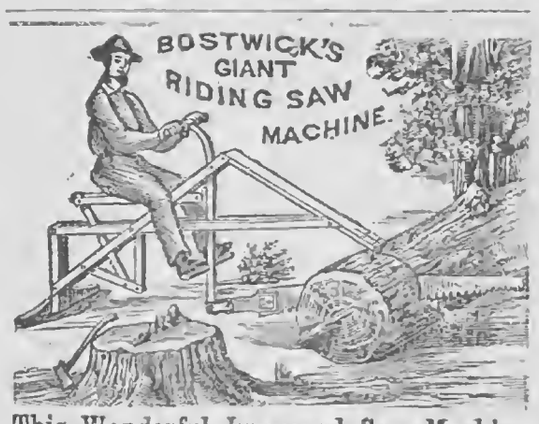

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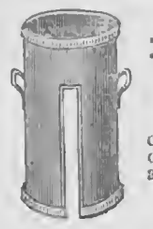

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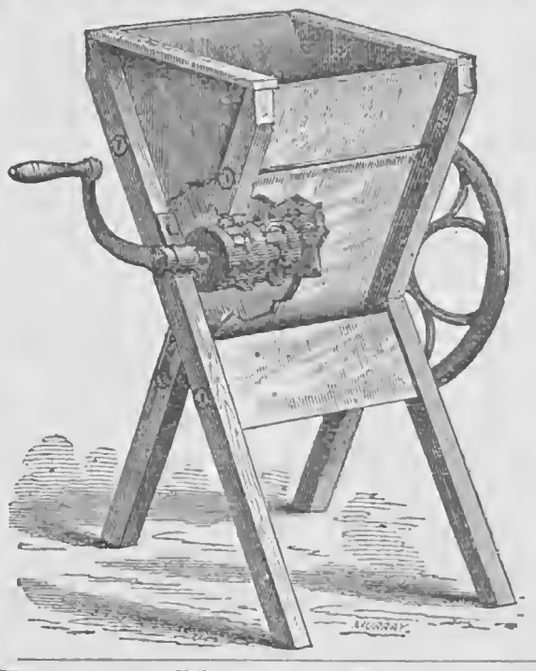

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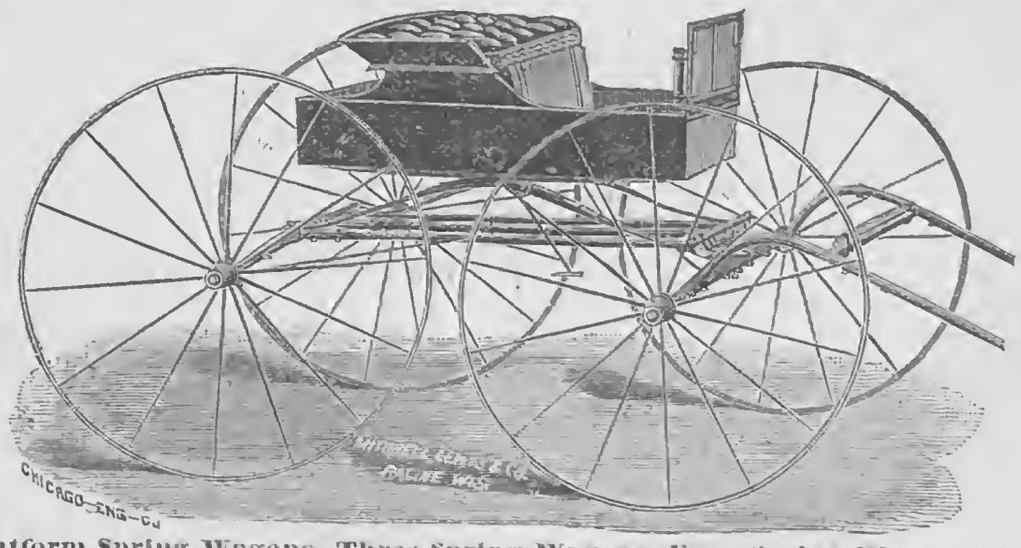

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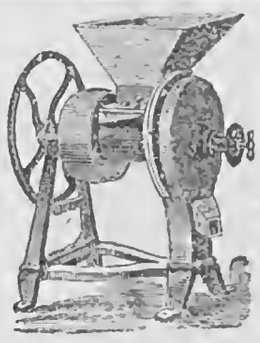

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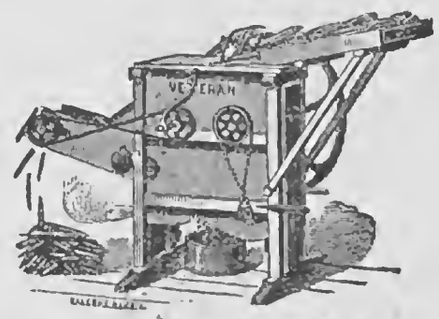

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THE RURAL NEW-YORKER

Ralph E. Evans

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The Herdsman.

SHORT-HORN BULL, BARON HILLHURST, 22,028.

In continuing our portraits of prize animals of the Albany show, we present this week an excellent picture of the 1st prize Short-horn bull, Baron Hillhurst, 22,028, exhibited by the president of the society, Gen. N. M. Curtis, Ogdensburg, New York. The Baron is an exceedingly stylish and handsome bull six years old, and he attracted more attention at the fair than any other animal. It is difficult to describe so well formed a bull. Ordinarily one may exercise his skill in passing lightly over imperfections, and dwelling especially upon excellencies; but in the case of Baron Hillhurst, the most critical may study him long without finding much fault.

His head is fine, with a handsome muzzle and a large gentle and beautiful eye, and medium, waxy well-shaped horn. He is level above and below, with deep brisket, wide loin and low in twist and flank. He is thick through the heart, with well sprung ribs and great capacity of barrel. A more upheaded, stylish bull one seldom sees, or one of so docile and gentle a disposition, and though weighing, in low flesh, 2,200 pounds, he is active, vigorous, "good on his pins" and as quick as a yearling. Notwithstanding he is so generally excellent, as a handler he is most extraordinary, his skin being mellow and unctuous, elastic and yielding to an extent that delights butchers and feeders, and all others of educated "touch," and this evidence of quality is hightened by his silky and glossy coat of fine hair. In color he is almost entirely red with few white spots, as seen in the engraving. His blood on the dam's side is traced through the Lady Mary's to Imported Red Rose 2d, and thence back to Princess by Favorite. His sire was sold at Col. King's sale in Chicago, May 1874, for $14,000, and subsequently went to England.

This noble animal stands at the head of Gen. Curtis's fine herd which is rich in Princess and Duchess blood.

BREEDING PURE-BRED STOCK.

F. K. MORELAND.

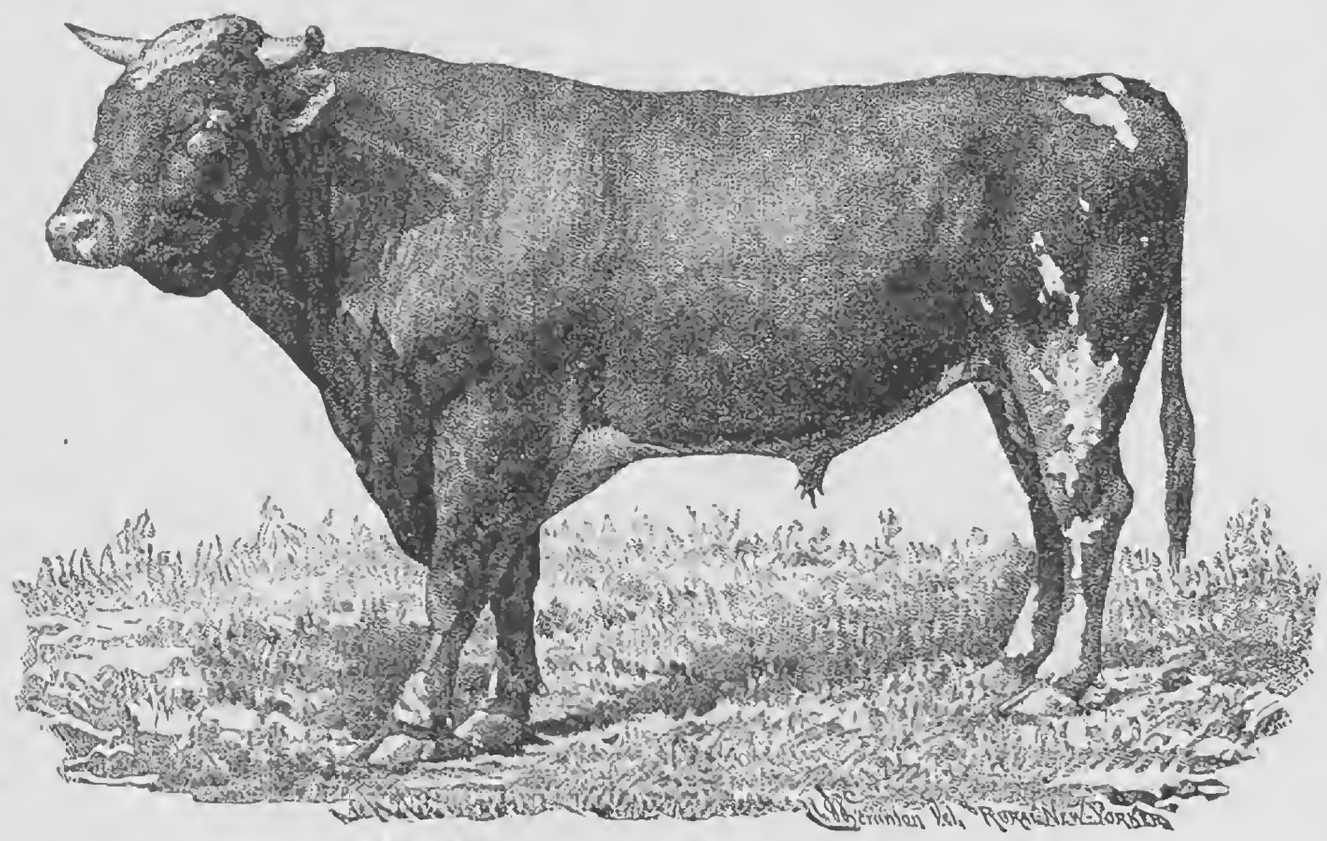
Success in breeding depends, first, upon shrewdness in selecting the best stock to breed from, and, second, upon good judgment in feeding, and I may add right here that this "second" is a very important matter. A man with unlimited wealth may purchase a fine thoroughbred colt or a Short-horn or Jersey calf and pay therefor a fancy price, and after twelvemonths' feeding turn out the veriest scrub ever bred on a dunghill. Such a man, were he a millionaire, could never become a successful breeder. Thousands of dollars are invested year after year in fancy stock, and judiciously invested, for which no adequate return is ever received, and the losers never learn that the fault lies wholly in their feeding or rather their lack of feeding. I have myself sold thoroughbred calves to farmers at good prices and been deeply chagrined to have those calves fed on whey, thus not only ruining the stock, but injuring me much more than it did the purchasers, for they lost only what they paid me, but I lost other customers who would probably have treated my stock in the same way—although I have grave doubts whether that was more loss than gain. Farmers too often think that they can pay $50 for a calf and let it feed at the same manger with calves worth only $5 per head, and thus rear a cow worth $200 or $300; but it can't be done. An uninterrupted list of failures on the part of every farmer who has attempted it proves the truth of my assertion.

I have stated that for breeding, the best stock must be selected in order to insure success. In order to obtain really good stock high prices must be paid; but the converse of this proposition is not always true—a really good animal is not always the result of having paid a high price therefor. It follows, therefore, that in selecting breeding stock a man must have some stock education; he must know something about that particular animal; he must be able from his own personal judgment to examine the animal he wishes to purchase critically, to discover the weak points of the individual as well as the more perfect characteristics. The value of pedigrees must not be ignored, if pedigree stock is what is to be bred. The value of a pedigree animal depends very materially upon certain desirable or undesirable crosses. A breeder should be thoroughly posted upon all the literature connected with the stock he breeds or intends to breed. There are certain animals or families that make desirable and valuable crosses. A man should have a certain well defined object in selecting breeding animals. The object he wishes to accomplish by breeding stock should be clearly defined in his own mind, and he should select his stock with reference to that particular object. If a male is to be selected, he should be closely studied and also the stock upon which he is to be used, and he should be selected with special reference to the object to be accomplished by using that male upon that particular class of female stock.

No farmer should be so insane as to use a grade or native male upon any stock with the object of improving it, no matter how inferior such stock may be or how perfect the male may be. The result of such a course will nearly always be that the progeny are of the same kind as their parents, or have advanced backwards. I have been frequently annoyed, when talking to my brother farmers, to have them point out for my inspection and commendation some miserably inferior scrub bull calf or buck lamb which was being reared for use upon the rest of the herd or flock. No possible success can attend such a course. Another prolific cause of failures with beginners is this—they start all right and attend to their stock intelligently for a few years, and then they become careless, line fences become defective and some neighbor's scrub bull gets in with the herd of Jerseys or Ayrshires and is suffered to remain for a few days, and incalculable damage is done and the breeder becomes discouraged. I can recall to mind numerous instances of just such failure. It may be a flock of thoroughbred sheep that have been brought up to a perfect condition of quality and have been allowed to stray away, or some scrub ram of the scrubbiest character has been allowed access to them, and the labor of years has come to nothing. All these small things must be guarded against most jealously. Now, if you are breeding fine stock, you are at least breeding stock that is worth feeding and deserving of a comfortable shelter in inclement weather, and do not by any means keep stock that is not worth food and shelter. You can not afford to pay high prices for stock and starve them six months of the year and freeze them the other six.

Does the breeding of thoroughbred stock pay? I answer yes; when conducted judiciously it pays well. There is no other branch of business that will return such large profits. Good males of the different breeds of sheep are always in demand for crossing upon common stock. And raising pure-bred sheep for this purpose is especially profitable. There is a growing demand for Ayrshire and Jersey stock for dairy purposes, and those who think they cannot afford to invest a large amount of capital in this branch of business, yet feel disposed to raise grade stock for their own use. This desire to improve farm stock will increase faster than the supply, and those who breed this class of stock for sale will find it easier to sell them, and prices will be much better than formerly. It seems to me that shrewd farmers will take advantage of this means of securing success and wealth in their calling.

St. Lawrence, Co., N. Y.



BARON HILLHURST 22,028—From Life.—Fig. 446.

A Very Old Cow and a Great Breeder.

A writer in the English Agricultural Gazette asks, "Can any Short-horn breeder give evidence of a cow breeding until 33 years old, and having produced 31 calves, having had twins on two separate occasions? Her whole family were proportionally long-lived, the bulls being serviceable until 15 and 16 years old."

The writer was talking of Hereford cattle, but whether he meant to say that the above cow was of this breed, we are at a loss to determine. She is the most extraordinary cow we ever heard of. We have known Short-horn cows to breed well till past 20 years old, producing 15 to 17 calves each, the bulls being still good getters after 13 years old; but such are rare nowadays, owing entirely, we think, to their being so highly fed and forced at an early age. If they were allowed to grow up more slowly and naturally, they would last years longer.

A common, or what is called a *scrub* cow, belonging to Judge Payne, of Milan, Missouri, according to the St. Louis Journal of Agriculture, 14 years old, at nine calvings has dropped 23 calves. If she keeps on at this rate a few years longer she will more than rival the English cow above, at least in the number of her calves, if not in years. One steer and three heifers dropped by this cow on the 26th of June 1876, weighed on the same day in June 1880, 1,700, 1,704, 1,574 and 1,536 pounds, altogether 6,514 pounds. In June 1878, the cow dropped three heifer calves, which themselves calved before two years old, namely, in March, April and May 1880, and all have proved good milkers.

In August of the present year, this same cow dropped four calves—one bull and three heifers. If any one can inform us of a cow that has equaled this at 14 years old, we shall be glad to hear from him.

Close Breeding—Questioning "Stockman."

In the Rural for Nov. 20th, page 768, in Notes by a "Stockman," I notice the following: "The great bugbear of farmers in this business is close breeding. A farmer who was discussing this question with me recently, seemed to think what he called incestuous breeding of animals was a crime, an unnatural and reprehensible proceeding. He had never heard or known how our best stock has been bred, and how closely the most successful breeders have kept to one blood Mr. Bates never hesitated to use the same bull on mother, daughter, and grand-daughter, when the animal suited him. This was his great principle in breeding, and he once remarked that it was by keeping to this rule that his success had been entirely won."

I suppose "Stockman" had reference to Thomas Bates, who bought his first Duchess of Mr. C. Collings, in 1804, and a two-year-old heifer called Duchess 1st, of the same gentleman in 1810, and probably this family was bred in the manner "Stockman" advises; that is by close, or in-and-in breeding to as great an extent as Mr. Bates ever bred from. Now, what I wish to ask "Stockman" is this: if Mr. Bates was so successful in his breeding, how many, and where are the descendants of Duchess of 1804, and of Duchess 1st of 1810, at this date? Will "Stockman" answer; then farmers of the present time can judge whether or not there is as much success in close breeding as "Stockman" seems to think, and whether Mr. Bates did prove that close breeding was productive of fine, healthy animals, that were prolific breeders, or whether they have become nearly worthless for breeding purposes, in consequence of such close breeding.

JONATHAN TALCOTT.

NOTES BY A STOCKMAN.

Some time ago I referred to the Hamiltons of Kentucky, as the larges breeders of Short-horns in America, if not in the world. At a sale recently held in Kansas City these gentlemen sold 140 Short-horn calves at an average of $115 per head, a pretty large draft from one herd, and a pretty good price for calves. And yet, doubtless every purchaser will find his profit in his purchase.

Old things become new. The old story current years ago about a heifer, which, having

lost its leg by accident, was provided with a wooden one on which it moves about with ease, is again reappearing. That heifer ought to be an old cow now. But the moral will always be good for use, which is, do not destroy any animal that may break a limb, nor too hastily remove a broken limb, even to fit on a wooden one, for by means of plaster-of-Paris and some bagging strips, the limb may be set and supported until the fractured bone unites again. The strips are dipped in the moistened plaster, made into a thin paste; wrapped around the prepared limb above and below the fracture, until a stiff bandage is made, which, as it sets very rapidly, holds the limb so that it cannot be moved.

Which reminds me that, having a careless man, who would never let the bars down when driving sheep and cattle out of a field, I had at one time a calf and several sheep with broken legs. Every one was repaired in this manner, the strips of bagging being wound about the limb, plastered over with calcined plaster mixed to a thin paste, and other strips wound over that and more plaster applied; the leg was fastened to splints of wood until the plaster set. The animal would limp about for a few days on three legs, but all recovered without a blemish. Let us make a note here, that when bars are used, they should all be let down and moved on one side before animals, especially sheep, are driven out of a field.

Dairy Husbandry.

THE DAIRY COW—NO. 19.

HENRY STEWART.

Trouble in Churning.

THE principal complaints of the behavior of the cream in the churn are, difficulty of procuring the butter; foaming of the cream, and white specks in the butter; soft, white butter; and waste of cream in the buttermilk. These troubles may all arise from improper feeding of the cow; from too long keeping of the cream; from keeping the cream at too low a temperature; from churning at too low a temperature; and from the condition of the cow. I will consider them one by one, as these are very frequent causes of complaint, especially by inexperienced dairymen and in family dairies.

When the Butter will not Come

the dairywoman may work for hours and all her labor may be spent in vain, unless she is told to raise the temperature of the cream by throwing into the churn a quantity of hot water. On one occasion I was churning a lot of cream which was full of small butter, but the butter would not gather; the cream was smooth and somewhat stiff. To test the case I continued to churn for seven hours, and still the cream was unchanged. The temperature was 62°. A few quarts of hot water, sufficient to raise the temperature to 65°, were turned in, and in two minutes the butter gathered, but it was white and of bad flavor. Over-churning had added six months to its age, for the excessive exposure to the air in the long churning had been equivalent to several months' keeping in the pail and had utterly spoiled the quality. But the low temperature was not the real cause of the trouble, for the next churning, noted exactly because it was made in a new churn, was at a temperature of 62°, and the butter came in 11 minutes. The next churning was at 65° and butter came in eight minutes. So that it could not have been the temperature at which the cream was churned; but—as it was on January 3rd, and the weather had been very cold, the cream cellar having been down to 40° for several days—it was the low temperature at which the cream had been kept that caused the difficulty. Cream that is kept at a temperature of at least 55° to 60°, and not more than six days, may always be churned in 30 minutes at a temperature of 62° to 65°, if the churn is a good one, and in the best churns butter will come in from 10 to 20 minutes.

Foaming of Cream in the Churn,

may be due to too low a temperature or too long keeping; slow, delayed churning is often accompanied by foaming. As soon as the churning begins, air is rapidly intermingled with the cream and innumerable vesicles are formed, each containing air. This expands the cream (as in whipped cream for cooking), and is really foaming; but under proper circumstances this foaming subsides as rapidly, and the noiseless motion of the churn quickly changes to a "slap-dash" sound, which precedes the more sharply liquid sound of the coming butter. If the cream is too cold for the particles of butter to unite, the emulsion (foaming) continues until the remedy—an increase of temperature by addition of hot water—is applied. But this emulsion may be formed in another way, and is often thus formed in the Summer, by too long standing of the cream on the milk, or too long keeping of the cream before it is churned. The cause of it is the formation of alcohol in the milk by the decomposition of the milk sugar, and the combination of the alcohol with the fat and the formation of an emulsion. When this happens no amount of churning will bring the butter. It may be expected when, on skimming the cream from the milk, a layer of whey-like or watery liquid is seen to have been formed between the milk and the cream, and the milk is thick and loppered under it. To prevent the trouble, half a teaspoonful of baking soda or saleratus may be stirred in the cream pot when the cream has been poured into it; and this should always be done, when this has occurred, at least one day before the cream is churned.

White Specks in the Butter

are the result of a too rapid souring of the milk or of keeping the cream in too warm a place and not stirring it every day when fresh cream is added to it. When fresh cream, with milk mixed with it, comes in contact with the sour cream, this milk is immediately curdled and the small flakes of curd become inclosed in masses of cream. When the cream is churned these hardened flakes of curd become mixed with the granules of butter and cannot be separated from them by washing. Coloring will not disguise this fault, for the curd will not take the color as the cream will; the coloring is prepared either with potash or oil and either of these easily unite with the butter, while they will not mix with curd. The only cure for this defect is prevention, by care in managing the cream.

Soft, White Butter

is caused by uneven temperature in the dairy and by the freezing of the cream or the milk, as well as by the food given to the cows. Some kinds of food will spoil the best cows as regards the quality of the butter, for the time being, and these should be discarded from the dairy. Potatoes, fed raw, have this effect, with the addition of a disagreeable flavor; and buckwheat bran or meal has a very distinct effect in this way. A week's feeding of buckwheat bran will produce butter of the texture and color of lard. But just here it is a question of management of the cream rather than of feeding that is to be considered. It is of importance that everything about a dairy should be regular and unchangeable. And in the care of the dairy, temperature is one of the essential conditions. If this is neglected and the cream is permitted to freeze, the butter will be white and soft. The color may be made right by the addition of coloring, but the soft texture will remain and the butter will lose its proper waxiness and become greasy, and this is beyond remedy. The cause must be prevented by providing some means of warming the dairy to keep the temperature even.

Waste of Cream

in the buttermilk is the effect of too long keeping, and not stirring the cream to secure evenness of condition. When the cream is turned out into the churn, if the bottom is watery and has a peculiar sweet and whey-like smell, that part of the cream will foam and form an emulsion, and will not mingle with the butter. When the butter is removed from the churn, this remains in the buttermilk, and after standing some time will appear as an oily substance on the buttermilk. Some persons have supposed that the mixing of different cows' milks, or the creams from the milks, produces such a waste as this, because when one portion of the cream is churned another is not. I have carefully investigated this point for some years, but have never found any evidence tending to support it until the recent publication of some experience by a person who stated that he had churned the cream of several cows separately, and then mixed, and the result was a very marked loss in the mixed cream. The loss was so enormous that some error might be suspected, and at any rate I have never found anything to support this statement. On the contrary, I have found many times that the cream of a cow, which by itself required 30 minutes to churn, was made into butter in 13 minutes when churned with that of another cow whose cream always churned rapidly. A great many trials of cows by churning their cream separately and then with that of others, never yet showed any loss. This result is reasonable; for when we consider how butter is gathered in the churn and one particle collects with itself other particles until fragments of butter are formed, and these gather into lumps by their natural cohesiveness, it is impossible to believe that the butter of one cow can remain in the churn by itself without mixing with the rest, or that if it did, it would not leave such very apparent traces of itself in the buttermilk that it could not be lost. If any cream is lost it cannot be lost in this way without palpable evidence; but it is lost frequently by mismanaging the cream in the way previously indicated. The cream is then found floating on the buttermilk, but it is not in such a condition that it can be made into butter.

The Horseman.

"PERCHERON HORSES TRIED AND FOUND WANTING."

THUS writes one of your correspondents in the RURAL of Dec., 4. But were these horses he thus speaks of *real* Percherons or only such as are *falsely called so*. Within the past 10 years, many horses have been imported from France, and called Percherons and Normans which were neither one nor the other. They were Boulonnais, a much coarser, slower and heavier French horse than the *true* Percheron. Others also have been imported, and perhaps been registered in the Percheron-Norman Stud Book, published in Chicago, which were colts picked up after weaning in Belgium and Flanders, brought to La Perche and Normandy, kept there till nearly or fully grown and then sold as true Percherons and Normans.

A true Percheron is superior to even a Norman. He ranges generally from 15 to 16 hands high, and weighs from 1,300 to 1,600 pounds. He is very compactly formed, with a fine Arabian-like head; arched neck; broad, strong, flat, sinewy legs; and the toughest and best of hoofs, well set up at the heels. His hair is soft and fine, and seldom long or shaggy on the legs. His action is free and easy, with a natural walk of about four miles per hour, and a trot of fully six miles, which can be easily pushed up when required to considerably greater speed. He is very docile, hardy, and of indomitable pluck.

If one wishes to have a good idea of a true Percheron, let him look at a fine well-bred Canadian pony, and imagine him grown to the size of a Percheron. French gentlemen frequently use these horses to their carriages, and handsome, noble, serviceable teams they make. I have often seen them thus harnessed in France, and occasionally used also as saddle horses, although not nearly so suitable for the latter as for the former purpose.

The Clydesdales are good farm horses, but not nearly so fine and active as true Percherons. As for Russian horses, I have seen thousands of these; some are quite good, but no better than our own Americans.

WESTERN.

Farm Economy.

COOKING, CUTTING AND GRINDING FODDER—COB MEAL.

E. G., Way, Kansas, says: "As coarse food for stock, what the Western farmer calls 'roughness,' is rapidly advancing in price, we need the experience of our best feeders, East and West, on the question whether the returns will warrant farmers in preparing food for horses, cattle, and hogs, by cutting, grinding, or cooking? An exhaustive discussion of this question, with reference to all kinds of feed and stock, giving figures, would be of great value, especially to your Western readers. It is stated, on what seems to be a scientific authority, that corn cobs have a nutritive quality, fully equal to the best straw. On the other hand, some farmers state that they are injurious when ground and fed to stock. Can we not get at the facts on both sides of this question also?"

ANSWER BY PROFESSOR G. C. CALDWELL.

Cooking Fodder.

The kitchen with its cooking arrangements, however rude they may sometimes be, constitutes the most essential part of the home that man constructs for himself; any other part of his habitation can be dispensed with, but not the kitchen. There the food provided for him by nature, in being softened and disintegrated by the cooking that it undergoes, is so modified as to be more easily masticated and prepared for the attack of the digestive fluids; in being made more palatable, it excites a larger secretion of some of those fluids, and in that way also the digestive work may be favored. The cooking produces no chemical changes of any consequence. Nothing more than this can be expected in cooking food for animals; and if the animal is provided with organs for suitably masticating its natural food and is not prevented in any way from doing the work of mastication in a proper manner, and does not require that its appetite shall be stimulated by tempting viands, it may be inferred that cooking fodder is a superfluous operation.

The most recent careful digestion experiments with cooked fodder, by Hornberger and others, show that, in accordance with these deductions, the fodder is not made more digestible by this treatment. In these tests the cooking was thorough, as the fodder was steamed for an hour, under a little more than the atmospheric pressure, and was allowed to cool in the cylinder; when taken out in the morning, if any water remained unabsorbed it was poured over the hay when fed, so that no soluble food should be lost in this extract. The steamed hay was at first readily eaten by the two oxen to which it was fed, but not so readily after a time. Besides the ration of steamed hay alone, the same oxen were fed for another period on the same kind of hay as dry fodder, and for still another period on a ration of the hay simply thoroughly wetted with warm water; samples of the fodder were analyzed, and the excrements were carefully collected, weighed and analyzed by samples. There was no notable difference in the digestion of the constituents of the fodder in the three cases, except as to the important protein or albuminoids, of which both oxen digested less in the steamed fodder than in either the dry or the wetted fodder, as shown in the following table, where the protein digested is given in per cent. of the protein in the ration:

	Dry fod'r.	Steamed fodder.	Wetted fodder.
First ox	44.27	29.77	35.07
Second ox	43.92	30 50	43.54

The experiment is seen to be highly satisfactory in respect to the close agreement in the digestive effect of the two oxen in the first two periods, both falling off to about the same extent on the steamed fodder, and in the agreement in respect to the digestive action of one of the oxen on dry and on wetted fodder. The other ox did not appear to be in good condition during the third period, as he did not eat well; but, nevertheless, he did not fail to digest the protein of the wetted fodder better than in the steamed fodder. Of course an experiment with but two oxen, however closely the results may correspond, does not settle the question, even though there is good reason for believing that the only effect of cooking on the protein, if there is any change at all, would be to make it less soluble, and less easily assimilable.

In an earlier investigation by Hellriegel, in 1864, it appeared from the average results with two sheep fed on rye straw thoroughly wetted with boiling water, and therefore only slightly cooked, that the digestibility of the protein was increased by about four per cent.; but as the alteration in the fodder by such treatment must have been very insignificant, and one of the animals digested the protein no better than in dry straw of the same quality, while the other digested it apparently very much more completely, the results possess no great importance in reference to the question under discussion. Emil Wolff, than whom no one can be more implicitly trusted, affirms in his writings on stock feeding, that cooking does not increase the digestibility of the fodder, and this conclusion, stated before the appearance of these last investigations, is amply confirmed by their results.

If we refer to the results of practical trials, where it has been attempted to compare the productive capacity of cooked and uncooked fodder for milk, beef, wool or pork, we find conflicting testimony, from which we can safely draw this conclusion only, that no advantage is gained in cooking any fodder that is good in quality, and in its natural condition is readily eaten. If, as appears above, cooking does not serve to expose the constituents of the fodder more fully to the attack of the digestive fluid agents, this is a reasonable conclusion, and science and practice agree. Some experiments, to all appearances carefully performed, seem to give proof of considerably greater productive power for fodder of good quality, when steamed or cooked, than when fed raw; but for every such result its opposite can be produced from the records in the agricultural journals, as any one can learn for himself who will take the trouble to examine the files of these; it would take too much space here to give the evidence in detail.

An ordinary farm supplies a great variety of foddering material, some of which is readily eaten by cattle, while other kinds will be refused if there is hope of getting something more agreeable to their taste or instincts. This poor fodder contains a large quantity of the same digestible nutrients that are to be found in good fodder, and which are fully as productive of milk or beef when once digested. The better and more concentrated the kind of fodder, the larger the proportion of each of its nutrients digested. In linseed cake 80 per cent. of the protein, 90 per cent of the fat and 80 per cent of the non-nitrogenous extract are digested. For good hay the corresponding figures are 78, 64 and 78 per cent.; for wheat straw, 26, 27 and 40 per cent. In the coarser fodder it might be supposed that the nutrient matters are so enveloped in, or mixed with, the excess of woody fiber as to be in a measure protected from the attack of the digestive fluids, and that the disintegration resulting from thorough steaming would naturally remove this obstacle to some extent. The above negative results, however, with good hay, where at least quite as large a proportion of nutritive matter remained undigestible, indicate that the expected result will not follow.

But as no digestion experiments with such coarse fodder, except those of Hellriegel above quoted, have been tried, we can get but little help from this quarter in the solution of the question. If poor and good fodder are

cut up and cooked together, so as to soften the harder parts of the former. A great deal of straw, coarse hay and other unpalatable material is eaten up clean and brought within the range of action of the digestive organs, which would otherwise be rejected and thrown into the manure pile, to the value of which they would add practically nothing. Herein lies, at least mainly, the explanation of the statement so commonly made, by those who claim to have proved it by their own experience, that steamed fodder is more digestible, and that a saving of from one-tenth to one-third or even more is effected by cooking. What is really done is to cause one-tenth to one-third more of the produce of the farm, good and poor together, to be eaten. Something may therefore be gained by cooking, either in this way or by selling good hay and buying straw.

In estimating the real saving effected, the cost of cooking must be taken into account, as well as the fact that it is only the poorer and least valuable part of the fodder that is thus utilized and saved from waste; all the good hay, the roots, the meal or oil-cake would produce just as much uncooked; when cooked up with the poor fodder they perform the additional service of securing the conveyance of that fodder into the digestive organs; some nutriment might even be gained from saw-dust or shavings in this way. As to the cost of cooking the fodder, the most ardent champions of the operation allow that it does not pay for a small number of animals; for as much outlay is necessary for ten cows as for thirty. In favor of the cooking it can be urged, further, with good reason, that the coarse product of the farm has much greater value for manure if passed through the animal body than if simply used for litter or scattered about the fields.

Cutting and Grinding Fodder.

While some go so far as to claim that it pays to grind straw to a fine powder; others affirm that for beef cattle it does not pay even to cut any fodder. Cattle are fully provided by nature with means for masticating their ordinary food, and we need not be surprised to find that both ordinary experience and careful experiments agree in showing that little if anything is gained by cutting. In fact it appears from some experiments that positive damage is done, as the fodder is not so thoroughly chewed and impregnated with saliva, a portion even passing at once into the second stomach. Cutting alone can do but little good, even with old and hard-stalked fodder, without the softening produced by cooking, for it cannot open the fodder to digestive action, nor save much labor of mastication. By far the greater part of this labor is expended on chewing the cud, and it is best that the animal should perform this entirely natural operation for itself.

Corn-Cobs.

The composition of average hay, straw and corn-cobs is given in the following table:—

	Hay.	Oat straw.	Wheat straw.	Cobs.
Water	15.	14.3	14.3	8.2
Protein	10.	4.	3.1	2.7
Fat	3.1	2.	1.2	0.4
Non-nitrog. ext.	49.4	35.6	37.5	57.2
Fiber	30.	39.7	40.	30.3
Ash	8.2	4.4	3.9	1.2

The cobs contain less of the valuable protein than is contained in straw, and less fat, but more of the non-nitrogenous extract. No digestion experiments have been tried with cobs, but with their delicate texture it is quite likely that, ground to meal, they would be as digestible as good straw. Such few careful experiments as have been made in feeding cob-meal, or cob and kernel ground together, show that the cob is digestible, a given result being obtained with less kernel when given with the cob than when given by itself; but all who have received good returns from cob-meal feeding insist that the whole shall be ground fine. It must be remembered further that for good results in feeding a due proportion of nitrogenous and non-nitrogenous constituents must be maintained. The cob contains a large quantity of the latter, as does also the kernel itself, and liberal feeding with cob-meal would require some addition of rich nitrogenous food to restore the balance between the two classes of nutrients, and keep the animal in good health.

Device for Raising or Hauling up Hogs.

A, A, A, represent three sticks like handspikes, all five or six feet long, according to the length of the hogs. B, B, are the spikes on which the gambrel sticks rest. C, is a long bolt that goes through the ends of all the sticks. The following is the mode of using the device: Place the hog on his back and the two sticks with spikes between his hind legs and outside the fore legs; the third to go behind, as shown. One man then holds the bottom of the two sticks steady, while another,

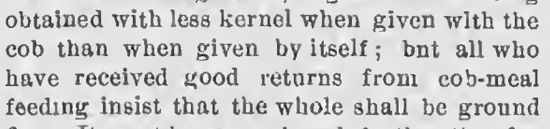


FIG. 447.

taking hold of them near the bolt, lifts them, the center piece rising with them and holding them at any hight one may wish, somewhat like a tripod or derrick. By this means two men can raise a 400-pound hog with ease.

J. D. PAYNE.

Horticultural.

THE CAROLINE RASPBERRY.

PETER B. MEAD.

It has been announced, and very generally accepted as a fact, that the Caroline Raspberry is a hybrid between Brinckle's Orange and Catawissa. I may remark that my plants are from headquarters. The first year's growth convinced me that the Caroline was a hybrid, but I very soon began to doubt its reputed parentage. I thought I could see, instead of the Catawissa, the growth of an old and familiar friend that I had known for 20 years. At the suggestion of Mr. Downing, I followed up the clue by calling on the originator of the Caroline, Mr. S. P. Carpenter, of New Rochelle, Westchester County, N. Y.

I propose to give the result of the interview very briefly. I asked Mr. C. what reason he had for saying the Caroline was a cross between the Brinckle and the Catawissa. His reply was, "I have no reason for supposing so, and have never said so, though others have. It is a seedling of Brinckle's Orange." That, so far, was entirely satisfactory. In the meantime we had arrived at the spot where the Brinckle plants had stood some eight years before. Now was my time. "Mr. Carpenter, do you know the old Yellow Cap?" "Oh, yes." "Did you ever grow it?" "Yes; I had a clump of it right there,"—probably some eight feet from where the Brinckle had stood. "Then the Caroline is a natural cross between the Brinckle and the Yellow Cap. Everything points that way." This seemed to be satisfactory to Mr. C., as it was to me. He then explained to me that he saw a very large and handsome berry on the Brinckle, and from that berry came the Caroline. Much more was said, but I only give the substance.

We next went to a plot of two acres or more of the Caroline. It has been said that the Caroline is not a strong grower. Mr. Carpenter is a very tall man, but the plants towered away over his head and hid him out of sight, while I was nowhere. The whole plantation is self-supporting, there being no stakes in it. A great many of the stalks measure an inch or more in diameter. My own grow equally strong. I can show a good many stalks an inch in diameter on plants only two years old the past Fall. So much for the feeble growth of the Caroline.

At my request Mr. C. showed me his sales book. I found that he had received an average of nearly 20 cents a quart, his lowest price being 18 and the highest 22. The entire crop was engaged by one dealer (as it had been before), who retailed them for from 25 to 30 cents a quart. I was eating all the time I was talking, and suppose I must be somewhat in that man's debt at these prices. One word as to the hardiness of the Caroline. It was raised about seven years ago, has never been protected, and has received no injury whatever from frost.

The accompanying illustration gives a fair idea of the average size of the berry of the Caroline, but not of its remarkable productiveness. The berry is nearly round, and when ripe of a rich salmon color, and very attractive when placed on the table. The flesh is tender and sweet, with a peculiarly rich raspberry flavor. The more you eat of it the more you like it. Some have said that it is as good as the Brinckle. I do not think so. The Brinckle, for quality, still stands unequaled. The Caroline, however, when ripe, does remind one of the Brinckle, and that is no little praise. It is an improvement in the right direction, and not its least merit is its well-tested hardiness.

It is said to be too tender for market, but chiefly by those who have not tried it. I am inclined not to agree with them. Carefully packed, I think it will carry well from 50 to 75 miles; at least I have carried it that distance and used it pretty roughly. Still I only express an opinion. It has been demonstrated clearly enough that it will carry to a near market. Be this as it may, it is a splendid plant for the garden.

The Caroline is a rampant grower. The cane for a foot or so above ground is very thickly set with short prickles, like the Brinckle; they then gradually become very few, and the whole top growth becomes exceedingly like the Yellow Cap, as will be readily recognized by anybody familiar with the latter. The ripe wood is a dull brown, covered with bloom while young.

It may not be out of place to remark that Westchester County has made a good record thus far in the berry business. First there was the New Rochelle Blackberry, a wildling; then the New Rochelle Raspberry, raised by Mr. Carpenter, and almost at the same time the Caroline, also by Mr. C.; and just a few miles away Mr. Cuthbert gave us the fine berry which bears his name.

The Caroline Raspberry.

This variety, like the New Rochelle, originated with Mr. S. P. Carpenter, and is comparatively a new variety. The plant is a strong, vigorous grower, and, thus far, appears to be perfectly hardy and very productive. The berry is of good size, and, when ripe, of a beautiful salmon color, not so firm as the New Rochelle, but decidedly better in quality. It has been claimed to resemble the Brinckle's Orange so closely in this respect as to render it difficult to detect the difference between them. This may be so to a novice, but not to those well posted. It propagates from the tips and by suckers from the roots—pretty strong evidence that it is a hybrid and quite probably there is Brinckle "blood" in it.

An amateur friend who has investigated the subject pretty well, gives it as his opinion "that it will carry well a distance of 50 to 75 miles, and as the fruit retailed the past season at 25 and 30 cents per quart, he thinks 'there is money in it.'" But what matters it whether there is or is not money in it, or whether it will carry well? Are these the chief requisites by which to judge of its value? Do we do not do injustice to fruits and injure the cause of horticulture by laying too great a stress on these tests?

In tens of thousands of private gardens there is great need of just such a hardy, productive and good quality raspberry of this color as the Caroline *promises* to be, and there the profit in it will not be computed in dollars and cents, but in the satisfaction of having an abundance of the delicious, healthful fruit, without the cost and labor of covering the canes in Winter, as is needed with the finer kinds heretofore grown. I sincerely hope the promises of the Caroline will be fulfilled. E. WILLIAMS.

Montclair, N. J.

THE CAROLINE RASPBERRY.—FROM LIFE.—FIG. 448.

The Wilson has a Friend in Need.

No horticultural advice has been more delusive or disastrous in its results than the recommendation of varieties in strawberry culture. The fascinating pictures and glowing descriptions of new varieties in the catalogues, and the wonderful figures of actual yield per acre published in the horticultural papers, have deluded us year after year with the hope that we had found the berry to "beat the Wilson." So we have tried Jucunda, Boyden's 30, Monarch of the West, Great American, Forest Rose and Sharpless, only to meet with total failure, while Prouty, Charles Downing and Crescent have proved, on an average, about half as valuable as the Wilson.

Notwithstanding our losses and disappointments, we are listening to the same advice, and looking at the same pictures with new names attached, and will next year try Marvin, Glendale, Mount Vernon, and a score of just as worthless new sorts.

One hundred plants of the Crescent yielded the next season after planting, 33 quarts, while 100 plants of the Great American, treated in the same manner, gave only 10 berries, and 200 plants of the Sharpless, only three quarts. The soil was a rich, black prairie, somewhat sandy, with a clay subsoil. The ground for all was kept perfectly clean. G. W.

Rock Falls, Ill.

Preparing Asparagus Beds or Fields.

It is our humble belief that thousands of loads of manure have been thrown away upon garden asparagus beds. Our teachers, or many of them, have instructed us to trench two feet deep and fill in with manure and soil. Thus treated, they say, "an asparagus bed will last a lifetime." No doubt. We know of fields of asparagus 20 acres in extent, that have never received *any* manure, according to the statements of the owners, and they have yielded plentifully for 25 years. The soil is simply a sandy loam, such as exists in a long belt along the south side of the Long Island Railroad.

We do not wish to make any extreme statements. We have talked with the asparagus growers of this Long Island asparagus belt—as it may be called—and many of them are of opinion that asparagus grows as well and as large without as *with* manure. This is inexplicable; but we are fully of the opinion that an occasional top-dressing of manure is all that is needed in field culture, and the same treatment should apply for a family bed. As for burying an immense amount of manure a foot or more beneath the surface so that a bed may "last for a lifetime," probably a great part of the manure is not available to the roots at all. For the rest, its effects could scarcely extend beyond 10 years, if so long.

RURALISMS.

Thanks, Mr. Editor, for the alcoholic suggestion. It proved to be a good one, and the lady alluded to returns her thanks. The mealy bugs were treated to it, and it made them *dead* drunk. It had the same effect on the scale and some other pests on which I tried it, and it might be made use of as a general insecticide if it were not too costly. It will bear some dilution.

The above reminds me to make a suggestion. Why not try this remedy on the phylloxera in Europe? In France there is a great deal of very bad, adulterated wine; so bad, indeed, as to have called for a certain kind of action on the part of the government. This wine, or a large part of it, is unquestionably not fit for human beings to drink, being essentially poisonous. Recourse has been had to flooding to destroy the phylloxera. Why not, then, take all this bad wine, and flood the vineyards with it? It contains alcohol and active poisons enough to kill ten times the number of phylloxera to be found in all Europe. In this way we shall get rid of two great evils at once.

I wish to say a word or two about Lonicera Halliana, or Hall's Honeysuckle, received from Japan some years ago by the Messrs. Parsons, but not yet, in my opinion, half as much grown as it should be. It has been objected to it, if I mistake not, that it does not hold its foliage as

well as the old Dutch or Evergreen. This may possibly be so in some localities, but it is quite at variance with my experience and observation. It has also been said that it does not bloom quite so early or quite so late. This, too, is inconsistent with my experience. With me, and wherever I have seen the true kind, it blooms early and continuously till late in the Fall. It is also a dense mass of foliage, as a general thing, till mid-winter has been long past and gone, and it is no uncommon thing to see old leaves and new side by side in the Spring. The flowers are abundant and deliciously fragrant. In these respects, I think it will compare favorably with the best of the old kinds. But I have another claim for it, which places it above and before all the others. It is well-known to all who have grown the honeysuckle that the old kinds are fearfully subject to the aphis and mildew. On the piazza where ladies are accustomed to sit on pleasant afternoons, this aphis is a disgusting nuisance. If one brushes against the plant she becomes covered with these pests, and her pleasure for the time is gone. To be brief, I have grown Hall's Honeysuckle for a number of years, and I have found it to be free from these serious drawbacks, and a clean plant to handle at all times; so much so, that I removed all the other kinds from the piazza about four years ago and replaced them with Hall's, and have never regretted it. I now never use any other kind to plant near the house. Some of the others are very pretty, but they must go to the background till they can present more cleanly habits. I, therefore, name Lonicera Halliana, (or, if you prefer it, Lonicera Japonica var. Hallii) as another subject for your list of hardy shrubs, to be used around the piazza and similar places; but I do not wish to be understood as discarding the others.

I am very much pleased with Mr. Stewart's articles on Farming for Boys. Thus far they have been simple, clear and practical and admirably adapted to the understanding and capacity of boys. If he can only maintain this lucid style, and remember all the time that he is talking to boys, he will furnish an invaluable series of articles which many "boys of an older growth" may read with much profit. He has a difficult and tedious, but I hope loving task before him, and I wish him all the success which his articles thus far give promise of.

I am strongly moved to add here a few simple words to the memory of the late Mrs. Charles Downing. Her relation to the horticultural world was of a peculiar nature, and deserves recognition. It may be safely said that no woman ever entertained so many horticulturists as she did. In this and other ways she materially helped the cause, and is entitled to respectful mention and remembrance. She had a nice taste for fruits, and was passionately fond of flowers which she grew largely. Having no children of her own, she went about doing good among the children of the poor, and in the church and out of it she was known for her many acts of benevolence. In this field of labor she will long be gratefully remembered. Above all, her daily walk was a beautiful example of a consistent Christian life and faith, which enabled her to bear years of painful suffering without complaining, and at last to fall asleep, as it were, so peacefully that none knew when she departed [May her worthy husband long be spared to us.—EDS.]

Pomological.

THE TREE-PEDDLERS OF THE NORTHWEST.

THESE remarks are penned wholly from a sense of duty, in the hope that they may help to guard the honest, industrious citizen from being victimized by the glib and wily tongues of the above class. While I speak of facts, I omit names, not caring to be personal, and because I wish to warn the community against a class rather than against individual dealers, and not being a tree dealer myself I have no competitor to abuse.

The class of men I refer to are always strangers and nearly always from some other State. The territory they seek to pillage is that occupied by new and inexperienced settlers, and they always shun the old settler with his years of experience. Men living north of us have sent their agents down through the northern part of Iowa, each year taking a new strip at a distance from that "worked" the year before. Large lots of plums have been sold by them, under the name of Miner, at the extravagant price of 50 cents and 75 cents a tree. Had they been the genuine Miner, they would have been dear at these figures; but they have seldom or never been true to name. Hundreds of the once famous Soulard Crabs have been sold at the same prices. In my travels through Dakota this Fall I saw a great many trees of the same variety sold to new settlers who had been made to believe that they had in them something choice and remarkably hardy, whereas, in fact, fruit of this kind is no better than the bitterest wild crab I have ever tasted. I also saw a lot of "Quaker Beauty" apple trees sold under various other names, though no one who knows this sort wants it. Ben Davis has often been sold for Pewaukee. Forked, crooked and stunted four or five-year-old trees have been sold for first-class three-year-olds. Whole car-loads of trees have been bought up at the South, after all that could be sold in the home market had been culled out, and these refuse trees have been carried up to the north of us and again brought South and sold as Northern trees, after having been shipped and reshipped, exposed to the sun and winds often for hours and not unfrequently frozen and thawed before reaching their destination. In this neighborhood agents sold the people large bills of such trees by representing that they were themselves connected with a particular church here.

The man who has been swindled himself by these sharpers can warn others with greater force than the man who has escaped their snares. I belong to the former class, having bought a lot of common apple trees on condition that a specified number of choice sorts should be sent with them at the same price. The common varieties came to hand, but only one of the choice sorts, and of this only one-third of the number of specimens promised. Frequently I have been asked by strangers to make out a bill of trees at my own price, in order that they might get my name on their books so as to get a good start among my neighbors. One agent showed me his contract with the firm he was working for, and by it more than half his sales had to be of trees of no value—such kinds as were thought good when started in the seed-bed or nursery row, but which had proved failures when old enough to sell.

These are only a few specimens of the tricks of tree-peddlers in the Northwest. MORAL—Before buying, *know your man.*

Floyd Co., Ia. ANTI-HUMBUG.

The Beurre d' Anjou Pear and Lindley Grape.

I am happy to see by the RURAL that Patrick Barry—than whom no man is better able to judge—pronounces so emphatically on the excellence of the Beurré d'Anjou Pear and the Lindley Grape. I concur fully in his appreciation of both, and, although it may appear egotistical even after forty years of trial, I beg to repeat what I have often said in our pomological conventions, that if I had done nothing else beyond introducing the Anjou I should feel that the man who was so fortunate as to have been the medium of doing this, would be remembered as a benefactor to American pomology. I have never known it to fail to yield a fair crop, having had, even in this poor season, 150 bushels. I have it on my table from October to March, and, take it all in all, I say with Mr. Barry, "it is the best pear in the world." Of the Lindley Grape—and it is time to drop the No. 9, the American Pomological Society having decided to do this long ago—I would also state that from the first introduction of Rogers's grapes I have considered it one of the most reliable varieties. Its quality is but little below that of the Delaware with me, while in size, beauty, vigor and hardiness it is superior. As a proof of its excellence, I selected samples of both, taking small berries of the Lindley, so as to have them in appearance as much alike as possible, and had them tested by connoiseurs. Nine out of eleven persons preferred the Lindley.

Dorchester, Mass. MARSHALL P. WILDER.

Entomological.

THE ARMY WORM.

THIS well-known pest has been often referred to, and few parts of the country have not suffered from its depredations. In order that the

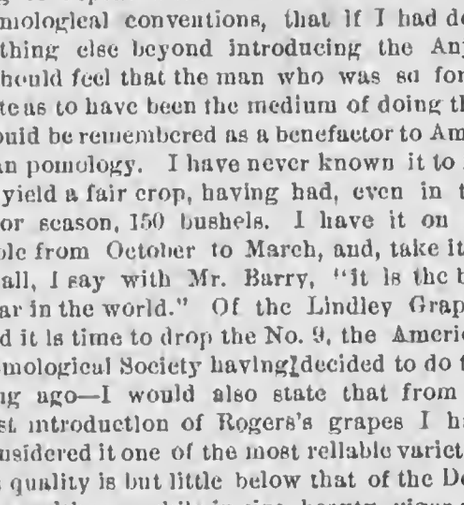


FIG. 449.

farmer may know exactly what it is he has to deal with when it appears upon his crops, we reproduce new illustrations of it from Prof. Comstock's description in the forth-coming Report of the Department of Agriculture, showing the beetle, the worm and the larva. See figures 449, 450, 451. The Army worm—which should not be confounded with the Cotton worm—has the scientific name of Leucania unipuncta, and has been known in the United States since 1743, but its history and ravages attracted little attention until since 1861. The adult insect is a night-flying moth of a dull brown color and nearly two inches in width when its wings are expanded. The eggs and manner in which they are laid, as well as the pupa, which is of a dark-brown color and nearly three fourths of an inch in length, are shown at figure 449. These remarks will help to locate and determine the insect, but it is the larva, or worm, which does the injury.

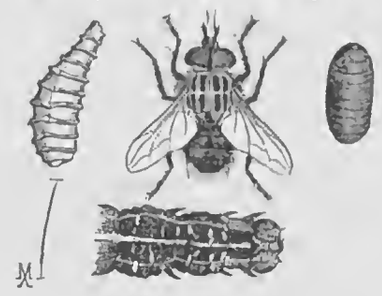


FIG. 450.

The worm is, when full-grown, about one and a half inch in length, as seen at figure 451. During the larva or feeding stage, lasting from 16 to 30 days, it changes or casts its skin five times. Its body is of a pale green color, varied with longitudinal stripes of yellow, gray and black, the gray often so closely dotted with black as to be dusky. The worms are found eating the leaves and buds of different kinds of grasses and cereals, and feeding chiefly at night. They commenced feeding in places on Long Island about the first of June, 1880, and migrated to other places, disappearing in from 20 to 30 days. There was but one crop during the season, but in some parts of the country two and even three are reported.

The natural habitation of the moth is in low marshes or about the wild grass of wet or moist places. In a dry season it is said to breed more abundantly than usual, having an unlimited range for feeding; then, if a wet season follows, the overflowed swamps drive it out from its lurking place in immense numbers, so that it swarms over the adjacent country. When it has become sufficiently mature to get its wings, however, it flies back to the swamps, finding the open country too dry for it, and in this way rejoices the husbandman by its disappearance.

FIG. 451.

The remedy is to keep watch of any piece of lowland and destroy the worms by burning the bushes, etc., so as to destroy the hibernating insects, or by poisoning them with London-purple, Paris-green, etc., when possible. When they appear in fields they may be sprinkled with arsenic or the above poisons, by mixing them with water and using a fountain pump. Another method is to plow a furrow or ditch around any infested field, which prevents their migration. An insect or parasite upon the Army worm, and which destroys a great number, is the Tachina fly—Nemorœa leucaniæ—which is shown at figure 450, and has much the appearance of the ordinary house fly, and is found in great numbers where the Army worm abounds. It is thought the crop of worms will be lighter next year from the known existence of great numbers of these parasites. The fly lays its eggs, often as many as 18, upon a single worm, in such a manner that the latter cannot destroy them. Here the eggs hatch and the larvæ eat into and destroy the worm. The birds are among the best friends of the farmer in destroying these pests.

Official Work of the Entomologists.

The work of the U. S. Entomological Commission has advanced with marked success during the present year. Professors Thomas and Packard have been engaged in a study of the Rocky Mountain Locust, and Professor Riley has conducted the cotton-worm investigation. It is thought that the pyrethrum may prove a valuable and safe antidote to the cotton worm, and steps have already been taken to introduce this plant in the Southern States. The result of the locust investigations made by Professors Thomas and Packard and their able assistants, shows that the Caloptenus spretus (the species of locust under consideration) has done much less damage this year than usual, Utah, Dakota, and Montana being unusually free from its attacks. Investigations will be resumed in the Spring of 1881, when Professor Packard will take up the work again in the Western States and Territories. It is thought that the locust will never again be as destructive as in the past. So may it be.

The Poultry Yard.

RAISING BROILERS IN WINTER.

L. S. HARDIN.

(Incubator experience continued.)

THE incubator has been running quite steadily for the last few weeks, giving but little trouble to keep a regular temperature in the oven; but now that bitter cold weather has set in, I am having some bother. The bottom of the incubator is very thin, with no protection against the weather. In fact, it has numerous holes to let the air pass through. This is on the theory that the nest being naturally upon the ground, a cold bottom is necessary. In extremely cold weather we get a little too much of this, and while the air in the oven marks the correct temperature on a thermometer hung over the eggs, one laid on them indicates too low a temperature. To avoid this trouble, I must change the gauge and heat the air to a higher temperature in the oven, say to 106 degrees. As the room warms up after the adjacent kitchen fire has been going all day, the eggs become too warm, which must be guarded against. The gauge to my machine requires several hours to regulate it after changing, and to save this trouble I have put a ventilator in the top of the oven, which I open gradually as the room warms up, and thus keep the eggs at the right temperature. There is a peculiarity about the temperature of the eggs—the oldest are always the warmest, while those last put in the oven are one or two degrees cooler, according to age. In order to get at the mean temperature when all the eggs are subjected to the same degree of heat, the thermometer should be kept on those nearest ten days old. To provide against the inconvenience of this requirement some incubators have different degrees of heat in different drawers, which is a good provision. In my machine there are also about two degrees, variation of heat between the eggs nearest the center and those at the outer edge of the pan. In order to give all as nearly as possible the same advantage, when they are turned the position of the eggs should be changed, those on the outer circle being put in the center and *vice versa*. The sand should not be allowed to get packed too hard, and to prevent this, at least once in three weeks the eggs should be put into a fresh pan with the sand well moistened and loosened up. In my machine the pans slope toward the center, and to prevent the weight of the eggs from injuring the air bubble at the larger end, I place all the eggs with the points inward until the chicks are expected to appear, when I reverse them to give the chick the advantage of gravitation in getting out of the shell. These are small matters, but it is a multitude of these little things that measures the success or failure in handling eggs and young chicks.

The Breed for Broilers.

Since I get my eggs promiscuously about the country, as the chicks feather out I find every conceivable breed represented, with more or less of purity, the Leghorn and Brahma blood largely predominating. Chicks that become heavily feathered early, grow slowly and are sure to be the first to fall ill, being apparently weakened, as though the production of the heavy coat of feathers had sapped the life-blood in them. Those with partly nude bodies even in the coldest weather seem to suffer less from exposure than the others, and grow much more rapidly. They are full of blood, with bright-red combs and vigorous appetites. From the present outlook, theoretically, for I have had no actual experience as yet, the most perfect cross, considering constitution, which is the vital point of profit, would be that of a Brahma cock with Houdan hens. I call constitution the "vital point," for while quality of flesh, as of the Dorking, tells well in market, this can be acquired by correct feeding; while a little chick is a delicate subject to deal with, and the rate of mortality is by far the most dangerous feature in the business so far as a square profit is concerned. With a wise and judicious selection of breeding stock, together with proper handling and care, trouble from this cause can be greatly remedied, but in my experience the cost of running the incubator and of buying eggs and feed for the chicks, is not of so much importance as the keeping of the chicks alive. In my case the mortality among 80 chicks is about one a day. If the same number of chicks were running with hens, the number lost could only be guessed at, for those lost in the weeds or otherwise would not be missed, and I am sure under such circumstances I would consider myself doing wonderfully well to show as good results as I now do.

Accidents.

To manage 80 chicks, two brooders and an incubator, without previous experience, and the mercury near the freezing point, requires a steady hand and the greatest vigilance to prevent an occasional accident. I have not broken a half dozen eggs since I started, but

have several times come near killing all my chicks both in and out of the shells. A kerosene lamp heats the brooder and there are openings directly from the lamp flue to the inside of the brooder. By some cause the damper above got closed one day, and I entered in time to see a volume of smoke pouring out of the lamp chimney. The chicks could not be seen through the glass door of the brooder, and when it was opened a heavy volume of smoke rolled out, and the little chicks that once were white came out as black as a pirate's flag. A few minutes more and they would all have been dead. At another time the door was left ajar while extra heat was turned on to make more heat for the chicks below. One of my numerous visitors very thoughtfully closed the door, and when I discovered the chicks they were spread out apparently dead from suffocation; but fresh air revived them. While these accidents and many minor ones do not always prove fatal at the time, they must in a measure contribute more or less remotely to subsequent deaths in the flock.

The other night, forgetting how cold it was, I failed to turn the stove wicks up far enough and also neglected to look at the thermometer. Waking up at one o'clock, I wisely concluded to get up and take a look at things, and discovered my omission. The eggs had been kept at least two degrees too cold for several hours. What harm this did will only appear in subsequent weakness of the chicks, for it is undoubtedly a fact that eggs can be so hatched, as to produce either strong or weak chicks. A good egg can be spoilt or a bad one greatly helped, all depending upon the management of the incubator.

On two occasions I have read the thermometer wrongly, when the gauge played on me the trick of not working, and when I again examined the oven, the eggs were heated up to 102 degrees, the excess of heat thus injuring all that it did not actually destroy. It is really wonderful how much abuse an egg will stand and yet hatch a chick. I give the above mishaps merely to show that they should be counted in the cost of raising broilers for market.

Questions for Duck Raisers.

In the RURAL of Nov. 20, page 767, Mr. L. S. Hardin gives some notes about ducks, in which he says, "All the water they need, (that is young ducklings) is best furnished by burying an old pot in the ground and laying a round piece of board on top of the water, with room for the ducks to stick their heads in and fish out the corn that is put in the water." What I wish to know is how large a pot is best to be used for that purpose, and how deep the water should be in the pots; also at how young an age the ducks will fish out corn, *and eat it*, if so provided for them? I have raised some ducks, but never in that way; but if that is the best way I wish to adopt it in the future. I raise them for their eggs, and have found by experience that the Pekin duck will lay more eggs in a year than any other I have ever tried. I do not let them run to the water when young, neither will a young duck eat whole corn, under my management: hence, the above question to Mr. Hardin. There is a small stream running through my grounds, to which the grown ducks have access daily in the open season, and they will eat only once a day with me; that is, when they come to their pen for the night—and then, not enormously. In the morning they never stop to eat, but go at once for the water. It may be that they get from the straw, during the day, food that suits them better than corn. I should like to hear what others say about that; also what Mr. Hardin's experience has been in such cases, as from his article alluded to, it differs from mine in such matters.

J. TALCOTT.

Remedy for Roup in Fowls.

Towards the last of December, 1879, I found one hen sick out of 48 or 49. What was the matter with her? For information I consulted Solon Robinson's "Facts for Farmers and the Family Circle," and found it to be roup. I took her from the nest and held her head over smoking sulphur; soon after, I gave her nearly one teaspoonful of kerosene oil, and, later, the same amount of rum in a tablespoonful of warm water. Next day I found a second one sick and followed the same treatment with her. In two days afterwards the rest of the flock were all sick. I could not dose all in the same manner, so after they went to roost I took an old-fashioned iron baking kettle, put in it some live, red-hot coals, and put it into the hen-house in a box two feet from the floor. Then I threw on the coals three single handfuls of sulphur, closed the door and left them to their fate. Nearly an hour later I went to see how they fared, and found their feathers wet from what they had thrown out of their mouths, but their breathing was quite free from any rattle. I smoked them every night for three weeks and every one lived, and we had all the eggs we needed to use. One of my neighbors, who had about 70 fowls affected in the same way, killed and gave away all he had, though they were not any worse than mine were. After they had got over the first attack, I watched them closely and whenever any signs of its reappearance were noted I smoked them again, keeping it up until May, 1880. L. S. H.

Spring Hill, Cape Cod, Mass.

Arboricultural.

THE JAPAN JUDAS TREE
Cercis Japonica.

THE Red Bud, as the American Judas Tree is called, has, after the manner of many hardy American trees, at least one near relative in Asia, Cercis Sinensis or Japonica. You notice the resemblance, in both foliage and flower, as you pass out on the lawn any early Spring morning. But how much richer and more charming in foliage and flower is the relative from Japan? Our American Red Bud is an attractive tree at all times during the season, and especially in Spring when the rosy tinge of the small red buds is decidedly conspicuous among half-opened, shining heart-shaped leaves.

JAPAN JUDAS TREE AND FRUIT.—FROM LIFE.—FIG. 452.

But give your attention for a space to this Japan Red Bud. Here you have other and more excellent flowers as well as foliage. Can any thing be more beautiful and unique in its way than the masses of purplish pink blossoms that wreathe and enfold the stems during April or May before the full-fledged leaves appear?

This peculiar habit of resting directly on the stem is termed, in botanical phrase, *sessile*. These flowers generally linger until the leaves are fully born, apparently to develop another feature of their beauty when shown against the background of large, deep-green, rich-looking foliage and delicately tinted, light-brown bark. Rich, firm, shining leaves make the Japan Judas Tree interesting and choice in Summer, although of course, Spring is the hey-day of its charms.

I have intimated that the Japan Judas Tree is a shrub, but by that, intend rather to convey that it grows thick and close to the ground with several stems and no main leader, than to suggest the idea of a low-growing or dwarf plant. It is not, indeed, a rapid grower during its earlier years, but in time increases to the size of a medium-sized tree. Its dimensions are, moreover, occasionally curtailed in New England and the Middle States by an unusually severe Winter. It is safe, therefore, to class it on the lawn with medium-sized, slow-growing shrubs.

Sometimes one sees a Japan Judas Tree spreading itself too much for the retention of proper clothing at its base, and become almost ungainly. This habit, however, should not be set down against its good character. It is only owing to lack of training or pruning, and most shrubs will look as badly if left uncared for in this respect. Just after the flowers have faded in May, the pruning knife should cut off at least two-thirds of the flower-bearing wood. It may be objected that such treatment gives the plant, for some time at least, a bare, unsightly appearance. The time, however, of nakedness is really short, a week or so serving to develop a fair growth of leaves; and the gain in bushiness, size and abundance of flowers as well as in prolonged shapeliness, amply compensates for a considerable sacrifice of such kinds.

The Japan Judas Tree would be scarcely termed a rare tree. It is not a new plant, having been grown and sold in different parts of the world for many years, but it is not easy to propagate except from seed and seed is not common. Hence, on this account, and on account of an unfortunate slowness on the part of the general public to appreciate the value of choice plants for want of giving proper attention to such matters, the Japan Judas Tree remains an uncommon lawn plant. Yet few hardy plants are more generally excellent. The small rosette-like flowers secure naturally our first attention, but it should be remembered also, that not only is the foliage large, heart-shaped, shining, and of firm texture, and dark green color all through the Summer, but that in the Fall when so many shrubs lose their beauty, if not their leaves, at an early period, this shrub continues long both fresh and effective.

Indeed, we may safely class the Japan Judas Tree among our most valuable, hardy, ornamental plants, and ask all lovers of trees to give it a trial, though in so doing, they are obliged to make it one of the half dozen plants their yard will contain.

SAMUEL PARSONS, JR.

Miscellaneous.

THE GREAT "KENT" SALE OF CHANNEL ISLAND CATTLE.

SAMUEL C. KENT, of West Grove, Pa., spent a good part of the Summer in the Islands of the Channel, and brought home thirty-nine Guernsey cows and heifers and two bulls, and eight Jersey females. This herd has been subjected to three months Federal quarantine, and most of the cows have calved. All, with the exception of one which had met with some accident, were sold at auction by the Messrs. Harkness, of Philadelphia, on the 9th inst., making the whole number, including calves, 71. There has never been nearly so good a collection of Guernsey cows imported together into this country—and the few Jerseys were equally fine.

Samuel Kent may well be congratulated on the emphatic indorsement of his judgment evinced by the high prices at which the cattle sold. It was a bold venture to buy such cattle and risk them upon the stormy Atlantic, but the result, no doubt, makes it a pecuniary success. Special attention was paid to the "Guenon Milk Mirror" otherwise the selections were made with reference to the characteristic points of each breed, and to those universally recognized as belonging to good milch cows. The following is a list of buyers and of the prices paid.

GUERNSEY COWS AND HEIFERS.

1. Lady Jane 2d, 7 years; R. Stuyvesant, N. Y.	$650
2. L. J.'s daughter, 8 weeks; Francis Shaw, Boston	200
3. Lady Jane 5th, 2 yrs; Michael Schall, York, Pa	440
4. Saffrano, 2 4-12 years; T. S. Watts, Baltimore, Md	310
5. S.'s daughter, 10 weeks; J. E. Philips, Baltimore, Md	110
6. Lilly 2d, 5 years; M. Schall, York, Pa	275
8. Beauty, 2 3-12 yrs; J. E. Phillips; Baltimore	510
9. Beauty's daughter, 6 weeks; Francis Shaw, Boston	200
10. Rose Bud, 3 3-12 yrs; R. Stuyvesant, N. Y.	400
11. R. B.'s daughter, 7 weeks; G. S. Watts, Baltimore	145
12. Topsey, 11 months; Thos. M. Harvey, West Grove, Pa	$210
13. Birdie, 6 months; R. Stuyvesant, N. Y.	90
14. Daisy, 2 years; Francis Shaw, Boston	425
15. Rose, 2 years; Francis Shaw, Boston	460
16. Laura, 2 yrs; Thos. M. Harvey, West Grove	350
17. Laura's daughter, 3 months; J. E. Phillips, Baltimore	115
18. Venus, 2 years; W. H. Carver, Philadelphia	300
19. Fill-Pail, 2 years; Francis Shaw, Boston	460
20. F. P.'s daughter, 3 months; G. S. Watts, Baltimore	180
21. Marie 2d, 2½ years; G. S. Watts, Baltimore	500
22. Buttercup, 3 years; F. Shaw, Boston	270
23. Nelly 2d, 6 years; R. Stuyvesant, New York	460
24. Pride, 2 3-12 years; M. Schall; York, Pa	400
25. Pride's daughter, 10 weeks; M. L. Groider, Mt. Joy, Pa	145
26. Darling, 2½ years; E. C. Freeman, Cornwall, Pa	400
27. Rosebud 1st Vauxhelets, 6½ years; J. N. Borland, New London, Ct	300
28. Valentine 4th, 1st Vauxhelets, 18 months; E. C. Freeman, Cornwall, Pa	320
29. Polly, 2 2-12 years; J. M. Codman, Brookline, Mass	360
30. Polly's daughter, 10 weeks, M. Schall, York, Pa	125
31. Duchess 3d, 5 years; Col. Ettinge, Concordville	375
32. Blanche, 2 3-12 yrs; J. E. Gillingham, Phila.	205
33. Butterfly, 15 months; J. D. W. French, No. Andover, Mass	200
34. Lydia, 15 mos; D. M. Eyer, Marietta, Pa	280
35. Nelly, 3 years; R. Stuyvesant, New York	410
36. Nelly's daughter, 3 months; J. M. Harvey, West Grove, Pa	130
37. Belle of the Isles, 4½ years; Col. Ettinge	405
38. B. of the I.'s daughter, 11 wks; Col. Ettinge	140
39. Dardy, 4 years, J. D. W. French, No. Andover, Mass	225
40. Dardy's daughter, 3 months; Col. Ettinge	100
41. Bijou, 2 9-12 years; J. D. W. French	230
42. Beauty, 3 9-12 yrs; G. F. Hull, New Lebanon, N. Y.	440
43. Polly, 3 years, M. Schall, York, Pa	350
44. Daisy 2d, 4 9-12 years; T. M. Harvey, West Grove, Pa	350
45. Daisy 3d, 1 10-12 yrs, Francis Shaw, Boston	410
46. Elegante, 5 3-12 years; L. W. Ledyard, Cazenovia, N. Y.	875
47. Jennette, 22 mos; J. Logan Fisher, Phila.	325
48. Jennette's daughter, 3 months; A. Scott	145
49. Minionette 2d, 7 months; J. E. Phillips, Baltimore	170
50. Princess Beatrice, 7 mos; G. S. Watts, Baltimore	230
51. Princess Louise, 8 mos; Edw'd Cary, Boston	260
Fifty Guernsey females sold for	$15,365
Average	307 10

GUERNSEY BULLS.

1. Champion of the Isles, 22 mos; M. Schall, York, Pa	250
2. Guernsey King, 8 mos, R. W. Coleman's Howe, Concordville Pa	160
3. Lilly's son, 14 wks; Col. F. M. Ettinge, Concordville, Pa	110
4. Daisy's son, 10 weeks; J. J. Borie, Phila	100
5. Venus's son, 10 weeks; A. Scott, Concordville, Pa	115
6. Buttercup's son, 4 mos; D. B. Cole, Mt. Holly, N. J.	100
7. Nelly 2d's son, 11 weeks; F. Shaw, Boston	170
8. Duchess 3d's son, 10 wks; M. Schall, York, Pa	125
9. Bijou's son, 3 mos; Wm. Arnold, Hudson, Mass	55
10. Beauty's son, 5 weeks; J. C. Evans, Darlington, Pa	50
11. Daidy 2d's son, 3½ months; E. C. Freeman, Cornwall, Pa	90
Eleven bulls, mostly young calves, sold for	$1,325
Average	120 45

JERSEY COWS AND HEIFERS.

1. Rosabelle, 5 years; W. R. McCready, Saugatuck, Conn	330
2. Frolic, 5 years; S. M. Burnham, Saugatuck, Conn	826
3. Britanla, 6½ years; C. S. Taylor, Burlington, N. J.	280
4. Buttercup, 4 years; Geo. F. Hull, New Lebanon, N. Y.	550
5. Maria Louise, 2 9-12 years; Geo. F. Hull, New Lebanon, N. Y.	600
7. M. L.'s daughter, 2 weeks; A. F. Mullen, Mt. Holly Springs, Pa	130
8. Achievement, 18 mos; D. M. Eyer, Marietta, Pa	210
9. Brisk's daughter, 15 mos; J. E. Gillingham, Philadelphia	260
10. Lady Sicily, 1 month; S. M. Burnham, Saugatuck, Conn	250
Ten females sold for	$3,355
Average	335 50

The Famous Three Mares of Mahomet a Myth.

THE Arabians believe with sincere faith that their finest horses are direct descendants from the famous mares of their great prophet, Mahomet; but this is about as much a matter of fact as that he was the inspired prophet of God. Count Lecoulteux de Cantelen, of France, has recently made a special study of this tradition, and, in the Revenue Britannique, affirms, that when Mahomet fled from Mecca to Medina to save himself from assassination the only animals he possessed were nine camels. Other writers assert that he never had either a mare or a horse, and that it was some time after his death horses were made use of in Arabian armies. Hitherto they had employed dromedaries alone for swift movements, and camels for the transportation of baggage and arms. The Arabians are an excitable people with any amount of credulity and gasconade. The braggadocio stories they get up of the great performances of their horses must be taken with considerable allowance, as it is impossible for these to gallop the distances they boast of within the short space of time often allowed them, and especially on the modicum of food and water taken on the route, and sometimes with none at all for a burst of a hundred miles or more.

A. B. A.

Food and Other Adulterations.

BECAUSE chicory is mixed with coffee, glucose with sugar, cider with wine, lard and oleo with butter, it does not follow that these articles are of themselves harmful or that they ought not to be produced, but the same regulation should follow the manufacture or production of all these and their use as follows all other things.

If a person mix poison in food, if he use a gun to wound another person, then it is crime, and in the mixing of different articles and products there should be crime and a penalty just in proportion as the act was an injury. If a store-keeper deceive in selling any article it should be a crime. And this with food and all other adulterations. Many people prefer chicory in their coffee and spirits in their wines, but the mixing should be a known and an exact formula, and when purchasing, the buyer should be insured in getting what he pays for. It is the regulation of traffic, not of production, which is demanded. There are few things but need to be produced.

but the producer of these few things must not be allowed to cheat or deceive in the sale, this is the true definition of fraud and this it is which the State may and should punish. It is clearly demanded that every article purchased be susceptible of proof as to character and quality and that penalty be incurred for deception or falsehood. B.

[The above is handed us for publication by one whose opinions are entitled to much consideration. We cannot say, however, that we at all agree with his opinions. Eds.]

RURAL BRIEFLETS.

A CORRESPONDENT from Butler County, Pa., writes us that he needs to know how to make poor land so rich that it will produce one hundredfold; where to get seed that will produce 300 bushels of corn to the acre; where to obtain the best breeds of stock; how a poor farmer can be made rich. . . . . .

Mr. BARRY'S note under "What Others Say," regarding the Fameuse or Snow Apple, does no more than justice to that handsome, excellent fruit. It thrives well in Nebraska, Iowa, Illinois, Wisconsin, New York, Connecticut, Vermont, New Hampshire, in parts of Canada, and we know not where else. The Fameuse Sucré, a seedling of this, which originated near Montreal, is said to resemble its parent in many respects and to be more prolific. It is not, however, offered for sale by nurserymen in general. . . . . .

THE London Garden republishes our cut of Fay's Prolific Currant and the accompanying article. The editor remarks in a note that this currant is not, he believes, in commerce in England, but that as it has been so long in cultivation in America, "some of the large nurserymen doubtless possess it." No, it is not yet offered for sale. It has been cultivated by Mr. Fay, with whom it originated, for many years. The stock is now controlled by Mr. Josselyn, of Fredonia, N. Y., who will offer it for sale as soon as his stock warrants him in doing so. . . . . .

Mr. H. B. ELLWANGER pronounces the Lady Washington one of the most beautiful grapes known. . . . . .

WE see that our friend, Mr. Peter Henderson, is advertising his St. Patrick Potato in English journals. The price to the trade is 24s. or about $6.00 per barrel of 160 pounds. . .

A GRAND novelty in the way of vegetables was offered last Spring under the sounding name of "Thousand-Headed Kale," "Chou de Russie," or "Russian Hardy Kale." Three seedsmen were kind enough to send us seed for trial and—we tried it. It has nothing to commend it and we hope it will not be offered another year. The leaves are large, spreading and deeply cut. Each plant made a growth of about two feet in hight and nearly three in width. It might prove a good food for pigs or cattle, but not better than cabbage which is just as easily grown. Why it should be called "Thousand Headed" is inexplicable, since, like other kales, it doesn't head at all. Would it not be better for all seedsmen (as many do) to test such costly, though worthless, novelties before offering them for sale? . . . .

Mr. A. B. ALLEN writes us: "I am glad you condemned Prickley Comfrey. I tried it three years ago and did the same." He also remarks: "What the Mark Lane Express says, quoted by you, against Percheron horses (p. 802) is all wrong and many a good English judge of horses has said for 40 years past in British journals that they are far superior to Clydesdales. . . . . .

MARSHALL P. WILDER'S statement in another column that under circumstances which he presents, nine out of eleven connoisseurs preferred the Lindley Grape (Rogers's Hybrid) to the Delaware, is an interesting and valuable fact. . . . . .

MANY thanks to Mr. Charles Deckner, of Atlanta, Ga., for a little box of strawberries which, notwithstanding their long journey, are still of a bright red color, and of fair quality. If there is one fruit a little more delicious than another it is a well-ripened strawberry in Midwinter. . . . . .

WE have just been reading an oleomargarine advertisement in a city weekly contemporary. OLEOMARGARINE in immense letters extends across the entire page. "If you have a trade for fine goods," it goes on, "only try our x, y, z brand, which we guarantee pure and the finest product ever produced in this country. WARRANTED NOT TO CRUMBLE. For sale by all jobbers." . . . . .

WE have received the following letter from Mr. J. H. Hale, of South Glastonbury, Coun. It rather gives strength than otherwise to our remarks respecting the proneness of people in general to exaggerate the size of favorite small fruits, especially when the actual size is itself a sufficient commendation. . . . .

"IN the RURAL of Dec. 4th, in the "Notes from the Rural Grounds," it is stated that raspberries rarely attain the size of one inch in diameter, and that the size of large specimens of fruit is usually guessed at, which I know is the fact; nevertheless, I will tell my little story: Two years ago we planted a part of an old muck swamp (that had the year before 25 cords of stable manure per acre) with the Gregg Black-cap, in rows ten feet apart with plants six feet in the row, hoeing them once a week all through the season. The following Spring we tied them up to stakes and then hoed in a double handful of bone and muriate of potash around each plant. The result at fruiting time was astonishing, as we picked from four to six quarts of berries from each plant, and by actual measure 30 berries from one plant were three-quarters of an inch and over in diameter, and on every plant there were, from eight to ten that were a good plump inch. There were 200 plants in all, and from the field we sold 986 quarts, besides what were used in our family of eight persons. The price was 20 cents per quart for the season, or $197.20 for the lot. At the same time Mammoth Cluster were selling in our Hartford market at 10 and 12 cents." . . . . .

THE Gregg is now generally conceded to be one of the largest Black-caps (if not the largest) in cultivation. Planted in an old muck swamp that the year before had received 25 cords of stable manure per acre, ten by six feet apart; and hoed once a week through the season and treated to a handful of bone and potash—is it surprising that from eight to ten berries on each plant should have measured "a good, plump inch?" If *ever* Black-caps attain to such a size, we should say not. It would appear, in fact, that a "plump inch" may be set down as the maximum diameter of the Black-cap raspberries. . . . . .

WHAT OTHERS SAY.

EARS OF WHEAT ON AN ACRE.—In answer to a question the agricultural editor of the N. Y. Times says that the usual number of ears of wheat grown upon an acre of ground is about 1,250,000, and this number varies but little, whatever quantity of seed is sown. Major Halles, an English seed-grower, who has produced some excellent varieties of wheat, gives the following statement on this point:

Seed sown per acre. Bushels.	Ears on a square yard.	Ears on an acre.
1	283	1,272,290
2	283	1,367,920
3	265	1,282,600
2	270	1,306,800
3	269	1,301,960

ASPARAGUS CULTURE IN FRANCE.—Some of our readers—those who have had a long experience in asparagus culture—will smile at some parts of the following. It may be remembered the Argenteuil is the name which we have given as one of the kinds offered in our Distribution, not that there is *one* kind known by this name, but there are several sub-varieties cultivated in that district which is famous for its asparagus. At the meeting of the International Congress of Horticulture in Paris, M. L' Herault, of Argenteuil, gave the following account of his method of culture of this popular vegetable, reproduced in the lately published Bulletin of the Congress:—

"I will not speak of the ten sorts of asparagus that I am acquainted with—of their varieties, nor of their twenty-five sub-varieties that I have experimented upon from every country. I will content myself by saying, that, in 1856, after four or five years of experiments, I thought it well to select three varieties, viz., the early, the intermediate, and the late. After sixteen years of cultivation the Central Horticultural Society of France acknowledged the superiority of these varieties, and accorded to me an award. The asparagus plants must be planted near the surface of the soil, contrary to the general custom; and, also contrary to the general practice, they should also be planted wide apart. They must be earthed-up in Spring to have them tender and white. Earthing-up is absolutely necessary, not only from a culinary point of view, but as a natural protection for the shoots, and to prevent the asparagus from being blown over by the wind. That is the object fulfilled by the mound of earth in the culture of asparagus. Afterwards, when the leaves appear, it is necessary to tie the asparagus to stakes. This protection is of great importance, for when the wind knocks over the asparagus it breaks and splits the stems, so that there is no hope of saving them.

"The method of culture of asparagus may be thus summed up:—Plant them very near the surface of the soil, earth them up in Spring, cut them moderately. As to the gathering of asparagus let me say that no steel instruments should be employed, but the fingers alone should be used, for otherwise there is a great risk of damaging the neighboring shoots and spoiling a great part of the crop."

PLEURO-PNEUMONIA IN OUR EXPORTED CATTLE.—The British Privy Council, by whose order the present restrictions were placed on importations of American cattle, has a staff of picked veterinarians at each port at which cattle from foreign countries are landed, and it is the duty of these to examine the animals both before and after death to discover how many of them are diseased, and the nature of that disease with a view of making, periodically, detailed reports on the subject. It is on these reports that the embargo on our cattle was originally established and it is on these reports that it is maintained. Away back in '79, just after the enforcement of the restrictions, Professor Williams, Principal of the New Veterinary College of Edinburgh, and last year President of the Royal College of Veterinary Surgeons of Great Britain, one of the most skillful and best known veterinarians in the United Kingdom, after a careful examination of the diseased lungs of the imported cattle slaughtered at Liverpool—or rather at Birkenhead in Cheshire on the opposite side of the Mersey, where most of the stock from this country is landed—declared that the official veterinarians had made a mistake in their diagnosis of the disease, and that instead of its being contagious pleuro-pneumonia as they claimed, it was simply ordinary non-contagious pneumonia developed during the voyage, and therefore that the Orders in Council prohibiting the importation of American cattle unless slaughtered at the port of landing, were founded on a mistake. This opinion we noticed at the time, but although some of our agricultural contemporaries seemed to deem it conclusive, not only with regard to the nature of the disease of the cattle slaughtered at Liverpool, but also as to the non-existence of pleuro-pneumonia among any of our herds, the British Government took no official notice of it.

LAST Summer Gen. Le Duc sent Mr. Lyman, a skilled veterinarian, to England to ascertain by post-mortem examination, whether animals infected with pleuro-pneumonia were actually landed there. Having examined the lungs of over 10,000 imported animals slaughtered, he reported last July that he found many infected with pleuro-pneumonia; that the disease was *in most cases* fresh; that the lungs were but slightly affected, and that three-fourths of the cases were Western Cattle imported from Boston. Lately President Williams, in an address before the students of his college, referring to Mr. Lyman's report, reiterated his former opinion that the disease with which the slaughtered animals were infected was not pleuro-pneumonia but bronchitis, brought on by the vicissitudes of the voyage, giving various reasons for his opinion. It seems to us that some of our agricultural papers lay by far too much stress upon this opinion of Prof. Williams. The best talent of his own country do not agree with him; the best talent of ours declare that genuine pleuro is among a few of our herds in a strip of country stretching from Western Mass., to Southern New Jersey, taking in nearly the whole of the latter State, and extending nearly the whole way across Pennsylvania and Maryland in a narrow belt along the line of these States, and then running southward across the District of Columbia into Virginia. It is highly probable, as we insisted eighteen months ago, that mistakes have been made by the British veterinarians in diagnosing the disease from which imported American cattle were suffering, especially as it is claimed that so many of them came from the West where the disease has not yet shown itself—but, as no modification of the restrictions will be made on account of these probable mistakes, what good can we achieve by making such a hubbub about them?

STAMPING OUT PLEURO-PNEUMONIA IN PENNSYLVANIA.—The following is an account of the total expenses incurred by Pennsylvania on the above account, from March 30, '79, to November 30, '80, according to a communication to the National Live Stock Journal from J. W. Gadsden. V. S.

ITEMS.	
For Animals killed by order	$3,164.25
Surgeons' fees and expenses	1,743 57
Salary and traveling expenses, special ag't	1,705.09
Expenses of commission	313.21
Office expenses, stationary, postage, etc.	273.84
Expenses under joint resolution	147.32
Total	$7,332.28
Cash received per State Treasury	6,964 18
Balance	$368.10

For slaughtered animals the owners receive somewhat less than half what their value would be if in good health. The State would have long ago succeeded in entirely suppressing the disease were it not that new cases are from time to time introduced from Maryland, where although the laws on the subject are excellent, no attempt seems to be made to enforce them. With one exception all the cases discovered in the last six months were due to importation from that State, and fully two-thirds of the total money expended in Penn. is chargeable to Maryland's neglect. The New Jersey authorities co-operate heartily with those of Penn., and no case of infection in the latter State has been traced to the former.

ADVICE TO SHIPPERS OF HOGS.—A Chicago commission salesman who has twelve years' practical experience in handling hogs in that market, gives the advice here condensed, which is equally applicable to shipping hogs to other markets also:

If hogs are driven to the depot the farm dogs should be first securely chained before starting them on the road. Haste should be made very slowly in driving. They should be started early without feeding from the evening before, and should not show any signs of uneasiness, or stop frequently for a resting; better by far take one more day and handle them safely. Over-heating founders them at once, or as soon as cooled down. If the delivery be made by teams, there should be no feeding that day; the wagon should be bedded deeply with dry hay or straw, and the teams move slowly with occasional stops, that they may rest from the jolting. When the hogs have been collected in the shipping yard without having been over-heated, and are well rested, weigh out 15,000 to 17,000 pounds of heavy hogs, according to the kind and size of car; of mixed weights, 14,000 to 16,000 pounds; handle carefully, without more "whoop and hurrah" than is necessary to move them. If there are no scales in the yard on which to weigh, count off and estimate the average weight for each car until you have your quota for a load, then bed each car with at least 400 pounds of dry hay or straw. If your hogs are loaded the same day they came from the feed yard where they were grown, do not feed any grain. Water if thirsty. They will find the new quarters comfortable and all will quietly settle down for a nap and the waking will not take place until their arrival at the market, whether it is one day or one day and night, or even two or three days. After 500 miles of constant run they will be in comfortable condition on arrival, without even a cripple to injure your interests. Hogs should not be unloaded during the colder seasons of the year oftener than once in forty-eight hours, if their comfort is only considered.

THE FAMEUSE OR SNOW APPLE.—Apples abounding in acidity are liable to derange the stomach, and a mild, sub-acid flavor is undoubtedly the most pleasant as well as the one best calculated to promote digestion. Mr. Barry, writing in the Albany Cultivator, is reminded of this fact by the handsome and excellent Fameuse or Snow apples, which we are enjoying, and which he is glad to say are tolerably abundant in this market. This variety, more than any other that he knows, possesses qualities which commend it, not only to all who enjoy fine fruit, but more especially to persons who suffer from indigestion. It is a beautiful fruit of medium size; the skin is of a purplish-crimson color, its flesh is as white as snow, tender and delicate, and the flavor very pleasant, with just enough acidity to render it exceedingly refreshing. Now as fruit has come to be regarded as so valuable an adjunct to other food and so conducive to health, there are many no doubt searching after the choicest kinds, and he recommends this as one of the finest fruits of its season.

HEREFORDS.—The great merits of the Herefords, a writer in the London Live Stock Journal states, are a robust constitution, early maturity, great aptitude to fatten, freedom from hereditary and epidemic disease, being able to thrive in any climate and on the roughest food, great prolificness, and general good breeding properties, wanting little attention at calving, even when in high condition, the best graziers, and commanding the best price per pound when fed. Their doubtful qualities, or rather the points in which many people say they fail are their milking qualities, their color, and their inability to improve other breeds by crossing; it has been also said that other cattle will feed better in the stalls, and attain to greater weights. It is said that the Herefords will never become the fashion, as the ladies do not like their white faces! The same writer above quoted hears the fashion has changed in America, and that at all the recent cattle shows the ladies all congregated around the "White-faces," as much from the novelty of the scene as from anything else, perhaps; but he thinks that the practical American ladies, when they find that the White-faces are a source of profit to their "lords and masters" (and therefore of a considerable advantage to themselves), will soon vote their color perfection, and the Hereford will be the prevailing fashion.

EXERCISE FOR COWS.—In the Agricultural Department of the New York Tribune, our friend, Colonel Curtis, has this to say on this subject: It is a wrong notion that cattle must be kept in a barnyard all day, or a part of a day, to get exercise. How much exercise will they take during the entire day? Just enough to get from one pile of fodder to another, or to find, if they can, a warm spot to stand on. If you don't believe this, watch a cow and see. Fasten cattle in the stable so they can get up and down easily, and this is all the exercise they require. You see these cattle are fastened with a chain, and they can move around freely and lick themselves and get up and down without straining. This is one reason why they are so healthy. Stanchions make more straining for them. He will

not have them in his stable; he thinks they are cruel.

THE INFLUENCE OF AGE UPON THE QUALITY of beef has been discussed somewhat in the last two numbers of the National Live Stock Journal. The conclusions arrived at are that in the British markets cattle generally are killed too young for the best flavor—say when from 18 to 30 months old. Moreover, they are fed on turnips and oil-cake, which as regards the flavor of the meat, are far inferior to corn, hay and grass. But there farmers cannot afford to keep their stock until it matures on hay and grass; to make a profit they must force it with the more nutritious foods. Immature beef, though perhaps more tender than the flesh of well-matured beasts, is inferior in juiciness and flavor. This is an argument in favor of those breeds that mature early, for the earlier they mature the sooner will they give a superior quality of flesh. A well-bred Short-horn steer is often as mature at 30 months as some other sorts at 48 or 60 months. There is a limit, however, both to earliness of maturity as well as to the extent to which we can force feeding without impairing the quality of the flesh. The West Highland beef, so much prized in England, is produced by grazing alone until the beasts are four or five years old.

MR. JOSEPH HARRIS, speaking of the experiments of Mr. Lawes, of Rothamsted, England, in connection with establishing an experiment station in the State of New York, said he had devoted his farm to experiments, had entailed it upon his son for such purposes, and had in addition appropriated $500,000 for carrying on agricultural experiments. A wealthy Duke (the Duke of Bedford—EDS.) had given his farm at Woburn to the Royal Agricultural Society to be devoted to like beneficent purposes.

MR. REYNOLDS, following Mr. Harris in the discussions of the Corning Farmers' Club, as reported in the Rural Home, said that to make an experiment farm successful, it would require the co-operation of scientists with practical farmers. Farmers are continually experimenting, but the results are of little value, comparatively, because they attribute effects to wrong causes. For these reasons farmers gain knowledge from experience very slowly. One farmer will tell you that a certain experiment, tried by him, resulted so and so. Another will say that the same experiment, tried by him, produced results directly antagonistic to those related by the other. Both are honest and truthful, but neither observed all the conditions and circumstances affecting his experiments, and so they are worthless as a guide to themselves or others. To properly establish such a farm with professors in the different branches of science related to agriculture, and the proper instruments, would require hundreds of thousands of dollars instead of the $20,000 appropriated by the Legislature.

MR. W. J. FOWLER, said that as regards experimental stations, practical farmers are beginning to learn their value. Those English experiments are of great value to the farmers of this country. We profit by experiments that result in loss as well as those which result in profit direct. Mr. Lawes has cultivated barley many successive years on the same plot, without manure, and the small diminution in yield shows that Nature furnishes a large share of what crops need to grow.

CATALOGUES, ETC., RECEIVED.

THE HARVARD UNIVERSITY CATALOGUE FOR 1880-81.—In this catalogue of 230 pages, the information regarding the Bussey Institution—which is a branch of the University, of which our contributor, Prof. F. H. Storer, is the Dean and Professor of Agricultural Chemistry—will be of special interest to farmers. In this School of Agriculture and Horticulture a systematic course of instruction in agriculture, useful and ornamental gardening and stock raising is given by teachers of the highest character in their several departments. The courses of study differ from those pursued in the ordinary agricultural colleges in that they are all given in one year, so that they may all be profitably pursued by young men of ability who cannot afford to spare much time for advanced study. In addition to the courses given at the Institution, students in regular standing there may freely attend any of the 200 courses of instruction in the other departments of the University, and in addition to the free use of the special agricultural library of the Institution, they can also freely avail themselves of the College Library at Cambridge and the Boston Public Library. The regular fee for the academic year is $150; for half a year or less, $75, and for any one of the special courses the fee is $40, except entomology, for which the fee is only $30. The students can live where they please in the neighborhood, at an estimated expense of from $218 to $370 a year—exclusive of clothing.

MODERN ARCHITECTURE.—This is part I. of a very fine quarto work to be completed in ten numbers, costing a dollar each, by Messrs. Bicknell & Comstock, architectural publishers, 194 Broadway, this city. The completed work will contain 80 fine lithographed plates, showing new and original designs of dwellings of moderate cost, in the Queen Anne, Eastlake, Elizabethan, and other modernized styles, giving perspective views, floors and framing plans, elevations and a great variety of miscellaneous exterior and interior details of dwellings, stores, offices, etc. There will also be a number of designs of low-priced cottages in the various popular styles adapted to the requirements of seaside and Summer resorts and suburban and country places, comprising drawings by prominent architects of New York, Boston and other localities, as well as other designs prepared expressly for this work. We have received frequent inquiries as to where such a practical work as this could be obtained, and urge all those contemplating the erection of new homes to subscribe for it. Not only will it suggest the most desirable styles of building suitable for all locations and pockets, but the drawings and instructions will be so full and detailed as to enable any intelligent builder to construct most of the edifices without the expense of an architect. It is a work greatly needed and excellently adapted to the requirements of the times.

REPORT OF THE UNITED STATES COMMISSION OF FISH AND FISHERIES FOR 1878.—This bulky volume of 988 pages contains a great mass of useful information with regard to the subject of which it treats.

FRANCIS BRILL, Mattituck, Long Island, N. Y.—Preliminary price list of garden seeds which Mr. Brill himself raises.

Everywhere.

NOTES FROM TEXAS.

THE past season has been an unfavorable one in some respects and very good in others.

COTTON grew finely and promised well—even over an average—when unexpectedly came the "boll worm" and made havoc with the cotton and man's "high hopes." Some farms in low and rich bottom land that promised at one time a bale per acre, did not turn out a quarter of a bale.

WHEAT in prospect and result was something like the last crop spoken of—excellent at first, but yielding below the average. The straw was long and good enough, but the damp weather in April caused rust, so that we might place the crop at ten bushels per acre for Mediterranean and eight for Texas May. There is a new wheat I am trying, called the Davis, that may do well here as it is early and has a large grain, although the two snows in November turned its color to some extent.

CORN was a splendid crop—the best ever raised in this State. Some farmers report 60 bushels per acre. It is now selling at 25 cents per bushel. We shall repay Kansas this year for the immense quantities bought of her last season. It is heavy, solid corn—such as we farmers like to feed to "big hogs" and beeves.

GOLDEN MILLET yielded 7¼ tons per acre of excellent feed, and was all put up in good style.

PRICES are as follows—cotton 10@11c; wheat $1 per bushel; corn 25@30c; pork 6@6¼; beef 4½@7c; eggs 15c per dozen; chickens 16⅔.

McKinney, Colin Co., Texas. W. N. W.

RURAL SPECIAL REPORTS.

GA., Atlanta, Fulton Co., Dec. 2.—We are having some disagreeable weather; it seems to have been raining every day for the last four weeks, and when fair it has been frosty, the temperature going as low as 10 degrees below freezing point, and all tender vegetation is now killed. The late strawberries, however, are not all killed. Farmers are pretty well up with their work; sweet potatoes are nearly all dug; but we have not quite finished sowing wheat. Crops of all kinds have been heavy; cotton and corn have yielded above an average. A larger crop of sweet potatoes has been grown this year than in any year in the past ten. They are selling at 35 and 40c. per bushel. Winter grain of all descriptions is looking fine. Farmers are doing well and business is flourishing. C. D.

N. C., Chapel Hill, Orange Co., Nov. 27.—The year has made its report. The wheat crop was probably about the average; the oat crop below. Tobacco was less in quantity than usual, but excellent in quality. Corn was the best yield in years. Sweet potatoes were a fair crop; Irish potatoes, much below an average yield. In fruit, there was a tolerably good product of peaches, and comparatively a very fine crop of apples. Plenty of forage. Cattle enter the Winter in good condition. Providence has been bountiful. Let the people of our favored land be grateful!

Among the notable features of the year in agricultural and kindred departments, I will mention that the earth has produced its harvests with astonishingly slight resources of the kind generally considered so important. I refer to the fact that after the Spring of 1879 there was such a light rainfall. This continued till very recently. While wells and springs were going dry, surface moisture from occasional showers kept vegetation for a long time fresh and flourishing. Now the rains are so frequent that the farmers are greatly embarrassed in their efforts to sow wheat. The earth is again, after the unprecedentedly long season of comparative drought, receiving its wonted supply of water.

The State Fair and several local fairs have held successful meetings. Unfortunately, as usual, the lovers of gambling, in the form of racing, offended and disgusted the taste of the better classes among the attendants. If there is not a change in these matters Christian people ought to withdraw their countenance and patronage from the demoralizing institutions.

N. C.

N. Y., Syracuse, Onondaga Co., Dec. 4.—Prior to the 10th of November the weather in this section seemed so gradually merging into Winter, that it appeared we were to have no Autumn. All kinds of out-door work were being finished up under the most favorable auspices. The shipments of freight on the canal indicated the general faith in a late business season before Winter could make its advent perceptible. Wheat looked and promised well; stock were making good use of the pasturage, and the farmers were gathering in the butter harvest most successfully. Winter then fell upon us like a thief in the night. During the last three weeks we have had the thermometer down to zero, and snow squalls have been constant. Some ten inches of snow have fallen altogether, and as there has been no thawing the sleighing is very good, wheels having disappeared wholly from the streets. Derived from the evaporation from the lakes, a strip of country between this and Oswego has had more than three feet of snow. Prices for country produce have a constant upward tendency, though perhaps no higher than last year at this time. The rainfall for October was 3.07 inches, 2.07 of which came on the last day of the month. That for November was 0.83. The surface of the ground has been kept tolerably moist, but wells and streams are too low for a sufficient Winter supply. S.

OHIO, Delaware.—The following note from Geo. W. Campbell, now acting Secretary of the Ohio Horticultural Society, since Mr. Bateham's death, was crowded out last week: "We have now had nearly three weeks of severe Winter weather, the thermometer ranging from the freezing point to 18° below zero during the whole time, and the ground is covered with snow. It is now moderating, with prospects of a thaw. It has been the coldest weather ever known here in November, as the thermometer was during the past three weeks at 15° below zero four or five times. I find grape buds somewhat injured upon hybrid and half-hardy kinds. Peach buds unhurt so far."

OHIO, Wellington, Lorain Co., Dec. 2.—We are having very cold weather; on the morning of the 19th, the thermometer was 15 deg. below zero. About four inches of snow are now on the ground. Crops of nearly all kinds were good the past Fall, oats being nearly the poorest in quantity and quality. They are worth 35c per bushel; wheat, $1; corn, 40c; clover seed, $3.75; eggs, 22c; butter, 24c; cheese, 13c. A. G. F.

The Querist.

ANSWERS TO CORRESPONDENTS.

Cows Chewing Bones—Hard Water.

J. S., Urbana, Kan., 1. says that his cows and in fact nearly all the cattle in that prairie region will eagerly pick up any piece of bone, or a stone or piece of iron, and chew it for an hour or two, as if masticating it; but they will finally drop it, without having made any apparent impression upon it; and as he never saw cattle do this in Ohio, he asks the reason for their doing so in Kansas. 2. He has a well the water of which is so hard that it cannot by any means known to him be softened for washing, and he asks how can it be rendered fit for that purpose.

ANS.—1. This morbid appetite of the cows seems to indicate a want of phosphate of lime in the soil; but as that county is largely underlaid with limestone and is fertile for corn, wheat and grass, it might naturally be inferred that it contained a sufficiency of this important element to grow healthful crops for cattle. As bituminous coal is found there, if our correspondent will pulverize some of this coal fine and mix a tablespoonful of it with the food of each cow once in ten days, he will be most likely to find it to satisfy this morbid appetite for chewing bones, or half a spoonful of the ashes of this coal will do as well. Some coal ashes contain as high as three per cent of phosphoric acid. If this should not effect the purpose, send to St. Louis and get the pure flour of bone, or bone meal, and mix a spoonful of this with the food. But this bone meal should be thoroughly boiled before using it, so as to kill all spores that it may contain.

2. Hard water is not easily made soft, and especially such very hard water as our friend describes. In England they expel lime with lime. Pure limestone is carbonate of lime, each pound of carbonate of lime containing nine ounces of lime and seven ounces of carbonic acid. They determine the amount of lime in a given quantity of water and then apply to it the same amount of burnt lime dissolved in water. When lime is burned the carbonic acid is driven off, and each pound of limestone weighs only nine ounces, after burning. When this burnt lime is mixed in the right proportion with the hard water, it will cause nearly all the lime in the water to settle to the bottom, and the soft water may be poured off of the top. The only way in the above case would be to experiment and find the right proportion. Powdered borax is sometimes used to soften the water. Wood ashes are also used, which cause a precipitation of the lime to the bottom, when the water may be poured off and will be found much softened. J. S., should make a filter of a tight barrel, having a hole in the center of one end, and then one inch above this put a false bottom, perforated with small holes. Lay thick flannel over this and then upon the flannel two or three inches of washed sand; upon the sand place six inches of fine wood charcoal, or fine bituminous coal, well washed, and on the coal three inches of clean gravel. Now pour in the water on top, and let it filter through and it will be much improved for drinking or washing. It may not be quite soft, but it will be much less hard.

Miscellaneous.

A. G. F., Wellington, Ohio, asks whether it is advisable to sell his clover seed at from $3.75 to $4 now or wait in hopes of getting a better price in Spring.

ANS.—As shown by our Crop Reports and in various places in "Everywhere," the crop of clover seed is considerably short this year owing to so much of the clover having been "heaved" out by the alternate thawings and freezings of last Winter. Our Market Reports last Winter and Spring showed the price for seed varied at the different collecting centers, and the variations were, doubtless, still greater in small local markets in which the farmer usually sells his products, especially in small lots. For ourselves we would prefer, in our friend's position, to take $4 for the seed now rather than wait until Spring on the chance of getting a higher figure, nor would we then regret having done so, even if the price were considerably higher. In case of risk, the satisfaction of being all along, on the safe side is worth something.

C. H. J., Fernandina, Fla., asks, 1, whether the Stockbridge Fertilizers manufactured by W. H. Bowker, of this city, are as represented; 2, would it be advisable to apply 400 pounds of Stockbridge Potato Fertilizer, costing $2, on an acre of potatoes, using no other manure; 3, are Mapes's Fertilizers as good, according to price, as the Stockbridge; 4, can a good crop of potatoes be obtained from land manured with green salt-marsh grass put in the drill at the time of planting?

ANS.—1, Entirely so. 3, We should prefer not to advise on such a subject, because the effect of the manure would depend upon conditions that we know nothing about. 3. Both are first-class articles, and the values, according to analysis and the cost, are about the same. 4, No. The grass would not have time to decompose. A large amount of such a manure would be required to produce "a good crop of potatoes."

A Subscriber, Wright Co., Ia., asks the address of some good authority on bee-keeping.

ANS.—Professor A. J. Cook, Michigan Agricultural College, Lansing, Mich.; J. G. Bingham, McGrawville, N. Y.; G. W. House, Fayetteville, N. Y.; C. M. Doolittle, Borodino, N. Y. If books are wanted, The Manual of the Apiary, by Prof. Cook, is as good as any published. Price, $1; published by T. G. Newman & Son, Chicago, Ill.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, DEC. 11.

N. J. S.—O. P.—A. B. A.—F. D. C.—T. H. H., thanks, reserved for Corn No.—G. W.—M. R. F.—M. W. F.—E. G.—F. K. M.—C. H. J.—P. B. M.—N. B. B.—J. T.—C. E. H.—A. W. M.—N. R.—F. W. B.—D. A. R.—E. W. G., as soon as possible.—M. N. G., many thanks—N. G. C., the Seed Distribution will commence about Jan. 15th, and be continued until further notice.—W. H. N.—M. P. W.—W. D. C. D.—T. M.—T. H. H.—W. T. C.—R. G. C. & Co.—G. C. C.—A. C.—A communication from Cincinnati on Corn, signed W. Would be pleased to receive full name.—S.—W. H. H.—E. C.—E. W. S.—M. C.—W. W. W.—E. L. T.—Otis Ford., thanks for ear of corn. It is the Chester County Mammoth.—G. K.—W. J. B.—J. E. M. C.—J. P. A.—J. B.—C. A. G.—Mrs H. B.—F. D. C.—A. F.—W. J. D.—T. M.—A. B.—P. B. M.—W. F., thanks.—J. H. H.—J. T. L.—C. B. M.—A. B.—F. D. C.—W. J. B.—N. W.—Mrs H. B., thanks.—N. T.—C. A. G., corn notes received; many thanks.

THE
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Conducted by
ELBERT S. CARMAN.

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SATURDAY, DEC. 18, 1880.

SPECIAL NOTICES.

AS ALREADY announced, the SPECIAL CORN NUMBER of the RURAL NEW-YORKER will be the first of the New Year.

WE SHALL present our annual INDEX next week. Special pains have been taken to render it accurate and full, so as to facilitate a quick reference to any article in the present volume. Few are aware of the immense amount of labor involved in *properly* compiling and arranging an annual index of such proportions; but those who have occasion to use them frequently are aware of their great value.

SUBSCRIBERS who receive the RURAL without any NUMBER appended to their names or address, may know that their subscription terms expire *with* the Index Number.

OUR PRESENT Plant and Seed Distribution will be begun about January 15th and continued until further notice. The WHITE ELEPHANT Potato will be mailed separately in a little wooden box as the weather permits. Subscribers are advised to place it in sand and keep it in a temperature as near 32° as practicable.

AT present there is almost a grain blockade at the Eastern termini of all the trunk lines, while at many of the way stations the facilities for handling the crops are altogether inadequate. Among the many needed reformations in railroad management an improvement in this respect is not the least desideratum.

READERS of the RURAL, when you communicate with advertisers mention the RURAL NEW-YORKER, and if any article purchased should not prove to be as represented TELL US. We desire to have our advertising columns *trustworthy*, and we shall be glad to entertain any complaint and to ascertain, by searching inquiry, to what extent it may be well founded. We place the interest of our readers far above those of merely mercenary advertisers, and we shall strive in every way to make it appear that these columns are to be shunned by all who have reason to dread the light of truth and justice.

WHAT IS GLUCOSE?—The establishment of several factories, and the great profits in its production lead to this inquiry. The cost of a factory may be anywhere from $10,000 to $300,000. One costing $100,000 should use 1,000 bushels of corn a day, and the production of glucose should be simply enormous, for the greater portion of the corn is saved. There is no process by which glucose and starch may both be obtained, but either may be, although there is a greater weight of refuse in starch making than in glucose making. The process of making glucose is to grind the corn and soak it in pure water. It is then passed through rollers to extract all the moisture and starch. The extract is then boiled, and after it is purified it becomes, according to the treatment, either a sirup or glucose—a hard, waxy substance nearly as sweet as sugar. The refuse corn is sold for feed.

THE ARMY WORM of which we give an illustrated account on p. 832, appeared, our readers will remember, in vast numbers at the Rural Farm last Summer. The RURAL was, indeed, the first agricultural paper to make the announcement of the appearance of this pest in this part of the country. Of all food, it preferred the heads of Timothy. In the infested belt of our farm, scarcely a Timothy head was left—the straight pointed straw alone remaining. While the wheat was in the milk stage, the army worm preferred the grain to the leaves. As soon, however, as the milk stiffened a little, the leaves were preferred and the grain was no longer molested. It is remarkable, as showing the ways of this worm, that while some fields of wheat and grass were alive with it, scarcely a worm could be found upon other fields. It is to be hoped that the auguries of entomologists may prove true and that we shall not have another march of the army worm during the Summer of 1881.

THE VETERINARY SURGEONS attached to the Health Department report ten cases of pleuro-pneumonia in one stable, containing fourteen cows, in Brooklyn. The other four beasts are extremely emaciated, and the officers declare they do not think that the milk of any animal in the stable is fit for human consumption. The filthy stable is twenty feet in the rear of a densely crowded tenement house, and the neighborhood is thickly populated. There are several cow stables in this and the neighboring cities of which a similar report might be made. These are the hot-beds of disease from which emanate frequent deaths to children and others who use the milk from them, while they are a constant menace to the herds of the country. In view of the difficulty of maintaining cleanliness and health in such places, and of the evils of disease and filth there, why should these pest-holes be longer tolerated, especially as every town has now ample facilities for obtaining an abundant supply of milk from the country?

IT is a recurring practice every Fall for many papers to find fault with Western farmers for not sending their grain more quickly to market, and this year these croakers have been unusually loud in their complaints, attributing the delay to a desire on the part of the grangers to obtain better than the current prices for their produce, an expectation fostered by the great rise in prices of wheat last year after most "of the crop had got into the hands of dealers and speculators." There is little doubt but this consideration had some influence on the action of farmers early in the season, although as we pointed out a couple of months ago, there has been this year no signs of the speculative movement to which the rapid advance in the price of wheat was due last season; but the main reason for the delay in marketing the crop early was the unfavorable weather for thrashing, and when the farmers were ready to deliver their grain they were hampered by a scarcity of railroad cars and elevator room, which has gone on increasing to the present time.

THE JAPAN JUDAS TREE.—A specimen of this has been growing in the Rural Grounds for six or seven years. It is generally harmed more of less by Winter and early Spring storms and sudden changes, but the wood has never been killed within a foot of the ground. It is with us a great favorite, and Mr. Parsons's article says not one word too much in its praise. It has needed no cutting back such as is recommended by Mr. Parsons, to preserve a full, bushy shape, since it is often enough harmed by severe weather to make pruning quite unnecessary. Before the leaf buds unfold, the beautiful clusters of purplish-pink flowers appear wreathing the stems. These flowers bloom in early May, dozens of them together nearly an inch broad or long. Never until last season have the flowers with us produced seeds, when they were produced so abundantly that we picked a peck of pods from this single bush. The seeds germinate very readily and, so far as our own experience goes, the seedlings do not vary in leaf or flower from the species. Our engraving on page 833 is a very correct portrait of the leaf and fruit as they appeared in October.

CLOVER SEED is likely to be unusually high-priced this year, as the crop seems to have been short nearly everywhere. Toledo, Ohio, is the headquarters of the trade and probably the largest market in the country. A late telegram from that place predicts a "corner" in clover seed there, which, if formed, must raise the prices elsewhere also. The stock now held is reported to be not over 6,000 bags of old and 4,000 bags of new clover seed, the former being practically out of the market, and most of the latter in the hands of a couple of firms, who are said to be determined to hold on to it until they get their own prices, buying in all that may be offered, so as to get control of the market. While a capital of millions of dollars is needed to "corner" wheat, pork or dairy products, less than $100,000 would be sufficient to "corner" clover seed. Last Tuesday the price of prime medium seed on 'Change was $5, and the tendency was upward. The "heaving" of clover last Winter will not only lower the supply and thus raise the price, but also increase the demand, as it is likely that an unusually large area will be sown next Spring. Farmers who have to buy seed as well as those who have to use it, should not lose sight of these considerations.

CLEANLINESS AND HEALTH.

THE alarming spread of diphtheria and kindred diseases is a warning to the people of the United States, of which they cannot long neglect to take heed. In many cities and towns diphtheria now exists almost to the extent of becoming epidemic, while there are few sections of the country entirely exempt from its ravages.

It is believed that the first cause of the disease is the preparation of the system by the presence of impure air for the germs of the disease to take effect, while these germs are believed to be multiplied by this impure air. The best houses of the cities, where there is a tide flow, are liable to the disease because the sewer connections are in the house, and cannot easily be so secure but that the gas is forced by the bellows of the tide back into them. This is also the case with dwellings in cities where high water fills the sewers, or into which from other courses the sewer gas escapes.

Upon the farm and in villages the disease is propagated by the impure air from cess pools and other sources. The germs of the disease are not destroyed by the frost as with those of yellow fever, and the only safety is in a complete removal of all impurities from the vicinity of the dwellings, and not only this but the filth must be entirely deodorized and rendered innocuous.

In the cities the sewer may be made a complete carriage way to a place of safety. In the villages and upon the farm the remedy can be made the means of adding largely to the fertilizing element of the country as well as securing health. The farmer and the village improvement societies should take this work in their especial charge.

PECUNIARY INDEPENDENCE.

There are two millions of persons in France who live quietly and moderately upon their incomes from investments in real estate or other property. In England there are probably half as many, who live in a simple and unostentatious manner under the same circumstances. The English Government funds known as "consols" in the technical terms of the money market, pay three per cent. per annum; the French "rentes" pay about the same rate of interest. The average income from these sources to each owner of these funds is not more than $300 per annum, and on this amount thousands of persons live simple and contented lives, enjoying in a modest, unassuming manner the fruits of their carefulness and economy.

A French "rentier," or an English owner of "the funds," or a person who may be possessed of real estate, occupied or rented, enjoys a certain social distinction on account of his "independence," to which term there attaches a distinct idea of certainty of income with the assurance of a competency and freedom from the cares and inconveniences of poverty or embarrassment. So long as these persons live within their incomes, they are privileged persons in an easy and well-defined position; persons of moderate fortune who can afford to look upon their front door as secure from the possible presence of the typical "wolf," which is the dread of all those who live by uncertain employments. But without the strictest plainness and economy of living, all these people would become "of all men the most miserable." Their property saved by years of industry and economy, would soon disappear and leave them, in their old age, in poverty and wretchedness. Few of them, knowing their security and realizing their comfort, are tempted to risk their income in the hope of increasing the rate of interest by riskful investments or speculations.

How fortunate it must be for Americans if they would but take a lesson from such examples as these! What misfortunes, what losses, what disappointments and even miseries would be avoided by a more contented disposition, more devotion to simplicity of life and economy of living? What secure friendships, what continued social pleasures, what permanent family affections and happiness in our home lives could be enjoyed, if people were only more contented with their present fortunes and the modest enjoyment of what they now have in secure possession? The foul demon of speculation keeps us all in a turmoil; society seethes and bubbles over with the excitement due to the constant race for riches; to the struggling pursuit of more wealth. This is common to all classes. Farmers and country dwellers are tempted to send their small savings to be swallowed up in the whirlpool of speculations in the cities, in the vain hope of acquiring riches that have never existed, and which they can no more secure than they could grasp a shadow. The business man and the man who possesses already a snug competence, haste to throw their property away in the same foolish manner to be swallowed up in the bottomless maw of speculation. And so the wrecked hopes and fortunes may be counted by the thousands and crime, ignominy and wretchedness are present everywhere. In a less degree the evils of over-living, too, prevail, and men and families mourn for want of that which they have unwisely squandered and wasted in a way that brings no solid comfort to them.

There is no happiness in living beyond one's means. Those who have no debts, who pay as they go and make this their rule, are more careful and economical than those who buy on credit whatever they may desire or think they need. Buying on credit is our national bane, an evil which saps the foundations of our social comfort. It keeps a man in debt, increases his expenses; makes his necessities greater, and tempts him to risk his property in vain efforts to extricate himself from pecuniary difficulties. It is quite easy to spend what we have not; but a man always thinks twice before he breaks upon a small accumulation which he already has, and will rather add to it than trench upon it. Therefore the habit of saving, once created, is a safeguard against careless spending and should be encouraged in every legitimate and proper way. There is an economy that is mean and stingy; but it is very easy to avoid this fault without falling into the opposite vice of extravagance, and to hit the happy mean of a sensible and wholesome economy.

BREVITIES.

THE imports of coffee for the year ending June 30, 1880, were over $60,000,000 in value. One half of this could have been saved at home by growing and using chicory instead.

WHY not grow it at home? The importations of raw silk amounted to over $12,000,000 during the past year. The silk industry with a duty of 60 per cent. is rather over stimulated, is it not? Would it not be a good thing to put a little more energy into the linen industry, not a manufactory of which exists in the country? Our importations of flax goods are about $25,000,000 worth annually.

A GREAT find is reported from the mountains of Nevada of a new hardy silk worm that feeds upon oak leaves. Naturallists describe the worm as bombyx quercleus. It is said, however, to be known in China and that it makes several broods in a year, and does not cut the silk in emerging from the cocoons, but pushes the threads aside. The silk is said to be stronger, and the worm hardy, living in open air and needing no care or shelter.

THE committee to select a site for the World's Fair to be held in 1883, have made choice of a vacant piece of 250 acres of land on and near the upper end of Manhattan Island, known as Inwood. It is about eleven miles from the N. Y. City Hall, in the lower part of the city, but accessible by the Elevated and Central railroads, while two steamer lines can carry visitors to it. Three other railroads are already under way to the vicinity and will no doubt be completed before the time for the opening of the Fair.

THE price of rye in St. Petersburg has fallen very considerably of late, and a similar decline is expected in Germany. In Russia the Government it seems, following the advice of Joseph of old to Pharaoh, is accustomed to purchase, in years of abundance, large stocks of that cereal, so as, in times of war or short crops, not to be deficient in a commodity which is so extensively used by the masses of the people. To lower the high prices of rye bread and thus alleviate the sufferings of the poorer classes, the Government has thrown a large supply on the market, thus depressing prices, much, no doubt, to the disappointment of those who were speculating in public distress. It is anticipated that this reduction in the price of rye will lessen the demand for Indian, for which there was growing a largely increased demand in consequence of the high price of its rival.

THE meeting of the Connecticut Board of Agriculture promises to be one of great interest. It will take place the 15th, 16th and 17th instant at New Britain. Many lectures will be delivered which have been selected with great good judgment. Prof. Atwater's subject is "How to develop the rational side of farm life and practice." "What the farmer should know about diseases of domestic animals," is the subject upon which Prof. Cressy will lecture. "Our Schools of Agriculture"—"Thoughts on agricultural education"—"Systematic agricultural education as adapted to the American farmer"—"The Agricultural Press," will be treated respectively by W. J. Beal, E. L. Sturtevant, S. W. Johnson and J. B. Olcott.

For Women.

CONDUCTED BY MISS RAY CLARK.

LITTLE FEET.

HARK! I hear the little feet
Of the tiny Maykin sweet
Pattering on the floor;
Back and forward, to and fro,
Now they come, and now they go,
Restless ever more!

First a pattering, then a peace,
Faster now, and now they cease,
Waiting at the door;
Now renew their little part,
Practice all their tiny art
Freshly o'er and o'er.

Music springs from every beat,
Comes so softly and so sweet,
Thrills us through and through;
Like a poet's soothing rhymes,
Or the evening's mellow chimes
O'er the waters blue.

Now I hear them on the stair!
Yes, the little feet are there,
Coming sure and slow;
Now they patter, now they stay,
Feeling out their little way
To the room below.

Now they safely reach the floor,
Come they quickly through the door,
Opened for them wide;
Bring they in with roguish grace
A little merry, laughing face,
To darling mamma's side.

There they gladly rest awhile
'Neath the sunshine of her smile,
There we'll let them be;
But the echoes soft and sweet
Of those little pattering feet
Through the coming years shall greet
Our loving memory!

DESCRIPTION OF CUTS.

FIG. 451.—EDGING FOR UNDERLINEN.—(Crochet.)—Along 17 chain crochet to and fro as follows: 1st

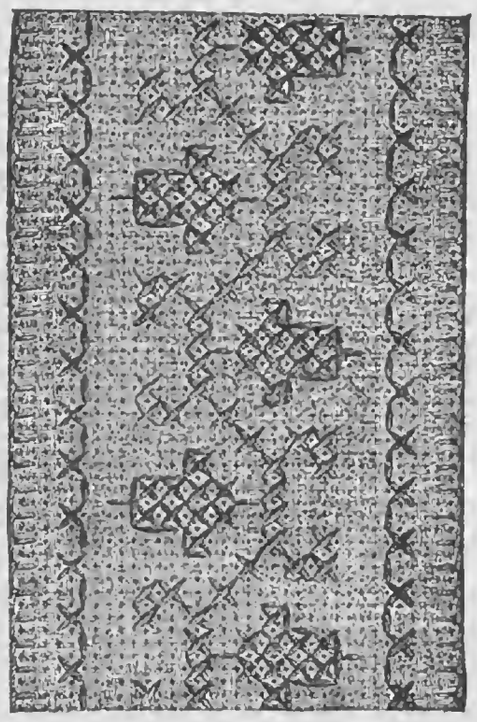

FIG. 453.

row: miss 3, 12 treble, leave 2 next stitches unnoticed. 2nd row: 3 times alternately 7 chains, miss 3, 1 double. 3rd row: 9 chain, 1 double in 4th stitch of chain scallop, twice alternately 7 chain, 1 double in 4th stitch of next chain of scallop. 4th and 5th rows: like the preceding, but at the end of the 5th row 5 more chain, 1 treble in 1st of 9 chain of 4th row, 5 chain, 1 slip-stitch in vertical part of last double of 3rd row, 3 chain, 1 double in first chain of 2d row. 6th row: 8 treble in 5 chain, 1 treble in next treble, 8 treble in next 5 chain, 3 times alternately 3 chain, 1 double in 4th chain of next scallop. 7th row: 3 chain to form one treble, 12 treble, 3 chain, 5 times alternately miss 2, 2 treble with 3 chain between in next treble, 1 chain, join to first foundation stitch, 1 double. 8th row: 4 times alternately 7 chain, 1 double in next 3 chain but one, 7 chain, miss 2 treble, 2 treble in next 2 treble, 6 chain, miss 6, 3 treble in next 3 treble. 9th row: 3 chain to form 1 treble, miss last treble of preceding row, 12 treble; repeat the 2nd to the 9th row, but in every repetition after the last stitch of the 7th row, join 1 double in corresponding chain of 8th row of the preceding pattern. Then crochet along the upper edge as follows: 1st row: double crochet. 2nd row: 3 treble, 3 chain, miss 2. 3rd row: 1 treble in 3 treble, 5 chain; repeat. 4th row: like the 2nd. The centre of the 3 treble must be worked in the treble of the preceding row. 5th row: double crochet.

FIG. 457.—TRIMMING FOR CHEMISE.—In this pattern each rosette is crocheted separately, as follows:—Close 7 stitches into a circle.—1st round: 3 chain to form 1 treble, 19 trebles in the circle. 2d round: 4 chain, the first 3 to form 1 treble, 19 times alternately 1 treble in both parts of treble, 1 chain. 3rd round: 4 chain to form 1 long treble, 2 long treble drawn up together in the chain, then 19 times alternately 5 chain, 3 long treble drawn up together in next chain, then 5 chain. 4th round 3 slip-stitch, 20 times alternately 5 chain, 1 double in 5 chain. This completes a rosette. The other rosettes are crocheted in the same way and joined together, as shown in the illustration. Thirty-two rosettes are sewn together in a circle. The front and back have ten rosettes each, and six are wanted for each shoulder. A length of seven rosettes is joined on for each sleeve (see illustration). Along the upper part of the rosettes, including the sleeves, crochet as follows:—1st round: * 1 treble in 5 chain of 2d chain scallop of rosette, twice alternately 4 chain, 1 double in 5 chain, 4 chain, 1 fourfold treble in 5 chain (only half drawn up), 1 long treble in 5 chain of 1st of the 6 free chain scallops of next rosette, draw up the fourfold long treble, 2 chain, 1 long treble in center of fourfold treble, 4 chain, repeat from *. Close always with a slip-stitch and manage to keep the work at the corners. 2d round: 4 chain, the first 3 to form 1

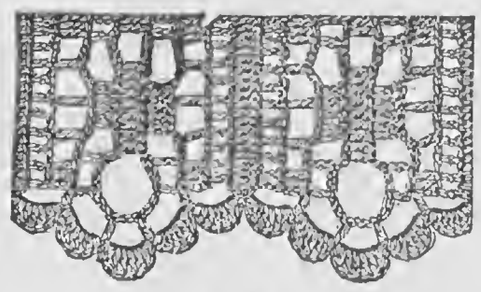

FIG. 454.

treble, then alternately miss 1, 1 treble, 1 chain. 3rd round: 4 chain to form 1 long treble, alternately 4 chain, miss 2, 2 long treble. 4th round: like the 2d round, 5th round: alternately 7 chain, miss 5, 1 double. 6th round: 4 slip-stitch, * 4 chain, 3 treble in 7 chain, 4 chain, 1 double in center of 7 chain, repeat from *. The last double must be worked in the 4th of the 4 slip-stitches. 7th round: * 4 chain, 3 double, with 4 chain between each in next 3 treble, 4 chain, 1 double in next double, repeat from *. Then crochet along the other side of the work, 3 rounds like the first three.

FIG. 455.

FIG. 459. BODICE AND FICHU.—Princess bodice and elbow sleeves of blue grosgrain silk. Down the front of the bodice pleated folds of fine white net are continued below the waist, and laced across with a narrow blue silk ribbon of the same shade as the dress. A pleated frill of lace is sewn round the net, and is finished off at the upper edge with a bow and ends of the ribbon. Turned-down collar, arranged out of fine pleated frills of lace, with narrow ruffle round the neck, tied with blue ribbon in front. On the left side a spray of white flowers and leaves. The sleeves are trimmed to correspond, with puffings of net crossed by narrow ribbon, and lace frill at the elbow under a bow of blue silk.

FIG. 458. CORSET FOR GIRLS OF EIGHT TO TEN YEARS OLD.—Corset of longcloth and white jean, with shoulder-straps of the latter material. But-

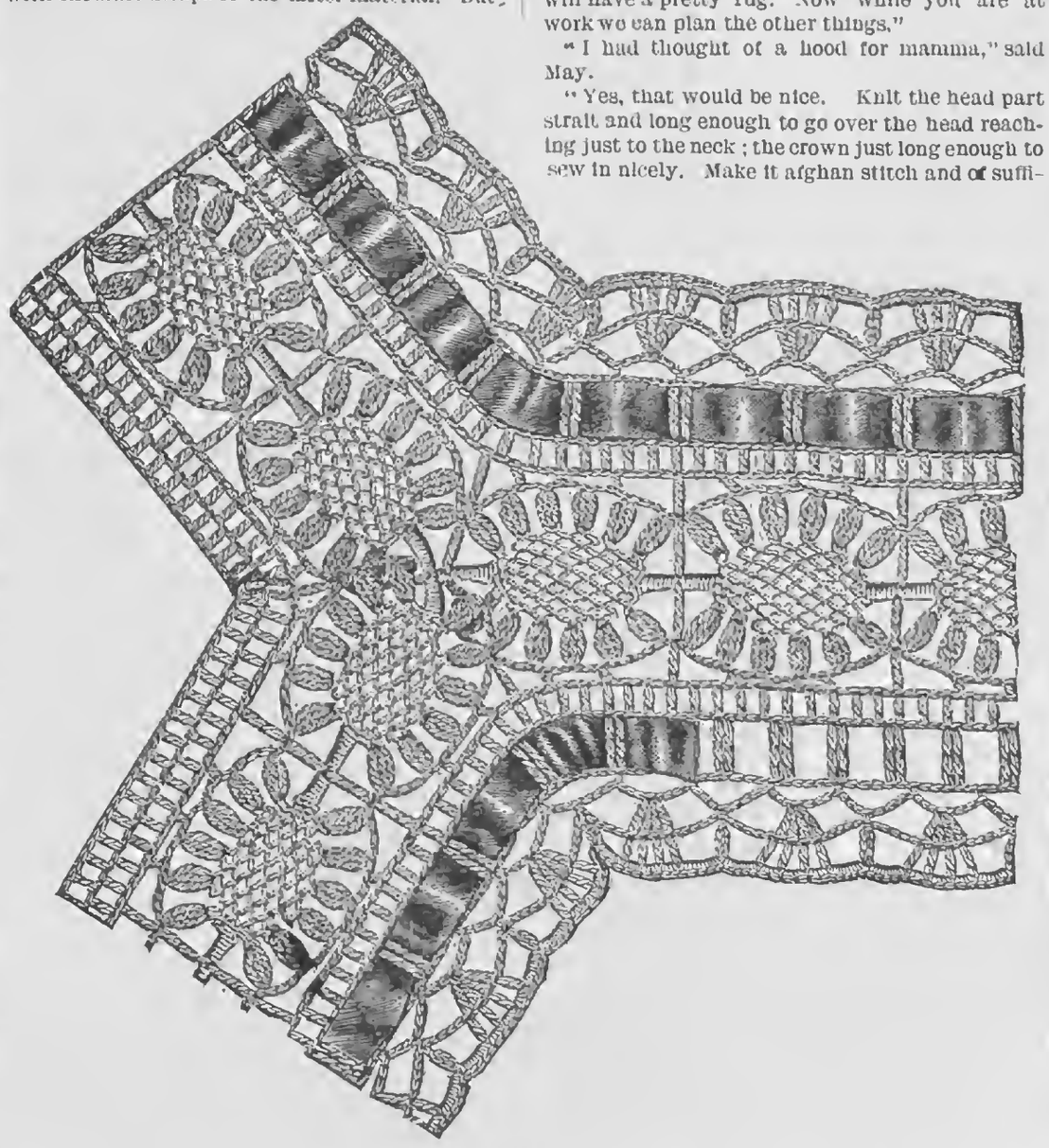

FIG. 457.

tons to support the weight of the petticoats are sewn on at the waist, and the corset is fastened with laces corded through eyelet holes.

FIGS. 453, 455, and 456. APRON FOR GIRL OF TWO TO FOUR YEARS OLD.—Apron of gray lawn, with borders and shoulder-straps of gray Aida cloth. The latter is worked in cross-stitch, with blue cotton, from the pattern given in Fig. 453.

CHRISTMAS PRESENTS.

"Oh, Auntie!" said May White, as she rushed into the house, "I want you to tell me what to make for Christmas presents. There is pa and ma; and grandpa and grandma; and Gracie, Mary and the baby. I want to make the things, for if papa gives me the money to buy them it will not seem as if they were mine."

"To begin with grandma; how would you like

FIG. 456.

to make her a nice rug to lay before her bed? Make it out of bright colors, and it will be very pretty and also serviceable, and will please her. I would braid it."

"Auntie, will you show me how?"

"Certainly; here are some pieces I have been getting for you. We will tear them into carpet rags, take four and join them together at one end. Now weave them together into a braid, turning one strand at one side over every time and the other under. Keep them doubled together even; in a little while you will get accustomed to the work then you will not mind the trouble. When one strip is braided sew another on it; in this way the ends will not be so long as to be troublesome. I will help you a little by making a center for your rug out of bright velvets made into patchwork. I will line the piece and bind it to make it firm. Braid your first strip just long enough to go around this and sew it on, taking care to join the ends neatly. Continue to add strips in this way until the rug is of the right size. Arrange the colors as nicely as possible and you will have a pretty rug. Now while you are at work we can plan the other things."

"I had thought of a hood for mamma," said May.

"Yes, that would be nice. Knit the head part strait and long enough to go over the head reaching just to the neck; the crown just long enough to sew in nicely. Make it afghan stitch and of sufficient thickness to be of use. Make a ruching where the crown is joined to the front by crocheting a long stitch drawing it an inch and a half; do not make a chain: catch it in again in the next stitch, make three together, catch the next stitch on the other side of the seam; make three long stitches, then the next three close to the ones first made. Keep alternating until you get around the crown. Make two of these ruchings in front one caught half way in the other. Make a cape to the hood, and crochet a piece on the top for ornament. Place a bow of ribbon on the top and at the neck; at the back you can put a cord and tassels, or strings of ribbon, for fastening."

"How are those little knots made in your hood, auntie?"

"When I am drawing the wool back in making the afghan stitch, I sometimes knit four chain stitches between two of the stitches, then next time take up the stitches as if the others were not there, leaving them on the right side. This makes the knot, and I arrange them in diamonds, one on each side of the hood and two in the crown."

"You might make your papa a nice long comforter."

"Gracie is crocheting one."

"Well, then, crochet him a pair of mittens."

"But grandma is knitting him a pair."

"You might crochet or knit a pair of wristlets, or embroider his initials on some handkerchiefs."

"I guess I will make the wristlets."

"I would knit them, they keep their shape better; crochet a pretty little edge around them."

"Now, what shall I give Gracie?"

"I will mention several things and you can take your choice. A pretty set of darned linen lace for her neck and sleeves, or a not tie darned with pink or blue saddler's silk; a fancy apron trimmed with linen lace; a handkerchief or glove case, or a jewel case."

"I guess I will make a lace set for her neck and sleeves. What shall Harry have?"

"You might embroider some handkerchiefs with his initials and a dog's or horse's head."

"Yes, but he would lose them in less than a week, or tear them in strings to tie something with."

"Well, then, make a pair of wristlets for him."

"I shall, I guess."

"Make a crocheted sacque for the baby; as it is to be a present, you might make it of pink and white. Make it snug around the neck, then widen rapidly on the shoulders. Make the sleeves a pretty shape and finish the whole with a pretty little edge."

"That navy blue dress you out-grew last Winter would just fit Mattie Burns."

"Why, auntie, do you suppose she would like it?"

"Yes, I know she would. She has never had so nice a dress as that in her life, for her folks are very poor."

"Well, auntie, she shall have it, and her little

FIG. 458.

sisters shall each have something to wear, too, from my wardrobe, for mamma lets me do as I please with my things; would you give them as Christmas presents?"

"Yes, dear, if they are as pretty as the dress, for probably all the Christmas presents they will get, will be from you, and they will appreciate them very much."

"Thank you, dear auntie, for your suggestions and kind help. I presume I shall call on you again for help, before I get all the articles made."

"I will willingly help you all I can."

L. E. K T.

A WORK-BAG BASKET.

MRS. J. E. S.

RATHER queer name it may be, but it just expresses what it is. In it may be put the work, thread, thimble and needles, and then drawn together and carried on the arm as a mere bag, or set on the work-stand, the top folded over, you have a neat and convenient work-basket.

Buy three-quarters of a yard of Silesia, cut two stiff, round pieces four and a half inches in diameter from a paper box, and cover each with a piece of the Silesia. Put these two pieces together so as to have the outside of each nicely covered, and sew them firmly all round the edge, this answers for the bottom. Take a piece of Silesia 24 inches wide and 24 inches long, sew the length sides of the cloth together and fold double so the seam comes inside. Sew over and over, the two edges coming together for the top of the bag, and stitch around half an inch below, making a hem for your ribbon. Work a button hole in each half in which to insert the ribbon, it to be narrow and put in double, just long enough to carry over the arm when used as a bag. Smooth the cloth out and take the opposite end and fold it over evenly to within three inches of the top. This is to be divided into five compartments or pockets for holding the several utensils. Stitch from the bottom up to the top of the pockets and down, securing each compartment. Having got thus far you are now ready to gather with a double thread and short stitches the bottom of these compartments, and sew them to the round you have already prepared for the bottom of the bag-basket. Sew it on so that when finished the pockets will be on the inside, and the button holes worked in the top outside.

Place on the table and turn the top over and down and you have a basket. The trimming may be whatever you choose, pink, blue or red Silesia with two rows of lace, one row sew the top

the other on the top of the pockets is pretty, but narrow strips of some striped cloth look well, is less expensive and more durable. You may also make the bag-basket from linen and embroider it with embroidery crewels.

CONCERNING WINTER COMFORT.

MARY WAGER-FISHER.

PHYSICIANS and other persons who occupy themselves with sanitary matters, always have something to say as the winter season approaches, about the infrequency of bathing among country people during cold weather, and the maladies that are often induced by it. City houses as a rule are warm in winter, while country houses are not; and to take a bath two or three times a week in a cold room, requires considerable courage for healthy persons, while for the frail, the shock is dangerous to wash, dress, comb one's hair and make one's toilet in general in a cold room, the whole winter through is very unpleasant. To sleep in a cold room, is for healthy persons decidedly enjoyable.

How to make the house comfortable in the winter, is a question easily answered, if the house has a hall in it, out of which rooms down-stairs and upstairs open:

PUT A STOVE IN THE HALL.

If the hall is six feet in width, this can always be done. If you cannot decide in what part of the hall to put the stove, nor where to have the stove

FIG. 426.

pipe holes cut, call in your neighbors and hold a council over the matter. Some one will have the wit to see the way clear for the stove, stove pipe and all. The stove should be for coal, so that the fire will keep all night, and never go out. The first expense will be considerable, as oftentimes a line of stove pipe will be needed as long as the moral law, and it must be put up neatly, with hooks and wire to hold it in place; when pipe is run across a room, see that the seam of the pipe is not on the under side. When there is unusual length of pipe, and the wood or coal is wet, so much moisture gathers in the pipe as often to fall in drops between the pieces unless the joining of the pipe is close enough on the under side to form a continuous trough for the water to run in, until it empties into the chimney.

With a good stove well put up in the hall, you may laugh at the cold and be comfortable the whole winter through. The hall is really the heart of the house, and if that is bright and warm the whole house will share warmth and brightness. The upstairs rooms will be warmer than those below, and if you wish your room cool to sleep in, you have but to close the door that opens into the hall and open a window. For warming a house a stove in the hall is worth a furnace in the cellar beside being more healthful—according to my notion—and very much more economical. It will not consume more than one quarter as much fuel. It will pay for itself the first winter in economy of fuel and work; and also in comfort and health and lead you to exclaim a great many times in the nipping cold weather, "Oh that blessed, blessed stove!"

I have a word to say, too, about "banking up" the house, although I take it for granted that everybody banks up his house to keep the cellar from freezing, and to add to the warmth of the ground floor of the house. A floor that is always cold is equal to a chronic malady. Cannot much of the "banking up" of country houses be advantageously made permanent? Unless the house should be built so that the ground steeply descends from it on all sides, the cellar wall can be banked nearly to the top, the windows of course being left open, the earth nicely graded in its descent and then well and firmly sodded. In nine cases out of ten, the appearance of the house will be much improved by the permanent embankment, and be relieved during the winter of the litter and untidiness that often are produced by the usual temporary protection. The cellar windows should never be banked up; for of all the rooms in the house the cellar has most need of ventilation in the winter; particularly if it contains apples and vegetables. The exhalations from decaying vegetation must go somewhere, and if there is no other outlet, they escape through the house. There are always bright sunny days in the winter, when for two or three hours at midday at least, the cellar can be thoroughly ventilated. This ventilation should be carefully attended to. To live over an unwholesome cellar is suicidal; and the most dark, wretched and muddy hole that was ever dignified by the name of cellar can be made a decent and comfortable apartment by giving it a dry bottom and sufficient light and air. When all other means of lighting your cellar fail, cut a hole through the floor above it, and put in a large pane of flint glass. It will cost a dollar and a half perhaps, but will last until doomsday, and will enable you to go into the cellar without a candle, and without fear of breaking your neck in the darkness.

Far, far better for you than Beer, Ale or Porter, and free from the intoxicating effects, is Hop Bitters.

Literary Miscellany.

INMATES OF LESTER HALL.

(Continued from page 821.)

This time the tableau was "Elaine: the Lily Maid of Astolat," and the song Cecil was singing, as she stood half in light and half in shade, was the song of "Love and Death." Miss Heriot was the Lily Maid, and when Cecil stood behind the curtain, Dr. Carewe could see the erect, graceful figure; the beautiful pale face; lustrous eyes, which had grown tragic as she sang:

"'Sweet is true love, tho' given in vain—in vain,
And sweet is death, who puts an end to pain;
I know not which is sweeter, no, not I.

"'Love, art thou sweet? then bitter death must be.
Love, thou art bitter; sweet is death to me;
O, love, if death be sweeter, let me die!

"'Sweet love, that seems not made to fade away,
Sweet death, that seems to make us loveless clay;
I know not which is sweeter, no, not I.

"'I fain would follow love, if that could be;
I needs must follow death, who calls for me;
Call and I follow—I follow—let me die!'"

The last words died away, and Cecil turned with a quick, sudden, groping movement, holding out her hands. Dr. Carewe made a step forward, but Ernest was instantly by her side, and Lawrence drew back with a bitter smile.

"What is it, Cecil?" said her lover, anxiously. "Are you faint?"

"No—no," she said, faintly. "It is nothing. It was the heat, I think. Leave me alone for a moment and I shall be quite myself again."

"You must not fail us, Miss Lester," said Mr. George, who had been watching her rather uneasily. "Remember your tableaux from 'Guinevere' will be the grand event of the evening. Doctor, come and prescribe for Miss Lester. I can't have her fainting yet, you know."

"If Miss Lester will allow me, I will prescribe a glass of champagne," said Dr. Carewe, smiling slightly.

"Thank you, doctor," said Cecil, coldly. "That is a pleasant prescription, but I do not need it."

After a pause of breathless expectation the curtain rose on those two last tableaux from "Guinevere." The first was the fallen queen at the convent at Almesbury, with the little novice, after her flight from the Court. Cecil was Guinevere, clad in flowing white garments—her face white, wild, haggard, desperate; Lottie Tyrrell the little novice, who tries to console her, and yet stabs her to the heart.

Both girls looked their parts to perfection—the guilty, despairing queen; the simple-minded child, looking at her with half-fearing, half-pitying eyes. But it was almost too true to nature; and as Cecil's face met their view, tears came into the eyes of one or two among the audience. And when the curtain fell there was no applause, but a silence which remained unbroken until it rose again on the last scene—King Arthur's visit to the convent, and his parting with the queen.

Lawrence Carewe personated the king. He stood erect, very pale and grave, but with a wonderful tenderness on his face, as he looked at Guinevere as she grovelled with her face against the floor. "There, with her milk-white arms and shadowy hair, she made her face a darkness to the king."

At his feet, her hair falling over her in heavy waves, lay Cecil. Her hands, trembling hands, lay upon the mailed feet of the king. Her face was half hidden, but the expression of agonized entreaty on her features was inimitable. And when the curtain fell there was a unanimous shout of "Encore!"

When it arose again the attitude of both were unchanged, but the face of the king had lost its pitying tenderness, and was stern and set as marble; while Guinevere's face was hidden

"I wish she would sit for me just as she was," said Mr. George, as the curtain fell again.

"What an expression! Where did she get it?"

Where? In the depths of her aching heart, which was longing for a pardon which it could not obtain—from between the pale lips which had whispered, "Ah! forgive—forgive!" in a voice of anguish which reached his ears alone. And the forgiveness had not been granted—the whispered word she had prayed for had not been spoken!

CHAPTER XXV.

DR. CAREWE RECALLS CECIL TO A SENSE OF HER DUTY.

"Doctor, let me congratulate you! Your King Arthur was most admirable, although it was a wonder to me, and to all of us, how you could resist so beautiful a suppliant."

And Mr. Brayburn looked up smilingly at Dr. Carewe's grave face, as they stood together in the drawing-room an hour after, when the children had gone to bed, and the elders were resting after their labors, and waiting for the clock to strike twelve, and usher in the Christmas-day which was so near at hand.

Dr. Carewe bowed gravely, but made no answer.

"She is very beautiful, is she not?" Mrs. Brayburn went on, looking over at Cecil, musingly.

"Very beautiful!" answered the young man, calmly.

"Poor child!" her ladyship said, softly.

And Dr. Carewe turned quickly to her.

"Your pity seems singularly misplaced," he said, rather bitterly. "Miss Lester seems a very fortunate young lady."

"You are right to say 'seems,'" said Mrs. Brayburn; shaking her head. "In this case it is all seeming."

"What makes you think so?" said Lawrence Carewe, dubiously.

"Her face," said Mrs. Brayburn, shortly. "Why, doctor, is it possible that you, who ought to be able to read countenances fairly well by this time, can think Cecil Lester a happy woman?"

He looked over at Cecil as Mrs. Brayburn spoke; and as his eyes fell on the beautiful, weary face—the sweet mouth, with its sorrowful curves—the unutterably-sad expression which never left her eyes, even when her lips smiled—he felt the truth of his hostess's remark.

"What can she need to make her happy?" he said.

"Something. I don't know what, but she wants something she has not got."

"She will find happiness in her husband's love," said Lawrence Carewe, in a constrained voice.

"Never," said her ladyship, abruptly. "That is if she marries Ernest. Doctor," she went on, impatiently, "where are your eyes? Do you think she loves her fiance?"

"Why should she not?" said Dr. Carewe, calmly.

"Why should she not? There is no reason, certainly," said the little French lady, but she does not love him. And when a woman like Cecil Lester marries a man she does not love, she soon hates him."—To be continued.

THE EYE-OPENER.

HAAS'S HOG CHOLERA REMEDY.—This nostrum is extensively advertised and sold throughout the country; but especially in the West, in spite of the fact that according to the opinion of the Commissioners appointed by the Government to investigate the disease, there is no known remedy for it. In his advertisements Mr. Haas gives testimonials in favor of his "cure" from several prominent swine breeders and raisers in the West and it is upon the strength of these that his remedy has gained most of its sale. The National Live Stock Journal for some time has been emphatic in its opinion that this Haas's "Hog Cholera Cure" is a HUMBUG, and that it would neither cure nor prevent the disease, and in its issue for last October it proposed to Mr. Haas that, if it was a genuine "cure," he should obtain certificates from several well-known hog breeders to the effect that it would either cure or prevent the disease, promising on their production that it would accept them as conclusive evidence that it had been mistaken in its expressed opinion of the character of the "cure" and thenceforth speak well of its efficacy.

In its issue for December the Journal returns to the subject, giving three certificates received from Haas, purporting to be indorsements received from well-known swine raisers. Of these the Journal has this to say: "Six days after the date of their testimonial to Haas, Shepherd Alexander of Charleston, Ill., wrote to the editor that they had no faith in any man or medicine that claimed to cure hog cholera, and that they would ask Haas to discontinue the use of their name in connection with the medicine. In a former letter they had said, "our first experience with Dr. Haas's medicine was favorable, but we are sorry to say it does not hold good." The second indorser, A. C. Moore, of Canton, Ill., speaks from hearsay only, giving no opinion of his own belief of the efficacy of the "cure" either as a preventive or remedy. The third certificate was from H. C. Castle of Wilmington, Ill., and on the day it was received, the editor of the Journal met him at the Fat Stock Show, when he denied having ever intended to give Haas any certificate as to the merits of the medicine as a cure or preventive of hog cholera, and then he dictated the following words. "I have not seen Mr. Haas's medicine tried in a case of hog cholera, and I do not know whether it will prevent or cure this disease." This was three weeks after the date of the certificate to Haas.

The journal gives extracts from letters received on the subject from several other prominent swine men who have no faith in the "cure." L. N. Bonham, editor of the Poland-China Record, says of Haas—"he is one of those vampires which, when attacked, are hard to shake off. I have notified him to discontinue the use of my name, as he makes me say what I never said." Some of his pigs had a cough. Haas insisted on trying his medicine on them. It was done, and soon the pigs recovered, and the owner gave Haas a testimonial to that effect, though he didn't know that their recovery was due to the medicine. This paper Haas used as a certificate in favor of his remedy as a cholera cure, though the pigs never had the cholera, and Mr. Bonham had distinctly told him he had no faith whatever in the medicine as a preventive or cure of that disease. H. M. & W. P. Sisson of Galesburg, Ill., say that "after a *thorough* trial, Haas's medicine will neither cure nor prevent the so-called hog cholera." Other letters are to the same effect. It is the easiest thing in the world to get certificates from some peoples' easy good nature, which can be so cunningly twisted as to bear a meaning very different from that intended by the writers. In attacks of hog cholera, there is always a time when the disease having run its course, begins to subside, and a remedy used just then gets the credit of effecting the favorable change. But that has really been Nature's work. This Haas's Cholera Cure, may stimulate the appetite, but according to experience, it neither prevents nor cures "hog cholera."

The "Monarch Lightning Saw Company," of 163 Randolph street, Chicago, was shown up in this paper nearly six months ago, when its advertisement was thrown out of our columns, our agent not being satisfied of the reliability of the concern after having investigated it on the spot. Several of our contemporaries have just discovered that, like the heathen Chinee, "for ways that are dark and for tricks that are vain, it is peculiar," and so are warning their readers against dealings with it—we repeat our old warning for the benefit of new readers.

NEW PUBLICATIONS.

How I Found It North and South.—Boston, Lee & Shepard. Paper, 50 cents; English Cloth, $1.

Born and reared on a New England farm, the author, like many another New England boy of his younger days, went to sea, before settling down in life. At the age of twenty-one, however, he married, and took charge of the "old farm,"—the paternal homestead. Loss by fire, and a desire to get along faster in the world, led him after some years to the city, where he soon learned that "all is not gold that glitters." To relieve himself from the anxieties and perplexities of the city, he at length turned back, with ardent longings to seek the former peace and quiet and true-heartedness of the country.

But the old home being then in other hands, he must look for a farm elsewhere; and it is here that his story begins,—"How I Found It."

Appended is "Mary's Statement," in which the ever-loving and devoted wife gives some pleasing reminiscences of those earlier years at the old homestead, with an account of David's management of the farm, the profits derived, and also a vivid description of the event that shrouded their home in gloom, and was the final cause of their leaving it for the city. The whole forms a story which no lover of the country and of rural life can fail to find pleasure in reading.

Spiritual Songs. With Music for the Church and the Choir. Selected and arranged by REV. CHAS. S. ROBINSON, D. D. Scribner & Co., New York.

This work, comprising 1,086 Hymns, 509 Tunes, Chants, etc., beautifully printed on superfine, linen, tinted paper, and strongly bound.

Bringing to the work all the advantages of a rich and ripe experience, with helpful suggestions from a vast correspondence with ministers and musicians, and rare facilities for the production of a work that should in its completeness surpass all others. Dr. Robinson has, it is believed, succeeded in giving to the churches a rich, most useful, convenient, compact and in every way acceptable Manual of Song ever brought before the public.

Baby Ballads; Mrs. Follen's Little Songs: New Songs for Little People. Boston, Lee & Shepard.

Besides the songs, these three little books are filled with illustrations which will serve to increase the interest excited in the juvenile community by the reading or hearing of the rhymes. Many a child may be made happy by the possession of one of these on Christmas day.

MAGAZINES FOR DECEMBER.

HARPER'S MAGAZINE is a striking Number, presenting many novel features. The first instalment of a new novel, "Anne," by an American author—Miss Constance Fenimore Woolson—is very promising. The story is sharply American.

The city of Pittsburgh is the subject of a very interesting paper by G. F. Muller.

The Number opens with twelve Christmas Carillons by Annie Chambers Ketchum, with four excellent illustrations by Fredericks.

Moncure D. Conway contributes the first of a series of papers, entitled "The English Lakes and their Genii."

Wolf's engraving of Abbey's full-page illustration of Herrick's poem, "To be Merry," is one of the finest pictures that have ever appeared in the Magazine.

Rose Terry Cooke contributes another of her characteristic New England stories.

"The Sixth Year of Quong See," is an interesting description by Catherine Baldwin of a New-Year's celebration in Chinatown, San Francisco.

Miss Sarah O. Jewett contributes a poem; "Two Mornings." Other poems are also contributed. A short story, "Miss Cabot's Guest," is contributed by Horace E. Scudder.

Charles F. Thwing shows in an able article the results of "Recent Movements in Woman's Education;" an article by W. T. Davis, "The Queen, Ministry, Lords, and Parliament," gives a satisfactory explanation of the operation of the British Government; and Mr. Edward Howland contributes a suggestive article, entitled "A Great City."

Henry James, Jr's., novel, "Washington Square," is concluded in this Number.

The Editor's Easy Chair treats of the Newspaper and Orator, the influence of Byron, the Rugby Colony in Tennessee, and the Irish Agitation; and contains a communication from Wendell Phillips correcting a very common error in the use of De as a prefix to French family names. The other Editorial Departments are well sustained.

THE HERALD OF HEALTH.—Contents: Common Mind Troubles; Health for Girls; Two or Three Health Maxims; The Most Abused—The Moth; The Close of the Year—Management and Care of the Singing Voice; Rugby—A Christmas and New

Year's Present; Clearness of Judgment—Turkish Baths in Diseases of the Eye; A Sermon; Woman's Work; Alcohol in Cold Weather; The Herald of Health in New Zealand—Heresy; Leaving off Drinking; Theory vs. Practice; A Caramel Custard; To Cook Onions; Chewing Milk; A Word for Water; Apples; A Waterproof Sole for Shoes; Nourishment in Wheat Bran; Keeping Fruit; Heels or no Heels—Current Literature.

TURKISH BATHS IN DISEASES OF THE EYE.—Dr. Cornelius R. Agnew, Professor of Diseases of the Eye and Ear in the College of Physicians and Surgeons, New York, says:

"We have learned in all the inflammatory affections of the eye, as far back as the iris and including it, to place great reliance upon the treatment of the general cutaneous surface as a most valuable if not indispensable adjuvant, and we know nothing more valuable among all the methods of practice than the Turkish bath. We rarely treat a case of conjunctival, corneal, or iritic disease now without the Turkish bath. We have seen very many cases where all other means failed to turn the scale in the direction of cure or mitigation until the Turkish Bath, was tried, and where a Turkish bath did it most effectually. We have seen cases of progressive iritis in which a mydriatic would not alone dilate the swollen irresponsive iris; where the effect of a single Turkish bath was to unlock as, it were, the immovable pupil, and to do it within an hour or two, and so to prevent destructive adhesions. We have seen many cases of obstinate inflammation of the cornea where the most beneficent results were produced by it in connection with other remedies. Pilocarpine given hypodermically is a most valuable agent for a similar purpose, if administered in sufficient doses to produce profuse salivation and sweating, but only to be employed when circumstances make the use of the Turkish bath impracticable.

"In granular lids, too, the Turkish bath is a most valuable remedy. Unfortunately it is too costly for many of our patients, and it is a misfortune that the hospitals have not yet provided them. We are happy to say that in the new plans which we are now preparing for the new Manhattan hospital building, a large portion of the basement of the structure is to be fitted with the Turkish bath."—Herald of Health.

APPLETONS' JOURNAL for December contains a novelette from the German, entitled "A Tree in Odenwald," that is eminently readable. There is a brilliant anecdotical paper on Alexandre Dumas the elder, which of itself is worth the price of the number. Then we have a long review of the concluding volumes of McCarthy's "History of Our Own Times;" and a review of "Sectional Fiction," meaning "A Fool's Errand," and other recent novels of its class, that is notably searching and pungent. There is a graphic sketch of "Paris before the Revolution," and a most interesting article called "The Roof of the World," describing the adventures of Lieutenant Wood in crossing the Hindoo Koosh, and exploring the hitherto unknown region of the upper Oxus. A. J. Faust writes entertainingly and anecdotically of "Memory;" Mr. Grant Allen discusses "The Dog's Universe," in an article that is both scientific and popular; Mr. Connolly reveals to many readers an Irish poet, Clarence Mangan; and we have some anecdotes of English rural life. The editor effectually defends the public schools against the assaults of Mr. Richard Grant White, showing that the evils Mr. White deplores are common to all classes and the age generally.

LIPPINCOTT'S MAGAZINE opens with an interesting and finely illustrated paper entitled "An Historical Rocky Mountain Out-post," by George Rex Buckman. Another illustrated article, "Our Grandfathers' Temples," by Charles F. Richardson, is a very readable account of the oldest places of worship still existing in the country. "Will Democracy Tolerate a Permanent Class of National Office-holders?" is a challenge to the Civil Service Reformers. "The Authors of Frou Frou," by J. Brander Matthews, has a timely interest in connection with Sara Bernhardt's performances. Other papers deserving of notice are "Gas-Burning and its Consequences," by George J. Varney; "An Episode of Spanish Chivalry," by Prof. T. F. Crane; the conclusion of Dr. H. C. Wood's exposition of "Automatism;" and a contribution to Shakesperian studies by Prof. James D. Butler. The popular serial, "Adam and Eve," reaches a dramatic and satisfactory termination in this number, which also contains several striking stories, including a thoroughly realistic sketch of Edinburgh street life, by the author of "Flitters, Tatters, and the Counsellor." The "Monthly Gossip" is unusually full and entertaining.

THE ATLANTIC MONTHLY contains its usual amount of entertaining and instructive matter. This magazine throughout its yearly publications does not offer the pictorial attractions of some of the other leading popular monthlies, but it contains articles of excellent merit of literary, social, industrial and other character. Families selecting several magazines for subscription should include this one. Families in suburban villages would be benefited if they would club together, each one selecting a different magazine or paper and exchanging with one another, thereby giving all the benefit of an extended reading which could not be obtained from a single periodical.

THE NURSERY—A MONTHLY MAGAZINE FOR YOUNGEST READERS.—This is a unique and much-admired work, and should be a welcome visitor in every intelligent family where there is a child to be entertained. It contains many choice pictures, and its articles in prose and verse, are adapted with the greatest care to the capacities of children.

Feeble Ladies, Aged Persons, Weakly Children, Persons of Sedentary Habits, all need Hop Bitters daily.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ONE WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

TUESDAY. Nora constitutes herself cook on washing days, leaving Janet all her time for getting the clothes out early. For dinner we utilize the oven, having baked meat and baked potatoes, with Yorkshire pudding, and some light, easily-made pudding or custard cooked in the oven. My sister is a good little cook, and prides herself on the accomplishment, and sometimes her little experiments are really artistic, "Why not have things got up prettily," she often says, when we think she takes too much time over her baking board, so we know we may expect something extra whenever Nora is cook, and if Janet had to leave me to-morrow I should not be afraid but that I could get along now with my two little girls and my neat, domestic sister. It is a great pity when young ladies feel themselves above learning all the details of housekeeping; the knowledge of these makes one so independent, and, as a dear, old lady I once knew used to romark, "It is easy to carry about with you." We canned our pumpkins last Fall when they began to show signs of decay, and filled the emptied fruit cans, cooking and straining as if for immediate use. To-day the pies of these were pronounced delicious by our household, and we have determined to try the experiment on a larger scale next season, putting up squash to be used as a vegetable, at a season when it cannot be otherwise prepared. It is a good plan to refill cans, instead of gathering up an array of empty, becobwebbed bottles and cans in the cupboard or cellar. I am always glad to see the washing done; it seems as if half the week's work is over, and with the modern appliances now-a-days, women and their help should be able to spare more time to cultivate the intellect, and improve each other.

DOMESTIC RECIPES.

Caramel for Coloring Soups, Etc.

Put into a tin or porcelain saucepan half a pound of white sugar and a tablespoonful of water. Stir over a slow fire until of a clear, dark-brown color. Great care must be taken not to let it burn. Add a teacupful of water and a teaspoonful of salt. Boil three or four minutes, cool, strain and put away in close-corked bottles. This innocent coloring substance greatly improves the appearance of soups or gravies, giving to them a rich amber color.

Noodles for Soup.

Two eggs, slightly beaten, a tablespoonful of water, half a teaspoonful of salt and flour to make a stiff dough. Work it well 10 minutes adding flour as necessary. When pliable, cut off a small part, roll very thin, dust over flour, begin at one side and roll into a tight roll. With a sharp knife, cut into thin slices. Make two horns before using them, that they may dry. Add to the soup 20 minutes before serving.

Soda Crackers.

Five small cups of flour, two small cups of corn-starch, two teaspoonfuls of salt, five teaspoonfuls of cream-of-tartar. Pass through the sieve three times. Chop two tablespoonfuls of firm lard in the flour. Dissolve two scant teaspoonfuls of soda in two tablespoonfuls of warm water, add about a pint of milk to it, stir into the flour and mix to a smooth dough. Roll out thin, cut into squares rub the surface with sweet milk and bake in a very moderate oven. Do not brown.

MRS. J. McC.

Christmas Game Pie.

This pie can be made of any game, but is especially nice when made of prairie chickens and quails. Dress and wash the birds, cutting each quail in half and the chickens into four pieces. Cut off bits of inferior portions neck, etc., and boil with the giblets until tender. Make a good paste and line a large pudding dish. Put a thin layer of cold boiled mutton, beef, corned ham, or anything you may have, in the bottom of the dish, upon this pieces of the birds, peppered and buttered. Make a dressing of bread-crumbs, the chopped giblets, minced parsley, thyme, and a small onion, seasoned with pepper and salt and the juice of a lemon. Strew part of this over the birds, then more birds and crumbs until all are in. Strain the liquid the giblets were boiled in and pour over, cover with a good thick crust and bake three hours, if a large pie. Cover with paper to prevent becoming too brown. H.H.

Mending the Coal-Scuttle.

One of our scuttles gave way on the side and at the bottom, and not having the money to buy a new one, I set to work to mend it, so as to prevent the sifting of fine coal over my kitchen floor. I made a stiff flour paste, cut some pieces of canton-flannel larger than the holes, and pasted them on, nap side down. I pasted two pieces over each hole, and after they had become perfectly dry blackened them on the outside with stove polish. The scuttle has been in use six months and is as good now as when first mended. MARY B.

Inexpensive Napkin Rings.

Cut a piece of canvas the size of a napkin ring, only larger, so that when stitched together, one end may overlap the other and be cut in points or scollops. Work the canvas with beads, worsted or silk, as fancy may dictate, leaving space for first name or initials. Line the canvas with silk—covered cardboard and bind the edges with bright ribbon to harmonize with the embroidery. A pretty Christmas gift. MARY B.

QUESTIONS ANSWERED.

Ebonizing Wood.

PLEASE give directions for staining wood in imitation of ebony. A. R. H.

ANS.—Wash any close-grained wood with a strong boiling decoction of log-wood two or three times, allowing the wood to dry between the applications. Then wash with a solution of acetrate of iron (made by dissolving iron filings in strong vinegar).

The Literary Revolution.

Victories are won every day. In January, 1879, "The Literary Revolution" was inaugurated by the publication of one small volume. At present, its list, published and in preparation, comprises nearly 175 volumes of standard books. It gives employment to about 500 hands, and now has facilities for delivering to purchasers over five tons of books a day. To meet the popular demand for the coming twelve months at least **2,000,000** and probably **3,000,000** volumes will be required. The almost wonderful success which the "Revolution" has achieved is, doubtless, to be attributed to its leading principles, which are:

I. Publish only books of real merit.
II. What is worth reading is worth preserving—all books are neatly and strongly bound.
III. Work on the basis of the present cost of making books, which is very much less than it was a few years ago.
IV. Books have commonly been considered luxuries; in a free republic they ought to be considered necessities, and the masses will buy good books by the million if prices are placed within their reach.
V. To make $1 and a friend is better than to make $5 only, and 1000 books sold at a profit of $1 each give a profit of only $1000, while 1,000,000 books sold at a profit of 1 cent each give a profit of $10,000; and it is more pleasure as well as more profit to sell the million.

LIBRARY OF UNIVERSAL KNOWLEDGE.

Large Type Edition. A verbatim reprint of the last (1880) London edition of Chambers's Encyclopædia, with copious additions (about 15,000 topics) by American editors; the whole combined under one alphabetical arrangement, with such illustrations as are necessary to elucidate the text. Printed from new electrotype plates, brevier type, on superior paper, and bound in fifteen elegant octavo volumes of about 900 pages each. It will contain, complete, about 10 per cent more than Appleton's, and 20 per cent more than Johnson's Cyclopædias, and, though in all respects important to the general reader it is far superior to either of them, its cost is but a fraction of their price. Volumes I. to VI. are now ready, and other volumes will follow, at least two each month, the entire work being completed by April, 1881, and probably sooner. Price, per volume, in cloth, **$1.00**; in half Russia gilt top, **$1.50**; postage per volume, 21 cents.

AN AMAZING OFFER.

It has been our custom in previous publications to offer special inducements to those whose orders are soonest received. In pursuance of that policy, on or before December 31 only, we will receive orders, with cash, for the set of 15 volumes complete, for the nominal price of **$11.00** for the edition in cloth, and **$16.50** for the edition in half Russia, gilt top. The price during January will be advanced to **$11.50** and **$17.25**, and a further advance will be made each month till the work is completed. Volumes will be shipped as may be directed, as soon as they are issued, or when the set is complete.

Chambers's Encyclopædia.

As a portion of the Library of Universal Knowledge, we issue Chambers's Encyclopædia separately, without the American additions, complete in 15 volumes 16mo. In this style it is printed from new electrotype plates made from very clear nonpareil type. Price, Acme edition, cloth, **$7.50**; Aldus edition (finer, heavier paper, wide margins), half Russia, gilt top, **$15**. In this style it is now complete and being delivered to purchasers.

What is the Verdict?

Anybody can afford to own a cyclopædia now.—*Press*, Ellenville, N. Y.

We can only repeat our hearty commendation of a scheme which places in the hands of the people the best literature at a merely nominal price.—*Traveler*, Boston.

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It has given me great pleasure to recommend your noble enterprise throughout Virginia. Your names will have to stand with those of Howard, Colden, Nightingale, Morse, Fulton, and Edison, as reformers of the nineteenth century.—R. S. BARRETT, Richmond, Va.

The books are received. I am well pleased with them. Your company is worth more to the common people than the Peabody Fund. It makes me feel good to look at your catalogue. You deserve the praises of all classes of the people.—Z. B. WARSAW, Yadkin College, North Carolina.

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News of the Week.

HOME NEWS.

MONDAY, Dec. 13, 1880.

THE failure of the great coffee house of B. G. Arnold & Co., New York, was brought about by last week's speculation in coffee. They risked their fortune on a rising market, and the market went the other way. There is a lesson in such reverses that is as old as the hills, but if men were as old as the hills they would not profit by it.....The first successful porcelain factory in the United States has been established in New Orleans under the management of enterprising Frenchmen. The kaolin from which the ware is manufactured is found in Louisiana and Texas. Large beds of this white clay are found in South Carolina and Lawrence County, Indiana.....The Legislature of Texas has given, by an inadvertent construction of the State Constitution, the right to women to vote in that State. The Constitution provides that every male person, 21 years of age, not subject to certain designated disqualifications, shall have the right to vote, and the Legislature has enacted, among other rules which shall govern in the construction of all civil statutory enactments, that "masculine gender shall include the feminine and neuter."..... ....A New York butcher, who incautiously ate raw pork, died at Bellevue Hospital in great agony, the attending physicians being unable to arrest the work of the ravenous parasites which were devouring him inch-meal. After death his body when laid open with the knife was found to be swarming with trichinæ.... ....The aggregate of the estimates for the initial work in the improvement of the Mississippi River is $5,133,000.....It is stated that subscriptions to the De Lesseps canal stock are coming in rapidly at New York, but for the most part in small amounts.....An East-bound express train on Ohio and Mississippi Railroad was thrown off the track at Greendale, Ill., by a misplaced switch, and Henry Meade of Chillicothe, and Scott Hill, of Floria, Ill., were killed. No other persons were hurt.

Adjutant General Drum has received a dispatch from General Terry at St. Paul, Minn., stating that he had received information from the camp on Poplar Creek and from Fort Buford which indicated that Sitting Bull would very probably soon come in and surrender at Buford.....In New Salem, near Rondout, N. Y., John Van Tassel assaulted his wife with an axe and then cut his own throat, dying instantly. He was 70 years of age and his wife 38. Van Tassel was jealous of the attention paid to his wife by other men.....

Mail Agent W. K. Syms was burned to death and Mail Agent A. G. Beller had his shoulder broken and Conductor Wessfall had an ankle sprained by the passenger train on the Chicago, Rock Island and Pacific Road, which left Atchison, Kansas, at 5.45, being thrown from the track near Edgetown Junction by a broken rail, twenty-three miles from Atchison. No passengers were hurt.....A fire originating in Iler's wholesale liquor house at Omaha spread to Collins' saddlery establishment, destroying both buildings and contents. The losses are: Iler & Co., stock and fixtures, $125,000; Collins Brothers, harness stock $50,000; Max, Meyer & Brothers, pianos, organs and jewelry, $15,000; Ramage, tailor, $2,500: McMahon, drugs, $4,000; Rodgers & Sons, $2,500, John D. Creighton and Marsh Kennard, $15,000 each; William Paxton, $5,000; McPhane Brothers, $4,000. Other buildings were damaged by water. The losses on buildings are $50,000, and on merchandise about $20,000, and are pretty fully covered by insurance.....Senator McDonald introduced a bill to authorize local taxation of legal tender Treasury notes as personal property, which was referred to the Finance Committee.

The wheelbarrow and cigar-box factory of Stevens & Co., of Cold Water, Mich., was destroyed by fire. Loss, $17,000. Merrill & Co., who occupied a part of the building as a machine shop, loss $5,000 ....William Barres, while drunk at Farmland, Ind., shot and killed his wife, and upon his arrest asserted that the shooting was accidental.....A fire at Highland, a zinc and lead mining town in Southern Wisconsin, caused a loss of $10,000 worth of property, including four stores and three dwelling houses.....A fire at Minneapolis, Minn., burned out the Jacoby block, involving a loss of about $25,000, sustained by the firm of G. M. Wolf & Co., Harris & Levy and Jacoby, photographer .....Mrs. Littlefield, who poisoned her husband and child at Stoughton, Mass., killed herself with a revolver purchased at the time when she procured the morphine for her family.

Mr. Ward, of Pennsylvania, presented to the House a bill providing for a monument to General Lafayette on the Brandywine battle field, ...Mr. Springer presented to the House a bill to change the time for electing Presidential electors and Congressmen to the second Tuesday in October.....A bill which Mr. Springer, of Illinois, presented to the House provides for a temporary increase of the Justices of the United States Supreme Court after March 4, 1881, making the number eleven, but proposes to eventually reduce the number to nine, as vacancies occur..... The bullion shipments from Leadville smelters for November aggregated in value $1,322,000 a decrease from those of the preceding two months; but there is a large increase of ore reserve at the smelters, accumulated during the month..... Dakota asks for admission to the Union as a State. .....It is asserted that the Congressional holiday recess will be unusually short.

The jury in the case of Mrs. Meeker, on trial at Montpelier, Vt., for the murder of her step-daughter, little Alice Meeker, last summer, brought in a verdict of guilty in the first degree. The case will go to the supreme court on exceptions. Almon Meeker, the son, who pleaded guilty of participation in the crime, was sentenced to be hanged.....

THE electors of the several States met on the 2d to cast their votes for the new president and vice-president, and appoint one of their number to carry the vote to Washington. It is said that Georgia will lose her vote from a conflict of State and National enactments .....A new railroad route has been opened from Philadelphia to New York. The Pennsylvania Railroad Company has complied with the order of the United States Courts directing it to open the Junction road to the cars of the Philadelphia, Wilmington and Baltimore and the Reading Railroad Companies, and the first through train to New York by the new trunk line passed over the Junction without difficulty. The Junction road was built several years ago under a charter granted by the State Legislature to the Philadelphia, Wilmington and Baltimore, the Reading and the Pennsylvania Companies. Each company was to pay one-third of the cost, and the road was to belong to the three corporations jointly, neither one to have exclusive control over any portion of it. This charter was confirmed by Councils, and the building of the Junction road was begun under the direction of the Pennsylvania Company. Three miles and a half were constructed, and bills rendered to the Philadelphia and Reading and the Philadelphia, Wilmington and Baltimore roads, each of which paid its third of the cost. The Pennsylvania people then completed the additional mile and a half, and paid for the work themselves. They rendered no bills to the other two companies, and claimed to own exclusively that part of the new road. The result was that the two former lines were denied the use of the road. Suit was entered by the other roads against the Pennsylvania, and it was only ended six weeks ago with a favorable decision for the contestants. When the decision was rendered negotiations were entered into with the New Jersey Central Railroad by the Reading and Philadelphia, Wilmington and Baltimore roads for running the trains of the Baltimore and Ohio road through to Jersey City. By this arrangement the first train over the new route were run on the first instant.

The Chief of the Bureau of Statistics in his fourth monthly statement for the current fiscal year reports the excess of exports of merchandise, stated in specie values, as follows: Month ended October 31, 1880, $31,657,154; month ended October 31, 1879, $39,944,857: ten months ended October 31, 1880, $105,458,320; ten months ended October 31, 1879, $201,443,193; twelve months ended October 31, 1880, $155,572,156; twelve months ended October 31, 1879, $269,257,132.... ....General Walker, Superintendent of the Tenth Census, in his annual report to the Secretary of the Interior, says it will probably be two or three weeks before complete statistics of the population of the country can be presented.

[St. Louis Western Watchman.]

Music Hath Charms, etc.

One of the great manufacturing interests of Boston, is the Emerson Piano Company, whose pianos are used with high appreciation and satisfaction throughout the world. In a recent conversation with Mr. Jos. Gramer, one of the proprietors, that gentleman remarked: I have used that splendid remedy, St. Jacobs Oil, in my family, and found it to be so very beneficial that I will never be without it. It has cured me of a severe case of rheumatism, after other remedies had failed.

FOREIGN NEWS.

The early freezing weather this year will greatly aggravate the distress of poor people in Russia. The ice in the Volga has closed that great river to navigation, and considerable quantities of grain, on the way from Southern Russia to the famine-stricken districts of the north, are tied up in transitu.....Dervish Pacha, Governor of Albania, is taking steps to disarm the Albanians and has forced the notables to sign a declaration of fidelity to the Sultan....The Madrid Imparcial says "Spain ought to conclude a treaty of commerce with the United States, and if the United States will consent to reduce the duties on Cuban sugar and Spanish fruit, Spain will reduce the duties on American cereals and flour,".....It is now officially announced that Secretary Thompson, of the Navy Department, has tendered his resignation, to take effect as soon as his successor is appointed. This step is taken by the Secretary to enable him to accept the chairmanship of the American branch of the Panama Interoceanic Canal Company, now quite under way..... .Affairs between China and Russia continue to wear a warlike look, ...The Paris Figaro of the 12th throws strange light on the melancholy case of the Baroness de Friedland, daughter of the Duc de Persigny. She has just been arrested, with her husband, on a charge of forgery.....Mme. Thiers, after a lingering illness, relieved by one flash of convalescence, died on the 11th in the arms of her sister, Mlle. Dosne. Her funeral will be celebrated at the Church of Notre Dame de Lorette. The deceased was only 58 years old.

A despatch from Cape Town, dated the 9th inst., says:—"Affairs in the Transvaal are very serious. The Boers are assembling in large numbers and threatening to resort to force. An attempt will be made to arrest the ringleaders, and a proclamation has been issued warning the Boers of the results of persistence in the agitation. A foraging party in the Leribe district has been compelled to retire, with the loss of thirteen colonials."..... A despatch to the Times from Dublin says each day brings fresh evidence that the country is hurrying on by strides and bounds toward revolution. Mr. Forster, Chief Secretary for Ireland, has left Dublin for London unexpectedly. It is stated that a battalion of the Scots Guards will shortly proceed to Ireland. The North German Gazette of Berlin criticises the government measures in Ireland, and says if the Peace Preservation act had not been allowed to lapse for party reasons, it would have been more effective in suppressing sedition than all the government's military measures. The Standard says:—"We understand that the parliamentary programme to be adopted at the meeting of Home Rule members in Dublin will include a resolution demanding from Parliament the removal of Chief Justice May from the bench. The meeting probably will not decide upon a scheme for land reform, as Mr. Parnell declares the onus of introducing such a measure lies with the government." A large land meeting was held yesterday near Ballina. An abusive resolution was passed protesting against the language of Chief Justice May, and expressing belief that the trial will be unfair if that Judge is allowed to preside. The brothers Moore, charged with being accessories to the murder of Wheeler at Oola, have been discharged on account of lack of evidence. A despatch to the News from Castlebar reports that a steward has been shot at Knockmore.

The Times, in its leading editorial says:—"The gravity of the situation in Ireland increases daily, and nobody can be surprised to hear that a Cabinet Council has been summoned to meet. We have reason to believe that Mr. Forster has, with most earnest and repeated remonstrances, induced his colleagues thus to accelerate the meeting of the Council. All doubt in regard to the state of the country has vanished in the presence of the charges of Justices Fitzgerald, Barry and Baron Dowse. Mr. Forster knows the meaning of these charges. The worst is proved to be substantially true."

[Milwaukee Evening Wisconsin.]

A Strong Conqueror.

According to an Illinois exchange, our days of Rheumatism are well nigh numbered. St. Jacobs Oil enters a rheumatic territory, and conquers every subject. That's right. We believe in it.

AGRICULTURAL NEWS.

The butter and cheese dealers of Chicago and Elgin, Ill., have organized for the purpose of protecting the trade against adulterated butter and cheese..... .By the analysis of Professor Collier he found the per cent of sugar in the stalk of Indian corn to be much greater the more perfect the stalks were and the nearer they were to maturity. The experiments demonstrate the importance of planting fodder corn thinner in order to get a more valuable crop.....The French are a nation of small farmers. There are more landowners in that country than in America. The farms are small; the majority are under twenty acres and a very large number under ten. It may not be that is the only reason for the money wealth of these people; they are notably economical and thrifty.....The experiment of growing ginger is likely to be tried at the South.

Chicago consumes more pounds of poultry every year than of beef .....The five great European Powers, Austria, England, France, Germany and Russia, together with the next most powerful, Italy, require for their armies, according to trustworthy estimates, 900,000 horses, and to maintain the full strength an annual supply of 125,000 horses is needed. In case of war breaking out, each country would need at least double the present number of horses before its army could be mobilized.....The Missouri State Board of Agriculture has passed a resolution asking the Legislature for at least $20,000 for the erection of buildings, the purchase of works and machinery for the manufacture of sugar from sorghum, ... The founder of the Colorado Farmer, Major John C. Peebles, and its associate editor and business manager, Mr. W. R. Case, both died at the close of November..... .The wool clip of California is put at 35,000,000 pounds—double the amount of any previous clip—isn't that rather too large an increase?..... At a late Short-horn sale Chillicothe, Ohio, 34 females averaged $95; 12 males, $76.50; $235 was the highest price paid for any animal.....John Johnson, the celebrated farmer of Cayuga Co., this State, lately died in his 90th year.

The Oklahoma movement in Kansas to settle the lands in the Indian Territory to which the Indian titles have become extinct is creating a good deal of excitement in the vicinity. The new settlers are near Hunnewell, where their camp presents a strange appearance, composed as it is of a nondescript throng, including farmers, mechanics, lawyers and doctors. The material of a printing office and two or three sawmills are among the numerous outfits. Not more than one thousand people are here, but many are coming in from all directions. Colonel Coppinger complains that the military force is not large enough to expel the intruders should a simultaneous advance movement be made. He has telegraphed for more troops and says:—"I will do my duty. The bulk of the settlers are well armed and many of them are desperate and reckless adventurers who will hesitate at nothing. They have been divided into military squads, each one of which is commanded by an officer and each is daily drilled in the centre of the camp. The Stars and Stripes are conspicuously displayed, while a number of the wagons are adorned with the same colors. The wagon covers are nearly all inscribed with "On to Oklahoma!" "No Turning Back!" "Strike for Homes!" "Uncle Sam is Rich Enough to Give Us All a Farm in Oklahoma!" and similar devices. The excitement in the Territory is intense. Bushy Head, chief of the Cherokees, is reported as saying that he would not be responsible for the result should the settlers elude the United States troops and get into the Territory. Two or three tribes are very hostile and it is known that there are a considerable number of them organized and armed ready to resist the encroachments of the white settlers. A despatch says that unless the government adopts a more vigorous policy a bloody conflict may be expected very shortly.

The next annual meeting of the American Poultry Association will be held at the exhibition rooms of the Cleveland Poultry, Pigeon and Pet Stock Association at Cleveland, Ohio, Jan. 31, 1881, at 3 P. M. Geo. S. Josselyn, Fredonia, N. Y., secretary.....Dr. D. M. Tindall, whose farm is near Red Lion, New Castle county, Del., has an apple tree from which he picked a crop of fruit in July. On the same tree a second crop formed, which he picked in November, and which was nearly as large and well formed fruit as that of July..... The cloverseed crop of the country this year is represented as much below a fair average yield. But about 40,000 bags were carried over from last year.....The lateness of the Fall rains has caused much uneasiness in California, but the wet season has now set in with a heavy, southeast storm that covered all the state, except in the most southerly counties. The rain-fall is plentiful and there is prospect of its continuance...Georgia is rapidly developing a great lumber business. The estimated product for this year will comprise 300,000,000 feet, valued at more than $5,000,000..... ....An American, largely interested in flour mills in the western states, has been inspecting mills in Hungary, with a view to adopting the machinery and system of working in America. The Hungarians have sent a commission to America to study operations. In order to be able to resist American competition in the Austrian markets.

Grocers and Storekeepers

pay 3 to 5 cents a pound extra for butter made with Gilt-Edge Butter Maker. It increase the production 6 to 10 per cent. Reduces labor of churning one-half. Gives a rich golden color the year round. Sold by druggists, grocers and general storekeepers. Send stamp for "Hints to Butter-Makers." Address, Butter Improvement Co., Buffalo, N. Y.

The Literary Revolution.

The credulity of the reading public has been severely taxed in the past year by the claims of the "Literary Revolution." A cyclopædia larger than Appleton's, which sells at not less than $3.00, and in no important respect inferior, for only $1.00; Macaulay's "England," formerly $7.50, reduced to $1.25; an $8.00 "Life of Christ" reduced to 50 cents: biographies by Carlyle, Lamartine, and Macaulay reduced from $1.25 to *three cents!*—these remarkable contrasts caused thousands who wished it might all be true to agree with the lady who frankly wrote to the publishers: "I read your advertisement, and immediately set you down as a grand swindle." Of course such claims could not long be presented without the real truth being discovered. The public is delighted to find its highest hopes realized. The verdict is emphatic.

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It is worth the while of all our readers to examine the list of books carefully as fully presented elsewhere in this paper. They can depend upon the books being all they are represented, and upon getting promptly what they may order. An illustrated article on "Book Making," taken from the Scientific American, and full descriptive catalogue will be sent free on request, by the publishers. The books can be had of the leading booksellers in principal cities.

WE would advise all our readers who ship poultry, calves, game, eggs, dried fruit, apples, potatoes, etc,, etc., to the New York market to send to Messrs. E. & O. Ward, the well-known Commission Merchants of this city, for their "Circular of Advice" to shippers of produce. This circular is very carefully prepared and contains full instructions in regard to the details we have mentioned besides a large amount of other valuable information. The firm named rank amongst our oldest and most successful Commission Houses, having a business experience of over thirty-five years, and are therefore very high authority on the subjects treated of in their Circular. Their card and address will be found in another column.

WILLIAM BLACK, the eminent English novelist, will contribute a serial story to the next volume of the *Youth's Companion*. The same paper has engaged stories by J. T. Trowbridge and Harriet Beecher Stowe, and a series of papers on interesting topics connected with astronomy by Prof. R. A. Proctor.

Tropic Fruit Laxative, an agreeable substitute for pills and nauseous purgatives. One lozenge is the dose. Physicians prescribe it. Sold by druggists.

ELIXIR VITÆ FOR WOMEN.—Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., has made the discovery! Her VEGETABLE COMPOUND is a positive cure for female complaints. A line addressed to this lady will elicit all necessary information.

For General Debility and Prostration Hop Bitters will do wonders. Prove it by trial.

Burnett's Flavoring Extracts.—There is no subject which should more engross attention than the purity of the preparations which are used in flavoring the various compounds prepared for the human stomach. BURNETT'S EXTRACTS are prepared from fruits of the best quality, and are highly concentrated. The "Fifth Avenue," "Continental," "Grand Pacific," and other leading Hotels use and endorse BURNETT'S EXTRACTS.

The Markets.

SPECIALS FROM THE CHIEF CENTERS.

Until Saturday, Dec. 11.

BOSTON—WOOL.—The market in domestic wool fully holds its own both as to prices and amount of sales, in comparison with the previous week. Somewhat over two million pounds have been moved, indicating a fair, quiet and healthy demand, especially considering the restrictions on business by the approaching close of the year. Fleeces have been comparatively quiet but firm and unchanged. Large sales of choice Ohio could have been effected at 48½c, but holders of such are asking and holding for 50c. There is a lively demand for fine delaine and combing wools, but operations are limited by the very scant stocks. Prices of these have further hardened and are up about 1c. The sales of California wool have been large, and are one of the special features of the week. A good deal has been done in Spring, including one sale of nearly half a million pounds. There is also a sale of 100,000 lambs' wool, and one of 165,000 Fall. For the moment, some manufacturers seem to have turned to these and Texas and Territory wools instead of deeces. Advices from the country are without special change and show that the most desirable wools there are very firmly held. The following are about present quotations: Ohio and Penn.—XXX and Picklock 50@52, No. 1 49@50, XX and above 48@50, X 47@48, Mich. X and above 44@46, Wis. X and above 43@45, New York 40@43, Vt., N. H. and Maine 40@43, Georgia 37@40, Combing, washed 48@55, do unwashed 35@40, Delaine, washed 48@52, do unwashed 35@40, Texas, eastern 27@30, Oregon, valley 38@40, do eastern 32@35, Nevada 22@28, Kentucky, unwashed 35@40, Western, unwashed 25@35, Unmerchantable 33@38. California—Spring 28@40, Fall 20@32, Pulled 33@50, Scoured 45@85, Tub washed 45@52, Scoured, fleece 60@95. Pulled—Super Western 35@38, do Eastern 45@50, do New York 40@45. Extras 40@45, Combing 38@45. Foreign—Canada combing 45@48, do pulled 31@45.

CHICAGO.—WHEAT. January, $1.05¼@1.05⅝@1.05⅝@1.06⅛@1.06@1.05⅝@1.05⅝ February, $1.09⅝@$1.⅜@1.07⅛@1.06¼. Winter wheat. Sales of No. 2 red at $1.03@1.03⅝ No. 2 at 90@91¼@94c; rejected at 87c. Hard Spring wheat—Sales at $1.05¼@1,05¼. FLOUR.—Choice and fancy winter extras $5.75@6.25; medium to good white winter do $5@5.50; winter superfines $3.75@4.50; good to choice western spring extras $5.00@5.50; low to fair western spring extras $4@4.75; choice to fancy Minnesota extras $5.75@6.50; common to good Minnesota do $5.@5 50; poor to fancy Minnesta do (patent) $6 @7.75; choice spring superfines $3@4; low to good superfines $2.50@3.50; Rye flour $4.90@5; buckwheat flour $5.50@5.75. Sales of bran at $9 50@11.60; of shorts at $11 on track, $13 free on board; middlings at $12 50 f. o. b; of coarse corn meal at $15.00; 1,000 beds New England do at $2.10; of feed at $18 for city ground. Corn. January, 40¾c; May 45¾@45⅝@45¾@45⅝c. Rye—Sales at 87c cash; December and January, 88c; February, 89c. bid. Barley—Sales cash, December and January $1,03. Pork December, $11.70@11.80; January $13.32½; February, $13.41½. Lard December, $8.40; January, $8 50; February, $8.03½.

SEEDS—Good to high timothy, $2 40@$2.50; poor $2.@$2.35. Clover, $4.50@$4.60 for prime medium, prime mammoth, $4.75@$5 Flax, $1.15. Prime buckwheat, 70c. BUTTER—Creamery quiet, and good to choice quotable at 30@32c, and fancy at 33c and some even held higher, while ordinary and offflavored stock quotable at 28@30c. Dairy salable to the local trade at 24@25c per lb for good to choice fresh made, and some very fancy makes occasionally for a shade more, while small orders of good to choice were filled at 20@23c; medium to fair dull at 16@18c. Ladle packed very dull at 15@17c per lb for fair to good, and choice fresh made would sell at about 18@20c. Packing stock about unsalable and nominally 12½@14c per lb for poor to good fresh made, with better stock, including some dairy, 14½@15c. Roll butter salable at 16@18c per lb for fair to choice fresh made, with occasional sales for a shade more.

CATTLE—Receipts not very large, mainly of medium and poorer qualities; prices have declined 5@10c per 100 lbs. Exporters took a few droves of prime selected holiday beeves at $6 50@6.70; Texans in light supply at $2.75@3.25 for poor to choice lots; stockers sold at $2.40@3.10; butchers' cows in moderate supply and rather dull as $2@3.25.

HOGS—Arrivals free and demand slack; prices on the whole range declined 10@25c per 100 lbs. Shippers had but few orders to purchase. Choice heavy packing and shipping lots sold at $4.80@5.20, but later declined to $4 60@4.90; light bacon in fair request at $4.40@4.80, but later at $4 30@4.50; mixed packing lots dull at $4 35@4.75, and towards the close easy at $4.35@4 55; common mixed and rough at $3.50@4; prices on Monday irregular and about 5c higher at $3.75@4 for common rough lots; $4.40@4.75 for heavy mixed packing; $4 40@4.60 for fair to choice light bacon lots, and $4.50@4.80 for fair to choice heavy shipping; lots.

SHEEP—Demand moderate during the past week and prices steady and unchanged. Demand mainly on local account. Rates ranged at $2.75@4.25, according to quality, chiefly at $3.25@3.90 for fair to good lots.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Dec. 11, 1880.

BEANS AND PEAS.—The market is quiet but strong at quotations. Some parcels of medium are going westward from the interior, and the fact materially stiffens that grade. Sellers do not seem alarmed at the pause in trade, as they feel good rates will be supported this Winter, as stock is not heavy at any point.

Marrow beans prime $1.90, fair to good $1.75@1.85, medium prime $1.65@1.70, other $1.50@1.60. pea $1.80, white kidney $1.80@2.00, red do. prime $1.85, do. other $1.65@1.75, black, or turtle soup, $1.60@1.65, lima $4.50@5.

BEESWAX.—Small sales are noted at 23½@24 for Western and Southern.

BUTTER.—The movement has been slow and it would not be surprising if some under good table grades soon show a weakness. The light supply of fancy and first-class stock is held strong, whether it sells or not. Some of the celebrated Iowa brands are reserved at 2c. above the extreme. Retailers of ordinary and good market or grocery grades do not seem pressed for stock; many of these buyers laid in a liberal quantity when prices were lower. Western butter has now good quality recommendation, and though high for Western suits the Winter purse better than State as the latter rules. Demand all local.

Creamery, Western choice 30c. good to prime, 33@35c; fair to good, 30@33c.; State creamery, poor to best, 23@32c.; sweet cream, 28@33c.; State dairies, entire choice, 27c.; good to prime, 25@26c; fair to good, 23@25c.; firkins, 23@28c.; pails and half tubs, 30c.; good to prime, 27@29c.; fair to good, 26@27c.; poor, 18@22c.; Welsh tubs, fresh fall 27@29c.; other 18@25c.; Western imitation creamery, 24@30c.; dairy, fresh, choice, 26@28c.; good to prime, 24@26c; fair to good, 21@24c.; poor to fair, 16@20c.; factory, late made, fine, 22@24c.; prime 19@21c.; fair to good, 15@16c.; poor to fair 14@15c.; rolls, choice, 22@23c.; other, 20@21c.

Receipts for the week, 24,870 pkgs. Exports for the week, 2,474 pkgs.

CHEESE.—Exporters have been in this week a little more freely for what may be called fair grades. Such parcels as could be had in the neighborhood of 11, with a sprinkling of orders for fancy stock, for which prices have settled to 12¼@12¾. The exports have reached 37,000 boxes, which in connection with an increased home demand has given a comparatively fair business. Quotations are for

State factory, fancy, at 12¾@12¾c.; do. good and prime, 11¾@12¼c.; do. fair to good, at 11@11¾c.; do. h'f skimmed, 8¾@10c.; Wisconsin factory, fine, 12¼c; do. good to prime, 11¼@12c.; do. fair to good, 10@11¾c.; Ohio factory, fine, 12@12¼c.; do. good to prime, 11¾@12c.; do. flat, fair to good, 10@11¾c.; do. poor to fair, 7@10c.

Receipts for week, 47,846 boxes.

Liverpool cable price, 63@63.

Steam for dairy products to Gt. Britain, 35@40s.

COTTON—Has had much less attention this week and the drift of the market is lower, as the advices from the South respecting damage to the crop by the recent cold wave have been more satisfactory. Latest prices are for

December at 11 63@11.84c.; January at 11.81c.; February at 11.98c.; March at 12.15@12.16c.; April at 12.29@12.30c; May at 12.42@12.43c.; June at 12.52@12.54c.; July at 12.61@12.63c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8⅜	8⅜	8⅜
Strict ordinary	9⅛	9⅜	9⅜
Good ordinary	10⅜	10⅝	10⅝
Strict good do	10⅝	11	11
Low middling	11 7-16	11 11-16	11 11-16
Strict low middling	11 11-16	11 15-16	11 15-16
Middling	11⅞	12⅜	12⅜
Good middling	12⅛	12⅝	12⅝
Strict good middling	12⅝	12⅞	12⅞
Middling Fair	13	13⅛	13⅛
Fair	13⅜	13⅝	13⅝

STAINED.

Good ordinary	8 9-16	Low middling	10 5-16
Strict good ordinary	9 7-16	Middling	11 3-16

Receipts for week, 41,811 bales. Exports do., 9,013 bales.

DRIED FRUITS.—Of apples the receipts are large, especially from Tennessee, but a large portion go to France to anticipate the new duty which goes into effect January 1. Prices strong. Peaches move out well, as also small fruits, with prices on a steady basis. Quotations are for

Evaporated apples at 8¾@9¼c. for better qualities; sliced apples at 5@6¼c. for good to choice North Carolina; 3½@4¼c. for Va. apples, 4@4½c. for Tenn. do; 4¾@5¾c for State do; 3¾@5¾c. for western Ohio and Mich. Peaches at 29@31c. for evaporated peeled; 14¾@15c. for unpeeled do.; N. C. peeled at 20@21c.; for the better qualities, unpeeled peaches at 6¾@7¼c. for halves and 6¾@7c. for quarters. Plums at 15@16c. Blackberries at 8c. Cherries at 18c. Raspberries at 25c. Whortleberries at 12@12½c.

Exports for week, 2,740 bbls. of dried apples.

Receipts for week, all kinds, 6,100 pkgs.

EGGS.—Receipts for the week, 5,515 bbls.; do last week 6,032 do. Very few straight lots of fresh arrive and buyers will not pay the extreme except for selections. The market is quiet at the price and imperfect fresh may be rated dull. Limed are in good demand, state leading the trade.

Near points 33@34, State and Pa. 31@32, Western fresh 31, seconds 29@29, Southern 3, Canadian 29@30, limed State 21@23, Western and Canadian 20@21.

FLOUR.—The market has had an easier tendency on the decline in wheat and larger supplies.

Latest prices are: $3.30@4.00 for very inferior to fancy superfine State and Western; $4.50@5.00 for poor to choice extra State and Western, odd lots and lines; $4.85@5.00 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4 65@5.20; good to choice do. at $4.60@6.35; (fancy do. up to $6 75;) red and amber winter wheat inferior to choice grade and family, at $4 65@5 40; round hoop Ohio, $4.65@5 15; and trade and family brands of do at $5.25@6.50, the latter for fancy; St. Louis at $4.90@5.65 for inferior to good extra; $5 65@6.50 for good to choice and $6.50@6.85 for choice to fancy brands; Minnesota clear, interior to very choice at $4 65@6.10, Minnesota "straight," poor to fancy, at $5 60@7.25, and patent inferior to fancy at $5.75@8.50; city mill extra at $5 00@5.75 for fair to very choice for the West Indies, do. for England, $4.60@5 for poor to very choice spring wheat, and $4.90@5.65 for winter wheat product; do. trade and family extras, $5.75@7; do, for South America, $5.80@6.25; the latter for fancy; No. 2 at $3.25@3.75 for inferior to strictly fancy.

Receipts for week, flour, bbls. 135,750; corn meal, do. 5,975; wheat, bush. 623,014; corn, do. 402,300; oats do. 266,700; rye, do. 27,675; malt, do. 55,400; barley, do. 143,700. beans, do., 15,820; rice, pkgs. 2,700

Exports for week, flour, bbls. 61,250, corn meal, do. 3,375, wheat, bush 461,900; corn, do. 264,900; oats, do, 1,330; peas, do. 2,275; beans, pkgs. 1,500; rice, 7,500.

FRESH FRUITS.—Exports of apples for week 14,331 bbls. Strictly sound apples are firm. Stock that was secured from the frost in the country is held higher. Baldwins $2.10. Greenings, $1.75. Spitzenbergs, $2@2.25 high grade sweets bring full rates. Lady apples, choice, $1@3; other, $3@6. Well-packed half bbls. meet the best demand. Cranberries are quiet but sellers have a good end of the market and quote strong prices. Cape Cod bbls. fancy, $7@7.50; good to choice, $6@6.75; poor to fair, $4@5.50; N. J., bush. crates, $1.50@2.25. Florida oranges are in better demand. Some prime stem-picked fruit is arriving for holiday use. Choice half bbl. boxes, $3.50; fair to good, $2.50@3. Pears and grapes have small inquiry. Boston pears quoted $3.50@6 ₱ box. Catawba grapes 5@7c. Peanuts quiet and steady; Va. hand-picked 5@5, other, 3½@4½, shelled 1@1½. New hickorynuts ₱ bush. of 50 lbs, $1.75, Bull nuts, 50@60. Black walnuts 50c. Pecans 9½@10c.

GRAIN.—The market has felt this week the reaction consequent upon the severe strain given it on the speculative activity only latterly, and has settled back a little and closed with a weak feeling. This turn about in prices has been hastened by the high rates bringing out supplies from farmers' hands, and the amounts on the way to market, or the "visible supply," shows a marked increase the past week. Besides accumulations have followed here on the diminished export trade as an outcome of the speculative fever. Wheat has been freely offered and has sold lower. Export demand has been very light; the shipments this week a little less than 40,000 bush. Latest sales of wheat are of:

No. 1 white at $1.16@1.18 do. December at $1.17¼@1.17¾, do. January at $1.18¾@1.19¾, do. February at $1.20¾@1.21¾, do steamer at $1.16; No. 2 white at $1.16; ungraded white at $1.14@1.18¾, mixed Winter at $1.17¾@1.17¾, No. 1 red at $1.26@1.27, No. 2 red at $1.19¾@1.20¾, do. December at $1.12¾@1.20¾, do. January option at $1.20¾@1.22¾, do. February at $1.23@1.24¾, do. May at $1.22¾@1.23¾, No. 3 red in lots at $1.15¾@1 17, ungraded red at $1.12¾@1.24¾, No. 2 Spring at $1.16, ungraded Spring at $1.14. Rye at $1 for prime State and 86c. for No. 1, and No. 2. Corn is freely offered at lower prices; latest sales are of New York No. 2 at 58¾@58¾, do. December at 58¾@58¾, do. January at 58¾@59¾, do. February at 59@59¾, new No. 2 at 57 ungraded mixed Western at 55@59, No. 3 at 55½@56, New York steamer mixed at 56@57, No. 2 white at 58@58¾. Oats are to be had at a decline. Sales of No 1 white 48@49, New York No. 2 white at 45¾@46¾, No. 3 white at 43¾@44¾, New York No. 1 quoted at 44¾, New York No. 2 at 44½@44¾, do. December at 44¾, do. January at 45½@45¾, No. 3 at 43¾, ungraded white Western at 44@47½, ungraded mixed Western 41¾@44, No. 2 Chicago quoted at 44½ afloat.

HAY AND STRAW.—Receipts are not more than the market can stand to permit a steady range of prices. Medium grades have most attention; latest prices are for

Selected retail State hay $1.25@1.35 per 100 lbs; other grades of timothy at $1.30@1.25 do, grades for railway and shipping wants at $1.05@1.10, clover mixed at 1.10, clover clear at $1, salt hay at 60@65c.; Straw—long rye, $1.05@1.10, short rye, oat, wheat and barley 65@70.

Exports for the week 328 bales.

HOPS.—Exports have dropped from 3,793 bales last week to 1,824 bales this week, and brewers keep out of the market as much as possible; consequently prices are rather weak.

	Cents per lb.	
New Yorks, crop 1880, prime and choice	22	@23
Do. medium	20	@21
New Yorks, crop 1880, low to fair	18	@19
Eastern, crop 1880	18	@22
Wisconsin, crop 1880	18	@23
Yearlings, crop 1879, choice	16	@23
Olds, all growths	4	@12
Bavarians	30	@35
Bohemians	35	@40
Pacific coast, new	20	@24

POULTRY AND GAME.—A prolonged presence of common or stale lots of dressed poultry broke the demand and the market though not better supplied has received a good winter movement. Christmas stock should be here by Dec. 23d. Large turkeys and fat geese then wanted.

Turkeys, N. J. choice, 11@12, State do. 10@11c, good to prime 9@10, Western, choice, 9@10, good to prime 8@9, fair to good 7@8, Phila., dry-picked, 12@13, Chickens, do., 12@13c.; Bucks Co. 10@12c.; N. J. 9@11c.; State scalded, 8@10c.; Western, do., 8@9c.; poor to fair 5@6c. Fowls, Phila. dry-picked, 10@11; N. J., 10@11c; scalded, do., 8@10c.; State and Western prime, 7@8c.; poor to fair 5@6c. Ducks, choice 10@12c.; other 7@9, Geese, choice 10@11c.; other, 7@9. Squabs, light ₱ doz. $1.50@1.75; dark $1.

Live poultry in large supply from the West, prices low and sale slow.

Fowls and chickens 6@7¼c. roosters 3@4.; turkeys 7@9. Ducks prime 65@75 common 40@50. Geese extra $1.62@1. 87 other 90@$1.37. pigeons 20@25.

There is a better feeling in the game trade with crisp weather. We quote prime lots only. Rabbits plenty and lower. Venison saddle quicker than whole deer.

Wild ducks, canvas back $1.50@1.75, red heads 55@75; mallard 50@65, teal, 30@40c.; common 25, quail prime trapped ₱ doz $1.25, poor 90@$1, partridge, 40@90 the latter for State. Grouse $ 1 12@1 25, drawn 80@$1, Hares, 30@35, Rabbits, 15@20, Venison, Minn. short saddle, 14@15c.; other 12@14c. Whole deer, 8@9.

PROVISIONS.—Hog products have been freely offered and have ruled as a rule easy.

Mess pork on the spot is quoted $13 75 for old in such lots as are wanted for export, while new in round lots for this month can be had at $13. Bacon at 7⅜ for long clear, and 7¾ for short clear. Lard, Western steam at $8.82½@8 85 for spot lots, $8.85 for December, $8.92½@8.95 for January, Stearine at 9. Tallow at 6½ for prime.

Receipts for week, beef, bbls. and tcs.; 1,000; pork, 13,975 bbls.; cut meats, 43,650 pkgs.; lard, 27,100 pkgs.

Exports for week, beef, bbls. and tcs. 1,150; pork, 4,200 bbls.; cutmeats, 14,221,088 lbs.; lard, 1,478,250 lbs.

SEED.—Clover is moderately active; sales at 7¾@8¾ for western; fair and strictly prime to 9 for extra choice. Timothy is slow at $2.75@2.85.

TOBACCO.—Export trade is better and there is a good home demand, with prices as last week.

VEGETABLES.—Exports of potatoes for week, 6,600 bbls. There has been some call for common sound potatoes; choice marks are firm, sellers holding the best position at the moment. Va, sweets out. Onions a shade off, though prime are steady Cabbages higher; cauliflower scarce; celery higher. Few good counts of pumpkins remain.

Potatoes, E. Rose Eastern double heads $2@4.25 State. $1.75@2; do. in bulk $1.50@1.87; Burbank and prolific $1.87; snowflake $2@2 25; do. in bulk, $1.75@1.87; peerless, $1.25@1.62; peachblows $2@2.25. Sweet Del. $2.50@3. Onions, white, $5@5.50 yellow, $3.25@3.50; red, $3.25@3,50; Chester, $3.25, beets, 75@$1, carrots, $1.25@1.50; marrow squash 40@50; Hubbard, 75c.@$1; cauliflower, $2@5; cabbage, ₱ 100, $4@7; red, do. $6@8. pumpkins, $3@5; celery, per dozen, $1.50@1.75, turnips white, 40@75. Russia 50@75.

WOOL.—Demand is very fair and prices strong but no higher; latest prices are

X and XX. Ohio fleeces at 48@48¼, medium do. at 51 fine western delaine fleece at 48@51, Ohio combing at 50@52.

LIVE STOCK MARKETS

NEW YORK, Saturday, Dec. 11, 1880.

BEEVES.—Receipts for the week 10,510 head; do. last week 12,084 do. Small supplies and no prospect of heavy receipts owing to the severe weather of a day or two past gave prices considerable start. Prime cattle advanced $1.00 per head and common to medium ½c per ℔, compared with Wednesday last. A lot of poor Va. cows sold at 7. to dress 54 lbs State dry cows sold at 2½@2¾ live weight, some at only $11@12 per head, ordinary to fair native steers 8@9½c to dress 55@56 lbs, good to choice 9¼@10¼c, to dress 56@57 lbs. Supply offered no fancy or extra cattle.

SHEEP AND LAMBS.—Receipts for week, 21,919 head; do. last week 31,529 do. Butchers seized the small supply quickly and the market closes strong. Common to choice sheep 4¼@5½, lambs 5¾@6¼, a few at $6.30 per 100, mixed lots sheep and lambs 4¾@5¼.

SWINE.—Receipts for the week, 36,481 head; do. last week 48,829 do. Market firmer with prime Western wanted at the close.

Live hogs corn 4.75@4 87, per 100, country dressed pork light 7@7¾, medium 6¾@6¾, heavy 5¾@6, city dressed State 5@5¾, city dressed Western 5½@6¼, Pork tenderloins in boxes 10.

LIVE CALVES.—With some limit to receipts the market is good for all prime calves. A few extra N. J. live have made 8c. Dressed are quoted full as they are plenty and vary in quality.

Live calves, N. J., prime 7¾, State, prime 7, fair to good 6@6¾, Mt. Holly, heavy, 6@7, medium to light 4@5¼, buttermilk, 2¾@3, grassers, 2@2½c.; dressed calves, choice 9¾@10, fair to prime 7@9, common 3@5.

COWS AND CALVES.—Supplies light, but fully ample for the prevailing quiet market. Late sales quoted $25@42 per head for common to fairly good milkers. Extras would bring previous figures.

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Reading for the Young.

FARMING FOR BOYS AND GIRLS.—NO. 7.

HENRY STEWART.

Methods of Plowing.

When one knows why he should plow the soil and how the plow should work, he will soon be able to become a good plowman, if he will use care and observation in his work. "Practice makes perfect," but perfection is only reached by thoughtful and careful practice. Otherwise, a habit of doing poor work may very easily become fixed, which a young man may find it very difficult to break. A good plowman who understands his work will be able to choose his own methods of doing it, but there are certain cases always occurring for which distinct rules may be laid down. For instance, there are some soils that need to be plowed in lands, and some in ridges, and sometimes again, what are called twice gathered ridges are desirable or necessary; in other cases as in laying down upland to grass it is very desirable to leave the ground flat and without ridges and dead furrows

FIG. 460.

By plowing land in ridges it is drained to some extent, as will be explained when we come to consider the subject of drainage; and the wetter the surface is the higher the ridges and the deeper the dead or open furrows are made. Ground is usually plowed in lands and these are made of different widths as may be wished by the farmer. A land is a narrow strip of ground across a field, which is plowed by going back and forth on each side of

FIG. 461.

the first or back furrow alternately. The first furrow should be made perfectly straight and the next which is plowed in returning back to the starting point, is laid neatly against the first one as shown at figure 460. But there are two ways of doing this, one right and one wrong. If the back furrow is placed as shown in figure 461, a hard strip of ground is left unbroken and all the defects of bad plowing will be found along this strip when the

FIG. 462.

crop is grown. If on the other hand the first furrows are turned outward as at figure 462, and the plow is then run under these, as marked by the dotted lines, the back furrow will be left soft and thoroughly broken up as seen at figure 461, and the whole ground will be left in equally good condition.

The first furrow is plowed by guides, usually

FIG. 463.

long stakes set up at each end of the land, as marked at figure 463. The three stakes are set in line and by starting from A the plow will go perfectly straight if the two stakes at B are kept in line. If the horses should swerve from the direct line, they should be stopped immediately, brought in line again, or even backed if necessary, and started again. For it is upon the correct plowing of the first furrow that the even finishing of the land depends. This is so important that the young farmer should practice laying out land and making back-furrows whenever he has an opportunity. The good plowman may indeed feel a pride

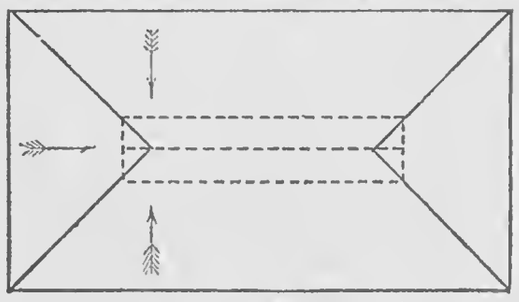

FIG. 464.

in looking at his furrows, straight as a line and even as the rule, because such work is rarely seen, as well as because the full success of all his afterwork depends upon it.

In plowing ridges the first few furrows are the most deeply plowed and laid more on edge, and on approaching the sides of the ridge the furrows are gradually shallowed and laid more nearly flat so as to leave the ridge somewhat rounded in form. Flat plowing without back or open furrows may be done by plowing around the field, or with the swivel, or reversible, plow. In the former case it is bad practice to begin on the outside of the field, because this leaves a disagreeable bank against the fence, which is made larger and broader at each plowing. The field should be laid out from the middle by measuring from each side to find the center line and from each end to find points that are equally distant from the sides and ends, measuring in the direction as shown by the arrows in the diagram, figure 464. A piece of land is then plowed, as shown by the dotted lines, of the same shape as the field and every part of which is equally distant from the fence opposite it. Then by plowing around this the fence is gradually approached, and if the furrows are evenly plowed the field will be finished without a break, leaving a perfectly level and smooth surface, the first back-furrow, even, being unseen, if it is plowed as previously directed.

The swivel plow is an excellent implement for flat plowing. The share and mold board are made to turn upon a swivel and by swinging these round at the end of the furrow the plow which was before a right hand plow, is made into a left-hand one, and the furrows are turned one after the other in the same direction from one side of the field to the other. It is well to begin in the middle of the field, plowing a back furrow as before described, then finishing one half of the field and afterwards the other half; and completing the whole by going around the field and making a headland of the ground upon which the team was turned. The use of this kind of plow may be made very convenient in many cases, and especially when planting needs to be done in a hurry, for as there are no lands, the harrowing and planting, or sowing, may be kept close up to the plow without waiting until the whole field is finished. There is much more to be learned about plowing, by the use of one's eyes and head in the field, than can be told in any book, and it should be the desire and object of every young farmer to study this out for himself, after learning something of the principles of the art which have been here only very partially referred to.

NUT-BEARING TREES—No. 4.

MAUDE MERIDITH.

The Chestnut.

"And a faint white mist, like a ghost was seen
Creeping over the valley green.
Close at the door of each guarded cell
He breathed the words of his wonderful spell,
Up sprang the wind with a loud "Ho! Ho!"
And scattered the treasures to and fro;
And the children shouted "Come away!
There is sport in the chestnut woods to-day."

This very valuable nut tree, Castanea vesca of Linneaus, and Castanea vulgaris of Lamb, is pretty well known all over the world, and in some nations, Italy and Spain, and in Eastern Europe and Western Asia, the chestnut crop is equal in importance to the wheat crop in Ohio. Chestnut bread constitutes the principal food for more than a hundred millions of people—the healthiest, handsomest, and most shiny people in the world. It abounds especially in France, on the banks of the Rhine, and on the slopes of the Jura, the Pyrenees, and the Alps. The chestnut is said to have been found by the Romans first at Castanea, a town of Thessaly, whence the fruit was named by them Castanea nut. The tree grows very thrifty, wild in forests or in the open glade and, when growing in

THE CHESTNUT.—FIG. 465.

the forest in favorable soil grows very tall and straight. In open places it spreads its branches majestically, grandly and prevents a most attractive appearance.

Some of the oldest and largest trees in the world are of this species. One of the most famous is that on Mount Etna, which has often been described by travelers, and can be seen from Acl Reale. It is 160 feet in circumference, and has a hollow trunk, the interior of which serves as a retreat for shepherds and their flocks. It is called the hundred-horse chestnut, from a tradition that Joanna of Aragon once visited it, accompanied by all the nobility of Catania, and that the whole party found protection beneath it from a sudden storm.

One of the oldest trees in England is at Trotworth in Gloucestershire, which was a boundary mark in the reign of King John, and in France there is a remarkable one at Lancerre, which is believed to be about 500 years old, and is still very productive.

Will not every boy of the RURAL reading this, plant a chestnut, and perhaps 1,000 years from now some other boys may have cause to thank him for it, for you know the lines:

"He who a tree doth plant or set
Puts after ages in his debt."

The appearance of the chestnut tree is very graceful, with long patulous boughs and delicate but ample foliage, the leaves being oblong, lanceolate, serrated with pointed teeth and smooth and green on both sides.

It prefers a deep, sandy soil, often growing on the sides of mountains, but always avoiding marshy regions. It thrives well in the most barren soil and chestnut trees 100 feet in hight, and from three to seven feet in diameter, can yet be found on the hill-tops of southern Ohio, growing in soil which cannot be made to produce five bushels of corn to the acre, and where oak, hickory and other trees are mere dwarfs.

The timber of the chestnut is most durable and excellent, and it is believed that the roof of Westminster Abbey and of the church at Great Yarmouth, erected in the reign of William Rufus, are of this timber.

The American chestnut has sometimes been separated from the European as a distinct species, but upon insufficient grounds.

The most esteemed of the French varieties is the *marron*.

The chestnut is found in rocky or hilly woods from Maine to Michigan and as far south as Kentucky. Its wood is highly esteemed for posts and rails in fences, and is also used for various articles of furniture and for house-building, office and household decoration.

The European chestnut was introduced into Virginia by Jefferson in the latter part of the last century.

There is also a smaller American variety, the Chinquapin nut (castanea pumila, Michaux), found from Ohio to southern Pennsylvania, growing from six to 20 feet high, having a solitary nut not half so large as the common chestnut, but very sweet and agreeable to eat. The bark of this tree has also been used as a medicine, its action being that of a moderate astringent and tonic.

The chestnut is eaten either raw, boiled or roasted, or is ground into meal for puddings, cakes and bread. Few persons who have lived in the rural parts of the United States but can refer to some of the most pleasant reminiscences of their childhood days in connection with chestnutting.

In pleasant Autumn days of Saturday school vacations I remember little parties of scholars strolling off to some neighboring hillside, until they reached a cluster of the beautiful trees, and while the girls spread their shawls on the grass beneath, the boys climbed the trees to shake down the plump brown nuts. Many were the merry nutting frolics of our early years. Roasting chestnuts reminds one of the times and times they have sat by the fire and, like "Jean," who—Burns tells us in his halloween games—

"Slips in one wi' tentie e'e;
Wha 'twas she wadna tell;
But this is *Jock* an' this is *me*,
She says it to hersel'."

It was here—

"The auld guid wife's weel-hoordet nit
Are round an' round divided,
And monie lads' and lasses' fates
Are there that night decided:
Some kindle, coutny, side by side,
An' burn thegither trimly;
Some start awa' wi' saucy pride,
An' jump out-ower the chimlie
Fu' high that night."

The chestnut is one of the most rapid-growing trees; is simple and easy to grow. Under favorable circumstances a bearing chestnut tree 25 feet in hight can be grown from the seed in five years. The proper way is to plant the chestnut where it is desired that the tree shall grow. Like the hickory, the chestnut does not take kindly to transplanting.

Any farmer who desires it can have a chestnut grove, or as many chestnut trees as he desires, by planting chestnuts. They should be planted before they become dry and shriveled—within a week or two after gathered—the sooner the better. The chestnut should be about half buried in the ground, and then covered with leaves or litter—barely covered, not buried or smothered. Twenty chestnuts should be planted for every tree desired; for although every healthy chestnut will germinate, and is liable to produce a tree, provision should be made against moles, mice, chipmunks and other vermin.

LETTERS FROM THE COUSINS.

In Mourning.

EVERY one of the cousins will join us in our sorrow and sympathy for the parents and sister of the two interesting cousins whose painful deaths at so young and interesting an age we have to report at this time. The following letter will tell its own sad story.—UNCLE MARK.

DEAR UNCLE MARK:—Two of our beloved girls and your accepted nieces are dead, viz: Josephine and Laura Jane Kenworthy; they had a deep love for the RURAL and talked as much about you as if you had been a real uncle. Laura's letter was in RURAL Nov. 27 she died on the 19 and Josephine on the 15th, of diptheria, Laura looked with eagerness for her letter which came too late to gratify her. When my dear wife and I saw the letter you kindly put in, our hearts felt nigh breaking. Just one week too late for her beautiful eyes to see it. I shall keep that number as a sacred treasure as long as I live; may God bless you for putting it in, we think you have a kind heart towards the little ones, your pleasant fiction gives pleasure to many lonely cottages. Laura Jane was thirteen years old Josephine nine years. One lonely little bird Helena is all we have left. These lines leaves their father and mother in deep sorrow. Yours gratefully.

H. and M. KENWORTHY.

Chebanse, Iroquois Co., Ill.

DEAR UNCLE MARK:—I think it is time to thank you for the seeds you sent me last Spring. I sowed my pinks and, when they were up nicely, a cat upset the box, and my pa said I must tell my Uncle Mark about it. The portulaca never came up, and the phloxes and mignonette ran all over the bed. My muskmelons were splendid. I had three bushels of carrots and I don't know exactly how many of turnips, and 23 pumpkins. I do not have much time to work in the garden, for I am the dairy-maid, and I care for the fowls. I had 40 to kill this year. ANNIE.

Temiscamque, Canada.

DEAR UNCLE MARK:—My papa does not take the RURAL, but I see it at my grandpa's, and read the little cousins letters, and thought I would write one to. I am eight years old, and I have a little brother two and a half years old, and we each have a pet rabbit and duck. I had some flowers last Summer, but our yard is so shady, and the chickens bothered us so, it was hard to save them. Please remember me when you send your flower seeds in the Spring. MYRTIE SWEET.

Armenia Mountain, Pa.

Bad Dreams, Disturbed Sleep, Indigestion, Stomach Gas, all vanishes before Hop Bitters.

Sabbath Reading.

VOICES OF THE LEAVES.

THERE comes a gentle whisper
Amidst the forest trees,
And tender budding leaves are seen
Of fragile form and softest green,
Kissing the Spring-time breeze.

They gladly woo the sunbeam,
They gaily open forth,
And robed in youth, all joy and light,
They deck as with a vestment bright
The pleasant scenes of earth.

Anon a deeper murmur,
The boughs wave to and fro,
And through the crowded forest leaves
And 'twere a mighty sea of leaves,
In an unceasing flow.

The storms shriek 'midst the branches
The midnight tempests wail,
And in the dark leaves' sterner hue
Ye see how oft they've struggled through
Wild conflicts with the gale.

Again, how deep a sighing
The sombre forest hath,
For now the dancing leaves are seen,
With shrivelled form and withered mien,
Scattered around our path.

They crush beneath our footfalls,
They rustle near our door,
And show us in their swift decay,
How joys once cherished fade away
To bloom on earth no more.

What say the leaflet voices
In crisp and dreary tone?
Do they not whisper to the heart
How Spring and Summer must depart
And leave but Autumn's moan?

Do they not tell the story
"Earth's fashions all decay,"
And bid us through our toil and strife,
Look ever to the Tree of Life,
Whose leaves fade not away?

CHRIST'S INTERCESSION.

THERE was one work completed by Christ, the work of atonement. When He bowed His head on the cross, and cried with a loud voice, "It is finished!"

"The great redemption was complete,
And Satan's power o'erthrown."

But there is another work which goes on continually, Christ's work of intercession. Ever since He ascended into heaven, blessing His disciples with His uplifted hands, He has been interceding, praying, pleading before God, with those pierced hands outspread in continual advocacy for His church on earth—His tempted, tried, suffering, sinning church! The Shepherd has never for a moment forgotten His few sheep in the wilderness; He has never ceased to present before the Father His own atoning work, and His perfect righteousness, as the procuring cause of every blessing bestowed on the flock which He hath purchased with His own blood.

That for which a man gives a high price is not likely to be forgotten by him; he cares for it, takes trouble to secure it from evil, puts a high value upon it; so does Christ value His purchased possession. How unlike is His care for us from the heathen idea of godhead! The deities of the most polished nation of antiquity were supposed to sit apart on Olympus enjoying themselves in utter indifference to the affairs of men: whereas, for us there is no care so tender, no love so warm or self-sacrificing as the love of Him who reigns above and yet intercedes above—the "Lamb that is in the midst of the Throne," "a Lamb as it had been slain!"

Let us think for our encouragement of his continual intercession. And let us live as those ought to do who have been redeemed at such a price, and who are of value in the sight of such a Redeemer.

TIMES OF NEED.

WHEN the mind is filled with questionings as to the great and blessed truths which we had held firmly and from which we had derived peace and strength, this is time of most urgent need. Then we should, with deepest humility and intensest earnestness, go to the throne of grace. Oh, if believers did, at such times, only comply with the exhortation of the apostle, and go "boldly unto the throne of grace," how much better it would be than allowing the doubts to do their deadly work in the soul!

A season of adversity is a time of need. Very many of God's people have, within the last few years, experienced difficulties and loss in temporal matters—blow followed blow until it appeared as if all must be taken; many of them found that "prayer makes the dark red cloud withdraw." Let us then come boldly unto the throne of grace that we may obtain mercy and find grace to help in time of need.—Rev. G. W. Humphreys.

GOD knows what keys in the human soul to touch, in order to draw out its sweetest and most perfect harmonies. They may be the minor strains of sadness and sorrow, they may be the loftier notes of joy and gladness. God knows what the melodies of our nature are, and what discipline will bring forth. Some with plaintive tongue must still in lowly vales of weary way; others in loftier hymns sing nothing but joy; but they all unite without discord or jar as the ascending anthem of loving and believing hearts finds its way into chorus of the redeemed to heaven.

CHRISTIANITY is to me, and has ever been, since I learned to live by it, not so much a fresh mystery as a revelation of mysteries—a "mystery shown," not a clouding, but an unveiling; not a new riddle whose glory is that being is the divinist, but a solution of many riddles, although indeed not of all.—Mrs. Charles.

PERSONAL ITEMS.

Nathan Barnes Greeley, brother of Horace, is a poor farmer in a barren part of Pennsylvania.

Prince Bismarck is now so much improved in health that he is laying plans for hunting excursions next year.

The friends of Senator Lamar apprehend that his health will not permit his attendance in the Senate again. He is said to be very feeble.

Mr. Edward Langtry, the husband of the "Jersey Lily," arrived in New York by the steamer City of Berlin on Wednesday. It is said the "Beauty" will also visit us.

Professor David O. Swing, talked about leaving Chicago for New York, but his congregation having raised his salary from $7,000 to $10,000 he will stay with the wicked of the West.

M. Fortado is the largest single holder of French government funds, of which he is the owner of $16,000,000 at par value, the interest on which is one million francs a quarter. This is less than one-half the sum received every quarter by Mr. William H. Vanderbilt from the United States Government securities he owns.

Olive Logan thus describes Mr. Burnand, the new editor of the celebrated comic Weekly, the London Punch. "One would never take Burnand for a humorist of the first water (as he is) by his appearance. His grizzled hair, parted in the middle and decorously smoothed down upon his forehead, his fan-shaped beard, parted also in the middle and brushed away on each side, his wide turn-over collar, beneath which a large black sailor bow takes the place of the more fashionable styles of necktie, all give him the air of a rather serious man of business, who cares nothing for dress except to be clean and tidy."

Mr. John Bright has become a very outspoken champion of republics. In his great speech at Birmingham, on November 16, he said: "For my share, I do not learn from history that everything has been wisely done that has been done by monarchs and by statesmen. On the contrary, almost all the greatest crimes of history have been committed and all the greatest calamities in history have been brought upon mankind through the instrumentality—the direct instrumentality—of monarchs and of statesmen. I would rather leave the judgment of an intelligent and a moral people informed as to their interests and their duty."

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A PRICELESS BOON to those who are UNABLE TO WALK. LEONARD BACON, D. D., HON. A. H. STEVENS, M. C., and OTHERS recommend them. SEND FOR CIRCULAR.
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Are acknowledged by competent and Scientific Judges, and by all who have critically tested their time-keeping qualities by using, to be
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Manufactured in this country, for equal price.
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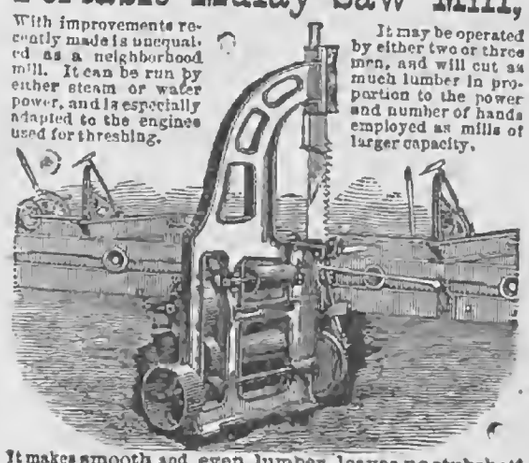

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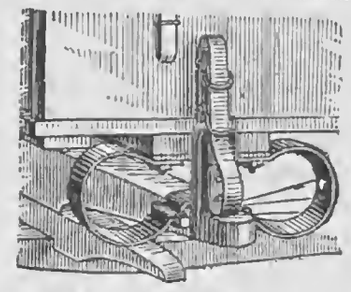
BOLSTERS SPRINGS for FARM WAGONS.



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The Public demand the Latest Improved, Simplest and Best.

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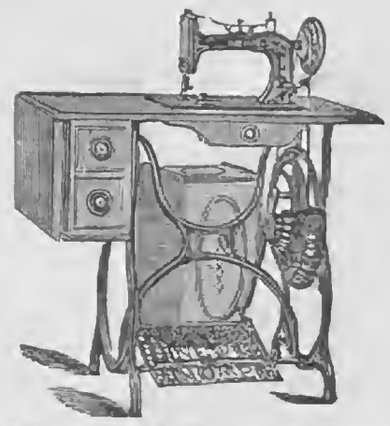

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Has Stood the Test.
The growing popularity, and large sales of the NEW HOME, both at home and abroad, are a most convincing proof of its excellence, and fully substantiate our claim.
Dealers handling other machines will do well to correspond with us.
☞ A set of our new Chromo Cards sent on receipt of stamp.
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Wells, Richardson & Co's
PERFECTED BUTTER COLOR
It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say **IT IS PERFECT.** Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**
USE ONLY THIS THE FIRST AND THE BEST

Humorous.

A MAINE paper says: "The types last week made us say that 'the showers were not sufficient to meet the wants of the 'milkmen,' &c., instead of 'millmen.' "

JUDGE to an unprepossessing tramp: "What are your means of living?" "I am an inventor." "Ah, indeed. And what have you invented?" "Nothing as yet; but I am on the lookout."

A PHILADELPHIA quack informs the public that he is not exclusive: "If a patient wants it gentle and mild, I'm a homœopath; and when anybody wants thunder and lightning, I'm an allopath."

THE editor wrote "An Evening with Saturn," and it came out in the paper, "An Evening with Satan." It was mighty rough, but the foreman said it was the work of the "devil." And it looked that way.—Norwich Herald.

I SAID to my little girl one day—"what a large forehead you have. It is just like your father's, you could drive a pony carriage round it. To which her brother five years old, said, "Yes, ma, but on pa's you can see the marks of the wheels."

"WHAT is your father's occupation?" asked the teacher of a new scholar. "Mum?" "What does he do for a living?" "Oh, he bets on thur election, I guess. Marm told him last night that's all he'd done for a month."—Boston Transcript.

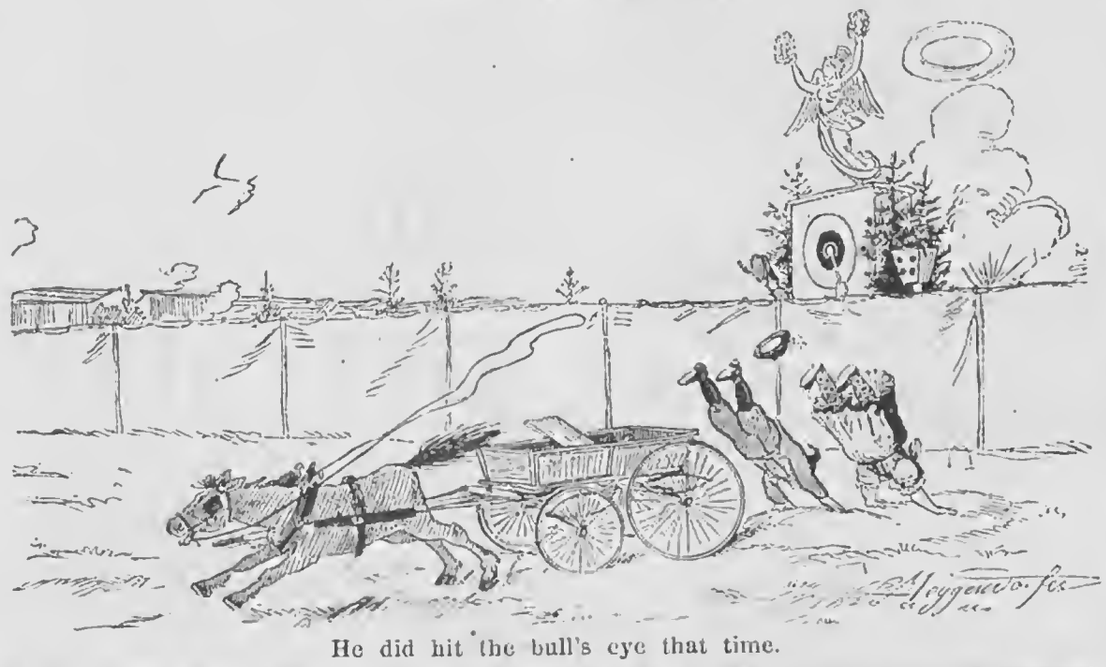
NOTHING maddens a man more than to come down to breakfast and have his wife tell him that he has been talking in his sleep, and refuse to give away what he said. Not that his conscience troubles him; oh, no! he is only after psychological facts.—Lowell Citizen.

"DO YOU love her still?" asked the Judge of a man who wanted a divorce. "Certainly I do," said he; "I love her better still than any other way, but the trouble is she will never be still." The Judge, who is a married man himself, takes the case under advisement.

EVERYBODY has heard of the jolly Dutchman who, when the steamboat was likely to sink, succeeded, after much trouble, in finding a life-preserver large enough to fit him. While he was trying his best to blow it up, a young fellow standing by said: "You can't fill that with wind, it leaks. Don't you hear it siss?" "Ish dot so?" he replied. "Vell, I dinks den, I better keep de vind in myself."

OBSERVING THE TARGET PRACTICE.

Now let's see if he will hit it!



He did hit the bull's eye that time.

Regularity Ensures Health

Of the physical structure. To restore it persons whose bowels are out of order, or whose digestion is imperfect, should use Hostetter's Stomach Bitters, a corrective of disordered conditions of the secretive, evacuative, and digestive organs without a peer. The most serious consequences result from a neglect of reformatory measures, where constipation is allowed to gain headway. For this as for many other disorders usually found in conjunction with costiveness, such as dyspepsia, biliousness, nervous derangement, headaches, vertigo, morning nausea and the like, the Bitters has long been recognized by the public and the medical profession as a genuinely efficatious remedy. Its action is never sudden and griping, like that of a violent purgative, nor does it like the average cathartic, tend to deplete the system and weaken the bowels. On the contrary, it invigorates and soothes while it regulates.

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Bicycle riding is an accomplishment easily acquired, and is rapidly becoming the most popular of out-door sports; as a health restorative it is invaluable, bringing into action every muscle of the body, strengthening the lungs, and invigorating the wearied brain. The practicability of the machine is generally conceded throughout the country, and the thousands of bicycles in daily use are constantly increasing in number. Send 3c. stamp for catalogue, with price list and full information. THE POPE M'F'G CO.
59 Washington Street, Boston, Mass.

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BRATTLEBORO VT.
Send postal for free Illustrated Catalogue.

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GRIST MILL.
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W. L. BOYER & BRO.,
Philadelphia, Pa.
Also Manuf'rs. of Celebrated *Union Horse-power, etc*

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LAXATIVE
UNLIKE PILLS,
And the usual Purgatives, is pleasant to take,
And will prove at once the most potent and harmless **System Renovator and Cleanser** that has yet been brought to public notice. For **Constipation, Biliousness, Headache, Piles,** and *all disorders arising from an obstructed state of the system,* it is incomparably the *best curative extant.* Avoid imitations; insist on getting the article called for.
TROPIC-FRUIT LAXATIVE is put up in bronzed tin boxes only. Price 60 cents. Ask your druggist for Descriptive Pamphlet, or address the proprietor, J. E. HETHERINGTON,
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Compact, substantial, economical and easily managed.
Guaranteed to work well and give full power claimed.
Engine and boiler complete including governor, feed pump, drive-pulley, etc., etc. at the low price of

3	Horse power....	$240
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Only mills made with Cast Cast Steel Grinders.
Warranted superior to any in use, for all purposes. Will grind faster, run easier and wear longer. *Satisfaction guaranteed.* Also, Corn Shellers, Feed Cutters, Cider Mills, &c. Send for circulars and prices.
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Manufacturers of
MILL STONES
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State you saw this in RURAL N.-Y.

BADGER STATE
Butter Color.
Received the only honorable mention granted to any Butter Color at the International Dairy Fair of 1879. If not for sale by your dealer, send for circular, &c., to the manufacturer, E. SHELDON, Fort Atkinson, Wis.

CIDER PRESSES AND GRATERS.
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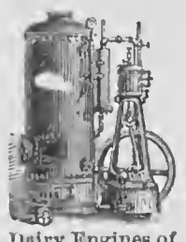
THE NATURAL BUTTER COLOR
Was awarded the diploma of highest merit at the International Dairy Fair, New York, by the Committee of Judges, also at the St. Louis and Illinois State Fairs. It is the cheapest and best in the market. Cheese color by the gallon. For sale by dealers. Manufactured by P. S. WHITE & CO., Fort Atkinson, Wis. Write for circulars and price list.
Mention THE RURAL NEW-YORKER.

PAYNE'S FARM ENGINES

Established 1840.



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B. W. PAYNE & SONS,
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Mill Manufactory
Established 1851.
GRIST MILLS,
OF FRENCH BUHR STONE
Portable Mills for Farmers, Saw Mills, etc.; 16 sizes; over 2,000 in use. Price from $80 up. Complete Mill and Sheller, $95. A boy can grind and keep in order. Adapted to any kind of suitable power. Complete Flouring and Corn Mills.
NORDYKE & MARMON CO.,
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THE request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness.

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Please find the names and addresses of ..... subscribers, at $ ..... each
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P. S.—Six cents additional in stamps must be enclosed if seeds are desired.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

Vol. XXXIX. No. 52. Whole No. 1613.

NEW YORK, DEC. 25, 1880.

Price Five Cents. $2.00 Per Year.

[Entered according to Act of Congress, in the year 1880, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Farm Topics.

IMPROVEMENTS OF FARMERS.

RICHARD GOODMAN.

So much is said and done for the advancement of agriculture in its inorganic aspect, and also in the improvement of the various breeds of domestic animals, that we are apt to overlook the status of the agriculturist himself through whom, willingly or unwillingly, these advances and improvements have to be made. The position of the sons of the soil in every portion of the Old World since the Roman conquest, has been so ignoble that they have hardly been accorded any rights which the other classes were bound to respect, and it was only after the settlement of this country that the actual farm laborer was able to enter upon his own land, and the higher idea of property, of exclusive right and ownership was allowed to exalt his conceptions. The early settlers, notwithstanding their severe privations and dangers, were happy in felling trees and cleaning forests to build their houses and make their farms, for they were creating homes and property which would descend to their children, and knew no other landlord than the government, whose rent, in the shape of taxes, was so light and necessary to the general welfare that it was cheerfully borne. Society was not composed here, as in the older-settled countries, of great and wealthy persons who possessed everything, and of a herd of people who possessed nothing. All were animated with the spirit of an industry unfettered and unrestrained, because each person worked for himself, and the farmers were the ruling class, as they were the most numerous and the importance of their avocation to the whole community was realized.

As the country increased in population and wealth, commerce, manufactures and the arts and professions began to come to the front, and the farmer to retire to the background. The high offices of State, the representative and Senate chambers were no longer filled from the agricultural ranks, and it seemed as if the class whose work underlaid the whole fabric of the Republic, was to be relegated to the same position their co-laborers in the Old World occupied. But, happily, that great ennobler, the common school, in conjunction with those higher seminaries called colleges, was accessible to farmers' sons, and the latter were enabled to retain some of the advantages their fathers had gained, and in this more recent period schools especially fitted for their own instruction have been chartered by the General Government in connection with every State in the Union. Farming as a business has become profitable in all its departments, and there is hope that the decadence of the farmer in his social, educational, political and monetary surroundings has ceased, and that he is again to come to the front, breast to breast with the other prominent classes upon whom the prosperity of the country depends.

After the five or six years of depression in all business interests, we have started again as a nation at an unexampled rate of speed on the road to affluence, we have resumed specie payments, our exchequer is filled with gold poured in from abroad, everybody is happy and hopeful who can and does work, and yet few perceive how much of this enhanced situation is owing to the products of the soil and the labor of the farmers—how the gold we receive from England and the Continental nations is in payment for the wheat, corn, beef and other results of the toil of the six millions of men and their families who constitute the great substratum of the Republic. Few realize the importance of the labors of these men and of the necessity of their being educated for their business so as to compete successfully with the cheap labor of the Old World, or else there would no longer be the objections continually to be fought down, even in enlightened Massachusetts and New England generally, to the maintenance of schools for their especial instruction—measures which alone in Germany, France and Europe generally have enabled those governments to possess a body of soil cultivators who can scientifically and profitably furnish food for their home consumption from their worn and impoverished soils.

The very improvements themselves in agriculture fostered, and in many cases, fathered by outside persons — with the introduction of new and valuable breeds of cattle have, in connection with agricultural journals and gatherings, greatly assisted in the growth of the farming community in intelligence, wealth, better style of living and dress, more sociability and a wider horizon of ambition. No person of ordinary character can give his attention to the more systematic and scientific modes of cultivating the soil without an increased interest in the pursuit of general knowledge connected with his calling. No owner and breeder of expensive stock but mends his ways and substitutes neatness for disorder and dirt, regularity for irregularity, and has his mind enlarged because the unwonted expenditure of capital necessarily begets the impetus to make all the surroundings suitable to a profit therefrom, and consequently the animals are treated tenderly, kept cleanly, fed properly, and thus care and attention soon extend to the whole farm.

It isn't a great many years since my herd of Jerseys were received at Tokun Farm through a chorus of jeers *en route*, and a shorter period since the success of my efforts in the State Board of Agriculture to prohibit the thirty-one county societies from bestowing premiums on grade bulls, seemed to threaten a dissolution of social farm life, and one would think from the debates on the subject at the clubs and annual meetings of these societies that a great blow had been aimed at the agricultural prosperity of the State. But the introduction of Jerseys here and elsewhere has led to much greater care in the dairy, in the farm and in the stables than theretofore known, except in special instances. Butter-making has been lifted into a science, and the use of thoroughbred bulls now generally established, has enhanced the value of our ordinary dairy and working and beef cattle from one-third to one-half more than they would otherwise have been worth.

Better than all this, the farmers themselves have grown in mental stature, realized the benefit of these and corresponding advances, and carried their families along with them; the discussions at our farmers' clubs have ceased to be like those of a camp-meeting, the venting of mere personal experiences, but deal with principles and established facts. The necessary care given to the cattle and the farm has extended in doors; the kitchen has ceased—though there are too many exceptions—to be the general drawing-room, pork is no longer king in the larder, pies have in some measure decreased, the girls' complexions have been improved with their manners and habits, and the boys have ceased, in many cases at least, to be gross in their ways and unconcerned about their calling. Scorn as we may the "almighty dollar," that reigns with no more supreme sway on this side of the Atlantic than the other, it is a great educator, and the man or woman who, by honest labor, is steadily earning a support and a little over, is not only happy and contented, but alive to investments and increase of capital and its profitable use. We may laud the parsimony and think of the French peasants who, in the moment of peril to their country, rescued her by their savings, but the very qualities which brought about this result have kept them in gross ignorance and poverty, and allowed their intelligence to be stunted and their condition to be not a whit better than that of the serfs of the Middle Ages. Much better to spend reasonably a portion of their earnings, educate therewith their children, improve their farms, make money out of money, as do our wide-awake farmers, and thus become not only intelligent cultivators but multiply the chances of their children to ascend in the social scale and stand on an equality with the best.

Our farmers have yet much to learn, but education of the proper sort is being forced upon them, and what with the facilities of book-learning at school, money making by new processes of grain culture and dairying, by exports of cattle, sheep and all grain products and other means constantly opening, it will be the coming farmer's own fault if he is not in all respects on a par with his fellows of whatever trade. Farming has ceased to be a mere monkish employment for persons secluded from their fellows, but has become one of the open and constantly improving industries, and he will succeed best in it who adds brains to his handiwork.

WINTER FARM WORK.

It is not an easy matter to arrange for profitable employment upon the farm during Winter beyond the immediate care of stock. The chief object will be to get everything out of the way, which will take up time and interfere with the active labors when Spring opens. To do this everything should be put in readiness for immediate use.

If muck is wanted or other absorbent, it is just as easy to dig it in Winter. A great part of the business of draining is also as well done while but partially freezing. If there be timber to get out; if trees have fallen which should be saved for fuel; if fencing material should be moved; if tools have to be repaired and painted; if a supply of fuel is to be gotten up; if any portion of the buildings needs repairs; if there is manure to haul, then the farmer knows at once the advantage of having these tasks forwarded.

In some instances swamps may be drained as readily in Winter, and if a sand bank be at hand, the clayey soils may receive a coating. If there is no ice-house there should be one made and filled. But to search for new or outside employments upon the farm during the Winter months, and of a character that the farmer may be supposed to be conversant with the pursuit, is quite another thing.

In earlier times the farmer got up and prepared a huge wood pile. He sawed, split and shaved shingles. He prepared a considerable quantity of flax fiber, and the wife spun and wove it. He made his boots and shoes. He pared and dried apples and pumpkins. He made apple sauce. But nearly all of these employments are gone.

If there be cows and a supply of foods for dairy purposes, the most profitable season for butter and milk is in the Winter; also if he have food and can obtain sheep for fattening them, there is profit in so doing. The Winter should be the time of care of stock and marketing of crops already secured, and of recreation and recuperation, and repreparation for the active times of Spring and Summer.

The farm is but a factory for producing a certain kind and quantity of produce, and the calculation, and the preparation of tools, and the procuring of fertilizers are largely Winter labor.

APPLES FOR STOCK.

I notice that there is considerable discussion as to the value of apples for feeding stock; some writers claiming that they are of considerable value, others that they are of very little. This subject is evidently not sufficiently understood. When farmers are willing to draw apples several miles, and sell them at prices ranging from five, to twenty cents per bushel, for cider or evaporating, as they have done this season, they evidently consider them of no more value for feeding. Why should we not trust to "common sense" upon this subject, and be governed by the instincts of our stock?

Our animals eat apples greedily when they have the opportunity and is not this good evidence that apples are valuable for feeding? The appetites of our cows, horses, and hogs have not become vitiated by the use of tobacco, whisky, or highly spiced food, consequently their tastes are to be relied upon to a considerable extent.

My opinion is that apples are worth, at least twenty five cents per bushel for feeding, either, to cows, hogs or horses. Feed lightly at first, as should always be done when changing feed, and increase the quantity until you feed as much as will be eaten freely but still leaving the animal with a good relish for the next meal.

I think that our best authorities are agreed that apples are valuable food for mankind, and it is only when our stock are under consideration that the "doctors disagree."

Why this difference? A celebrated English doctor says: "Apples, our most common fruit, are good food raw, baked, stewed or in a tart, or pudding. Of course, a large portion of an apple, as of all fruits, is water, but the nutritive portion is very pure, and has the best effect upon digestion." Does any one doubt the correctness of the above statements? If not, why doubt the apple being just as valuable, as food for stock? An occasional farmer has discovered that apples are valuable for feeding purposes. One of the largest dairymen in an adjoining county feeds them by the hundreds of bushels, having large orchards and also buying largely of his less well informed neighbors. Another has just set an orchard mostly of Tallman Sweet, for no other purpose than to raise apples for stock feeding. Plenty of such instances could be given, but are probably needless. When people generally understand this subject, apples will be a more profitable crop than at present.

It is of little consequence for feeding whether apples are sweet or sour, but the best varieties for mankind, are also the best for stock, while an apple of too poor a quality to be eaten should not be grown for feeding. Suppose an apple to be mostly water, our stock need water, and can it not be given them as advantageously with their food as in any other way, especially in cold weather? NELSON RITTER.

Onondaga Co., N. Y.

Ensilage.

The question of green food in Winter, or a preservation of food in a more natural state is one in which the farming industry is soon to have great interest.

The health of humanity is much enhanced by the preservation of green, juicy, succulent foods, and there is no question but the condition of all animals would be improved by a preservation or production of a natural condition of food for them so far as possible.

The announcement that vegetables, fruits and meats may be preserved in a preparation of water for almost any length of time suggests the feasibility of the erection of tanks sufficient to cover cart-loads of apples and other green things kept at a temperature above freezing and the withdrawal and use as wanted.

The preservation of beet tops in France is made practicable, and a few experiments in such preservation in this country show favorable results.

The question then arises how to increase the supply of fodder plants and roots and fruits and vegetables at the same time, and which shall be of a character to be thus preserved, and also to complete the experiments with the systems of preservation.

Few things but keep better in cellars or shut out from the air, and many articles keep better in moist cellars or in water. Every good farmer knows the benefit of an underground

cellar for freshness for vegetables, while in many articles, like celery, beets, cabbages, turnips, and the like, if they are set in the ground late in the Fall and wholly covered, top and sides, below frost, both tops and roots are preserved fresh.

Were the fodder crops cut before ripening and carefully cured, a part of the suggestion of more succulent food would be realized and the addition of supplies of roots for feeding with hay and grain would do a great deal more, if it were generally practiced. C. B. C.

Horticultural.

RURALISMS.

THE RURAL lately gave a portrait of the Jefferson Grape, and a fair representative bunch. I have for years been through Mr. Ricketts's grapes, each year taking notes, and I claim to know something about them. As he has sent them out from time to time during the past four or five years, on looking at my notes, I have been compelled to say each time, "Well, Ricketts seems to be keeping his best till the last," and I have said it loud enough to be heard by hundreds. It is so with the Jefferson, which, with the exception of the exotic seedling Welcome, is thus far the best grape Mr. R. has parted with, and of excellent quality it is. It is not, however, his best grape, as the public will some day have the pleasure of knowing. The Jefferson is so good that I hope it may find a congenial home in all parts of the country. If the really good grapes we already have would only meet this requirement, we might be content for a while. I see there is likely to be considerable disappointment unless it be distinctly remembered that the Bacchus is not a table, but a wine grape, and it promises to be one of the best for this purpose.

There are probably few of the readers of the RURAL who have any adequate idea of the magnitude of some branches of the flower trade in the city of New York. Take, for example, the Lily of the Valley, the roots of which are all imported. I had an opportunity lately of examining some statistics carefully collected by Mr. Peter Henderson for his new "Hand Book of Plants;" and it appears from these that a *million* of roots of the Lily of the Valley are forced in Winter in the city of New York alone, for which $50,000 are paid by those who make up the flowers. This business of forcing has reached such a state of perfection, that, by the aid of a refrigerator, flowers of the Lily of the Valley are now to be had every month in the year. If the reader will bear in mind that these Lilies are forced on a corresponding scale in every large city in the Union, he will get some idea of what is annually spent for this one flower alone.

Take another example. It is only a very few years since the white Roman Hyacinth began to be forced for the use of the florist, or, in fact, was known here at all; and yet already over 400,000 bulbs are sold in the city of New York for forcing, and the number is rapidly increasing every year. The bulbs are sold in quantity at four cents each. The white Roman Hyacinth is forced very much in the way that the Lily of the Valley is. Add to these two the roses, carnations, violets, etc., that are grown in corresponding quantities in all the principal cities in the country, and one feels his breath beginning to go.

Of all the small shrubs I have grown, I know of none more beautiful in Winter than Spiræa Thunbergii. Its real beauty is not fully developed, however, till the plant is at least three years old. The spray is small and delicate, and prettily recurved. The leaves are about an inch long, and very narrow and willow-like. The plant is quite dwarf, and rather solidly furnished, except it be thinned out. It is not a plant for the barbarous practice of heading in. Up to the present time, (Nov. 27,) with the ground frozen as hard as a rock, and covered with four inches of snow, the plant does not seem to have lost a single leaf. It is a mass of rich purple and green, reminding me of some of the Japan Maples. To my mind, it is now a much more beautiful object than when covered with its tiny white flowers very early in the Spring. It would seem to be almost evergreen. When you make out your promised list of shrubs, Mr. Editor, please add this to it. It is one of those modest things very likely to be overlooked.

HORTICOLA.

Australian Botanical and Experiment gardens are quite taking the lead in some things. They have 78 varieties of sugar-cane undergoing test, and it is believed that the new sub-tropical nation will, by and by, be a sugar-producing country. Twenty varieties of rice are under cultivation also to test the practicability of growing that cereal. In Northern Queensland horticulturists have 8,000 coffee plants which promise well, and are also planting the cocoa tree.

CHARLES DOWNING tells us in reply to an inquiry that he deems the Caroline Raspberry a very promising variety and worthy of cultivation. The Caroline has not yet fruited at the Rural Grounds—hence the RURAL has no decided opinion to express.

Entomological.

REMEDY FOR CABBAGE WORMS, Etc.

In reading the RURAL and a couple of Western agricultural papers, I notice that the cabbage worm has been plentiful and busy during the past season in nearly all parts of the country, and of the many remedies advertised for the pest, I have tried several with slight success; yet I have hit upon one thing which has proved an effectual safeguard. I had a large patch of more than a thousand plants, many of which were completely riddled, nothing but a skeleton being left when they began to head, but one thorough application of unleached dry wood ashes at once killed every worm it touched and stopped the ravages entirely for several weeks, every plant taking a new and vigorous start. Later on, seeing millers flying about thickly, I made a second application over a part of the plants, and as a result obtained as fine a lot of large heads as I ever saw when no enemy was near. No further attention was required except ordinary tillage, though before I used the ashes I was about to abandon the patch as worthless. According to the size of the plants, from half to a whole shovelful of the ashes was thrown on top of each cabbage, the only care being to cover it well. If cabbage raisers who read the RURAL will employ this remedy next season, they will be certain of a fine crop in spite of any number of cabbage worms. So far from the ashes having had an unfavorable effect on the growth of the plants, these grew more vigorously than ever after the application; every plant seemed to receive new life and health therefrom. This remedy has proven so thoroughly effectual in my case that I wish to impress its importance as strongly as possible upon all cultivators of the cabbage for use next year, satisfied that it will prove thoroughly satisfactory in their case also.

Of the Yellow Ovoid Mangel from the RURAL's free seed distribution, I have a very fine crop, the roots ranging from five to ten pounds each. They are very excellent for table use during the season, and I think they might be fully equal to or ahead of the mangel-wurzel for feeding stock, being fuller of saccharine matter.

C. C. Y.

Liberty Centre, Ohio.

The Apiarian.

BEES IN WINTER.

THE problem of successfully wintering bees is one that has perplexed, more or less, our best apiarians, and it does not yet seem to have been satisfactorily solved. Three methods have been advocated with regard to the location of the hives in Winter first, on the summer stands, second, in cellars, and third which is essentially the same as the second, that of burying. The common opinion, we believe, is that bees can be wintered as well out of doors as anywhere provided the necessary precautions are taken.

(1.) Bees should be provided with a sufficient amount of food for the winter. Prof Cook says that to winter safely demands that the bees have 30 pounds by weight, not guess, of good capped honey, though coffee A sugar is just as good. A syrup made of two parts by measure of A sugar, and one of water, fed warm in the cap each evening will be carried down very rapidly. Sticks of plain white candy thrust down between the combs among the bees, before their honey is quite exhausted, will greatly lengthen out their stores. But bees have been known to die even when there was honey in the outer combs. It is well known that with the approach of cold weather, bees recede from the outer combs and gather into a compact mass in the center of the hive, so as to husband their animal heat, but as these central combs are not generally well supplied with honey eing rather for ising the brood, the bees soon exhaust the supply within reach, and die rather than move *en masse* to the combs which they have before deserted.

(2.) Extremes of heat and cold must be avoided. If the temperature of the hive becomes too high, as may be the case when within doors, the bees become restless, eat too much, and if confined to their hives, are distended with their fæces, become diseased and die. Hence the necessity of allowing the bees to have a purifying flight, when the hives are out of doors, when the weather will permit it.

Too low a temperature is likewise detrimental. To keep up animal heat they must consume more food, are uneasy, exhale much moisture, which may settle and freeze on the outer combs, preventing them from getting at the needed food, even if they were so inclined. It is also liable to produce fungus growths.

(3) Particular care must be taken, when hives are out of doors in the winter, to protect them from piercing winds which so powerfully tend to exhaust their animal heat. One authority says that bees, if sheltered from the wind, will endure a temperature low enough to freeze mercury without suffering as much as by exposure to a powerful and long continued current of air, some 40 or 50 degrees warmer. This may be an extreme statement but there is doubtless much truth in it. It is desirable that the temperature should be kept between 35° and 50° Fahrenheit through the entire winter, which may be done by boxing up the hives with straw or chaff, leaving the entrance open for exit.

If bees are kept in cellars they should be moved thither before cold weather and should remain until April or May, though, if there are any warm days in the winter, they may be taken out of the cellar and permitted to fly about. Towards night return to the cellar.

If bees be buried for the winter, it should be done in sandy and well drained soil. Hives should be placed beneath the surface of the soil, then a mound formed above them to afford sufficient protection. Five colonies treated thus in 1877-8 lost all together less than one-half gill of bees.

J. W. D.

Scientific and Useful.

A NEW THEORY.

THE growth of plants is accelerated by heat, and retarded by cold, a fact which sugggests the question: in what manner does this affect the tissues, and how is active growth at one time, and either a temporary suspension of growth or the death of the plant at another, produced by extremes of temperature?

Sap is elaborated during the growing season very rapidly and copiously, the increasing heat of the season expands the tissues, making constantly more room for its ready flow through the whole plant. As the extreme heat of Summer comes on, the tissues begin to dry up, to harden; their expansion is sensibly checked; the sap also becomes thicker, less in volume, more sluggish, and as the cool nights of Autumn chill the fibers, and the heat of the day checks their expansion both laterally and longitudinally, the sap channels become hardened, shrink, and prevent the sap from rising; in common parlance, the plant ripens in every part, but more especially in those parts most exposed to the changing temperature of the season.

As the cold of Winter encroaches, the sap is compelled by the obstructions to its upward progress, to descend to the roots which, being below the surface and protected from heat and cold by the soil, offer the only refuge. This evidently causes the first-formed fibrous roots to decay and disappear leaving only the surface roots to increase in size and to put on a bark similar to that of the trunk, able to resist both heat and cold. The effect of cold causes the newly made roots to descend till below the reach of that degree of cold which is death to them. This process has the effect of ripening the whole structure of the plant from root to fruit, except those root fibers which are powerfully stimulated to resist the approach of their deadly enemy, and burrow in the deeper soil to escape him.

The difficulty which novices have in successfully growing house plants, lies in an attempt to thwart the season's natural effect upon their pets; the rooms are kept too hot as Winter approaches; the plant does not ripen, and one night of sharp cold kills outright the plant made delicate by improper treatment at the most critical time of its life. Growth of a plant may, in houses made for the purpose, be continued without any ripening of its tissues, but the plant becomes over-grown, long-jointed, long-legged, with a few leaves at the tips of the branches, and none below, as many no doubt have noticed in the common Fish Geranium, a plant very seldom nicely grown except by very careful and experienced gardeners.

A close observation is necessary to learn the temperature at which each plant "ripens off;" a season of rest must follow that period, and a gentle but regular growth be induced till that period arrives again. To those who love plants, and to grow them handsomely, I recommend their close attention to the habits of each plant. These are as varied as the plants themselves. Soil is not of half so much importance as sensible management. One of our foremost and most successful gardeners has discarded entirely the 29 different kinds of soil recommended by one seedsman, and for years past has used but one soil, but he adopts a management of each variety of plant exactly suited to its natural habits and demands. It is asserted that if the earth were at once relieved of its present extremes of heat and cold, and a temperature of, say, 75° established, one month's time would suffice to smother all animal life with the exuberance of the fungus growth which would take place.

S. RUFUS MASON.

Dodge Co., Neb.

The Garden.

THE FARM GARDEN.

PROBABLY no recollection of the farm is more interesting to the boy, grown to be a man in the busy scenes of the city, than that of the garden of his childhood. And if any picture of Eden ever comes up to his mind, it is that beautiful spot. When rightly cared for nothing is pleasanter, nothing of more interest or beauty, and no portion of the farm of more profit.

This, too, is the part of the out-door work in which the children, the boys and girls and the mother may take chief interest. There is no healthier, pleasanter occupation for women than gardening, and nothing more tends to develop that beautiful love of nature in the mind of the boy or girl than the employment in and the association with the garden as it may be, and should be, upon every farm in the land: both useful for fruits and vegetables, and ornamental for flowers and taste in design.

If one rides in the country of a Summer day, he cannot help feeling impressed with the beauty of the few blooming rose bushes, and the sweetness of the few flowers on the border of the garden, or in a plat by the front door; nor can he help an expression of regret, and a feeling of dreariness where no such examples of taste and thrift are found.

If you would drive the children from the farm, instilling into their natures a dislike and distaste for rural scenes, see to it that there be no flowers to shed their fragrance nor enliven the scene; that there be no pleasant, shady nook, or rural retreat, no taste in green, or arbor, or fountain, to arrest the fancy or the eye. But to the boy or girl reared amid the beauties of nature's scenes, and with a home rendered attractive by fruits, and flowers trellises, walks, and arbors, and an abundance of the good things which may be grown in every garden, no matter how far away his steps may wander, there will be a tender thought for the homestead and a tear of regret that his childhood did not always last, or that his life were not still in the midst of such scenes.

The purpose of the garden should be threefold, to supply the most wholesome portion of the farmer's diet, to afford beauty and attractiveness to the eye, and to cultivate taste in the household, and to afford a plot of ground for the practice of the children in caring for flowers and vegetables and as an incitement to the knowledge thus gained.

All these may be in one and the same locality, or in two or three different places, as preferred. Some place near the dwelling is preferable for the family flower bed, and also for the childrens' garden. The vegetable garden may be by itself further removed, may be large or small, cultivated as a garden, or most of the garden crops may be grown in the field.

The orchard may be to the north and west of the garden for shelter and protection to it, and the vineyard and small fruit garden may be a part of the plot selected. But there should be no mixing nor mingling of fruit trees and vines, nor of small fruits and vegetables, nor vegetables and flowers. Let each have its own allotted space, and let the tallest plants, trees, or shrubs, be on the north and west, and gradually grade down in diminishing hight until the vegetable garden is reached, which should be on the east and south side, with the fullest exposure to sun and warmth. The greater proportion of things grown in gardens are semi-tropical and need abundance of sunshine and moisture.

The garden plot should also be selected with reference to good soil, and good drainage; the soil should be deep, cultivated deep, and thoroughly enriched, and of a just medium of soil and sand, clay and loam, to enable the earth to remain light and mellow, and to hold fertilizing elements. If the soil is not thus constituted, it should be made so by the mixing of clay or sand as required, and all stone should be carefully removed. All this extra labor is required and rendered necessary from the fact that the same spot is expected to remain for a long time in use as a garden, and, because also, many kinds of seeds are very small, and their shoots tender and require a very soft, pliable and mellow soil to allow them to germinate and grow freely.

In the soil where fruit trees, or shrubs an perennial plants are to be set, as well as asparagus, rhubarb and rose bushes, the

soil should be loosened up to a great depth and not only thoroughly enriched but if charcoal, old bones, scraps of leather, chip dirt, or a quantity of coarse sand are placed six inches or a foot below the top or mixed with it, it will tend to keep the soil loose and prevent drought or the drowning out by too much rain, and also enables the roots to obtain an easier circulation. Lightness of soil and a capability of receiving air and moisture are almost as good as fertilizers. S. S. B.

Miscellaneous.

TELL KNOWLEDGE, NOT GUESSES.

GEN. WM. H. NOBLE, BRIDGEPORT, CONN.

Nobody has a right to put forward, in such a journal as the Rural, his whims and guesses. We don't want even thought-out opinions, unless backed up by facts and logic. Most men like to see themselves in print, however crudely and thoughtlessly they write. When the average man spreads himself on the wants and ways, the goods and ills of rural life, we get about as many notions as Mark Twain had from his friends to cure a cold. Some offered cures might help, but a good many would be sure to kill.

The world is old in all the happenings of rural life, yet every little while somebody pops up with a small fact, tagged to a very big but lame conclusion. A man with a fever, drenched in a storm or ducked in a stream, gets well; right-away. This water-cure is set down as sovereign for fevers. Somebody kills the coccus or bark louse on his fruit trees with linseed oil; out comes linseed oil as a cure-all for these pests. So through all that happens in the orchard or on the farm. No one has any right to declare what follows an event, is its logical result. Cause and effect want a good deal closer studying and linking before you ask our faith. The seeming cure may turn out only "a delusion and a snare."

I am a little akin to the sanguine man of whom Col. Ingersoll says: "Show him an egg and right off he sees the air full of feathers." I am so glad to get hold of an insector coccus-killer, that I try it at once. I went for that linseed oil and the coccus, and in the end I think "cussed" the remedy. All I have to say, is, plously, if you want to kill the coccus and your trees, too, paint them, as I did, from top to toe with linseed oil.

Now, what started me out in this foray, after braggart whim-whams and cures, was the self-complacent talk of some one about the woodpeckers which girt, with eyelet-hole platoons, our pear and apple tree trunks and limbs. It was in some rural journal, perhaps the Rural [No, it was not the Rural.—Eds.] that he called the little fellows "sap-suckers," and said, "shoot the rascals." Just which little hammer-head does this business I know not; but it was some branch of the family which he has thus doomed without judge or jury, while he left the rest of the breed with a good name, scot-free. This sentence of outlawry was backed up by the claim that the little hammer-heads made holes either out of pure "cussedness," or to suck the tree sap, which fancied doing got them a bad name.

Now, I don't think, of themselves, that those eyelet-hole bark wound sdothe tree any good; as little do I believe the little fellows plant those platoons around the trunk, either in wantonness or to suck the sap. It's a poor help to wisdom in the orchard to charge a wanton and even a food-sucking act without close scanning of their doings. There may be other sap-heads around, that neither see nor do half as brightly as our lively, gray-plumaged, wintry friends. The woodpecker knows too much to waste his time sucking sap when there is none, or to make those holes just for the fun or the wrong of the thing.

In the first place, no sap flows in the season when the little fellows dig these tiny wells; if there did the sucking of sap would do no harm. The Irishman, seeing their red caps, thought the little fools were hammering their heads all "bluggy" just for fun. Is the man much wiser who deems the industrious rat-tat-too, and busy hammering sheer wantonness?

The woodpeckers are no fools. They know what they are about. The whole tribe are our best helpers in the orchard, rapping for hollow spots to pick out the worms within, sticking their bills under loose bark, to lance with barbed tongue the insect crawler or crysalis. Rat-tat goes the bill into the rotten wood; down the splinters fly; out comes the worm that feasts on and makes decay. Through the currant bushes the little bird flits, and hearkens to the borer's gnaw. Rap goes his little trip-hammer and out comes the tunneling grub. He hunts all over. I saw one the other day getting a meal on a lilac, out of the enemies of its blossoms.

Now, if anybody has studied up this sap-sucker's work, his motive in hammering out these tiny holes, let him tell us, and shame my ignorance. I suppose they are made in digging after insects, but I do not claim to know. But let nobody tell about this what he *thinks*, but only what he has studied and *knows*. If this sap-sucker, like the heathen Chinee, is up to "ways that are dark," and "tricks that are vain and peculiar," lets hoot and shoot him out of the orchard. But first let us kill off the budcating English sparrow.

NEW AGRICULTURAL COLONIES.

The time is fast passing away in the United States when land of a character and in locations desirable may be had for the purpose of planting model communities, as Mr. Hughes and his associates are doing in East Tennessee. In this instance, also, the undertaking is on a scale in which only capitalists can engage. It requires money, and no small amount either. To take up several thousand acres in Texas or Dakota or in other Territories is not, however, a difficult matter, but to carry the authority with it of social regulation, and, added to that, a company coming together with a few hundred dollars each, willing to rough it until their settlement grows, cannot always be depended upon for good order and sobriety.

Character, habits, education and religious belief are not always compatible, even if there would be much of either of these.

In America, too, few persons are willing to be second in any colony or settlement, as by far the larger number in Mr. Hughes's New Rugby Settlement must always be. The highest places must be open to competition, and there must be individual independence.

Tennessee may charter this experiment of establishing a young aristocracy, in which one part of the society are "gentlemen" and the other "coachmen" and "gardeners," but should the latter two branches become most numerous, they might some fine day vote the "gentlemen" out of office.

There is nothing less than the State organization practicable in America, boroughs and shires and model utopias or cantons and duchies cannot now be made to take the place of universal society and good order. The State organization is also increasing in dimensions and threatening to become of national dimensions of industrial good order and good citizenship.

This English settlement of Rugby is, however, doing a good work in directing attention southward, where the best climatic opportunities are now presented for new settlements, and causing a nation-wide inquiry, besides suggesting to the people of the States of Virginia, Tennessee and Kentucky that it will be a very easy thing to invite a well-to-do, intelligent, industrial population, as well as much capital to their midst, by a little judicious making known of the advantages awaiting. Advantages, too, which may be augmented to an almost unlimited extent, for no part of the world has greater natural resources or a more delightful climate. C. B. C.

WANTED, A FIRE-PROOF FRUIT EVAPORATOR.

In this vicinity a new interest was developed this Fall in the direction of drying fruit, apples in particular. Three of Williams's patent evaporators were erected in this county, two at Pen Yan and one at Starkey. The one at Starkey and one of those at Pen Yan ran but a few weeks before they caught fire and were burned. The other has done a fine business, but at what profit, I do not know. At any rate the owners paid out a good deal of money for fruit that would otherwise have gone to waste. There is a job for some inventor to devise some arrangement that is not quite so sure as this to burn up, or down. It must be made of something besides pine boards. The business is not going to be abandoned on account of the combustibility of these machines; for some genius will overcome that. The trade will demand the evaporated fruit for a good many reasons, among which not the least is its economy in use. If properly evaporated in the first place, and properly handled by the cook, it is as good as fresh fruit, without any of the liability to decay, while it takes much less room to keep it.

By-and-by will grow up the necessity of grading the evaporated fruit according to varieties, for there is as much difference in the qualities of apples after drying as before, for no apple that is not good to cook fresh will be improved in the least for that purpose by drying. There are a few varieties of Fall apples that it would be well to cultivate for early drying. Among the very best, I think, is Clyde Beauty. It is a good grower, an abundant bearer, and of the very best quality for cooking, either fresh or dried, and it is just perfection dried. I throw out these hints that those interested may profit thereby.

Yates Co., N. Y. W. H. Olin.

RURAL BRIEFLETS.

In a late number of this journal we made bold to allude to the illiberal spirit which many members of the agricultural press display towards one another. In the current number of his Experiment Record, Mr. Conrad Wilson thus remarks upon our allusions:

"The Rural New Yorker justly criticises the weak, unwise and timid policy of some editors, as shown by their declining to insert the advertisements of rival papers. There are a few journals that carry this principle so far as to refrain entirely from noticing, alluding to, or even mentioning the name of any paper of the same class that succeeds in making itself popular, or that is supposed for any reason to be a dangerous rival. This seems to us a great mistake, as it appears to imply not not only a lack of courtesy, but equally a lack of self-confidence and courage." . . . . .

We had supposed that our agricultural contemporaries would have referred to our immense yields of corn as a mere matter of agricultural interest, produced as they were at a comparatively small cost. The weekly and daily newspapers and several of the magazines spoke of it freely. But we have yet to see any mention of it in purely agricultural journals. Touching this phase of the illiberal feeling displayed by agricultural editors, in general, towards each other, we quote the following (Vermont Watchman) from the pen of Dr. T. H. Hoskins:

Big Crops of Corn.—There are not many things more contemptible than the petty jealousy that exists amongst editors. Amongst political editors the way in which they "run" politics, and the chasm that exists between the political ideas of most of them and anything approaching genuine patriotism or statesmanship, demonstrates the urgent need of the proposed "school of journalism." But that in the liberal profession of agriculture and its journalism a mean and petty jealousy should prevent the acknowledgment and praise of merit, is simply disgusting. The reason, is, perhaps, that most of the conductors of agricultural papers are not farmers, and have no real part in or sympathy with the soul-enlarging pursuit of agriculture." . . . . . .

Dr. Hoskins goes on to state:

The editor of the Rural New Yorker is a farmer and horticulturist. We have seen his farm, walked about it with him and talked with him, and know that he understands the practical side of his business better than most farmers. He has the past season demonstrated this in various ways, but especially by accomplishing the feat of raising, upon different fields, crops of 261 bushel baskets of "Blount's Dent" and of nearly 300 bushel baskets of "Chester County Mammoth" ears of corn to the acre. We have yet to see this noticed in any other agricultural paper on our exchange list. . . . . .

The Niagara Grape.—On looking over the Rural of Nov. 6, I notice this remark about the Niagara Grape, "The quality is no better than the Concord." Now, I have not seen the "Niagara," but I wish to say that if it is *as good* as the Concord, the owners of it may congratulate themselves for having the next best grape there is in the country, for there is none so popular as the Concord in the New York market. C. W. Idell.

333 Washington St., N. Y.

Keeping Grapes—In a late Rural is an inquiry "How to Keep Grapes?" An easy and cheap way is to dip the stems of each bunch into melted, not hot, beeswax, and then wrap each bunch carefully up in cotton and lay away in drawers in a cool, but not cold, room. Care must be taken that the grapes are in perfect condition. Mrs. M. V. A.

Almost the only demand in our large city markets is for new butter. New butter in January and February as well as in June and September, and so far as the dairymen of the country cater to this want, they seem to be successful. Probably twice as much creamery or imitation creamery butter is now sold during Winter as of all other sorts put together, and it brings the highest price because of its fresh flavor.

Mending Cracks in Stoves.

The following recipe for mending cracks in stoves costs nothing and is one that I can vouch for: Equal parts of ashes and salt made into a paste by adding water. Fill in the cracks and it will soon get hard, and you will find your stove as good as new. R. B.

Now let the Rural New-Yorker go ahead in its noble work, and let other journals and other farmers everywhere take the hint, not only for corn and wheat, but for all food staples, and let them take up everywhere the universal refrain, *more food from an acre, and less cost for production*.—[Conrad Wilson in the Business Farmer and Experiment Record for November.

WHAT OTHERS SAY.

Mr. Mechi, of England says, in the Mark Lane Express, that those who have witnessed his wheat crops during the last thirty years must be convinced that on the poorest soils, such as his, great wheat crops can be profitably grown, under the needful conditions, one of them being selected seed; and this he obtains in all his cereal crops by a powerful blower, which, being used after the ordinary dressing machine, leaves only the heaviest and most perfect kernels. After doing this, one is surprised by the large number of imperfect corns that have been blown out. He has grown his largest crops of wheat, over seven quarters per acre, on several occasions on those portions of the field sown, or rather dibbled, with one peck per acre, one kernel in each dibble hole. Wheat crops require a very highly fertilized soil, for, owing to its root formation, Liebig tells us, that in order to produce one full wheat crop, there must be within reach of the roots, the manure elements of 100 wheat crops.

Again he says, quoting Liebig, although the land is not sufficiently rich, or manured to produce a full wheat crop, many rye crops can be grown, and when these fail, oats, which possess a greater number of roots and more exhaustive power, can still succeed after the rye fails. If, then, we are to grow large crops of wheat (and none but large crops can compete with foreign supplies and prices) it must be by enriching our poor lands, by means of a more abundant supply of manure. Land can never be too rich for wheat, provided we do not over seed.

The Plymouth Rock is gaining a reputation in England. A writer in the Agricultural Gazette says: "I hear that Plymouth Rocks are the fowls which either do not moult in November, or which moult and lay at the same time. If so, then we have the coming bird before us, and we shall all hear more of the breed."

THE COTTAGER AND HIS LANDLORD.

A peasant to his lord paid yearly court,
Presenting pippins of so rich a sort
That he, displeased to have a part alone,
Removed the tree, that all might be his own.
The tree, too old to travel, though before
So fruitful, withered, and would yield no more.
The squire, perceiving all his labor void,
Cursed his own pains, so foolishly employed,
And "Oh," he cried, "that I had lived content
With tribute small indeed, but kindly meant!
My avarice has expensive proved to me,
And cost me both my pippins and my tree."
—Vermont Watchman.

A Splendid Early Pear.—Petite Margnerite, says W. C. Barry in the Cultivator and Country Gentleman, is one of Mr. Andre Leroy's seedlings, and it was held in such high esteem by that celebrated French pomologist that he named it after the youngest of his granddaughters. In the year 1863 it was first offered in France, and in this country, it has been on trial several years, but not until recently have its merits been recognized, and its propagation and dissemination seriously undertaken. This shows how much time is required to determine the value and to raise a stock of a new fruit. It is of medium size, just large enough to be acceptable as a dessert fruit; skin green, covered with grey and brown dots, and sometimes bronzed on the side exposed to the sun; flesh greenish white, fine, melting, juicy, acidulous, with a pleasant perfume. Ripening, as it does, about ten days before the Bartlett, it possesses a particular value as an early pear. As a fruit of the very first quality it can be highly recommended to connoisseurs for the table, but it is not large and showy enough for market. Mr. Leroy, in his Pomological Dictionary, describes it as the best pear ripening in August. Mr. Barry believes this statement to be as true in America as it is in France.

Acorns for Animals.—In Saxony and some other parts of Germany, according to the London Ag. Gazette, considerable store is set on oak "mast" as a winter food for sheep, and where other food falls short the acorn crop is looked forward to with no small degree of anxiety. In the New Forest in Hampshire, in Middlesex and in Hertfordshire, large quantities of "mast" are now being gathered in. In the former county whole herds of pigs are turned loose to forage for themselves at this season of the year, and receive but little of any other kind of food. Although tolerant of acorns far above that of beasts and sheep, the practice of allowing pigs an unlimited amount of unprepared "mast" is not to be commended. If given in large quantities for long periods swine become surfeited, and altogether indifferent to them, while at the same time they lose rather than gain flesh, and where pushed too far the system becomes disordered, the lymphatic glands enlarge, and the balance of health is upset. Moreover, used in excess, the meat is rendered hard, stringy, and lumpy, and loses its brightness, succulence, and flavor.

Volney Lacy, of Livingston County, Mr. Green says in the N. Y. Tribune, has 300 acres of good land, and has a reputation for keeping fine cattle. "What benefit do you derive from keeping your stock stabled in the Summer?" asked Mr. Green. "I am at no expense for fences except on the borders. I nearly double the capacity of my farm for producing grain, as I make about twice the ordinary amount of manure, and leave no large range of pasturage in the main idle, or, what is worse, a nursery for the most annoying weeds." "What

is the best method of saving manure from the cattle?" Mr. Green asked. "I permit it to lie in the stable for a few days, the more objectionable part thrown back, so the cattle have a clean bed, permitting the litter to gather to considerable depth. By this method, the floors being cemented, the liquid is absorbed. My ideal method, however, is to let the stock run loose in moderate-sized inclosures, keep them well bedded with straw, and permit the manure to remain for several weeks. The treading of the stock is advantageous. More liquid is saved by this method than by any other."

Everywhere.

RURAL SPECIAL REPORTS.

N. Y., North Lawrence, St. Lawrence Co., Dec. 2.—Last year and this, I received seeds from the RURAL office, and now I am going to report to you how I have succeeded with them. Last year I had Blount's corn which I planted in drills as I usually plant sweet corn. It grew very tall and full of leaves from the ground up, but had not tasseled when we had a severe frost early in August, which blanched the leaves; after awhile it grew again and bore some nubbins, which did not have time to get half grown; last year was an unusually cold season here for corn. I think the seasons are too short here to grow Blount's corn. My Beauty of Hebron potato yielded seed enough last year to produce over a bushel of potatoes this year. The Golden Ovoid Mangels did not grow very large, but I did not sow all my seed and intend to try them again. The little bag of Mold's ennobled oats, produced five pounds besides what the sparrows destroyed. But few of the Telephone peas grew, I saved them all, and have seven ounces for seed. They are very nice, no weevil-eaten ones among them. The cow peas produced a great amount of vine and ripened some seed. I received two Cuthbert raspberry plants late in the Fall of 1879, but they did not survive the winter. I am very glad to have a chance to get the Cuthbert again. I will send stamp to Mr. Lovett at once.

ANNA H. N.

ILL., Baileyville, Ogle Co., Dec. 8.—The year now closing has been one of general prosperity to the people in this locality, though some have succeeded better than others. The weather has been capricious and noted for its many changes, often causing our "oldest inhabitants" to exclaim, "I never saw such weather before!" Crops have varied greatly, both in yield and quality, but there have been no entire failures, and there is much to be thankful for. Many valuable lessons have been learned in the "school of experience" during the past year which should be remembered and heeded. The light of the past brightens the present and illuminates the future; hence all can now see more clearly their way in the march of improvement and progress than those who lived in the past. Last winter was mild and wet, with but little snow, and there were frequent spells of alternate freezing and thawing, especially in March, which killed a large portion of the Winter wheat in Northern Illinois, Wisconsin and Iowa. Many fields were plowed up in the Spring and the ground seeded to other crops, but some escaped and produced from ten to thirty bushels per acre. Wheat that was drilled in on rolling or well drained land, and where the seed bed was properly prepared, did better than what was sown broadcast—a lesson worth remembering. It has also been found that certain varieties of wheat are hardier than others, and the farmers this Fall have been careful to sow those varieties that appear to have become acclimated and have proved the more successful the past few years. Northern Illinois is embraced in what is known as the "Spring-wheat region," and the production of Winter wheat has not been large; but notwithstanding all drawbacks, the aggregate amount produced the past season in this section was greater than that of Spring wheat. The average yield of Winter wheat in this State, according to the estimate of our State Department of Agriculture, for this year, is 18 bushels, and of Spring wheat 9½ bushels. The Spring wheat in this locality promised well for awhile, but was injured by chinch bugs and the hot, humid weather at the time it was maturing. Some fields were not worth harvesting; others yielded from five to 15 bushels per acre. Rye was a fair average crop, but the acreage was not large. It generally does well here and might be raised to advantage and profit, if there were paper-mills, etc., for utilizing the straw. Barley and oats yielded well, but the quality was not good. Corn that was planted early, on dry, rich land, was excellent both in yield and quality, but a large portion was not so good as last year. The average yield here is about 40 bushels per acre. Hay was a light crop and a considerable portion was spoiled by wet weather; hence, good hay is scarce and dear this Winter. Potatoes rather scarce. Apples plenty. Garden vegetables were in no wise scarce, and the cellars are mostly well stored with fruit and vegetables.

Live stock of all kinds has been generally healthy and in good condition. About the second week of November, the epizootic broke out among the horses, but did not prove as severe as in 1873, and is abating. Have heard of a few cases of so-called "hog-cholera" this Fall, but the disease was not generally prevalent.

Winter set in here about the middle of November, being a month earlier than usual, and the weather has been cold and blustering the most of the time since, but very little snow has fallen here, and we fear the late dry, hard-freezing has been severe upon the Winter wheat, etc. The Fall was favorable for outdoor work, and most of the farmers are pretty well prepared for Winter. There were some indications of a thaw last week. Cloudy and foggy on Saturday and rained a little at night, but the weather was only "foolin'," for it soon turned cold and has been of an arctic nature all this week. Had a light fall of frosty snow yesterday. Clear and cold to-day.

To the RURAL NEW-YORKER and its hosts of readers, your correspondent cordially wishes all A Merry Christmas and Happy New Year.

W. B. D.

ILL., Paris, Edgar Co., Dec. 5.—It is almost a year since I received the first number of the RURAL and it has been of much benefit to me, though I am only a common farm hand. I think that if more of us would take some papers of the kind and read them and profit by their instructions we would be better able to fill the place that is allotted us in the agricultural world, and be of more profit to our employers and ourselves. I intend to try and get a few names for the RURAL. The seeds that I received last Spring did not do as well as they should have done owing to dry season here. I received from the oats three pounds of seed and seven pounds of straw, and I think that is very good when other oats were hardly worth cutting. The farmers are behind with their corn shucking on account of the cold and the snow which has covered the ground for the last month. I do not think there is more than half of it gathered yet. The snow all left last night in a heavy rain and at the present time the wheat looks splendid and as green and fresh as though there had been no cold spell at all. I think the wheat looks better this Fall than it did a year ago. There has been about the same amount sown. The corn crop is the best we have had for some years, and the price is good, 35 cents a bushel. I had from between nine and ten acres, 700 bushels. It was drilled in the row eight inches, the rows were three feet and three inches apart. I first harrowed the ground till I got it thoroughly pulverized and plowed it twice and I think it did well for the work done to it. E. B. R.

ILLINOIS, Highland, Madison Co., Dec. 7.—Since the middle of November we have had very cold weather. On the first of December it was warm and staid so for a few days but on the night of the 4th it turned cold again, and now it is about 20 degrees below freezing. Many farmers have got to husk their corn, they could not do it before on account of the cold spell. Corn will not yield as much as last year, and will be of lighter weight. In some sections there is none at all it having been all destroyed by chinch bugs, and drought. The price ranges from 30 to 35 cents per bushel.

The growing wheat does not look as strong as last year as it has generally been sown late, and the weather has been rather unfavorable for it since then, and now 20 degrees below freezing without snow to cover it does not help it much. The price of wheat in this place is $1.00. Roads are now very rough and not much hauling is done except by the ice men who are filling their ice houses. This county has the honor to be the banner county of this banner wheat growing state. The acreage in winter wheat in 1880 was 141,576 and the yield reached the enormous aggregate of 3,539,400 bushels; which will make at least $2,960,000.

C. L. R.

ILL., Champagne, Champagne Co., Dec. 10.—We have three or four inches of dry snow, the fifth or sixth snowfall of the season. This snow came after a thaw, a rain and thunder storm, and gives us the third cold spell of this winter. The mercury went down to 10 deg. below zero yesterday morning, and this, it stands near zero with a change to moderate weather and more snow, probable. There is a coal and a water famine prevailing here as elsewhere over the entire northwestern prairie country, intensified, however, outside of the coal measures. Corn is harvested and turns out half a crop, compared with last year; hogs and cattle have been mostly disposed of; the winter wheat crop is in a very good state of preservation; prices, with fluctuations from day to day, are on the rise and a very general state of health and prosperity prevails. If this season follows many examples set by others, we are pretty sure to have some very severe weather indeed, between this time and Christmas, or a while thereafter. B. F. J.

ILL., Ludlow, Champagne Co., Dec. 8.—Our Winter, which began about the middle of November was interrupted for a few days by mild weather which took off the snow, but on the night of the fourth there were thunder and considerable rain; this was followed by another cold turn which has increased in severity till to-day, which has been the coldest of the season, the mercury standing between six deg. and ten deg. all day. A couple of inches of snow fell last night, which is some protection to wheat. There were six to eight inches of frost in the ground before the thaw, and probably there is about the same now. There is some corn yet in the fields, though a great deal has been gathered during the last two weeks. Corn has been freely coming into market with the prices at 34 to 35 cents for 56 pounds shelled, 32 to 33 cents for 75 pounds in the ear. Beef, alive, $3 to $3 50 per cwt: Hogs $4 20 to $4.25 alive; oats, 28 cents; butter, 20 cents poultry and game plenty and a drug in the market. "G."

WIS., Freedom, Outagamie Co., Dec 10.—Corn was our best crop in this part of the State, and I think it was equally good in all parts of the State. One hundred bushels of ears to the acre are considered a good yield with us. All the corn raised here and more is fed at home and marketed in the shape of beef and pork. The wheat crop was very poor in this county as well as in all this part of the State. Luckily, farming with us is not confined to wheat alone, and most other crops were good. So we hear no serious complaints, as almost every farmer has something to sell for which he has ready sale and a cash market. The lumbering and mining country north of us affords a good home market for everthing in the line of meat. Good butter is worth 20 to 25 cents, cheese 15 cents. We had good weather for doing up Fall work, all plowing is mostly done. Stock of all kinds go into Winter quarters in good shape. Winter has come upon us earlier than usual and very cold but not snow enough for sleighing yet. The Mold's oats grew rank but rusted badly. Black oats are not in favor with our farmers and they will not sell. The Golden Mangels grew finely and produced some pretty large roots, a fifteen pounder being the largest, I cannot say if they are better than the Orange Globe, the kind mostly grown here. The Cuthbert raspberries failed to grow. I think they were dry when received. J. R.

MISSOURI, Greene Co., Nov. 16.—Ordinarily, in Southwest Missouri, our Autumn season is most delightful and very *long*, with scarcely any real Winter earlier than the 15th to the 20th of December. Now, November 16th, we have six inches of snow with the mercury 10 deg. below zero, colder than at *any* time last Winter. This is 30 days, at best *earlier* than our usual Winters. Some farmers and others are surprised and not ready—not so with Nature, this time a prophet, foretelling us of this early approach of Winter by an early and thorough preparation of all things under her control. All fruits, vegetables and grain ripened about 30 days earlier this year, in this locality, than usual. The young wood in vineyard, orchard, and forest was fully ripe. Our budding, in nurseries, was cut short. The happy singing birds, refusing leafless trees, left us early for their Winter home in the "Sunny South." From instinct, animals left their Summer range for Winter quarters before the hasty season came. Were all these "Signs of the time coming" which we should have discerned and been ready for? Though Winter has come early and may be long, there is an ample supply of food for "Man and beast." Never, perhaps, has there been such abundance of all the products of the soil, here, in any one year before. For this evidence of the care of Him who feedeth even the "Young ravens when they cry," we trust we, as His people, are not quite ungrateful. On later examination I find fruit buds killed on the peach, pear and cherry. Much loss has fallen to gardeners, unharvested vegetables being frozen and lost. Fruit growers and shippers, many of them, have lost heavily of apples; one farmer lost 400 barrels. Many farmers lost theirs from bad storage.

"JOT."

IOWA, Oskaloosa, Mahaska Co., Dec. 4.—I was in hopes that some one from Mahaska County, better able to wield the pen than I am, would have contributed a mite to your valuable paper, one of the best papers in the Union, both a news and an agricultural paper in one. Every farmer should have it. Every department in this part of the country is prospering, and will be likely to continue if our present finances hold on, thanks to our Secretary. We have had remarkably cold, dry weather for the last month. Stock water is getting scarce, and it is feared that wheat has suffered. No snow in these parts. Hay is scarce and worth fifteen dollars per ton; potatoes are scarce at 40 cents; apples plenty at 25 to 30 cents; corn, 30 cents, and oats, 25 cents. There is some dairying done on a small scale, but no extensive dairies in this part of the county. Cheese is worth from 14 to 16; butter, 20 to 25 cents. A. B.

UTAH, Glenwood, Sevier Co., December 1.—The RURAL comes regularly to hand, and is cut open and each member of the family that is old enough to read has a portion, one the story, another the correspondence from the cousins, and another, your humble servant, the chapters on fertilizers, &c., till it is pretty thoroughly read; then it goes to the neighbors that have any interest in such things. The first six weeks of Autumn were very pleasant and a great deal of plowing was done ready for Spring sowing, most farmers believing that they realize from five to ten bushels of wheat per acre more when Fall plowed. The land is usually well irrigated first so as to soften the under crust. The frost works up the soil better when it is wet, and the stubble rots quicker.

Wheat was about an average crop, and brings now 75 cents to $1. Oats and barley 1½ cent per pound. Corn was of a fair growth but a severe frost on the 19th of August killed it outright. So with all tender vegetables. Our Dixie neighbors bring into our valley a good deal of dried apples, peaches, grapes, &c., and "Dixie wine," which compares very favorably with California wine of 20 years ago. But why will people convert their grapes into wine when the juice might be made into delicious jelly.

Fruit-tree labels seem to draw a good deal of attention now-a-days. The best arrangements I ever found for distinguishing the kinds of fruit trees was to cut the initials into the bark of the tree with a sharp knife, as R. A. for Red Astrachan; R. I. for Rhode Island greenings, &c.; it takes but an instant and can never be lost or misarranged. The best apple for drying I have found to be the Porter, giving about eight pounds of dried fruit to the bushel of 44 pounds; Red Astrachan the poorest, only giving between three and four pounds.

Of Smut in Corn: I manured a narrow strip of my garden with smutty chaff, and it was a "caution" how the smut appeared in the corn—planted on it—scarcely an ear missed; some balls were as large as one's head. The tassels were covered with smut, and it broke out in knots and streaks all over the stalks. The corn adjoining was uninjured and showed no signs of this fungus. Does not this point to some unaccountable freaks in smut in wheat?

It seems to me that the centrifugal plan of separating the cream from the milk is wrong in principle; we find water in rapid motion carries sand, gravel, pieces of wood and even rocks and holds them there; but when it comes to rest, these articles drop to the bottom or float on top; why not the milk in motion hold the globules of cream in solution notwithstanding the centrifugal force that tends to separate them. It seems to me that subjecting the milk to a pressure of several atmospheres would compress the substance of the milk to a smaller compass and cause the globules of cream to rise to the surface rather than suffer the pressure of the surrounding medium. The smaller globules, which vary in buoyancy in proportion to the cube of their diameters, I presume would have a greater tendency to rise in a dense medium.

I do not think that salt has any value as a fertilizer unless it is on land containing lime, which, we are aware, separates the elements of the salt, and forms nitrate of soda, taking the nitrogen from the atmosphere or other sources. I assure you I have plenty of salt in the soil of my homestead but I find no fertility in the soil till the salt has been dissolved out by constant watering and draining. In the north of this Territory, where there are mountains of limestone and the soil is full of such deposits or in the form of lime cement, the soil is very rich and good for cereals and vegetables, and the salt is replaced by soda; but in this county, 300 miles south we have mountains of salt, gypsum, burnt granite, sugar stone etc., on the east side of the valley, and red and gray sand stone on the west. The land on the west side is much richer than on the other. Wherever the soil is red, it is good for grain. W. M. C.

FLORIDA, Rock Ledge Home, Indian River, Nov. 25.—Being a subscriber to the World, has placed in my hands the liberal joint offer made for the two papers. My attention is particularly attracted by the free offering of valuable seeds and plants. I happen to occupy a position which makes me particularly desirous to possess all of the different growth to be had for testing their value in this new and undeveloped country. We have certainly the most delightful, genial, and healthful country known to man. Travelers say our climate is much dryer and more equable than that of Italy, and consequently more healthy. We have a deep, sandy loam, in many instances, of a dark, snuff color, rich in decomposed vegetable mould, and underlaid with decomposing shell and coquina, with a dense growth of Live-Oak, hickory, hackberry, mulberry, marlbush, grapevines; and in special localities, the more tropical Indian rubber, gum-olimbo, break-ax-torchwood, wait-a-bit, iron-wood, palms, etc. The idea of extended areas of lands, hundreds

of acres for the cereals at the north, and with the southern planters, for King cotton, is entirely discarded with us, and we propose to realize an income of thousands, from only acres, instead of hundreds of acres. Upon our lands, we aspire to have Orange groves yielding at 10 years old, $1,000 per acre, and at 20 years old, $2,000 per acre. Rev. Mr. Thomas, of Penial, sells from one acre, from $1,800 to $2 600 worth annually from a grove 25 years old. I have trees eight years old with 1,200 to 1,500 fine fruit per tree—some growers have a larger yield from trees of the same age. These lands are also first quality for garden vegetables, guavas, casava, bananas, etc. The more tropical localities, Merretts Island Hutchinson, and particularly Jupiter Island, on the east of Indian River and washed by the rolling billows of the ocean on their eastern shore, are attracting our especial attention. In ten years Jupiter Island will be an extended grove of orange, banana, cocoanut, mammee apple, mangoe, and sappodilla with thousands of pine apples, and paying its happy possessors thousands of dollars. Added to this there are beautiful sites for residences, 30 to 40 feet in hight and over-looking the ocean on the east, and fanned by the balmy breeze of the trade winds. I propose to set 500 cocoanuts, 50,000 pines, 1,000 banana and mangoe, avocado-pear, sappodilla, tamarind and mammee apple, and would like to procure the cherry-mollier, mangostine and one pound of coffee seed. Manatee, northwest and about two deg. colder than Jupiter Island, is raising coffee quite successfully. We solicit settlers from the best class of people from North, South, East or West. We need labor and capital to develop our country into the Eldorado of the South. C. B. MAGRUDER.

TEXAS, Waco, McLennan Co., Dec. 3.—We are just at the end of a three weeks "Norther," during which we have had some extremely cold weather, as cold as I have ever seen it at any time in the State. The ground froze about two inces deep, and sweet potatoes that were still in the ground have been much injured. After harvesting my early crop of Irish potatoes, I selected the very small ones about the size of hickory-nuts, and planted in the same ground. I had a furrow made by a small turning plow and dropped these small tubers about 18 inches apart, and owing to a press of other business, they were not cultivated at all, and of course I did not expect any potatoes, but I never have had a better crop, and what seems most singular, there were no very small tubers. The fact is, we can always raise two crops of potatoes on the same ground, unless there is an unusual drought. I planted my sweet potatoes in ground upon which I raised a crop of Irish potatoes, and raised a splendid crop. My Eunobled oats rusted so badly that I saved but little seed, owing, as I think, to being planted too late. The Mangels did very well, but I failed with most of the flower seeds, from some cause that I cannot account for. I received a few cuttings last Autumn of the Le Conte pear, from Mr. H. H. Sanford, of Thomasville, Ga., and they have made a most remarkable growth, two or three of them are fully six feet high, with strong and healthy trunks. It does seem, that if pears can be grown so easily from cuttings, it would be far the better plan to propagate them, as you are then sure of what you have, and more certain of a healthy tree. Last season I grew the Sharpless and Forest Rose Strawberries; each of them did well, but the Forest Rose, I think, is the hardiest, as it suffered less from the effect of drought. I planted tomatoes between the rows of strawberries with a view to sheltering the ground from the heat of the sun, but it proved to be all wrong. Wherever I had a good stand of tomatoes, the strawberries died out, while where there were no tomatoes, none died, but continued to grow and remain fresh and green during the whole season. I also planted tomatoes between some of my young grapes, and wherever the tomato vine was near the grape, the latter made little growth, while others separate from the tomatoes made a vigorous and healthy growth of vine and foliage. My experience is that the further the tomato is grown from the grape and strawberry, the better it will be for them. Now, Mr. RURAL, accept a bit of praise, if you please, for you keep so full abreast of the times that I anxiously await the receipt of the RURAL, and read it through at one sitting often times. I receive several agricultural journals regularly, and have had specimen copies of many others, some no doubt of those who were not willing to dispel the "bliss of ignorance" of their readers to enable them to grow wise by reading the best. A. S. S.

TEXAS, Dallas Co., Dec., 5th.—November has been a disagreeable month with us away down in Dixie; we have had two severe snow storms during the month, and the rest of the month cloudy, drizzly, and cold; and now the mud is so deep the roads are almost impassable. The corn crop was good so far as it went, but there was not enough planted. A good many planters think they can raise cotton to buy corn and meat and make more money than they can by raising corn and hogs, but I think some of them have already seen the error of so doing and more of them will, I think, before they make the cotton crop pay for their corn and hogs for another year. The yield of cotton was an average one but a considerable portion of it is yet in the patch, and is badly damaged, and unless December is an open month it will remain in the patch. The hog crop is rather short, pork is selling at from eight to ten cents per pound, corn 35 to 40 cents per bushel, the sweet potato crop was very heavy, but a good many of them got frozen before they were dug. So they will not keep but a short time, those that did not freeze will not keep well on account of their being chilled in the ground. N. H.

TEXAS, Belle Plain, Callahan Co., Dec. 6.—We have had unusual cold weather for the past four weeks. Sweet potatoes all frozen. Much of the late cane frozen; of five varieties the Early Amber takes the lead for feed. I cut three crops from one planting. My mangels were a failure as the bugs were too fond of them; the Raspberries were so long on the way that they also perished. Corn crops very good and selling for $1 per bushel; wheat but little sown and that for pasture, will plow up and plant to corn in the Spring. This place is filling up with sheep, mostly Improved Mexican, we use Merino bucks. The last cold spell has developed a few cases of scab, otherwise, flocks look well. F. P.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Soil, Climate, etc. of N. C.

NOTE. The letter of inquiry to which the following is a reply was forwarded to Dr. D. E. McAboy, who resides in the section of North Carolina, inquired about. The Doctor returned to us the answers appended, but not the letter of inquiry—so that the usual initials, County and State of the writer are necessarily omitted. The letter of inquiry requested that the Editor of the RURAL NEW-YORKER should, himself, answer the questions contained therein. But he begs to state that ill-health, which induced his visit to the so called "Thermal Belt" prevented his acquiring a sufficient knowledge of the Country to enable him to answer several of them. The Doctor says:

I have your note with letter to be answered enclosed, and I hasten to give you all the light I have on the soil, climate, productions, etc., of North Carolina. Should your correspondent want authoritative information, he will find it in the Hand Book of the State, published by the Commissioner of Agriculture of the State of North Carolina.

1. What part of Polk County did you visit? Ans.—Tryon Township, at the foot of Tryon Mountains—Lynn P. O., N. C.

2. Is it a clay or loam soil? Ans.—The upland has much clay mixed with sand and mica. The creeks and rivers are a loam soil with micaclous sand. We have red clay and yellow, and in some places, the white or blue used for stone ware.

3. Can raise cotton. The cotton belt runs up half way to the top of the mountain. We are proposing to put in 50 acres of cotton next year.

4. Can raise peanuts. They are not grown largely here for the markets, but on our sandy land they grow finely.

5. Cannot answer from my own knowledge how many can be raised per acre.

6. The climate is healthy. Free from all malaria and malarious diseases, and is now considered as one of the most popular health resorts for Summer or Winter.

7. Have no long-continued droughts. The mountain's attract the rain showers.

8. The water is soft.

9. There are many Springs, some of them highly mineral.

10. No limestone in Polk County; good limestone is found 28 miles north, near Hendersonville, and south in Spartanburg, South Carolina, 50 miles due south on the Air Line Rail Road.

11. Lime is easily obtained by railroad from Henderson County, North Carolina, or from South Carolina.

12. Good bottom land, is hardly ever offered alone, generally the farms consist of hill and upland as well as bottom land. When sold alone they are valued all the way from $25 to $100 per acre, while 50 acres of bottom land with 200 or 300 acres of fair upland (cotton land) will be offered at $10 per acre.

14. The land titles are *good*, very little litigation about titles.

15. The Spartanburg and Asheville Rail Road runs through Polk County, with its Tryon Station on this farm.

16. Produce realizes good prices here. Corn at our Station 55 cents per bushel; wheat $1 25; hay, $20 per ton. We are at the head of the upland cotton belt and corn is always high and all the other products, for the simple reason, that everybody is engaged in cotton raising below, and they come up to these rich valleys for corn and produce.

17. The local freights are high. We pay from 12 to 25 cents per 100 for our goods from Spartanburg, South Carolina, 27 miles. But freights by the great through lines are very reasonable from New York this way by Richmond, Virginia, or by the ocean route by Charleston from New York. Passenger rates, local, five cents per mile, *tourist* rate three cents per mile.

18. The Public School System of the Northern States is the law of the land, but here, as they have large districts, and schools kept but a few months, we depend mostly on private schools. Churches are not plenty. The Baptist and Methodist Churches predominate. The country is too thinly peopled yet for churches and schools. The farms are too large, think of it, for seven miles along this highway there are but three farms, one of 2,400 acres one 600, and the other, this of 2,250. On these lands are over 300 people, and except three or four families, they are not the class to support either schools or churches.

19. The white population predominates in Polk County, and more so in the counties north of us. When you get in South Carolina the black race predominates, so also in the coas regions of the North State.

20. Labor is plenty and cheap, average of males $10 per month with board, and $13 to $15 and board themselves. Females, $6 per month and board.

21. Good land is found in very many places all along the base of these mountains. The land on North Paccotee is considered richer because it runs along the base of the mountains, and the valleys are made of the mountain *debris* and washings constantly coming down year by year. There are may desirable sections for corn, cotton, wheat, peanuts, and tobacco, and many that have fine water. All the Piedmont lands of N. and S. Carolina are well-watered, and on the top of the mountains there are abounding springs of the very best water.

But the climate of this valley is peculiar, "*sui generis*." Yesterday, December 7th, the mercury stood 25 deg., while 10 miles above at Saluda, it stood at zero, and at Hendersonville, the same. We are in mid-Winter with no sign of snow yet, though the mountains north of us have several times been white with snow. Our railroad facilities are now very good, we have a daily mail each way. To those who seek a country for agriculture, all the south side of these mountains offers great inducements. But for fine fruits, which seldom fail, good air and water and health, we are honestly of the opinion this Tryon region is not excelled any where. Yours truly.

Lynn P. O., N. C., Dec. 9. DR. D. E. MCABOY.

Four Months too Long to Go Dry.

V. B., Canaseraga, N. Y., writes, I have a Jersey cow 5 years old. She has been milked a year and seven months continuously, and will come in again 13th next March. She is in good order, but gives only a teacup of milk twice per day. If now dried she will go dry about four months. She has no slop. Shall I slop her and milk her or let her go dry now?

ANS.—We wish our correspondent had mentioned whether she was a large or small milker when fresh in milk, what her feed now is etc. Jerseys usually hold out their milk remarkably well—it often being more difficult to dry them off than to keep up their milking. Four months are too long for a cow to go dry, unless in the case of a very deep milker that has given milk as long as this cow, and may need rest to recuperate. This cow, however, seems to be in no need of a long rest, and it may be an injury to go dry so long. Should advise that she be fed one quart of oil-meal or six quarts of bran or middlings per day, wet up with hot water and allowed to cool. This should be given in two feeds with about 1½ ounces of salt. Begin with half this quantity and gradually increase so as to reach this amount in one week. The greatest care must be taken to milk the cow perfectly clean. Milking has much to do with a cow's holding out her milk. If this plan had been adopted a month or six weeks earlier it would have fully accomplished the object. If the cow shall have become so near dry before this reaches our correspondent that her milk cannot be recovered, then the best plan is to give her one pint of oil-meal per day until five weeks before coming in, when she should have a slop of about three quarts of bran per day in one feed until the last week, when this should be reduced one-half; and, the first week after coming in, she should have a slop of a pail full of tepid water with one quart of bran, morning and evening. After that she may be fed well. This plan will be likely to develop her milking capacity.

Miscellaneous.

Newton Hatcher, Dallas Co., Texas, asks, 1, what ails my land, my sweet potatoes will rot before they are half matured! the vines even will rot off just below the surface of the ground. The cotton plant will die on the same spots before the plant matures half a crop. Apple, cherry and pear trees will not live three years on it. The peach and plum will thrive on the same spots six or seven years and then die, they die first just below the surface, on the main root, the bark, both the inner and the out side will be dead commencing about one inch below the surface, running down three or four inches, then there will be live bark below and above; the gum exudes from the tree by the pint, so thin it will run on the ground, and the bark peels off of the dead part and has the appearance of being frost bitten when the sap starts in the spring. Now don't say borer for I hunt the borer twice a year and know how to find him. Besides other trees, the umbrellas, china, catalpa are effected in the same way; and the borer don't like either of them to my knowledge. Now what is the cause, and the remedy? 2, does the borer come out of the tree as a fly or a beetle, if so how long does it remain in the tree as a grub.

ANS.—The trouble is doubtless due to what is known as alkali in the soil. Alkali spots are frequent through all the prairie region from Texas to Colorado. These alkaline salts are usually sulphate of magnesia, an impure kind of Epsom salts, with which the soil is more or less saturated; they are usually springy, and the salts are deposited by the water in which they are sometimes so plentifully contained as to be unfit and dangerous to drink. The remedy is to drain the spots, to plow deeply, to summer fallow, stirring often, and to have patience until the soil is slowly freed from the impurity. Further west in Texas many hundreds of square miles are made barren by the same cause. 2. As a beetle. It remains as a grub about 15 months. It throws off its grub skin and becomes a pupa usually at the close of the second summer. Thus it lies through winter, changing to its perfect form the following spring. It then cuts with its jaws a smooth round hole of the exact size to enable it to crawl out of the tree. The sexes then pair, and the female deposits another crop of eggs.

D. E. S., Norton, Kas., asks, will you describe in the RURAL, your mode of "flat" cultivation? 2. Which do you prefer, the Doura or Branching Sorghum? 3. The B. S. is such a vigorous grower, are not the roots worse to get rid of for next crop than those of common sorghum or broom corn?

ANS.—1. There is little to describe. We use a shallow cultivator which does not throw the soil into ridges. The hoe is the only other implement used. The men are instructed not to hill up in the least. 2. The "Doura," as it is called, is not worth sowing as a forage plant. It has but one stalk and that is large with fewer leaves than corn. The seeds (which ripen freely in this climate) are good for chickens. The flour may prove of value when mixed with other flour or treated in some new way. 3. No, we think not.

R C., Upland P. O., Ontario, says that in the RURAL a few weeks since I noticed "Insect Powder Pyrethrum," highly recommended as a protection against mosquitos. On referring to my dictionary I find Pyrethrum is an order of plants to which Feverfew belongs. Is the common Feverfew obnoxious to mosquitos? How is the Insect Powder prepared and how used?

ANS.—The Chrysanthemum Roseum is the variety used for the preparation of the Persian Insect powder It is from Persia and North Asia, and grown somewhat as an ornamental plant. The pulverized flower-heads furnish what is used to destroy insects.

H. L. W., Newbern, Va., wants to hear something of the Queen of the Prairie corn, knowing we tried it at the farm last year.

ANS.—We did. But the fence of the field in one part was broken down and the cattle destroyed it.

A. B. C., Rock Spring, N. C., asks where he can obtain seed of the Rural Branching Sorghum.

ANS.—At present it can only be procured through the Rural Free Seed Distribution.

A. J. J., Midland Co., Mich., sends a leaf of a plant for name.

ANS —It is a Stonecrop—Sedum—but we cannot give the specific name from a leaf alone.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, DEC. 18.

M. W. F,—E. L. S.—A. C. B.—S. R. M.—E. N.—W. H. B.—J. H. Mc.—E F.—F. D. S —E. R. S.—J. G. L.—H. S.—A. W.—J. S.—O. M. T.—H. L. W.—E. A.—W. M.—W. E. M.—E. B. R.—R. M. P.—J. E. Du B., thanks—A. S. S.—D. E. McA.—A. P. A, thanks—"Clinton," thanks—A. S. G.—A. B. A.—C. E. T.—S. C. M.—F. P.—J. R. J.—B. E.—W. C.—L. W.—C. W. Y.—S. P. Jr.—J. W. K.—H. W. F.—W. W. D.—F. M. H., thanks—C. E. D.—J. B. M.—W. B. D.—B. F. J.—B. McC.—A. L. J.—W. R. C. A. G.—C. B. A.—E. D. G.

All Monthly prostration and suffering by ladies is avoided by using Hop Bitters a few days in advance.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, DEC. 25, 1880.

SPECIAL NOTICES.

AS ALREADY announced, the SPECIAL CORN NUMBER of the RURAL NEW-YORKER will be dated January 1st.

SUBSCRIBERS who receive the RURAL without any NUMBER appended to their names or address, may know that their subscription terms expire *with* this Number.

OUR PRESENT Plant and Seed Distribution will be begun about January 15th and continued until further notice. The WHITE ELEPHANT Potato will be mailed separately in a little wooden box as the weather permits. Subscribers are advised to place it in sand and keep it in a temperature as near 32° as practicable.

DOMESTIC ANIMAL SHOW.—The American Institute which has just finished its forty-ninth highly successful annual fair, and during many years occasionally held cattle shows, and field trials of agricultural implements, is now discussing the advisability of an exhibition next season of all domestic animals, useful, ornamental and otherwise. It is intended to comprise all the farm animals, quadruped or biped, and their products, as well as dogs, cats, birds and all other pets, not forgetting bees with all their complement of queens, hives, honey, wax, etc. There is here scope for one of the most interesting shows ever witnessed in this country or indeed, anywhere. A general gathering together of all domestic animals will be a new departure, and may if successful, be but the forerunner of many such displays.

AND so the year is closing. It is hard to realize that this is the last number of the RURAL NEW-YORKER for 1880. How quickly the year has flown! And thus life flies. It is rather strange that the longer we live the shorter life seems. We wish our friends a Merry, Merry Christmas. To many who read these lines we shall not have the opportunity of saying "Happy New Year!" How well soever the RURAL may have served the interests of its readers; how kindly soever they may feel towards the RURAL, yet, for reasons more than one, many of them will cease with this year to be its subscribers. Our lists are increasing faster than ever before in the experience of the RURAL NEW-YORKER. This is gratifying—very. Nevertheless we part with old friends with regret. We wish them especially a Merry Christmas, and, anticipating a few days, a Happy New Year, as well.

A GREAT loss in the importation of the celebrated thoroughbred horse, Blue-Gown, from England, has just been sustained by Mr. James R. Keene, of New York. He paid $20,000 for the horse, and he was shipped for this port about the middle of November. The steamer met with fierce, stormy weather, and pitched and rolled so badly during the voyage as to cause the death of the poor animal, after long suffering. Losses in cattle shipped abroad continue fearful, and it is astonishing that they are still kept up; in fact, notwithstanding all this, are rather on the increase than diminishing. Grown animals should only be sent to sea during about five months out of the year, say from April 15 to September of the same date. Fierce storms do not often occur on the Atlantic Ocean during this time, and little danger of loss from them is consequently to be apprehended.

A BUSINESS MAN, whose knowledge is varied as regards everything but farm work, whose mind has been trained to the methodical and accurate ways of business, takes a farm and in a short time reduces its irregularities to order, its work to a system, and its conduct to a profitable result. He succeeds by virtue of these business methods, which have made the acquisition of practical knowledge easy, and have given a habit of scanning, with the greatest carefulness, every expenditure, and of suddenly stopping every leak through which profits might be frittered away. The best of improved stock, improved implements, drainage, the best arranged buildings, improved plants and seeds, effective fertilizers and the most improved methods have many of them been introduced into farm practice by business men who have become farmers, but who meanwhile have suffered derision and detraction at the hands of those who were glad afterwards to benefit by their example.

SILK CULTURE has had its short periods of favor with the American public, followed by long terms in which it appears to sleep the sleep of death. It is now once again occupying the attention of many. In the manufacture of silk goods, furnished as they are with the imported material, our mills have no superior. Our silk fabrics are by many rated as the best of the world, as it is not our custom to weight them nearly so heavily as are the imported dress goods. When a splendid satin is able to stand alone be sure that it is not all silk, for sometimes only one-third of the weight comes from the silk-worm, the remainder being one of the secrets of the trade.

As far as known no silk raised in our country finds its way to its 300 factories. Efforts are being now made at the South to increase the food supply of future worms by largely planting the mulberry tree, the leaves of which are the favorite food of the common silk-worm. The difficulties heretofore found in the way of successful silk raising have been more practical than theoretical, and we shall, hoping for their removal, lend our aid to forward this important industry.

CONGRESS AND THE CATTLE DISEASE.

ONE of the most important subjects that will come before the Agricultural Committee of the House during the present session, is that of the cattle disease known as pleuro-pneumonia. Already a large number of petitions have been referred to the committee urging immediate action on the question, prominent among which was that of the National Grange, advising that such laws be enacted as will not only arrest its spread, but effectually exterminate the disease from the country.

Various constitutional questions seem to be involved in any attempt to embrace the entire subject under a national legislation without infringing upon the rights of the several States, but we have no doubt but that some satisfactory solution of the problem will be arrived at, at an early day.

Commissioner Le Duc recently submitted to the President the report, already referred to, of Mr. Charles P. Lyman, which contained the information called for by a Senate resolution of the 7th inst., relating to contagious diseases in cattle. In this document Mr. Lyman shows what districts are most infected by the disease, and he considers that all large cities are diseased centres. He recommends a restriction on the movement of cattle from the infected districts as the best means to check the contagion. Immediate action in this matter, on the part of Congress, will be eagerly looked for.

HOW TO MAKE THE BEST SACK OF FLOUR.

THE Millers' Newspaper informs us that some three years ago a National Association of British and Irish Millers was formed, and that on May 10, next, and the four following days, at the Agricultural Hall, London, they will have on exhibition all the different processes at work, together with every variety of machinery which they can obtain from all parts of the world, also in operation for the production of samples of wheat flour. In this way they hope not only to get that of the best quality, but also at the cheapest and best method of manufacturing it.

To show the interest now taken in this matter, applications are already made for 559 patents for improvements in machinery, etc. Of these Great Britain and Ireland have 103, Austria 46, Belgium 31, France 34, German Empire 69, United States 221, Canada 27, Italy 10, New South Wales 5, Ceylon 1, Spain 6, Victoria 2, India 1, Norway 2, Sweden 1.

We are glad to see our own countrymen so wide awake as to improvements in the manufacture of a superior article of flour, for it will be a very important assistance in obtaining a good market for our large and constantly increasing wheat crop.

Of the above 559 applications for patents, it seems Americans have made nearly one-half. We trust in addition to this many of our millers will attend the above exhibition, to come off next May in London, for in doing so they will learn much for their interest and improvement.

STEAM PLOWING.

MUCH as we excel the rest of the world in agricultural implements, both for cultivation and the after-gathering of the crops, steam plows, which are highly extolled and constantly used in Great Britain, do not prove a success here. Our patent office reports, for many years, show how persistently our inventors have pursued this subject, and how they have built traction, stationary or locomotive engines in a, so far, vain endeavor to solve the problem. The Fowler plow in England appears to be one of the usual requirements of a large farm, and cumbersome as it is, it does its work in a satisfactory manner. Here, where the almost measureless fields seem to invite this improved labor, horses yet are entirely depended upon to till the ground, and we do not see in any reports of farm proceedings any evidence of steam being now employed in this manner.

However, the matter is not dead, and Mr. Peter J. Macdonald of San Francisco, has lately patented a new device, which presents some novel and apparently better features than any of the other plows. His machine is locomotive, a boiler with steam engine attached working the plowing portion, which consists of two arms each about fifteen feet in length meeting in the center behind the boiler, and running at right angles to it, and supporting each two plow-shares, which are pulled toward each other, turning the soil as they move. When they reach each other, they are automatically run backward to the ends of the transverse arms, and the whole machine moves over the unplowed ground two feet, and without any assistance in the change from plowing to motion these operations are repeated. As the plowing has no tendency to move the machine in any direction, it need not be made so heavy as to offer more resistance by weight than the plow-shares do in their motion, and as it is not traveling and plowing at the same time, less steam power is required than when these efforts occur simultaneously. This plow is quite new, and if these points are not offset by some unforseen objections, may make a long step in the indicated direction.

STRIVING FOR THE UNATTAINABLE.

WHEN Mr. Samuel Patch first contemplated his notorious leap, he remarked that "Some things can be done as well as others." He lived, or rather died, to prove that he was mistaken, and that some things are impossible. The American citizen is a sanguine person who, to a great extent, believes that all things are possible—at least to him. So there is a general restlessness prevalent, an ambitious desire to emulate, and surpass, if possible, every startling occurrence. This is observable in every direction. When Dexter made his wonderful record, and some men thought the highest possible speed had been obtained, others set about reducing it, and at short intervals we have been surprised by announcements that this and that record has been lowered, until now a mile has been trotted in 2:10¾. By and by it will be down to two minutes, perhaps. And will that be the end? Who can say, in view of what is passing before us in every direction, what the unattainable may be? A noted cow yields nearly 700 pounds of butter in a year, the value of which, at the ordinary market price for the best creamery only, would be $210. Such a fact is like lead to the aspirations of the average dairyman. Can he ever attain to such success himself? And he makes up his mind that it is beyond hope, and goes on in a sort of desponding way with his 150-pound cow and his $30 a year as her income, and gazes on vacancy in his thoughtfulness with a very sad countenance, because some things are beyond his reach. And in other directions other men feel similarly. But is this a right and proper determination? By no means. If men had never striven after what is unattainable, they would never have reached what has been attained. Years and years ago the old alchemists spent their lives in efforts to transmute base metals into gold, and to discover a liquid which should make life self-sustaining and snatch the victory from disease and death. For centuries men have worked and worked to discover perpetual motion. It may be safe to say that these laborers could never have reached what they desired to attain. But the whole science of chemistry and mechanics is based on the discoveries of those old investigators, made during those futile efforts, and we are to-day reaping the rewards of their labors; and it is the same to-day as it was, and it will ever be as it is to-day. Therefore let no one be discouraged or despair because something is presented to him which he fears may be unattainable. Let us all strive for the very highest point. If we do not reach it we shall make some progress towards it, and that will be reward enough to give us hope and courage.

BREVITIES.

IT would appear from various tests made with Early Amber Cane in the middle portions of New York State that the production of molasses from it is considered profitable.

A SUBSTITUTE for leather is now clearly demanded as one of the new industries of the country. Over $30,000,000 worth of raw hides were imported during the past year.

SOME of the least exhaustive products for export from a country are glucose and starch as made from Indian corn. They carry no mineral fertilizers, being wholly the product of the atmosphere.

RESPECTFUL notice, with many thanks, is given to our correspondents that the CORN NUMBER of the RURAL NEW YORKER is fully supplied with articles, and those, too, of a class that cannot fail to instruct every thoughtful reader.

THE importations of sugar for the past year were to the value of $75,000,000, representing 75,000,000 bushels of wheat sent away to pay for it. With the half dozen beet sugar factories now in successful operation, and something over 200,000 acres of sorghum grown the past season there is a promise that the time of this outgo may be limited.

THE want of amber cane mills of a character to do exact work, and of sufficient capacity to ensure the economical grinding, evaporation and reduction of the product, is seriously felt all over the Western States at this time. A crude product for home use may be made by each farmer, but there is economy in a mill that will do the work for from 25 to 50 farms.

As we have noted in our news columns, a flock of sheep in New Jersey was attacked during the night by dogs, and sixty-one killed and twenty-one mutilated. Facts like these should be kept before the public. It was but a short time since that the flock of Mr. Farwell, (Iowa), was attacked, by a lot of curs, nineteen of which were killed and several more or less mutilated. Some were driven into the river and others driven far away.

TWENTY-SIXTH ANNUAL MEETING. — The Twenty-sixth Annual Meeting of the Western New York Horticultural Society, will be held in the Common Council Chamber, (New City Hall,) Rochester N. Y., commencing Wednesday, January 26, 1881, at 11 o'clock, A. M., and continuing two or three days. Farmers, Fruit Growers, Nurserymen, all who are interested in Horticulture, and citizens of Rochester and vicinity, are cordially invited to attend. All will be free to participate in the discussions.

OF the many causes that contribute to the future prosperity of Kansas not the least effective is the constitutional amendment lately adopted, prohibiting the manufacture or sale of intoxicating liquors within its borders. The law is being rigidly enforced against the manufacturers of liquor, and in many of the cities local dealers are voluntarily abandoning the sale of it. The Governor believes that by the middle of January there will not be a distillery and rectifying establishment or saloon in the State. What a fine example this, one of the youngest of our States, is setting before its elders—and in the West, too, the West which has the reputation of being a heavy drinker.

THE alarming prevalence of diptheria suggests the publication of several remedies. As a preventive where the disease is feared, a mixture of equal parts of carbolic acid and glycerine, and putting 15 drops of the mixture in a glass of water, and giving a teaspoonful three or four times a day, is recommended by Brooklyn physicians. If sore throats, gargle with 15 drops in a glass of water. The following is given as a remedy in the early stages of the disease. "Stir a teaspoonful of flour of sulphur in a wine glass of water and give it to the patient to gargle the throat with. In ten minutes the patient will show improvement. In extreme cases, when the fungus has grown to such an extent as to preclude the possibility of gargling, blow the sulphur down the throat with a quill. This may cause the fungus to contract, and then gargling should be resorted to. Or take live coals in a shovel and sprinkle a couple of spoonfuls of the sulphur on them, and let the patient inhale the fumes. This will kill the fungus."(!?)

THE National Board of Trade in session at Washington, state in their reports on the public health, that they have investigated the purpose and scope of the National Board of Health, and recommend that Congress should make an appropriation for continuing the work already begun, and to enlarge the scope of the board in a series of original investigations concerning the prevalence and causes of our most fatal diseases, and also to a series of analyses bearing upon the adulteration of food, which are now being made in different parts of the country. The board recommend to Congress the passage of an act prohibiting any person or corporation from selling or offering for sale any article of food or drugs adulterated within the meaning of the proposed act, and defines carefully what shall be deemed to be adulteration. In order to carry into effect the provisions of the act in regard to the examination of imported and domestic food and drugs, the Secretary of the Treasury is authorized to appoint, from names submitted to him by the National Board of Health, suitably qualified persons as public analysists and as special inspectors to examine and report violations of the proposed law.

Literary Miscellany.

CHRISTMAS CAROL.

ELAINE GOODALE.

Our walls are wreathed with trailing pine,
And hemlock boughs are leaning
Dark where the blood-red berries shine,
With leaves of Autumn's gleaning;
Yet ah! how pale the Summer's pride,
How barren field and fallow,—
For why? the year must be so wide,
And Summer still so narrow!

Our chimney's glow with generous heat,
And all our lamps are burning,
We list the music wild and sweet,
With dance and song returning;
Yet oh! the vaster dark outside,
How cold and dumb with sorrow!
For still the world must be so wide,
And joy, alas! so narrow!

Our home throws wide its doors to-night,
Our threshold laughs with greeting;
With clasp as warm and step as light,
The old-time friends are meeting;
Yet oh! the few who stand aside
Bowed down by hopeless sorrow,
And weep that hearts should be so wide,
And love, alas! so narrow!

Nay, further press the strong desire,
The questioning, swift yet tender,
And lifted ever strangely higher,
Divine a holier splendor;
On Christmas-day, whate'er betide,
We have no room for sorrow,
For though man's needs be e'er so wide,
God's help grows never narrow.

INMATES OF LESTER HALL.

(Continued from page 838.)

There was a silence then, during which they both watched Cecil as she stood talking to Mr. George, with a smile on her lips and a shadow in her eyes.

"I know little or nothing of Cecil Lester's history," said Mrs. Brayburn, earnestly, as she left the doctor's side, "but there is a turned-down leaf in the book of her life on which is written a very sad story, believe me!"

She moved away from him as she spoke; and Dr. Carewe left the drawing-room, and finding his way to the deserted hall, threw himself into a chair before the fire and gave himself up to a train of deep thought.

Dr. Carewe leaned his head on his hands, and thought with all his might. Was Mrs. Brayburn right? Was Cecil really unhappy? If so, what was the cause of that unhappiness? Could it be true that she did not love the gallant young lover who was so devoted to her? Could it——

At this juncture a light touch on his arm broke the thread of his reverie; and looking up with a start, he saw Cecil standing before him. He started to his feet, and looked at her in silence. She was very pale, and her hand shook as she said, hurriedly:

"Dr. Carewe, may I speak a few words with you?"

"Certainly, Miss Lester," he replied, with a stiff bow.

And without taking a seat, she went on in the same hurried, troubled voice.

"I have been wishing to do so ever since I came here," she said. "But in a house like this it is so difficult to find an opportunity. You think we shall be free from interruption here?" she added glancing round with some apprehension.

"I think so," he said, coldly.

"I was so eager to speak to you," she continued, with a faint smile, "that to-night, when we were acting, I dared to say one word to you. I hope—I think you did not hear it."

"I heard it, Miss Lester," he rejoined, very coldly and steadily, although his face was as pale as her own.

"Then you did not understand?" she said, with a pitiful, repressed eagerness. "It was not Guinevere asking King Arthur to forgive her. It was Cecil Lester asking pardon of you! "Oh! Dr. Carewe," she went on, passionately, as she clasped her hands in her earnestness, and drew nearer to him. "I have been so unhappy! I cannot tell you how I have suffered, nor what my life has been since I knew the truth! Not that the wretched mistake I made excuses my cruel conduct, but——"

Her voice failed her, and the beautiful head sank low in her shame and distress.

"It almost killed me to see how I had misjudged you!" she said, in a moment, and her voice was faint and broken. "I know how you must despise me—I know how you must hate me—but"—she put her hand upon his arm for a moment—"by the memory of the love you once gave me, forgive me now!"

"You have chosen an unwise plea," he said, coldly. "What memories can that love bring to me, Miss Lester, when I think how you threw it aside—despised, mocked, scorned it!"

"I was mad!" said Cecil, piteously, "I was mad! Do not be hard upon me! My repentance has been bitter enough, Heaven knows—let it suffice!"

"I told you that I forgave," he answered, averting his face from the agonized entreaty in her eyes.

"I cannot be content with such a forgiveness as that!" she said, passionately. "Spoken in such a tone—given so grudgingly. I want you to look at me kindly; I want you to say, with my hand in yours, "Cecil, I have forgiven—I will forget.'"

He made no answer, but the proud face softened; and creeping closer to him, Cecil put her trembling hand upon his arm.

"Do you remember," she said, tremulously—"do you remember that night, and what you said? You said"—the sweet voice grew soft as music then—"Cecil, I love you as woman was never loved, and to win you I would give my life—my very soul!' Lawrence"—the beautiful face sank forward until it rested on his arm—"Lawrence I want to hear you say those words again!"

For a moment there was a dead silence, broken only by the hurried breathing of the young girl as she stood bowed before him; then, with a sudden passionate movement, he shook her from him, and turned to her fiercely as she stood cowering before him, pale and trembling.

"Love you!" he said, in a tone of bitter contempt. "I never loved you! I clothed another being in your beauty! I gave it honor, and you have none—I gave it a heart, and you have none—I gave it truth—you do not know the meaning of the word! I never loved you, I say! but now I despise your beauty, which has deceived me, and deceived that poor lad who loves you, and whose wife you have promised to be! Is this your allegiance? Is this your loyalty? Shame, thrice shame upon you!"

"Lawrence, have pity!" she moaned, faintly, "I am punished; mine was the sin, let mine be the punishment—but it is hard enough to bear without such words from you! Ah! don't you see—will you not believe—that unworthy as I am—I love you?"

Her voice died away in a low wail of pain, and Lawrence Carewe turned from her with a passionate exclamation of anguish; his face was pale as death, and his hands shook even as hers did.

"I have never known a happy moment since I sent you from me!" she pleaded, faintly. "Will you not say one word of pardon, one word of pity——"

"Silence!" he said, with sudden passion. "Silence! How dare you? You, the promised wife of another! How can I pity you? How can I do anything but loathe and despise you! As I do—for your falsehood, your treachery!"

They were bitter words, but Cecil bore them—proud Cecil Lester, whose pride was as conspicuous as her beauty was great. She answered nothing, but she shivered and shrank away from him as if a blow had struck her.

"Have you forgotten?" he said, coldly, "who you are? Has it escaped your memory that you are the affianced bride of a noble and honorable man, who trusts you as fully as I myself would have trusted you in that past, which I have forgotten—which I will not remember!" he added, fiercely.

"But which, while I have life, I shall remember!" she said, faintly, as she raised her head and lifted her great, tragic, solemn eyes to his; and at the intensity of anguish in her glance his angry words ceased, and the fierce gleam died out of his eyes.

"I thank you," she said, in a moment, standing erect again, but steadying herself by the mantle shelf. "I thank you that you have recalled me to my senses, Dr. Carewe. As you say, I am—the affianced—bride of a good man"—she smiled drearily as the words left her lips slowly. "Dr. Carewe, will you not say good night?"

She held out her hand to him with a smile, which was more mournful even than her grief had been. He hesitated a moment, then drew back slightly, and bowed low.

Cecil started; there came into her face a sudden wondering gleam; then her hand fell heavily to her side.

"It does not matter," she said, with proud bitterness in her voice. "Go, Dr. Carewe."

He made no answer—it may be that he could not trust himself to speak; but even his lips were white as she turned away from him with a slow, steady step; and there alone, Lawrence Carewe hid his face in his hands, and these words came from his lips in a broken whisper:

"If I had touched her hand I could not have let her go! I dared not—I dared not!

The next morning, Christmas day, when the guests assembled at breakfast, one among them was missing; and Mrs. Brayburn showed evident vexation at Dr. Carewe's departure.

"He was called away by some very urgent case," she said, referring to his note; is it not provoking?—on Christmas day. I wonder how he will spend it!"

"Ten chances to one he will be coming back," said Ernest, leaving the window where he had been standing, looking at the snow-covered park. "It has been snowing heavily all night, and the snow is several feet deep in places."

"Perhaps you will be a little more gracious to me now, Miss Heriot," said Captain Tyrrell, as he sat down beside her. "It is an ill wind that blows nobody good."

"You—well, you will do very well for a makeshift," said Miss Heriot, saucily; but her eyes contradicted her words, and Captain Tyrrell's appetite was in no way impaired thereby.

Meanwhile, unexpected—and faithful as his servants were, unwished-for—Lawrence Carewe had found his way back home. His cabman's rat-tat at the door had disturbed his servants at their Christmas dinner, and Jackson answered the summons with an irate look upon his face, which changed to an expression of intense surprise when he caught sight of his master.

"I beg pardon, sir," he stammered. "We did not expect you to-day."

"I suppose not," said the doctor, grimly, as he passed into his study, in which, fortunately, there was a good fire, and where he threw himself into an arm-chair in an attitude of weariness, dissatisfaction and languor.

CHAPTER XXVI.

THE WEDDING-DAY.

"Cecil, Madame Rudolph has sent to know which of these two silks you will prefer for your going-away dress? She thinks the lighter of the two is the prettiest."

She turned from the window as her sister entered the room and took the patterns from her hand with a languid indifference which rather puzzled Mattie.

"I do not care," she answered, "tell her to use her own judgment, it does not matter."

"It matters a great deal," Mattie said. "You ought to be anxious to appear well, Cecil. The newspapers will chronicle all the details of the beautiful bride.

"My charms are of the past," she said.

"Oh! foolish child," replied Mattie. "Ernest says you grow more handsome every day."

She put her hand to her face and said drearily, "do you not see the change in me? Ah! you cannot deceive me," she said with a sad smile. "You need not be afraid to hurt me by speaking the truth; it does not matter now how soon my days are ended."

"What do you mean, Cecil?" said Mattie gently. "You are a little paler and thinner, but—"

"A little paler and thinner!" echoed Cecil, with a bitter laugh. "A veritable scarecrow you mean! Look here, Mattie!"

She threw back the sleeve of her dress, and bared her arm.

"It is lucky ball-dresses are not made *decollete* this season," she said. "I am afraid if they were, I should disgrace my—my—husband——"

The word was jerked out as if it cost her an effort.

"But, dear Cecil," said Mattie, gently, "you say you are not ill and you are not unhappy?"

"Unhappy!" repeated Cecil, with a laugh—"unhappy! Why should I be unhappy? I am a very fortunate woman, am I not? I am so happy—so happy!" she went on, clasping her hands, and beginning to pace up and down the room, so happy, that for the last fortnight I cannot eat, or sleep, or rest, thinking of that happiness!"

"Cecil, dear Cecil, you frighten me," said Mattie, gently, at a loss to understand this frantic outburst.

"Frighten you! Well, I frighten myself sometimes," she said, with a laugh. "I wonder if you ever felt so when you were going to marry Edgar, Mattie? Did you sleep well at night, I wonder? or did you spend all the hours pacing up and down the room as I do, until my strength fails, and I fall from very weakness? Did you feel sometimes as if you must scream out loud, or that you would go mad? It is all happiness, you know, but sometimes I have that feeling; it comes up in my throat, and threatens to choke me; and I have to run out of the room, afraid you should notice it. But it is all happiness—all happiness—all happiness, Mattie!"

She fell on her knees beside her sister, and hid her face on her lap, clinging to her with quick, nervous hands, and choking back her sobs with a wild, passionate vehemence, which alarmed Mattie dreadfully.

"But, my darling, if you are not happy it is not too late," she said, gently.

"I tell you that I am happy!" said Cecil, fiercely—"happy as the day is long! How could I be otherwise?"

She sprang up as she spoke, and rushed out of the room, leaving Mattie startled and puzzled at the dreadful agitation she had evinced, and with a vague fear at her heart that something was very wrong with Cecil—a fear which she imparted to Edgar, with tears in her eyes, over his dressing-room fire that evening.

"I dare say she is a little nervous and hysterical," said Edgar, calmly. "It is quite natural, little wife: but I really don't think there is anything else the matter with her. I daresay she feels leaving your uncle, she is so much attached to him."

But Mattie was not satisfied; her quick womanly instinct told her that Cecil was not ill only, but intensely wretched—and she watched her closely.

The wedding, at Mattie's earnest request, was to take place at Thorn Lee. Mr. Edgar had been so kind and cordial that Cecil had acquiesced without difficulty.

"A wedding is always so much prettier in the country," Mattie said. "I hate city weddings—stately, pompous affairs!"

So it was settled that Cecil should be married from Thorn Lee, which was a great old spreading mansion, affording ample accommodation even for the large party of guests who were to be gathered together for the occasion.

The wedding was to be a brilliant one, for was not the bride a reigning beauty, and the bridegroom rich and noble? No trouble, no expense was spared to make it all that it should be in magnificence and splendor, and the wedding was to be preceded by a dance, which was to serve to introduce the guests one to the other, and put them on a friendly footing.—[To be continued.]

TRIPLET MAXIMS.

THREE things to do—think, live and act.

Three things to govern—your temper, tongue and conduct.

Three things to cherish—virtue, goodness and wisdom.

Three things to love—courage, gentleness and affection.

Three things to contend for—honor, country and friends.

Three things to hate—cruelty, arrogance and ingratitude.

Three things to teach—truth, industry and contentment.

Three things to admire—intellect, dignity and gracefulness.

Three things to like—cordiality, goodness and cheerfulness.

Three things to delight in—beauty, frankness and freedom.

Three things to avoid—idleness, loquacity and flippant jesting.

Three things to wish for—health, friends and a contented spirit.

Three things to cultivate—good books, good friends and good humor.

For Women.

CONDUCTED BY MISS RAY CLARK.

THROUGH THE "HOLY DAYS."

DORA GOODALE.

GLAD the light of Christmas comes,
Merry is the Christmas feast,
Through a thousand happy homes,
North and South and West and East;
Blithe the song the traveler sings,
Blithe the wish the reveler says,
Lifting hearts to happier things
Through the Christmas holidays.

Other dear desires were ours,
Few fulfilled and many lost,—
Though we catch, in rarer hours,
That which we have longed for most;
Life hath found a fuller measure,
When we tread forgotten ways,
In the sudden stress of pleasure,
Through the Christmas holidays.

In the future we shall see
Much to promise and forget,—
There are tendencies that be
Which we cannot fathom yet;
Still a song the traveler sings,
Still a toast the reveler says,
Trifling with familiar things
Through the Christmas holidays.

TO FRIENDS!

THE current number being largely devoted to the publication of the yearly index, the following one, the "Corn Number," to that particular subject, necessitates encroachment on the "Literary and Woman's Department;" succeeding issues, however, will be continued as heretofore, with the exception, we hope, of improvement.

In the issue of January 8th, we will give an article on a *Table Spread* with illustrated cut to assist in making, also one on *Window Furnishing—Inexpensive Screens, &c.*

Occasion is here taken to extend thanks to all friends of the RURAL who have shown their interest both in deeds and words.

It is with exceeding regret that we announce the continuance of the story, "Inmates of Lester Hall;" the calculation was to end it before or at the expiration of the year, but it has been impossible to carry out our intentions, owing to a short allowance of space which has at times been unavoidable.

RAY CLARK.

SOME RECOLLECTIONS.

BERTHA A. WINKLER.

My first Christmas-cake—and I vowed it should be my last—had proved a miserable failure. There it stood, lead heavy, at zero in the pan, with my burning face beaming with anger and despair upon it, I concluded in loud thoughts that Christmas caused more worry than cheer to some folks.

"Why, Auntie!" chimed in a childish voice, "its always Tris'mastseer of tourse, sus''magine what's tomin' then! Oh! doodness me!" Here the vision of "doodies and beautiful dings" was contemplated with an exhaustive sigh and I good-naturedly resolved to try again. While the second cake was in vigorous progress and little "hopeful" was skipping around the table in high glee. Some recollections of my own childhood brought before me the vivid contrast of the past and present life, in the old world and the new.

My first Christmas-tree was a mere wisp suspended from the ceiling over the table. A few nuts; a very small fruit-cake; half a dozen gingersnaps; a gaily-colored neckerchief; and a pair of new shoes was all Saint Nicholas brought. And yet, what a world of wealth was mine in the sole possession of that handful! How often I opened the little pine chest for a look at my treasures and counted how many weeks—remember—they might last; though each week lessened the heap considerably. That day, queens on their thrones never felt more royal than I did on the platform of the Sabbath-school, declaiming the chapter of the three wise men of the East, in the full magnificence of my new shoes. But the mills of the gods ground very fast that time, for, just as I felt myself, exulting in the proud smile of parents and teacher I finished with, "and they presented unto him gifts; gold, and—and *a pair of new shoes.*" A confused vision of big words, new shoes, and laughing faces floated before me and later in the day I divided my fruit-cake, the last of my wealth among schoolmates who promised not to tease me about that declamation.

My next Christmas was equally memorable being in the western wilds of the new world with scarce a crumb to eat. Mother said we could not expect Santa Claus to come away out there; he might possibly send a letter and some things in a box. That day and the next the post-office clerk and baggage-master were vainly besieged by two persistent little dutch magpies as the latter, quite out of patience, called Sophy and me. In spite of all, however, that same official found us both standing on the platform in a driving snow-storm as the evening train rushed up to the station. He held the glaring lantern in front of our faces for a moment, then gently hustled us off the platform and as gently promised that if Saint Nicholas' box came he would send his boy with it in the morning. Wide awake in our little trundle bed we talked the matter over; Sophy wisely suggesting that the expected box might not be large enough to hold the tree. Accordingly the early dawn found us, armed with a hatchet, wading through the snow in search of a tree. When mother was receiving the box at the front door, we were tugging the tree in at the back. We crowded around in breathless interest as the box was opened. "Dresses and shoes, I hope," mother murmured. "Dolls, I 'spects," Sophy said. "Books rather," I shouted, as the lid flew open and eager

eyes beheld heavy counter-panes, thick shoes and coarse dresses. All welcome and needed things to be sure, but, oh, such strange gifts for a jolly Saint to send! The big tree which was finally adorned with rosy apples and walnuts, covered with silver paper taken from the necks of old bottles and secured with the wire of an old mouse-trap made quite a fine appearance, especially at night when it was illuminated with little sticks of pine wood.

Since then I have seen all kinds of Christmas ces, but none has ever out-shone or even quailed that pride of our western home. For, had we not exercised our ingenuity and inventive faculty to the utmost? And was it not the object of admiration of every visitor during the following week? And had we not the satisfaction of hearing that every log hut for miles around had an apple and nut-covered tree the ensuing Christmas? It was a cheap but genuine Christmas joy in the depth of the wilderness and the hearts of the humblest backwoods-man.

HOMELY ACCOMPLISHMENTS.

There are a few of the accomplishments prized by our grandmothers which even in those days of machinery, of co-operation, and of luxurious living, we cannot afford to have classed with the lost arts. Among these is the art of plain sewing. In the olden times the sampler and patchwork made girlish fingers early acquainted with the use of the needle, and though no one can care to see those particular industries revived, yet there are few women who do not find sooner or later that in their lives "the needle bears equality with the beautiful craft of the pencil and the mighty power of the pen." Whether it is cheaper or not to buy ready-made under-clothing is not the question. The point insisted on is that every woman should know how to make her own clothing neatly, skillfully and readily. She may add to this knowledge that of embroidery and lace making, just as she may add to a practical knowledge of bread making that of making cake and desserts. There is a great effort made now-a-days to acquire accomplishments comparatively useless and the neglect of those which are of first consequence. The little girl may begin her apprenticeship to the needle by making doll clothes, and as patterns for all manner of lilliputian garments are for sale in pattern stores, she can learn to cut out and put together at the same time. Of course she must have instruction, direction, assistance: to give these is one of the purposes her mother was specially created for. By and by the juvenile seamstress may be promoted, and permitted to exercise her skill on larger garments and later be taught machine sewing. But before this she should master all the mysteries of "over and over" stitch, of hemming, felling, overcasting, catstitch, backstitch, gathering and facing down. Little folks always want to do what they can't do, and a promise of permission to undertake a difficult task will often stimulate a child to do well that which is entirely within its power. Then they should be permitted to enter upon larger undertakings.

Mending is another accomplishment possessed by very few young ladies. This branch of domestic industry is usually relegated to the mother or grandmother of the family where there is a grandmother, and the young ladies play the piano or embroider when they would be more usefully employed in mending. This imposes a great deal of drudgery on the one who has all the mending to do, and releases from what should be a pleasant task, those most able to perform it. No matter how wealthy a young lady is, she should know when her wardrobe is in perfect order and be able to keep it so with her own hands.—Religious Herald.

WHAT TO TEACH OUR DAUGHTERS.

Teach them self-reliance.
Teach them to make bread.
Teach them to make shirts.
Teach them to foot up store bills.
Teach them not to wear false hair.
Teach them to wear thick, warm shoes.
Bring them up in the way they should go.
Teach them how to wash and iron clothes.
Teach them how to make their own dresses.
Teach them that a dollar is only a hundred cents.
Teach them to cook a good meal of victuals.
Teach them how to darn stockings and sew on buttons.
Teach them every day, dry, hard, practical common sense.
Teach them to say No, and mean it; or Yes, and stick to it.
Teach them to wear calico dresses and do it like queens.
Give them a good, substantial common-school education.
Teach them that a good, rosy romp is worth fifty consumptives.
Teach them to regard the morals and not the money of their beaux.
Teach them all the mysteries of the kitchen, the dining room, and the parlor.
Teach them that the more one lives within his income the more he will save.
Teach them to have nothing to do with intemperate and dissolute young men.
Teach them that the further one lives beyond his income the nearer he gets to the poor-house.
Rely on it that upon your teaching depends in a great measure the weal or woe of their after life.
Teach them that a good, steady mechanic is worth a dozen loafers in broadcloth.
Teach them the accomplishments, music, painting, drawing, if you have time and money to do it with.
Teach them that God made them in His own image, and no amount of tight-lacing will improve the model.—The Advance.

Too Much Noise.—A writer in the Journal of Science remarks that noise is a contributor to the tear and wear of modern city life to a very grave degree and wonders why, while a steady war is waged against many other anti-sanitary agencies, no really serious and persistent attempt has been made for the abolition of superfluous sounds. No complete and satisfactory account has yet been given regarding the cause of the injurious effects of sound in excess upon the nervous system. Nervous irritability and cerebral disease appear to keep pace with the multiplication of sounds, especially among thinkers. He proposes, therefore, as a palliative, the absolute prohibition of street music and of church bell ringing, and the prevention of such sounds as proceed from dogs which bark persistently, and from harmonious organs, and wind instruments in general, except in houses which are detached.

ABOUT WOMEN.

Mrs. Hayes has, it is reported, invited Mrs. Garfield to visit her at the White House this winter, in order that she may see something of the responsibilities of the Presidential household before she assumes them.

Miss Anna Dickinson has read her new play, "Aurelian," before a Philadelphia audience, and the Press, at that city, says she had "a most cordial reception, and the closest attention, broken only by applause, was given to her play."

Mrs. Mary Lincoln, the widow of President Lincoln, has returned to the United States. Her stay abroad was extended over three years, with the hope that her health would be improved, but she is in a very feeble condition, and will make her home with her son Robert, in Chicago.

Lucretia Mott died at her home near Philadelphia, on Thursday, Nov. 11, aged eighty-eight. She was buried on the 14th. The body, plainly dressed, was encased in a plain walnut coffin. Appropriate services were held at the house. The body was interred in Fair Hill Grounds according to the rites of the Friends.

Oh, how refreshing, palatable and reviving is a draught of cool water with Hop Bitters in it, to a fever patient.

News of the Week

HOME NEWS.

Monday, Dec. 20, 1880.

Among new bills in Congress are those imposing a duty of at least one and one-half cents per pound on all fresh-water fish called hard fish, and one-half cent on all fresh-water fish called soft fish imported into the United States caught in Canadian waters; providing for a commission of five Representatives, four Senators and five experts to revise and readjust the tariff; repealing the export tax on tobacco, snuff and cigars; making the trade dollar a legal tender; for the prevention and suppression of pleuro-pneumonia; to provide for the regulation of commerce by railroads; proposing a constitutional amendment on the subject of free schools and of election; and to reduce the postage on letters to two cents..... The steamer Cotton Plant, valued at $7,000, belonging to the Old Dominion Steamship Company, was burned on the 11th, while lying at Tarboro, N. C., together with 140 bales of cotton and other merchandise.....A special from New Philadelphia, Ohio, says: "The petrified child of this place, and the wonder of this section, died on Saturday, Dec. 11th. In death as in life the flesh on its body is almost as hard as stone. To the surprise of every one the child lived in this condition nearly a year. The parents, Mr. and Mrs. J. A. Knisely, are in great distress for fear the body of the child will now be stolen. It was deposited in a strong vault, which will be carefully guarded.....Not long since a child escaped from the almshouse at Salem, Mass., and went to work for wages at Saxonville, but the authorities arrested her and sent her back, but the Massachusetts Society for Lost, Stolen or Abused Children has interfered in her behalf, and the city officials of Salem are willing that she should be put at remunerative employment again..... On Sunday the 5th, Ort Hendrickson, residing in Todd county, Minnesota, twelve miles southeast of Wadena, started deer hunting with his brother, and they parted company in the woods two miles from home. In about half an hour three shots were heard, and when the brother reached the spot he found Ort's dead body with three rifle balls in it and a knife plunged to the hilt through the body in various places. The brother followed the trail of the murderers six miles and then lost it. The cause of the crime is unknown.

Elisha Estes, a farmer, was fatally shot by J. W. Alverson, another farmer, near Cascade, Pittsylvania county, Va., for trespassing on the latter's premises on horseback.....It is not believed that anything will be done by Congress regarding the sugar question until after the Christmas holidays.....A resolution requesting the President to invite France to participate in celebrating the Yorktown surrender has been presented in the House.....It is said that a funding bill will be passed by Congress at this session, but it is by no means certain that Secretary Sherman's sugestions will be closely followed

FOREIGN NEWS.

An explosion occurred at the Pen-y-Graig colliery in the Rhondda valley in Wales, and it is believed that between eighty and ninety persons perished. An exploring party discovered sixteen corpses, and search was impeded by the after-damp and debris. The pit is about a mile from the scene of the great explosion in the Dinas colliery in the same valley, January 13, 1878, when sixty persons lost their lives. Later—It is now ascertained that eighty-six of the persons in the pit at the time of the explosion are dead. Two bodies have been recovered thus far and thirty-four more have been seen in the pit..... The arrival of emigrants has decreased since the 1st of November. According to official figures, the number who have arrived here during the last 11 months is 304,248. There were 247 deaths and 140 births on vessels landing steerage passengers at Castle Garden. Germany sent over the largest contingent, as the following figures will show: England, 25,307; Ireland, 56,224; Scotland, 7,472; Wales, 2,495; not specified, 66; Germany, 70,550; Austria, 3,493; Hungary, 4,607; Sweden, 20,183; Norway, 8,286; Denmark, 4,432; Netherlands, 2,592; Belgium, 1,002; Switzerland, 5,493; France, 3,226; Italy, 6,991; Sicily, 1; Greece, 20; Spain, 1,027; Portugal, 17; Russia, 5,925; Poland, 1; Luxemburg, 409; Bohemia, 4,680.....Mr. Gladstone has summoned the members of the British House of Commons to attend Parliament on important business.....There have been upward of 1,200,000 applications for Panama canal shares in Paris since the subscription list was opened..... .....The Pope has conferred on D. J. Murphy, a wealthy merchant of San Francisco, the hereditary title of Marquis, in recognition of his great services to religion in America and Europe..... The St. Petersburg Gaios, supposed to echo the sentiments of the Russian foreign office, insists on energetic and decisive measures in relation to the Chinese question.....Seventeen transports with 9,000 men left Arica on the 15th ultimo to enter upon a campaign against Lima, Peru.

A sad and dramatic eviction took place in county Wicklow on Wednesday. An old man named Arthur Kavanagh, in feeble health, who had a cabin on the property of Earl Fitzwilliam, had fallen behind in his rent. A decree of ejectment was obtained by the earl. His gamekeeper with two bailiffs went to execute the decree. They had to carry Kavanagh out of the house, and as he was crossing the threshold of the cabin the poor old man gave one gasp and died in the gamekeepers' arms. His body was laid by the roadside. Over it for hours sat his only mourner, a granddaughter. Kavanagh was formerly in a good position. He had been unable to work for two years, and was bed-ridden for some time.....The Times' financial says: "The finances of the United States may excite the envy not only of England, but of Europe. The unprecedented rate of redemption is having its natural effect in raising the credit of the United States to a level with the most staid and best paying communities of the Old World. In reaching that level the United States will only attain its rightful position. A country which is so faithful to its engagements, whose resources are so limitless, and whose population increases with such remarkable rapidity, ought to enjoy the best credit accorded to any State. In all probability, should the conditions remain favorable, Secretary Sherman will accomplish his refunding operations at a rate nearer three or four per cent. The very rapidity with which he is able to pay off the debt must aid him most materially by reducing the supply of stock. This, acting *pari passu* with the augmenting demand for sound investments, will give him an incalculable advantage in his operations."

[Des Moines Iowa State Register.]

Hon. S. H. Yoder's Position.

A representative man's opinion on other than political matters, is often of great use to his constituency. The Hon. S. H. Yoder, of Globe Mills, Pa. has thus recorded his opinion on a subject of popular interest. I have been selling St. Jacobs Oil for the last year. I have never heard a person speak of it except as a splendid medicine, and as the great specific for rheumatic affections, whether inflammatory, acute or chronic, swellings, sores, sprains, burns, wounds etc. I sell more St. Jacobs Oil than of any other kind of liniment and it gives universal satisfaction. I will always keep it on hand. The farmers say, that for man and beast, they find nothing to equal it.

AGRICULTURAL NEWS.

While most of the Eastern States have suffered from drought during the past season, the Mississippi Valley seems to have had an unprecedented amount of rain, which the Vicksburg Commercial says aggregates 90.09 inches for the eleven months ending December 1.....The Weatherford (Tex.) Herald says that G. W. Wakefield, a one-armed farmer, is cultivating, unaided, thirty-three acres of corn, eight acres of cotton, one acre of watermelons, and one and a half acres of sweet potatoes.....An Orange County, Fla., gentleman expects to make forty tons of cassava starch this year.....The Constitution of Florida provides that after 1880 the Legislature shall pass a law making an educational qualification for voters..... .....Sheep-raising is said to be the principal industry of Geneva County, Ala.....In Birmingham, Ala., more than 100 houses have been built in six weeks.....In leisure time during the Winter the farmer should go over the orchard and destroy the eggs of the tent caterpillars. They are easily discovered in clusters around the small twigs. Three or four hundred eggs are in one cluster, and its destruction saves the tree from the ravages of as many voracious worms in Spring.....The House Committee on Manufactures has heard the protest of produce merchants against the sale of oleomargarine and other imitations of butter. The manufacturers of oleomargarine are on hand, and there promises to be a regular butter war..... Twenty-seven artesian wells are in Fort Worth, Texas.....The senate has passed a bill providing for the sale of the remainder of the reservation of the confederated Otoe and Missouri tribes of Indians in Nebraska and Kansas to actual settlers of said lands, with the consent of said Indians, the proceeds to be placed to the credit of the tribes, and a new reservation to be selected for them, they desiring to quit their present reservation.....The rate of passage into the interior for emigrants is now so low that a very much larger number of those who come from other countries either have purchased through tickets or do so upon arrival, and it will be much easier for farmers to obtain a supply of willing help than during previous years..... Mr. M. B Hershey, Muscatine, Iowa, has recently imported seventy-three head of Short-horn cattle..... A million and a quarter pounds of honey goes from San Diego County, Cal., this year.....Wood sold on the streets at Fort Worth, Tex., during the snow-storm at $20 a cord.

Distance all Competitors.

The dairyman who uses Gilt-Edge Butter Maker will increase his product 6 per cent., improve its quality 20 per cent., and distance all competitors who do not use it. 25 cents' worth of the powder will increase product and market value of same $3,00. Can you make a better investment? Sold by grocers, druggists and general storekeepers. Send stamp for "Hints to Butter-Makers." Address, Butter Improvement Co., Buffalo, N. Y.

Tropic-Fruit Laxative removes Habitual Costiveness and all kindred complaints. It is composed entirely of concentrated fruits and medicines. Druggists sell it.

Druggists say that Lydia E. Pinkham's Vegetable Compound is the best remedy for female weakness that they ever heard of, for it gives universal satisfaction. Send to Mrs Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamplets.

A Rare Treat.

The American Publishing Company of Hartford, Ct., (as per advertisement in another column) have in press and will soon issue a new book entitled "*My Wayward Partner*," from the pen of the popular author Josiah Allen's wife, who has heretofore so pleased the public with her spicy books "*My Opinions and Betsey Bobbet's*, and *Samantha at the Centennial*," over which many a hearty laugh has been had. This new volume promises to surpass in many respects her previous works, and we with other readers may expect a rare treat when the volume is out.

Shippers of produce will find the advertisement of Messrs. E. & O Ward in this paper. Their advertisement did not appear in last week's paper, as then stated.

"That medicine goes right to the spot, refreshes, revives and cures."—A patient on Hop Bitters.

Burnett's Cologne received the highest award at the Centennial Exhibition. It is filled in elegant bottles—glass and cork stoppered, and basket covered—and is for sale by all first-class Grocers and Druggists.

The Markets.

SPECIALS FROM THE CHIEF CENTERS

Until Saturday, Dec. 18.

Boston.—Wool.—There has been a large number of mills represented in the market the past week, and manufacturers have looked over the ground carefully for weak places. They generally complain that, at the present price of goods, they cannot afford to pay the recent advance in wool, and that fine fleece must be bought at lower figures. Some small lots, of ten to twenty thousand pounds, of fine Ohio and Pennsylvania have been sold within the past three days at 47c., which is just about a cent below what dealers held their wool at two weeks ago; but the same sellers would not have sold 100,000 pounds lot at that price, as they have confidence that the market for this description will show more firmness after the new year opens and a more active trade sets in. The general tone of the market is strong, and on certain grades of wool no concession would be granted to effect sales, but with a dull trade there will always be a little advantage to a buyer in good credit, and as a good many consignees like to have their consignments closed out at the end of the year, manufacturers have secured some advantage. The sales of fine fleece have been 142,000 pounds, at prices ranging from 47@48c., but the market to day for X and XX Ohio cannot be quoted above 47@47½c., although there is a good deal of wool that could not be bought for these figures. The demand for Michigan has been light, and not enough has been sold to establish quotations. Combing and delaine selections show no change, and there have not been any choice lots of combing sold. Pulled wools are firm, and flannel manufacturers have taken hold quite freely. Butter—The business in this article is confined to supplying the immediate wants of the trade, as no one is disposed to anticipate the future, and most grocers want a fresh article. Stale lots of Northern and Western butter are dull, and there is quite a wide range of prices. We quote fine Northern and Western creameries at 33@35c; early-made do at 28@30c, fine Western dairy made at 25@27c., with one or two brands at a higher price; summer-made Western dairy at 22@24c.; long dairies of Northern butter at 22@26c; Western dairy packed at 20@23c. for choice and 16@18c for common. Cheese—There is a steady demand for small lots for immediate use at 13@13½c for fine Northern, and 13c for Ohio, while fair to good cheese ranges from 11@12½c.

Chicago.—Spring wheat. The trading was very fair, but the amount offered was excessive, and a decline of upward of 1½c was suffered. No. 2 sold for forward delivery at $1.01⅞@1 03 for seller December; $1.02⅝@$1.03⅝ for seller January, and $1.03½@$1.04⅝ for February. December wheat closed at $1.01⅞; January at $1.02⅝, and February at $1.03⅝. Seller March was about 1@1½c, and seller May 6½c over January. Cash wheat sold to a moderate extent as follows: In Store—5,000 bu. and 12 cars No 2 at $1.01⅝ 10,000 bu. at $1 02⅝, 10,000 bu, and 39 cars at $1.02, 5,000 bu. and 37 cars at $1.02⅛, 5,000 bu. and 3 cars at $1 02½; closed at about $1.01⅞; 2 cars No. 3 Spring Central receips at 86½c, 12 cars do. at 87c, 13 cars Iowa and other good houses at 87½c Flour—Buyers appear to be badly demoralized, and the amount sold was insignificant. Prices ranged as follows: Choice and fancy white winter extras, $5.75@$6 25; common to good white winter extras, $5.@$5 50; winter superfines, $3.75@$4.50; good to choice western spring extras, $5@$5.50; low to fair western spring extras, $4@$4 75; choice to fancy Minnesota spring extras, $5 75@$6.50; common to good Minnesota spring extras, $5@$50; poor to fancy Minnesota spring patents, $6@$7 75; low to fancy Minnesota spring patents, $6@$7.75; low to choice spring superfinesg $2.50@$4.; rye flour, $4.85@$5.; buckwheat, $5.35@, $5.50. Corn—Prices for this cereal averaged ½@

¼c lower. The weakness in wheat seemed to bear rather heavily on the market, which was weak and in a legitimate way, slow. Speculators bought to some extent to cover outstanding contracts, but shippers were light buyers, and the legitimate business transacted was limited. For forward delivery No. 2 sold at 39¾@40c for seller December; 39¾@40¼c for seller January. OATS—In sympathy with the drop in wheat and corn, this grain was weak and 3-8@¼c lower, the demand being mainly of a moderate speculative character. RYE—This grain was firm, the offerings being light Seller December was salable at 87½c, and sales were made of seller January at 88½c, and seller February at 89@91c. Cash sales were made of 6 cars of No. 2 at 87½c, besides sales by sample of 2 cars of No. 2 on track at 88½@89½c, and 5 cars of rejected on track at 83@85c. BARLEY—No. 2 was very scarce and an urgent demand caused an advance of 6@7c, followed by the loss of most of the appreciation, No. 2 cash closing at $1.15@$1 17. PROVISIONS—A weaker feeling in the hog market developed more than an ordinary desire to sell, and on mess pork prices averaged about 20c ₮ bbl. lower; on lard 5@7½c ₮ 100 lbs, and on meats 5c ₮ 100 lbs. Speculation was quite moderate while in the line of legitimate business there was no activity to demand any attention. The general trade, in fact, was a little slow. Cash Mess Pork was dull. No sales were made and price closed at $11 65@$11.70 for old and $12.75@$12 80 for new. Option pork sold at $11.80 for seller December; $12 87½@$13 10 for seller January; $13 02½@$13.27½ for seller February, and $13.20@$13 41½ for seller March. January pork closed at $12.92½@$12 95; February at $13 07½@$13 10, and March at $13 25@$13 27½. Cash Lard sold to the extent of 500 tcs. at $8 30, and 500 tcs. at $8.35, closing at $8 32½@$8.35.

BUTTER.—The position of the market remains about the same in all respects as noted in our last report. The stocks are fair and the receipts rather in excess of the demand, and stocks are slowly on the increase. There is a moderate business in all fresh-made stock, and prices are steady, but old stock is in liberal supply, exceedingly slow, and prices weak. Shippers are doing very little, and about the only inquiry is for supply of the local retail trade, and to meet a few orders from outside points. We once more quote: Choice to fancy creamery 32@33c, ₮ lb; fair to good do 28@30 fine to fancy dairy 25@28c; good to choice dairy 22@24; medium to fair dairy, in shipping lots, 18@20c; ladle-packed, good to choice, 19@21c; fair to the best packing stock 14@16c; grease butter 8@10c. Fair to choice roll butter sells at 16@20c.

Obstructions of the kidneys and attendant organs will prove fatal if not removed by Hop Bitters.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Dec. 18, 1880.

BEANS AND PEAS.—Supplies of beans arrive heavily, but as yet have made no impression upon prices; for that matter strictly choice mediums are very firm. Green peas plenty and dull at $1.70@1,75. Southern B. E. peas quiet at $2 ₮ 2-bush. bag.

Marrow beans choice $1.90, do, other $1.75@1,82½, medium choice $1.72½@1 75, do. other $1.60@1.70, pea $1.60@1 80 white kidney $1.85@2, red do. choice $1.75@1.80, do. other $1.60@1.65, black $1.60@1.65, lima $4@5.

BUTTER—With the strong prices that are ruling buyers are very fastidious and best marks of any style are subject to close scrutiny before trading occurs. There are few straight upper grades in market and many creamery buyers have left that line for selected half tubs. State dairies have an easier tone and all under grades are rather pressed for sale. Western butter is not up to a good standard: best dairy hangs at the high price and factory is lower.

Creamery, Western choice 35@36c, fair to prime, 20@34c State poor to best 22@33c.; sweet cream :8@32c.; State dairies, entire choice, 26@; fair to prime, 28@30c.; firkins, 18@25c; pails and half tubs, choice 28@29c.; fair to prime, 25@27c.; poor, 18@22c.; Welsh tubs, fresh 26@27c; other 18@24c.; Western imitation creamery, 24@26c.; dairy, choice, 25@26c., fair to prime, 21@25c; poor 16@18c.; factory, late made 21@22c.; common to prime 15@20c.; rolls choice, 22@23c.; other, 20@21c.

Receipts for the week, 29,563 pkgs. Exports for the week, 3,418 pkgs.

CHEESE—The market has tended stronger this week, making a gain of about ½c, and closed firm on a better demand for export and more moderate receipts. The shipments of the week have been 35,700 boxes. Quotations are for

State factory, fancy, at 13@13½c.; do. good and prime, 12½@12¾c.; do. fair to good, at 11½@12½c.; do. half skimmed, 8¾@10c.; Wisconsin factory, fine, 12½@12¾c do. good to prime, 11¾@12½c.; do. fair to good, 10¾@11¾c.; Ohio factory, fine, 12½@12¾c.; do. good to prime, 11¾@12½c.; do. flat, fair to good, 10@11¾c; do. poor to fair 7@10c.

Receipts for week, 40 346 boxes.

Exports for week, 35 493 boxes.

Liverpool cable price, 65s.

Steam for dairy produce to Gt. Britain 35@40s.

COTTON—The market has ruled weak and only moderately active. Latest prices are for

December at 11 84@11.86c.; January at 11.98@11.99c.; February at 12,16@12,17c.; March at 12.34@12 35c.; April at 12,48@12.49c.; May at 12.60@12.61c.; June at 12.71@12.72c; July at 12.79@12.81c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	9	9	9
Strict ordinary	9¾	9¾	9¾
Good ordinary	10⅜	10⅜	10⅜
Strict good do	11	11⅛	11⅛
Low middling	11 9-16	11 13-16	11 13-16
Strict low middling	11 13-16	12 1-16	12 1-16
Middling	12	12⅛	12⅛
Good middling	12⅛	12⅜	12⅜
Strict good middling	12⅜	13	13
Middling Fair	13¼	13⅜	13⅜
Fair	13¾	14⅛	14⅛

STAINED.

Good ordinary	8 11-16	Low middling	10 7-16
Strict good ordinary	9 9-16	Middling	11 5-16

DRIED FRUITS.—Apples have had little attention, prices being above buyers' views. Peaches meet with a fair demand and rule firm. Small fruits are generally at strong prices. Quotations are for

Evaporated apples at 8¾@9¾c. for better qualities; sliced apples at 5@6¼c. for good to choice North Carolina; 3¾@4¼c. for Va. apples, 4@4¼c. for Tenn. do; 4¾@5¾c for State do; 3¾@4¼c. for western Ohio and Mich. Peaches at 2¾@3c. for evaporated peeled; 11¾@13c. for unpeeled do.; N. C peeled at 20@21c.; for the better qualities, unpeeled peaches at 6¾@7¾c. for halves and 6¾@7c. for quarters. Plums at 15@16c. Blackberries at 8c. Cherries at 8c. Raspberries at 25c. Whortleberries at 12@12¾c.

EGGS.—Receipts for the week, 15,179 bbls.; do last week 5,345 do. Prices for fresh are restrictively nigh and the light supply is not sought for so eagerly. Stored fresh are quiet, limed are firm and active when quality is right.

N. J. and near points 34@35, State and Pa. 31@32, Western fresh 30@31, Southern 30@32, stored 27@28, limed State 21½@22½, do. Canadian 20@22, Western 20@21¾.

FLOUR—Has sympathized with wheat and it has been possible to sell only by making concessions.

Latest prices are: $5.30@5.60 for very inferior to fancy superfine State and Western; $4,30@4 75 for poor to choice extra State and Western, odd lots and lines; $4.75@5 00 for choice to fancy do.; inferior to good whites wheat, trade and family extras, $5 60@5 80; good to choice do. at $5.10@6.25; (fancy do. up to $6.75;) red and amber winter wheat inferior to choice trade and family, at $4 60@6 00; round hoop Ohio $4.60 5 00; mixed trade and family brands of do at $5.00@6.50, the latter for fancy; St. Louis at $4.25@5.50 for inferior to good extra; $5.50@6.50 for good to choice and $6.50@6.75 for choice to fancy brands; Minnesota clear, inferior to very choice at $4,60@6.00; Minnesota "straight," poor to fancy, at $5 60@7.25, and patent inferior to fancy at $5.75@8.50; city mill extra at $5.50@5.65 for fair to very choice for the West Indies; do. for England, $4 50@6 for poor to very choice spring wheat, and $4.90@5.15 for winter wheat product; do. trade and family extras, $5.75@7; do. for South America, $5.65@6.00; the latter for fancy; No. 2 at $3@3 65 for inferior to strictly fancy.

Receipts for week, flour, bbls. 180,950; corn meal, do. 2,000; wheat, bush. 575,000; corn, do. 367,514; oats do. 175,000; rye, do. 13,436; malt, do. 55 200; barley, do. 62,450; beans, do., 13,284; rice, pkgs 2,313.

Exports for week, flour, bbls. 100,500; corn meal, do. 3,531; wheat, bush 758,079; corn, do. 204 941; oats, do, 3,115; peas, do. 3,436; beans, pkgs. 752; rice, 385.

BUCKWHEAT—Quoted at 57@59, and buckwheat flour at $2.20@2,45.

FRESH FRUITS—Exports of apples for week 10,351 bbls. The market for apples is strong, but only for well-protected stock. Receipts are discouraged as railroad stock varies so in price.

Baldwins $1.87@2; Greenings, $1.75; Northern Spy $1.50@1 75; Spitzenbergs, $2@2,25 Lady apples, choice, $1@8; other, $3@5; sweet apples firm for market brands. Cranberries quiet at the moment, Cape Cod fancy bbls., $7.50; poor to choice, $4@7. N. J., boxes $1.50@2. Florida oranges very dull stock lacking its usual attractive quality. Choice half bbl. boxes, $3.25@3.50; fair to good, $2 50@3. Boston pears nominally $4@6. Catawba grapes 5@6c. ₥, cases or bulk. Peanuts in fair demand. Va. hand-picked 4½@5, other, 3½@4¼, shelled 4@4¼. Hickorynuts ₮ bush. of 50 lbs, $1.75. Western butternuts 60@70. Black walnuts 50c. Pecans 9@9½c.

FURS AND SKINS—The tendency of the market for domestic skins is low, as the catch will be heavier than usual according to country reports. Skunk, mink and muskrat will be most affected.

GRAIN.—The visible supply of wheat this week has increased to 1,701 000 bush, and the arrivals at all western centers show a marked increase; consequently prices have declined. Exporters have taken about 800 000 bush. The latest prices are for

No. 1 white at $1 17½@1.18 do. December at $1.17¼@1.17½, do January at $1.18@1.18¼, do. February at $1.20½@1.20¾, ungraded white at $1.03@1.20, mixed Winter at $1.17¼, No. 1 red at $1.25@1.28, No. 2 red at $1 19¼@1.20¾, do. December at $1.19¼@1.19¾, do. January option at $1.20¼@1.21¼, do. February at $1.22¾@1.23¼, do. May at $1.24¼@1.24½, No. 3 red in lots at $1.16¾@1 17¼, ungraded red at $1.06@1.25, No. 3 Spring at $1.14@1.14½, ungraded Spring at $1.06.

Corn has been freely offered at lower prices; shipments for the week 403,011 bush; latest prices are for

New York No. 2 at 57¾@58¼, do. December at 58¼@58¾, do. January at 58¼@59, do. February at 59¼@59¾, ungraded mixed Western at 55@58¼, No. 3 55¾@56¾, New York steamer mixed at 56¾@57, No. 2 white at 58¼@58¾, yellow Western at 57½@58, white Western at 58, steamer white at 57.

Oats are also lower and in fair demand; latest sales are of

No 1 white 47½, New York No. 2 white at 44¾@45, No. 3 white at 43@43¾, New York No. 1 at 44, New York No. 2 at 43¾@44, do. January at 41¾@41¾, do. February at 45½@45¾, No. 3 at 42¾@43, ungraded white Western at 43@47, ungraded mixed Western at 40@44, white state at 49, No. 2 Chicago quoted at 43¾, No. 2 February at 44¼@45½.

HAY AND STRAW.—Supplies are very fair with prices scarcely as strong. Demand is moderately active. Latest prices are for

Selected retail State hay $1.25@1.65 per 100 lbs other grades of timothy at $1,20@1.25 do, grades for railway and shipping wants at $1.10, clover mixed at $1.10@1.15, clover clear at $1@1.05, salt hay at 70@75c. Straw—long rye, $1.10@1.15, short rye, oat, wheat and barley 70@85.

Exports for the week 1,107 bales.

HONEY.—The market is disappointingly dull for the approach to the holidays.

White clover, comb, single, 17@18c.; larger pkgs. do. 15@16c.; buckwheat 12@13c.; extracted 7@11c. as to color.

HOPS.—There is very little interest shown by exporters and the home demand is moderate, with prices generally unchanged. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	22 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	16 @18
Eastern, crop 1880	18 @22
Wisconsin, crop 1880	18 @22
Yearlings, crop 1879, choice	14 @20
Olds, all growths	4 @12
Bavarians	30 @35
Bohemians	35 @40
Pacific coast, new	20 @24

LEATHER.—Hemlock sole quoted 22½@24 for light, 23½@25 for middle, 23½@25 for heavy and 21@22½ for good damaged.

OIL CAKE.—Western is quoted at $30.50 per ton.

POULTRY AND GAME.—The market has had an unsteady run; quality has turned out very irregular in lots of remote shipment. Each day has shown a surplus and even bright fresh stock has suffered some in quotations in consequence. It is hoped next week will clear the market and leave it in better shape.

Turkeys, N. J. choice, 11¾@12, State do. 11@11½, good to prime 10@10¾, Western, choice, 10@11, good to prime 9@10, fair to good 8@9. Phila., dry-picked, 11@13, Chickens do. 12@13. Bucks Co. 10@12, N. J. 9@11c.; State scalded, 8@10c.; Western, do., 8@9c.; good to fair 5@7. Fowls, Phila. dry-picked, 10. N. J., 9@10, scalded, do, 8@9; State and Western prime, 7@8; poor to fair 5@6, Ducks, choice 12@13 other 7@10. Geese, choice 10@11; other, 7@9. Squabs, light ₮ doz. $1.75@2 dark $1@1,25. Mixed lot of Chickens and fowls, Western, 5@8.

Supplies of live are light, but little is wanted in the way of fowls or turkeys

Fowls and chickens 6@8, roosters 3@4, turkeys 7@9, Ducks choice 6@7c, other 40@50. Geese extra $1, 87 other 80@$1 02 Pigeons 20@25,

The market is well supplied with game of all kinds and the demand is growing to be active with the present popular prices. Rabbits extremely low.

Wild ducks, canvas back $1.50@2, red heads, 75@87, mallard 60, teal, 40@50; common 20@30; quail prime trapped ₮ doz $1,12@1 25, poor 20@31, partridge, 60@80, the latter for State. Grouse prime $1@1.15, drawn 80@90, Hares, 25@30, Rabbits, 10@20, Venison, Minn. short saddle, 13, other 10@12 Whole deer, 8@9. Dressed saddles of venison do not meet with favor here; some from St. Louis brought only 7@9.

PROVISIONS.—Hog products have been fairly active and prices weak.

Mess pork is quoted $13 for spot lots, $13 75 bid and $14.40 asked for Jan. and $13.90 bid and $14.30 asked for Feb. Bacon at 7¼ for long clear, and 7¾ for short clear. Lard, Western steam at $8.90 for spot and December, $8.92½ for January, $9 01@9.05 for February and $9.12½@9.15 for March. Stearine at 9 for choice. Tallow at 6¾@6¾. Beef hams at $16.50@17. Beef at $18@20 for city India mess, $9.50 for extra mess, $8 50 for plain mess.

Receipts for week, beef, bbls. and tcs.; 1,154; pork, 5,698 bbls.; cut meats, 35,500 pkgs.; lard, 32,224 pkgs.

Exports for week, beef, bbls. and tcs. 2,700; pork, 5,375 bbls.; cutmeats, 13,539,483 lbs.; lard, 5,770,600 lbs.

SEED.—Clover is firmer on small receipts and a better demand. Western is quoted 8@8¾ and extra choice at 8 49¾. Timothy is quiet at $2.7.@2,45,

TOBACCO.—There has been a quiet and steady market. Quotations unchanged.

VEGETABLES.—Exports of potatoes for week, 5,100 bbls. Small potatoes sold at 180 lbs. to the bbl. The supply is larger and outside prices are not so readily obtained, still choice well-kept and packed lots are not pushed on the market. Other items fairly firm when free from frost.

Potatoes, in close Eastern double heads $2@2 25 State, $1 75@2. do. in bulk $1.62½@1.87; Burbank and prolific $1.75@1,87; snowflake $1.62½@1 81; peerless, $1.37½@1.75; peachblows $2@2.25 Sweet Del. $2.50@3 Onions, white, $5@5.50 yellow, $3.25@3.50; red, $3.25@3,50; Chester, $3.25; carrots, $1.25@1.50; marrow squash, 40@50. Hubbard, 75c.@$1; cauliflower, $2@5; cabbage, ₮ 100, $4@6; red, do. $1@7 pumpkins, $3@5; celery, ₮ dozen, $1.00@1.60; turnips, white, ₮ bbl. 50@75, Russia 50@75.

WOOL.—There is a very fair demand and a steady market without further change in prices. Quotations are for

Ohio, Penn., and W. Va. XXX and picklock 49@51, XX, 48@49c.; X 47½@49c.; No. 1 49@51c.; No. 2 44@47c.; common 40@43c.; combing and delaine 49@53c.

Mich, Ind. and Wis. X and XX 43½@46c.; No. 1 47@48c.; No. 2 and common 40@44c.; combing and delaine 47@52c.

N. Y. N. H. and Vt. X and XX 40@43c.; No. 1 45@47c.; No. 2 and common 38@42c.; combing and delaine 45@51c.

Iowa, Ill. and Western X and XX 40@43c.; No. 1 45@47c.; No. 2 and common 38@42c.; combing 44@49c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Dec. 18, 1880.

BEEVES.—Receipts for the week 9,747 head; do last week 10 510 do. The week preceding Christmas has been seldom so liberally supplied with fancy steers. Both Wednesday and yesterday showed that special feeding had become a thing of the past, for it was predicted this Fall that no heavy high-fed lots would appear this season. Exporters and first-class butchers have had all they wanted in the way of show beef and have paid good compensating prices. The general market was strong under the small total. Prices ¼c. higher at all the yards. About 400 head sold yesterday at 11@12c. and above. Rough State Michigan oxen and stags 6¾@7 to dress 54@55 lbs; similar Kentuckys 7¾; poor State cattle 7¾@7¾; common to choice 8¼@11¼ to dress 55@57 lbs; extra and premium steers 11¾@13. With the style of stock of the week classification is somewhat special.

COWS AND CALVES.—Market regarded fair for the season; stock selling at full old ranges.

SHEEP AND LAMBS.—Receipts for week, 25,083 head; do. last week 21,903 do. Supplies have been very short and prices for all decent stock have ruled firm. Coarse ewes sold at 4@4¼, good to choice sheep 6¼@6¾; lambs 5½@7.

SWINE.—Receipts for the week, 34,133 head; do. last week 35 481 do. Market dull, as dressed pork furnishes a good portion of the city cutting trade.

Live hogs, corn, $4.50@4 75 per 100, country dressed pork light 7, medium 6¾@6¾, heavy 6¼@6¾, city dressed State 5¾@6¾, city dressed Western 5¾@6, Western dressed 5¼@5¾. Pork tenderloins 10¾.

VEAL CALVES.—Live calves are somewhat scarce and prime are very firm. Common live are slow, as retail butchers have a good offering of dressed to draw upon. Market steady for dressed.

Live calves, N. J. prime 7¼, State, prime 7, poor to good 5@6¼, Mt. Holly, heavy, 4@5, medium to light 6@7¼, buttermilk, 2½@3, grassers, 2@2¼c.; dressed choice 9¾@10, fair to prime 7¼@9, common 3@5.

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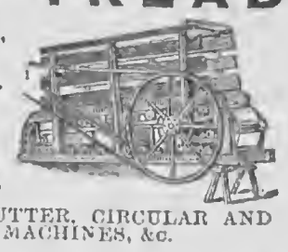
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GOOD GRAMMAR.

THREE little words you often see
Are articles—a, an and the.

A noun's the name of anything,
As school or garden, hoop or swing.

Adjectives tell what kind of noun,
As great, small, white or brown.

Instead of nouns the pronouns stand—
Her head, his face, your arm, my hand.

Verbs tell of something to be done—
To read, count, sing, laugh, jump, run.

How things are done the adverbs tell,
As slowly, quickly, ill or well.

Conjunctions join the words together,
As men and women, wind r weather.

The prepositions stand before
A noun, as of or through a door.

The interjections show surprise,
As ah! how pretty—oh! how wise.

The whole are called nine parts of speech,
Which reading, writing, speaking teach.

CHRISTMAS.

ESTELLE.

CHRISTMAS! What a magic word, and how closely it is connected, in the eyes of little folks, with Christmas trees and bountiful feasts of good things! How, even in their dreams, dolls, small Saratogas containing their wardrobes, little cook stoves, kitchens, sets of dishes, drums, tin engines ferry-boats, knives, skates, and all the many beautiful playthings float like a panorama before their eyes.

How the excitement of the little ones carries me back to a time in my childhood, when poor mamma had her hands full to find bread and shelter for my two younger brothers and myself. As Christmas drew near our talk was of little else but a tree, would we have one, or not?

We had a dim idea that this was different from our other Christmases, before the cruel war killed papa, but whether we were too poor to have a Christmas tree was a problem we were unable to solve, but which troubled us greatly. Mamma's eyes would fill with tears, and she would look so sad whenever she heard us talk; and once, when we ventured to ask her if she thought Santa Claus would remember us if we tried to be good, even though we were poor, she sobbed right out, as if her heart would break, but soon controlled herself, wiped away the tears, and for our sakes smiled and looked pleasant.

At last the eventful night came, and we were in a quandary as to whether we had better hang up our stockings. The boys were for hanging them up, but I, feeling the weight of my three senior years, thought we had better not, as Santa Claus forgot all about children when they became poor, and it might make mamma feel bad and cry again. But she, seeing our trouble, told us to hang them up. It wouldn't do any harm, and we might get something if we didn't make any noise but went to sleep early. So, after our prayers were said and we were tucked up warmly in our beds, she kissed and left us.

It was hardly light, Christmas morning, when I awoke, quickly jumping up I awoke my brothers, and we three in night-dress and bare feet made our way to where we had hung our stockings. They looked as if they were full for a bundle was sticking out of the top of each. On seeing them, we uttered an exclamation of joy, which was turned to one of bitter disappointment, as we found on taking hold of them, that they were nearly empty, only containing a few candies and an odd-looking bundle, which proved to be a doughnut doll-baby, with queerly-proportioned arms and legs. In my heart I had really thought Santa Claus would not forget us, and now the disappointment was so bitter, that I threw the doughnut baby on the floor, breaking one of its arms.

"Stella!" It was mamma's voice, as I looked in her face I knew she had seen me, and felt sorry about it. In a fit of remorse I ran to her arms and had a good cry; when my sobs had ceased, she said, "go and raise that curtain in the corner." I obeyed, and could we believe our eyes, there stood a tree loaded with beautiful toys, besides a number of boxes on the table.

With eyes bright with pleasure, we stood fascinated by the bright scene until aroused by a hearty voice, saying, "why don't you take them off?" Turning around, we beheld a man in the dress of an officer of the navy. Seeing we did not recognize him, he said, "come here, little folks, and kiss your uncle;" after which proceeding, he unloaded the tree.

Such a lot of presents from Uncle Will, then there was a present for each of us from mamma. Mine was a little toy cooking stove, with all the apparatus for cooking. How that stove had haunted my dreams both waking and sleeping, for a long time, and how many times when on my way to and from school, and when sent by mamma on errands, I had gone out of my way to go by the stove and gaze in the window that contained it. And now it was really mine. I was afraid I would awake and find it all a dream.

Little did we then know how poor mamma had worked early and late to get our presents; but we soon learned how Uncle Will, mamma's brother, came after we had been put to bed, and frightened her very much, as she thought he had been killed in the war. He did not forget mamma's Christmas, but gave her our old home, where we used to live when papa was alive. And now we are living there and are so happy. Among the relics of my childhood none are so dearly prized, as that little stove, and a one armed doughnut doll

LETTER FRON HONOLULU.

DEAR UNCLE MARK:—I fear you will think that Hawaii nei has forgotten you altogether; far from it. I often think of you all and have started several letters to you, but writing to ones' friends and to a paper are two different things. I write so rapidly and carelessly, that I have to go over my composition, correct it and rewrite, and it takes time, and with me just at present it is a scarce article. Last July my parents left me for a visit to California to see if papa would derive any benefit from a change of climate. After a four months trial he was thoroughly examined by one of the best doctors, Dr. Cole, and his statement is, pulmonary consumption, both lungs affected. A mild climate and no more medicine is prescribed. This week I received news of their home-coming, and by friends I am told to prepare myself for a great change in my dear father's appearance. And loving him as I do it is hard to think that the time may soon come when I shall no more have a father, but though he be taken, a Heavenly Father remains. He is about to send me the severest trial I have ever known. I have murmured against it but now I feel that God knows best and He will be sure to comfort us; so now my whole aim is to make our truly beautiful home as lovely as possible.

I have been housekeeper for my cousin, my adopted sister and a young married couple, friends of ours, for four months, no! the young couple have only been here two months, still I have been busy, very busy all along with a large home like ours, and I alone at its head to direct. It is no easy task and I am glad to so soon welcome home my loved ones. So you see, Uncle Mark, my time has been fully occupied and I know you will forgive my silence.

And now allow me to thank you for the seeds you kindly sent me. I planted them all with such care and some bloomed so nicely; then I was very sick and my plants were neglected. I felt so sorry to find some dead whilst others I have petted back to life. If any seeds are sent to me next year I hope to have better success.

I intended to have sent you an autograph of our King's this time, but I have not found time to pay him a visit, and several of my young lady friends are waiting patiently with their albums for his autograph.

I have just written a long letter to L. L. Lewis, a Rural cousin and a very interesting correspondent. I also correspond with Rachel E. Moore and enjoy her letters. I await one by the next mail.

And now my final paragraph and the real cause of my writing to you. Our great wonder, the volcano, is giving us a grand break-out, the first since '68. It is impossible for me to attempt a description so I have asked my cousin to try and procure a paper and mail it to you, and you will find a splendid description as witnessed by a gentleman of our acquaintance; the sight must be grand, and I hope if possible to visit it.

My parents were on Hawaii in '68 and mamma says she never wishes to go through another time like that. They could not get away for the schooners could not get to land, and besides papa was the sole manager of a plantation and not another white person within twelve miles. Not a blade of grass, not a drop of water but what was brought by the natives from the mountain three miles away. The sun was like blood, and for days sometimes it was not to be seen on account of the dense smoke. For months they slept in the open air and could feel the ground surging under them and all was so hot. Earthquakes, too numerous to count. Cattle that had been wild became tame. The trees waved and snapped like whips, stone walls fell everywhere. It was a fearful time. All this time I was in a convent boarding school and received no home letters, and wondered and fretted at my parents' silence. This eruption does not seem to be accompanied by earthquakes, drought, etc., and yet the sight is grander than any previous. Hoping Uncle Mark and the cousins will enjoy the perusal of this letter and also the paper, and with best wishes for a Merry Christmas and Happy New Year, Hawaii nei bids good night. FRANCES M. LACK.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I wish to thank you for those seeds which you so kindly sent me. They all came up nicely. The china pinks were beautiful, as was also the phlox; my favorite phlox was a pale pink one. The cockscomb was something new, being variegated, buff and crimson. We had good success with the RURAL seeds. We were all very much pleased with the beautiful flowers of the Lemon Hollyhock, which we received in 1879. I have an Oleander four years old, and eight feet high, it was full of flowers from May till September, there are three seed pods on it at present, and is getting more. Do they often get seed? I have never heard of it before. The muskmelon seed all came up, but did not do as well as they might on account of not having much rain. I had one nice large one of which I saved all the seed. Uncle Mark, can you tell me which is the best method of treating the Calla lily; so that it will bloom during the winter.

Your affectionate niece,

Wayne Co., O. ANNA CROUSE.

[It is not common for the Oleander to have seed pods in this climate. The Oleander is easily propagated by putting cuttings into a bottle of water where they form roots in a few weeks. You are aware that the Oleander is very poisonous and that none should ever put the leaves or flowers in the mouth. The Calla lily requires thorough drainage, yet frequent waterings. U. M.

DEAR UNCLE MARK:—Please add my name to the Horticultural Club. We have a great many house plants this winter, among them an Oleander, several different kinds of geraniums, both sweet-scented and other kinds, an Oxalis that is always in bloom, fuchias, a double rose petunia, callas and others. We had about 40 different kinds of roses last summer, and a balsam that came up self-sown in our rose bed, and grew to be a beautiful shaped tree about three feet high and over eight feet in circumference, and it was a perfect beauty when covered with nearly all white blossoms with a little sprinkling of red.

Love to all, ESTELLA B. HUNTER.

Hartford Co., Conn.

DEAR UNCLE MARK:—I am a little girl nine years old, my pa has taken the RURAL a good many years and I like to read the letters from the cousins very much and I would like to join the horticultural club for I am very fond of flowers. I live on a farm and my pa keeps horses and colts and cows and pigs and poultry and I like to help him take care of them. I can unharness a horse and tie him in his stall and feed him and my pa sometimes calls me a Tom Boy, but I do like to be out of doors and among the flowers and in the fields, and I drive the cows to and from the pastures.

From your little nicce,

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PERSONAL ITEMS.

Justice Hunt, of the United States Supreme Court, is slightly improving.

Justice Clifford, of the United States Supreme Court, suffers from softening of the brain.

Col. Mosby, United States Consul at Hong Kong, will arrive in this country in February next.

Capt. Joseph Wilson, on the Alabama during the war, was killed in a Florida railroad accident.

Mlle. Jeanne Bernhardt, sister of the famous Sarah, arrived in New York on board the French steamer Labrador.

D. J. Murphy, a wealthy resident of San Francisco, has been given the title of Marquis by the Pope in recognition of his great services to religion.

Judge Key, ex-Postmaster General, with his wife and daughters, has arrived at Havana from Cedar Keys. They expect to remain three or four days.

Some of Senator Lamar's friends doubt very much if that gentleman will ever be able to reoccupy his seat in the Senate or participate in its proceedings.

Professor W. H. Jordan, of the Maine State Agricultural College, has been elected to the Chair of Agriculture and Agricultural Chemistry in the Pennsylvania State College.

By direction of the President, Major-General Winfield S. Hancock, U. S. A., has been assigned to duty according to his brevet of major general, to date from December 4, 1880.

Mrs. Senator Logan superintends her husband's correspondence, dictating to a stenographer for hours at a time. She also assists the Senator in collecting materials for reports and addresses.

Mr. Longfellow can take a worthless sheet of paper and by writing a poem on it make it worth $50. That's genius. Mr. Vanderbilt can write fewer words on a similar sheet and make it worth $50,000,000. That's capital.

[Pittsburg Evening Chronicle]

Dangers to Iron Workers.

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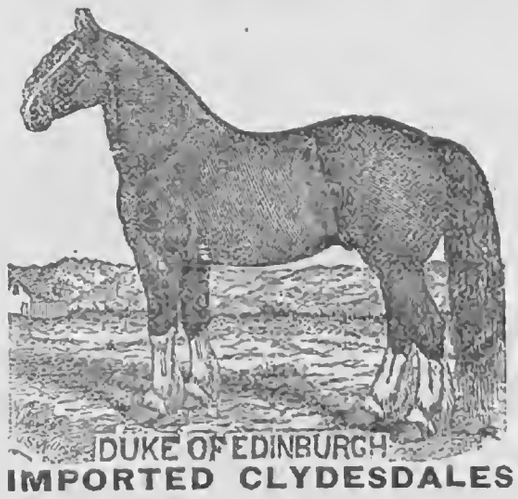

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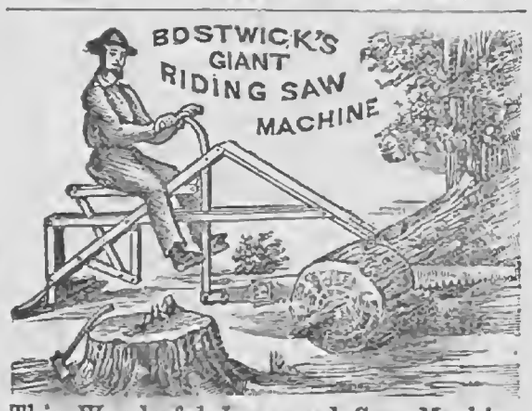

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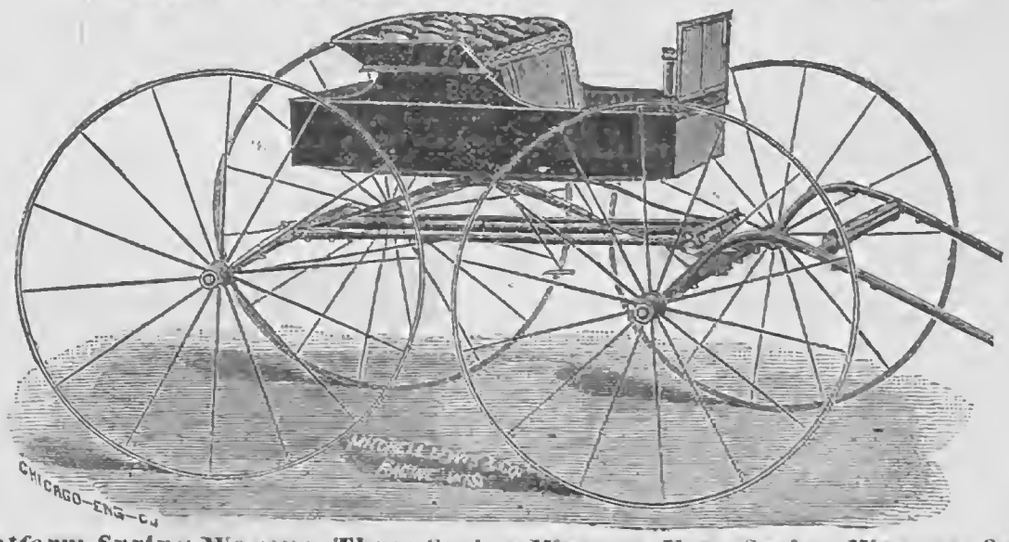

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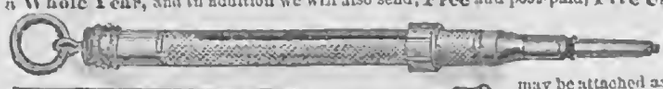

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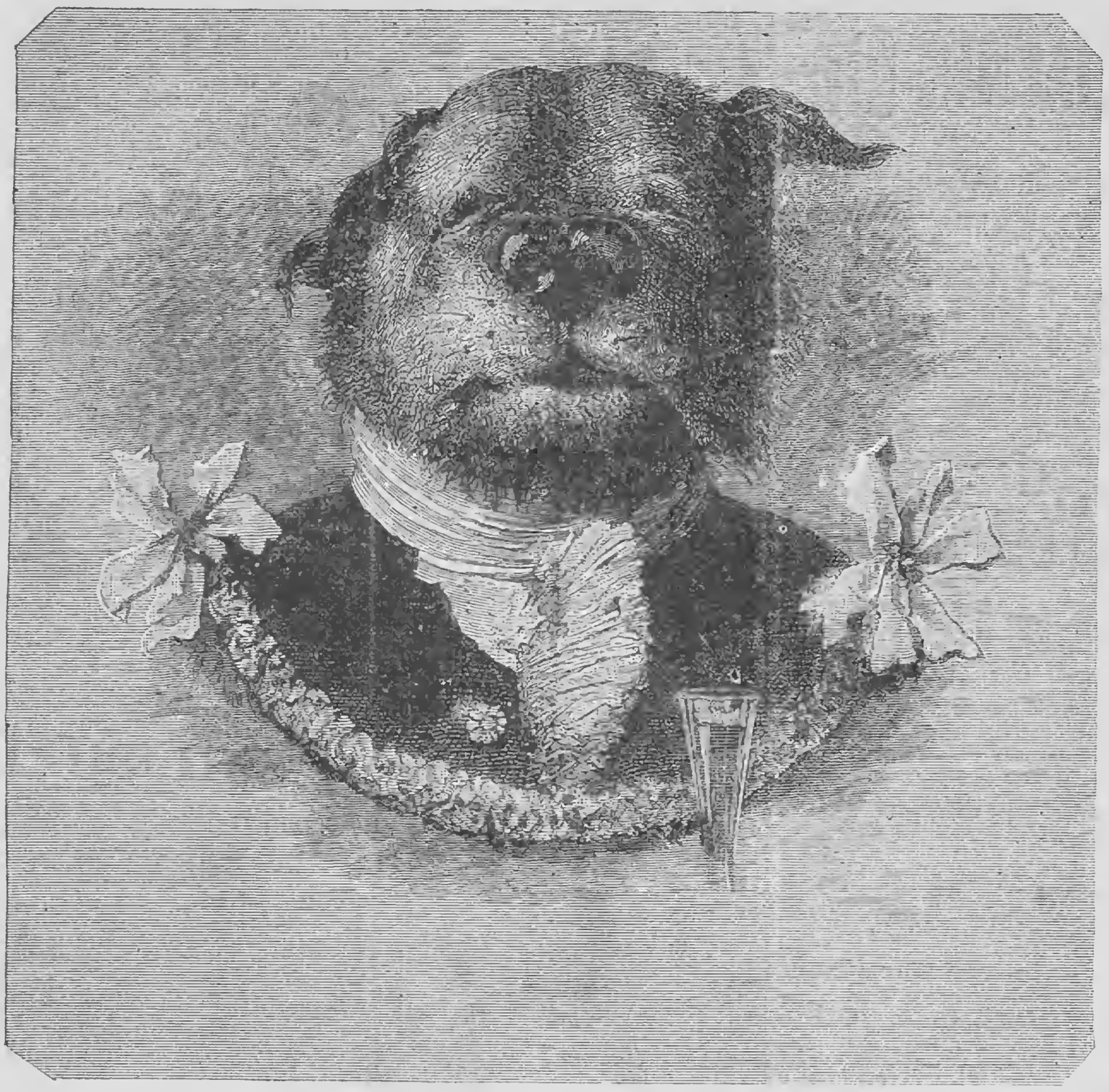

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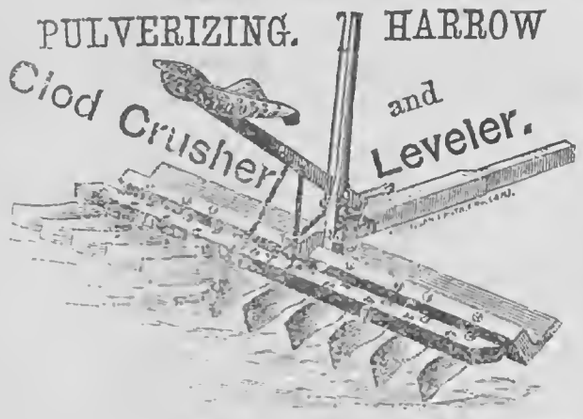

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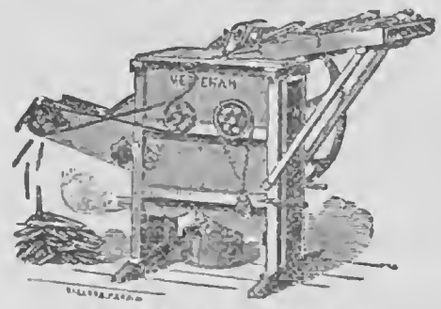

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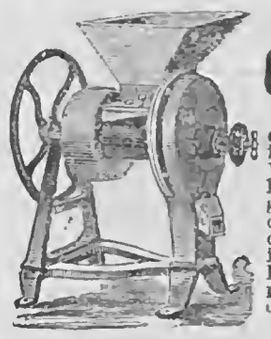

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